



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 29, 2026 – 12:47 PM UTC

PDB ID : 4WF1 / pdb_00004wf1
Title : Crystal structure of the E. coli ribosome bound to negamycin.
Authors : Olivier, N.B.; Altman, R.B.; Noeske, J.; Basarab, G.S.; Code, E.; Ferguson, A.D.; Gao, N.; Huang, J.; Juetten, M.F.; Livchak, S.; Miller, M.D.; Prince, D.B.; Cate, J.H.D.; Buurman, E.T.; Blanchard, S.C.
Deposited on : 2014-09-11
Resolution : 3.09 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
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

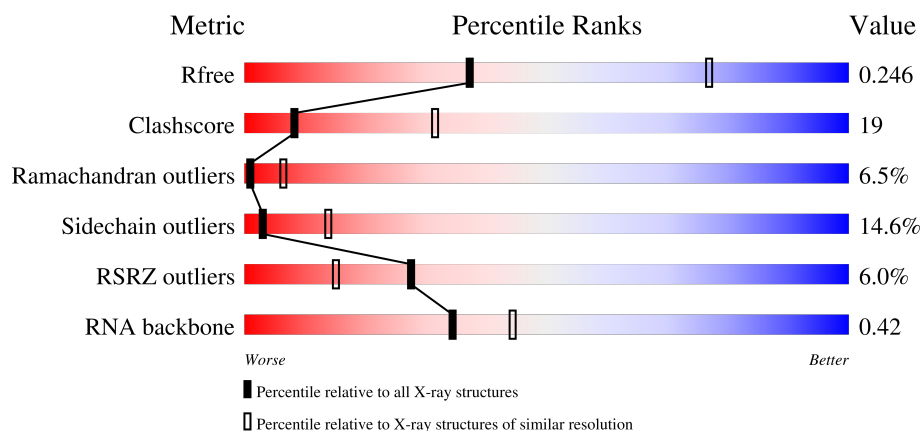
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.09 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	1456 (3.10-3.10)
Clashscore	190562	1539 (3.10-3.10)
Ramachandran outliers	187476	1467 (3.10-3.10)
Sidechain outliers	187428	1467 (3.10-3.10)
RSRZ outliers	180081	1456 (3.10-3.10)
RNA backbone	3983	1022 (3.32-2.88)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1539	2% 36% 50% 14%
1	CA	1539	3% 36% 52% 12%
2	AB	218	6% 28% 50% 20%
2	CB	218	11% 35% 47% 16%

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

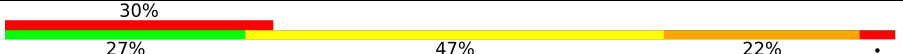
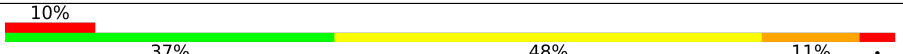
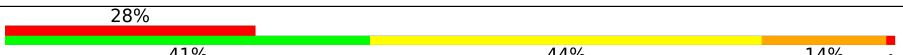
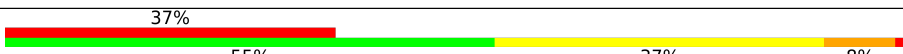
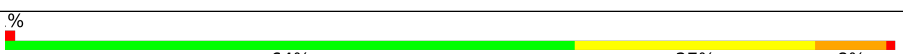
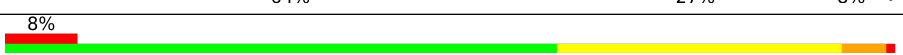
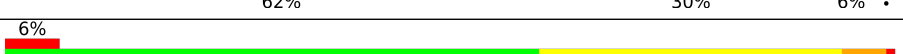
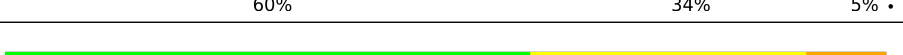
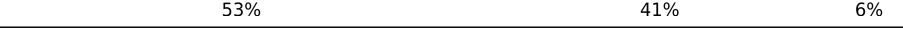
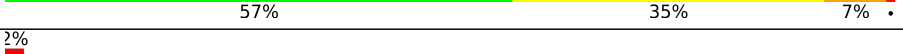
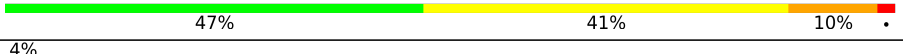
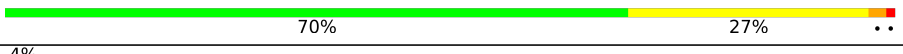
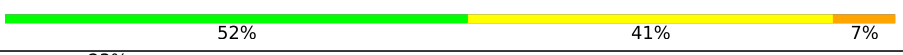
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Mol	Chain	Length	Quality of chain
15	CO	88	48% 42% 10%
16	AP	82	48% 32% 20%
16	CP	82	9% 43% 49% 9%
17	AQ	80	4% 42% 42% 10% 5%
17	CQ	80	2% 41% 40% 18%
18	AR	55	4% 64% 35%
18	CR	55	4% 44% 49% 5%
19	AS	79	9% 58% 32% 8%
19	CS	79	19% 56% 33% 10%
20	AT	85	5% 48% 35% 13%
20	CT	85	27% 49% 38% 12%
21	AU	51	12% 24% 47% 22% 8%
21	CU	51	18% 24% 49% 22% 6%
22	BA	2903	3% 51% 39% 10%
22	DA	2903	3% 34% 53% 13%
23	BB	119	59% 38%
23	DB	119	48% 46% 5%
24	BC	271	5% 54% 39% 7%
24	DC	271	13% 38% 49% 13%
25	BD	209	65% 30% 5%
25	DD	209	9% 59% 34% 7%
26	BE	201	60% 34% 5%
26	DE	201	15% 52% 44%
27	BF	177	49% 41% 8%
27	DF	177	11% 70% 27%

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Mol	Chain	Length	Quality of chain
28	BG	176	
28	DG	176	
29	BH	149	
29	DH	149	
30	BI	141	
30	DI	141	
31	BJ	142	
31	DJ	142	
32	BK	122	
32	DK	122	
33	BL	143	
33	DL	143	
34	BM	136	
34	DM	136	
35	BN	120	
35	DN	120	
36	BO	116	
36	DO	116	
37	BP	114	
37	DP	114	
38	BQ	117	
38	DQ	117	
39	BR	103	
39	DR	103	
40	BS	110	

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Mol	Chain	Length	Quality of chain
40	DS	110	
41	BT	93	
41	DT	93	
42	BU	102	
42	DU	102	
43	BV	94	
43	DV	94	
44	BW	76	
44	DW	76	
45	BX	77	
45	DX	77	
46	BY	63	
46	DY	63	
47	BZ	58	
47	DZ	58	
48	B0	56	
48	D0	56	
49	B1	50	
49	D1	50	
50	B2	46	
50	D2	46	
51	B3	64	
51	D3	64	
52	B4	38	
52	D4	38	

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Mol	Chain	Length	Quality of chain
53	B5	207	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	BA	3179	-	-	-	X
54	MG	DA	3057	-	-	-	X
54	MG	DA	3061	-	-	-	X
54	MG	DA	3130	-	-	-	X

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 288204 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
			714	439	144	130	1			
15	CO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				
38	DQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	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	C	N	O	0	0	1
			1142	691	221	230			

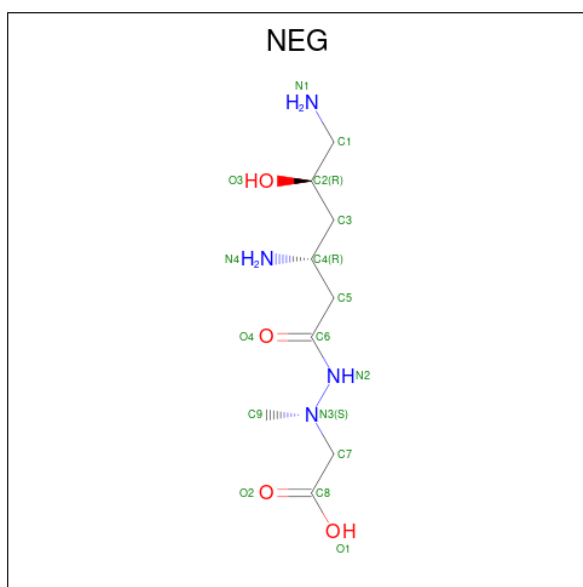
- Molecule 54 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	71	Total	Mg	0	0
			71	71		
54	AM	1	Total	Mg	0	0
			1	1		
54	BA	194	Total	Mg	0	0
			194	194		
54	BB	4	Total	Mg	0	0
			4	4		
54	BQ	1	Total	Mg	0	0
			1	1		
54	CA	56	Total	Mg	0	0
			56	56		
54	CT	1	Total	Mg	0	0
			1	1		
54	DA	164	Total	Mg	0	0
			164	164		
54	DB	3	Total	Mg	0	0
			3	3		
54	DL	2	Total	Mg	0	0
			2	2		
54	DQ	1	Total	Mg	0	0
			1	1		
54	D2	1	Total	Mg	0	0
			1	1		

- Molecule 55 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 56 is NEGAMYCIN (CCD ID: NEG) (formula: C₉H₂₀N₄O₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
56	CA	1	Total	C	N	O	0	0
			17	9	4	4		

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	196	Total	O	0	0
			196	196		
57	AE	1	Total	O	0	0
			1	1		
57	AL	1	Total	O	0	0
			1	1		
57	AN	3	Total	O	0	0
			3	3		
57	AT	1	Total	O	0	0
			1	1		
57	AU	1	Total	O	0	0
			1	1		
57	BA	620	Total	O	0	0
			620	620		
57	BB	14	Total	O	0	0
			14	14		
57	BC	10	Total	O	0	0
			10	10		
57	BD	4	Total	O	0	0
			4	4		
57	BF	1	Total	O	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	BG	1	Total O 1 1	0	0
57	BL	6	Total O 6 6	0	0
57	BN	3	Total O 3 3	0	0
57	BS	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	3	Total O 3 3	0	0
57	B4	2	Total O 2 2	0	0
57	CA	186	Total O 186 186	0	0
57	CL	1	Total O 1 1	0	0
57	CN	3	Total O 3 3	0	0
57	CT	3	Total O 3 3	0	0
57	CU	1	Total O 1 1	0	0
57	DA	611	Total O 611 611	0	0
57	DB	13	Total O 13 13	0	0
57	DC	8	Total O 8 8	0	0
57	DD	3	Total O 3 3	0	0
57	DE	5	Total O 5 5	0	0
57	DJ	1	Total O 1 1	0	0
57	DL	4	Total O 4 4	0	0
57	DN	1	Total O 1 1	0	0
57	DS	1	Total O 1 1	0	0

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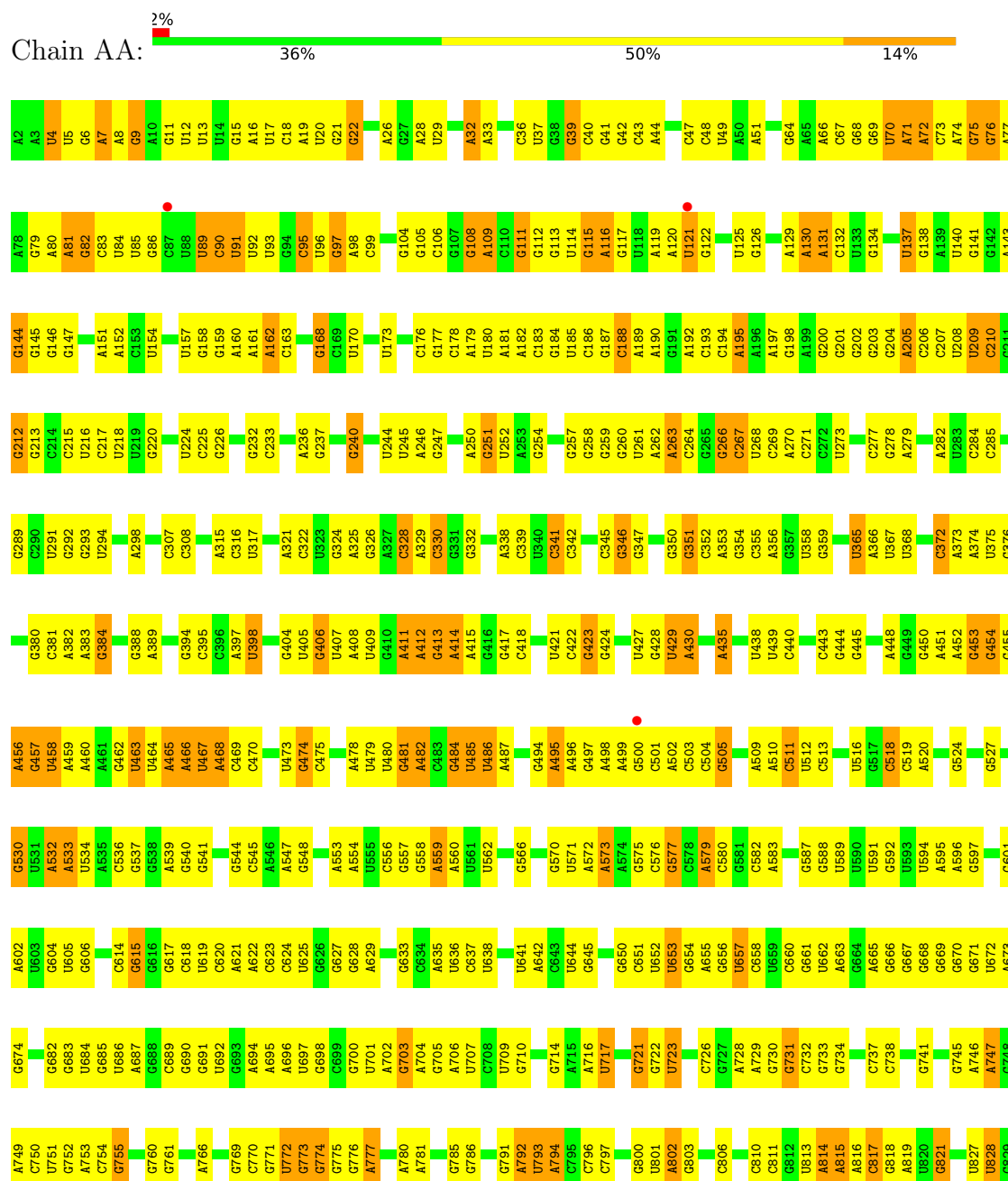
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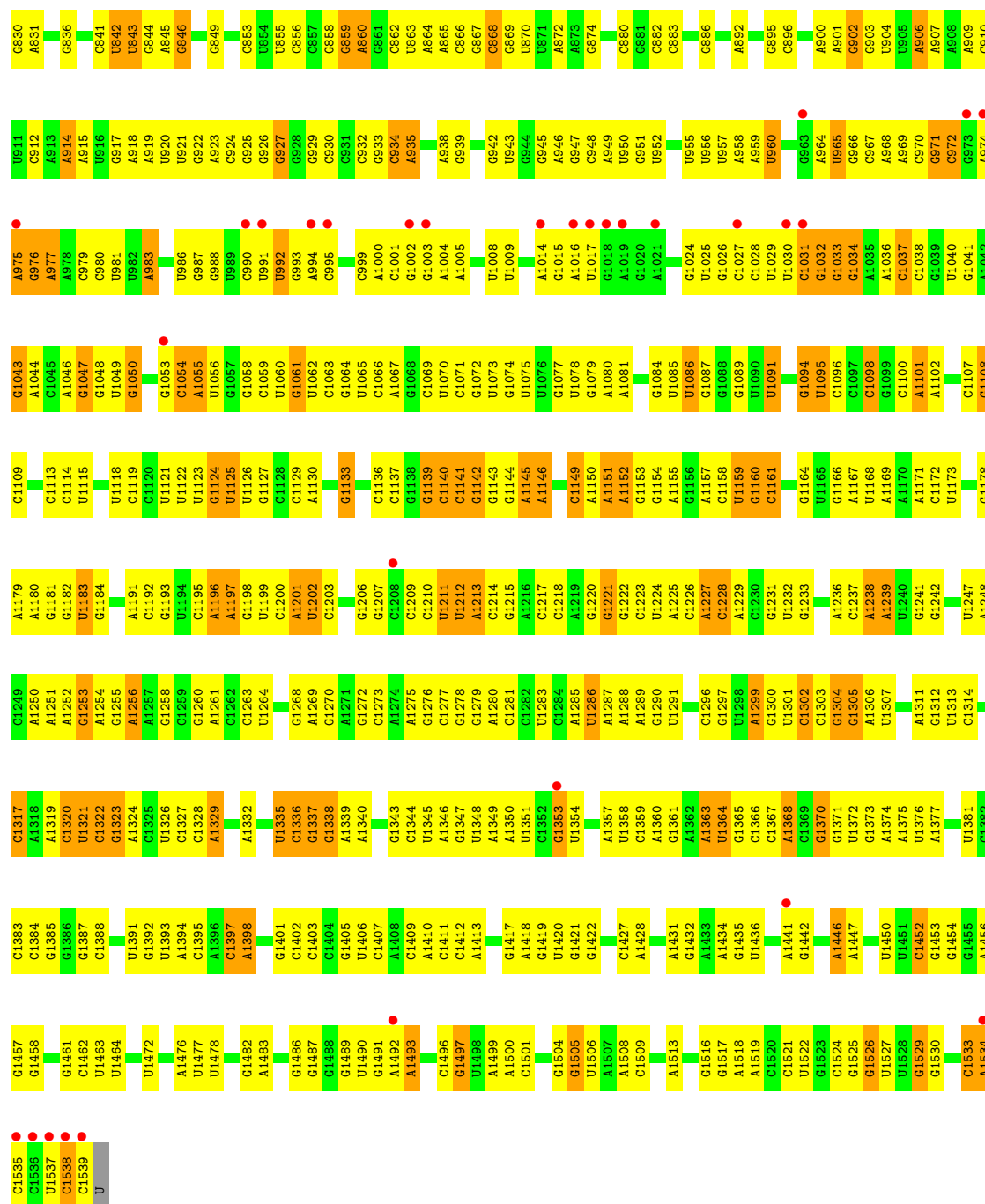
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	DT	3	Total 3	O 3	0	0
57	DU	1	Total 1	O 1	0	0
57	DV	1	Total 1	O 1	0	0
57	D2	1	Total 1	O 1	0	0
57	D3	2	Total 2	O 2	0	0
57	D4	1	Total 1	O 1	0	0

3 Residue-property plots

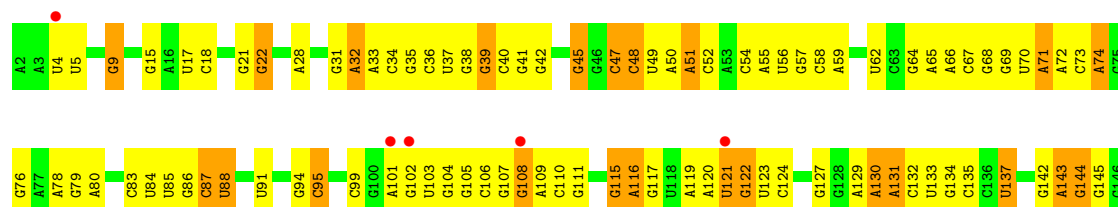
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

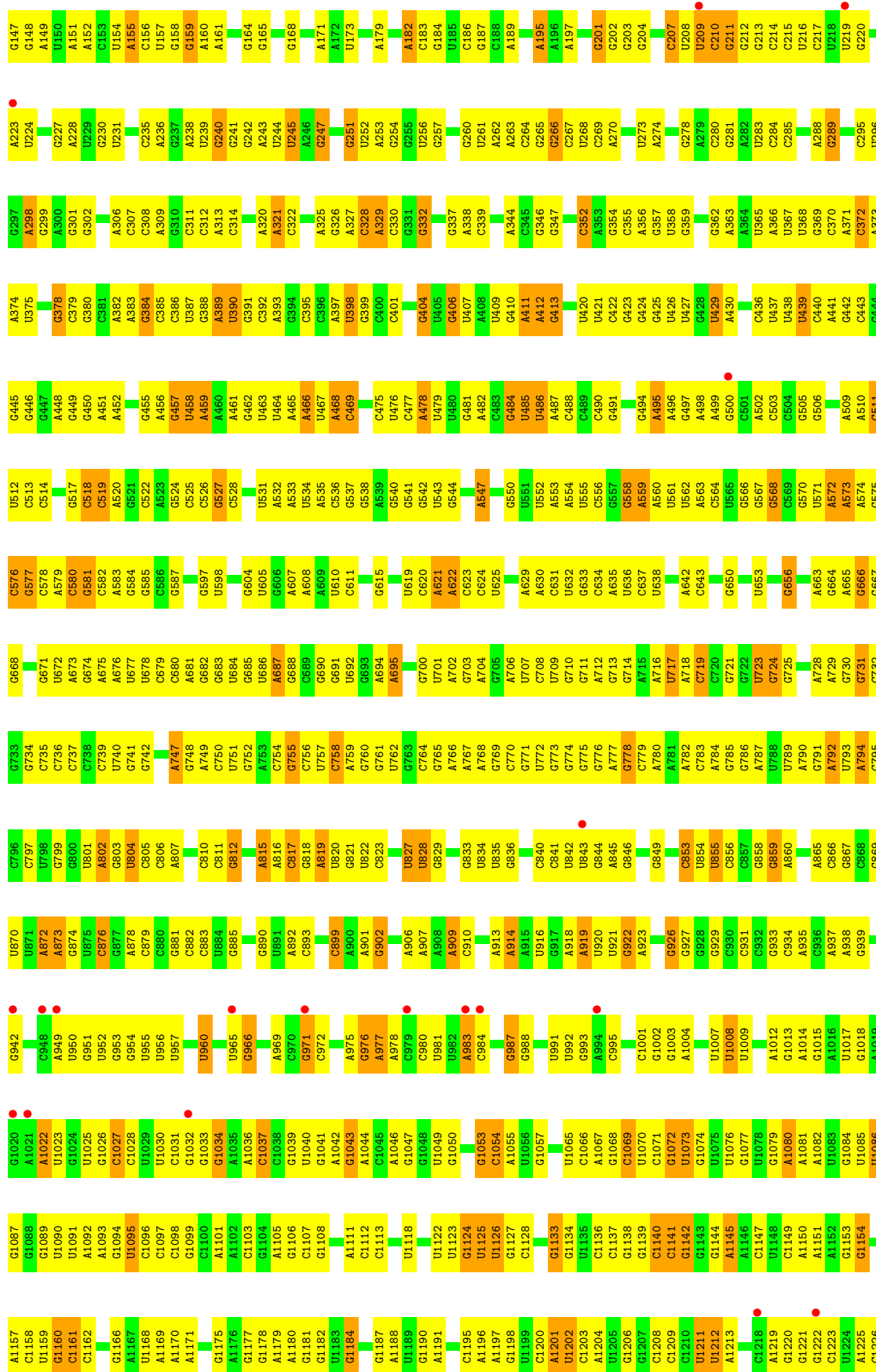
• Molecule 1: 16S rRNA

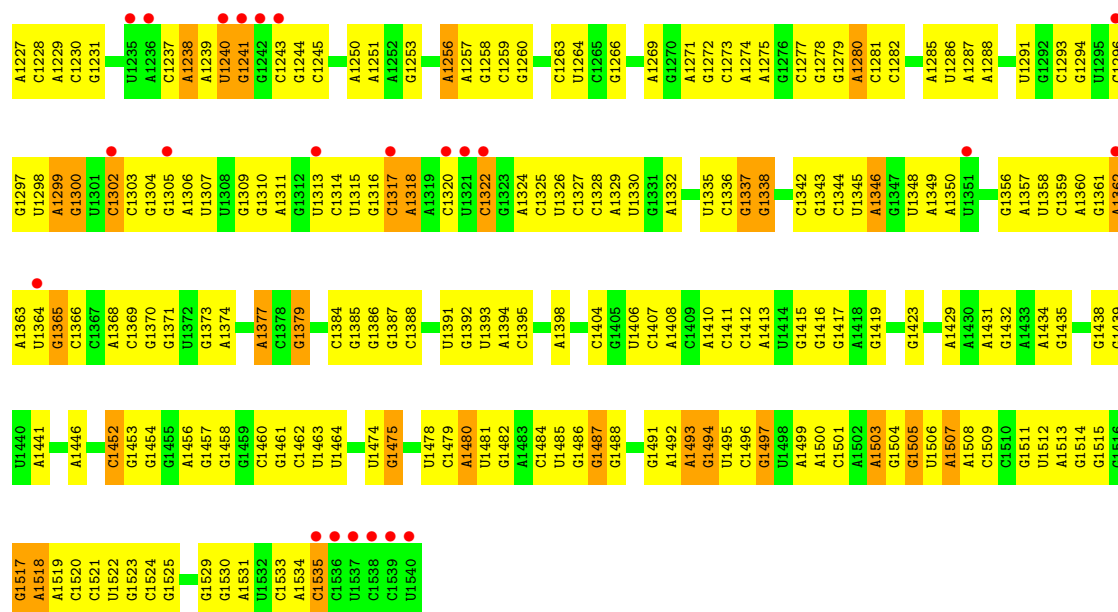




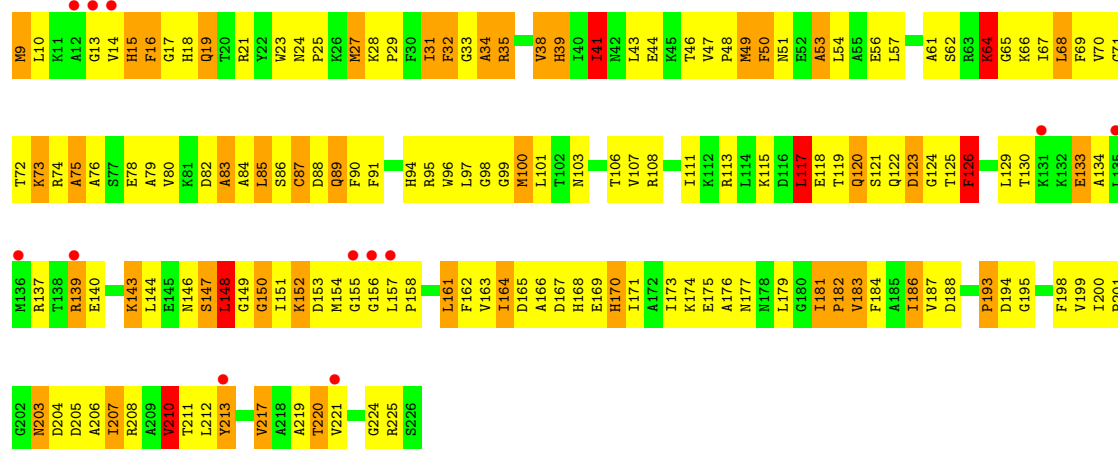
• Molecule 1: 16S rRNA



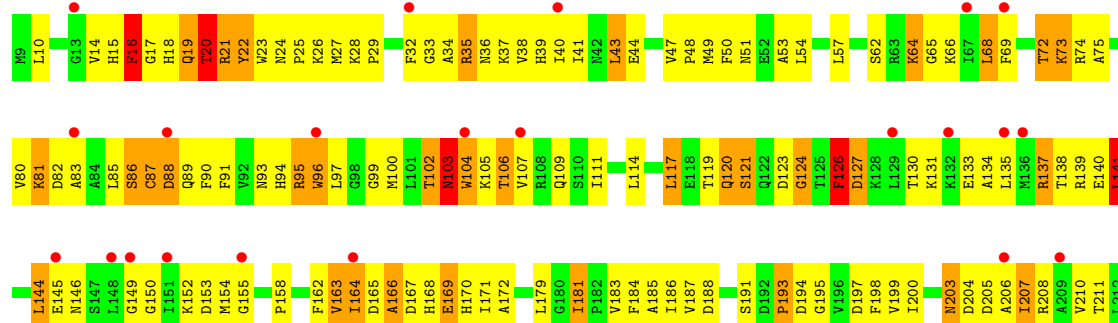


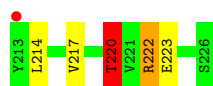


- Molecule 2: 30S ribosomal protein S2



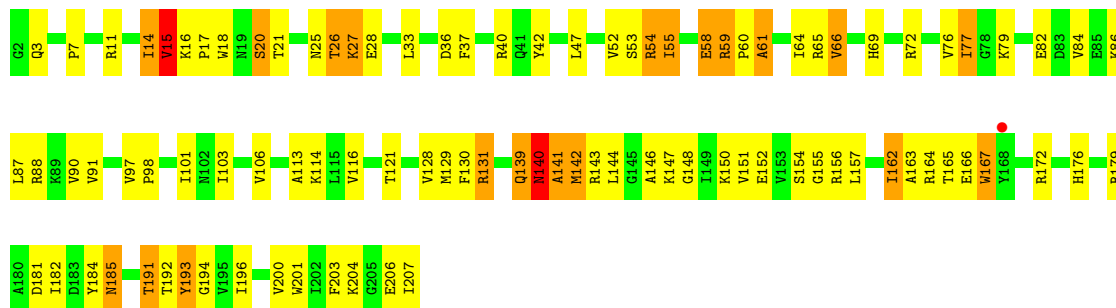
- Molecule 2: 30S ribosomal protein S2





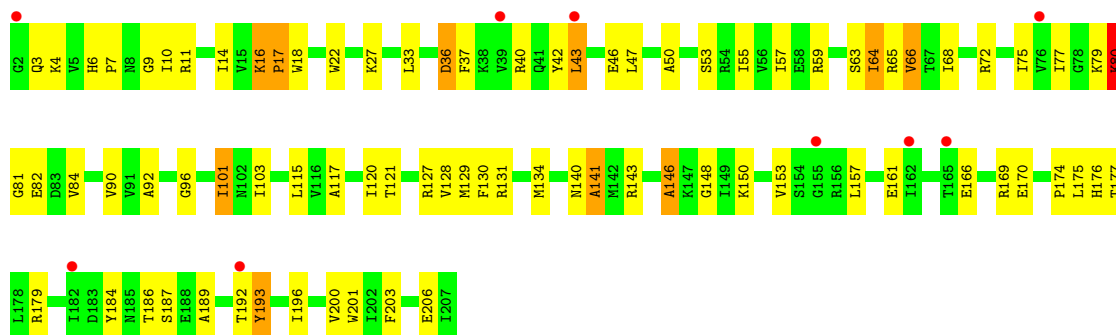
• Molecule 3: 30S ribosomal protein S3

Chain AC: 53% 36% 10%



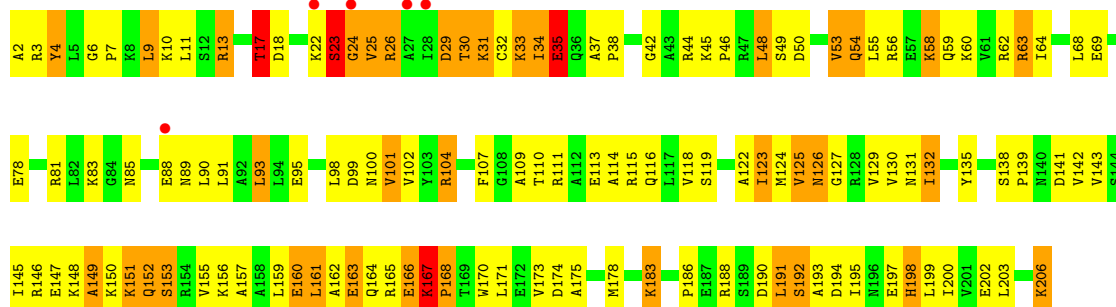
• Molecule 3: 30S ribosomal protein S3

Chain CC: 4% 60% 34% 5%



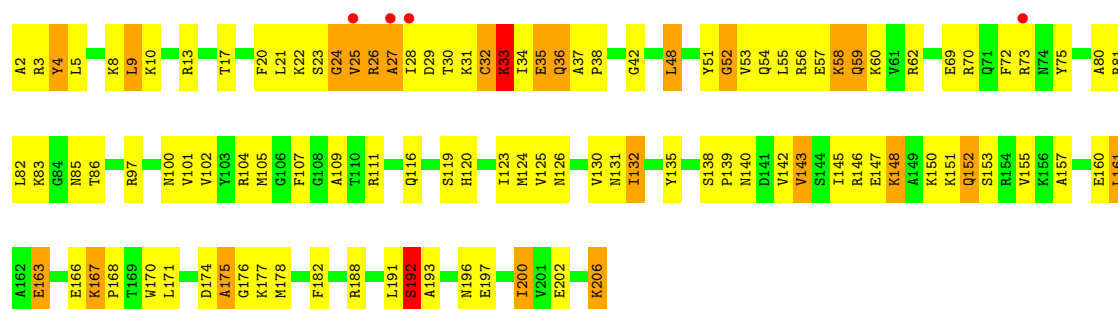
• Molecule 4: 30S ribosomal protein S4

Chain AD: 2% 37% 43% 18%

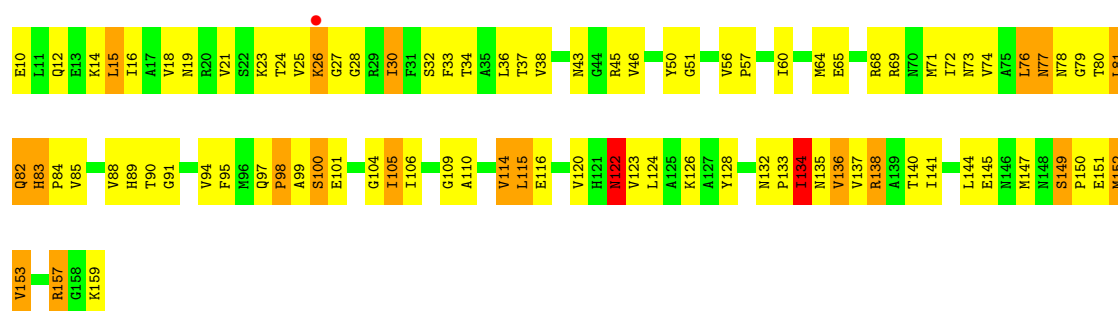


• Molecule 4: 30S ribosomal protein S4

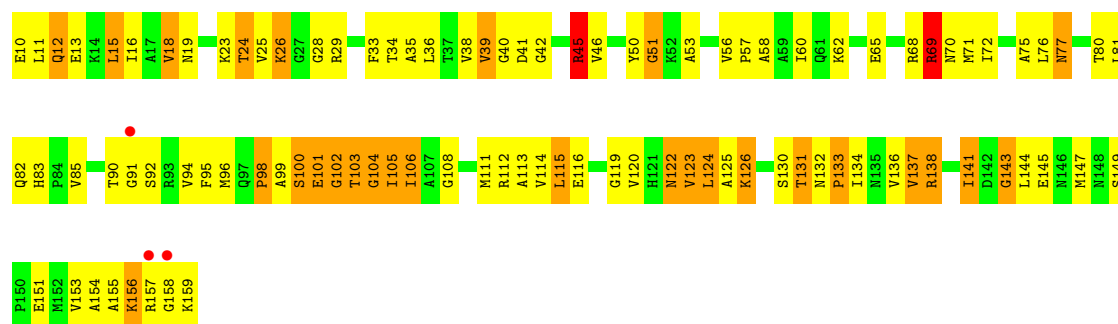
Chain CD: 2% 46% 41% 11%



• Molecule 5: 30S ribosomal protein S5



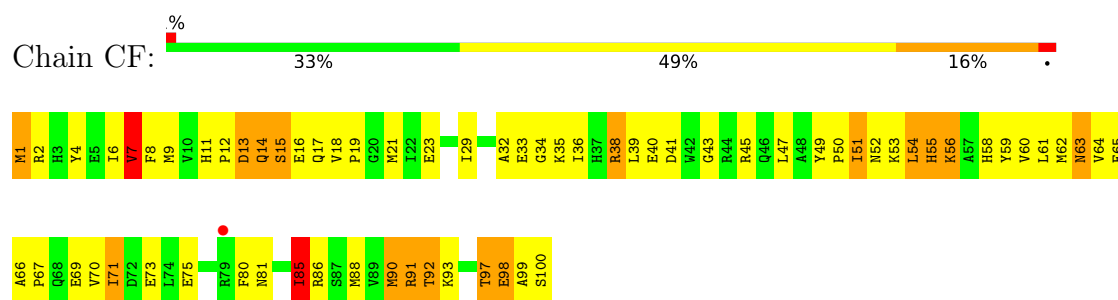
• Molecule 5: 30S ribosomal protein S5



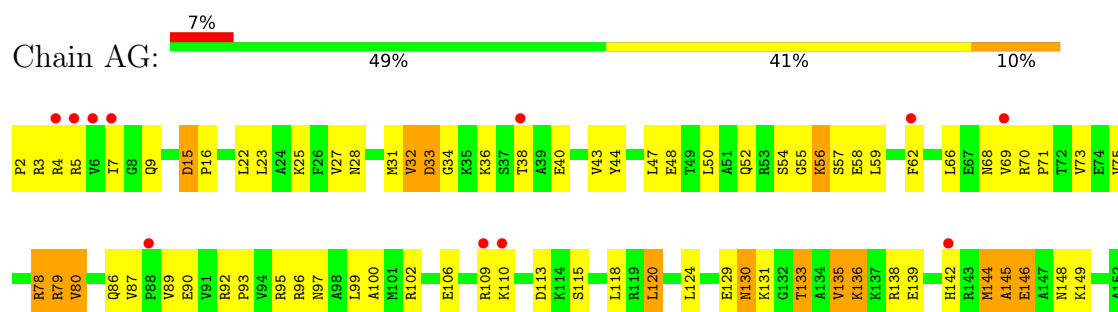
• Molecule 6: 30S ribosomal protein S6



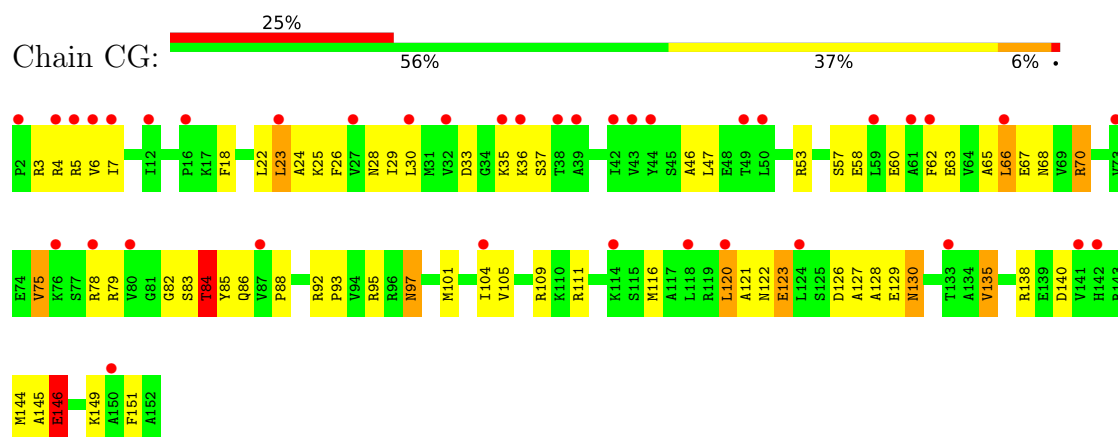
• Molecule 6: 30S ribosomal protein S6



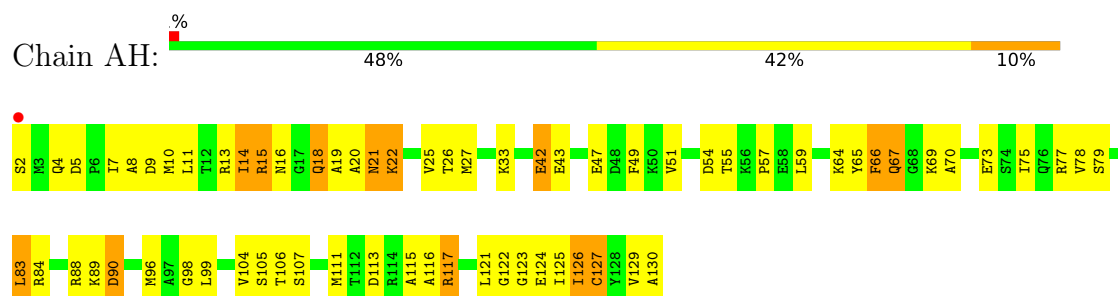
• Molecule 7: 30S ribosomal protein S7



• Molecule 7: 30S ribosomal protein S7

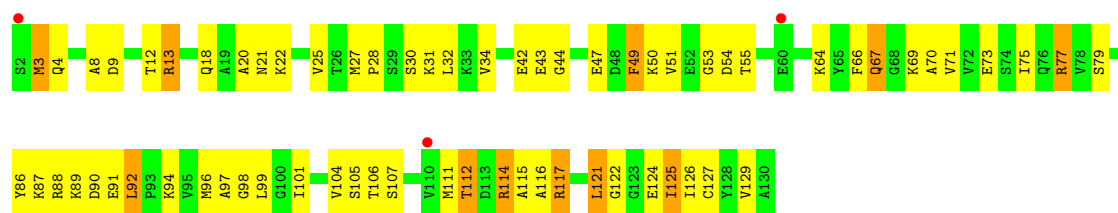


• Molecule 8: 30S ribosomal protein S8

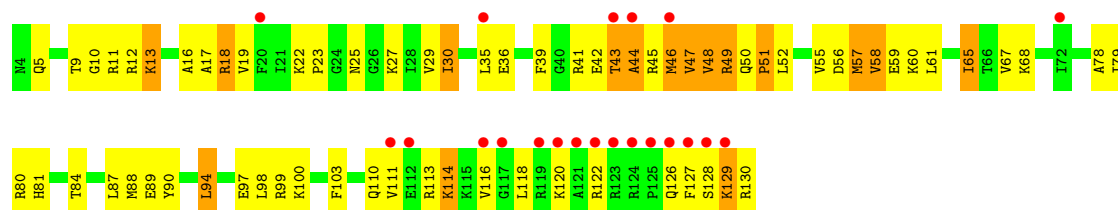


• Molecule 8: 30S ribosomal protein S8

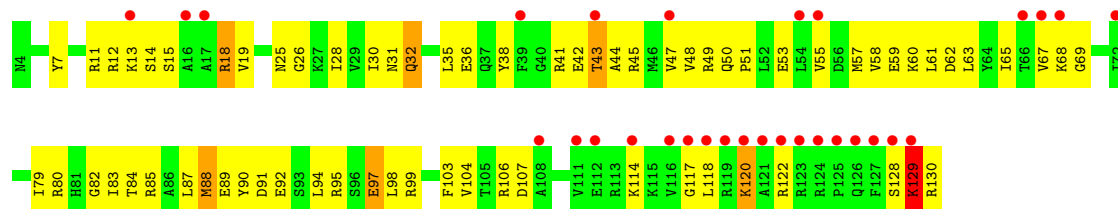




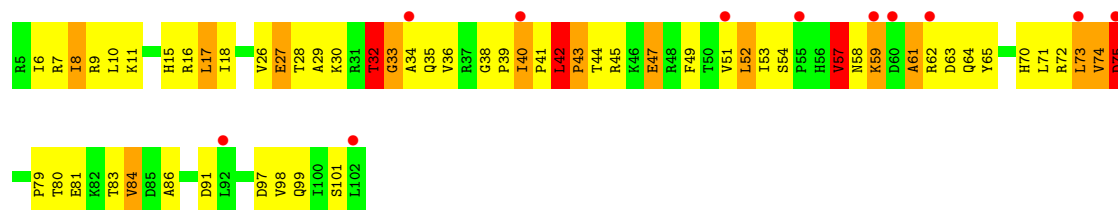
• Molecule 9: 30S ribosomal protein S9



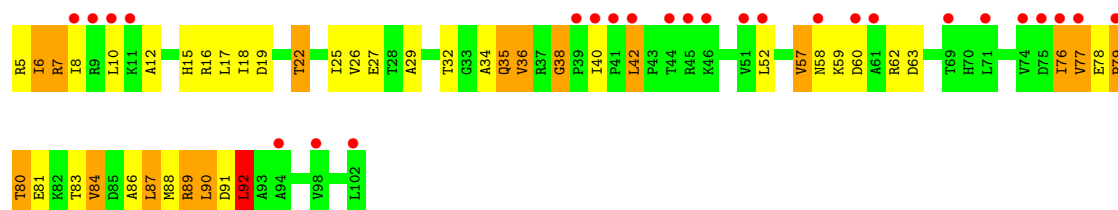
• Molecule 9: 30S ribosomal protein S9



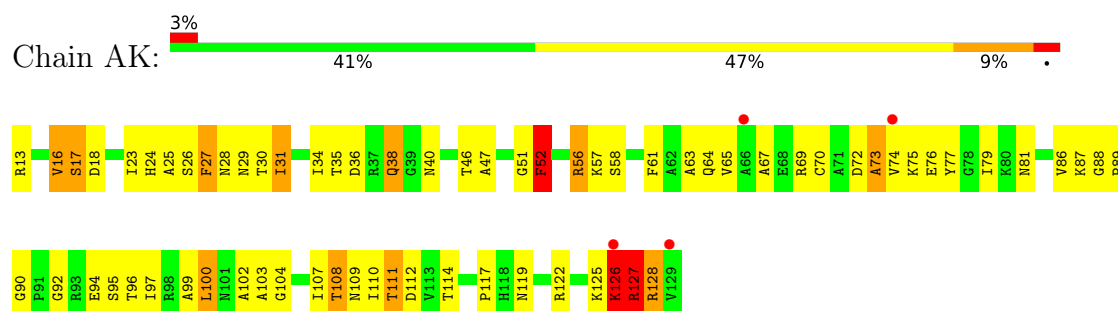
• Molecule 10: 30S ribosomal protein S10



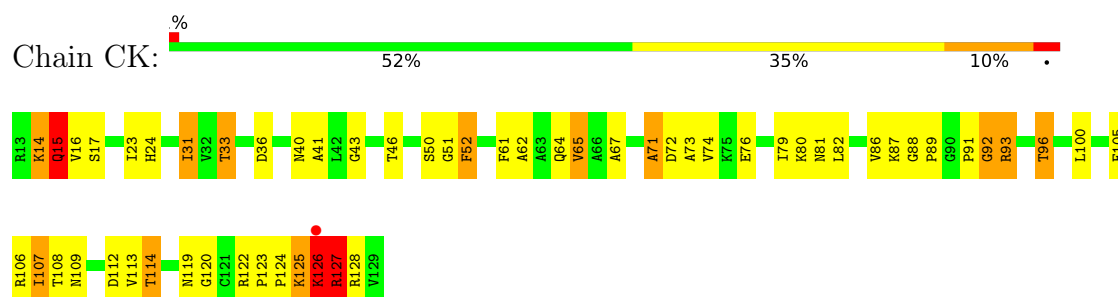
• Molecule 10: 30S ribosomal protein S10



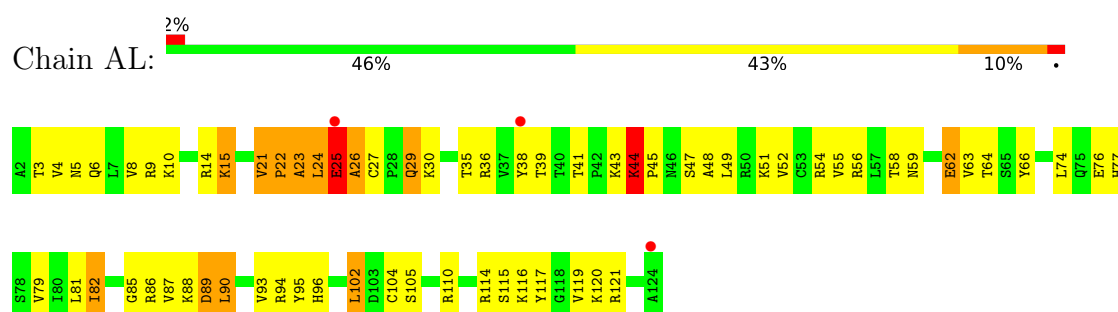
- Molecule 11: 30S ribosomal protein S11



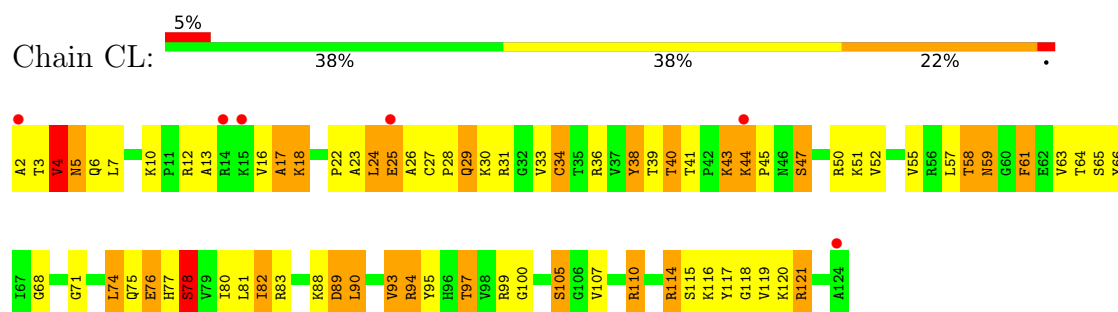
- Molecule 11: 30S ribosomal protein S11



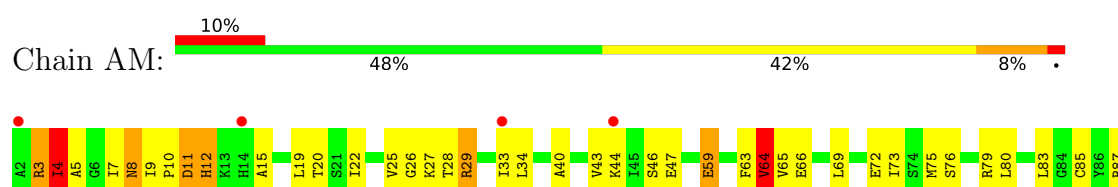
- Molecule 12: 30S ribosomal protein S12

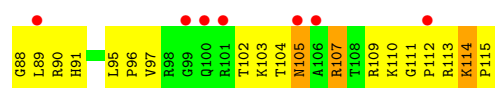


- Molecule 12: 30S ribosomal protein S12

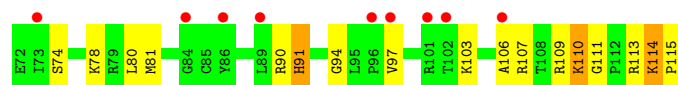
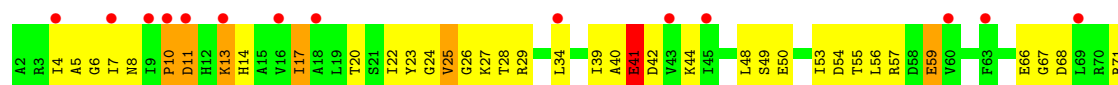


- Molecule 13: 30S ribosomal protein S13

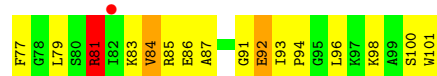
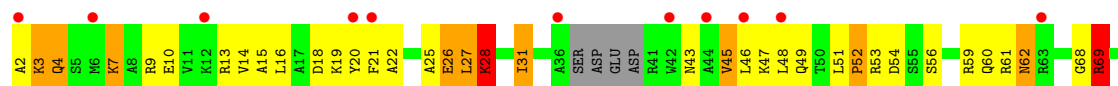
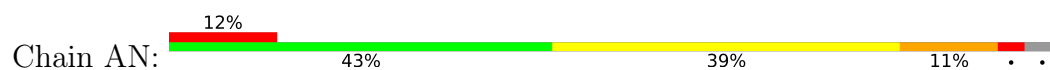




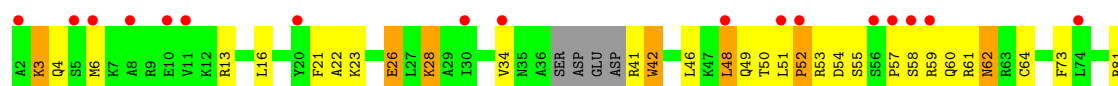
• Molecule 13: 30S ribosomal protein S13



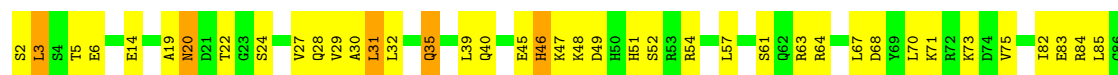
• Molecule 14: 30S ribosomal protein S14



• Molecule 14: 30S ribosomal protein S14

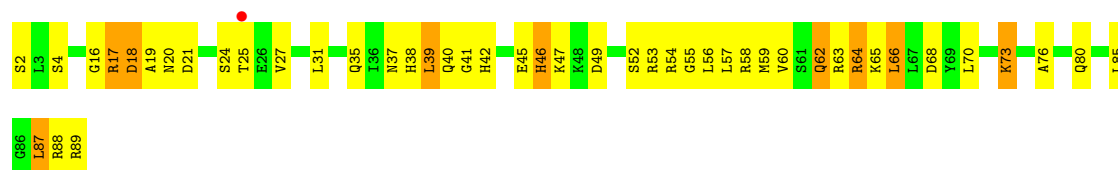


• Molecule 15: 30S ribosomal protein S15



• Molecule 15: 30S ribosomal protein S15

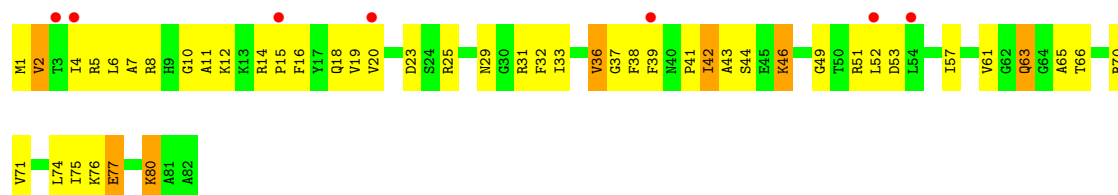
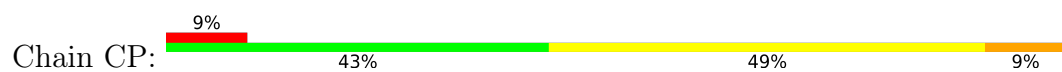




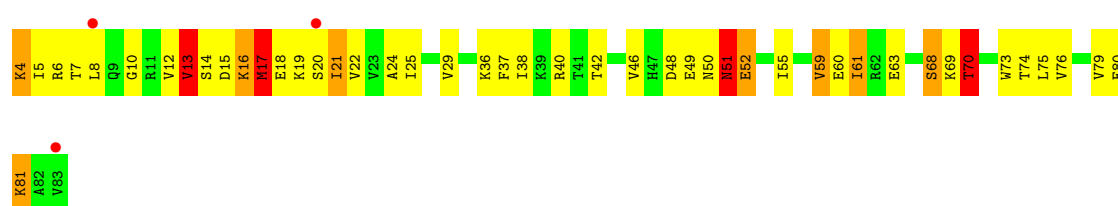
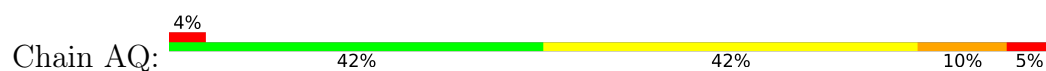
- Molecule 16: 30S ribosomal protein S16



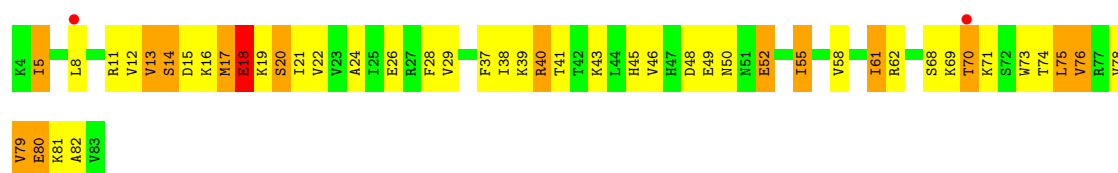
- Molecule 16: 30S ribosomal protein S16



- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17



- Molecule 18: 30S ribosomal protein S18

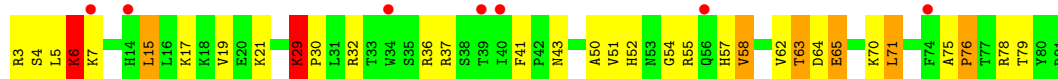




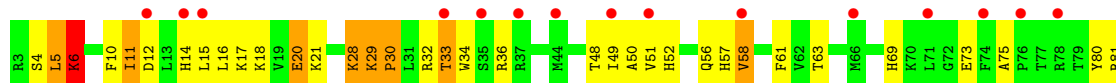
- Molecule 18: 30S ribosomal protein S18



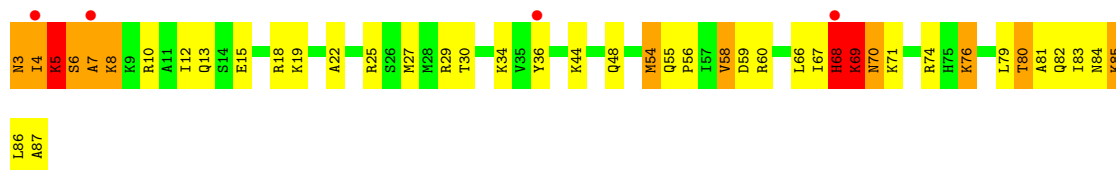
- Molecule 19: 30S ribosomal protein S19



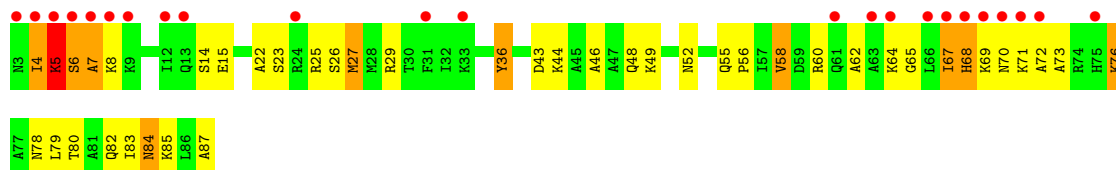
- Molecule 19: 30S ribosomal protein S19



- Molecule 20: 30S ribosomal protein S20

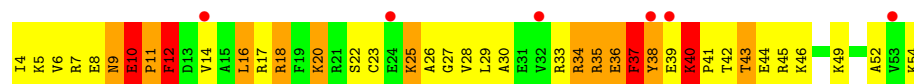


- Molecule 20: 30S ribosomal protein S20

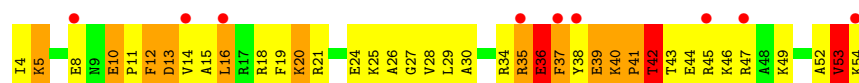


- Molecule 21: 30S ribosomal protein S21

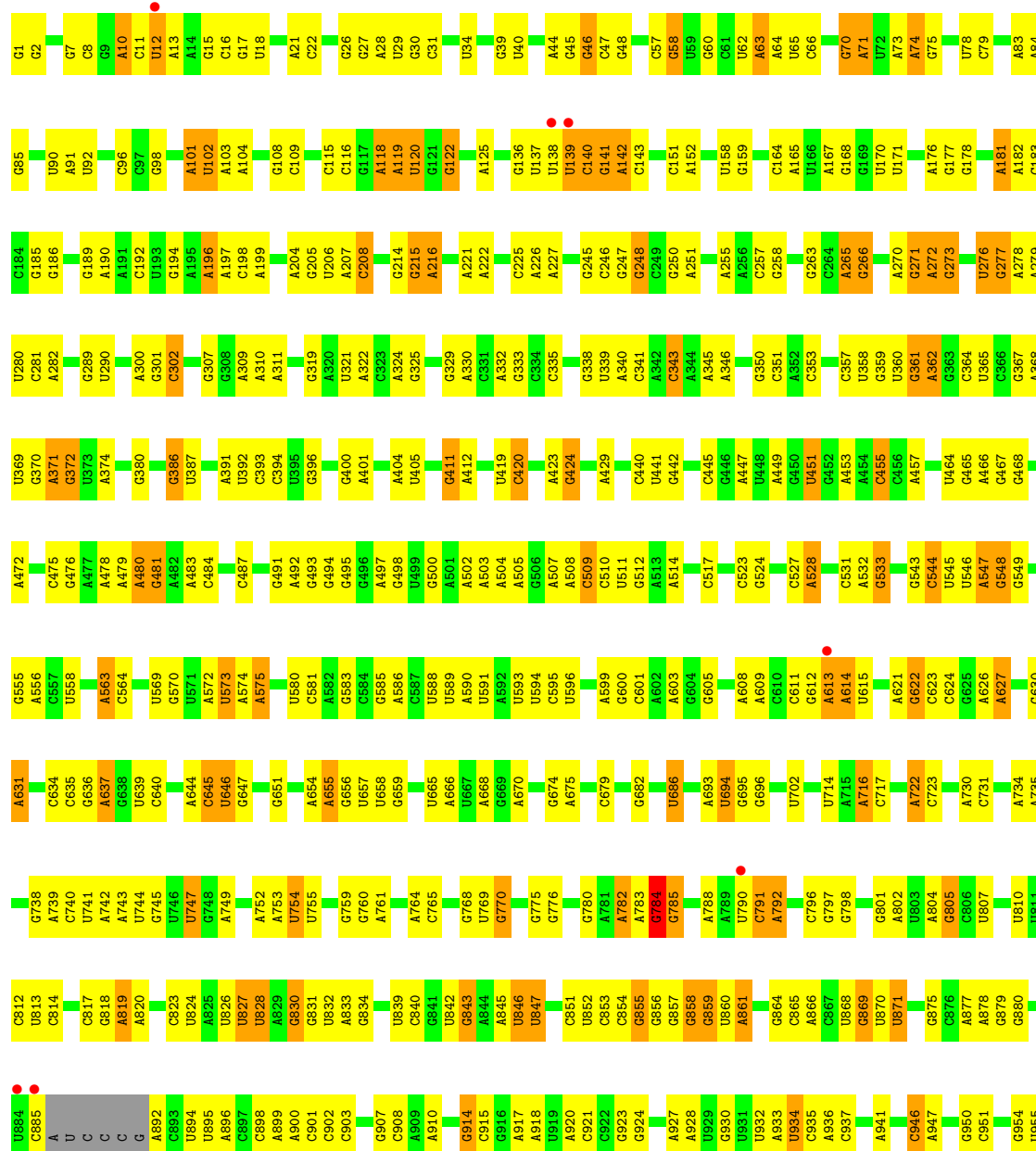




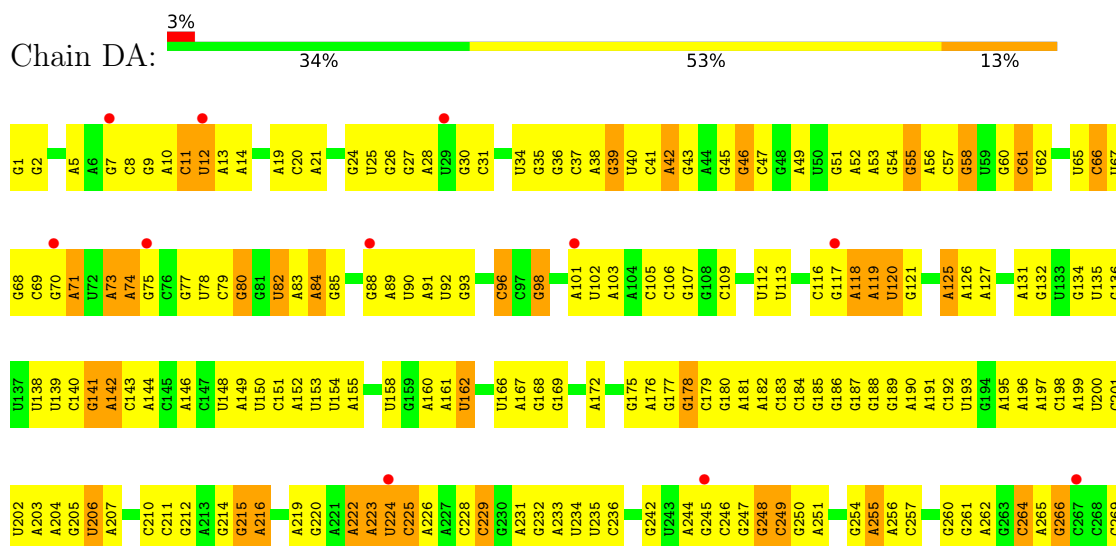
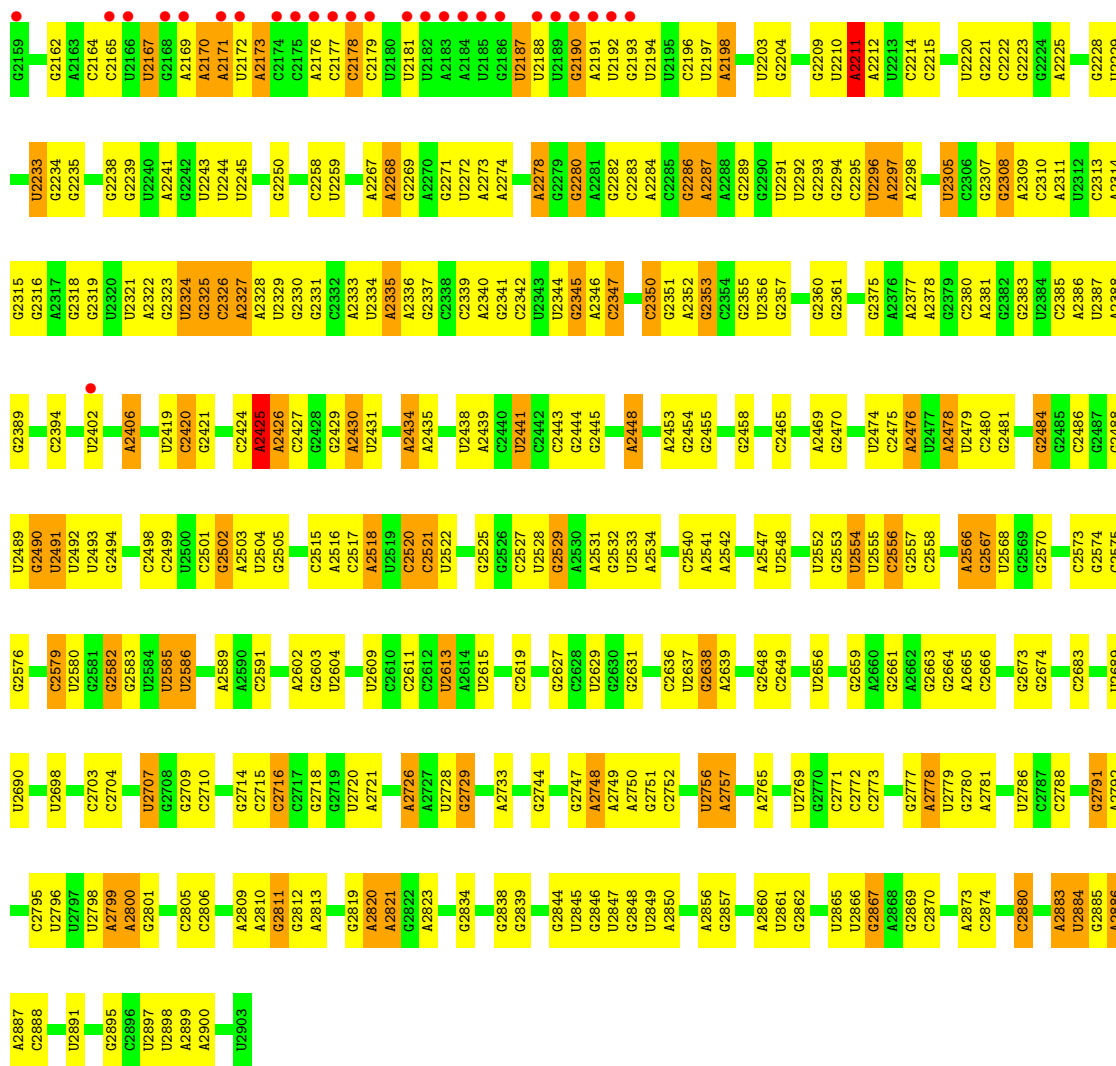
- Molecule 21: 30S ribosomal protein S21

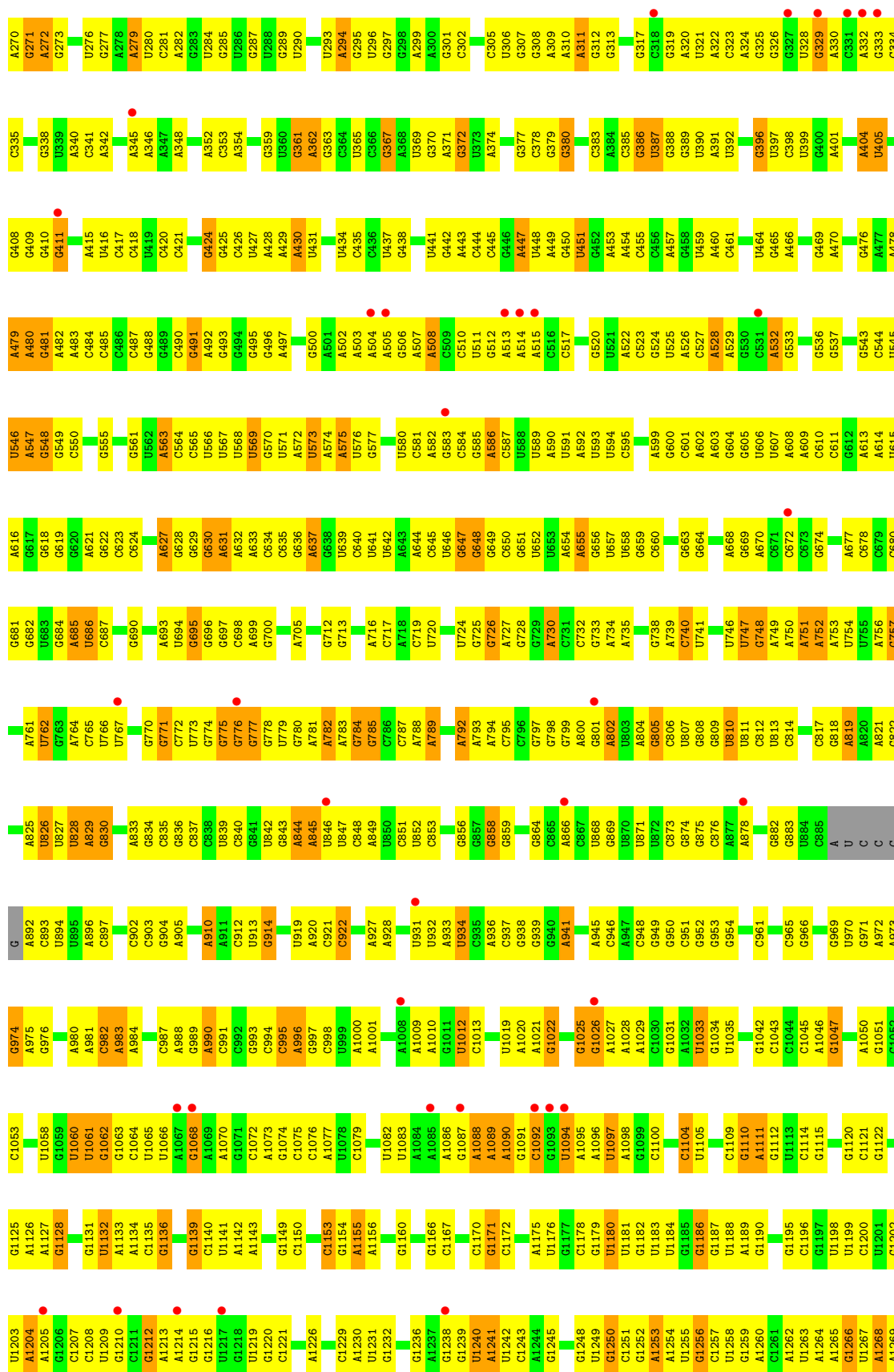


- Molecule 22: 23S rRNA

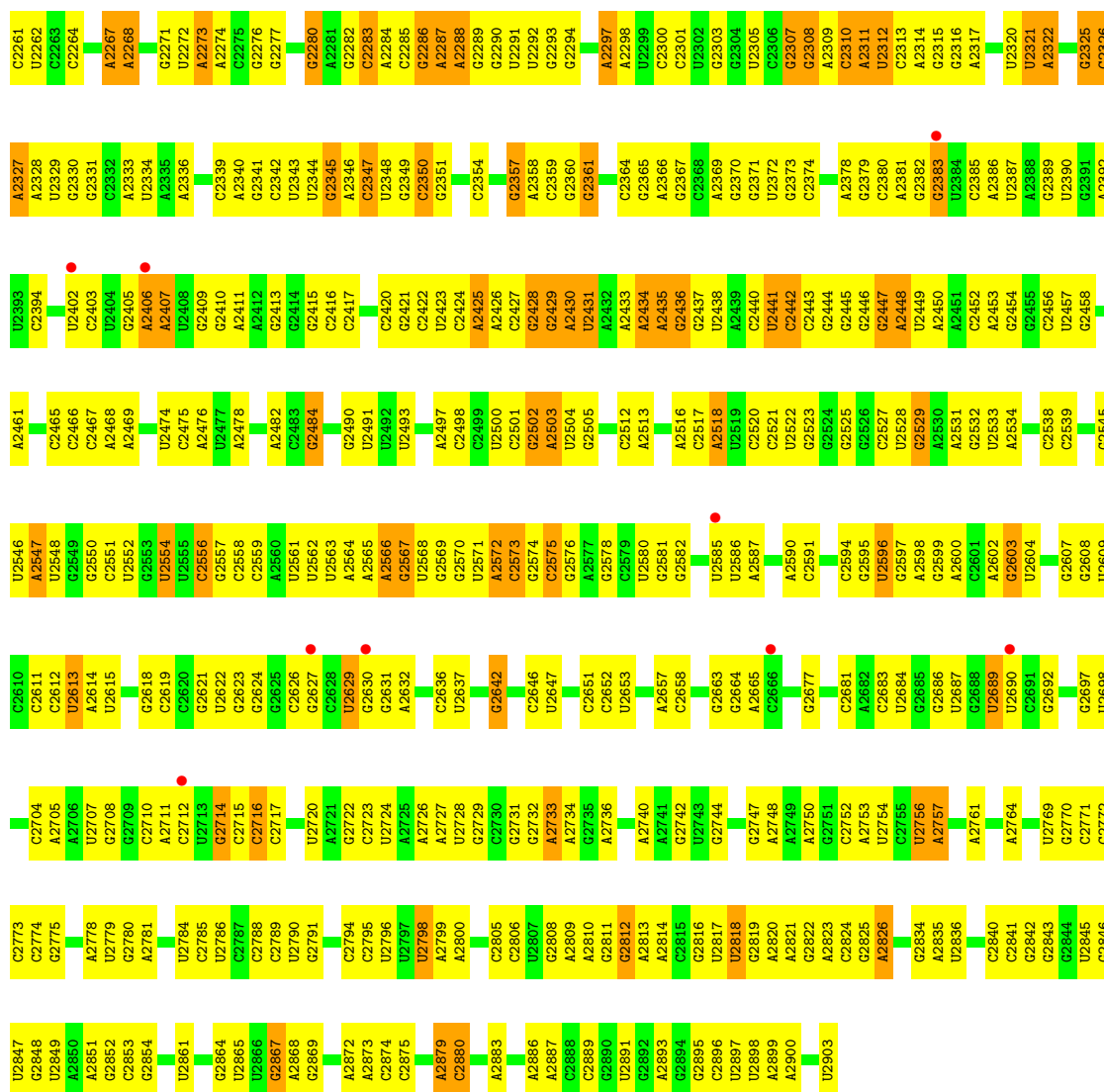






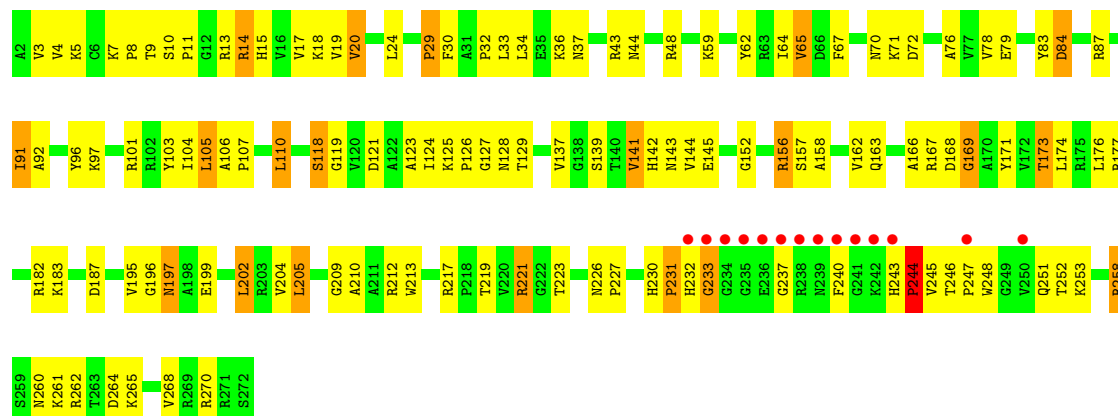


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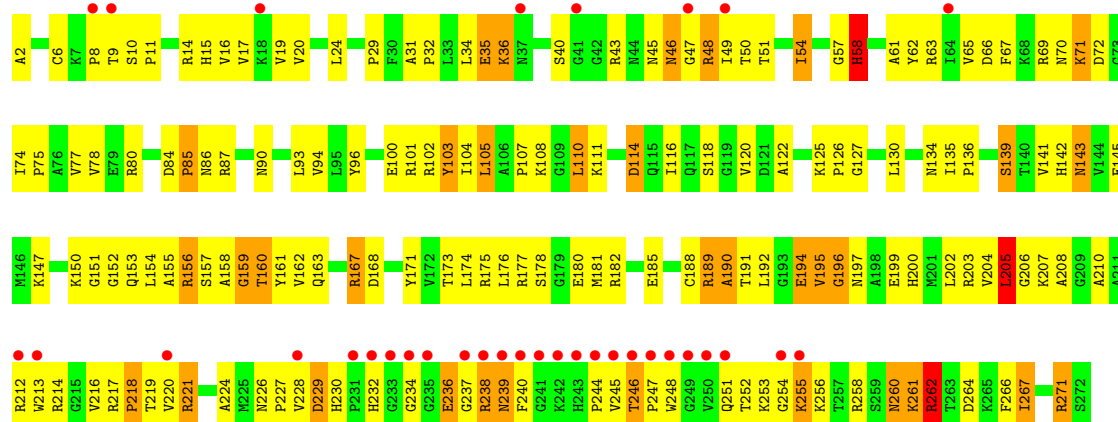




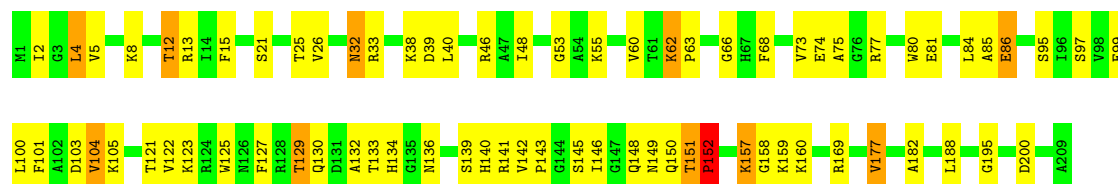
- Molecule 24: 50S ribosomal protein L2



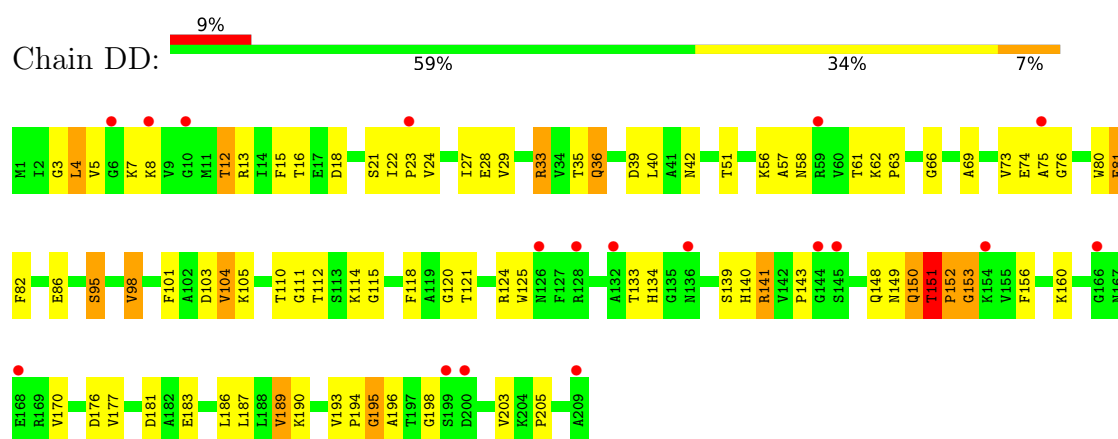
- Molecule 24: 50S ribosomal protein L2



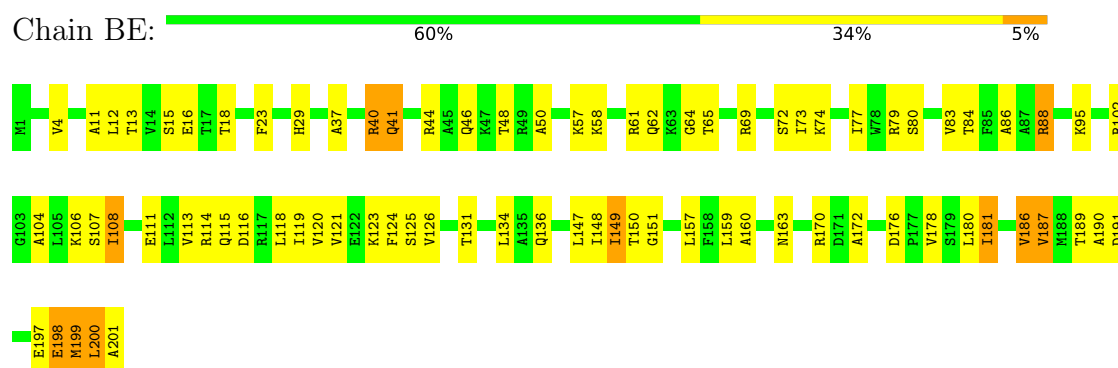
- Molecule 25: 50S ribosomal protein L3



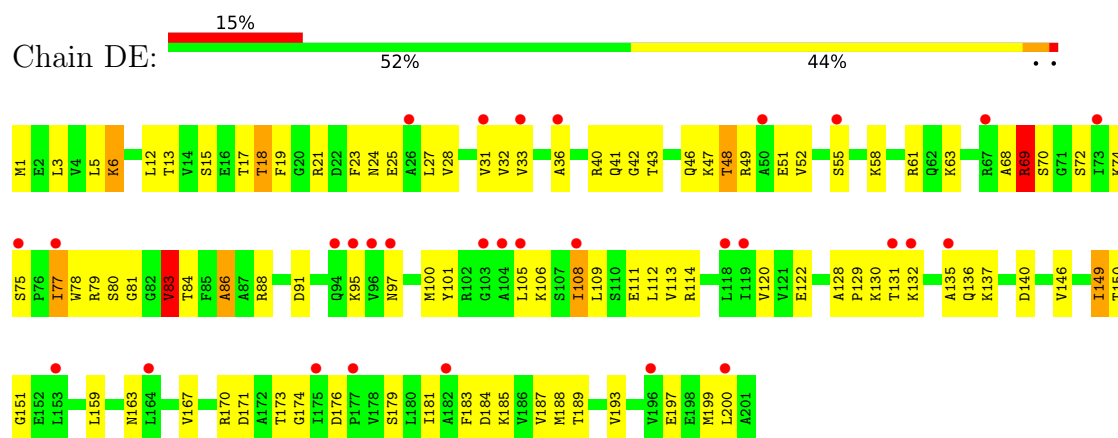
- Molecule 25: 50S ribosomal protein L3



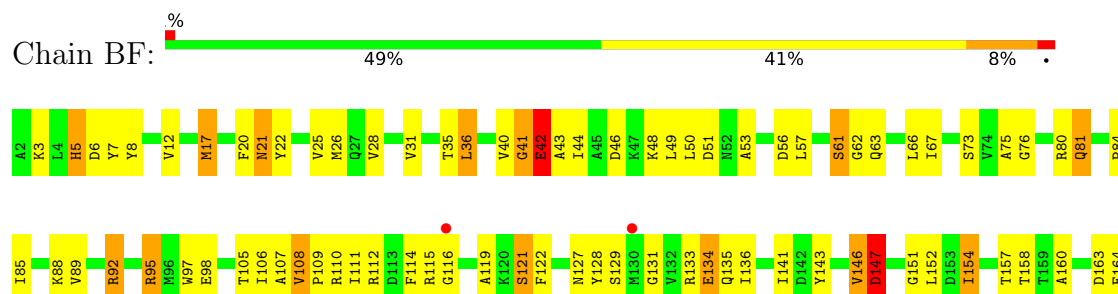
- Molecule 26: 50S ribosomal protein L4



- Molecule 26: 50S ribosomal protein L4

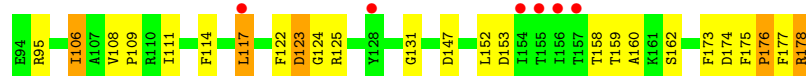
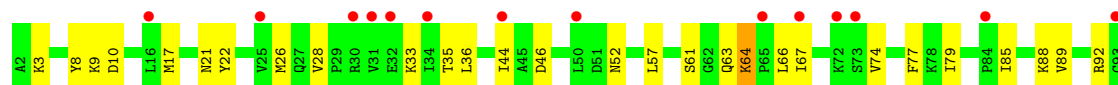
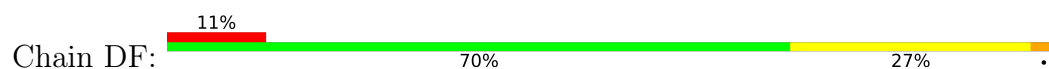


- Molecule 27: 50S ribosomal protein L5

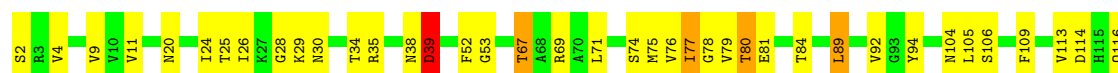




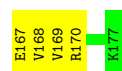
- Molecule 27: 50S ribosomal protein L5



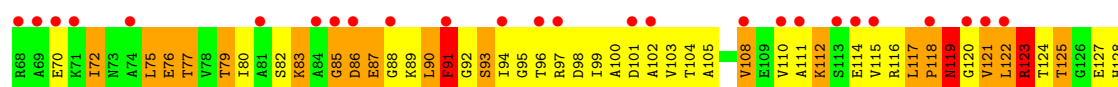
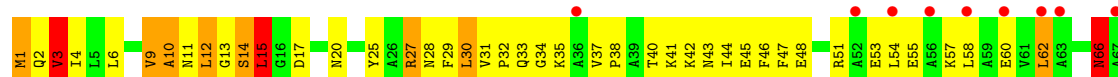
- Molecule 28: 50S ribosomal protein L6

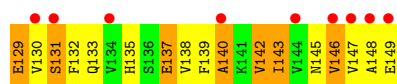


- Molecule 28: 50S ribosomal protein L6

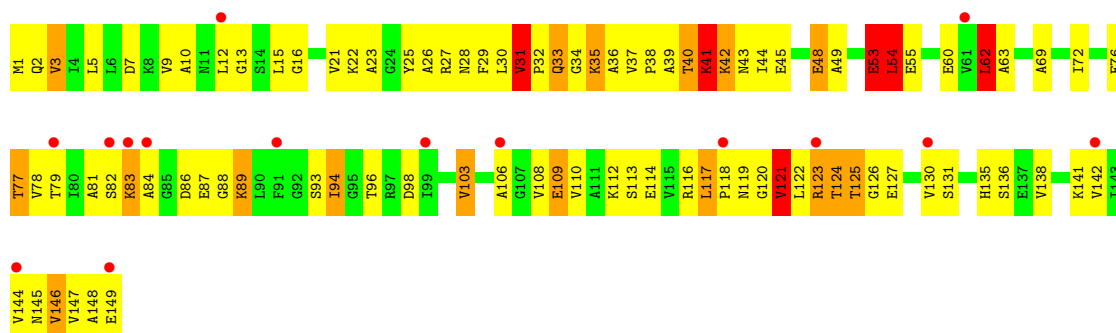


- Molecule 29: 50S ribosomal protein L9

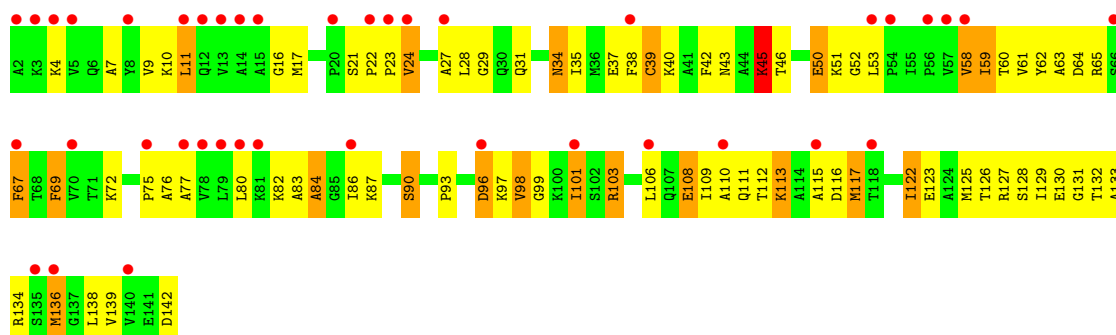




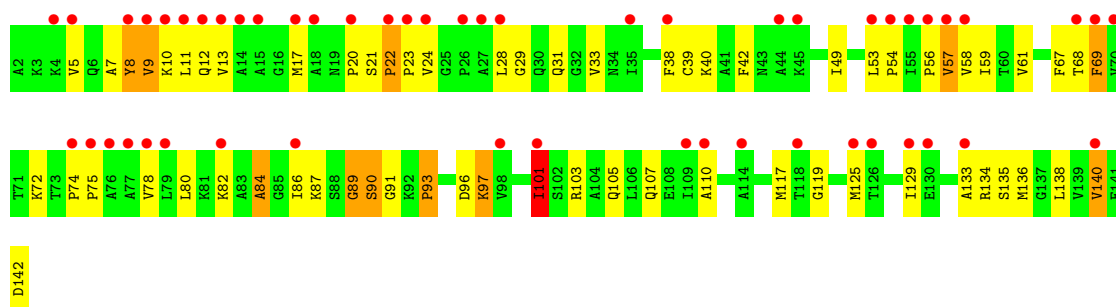
• Molecule 29: 50S ribosomal protein L9



• Molecule 30: 50S ribosomal protein L11

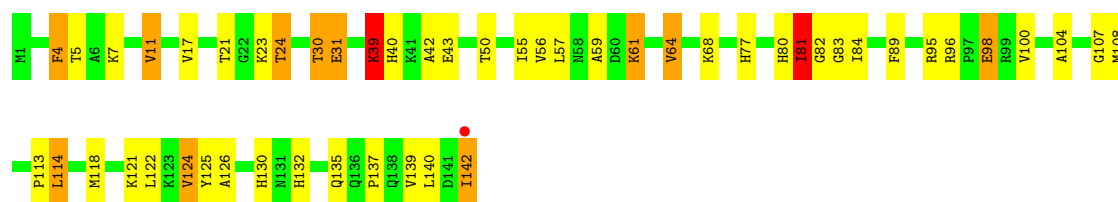


• Molecule 30: 50S ribosomal protein L11

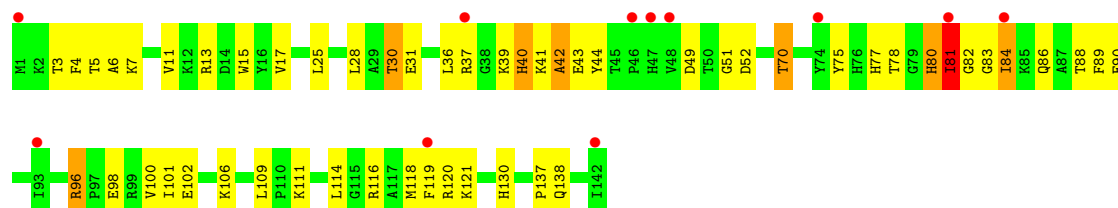


• Molecule 31: 50S ribosomal protein L13

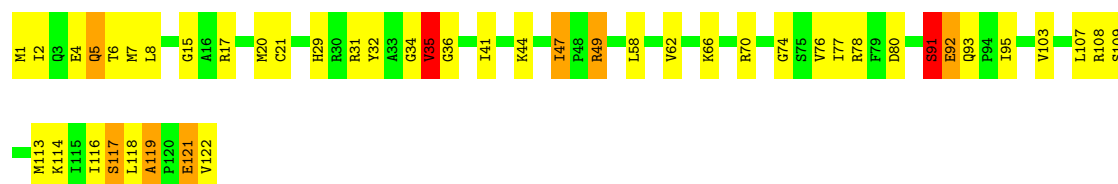




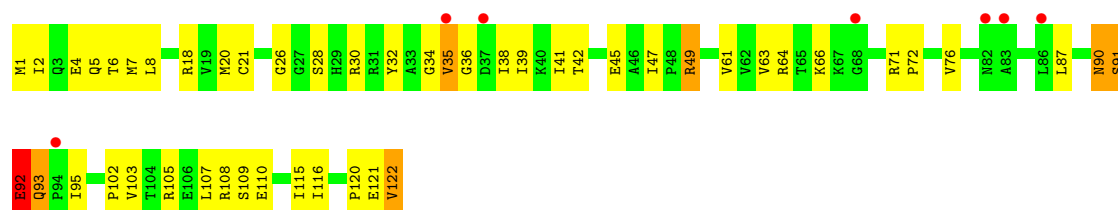
• Molecule 31: 50S ribosomal protein L13



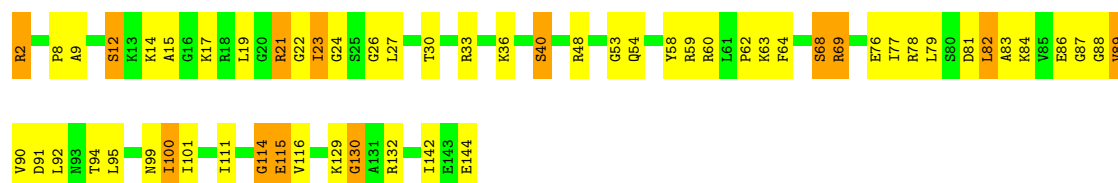
• Molecule 32: 50S ribosomal protein L14



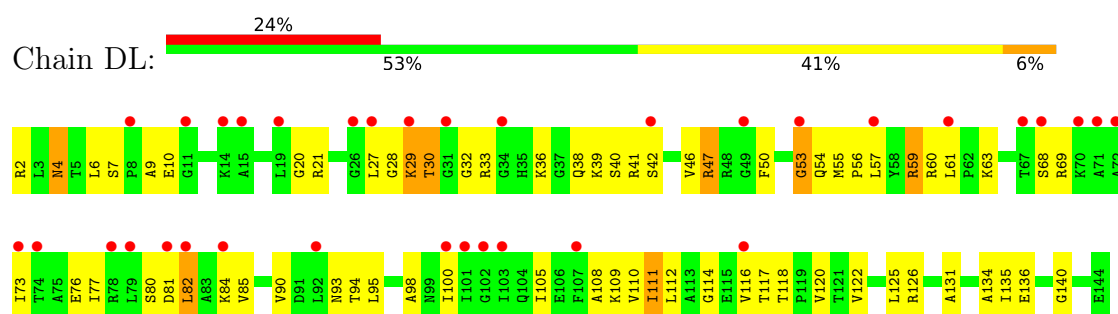
• Molecule 32: 50S ribosomal protein L14



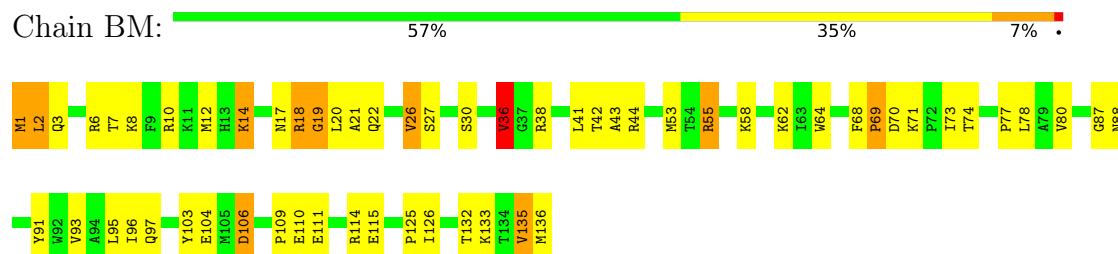
• Molecule 33: 50S ribosomal protein L15



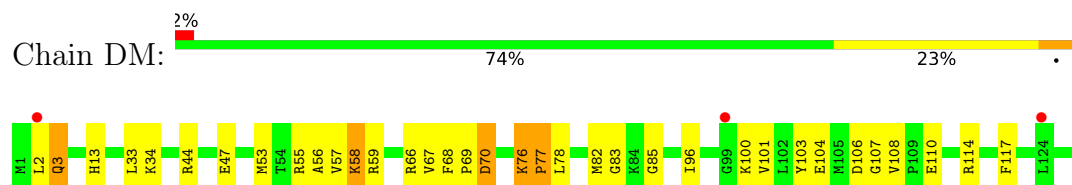
• Molecule 33: 50S ribosomal protein L15



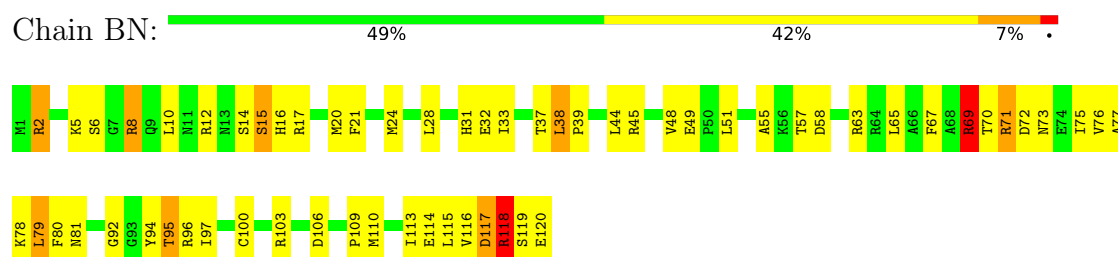
- Molecule 34: 50S ribosomal protein L16



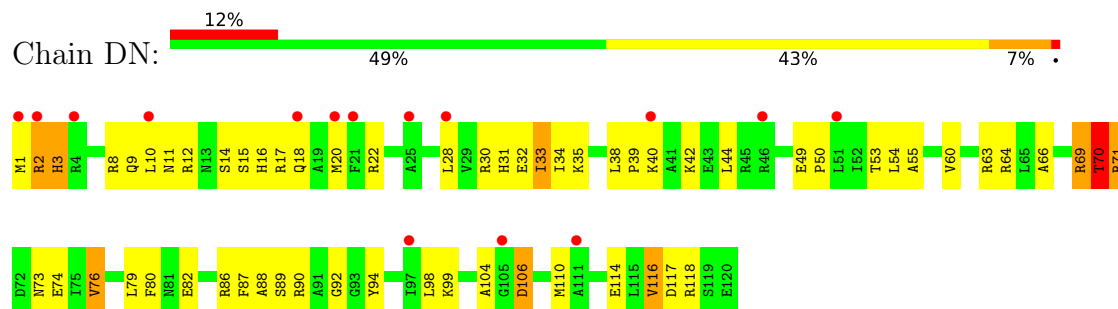
- Molecule 34: 50S ribosomal protein L16



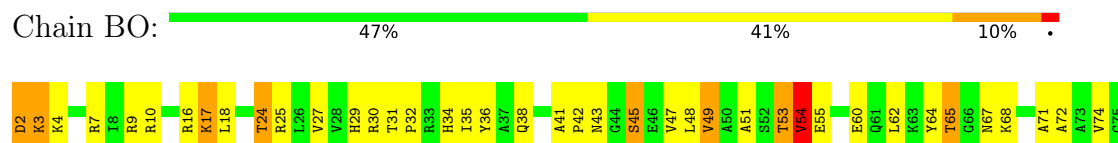
- Molecule 35: 50S ribosomal protein L17



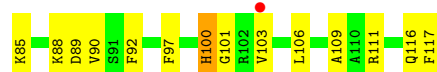
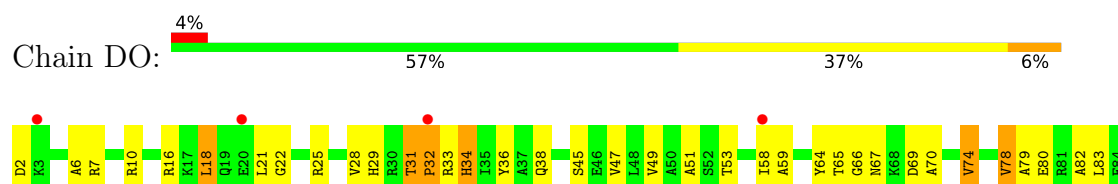
- Molecule 35: 50S ribosomal protein L17



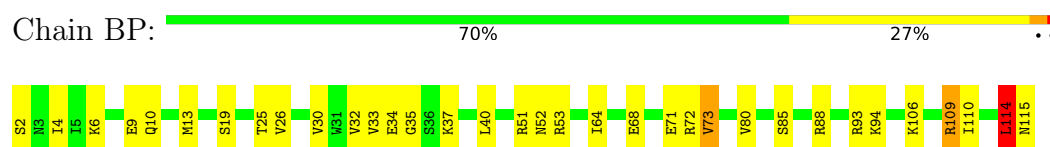
- Molecule 36: 50S ribosomal protein L18



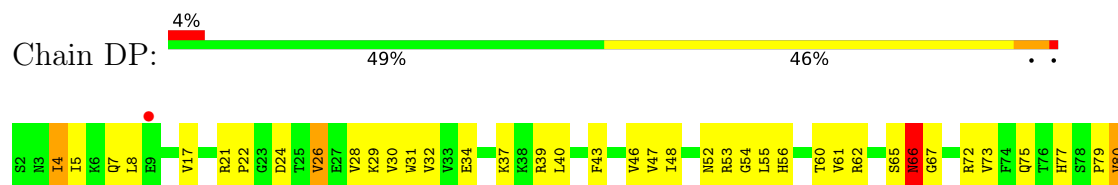
- Molecule 36: 50S ribosomal protein L18



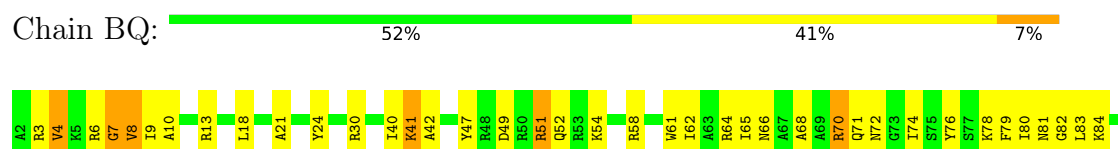
- Molecule 37: 50S ribosomal protein L19



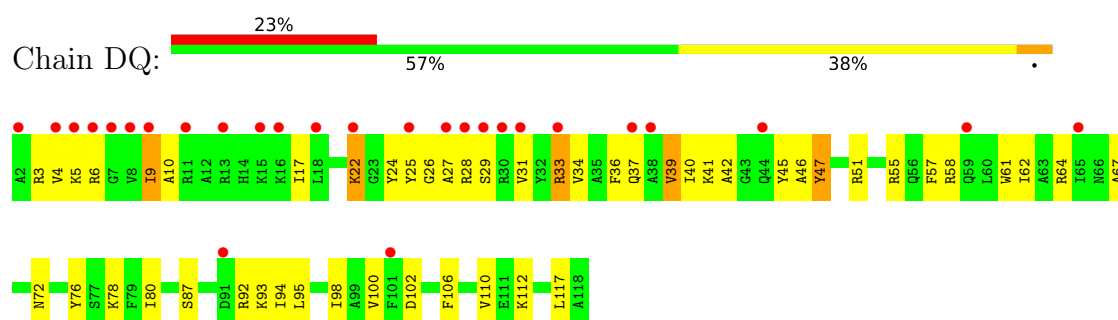
- Molecule 37: 50S ribosomal protein L19



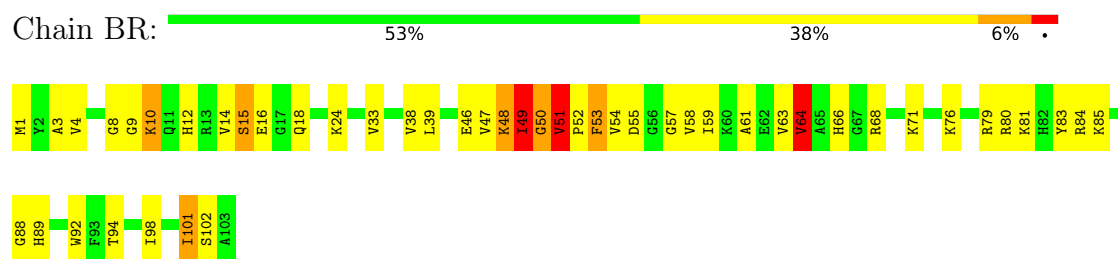
- Molecule 38: 50S ribosomal protein L20



- Molecule 38: 50S ribosomal protein L20



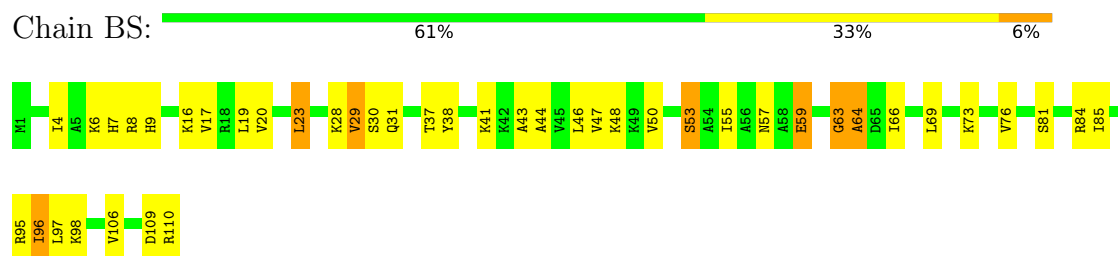
• Molecule 39: 50S ribosomal protein L21



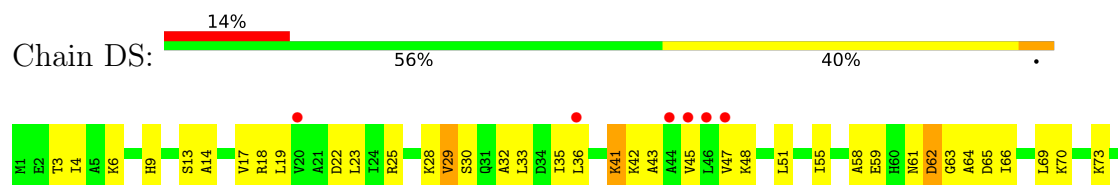
• Molecule 39: 50S ribosomal protein L21



• Molecule 40: 50S ribosomal protein L22

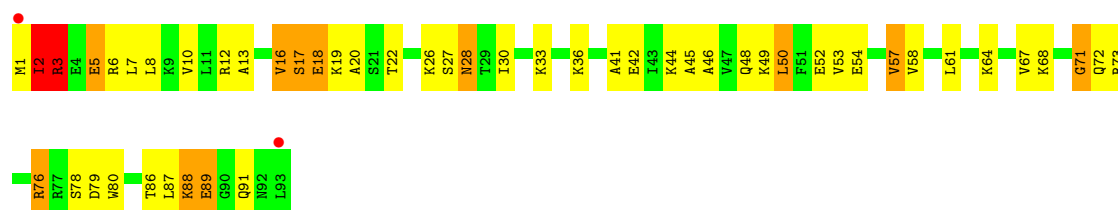


• Molecule 40: 50S ribosomal protein L22

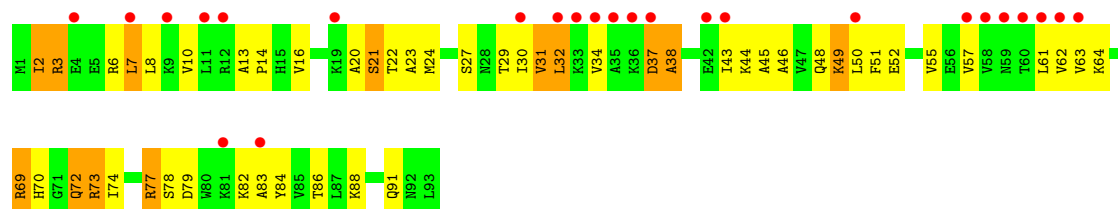




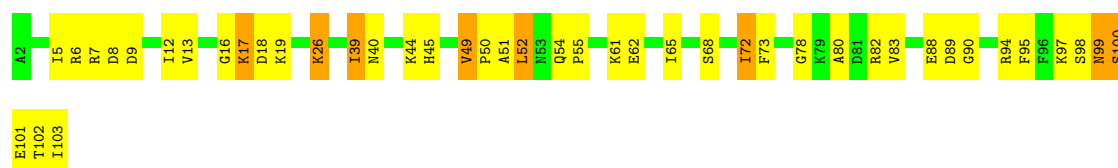
- Molecule 41: 50S ribosomal protein L23



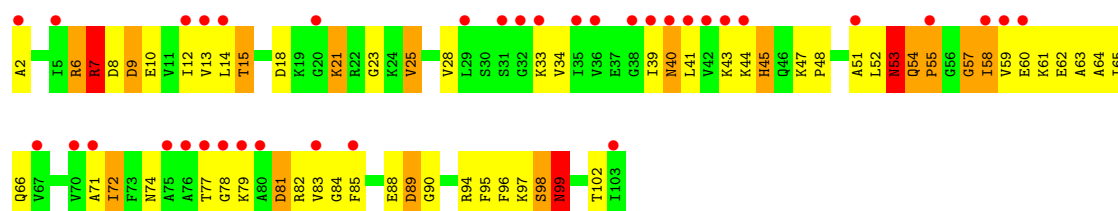
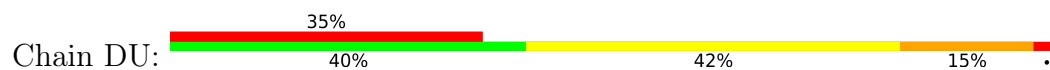
- Molecule 41: 50S ribosomal protein L23



- Molecule 42: 50S ribosomal protein L24



- Molecule 42: 50S ribosomal protein L24

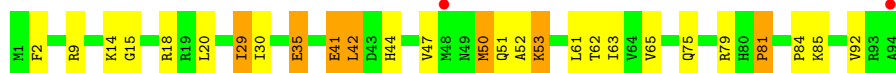
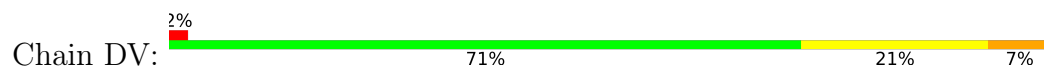


- Molecule 43: 50S ribosomal protein L25

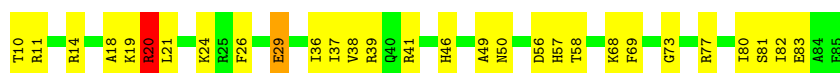




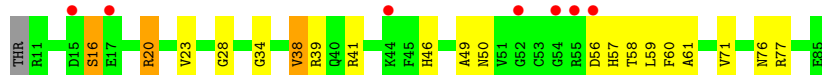
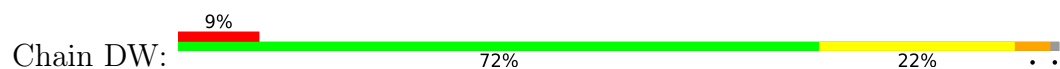
- Molecule 43: 50S ribosomal protein L25



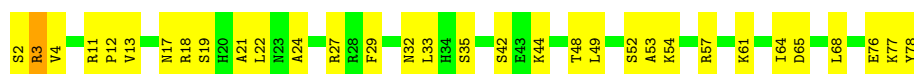
- Molecule 44: 50S ribosomal protein L27



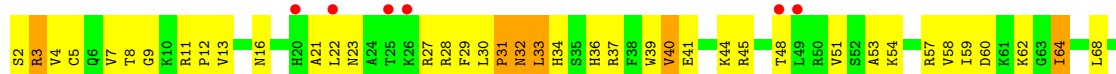
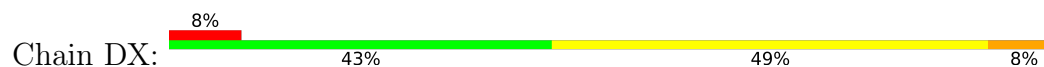
- Molecule 44: 50S ribosomal protein L27



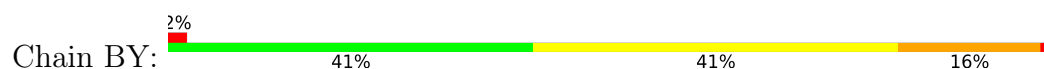
- Molecule 45: 50S ribosomal protein L28



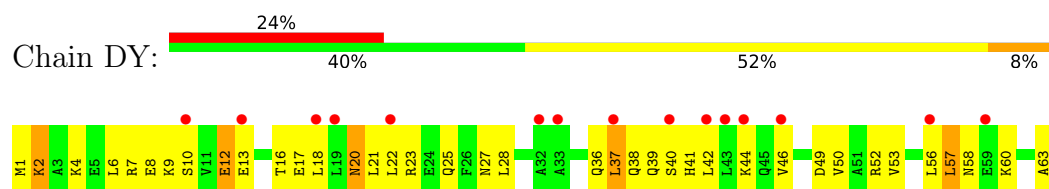
- Molecule 45: 50S ribosomal protein L28



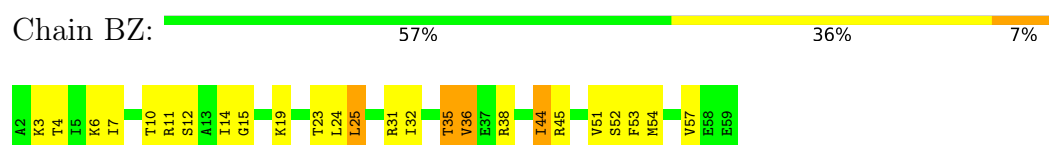
- Molecule 46: 50S ribosomal protein L29



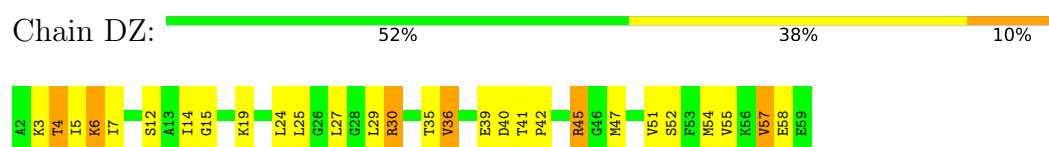
- Molecule 46: 50S ribosomal protein L29



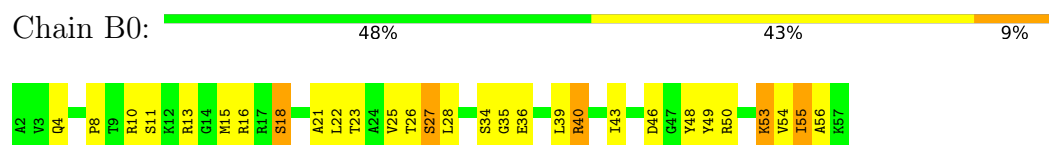
- Molecule 47: 50S ribosomal protein L30



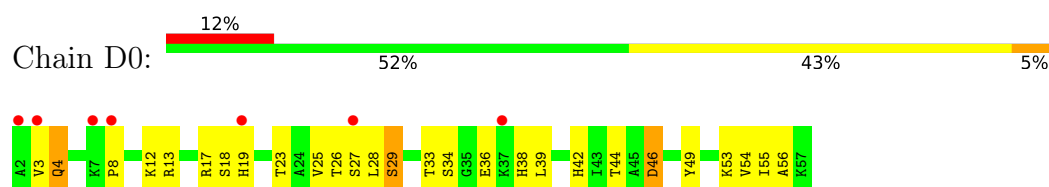
- Molecule 47: 50S ribosomal protein L30



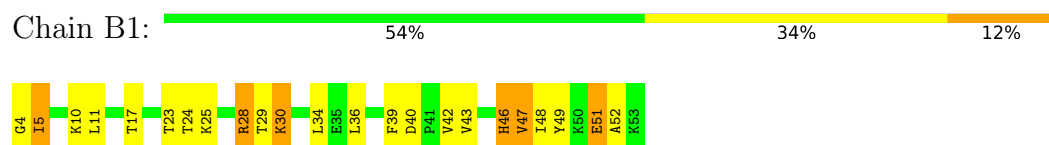
- Molecule 48: 50S ribosomal protein L32



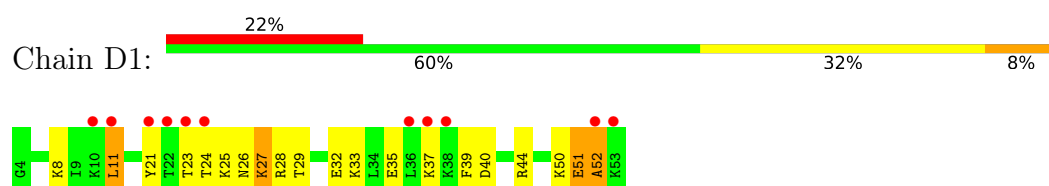
- Molecule 48: 50S ribosomal protein L32



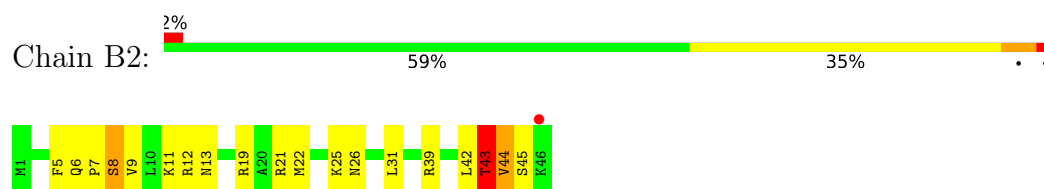
- Molecule 49: 50S ribosomal protein L33



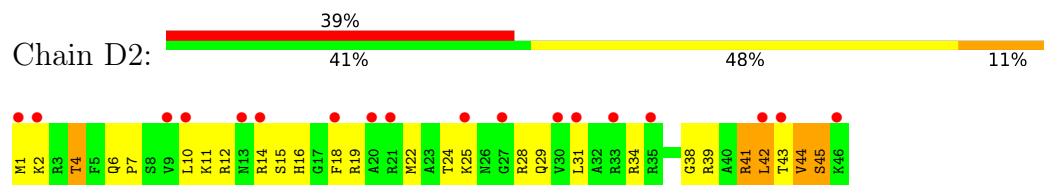
- Molecule 49: 50S ribosomal protein L33



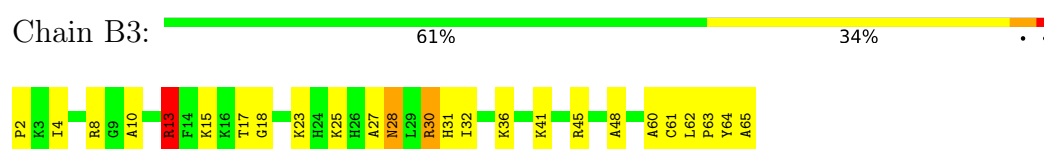
- Molecule 50: 50S ribosomal protein L34



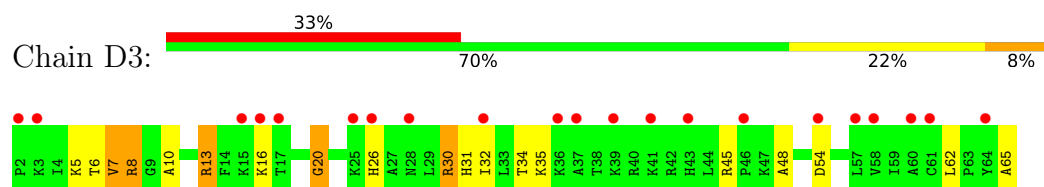
- Molecule 50: 50S ribosomal protein L34



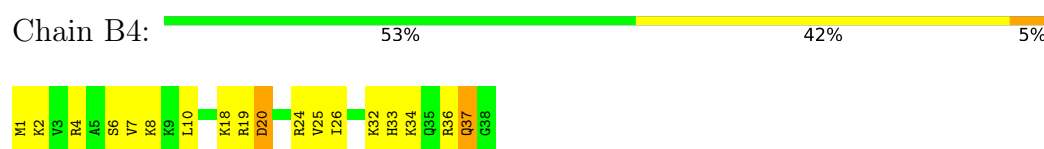
- Molecule 51: 50S ribosomal protein L35



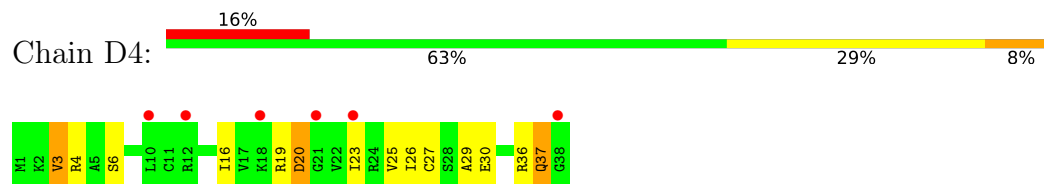
- Molecule 51: 50S ribosomal protein L35



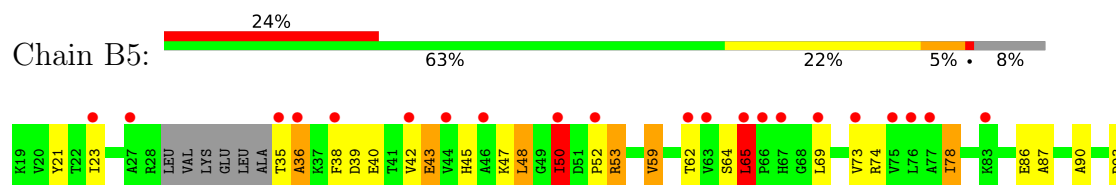
- Molecule 52: 50S ribosomal protein L36

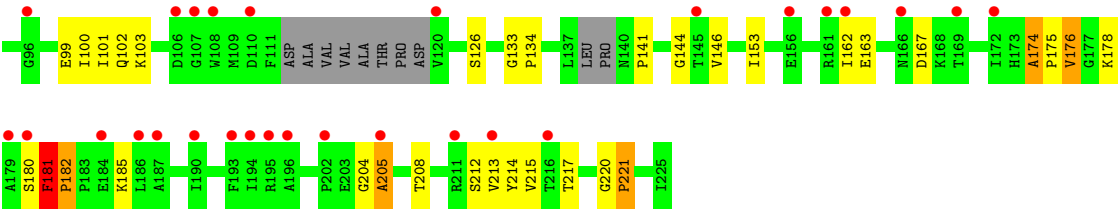


- Molecule 52: 50S ribosomal protein L36



- Molecule 53: 50S ribosomal protein L1





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.91Å 434.31Å 624.40Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	41.14 – 3.09 41.14 – 3.09	Depositor EDS
% Data completeness (in resolution range)	99.9 (41.14-3.09) 99.9 (41.14-3.09)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.37 (at 3.06Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.202 , 0.244 0.204 , 0.246	Depositor DCC
R_{free} test set	4190 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å ²)	72.7	Xtriage
Anisotropy	0.339	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 47.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	288204	wwPDB-VP
Average B, all atoms (Å ²)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.50% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	AA	0.32	0/36944	0.52	0/57632
1	CA	0.28	0/36966	0.47	0/57666
2	AB	0.52	0/1736	0.92	4/2338 (0.2%)
2	CB	0.47	1/1736 (0.1%)	0.82	0/2338
3	AC	0.47	0/1652	0.82	2/2225 (0.1%)
3	CC	0.49	0/1652	0.77	0/2225
4	AD	0.49	0/1665	0.85	3/2227 (0.1%)
4	CD	0.61	0/1665	0.92	1/2227 (0.0%)
5	AE	0.57	0/1119	0.96	1/1504 (0.1%)
5	CE	0.58	0/1119	0.96	2/1504 (0.1%)
6	AF	0.57	0/836	0.85	1/1128 (0.1%)
6	CF	0.51	0/836	0.84	1/1128 (0.1%)
7	AG	0.47	0/1196	0.82	2/1602 (0.1%)
7	CG	0.51	0/1196	0.79	0/1602
8	AH	0.51	0/989	0.93	2/1326 (0.2%)
8	CH	0.44	0/989	0.83	0/1326
9	AI	0.46	0/1034	0.78	1/1375 (0.1%)
9	CI	0.45	0/1034	0.74	0/1375
10	AJ	0.48	0/797	0.80	2/1077 (0.2%)
10	CJ	0.52	0/797	0.78	1/1077 (0.1%)
11	AK	0.50	0/893	0.85	1/1205 (0.1%)
11	CK	0.47	0/893	0.90	2/1205 (0.2%)
12	AL	0.64	2/969 (0.2%)	1.02	1/1300 (0.1%)
12	CL	0.54	0/969	1.00	1/1300 (0.1%)
13	AM	0.50	0/893	0.86	0/1193
13	CM	0.53	0/893	0.81	1/1193 (0.1%)
14	AN	0.44	0/785	0.86	3/1043 (0.3%)
14	CN	0.44	0/785	0.75	0/1043
15	AO	0.49	0/722	0.83	0/964
15	CO	0.41	0/722	0.81	0/964
16	AP	0.55	0/659	0.82	0/884
16	CP	0.53	0/659	0.87	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.59	0/658	0.90	0/881
17	CQ	0.51	0/658	0.78	0/881
18	AR	0.53	0/463	0.82	0/621
18	CR	0.49	0/463	0.83	1/621 (0.2%)
19	AS	0.51	0/653	0.84	2/877 (0.2%)
19	CS	0.50	0/653	0.80	2/877 (0.2%)
20	AT	0.55	0/671	0.93	2/888 (0.2%)
20	CT	0.48	0/671	0.86	1/888 (0.1%)
21	AU	0.72	0/431	1.05	4/570 (0.7%)
21	CU	0.61	0/431	0.88	2/570 (0.4%)
22	BA	0.57	0/69659	0.72	10/108672 (0.0%)
22	DA	0.27	0/69659	0.44	0/108672
23	BB	0.48	0/2850	0.68	1/4444 (0.0%)
23	DB	0.21	0/2828	0.34	0/4410
24	BC	0.82	0/2122	1.11	13/2852 (0.5%)
24	DC	0.50	0/2122	0.90	2/2852 (0.1%)
25	BD	1.03	2/1586 (0.1%)	1.73	6/2134 (0.3%)
25	DD	0.49	0/1586	0.86	3/2134 (0.1%)
26	BE	0.79	0/1571	1.00	4/2113 (0.2%)
26	DE	0.52	0/1571	0.81	0/2113
27	BF	0.56	0/1435	0.91	3/1926 (0.2%)
27	DF	0.43	0/1435	0.74	0/1926
28	BG	0.65	0/1343	1.02	3/1816 (0.2%)
28	DG	0.43	0/1343	0.76	2/1816 (0.1%)
29	BH	0.46	0/1121	0.94	4/1515 (0.3%)
29	DH	0.47	0/1121	0.91	5/1515 (0.3%)
30	BI	0.59	0/1046	0.84	0/1410
30	DI	0.59	0/1046	0.86	1/1410 (0.1%)
31	BJ	0.96	0/1152	1.13	4/1551 (0.3%)
31	DJ	0.45	0/1152	0.86	2/1551 (0.1%)
32	BK	0.89	0/948	1.23	4/1268 (0.3%)
32	DK	0.50	0/948	0.83	2/1268 (0.2%)
33	BL	0.81	0/1054	1.12	2/1403 (0.1%)
33	DL	0.50	0/1054	0.90	1/1403 (0.1%)
34	BM	0.90	1/1093 (0.1%)	1.08	6/1460 (0.4%)
34	DM	0.42	0/1093	0.81	2/1460 (0.1%)
35	BN	0.95	1/974 (0.1%)	1.23	6/1301 (0.5%)
35	DN	0.50	0/974	0.81	0/1301
36	BO	0.67	0/902	0.98	2/1209 (0.2%)
36	DO	0.41	0/902	0.75	0/1209
37	BP	0.80	0/929	0.99	1/1242 (0.1%)
37	DP	0.48	0/929	0.83	3/1242 (0.2%)
38	BQ	1.04	2/960 (0.2%)	1.28	5/1278 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DQ	0.44	0/960	0.80	0/1278
39	BR	0.97	0/829	1.34	6/1107 (0.5%)
39	DR	0.47	0/829	0.80	0/1107
40	BS	1.09	0/864	1.13	2/1156 (0.2%)
40	DS	0.50	0/864	0.83	0/1156
41	BT	0.86	1/745 (0.1%)	1.05	1/994 (0.1%)
41	DT	0.48	0/745	0.80	0/994
42	BU	0.69	0/788	0.98	0/1051
42	DU	0.58	0/788	0.88	2/1051 (0.2%)
43	BV	0.81	0/766	1.02	0/1025
43	DV	0.39	0/766	0.73	0/1025
44	BW	0.85	0/587	1.12	2/776 (0.3%)
44	DW	0.39	0/576	0.73	0/762
45	BX	0.74	0/635	0.97	0/848
45	DX	0.51	0/635	0.86	0/848
46	BY	0.70	0/510	1.01	3/677 (0.4%)
46	DY	0.44	0/510	0.85	0/677
47	BZ	0.99	0/453	1.11	1/605 (0.2%)
47	DZ	0.46	0/453	0.87	1/605 (0.2%)
48	B0	1.00	1/450 (0.2%)	1.07	1/599 (0.2%)
48	D0	0.48	0/450	0.75	0/599
49	B1	0.61	0/417	0.97	2/554 (0.4%)
49	D1	0.49	0/417	0.70	0/554
50	B2	0.99	0/380	1.28	2/498 (0.4%)
50	D2	0.49	0/380	0.86	0/498
51	B3	0.80	0/513	1.13	3/676 (0.4%)
51	D3	0.46	0/513	0.78	0/676
52	B4	0.91	0/303	1.11	0/397
52	D4	0.44	0/303	0.81	0/397
53	B5	0.54	0/1145	0.99	8/1556 (0.5%)
All	All	0.47	11/310634 (0.0%)	0.68	177/464376 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
5	CE	0	2
11	AK	0	1
11	CK	0	1
12	CL	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
25	BD	0	1
25	DD	0	1
41	BT	0	1
47	BZ	0	1
All	All	0	9

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	BD	151	THR	C-O	13.08	1.40	1.24
34	BM	36	VAL	CA-CB	-6.74	1.46	1.54
25	BD	152	PRO	N-CA	-5.97	1.39	1.47
38	BQ	42	ALA	CA-CB	-5.68	1.44	1.53
48	B0	21	ALA	CA-CB	-5.52	1.44	1.53
35	BN	70	THR	N-CA	5.18	1.52	1.46
41	BT	2	ILE	N-CA	-5.12	1.40	1.46
12	AL	23	ALA	CA-CB	5.10	1.58	1.53
2	CB	20	THR	CA-C	5.09	1.55	1.52
38	BQ	65	ILE	CA-CB	-5.03	1.48	1.54
12	AL	22	PRO	CA-C	5.02	1.57	1.52

All (177) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BD	151	THR	CA-C-N	41.74	172.01	119.84
25	BD	151	THR	C-N-CA	41.74	172.01	119.84
25	BD	151	THR	C-N-CD	-12.44	73.98	125.00
39	BR	51	VAL	CA-C-N	-12.19	108.51	120.21
39	BR	51	VAL	C-N-CA	-12.19	108.51	120.21
53	B5	220	GLY	CA-C-N	11.79	134.58	119.84
53	B5	220	GLY	C-N-CA	11.79	134.58	119.84
41	BT	3	ARG	N-CA-C	-8.80	92.05	110.80
2	AB	181	ILE	CA-C-N	8.65	130.66	119.84
2	AB	181	ILE	C-N-CA	8.65	130.66	119.84
31	BJ	7	LYS	CA-C-N	8.19	128.97	119.47
31	BJ	7	LYS	C-N-CA	8.19	128.97	119.47
25	BD	152	PRO	CA-N-CD	-8.12	100.63	112.00
35	BN	79	LEU	N-CA-C	-8.08	99.90	110.33
25	BD	151	THR	O-C-N	7.95	128.07	121.31
7	AG	87	VAL	N-CA-C	7.91	115.38	107.55
39	BR	101	ILE	CB-CA-C	-7.59	101.67	111.53
12	AL	23	ALA	N-CA-C	-7.51	102.98	113.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	BY	56	LEU	N-CA-C	-7.44	99.27	110.28
53	B5	182	PRO	CA-C-N	7.30	128.97	119.84
53	B5	182	PRO	C-N-CA	7.30	128.97	119.84
22	BA	1378	A	C4'-C3'-O3'	7.19	120.18	109.40
25	DD	151	THR	CA-C-N	-7.14	110.91	119.84
25	DD	151	THR	C-N-CA	-7.14	110.91	119.84
24	DC	217	ARG	CA-C-N	7.07	128.68	119.84
24	DC	217	ARG	C-N-CA	7.07	128.68	119.84
44	BW	73	GLY	CA-C-N	7.01	126.64	119.56
44	BW	73	GLY	C-N-CA	7.01	126.64	119.56
29	BH	123	ARG	CA-C-N	6.97	133.29	121.87
29	BH	123	ARG	C-N-CA	6.97	133.29	121.87
26	BE	41	GLN	N-CA-C	-6.95	101.58	110.19
3	AC	72	ARG	CA-C-N	6.92	126.89	119.28
3	AC	72	ARG	C-N-CA	6.92	126.89	119.28
27	BF	175	PHE	CA-C-N	6.88	128.44	119.84
27	BF	175	PHE	C-N-CA	6.88	128.44	119.84
35	BN	69	ARG	N-CA-C	-6.88	101.66	110.53
46	BY	45	GLN	N-CA-C	-6.79	100.42	110.48
32	BK	47	ILE	CA-C-N	6.72	126.23	119.24
32	BK	47	ILE	C-N-CA	6.72	126.23	119.24
26	BE	181	ILE	CB-CA-C	-6.68	105.19	111.06
34	BM	19	GLY	CA-C-O	-6.62	117.66	122.23
29	DH	121	VAL	N-CA-C	-6.55	106.29	113.43
39	BR	50	GLY	N-CA-C	-6.51	104.91	112.73
21	AU	40	LYS	CA-C-N	6.47	126.05	119.19
21	AU	40	LYS	C-N-CA	6.47	126.05	119.19
34	BM	68	PHE	CA-C-N	6.42	127.86	119.84
34	BM	68	PHE	C-N-CA	6.42	127.86	119.84
40	BS	85	ILE	CB-CA-C	-6.34	102.04	110.98
50	B2	43	THR	N-CA-C	6.33	124.29	110.80
22	BA	2425	A	P-O3'-C3'	6.33	129.69	120.20
26	BE	65	THR	N-CA-C	-6.32	102.02	110.55
8	AH	126	ILE	N-CA-C	6.31	116.48	110.42
31	BJ	96	ARG	CA-C-N	6.30	127.71	119.84
31	BJ	96	ARG	C-N-CA	6.30	127.71	119.84
14	AN	69	ARG	CA-C-N	6.26	125.94	119.56
14	AN	69	ARG	C-N-CA	6.26	125.94	119.56
34	BM	21	ALA	N-CA-C	6.24	117.93	110.19
33	BL	23	ILE	CB-CA-C	-6.24	103.83	111.87
11	CK	76	GLU	N-CA-C	-6.16	105.70	112.72
35	BN	51	LEU	N-CA-C	-6.14	104.51	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	B1	30	LYS	CA-C-N	6.10	127.47	119.84
49	B1	30	LYS	C-N-CA	6.10	127.47	119.84
4	AD	4	TYR	N-CA-C	6.09	117.59	111.07
32	DK	47	ILE	CA-C-N	6.09	125.57	119.24
32	DK	47	ILE	C-N-CA	6.09	125.57	119.24
20	CT	8	LYS	N-CA-C	-6.09	105.68	113.23
25	DD	153	GLY	N-CA-C	-6.05	107.50	114.69
24	BC	243	HIS	CA-C-N	6.04	127.38	119.84
24	BC	243	HIS	C-N-CA	6.04	127.38	119.84
34	BM	135	VAL	CB-CA-C	-6.03	104.78	111.35
26	BE	125	SER	N-CA-C	6.00	116.02	108.45
53	B5	174	ALA	CA-C-N	5.93	127.25	119.84
53	B5	174	ALA	C-N-CA	5.93	127.25	119.84
24	BC	217	ARG	CA-C-N	5.90	125.84	119.76
24	BC	217	ARG	C-N-CA	5.90	125.84	119.76
22	BA	784	G	P-O3'-C3'	5.88	129.02	120.20
25	BD	146	ILE	CB-CA-C	-5.87	104.31	112.36
14	AN	45	VAL	N-CA-C	5.79	115.86	110.42
5	AE	153	VAL	N-CA-C	-5.79	104.19	112.35
47	DZ	57	VAL	N-CA-C	5.77	116.17	107.75
38	BQ	70	ARG	N-CA-C	-5.76	105.51	112.54
29	DH	31	VAL	CA-C-N	-5.74	113.79	119.93
29	DH	31	VAL	C-N-CA	-5.74	113.79	119.93
35	BN	49	GLU	CA-C-N	-5.73	113.91	119.87
35	BN	49	GLU	C-N-CA	-5.73	113.91	119.87
34	DM	76	LYS	CA-C-N	5.72	126.99	119.84
34	DM	76	LYS	C-N-CA	5.72	126.99	119.84
4	AD	167	LYS	CA-C-N	5.71	126.98	119.84
4	AD	167	LYS	C-N-CA	5.71	126.98	119.84
38	BQ	8	VAL	N-CA-CB	5.71	117.88	110.57
28	BG	53	GLY	CA-C-N	5.70	125.88	119.90
28	BG	53	GLY	C-N-CA	5.70	125.88	119.90
24	BC	14	ARG	N-CA-C	5.68	118.24	111.71
20	AT	8	LYS	N-CA-C	-5.68	105.61	112.54
53	B5	181	PHE	CA-C-N	5.64	126.19	120.38
53	B5	181	PHE	C-N-CA	5.64	126.19	120.38
39	BR	9	GLY	N-CA-C	-5.61	106.27	114.90
10	AJ	40	ILE	CA-C-N	5.60	126.84	119.84
10	AJ	40	ILE	C-N-CA	5.60	126.84	119.84
51	B3	18	GLY	N-CA-C	5.56	119.40	112.73
4	CD	21	LEU	N-CA-C	-5.54	106.53	113.28
24	BC	106	ALA	CA-C-N	5.53	126.75	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BC	106	ALA	C-N-CA	5.53	126.75	119.84
28	BG	141	ILE	N-CA-C	-5.52	104.14	111.05
6	CF	90	MET	N-CA-C	5.52	115.83	108.38
50	B2	43	THR	CB-CA-C	-5.51	99.45	110.42
5	CE	69	ARG	N-CA-C	-5.50	103.27	110.53
31	DJ	96	ARG	CA-C-N	5.50	126.71	119.84
31	DJ	96	ARG	C-N-CA	5.50	126.71	119.84
23	BB	82	U	OP2-P-O3'	5.49	124.46	108.00
8	AH	127	CYS	N-CA-C	5.48	115.78	108.38
29	BH	70	GLU	N-CA-C	-5.47	106.56	113.18
7	AG	145	ALA	N-CA-C	-5.47	103.69	110.41
21	AU	30	ALA	N-CA-C	-5.46	105.34	112.23
28	DG	7	ALA	CA-C-N	5.46	126.67	119.84
28	DG	7	ALA	C-N-CA	5.46	126.67	119.84
27	BF	5	HIS	N-CA-C	-5.44	105.43	111.36
36	BO	54	VAL	N-CA-C	-5.43	107.69	112.90
5	CE	153	VAL	N-CA-C	-5.43	105.68	113.07
37	DP	17	VAL	CA-C-N	5.41	125.39	120.03
37	DP	17	VAL	C-N-CA	5.41	125.39	120.03
6	AF	90	MET	N-CA-C	5.40	117.62	109.41
18	CR	67	LEU	N-CA-C	-5.40	105.30	111.07
24	BC	213	TRP	CB-CA-C	5.39	119.96	110.37
22	BA	2777	G	C8-N9-C1'	5.39	143.16	127.00
35	BN	97	ILE	N-CA-C	5.38	116.06	108.36
11	CK	71	ALA	N-CA-C	-5.36	105.35	111.14
33	BL	22	GLY	N-CA-C	5.35	118.28	112.29
19	CS	29	LYS	CA-C-N	5.35	126.53	119.84
19	CS	29	LYS	C-N-CA	5.35	126.53	119.84
22	BA	2211	A	P-O3'-C3'	5.34	128.21	120.20
51	B3	10	ALA	N-CA-C	-5.34	105.12	111.69
39	BR	51	VAL	N-CA-C	-5.33	97.36	108.88
10	CJ	86	ALA	N-CA-C	-5.31	106.93	113.41
36	BO	53	THR	N-CA-C	-5.31	107.34	112.97
22	BA	752	A	N9-C1'-C2'	5.28	121.92	114.00
22	BA	1936	A	N9-C1'-C2'	-5.27	106.10	114.00
29	BH	91	PHE	N-CA-C	-5.27	106.85	113.28
32	BK	31	ARG	N-CA-C	5.26	119.83	113.41
40	BS	31	GLN	N-CA-C	-5.25	105.47	111.14
42	DU	62	GLU	N-CA-C	5.25	116.85	108.41
32	BK	95	ILE	N-CA-C	5.24	115.86	110.36
13	CM	17	ILE	CB-CA-C	-5.23	106.46	111.06
34	BM	58	LYS	CB-CA-C	-5.23	109.57	115.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	DL	114	GLY	N-CA-C	5.22	118.80	112.48
20	AT	85	LYS	N-CA-C	-5.20	105.67	112.23
21	CU	30	ALA	N-CA-C	-5.20	105.03	111.33
2	AB	217	VAL	N-CA-C	-5.17	106.10	111.58
24	BC	9	THR	N-CA-C	-5.16	107.01	113.15
38	BQ	4	VAL	N-CA-C	5.16	116.11	107.18
22	BA	784	G	N9-C1'-C2'	5.16	119.73	112.00
51	B3	13	ARG	NE-CZ-NH2	5.15	123.84	119.20
24	BC	84	ASP	CA-C-N	5.15	124.81	119.56
24	BC	84	ASP	C-N-CA	5.15	124.81	119.56
22	BA	2425	A	C4'-C3'-O3'	5.14	117.11	109.40
37	BP	64	ILE	CB-CA-C	-5.14	106.07	112.45
19	AS	29	LYS	CA-C-N	-5.14	114.36	120.11
19	AS	29	LYS	C-N-CA	-5.14	114.36	120.11
9	AI	98	LEU	N-CA-C	-5.13	106.18	112.90
24	BC	127	GLY	N-CA-C	-5.13	108.37	114.48
38	BQ	7	GLY	CA-C-N	-5.13	113.99	120.56
38	BQ	7	GLY	C-N-CA	-5.13	113.99	120.56
21	CU	46	LYS	N-CA-C	-5.12	107.70	114.04
22	BA	2324	U	C4'-C3'-O3'	-5.11	105.33	113.00
21	AU	9	ASN	N-CA-C	5.09	116.88	108.48
29	DH	123	ARG	N-CA-C	-5.08	105.39	112.30
48	B0	16	ARG	N-CA-C	-5.08	105.83	111.36
46	BY	58	ASN	N-CA-C	-5.07	107.64	113.88
24	BC	91	ILE	N-CA-C	5.06	117.31	108.95
29	DH	62	LEU	N-CA-C	-5.06	107.06	113.18
42	DU	6	ARG	N-CA-C	5.05	116.60	108.32
2	AB	203	ASN	N-CA-C	5.04	117.41	110.35
37	DP	61	VAL	N-CA-C	5.02	115.27	107.28
47	BZ	51	VAL	N-CA-C	-5.02	106.56	111.88
11	AK	75	LYS	N-CA-C	-5.01	106.99	113.01
12	CL	36	ARG	N-CA-C	5.01	115.14	108.38
30	DI	57	VAL	N-CA-C	5.01	114.86	107.75

There are no chirality outliers.

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
25	BD	132	ALA	Peptide
41	BT	2	ILE	Peptide
47	BZ	15	GLY	Peptide

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Mol	Chain	Res	Type	Group
5	CE	102	GLY	Peptide
5	CE	104	GLY	Peptide
11	CK	126	LYS	Peptide
12	CL	38	TYR	Peptide
25	DD	151	THR	Peptide

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	896	5
1	CA	33015	0	16617	1016	0
2	AB	1705	0	1732	122	0
2	CB	1705	0	1732	115	0
3	AC	1625	0	1696	61	0
3	CC	1625	0	1696	50	0
4	AD	1643	0	1707	128	0
4	CD	1643	0	1707	104	0
5	AE	1106	0	1148	84	0
5	CE	1106	0	1148	100	0
6	AF	818	0	808	50	0
6	CF	818	0	808	55	0
7	AG	1182	0	1238	53	0
7	CG	1182	0	1238	46	0
8	AH	979	0	1031	48	0
8	CH	979	0	1031	43	0
9	AI	1022	0	1070	59	0
9	CI	1022	0	1070	42	0
10	AJ	787	0	828	43	0
10	CJ	787	0	828	34	0
11	AK	877	0	887	62	0
11	CK	877	0	887	55	0
12	AL	955	0	1016	63	0
12	CL	955	0	1016	75	0
13	AM	884	0	941	52	0
13	CM	884	0	941	37	0
14	AN	774	0	824	47	0
14	CN	774	0	824	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	AO	714	0	734	31	0
15	CO	714	0	734	38	0
16	AP	649	0	666	30	0
16	CP	649	0	666	46	0
17	AQ	649	0	691	48	0
17	CQ	649	0	691	41	0
18	AR	456	0	478	11	0
18	CR	456	0	478	28	0
19	AS	638	0	665	33	0
19	CS	638	0	665	22	0
20	AT	665	0	714	42	0
20	CT	665	0	714	35	0
21	AU	426	0	449	60	0
21	CU	426	0	449	47	0
22	BA	62195	0	31278	1189	0
22	DA	62195	0	31280	2066	0
23	BB	2549	0	1291	36	0
23	DB	2529	0	1281	42	0
24	BC	2083	0	2154	85	0
24	DC	2083	0	2154	168	0
25	BD	1565	0	1616	62	0
25	DD	1565	0	1616	71	0
26	BE	1552	0	1619	62	0
26	DE	1552	0	1619	84	0
27	BF	1411	0	1444	71	0
27	DF	1411	0	1444	29	0
28	BG	1323	0	1371	49	0
28	DG	1323	0	1371	44	0
29	BH	1110	0	1148	172	0
29	DH	1110	0	1148	91	5
30	BI	1032	0	1085	58	0
30	DI	1032	0	1085	40	0
31	BJ	1129	0	1162	43	0
31	DJ	1129	0	1162	48	0
32	BK	939	0	1012	32	0
32	DK	939	0	1012	36	0
33	BL	1045	0	1117	57	0
33	DL	1045	0	1117	64	0
34	BM	1074	0	1157	45	0
34	DM	1074	0	1157	26	0
35	BN	961	0	1000	49	0
35	DN	961	0	1000	49	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	BO	892	0	923	52	0
36	DO	892	0	923	36	0
37	BP	917	0	962	23	0
37	DP	917	0	962	41	0
38	BQ	947	0	1019	52	0
38	DQ	947	0	1019	48	0
39	BR	816	0	839	60	0
39	DR	816	0	839	47	0
40	BS	857	0	922	30	0
40	DS	857	0	922	32	0
41	BT	739	0	807	52	0
41	DT	739	0	807	28	0
42	BU	780	0	831	34	0
42	DU	780	0	831	64	0
43	BV	753	0	780	24	0
43	DV	753	0	780	17	0
44	BW	580	0	594	22	0
44	DW	569	0	581	12	0
45	BX	625	0	652	21	0
45	DX	625	0	652	55	0
46	BY	509	0	543	31	0
46	DY	509	0	543	24	0
47	BZ	449	0	488	13	0
47	DZ	449	0	488	15	0
48	B0	444	0	458	26	0
48	D0	444	0	458	19	0
49	B1	410	0	440	15	0
49	D1	410	0	440	12	0
50	B2	377	0	418	16	0
50	D2	377	0	418	41	0
51	B3	504	0	572	24	0
51	D3	504	0	572	22	0
52	B4	302	0	340	12	0
52	D4	302	0	342	10	0
53	B5	1142	0	865	26	0
54	AA	71	0	0	0	0
54	AM	1	0	0	0	0
54	BA	194	0	0	0	0
54	BB	4	0	0	0	0
54	BQ	1	0	0	0	0
54	CA	56	0	0	0	0
54	CT	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	D2	1	0	0	0	0
54	DA	164	0	0	0	0
54	DB	3	0	0	0	0
54	DL	2	0	0	0	0
54	DQ	1	0	0	0	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	CA	17	0	19	1	0
57	AA	196	0	0	18	0
57	AE	1	0	0	0	0
57	AL	1	0	0	0	0
57	AN	3	0	0	1	0
57	AT	1	0	0	0	0
57	AU	1	0	0	0	0
57	B2	1	0	0	0	0
57	B3	3	0	0	0	0
57	B4	2	0	0	0	0
57	BA	620	0	0	82	0
57	BB	14	0	0	0	0
57	BC	10	0	0	1	0
57	BD	4	0	0	2	0
57	BF	1	0	0	0	0
57	BG	1	0	0	0	0
57	BL	6	0	0	2	0
57	BN	3	0	0	0	0
57	BS	1	0	0	0	0
57	CA	186	0	0	16	0
57	CL	1	0	0	0	0
57	CN	3	0	0	0	0
57	CT	3	0	0	1	0
57	CU	1	0	0	0	0
57	D2	1	0	0	1	0
57	D3	2	0	0	0	0
57	D4	1	0	0	1	0
57	DA	611	0	0	87	0
57	DB	13	0	0	1	0
57	DC	8	0	0	0	0
57	DD	3	0	0	1	0
57	DE	5	0	0	0	0
57	DJ	1	0	0	0	0
57	DL	4	0	0	0	0
57	DN	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	DS	1	0	0	0	0
57	DT	3	0	0	0	0
57	DU	1	0	0	0	0
57	DV	1	0	0	0	0
All	All	288204	0	192819	9120	5

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 19.

All (9120) 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:94:ILE:H	29:BH:122:LEU:CB	1.08	1.58
29:BH:94:ILE:O	29:BH:122:LEU:CD1	1.69	1.41
29:BH:94:ILE:N	29:BH:122:LEU:CB	1.88	1.34
29:BH:94:ILE:N	29:BH:122:LEU:HB3	1.41	1.28
29:BH:122:LEU:HD21	1:CA:368:U:OP2	1.09	1.25
29:BH:122:LEU:CD2	1:CA:368:U:OP2	1.88	1.20
29:BH:94:ILE:C	29:BH:122:LEU:HD12	1.68	1.18
29:BH:93:SER:CA	29:BH:122:LEU:HB2	1.74	1.17
22:BA:731:C:OP2	57:BA:3699:HOH:O	1.61	1.17
29:BH:94:ILE:N	29:BH:122:LEU:HG	1.60	1.15
1:CA:1500:A:OP2	57:CA:1877:HOH:O	1.66	1.14
22:BA:842:U:O4	57:BA:3592:HOH:O	1.69	1.09
22:BA:2499:C:OP2	57:BA:3691:HOH:O	1.68	1.08
6:CF:12:PRO:O	6:CF:15:SER:OG	1.70	1.08
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	1.87	1.08
25:DD:151:THR:O	25:DD:153:GLY:N	1.84	1.08
29:BH:94:ILE:H	29:BH:122:LEU:CG	1.66	1.08
22:BA:2575:C:OP2	57:BA:3717:HOH:O	1.67	1.08
29:BH:93:SER:HA	29:BH:122:LEU:HB2	1.29	1.07
29:BH:94:ILE:N	29:BH:122:LEU:CG	2.16	1.07
22:BA:1342:A:OP2	57:BA:3721:HOH:O	1.71	1.06
22:DA:1936:A:OP1	57:DA:3459:HOH:O	1.73	1.06
22:BA:2574:G:OP1	57:BA:3717:HOH:O	1.74	1.05
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.72	1.04
22:DA:1357:C:C5	57:DA:3401:HOH:O	2.10	1.04
1:CA:1181:G:O2'	1:CA:1182:G:N7	1.89	1.03
22:DA:756:A:N7	57:DA:3299:HOH:O	1.92	1.02
29:BH:93:SER:HB2	29:BH:122:LEU:HD23	1.08	1.02
22:BA:2269:G:OP1	57:BA:3517:HOH:O	1.77	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:822:G:OP2	57:DA:3348:HOH:O	1.78	1.00
22:DA:370:G:N7	57:DA:3559:HOH:O	1.92	1.00
1:AA:533:A:OP1	57:AA:1850:HOH:O	1.78	0.99
22:BA:2243:U:OP1	57:BA:3747:HOH:O	1.81	0.98
29:BH:93:SER:HB2	29:BH:122:LEU:CD2	1.93	0.98
22:DA:1010:A:OP2	57:DA:3780:HOH:O	1.83	0.97
22:DA:211:C:OP1	50:D2:25:LYS:NZ	1.97	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
22:DA:1789:A:OP2	24:DC:221:ARG:NH1	1.99	0.95
4:CD:192:SER:OG	4:CD:193:ALA:N	1.93	0.94
22:DA:761:A:N7	57:DA:3295:HOH:O	1.99	0.94
29:BH:83:LYS:HD2	1:CA:55:A:O2'	1.68	0.94
2:AB:193:PRO:O	2:AB:195:GLY:N	2.01	0.93
14:CN:41:ARG:NH1	14:CN:42:TRP:O	2.01	0.93
22:DA:602:A:O2'	22:DA:604:G:O2'	1.81	0.93
22:DA:2006:C:OP1	57:DA:3380:HOH:O	1.86	0.93
22:BA:622:G:OP2	57:BA:3296:HOH:O	1.86	0.93
1:AA:702:A:N6	22:BA:1846:G:O2'	2.00	0.93
2:AB:82:ASP:O	2:AB:85:LEU:N	2.02	0.93
12:AL:24:LEU:O	12:AL:26:ALA:N	2.01	0.93
22:BA:2005:A:OP1	57:BA:3387:HOH:O	1.85	0.92
22:BA:2611:C:OP2	57:BA:3548:HOH:O	1.87	0.92
1:CA:1095:U:OP2	57:CA:1849:HOH:O	1.86	0.92
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.50	0.92
25:BD:140:HIS:NE2	57:BD:303:HOH:O	2.01	0.91
22:BA:1171:G:N2	22:BA:1178:C:O2	2.02	0.91
22:BA:1916:A:H2'	22:BA:1917:U:O4'	1.70	0.91
22:BA:192:C:OP1	57:BA:3747:HOH:O	1.89	0.91
22:DA:1607:C:N4	22:DA:1622:G:N7	2.19	0.90
2:CB:103:ASN:OD1	2:CB:106:THR:OG1	1.89	0.90
29:BH:94:ILE:O	29:BH:122:LEU:HD12	0.73	0.90
22:DA:1371:G:N7	57:DA:3400:HOH:O	2.05	0.90
35:BN:12:ARG:CZ	35:BN:20:MET:HE1	2.00	0.90
22:DA:58:G:OP1	41:DT:78:SER:OG	1.90	0.90
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.04	0.89
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.03	0.89
1:CA:201:G:N2	1:CA:469:C:O2	2.04	0.89
22:DA:618:G:O6	57:DA:3289:HOH:O	1.89	0.89
1:AA:980:C:OP1	57:AA:1838:HOH:O	1.91	0.88
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.06	0.88
22:DA:1439:A:OP2	57:DA:3631:HOH:O	1.91	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:890:G:O2'	1:CA:906:A:N6	2.06	0.88
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.06	0.88
39:BR:49:ILE:HG22	39:BR:52:PRO:C	1.99	0.88
22:DA:1187:G:N7	57:DA:3578:HOH:O	2.05	0.88
27:DF:122:PHE:O	27:DF:124:GLY:N	2.06	0.88
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.55	0.88
25:BD:140:HIS:CD2	57:BD:303:HOH:O	2.27	0.88
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.05	0.88
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.07	0.88
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.07	0.88
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.92	0.87
22:BA:512:G:C8	57:BA:3777:HOH:O	2.13	0.87
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.07	0.87
24:DC:157:SER:O	24:DC:160:THR:OG1	1.92	0.86
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.11	0.86
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.08	0.86
22:DA:2874:C:OP1	57:DA:3803:HOH:O	1.93	0.86
22:DA:1395:A:OP2	57:DA:3404:HOH:O	1.94	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.94	0.85
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.08	0.85
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.48	0.85
1:CA:536:C:OP1	57:CA:1770:HOH:O	1.93	0.85
22:DA:618:G:N7	57:DA:3287:HOH:O	2.09	0.85
22:BA:1603:A:OP1	57:BA:3415:HOH:O	1.94	0.85
22:BA:1925:C:H5''	22:BA:1926:U:O4	1.77	0.85
41:BT:2:ILE:HD12	41:BT:7:LEU:HD11	1.58	0.85
29:BH:121:VAL:O	29:BH:128:HIS:CD2	2.29	0.85
40:DS:28:LYS:O	40:DS:30:SER:N	2.10	0.85
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.09	0.85
22:DA:450:G:O6	57:DA:3240:HOH:O	1.93	0.85
12:CL:75:GLN:O	12:CL:78:SER:OG	1.92	0.84
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.09	0.84
29:BH:94:ILE:H	29:BH:122:LEU:HB3	0.68	0.84
11:AK:126:LYS:C	21:AU:34:ARG:CZ	2.51	0.84
22:BA:273:G:N2	22:BA:365:U:O2	2.10	0.84
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.11	0.84
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.60	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
22:DA:2234:G:C6	22:DA:2235:G:N7	2.46	0.84
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:627:A:OP1	33:BL:78:ARG:NH1	2.10	0.83
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.59	0.83
22:DA:2144:G:N2	22:DA:2148:G:O6	2.11	0.83
22:DA:247:G:H4'	22:DA:386:G:C5	2.12	0.83
22:DA:2711:A:OP2	57:DA:3549:HOH:O	1.96	0.83
22:DA:2057:G:OP1	57:DA:3671:HOH:O	1.96	0.83
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.11	0.83
22:DA:1826:G:C5	22:DA:1827:U:C5	2.67	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
41:BT:2:ILE:HD12	41:BT:7:LEU:CD1	2.08	0.83
1:CA:1197:A:O3'	56:CA:1657:NEG:N4	2.11	0.83
22:DA:192:C:OP1	57:DA:3739:HOH:O	1.96	0.83
22:DA:1317:G:C2	22:DA:1336:A:C2	2.67	0.83
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.11	0.83
18:CR:20:GLU:O	18:CR:22:ASP:N	2.11	0.82
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.11	0.82
29:BH:117:LEU:HD21	29:BH:122:LEU:CD1	2.09	0.82
22:DA:53:A:C2	22:DA:179:C:H4'	2.14	0.82
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.08	0.82
22:DA:2171:A:O2'	22:DA:2173:A:OP1	1.97	0.82
22:DA:2271:G:O6	57:DA:3510:HOH:O	1.97	0.82
22:BA:1924:C:O2	22:BA:1926:U:O4	1.97	0.82
22:DA:1359:A:C8	22:DA:1373:A:N1	2.48	0.82
50:D2:44:VAL:O	50:D2:45:SER:OG	1.97	0.81
22:BA:761:A:C8	57:BA:3298:HOH:O	2.32	0.81
34:BM:27:SER:N	34:BM:104:GLU:OE1	2.12	0.81
22:BA:1779:U:H5	22:BA:1784:A:N7	1.78	0.81
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.13	0.81
22:DA:201:C:C5	22:DA:202:U:C5	2.69	0.81
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.62	0.80
1:AA:452:A:N6	1:AA:480:U:O2	2.14	0.80
1:AA:1397:C:O2'	1:AA:1398:A:OP1	1.99	0.80
22:BA:1916:A:N3	22:BA:1917:U:H1'	1.96	0.80
22:BA:2191:A:C2	22:BA:2192:U:C2	2.69	0.80
29:BH:94:ILE:C	29:BH:122:LEU:CD1	2.40	0.80
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.45	0.80
1:AA:939:G:N7	57:AA:1771:HOH:O	2.13	0.80
29:BH:91:PHE:O	1:CA:55:A:C6	2.34	0.80
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	1.96	0.80
45:BX:2:SER:O	45:BX:4:VAL:N	2.15	0.80
1:CA:373:A:C2	1:CA:374:A:C8	2.70	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:16:GLY:O	42:BU:18:ASP:N	2.15	0.80
4:CD:30:THR:C	4:CD:31:LYS:HD3	2.06	0.80
4:AD:100:ASN:OD1	4:AD:111:ARG:NH1	2.14	0.80
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.17	0.80
22:DA:761:A:OP2	57:DA:3293:HOH:O	1.98	0.80
1:AA:880:C:OP1	12:AL:9:ARG:NH1	2.13	0.80
7:AG:68:ASN:O	7:AG:138:ARG:NH1	2.14	0.80
16:CP:23:ASP:OD2	16:CP:25:ARG:NH2	2.15	0.80
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.16	0.80
22:DA:2243:U:OP1	57:DA:3742:HOH:O	1.98	0.80
3:AC:40:ARG:NH1	3:AC:55:ILE:O	2.15	0.79
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.12	0.79
29:BH:119:ASN:HB3	29:BH:123:ARG:HH12	1.47	0.79
1:CA:505:G:C6	1:CA:535:A:C2	2.70	0.79
22:DA:1344:U:O2'	22:DA:1345:C:OP2	1.99	0.79
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.82	0.79
5:AE:65:GLU:OE2	5:AE:69:ARG:NH2	2.16	0.79
22:DA:132:G:N2	22:DA:148:U:C2	2.51	0.79
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.18	0.79
1:CA:794:A:HO2'	1:CA:1521:C:HO2'	1.08	0.79
1:AA:1223:C:OP2	19:AS:78:ARG:NH1	2.16	0.79
17:AQ:52:GLU:OE1	17:AQ:52:GLU:N	2.14	0.79
22:DA:1050:A:N6	22:DA:1109:C:O2	2.16	0.79
22:BA:12:U:H2'	22:BA:12:U:O2	1.83	0.79
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.16	0.79
37:DP:65:SER:O	37:DP:67:GLY:N	2.15	0.79
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.65	0.78
29:BH:122:LEU:O	29:BH:122:LEU:HD22	1.83	0.78
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.55	0.78
24:BC:168:ASP:OD1	24:BC:169:GLY:N	2.14	0.78
22:DA:2883:A:OP1	48:D0:49:TYR:OH	2.01	0.78
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.16	0.78
11:AK:69:ARG:HD2	22:BA:2146:C:N3	1.99	0.78
24:BC:204:VAL:O	24:BC:205:LEU:HB2	1.82	0.78
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	1.64	0.78
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.66	0.78
11:AK:127:ARG:N	21:AU:34:ARG:NH1	2.31	0.78
22:BA:2187:U:C4	22:BA:2188:U:C4	2.72	0.78
1:AA:516:U:O4	57:AA:1848:HOH:O	2.00	0.78
5:CE:157:ARG:O	5:CE:159:LYS:N	2.17	0.78
22:DA:1984:G:C5	22:DA:1985:C:C5	2.72	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:16:GLU:OE2	4:CD:188:ARG:NH1	2.17	0.78
39:DR:60:LYS:NZ	39:DR:102:SER:OG	2.17	0.78
25:BD:103:ASP:O	25:BD:105:LYS:N	2.16	0.77
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.17	0.77
22:DA:1851:U:N3	22:DA:1891:G:O6	2.16	0.77
22:DA:2550:G:O6	22:DA:2551:C:N4	2.17	0.77
29:BH:83:LYS:HG3	1:CA:55:A:N3	2.00	0.77
29:BH:118:PRO:O	29:BH:120:GLY:N	2.18	0.77
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.67	0.77
1:CA:484:G:H4'	1:CA:485:U:O5'	1.85	0.77
22:DA:514:A:N3	22:DA:581:C:O2'	2.15	0.77
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.31	0.77
5:CE:98:PRO:O	5:CE:122:ASN:ND2	2.16	0.77
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.18	0.77
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.84	0.77
1:CA:977:A:O2'	1:CA:1223:C:N4	2.18	0.77
22:BA:1917:U:C4	22:BA:1918:A:C5	2.73	0.77
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.20	0.77
1:AA:328:C:O2	1:AA:328:C:H2'	1.84	0.76
22:BA:481:G:C4	22:BA:507:A:C2	2.74	0.76
29:BH:83:LYS:CD	1:CA:55:A:O2'	2.33	0.76
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.18	0.76
22:DA:1671:U:OP2	57:DA:3434:HOH:O	2.03	0.76
22:DA:1791:A:N6	22:DA:1828:G:O2'	2.17	0.76
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.76
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.68	0.76
22:DA:2005:A:OP1	57:DA:3384:HOH:O	2.02	0.76
1:AA:701:U:O2	1:AA:703:G:N1	2.19	0.76
1:CA:527:G:C2	1:CA:528:C:C6	2.73	0.76
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.18	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.18	0.76
22:DA:466:A:N1	22:DA:795:C:O2'	2.19	0.76
22:DA:842:U:O4	57:DA:3581:HOH:O	2.02	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.68	0.76
1:CA:62:U:O2'	1:CA:379:C:O2	2.03	0.76
22:DA:1826:G:C6	22:DA:1827:U:C4	2.73	0.76
22:DA:1209:U:O2	22:DA:1210:G:N2	2.19	0.76
22:DA:1995:U:OP1	57:DA:3808:HOH:O	2.03	0.76
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.19	0.75
24:BC:237:GLY:O	57:BC:309:HOH:O	2.04	0.75
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.49	0.75
22:DA:512:G:N7	57:DA:3769:HOH:O	2.19	0.75
22:DA:183:C:C5	22:DA:184:C:C5	2.74	0.75
22:DA:186:G:N2	22:DA:211:C:O2	2.19	0.75
1:AA:673:A:H2'	1:AA:674:G:C8	2.21	0.75
4:CD:25:VAL:O	4:CD:26:ARG:O	2.04	0.75
22:DA:1316:U:C2	22:DA:1337:G:N2	2.54	0.75
29:BH:117:LEU:HD21	29:BH:122:LEU:HD13	1.67	0.75
35:BN:12:ARG:NE	35:BN:20:MET:HE1	2.01	0.75
6:CF:91:ARG:O	6:CF:92:THR:OG1	2.04	0.75
1:AA:79:G:N2	1:AA:91:U:O4	2.19	0.75
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.22	0.75
22:BA:2757:A:N1	28:BG:67:THR:HG21	2.01	0.75
1:AA:154:U:C2	1:AA:168:G:N2	2.55	0.74
1:AA:1031:C:O2'	1:AA:1032:G:OP2	2.05	0.74
1:CA:818:G:O2'	1:CA:819:A:H5'	1.86	0.74
7:CG:24:ALA:O	7:CG:28:ASN:ND2	2.19	0.74
22:DA:724:U:H2'	22:DA:725:G:O4'	1.87	0.74
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.20	0.74
22:BA:2127:G:O2'	22:BA:2128:G:O5'	2.04	0.74
1:CA:803:G:OP1	57:CA:1800:HOH:O	2.04	0.74
22:DA:1984:G:C6	22:DA:1985:C:C4	2.74	0.74
1:AA:451:A:C8	1:AA:452:A:C2	2.75	0.74
1:AA:1269:A:N1	1:AA:1312:G:O2'	2.19	0.74
22:BA:792:A:N3	22:BA:2072:C:O2'	2.19	0.74
22:DA:782:A:O2'	24:DC:224:ALA:O	2.03	0.74
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.39	0.74
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.17	0.74
1:AA:69:G:O6	1:AA:98:A:N6	2.20	0.74
13:AM:11:ASP:OD1	13:AM:12:HIS:N	2.20	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.68	0.74
1:AA:685:G:N1	1:AA:686:U:O4	2.21	0.74
22:BA:198:C:OP2	57:BA:3767:HOH:O	2.04	0.74
2:CB:131:LYS:O	2:CB:135:LEU:N	2.20	0.74
27:BF:61:SER:O	27:BF:63:GLN:N	2.18	0.74
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.23	0.74
1:CA:17:U:H2'	1:CA:18:C:C6	2.23	0.74
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:686:U:OP2	57:BA:3727:HOH:O	2.04	0.74
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.12	0.74
22:DA:2407:A:OP2	57:DA:3562:HOH:O	2.05	0.74
22:DA:2550:G:OP1	57:DA:3722:HOH:O	2.03	0.74
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.73
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.06	0.73
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.20	0.73
29:DH:27:ARG:HE	45:DX:60:ASP:CG	1.95	0.73
1:AA:1077:G:N7	57:AA:1793:HOH:O	2.20	0.73
22:BA:572:A:H5''	22:BA:573:U:OP2	1.89	0.73
29:BH:93:SER:C	29:BH:122:LEU:CB	2.60	0.73
41:BT:2:ILE:HG22	41:BT:3:ARG:N	2.03	0.73
22:DA:784:G:OP1	57:DA:3314:HOH:O	2.05	0.73
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.71	0.73
1:AA:203:G:N2	1:AA:215:C:C2	2.56	0.73
27:BF:73:SER:OG	27:BF:80:ARG:HA	1.88	0.73
1:CA:687:A:O2'	1:CA:701:U:O4	2.05	0.73
1:CA:1521:C:C4	1:CA:1522:U:C5	2.75	0.73
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.71	0.73
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.22	0.73
2:AB:188:ASP:HB2	2:AB:204:ASP:HB3	1.71	0.73
11:AK:76:GLU:N	11:AK:76:GLU:OE2	2.22	0.73
22:BA:977:G:C6	57:BA:3598:HOH:O	2.41	0.73
22:DA:185:G:C6	22:DA:212:G:N2	2.56	0.73
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.71	0.73
21:CU:18:ARG:O	21:CU:21:ARG:N	2.21	0.73
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.24	0.73
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.17	0.73
29:BH:93:SER:HA	29:BH:122:LEU:CB	2.14	0.73
29:BH:93:SER:CB	29:BH:122:LEU:HB2	2.18	0.73
1:CA:724:G:OP2	1:CA:833:G:O2'	2.06	0.73
22:DA:2209:G:C2	22:DA:2216:G:C2	2.75	0.73
24:DC:15:HIS:O	24:DC:204:VAL:HG21	1.89	0.73
22:DA:593:U:H2'	22:DA:594:U:C6	2.23	0.73
22:BA:370:G:OP2	57:BA:3565:HOH:O	2.07	0.73
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.89	0.73
1:AA:970:C:N4	9:AI:130:ARG:OXT	2.20	0.73
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.37	0.73
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.06	0.73
1:CA:409:U:OP1	4:CD:24:GLY:HA3	1.89	0.72
22:BA:588:U:H2'	22:BA:589:U:C6	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.05	0.72
2:AB:188:ASP:OD2	2:AB:204:ASP:CG	2.32	0.72
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.19	0.72
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.07	0.72
22:DA:377:G:C6	22:DA:378:C:C4	2.77	0.72
1:AA:1406:U:C5	1:AA:1407:C:C5	2.77	0.72
27:BF:25:VAL:O	27:BF:28:VAL:HG12	1.89	0.72
1:CA:31:G:N7	1:CA:306:A:H1'	2.04	0.72
22:DA:84:A:N1	22:DA:98:G:O2'	2.18	0.72
22:DA:910:A:N3	22:DA:2264:C:O2'	2.22	0.72
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.69	0.72
29:BH:93:SER:C	29:BH:122:LEU:HB2	2.14	0.72
22:DA:161:A:H3'	22:DA:162:U:H5''	1.72	0.72
22:DA:370:G:O2'	22:DA:424:G:OP1	2.07	0.72
22:DA:374:A:C6	22:DA:401:A:C8	2.77	0.72
22:DA:1973:G:OP1	57:DA:3464:HOH:O	2.06	0.72
22:DA:2032:G:N7	57:DA:3533:HOH:O	2.22	0.72
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.88	0.72
1:AA:496:A:C2	1:AA:497:G:C5	2.77	0.72
12:AL:21:VAL:HG23	12:AL:95:TYR:CE2	2.24	0.72
22:DA:2248:C:OP2	57:DA:3505:HOH:O	2.05	0.72
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.24	0.72
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.18	0.72
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.23	0.72
1:CA:995:C:N3	1:CA:1046:A:O2'	2.23	0.72
1:CA:1309:G:C6	1:CA:1329:A:C2	2.78	0.72
22:DA:185:G:C6	22:DA:212:G:C2	2.78	0.72
22:DA:287:G:C2	22:DA:354:A:C2	2.78	0.72
22:DA:528:A:C2	22:DA:2043:C:H4'	2.23	0.72
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.07	0.72
3:AC:7:PRO:HG2	3:AC:184:TYR:CD2	2.25	0.71
5:CE:137:VAL:O	5:CE:137:VAL:HG22	1.90	0.71
22:BA:1394:U:P	57:BA:3413:HOH:O	2.48	0.71
1:CA:1169:A:C2	1:CA:1170:A:C4	2.78	0.71
22:DA:570:G:OP1	57:DA:3773:HOH:O	2.08	0.71
22:DA:2550:G:C6	22:DA:2551:C:N4	2.57	0.71
23:DB:8:C:O2'	36:DO:25:ARG:NH1	2.23	0.71
22:BA:574:A:OP2	57:BA:3269:HOH:O	2.07	0.71
29:BH:119:ASN:O	29:BH:123:ARG:NH1	2.23	0.71
41:BT:2:ILE:HD11	41:BT:45:ALA:HB1	1.70	0.71
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.63	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:247:G:H4'	22:DA:386:G:C4	2.24	0.71
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.90	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
1:AA:958:A:N6	1:AA:959:A:N1	2.37	0.71
22:BA:2498:C:OP2	57:BA:3690:HOH:O	2.08	0.71
22:DA:690:G:O2'	22:DA:780:G:OP1	2.07	0.71
29:BH:120:GLY:O	29:BH:122:LEU:N	2.23	0.71
22:DA:396:G:H4'	45:DX:29:PHE:O	1.90	0.71
22:DA:1544:A:N6	22:DA:1545:A:N1	2.39	0.71
22:DA:1805:A:N3	22:DA:1813:G:C2	2.58	0.71
1:AA:532:A:O3'	57:AA:1849:HOH:O	2.07	0.71
4:CD:29:ASP:O	4:CD:31:LYS:NZ	2.23	0.71
4:CD:151:LYS:O	4:CD:152:GLN:OE1	2.08	0.71
22:DA:1821:A:OP1	24:DC:200:HIS:NE2	2.20	0.71
22:DA:1973:G:C5	22:DA:1974:C:C5	2.79	0.71
1:AA:468:A:C2	1:AA:469:C:C4	2.79	0.71
1:AA:914:A:C4	1:AA:915:A:C8	2.78	0.71
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	1.73	0.71
22:BA:2049:G:N7	57:BA:3679:HOH:O	2.22	0.71
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.24	0.71
22:DA:1315:C:OP2	57:DA:3762:HOH:O	2.07	0.71
22:DA:1336:A:H2'	22:DA:1337:G:C8	2.26	0.71
22:DA:1619:G:N7	57:DA:3644:HOH:O	2.22	0.71
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.22	0.71
1:AA:9:G:OP2	5:AE:126:LYS:NZ	2.20	0.71
16:AP:43:ALA:O	16:AP:46:LYS:HD2	1.90	0.71
22:BA:877:A:N6	22:BA:899:A:N6	2.39	0.71
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.25	0.71
11:AK:125:LYS:O	21:AU:34:ARG:NE	2.24	0.71
22:DA:511:U:OP2	57:DA:3769:HOH:O	2.08	0.71
22:DA:1450:G:C6	22:DA:1451:C:N4	2.59	0.71
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.24	0.71
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.16	0.71
22:BA:528:A:C8	22:BA:528:A:H3'	2.25	0.71
1:CA:109:A:O2'	1:CA:326:G:N2	2.24	0.71
1:AA:1220:G:OP1	19:AS:37:ARG:NH2	2.24	0.70
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.91	0.70
22:BA:1380:G:OP2	57:BA:3758:HOH:O	2.09	0.70
22:BA:1509:A:O2'	22:BA:1510:G:P	2.49	0.70
1:CA:552:U:C4	1:CA:553:A:N7	2.59	0.70
22:DA:1581:G:C6	22:DA:1582:C:N4	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.06	0.70
1:CA:978:A:OP2	1:CA:1362:A:N6	2.24	0.70
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.26	0.70
1:CA:207:C:O2'	1:CA:213:G:N2	2.24	0.70
12:CL:100:GLY:N	12:CL:105:SER:O	2.23	0.70
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.06	0.70
22:DA:449:A:OP2	57:DA:3241:HOH:O	2.09	0.70
22:DA:591:U:C2	22:DA:592:A:C8	2.79	0.70
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.27	0.70
17:AQ:69:LYS:O	17:AQ:70:THR:HB	1.91	0.70
22:DA:370:G:OP2	57:DA:3560:HOH:O	2.10	0.70
22:DA:1208:C:C4	22:DA:1209:U:C5	2.78	0.70
1:AA:178:C:OP2	20:AT:60:ARG:NH2	2.24	0.70
1:AA:1407:C:O2'	22:BA:1912:A:N1	2.24	0.70
1:CA:577:G:C2	1:CA:578:C:C6	2.80	0.70
1:CA:1107:C:C2	1:CA:1108:G:C8	2.80	0.70
2:CB:15:HIS:O	2:CB:17:GLY:N	2.24	0.70
27:BF:127:ASN:OD1	27:BF:157:THR:HA	1.91	0.70
1:CA:933:G:N7	7:CG:3:ARG:NH2	2.38	0.70
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.07	0.70
22:BA:784:G:OP2	57:BA:3316:HOH:O	2.08	0.70
22:BA:2498:C:OP2	57:BA:3691:HOH:O	2.08	0.70
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.24	0.70
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.92	0.70
22:BA:1433:A:O2'	22:BA:1434:A:H5'	1.92	0.70
22:DA:684:G:C2	22:DA:794:A:C2	2.79	0.70
22:DA:2711:A:OP2	57:DA:3546:HOH:O	2.09	0.70
46:DY:56:LEU:O	46:DY:57:LEU:HB3	1.92	0.70
1:AA:322:C:O2'	20:AT:18:ARG:HG3	1.92	0.70
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.89	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
3:AC:25:ASN:O	3:AC:27:LYS:N	2.24	0.69
5:AE:101:GLU:HB3	5:AE:122:ASN:HB3	1.73	0.69
5:AE:157:ARG:HD2	8:AH:43:GLU:O	1.92	0.69
1:CA:374:A:O3'	16:CP:70:ARG:NH1	2.25	0.69
1:CA:1027:C:N4	1:CA:1034:G:O6	2.25	0.69
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.24	0.69
22:DA:1469:A:C2	22:DA:1470:A:C5	2.80	0.69
2:AB:82:ASP:O	2:AB:84:ALA:N	2.25	0.69
1:CA:247:G:C6	1:CA:278:G:C2	2.80	0.69
6:CF:13:ASP:O	6:CF:15:SER:N	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:89:A:C2	22:DA:90:U:C2	2.80	0.69
22:DA:447:A:H5'	22:DA:449:A:C5	2.26	0.69
5:AE:72:ILE:HD13	5:AE:145:GLU:CD	2.17	0.69
22:DA:301:G:C2	22:DA:302:C:N3	2.60	0.69
22:DA:1823:G:N7	57:DA:3659:HOH:O	2.26	0.69
22:DA:1839:G:O6	57:DA:3810:HOH:O	2.06	0.69
1:AA:771:G:O2'	1:AA:772:U:H5'	1.92	0.69
44:BW:49:ALA:O	44:BW:50:ASN:HB2	1.92	0.69
8:CH:92:LEU:O	8:CH:117:ARG:NH1	2.26	0.69
22:DA:753:A:C2	22:DA:754:U:C2	2.81	0.69
22:DA:1364:G:N7	45:DX:2:SER:N	2.41	0.69
22:DA:2467:C:N4	22:DA:2468:A:C6	2.60	0.69
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.38	0.69
22:BA:2271:G:O6	57:BA:3518:HOH:O	2.09	0.69
29:BH:94:ILE:CA	29:BH:122:LEU:HG	2.22	0.69
1:CA:32:A:C2	1:CA:33:A:C5	2.80	0.69
2:CB:21:ARG:NH1	2:CB:21:ARG:HA	2.06	0.69
22:DA:2550:G:C6	22:DA:2551:C:C4	2.81	0.69
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.25	0.69
24:DC:66:ASP:OD2	24:DC:102:ARG:NH1	2.25	0.69
1:AA:405:U:OP1	1:AA:406:G:O2'	2.09	0.69
5:AE:159:LYS:O	8:AH:64:LYS:NZ	2.25	0.69
22:BA:276:U:O2'	22:BA:278:A:N7	2.26	0.69
22:BA:2192:U:C4	22:BA:2193:G:N7	2.60	0.69
22:BA:2196:C:O2'	22:BA:2197:U:H5'	1.93	0.69
22:BA:2502:G:OP2	57:BA:3496:HOH:O	2.10	0.69
29:BH:97:ARG:HD2	1:CA:369:G:O2'	1.93	0.69
29:BH:116:ARG:O	29:BH:118:PRO:HD3	1.92	0.69
29:BH:117:LEU:HD11	29:BH:121:VAL:N	2.05	0.69
29:BH:119:ASN:HB3	29:BH:123:ARG:NH1	2.06	0.69
2:CB:104:TRP:CH2	2:CB:155:GLY:C	2.70	0.69
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.11	0.69
22:DA:2093:G:C5	22:DA:2225:A:C8	2.81	0.69
24:DC:108:LYS:N	24:DC:194:GLU:O	2.24	0.69
42:DU:82:ARG:HB2	42:DU:97:LYS:HG3	1.75	0.69
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.26	0.69
33:BL:87:GLY:O	33:BL:89:VAL:N	2.26	0.69
1:CA:577:G:C4	1:CA:816:A:C2	2.80	0.69
1:CA:673:A:H2'	1:CA:674:G:C8	2.28	0.69
22:DA:658:U:N3	22:DA:659:G:N7	2.41	0.69
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.93	0.68
22:BA:2448:A:OP2	57:BA:3691:HOH:O	2.09	0.68
22:DA:1350:C:N3	22:DA:1382:G:C2	2.61	0.68
2:AB:73:LYS:O	2:AB:75:ALA:N	2.26	0.68
22:BA:686:U:H2'	22:BA:788:A:N1	2.09	0.68
1:CA:579:A:H2'	1:CA:580:C:C6	2.28	0.68
22:BA:977:G:O6	57:BA:3598:HOH:O	2.10	0.68
22:BA:2499:C:OP1	57:BA:3693:HOH:O	2.10	0.68
35:BN:103:ARG:CD	35:BN:110:MET:HE3	2.23	0.68
2:CB:193:PRO:O	2:CB:195:GLY:N	2.26	0.68
22:DA:789:A:N1	57:DA:3310:HOH:O	2.27	0.68
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.29	0.68
22:BA:2297:A:N1	22:BA:2321:U:H5	1.92	0.68
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.29	0.68
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.26	0.68
1:CA:1108:G:O6	57:CA:1851:HOH:O	2.10	0.68
25:BD:2:ILE:HG13	25:BD:100:LEU:HD21	1.75	0.68
38:BQ:112:LYS:NZ	39:BR:50:GLY:HA2	2.08	0.68
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.74	0.68
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.09	0.68
22:DA:2780:G:N1	31:DJ:102:GLU:OE2	2.26	0.68
1:AA:254:G:OP1	17:AQ:70:THR:HG22	1.93	0.68
24:BC:247:PRO:HD2	24:BC:248:TRP:CE3	2.28	0.68
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.29	0.68
1:CA:811:C:O2'	1:CA:901:A:N1	2.24	0.68
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.26	0.68
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.94	0.68
20:CT:5:LYS:O	20:CT:7:ALA:N	2.25	0.68
22:BA:2192:U:C2	22:BA:2193:G:C8	2.82	0.68
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.76	0.68
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.42	0.68
22:BA:181:A:H2'	22:BA:182:A:C8	2.29	0.68
22:BA:1922:G:C2	22:BA:1923:U:C6	2.81	0.68
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.75	0.68
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.24	0.68
22:DA:297:G:H5''	42:DU:85:PHE:HB2	1.75	0.68
22:DA:771:G:C2	22:DA:772:C:C6	2.81	0.68
22:DA:777:G:N7	22:DA:793:A:H2	1.92	0.68
22:DA:2091:C:H3'	22:DA:2092:U:H5''	1.76	0.68
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG12	1.75	0.68
22:BA:2380:C:OP1	36:BO:17:LYS:NZ	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:114:ARG:O	8:CH:117:ARG:N	2.25	0.68
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.29	0.68
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.76	0.68
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.09	0.68
22:BA:1288:G:C4	22:BA:1327:A:C2	2.82	0.68
22:BA:2845:U:H5''	37:BP:52:ASN:O	1.94	0.68
28:BG:149:ARG:HG2	28:BG:149:ARG:HH11	1.59	0.68
1:CA:577:G:C8	1:CA:816:A:N1	2.62	0.68
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.77	0.68
2:CB:87:CYS:O	2:CB:89:GLN:N	2.26	0.68
22:DA:42:A:C2	22:DA:438:G:C2	2.82	0.68
22:DA:201:C:C4	22:DA:202:U:C5	2.81	0.68
22:DA:260:G:C6	22:DA:261:G:N7	2.62	0.68
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.74	0.68
20:AT:5:LYS:O	20:AT:7:ALA:N	2.27	0.67
22:BA:877:A:C6	22:BA:899:A:C6	2.82	0.67
1:CA:123:U:OP1	1:CA:311:C:O2'	2.11	0.67
11:CK:126:LYS:O	21:CU:34:ARG:NE	2.27	0.67
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.29	0.67
22:DA:1737:G:C6	22:DA:1738:G:N1	2.62	0.67
1:AA:119:A:C2	1:AA:240:G:C8	2.82	0.67
33:BL:82:LEU:HD23	33:BL:83:ALA:N	2.08	0.67
4:CD:35:GLU:O	4:CD:37:ALA:N	2.27	0.67
22:DA:563:A:C4	22:DA:2018:G:C2	2.83	0.67
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.08	0.67
22:DA:669:G:N2	22:DA:670:A:N1	2.42	0.67
22:DA:749:A:C5	22:DA:750:A:N7	2.63	0.67
22:DA:2093:G:C6	22:DA:2225:A:C8	2.82	0.67
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.29	0.67
4:AD:191:LEU:O	4:AD:192:SER:HB3	1.93	0.67
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.10	0.67
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.75	0.67
22:DA:1805:A:C2	22:DA:1813:G:C2	2.83	0.67
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.76	0.67
22:DA:398:C:OP1	45:DX:32:ASN:ND2	2.27	0.67
22:DA:1627:G:C2	22:DA:1628:G:C8	2.82	0.67
22:BA:142:A:C5	22:BA:143:C:C4	2.83	0.67
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.19	0.67
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.30	0.67
1:CA:309:A:O2'	1:CA:607:A:N1	2.25	0.67
2:CB:16:PHE:CE2	2:CB:18:HIS:CE1	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.26	0.67
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.10	0.67
22:DA:2427:C:OP1	57:DA:3699:HOH:O	2.11	0.67
24:DC:70:ASN:O	24:DC:72:ASP:N	2.28	0.67
1:AA:858:G:N7	57:AA:1824:HOH:O	2.28	0.67
22:BA:2591:C:OP2	24:BC:237:GLY:O	2.13	0.67
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.19	0.67
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.28	0.67
1:CA:1458:G:H5'	20:CT:27:MET:HB3	1.77	0.67
5:CE:102:GLY:O	5:CE:104:GLY:N	2.28	0.67
11:CK:127:ARG:N	21:CU:34:ARG:NH2	2.42	0.67
22:DA:1773:A:N3	22:DA:1978:A:C2	2.62	0.67
1:AA:572:A:H5'	1:AA:573:A:OP2	1.95	0.67
24:BC:15:HIS:O	24:BC:204:VAL:HG21	1.94	0.67
22:DA:14:A:C6	22:DA:526:A:C2	2.83	0.67
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.30	0.67
22:DA:2016:U:O2	48:D0:4:GLN:NE2	2.27	0.67
25:DD:151:THR:O	25:DD:152:PRO:C	2.38	0.67
4:AD:130:VAL:HG11	4:AD:135:TYR:CD2	2.29	0.67
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	1.94	0.67
22:DA:187:G:C2	22:DA:210:C:C2	2.82	0.67
22:DA:310:A:O2'	22:DA:311:A:OP2	2.09	0.67
22:DA:945:A:C8	22:DA:2448:A:C2	2.83	0.67
24:DC:62:TYR:CE2	24:DC:63:ARG:O	2.48	0.67
32:DK:34:GLY:O	32:DK:36:GLY:N	2.27	0.67
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.27	0.67
1:AA:872:A:C4	1:AA:874:G:N7	2.63	0.67
5:AE:159:LYS:C	8:AH:64:LYS:HZ1	2.02	0.67
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.94	0.67
22:DA:2392:A:C8	22:DA:2429:G:C2	2.83	0.67
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.77	0.66
22:DA:334:C:OP1	22:DA:335:C:N4	2.26	0.66
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.75	0.66
17:AQ:48:ASP:OD2	17:AQ:52:GLU:OE1	2.13	0.66
22:BA:2192:U:N3	22:BA:2193:G:N7	2.44	0.66
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.66
29:BH:94:ILE:C	29:BH:122:LEU:HG	2.21	0.66
22:DA:1654:A:P	35:DN:1:MET:HA	2.35	0.66
22:DA:2093:G:C5	22:DA:2225:A:N7	2.63	0.66
5:AE:25:VAL:O	5:AE:27:GLY:N	2.28	0.66
22:BA:831:G:OP1	57:BA:3265:HOH:O	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.59	0.66
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.28	0.66
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.30	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.93	0.66
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.26	0.66
22:DA:696:G:C2	22:DA:767:U:O2	2.47	0.66
22:DA:1649:G:O6	22:DA:2009:A:N6	2.29	0.66
22:DA:2055:C:N3	57:DA:3532:HOH:O	2.28	0.66
25:DD:13:ARG:HD2	25:DD:15:PHE:CE2	2.30	0.66
40:DS:58:ALA:O	40:DS:64:ALA:N	2.29	0.66
1:AA:532:A:N6	3:AC:192:THR:OG1	2.28	0.66
22:BA:357:C:H2'	22:BA:358:U:C6	2.31	0.66
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.78	0.66
22:DA:450:G:N1	22:DA:454:A:OP2	2.27	0.66
29:BH:121:VAL:O	29:BH:128:HIS:NE2	2.29	0.66
44:BW:19:LYS:O	44:BW:21:LEU:HG	1.94	0.66
1:CA:374:A:H5''	1:CA:452:A:N1	2.10	0.66
1:CA:577:G:N3	1:CA:578:C:C6	2.64	0.66
2:CB:72:THR:HG22	2:CB:95:ARG:NH1	2.11	0.66
1:CA:412:A:O2'	1:CA:413:G:H4'	1.95	0.66
1:AA:16:A:O2'	1:AA:17:U:H5'	1.95	0.66
22:BA:798:G:O6	57:BA:3326:HOH:O	2.12	0.66
45:BX:13:VAL:HG22	45:BX:29:PHE:HB2	1.78	0.66
46:BY:22:LEU:O	46:BY:23:ARG:C	2.38	0.66
1:CA:716:A:N3	11:CK:119:ASN:O	2.29	0.66
1:CA:978:A:HO2'	1:CA:1322:C:H5	1.42	0.66
22:DA:746:U:HO2'	22:DA:2611:C:HO2'	1.42	0.66
22:DA:1380:G:OP2	57:DA:3751:HOH:O	2.14	0.66
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.28	0.66
1:AA:382:A:H2'	1:AA:383:A:C8	2.31	0.66
1:AA:721:G:H4'	1:AA:722:G:O4'	1.95	0.66
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.21	0.66
22:BA:2190:G:C6	22:BA:2191:A:C6	2.83	0.66
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.31	0.66
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.11	0.66
22:DA:189:G:C4	22:DA:205:G:N2	2.63	0.66
1:AA:209:U:O2'	1:AA:210:C:OP1	2.13	0.66
16:AP:50:THR:O	16:AP:50:THR:HG22	1.96	0.66
27:BF:146:VAL:O	27:BF:147:ASP:C	2.37	0.66
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:728:A:H2'	1:CA:729:A:C8	2.31	0.66
22:DA:574:A:H4'	22:DA:575:A:C5'	2.25	0.66
14:AN:61:ARG:NH1	57:AN:202:HOH:O	2.25	0.65
22:BA:1779:U:C5	22:BA:1784:A:N7	2.62	0.65
22:BA:1915:U:C2	22:BA:1916:A:C8	2.84	0.65
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.31	0.65
1:CA:31:G:O4'	1:CA:306:A:C2	2.49	0.65
1:CA:1071:C:O2	1:CA:1072:G:C8	2.49	0.65
5:CE:80:THR:OG1	5:CE:122:ASN:ND2	2.29	0.65
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.31	0.65
22:DA:1530:G:N2	22:DA:1542:U:O2	2.28	0.65
22:DA:2131:U:O2	22:DA:2158:A:N6	2.29	0.65
50:D2:11:LYS:NZ	57:D2:201:HOH:O	2.29	0.65
22:BA:11:C:H2'	22:BA:12:U:H5'	1.79	0.65
22:BA:555:G:O2'	22:BA:556:A:OP2	2.14	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
1:CA:1524:C:OP2	11:CK:125:LYS:HD2	1.95	0.65
22:DA:2004:G:OP2	57:DA:3801:HOH:O	2.13	0.65
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.42	0.65
24:DC:67:PHE:HB3	24:DC:151:GLY:O	1.96	0.65
5:AE:114:VAL:HG21	5:AE:141:ILE:HD12	1.78	0.65
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.29	0.65
1:CA:821:G:H2'	1:CA:822:U:C6	2.31	0.65
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.32	0.65
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.32	0.65
1:AA:71:A:O2'	1:AA:72:A:OP2	2.15	0.65
1:AA:1180:A:OP2	9:AI:99:ARG:NH2	2.30	0.65
22:BA:933:A:H5'	22:BA:934:U:OP2	1.97	0.65
22:BA:1410:G:O6	57:BA:3628:HOH:O	2.10	0.65
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.79	0.65
29:BH:122:LEU:HD21	1:CA:368:U:P	2.33	0.65
38:BQ:92:ARG:HA	38:BQ:95:LEU:HB2	1.79	0.65
12:CL:16:VAL:O	12:CL:17:ALA:O	2.14	0.65
22:DA:613:A:OP2	22:DA:614:A:N7	2.29	0.65
22:DA:1317:G:H2'	22:DA:1318:U:O4'	1.97	0.65
22:DA:1973:G:C6	22:DA:1974:C:C4	2.85	0.65
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.15	0.65
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.31	0.65
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.96	0.65
25:BD:12:THR:HG23	37:BP:9:GLU:OE2	1.96	0.65
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
5:CE:99:ALA:O	5:CE:101:GLU:N	2.29	0.65
22:DA:105:C:H2'	22:DA:106:C:C6	2.32	0.65
22:DA:1359:A:C8	22:DA:1373:A:C2	2.84	0.65
22:DA:1843:C:H4'	24:DC:251:GLN:HG2	1.78	0.65
23:DB:4:C:C2	23:DB:117:G:N2	2.64	0.65
1:AA:484:G:H4'	1:AA:485:U:OP1	1.97	0.65
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.29	0.65
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	1.97	0.65
22:BA:2286:G:H4'	22:BA:2287:A:O5'	1.97	0.65
22:DA:118:A:C8	22:DA:119:A:C8	2.85	0.65
22:DA:1627:G:C2	22:DA:1628:G:N7	2.65	0.65
1:AA:933:G:OP2	7:AG:3:ARG:HB3	1.96	0.65
22:BA:761:A:OP1	57:BA:3701:HOH:O	2.14	0.65
32:BK:107:LEU:O	32:BK:109:SER:N	2.30	0.65
1:CA:675:A:C4	1:CA:676:A:C8	2.85	0.65
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.10	0.65
29:DH:149:GLU:HG2	29:DH:149:GLU:O	1.96	0.65
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.11	0.65
22:BA:1224:U:H4'	39:BR:88:GLY:O	1.96	0.65
42:BU:72:ILE:HD13	42:BU:72:ILE:N	2.11	0.65
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.32	0.65
17:CQ:19:LYS:NZ	17:CQ:49:GLU:OE1	2.17	0.65
42:DU:77:THR:O	42:DU:79:LYS:N	2.30	0.65
1:AA:771:G:C2'	1:AA:772:U:H5'	2.26	0.64
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.30	0.64
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.12	0.64
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.12	0.64
4:AD:125:VAL:O	4:AD:127:GLY:N	2.27	0.64
22:BA:747:U:C5	22:BA:2613:U:C5	2.85	0.64
22:BA:981:A:OP1	57:BA:3600:HOH:O	2.14	0.64
39:BR:49:ILE:C	39:BR:51:VAL:O	2.40	0.64
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.27	0.64
7:AG:75:VAL:HG11	7:AG:144:MET:HG3	1.80	0.64
24:BC:231:PRO:HD2	24:BC:247:PRO:HA	1.79	0.64
1:CA:642:A:C5	8:CH:107:SER:HA	2.32	0.64
1:CA:1499:A:H3'	57:CA:1877:HOH:O	1.97	0.64
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.79	0.64
1:AA:188:C:N3	1:AA:189:A:C2	2.65	0.64
1:AA:262:A:H2'	1:AA:263:A:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1055:A:C6	1:AA:1206:G:C5	2.86	0.64
22:BA:96:C:H4'	46:BY:41:HIS:CD2	2.32	0.64
22:BA:686:U:H2'	22:BA:788:A:C2	2.33	0.64
22:BA:2066:C:OP1	57:BA:3514:HOH:O	2.15	0.64
2:CB:73:LYS:O	2:CB:75:ALA:N	2.31	0.64
22:DA:1780:A:OP1	57:DA:3690:HOH:O	2.15	0.64
32:DK:105:ARG:NH2	37:DP:34:GLU:OE2	2.29	0.64
1:AA:111:G:H5''	1:AA:112:G:OP2	1.97	0.64
33:BL:100:ILE:HG13	33:BL:101:ILE:HG23	1.80	0.64
1:CA:547:A:P	57:CA:1774:HOH:O	2.56	0.64
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	1.96	0.64
22:DA:813:U:H2'	22:DA:814:C:C6	2.33	0.64
22:DA:1269:A:N7	57:DA:3383:HOH:O	2.30	0.64
23:BB:47:C:P	36:BO:3:LYS:HD2	2.36	0.64
39:BR:47:VAL:HG11	39:BR:54:VAL:HG13	1.79	0.64
49:B1:23:THR:OG1	49:B1:24:THR:N	2.31	0.64
15:CO:87:LEU:O	15:CO:88:ARG:HB3	1.96	0.64
22:DA:1441:G:N2	22:DA:1442:U:C2	2.66	0.64
22:DA:1649:G:C6	22:DA:2009:A:N6	2.65	0.64
33:DL:93:ASN:O	33:DL:95:LEU:N	2.30	0.64
1:AA:202:G:O2'	1:AA:468:A:C8	2.48	0.64
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.98	0.64
2:CB:64:LYS:HD3	2:CB:64:LYS:C	2.23	0.64
22:DA:388:G:N7	22:DA:390:U:H2'	2.13	0.64
22:DA:1824:G:N7	57:DA:3656:HOH:O	2.30	0.64
33:DL:61:LEU:O	51:D3:13:ARG:HD3	1.97	0.64
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.13	0.64
22:BA:1509:A:HO2'	22:BA:1510:G:P	2.20	0.64
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.79	0.64
22:DA:686:U:OP2	57:DA:3717:HOH:O	2.15	0.64
31:DJ:4:PHE:O	38:DQ:64:ARG:NH2	2.26	0.64
22:BA:930:G:H1'	47:BZ:25:LEU:HD21	1.80	0.64
22:BA:1921:G:C2	22:BA:1922:G:C8	2.86	0.64
22:BA:2315:G:H2'	22:BA:2316:G:H8	1.63	0.64
22:BA:2554:U:C4	22:BA:2555:U:O4	2.51	0.64
28:DG:170:ARG:NH1	52:D4:29:ALA:O	2.30	0.64
34:DM:70:ASP:C	34:DM:70:ASP:OD1	2.41	0.64
8:AH:18:GLN:O	8:AH:21:ASN:N	2.30	0.64
22:BA:45:G:H5''	22:BA:46:G:OP1	1.97	0.64
22:BA:197:A:N6	22:BA:2430:A:H2'	2.13	0.64
22:BA:2187:U:C5	22:BA:2188:U:C4	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.97	0.64
38:BQ:112:LYS:HZ1	39:BR:50:GLY:HA2	1.63	0.64
1:CA:22:G:O2'	1:CA:913:A:N1	2.29	0.64
4:CD:130:VAL:HG11	4:CD:135:TYR:CD2	2.33	0.64
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.98	0.64
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.78	0.64
36:DO:2:ASP:O	36:DO:6:ALA:HB2	1.97	0.64
1:AA:1358:U:C5	1:AA:1359:C:C4	2.86	0.63
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.33	0.63
1:CA:576:C:H3'	1:CA:577:G:H5''	1.79	0.63
1:CA:966:G:O2'	9:CI:130:ARG:OXT	2.16	0.63
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.13	0.63
22:DA:2330:G:N2	22:DA:2386:A:C2	2.66	0.63
24:DC:212:ARG:NE	24:DC:216:VAL:O	2.31	0.63
29:DH:81:ALA:C	29:DH:149:GLU:HB2	2.23	0.63
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.63
33:DL:80:SER:O	33:DL:84:LYS:NZ	2.31	0.63
2:AB:67:ILE:HG21	2:AB:69:PHE:CE1	2.33	0.63
6:AF:3:HIS:O	6:AF:92:THR:HA	1.98	0.63
22:BA:591:U:HO2'	51:B3:2:PRO:N	1.95	0.63
4:CD:26:ARG:O	4:CD:27:ALA:HB2	1.98	0.63
17:CQ:14:SER:O	17:CQ:17:MET:HE1	1.97	0.63
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.81	0.63
1:AA:682:G:N2	1:AA:709:U:C2	2.67	0.63
22:BA:319:G:C4	22:BA:333:G:N2	2.66	0.63
22:BA:2516:A:O2'	22:BA:2517:C:H5'	1.98	0.63
1:CA:134:G:H2'	1:CA:135:C:O4'	1.99	0.63
1:CA:322:C:O2	1:CA:332:G:N2	2.30	0.63
1:CA:577:G:C8	1:CA:816:A:C2	2.87	0.63
2:CB:86:SER:O	2:CB:87:CYS:O	2.17	0.63
22:DA:235:U:C4	22:DA:236:C:C5	2.86	0.63
22:DA:781:A:H2'	22:DA:1777:U:O2'	1.98	0.63
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.98	0.63
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.33	0.63
22:DA:1973:G:C5	22:DA:1974:C:C4	2.87	0.63
1:AA:1121:U:N3	1:AA:1122:U:C5	2.67	0.63
4:AD:150:LYS:O	4:AD:151:LYS:C	2.41	0.63
22:BA:324:A:N6	22:BA:338:G:O2'	2.30	0.63
22:BA:475:C:C4	22:BA:481:G:O6	2.51	0.63
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.79	0.63
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.80	0.63
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	1.79	0.63
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.31	0.63
22:DA:684:G:N2	22:DA:788:A:OP2	2.30	0.63
22:DA:749:A:C6	22:DA:750:A:N7	2.66	0.63
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.17	0.63
22:DA:2189:U:H2'	22:DA:2190:G:H5''	1.80	0.63
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.34	0.63
24:DC:67:PHE:CE1	24:DC:156:ARG:CZ	2.81	0.63
45:DX:28:ARG:CZ	45:DX:30:LEU:HD21	2.29	0.63
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	1.80	0.63
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.31	0.63
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.80	0.63
46:BY:22:LEU:O	46:BY:23:ARG:O	2.16	0.63
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.98	0.63
1:CA:623:C:C4	1:CA:624:C:C5	2.86	0.63
22:DA:1364:G:N2	22:DA:1367:A:OP2	2.29	0.63
22:DA:1937:A:O2'	22:DA:1939:U:OP2	2.10	0.63
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.32	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.79	0.63
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.46	0.63
22:BA:2062:A:OP1	57:BA:3502:HOH:O	2.15	0.63
22:BA:2296:U:H4'	22:BA:2297:A:OP1	1.99	0.63
30:BI:131:GLY:O	30:BI:134:ARG:N	2.31	0.63
39:BR:49:ILE:CG2	39:BR:53:PHE:H	2.11	0.63
1:CA:568:G:O6	12:CL:2:ALA:HB2	1.98	0.63
22:DA:106:C:O2'	22:DA:294:A:O2'	2.07	0.63
22:DA:1835:G:N3	22:DA:1836:C:C6	2.67	0.63
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.80	0.63
23:DB:23:G:O6	57:DB:304:HOH:O	2.13	0.63
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.66	0.63
1:AA:1217:C:OP1	14:AN:9:ARG:NE	2.32	0.63
13:AM:80:LEU:HD22	13:AM:87:ARG:HB2	1.81	0.63
15:AO:19:ALA:O	15:AO:20:ASN:HB2	1.99	0.63
1:CA:773:G:C2	1:CA:807:A:C2	2.86	0.63
2:CB:210:VAL:O	2:CB:214:LEU:HB2	1.98	0.63
22:DA:749:A:C4	22:DA:750:A:C8	2.87	0.63
22:DA:1825:U:O4	57:DA:3783:HOH:O	2.14	0.63
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.80	0.63
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.29	0.63
22:BA:2887:A:H5'	22:BA:2888:C:OP2	1.99	0.63
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	1.98	0.63
35:BN:117:ASP:O	35:BN:119:SER:N	2.32	0.63
42:BU:72:ILE:HD13	42:BU:72:ILE:H	1.64	0.63
48:B0:15:MET:O	48:B0:18:SER:HB3	1.98	0.63
1:CA:784:A:C2	1:CA:785:G:C4	2.86	0.63
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.31	0.63
1:CA:1417:G:N2	1:CA:1484:C:C4	2.67	0.63
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.52	0.63
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.33	0.63
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.32	0.63
22:DA:1833:C:C2	22:DA:1834:U:C6	2.86	0.63
25:DD:140:HIS:NE2	57:DD:302:HOH:O	2.14	0.63
1:AA:655:A:C2	1:AA:656:G:C4	2.87	0.63
17:AQ:12:VAL:O	17:AQ:22:VAL:O	2.16	0.63
22:BA:1916:A:H2'	22:BA:1917:U:H1'	1.79	0.63
22:BA:2025:C:OP2	57:BA:3479:HOH:O	2.16	0.63
24:BC:232:HIS:O	24:BC:233:GLY:O	2.17	0.63
1:CA:223:A:C5	1:CA:224:U:C5	2.87	0.63
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.32	0.63
22:DA:1649:G:C6	22:DA:2009:A:C6	2.87	0.63
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.31	0.63
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.34	0.63
1:AA:1077:G:C5	57:AA:1793:HOH:O	2.52	0.62
17:AQ:14:SER:OG	17:AQ:17:MET:CE	2.47	0.62
22:BA:1071:G:C8	22:BA:1089:A:N6	2.66	0.62
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.34	0.62
22:DA:1973:G:N7	22:DA:1974:C:C5	2.66	0.62
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.46	0.62
1:AA:108:G:N3	1:AA:108:G:H5'	2.14	0.62
1:AA:1317:C:OP1	14:AN:56:SER:OG	2.12	0.62
22:BA:1917:U:O4	22:BA:1918:A:C6	2.52	0.62
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.12	0.62
5:CE:72:ILE:HD13	5:CE:145:GLU:CD	2.24	0.62
22:DA:1715:G:N2	22:DA:1744:A:OP2	2.32	0.62
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.32	0.62
1:AA:68:G:C5	1:AA:69:G:H1'	2.34	0.62
1:AA:114:U:O2'	1:AA:115:G:H5'	1.99	0.62
4:AD:192:SER:OG	4:AD:193:ALA:N	2.28	0.62
5:AE:81:LEU:HA	5:AE:147:MET:HE1	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2455:G:O6	57:BA:3534:HOH:O	2.14	0.62
44:BW:19:LYS:O	44:BW:21:LEU:N	2.32	0.62
1:CA:1296:C:N4	1:CA:1297:G:O6	2.32	0.62
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.81	0.62
20:CT:25:ARG:O	20:CT:29:ARG:HG2	1.99	0.62
22:DA:308:G:C6	22:DA:309:A:C6	2.88	0.62
22:DA:319:G:H2'	22:DA:320:A:O4'	1.99	0.62
22:DA:668:A:C2	22:DA:670:A:C5	2.88	0.62
22:DA:686:U:H6	22:DA:788:A:N1	1.96	0.62
22:DA:2214:C:C2	22:DA:2215:C:C6	2.87	0.62
1:AA:597:G:C2	1:AA:644:U:C2	2.87	0.62
28:BG:38:ASN:O	28:BG:39:ASP:HB2	1.99	0.62
33:BL:62:PRO:CG	51:B3:25:LYS:HD3	2.30	0.62
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.14	0.62
1:CA:1219:A:N6	1:CA:1220:G:O6	2.32	0.62
20:CT:78:ASN:ND2	57:CT:202:HOH:O	2.33	0.62
22:DA:514:A:N1	22:DA:515:A:C2	2.67	0.62
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.00	0.62
22:BA:998:C:C6	57:BA:3364:HOH:O	2.51	0.62
22:BA:1817:G:OP1	24:BC:87:ARG:NH2	2.30	0.62
24:BC:70:ASN:O	24:BC:72:ASP:N	2.32	0.62
1:CA:577:G:N9	1:CA:816:A:C2	2.67	0.62
2:CB:99:GLY:O	2:CB:103:ASN:ND2	2.32	0.62
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.47	0.62
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.00	0.62
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.00	0.62
22:DA:53:A:N3	22:DA:179:C:H4'	2.14	0.62
22:DA:1240:U:HO2'	22:DA:1241:A:P	2.23	0.62
22:DA:1308:A:N6	22:DA:1309:G:C2	2.68	0.62
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.18	0.62
1:AA:995:C:N3	1:AA:1046:A:O2'	2.30	0.62
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.64	0.62
9:AI:57:MET:SD	9:AI:58:VAL:N	2.70	0.62
22:BA:528:A:H3'	22:BA:528:A:H8	1.62	0.62
22:BA:1156:A:C8	38:BQ:51:ARG:HG2	2.34	0.62
22:BA:2314:A:OP1	27:BF:88:LYS:NZ	2.33	0.62
24:BC:260:ASN:O	24:BC:262:ARG:N	2.30	0.62
41:BT:2:ILE:CD1	41:BT:7:LEU:HD11	2.27	0.62
1:CA:33:A:H2'	1:CA:34:C:C6	2.34	0.62
1:CA:782:A:N7	1:CA:783:C:C5	2.68	0.62
22:DA:118:A:N3	22:DA:178:G:H1'	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1693:U:O4	22:DA:1976:U:O2'	2.16	0.62
22:DA:2521:C:C2	22:DA:2545:G:N2	2.68	0.62
1:AA:64:G:C8	1:AA:99:C:N4	2.68	0.62
11:AK:67:ALA:HB1	11:AK:100:LEU:HD13	1.81	0.62
22:BA:276:U:H2'	22:BA:276:U:O2	2.00	0.62
39:BR:49:ILE:CG2	39:BR:52:PRO:HA	2.29	0.62
22:DA:248:G:H5'	22:DA:250:G:N7	2.15	0.62
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.29	0.62
22:DA:1304:A:C6	22:DA:1305:C:C4	2.87	0.62
22:DA:1440:U:O4	57:DA:3631:HOH:O	2.16	0.62
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.33	0.62
22:BA:58:G:OP1	41:BT:78:SER:CB	2.48	0.62
22:BA:1057:A:C2	22:BA:1086:A:C2	2.87	0.62
49:B1:40:ASP:C	49:B1:40:ASP:OD1	2.43	0.62
1:CA:429:U:H3'	4:CD:9:LEU:HD22	1.80	0.62
2:CB:167:ASP:OD2	2:CB:191:SER:HA	1.99	0.62
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.00	0.62
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.82	0.62
14:CN:91:GLY:O	14:CN:93:ILE:N	2.33	0.62
22:DA:1360:G:C6	22:DA:1361:G:H1'	2.34	0.62
32:DK:1:MET:HE2	32:DK:32:TYR:CE1	2.34	0.62
3:AC:139:GLN:O	3:AC:141:ALA:N	2.33	0.62
22:BA:1926:U:H2'	22:BA:1926:U:O2	1.99	0.62
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.35	0.62
25:BD:104:VAL:O	25:BD:105:LYS:HB2	1.99	0.62
1:CA:257:G:C6	57:CA:1718:HOH:O	2.51	0.62
1:CA:858:G:O6	1:CA:869:G:H3'	2.00	0.62
22:DA:311:A:C2	22:DA:328:U:O4	2.52	0.62
22:DA:1088:A:N6	30:DI:135:SER:OG	2.33	0.62
22:DA:2056:G:C2	22:DA:2057:G:C8	2.88	0.62
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.32	0.62
1:AA:1212:U:H4'	1:AA:1213:A:C8	2.35	0.62
20:AT:3:ASN:O	20:AT:4:ILE:C	2.43	0.62
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.34	0.62
33:BL:77:ILE:HG23	33:BL:100:ILE:HD11	1.82	0.62
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.82	0.62
22:DA:192:C:O2'	22:DA:802:A:N3	2.33	0.62
22:DA:1240:U:O2'	22:DA:1241:A:O5'	2.17	0.62
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.00	0.62
23:DB:58:A:H2'	23:DB:59:A:O4'	2.00	0.62
38:DQ:47:TYR:CD1	38:DQ:47:TYR:C	2.78	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.18	0.61
22:BA:528:A:C8	22:BA:528:A:C3'	2.82	0.61
22:BA:1376:C:OP2	57:BA:3406:HOH:O	2.16	0.61
22:BA:1588:G:C2	22:BA:1589:U:C6	2.88	0.61
22:BA:1589:U:C2	22:BA:1590:A:C8	2.88	0.61
22:BA:2499:C:P	57:BA:3691:HOH:O	2.48	0.61
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.33	0.61
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.34	0.61
44:BW:37:ILE:HG21	44:BW:80:ILE:HG21	1.82	0.61
1:CA:582:C:O2	1:CA:760:G:N2	2.33	0.61
1:CA:920:U:H2'	1:CA:921:U:C6	2.34	0.61
1:CA:1452:C:H5'	1:CA:1453:G:C4	2.35	0.61
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.82	0.61
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.82	0.61
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.00	0.61
1:AA:518:C:H2'	1:AA:530:G:C8	2.35	0.61
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.81	0.61
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.64	0.61
13:AM:29:ARG:NH2	13:AM:63:PHE:HB2	2.15	0.61
22:BA:580:U:H2'	22:BA:581:C:C6	2.33	0.61
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.35	0.61
1:CA:386:C:N4	1:CA:387:U:O4	2.33	0.61
2:CB:24:ASN:O	2:CB:26:LYS:N	2.32	0.61
22:DA:2300:C:C2	22:DA:2317:A:C2	2.88	0.61
23:DB:7:G:O2'	36:DO:38:GLN:OE1	2.17	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
1:AA:408:A:C2	1:AA:435:A:C2	2.88	0.61
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.16	0.61
22:BA:1910:G:H2'	22:BA:1911:U:O4'	2.00	0.61
1:CA:373:A:N3	1:CA:374:A:C8	2.68	0.61
1:CA:1518:A:C2	1:CA:1519:A:C2	2.88	0.61
11:CK:112:ASP:CB	21:CU:20:LYS:HE3	2.30	0.61
22:DA:828:U:O2'	22:DA:829:A:O5'	2.19	0.61
1:AA:955:U:O4'	1:AA:1227:A:N6	2.33	0.61
6:AF:16:GLU:OE2	4:CD:188:ARG:CZ	2.47	0.61
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.29	0.61
12:AL:114:ARG:O	12:AL:116:LYS:O	2.19	0.61
22:BA:830:G:H4'	22:BA:831:G:OP2	1.99	0.61
22:BA:861:A:C2	22:BA:917:A:C4	2.89	0.61
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.33	0.61
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:24:LEU:O	12:CL:26:ALA:N	2.34	0.61
22:DA:830:G:C4	22:DA:2448:A:C5	2.88	0.61
22:DA:2300:C:N3	22:DA:2317:A:C2	2.68	0.61
26:DE:15:SER:OG	26:DE:197:GLU:OE2	2.17	0.61
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.61
1:AA:872:A:C5	1:AA:874:G:C8	2.89	0.61
1:AA:1059:C:H2'	1:AA:1060:U:H6	1.64	0.61
22:BA:580:U:H2'	22:BA:581:C:H6	1.66	0.61
22:BA:1584:U:O2	22:BA:1584:U:H2'	1.99	0.61
35:BN:12:ARG:NE	35:BN:20:MET:CE	2.63	0.61
39:BR:47:VAL:CG1	39:BR:54:VAL:HG13	2.30	0.61
1:CA:72:A:C6	1:CA:73:C:N4	2.68	0.61
1:CA:790:A:C6	1:CA:791:G:C6	2.88	0.61
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.49	0.61
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.31	0.61
22:DA:27:G:N2	22:DA:512:G:H1'	2.15	0.61
22:DA:2204:G:C2	22:DA:2205:A:C8	2.88	0.61
35:DN:87:PHE:O	35:DN:89:SER:N	2.34	0.61
4:AD:32:CYS:O	4:AD:33:LYS:HB2	2.00	0.61
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.82	0.61
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.81	0.61
22:BA:281:C:H2'	22:BA:282:A:C8	2.35	0.61
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.83	0.61
1:CA:765:G:C6	1:CA:812:G:C4	2.89	0.61
15:CO:16:GLY:O	15:CO:18:ASP:N	2.33	0.61
11:AK:126:LYS:O	21:AU:34:ARG:CZ	2.49	0.61
22:BA:1588:G:N3	22:BA:1589:U:C6	2.68	0.61
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.83	0.61
44:BW:10:THR:O	44:BW:11:ARG:HB2	2.00	0.61
1:CA:455:G:N2	1:CA:478:A:C2	2.68	0.61
1:CA:562:U:H1'	12:CL:12:ARG:CG	2.30	0.61
1:CA:581:G:OP1	15:CO:65:LYS:NZ	2.32	0.61
1:CA:938:A:O3'	7:CG:95:ARG:NH2	2.34	0.61
22:DA:1831:G:H2'	22:DA:1832:C:C6	2.36	0.61
23:DB:81:G:C5	23:DB:82:U:C5	2.88	0.61
50:D2:18:PHE:O	50:D2:19:ARG:C	2.44	0.61
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.82	0.61
5:AE:137:VAL:O	5:AE:138:ARG:HB2	2.01	0.61
1:CA:33:A:H2'	1:CA:34:C:H6	1.65	0.61
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.00	0.61
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.36	0.61
1:AA:328:C:O2	1:AA:328:C:C2'	2.49	0.61
1:AA:1504:G:O3'	57:AA:1871:HOH:O	2.16	0.61
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.31	0.61
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.01	0.61
1:CA:369:G:OP2	1:CA:388:G:N1	2.30	0.61
1:CA:1191:A:H5''	3:CC:4:LYS:HE3	1.82	0.61
1:CA:1386:G:O2'	1:CA:1387:G:H5'	2.00	0.61
22:DA:56:A:C2	22:DA:57:C:C2	2.89	0.61
22:DA:659:G:H2'	22:DA:660:C:C6	2.36	0.61
22:DA:2502:G:H5'	22:DA:2503:A:O5'	2.01	0.61
22:DA:2573:C:OP1	22:DA:2574:G:H5''	2.01	0.61
1:AA:457:G:C6	1:AA:458:U:N3	2.69	0.61
1:AA:1151:A:O2'	1:AA:1152:A:O5'	2.18	0.61
22:BA:272:A:H2'	22:BA:273:G:O4'	2.00	0.61
22:BA:846:U:O2'	22:BA:847:U:P	2.59	0.61
1:CA:552:U:C2	1:CA:553:A:C8	2.89	0.61
18:CR:35:GLU:HB2	21:CU:19:PHE:CZ	2.36	0.61
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.00	0.61
1:AA:438:U:C2	1:AA:494:G:C6	2.89	0.60
1:AA:448:A:C4	1:AA:487:A:C2	2.89	0.60
22:BA:790:U:O2'	22:BA:791:C:OP2	2.17	0.60
22:BA:2448:A:OP2	57:BA:3690:HOH:O	2.15	0.60
41:BT:2:ILE:O	41:BT:3:ARG:HB2	1.99	0.60
4:CD:202:GLU:OE1	5:CE:105:ILE:HG23	2.01	0.60
8:CH:114:ARG:O	8:CH:115:ALA:C	2.44	0.60
12:CL:39:THR:O	12:CL:40:THR:OG1	2.13	0.60
22:DA:306:U:O2	22:DA:312:G:N2	2.34	0.60
22:DA:1109:C:C4	22:DA:1110:G:C6	2.89	0.60
22:DA:1638:C:H5''	22:DA:2710:C:O2'	2.01	0.60
22:DA:2091:C:H1'	45:DX:34:HIS:NE2	2.16	0.60
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.01	0.60
22:DA:2156:G:C6	22:DA:2157:G:C2	2.89	0.60
29:DH:81:ALA:O	29:DH:149:GLU:OE1	2.18	0.60
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.31	0.60
1:AA:1319:A:C8	1:AA:1323:G:C5	2.89	0.60
2:AB:47:VAL:HB	2:AB:48:PRO:HD3	1.82	0.60
2:AB:91:PHE:CD1	2:AB:150:GLY:HA3	2.36	0.60
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.01	0.60
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.16	0.60
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.16	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.83	0.60
1:CA:375:U:OP1	16:CP:70:ARG:HD3	2.00	0.60
4:CD:4:TYR:O	4:CD:5:LEU:HB2	2.01	0.60
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.83	0.60
22:DA:120:U:O4	22:DA:177:G:C8	2.54	0.60
22:DA:142:A:C6	22:DA:143:C:N4	2.69	0.60
22:DA:1805:A:H1'	24:DC:50:THR:O	2.01	0.60
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.83	0.60
52:D4:20:ASP:OD1	57:D4:201:HOH:O	2.15	0.60
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.36	0.60
1:AA:1461:G:C5	1:AA:1462:C:C5	2.89	0.60
4:AD:22:LYS:O	4:AD:24:GLY:N	2.34	0.60
9:AI:46:MET:SD	9:AI:46:MET:N	2.66	0.60
17:AQ:17:MET:HG2	17:AQ:20:SER:CB	2.31	0.60
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.18	0.60
1:CA:577:G:C2	1:CA:578:C:C5	2.89	0.60
22:DA:443:A:N6	26:DE:36:ALA:O	2.34	0.60
22:DA:669:G:N2	22:DA:670:A:C2	2.69	0.60
22:DA:1767:G:N1	22:DA:1986:C:C4	2.69	0.60
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.16	0.60
22:DA:1905:C:O4'	22:DA:1928:A:C2	2.54	0.60
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.02	0.60
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.35	0.60
25:DD:104:VAL:O	25:DD:105:LYS:HB3	1.99	0.60
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.02	0.60
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.31	0.60
22:BA:194:G:N7	57:BA:3765:HOH:O	2.31	0.60
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.01	0.60
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.82	0.60
22:BA:2589:A:C8	57:BA:3551:HOH:O	2.54	0.60
27:BF:17:MET:HE1	27:BF:22:TYR:O	2.01	0.60
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.83	0.60
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.32	0.60
48:B0:34:SER:OG	48:B0:36:GLU:HG2	2.00	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
40:DS:79:GLY:N	40:DS:100:THR:O	2.35	0.60
48:D0:25:VAL:O	48:D0:26:THR:OG1	2.15	0.60
3:AC:7:PRO:HD2	3:AC:184:TYR:CD1	2.37	0.60
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.32	0.60
26:BE:12:LEU:HD23	26:BE:13:THR:N	2.16	0.60
1:CA:502:A:H2'	1:CA:503:C:O4'	2.01	0.60
22:DA:561:G:O2'	38:DQ:45:TYR:OH	2.14	0.60
22:DA:1127:A:H2'	22:DA:1128:G:H5'	1.84	0.60
22:DA:1936:A:C8	22:DA:1945:G:C6	2.89	0.60
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.82	0.60
1:AA:901:A:N7	1:AA:902:G:H1'	2.17	0.60
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.02	0.60
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.02	0.60
1:CA:642:A:N3	8:CH:105:SER:OG	2.32	0.60
19:CS:80:TYR:CG	19:CS:81:ARG:N	2.69	0.60
22:DA:1207:C:N3	22:DA:1208:C:C5	2.69	0.60
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.84	0.60
22:DA:1855:U:C5	22:DA:1856:U:C5	2.88	0.60
50:D2:15:SER:HG	50:D2:16:HIS:CD2	2.20	0.60
1:AA:691:G:O6	11:AK:57:LYS:NZ	2.28	0.60
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.01	0.60
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.83	0.60
22:BA:2406:A:C2	33:BL:69:ARG:NH2	2.69	0.60
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.83	0.60
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.16	0.60
36:BO:64:TYR:HB3	36:BO:67:ASN:ND2	2.17	0.60
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.02	0.60
22:DA:575:A:C2	22:DA:576:U:C6	2.90	0.60
22:DA:635:C:O2'	22:DA:639:U:H5''	2.01	0.60
22:DA:1835:G:C4	22:DA:1836:C:C5	2.89	0.60
22:DA:2330:G:N2	22:DA:2386:A:C4	2.70	0.60
22:DA:2373:G:H2'	22:DA:2374:C:C6	2.35	0.60
1:AA:1107:C:C4	1:AA:1108:G:N7	2.70	0.60
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.37	0.60
41:BT:2:ILE:HD12	41:BT:7:LEU:CG	2.32	0.60
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.01	0.60
12:CL:71:GLY:O	12:CL:99:ARG:NH2	2.35	0.60
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.17	0.60
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.36	0.60
22:BA:271:G:C4	22:BA:367:G:N2	2.70	0.60
22:BA:289:G:H2'	22:BA:290:U:O4'	2.02	0.60
22:BA:1450:G:C6	22:BA:1451:C:N4	2.70	0.60
22:BA:1817:G:H2'	22:BA:1818:U:H5'	1.84	0.60
22:BA:1832:C:N4	22:BA:1833:C:C4	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:56:LEU:O	46:BY:57:LEU:HB2	2.02	0.60
1:CA:840:C:N3	1:CA:842:U:H4'	2.17	0.60
1:CA:899:C:O2'	22:DA:1832:C:OP1	2.19	0.60
1:CA:1480:A:C5	1:CA:1481:U:C5	2.90	0.60
1:CA:1521:C:N3	1:CA:1522:U:C5	2.70	0.60
22:DA:483:A:C8	22:DA:484:C:C5	2.90	0.60
22:DA:608:A:H2'	22:DA:609:A:C8	2.37	0.60
22:DA:1826:G:C4	22:DA:1827:U:C6	2.90	0.60
1:AA:1059:C:C2	1:AA:1060:U:C5	2.90	0.60
22:BA:1587:G:C5	22:BA:1588:G:N7	2.70	0.60
22:BA:1910:G:H2'	22:BA:1911:U:C6	2.37	0.60
29:BH:117:LEU:CD2	29:BH:122:LEU:CD1	2.80	0.60
1:CA:728:A:N1	1:CA:729:A:C6	2.70	0.60
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.17	0.60
22:DA:527:C:OP2	22:DA:2779:U:N3	2.34	0.60
22:DA:1140:C:O4'	22:DA:1143:A:C2	2.55	0.60
22:DA:1252:G:H5''	57:DA:3283:HOH:O	2.00	0.60
22:DA:1818:U:OP2	24:DC:156:ARG:NH1	2.35	0.60
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.67	0.60
22:DA:2053:G:N2	22:DA:2054:A:H1'	2.17	0.60
22:DA:2864:G:H2'	22:DA:2865:U:O4'	2.02	0.60
1:AA:951:G:C2	1:AA:952:U:C2	2.90	0.59
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.30	0.59
22:BA:1060:U:O4'	22:BA:1062:G:H5'	2.02	0.59
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.02	0.59
22:BA:2278:A:OP1	34:BM:10:ARG:NH2	2.35	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
1:CA:475:C:H2'	1:CA:476:U:C6	2.36	0.59
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.84	0.59
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.02	0.59
13:CM:40:ALA:O	13:CM:42:ASP:N	2.34	0.59
14:CN:51:LEU:O	14:CN:53:ARG:N	2.34	0.59
22:DA:24:G:N2	22:DA:517:C:C2	2.70	0.59
22:DA:135:U:H2'	22:DA:136:G:C8	2.37	0.59
22:DA:629:G:N3	22:DA:639:U:O2'	2.31	0.59
22:DA:842:U:N3	22:DA:843:G:N7	2.50	0.59
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.83	0.59
1:AA:988:G:N2	1:AA:1217:C:O2	2.35	0.59
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.02	0.59
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.89	0.59
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.31	0.59
22:BA:1869:G:C2	22:BA:1873:G:C6	2.90	0.59
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.35	0.59
22:DA:397:U:OP1	45:DX:31:PRO:HA	2.02	0.59
22:DA:727:A:H2'	22:DA:728:G:C8	2.37	0.59
22:DA:1827:U:H2'	22:DA:1828:G:C8	2.37	0.59
22:DA:2046:G:OP1	48:D0:12:LYS:NZ	2.35	0.59
22:DA:2415:G:C6	22:DA:2416:C:C4	2.89	0.59
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.03	0.59
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.35	0.59
19:AS:65:GLU:CD	19:AS:65:GLU:N	2.60	0.59
22:BA:278:A:C2	22:BA:362:A:C8	2.90	0.59
22:BA:1588:G:C4	22:BA:1589:U:C5	2.91	0.59
22:BA:1936:A:H2	22:BA:1943:U:N3	1.99	0.59
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.01	0.59
2:CB:119:THR:O	2:CB:120:GLN:HB2	2.01	0.59
11:CK:126:LYS:C	21:CU:34:ARG:NH2	2.60	0.59
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.31	0.59
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.38	0.59
23:DB:66:A:N6	23:DB:107:G:H2'	2.17	0.59
5:AE:15:LEU:HB3	5:AE:37:THR:HG22	1.83	0.59
22:BA:139:U:O4	41:BT:2:ILE:HG13	2.02	0.59
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.37	0.59
22:DA:71:A:OP2	22:DA:113:U:H5'	2.03	0.59
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.16	0.59
22:DA:1515:A:HO2'	22:DA:1556:C:HO2'	1.39	0.59
22:DA:1826:G:C5	22:DA:1827:U:C4	2.90	0.59
22:DA:2232:C:P	45:DX:27:ARG:HH12	2.25	0.59
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.03	0.59
38:DQ:58:ARG:NH2	38:DQ:92:ARG:NH1	2.50	0.59
1:AA:976:G:C4	1:AA:1363:A:N6	2.70	0.59
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.36	0.59
12:AL:25:GLU:O	12:AL:26:ALA:C	2.44	0.59
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.85	0.59
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.35	0.59
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.18	0.59
22:BA:2589:A:N7	57:BA:3551:HOH:O	2.32	0.59
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.14	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
1:CA:207:C:O2	1:CA:207:C:H2'	2.02	0.59
1:CA:1348:U:H4'	9:CI:122:ARG:HG3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	1.83	0.59
22:DA:1358:G:O2'	22:DA:1359:A:H5'	2.01	0.59
22:DA:2069:G:N2	22:DA:2443:C:C2	2.71	0.59
23:DB:61:G:C6	23:DB:62:C:C4	2.90	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.02	0.59
1:AA:1121:U:C2	1:AA:1122:U:C6	2.91	0.59
7:AG:99:LEU:O	7:AG:102:ARG:N	2.35	0.59
9:AI:57:MET:O	9:AI:59:GLU:N	2.36	0.59
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.18	0.59
22:BA:1792:G:OP1	24:BC:204:VAL:O	2.20	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
1:CA:1055:A:O2'	3:CC:161:GLU:O	2.20	0.59
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.51	0.59
17:CQ:62:ARG:C	17:CQ:73:TRP:CE3	2.80	0.59
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.37	0.59
24:DC:204:VAL:O	24:DC:206:GLY:N	2.35	0.59
1:AA:194:C:O2'	1:AA:195:A:H5'	2.02	0.59
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.70	0.59
15:AO:27:VAL:O	15:AO:31:LEU:HG	2.03	0.59
16:AP:47:GLU:O	16:AP:48:GLU:O	2.20	0.59
21:AU:34:ARG:O	21:AU:35:ARG:O	2.20	0.59
22:BA:977:G:C5	57:BA:3598:HOH:O	2.56	0.59
22:BA:1091:G:O2'	22:BA:1092:C:OP2	2.14	0.59
22:BA:2191:A:N1	22:BA:2192:U:N3	2.51	0.59
45:BX:64:ILE:HG23	45:BX:65:ASP:N	2.17	0.59
1:CA:1124:G:C2	1:CA:1127:G:N2	2.71	0.59
1:CA:1417:G:C6	1:CA:1482:G:C6	2.91	0.59
2:CB:102:THR:O	2:CB:103:ASN:HB3	2.02	0.59
22:DA:11:C:C2'	22:DA:12:U:H5'	2.33	0.59
22:DA:158:U:O2	22:DA:169:G:C2	2.56	0.59
22:DA:2234:G:C5	22:DA:2235:G:N7	2.70	0.59
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.03	0.59
5:CE:83:HIS:CD2	8:CH:96:MET:HE3	2.37	0.59
22:DA:185:G:C5	22:DA:212:G:N2	2.71	0.59
22:DA:658:U:C2	22:DA:659:G:C8	2.91	0.59
22:DA:1204:A:C2	22:DA:1240:U:N3	2.70	0.59
22:DA:1651:G:N2	22:DA:2007:U:O2	2.35	0.59
22:DA:2345:G:C6	22:DA:2347:C:N4	2.70	0.59
30:DI:28:LEU:HD13	30:DI:38:PHE:CD1	2.37	0.59
35:DN:90:ARG:NH2	35:DN:116:VAL:HG21	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1029:U:O2'	1:AA:1032:G:O6	2.21	0.59
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.36	0.59
13:AM:73:ILE:O	13:AM:76:SER:OG	2.21	0.59
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.59
2:CB:23:TRP:CD1	2:CB:23:TRP:O	2.56	0.59
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.18	0.59
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	1.85	0.59
22:DA:200:U:C4	22:DA:248:G:N2	2.71	0.59
22:DA:204:A:H5'	22:DA:206:U:O4'	2.03	0.59
22:DA:214:G:O2'	22:DA:216:A:O3'	2.20	0.59
22:DA:1596:A:N1	22:DA:1597:A:C2	2.71	0.59
22:DA:1773:A:C2	22:DA:1978:A:C2	2.91	0.59
22:DA:2230:G:O3'	45:DX:30:LEU:HB2	2.02	0.59
22:DA:2461:A:N1	22:DA:2490:G:N2	2.50	0.59
24:DC:67:PHE:CE1	24:DC:156:ARG:NH2	2.71	0.59
1:AA:1505:G:P	57:AA:1871:HOH:O	2.60	0.59
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.33	0.59
20:AT:58:VAL:HG12	20:AT:59:ASP:N	2.18	0.59
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.38	0.59
22:BA:2856:A:N6	22:BA:2857:G:C6	2.71	0.59
42:BU:16:GLY:O	42:BU:17:LYS:C	2.45	0.59
1:CA:374:A:H5''	1:CA:452:A:C2	2.37	0.59
1:CA:505:G:C5	1:CA:535:A:C2	2.91	0.59
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.38	0.59
13:CM:6:GLY:O	13:CM:8:ASN:N	2.35	0.59
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.01	0.59
22:DA:186:G:C2	22:DA:211:C:O2	2.56	0.59
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.18	0.59
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.38	0.59
23:DB:48:U:H2'	23:DB:49:C:C6	2.38	0.59
9:AI:10:GLY:HA2	9:AI:81:HIS:ND1	2.18	0.58
12:AL:22:PRO:C	12:AL:24:LEU:H	2.11	0.58
22:BA:58:G:OP1	41:BT:78:SER:HB3	2.02	0.58
22:BA:70:G:H4'	22:BA:71:A:OP1	2.01	0.58
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.38	0.58
22:BA:2346:A:H4'	22:BA:2347:C:OP2	2.02	0.58
22:BA:2665:A:C2	22:BA:2666:C:C6	2.90	0.58
27:BF:171:ALA:O	27:BF:174:ASP:N	2.36	0.58
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.35	0.58
1:CA:404:G:N7	4:CD:2:ALA:HB3	2.18	0.58
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.03	0.58
22:DA:188:G:HO2'	22:DA:1365:A:N6	2.01	0.58
22:DA:201:C:C4	22:DA:202:U:C4	2.91	0.58
22:DA:1275:A:C8	35:DN:16:HIS:ND1	2.71	0.58
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.03	0.58
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.02	0.58
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.02	0.58
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.38	0.58
26:DE:5:LEU:HD23	26:DE:122:GLU:CD	2.27	0.58
21:AU:10:GLU:CD	21:AU:11:PRO:HD3	2.28	0.58
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.03	0.58
24:BC:230:HIS:C	24:BC:232:HIS:H	2.11	0.58
33:BL:26:GLY:O	33:BL:27:LEU:HD23	2.02	0.58
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.37	0.58
1:CA:513:C:H2'	1:CA:514:C:C6	2.38	0.58
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.28	0.58
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.39	0.58
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.84	0.58
24:DC:136:PRO:O	24:DC:139:SER:OG	2.22	0.58
24:DC:160:THR:HG22	24:DC:177:ARG:HG2	1.85	0.58
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.84	0.58
50:D2:15:SER:OG	50:D2:16:HIS:CD2	2.56	0.58
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.38	0.58
21:AU:25:LYS:HD2	21:AU:26:ALA:H	1.67	0.58
30:BI:17:MET:HE2	30:BI:17:MET:HA	1.85	0.58
1:CA:72:A:C5	1:CA:73:C:C4	2.91	0.58
1:CA:195:A:OP1	20:CT:60:ARG:NH1	2.37	0.58
1:CA:252:U:O4	1:CA:253:A:N6	2.35	0.58
1:CA:801:U:H2'	1:CA:802:A:H8	1.68	0.58
22:DA:30:G:C6	22:DA:31:C:N3	2.71	0.58
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.85	0.58
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.38	0.58
22:DA:2566:A:N1	32:DK:28:SER:HB2	2.17	0.58
22:DA:2576:G:C8	22:DA:2580:U:O4	2.56	0.58
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.84	0.58
1:AA:496:A:C2	1:AA:497:G:C6	2.91	0.58
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.39	0.58
1:AA:1288:A:C6	1:AA:1289:A:C5	2.90	0.58
8:AH:11:LEU:HD11	8:AH:127:CYS:HB3	1.85	0.58
22:BA:1435:G:O2'	22:BA:1436:G:H5'	2.03	0.58
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:20:ASN:O	28:BG:20:ASN:ND2	2.35	0.58
17:CQ:70:THR:HG22	17:CQ:71:LYS:N	2.18	0.58
22:DA:749:A:C2	22:DA:750:A:C8	2.91	0.58
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.03	0.58
22:DA:933:A:H5'	22:DA:934:U:OP2	2.03	0.58
22:DA:1042:G:C6	22:DA:1043:C:C4	2.92	0.58
22:DA:1833:C:N3	22:DA:1834:U:C5	2.72	0.58
22:DA:2235:G:C5	22:DA:2236:U:C5	2.91	0.58
1:AA:1521:C:C2	1:AA:1522:U:C5	2.91	0.58
5:AE:109:GLY:O	5:AE:110:ALA:HB3	2.04	0.58
22:BA:731:C:P	57:BA:3699:HOH:O	2.42	0.58
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.38	0.58
22:BA:1916:A:C2'	22:BA:1917:U:O4'	2.47	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.18	0.58
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.85	0.58
45:BX:21:ALA:O	45:BX:22:LEU:HB2	2.03	0.58
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.16	0.58
1:CA:64:G:C8	1:CA:99:C:N4	2.71	0.58
1:CA:1317:C:OP1	14:CN:57:PRO:HD2	2.04	0.58
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.38	0.58
22:DA:1208:C:C4	22:DA:1209:U:C4	2.91	0.58
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.86	0.58
22:DA:1358:G:O6	22:DA:1371:G:C8	2.56	0.58
22:DA:2093:G:C2	22:DA:2094:A:C5	2.91	0.58
25:DD:103:ASP:O	25:DD:105:LYS:N	2.37	0.58
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.33	0.58
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.44	0.58
21:AU:40:LYS:HA	21:AU:43:THR:HG23	1.86	0.58
22:BA:1359:A:C8	22:BA:1373:A:C2	2.92	0.58
22:BA:2298:A:C6	22:BA:2321:U:O4	2.56	0.58
39:BR:49:ILE:HG22	39:BR:52:PRO:CA	2.34	0.58
1:CA:604:G:H2'	1:CA:605:U:O4'	2.03	0.58
1:CA:1084:G:C5	1:CA:1085:U:C4	2.92	0.58
8:CH:3:MET:SD	8:CH:3:MET:N	2.76	0.58
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.67	0.58
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.38	0.58
22:DA:1378:A:O2'	57:DA:3753:HOH:O	2.17	0.58
22:DA:2115:G:N3	22:DA:2117:A:N7	2.51	0.58
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.36	0.58
28:DG:166:ASP:N	28:DG:166:ASP:OD1	2.37	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.34	0.58
51:D3:26:HIS:NE2	51:D3:48:ALA:HB2	2.19	0.58
1:AA:365:U:H5''	1:AA:366:A:OP1	2.02	0.58
1:AA:705:G:C5	1:AA:706:A:C8	2.92	0.58
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.38	0.58
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.02	0.58
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.86	0.58
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.69	0.58
16:CP:20:VAL:HG21	16:CP:32:PHE:HB2	1.86	0.58
22:DA:82:U:C2	22:DA:83:A:C8	2.92	0.58
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.51	0.58
22:DA:1389:G:N2	22:DA:1390:U:O2	2.36	0.58
22:DA:1805:A:N3	22:DA:1813:G:N2	2.52	0.58
22:BA:975:A:C2	22:BA:990:A:C8	2.91	0.58
22:BA:1588:G:C2	22:BA:1589:U:C5	2.92	0.58
24:BC:244:PRO:O	24:BC:251:GLN:OE1	2.21	0.58
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.67	0.58
2:CB:90:PHE:CD1	2:CB:150:GLY:O	2.56	0.58
16:CP:52:LEU:HD23	16:CP:53:ASP:N	2.19	0.58
22:DA:55:G:C2	22:DA:56:A:C8	2.91	0.58
22:DA:732:C:N4	22:DA:733:G:C5	2.72	0.58
22:DA:747:U:O2	22:DA:2014:A:H1'	2.03	0.58
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.38	0.58
22:DA:2677:G:C2	22:DA:2731:G:C2	2.92	0.58
36:DO:79:ALA:O	36:DO:83:LEU:HG	2.03	0.58
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.19	0.58
50:D2:10:LEU:HD11	50:D2:14:ARG:CZ	2.33	0.58
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.85	0.58
1:AA:73:C:O2'	1:AA:74:A:H5''	2.04	0.58
1:AA:212:G:N2	1:AA:213:G:C4	2.71	0.58
1:AA:1241:G:C2	1:AA:1242:G:C5	2.92	0.58
1:AA:1319:A:C8	1:AA:1323:G:C6	2.91	0.58
2:AB:15:HIS:O	2:AB:16:PHE:C	2.47	0.58
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.03	0.58
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.85	0.58
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.33	0.58
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.86	0.58
1:CA:131:A:O2'	1:CA:262:A:N3	2.31	0.58
1:CA:833:G:C6	1:CA:834:U:C4	2.91	0.58
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.03	0.58
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:834:G:H1'	22:DA:2358:A:N3	2.18	0.58
22:DA:1324:G:N2	22:DA:1328:A:N1	2.51	0.58
22:DA:1525:A:C6	22:DA:1526:C:N3	2.72	0.58
22:DA:2143:C:H2'	22:DA:2144:G:O4'	2.03	0.58
22:DA:2204:G:C5	22:DA:2221:G:C2	2.92	0.58
22:DA:2817:U:O2'	22:DA:2836:U:O2	2.14	0.58
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.03	0.58
50:D2:10:LEU:HD11	50:D2:14:ARG:NE	2.19	0.58
1:AA:109:A:H2'	1:AA:326:G:N2	2.19	0.58
1:AA:144:G:C4	1:AA:179:A:C2	2.92	0.58
1:AA:316:C:C2	1:AA:317:U:C5	2.91	0.58
1:AA:983:A:N3	1:AA:983:A:H2'	2.18	0.58
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.86	0.58
6:AF:5:GLU:O	6:AF:6:ILE:HB	2.04	0.58
22:BA:1847:A:C8	22:BA:1847:A:OP2	2.57	0.58
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.04	0.58
31:BJ:125:TYR:OH	31:BJ:132:HIS:NE2	2.34	0.58
1:CA:243:A:H4'	1:CA:244:U:H5''	1.86	0.58
1:CA:687:A:N3	1:CA:688:G:H1'	2.19	0.58
1:CA:761:G:C2	1:CA:762:U:C2	2.91	0.58
22:DA:630:G:N2	22:DA:633:A:OP2	2.37	0.58
22:DA:681:G:C4	22:DA:682:G:C8	2.92	0.58
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.39	0.58
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.34	0.58
22:DA:2330:G:C2	22:DA:2386:A:C2	2.91	0.58
1:AA:1299:A:C6	1:AA:1301:U:O2	2.57	0.57
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.03	0.57
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.03	0.57
22:BA:1421:G:C2	22:BA:1422:G:C8	2.92	0.57
22:BA:1985:C:H2'	22:BA:1985:C:O2	2.03	0.57
1:CA:38:G:C2	1:CA:397:A:C2	2.92	0.57
1:CA:495:A:C2	1:CA:496:A:C6	2.92	0.57
1:CA:729:A:C4	1:CA:730:G:C8	2.92	0.57
4:CD:30:THR:O	4:CD:30:THR:HG22	2.02	0.57
22:DA:197:A:C8	22:DA:2430:A:C8	2.92	0.57
22:DA:1029:A:N1	22:DA:2465:C:O2'	2.35	0.57
22:DA:1315:C:N3	22:DA:1338:G:C2	2.72	0.57
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.37	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
35:DN:54:LEU:HD23	35:DN:66:ALA:HB2	1.85	0.57
35:DN:90:ARG:NH1	35:DN:116:VAL:HG11	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:473:U:C2	1:AA:474:G:C8	2.91	0.57
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.05	0.57
2:AB:96:TRP:CH2	2:AB:100:MET:HB3	2.38	0.57
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.47	0.57
1:CA:31:G:H5'	1:CA:306:A:N1	2.19	0.57
1:CA:1022:A:C5	1:CA:1023:U:C4	2.92	0.57
1:CA:1222:G:O6	57:CA:1858:HOH:O	2.17	0.57
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.04	0.57
12:CL:38:TYR:HB3	12:CL:39:THR:O	2.03	0.57
22:DA:11:C:H2'	22:DA:12:U:H5'	1.85	0.57
22:DA:936:A:C6	22:DA:937:C:C4	2.92	0.57
22:DA:1555:G:C2	22:DA:1556:C:C2	2.92	0.57
22:DA:2183:A:H2'	22:DA:2184:A:C8	2.38	0.57
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.86	0.57
1:AA:971:G:C8	1:AA:1365:G:H4'	2.40	0.57
8:AH:2:SER:N	8:AH:4:GLN:HG3	2.19	0.57
22:BA:11:C:C2'	22:BA:12:U:H5'	2.33	0.57
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.22	0.57
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.34	0.57
1:CA:109:A:C6	1:CA:327:A:C6	2.91	0.57
5:CE:41:ASP:OD1	5:CE:42:GLY:N	2.37	0.57
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.37	0.57
13:CM:40:ALA:C	13:CM:41:GLU:HG3	2.30	0.57
22:DA:1855:U:C5	22:DA:1856:U:C4	2.92	0.57
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	1.86	0.57
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.04	0.57
1:AA:208:U:C5	1:AA:210:C:C4	2.91	0.57
1:AA:1319:A:C5	1:AA:1323:G:C4	2.91	0.57
4:AD:148:LYS:O	4:AD:149:ALA:C	2.46	0.57
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.02	0.57
14:AN:54:ASP:OD1	14:AN:59:ARG:NH1	2.37	0.57
14:AN:91:GLY:O	14:AN:93:ILE:N	2.37	0.57
22:BA:1185:G:H4'	22:BA:1186:G:OP1	2.04	0.57
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.85	0.57
33:BL:68:SER:O	33:BL:69:ARG:CB	2.53	0.57
1:CA:409:U:H2'	1:CA:410:G:O4'	2.05	0.57
1:CA:671:G:C6	1:CA:672:U:N3	2.72	0.57
1:CA:1086:U:H4'	1:CA:1086:U:OP1	2.05	0.57
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.78	0.57
5:CE:96:MET:CE	5:CE:111:MET:HE3	2.35	0.57
7:CG:70:ARG:HD2	7:CG:97:ASN:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:19:ALA:O	15:CO:20:ASN:HB2	2.03	0.57
22:DA:1361:G:C5	22:DA:1371:G:N2	2.72	0.57
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.03	0.57
22:DA:1984:G:C6	22:DA:1985:C:C5	2.92	0.57
22:DA:2093:G:N2	22:DA:2094:A:C4	2.73	0.57
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.37	0.57
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.57
37:DP:53:ARG:O	37:DP:56:HIS:N	2.36	0.57
1:AA:1124:G:H2'	1:AA:1145:A:N6	2.18	0.57
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.40	0.57
21:AU:4:ILE:HA	21:AU:20:LYS:CE	2.34	0.57
22:BA:137:U:H2'	22:BA:140:C:C2	2.39	0.57
22:BA:740:C:OP2	57:BA:3703:HOH:O	2.17	0.57
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.29	0.57
41:BT:3:ARG:HD2	41:BT:5:GLU:HB2	1.86	0.57
1:CA:72:A:C5	1:CA:73:C:N4	2.72	0.57
1:CA:328:C:O2	1:CA:328:C:C2'	2.51	0.57
1:CA:728:A:C8	15:CO:54:ARG:NH1	2.73	0.57
1:CA:774:G:C6	1:CA:775:G:C5	2.92	0.57
1:CA:1237:C:C5	1:CA:1336:C:C4	2.92	0.57
3:CC:7:PRO:HD2	3:CC:184:TYR:CD2	2.39	0.57
12:CL:114:ARG:HD2	12:CL:119:VAL:HG12	1.86	0.57
22:DA:374:A:C2	22:DA:401:A:C4	2.92	0.57
22:DA:687:C:H1'	50:D2:4:THR:HG23	1.86	0.57
22:DA:1317:G:N2	22:DA:1336:A:N3	2.53	0.57
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.39	0.57
22:DA:2133:G:N2	22:DA:2158:A:C6	2.72	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
1:AA:131:A:H2'	1:AA:132:C:H6	1.68	0.57
1:AA:976:G:N9	1:AA:1363:A:N6	2.52	0.57
7:AG:120:LEU:HD22	7:AG:124:LEU:HD23	1.86	0.57
28:BG:74:SER:HA	28:BG:77:ILE:HG13	1.87	0.57
39:BR:47:VAL:HG11	39:BR:54:VAL:CG1	2.33	0.57
1:CA:135:C:O2	16:CP:1:MET:HB2	2.04	0.57
1:CA:671:G:C2	1:CA:672:U:C2	2.93	0.57
5:CE:15:LEU:C	5:CE:16:ILE:HD12	2.28	0.57
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.05	0.57
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.03	0.57
22:DA:197:A:H62	22:DA:2430:A:H2'	1.68	0.57
22:DA:269:C:N3	22:DA:270:A:C8	2.72	0.57
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:938:G:C2	22:DA:939:G:N7	2.72	0.57
22:DA:1031:G:H4'	52:D4:6:SER:HB2	1.86	0.57
22:DA:1833:C:C2	22:DA:1834:U:C5	2.92	0.57
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.37	0.57
22:DA:2407:A:OP1	57:DA:3564:HOH:O	2.17	0.57
1:AA:409:U:OP1	4:AD:24:GLY:HA3	2.04	0.57
1:AA:430:A:OP1	4:AD:9:LEU:HB2	2.05	0.57
1:AA:652:U:C2	1:AA:752:G:N2	2.73	0.57
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.39	0.57
2:AB:188:ASP:OD2	2:AB:204:ASP:OD1	2.23	0.57
6:AF:6:ILE:HG12	6:AF:89:VAL:HG12	1.87	0.57
10:AJ:32:THR:HG21	10:AJ:86:ALA:CB	2.34	0.57
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.86	0.57
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.05	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.38	0.57
1:CA:505:G:H2'	1:CA:506:G:C8	2.39	0.57
1:CA:1084:G:C8	1:CA:1085:U:C6	2.92	0.57
6:CF:16:GLU:O	6:CF:19:PRO:HD2	2.05	0.57
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.03	0.57
22:DA:109:C:H4'	22:DA:348:A:H4'	1.86	0.57
22:DA:391:A:C8	22:DA:392:U:C5	2.93	0.57
22:DA:528:A:H2'	22:DA:529:A:H5''	1.87	0.57
22:DA:647:G:C5	22:DA:648:G:N7	2.73	0.57
22:DA:668:A:C4	22:DA:670:A:N7	2.73	0.57
22:DA:733:G:OP2	57:DA:3294:HOH:O	2.18	0.57
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.05	0.57
22:DA:1832:C:C4	22:DA:1833:C:C6	2.92	0.57
22:DA:2772:C:H2'	22:DA:2773:C:C6	2.39	0.57
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.40	0.57
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.57
42:DU:2:ALA:HA	42:DU:85:PHE:CE1	2.40	0.57
1:AA:71:A:O2'	1:AA:72:A:P	2.63	0.57
1:AA:457:G:C6	1:AA:458:U:C2	2.93	0.57
28:BG:84:THR:OG1	28:BG:134:LYS:HG2	2.05	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
33:BL:59:ARG:HD2	57:BL:306:HOH:O	2.04	0.57
33:BL:62:PRO:HG2	51:B3:25:LYS:HD3	1.85	0.57
1:CA:72:A:N6	1:CA:73:C:N4	2.52	0.57
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.40	0.57
6:CF:64:VAL:HG12	6:CF:65:GLU:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:697:G:C2	22:DA:766:U:O2	2.57	0.57
39:DR:16:GLU:OE1	39:DR:100:GLY:HA2	2.04	0.57
1:AA:914:A:C5	1:AA:915:A:N7	2.73	0.57
1:AA:923:A:O4'	1:AA:1398:A:C2	2.58	0.57
4:AD:147:GLU:O	4:AD:150:LYS:HB2	2.05	0.57
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.38	0.57
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.19	0.57
16:AP:42:ILE:O	16:AP:42:ILE:HG22	2.05	0.57
22:BA:265:A:H4'	22:BA:266:G:OP1	2.02	0.57
22:BA:790:U:O2'	22:BA:791:C:P	2.63	0.57
24:BC:17:VAL:N	24:BC:204:VAL:HG22	2.19	0.57
29:BH:99:ILE:CD1	29:BH:121:VAL:HG21	2.35	0.57
34:BM:77:PRO:HG2	34:BM:80:VAL:CG2	2.35	0.57
1:CA:35:G:N3	12:CL:115:SER:OG	2.38	0.57
1:CA:971:G:OP1	1:CA:972:C:H5''	2.05	0.57
5:CE:76:LEU:HD12	5:CE:76:LEU:N	2.19	0.57
5:CE:95:PHE:O	5:CE:125:ALA:O	2.23	0.57
22:DA:120:U:C2	22:DA:149:A:C6	2.92	0.57
22:DA:202:U:H2'	22:DA:203:A:C8	2.40	0.57
22:DA:734:A:C5	22:DA:735:A:C8	2.92	0.57
22:DA:1914:C:C5	22:DA:1915:U:C2	2.92	0.57
24:DC:107:PRO:CD	24:DC:110:LEU:HD22	2.34	0.57
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.37	0.57
41:DT:51:PHE:C	41:DT:52:GLU:HG2	2.30	0.57
1:AA:1296:C:H4'	1:AA:1302:C:C5	2.40	0.57
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.40	0.57
14:AN:9:ARG:O	14:AN:13:ARG:HG2	2.04	0.57
22:BA:1059:G:H5''	22:BA:1060:U:H2'	1.87	0.57
22:BA:1084:A:C5	22:BA:1085:A:C6	2.93	0.57
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.39	0.57
22:BA:1915:U:O2'	22:BA:1916:A:H5'	2.05	0.57
22:BA:1936:A:C2	22:BA:1945:G:C8	2.92	0.57
28:BG:30:ASN:O	28:BG:30:ASN:OD1	2.23	0.57
1:CA:570:G:C6	1:CA:873:A:C2	2.93	0.57
1:CA:711:G:O2'	1:CA:712:A:H5'	2.05	0.57
1:CA:804:U:H5''	1:CA:805:C:OP2	2.05	0.57
2:CB:87:CYS:HB2	2:CB:89:GLN:NE2	2.18	0.57
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.45	0.57
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.05	0.57
16:CP:43:ALA:O	16:CP:44:SER:OG	2.20	0.57
18:CR:35:GLU:HB2	21:CU:19:PHE:HZ	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:377:G:C5	22:DA:378:C:C5	2.93	0.57
22:DA:732:C:C4	22:DA:733:G:N7	2.73	0.57
22:DA:1012:U:O4	31:DJ:30:THR:HG21	2.04	0.57
22:DA:1462:C:C2	22:DA:1463:C:C5	2.93	0.57
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.40	0.57
23:DB:39:A:H2'	23:DB:40:U:C6	2.40	0.57
1:AA:1226:C:O2'	13:AM:110:LYS:NZ	2.37	0.56
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.05	0.56
8:AH:89:LYS:HG3	8:AH:90:ASP:N	2.20	0.56
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.86	0.56
22:BA:570:G:H2'	22:BA:2030:A:N7	2.19	0.56
22:BA:627:A:C6	22:BA:637:A:C8	2.92	0.56
22:BA:702:U:O2	22:BA:702:U:H2'	2.04	0.56
42:BU:49:VAL:O	42:BU:51:ALA:N	2.38	0.56
1:CA:920:U:C2	1:CA:921:U:C5	2.93	0.56
13:CM:91:HIS:HA	13:CM:109:ARG:NH2	2.20	0.56
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.88	0.56
22:DA:27:G:O2'	22:DA:28:A:OP2	2.17	0.56
22:DA:30:G:C2	22:DA:31:C:C2	2.93	0.56
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.05	0.56
45:DX:3:ARG:HG2	45:DX:33:LEU:HD22	1.87	0.56
1:AA:262:A:C6	1:AA:263:A:C6	2.92	0.56
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.05	0.56
7:AG:145:ALA:O	7:AG:146:GLU:HB2	2.04	0.56
22:BA:1912:A:C2	22:BA:1919:A:C5	2.92	0.56
22:BA:2529:G:O6	52:B4:32:LYS:NZ	2.37	0.56
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.45	0.56
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.03	0.56
1:CA:552:U:N3	1:CA:553:A:N7	2.52	0.56
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.40	0.56
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.05	0.56
6:CF:66:ALA:HB1	6:CF:67:PRO:HD2	1.87	0.56
21:CU:34:ARG:NE	21:CU:35:ARG:HB2	2.20	0.56
22:DA:583:G:C6	22:DA:584:C:C4	2.93	0.56
22:DA:699:A:C2'	22:DA:700:G:H5'	2.35	0.56
22:DA:1126:A:H4'	22:DA:1127:A:O5'	2.05	0.56
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.88	0.56
34:DM:56:ALA:C	34:DM:58:LYS:H	2.13	0.56
1:AA:91:U:H2'	1:AA:92:U:O4'	2.05	0.56
1:AA:315:A:O2'	1:AA:330:C:H4'	2.05	0.56
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:25:VAL:O	5:AE:26:LYS:C	2.48	0.56
14:AN:14:VAL:HA	14:AN:60:GLN:OE1	2.04	0.56
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.88	0.56
20:AT:67:ILE:HD11	20:AT:71:LYS:CE	2.34	0.56
22:BA:695:G:C2	22:BA:696:G:C8	2.93	0.56
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.28	0.56
22:BA:1745:A:C2	22:BA:1746:A:C8	2.94	0.56
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.23	0.56
22:BA:1924:C:C2	22:BA:1926:U:O4	2.59	0.56
23:BB:37:C:C5	23:BB:38:C:C4	2.93	0.56
28:BG:124:GLU:OE2	28:BG:125:CYS:N	2.37	0.56
29:BH:94:ILE:C	29:BH:122:LEU:CG	2.77	0.56
35:BN:58:ASP:OD1	35:BN:63:ARG:HD2	2.06	0.56
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.05	0.56
1:CA:32:A:H2'	1:CA:33:A:C8	2.40	0.56
1:CA:610:U:C4	1:CA:611:C:C5	2.93	0.56
1:CA:682:G:C2	1:CA:683:G:C8	2.94	0.56
1:CA:783:C:C2	1:CA:784:A:C8	2.93	0.56
1:CA:833:G:C5	1:CA:834:U:C5	2.93	0.56
1:CA:1124:G:N2	1:CA:1127:G:C2	2.73	0.56
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.38	0.56
1:CA:1239:A:H2'	1:CA:1298:U:O4	2.05	0.56
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.19	0.56
5:CE:39:VAL:CG2	5:CE:71:MET:HE2	2.36	0.56
9:CI:106:ARG:NH1	9:CI:107:ASP:O	2.38	0.56
22:DA:65:U:H2'	22:DA:66:C:C6	2.38	0.56
22:DA:191:A:C6	22:DA:192:C:N4	2.74	0.56
22:DA:301:G:C2	22:DA:302:C:C2	2.93	0.56
22:DA:305:C:H1'	22:DA:313:G:N2	2.20	0.56
22:DA:352:A:H2'	22:DA:353:C:O4'	2.05	0.56
22:DA:372:G:N2	22:DA:401:A:OP2	2.34	0.56
22:DA:989:G:OP2	47:DZ:12:SER:OG	2.12	0.56
22:DA:1358:G:N2	22:DA:1374:G:C6	2.73	0.56
22:DA:1379:U:O2	22:DA:1379:U:H2'	2.04	0.56
22:DA:1809:A:C6	22:DA:1810:A:C6	2.94	0.56
22:DA:2093:G:N7	22:DA:2225:A:C8	2.73	0.56
22:DA:2297:A:C2	22:DA:2298:A:C8	2.92	0.56
22:DA:2642:G:OP1	31:DJ:78:THR:OG1	2.24	0.56
24:DC:72:ASP:HA	24:DC:118:SER:O	2.06	0.56
33:DL:108:ALA:HB3	33:DL:125:LEU:HG	1.87	0.56
39:DR:81:LYS:O	39:DR:82:HIS:C	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.35	0.56
1:AA:115:G:H4'	1:AA:116:A:O5'	2.04	0.56
2:AB:149:GLY:O	2:AB:151:ILE:N	2.38	0.56
22:BA:280:U:H2'	22:BA:281:C:C6	2.39	0.56
22:BA:1344:U:O2'	22:BA:1345:C:P	2.64	0.56
22:BA:2715:C:C4	22:BA:2716:C:C5	2.93	0.56
28:BG:30:ASN:O	28:BG:30:ASN:CG	2.49	0.56
30:BI:11:LEU:HD11	30:BI:27:ALA:O	2.05	0.56
41:BT:2:ILE:HG22	41:BT:3:ARG:H	1.68	0.56
1:CA:445:G:C2	1:CA:446:G:C8	2.93	0.56
1:CA:451:A:OP2	16:CP:70:ARG:NH2	2.36	0.56
5:CE:25:VAL:N	5:CE:28:GLY:O	2.34	0.56
21:CU:41:PRO:O	21:CU:43:THR:N	2.39	0.56
22:DA:728:G:C2	22:DA:730:A:C4	2.94	0.56
22:DA:1104:C:N4	22:DA:1105:U:O4	2.38	0.56
22:DA:2199:A:C5	22:DA:2225:A:N1	2.74	0.56
22:DA:2516:A:N6	22:DA:2517:C:N4	2.53	0.56
28:DG:40:ALA:HA	28:DG:58:TYR:CD1	2.40	0.56
33:DL:29:LYS:HG2	33:DL:29:LYS:O	2.03	0.56
1:AA:80:A:C2	1:AA:90:C:N3	2.73	0.56
1:AA:502:A:OP1	12:AL:115:SER:CB	2.54	0.56
1:AA:1397:C:HO2'	1:AA:1398:A:P	2.23	0.56
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.40	0.56
35:BN:117:ASP:O	35:BN:118:ARG:C	2.49	0.56
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.06	0.56
39:BR:68:ARG:HD3	39:BR:92:TRP:CE2	2.40	0.56
1:CA:159:G:N2	1:CA:161:A:H3'	2.20	0.56
1:CA:378:G:C2	1:CA:386:C:O2	2.58	0.56
1:CA:562:U:O2'	12:CL:13:ALA:O	2.14	0.56
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.49	0.56
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.53	0.56
12:CL:66:TYR:O	12:CL:97:THR:OG1	2.23	0.56
19:CS:48:THR:HG22	19:CS:61:PHE:CD2	2.41	0.56
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.21	0.56
22:DA:749:A:C6	22:DA:1618:A:C2	2.93	0.56
22:DA:2018:G:H2'	22:DA:2019:A:O4'	2.05	0.56
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.88	0.56
42:DU:82:ARG:CB	42:DU:97:LYS:HG3	2.35	0.56
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.38	0.56
50:D2:15:SER:OG	50:D2:16:HIS:NE2	2.38	0.56
1:AA:669:G:O2'	1:AA:670:G:H5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:OP1	1:AA:766:A:H1'	2.06	0.56
22:BA:694:U:OP1	24:BC:59:LYS:NZ	2.39	0.56
57:BA:3296:HOH:O	33:BL:99:ASN:ND2	2.29	0.56
34:BM:22:GLN:OE1	34:BM:22:GLN:HA	2.05	0.56
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.48	0.56
1:CA:283:U:C4	1:CA:284:C:C4	2.94	0.56
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.20	0.56
1:CA:1461:G:C5	1:CA:1462:C:C4	2.94	0.56
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.88	0.56
5:CE:13:GLU:HB2	5:CE:39:VAL:HG12	1.87	0.56
6:CF:13:ASP:C	6:CF:15:SER:H	2.13	0.56
22:DA:952:G:C2	22:DA:966:G:C2	2.93	0.56
45:DX:21:ALA:O	45:DX:22:LEU:HB2	2.05	0.56
1:AA:1157:A:C6	1:AA:1180:A:C5	2.93	0.56
22:BA:2315:G:H2'	22:BA:2316:G:C8	2.40	0.56
27:BF:41:GLY:O	27:BF:43:ALA:N	2.39	0.56
32:BK:1:MET:HE3	32:BK:32:TYR:CZ	2.41	0.56
52:B4:26:ILE:HD13	52:B4:26:ILE:N	2.21	0.56
1:CA:375:U:P	16:CP:70:ARG:HH11	2.29	0.56
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.06	0.56
2:CB:21:ARG:O	2:CB:23:TRP:N	2.38	0.56
2:CB:140:GLU:O	2:CB:144:LEU:HG	2.06	0.56
5:CE:75:ALA:O	5:CE:147:MET:HE2	2.06	0.56
12:CL:29:GLN:O	12:CL:30:LYS:HG2	2.06	0.56
19:CS:69:HIS:ND1	19:CS:73:GLU:OE2	2.38	0.56
22:DA:503:A:C2	22:DA:506:G:C4	2.94	0.56
22:DA:1651:G:C2	22:DA:2007:U:O2	2.59	0.56
22:DA:1830:C:H5'	24:DC:15:HIS:CE1	2.41	0.56
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.21	0.56
22:DA:2351:G:O2'	22:DA:2366:A:N6	2.39	0.56
1:AA:810:C:O2	1:AA:810:C:H2'	2.05	0.56
1:AA:813:U:H2'	1:AA:814:A:H5''	1.87	0.56
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.20	0.56
11:AK:88:GLY:N	11:AK:114:THR:HG22	2.21	0.56
15:AO:45:GLU:HG2	15:AO:46:HIS:N	2.20	0.56
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.38	0.56
22:BA:508:A:H4'	22:BA:509:C:OP2	2.06	0.56
22:BA:2190:G:OP2	22:BA:2190:G:H8	1.88	0.56
22:BA:2517:C:C6	22:BA:2542:A:N7	2.73	0.56
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.41	0.56
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
1:CA:247:G:O6	1:CA:278:G:N1	2.38	0.56
1:CA:1302:C:C4	13:CM:17:ILE:HD11	2.40	0.56
1:CA:1306:A:C6	1:CA:1307:U:N3	2.72	0.56
2:CB:117:LEU:O	2:CB:121:SER:N	2.39	0.56
4:CD:174:ASP:OD2	4:CD:176:GLY:N	2.39	0.56
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.20	0.56
11:CK:67:ALA:O	11:CK:71:ALA:N	2.39	0.56
16:CP:75:ILE:C	16:CP:77:GLU:H	2.13	0.56
22:DA:572:A:C2	22:DA:2033:A:C2	2.94	0.56
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.23	0.56
22:DA:668:A:C2	22:DA:670:A:C6	2.94	0.56
22:DA:765:C:H2'	22:DA:766:U:C6	2.41	0.56
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.56
41:DT:64:LYS:HA	41:DT:79:ASP:OD2	2.06	0.56
1:AA:184:G:H2'	1:AA:185:U:C6	2.39	0.56
1:AA:1033:G:H2'	1:AA:1034:G:H5'	1.88	0.56
4:AD:32:CYS:SG	4:AD:34:ILE:N	2.77	0.56
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.67	0.56
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.88	0.56
22:BA:1587:G:C4	22:BA:1588:G:C8	2.93	0.56
26:BE:181:ILE:CG2	33:BL:2:ARG:HB3	2.36	0.56
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.05	0.56
41:BT:6:ARG:O	41:BT:7:LEU:C	2.48	0.56
1:CA:130:A:N3	1:CA:263:A:O2'	2.30	0.56
1:CA:484:G:C5	1:CA:486:U:H1'	2.40	0.56
1:CA:1036:A:H3'	1:CA:1037:C:C6	2.41	0.56
1:CA:1521:C:C2	1:CA:1522:U:C6	2.93	0.56
2:CB:20:THR:O	2:CB:21:ARG:NH2	2.39	0.56
8:CH:88:ARG:O	8:CH:122:GLY:HA3	2.05	0.56
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.88	0.56
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.87	0.56
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.06	0.56
22:DA:362:A:C4	22:DA:363:G:C8	2.94	0.56
22:DA:503:A:N3	22:DA:506:G:C8	2.73	0.56
22:DA:1208:C:C2	22:DA:1209:U:C6	2.93	0.56
33:DL:56:PRO:O	33:DL:60:ARG:CB	2.53	0.56
1:AA:205:A:H2'	1:AA:205:A:N3	2.21	0.56
1:AA:660:C:P	15:AO:5:THR:HG21	2.45	0.56
8:AH:78:VAL:HG11	8:AH:125:ILE:CD1	2.36	0.56
22:BA:1288:G:C5	22:BA:1327:A:C2	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2080:A:O5'	45:BX:19:SER:HB2	2.05	0.56
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.19	0.56
27:BF:41:GLY:C	27:BF:43:ALA:H	2.14	0.56
31:BJ:24:THR:HG22	31:BJ:24:THR:O	2.06	0.56
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	1.86	0.56
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.36	0.56
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.87	0.56
1:CA:624:C:H2'	1:CA:625:U:O4'	2.05	0.56
1:CA:782:A:C8	1:CA:783:C:C5	2.94	0.56
1:CA:955:U:H2'	1:CA:956:U:O4'	2.06	0.56
20:CT:67:ILE:HG13	20:CT:71:LYS:HD3	1.88	0.56
22:DA:225:C:H2'	22:DA:226:A:O4'	2.06	0.56
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.41	0.56
22:DA:1731:G:C2	22:DA:1733:G:C4	2.94	0.56
22:DA:1802:A:OP2	22:DA:1815:A:N6	2.39	0.56
22:DA:2796:U:C4	22:DA:2798:U:C4	2.94	0.56
1:AA:1074:G:C4	1:AA:1102:A:C2	2.94	0.55
2:AB:9:MET:N	2:AB:9:MET:SD	2.78	0.55
11:AK:76:GLU:HA	22:BA:2141:G:P	2.46	0.55
22:BA:455:C:N3	22:BA:472:A:H2'	2.20	0.55
22:BA:1866:A:N1	22:BA:1876:A:C8	2.74	0.55
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.05	0.55
1:CA:32:A:N3	1:CA:33:A:C8	2.74	0.55
1:CA:938:A:N6	1:CA:939:G:C6	2.75	0.55
1:CA:1092:A:N6	1:CA:1093:A:N6	2.54	0.55
4:CD:126:ASN:OD1	4:CD:142:VAL:HG22	2.06	0.55
12:CL:22:PRO:O	12:CL:24:LEU:N	2.35	0.55
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.35	0.55
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.06	0.55
22:DA:187:G:N2	22:DA:210:C:H1'	2.21	0.55
22:DA:533:G:H5'	38:DQ:24:TYR:CE1	2.41	0.55
22:DA:1095:A:C6	22:DA:1096:A:C2	2.94	0.55
22:DA:1280:G:C6	22:DA:1281:G:C5	2.94	0.55
22:DA:2223:G:C6	22:DA:2224:G:C4	2.93	0.55
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	1.87	0.55
42:DU:59:VAL:CG1	42:DU:61:LYS:HD3	2.37	0.55
1:AA:203:G:O2'	1:AA:465:A:N1	2.40	0.55
1:AA:1328:C:H5''	13:AM:28:THR:HG21	1.88	0.55
1:AA:1357:A:C5	1:AA:1358:U:C4	2.94	0.55
5:AE:137:VAL:O	5:AE:137:VAL:HG13	2.05	0.55
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:26:SER:O	11:AK:28:ASN:N	2.39	0.55
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.39	0.55
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.20	0.55
22:BA:1435:G:C2'	22:BA:1436:G:H5'	2.36	0.55
28:BG:149:ARG:HH11	28:BG:149:ARG:CG	2.19	0.55
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.88	0.55
1:CA:386:C:N4	1:CA:387:U:C4	2.75	0.55
1:CA:668:G:N2	1:CA:739:C:C2	2.74	0.55
1:CA:786:G:C2	1:CA:797:C:O2	2.60	0.55
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.38	0.55
22:DA:36:G:C2'	22:DA:450:G:HO2'	2.19	0.55
22:DA:228:C:H5''	22:DA:229:C:C6	2.41	0.55
22:DA:674:G:O2'	26:DE:69:ARG:HD3	2.06	0.55
22:DA:674:G:O2'	26:DE:69:ARG:NE	2.39	0.55
22:DA:1096:A:H2'	22:DA:1097:U:O4'	2.07	0.55
26:DE:41:GLN:O	26:DE:43:THR:N	2.36	0.55
1:AA:412:A:H4'	1:AA:413:G:OP1	2.06	0.55
1:AA:1098:C:OP1	2:AB:143:LYS:NZ	2.30	0.55
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.40	0.55
1:AA:1313:U:O4	19:AS:4:SER:HA	2.05	0.55
12:AL:114:ARG:CZ	12:AL:114:ARG:HB2	2.36	0.55
22:BA:65:U:H2'	22:BA:66:C:C6	2.41	0.55
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.86	0.55
49:B1:34:LEU:H	49:B1:52:ALA:CB	2.19	0.55
16:CP:42:ILE:O	16:CP:43:ALA:HB3	2.04	0.55
22:DA:40:U:C4	22:DA:41:C:N4	2.75	0.55
22:DA:151:C:H2'	22:DA:152:A:C8	2.41	0.55
22:DA:1063:G:N2	22:DA:1076:C:O2	2.39	0.55
22:DA:1832:C:N4	22:DA:1833:C:C5	2.74	0.55
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.87	0.55
32:DK:63:VAL:HB	32:DK:103:VAL:HG12	1.89	0.55
1:AA:1288:A:C6	1:AA:1289:A:N7	2.74	0.55
5:AE:114:VAL:HG21	5:AE:141:ILE:CD1	2.36	0.55
10:AJ:54:SER:O	14:AN:81:ARG:NH2	2.40	0.55
22:BA:226:A:C6	22:BA:227:A:C6	2.95	0.55
22:BA:870:U:H2'	22:BA:871:U:H5'	1.88	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
33:BL:76:GLU:HB2	33:BL:111:ILE:HD13	1.89	0.55
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	1.87	0.55
1:CA:672:U:H2'	1:CA:673:A:H8	1.71	0.55
2:CB:28:LYS:N	2:CB:29:PRO:CD	2.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:41:PRO:O	21:CU:44:GLU:N	2.39	0.55
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.41	0.55
22:DA:443:A:N7	26:DE:40:ARG:HG3	2.22	0.55
22:DA:674:G:N2	22:DA:2445:G:OP1	2.39	0.55
22:DA:677:A:C2	22:DA:678:C:C2	2.94	0.55
22:DA:787:C:OP1	57:DA:3755:HOH:O	2.18	0.55
22:DA:1327:A:N6	22:DA:1328:A:C2	2.73	0.55
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.07	0.55
22:DA:2345:G:C5	22:DA:2381:A:C2	2.94	0.55
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.71	0.55
24:DC:67:PHE:CZ	24:DC:156:ARG:NH2	2.74	0.55
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.06	0.55
32:DK:90:ASN:N	32:DK:90:ASN:OD1	2.40	0.55
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	1.88	0.55
1:AA:417:G:C6	1:AA:418:C:C4	2.95	0.55
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.07	0.55
22:BA:118:A:C8	22:BA:119:A:C8	2.94	0.55
22:BA:192:C:P	57:BA:3749:HOH:O	2.64	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
30:BI:80:LEU:HD11	30:BI:133:ALA:HA	1.88	0.55
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.47	0.55
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.06	0.55
1:CA:411:A:C5	1:CA:429:U:C5	2.95	0.55
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.06	0.55
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.55	0.55
20:CT:78:ASN:O	20:CT:82:GLN:HG2	2.06	0.55
22:DA:107:G:O3'	22:DA:293:U:O2'	2.25	0.55
22:DA:804:A:H2'	22:DA:806:C:C4	2.41	0.55
22:DA:1984:G:O6	22:DA:1985:C:N4	2.39	0.55
22:DA:2094:A:C2	22:DA:2196:C:C2	2.95	0.55
22:DA:2200:C:OP2	45:DX:37:ARG:NH2	2.39	0.55
22:DA:2513:A:OP1	25:DD:160:LYS:NZ	2.39	0.55
22:DA:2681:C:C2	22:DA:2724:U:O4	2.59	0.55
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.35	0.55
27:DF:57:LEU:O	27:DF:61:SER:OG	2.24	0.55
28:DG:105:LEU:HB2	28:DG:113:VAL:HB	1.88	0.55
1:AA:145:G:N2	1:AA:178:C:C2	2.75	0.55
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.25	0.55
2:AB:72:THR:O	2:AB:73:LYS:HG2	2.06	0.55
2:AB:118:GLU:HA	2:AB:121:SER:HB2	1.89	0.55
21:AU:36:GLU:O	21:AU:37:PHE:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:846:U:O2'	22:BA:847:U:OP2	2.22	0.55
24:BC:29:PRO:HG2	24:BC:34:LEU:HD11	1.86	0.55
35:BN:78:LYS:C	35:BN:79:LEU:O	2.45	0.55
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.07	0.55
1:CA:1330:U:H4'	13:CM:23:TYR:CE2	2.41	0.55
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.07	0.55
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	1.89	0.55
22:DA:622:G:H2'	22:DA:623:C:C6	2.40	0.55
22:DA:741:U:O2'	22:DA:1676:A:OP1	2.18	0.55
22:DA:1082:U:H5'	30:DI:119:GLY:HA2	1.88	0.55
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.41	0.55
22:DA:1912:A:C8	22:DA:1918:A:C2	2.95	0.55
22:DA:1985:C:C2	22:DA:1986:C:C5	2.95	0.55
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.42	0.55
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.04	0.55
1:AA:307:C:H5''	1:AA:308:C:OP2	2.07	0.55
1:AA:654:G:H2'	1:AA:655:A:H5'	1.88	0.55
1:AA:934:C:H5''	57:AA:1767:HOH:O	2.06	0.55
3:AC:156:ARG:HD3	3:AC:193:TYR:O	2.07	0.55
4:AD:56:ARG:NH2	4:AD:59:GLN:HG2	2.22	0.55
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.41	0.55
22:BA:2786:U:O2'	25:BD:66:GLY:HA3	2.06	0.55
28:BG:11:VAL:HG23	28:BG:11:VAL:O	2.06	0.55
48:B0:11:SER:O	48:B0:15:MET:HG3	2.06	0.55
1:CA:36:C:OP1	12:CL:120:LYS:HE3	2.07	0.55
1:CA:157:U:H1'	1:CA:165:G:N2	2.21	0.55
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.07	0.55
1:CA:984:C:N4	57:CA:1859:HOH:O	2.40	0.55
5:CE:50:TYR:O	5:CE:51:GLY:O	2.25	0.55
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.07	0.55
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	1.89	0.55
22:DA:1476:U:C5	22:DA:1514:G:N2	2.74	0.55
22:DA:1807:G:C2	22:DA:1809:A:OP2	2.60	0.55
24:DC:114:ASP:N	24:DC:114:ASP:OD1	2.38	0.55
29:DH:27:ARG:HE	45:DX:60:ASP:CB	2.19	0.55
33:DL:116:VAL:HG21	33:DL:134:ALA:O	2.07	0.55
41:DT:37:ASP:O	41:DT:38:ALA:HB3	2.06	0.55
1:AA:455:G:N2	1:AA:478:A:C2	2.75	0.55
1:AA:685:G:C6	1:AA:686:U:O4	2.60	0.55
1:AA:737:C:H2'	1:AA:738:C:H6	1.72	0.55
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:74:LEU:HD21	12:AL:104:CYS:SG	2.46	0.55
22:BA:400:G:N7	45:BX:57:ARG:NH1	2.51	0.55
22:BA:947:A:HO2'	22:BA:984:A:H2	1.50	0.55
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.22	0.55
31:BJ:140:LEU:HD11	31:BJ:142:ILE:HD13	1.88	0.55
35:BN:100:CYS:O	35:BN:100:CYS:SG	2.65	0.55
44:BW:68:LYS:HD3	44:BW:83:GLU:OE2	2.07	0.55
1:CA:577:G:C4	1:CA:578:C:C5	2.95	0.55
1:CA:734:G:C5	1:CA:735:C:C5	2.94	0.55
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.89	0.55
15:CO:37:ASN:O	15:CO:38:HIS:C	2.50	0.55
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.88	0.55
22:DA:1064:C:N3	22:DA:1074:G:N2	2.54	0.55
22:DA:1239:G:C6	22:DA:1240:U:C4	2.94	0.55
22:DA:1277:G:H5'	35:DN:20:MET:HE2	1.87	0.55
22:DA:1665:A:OP1	32:DK:66:LYS:CE	2.55	0.55
22:DA:2657:A:H1'	22:DA:2665:A:N6	2.22	0.55
22:DA:2819:G:H5''	57:DA:3805:HOH:O	2.07	0.55
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.37	0.55
1:AA:202:G:N2	1:AA:216:U:O2	2.39	0.55
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.07	0.55
22:BA:1314:C:H2'	22:BA:1314:C:O2	2.06	0.55
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.07	0.55
25:BD:4:LEU:HD23	25:BD:101:PHE:CE1	2.41	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.39	0.55
46:BY:13:GLU:OE2	46:BY:13:GLU:HA	2.06	0.55
1:CA:1027:C:N4	1:CA:1034:G:C6	2.75	0.55
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.72	0.55
22:DA:792:A:H5''	22:DA:793:A:H5'	1.87	0.55
22:DA:2234:G:C6	22:DA:2235:G:C5	2.95	0.55
22:DA:2818:U:OP2	35:DN:42:LYS:NZ	2.36	0.55
27:DF:108:VAL:HG11	27:DF:176:PRO:HG2	1.88	0.55
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.21	0.55
1:AA:1144:G:N1	1:AA:1145:A:C2	2.75	0.55
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.22	0.55
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.07	0.55
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.89	0.55
22:BA:1985:C:O2	22:BA:1985:C:C2'	2.49	0.55
22:BA:2454:G:N7	57:BA:3529:HOH:O	2.33	0.55
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:9:ILE:HG13	38:BQ:10:ALA:N	2.22	0.55
40:BS:63:GLY:O	40:BS:64:ALA:HB2	2.07	0.55
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.55	0.55
1:CA:676:A:C2	1:CA:677:U:C4	2.95	0.55
7:CG:23:LEU:HD23	7:CG:26:PHE:HB3	1.87	0.55
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.22	0.55
22:DA:305:C:C2	22:DA:313:G:N1	2.75	0.55
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.25	0.55
22:DA:2199:A:C5	22:DA:2225:A:C6	2.95	0.55
25:DD:101:PHE:HB3	25:DD:104:VAL:HG21	1.89	0.55
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.07	0.55
1:AA:205:A:OP1	1:AA:205:A:H4'	2.07	0.54
13:AM:15:ALA:HB3	13:AM:34:LEU:HD21	1.89	0.54
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.88	0.54
22:BA:364:C:H2'	22:BA:365:U:C6	2.41	0.54
22:BA:870:U:C2'	22:BA:871:U:H5'	2.37	0.54
22:BA:1973:G:OP1	57:BA:3471:HOH:O	2.18	0.54
22:BA:2728:U:O2'	22:BA:2729:G:OP2	2.20	0.54
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.07	0.54
35:BN:33:ILE:HG23	35:BN:33:ILE:O	2.07	0.54
1:CA:562:U:H1'	12:CL:12:ARG:HG3	1.88	0.54
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.07	0.54
3:CC:150:LYS:HE3	3:CC:201:TRP:CE3	2.42	0.54
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.07	0.54
18:CR:20:GLU:HG3	18:CR:55:LEU:HD13	1.89	0.54
22:DA:1335:C:N4	57:DA:3393:HOH:O	2.39	0.54
22:DA:1665:A:H5''	32:DK:66:LYS:HG3	1.90	0.54
22:DA:2235:G:C4	22:DA:2236:U:C6	2.95	0.54
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.54
31:DJ:6:ALA:O	31:DJ:7:LYS:HG3	2.07	0.54
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.40	0.54
49:D1:23:THR:OG1	49:D1:24:THR:N	2.40	0.54
1:AA:257:G:C2	1:AA:258:G:C5	2.94	0.54
1:AA:895:G:H2'	1:AA:896:C:C6	2.43	0.54
2:AB:72:THR:O	2:AB:73:LYS:CB	2.55	0.54
2:AB:151:ILE:O	2:AB:152:LYS:C	2.50	0.54
4:AD:95:GLU:OE2	4:AD:100:ASN:ND2	2.40	0.54
11:AK:23:ILE:HD11	11:AK:86:VAL:HG13	1.87	0.54
13:AM:20:THR:HA	13:AM:25:VAL:HG23	1.88	0.54
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.38	0.54
22:BA:142:A:H2'	22:BA:143:C:O4'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:374:A:C2	22:BA:401:A:C4	2.95	0.54
22:BA:1080:A:C2	22:BA:1081:U:C5	2.96	0.54
22:BA:1812:U:O2	22:BA:1812:U:H2'	2.06	0.54
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.36	0.54
25:BD:151:THR:HG22	25:BD:152:PRO:HD3	1.89	0.54
32:BK:113:MET:O	32:BK:116:ILE:HG13	2.06	0.54
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.06	0.54
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.42	0.54
4:CD:168:PRO:HB3	4:CD:170:TRP:CH2	2.42	0.54
8:CH:9:ASP:OD2	8:CH:13:ARG:NH1	2.40	0.54
16:CP:6:LEU:CD1	16:CP:71:VAL:CG2	2.85	0.54
22:DA:443:A:N7	26:DE:40:ARG:CG	2.70	0.54
22:DA:1438:U:C5	22:DA:1552:A:C2	2.95	0.54
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.90	0.54
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.90	0.54
22:DA:2343:U:HO2'	22:DA:2373:G:HO2'	1.55	0.54
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.22	0.54
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.06	0.54
28:DG:98:VAL:HG23	28:DG:125:CYS:SG	2.47	0.54
1:AA:397:A:C6	1:AA:548:G:N7	2.75	0.54
1:AA:858:G:O2'	1:AA:859:G:H5'	2.06	0.54
1:AA:1418:A:C2	1:AA:1483:A:C2	2.96	0.54
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	1.90	0.54
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.07	0.54
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.07	0.54
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.22	0.54
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.08	0.54
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.42	0.54
27:BF:108:VAL:CG1	27:BF:114:PHE:CZ	2.90	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
34:BM:55:ARG:CZ	34:BM:55:ARG:HB3	2.36	0.54
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.07	0.54
22:DA:192:C:C5	22:DA:193:U:C2	2.95	0.54
22:DA:699:A:H2'	22:DA:700:G:H5'	1.89	0.54
22:DA:969:G:H2'	22:DA:970:U:C6	2.42	0.54
22:DA:1606:C:O2'	22:DA:1607:C:P	2.65	0.54
26:DE:128:ALA:O	26:DE:130:LYS:N	2.40	0.54
30:DI:101:ILE:HG22	30:DI:105:GLN:HB2	1.88	0.54
42:DU:59:VAL:HG12	42:DU:61:LYS:HD3	1.90	0.54
45:DX:31:PRO:HB2	45:DX:33:LEU:HD13	1.89	0.54
5:AE:50:TYR:CE1	5:AE:134:ILE:HD11	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:25:ARG:HG2	20:AT:29:ARG:NH1	2.23	0.54
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.88	0.54
22:BA:345:A:N3	22:BA:346:A:N6	2.52	0.54
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.07	0.54
29:BH:83:LYS:CE	1:CA:55:A:O2'	2.56	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
34:BM:77:PRO:HG2	34:BM:80:VAL:HG21	1.89	0.54
4:CD:166:GLU:O	4:CD:167:LYS:HB2	2.06	0.54
6:CF:99:ALA:O	6:CF:100:SER:CB	2.55	0.54
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.40	0.54
22:DA:13:A:C6	22:DA:525:U:C2	2.96	0.54
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.37	0.54
22:DA:801:G:C8	26:DE:49:ARG:HG3	2.43	0.54
22:DA:1713:A:C6	22:DA:1716:U:H1'	2.42	0.54
22:DA:1914:C:C6	22:DA:1915:U:C6	2.96	0.54
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.43	0.54
22:DA:2232:C:OP1	45:DX:27:ARG:NH1	2.40	0.54
22:DA:2773:C:H2'	22:DA:2774:C:C6	2.42	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.06	0.54
1:AA:666:G:C5	1:AA:741:G:C6	2.96	0.54
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.90	0.54
13:AM:25:VAL:HG12	13:AM:29:ARG:HB3	1.90	0.54
22:BA:371:A:O2'	45:BX:61:LYS:NZ	2.41	0.54
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.06	0.54
22:BA:1340:U:OP1	41:BT:19:LYS:NZ	2.34	0.54
24:BC:123:ALA:O	24:BC:128:ASN:ND2	2.40	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.23	0.54
36:BO:10:ARG:NH2	36:BO:96:GLY:O	2.41	0.54
1:CA:41:G:H2'	1:CA:42:G:C8	2.43	0.54
5:CE:12:GLN:HB3	5:CE:40:GLY:O	2.08	0.54
10:CJ:63:ASP:OD2	14:CN:85:ARG:NH1	2.40	0.54
15:CO:37:ASN:O	15:CO:40:GLN:CB	2.56	0.54
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.33	0.54
22:DA:1027:A:C6	22:DA:1126:A:C4	2.94	0.54
22:DA:1208:C:N3	22:DA:1209:U:C5	2.75	0.54
22:DA:2369:A:N6	22:DA:2382:G:O6	2.40	0.54
27:DF:64:LYS:O	27:DF:64:LYS:HG2	2.07	0.54
1:AA:81:A:H2'	1:AA:82:G:H5'	1.89	0.54
1:AA:872:A:C8	1:AA:874:G:C8	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:949:A:C6	1:AA:950:U:N3	2.76	0.54
1:AA:990:C:C4	1:AA:991:U:O4	2.61	0.54
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.61	0.54
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.41	0.54
4:AD:10:LYS:HA	4:AD:13:ARG:HG3	1.89	0.54
7:AG:75:VAL:HG21	7:AG:144:MET:HG2	1.88	0.54
22:BA:693:A:O2'	22:BA:694:U:H5'	2.08	0.54
22:BA:995:C:H5'	22:BA:995:C:H6	1.73	0.54
22:BA:1002:G:N7	57:BA:3746:HOH:O	2.33	0.54
22:BA:1114:C:O2'	22:BA:1115:G:H5'	2.08	0.54
22:BA:1373:A:H5''	22:BA:1374:G:OP2	2.08	0.54
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.08	0.54
22:BA:2191:A:C6	22:BA:2192:U:C4	2.96	0.54
23:BB:51:G:H2'	23:BB:52:A:C8	2.42	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.89	0.54
35:BN:106:ASP:C	35:BN:106:ASP:OD1	2.48	0.54
48:B0:54:VAL:O	48:B0:56:ALA:N	2.40	0.54
1:CA:1125:U:C5	10:CJ:40:ILE:HG21	2.43	0.54
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.07	0.54
22:DA:545:U:O2'	22:DA:547:A:OP1	2.23	0.54
22:DA:856:G:N2	22:DA:922:C:C2	2.76	0.54
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.43	0.54
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.43	0.54
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.37	0.54
22:DA:1940:U:C2	22:DA:1965:C:OP2	2.61	0.54
22:DA:2056:G:OP2	57:DA:3487:HOH:O	2.18	0.54
22:DA:2550:G:C5	22:DA:2551:C:C5	2.95	0.54
22:DA:2603:G:C6	22:DA:2604:U:C4	2.96	0.54
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.23	0.54
51:D3:16:LYS:HE2	51:D3:20:GLY:HA2	1.89	0.54
1:AA:451:A:H61	1:AA:481:G:H5''	1.73	0.54
1:AA:451:A:N6	1:AA:481:G:H5''	2.23	0.54
12:AL:114:ARG:HB3	12:AL:119:VAL:HB	1.89	0.54
22:BA:639:U:H2'	22:BA:640:C:C6	2.43	0.54
22:BA:1917:U:N3	22:BA:1918:A:C4	2.76	0.54
44:BW:41:ARG:HG3	44:BW:41:ARG:NH1	2.22	0.54
1:CA:682:G:C2	1:CA:683:G:N7	2.75	0.54
1:CA:992:U:C4	1:CA:1043:G:C8	2.96	0.54
1:CA:1474:U:H2'	1:CA:1475:G:H5''	1.90	0.54
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.40	0.54
22:DA:1000:A:N1	22:DA:1001:A:C2	2.76	0.54
22:DA:2209:G:N2	22:DA:2216:G:N3	2.55	0.54
22:DA:2346:A:H3'	22:DA:2347:C:H5'	1.89	0.54
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.38	0.54
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.41	0.54
31:DJ:114:LEU:HG	31:DJ:118:MET:HE3	1.90	0.54
33:DL:77:ILE:O	33:DL:110:VAL:O	2.26	0.54
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.37	0.54
1:AA:71:A:H3'	1:AA:71:A:OP2	2.07	0.54
1:AA:872:A:C4	1:AA:874:G:C8	2.96	0.54
1:AA:1526:G:OP1	21:AU:39:GLU:HB2	2.08	0.54
2:AB:21:ARG:NH1	2:AB:21:ARG:HA	2.23	0.54
4:AD:30:THR:O	4:AD:31:LYS:C	2.51	0.54
11:AK:127:ARG:N	21:AU:34:ARG:CZ	2.69	0.54
22:BA:84:A:H4'	22:BA:85:G:O5'	2.08	0.54
22:BA:613:A:O2'	22:BA:614:A:OP1	2.26	0.54
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.43	0.54
33:BL:81:ASP:HB3	33:BL:100:ILE:HD13	1.89	0.54
46:BY:23:ARG:O	46:BY:24:GLU:C	2.49	0.54
1:CA:76:G:N2	1:CA:95:C:N3	2.55	0.54
1:CA:298:A:H2'	1:CA:299:G:O4'	2.08	0.54
1:CA:463:U:H3'	1:CA:464:U:C6	2.42	0.54
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.37	0.54
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.43	0.54
4:CD:30:THR:O	4:CD:31:LYS:HD3	2.06	0.54
16:CP:20:VAL:HG21	16:CP:32:PHE:CB	2.37	0.54
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.23	0.54
22:DA:1809:A:N6	22:DA:1810:A:C6	2.76	0.54
22:DA:1856:U:O4	22:DA:1857:G:N1	2.40	0.54
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.41	0.54
51:D3:6:THR:O	51:D3:8:ARG:HG2	2.08	0.54
1:AA:96:U:O2'	1:AA:97:G:P	2.65	0.54
1:AA:949:A:C6	1:AA:950:U:C2	2.96	0.54
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.23	0.54
2:AB:78:GLU:C	2:AB:80:VAL:H	2.16	0.54
2:AB:83:ALA:HA	2:AB:86:SER:OG	2.08	0.54
4:AD:90:LEU:HD23	4:AD:200:ILE:HD11	1.89	0.54
9:AI:50:GLN:N	9:AI:51:PRO:HD2	2.23	0.54
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.07	0.54
22:BA:189:G:O6	22:BA:205:G:O2'	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:480:A:OP2	42:BU:44:LYS:HD2	2.08	0.54
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.55	0.54
22:BA:666:A:H4'	33:BL:48:ARG:HD3	1.90	0.54
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	1.90	0.54
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.37	0.54
1:CA:327:A:C2	1:CA:329:A:C4	2.95	0.54
1:CA:511:C:C2	1:CA:512:U:C6	2.96	0.54
1:CA:686:U:O2'	1:CA:687:A:OP2	2.20	0.54
1:CA:978:A:H4'	1:CA:1322:C:C5	2.43	0.54
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.22	0.54
22:DA:500:G:N2	22:DA:502:A:C8	2.75	0.54
22:DA:532:A:N7	22:DA:2021:C:H2'	2.23	0.54
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.43	0.54
22:DA:2406:A:H2'	22:DA:2406:A:OP2	2.07	0.54
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.43	0.54
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.33	0.54
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.90	0.54
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.08	0.54
1:AA:49:U:O4	1:AA:365:U:H5	1.91	0.54
1:AA:232:G:H2'	1:AA:233:C:O4'	2.07	0.54
1:AA:728:A:C6	1:AA:729:A:C6	2.96	0.54
2:AB:126:PHE:N	2:AB:126:PHE:HD1	2.06	0.54
5:AE:149:SER:OG	5:AE:152:MET:HB2	2.07	0.54
12:AL:86:ARG:NE	12:AL:88:LYS:HB3	2.23	0.54
13:AM:3:ARG:O	13:AM:4:ILE:HG12	2.08	0.54
14:AN:7:LYS:O	14:AN:10:GLU:N	2.40	0.54
22:BA:142:A:H2'	22:BA:143:C:C6	2.43	0.54
22:BA:570:G:O6	57:BA:3693:HOH:O	2.17	0.54
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.89	0.54
22:BA:1824:G:C5	22:BA:1825:U:C5	2.96	0.54
24:BC:33:LEU:O	24:BC:64:ILE:HG13	2.08	0.54
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.90	0.54
42:BU:99:ASN:O	42:BU:101:GLU:N	2.41	0.54
1:CA:227:G:H2'	1:CA:228:A:O4'	2.07	0.54
1:CA:577:G:C8	1:CA:816:A:C6	2.95	0.54
1:CA:951:G:C2	1:CA:1231:G:C2	2.96	0.54
1:CA:1106:G:C4	1:CA:1107:C:C5	2.96	0.54
1:CA:1298:U:O2	1:CA:1298:U:H2'	2.06	0.54
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.08	0.54
10:CJ:26:VAL:HG13	10:CJ:36:VAL:HG11	1.90	0.54
12:CL:25:GLU:O	12:CL:26:ALA:C	2.49	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:45:G:H2'	22:DA:215:G:N7	2.22	0.54
22:DA:223:A:C4	22:DA:408:G:H1'	2.43	0.54
22:DA:1469:A:C2	22:DA:1470:A:C6	2.96	0.54
22:DA:1867:G:O6	22:DA:1875:G:N2	2.40	0.54
22:DA:2199:A:N7	22:DA:2225:A:C6	2.76	0.54
22:DA:2370:G:C6	22:DA:2371:G:C5	2.96	0.54
42:DU:34:VAL:HG22	42:DU:65:ILE:O	2.08	0.54
1:AA:624:C:C5	1:AA:625:U:C5	2.95	0.53
1:AA:792:A:H1'	1:AA:794:A:N7	2.24	0.53
1:AA:1195:C:H2'	1:AA:1197:A:O4'	2.07	0.53
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.89	0.53
21:AU:12:PHE:HD1	21:AU:12:PHE:N	2.05	0.53
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.53
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.43	0.53
22:BA:2748:A:C1'	28:BG:67:THR:HG22	2.36	0.53
26:BE:77:ILE:HG22	26:BE:77:ILE:O	2.08	0.53
1:CA:102:G:C2	1:CA:103:U:C4	2.95	0.53
1:CA:679:C:O2	1:CA:712:A:C2	2.61	0.53
1:CA:1320:C:N3	19:CS:36:ARG:NH1	2.56	0.53
4:CD:150:LYS:O	4:CD:151:LYS:C	2.50	0.53
6:CF:88:MET:SD	6:CF:90:MET:SD	3.06	0.53
22:DA:222:A:H3'	22:DA:421:C:H5'	1.90	0.53
22:DA:301:G:N2	22:DA:302:C:C2	2.76	0.53
22:DA:1034:G:C6	22:DA:1035:U:C2	2.97	0.53
22:DA:1389:G:C2	22:DA:1390:U:C2	2.96	0.53
1:AA:579:A:H2'	1:AA:580:C:H6	1.74	0.53
1:AA:792:A:H4'	1:AA:793:U:O5'	2.08	0.53
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.26	0.53
16:AP:78:VAL:HG13	16:AP:78:VAL:O	2.06	0.53
22:BA:533:G:H5'	38:BQ:24:TYR:CD1	2.43	0.53
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.71	0.53
42:BU:5:ILE:C	42:BU:6:ARG:HG2	2.33	0.53
1:CA:257:G:C2	1:CA:270:A:N1	2.76	0.53
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.41	0.53
1:CA:1277:C:H2'	1:CA:1278:G:H5''	1.90	0.53
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.90	0.53
22:DA:289:G:H2'	22:DA:290:U:O4'	2.08	0.53
22:DA:1340:U:C4	22:DA:1603:A:C8	2.96	0.53
22:DA:1345:C:C2	22:DA:1346:G:C8	2.96	0.53
22:DA:1431:A:C2	22:DA:1432:G:C4	2.96	0.53
22:DA:2032:G:H1'	25:DD:150:GLN:OE1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2268:A:OP1	57:DA:3509:HOH:O	2.18	0.53
22:DA:2816:G:O3'	35:DN:99:LYS:HE2	2.08	0.53
23:DB:29:A:O2'	23:DB:58:A:N1	2.38	0.53
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.43	0.53
51:D3:62:LEU:HB3	51:D3:65:ALA:HB2	1.89	0.53
1:AA:188:C:O2	1:AA:188:C:H2'	2.07	0.53
1:AA:448:A:C5	1:AA:487:A:C2	2.96	0.53
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.40	0.53
5:AE:78:ASN:OD1	5:AE:79:GLY:N	2.40	0.53
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.41	0.53
11:AK:34:ILE:HG12	11:AK:70:CYS:SG	2.48	0.53
22:BA:1001:A:OP2	57:BA:3743:HOH:O	2.18	0.53
29:BH:94:ILE:CA	29:BH:122:LEU:HB3	2.35	0.53
1:CA:620:C:H2'	1:CA:621:A:O4'	2.09	0.53
1:CA:706:A:N7	1:CA:707:U:C5	2.76	0.53
1:CA:782:A:H2'	1:CA:783:C:H5'	1.89	0.53
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.24	0.53
2:CB:126:PHE:CZ	2:CB:127:ASP:OD1	2.60	0.53
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.89	0.53
12:CL:3:THR:O	12:CL:4:VAL:C	2.51	0.53
12:CL:88:LYS:HG3	12:CL:88:LYS:O	2.07	0.53
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.09	0.53
50:D2:25:LYS:O	50:D2:29:GLN:HG3	2.08	0.53
1:AA:939:G:H4'	7:AG:102:ARG:NH2	2.24	0.53
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.43	0.53
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.90	0.53
13:AM:40:ALA:HB3	13:AM:43:VAL:HG13	1.89	0.53
21:AU:16:LEU:C	21:AU:18:ARG:HE	2.16	0.53
22:BA:1482:G:C6	22:BA:1508:A:N1	2.76	0.53
22:BA:1907:G:C6	22:BA:1908:C:N3	2.77	0.53
22:BA:1917:U:C4	22:BA:1918:A:C4	2.97	0.53
22:BA:1971:U:OP2	22:BA:1971:U:H4'	2.09	0.53
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.09	0.53
1:CA:579:A:H2'	1:CA:580:C:H6	1.74	0.53
1:CA:580:C:H2'	1:CA:581:G:C8	2.44	0.53
1:CA:728:A:C2	1:CA:729:A:C5	2.96	0.53
1:CA:734:G:C4	1:CA:735:C:C5	2.96	0.53
1:CA:792:A:O2'	1:CA:794:A:N7	2.38	0.53
22:DA:188:G:O2'	22:DA:1365:A:N6	2.41	0.53
22:DA:522:A:C6	22:DA:523:C:N3	2.76	0.53
22:DA:685:A:C8	22:DA:774:G:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.09	0.53
22:DA:1826:G:C4	22:DA:1827:U:C5	2.96	0.53
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.43	0.53
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.22	0.53
1:AA:201:G:C2	1:AA:217:C:O2	2.62	0.53
1:AA:792:A:N3	1:AA:794:A:C5	2.76	0.53
1:AA:1055:A:N6	1:AA:1206:G:C5	2.76	0.53
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.08	0.53
1:AA:1358:U:C6	1:AA:1359:C:C5	2.97	0.53
4:AD:50:ASP:OD1	4:AD:54:GLN:NE2	2.41	0.53
17:AQ:51:ASN:OD1	17:AQ:51:ASN:N	2.42	0.53
22:BA:1056:G:O2'	22:BA:1086:A:H1'	2.08	0.53
22:BA:1095:A:C6	22:BA:1096:A:N6	2.76	0.53
22:BA:1185:G:H5''	22:BA:1186:G:P	2.49	0.53
22:BA:2129:C:OP1	53:B5:35:THR:HG23	2.08	0.53
22:BA:2193:G:O2'	22:BA:2194:U:H5'	2.09	0.53
24:BC:17:VAL:H	24:BC:204:VAL:HG22	1.72	0.53
42:BU:89:ASP:CG	42:BU:90:GLY:H	2.15	0.53
1:CA:68:G:C5	1:CA:69:G:H1'	2.43	0.53
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.43	0.53
4:CD:51:TYR:O	4:CD:52:GLY:C	2.52	0.53
6:CF:52:ASN:O	6:CF:53:LYS:HB2	2.08	0.53
16:CP:16:PHE:CE1	16:CP:38:PHE:HB2	2.44	0.53
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.57	0.53
22:DA:575:A:C2	22:DA:576:U:C5	2.96	0.53
22:DA:953:G:O2'	22:DA:954:G:H5'	2.09	0.53
22:DA:1833:C:O2	22:DA:1833:C:H2'	2.07	0.53
24:DC:159:GLY:N	24:DC:197:ASN:O	2.41	0.53
26:DE:170:ARG:CG	26:DE:174:GLY:O	2.56	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.09	0.53
31:DJ:40:HIS:O	38:DQ:67:ALA:HB1	2.08	0.53
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.91	0.53
37:DP:113:ARG:O	37:DP:114:LEU:C	2.52	0.53
1:AA:451:A:C8	1:AA:452:A:N1	2.76	0.53
1:AA:958:A:C6	1:AA:959:A:N1	2.77	0.53
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.42	0.53
6:AF:12:PRO:O	6:AF:15:SER:HB2	2.09	0.53
8:AH:10:MET:HE2	8:AH:33:LYS:HG2	1.89	0.53
11:AK:76:GLU:HA	22:BA:2141:G:OP2	2.08	0.53
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.33	0.53
22:BA:192:C:OP1	57:BA:3749:HOH:O	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:621:A:OP2	33:BL:99:ASN:ND2	2.41	0.53
22:BA:1070:A:O2'	22:BA:1097:U:OP1	2.17	0.53
22:BA:1487:U:C2	22:BA:1503:A:C2	2.97	0.53
22:BA:1925:C:H5''	22:BA:1926:U:C4	2.41	0.53
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.44	0.53
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.73	0.53
27:BF:173:PHE:O	27:BF:174:ASP:HB3	2.09	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.24	0.53
33:BL:14:LYS:HD3	33:BL:15:ALA:HB3	1.89	0.53
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.90	0.53
1:CA:1237:C:C5	1:CA:1336:C:N4	2.77	0.53
2:CB:183:VAL:N	2:CB:197:ASP:OD2	2.41	0.53
5:CE:25:VAL:O	5:CE:26:LYS:C	2.51	0.53
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	1.91	0.53
22:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.39	0.53
22:DA:1352:U:C5	22:DA:1377:G:C6	2.97	0.53
22:DA:1809:A:C5	22:DA:1810:A:C5	2.97	0.53
22:DA:2148:G:C2	22:DA:2149:U:C4	2.96	0.53
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.91	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
31:DJ:15:TRP:O	31:DJ:137:PRO:HA	2.09	0.53
33:DL:82:LEU:HA	33:DL:85:VAL:HG13	1.90	0.53
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.89	0.53
45:DX:2:SER:O	45:DX:4:VAL:N	2.40	0.53
1:AA:439:U:C5	1:AA:440:C:C5	2.97	0.53
1:AA:451:A:H4'	1:AA:452:A:O5'	2.08	0.53
1:AA:994:A:N3	1:AA:994:A:H2'	2.24	0.53
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.24	0.53
1:AA:1198:G:H5''	57:AA:1835:HOH:O	2.08	0.53
2:AB:82:ASP:C	2:AB:84:ALA:N	2.64	0.53
8:AH:14:ILE:O	8:AH:15:ARG:C	2.51	0.53
22:BA:804:A:H5''	22:BA:805:G:OP1	2.09	0.53
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.44	0.53
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.90	0.53
47:BZ:35:THR:CG2	47:BZ:36:VAL:N	2.71	0.53
51:B3:15:LYS:HD2	51:B3:23:LYS:HE2	1.90	0.53
1:CA:1081:A:H5'	5:CE:23:LYS:HG3	1.89	0.53
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.09	0.53
22:DA:705:A:C2	22:DA:727:A:H1'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:785:G:O2'	22:DA:1779:U:H5'	2.09	0.53
22:DA:2126:A:O2'	22:DA:2162:G:O6	2.24	0.53
22:DA:2454:G:H1'	57:DA:3533:HOH:O	2.08	0.53
24:DC:258:ARG:NH2	24:DC:264:ASP:OD1	2.41	0.53
28:DG:39:ASP:HB3	28:DG:58:TYR:OH	2.07	0.53
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.90	0.53
1:AA:188:C:O2	1:AA:189:A:C4	2.62	0.53
1:AA:938:A:N3	1:AA:1376:U:O2'	2.39	0.53
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.44	0.53
2:AB:76:ALA:O	2:AB:80:VAL:HG23	2.09	0.53
5:AE:81:LEU:CD2	5:AE:123:VAL:HG12	2.39	0.53
6:AF:29:ILE:HD13	6:AF:64:VAL:HG11	1.91	0.53
13:AM:104:THR:O	13:AM:105:ASN:C	2.52	0.53
22:BA:574:A:H4'	22:BA:575:A:O5'	2.07	0.53
22:BA:1439:A:C2	22:BA:1553:A:C5	2.97	0.53
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.74	0.53
22:BA:2883:A:OP2	48:B0:50:ARG:NH1	2.42	0.53
1:CA:228:A:H4'	16:CP:63:GLN:HG2	1.91	0.53
1:CA:518:C:H4'	1:CA:519:C:O5'	2.08	0.53
1:CA:899:C:H6	1:CA:899:C:OP1	1.91	0.53
1:CA:938:A:C2	1:CA:1345:U:O4	2.62	0.53
11:CK:52:PHE:CE1	11:CK:62:ALA:HB1	2.44	0.53
16:CP:20:VAL:CG2	16:CP:32:PHE:HB2	2.39	0.53
22:DA:224:U:OP2	22:DA:408:G:N2	2.42	0.53
22:DA:532:A:H2'	22:DA:532:A:N3	2.24	0.53
22:DA:690:G:H1'	22:DA:779:U:O3'	2.09	0.53
22:DA:919:U:H2'	22:DA:920:A:O4'	2.09	0.53
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.44	0.53
22:DA:1728:C:C2	22:DA:1730:C:O2	2.62	0.53
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.09	0.53
25:DD:176:ASP:O	25:DD:190:LYS:N	2.39	0.53
26:DE:109:LEU:O	26:DE:112:LEU:HB2	2.08	0.53
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.72	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
42:DU:47:LYS:HG3	42:DU:48:PRO:HD2	1.91	0.53
47:DZ:24:LEU:HD22	47:DZ:29:LEU:HD12	1.91	0.53
1:AA:557:G:C6	1:AA:558:G:N1	2.77	0.53
1:AA:1417:G:C6	1:AA:1482:G:C6	2.96	0.53
12:AL:66:TYR:CD2	12:AL:87:VAL:HG21	2.44	0.53
16:AP:72:ALA:O	16:AP:75:ILE:HG13	2.08	0.53
22:BA:674:G:N3	26:BE:69:ARG:NH1	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:852:U:H2'	22:BA:853:C:C6	2.44	0.53
22:BA:1205:A:H4'	22:BA:1206:G:OP2	2.09	0.53
22:BA:1206:G:C6	22:BA:1207:C:C4	2.97	0.53
22:BA:2425:A:H5''	22:BA:2427:C:O4'	2.09	0.53
22:BA:2750:A:H1'	22:BA:2752:C:N4	2.23	0.53
32:BK:34:GLY:O	32:BK:35:VAL:C	2.51	0.53
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.09	0.53
1:CA:1012:A:N6	1:CA:1013:G:O6	2.42	0.53
1:CA:1070:U:C2	1:CA:1071:C:C5	2.97	0.53
7:CG:66:LEU:HG	7:CG:66:LEU:O	2.09	0.53
12:CL:116:LYS:O	12:CL:117:TYR:CB	2.57	0.53
16:CP:6:LEU:HD12	16:CP:71:VAL:CG2	2.38	0.53
22:DA:526:A:OP1	57:DA:3244:HOH:O	2.18	0.53
22:DA:563:A:C6	22:DA:2018:G:C4	2.97	0.53
22:DA:696:G:C6	22:DA:767:U:O2	2.62	0.53
22:DA:2147:A:C8	22:DA:2148:G:C8	2.97	0.53
22:DA:2415:G:C2	22:DA:2416:C:C2	2.97	0.53
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.39	0.53
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.42	0.53
25:DD:51:THR:OG1	25:DD:76:GLY:HA3	2.09	0.53
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.91	0.53
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.43	0.53
50:D2:44:VAL:O	50:D2:45:SER:CB	2.56	0.53
1:AA:173:U:C6	1:AA:197:A:C2	2.97	0.53
1:AA:554:A:C5'	12:AL:26:ALA:HB1	2.39	0.53
8:AH:8:ALA:HB2	8:AH:77:ARG:CD	2.38	0.53
9:AI:97:GLU:N	9:AI:97:GLU:OE2	2.42	0.53
22:BA:497:A:C4	22:BA:498:G:C8	2.97	0.53
22:BA:608:A:C6	22:BA:609:A:C6	2.96	0.53
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.39	0.53
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.90	0.53
27:BF:40:VAL:HG11	27:BF:50:LEU:HD13	1.91	0.53
39:BR:47:VAL:CG1	39:BR:54:VAL:CG1	2.87	0.53
43:BV:10:LYS:CE	43:BV:10:LYS:H	2.21	0.53
22:DA:142:A:H2'	22:DA:143:C:C6	2.44	0.53
22:DA:187:G:C2	22:DA:210:C:O2	2.61	0.53
22:DA:476:G:N2	22:DA:479:A:C8	2.77	0.53
22:DA:696:G:N1	22:DA:767:U:C2	2.77	0.53
22:DA:910:A:C2	34:DM:13:HIS:CE1	2.97	0.53
22:DA:1483:G:C6	22:DA:1484:U:C4	2.96	0.53
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1747:U:H2'	22:DA:1748:C:C6	2.44	0.53
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.44	0.53
22:DA:2438:U:O2'	22:DA:2440:C:OP1	2.24	0.53
22:DA:2441:U:H4'	22:DA:2441:U:OP1	2.09	0.53
22:DA:2734:A:N6	22:DA:2770:G:O2'	2.42	0.53
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.42	0.53
28:DG:98:VAL:HG21	28:DG:124:GLU:HA	1.91	0.53
42:DU:13:VAL:CG1	42:DU:18:ASP:O	2.57	0.53
42:DU:33:LYS:HE2	42:DU:66:GLN:NE2	2.24	0.53
1:AA:903:G:C5	1:AA:904:U:C5	2.97	0.52
5:AE:151:GLU:HG3	5:AE:152:MET:SD	2.49	0.52
9:AI:13:LYS:HG2	9:AI:13:LYS:O	2.08	0.52
9:AI:16:ALA:O	9:AI:67:VAL:HA	2.09	0.52
13:AM:88:GLY:C	13:AM:90:ARG:N	2.66	0.52
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.91	0.52
22:BA:1069:A:O2'	22:BA:1070:A:H5''	2.08	0.52
22:BA:1870:C:H2'	22:BA:1871:A:C2	2.44	0.52
24:BC:209:GLY:O	24:BC:210:ALA:C	2.52	0.52
42:BU:72:ILE:HD12	42:BU:83:VAL:HG23	1.91	0.52
43:BV:80:HIS:CE1	43:BV:83:LYS:HD2	2.43	0.52
1:CA:154:U:C2'	1:CA:155:A:H5'	2.39	0.52
1:CA:519:C:H2'	1:CA:520:A:O4'	2.08	0.52
1:CA:1160:G:O6	1:CA:1181:G:C6	2.62	0.52
1:CA:1328:C:H5''	13:CM:28:THR:HG21	1.92	0.52
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.09	0.52
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.24	0.52
20:CT:58:VAL:HG13	20:CT:72:ALA:HB1	1.92	0.52
22:DA:79:C:C4	22:DA:80:G:N7	2.77	0.52
22:DA:1497:U:C5	22:DA:1578:U:O5'	2.62	0.52
22:DA:1651:G:N2	22:DA:2007:U:C2	2.77	0.52
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.44	0.52
23:DB:39:A:H2'	23:DB:40:U:C5	2.43	0.52
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.09	0.52
26:DE:32:VAL:HG21	33:DL:6:LEU:HD13	1.91	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.91	0.52
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.90	0.52
49:D1:26:ASN:O	49:D1:27:LYS:C	2.53	0.52
1:AA:21:G:N2	1:AA:22:G:C6	2.77	0.52
1:AA:269:C:H2'	1:AA:270:A:C8	2.44	0.52
1:AA:970:C:H5''	1:AA:971:G:OP1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.91	0.52
3:AC:206:GLU:O	3:AC:207:ILE:O	2.28	0.52
7:AG:31:MET:CG	7:AG:32:VAL:N	2.71	0.52
21:AU:12:PHE:N	21:AU:12:PHE:CD1	2.75	0.52
22:BA:674:G:O2'	26:BE:69:ARG:HB3	2.09	0.52
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.09	0.52
22:BA:1277:G:H5'	35:BN:20:MET:HE2	1.92	0.52
22:BA:2811:G:OP1	25:BD:62:LYS:HB2	2.09	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.91	0.52
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.92	0.52
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.56	0.52
7:CG:18:PHE:CE1	7:CG:58:GLU:HG2	2.44	0.52
11:CK:87:LYS:HA	11:CK:114:THR:HG22	1.91	0.52
12:CL:80:ILE:HD12	12:CL:97:THR:HG21	1.91	0.52
15:CO:56:LEU:O	15:CO:59:MET:N	2.42	0.52
19:CS:4:SER:O	19:CS:5:LEU:CB	2.57	0.52
22:DA:777:G:C2	22:DA:778:G:C8	2.97	0.52
22:DA:1432:G:C2	22:DA:1433:A:C4	2.98	0.52
22:DA:1544:A:C6	22:DA:1545:A:N1	2.77	0.52
22:DA:1835:G:C2	22:DA:1836:C:C6	2.97	0.52
22:DA:1835:G:C5	22:DA:1836:C:C5	2.96	0.52
22:DA:2772:C:H2'	22:DA:2773:C:H6	1.74	0.52
25:DD:7:LYS:HG3	25:DD:198:GLY:O	2.09	0.52
25:DD:35:THR:HG22	25:DD:73:VAL:HG21	1.91	0.52
1:AA:11:G:C6	1:AA:12:U:C4	2.98	0.52
1:AA:36:C:OP1	12:AL:120:LYS:HE3	2.09	0.52
1:AA:76:G:N2	1:AA:95:C:C2	2.77	0.52
1:AA:125:U:H2'	1:AA:126:G:O4'	2.08	0.52
1:AA:595:A:C5	1:AA:641:U:C5	2.97	0.52
1:AA:827:U:C4	1:AA:870:U:C2	2.98	0.52
1:AA:971:G:O6	1:AA:1364:U:O2'	2.27	0.52
3:AC:142:MET:HE1	3:AC:148:GLY:HA2	1.90	0.52
5:AE:25:VAL:O	5:AE:28:GLY:N	2.32	0.52
5:AE:122:ASN:C	5:AE:122:ASN:HD22	2.17	0.52
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.87	0.52
22:BA:301:G:C4	22:BA:302:C:C5	2.97	0.52
22:BA:675:A:OP1	26:BE:58:LYS:HE2	2.08	0.52
22:BA:2325:G:C6	22:BA:2326:C:N4	2.77	0.52
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.45	0.52
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:89:LYS:HG2	1:CA:359:G:OP1	2.09	0.52
36:BO:51:ALA:O	36:BO:74:VAL:HG13	2.10	0.52
39:BR:47:VAL:HG12	39:BR:54:VAL:CG2	2.40	0.52
43:BV:66:ASP:O	43:BV:67:GLY:C	2.53	0.52
46:BY:26:PHE:C	46:BY:26:PHE:CD2	2.87	0.52
1:CA:151:A:H2'	1:CA:152:A:O4'	2.10	0.52
1:CA:785:G:C2	1:CA:786:G:C8	2.98	0.52
15:CO:42:HIS:O	15:CO:45:GLU:O	2.27	0.52
17:CQ:12:VAL:HG12	17:CQ:13:VAL:N	2.23	0.52
22:DA:25:U:O2	22:DA:515:A:N6	2.42	0.52
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.92	0.52
22:DA:370:G:C6	22:DA:424:G:N7	2.77	0.52
22:DA:931:U:O4	22:DA:1166:G:N2	2.42	0.52
22:DA:1534:U:O2'	22:DA:1537:G:O6	2.28	0.52
22:DA:2234:G:C4	22:DA:2235:G:C8	2.96	0.52
22:DA:2273:A:H2'	22:DA:2274:A:C8	2.45	0.52
22:DA:2343:U:H2'	22:DA:2344:U:C6	2.44	0.52
28:DG:123:ALA:HB2	28:DG:133:LEU:HB3	1.91	0.52
45:DX:74:ARG:NH2	45:DX:76:GLU:OE2	2.40	0.52
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.56	0.52
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.23	0.52
1:AA:157:U:O2'	1:AA:158:G:H5'	2.09	0.52
1:AA:443:C:C2	1:AA:444:G:C8	2.98	0.52
1:AA:731:G:O2'	1:AA:732:C:H5'	2.08	0.52
1:AA:914:A:N3	1:AA:915:A:C8	2.78	0.52
1:AA:1306:A:C4	1:AA:1307:U:C6	2.98	0.52
2:AB:147:SER:O	2:AB:148:LEU:CB	2.56	0.52
4:AD:98:LEU:HD23	4:AD:118:VAL:CG1	2.38	0.52
7:AG:27:VAL:O	7:AG:31:MET:N	2.40	0.52
12:AL:38:TYR:O	12:AL:39:THR:HG22	2.09	0.52
12:AL:41:THR:HG22	12:AL:49:LEU:HD12	1.92	0.52
20:AT:68:HIS:C	20:AT:69:LYS:HZ2	2.16	0.52
21:AU:22:SER:C	21:AU:23:CYS:SG	2.92	0.52
22:BA:665:U:O2'	22:BA:666:A:H5'	2.09	0.52
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.09	0.52
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.09	0.52
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.73	0.52
22:BA:2097:A:C2	22:BA:2193:G:C6	2.97	0.52
24:BC:11:PRO:C	24:BC:13:ARG:H	2.18	0.52
1:CA:384:G:H2'	1:CA:385:C:C6	2.45	0.52
1:CA:671:G:N1	1:CA:672:U:C2	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.90	0.52
22:DA:89:A:C6	22:DA:90:U:C4	2.97	0.52
22:DA:649:G:H2'	22:DA:650:C:C6	2.44	0.52
22:DA:971:G:O2'	22:DA:983:A:N3	2.39	0.52
22:DA:987:C:O2'	22:DA:1000:A:N3	2.39	0.52
22:DA:1275:A:N7	35:DN:16:HIS:CG	2.78	0.52
22:DA:1809:A:C6	22:DA:1810:A:C5	2.98	0.52
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.40	0.52
22:DA:2226:C:H2'	22:DA:2227:A:O4'	2.09	0.52
24:DC:252:THR:O	24:DC:253:LYS:HB2	2.09	0.52
25:DD:13:ARG:HD3	25:DD:21:SER:OG	2.08	0.52
43:DV:30:ILE:HD11	43:DV:63:ILE:HD12	1.92	0.52
1:AA:657:U:O2'	1:AA:658:C:H5'	2.09	0.52
1:AA:701:U:O2	1:AA:703:G:C2	2.63	0.52
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.40	0.52
1:AA:1101:A:N7	2:AB:171:ILE:HG23	2.24	0.52
1:AA:1124:G:C2'	1:AA:1145:A:N6	2.73	0.52
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.10	0.52
2:AB:126:PHE:N	2:AB:126:PHE:CD1	2.76	0.52
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.38	0.52
12:AL:41:THR:HG22	12:AL:48:ALA:O	2.10	0.52
13:AM:75:MET:SD	27:BF:112:ARG:HD3	2.50	0.52
14:AN:79:LEU:HB2	14:AN:84:VAL:HG23	1.91	0.52
19:AS:36:ARG:NH2	19:AS:75:ALA:O	2.42	0.52
21:AU:25:LYS:O	21:AU:29:LEU:HB2	2.09	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.40	0.52
46:BY:42:LEU:O	46:BY:45:GLN:O	2.28	0.52
1:CA:371:A:H1'	1:CA:482:A:H1'	1.91	0.52
1:CA:764:C:C2	1:CA:765:G:C8	2.98	0.52
1:CA:1007:U:H2'	1:CA:1008:U:H5''	1.91	0.52
3:CC:177:THR:HG22	3:CC:179:ARG:HG3	1.92	0.52
5:CE:35:ALA:O	5:CE:50:TYR:O	2.27	0.52
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.25	0.52
20:CT:43:ASP:HB3	20:CT:46:ALA:CB	2.40	0.52
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.07	0.52
22:DA:410:G:C2	22:DA:2407:A:C5	2.98	0.52
22:DA:819:A:C8	22:DA:1188:U:O4	2.62	0.52
22:DA:1344:U:O2'	22:DA:1345:C:P	2.68	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.92	0.52
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.40	0.52
1:AA:502:A:OP1	12:AL:115:SER:HB3	2.09	0.52
1:AA:596:A:C6	1:AA:645:G:C2	2.98	0.52
1:AA:617:G:C2	1:AA:618:C:C5	2.98	0.52
1:AA:774:G:N2	1:AA:806:C:C2	2.78	0.52
1:AA:947:G:C2	1:AA:948:C:C2	2.97	0.52
12:AL:29:GLN:HB2	12:AL:82:ILE:O	2.09	0.52
12:AL:39:THR:O	12:AL:39:THR:OG1	2.28	0.52
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.39	0.52
21:AU:14:VAL:HG13	21:AU:16:LEU:CD2	2.38	0.52
22:BA:142:A:N7	22:BA:143:C:C4	2.77	0.52
22:BA:858:G:H3'	22:BA:859:G:C8	2.44	0.52
22:BA:864:G:C6	22:BA:865:C:N4	2.77	0.52
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.09	0.52
22:BA:1696:G:C6	22:BA:1697:G:C4	2.98	0.52
22:BA:1917:U:C4	22:BA:1918:A:C6	2.97	0.52
22:BA:2191:A:C2	22:BA:2192:U:N3	2.77	0.52
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.10	0.52
39:BR:49:ILE:HG22	39:BR:52:PRO:HA	1.90	0.52
1:CA:373:A:O2'	1:CA:374:A:H5'	2.09	0.52
1:CA:448:A:N6	1:CA:449:G:C2	2.78	0.52
1:CA:610:U:C4	1:CA:611:C:C4	2.97	0.52
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.75	0.52
13:CM:107:ARG:NH2	13:CM:111:GLY:O	2.42	0.52
22:DA:46:G:C2	22:DA:47:C:C5	2.97	0.52
22:DA:82:U:H5'	22:DA:296:U:H5''	1.90	0.52
22:DA:197:A:C8	22:DA:2430:A:N7	2.77	0.52
22:DA:445:C:O2'	22:DA:449:A:N3	2.41	0.52
22:DA:734:A:N7	22:DA:735:A:N7	2.58	0.52
22:DA:811:U:O2	22:DA:1251:C:C5	2.63	0.52
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.09	0.52
22:DA:1361:G:C6	22:DA:1371:G:C2	2.97	0.52
22:DA:1464:G:H2'	22:DA:1465:G:C8	2.44	0.52
22:DA:1754:A:N6	22:DA:1755:A:C6	2.78	0.52
22:DA:2093:G:C6	22:DA:2225:A:N7	2.78	0.52
22:DA:2225:A:H4'	22:DA:2226:C:O5'	2.09	0.52
22:DA:2596:U:C5	22:DA:2597:G:C5	2.98	0.52
1:AA:394:G:C5	1:AA:395:C:C5	2.98	0.52
1:AA:429:U:H4'	1:AA:430:A:OP1	2.08	0.52
1:AA:463:U:H3'	1:AA:464:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:690:G:H2'	1:AA:691:G:C8	2.45	0.52
1:AA:957:U:C2	1:AA:959:A:OP2	2.63	0.52
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.10	0.52
10:AJ:52:LEU:HB3	14:AN:81:ARG:NE	2.24	0.52
11:AK:25:ALA:O	11:AK:88:GLY:HA3	2.10	0.52
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.40	0.52
22:BA:65:U:H2'	22:BA:66:C:H6	1.73	0.52
22:BA:864:G:O2'	22:BA:865:C:H5'	2.10	0.52
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.39	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.58	0.52
1:CA:160:A:H1'	1:CA:344:A:N7	2.25	0.52
1:CA:527:G:N1	1:CA:528:C:C5	2.78	0.52
1:CA:604:G:C2	1:CA:635:A:C2	2.98	0.52
1:CA:717:U:O2'	1:CA:734:G:O4'	2.26	0.52
9:CI:95:ARG:HA	9:CI:98:LEU:HB3	1.91	0.52
11:CK:112:ASP:HB3	21:CU:4:ILE:CG2	2.40	0.52
22:DA:186:G:N1	22:DA:211:C:N3	2.58	0.52
22:DA:190:A:N6	22:DA:191:A:N1	2.58	0.52
22:DA:1580:A:H3'	22:DA:1581:G:O4'	2.10	0.52
22:DA:1835:G:C4	22:DA:1836:C:C6	2.98	0.52
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.44	0.52
23:DB:29:A:H2'	23:DB:30:C:C6	2.44	0.52
24:DC:2:ALA:N	24:DC:199:GLU:OE2	2.42	0.52
24:DC:230:HIS:CD2	24:DC:247:PRO:HB3	2.45	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.08	0.52
37:DP:103:ARG:HG2	37:DP:107:ALA:HB1	1.91	0.52
41:DT:6:ARG:O	41:DT:10:VAL:HG23	2.09	0.52
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.25	0.52
1:AA:204:G:H2'	1:AA:205:A:O4'	2.10	0.52
1:AA:254:G:OP1	17:AQ:70:THR:CG2	2.57	0.52
1:AA:697:U:C5	1:AA:698:G:C8	2.97	0.52
1:AA:1129:C:O2	1:AA:1130:A:N6	2.42	0.52
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.10	0.52
7:AG:135:VAL:HB	7:AG:138:ARG:NH2	2.24	0.52
15:AO:3:LEU:HB2	15:AO:35:GLN:HG2	1.91	0.52
21:AU:16:LEU:C	21:AU:18:ARG:NE	2.68	0.52
22:BA:182:A:C6	22:BA:183:C:C4	2.98	0.52
22:BA:1731:G:C6	22:BA:1733:G:C5	2.98	0.52
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.49	0.52
34:BM:74:THR:HG22	34:BM:88:ASN:C	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.09	0.52
46:BY:56:LEU:O	46:BY:57:LEU:HB3	2.09	0.52
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.57	0.52
1:CA:1499:A:OP2	57:CA:1877:HOH:O	2.18	0.52
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.09	0.52
4:CD:32:CYS:O	4:CD:33:LYS:HB2	2.10	0.52
9:CI:26:GLY:H	9:CI:59:GLU:HA	1.75	0.52
11:CK:51:GLY:O	11:CK:52:PHE:O	2.28	0.52
22:DA:37:C:H2'	22:DA:38:A:C8	2.44	0.52
22:DA:1087:G:N1	22:DA:1089:A:C2	2.77	0.52
22:DA:1559:U:H4'	22:DA:1560:G:OP2	2.10	0.52
22:DA:2357:G:H5'	22:DA:2358:A:OP2	2.09	0.52
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.25	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.10	0.52
3:AC:156:ARG:NH1	3:AC:193:TYR:O	2.43	0.52
4:AD:95:GLU:HG2	4:AD:186:PRO:HG2	1.92	0.52
4:AD:118:VAL:HA	4:AD:123:ILE:HD12	1.91	0.52
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.09	0.52
11:AK:35:THR:HG1	11:AK:40:ASN:C	2.18	0.52
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.45	0.52
16:AP:22:ALA:HB2	16:AP:32:PHE:HA	1.91	0.52
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.24	0.52
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.25	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
33:BL:9:ALA:O	33:BL:12:SER:OG	2.28	0.52
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.74	0.52
38:BQ:88:VAL:HG13	39:BR:49:ILE:CD1	2.40	0.52
43:BV:2:PHE:HB2	43:BV:61:LEU:HD12	1.92	0.52
1:CA:154:U:H2'	1:CA:155:A:H5'	1.92	0.52
1:CA:755:G:C2	1:CA:756:C:C6	2.98	0.52
1:CA:1362:A:OP1	1:CA:1362:A:H4'	2.08	0.52
2:CB:20:THR:O	2:CB:21:ARG:CZ	2.57	0.52
3:CC:42:TYR:CE2	3:CC:90:VAL:HG21	2.45	0.52
21:CU:19:PHE:O	21:CU:19:PHE:HD1	1.93	0.52
22:DA:582:A:N7	57:DA:3284:HOH:O	2.34	0.52
22:DA:590:A:C6	22:DA:591:U:C4	2.98	0.52
22:DA:664:G:O2'	22:DA:941:A:OP1	2.19	0.52
22:DA:1969:A:O2'	22:DA:1972:G:N3	2.39	0.52
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.45	0.52
32:DK:21:CYS:SG	32:DK:39:ILE:HB	2.49	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:137:U:H2'	1:AA:137:U:O2	2.09	0.52
1:AA:977:A:H8	1:AA:1223:C:C2	2.28	0.52
1:AA:1285:A:H5''	1:AA:1286:U:C4	2.45	0.52
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.10	0.52
20:AT:6:SER:OG	20:AT:7:ALA:N	2.43	0.52
24:BC:258:ARG:HD2	24:BC:270:ARG:NH2	2.25	0.52
27:BF:107:ALA:O	27:BF:110:ARG:N	2.43	0.52
31:BJ:55:ILE:HG21	31:BJ:130:HIS:CD2	2.45	0.52
48:B0:43:ILE:HG22	48:B0:49:TYR:HB2	1.92	0.52
50:B2:6:GLN:OE1	50:B2:6:GLN:HA	2.09	0.52
1:CA:32:A:OP1	1:CA:398:U:H1'	2.09	0.52
1:CA:49:U:O4	1:CA:365:U:H5	1.93	0.52
1:CA:734:G:C6	1:CA:735:C:C4	2.98	0.52
1:CA:748:G:C2	1:CA:749:A:C5	2.98	0.52
1:CA:1149:C:N4	1:CA:1150:A:C6	2.77	0.52
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.45	0.52
9:CI:25:ASN:O	9:CI:62:ASP:HA	2.10	0.52
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.92	0.52
22:DA:132:G:N2	22:DA:148:U:O2	2.43	0.52
22:DA:183:C:C4	22:DA:184:C:C5	2.98	0.52
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.73	0.52
22:DA:2037:A:C6	22:DA:2038:G:C6	2.98	0.52
22:DA:2043:C:H2'	22:DA:2043:C:O2	2.10	0.52
22:DA:2199:A:C4	22:DA:2225:A:C2	2.98	0.52
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.45	0.52
23:DB:42:C:C5	27:DF:66:LEU:HD22	2.45	0.52
37:DP:60:THR:HG23	37:DP:73:VAL:HG12	1.91	0.52
1:AA:1285:A:O2'	1:AA:1286:U:OP2	2.26	0.51
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.10	0.51
4:AD:138:SER:HB2	4:AD:139:PRO:HD2	1.92	0.51
5:AE:68:ARG:O	5:AE:71:MET:HE3	2.10	0.51
12:AL:51:LYS:N	12:AL:51:LYS:HD2	2.25	0.51
17:AQ:4:LYS:HG3	17:AQ:7:THR:HG23	1.91	0.51
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.45	0.51
22:BA:2223:G:OP1	24:BC:171:TYR:OH	2.22	0.51
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.25	0.51
30:BI:101:ILE:CG1	30:BI:138:LEU:HD13	2.40	0.51
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.58	0.51
38:BQ:115:ALA:O	38:BQ:117:LEU:N	2.43	0.51
44:BW:69:PHE:CE2	44:BW:80:ILE:HD11	2.45	0.51
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:42:VAL:HG12	53:B5:214:TYR:HA	1.92	0.51
1:CA:505:G:H2'	1:CA:506:G:H8	1.74	0.51
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.44	0.51
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.45	0.51
2:CB:154:MET:SD	2:CB:158:PRO:HD3	2.50	0.51
4:CD:31:LYS:HD3	4:CD:31:LYS:N	2.26	0.51
6:CF:2:ARG:HB3	6:CF:4:TYR:CZ	2.45	0.51
7:CG:75:VAL:HG11	7:CG:144:MET:HG3	1.92	0.51
17:CQ:46:VAL:HG11	17:CQ:61:ILE:HG13	1.93	0.51
22:DA:58:G:N3	22:DA:70:G:N2	2.58	0.51
22:DA:1275:A:C8	35:DN:16:HIS:CG	2.98	0.51
22:DA:1304:A:N6	22:DA:1305:C:N4	2.58	0.51
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.24	0.51
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.44	0.51
34:DM:2:LEU:O	34:DM:3:GLN:HB3	2.09	0.51
4:AD:138:SER:HB2	4:AD:139:PRO:CD	2.39	0.51
4:AD:188:ARG:NH2	4:AD:197:GLU:OE1	2.43	0.51
6:AF:68:GLN:HA	6:AF:71:ILE:HG21	1.92	0.51
11:AK:102:ALA:C	11:AK:104:GLY:H	2.18	0.51
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.92	0.51
22:BA:198:C:P	57:BA:3767:HOH:O	2.67	0.51
22:BA:569:U:H1'	22:BA:947:A:O4'	2.10	0.51
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.75	0.51
23:BB:47:C:OP2	36:BO:3:LYS:HE3	2.11	0.51
24:BC:197:ASN:CG	24:BC:197:ASN:O	2.53	0.51
27:BF:40:VAL:O	27:BF:42:GLU:N	2.44	0.51
29:BH:83:LYS:HE2	1:CA:55:A:H2'	1.93	0.51
31:BJ:118:MET:HA	31:BJ:121:LYS:NZ	2.24	0.51
34:BM:110:GLU:O	34:BM:111:GLU:C	2.54	0.51
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.25	0.51
39:BR:53:PHE:N	39:BR:53:PHE:CD1	2.72	0.51
1:CA:32:A:H2'	1:CA:32:A:N3	2.24	0.51
1:CA:780:A:C2	1:CA:803:G:N1	2.78	0.51
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.45	0.51
5:CE:96:MET:CE	5:CE:111:MET:CE	2.89	0.51
6:CF:1:MET:SD	6:CF:67:PRO:HD3	2.50	0.51
6:CF:43:GLY:HA2	6:CF:58:HIS:CD2	2.45	0.51
8:CH:126:ILE:HG22	8:CH:127:CYS:SG	2.50	0.51
12:CL:116:LYS:O	12:CL:117:TYR:HB2	2.10	0.51
17:CQ:17:MET:CE	17:CQ:20:SER:O	2.58	0.51
17:CQ:45:HIS:HB2	17:CQ:70:THR:HG22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:294:A:C5	22:DA:345:A:C2	2.97	0.51
22:DA:586:A:C2	22:DA:810:U:O4'	2.63	0.51
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.40	0.51
22:DA:1351:C:OP2	57:DA:3398:HOH:O	2.19	0.51
22:DA:1786:A:OP1	57:DA:3443:HOH:O	2.19	0.51
22:DA:2043:C:C2	22:DA:2044:C:C5	2.98	0.51
22:DA:2722:G:C2	22:DA:2723:C:O2	2.63	0.51
57:DA:3249:HOH:O	31:DJ:111:LYS:HE2	2.10	0.51
24:DC:185:GLU:O	24:DC:188:CYS:SG	2.64	0.51
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.44	0.51
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.57	0.51
1:AA:844:G:N2	1:AA:846:G:H4'	2.25	0.51
1:AA:1091:U:O2	1:AA:1095:U:C2	2.64	0.51
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.91	0.51
2:AB:64:LYS:HE2	2:AB:64:LYS:HA	1.92	0.51
2:AB:108:ARG:O	2:AB:111:ILE:HB	2.10	0.51
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.86	0.51
4:AD:29:ASP:C	4:AD:30:THR:O	2.51	0.51
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	1.91	0.51
7:AG:89:VAL:HG22	7:AG:90:GLU:N	2.26	0.51
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.46	0.51
9:AI:114:LYS:NZ	9:AI:118:LEU:O	2.43	0.51
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.25	0.51
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.10	0.51
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.32	0.51
26:BE:119:ILE:CG2	26:BE:187:VAL:HG22	2.40	0.51
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.58	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.24	0.51
41:BT:2:ILE:HG22	41:BT:3:ARG:C	2.36	0.51
1:CA:66:A:H4'	1:CA:173:U:C5	2.45	0.51
1:CA:680:C:C2	1:CA:711:G:N2	2.78	0.51
1:CA:1089:G:C5	1:CA:1090:U:C5	2.98	0.51
1:CA:1124:G:O2'	1:CA:1127:G:O6	2.29	0.51
1:CA:1271:A:H2'	1:CA:1272:G:C8	2.46	0.51
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.92	0.51
3:CC:184:TYR:HE1	3:CC:201:TRP:CZ2	2.29	0.51
11:CK:31:ILE:O	11:CK:31:ILE:HG12	2.09	0.51
22:DA:134:G:C2	22:DA:146:A:C2	2.99	0.51
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1372:U:H2'	22:DA:1373:A:C8	2.46	0.51
22:DA:1737:G:C6	22:DA:1738:G:C6	2.98	0.51
22:DA:2217:G:C5	22:DA:2218:G:N7	2.79	0.51
22:DA:2250:G:N2	34:DM:82:MET:HG3	2.25	0.51
22:DA:2493:U:O2'	34:DM:78:LEU:HD21	2.11	0.51
22:DA:2594:C:N4	22:DA:2595:G:O6	2.42	0.51
22:DA:2697:G:C2	22:DA:2711:A:C2	2.98	0.51
44:DW:34:GLY:N	44:DW:61:ALA:O	2.36	0.51
1:AA:144:G:C5	1:AA:179:A:C2	2.99	0.51
1:AA:455:G:C2	1:AA:478:A:N1	2.78	0.51
1:AA:1321:U:C4	1:AA:1322:C:N4	2.79	0.51
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.11	0.51
1:AA:1348:U:H4'	9:AI:122:ARG:HG3	1.92	0.51
2:AB:169:GLU:O	2:AB:170:HIS:C	2.54	0.51
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.43	0.51
5:AE:74:VAL:O	5:AE:74:VAL:HG23	2.09	0.51
8:AH:14:ILE:O	8:AH:16:ASN:N	2.44	0.51
12:AL:27:CYS:SG	12:AL:30:LYS:HE3	2.50	0.51
22:BA:277:G:H1'	22:BA:361:G:O6	2.10	0.51
22:BA:495:G:C1'	40:BS:57:ASN:HD21	2.23	0.51
22:BA:2192:U:N3	22:BA:2193:G:C8	2.79	0.51
1:CA:243:A:C5	1:CA:281:G:N2	2.79	0.51
1:CA:374:A:C2	1:CA:375:U:C6	2.98	0.51
1:CA:1166:G:C6	1:CA:1168:U:H5''	2.45	0.51
1:CA:1263:C:H2'	1:CA:1264:U:C6	2.46	0.51
2:CB:131:LYS:HA	2:CB:134:ALA:HB3	1.92	0.51
7:CG:145:ALA:O	7:CG:146:GLU:CB	2.59	0.51
22:DA:152:A:C2	22:DA:175:G:C2	2.99	0.51
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.11	0.51
22:DA:771:G:C6	22:DA:772:C:C5	2.99	0.51
22:DA:991:C:H5'	22:DA:1186:G:H5'	1.92	0.51
22:DA:1401:G:C5	22:DA:1402:U:C5	2.98	0.51
22:DA:1754:A:C6	22:DA:1755:A:C6	2.98	0.51
22:DA:2392:A:C2	33:DL:55:MET:HE3	2.45	0.51
28:DG:107:LEU:O	28:DG:152:ARG:NH2	2.41	0.51
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.44	0.51
50:D2:34:ARG:HB2	50:D2:42:LEU:HD13	1.92	0.51
1:AA:173:U:C2	1:AA:197:A:N1	2.79	0.51
1:AA:257:G:C2	1:AA:258:G:N7	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:263:A:H2'	1:AA:264:C:C5	2.45	0.51
1:AA:358:U:H2'	1:AA:359:G:C8	2.46	0.51
1:AA:1149:C:OP1	9:AI:11:ARG:NE	2.44	0.51
1:AA:1279:G:O2'	1:AA:1281:C:OP2	2.23	0.51
5:AE:104:GLY:O	5:AE:105:ILE:HB	2.11	0.51
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.63	0.51
22:BA:2056:G:C2	22:BA:2057:G:C8	2.99	0.51
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.46	0.51
24:BC:167:ARG:O	24:BC:168:ASP:CB	2.59	0.51
26:BE:147:LEU:HB3	26:BE:186:VAL:HG13	1.92	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
44:BW:38:VAL:CG1	44:BW:39:ARG:N	2.73	0.51
1:CA:786:G:N2	1:CA:787:A:H1'	2.26	0.51
1:CA:1068:G:N3	1:CA:1191:A:C2	2.79	0.51
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.46	0.51
4:CD:29:ASP:C	4:CD:31:LYS:H	2.18	0.51
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.11	0.51
17:CQ:48:ASP:N	17:CQ:48:ASP:OD1	2.43	0.51
22:DA:187:G:N2	22:DA:210:C:C2	2.78	0.51
22:DA:1315:C:C2	22:DA:1338:G:N2	2.79	0.51
22:DA:1857:G:C4	22:DA:1884:G:C2	2.98	0.51
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.25	0.51
22:DA:2201:G:H2'	22:DA:2202:U:H6	1.74	0.51
22:DA:2345:G:C4	22:DA:2381:A:C2	2.98	0.51
22:DA:2575:C:OP2	57:DA:3710:HOH:O	2.18	0.51
24:DC:65:VAL:CG1	24:DC:67:PHE:CE2	2.94	0.51
37:DP:98:TYR:CD1	37:DP:101:ARG:NH2	2.79	0.51
1:AA:657:U:O2	15:AO:22:THR:HG23	2.11	0.51
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.10	0.51
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.46	0.51
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.42	0.51
12:AL:21:VAL:HG23	12:AL:95:TYR:HE2	1.74	0.51
12:AL:24:LEU:HB2	12:AL:59:ASN:HD22	1.75	0.51
22:BA:570:G:H2'	22:BA:2030:A:C8	2.46	0.51
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.25	0.51
22:BA:1416:G:HO2'	22:BA:1417:C:H6	1.56	0.51
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.25	0.51
22:BA:2656:U:C5	22:BA:2664:G:N2	2.78	0.51
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.92	0.51
25:BD:13:ARG:HD2	25:BD:15:PHE:CE2	2.46	0.51
27:BF:20:PHE:O	27:BF:21:ASN:ND2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:25:THR:HG23	28:BG:34:THR:HG1	1.76	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
34:BM:136:MET:HE2	43:BV:57:TYR:CE1	2.46	0.51
38:BQ:115:ALA:C	38:BQ:117:LEU:H	2.19	0.51
41:BT:1:MET:O	41:BT:2:ILE:HD13	2.10	0.51
52:B4:1:MET:HE2	52:B4:34:LYS:HG2	1.93	0.51
1:CA:965:U:OP1	1:CA:1198:G:H5''	2.10	0.51
1:CA:1310:G:N2	1:CA:1328:C:O2	2.43	0.51
1:CA:1313:U:P	19:CS:6:LYS:HB3	2.51	0.51
1:CA:1494:G:C2	1:CA:1495:U:C5	2.98	0.51
3:CC:184:TYR:CE1	3:CC:201:TRP:CE2	2.99	0.51
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.25	0.51
22:DA:49:A:H1'	22:DA:51:G:C6	2.46	0.51
22:DA:982:C:C5'	22:DA:983:A:P	2.99	0.51
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.11	0.51
22:DA:2148:G:N2	22:DA:2149:U:C4	2.78	0.51
22:DA:2307:G:N2	22:DA:2312:U:C2	2.79	0.51
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.11	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
45:DX:58:VAL:HG12	45:DX:59:ILE:N	2.24	0.51
1:AA:843:U:OP1	1:AA:846:G:N2	2.44	0.51
1:AA:858:G:C2'	1:AA:859:G:H5'	2.41	0.51
1:AA:1167:A:N7	1:AA:1169:A:C6	2.78	0.51
2:AB:120:GLN:HG2	2:AB:125:THR:O	2.11	0.51
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.11	0.51
12:AL:22:PRO:C	12:AL:24:LEU:N	2.69	0.51
22:BA:28:A:C4	22:BA:29:U:C6	2.98	0.51
22:BA:62:U:O2	22:BA:63:A:N6	2.44	0.51
22:BA:622:G:H2'	22:BA:623:C:C6	2.46	0.51
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.10	0.51
22:BA:1176:U:C4	22:BA:1177:G:O6	2.64	0.51
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.10	0.51
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.38	0.51
22:BA:1918:A:O2'	22:BA:1920:C:C5	2.64	0.51
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.45	0.51
25:BD:55:LYS:HD2	25:BD:60:VAL:HG22	1.93	0.51
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.41	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.91	0.51
46:BY:53:VAL:O	46:BY:56:LEU:O	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.59	0.51
1:CA:106:C:O2	1:CA:379:C:H4'	2.10	0.51
1:CA:265:G:O3'	17:CQ:68:SER:HA	2.10	0.51
1:CA:748:G:N2	1:CA:749:A:C4	2.79	0.51
1:CA:777:A:C2	1:CA:778:G:H1'	2.45	0.51
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.46	0.51
1:CA:1107:C:N3	1:CA:1108:G:C8	2.79	0.51
1:CA:1108:G:OP1	3:CC:176:HIS:CD2	2.64	0.51
2:CB:43:LEU:HG	2:CB:44:GLU:N	2.25	0.51
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.11	0.51
22:DA:21:A:C2	22:DA:520:G:C2	2.99	0.51
22:DA:39:G:N2	22:DA:441:U:C2	2.79	0.51
22:DA:189:G:C2'	22:DA:190:A:O5'	2.58	0.51
22:DA:485:C:C2	22:DA:496:G:N2	2.79	0.51
22:DA:621:A:C5	22:DA:622:G:H1'	2.46	0.51
22:DA:1063:G:H2'	22:DA:1064:C:O4'	2.10	0.51
22:DA:1267:U:O3'	57:DA:3379:HOH:O	2.18	0.51
22:DA:1866:A:C8	22:DA:1867:G:C8	2.99	0.51
22:DA:2037:A:N6	22:DA:2038:G:C6	2.78	0.51
22:DA:2283:C:C2	22:DA:2389:G:C2	2.98	0.51
22:DA:2722:G:C2	22:DA:2723:C:C2	2.98	0.51
45:DX:40:VAL:O	45:DX:41:GLU:C	2.53	0.51
1:AA:466:A:H5'	1:AA:467:U:OP2	2.10	0.51
1:AA:796:C:OP1	11:AK:126:LYS:HB2	2.10	0.51
1:AA:935:A:O2'	1:AA:1383:C:N3	2.43	0.51
1:AA:1033:G:C2'	1:AA:1034:G:H5'	2.41	0.51
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.10	0.51
2:AB:27:MET:SD	2:AB:193:PRO:HD3	2.51	0.51
4:AD:13:ARG:NH2	4:AD:37:ALA:O	2.43	0.51
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	1.93	0.51
22:BA:321:U:H5''	26:BE:131:THR:HG23	1.91	0.51
22:BA:973:A:O4'	22:BA:1188:U:C6	2.64	0.51
22:BA:1795:C:C4	22:BA:1796:U:C5	2.99	0.51
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.46	0.51
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.34	0.51
27:BF:169:LEU:HD12	27:BF:169:LEU:O	2.11	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
30:BI:97:LYS:CG	30:BI:139:VAL:HG22	2.41	0.51
39:BR:49:ILE:HG22	39:BR:53:PHE:H	1.63	0.51
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.11	0.51
44:BW:10:THR:O	44:BW:11:ARG:CB	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:24:LEU:HD11	47:BZ:54:MET:CE	2.41	0.51
1:CA:288:A:H2'	1:CA:289:G:H4'	1.93	0.51
1:CA:667:G:OP1	1:CA:732:C:O2'	2.21	0.51
1:CA:784:A:C2	1:CA:785:G:C5	2.98	0.51
1:CA:1324:A:C6	1:CA:1325:C:N3	2.79	0.51
5:CE:11:LEU:HG	5:CE:12:GLN:H	1.76	0.51
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.93	0.51
16:CP:70:ARG:O	16:CP:74:LEU:HG	2.11	0.51
17:CQ:48:ASP:HB2	17:CQ:52:GLU:OE1	2.11	0.51
22:DA:206:U:H2'	22:DA:207:A:H8	1.76	0.51
22:DA:565:C:H4'	22:DA:1253:A:N6	2.26	0.51
22:DA:830:G:C6	22:DA:2448:A:C8	2.99	0.51
22:DA:864:G:O2'	22:DA:914:G:O6	2.26	0.51
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.11	0.51
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.41	0.51
22:DA:2297:A:N7	22:DA:2320:U:C4	2.79	0.51
22:DA:2621:G:H2'	22:DA:2622:U:O4'	2.11	0.51
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.26	0.51
24:DC:51:THR:HG22	24:DC:54:ILE:HD11	1.93	0.51
27:DF:44:ILE:HG21	27:DF:79:ILE:HG22	1.91	0.51
32:DK:107:LEU:O	32:DK:109:SER:N	2.44	0.51
33:DL:110:VAL:C	33:DL:111:ILE:HD12	2.35	0.51
40:DS:47:VAL:HG23	40:DS:103:ILE:HG21	1.92	0.51
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.92	0.51
48:D0:53:LYS:HE3	48:D0:56:ALA:HA	1.92	0.51
1:AA:96:U:HO2'	1:AA:97:G:P	2.33	0.51
1:AA:484:G:C5	1:AA:486:U:H1'	2.46	0.51
1:AA:1285:A:C5'	1:AA:1286:U:C4	2.94	0.51
1:AA:1312:G:N7	19:AS:3:ARG:N	2.59	0.51
1:AA:1335:U:H5''	1:AA:1336:C:OP1	2.11	0.51
1:AA:1406:U:C6	1:AA:1407:C:C5	2.99	0.51
11:AK:125:LYS:O	21:AU:34:ARG:NH2	2.44	0.51
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.93	0.51
20:AT:67:ILE:CD1	20:AT:71:LYS:HD3	2.41	0.51
21:AU:11:PRO:O	21:AU:12:PHE:HB3	2.11	0.51
22:BA:1002:G:C6	57:BA:3746:HOH:O	2.62	0.51
22:BA:1850:G:C5	22:BA:1851:U:C5	2.98	0.51
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.10	0.51
24:BC:251:GLN:HG3	24:BC:252:THR:O	2.11	0.51
25:BD:8:LYS:NZ	25:BD:195:GLY:O	2.32	0.51
29:BH:121:VAL:CG2	29:BH:130:VAL:HG22	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:77:ILE:CD1	37:BP:72:ARG:HD2	2.41	0.51
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.93	0.51
42:BU:88:GLU:O	42:BU:89:ASP:HB3	2.11	0.51
1:CA:35:G:O2'	12:CL:115:SER:O	2.29	0.51
1:CA:675:A:C5	1:CA:676:A:N7	2.79	0.51
1:CA:1084:G:C8	1:CA:1085:U:C5	2.99	0.51
1:CA:1144:G:C2	1:CA:1145:A:C2	2.99	0.51
1:CA:1296:C:N4	1:CA:1297:G:C6	2.79	0.51
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.46	0.51
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	1.93	0.51
11:CK:23:ILE:HD11	11:CK:86:VAL:HG22	1.93	0.51
12:CL:40:THR:CG2	12:CL:90:LEU:HD12	2.41	0.51
22:DA:52:A:C5	22:DA:118:A:C2	2.99	0.51
22:DA:85:G:OP2	42:DU:7:ARG:HG2	2.11	0.51
22:DA:185:G:N1	22:DA:212:G:C2	2.79	0.51
22:DA:310:A:HO2'	22:DA:311:A:P	2.30	0.51
22:DA:311:A:H5'	22:DA:332:A:C2	2.46	0.51
22:DA:484:C:P	42:DU:48:PRO:HG3	2.51	0.51
22:DA:811:U:C2	22:DA:1251:C:C4	2.99	0.51
22:DA:1045:C:O2	22:DA:1047:G:N1	2.44	0.51
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.46	0.51
22:DA:2093:G:N7	22:DA:2225:A:C4	2.79	0.51
26:DE:24:ASN:ND2	26:DE:27:LEU:CB	2.74	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
35:DN:10:LEU:HD13	35:DN:40:LYS:HG3	1.92	0.51
45:DX:36:HIS:O	45:DX:48:THR:HA	2.11	0.51
4:AD:37:ALA:N	4:AD:38:PRO:HD3	2.26	0.51
5:AE:126:LYS:HD3	5:AE:128:TYR:CE1	2.47	0.51
8:AH:8:ALA:HB2	8:AH:77:ARG:HD2	1.92	0.51
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.35	0.51
20:AT:67:ILE:HD11	20:AT:71:LYS:HD3	1.92	0.51
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.44	0.51
22:BA:784:G:H5''	24:BC:226:ASN:OD1	2.11	0.51
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.46	0.51
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.11	0.51
25:BD:26:VAL:HG22	25:BD:188:LEU:CD2	2.41	0.51
27:BF:135:GLN:O	27:BF:135:GLN:HG2	2.10	0.51
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.51
32:BK:8:LEU:HD12	32:BK:8:LEU:N	2.25	0.51
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.10	0.51
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:18:ARG:CZ	45:BX:24:ALA:HB2	2.40	0.51
1:CA:301:G:H2'	1:CA:302:G:C8	2.46	0.51
1:CA:372:C:N4	1:CA:387:U:H2'	2.26	0.51
1:CA:575:G:C6	1:CA:821:G:N7	2.79	0.51
1:CA:635:A:C6	1:CA:636:U:C4	2.98	0.51
1:CA:774:G:C5	1:CA:775:G:N7	2.79	0.51
4:CD:72:PHE:O	4:CD:75:TYR:HB2	2.10	0.51
16:CP:6:LEU:HD12	16:CP:71:VAL:HG23	1.93	0.51
18:CR:58:ALA:O	18:CR:59:ILE:C	2.54	0.51
22:DA:52:A:C6	22:DA:118:A:C2	2.99	0.51
22:DA:325:G:O6	22:DA:338:G:C2	2.64	0.51
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.11	0.51
22:DA:705:A:C2	22:DA:727:A:C1'	2.94	0.51
22:DA:732:C:C4	22:DA:733:G:C8	2.99	0.51
22:DA:1095:A:C6	22:DA:1096:A:N1	2.79	0.51
22:DA:1799:G:C8	24:DC:180:GLU:OE2	2.63	0.51
22:DA:1803:A:H2'	22:DA:1804:C:O4'	2.11	0.51
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	2.10	0.51
22:DA:2612:C:H5''	22:DA:2613:U:OP1	2.11	0.51
33:DL:68:SER:O	33:DL:69:ARG:CB	2.59	0.51
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.11	0.51
37:DP:92:VAL:HG21	37:DP:97:LEU:HD11	1.92	0.51
1:AA:154:U:O2	1:AA:168:G:N2	2.43	0.50
1:AA:1212:U:H5'	1:AA:1213:A:C5	2.45	0.50
1:AA:1233:G:OP1	9:AI:126:GLN:HB3	2.11	0.50
7:AG:70:ARG:HG3	7:AG:96:ARG:HG2	1.92	0.50
8:AH:54:ASP:OD1	8:AH:55:THR:N	2.44	0.50
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.92	0.50
14:AN:68:GLY:O	14:AN:69:ARG:C	2.54	0.50
18:AR:33:ILE:HA	18:AR:40:VAL:HG23	1.92	0.50
22:BA:263:G:O2'	22:BA:429:A:N3	2.43	0.50
22:BA:2190:G:C6	22:BA:2191:A:C5	2.99	0.50
22:BA:2773:C:H5''	25:BD:169:ARG:HG2	1.92	0.50
1:CA:247:G:C5	1:CA:278:G:N2	2.79	0.50
1:CA:296:U:O2'	1:CA:556:C:O2	2.29	0.50
1:CA:456:A:H2'	1:CA:457:G:O4'	2.11	0.50
1:CA:690:G:H2'	1:CA:691:G:O4'	2.10	0.50
1:CA:1384:C:N4	1:CA:1385:G:O6	2.43	0.50
22:DA:457:A:N1	22:DA:470:A:H5''	2.26	0.50
22:DA:845:A:C6	22:DA:847:U:C6	2.98	0.50
22:DA:1087:G:C4	22:DA:1089:A:H1'	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1671:U:O2'	22:DA:1673:G:N7	2.41	0.50
22:DA:1788:C:H2'	22:DA:1789:A:O4'	2.11	0.50
22:DA:2289:G:HO2'	22:DA:2383:G:HO2'	1.57	0.50
22:DA:2330:G:N2	22:DA:2386:A:N3	2.60	0.50
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.11	0.50
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.76	0.50
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.46	0.50
22:DA:2780:G:P	31:DJ:120:ARG:HE	2.34	0.50
24:DC:24:LEU:HD11	24:DC:90:ASN:ND2	2.27	0.50
26:DE:23:PHE:HB2	26:DE:111:GLU:OE2	2.11	0.50
35:DN:30:ARG:HD2	35:DN:31:HIS:NE2	2.26	0.50
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.46	0.50
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.11	0.50
1:AA:977:A:O2'	1:AA:979:C:OP2	2.28	0.50
1:AA:1125:U:C5	1:AA:1127:G:C5	3.00	0.50
1:AA:1237:C:C4	1:AA:1336:C:N3	2.78	0.50
1:AA:1253:G:H2'	1:AA:1254:A:C8	2.46	0.50
1:AA:1537:U:C4	1:AA:1538:C:C4	3.00	0.50
2:AB:133:GLU:O	2:AB:137:ARG:N	2.43	0.50
2:AB:219:ALA:O	2:AB:220:THR:HB	2.11	0.50
17:AQ:36:LYS:HG2	17:AQ:37:PHE:N	2.27	0.50
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.53	0.50
22:BA:215:G:H4'	22:BA:216:A:H4'	1.93	0.50
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.76	0.50
38:BQ:68:ALA:O	38:BQ:71:GLN:HB3	2.11	0.50
44:BW:46:HIS:CE1	44:BW:77:ARG:HD3	2.47	0.50
49:B1:34:LEU:H	49:B1:52:ALA:HB3	1.76	0.50
1:CA:51:A:H4'	1:CA:52:C:C5'	2.41	0.50
1:CA:157:U:O2	1:CA:165:G:C2	2.65	0.50
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.11	0.50
1:CA:411:A:C6	1:CA:429:U:C5	2.99	0.50
1:CA:510:A:H5''	1:CA:511:C:P	2.50	0.50
1:CA:681:A:N1	1:CA:710:G:C6	2.80	0.50
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.41	0.50
2:CB:96:TRP:CE3	2:CB:97:LEU:O	2.64	0.50
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.94	0.50
15:CO:73:LYS:HE2	15:CO:73:LYS:HA	1.93	0.50
19:CS:18:LYS:HE3	19:CS:33:THR:CG2	2.41	0.50
22:DA:49:A:C8	22:DA:51:G:N1	2.79	0.50
22:DA:66:C:C4	22:DA:67:U:C5	2.99	0.50
22:DA:195:A:C6	22:DA:198:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:219:A:C6	22:DA:220:G:C6	2.99	0.50
22:DA:306:U:O4	22:DA:307:G:C6	2.64	0.50
22:DA:658:U:C4	22:DA:659:G:N7	2.78	0.50
22:DA:1027:A:N6	22:DA:1126:A:H1'	2.26	0.50
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.25	0.50
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.12	0.50
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.11	0.50
22:DA:1373:A:C5	22:DA:1374:G:H1'	2.46	0.50
22:DA:1829:A:O2'	24:DC:15:HIS:NE2	2.39	0.50
22:DA:2250:G:C2	34:DM:82:MET:HB2	2.46	0.50
22:DA:2342:C:O2'	22:DA:2374:C:H5''	2.11	0.50
24:DC:185:GLU:HB2	24:DC:188:CYS:SG	2.51	0.50
2:AB:186:ILE:HG12	2:AB:186:ILE:O	2.12	0.50
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.40	0.50
5:AE:115:LEU:O	5:AE:120:VAL:HG22	2.11	0.50
22:BA:78:U:H2'	22:BA:79:C:C6	2.46	0.50
22:BA:855:G:H2'	22:BA:856:G:O5'	2.12	0.50
22:BA:958:U:H2'	23:BB:89:U:C2	2.47	0.50
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.42	0.50
22:BA:2305:U:O2	27:BF:151:GLY:HA3	2.11	0.50
57:BA:3790:HOH:O	24:BC:219:THR:HB	2.10	0.50
23:BB:37:C:C5	23:BB:38:C:C5	2.99	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
32:BK:113:MET:O	32:BK:114:LYS:C	2.53	0.50
34:BM:41:LEU:CD2	34:BM:125:PRO:HD2	2.42	0.50
1:CA:243:A:C2	1:CA:245:U:C2	2.99	0.50
1:CA:327:A:C2	1:CA:329:A:N3	2.79	0.50
1:CA:542:G:C2	1:CA:543:U:C5	3.00	0.50
1:CA:692:U:O2'	1:CA:694:A:N7	2.32	0.50
1:CA:1244:G:C2	1:CA:1294:G:C2	2.99	0.50
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.11	0.50
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.76	0.50
12:CL:18:LYS:HD2	12:CL:18:LYS:C	2.36	0.50
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.54	0.50
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.37	0.50
22:DA:36:G:H4'	22:DA:451:U:C2	2.46	0.50
22:DA:685:A:H5''	22:DA:774:G:O6	2.11	0.50
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.12	0.50
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.41	0.50
24:DC:189:ARG:O	24:DC:190:ALA:HB2	2.10	0.50
39:DR:69:GLY:O	39:DR:70:GLU:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:59:GLU:OE2	40:DS:66:ILE:HD11	2.11	0.50
48:D0:54:VAL:O	48:D0:56:ALA:N	2.44	0.50
1:AA:723:U:H5''	21:AU:49:LYS:HG2	1.92	0.50
1:AA:986:U:H1'	19:AS:54:GLY:O	2.11	0.50
1:AA:1048:G:N3	1:AA:1050:G:N7	2.60	0.50
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.26	0.50
22:BA:498:G:O2'	42:BU:45:HIS:NE2	2.43	0.50
22:BA:947:A:O2'	22:BA:984:A:C2	2.59	0.50
22:BA:1392:A:C6	22:BA:1393:A:C6	2.99	0.50
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.10	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
30:BI:110:ALA:HB1	30:BI:129:ILE:HG13	1.93	0.50
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.11	0.50
50:B2:43:THR:O	50:B2:44:VAL:CB	2.57	0.50
1:CA:597:G:H2'	1:CA:598:U:H5'	1.92	0.50
1:CA:736:C:H2'	1:CA:737:C:C6	2.47	0.50
1:CA:747:A:N6	1:CA:748:G:C6	2.79	0.50
1:CA:1169:A:C2	1:CA:1170:A:C5	3.00	0.50
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.50
2:CB:93:ASN:OD1	2:CB:94:HIS:ND1	2.44	0.50
3:CC:117:ALA:HB1	3:CC:187:SER:HB3	1.91	0.50
3:CC:130:PHE:CE2	3:CC:157:LEU:HB3	2.46	0.50
4:CD:174:ASP:O	4:CD:175:ALA:HB3	2.11	0.50
6:CF:51:ILE:O	6:CF:51:ILE:HG12	2.12	0.50
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	1.92	0.50
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.74	0.50
22:DA:30:G:C5	22:DA:31:C:C4	2.99	0.50
22:DA:927:A:H2'	22:DA:928:A:C8	2.46	0.50
22:DA:981:A:OP2	22:DA:982:C:N4	2.41	0.50
22:DA:1149:G:H2'	22:DA:1150:C:C6	2.46	0.50
22:DA:2142:A:C5	22:DA:2143:C:C5	2.99	0.50
22:DA:2574:G:N3	22:DA:2574:G:H2'	2.26	0.50
22:DA:2686:G:H2'	22:DA:2687:U:C6	2.46	0.50
22:DA:2821:A:OP2	25:DD:115:GLY:CA	2.58	0.50
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.26	0.50
25:DD:7:LYS:O	25:DD:27:ILE:HA	2.11	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.11	0.50
1:AA:452:A:N6	1:AA:480:U:C2	2.79	0.50
1:AA:692:U:O2'	1:AA:694:A:N7	2.29	0.50
1:AA:862:C:O2'	1:AA:863:U:H5'	2.11	0.50
1:AA:942:G:H2'	1:AA:942:G:N3	2.25	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'	1.94	0.50
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.94	0.50
15:AO:2:SER:O	15:AO:3:LEU:CB	2.58	0.50
18:AR:37:GLY:O	18:AR:63:ARG:NH2	2.45	0.50
22:BA:277:G:O2'	22:BA:361:G:N1	2.44	0.50
22:BA:445:C:H5''	38:BQ:3:ARG:HB2	1.92	0.50
22:BA:1085:A:C6	22:BA:1086:A:N6	2.79	0.50
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.92	0.50
28:BG:89:LEU:N	28:BG:89:LEU:CD1	2.74	0.50
30:BI:125:MET:O	30:BI:128:SER:OG	2.25	0.50
1:CA:72:A:C6	1:CA:73:C:C4	3.00	0.50
1:CA:449:G:H2'	1:CA:450:G:C8	2.46	0.50
1:CA:706:A:C5	1:CA:707:U:C5	3.00	0.50
1:CA:938:A:N6	1:CA:939:G:C5	2.80	0.50
1:CA:1106:G:N3	1:CA:1107:C:C6	2.79	0.50
4:CD:161:LEU:H	4:CD:161:LEU:HD22	1.77	0.50
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.75	0.50
17:CQ:19:LYS:HD2	17:CQ:49:GLU:HA	1.93	0.50
19:CS:16:LEU:O	19:CS:20:GLU:HG2	2.11	0.50
22:DA:35:G:C4	22:DA:454:A:C2	3.00	0.50
22:DA:536:G:C6	22:DA:537:G:C4	3.00	0.50
22:DA:1718:G:O6	22:DA:1743:G:C2	2.64	0.50
22:DA:2204:G:N3	22:DA:2205:A:C8	2.80	0.50
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.27	0.50
39:DR:52:PRO:O	39:DR:53:PHE:CD2	2.64	0.50
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.64	0.50
4:AD:123:ILE:O	4:AD:123:ILE:HD13	2.12	0.50
13:AM:85:CYS:O	13:AM:89:LEU:HG	2.12	0.50
19:AS:32:ARG:HA	19:AS:50:ALA:HB3	1.93	0.50
22:BA:722:A:H2'	22:BA:723:C:O4'	2.12	0.50
22:BA:962:G:H21	22:BA:2250:G:H1	1.59	0.50
22:BA:1022:G:N7	31:BJ:68:LYS:HE2	2.26	0.50
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.12	0.50
22:BA:1482:G:C2	22:BA:1483:G:C8	3.00	0.50
22:BA:1984:G:C6	22:BA:1985:C:C5	3.00	0.50
22:BA:2023:C:H2'	22:BA:2023:C:O2	2.11	0.50
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.76	0.50
27:BF:63:GLN:OE1	27:BF:95:ARG:HD3	2.12	0.50
27:BF:135:GLN:HG2	27:BF:141:ILE:HG12	1.94	0.50
46:BY:61:ALA:O	46:BY:63:ALA:N	2.37	0.50
1:CA:307:C:H5''	1:CA:308:C:OP2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:629:A:H2'	1:CA:630:A:O4'	2.11	0.50
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.93	0.50
3:CC:184:TYR:CE1	3:CC:201:TRP:CZ2	3.00	0.50
22:DA:161:A:C3'	22:DA:162:U:H5''	2.39	0.50
22:DA:192:C:H2'	22:DA:193:U:O4'	2.11	0.50
22:DA:397:U:N3	22:DA:398:C:C5	2.80	0.50
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.28	0.50
22:DA:533:G:H5'	38:DQ:24:TYR:CD1	2.47	0.50
22:DA:1060:U:O4'	22:DA:1062:G:H5'	2.12	0.50
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.42	0.50
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.47	0.50
22:DA:1798:U:H5''	24:DC:258:ARG:HB2	1.93	0.50
22:DA:1833:C:C4	22:DA:1834:U:C5	2.99	0.50
22:DA:2714:G:C5	22:DA:2715:C:C5	2.98	0.50
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.42	0.50
28:DG:35:ARG:NE	28:DG:71:LEU:HD22	2.26	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
1:AA:260:G:H2'	1:AA:261:U:C6	2.46	0.50
1:AA:374:A:C5	1:AA:375:U:C5	2.99	0.50
1:AA:428:G:O4'	1:AA:430:A:C8	2.65	0.50
1:AA:512:U:H2'	1:AA:513:C:C6	2.47	0.50
1:AA:683:G:N2	11:AK:40:ASN:HA	2.27	0.50
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.43	0.50
3:AC:154:SER:O	3:AC:196:ILE:HG23	2.10	0.50
4:AD:25:VAL:O	4:AD:26:ARG:C	2.55	0.50
4:AD:91:LEU:HD21	4:AD:195:ILE:HD12	1.93	0.50
4:AD:101:VAL:O	4:AD:101:VAL:HG12	2.12	0.50
22:BA:826:U:O2'	33:BL:53:GLY:HA3	2.10	0.50
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.93	0.50
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.77	0.50
31:BJ:4:PHE:CD1	31:BJ:4:PHE:C	2.90	0.50
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.94	0.50
1:CA:892:A:C5	1:CA:893:C:C5	3.00	0.50
5:CE:122:ASN:O	5:CE:123:VAL:O	2.30	0.50
6:CF:1:MET:HG3	6:CF:66:ALA:O	2.12	0.50
20:CT:79:LEU:HA	20:CT:82:GLN:HB2	1.94	0.50
22:DA:58:G:C4	22:DA:70:G:N2	2.79	0.50
22:DA:570:G:C4	22:DA:2030:A:N7	2.80	0.50
22:DA:751:A:H5''	22:DA:752:A:OP1	2.12	0.50
22:DA:883:G:N2	22:DA:894:U:O2	2.45	0.50
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1865:U:C5	22:DA:1875:G:C2	3.00	0.50
22:DA:2217:G:C6	22:DA:2218:G:N7	2.79	0.50
22:DA:2652:C:C4	22:DA:2653:U:C4	3.00	0.50
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.12	0.50
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.39	0.50
1:AA:145:G:N2	1:AA:178:C:N3	2.59	0.50
1:AA:452:A:C8	1:AA:453:G:C8	2.99	0.50
1:AA:495:A:C2	1:AA:496:A:N6	2.80	0.50
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.47	0.50
4:AD:170:TRP:CE2	4:AD:186:PRO:HG3	2.47	0.50
9:AI:128:SER:O	9:AI:129:LYS:C	2.55	0.50
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.41	0.50
15:AO:46:HIS:C	15:AO:48:LYS:H	2.20	0.50
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.27	0.50
22:BA:588:U:H2'	22:BA:589:U:H6	1.73	0.50
22:BA:2579:C:O2'	22:BA:2580:U:H5'	2.11	0.50
23:BB:46:A:C5	23:BB:47:C:C5	3.00	0.50
1:CA:209:U:H4'	1:CA:210:C:OP2	2.12	0.50
1:CA:251:G:N1	1:CA:266:G:C6	2.80	0.50
1:CA:1434:A:N6	1:CA:1435:G:C6	2.80	0.50
1:CA:1518:A:N1	1:CA:1519:A:C6	2.80	0.50
4:CD:38:PRO:HD2	4:CD:42:GLY:CA	2.42	0.50
4:CD:145:ILE:HD13	4:CD:178:MET:HB3	1.94	0.50
5:CE:133:PRO:O	5:CE:137:VAL:HG12	2.11	0.50
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.26	0.50
22:DA:599:A:N3	22:DA:659:G:C2	2.80	0.50
22:DA:753:A:H2'	22:DA:754:U:C6	2.47	0.50
22:DA:997:G:OP1	38:DQ:92:ARG:HG2	2.11	0.50
22:DA:1241:A:C2	22:DA:1242:U:H1'	2.47	0.50
22:DA:1865:U:C4	22:DA:1875:G:C2	2.98	0.50
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.12	0.50
22:DA:2345:G:C5	22:DA:2347:C:N4	2.80	0.50
22:DA:2808:G:H4'	22:DA:2809:A:O5'	2.12	0.50
24:DC:212:ARG:HD2	24:DC:216:VAL:O	2.11	0.50
27:DF:122:PHE:O	27:DF:123:ASP:C	2.55	0.50
31:DJ:89:PHE:CE2	31:DJ:100:VAL:HG11	2.47	0.50
32:DK:34:GLY:O	32:DK:35:VAL:C	2.53	0.50
33:DL:56:PRO:O	33:DL:60:ARG:HB2	2.11	0.50
45:DX:33:LEU:HD12	45:DX:51:VAL:O	2.12	0.50
1:AA:237:G:OP1	17:AQ:42:THR:OG1	2.29	0.50
1:AA:818:G:O2'	1:AA:819:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1209:C:O2'	1:AA:1210:C:H5'	2.11	0.50
2:AB:96:TRP:HZ3	2:AB:175:GLU:OE2	1.95	0.50
4:AD:152:GLN:O	4:AD:153:SER:C	2.53	0.50
6:AF:91:ARG:O	6:AF:92:THR:OG1	2.22	0.50
8:AH:18:GLN:O	8:AH:20:ALA:N	2.44	0.50
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.12	0.50
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.94	0.50
21:AU:39:GLU:OE2	21:AU:42:THR:HG21	2.12	0.50
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.46	0.50
22:BA:1488:C:O2	22:BA:1502:A:C2	2.65	0.50
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.12	0.50
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.93	0.50
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.64	0.50
41:BT:2:ILE:HD12	41:BT:7:LEU:HG	1.93	0.50
1:CA:158:G:C4	1:CA:159:G:C8	3.00	0.50
1:CA:1072:G:C5	1:CA:1073:U:C4	3.00	0.50
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.26	0.50
12:CL:27:CYS:HB3	12:CL:29:GLN:O	2.12	0.50
22:DA:126:A:P	50:D2:19:ARG:HG3	2.52	0.50
22:DA:528:A:N1	22:DA:2043:C:C5'	2.75	0.50
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.80	0.50
22:DA:1832:C:C4	22:DA:1833:C:C5	3.00	0.50
22:DA:2050:C:N4	22:DA:2051:A:C6	2.80	0.50
22:DA:2753:A:C6	22:DA:2754:U:C4	2.99	0.50
22:DA:2823:A:C2	22:DA:2824:C:C6	3.00	0.50
57:DA:3717:HOH:O	50:D2:11:LYS:NZ	2.44	0.50
39:DR:68:ARG:HD2	39:DR:90:ARG:HB3	1.92	0.50
1:AA:8:A:N6	4:AD:202:GLU:O	2.44	0.49
1:AA:1152:A:OP1	10:AJ:15:HIS:HB2	2.11	0.49
1:AA:1178:G:C5	9:AI:99:ARG:NH2	2.80	0.49
1:AA:1304:G:N1	1:AA:1305:G:N2	2.60	0.49
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.73	0.49
4:AD:46:PRO:O	4:AD:48:LEU:N	2.45	0.49
5:AE:132:ASN:O	5:AE:136:VAL:HG12	2.12	0.49
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.77	0.49
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.12	0.49
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.93	0.49
22:BA:741:U:P	57:BA:3702:HOH:O	2.70	0.49
22:BA:1414:C:C4	22:BA:1415:U:C5	2.99	0.49
22:BA:1589:U:N3	22:BA:1590:A:N7	2.59	0.49
22:BA:1916:A:C5	22:BA:1917:U:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2352:A:H5''	22:BA:2353:G:OP2	2.12	0.49
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.69	0.49
28:BG:25:THR:HG23	28:BG:34:THR:OG1	2.11	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
31:BJ:56:VAL:HB	31:BJ:124:VAL:HB	1.94	0.49
32:BK:1:MET:HE3	32:BK:32:TYR:CE2	2.46	0.49
1:CA:106:C:H2'	1:CA:107:G:O4'	2.12	0.49
1:CA:211:G:N3	1:CA:211:G:H2'	2.27	0.49
1:CA:794:A:O2'	1:CA:1521:C:O2'	1.97	0.49
1:CA:1122:U:C4	1:CA:1123:U:C4	3.00	0.49
1:CA:1219:A:C5	1:CA:1220:G:N7	2.80	0.49
1:CA:1366:C:O2'	10:CJ:62:ARG:NH2	2.45	0.49
1:CA:1525:G:O6	57:CA:1885:HOH:O	2.20	0.49
2:CB:35:ARG:O	2:CB:38:VAL:N	2.42	0.49
22:DA:49:A:C8	22:DA:51:G:C2	3.00	0.49
22:DA:639:U:H2'	22:DA:640:C:C6	2.46	0.49
22:DA:810:U:C6	33:DL:29:LYS:HA	2.47	0.49
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.47	0.49
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.11	0.49
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.49
34:DM:53:MET:HE1	34:DM:103:TYR:CG	2.47	0.49
41:DT:7:LEU:HD22	41:DT:46:ALA:HB2	1.94	0.49
1:AA:188:C:O2	1:AA:188:C:C2'	2.60	0.49
1:AA:468:A:C2	1:AA:469:C:C5	3.00	0.49
1:AA:544:G:OP1	4:AD:59:GLN:NE2	2.46	0.49
1:AA:960:U:H2'	1:AA:1225:A:H62	1.77	0.49
1:AA:1129:C:H5'	9:AI:18:ARG:HH22	1.77	0.49
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.12	0.49
1:AA:1539:C:O3'	21:AU:18:ARG:HB3	2.12	0.49
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.12	0.49
18:AR:26:ILE:O	18:AR:30:LYS:HG3	2.12	0.49
21:AU:17:ARG:NH1	21:AU:20:LYS:HG3	2.27	0.49
22:BA:28:A:C5	22:BA:29:U:C5	3.00	0.49
22:BA:827:U:H2'	22:BA:2068:U:C2	2.47	0.49
22:BA:967:U:H2'	22:BA:968:C:C6	2.47	0.49
22:BA:994:C:H3'	38:BQ:54:LYS:HE3	1.94	0.49
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	2.12	0.49
24:BC:43:ARG:HA	24:BC:48:ARG:O	2.12	0.49
24:BC:187:ASP:N	24:BC:187:ASP:OD1	2.44	0.49
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	2.15	0.49
48:B0:39:LEU:O	48:B0:40:ARG:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:58:C:H2'	1:CA:59:A:O5'	2.12	0.49
1:CA:558:G:C4	1:CA:559:A:C2	3.00	0.49
1:CA:571:U:H5''	1:CA:572:A:OP2	2.12	0.49
1:CA:1480:A:C4	1:CA:1481:U:C6	3.00	0.49
2:CB:103:ASN:C	2:CB:105:LYS:N	2.70	0.49
2:CB:123:ASP:O	2:CB:124:GLY:C	2.55	0.49
5:CE:81:LEU:HD22	5:CE:123:VAL:HG12	1.93	0.49
6:CF:38:ARG:HG2	6:CF:63:ASN:HB3	1.94	0.49
22:DA:1:G:H2'	22:DA:2:G:C8	2.47	0.49
22:DA:160:A:C6	22:DA:161:A:C6	3.00	0.49
22:DA:167:A:H2'	22:DA:168:G:O4'	2.12	0.49
22:DA:362:A:C5	22:DA:363:G:C8	3.00	0.49
22:DA:389:G:C2	22:DA:2413:G:H1'	2.47	0.49
22:DA:1020:A:C2	22:DA:1141:U:C2	3.00	0.49
22:DA:1195:G:O2'	22:DA:1226:A:N1	2.32	0.49
22:DA:1293:C:H2'	22:DA:1294:U:O4'	2.12	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.49
22:DA:1807:G:H2'	22:DA:1808:A:O5'	2.12	0.49
22:DA:2282:G:N3	22:DA:2425:A:N6	2.61	0.49
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.47	0.49
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.11	0.49
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.80	0.49
37:DP:65:SER:O	37:DP:66:ASN:C	2.54	0.49
50:D2:22:MET:SD	50:D2:28:ARG:HG2	2.52	0.49
1:AA:74:A:C2	1:AA:97:G:C4	3.00	0.49
1:AA:439:U:H1'	4:AD:119:SER:O	2.12	0.49
1:AA:866:C:C4	1:AA:867:G:H1'	2.48	0.49
2:AB:24:ASN:C	2:AB:24:ASN:OD1	2.55	0.49
8:AH:10:MET:HG3	8:AH:27:MET:SD	2.52	0.49
22:BA:17:G:H2'	22:BA:18:U:C6	2.47	0.49
26:BE:189:THR:HG22	26:BE:191:ASP:N	2.27	0.49
36:BO:24:THR:HG22	36:BO:41:ALA:HA	1.95	0.49
1:CA:64:G:H4'	1:CA:65:A:H5''	1.94	0.49
1:CA:154:U:C2	1:CA:168:G:N2	2.80	0.49
1:CA:264:C:H2'	1:CA:265:G:O4'	2.13	0.49
1:CA:568:G:N2	1:CA:883:C:C2	2.80	0.49
1:CA:577:G:H1'	1:CA:816:A:N3	2.27	0.49
1:CA:1408:A:C2	1:CA:1494:G:C5	3.00	0.49
4:CD:168:PRO:HB2	4:CD:171:LEU:HD13	1.94	0.49
5:CE:18:VAL:HG21	5:CE:56:VAL:HG13	1.94	0.49
11:CK:33:THR:O	11:CK:33:THR:HG22	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:20:THR:HG22	13:CM:26:GLY:O	2.10	0.49
17:CQ:79:VAL:O	17:CQ:80:GLU:HB2	2.12	0.49
22:DA:43:G:C2	22:DA:437:U:C2	3.00	0.49
22:DA:569:U:H5''	22:DA:821:A:C2	2.48	0.49
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.28	0.49
22:DA:2370:G:C6	22:DA:2371:G:C6	3.01	0.49
22:DA:2747:G:C2	22:DA:2756:U:C5	3.00	0.49
24:DC:153:GLN:C	24:DC:156:ARG:HD2	2.37	0.49
27:DF:33:LYS:HD3	27:DF:92:ARG:NH1	2.27	0.49
1:AA:373:A:C2	1:AA:374:A:C8	3.01	0.49
1:AA:557:G:C6	1:AA:558:G:C6	2.99	0.49
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.13	0.49
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.47	0.49
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.93	0.49
19:AS:64:ASP:HB2	27:BF:115:ARG:NH2	2.27	0.49
20:AT:69:LYS:HB2	20:AT:69:LYS:NZ	2.27	0.49
22:BA:362:A:C8	22:BA:362:A:OP2	2.66	0.49
22:BA:440:C:O2'	22:BA:441:U:H5'	2.12	0.49
22:BA:868:U:C4	22:BA:869:G:N7	2.80	0.49
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.95	0.49
22:BA:1073:A:C8	22:BA:1074:G:O4'	2.66	0.49
22:BA:1540:G:H2'	22:BA:1541:C:O4'	2.12	0.49
22:BA:1796:U:O2	22:BA:1796:U:H2'	2.12	0.49
22:BA:2489:U:O2	22:BA:2491:U:C4	2.66	0.49
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.42	0.49
27:BF:6:ASP:O	27:BF:7:TYR:C	2.55	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
34:BM:110:GLU:OE2	34:BM:114:ARG:NH2	2.45	0.49
42:BU:102:THR:HG22	42:BU:103:ILE:N	2.27	0.49
1:CA:583:A:C2	1:CA:759:A:C5	3.01	0.49
1:CA:1070:U:O2'	1:CA:1071:C:H5'	2.12	0.49
1:CA:1310:G:N2	1:CA:1328:C:C2	2.81	0.49
2:CB:99:GLY:HA2	2:CB:102:THR:HG22	1.94	0.49
6:CF:38:ARG:NH1	6:CF:61:LEU:HD21	2.27	0.49
7:CG:57:SER:HB3	7:CG:60:GLU:HG2	1.93	0.49
11:CK:124:PRO:HB2	11:CK:126:LYS:HE3	1.93	0.49
14:CN:26:GLU:CD	14:CN:26:GLU:C	2.80	0.49
17:CQ:17:MET:HE2	17:CQ:20:SER:O	2.11	0.49
22:DA:420:C:H2'	22:DA:421:C:H6	1.78	0.49
22:DA:599:A:C2	22:DA:659:G:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:668:A:N6	22:DA:670:A:O2'	2.46	0.49
22:DA:789:A:C2	57:DA:3310:HOH:O	2.64	0.49
22:DA:839:U:H2'	22:DA:840:C:C6	2.47	0.49
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.47	0.49
22:DA:1384:A:O2'	22:DA:1404:C:O2	2.29	0.49
22:DA:1441:G:C2	22:DA:1442:U:C4	2.99	0.49
22:DA:1506:U:H2'	22:DA:1507:C:C6	2.47	0.49
22:DA:1665:A:OP1	32:DK:66:LYS:HE3	2.11	0.49
22:DA:2127:G:O2'	22:DA:2173:A:C2	2.65	0.49
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.42	0.49
22:DA:2346:A:H4'	22:DA:2347:C:OP2	2.12	0.49
34:DM:34:LYS:NZ	43:DV:81:PRO:O	2.45	0.49
1:AA:450:G:N7	1:AA:481:G:C6	2.81	0.49
1:AA:452:A:N7	1:AA:453:G:C4	2.80	0.49
1:AA:843:U:OP1	1:AA:846:G:N1	2.46	0.49
1:AA:965:U:OP2	57:AA:1833:HOH:O	2.19	0.49
1:AA:972:C:H4'	10:AJ:59:LYS:CE	2.42	0.49
1:AA:1153:G:C2	1:AA:1154:G:C8	3.00	0.49
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.12	0.49
2:AB:157:LEU:O	2:AB:158:PRO:C	2.52	0.49
7:AG:16:PRO:HB3	9:AI:46:MET:HE3	1.93	0.49
8:AH:5:ASP:OD1	8:AH:77:ARG:NH1	2.45	0.49
22:BA:923:G:H4'	44:BW:29:GLU:HG3	1.95	0.49
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.42	0.49
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.11	0.49
22:BA:1866:A:H2'	22:BA:1867:G:H5'	1.95	0.49
22:BA:2190:G:C2	22:BA:2191:A:C4	3.00	0.49
22:BA:2297:A:N1	22:BA:2321:U:C5	2.78	0.49
22:BA:2307:G:N3	22:BA:2308:G:O6	2.45	0.49
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.47	0.49
33:BL:132:ARG:HG3	33:BL:142:ILE:HD13	1.93	0.49
34:BM:135:VAL:O	34:BM:136:MET:HB3	2.12	0.49
36:BO:76:LYS:HE3	36:BO:80:GLU:OE2	2.11	0.49
1:CA:57:G:H2'	1:CA:58:C:C6	2.48	0.49
1:CA:369:G:OP2	1:CA:388:G:N2	2.45	0.49
1:CA:926:G:C6	1:CA:1505:G:C6	2.99	0.49
4:CD:107:PHE:CD2	4:CD:145:ILE:HD11	2.47	0.49
18:CR:32:TYR:CG	18:CR:55:LEU:HD21	2.47	0.49
22:DA:301:G:N3	22:DA:302:C:C2	2.81	0.49
22:DA:449:A:C5	22:DA:450:G:C8	3.01	0.49
22:DA:674:G:O6	22:DA:806:C:N3	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:983:A:N6	22:DA:984:A:C2	2.80	0.49
22:DA:2085:U:C2	22:DA:2086:U:C5	3.00	0.49
22:DA:2217:G:C4	22:DA:2218:G:C8	3.01	0.49
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.27	0.49
26:DE:17:THR:O	26:DE:18:THR:OG1	2.26	0.49
28:DG:89:LEU:CD1	28:DG:162:VAL:HG22	2.42	0.49
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
49:D1:35:GLU:HG2	49:D1:50:LYS:HG3	1.95	0.49
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.12	0.49
1:AA:502:A:H2'	1:AA:503:C:O4'	2.13	0.49
1:AA:672:U:H2'	1:AA:673:A:H8	1.77	0.49
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.47	0.49
2:AB:151:ILE:HD12	2:AB:154:MET:SD	2.52	0.49
3:AC:58:GLU:HG3	3:AC:65:ARG:HB3	1.95	0.49
22:BA:1483:G:C2	22:BA:1484:U:C2	3.01	0.49
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.11	0.49
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.13	0.49
26:BE:61:ARG:NH2	26:BE:64:GLY:HA3	2.27	0.49
27:BF:42:GLU:O	27:BF:42:GLU:HG2	2.12	0.49
33:BL:53:GLY:O	33:BL:54:GLN:C	2.56	0.49
34:BM:7:THR:O	34:BM:8:LYS:C	2.54	0.49
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.94	0.49
34:BM:26:VAL:HA	34:BM:104:GLU:OE1	2.13	0.49
36:BO:36:TYR:N	36:BO:36:TYR:CD1	2.81	0.49
41:BT:7:LEU:HD22	41:BT:46:ALA:HB2	1.94	0.49
45:BX:42:SER:OG	45:BX:65:ASP:OD1	2.30	0.49
48:B0:10:ARG:HB2	48:B0:13:ARG:NH2	2.27	0.49
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.43	0.49
1:CA:223:A:C6	1:CA:224:U:C4	3.00	0.49
1:CA:301:G:C4	1:CA:302:G:C8	3.01	0.49
1:CA:465:A:C2	1:CA:466:A:C4	3.01	0.49
1:CA:511:C:C2	1:CA:512:U:C5	3.00	0.49
1:CA:525:C:C2	1:CA:526:C:C5	3.01	0.49
1:CA:872:A:C4	1:CA:874:G:C8	3.01	0.49
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.47	0.49
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.13	0.49
2:CB:69:PHE:O	2:CB:91:PHE:HA	2.12	0.49
20:CT:67:ILE:HD11	20:CT:71:LYS:HE2	1.94	0.49
22:DA:990:A:N3	39:DR:76:LYS:NZ	2.60	0.49
22:DA:1544:A:C6	22:DA:1545:A:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.12	0.49
22:DA:1973:G:C8	22:DA:1974:C:C5	3.00	0.49
22:DA:2261:C:C2	22:DA:2280:G:C2	3.01	0.49
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.12	0.49
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.13	0.49
24:DC:101:ARG:O	24:DC:102:ARG:HG3	2.13	0.49
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.27	0.49
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.56	0.49
35:DN:2:ARG:O	35:DN:3:HIS:C	2.55	0.49
37:DP:40:LEU:HD23	37:DP:40:LEU:C	2.38	0.49
44:DW:23:VAL:HG22	44:DW:38:VAL:CG1	2.42	0.49
45:DX:28:ARG:O	45:DX:29:PHE:CD1	2.66	0.49
49:D1:25:LYS:NZ	49:D1:32:GLU:O	2.45	0.49
1:AA:374:A:C6	1:AA:375:U:C4	3.01	0.49
1:AA:956:U:C4	1:AA:957:U:C5	3.01	0.49
4:AD:53:VAL:CG2	4:AD:54:GLN:N	2.76	0.49
5:AE:50:TYR:CD1	5:AE:134:ILE:HD11	2.47	0.49
6:AF:88:MET:HG2	6:AF:90:MET:HE2	1.94	0.49
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.43	0.49
22:BA:340:A:H2'	22:BA:341:C:O4'	2.13	0.49
22:BA:1327:A:N6	22:BA:1328:A:C2	2.80	0.49
24:BC:144:VAL:HG12	24:BC:145:GLU:O	2.11	0.49
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.95	0.49
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.37	0.49
37:BP:2:SER:O	37:BP:6:LYS:HG2	2.13	0.49
42:BU:6:ARG:HG3	42:BU:94:ARG:NH2	2.28	0.49
1:CA:102:G:N1	1:CA:103:U:C4	2.80	0.49
1:CA:386:C:C4	1:CA:387:U:C4	3.01	0.49
1:CA:820:U:H4'	1:CA:821:G:OP2	2.13	0.49
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.95	0.49
1:CA:1106:G:C2	1:CA:1107:C:C6	3.00	0.49
1:CA:1107:C:N3	1:CA:1108:G:N7	2.60	0.49
1:CA:1150:A:N6	1:CA:1151:A:H62	2.11	0.49
1:CA:1368:A:C8	9:CI:114:LYS:HD3	2.47	0.49
1:CA:1408:A:N1	1:CA:1494:G:C6	2.81	0.49
3:CC:130:PHE:CE1	3:CC:131:ARG:HD3	2.47	0.49
3:CC:192:THR:HG23	3:CC:193:TYR:CD1	2.46	0.49
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.42	0.49
22:DA:9:G:C6	22:DA:2629:U:C5	3.01	0.49
22:DA:176:A:N6	22:DA:177:G:O6	2.45	0.49
22:DA:250:G:H4'	33:DL:59:ARG:HD3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:320:A:H4'	22:DA:322:A:N7	2.27	0.49
22:DA:669:G:N3	22:DA:669:G:C2'	2.75	0.49
22:DA:770:G:H1'	22:DA:1379:U:C4	2.48	0.49
22:DA:1267:U:C5	22:DA:2012:G:N2	2.80	0.49
22:DA:1566:A:N1	24:DC:213:TRP:CE3	2.80	0.49
22:DA:1791:A:H5'	24:DC:207:LYS:O	2.13	0.49
22:DA:1829:A:HO2'	24:DC:15:HIS:CD2	2.29	0.49
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.47	0.49
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.12	0.49
22:DA:2845:U:H5''	37:DP:52:ASN:O	2.12	0.49
23:DB:81:G:C6	23:DB:82:U:C4	3.01	0.49
28:DG:93:GLY:HA2	28:DG:95:ARG:NH2	2.28	0.49
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.13	0.49
42:DU:82:ARG:HB2	42:DU:97:LYS:CG	2.39	0.49
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.12	0.49
50:D2:12:ARG:NH2	50:D2:44:VAL:HG13	2.28	0.49
1:AA:652:U:O2'	1:AA:653:U:OP2	2.23	0.49
1:AA:920:U:O2'	1:AA:921:U:H5'	2.13	0.49
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.48	0.49
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.43	0.49
22:BA:251:A:OP1	33:BL:58:TYR:OH	2.16	0.49
22:BA:558:U:OP2	31:BJ:113:PRO:HG2	2.13	0.49
22:BA:753:A:H2'	22:BA:754:U:H6	1.77	0.49
22:BA:1358:G:N2	22:BA:1374:G:C5	2.80	0.49
22:BA:2749:A:OP1	28:BG:2:SER:N	2.45	0.49
30:BI:111:GLN:CD	30:BI:111:GLN:C	2.81	0.49
34:BM:6:ARG:O	34:BM:7:THR:CG2	2.61	0.49
39:BR:66:HIS:HE1	39:BR:94:THR:CG2	2.26	0.49
47:BZ:35:THR:HG22	47:BZ:36:VAL:N	2.27	0.49
1:CA:182:A:C4	1:CA:184:G:C8	3.01	0.49
1:CA:202:G:N2	1:CA:216:U:O2	2.46	0.49
1:CA:656:G:N2	1:CA:751:U:C2	2.81	0.49
1:CA:784:A:H2'	1:CA:785:G:C8	2.48	0.49
1:CA:1055:A:C6	1:CA:1206:G:C5	3.01	0.49
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.13	0.49
9:CI:51:PRO:HD3	9:CI:80:ARG:HG2	1.95	0.49
22:DA:7:G:C5	22:DA:8:C:C5	3.01	0.49
22:DA:105:C:H2'	22:DA:106:C:H6	1.76	0.49
22:DA:784:G:N1	24:DC:228:VAL:HG21	2.27	0.49
22:DA:892:A:C8	22:DA:892:A:P	3.06	0.49
22:DA:1359:A:N7	22:DA:1373:A:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1515:A:H5'	22:DA:1516:G:OP2	2.12	0.49
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.13	0.49
22:DA:2053:G:H21	22:DA:2054:A:H1'	1.78	0.49
22:DA:2267:A:H5''	22:DA:2268:A:H5'	1.94	0.49
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.93	0.49
22:DA:2722:G:H8	22:DA:2722:G:O5'	1.96	0.49
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.42	0.49
22:DA:2823:A:H2'	22:DA:2824:C:H5'	1.95	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.46	0.49
42:DU:95:PHE:O	42:DU:95:PHE:CG	2.66	0.49
1:AA:79:G:N2	1:AA:91:U:C4	2.81	0.49
1:AA:293:G:C4	1:AA:294:U:C5	3.01	0.49
1:AA:438:U:N3	1:AA:494:G:C6	2.81	0.49
1:AA:502:A:C2	1:AA:544:G:C2	3.01	0.49
1:AA:682:G:C2	1:AA:709:U:C2	3.00	0.49
1:AA:1055:A:C6	1:AA:1206:G:C4	3.01	0.49
1:AA:1160:G:O2'	1:AA:1161:C:P	2.71	0.49
1:AA:1164:G:C2	1:AA:1173:U:O2	2.65	0.49
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.12	0.49
9:AI:45:ARG:O	9:AI:48:VAL:HG22	2.12	0.49
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.53	0.49
14:AN:13:ARG:HB3	14:AN:60:GLN:HG2	1.95	0.49
22:BA:754:U:H2'	22:BA:755:U:C6	2.47	0.49
22:BA:1083:U:O2	22:BA:1086:A:N1	2.46	0.49
22:BA:1656:C:OP1	25:BD:141:ARG:HD3	2.13	0.49
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.13	0.49
22:BA:2125:G:N2	22:BA:2171:A:O5'	2.46	0.49
24:BC:84:ASP:C	24:BC:84:ASP:OD1	2.56	0.49
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.13	0.49
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.95	0.49
46:BY:11:VAL:O	46:BY:15:ASN:ND2	2.46	0.49
1:CA:790:A:N6	1:CA:791:G:C6	2.81	0.49
1:CA:872:A:C5	1:CA:874:G:C8	3.01	0.49
1:CA:1150:A:N6	1:CA:1151:A:N6	2.61	0.49
1:CA:1358:U:H5''	14:CN:73:PHE:O	2.13	0.49
1:CA:1413:A:N1	1:CA:1488:G:C2	2.81	0.49
2:CB:54:LEU:HD11	2:CB:217:VAL:HG22	1.94	0.49
5:CE:16:ILE:HD11	5:CE:38:VAL:HG23	1.93	0.49
22:DA:83:A:H5''	22:DA:84:A:P	2.53	0.49
22:DA:321:U:H5''	26:DE:131:THR:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:353:C:H2'	22:DA:354:A:C8	2.47	0.49
22:DA:428:A:H2'	22:DA:429:A:O4'	2.13	0.49
22:DA:1320:C:N4	22:DA:1333:G:C6	2.81	0.49
22:DA:1361:G:C2	22:DA:1362:C:C6	3.01	0.49
22:DA:1790:C:H4'	24:DC:208:ALA:CB	2.42	0.49
22:DA:1791:A:C5'	24:DC:207:LYS:O	2.60	0.49
22:DA:1812:U:O2	22:DA:1812:U:H2'	2.13	0.49
22:DA:2234:G:C5	22:DA:2235:G:C8	3.01	0.49
22:DA:2683:C:C5	22:DA:2684:U:C5	3.00	0.49
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.13	0.49
24:DC:84:ASP:OD2	24:DC:87:ARG:NE	2.45	0.49
24:DC:226:ASN:HB3	24:DC:227:PRO:HD2	1.94	0.49
26:DE:5:LEU:HA	26:DE:120:VAL:O	2.12	0.49
41:DT:82:LYS:HG2	41:DT:83:ALA:H	1.78	0.49
1:AA:32:A:OP1	1:AA:398:U:H1'	2.13	0.49
1:AA:553:A:O2'	1:AA:554:A:H5'	2.12	0.49
1:AA:709:U:H2'	1:AA:710:G:C8	2.47	0.49
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.46	0.49
2:AB:78:GLU:C	2:AB:80:VAL:N	2.70	0.49
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.13	0.49
9:AI:49:ARG:C	9:AI:49:ARG:HD3	2.37	0.49
22:BA:613:A:H2'	22:BA:614:A:H5''	1.94	0.49
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.94	0.49
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.48	0.49
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.43	0.49
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	1.95	0.49
24:BC:230:HIS:O	24:BC:232:HIS:N	2.45	0.49
28:BG:11:VAL:O	28:BG:11:VAL:CG2	2.60	0.49
28:BG:67:THR:O	28:BG:71:LEU:HG	2.13	0.49
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.56	0.49
39:BR:76:LYS:O	39:BR:84:ARG:HA	2.13	0.49
41:BT:17:SER:O	41:BT:18:GLU:C	2.56	0.49
41:BT:87:LEU:O	41:BT:88:LYS:C	2.55	0.49
42:BU:89:ASP:CG	42:BU:90:GLY:N	2.67	0.49
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.94	0.49
49:B1:25:LYS:HD2	49:B1:52:ALA:HB1	1.95	0.49
1:CA:57:G:C6	1:CA:58:C:N4	2.81	0.49
1:CA:158:G:C5	1:CA:159:G:N7	2.81	0.49
1:CA:756:C:O2'	1:CA:757:U:H5'	2.13	0.49
1:CA:1250:A:N6	1:CA:1251:A:C6	2.81	0.49
1:CA:1314:C:OP2	19:CS:6:LYS:HG2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.42	0.49
16:CP:20:VAL:HG21	16:CP:32:PHE:CG	2.48	0.49
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.95	0.49
22:DA:88:G:C2	22:DA:89:A:C8	3.01	0.49
22:DA:231:A:N6	22:DA:232:G:C2	2.80	0.49
22:DA:655:A:H4'	22:DA:656:G:OP1	2.13	0.49
22:DA:672:C:C2	22:DA:809:G:N2	2.81	0.49
22:DA:680:C:C2	22:DA:681:G:N7	2.81	0.49
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.60	0.49
22:DA:1651:G:C2	22:DA:2007:U:C2	3.01	0.49
22:DA:1856:U:O4	22:DA:1857:G:C6	2.66	0.49
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.94	0.49
22:DA:2247:A:H3'	57:DA:3505:HOH:O	2.13	0.49
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.13	0.49
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.13	0.49
25:DD:7:LYS:HG2	25:DD:8:LYS:N	2.28	0.49
36:DO:53:THR:O	36:DO:59:ALA:HB2	2.13	0.49
39:DR:66:HIS:CE1	39:DR:94:THR:HG21	2.47	0.49
46:DY:42:LEU:O	46:DY:46:VAL:HG23	2.13	0.49
1:AA:627:G:OP1	16:AP:51:ARG:NH2	2.46	0.48
1:AA:1121:U:C2	1:AA:1122:U:C5	3.01	0.48
3:AC:113:ALA:O	3:AC:116:VAL:HB	2.13	0.48
8:AH:73:GLU:OE2	8:AH:96:MET:HE1	2.13	0.48
8:AH:106:THR:HG22	8:AH:122:GLY:O	2.13	0.48
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.71	0.48
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.28	0.48
35:BN:12:ARG:NH1	35:BN:20:MET:HE1	2.28	0.48
35:BN:77:ALA:O	35:BN:79:LEU:O	2.31	0.48
39:BR:83:TYR:C	39:BR:83:TYR:CD2	2.90	0.48
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.95	0.48
1:CA:56:U:H2'	1:CA:57:G:C8	2.48	0.48
1:CA:505:G:H5'	1:CA:534:U:C2	2.48	0.48
1:CA:537:G:H2'	1:CA:538:G:C8	2.48	0.48
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.48	0.48
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.94	0.48
15:CO:64:ARG:NH1	15:CO:68:ASP:OD1	2.44	0.48
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.43	0.48
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.13	0.48
22:DA:46:G:C2	22:DA:47:C:C6	3.00	0.48
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.36	0.48
22:DA:1208:C:C2	22:DA:1209:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.41	0.48
22:DA:1364:G:C8	45:DX:2:SER:N	2.81	0.48
22:DA:1862:G:C2	22:DA:1881:C:C2	3.01	0.48
24:DC:45:ASN:O	24:DC:47:GLY:N	2.46	0.48
24:DC:48:ARG:HH11	24:DC:48:ARG:HG3	1.78	0.48
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.48
36:DO:18:LEU:O	36:DO:22:GLY:N	2.46	0.48
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.95	0.48
42:DU:71:ALA:HB1	42:DU:81:ASP:O	2.12	0.48
46:DY:60:LYS:HA	46:DY:63:ALA:OXT	2.13	0.48
1:AA:830:G:H2'	1:AA:831:A:C8	2.49	0.48
1:AA:914:A:C6	1:AA:915:A:N7	2.81	0.48
1:AA:914:A:C2	1:AA:915:A:C8	3.00	0.48
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.28	0.48
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.60	0.48
4:AD:23:SER:O	4:AD:24:GLY:C	2.55	0.48
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.95	0.48
15:AO:88:ARG:O	15:AO:89:ARG:HB2	2.13	0.48
22:BA:1079:C:C5	22:BA:1088:A:C2	3.01	0.48
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.46	0.48
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.45	0.48
22:BA:1823:G:N7	57:BA:3663:HOH:O	2.34	0.48
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.48	0.48
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	2.13	0.48
33:BL:81:ASP:O	33:BL:83:ALA:N	2.43	0.48
39:BR:49:ILE:CA	39:BR:51:VAL:O	2.61	0.48
53:B5:52:PRO:HB2	53:B5:204:GLY:O	2.13	0.48
1:CA:76:G:C2	1:CA:95:C:N3	2.82	0.48
1:CA:123:U:H2'	1:CA:124:C:C6	2.48	0.48
1:CA:681:A:C6	1:CA:710:G:C6	3.01	0.48
1:CA:685:G:C2	1:CA:686:U:C4	3.01	0.48
1:CA:1300:G:C6	1:CA:1335:U:C6	3.02	0.48
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.13	0.48
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.38	0.48
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.27	0.48
20:CT:4:ILE:O	20:CT:5:LYS:HB2	2.11	0.48
22:DA:632:A:H4'	33:DL:68:SER:HB2	1.94	0.48
22:DA:1462:C:N3	22:DA:1463:C:C5	2.80	0.48
22:DA:2032:G:C2	25:DD:150:GLN:HG2	2.48	0.48
22:DA:2736:A:C2	22:DA:2769:U:O2	2.66	0.48
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.94	0.48
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.48	0.48
40:DS:47:VAL:HG23	40:DS:103:ILE:CG2	2.42	0.48
1:AA:620:C:H2'	1:AA:621:A:O4'	2.13	0.48
1:AA:1157:A:C6	1:AA:1180:A:C6	3.01	0.48
1:AA:1226:C:H2'	13:AM:102:THR:HB	1.95	0.48
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.12	0.48
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.48	0.48
2:AB:82:ASP:C	2:AB:82:ASP:OD1	2.56	0.48
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.38	0.48
6:AF:97:THR:O	6:AF:98:GLU:CG	2.61	0.48
7:AG:146:GLU:O	7:AG:149:LYS:CB	2.61	0.48
12:AL:79:VAL:O	12:AL:102:LEU:HB3	2.13	0.48
13:AM:40:ALA:HB3	13:AM:43:VAL:CG1	2.43	0.48
20:AT:83:ILE:O	20:AT:87:ALA:HB3	2.13	0.48
22:BA:464:U:H5'	50:B2:5:PHE:CD1	2.48	0.48
22:BA:1007:C:OP1	31:BJ:39:LYS:HE2	2.14	0.48
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.67	0.48
22:BA:1714:U:O2	22:BA:1714:U:H2'	2.13	0.48
22:BA:1795:C:C2	22:BA:1796:U:C6	3.01	0.48
24:BC:76:ALA:HB2	24:BC:96:TYR:CD2	2.49	0.48
28:BG:94:TYR:HA	28:BG:106:SER:O	2.14	0.48
28:BG:155:GLU:OE2	28:BG:157:TYR:C	2.56	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.14	0.48
31:BJ:23:LYS:CE	31:BJ:142:ILE:OXT	2.62	0.48
32:BK:70:ARG:HD3	32:BK:76:VAL:CG2	2.43	0.48
33:BL:59:ARG:NH1	57:BL:306:HOH:O	2.38	0.48
1:CA:102:G:N2	1:CA:103:U:C2	2.82	0.48
1:CA:127:G:N2	1:CA:235:C:C2	2.80	0.48
1:CA:740:U:O2'	1:CA:741:G:H5'	2.13	0.48
1:CA:821:G:H2'	1:CA:822:U:H6	1.76	0.48
1:CA:865:A:H2	1:CA:918:A:H4'	1.79	0.48
1:CA:1328:C:OP1	13:CM:28:THR:HG21	2.13	0.48
1:CA:1479:C:C2	1:CA:1480:A:C8	3.01	0.48
22:DA:136:G:N2	22:DA:144:A:C5	2.81	0.48
22:DA:183:C:N4	22:DA:184:C:C4	2.81	0.48
22:DA:630:G:H5''	22:DA:631:A:OP2	2.12	0.48
22:DA:1155:A:H5''	38:DQ:55:ARG:HD3	1.95	0.48
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.26	0.48
22:DA:1512:C:C4	22:DA:1513:U:C4	3.00	0.48
22:DA:1665:A:OP1	32:DK:66:LYS:HE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1856:U:C4	22:DA:1857:G:C6	3.01	0.48
22:DA:2119:A:N6	22:DA:2167:U:O2'	2.46	0.48
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	1.95	0.48
22:DA:2823:A:C5	22:DA:2824:C:C5	3.01	0.48
22:DA:2852:G:C2	22:DA:2853:C:C2	3.02	0.48
31:DJ:41:LYS:CE	31:DJ:52:ASP:OD1	2.62	0.48
35:DN:34:ILE:HD11	35:DN:44:LEU:CD2	2.43	0.48
50:D2:11:LYS:O	50:D2:14:ARG:N	2.46	0.48
1:AA:36:C:H2'	1:AA:37:U:O4'	2.14	0.48
1:AA:575:G:C6	1:AA:821:G:C8	3.01	0.48
1:AA:737:C:H2'	1:AA:738:C:C6	2.49	0.48
1:AA:951:G:H1'	1:AA:1231:G:N2	2.27	0.48
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.13	0.48
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.48	0.48
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.60	0.48
4:AD:95:GLU:OE1	4:AD:191:LEU:HD22	2.13	0.48
7:AG:99:LEU:O	7:AG:100:ALA:C	2.57	0.48
14:AN:46:LEU:O	14:AN:48:LEU:N	2.46	0.48
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.13	0.48
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.13	0.48
22:BA:1967:C:H2'	22:BA:1968:G:H5'	1.96	0.48
27:BF:41:GLY:C	27:BF:43:ALA:N	2.71	0.48
27:BF:171:ALA:O	27:BF:173:PHE:N	2.46	0.48
28:BG:104:ASN:ND2	28:BG:114:ASP:CG	2.72	0.48
34:BM:6:ARG:C	34:BM:7:THR:HG23	2.39	0.48
48:B0:25:VAL:O	48:B0:27:SER:N	2.47	0.48
48:B0:34:SER:OG	48:B0:36:GLU:CG	2.61	0.48
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.61	0.48
1:CA:216:U:H4'	1:CA:464:U:H4'	1.95	0.48
1:CA:757:U:OP1	1:CA:822:U:O2'	2.31	0.48
1:CA:801:U:C2'	1:CA:802:A:O5'	2.61	0.48
1:CA:878:A:C5	1:CA:879:C:C5	3.01	0.48
1:CA:1012:A:C6	1:CA:1013:G:C6	3.02	0.48
1:CA:1140:C:O2'	1:CA:1141:C:O5'	2.31	0.48
1:CA:1306:A:C5	1:CA:1307:U:C4	3.01	0.48
4:CD:3:ARG:O	4:CD:5:LEU:HD13	2.13	0.48
4:CD:124:MET:O	4:CD:143:VAL:HA	2.13	0.48
6:CF:50:PRO:HD2	18:CR:74:HIS:HB3	1.95	0.48
9:CI:49:ARG:CZ	9:CI:53:GLU:HG2	2.43	0.48
15:CO:76:ALA:O	15:CO:80:GLN:HG3	2.14	0.48
22:DA:527:C:H2'	22:DA:2779:U:O2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1252:G:C4	22:DA:1253:A:C2	3.01	0.48
22:DA:1805:A:C2	22:DA:1813:G:N1	2.81	0.48
22:DA:1931:U:O2	22:DA:1931:U:H2'	2.14	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
46:DY:9:LYS:HG2	46:DY:10:SER:N	2.29	0.48
1:AA:41:G:H2'	1:AA:42:G:H8	1.78	0.48
1:AA:203:G:C2	1:AA:215:C:C2	3.01	0.48
1:AA:1275:A:H2'	1:AA:1276:G:O4'	2.13	0.48
22:BA:996:A:N6	22:BA:1160:G:C6	2.81	0.48
22:BA:1073:A:C8	22:BA:1073:A:OP1	2.67	0.48
22:BA:1657:U:OP2	25:BD:141:ARG:HG3	2.14	0.48
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.43	0.48
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.42	0.48
33:BL:62:PRO:HG2	51:B3:25:LYS:CD	2.42	0.48
35:BN:28:LEU:O	35:BN:32:GLU:N	2.43	0.48
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.61	0.48
1:CA:389:A:C6	1:CA:390:U:H1'	2.48	0.48
1:CA:760:G:N7	1:CA:761:G:C8	2.81	0.48
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.79	0.48
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.49	0.48
3:CC:148:GLY:O	3:CC:203:PHE:N	2.43	0.48
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.31	0.48
6:CF:88:MET:HG2	6:CF:90:MET:HE2	1.95	0.48
15:CO:88:ARG:O	15:CO:89:ARG:HB2	2.13	0.48
18:CR:20:GLU:C	18:CR:22:ASP:N	2.71	0.48
21:CU:41:PRO:C	21:CU:43:THR:N	2.70	0.48
22:DA:636:G:N2	33:DL:76:GLU:OE2	2.46	0.48
22:DA:993:G:H1'	39:DR:91:GLN:OE1	2.13	0.48
22:DA:1153:C:C4	22:DA:1154:G:C5	3.00	0.48
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.29	0.48
22:DA:1403:A:C2	22:DA:1404:C:C2	3.02	0.48
22:DA:1446:C:N4	22:DA:1447:C:N4	2.61	0.48
22:DA:1659:G:C6	22:DA:1660:G:N7	2.82	0.48
22:DA:1907:G:C2	22:DA:1924:C:C2	3.01	0.48
22:DA:2064:C:H2'	22:DA:2065:C:C6	2.48	0.48
22:DA:2199:A:C6	22:DA:2200:C:N3	2.82	0.48
22:DA:2370:G:O6	22:DA:2371:G:C6	2.67	0.48
24:DC:161:TYR:C	24:DC:161:TYR:CD1	2.92	0.48
24:DC:212:ARG:CD	24:DC:216:VAL:O	2.62	0.48
24:DC:260:ASN:OD1	24:DC:262:ARG:HB3	2.14	0.48
33:DL:20:GLY:N	33:DL:27:LEU:O	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:35:GLU:CD	43:DV:35:GLU:N	2.71	0.48
45:DX:28:ARG:NH1	45:DX:30:LEU:HD21	2.29	0.48
1:AA:701:U:C2	1:AA:703:G:C2	3.01	0.48
1:AA:781:A:C5	1:AA:802:A:C2	3.01	0.48
2:AB:123:ASP:N	2:AB:123:ASP:OD1	2.46	0.48
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.95	0.48
12:AL:5:ASN:O	12:AL:6:GLN:C	2.56	0.48
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.95	0.48
22:BA:372:G:O2'	22:BA:400:G:O6	2.25	0.48
22:BA:595:C:H2'	22:BA:596:U:C6	2.49	0.48
22:BA:1187:G:H5''	39:BR:83:TYR:CE1	2.49	0.48
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.61	0.48
22:BA:1439:A:C2	22:BA:1553:A:C4	3.02	0.48
22:BA:1619:G:C8	22:BA:1619:G:OP2	2.66	0.48
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.13	0.48
24:BC:65:VAL:HG11	24:BC:67:PHE:CZ	2.49	0.48
24:BC:118:SER:HB2	24:BC:129:THR:HB	1.94	0.48
27:BF:57:LEU:HD21	27:BF:152:LEU:HD11	1.95	0.48
28:BG:2:SER:C	28:BG:4:VAL:N	2.68	0.48
30:BI:76:ALA:HB1	30:BI:129:ILE:HG23	1.95	0.48
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.13	0.48
1:CA:325:A:N6	1:CA:326:G:C6	2.81	0.48
1:CA:525:C:N3	1:CA:526:C:C5	2.82	0.48
1:CA:634:C:N4	1:CA:635:A:N6	2.61	0.48
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.13	0.48
2:CB:35:ARG:O	2:CB:37:LYS:N	2.47	0.48
2:CB:68:LEU:HD12	2:CB:158:PRO:HG2	1.94	0.48
2:CB:102:THR:O	2:CB:102:THR:HG23	2.13	0.48
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.93	0.48
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.96	0.48
22:DA:90:U:H5	22:DA:91:A:HO2'	1.60	0.48
22:DA:262:A:H4'	22:DA:611:C:OP1	2.13	0.48
22:DA:591:U:H2'	22:DA:592:A:O4'	2.14	0.48
22:DA:734:A:C4	22:DA:735:A:C8	3.01	0.48
22:DA:1153:C:C4	22:DA:1154:G:C6	3.02	0.48
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.13	0.48
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.96	0.48
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.48	0.48
22:DA:1855:U:C4	22:DA:1856:U:C4	3.01	0.48
22:DA:1914:C:H5	22:DA:1915:U:C2	2.31	0.48
22:DA:2359:C:O2'	51:D3:54:ASP:OD2	2.19	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:65:VAL:HG12	24:DC:67:PHE:CD2	2.49	0.48
24:DC:94:VAL:HG11	24:DC:104:ILE:HD11	1.95	0.48
24:DC:228:VAL:CG1	24:DC:229:ASP:N	2.76	0.48
26:DE:24:ASN:ND2	26:DE:27:LEU:HB3	2.28	0.48
1:AA:4:U:O2	1:AA:4:U:H2'	2.13	0.48
1:AA:594:U:C4	1:AA:595:A:C6	3.01	0.48
1:AA:945:G:C2	1:AA:946:A:C8	3.01	0.48
2:AB:71:GLY:HA2	2:AB:164:ILE:HG22	1.95	0.48
2:AB:90:PHE:HB3	2:AB:150:GLY:O	2.13	0.48
2:AB:94:HIS:O	2:AB:95:ARG:C	2.57	0.48
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.29	0.48
4:AD:190:ASP:O	4:AD:191:LEU:O	2.31	0.48
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	1.96	0.48
11:AK:126:LYS:HD3	11:AK:126:LYS:N	2.29	0.48
13:AM:33:ILE:HD12	13:AM:59:GLU:HB3	1.96	0.48
20:AT:68:HIS:O	20:AT:69:LYS:NZ	2.44	0.48
22:BA:593:U:H2'	22:BA:594:U:C6	2.49	0.48
22:BA:1820:U:O2'	24:BC:158:ALA:O	2.27	0.48
22:BA:2313:C:H5''	27:BF:88:LYS:HD3	1.96	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
30:BI:122:ILE:O	30:BI:122:ILE:HG22	2.14	0.48
31:BJ:59:ALA:C	31:BJ:61:LYS:H	2.20	0.48
36:BO:31:THR:HG23	36:BO:34:HIS:H	1.79	0.48
40:BS:41:LYS:HE3	48:B0:22:LEU:HD21	1.96	0.48
1:CA:295:C:C4	1:CA:296:U:C5	3.02	0.48
1:CA:572:A:H5'	1:CA:573:A:OP2	2.14	0.48
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.48	0.48
1:CA:1177:G:O6	1:CA:1178:G:C6	2.67	0.48
1:CA:1227:A:OP2	13:CM:110:LYS:HE3	2.13	0.48
5:CE:102:GLY:C	5:CE:104:GLY:N	2.71	0.48
8:CH:86:TYR:CE1	8:CH:124:GLU:HB2	2.48	0.48
10:CJ:5:ARG:HG3	10:CJ:6:ILE:HG13	1.96	0.48
22:DA:807:U:OP2	33:DL:41:ARG:NH1	2.47	0.48
22:DA:996:A:C2	22:DA:997:G:C8	3.01	0.48
22:DA:1270:C:N4	22:DA:1648:U:O4	2.46	0.48
22:DA:1784:A:H4'	22:DA:1785:A:O5'	2.13	0.48
22:DA:1838:C:C6	22:DA:1899:A:C6	3.02	0.48
22:DA:2461:A:C2	22:DA:2490:G:N2	2.81	0.48
22:DA:2469:A:O2'	34:DM:55:ARG:NH2	2.46	0.48
24:DC:162:VAL:HG12	24:DC:163:GLN:N	2.28	0.48
24:DC:212:ARG:HD3	24:DC:218:PRO:HD3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:39:ASP:CG	25:DD:40:LEU:N	2.71	0.48
26:DE:5:LEU:CD2	26:DE:122:GLU:CD	2.86	0.48
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.13	0.48
39:DR:101:ILE:O	39:DR:103:ALA:N	2.47	0.48
40:DS:79:GLY:CA	40:DS:100:THR:O	2.61	0.48
42:DU:74:ASN:HB2	42:DU:81:ASP:OD2	2.13	0.48
44:DW:38:VAL:HG23	44:DW:59:LEU:HB2	1.95	0.48
1:AA:345:C:N3	32:BK:117:SER:OG	2.44	0.48
1:AA:539:A:N6	1:AA:540:G:O6	2.47	0.48
1:AA:575:G:C6	1:AA:821:G:N7	2.82	0.48
1:AA:617:G:C2	1:AA:618:C:C6	3.02	0.48
1:AA:716:A:H2'	1:AA:717:U:O5'	2.14	0.48
1:AA:858:G:O6	1:AA:869:G:C8	2.66	0.48
1:AA:1228:C:OP2	13:AM:107:ARG:NH2	2.42	0.48
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.47	0.48
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.13	0.48
4:AD:161:LEU:HD22	4:AD:161:LEU:N	2.29	0.48
6:AF:92:THR:C	6:AF:93:LYS:HG2	2.38	0.48
20:AT:68:HIS:HB3	20:AT:69:LYS:HE3	1.94	0.48
22:BA:64:A:H2'	22:BA:65:U:C6	2.49	0.48
22:BA:332:A:C2	22:BA:335:C:C5	3.02	0.48
22:BA:1359:A:P	57:BA:3622:HOH:O	2.72	0.48
22:BA:1489:C:C2	22:BA:1501:G:C2	3.01	0.48
22:BA:2356:U:O3'	44:BW:20:ARG:HD3	2.13	0.48
24:BC:141:VAL:N	24:BC:162:VAL:O	2.46	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
41:BT:12:ARG:HB2	41:BT:33:LYS:O	2.13	0.48
46:BY:32:ALA:HB2	46:BY:37:LEU:CD2	2.44	0.48
1:CA:313:A:H2'	1:CA:314:C:C6	2.49	0.48
1:CA:456:A:C6	1:CA:457:G:C5	3.01	0.48
1:CA:458:U:H2'	1:CA:459:A:C8	2.48	0.48
1:CA:728:A:C6	1:CA:729:A:N6	2.82	0.48
1:CA:775:G:C4	1:CA:776:G:C8	3.01	0.48
1:CA:782:A:C2'	1:CA:783:C:H5'	2.43	0.48
1:CA:1327:C:C4	1:CA:1328:C:N4	2.82	0.48
9:CI:118:LEU:HD12	9:CI:118:LEU:N	2.29	0.48
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.13	0.48
12:CL:58:THR:HG22	12:CL:59:ASN:N	2.28	0.48
12:CL:107:VAL:HG23	12:CL:117:TYR:HB3	1.96	0.48
22:DA:192:C:P	57:DA:3739:HOH:O	2.68	0.48
22:DA:197:A:N6	22:DA:2430:A:H2'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:246:C:H2'	22:DA:247:G:H5'	1.96	0.48
22:DA:448:U:H5''	57:DA:3242:HOH:O	2.12	0.48
22:DA:511:U:C5	22:DA:512:G:C5	3.02	0.48
22:DA:825:A:C6	22:DA:826:U:C4	3.01	0.48
22:DA:1866:A:N7	22:DA:1867:G:C8	2.81	0.48
22:DA:2050:C:N4	22:DA:2051:A:N1	2.62	0.48
22:DA:2131:U:H5'	22:DA:2132:U:H5''	1.95	0.48
22:DA:2447:G:C8	22:DA:2500:U:C6	3.02	0.48
26:DE:5:LEU:O	26:DE:6:LYS:C	2.55	0.48
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.95	0.48
42:DU:77:THR:C	42:DU:79:LYS:H	2.22	0.48
1:AA:64:G:C2	1:AA:67:C:N4	2.82	0.48
4:AD:165:ARG:O	4:AD:166:GLU:C	2.56	0.48
5:AE:94:VAL:HG21	5:AE:140:THR:HG22	1.95	0.48
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.96	0.48
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.61	0.48
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.62	0.48
21:AU:26:ALA:O	21:AU:27:GLY:C	2.56	0.48
22:BA:74:A:N3	22:BA:74:A:H5''	2.28	0.48
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.22	0.48
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.77	0.48
22:BA:2886:A:C4	22:BA:2887:A:C8	3.02	0.48
32:BK:91:SER:O	32:BK:92:GLU:C	2.57	0.48
35:BN:28:LEU:HD23	35:BN:48:VAL:HG11	1.96	0.48
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.62	0.48
1:CA:756:C:C4	1:CA:757:U:C5	3.01	0.48
1:CA:954:G:C6	1:CA:955:U:C4	3.02	0.48
1:CA:954:G:C5	1:CA:955:U:C4	3.02	0.48
2:CB:164:ILE:O	2:CB:186:ILE:O	2.32	0.48
4:CD:72:PHE:CE2	4:CD:200:ILE:HD11	2.49	0.48
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.13	0.48
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.43	0.48
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.14	0.48
13:CM:22:ILE:HG23	13:CM:66:GLU:HG2	1.96	0.48
13:CM:55:THR:O	13:CM:59:GLU:OE2	2.31	0.48
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.96	0.48
22:DA:280:U:H2'	22:DA:281:C:C6	2.49	0.48
22:DA:323:C:H2'	26:DE:163:ASN:OD1	2.13	0.48
22:DA:842:U:C2	22:DA:843:G:C8	3.02	0.48
22:DA:920:A:C6	22:DA:921:C:C4	3.02	0.48
22:DA:1009:A:OP2	31:DJ:39:LYS:HE3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.95	0.48
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.48	0.48
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.14	0.48
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.14	0.48
22:DA:1428:C:C4	22:DA:1569:A:H5''	2.48	0.48
22:DA:2272:U:H5''	22:DA:2273:A:OP1	2.14	0.48
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.14	0.48
33:DL:112:LEU:CD1	33:DL:134:ALA:HB2	2.44	0.48
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.48	0.48
39:DR:76:LYS:HB2	39:DR:85:LYS:HB2	1.96	0.48
45:DX:7:VAL:HG21	45:DX:59:ILE:HD11	1.95	0.48
48:D0:38:HIS:CD2	48:D0:44:THR:HG22	2.48	0.48
1:AA:129:A:O2'	1:AA:130:A:H5''	2.14	0.48
1:AA:184:G:C6	1:AA:185:U:O4	2.66	0.48
1:AA:689:C:H2'	1:AA:690:G:O4'	2.14	0.48
1:AA:1077:G:C6	57:AA:1793:HOH:O	2.59	0.48
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.54	0.48
5:AE:74:VAL:O	5:AE:76:LEU:HD12	2.14	0.48
7:AG:146:GLU:O	7:AG:149:LYS:HB3	2.13	0.48
12:AL:35:THR:HG22	12:AL:36:ARG:HD2	1.95	0.48
22:BA:1317:G:C2	22:BA:1336:A:C2	3.02	0.48
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.44	0.48
22:BA:2129:C:H2'	22:BA:2130:U:C6	2.49	0.48
22:BA:2294:G:H5''	36:BO:10:ARG:HD3	1.96	0.48
22:BA:2554:U:H2'	22:BA:2555:U:C6	2.49	0.48
26:BE:15:SER:N	26:BE:197:GLU:OE2	2.47	0.48
35:BN:8:ARG:HB3	35:BN:10:LEU:HG	1.95	0.48
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.91	0.48
1:CA:72:A:N6	1:CA:73:C:H42	2.12	0.48
1:CA:110:C:H2'	1:CA:111:G:O4'	2.14	0.48
1:CA:363:A:OP1	12:CL:31:ARG:N	2.43	0.48
1:CA:716:A:C6	1:CA:717:U:N3	2.82	0.48
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.28	0.48
2:CB:200:ILE:N	2:CB:200:ILE:HD12	2.29	0.48
5:CE:81:LEU:HA	5:CE:147:MET:HE1	1.96	0.48
8:CH:114:ARG:HG2	8:CH:115:ALA:N	2.28	0.48
17:CQ:24:ALA:HA	17:CQ:43:LYS:HA	1.96	0.48
20:CT:83:ILE:HD12	20:CT:84:ASN:N	2.29	0.48
22:DA:177:G:H3'	22:DA:178:G:C8	2.49	0.48
22:DA:197:A:C8	22:DA:2430:A:C5	3.02	0.48
22:DA:325:G:O2'	22:DA:326:G:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:370:G:C6	22:DA:424:G:C5	3.02	0.48
22:DA:649:G:H2'	22:DA:650:C:O4'	2.14	0.48
22:DA:752:A:N3	22:DA:752:A:H2'	2.28	0.48
22:DA:1250:G:H5'	38:DQ:6:ARG:HD2	1.95	0.48
22:DA:1430:G:C4	22:DA:1431:A:C8	3.02	0.48
22:DA:1566:A:C2	24:DC:213:TRP:CE3	3.02	0.48
22:DA:1960:A:O2'	22:DA:1961:C:H5'	2.14	0.48
22:DA:2286:G:H5''	22:DA:2287:A:OP1	2.14	0.48
22:DA:2854:G:C2	22:DA:2864:G:C2	3.02	0.48
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.94	0.48
24:DC:154:LEU:HD13	24:DC:176:LEU:HD21	1.95	0.48
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.29	0.48
42:DU:28:VAL:HG23	42:DU:34:VAL:HG12	1.95	0.48
42:DU:72:ILE:CD1	42:DU:83:VAL:HG23	2.43	0.48
1:AA:967:C:H4'	9:AI:127:PHE:HE2	1.78	0.47
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.44	0.47
1:AA:1521:C:N3	1:AA:1522:U:C5	2.82	0.47
5:AE:36:LEU:HD21	5:AE:137:VAL:HG11	1.95	0.47
5:AE:82:GLN:H	5:AE:147:MET:HE3	1.79	0.47
16:AP:38:PHE:CD1	16:AP:38:PHE:C	2.92	0.47
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.14	0.47
17:AQ:15:ASP:HA	17:AQ:21:ILE:CD1	2.42	0.47
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.96	0.47
22:BA:278:A:N1	22:BA:362:A:C8	2.82	0.47
22:BA:345:A:C2	22:BA:346:A:N6	2.82	0.47
22:BA:813:U:H2'	22:BA:814:C:C6	2.48	0.47
22:BA:1304:A:O2'	22:BA:1305:C:H5'	2.13	0.47
22:BA:2856:A:N6	22:BA:2857:G:O6	2.47	0.47
26:BE:48:THR:C	26:BE:50:ALA:N	2.69	0.47
26:BE:134:LEU:HD12	26:BE:134:LEU:O	2.14	0.47
26:BE:200:LEU:O	26:BE:201:ALA:HB3	2.12	0.47
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.77	0.47
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.78	0.47
40:BS:20:VAL:O	40:BS:23:LEU:HB2	2.13	0.47
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.44	0.47
1:CA:137:U:H1'	1:CA:227:G:N2	2.29	0.47
1:CA:510:A:H5''	1:CA:511:C:OP2	2.14	0.47
1:CA:729:A:C5	1:CA:730:G:N7	2.82	0.47
2:CB:15:HIS:O	2:CB:16:PHE:C	2.57	0.47
3:CC:92:ALA:O	3:CC:96:GLY:N	2.47	0.47
4:CD:206:LYS:HG3	4:CD:206:LYS:OXT	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:24:HIS:HB3	11:CK:31:ILE:HG23	1.95	0.47
16:CP:52:LEU:HD21	16:CP:57:ILE:HD12	1.95	0.47
22:DA:167:A:C2	22:DA:168:G:H1'	2.49	0.47
22:DA:188:G:C6	22:DA:189:G:C4	3.02	0.47
22:DA:310:A:O2'	22:DA:311:A:P	2.72	0.47
22:DA:323:C:H6	22:DA:1205:A:N1	2.12	0.47
22:DA:668:A:C5	22:DA:670:A:C8	3.02	0.47
22:DA:681:G:N3	22:DA:682:G:C8	2.82	0.47
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.49	0.47
22:DA:2405:G:O2'	22:DA:2411:A:N6	2.47	0.47
24:DC:174:LEU:O	24:DC:181:MET:HA	2.14	0.47
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.13	0.47
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.47
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.47
31:DJ:116:ARG:NH1	31:DJ:116:ARG:HB2	2.29	0.47
39:DR:19:THR:CG2	39:DR:95:ASP:HB3	2.44	0.47
1:AA:89:U:O2'	1:AA:90:C:H5''	2.14	0.47
1:AA:785:G:C2'	1:AA:786:G:H5'	2.44	0.47
1:AA:1222:G:C6	1:AA:1223:C:C4	3.02	0.47
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.30	0.47
1:AA:1419:G:C5	1:AA:1420:U:C5	3.02	0.47
3:AC:130:PHE:CE1	3:AC:131:ARG:HD2	2.49	0.47
6:AF:55:HIS:O	6:AF:56:LYS:HB2	2.14	0.47
7:AG:55:GLY:O	7:AG:57:SER:N	2.42	0.47
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.96	0.47
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.62	0.47
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.29	0.47
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.47	0.47
21:AU:37:PHE:HB3	21:AU:41:PRO:CG	2.43	0.47
22:BA:370:G:O2'	22:BA:424:G:OP1	2.28	0.47
22:BA:391:A:H1'	22:BA:411:G:O4'	2.13	0.47
22:BA:1006:C:C2	22:BA:1138:G:N2	2.81	0.47
22:BA:1060:U:O4	22:BA:1088:A:C8	2.68	0.47
22:BA:1340:U:C5	22:BA:1603:A:C8	3.01	0.47
22:BA:1588:G:C5	22:BA:1589:U:C5	3.02	0.47
22:BA:1967:C:C2'	22:BA:1968:G:H5'	2.44	0.47
25:BD:5:VAL:HG21	25:BD:80:TRP:CE3	2.49	0.47
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.29	0.47
35:BN:21:PHE:CD1	35:BN:24:MET:HE3	2.49	0.47
35:BN:71:ARG:HH21	35:BN:71:ARG:CG	2.26	0.47
42:BU:16:GLY:O	42:BU:19:LYS:N	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:280:C:H4'	1:CA:281:G:OP2	2.14	0.47
1:CA:728:A:C6	1:CA:729:A:C6	3.02	0.47
1:CA:749:A:C6	1:CA:750:C:C4	3.02	0.47
1:CA:927:G:N2	1:CA:1391:U:H1'	2.29	0.47
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.29	0.47
1:CA:1439:G:C2	1:CA:1463:U:O2	2.67	0.47
2:CB:94:HIS:HB2	2:CB:146:ASN:O	2.14	0.47
2:CB:134:ALA:O	2:CB:138:THR:N	2.43	0.47
2:CB:188:ASP:OD2	2:CB:204:ASP:CG	2.57	0.47
3:CC:47:LEU:HB3	3:CC:50:ALA:HB3	1.97	0.47
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.96	0.47
9:CI:49:ARG:NH1	9:CI:53:GLU:HG2	2.29	0.47
19:CS:17:LYS:O	19:CS:21:LYS:HB2	2.13	0.47
22:DA:980:A:C4	22:DA:1136:G:O4'	2.67	0.47
22:DA:1288:G:C4	22:DA:1327:A:C2	3.02	0.47
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.48	0.47
31:DJ:138:GLN:HG3	31:DJ:138:GLN:O	2.13	0.47
35:DN:69:ARG:O	35:DN:71:ARG:N	2.41	0.47
37:DP:30:VAL:HG12	37:DP:31:TRP:O	2.14	0.47
42:DU:88:GLU:O	42:DU:89:ASP:HB3	2.14	0.47
49:D1:26:ASN:CG	49:D1:29:THR:OG1	2.57	0.47
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.14	0.47
1:AA:119:A:C4	1:AA:240:G:N7	2.82	0.47
1:AA:411:A:C5	1:AA:429:U:C5	3.02	0.47
1:AA:444:G:C6	1:AA:445:G:N7	2.82	0.47
1:AA:684:U:O4	1:AA:685:G:C6	2.67	0.47
1:AA:1130:A:O2'	9:AI:5:GLN:HG3	2.14	0.47
1:AA:1254:A:H2'	1:AA:1255:G:C8	2.49	0.47
2:AB:91:PHE:CD1	2:AB:150:GLY:CA	2.97	0.47
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.13	0.47
2:AB:154:MET:CE	2:AB:158:PRO:HG3	2.44	0.47
4:AD:25:VAL:O	4:AD:26:ARG:O	2.32	0.47
9:AI:78:ALA:O	9:AI:81:HIS:HB3	2.14	0.47
12:AL:5:ASN:O	12:AL:8:VAL:N	2.46	0.47
14:AN:2:ALA:O	14:AN:3:LYS:CB	2.62	0.47
20:AT:70:ASN:N	20:AT:70:ASN:OD1	2.46	0.47
22:BA:934:U:H2'	22:BA:935:C:C6	2.49	0.47
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.49	0.47
22:BA:1385:A:C4	22:BA:1386:C:C5	3.03	0.47
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.62	0.47
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:12:THR:HG21	37:BP:9:GLU:CG	2.44	0.47
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	1.96	0.47
34:BM:42:THR:O	34:BM:43:ALA:C	2.56	0.47
34:BM:97:GLN:OE1	34:BM:97:GLN:N	2.47	0.47
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.96	0.47
53:B5:69:LEU:HD12	53:B5:163:GLU:O	2.14	0.47
1:CA:553:A:O2'	12:CL:26:ALA:O	2.32	0.47
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.29	0.47
1:CA:951:G:H2'	1:CA:952:U:C6	2.49	0.47
1:CA:1253:G:N1	1:CA:1285:A:N6	2.63	0.47
5:CE:25:VAL:O	5:CE:28:GLY:N	2.45	0.47
8:CH:64:LYS:HE2	8:CH:71:VAL:HG21	1.95	0.47
15:CO:41:GLY:O	15:CO:42:HIS:C	2.57	0.47
15:CO:42:HIS:CE1	15:CO:46:HIS:CD2	3.02	0.47
22:DA:242:G:N7	51:D3:5:LYS:HG2	2.29	0.47
22:DA:609:A:H2'	22:DA:610:C:O4'	2.13	0.47
22:DA:621:A:H2'	22:DA:622:G:O4'	2.15	0.47
22:DA:807:U:H4'	22:DA:2446:G:OP1	2.14	0.47
22:DA:949:G:C6	22:DA:950:G:N7	2.83	0.47
22:DA:1187:G:C5	57:DA:3578:HOH:O	2.60	0.47
22:DA:1350:C:C2	22:DA:1382:G:C2	3.01	0.47
22:DA:1805:A:C4	22:DA:1813:G:N2	2.82	0.47
22:DA:1838:C:N3	22:DA:1899:A:C2	2.82	0.47
22:DA:2215:C:O2'	22:DA:2216:G:H5'	2.14	0.47
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.49	0.47
26:DE:170:ARG:CZ	26:DE:176:ASP:OD1	2.63	0.47
39:DR:81:LYS:O	39:DR:83:TYR:N	2.47	0.47
42:DU:7:ARG:O	42:DU:25:VAL:HB	2.14	0.47
1:AA:8:A:C5	4:AD:206:LYS:HB3	2.50	0.47
1:AA:192:A:C5	1:AA:193:C:C5	3.03	0.47
1:AA:974:A:H4'	1:AA:975:A:H3'	1.95	0.47
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.30	0.47
1:AA:1462:C:C2	1:AA:1463:U:C6	3.02	0.47
4:AD:197:GLU:O	4:AD:200:ILE:N	2.47	0.47
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.30	0.47
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.29	0.47
10:AJ:26:VAL:HG12	10:AJ:30:LYS:HD3	1.97	0.47
11:AK:110:ILE:HB	21:AU:6:VAL:CG2	2.44	0.47
13:AM:88:GLY:O	13:AM:91:HIS:N	2.47	0.47
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.15	0.47
22:BA:164:C:H2'	22:BA:165:A:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:372:G:OP2	45:BX:61:LYS:HD3	2.13	0.47
22:BA:907:G:C2'	22:BA:908:C:H5'	2.45	0.47
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.29	0.47
22:BA:1449:G:C6	22:BA:1450:G:N7	2.82	0.47
22:BA:1672:A:C2	22:BA:2582:G:H5'	2.49	0.47
22:BA:2298:A:N1	22:BA:2321:U:C4	2.81	0.47
23:BB:7:G:H5'	36:BO:29:HIS:CD2	2.49	0.47
24:BC:92:ALA:HB3	24:BC:104:ILE:HG13	1.97	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.14	0.47
35:BN:95:THR:HG21	35:BN:113:ILE:HD11	1.97	0.47
1:CA:182:A:C8	1:CA:184:G:N7	2.82	0.47
1:CA:632:U:H3'	1:CA:633:G:H5'	1.97	0.47
4:CD:48:LEU:HD23	4:CD:53:VAL:HA	1.96	0.47
9:CI:12:ARG:HD2	9:CI:107:ASP:HB3	1.96	0.47
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.29	0.47
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.44	0.47
20:CT:65:GLY:HA2	20:CT:68:HIS:CD2	2.49	0.47
22:DA:39:G:C6	22:DA:40:U:C4	3.02	0.47
22:DA:197:A:C2	22:DA:198:C:H1'	2.49	0.47
22:DA:479:A:H4'	22:DA:480:A:OP1	2.14	0.47
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.29	0.47
22:DA:1324:G:C2	22:DA:1328:A:C6	3.01	0.47
22:DA:1509:A:O2'	22:DA:1510:G:P	2.72	0.47
22:DA:1525:A:C5	22:DA:1526:C:C4	3.02	0.47
22:DA:2283:C:H2'	22:DA:2284:A:O4'	2.14	0.47
22:DA:2452:C:N4	22:DA:2453:A:N6	2.62	0.47
24:DC:168:ASP:O	24:DC:171:TYR:O	2.31	0.47
24:DC:178:SER:O	24:DC:271:ARG:HB2	2.14	0.47
25:DD:66:GLY:O	25:DD:69:ALA:HB3	2.14	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
32:DK:20:MET:HE2	32:DK:42:THR:CG2	2.44	0.47
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.97	0.47
1:AA:152:A:N6	1:AA:170:U:C2	2.82	0.47
1:AA:381:C:H2'	1:AA:382:A:O4'	2.15	0.47
1:AA:760:G:C5	1:AA:761:G:C8	3.03	0.47
1:AA:934:C:N3	1:AA:1345:U:C5	2.83	0.47
1:AA:1306:A:C5	1:AA:1307:U:C5	3.01	0.47
6:AF:49:TYR:CD1	6:AF:49:TYR:C	2.92	0.47
10:AJ:51:VAL:HB	14:AN:81:ARG:CB	2.44	0.47
13:AM:66:GLU:O	13:AM:69:LEU:N	2.48	0.47
14:AN:26:GLU:O	14:AN:28:LYS:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:16:LYS:N	17:AQ:17:MET:HE1	2.29	0.47
21:AU:34:ARG:NH2	21:AU:35:ARG:HD2	2.30	0.47
22:BA:807:U:P	33:BL:36:LYS:HE2	2.55	0.47
22:BA:1483:G:N2	22:BA:1484:U:C2	2.83	0.47
22:BA:2117:A:N1	22:BA:2170:A:N1	2.63	0.47
22:BA:2118:U:O4	22:BA:2149:U:H5'	2.15	0.47
22:BA:2258:C:C2	22:BA:2426:A:H4'	2.49	0.47
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.50	0.47
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.79	0.47
22:BA:2805:C:C4	22:BA:2806:C:C4	3.03	0.47
23:BB:109:A:C5	23:BB:110:C:C4	3.02	0.47
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.61	0.47
24:BC:83:TYR:CD1	24:BC:83:TYR:C	2.93	0.47
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.97	0.47
27:BF:85:ILE:O	27:BF:85:ILE:HG23	2.15	0.47
27:BF:134:GLU:HB3	27:BF:136:ILE:HD12	1.96	0.47
33:BL:82:LEU:C	33:BL:84:LYS:H	2.22	0.47
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.29	0.47
43:BV:82:TYR:CD2	43:BV:82:TYR:O	2.67	0.47
1:CA:748:G:H2'	1:CA:749:A:H8	1.80	0.47
1:CA:929:G:H5''	1:CA:1535:C:H5''	1.96	0.47
1:CA:1309:G:O6	1:CA:1329:A:N1	2.47	0.47
2:CB:32:PHE:N	2:CB:40:ILE:O	2.46	0.47
2:CB:41:ILE:C	2:CB:41:ILE:HD12	2.40	0.47
3:CC:153:VAL:HG23	3:CC:157:LEU:HD21	1.95	0.47
5:CE:122:ASN:CG	5:CE:123:VAL:H	2.23	0.47
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.29	0.47
8:CH:67:GLN:C	8:CH:69:LYS:N	2.72	0.47
11:CK:87:LYS:HG3	11:CK:114:THR:HA	1.95	0.47
11:CK:112:ASP:HB2	21:CU:20:LYS:HE3	1.95	0.47
22:DA:219:A:N6	22:DA:220:G:C6	2.83	0.47
22:DA:295:G:H2'	22:DA:295:G:N3	2.28	0.47
22:DA:396:G:O4'	45:DX:29:PHE:HB3	2.14	0.47
22:DA:536:G:C6	22:DA:537:G:C5	3.02	0.47
22:DA:732:C:H2'	22:DA:733:G:O4'	2.15	0.47
22:DA:776:G:N7	22:DA:793:A:C4	2.82	0.47
22:DA:874:G:C2	22:DA:904:G:C2	3.01	0.47
22:DA:1313:U:O2	22:DA:1313:U:H2'	2.13	0.47
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.50	0.47
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.14	0.47
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1861:G:N2	22:DA:1882:U:H1'	2.29	0.47
22:DA:2276:G:O2'	22:DA:2277:G:H5'	2.14	0.47
22:DA:2331:G:O2'	22:DA:2336:A:N1	2.45	0.47
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.45	0.47
24:DC:17:VAL:HB	24:DC:204:VAL:HG22	1.97	0.47
24:DC:200:HIS:O	24:DC:203:ARG:HG2	2.14	0.47
25:DD:4:LEU:HD22	25:DD:101:PHE:CZ	2.49	0.47
33:DL:76:GLU:HG3	33:DL:76:GLU:O	2.14	0.47
35:DN:18:GLN:O	35:DN:18:GLN:HG2	2.13	0.47
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.97	0.47
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	1.95	0.47
45:DX:54:LYS:O	45:DX:58:VAL:N	2.41	0.47
1:AA:134:G:H1'	1:AA:325:A:C5	2.50	0.47
1:AA:1381:U:C6	7:AG:78:ARG:NH2	2.83	0.47
2:AB:179:LEU:O	2:AB:181:ILE:HG13	2.14	0.47
3:AC:106:VAL:O	3:AC:106:VAL:HG12	2.14	0.47
3:AC:152:GLU:HB3	3:AC:167:TRP:HB3	1.96	0.47
7:AG:92:ARG:HB3	7:AG:93:PRO:HD2	1.97	0.47
8:AH:73:GLU:N	8:AH:130:ALA:O	2.48	0.47
13:AM:90:ARG:HD2	13:AM:96:PRO:O	2.15	0.47
17:AQ:48:ASP:HB2	17:AQ:52:GLU:OE2	2.14	0.47
22:BA:362:A:N3	22:BA:362:A:H2'	2.29	0.47
22:BA:622:G:O5'	57:BA:3297:HOH:O	2.20	0.47
22:BA:981:A:C5'	57:BA:3600:HOH:O	2.61	0.47
22:BA:1176:U:C4	22:BA:1177:G:C6	3.02	0.47
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.15	0.47
22:BA:1358:G:C8	22:BA:1371:G:O6	2.68	0.47
22:BA:1360:G:C6	22:BA:1372:U:C2	3.02	0.47
22:BA:2187:U:C4	22:BA:2188:U:N3	2.83	0.47
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.49	0.47
22:BA:2298:A:C2	22:BA:2321:U:C4	3.03	0.47
26:BE:108:ILE:HD12	26:BE:108:ILE:C	2.40	0.47
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	2.29	0.47
44:BW:41:ARG:HG3	44:BW:41:ARG:HH11	1.79	0.47
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.49	0.47
1:CA:33:A:N3	1:CA:34:C:C6	2.83	0.47
1:CA:461:A:H2'	1:CA:462:G:O4'	2.15	0.47
1:CA:1251:A:O2'	1:CA:1369:C:O2'	2.27	0.47
1:CA:1299:A:H2'	1:CA:1299:A:N3	2.30	0.47
1:CA:1302:C:C5	13:CM:17:ILE:CD1	2.98	0.47
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1423:G:OP1	32:DK:49:ARG:NH1	2.45	0.47
2:CB:207:ILE:O	2:CB:210:VAL:HG22	2.15	0.47
3:CC:169:ARG:HD2	3:CC:170:GLU:N	2.29	0.47
6:CF:41:ASP:OD1	6:CF:58:HIS:NE2	2.47	0.47
15:CO:53:ARG:O	15:CO:56:LEU:N	2.47	0.47
21:CU:8:GLU:HB3	21:CU:12:PHE:CD2	2.49	0.47
22:DA:247:G:OP2	22:DA:249:C:N4	2.48	0.47
22:DA:282:A:C6	22:DA:359:G:N1	2.82	0.47
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.39	0.47
22:DA:605:G:N7	22:DA:606:U:C5	2.82	0.47
22:DA:674:G:O2'	26:DE:69:ARG:CD	2.62	0.47
22:DA:805:G:H5''	33:DL:38:GLN:HG3	1.95	0.47
22:DA:833:A:H2'	22:DA:834:G:C8	2.50	0.47
22:DA:1213:A:H2'	22:DA:1214:A:O4'	2.14	0.47
22:DA:1323:C:C4	22:DA:1324:G:N7	2.83	0.47
22:DA:1428:C:C5	22:DA:1569:A:H5''	2.48	0.47
22:DA:1660:G:C2	22:DA:1661:G:C8	3.03	0.47
22:DA:2572:A:N7	25:DD:150:GLN:HB3	2.29	0.47
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.14	0.47
24:DC:232:HIS:CE1	24:DC:244:PRO:HA	2.50	0.47
24:DC:237:GLY:O	24:DC:239:ASN:N	2.47	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	1.95	0.47
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.13	0.47
35:DN:87:PHE:CZ	35:DN:94:TYR:HB3	2.49	0.47
39:DR:82:HIS:CG	39:DR:82:HIS:O	2.67	0.47
1:AA:181:A:N6	1:AA:195:A:C8	2.83	0.47
1:AA:254:G:N2	1:AA:273:U:C2	2.83	0.47
1:AA:654:G:C5	1:AA:655:A:N7	2.82	0.47
1:AA:728:A:OP1	15:AO:54:ARG:NH2	2.47	0.47
1:AA:1133:G:N1	1:AA:1142:G:C6	2.82	0.47
1:AA:1288:A:C5	1:AA:1289:A:C8	3.03	0.47
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.14	0.47
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.30	0.47
4:AD:38:PRO:HD2	4:AD:42:GLY:CA	2.45	0.47
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	1.96	0.47
5:AE:65:GLU:HA	5:AE:68:ARG:HG3	1.96	0.47
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.77	0.47
16:AP:77:GLU:C	16:AP:79:ASN:H	2.23	0.47
17:AQ:59:VAL:HG22	17:AQ:61:ILE:HD12	1.97	0.47
19:AS:51:VAL:HG22	19:AS:71:LEU:CD1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:25:LYS:HD2	21:AU:26:ALA:N	2.30	0.47
22:BA:29:U:H2'	22:BA:30:G:C8	2.50	0.47
22:BA:58:G:OP1	41:BT:78:SER:HB2	2.15	0.47
22:BA:118:A:N3	22:BA:178:G:H1'	2.30	0.47
22:BA:250:G:C6	22:BA:251:A:C6	3.03	0.47
22:BA:547:A:H8	22:BA:548:G:N3	2.12	0.47
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.29	0.47
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.30	0.47
22:BA:1230:A:H2'	22:BA:1231:U:O4'	2.15	0.47
22:BA:1378:A:O2'	22:BA:1380:G:N7	2.45	0.47
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.28	0.47
22:BA:1926:U:H2'	22:BA:1927:A:OP2	2.14	0.47
26:BE:37:ALA:O	26:BE:40:ARG:HB2	2.14	0.47
28:BG:24:ILE:HG22	28:BG:26:ILE:HD11	1.96	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.62	0.47
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.97	0.47
33:BL:111:ILE:HD12	33:BL:111:ILE:N	2.30	0.47
35:BN:55:ALA:HB1	35:BN:80:PHE:H	1.80	0.47
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.29	0.47
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.28	0.47
1:CA:254:G:H4'	17:CQ:20:SER:OG	2.15	0.47
1:CA:679:C:C2	1:CA:712:A:C2	3.03	0.47
1:CA:906:A:N6	57:CA:1824:HOH:O	2.47	0.47
1:CA:992:U:C5	1:CA:1043:G:C8	3.03	0.47
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.50	0.47
1:CA:1243:C:N4	1:CA:1244:G:O6	2.48	0.47
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.49	0.47
1:CA:1416:G:C2	1:CA:1485:U:O2	2.67	0.47
2:CB:17:GLY:O	2:CB:39:HIS:O	2.32	0.47
2:CB:187:VAL:HB	2:CB:191:SER:HB2	1.96	0.47
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.96	0.47
4:CD:116:GLN:HG3	4:CD:120:HIS:ND1	2.30	0.47
5:CE:69:ARG:O	5:CE:70:ASN:HB2	2.14	0.47
5:CE:105:ILE:HG13	5:CE:112:ARG:HD3	1.96	0.47
7:CG:130:ASN:HB2	7:CG:135:VAL:HG21	1.97	0.47
12:CL:24:LEU:HG	12:CL:25:GLU:HG3	1.95	0.47
12:CL:94:ARG:O	12:CL:95:TYR:CD1	2.67	0.47
17:CQ:46:VAL:HG22	17:CQ:61:ILE:HD11	1.96	0.47
18:CR:24:LYS:O	18:CR:26:ILE:N	2.48	0.47
22:DA:271:G:H1'	22:DA:272:A:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.82	0.47
22:DA:681:G:H2'	22:DA:682:G:O4'	2.15	0.47
22:DA:749:A:C4	22:DA:750:A:H8	2.31	0.47
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.49	0.47
22:DA:1265:A:OP2	57:DA:3747:HOH:O	2.19	0.47
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.49	0.47
22:DA:1686:C:H2'	22:DA:1687:G:O4'	2.14	0.47
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.49	0.47
22:DA:1819:A:H4'	22:DA:1820:U:H5''	1.97	0.47
22:DA:2201:G:N3	22:DA:2202:U:C6	2.83	0.47
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.14	0.47
22:DA:2518:A:N3	22:DA:2518:A:H2'	2.29	0.47
22:DA:2520:C:O2'	22:DA:2565:A:O2'	2.12	0.47
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.45	0.47
22:DA:2550:G:C2	22:DA:2559:C:O2	2.68	0.47
22:DA:2621:G:OP1	25:DD:124:ARG:NH2	2.47	0.47
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.14	0.47
22:DA:2851:A:O2'	35:DN:64:ARG:NH2	2.47	0.47
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.49	0.47
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.49	0.47
24:DC:232:HIS:HE2	24:DC:244:PRO:HA	1.78	0.47
25:DD:56:LYS:O	25:DD:58:ASN:N	2.47	0.47
25:DD:74:GLU:HG2	25:DD:75:ALA:N	2.30	0.47
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.14	0.47
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.55	0.47
26:DE:181:ILE:HG23	33:DL:2:ARG:CZ	2.45	0.47
30:DI:53:LEU:HD21	30:DI:82:LYS:HE2	1.96	0.47
36:DO:7:ARG:NH1	36:DO:97:PHE:CE2	2.83	0.47
48:D0:36:GLU:OE2	48:D0:46:ASP:HB2	2.15	0.47
1:AA:570:G:H2'	1:AA:571:U:C6	2.50	0.47
1:AA:769:G:C2'	1:AA:770:C:H5'	2.45	0.47
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.45	0.47
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.15	0.47
1:AA:1524:C:OP2	11:AK:125:LYS:NZ	2.48	0.47
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.96	0.47
6:AF:99:ALA:O	6:AF:100:SER:HB2	2.15	0.47
11:AK:125:LYS:O	21:AU:34:ARG:CZ	2.63	0.47
22:BA:26:G:H1'	22:BA:514:A:N6	2.30	0.47
22:BA:84:A:N1	22:BA:98:G:O2'	2.45	0.47
22:BA:480:A:H2'	22:BA:481:G:OP1	2.14	0.47
22:BA:572:A:C2	22:BA:2033:A:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2196:C:C2'	22:BA:2197:U:H5'	2.45	0.47
22:BA:2214:C:C5	22:BA:2215:C:C5	3.02	0.47
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.50	0.47
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.97	0.47
31:BJ:17:VAL:HG23	31:BJ:137:PRO:CB	2.35	0.47
35:BN:37:THR:HG22	35:BN:110:MET:HE1	1.96	0.47
41:BT:16:VAL:O	41:BT:17:SER:CB	2.62	0.47
1:CA:780:A:H2	1:CA:803:G:C6	2.33	0.47
1:CA:881:G:C6	1:CA:882:C:C4	3.02	0.47
1:CA:937:A:C2	1:CA:1379:G:O6	2.67	0.47
1:CA:1107:C:C4	1:CA:1108:G:N7	2.83	0.47
1:CA:1187:G:C4	1:CA:1188:A:C8	3.02	0.47
5:CE:18:VAL:CG2	5:CE:56:VAL:HG13	2.45	0.47
6:CF:88:MET:HE3	18:CR:64:TYR:CD2	2.50	0.47
9:CI:83:ILE:O	9:CI:87:LEU:HG	2.15	0.47
11:CK:126:LYS:C	21:CU:34:ARG:CZ	2.88	0.47
14:CN:49:GLN:O	14:CN:51:LEU:N	2.48	0.47
21:CU:41:PRO:O	21:CU:42:THR:C	2.57	0.47
22:DA:13:A:C5	22:DA:525:U:N3	2.83	0.47
22:DA:85:G:OP1	42:DU:6:ARG:HB2	2.15	0.47
22:DA:566:U:H2'	22:DA:567:U:O4'	2.14	0.47
22:DA:624:C:O2'	22:DA:657:U:H5''	2.15	0.47
22:DA:669:G:N3	22:DA:669:G:H2'	2.30	0.47
22:DA:732:C:C4	22:DA:733:G:C5	3.03	0.47
22:DA:776:G:C8	22:DA:793:A:C4	3.02	0.47
22:DA:836:G:C5	22:DA:837:C:C4	3.03	0.47
22:DA:938:G:C2	22:DA:939:G:C8	3.03	0.47
22:DA:1838:C:C5	22:DA:1899:A:C6	3.03	0.47
22:DA:2050:C:C4	22:DA:2051:A:C6	3.02	0.47
22:DA:2077:A:C2	22:DA:2078:C:C5	3.02	0.47
22:DA:2264:C:C2	22:DA:2277:G:N2	2.82	0.47
22:DA:2435:A:H2'	22:DA:2436:G:O4'	2.14	0.47
22:DA:2652:C:C4	22:DA:2653:U:C5	3.03	0.47
24:DC:45:ASN:C	24:DC:47:GLY:N	2.72	0.47
1:AA:427:U:H3'	1:AA:428:G:H2'	1.97	0.47
1:AA:469:C:C4	1:AA:470:C:C4	3.02	0.47
1:AA:1268:G:C6	1:AA:1269:A:N6	2.82	0.47
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.15	0.47
3:AC:113:ALA:O	3:AC:114:LYS:C	2.57	0.47
5:AE:101:GLU:O	5:AE:101:GLU:CD	2.58	0.47
7:AG:43:VAL:O	7:AG:47:LEU:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:25:ASN:HB2	9:AI:27:LYS:HE3	1.96	0.47
13:AM:3:ARG:HA	13:AM:9:ILE:HA	1.97	0.47
17:AQ:4:LYS:HD2	17:AQ:4:LYS:O	2.15	0.47
22:BA:11:C:C3'	22:BA:12:U:H5'	2.44	0.47
22:BA:702:U:O2	22:BA:702:U:C2'	2.63	0.47
22:BA:747:U:C4	22:BA:2613:U:C4	3.03	0.47
22:BA:1359:A:N7	22:BA:1373:A:C2	2.83	0.47
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.37	0.47
22:BA:2728:U:O2'	22:BA:2729:G:P	2.73	0.47
23:BB:109:A:H2'	23:BB:110:C:C6	2.50	0.47
25:BD:99:GLU:O	25:BD:100:LEU:C	2.55	0.47
27:BF:73:SER:HB2	27:BF:81:GLN:N	2.30	0.47
36:BO:102:ARG:O	36:BO:105:ALA:HB3	2.15	0.47
1:CA:4:U:O4	1:CA:630:A:O2'	2.32	0.47
1:CA:9:G:H5'	5:CE:108:GLY:HA3	1.95	0.47
1:CA:723:U:O5'	21:CU:49:LYS:HG2	2.15	0.47
1:CA:865:A:C2	1:CA:918:A:H4'	2.49	0.47
1:CA:1359:C:H2'	1:CA:1361:G:OP2	2.15	0.47
1:CA:1460:C:N4	1:CA:1461:G:C6	2.82	0.47
1:CA:1517:G:C8	22:DA:1920:C:OP1	2.68	0.47
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	1.96	0.47
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.28	0.47
6:CF:51:ILE:O	6:CF:52:ASN:HB2	2.15	0.47
12:CL:64:THR:HG23	12:CL:93:VAL:HA	1.96	0.47
22:DA:308:G:N1	22:DA:309:A:C2	2.83	0.47
22:DA:571:U:H4'	22:DA:573:U:H5	1.80	0.47
22:DA:682:G:N3	22:DA:682:G:H2'	2.30	0.47
22:DA:848:C:H2'	22:DA:849:A:C8	2.50	0.47
22:DA:1153:C:H3'	22:DA:1154:G:H8	1.80	0.47
22:DA:1352:U:C5	22:DA:1377:G:O6	2.68	0.47
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.97	0.47
22:DA:2055:C:H5'	22:DA:2056:G:OP1	2.15	0.47
22:DA:2195:U:H2'	22:DA:2196:C:C6	2.50	0.47
22:DA:2285:C:H5'	22:DA:2288:A:N6	2.30	0.47
32:DK:63:VAL:HG12	32:DK:107:LEU:HD21	1.96	0.47
35:DN:8:ARG:HB3	35:DN:10:LEU:HG	1.96	0.47
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.47	0.47
38:DQ:47:TYR:CD1	38:DQ:47:TYR:O	2.67	0.47
40:DS:107:VAL:HG13	40:DS:107:VAL:O	2.15	0.47
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.15	0.47
52:D4:27:CYS:SG	52:D4:30:GLU:N	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:192:A:C6	1:AA:193:C:C4	3.03	0.47
1:AA:284:C:H2'	1:AA:285:C:C6	2.49	0.47
1:AA:453:G:H2'	1:AA:454:G:C8	2.50	0.47
1:AA:495:A:O4'	1:AA:496:A:C8	2.68	0.47
1:AA:505:G:OP2	1:AA:534:U:H2'	2.15	0.47
1:AA:1180:A:P	9:AI:99:ARG:HH22	2.37	0.47
1:AA:1374:A:C2	1:AA:1375:A:C8	3.03	0.47
2:AB:99:GLY:O	2:AB:103:ASN:N	2.42	0.47
4:AD:100:ASN:O	4:AD:104:ARG:HB2	2.15	0.47
11:AK:102:ALA:O	11:AK:104:GLY:N	2.48	0.47
12:AL:63:VAL:HG21	12:AL:95:TYR:CE1	2.50	0.47
19:AS:65:GLU:CD	19:AS:65:GLU:H	2.22	0.47
22:BA:278:A:C6	22:BA:362:A:N7	2.83	0.47
22:BA:528:A:H2	22:BA:2043:C:H5'	1.80	0.47
22:BA:601:C:O2	22:BA:605:G:H4'	2.15	0.47
22:BA:644:A:H2'	22:BA:645:C:O4'	2.15	0.47
22:BA:1579:A:H2'	22:BA:1580:A:C8	2.50	0.47
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.33	0.47
23:BB:30:C:H2'	23:BB:31:C:H5'	1.96	0.47
24:BC:260:ASN:O	24:BC:261:LYS:HB2	2.15	0.47
37:BP:52:ASN:C	37:BP:53:ARG:HG2	2.39	0.47
1:CA:268:U:H2'	1:CA:269:C:C6	2.50	0.47
1:CA:366:A:H1'	1:CA:395:C:O2	2.14	0.47
1:CA:495:A:C2	1:CA:496:A:N6	2.83	0.47
1:CA:540:G:C6	1:CA:541:G:C5	3.02	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.62	0.47
22:DA:45:G:N2	22:DA:434:U:C2	2.82	0.47
22:DA:149:A:C5	22:DA:150:U:C5	3.03	0.47
22:DA:293:U:C5'	22:DA:294:A:OP2	2.63	0.47
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.45	0.47
22:DA:478:A:C2	22:DA:480:A:C4	3.03	0.47
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.14	0.47
22:DA:1374:G:H5'	22:DA:1375:U:OP2	2.15	0.47
22:DA:1906:G:H5''	22:DA:1929:G:O2'	2.14	0.47
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.78	0.47
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.15	0.47
31:DJ:106:LYS:HD2	31:DJ:119:PHE:CZ	2.50	0.47
35:DN:114:GLU:OE2	35:DN:118:ARG:HD3	2.15	0.47
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.14	0.47
47:DZ:5:ILE:HD11	47:DZ:57:VAL:HG21	1.97	0.47
48:D0:39:LEU:O	48:D0:42:HIS:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:341:C:H2'	1:AA:342:C:C6	2.50	0.46
3:AC:42:TYR:CE2	3:AC:90:VAL:HG21	2.50	0.46
12:AL:4:VAL:O	12:AL:8:VAL:HG23	2.15	0.46
20:AT:5:LYS:O	20:AT:6:SER:C	2.57	0.46
22:BA:78:U:H2'	22:BA:79:C:H6	1.79	0.46
22:BA:465:G:H2'	22:BA:466:A:C8	2.50	0.46
22:BA:527:C:H4'	22:BA:528:A:O5'	2.15	0.46
22:BA:995:C:H5'	22:BA:995:C:C6	2.51	0.46
22:BA:1064:C:N4	22:BA:1070:A:OP2	2.48	0.46
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.15	0.46
22:BA:1713:A:C2	22:BA:1716:U:C6	3.03	0.46
22:BA:1770:G:C5	22:BA:1983:G:C6	3.04	0.46
22:BA:1818:U:OP2	24:BC:156:ARG:NH1	2.48	0.46
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.30	0.46
22:BA:1925:C:C4'	22:BA:1926:U:C4	2.98	0.46
22:BA:2241:A:N7	57:BA:3510:HOH:O	2.36	0.46
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.30	0.46
28:BG:105:LEU:HB2	28:BG:113:VAL:HB	1.98	0.46
32:BK:121:GLU:O	32:BK:122:VAL:OXT	2.33	0.46
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.14	0.46
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.93	0.46
1:CA:132:C:C4	1:CA:133:U:C5	3.03	0.46
1:CA:213:G:N7	1:CA:214:C:C2	2.83	0.46
1:CA:429:U:H3'	4:CD:9:LEU:CD2	2.44	0.46
1:CA:724:G:C2	1:CA:725:G:C8	3.02	0.46
1:CA:756:C:C2'	1:CA:757:U:H5'	2.45	0.46
1:CA:792:A:H1'	1:CA:794:A:N7	2.29	0.46
1:CA:956:U:C4	1:CA:957:U:C5	3.03	0.46
1:CA:1039:G:C6	1:CA:1040:U:C4	3.03	0.46
1:CA:1072:G:C6	1:CA:1073:U:C4	3.03	0.46
1:CA:1461:G:C6	1:CA:1462:C:C4	3.03	0.46
2:CB:114:LEU:HD13	2:CB:144:LEU:HB2	1.97	0.46
3:CC:130:PHE:CZ	3:CC:131:ARG:HD3	2.50	0.46
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.96	0.46
22:DA:118:A:N7	22:DA:119:A:C8	2.82	0.46
22:DA:460:A:H2'	22:DA:461:C:O4'	2.15	0.46
22:DA:693:A:C6	22:DA:694:U:C4	3.03	0.46
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.80	0.46
22:DA:1649:G:N1	22:DA:2009:A:C6	2.83	0.46
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.50	0.46
22:DA:1838:C:C4	22:DA:1899:A:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1883:U:H2'	22:DA:1884:G:H5'	1.97	0.46
22:DA:2214:C:O2	22:DA:2214:C:H2'	2.14	0.46
22:DA:2308:G:O6	22:DA:2311:A:N7	2.48	0.46
26:DE:189:THR:O	26:DE:193:VAL:HG23	2.16	0.46
30:DI:33:VAL:HG22	30:DI:67:PHE:CD1	2.50	0.46
31:DJ:130:HIS:CE1	31:DJ:137:PRO:HG3	2.50	0.46
37:DP:37:LYS:HD2	37:DP:39:ARG:HD2	1.97	0.46
40:DS:59:GLU:HA	40:DS:64:ALA:HA	1.97	0.46
45:DX:74:ARG:HG3	45:DX:76:GLU:HG3	1.97	0.46
1:AA:160:A:H2'	1:AA:161:A:O4'	2.15	0.46
1:AA:224:U:H2'	1:AA:225:C:C6	2.49	0.46
1:AA:374:A:C4	1:AA:375:U:C5	3.04	0.46
1:AA:972:C:H4'	10:AJ:59:LYS:HE2	1.96	0.46
1:AA:1091:U:O2	1:AA:1095:U:N3	2.48	0.46
12:AL:90:LEU:HB3	12:AL:93:VAL:CG2	2.45	0.46
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.74	0.46
19:AS:5:LEU:O	19:AS:7:LYS:N	2.47	0.46
22:BA:84:A:H62	22:BA:101:A:H2	1.63	0.46
22:BA:170:U:H2'	22:BA:171:U:H6	1.80	0.46
22:BA:368:A:N6	22:BA:369:U:O4	2.47	0.46
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.51	0.46
22:BA:2575:C:O2'	25:BD:145:SER:HB2	2.15	0.46
22:BA:2886:A:C5	22:BA:2887:A:C8	3.03	0.46
23:BB:29:A:H2'	23:BB:30:C:O4'	2.15	0.46
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.46	0.46
28:BG:2:SER:C	28:BG:4:VAL:H	2.22	0.46
49:B1:29:THR:O	49:B1:30:LYS:HD3	2.15	0.46
51:B3:62:LEU:HB3	51:B3:65:ALA:HB2	1.96	0.46
1:CA:57:G:C6	1:CA:58:C:C4	3.03	0.46
1:CA:254:G:N2	1:CA:273:U:C2	2.83	0.46
1:CA:312:C:H2'	1:CA:313:A:O4'	2.16	0.46
1:CA:544:G:OP1	4:CD:59:GLN:HG2	2.15	0.46
1:CA:672:U:H2'	1:CA:673:A:C8	2.50	0.46
1:CA:708:C:H2'	1:CA:709:U:C6	2.51	0.46
1:CA:956:U:C5	1:CA:957:U:C5	3.03	0.46
1:CA:1244:G:C6	1:CA:1245:C:N4	2.83	0.46
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.15	0.46
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.15	0.46
2:CB:164:ILE:O	2:CB:186:ILE:HG23	2.14	0.46
5:CE:101:GLU:C	5:CE:103:THR:N	2.74	0.46
5:CE:105:ILE:HG13	5:CE:105:ILE:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.45	0.46
6:CF:55:HIS:O	6:CF:56:LYS:O	2.33	0.46
12:CL:40:THR:HG21	12:CL:90:LEU:HD12	1.97	0.46
16:CP:6:LEU:HD11	16:CP:71:VAL:CG2	2.46	0.46
20:CT:25:ARG:HD2	20:CT:29:ARG:NH2	2.30	0.46
22:DA:503:A:C4	22:DA:506:G:N7	2.83	0.46
22:DA:593:U:C2	22:DA:594:U:C5	3.04	0.46
22:DA:605:G:C5	22:DA:606:U:C5	3.03	0.46
22:DA:756:A:H2'	22:DA:757:G:O4'	2.16	0.46
22:DA:1599:U:O4	22:DA:1600:C:N4	2.47	0.46
22:DA:1645:G:H5''	22:DA:1646:C:O5'	2.15	0.46
22:DA:2093:G:N1	22:DA:2094:A:C5	2.83	0.46
22:DA:2094:A:C2	22:DA:2196:C:O2	2.69	0.46
22:DA:2361:G:OP1	51:D3:26:HIS:HA	2.15	0.46
23:DB:25:U:C4	23:DB:26:C:C4	3.03	0.46
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.15	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	1.97	0.46
39:DR:49:ILE:CG2	39:DR:54:VAL:HG23	2.46	0.46
39:DR:52:PRO:C	39:DR:53:PHE:CG	2.90	0.46
40:DS:69:LEU:HG	40:DS:107:VAL:CG2	2.45	0.46
48:D0:13:ARG:HG2	48:D0:17:ARG:HD2	1.96	0.46
1:AA:614:C:H2'	1:AA:615:G:O4'	2.16	0.46
1:AA:637:C:C2'	1:AA:638:U:H5'	2.45	0.46
1:AA:929:G:C6	1:AA:930:C:C4	3.04	0.46
9:AI:12:ARG:O	9:AI:13:LYS:C	2.58	0.46
15:AO:89:ARG:NH2	22:BA:714:U:OP2	2.48	0.46
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.45	0.46
22:BA:622:G:H2'	22:BA:623:C:H6	1.79	0.46
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.14	0.46
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.31	0.46
22:BA:1866:A:C6	22:BA:1876:A:N7	2.83	0.46
22:BA:2861:U:C2	22:BA:2862:G:C8	3.04	0.46
38:BQ:90:ILE:HG13	39:BR:49:ILE:HD11	1.96	0.46
1:CA:101:A:C5	1:CA:102:G:N7	2.83	0.46
1:CA:187:G:H5'	20:CT:80:THR:HG21	1.97	0.46
1:CA:301:G:H2'	1:CA:302:G:H8	1.79	0.46
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.15	0.46
1:CA:391:G:H5''	16:CP:8:ARG:CD	2.45	0.46
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.80	0.46
6:CF:90:MET:HE1	18:CR:23:TYR:CZ	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:101:ILE:HD12	8:CH:101:ILE:C	2.40	0.46
11:CK:61:PHE:O	11:CK:65:VAL:HG12	2.15	0.46
11:CK:122:ARG:CZ	21:CU:36:GLU:HG3	2.45	0.46
12:CL:7:LEU:HD22	12:CL:12:ARG:HD2	1.96	0.46
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.14	0.46
22:DA:13:A:N1	22:DA:525:U:H2'	2.29	0.46
22:DA:574:A:P	57:DA:3263:HOH:O	2.74	0.46
22:DA:669:G:N2	22:DA:670:A:C6	2.82	0.46
22:DA:982:C:H5''	22:DA:983:A:OP2	2.15	0.46
22:DA:1264:A:C8	22:DA:1265:A:C8	3.04	0.46
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.03	0.46
22:DA:1365:A:O3'	45:DX:11:ARG:NH1	2.47	0.46
22:DA:2066:C:N3	22:DA:2067:G:N7	2.62	0.46
22:DA:2093:G:C8	22:DA:2225:A:C4	3.03	0.46
22:DA:2821:A:H2'	22:DA:2822:G:O4'	2.15	0.46
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.45	0.46
28:DG:89:LEU:HD12	28:DG:162:VAL:HG22	1.97	0.46
46:DY:9:LYS:HG2	46:DY:10:SER:H	1.80	0.46
1:AA:451:A:H61	1:AA:481:G:C5'	2.28	0.46
1:AA:456:A:H5'	1:AA:457:G:OP2	2.16	0.46
1:AA:927:G:N1	1:AA:1391:U:C2	2.84	0.46
1:AA:1049:U:O4	14:AN:2:ALA:HB1	2.16	0.46
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.14	0.46
17:AQ:14:SER:OG	17:AQ:17:MET:HE1	2.15	0.46
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.88	0.46
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.43	0.46
19:AS:29:LYS:HB3	19:AS:30:PRO:CD	2.44	0.46
22:BA:974:G:C4	22:BA:1186:G:C2	3.03	0.46
22:BA:1074:G:H2'	22:BA:1074:G:N3	2.31	0.46
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.45	0.46
22:BA:1808:A:O2'	45:BX:3:ARG:NH1	2.49	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
33:BL:63:LYS:HA	51:B3:13:ARG:HB3	1.98	0.46
39:BR:47:VAL:HG12	39:BR:54:VAL:HG22	1.96	0.46
41:BT:89:GLU:HA	41:BT:89:GLU:OE2	2.15	0.46
45:BX:68:LEU:HD13	45:BX:78:TYR:CE2	2.51	0.46
1:CA:54:C:N4	1:CA:352:C:H2'	2.30	0.46
1:CA:328:C:O2	1:CA:328:C:O2'	2.32	0.46
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.30	0.46
5:CE:13:GLU:HG3	5:CE:13:GLU:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:20:ALA:O	8:CH:21:ASN:HB2	2.16	0.46
12:CL:7:LEU:HD22	12:CL:12:ARG:CD	2.46	0.46
22:DA:26:G:C6	22:DA:27:G:N1	2.84	0.46
22:DA:150:U:H2'	22:DA:151:C:C6	2.50	0.46
22:DA:748:G:O6	22:DA:751:A:H5'	2.16	0.46
22:DA:847:U:O2	22:DA:847:U:H2'	2.14	0.46
22:DA:987:C:N4	22:DA:988:A:C6	2.83	0.46
22:DA:1255:U:C5	26:DE:68:ALA:HA	2.50	0.46
22:DA:1426:G:N2	22:DA:1571:A:N7	2.63	0.46
22:DA:1616:A:H2	22:DA:1647:U:C5	2.33	0.46
22:DA:2091:C:C3'	22:DA:2092:U:H5''	2.43	0.46
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.29	0.46
24:DC:173:THR:O	24:DC:174:LEU:HD12	2.15	0.46
29:DH:27:ARG:NE	45:DX:60:ASP:CG	2.68	0.46
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.97	0.46
31:DJ:25:LEU:CD1	31:DJ:100:VAL:HG12	2.45	0.46
33:DL:10:GLU:OE1	33:DL:10:GLU:HA	2.16	0.46
33:DL:36:LYS:O	33:DL:40:SER:OG	2.33	0.46
39:DR:82:HIS:O	39:DR:82:HIS:ND1	2.49	0.46
1:AA:151:A:H2'	1:AA:152:A:O4'	2.14	0.46
1:AA:154:U:C2	1:AA:168:G:C2	3.03	0.46
1:AA:407:U:O2'	4:AD:113:GLU:HG3	2.15	0.46
1:AA:587:G:C2	1:AA:755:G:C5	3.03	0.46
1:AA:1114:C:C5	1:AA:1115:U:C5	3.04	0.46
1:AA:1319:A:N7	1:AA:1323:G:C5	2.84	0.46
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.50	0.46
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.45	0.46
2:AB:85:LEU:HG	2:AB:86:SER:N	2.31	0.46
3:AC:40:ARG:HG2	3:AC:55:ILE:HG12	1.98	0.46
4:AD:49:SER:O	4:AD:53:VAL:HG13	2.15	0.46
7:AG:32:VAL:O	7:AG:34:GLY:N	2.48	0.46
8:AH:18:GLN:C	8:AH:20:ALA:N	2.72	0.46
11:AK:51:GLY:O	11:AK:52:PHE:O	2.33	0.46
12:AL:88:LYS:O	12:AL:88:LYS:HG3	2.15	0.46
16:AP:29:ASN:N	16:AP:29:ASN:OD1	2.48	0.46
17:AQ:8:LEU:HD23	17:AQ:25:ILE:HG13	1.97	0.46
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.78	0.46
20:AT:3:ASN:ND2	20:AT:3:ASN:C	2.74	0.46
21:AU:14:VAL:O	21:AU:16:LEU:HG	2.15	0.46
22:BA:28:A:C2'	22:BA:29:U:H5'	2.46	0.46
22:BA:1840:G:C6	22:BA:1841:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1918:A:O2'	22:BA:1920:C:C4	2.68	0.46
22:BA:2305:U:H5''	27:BF:131:GLY:HA3	1.96	0.46
23:BB:37:C:C6	23:BB:38:C:C5	3.04	0.46
24:BC:162:VAL:HG22	24:BC:176:LEU:HA	1.98	0.46
26:BE:29:HIS:CE1	33:BL:8:PRO:HB3	2.51	0.46
26:BE:115:GLN:OE1	26:BE:115:GLN:HA	2.16	0.46
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.97	0.46
34:BM:55:ARG:CZ	34:BM:55:ARG:CB	2.93	0.46
34:BM:95:LEU:O	34:BM:96:ILE:HD13	2.15	0.46
36:BO:80:GLU:O	36:BO:81:ARG:C	2.57	0.46
53:B5:59:VAL:HG21	53:B5:167:ASP:C	2.40	0.46
53:B5:101:ILE:HG22	53:B5:102:GLN:HG3	1.98	0.46
1:CA:253:A:C2	1:CA:254:G:C5	3.03	0.46
1:CA:436:C:C2	1:CA:437:U:C5	3.04	0.46
1:CA:439:U:C5	1:CA:440:C:C5	3.04	0.46
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.51	0.46
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.46	0.46
9:CI:67:VAL:HG11	9:CI:79:ILE:HD11	1.97	0.46
16:CP:10:GLY:HA3	16:CP:15:PRO:HA	1.98	0.46
21:CU:18:ARG:O	21:CU:19:PHE:C	2.58	0.46
22:DA:370:G:N1	22:DA:424:G:C5	2.83	0.46
22:DA:1432:G:N2	22:DA:1433:A:N3	2.63	0.46
22:DA:1623:G:C2	22:DA:1624:U:C6	3.04	0.46
22:DA:1953:A:C6	22:DA:2550:G:O4'	2.69	0.46
22:DA:2207:C:O2'	22:DA:2208:C:H5'	2.15	0.46
22:DA:2291:U:H2'	22:DA:2292:U:H6	1.80	0.46
24:DC:107:PRO:HG2	24:DC:110:LEU:HD13	1.97	0.46
24:DC:246:THR:C	24:DC:248:TRP:H	2.24	0.46
41:DT:8:LEU:HD23	41:DT:50:LEU:HD21	1.97	0.46
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.62	0.46
47:DZ:40:ASP:OD2	47:DZ:45:ARG:NE	2.48	0.46
50:D2:6:GLN:OE1	50:D2:6:GLN:HA	2.16	0.46
1:AA:455:G:C2	1:AA:478:A:C2	3.04	0.46
1:AA:654:G:C2'	1:AA:655:A:H5'	2.44	0.46
1:AA:1353:G:C4	1:AA:1354:U:C5	3.03	0.46
4:AD:38:PRO:HD2	4:AD:42:GLY:HA2	1.98	0.46
5:AE:77:ASN:O	5:AE:78:ASN:HB3	2.16	0.46
5:AE:157:ARG:O	5:AE:159:LYS:N	2.46	0.46
8:AH:25:VAL:O	8:AH:25:VAL:HG13	2.15	0.46
10:AJ:52:LEU:HD22	10:AJ:62:ARG:HG2	1.98	0.46
11:AK:29:ASN:OD1	11:AK:47:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:24:LEU:O	12:AL:25:GLU:C	2.58	0.46
13:AM:26:GLY:O	13:AM:28:THR:N	2.42	0.46
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.14	0.46
22:BA:140:C:O2	22:BA:140:C:O4'	2.34	0.46
22:BA:478:A:N1	22:BA:500:G:H4'	2.31	0.46
22:BA:927:A:H2'	22:BA:928:A:C8	2.51	0.46
22:BA:988:A:O5'	47:BZ:12:SER:HB2	2.16	0.46
22:BA:2127:G:H4'	22:BA:2128:G:OP1	2.15	0.46
22:BA:2518:A:H2'	22:BA:2518:A:N3	2.31	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
32:BK:15:GLY:HA2	32:BK:47:ILE:HD13	1.98	0.46
38:BQ:88:VAL:HA	39:BR:49:ILE:HD12	1.97	0.46
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.46	0.46
1:CA:909:A:H2'	1:CA:910:C:O4'	2.16	0.46
1:CA:978:A:O2'	1:CA:1322:C:H5	1.97	0.46
1:CA:1022:A:C6	1:CA:1023:U:C4	3.04	0.46
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.15	0.46
10:CJ:15:HIS:CG	10:CJ:16:ARG:N	2.83	0.46
13:CM:78:LYS:HA	13:CM:81:MET:HE2	1.98	0.46
17:CQ:28:PHE:HE2	17:CQ:37:PHE:O	1.99	0.46
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.31	0.46
21:CU:34:ARG:HG2	21:CU:35:ARG:N	2.31	0.46
22:DA:228:C:O2	22:DA:418:C:H4'	2.15	0.46
22:DA:537:G:OP1	22:DA:995:C:N4	2.48	0.46
22:DA:818:G:C2'	22:DA:819:A:H5''	2.45	0.46
22:DA:851:C:C2	22:DA:852:U:C5	3.03	0.46
22:DA:1257:C:N4	22:DA:1258:U:O4	2.49	0.46
22:DA:1262:A:N1	22:DA:1263:U:C2	2.83	0.46
22:DA:1775:U:O4	22:DA:1789:A:H2	1.98	0.46
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.46	0.46
22:DA:1946:U:H2'	22:DA:1947:C:C6	2.51	0.46
22:DA:2538:C:H2'	22:DA:2539:C:C6	2.50	0.46
22:DA:2848:G:C8	37:DP:95:ALA:HB2	2.50	0.46
26:DE:181:ILE:HG23	33:DL:2:ARG:NH1	2.31	0.46
28:DG:96:ALA:N	28:DG:128:GLN:O	2.47	0.46
46:DY:36:GLN:O	46:DY:37:LEU:C	2.59	0.46
49:D1:33:LYS:HA	49:D1:52:ALA:HB3	1.97	0.46
1:AA:1256:A:N6	1:AA:1277:C:C2	2.83	0.46
1:AA:1374:A:N3	1:AA:1375:A:C8	2.83	0.46
1:AA:1417:G:H22	1:AA:1482:G:H2'	1.79	0.46
1:AA:1491:G:H5''	12:AL:43:LYS:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:18:HIS:O	2:AB:19:GLN:HB2	2.16	0.46
2:AB:31:ILE:HD11	2:AB:39:HIS:ND1	2.31	0.46
3:AC:128:VAL:O	3:AC:129:MET:C	2.58	0.46
3:AC:181:ASP:HB3	3:AC:204:LYS:HB2	1.98	0.46
6:AF:22:ILE:O	6:AF:23:GLU:C	2.56	0.46
10:AJ:51:VAL:HB	14:AN:81:ARG:HB3	1.98	0.46
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.98	0.46
16:AP:17:TYR:N	16:AP:17:TYR:CD1	2.84	0.46
20:AT:44:LYS:HE2	20:AT:86:LEU:O	2.16	0.46
22:BA:7:G:H2'	22:BA:8:C:C6	2.51	0.46
22:BA:58:G:O2'	22:BA:73:A:N1	2.44	0.46
22:BA:270:A:N6	22:BA:369:U:O2	2.49	0.46
22:BA:528:A:C2	22:BA:2042:A:H2'	2.51	0.46
22:BA:1171:G:C2	22:BA:1178:C:O2	2.68	0.46
22:BA:1935:G:C6	22:BA:1962:C:C5	3.04	0.46
23:BB:7:G:O2'	36:BO:38:GLN:OE1	2.09	0.46
24:BC:17:VAL:HB	24:BC:204:VAL:HG22	1.96	0.46
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.23	0.46
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.41	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.33	0.46
41:BT:27:SER:O	41:BT:28:ASN:C	2.59	0.46
1:CA:102:G:C2	1:CA:103:U:C5	3.04	0.46
1:CA:121:U:OP2	1:CA:121:U:C4'	2.64	0.46
1:CA:487:A:H2'	1:CA:488:C:O4'	2.16	0.46
1:CA:563:A:N7	1:CA:567:G:H1'	2.31	0.46
1:CA:1346:A:N6	1:CA:1374:A:C8	2.84	0.46
2:CB:165:ASP:O	2:CB:169:GLU:HG2	2.16	0.46
2:CB:184:PHE:CD2	2:CB:198:PHE:HB2	2.50	0.46
5:CE:100:SER:O	5:CE:101:GLU:C	2.59	0.46
7:CG:68:ASN:HB3	7:CG:130:ASN:HB3	1.96	0.46
7:CG:146:GLU:HA	7:CG:149:LYS:HB2	1.98	0.46
22:DA:187:G:O2'	22:DA:1365:A:C2	2.64	0.46
22:DA:201:C:N4	22:DA:202:U:C4	2.83	0.46
22:DA:301:G:H1'	22:DA:302:C:C6	2.50	0.46
22:DA:613:A:OP2	22:DA:614:A:C8	2.69	0.46
22:DA:712:G:C2	22:DA:720:U:O2	2.69	0.46
22:DA:868:U:C4	22:DA:869:G:N7	2.84	0.46
22:DA:893:C:H2'	22:DA:894:U:O4'	2.15	0.46
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.16	0.46
22:DA:1635:A:H2'	22:DA:1636:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1792:G:C5	22:DA:1793:C:C5	3.04	0.46
22:DA:2142:A:C6	22:DA:2143:C:C4	3.04	0.46
22:DA:2189:U:C2'	22:DA:2190:G:H5''	2.44	0.46
22:DA:2199:A:C5	22:DA:2200:C:C4	3.04	0.46
22:DA:2199:A:C6	22:DA:2200:C:C2	3.03	0.46
24:DC:116:ILE:HB	24:DC:127:GLY:O	2.16	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.31	0.46
46:DY:23:ARG:NH1	46:DY:27:ASN:OD1	2.48	0.46
1:AA:193:C:O2'	1:AA:194:C:H5'	2.14	0.46
1:AA:279:A:H5'	1:AA:279:A:H8	1.80	0.46
1:AA:408:A:N3	1:AA:435:A:C2	2.84	0.46
1:AA:660:C:OP1	15:AO:5:THR:HG21	2.15	0.46
1:AA:1152:A:C5	1:AA:1153:G:N7	2.84	0.46
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.51	0.46
1:AA:1521:C:C2	1:AA:1522:U:C6	3.04	0.46
2:AB:80:VAL:O	2:AB:84:ALA:HB3	2.15	0.46
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.97	0.46
11:AK:35:THR:OG1	11:AK:40:ASN:C	2.58	0.46
20:AT:68:HIS:HB3	20:AT:69:LYS:CE	2.46	0.46
22:BA:674:G:O2'	26:BE:69:ARG:HD3	2.16	0.46
22:BA:1020:A:C2	22:BA:1141:U:C2	3.03	0.46
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.98	0.46
22:BA:2321:U:C5'	22:BA:2322:A:OP2	2.60	0.46
40:BS:50:VAL:O	40:BS:53:SER:N	2.49	0.46
1:CA:502:A:OP1	12:CL:115:SER:CB	2.64	0.46
1:CA:666:G:C6	1:CA:741:G:C6	3.04	0.46
1:CA:676:A:C2	1:CA:677:U:C5	3.03	0.46
1:CA:795:C:H5'	1:CA:1522:U:OP1	2.15	0.46
1:CA:881:G:H2'	1:CA:882:C:O4'	2.16	0.46
1:CA:927:G:H4'	1:CA:1503:A:N7	2.31	0.46
4:CD:81:ARG:NH2	4:CD:82:LEU:HD23	2.30	0.46
10:CJ:91:ASP:O	10:CJ:92:LEU:HG	2.15	0.46
11:CK:51:GLY:O	11:CK:52:PHE:CD1	2.69	0.46
12:CL:93:VAL:HG23	12:CL:93:VAL:O	2.16	0.46
17:CQ:26:GLU:HA	17:CQ:40:ARG:O	2.14	0.46
18:CR:20:GLU:C	18:CR:22:ASP:H	2.24	0.46
20:CT:70:ASN:O	20:CT:73:ALA:N	2.49	0.46
22:DA:119:A:H5'	57:DA:3220:HOH:O	2.14	0.46
22:DA:141:G:H3'	22:DA:142:A:C8	2.50	0.46
22:DA:228:C:C5'	22:DA:229:C:C6	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:479:A:N3	22:DA:481:G:H5''	2.31	0.46
22:DA:482:A:O2'	22:DA:497:A:N1	2.45	0.46
22:DA:647:G:H4'	22:DA:647:G:OP1	2.15	0.46
22:DA:680:C:H2'	22:DA:681:G:C8	2.51	0.46
22:DA:750:A:N3	22:DA:750:A:H2'	2.30	0.46
22:DA:785:G:O2'	22:DA:1779:U:C5'	2.64	0.46
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.30	0.46
22:DA:1319:C:O2	22:DA:1334:G:C2	2.68	0.46
22:DA:1645:G:H4'	22:DA:1646:C:C5	2.50	0.46
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.51	0.46
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.64	0.46
22:DA:2373:G:C6	22:DA:2374:C:N4	2.83	0.46
22:DA:2436:G:C2	22:DA:2437:G:C8	3.04	0.46
22:DA:2518:A:P	57:DA:3534:HOH:O	2.73	0.46
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.51	0.46
24:DC:226:ASN:OD1	24:DC:226:ASN:N	2.49	0.46
28:DG:40:ALA:HA	28:DG:58:TYR:CE1	2.50	0.46
28:DG:86:LYS:O	28:DG:165:ALA:HB2	2.15	0.46
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.46
31:DJ:109:LEU:HD22	31:DJ:118:MET:HG3	1.98	0.46
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.98	0.46
41:DT:45:ALA:O	41:DT:49:LYS:HE3	2.16	0.46
1:AA:189:A:O2'	1:AA:190:A:H5'	2.15	0.46
1:AA:695:A:H2'	1:AA:696:A:O4'	2.16	0.46
1:AA:882:C:O2'	1:AA:883:C:H5'	2.15	0.46
1:AA:1145:A:O2'	1:AA:1146:A:P	2.74	0.46
1:AA:1157:A:C5	1:AA:1180:A:C6	3.04	0.46
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.16	0.46
1:AA:1311:A:C2	1:AA:1327:C:N3	2.84	0.46
4:AD:166:GLU:O	4:AD:167:LYS:HB2	2.16	0.46
5:AE:25:VAL:C	5:AE:27:GLY:N	2.74	0.46
6:AF:54:LEU:HD22	6:AF:55:HIS:O	2.16	0.46
6:AF:97:THR:O	6:AF:98:GLU:HG2	2.15	0.46
7:AG:86:GLN:HB3	7:AG:148:ASN:ND2	2.31	0.46
10:AJ:15:HIS:C	10:AJ:17:LEU:H	2.23	0.46
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.31	0.46
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.16	0.46
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.98	0.46
17:AQ:79:VAL:HG12	17:AQ:80:GLU:HG3	1.97	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.32	0.46
22:BA:1376:C:H2'	22:BA:1377:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1676:A:H2'	22:BA:1677:A:O4'	2.16	0.46
22:BA:1734:G:C4	22:BA:1735:A:C8	3.03	0.46
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.98	0.46
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.46
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.46
30:BI:50:GLU:C	30:BI:51:LYS:HD3	2.40	0.46
30:BI:69:PHE:O	30:BI:69:PHE:CD1	2.68	0.46
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.15	0.46
44:BW:38:VAL:HG12	44:BW:39:ARG:N	2.31	0.46
1:CA:322:C:H5	1:CA:328:C:C5	2.33	0.46
1:CA:667:G:C2	1:CA:740:U:O2	2.69	0.46
1:CA:822:U:H2'	1:CA:823:C:H6	1.80	0.46
1:CA:858:G:C5	57:CA:1818:HOH:O	2.62	0.46
1:CA:1150:A:C6	1:CA:1151:A:N6	2.83	0.46
1:CA:1158:C:N3	1:CA:1160:G:N7	2.64	0.46
1:CA:1431:A:C6	1:CA:1432:G:C6	3.03	0.46
1:CA:1501:C:OP2	1:CA:1504:G:O2'	2.27	0.46
2:CB:83:ALA:O	2:CB:86:SER:OG	2.33	0.46
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.82	0.46
5:CE:16:ILE:HD12	5:CE:16:ILE:N	2.30	0.46
8:CH:43:GLU:OE1	8:CH:112:THR:HG21	2.16	0.46
10:CJ:5:ARG:HD2	10:CJ:79:PRO:HB3	1.98	0.46
16:CP:7:ALA:HB1	16:CP:29:ASN:OD1	2.16	0.46
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.98	0.46
22:DA:149:A:C8	22:DA:150:U:C5	3.04	0.46
22:DA:158:U:O2	22:DA:169:G:N1	2.49	0.46
22:DA:182:A:H2'	22:DA:183:C:C6	2.51	0.46
22:DA:410:G:H2'	22:DA:2407:A:N7	2.31	0.46
22:DA:1512:C:C4	22:DA:1513:U:C5	3.04	0.46
22:DA:1790:C:C5	22:DA:1828:G:C2	3.04	0.46
22:DA:1814:G:OP1	24:DC:40:SER:OG	2.33	0.46
22:DA:1855:U:C6	22:DA:1856:U:C5	3.03	0.46
22:DA:2232:C:OP2	45:DX:27:ARG:NH2	2.44	0.46
23:DB:78:A:C6	23:DB:99:A:C8	3.04	0.46
24:DC:167:ARG:CG	24:DC:167:ARG:O	2.63	0.46
26:DE:108:ILE:O	26:DE:112:LEU:HG	2.16	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
31:DJ:49:ASP:OD2	31:DJ:121:LYS:HD3	2.16	0.46
40:DS:36:LEU:HD13	40:DS:48:LYS:HB2	1.96	0.46
43:DV:42:LEU:CD1	43:DV:47:VAL:HG21	2.46	0.46
47:DZ:42:PRO:HA	47:DZ:45:ARG:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:582:C:C4	1:AA:583:A:N7	2.84	0.46
1:AA:605:U:O2'	1:AA:606:G:H5'	2.16	0.46
5:AE:149:SER:C	5:AE:151:GLU:H	2.24	0.46
11:AK:102:ALA:C	11:AK:104:GLY:N	2.73	0.46
13:AM:79:ARG:O	13:AM:83:LEU:HG	2.16	0.46
14:AN:87:ALA:O	14:AN:92:GLU:HB2	2.16	0.46
19:AS:51:VAL:O	19:AS:58:VAL:HG13	2.15	0.46
21:AU:16:LEU:HA	21:AU:18:ARG:CZ	2.46	0.46
22:BA:151:C:H2'	22:BA:152:A:C8	2.51	0.46
22:BA:634:C:H2'	22:BA:635:C:C6	2.51	0.46
22:BA:734:A:C4	22:BA:735:A:C8	3.04	0.46
22:BA:1224:U:C4	22:BA:1225:G:C6	3.04	0.46
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.16	0.46
22:BA:1816:C:C5	24:BC:62:TYR:CE2	3.03	0.46
22:BA:1991:U:H2'	22:BA:1992:G:H5'	1.98	0.46
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.51	0.46
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.51	0.46
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.16	0.46
22:BA:2637:U:C3'	22:BA:2638:G:H5'	2.44	0.46
24:BC:36:LYS:O	24:BC:37:ASN:HB2	2.14	0.46
24:BC:246:THR:HB	24:BC:248:TRP:CE3	2.51	0.46
25:BD:55:LYS:CD	25:BD:60:VAL:HG22	2.45	0.46
26:BE:124:PHE:CD1	26:BE:124:PHE:C	2.93	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.97	0.46
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.31	0.46
31:BJ:21:THR:HA	31:BJ:61:LYS:HB3	1.98	0.46
48:B0:53:LYS:HE2	48:B0:56:ALA:HA	1.98	0.46
49:B1:40:ASP:HB2	49:B1:49:TYR:OH	2.16	0.46
1:CA:21:G:H1'	1:CA:914:A:N6	2.30	0.46
1:CA:420:U:O2'	1:CA:423:G:O6	2.23	0.46
1:CA:552:U:H5'	12:CL:83:ARG:HD2	1.98	0.46
1:CA:663:A:O2'	1:CA:664:G:H5'	2.16	0.46
1:CA:1202:U:N3	14:CN:82:ILE:HG21	2.30	0.46
1:CA:1337:G:H5''	1:CA:1338:G:OP1	2.16	0.46
1:CA:1345:U:C2	1:CA:1377:A:C2	3.04	0.46
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.51	0.46
7:CG:60:GLU:HA	7:CG:63:GLU:HB3	1.98	0.46
9:CI:97:GLU:N	9:CI:97:GLU:CD	2.74	0.46
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:118:A:OP2	22:DA:119:A:H5''	2.15	0.46
22:DA:792:A:H1'	22:DA:2072:C:HO2'	1.79	0.46
22:DA:1114:C:H2'	22:DA:1115:G:C8	2.50	0.46
22:DA:1374:G:H3'	22:DA:1375:U:C6	2.51	0.46
22:DA:1638:C:O2'	22:DA:2698:U:O2	2.33	0.46
22:DA:2117:A:N1	22:DA:2171:A:N1	2.64	0.46
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.30	0.46
22:DA:2250:G:O5'	22:DA:2250:G:H8	1.99	0.46
22:DA:2347:C:H2'	22:DA:2348:U:C6	2.51	0.46
22:DA:2440:C:C4	22:DA:2441:U:H1'	2.50	0.46
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.98	0.46
22:DA:2744:G:N2	22:DA:2761:A:C4	2.84	0.46
24:DC:65:VAL:HG12	24:DC:67:PHE:CE2	2.51	0.46
24:DC:84:ASP:O	24:DC:86:ASN:N	2.49	0.46
26:DE:31:VAL:HG21	26:DE:100:MET:O	2.16	0.46
33:DL:82:LEU:HD23	33:DL:82:LEU:C	2.42	0.46
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.16	0.46
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.99	0.45
1:AA:987:G:H2'	1:AA:987:G:N3	2.31	0.45
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.50	0.45
1:AA:1149:C:P	9:AI:11:ARG:HH21	2.39	0.45
1:AA:1150:A:N6	1:AA:1151:A:N6	2.65	0.45
1:AA:1363:A:C4	1:AA:1365:G:C6	3.03	0.45
1:AA:1456:A:H2'	1:AA:1457:G:O4'	2.16	0.45
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.16	0.45
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.97	0.45
3:AC:14:ILE:C	3:AC:16:LYS:H	2.25	0.45
9:AI:97:GLU:H	9:AI:97:GLU:CD	2.25	0.45
22:BA:994:C:H1'	39:BR:10:LYS:HE3	1.98	0.45
22:BA:1176:U:N3	22:BA:1177:G:C6	2.84	0.45
22:BA:1737:G:C6	22:BA:1738:G:N1	2.84	0.45
22:BA:1754:A:C6	22:BA:1755:A:C6	3.04	0.45
22:BA:2791:G:H2'	22:BA:2792:A:O4'	2.16	0.45
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	1.98	0.45
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
36:BO:100:HIS:CG	36:BO:101:GLY:N	2.83	0.45
37:BP:4:ILE:H	37:BP:4:ILE:HD12	1.81	0.45
41:BT:3:ARG:CD	41:BT:5:GLU:HB2	2.45	0.45
41:BT:3:ARG:NE	41:BT:5:GLU:HB2	2.31	0.45
42:BU:18:ASP:O	42:BU:19:LYS:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:121:U:H3'	1:CA:122:G:H5'	1.97	0.45
1:CA:552:U:O2'	12:CL:83:ARG:O	2.29	0.45
1:CA:664:G:H2'	1:CA:666:G:OP1	2.17	0.45
1:CA:955:U:O2'	1:CA:1227:A:N6	2.50	0.45
1:CA:957:U:H1'	1:CA:960:U:C4	2.51	0.45
2:CB:126:PHE:CD1	2:CB:127:ASP:N	2.84	0.45
2:CB:169:GLU:O	2:CB:171:ILE:N	2.48	0.45
5:CE:154:ALA:C	5:CE:156:LYS:N	2.73	0.45
22:DA:325:G:H2'	22:DA:326:G:O4'	2.16	0.45
22:DA:590:A:H2'	22:DA:591:U:C6	2.52	0.45
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.48	0.45
22:DA:1210:G:P	22:DA:1212:G:H5'	2.56	0.45
22:DA:1275:A:C8	35:DN:16:HIS:CE1	3.03	0.45
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.16	0.45
22:DA:1438:U:C5	22:DA:1552:A:N1	2.84	0.45
22:DA:1585:C:C5	22:DA:1586:A:C5	3.05	0.45
22:DA:1645:G:H5''	22:DA:1646:C:C5'	2.46	0.45
22:DA:2199:A:C5	22:DA:2225:A:C2	3.03	0.45
22:DA:2262:U:OP2	44:DW:16:SER:HB3	2.16	0.45
22:DA:2421:G:O6	51:D3:31:HIS:CD2	2.70	0.45
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.97	0.45
22:DA:2867:G:C5	37:DP:21:ARG:NH2	2.85	0.45
24:DC:230:HIS:NE2	24:DC:247:PRO:HA	2.31	0.45
24:DC:260:ASN:O	24:DC:261:LYS:CB	2.64	0.45
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.74	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
34:DM:66:ARG:HB2	34:DM:101:VAL:O	2.15	0.45
34:DM:76:LYS:HE2	34:DM:83:GLY:O	2.16	0.45
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.79	0.45
43:DV:14:LYS:HD3	43:DV:18:ARG:NH2	2.31	0.45
1:AA:105:G:H2'	1:AA:106:C:C6	2.51	0.45
1:AA:246:A:C2	1:AA:282:A:C5	3.05	0.45
1:AA:1061:G:C6	1:AA:1197:A:C2	3.04	0.45
1:AA:1198:G:H2'	1:AA:1199:U:H6	1.80	0.45
2:AB:96:TRP:CZ3	2:AB:175:GLU:OE2	2.69	0.45
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.16	0.45
12:AL:43:LYS:O	12:AL:44:LYS:C	2.60	0.45
14:AN:15:ALA:O	14:AN:18:ASP:OD1	2.34	0.45
14:AN:100:SER:O	14:AN:101:TRP:HB3	2.16	0.45
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:451:U:C2	22:BA:453:A:N7	2.84	0.45
22:BA:1131:G:C4	31:BJ:77:HIS:CD2	3.04	0.45
22:BA:2010:G:N7	57:BA:3381:HOH:O	2.36	0.45
22:BA:2520:C:O2'	22:BA:2521:C:H5'	2.16	0.45
22:BA:2865:U:C4	22:BA:2866:U:C4	3.05	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.45
30:BI:96:ASP:CG	30:BI:97:LYS:N	2.74	0.45
38:BQ:76:TYR:CD2	38:BQ:76:TYR:C	2.94	0.45
41:BT:71:GLY:O	41:BT:73:ARG:N	2.49	0.45
42:BU:95:PHE:CD1	42:BU:95:PHE:C	2.94	0.45
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.64	0.45
51:B3:61:CYS:O	51:B3:62:LEU:HD23	2.16	0.45
1:CA:32:A:C3'	1:CA:33:A:H8	2.29	0.45
1:CA:115:G:H1'	1:CA:116:A:N7	2.32	0.45
1:CA:115:G:C2	1:CA:289:G:N7	2.84	0.45
1:CA:346:G:H2'	1:CA:347:G:O4'	2.15	0.45
1:CA:578:C:O2	1:CA:579:A:C8	2.68	0.45
1:CA:597:G:N7	1:CA:598:U:C5	2.84	0.45
1:CA:1253:G:C2	1:CA:1285:A:N6	2.84	0.45
2:CB:21:ARG:C	2:CB:23:TRP:N	2.73	0.45
2:CB:211:THR:HA	2:CB:214:LEU:HB3	1.98	0.45
3:CC:6:HIS:NE2	3:CC:184:TYR:HE2	2.14	0.45
5:CE:157:ARG:C	5:CE:159:LYS:N	2.74	0.45
8:CH:126:ILE:HG22	8:CH:127:CYS:CB	2.46	0.45
12:CL:40:THR:HG22	12:CL:41:THR:N	2.31	0.45
17:CQ:38:ILE:HD12	17:CQ:38:ILE:N	2.30	0.45
22:DA:260:G:C6	22:DA:261:G:C5	3.03	0.45
22:DA:410:G:C2	22:DA:2407:A:C6	3.04	0.45
22:DA:912:C:N4	22:DA:913:U:O4	2.49	0.45
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.17	0.45
22:DA:1317:G:N2	22:DA:1336:A:C2	2.83	0.45
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.16	0.45
22:DA:1789:A:OP1	24:DC:220:VAL:HA	2.16	0.45
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.16	0.45
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.16	0.45
30:DI:61:VAL:HG22	30:DI:67:PHE:HB3	1.97	0.45
36:DO:111:ARG:NH2	36:DO:117:PHE:OXT	2.48	0.45
1:AA:284:C:H2'	1:AA:285:C:H6	1.81	0.45
1:AA:428:G:C5	1:AA:430:A:C6	3.04	0.45
1:AA:457:G:O6	1:AA:458:U:N3	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:579:A:H2'	1:AA:580:C:C6	2.51	0.45
1:AA:918:A:C6	1:AA:919:A:C6	3.05	0.45
1:AA:1140:C:O2	1:AA:1141:C:C5	2.70	0.45
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.52	0.45
1:AA:1427:C:C2'	1:AA:1428:A:H5'	2.46	0.45
3:AC:162:ILE:HG13	3:AC:163:ALA:N	2.30	0.45
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.31	0.45
8:AH:9:ASP:O	8:AH:13:ARG:HB2	2.17	0.45
22:BA:657:U:O5'	22:BA:657:U:H6	1.99	0.45
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.46	0.45
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	1.98	0.45
22:BA:1638:C:H5''	22:BA:2710:C:O2'	2.16	0.45
22:BA:1735:A:C2	22:BA:1736:U:N1	2.85	0.45
22:BA:2582:G:C2	22:BA:2583:G:C8	3.05	0.45
24:BC:119:GLY:C	24:BC:121:ASP:H	2.25	0.45
24:BC:199:GLU:O	24:BC:202:LEU:HB2	2.16	0.45
25:BD:103:ASP:C	25:BD:104:VAL:HG22	2.42	0.45
26:BE:198:GLU:O	26:BE:199:MET:C	2.60	0.45
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.16	0.45
28:BG:143:GLN:O	28:BG:144:VAL:C	2.59	0.45
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.45
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.42	0.45
34:BM:53:MET:HE1	34:BM:103:TYR:CG	2.50	0.45
37:BP:33:VAL:HA	37:BP:37:LYS:O	2.16	0.45
38:BQ:82:GLY:O	38:BQ:83:LEU:C	2.57	0.45
39:BR:98:ILE:HG21	39:BR:101:ILE:HD11	1.98	0.45
42:BU:82:ARG:O	42:BU:97:LYS:HG2	2.16	0.45
43:BV:41:GLU:O	43:BV:41:GLU:HG2	2.15	0.45
47:BZ:11:ARG:NH1	47:BZ:53:PHE:O	2.50	0.45
50:B2:8:SER:OG	50:B2:11:LYS:HG3	2.17	0.45
1:CA:158:G:C5	1:CA:159:G:C8	3.04	0.45
1:CA:269:C:H2'	1:CA:270:A:C8	2.52	0.45
1:CA:429:U:H5'	4:CD:9:LEU:HD23	1.97	0.45
1:CA:477:C:H2'	1:CA:478:A:C8	2.51	0.45
1:CA:527:G:N2	1:CA:528:C:N1	2.64	0.45
1:CA:980:C:O3'	14:CN:13:ARG:NH2	2.50	0.45
1:CA:1076:U:N3	1:CA:1082:A:C2	2.85	0.45
2:CB:19:GLN:O	2:CB:38:VAL:CG2	2.64	0.45
4:CD:20:PHE:N	4:CD:20:PHE:CD1	2.84	0.45
5:CE:16:ILE:CD1	5:CE:38:VAL:HG23	2.46	0.45
5:CE:115:LEU:HD12	5:CE:115:LEU:HA	1.87	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:29:ALA:HB1	10:CJ:76:ILE:HD13	1.99	0.45
20:CT:22:ALA:O	20:CT:26:SER:HB2	2.15	0.45
22:DA:482:A:C8	22:DA:506:G:C2	3.04	0.45
22:DA:526:A:C6	22:DA:2626:C:H4'	2.52	0.45
22:DA:1262:A:C6	22:DA:1263:U:N3	2.85	0.45
22:DA:1308:A:C6	22:DA:1309:G:C2	3.05	0.45
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.30	0.45
22:DA:1464:G:H2'	22:DA:1465:G:H8	1.80	0.45
22:DA:1797:G:H4'	24:DC:255:LYS:O	2.15	0.45
22:DA:2077:A:N1	22:DA:2078:C:C4	2.85	0.45
22:DA:2652:C:N4	22:DA:2653:U:C4	2.84	0.45
25:DD:183:GLU:OE1	25:DD:183:GLU:N	2.48	0.45
26:DE:61:ARG:HB3	26:DE:63:LYS:O	2.16	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
38:DQ:28:ARG:HG2	38:DQ:34:VAL:HG12	1.98	0.45
39:DR:66:HIS:CE1	39:DR:94:THR:CG2	2.99	0.45
40:DS:41:LYS:O	40:DS:42:LYS:C	2.58	0.45
1:AA:263:A:H2'	1:AA:264:C:C6	2.52	0.45
1:AA:341:C:H2'	1:AA:342:C:H6	1.81	0.45
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.52	0.45
1:AA:1048:G:N2	1:AA:1050:G:C5	2.85	0.45
1:AA:1476:A:H2'	1:AA:1477:U:O4'	2.16	0.45
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.17	0.45
4:AD:55:LEU:HD23	4:AD:55:LEU:C	2.41	0.45
4:AD:152:GLN:O	4:AD:155:VAL:HG12	2.16	0.45
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.16	0.45
5:AE:151:GLU:C	5:AE:153:VAL:H	2.24	0.45
6:AF:76:THR:O	6:AF:79:ARG:N	2.45	0.45
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.31	0.45
14:AN:10:GLU:HA	14:AN:13:ARG:HG3	1.97	0.45
18:AR:42:SER:OG	18:AR:47:THR:HG23	2.17	0.45
19:AS:62:VAL:HG12	19:AS:63:THR:N	2.32	0.45
21:AU:17:ARG:NH1	21:AU:20:LYS:CG	2.79	0.45
22:BA:500:G:N2	22:BA:502:A:H3'	2.31	0.45
22:BA:657:U:H2'	22:BA:658:U:C6	2.51	0.45
22:BA:839:U:H2'	22:BA:840:C:C6	2.51	0.45
22:BA:1344:U:C2'	22:BA:1345:C:OP1	2.64	0.45
22:BA:1635:A:C6	22:BA:1636:U:C2	3.05	0.45
22:BA:1910:G:N2	22:BA:1921:G:H1'	2.31	0.45
22:BA:2128:G:N2	22:BA:2173:A:O2'	2.49	0.45
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.16	0.45
27:BF:107:ALA:O	27:BF:108:VAL:C	2.58	0.45
30:BI:76:ALA:CB	30:BI:129:ILE:HG23	2.45	0.45
33:BL:81:ASP:HA	33:BL:84:LYS:HE3	1.99	0.45
43:BV:48:MET:SD	43:BV:86:LEU:HG	2.56	0.45
44:BW:19:LYS:O	44:BW:20:ARG:C	2.58	0.45
1:CA:17:U:C2	1:CA:18:C:C5	3.04	0.45
1:CA:49:U:O4	1:CA:362:G:N2	2.47	0.45
1:CA:223:A:C4	1:CA:224:U:C5	3.05	0.45
1:CA:254:G:C2	1:CA:273:U:C2	3.04	0.45
2:CB:207:ILE:C	2:CB:210:VAL:HG22	2.41	0.45
4:CD:23:SER:HB2	4:CD:109:ALA:O	2.15	0.45
4:CD:168:PRO:HB3	4:CD:170:TRP:CZ3	2.52	0.45
15:CO:25:THR:HG23	15:CO:66:LEU:HD12	1.99	0.45
15:CO:88:ARG:HG3	15:CO:89:ARG:OXT	2.17	0.45
20:CT:70:ASN:O	20:CT:71:LYS:C	2.59	0.45
20:CT:82:GLN:O	20:CT:85:LYS:HB2	2.16	0.45
22:DA:254:G:OP2	51:D3:5:LYS:NZ	2.49	0.45
22:DA:297:G:H5''	42:DU:85:PHE:CB	2.43	0.45
22:DA:450:G:H2'	22:DA:451:U:H5''	1.97	0.45
22:DA:974:G:H1'	22:DA:975:A:C8	2.50	0.45
22:DA:996:A:N6	22:DA:1160:G:C6	2.85	0.45
22:DA:1083:U:O2	22:DA:1086:A:N1	2.50	0.45
22:DA:1248:G:O2'	38:DQ:3:ARG:HA	2.16	0.45
22:DA:1257:C:C4	22:DA:1258:U:O4	2.69	0.45
22:DA:1623:G:C6	22:DA:1624:U:C5	3.04	0.45
22:DA:1861:G:H22	22:DA:1882:U:H1'	1.80	0.45
22:DA:1985:C:H2'	22:DA:1986:C:H6	1.80	0.45
22:DA:2341:G:C2	22:DA:2342:C:C2	3.05	0.45
24:DC:77:VAL:HG22	24:DC:78:VAL:N	2.32	0.45
24:DC:120:VAL:HG13	24:DC:134:ASN:ND2	2.32	0.45
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.80	0.45
33:DL:90:VAL:HG13	33:DL:95:LEU:HD11	1.98	0.45
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.97	0.45
44:DW:56:ASP:OD2	44:DW:58:THR:OG1	2.35	0.45
45:DX:64:ILE:O	45:DX:64:ILE:HD12	2.17	0.45
1:AA:41:G:H2'	1:AA:42:G:C8	2.51	0.45
1:AA:200:G:C2	1:AA:218:U:O2	2.70	0.45
1:AA:510:A:H5''	1:AA:511:C:P	2.57	0.45
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.16	0.45
1:AA:1167:A:N7	1:AA:1169:A:C5	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.51	0.45
3:AC:141:ALA:O	3:AC:146:ALA:CB	2.63	0.45
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.47	0.45
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	1.98	0.45
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.41	0.45
22:BA:449:A:H4'	38:BQ:3:ARG:NH1	2.32	0.45
22:BA:1916:A:C2	22:BA:1917:U:C2	3.04	0.45
22:BA:1917:U:C3'	22:BA:1918:A:H5'	2.45	0.45
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.45
22:BA:2140:G:C2	22:BA:2152:G:N1	2.85	0.45
22:BA:2286:G:C2	49:B1:36:LEU:HD11	2.52	0.45
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.17	0.45
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.32	0.45
24:BC:19:VAL:O	24:BC:19:VAL:HG12	2.16	0.45
24:BC:258:ARG:NH1	24:BC:264:ASP:OD1	2.49	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.42	0.45
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.46	0.45
34:BM:62:LYS:HD3	34:BM:64:TRP:CH2	2.51	0.45
42:BU:6:ARG:O	42:BU:7:ARG:C	2.59	0.45
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.31	0.45
50:B2:43:THR:O	50:B2:44:VAL:HB	2.17	0.45
1:CA:39:G:N2	1:CA:40:C:C2	2.85	0.45
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.16	0.45
4:CD:202:GLU:OE1	5:CE:105:ILE:CG2	2.64	0.45
6:CF:51:ILE:O	6:CF:51:ILE:CG1	2.65	0.45
13:CM:34:LEU:HB3	13:CM:39:ILE:HB	1.98	0.45
16:CP:6:LEU:HD11	16:CP:71:VAL:HG23	1.99	0.45
16:CP:75:ILE:C	16:CP:77:GLU:N	2.75	0.45
22:DA:7:G:H2'	22:DA:8:C:O4'	2.17	0.45
22:DA:40:U:C4	22:DA:41:C:C4	3.05	0.45
22:DA:136:G:C2	22:DA:144:A:C6	3.04	0.45
22:DA:324:A:N6	22:DA:338:G:O2'	2.50	0.45
22:DA:341:C:H2'	22:DA:342:A:C8	2.50	0.45
22:DA:547:A:H3'	22:DA:548:G:C5'	2.47	0.45
22:DA:627:A:C2	22:DA:637:A:C4	3.04	0.45
22:DA:980:A:C6	22:DA:981:A:N1	2.84	0.45
22:DA:1073:A:O2'	22:DA:2474:U:H5'	2.17	0.45
22:DA:2248:C:C2'	22:DA:2249:U:H5'	2.47	0.45
22:DA:2297:A:N3	22:DA:2297:A:H2'	2.32	0.45
24:DC:142:HIS:O	24:DC:143:ASN:CB	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:16:THR:HG1	25:DD:18:ASP:CG	2.22	0.45
28:DG:11:VAL:HG23	28:DG:15:VAL:HB	1.98	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.64	0.45
39:DR:1:MET:HA	39:DR:42:ALA:O	2.16	0.45
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.98	0.45
46:DY:17:GLU:HA	46:DY:20:ASN:HB2	1.98	0.45
1:AA:207:C:H2'	1:AA:208:U:C2	2.51	0.45
1:AA:533:A:P	57:AA:1850:HOH:O	2.62	0.45
1:AA:1154:G:H2'	1:AA:1154:G:N3	2.30	0.45
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.16	0.45
1:AA:1360:A:H2'	1:AA:1361:G:O4'	2.16	0.45
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	1.99	0.45
13:AM:5:ALA:CB	13:AM:22:ILE:HG12	2.46	0.45
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.46	0.45
21:AU:38:TYR:C	21:AU:41:PRO:HD2	2.41	0.45
22:BA:674:G:H1'	26:BE:69:ARG:CD	2.46	0.45
22:BA:826:U:H2'	22:BA:828:U:O4'	2.17	0.45
22:BA:855:G:C2'	22:BA:856:G:O5'	2.65	0.45
22:BA:1088:A:N3	22:BA:1088:A:H5''	2.32	0.45
22:BA:1433:A:C2'	22:BA:1434:A:H5'	2.46	0.45
22:BA:2178:C:H2'	22:BA:2179:C:C6	2.52	0.45
22:BA:2847:U:O2'	22:BA:2848:G:H5'	2.17	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
29:BH:93:SER:C	29:BH:122:LEU:HG	2.35	0.45
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	1.99	0.45
31:BJ:139:VAL:CG1	31:BJ:140:LEU:N	2.76	0.45
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.51	0.45
45:BX:53:ALA:O	45:BX:54:LYS:C	2.59	0.45
51:B3:23:LYS:HA	51:B3:48:ALA:O	2.17	0.45
1:CA:878:A:C6	1:CA:879:C:C4	3.05	0.45
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.97	0.45
4:CD:100:ASN:O	4:CD:104:ARG:HG2	2.17	0.45
7:CG:66:LEU:HB2	7:CG:104:ILE:HD11	1.99	0.45
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.99	0.45
8:CH:114:ARG:O	8:CH:116:ALA:N	2.50	0.45
11:CK:72:ASP:OD2	11:CK:73:ALA:N	2.49	0.45
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.84	0.45
13:CM:90:ARG:HB3	13:CM:97:VAL:HG22	1.99	0.45
21:CU:15:ALA:O	21:CU:16:LEU:C	2.59	0.45
22:DA:858:G:O2'	22:DA:2268:A:N3	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:866:A:O4'	22:DA:914:G:N2	2.49	0.45
22:DA:1314:C:C2	22:DA:1339:G:N2	2.84	0.45
22:DA:1974:C:C2	22:DA:1975:G:C8	3.05	0.45
22:DA:2841:C:H2'	22:DA:2842:G:C8	2.52	0.45
24:DC:245:VAL:HG12	24:DC:251:GLN:HA	1.99	0.45
27:DF:63:GLN:HG3	27:DF:95:ARG:HD2	1.99	0.45
31:DJ:37:ARG:HA	31:DJ:118:MET:SD	2.56	0.45
32:DK:103:VAL:O	32:DK:122:VAL:HB	2.16	0.45
33:DL:59:ARG:HB3	33:DL:59:ARG:NH1	2.31	0.45
34:DM:110:GLU:O	34:DM:114:ARG:HG3	2.16	0.45
36:DO:31:THR:O	36:DO:32:PRO:C	2.60	0.45
40:DS:29:VAL:HG11	40:DS:55:ILE:HD11	1.98	0.45
46:DY:23:ARG:NH1	46:DY:23:ARG:HA	2.32	0.45
1:AA:90:C:C2	1:AA:91:U:C5	3.05	0.45
1:AA:380:G:C2	1:AA:384:G:C6	3.04	0.45
1:AA:617:G:N1	1:AA:618:C:C5	2.84	0.45
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.52	0.45
1:AA:1358:U:H5	1:AA:1359:C:C4	2.35	0.45
1:AA:1368:A:P	9:AI:114:LYS:O	2.75	0.45
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.52	0.45
3:AC:11:ARG:O	3:AC:14:ILE:O	2.35	0.45
4:AD:23:SER:O	4:AD:24:GLY:O	2.33	0.45
11:AK:61:PHE:O	11:AK:64:GLN:HB3	2.17	0.45
11:AK:125:LYS:HE3	21:AU:35:ARG:NH2	2.32	0.45
13:AM:3:ARG:O	13:AM:8:ASN:O	2.35	0.45
19:AS:64:ASP:CB	27:BF:115:ARG:NH2	2.80	0.45
22:BA:60:G:C8	22:BA:62:U:C6	3.05	0.45
22:BA:300:A:OP2	42:BU:97:LYS:NZ	2.50	0.45
22:BA:1496:A:H2'	22:BA:1498:C:C5	2.52	0.45
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.16	0.45
22:BA:1984:G:C2	22:BA:1985:C:C6	3.05	0.45
22:BA:2318:G:C6	22:BA:2319:G:N1	2.85	0.45
22:BA:2527:C:C2'	22:BA:2528:U:H5'	2.47	0.45
23:BB:104:A:H2'	23:BB:105:G:O4'	2.17	0.45
24:BC:44:ASN:C	24:BC:44:ASN:OD1	2.59	0.45
27:BF:57:LEU:CD2	27:BF:152:LEU:HD11	2.47	0.45
40:BS:59:GLU:HG3	40:BS:66:ILE:HD11	1.99	0.45
1:CA:67:C:O2'	1:CA:171:A:N3	2.49	0.45
1:CA:260:G:H2'	1:CA:261:U:C6	2.52	0.45
1:CA:321:A:C8	1:CA:328:C:C2	3.04	0.45
1:CA:747:A:C6	1:CA:748:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:780:A:C2	1:CA:803:G:C6	3.05	0.45
3:CC:117:ALA:HB2	3:CC:200:VAL:HG12	1.99	0.45
4:CD:26:ARG:O	4:CD:27:ALA:CB	2.63	0.45
5:CE:18:VAL:HG21	5:CE:56:VAL:CG1	2.47	0.45
6:CF:14:GLN:C	6:CF:16:GLU:H	2.24	0.45
12:CL:52:VAL:HG23	12:CL:65:SER:O	2.17	0.45
22:DA:19:A:C2	22:DA:522:A:C2	3.04	0.45
22:DA:92:U:C6	22:DA:93:G:C8	3.05	0.45
22:DA:118:A:H1'	22:DA:178:G:O4'	2.16	0.45
22:DA:204:A:O4'	22:DA:206:U:C6	2.69	0.45
22:DA:528:A:N1	22:DA:2043:C:H4'	2.32	0.45
22:DA:797:G:H5''	26:DE:55:SER:HB2	1.98	0.45
22:DA:1248:G:C2	38:DQ:3:ARG:HD2	2.52	0.45
22:DA:1651:G:N2	22:DA:1652:A:H1'	2.31	0.45
22:DA:1793:C:C2	22:DA:1794:A:C8	3.05	0.45
22:DA:2022:U:P	57:DA:3661:HOH:O	2.75	0.45
25:DD:29:VAL:HB	25:DD:98:VAL:CG2	2.46	0.45
26:DE:106:LYS:HG3	26:DE:200:LEU:HD23	1.98	0.45
27:DF:36:LEU:HB2	27:DF:89:VAL:HB	1.98	0.45
27:DF:106:ILE:C	27:DF:109:PRO:HD2	2.42	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
31:DJ:13:ARG:HD3	31:DJ:51:GLY:O	2.17	0.45
32:DK:7:MET:HE1	32:DK:20:MET:HB2	1.98	0.45
32:DK:64:ARG:HD3	32:DK:102:PRO:O	2.16	0.45
33:DL:77:ILE:HB	33:DL:109:LYS:O	2.17	0.45
39:DR:66:HIS:CG	39:DR:94:THR:HG22	2.52	0.45
42:DU:13:VAL:CG2	42:DU:39:ILE:HG21	2.47	0.45
42:DU:98:SER:O	42:DU:99:ASN:CB	2.65	0.45
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.99	0.45
1:AA:702:A:N6	22:BA:1846:G:HO2'	2.10	0.45
1:AA:714:G:N3	1:AA:777:A:H1'	2.32	0.45
1:AA:797:C:OP1	11:AK:126:LYS:NZ	2.33	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.05	0.45
2:AB:148:LEU:HA	2:AB:151:ILE:CG2	2.47	0.45
3:AC:87:LEU:O	3:AC:91:VAL:HG23	2.17	0.45
4:AD:30:THR:HG22	4:AD:31:LYS:H	1.81	0.45
6:AF:67:PRO:O	6:AF:69:GLU:N	2.42	0.45
11:AK:109:ASN:HB3	21:AU:7:ARG:HA	1.98	0.45
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.17	0.45
14:AN:27:LEU:O	14:AN:28:LYS:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:273:G:C2	22:BA:365:U:O2	2.69	0.45
22:BA:892:A:H2'	22:BA:892:A:N3	2.30	0.45
22:BA:1916:A:N1	22:BA:1917:U:C2	2.85	0.45
22:BA:1971:U:H5'	22:BA:1972:G:H5''	1.98	0.45
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.32	0.45
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.52	0.45
22:BA:2515:C:O2	22:BA:2570:G:C2	2.70	0.45
25:BD:133:THR:HG23	25:BD:134:HIS:CG	2.52	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
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.16	0.45
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.51	0.45
48:B0:34:SER:O	48:B0:35:GLY:C	2.60	0.45
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.47	0.45
1:CA:828:U:H2'	1:CA:829:G:O5'	2.16	0.45
1:CA:1071:C:C2	1:CA:1072:G:C8	3.04	0.45
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.51	0.45
4:CD:25:VAL:HG12	4:CD:26:ARG:N	2.31	0.45
4:CD:97:ARG:O	4:CD:101:VAL:HG23	2.17	0.45
7:CG:37:SER:OG	9:CI:43:THR:OG1	2.30	0.45
14:CN:64:CYS:SG	14:CN:83:LYS:HG3	2.57	0.45
19:CS:34:TRP:HA	19:CS:52:HIS:HB2	1.99	0.45
22:DA:89:A:C2	22:DA:90:U:N3	2.85	0.45
22:DA:118:A:N7	22:DA:119:A:N7	2.65	0.45
22:DA:149:A:N7	22:DA:150:U:C5	2.84	0.45
22:DA:266:G:C2	22:DA:427:U:O2	2.70	0.45
22:DA:807:U:H2'	22:DA:808:G:O4'	2.17	0.45
22:DA:873:C:N3	22:DA:905:A:C2	2.84	0.45
22:DA:1767:G:O6	22:DA:1986:C:N4	2.50	0.45
22:DA:1791:A:C4'	24:DC:207:LYS:O	2.65	0.45
22:DA:1794:A:H2'	22:DA:1795:C:H6	1.81	0.45
22:DA:1809:A:C5	22:DA:1810:A:N7	2.84	0.45
22:DA:2077:A:C2	22:DA:2078:C:C6	3.05	0.45
22:DA:2201:G:C4	22:DA:2202:U:C6	3.04	0.45
22:DA:2359:C:N4	22:DA:2360:G:C6	2.85	0.45
22:DA:2868:A:C6	22:DA:2869:G:C6	3.04	0.45
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.81	0.45
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.32	0.45
25:DD:176:ASP:O	25:DD:189:VAL:HA	2.16	0.45
26:DE:46:GLN:O	26:DE:88:ARG:NH1	2.49	0.45
26:DE:77:ILE:O	26:DE:77:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:57:VAL:CG2	30:DI:69:PHE:HB2	2.46	0.45
41:DT:13:ALA:HB1	41:DT:14:PRO:HD2	1.99	0.45
46:DY:9:LYS:N	46:DY:12:GLU:HG3	2.32	0.45
1:AA:443:C:O2'	1:AA:444:G:H5'	2.17	0.45
1:AA:557:G:N1	1:AA:558:G:C2	2.85	0.45
1:AA:1048:G:H5''	14:AN:3:LYS:HG3	1.98	0.45
1:AA:1152:A:C6	1:AA:1153:G:C6	3.05	0.45
6:AF:49:TYR:CD1	6:AF:49:TYR:O	2.70	0.45
22:BA:92:U:O2	22:BA:92:U:H2'	2.17	0.45
22:BA:141:G:H3'	22:BA:142:A:C8	2.52	0.45
22:BA:851:C:H2'	22:BA:852:U:C6	2.51	0.45
22:BA:977:G:N7	57:BA:3598:HOH:O	2.50	0.45
22:BA:999:U:C5	22:BA:1154:G:C5	3.05	0.45
22:BA:1327:A:H2'	22:BA:1328:A:O4'	2.17	0.45
22:BA:1378:A:H4'	22:BA:1379:U:OP1	2.16	0.45
22:BA:2887:A:C5'	22:BA:2888:C:OP2	2.64	0.45
30:BI:67:PHE:CD1	30:BI:67:PHE:N	2.85	0.45
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.99	0.45
37:BP:25:THR:HB	37:BP:88:ARG:HB3	1.99	0.45
51:B3:36:LYS:O	51:B3:41:LYS:HE2	2.16	0.45
1:CA:73:C:C2	1:CA:74:A:C8	3.05	0.45
1:CA:142:G:C2	1:CA:143:A:H1'	2.52	0.45
1:CA:320:A:H2'	1:CA:321:A:O4'	2.16	0.45
1:CA:476:U:O2'	1:CA:477:C:H5'	2.16	0.45
1:CA:775:G:C5	1:CA:776:G:N7	2.85	0.45
1:CA:1138:G:H2'	1:CA:1140:C:H5'	1.98	0.45
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.52	0.45
2:CB:152:LYS:HG3	2:CB:153:ASP:OD2	2.17	0.45
6:CF:1:MET:HE2	6:CF:67:PRO:HB3	1.98	0.45
7:CG:65:ALA:HA	7:CG:128:ALA:HA	1.98	0.45
9:CI:19:VAL:HG21	9:CI:82:GLY:HA3	1.98	0.45
11:CK:91:PRO:O	11:CK:92:GLY:O	2.35	0.45
22:DA:68:G:N2	22:DA:69:C:H1'	2.31	0.45
22:DA:125:A:H5''	50:D2:19:ARG:HD3	1.99	0.45
22:DA:141:G:N2	22:DA:142:A:C2	2.85	0.45
22:DA:187:G:N1	22:DA:210:C:C2	2.85	0.45
22:DA:362:A:N7	22:DA:363:G:N7	2.65	0.45
22:DA:377:G:C5	22:DA:378:C:C4	3.05	0.45
22:DA:391:A:N7	22:DA:392:U:C5	2.85	0.45
22:DA:777:G:N7	22:DA:793:A:C2	2.80	0.45
22:DA:806:C:O2'	22:DA:2445:G:H4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.52	0.45
22:DA:1446:C:C4	22:DA:1447:C:C4	3.05	0.45
22:DA:1830:C:H5'	24:DC:15:HIS:HE1	1.82	0.45
22:DA:1833:C:C4	22:DA:1834:U:C4	3.05	0.45
22:DA:2064:C:H2'	22:DA:2065:C:H6	1.82	0.45
22:DA:2110:G:C6	22:DA:2120:G:C8	3.05	0.45
22:DA:2478:A:N7	22:DA:2529:G:C6	2.85	0.45
22:DA:2516:A:C6	22:DA:2517:C:C4	3.04	0.45
22:DA:2728:U:O2'	22:DA:2729:G:H5''	2.17	0.45
23:DB:27:C:OP1	36:DO:34:HIS:NE2	2.50	0.45
23:DB:28:C:OP1	36:DO:36:TYR:OH	2.17	0.45
28:DG:86:LYS:HB3	28:DG:165:ALA:CB	2.47	0.45
34:DM:56:ALA:O	34:DM:58:LYS:N	2.48	0.45
37:DP:99:TYR:CE2	37:DP:100:LEU:HD21	2.52	0.45
38:DQ:9:ILE:HG13	38:DQ:10:ALA:N	2.32	0.45
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.98	0.45
42:DU:43:LYS:HA	42:DU:60:GLU:HA	1.98	0.45
49:D1:11:LEU:HB2	49:D1:21:TYR:HB2	1.98	0.45
1:AA:200:G:N2	1:AA:218:U:O2	2.49	0.45
1:AA:358:U:H2'	1:AA:359:G:H8	1.81	0.45
1:AA:654:G:C4	1:AA:655:A:C8	3.05	0.45
1:AA:945:G:C2	1:AA:1337:G:C2	3.05	0.45
1:AA:1226:C:C4	13:AM:103:LYS:HA	2.52	0.45
5:AE:57:PRO:HA	5:AE:60:ILE:HG12	1.99	0.45
10:AJ:81:GLU:O	10:AJ:84:VAL:HG12	2.17	0.45
12:AL:24:LEU:HG	12:AL:25:GLU:H	1.82	0.45
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.58	0.45
14:AN:25:ALA:O	14:AN:28:LYS:HG2	2.17	0.45
19:AS:58:VAL:O	19:AS:58:VAL:CG2	2.65	0.45
22:BA:248:G:H5'	22:BA:250:G:N7	2.32	0.45
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.65	0.45
22:BA:476:G:H4'	22:BA:502:A:N1	2.32	0.45
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.31	0.45
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.99	0.45
22:BA:1109:C:C5	22:BA:1110:G:C6	3.05	0.45
22:BA:1324:G:C4	22:BA:1328:A:N6	2.85	0.45
22:BA:1431:A:H2'	22:BA:1432:G:C8	2.52	0.45
22:BA:1936:A:H2	22:BA:1943:U:H3	1.63	0.45
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.17	0.45
22:BA:2341:G:H2'	22:BA:2342:C:O4'	2.16	0.45
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2844:G:H2'	22:BA:2845:U:O4'	2.18	0.45
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.52	0.45
29:BH:119:ASN:C	29:BH:123:ARG:HH11	2.23	0.45
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.98	0.45
47:BZ:53:PHE:C	47:BZ:53:PHE:CD2	2.95	0.45
1:CA:238:A:C5	1:CA:239:U:C5	3.05	0.45
1:CA:463:U:H5'	1:CA:464:U:OP2	2.17	0.45
1:CA:577:G:N7	1:CA:816:A:N1	2.65	0.45
1:CA:774:G:C5	1:CA:775:G:C8	3.04	0.45
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.52	0.45
1:CA:1226:C:C4	13:CM:103:LYS:HA	2.52	0.45
1:CA:1522:U:O2	1:CA:1523:G:C8	2.70	0.45
2:CB:81:LYS:HG3	2:CB:91:PHE:CE2	2.52	0.45
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	1.99	0.45
6:CF:4:TYR:CD2	6:CF:71:ILE:HG12	2.52	0.45
6:CF:32:ALA:O	6:CF:33:GLU:C	2.60	0.45
14:CN:46:LEU:HD21	19:CS:10:PHE:CD1	2.52	0.45
22:DA:27:G:HO2'	22:DA:28:A:P	2.38	0.45
22:DA:43:G:N2	22:DA:437:U:C2	2.85	0.45
22:DA:82:U:N3	22:DA:83:A:N7	2.65	0.45
22:DA:271:G:C2	22:DA:367:G:C2	3.05	0.45
22:DA:277:G:H3'	22:DA:277:G:N3	2.32	0.45
22:DA:299:A:N3	22:DA:319:G:O2'	2.38	0.45
22:DA:600:G:H2'	22:DA:601:C:C6	2.52	0.45
22:DA:858:G:N2	22:DA:919:U:O4	2.48	0.45
22:DA:1239:G:C5	22:DA:1240:U:C5	3.05	0.45
22:DA:1242:U:H2'	22:DA:1243:C:O4'	2.17	0.45
22:DA:1324:G:C2	22:DA:1328:A:N6	2.85	0.45
22:DA:1363:C:H2'	22:DA:1364:G:C8	2.52	0.45
22:DA:1773:A:N3	22:DA:1978:A:H2	2.14	0.45
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.99	0.45
22:DA:1791:A:C8	22:DA:1792:G:C8	3.05	0.45
22:DA:1932:A:N3	22:DA:1932:A:H2'	2.31	0.45
22:DA:2019:A:H4'	38:DQ:34:VAL:HG22	1.98	0.45
22:DA:2107:G:H2'	22:DA:2108:A:O4'	2.16	0.45
25:DD:101:PHE:O	25:DD:104:VAL:HG22	2.17	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.42	0.45
40:DS:32:ALA:O	40:DS:35:ILE:HB	2.17	0.45
43:DV:9:ARG:HG3	43:DV:41:GLU:HB3	1.97	0.45
43:DV:75:GLN:HB2	43:DV:92:VAL:HG23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:40:VAL:HG23	45:DX:45:ARG:O	2.17	0.45
1:AA:113:G:H2'	1:AA:114:U:C6	2.52	0.44
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.53	0.44
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.17	0.44
4:AD:29:ASP:O	4:AD:31:LYS:NZ	2.50	0.44
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.41	0.44
6:AF:99:ALA:O	6:AF:100:SER:CB	2.65	0.44
9:AI:52:LEU:HB3	9:AI:57:MET:CG	2.47	0.44
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	2.00	0.44
15:AO:82:ILE:HB	15:AO:87:LEU:HD23	1.99	0.44
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	2.00	0.44
20:AT:67:ILE:HD12	20:AT:67:ILE:HA	1.84	0.44
22:BA:226:A:N6	22:BA:227:A:C6	2.86	0.44
22:BA:350:G:H2'	22:BA:351:C:O4'	2.17	0.44
22:BA:947:A:O2'	22:BA:984:A:H2	1.97	0.44
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.50	0.44
22:BA:1061:U:O4	30:BI:11:LEU:HA	2.17	0.44
22:BA:1857:G:C2	22:BA:1884:G:N3	2.85	0.44
22:BA:1912:A:C2	22:BA:1919:A:C4	3.04	0.44
22:BA:1921:G:C2	22:BA:1922:G:N7	2.85	0.44
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.18	0.44
22:BA:2315:G:C2	22:BA:2316:G:C4	3.05	0.44
22:BA:2386:A:H2'	22:BA:2387:U:O4'	2.17	0.44
26:BE:113:VAL:HG22	26:BE:118:LEU:HD23	2.00	0.44
31:BJ:17:VAL:CG1	31:BJ:57:LEU:HD12	2.47	0.44
37:BP:10:GLN:HA	37:BP:13:MET:HG3	1.99	0.44
38:BQ:41:LYS:HB2	38:BQ:41:LYS:HE3	1.81	0.44
38:BQ:72:ASN:HD22	38:BQ:72:ASN:N	2.15	0.44
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.86	0.44
45:BX:32:ASN:O	45:BX:52:SER:HA	2.17	0.44
46:BY:36:GLN:O	46:BY:37:LEU:HB3	2.18	0.44
47:BZ:7:ILE:HB	47:BZ:36:VAL:HG12	1.98	0.44
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.17	0.44
1:CA:31:G:C8	1:CA:306:A:H1'	2.51	0.44
1:CA:107:G:H2'	1:CA:108:G:H5''	1.98	0.44
1:CA:129:A:H1'	1:CA:130:A:C8	2.52	0.44
1:CA:512:U:H2'	1:CA:513:C:C6	2.52	0.44
1:CA:756:C:N3	1:CA:757:U:C6	2.85	0.44
1:CA:1093:A:O2'	1:CA:1095:U:OP1	2.19	0.44
1:CA:1124:G:C2	1:CA:1127:G:C2	3.05	0.44
3:CC:53:SER:HB3	3:CC:115:LEU:HD21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:78:ARG:HB2	7:CG:85:TYR:HB2	1.99	0.44
17:CQ:11:ARG:NE	17:CQ:12:VAL:O	2.49	0.44
17:CQ:45:HIS:ND1	17:CQ:70:THR:HG21	2.32	0.44
22:DA:460:A:OP2	50:D2:41:ARG:NH1	2.50	0.44
22:DA:681:G:C2	22:DA:682:G:C8	3.05	0.44
22:DA:705:A:N3	22:DA:727:A:H1'	2.32	0.44
22:DA:740:C:H5''	22:DA:1784:A:OP1	2.17	0.44
22:DA:770:G:C4	22:DA:771:G:C8	3.05	0.44
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.16	0.44
22:DA:1327:A:C6	22:DA:1328:A:C4	3.05	0.44
22:DA:1596:A:C6	22:DA:1597:A:C6	3.05	0.44
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.17	0.44
22:DA:1930:G:H1'	22:DA:1968:G:N1	2.32	0.44
22:DA:2093:G:O6	22:DA:2225:A:C8	2.70	0.44
22:DA:2248:C:H2'	22:DA:2249:U:H5'	1.99	0.44
22:DA:2457:U:C4	22:DA:2458:G:C6	3.05	0.44
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.17	0.44
22:DA:2581:G:H2'	22:DA:2581:G:N3	2.31	0.44
22:DA:2647:U:O2	22:DA:2647:U:H2'	2.17	0.44
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.65	0.44
24:DC:125:LYS:O	24:DC:192:LEU:HB2	2.18	0.44
24:DC:168:ASP:OD1	24:DC:168:ASP:N	2.45	0.44
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.44
32:DK:26:GLY:O	32:DK:30:ARG:HD2	2.18	0.44
40:DS:13:SER:O	40:DS:14:ALA:C	2.59	0.44
41:DT:49:LYS:HD3	41:DT:49:LYS:N	2.31	0.44
1:AA:406:G:C6	1:AA:495:A:C8	3.05	0.44
1:AA:622:A:C8	1:AA:623:C:C6	3.05	0.44
1:AA:716:A:C6	1:AA:717:U:N3	2.85	0.44
1:AA:1078:U:O4	1:AA:1079:G:C6	2.71	0.44
1:AA:1141:C:C2	1:AA:1142:G:C8	3.05	0.44
1:AA:1533:C:H5'	1:AA:1534:A:OP1	2.17	0.44
3:AC:147:LYS:HB2	3:AC:203:PHE:CD2	2.52	0.44
4:AD:98:LEU:HD23	4:AD:118:VAL:HG11	1.98	0.44
4:AD:123:ILE:HD13	4:AD:123:ILE:C	2.42	0.44
7:AG:75:VAL:HB	7:AG:86:GLN:HG3	1.98	0.44
7:AG:115:SER:HB3	7:AG:118:LEU:HG	1.98	0.44
9:AI:87:LEU:O	9:AI:94:LEU:HD11	2.18	0.44
11:AK:24:HIS:O	11:AK:30:THR:HA	2.18	0.44
20:AT:19:LYS:O	20:AT:22:ALA:HB3	2.17	0.44
20:AT:67:ILE:HG13	20:AT:71:LYS:HD3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:142:A:C6	22:BA:143:C:N3	2.85	0.44
22:BA:1088:A:N3	22:BA:1088:A:H3'	2.32	0.44
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.16	0.44
22:BA:1223:G:N7	39:BR:71:LYS:NZ	2.65	0.44
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.52	0.44
22:BA:1910:G:C5	22:BA:1911:U:C4	3.05	0.44
22:BA:1984:G:C5	22:BA:1985:C:C5	3.05	0.44
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.18	0.44
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.17	0.44
25:BD:158:GLY:O	25:BD:159:LYS:C	2.61	0.44
29:BH:75:LEU:C	29:BH:75:LEU:HD22	2.41	0.44
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.51	0.44
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.17	0.44
46:BY:5:GLU:C	46:BY:7:ARG:N	2.73	0.44
1:CA:66:A:N6	1:CA:67:C:C4	2.85	0.44
1:CA:159:G:H22	1:CA:161:A:H3'	1.82	0.44
1:CA:356:A:H2'	1:CA:357:G:O4'	2.17	0.44
1:CA:563:A:H2'	1:CA:567:G:C8	2.53	0.44
1:CA:663:A:H5'	1:CA:836:G:OP1	2.17	0.44
1:CA:671:G:C6	1:CA:672:U:C4	3.05	0.44
1:CA:683:G:H2'	1:CA:684:U:C6	2.52	0.44
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.32	0.44
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.99	0.44
12:CL:99:ARG:HB2	12:CL:117:TYR:HA	1.99	0.44
15:CO:63:ARG:NH1	15:CO:87:LEU:CD1	2.80	0.44
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.47	0.44
18:CR:23:TYR:HA	18:CR:58:ALA:HB1	1.98	0.44
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.17	0.44
22:DA:144:A:H2'	22:DA:144:A:N3	2.32	0.44
22:DA:264:C:O3'	22:DA:265:A:H2'	2.17	0.44
22:DA:734:A:C8	22:DA:735:A:C8	3.05	0.44
22:DA:858:G:C4	22:DA:2268:A:C2	3.05	0.44
22:DA:993:G:O2'	22:DA:994:C:H5'	2.17	0.44
22:DA:1034:G:C6	22:DA:1035:U:N3	2.85	0.44
22:DA:1090:A:C6	22:DA:1091:G:N7	2.86	0.44
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.35	0.44
22:DA:1992:G:H4'	22:DA:1993:U:OP1	2.17	0.44
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.17	0.44
22:DA:2127:G:H4'	22:DA:2128:G:OP1	2.17	0.44
22:DA:2314:A:C2	22:DA:2315:G:C5	3.05	0.44
22:DA:2478:A:C8	22:DA:2529:G:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:136:GLN:NE2	26:DE:140:ASP:OD1	2.50	0.44
30:DI:53:LEU:HD11	30:DI:82:LYS:HE2	1.98	0.44
30:DI:136:MET:HG3	30:DI:138:LEU:HD11	1.99	0.44
33:DL:63:LYS:HA	51:D3:13:ARG:HG3	1.99	0.44
38:DQ:36:PHE:CD2	38:DQ:36:PHE:C	2.94	0.44
1:AA:9:G:C6	1:AA:26:A:N6	2.86	0.44
1:AA:11:G:C5	1:AA:12:U:C5	3.06	0.44
1:AA:404:G:O2'	1:AA:498:A:N1	2.49	0.44
1:AA:463:U:H5'	1:AA:464:U:OP2	2.17	0.44
1:AA:1377:A:O2'	7:AG:2:PRO:HB3	2.18	0.44
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.18	0.44
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.18	0.44
7:AG:15:ASP:OD1	7:AG:16:PRO:HD2	2.18	0.44
9:AI:80:ARG:NH1	9:AI:103:PHE:CE1	2.84	0.44
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	2.17	0.44
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE2	3.05	0.44
12:AL:85:GLY:O	12:AL:96:HIS:ND1	2.47	0.44
22:BA:26:G:H1'	22:BA:514:A:H61	1.82	0.44
22:BA:39:G:H2'	22:BA:40:U:C6	2.53	0.44
22:BA:170:U:H2'	22:BA:171:U:C6	2.52	0.44
22:BA:196:A:O2'	22:BA:805:G:O6	2.30	0.44
22:BA:527:C:N3	22:BA:2779:U:H2'	2.32	0.44
22:BA:761:A:P	57:BA:3701:HOH:O	2.74	0.44
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.48	0.44
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.17	0.44
25:BD:4:LEU:HD12	25:BD:32:ASN:CG	2.42	0.44
25:BD:68:PHE:CE1	25:BD:75:ALA:HA	2.53	0.44
27:BF:17:MET:HE3	27:BF:22:TYR:HB2	1.99	0.44
27:BF:122:PHE:HB3	27:BF:163:ASP:OD2	2.18	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
29:BH:99:ILE:HD11	29:BH:121:VAL:HG11	2.00	0.44
31:BJ:80:HIS:O	31:BJ:83:GLY:N	2.47	0.44
32:BK:70:ARG:NH1	32:BK:74:GLY:O	2.50	0.44
33:BL:77:ILE:CD1	33:BL:95:LEU:HD13	2.48	0.44
41:BT:26:LYS:O	41:BT:26:LYS:HG2	2.17	0.44
49:B1:10:LYS:O	49:B1:51:GLU:HG3	2.18	0.44
1:CA:257:G:C5	57:CA:1718:HOH:O	2.69	0.44
1:CA:922:G:H4'	5:CE:25:VAL:HA	2.00	0.44
1:CA:926:G:C5	1:CA:1505:G:C6	3.05	0.44
1:CA:1103:C:H5''	2:CB:97:LEU:HD22	1.98	0.44
1:CA:1157:A:C6	1:CA:1180:A:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:80:LYS:HE3	3:CC:80:LYS:HA	1.99	0.44
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	1.99	0.44
8:CH:126:ILE:HG22	8:CH:127:CYS:N	2.33	0.44
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.99	0.44
14:CN:21:PHE:O	14:CN:23:LYS:N	2.50	0.44
22:DA:442:G:N3	26:DE:43:THR:OG1	2.43	0.44
22:DA:485:C:C2	22:DA:496:G:C2	3.05	0.44
22:DA:566:U:O2'	22:DA:809:G:OP2	2.28	0.44
22:DA:705:A:C2	22:DA:727:A:O4'	2.70	0.44
22:DA:948:C:O2	22:DA:984:A:O2'	2.34	0.44
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.52	0.44
22:DA:1170:C:H2'	22:DA:1171:G:C8	2.52	0.44
22:DA:1308:A:N6	22:DA:1309:G:N1	2.65	0.44
22:DA:1760:C:C6	22:DA:1761:C:C5	3.06	0.44
22:DA:1773:A:H2'	22:DA:1774:C:H5'	2.00	0.44
22:DA:2063:C:O2	22:DA:2450:A:N1	2.51	0.44
22:DA:2114:A:H2'	22:DA:2114:A:N3	2.32	0.44
22:DA:2351:G:H1'	22:DA:2367:G:N2	2.33	0.44
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.17	0.44
22:DA:2849:U:O4	37:DP:21:ARG:NH2	2.49	0.44
23:DB:68:C:H2'	23:DB:69:G:O4'	2.17	0.44
24:DC:212:ARG:CD	24:DC:218:PRO:HD3	2.47	0.44
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.17	0.44
26:DE:21:ARG:HD3	26:DE:106:LYS:HB3	2.00	0.44
26:DE:79:ARG:O	26:DE:80:SER:HB2	2.18	0.44
27:DF:176:PRO:O	27:DF:177:PHE:HB2	2.18	0.44
28:DG:9:VAL:HG23	28:DG:69:ARG:CD	2.47	0.44
28:DG:83:PHE:CE2	28:DG:138:LYS:HB2	2.52	0.44
28:DG:91:GLY:O	28:DG:92:VAL:C	2.59	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
31:DJ:5:THR:HB	31:DJ:7:LYS:NZ	2.32	0.44
37:DP:73:VAL:HG23	37:DP:73:VAL:O	2.16	0.44
39:DR:67:GLY:C	39:DR:93:PHE:CE1	2.95	0.44
50:D2:10:LEU:CD1	50:D2:14:ARG:NE	2.80	0.44
1:AA:113:G:H2'	1:AA:114:U:H6	1.83	0.44
1:AA:147:G:N2	1:AA:176:C:C2	2.86	0.44
1:AA:184:G:C6	1:AA:185:U:C4	3.05	0.44
1:AA:417:G:C5	1:AA:418:C:C4	3.05	0.44
1:AA:1078:U:O4'	5:AE:89:HIS:HE1	2.00	0.44
1:AA:1353:G:C2	1:AA:1370:G:C2	3.05	0.44
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:40:GLU:HB2	6:AF:61:LEU:HB3	2.00	0.44
14:AN:83:LYS:HD3	14:AN:86:GLU:OE1	2.17	0.44
17:AQ:14:SER:C	17:AQ:17:MET:HE1	2.42	0.44
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.50	0.44
22:BA:1050:A:C2	22:BA:2751:G:C5	3.05	0.44
22:BA:1360:G:O6	22:BA:1372:U:C2	2.71	0.44
22:BA:1373:A:C5	22:BA:1374:G:H1'	2.53	0.44
22:BA:1795:C:H2'	22:BA:1796:U:H6	1.81	0.44
22:BA:1903:G:O2'	22:BA:1904:G:H5'	2.16	0.44
22:BA:2554:U:C4	22:BA:2555:U:C4	3.05	0.44
22:BA:2566:A:H4'	22:BA:2567:G:H5''	1.99	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
30:BI:52:GLY:C	30:BI:53:LEU:HD12	2.42	0.44
31:BJ:59:ALA:C	31:BJ:61:LYS:N	2.73	0.44
35:BN:38:LEU:HD12	35:BN:38:LEU:O	2.18	0.44
45:BX:35:SER:HA	45:BX:49:LEU:O	2.17	0.44
1:CA:243:A:H4'	1:CA:244:U:C5'	2.48	0.44
1:CA:312:C:C5	1:CA:313:A:N7	2.86	0.44
1:CA:355:C:H2'	1:CA:356:A:O4'	2.17	0.44
1:CA:496:A:H2'	1:CA:497:G:N7	2.32	0.44
1:CA:587:G:N2	1:CA:755:G:C4	2.85	0.44
1:CA:709:U:H2'	1:CA:710:G:H8	1.82	0.44
1:CA:806:C:O2'	1:CA:807:A:H5'	2.18	0.44
1:CA:1123:U:O3'	10:CJ:38:GLY:HA3	2.17	0.44
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.17	0.44
1:CA:1413:A:C2	1:CA:1488:G:N2	2.86	0.44
1:CA:1461:G:C5	1:CA:1462:C:C5	3.06	0.44
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.18	0.44
4:CD:104:ARG:HA	4:CD:104:ARG:HD2	1.84	0.44
5:CE:101:GLU:OE2	5:CE:103:THR:HA	2.17	0.44
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.42	0.44
5:CE:157:ARG:O	5:CE:159:LYS:HG2	2.17	0.44
7:CG:105:VAL:O	7:CG:109:ARG:HG2	2.17	0.44
8:CH:67:GLN:C	8:CH:69:LYS:H	2.25	0.44
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.99	0.44
12:CL:59:ASN:N	12:CL:59:ASN:HD22	2.16	0.44
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	2.00	0.44
15:CO:88:ARG:O	15:CO:89:ARG:CB	2.65	0.44
16:CP:11:ALA:O	16:CP:14:ARG:N	2.45	0.44
22:DA:305:C:O2	22:DA:313:G:C2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:480:A:H5''	42:DU:44:LYS:HD2	1.98	0.44
22:DA:528:A:C2	22:DA:2043:C:C4'	2.99	0.44
22:DA:563:A:C2	22:DA:564:C:C2	3.05	0.44
22:DA:1731:G:N1	22:DA:1733:G:C5	2.86	0.44
22:DA:2134:A:C6	22:DA:2135:A:C5	3.06	0.44
22:DA:2561:U:H2'	22:DA:2562:U:O5'	2.17	0.44
22:DA:2571:U:C4	22:DA:2574:G:C8	3.06	0.44
22:DA:2753:A:C6	22:DA:2754:U:N3	2.85	0.44
22:DA:2821:A:OP2	25:DD:115:GLY:HA3	2.17	0.44
23:DB:66:A:H61	23:DB:107:G:H2'	1.83	0.44
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	2.00	0.44
24:DC:204:VAL:O	24:DC:205:LEU:HB2	2.16	0.44
25:DD:62:LYS:HB2	25:DD:63:PRO:HD3	1.99	0.44
26:DE:132:LYS:HA	26:DE:135:ALA:HB3	1.99	0.44
27:DF:8:TYR:HB2	27:DF:173:PHE:CZ	2.53	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
30:DI:80:LEU:HD11	30:DI:133:ALA:HA	1.98	0.44
42:DU:81:ASP:OD1	42:DU:96:PHE:HB3	2.17	0.44
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.16	0.44
1:AA:137:U:O2	1:AA:137:U:C2'	2.65	0.44
1:AA:423:G:H2'	1:AA:424:G:O4'	2.18	0.44
1:AA:591:U:H2'	1:AA:592:G:C8	2.53	0.44
1:AA:604:G:C2	1:AA:635:A:C2	3.06	0.44
1:AA:1080:A:H5''	5:AE:21:VAL:HG11	1.99	0.44
1:AA:1269:A:H2	1:AA:1312:G:N3	2.15	0.44
1:AA:1329:A:H5''	13:AM:26:GLY:N	2.33	0.44
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.53	0.44
2:AB:27:MET:HA	2:AB:27:MET:HE3	1.99	0.44
2:AB:47:VAL:C	2:AB:49:MET:N	2.75	0.44
3:AC:140:ASN:O	3:AC:140:ASN:ND2	2.48	0.44
3:AC:146:ALA:C	3:AC:148:GLY:H	2.25	0.44
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.16	0.44
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.99	0.44
15:AO:28:GLN:O	15:AO:29:VAL:C	2.60	0.44
21:AU:40:LYS:HG2	21:AU:41:PRO:HD3	2.00	0.44
22:BA:675:A:H4'	26:BE:62:GLN:OE1	2.18	0.44
22:BA:1068:G:H2'	22:BA:1069:A:H5'	2.00	0.44
22:BA:1566:A:O2'	22:BA:1567:G:H5'	2.18	0.44
22:BA:2122:U:C4	22:BA:2123:G:N7	2.85	0.44
25:BD:85:ALA:O	25:BD:86:GLU:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:52:PHE:CE1	28:BG:69:ARG:HA	2.53	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.51	0.44
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.52	0.44
50:B2:21:ARG:HB2	50:B2:31:LEU:HD11	1.99	0.44
1:CA:62:U:H5''	1:CA:385:C:O2'	2.17	0.44
1:CA:273:U:C2'	1:CA:274:A:H5'	2.48	0.44
1:CA:327:A:O2'	1:CA:328:C:O4'	2.29	0.44
1:CA:768:A:N3	1:CA:1512:U:O2'	2.47	0.44
1:CA:942:G:N2	1:CA:1342:C:C2	2.85	0.44
1:CA:1126:U:C2	1:CA:1281:C:C5	3.05	0.44
1:CA:1318:A:H4'	19:CS:10:PHE:CE2	2.53	0.44
1:CA:1408:A:C2	1:CA:1494:G:C6	3.05	0.44
4:CD:9:LEU:HD12	4:CD:9:LEU:HA	1.74	0.44
4:CD:57:GLU:OE2	4:CD:196:ASN:N	2.45	0.44
4:CD:148:LYS:C	4:CD:150:LYS:H	2.26	0.44
11:CK:92:GLY:O	11:CK:93:ARG:HB3	2.17	0.44
12:CL:75:GLN:O	12:CL:76:GLU:C	2.60	0.44
14:CN:61:ARG:O	14:CN:62:ASN:HB2	2.16	0.44
22:DA:14:A:N6	22:DA:526:A:C2	2.85	0.44
22:DA:82:U:O2	22:DA:83:A:C8	2.71	0.44
22:DA:96:C:OP1	46:DY:41:HIS:CE1	2.70	0.44
22:DA:270:A:OP1	22:DA:271:G:H2'	2.18	0.44
22:DA:687:C:H5''	50:D2:2:LYS:HE2	1.99	0.44
22:DA:830:G:C2	22:DA:2448:A:N7	2.86	0.44
22:DA:1132:U:H4'	31:DJ:75:TYR:CE2	2.52	0.44
22:DA:1154:G:P	38:DQ:58:ARG:HH11	2.40	0.44
22:DA:1215:G:H2'	22:DA:1216:G:O4'	2.17	0.44
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.17	0.44
22:DA:1392:A:N6	22:DA:1393:A:N6	2.66	0.44
22:DA:1623:G:C5	22:DA:1624:U:C5	3.05	0.44
22:DA:1790:C:H4'	24:DC:208:ALA:HB2	2.00	0.44
22:DA:1869:G:C2	22:DA:1873:G:N1	2.86	0.44
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.18	0.44
22:DA:2389:G:H5''	22:DA:2390:U:H5'	1.99	0.44
22:DA:2843:G:N2	22:DA:2875:C:C2	2.85	0.44
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.17	0.44
23:DB:45:A:OP1	27:DF:92:ARG:HD3	2.18	0.44
26:DE:1:MET:HE1	26:DE:113:VAL:HG11	2.00	0.44
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.33	0.44
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:39:ARG:NE	37:DP:39:ARG:HA	2.33	0.44
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	2.00	0.44
48:D0:33:THR:HG22	48:D0:34:SER:N	2.32	0.44
1:AA:355:C:O2'	1:AA:388:G:N3	2.40	0.44
1:AA:859:G:H2'	1:AA:860:A:C8	2.52	0.44
1:AA:1059:C:N3	1:AA:1060:U:C5	2.86	0.44
5:AE:81:LEU:HB3	5:AE:147:MET:CE	2.48	0.44
6:AF:88:MET:HE3	18:AR:64:TYR:CD2	2.52	0.44
9:AI:9:THR:O	9:AI:17:ALA:O	2.36	0.44
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.48	0.44
17:AQ:16:LYS:N	17:AQ:17:MET:CE	2.81	0.44
22:BA:1654:A:H1'	22:BA:2823:A:H5'	1.99	0.44
22:BA:1923:U:O2'	22:BA:1924:C:H5'	2.17	0.44
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.17	0.44
26:BE:48:THR:C	26:BE:50:ALA:H	2.25	0.44
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.30	0.44
26:BE:79:ARG:O	26:BE:80:SER:HB2	2.17	0.44
27:BF:40:VAL:CG1	27:BF:50:LEU:HD13	2.47	0.44
28:BG:35:ARG:HD3	28:BG:71:LEU:HD13	2.00	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.17	0.44
34:BM:109:PRO:O	34:BM:110:GLU:C	2.60	0.44
35:BN:37:THR:HG22	35:BN:110:MET:CE	2.48	0.44
1:CA:144:G:C2	1:CA:145:G:C4	3.06	0.44
1:CA:519:C:N4	1:CA:520:A:C6	2.86	0.44
1:CA:560:A:H4'	1:CA:561:U:H5''	1.99	0.44
1:CA:562:U:H4'	1:CA:563:A:O5'	2.18	0.44
1:CA:632:U:H2'	1:CA:633:G:OP1	2.18	0.44
1:CA:682:G:N3	1:CA:683:G:C8	2.86	0.44
1:CA:1066:C:H3'	1:CA:1067:A:C8	2.52	0.44
1:CA:1066:C:H3'	1:CA:1067:A:H8	1.83	0.44
1:CA:1144:G:N2	1:CA:1145:A:C2	2.86	0.44
1:CA:1404:C:O2	1:CA:1519:A:O2'	2.34	0.44
1:CA:1458:G:O2'	20:CT:23:SER:HB3	2.18	0.44
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.18	0.44
2:CB:64:LYS:HD3	2:CB:65:GLY:N	2.32	0.44
4:CD:8:LYS:O	4:CD:9:LEU:C	2.59	0.44
9:CI:60:LYS:HD2	9:CI:61:LEU:HD22	2.00	0.44
18:CR:52:GLN:O	18:CR:52:GLN:HG3	2.17	0.44
22:DA:60:G:C4	22:DA:74:A:C2	3.06	0.44
22:DA:89:A:N1	22:DA:90:U:N3	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:126:A:C5	22:DA:127:A:C2	3.06	0.44
22:DA:189:G:C5	22:DA:205:G:C2	3.05	0.44
22:DA:246:C:C2'	22:DA:247:G:H5'	2.47	0.44
22:DA:260:G:C6	22:DA:261:G:C8	3.06	0.44
22:DA:269:C:C4	22:DA:270:A:N7	2.85	0.44
22:DA:307:G:N2	22:DA:310:A:C8	2.85	0.44
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.52	0.44
22:DA:1300:G:C6	22:DA:1626:A:O2'	2.66	0.44
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.17	0.44
22:DA:2631:G:C6	22:DA:2632:A:N7	2.86	0.44
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.17	0.44
24:DC:141:VAL:O	24:DC:162:VAL:N	2.47	0.44
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	2.00	0.44
50:D2:10:LEU:HD11	50:D2:14:ARG:NH1	2.32	0.44
1:AA:15:G:C4	1:AA:16:A:C8	3.06	0.44
1:AA:104:G:C2	1:AA:105:G:C8	3.06	0.44
1:AA:186:C:O4'	20:AT:76:LYS:HD2	2.17	0.44
1:AA:427:U:OP2	1:AA:428:G:O2'	2.32	0.44
1:AA:922:G:C6	1:AA:923:A:C6	3.06	0.44
1:AA:992:U:C2	1:AA:1043:G:N7	2.86	0.44
1:AA:1095:U:P	57:AA:1865:HOH:O	2.75	0.44
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.18	0.44
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.53	0.44
2:AB:35:ARG:O	2:AB:38:VAL:HG13	2.18	0.44
2:AB:154:MET:HE2	2:AB:158:PRO:HG3	1.99	0.44
6:AF:13:ASP:OD1	6:AF:13:ASP:N	2.50	0.44
7:AG:69:VAL:HG12	7:AG:135:VAL:HA	1.99	0.44
9:AI:50:GLN:C	9:AI:52:LEU:H	2.26	0.44
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.46	0.44
10:AJ:52:LEU:HD21	10:AJ:59:LYS:HA	2.00	0.44
15:AO:87:LEU:O	15:AO:88:ARG:HB3	2.17	0.44
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.98	0.44
16:AP:18:GLN:O	16:AP:19:VAL:C	2.61	0.44
22:BA:875:G:N2	22:BA:903:C:C2	2.85	0.44
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.53	0.44
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.42	0.44
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.32	0.44
22:BA:2209:G:C6	22:BA:2210:U:C4	3.05	0.44
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.99	0.44
22:BA:2419:U:O2'	22:BA:2420:C:H5'	2.17	0.44
22:BA:2639:A:C2	22:BA:2778:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:7:G:C5'	36:BO:29:HIS:CD2	3.01	0.44
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	2.00	0.44
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.99	0.44
24:BC:166:ALA:HB3	24:BC:173:THR:HB	2.00	0.44
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.18	0.44
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.32	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
29:BH:122:LEU:HD23	1:CA:368:U:OP2	2.03	0.44
31:BJ:11:VAL:HG21	31:BJ:50:THR:HG22	2.00	0.44
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.99	0.44
39:BR:79:ARG:O	39:BR:80:ARG:HB2	2.18	0.44
40:BS:95:ARG:HG2	40:BS:96:ILE:N	2.32	0.44
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.48	0.44
52:B4:37:GLN:O	52:B4:37:GLN:CG	2.65	0.44
1:CA:28:A:OP1	4:CD:73:ARG:NH2	2.51	0.44
1:CA:490:C:H2'	1:CA:491:G:C8	2.53	0.44
1:CA:687:A:C2'	1:CA:701:U:O4	2.66	0.44
1:CA:728:A:C2	1:CA:729:A:C4	3.05	0.44
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.52	0.44
1:CA:1106:G:C5	1:CA:1107:C:C5	3.05	0.44
1:CA:1229:A:C2	1:CA:1230:C:C2	3.05	0.44
1:CA:1250:A:C6	1:CA:1251:A:C6	3.05	0.44
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.18	0.44
1:CA:1416:G:H2'	1:CA:1417:G:O4'	2.18	0.44
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.99	0.44
5:CE:133:PRO:O	5:CE:134:ILE:C	2.60	0.44
8:CH:30:SER:O	8:CH:34:VAL:HG23	2.17	0.44
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.17	0.44
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	2.00	0.44
22:DA:136:G:N1	22:DA:144:A:N6	2.65	0.44
22:DA:545:U:O2	22:DA:545:U:O5'	2.36	0.44
22:DA:726:G:O2'	22:DA:727:A:OP2	2.31	0.44
22:DA:749:A:C5	22:DA:750:A:C8	3.06	0.44
22:DA:1022:G:N2	22:DA:1142:A:C2	2.86	0.44
22:DA:1290:C:N3	22:DA:1291:C:C5	2.86	0.44
22:DA:1341:G:H5'	41:DT:61:LEU:HB3	1.99	0.44
22:DA:1356:G:C2	22:DA:1357:C:H1'	2.53	0.44
22:DA:1671:U:P	57:DA:3434:HOH:O	2.73	0.44
22:DA:1767:G:C6	22:DA:1986:C:N4	2.86	0.44
22:DA:1831:G:C5	22:DA:1832:C:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1853:A:H1'	22:DA:2234:G:H5'	2.00	0.44
22:DA:1869:G:H3'	22:DA:1870:C:H5'	2.00	0.44
22:DA:1906:G:OP1	22:DA:1930:G:N7	2.51	0.44
22:DA:2444:G:P	26:DE:63:LYS:HD2	2.57	0.44
22:DA:2452:C:C4	22:DA:2453:A:C6	3.06	0.44
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.53	0.44
26:DE:146:VAL:HA	26:DE:185:LYS:O	2.17	0.44
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.24	0.44
36:DO:70:ALA:O	36:DO:74:VAL:HB	2.17	0.44
41:DT:29:THR:OG1	41:DT:86:THR:HG22	2.18	0.44
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.18	0.44
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.52	0.44
50:D2:44:VAL:HG22	50:D2:45:SER:H	1.83	0.44
1:AA:636:U:H5''	17:AQ:6:ARG:HG2	1.99	0.44
1:AA:1094:G:O2'	1:AA:1095:U:OP2	2.36	0.44
1:AA:1159:U:N3	1:AA:1182:G:C5	2.85	0.44
1:AA:1343:G:C5	1:AA:1344:C:C4	3.05	0.44
1:AA:1409:C:H2'	1:AA:1410:A:C8	2.53	0.44
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	2.00	0.44
5:AE:72:ILE:CD1	5:AE:145:GLU:OE1	2.65	0.44
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.99	0.44
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.99	0.44
22:BA:190:A:N3	22:BA:679:C:O2'	2.47	0.44
22:BA:423:A:H5''	22:BA:424:G:H5'	2.00	0.44
22:BA:544:C:H2'	22:BA:545:U:O4'	2.18	0.44
22:BA:831:G:C6	22:BA:832:U:C4	3.06	0.44
22:BA:900:A:C2	22:BA:901:C:H1'	2.53	0.44
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.66	0.44
22:BA:1796:U:O2	22:BA:1796:U:C2'	2.64	0.44
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.33	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
41:BT:44:LYS:O	41:BT:48:GLN:HG3	2.18	0.44
45:BX:22:LEU:HD23	45:BX:22:LEU:HA	1.73	0.44
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	1.99	0.44
1:CA:45:G:H5''	1:CA:307:C:O2'	2.18	0.44
1:CA:230:G:H2'	1:CA:231:U:O4'	2.18	0.44
1:CA:610:U:O4	1:CA:611:C:N4	2.51	0.44
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.98	0.44
1:CA:949:A:H2'	1:CA:950:U:O4'	2.18	0.44
1:CA:1237:C:H3'	1:CA:1238:A:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1370:G:O2'	1:CA:1371:G:H5'	2.17	0.44
1:CA:1504:G:OP2	1:CA:1507:A:O2'	2.34	0.44
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.17	0.44
5:CE:53:ALA:HB2	5:CE:62:LYS:NZ	2.33	0.44
6:CF:41:ASP:CG	6:CF:58:HIS:HE2	2.25	0.44
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.18	0.44
18:CR:25:ASP:C	18:CR:27:ALA:N	2.74	0.44
22:DA:79:C:O2'	22:DA:346:A:N3	2.48	0.44
22:DA:89:A:N1	22:DA:90:U:C4	2.85	0.44
22:DA:222:A:H3'	22:DA:421:C:C5'	2.48	0.44
22:DA:245:G:O6	51:D3:8:ARG:HD3	2.18	0.44
22:DA:575:A:N3	22:DA:576:U:C6	2.86	0.44
22:DA:1249:U:H4'	38:DQ:4:VAL:HB	2.00	0.44
22:DA:1363:C:H2'	22:DA:1364:G:H8	1.83	0.44
22:DA:1465:G:C5	22:DA:1466:U:C4	3.06	0.44
22:DA:2453:A:N7	57:DA:3527:HOH:O	2.35	0.44
22:DA:2607:G:H2'	22:DA:2608:G:O4'	2.18	0.44
24:DC:43:ARG:HG2	24:DC:48:ARG:O	2.18	0.44
24:DC:66:ASP:OD2	24:DC:102:ARG:HD3	2.17	0.44
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.44	0.44
24:DC:228:VAL:HG13	24:DC:229:ASP:N	2.33	0.44
27:DF:178:ARG:HE	27:DF:178:ARG:C	2.25	0.44
29:DH:29:PHE:O	29:DH:30:LEU:C	2.61	0.44
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD1	2.51	0.44
31:DJ:70:THR:HG22	31:DJ:90:GLU:CD	2.43	0.44
35:DN:98:LEU:HD13	48:D0:54:VAL:HG21	2.00	0.44
42:DU:13:VAL:HG21	42:DU:39:ILE:HG21	2.00	0.44
42:DU:45:HIS:HB3	42:DU:58:ILE:HG12	2.00	0.44
1:AA:6:G:O2'	1:AA:7:A:H5''	2.18	0.44
1:AA:75:G:N3	1:AA:75:G:H2'	2.33	0.44
1:AA:76:G:H2'	1:AA:76:G:N3	2.32	0.44
1:AA:628:G:H2'	1:AA:629:A:C8	2.53	0.44
1:AA:815:A:H4'	1:AA:817:C:C4	2.53	0.44
1:AA:920:U:H2'	1:AA:921:U:C6	2.53	0.44
1:AA:1191:A:C6	1:AA:1192:C:N4	2.86	0.44
1:AA:1516:G:N2	1:AA:1519:A:OP2	2.51	0.44
2:AB:162:PHE:HA	2:AB:184:PHE:O	2.18	0.44
4:AD:122:ALA:O	4:AD:123:ILE:HG22	2.18	0.44
4:AD:138:SER:N	4:AD:141:ASP:OD2	2.50	0.44
5:AE:15:LEU:O	5:AE:15:LEU:CD1	2.65	0.44
8:AH:83:LEU:C	8:AH:83:LEU:CD2	2.91	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:42:LEU:HA	10:AJ:43:PRO:HD2	1.83	0.44
10:AJ:71:LEU:O	10:AJ:72:ARG:NE	2.51	0.44
11:AK:128:ARG:HG2	11:AK:128:ARG:HH11	1.83	0.44
14:AN:51:LEU:O	14:AN:52:PRO:C	2.61	0.44
21:AU:14:VAL:HG13	21:AU:16:LEU:CG	2.48	0.44
22:BA:483:A:H2'	22:BA:484:C:H5'	1.99	0.44
22:BA:682:G:H5'	50:B2:26:ASN:CG	2.42	0.44
22:BA:877:A:N6	22:BA:899:A:C6	2.84	0.44
22:BA:958:U:C2	23:BB:89:U:H1'	2.53	0.44
22:BA:1002:G:C5	57:BA:3746:HOH:O	2.69	0.44
22:BA:1438:U:C5	22:BA:1552:A:C2	3.06	0.44
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.48	0.44
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.33	0.44
22:BA:1795:C:H2'	22:BA:1796:U:C6	2.53	0.44
22:BA:2846:G:OP1	37:BP:53:ARG:NH1	2.51	0.44
24:BC:246:THR:HB	24:BC:247:PRO:HD2	2.00	0.44
25:BD:104:VAL:HG23	25:BD:177:VAL:HG11	2.00	0.44
25:BD:125:TRP:CE3	25:BD:160:LYS:HE2	2.53	0.44
26:BE:18:THR:O	26:BE:18:THR:HG22	2.18	0.44
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.44
29:BH:121:VAL:HA	29:BH:128:HIS:CG	2.53	0.44
38:BQ:91:ASP:C	38:BQ:91:ASP:OD1	2.59	0.44
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	2.00	0.44
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.81	0.44
53:B5:50:ILE:O	53:B5:52:PRO:HD3	2.16	0.44
1:CA:121:U:OP2	1:CA:121:U:H4'	2.17	0.44
1:CA:1160:G:O2'	1:CA:1161:C:P	2.76	0.44
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.53	0.44
4:CD:139:PRO:O	4:CD:140:ASN:HB2	2.18	0.44
5:CE:105:ILE:HD11	5:CE:112:ARG:HA	2.00	0.44
8:CH:53:GLY:C	8:CH:54:ASP:CG	2.85	0.44
8:CH:91:GLU:O	8:CH:92:LEU:C	2.60	0.44
20:CT:43:ASP:CB	20:CT:46:ALA:HB3	2.48	0.44
22:DA:43:G:C2	22:DA:437:U:N3	2.86	0.44
22:DA:60:G:C5	22:DA:62:U:C4	3.06	0.44
22:DA:563:A:C5	22:DA:2018:G:C2	3.06	0.44
22:DA:607:U:O4	22:DA:619:G:H2'	2.18	0.44
22:DA:856:G:C2	22:DA:922:C:C2	3.06	0.44
22:DA:875:G:C2	22:DA:876:C:O2	2.70	0.44
22:DA:996:A:C5	22:DA:1160:G:C2	3.06	0.44
22:DA:1862:G:C2	22:DA:1881:C:O2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1905:C:O4'	22:DA:1928:A:H2	1.99	0.44
22:DA:2297:A:C8	22:DA:2320:U:C4	3.05	0.44
22:DA:2556:C:C4	22:DA:2557:G:C5	3.06	0.44
22:DA:2591:C:OP1	24:DC:238:ARG:NH1	2.51	0.44
23:DB:43:C:N4	23:DB:45:A:N1	2.65	0.44
23:DB:66:A:H4'	23:DB:67:G:OP1	2.18	0.44
24:DC:162:VAL:HG13	24:DC:175:ARG:O	2.18	0.44
26:DE:136:GLN:O	26:DE:137:LYS:C	2.59	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.18	0.44
38:DQ:17:ILE:HG23	38:DQ:39:VAL:HG21	2.00	0.44
40:DS:59:GLU:O	40:DS:59:GLU:HG2	2.18	0.44
45:DX:5:CYS:O	45:DX:9:GLY:N	2.49	0.44
47:DZ:24:LEU:HD11	47:DZ:54:MET:HE2	2.00	0.44
1:AA:865:A:O2'	1:AA:866:C:H5'	2.18	0.43
1:AA:1197:A:P	1:AA:1197:A:H3'	2.58	0.43
1:AA:1350:A:C6	1:AA:1351:U:C4	3.06	0.43
1:AA:1406:U:C5	1:AA:1407:C:C4	3.06	0.43
3:AC:15:VAL:HG11	3:AC:179:ARG:O	2.18	0.43
4:AD:2:ALA:O	4:AD:68:LEU:HD23	2.18	0.43
7:AG:62:PHE:CE2	7:AG:66:LEU:HD22	2.53	0.43
9:AI:29:VAL:O	9:AI:65:ILE:HG12	2.18	0.43
12:AL:47:SER:O	12:AL:48:ALA:HB2	2.18	0.43
16:AP:50:THR:O	16:AP:50:THR:CG2	2.64	0.43
22:BA:10:A:C5	22:BA:11:C:C5	3.06	0.43
22:BA:90:U:H2'	22:BA:91:A:C8	2.53	0.43
22:BA:273:G:O6	22:BA:364:C:N4	2.42	0.43
22:BA:563:A:C2	22:BA:564:C:C2	3.06	0.43
22:BA:637:A:N1	22:BA:651:G:O2'	2.50	0.43
22:BA:962:G:N2	22:BA:2250:G:H1	2.16	0.43
22:BA:1001:A:P	57:BA:3743:HOH:O	2.75	0.43
22:BA:1429:G:C5	22:BA:1568:G:C6	3.06	0.43
22:BA:1768:C:C2	22:BA:1769:U:C6	3.06	0.43
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.48	0.43
24:BC:226:ASN:O	24:BC:227:PRO:C	2.61	0.43
27:BF:57:LEU:HD21	27:BF:152:LEU:CD1	2.48	0.43
27:BF:129:SER:HA	27:BF:154:ILE:O	2.18	0.43
30:BI:29:GLY:O	30:BI:35:ILE:HD11	2.18	0.43
36:BO:115:LEU:HD12	36:BO:115:LEU:HA	1.89	0.43
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.17	0.43
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:158:G:C5	1:CA:164:G:C6	3.06	0.43
1:CA:202:G:C2	1:CA:216:U:O2	2.71	0.43
1:CA:502:A:O2'	1:CA:503:C:H5'	2.18	0.43
1:CA:642:A:N7	8:CH:107:SER:HA	2.33	0.43
1:CA:815:A:N7	1:CA:1509:C:O2'	2.31	0.43
1:CA:1514:G:H2'	1:CA:1515:G:C8	2.52	0.43
12:CL:30:LYS:O	12:CL:81:LEU:HD12	2.17	0.43
16:CP:6:LEU:HD12	16:CP:6:LEU:N	2.33	0.43
22:DA:189:G:H2'	22:DA:190:A:O5'	2.18	0.43
22:DA:273:G:N2	22:DA:365:U:O2	2.51	0.43
22:DA:696:G:C6	22:DA:767:U:C2	3.06	0.43
22:DA:1316:U:C2	22:DA:1337:G:C2	3.05	0.43
22:DA:2009:A:N6	57:DA:3375:HOH:O	2.30	0.43
22:DA:2037:A:C6	22:DA:2038:G:C5	3.05	0.43
22:DA:2204:G:C6	22:DA:2221:G:C2	3.06	0.43
22:DA:2271:G:H5'	44:DW:20:ARG:HG3	2.00	0.43
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	2.00	0.43
24:DC:155:ALA:HB2	24:DC:162:VAL:HG23	2.01	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
35:DN:9:GLN:O	35:DN:10:LEU:C	2.61	0.43
35:DN:114:GLU:OE2	35:DN:118:ARG:CD	2.66	0.43
37:DP:26:VAL:HG12	37:DP:28:VAL:HG23	1.99	0.43
39:DR:21:ARG:HG3	39:DR:93:PHE:HD2	1.82	0.43
40:DS:22:ASP:OD1	40:DS:22:ASP:N	2.51	0.43
41:DT:32:LEU:HD12	41:DT:32:LEU:O	2.18	0.43
1:AA:236:A:H2'	1:AA:237:G:C8	2.53	0.43
1:AA:250:A:H4'	1:AA:251:G:O5'	2.17	0.43
1:AA:452:A:N7	1:AA:453:G:N9	2.67	0.43
1:AA:553:A:C2'	1:AA:554:A:H5'	2.47	0.43
1:AA:633:G:OP2	8:AH:88:ARG:NH2	2.50	0.43
1:AA:802:A:H5''	1:AA:803:G:OP2	2.17	0.43
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.41	0.43
2:AB:33:GLY:O	2:AB:34:ALA:HB2	2.17	0.43
2:AB:88:ASP:HB2	2:AB:221:VAL:HG12	1.99	0.43
2:AB:144:LEU:O	2:AB:148:LEU:HB2	2.19	0.43
3:AC:66:VAL:O	3:AC:66:VAL:HG12	2.16	0.43
7:AG:133:THR:O	7:AG:136:LYS:HB3	2.18	0.43
16:AP:22:ALA:CB	16:AP:32:PHE:HA	2.48	0.43
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.33	0.43
22:BA:167:A:H2'	22:BA:168:G:O4'	2.18	0.43
22:BA:769:U:C2	22:BA:770:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1356:G:C6	22:BA:1357:C:C4	3.06	0.43
22:BA:1358:G:N2	22:BA:1374:G:C6	2.86	0.43
22:BA:1607:C:N4	22:BA:1622:G:C5	2.85	0.43
22:BA:2516:A:C2'	22:BA:2517:C:H5'	2.49	0.43
26:BE:79:ARG:O	26:BE:80:SER:CB	2.65	0.43
26:BE:199:MET:HE2	26:BE:199:MET:HB3	1.95	0.43
27:BF:61:SER:O	27:BF:61:SER:OG	2.35	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
33:BL:36:LYS:O	33:BL:40:SER:HB3	2.18	0.43
33:BL:48:ARG:HG2	51:B3:60:ALA:HB1	1.99	0.43
34:BM:19:GLY:O	34:BM:97:GLN:HG2	2.18	0.43
41:BT:13:ALA:HB1	46:BY:33:ALA:HB1	1.99	0.43
1:CA:356:A:C5	1:CA:357:G:C8	3.06	0.43
1:CA:374:A:C5	1:CA:375:U:C5	3.06	0.43
1:CA:729:A:H2'	1:CA:730:G:H8	1.82	0.43
1:CA:754:C:H3'	1:CA:754:C:O2	2.18	0.43
1:CA:1039:G:H2'	1:CA:1040:U:O4'	2.19	0.43
1:CA:1349:A:H1'	1:CA:1374:A:N6	2.33	0.43
4:CD:157:ALA:O	4:CD:161:LEU:HD22	2.17	0.43
6:CF:11:HIS:ND1	6:CF:12:PRO:HD2	2.33	0.43
17:CQ:24:ALA:HB1	17:CQ:41:THR:HG23	2.00	0.43
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.17	0.43
22:DA:24:G:C6	22:DA:25:U:C4	3.06	0.43
22:DA:478:A:C6	22:DA:480:A:C6	3.06	0.43
22:DA:976:G:H4'	22:DA:1156:A:N7	2.33	0.43
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.33	0.43
22:DA:1650:A:C2	22:DA:1651:G:C4	3.06	0.43
22:DA:1789:A:C5'	24:DC:219:THR:O	2.66	0.43
22:DA:1806:C:O2'	24:DC:48:ARG:HG3	2.18	0.43
22:DA:2141:G:N2	22:DA:2151:U:O2	2.51	0.43
22:DA:2267:A:H5''	22:DA:2268:A:C5'	2.48	0.43
26:DE:52:VAL:CG2	26:DE:81:GLY:HA2	2.45	0.43
32:DK:38:ILE:CD1	32:DK:61:VAL:HB	2.48	0.43
35:DN:98:LEU:CD1	48:D0:54:VAL:HG21	2.48	0.43
38:DQ:36:PHE:CE2	38:DQ:40:ILE:CD1	3.01	0.43
39:DR:61:ALA:HB2	39:DR:98:ILE:HD13	2.01	0.43
1:AA:19:A:C2	1:AA:917:G:C5	3.07	0.43
1:AA:1058:G:C6	1:AA:1059:C:C4	3.07	0.43
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.46	0.43
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.83	0.43
4:AD:50:ASP:OD1	4:AD:50:ASP:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:102:VAL:HG12	4:AD:114:ALA:HB1	1.99	0.43
5:AE:15:LEU:CB	5:AE:37:THR:HG22	2.48	0.43
5:AE:25:VAL:N	5:AE:28:GLY:O	2.46	0.43
9:AI:25:ASN:C	9:AI:59:GLU:HA	2.43	0.43
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.33	0.43
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.98	0.43
22:BA:613:A:O2'	22:BA:614:A:P	2.77	0.43
22:BA:981:A:H5'	57:BA:3600:HOH:O	2.17	0.43
22:BA:1142:A:C4	22:BA:1144:A:C8	3.06	0.43
22:BA:1265:A:P	57:BA:3754:HOH:O	2.75	0.43
22:BA:2267:A:OP2	57:BA:3516:HOH:O	2.21	0.43
22:BA:2756:U:H1'	22:BA:2757:A:H5''	2.00	0.43
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.48	0.43
30:BI:90:SER:HB3	30:BI:93:PRO:HG3	1.99	0.43
34:BM:36:VAL:HG22	43:BV:82:TYR:CD2	2.52	0.43
38:BQ:47:TYR:CD1	38:BQ:47:TYR:C	2.96	0.43
38:BQ:115:ALA:C	38:BQ:117:LEU:N	2.76	0.43
42:BU:72:ILE:H	42:BU:72:ILE:CD1	2.31	0.43
49:B1:4:GLY:O	49:B1:5:ILE:HB	2.18	0.43
1:CA:71:A:C2	1:CA:72:A:C8	3.07	0.43
1:CA:215:C:H2'	1:CA:216:U:O4'	2.18	0.43
1:CA:251:G:C6	1:CA:266:G:O6	2.71	0.43
1:CA:256:U:H2'	1:CA:257:G:C8	2.54	0.43
1:CA:295:C:C4	1:CA:296:U:C4	3.06	0.43
1:CA:584:G:H2'	1:CA:585:G:C8	2.54	0.43
1:CA:761:G:O2'	1:CA:762:U:H5'	2.19	0.43
1:CA:1076:U:C2	1:CA:1082:A:C2	3.07	0.43
1:CA:1124:G:N2	1:CA:1127:G:N2	2.66	0.43
1:CA:1133:G:C2	1:CA:1142:G:C2	3.07	0.43
1:CA:1227:A:H3'	1:CA:1227:A:N3	2.32	0.43
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.18	0.43
2:CB:181:ILE:HD13	2:CB:181:ILE:N	2.33	0.43
2:CB:188:ASP:OD2	2:CB:204:ASP:OD1	2.35	0.43
4:CD:9:LEU:HD11	4:CD:29:ASP:OD1	2.18	0.43
5:CE:26:LYS:HE2	5:CE:26:LYS:HA	1.98	0.43
9:CI:19:VAL:HG22	9:CI:65:ILE:HG22	2.00	0.43
10:CJ:91:ASP:OD1	10:CJ:92:LEU:N	2.51	0.43
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.72	0.43
16:CP:5:ARG:O	16:CP:19:VAL:HG23	2.18	0.43
22:DA:126:A:O5'	50:D2:19:ARG:HG3	2.17	0.43
22:DA:459:U:C5	22:DA:469:G:N2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:491:G:C6	22:DA:492:A:C6	3.06	0.43
22:DA:852:U:H2'	22:DA:853:C:O4'	2.18	0.43
22:DA:965:C:H4'	22:DA:2273:A:H1'	2.00	0.43
22:DA:982:C:H5''	22:DA:983:A:P	2.58	0.43
22:DA:995:C:C4	38:DQ:57:PHE:CZ	3.06	0.43
22:DA:1265:A:N1	22:DA:2013:A:H5''	2.32	0.43
22:DA:1275:A:H1'	22:DA:1276:A:O4'	2.17	0.43
22:DA:1326:U:O4	22:DA:1647:U:O2	2.36	0.43
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.47	0.43
22:DA:1464:G:C2	22:DA:1465:G:C4	3.06	0.43
22:DA:1532:A:C2	22:DA:1540:G:C6	3.06	0.43
22:DA:1599:U:C4	22:DA:1600:C:N4	2.86	0.43
22:DA:2290:G:C6	22:DA:2291:U:C4	3.06	0.43
23:DB:46:A:C5	23:DB:47:C:C5	3.05	0.43
38:DQ:94:ILE:HG22	38:DQ:95:LEU:N	2.33	0.43
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.81	0.43
1:AA:619:U:N3	4:AD:131:ASN:OD1	2.44	0.43
1:AA:855:U:H2'	1:AA:856:C:C6	2.54	0.43
1:AA:903:G:C4	1:AA:904:U:C6	3.06	0.43
1:AA:1458:G:OP1	20:AT:30:THR:OG1	2.34	0.43
2:AB:154:MET:O	2:AB:156:GLY:N	2.51	0.43
4:AD:44:ARG:O	4:AD:46:PRO:HD3	2.19	0.43
4:AD:197:GLU:O	4:AD:198:HIS:C	2.59	0.43
8:AH:18:GLN:CD	8:AH:70:ALA:HB1	2.43	0.43
9:AI:67:VAL:HG11	9:AI:79:ILE:HD11	2.00	0.43
12:AL:14:ARG:O	12:AL:15:LYS:C	2.61	0.43
15:AO:64:ARG:NH2	15:AO:68:ASP:OD1	2.51	0.43
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.18	0.43
21:AU:8:GLU:HB3	21:AU:12:PHE:CZ	2.53	0.43
22:BA:225:C:H2'	22:BA:226:A:O4'	2.19	0.43
22:BA:747:U:C4	22:BA:2613:U:C5	3.06	0.43
22:BA:832:U:H2'	22:BA:833:A:C8	2.54	0.43
22:BA:914:G:C8	22:BA:914:G:H3'	2.53	0.43
22:BA:918:A:H4'	23:BB:97:C:O2	2.18	0.43
22:BA:1073:A:N7	22:BA:1074:G:C8	2.86	0.43
22:BA:1334:G:C6	22:BA:1335:C:C4	3.06	0.43
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.36	0.43
22:BA:1588:G:N1	22:BA:1589:U:C4	2.87	0.43
22:BA:2094:A:H4'	29:BH:25:TYR:CZ	2.54	0.43
24:BC:157:SER:O	24:BC:158:ALA:C	2.61	0.43
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
38:BQ:82:GLY:C	38:BQ:84:LYS:N	2.75	0.43
47:BZ:6:LYS:HA	47:BZ:36:VAL:O	2.19	0.43
47:BZ:31:ARG:O	47:BZ:32:ILE:C	2.62	0.43
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.53	0.43
1:CA:17:U:N3	1:CA:18:C:C4	2.86	0.43
1:CA:688:G:O2'	1:CA:704:A:N1	2.45	0.43
1:CA:735:C:H5'	18:CR:60:LYS:HD3	1.99	0.43
1:CA:1105:A:C2	1:CA:1106:G:C8	3.06	0.43
1:CA:1256:A:N1	1:CA:1277:C:C4	2.87	0.43
2:CB:103:ASN:C	2:CB:105:LYS:H	2.25	0.43
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.99	0.43
5:CE:58:ALA:O	5:CE:62:LYS:HB2	2.19	0.43
5:CE:105:ILE:H	5:CE:122:ASN:CA	2.31	0.43
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.95	0.43
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	2.01	0.43
16:CP:2:VAL:HG23	16:CP:65:ALA:HA	2.00	0.43
16:CP:39:PHE:O	16:CP:41:PRO:HD3	2.18	0.43
21:CU:5:LYS:HD2	21:CU:5:LYS:C	2.43	0.43
22:DA:116:C:O2'	22:DA:126:A:O2'	2.26	0.43
22:DA:311:A:C6	22:DA:328:U:C4	3.06	0.43
22:DA:362:A:C5	22:DA:363:G:N7	2.86	0.43
22:DA:387:U:O2	22:DA:388:G:N7	2.52	0.43
22:DA:408:G:C6	22:DA:409:G:C5	3.05	0.43
22:DA:1290:C:C4	22:DA:1291:C:C5	3.06	0.43
22:DA:1429:G:N3	22:DA:1568:G:C2	2.86	0.43
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.48	0.43
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.51	0.43
22:DA:1742:U:O4	22:DA:1743:G:C6	2.71	0.43
22:DA:1779:U:H5	22:DA:1784:A:N7	2.17	0.43
22:DA:1969:A:H1'	22:DA:1973:G:H1'	1.99	0.43
22:DA:2125:G:N2	22:DA:2171:A:O5'	2.51	0.43
22:DA:2301:C:C2	22:DA:2316:G:N2	2.87	0.43
22:DA:2531:A:C4	22:DA:2532:G:C8	3.06	0.43
22:DA:2740:A:C6	22:DA:2764:A:C8	3.06	0.43
22:DA:2753:A:N1	22:DA:2754:U:C2	2.86	0.43
22:DA:2823:A:C6	22:DA:2824:C:C4	3.06	0.43
24:DC:35:GLU:HG3	24:DC:35:GLU:O	2.19	0.43
27:DF:158:THR:C	27:DF:160:ALA:H	2.26	0.43
39:DR:78:ARG:HB3	39:DR:83:TYR:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:33:LEU:C	45:DX:34:HIS:CG	2.97	0.43
1:AA:254:G:H4'	17:AQ:20:SER:HB2	2.00	0.43
1:AA:949:A:N1	1:AA:950:U:C2	2.86	0.43
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.53	0.43
2:AB:204:ASP:OD1	2:AB:205:ASP:OD1	2.35	0.43
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	2.01	0.43
4:AD:17:THR:HG23	4:AD:18:ASP:N	2.33	0.43
5:AE:23:LYS:HB3	5:AE:30:ILE:HG23	2.00	0.43
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.99	0.43
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	2.00	0.43
7:AG:50:LEU:O	7:AG:50:LEU:HD13	2.19	0.43
8:AH:2:SER:N	8:AH:4:GLN:HE21	2.17	0.43
8:AH:7:ILE:O	8:AH:11:LEU:HG	2.18	0.43
11:AK:112:ASP:OD2	11:AK:114:THR:HG23	2.17	0.43
14:AN:54:ASP:HA	14:AN:59:ARG:HD3	2.00	0.43
15:AO:70:LEU:O	15:AO:71:LYS:C	2.60	0.43
17:AQ:49:GLU:O	17:AQ:50:ASN:C	2.60	0.43
20:AT:67:ILE:O	20:AT:68:HIS:C	2.61	0.43
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.65	0.43
22:BA:322:A:C5	22:BA:340:A:C2	3.07	0.43
22:BA:480:A:C2'	22:BA:481:G:OP1	2.66	0.43
22:BA:659:G:H4'	26:BE:95:LYS:HD2	2.00	0.43
22:BA:668:A:H2'	22:BA:670:A:H62	1.84	0.43
22:BA:996:A:C2	22:BA:997:G:C8	3.07	0.43
22:BA:1056:G:C2	22:BA:1102:C:C5	3.07	0.43
22:BA:1059:G:H5''	22:BA:1060:U:C2'	2.48	0.43
22:BA:1071:G:P	22:BA:1071:G:H8	2.42	0.43
22:BA:2517:C:C5	22:BA:2542:A:C5	3.06	0.43
23:BB:73:A:N3	23:BB:73:A:H2'	2.34	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
38:BQ:112:LYS:O	38:BQ:115:ALA:HB3	2.18	0.43
43:BV:51:GLN:HB2	43:BV:57:TYR:OH	2.18	0.43
46:BY:17:GLU:HB2	46:BY:53:VAL:HG11	2.01	0.43
1:CA:202:G:H2'	1:CA:203:G:O4'	2.17	0.43
1:CA:207:C:O2	1:CA:207:C:C2'	2.65	0.43
1:CA:337:G:H2'	1:CA:338:A:C8	2.52	0.43
2:CB:94:HIS:HA	2:CB:95:ARG:NH2	2.34	0.43
10:CJ:89:ARG:O	10:CJ:90:LEU:CB	2.66	0.43
16:CP:71:VAL:O	16:CP:74:LEU:N	2.52	0.43
18:CR:55:LEU:O	18:CR:56:ALA:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:176:A:C5	22:DA:177:G:C6	3.06	0.43
22:DA:247:G:C4'	22:DA:386:G:C5	2.94	0.43
22:DA:277:G:H1'	22:DA:361:G:O6	2.18	0.43
22:DA:425:G:N2	22:DA:426:C:C2	2.87	0.43
22:DA:599:A:C2	22:DA:659:G:C5	3.06	0.43
22:DA:684:G:C5'	50:D2:16:HIS:CE1	3.00	0.43
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.33	0.43
22:DA:1648:U:H2'	22:DA:1649:G:O4'	2.18	0.43
22:DA:1936:A:H3'	22:DA:1937:A:H5'	2.00	0.43
22:DA:2064:C:H1'	22:DA:2450:A:C6	2.53	0.43
22:DA:2109:U:H4'	22:DA:2110:G:OP1	2.17	0.43
22:DA:2325:G:C6	22:DA:2326:C:N4	2.86	0.43
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	2.00	0.43
22:DA:2545:G:N3	22:DA:2565:A:H2	2.16	0.43
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.54	0.43
22:DA:2847:U:O4	22:DA:2848:G:C6	2.72	0.43
23:DB:100:G:H2'	23:DB:101:A:O4'	2.18	0.43
24:DC:24:LEU:HD11	24:DC:90:ASN:CG	2.44	0.43
24:DC:45:ASN:C	24:DC:47:GLY:H	2.25	0.43
25:DD:61:THR:HB	25:DD:63:PRO:HD2	2.00	0.43
26:DE:187:VAL:HG13	26:DE:187:VAL:O	2.18	0.43
32:DK:91:SER:O	32:DK:92:GLU:O	2.36	0.43
33:DL:136:GLU:HA	33:DL:140:GLY:HA3	2.00	0.43
39:DR:68:ARG:HD3	39:DR:92:TRP:CE2	2.53	0.43
45:DX:32:ASN:ND2	45:DX:53:ALA:HB2	2.34	0.43
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.17	0.43
1:AA:19:A:C2	1:AA:917:G:C4	3.06	0.43
1:AA:208:U:C5	1:AA:210:C:N3	2.86	0.43
1:AA:350:G:O2'	1:AA:351:G:H5'	2.18	0.43
1:AA:509:A:C6	1:AA:510:A:N1	2.86	0.43
1:AA:663:A:H5'	1:AA:836:G:OP1	2.18	0.43
1:AA:706:A:C6	1:AA:707:U:C4	3.06	0.43
1:AA:745:G:H2'	1:AA:746:A:C8	2.54	0.43
1:AA:749:A:C5	1:AA:750:C:C5	3.07	0.43
1:AA:979:C:OP1	1:AA:981:U:O4	2.37	0.43
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.53	0.43
1:AA:1357:A:C6	1:AA:1358:U:C4	3.07	0.43
1:AA:1431:A:C6	1:AA:1432:G:C6	3.06	0.43
1:AA:1524:C:H2'	1:AA:1525:G:C8	2.54	0.43
3:AC:7:PRO:HD2	3:AC:184:TYR:CG	2.53	0.43
4:AD:55:LEU:C	4:AD:55:LEU:CD2	2.92	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.18	0.43
12:AL:94:ARG:HB2	12:AL:95:TYR:CE1	2.54	0.43
19:AS:75:ALA:O	19:AS:76:PRO:C	2.62	0.43
22:BA:1:G:H2'	22:BA:2:G:H8	1.83	0.43
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.19	0.43
22:BA:2631:G:O2'	22:BA:2810:A:N1	2.49	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
33:BL:21:ARG:HD3	33:BL:21:ARG:HA	1.77	0.43
36:BO:87:ILE:O	36:BO:88:LYS:O	2.37	0.43
36:BO:89:ASP:C	36:BO:90:VAL:HG13	2.44	0.43
38:BQ:112:LYS:HD3	39:BR:48:LYS:HD2	2.00	0.43
1:CA:108:G:H5'	1:CA:108:G:N3	2.34	0.43
1:CA:392:C:H2'	1:CA:393:A:C8	2.53	0.43
1:CA:519:C:OP2	12:CL:47:SER:OG	2.36	0.43
1:CA:525:C:N4	1:CA:526:C:N4	2.67	0.43
1:CA:774:G:C4	1:CA:775:G:C8	3.06	0.43
1:CA:859:G:H2'	1:CA:860:A:C8	2.54	0.43
1:CA:1068:G:H2'	1:CA:1069:C:H5'	2.00	0.43
1:CA:1317:C:O2'	14:CN:49:GLN:HG2	2.18	0.43
2:CB:23:TRP:O	2:CB:23:TRP:CG	2.71	0.43
3:CC:130:PHE:CE1	3:CC:157:LEU:HD23	2.53	0.43
5:CE:45:ARG:HA	5:CE:72:ILE:O	2.19	0.43
7:CG:46:ALA:CB	7:CG:120:LEU:HB3	2.48	0.43
10:CJ:80:THR:O	10:CJ:84:VAL:HB	2.17	0.43
15:CO:18:ASP:OD1	15:CO:18:ASP:C	2.62	0.43
17:CQ:14:SER:OG	17:CQ:17:MET:HE1	2.18	0.43
22:DA:20:C:H2'	22:DA:21:A:C8	2.53	0.43
22:DA:52:A:C2	22:DA:178:G:N3	2.87	0.43
22:DA:270:A:C2	22:DA:369:U:H4'	2.54	0.43
22:DA:513:A:C2	22:DA:514:A:C5	3.06	0.43
22:DA:686:U:C6	22:DA:788:A:N1	2.84	0.43
22:DA:813:U:H2'	22:DA:814:C:H6	1.81	0.43
22:DA:1120:G:C6	22:DA:1121:C:C4	3.06	0.43
22:DA:1407:G:N2	22:DA:1596:A:N3	2.67	0.43
22:DA:1439:A:C8	22:DA:1440:U:C6	3.06	0.43
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.54	0.43
22:DA:1609:A:O2'	22:DA:1610:A:H5'	2.19	0.43
22:DA:1789:A:H5''	24:DC:219:THR:O	2.18	0.43
22:DA:1829:A:O2'	24:DC:15:HIS:CE1	2.71	0.43
22:DA:1838:C:C2	22:DA:1899:A:C2	3.07	0.43
22:DA:1935:G:H1'	22:DA:1964:G:H21	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2093:G:C2	22:DA:2094:A:C4	3.06	0.43
22:DA:2176:A:H2'	22:DA:2177:C:C6	2.54	0.43
22:DA:2200:C:O2	22:DA:2226:C:N4	2.48	0.43
22:DA:2502:G:C5'	22:DA:2503:A:O5'	2.66	0.43
24:DC:31:ALA:N	24:DC:32:PRO:HD2	2.34	0.43
24:DC:212:ARG:C	24:DC:214:ARG:H	2.26	0.43
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.99	0.43
39:DR:48:LYS:O	39:DR:48:LYS:HG2	2.17	0.43
42:DU:72:ILE:HG12	42:DU:83:VAL:HG23	2.00	0.43
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.49	0.43
1:AA:198:G:C5	1:AA:220:G:C2	3.06	0.43
1:AA:376:G:C2	1:AA:389:A:C2	3.07	0.43
1:AA:504:C:H1'	1:AA:510:A:C4	2.53	0.43
1:AA:1202:U:H2'	1:AA:1203:C:O4'	2.17	0.43
1:AA:1210:C:N4	1:AA:1211:U:C4	2.87	0.43
1:AA:1288:A:N1	1:AA:1289:A:C5	2.86	0.43
1:AA:1353:G:C2	1:AA:1354:U:C6	3.07	0.43
1:AA:1394:A:H4'	1:AA:1395:C:OP2	2.19	0.43
2:AB:78:GLU:O	2:AB:80:VAL:N	2.52	0.43
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	2.00	0.43
7:AG:31:MET:HG2	7:AG:32:VAL:N	2.33	0.43
7:AG:129:GLU:CD	7:AG:131:LYS:HE2	2.44	0.43
10:AJ:80:THR:O	10:AJ:84:VAL:N	2.51	0.43
17:AQ:16:LYS:HA	17:AQ:16:LYS:HD2	1.91	0.43
20:AT:6:SER:C	20:AT:8:LYS:H	2.27	0.43
22:BA:846:U:C2'	22:BA:847:U:OP2	2.66	0.43
22:BA:1297:C:O2'	22:BA:1302:A:N1	2.46	0.43
22:BA:1768:C:N3	22:BA:1769:U:C5	2.86	0.43
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.52	0.43
23:BB:48:U:H4'	36:BO:100:HIS:CD2	2.54	0.43
28:BG:118:PRO:O	28:BG:119:ALA:C	2.62	0.43
29:BH:93:SER:HB2	29:BH:122:LEU:HB2	1.99	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:34:ASN:CB	30:BI:37:GLU:HB2	2.49	0.43
40:BS:28:LYS:O	40:BS:29:VAL:C	2.60	0.43
47:BZ:38:ARG:HB3	47:BZ:44:ILE:HD12	2.00	0.43
1:CA:109:A:C6	1:CA:327:A:C5	3.07	0.43
1:CA:505:G:C2	1:CA:506:G:C5	3.06	0.43
1:CA:517:G:C8	1:CA:531:U:C5	3.06	0.43
1:CA:1394:A:H4'	1:CA:1395:C:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:22:TRP:CZ3	14:CN:94:PRO:HG2	2.53	0.43
4:CD:23:SER:O	4:CD:24:GLY:O	2.37	0.43
4:CD:130:VAL:CG1	4:CD:135:TYR:CD2	3.01	0.43
5:CE:81:LEU:N	5:CE:81:LEU:CD1	2.82	0.43
6:CF:47:LEU:CD2	6:CF:59:TYR:OH	2.66	0.43
7:CG:36:LYS:O	7:CG:36:LYS:HG3	2.17	0.43
11:CK:31:ILE:HB	11:CK:46:THR:HG22	2.01	0.43
12:CL:74:LEU:HD11	12:CL:80:ILE:CG2	2.49	0.43
17:CQ:49:GLU:O	17:CQ:50:ASN:CG	2.62	0.43
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.52	0.43
22:DA:142:A:C5	22:DA:143:C:N4	2.87	0.43
22:DA:322:A:O4'	22:DA:340:A:H1'	2.18	0.43
22:DA:481:G:C4	22:DA:507:A:C2	3.07	0.43
22:DA:585:G:H2'	22:DA:586:A:N7	2.33	0.43
22:DA:1213:A:O2'	22:DA:1214:A:H5'	2.18	0.43
22:DA:1241:A:C2	22:DA:1242:U:C1'	3.02	0.43
22:DA:1388:G:N2	22:DA:1389:G:H1'	2.34	0.43
22:DA:1474:U:O4	22:DA:1475:G:N1	2.51	0.43
22:DA:1569:A:C6	22:DA:1570:A:C2	3.06	0.43
22:DA:1713:A:C5	22:DA:1716:U:H1'	2.53	0.43
22:DA:1799:G:H8	24:DC:180:GLU:OE2	2.00	0.43
22:DA:2093:G:N7	22:DA:2225:A:N9	2.67	0.43
22:DA:2497:A:N3	22:DA:2498:C:N4	2.66	0.43
22:DA:2896:C:C4	22:DA:2897:U:C5	3.07	0.43
29:DH:31:VAL:O	29:DH:32:PRO:C	2.61	0.43
37:DP:89:ARG:HD2	37:DP:113:ARG:NH2	2.33	0.43
40:DS:17:VAL:HB	40:DS:76:VAL:HG11	1.99	0.43
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.18	0.43
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.33	0.43
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.18	0.43
50:D2:34:ARG:CB	50:D2:42:LEU:HD13	2.49	0.43
1:AA:39:G:O2'	1:AA:40:C:H5'	2.19	0.43
1:AA:74:A:N3	1:AA:97:G:C2	2.87	0.43
1:AA:338:A:H2'	1:AA:339:C:O4'	2.18	0.43
1:AA:427:U:C4	1:AA:428:G:C6	3.06	0.43
1:AA:464:U:H2'	1:AA:466:A:OP2	2.18	0.43
1:AA:775:G:O2'	1:AA:776:G:H5'	2.19	0.43
1:AA:842:U:H3'	1:AA:843:U:C5'	2.48	0.43
1:AA:1069:C:H2'	1:AA:1070:U:O5'	2.18	0.43
1:AA:1253:G:N3	1:AA:1254:A:C8	2.86	0.43
1:AA:1392:G:C5	1:AA:1393:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:39:PHE:C	9:AI:41:ARG:H	2.25	0.43
14:AN:43:ASN:C	14:AN:45:VAL:H	2.25	0.43
22:BA:393:C:C2	22:BA:394:C:C5	3.06	0.43
22:BA:760:G:C2'	22:BA:761:A:H5'	2.49	0.43
22:BA:768:G:C5	22:BA:769:U:C5	3.07	0.43
22:BA:854:C:C2'	22:BA:855:G:H5'	2.49	0.43
22:BA:1176:U:OP1	22:BA:1176:U:H4'	2.19	0.43
22:BA:1935:G:N2	22:BA:1964:G:C8	2.87	0.43
22:BA:2065:C:H2'	22:BA:2066:C:C6	2.52	0.43
22:BA:2309:A:N6	22:BA:2310:C:N4	2.67	0.43
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.18	0.43
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.54	0.43
24:BC:105:LEU:O	24:BC:107:PRO:HD3	2.18	0.43
27:BF:174:ASP:O	27:BF:175:PHE:C	2.61	0.43
30:BI:67:PHE:N	30:BI:67:PHE:HD1	2.15	0.43
32:BK:107:LEU:C	32:BK:109:SER:N	2.76	0.43
38:BQ:74:ILE:HG21	38:BQ:110:VAL:HG13	2.01	0.43
38:BQ:81:ASN:O	38:BQ:84:LYS:HB3	2.17	0.43
38:BQ:89:GLU:N	39:BR:49:ILE:HD12	2.32	0.43
42:BU:7:ARG:HD2	42:BU:26:LYS:O	2.19	0.43
50:B2:22:MET:HE2	50:B2:31:LEU:HD13	2.01	0.43
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.67	0.43
1:CA:159:G:H5'	1:CA:160:A:OP2	2.19	0.43
1:CA:358:U:O2	1:CA:358:U:H2'	2.18	0.43
1:CA:374:A:N3	1:CA:375:U:C6	2.86	0.43
1:CA:637:C:H2'	1:CA:638:U:C6	2.53	0.43
1:CA:678:U:N3	1:CA:713:G:N2	2.67	0.43
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.19	0.43
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.37	0.43
1:CA:1309:G:O6	1:CA:1329:A:C2	2.71	0.43
1:CA:1511:G:C5	1:CA:1512:U:C5	3.07	0.43
2:CB:24:ASN:C	2:CB:26:LYS:N	2.77	0.43
2:CB:62:SER:C	2:CB:64:LYS:N	2.76	0.43
5:CE:33:PHE:CD1	5:CE:33:PHE:N	2.87	0.43
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.77	0.43
10:CJ:88:MET:O	10:CJ:89:ARG:HB2	2.19	0.43
22:DA:197:A:N3	22:DA:197:A:H2'	2.33	0.43
22:DA:396:G:O2'	22:DA:397:U:H5'	2.18	0.43
22:DA:442:G:N2	22:DA:444:C:C2	2.87	0.43
22:DA:488:G:C2	22:DA:493:G:O6	2.72	0.43
22:DA:546:U:O2	22:DA:546:U:H3'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:567:U:H4'	22:DA:808:G:OP1	2.19	0.43
22:DA:828:U:HO2'	22:DA:829:A:C5'	2.32	0.43
22:DA:1184:U:OP1	47:DZ:30:ARG:HD3	2.19	0.43
22:DA:1844:C:H5'	24:DC:254:GLY:O	2.19	0.43
22:DA:2037:A:N6	22:DA:2038:G:O6	2.52	0.43
22:DA:2212:A:C2	22:DA:2214:C:C4	3.07	0.43
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.34	0.43
22:DA:2410:G:H2'	22:DA:2411:A:O4'	2.19	0.43
22:DA:2623:G:H4'	22:DA:2825:G:C8	2.54	0.43
22:DA:2756:U:H4'	22:DA:2757:A:OP1	2.19	0.43
23:DB:69:G:C2	23:DB:70:C:H1'	2.54	0.43
24:DC:107:PRO:HA	24:DC:195:VAL:HA	1.99	0.43
24:DC:126:PRO:HA	24:DC:192:LEU:O	2.18	0.43
28:DG:8:PRO:HG3	28:DG:51:THR:HG22	2.01	0.43
28:DG:86:LYS:HB3	28:DG:165:ALA:HB3	2.00	0.43
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.17	0.43
33:DL:73:ILE:HA	33:DL:105:ILE:HD13	1.99	0.43
35:DN:34:ILE:HD11	35:DN:44:LEU:HD21	2.00	0.43
42:DU:95:PHE:O	42:DU:95:PHE:CD2	2.72	0.43
47:DZ:27:LEU:O	47:DZ:36:VAL:HG11	2.19	0.43
1:AA:374:A:C4	1:AA:375:U:C6	3.06	0.43
1:AA:481:G:O2'	1:AA:482:A:P	2.77	0.43
1:AA:923:A:OP1	5:AE:26:LYS:HG2	2.19	0.43
1:AA:1003:G:H21	1:AA:1005:A:H5'	1.84	0.43
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.54	0.43
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.54	0.43
3:AC:164:ARG:NH1	3:AC:166:GLU:OE1	2.52	0.43
3:AC:184:TYR:CD1	3:AC:184:TYR:C	2.97	0.43
5:AE:76:LEU:HB3	5:AE:77:ASN:H	1.68	0.43
5:AE:81:LEU:HD21	5:AE:123:VAL:CG1	2.49	0.43
6:AF:86:ARG:HG2	6:AF:86:ARG:HH11	1.83	0.43
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.18	0.43
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.49	0.43
22:BA:103:A:H2'	22:BA:104:A:O4'	2.19	0.43
22:BA:158:U:O4	22:BA:159:G:C6	2.72	0.43
22:BA:281:C:H2'	22:BA:282:A:H8	1.82	0.43
22:BA:980:A:C6	22:BA:981:A:N1	2.86	0.43
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.18	0.43
22:BA:1268:A:C2	22:BA:2013:A:C4	3.07	0.43
22:BA:1494:A:C2	22:BA:1495:A:C4	3.07	0.43
22:BA:1638:C:O2	22:BA:2698:U:O2'	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1664:A:C2	22:BA:2726:A:C8	3.07	0.43
22:BA:1795:C:C4	22:BA:1796:U:C4	3.07	0.43
22:BA:2484:G:OP1	34:BM:44:ARG:HG2	2.18	0.43
22:BA:2856:A:C6	22:BA:2857:G:C6	3.07	0.43
24:BC:20:VAL:HG23	24:BC:20:VAL:O	2.19	0.43
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.82	0.43
25:BD:12:THR:HG21	37:BP:9:GLU:HG2	2.01	0.43
26:BE:115:GLN:O	26:BE:116:ASP:HB2	2.19	0.43
27:BF:111:ILE:O	27:BF:114:PHE:HB2	2.19	0.43
28:BG:140:VAL:O	28:BG:141:ILE:C	2.61	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
1:CA:322:C:OP2	1:CA:328:C:N4	2.52	0.43
1:CA:412:A:O2'	1:CA:413:G:O5'	2.35	0.43
1:CA:487:A:H3'	1:CA:488:C:C6	2.53	0.43
1:CA:777:A:C2'	1:CA:778:G:O5'	2.67	0.43
1:CA:778:G:C6	1:CA:779:C:N3	2.87	0.43
1:CA:920:U:H2'	1:CA:921:U:H6	1.78	0.43
1:CA:926:G:C6	1:CA:1505:G:C5	3.07	0.43
1:CA:1092:A:H62	1:CA:1093:A:N6	2.17	0.43
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	2.00	0.43
7:CG:111:ARG:CZ	7:CG:122:ASN:HB3	2.49	0.43
14:CN:16:LEU:HB3	14:CN:55:SER:HA	2.00	0.43
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.19	0.43
15:CO:39:LEU:HD12	15:CO:39:LEU:HA	1.88	0.43
22:DA:66:C:C4	22:DA:67:U:C4	3.07	0.43
22:DA:70:G:H5''	22:DA:112:U:O2	2.19	0.43
22:DA:250:G:H4'	33:DL:59:ARG:CD	2.49	0.43
22:DA:484:C:N4	22:DA:497:A:C2	2.86	0.43
22:DA:574:A:H4'	22:DA:575:A:O5'	2.19	0.43
22:DA:684:G:C5'	50:D2:16:HIS:HE1	2.32	0.43
22:DA:727:A:C6	22:DA:728:G:C6	3.06	0.43
22:DA:788:A:H1'	50:D2:4:THR:CG2	2.48	0.43
22:DA:1090:A:N6	22:DA:1091:G:O6	2.52	0.43
22:DA:1833:C:O2	22:DA:1833:C:C2'	2.66	0.43
22:DA:1936:A:N7	22:DA:1945:G:C6	2.87	0.43
22:DA:2147:A:N7	22:DA:2148:G:N7	2.67	0.43
24:DC:69:ARG:NH2	24:DC:116:ILE:HD12	2.33	0.43
24:DC:100:GLU:HG2	24:DC:101:ARG:N	2.33	0.43
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.86	0.43
28:DG:148:LEU:O	28:DG:162:VAL:HG11	2.19	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:56:ALA:C	34:DM:58:LYS:N	2.77	0.43
35:DN:79:LEU:O	35:DN:80:PHE:HB2	2.19	0.43
36:DO:67:ASN:OD1	36:DO:69:ASP:HB2	2.19	0.43
43:DV:14:LYS:HG3	43:DV:15:GLY:N	2.34	0.43
1:AA:33:A:O2'	12:AL:29:GLN:OE1	2.19	0.43
1:AA:267:C:OP1	17:AQ:69:LYS:HB2	2.18	0.43
1:AA:406:G:C5	1:AA:495:A:C8	3.07	0.43
1:AA:516:U:O2'	1:AA:519:C:N3	2.47	0.43
1:AA:595:A:C6	1:AA:641:U:C6	3.06	0.43
1:AA:1122:U:C4	1:AA:1123:U:C5	3.06	0.43
1:AA:1129:C:C6	1:AA:1139:G:N7	2.87	0.43
1:AA:1195:C:O2	1:AA:1197:A:H1'	2.19	0.43
1:AA:1319:A:C4	1:AA:1323:G:C8	3.06	0.43
1:AA:1521:C:H2'	1:AA:1522:U:H6	1.84	0.43
2:AB:10:LEU:C	2:AB:10:LEU:CD2	2.90	0.43
2:AB:115:LYS:O	2:AB:117:LEU:N	2.49	0.43
2:AB:187:VAL:O	2:AB:187:VAL:HG23	2.17	0.43
3:AC:53:SER:O	3:AC:54:ARG:HB2	2.18	0.43
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.52	0.43
4:AD:110:THR:O	4:AD:113:GLU:N	2.51	0.43
5:AE:33:PHE:CD2	5:AE:56:VAL:HG22	2.54	0.43
9:AI:56:ASP:O	9:AI:60:LYS:NZ	2.28	0.43
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.27	0.43
12:AL:38:TYR:O	12:AL:39:THR:CG2	2.66	0.43
12:AL:87:VAL:HG11	12:AL:90:LEU:HD22	2.01	0.43
12:AL:94:ARG:C	12:AL:95:TYR:CD1	2.97	0.43
16:AP:20:VAL:HG23	16:AP:35:ARG:HA	2.01	0.43
20:AT:3:ASN:O	20:AT:5:LYS:N	2.52	0.43
22:BA:21:A:O2'	22:BA:22:C:H5'	2.19	0.43
22:BA:47:C:C2'	22:BA:48:G:H5'	2.49	0.43
22:BA:158:U:C4	22:BA:159:G:C5	3.07	0.43
22:BA:204:A:O4'	22:BA:206:U:C6	2.72	0.43
22:BA:319:G:C5	22:BA:333:G:C2	3.07	0.43
22:BA:716:A:N6	22:BA:717:C:C4	2.87	0.43
22:BA:742:A:H2'	22:BA:743:A:C8	2.54	0.43
22:BA:833:A:H2'	22:BA:834:G:C8	2.54	0.43
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.19	0.43
22:BA:1879:C:C5	22:BA:1880:U:C5	3.07	0.43
22:BA:1917:U:O4	22:BA:1918:A:N1	2.52	0.43
22:BA:2176:A:C6	22:BA:2177:C:N4	2.86	0.43
28:BG:109:PHE:CE1	28:BG:152:ARG:NH2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:155:GLU:OE2	28:BG:158:LYS:HB2	2.19	0.43
29:BH:89:LYS:HB3	1:CA:359:G:H5''	2.00	0.43
30:BI:98:VAL:HG12	30:BI:99:GLY:N	2.34	0.43
36:BO:2:ASP:OD1	36:BO:2:ASP:C	2.61	0.43
38:BQ:21:ALA:HA	38:BQ:24:TYR:CE2	2.54	0.43
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.33	0.43
42:BU:13:VAL:HG12	42:BU:19:LYS:HA	2.00	0.43
1:CA:54:C:H2'	1:CA:352:C:H41	1.84	0.43
1:CA:674:G:H2'	1:CA:675:A:H8	1.84	0.43
1:CA:718:A:C8	1:CA:719:C:C5	3.07	0.43
1:CA:735:C:H2'	1:CA:736:C:H6	1.82	0.43
1:CA:801:U:C2	1:CA:802:A:C8	3.07	0.43
1:CA:977:A:C2'	1:CA:1223:C:N4	2.81	0.43
1:CA:977:A:H3'	1:CA:977:A:N3	2.34	0.43
1:CA:1182:G:H5'	1:CA:1184:G:H5''	2.00	0.43
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.33	0.43
1:CA:1408:A:C2	1:CA:1494:G:C4	3.07	0.43
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.19	0.43
2:CB:187:VAL:O	2:CB:187:VAL:HG23	2.19	0.43
3:CC:175:LEU:HG	3:CC:175:LEU:O	2.19	0.43
4:CD:85:ASN:C	4:CD:85:ASN:OD1	2.61	0.43
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.33	0.43
8:CH:44:GLY:O	8:CH:64:LYS:NZ	2.41	0.43
9:CI:12:ARG:NH1	9:CI:13:LYS:HB2	2.34	0.43
9:CI:15:SER:OG	9:CI:69:GLY:O	2.34	0.43
22:DA:5:A:C2	22:DA:2899:A:C2	3.07	0.43
22:DA:9:G:C6	22:DA:2629:U:C6	3.07	0.43
22:DA:38:A:H2'	22:DA:39:G:O4'	2.19	0.43
22:DA:179:C:C2	22:DA:180:G:C8	3.06	0.43
22:DA:319:G:C5	22:DA:333:G:C2	3.06	0.43
22:DA:321:U:H4'	26:DE:159:LEU:O	2.18	0.43
22:DA:536:G:O6	22:DA:537:G:C6	2.72	0.43
22:DA:648:G:C2	22:DA:649:G:C5	3.07	0.43
22:DA:749:A:N3	22:DA:750:A:C8	2.87	0.43
22:DA:753:A:C2	22:DA:754:U:N3	2.87	0.43
22:DA:1045:C:N4	22:DA:1111:A:H2'	2.34	0.43
22:DA:2552:U:C2	22:DA:2554:U:C5'	3.01	0.43
22:DA:2569:G:C2	22:DA:2570:G:C8	3.06	0.43
25:DD:105:LYS:O	25:DD:177:VAL:HG12	2.19	0.43
30:DI:57:VAL:HG22	30:DI:69:PHE:HB2	2.01	0.43
31:DJ:25:LEU:HD13	31:DJ:100:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:29:LYS:O	33:DL:30:THR:CB	2.67	0.43
33:DL:57:LEU:HA	33:DL:60:ARG:HB3	2.01	0.43
37:DP:98:TYR:HD1	37:DP:101:ARG:NH2	2.16	0.43
42:DU:77:THR:C	42:DU:79:LYS:N	2.75	0.43
47:DZ:7:ILE:O	47:DZ:35:THR:HA	2.18	0.43
1:AA:958:A:C6	1:AA:959:A:C2	3.07	0.42
1:AA:1048:G:C2	1:AA:1050:G:C5	3.07	0.42
1:AA:1084:G:C5	1:AA:1085:U:C4	3.07	0.42
1:AA:1539:C:OP1	21:AU:18:ARG:HG3	2.19	0.42
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.19	0.42
2:AB:173:ILE:HG22	2:AB:177:ASN:ND2	2.34	0.42
3:AC:167:TRP:CE3	3:AC:167:TRP:N	2.86	0.42
4:AD:135:TYR:CD1	4:AD:135:TYR:C	2.97	0.42
5:AE:101:GLU:O	5:AE:101:GLU:OE2	2.37	0.42
7:AG:106:GLU:O	7:AG:110:LYS:HG2	2.19	0.42
12:AL:36:ARG:HB3	12:AL:38:TYR:CE1	2.54	0.42
15:AO:82:ILE:HA	15:AO:87:LEU:CD2	2.49	0.42
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.19	0.42
19:AS:36:ARG:NE	19:AS:52:HIS:O	2.47	0.42
22:BA:946:C:P	57:BA:3353:HOH:O	2.77	0.42
22:BA:1006:C:C2'	22:BA:1007:C:H5'	2.49	0.42
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.53	0.42
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.82	0.42
22:BA:1428:C:N4	22:BA:1570:A:OP2	2.41	0.42
22:BA:1605:C:H2'	22:BA:1606:C:H5'	2.01	0.42
22:BA:1638:C:H1'	22:BA:2698:U:O2'	2.19	0.42
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.54	0.42
22:BA:2280:G:O6	44:BW:14:ARG:HD2	2.19	0.42
22:BA:2284:A:OP1	49:B1:4:GLY:O	2.37	0.42
22:BA:2350:C:H2'	22:BA:2351:G:O4'	2.18	0.42
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.54	0.42
25:BD:136:ASN:HD21	25:BD:139:SER:H	1.66	0.42
27:BF:42:GLU:OE2	27:BF:49:LEU:CD2	2.67	0.42
28:BG:75:MET:O	28:BG:78:GLY:N	2.52	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
30:BI:77:ALA:HA	30:BI:80:LEU:HD12	2.01	0.42
31:BJ:104:ALA:O	31:BJ:108:MET:HG3	2.18	0.42
33:BL:116:VAL:HG13	33:BL:116:VAL:O	2.19	0.42
36:BO:71:ALA:O	36:BO:72:ALA:C	2.62	0.42
40:BS:109:ASP:OD1	40:BS:110:ARG:N	2.50	0.42
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B0:4:GLN:HG3	48:B0:4:GLN:O	2.18	0.42
1:CA:273:U:H2'	1:CA:274:A:H5'	2.01	0.42
1:CA:577:G:O2'	1:CA:578:C:H5'	2.19	0.42
1:CA:622:A:H5''	1:CA:623:C:OP2	2.19	0.42
1:CA:723:U:O2	1:CA:855:U:H4'	2.19	0.42
1:CA:756:C:C2	1:CA:757:U:C6	3.07	0.42
1:CA:1264:U:O2	1:CA:1272:G:N2	2.52	0.42
1:CA:1350:A:N6	1:CA:1373:G:N2	2.66	0.42
1:CA:1478:U:N3	1:CA:1479:C:C5	2.87	0.42
2:CB:10:LEU:O	2:CB:10:LEU:HD23	2.19	0.42
2:CB:165:ASP:OD2	2:CB:168:HIS:HB2	2.19	0.42
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.33	0.42
8:CH:8:ALA:HB2	8:CH:77:ARG:HG3	2.00	0.42
9:CI:44:ALA:HB1	9:CI:47:VAL:HG21	2.00	0.42
11:CK:14:LYS:O	11:CK:15:GLN:HB3	2.17	0.42
11:CK:17:SER:O	11:CK:80:LYS:N	2.48	0.42
15:CO:57:LEU:O	15:CO:60:VAL:HB	2.19	0.42
16:CP:11:ALA:O	16:CP:12:LYS:C	2.62	0.42
22:DA:45:G:H2'	22:DA:215:G:C5	2.54	0.42
22:DA:420:C:C2	22:DA:421:C:C5	3.07	0.42
22:DA:464:U:C4	22:DA:465:G:C6	3.07	0.42
22:DA:910:A:N3	34:DM:13:HIS:CE1	2.87	0.42
22:DA:1166:G:H2'	22:DA:1167:C:O4'	2.18	0.42
22:DA:1363:C:O2	22:DA:1369:G:C2	2.72	0.42
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.54	0.42
22:DA:1794:A:C6	22:DA:1795:C:C4	3.07	0.42
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.54	0.42
22:DA:1953:A:C6	22:DA:2550:G:C4'	3.02	0.42
22:DA:1992:G:N2	22:DA:1995:U:C5	2.87	0.42
22:DA:2093:G:C5	22:DA:2225:A:C5	3.07	0.42
22:DA:2127:G:C2	22:DA:2162:G:C8	3.07	0.42
22:DA:2133:G:N3	22:DA:2158:A:N1	2.67	0.42
22:DA:2303:G:O4'	27:DF:123:ASP:HA	2.19	0.42
22:DA:2547:A:C2	22:DA:2562:U:C2	3.07	0.42
22:DA:2658:C:OP1	28:DG:158:LYS:NZ	2.49	0.42
24:DC:48:ARG:HG3	24:DC:48:ARG:NH1	2.34	0.42
25:DD:110:THR:HG22	25:DD:111:GLY:N	2.34	0.42
30:DI:91:GLY:C	30:DI:93:PRO:HD3	2.44	0.42
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	2.00	0.42
33:DL:94:THR:O	33:DL:98:ALA:N	2.50	0.42
35:DN:117:ASP:O	35:DN:118:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:79:PRO:O	37:DP:80:VAL:C	2.61	0.42
40:DS:25:ARG:CZ	40:DS:25:ARG:HB2	2.49	0.42
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.20	0.42
42:DU:97:LYS:O	42:DU:98:SER:OG	2.29	0.42
45:DX:7:VAL:HG12	45:DX:8:THR:HG23	2.01	0.42
1:AA:66:A:H4'	1:AA:173:U:C5	2.54	0.42
1:AA:109:A:C6	1:AA:326:G:C6	3.07	0.42
1:AA:244:U:O4	1:AA:906:A:H1'	2.19	0.42
1:AA:872:A:C2	1:AA:874:G:C6	3.07	0.42
1:AA:1061:G:C4	1:AA:1062:U:C6	3.07	0.42
1:AA:1228:C:OP1	13:AM:115:PRO:HD2	2.19	0.42
2:AB:50:PHE:HB2	2:AB:213:TYR:OH	2.19	0.42
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	2.01	0.42
4:AD:173:VAL:HG22	4:AD:174:ASP:N	2.34	0.42
5:AE:60:ILE:O	5:AE:64:MET:HG2	2.19	0.42
6:AF:5:GLU:OE2	18:AR:24:LYS:HE3	2.20	0.42
8:AH:79:SER:OG	8:AH:84:ARG:HA	2.19	0.42
9:AI:113:ARG:NH2	10:AJ:64:GLN:OE1	2.48	0.42
11:AK:23:ILE:O	11:AK:23:ILE:HG13	2.18	0.42
16:AP:11:ALA:O	16:AP:12:LYS:C	2.62	0.42
19:AS:32:ARG:HD3	19:AS:57:HIS:NE2	2.34	0.42
22:BA:973:A:H5''	39:BR:81:LYS:HG3	2.01	0.42
22:BA:1833:C:H2'	22:BA:1834:U:H6	1.84	0.42
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.18	0.42
22:BA:2441:U:OP2	22:BA:2586:U:O2'	2.32	0.42
22:BA:2458:G:C2	22:BA:2490:G:N2	2.87	0.42
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.54	0.42
22:BA:2838:G:C6	22:BA:2839:G:C5	3.08	0.42
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.18	0.42
26:BE:131:THR:HG22	26:BE:160:ALA:HA	2.00	0.42
38:BQ:97:ASP:OD1	38:BQ:101:PHE:HD2	2.02	0.42
40:BS:20:VAL:HG11	40:BS:44:ALA:HA	2.00	0.42
43:BV:4:ILE:HG13	43:BV:50:MET:HE1	1.99	0.42
53:B5:74:ARG:HA	53:B5:93:ASP:OD1	2.20	0.42
1:CA:502:A:OP1	12:CL:115:SER:HB2	2.19	0.42
1:CA:666:G:C4	1:CA:667:G:C8	3.07	0.42
1:CA:1105:A:N3	1:CA:1106:G:C8	2.88	0.42
1:CA:1521:C:H2'	1:CA:1522:U:O5'	2.20	0.42
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.01	0.42
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.51	0.42
2:CB:141:LEU:O	2:CB:145:GLU:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:134:MET:SD	3:CC:153:VAL:HG22	2.60	0.42
4:CD:25:VAL:C	4:CD:26:ARG:O	2.62	0.42
4:CD:38:PRO:HD2	4:CD:42:GLY:HA3	2.01	0.42
5:CE:94:VAL:HG13	5:CE:111:MET:HE1	2.00	0.42
5:CE:133:PRO:HA	5:CE:136:VAL:HG12	2.01	0.42
10:CJ:8:ILE:HG22	10:CJ:10:LEU:HD11	2.01	0.42
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.18	0.42
15:CO:24:SER:O	15:CO:27:VAL:HB	2.19	0.42
15:CO:47:LYS:O	15:CO:53:ARG:NH2	2.53	0.42
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.18	0.42
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	2.01	0.42
21:CU:36:GLU:OE2	21:CU:38:TYR:HD2	2.02	0.42
21:CU:38:TYR:O	21:CU:39:GLU:HB2	2.19	0.42
22:DA:189:G:C5	22:DA:205:G:N2	2.87	0.42
22:DA:415:A:C2	22:DA:2409:G:C2	3.07	0.42
22:DA:430:A:H2'	22:DA:431:U:H5'	2.01	0.42
22:DA:674:G:H1'	26:DE:69:ARG:CD	2.48	0.42
22:DA:697:G:C2	22:DA:766:U:C2	3.07	0.42
22:DA:1087:G:C6	22:DA:1089:A:C2	3.07	0.42
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.19	0.42
22:DA:1607:C:O2	22:DA:1621:U:C5	2.72	0.42
22:DA:1692:U:H2'	22:DA:1694:C:C4	2.54	0.42
23:DB:52:A:C5	36:DO:33:ARG:NH2	2.87	0.42
24:DC:213:TRP:CD1	24:DC:213:TRP:C	2.97	0.42
25:DD:16:THR:OG1	25:DD:18:ASP:OD1	2.33	0.42
25:DD:187:LEU:HD21	25:DD:203:VAL:HG11	2.00	0.42
26:DE:97:ASN:HB2	26:DE:100:MET:CG	2.49	0.42
27:DF:46:ASP:N	27:DF:46:ASP:OD1	2.52	0.42
30:DI:33:VAL:HG22	30:DI:67:PHE:CE1	2.53	0.42
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.19	0.42
36:DO:36:TYR:CD1	36:DO:36:TYR:N	2.86	0.42
40:DS:41:LYS:C	40:DS:43:ALA:N	2.76	0.42
44:DW:46:HIS:CD2	44:DW:77:ARG:HB3	2.54	0.42
1:AA:28:A:C2	1:AA:29:U:C2	3.07	0.42
1:AA:324:G:N2	1:AA:326:G:H3'	2.35	0.42
1:AA:406:G:N2	1:AA:407:U:C2	2.87	0.42
1:AA:495:A:H4'	1:AA:496:A:O4'	2.19	0.42
1:AA:539:A:C6	1:AA:540:G:C6	3.08	0.42
1:AA:560:A:H5'	1:AA:566:G:N2	2.34	0.42
1:AA:716:A:C2'	1:AA:717:U:O5'	2.68	0.42
1:AA:810:C:O2	1:AA:810:C:C2'	2.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:842:U:H3'	1:AA:843:U:H4'	2.01	0.42
1:AA:1016:A:C5	1:AA:1017:U:H1'	2.53	0.42
1:AA:1290:G:N2	1:AA:1291:U:H1'	2.34	0.42
2:AB:17:GLY:HA2	2:AB:41:ILE:HG23	2.02	0.42
2:AB:32:PHE:CD1	2:AB:32:PHE:C	2.95	0.42
3:AC:181:ASP:C	3:AC:182:ILE:HG12	2.44	0.42
8:AH:59:LEU:HD13	8:AH:59:LEU:C	2.45	0.42
22:BA:136:G:H2'	22:BA:137:U:C6	2.54	0.42
22:BA:181:A:C2	22:BA:182:A:C4	3.06	0.42
22:BA:630:G:H5''	22:BA:631:A:OP2	2.20	0.42
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.51	0.42
22:BA:1467:U:C4	22:BA:1546:G:C2	3.08	0.42
22:BA:1578:U:O2	22:BA:1578:U:H2'	2.19	0.42
22:BA:1901:A:O2'	24:BC:244:PRO:HG2	2.18	0.42
22:BA:1935:G:C6	22:BA:1962:C:C6	3.06	0.42
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.19	0.42
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.34	0.42
22:BA:2552:U:C2	22:BA:2554:U:C5'	3.02	0.42
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.42	0.42
24:BC:119:GLY:O	24:BC:121:ASP:N	2.52	0.42
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.49	0.42
29:BH:117:LEU:O	29:BH:118:PRO:C	2.61	0.42
30:BI:112:THR:O	30:BI:113:LYS:C	2.61	0.42
30:BI:113:LYS:HE3	30:BI:116:ASP:HB3	2.02	0.42
33:BL:64:PHE:CD1	33:BL:64:PHE:C	2.97	0.42
34:BM:106:ASP:OD2	34:BM:106:ASP:C	2.62	0.42
41:BT:2:ILE:CD1	41:BT:45:ALA:HB1	2.47	0.42
50:B2:9:VAL:HG12	50:B2:13:ASN:ND2	2.34	0.42
53:B5:64:SER:O	53:B5:65:LEU:CB	2.67	0.42
1:CA:47:C:H4'	1:CA:48:C:OP1	2.18	0.42
1:CA:687:A:C8	1:CA:701:U:C5	3.07	0.42
1:CA:922:G:H2'	1:CA:923:A:C8	2.54	0.42
1:CA:983:A:N3	1:CA:983:A:C2'	2.82	0.42
1:CA:991:U:N3	1:CA:1212:U:O4'	2.53	0.42
1:CA:1153:G:H2'	1:CA:1154:G:O4'	2.19	0.42
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.53	0.42
1:CA:1211:U:O2'	1:CA:1212:U:P	2.77	0.42
1:CA:1303:C:N4	1:CA:1304:G:C6	2.88	0.42
4:CD:62:ARG:NH1	4:CD:69:GLU:HG2	2.34	0.42
4:CD:130:VAL:HG11	4:CD:135:TYR:CG	2.54	0.42
5:CE:154:ALA:C	5:CE:156:LYS:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:18:VAL:O	6:CF:21:MET:HB2	2.18	0.42
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.51	0.42
8:CH:27:MET:HB2	8:CH:28:PRO:HD2	2.00	0.42
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	2.01	0.42
17:CQ:11:ARG:HA	17:CQ:58:VAL:HA	2.01	0.42
22:DA:447:A:H5'	22:DA:449:A:C4	2.53	0.42
22:DA:996:A:C2	22:DA:997:G:N9	2.87	0.42
22:DA:1171:G:C2	22:DA:1179:G:O6	2.72	0.42
22:DA:1581:G:C6	22:DA:1582:C:C4	3.07	0.42
22:DA:2070:A:C2	22:DA:2442:C:C2	3.07	0.42
22:DA:2100:G:C6	22:DA:2101:A:C5	3.07	0.42
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.54	0.42
22:DA:2131:U:H4'	22:DA:2133:G:O4'	2.18	0.42
22:DA:2297:A:N1	22:DA:2321:U:H5	2.17	0.42
22:DA:2341:G:C6	22:DA:2342:C:C4	3.08	0.42
22:DA:2347:C:H2'	22:DA:2348:U:C5	2.54	0.42
22:DA:2366:A:C2	22:DA:2367:G:H1'	2.55	0.42
22:DA:2456:C:C4	22:DA:2457:U:C5	3.07	0.42
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.54	0.42
26:DE:3:LEU:HD11	26:DE:19:PHE:CD2	2.54	0.42
26:DE:105:LEU:HD23	26:DE:105:LEU:HA	1.94	0.42
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.62	0.42
38:DQ:27:ALA:HB1	38:DQ:31:VAL:HG23	2.01	0.42
39:DR:9:GLY:C	39:DR:10:LYS:HG2	2.44	0.42
39:DR:78:ARG:CB	39:DR:83:TYR:HD2	2.32	0.42
40:DS:6:LYS:HE2	40:DS:104:THR:HG23	2.01	0.42
1:AA:19:A:N3	1:AA:917:G:C2	2.87	0.42
1:AA:82:G:N2	1:AA:84:U:O4	2.52	0.42
1:AA:194:C:C2'	1:AA:195:A:H5'	2.49	0.42
1:AA:614:C:H2'	1:AA:615:G:O5'	2.20	0.42
1:AA:1053:G:C4	1:AA:1199:U:C4	3.08	0.42
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.45	0.42
1:AA:1077:G:C6	1:AA:1081:A:N6	2.87	0.42
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.19	0.42
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.34	0.42
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	2.01	0.42
4:AD:50:ASP:O	4:AD:53:VAL:HG22	2.20	0.42
4:AD:102:VAL:CG1	4:AD:114:ALA:HB1	2.49	0.42
4:AD:130:VAL:CG1	4:AD:135:TYR:CD2	3.00	0.42
4:AD:197:GLU:H	4:AD:197:GLU:CD	2.28	0.42
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:126:LYS:HA	21:AU:34:ARG:NH2	2.34	0.42
13:AM:90:ARG:HB3	13:AM:97:VAL:HG22	2.00	0.42
17:AQ:59:VAL:CG2	17:AQ:60:GLU:N	2.83	0.42
21:AU:14:VAL:O	21:AU:16:LEU:CD1	2.68	0.42
22:BA:739:A:N1	57:BA:3305:HOH:O	2.37	0.42
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.49	0.42
22:BA:1406:U:H2'	22:BA:1407:G:H8	1.84	0.42
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.19	0.42
22:BA:2380:C:H5'	36:BO:17:LYS:NZ	2.34	0.42
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.19	0.42
25:BD:39:ASP:OD1	25:BD:40:LEU:N	2.53	0.42
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.49	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
30:BI:45:LYS:HE2	30:BI:45:LYS:HB2	1.87	0.42
30:BI:113:LYS:HE2	30:BI:116:ASP:OD2	2.20	0.42
34:BM:6:ARG:O	34:BM:7:THR:HG23	2.19	0.42
34:BM:30:SER:H	34:BM:106:ASP:HB2	1.84	0.42
35:BN:79:LEU:O	35:BN:81:ASN:N	2.49	0.42
36:BO:35:ILE:O	36:BO:35:ILE:HG23	2.18	0.42
39:BR:15:SER:O	39:BR:18:GLN:HB3	2.19	0.42
52:B4:19:ARG:HB2	52:B4:24:ARG:HD2	2.00	0.42
1:CA:58:C:C2'	1:CA:59:A:O5'	2.66	0.42
1:CA:101:A:C4	1:CA:102:G:C8	3.07	0.42
1:CA:144:G:C5	1:CA:179:A:C2	3.07	0.42
1:CA:147:G:N2	1:CA:148:G:C2	2.87	0.42
1:CA:582:C:O2	1:CA:760:G:C2	2.72	0.42
1:CA:685:G:C2	1:CA:686:U:O4	2.73	0.42
1:CA:692:U:H1'	1:CA:695:A:N7	2.35	0.42
1:CA:783:C:N3	1:CA:784:A:N7	2.68	0.42
1:CA:866:C:C4	1:CA:867:G:H1'	2.54	0.42
1:CA:1220:G:H4'	19:CS:34:TRP:O	2.18	0.42
1:CA:1328:C:H5''	13:CM:28:THR:CG2	2.48	0.42
1:CA:1518:A:C2	1:CA:1519:A:C4	3.08	0.42
2:CB:19:GLN:O	2:CB:38:VAL:HG22	2.20	0.42
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.44	0.42
3:CC:50:ALA:HA	3:CC:75:ILE:HG21	2.00	0.42
4:CD:148:LYS:H	4:CD:148:LYS:HD3	1.85	0.42
4:CD:150:LYS:C	4:CD:151:LYS:HG2	2.44	0.42
11:CK:108:THR:HG22	11:CK:109:ASN:CG	2.44	0.42
15:CO:53:ARG:O	15:CO:54:ARG:C	2.61	0.42
17:CQ:12:VAL:HG11	17:CQ:55:ILE:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:62:ALA:O	18:CR:63:ARG:C	2.61	0.42
18:CR:67:LEU:HD23	18:CR:67:LEU:N	2.34	0.42
22:DA:328:U:O3'	42:DU:66:GLN:NE2	2.52	0.42
22:DA:517:C:O4'	40:DS:78:GLU:OE2	2.36	0.42
22:DA:607:U:H5	22:DA:619:G:C4	2.38	0.42
22:DA:931:U:O4	22:DA:1184:U:O4'	2.37	0.42
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.52	0.42
22:DA:1094:U:H2'	22:DA:1096:A:OP2	2.19	0.42
22:DA:1156:A:C2	38:DQ:47:TYR:HE1	2.37	0.42
22:DA:1361:G:N3	22:DA:1362:C:C6	2.86	0.42
22:DA:1820:U:O2'	24:DC:158:ALA:HB3	2.19	0.42
22:DA:2067:G:C6	22:DA:2444:G:N1	2.87	0.42
22:DA:2077:A:C8	22:DA:2435:A:C4	3.07	0.42
22:DA:2261:C:C2	22:DA:2280:G:N2	2.87	0.42
22:DA:2677:G:C4	22:DA:2731:G:N2	2.87	0.42
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.19	0.42
23:DB:5:U:C2	23:DB:116:G:N2	2.87	0.42
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	2.02	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
32:DK:87:LEU:HD22	32:DK:92:GLU:HA	2.01	0.42
36:DO:49:VAL:CG2	36:DO:85:LYS:HG3	2.49	0.42
39:DR:49:ILE:HG23	39:DR:54:VAL:HG23	1.99	0.42
42:DU:8:ASP:O	42:DU:9:ASP:HB2	2.19	0.42
1:AA:685:G:N2	1:AA:706:A:N6	2.67	0.42
1:AA:942:G:N2	1:AA:943:U:C2	2.87	0.42
1:AA:979:C:OP1	1:AA:1223:C:N4	2.53	0.42
1:AA:1000:A:C2	1:AA:1041:G:C2	3.07	0.42
1:AA:1260:G:H4'	1:AA:1283:U:O2'	2.19	0.42
2:AB:82:ASP:C	2:AB:84:ALA:H	2.28	0.42
2:AB:210:VAL:O	2:AB:211:THR:C	2.62	0.42
5:AE:97:GLN:HG2	5:AE:98:PRO:HD2	2.02	0.42
5:AE:151:GLU:O	5:AE:153:VAL:N	2.53	0.42
7:AG:22:LEU:HD21	7:AG:97:ASN:ND2	2.35	0.42
15:AO:88:ARG:O	15:AO:89:ARG:CB	2.67	0.42
19:AS:79:THR:O	19:AS:79:THR:OG1	2.30	0.42
22:BA:368:A:C6	22:BA:369:U:C4	3.06	0.42
22:BA:693:A:C2'	22:BA:694:U:H5'	2.49	0.42
22:BA:958:U:C6	34:BM:14:LYS:HD3	2.55	0.42
22:BA:1078:U:H5''	22:BA:1079:C:OP1	2.19	0.42
22:BA:1385:A:C2	22:BA:1386:C:N3	2.87	0.42
22:BA:2000:C:O2'	22:BA:2001:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2187:U:C4	22:BA:2188:U:O4	2.72	0.42
22:BA:2438:U:O2'	22:BA:2439:A:H5''	2.20	0.42
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.20	0.42
22:BA:2847:U:H2'	22:BA:2848:G:C5'	2.50	0.42
25:BD:33:ARG:NH1	25:BD:53:GLY:O	2.53	0.42
26:BE:83:VAL:O	26:BE:84:THR:C	2.58	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.84	0.42
30:BI:117:MET:HE2	30:BI:117:MET:HA	2.01	0.42
1:CA:37:U:OP1	12:CL:121:ARG:HB2	2.19	0.42
1:CA:86:G:H1'	1:CA:87:C:O4'	2.20	0.42
1:CA:216:U:H2'	1:CA:217:C:C6	2.55	0.42
1:CA:273:U:C4	1:CA:274:A:N7	2.88	0.42
1:CA:468:A:N3	1:CA:468:A:O4'	2.52	0.42
1:CA:581:G:H3'	1:CA:758:C:H42	1.83	0.42
1:CA:853:C:H2'	1:CA:854:U:H6	1.84	0.42
5:CE:112:ARG:O	5:CE:115:LEU:N	2.53	0.42
11:CK:123:PRO:CB	11:CK:124:PRO:HD2	2.49	0.42
20:CT:62:ALA:HA	20:CT:68:HIS:H	1.84	0.42
20:CT:62:ALA:HA	20:CT:68:HIS:N	2.35	0.42
22:DA:51:G:H4'	22:DA:52:A:H5'	2.02	0.42
22:DA:201:C:C6	22:DA:202:U:C5	3.05	0.42
22:DA:641:U:C5	22:DA:642:U:C4	3.08	0.42
22:DA:1027:A:H61	22:DA:1126:A:H1'	1.84	0.42
22:DA:1681:G:H2'	22:DA:1757:A:N1	2.34	0.42
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.20	0.42
22:DA:1975:G:C4	22:DA:1976:U:C6	3.08	0.42
22:DA:2394:C:OP2	51:D3:30:ARG:NH2	2.51	0.42
22:DA:2810:A:C8	22:DA:2811:G:C8	3.08	0.42
23:DB:85:G:N2	23:DB:92:C:C2	2.87	0.42
26:DE:150:THR:OG1	26:DE:151:GLY:N	2.53	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
31:DJ:42:ALA:C	31:DJ:44:TYR:H	2.26	0.42
1:AA:71:A:OP2	1:AA:71:A:H2'	2.20	0.42
1:AA:146:G:C2	1:AA:177:G:N7	2.88	0.42
1:AA:801:U:H2'	1:AA:802:A:C8	2.55	0.42
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.55	0.42
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	2.01	0.42
4:AD:58:LYS:HG2	4:AD:203:LEU:CD2	2.49	0.42
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.87	0.42
11:AK:36:ASP:CG	11:AK:38:GLN:HG2	2.44	0.42
13:AM:88:GLY:O	13:AM:90:ARG:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1:G:H2'	22:BA:2:G:C8	2.54	0.42
22:BA:115:C:O2'	22:BA:116:C:H5'	2.19	0.42
22:BA:447:A:OP2	57:BA:3210:HOH:O	2.21	0.42
22:BA:493:G:H2'	22:BA:494:G:O4'	2.20	0.42
22:BA:1343:G:C4	22:BA:1344:U:C5	3.07	0.42
22:BA:1403:A:O2'	22:BA:1404:C:H5'	2.19	0.42
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.84	0.42
22:BA:2082:A:H2'	22:BA:2083:G:O4'	2.19	0.42
22:BA:2533:U:H2'	22:BA:2534:A:H5'	2.02	0.42
22:BA:2636:C:H4'	25:BD:81:GLU:CD	2.44	0.42
23:BB:116:G:H4'	36:BO:54:VAL:HG13	2.01	0.42
24:BC:79:GLU:OE1	24:BC:101:ARG:NE	2.42	0.42
24:BC:105:LEU:HD22	24:BC:143:ASN:ND2	2.34	0.42
26:BE:180:LEU:HD23	26:BE:180:LEU:HA	1.92	0.42
29:BH:90:LEU:CD2	29:BH:122:LEU:HA	2.49	0.42
29:BH:91:PHE:CD1	1:CA:55:A:C8	3.07	0.42
30:BI:80:LEU:HA	30:BI:84:ALA:HB3	2.02	0.42
39:BR:51:VAL:CB	39:BR:52:PRO:HD2	2.49	0.42
40:BS:96:ILE:HD12	40:BS:98:LYS:HG3	2.01	0.42
51:B3:4:ILE:CG2	51:B3:63:PRO:HG3	2.50	0.42
1:CA:78:A:N6	1:CA:79:G:C6	2.88	0.42
1:CA:115:G:H4'	1:CA:116:A:O5'	2.20	0.42
1:CA:775:G:C2'	1:CA:776:G:H5'	2.50	0.42
1:CA:1053:G:H4'	1:CA:1055:A:OP1	2.20	0.42
1:CA:1228:C:H5'	13:CM:113:ARG:HB2	2.01	0.42
1:CA:1311:A:C2	1:CA:1327:C:N3	2.87	0.42
4:CD:150:LYS:HG2	4:CD:151:LYS:N	2.34	0.42
8:CH:87:LYS:HG3	8:CH:91:GLU:HB3	2.00	0.42
9:CI:88:MET:HB2	9:CI:92:GLU:OE2	2.19	0.42
9:CI:88:MET:O	9:CI:88:MET:HG2	2.19	0.42
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.20	0.42
16:CP:2:VAL:CG2	16:CP:65:ALA:HA	2.49	0.42
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.83	0.42
22:DA:28:A:C2	22:DA:513:A:C8	3.08	0.42
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.19	0.42
22:DA:204:A:C8	22:DA:206:U:C2	3.08	0.42
22:DA:250:G:H2'	22:DA:251:A:C8	2.54	0.42
22:DA:571:U:C4	22:DA:2030:A:C6	3.08	0.42
22:DA:724:U:C4	22:DA:725:G:C5	3.08	0.42
22:DA:1345:C:H5'	22:DA:1396:U:C4	2.54	0.42
22:DA:1411:U:H2'	22:DA:1412:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1857:G:C2	22:DA:1884:G:C4	3.08	0.42
22:DA:1864:U:H2'	22:DA:1865:U:H5'	2.00	0.42
22:DA:2069:G:C2	22:DA:2443:C:C2	3.07	0.42
22:DA:2234:G:N1	22:DA:2235:G:C5	2.87	0.42
22:DA:2344:U:OP1	49:D1:37:LYS:HD2	2.19	0.42
22:DA:2446:G:C6	22:DA:2501:C:H2'	2.55	0.42
22:DA:2548:U:O2'	32:DK:4:GLU:OE1	2.38	0.42
22:DA:2794:C:H2'	22:DA:2795:C:O4'	2.19	0.42
24:DC:6:CYS:SG	24:DC:16:VAL:HG12	2.59	0.42
25:DD:22:ILE:HA	25:DD:23:PRO:HD3	1.91	0.42
25:DD:133:THR:O	25:DD:134:HIS:C	2.61	0.42
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.35	0.42
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.54	0.42
26:DE:108:ILE:HB	33:DL:2:ARG:HH22	1.84	0.42
26:DE:199:MET:HE3	26:DE:200:LEU:CD1	2.50	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
32:DK:61:VAL:O	32:DK:61:VAL:HG13	2.19	0.42
39:DR:25:LEU:O	39:DR:66:HIS:HE1	2.03	0.42
42:DU:14:LEU:HD11	42:DU:71:ALA:HB2	2.01	0.42
46:DY:7:ARG:O	46:DY:8:GLU:HG3	2.19	0.42
49:D1:39:PHE:CE2	49:D1:40:ASP:O	2.73	0.42
1:AA:17:U:H2'	1:AA:18:C:C6	2.55	0.42
1:AA:206:C:H2'	1:AA:207:C:O4'	2.19	0.42
1:AA:828:U:C4	1:AA:859:G:C4	3.07	0.42
1:AA:979:C:C5	1:AA:980:C:C5	3.08	0.42
1:AA:1225:A:C2	1:AA:1226:C:C4	3.08	0.42
3:AC:77:ILE:HA	3:AC:84:VAL:CG2	2.50	0.42
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	2.00	0.42
10:AJ:7:ARG:HB2	10:AJ:75:ASP:OD1	2.20	0.42
12:AL:81:LEU:HD12	12:AL:81:LEU:HA	1.88	0.42
21:AU:14:VAL:HG13	21:AU:16:LEU:HD21	2.01	0.42
22:BA:250:G:P	51:B3:13:ARG:HH12	2.43	0.42
22:BA:487:C:O2	40:BS:53:SER:OG	2.38	0.42
22:BA:749:A:C6	22:BA:1618:A:C2	3.07	0.42
22:BA:817:C:H2'	22:BA:818:G:O4'	2.19	0.42
22:BA:842:U:H2'	22:BA:843:G:O4'	2.19	0.42
22:BA:920:A:C6	22:BA:921:C:C4	3.08	0.42
22:BA:1984:G:C4	22:BA:1985:C:C6	3.08	0.42
22:BA:2287:A:C8	22:BA:2289:G:C8	3.07	0.42
22:BA:2480:C:H2'	22:BA:2481:G:H5'	2.02	0.42
22:BA:2555:U:C5	22:BA:2556:C:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:134:GLU:CB	27:BF:136:ILE:HD12	2.50	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:119:ASN:CB	29:BH:123:ARG:NH1	2.81	0.42
36:BO:109:ALA:O	36:BO:112:GLU:HB2	2.20	0.42
40:BS:38:TYR:CE1	48:B0:28:LEU:HD21	2.54	0.42
41:BT:6:ARG:O	41:BT:8:LEU:N	2.53	0.42
1:CA:238:A:C2'	1:CA:239:U:H5'	2.48	0.42
1:CA:1007:U:H3'	1:CA:1008:U:H5''	2.00	0.42
1:CA:1125:U:C5	10:CJ:40:ILE:HD13	2.55	0.42
1:CA:1478:U:C2	1:CA:1479:C:C5	3.07	0.42
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.45	0.42
22:DA:45:G:N2	22:DA:434:U:N3	2.67	0.42
22:DA:234:U:H2'	22:DA:235:U:H6	1.84	0.42
22:DA:265:A:H4'	22:DA:266:G:OP1	2.19	0.42
22:DA:328:U:O3'	42:DU:66:GLN:HG3	2.19	0.42
22:DA:425:G:C6	22:DA:426:C:N4	2.88	0.42
22:DA:770:G:O4'	22:DA:1379:U:C5	2.72	0.42
22:DA:773:U:O2'	24:DC:48:ARG:HD3	2.19	0.42
22:DA:775:G:O6	22:DA:787:C:H2'	2.20	0.42
22:DA:920:A:C5	22:DA:921:C:C5	3.07	0.42
22:DA:1441:G:C2	22:DA:1442:U:C5	3.07	0.42
22:DA:1452:G:H2'	22:DA:1457:U:O4	2.20	0.42
22:DA:1566:A:H5'	24:DC:214:ARG:CZ	2.50	0.42
22:DA:1606:C:H4'	22:DA:1607:C:H5'	2.02	0.42
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.55	0.42
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.19	0.42
22:DA:2618:G:C5	22:DA:2619:C:C5	3.08	0.42
22:DA:2852:G:H2'	22:DA:2853:C:C6	2.53	0.42
23:DB:34:A:N6	23:DB:44:G:O2'	2.49	0.42
24:DC:57:GLY:O	24:DC:58:HIS:C	2.62	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
33:DL:63:LYS:CA	51:D3:13:ARG:HG3	2.50	0.42
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	2.00	0.42
38:DQ:39:VAL:O	38:DQ:42:ALA:HB3	2.19	0.42
38:DQ:61:TRP:CH2	38:DQ:93:LYS:HB2	2.55	0.42
40:DS:33:LEU:CD2	40:DS:51:LEU:HD23	2.50	0.42
42:DU:51:ALA:O	42:DU:52:LEU:HB2	2.18	0.42
44:DW:71:VAL:HG13	44:DW:76:ASN:C	2.45	0.42
1:AA:374:A:N3	1:AA:375:U:C6	2.88	0.42
1:AA:620:C:H1'	4:AD:132:ILE:HD11	2.01	0.42
1:AA:687:A:C2	1:AA:700:G:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.67	0.42
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.35	0.42
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.54	0.42
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.82	0.42
3:AC:14:ILE:O	3:AC:16:LYS:N	2.50	0.42
4:AD:23:SER:HB2	4:AD:110:THR:HB	2.01	0.42
5:AE:95:PHE:CD2	5:AE:95:PHE:C	2.96	0.42
5:AE:133:PRO:O	5:AE:137:VAL:HG12	2.19	0.42
5:AE:157:ARG:C	5:AE:159:LYS:N	2.76	0.42
7:AG:54:SER:C	7:AG:56:LYS:H	2.27	0.42
11:AK:67:ALA:HB3	11:AK:99:ALA:HB3	2.02	0.42
22:BA:589:U:H2'	22:BA:590:A:C8	2.55	0.42
22:BA:1352:U:H2'	22:BA:1353:A:H5'	2.02	0.42
22:BA:1381:G:H1'	22:BA:1571:A:N1	2.34	0.42
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.54	0.42
22:BA:1483:G:C6	22:BA:1484:U:C4	3.07	0.42
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.34	0.42
22:BA:1876:A:C2	22:BA:1877:A:C4	3.08	0.42
22:BA:2093:G:O2'	22:BA:2094:A:H5'	2.19	0.42
22:BA:2899:A:H2'	22:BA:2900:A:C8	2.54	0.42
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.55	0.42
27:BF:75:ALA:O	27:BF:76:GLY:C	2.62	0.42
33:BL:82:LEU:CG	33:BL:90:VAL:HG21	2.49	0.42
41:BT:17:SER:O	41:BT:20:ALA:N	2.52	0.42
46:BY:21:LEU:O	46:BY:22:LEU:O	2.37	0.42
52:B4:7:VAL:O	52:B4:8:LYS:HG3	2.20	0.42
1:CA:357:G:C2	1:CA:358:U:C6	3.08	0.42
1:CA:445:G:N3	1:CA:445:G:H2'	2.34	0.42
1:CA:815:A:H4'	1:CA:817:C:C4	2.54	0.42
1:CA:1128:C:N3	1:CA:1145:A:N1	2.67	0.42
1:CA:1162:C:C2	1:CA:1175:G:N2	2.88	0.42
1:CA:1406:U:H2'	1:CA:1407:C:O4'	2.19	0.42
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	2.00	0.42
5:CE:92:SER:OG	5:CE:130:SER:O	2.33	0.42
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.54	0.42
8:CH:125:ILE:O	8:CH:125:ILE:HG12	2.18	0.42
9:CI:31:ASN:O	9:CI:32:GLN:C	2.63	0.42
10:CJ:84:VAL:O	10:CJ:88:MET:HG2	2.19	0.42
11:CK:113:VAL:HB	18:CR:73:ARG:NH2	2.35	0.42
14:CN:26:GLU:C	14:CN:28:LYS:H	2.28	0.42
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:39:GLU:OE1	21:CU:42:THR:OG1	2.37	0.42
22:DA:11:C:C3'	22:DA:12:U:H5'	2.49	0.42
22:DA:416:U:H2'	22:DA:417:C:C6	2.55	0.42
22:DA:699:A:H2'	22:DA:700:G:C5'	2.49	0.42
22:DA:738:G:O2'	22:DA:739:A:H5'	2.20	0.42
22:DA:1042:G:C5	22:DA:1043:C:C4	3.07	0.42
22:DA:1742:U:C4	22:DA:1743:G:C6	3.08	0.42
22:DA:1851:U:C2	22:DA:1891:G:O6	2.72	0.42
22:DA:2100:G:O6	22:DA:2101:A:C6	2.72	0.42
22:DA:2204:G:C5	22:DA:2221:G:N2	2.88	0.42
22:DA:2250:G:C2	34:DM:82:MET:CB	3.02	0.42
22:DA:2311:A:C2	27:DF:85:ILE:HD11	2.54	0.42
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.35	0.42
22:DA:2528:U:O2'	22:DA:2529:G:H3'	2.19	0.42
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.73	0.42
22:DA:2756:U:H1'	22:DA:2757:A:H5''	2.01	0.42
22:DA:2883:A:P	48:D0:49:TYR:HH	2.38	0.42
22:DA:2899:A:H2'	22:DA:2900:A:H8	1.83	0.42
25:DD:12:THR:HG21	37:DP:5:ILE:HG23	2.02	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.60	0.42
31:DJ:36:LEU:O	31:DJ:121:LYS:NZ	2.53	0.42
37:DP:48:ILE:HD13	37:DP:62:ARG:HB2	2.01	0.42
40:DS:45:VAL:O	40:DS:45:VAL:HG12	2.20	0.42
41:DT:21:SER:O	41:DT:23:ALA:N	2.52	0.42
45:DX:21:ALA:HB3	45:DX:23:ASN:OD1	2.20	0.42
1:AA:81:A:C2'	1:AA:82:G:H5'	2.50	0.42
1:AA:346:G:C8	37:BP:37:LYS:HE2	2.55	0.42
1:AA:473:U:N3	1:AA:474:G:N7	2.67	0.42
1:AA:709:U:H2'	1:AA:710:G:H8	1.85	0.42
1:AA:827:U:H5''	1:AA:828:U:OP2	2.20	0.42
1:AA:929:G:H2'	1:AA:930:C:C6	2.55	0.42
1:AA:980:C:H2'	1:AA:981:U:H5'	2.02	0.42
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.35	0.42
1:AA:1296:C:H5''	1:AA:1297:G:OP2	2.19	0.42
3:AC:60:PRO:O	3:AC:61:ALA:O	2.37	0.42
4:AD:58:LYS:HB3	4:AD:200:ILE:HG22	2.02	0.42
5:AE:89:HIS:CE1	5:AE:138:ARG:HD3	2.55	0.42
8:AH:5:ASP:OD2	8:AH:8:ALA:HB2	2.20	0.42
9:AI:57:MET:SD	9:AI:57:MET:N	2.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:26:VAL:HG12	10:AJ:30:LYS:CE	2.50	0.42
13:AM:44:LYS:HE2	13:AM:44:LYS:HB3	1.94	0.42
13:AM:107:ARG:HH21	13:AM:113:ARG:HB3	1.84	0.42
17:AQ:18:GLU:C	17:AQ:19:LYS:HG3	2.45	0.42
17:AQ:46:VAL:HG13	17:AQ:73:TRP:O	2.20	0.42
22:BA:15:G:O2'	22:BA:16:C:H5'	2.20	0.42
22:BA:322:A:H5'	22:BA:340:A:H1'	2.01	0.42
22:BA:545:U:O5'	22:BA:545:U:O2	2.36	0.42
22:BA:796:C:H2'	22:BA:797:G:C8	2.55	0.42
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.55	0.42
22:BA:1610:A:C4'	22:BA:1611:C:OP2	2.68	0.42
22:BA:1842:G:C6	22:BA:1843:C:C4	3.08	0.42
22:BA:2018:G:O2'	22:BA:2019:A:H5'	2.20	0.42
22:BA:2286:G:C4'	22:BA:2287:A:O5'	2.67	0.42
22:BA:2795:C:H2'	22:BA:2796:U:C6	2.55	0.42
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	2.02	0.42
30:BI:83:ALA:HB1	30:BI:109:ILE:HD13	2.01	0.42
35:BN:114:GLU:OE2	35:BN:118:ARG:NH2	2.49	0.42
41:BT:67:VAL:HG22	41:BT:76:ARG:HG3	2.01	0.42
42:BU:72:ILE:N	42:BU:72:ILE:CD1	2.81	0.42
43:BV:2:PHE:CD1	43:BV:50:MET:HE3	2.55	0.42
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.53	0.42
1:CA:235:C:H2'	1:CA:236:A:C8	2.55	0.42
1:CA:358:U:H2'	1:CA:359:G:C8	2.54	0.42
1:CA:505:G:C5'	1:CA:534:U:C2	3.03	0.42
1:CA:522:C:H41	12:CL:50:ARG:NH2	2.18	0.42
1:CA:527:G:C2	1:CA:528:C:C5	3.07	0.42
1:CA:688:G:C5	1:CA:700:G:C2	3.08	0.42
1:CA:756:C:H2'	1:CA:757:U:C5'	2.50	0.42
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.54	0.42
1:CA:1105:A:C2	1:CA:1106:G:N7	2.88	0.42
1:CA:1279:G:O2'	1:CA:1282:C:N4	2.53	0.42
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.20	0.42
8:CH:77:ARG:NE	8:CH:79:SER:O	2.52	0.42
16:CP:16:PHE:HE1	16:CP:38:PHE:HB2	1.84	0.42
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.92	0.42
22:DA:415:A:C2	22:DA:2409:G:C6	3.07	0.42
22:DA:415:A:C2	22:DA:2409:G:N1	2.87	0.42
22:DA:451:U:C2	22:DA:453:A:N7	2.88	0.42
22:DA:511:U:OP2	22:DA:512:G:N7	2.53	0.42
22:DA:537:G:N1	22:DA:555:G:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:599:A:N1	22:DA:600:G:C6	2.88	0.42
22:DA:1220:G:H2'	22:DA:1221:C:C6	2.54	0.42
22:DA:1304:A:C5	22:DA:1305:C:C5	3.08	0.42
22:DA:1389:G:C2	22:DA:1390:U:O2	2.72	0.42
22:DA:1599:U:C4	22:DA:1600:C:C4	3.08	0.42
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.83	0.42
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.20	0.42
22:DA:1974:C:H2'	22:DA:1975:G:H8	1.85	0.42
22:DA:2516:A:N6	22:DA:2517:C:H42	2.16	0.42
24:DC:9:THR:O	24:DC:10:SER:HB3	2.19	0.42
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.54	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
32:DK:38:ILE:HD12	32:DK:87:LEU:CD1	2.50	0.42
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.35	0.42
33:DL:82:LEU:O	33:DL:120:VAL:HG21	2.20	0.42
34:DM:106:ASP:OD1	34:DM:107:GLY:N	2.52	0.42
39:DR:3:ALA:HB3	39:DR:101:ILE:HD12	2.01	0.42
42:DU:83:VAL:HG11	42:DU:94:ARG:HD2	2.00	0.42
1:AA:108:G:N2	1:AA:109:A:C2	2.88	0.42
1:AA:868:C:H2'	1:AA:869:G:C5'	2.50	0.42
1:AA:999:C:N4	1:AA:1000:A:N6	2.68	0.42
1:AA:1061:G:C5	1:AA:1062:U:C5	3.08	0.42
1:AA:1239:A:H62	1:AA:1299:A:N6	2.18	0.42
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.20	0.42
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.20	0.42
2:AB:161:LEU:CD1	2:AB:176:ALA:HB2	2.50	0.42
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.19	0.42
5:AE:151:GLU:HG2	5:AE:152:MET:H	1.85	0.42
7:AG:135:VAL:HB	7:AG:138:ARG:HH21	1.85	0.42
9:AI:43:THR:O	9:AI:44:ALA:CB	2.67	0.42
15:AO:49:ASP:CG	15:AO:52:SER:HB2	2.44	0.42
16:AP:78:VAL:O	16:AP:79:ASN:C	2.63	0.42
18:AR:22:ASP:OD2	18:AR:24:LYS:N	2.50	0.42
22:BA:83:A:N6	22:BA:101:A:C5	2.88	0.42
22:BA:246:C:C2'	22:BA:247:G:H5'	2.50	0.42
22:BA:901:C:C4	22:BA:902:C:C5	3.08	0.42
22:BA:1002:G:O6	57:BA:3746:HOH:O	2.22	0.42
22:BA:1263:U:O2'	48:B0:8:PRO:HD2	2.20	0.42
22:BA:1265:A:O4'	22:BA:1267:U:C6	2.73	0.42
22:BA:1296:G:OP1	22:BA:2709:G:O2'	2.32	0.42
22:BA:1924:C:H2'	22:BA:1926:U:O4	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2142:A:H2'	22:BA:2143:C:C6	2.55	0.42
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.19	0.42
22:BA:2553:G:H5''	22:BA:2554:U:OP2	2.20	0.42
23:BB:59:A:H2'	23:BB:60:C:O4'	2.20	0.42
23:BB:110:C:C4	23:BB:111:U:C5	3.08	0.42
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.44	0.42
29:BH:41:LYS:O	29:BH:42:LYS:C	2.62	0.42
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.42
31:BJ:55:ILE:HG21	31:BJ:130:HIS:HD2	1.83	0.42
33:BL:129:LYS:O	33:BL:130:GLY:C	2.62	0.42
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.83	0.42
35:BN:31:HIS:C	35:BN:33:ILE:H	2.28	0.42
39:BR:61:ALA:HB2	39:BR:98:ILE:HD13	2.02	0.42
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.20	0.42
40:BS:38:TYR:CD1	48:B0:28:LEU:HD21	2.55	0.42
41:BT:89:GLU:O	41:BT:91:GLN:HG2	2.19	0.42
42:BU:73:PHE:CZ	42:BU:78:GLY:HA2	2.55	0.42
43:BV:10:LYS:NZ	43:BV:41:GLU:OE2	2.52	0.42
46:BY:5:GLU:HA	46:BY:8:GLU:HG3	2.01	0.42
49:B1:39:PHE:HB2	49:B1:46:HIS:CE1	2.55	0.42
1:CA:35:G:N2	12:CL:115:SER:OG	2.53	0.42
1:CA:223:A:C4	1:CA:224:U:C6	3.08	0.42
1:CA:380:G:N2	1:CA:383:A:OP2	2.48	0.42
1:CA:643:C:H5'	8:CH:32:LEU:HD13	2.02	0.42
1:CA:674:G:C2	1:CA:675:A:C5	3.08	0.42
1:CA:681:A:C2	1:CA:710:G:C2	3.08	0.42
1:CA:714:G:H21	1:CA:777:A:H1'	1.84	0.42
1:CA:728:A:C8	15:CO:54:ARG:CZ	3.03	0.42
1:CA:855:U:H2'	1:CA:856:C:C6	2.55	0.42
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	2.53	0.42
2:CB:222:ARG:NE	2:CB:223:GLU:HB2	2.35	0.42
4:CD:123:ILE:HG22	4:CD:124:MET:N	2.34	0.42
6:CF:29:ILE:CG2	6:CF:34:GLY:O	2.68	0.42
7:CG:46:ALA:CA	7:CG:121:ALA:HB2	2.50	0.42
13:CM:20:THR:HG22	13:CM:26:GLY:C	2.45	0.42
17:CQ:79:VAL:O	17:CQ:80:GLU:CB	2.67	0.42
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.19	0.42
22:DA:40:U:H2'	22:DA:41:C:C6	2.55	0.42
22:DA:495:G:H4'	40:DS:4:ILE:O	2.20	0.42
22:DA:732:C:C5	22:DA:733:G:N7	2.88	0.42
22:DA:804:A:C2'	22:DA:806:C:C4	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:811:U:O2	22:DA:1251:C:C6	2.73	0.42
22:DA:1025:G:H4'	22:DA:1026:G:OP2	2.20	0.42
22:DA:1340:U:C5	22:DA:1603:A:C8	3.07	0.42
22:DA:1624:U:N3	22:DA:1625:C:C5	2.88	0.42
22:DA:2104:C:H2'	22:DA:2105:U:C6	2.55	0.42
22:DA:2290:G:C5	22:DA:2291:U:C4	3.08	0.42
22:DA:2364:C:H2'	22:DA:2365:G:O4'	2.20	0.42
22:DA:2428:G:H5''	22:DA:2429:G:OP1	2.20	0.42
22:DA:2431:U:O2'	22:DA:2433:A:N7	2.42	0.42
34:DM:76:LYS:O	34:DM:77:PRO:O	2.37	0.42
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.49	0.42
45:DX:40:VAL:HG11	45:DX:68:LEU:CD1	2.49	0.42
1:AA:66:A:O4'	1:AA:173:U:C4	2.73	0.41
1:AA:545:C:H5'	4:AD:69:GLU:HG3	2.00	0.41
1:AA:624:C:C4	1:AA:625:U:C5	3.08	0.41
1:AA:666:G:H5'	1:AA:726:C:H1'	2.02	0.41
1:AA:668:G:O2'	15:AO:46:HIS:CD2	2.73	0.41
1:AA:1500:A:OP2	1:AA:1505:G:OP1	2.38	0.41
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	2.02	0.41
4:AD:4:TYR:CZ	4:AD:6:GLY:HA3	2.54	0.41
4:AD:11:LEU:HD13	4:AD:63:ARG:HD3	2.02	0.41
4:AD:88:GLU:O	4:AD:91:LEU:N	2.52	0.41
4:AD:124:MET:SD	4:AD:127:GLY:O	2.78	0.41
4:AD:192:SER:O	4:AD:194:ASP:N	2.46	0.41
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.66	0.41
8:AH:42:GLU:OE1	8:AH:42:GLU:CA	2.68	0.41
12:AL:23:ALA:O	12:AL:24:LEU:O	2.38	0.41
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.68	0.41
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.34	0.41
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.68	0.41
22:BA:44:A:H2'	22:BA:45:G:O4'	2.19	0.41
22:BA:257:C:H2'	22:BA:258:G:O4'	2.20	0.41
22:BA:271:G:H4'	22:BA:272:A:OP1	2.19	0.41
22:BA:307:G:N2	22:BA:309:A:H3'	2.35	0.41
22:BA:547:A:C8	22:BA:548:G:N3	2.88	0.41
22:BA:1022:G:N2	22:BA:1142:A:C2	2.77	0.41
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.50	0.41
22:BA:1269:A:OP2	57:BA:3387:HOH:O	2.21	0.41
22:BA:1309:G:H4'	50:B2:7:PRO:HG2	2.02	0.41
22:BA:1438:U:C4	22:BA:1552:A:C2	3.08	0.41
22:BA:2221:G:O2'	22:BA:2222:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2292:U:H4'	22:BA:2375:G:H4'	2.02	0.41
22:BA:2478:A:C2'	22:BA:2479:U:H5'	2.50	0.41
22:BA:2659:G:OP1	28:BG:158:LYS:HE3	2.20	0.41
23:BB:33:G:O2'	23:BB:34:A:H5'	2.20	0.41
25:BD:48:ILE:HG23	25:BD:84:LEU:HD21	2.01	0.41
27:BF:136:ILE:HG21	27:BF:143:TYR:CD1	2.54	0.41
28:BG:109:PHE:CE1	28:BG:152:ARG:CZ	3.03	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.02	0.41
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	2.02	0.41
41:BT:50:LEU:HD12	41:BT:50:LEU:HA	1.85	0.41
45:BX:4:VAL:N	45:BX:33:LEU:HD11	2.35	0.41
1:CA:735:C:H2'	1:CA:736:C:C6	2.54	0.41
1:CA:775:G:C6	1:CA:776:G:N7	2.88	0.41
1:CA:892:A:C6	1:CA:893:C:C4	3.08	0.41
1:CA:1219:A:N6	1:CA:1220:G:C6	2.88	0.41
1:CA:1222:G:C6	1:CA:1223:C:C4	3.08	0.41
1:CA:1343:G:C6	1:CA:1344:C:N4	2.88	0.41
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.55	0.41
2:CB:103:ASN:HD22	2:CB:103:ASN:N	2.16	0.41
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.35	0.41
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	2.01	0.41
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.68	0.41
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.49	0.41
22:DA:191:A:N6	22:DA:192:C:N4	2.67	0.41
22:DA:410:G:H2'	22:DA:2407:A:C8	2.55	0.41
22:DA:415:A:O2'	22:DA:1865:U:H5''	2.20	0.41
22:DA:599:A:H1'	22:DA:659:G:N2	2.35	0.41
22:DA:799:G:OP2	22:DA:800:A:O2'	2.35	0.41
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.19	0.41
22:DA:1462:C:H2'	22:DA:1463:C:H6	1.84	0.41
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.73	0.41
22:DA:2527:C:C4	22:DA:2528:U:C5	3.08	0.41
23:DB:23:G:C2	23:DB:24:G:O6	2.73	0.41
24:DC:35:GLU:O	24:DC:36:LYS:C	2.63	0.41
29:DH:43:ASN:C	29:DH:45:GLU:H	2.28	0.41
35:DN:33:ILE:HD12	35:DN:118:ARG:CZ	2.49	0.41
36:DO:33:ARG:HG2	36:DO:34:HIS:CD2	2.55	0.41
42:DU:82:ARG:HB2	42:DU:97:LYS:HB2	2.02	0.41
43:DV:52:ALA:HB3	43:DV:53:LYS:HE2	2.01	0.41
1:AA:268:U:H2'	1:AA:269:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:374:A:H5''	1:AA:452:A:C2	2.55	0.41
1:AA:500:G:C6	1:AA:501:C:N4	2.88	0.41
1:AA:588:G:C2	1:AA:589:U:C2	3.08	0.41
1:AA:644:U:O2'	1:AA:645:G:H5'	2.20	0.41
1:AA:775:G:C2'	1:AA:776:G:H5'	2.50	0.41
1:AA:975:A:O4'	1:AA:1358:U:H1'	2.20	0.41
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.70	0.41
3:AC:193:TYR:CD2	3:AC:193:TYR:N	2.85	0.41
4:AD:89:ASN:O	4:AD:93:LEU:HB2	2.20	0.41
4:AD:118:VAL:O	4:AD:131:ASN:HA	2.20	0.41
5:AE:81:LEU:HD21	5:AE:123:VAL:HG12	2.01	0.41
5:AE:81:LEU:CA	5:AE:147:MET:HE1	2.50	0.41
9:AI:22:LYS:HB3	9:AI:22:LYS:HE3	1.91	0.41
14:AN:16:LEU:HD23	14:AN:19:LYS:HD2	2.02	0.41
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.19	0.41
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.53	0.41
22:BA:176:A:C2'	22:BA:177:G:H5'	2.50	0.41
22:BA:954:G:C5	22:BA:955:U:C5	3.08	0.41
22:BA:998:C:P	38:BQ:92:ARG:NH2	2.93	0.41
22:BA:1326:U:C2'	22:BA:1327:A:H5'	2.50	0.41
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.20	0.41
22:BA:1786:A:C4	22:BA:1938:A:C6	3.08	0.41
22:BA:2030:A:C2	22:BA:2499:C:H5''	2.55	0.41
22:BA:2211:A:OP2	22:BA:2211:A:H4'	2.19	0.41
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.55	0.41
22:BA:2406:A:N1	33:BL:69:ARG:NH2	2.67	0.41
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.41	0.41
23:BB:57:A:C4	27:BF:26:MET:HB3	2.55	0.41
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.20	0.41
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.46	0.41
30:BI:28:LEU:HD21	30:BI:35:ILE:HG23	2.02	0.41
30:BI:77:ALA:HB2	30:BI:132:THR:CG2	2.49	0.41
31:BJ:98:GLU:CD	31:BJ:126:ALA:HB2	2.45	0.41
31:BJ:114:LEU:O	31:BJ:114:LEU:HD12	2.20	0.41
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	2.02	0.41
34:BM:136:MET:HE2	43:BV:57:TYR:CD1	2.55	0.41
44:BW:18:ALA:HB3	44:BW:20:ARG:HH21	1.85	0.41
1:CA:219:U:H2'	1:CA:220:G:C8	2.55	0.41
1:CA:247:G:O6	1:CA:278:G:C6	2.73	0.41
1:CA:584:G:H2'	1:CA:585:G:H8	1.85	0.41
1:CA:734:G:C4	1:CA:735:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:833:G:C4	1:CA:834:U:C6	3.08	0.41
1:CA:840:C:C4	1:CA:842:U:H4'	2.55	0.41
1:CA:892:A:C2	1:CA:907:A:C4	3.08	0.41
1:CA:952:U:H2'	1:CA:953:G:C8	2.55	0.41
1:CA:1118:U:H1'	1:CA:1179:A:C5	2.55	0.41
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.55	0.41
5:CE:68:ARG:O	5:CE:71:MET:HE3	2.21	0.41
6:CF:8:PHE:CE1	6:CF:60:VAL:HB	2.56	0.41
6:CF:29:ILE:HG22	6:CF:34:GLY:O	2.19	0.41
6:CF:97:THR:O	6:CF:98:GLU:CB	2.68	0.41
10:CJ:80:THR:O	10:CJ:84:VAL:N	2.52	0.41
11:CK:112:ASP:HB3	21:CU:4:ILE:HG22	2.00	0.41
13:CM:4:ILE:HG22	13:CM:53:ILE:HG23	2.02	0.41
15:CO:49:ASP:OD2	15:CO:52:SER:HB2	2.20	0.41
20:CT:44:LYS:HD3	20:CT:87:ALA:HA	2.01	0.41
22:DA:80:G:H4'	22:DA:346:A:H1'	2.02	0.41
22:DA:658:U:N3	22:DA:659:G:C8	2.87	0.41
22:DA:659:G:H4'	26:DE:95:LYS:HD3	2.01	0.41
22:DA:772:C:C2	22:DA:773:U:C5	3.08	0.41
22:DA:971:G:H2'	22:DA:972:A:O4'	2.20	0.41
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.20	0.41
22:DA:1140:C:H1'	22:DA:1143:A:N3	2.35	0.41
22:DA:1422:G:H4'	22:DA:1493:C:OP2	2.19	0.41
22:DA:1663:G:C6	22:DA:1992:G:C8	3.07	0.41
22:DA:1809:A:C4	22:DA:1810:A:C8	3.07	0.41
22:DA:1921:G:N1	22:DA:1922:G:C5	2.87	0.41
22:DA:1975:G:C5	22:DA:1976:U:C5	3.08	0.41
22:DA:2067:G:C5	22:DA:2444:G:C2	3.08	0.41
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.83	0.41
22:DA:2677:G:C2	22:DA:2731:G:N3	2.88	0.41
24:DC:57:GLY:O	24:DC:58:HIS:O	2.38	0.41
28:DG:4:VAL:O	28:DG:5:ALA:C	2.63	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
33:DL:2:ARG:C	33:DL:4:ASN:H	2.28	0.41
39:DR:42:ALA:HA	39:DR:46:GLU:HA	2.01	0.41
47:DZ:4:THR:CG2	47:DZ:5:ILE:N	2.83	0.41
50:D2:43:THR:O	50:D2:44:VAL:HB	2.20	0.41
1:AA:258:G:C4	1:AA:259:G:C8	3.08	0.41
1:AA:556:C:O2'	1:AA:557:G:H5'	2.20	0.41
1:AA:559:A:H2'	1:AA:559:A:N3	2.35	0.41
1:AA:753:A:H4'	1:AA:754:C:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:923:A:C6	1:AA:924:C:C4	3.08	0.41
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.55	0.41
1:AA:1464:U:OP2	37:BP:109:ARG:NH1	2.48	0.41
2:AB:62:SER:C	2:AB:64:LYS:H	2.27	0.41
2:AB:164:ILE:HG23	2:AB:165:ASP:N	2.35	0.41
2:AB:168:HIS:ND1	2:AB:168:HIS:O	2.53	0.41
3:AC:47:LEU:O	3:AC:52:VAL:HG12	2.20	0.41
4:AD:90:LEU:O	4:AD:90:LEU:HD12	2.20	0.41
7:AG:31:MET:HG3	7:AG:32:VAL:H	1.85	0.41
7:AG:62:PHE:CD2	7:AG:62:PHE:C	2.98	0.41
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.19	0.41
11:AK:26:SER:O	11:AK:27:PHE:C	2.62	0.41
13:AM:69:LEU:O	13:AM:73:ILE:HG13	2.20	0.41
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.19	0.41
19:AS:41:PHE:HB3	19:AS:43:ASN:OD1	2.20	0.41
22:BA:391:A:C5	22:BA:392:U:C5	3.08	0.41
22:BA:495:G:C1'	40:BS:57:ASN:ND2	2.83	0.41
22:BA:819:A:H2'	22:BA:820:A:H5'	2.02	0.41
22:BA:819:A:C4	22:BA:1189:A:C2	3.08	0.41
22:BA:857:G:N3	44:BW:26:PHE:HE2	2.18	0.41
22:BA:950:G:C6	22:BA:951:C:C4	3.08	0.41
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.21	0.41
22:BA:1924:C:H2'	22:BA:1925:C:H5''	2.02	0.41
22:BA:2114:A:N3	22:BA:2114:A:C2'	2.83	0.41
26:BE:181:ILE:HG22	33:BL:2:ARG:HB3	2.02	0.41
27:BF:36:LEU:HD11	27:BF:154:ILE:HD13	2.02	0.41
34:BM:1:MET:HE2	34:BM:1:MET:HB3	1.76	0.41
37:BP:80:VAL:O	37:BP:80:VAL:HG12	2.20	0.41
48:B0:54:VAL:O	48:B0:55:ILE:C	2.62	0.41
1:CA:121:U:H3'	1:CA:122:G:C5'	2.49	0.41
1:CA:147:G:H2'	1:CA:148:G:C8	2.55	0.41
1:CA:242:G:N2	1:CA:285:C:C2	2.88	0.41
1:CA:406:G:C2	1:CA:407:U:C5	3.08	0.41
1:CA:741:G:H2'	1:CA:742:G:O4'	2.20	0.41
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.20	0.41
1:CA:1227:A:OP2	13:CM:110:LYS:CE	2.68	0.41
5:CE:131:THR:O	5:CE:132:ASN:C	2.63	0.41
6:CF:6:ILE:HD13	6:CF:62:MET:HG2	2.01	0.41
6:CF:88:MET:HE3	18:CR:64:TYR:HD2	1.84	0.41
9:CI:87:LEU:C	9:CI:89:GLU:H	2.28	0.41
18:CR:22:ASP:OD2	18:CR:24:LYS:NZ	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:270:A:N1	22:DA:369:U:H1'	2.35	0.41
22:DA:483:A:H4'	42:DU:48:PRO:HD3	2.03	0.41
22:DA:693:A:C5	22:DA:694:U:C5	3.08	0.41
22:DA:851:C:H2'	22:DA:852:U:C6	2.55	0.41
22:DA:973:A:OP2	39:DR:81:LYS:HD2	2.20	0.41
22:DA:1445:G:N2	22:DA:1547:C:C2	2.88	0.41
22:DA:1526:C:H2'	22:DA:1527:G:C8	2.55	0.41
22:DA:1545:A:H2'	22:DA:1546:G:H5'	2.03	0.41
22:DA:1653:G:O6	35:DN:11:ASN:N	2.48	0.41
22:DA:1990:C:H2'	22:DA:1991:U:O4'	2.20	0.41
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.20	0.41
22:DA:2420:C:C4	51:D3:31:HIS:HB3	2.55	0.41
22:DA:2521:C:C2	22:DA:2545:G:C2	3.08	0.41
22:DA:2692:G:O4'	22:DA:2846:G:N2	2.53	0.41
23:DB:74:U:O2	43:DV:29:ILE:CD1	2.68	0.41
28:DG:60:ASP:O	28:DG:61:GLY:C	2.64	0.41
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.35	0.41
35:DN:73:ASN:O	35:DN:76:VAL:HG12	2.20	0.41
38:DQ:112:LYS:HB2	39:DR:48:LYS:HD2	2.03	0.41
39:DR:52:PRO:O	39:DR:53:PHE:HB2	2.20	0.41
40:DS:28:LYS:O	40:DS:29:VAL:C	2.63	0.41
41:DT:72:GLN:O	41:DT:73:ARG:C	2.62	0.41
46:DY:17:GLU:HB2	46:DY:53:VAL:HG11	2.02	0.41
1:AA:413:G:N1	4:AD:32:CYS:O	2.48	0.41
1:AA:927:G:C2	1:AA:1391:U:O2	2.73	0.41
1:AA:1350:A:C6	1:AA:1351:U:N3	2.88	0.41
2:AB:16:PHE:C	2:AB:41:ILE:HD12	2.45	0.41
3:AC:42:TYR:OH	3:AC:90:VAL:HG21	2.20	0.41
6:AF:46:GLN:HB2	6:AF:56:LYS:HE2	2.02	0.41
6:AF:79:ARG:O	6:AF:80:PHE:C	2.63	0.41
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.34	0.41
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.20	0.41
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.86	0.41
15:AO:45:GLU:O	15:AO:46:HIS:HB2	2.20	0.41
22:BA:338:G:N2	22:BA:339:U:H1'	2.35	0.41
22:BA:533:G:H5'	38:BQ:24:TYR:CE1	2.56	0.41
22:BA:734:A:C5	22:BA:735:A:C8	3.09	0.41
22:BA:854:C:O2	22:BA:924:G:C2	2.74	0.41
22:BA:1185:G:C4'	22:BA:1186:G:OP1	2.66	0.41
22:BA:1917:U:H2'	22:BA:1917:U:O2	2.20	0.41
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.56	0.41
22:BA:2557:G:H2'	22:BA:2558:C:H6	1.85	0.41
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.55	0.41
24:BC:260:ASN:C	24:BC:262:ARG:N	2.78	0.41
25:BD:122:VAL:HG12	25:BD:123:LYS:N	2.34	0.41
27:BF:97:TRP:O	27:BF:98:GLU:C	2.64	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
30:BI:80:LEU:CD1	30:BI:132:THR:O	2.68	0.41
30:BI:97:LYS:HB3	30:BI:139:VAL:HG22	2.01	0.41
30:BI:103:ARG:HB3	30:BI:142:ASP:O	2.20	0.41
43:BV:63:ILE:CD1	43:BV:72:VAL:HG21	2.50	0.41
45:BX:68:LEU:HD23	45:BX:68:LEU:HA	1.84	0.41
1:CA:76:G:N2	1:CA:95:C:C2	2.89	0.41
1:CA:78:A:C6	1:CA:79:G:C5	3.08	0.41
1:CA:582:C:N3	1:CA:760:G:N1	2.68	0.41
1:CA:734:G:N3	1:CA:735:C:C6	2.89	0.41
1:CA:995:C:O2	1:CA:1047:G:H5'	2.21	0.41
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.21	0.41
2:CB:21:ARG:O	2:CB:22:TYR:C	2.64	0.41
3:CC:150:LYS:HE3	3:CC:201:TRP:CZ3	2.55	0.41
4:CD:53:VAL:HG23	4:CD:54:GLN:N	2.35	0.41
5:CE:112:ARG:O	5:CE:113:ALA:C	2.63	0.41
9:CI:128:SER:O	9:CI:129:LYS:C	2.63	0.41
11:CK:36:ASP:OD1	11:CK:36:ASP:C	2.62	0.41
12:CL:58:THR:CG2	12:CL:59:ASN:N	2.83	0.41
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.21	0.41
14:CN:48:LEU:O	14:CN:48:LEU:HD22	2.20	0.41
15:CO:37:ASN:O	15:CO:40:GLN:N	2.51	0.41
15:CO:42:HIS:ND1	15:CO:46:HIS:CD2	2.88	0.41
16:CP:43:ALA:O	16:CP:46:LYS:CG	2.68	0.41
16:CP:61:VAL:C	16:CP:63:GLN:H	2.28	0.41
22:DA:121:G:N3	22:DA:131:A:C2	2.88	0.41
22:DA:184:C:H2'	22:DA:185:G:C8	2.55	0.41
22:DA:282:A:C2	22:DA:359:G:C2	3.08	0.41
22:DA:379:G:N2	22:DA:380:G:H1'	2.36	0.41
22:DA:511:U:O4	22:DA:512:G:N1	2.54	0.41
22:DA:699:A:H2'	22:DA:700:G:O4'	2.21	0.41
22:DA:783:A:O2'	22:DA:785:G:OP1	2.38	0.41
22:DA:836:G:C5	22:DA:837:C:C5	3.08	0.41
22:DA:1471:G:N2	22:DA:1521:G:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1773:A:H2'	22:DA:1774:C:C5'	2.51	0.41
22:DA:1798:U:H5	24:DC:271:ARG:CZ	2.33	0.41
22:DA:2201:G:C4	22:DA:2202:U:C5	3.08	0.41
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.55	0.41
22:DA:2291:U:H5''	22:DA:2380:C:O2'	2.19	0.41
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.55	0.41
22:DA:2774:C:N4	22:DA:2775:G:C6	2.88	0.41
22:DA:2825:G:C3'	22:DA:2826:A:H5'	2.51	0.41
28:DG:2:SER:N	28:DG:5:ALA:HB3	2.35	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
30:DI:54:PRO:HG2	30:DI:78:VAL:HG21	2.02	0.41
30:DI:97:LYS:HA	30:DI:97:LYS:HE3	2.03	0.41
30:DI:140:VAL:O	30:DI:140:VAL:HG13	2.20	0.41
33:DL:82:LEU:O	33:DL:82:LEU:HG	2.20	0.41
36:DO:7:ARG:CZ	36:DO:97:PHE:CZ	3.03	0.41
46:DY:17:GLU:OE1	46:DY:50:VAL:HG13	2.20	0.41
52:D4:4:ARG:O	52:D4:37:GLN:NE2	2.53	0.41
1:AA:19:A:C5	1:AA:20:U:C5	3.09	0.41
1:AA:201:G:H2'	1:AA:202:G:O4'	2.20	0.41
1:AA:372:C:H4'	1:AA:373:A:OP1	2.20	0.41
1:AA:601:G:H2'	1:AA:602:A:C8	2.56	0.41
1:AA:620:C:H1'	4:AD:132:ILE:CD1	2.50	0.41
1:AA:862:C:N4	1:AA:863:U:O4	2.54	0.41
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.51	0.41
2:AB:101:LEU:HD11	2:AB:158:PRO:HG2	2.03	0.41
13:AM:66:GLU:OE1	13:AM:66:GLU:HA	2.20	0.41
21:AU:34:ARG:O	21:AU:35:ARG:C	2.63	0.41
21:AU:37:PHE:O	21:AU:38:TYR:CB	2.67	0.41
21:AU:38:TYR:O	21:AU:41:PRO:HD2	2.20	0.41
22:BA:271:G:C6	22:BA:367:G:C2	3.09	0.41
22:BA:613:A:HO2'	22:BA:614:A:P	2.41	0.41
22:BA:1577:C:H2'	22:BA:1578:U:C1'	2.51	0.41
22:BA:2819:G:H2'	22:BA:2821:A:N7	2.35	0.41
24:BC:43:ARG:HG3	24:BC:48:ARG:C	2.45	0.41
25:BD:2:ILE:HG13	25:BD:100:LEU:CD2	2.46	0.41
28:BG:28:GLY:O	28:BG:29:LYS:C	2.63	0.41
30:BI:43:ASN:OD1	30:BI:46:THR:HB	2.21	0.41
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.60	0.41
31:BJ:89:PHE:CE1	31:BJ:100:VAL:HG11	2.56	0.41
32:BK:76:VAL:HB	37:BP:73:VAL:HG13	2.01	0.41
33:BL:84:LYS:O	33:BL:84:LYS:HG3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	2.02	0.41
37:BP:32:VAL:HG23	37:BP:34:GLU:HG3	2.01	0.41
40:BS:37:THR:OG1	40:BS:48:LYS:NZ	2.54	0.41
42:BU:97:LYS:O	42:BU:98:SER:OG	2.37	0.41
43:BV:40:ILE:HA	43:BV:40:ILE:HD13	1.80	0.41
53:B5:43:GLU:HA	53:B5:178:LYS:HA	2.03	0.41
1:CA:32:A:H3'	1:CA:33:A:H8	1.84	0.41
1:CA:573:A:H2'	1:CA:574:A:C8	2.55	0.41
1:CA:682:G:O2'	1:CA:683:G:H5'	2.19	0.41
1:CA:687:A:C5	1:CA:701:U:C5	3.08	0.41
1:CA:811:C:N4	1:CA:812:G:C6	2.89	0.41
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.83	0.41
1:CA:1240:U:OP2	7:CG:116:MET:CB	2.68	0.41
1:CA:1364:U:O2	1:CA:1364:U:O2'	2.32	0.41
2:CB:134:ALA:O	2:CB:138:THR:HG23	2.20	0.41
2:CB:139:ARG:HD2	2:CB:139:ARG:C	2.44	0.41
2:CB:206:ALA:O	2:CB:207:ILE:C	2.64	0.41
5:CE:141:ILE:C	5:CE:143:GLY:H	2.28	0.41
6:CF:39:LEU:O	6:CF:40:GLU:HG3	2.20	0.41
12:CL:4:VAL:HG13	12:CL:5:ASN:H	1.85	0.41
21:CU:37:PHE:HB3	21:CU:41:PRO:CG	2.50	0.41
22:DA:19:A:OP1	38:DQ:22:LYS:NZ	2.53	0.41
22:DA:71:A:C2	22:DA:73:A:C2	3.08	0.41
22:DA:201:C:C5	22:DA:202:U:C4	3.08	0.41
22:DA:223:A:H2'	22:DA:408:G:N3	2.35	0.41
22:DA:329:G:P	42:DU:66:GLN:HG3	2.61	0.41
22:DA:487:C:N4	22:DA:488:G:C6	2.88	0.41
22:DA:634:C:H2'	22:DA:635:C:C6	2.56	0.41
22:DA:833:A:OP2	33:DL:39:LYS:HE3	2.20	0.41
22:DA:844:A:C2	22:DA:845:A:N7	2.88	0.41
22:DA:972:A:N1	22:DA:973:A:N6	2.69	0.41
22:DA:1257:C:C4	22:DA:1258:U:C4	3.08	0.41
22:DA:1313:U:O2	22:DA:1313:U:C2'	2.69	0.41
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.85	0.41
22:DA:2282:G:C2	22:DA:2425:A:C6	3.08	0.41
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.20	0.41
22:DA:2780:G:C6	31:DJ:102:GLU:OE2	2.73	0.41
25:DD:150:GLN:C	25:DD:151:THR:O	2.61	0.41
26:DE:24:ASN:ND2	26:DE:27:LEU:HB2	2.35	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
30:DI:110:ALA:HB2	30:DI:129:ILE:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.56	0.41
42:DU:40:ASN:HB3	42:DU:63:ALA:HB3	2.02	0.41
42:DU:84:GLY:O	42:DU:94:ARG:HA	2.20	0.41
50:D2:39:ARG:HB2	50:D2:42:LEU:HD22	2.03	0.41
1:AA:121:U:H3'	1:AA:122:G:H5'	2.02	0.41
1:AA:179:A:C6	1:AA:180:U:N3	2.88	0.41
1:AA:270:A:C5	1:AA:271:C:C4	3.08	0.41
1:AA:651:C:N4	1:AA:652:U:O4	2.53	0.41
1:AA:751:U:H4'	15:AO:24:SER:HA	2.02	0.41
1:AA:942:G:C6	1:AA:943:U:C4	3.09	0.41
1:AA:945:G:H2'	1:AA:945:G:N3	2.36	0.41
1:AA:1074:G:H2'	1:AA:1075:U:O4'	2.21	0.41
2:AB:91:PHE:CE1	2:AB:150:GLY:CA	3.04	0.41
3:AC:191:THR:N	3:AC:194:GLY:O	2.54	0.41
4:AD:157:ALA:O	4:AD:160:GLU:HB3	2.20	0.41
8:AH:124:GLU:O	8:AH:126:ILE:HD12	2.21	0.41
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	2.02	0.41
11:AK:110:ILE:HG22	11:AK:111:THR:N	2.35	0.41
11:AK:117:PRO:C	11:AK:119:ASN:H	2.27	0.41
14:AN:3:LYS:O	14:AN:4:GLN:C	2.63	0.41
15:AO:32:LEU:HD23	15:AO:32:LEU:HA	1.86	0.41
16:AP:6:LEU:HB3	16:AP:17:TYR:HB3	2.03	0.41
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.54	0.41
22:BA:343:C:O2	22:BA:343:C:H2'	2.20	0.41
22:BA:744:U:H2'	22:BA:745:G:O4'	2.21	0.41
22:BA:851:C:H2'	22:BA:852:U:H6	1.86	0.41
22:BA:1061:U:O2	30:BI:10:LYS:HD2	2.20	0.41
22:BA:1076:C:H2'	22:BA:1077:A:N9	2.36	0.41
22:BA:1832:C:C4	22:BA:1833:C:C5	3.08	0.41
22:BA:1840:G:C2	22:BA:1841:U:C2	3.08	0.41
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.51	0.41
22:BA:1960:A:H5''	22:BA:1961:C:OP2	2.21	0.41
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.56	0.41
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.55	0.41
22:BA:2520:C:C5	22:BA:2567:G:C4	3.09	0.41
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.55	0.41
22:BA:2880:C:O2	22:BA:2880:C:H2'	2.21	0.41
23:BB:75:G:H2'	23:BB:76:G:O4'	2.20	0.41
24:BC:33:LEU:HD23	24:BC:33:LEU:HA	1.84	0.41
25:BD:77:ARG:NH2	25:BD:200:ASP:OD1	2.48	0.41
25:BD:125:TRP:HB2	25:BD:127:PHE:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:72:SER:C	26:BE:74:LYS:N	2.79	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
31:BJ:23:LYS:HE2	31:BJ:142:ILE:OXT	2.21	0.41
35:BN:33:ILE:HD11	48:B0:55:ILE:CD1	2.51	0.41
38:BQ:47:TYR:CZ	38:BQ:51:ARG:NH1	2.88	0.41
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.20	0.41
44:BW:36:ILE:HG23	44:BW:58:THR:HG23	2.02	0.41
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.55	0.41
52:B4:25:VAL:C	52:B4:26:ILE:HD13	2.45	0.41
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.20	0.41
1:CA:731:G:O2'	1:CA:732:C:H5'	2.20	0.41
1:CA:805:C:O2'	1:CA:806:C:H5'	2.20	0.41
1:CA:876:C:H1'	8:CH:12:THR:HG21	2.01	0.41
1:CA:1111:A:C5	1:CA:1112:C:C5	3.08	0.41
1:CA:1220:G:H2'	1:CA:1221:G:H8	1.85	0.41
1:CA:1317:C:N3	1:CA:1318:A:H1'	2.36	0.41
1:CA:1385:G:C2'	1:CA:1386:G:H5'	2.51	0.41
2:CB:131:LYS:HA	2:CB:131:LYS:HE2	2.02	0.41
3:CC:189:ALA:HB3	3:CC:196:ILE:HB	2.02	0.41
5:CE:144:LEU:O	5:CE:147:MET:HB3	2.21	0.41
6:CF:50:PRO:CD	18:CR:74:HIS:HB3	2.51	0.41
7:CG:84:THR:HG22	7:CG:86:GLN:OE1	2.20	0.41
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.20	0.41
9:CI:7:TYR:CD1	9:CI:19:VAL:O	2.74	0.41
11:CK:46:THR:O	11:CK:50:SER:OG	2.35	0.41
13:CM:23:TYR:O	13:CM:66:GLU:N	2.53	0.41
16:CP:19:VAL:HG13	16:CP:36:VAL:HG12	2.01	0.41
16:CP:36:VAL:O	16:CP:36:VAL:HG13	2.21	0.41
22:DA:301:G:N2	22:DA:302:C:O2	2.53	0.41
22:DA:580:U:C2'	22:DA:581:C:H5'	2.50	0.41
22:DA:644:A:N1	22:DA:2369:A:H1'	2.34	0.41
22:DA:648:G:N2	22:DA:649:G:C4	2.89	0.41
22:DA:773:U:H5''	22:DA:774:G:OP2	2.20	0.41
22:DA:847:U:O2	22:DA:934:U:H1'	2.21	0.41
22:DA:1520:U:O4	22:DA:1521:G:C6	2.74	0.41
22:DA:1526:C:N4	22:DA:1527:G:C6	2.88	0.41
22:DA:1688:U:C4	22:DA:1698:A:C2	3.09	0.41
22:DA:1695:G:H1'	24:DC:8:PRO:O	2.20	0.41
22:DA:1853:A:N3	22:DA:2233:U:O2'	2.49	0.41
22:DA:1857:G:O2'	22:DA:1884:G:N2	2.54	0.41
22:DA:1869:G:H2'	22:DA:1870:C:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2077:A:N3	22:DA:2078:C:C6	2.88	0.41
22:DA:2431:U:N3	22:DA:2434:A:OP2	2.46	0.41
22:DA:2840:C:H2'	22:DA:2841:C:C6	2.56	0.41
24:DC:43:ARG:HB3	24:DC:48:ARG:O	2.21	0.41
24:DC:101:ARG:O	24:DC:102:ARG:CG	2.68	0.41
24:DC:153:GLN:O	24:DC:156:ARG:HD2	2.20	0.41
26:DE:184:ASP:O	26:DE:185:LYS:HG2	2.21	0.41
27:DF:108:VAL:N	27:DF:109:PRO:HD2	2.36	0.41
37:DP:43:PHE:CE2	37:DP:72:ARG:HD3	2.54	0.41
38:DQ:87:SER:O	39:DR:52:PRO:HD3	2.20	0.41
39:DR:97:LYS:O	39:DR:99:THR:HG23	2.21	0.41
41:DT:20:ALA:CB	41:DT:31:VAL:HG21	2.50	0.41
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	2.03	0.41
1:AA:69:G:H2'	1:AA:70:U:C6	2.56	0.41
1:AA:257:G:C2	1:AA:258:G:C8	3.08	0.41
1:AA:258:G:O2'	1:AA:259:G:H5'	2.20	0.41
1:AA:464:U:N3	1:AA:466:A:H5''	2.35	0.41
1:AA:554:A:H5''	12:AL:26:ALA:HB1	2.01	0.41
1:AA:1102:A:O2'	2:AB:98:GLY:O	2.34	0.41
2:AB:16:PHE:HD1	2:AB:17:GLY:N	2.18	0.41
2:AB:122:GLN:H	2:AB:122:GLN:CD	2.29	0.41
3:AC:54:ARG:O	3:AC:69:HIS:HB2	2.20	0.41
4:AD:98:LEU:HD23	4:AD:118:VAL:HG13	2.01	0.41
5:AE:89:HIS:CD2	5:AE:138:ARG:HD3	2.56	0.41
9:AI:49:ARG:C	9:AI:51:PRO:HD2	2.45	0.41
14:AN:45:VAL:HG23	14:AN:46:LEU:H	1.86	0.41
15:AO:46:HIS:O	15:AO:47:LYS:HB2	2.20	0.41
22:BA:47:C:H2'	22:BA:48:G:H5'	2.03	0.41
22:BA:120:U:H5''	22:BA:122:G:OP2	2.19	0.41
22:BA:523:C:O2'	22:BA:524:G:H5'	2.20	0.41
22:BA:645:C:O2'	22:BA:646:U:H5''	2.21	0.41
22:BA:674:G:O2'	26:BE:69:ARG:CB	2.69	0.41
22:BA:801:G:C8	26:BE:50:ALA:HB2	2.55	0.41
22:BA:1356:G:C2	22:BA:1357:C:C2	3.09	0.41
22:BA:1722:A:C4	22:BA:1739:A:C2	3.09	0.41
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.56	0.41
23:BB:61:G:H2'	23:BB:62:C:H6	1.84	0.41
26:BE:40:ARG:C	26:BE:41:GLN:O	2.60	0.41
27:BF:46:ASP:HB3	27:BF:49:LEU:HB2	2.03	0.41
29:BH:10:ALA:C	29:BH:12:LEU:H	2.27	0.41
35:BN:15:SER:O	35:BN:16:HIS:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:490:C:H2'	1:CA:491:G:H8	1.84	0.41
1:CA:572:A:H5'	1:CA:573:A:P	2.61	0.41
1:CA:1057:G:C5	1:CA:1204:A:C2	3.08	0.41
1:CA:1118:U:C1'	1:CA:1179:A:C4	3.04	0.41
1:CA:1394:A:H2'	1:CA:1501:C:O2'	2.21	0.41
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.56	0.41
2:CB:106:THR:HA	2:CB:109:GLN:OE1	2.21	0.41
3:CC:81:GLY:O	3:CC:82:GLU:C	2.63	0.41
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.36	0.41
6:CF:85:ILE:HB	6:CF:86:ARG:H	1.73	0.41
12:CL:25:GLU:C	12:CL:27:CYS:N	2.76	0.41
17:CQ:39:LYS:O	17:CQ:40:ARG:HD2	2.21	0.41
21:CU:26:ALA:O	21:CU:27:GLY:C	2.62	0.41
22:DA:319:G:C6	22:DA:333:G:C2	3.08	0.41
22:DA:416:U:H2'	22:DA:417:C:O4'	2.21	0.41
22:DA:600:G:H5'	26:DE:27:LEU:HD22	2.03	0.41
22:DA:771:G:N1	22:DA:772:C:C5	2.89	0.41
22:DA:817:C:O2'	22:DA:839:U:H5''	2.21	0.41
22:DA:1087:G:N9	22:DA:1089:A:H1'	2.36	0.41
22:DA:1229:C:H2'	22:DA:1230:A:C8	2.54	0.41
22:DA:1544:A:N1	22:DA:1545:A:C2	2.88	0.41
22:DA:1783:A:C5'	22:DA:2608:G:H4'	2.50	0.41
22:DA:1860:G:N2	22:DA:1883:U:H1'	2.35	0.41
22:DA:2209:G:C5	22:DA:2210:U:C4	3.09	0.41
22:DA:2310:C:C4	27:DF:77:PHE:CZ	3.08	0.41
22:DA:2823:A:C6	22:DA:2824:C:C5	3.09	0.41
22:DA:2867:G:C6	37:DP:21:ARG:NH2	2.88	0.41
24:DC:71:LYS:HB2	24:DC:96:TYR:CE2	2.56	0.41
25:DD:148:GLN:OE1	25:DD:152:PRO:HG2	2.21	0.41
29:DH:76:GLU:O	29:DH:76:GLU:CD	2.63	0.41
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	2.03	0.41
36:DO:58:ILE:HG22	36:DO:58:ILE:O	2.21	0.41
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.36	0.41
49:D1:8:LYS:HG3	49:D1:24:THR:HG22	2.03	0.41
1:AA:111:G:O6	1:AA:330:C:N3	2.54	0.41
1:AA:232:G:C5	1:AA:233:C:C5	3.08	0.41
1:AA:338:A:N1	1:AA:351:G:O6	2.53	0.41
1:AA:406:G:C4	1:AA:495:A:C5	3.08	0.41
1:AA:474:G:N2	1:AA:475:C:H1'	2.35	0.41
1:AA:780:A:C8	1:AA:800:G:O6	2.74	0.41
1:AA:815:A:N3	1:AA:1527:U:O2'	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:819:A:N7	1:AA:1529:G:C2	2.89	0.41
1:AA:830:G:H2'	1:AA:831:A:H8	1.85	0.41
1:AA:1384:C:H2'	1:AA:1385:G:C8	2.56	0.41
1:AA:1421:G:H2'	1:AA:1422:G:O5'	2.21	0.41
4:AD:85:ASN:OD1	4:AD:88:GLU:HG3	2.21	0.41
4:AD:159:LEU:HD23	4:AD:159:LEU:HA	1.96	0.41
4:AD:160:GLU:C	4:AD:162:ALA:N	2.78	0.41
8:AH:10:MET:CE	8:AH:33:LYS:HA	2.51	0.41
8:AH:11:LEU:HB3	8:AH:75:ILE:HG13	2.02	0.41
8:AH:20:ALA:O	8:AH:21:ASN:C	2.63	0.41
11:AK:16:VAL:HG12	11:AK:77:TYR:HB3	2.02	0.41
14:AN:26:GLU:HG2	14:AN:27:LEU:N	2.33	0.41
22:BA:137:U:P	22:BA:140:C:C5	3.14	0.41
22:BA:142:A:C8	22:BA:143:C:C5	3.08	0.41
22:BA:739:A:C2	57:BA:3305:HOH:O	2.74	0.41
22:BA:823:C:C4	22:BA:824:U:C4	3.09	0.41
22:BA:1115:G:N3	22:BA:1116:G:C8	2.89	0.41
22:BA:1171:G:C5	22:BA:1172:C:C4	3.08	0.41
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.53	0.41
22:BA:1274:A:N3	22:BA:1297:C:H1'	2.36	0.41
22:BA:1290:C:H2'	22:BA:1291:C:H6	1.85	0.41
22:BA:1416:G:O2'	22:BA:1417:C:H6	2.03	0.41
22:BA:1654:A:C1'	22:BA:2823:A:H5'	2.50	0.41
22:BA:1734:G:C5	22:BA:1735:A:N7	2.89	0.41
22:BA:1812:U:O2	22:BA:1812:U:C2'	2.66	0.41
22:BA:1930:G:O2'	22:BA:1931:U:P	2.79	0.41
22:BA:2214:C:C5	22:BA:2215:C:C4	3.09	0.41
22:BA:2335:A:N6	22:BA:2337:G:H1'	2.35	0.41
22:BA:2493:U:H2'	22:BA:2494:G:O5'	2.21	0.41
22:BA:2527:C:H2'	22:BA:2528:U:H5'	2.02	0.41
22:BA:2540:C:C2'	22:BA:2541:A:H5'	2.51	0.41
22:BA:2788:C:O2'	22:BA:2809:A:N3	2.47	0.41
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.21	0.41
26:BE:149:ILE:HA	26:BE:170:ARG:O	2.20	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
33:BL:111:ILE:N	33:BL:111:ILE:CD1	2.83	0.41
35:BN:72:ASP:OD2	35:BN:75:ILE:HD13	2.21	0.41
38:BQ:58:ARG:HH11	38:BQ:62:ILE:HD11	1.85	0.41
39:BR:63:VAL:C	39:BR:64:VAL:CG1	2.93	0.41
41:BT:41:ALA:O	41:BT:42:GLU:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:15:GLY:O	43:BV:19:ARG:HG3	2.20	0.41
1:CA:31:G:C5	1:CA:306:A:H1'	2.55	0.41
1:CA:32:A:C2	1:CA:33:A:N7	2.89	0.41
1:CA:182:A:C5	1:CA:184:G:C8	3.09	0.41
1:CA:524:G:H2'	1:CA:525:C:H6	1.86	0.41
1:CA:827:U:H2'	1:CA:870:U:O4	2.21	0.41
1:CA:1413:A:C2	1:CA:1488:G:C2	3.09	0.41
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.84	0.41
1:CA:1494:G:C2	1:CA:1495:U:C6	3.09	0.41
3:CC:179:ARG:O	3:CC:206:GLU:O	2.38	0.41
7:CG:83:SER:O	7:CG:85:TYR:N	2.53	0.41
7:CG:101:MET:HA	7:CG:104:ILE:HD12	2.02	0.41
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.35	0.41
13:CM:50:GLU:HA	13:CM:50:GLU:OE2	2.21	0.41
22:DA:83:A:H2'	22:DA:84:A:N7	2.35	0.41
22:DA:566:U:C5	22:DA:567:U:C5	3.09	0.41
22:DA:1268:A:C6	22:DA:2013:A:C8	3.09	0.41
22:DA:1361:G:C5	22:DA:1362:C:C5	3.08	0.41
22:DA:1604:C:O2'	22:DA:1610:A:N1	2.43	0.41
22:DA:2079:U:O4	22:DA:2241:A:N1	2.54	0.41
22:DA:2147:A:N7	22:DA:2148:G:C5	2.89	0.41
22:DA:2409:G:C6	22:DA:2410:G:C5	3.09	0.41
22:DA:2599:G:C8	24:DC:236:GLU:HB2	2.55	0.41
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.20	0.41
28:DG:107:LEU:HB2	28:DG:109:PHE:CZ	2.56	0.41
28:DG:138:LYS:HA	28:DG:141:ILE:HG12	2.01	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
30:DI:103:ARG:HB3	30:DI:142:ASP:OD1	2.20	0.41
36:DO:7:ARG:O	36:DO:10:ARG:N	2.54	0.41
36:DO:34:HIS:N	36:DO:65:THR:O	2.52	0.41
42:DU:52:LEU:C	42:DU:53:ASN:CG	2.88	0.41
45:DX:3:ARG:HB3	45:DX:31:PRO:CG	2.50	0.41
1:AA:9:G:N7	1:AA:558:G:O2'	2.49	0.41
1:AA:92:U:H2'	1:AA:93:U:C6	2.56	0.41
1:AA:193:C:H2'	1:AA:194:C:H6	1.86	0.41
1:AA:277:C:C2'	1:AA:278:G:H5'	2.50	0.41
1:AA:374:A:H5''	1:AA:452:A:H2	1.86	0.41
1:AA:376:G:N3	1:AA:389:A:C2	2.89	0.41
1:AA:459:A:H2'	1:AA:460:A:C8	2.56	0.41
1:AA:469:C:H2'	1:AA:470:C:O4'	2.21	0.41
1:AA:661:G:O2'	1:AA:662:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:700:G:O4'	1:AA:704:A:H1'	2.21	0.41
1:AA:927:G:N2	1:AA:1391:U:H1'	2.35	0.41
1:AA:972:C:O2	1:AA:972:C:H2'	2.21	0.41
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.56	0.41
1:AA:1392:G:C6	1:AA:1393:U:C4	3.09	0.41
1:AA:1421:G:C2'	1:AA:1422:G:O5'	2.69	0.41
1:AA:1489:G:H2'	1:AA:1490:U:O4'	2.21	0.41
2:AB:64:LYS:HD3	2:AB:65:GLY:N	2.36	0.41
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.28	0.41
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.84	0.41
6:AF:54:LEU:HD22	6:AF:55:HIS:N	2.36	0.41
7:AG:129:GLU:O	7:AG:130:ASN:C	2.64	0.41
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.21	0.41
8:AH:22:LYS:O	8:AH:65:TYR:OH	2.34	0.41
8:AH:111:MET:HE2	8:AH:115:ALA:C	2.46	0.41
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.21	0.41
13:AM:10:PRO:O	13:AM:11:ASP:HB2	2.20	0.41
13:AM:22:ILE:HG21	13:AM:65:VAL:HG21	2.02	0.41
15:AO:14:GLU:HB3	15:AO:84:ARG:HH22	1.85	0.41
18:AR:40:VAL:HG13	18:AR:41:PRO:HD2	2.03	0.41
20:AT:54:MET:HE1	20:AT:58:VAL:HG21	2.02	0.41
22:BA:207:A:H2'	22:BA:208:C:O4'	2.20	0.41
22:BA:214:G:N2	22:BA:216:A:N3	2.69	0.41
22:BA:572:A:C5'	22:BA:573:U:OP2	2.63	0.41
22:BA:819:A:C2'	22:BA:820:A:H5'	2.51	0.41
22:BA:875:G:C2	22:BA:903:C:C2	3.09	0.41
22:BA:1275:A:N1	22:BA:1295:C:O2'	2.47	0.41
22:BA:1289:C:O2'	22:BA:1330:C:H4'	2.20	0.41
22:BA:1352:U:C2'	22:BA:1353:A:H5'	2.51	0.41
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.50	0.41
22:BA:1482:G:N3	22:BA:1483:G:C8	2.89	0.41
22:BA:2271:G:H2'	22:BA:2272:U:C6	2.56	0.41
22:BA:2470:G:O6	22:BA:2476:A:O2'	2.30	0.41
22:BA:2531:A:C6	22:BA:2532:G:C5	3.09	0.41
22:BA:2615:U:H1'	48:B0:4:GLN:HB3	2.02	0.41
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.21	0.41
23:BB:78:A:C2	23:BB:99:A:C4	3.09	0.41
26:BE:72:SER:C	26:BE:74:LYS:H	2.28	0.41
26:BE:170:ARG:NH2	26:BE:176:ASP:OD2	2.50	0.41
27:BF:114:PHE:CE1	27:BF:116:GLY:HA2	2.56	0.41
28:BG:155:GLU:HG2	28:BG:156:PRO:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:116:ARG:C	29:BH:118:PRO:HD3	2.44	0.41
29:BH:121:VAL:HA	29:BH:128:HIS:CB	2.51	0.41
32:BK:17:ARG:HA	32:BK:17:ARG:HD3	1.86	0.41
33:BL:82:LEU:HG	33:BL:90:VAL:HG21	2.02	0.41
33:BL:95:LEU:HD22	33:BL:100:ILE:HD11	2.02	0.41
34:BM:136:MET:CE	43:BV:57:TYR:CE1	3.03	0.41
36:BO:43:ASN:OD1	36:BO:45:SER:HB2	2.19	0.41
42:BU:54:GLN:N	42:BU:55:PRO:HD2	2.36	0.41
53:B5:87:ALA:HB2	53:B5:153:ILE:CB	2.51	0.41
1:CA:62:U:H1'	1:CA:379:C:H1'	2.02	0.41
1:CA:87:C:H2'	1:CA:88:U:N1	2.35	0.41
1:CA:209:U:C4'	1:CA:210:C:OP2	2.69	0.41
1:CA:240:G:H4'	1:CA:240:G:OP1	2.20	0.41
1:CA:247:G:C5	1:CA:278:G:C2	3.08	0.41
1:CA:425:G:H2'	1:CA:426:U:O4'	2.20	0.41
1:CA:525:C:N3	1:CA:526:C:C4	2.89	0.41
1:CA:554:A:H2'	1:CA:555:U:H6	1.86	0.41
1:CA:560:A:H5'	1:CA:566:G:N2	2.36	0.41
1:CA:676:A:N1	1:CA:677:U:C4	2.89	0.41
1:CA:706:A:H1'	11:CK:31:ILE:HD11	2.03	0.41
1:CA:766:A:H2'	1:CA:767:A:O4'	2.21	0.41
1:CA:784:A:N3	1:CA:785:G:C8	2.88	0.41
1:CA:789:U:O2'	1:CA:791:G:N7	2.38	0.41
1:CA:919:A:C2	1:CA:920:U:C5	3.08	0.41
1:CA:1220:G:H1'	19:CS:52:HIS:HD2	1.86	0.41
1:CA:1377:A:C5	7:CG:7:ILE:HD11	2.55	0.41
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.42	0.41
2:CB:22:TYR:CD1	2:CB:22:TYR:N	2.89	0.41
4:CD:58:LYS:HG3	4:CD:59:GLN:N	2.33	0.41
7:CG:67:GLU:O	7:CG:67:GLU:HG2	2.20	0.41
9:CI:35:LEU:HD11	9:CI:48:VAL:HG21	2.03	0.41
9:CI:117:GLY:HA2	10:CJ:60:ASP:CG	2.46	0.41
10:CJ:78:GLU:OE2	10:CJ:80:THR:OG1	2.39	0.41
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.36	0.41
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.51	0.41
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.21	0.41
11:CK:123:PRO:HB2	11:CK:124:PRO:HD2	2.02	0.41
12:CL:33:VAL:O	12:CL:33:VAL:HG12	2.21	0.41
20:CT:67:ILE:CG1	20:CT:71:LYS:HD3	2.49	0.41
22:DA:13:A:N7	22:DA:525:U:C4	2.89	0.41
22:DA:30:G:H2'	22:DA:31:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:54:G:N2	22:DA:117:G:H1'	2.35	0.41
22:DA:58:G:C2	22:DA:70:G:C2	3.08	0.41
22:DA:67:U:C2	22:DA:68:G:C8	3.08	0.41
22:DA:68:G:H2'	22:DA:69:C:O4'	2.21	0.41
22:DA:153:U:H2'	22:DA:154:U:C6	2.56	0.41
22:DA:155:A:C2	22:DA:172:A:C2	3.09	0.41
22:DA:310:A:OP1	42:DU:15:THR:HG22	2.21	0.41
22:DA:396:G:H5'	45:DX:13:VAL:HG22	2.02	0.41
22:DA:523:C:H2'	22:DA:524:G:H8	1.85	0.41
22:DA:563:A:N1	22:DA:564:C:C2	2.89	0.41
22:DA:593:U:C2	22:DA:594:U:C4	3.09	0.41
22:DA:694:U:C3'	22:DA:695:G:H5''	2.50	0.41
22:DA:713:G:N2	22:DA:719:C:C4	2.89	0.41
22:DA:835:C:C4	22:DA:836:G:N7	2.89	0.41
22:DA:871:U:H4'	34:DM:68:PHE:CD2	2.56	0.41
22:DA:972:A:C6	22:DA:973:A:C6	3.09	0.41
22:DA:1033:U:O2'	22:DA:2750:A:N6	2.54	0.41
22:DA:1153:C:P	57:DA:3361:HOH:O	2.79	0.41
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.69	0.41
22:DA:1198:U:O2	38:DQ:4:VAL:HG11	2.20	0.41
22:DA:1202:G:C5	22:DA:1203:U:C5	3.09	0.41
22:DA:1365:A:OP2	45:DX:3:ARG:N	2.51	0.41
22:DA:1503:A:H3'	22:DA:1504:A:H5''	2.03	0.41
22:DA:1814:G:C6	22:DA:1815:A:C6	3.08	0.41
22:DA:1905:C:C4	22:DA:1930:G:C2	3.09	0.41
22:DA:2061:G:C2	22:DA:2063:C:C4	3.09	0.41
22:DA:2131:U:H4'	22:DA:2133:G:C1'	2.51	0.41
22:DA:2210:U:H4'	22:DA:2211:A:H5'	2.03	0.41
22:DA:2258:C:H4'	22:DA:2259:U:OP2	2.21	0.41
22:DA:2307:G:H4'	22:DA:2308:G:O5'	2.21	0.41
22:DA:2446:G:C3'	22:DA:2447:G:H5''	2.51	0.41
22:DA:2467:C:H41	22:DA:2468:A:N6	2.19	0.41
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.21	0.41
22:DA:2812:G:N2	22:DA:2889:C:C2	2.89	0.41
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.21	0.41
24:DC:72:ASP:O	24:DC:74:ILE:HD12	2.21	0.41
24:DC:135:ILE:O	24:DC:167:ARG:NH2	2.53	0.41
25:DD:3:GLY:O	25:DD:82:PHE:CE2	2.74	0.41
25:DD:22:ILE:HG22	25:DD:24:VAL:HG13	2.03	0.41
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.55	0.41
25:DD:186:LEU:HD21	37:DP:4:ILE:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:50:LEU:HD13	28:DG:72:LEU:HD23	2.03	0.41
28:DG:167:GLU:HG2	28:DG:169:VAL:CG2	2.51	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
30:DI:5:VAL:HA	30:DI:8:TYR:CE1	2.55	0.41
30:DI:22:PRO:CB	30:DI:23:PRO:HD3	2.50	0.41
33:DL:111:ILE:C	33:DL:131:ALA:HB2	2.46	0.41
35:DN:92:GLY:HA2	35:DN:94:TYR:CZ	2.55	0.41
37:DP:53:ARG:CB	37:DP:56:HIS:HB2	2.51	0.41
40:DS:61:ASN:O	40:DS:62:ASP:HB3	2.21	0.41
43:DV:2:PHE:HB3	43:DV:50:MET:HE3	2.02	0.41
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	2.02	0.41
47:DZ:47:MET:O	47:DZ:51:VAL:HG22	2.21	0.41
48:D0:13:ARG:O	48:D0:17:ARG:HD2	2.21	0.41
1:AA:96:U:O2'	1:AA:97:G:O5'	2.35	0.41
1:AA:186:C:H2'	1:AA:187:G:O4'	2.20	0.41
1:AA:251:G:H4'	1:AA:252:U:O5'	2.17	0.41
1:AA:697:U:C6	1:AA:698:G:C8	3.09	0.41
1:AA:1238:A:H5''	1:AA:1239:A:OP2	2.21	0.41
1:AA:1345:U:C2	1:AA:1377:A:C6	3.08	0.41
1:AA:1374:A:C2	1:AA:1375:A:N9	2.89	0.41
1:AA:1377:A:C5	7:AG:7:ILE:HD11	2.55	0.41
2:AB:72:THR:O	2:AB:73:LYS:CG	2.68	0.41
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.54	0.41
6:AF:5:GLU:HB3	6:AF:90:MET:HB2	2.03	0.41
7:AG:57:SER:OG	7:AG:58:GLU:N	2.53	0.41
11:AK:127:ARG:HB2	21:AU:34:ARG:HD2	2.03	0.41
13:AM:88:GLY:O	13:AM:89:LEU:C	2.65	0.41
18:AR:47:THR:C	18:AR:48:ARG:O	2.63	0.41
20:AT:67:ILE:HD11	20:AT:71:LYS:CD	2.50	0.41
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.84	0.41
22:BA:655:A:H4'	22:BA:656:G:OP1	2.21	0.41
22:BA:754:U:H2'	22:BA:755:U:H6	1.85	0.41
22:BA:780:G:H21	22:BA:783:A:H62	1.69	0.41
22:BA:894:U:H2'	22:BA:895:U:C6	2.56	0.41
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.86	0.41
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.55	0.41
22:BA:1857:G:N3	22:BA:1884:G:C2	2.89	0.41
22:BA:2474:U:H5''	22:BA:2475:C:OP2	2.21	0.41
22:BA:2554:U:C6	22:BA:2555:U:C5	3.10	0.41
22:BA:2673:G:C2	22:BA:2674:G:C8	3.09	0.41
23:BB:43:C:O2	27:BF:92:ARG:HD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:78:VAL:HG21	24:BC:110:LEU:HG	2.03	0.41
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.83	0.41
25:BD:129:THR:CG2	25:BD:140:HIS:O	2.68	0.41
28:BG:164:TYR:HB2	28:BG:167:GLU:HB2	2.04	0.41
29:BH:75:LEU:C	29:BH:75:LEU:CD2	2.93	0.41
30:BI:80:LEU:HD11	30:BI:132:THR:O	2.21	0.41
32:BK:7:MET:HE1	32:BK:44:LYS:HG3	2.02	0.41
34:BM:41:LEU:HD22	34:BM:125:PRO:HD2	2.02	0.41
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	2.02	0.41
38:BQ:66:ASN:O	38:BQ:70:ARG:HB2	2.20	0.41
40:BS:29:VAL:HG11	40:BS:55:ILE:CD1	2.51	0.41
41:BT:18:GLU:CD	41:BT:18:GLU:H	2.29	0.41
52:B4:36:ARG:CG	52:B4:37:GLN:N	2.84	0.41
53:B5:42:VAL:HG23	53:B5:42:VAL:O	2.21	0.41
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.69	0.41
1:CA:55:A:C6	1:CA:56:U:C2	3.09	0.41
1:CA:631:C:H3'	1:CA:632:U:H5'	2.03	0.41
1:CA:783:C:H2'	1:CA:784:A:H8	1.86	0.41
1:CA:822:U:C2	1:CA:823:C:C5	3.09	0.41
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.56	0.41
1:CA:1315:U:C5	1:CA:1316:G:C6	3.09	0.41
1:CA:1360:A:C8	14:CN:58:SER:HB3	2.55	0.41
1:CA:1386:G:O2'	1:CA:1387:G:C5'	2.67	0.41
1:CA:1392:G:H2'	1:CA:1393:U:H5'	2.02	0.41
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.21	0.41
4:CD:29:ASP:C	4:CD:31:LYS:N	2.78	0.41
4:CD:152:GLN:O	4:CD:153:SER:C	2.63	0.41
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.64	0.41
6:CF:2:ARG:O	6:CF:4:TYR:CE2	2.74	0.41
10:CJ:36:VAL:C	10:CJ:38:GLY:H	2.29	0.41
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.19	0.41
12:CL:94:ARG:H	12:CL:94:ARG:HG2	1.78	0.41
16:CP:4:ILE:HD13	16:CP:57:ILE:HG12	2.02	0.41
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.56	0.41
22:DA:121:G:N2	22:DA:131:A:C4	2.89	0.41
22:DA:244:A:C2	22:DA:255:A:C4	3.08	0.41
22:DA:396:G:H1'	45:DX:29:PHE:CD2	2.56	0.41
22:DA:567:U:C4	22:DA:568:U:C5	3.09	0.41
22:DA:594:U:H2'	22:DA:595:C:C6	2.57	0.41
22:DA:740:C:H5'	22:DA:1784:A:C2'	2.51	0.41
22:DA:836:G:C6	22:DA:837:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:842:U:C2	22:DA:843:G:N7	2.89	0.41
22:DA:1000:A:C6	22:DA:1001:A:C6	3.09	0.41
22:DA:1136:G:H1'	22:DA:2038:G:H4'	2.03	0.41
22:DA:1384:A:H1'	22:DA:1405:U:H1'	2.03	0.41
22:DA:1429:G:C2	22:DA:1430:G:C5	3.09	0.41
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.21	0.41
22:DA:1453:A:N1	35:DN:74:GLU:HG3	2.36	0.41
22:DA:1791:A:H2'	22:DA:1792:G:O4'	2.21	0.41
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	2.02	0.41
22:DA:1885:A:H2'	22:DA:1886:U:O4'	2.21	0.41
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.20	0.41
22:DA:2372:U:H2'	22:DA:2373:G:C8	2.55	0.41
22:DA:2538:C:H2'	22:DA:2539:C:H6	1.85	0.41
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.74	0.41
22:DA:2683:C:H4'	25:DD:13:ARG:HH12	1.86	0.41
22:DA:2823:A:C2	22:DA:2824:C:N1	2.89	0.41
24:DC:227:PRO:O	24:DC:228:VAL:C	2.63	0.41
25:DD:5:VAL:HG11	25:DD:80:TRP:CE3	2.57	0.41
26:DE:179:SER:O	26:DE:183:PHE:HD1	2.04	0.41
27:DF:17:MET:SD	27:DF:22:TYR:HB2	2.60	0.41
27:DF:117:LEU:O	27:DF:177:PHE:HA	2.20	0.41
28:DG:139:GLN:OE1	28:DG:140:VAL:HG22	2.21	0.41
31:DJ:4:PHE:CG	38:DQ:100:VAL:HG11	2.56	0.41
31:DJ:96:ARG:O	31:DJ:98:GLU:N	2.54	0.41
33:DL:90:VAL:HB	33:DL:122:VAL:HA	2.03	0.41
36:DO:106:LEU:O	36:DO:109:ALA:HB3	2.21	0.41
42:DU:10:GLU:HG3	42:DU:23:GLY:O	2.21	0.41
1:AA:43:C:H2'	1:AA:44:A:O4'	2.20	0.40
1:AA:140:U:H2'	1:AA:141:G:O4'	2.20	0.40
1:AA:653:U:O2'	1:AA:654:G:H8	2.04	0.40
1:AA:730:G:N2	1:AA:766:A:OP1	2.47	0.40
1:AA:746:A:H2'	1:AA:747:A:C8	2.56	0.40
1:AA:772:U:C2'	1:AA:773:G:O5'	2.68	0.40
1:AA:811:C:H4'	1:AA:900:A:N6	2.37	0.40
1:AA:886:G:C2	1:AA:912:C:O2	2.74	0.40
1:AA:903:G:H2'	1:AA:904:U:H6	1.86	0.40
1:AA:1048:G:C2	1:AA:1050:G:N7	2.89	0.40
1:AA:1067:A:H3'	1:AA:1094:G:OP1	2.21	0.40
1:AA:1223:C:OP2	1:AA:1224:U:H2'	2.21	0.40
1:AA:1299:A:C5	1:AA:1301:U:O2	2.74	0.40
2:AB:51:ASN:C	2:AB:53:ALA:H	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:47:LEU:HD22	3:AC:76:VAL:HG22	2.02	0.40
7:AG:23:LEU:C	7:AG:25:LYS:N	2.79	0.40
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.20	0.40
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.69	0.40
22:BA:780:G:H2'	22:BA:782:A:N7	2.36	0.40
22:BA:936:A:H2'	22:BA:937:C:C6	2.56	0.40
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.20	0.40
22:BA:1170:C:H2'	22:BA:1171:G:C8	2.56	0.40
22:BA:2112:G:N3	22:BA:2112:G:H2'	2.36	0.40
22:BA:2243:U:O2	22:BA:2434:A:C2	2.74	0.40
22:BA:2627:G:O2'	22:BA:2781:A:N1	2.51	0.40
24:BC:212:ARG:HA	24:BC:212:ARG:HD2	1.71	0.40
28:BG:140:VAL:C	28:BG:142:GLY:N	2.73	0.40
29:BH:83:LYS:CE	1:CA:56:U:H5'	2.51	0.40
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.40
31:BJ:122:LEU:HG	31:BJ:124:VAL:HG12	2.03	0.40
36:BO:60:GLU:C	36:BO:62:LEU:H	2.29	0.40
1:CA:57:G:C5	1:CA:58:C:C4	3.10	0.40
1:CA:66:A:C6	1:CA:67:C:C4	3.09	0.40
1:CA:66:A:C6	1:CA:67:C:C5	3.10	0.40
1:CA:392:C:H2'	1:CA:393:A:O4'	2.21	0.40
1:CA:770:C:C2'	1:CA:771:G:H5'	2.51	0.40
1:CA:771:G:O2'	1:CA:772:U:H5'	2.20	0.40
1:CA:1014:A:N7	1:CA:1015:G:C6	2.89	0.40
1:CA:1208:C:C4	1:CA:1209:C:C4	3.08	0.40
1:CA:1343:G:C6	1:CA:1344:C:C4	3.09	0.40
1:CA:1456:A:H2'	1:CA:1457:G:O4'	2.21	0.40
1:CA:1492:A:N6	1:CA:1493:A:C2	2.89	0.40
2:CB:203:ASN:ND2	2:CB:206:ALA:HB2	2.36	0.40
3:CC:79:LYS:O	3:CC:81:GLY:N	2.54	0.40
3:CC:140:ASN:HA	3:CC:143:ARG:HB3	2.02	0.40
4:CD:188:ARG:HD2	4:CD:188:ARG:HA	1.81	0.40
4:CD:206:LYS:OXT	4:CD:206:LYS:CG	2.69	0.40
5:CE:137:VAL:O	5:CE:138:ARG:HB2	2.19	0.40
8:CH:94:LYS:HD3	8:CH:98:GLY:N	2.36	0.40
11:CK:23:ILE:HD11	11:CK:86:VAL:HG13	2.03	0.40
13:CM:66:GLU:HB3	13:CM:67:GLY:H	1.76	0.40
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.21	0.40
18:CR:46:GLY:O	18:CR:47:THR:O	2.39	0.40
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.56	0.40
22:DA:236:C:H4'	22:DA:431:U:O2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:249:C:P	22:DA:2394:C:O2'	2.79	0.40
22:DA:583:G:C5	22:DA:584:C:C5	3.10	0.40
22:DA:698:C:C4	22:DA:762:U:O4	2.75	0.40
22:DA:732:C:N4	22:DA:733:G:C6	2.89	0.40
22:DA:818:G:H2'	22:DA:819:A:H5''	2.04	0.40
22:DA:945:A:H8	57:DA:3258:HOH:O	2.04	0.40
22:DA:1020:A:C2	22:DA:1141:U:O2	2.74	0.40
22:DA:1255:U:H3'	22:DA:1256:G:H5''	2.03	0.40
22:DA:1355:G:N2	22:DA:1356:G:H1'	2.36	0.40
22:DA:1373:A:C4	22:DA:1374:G:H1'	2.57	0.40
22:DA:1430:G:C5	22:DA:1431:A:N7	2.89	0.40
22:DA:1431:A:C2	22:DA:1432:G:N9	2.89	0.40
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.21	0.40
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.21	0.40
22:DA:2077:A:C2	22:DA:2078:C:C4	3.09	0.40
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.54	0.40
22:DA:2313:C:H5''	27:DF:88:LYS:HD3	2.03	0.40
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.51	0.40
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.21	0.40
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.22	0.40
22:DA:2880:C:O2	22:DA:2880:C:H2'	2.21	0.40
23:DB:41:G:H8	27:DF:66:LEU:HD11	1.86	0.40
23:DB:46:A:C5	23:DB:47:C:C4	3.08	0.40
25:DD:114:LYS:HE2	25:DD:196:ALA:CB	2.51	0.40
25:DD:121:THR:HG21	25:DD:143:PRO:HB3	2.03	0.40
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.78	0.40
32:DK:2:ILE:HG21	32:DK:8:LEU:HD21	2.03	0.40
33:DL:46:VAL:HB	33:DL:50:PHE:CD2	2.56	0.40
35:DN:12:ARG:HE	35:DN:16:HIS:CE1	2.39	0.40
42:DU:89:ASP:CG	42:DU:90:GLY:H	2.29	0.40
1:AA:266:G:H3'	17:AQ:69:LYS:HB2	2.04	0.40
1:AA:277:C:H2'	1:AA:278:G:H5'	2.03	0.40
1:AA:380:G:N2	1:AA:384:G:C5	2.90	0.40
1:AA:397:A:C5	1:AA:548:G:N7	2.89	0.40
1:AA:577:G:C8	1:AA:816:A:C6	3.10	0.40
1:AA:628:G:H2'	1:AA:629:A:O4'	2.21	0.40
1:AA:791:G:N2	1:AA:1497:G:O3'	2.48	0.40
1:AA:1048:G:OP1	14:AN:4:GLN:N	2.51	0.40
1:AA:1126:U:C6	1:AA:1281:C:N3	2.90	0.40
1:AA:1241:G:N2	1:AA:1242:G:C4	2.90	0.40
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:150:LYS:NZ	4:AD:178:MET:HB2	2.35	0.40
6:AF:90:MET:O	6:AF:91:ARG:O	2.38	0.40
8:AH:18:GLN:NE2	8:AH:70:ALA:HB1	2.36	0.40
10:AJ:9:ARG:NH2	10:AJ:71:LEU:HD11	2.35	0.40
19:AS:32:ARG:HG2	19:AS:57:HIS:CD2	2.57	0.40
22:BA:386:G:H4'	22:BA:387:U:OP2	2.21	0.40
22:BA:497:A:H2'	22:BA:498:G:O4'	2.21	0.40
22:BA:511:U:C5	22:BA:512:G:C5	3.09	0.40
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.55	0.40
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.56	0.40
22:BA:1386:C:H5''	22:BA:1396:U:O2	2.22	0.40
22:BA:1603:A:H5''	22:BA:1604:C:OP2	2.21	0.40
22:BA:1910:G:N2	22:BA:1921:G:C1'	2.85	0.40
22:BA:2080:A:C5'	45:BX:19:SER:HB2	2.52	0.40
22:BA:2318:G:C6	22:BA:2319:G:C6	3.09	0.40
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.69	0.40
23:BB:29:A:OP2	36:BO:32:PRO:HD2	2.21	0.40
23:BB:109:A:C5	23:BB:110:C:C5	3.09	0.40
24:BC:10:SER:O	24:BC:13:ARG:HB3	2.20	0.40
26:BE:148:ILE:HG21	26:BE:157:LEU:HD21	2.04	0.40
26:BE:189:THR:O	26:BE:190:ALA:C	2.63	0.40
29:BH:90:LEU:HB2	29:BH:124:THR:C	2.46	0.40
30:BI:77:ALA:HB2	30:BI:132:THR:HG22	2.03	0.40
31:BJ:142:ILE:HD12	31:BJ:142:ILE:HA	1.94	0.40
32:BK:103:VAL:O	32:BK:122:VAL:HB	2.22	0.40
35:BN:57:THR:O	35:BN:57:THR:HG22	2.21	0.40
35:BN:67:PHE:CE1	35:BN:73:ASN:ND2	2.90	0.40
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.21	0.40
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	2.02	0.40
40:BS:84:ARG:O	40:BS:96:ILE:N	2.45	0.40
41:BT:57:VAL:CG2	41:BT:58:VAL:N	2.83	0.40
43:BV:10:LYS:H	43:BV:10:LYS:HE2	1.85	0.40
46:BY:18:LEU:HD21	46:BY:22:LEU:HD22	2.04	0.40
48:B0:25:VAL:C	48:B0:27:SER:H	2.30	0.40
53:B5:78:ILE:O	53:B5:78:ILE:HG12	2.22	0.40
1:CA:582:C:C2	1:CA:760:G:N1	2.90	0.40
1:CA:582:C:C2	1:CA:760:G:C2	3.08	0.40
1:CA:608:A:C8	57:CA:1798:HOH:O	2.71	0.40
1:CA:709:U:H2'	1:CA:710:G:C8	2.56	0.40
1:CA:834:U:H2'	1:CA:835:U:C6	2.55	0.40
1:CA:913:A:H4'	1:CA:914:A:H4'	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:987:G:H2'	1:CA:988:G:O4'	2.22	0.40
2:CB:166:ALA:HB2	2:CB:187:VAL:HG12	2.02	0.40
3:CC:9:GLY:HA3	14:CN:89:MET:SD	2.61	0.40
5:CE:80:THR:CB	5:CE:122:ASN:OD1	2.69	0.40
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.22	0.40
5:CE:133:PRO:O	5:CE:136:VAL:N	2.53	0.40
9:CI:49:ARG:HD3	9:CI:49:ARG:C	2.46	0.40
9:CI:84:THR:HG22	9:CI:98:LEU:HD11	2.04	0.40
10:CJ:34:ALA:O	10:CJ:35:GLN:CB	2.68	0.40
15:CO:40:GLN:OE1	22:DA:716:A:H1'	2.22	0.40
17:CQ:62:ARG:HD3	17:CQ:76:VAL:HG11	2.02	0.40
19:CS:36:ARG:HG2	19:CS:51:VAL:CG1	2.51	0.40
20:CT:48:GLN:O	20:CT:52:ASN:ND2	2.54	0.40
22:DA:35:G:H1'	22:DA:454:A:C4	2.56	0.40
22:DA:195:A:C5	22:DA:198:C:C5	3.08	0.40
22:DA:226:A:H5'	22:DA:257:C:O3'	2.21	0.40
22:DA:235:U:C2	22:DA:236:C:C6	3.09	0.40
22:DA:279:A:H61	22:DA:361:G:H1'	1.86	0.40
22:DA:734:A:O2'	22:DA:1635:A:C5'	2.70	0.40
22:DA:945:A:N1	57:DA:3686:HOH:O	2.51	0.40
22:DA:950:G:C6	22:DA:951:C:N3	2.89	0.40
22:DA:1483:G:C4	22:DA:1484:U:C5	3.09	0.40
22:DA:1539:U:H2'	22:DA:1540:G:C8	2.56	0.40
22:DA:1996:C:H5	32:DK:32:TYR:OH	2.04	0.40
22:DA:2106:U:H2'	22:DA:2107:G:C8	2.57	0.40
22:DA:2221:G:H2'	22:DA:2222:C:H5'	2.03	0.40
22:DA:2598:A:OP1	24:DC:234:GLY:O	2.40	0.40
22:DA:2615:U:O2	22:DA:2615:U:H2'	2.20	0.40
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.55	0.40
23:DB:76:G:H2'	23:DB:77:U:O4'	2.22	0.40
24:DC:219:THR:HG22	24:DC:220:VAL:H	1.86	0.40
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.22	0.40
28:DG:41:VAL:HG22	28:DG:64:GLN:O	2.22	0.40
28:DG:44:LYS:HE3	28:DG:51:THR:OG1	2.22	0.40
28:DG:85:LYS:HG2	28:DG:141:ILE:HD12	2.02	0.40
29:DH:96:THR:C	29:DH:98:ASP:N	2.79	0.40
33:DL:55:MET:SD	33:DL:59:ARG:HB3	2.61	0.40
38:DQ:62:ILE:CG1	38:DQ:92:ARG:HD3	2.51	0.40
42:DU:53:ASN:OD1	42:DU:53:ASN:N	2.53	0.40
50:D2:11:LYS:HA	50:D2:14:ARG:HB2	2.03	0.40
51:D3:6:THR:O	51:D3:8:ARG:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:161:A:H2'	1:AA:162:A:C8	2.56	0.40
1:AA:291:U:O2'	1:AA:292:G:H5'	2.22	0.40
1:AA:892:A:C2	1:AA:907:A:C4	3.10	0.40
1:AA:909:A:H2'	1:AA:910:C:O4'	2.21	0.40
1:AA:965:U:P	57:AA:1833:HOH:O	2.78	0.40
3:AC:20:SER:HB3	14:AN:94:PRO:HG3	2.02	0.40
4:AD:26:ARG:HD3	4:AD:31:LYS:HE3	2.03	0.40
5:AE:99:ALA:O	5:AE:100:SER:C	2.65	0.40
6:AF:70:VAL:HA	6:AF:73:GLU:HG2	2.03	0.40
7:AG:32:VAL:O	7:AG:33:ASP:C	2.64	0.40
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	2.02	0.40
10:AJ:65:TYR:OH	14:AN:85:ARG:HG3	2.22	0.40
19:AS:17:LYS:O	19:AS:21:LYS:HB2	2.20	0.40
22:BA:624:C:O2'	22:BA:657:U:H5''	2.20	0.40
22:BA:753:A:C2'	22:BA:754:U:O5'	2.70	0.40
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.56	0.40
22:BA:1187:G:P	57:BA:3373:HOH:O	2.79	0.40
22:BA:1593:A:H2'	22:BA:1594:U:C6	2.57	0.40
22:BA:1921:G:N3	22:BA:1922:G:C8	2.89	0.40
22:BA:1922:G:C6	22:BA:1923:U:C5	3.09	0.40
22:BA:1985:C:N3	22:BA:1986:C:C5	2.89	0.40
22:BA:1991:U:C2'	22:BA:1992:G:H5'	2.51	0.40
22:BA:2318:G:O2'	22:BA:2319:G:H5'	2.21	0.40
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.21	0.40
22:BA:2520:C:C2'	22:BA:2521:C:O5'	2.70	0.40
26:BE:46:GLN:O	26:BE:88:ARG:NH1	2.54	0.40
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.37	0.40
27:BF:53:ALA:O	27:BF:56:ASP:HB2	2.21	0.40
30:BI:39:CYS:SG	30:BI:43:ASN:ND2	2.94	0.40
36:BO:24:THR:HG23	36:BO:42:PRO:HD3	2.04	0.40
38:BQ:9:ILE:CG1	38:BQ:10:ALA:N	2.83	0.40
41:BT:18:GLU:O	41:BT:22:THR:HG23	2.22	0.40
51:B3:45:ARG:HH11	51:B3:45:ARG:HG3	1.86	0.40
51:B3:63:PRO:HG2	51:B3:64:TYR:CD2	2.56	0.40
52:B4:19:ARG:O	52:B4:20:ASP:C	2.65	0.40
1:CA:104:G:C2	1:CA:105:G:C8	3.10	0.40
1:CA:247:G:C6	1:CA:278:G:N1	2.89	0.40
1:CA:442:G:C6	1:CA:443:C:C4	3.10	0.40
1:CA:462:G:N7	1:CA:463:U:C5	2.89	0.40
1:CA:554:A:H2'	1:CA:555:U:C6	2.56	0.40
1:CA:577:G:N3	1:CA:578:C:C5	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.22	0.40
1:CA:1302:C:N4	13:CM:17:ILE:HD11	2.37	0.40
4:CD:80:ALA:HA	4:CD:86:THR:OG1	2.20	0.40
11:CK:82:LEU:HD22	11:CK:105:PHE:CD1	2.57	0.40
16:CP:20:VAL:CG2	16:CP:32:PHE:CD1	3.04	0.40
21:CU:34:ARG:O	21:CU:35:ARG:O	2.40	0.40
22:DA:24:G:C5	22:DA:25:U:C5	3.09	0.40
22:DA:183:C:C4	22:DA:184:C:C4	3.09	0.40
22:DA:247:G:N7	22:DA:249:C:C2	2.90	0.40
22:DA:480:A:N3	22:DA:480:A:H2'	2.36	0.40
22:DA:514:A:C2	22:DA:515:A:C2	3.10	0.40
22:DA:1021:A:N3	22:DA:1021:A:H2'	2.35	0.40
22:DA:1454:C:H1'	35:DN:60:VAL:HG13	2.02	0.40
22:DA:1549:A:C6	22:DA:1550:C:N3	2.90	0.40
22:DA:1657:U:OP2	25:DD:141:ARG:HG3	2.21	0.40
22:DA:1659:G:C5	22:DA:1660:G:C8	3.10	0.40
22:DA:1783:A:C2	22:DA:2587:A:C4	3.09	0.40
22:DA:2235:G:H2'	22:DA:2236:U:H6	1.86	0.40
22:DA:2474:U:H5''	22:DA:2475:C:OP2	2.21	0.40
24:DC:74:ILE:HG22	24:DC:75:PRO:O	2.22	0.40
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	2.03	0.40
26:DE:149:ILE:CG1	26:DE:188:MET:HE3	2.51	0.40
28:DG:107:LEU:HB2	28:DG:109:PHE:CE2	2.57	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
30:DI:89:GLY:HA3	30:DI:136:MET:HE3	2.02	0.40
44:DW:56:ASP:O	44:DW:57:HIS:HB2	2.21	0.40
1:AA:404:G:H2'	1:AA:405:U:O4'	2.22	0.40
1:AA:519:C:H2'	1:AA:520:A:O4'	2.22	0.40
1:AA:536:C:H2'	1:AA:537:G:C8	2.57	0.40
1:AA:614:C:C2	1:AA:615:G:C8	3.09	0.40
1:AA:642:A:C5	8:AH:107:SER:HA	2.57	0.40
1:AA:864:A:H4'	5:AE:90:THR:HG23	2.04	0.40
1:AA:1070:U:C2	1:AA:1071:C:C5	3.10	0.40
1:AA:1157:A:H5'	1:AA:1158:C:C5	2.56	0.40
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.22	0.40
1:AA:1263:C:H2'	1:AA:1264:U:O4'	2.22	0.40
1:AA:1432:G:H3'	37:BP:106:LYS:HE2	2.03	0.40
4:AD:25:VAL:C	4:AD:26:ARG:O	2.63	0.40
4:AD:188:ARG:CZ	4:AD:197:GLU:OE1	2.69	0.40
5:AE:80:THR:HB	5:AE:122:ASN:ND2	2.36	0.40
5:AE:133:PRO:O	5:AE:135:ASN:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:29:ILE:HD13	6:AF:64:VAL:CG1	2.51	0.40
8:AH:105:SER:O	8:AH:123:GLY:HA3	2.21	0.40
9:AI:19:VAL:HG22	9:AI:65:ILE:CG2	2.52	0.40
12:AL:117:TYR:O	12:AL:119:VAL:HG23	2.21	0.40
22:BA:611:C:C2'	22:BA:612:G:H5'	2.51	0.40
22:BA:880:G:N2	22:BA:898:C:C2	2.90	0.40
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.21	0.40
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.56	0.40
22:BA:1444:G:H2'	22:BA:1445:G:O4'	2.22	0.40
22:BA:1790:C:H6	22:BA:1790:C:O5'	2.05	0.40
22:BA:1869:G:C3'	22:BA:1870:C:H5'	2.51	0.40
22:BA:1916:A:C4	22:BA:1917:U:H1'	2.55	0.40
22:BA:1973:G:H2'	22:BA:1974:C:C6	2.57	0.40
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	2.02	0.40
22:BA:2799:A:C6	22:BA:2801:G:C5	3.10	0.40
27:BF:119:ALA:HB1	27:BF:167:ARG:HD2	2.02	0.40
30:BI:64:ASP:O	30:BI:65:ARG:HB3	2.21	0.40
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.51	0.40
32:BK:2:ILE:HD12	32:BK:6:THR:HG21	2.03	0.40
33:BL:23:ILE:O	33:BL:24:GLY:C	2.64	0.40
34:BM:95:LEU:HD23	34:BM:95:LEU:HA	1.91	0.40
35:BN:92:GLY:HA2	35:BN:94:TYR:CZ	2.57	0.40
39:BR:4:VAL:HA	39:BR:12:HIS:O	2.22	0.40
40:BS:29:VAL:CG1	40:BS:55:ILE:CD1	2.99	0.40
46:BY:28:LEU:O	46:BY:31:GLN:HB3	2.22	0.40
1:CA:109:A:N1	1:CA:327:A:C6	2.90	0.40
1:CA:570:G:C6	1:CA:873:A:N1	2.89	0.40
1:CA:577:G:C5	1:CA:816:A:C2	3.08	0.40
1:CA:901:A:N7	1:CA:902:G:H1'	2.36	0.40
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.54	0.40
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.56	0.40
3:CC:65:ARG:O	3:CC:101:ILE:HA	2.21	0.40
4:CD:28:ILE:O	4:CD:29:ASP:C	2.65	0.40
4:CD:160:GLU:O	4:CD:163:GLU:HB3	2.21	0.40
4:CD:177:LYS:O	4:CD:178:MET:HB2	2.22	0.40
5:CE:39:VAL:HG23	5:CE:71:MET:HE2	2.04	0.40
6:CF:49:TYR:CE2	18:CR:66:SER:HA	2.57	0.40
6:CF:70:VAL:O	6:CF:73:GLU:HG2	2.21	0.40
6:CF:81:ASN:OD1	6:CF:81:ASN:C	2.64	0.40
7:CG:123:GLU:OE1	7:CG:126:ASP:HB2	2.21	0.40
11:CK:16:VAL:HG12	11:CK:79:ILE:HG12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:43:LYS:HB3	12:CL:43:LYS:HE2	1.91	0.40
13:CM:71:ARG:HA	13:CM:74:SER:HB2	2.02	0.40
17:CQ:17:MET:O	17:CQ:18:GLU:CB	2.68	0.40
17:CQ:74:THR:HG22	17:CQ:75:LEU:N	2.36	0.40
22:DA:53:A:C8	22:DA:54:G:C8	3.10	0.40
22:DA:106:C:C2'	22:DA:294:A:O2'	2.70	0.40
22:DA:167:A:C4	22:DA:168:G:C8	3.09	0.40
22:DA:404:A:H1'	22:DA:405:U:OP2	2.22	0.40
22:DA:527:C:N3	22:DA:2779:U:H2'	2.37	0.40
22:DA:581:C:H2'	22:DA:582:A:C8	2.56	0.40
22:DA:589:U:C4	22:DA:590:A:N7	2.89	0.40
22:DA:651:G:C6	22:DA:652:U:C4	3.09	0.40
22:DA:663:G:C6	22:DA:664:G:C5	3.09	0.40
22:DA:825:A:H4'	22:DA:2428:G:C5	2.56	0.40
22:DA:875:G:N2	22:DA:903:C:C2	2.89	0.40
22:DA:1365:A:O5'	45:DX:12:PRO:HG2	2.21	0.40
22:DA:1394:U:C4	22:DA:1395:A:C5	3.10	0.40
22:DA:1483:G:C5	22:DA:1484:U:C5	3.10	0.40
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.16	0.40
22:DA:1893:C:C5	22:DA:1894:C:C5	3.09	0.40
22:DA:2073:C:O2'	22:DA:2074:U:H5'	2.22	0.40
22:DA:2124:G:O6	22:DA:2125:G:N3	2.54	0.40
22:DA:2150:C:C4	22:DA:2151:U:C4	3.10	0.40
22:DA:2478:A:C8	22:DA:2529:G:C6	3.09	0.40
22:DA:2618:G:C6	22:DA:2619:C:C4	3.10	0.40
22:DA:2742:G:OP1	52:D4:36:ARG:HD2	2.21	0.40
22:DA:2840:C:H2'	22:DA:2841:C:H6	1.87	0.40
24:DC:258:ARG:NH1	24:DC:264:ASP:OD1	2.53	0.40
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	2.03	0.40
28:DG:14:GLY:O	28:DG:28:GLY:HA2	2.22	0.40
31:DJ:28:LEU:HD23	31:DJ:101:ILE:HD12	2.02	0.40
32:DK:107:LEU:CD2	32:DK:115:ILE:HG21	2.52	0.40
35:DN:35:LYS:HE3	35:DN:110:MET:HB3	2.03	0.40
35:DN:86:ARG:O	35:DN:86:ARG:HG2	2.20	0.40
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.37	0.40
42:DU:47:LYS:CG	42:DU:48:PRO:HD2	2.52	0.40
42:DU:65:ILE:O	42:DU:65:ILE:HG23	2.22	0.40
1:AA:144:G:H2'	1:AA:145:G:O4'	2.21	0.40
1:AA:178:C:H2'	1:AA:179:A:O4'	2.22	0.40
1:AA:414:A:H2'	1:AA:415:A:H8	1.87	0.40
1:AA:921:U:H2'	1:AA:922:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:942:G:C4	1:AA:943:U:C5	3.10	0.40
1:AA:1047:G:N3	1:AA:1047:G:H2'	2.35	0.40
1:AA:1118:U:H2'	1:AA:1119:C:O4'	2.21	0.40
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.57	0.40
1:AA:1347:G:H2'	9:AI:110:GLN:O	2.21	0.40
1:AA:1349:A:C6	1:AA:1374:A:C8	3.09	0.40
57:AA:1783:HOH:O	14:AN:3:LYS:HA	2.20	0.40
4:AD:165:ARG:O	4:AD:167:LYS:N	2.54	0.40
7:AG:120:LEU:HD22	7:AG:120:LEU:O	2.22	0.40
10:AJ:7:ARG:CB	10:AJ:75:ASP:OD1	2.69	0.40
11:AK:87:LYS:HA	11:AK:114:THR:HG22	2.03	0.40
12:AL:38:TYR:HB2	12:AL:52:VAL:HG23	2.03	0.40
14:AN:28:LYS:N	14:AN:31:ILE:HB	2.37	0.40
21:AU:42:THR:O	21:AU:46:LYS:HB2	2.22	0.40
22:BA:45:G:H5''	22:BA:46:G:H5'	2.03	0.40
22:BA:108:G:C2'	22:BA:109:C:H5'	2.51	0.40
22:BA:185:G:H2'	22:BA:186:G:O4'	2.21	0.40
22:BA:359:G:C5	22:BA:360:U:C5	3.09	0.40
22:BA:419:U:H2'	22:BA:420:C:C6	2.56	0.40
22:BA:599:A:O2'	22:BA:600:G:H5'	2.21	0.40
22:BA:784:G:O2'	22:BA:785:G:H5''	2.21	0.40
22:BA:988:A:P	47:BZ:12:SER:HB2	2.61	0.40
22:BA:1180:U:H2'	22:BA:1181:U:O4'	2.21	0.40
22:BA:1408:G:C6	22:BA:1409:U:C4	3.09	0.40
22:BA:1415:U:O2'	22:BA:1416:G:H4'	2.21	0.40
22:BA:1590:A:C2	22:BA:1591:A:C5	3.09	0.40
22:BA:2114:A:C4	22:BA:2167:U:H5'	2.57	0.40
22:BA:2131:U:H5'	22:BA:2132:U:H5''	2.03	0.40
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.36	0.40
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.22	0.40
22:BA:2582:G:OP2	22:BA:2582:G:H3'	2.22	0.40
28:BG:76:VAL:O	28:BG:77:ILE:C	2.63	0.40
35:BN:103:ARG:NE	35:BN:110:MET:HE3	2.37	0.40
41:BT:6:ARG:C	41:BT:8:LEU:N	2.79	0.40
43:BV:92:VAL:O	43:BV:92:VAL:HG12	2.21	0.40
51:B3:31:HIS:O	51:B3:32:ILE:C	2.61	0.40
1:CA:209:U:H5''	1:CA:210:C:OP2	2.21	0.40
1:CA:265:G:O2'	17:CQ:68:SER:C	2.64	0.40
1:CA:582:C:N3	1:CA:760:G:C2	2.90	0.40
1:CA:587:G:H4'	8:CH:4:GLN:HB3	2.03	0.40
1:CA:619:U:N3	4:CD:132:ILE:CD1	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:716:A:N3	11:CK:120:GLY:HA2	2.37	0.40
1:CA:1438:G:OP1	20:CT:29:ARG:HD3	2.21	0.40
1:CA:1523:G:H2'	1:CA:1524:C:C6	2.56	0.40
2:CB:103:ASN:O	2:CB:103:ASN:CG	2.65	0.40
8:CH:101:ILE:HD12	8:CH:101:ILE:O	2.22	0.40
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	2.03	0.40
18:CR:54:GLN:O	18:CR:55:LEU:C	2.64	0.40
22:DA:374:A:N6	22:DA:401:A:C8	2.89	0.40
22:DA:388:G:O6	22:DA:390:U:O2'	2.37	0.40
22:DA:547:A:H3'	22:DA:548:G:H5'	2.02	0.40
22:DA:570:G:C4	22:DA:2030:A:C8	3.09	0.40
22:DA:571:U:H1'	22:DA:573:U:C6	2.56	0.40
22:DA:580:U:H4'	38:DQ:31:VAL:HG11	2.04	0.40
22:DA:581:C:OP1	38:DQ:33:ARG:HG3	2.22	0.40
22:DA:972:A:C2	22:DA:973:A:N6	2.89	0.40
22:DA:982:C:H4'	22:DA:983:A:OP1	2.22	0.40
22:DA:1009:A:C6	22:DA:1010:A:N1	2.90	0.40
22:DA:1027:A:N7	22:DA:1126:A:C2	2.88	0.40
22:DA:1422:G:C6	22:DA:1423:G:C5	3.09	0.40
22:DA:2084:C:H2'	22:DA:2085:U:H6	1.87	0.40
23:DB:38:C:O4'	36:DO:100:HIS:CE1	2.74	0.40
25:DD:151:THR:HB	25:DD:152:PRO:HD2	2.03	0.40
31:DJ:75:TYR:CE2	31:DJ:86:GLN:OE1	2.75	0.40
34:DM:67:VAL:HG11	34:DM:96:ILE:HD12	2.04	0.40
35:DN:69:ARG:C	35:DN:71:ARG:H	2.29	0.40
41:DT:44:LYS:HG3	41:DT:55:VAL:HB	2.03	0.40
41:DT:57:VAL:HG12	41:DT:86:THR:OG1	2.21	0.40
43:DV:51:GLN:C	43:DV:53:LYS:H	2.29	0.40
48:D0:17:ARG:O	48:D0:18:SER:C	2.65	0.40
51:D3:34:THR:HG23	51:D3:35:LYS:N	2.36	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP2	29:DH:123:ARG:NH2[4_455]	2.03	0.17
1:AA:368:U:OP2	29:DH:123:ARG:NE[4_455]	2.07	0.13
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	2.08	0.12
1:AA:368:U:OP2	29:DH:123:ARG:CZ[4_455]	2.18	0.02
1:AA:359:G:OP1	29:DH:89:LYS:NZ[4_455]	2.19	0.01

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	140 (65%)	41 (19%)	35 (16%)	0	0
2	CB	216/218 (99%)	144 (67%)	44 (20%)	28 (13%)	0	1
3	AC	204/206 (99%)	161 (79%)	32 (16%)	11 (5%)	1	9
3	CC	204/206 (99%)	165 (81%)	29 (14%)	10 (5%)	1	11
4	AD	203/205 (99%)	149 (73%)	29 (14%)	25 (12%)	0	1
4	CD	203/205 (99%)	155 (76%)	34 (17%)	14 (7%)	1	5
5	AE	148/150 (99%)	109 (74%)	24 (16%)	15 (10%)	0	3
5	CE	148/150 (99%)	104 (70%)	29 (20%)	15 (10%)	0	3
6	AF	98/100 (98%)	75 (76%)	17 (17%)	6 (6%)	1	7
6	CF	98/100 (98%)	72 (74%)	17 (17%)	9 (9%)	0	3
7	AG	149/151 (99%)	111 (74%)	31 (21%)	7 (5%)	2	11
7	CG	149/151 (99%)	127 (85%)	18 (12%)	4 (3%)	4	20
8	AH	127/129 (98%)	97 (76%)	20 (16%)	10 (8%)	1	4
8	CH	127/129 (98%)	100 (79%)	24 (19%)	3 (2%)	4	22
9	AI	125/127 (98%)	93 (74%)	28 (22%)	4 (3%)	3	18
9	CI	125/127 (98%)	95 (76%)	23 (18%)	7 (6%)	1	8
10	AJ	96/98 (98%)	67 (70%)	13 (14%)	16 (17%)	0	0
10	CJ	96/98 (98%)	69 (72%)	15 (16%)	12 (12%)	0	1
11	AK	115/117 (98%)	91 (79%)	15 (13%)	9 (8%)	1	4
11	CK	115/117 (98%)	87 (76%)	23 (20%)	5 (4%)	2	12
12	AL	121/123 (98%)	84 (69%)	31 (26%)	6 (5%)	1	11
12	CL	121/123 (98%)	90 (74%)	16 (13%)	15 (12%)	0	1
13	AM	112/114 (98%)	84 (75%)	20 (18%)	8 (7%)	1	5
13	CM	112/114 (98%)	83 (74%)	16 (14%)	13 (12%)	0	1
14	AN	92/100 (92%)	65 (71%)	17 (18%)	10 (11%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	92/100 (92%)	71 (77%)	13 (14%)	8 (9%)	0	4
15	AO	86/88 (98%)	72 (84%)	10 (12%)	4 (5%)	2	11
15	CO	86/88 (98%)	69 (80%)	14 (16%)	3 (4%)	3	16
16	AP	80/82 (98%)	49 (61%)	18 (22%)	13 (16%)	0	0
16	CP	80/82 (98%)	61 (76%)	14 (18%)	5 (6%)	1	6
17	AQ	78/80 (98%)	53 (68%)	20 (26%)	5 (6%)	1	6
17	CQ	78/80 (98%)	59 (76%)	12 (15%)	7 (9%)	0	3
18	AR	53/55 (96%)	44 (83%)	8 (15%)	1 (2%)	6	27
18	CR	53/55 (96%)	41 (77%)	8 (15%)	4 (8%)	1	4
19	AS	77/79 (98%)	61 (79%)	13 (17%)	3 (4%)	2	14
19	CS	77/79 (98%)	66 (86%)	6 (8%)	5 (6%)	1	6
20	AT	83/85 (98%)	68 (82%)	8 (10%)	7 (8%)	0	4
20	CT	83/85 (98%)	67 (81%)	10 (12%)	6 (7%)	1	5
21	AU	49/51 (96%)	29 (59%)	11 (22%)	9 (18%)	0	0
21	CU	49/51 (96%)	24 (49%)	11 (22%)	14 (29%)	0	0
24	BC	269/271 (99%)	219 (81%)	38 (14%)	12 (4%)	2	12
24	DC	269/271 (99%)	200 (74%)	43 (16%)	26 (10%)	0	3
25	BD	207/209 (99%)	186 (90%)	18 (9%)	3 (1%)	9	34
25	DD	207/209 (99%)	165 (80%)	32 (16%)	10 (5%)	2	11
26	BE	199/201 (99%)	174 (87%)	22 (11%)	3 (2%)	8	32
26	DE	199/201 (99%)	167 (84%)	24 (12%)	8 (4%)	2	13
27	BF	175/177 (99%)	144 (82%)	19 (11%)	12 (7%)	1	5
27	DF	175/177 (99%)	143 (82%)	24 (14%)	8 (5%)	2	12
28	BG	174/176 (99%)	150 (86%)	18 (10%)	6 (3%)	3	16
28	DG	174/176 (99%)	145 (83%)	21 (12%)	8 (5%)	2	12
29	BH	147/149 (99%)	91 (62%)	35 (24%)	21 (14%)	0	1
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0	3
30	BI	139/141 (99%)	85 (61%)	37 (27%)	17 (12%)	0	1
30	DI	139/141 (99%)	89 (64%)	39 (28%)	11 (8%)	1	4
31	BJ	140/142 (99%)	127 (91%)	9 (6%)	4 (3%)	3	19
31	DJ	140/142 (99%)	116 (83%)	22 (16%)	2 (1%)	9	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	BK	120/122 (98%)	98 (82%)	16 (13%)	6 (5%)	1	11
32	DK	120/122 (98%)	100 (83%)	14 (12%)	6 (5%)	1	11
33	BL	141/143 (99%)	114 (81%)	21 (15%)	6 (4%)	2	12
33	DL	141/143 (99%)	106 (75%)	28 (20%)	7 (5%)	1	11
34	BM	134/136 (98%)	118 (88%)	13 (10%)	3 (2%)	5	24
34	DM	134/136 (98%)	111 (83%)	18 (13%)	5 (4%)	2	15
35	BN	118/120 (98%)	98 (83%)	18 (15%)	2 (2%)	7	30
35	DN	118/120 (98%)	93 (79%)	18 (15%)	7 (6%)	1	8
36	BO	114/116 (98%)	94 (82%)	18 (16%)	2 (2%)	6	28
36	DO	114/116 (98%)	94 (82%)	16 (14%)	4 (4%)	3	16
37	BP	112/114 (98%)	104 (93%)	5 (4%)	3 (3%)	4	20
37	DP	112/114 (98%)	89 (80%)	18 (16%)	5 (4%)	2	12
38	BQ	115/117 (98%)	107 (93%)	5 (4%)	3 (3%)	4	21
38	DQ	115/117 (98%)	97 (84%)	15 (13%)	3 (3%)	4	21
39	BR	101/103 (98%)	90 (89%)	5 (5%)	6 (6%)	1	8
39	DR	101/103 (98%)	79 (78%)	17 (17%)	5 (5%)	1	11
40	BS	108/110 (98%)	99 (92%)	7 (6%)	2 (2%)	6	27
40	DS	108/110 (98%)	91 (84%)	13 (12%)	4 (4%)	2	15
41	BT	91/93 (98%)	73 (80%)	9 (10%)	9 (10%)	0	3
41	DT	91/93 (98%)	65 (71%)	18 (20%)	8 (9%)	0	3
42	BU	100/102 (98%)	79 (79%)	15 (15%)	6 (6%)	1	7
42	DU	100/102 (98%)	74 (74%)	13 (13%)	13 (13%)	0	1
43	BV	92/94 (98%)	86 (94%)	5 (5%)	1 (1%)	11	39
43	DV	92/94 (98%)	83 (90%)	7 (8%)	2 (2%)	5	24
44	BW	74/76 (97%)	66 (89%)	7 (10%)	1 (1%)	9	34
44	DW	73/76 (96%)	61 (84%)	11 (15%)	1 (1%)	9	34
45	BX	75/77 (97%)	68 (91%)	6 (8%)	1 (1%)	9	35
45	DX	75/77 (97%)	54 (72%)	17 (23%)	4 (5%)	1	10
46	BY	61/63 (97%)	47 (77%)	5 (8%)	9 (15%)	0	0
46	DY	61/63 (97%)	50 (82%)	8 (13%)	3 (5%)	1	11
47	BZ	56/58 (97%)	52 (93%)	4 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DZ	56/58 (97%)	49 (88%)	5 (9%)	2 (4%)	2	16
48	B0	54/56 (96%)	44 (82%)	8 (15%)	2 (4%)	2	15
48	D0	54/56 (96%)	37 (68%)	14 (26%)	3 (6%)	1	8
49	B1	48/50 (96%)	39 (81%)	7 (15%)	2 (4%)	2	13
49	D1	48/50 (96%)	35 (73%)	9 (19%)	4 (8%)	0	4
50	B2	44/46 (96%)	39 (89%)	3 (7%)	2 (4%)	2	12
50	D2	44/46 (96%)	38 (86%)	3 (7%)	3 (7%)	1	5
51	B3	62/64 (97%)	57 (92%)	4 (6%)	1 (2%)	7	30
51	D3	62/64 (97%)	54 (87%)	6 (10%)	2 (3%)	3	18
52	B4	36/38 (95%)	34 (94%)	2 (6%)	0	100	100
52	D4	36/38 (95%)	31 (86%)	3 (8%)	2 (6%)	1	8
53	B5	183/207 (88%)	100 (55%)	58 (32%)	25 (14%)	0	1
All	All	11418/11651 (98%)	8949 (78%)	1727 (15%)	742 (6%)	1	6

All (742) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	34	ALA
2	AB	73	LYS
2	AB	74	ARG
2	AB	120	GLN
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	194	ASP
2	AB	220	THR
3	AC	26	THR
3	AC	61	ALA
3	AC	141	ALA
4	AD	23	SER
4	AD	24	GLY
4	AD	33	LYS
4	AD	35	GLU
4	AD	160	GLU
4	AD	168	PRO
4	AD	191	LEU
4	AD	192	SER

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Mol	Chain	Res	Type
5	AE	26	LYS
5	AE	76	LEU
5	AE	105	ILE
5	AE	122	ASN
6	AF	91	ARG
6	AF	92	THR
8	AH	66	PHE
8	AH	67	GLN
10	AJ	33	GLY
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	101	SER
11	AK	52	PHE
11	AK	73	ALA
11	AK	127	ARG
12	AL	24	LEU
12	AL	25	GLU
12	AL	44	LYS
13	AM	4	ILE
13	AM	112	PRO
14	AN	28	LYS
14	AN	52	PRO
14	AN	62	ASN
14	AN	92	GLU
15	AO	3	LEU
16	AP	11	ALA
16	AP	48	GLU
17	AQ	68	SER
19	AS	6	LYS
20	AT	4	ILE
20	AT	6	SER
21	AU	35	ARG
21	AU	38	TYR
21	AU	40	LYS
24	BC	71	LYS
24	BC	233	GLY
24	BC	244	PRO
25	BD	104	VAL
25	BD	152	PRO
27	BF	172	ALA
28	BG	119	ALA
29	BH	10	ALA

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Mol	Chain	Res	Type
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	119	ASN
29	BH	121	VAL
29	BH	140	ALA
30	BI	45	LYS
30	BI	63	ALA
30	BI	90	SER
30	BI	113	LYS
32	BK	35	VAL
32	BK	91	SER
32	BK	108	ARG
33	BL	69	ARG
33	BL	88	GLY
33	BL	115	GLU
34	BM	69	PRO
35	BN	118	ARG
36	BO	87	ILE
36	BO	88	LYS
37	BP	94	LYS
39	BR	49	ILE
40	BS	64	ALA
41	BT	17	SER
41	BT	71	GLY
41	BT	72	GLN
41	BT	88	LYS
42	BU	17	LYS
42	BU	39	ILE
42	BU	100	SER
45	BX	3	ARG
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
46	BY	36	GLN
50	B2	44	VAL
53	B5	53	ARG
53	B5	134	PRO
53	B5	141	PRO
53	B5	174	ALA
53	B5	175	PRO

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Mol	Chain	Res	Type
53	B5	181	PHE
53	B5	221	PRO
2	CB	16	PHE
2	CB	51	ASN
2	CB	74	ARG
2	CB	87	CYS
2	CB	88	ASP
2	CB	103	ASN
2	CB	120	GLN
2	CB	193	PRO
2	CB	194	ASP
4	CD	25	VAL
4	CD	26	ARG
4	CD	33	LYS
4	CD	36	GLN
5	CE	45	ARG
5	CE	51	GLY
5	CE	100	SER
5	CE	101	GLU
5	CE	103	THR
5	CE	123	VAL
5	CE	138	ARG
5	CE	158	GLY
6	CF	14	GLN
6	CF	56	LYS
6	CF	91	ARG
6	CF	92	THR
6	CF	98	GLU
9	CI	129	LYS
10	CJ	36	VAL
10	CJ	57	VAL
10	CJ	90	LEU
10	CJ	92	LEU
11	CK	52	PHE
11	CK	127	ARG
12	CL	17	ALA
12	CL	24	LEU
12	CL	34	CYS
12	CL	43	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP

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Mol	Chain	Res	Type
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
13	CM	49	SER
14	CN	92	GLU
15	CO	17	ARG
17	CQ	70	THR
18	CR	21	ILE
18	CR	47	THR
19	CS	5	LEU
20	CT	4	ILE
20	CT	6	SER
20	CT	68	HIS
21	CU	10	GLU
21	CU	13	ASP
21	CU	35	ARG
21	CU	36	GLU
21	CU	39	GLU
21	CU	40	LYS
24	DC	29	PRO
24	DC	35	GLU
24	DC	58	HIS
24	DC	71	LYS
25	DD	104	VAL
25	DD	151	THR
25	DD	152	PRO
26	DE	83	VAL
26	DE	86	ALA
27	DF	9	LYS
27	DF	123	ASP
28	DG	119	ALA
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	93	PRO
31	DJ	42	ALA

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Mol	Chain	Res	Type
31	DJ	81	ILE
32	DK	92	GLU
32	DK	108	ARG
34	DM	69	PRO
34	DM	77	PRO
35	DN	88	ALA
35	DN	104	ALA
37	DP	24	ASP
37	DP	66	ASN
39	DR	31	GLU
39	DR	82	HIS
40	DS	29	VAL
40	DS	62	ASP
41	DT	37	ASP
42	DU	21	LYS
42	DU	55	PRO
42	DU	89	ASP
45	DX	3	ARG
45	DX	62	LYS
50	D2	44	VAL
50	D2	45	SER
2	AB	13	GLY
2	AB	83	ALA
2	AB	117	LEU
2	AB	126	PHE
2	AB	150	GLY
2	AB	155	GLY
2	AB	170	HIS
2	AB	193	PRO
2	AB	212	LEU
3	AC	15	VAL
3	AC	139	GLN
3	AC	140	ASN
4	AD	26	ARG
4	AD	29	ASP
4	AD	126	ASN
4	AD	153	SER
4	AD	175	ALA
5	AE	12	GLN
5	AE	43	ASN
5	AE	138	ARG
7	AG	56	LYS

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Mol	Chain	Res	Type
7	AG	130	ASN
8	AH	57	PRO
8	AH	69	LYS
9	AI	13	LYS
9	AI	58	VAL
11	AK	27	PHE
11	AK	89	PRO
12	AL	89	ASP
13	AM	12	HIS
13	AM	105	ASN
13	AM	111	GLY
13	AM	114	LYS
14	AN	27	LEU
14	AN	47	LYS
14	AN	53	ARG
16	AP	46	LYS
16	AP	68	SER
17	AQ	13	VAL
18	AR	48	ARG
20	AT	5	LYS
20	AT	68	HIS
21	AU	10	GLU
21	AU	12	PHE
24	BC	124	ILE
24	BC	169	GLY
24	BC	196	GLY
24	BC	253	LYS
25	BD	86	GLU
26	BE	11	ALA
27	BF	41	GLY
27	BF	42	GLU
27	BF	62	GLY
27	BF	176	PRO
28	BG	39	ASP
28	BG	79	VAL
28	BG	175	LYS
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	123	ARG

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Mol	Chain	Res	Type
30	BI	7	ALA
30	BI	58	VAL
31	BJ	95	ARG
32	BK	5	GLN
33	BL	68	SER
37	BP	35	GLY
38	BQ	7	GLY
38	BQ	102	ASP
39	BR	53	PHE
39	BR	57	GLY
40	BS	63	GLY
42	BU	50	PRO
44	BW	20	ARG
46	BY	46	VAL
46	BY	57	LEU
46	BY	62	GLY
48	B0	55	ILE
50	B2	42	LEU
53	B5	62	THR
53	B5	86	GLU
53	B5	126	SER
53	B5	144	GLY
53	B5	205	ALA
53	B5	215	VAL
53	B5	217	THR
2	CB	36	ASN
2	CB	124	GLY
2	CB	166	ALA
2	CB	170	HIS
2	CB	220	THR
3	CC	64	ILE
3	CC	141	ALA
3	CC	146	ALA
4	CD	24	GLY
4	CD	27	ALA
4	CD	35	GLU
4	CD	175	ALA
5	CE	126	LYS
5	CE	143	GLY
6	CF	13	ASP
7	CG	130	ASN
8	CH	114	ARG

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Mol	Chain	Res	Type
9	CI	41	ARG
9	CI	58	VAL
9	CI	91	ASP
10	CJ	17	LEU
10	CJ	38	GLY
11	CK	92	GLY
12	CL	23	ALA
12	CL	93	VAL
12	CL	105	SER
13	CM	10	PRO
13	CM	44	LYS
14	CN	50	THR
14	CN	52	PRO
16	CP	42	ILE
17	CQ	82	ALA
19	CS	6	LYS
20	CT	5	LYS
20	CT	67	ILE
21	CU	12	PHE
21	CU	24	GLU
21	CU	42	THR
21	CU	52	ALA
21	CU	53	VAL
24	DC	36	LYS
24	DC	48	ARG
24	DC	159	GLY
24	DC	196	GLY
24	DC	239	ASN
24	DC	240	PHE
24	DC	255	LYS
25	DD	36	GLN
25	DD	194	PRO
26	DE	6	LYS
26	DE	18	THR
26	DE	48	THR
27	DF	176	PRO
28	DG	61	GLY
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	7	ALA
30	DI	84	ALA

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Mol	Chain	Res	Type
30	DI	90	SER
32	DK	35	VAL
33	DL	4	ASN
33	DL	53	GLY
33	DL	111	ILE
34	DM	57	VAL
34	DM	58	LYS
35	DN	2	ARG
35	DN	3	HIS
35	DN	70	THR
37	DP	114	LEU
38	DQ	102	ASP
40	DS	63	GLY
41	DT	77	ARG
42	DU	9	ASP
42	DU	57	GLY
42	DU	78	GLY
45	DX	32	ASN
46	DY	37	LEU
47	DZ	4	THR
47	DZ	30	ARG
49	D1	11	LEU
50	D2	38	GLY
51	D3	7	VAL
2	AB	53	ALA
2	AB	68	LEU
2	AB	75	ALA
2	AB	79	ALA
2	AB	87	CYS
2	AB	97	LEU
2	AB	210	VAL
3	AC	54	ARG
4	AD	30	THR
4	AD	34	ILE
4	AD	149	ALA
4	AD	151	LYS
5	AE	24	THR
5	AE	98	PRO
7	AG	33	ASP
7	AG	79	ARG
7	AG	80	VAL
8	AH	19	ALA

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Mol	Chain	Res	Type
9	AI	44	ALA
10	AJ	45	ARG
10	AJ	75	ASP
11	AK	103	ALA
11	AK	128	ARG
14	AN	81	ARG
15	AO	46	HIS
16	AP	36	VAL
16	AP	44	SER
16	AP	49	GLY
16	AP	80	LYS
17	AQ	17	MET
17	AQ	51	ASN
17	AQ	70	THR
19	AS	76	PRO
21	AU	33	ARG
21	AU	37	PHE
21	AU	52	ALA
24	BC	205	LEU
24	BC	231	PRO
27	BF	146	VAL
27	BF	177	PHE
28	BG	158	LYS
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	75	PRO
30	BI	84	ALA
30	BI	98	VAL
30	BI	115	ALA
30	BI	117	MET
31	BJ	81	ILE
32	BK	93	GLN
37	BP	114	LEU
39	BR	55	ASP
41	BT	89	GLU
48	B0	26	THR
49	B1	28	ARG
51	B3	28	ASN
53	B5	36	ALA

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Mol	Chain	Res	Type
53	B5	176	VAL
53	B5	180	SER
2	CB	22	TYR
2	CB	64	LYS
2	CB	73	LYS
2	CB	86	SER
2	CB	126	PHE
2	CB	141	LEU
3	CC	14	ILE
3	CC	80	LYS
5	CE	12	GLN
5	CE	98	PRO
5	CE	122	ASN
6	CF	85	ILE
7	CG	84	THR
9	CI	42	GLU
10	CJ	7	ARG
10	CJ	35	GLN
12	CL	25	GLU
12	CL	78	SER
12	CL	118	GLY
13	CM	114	LYS
14	CN	22	ALA
14	CN	42	TRP
15	CO	46	HIS
18	CR	25	ASP
19	CS	32	ARG
21	CU	11	PRO
24	DC	46	ASN
24	DC	85	PRO
24	DC	105	LEU
24	DC	205	LEU
24	DC	218	PRO
24	DC	238	ARG
24	DC	260	ASN
24	DC	271	ARG
25	DD	57	ALA
25	DD	118	PHE
26	DE	42	GLY
26	DE	69	ARG
26	DE	129	PRO
27	DF	175	PHE

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Mol	Chain	Res	Type
28	DG	20	ASN
28	DG	46	ALA
29	DH	16	GLY
29	DH	40	THR
30	DI	140	VAL
33	DL	29	LYS
33	DL	30	THR
35	DN	106	ASP
36	DO	34	HIS
37	DP	111	LYS
38	DQ	39	VAL
39	DR	70	GLU
39	DR	102	SER
40	DS	65	ASP
41	DT	22	THR
42	DU	7	ARG
42	DU	41	LEU
42	DU	98	SER
42	DU	99	ASN
46	DY	12	GLU
49	D1	51	GLU
2	AB	133	GLU
2	AB	147	SER
3	AC	66	VAL
3	AC	157	LEU
4	AD	166	GLU
4	AD	167	LYS
5	AE	100	SER
5	AE	152	MET
6	AF	5	GLU
6	AF	54	LEU
7	AG	15	ASP
8	AH	15	ARG
8	AH	18	GLN
8	AH	21	ASN
8	AH	98	GLY
10	AJ	36	VAL
10	AJ	38	GLY
10	AJ	43	PRO
10	AJ	47	GLU
10	AJ	79	PRO
11	AK	108	THR

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Mol	Chain	Res	Type
12	AL	26	ALA
14	AN	3	LYS
15	AO	20	ASN
20	AT	7	ALA
21	AU	11	PRO
24	BC	29	PRO
27	BF	134	GLU
27	BF	147	ASP
27	BF	175	PHE
28	BG	152	ARG
29	BH	83	LYS
30	BI	4	LYS
30	BI	60	THR
32	BK	119	ALA
41	BT	3	ARG
41	BT	28	ASN
41	BT	52	GLU
42	BU	8	ASP
42	BU	52	LEU
49	B1	5	ILE
53	B5	133	GLY
2	CB	34	ALA
2	CB	82	ASP
2	CB	149	GLY
2	CB	203	ASN
3	CC	101	ILE
4	CD	32	CYS
4	CD	52	GLY
4	CD	192	SER
5	CE	24	THR
6	CF	54	LEU
8	CH	97	ALA
9	CI	120	LYS
11	CK	15	GLN
11	CK	93	ARG
13	CM	5	ALA
13	CM	13	LYS
15	CO	21	ASP
16	CP	76	LYS
17	CQ	18	GLU
19	CS	28	LYS
19	CS	30	PRO

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Mol	Chain	Res	Type
24	DC	122	ALA
24	DC	143	ASN
24	DC	189	ARG
24	DC	190	ALA
27	DF	3	LYS
27	DF	21	ASN
27	DF	174	ASP
29	DH	9	VAL
30	DI	101	ILE
32	DK	93	GLN
32	DK	110	GLU
32	DK	120	PRO
33	DL	9	ALA
36	DO	101	GLY
38	DQ	46	ALA
39	DR	53	PHE
44	DW	28	GLY
46	DY	57	LEU
49	D1	27	LYS
49	D1	52	ALA
52	D4	20	ASP
2	AB	64	LYS
2	AB	201	PRO
3	AC	17	PRO
4	AD	17	THR
5	AE	157	ARG
6	AF	6	ILE
6	AF	36	ILE
7	AG	113	ASP
10	AJ	35	GLN
10	AJ	42	LEU
12	AL	15	LYS
13	AM	11	ASP
14	AN	69	ARG
16	AP	10	GLY
16	AP	77	GLU
19	AS	29	LYS
20	AT	69	LYS
24	BC	240	PHE
26	BE	199	MET
31	BJ	39	LYS
33	BL	114	GLY

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Mol	Chain	Res	Type
38	BQ	116	ALA
41	BT	2	ILE
46	BY	20	ASN
53	B5	50	ILE
53	B5	65	LEU
53	B5	90	ALA
53	B5	185	LYS
2	CB	21	ARG
2	CB	33	GLY
2	CB	104	TRP
3	CC	17	PRO
3	CC	166	GLU
4	CD	4	TYR
4	CD	167	LYS
4	CD	182	PHE
7	CG	82	GLY
7	CG	146	GLU
9	CI	38	TYR
10	CJ	42	LEU
10	CJ	58	ASN
12	CL	40	THR
13	CM	25	VAL
16	CP	80	LYS
17	CQ	80	GLU
18	CR	34	THR
20	CT	7	ALA
21	CU	37	PHE
24	DC	261	LYS
24	DC	262	ARG
25	DD	205	PRO
27	DF	159	THR
28	DG	12	PRO
28	DG	118	PRO
33	DL	42	SER
41	DT	21	SER
41	DT	38	ALA
41	DT	72	GLN
41	DT	73	ARG
41	DT	88	LYS
42	DU	53	ASN
48	D0	4	GLN
2	AB	183	VAL

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Mol	Chain	Res	Type
4	AD	125	VAL
10	AJ	32	THR
10	AJ	41	PRO
15	AO	73	LYS
16	AP	15	PRO
16	AP	16	PHE
27	BF	84	PRO
27	BF	121	SER
30	BI	21	SER
30	BI	39	CYS
31	BJ	98	GLU
43	BV	67	GLY
46	BY	37	LEU
53	B5	146	VAL
53	B5	162	ILE
2	CB	25	PRO
3	CC	66	VAL
10	CJ	79	PRO
13	CM	110	LYS
14	CN	3	LYS
14	CN	62	ASN
16	CP	49	GLY
17	CQ	5	ILE
30	DI	9	VAL
30	DI	22	PRO
35	DN	82	GLU
37	DP	32	VAL
43	DV	84	PRO
51	D3	20	GLY
2	AB	182	PRO
4	AD	7	PRO
5	AE	51	GLY
10	AJ	74	VAL
11	AK	90	GLY
20	AT	58	VAL
34	BM	87	GLY
10	CJ	6	ILE
13	CM	24	GLY
14	CN	34	VAL
17	CQ	13	VAL
24	DC	19	VAL
25	DD	195	GLY

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Mol	Chain	Res	Type
42	DU	58	ILE
3	AC	101	ILE
13	AM	64	VAL
24	BC	137	VAL
26	BE	151	GLY
30	BI	122	ILE
33	BL	130	GLY
35	BN	109	PRO
12	CL	4	VAL
28	DG	154	PRO
30	DI	74	PRO
36	DO	66	GLY
45	DX	31	PRO
48	D0	55	ILE
52	D4	23	ILE
4	AD	64	ILE
4	AD	101	VAL
5	AE	106	ILE
16	AP	78	VAL
39	BR	51	VAL
53	B5	182	PRO
5	CE	133	PRO
6	CF	7	VAL
13	CM	94	GLY
17	CQ	76	VAL
30	DI	13	VAL
42	DU	25	VAL
43	DV	81	PRO
4	AD	25	VAL
9	AI	51	PRO
30	BI	59	ILE
34	BM	26	VAL
3	CC	174	PRO
8	CH	92	LEU
16	CP	33	ILE
21	CU	41	PRO
25	DD	120	GLY
34	DM	3	GLN
48	D0	8	PRO
2	AB	41	ILE
2	AB	124	GLY
2	AB	224	GLY

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Mol	Chain	Res	Type
5	AE	134	ILE
8	AH	14	ILE
29	BH	118	PRO
39	BR	64	VAL
28	DG	17	VAL
30	DI	89	GLY
36	DO	32	PRO

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%)	133 (74%)	47 (26%)	0	2
2	CB	180/180 (100%)	142 (79%)	38 (21%)	1	5
3	AC	170/170 (100%)	138 (81%)	32 (19%)	1	7
3	CC	170/170 (100%)	151 (89%)	19 (11%)	6	24
4	AD	172/172 (100%)	144 (84%)	28 (16%)	2	11
4	CD	172/172 (100%)	147 (86%)	25 (14%)	3	14
5	AE	113/113 (100%)	88 (78%)	25 (22%)	1	4
5	CE	113/113 (100%)	86 (76%)	27 (24%)	1	3
6	AF	87/87 (100%)	71 (82%)	16 (18%)	1	8
6	CF	87/87 (100%)	68 (78%)	19 (22%)	1	5
7	AG	124/124 (100%)	101 (82%)	23 (18%)	1	8
7	CG	124/124 (100%)	105 (85%)	19 (15%)	3	12
8	AH	104/104 (100%)	91 (88%)	13 (12%)	4	19
8	CH	104/104 (100%)	82 (79%)	22 (21%)	1	5
9	AI	105/105 (100%)	83 (79%)	22 (21%)	1	5
9	CI	105/105 (100%)	87 (83%)	18 (17%)	2	10
10	AJ	86/86 (100%)	69 (80%)	17 (20%)	1	6
10	CJ	86/86 (100%)	72 (84%)	14 (16%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AK	90/90 (100%)	70 (78%)	20 (22%)	1	4
11	CK	90/90 (100%)	74 (82%)	16 (18%)	2	9
12	AL	103/103 (100%)	87 (84%)	16 (16%)	2	12
12	CL	103/103 (100%)	81 (79%)	22 (21%)	1	5
13	AM	92/92 (100%)	81 (88%)	11 (12%)	5	21
13	CM	92/92 (100%)	83 (90%)	9 (10%)	7	29
14	AN	79/83 (95%)	71 (90%)	8 (10%)	7	28
14	CN	79/83 (95%)	73 (92%)	6 (8%)	12	39
15	AO	76/76 (100%)	67 (88%)	9 (12%)	5	21
15	CO	76/76 (100%)	63 (83%)	13 (17%)	2	10
16	AP	65/65 (100%)	50 (77%)	15 (23%)	1	4
16	CP	65/65 (100%)	56 (86%)	9 (14%)	3	15
17	AQ	74/74 (100%)	54 (73%)	20 (27%)	0	2
17	CQ	74/74 (100%)	60 (81%)	14 (19%)	1	7
18	AR	48/48 (100%)	44 (92%)	4 (8%)	10	35
18	CR	48/48 (100%)	42 (88%)	6 (12%)	4	19
19	AS	70/70 (100%)	63 (90%)	7 (10%)	7	29
19	CS	70/70 (100%)	60 (86%)	10 (14%)	3	14
20	AT	65/65 (100%)	48 (74%)	17 (26%)	0	2
20	CT	65/65 (100%)	53 (82%)	12 (18%)	1	8
21	AU	44/44 (100%)	30 (68%)	14 (32%)	0	0
21	CU	44/44 (100%)	34 (77%)	10 (23%)	1	4
24	BC	216/216 (100%)	189 (88%)	27 (12%)	4	19
24	DC	216/216 (100%)	189 (88%)	27 (12%)	4	19
25	BD	164/164 (100%)	151 (92%)	13 (8%)	11	37
25	DD	164/164 (100%)	149 (91%)	15 (9%)	9	32
26	BE	165/165 (100%)	143 (87%)	22 (13%)	4	17
26	DE	165/165 (100%)	154 (93%)	11 (7%)	15	43
27	BF	148/148 (100%)	126 (85%)	22 (15%)	3	13
27	DF	148/148 (100%)	133 (90%)	15 (10%)	7	28
28	BG	137/137 (100%)	121 (88%)	16 (12%)	5	22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	DG	137/137 (100%)	125 (91%)	12 (9%)	9	33
29	BH	114/114 (100%)	83 (73%)	31 (27%)	0	1
29	DH	114/114 (100%)	90 (79%)	24 (21%)	1	5
30	BI	109/109 (100%)	86 (79%)	23 (21%)	1	5
30	DI	109/109 (100%)	90 (83%)	19 (17%)	2	9
31	BJ	116/116 (100%)	100 (86%)	16 (14%)	3	15
31	DJ	116/116 (100%)	108 (93%)	8 (7%)	14	41
32	BK	103/103 (100%)	93 (90%)	10 (10%)	8	30
32	DK	103/103 (100%)	94 (91%)	9 (9%)	9	34
33	BL	102/102 (100%)	87 (85%)	15 (15%)	3	14
33	DL	102/102 (100%)	94 (92%)	8 (8%)	11	38
34	BM	109/109 (100%)	95 (87%)	14 (13%)	4	18
34	DM	109/109 (100%)	104 (95%)	5 (5%)	24	55
35	BN	100/100 (100%)	87 (87%)	13 (13%)	4	18
35	DN	100/100 (100%)	89 (89%)	11 (11%)	6	24
36	BO	86/86 (100%)	69 (80%)	17 (20%)	1	6
36	DO	86/86 (100%)	75 (87%)	11 (13%)	4	18
37	BP	99/99 (100%)	88 (89%)	11 (11%)	6	24
37	DP	99/99 (100%)	89 (90%)	10 (10%)	7	28
38	BQ	89/89 (100%)	79 (89%)	10 (11%)	6	24
38	DQ	89/89 (100%)	81 (91%)	8 (9%)	9	33
39	BR	84/84 (100%)	69 (82%)	15 (18%)	2	9
39	DR	84/84 (100%)	76 (90%)	8 (10%)	8	30
40	BS	93/93 (100%)	79 (85%)	14 (15%)	3	13
40	DS	93/93 (100%)	86 (92%)	7 (8%)	12	39
41	BT	80/80 (100%)	66 (82%)	14 (18%)	2	9
41	DT	80/80 (100%)	66 (82%)	14 (18%)	2	9
42	BU	83/83 (100%)	72 (87%)	11 (13%)	4	17
42	DU	83/83 (100%)	73 (88%)	10 (12%)	5	21
43	BV	78/78 (100%)	66 (85%)	12 (15%)	2	12
43	DV	78/78 (100%)	68 (87%)	10 (13%)	4	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	BW	57/58 (98%)	53 (93%)	4 (7%)	14	41
44	DW	56/58 (97%)	52 (93%)	4 (7%)	13	41
45	BX	67/67 (100%)	63 (94%)	4 (6%)	17	47
45	DX	67/67 (100%)	63 (94%)	4 (6%)	17	47
46	BY	55/55 (100%)	49 (89%)	6 (11%)	6	24
46	DY	55/55 (100%)	45 (82%)	10 (18%)	2	8
47	BZ	48/48 (100%)	36 (75%)	12 (25%)	0	2
47	DZ	48/48 (100%)	41 (85%)	7 (15%)	3	14
48	B0	47/47 (100%)	41 (87%)	6 (13%)	4	18
48	D0	47/47 (100%)	41 (87%)	6 (13%)	4	18
49	B1	45/45 (100%)	39 (87%)	6 (13%)	4	17
49	D1	45/45 (100%)	43 (96%)	2 (4%)	25	56
50	B2	38/38 (100%)	34 (90%)	4 (10%)	6	26
50	D2	38/38 (100%)	33 (87%)	5 (13%)	4	17
51	B3	51/51 (100%)	48 (94%)	3 (6%)	18	48
51	D3	51/51 (100%)	48 (94%)	3 (6%)	18	48
52	B4	34/34 (100%)	28 (82%)	6 (18%)	2	9
52	D4	34/34 (100%)	31 (91%)	3 (9%)	9	33
53	B5	61/161 (38%)	48 (79%)	13 (21%)	1	5
All	All	9388/9499 (99%)	8020 (85%)	1368 (15%)	3	14

All (1368) 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	19	GLN
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	35	ARG
2	AB	38	VAL
2	AB	39	HIS
2	AB	41	ILE

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Mol	Chain	Res	Type
2	AB	43	LEU
2	AB	44	GLU
2	AB	46	THR
2	AB	49	MET
2	AB	50	PHE
2	AB	56	GLU
2	AB	57	LEU
2	AB	64	LYS
2	AB	66	LYS
2	AB	85	LEU
2	AB	89	GLN
2	AB	100	MET
2	AB	106	THR
2	AB	107	VAL
2	AB	117	LEU
2	AB	123	ASP
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	139	ARG
2	AB	143	LYS
2	AB	146	ASN
2	AB	148	LEU
2	AB	153	ASP
2	AB	161	LEU
2	AB	163	VAL
2	AB	164	ILE
2	AB	174	LYS
2	AB	182	PRO
2	AB	186	ILE
2	AB	199	VAL
2	AB	207	ILE
2	AB	208	ARG
2	AB	210	VAL
2	AB	213	TYR
2	AB	225	ARG
3	AC	3	GLN
3	AC	14	ILE
3	AC	15	VAL
3	AC	18	TRP
3	AC	20	SER
3	AC	21	THR

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Mol	Chain	Res	Type
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	33	LEU
3	AC	37	PHE
3	AC	55	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	77	ILE
3	AC	86	LYS
3	AC	88	ARG
3	AC	103	ILE
3	AC	121	THR
3	AC	131	ARG
3	AC	140	ASN
3	AC	142	MET
3	AC	143	ARG
3	AC	144	LEU
3	AC	151	VAL
3	AC	162	ILE
3	AC	165	THR
3	AC	167	TRP
3	AC	185	ASN
3	AC	191	THR
3	AC	193	TYR
3	AC	200	VAL
4	AD	9	LEU
4	AD	13	ARG
4	AD	17	THR
4	AD	23	SER
4	AD	31	LYS
4	AD	35	GLU
4	AD	45	LYS
4	AD	48	LEU
4	AD	53	VAL
4	AD	54	GLN
4	AD	58	LYS
4	AD	60	LYS
4	AD	63	ARG
4	AD	83	LYS
4	AD	93	LEU
4	AD	104	ARG

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Mol	Chain	Res	Type
4	AD	116	GLN
4	AD	123	ILE
4	AD	129	VAL
4	AD	132	ILE
4	AD	143	VAL
4	AD	152	GLN
4	AD	161	LEU
4	AD	163	GLU
4	AD	183	LYS
4	AD	198	HIS
4	AD	199	LEU
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	19	ASN
5	AE	30	ILE
5	AE	32	SER
5	AE	34	THR
5	AE	38	VAL
5	AE	46	VAL
5	AE	77	ASN
5	AE	81	LEU
5	AE	82	GLN
5	AE	83	HIS
5	AE	85	VAL
5	AE	88	VAL
5	AE	114	VAL
5	AE	115	LEU
5	AE	116	GLU
5	AE	122	ASN
5	AE	124	LEU
5	AE	134	ILE
5	AE	136	VAL
5	AE	149	SER
6	AF	5	GLU
6	AF	7	VAL
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN

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Mol	Chain	Res	Type
6	AF	24	ARG
6	AF	39	LEU
6	AF	51	ILE
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	77	THR
6	AF	84	VAL
6	AF	86	ARG
6	AF	89	VAL
6	AF	96	VAL
7	AG	4	ARG
7	AG	5	ARG
7	AG	9	GLN
7	AG	32	VAL
7	AG	36	LYS
7	AG	38	THR
7	AG	40	GLU
7	AG	48	GLU
7	AG	52	GLN
7	AG	59	LEU
7	AG	73	VAL
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL
7	AG	95	ARG
7	AG	109	ARG
7	AG	120	LEU
7	AG	133	THR
7	AG	135	VAL
7	AG	136	LYS
7	AG	142	HIS
7	AG	144	MET
7	AG	146	GLU
8	AH	22	LYS
8	AH	26	THR
8	AH	42	GLU
8	AH	47	GLU
8	AH	49	PHE
8	AH	51	VAL
8	AH	83	LEU
8	AH	90	ASP

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Mol	Chain	Res	Type
8	AH	99	LEU
8	AH	104	VAL
8	AH	117	ARG
8	AH	121	LEU
8	AH	129	VAL
9	AI	18	ARG
9	AI	30	ILE
9	AI	36	GLU
9	AI	42	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	57	MET
9	AI	65	ILE
9	AI	68	LYS
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU
9	AI	100	LYS
9	AI	111	VAL
9	AI	114	LYS
9	AI	116	VAL
9	AI	129	LYS
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	17	LEU
10	AJ	27	GLU
10	AJ	32	THR
10	AJ	40	ILE
10	AJ	42	LEU
10	AJ	47	GLU
10	AJ	52	LEU
10	AJ	57	VAL
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	73	LEU
10	AJ	75	ASP
10	AJ	83	THR

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Mol	Chain	Res	Type
10	AJ	84	VAL
10	AJ	91	ASP
11	AK	16	VAL
11	AK	17	SER
11	AK	18	ASP
11	AK	31	ILE
11	AK	38	GLN
11	AK	52	PHE
11	AK	56	ARG
11	AK	58	SER
11	AK	65	VAL
11	AK	81	ASN
11	AK	94	GLU
11	AK	95	SER
11	AK	96	THR
11	AK	97	ILE
11	AK	100	LEU
11	AK	107	ILE
11	AK	108	THR
11	AK	111	THR
11	AK	126	LYS
11	AK	127	ARG
12	AL	10	LYS
12	AL	21	VAL
12	AL	25	GLU
12	AL	29	GLN
12	AL	44	LYS
12	AL	54	ARG
12	AL	55	VAL
12	AL	58	THR
12	AL	62	GLU
12	AL	64	THR
12	AL	82	ILE
12	AL	89	ASP
12	AL	90	LEU
12	AL	102	LEU
12	AL	105	SER
12	AL	121	ARG
13	AM	3	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	8	ASN

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Mol	Chain	Res	Type
13	AM	19	LEU
13	AM	27	LYS
13	AM	29	ARG
13	AM	59	GLU
13	AM	64	VAL
13	AM	72	GLU
13	AM	107	ARG
14	AN	4	GLN
14	AN	7	LYS
14	AN	26	GLU
14	AN	28	LYS
14	AN	31	ILE
14	AN	81	ARG
14	AN	84	VAL
14	AN	98	LYS
15	AO	6	GLU
15	AO	31	LEU
15	AO	35	GLN
15	AO	39	LEU
15	AO	40	GLN
15	AO	57	LEU
15	AO	61	SER
15	AO	75	VAL
15	AO	83	GLU
16	AP	2	VAL
16	AP	5	ARG
16	AP	6	LEU
16	AP	8	ARG
16	AP	18	GLN
16	AP	19	VAL
16	AP	20	VAL
16	AP	29	ASN
16	AP	46	LYS
16	AP	51	ARG
16	AP	63	GLN
16	AP	67	ILE
16	AP	71	VAL
16	AP	75	ILE
16	AP	76	LYS
17	AQ	4	LYS
17	AQ	13	VAL
17	AQ	16	LYS

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Mol	Chain	Res	Type
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	29	VAL
17	AQ	38	ILE
17	AQ	40	ARG
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	61	ILE
17	AQ	63	GLU
17	AQ	68	SER
17	AQ	70	THR
17	AQ	74	THR
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	81	LYS
18	AR	21	ILE
18	AR	29	LEU
18	AR	43	ARG
18	AR	55	LEU
19	AS	6	LYS
19	AS	15	LEU
19	AS	55	ARG
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
19	AS	71	LEU
20	AT	3	ASN
20	AT	5	LYS
20	AT	12	ILE
20	AT	13	GLN
20	AT	15	GLU
20	AT	27	MET
20	AT	34	LYS
20	AT	36	TYR
20	AT	48	GLN
20	AT	54	MET
20	AT	66	LEU
20	AT	68	HIS
20	AT	69	LYS
20	AT	70	ASN

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Mol	Chain	Res	Type
20	AT	74	ARG
20	AT	76	LYS
20	AT	80	THR
21	AU	5	LYS
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	16	LEU
21	AU	18	ARG
21	AU	20	LYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	34	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	43	THR
21	AU	54	LYS
24	BC	3	VAL
24	BC	4	VAL
24	BC	5	LYS
24	BC	14	ARG
24	BC	18	LYS
24	BC	20	VAL
24	BC	24	LEU
24	BC	65	VAL
24	BC	97	LYS
24	BC	105	LEU
24	BC	110	LEU
24	BC	118	SER
24	BC	139	SER
24	BC	141	VAL
24	BC	156	ARG
24	BC	173	THR
24	BC	174	LEU
24	BC	195	VAL
24	BC	197	ASN
24	BC	202	LEU
24	BC	221	ARG
24	BC	223	THR
24	BC	244	PRO
24	BC	245	VAL
24	BC	258	ARG

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Mol	Chain	Res	Type
24	BC	265	LYS
24	BC	268	VAL
25	BD	4	LEU
25	BD	12	THR
25	BD	25	THR
25	BD	32	ASN
25	BD	62	LYS
25	BD	73	VAL
25	BD	95	SER
25	BD	97	SER
25	BD	121	THR
25	BD	129	THR
25	BD	130	GLN
25	BD	157	LYS
25	BD	177	VAL
26	BE	4	VAL
26	BE	16	GLU
26	BE	40	ARG
26	BE	44	ARG
26	BE	73	ILE
26	BE	88	ARG
26	BE	102	ARG
26	BE	107	SER
26	BE	108	ILE
26	BE	120	VAL
26	BE	121	VAL
26	BE	123	LYS
26	BE	126	VAL
26	BE	136	GLN
26	BE	149	ILE
26	BE	159	LEU
26	BE	163	ASN
26	BE	178	VAL
26	BE	186	VAL
26	BE	187	VAL
26	BE	198	GLU
26	BE	200	LEU
27	BF	3	LYS
27	BF	17	MET
27	BF	21	ASN
27	BF	31	VAL
27	BF	35	THR

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Mol	Chain	Res	Type
27	BF	36	LEU
27	BF	42	GLU
27	BF	44	ILE
27	BF	48	LYS
27	BF	51	ASP
27	BF	61	SER
27	BF	66	LEU
27	BF	67	ILE
27	BF	81	GLN
27	BF	89	VAL
27	BF	92	ARG
27	BF	95	ARG
27	BF	108	VAL
27	BF	133	ARG
27	BF	147	ASP
27	BF	154	ILE
27	BF	164	GLU
28	BG	9	VAL
28	BG	39	ASP
28	BG	67	THR
28	BG	77	ILE
28	BG	80	THR
28	BG	89	LEU
28	BG	92	VAL
28	BG	116	GLN
28	BG	124	GLU
28	BG	127	THR
28	BG	139	GLN
28	BG	149	ARG
28	BG	155	GLU
28	BG	160	LYS
28	BG	166	ASP
28	BG	168	VAL
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

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Mol	Chain	Res	Type
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	122	LEU
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	11	LEU
30	BI	24	VAL
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	40	LYS
30	BI	45	LYS
30	BI	50	GLU
30	BI	58	VAL
30	BI	62	TYR
30	BI	67	PHE
30	BI	69	PHE
30	BI	72	LYS
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	96	ASP
30	BI	101	ILE
30	BI	103	ARG

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Mol	Chain	Res	Type
30	BI	108	GLU
30	BI	123	GLU
30	BI	136	MET
31	BJ	4	PHE
31	BJ	5	THR
31	BJ	11	VAL
31	BJ	24	THR
31	BJ	30	THR
31	BJ	31	GLU
31	BJ	39	LYS
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	81	ILE
31	BJ	114	LEU
31	BJ	124	VAL
31	BJ	135	GLN
31	BJ	142	ILE
32	BK	29	HIS
32	BK	35	VAL
32	BK	49	ARG
32	BK	58	LEU
32	BK	66	LYS
32	BK	80	ASP
32	BK	91	SER
32	BK	92	GLU
32	BK	117	SER
32	BK	121	GLU
33	BL	2	ARG
33	BL	12	SER
33	BL	17	LYS
33	BL	19	LEU
33	BL	21	ARG
33	BL	40	SER
33	BL	82	LEU
33	BL	86	GLU
33	BL	89	VAL
33	BL	91	ASP
33	BL	92	LEU
33	BL	94	THR
33	BL	100	ILE

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Mol	Chain	Res	Type
33	BL	115	GLU
33	BL	144	GLU
34	BM	1	MET
34	BM	2	LEU
34	BM	14	LYS
34	BM	18	ARG
34	BM	20	LEU
34	BM	36	VAL
34	BM	55	ARG
34	BM	69	PRO
34	BM	70	ASP
34	BM	78	LEU
34	BM	93	VAL
34	BM	106	ASP
34	BM	115	GLU
34	BM	126	ILE
35	BN	2	ARG
35	BN	6	SER
35	BN	8	ARG
35	BN	15	SER
35	BN	38	LEU
35	BN	69	ARG
35	BN	71	ARG
35	BN	95	THR
35	BN	96	ARG
35	BN	116	VAL
35	BN	117	ASP
35	BN	118	ARG
35	BN	120	GLU
36	BO	2	ASP
36	BO	3	LYS
36	BO	4	LYS
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	24	THR
36	BO	27	VAL
36	BO	45	SER
36	BO	47	VAL
36	BO	49	VAL
36	BO	54	VAL
36	BO	65	THR

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Mol	Chain	Res	Type
36	BO	78	VAL
36	BO	88	LYS
36	BO	102	ARG
36	BO	116	GLN
37	BP	19	SER
37	BP	26	VAL
37	BP	30	VAL
37	BP	40	LEU
37	BP	68	GLU
37	BP	73	VAL
37	BP	85	SER
37	BP	93	ARG
37	BP	109	ARG
37	BP	110	ILE
37	BP	114	LEU
38	BQ	8	VAL
38	BQ	18	LEU
38	BQ	40	ILE
38	BQ	41	LYS
38	BQ	51	ARG
38	BQ	78	LYS
38	BQ	87	SER
38	BQ	92	ARG
38	BQ	100	VAL
38	BQ	104	VAL
39	BR	1	MET
39	BR	10	LYS
39	BR	14	VAL
39	BR	15	SER
39	BR	16	GLU
39	BR	33	VAL
39	BR	38	VAL
39	BR	46	GLU
39	BR	48	LYS
39	BR	49	ILE
39	BR	58	VAL
39	BR	64	VAL
39	BR	85	LYS
39	BR	89	HIS
39	BR	102	SER
40	BS	4	ILE
40	BS	6	LYS

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Mol	Chain	Res	Type
40	BS	7	HIS
40	BS	19	LEU
40	BS	23	LEU
40	BS	29	VAL
40	BS	30	SER
40	BS	47	VAL
40	BS	53	SER
40	BS	59	GLU
40	BS	69	LEU
40	BS	81	SER
40	BS	96	ILE
40	BS	97	LEU
41	BT	3	ARG
41	BT	5	GLU
41	BT	10	VAL
41	BT	16	VAL
41	BT	18	GLU
41	BT	30	ILE
41	BT	36	LYS
41	BT	49	LYS
41	BT	50	LEU
41	BT	53	VAL
41	BT	57	VAL
41	BT	68	LYS
41	BT	76	ARG
41	BT	86	THR
42	BU	9	ASP
42	BU	26	LYS
42	BU	49	VAL
42	BU	52	LEU
42	BU	61	LYS
42	BU	62	GLU
42	BU	65	ILE
42	BU	68	SER
42	BU	72	ILE
42	BU	99	ASN
42	BU	100	SER
43	BV	8	VAL
43	BV	10	LYS
43	BV	18	ARG
43	BV	20	LEU
43	BV	29	ILE

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Mol	Chain	Res	Type
43	BV	40	ILE
43	BV	41	GLU
43	BV	53	LYS
43	BV	61	LEU
43	BV	65	VAL
43	BV	70	ILE
43	BV	92	VAL
44	BW	20	ARG
44	BW	29	GLU
44	BW	81	SER
44	BW	82	ILE
45	BX	44	LYS
45	BX	48	THR
45	BX	76	GLU
45	BX	77	LYS
46	BY	6	LEU
46	BY	16	THR
46	BY	17	GLU
46	BY	22	LEU
46	BY	39	GLN
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	4	THR
47	BZ	10	THR
47	BZ	19	LYS
47	BZ	23	THR
47	BZ	25	LEU
47	BZ	35	THR
47	BZ	36	VAL
47	BZ	44	ILE
47	BZ	45	ARG
47	BZ	52	SER
47	BZ	57	VAL
48	B0	18	SER
48	B0	23	THR
48	B0	27	SER
48	B0	40	ARG
48	B0	46	ASP
48	B0	53	LYS
49	B1	11	LEU
49	B1	28	ARG
49	B1	43	VAL

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Mol	Chain	Res	Type
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	8	SER
50	B2	25	LYS
50	B2	43	THR
50	B2	45	SER
51	B3	13	ARG
51	B3	17	THR
51	B3	30	ARG
52	B4	2	LYS
52	B4	4	ARG
52	B4	6	SER
52	B4	18	LYS
52	B4	20	ASP
52	B4	37	GLN
53	B5	21	TYR
53	B5	23	ILE
53	B5	38	PHE
53	B5	39	ASP
53	B5	43	GLU
53	B5	47	LYS
53	B5	48	LEU
53	B5	50	ILE
53	B5	59	VAL
53	B5	65	LEU
53	B5	73	VAL
53	B5	78	ILE
53	B5	100	ILE
2	CB	14	VAL
2	CB	16	PHE
2	CB	19	GLN
2	CB	20	THR
2	CB	27	MET
2	CB	35	ARG
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	66	LYS
2	CB	68	LEU
2	CB	72	THR
2	CB	80	VAL

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Mol	Chain	Res	Type
2	CB	81	LYS
2	CB	88	ASP
2	CB	95	ARG
2	CB	96	TRP
2	CB	102	THR
2	CB	103	ASN
2	CB	106	THR
2	CB	111	ILE
2	CB	117	LEU
2	CB	121	SER
2	CB	126	PHE
2	CB	127	ASP
2	CB	130	THR
2	CB	137	ARG
2	CB	141	LEU
2	CB	144	LEU
2	CB	163	VAL
2	CB	164	ILE
2	CB	169	GLU
2	CB	179	LEU
2	CB	181	ILE
2	CB	205	ASP
2	CB	207	ILE
2	CB	220	THR
2	CB	222	ARG
3	CC	3	GLN
3	CC	11	ARG
3	CC	16	LYS
3	CC	18	TRP
3	CC	27	LYS
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	43	LEU
3	CC	46	GLU
3	CC	80	LYS
3	CC	103	ILE
3	CC	120	ILE
3	CC	121	THR
3	CC	127	ARG
3	CC	128	VAL
3	CC	129	MET

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Mol	Chain	Res	Type
3	CC	186	THR
3	CC	193	TYR
4	CD	9	LEU
4	CD	10	LYS
4	CD	17	THR
4	CD	33	LYS
4	CD	48	LEU
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	60	LYS
4	CD	83	LYS
4	CD	125	VAL
4	CD	132	ILE
4	CD	138	SER
4	CD	143	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	161	LEU
4	CD	163	GLU
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	19	ASN
5	CE	26	LYS
5	CE	34	THR
5	CE	39	VAL
5	CE	45	ARG
5	CE	46	VAL
5	CE	65	GLU
5	CE	69	ARG
5	CE	77	ASN
5	CE	85	VAL
5	CE	105	ILE
5	CE	106	ILE

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Mol	Chain	Res	Type
5	CE	114	VAL
5	CE	115	LEU
5	CE	116	GLU
5	CE	120	VAL
5	CE	124	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	137	VAL
5	CE	141	ILE
5	CE	149	SER
5	CE	151	GLU
5	CE	156	LYS
6	CF	1	MET
6	CF	7	VAL
6	CF	9	MET
6	CF	15	SER
6	CF	17	GLN
6	CF	23	GLU
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	54	LEU
6	CF	55	HIS
6	CF	63	ASN
6	CF	69	GLU
6	CF	71	ILE
6	CF	75	GLU
6	CF	80	PHE
6	CF	85	ILE
6	CF	97	THR
7	CG	4	ARG
7	CG	6	VAL
7	CG	22	LEU
7	CG	23	LEU
7	CG	30	LEU
7	CG	47	LEU
7	CG	53	ARG
7	CG	62	PHE
7	CG	66	LEU
7	CG	70	ARG
7	CG	75	VAL

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Mol	Chain	Res	Type
7	CG	84	THR
7	CG	97	ASN
7	CG	120	LEU
7	CG	123	GLU
7	CG	129	GLU
7	CG	135	VAL
7	CG	140	ASP
7	CG	146	GLU
8	CH	3	MET
8	CH	13	ARG
8	CH	22	LYS
8	CH	25	VAL
8	CH	31	LYS
8	CH	42	GLU
8	CH	47	GLU
8	CH	49	PHE
8	CH	50	LYS
8	CH	51	VAL
8	CH	55	THR
8	CH	67	GLN
8	CH	73	GLU
8	CH	75	ILE
8	CH	77	ARG
8	CH	104	VAL
8	CH	111	MET
8	CH	112	THR
8	CH	117	ARG
8	CH	121	LEU
8	CH	125	ILE
8	CH	129	VAL
9	CI	11	ARG
9	CI	18	ARG
9	CI	32	GLN
9	CI	36	GLU
9	CI	43	THR
9	CI	45	ARG
9	CI	55	VAL
9	CI	57	MET
9	CI	63	LEU
9	CI	68	LYS
9	CI	85	ARG
9	CI	88	MET

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Mol	Chain	Res	Type
9	CI	90	TYR
9	CI	94	LEU
9	CI	97	GLU
9	CI	99	ARG
9	CI	104	VAL
9	CI	129	LYS
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	57	VAL
10	CJ	59	LYS
10	CJ	76	ILE
10	CJ	77	VAL
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	92	LEU
11	CK	14	LYS
11	CK	15	GLN
11	CK	31	ILE
11	CK	33	THR
11	CK	64	GLN
11	CK	65	VAL
11	CK	81	ASN
11	CK	96	THR
11	CK	100	LEU
11	CK	106	ARG
11	CK	107	ILE
11	CK	114	THR
11	CK	125	LYS
11	CK	126	LYS
11	CK	127	ARG
11	CK	128	ARG
12	CL	4	VAL
12	CL	5	ASN
12	CL	10	LYS
12	CL	18	LYS
12	CL	29	GLN
12	CL	44	LYS

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Mol	Chain	Res	Type
12	CL	47	SER
12	CL	57	LEU
12	CL	58	THR
12	CL	59	ASN
12	CL	61	PHE
12	CL	63	VAL
12	CL	74	LEU
12	CL	78	SER
12	CL	82	ILE
12	CL	89	ASP
12	CL	90	LEU
12	CL	94	ARG
12	CL	97	THR
12	CL	110	ARG
12	CL	114	ARG
12	CL	121	ARG
13	CM	25	VAL
13	CM	27	LYS
13	CM	29	ARG
13	CM	41	GLU
13	CM	48	LEU
13	CM	59	GLU
13	CM	68	ASP
13	CM	80	LEU
13	CM	91	HIS
14	CN	4	GLN
14	CN	26	GLU
14	CN	28	LYS
14	CN	48	LEU
14	CN	60	GLN
14	CN	84	VAL
15	CO	2	SER
15	CO	4	SER
15	CO	18	ASP
15	CO	31	LEU
15	CO	35	GLN
15	CO	39	LEU
15	CO	62	GLN
15	CO	64	ARG
15	CO	66	LEU
15	CO	70	LEU
15	CO	73	LYS

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Mol	Chain	Res	Type
15	CO	85	LEU
15	CO	87	LEU
16	CP	2	VAL
16	CP	18	GLN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	63	GLN
16	CP	66	THR
16	CP	77	GLU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	20	SER
17	CQ	29	VAL
17	CQ	40	ARG
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	61	ILE
17	CQ	75	LEU
17	CQ	78	VAL
17	CQ	79	VAL
17	CQ	81	LYS
18	CR	25	ASP
18	CR	33	ILE
18	CR	36	SER
18	CR	47	THR
18	CR	67	LEU
18	CR	68	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	14	HIS
19	CS	20	GLU
19	CS	28	LYS
19	CS	33	THR
19	CS	49	ILE
19	CS	56	GLN
19	CS	58	VAL
19	CS	63	THR
20	CT	5	LYS

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Mol	Chain	Res	Type
20	CT	6	SER
20	CT	14	SER
20	CT	15	GLU
20	CT	27	MET
20	CT	36	TYR
20	CT	49	LYS
20	CT	58	VAL
20	CT	64	LYS
20	CT	69	LYS
20	CT	76	LYS
20	CT	84	ASN
21	CU	5	LYS
21	CU	10	GLU
21	CU	16	LEU
21	CU	20	LYS
21	CU	25	LYS
21	CU	28	VAL
21	CU	36	GLU
21	CU	42	THR
21	CU	47	ARG
21	CU	53	VAL
24	DC	14	ARG
24	DC	20	VAL
24	DC	54	ILE
24	DC	58	HIS
24	DC	80	ARG
24	DC	103	TYR
24	DC	105	LEU
24	DC	110	LEU
24	DC	111	LYS
24	DC	114	ASP
24	DC	130	LEU
24	DC	139	SER
24	DC	156	ARG
24	DC	160	THR
24	DC	167	ARG
24	DC	182	ARG
24	DC	194	GLU
24	DC	195	VAL
24	DC	202	LEU
24	DC	205	LEU
24	DC	221	ARG

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Mol	Chain	Res	Type
24	DC	229	ASP
24	DC	236	GLU
24	DC	246	THR
24	DC	256	LYS
24	DC	262	ARG
24	DC	267	ILE
25	DD	4	LEU
25	DD	12	THR
25	DD	28	GLU
25	DD	33	ARG
25	DD	81	GLU
25	DD	86	GLU
25	DD	95	SER
25	DD	98	VAL
25	DD	139	SER
25	DD	141	ARG
25	DD	150	GLN
25	DD	170	VAL
25	DD	181	ASP
25	DD	189	VAL
25	DD	193	VAL
26	DE	25	GLU
26	DE	69	ARG
26	DE	72	SER
26	DE	77	ILE
26	DE	83	VAL
26	DE	84	THR
26	DE	91	ASP
26	DE	108	ILE
26	DE	149	ILE
26	DE	171	ASP
26	DE	173	THR
27	DF	10	ASP
27	DF	26	MET
27	DF	28	VAL
27	DF	35	THR
27	DF	52	ASN
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	106	ILE
27	DF	117	LEU

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Mol	Chain	Res	Type
27	DF	125	ARG
27	DF	147	ASP
27	DF	152	LEU
27	DF	162	SER
27	DF	178	ARG
28	DG	11	VAL
28	DG	29	LYS
28	DG	30	ASN
28	DG	43	VAL
28	DG	95	ARG
28	DG	124	GLU
28	DG	127	THR
28	DG	133	LEU
28	DG	155	GLU
28	DG	160	LYS
28	DG	166	ASP
28	DG	168	VAL
29	DH	7	ASP
29	DH	12	LEU
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
30	DI	8	TYR

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Mol	Chain	Res	Type
30	DI	11	LEU
30	DI	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	49	ILE
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	86	ILE
30	DI	87	LYS
30	DI	96	ASP
30	DI	97	LYS
30	DI	101	ILE
30	DI	117	MET
30	DI	125	MET
30	DI	134	ARG
31	DJ	17	VAL
31	DJ	30	THR
31	DJ	40	HIS
31	DJ	70	THR
31	DJ	80	HIS
31	DJ	81	ILE
31	DJ	84	ILE
31	DJ	88	THR
32	DK	41	ILE
32	DK	49	ARG
32	DK	90	ASN
32	DK	91	SER
32	DK	92	GLU
32	DK	95	ILE
32	DK	116	ILE
32	DK	121	GLU
32	DK	122	VAL
33	DL	7	SER
33	DL	47	ARG
33	DL	59	ARG
33	DL	82	LEU
33	DL	100	ILE
33	DL	117	THR
33	DL	118	THR

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Mol	Chain	Res	Type
33	DL	126	ARG
34	DM	47	GLU
34	DM	59	ARG
34	DM	70	ASP
34	DM	100	LYS
34	DM	108	VAL
35	DN	14	SER
35	DN	15	SER
35	DN	33	ILE
35	DN	53	THR
35	DN	63	ARG
35	DN	69	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	76	VAL
35	DN	106	ASP
35	DN	116	VAL
36	DO	18	LEU
36	DO	28	VAL
36	DO	31	THR
36	DO	45	SER
36	DO	47	VAL
36	DO	74	VAL
36	DO	78	VAL
36	DO	88	LYS
36	DO	100	HIS
36	DO	103	VAL
36	DO	116	GLN
37	DP	4	ILE
37	DP	7	GLN
37	DP	8	LEU
37	DP	26	VAL
37	DP	66	ASN
37	DP	75	GLN
37	DP	80	VAL
37	DP	81	VAL
37	DP	109	ARG
37	DP	110	ILE
38	DQ	5	LYS
38	DQ	9	ILE
38	DQ	22	LYS
38	DQ	29	SER

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Mol	Chain	Res	Type
38	DQ	33	ARG
38	DQ	41	LYS
38	DQ	47	TYR
38	DQ	51	ARG
39	DR	1	MET
39	DR	29	THR
39	DR	37	GLU
39	DR	38	VAL
39	DR	43	ASN
39	DR	46	GLU
39	DR	48	LYS
39	DR	58	VAL
40	DS	3	THR
40	DS	19	LEU
40	DS	23	LEU
40	DS	41	LYS
40	DS	78	GLU
40	DS	96	ILE
40	DS	109	ASP
41	DT	2	ILE
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	24	MET
41	DT	27	SER
41	DT	30	ILE
41	DT	31	VAL
41	DT	32	LEU
41	DT	49	LYS
41	DT	69	ARG
41	DT	70	HIS
41	DT	77	ARG
41	DT	91	GLN
42	DU	7	ARG
42	DU	15	THR
42	DU	40	ASN
42	DU	45	HIS
42	DU	53	ASN
42	DU	54	GLN
42	DU	72	ILE
42	DU	81	ASP
42	DU	99	ASN

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Mol	Chain	Res	Type
42	DU	102	THR
43	DV	20	LEU
43	DV	29	ILE
43	DV	35	GLU
43	DV	41	GLU
43	DV	42	LEU
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU
43	DV	62	THR
43	DV	65	VAL
44	DW	16	SER
44	DW	20	ARG
44	DW	38	VAL
44	DW	39	ARG
45	DX	33	LEU
45	DX	40	VAL
45	DX	64	ILE
45	DX	71	LEU
46	DY	2	LYS
46	DY	6	LEU
46	DY	13	GLU
46	DY	16	THR
46	DY	20	ASN
46	DY	38	GLN
46	DY	39	GLN
46	DY	40	SER
46	DY	49	ASP
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	6	LYS
47	DZ	25	LEU
47	DZ	36	VAL
47	DZ	39	GLU
47	DZ	41	THR
47	DZ	45	ARG
48	D0	3	VAL
48	D0	23	THR
48	D0	27	SER
48	D0	28	LEU
48	D0	29	SER
48	D0	46	ASP

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Mol	Chain	Res	Type
49	D1	28	ARG
49	D1	51	GLU
50	D2	1	MET
50	D2	4	THR
50	D2	24	THR
50	D2	41	ARG
50	D2	42	LEU
51	D3	8	ARG
51	D3	13	ARG
51	D3	30	ARG
52	D4	3	VAL
52	D4	26	ILE
52	D4	37	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (86) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	42	ASN
2	AB	89	GLN
2	AB	178	ASN
4	AD	54	GLN
5	AE	77	ASN
5	AE	89	HIS
5	AE	122	ASN
5	AE	132	ASN
6	AF	37	HIS
6	AF	63	ASN
7	AG	148	ASN
8	AH	18	GLN
10	AJ	35	GLN
11	AK	118	HIS
14	AN	35	ASN
14	AN	66	GLN
15	AO	46	HIS
16	AP	59	HIS
17	AQ	50	ASN
18	AR	31	ASN
20	AT	20	HIS
24	BC	142	HIS
24	BC	243	HIS
24	BC	260	ASN
25	BD	136	ASN

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Mol	Chain	Res	Type
25	BD	173	GLN
26	BE	94	GLN
27	BF	5	HIS
27	BF	21	ASN
28	BG	128	GLN
29	BH	20	ASN
29	BH	135	HIS
31	BJ	131	ASN
31	BJ	136	GLN
32	BK	93	GLN
34	BM	13	HIS
35	BN	107	ASN
36	BO	29	HIS
40	BS	31	GLN
40	BS	40	ASN
40	BS	60	HIS
40	BS	102	HIS
43	BV	87	GLN
47	BZ	20	HIS
50	B2	13	ASN
53	B5	45	HIS
2	CB	24	ASN
3	CC	140	ASN
4	CD	131	ASN
5	CE	97	GLN
6	CF	37	HIS
6	CF	63	ASN
6	CF	94	HIS
7	CG	28	ASN
8	CH	21	ASN
9	CI	32	GLN
10	CJ	58	ASN
13	CM	8	ASN
15	CO	46	HIS
16	CP	26	ASN
17	CQ	31	HIS
18	CR	54	GLN
19	CS	43	ASN
20	CT	84	ASN
24	DC	58	HIS
25	DD	140	HIS
26	DE	30	GLN

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Mol	Chain	Res	Type
27	DF	37	ASN
28	DG	30	ASN
28	DG	73	ASN
29	DH	20	ASN
29	DH	28	ASN
32	DK	88	ASN
33	DL	54	GLN
36	DO	19	GLN
36	DO	100	HIS
38	DQ	20	GLN
39	DR	11	GLN
40	DS	57	ASN
44	DW	12	ASN
45	DX	34	HIS
46	DY	41	HIS
46	DY	58	ASN
47	DZ	20	HIS
48	D0	38	HIS
50	D2	26	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	304 (19%)	13 (0%)
1	CA	1538/1539 (99%)	304 (19%)	7 (0%)
22	BA	2895/2903 (99%)	519 (17%)	34 (1%)
22	DA	2895/2903 (99%)	536 (18%)	22 (0%)
23	BB	118/119 (99%)	16 (13%)	1 (0%)
23	DB	117/119 (98%)	18 (15%)	0
All	All	9100/9122 (99%)	1697 (18%)	77 (0%)

All (1697) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	7	A
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	32	A

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Mol	Chain	Res	Type
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	109	A
1	AA	111	G
1	AA	116	A
1	AA	117	G
1	AA	120	A
1	AA	121	U
1	AA	130	A
1	AA	131	A
1	AA	137	U
1	AA	138	G
1	AA	143	A
1	AA	144	G
1	AA	159	G
1	AA	162	A
1	AA	163	C
1	AA	168	G
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A
1	AA	205	A

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Mol	Chain	Res	Type
1	AA	210	C
1	AA	212	G
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	298	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	341	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	356	A
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	398	U
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	453	G
1	AA	454	G

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Mol	Chain	Res	Type
1	AA	456	A
1	AA	457	G
1	AA	458	U
1	AA	462	G
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	474	G
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	505	G
1	AA	511	C
1	AA	518	C
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	573	A
1	AA	576	C
1	AA	577	G
1	AA	579	A
1	AA	615	G
1	AA	650	G
1	AA	653	U
1	AA	657	U
1	AA	665	A
1	AA	671	G
1	AA	703	G
1	AA	717	U
1	AA	721	G

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Mol	Chain	Res	Type
1	AA	723	U
1	AA	731	G
1	AA	733	G
1	AA	734	G
1	AA	747	A
1	AA	755	G
1	AA	772	U
1	AA	773	G
1	AA	774	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	821	G
1	AA	828	U
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	853	C
1	AA	859	G
1	AA	860	A
1	AA	868	C
1	AA	902	G
1	AA	906	A
1	AA	914	A
1	AA	925	G
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	964	A
1	AA	965	U
1	AA	966	G

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Mol	Chain	Res	Type
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1008	U
1	AA	1009	U
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1089	G
1	AA	1091	U
1	AA	1094	G
1	AA	1095	U
1	AA	1098	C
1	AA	1101	A

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Mol	Chain	Res	Type
1	AA	1108	G
1	AA	1113	C
1	AA	1124	G
1	AA	1125	U
1	AA	1133	G
1	AA	1136	C
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1145	A
1	AA	1146	A
1	AA	1149	C
1	AA	1151	A
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1168	U
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1193	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1221	G
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1253	G
1	AA	1256	A
1	AA	1261	A
1	AA	1280	A
1	AA	1286	U
1	AA	1287	A

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Mol	Chain	Res	Type
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1329	A
1	AA	1332	A
1	AA	1335	U
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1346	A
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1368	A
1	AA	1370	G
1	AA	1397	C
1	AA	1398	A
1	AA	1401	G
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1472	U
1	AA	1493	A
1	AA	1497	G
1	AA	1499	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1526	G
1	AA	1529	G
1	AA	1530	G
1	AA	1533	C

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Mol	Chain	Res	Type
1	AA	1534	A
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	27	G
22	BA	34	U
22	BA	46	G
22	BA	57	C
22	BA	58	G
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	101	A
22	BA	102	U
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	122	G
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	181	A
22	BA	196	A
22	BA	208	C
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	248	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	272	A
22	BA	273	G
22	BA	276	U
22	BA	277	G
22	BA	279	A

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Mol	Chain	Res	Type
22	BA	302	C
22	BA	310	A
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	343	C
22	BA	353	C
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	380	G
22	BA	386	G
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	420	C
22	BA	424	G
22	BA	442	G
22	BA	451	U
22	BA	455	C
22	BA	457	A
22	BA	467	G
22	BA	480	A
22	BA	481	G
22	BA	491	G
22	BA	503	A
22	BA	504	A
22	BA	505	A
22	BA	509	C
22	BA	510	C
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A

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Mol	Chain	Res	Type
22	BA	548	G
22	BA	549	G
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	583	G
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	654	A
22	BA	655	A
22	BA	686	U
22	BA	694	U
22	BA	716	A
22	BA	722	A
22	BA	730	A
22	BA	738	G
22	BA	747	U
22	BA	754	U
22	BA	759	G
22	BA	764	A
22	BA	765	C
22	BA	770	G
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A
22	BA	802	A
22	BA	805	G
22	BA	810	U

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Mol	Chain	Res	Type
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	830	G
22	BA	843	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	855	G
22	BA	858	G
22	BA	859	G
22	BA	860	U
22	BA	861	A
22	BA	866	A
22	BA	869	G
22	BA	871	U
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	932	U
22	BA	934	U
22	BA	941	A
22	BA	946	C
22	BA	959	A
22	BA	961	C
22	BA	974	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	995	C
22	BA	996	A
22	BA	1005	C
22	BA	1012	U
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G
22	BA	1033	U

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Mol	Chain	Res	Type
22	BA	1040	A
22	BA	1046	A
22	BA	1047	G
22	BA	1057	A
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1066	U
22	BA	1067	A
22	BA	1068	G
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1077	A
22	BA	1081	U
22	BA	1087	G
22	BA	1088	A
22	BA	1089	A
22	BA	1091	G
22	BA	1092	C
22	BA	1097	U
22	BA	1098	A
22	BA	1100	C
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	1142	A
22	BA	1144	A
22	BA	1156	A
22	BA	1168	G
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A

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Mol	Chain	Res	Type
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1186	G
22	BA	1218	G
22	BA	1221	C
22	BA	1238	G
22	BA	1244	A
22	BA	1253	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1281	G
22	BA	1294	U
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1327	A
22	BA	1332	G
22	BA	1334	G
22	BA	1342	A
22	BA	1345	C
22	BA	1352	U
22	BA	1353	A
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1374	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1386	C
22	BA	1397	U
22	BA	1405	U
22	BA	1407	G
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1427	A

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Mol	Chain	Res	Type
22	BA	1428	C
22	BA	1435	G
22	BA	1441	G
22	BA	1451	C
22	BA	1452	G
22	BA	1453	A
22	BA	1467	U
22	BA	1478	G
22	BA	1482	G
22	BA	1483	G
22	BA	1493	C
22	BA	1504	A
22	BA	1508	A
22	BA	1510	G
22	BA	1515	A
22	BA	1523	U
22	BA	1527	G
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1554	U
22	BA	1558	C
22	BA	1569	A
22	BA	1578	U
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1610	A
22	BA	1619	G
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1669	A
22	BA	1674	G
22	BA	1682	G
22	BA	1715	G
22	BA	1729	U

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Mol	Chain	Res	Type
22	BA	1730	C
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1758	U
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G
22	BA	1791	A
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1808	A
22	BA	1816	C
22	BA	1829	A
22	BA	1847	A
22	BA	1870	C
22	BA	1872	A
22	BA	1873	G
22	BA	1882	U
22	BA	1884	G
22	BA	1885	A
22	BA	1890	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1919	A
22	BA	1921	G
22	BA	1922	G
22	BA	1923	U
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1936	A

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Mol	Chain	Res	Type
22	BA	1937	A
22	BA	1938	A
22	BA	1955	U
22	BA	1960	A
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1976	U
22	BA	1977	A
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1997	C
22	BA	2017	U
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2033	A
22	BA	2042	A
22	BA	2043	C
22	BA	2054	A
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2069	G
22	BA	2093	G
22	BA	2096	C
22	BA	2102	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U

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Mol	Chain	Res	Type
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2127	G
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2136	G
22	BA	2147	A
22	BA	2148	G
22	BA	2157	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2178	C
22	BA	2181	U
22	BA	2187	U
22	BA	2190	G
22	BA	2198	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2220	U
22	BA	2225	A
22	BA	2233	U
22	BA	2235	G
22	BA	2238	G
22	BA	2239	G
22	BA	2245	U
22	BA	2268	A
22	BA	2278	A
22	BA	2280	G
22	BA	2283	C
22	BA	2287	A

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Mol	Chain	Res	Type
22	BA	2295	C
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2333	A
22	BA	2335	A
22	BA	2345	G
22	BA	2347	C
22	BA	2350	C
22	BA	2357	G
22	BA	2361	G
22	BA	2383	G
22	BA	2385	C
22	BA	2402	U
22	BA	2406	A
22	BA	2420	C
22	BA	2421	G
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2429	G
22	BA	2430	A
22	BA	2434	A
22	BA	2435	A
22	BA	2441	U
22	BA	2448	A
22	BA	2453	A
22	BA	2465	C
22	BA	2476	A
22	BA	2478	A
22	BA	2484	G
22	BA	2486	C
22	BA	2490	G
22	BA	2491	U
22	BA	2501	C
22	BA	2502	G
22	BA	2504	U

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Mol	Chain	Res	Type
22	BA	2505	G
22	BA	2518	A
22	BA	2520	C
22	BA	2521	C
22	BA	2522	U
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2556	C
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2576	G
22	BA	2579	C
22	BA	2582	G
22	BA	2585	U
22	BA	2586	U
22	BA	2602	A
22	BA	2603	G
22	BA	2604	U
22	BA	2609	U
22	BA	2613	U
22	BA	2629	U
22	BA	2638	G
22	BA	2661	G
22	BA	2663	G
22	BA	2689	U
22	BA	2690	U
22	BA	2707	U
22	BA	2714	G
22	BA	2716	C
22	BA	2718	G
22	BA	2721	A
22	BA	2726	A
22	BA	2729	G
22	BA	2733	A
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	2765	A
22	BA	2769	U
22	BA	2778	A

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Mol	Chain	Res	Type
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2811	G
22	BA	2820	A
22	BA	2821	A
22	BA	2834	G
22	BA	2850	A
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2886	A
22	BA	2891	U
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	28	C
23	BB	35	C
23	BB	42	C
23	BB	45	A
23	BB	56	G
23	BB	65	U
23	BB	67	G
23	BB	89	U
23	BB	90	C
23	BB	98	G
23	BB	99	A
23	BB	109	A
1	CA	5	U
1	CA	9	G
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	45	G
1	CA	47	C
1	CA	48	C

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Mol	Chain	Res	Type
1	CA	50	A
1	CA	51	A
1	CA	70	U
1	CA	71	A
1	CA	74	A
1	CA	80	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	94	G
1	CA	95	C
1	CA	108	G
1	CA	115	G
1	CA	116	A
1	CA	117	G
1	CA	119	A
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	130	A
1	CA	131	A
1	CA	137	U
1	CA	143	A
1	CA	144	G
1	CA	149	A
1	CA	155	A
1	CA	156	C
1	CA	159	G
1	CA	182	A
1	CA	183	C
1	CA	189	A
1	CA	195	A
1	CA	197	A
1	CA	201	G
1	CA	204	G
1	CA	207	C
1	CA	208	U
1	CA	209	U
1	CA	210	C

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Mol	Chain	Res	Type
1	CA	211	G
1	CA	212	G
1	CA	240	G
1	CA	241	G
1	CA	245	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	289	G
1	CA	298	A
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	339	C
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	370	C
1	CA	372	C
1	CA	378	G
1	CA	382	A
1	CA	384	G
1	CA	389	A
1	CA	390	U
1	CA	398	U
1	CA	399	G
1	CA	404	G
1	CA	406	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	429	U
1	CA	430	A
1	CA	438	U
1	CA	439	U
1	CA	441	A

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Mol	Chain	Res	Type
1	CA	457	G
1	CA	458	U
1	CA	459	A
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
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	494	G
1	CA	495	A
1	CA	498	A
1	CA	499	A
1	CA	500	G
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	527	G
1	CA	532	A
1	CA	533	A
1	CA	547	A
1	CA	550	G
1	CA	558	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	580	C
1	CA	581	G
1	CA	615	G
1	CA	621	A
1	CA	622	A
1	CA	650	G
1	CA	653	U

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Mol	Chain	Res	Type
1	CA	656	G
1	CA	665	A
1	CA	666	G
1	CA	687	A
1	CA	695	A
1	CA	702	A
1	CA	703	G
1	CA	717	U
1	CA	719	C
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	747	A
1	CA	752	G
1	CA	755	G
1	CA	758	C
1	CA	778	G
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	799	G
1	CA	802	A
1	CA	804	U
1	CA	810	C
1	CA	812	G
1	CA	815	A
1	CA	817	C
1	CA	819	A
1	CA	827	U
1	CA	828	U
1	CA	841	C
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	849	G
1	CA	853	C
1	CA	855	U
1	CA	859	G
1	CA	872	A
1	CA	873	A

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Mol	Chain	Res	Type
1	CA	876	C
1	CA	885	G
1	CA	899	C
1	CA	902	G
1	CA	909	A
1	CA	914	A
1	CA	916	U
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	931	C
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	966	G
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	981	U
1	CA	983	A
1	CA	987	G
1	CA	993	G
1	CA	1004	A
1	CA	1008	U
1	CA	1009	U
1	CA	1017	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1043	G
1	CA	1044	A

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Mol	Chain	Res	Type
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1065	U
1	CA	1069	C
1	CA	1072	G
1	CA	1073	U
1	CA	1080	A
1	CA	1086	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1113	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
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	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1184	G
1	CA	1196	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1256	A
1	CA	1257	A
1	CA	1260	G
1	CA	1275	A
1	CA	1280	A

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Mol	Chain	Res	Type
1	CA	1286	U
1	CA	1287	A
1	CA	1293	C
1	CA	1299	A
1	CA	1300	G
1	CA	1302	C
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1322	C
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1362	A
1	CA	1363	A
1	CA	1365	G
1	CA	1377	A
1	CA	1379	G
1	CA	1398	A
1	CA	1419	G
1	CA	1429	A
1	CA	1441	A
1	CA	1446	A
1	CA	1452	C
1	CA	1454	G
1	CA	1475	G
1	CA	1480	A
1	CA	1487	G
1	CA	1491	G
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1517	G
1	CA	1518	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A

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Mol	Chain	Res	Type
1	CA	1533	C
1	CA	1535	C
22	DA	10	A
22	DA	11	C
22	DA	12	U
22	DA	34	U
22	DA	39	G
22	DA	42	A
22	DA	46	G
22	DA	55	G
22	DA	58	G
22	DA	61	C
22	DA	66	C
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	82	U
22	DA	84	A
22	DA	96	C
22	DA	98	G
22	DA	101	A
22	DA	103	A
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	125	A
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	162	U
22	DA	166	U
22	DA	178	G
22	DA	181	A
22	DA	196	A
22	DA	199	A
22	DA	206	U
22	DA	215	G
22	DA	216	A

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Mol	Chain	Res	Type
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	225	C
22	DA	229	C
22	DA	233	A
22	DA	248	G
22	DA	249	C
22	DA	255	A
22	DA	256	A
22	DA	264	C
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	311	A
22	DA	317	G
22	DA	329	G
22	DA	330	A
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	380	G
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	396	G
22	DA	399	U
22	DA	405	U
22	DA	411	G
22	DA	424	G
22	DA	430	A
22	DA	435	C
22	DA	447	A
22	DA	451	U

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Mol	Chain	Res	Type
22	DA	455	C
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	510	C
22	DA	528	A
22	DA	532	A
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	569	U
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	603	A
22	DA	615	U
22	DA	627	A
22	DA	628	G
22	DA	630	G
22	DA	631	A
22	DA	637	A
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	685	A
22	DA	686	U
22	DA	695	G
22	DA	717	C
22	DA	726	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	751	A
22	DA	752	A
22	DA	757	G
22	DA	762	U
22	DA	764	A
22	DA	771	G
22	DA	775	G
22	DA	776	G
22	DA	777	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	789	A
22	DA	792	A
22	DA	798	G
22	DA	802	A
22	DA	805	G
22	DA	810	U
22	DA	812	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	858	G
22	DA	859	G
22	DA	878	A
22	DA	882	G
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	910	A
22	DA	914	G
22	DA	922	C
22	DA	932	U

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Mol	Chain	Res	Type
22	DA	934	U
22	DA	941	A
22	DA	946	C
22	DA	961	C
22	DA	974	G
22	DA	982	C
22	DA	983	A
22	DA	990	A
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U
22	DA	1046	A
22	DA	1047	G
22	DA	1051	G
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U
22	DA	1068	G
22	DA	1070	A
22	DA	1072	C
22	DA	1075	C
22	DA	1079	C
22	DA	1088	A
22	DA	1089	A
22	DA	1090	A
22	DA	1092	C
22	DA	1094	U
22	DA	1097	U
22	DA	1100	C
22	DA	1104	C
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G

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Mol	Chain	Res	Type
22	DA	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1133	A
22	DA	1134	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1153	C
22	DA	1155	A
22	DA	1171	G
22	DA	1172	C
22	DA	1175	A
22	DA	1176	U
22	DA	1180	U
22	DA	1186	G
22	DA	1204	A
22	DA	1212	G
22	DA	1236	G
22	DA	1238	G
22	DA	1241	A
22	DA	1250	G
22	DA	1253	A
22	DA	1256	G
22	DA	1266	G
22	DA	1268	A
22	DA	1271	G
22	DA	1272	A
22	DA	1275	A
22	DA	1276	A
22	DA	1300	G
22	DA	1301	A
22	DA	1305	C
22	DA	1321	A
22	DA	1343	G
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1372	U
22	DA	1374	G

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Mol	Chain	Res	Type
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1386	C
22	DA	1387	A
22	DA	1395	A
22	DA	1403	A
22	DA	1411	U
22	DA	1414	C
22	DA	1416	G
22	DA	1427	A
22	DA	1428	C
22	DA	1434	A
22	DA	1451	C
22	DA	1452	G
22	DA	1455	G
22	DA	1458	U
22	DA	1468	U
22	DA	1471	G
22	DA	1478	G
22	DA	1482	G
22	DA	1493	C
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1560	G
22	DA	1565	C
22	DA	1569	A
22	DA	1578	U
22	DA	1581	G
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C

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Mol	Chain	Res	Type
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	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1661	G
22	DA	1664	A
22	DA	1674	G
22	DA	1694	C
22	DA	1695	G
22	DA	1705	A
22	DA	1715	G
22	DA	1729	U
22	DA	1730	C
22	DA	1732	C
22	DA	1738	G
22	DA	1744	A
22	DA	1750	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1782	U
22	DA	1794	A
22	DA	1798	U
22	DA	1800	C
22	DA	1801	A
22	DA	1802	A
22	DA	1808	A
22	DA	1816	C
22	DA	1823	G
22	DA	1827	U
22	DA	1828	G
22	DA	1829	A
22	DA	1847	A

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Mol	Chain	Res	Type
22	DA	1848	A
22	DA	1858	A
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1873	G
22	DA	1874	C
22	DA	1889	A
22	DA	1903	G
22	DA	1906	G
22	DA	1914	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1934	C
22	DA	1937	A
22	DA	1955	U
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1972	G
22	DA	1991	U
22	DA	1993	U
22	DA	1997	C
22	DA	2018	G
22	DA	2020	A
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	2057	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2069	G
22	DA	2073	C
22	DA	2083	G

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Mol	Chain	Res	Type
22	DA	2092	U
22	DA	2093	G
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A
22	DA	2178	C
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2198	A
22	DA	2204	G
22	DA	2211	A
22	DA	2212	A

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Mol	Chain	Res	Type
22	DA	2213	U
22	DA	2225	A
22	DA	2226	C
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2243	U
22	DA	2250	G
22	DA	2267	A
22	DA	2268	A
22	DA	2273	A
22	DA	2280	G
22	DA	2283	C
22	DA	2287	A
22	DA	2288	A
22	DA	2297	A
22	DA	2305	U
22	DA	2307	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
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	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2417	C
22	DA	2422	C
22	DA	2423	U

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Mol	Chain	Res	Type
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2434	A
22	DA	2435	A
22	DA	2436	G
22	DA	2441	U
22	DA	2442	C
22	DA	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2476	A
22	DA	2482	A
22	DA	2484	G
22	DA	2491	U
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2547	A
22	DA	2554	U
22	DA	2556	C
22	DA	2564	A
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2575	C
22	DA	2578	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2596	U
22	DA	2600	A
22	DA	2602	A

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Mol	Chain	Res	Type
22	DA	2603	G
22	DA	2609	U
22	DA	2613	U
22	DA	2614	A
22	DA	2629	U
22	DA	2630	G
22	DA	2642	G
22	DA	2646	C
22	DA	2689	U
22	DA	2690	U
22	DA	2714	G
22	DA	2716	C
22	DA	2726	A
22	DA	2727	A
22	DA	2733	A
22	DA	2748	A
22	DA	2757	A
22	DA	2778	A
22	DA	2791	G
22	DA	2798	U
22	DA	2799	A
22	DA	2812	G
22	DA	2818	U
22	DA	2820	A
22	DA	2826	A
22	DA	2835	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	A
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2891	U
22	DA	2903	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	41	G
23	DB	44	G

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Mol	Chain	Res	Type
23	DB	51	G
23	DB	56	G
23	DB	58	A
23	DB	66	A
23	DB	73	A
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	99	A
23	DB	109	A

All (77) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	209	U
1	AA	351	G
1	AA	353	A
1	AA	429	U
1	AA	481	G
1	AA	484	G
1	AA	733	G
1	AA	1031	C
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1533	C
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	310	A
22	BA	404	A
22	BA	479	A
22	BA	503	A
22	BA	613	A
22	BA	764	A
22	BA	776	G
22	BA	784	G
22	BA	846	U
22	BA	858	G
22	BA	960	A
22	BA	984	A

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Mol	Chain	Res	Type
22	BA	995	C
22	BA	1185	G
22	BA	1301	A
22	BA	1344	U
22	BA	1378	A
22	BA	1606	C
22	BA	1610	A
22	BA	1738	G
22	BA	1757	A
22	BA	2127	G
22	BA	2282	G
22	BA	2286	G
22	BA	2326	C
22	BA	2353	G
22	BA	2406	A
22	BA	2425	A
22	BA	2756	U
22	BA	2800	A
22	BA	2873	A
23	BB	15	A
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	438	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
22	DA	196	A
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	982	C
22	DA	1240	U
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C
22	DA	1900	A
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G

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Mol	Chain	Res	Type
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	2756	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 502 ligands modelled in this entry, 501 are monoatomic - leaving 1 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	NEG	CA	1657	54	14,16,16	0.66	0	12,20,20	0.64	0

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	NEG	CA	1657	54	-	10/18/18/18	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	CA	1657	NEG	N3-C7-C8-O1
56	CA	1657	NEG	N3-C7-C8-O2
56	CA	1657	NEG	C8-C7-N3-N2
56	CA	1657	NEG	C6-N2-N3-C9
56	CA	1657	NEG	N4-C4-C5-C6
56	CA	1657	NEG	C3-C4-C5-C6
56	CA	1657	NEG	O3-C2-C3-C4
56	CA	1657	NEG	C1-C2-C3-C4
56	CA	1657	NEG	N1-C1-C2-C3
56	CA	1657	NEG	C6-N2-N3-C7

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	CA	1657	NEG	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1538/1539 (99%)	-0.39	33 (2%) 63 42	12, 56, 146, 187	0
1	CA	1539/1539 (100%)	0.07	47 (3%) 51 30	24, 78, 151, 182	0
2	AB	218/218 (100%)	0.34	12 (5%) 30 16	38, 79, 106, 130	0
2	CB	218/218 (100%)	0.74	23 (10%) 11 6	62, 97, 114, 127	0
3	AC	206/206 (100%)	0.06	1 (0%) 87 73	57, 83, 97, 110	0
3	CC	206/206 (100%)	0.62	9 (4%) 39 21	83, 101, 112, 120	0
4	AD	205/205 (100%)	0.02	5 (2%) 59 38	39, 64, 88, 106	0
4	CD	205/205 (100%)	-0.21	4 (1%) 65 44	21, 41, 70, 92	0
5	AE	150/150 (100%)	-0.09	1 (0%) 84 68	31, 50, 83, 105	0
5	CE	150/150 (100%)	0.06	3 (2%) 65 44	28, 58, 89, 109	0
6	AF	100/100 (100%)	-0.03	3 (3%) 52 31	36, 60, 80, 92	0
6	CF	100/100 (100%)	0.08	1 (1%) 79 61	48, 81, 103, 108	0
7	AG	151/151 (100%)	0.54	11 (7%) 21 11	68, 93, 106, 116	0
7	CG	151/151 (100%)	1.50	38 (25%) 1 1	95, 117, 127, 130	0
8	AH	129/129 (100%)	-0.25	1 (0%) 82 65	31, 52, 72, 90	0
8	CH	129/129 (100%)	0.08	3 (2%) 61 39	55, 75, 93, 105	0
9	AI	127/127 (100%)	0.94	21 (16%) 4 2	70, 95, 110, 122	0
9	CI	127/127 (100%)	1.32	30 (23%) 2 1	100, 112, 123, 131	0
10	AJ	98/98 (100%)	0.73	11 (11%) 10 5	76, 90, 107, 127	0
10	CJ	98/98 (100%)	1.52	26 (26%) 1 1	97, 114, 122, 133	0
11	AK	117/117 (100%)	0.20	4 (3%) 48 28	26, 70, 98, 117	0
11	CK	117/117 (100%)	0.01	1 (0%) 81 63	36, 75, 94, 98	0
12	AL	123/123 (100%)	-0.17	3 (2%) 59 38	23, 39, 70, 100	0
12	CL	123/123 (100%)	0.34	6 (4%) 35 18	34, 56, 84, 108	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	114/114 (100%)	0.75	11 (9%) 13 7	70, 87, 104, 111	0
13	CM	114/114 (100%)	1.49	23 (20%) 3 1	105, 122, 130, 134	0
14	AN	96/100 (96%)	1.04	12 (12%) 8 5	79, 91, 108, 117	0
14	CN	96/100 (96%)	1.29	19 (19%) 3 1	98, 112, 125, 129	0
15	AO	88/88 (100%)	-0.22	0 100 100	30, 51, 72, 92	0
15	CO	88/88 (100%)	0.19	1 (1%) 78 59	45, 71, 89, 106	0
16	AP	82/82 (100%)	0.11	0 100 100	34, 51, 92, 108	0
16	CP	82/82 (100%)	0.83	7 (8%) 16 9	52, 73, 105, 117	0
17	AQ	80/80 (100%)	0.26	3 (3%) 44 25	30, 53, 77, 120	0
17	CQ	80/80 (100%)	0.46	2 (2%) 58 37	48, 88, 102, 109	0
18	AR	55/55 (100%)	0.14	2 (3%) 46 26	44, 56, 87, 108	0
18	CR	55/55 (100%)	0.05	2 (3%) 46 26	41, 58, 85, 109	0
19	AS	79/79 (100%)	0.74	7 (8%) 15 8	78, 95, 107, 113	0
19	CS	79/79 (100%)	1.38	15 (18%) 3 1	105, 123, 130, 133	0
20	AT	85/85 (100%)	0.24	4 (4%) 36 19	35, 52, 79, 98	0
20	CT	85/85 (100%)	1.35	23 (27%) 1 1	61, 86, 102, 106	0
21	AU	51/51 (100%)	0.85	6 (11%) 9 5	39, 73, 105, 115	0
21	CU	51/51 (100%)	0.98	9 (17%) 4 2	46, 73, 101, 107	0
22	BA	2897/2903 (99%)	-0.85	98 (3%) 48 28	1, 14, 135, 195	0
22	DA	2897/2903 (99%)	0.45	82 (2%) 55 34	38, 91, 152, 183	0
23	BB	119/119 (100%)	-1.07	0 100 100	2, 25, 59, 89	0
23	DB	118/119 (99%)	0.16	0 100 100	80, 119, 136, 145	0
24	BC	271/271 (100%)	-0.26	14 (5%) 33 17	2, 21, 52, 65	0
24	DC	271/271 (100%)	0.73	34 (12%) 8 5	45, 70, 90, 96	0
25	BD	209/209 (100%)	-0.64	0 100 100	1, 12, 38, 77	0
25	DD	209/209 (100%)	0.70	18 (8%) 16 9	56, 82, 97, 107	0
26	BE	201/201 (100%)	-0.47	0 100 100	1, 27, 64, 92	0
26	DE	201/201 (100%)	0.94	30 (14%) 5 3	63, 98, 114, 122	0
27	BF	177/177 (100%)	-0.15	2 (1%) 78 59	20, 51, 84, 100	0
27	DF	177/177 (100%)	0.97	20 (11%) 10 5	100, 119, 131, 137	0
28	BG	176/176 (100%)	-0.48	0 100 100	12, 38, 66, 79	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DG	176/176 (100%)	0.68	6 (3%) 48 28	87, 105, 116, 126	0
29	BH	149/149 (100%)	1.39	44 (29%) 1 1	25, 102, 121, 129	0
29	DH	149/149 (100%)	0.87	15 (10%) 12 6	25, 92, 107, 115	0
30	BI	141/141 (100%)	1.56	40 (28%) 1 1	103, 122, 132, 139	0
30	DI	141/141 (100%)	1.66	52 (36%) 1 0	109, 130, 140, 149	0
31	BJ	142/142 (100%)	-0.63	1 (0%) 84 68	1, 8, 28, 41	0
31	DJ	142/142 (100%)	0.60	11 (7%) 19 10	57, 79, 92, 103	0
32	BK	122/122 (100%)	-0.60	0 100 100	4, 13, 35, 66	0
32	DK	122/122 (100%)	0.51	7 (5%) 29 16	56, 75, 94, 106	0
33	BL	143/143 (100%)	-0.45	0 100 100	1, 22, 52, 87	0
33	DL	143/143 (100%)	1.31	34 (23%) 2 1	58, 92, 106, 127	0
34	BM	136/136 (100%)	-0.67	0 100 100	1, 11, 34, 82	0
34	DM	136/136 (100%)	0.29	3 (2%) 62 41	50, 79, 94, 113	0
35	BN	120/120 (100%)	-0.67	0 100 100	2, 10, 21, 70	0
35	DN	120/120 (100%)	0.98	15 (12%) 8 5	65, 88, 100, 123	0
36	BO	116/116 (100%)	-0.53	0 100 100	12, 30, 47, 57	0
36	DO	116/116 (100%)	0.76	5 (4%) 40 22	91, 106, 114, 121	0
37	BP	114/114 (100%)	-0.60	0 100 100	5, 18, 46, 67	0
37	DP	114/114 (100%)	0.72	5 (4%) 39 21	65, 81, 94, 103	0
38	BQ	117/117 (100%)	-0.63	0 100 100	1, 4, 15, 52	0
38	DQ	117/117 (100%)	1.14	27 (23%) 2 1	62, 79, 89, 94	0
39	BR	103/103 (100%)	-0.60	0 100 100	1, 13, 35, 67	0
39	DR	103/103 (100%)	0.92	14 (13%) 7 4	67, 91, 101, 103	0
40	BS	110/110 (100%)	-0.72	0 100 100	1, 5, 27, 79	0
40	DS	110/110 (100%)	0.92	15 (13%) 7 4	68, 88, 105, 112	0
41	BT	93/93 (100%)	-0.27	2 (2%) 62 41	8, 27, 77, 106	0
41	DT	93/93 (100%)	1.45	25 (26%) 1 1	80, 98, 117, 125	0
42	BU	102/102 (100%)	-0.39	0 100 100	13, 32, 67, 96	0
42	DU	102/102 (100%)	1.70	36 (35%) 1 0	88, 106, 122, 129	0
43	BV	94/94 (100%)	-0.61	0 100 100	7, 23, 51, 63	0
43	DV	94/94 (100%)	0.35	2 (2%) 63 42	74, 95, 107, 115	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BW	76/76 (100%)	-0.58	0 100 100	3, 13, 32, 61	0
44	DW	75/76 (98%)	0.78	7 (9%) 14 8	60, 90, 99, 114	0
45	BX	77/77 (100%)	-0.48	0 100 100	5, 26, 54, 77	0
45	DX	77/77 (100%)	0.76	6 (7%) 19 10	57, 80, 94, 101	0
46	BY	63/63 (100%)	-0.01	1 (1%) 70 49	17, 40, 74, 92	0
46	DY	63/63 (100%)	1.24	15 (23%) 2 1	89, 105, 112, 115	0
47	BZ	58/58 (100%)	-0.52	0 100 100	2, 8, 35, 48	0
47	DZ	58/58 (100%)	0.50	0 100 100	64, 81, 96, 102	0
48	B0	56/56 (100%)	-0.73	0 100 100	1, 11, 44, 65	0
48	D0	56/56 (100%)	1.20	7 (12%) 8 5	58, 89, 102, 109	0
49	B1	50/50 (100%)	-0.39	0 100 100	25, 38, 63, 84	0
49	D1	50/50 (100%)	1.15	11 (22%) 2 1	79, 99, 108, 112	0
50	B2	46/46 (100%)	-0.43	1 (2%) 62 41	3, 8, 17, 80	0
50	D2	46/46 (100%)	1.85	18 (39%) 1 0	58, 80, 89, 105	0
51	B3	64/64 (100%)	-0.54	0 100 100	5, 11, 20, 33	0
51	D3	64/64 (100%)	1.57	21 (32%) 1 0	66, 82, 93, 98	0
52	B4	38/38 (100%)	-0.47	0 100 100	4, 13, 33, 51	0
52	D4	38/38 (100%)	1.24	6 (15%) 5 2	65, 84, 98, 109	0
53	B5	191/207 (92%)	1.41	49 (25%) 1 1	108, 127, 138, 143	0
All	All	20734/20773 (99%)	0.13	1242 (5%) 27 15	1, 73, 130, 195	0

All (1242) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
20	CT	4	ILE	9.6
22	BA	2184	A	8.5
50	D2	46	LYS	8.2
24	DC	242	LYS	8.1
24	DC	241	GLY	7.8
22	BA	2101	A	6.7
38	DQ	9	ILE	6.7
9	CI	108	ALA	6.6
22	DA	331	C	6.6
38	DQ	8	VAL	6.6
38	DQ	29	SER	6.4

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Mol	Chain	Res	Type	RSRZ
24	BC	234	GLY	6.4
24	BC	240	PHE	6.4
12	CL	25	GLU	6.2
22	BA	2100	G	6.2
24	DC	245	VAL	6.1
24	BC	242	LYS	6.1
9	CI	125	PRO	6.1
24	BC	233	GLY	6.0
7	CG	62	PHE	6.0
22	BA	2104	C	6.0
2	AB	156	GLY	6.0
50	B2	46	LYS	5.9
41	DT	36	LYS	5.9
24	DC	233	GLY	5.8
22	BA	2185	U	5.8
21	AU	38	TYR	5.8
17	AQ	20	SER	5.7
24	BC	238	ARG	5.6
24	DC	239	ASN	5.5
33	DL	92	LEU	5.4
52	D4	10	LEU	5.4
22	BA	2103	C	5.4
30	BI	2	ALA	5.3
24	DC	237	GLY	5.3
24	DC	244	PRO	5.3
42	DU	67	VAL	5.3
48	D0	27	SER	5.2
30	BI	12	GLN	5.2
20	CT	64	LYS	5.1
22	BA	2102	G	5.1
10	CJ	71	LEU	5.1
9	CI	124	ARG	5.1
41	DT	34	VAL	5.1
9	AI	119	ARG	5.1
24	BC	236	GLU	5.1
22	BA	1926	U	5.1
33	DL	71	ALA	5.1
21	CU	38	TYR	5.0
12	AL	25	GLU	5.0
1	CA	1539	C	5.0
9	CI	118	LEU	4.9
2	CB	67	ILE	4.9

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Mol	Chain	Res	Type	RSRZ
20	AT	68	HIS	4.9
11	AK	126	LYS	4.9
24	DC	240	PHE	4.9
22	BA	2125	G	4.9
24	DC	235	GLY	4.9
30	BI	11	LEU	4.9
9	CI	120	LYS	4.9
30	DI	11	LEU	4.9
22	DA	2172	U	4.9
51	D3	37	ALA	4.8
22	BA	2190	G	4.8
30	BI	53	LEU	4.8
30	DI	78	VAL	4.8
14	CN	2	ALA	4.8
13	CM	96	PRO	4.8
41	DT	60	THR	4.7
13	CM	106	ALA	4.7
7	CG	27	VAL	4.7
30	BI	3	LYS	4.7
9	CI	123	ARG	4.7
22	BA	2156	G	4.6
24	BC	235	GLY	4.6
25	DD	126	ASN	4.6
42	DU	58	ILE	4.6
9	AI	123	ARG	4.6
1	AA	1030	U	4.6
24	DC	238	ARG	4.6
7	CG	39	ALA	4.6
51	D3	61	CYS	4.5
1	AA	121	U	4.5
42	DU	36	VAL	4.5
9	AI	127	PHE	4.5
22	BA	2175	C	4.4
9	CI	128	SER	4.4
1	AA	1017	U	4.4
30	DI	27	ALA	4.4
2	AB	157	LEU	4.4
24	DC	246	THR	4.4
42	DU	80	ALA	4.4
7	CG	30	LEU	4.4
48	D0	3	VAL	4.4
30	BI	27	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
18	AR	20	GLU	4.3
1	CA	1235	U	4.3
20	CT	72	ALA	4.3
45	DX	49	LEU	4.3
50	D2	42	LEU	4.3
10	AJ	102	LEU	4.3
22	BA	2189	U	4.3
1	AA	1535	C	4.3
1	AA	1536	C	4.3
22	BA	2155	U	4.3
13	CM	45	ILE	4.3
31	DJ	81	ILE	4.3
22	BA	2136	G	4.2
9	CI	127	PHE	4.2
33	DL	72	ALA	4.2
29	BH	120	GLY	4.2
1	AA	994	A	4.2
24	DC	248	TRP	4.2
30	BI	54	PRO	4.2
24	BC	237	GLY	4.2
13	CM	89	LEU	4.2
22	BA	2098	U	4.2
1	CA	983	A	4.2
1	AA	995	C	4.2
22	BA	2182	U	4.1
9	CI	119	ARG	4.1
22	BA	2169	A	4.1
24	DC	232	HIS	4.1
17	AQ	83	VAL	4.1
53	B5	216	THR	4.1
22	BA	2172	U	4.1
45	DX	20	HIS	4.1
42	DU	39	ILE	4.1
38	DQ	2	ALA	4.1
22	BA	2174	C	4.0
22	BA	2183	A	4.0
2	CB	132	LYS	4.0
2	CB	88	ASP	4.0
30	BI	86	ILE	4.0
7	CG	38	THR	4.0
22	DA	1537	G	4.0
22	BA	2176	A	4.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1538	C	4.0
25	DD	200	ASP	4.0
2	AB	139	ARG	4.0
30	DI	53	LEU	4.0
30	DI	74	PRO	3.9
1	CA	1537	U	3.9
29	DH	84	ALA	3.9
10	AJ	59	LYS	3.9
9	CI	129	LYS	3.9
22	BA	2178	C	3.9
32	DK	83	ALA	3.9
33	DL	19	LEU	3.9
9	AI	116	VAL	3.9
24	BC	247	PRO	3.9
10	CJ	74	VAL	3.9
35	DN	21	PHE	3.9
24	BC	243	HIS	3.9
30	BI	78	VAL	3.8
22	BA	2115	G	3.8
19	CS	49	ILE	3.8
1	CA	1243	C	3.8
1	CA	1535	C	3.8
30	BI	4	LYS	3.8
2	CB	213	TYR	3.8
2	CB	149	GLY	3.8
12	AL	124	ALA	3.8
49	D1	36	LEU	3.8
10	CJ	39	PRO	3.8
20	CT	66	LEU	3.8
9	CI	116	VAL	3.7
29	BH	144	VAL	3.7
42	DU	13	VAL	3.7
10	AJ	75	ASP	3.7
24	DC	49	ILE	3.7
20	CT	3	ASN	3.7
50	D2	33	ARG	3.7
10	CJ	60	ASP	3.7
9	AI	43	THR	3.7
38	DQ	11	ARG	3.7
1	CA	994	A	3.7
29	BH	122	LEU	3.7
10	CJ	41	PRO	3.7

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Mol	Chain	Res	Type	RSRZ
21	AU	24	GLU	3.7
29	DH	149	GLU	3.7
48	D0	2	ALA	3.7
33	DL	101	ILE	3.7
41	DT	43	ILE	3.7
10	CJ	42	LEU	3.7
22	BA	2127	G	3.7
13	CM	18	ALA	3.7
29	BH	63	ALA	3.7
1	AA	990	C	3.7
19	CS	71	LEU	3.7
33	DL	68	SER	3.6
10	CJ	77	VAL	3.6
22	BA	2140	G	3.6
19	CS	15	LEU	3.6
35	DN	20	MET	3.6
13	CM	7	ILE	3.6
1	AA	1534	A	3.6
38	DQ	33	ARG	3.6
1	CA	1536	C	3.6
22	BA	2143	C	3.6
51	D3	64	TYR	3.6
53	B5	180	SER	3.6
22	BA	2124	G	3.6
1	CA	1538	C	3.6
13	AM	99	GLY	3.6
33	DL	15	ALA	3.6
42	DU	14	LEU	3.6
37	DP	110	ILE	3.6
24	BC	241	GLY	3.5
42	DU	20	GLY	3.5
10	CJ	8	ILE	3.5
22	BA	2177	C	3.5
22	DA	1217	U	3.5
12	CL	44	LYS	3.5
44	DW	54	GLY	3.5
40	DS	84	ARG	3.5
29	BH	91	PHE	3.5
24	DC	9	THR	3.5
21	CU	14	VAL	3.5
29	BH	146	VAL	3.5
36	DO	103	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
29	BH	81	ALA	3.5
33	DL	81	ASP	3.5
41	DT	35	ALA	3.5
22	BA	2099	U	3.5
10	CJ	76	ILE	3.5
31	DJ	142	ILE	3.5
42	DU	33	LYS	3.5
22	BA	2135	A	3.5
41	DT	57	VAL	3.5
30	DI	14	ALA	3.5
30	DI	54	PRO	3.5
41	BT	1	MET	3.5
22	BA	2157	G	3.5
42	DU	60	GLU	3.4
51	D3	15	LYS	3.4
10	CJ	102	LEU	3.4
30	DI	28	LEU	3.4
20	CT	68	HIS	3.4
21	CU	37	PHE	3.4
30	DI	38	PHE	3.4
7	CG	6	VAL	3.4
20	CT	71	LYS	3.4
48	D0	7	LYS	3.4
10	CJ	75	ASP	3.4
7	CG	43	VAL	3.4
8	CH	110	VAL	3.4
53	B5	120	VAL	3.4
22	BA	2153	C	3.4
22	BA	2192	U	3.4
22	DA	12	U	3.4
38	DQ	65	ILE	3.4
30	DI	22	PRO	3.4
25	DD	154	LYS	3.4
30	DI	79	LEU	3.4
26	DE	73	ILE	3.4
7	CG	5	ARG	3.4
30	DI	13	VAL	3.4
33	DL	27	LEU	3.4
22	BA	2123	G	3.4
2	AB	155	GLY	3.4
29	BH	69	ALA	3.4
22	BA	2114	A	3.3

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Mol	Chain	Res	Type	RSRZ
20	CT	6	SER	3.3
30	BI	13	VAL	3.3
42	DU	41	LEU	3.3
22	BA	2402	U	3.3
10	CJ	61	ALA	3.3
30	DI	10	LYS	3.3
53	B5	50	ILE	3.3
19	CS	76	PRO	3.3
27	DF	84	PRO	3.3
22	BA	2144	G	3.3
33	DL	78	ARG	3.3
53	B5	76	LEU	3.3
1	CA	1236	A	3.3
22	BA	2191	A	3.3
22	BA	2106	U	3.3
52	D4	18	LYS	3.3
29	BH	67	ALA	3.3
29	BH	148	ALA	3.3
14	CN	20	TYR	3.3
22	DA	2126	A	3.3
22	BA	2188	U	3.3
22	BA	2165	C	3.3
30	BI	80	LEU	3.3
29	DH	144	VAL	3.3
19	AS	34	TRP	3.3
48	D0	8	PRO	3.3
10	CJ	10	LEU	3.3
49	D1	24	THR	3.3
4	CD	28	ILE	3.3
25	DD	166	GLY	3.3
33	DL	34	GLY	3.3
44	DW	52	GLY	3.3
8	CH	2	SER	3.2
41	DT	81	LYS	3.2
11	AK	129	VAL	3.2
30	BI	110	ALA	3.2
31	BJ	142	ILE	3.2
22	BA	2107	G	3.2
7	CG	4	ARG	3.2
22	BA	2117	A	3.2
29	BH	97	ARG	3.2
9	CI	114	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
29	BH	96	THR	3.2
7	AG	109	ARG	3.2
10	CJ	9	ARG	3.2
30	DI	23	PRO	3.2
14	CN	59	ARG	3.2
33	DL	84	LYS	3.2
51	D3	36	LYS	3.2
10	CJ	52	LEU	3.2
29	BH	58	LEU	3.2
6	AF	91	ARG	3.2
1	AA	1019	A	3.2
24	DC	47	GLY	3.2
4	CD	25	VAL	3.2
16	CP	39	PHE	3.2
21	AU	32	VAL	3.2
53	B5	179	ALA	3.2
40	DS	97	LEU	3.1
41	DT	61	LEU	3.1
14	CN	10	GLU	3.1
9	CI	67	VAL	3.1
6	CF	79	ARG	3.1
42	DU	12	ILE	3.1
9	AI	126	GLN	3.1
42	DU	71	ALA	3.1
46	DY	32	ALA	3.1
42	DU	78	GLY	3.1
22	BA	138	U	3.1
32	DK	35	VAL	3.1
7	CG	42	ILE	3.1
14	AN	36	ALA	3.1
1	CA	1218	C	3.1
44	DW	17	GLU	3.1
30	DI	70	VAL	3.1
29	BH	102	ALA	3.1
35	DN	111	ALA	3.1
39	DR	8	GLY	3.1
21	AU	14	VAL	3.1
27	DF	31	VAL	3.1
29	BH	110	VAL	3.1
37	DP	102	GLU	3.1
30	DI	20	PRO	3.1
51	D3	25	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
1	AA	1018	G	3.1
30	DI	129	ILE	3.1
35	DN	97	ILE	3.1
53	B5	172	ILE	3.1
22	BA	1066	U	3.1
45	DX	22	LEU	3.1
3	CC	155	GLY	3.1
44	DW	55	ARG	3.1
9	AI	128	SER	3.1
14	AN	12	LYS	3.1
20	AT	36	TYR	3.1
1	CA	1302	C	3.0
22	DA	2712	C	3.0
29	BH	56	ALA	3.0
53	B5	166	ASN	3.0
22	DA	801	G	3.0
3	CC	39	VAL	3.0
22	BA	2166	U	3.0
26	DE	96	VAL	3.0
2	CB	164	ILE	3.0
42	DU	35	ILE	3.0
13	CM	69	LEU	3.0
24	DC	243	HIS	3.0
50	D2	13	ASN	3.0
2	CB	13	GLY	3.0
38	DQ	44	GLN	3.0
24	DC	228	VAL	3.0
30	BI	5	VAL	3.0
53	B5	35	THR	3.0
30	BI	38	PHE	3.0
30	DI	69	PHE	3.0
2	AB	136	MET	3.0
22	DA	2402	U	3.0
26	DE	177	PRO	3.0
26	DE	105	LEU	3.0
25	DD	8	LYS	3.0
33	DL	29	LYS	3.0
38	DQ	37	GLN	3.0
30	DI	68	THR	3.0
30	BI	20	PRO	3.0
33	DL	8	PRO	3.0
49	D1	52	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
53	B5	196	ALA	3.0
7	CG	32	VAL	3.0
22	DA	776	G	3.0
24	DC	250	VAL	3.0
26	DE	94	GLN	3.0
27	DF	154	ILE	3.0
22	BA	2126	A	3.0
24	DC	247	PRO	3.0
9	AI	122	ARG	3.0
30	DI	58	VAL	3.0
19	CS	74	PHE	3.0
24	DC	37	ASN	3.0
7	CG	120	LEU	2.9
41	BT	93	LEU	2.9
51	D3	57	LEU	2.9
22	BA	2159	G	2.9
25	DD	199	SER	2.9
1	AA	974	A	2.9
52	D4	21	GLY	2.9
53	B5	44	VAL	2.9
53	B5	63	VAL	2.9
24	DC	251	GLN	2.9
19	CS	66	MET	2.9
30	DI	118	THR	2.9
49	D1	11	LEU	2.9
27	DF	32	GLU	2.9
42	DU	55	PRO	2.9
51	D3	60	ALA	2.9
13	CM	16	VAL	2.9
42	DU	83	VAL	2.9
1	AA	973	G	2.9
26	DE	108	ILE	2.9
20	CT	24	ARG	2.9
46	DY	18	LEU	2.9
9	CI	43	THR	2.9
11	CK	126	LYS	2.9
49	D1	22	THR	2.9
22	DA	2174	C	2.9
30	BI	22	PRO	2.9
30	BI	56	PRO	2.9
25	DD	209	ALA	2.9
7	CG	73	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
18	CR	51	TYR	2.9
30	DI	24	VAL	2.9
8	AH	2	SER	2.9
9	AI	117	GLY	2.9
30	BI	135	SER	2.9
32	DK	68	GLY	2.9
4	AD	28	ILE	2.9
35	DN	28	LEU	2.9
24	DC	231	PRO	2.9
22	BA	2154	A	2.9
13	CM	60	VAL	2.9
29	BH	147	VAL	2.9
22	BA	1065	U	2.9
22	BA	2181	U	2.9
22	DA	2585	U	2.9
14	CN	8	ALA	2.9
50	D2	20	ALA	2.9
27	DF	128	TYR	2.9
20	AT	4	ILE	2.9
22	BA	2193	G	2.9
22	BA	2105	U	2.8
22	BA	2130	U	2.8
27	DF	73	SER	2.8
28	DG	150	ALA	2.8
42	DU	2	ALA	2.8
29	DH	91	PHE	2.8
53	B5	83	LYS	2.8
9	CI	54	LEU	2.8
1	AA	1021	A	2.8
22	BA	2158	A	2.8
22	BA	2171	A	2.8
22	BA	2121	G	2.8
29	BH	118	PRO	2.8
44	DW	56	ASP	2.8
13	CM	73	ILE	2.8
14	AN	21	PHE	2.8
14	CN	48	LEU	2.8
33	DL	11	GLY	2.8
46	DY	19	LEU	2.8
4	AD	27	ALA	2.8
30	BI	14	ALA	2.8
25	DD	128	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
30	BI	23	PRO	2.8
30	BI	75	PRO	2.8
50	D2	35	ARG	2.8
3	CC	192	THR	2.8
7	CG	87	VAL	2.8
22	DA	345	A	2.8
53	B5	110	ASP	2.8
7	CG	118	LEU	2.8
26	DE	119	ILE	2.8
22	BA	1179	G	2.8
22	BA	1924	C	2.8
46	DY	33	ALA	2.8
53	B5	46	ALA	2.8
13	CM	101	ARG	2.8
14	CN	56	SER	2.8
29	BH	131	SER	2.8
32	DK	94	PRO	2.8
13	CM	102	THR	2.8
22	BA	2122	U	2.8
1	AA	1031	C	2.8
9	AI	121	ALA	2.8
21	CU	47	ARG	2.8
22	DA	1983	G	2.8
37	DP	92	VAL	2.8
21	CU	16	LEU	2.8
33	DL	79	LEU	2.8
7	CG	7	ILE	2.8
26	DE	103	GLY	2.7
31	DJ	47	HIS	2.7
27	DF	72	LYS	2.7
30	BI	15	ALA	2.7
36	DO	3	LYS	2.7
38	DQ	5	LYS	2.7
39	DR	76	LYS	2.7
22	BA	2113	U	2.7
26	DE	33	VAL	2.7
30	DI	9	VAL	2.7
51	D3	58	VAL	2.7
30	DI	75	PRO	2.7
30	BI	79	LEU	2.7
33	DL	82	LEU	2.7
50	D2	31	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
7	CG	133	THR	2.7
22	BA	885	C	2.7
33	DL	42	SER	2.7
50	D2	43	THR	2.7
22	BA	2133	G	2.7
22	BA	2141	G	2.7
35	DN	2	ARG	2.7
9	CI	13	LYS	2.7
50	D2	2	LYS	2.7
51	D3	28	ASN	2.7
50	D2	10	LEU	2.7
31	DJ	84	ILE	2.7
1	AA	1492	A	2.7
1	CA	101	A	2.7
22	BA	1847	A	2.7
9	CI	68	LYS	2.7
20	CT	9	LYS	2.7
29	BH	86	ASP	2.7
38	DQ	25	TYR	2.7
14	AN	2	ALA	2.7
29	DH	142	VAL	2.7
7	AG	88	PRO	2.7
22	BA	1171	G	2.7
9	AI	46	MET	2.7
14	CN	6	MET	2.7
21	CU	35	ARG	2.7
14	CN	58	SER	2.7
22	BA	884	U	2.7
22	DA	224	U	2.7
29	BH	134	VAL	2.7
34	DM	2	LEU	2.7
53	B5	69	LEU	2.7
1	CA	1320	C	2.7
22	BA	1072	C	2.7
22	BA	1925	C	2.7
9	AI	72	ILE	2.7
31	DJ	93	ILE	2.7
30	DI	17	MET	2.7
2	CB	145	GLU	2.7
30	DI	4	LYS	2.7
46	BY	2	LYS	2.7
51	D3	39	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
22	DA	7	G	2.7
22	DA	1087	G	2.7
42	DU	31	SER	2.7
7	AG	69	VAL	2.7
22	BA	1923	U	2.7
22	DA	2690	U	2.7
13	AM	105	ASN	2.7
42	DU	40	ASN	2.7
14	AN	82	ILE	2.6
36	DO	58	ILE	2.6
53	B5	66	PRO	2.6
33	DL	70	LYS	2.6
38	DQ	7	GLY	2.6
19	AS	39	THR	2.6
2	CB	83	ALA	2.6
24	DC	220	VAL	2.6
29	BH	52	ALA	2.6
30	DI	44	ALA	2.6
33	DL	57	LEU	2.6
41	DT	63	VAL	2.6
53	B5	186	LEU	2.6
7	CG	104	ILE	2.6
13	AM	33	ILE	2.6
19	CS	12	ASP	2.6
53	B5	23	ILE	2.6
9	AI	125	PRO	2.6
41	DT	59	ASN	2.6
49	D1	53	LYS	2.6
19	CS	33	THR	2.6
42	DU	77	THR	2.6
14	AN	42	TRP	2.6
2	CB	209	ALA	2.6
7	CG	141	VAL	2.6
9	CI	47	VAL	2.6
26	DE	50	ALA	2.6
30	DI	5	VAL	2.6
40	DS	20	VAL	2.6
42	DU	70	VAL	2.6
42	DU	76	ALA	2.6
43	DV	94	ALA	2.6
53	B5	65	LEU	2.6
7	AG	5	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
9	AI	120	LYS	2.6
28	DG	153	ARG	2.6
30	DI	109	ILE	2.6
38	DQ	6	ARG	2.6
1	CA	4	U	2.6
1	CA	1351	U	2.6
21	CU	8	GLU	2.6
22	BA	1094	U	2.6
1	CA	1020	G	2.6
22	DA	2630	G	2.6
13	AM	89	LEU	2.6
29	BH	111	ALA	2.6
30	BI	58	VAL	2.6
30	BI	115	ALA	2.6
30	DI	133	ALA	2.6
51	D3	17	THR	2.6
4	AD	22	LYS	2.6
22	BA	613	A	2.6
39	DR	73	LYS	2.6
49	D1	10	LYS	2.6
52	D4	23	ILE	2.6
51	D3	46	PRO	2.6
22	DA	2666	C	2.6
41	DT	37	ASP	2.6
51	D3	54	ASP	2.6
46	DY	22	LEU	2.6
26	DE	36	ALA	2.6
30	BI	140	VAL	2.6
53	B5	77	ALA	2.6
53	B5	213	VAL	2.6
1	CA	843	U	2.6
7	CG	36	LYS	2.6
20	CT	8	LYS	2.6
22	BA	2131	U	2.6
22	DA	1094	U	2.6
35	DN	4	ARG	2.6
35	DN	46	ARG	2.6
38	DQ	28	ARG	2.6
39	DR	27	ILE	2.6
13	CM	86	TYR	2.6
18	AR	51	TYR	2.6
20	CT	75	HIS	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	88	G	2.6
22	DA	1238	G	2.6
26	DE	75	SER	2.6
33	DL	107	PHE	2.6
22	BA	1918	A	2.6
38	DQ	59	GLN	2.6
52	D4	38	GLY	2.6
6	AF	61	LEU	2.6
7	CG	124	LEU	2.6
9	CI	112	GLU	2.6
7	AG	6	VAL	2.6
9	CI	111	VAL	2.6
13	AM	2	ALA	2.6
14	CN	34	VAL	2.6
39	DR	72	VAL	2.6
42	DU	51	ALA	2.6
7	CG	12	ILE	2.5
30	DI	56	PRO	2.5
36	DO	32	PRO	2.5
29	BH	88	GLY	2.5
2	CB	148	LEU	2.5
29	BH	62	LEU	2.5
32	DK	86	LEU	2.5
40	DS	46	LEU	2.5
7	CG	80	VAL	2.5
9	AI	124	ARG	2.5
20	CT	5	LYS	2.5
22	BA	2112	G	2.5
22	DA	1622	G	2.5
22	DA	2383	G	2.5
24	DC	18	LYS	2.5
29	DH	83	LYS	2.5
31	DJ	48	VAL	2.5
38	DQ	16	LYS	2.5
53	B5	73	VAL	2.5
1	AA	1014	A	2.5
7	CG	61	ALA	2.5
22	DA	513	A	2.5
22	DA	866	A	2.5
22	DA	1067	A	2.5
30	DI	15	ALA	2.5
10	AJ	40	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
16	CP	3	THR	2.5
17	CQ	70	THR	2.5
1	CA	984	C	2.5
22	DA	2150	C	2.5
53	B5	193	PHE	2.5
30	DI	26	PRO	2.5
40	DS	81	SER	2.5
1	CA	1240	U	2.5
22	BA	2139	U	2.5
22	DA	2149	U	2.5
41	DT	50	LEU	2.5
13	AM	101	ARG	2.5
30	BI	57	VAL	2.5
46	DY	46	VAL	2.5
9	AI	112	GLU	2.5
26	DE	135	ALA	2.5
53	B5	27	ALA	2.5
27	DF	67	ILE	2.5
13	CM	63	PHE	2.5
1	AA	1441	A	2.5
22	DA	101	A	2.5
1	AA	963	G	2.5
1	CA	942	G	2.5
31	DJ	46	PRO	2.5
10	CJ	11	LYS	2.5
22	DA	1961	C	2.5
34	DM	99	GLY	2.5
50	D2	21	ARG	2.5
46	DY	10	SER	2.5
14	CN	11	VAL	2.5
9	CI	17	ALA	2.5
12	CL	124	ALA	2.5
29	BH	84	ALA	2.5
13	CM	4	ILE	2.5
20	CT	67	ILE	2.5
9	CI	66	THR	2.5
15	CO	25	THR	2.5
19	AS	74	PHE	2.5
27	DF	155	THR	2.5
29	DH	79	THR	2.5
2	CB	129	LEU	2.5
7	CG	114	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
29	BH	68	ARG	2.5
41	DT	7	LEU	2.5
46	DY	43	LEU	2.5
1	AA	1016	A	2.5
24	DC	249	GLY	2.5
42	DU	32	GLY	2.5
1	AA	1003	G	2.5
10	AJ	34	ALA	2.5
53	B5	205	ALA	2.5
1	AA	87	C	2.5
1	CA	979	C	2.5
25	DD	168	GLU	2.5
46	DY	13	GLU	2.5
19	CS	44	MET	2.5
42	DU	85	PHE	2.5
10	CJ	44	THR	2.5
10	CJ	69	THR	2.5
33	DL	14	LYS	2.5
26	DE	118	LEU	2.5
53	B5	195	ARG	2.5
9	CI	117	GLY	2.5
33	DL	53	GLY	2.5
29	BH	130	VAL	2.5
30	DI	57	VAL	2.5
41	DT	58	VAL	2.5
30	DI	114	ALA	2.4
27	BF	130	MET	2.4
36	DO	20	GLU	2.4
9	AI	20	PHE	2.4
30	BI	67	PHE	2.4
29	DH	123	ARG	2.4
31	DJ	37	ARG	2.4
1	CA	948	C	2.4
22	BA	2129	C	2.4
22	DA	583	G	2.4
22	DA	1092	C	2.4
22	DA	1210	G	2.4
27	DF	117	LEU	2.4
38	DQ	18	LEU	2.4
29	DH	118	PRO	2.4
1	CA	121	U	2.4
1	CA	1364	U	2.4

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Mol	Chain	Res	Type	RSRZ
3	AC	168	TYR	2.4
7	AG	142	HIS	2.4
5	CE	158	GLY	2.4
9	AI	44	ALA	2.4
25	DD	75	ALA	2.4
25	DD	132	ALA	2.4
29	BH	74	ALA	2.4
33	DL	103	ILE	2.4
50	D2	1	MET	2.4
29	BH	70	GLU	2.4
7	CG	35	LYS	2.4
12	CL	14	ARG	2.4
38	DQ	22	LYS	2.4
49	D1	37	LYS	2.4
7	CG	49	THR	2.4
32	DK	82	ASN	2.4
13	CM	10	PRO	2.4
22	DA	1214	A	2.4
19	CS	51	VAL	2.4
50	D2	9	VAL	2.4
22	DA	1764	C	2.4
22	DA	2000	C	2.4
51	D3	32	ILE	2.4
29	DH	12	LEU	2.4
26	DE	97	ASN	2.4
53	B5	52	PRO	2.4
2	AB	221	VAL	2.4
16	CP	20	VAL	2.4
44	DW	15	ASP	2.4
25	DD	6	GLY	2.4
20	CT	63	ALA	2.4
28	DG	103	ILE	2.4
42	DU	103	ILE	2.4
19	AS	56	GLN	2.4
5	CE	157	ARG	2.4
42	DU	79	LYS	2.4
44	DW	44	LYS	2.4
51	D3	41	LYS	2.4
53	B5	211	ARG	2.4
2	CB	69	PHE	2.4
21	AU	39	GLU	2.4
29	BH	149	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
30	BI	106	LEU	2.4
30	BI	66	SER	2.4
1	CA	108	G	2.4
1	CA	1242	G	2.4
22	BA	1922	G	2.4
22	DA	1093	G	2.4
27	DF	157	THR	2.4
42	DU	59	VAL	2.4
45	DX	48	THR	2.4
53	B5	202	PRO	2.4
19	CS	14	HIS	2.4
3	CC	162	ILE	2.4
7	AG	7	ILE	2.4
7	CG	150	ALA	2.4
14	AN	20	TYR	2.4
42	DU	44	LYS	2.4
35	DN	18	GLN	2.4
2	AB	135	LEU	2.4
7	CG	23	LEU	2.4
7	CG	66	LEU	2.4
14	CN	51	LEU	2.4
1	CA	1021	A	2.4
1	CA	1362	A	2.4
29	BH	60	GLU	2.4
1	AA	1537	U	2.4
1	CA	1321	U	2.4
2	AB	14	VAL	2.4
16	CP	15	PRO	2.4
22	BA	12	U	2.4
22	BA	2132	U	2.4
24	DC	234	GLY	2.3
14	CN	97	LYS	2.3
41	DT	33	LYS	2.3
50	D2	25	LYS	2.3
32	DK	37	ASP	2.3
22	BA	2138	G	2.3
22	DA	2124	G	2.3
7	CG	59	LEU	2.3
30	DI	12	GLN	2.3
46	DY	37	LEU	2.3
53	B5	38	PHE	2.3
37	DP	9	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
30	DI	98	VAL	2.3
51	D3	2	PRO	2.3
3	CC	2	GLY	2.3
5	CE	91	GLY	2.3
7	CG	76	LYS	2.3
22	DA	504	A	2.3
22	DA	2406	A	2.3
33	DL	31	GLY	2.3
40	DS	83	LYS	2.3
21	CU	45	ARG	2.3
20	AT	7	ALA	2.3
29	BH	36	ALA	2.3
30	BI	77	ALA	2.3
1	CA	209	U	2.3
2	AB	213	TYR	2.3
22	BA	2111	U	2.3
1	AA	1539	C	2.3
1	CA	1322	C	2.3
10	AJ	60	ASP	2.3
13	CM	11	ASP	2.3
29	BH	54	LEU	2.3
53	B5	156	GLU	2.3
22	BA	2152	G	2.3
22	BA	2186	G	2.3
27	DF	25	VAL	2.3
5	AE	26	LYS	2.3
12	CL	15	LYS	2.3
45	DX	26	LYS	2.3
19	AS	40	ILE	2.3
33	DL	73	ILE	2.3
4	CD	27	ALA	2.3
30	BI	118	THR	2.3
38	DQ	38	ALA	2.3
49	D1	23	THR	2.3
53	B5	169	THR	2.3
51	D3	43	HIS	2.3
7	CG	44	TYR	2.3
39	DR	83	TYR	2.3
14	CN	74	LEU	2.3
26	DE	153	LEU	2.3
1	CA	223	A	2.3
1	AA	991	U	2.3

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Mol	Chain	Res	Type	RSRZ
8	CH	60	GLU	2.3
41	DT	4	GLU	2.3
41	DT	42	GLU	2.3
19	CS	58	VAL	2.3
24	DC	255	LYS	2.3
30	BI	24	VAL	2.3
30	BI	81	LYS	2.3
33	DL	116	VAL	2.3
53	B5	75	VAL	2.3
4	AD	24	GLY	2.3
10	CJ	40	ILE	2.3
24	DC	254	GLY	2.3
42	DU	5	ILE	2.3
26	DE	182	ALA	2.3
2	CB	136	MET	2.3
1	AA	500	G	2.3
22	DA	245	G	2.3
13	AM	100	GLN	2.3
19	AS	7	LYS	2.3
49	D1	38	LYS	2.3
4	AD	88	GLU	2.3
9	CI	122	ARG	2.3
19	CS	37	ARG	2.3
22	DA	515	A	2.3
39	DR	20	VAL	2.3
39	DR	80	ARG	2.3
1	CA	1313	U	2.3
27	DF	44	ILE	2.3
39	DR	50	GLY	2.3
42	DU	38	GLY	2.3
33	DL	74	THR	2.3
35	DN	51	LEU	2.3
40	DS	36	LEU	2.3
19	AS	14	HIS	2.3
9	CI	39	PHE	2.3
19	CS	35	SER	2.3
29	BH	113	SER	2.3
9	AI	129	LYS	2.3
9	CI	126	GLN	2.3
24	DC	212	ARG	2.3
40	DS	99	ARG	2.3
41	DT	62	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
18	CR	20	GLU	2.2
46	DY	59	GLU	2.2
53	B5	184	GLU	2.2
9	CI	72	ILE	2.2
24	DC	41	GLY	2.2
27	DF	93	GLY	2.2
40	DS	80	PRO	2.2
1	CA	949	A	2.2
17	CQ	8	LEU	2.2
41	DT	32	LEU	2.2
7	AG	62	PHE	2.2
30	DI	126	THR	2.2
39	DR	82	HIS	2.2
51	D3	26	HIS	2.2
2	AB	131	LYS	2.2
29	DH	82	SER	2.2
40	DS	95	ARG	2.2
20	CT	70	ASN	2.2
29	BH	121	VAL	2.2
38	DQ	31	VAL	2.2
29	BH	94	ILE	2.2
2	AB	13	GLY	2.2
6	AF	88	MET	2.2
7	CG	16	PRO	2.2
14	CN	99	ALA	2.2
27	DF	16	LEU	2.2
28	DG	105	LEU	2.2
2	CB	104	TRP	2.2
1	CA	500	G	2.2
1	CA	1241	G	2.2
13	AM	14	HIS	2.2
22	BA	1093	G	2.2
22	BA	2148	G	2.2
22	DA	75	G	2.2
26	DE	131	THR	2.2
38	DQ	15	LYS	2.2
41	DT	9	LYS	2.2
7	AG	4	ARG	2.2
12	AL	38	TYR	2.2
22	BA	790	U	2.2
30	BI	8	TYR	2.2
1	AA	975	A	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	332	A	2.2
22	DA	878	A	2.2
25	DD	145	SER	2.2
46	DY	40	SER	2.2
9	AI	111	VAL	2.2
21	AU	53	VAL	2.2
38	DQ	4	VAL	2.2
53	B5	42	VAL	2.2
25	DD	136	ASN	2.2
20	CT	12	ILE	2.2
30	DI	130	GLU	2.2
39	DR	49	ILE	2.2
1	CA	1296	C	2.2
22	BA	2146	C	2.2
13	CM	84	GLY	2.2
27	DF	50	LEU	2.2
28	DG	136	ALA	2.2
30	DI	77	ALA	2.2
35	DN	25	ALA	2.2
13	AM	44	LYS	2.2
7	CG	78	ARG	2.2
24	DC	213	TRP	2.2
48	D0	19	HIS	2.2
53	B5	67	HIS	2.2
22	DA	931	U	2.2
26	DE	77	ILE	2.2
30	DI	86	ILE	2.2
53	B5	190	ILE	2.2
22	BA	2168	G	2.2
22	DA	1984	G	2.2
22	DA	2250	G	2.2
9	AI	35	LEU	2.2
46	DY	42	LEU	2.2
9	CI	121	ALA	2.2
10	AJ	55	PRO	2.2
13	AM	106	ALA	2.2
20	CT	7	ALA	2.2
29	DH	106	ALA	2.2
33	DL	102	GLY	2.2
7	AG	110	LYS	2.2
38	DQ	91	ASP	2.2
25	DD	59	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
22	BA	2179	C	2.2
53	B5	62	THR	2.2
40	DS	45	VAL	2.2
10	AJ	73	LEU	2.2
2	AB	12	ALA	2.2
10	CJ	58	ASN	2.2
11	AK	66	ALA	2.2
26	DE	104	ALA	2.2
41	DT	83	ALA	2.2
13	AM	112	PRO	2.2
33	DL	26	GLY	2.2
51	D3	16	LYS	2.2
22	DA	767	U	2.2
41	DT	12	ARG	2.2
50	D2	14	ARG	2.2
52	D4	12	ARG	2.2
31	DJ	119	PHE	2.2
53	B5	106	ASP	2.2
22	BA	2108	A	2.2
22	BA	2147	A	2.2
22	DA	2173	A	2.2
1	CA	1032	G	2.2
22	DA	327	G	2.2
22	DA	2112	G	2.2
11	AK	74	VAL	2.1
26	DE	31	VAL	2.1
29	BH	115	VAL	2.1
53	B5	145	THR	2.1
22	DA	267	C	2.1
30	DI	35	ILE	2.1
41	DT	11	LEU	2.1
26	DE	95	LYS	2.1
30	BI	136	MET	2.1
35	DN	40	LYS	2.1
46	DY	44	LYS	2.1
51	D3	3	LYS	2.1
2	CB	206	ALA	2.1
9	CI	16	ALA	2.1
42	DU	75	ALA	2.1
53	B5	187	ALA	2.1
26	DE	67	ARG	2.1
27	DF	65	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
53	B5	107	GLY	2.1
2	CB	32	PHE	2.1
1	CA	965	U	2.1
22	DA	846	U	2.1
2	CB	96	TRP	2.1
9	CI	55	VAL	2.1
10	CJ	51	VAL	2.1
13	CM	43	VAL	2.1
29	DH	130	VAL	2.1
13	CM	9	ILE	2.1
14	CN	30	ILE	2.1
22	DA	505	A	2.1
30	DI	55	ILE	2.1
30	DI	101	ILE	2.1
10	CJ	46	LYS	2.1
14	AN	48	LEU	2.1
20	CT	69	LYS	2.1
29	BH	71	LYS	2.1
33	DL	61	LEU	2.1
41	DT	19	LYS	2.1
42	DU	43	LYS	2.1
1	CA	102	G	2.1
1	CA	971	G	2.1
1	CA	1222	G	2.1
14	AN	6	MET	2.1
10	AJ	62	ARG	2.1
22	BA	2120	G	2.1
22	DA	1721	G	2.1
22	DA	2627	G	2.1
30	DI	125	MET	2.1
31	DJ	1	MET	2.1
35	DN	1	MET	2.1
12	CL	2	ALA	2.1
30	DI	76	ALA	2.1
37	DP	95	ALA	2.1
38	DQ	13	ARG	2.1
39	DR	78	ARG	2.1
14	CN	5	SER	2.1
29	BH	85	GLY	2.1
35	DN	105	GLY	2.1
22	DA	1278	C	2.1
24	BC	250	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
30	BI	70	VAL	2.1
40	DS	47	VAL	2.1
50	D2	30	VAL	2.1
13	CM	13	LYS	2.1
26	DE	175	ILE	2.1
28	DG	107	LEU	2.1
34	DM	124	LEU	2.1
40	DS	98	LYS	2.1
45	DX	25	THR	2.1
46	DY	56	LEU	2.1
40	DS	86	MET	2.1
43	DV	48	MET	2.1
29	BH	140	ALA	2.1
7	CG	2	PRO	2.1
10	CJ	79	PRO	2.1
27	BF	116	GLY	2.1
53	B5	96	GLY	2.1
3	CC	76	VAL	2.1
22	DA	329	G	2.1
22	DA	333	G	2.1
22	DA	1068	G	2.1
22	DA	2061	G	2.1
3	CC	43	LEU	2.1
3	CC	182	ILE	2.1
26	DE	200	LEU	2.1
53	B5	194	ILE	2.1
4	CD	73	ARG	2.1
38	DQ	30	ARG	2.1
30	DI	110	ALA	2.1
20	CT	61	GLN	2.1
2	CB	155	GLY	2.1
14	CN	52	PRO	2.1
50	D2	18	PHE	2.1
2	CB	107	VAL	2.1
10	CJ	98	VAL	2.1
21	CU	54	LYS	2.1
22	DA	1085	A	2.1
22	DA	2171	A	2.1
48	D0	37	LYS	2.1
2	CB	40	ILE	2.1
2	CB	151	ILE	2.1
10	AJ	92	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
16	CP	4	ILE	2.1
16	CP	52	LEU	2.1
17	AQ	8	LEU	2.1
27	DF	156	ILE	2.1
33	DL	100	ILE	2.1
35	DN	10	LEU	2.1
53	B5	161	ARG	2.1
53	B5	162	ILE	2.1
24	BC	232	HIS	2.1
31	DJ	74	TYR	2.1
49	D1	21	TYR	2.1
1	AA	1027	C	2.1
1	CA	1305	G	2.1
10	CJ	94	ALA	2.1
14	AN	44	ALA	2.1
22	DA	1518	C	2.1
22	BA	1062	G	2.1
22	BA	1087	G	2.1
22	BA	2116	G	2.1
22	DA	70	G	2.1
22	DA	1341	G	2.1
53	B5	36	ALA	2.1
20	CT	13	GLN	2.1
33	DL	49	GLY	2.1
14	CN	57	PRO	2.1
38	DQ	101	PHE	2.1
1	CA	1540	U	2.0
26	DE	196	VAL	2.0
29	BH	108	VAL	2.0
30	DI	140	VAL	2.0
42	DU	42	VAL	2.0
7	CG	50	LEU	2.0
14	AN	63	ARG	2.0
16	CP	54	LEU	2.0
24	DC	64	ILE	2.0
7	CG	142	HIS	2.0
53	B5	108	TRP	2.0
7	AG	38	THR	2.0
22	DA	514	A	2.0
22	DA	1205	A	2.0
26	DE	26	ALA	2.0
30	BI	96	ASP	2.0

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Mol	Chain	Res	Type	RSRZ
33	DL	67	THR	2.0
38	DQ	27	ALA	2.0
20	CT	31	PHE	2.0
25	DD	10	GLY	2.0
39	DR	86	GLN	2.0
50	D2	27	GLY	2.0
1	AA	1208	C	2.0
20	CT	33	LYS	2.0
29	BH	114	GLU	2.0
10	AJ	51	VAL	2.0
22	DA	531	C	2.0
22	DA	1644	C	2.0
39	DR	10	LYS	2.0
1	AA	1002	G	2.0
1	AA	1053	G	2.0
1	AA	1353	G	2.0
2	CB	135	LEU	2.0
13	CM	34	LEU	2.0
19	CS	78	ARG	2.0
22	DA	117	G	2.0
22	DA	411	G	2.0
22	DA	1026	G	2.0
22	DA	1514	G	2.0
26	DE	164	LEU	2.0
27	DF	30	ARG	2.0
42	DU	29	LEU	2.0
26	DE	55	SER	2.0
29	DH	99	ILE	2.0
1	CA	219	U	2.0
22	BA	139	U	2.0
22	DA	29	U	2.0
22	DA	2245	U	2.0
24	BC	239	ASN	2.0
3	CC	165	THR	2.0
30	DI	18	ALA	2.0
40	DS	44	ALA	2.0
30	DI	8	TYR	2.0
29	BH	101	ASP	2.0
25	DD	144	GLY	2.0
24	DC	8	PRO	2.0
25	DD	23	PRO	2.0
26	DE	132	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
30	DI	45	LYS	2.0
30	DI	82	LYS	2.0
13	CM	97	VAL	2.0
22	DA	1008	A	2.0
10	CJ	45	ARG	2.0
29	DH	61	VAL	2.0
14	AN	46	LEU	2.0
27	DF	34	ILE	2.0
30	BI	101	ILE	2.0
41	DT	30	ILE	2.0
1	CA	1317	C	2.0
22	DA	318	C	2.0
22	DA	672	C	2.0

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

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

6.3 Carbohydrates [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3040	1/1	-0.06	0.28	94,94,94,94	0
54	MG	DA	3132	1/1	-0.00	0.33	123,123,123,123	0
54	MG	DA	3144	1/1	0.06	0.24	96,96,96,96	0
54	MG	DA	3025	1/1	0.23	0.38	120,120,120,120	0
54	MG	DA	3130	1/1	0.23	0.44	108,108,108,108	0
54	MG	AA	1617	1/1	0.34	0.25	124,124,124,124	0
54	MG	CA	1634	1/1	0.44	0.13	143,143,143,143	0
54	MG	CA	1651	1/1	0.46	0.26	70,70,70,70	0
54	MG	BA	3102	1/1	0.48	0.21	68,68,68,68	0
54	MG	CA	1644	1/1	0.52	0.32	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3091	1/1	0.54	0.23	128,128,128,128	0
54	MG	DA	3055	1/1	0.55	0.23	109,109,109,109	0
54	MG	CA	1626	1/1	0.57	0.24	125,125,125,125	0
54	MG	DA	3146	1/1	0.57	0.26	68,68,68,68	0
54	MG	DA	3092	1/1	0.58	0.15	123,123,123,123	0
54	MG	DA	3061	1/1	0.61	0.42	91,91,91,91	0
54	MG	AA	1658	1/1	0.62	0.09	71,71,71,71	0
54	MG	DA	3127	1/1	0.63	0.27	91,91,91,91	0
54	MG	CA	1633	1/1	0.67	0.11	134,134,134,134	0
54	MG	DA	3056	1/1	0.67	0.17	103,103,103,103	0
54	MG	DA	3060	1/1	0.69	0.25	92,92,92,92	0
54	MG	DA	3135	1/1	0.70	0.19	112,112,112,112	0
54	MG	DA	3114	1/1	0.70	0.16	126,126,126,126	0
54	MG	DA	3145	1/1	0.70	0.28	60,60,60,60	0
54	MG	DA	3093	1/1	0.70	0.12	119,119,119,119	0
54	MG	DA	3158	1/1	0.70	0.20	52,52,52,52	0
54	MG	DA	3041	1/1	0.71	0.09	96,96,96,96	0
54	MG	DA	3150	1/1	0.71	0.18	86,86,86,86	0
54	MG	DA	3136	1/1	0.71	0.31	46,46,46,46	0
54	MG	CA	1627	1/1	0.72	0.09	116,116,116,116	0
54	MG	DA	3031	1/1	0.73	0.35	95,95,95,95	0
54	MG	DA	3047	1/1	0.73	0.08	132,132,132,132	0
54	MG	DL	201	1/1	0.73	0.39	95,95,95,95	0
54	MG	AA	1660	1/1	0.74	0.27	72,72,72,72	0
54	MG	DA	3071	1/1	0.74	0.20	99,99,99,99	0
54	MG	DA	3089	1/1	0.74	0.12	106,106,106,106	0
54	MG	AA	1665	1/1	0.74	0.14	61,61,61,61	0
54	MG	DA	3004	1/1	0.74	0.22	112,112,112,112	0
54	MG	BA	3057	1/1	0.74	0.32	40,40,40,40	0
54	MG	DA	3027	1/1	0.74	0.20	106,106,106,106	0
54	MG	DA	3059	1/1	0.74	0.16	87,87,87,87	0
54	MG	AA	1659	1/1	0.74	0.21	68,68,68,68	0
54	MG	DA	3057	1/1	0.75	0.47	99,99,99,99	0
54	MG	DA	3155	1/1	0.76	0.19	51,51,51,51	0
54	MG	DA	3118	1/1	0.76	0.20	113,113,113,113	0
54	MG	DA	3162	1/1	0.76	0.24	66,66,66,66	0
54	MG	CA	1628	1/1	0.76	0.10	137,137,137,137	0
54	MG	DA	3104	1/1	0.77	0.16	97,97,97,97	0
54	MG	CA	1650	1/1	0.77	0.09	85,85,85,85	0
54	MG	DA	3159	1/1	0.77	0.15	71,71,71,71	0
54	MG	DA	3147	1/1	0.77	0.33	49,49,49,49	0
54	MG	BA	3179	1/1	0.77	0.47	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1654	1/1	0.78	0.10	70,70,70,70	0
54	MG	DA	3074	1/1	0.78	0.10	96,96,96,96	0
54	MG	AA	1667	1/1	0.78	0.07	54,54,54,54	0
54	MG	CA	1647	1/1	0.79	0.31	72,72,72,72	0
54	MG	CA	1629	1/1	0.79	0.22	123,123,123,123	0
54	MG	DA	3149	1/1	0.79	0.35	77,77,77,77	0
54	MG	BA	3176	1/1	0.79	0.21	37,37,37,37	0
54	MG	DA	3154	1/1	0.79	0.17	63,63,63,63	0
54	MG	AA	1652	1/1	0.80	0.21	63,63,63,63	0
54	MG	DA	3083	1/1	0.80	0.08	116,116,116,116	0
54	MG	DA	3139	1/1	0.80	0.24	49,49,49,49	0
54	MG	AA	1670	1/1	0.80	0.30	49,49,49,49	0
54	MG	AA	1671	1/1	0.80	0.38	52,52,52,52	0
54	MG	AM	201	1/1	0.80	0.13	63,63,63,63	0
54	MG	BA	3055	1/1	0.80	0.36	89,89,89,89	0
54	MG	AA	1657	1/1	0.80	0.20	42,42,42,42	0
54	MG	DA	3006	1/1	0.80	0.09	127,127,127,127	0
54	MG	DA	3116	1/1	0.80	0.12	106,106,106,106	0
54	MG	DA	3008	1/1	0.80	0.13	96,96,96,96	0
54	MG	DA	3156	1/1	0.80	0.15	72,72,72,72	0
54	MG	DA	3016	1/1	0.80	0.11	103,103,103,103	0
54	MG	BA	3059	1/1	0.80	0.25	27,27,27,27	0
54	MG	AA	1614	1/1	0.80	0.23	97,97,97,97	0
54	MG	DA	3134	1/1	0.80	0.11	112,112,112,112	0
54	MG	DA	3105	1/1	0.81	0.10	77,77,77,77	0
54	MG	DA	3094	1/1	0.81	0.12	99,99,99,99	0
54	MG	CA	1641	1/1	0.81	0.35	49,49,49,49	0
54	MG	DA	3024	1/1	0.82	0.11	77,77,77,77	0
54	MG	DA	3084	1/1	0.82	0.13	104,104,104,104	0
54	MG	CA	1642	1/1	0.82	0.23	53,53,53,53	0
54	MG	DA	3070	1/1	0.82	0.12	105,105,105,105	0
54	MG	DA	3043	1/1	0.82	0.11	104,104,104,104	0
54	MG	DA	3142	1/1	0.82	0.32	53,53,53,53	0
54	MG	DA	3143	1/1	0.82	0.11	63,63,63,63	0
54	MG	DA	3125	1/1	0.82	0.16	83,83,83,83	0
54	MG	DA	3036	1/1	0.82	0.08	114,114,114,114	0
54	MG	DA	3076	1/1	0.82	0.14	114,114,114,114	0
54	MG	DA	3039	1/1	0.83	0.10	96,96,96,96	0
54	MG	CA	1655	1/1	0.83	0.17	85,85,85,85	0
54	MG	AA	1662	1/1	0.83	0.29	76,76,76,76	0
54	MG	BA	3040	1/1	0.83	0.32	1,1,1,1	0
54	MG	DA	3137	1/1	0.83	0.29	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1614	1/1	0.83	0.18	60,60,60,60	0
54	MG	BA	3146	1/1	0.83	0.33	32,32,32,32	0
56	NEG	CA	1657	17/17	0.83	0.09	62,88,103,104	0
54	MG	AA	1666	1/1	0.84	0.24	55,55,55,55	0
54	MG	AA	1651	1/1	0.84	0.37	52,52,52,52	0
54	MG	DA	3164	1/1	0.84	0.08	60,60,60,60	0
54	MG	CA	1640	1/1	0.84	0.19	29,29,29,29	0
54	MG	AA	1644	1/1	0.84	0.10	60,60,60,60	0
54	MG	BA	3133	1/1	0.85	0.28	63,63,63,63	0
54	MG	BA	3034	1/1	0.85	0.38	39,39,39,39	0
54	MG	BA	3173	1/1	0.85	0.14	40,40,40,40	0
54	MG	DA	3015	1/1	0.85	0.14	90,90,90,90	0
54	MG	BA	3060	1/1	0.85	0.31	72,72,72,72	0
54	MG	AA	1669	1/1	0.85	1.16	83,83,83,83	0
54	MG	BQ	201	1/1	0.85	0.10	17,17,17,17	0
54	MG	CA	1635	1/1	0.85	0.29	99,99,99,99	0
54	MG	BA	3112	1/1	0.85	0.08	25,25,25,25	0
54	MG	AA	1649	1/1	0.86	0.12	52,52,52,52	0
54	MG	DA	3072	1/1	0.86	0.13	78,78,78,78	0
54	MG	AA	1648	1/1	0.86	0.22	34,34,34,34	0
54	MG	DA	3048	1/1	0.86	0.10	109,109,109,109	0
54	MG	CA	1649	1/1	0.86	0.18	50,50,50,50	0
54	MG	DA	3098	1/1	0.86	0.17	89,89,89,89	0
54	MG	DA	3140	1/1	0.86	0.20	51,51,51,51	0
54	MG	DL	202	1/1	0.86	0.12	116,116,116,116	0
54	MG	D2	101	1/1	0.86	0.09	111,111,111,111	0
54	MG	BA	3105	1/1	0.86	0.11	10,10,10,10	0
54	MG	BA	3061	1/1	0.87	0.25	56,56,56,56	0
54	MG	BA	3145	1/1	0.87	0.22	35,35,35,35	0
54	MG	DA	3107	1/1	0.87	0.10	70,70,70,70	0
54	MG	DA	3161	1/1	0.87	0.11	65,65,65,65	0
54	MG	DA	3111	1/1	0.87	0.09	71,71,71,71	0
54	MG	BA	3131	1/1	0.87	0.23	49,49,49,49	0
54	MG	BA	3147	1/1	0.87	0.13	13,13,13,13	0
54	MG	BA	3163	1/1	0.87	0.42	36,36,36,36	0
54	MG	CA	1622	1/1	0.87	0.15	84,84,84,84	0
54	MG	DA	3026	1/1	0.87	0.08	93,93,93,93	0
54	MG	BA	3076	1/1	0.88	0.16	60,60,60,60	0
54	MG	AA	1646	1/1	0.88	0.06	49,49,49,49	0
54	MG	DA	3119	1/1	0.88	0.09	83,83,83,83	0
54	MG	AA	1628	1/1	0.88	0.08	84,84,84,84	0
54	MG	CA	1631	1/1	0.88	0.15	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3183	1/1	0.88	0.20	35,35,35,35	0
54	MG	AA	1630	1/1	0.88	0.15	78,78,78,78	0
54	MG	CA	1653	1/1	0.88	0.29	54,54,54,54	0
54	MG	BA	3148	1/1	0.88	0.28	44,44,44,44	0
54	MG	AA	1618	1/1	0.88	0.07	89,89,89,89	0
54	MG	BA	3167	1/1	0.88	0.09	25,25,25,25	0
54	MG	AA	1663	1/1	0.89	0.09	36,36,36,36	0
54	MG	BA	3132	1/1	0.89	0.24	45,45,45,45	0
54	MG	DA	3123	1/1	0.89	0.18	88,88,88,88	0
54	MG	AA	1635	1/1	0.89	0.17	73,73,73,73	0
54	MG	BA	3084	1/1	0.89	0.17	33,33,33,33	0
54	MG	DA	3152	1/1	0.89	0.10	59,59,59,59	0
54	MG	CA	1643	1/1	0.89	0.18	43,43,43,43	0
54	MG	BA	3166	1/1	0.89	0.18	36,36,36,36	0
54	MG	CA	1645	1/1	0.89	0.18	52,52,52,52	0
54	MG	DA	3124	1/1	0.90	0.15	55,55,55,55	0
54	MG	CA	1605	1/1	0.90	0.08	110,110,110,110	0
54	MG	BA	3110	1/1	0.90	0.12	61,61,61,61	0
54	MG	BA	3185	1/1	0.90	0.22	17,17,17,17	0
54	MG	DA	3005	1/1	0.90	0.06	113,113,113,113	0
54	MG	CA	1636	1/1	0.90	0.08	93,93,93,93	0
54	MG	BA	3150	1/1	0.90	0.20	23,23,23,23	0
54	MG	DA	3014	1/1	0.90	0.16	86,86,86,86	0
54	MG	DA	3002	1/1	0.91	0.17	94,94,94,94	0
54	MG	AA	1661	1/1	0.91	0.06	40,40,40,40	0
54	MG	BA	3073	1/1	0.91	0.08	16,16,16,16	0
54	MG	DA	3151	1/1	0.91	0.22	42,42,42,42	0
54	MG	CA	1652	1/1	0.91	0.06	73,73,73,73	0
54	MG	BA	3001	1/1	0.91	0.07	39,39,39,39	0
54	MG	DA	3028	1/1	0.91	0.08	83,83,83,83	0
54	MG	DA	3078	1/1	0.91	0.08	103,103,103,103	0
54	MG	DA	3109	1/1	0.91	0.22	64,64,64,64	0
54	MG	DA	3080	1/1	0.91	0.10	74,74,74,74	0
54	MG	DA	3160	1/1	0.91	0.14	86,86,86,86	0
54	MG	DA	3112	1/1	0.91	0.06	78,78,78,78	0
54	MG	DA	3011	1/1	0.91	0.11	98,98,98,98	0
54	MG	DA	3033	1/1	0.91	0.14	77,77,77,77	0
54	MG	DA	3087	1/1	0.91	0.07	84,84,84,84	0
54	MG	BA	3169	1/1	0.91	0.07	33,33,33,33	0
54	MG	DQ	201	1/1	0.91	0.20	51,51,51,51	0
54	MG	DA	3120	1/1	0.91	0.10	82,82,82,82	0
54	MG	BA	3004	1/1	0.91	0.11	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3110	1/1	0.92	0.11	89,89,89,89	0
54	MG	DA	3153	1/1	0.92	0.11	58,58,58,58	0
54	MG	DA	3086	1/1	0.92	0.08	81,81,81,81	0
54	MG	BA	3164	1/1	0.92	0.06	13,13,13,13	0
54	MG	DA	3069	1/1	0.92	0.08	121,121,121,121	0
54	MG	DA	3157	1/1	0.92	0.17	61,61,61,61	0
54	MG	AA	1623	1/1	0.92	0.10	60,60,60,60	0
54	MG	BA	3111	1/1	0.92	0.08	40,40,40,40	0
54	MG	DA	3007	1/1	0.92	0.09	114,114,114,114	0
54	MG	BA	3015	1/1	0.92	0.20	62,62,62,62	0
54	MG	CA	1632	1/1	0.92	0.07	85,85,85,85	0
54	MG	DA	3103	1/1	0.92	0.09	85,85,85,85	0
54	MG	AA	1620	1/1	0.92	0.06	100,100,100,100	0
54	MG	DA	3034	1/1	0.92	0.11	90,90,90,90	0
54	MG	BA	3036	1/1	0.92	0.32	20,20,20,20	0
54	MG	DA	3131	1/1	0.92	0.13	79,79,79,79	0
54	MG	AA	1638	1/1	0.92	0.08	88,88,88,88	0
54	MG	BA	3158	1/1	0.93	0.12	15,15,15,15	0
54	MG	BA	3174	1/1	0.93	0.10	25,25,25,25	0
54	MG	DA	3148	1/1	0.93	0.07	53,53,53,53	0
54	MG	BA	3175	1/1	0.93	0.11	38,38,38,38	0
54	MG	BA	3144	1/1	0.93	0.23	34,34,34,34	0
54	MG	BA	3178	1/1	0.93	0.29	41,41,41,41	0
54	MG	BA	3115	1/1	0.93	0.11	58,58,58,58	0
54	MG	BA	3137	1/1	0.93	0.23	11,11,11,11	0
54	MG	BA	3151	1/1	0.93	0.06	7,7,7,7	0
54	MG	BA	3194	1/1	0.93	0.10	42,42,42,42	0
54	MG	DA	3013	1/1	0.93	0.11	72,72,72,72	0
54	MG	DA	3106	1/1	0.93	0.05	60,60,60,60	0
54	MG	BA	3168	1/1	0.93	0.12	43,43,43,43	0
54	MG	BA	3152	1/1	0.93	0.24	1,1,1,1	0
54	MG	DA	3079	1/1	0.93	0.08	91,91,91,91	0
54	MG	DA	3138	1/1	0.93	0.17	41,41,41,41	0
54	MG	CA	1608	1/1	0.93	0.08	86,86,86,86	0
54	MG	DA	3018	1/1	0.93	0.07	88,88,88,88	0
54	MG	DA	3141	1/1	0.93	0.28	45,45,45,45	0
54	MG	DA	3020	1/1	0.93	0.24	76,76,76,76	0
54	MG	DA	3115	1/1	0.93	0.10	79,79,79,79	0
54	MG	DA	3023	1/1	0.93	0.12	57,57,57,57	0
54	MG	DA	3117	1/1	0.93	0.12	79,79,79,79	0
54	MG	BA	3170	1/1	0.94	0.07	44,44,44,44	0
54	MG	BA	3171	1/1	0.94	0.14	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	AA	1653	1/1	0.94	0.19	27,27,27,27	0
54	MG	BA	3079	1/1	0.94	0.09	29,29,29,29	0
54	MG	CA	1656	1/1	0.94	0.10	88,88,88,88	0
54	MG	BA	3080	1/1	0.94	0.06	24,24,24,24	0
54	MG	BA	3056	1/1	0.94	0.20	27,27,27,27	0
54	MG	BA	3135	1/1	0.94	0.10	23,23,23,23	0
54	MG	BA	3159	1/1	0.94	0.23	18,18,18,18	0
54	MG	BA	3181	1/1	0.94	0.23	33,33,33,33	0
54	MG	DA	3088	1/1	0.94	0.09	81,81,81,81	0
54	MG	BA	3160	1/1	0.94	0.05	7,7,7,7	0
54	MG	DA	3090	1/1	0.94	0.06	85,85,85,85	0
54	MG	DA	3046	1/1	0.94	0.07	80,80,80,80	0
54	MG	DA	3009	1/1	0.94	0.05	91,91,91,91	0
54	MG	BA	3161	1/1	0.94	0.18	30,30,30,30	0
54	MG	DA	3133	1/1	0.94	0.09	78,78,78,78	0
54	MG	BA	3186	1/1	0.94	0.10	29,29,29,29	0
54	MG	BA	3191	1/1	0.94	0.13	17,17,17,17	0
54	MG	BA	3136	1/1	0.94	0.22	50,50,50,50	0
54	MG	AA	1654	1/1	0.94	0.24	46,46,46,46	0
54	MG	AA	1645	1/1	0.94	0.16	52,52,52,52	0
54	MG	AA	1643	1/1	0.94	0.33	7,7,7,7	0
54	MG	AA	1668	1/1	0.94	0.13	39,39,39,39	0
54	MG	CA	1620	1/1	0.94	0.07	81,81,81,81	0
54	MG	BA	3047	1/1	0.94	0.07	43,43,43,43	0
54	MG	DA	3077	1/1	0.95	0.08	114,114,114,114	0
54	MG	BA	3180	1/1	0.95	0.14	45,45,45,45	0
54	MG	AA	1627	1/1	0.95	0.17	68,68,68,68	0
54	MG	CA	1646	1/1	0.95	0.36	21,21,21,21	0
54	MG	AA	1615	1/1	0.95	0.15	52,52,52,52	0
54	MG	CA	1648	1/1	0.95	0.24	47,47,47,47	0
54	MG	BA	3021	1/1	0.95	0.05	1,1,1,1	0
54	MG	BA	3143	1/1	0.95	0.19	18,18,18,18	0
54	MG	DA	3121	1/1	0.95	0.09	62,62,62,62	0
54	MG	BA	3187	1/1	0.95	0.10	41,41,41,41	0
54	MG	DA	3051	1/1	0.95	0.09	51,51,51,51	0
54	MG	BA	3188	1/1	0.95	0.09	5,5,5,5	0
54	MG	BA	3120	1/1	0.95	0.09	10,10,10,10	0
54	MG	BA	3121	1/1	0.95	0.16	50,50,50,50	0
54	MG	BA	3124	1/1	0.95	0.23	44,44,44,44	0
54	MG	CA	1604	1/1	0.95	0.06	102,102,102,102	0
54	MG	BA	3070	1/1	0.95	0.07	6,6,6,6	0
54	MG	DA	3099	1/1	0.95	0.07	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1607	1/1	0.95	0.07	96,96,96,96	0
54	MG	DA	3029	1/1	0.95	0.10	83,83,83,83	0
54	MG	DA	3030	1/1	0.95	0.07	71,71,71,71	0
54	MG	DB	202	1/1	0.95	0.07	89,89,89,89	0
54	MG	DB	203	1/1	0.95	0.06	106,106,106,106	0
54	MG	AA	1664	1/1	0.95	0.12	58,58,58,58	0
54	MG	DA	3073	1/1	0.95	0.10	69,69,69,69	0
54	MG	AA	1629	1/1	0.95	0.07	73,73,73,73	0
54	MG	DA	3075	1/1	0.95	0.13	78,78,78,78	0
54	MG	CA	1619	1/1	0.95	0.09	85,85,85,85	0
54	MG	DA	3067	1/1	0.96	0.09	70,70,70,70	0
54	MG	DA	3068	1/1	0.96	0.07	81,81,81,81	0
54	MG	DA	3101	1/1	0.96	0.07	85,85,85,85	0
54	MG	BA	3014	1/1	0.96	0.13	8,8,8,8	0
54	MG	DA	3001	1/1	0.96	0.05	93,93,93,93	0
54	MG	BA	3193	1/1	0.96	0.21	46,46,46,46	0
54	MG	BA	3098	1/1	0.96	0.19	41,41,41,41	0
54	MG	BA	3172	1/1	0.96	0.15	29,29,29,29	0
54	MG	CA	1602	1/1	0.96	0.11	93,93,93,93	0
54	MG	BA	3156	1/1	0.96	0.35	40,40,40,40	0
54	MG	AA	1632	1/1	0.96	0.07	60,60,60,60	0
54	MG	AA	1655	1/1	0.96	0.15	55,55,55,55	0
54	MG	AA	1656	1/1	0.96	0.09	46,46,46,46	0
54	MG	BA	3069	1/1	0.96	0.06	72,72,72,72	0
54	MG	BA	3162	1/1	0.96	0.18	30,30,30,30	0
54	MG	DA	3081	1/1	0.96	0.05	75,75,75,75	0
54	MG	DA	3082	1/1	0.96	0.04	80,80,80,80	0
54	MG	AA	1650	1/1	0.96	0.36	49,49,49,49	0
54	MG	AA	1601	1/1	0.96	0.06	59,59,59,59	0
54	MG	DA	3085	1/1	0.96	0.08	71,71,71,71	0
54	MG	BA	3165	1/1	0.96	0.24	29,29,29,29	0
54	MG	DA	3053	1/1	0.96	0.11	49,49,49,49	0
54	MG	DA	3054	1/1	0.96	0.06	64,64,64,64	0
54	MG	AA	1604	1/1	0.96	0.05	81,81,81,81	0
54	MG	DA	3128	1/1	0.96	0.08	60,60,60,60	0
54	MG	DA	3163	1/1	0.96	0.21	45,45,45,45	0
54	MG	BA	3003	1/1	0.96	0.06	29,29,29,29	0
54	MG	AA	1619	1/1	0.96	0.15	57,57,57,57	0
54	MG	CA	1630	1/1	0.96	0.04	79,79,79,79	0
54	MG	BA	3083	1/1	0.96	0.17	44,44,44,44	0
54	MG	BA	3189	1/1	0.96	0.15	43,43,43,43	0
54	MG	DA	3095	1/1	0.96	0.05	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	DA	3096	1/1	0.96	0.12	81,81,81,81	0
54	MG	DA	3097	1/1	0.96	0.06	67,67,67,67	0
54	MG	BA	3119	1/1	0.97	0.16	40,40,40,40	0
54	MG	BA	3157	1/1	0.97	0.20	26,26,26,26	0
54	MG	DA	3062	1/1	0.97	0.04	67,67,67,67	0
54	MG	CA	1606	1/1	0.97	0.09	61,61,61,61	0
54	MG	BA	3138	1/1	0.97	0.21	1,1,1,1	0
54	MG	DA	3102	1/1	0.97	0.10	77,77,77,77	0
54	MG	BA	3177	1/1	0.97	0.11	24,24,24,24	0
54	MG	CA	1613	1/1	0.97	0.06	51,51,51,51	0
54	MG	BA	3139	1/1	0.97	0.24	1,1,1,1	0
54	MG	CA	1616	1/1	0.97	0.12	43,43,43,43	0
54	MG	BA	3141	1/1	0.97	0.33	2,2,2,2	0
54	MG	DA	3108	1/1	0.97	0.15	22,22,22,22	0
54	MG	BA	3142	1/1	0.97	0.38	17,17,17,17	0
54	MG	BA	3093	1/1	0.97	0.05	11,11,11,11	0
54	MG	AA	1624	1/1	0.97	0.07	36,36,36,36	0
54	MG	BA	3184	1/1	0.97	0.05	24,24,24,24	0
54	MG	DA	3113	1/1	0.97	0.07	54,54,54,54	0
54	MG	BA	3025	1/1	0.97	0.18	38,38,38,38	0
54	MG	CT	101	1/1	0.97	0.10	91,91,91,91	0
54	MG	BA	3128	1/1	0.97	0.30	1,1,1,1	0
54	MG	BA	3029	1/1	0.97	0.06	20,20,20,20	0
54	MG	DA	3003	1/1	0.97	0.06	83,83,83,83	0
54	MG	AA	1625	1/1	0.97	0.07	47,47,47,47	0
54	MG	DA	3045	1/1	0.97	0.06	74,74,74,74	0
54	MG	BA	3149	1/1	0.97	0.26	48,48,48,48	0
54	MG	DA	3122	1/1	0.97	0.07	51,51,51,51	0
54	MG	BA	3190	1/1	0.97	0.08	46,46,46,46	0
54	MG	AA	1616	1/1	0.97	0.05	94,94,94,94	0
54	MG	AA	1634	1/1	0.97	0.05	58,58,58,58	0
54	MG	AA	1608	1/1	0.97	0.07	26,26,26,26	0
54	MG	DB	201	1/1	0.97	0.09	118,118,118,118	0
54	MG	DA	3010	1/1	0.97	0.09	60,60,60,60	0
54	MG	DA	3129	1/1	0.97	0.04	93,93,93,93	0
54	MG	CA	1639	1/1	0.97	0.16	59,59,59,59	0
54	MG	BA	3153	1/1	0.97	0.11	33,33,33,33	0
54	MG	CA	1601	1/1	0.97	0.07	45,45,45,45	0
54	MG	DA	3058	1/1	0.97	0.05	64,64,64,64	0
54	MG	BA	3155	1/1	0.97	0.22	21,21,21,21	0
54	MG	BA	3048	1/1	0.98	0.15	10,10,10,10	0
54	MG	BA	3099	1/1	0.98	0.06	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3027	1/1	0.98	0.12	10,10,10,10	0
54	MG	BA	3182	1/1	0.98	0.17	25,25,25,25	0
54	MG	DA	3032	1/1	0.98	0.06	67,67,67,67	0
54	MG	CA	1637	1/1	0.98	0.07	35,35,35,35	0
54	MG	AA	1636	1/1	0.98	0.09	46,46,46,46	0
54	MG	AA	1639	1/1	0.98	0.08	60,60,60,60	0
54	MG	BA	3016	1/1	0.98	0.11	13,13,13,13	0
54	MG	BA	3005	1/1	0.98	0.04	44,44,44,44	0
54	MG	CA	1615	1/1	0.98	0.06	39,39,39,39	0
54	MG	DA	3042	1/1	0.98	0.09	67,67,67,67	0
54	MG	BA	3154	1/1	0.98	0.10	18,18,18,18	0
54	MG	CA	1617	1/1	0.98	0.04	38,38,38,38	0
54	MG	BA	3114	1/1	0.98	0.04	14,14,14,14	0
54	MG	BA	3046	1/1	0.98	0.09	5,5,5,5	0
54	MG	CA	1621	1/1	0.98	0.07	75,75,75,75	0
54	MG	DA	3049	1/1	0.98	0.04	61,61,61,61	0
54	MG	DA	3050	1/1	0.98	0.04	41,41,41,41	0
54	MG	BA	3118	1/1	0.98	0.08	14,14,14,14	0
54	MG	DA	3052	1/1	0.98	0.05	50,50,50,50	0
54	MG	DA	3017	1/1	0.98	0.06	71,71,71,71	0
54	MG	BA	3085	1/1	0.98	0.06	9,9,9,9	0
54	MG	DA	3019	1/1	0.98	0.20	38,38,38,38	0
54	MG	BA	3192	1/1	0.98	0.12	30,30,30,30	0
54	MG	DA	3021	1/1	0.98	0.08	69,69,69,69	0
54	MG	BA	3089	1/1	0.98	0.04	8,8,8,8	0
54	MG	BA	3091	1/1	0.98	0.08	53,53,53,53	0
54	MG	BB	204	1/1	0.98	0.28	6,6,6,6	0
54	MG	BA	3123	1/1	0.98	0.08	6,6,6,6	0
54	MG	BA	3010	1/1	0.98	0.03	1,1,1,1	0
54	MG	DA	3064	1/1	0.98	0.04	61,61,61,61	0
54	MG	DA	3065	1/1	0.98	0.05	44,44,44,44	0
54	MG	DA	3100	1/1	0.98	0.05	74,74,74,74	0
55	ZN	D4	101	1/1	0.98	0.03	95,95,95,95	0
54	MG	DA	3066	1/1	0.98	0.08	58,58,58,58	0
54	MG	DA	3037	1/1	0.99	0.09	66,66,66,66	0
54	MG	DA	3038	1/1	0.99	0.05	68,68,68,68	0
54	MG	BA	3108	1/1	0.99	0.09	1,1,1,1	0
54	MG	BA	3109	1/1	0.99	0.11	1,1,1,1	0
54	MG	AA	1611	1/1	0.99	0.04	32,32,32,32	0
54	MG	AA	1647	1/1	0.99	0.10	51,51,51,51	0
54	MG	AA	1631	1/1	0.99	0.02	32,32,32,32	0
54	MG	DA	3044	1/1	0.99	0.19	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3113	1/1	0.99	0.04	4,4,4,4	0
54	MG	BA	3006	1/1	0.99	0.05	29,29,29,29	0
54	MG	BA	3007	1/1	0.99	0.03	29,29,29,29	0
54	MG	BA	3116	1/1	0.99	0.05	1,1,1,1	0
54	MG	BA	3009	1/1	0.99	0.06	1,1,1,1	0
54	MG	AA	1612	1/1	0.99	0.06	42,42,42,42	0
54	MG	BA	3011	1/1	0.99	0.12	16,16,16,16	0
54	MG	BA	3062	1/1	0.99	0.03	4,4,4,4	0
54	MG	BA	3063	1/1	0.99	0.03	6,6,6,6	0
54	MG	BA	3064	1/1	0.99	0.05	5,5,5,5	0
54	MG	BA	3126	1/1	0.99	0.09	3,3,3,3	0
54	MG	BA	3127	1/1	0.99	0.03	3,3,3,3	0
54	MG	BA	3067	1/1	0.99	0.06	2,2,2,2	0
54	MG	DA	3126	1/1	0.99	0.04	58,58,58,58	0
54	MG	BA	3129	1/1	0.99	0.04	1,1,1,1	0
54	MG	BA	3012	1/1	0.99	0.08	1,1,1,1	0
54	MG	AA	1633	1/1	0.99	0.04	25,25,25,25	0
54	MG	BA	3071	1/1	0.99	0.09	13,13,13,13	0
54	MG	BA	3134	1/1	0.99	0.06	3,3,3,3	0
54	MG	DA	3063	1/1	0.99	0.07	64,64,64,64	0
54	MG	AA	1621	1/1	0.99	0.04	32,32,32,32	0
54	MG	BA	3074	1/1	0.99	0.05	24,24,24,24	0
54	MG	AA	1622	1/1	0.99	0.13	21,21,21,21	0
54	MG	BA	3077	1/1	0.99	0.03	16,16,16,16	0
54	MG	BA	3078	1/1	0.99	0.03	48,48,48,48	0
54	MG	BA	3140	1/1	0.99	0.18	34,34,34,34	0
54	MG	AA	1613	1/1	0.99	0.03	13,13,13,13	0
54	MG	BA	3023	1/1	0.99	0.04	1,1,1,1	0
54	MG	BB	201	1/1	0.99	0.06	32,32,32,32	0
54	MG	BA	3081	1/1	0.99	0.03	1,1,1,1	0
54	MG	BA	3082	1/1	0.99	0.10	8,8,8,8	0
54	MG	AA	1606	1/1	0.99	0.02	42,42,42,42	0
54	MG	AA	1607	1/1	0.99	0.04	48,48,48,48	0
54	MG	CA	1603	1/1	0.99	0.03	40,40,40,40	0
54	MG	AA	1640	1/1	0.99	0.05	39,39,39,39	0
54	MG	BA	3087	1/1	0.99	0.04	18,18,18,18	0
54	MG	DA	3012	1/1	0.99	0.07	46,46,46,46	0
54	MG	BA	3088	1/1	0.99	0.12	25,25,25,25	0
54	MG	BA	3031	1/1	0.99	0.09	11,11,11,11	0
54	MG	BA	3090	1/1	0.99	0.09	13,13,13,13	0
54	MG	CA	1609	1/1	0.99	0.05	56,56,56,56	0
54	MG	CA	1610	1/1	0.99	0.03	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	CA	1611	1/1	0.99	0.04	42,42,42,42	0
54	MG	CA	1612	1/1	0.99	0.07	20,20,20,20	0
54	MG	AA	1605	1/1	0.99	0.07	35,35,35,35	0
54	MG	BA	3092	1/1	0.99	0.09	33,33,33,33	0
54	MG	DA	3022	1/1	0.99	0.09	74,74,74,74	0
54	MG	AA	1609	1/1	0.99	0.04	23,23,23,23	0
54	MG	BA	3094	1/1	0.99	0.06	19,19,19,19	0
54	MG	BA	3095	1/1	0.99	0.04	6,6,6,6	0
54	MG	CA	1618	1/1	0.99	0.06	35,35,35,35	0
54	MG	BA	3039	1/1	0.99	0.04	1,1,1,1	0
54	MG	AA	1610	1/1	0.99	0.04	64,64,64,64	0
54	MG	BA	3101	1/1	0.99	0.03	14,14,14,14	0
54	MG	BA	3045	1/1	0.99	0.10	5,5,5,5	0
54	MG	CA	1623	1/1	0.99	0.03	48,48,48,48	0
54	MG	CA	1625	1/1	0.99	0.02	44,44,44,44	0
54	MG	BA	3104	1/1	0.99	0.08	1,1,1,1	0
54	MG	BA	3002	1/1	0.99	0.05	11,11,11,11	0
54	MG	DA	3035	1/1	0.99	0.07	54,54,54,54	0
54	MG	BA	3107	1/1	0.99	0.03	3,3,3,3	0
54	MG	BA	3018	1/1	1.00	0.03	14,14,14,14	0
54	MG	CA	1624	1/1	1.00	0.19	4,4,4,4	0
54	MG	BA	3125	1/1	1.00	0.06	4,4,4,4	0
54	MG	BA	3041	1/1	1.00	0.08	3,3,3,3	0
54	MG	BA	3042	1/1	1.00	0.04	1,1,1,1	0
54	MG	BA	3043	1/1	1.00	0.02	11,11,11,11	0
54	MG	BA	3044	1/1	1.00	0.25	1,1,1,1	0
54	MG	BA	3130	1/1	1.00	0.08	7,7,7,7	0
54	MG	BA	3019	1/1	1.00	0.26	1,1,1,1	0
54	MG	BA	3020	1/1	1.00	0.04	1,1,1,1	0
54	MG	AA	1603	1/1	1.00	0.02	30,30,30,30	0
54	MG	BA	3086	1/1	1.00	0.04	2,2,2,2	0
54	MG	BA	3022	1/1	1.00	0.04	1,1,1,1	0
54	MG	BA	3049	1/1	1.00	0.04	3,3,3,3	0
54	MG	BA	3050	1/1	1.00	0.04	7,7,7,7	0
54	MG	CA	1638	1/1	1.00	0.09	28,28,28,28	0
54	MG	BA	3051	1/1	1.00	0.04	2,2,2,2	0
54	MG	BA	3052	1/1	1.00	0.02	1,1,1,1	0
54	MG	BA	3053	1/1	1.00	0.08	1,1,1,1	0
54	MG	BA	3054	1/1	1.00	0.02	4,4,4,4	0
54	MG	AA	1626	1/1	1.00	0.19	1,1,1,1	0
54	MG	BA	3024	1/1	1.00	0.02	13,13,13,13	0
54	MG	BA	3096	1/1	1.00	0.02	2,2,2,2	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
54	MG	BA	3097	1/1	1.00	0.09	1,1,1,1	0
54	MG	AA	1602	1/1	1.00	0.06	37,37,37,37	0
54	MG	BA	3058	1/1	1.00	0.02	14,14,14,14	0
54	MG	BB	202	1/1	1.00	0.02	10,10,10,10	0
54	MG	BB	203	1/1	1.00	0.05	12,12,12,12	0
54	MG	BA	3100	1/1	1.00	0.02	4,4,4,4	0
54	MG	BA	3026	1/1	1.00	0.01	2,2,2,2	0
54	MG	AA	1641	1/1	1.00	0.07	12,12,12,12	0
54	MG	BA	3103	1/1	1.00	0.02	2,2,2,2	0
54	MG	BA	3028	1/1	1.00	0.03	1,1,1,1	0
54	MG	BA	3013	1/1	1.00	0.08	1,1,1,1	0
54	MG	BA	3106	1/1	1.00	0.06	1,1,1,1	0
54	MG	BA	3030	1/1	1.00	0.05	4,4,4,4	0
54	MG	AA	1642	1/1	1.00	0.04	23,23,23,23	0
54	MG	BA	3065	1/1	1.00	0.06	1,1,1,1	0
54	MG	BA	3066	1/1	1.00	0.02	3,3,3,3	0
54	MG	BA	3032	1/1	1.00	0.05	4,4,4,4	0
54	MG	BA	3068	1/1	1.00	0.01	1,1,1,1	0
54	MG	BA	3033	1/1	1.00	0.10	1,1,1,1	0
54	MG	AA	1637	1/1	1.00	0.04	13,13,13,13	0
54	MG	BA	3035	1/1	1.00	0.05	1,1,1,1	0
54	MG	BA	3072	1/1	1.00	0.04	1,1,1,1	0
54	MG	BA	3117	1/1	1.00	0.05	1,1,1,1	0
54	MG	BA	3008	1/1	1.00	0.07	3,3,3,3	0
54	MG	BA	3037	1/1	1.00	0.10	1,1,1,1	0
54	MG	BA	3075	1/1	1.00	0.05	3,3,3,3	0
54	MG	BA	3038	1/1	1.00	0.04	1,1,1,1	0
55	ZN	B4	101	1/1	1.00	0.04	28,28,28,28	0
54	MG	BA	3122	1/1	1.00	0.10	1,1,1,1	0
54	MG	BA	3017	1/1	1.00	0.06	1,1,1,1	0

6.5 Other polymers ⓘ

There are no such residues in this entry.