



Full wwPDB EM Validation Report ⓘ

Mar 30, 2026 – 03:44 PM UTC

PDB ID : 6Z6K / pdb_00006z6k
EMDB ID : EMD-11097
Title : Cryo-EM structure of yeast reconstituted Lso2 bound to 80S ribosomes
Authors : Wells, J.N.; Buschauer, R.; Mackens-Kiani, T.; Best, K.; Kratzat, H.; Berninghausen, O.; Becker, T.; Cheng, J.; Beckmann, R.
Deposited on : 2020-05-28
Resolution : 3.40 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp>
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:

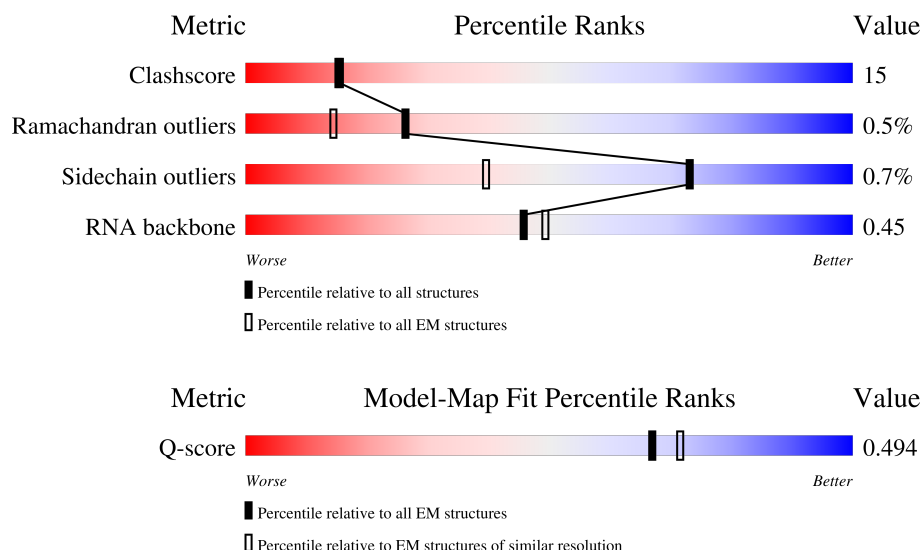
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.40 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.



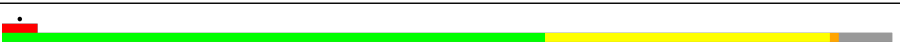
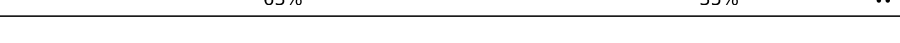
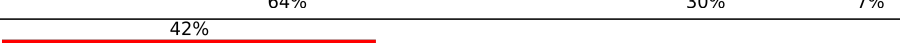
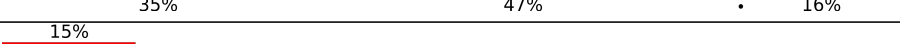
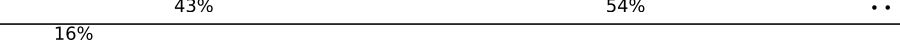
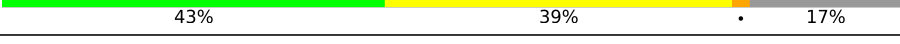
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	14717 (2.90 - 3.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	C2	1800	
2	C5	91	
3	C1	3396	

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Mol	Chain	Length	Quality of chain
4	C4	121	
5	C3	158	
6	SA	252	
7	SB	255	
8	SC	254	
9	SD	240	
10	SE	261	
11	SF	225	
12	SG	236	
13	SH	190	
14	SI	200	
15	SJ	197	
16	SK	105	
17	SL	156	
18	SM	143	
19	SN	151	
20	SO	137	
21	SP	142	
22	SQ	143	
23	SR	136	
24	SS	146	
25	ST	144	
26	SU	121	
27	SV	87	
28	SW	130	

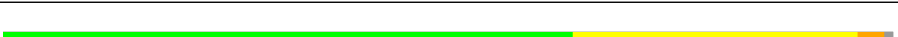
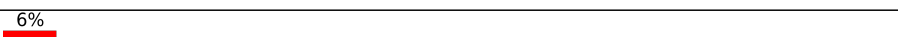
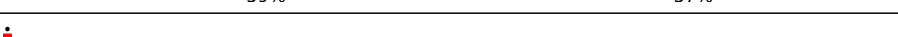
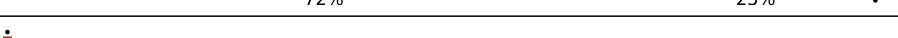
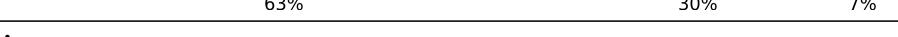
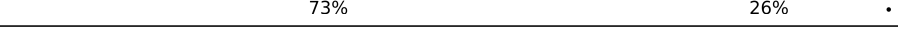
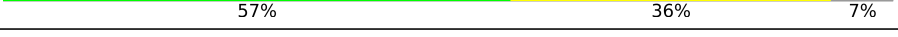
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Mol	Chain	Length	Quality of chain
29	SX	145	
30	SY	135	
31	SZ	108	
32	Sa	119	
33	Sb	82	
34	Sc	67	
35	Sd	56	
36	Se	63	
37	Sf	152	
38	Sg	319	
39	LA	254	
40	LB	387	
41	LC	362	
42	LD	297	
43	LE	176	
44	LF	244	
45	LG	256	
46	LH	191	
47	LI	221	
48	LJ	174	
49	LL	199	
50	LM	138	
51	LN	204	
52	LO	199	
53	LP	184	

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Mol	Chain	Length	Quality of chain
54	LQ	186	
55	LR	189	
56	LS	172	
57	LT	160	
58	LU	121	
59	LV	137	
60	LW	155	
61	LX	142	
62	LY	127	
63	LZ	136	
64	La	149	
65	Lb	59	
66	Lc	105	
67	Ld	113	
68	Le	130	
69	Lf	107	
70	Lg	121	
71	Lh	120	
72	Li	100	
73	Lj	88	
74	Lk	78	
75	Ll	51	
76	Lm	128	
77	Ln	25	
78	Lo	106	

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Mol	Chain	Length	Quality of chain
79	Lp	92	5% 77% 22%

2 Entry composition [i](#)

There are 80 unique types of molecules in this entry. The entry contains 196360 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	C2	1700	Total	C	N	O	P	0	0
			36234	16201	6426	11907	1700		

- Molecule 2 is a protein called Protein LSO2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C5	79	Total	C	N	O	S	0	0
			633	379	128	125	1		

- Molecule 3 is a RNA chain called 25S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C1	3127	Total	C	N	O	P	0	0
			66891	29878	12066	21820	3127		

- Molecule 4 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	C4	121	Total	C	N	O	P	0	0
			2579	1152	461	845	121		

- Molecule 5 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	C3	157	Total	C	N	O	P	0	0
			3333	1491	584	1101	157		

- Molecule 6 is a protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	SA	206	Total	C	N	O	S	0	0
			1583	1017	281	283	2		

- Molecule 7 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	SB	216	Total	C	N	O	S	0	0
			1722	1091	312	315	4		

- Molecule 8 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	SC	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 9 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	SD	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 10 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	SE	260	Total	C	N	O	S	0	0
			2068	1316	389	360	3		

- Molecule 11 is a protein called Rps5p.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	SF	206	Total	C	N	O	S	0	0
			1609	1007	300	299	3		

- Molecule 12 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	SG	218	Total	C	N	O	S	0	0
			1755	1102	337	313	3		

- Molecule 13 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	SH	185	Total	C	N	O	0	0
			1486	954	266	266		

- Molecule 14 is a protein called 40S ribosomal protein S8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	SI	188	Total	C	N	O	S	0	0
			1489	925	298	264	2		

- Molecule 15 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	SJ	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 16 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	SK	92	Total	C	N	O	S	0	0
			741	478	121	140	2		

- Molecule 17 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	SL	146	Total	C	N	O	S	0	0
			1168	747	221	197	3		

- Molecule 18 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	SM	124	Total	C	N	O	S	0	0
			890	560	156	172	2		

- Molecule 19 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	SN	150	Total	C	N	O	S	0	0
			1192	759	224	207	2		

- Molecule 20 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	SO	128	Total	C	N	O	S	0	0
			949	582	188	176	3		

- Molecule 21 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	SP	119	Total	C	N	O	S	0	0
			939	595	176	161	7		

- Molecule 22 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	SQ	141	Total	C	N	O	S	0	0
			1105	708	203	194			

- Molecule 23 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	SR	115	Total	C	N	O	S	0	0
			896	557	172	165	2		

- Molecule 24 is a protein called 40S ribosomal protein S18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	SS	145	Total	C	N	O	S	0	0
			1192	743	237	210	2		

- Molecule 25 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	ST	143	Total	C	N	O	S	0	0
			1112	694	208	208	2		

- Molecule 26 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	SU	101	Total	C	N	O	S	0	0
			805	512	145	147	1		

- Molecule 27 is a protein called 40S ribosomal protein S21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	SV	87	Total	C	N	O	S	0	0
			684	420	125	137	2		

- Molecule 28 is a protein called 40S ribosomal protein S22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	SW	129	Total	C	N	O	S	0	0
			1021	650	188	180	3		

- Molecule 29 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	SX	144	Total	C	N	O	S	0	0
			1121	708	220	191	2		

- Molecule 30 is a protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	SY	134	Total	C	N	O		0	0
			1073	676	208	189			

- Molecule 31 is a protein called 40S ribosomal protein S25-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	SZ	69	Total	C	N	O		0	0
			558	357	103	98			

- Molecule 32 is a protein called 40S ribosomal protein S26-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Sa	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 33 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Sb	81	Total	C	N	O	S	0	0
			610	382	110	113	5		

- Molecule 34 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Sc	63	Total	C	N	O	S	0	0
			497	306	99	91	1		

- Molecule 35 is a protein called 40S ribosomal protein S29-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Sd	53	Total	C	N	O	S	0	0
			442	274	92	72	4		

- Molecule 36 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Se	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 37 is a protein called Ubiquitin-40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Sf	33	Total	C	N	O	S	0	0
			248	153	46	45	4		

- Molecule 38 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Sg	313	Total	C	N	O	S	0	0
			2403	1521	411	463	8		

- Molecule 39 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	LA	252	Total	C	N	O	S	0	0
			1912	1190	388	333	1		

- Molecule 40 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	LB	386	Total	C	N	O	S	0	0
			3075	1950	584	533	8		

- Molecule 41 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	LC	361	Total	C	N	O	S	0	0
			2748	1729	522	494	3		

- Molecule 42 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	LD	294	Total	C	N	O	S	0	0
			2359	1489	412	456	2		

- Molecule 43 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	LE	157	Total	C	N	O	S	0	0
			1248	806	224	217	1		

- Molecule 44 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	LF	223	Total	C	N	O	S	0	0
			1791	1155	325	310	1		

- Molecule 45 is a protein called 60S ribosomal protein L8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	LG	231	Total	C	N	O	S	0	0
			1763	1130	316	314	3		

- Molecule 46 is a protein called 60S ribosomal protein L9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	LH	190	Total	C	N	O	S	0	0
			1510	957	273	276	4		

- Molecule 47 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	LI	209	Total	C	N	O	S	0	0
			1696	1077	321	293	5		

- Molecule 48 is a protein called 60S ribosomal protein L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	LJ	169	Total	C	N	O	S	0	0
			1353	847	253	249	4		

- Molecule 49 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
49	LL	194	Total	C	N	O	0	0
			1548	965	316	267		

- Molecule 50 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	LM	137	Total	C	N	O	S	0	0
			1059	678	200	179	2		

- Molecule 51 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	LN	203	Total	C	N	O	S	0	0
			1720	1077	361	281	1		

- Molecule 52 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	LO	197	Total	C	N	O	S	0	0
			1555	1003	289	262	1		

- Molecule 53 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
53	LP	175	Total	C	N	O	0	0
			1378	856	273	249		

- Molecule 54 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	LQ	185	Total	C	N	O	S	0	0
			1441	908	290	241	2		

- Molecule 55 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
55	LR	174	Total	C	N	O	0	0
			1365	843	286	236		

- Molecule 56 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	LS	172	Total	C	N	O	S	0	0
			1445	930	267	244	4		

- Molecule 57 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	LT	159	Total	C	N	O	S	0	0
			1276	805	246	221	4		

- Molecule 58 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	LU	98	Total	C	N	O	S	0	0
			778	505	127	146			

- Molecule 59 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	LV	134	Total	C	N	O	S	0	0
			993	623	187	176	7		

- Molecule 60 is a protein called 60S ribosomal protein L24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	LW	63	Total	C	N	O	S	0	0
			521	336	102	82	1		

- Molecule 61 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	LX	120	Total	C	N	O	S	0	0
			959	617	168	172	2		

- Molecule 62 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	LY	124	Total	C	N	O	S	0	0
			976	614	190	172			

- Molecule 63 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
63	LZ	135	Total	C	N	O	0	0
			1092	710	202	180		

- Molecule 64 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	La	148	Total	C	N	O	S	0	0
			1173	749	231	190	3		

- Molecule 65 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
65	Lb	58	Total	C	N	O	0	0
			462	289	100	73		

- Molecule 66 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Lc	100	Total	C	N	O	S	0	0
			767	492	128	146	1		

- Molecule 67 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Ld	109	Total	C	N	O	S	0	0
			883	559	167	156	1		

- Molecule 68 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Le	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 69 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Lf	106	Total	C	N	O	S	0	0
			850	540	165	144	1		

- Molecule 70 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Lg	112	Total	C	N	O	S	0	0
			880	545	179	152	4		

- Molecule 71 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Lh	119	Total	C	N	O	S	0	0
			965	612	185	167	1		

- Molecule 72 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Li	99	Total	C	N	O	S	0	0
			770	481	156	131	2		

- Molecule 73 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Lj	82	Total	C	N	O	S	0	0
			650	396	142	107	5		

- Molecule 74 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms				AltConf	Trace
74	Lk	77	Total	C	N	O	0	0
			608	388	114	106		

- Molecule 75 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Ll	50	Total	C	N	O	S	0	0
			436	272	97	65	2		

- Molecule 76 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Lm	52	Total	C	N	O	S	0	0
			417	259	86	67	5		

- Molecule 77 is a protein called 60S ribosomal protein L41-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Ln	25	Total	C	N	O	S	0	0
			233	142	63	27	1		

- Molecule 78 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Lo	105	Total	C	N	O	S	0	0
			847	534	170	138	5		

- Molecule 79 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Lp	91	Total	C	N	O	S	0	0
			694	429	138	121	6		

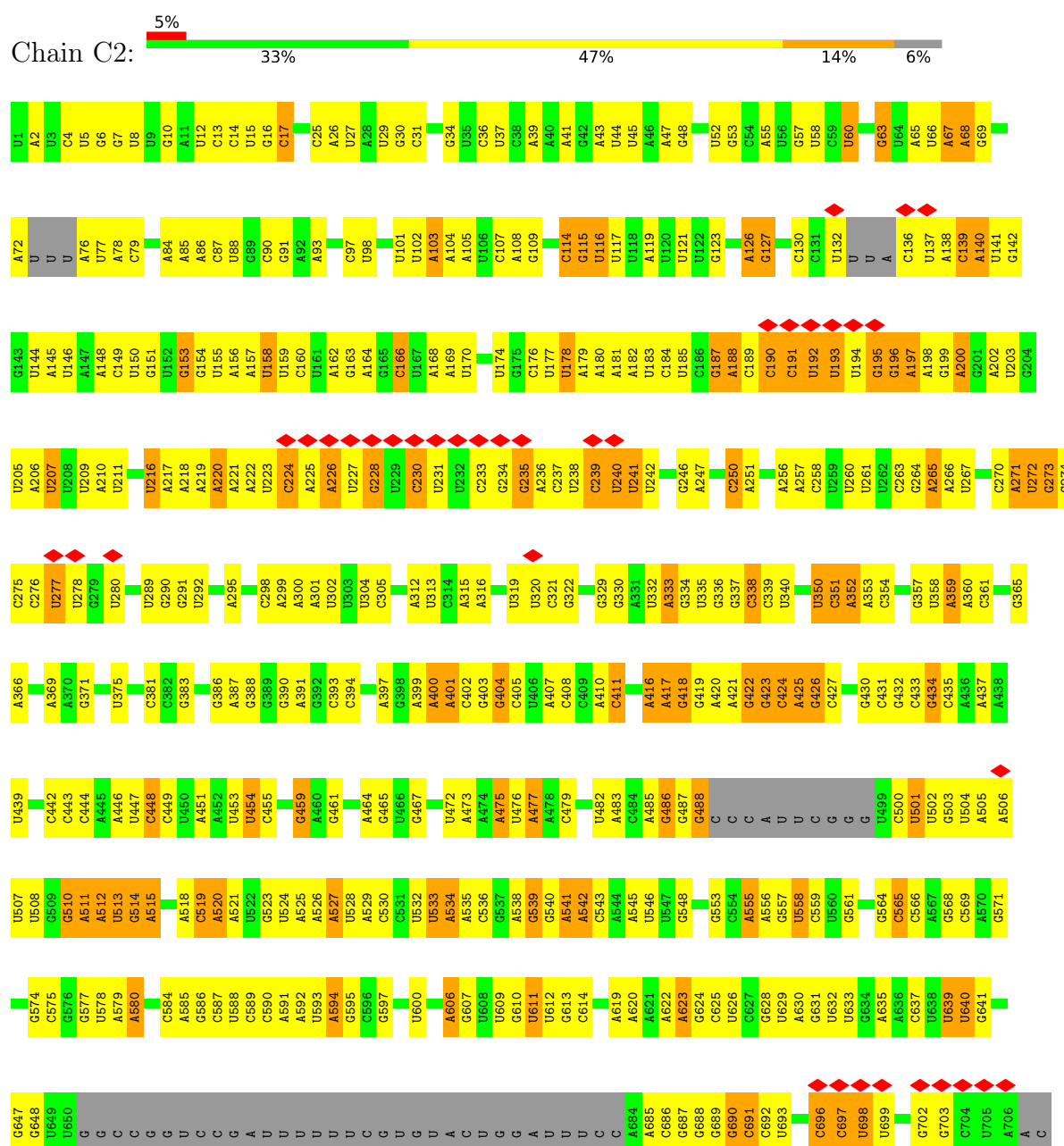
- Molecule 80 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
80	C2	1	Total	Zn	0
			1	1	
80	Sa	1	Total	Zn	0
			1	1	
80	Sb	1	Total	Zn	0
			1	1	
80	Sf	1	Total	Zn	0
			1	1	
80	Lg	1	Total	Zn	0
			1	1	
80	Lj	1	Total	Zn	0
			1	1	
80	Lm	1	Total	Zn	0
			1	1	
80	Lo	1	Total	Zn	0
			1	1	
80	Lp	1	Total	Zn	0
			1	1	

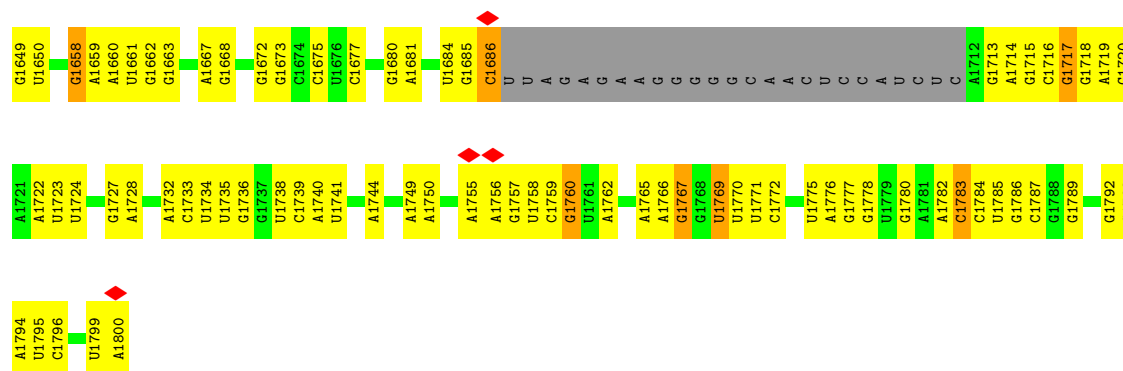
3 Residue-property plots

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: 18S rRNA



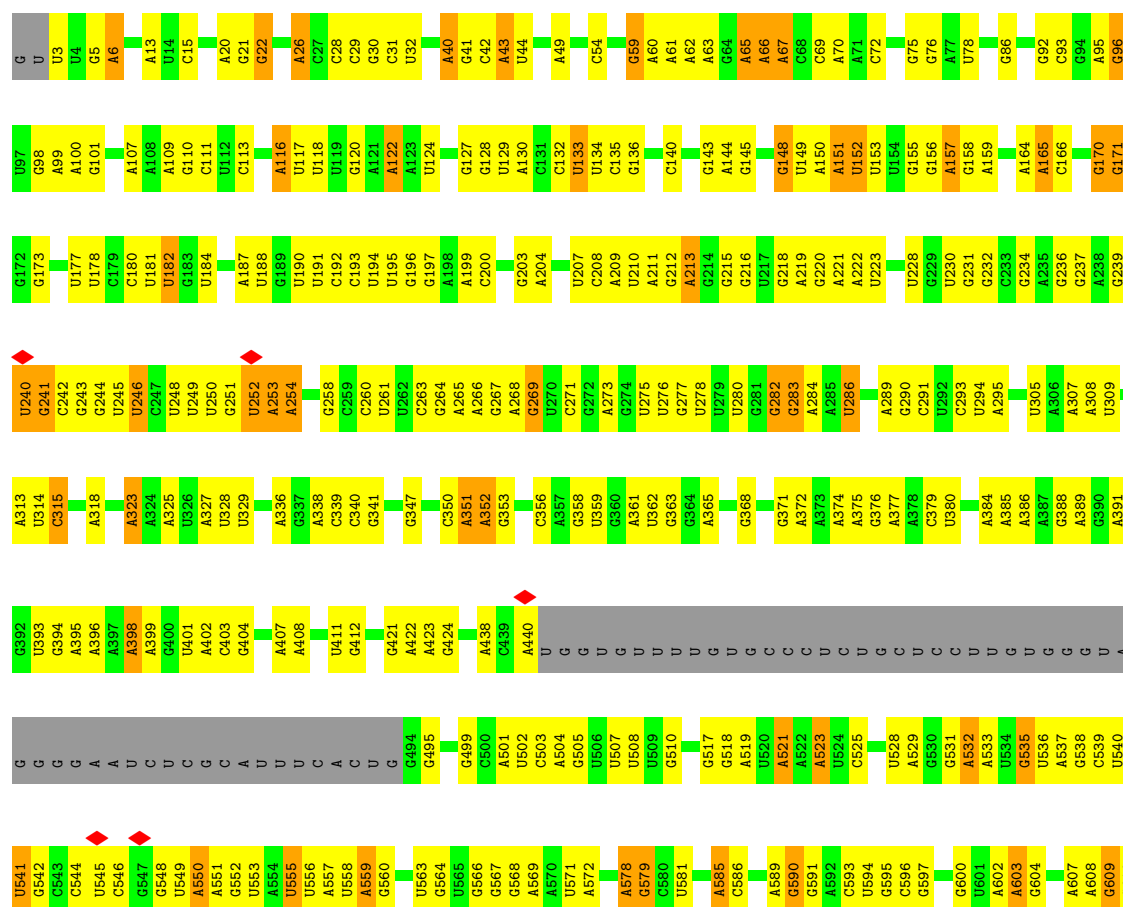


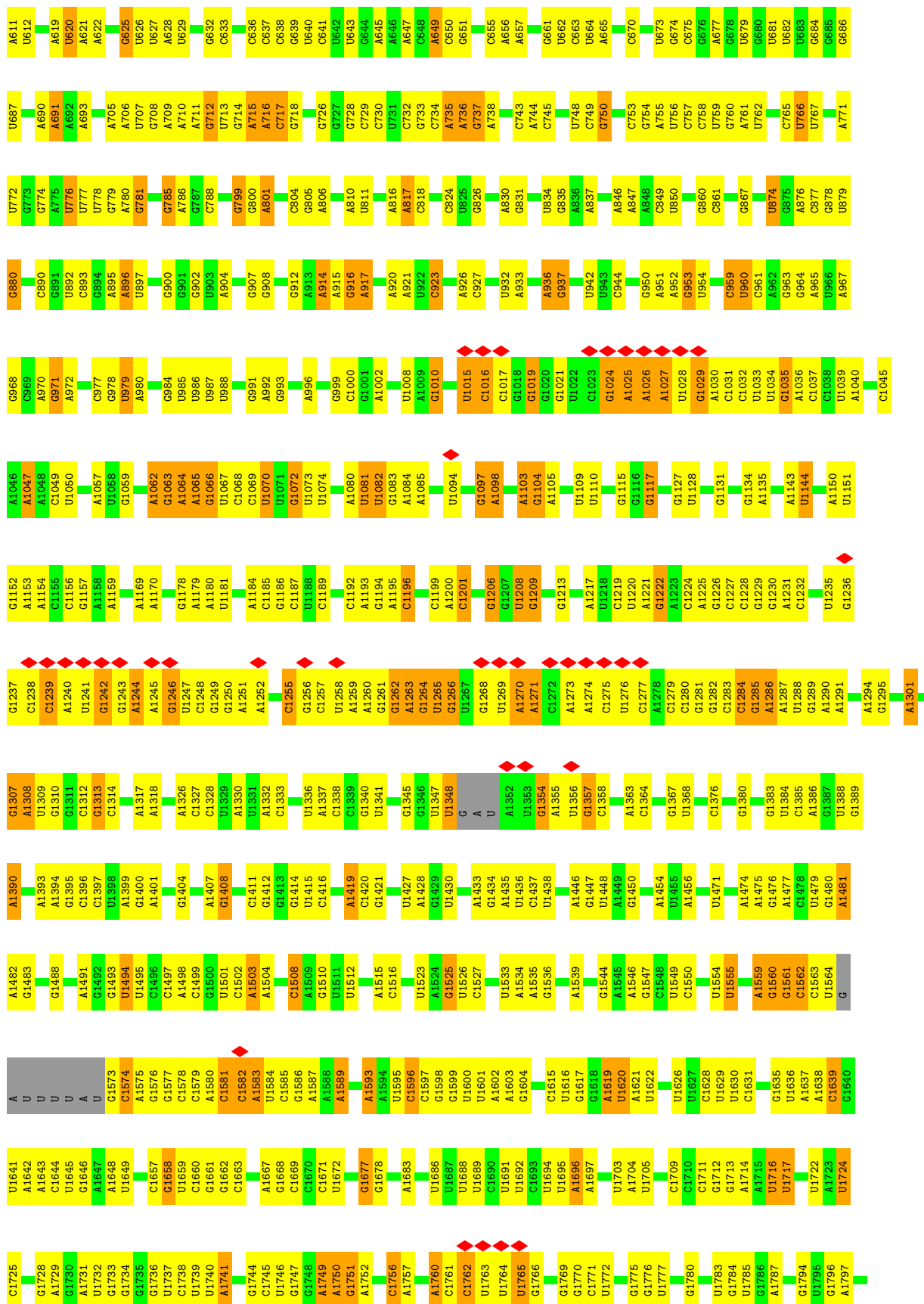


• Molecule 2: Protein LSO2

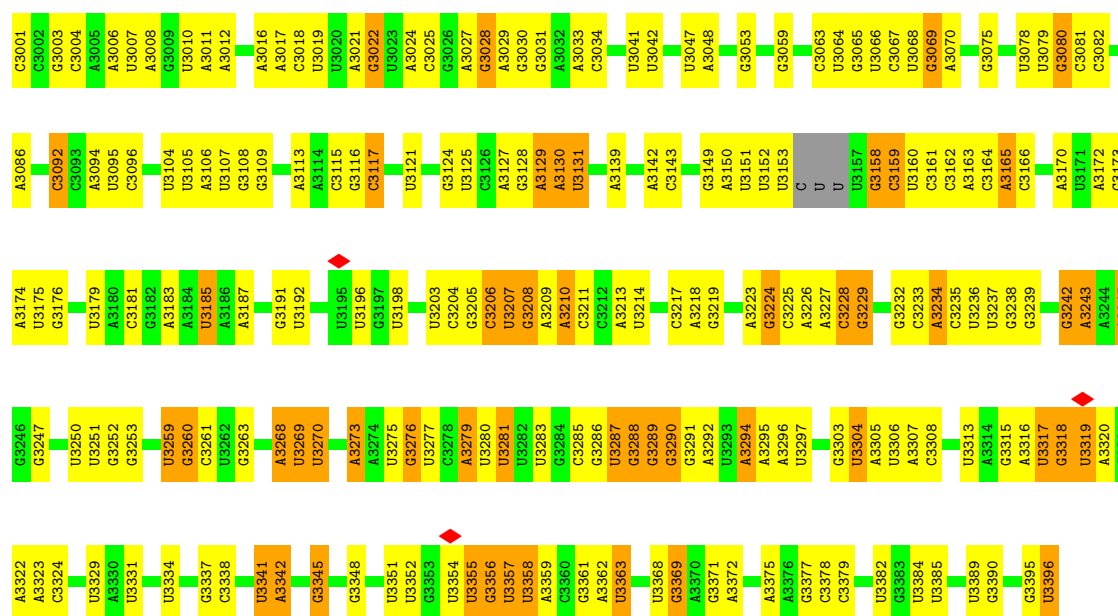


• Molecule 3: 25S rRNA



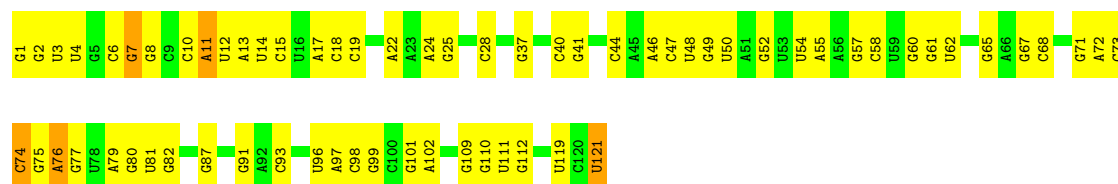






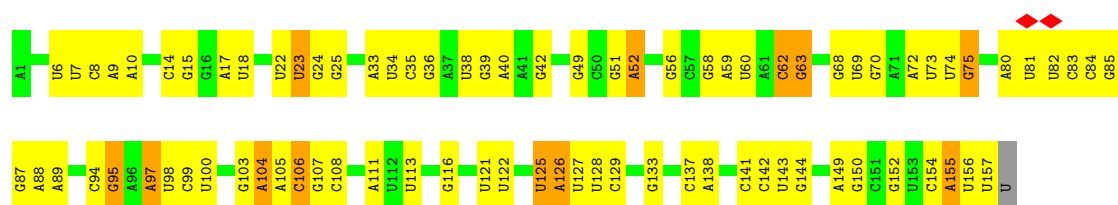
• Molecule 4: 5S rRNA

Chain C4: 45% 50%



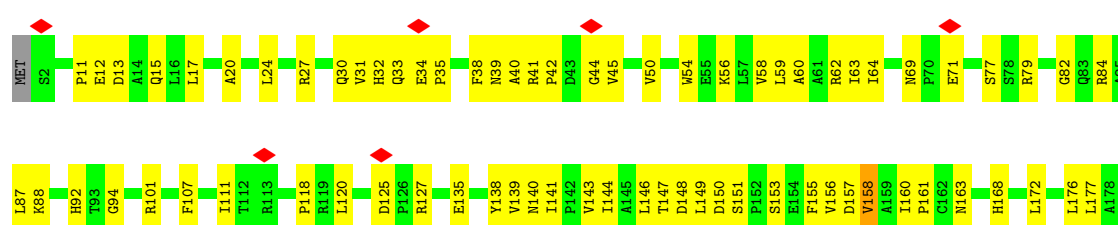
• Molecule 5: 5.8S rRNA

Chain C3: 47% 45% 8%

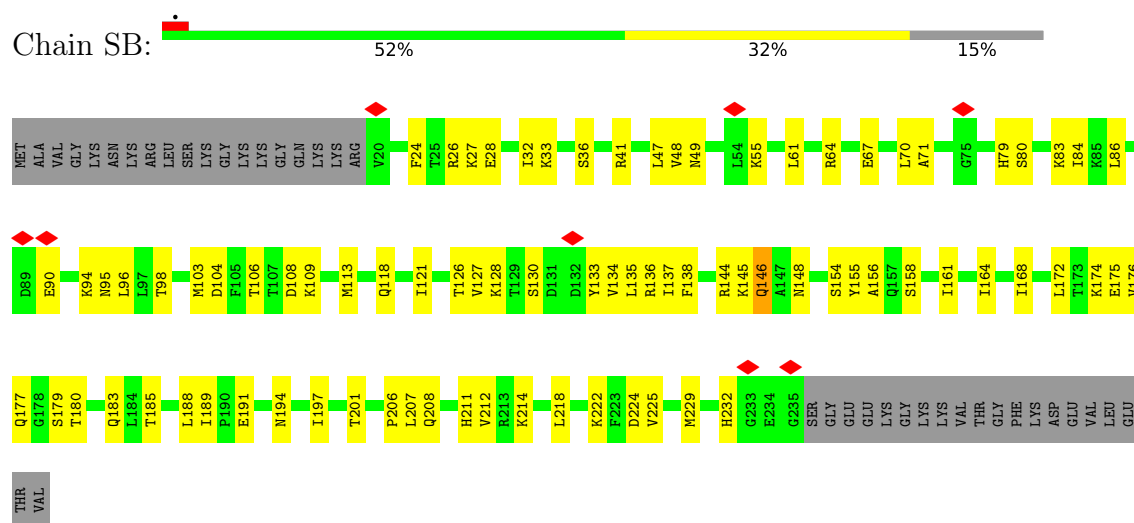


• Molecule 6: 40S ribosomal protein S0-A

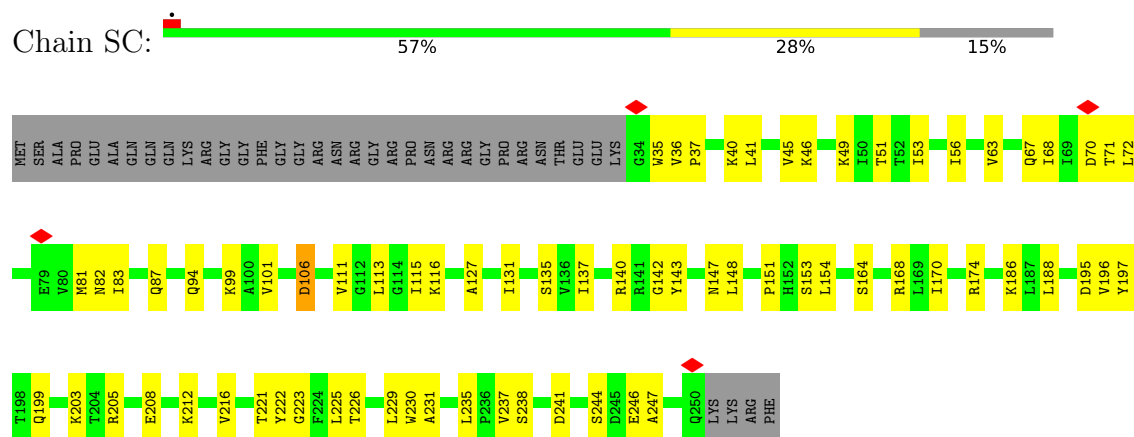
Chain SA: 49% 32% 18%



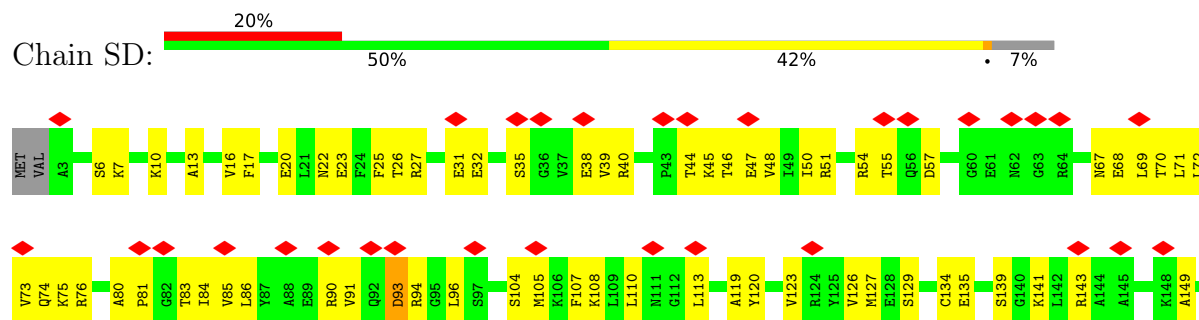
- Molecule 7: 40S ribosomal protein S1-A

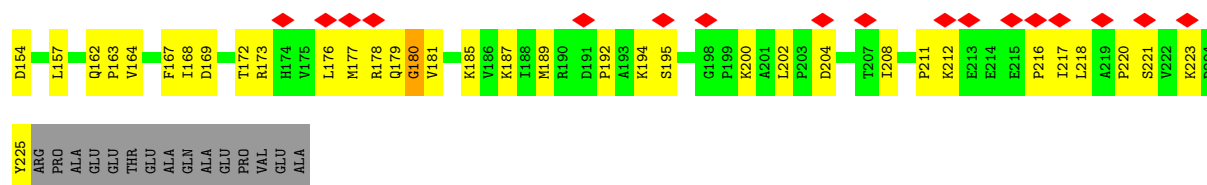


- Molecule 8: 40S ribosomal protein S2

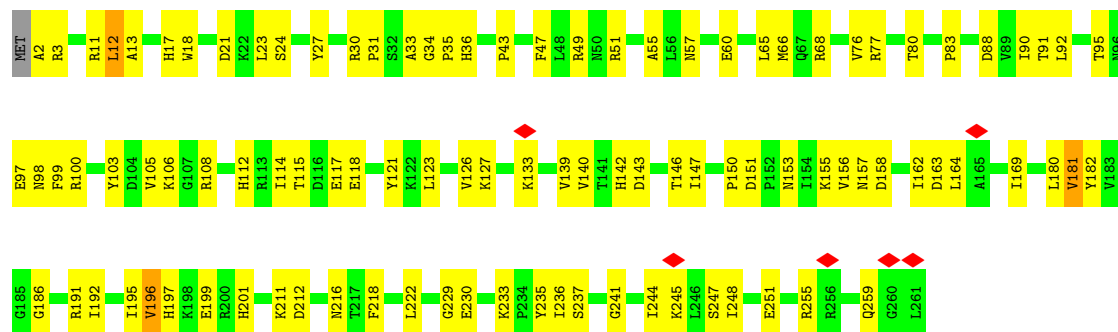


- Molecule 9: 40S ribosomal protein S3

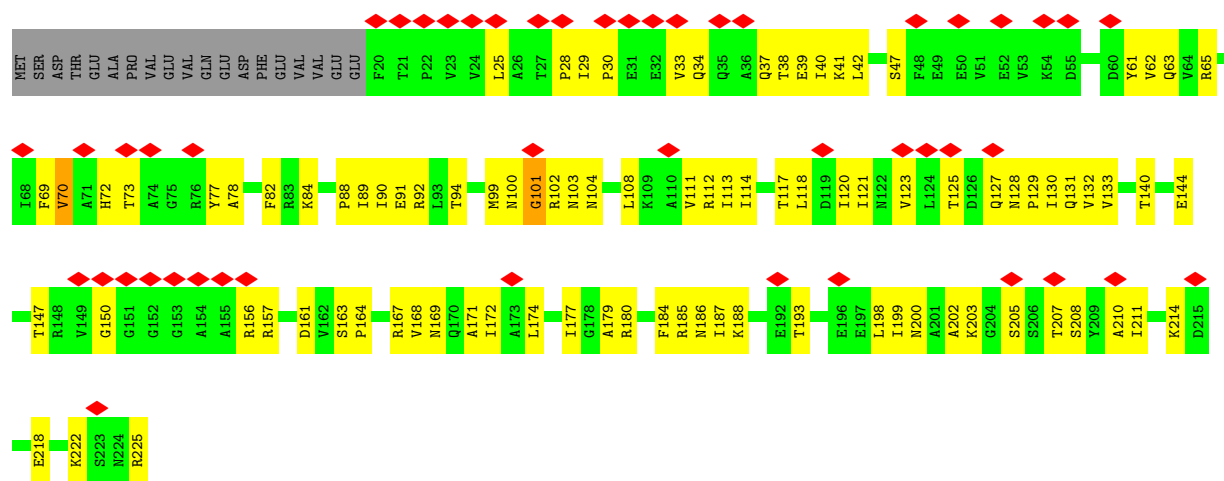




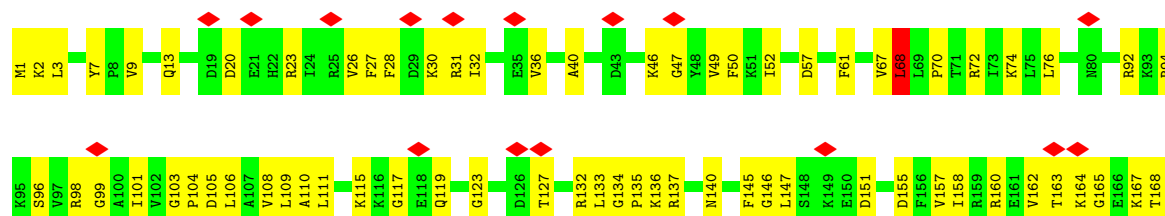
• Molecule 10: 40S ribosomal protein S4-A



• Molecule 11: Rps5p

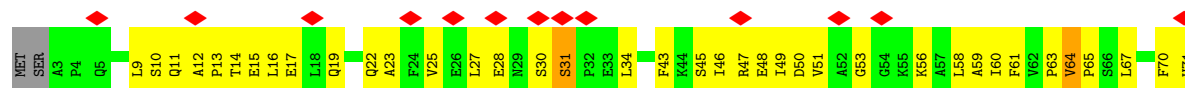


• Molecule 12: 40S ribosomal protein S6-A

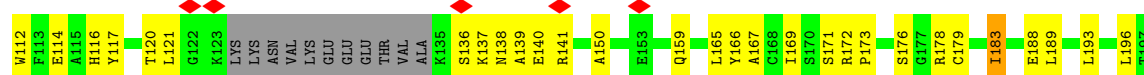




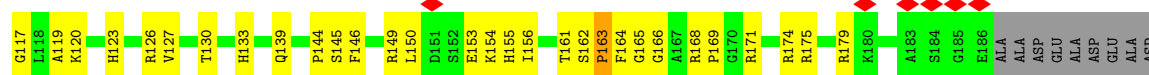
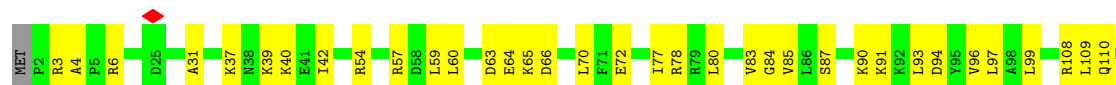
• Molecule 13: 40S ribosomal protein S7-A



• Molecule 14: 40S ribosomal protein S8-A



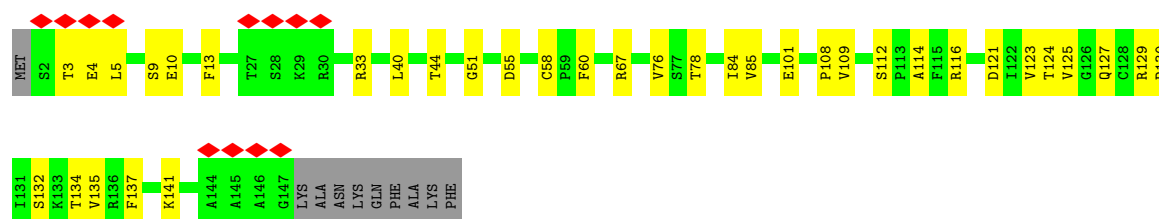
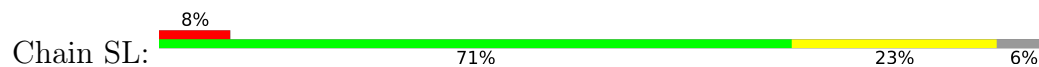
• Molecule 15: 40S ribosomal protein S9-A



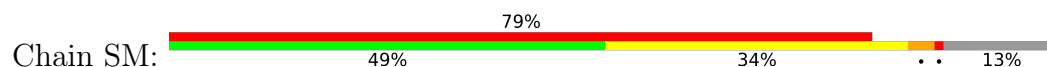
• Molecule 16: 40S ribosomal protein S10-A



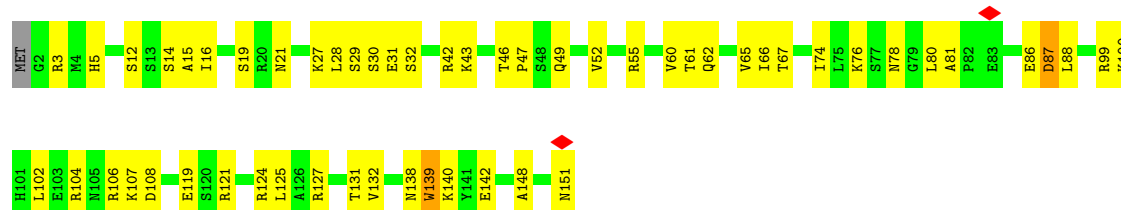
- Molecule 17: 40S ribosomal protein S11-A



- Molecule 18: 40S ribosomal protein S12

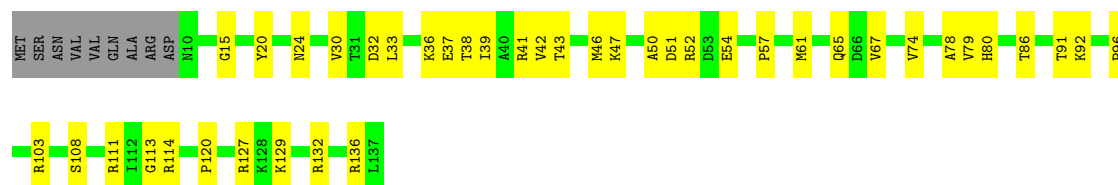


- Molecule 19: 40S ribosomal protein S13

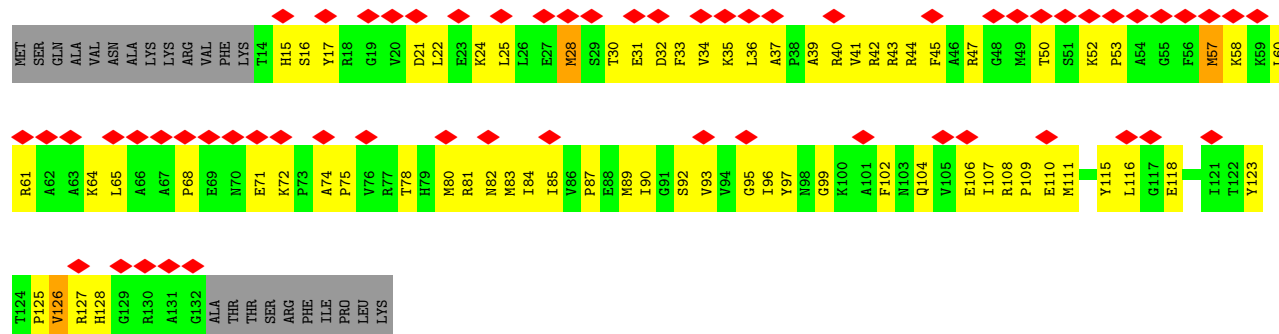


- Molecule 20: 40S ribosomal protein S14-A

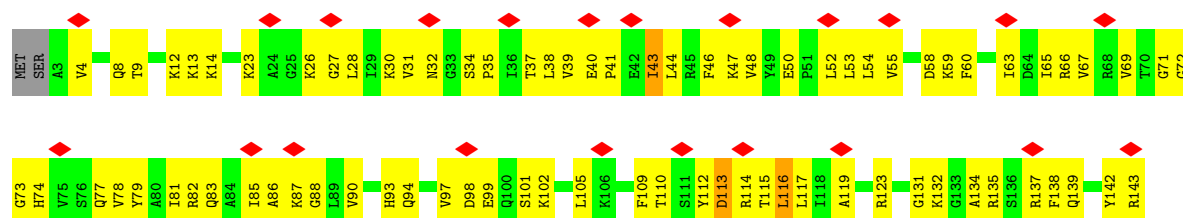




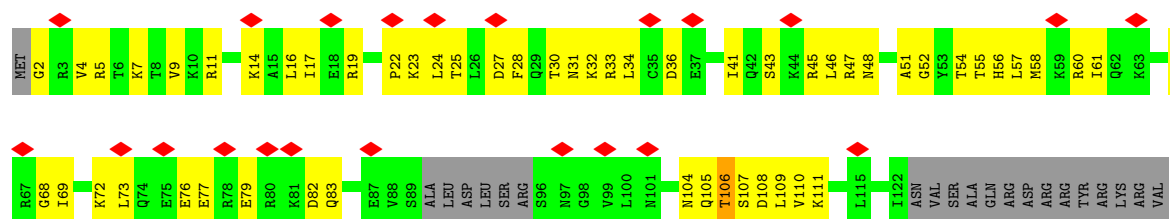
- Molecule 21: 40S ribosomal protein S15



- Molecule 22: 40S ribosomal protein S16-A

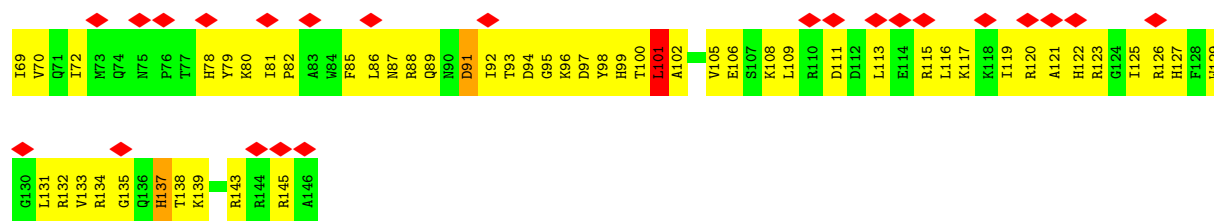


- Molecule 23: 40S ribosomal protein S17-A

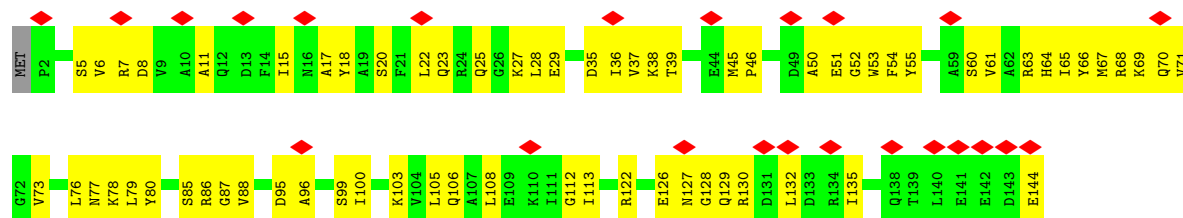


- Molecule 24: 40S ribosomal protein S18-A

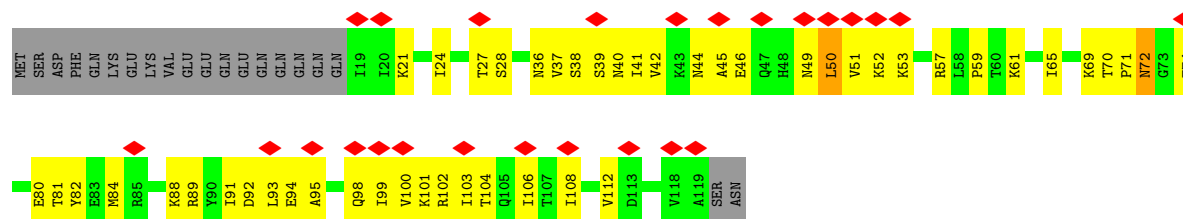
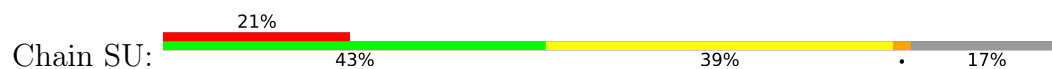




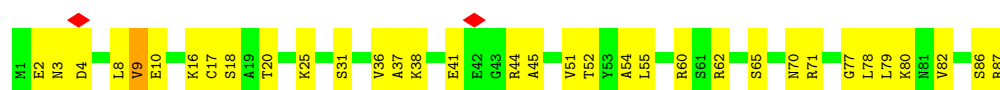
• Molecule 25: 40S ribosomal protein S19-A



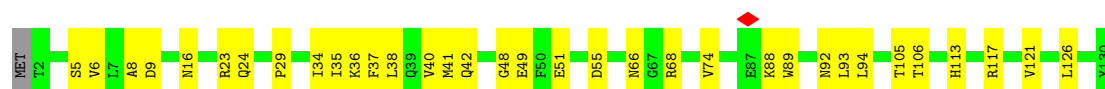
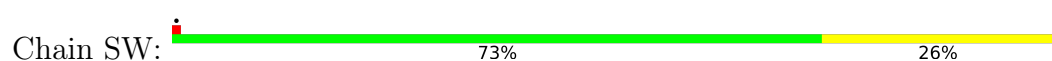
• Molecule 26: 40S ribosomal protein S20



• Molecule 27: 40S ribosomal protein S21-A

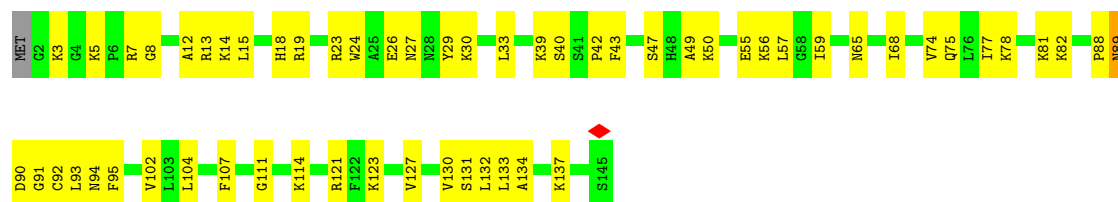


• Molecule 28: 40S ribosomal protein S22-A

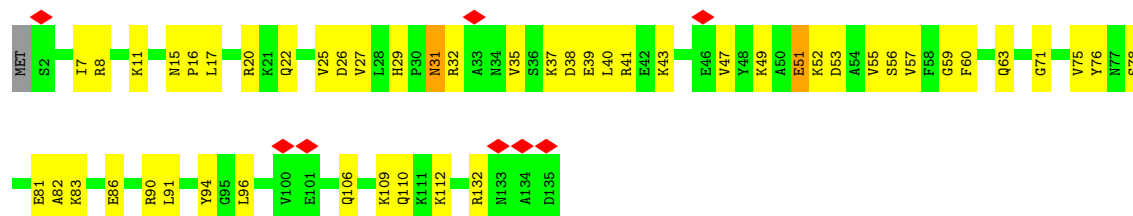


• Molecule 29: 40S ribosomal protein S23-A

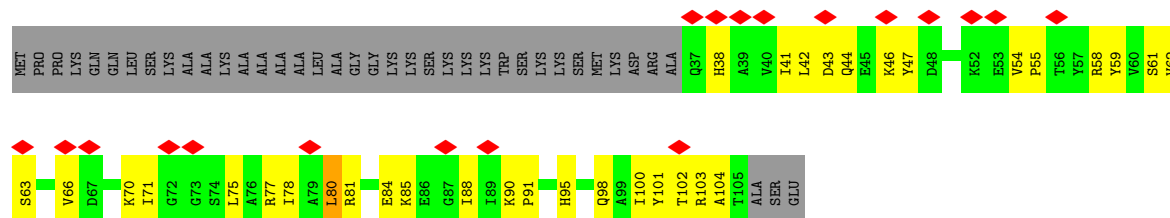




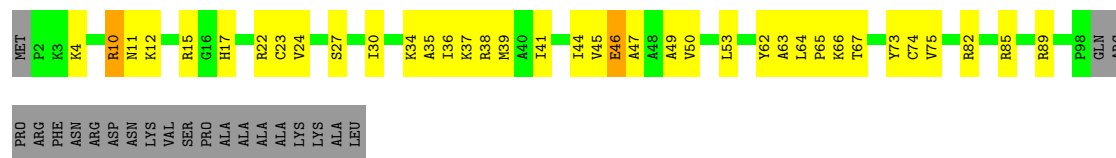
• Molecule 30: 40S ribosomal protein S24-A



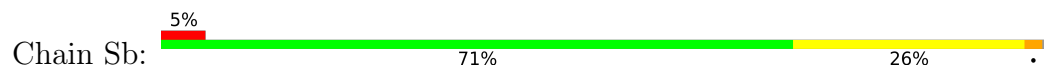
• Molecule 31: 40S ribosomal protein S25-A



• Molecule 32: 40S ribosomal protein S26-B

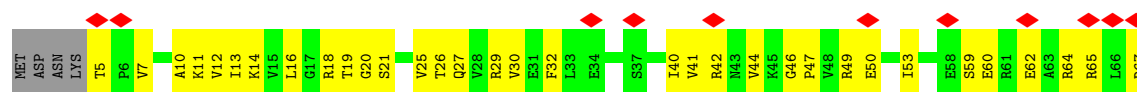


• Molecule 33: 40S ribosomal protein S27-A



• Molecule 34: 40S ribosomal protein S28-A





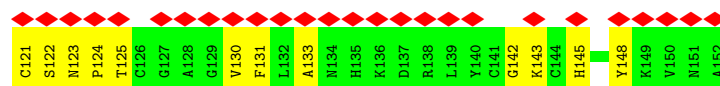
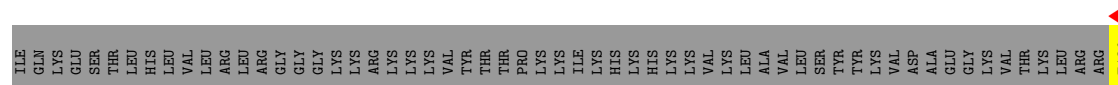
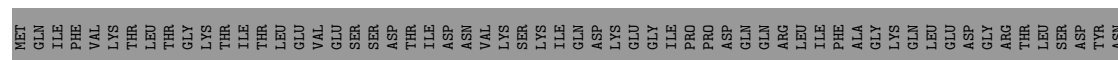
- Molecule 35: 40S ribosomal protein S29-A



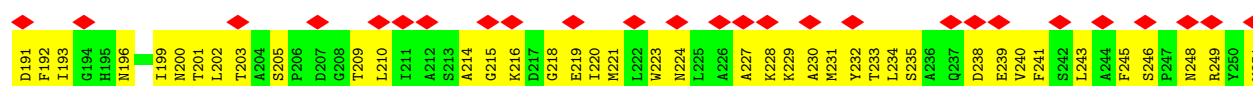
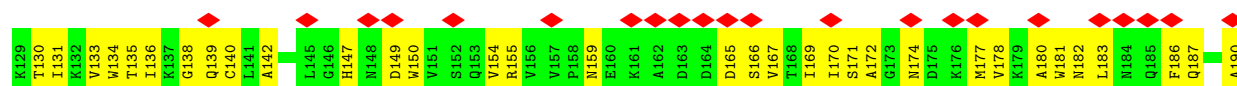
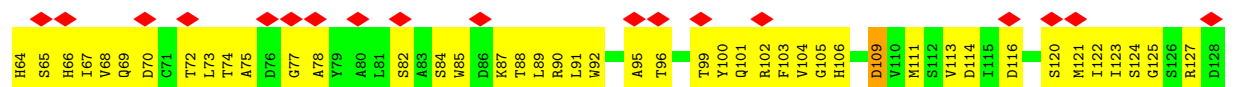
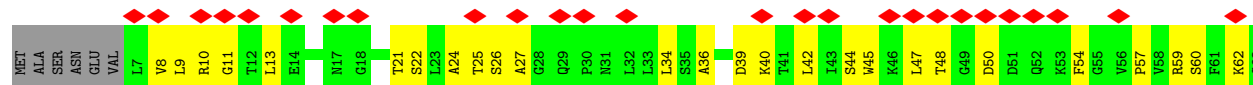
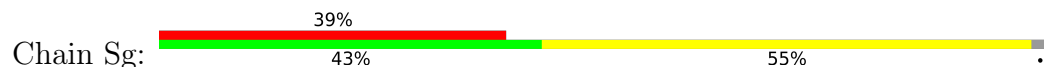
- Molecule 36: 40S ribosomal protein S30-A

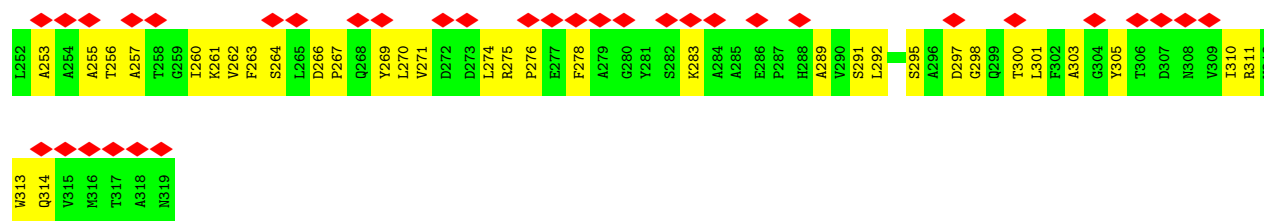


- Molecule 37: Ubiquitin-40S ribosomal protein S31



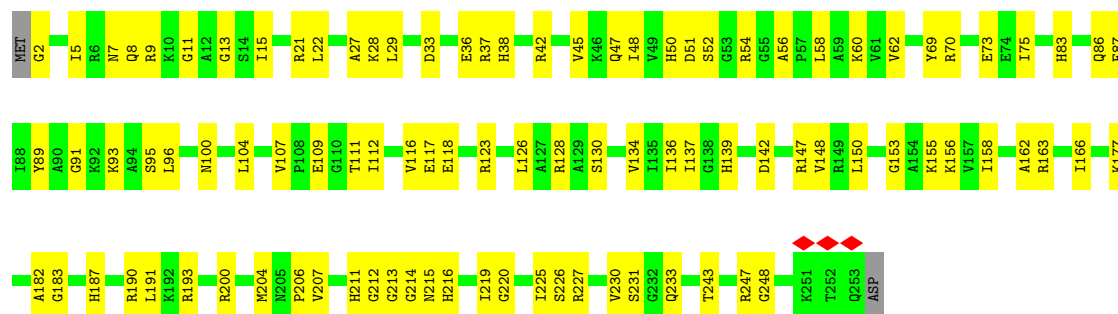
- Molecule 38: Guanine nucleotide-binding protein subunit beta-like protein





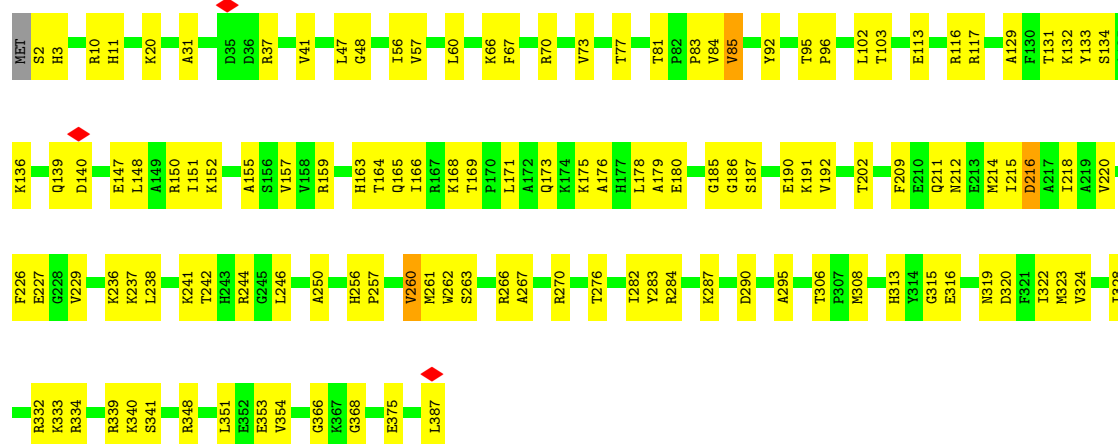
• Molecule 39: 60S ribosomal protein L2-A

Chain LA: 61% 38%



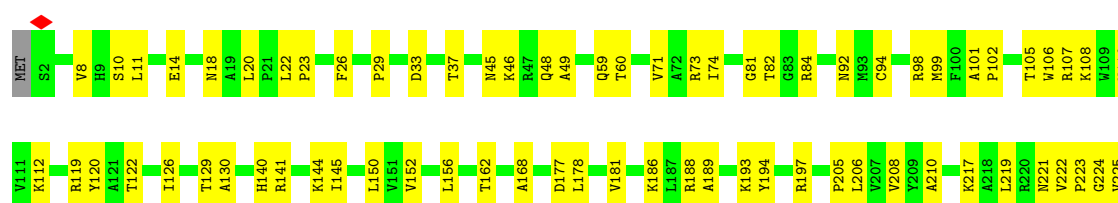
• Molecule 40: 60S ribosomal protein L3

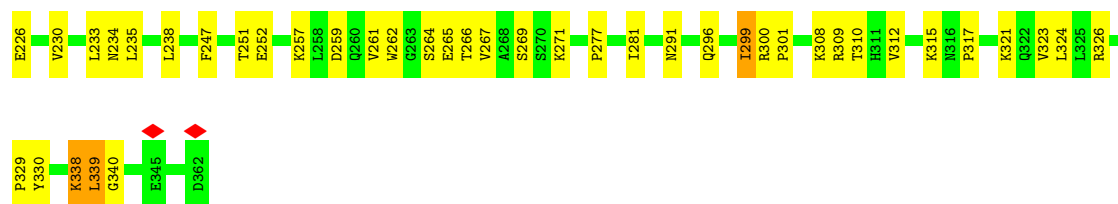
Chain LB: 67% 32%



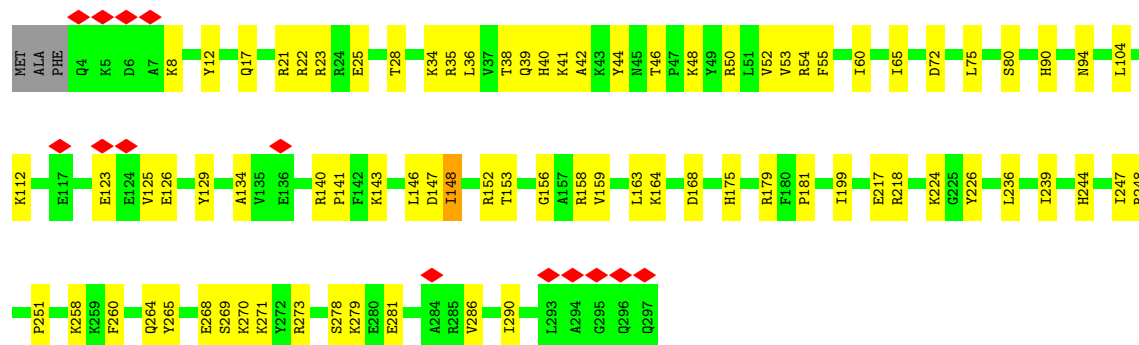
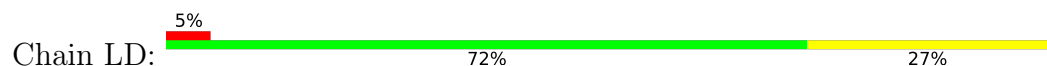
• Molecule 41: 60S ribosomal protein L4-A

Chain LC: 69% 30%

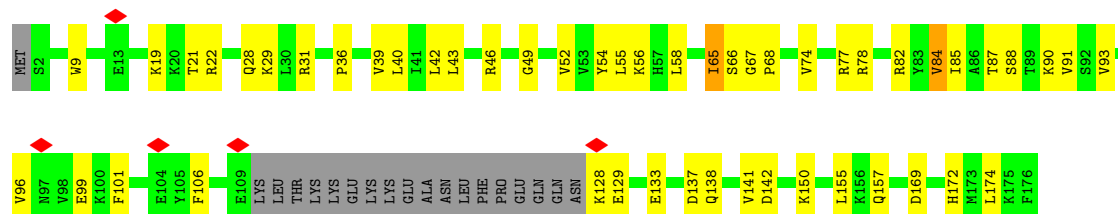




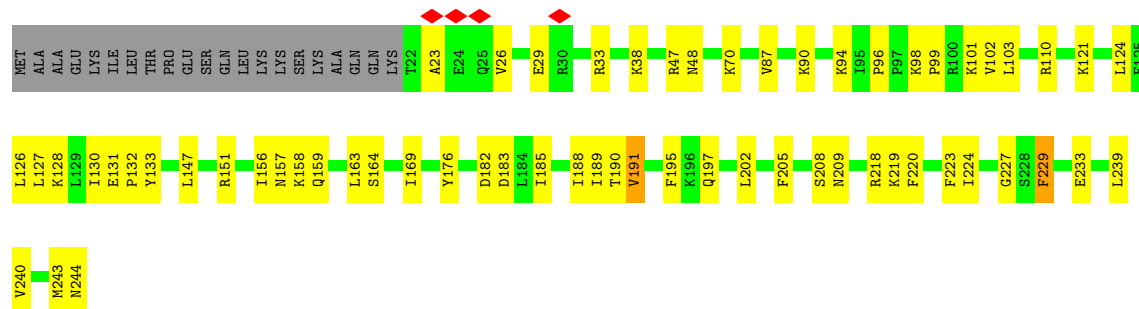
- Molecule 42: 60S ribosomal protein L5



- Molecule 43: 60S ribosomal protein L6-A

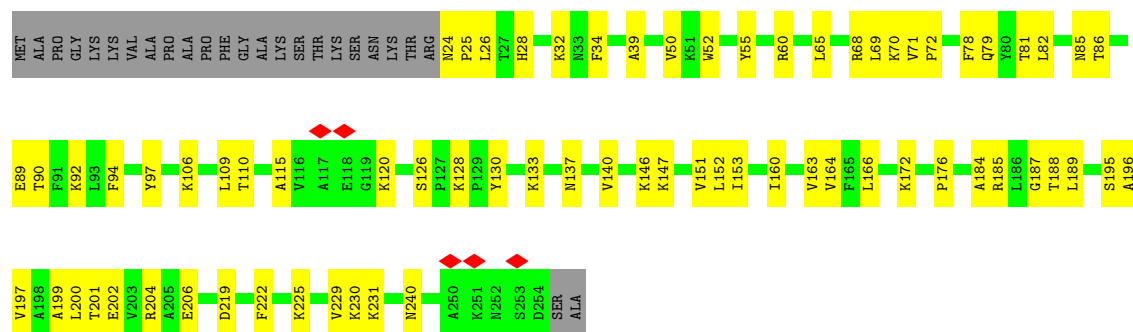


- Molecule 44: 60S ribosomal protein L7-A

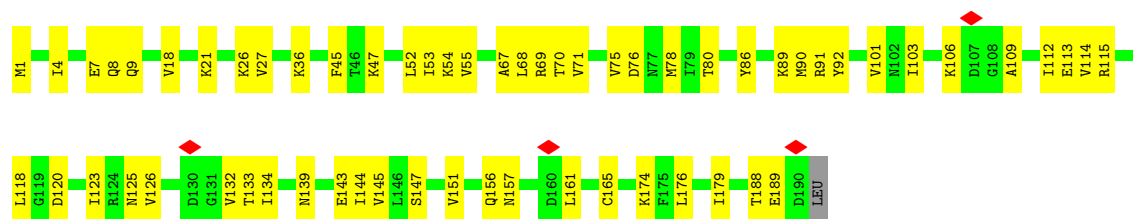


- Molecule 45: 60S ribosomal protein L8-A

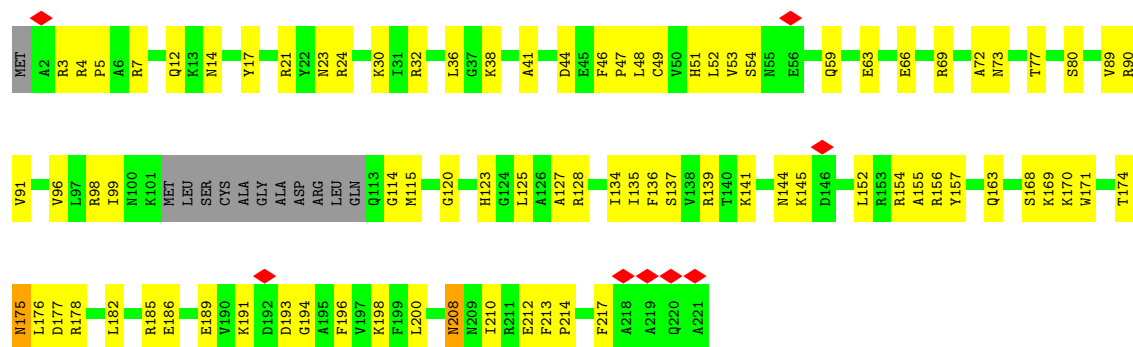




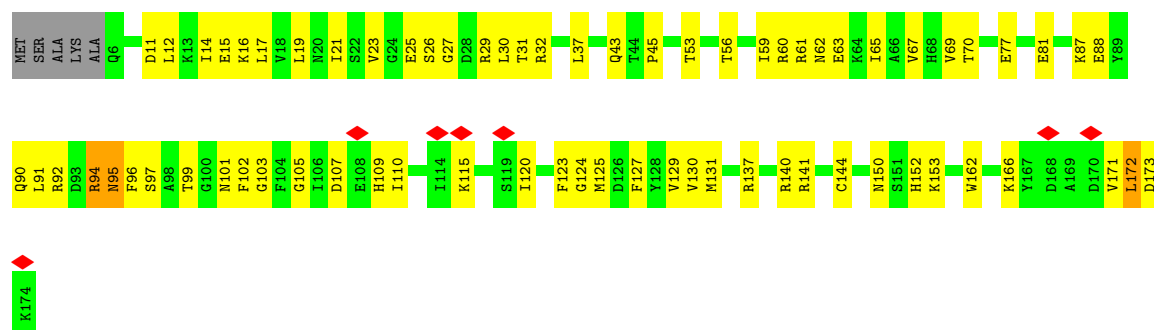
• Molecule 46: 60S ribosomal protein L9-A



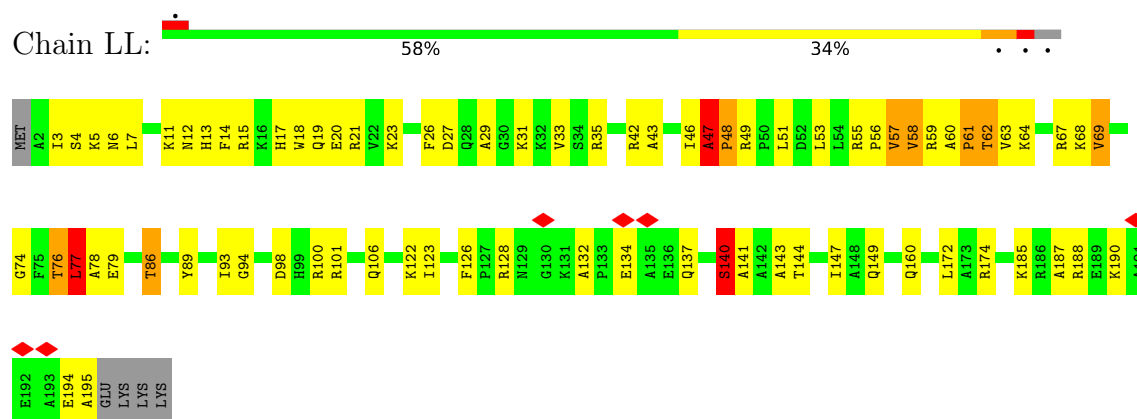
• Molecule 47: 60S ribosomal protein L10



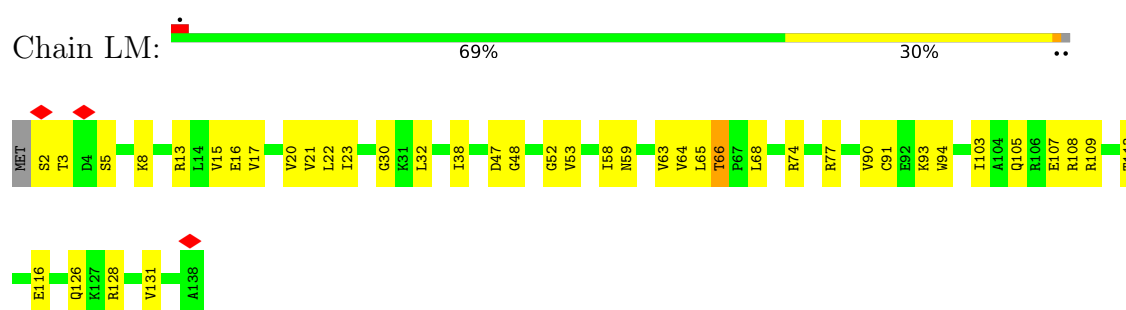
• Molecule 48: 60S ribosomal protein L11-A



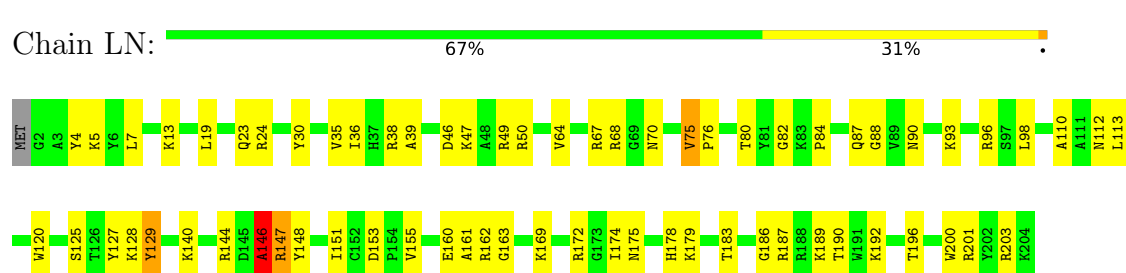
- Molecule 49: 60S ribosomal protein L13-A



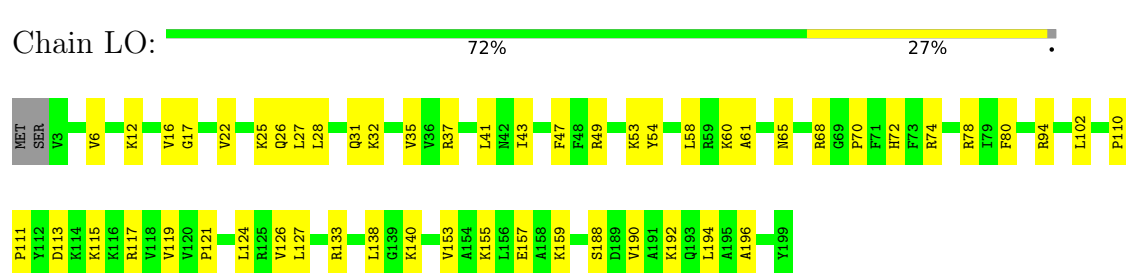
- Molecule 50: 60S ribosomal protein L14-A



- Molecule 51: 60S ribosomal protein L15-A

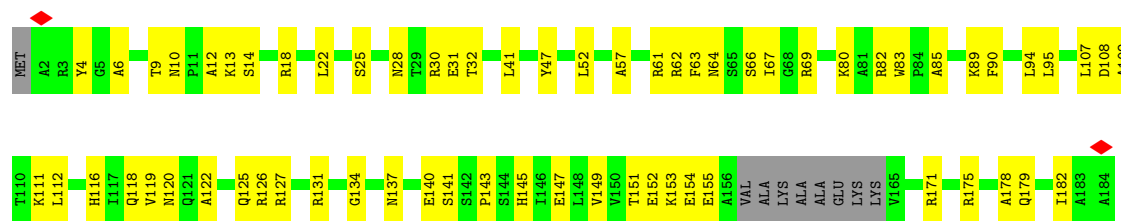


- Molecule 52: 60S ribosomal protein L16-A



- Molecule 53: 60S ribosomal protein L17-A





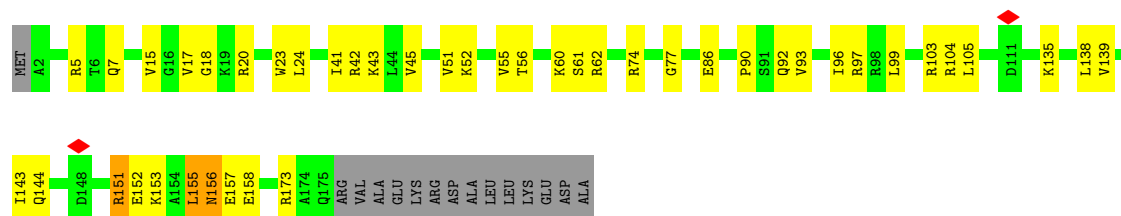
- Molecule 54: 60S ribosomal protein L18-A

Chain LQ: 74% 25%



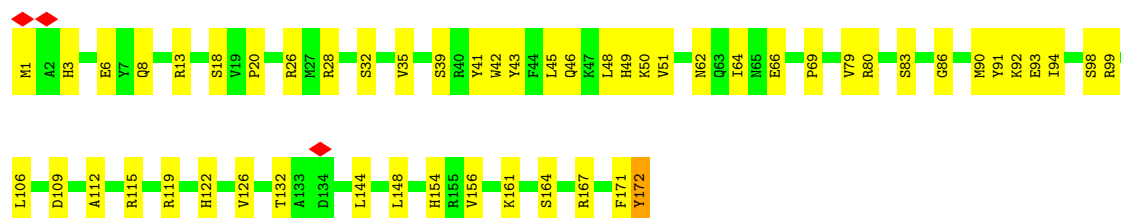
- Molecule 55: 60S ribosomal protein L19-A

Chain LR: 69% 22% 8%



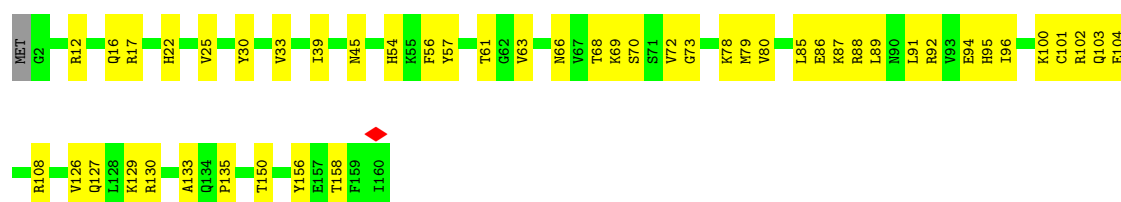
- Molecule 56: 60S ribosomal protein L20-A

Chain LS: 69% 30%

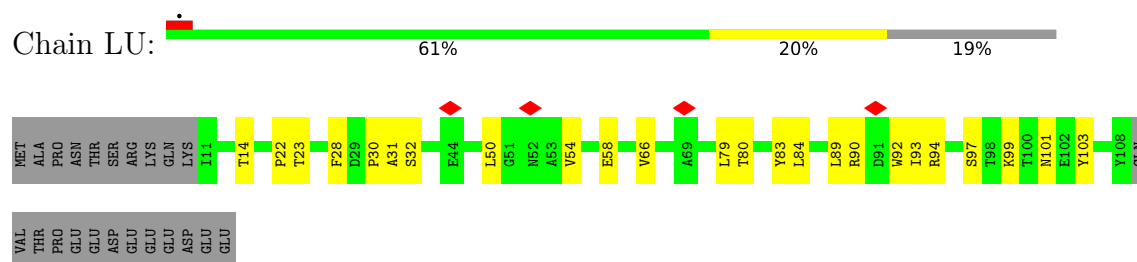


- Molecule 57: 60S ribosomal protein L21-A

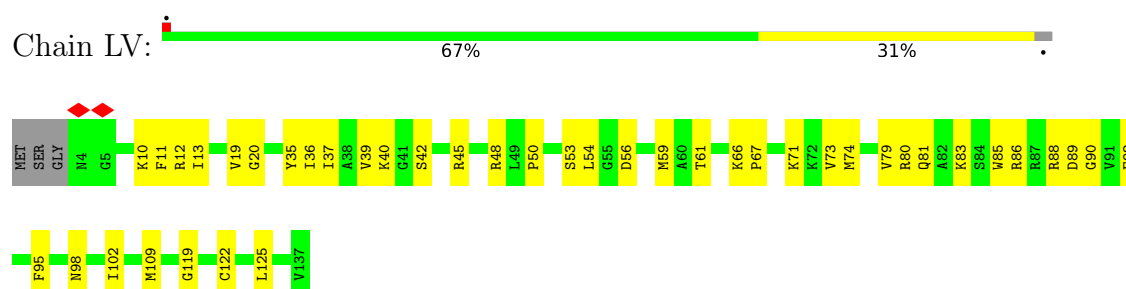
Chain LT: 69% 30%



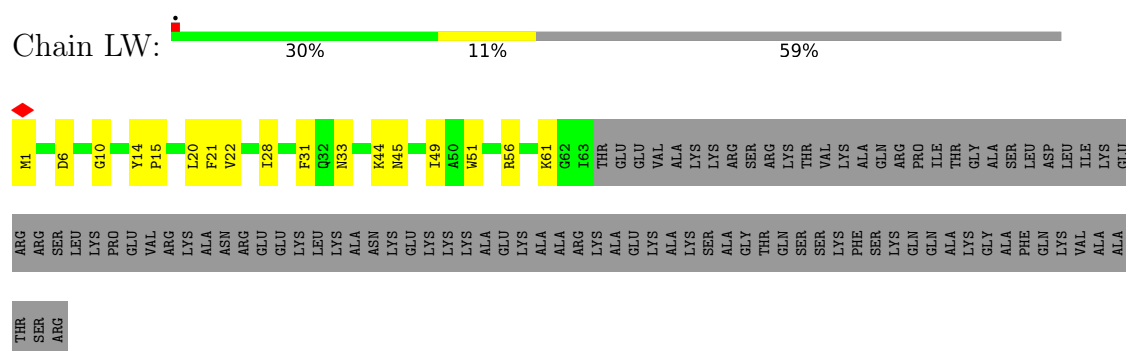
- Molecule 58: 60S ribosomal protein L22-A



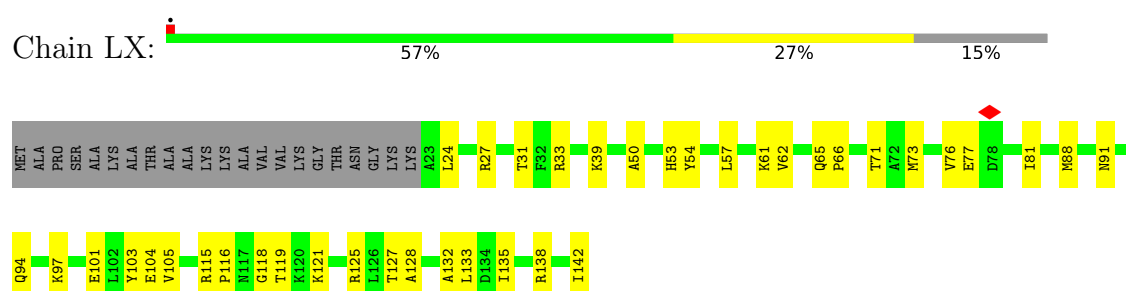
- Molecule 59: 60S ribosomal protein L23-A



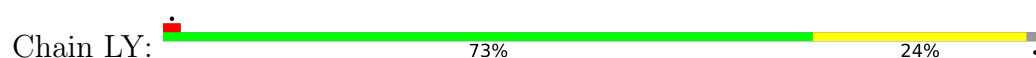
- Molecule 60: 60S ribosomal protein L24-A



- Molecule 61: 60S ribosomal protein L25

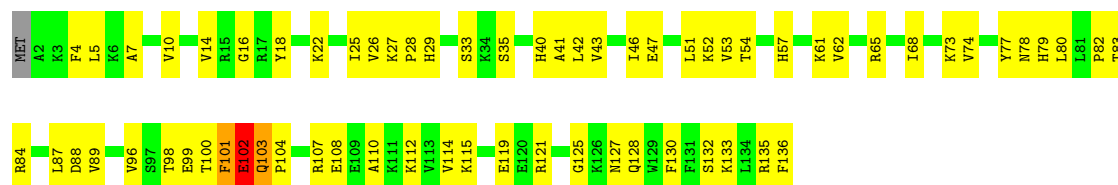


- Molecule 62: 60S ribosomal protein L26-A

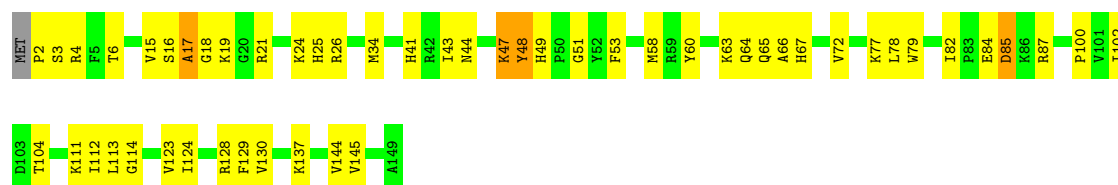




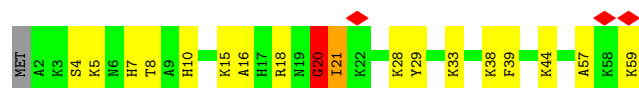
- Molecule 63: 60S ribosomal protein L27-A



- Molecule 64: 60S ribosomal protein L28



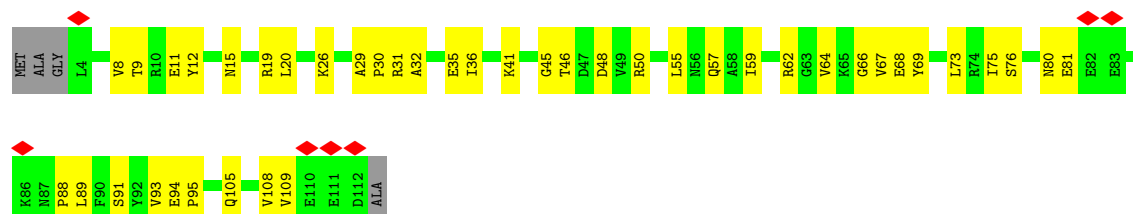
- Molecule 65: 60S ribosomal protein L29



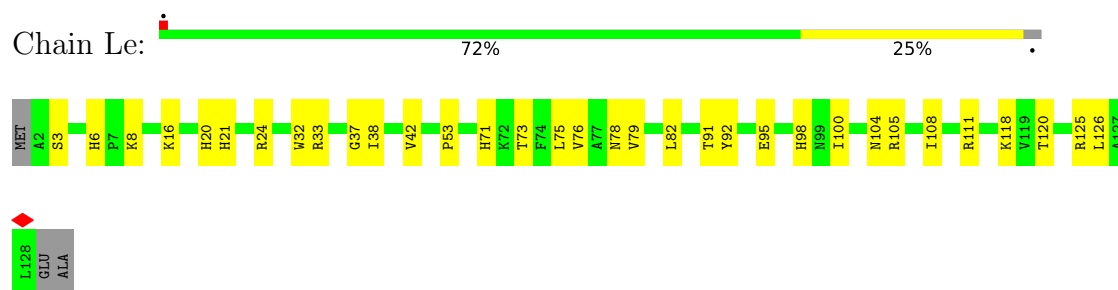
- Molecule 66: 60S ribosomal protein L30



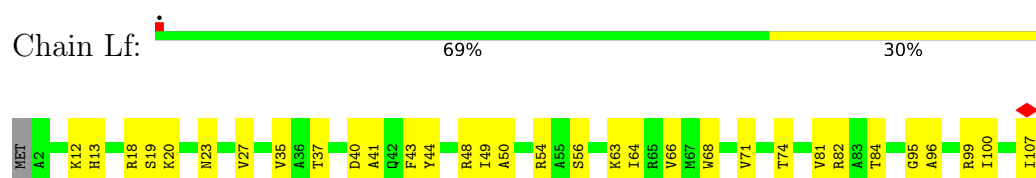
- Molecule 67: 60S ribosomal protein L31-A



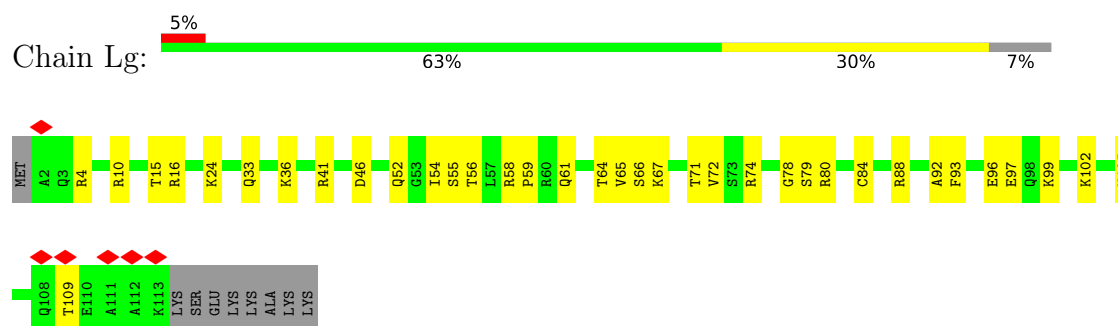
- Molecule 68: 60S ribosomal protein L32



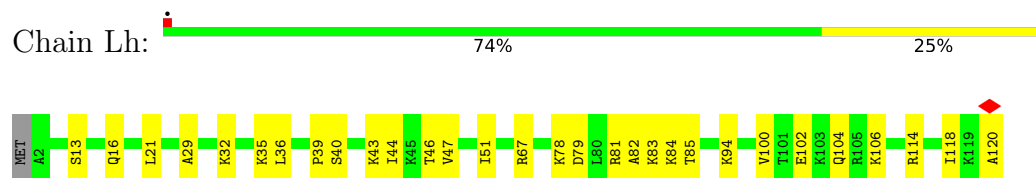
- Molecule 69: 60S ribosomal protein L33-A



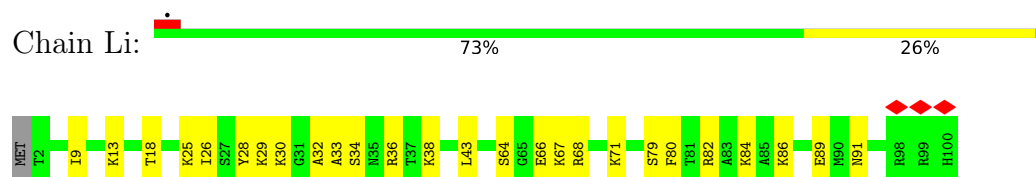
- Molecule 70: 60S ribosomal protein L34-A



- Molecule 71: 60S ribosomal protein L35-A

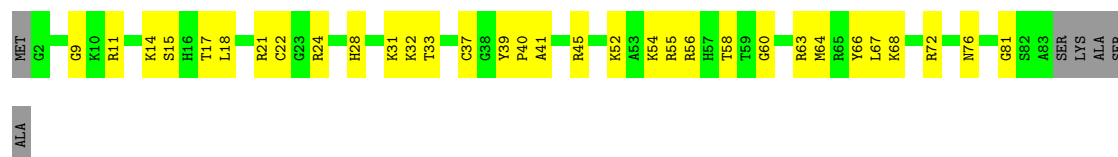


- Molecule 72: 60S ribosomal protein L36-A

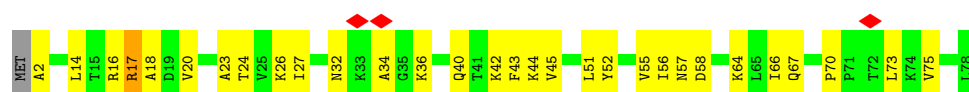


- Molecule 73: 60S ribosomal protein L37-A





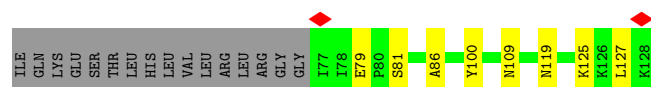
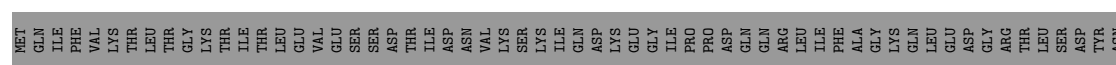
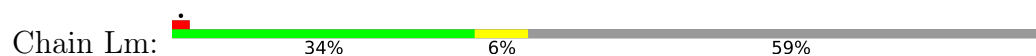
- Molecule 74: 60S ribosomal protein L38



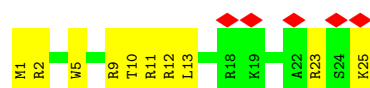
- Molecule 75: 60S ribosomal protein L39



- Molecule 76: Ubiquitin-60S ribosomal protein L40



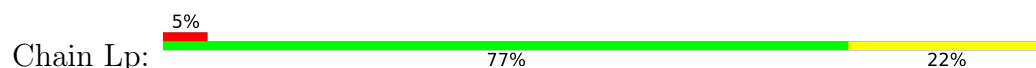
- Molecule 77: 60S ribosomal protein L41-A

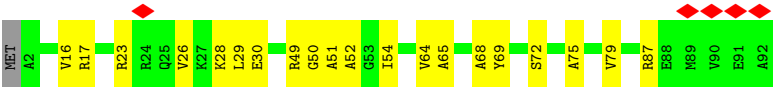


- Molecule 78: 60S ribosomal protein L42-A



- Molecule 79: 60S ribosomal protein L43-A





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	88523	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	28	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.283	Depositor
Minimum map value	-0.173	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.010	Depositor
Recommended contour level	0.03	Depositor
Map size (Å)	433.6, 433.6, 433.6	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.084, 1.084, 1.084	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	C2	0.43	0/40528	0.43	1/63141 (0.0%)
2	C5	0.32	0/636	0.49	0/837
3	C1	0.56	0/74873	0.44	0/116727
4	C4	0.48	0/2883	0.38	0/4491
5	C3	0.59	0/3724	0.44	0/5798
6	SA	0.36	0/1623	0.58	0/2222
7	SB	0.41	0/1748	0.63	0/2352
8	SC	0.44	0/1665	0.61	0/2263
9	SD	0.30	0/1759	0.57	0/2368
10	SE	0.40	0/2109	0.61	0/2839
11	SF	0.29	0/1629	0.53	0/2202
12	SG	0.32	0/1779	0.53	0/2379
13	SH	0.34	0/1511	0.67	0/2036
14	SI	0.46	0/1514	0.57	0/2021
15	SJ	0.39	0/1519	0.58	0/2035
16	SK	0.27	0/757	0.58	0/1022
17	SL	0.49	0/1194	0.57	0/1610
18	SM	0.23	0/898	0.69	0/1220
19	SN	0.43	0/1215	0.62	2/1638 (0.1%)
20	SO	0.44	0/960	0.63	0/1290
21	SP	0.28	0/959	0.65	2/1288 (0.2%)
22	SQ	0.28	0/1125	0.62	1/1510 (0.1%)
23	SR	0.30	0/904	0.55	0/1210
24	SS	0.27	0/1211	0.61	1/1628 (0.1%)
25	ST	0.27	0/1130	0.55	0/1517
26	SU	0.31	0/815	0.64	0/1102
27	SV	0.39	0/693	0.54	0/935
28	SW	0.49	0/1038	0.61	0/1395
29	SX	0.48	0/1139	0.64	0/1518
30	SY	0.35	0/1087	0.61	0/1449
31	SZ	0.29	0/566	0.60	0/761
32	Sa	0.47	0/782	0.61	0/1047

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Sb	0.39	0/620	0.63	0/838
34	Sc	0.32	0/499	0.62	0/670
35	Sd	0.31	0/452	0.58	0/600
36	Se	0.32	0/483	0.60	0/643
37	Sf	0.24	0/253	0.58	0/340
38	Sg	0.26	0/2456	0.60	0/3343
39	LA	0.62	0/1946	0.70	0/2614
40	LB	0.53	0/3146	0.61	0/4228
41	LC	0.54	0/2800	0.63	0/3790
42	LD	0.41	0/2408	0.52	0/3248
43	LE	0.42	0/1269	0.57	0/1705
44	LF	0.52	0/1828	0.58	0/2461
45	LG	0.51	0/1795	0.60	0/2429
46	LH	0.43	0/1531	0.56	0/2062
47	LI	0.48	0/1732	0.59	0/2323
48	LJ	0.41	0/1374	0.61	0/1842
49	LL	0.52	0/1573	0.73	2/2113 (0.1%)
50	LM	0.41	0/1074	0.57	0/1446
51	LN	0.62	0/1757	0.70	0/2354
52	LO	0.51	0/1585	0.57	0/2128
53	LP	0.56	0/1400	0.57	0/1882
54	LQ	0.54	0/1465	0.60	0/1965
55	LR	0.60	0/1382	0.69	3/1849 (0.2%)
56	LS	0.47	0/1481	0.55	2/1990 (0.1%)
57	LT	0.48	0/1300	0.55	0/1743
58	LU	0.40	0/794	0.56	0/1076
59	LV	0.50	0/1008	0.59	0/1356
60	LW	0.48	0/533	0.56	0/707
61	LX	0.53	0/974	0.67	0/1314
62	LY	0.48	0/987	0.60	0/1318
63	LZ	0.52	0/1118	0.64	0/1497
64	La	0.57	0/1204	0.65	2/1612 (0.1%)
65	Lb	0.46	0/473	0.66	0/629
66	Lc	0.45	0/775	0.56	0/1040
67	Ld	0.51	0/897	0.60	0/1205
68	Le	0.54	0/1041	0.61	0/1394
69	Lf	0.60	0/868	0.64	0/1168
70	Lg	0.55	0/890	0.59	0/1189
71	Lh	0.48	0/974	0.55	0/1297
72	Li	0.45	0/777	0.59	0/1033
73	Lj	0.64	0/665	0.71	0/882
74	Lk	0.37	0/614	0.57	0/822
75	Ll	0.59	0/443	0.61	0/588

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	Lm	0.46	0/423	0.55	0/562
77	Ln	0.41	0/234	0.55	0/300
78	Lo	0.47	0/860	0.56	0/1136
79	Lp	0.55	0/701	0.62	0/934
All	All	0.49	0/210835	0.51	16/309516 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
6	SA	0	1
7	SB	0	2
8	SC	0	1
13	SH	0	2
18	SM	0	3
19	SN	0	1
22	SQ	0	2
24	SS	0	1
26	SU	0	1
30	SY	0	2
32	Sa	0	1
33	Sb	0	1
36	Se	0	1
39	LA	0	1
41	LC	0	1
48	LJ	0	2
49	LL	0	2
51	LN	0	1
63	LZ	0	2
64	La	0	2
65	Lb	0	2
72	Li	0	1
All	All	0	33

There are no bond length outliers.

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	LR	173	ARG	N-CA-C	-8.29	102.98	113.43
64	La	47	LYS	CA-C-N	6.86	134.65	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
64	La	47	LYS	C-N-CA	6.86	134.65	121.54
1	C2	857	U	C4'-C3'-O3'	-6.84	102.75	113.00
49	LL	140	SER	CA-C-N	5.99	132.98	121.54
49	LL	140	SER	C-N-CA	5.99	132.98	121.54
24	SS	101	LEU	N-CA-C	5.63	115.84	108.07
55	LR	24	LEU	CA-C-N	-5.55	111.71	122.70
55	LR	24	LEU	C-N-CA	-5.55	111.71	122.70
22	SQ	43	ILE	N-CA-C	-5.44	107.50	113.43
19	SN	27	LYS	CA-C-N	-5.38	115.12	121.90
19	SN	27	LYS	C-N-CA	-5.38	115.12	121.90
21	SP	126	VAL	CA-C-N	5.29	131.64	121.54
21	SP	126	VAL	C-N-CA	5.29	131.64	121.54
56	LS	13	ARG	CA-C-N	-5.07	111.30	120.94
56	LS	13	ARG	C-N-CA	-5.07	111.30	120.94

There are no chirality outliers.

All (33) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
39	LA	13	GLY	Peptide
41	LC	338	LYS	Peptide
48	LJ	172	LEU	Peptide
48	LJ	94	ARG	Peptide
49	LL	47	ALA	Peptide
49	LL	61	PRO	Peptide
51	LN	146	ALA	Peptide
63	LZ	100	THR	Peptide
63	LZ	102	GLU	Peptide
64	La	17	ALA	Peptide
64	La	66	ALA	Peptide
65	Lb	20	GLY	Peptide
65	Lb	21	ILE	Peptide
72	Li	64	SER	Peptide
6	SA	184	LEU	Peptide
7	SB	104	ASP	Peptide
7	SB	146	GLN	Peptide
8	SC	106	ASP	Peptide
13	SH	31	SER	Peptide
13	SH	64	VAL	Peptide
18	SM	110	GLY	Peptide
18	SM	128	ALA	Peptide
18	SM	130	THR	Peptide

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Mol	Chain	Res	Type	Group
19	SN	139	TRP	Peptide
22	SQ	113	ASP	Peptide
22	SQ	40	GLU	Peptide
24	SS	101	LEU	Peptide
26	SU	50	LEU	Peptide
30	SY	31	ASN	Peptide
30	SY	51	GLU	Peptide
32	Sa	10	ARG	Peptide
33	Sb	75	GLU	Peptide
36	Se	44	PHE	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	C2	36234	0	18230	969	0
2	C5	633	0	637	17	0
3	C1	66891	0	33619	1228	0
4	C4	2579	0	1304	49	0
5	C3	3333	0	1685	66	0
6	SA	1583	0	1578	68	0
7	SB	1722	0	1793	64	0
8	SC	1635	0	1723	63	0
9	SD	1734	0	1817	87	0
10	SE	2068	0	2154	88	0
11	SF	1609	0	1675	88	0
12	SG	1755	0	1846	79	0
13	SH	1486	0	1576	82	0
14	SI	1489	0	1525	57	0
15	SJ	1494	0	1573	59	0
16	SK	741	0	691	37	0
17	SL	1168	0	1233	26	0
18	SM	890	0	887	49	0
19	SN	1192	0	1255	46	0
20	SO	949	0	985	42	0
21	SP	939	0	968	71	0
22	SQ	1105	0	1166	80	0
23	SR	896	0	902	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	SS	1192	0	1222	100	0
25	ST	1112	0	1124	56	0
26	SU	805	0	874	45	0
27	SV	684	0	672	36	0
28	SW	1021	0	1060	25	0
29	SX	1121	0	1196	54	0
30	SY	1073	0	1132	37	0
31	SZ	558	0	598	28	0
32	Sa	769	0	816	30	0
33	Sb	610	0	630	21	0
34	Sc	497	0	535	32	0
35	Sd	442	0	432	23	0
36	Se	475	0	525	19	0
37	Sf	248	0	237	15	0
38	Sg	2403	0	2350	158	0
39	LA	1912	0	1976	81	0
40	LB	3075	0	3142	92	0
41	LC	2748	0	2859	97	0
42	LD	2359	0	2311	72	0
43	LE	1248	0	1339	40	0
44	LF	1791	0	1869	52	0
45	LG	1763	0	1819	56	0
46	LH	1510	0	1576	53	0
47	LI	1696	0	1731	71	0
48	LJ	1353	0	1383	56	0
49	LL	1548	0	1613	64	0
50	LM	1059	0	1154	32	0
51	LN	1720	0	1779	66	0
52	LO	1555	0	1659	43	0
53	LP	1378	0	1404	45	0
54	LQ	1441	0	1543	42	0
55	LR	1365	0	1414	35	0
56	LS	1445	0	1487	48	0
57	LT	1276	0	1323	42	0
58	LU	778	0	791	15	0
59	LV	993	0	1040	31	0
60	LW	521	0	551	12	0
61	LX	959	0	1023	33	0
62	LY	976	0	1064	21	0
63	LZ	1092	0	1155	52	0
64	La	1173	0	1215	47	0
65	Lb	462	0	491	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
66	Lc	767	0	816	19	0
67	Ld	883	0	918	28	0
68	Le	1020	0	1090	28	0
69	Lf	850	0	880	25	0
70	Lg	880	0	942	27	0
71	Lh	965	0	1067	24	0
72	Li	770	0	846	23	0
73	Lj	650	0	650	31	0
74	Lk	608	0	671	24	0
75	Ll	436	0	475	16	0
76	Lm	417	0	455	9	0
77	Ln	233	0	284	13	0
78	Lo	847	0	915	23	0
79	Lp	694	0	734	20	0
80	C2	1	0	0	0	0
80	Lg	1	0	0	0	0
80	Lj	1	0	0	0	0
80	Lm	1	0	0	0	0
80	Lo	1	0	0	0	0
80	Lp	1	0	0	0	0
80	Sa	1	0	0	0	0
80	Sb	1	0	0	0	0
80	Sf	1	0	0	0	0
All	All	196360	0	145679	4954	0

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 15.

All (4954) 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)
1:C2:1158:C:N4	1:C2:1582:U:H3	0.90	1.39
1:C2:1158:C:N4	1:C2:1582:U:N3	1.73	1.33
3:C1:1559:A:C6	3:C1:1581:C:N4	2.14	1.13
3:C1:1559:A:C5	3:C1:1581:C:N4	2.17	1.12
1:C2:1677:C:N4	1:C2:1724:U:H3	1.47	1.11
3:C1:3165:A:N6	3:C1:3285:C:H42	1.49	1.10
3:C1:1257:C:H42	3:C1:1261:G:N2	1.50	1.10
38:Sg:218:GLY:O	38:Sg:235:SER:HA	1.49	1.10
1:C2:852:C:H6	1:C2:852:C:H5"	1.17	1.09
3:C1:3165:A:H61	3:C1:3285:C:N4	1.50	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1152:G:N2	3:C1:1200:A:H61	1.53	1.07
3:C1:2890:A:N6	3:C1:2913:C:H42	1.57	1.02
3:C1:1257:C:N4	3:C1:1261:G:H22	1.57	0.99
3:C1:1257:C:N4	3:C1:1261:G:N2	2.09	0.99
3:C1:2890:A:H61	3:C1:2913:C:N4	1.59	0.98
67:Ld:41:LYS:O	67:Ld:45:GLY:HA2	1.62	0.98
3:C1:2392:C:H42	3:C1:2987:A:N6	1.62	0.98
3:C1:2392:C:N4	3:C1:2987:A:H61	1.61	0.97
3:C1:240:U:HO2'	3:C1:241:G:H8	1.06	0.97
21:SP:96:ILE:HG12	21:SP:116:LEU:HB3	1.45	0.96
47:LI:49:CYS:HB3	47:LI:168:SER:HB3	1.46	0.94
3:C1:2392:C:H42	3:C1:2987:A:H61	0.96	0.94
3:C1:1559:A:N6	3:C1:1581:C:N4	2.14	0.93
3:C1:1156:C:OP2	44:LF:94:LYS:NZ	2.02	0.93
1:C2:1158:C:C4	1:C2:1582:U:N3	2.31	0.92
3:C1:1237:G:O6	3:C1:1251:A:N1	2.04	0.90
3:C1:1237:G:H1	3:C1:1251:A:H2	1.17	0.90
3:C1:3068:U:OP2	55:LR:62:ARG:NH2	2.04	0.90
3:C1:182:U:H3	3:C1:234:G:H1	0.93	0.89
1:C2:852:C:H5''	1:C2:852:C:C6	2.07	0.89
3:C1:1481:A:O2'	3:C1:1858:A:N3	2.04	0.89
3:C1:2940:A:N7	40:LB:2:SER:N	2.20	0.89
1:C2:1158:C:H42	1:C2:1163:A:H61	1.20	0.88
1:C2:187:G:H3'	14:SI:138:ASN:HD21	1.34	0.88
3:C1:1868:G:N2	3:C1:2118:C:O2	2.07	0.88
1:C2:699:U:H3	1:C2:739:G:H1	1.22	0.87
1:C2:1158:C:H41	1:C2:1582:U:H3	1.10	0.87
10:SE:68:ARG:HG3	10:SE:76:VAL:HG11	1.56	0.87
12:SG:3:LEU:HD21	12:SG:111:LEU:HD12	1.55	0.87
1:C2:65:A:H2	1:C2:84:A:H62	1.20	0.86
23:SR:41:ILE:HD11	23:SR:46:LEU:HG	1.57	0.86
10:SE:147:ILE:HG21	10:SE:169:ILE:HG12	1.56	0.86
1:C2:1086:A:H5'	8:SC:164:SER:HB3	1.58	0.86
12:SG:46:LYS:H	12:SG:119:GLN:HE21	1.19	0.86
14:SI:62:THR:HA	14:SI:76:THR:O	1.75	0.86
3:C1:2890:A:H61	3:C1:2913:C:H42	0.86	0.86
18:SM:97:LEU:HD22	18:SM:119:SER:H	1.41	0.85
3:C1:1152:G:N2	3:C1:1200:A:N6	2.24	0.85
25:ST:7:ARG:NH1	25:ST:67:MET:SD	2.50	0.85
33:Sb:38:PRO:HD3	33:Sb:77:THR:HG22	1.57	0.85
3:C1:3234:A:H61	3:C1:3253:G:H1	1.22	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1896:A:H61	3:C1:2339:C:H42	1.21	0.85
1:C2:1588:G:H1	1:C2:1608:U:H3	1.21	0.84
49:LL:123:ILE:HG22	71:Lh:118:ILE:HG22	1.59	0.84
63:LZ:121:ARG:O	63:LZ:125:GLY:HA2	1.78	0.84
1:C2:1292:G:H21	6:SA:111:ILE:HD11	1.42	0.84
1:C2:1467:C:O2	1:C2:1601:G:N2	2.10	0.84
7:SB:222:LYS:HD3	7:SB:224:ASP:H	1.40	0.84
9:SD:168:ILE:HG22	9:SD:189:MET:HG3	1.60	0.83
21:SP:44:ARG:HG2	21:SP:84:ILE:HD11	1.60	0.83
9:SD:177:MET:HG3	9:SD:179:GLN:H	1.43	0.83
3:C1:3121:U:C4	3:C1:3124:G:O6	2.32	0.83
27:SV:36:VAL:HG21	27:SV:78:LEU:HD21	1.60	0.83
1:C2:1462:G:OP2	24:SS:143:ARG:NH1	2.11	0.83
10:SE:181:VAL:HG21	10:SE:195:ILE:HD11	1.59	0.83
1:C2:1472:C:C2	1:C2:1534:G:N2	2.47	0.83
3:C1:2727:A:OP2	3:C1:2728:G:N2	2.11	0.83
30:SY:59:GLY:O	30:SY:71:GLY:HA2	1.79	0.83
51:LN:146:ALA:O	51:LN:148:TYR:N	2.12	0.82
47:LI:189:GLU:HB2	47:LI:200:LEU:HB3	1.60	0.82
18:SM:64:SER:HA	18:SM:90:LYS:HE2	1.60	0.82
70:Lg:58:ARG:HD3	70:Lg:59:PRO:HD2	1.60	0.82
40:LB:168:LYS:O	40:LB:319:ASN:ND2	2.12	0.82
3:C1:2392:C:O2'	40:LB:266:ARG:NH1	2.12	0.82
13:SH:9:LEU:HG	13:SH:10:SER:H	1.45	0.82
1:C2:1785:U:OP1	20:SO:136:ARG:NH2	2.13	0.81
3:C1:804:C:OP1	41:LC:98:ARG:NH2	2.13	0.81
25:ST:77:ASN:HD22	25:ST:96:ALA:HB3	1.45	0.81
24:SS:86:LEU:HD22	24:SS:99:HIS:HB2	1.62	0.81
42:LD:236:LEU:HD23	42:LD:239:ILE:HD11	1.62	0.81
40:LB:152:LYS:HG2	40:LB:192:VAL:HG21	1.61	0.81
3:C1:1427:U:OP2	64:La:4:ARG:NH2	2.14	0.81
9:SD:208:ILE:HD13	23:SR:16:LEU:HB3	1.62	0.80
64:La:130:VAL:HG21	64:La:145:VAL:HG11	1.62	0.80
1:C2:895:G:H21	20:SO:38:THR:HG21	1.45	0.80
1:C2:1357:A:H2'	1:C2:1358:G:C8	2.16	0.80
1:C2:1082:C:N4	1:C2:1091:A:C6	2.49	0.80
13:SH:73:VAL:HG23	13:SH:74:GLN:H	1.45	0.80
1:C2:1065:A:N3	7:SB:146:GLN:NE2	2.29	0.80
22:SQ:110:THR:HA	22:SQ:113:ASP:HB3	1.61	0.80
38:Sg:246:SER:HB3	38:Sg:251:TRP:HB2	1.62	0.80
1:C2:486:G:O6	1:C2:501:U:O4	2.00	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1795:U:O2	32:Sa:10:ARG:NE	2.14	0.79
3:C1:3234:A:N6	3:C1:3253:G:H1	1.80	0.79
38:Sg:240:VAL:HA	38:Sg:256:THR:HA	1.62	0.79
3:C1:1152:G:H22	3:C1:1200:A:N6	1.79	0.79
3:C1:1152:G:N1	3:C1:1200:A:N6	2.30	0.79
49:LL:4:SER:O	64:La:44:ASN:ND2	2.16	0.79
3:C1:1231:A:H5''	3:C1:1232:C:H5'	1.64	0.79
1:C2:1339:C:O2'	1:C2:1341:A:N7	2.15	0.79
24:SS:14:ILE:HG22	24:SS:23:ASP:HA	1.63	0.79
24:SS:113:LEU:HD13	24:SS:116:LEU:HD11	1.65	0.79
1:C2:1042:G:N2	1:C2:1077:C:O2	2.16	0.79
21:SP:126:VAL:HG22	21:SP:127:ARG:H	1.47	0.79
1:C2:1551:U:O4	21:SP:40:ARG:NH2	2.16	0.79
47:LI:99:ILE:O	47:LI:120:GLY:HA3	1.83	0.79
48:LJ:94:ARG:O	48:LJ:96:PHE:N	2.16	0.79
22:SQ:142:TYR:O	22:SQ:143:ARG:NH2	2.16	0.79
3:C1:860:G:OP1	79:Lp:17:ARG:NH2	2.16	0.78
66:Lc:9:SER:HB3	66:Lc:12:GLN:HG3	1.65	0.78
3:C1:912:G:OP2	39:LA:9:ARG:NH1	2.15	0.78
45:LG:50:VAL:HG21	61:LX:27:ARG:HD2	1.64	0.78
1:C2:1211:A:C6	1:C2:1453:G:C6	2.71	0.78
3:C1:3042:U:OP2	3:C1:3092:C:N4	2.16	0.78
5:C3:24:G:OP2	62:LY:13:ARG:NH1	2.17	0.78
11:SF:29:ILE:O	11:SF:34:GLN:NE2	2.15	0.78
3:C1:1103:A:H5''	44:LF:158:LYS:HD3	1.64	0.78
3:C1:3109:G:N2	46:LH:156:GLN:OE1	2.16	0.78
1:C2:852:C:H6	1:C2:852:C:C5'	1.95	0.78
47:LI:156:ARG:NH2	47:LI:163:GLN:O	2.17	0.78
51:LN:127:TYR:HB2	51:LN:129:TYR:HE1	1.48	0.78
24:SS:32:LEU:HA	24:SS:35:ILE:HD12	1.66	0.78
40:LB:212:ASN:HD21	40:LB:354:VAL:H	1.29	0.78
41:LC:233:LEU:HD22	41:LC:238:LEU:HD11	1.66	0.78
3:C1:3165:A:N1	3:C1:3285:C:N3	2.32	0.78
1:C2:1202:A:N6	1:C2:1456:C:O2	2.16	0.77
3:C1:76:G:O2'	49:LL:100:ARG:NH1	2.18	0.77
1:C2:459:G:OP1	30:SY:109:LYS:NZ	2.14	0.77
13:SH:70:PHE:O	13:SH:74:GLN:HB2	1.83	0.77
41:LC:82:THR:HG23	41:LC:84:ARG:H	1.48	0.77
40:LB:37:ARG:HD2	40:LB:186:GLY:HA2	1.65	0.77
1:C2:227:U:H2'	1:C2:228:G:H8	1.49	0.77
1:C2:153:G:H2'	1:C2:154:G:H8	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:207:U:O2	14:SI:178:ARG:NH1	2.17	0.77
58:LU:14:THR:HG22	58:LU:66:VAL:HG22	1.65	0.77
3:C1:268:A:OP1	51:LN:50:ARG:NH2	2.18	0.77
3:C1:2185:G:O2'	3:C1:2314:U:OP2	2.03	0.77
8:SC:63:VAL:HG13	8:SC:68:ILE:HD11	1.67	0.77
38:Sg:22:SER:HB3	38:Sg:36:ALA:HB3	1.67	0.77
57:LT:88:ARG:NH1	65:Lb:33:LYS:O	2.18	0.77
1:C2:873:U:O4	1:C2:954:G:O6	2.03	0.77
3:C1:2895:G:O2'	76:Lm:100:TYR:O	2.02	0.76
9:SD:7:LYS:HE2	26:SU:27:THR:HG21	1.66	0.76
9:SD:177:MET:HE3	9:SD:178:ARG:HB2	1.66	0.76
12:SG:180:THR:HG22	12:SG:182:GLN:H	1.49	0.76
1:C2:472:U:O2'	1:C2:769:A:N3	2.19	0.76
3:C1:220:G:N2	3:C1:1390:A:C6	2.53	0.76
3:C1:874:U:OP2	40:LB:241:LYS:NZ	2.16	0.76
3:C1:173:G:C2	3:C1:246:U:C2	2.74	0.76
1:C2:1672:G:H2'	1:C2:1673:G:C8	2.21	0.75
1:C2:1158:C:N4	1:C2:1582:U:C2	2.50	0.75
3:C1:3268:A:OP1	43:LE:46:ARG:NH2	2.20	0.75
1:C2:765:G:N7	15:SJ:149:ARG:NE	2.33	0.75
3:C1:1024:G:N2	3:C1:1026:A:OP2	2.19	0.75
3:C1:2176:U:OP1	39:LA:54:ARG:NH2	2.18	0.75
29:SX:59:ILE:HG22	36:Se:4:VAL:HA	1.68	0.75
1:C2:67:A:O2'	1:C2:69:G:OP1	2.04	0.75
3:C1:800:G:H22	41:LC:101:ALA:HA	1.51	0.75
44:LF:132:PRO:HA	44:LF:229:PHE:CE1	2.21	0.75
78:Lo:38:GLN:OE1	78:Lo:41:ARG:NH2	2.20	0.75
3:C1:1152:G:C2	3:C1:1200:A:N6	2.51	0.75
7:SB:137:ILE:HD11	7:SB:172:LEU:HB3	1.68	0.75
29:SX:130:VAL:HG23	29:SX:131:SER:H	1.50	0.75
1:C2:976:G:H1	1:C2:1023:A:HO2'	1.33	0.75
1:C2:1252:C:O2'	37:Sf:142:GLY:O	2.04	0.75
1:C2:764:U:OP1	15:SJ:78:ARG:NH1	2.19	0.75
53:LP:118:GLN:NE2	53:LP:147:GLU:OE2	2.19	0.75
1:C2:749:U:C2	1:C2:801:G:C2	2.75	0.74
3:C1:15:C:N3	5:C3:144:G:N1	2.35	0.74
3:C1:1508:C:OP1	53:LP:127:ARG:NH2	2.16	0.74
11:SF:125:THR:HG22	11:SF:127:GLN:H	1.51	0.74
28:SW:42:GLN:NE2	28:SW:48:GLY:O	2.18	0.74
12:SG:98:ARG:NH2	12:SG:101:ILE:O	2.19	0.74
41:LC:11:LEU:HD12	41:LC:168:ALA:HB1	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:361:A:O3'	73:Lj:45:ARG:NH2	2.20	0.74
3:C1:1559:A:N6	3:C1:1581:C:C4	2.56	0.74
38:Sg:92:TRP:HD1	38:Sg:99:THR:HA	1.52	0.74
1:C2:1357:A:H2'	1:C2:1358:G:H8	1.53	0.74
3:C1:1661:G:H2'	3:C1:1662:G:C8	2.22	0.74
3:C1:2555:G:O2'	63:LZ:136:PHE:O	2.06	0.74
34:Sc:19:THR:HG22	34:Sc:20:GLY:H	1.51	0.74
3:C1:2406:C:O2'	3:C1:2619:G:N2	2.21	0.74
37:Sf:130:VAL:HG13	37:Sf:143:LYS:H	1.50	0.74
1:C2:1434:U:O2'	1:C2:1436:A:OP1	2.05	0.74
3:C1:1559:A:C6	3:C1:1581:C:C4	2.76	0.74
3:C1:1953:G:C6	3:C1:2093:A:N6	2.56	0.74
6:SA:184:LEU:HD12	27:SV:45:ALA:HB2	1.67	0.74
11:SF:39:GLU:HG2	11:SF:40:ILE:HG12	1.70	0.74
38:Sg:159:ASN:ND2	38:Sg:166:SER:O	2.21	0.74
40:LB:66:LYS:O	40:LB:70:ARG:NH2	2.21	0.74
41:LC:338:LYS:O	41:LC:340:GLY:N	2.21	0.74
50:LM:20:VAL:HG13	50:LM:66:THR:HG23	1.70	0.74
3:C1:1695:U:HO2'	3:C1:1749:A:H61	1.36	0.73
21:SP:126:VAL:HG13	21:SP:127:ARG:HD2	1.69	0.73
1:C2:788:A:OP2	10:SE:108:ARG:NH1	2.21	0.73
1:C2:1393:C:H2'	1:C2:1394:G:H8	1.52	0.73
3:C1:2209:U:O2'	3:C1:2210:G:OP2	2.06	0.73
3:C1:3121:U:O4	3:C1:3124:G:C6	2.41	0.73
8:SC:170:ILE:HB	8:SC:197:TYR:HB2	1.68	0.73
38:Sg:72:THR:HG21	38:Sg:114:ASP:HA	1.69	0.73
1:C2:895:G:H1	1:C2:917:U:H3	0.83	0.73
3:C1:243:G:H2'	3:C1:244:G:C8	2.23	0.73
3:C1:2836:C:H5	3:C1:2852:C:H42	1.36	0.73
10:SE:115:THR:OG1	10:SE:117:GLU:O	2.05	0.73
1:C2:66:U:OP2	12:SG:136:LYS:NZ	2.20	0.73
1:C2:422:G:O2'	1:C2:423:G:O5'	2.06	0.73
1:C2:1488:G:O2'	1:C2:1494:C:O2	2.05	0.73
39:LA:104:LEU:HD12	39:LA:158:ILE:HD11	1.70	0.73
1:C2:1380:U:O2'	1:C2:1516:A:N1	2.21	0.73
1:C2:1471:A:N7	1:C2:1538:U:O4	2.22	0.73
47:LI:174:THR:OG1	47:LI:175:ASN:N	2.22	0.73
1:C2:1601:G:H22	25:ST:88:VAL:HG22	1.53	0.73
3:C1:1420:C:OP2	41:LC:193:LYS:NZ	2.22	0.73
3:C1:3315:G:OP1	40:LB:116:ARG:NH2	2.21	0.73
1:C2:1465:C:OP1	22:SQ:139:GLN:NE2	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:708:G:N2	3:C1:711:A:OP2	2.21	0.73
39:LA:36:GLU:OE1	39:LA:163:ARG:NH1	2.22	0.73
10:SE:88:ASP:O	10:SE:100:ARG:HA	1.88	0.73
40:LB:260:VAL:HG21	40:LB:266:ARG:HH21	1.54	0.73
3:C1:209:A:N3	41:LC:221:ASN:ND2	2.37	0.73
3:C1:215:G:OP1	62:LY:12:ARG:NH1	2.22	0.73
15:SJ:59:LEU:HD21	15:SJ:72:GLU:HB3	1.71	0.73
23:SR:17:ILE:HD12	23:SR:57:LEU:HD23	1.70	0.73
32:Sa:64:LEU:HD12	32:Sa:65:PRO:HD2	1.69	0.73
3:C1:1274:A:H2'	3:C1:1275:C:C6	2.24	0.72
3:C1:1814:A:H4'	3:C1:1815:U:H5'	1.70	0.72
38:Sg:216:LYS:HA	38:Sg:239:GLU:HG2	1.69	0.72
1:C2:196:G:N7	14:SI:141:ARG:NH1	2.37	0.72
1:C2:868:G:OP1	19:SN:121:ARG:NH1	2.22	0.72
5:C3:94:C:OP1	73:Lj:76:ASN:ND2	2.21	0.72
13:SH:64:VAL:HG22	13:SH:94:ALA:HB1	1.71	0.72
50:LM:48:GLY:HA3	50:LM:53:VAL:HB	1.71	0.72
1:C2:1714:A:H2'	1:C2:1715:G:C8	2.24	0.72
3:C1:1896:A:H61	3:C1:2339:C:N4	1.86	0.72
43:LE:40:LEU:HD12	43:LE:65:ILE:HD11	1.71	0.72
3:C1:3163:A:N6	3:C1:3288:G:O6	2.22	0.72
20:SO:42:VAL:HG23	20:SO:46:MET:HE2	1.71	0.72
49:LL:59:ARG:HH11	49:LL:69:VAL:HG23	1.52	0.72
3:C1:1103:A:H3'	3:C1:1104:G:H5'	1.72	0.72
57:LT:39:ILE:HG12	57:LT:63:VAL:HG12	1.72	0.72
69:Lf:35:VAL:HG13	69:Lf:40:ASP:HB2	1.69	0.72
3:C1:1757:A:OP1	58:LU:94:ARG:NH2	2.23	0.72
36:Se:24:THR:OG1	36:Se:26:LYS:NZ	2.23	0.72
43:LE:42:LEU:O	43:LE:49:GLY:N	2.23	0.72
67:Ld:46:THR:HG21	67:Ld:91:SER:HB2	1.70	0.72
1:C2:68:A:OP1	12:SG:160:ARG:NH2	2.23	0.72
1:C2:405:C:O2'	12:SG:92:ARG:O	2.07	0.72
3:C1:1477:A:OP1	3:C1:3075:G:O2'	2.07	0.72
3:C1:1899:G:O2'	3:C1:2334:U:O4	2.08	0.72
9:SD:108:LYS:HG3	9:SD:113:LEU:HD12	1.70	0.72
19:SN:88:LEU:HG	19:SN:125:LEU:HD23	1.72	0.72
3:C1:1408:G:OP1	68:Le:33:ARG:NH2	2.22	0.71
11:SF:144:GLU:HG2	11:SF:225:ARG:HH22	1.55	0.71
1:C2:776:G:O6	30:SY:11:LYS:NZ	2.23	0.71
3:C1:1019:G:O6	3:C1:1033:U:O4	2.07	0.71
29:SX:107:PHE:CE2	29:SX:114:LYS:HE3	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2666:C:OP2	3:C1:2687:G:N1	2.22	0.71
3:C1:1069:C:H2'	3:C1:1070:U:C6	2.25	0.71
3:C1:2899:C:O2'	3:C1:2901:G:OP2	2.08	0.71
40:LB:220:VAL:O	40:LB:334:ARG:NH1	2.23	0.71
3:C1:286:U:O2'	51:LN:179:LYS:O	2.08	0.71
3:C1:3242:G:H5'	3:C1:3245:A:H8	1.54	0.71
39:LA:95:SER:O	39:LA:100:ASN:ND2	2.23	0.71
3:C1:253:A:O2'	3:C1:254:A:O5'	2.08	0.71
3:C1:977:C:OP1	54:LQ:141:ARG:NH2	2.23	0.71
3:C1:714:G:N7	64:La:111:LYS:NZ	2.38	0.71
3:C1:1953:G:N2	3:C1:2093:A:N7	2.38	0.71
13:SH:133:THR:HG21	13:SH:159:VAL:HA	1.73	0.71
23:SR:23:LYS:NZ	38:Sg:174:ASN:O	2.24	0.71
3:C1:241:G:H2'	3:C1:242:C:H6	1.56	0.71
1:C2:1505:A:H1'	1:C2:1562:G:H21	1.56	0.71
3:C1:1404:G:O6	68:Le:16:LYS:NZ	2.20	0.70
21:SP:87:PRO:HA	21:SP:90:ILE:HG12	1.73	0.70
70:Lg:66:SER:OG	70:Lg:67:LYS:N	2.17	0.70
3:C1:363:G:OP2	73:Lj:56:ARG:NH2	2.24	0.70
3:C1:3152:U:OP2	3:C1:3395:G:N1	2.14	0.70
25:ST:112:GLY:O	25:ST:127:ASN:ND2	2.23	0.70
1:C2:1499:G:OP1	25:ST:122:ARG:NH1	2.24	0.70
1:C2:504:U:H2'	1:C2:505:A:C8	2.26	0.70
3:C1:1863:G:N1	3:C1:1866:C:OP2	2.21	0.70
3:C1:2948:C:OP1	40:LB:244:ARG:NH2	2.24	0.70
32:Sa:10:ARG:HD3	32:Sa:34:LYS:HA	1.72	0.70
1:C2:871:G:H2'	1:C2:872:G:C8	2.26	0.70
11:SF:205:SER:OG	11:SF:207:THR:OG1	2.07	0.70
14:SI:84:HIS:NE2	14:SI:97:THR:OG1	2.24	0.70
24:SS:23:ASP:OD2	24:SS:24:GLY:N	2.24	0.70
3:C1:116:A:OP1	72:Li:36:ARG:NH1	2.25	0.70
3:C1:499:G:H5''	69:Lf:48:ARG:HH21	1.56	0.70
3:C1:1562:C:H2'	3:C1:1563:C:C6	2.26	0.70
6:SA:156:VAL:O	27:SV:65:SER:OG	2.09	0.70
3:C1:3308:C:O2'	53:LP:69:ARG:O	2.09	0.70
6:SA:60:ALA:HA	6:SA:63:ILE:HD12	1.74	0.70
11:SF:100:ASN:ND2	11:SF:180:ARG:HD3	2.06	0.70
54:LQ:122:ILE:HG23	54:LQ:126:GLN:HB2	1.73	0.70
1:C2:1082:C:N4	1:C2:1091:A:N6	2.39	0.70
1:C2:1533:C:OP2	31:SZ:77:ARG:NH1	2.21	0.70
14:SI:165:LEU:HD13	14:SI:183:ILE:HD12	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Lk:32:ASN:ND2	74:Lk:36:LYS:O	2.25	0.70
3:C1:1240:A:N1	3:C1:1244:A:O2'	2.25	0.70
21:SP:81:ARG:NH1	21:SP:97:TYR:O	2.25	0.70
46:LH:101:VAL:HG22	46:LH:114:VAL:HG22	1.72	0.70
3:C1:1393:A:OP1	68:Le:125:ARG:NH2	2.24	0.70
38:Sg:223:TRP:HD1	38:Sg:230:ALA:HA	1.56	0.70
53:LP:64:ASN:O	53:LP:80:LYS:NZ	2.23	0.70
6:SA:24:LEU:O	6:SA:163:ASN:ND2	2.25	0.69
24:SS:15:LEU:O	24:SS:21:ASN:ND2	2.25	0.69
26:SU:50:LEU:HD12	26:SU:93:LEU:HG	1.74	0.69
3:C1:610:G:O6	41:LC:309:ARG:NH2	2.26	0.69
3:C1:3261:C:OP1	50:LM:126:GLN:NE2	2.24	0.69
31:SZ:42:LEU:HD12	31:SZ:46:LYS:HG3	1.74	0.69
52:LO:31:GLN:HE21	52:LO:32:LYS:H	1.40	0.69
1:C2:1211:A:N6	1:C2:1453:G:O6	2.25	0.69
1:C2:1474:G:H2'	1:C2:1475:A:H8	1.56	0.69
23:SR:11:ARG:HA	23:SR:14:LYS:HE3	1.75	0.69
8:SC:188:LEU:HD23	8:SC:196:VAL:HG21	1.74	0.69
15:SJ:87:SER:HB3	15:SJ:90:LYS:HD3	1.74	0.69
38:Sg:209:THR:HG23	38:Sg:210:LEU:HD12	1.73	0.69
42:LD:278:SER:OG	42:LD:281:GLU:OE1	2.09	0.69
1:C2:1158:C:H42	1:C2:1582:U:H3	1.30	0.69
3:C1:196:G:N1	3:C1:199:A:OP2	2.25	0.69
16:SK:29:GLN:HG3	16:SK:39:ASN:HD22	1.56	0.69
1:C2:1481:C:O2'	1:C2:1482:C:O5'	2.11	0.69
12:SG:52:ILE:HD13	12:SG:111:LEU:HD21	1.74	0.69
53:LP:30:ARG:HA	53:LP:119:VAL:HG11	1.75	0.69
1:C2:1370:U:H4'	1:C2:1371:A:H4'	1.75	0.69
1:C2:1606:C:H2'	1:C2:1607:G:C8	2.26	0.69
2:C5:70:ARG:NH2	47:LI:32:ARG:O	2.26	0.69
3:C1:2771:U:OP2	3:C1:2772:C:N4	2.24	0.69
12:SG:20:ASP:HB3	12:SG:23:ARG:HB2	1.73	0.69
21:SP:45:PHE:HE1	21:SP:84:ILE:HD13	1.58	0.69
40:LB:169:THR:HG22	40:LB:171:LEU:H	1.56	0.69
51:LN:174:ILE:O	51:LN:175:ASN:ND2	2.25	0.69
78:Lo:71:ARG:HD3	78:Lo:80:ARG:HD3	1.74	0.69
3:C1:1246:G:N3	3:C1:1264:G:O2'	2.25	0.69
45:LG:89:GLU:HA	45:LG:92:LYS:HE3	1.75	0.69
3:C1:1722:U:OP2	55:LR:103:ARG:NH1	2.25	0.69
3:C1:3149:G:O2'	40:LB:129:ALA:O	2.10	0.69
11:SF:77:TYR:OH	22:SQ:114:ARG:NH1	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Sb:67:THR:HG22	33:Sb:68:GLY:H	1.58	0.69
79:Lp:49:ARG:HD2	79:Lp:50:GLY:H	1.57	0.69
3:C1:1024:G:O6	3:C1:1027:A:N7	2.26	0.68
3:C1:1152:G:H1	3:C1:1200:A:N6	1.90	0.68
13:SH:91:ILE:HG12	13:SH:129:LEU:HD12	1.74	0.68
42:LD:265:TYR:O	42:LD:269:SER:HB2	1.93	0.68
47:LI:21:ARG:O	47:LI:24:ARG:NH2	2.25	0.68
53:LP:131:ARG:NH1	53:LP:137:ASN:OD1	2.26	0.68
1:C2:1775:U:OP1	77:Ln:11:ARG:NH2	2.27	0.68
3:C1:1259:A:H62	3:C1:1260:A:H61	1.42	0.68
3:C1:3276:G:O6	53:LP:171:ARG:NH1	2.26	0.68
10:SE:100:ARG:NH2	10:SE:118:GLU:O	2.26	0.68
21:SP:57:MET:N	21:SP:57:MET:SD	2.66	0.68
32:Sa:45:VAL:HG11	32:Sa:53:LEU:HG	1.76	0.68
39:LA:126:LEU:HD13	39:LA:150:LEU:HD21	1.74	0.68
48:LJ:95:ASN:ND2	48:LJ:103:GLY:O	2.25	0.68
49:LL:42:ARG:O	49:LL:46:ILE:HB	1.92	0.68
3:C1:173:G:N1	3:C1:246:U:C2	2.61	0.68
3:C1:651:G:O2'	3:C1:1435:A:OP1	2.10	0.68
12:SG:50:PHE:HB3	12:SG:111:LEU:HD22	1.76	0.68
25:ST:39:THR:HA	25:ST:100:ILE:HD11	1.73	0.68
38:Sg:248:ASN:ND2	38:Sg:297:ASP:O	2.26	0.68
54:LQ:123:THR:OG1	54:LQ:125:ASP:OD1	2.11	0.68
1:C2:36:C:N4	1:C2:473:A:N6	2.42	0.68
3:C1:2509:U:O2'	3:C1:2510:U:O5'	2.11	0.68
15:SJ:109:LEU:HB2	15:SJ:146:PHE:HB3	1.76	0.68
22:SQ:14:LYS:O	22:SQ:123:ARG:NH1	2.27	0.68
59:LV:10:LYS:HB2	59:LV:125:LEU:HD11	1.74	0.68
1:C2:895:G:N2	1:C2:917:U:O2	2.19	0.68
1:C2:1041:G:H2'	1:C2:1042:G:C8	2.29	0.68
27:SV:2:GLU:HG3	27:SV:8:LEU:HA	1.76	0.68
3:C1:1376:C:O2'	3:C1:1408:G:O2'	2.11	0.68
7:SB:71:ALA:HB2	7:SB:80:SER:HA	1.75	0.68
1:C2:1082:C:C4	1:C2:1091:A:N6	2.62	0.68
1:C2:1400:A:H5''	23:SR:60:ARG:NH2	2.09	0.68
9:SD:72:LEU:HA	9:SD:75:LYS:HE3	1.74	0.68
41:LC:300:ARG:HG2	54:LQ:39:ARG:HG2	1.74	0.68
3:C1:69:C:OP1	51:LN:178:HIS:ND1	2.20	0.68
42:LD:39:GLN:NE2	42:LD:46:THR:O	2.27	0.68
24:SS:49:LYS:HG3	24:SS:81:ILE:HD11	1.77	0.67
38:Sg:74:THR:HG23	38:Sg:77:GLY:H	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Sg:109:ASP:OD1	38:Sg:127:ARG:NH1	2.27	0.67
48:LJ:37:LEU:HD13	48:LJ:69:VAL:HG23	1.75	0.67
52:LO:121:PRO:HG3	56:LS:164:SER:HB2	1.74	0.67
65:Lb:8:THR:HG22	65:Lb:10:HIS:H	1.59	0.67
1:C2:1296:A:OP1	6:SA:138:TYR:OH	2.12	0.67
1:C2:1714:A:H2'	1:C2:1715:G:H8	1.58	0.67
3:C1:2555:G:O6	70:Lg:99:LYS:NZ	2.26	0.67
24:SS:78:HIS:ND1	24:SS:78:HIS:O	2.28	0.67
1:C2:482:U:H2'	1:C2:483:A:H8	1.57	0.67
3:C1:3092:C:O2'	3:C1:3094:A:OP2	2.11	0.67
25:ST:7:ARG:HH12	25:ST:67:MET:HA	1.59	0.67
1:C2:628:G:N2	1:C2:629:U:O4	2.28	0.67
1:C2:829:A:H1'	1:C2:830:U:H5	1.59	0.67
15:SJ:175:ARG:HG3	15:SJ:179:ARG:HH22	1.59	0.67
64:La:85:ASP:N	64:La:85:ASP:OD1	2.27	0.67
3:C1:1069:C:H2'	3:C1:1070:U:H6	1.60	0.67
6:SA:180:GLU:OE1	6:SA:191:ARG:NH2	2.27	0.67
1:C2:58:U:O2'	1:C2:451:A:N3	2.27	0.67
3:C1:220:G:N2	3:C1:1390:A:N6	2.42	0.67
3:C1:2728:G:N7	57:LT:87:LYS:NZ	2.42	0.67
46:LH:4:ILE:HD11	56:LS:148:LEU:HD11	1.77	0.67
63:LZ:74:VAL:HG23	63:LZ:101:PHE:HE2	1.60	0.67
1:C2:482:U:H2'	1:C2:483:A:C8	2.30	0.67
1:C2:1559:A:H5''	24:SS:135:GLY:HA3	1.77	0.67
3:C1:152:U:OP1	71:Lh:106:LYS:NZ	2.19	0.67
3:C1:2526:C:OP1	39:LA:37:ARG:NH1	2.27	0.67
3:C1:3234:A:N1	3:C1:3253:G:N2	2.43	0.67
5:C3:56:G:OP1	73:Lj:68:LYS:NZ	2.28	0.67
3:C1:389:A:OP1	53:LP:4:TYR:OH	2.11	0.67
3:C1:867:G:H1	3:C1:892:U:H3	1.43	0.67
3:C1:2814:G:OP1	41:LC:73:ARG:NH2	2.26	0.67
7:SB:32:ILE:HD11	20:SO:33:LEU:HD23	1.77	0.67
28:SW:89:TRP:O	28:SW:93:LEU:HD23	1.94	0.67
51:LN:19:LEU:O	51:LN:23:GLN:HG2	1.95	0.67
60:LW:56:ARG:HD3	60:LW:61:LYS:HB2	1.74	0.67
1:C2:558:U:OP2	36:Se:55:ARG:NH2	2.28	0.67
1:C2:1565:C:H2'	1:C2:1566:U:H6	1.59	0.67
3:C1:737:G:H2'	3:C1:738:A:H8	1.59	0.67
38:Sg:238:ASP:HB3	38:Sg:257:ALA:HB3	1.75	0.67
61:LX:135:ILE:HD12	61:LX:138:ARG:HH11	1.60	0.67
63:LZ:25:ILE:HG23	63:LZ:41:ALA:HB1	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:164:A:C2	3:C1:258:G:C6	2.82	0.67
29: SX:26:GLU:OE1	29: SX:27:ASN:N	2.28	0.67
38:Sg:13:LEU:HB2	38:Sg:310:ILE:HB	1.76	0.67
38:Sg:27:ALA:HB3	38:Sg:75:ALA:HB1	1.77	0.67
63:LZ:28:PRO:O	63:LZ:40:HIS:O	2.13	0.67
1:C2:366:A:OP1	1:C2:758:U:O2'	2.13	0.66
1:C2:1316:G:OP1	23:SR:7:LYS:N	2.28	0.66
3:C1:3041:U:OP1	59:LV:12:ARG:NH1	2.28	0.66
1:C2:1254:U:H3'	1:C2:1255:G:C8	2.30	0.66
1:C2:1335:U:N3	1:C2:1336:A:N7	2.43	0.66
1:C2:1482:C:O2'	22:SQ:72:GLY:O	2.13	0.66
1:C2:902:G:OP2	20:SO:24:ASN:ND2	2.27	0.66
9:SD:217:ILE:HG13	9:SD:218:LEU:H	1.60	0.66
21:SP:22:LEU:HA	21:SP:25:LEU:HD12	1.78	0.66
63:LZ:52:LYS:O	63:LZ:65:ARG:NH1	2.28	0.66
69:Lf:37:THR:OG1	69:Lf:40:ASP:OD2	2.11	0.66
11:SF:84:LYS:O	11:SF:92:ARG:NH1	2.29	0.66
38:Sg:89:LEU:HD22	38:Sg:113:VAL:HG11	1.77	0.66
45:LG:85:ASN:OD1	45:LG:86:THR:N	2.26	0.66
3:C1:61:A:N1	51:LN:189:LYS:NZ	2.43	0.66
3:C1:309:U:OP1	72:Li:84:LYS:NZ	2.23	0.66
3:C1:950:G:N1	3:C1:1368:U:OP2	2.17	0.66
18:SM:54:ARG:NH2	37:Sf:125:THR:O	2.29	0.66
24:SS:87:ASN:OD1	24:SS:88:ARG:N	2.28	0.66
36:Se:50:VAL:HG13	36:Se:52:GLY:H	1.59	0.66
50:LM:17:VAL:HG11	50:LM:74:ARG:HA	1.76	0.66
1:C2:1544:U:O3'	24:SS:132:ARG:NE	2.28	0.66
3:C1:70:A:N1	3:C1:313:A:O2'	2.24	0.66
3:C1:571:U:H2'	3:C1:572:A:H8	1.60	0.66
5:C3:125:U:H3'	5:C3:126:A:H8	1.60	0.66
25:ST:77:ASN:HB3	25:ST:95:ASP:HB3	1.77	0.66
49:LL:27:ASP:O	49:LL:31:LYS:HB2	1.96	0.66
1:C2:5:U:H2'	1:C2:6:G:H8	1.61	0.66
1:C2:339:C:OP2	14:SI:10:LYS:NZ	2.26	0.66
1:C2:1601:G:OP1	25:ST:86:ARG:NH1	2.28	0.66
3:C1:655:C:H2'	3:C1:656:A:H8	1.60	0.66
3:C1:1813:A:N7	3:C1:1814:A:N6	2.44	0.66
3:C1:3016:A:H2'	3:C1:3017:A:C8	2.30	0.66
3:C1:3209:A:P	56:LS:161:LYS:HZ1	2.17	0.66
15:SJ:83:VAL:HG13	15:SJ:85:VAL:HG23	1.77	0.66
68:Le:73:THR:HG23	68:Le:95:GLU:HG3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:227:U:H2'	1:C2:228:G:C8	2.30	0.66
9:SD:157:LEU:HD21	9:SD:187:LYS:HE3	1.77	0.66
10:SE:103:TYR:O	10:SE:182:TYR:OH	2.14	0.66
11:SF:94:THR:HG22	11:SF:114:ILE:HG13	1.76	0.66
40:LB:190:GLU:OE1	40:LB:190:GLU:N	2.29	0.66
1:C2:1466:G:H2'	1:C2:1467:C:C6	2.31	0.66
3:C1:412:G:OP1	53:LP:62:ARG:NH1	2.27	0.66
3:C1:1310:G:HO2'	3:C1:2380:U:HO2'	1.44	0.66
16:SK:46:LEU:O	16:SK:50:THR:HG23	1.96	0.66
1:C2:1483:A:H4'	22:SQ:71:GLY:HA2	1.76	0.66
3:C1:173:G:C6	3:C1:246:U:N3	2.64	0.66
3:C1:1949:G:OP1	55:LR:104:ARG:NH1	2.29	0.66
22:SQ:44:LEU:HB3	22:SQ:47:LYS:HB2	1.78	0.66
25:ST:18:TYR:HD1	25:ST:135:ILE:HG21	1.61	0.66
25:ST:23:GLN:HE22	25:ST:52:GLY:HA2	1.61	0.66
3:C1:2441:A:H61	3:C1:2506:U:H3	1.44	0.65
3:C1:188:U:O2'	3:C1:207:U:O2	2.14	0.65
3:C1:1134:G:O2'	3:C1:2642:A:N3	2.29	0.65
4:C4:99:G:H4'	44:LF:128:LYS:HD3	1.77	0.65
41:LC:299:ILE:HD12	54:LQ:39:ARG:HB3	1.78	0.65
47:LI:72:ALA:HB2	47:LI:155:ALA:HB2	1.79	0.65
53:LP:107:LEU:HD23	53:LP:152:GLU:HG3	1.77	0.65
64:La:77:LYS:O	64:La:79:TRP:N	2.29	0.65
1:C2:1393:C:H2'	1:C2:1394:G:C8	2.31	0.65
38:Sg:267:PRO:HD2	38:Sg:269:TYR:HE2	1.61	0.65
42:LD:270:LYS:HE2	42:LD:273:ARG:HB3	1.78	0.65
47:LI:44:ASP:OD2	47:LI:185:ARG:NH2	2.29	0.65
76:Lm:79:GLU:HG3	76:Lm:81:SER:H	1.61	0.65
1:C2:1389:C:OP2	23:SR:45:ARG:NH1	2.29	0.65
1:C2:1492:A:O2'	1:C2:1493:A:O5'	2.13	0.65
3:C1:182:U:O4	3:C1:234:G:O6	2.14	0.65
3:C1:2572:C:O2'	3:C1:2573:G:O4'	2.15	0.65
3:C1:3369:G:OP2	60:LW:61:LYS:NZ	2.25	0.65
27:SV:9:VAL:HG12	27:SV:10:GLU:H	1.61	0.65
30:SY:55:VAL:HG12	30:SY:75:VAL:HG23	1.78	0.65
34:Sc:49:ARG:HG2	34:Sc:50:GLU:H	1.62	0.65
42:LD:75:LEU:O	42:LD:112:LYS:NZ	2.22	0.65
44:LF:233:GLU:HG3	56:LS:35:VAL:HG22	1.78	0.65
22:SQ:83:GLN:HE22	22:SQ:119:ALA:HA	1.61	0.65
28:SW:24:GLN:OE1	28:SW:24:GLN:N	2.30	0.65
34:Sc:13:ILE:HG22	34:Sc:14:LYS:HG3	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LA:104:LEU:HD11	39:LA:116:VAL:HG21	1.78	0.65
42:LD:134:ALA:HB2	42:LD:141:PRO:HD3	1.78	0.65
1:C2:828:U:H2'	1:C2:829:A:O4'	1.96	0.65
1:C2:1170:G:N2	1:C2:1571:C:O2'	2.28	0.65
1:C2:1221:A:OP1	16:SK:52:LYS:NZ	2.30	0.65
3:C1:2308:C:OP1	3:C1:2309:A:O2'	2.14	0.65
6:SA:183:ARG:NH2	6:SA:191:ARG:O	2.30	0.65
18:SM:64:SER:HB3	18:SM:92:ALA:HA	1.78	0.65
39:LA:27:ALA:O	39:LA:128:ARG:NH2	2.29	0.65
1:C2:330:G:OP2	14:SI:172:ARG:NH1	2.29	0.65
1:C2:950:C:O2'	19:SN:104:ARG:NH2	2.30	0.65
1:C2:1237:G:H2'	1:C2:1238:A:H8	1.62	0.65
3:C1:164:A:N1	3:C1:258:G:C6	2.65	0.65
3:C1:600:G:H21	3:C1:603:A:H62	1.45	0.65
11:SF:92:ARG:NH2	11:SF:169:ASN:OD1	2.29	0.65
38:Sg:182:ASN:ND2	38:Sg:187:GLN:O	2.30	0.65
63:LZ:29:HIS:HB2	63:LZ:40:HIS:O	1.97	0.65
26:SU:37:VAL:O	26:SU:41:ILE:HG12	1.97	0.65
3:C1:1388:U:O4	41:LC:186:LYS:NZ	2.27	0.65
3:C1:1695:U:HO2'	3:C1:1749:A:N6	1.93	0.65
3:C1:1868:G:C2	3:C1:2118:C:O2	2.49	0.65
23:SR:36:ASP:OD1	23:SR:47:ARG:NE	2.30	0.65
53:LP:47:TYR:OH	53:LP:57:ALA:O	2.13	0.65
1:C2:234:G:C5	1:C2:235:G:H1'	2.31	0.65
1:C2:565:C:O2'	1:C2:577:G:N2	2.30	0.65
1:C2:1098:U:OP1	8:SC:168:ARG:NE	2.30	0.65
1:C2:1506:G:H2'	1:C2:1507:G:C8	2.31	0.65
3:C1:173:G:C2	3:C1:246:U:O2	2.50	0.65
3:C1:1364:C:OP1	44:LF:110:ARG:NH2	2.26	0.64
13:SH:43:PHE:HA	13:SH:63:PRO:HD3	1.79	0.64
18:SM:90:LYS:HD2	18:SM:91:VAL:H	1.61	0.64
70:Lg:84:CYS:O	70:Lg:88:ARG:HG2	1.98	0.64
78:Lo:25:VAL:HG22	78:Lo:72:LEU:HD22	1.78	0.64
1:C2:44:U:OP2	1:C2:437:A:N6	2.29	0.64
1:C2:68:A:H5'	12:SG:160:ARG:HH22	1.63	0.64
1:C2:1459:C:H2'	24:SS:138:THR:O	1.95	0.64
13:SH:73:VAL:O	13:SH:75:THR:N	2.29	0.64
29:SX:74:VAL:HG11	29:SX:104:LEU:HD11	1.79	0.64
38:Sg:253:ALA:HA	38:Sg:262:VAL:HG12	1.80	0.64
41:LC:291:ASN:HA	41:LC:296:GLN:HE21	1.61	0.64
56:LS:8:GLN:HB3	56:LS:64:ILE:HD11	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:LZ:74:VAL:HG23	63:LZ:101:PHE:CE2	2.31	0.64
1:C2:813:U:O2'	1:C2:815:G:OP1	2.15	0.64
3:C1:600:G:N2	3:C1:603:A:H62	1.95	0.64
3:C1:874:U:N3	3:C1:2978:U:OP1	2.30	0.64
21:SP:34:VAL:HA	21:SP:37:ALA:HB3	1.80	0.64
22:SQ:26:LYS:HE2	22:SQ:28:LEU:HD23	1.78	0.64
34:Sc:18:ARG:HD2	34:Sc:26:THR:HG23	1.79	0.64
1:C2:190:C:H41	14:SI:137:LYS:HD3	1.61	0.64
20:SO:32:ASP:OD1	20:SO:37:GLU:HB2	1.97	0.64
24:SS:132:ARG:HH12	24:SS:145:ARG:HH22	1.44	0.64
45:LG:133:LYS:HG3	45:LG:201:THR:HG22	1.80	0.64
1:C2:1241:G:OP1	1:C2:1241:G:N2	2.30	0.64
3:C1:1239:C:H2'	3:C1:1240:A:O4'	1.98	0.64
5:C3:75:G:OP2	62:LY:74:TYR:OH	2.15	0.64
11:SF:161:ASP:OD2	34:Sc:42:ARG:HD2	1.97	0.64
40:LB:48:GLY:HA3	40:LB:81:THR:HG22	1.79	0.64
1:C2:826:U:H2'	1:C2:827:C:H6	1.63	0.64
21:SP:85:ILE:HG23	21:SP:107:ILE:HD12	1.80	0.64
45:LG:147:LYS:O	45:LG:201:THR:OG1	2.12	0.64
3:C1:3165:A:H61	3:C1:3285:C:H42	0.75	0.64
9:SD:48:VAL:HB	9:SD:86:LEU:HD23	1.80	0.64
11:SF:42:LEU:HD22	11:SF:47:SER:HA	1.80	0.64
38:Sg:123:ILE:HD12	38:Sg:133:VAL:HG12	1.80	0.64
40:LB:284:ARG:NH2	40:LB:295:ALA:O	2.31	0.64
48:LJ:53:THR:HG22	48:LJ:60:ARG:HA	1.80	0.64
55:LR:105:LEU:HD22	55:LR:135:LYS:HG3	1.79	0.64
56:LS:26:ARG:NH1	57:LT:150:THR:OG1	2.31	0.64
1:C2:826:U:H2'	1:C2:827:C:C6	2.33	0.64
1:C2:953:G:H2'	1:C2:954:G:C8	2.33	0.64
3:C1:240:U:OP2	71:Lh:94:LYS:NZ	2.30	0.64
3:C1:519:A:OP2	44:LF:70:LYS:NZ	2.30	0.64
3:C1:691:A:OP1	41:LC:46:LYS:NZ	2.31	0.64
4:C4:121:U:OP2	42:LD:265:TYR:OH	2.16	0.64
24:SS:91:ASP:H	24:SS:95:GLY:HA2	1.63	0.64
31:SZ:71:ILE:HG23	31:SZ:75:LEU:HB3	1.79	0.64
40:LB:83:PRO:O	40:LB:165:GLN:NE2	2.31	0.64
3:C1:1279:C:H2'	3:C1:1280:C:C6	2.33	0.64
3:C1:1284:C:O2'	3:C1:1285:G:OP1	2.15	0.64
3:C1:3289:G:H2'	3:C1:3290:G:H8	1.61	0.64
5:C3:52:A:H62	75:Ll:27:ILE:HD13	1.61	0.64
24:SS:94:ASP:OD1	24:SS:94:ASP:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:LL:86:THR:HG23	49:LL:89:TYR:HB3	1.80	0.64
51:LN:84:PRO:HA	51:LN:87:GLN:HG2	1.79	0.64
3:C1:132:C:H2'	3:C1:133:U:H5''	1.78	0.64
3:C1:1747:G:H21	74:Lk:2:ALA:HB1	1.63	0.64
9:SD:220:PRO:HB2	38:Sg:221:MET:HE1	1.80	0.64
71:Lh:83:LYS:NZ	73:Lj:66:TYR:OH	2.30	0.64
1:C2:835:U:H2'	1:C2:836:U:C6	2.32	0.63
1:C2:1066:C:O2'	7:SB:148:ASN:OD1	2.15	0.63
1:C2:1439:C:H2'	1:C2:1440:C:C6	2.33	0.63
3:C1:2548:C:OP1	39:LA:93:LYS:NZ	2.25	0.63
12:SG:70:PRO:HA	12:SG:99:GLY:HA3	1.79	0.63
31:SZ:42:LEU:HA	31:SZ:46:LYS:HD2	1.79	0.63
34:Sc:5:THR:HG23	34:Sc:7:VAL:HG22	1.80	0.63
1:C2:647:G:H22	1:C2:687:G:H1	1.46	0.63
1:C2:844:A:H2'	1:C2:845:G:C8	2.34	0.63
3:C1:3243:A:OP1	52:LO:159:LYS:NZ	2.30	0.63
23:SR:16:LEU:HD12	23:SR:24:LEU:HD11	1.80	0.63
23:SR:25:THR:HG1	23:SR:30:THR:HG1	1.45	0.63
1:C2:1263:G:H2'	1:C2:1264:G:O4'	1.98	0.63
3:C1:28:C:O2'	3:C1:61:A:N3	2.28	0.63
3:C1:542:G:H1	3:C1:549:U:H3	1.46	0.63
11:SF:102:ARG:NH1	11:SF:103:ASN:OD1	2.31	0.63
13:SH:14:THR:OG1	13:SH:15:GLU:OE1	2.16	0.63
18:SM:98:GLY:O	18:SM:101:ALA:C	2.42	0.63
55:LR:105:LEU:HD23	55:LR:138:LEU:HD23	1.80	0.63
1:C2:1182:U:N3	1:C2:1185:U:OP2	2.31	0.63
1:C2:1211:A:N1	1:C2:1453:G:C6	2.66	0.63
1:C2:1400:A:H5''	23:SR:60:ARG:HH21	1.63	0.63
3:C1:2338:C:OP1	40:LB:236:LYS:NZ	2.31	0.63
3:C1:2551:U:H3	39:LA:95:SER:HG	1.45	0.63
3:C1:2771:U:O2'	3:C1:2772:C:O4'	2.13	0.63
3:C1:3158:G:H2'	3:C1:3159:C:H6	1.64	0.63
3:C1:3329:U:H5''	40:LB:308:MET:HE2	1.80	0.63
7:SB:61:LEU:HD21	7:SB:96:LEU:HD13	1.81	0.63
17:SL:101:GLU:OE1	29:SX:13:ARG:NH2	2.31	0.63
30:SY:57:VAL:O	30:SY:94:TYR:OH	2.17	0.63
47:LI:53:VAL:HG12	47:LI:134:ILE:HG12	1.79	0.63
57:LT:94:GLU:N	57:LT:94:GLU:OE1	2.32	0.63
1:C2:1499:G:H1	1:C2:1508:U:H3	1.45	0.63
3:C1:609:G:OP2	41:LC:315:LYS:NZ	2.26	0.63
3:C1:1764:U:OP1	55:LR:43:LYS:NZ	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:SP:71:GLU:CD	21:SP:72:LYS:H	2.07	0.63
22:SQ:115:THR:O	22:SQ:117:LEU:N	2.30	0.63
30:SY:43:LYS:O	30:SY:47:VAL:HG23	1.99	0.63
38:Sg:8:VAL:HG22	38:Sg:9:LEU:H	1.63	0.63
38:Sg:200:ASN:ND2	38:Sg:241:PHE:O	2.30	0.63
3:C1:412:G:N2	53:LP:118:GLN:OE1	2.30	0.63
3:C1:2828:G:O2'	47:LI:4:ARG:NH1	2.26	0.63
21:SP:17:TYR:HB2	21:SP:25:LEU:HD11	1.79	0.63
24:SS:31:ALA:O	24:SS:34:THR:OG1	2.07	0.63
29:SX:40:SER:O	29:SX:81:LYS:NZ	2.32	0.63
38:Sg:90:ARG:HH21	38:Sg:102:ARG:HE	1.46	0.63
49:LL:68:LYS:HA	49:LL:149:GLN:HE22	1.63	0.63
3:C1:157:A:C8	72:LI:26:ILE:HD13	2.34	0.63
3:C1:173:G:N1	3:C1:246:U:N3	2.46	0.63
3:C1:1066:G:H2'	3:C1:1067:U:C6	2.34	0.63
3:C1:3191:G:H2'	3:C1:3192:U:C6	2.34	0.63
3:C1:3243:A:H4'	40:LB:95:THR:HG22	1.79	0.63
8:SC:229:LEU:O	27:SV:16:LYS:NZ	2.26	0.63
1:C2:1579:U:H2'	1:C2:1580:C:C6	2.34	0.63
1:C2:1769:U:OP1	2:C5:2:GLY:N	2.32	0.63
3:C1:1544:G:O2'	3:C1:2167:A:N3	2.29	0.63
3:C1:1628:C:O4'	3:C1:1814:A:N6	2.32	0.63
3:C1:2584:G:H1'	45:LG:240:ASN:ND2	2.14	0.63
9:SD:27:ARG:HD2	16:SK:60:SER:HB2	1.81	0.63
39:LA:33:ASP:N	39:LA:33:ASP:OD1	2.28	0.63
46:LH:18:VAL:HG12	46:LH:27:VAL:HG22	1.79	0.63
75:LI:44:TRP:O	75:LI:48:LYS:NZ	2.28	0.63
1:C2:36:C:H42	1:C2:473:A:N6	1.96	0.62
1:C2:126:A:N1	1:C2:263:C:O2'	2.32	0.62
1:C2:1182:U:H3	1:C2:1185:U:H5''	1.63	0.62
1:C2:1488:G:H3'	1:C2:1515:A:H61	1.64	0.62
3:C1:3319:U:O2'	3:C1:3320:A:H5'	1.99	0.62
10:SE:11:ARG:NH2	10:SE:21:ASP:O	2.32	0.62
1:C2:1594:G:OP2	1:C2:1596:C:N4	2.33	0.62
3:C1:664:U:H2'	3:C1:665:A:C8	2.34	0.62
3:C1:1027:A:O2'	3:C1:1029:G:OP1	2.16	0.62
3:C1:1213:G:H4'	56:LS:90:MET:HG3	1.82	0.62
3:C1:1874:A:N7	55:LR:20:ARG:NH1	2.47	0.62
3:C1:2912:G:C6	3:C1:3130:A:N7	2.68	0.62
38:Sg:255:ALA:H	38:Sg:292:LEU:HD11	1.62	0.62
64:La:17:ALA:O	64:La:19:LYS:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1681:A:N6	1:C2:1720:G:O2'	2.31	0.62
3:C1:158:G:H2'	3:C1:159:A:H8	1.64	0.62
3:C1:170:G:OP1	49:LL:128:ARG:NH1	2.33	0.62
3:C1:2890:A:N1	3:C1:2913:C:N3	2.46	0.62
53:LP:30:ARG:NH1	53:LP:31:GLU:OE1	2.29	0.62
59:LV:53:SER:OG	59:LV:56:ASP:OD2	2.14	0.62
73:Lj:21:ARG:NH2	73:Lj:41:ALA:O	2.27	0.62
3:C1:282:G:O2'	3:C1:283:G:OP2	2.14	0.62
3:C1:1242:G:OP2	3:C1:1242:G:N2	2.32	0.62
3:C1:1912:U:N3	3:C1:2122:G:OP2	2.29	0.62
10:SE:139:VAL:HG13	10:SE:150:PRO:HG3	1.81	0.62
15:SJ:163:PRO:HB3	15:SJ:169:PRO:HA	1.79	0.62
23:SR:107:SER:O	23:SR:111:LYS:HG3	1.99	0.62
30:SY:25:VAL:N	30:SY:71:GLY:O	2.32	0.62
43:LE:31:ARG:NH1	69:Lf:107:ILE:O	2.31	0.62
1:C2:199:G:O2'	1:C2:200:A:H8	1.82	0.62
1:C2:500:C:O2'	1:C2:501:U:O5'	2.17	0.62
1:C2:1459:C:H5''	24:SS:138:THR:HB	1.82	0.62
3:C1:693:A:OP1	41:LC:45:ASN:ND2	2.33	0.62
3:C1:2608:G:OP1	39:LA:2:GLY:N	2.32	0.62
20:SO:42:VAL:HG12	20:SO:67:VAL:HG23	1.79	0.62
42:LD:23:ARG:O	42:LD:23:ARG:NH1	2.28	0.62
58:LU:22:PRO:HB2	58:LU:28:PHE:HB2	1.81	0.62
58:LU:89:LEU:HD23	58:LU:93:ILE:HD12	1.80	0.62
1:C2:1202:A:O2'	1:C2:1205:C:N4	2.31	0.62
1:C2:1467:C:OP1	22:SQ:132:LYS:NZ	2.33	0.62
1:C2:1593:A:H2'	1:C2:1594:G:H8	1.65	0.62
3:C1:952:A:H4'	3:C1:968:G:N2	2.15	0.62
7:SB:26:ARG:HH21	7:SB:49:ASN:HD21	1.46	0.62
9:SD:91:VAL:HG11	9:SD:94:ARG:HB3	1.80	0.62
18:SM:63:VAL:HG21	18:SM:66:VAL:HG13	1.80	0.62
1:C2:168:A:OP1	12:SG:140:ASN:ND2	2.33	0.62
3:C1:26:A:N3	3:C1:328:U:O2'	2.30	0.62
3:C1:173:G:H1	3:C1:245:U:H3	1.47	0.62
12:SG:136:LYS:NZ	12:SG:174:LYS:O	2.33	0.62
38:Sg:122:ILE:HG23	38:Sg:134:TRP:HB2	1.80	0.62
70:Lg:41:ARG:HG2	70:Lg:56:THR:HG21	1.82	0.62
1:C2:1237:G:H2'	1:C2:1238:A:C8	2.35	0.62
3:C1:1818:U:H2'	3:C1:1819:U:H6	1.64	0.62
6:SA:144:ILE:HG13	6:SA:158:VAL:HG13	1.82	0.62
38:Sg:218:GLY:O	38:Sg:234:LEU:O	2.18	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:LL:47:ALA:O	49:LL:49:ARG:N	2.31	0.62
64:La:44:ASN:O	64:La:47:LYS:O	2.16	0.62
3:C1:1260:A:O2'	3:C1:1261:G:O4'	2.13	0.62
14:SI:7:SER:O	14:SI:18:ARG:NH2	2.31	0.62
38:Sg:89:LEU:HB2	38:Sg:103:PHE:HB2	1.81	0.62
43:LE:88:SER:O	43:LE:90:LYS:NZ	2.31	0.62
52:LO:127:LEU:HD22	56:LS:156:VAL:HG23	1.82	0.62
3:C1:600:G:H21	3:C1:603:A:N6	1.98	0.61
3:C1:1259:A:N3	3:C1:1281:G:H4'	2.15	0.61
4:C4:60:G:H2'	4:C4:61:G:H8	1.65	0.61
15:SJ:154:LYS:HG3	15:SJ:155:HIS:HD2	1.65	0.61
54:LQ:63:SER:HB2	54:LQ:90:ASP:HB2	1.82	0.61
1:C2:691:C:OP2	1:C2:696:C:N4	2.33	0.61
3:C1:1063:G:N2	3:C1:1097:G:O2'	2.33	0.61
3:C1:1497:C:O2'	3:C1:1602:A:N3	2.33	0.61
24:SS:23:ASP:HB3	24:SS:26:ILE:HG12	1.81	0.61
30:SY:51:GLU:O	30:SY:53:ASP:N	2.32	0.61
45:LG:86:THR:O	45:LG:90:THR:HG23	2.00	0.61
6:SA:182:LEU:O	6:SA:186:GLY:HA3	2.00	0.61
7:SB:48:VAL:HG21	7:SB:61:LEU:HD12	1.81	0.61
21:SP:75:PRO:HA	21:SP:93:VAL:HG13	1.82	0.61
45:LG:81:THR:O	45:LG:222:PHE:HZ	1.83	0.61
52:LO:61:ALA:HA	52:LO:70:PRO:HD2	1.83	0.61
3:C1:149:U:OP2	51:LN:49:ARG:NH1	2.16	0.61
3:C1:1206:G:OP1	47:LI:157:TYR:OH	2.17	0.61
10:SE:17:HIS:HB2	10:SE:108:ARG:HA	1.82	0.61
42:LD:148:ILE:HG12	42:LD:159:VAL:HG21	1.81	0.61
48:LJ:23:VAL:HG21	48:LJ:30:LEU:HA	1.81	0.61
1:C2:1587:A:H1'	11:SF:104:ASN:HD22	1.65	0.61
3:C1:241:G:H2'	3:C1:242:C:C6	2.35	0.61
3:C1:2722:U:O2'	57:LT:88:ARG:O	2.17	0.61
8:SC:87:GLN:OE1	8:SC:94:GLN:NE2	2.33	0.61
12:SG:160:ARG:O	12:SG:170:THR:HA	2.00	0.61
21:SP:95:GLY:HA2	21:SP:104:GLN:HA	1.81	0.61
26:SU:51:VAL:HG23	26:SU:52:LYS:H	1.64	0.61
40:LB:10:ARG:NH2	40:LB:263:SER:O	2.34	0.61
1:C2:1474:G:H2'	1:C2:1475:A:C8	2.36	0.61
3:C1:113:C:OP1	51:LN:147:ARG:NH2	2.29	0.61
3:C1:1192:C:N4	3:C1:1301:A:O3'	2.33	0.61
3:C1:2946:A:H5''	3:C1:2947:G:H5'	1.82	0.61
3:C1:2953:U:H2'	3:C1:2954:U:H2'	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:3289:G:H2'	3:C1:3290:G:C8	2.35	0.61
9:SD:172:THR:O	9:SD:173:ARG:NH1	2.27	0.61
42:LD:104:LEU:HD13	42:LD:247:ILE:HG23	1.83	0.61
3:C1:356:C:O2'	41:LC:81:GLY:O	2.16	0.61
3:C1:761:A:H2'	3:C1:762:U:C6	2.35	0.61
3:C1:1127:G:OP2	47:LI:98:ARG:NH2	2.32	0.61
3:C1:1281:G:H3'	3:C1:1282:G:H8	1.66	0.61
3:C1:2901:G:O2'	3:C1:3024:A:N1	2.34	0.61
3:C1:3016:A:H2'	3:C1:3017:A:H8	1.65	0.61
29:SX:92:CYS:HA	29:SX:95:PHE:HD1	1.66	0.61
34:Sc:21:SER:OG	34:Sc:67:ARG:O	2.17	0.61
38:Sg:263:PHE:HD2	38:Sg:270:LEU:HG	1.64	0.61
38:Sg:291:SER:O	38:Sg:303:ALA:HA	2.01	0.61
44:LF:224:ILE:HD13	56:LS:39:SER:HB2	1.83	0.61
61:LX:65:GLN:HE21	71:Lh:36:LEU:HD11	1.64	0.61
1:C2:1220:C:H2'	1:C2:1221:A:H8	1.66	0.61
1:C2:1713:G:H2'	1:C2:1714:A:C8	2.36	0.61
3:C1:1636:U:H5''	63:LZ:73:LYS:HE2	1.82	0.61
3:C1:2113:A:O2'	3:C1:2116:G:N7	2.31	0.61
4:C4:17:A:P	48:LJ:150:ASN:HD21	2.23	0.61
10:SE:112:HIS:NE2	10:SE:237:SER:O	2.33	0.61
35:Sd:15:GLY:HA2	35:Sd:19:ARG:CZ	2.30	0.61
68:Le:100:ILE:O	68:Le:105:ARG:NH1	2.33	0.61
3:C1:655:C:H2'	3:C1:656:A:C8	2.36	0.61
3:C1:1581:C:H4'	3:C1:1582:C:OP1	2.01	0.61
3:C1:1635:G:N2	3:C1:1638:A:OP2	2.29	0.61
3:C1:1740:U:OP1	70:Lg:55:SER:OG	2.13	0.61
40:LB:37:ARG:HH11	40:LB:187:SER:H	1.49	0.61
41:LC:321:LYS:HE3	41:LC:324:LEU:HD23	1.82	0.61
3:C1:371:G:N1	3:C1:374:A:OP2	2.34	0.61
3:C1:1559:A:C6	3:C1:1581:C:N3	2.69	0.61
3:C1:2768:U:H2'	3:C1:2769:A:H8	1.64	0.61
3:C1:3379:C:H4'	40:LB:315:GLY:HA2	1.83	0.61
11:SF:90:ILE:HD11	11:SF:130:ILE:HG22	1.83	0.61
32:Sa:47:ALA:HA	32:Sa:50:VAL:HG23	1.82	0.61
40:LB:185:GLY:O	40:LB:191:LYS:NZ	2.25	0.61
46:LH:106:LYS:O	46:LH:109:ALA:CB	2.49	0.61
73:Lj:54:LYS:O	73:Lj:58:THR:HG23	2.01	0.61
79:Lp:49:ARG:HD2	79:Lp:50:GLY:N	2.16	0.61
1:C2:1054:U:H2'	1:C2:1055:U:H6	1.66	0.60
3:C1:571:U:H2'	3:C1:572:A:C8	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:643:U:O2'	3:C1:1153:A:N1	2.24	0.60
3:C1:1255:C:H2'	3:C1:1256:G:H8	1.65	0.60
3:C1:1659:U:H2'	3:C1:1660:C:C6	2.36	0.60
20:SO:15:GLY:O	20:SO:79:VAL:HA	2.01	0.60
26:SU:21:LYS:HG3	26:SU:94:GLU:HG3	1.83	0.60
31:SZ:90:LYS:HD2	31:SZ:91:PRO:HD2	1.82	0.60
42:LD:164:LYS:NZ	42:LD:168:ASP:OD2	2.34	0.60
47:LI:54:SER:HB2	47:LI:135:ILE:HD11	1.83	0.60
1:C2:36:C:N4	1:C2:473:A:H61	1.97	0.60
1:C2:55:A:OP1	30:SY:112:LYS:NZ	2.32	0.60
1:C2:224:C:H2'	1:C2:225:A:C8	2.36	0.60
9:SD:25:PHE:HE1	9:SD:69:LEU:HD22	1.66	0.60
13:SH:11:GLN:HB3	13:SH:13:PRO:HD2	1.82	0.60
21:SP:57:MET:HE2	21:SP:89:MET:HE3	1.83	0.60
25:ST:69:LYS:HE3	25:ST:70:GLN:HG2	1.83	0.60
38:Sg:249:ARG:NH2	38:Sg:298:GLY:O	2.27	0.60
1:C2:1054:U:H2'	1:C2:1055:U:C6	2.37	0.60
1:C2:1467:C:H2'	1:C2:1468:U:C6	2.36	0.60
1:C2:1579:U:H2'	1:C2:1580:C:H6	1.66	0.60
3:C1:993:G:N2	3:C1:1057:A:N1	2.49	0.60
3:C1:1229:G:H2'	3:C1:1230:G:C8	2.36	0.60
9:SD:23:GLU:OE1	16:SK:61:TRP:NE1	2.29	0.60
15:SJ:80:LEU:HD13	15:SJ:99:LEU:HD11	1.84	0.60
18:SM:62:LEU:HD21	18:SM:75:VAL:HG21	1.83	0.60
30:SY:86:GLU:OE1	30:SY:90:ARG:NH1	2.34	0.60
31:SZ:91:PRO:HB3	31:SZ:101:TYR:CE1	2.36	0.60
36:Se:29:LYS:O	36:Se:31:LYS:NZ	2.31	0.60
75:Ll:20:ASN:ND2	75:Ll:42:ARG:O	2.34	0.60
1:C2:1050:G:OP1	33:Sb:70:LYS:NZ	2.26	0.60
1:C2:1147:A:H2'	1:C2:1148:C:H6	1.65	0.60
1:C2:1469:A:H2'	1:C2:1470:C:C6	2.37	0.60
3:C1:358:G:N2	3:C1:361:A:OP2	2.31	0.60
3:C1:1178:G:N3	3:C1:1328:C:O2'	2.33	0.60
3:C1:2685:C:OP1	48:LJ:140:ARG:NH2	2.24	0.60
6:SA:77:SER:HB2	6:SA:86:VAL:HG21	1.84	0.60
7:SB:70:LEU:HD13	7:SB:84:ILE:HG13	1.83	0.60
26:SU:28:SER:HB2	26:SU:112:VAL:HA	1.84	0.60
38:Sg:21:THR:OG1	38:Sg:69:GLN:O	2.16	0.60
1:C2:235:G:H2'	1:C2:236:A:C8	2.37	0.60
1:C2:298:C:O2'	10:SE:30:ARG:NH2	2.34	0.60
1:C2:1022:C:O2'	1:C2:1125:A:N1	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1564:U:OP1	25:ST:38:LYS:NZ	2.32	0.60
28:SW:55:ASP:HB3	33:Sb:25:VAL:HG22	1.82	0.60
1:C2:749:U:N3	1:C2:801:G:C6	2.70	0.60
3:C1:86:G:O2'	3:C1:98:G:O6	2.19	0.60
4:C4:13:A:OP2	4:C4:67:G:N2	2.33	0.60
7:SB:180:THR:OG1	7:SB:183:GLN:OE1	2.19	0.60
15:SJ:161:THR:HG22	15:SJ:162:SER:H	1.66	0.60
40:LB:148:LEU:O	40:LB:152:LYS:HG3	2.01	0.60
49:LL:46:ILE:HG12	49:LL:49:ARG:HE	1.65	0.60
1:C2:209:U:H2'	1:C2:210:A:H8	1.66	0.60
3:C1:1067:U:H2'	3:C1:1068:C:H6	1.66	0.60
3:C1:3150:A:H5'	40:LB:129:ALA:O	2.02	0.60
3:C1:3151:U:OP2	40:LB:132:LYS:NZ	2.31	0.60
7:SB:109:LYS:O	7:SB:113:MET:HG3	2.02	0.60
14:SI:87:ASN:HB3	14:SI:90:LEU:HG	1.84	0.60
23:SR:104:ASN:O	23:SR:107:SER:OG	2.13	0.60
38:Sg:220:ILE:HG23	38:Sg:234:LEU:HB3	1.82	0.60
43:LE:52:VAL:HG21	43:LE:65:ILE:HG23	1.84	0.60
64:La:77:LYS:C	64:La:79:TRP:H	2.10	0.60
1:C2:230:C:H2'	1:C2:231:U:C6	2.37	0.60
3:C1:291:C:OP1	51:LN:68:ARG:HG3	2.02	0.60
3:C1:877:C:O2'	3:C1:880:G:O2'	2.17	0.60
11:SF:208:SER:HB3	11:SF:211:ILE:HG12	1.84	0.60
34:Sc:40:ILE:HG23	34:Sc:62:GLU:HG3	1.84	0.60
41:LC:299:ILE:HG23	54:LQ:39:ARG:HD2	1.84	0.60
1:C2:475:A:OP1	15:SJ:130:THR:OG1	2.19	0.60
1:C2:1471:A:H62	1:C2:1538:U:H3	1.47	0.60
1:C2:1487:A:H2'	1:C2:1488:G:C8	2.36	0.60
3:C1:1579:C:H2'	3:C1:1580:A:C8	2.36	0.60
3:C1:1838:G:H5''	3:C1:1839:A:H5'	1.83	0.60
3:C1:3191:G:H2'	3:C1:3192:U:H6	1.66	0.60
18:SM:74:LEU:O	18:SM:78:LEU:HG	2.00	0.60
20:SO:103:ARG:NH1	34:Sc:62:GLU:OE1	2.34	0.60
24:SS:44:ASN:O	24:SS:48:LYS:HG3	2.02	0.60
25:ST:6:VAL:O	25:ST:63:ARG:NH2	2.35	0.60
41:LC:60:THR:HG21	41:LC:84:ARG:HH21	1.66	0.60
43:LE:43:LEU:HD11	43:LE:85:ILE:HG12	1.82	0.60
46:LH:91:ARG:NH1	46:LH:143:GLU:OE1	2.31	0.60
46:LH:106:LYS:O	46:LH:109:ALA:HB3	2.02	0.60
46:LH:112:ILE:HD11	46:LH:134:ILE:HG13	1.81	0.60
72:Li:66:GLU:OE2	72:Li:91:ASN:ND2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:627:U:H2'	3:C1:628:A:C8	2.37	0.60
3:C1:1098:A:H5'	57:LT:129:LYS:HB2	1.84	0.60
14:SI:12:SER:OG	14:SI:18:ARG:HD2	2.02	0.60
15:SJ:93:LEU:HA	15:SJ:96:VAL:HG12	1.83	0.60
16:SK:35:ILE:HG13	16:SK:37:THR:HG22	1.82	0.60
41:LC:29:PRO:HB3	54:LQ:25:TYR:HE2	1.67	0.60
52:LO:113:ASP:O	52:LO:117:ARG:NH1	2.35	0.60
56:LS:132:THR:HG23	56:LS:144:LEU:HD13	1.84	0.60
23:SR:66:VAL:HG22	23:SR:68:GLY:H	1.67	0.59
41:LC:315:LYS:HB2	41:LC:323:VAL:HG21	1.83	0.59
46:LH:115:ARG:HG3	46:LH:123:ILE:HG12	1.84	0.59
1:C2:181:A:H2'	1:C2:182:A:H8	1.67	0.59
38:Sg:8:VAL:HG12	38:Sg:10:ARG:HH21	1.67	0.59
50:LM:108:ARG:NH2	52:LO:196:ALA:O	2.35	0.59
3:C1:283:G:OP1	78:Lo:45:ARG:NH2	2.23	0.59
3:C1:1064:A:H4'	3:C1:1065:A:O5'	2.01	0.59
15:SJ:65:LYS:HA	15:SJ:70:LEU:HD21	1.84	0.59
22:SQ:28:LEU:HD13	22:SQ:30:LYS:HG3	1.83	0.59
65:Lb:38:LYS:O	65:Lb:39:PHE:HB3	2.02	0.59
72:Li:79:SER:HB3	72:Li:82:ARG:HG3	1.83	0.59
3:C1:1010:G:N2	47:LI:193:ASP:OD1	2.34	0.59
6:SA:127:ARG:NH2	6:SA:150:ASP:O	2.34	0.59
11:SF:34:GLN:O	11:SF:38:THR:N	2.30	0.59
11:SF:132:VAL:HG13	11:SF:202:ALA:HB2	1.83	0.59
49:LL:76:THR:HG23	49:LL:79:GLU:HB2	1.83	0.59
1:C2:119:A:H1'	1:C2:397:A:C4	2.38	0.59
1:C2:1330:G:N2	9:SD:204:ASP:OD2	2.30	0.59
1:C2:1772:C:OP2	77:Ln:2:ARG:NH1	2.35	0.59
3:C1:619:A:H5''	3:C1:620:U:H5'	1.83	0.59
3:C1:1063:G:H8	3:C1:1066:G:H1'	1.68	0.59
3:C1:1237:G:C6	3:C1:1251:A:N1	2.69	0.59
3:C1:3203:U:H2'	3:C1:3204:C:C6	2.37	0.59
33:Sb:35:VAL:HG11	33:Sb:63:LEU:HD21	1.83	0.59
39:LA:42:ARG:HD2	39:LA:87:PHE:CD1	2.37	0.59
1:C2:924:A:H2'	1:C2:925:G:C8	2.38	0.59
1:C2:1459:C:H1'	21:SP:128:HIS:NE2	2.17	0.59
3:C1:567:G:H2'	3:C1:568:G:C8	2.37	0.59
3:C1:978:G:O2'	3:C1:979:U:O2	2.14	0.59
3:C1:1104:G:H2'	3:C1:1105:A:H8	1.67	0.59
3:C1:1596:C:H2'	3:C1:1597:C:C6	2.37	0.59
3:C1:1910:A:H2'	3:C1:1911:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:SA:168:HIS:HA	6:SA:203:PHE:CE1	2.37	0.59
23:SR:108:ASP:HA	23:SR:111:LYS:HE2	1.83	0.59
1:C2:155:U:OP2	30:SY:132:ARG:NH2	2.35	0.59
1:C2:336:G:H2'	1:C2:338:C:H5	1.68	0.59
1:C2:792:U:O4	1:C2:793:A:N6	2.36	0.59
1:C2:1186:U:OP2	1:C2:1456:C:O2'	2.11	0.59
1:C2:1471:A:N6	1:C2:1538:U:H3	2.00	0.59
3:C1:1237:G:N1	3:C1:1251:A:C2	2.65	0.59
12:SG:61:PHE:HE2	12:SG:72:ARG:HH11	1.49	0.59
20:SO:57:PRO:HG3	20:SO:96:PRO:HB2	1.84	0.59
47:LI:48:LEU:HD12	47:LI:178:ARG:NH2	2.18	0.59
74:Lk:70:PRO:HG2	74:Lk:73:LEU:HD13	1.84	0.59
1:C2:614:C:OP2	29:SX:5:LYS:NZ	2.33	0.59
1:C2:689:G:H2'	1:C2:690:G:H8	1.68	0.59
7:SB:174:LYS:NZ	7:SB:175:GLU:OE2	2.35	0.59
13:SH:47:ARG:HB2	13:SH:61:PHE:HE2	1.67	0.59
14:SI:110:ARG:O	14:SI:114:GLU:HG2	2.03	0.59
46:LH:9:GLN:HG3	46:LH:54:LYS:HG2	1.85	0.59
77:Ln:1:MET:SD	77:Ln:9:ARG:NH1	2.75	0.59
1:C2:1178:G:H5'	1:C2:1190:C:H42	1.68	0.59
1:C2:1203:A:H2'	1:C2:1204:A:H8	1.66	0.59
1:C2:1284:C:O2	1:C2:1286:U:N3	2.36	0.59
1:C2:1573:A:P	11:SF:185:ARG:HH22	2.26	0.59
3:C1:734:C:H2'	3:C1:735:A:C8	2.36	0.59
3:C1:1601:U:OP2	55:LR:42:ARG:NH2	2.33	0.59
3:C1:2433:U:H1'	51:LN:125:SER:HB2	1.85	0.59
7:SB:185:THR:O	7:SB:189:ILE:HG12	2.02	0.59
12:SG:57:ASP:HA	12:SG:106:LEU:HA	1.83	0.59
22:SQ:28:LEU:HD21	22:SQ:66:ARG:HH21	1.68	0.59
1:C2:1278:G:OP1	9:SD:185:LYS:NZ	2.36	0.59
3:C1:2101:C:O2'	3:C1:2102:U:OP1	2.19	0.59
18:SM:134:SER:O	18:SM:138:GLU:HG2	2.02	0.59
51:LN:192:LYS:O	51:LN:196:THR:HG23	2.03	0.59
72:Li:9:ILE:HA	72:Li:13:LYS:HD3	1.85	0.59
74:Lk:32:ASN:HD21	74:Lk:36:LYS:HB2	1.66	0.59
1:C2:1147:A:H2'	1:C2:1148:C:C6	2.37	0.58
9:SD:22:ASN:O	9:SD:26:THR:HG23	2.02	0.58
12:SG:26:VAL:HB	12:SG:40:ALA:HB3	1.84	0.58
27:SV:41:GLU:O	27:SV:44:ARG:NH2	2.36	0.58
38:Sg:218:GLY:O	38:Sg:235:SER:CA	2.39	0.58
47:LI:90:ARG:NH1	47:LI:137:SER:OG	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:LI:191:LYS:NZ	47:LI:212:GLU:OE1	2.35	0.58
57:LT:80:VAL:HG11	57:LT:85:LEU:HD12	1.85	0.58
60:LW:22:VAL:HG13	60:LW:28:ILE:HG22	1.85	0.58
3:C1:1940:G:O2'	3:C1:3362:A:O2'	2.21	0.58
3:C1:2245:C:O2'	39:LA:220:GLY:O	2.21	0.58
10:SE:196:VAL:HG11	10:SE:211:LYS:HE3	1.86	0.58
26:SU:36:ASN:OD1	26:SU:37:VAL:N	2.36	0.58
26:SU:45:ALA:O	26:SU:49:ASN:HA	2.02	0.58
29:SX:102:VAL:HG12	29:SX:127:VAL:HG23	1.84	0.58
38:Sg:9:LEU:HD23	38:Sg:11:GLY:H	1.68	0.58
38:Sg:274:LEU:HD21	38:Sg:313:TRP:CD2	2.38	0.58
41:LC:59:GLN:NE2	73:Lj:55:ARG:HH22	2.01	0.58
49:LL:48:PRO:HA	49:LL:137:GLN:HE21	1.68	0.58
1:C2:486:G:H2'	1:C2:487:G:C8	2.38	0.58
1:C2:1354:G:O6	1:C2:1369:U:O2	2.20	0.58
3:C1:1815:U:O2'	3:C1:1816:A:OP2	2.19	0.58
7:SB:134:VAL:HG12	7:SB:218:LEU:HD12	1.86	0.58
28:SW:36:LYS:O	28:SW:40:VAL:HG23	2.04	0.58
29:SX:57:LEU:HD22	36:Se:4:VAL:HG22	1.85	0.58
33:Sb:40:CYS:SG	33:Sb:42:ASN:ND2	2.76	0.58
36:Se:54:ARG:HE	36:Se:56:MET:HE1	1.68	0.58
41:LC:23:PRO:HB3	41:LC:259:ASP:HB2	1.85	0.58
64:La:104:THR:HG21	64:La:112:ILE:HD11	1.86	0.58
1:C2:1219:A:O2'	16:SK:48:SER:HA	2.02	0.58
1:C2:1504:G:H2'	1:C2:1505:A:C8	2.38	0.58
1:C2:1546:G:OP1	24:SS:123:ARG:NH2	2.33	0.58
3:C1:341:G:O2'	5:C3:22:U:O4	2.21	0.58
3:C1:3033:A:H2'	3:C1:3034:C:H6	1.68	0.58
3:C1:3160:U:H2'	3:C1:3161:C:C6	2.38	0.58
3:C1:3252:G:H2'	3:C1:3253:G:C8	2.38	0.58
21:SP:72:LYS:HE3	21:SP:106:GLU:HB2	1.84	0.58
38:Sg:178:VAL:HB	38:Sg:192:PHE:HB2	1.86	0.58
1:C2:955:A:OP1	19:SN:3:ARG:NH1	2.35	0.58
1:C2:1364:G:H2'	1:C2:1365:C:C6	2.38	0.58
3:C1:327:A:O3'	49:LL:23:LYS:NZ	2.35	0.58
3:C1:1040:A:N3	47:LI:198:LYS:NZ	2.48	0.58
3:C1:1314:C:H5'	52:LO:17:GLY:HA3	1.84	0.58
18:SM:45:LEU:O	18:SM:49:THR:HG23	2.03	0.58
23:SR:22:PRO:O	38:Sg:216:LYS:NZ	2.28	0.58
38:Sg:105:GLY:HA3	38:Sg:134:TRP:CZ2	2.38	0.58
74:Lk:17:ARG:NH2	74:Lk:52:TYR:OH	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:156:A:H2'	1:C2:157:A:O4'	2.02	0.58
3:C1:1696:A:H2'	3:C1:1697:A:C8	2.39	0.58
7:SB:121:ILE:HD12	7:SB:207:LEU:HD21	1.86	0.58
8:SC:116:LYS:HG2	8:SC:127:ALA:HB3	1.84	0.58
9:SD:169:ASP:N	9:SD:169:ASP:OD1	2.34	0.58
46:LH:45:PHE:CD1	46:LH:55:VAL:HG12	2.39	0.58
49:LL:74:GLY:O	49:LL:101:ARG:NH1	2.36	0.58
1:C2:1051:G:O2'	1:C2:1052:U:OP1	2.20	0.58
3:C1:377:A:O2'	3:C1:391:A:N1	2.36	0.58
3:C1:627:U:H2'	3:C1:628:A:H8	1.68	0.58
11:SF:88:PRO:HG2	11:SF:91:GLU:OE1	2.03	0.58
18:SM:29:LYS:HE2	18:SM:100:TRP:CD1	2.39	0.58
24:SS:7:GLU:HB3	24:SS:11:PHE:CE2	2.39	0.58
52:LO:27:LEU:HD11	52:LO:102:LEU:HD13	1.86	0.58
1:C2:1180:C:O2'	21:SP:128:HIS:HB3	2.04	0.58
3:C1:338:A:H4'	41:LC:197:ARG:HH12	1.69	0.58
3:C1:1259:A:C2	3:C1:1281:G:H4'	2.39	0.58
3:C1:2223:A:OP1	72:Li:67:LYS:NZ	2.37	0.58
13:SH:23:ALA:O	13:SH:27:LEU:HG	2.04	0.58
16:SK:29:GLN:HG3	16:SK:39:ASN:ND2	2.19	0.58
22:SQ:94:GLN:HG3	38:Sg:62:LYS:NZ	2.18	0.58
25:ST:108:LEU:HG	25:ST:113:ILE:HB	1.84	0.58
42:LD:126:GLU:N	42:LD:126:GLU:OE1	2.37	0.58
68:Le:6:HIS:ND1	68:Le:6:HIS:O	2.37	0.58
1:C2:1159:C:N4	1:C2:1285:U:OP1	2.37	0.58
1:C2:1533:C:H4'	1:C2:1539:G:C6	2.38	0.58
3:C1:831:G:O2'	3:C1:1864:A:N3	2.35	0.58
3:C1:1481:A:O2'	3:C1:1858:A:H1'	2.04	0.58
13:SH:51:VAL:HG13	13:SH:53:GLY:N	2.18	0.58
15:SJ:108:ARG:HH21	15:SJ:145:SER:HB3	1.68	0.58
42:LD:40:HIS:HD2	42:LD:42:ALA:H	1.50	0.58
49:LL:53:LEU:HB2	49:LL:55:ARG:HH12	1.68	0.58
49:LL:76:THR:O	49:LL:79:GLU:N	2.37	0.58
51:LN:200:TRP:O	51:LN:203:ARG:NH1	2.36	0.58
1:C2:978:A:H2'	1:C2:979:A:O4'	2.04	0.58
1:C2:1158:C:H42	1:C2:1163:A:N6	1.95	0.58
1:C2:1568:C:H4'	1:C2:1569:A:O5'	2.04	0.58
3:C1:993:G:H1	3:C1:1057:A:N6	2.02	0.58
6:SA:59:LEU:HB2	27:SV:79:LEU:HD21	1.85	0.58
10:SE:35:PRO:HD2	10:SE:83:PRO:HG2	1.85	0.58
13:SH:22:GLN:HA	13:SH:25:VAL:HG12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:SI:99:ALA:N	14:SI:169:ILE:O	2.37	0.58
29:SX:107:PHE:CD2	29:SX:114:LYS:HB3	2.39	0.58
49:LL:57:VAL:HG22	49:LL:147:ILE:HG23	1.86	0.58
60:LW:1:MET:HB2	60:LW:15:PRO:HG2	1.85	0.58
1:C2:827:C:H2'	1:C2:828:U:C6	2.39	0.57
1:C2:903:U:O2'	1:C2:905:A:N7	2.31	0.57
1:C2:1644:C:O2'	3:C1:2255:A:N1	2.35	0.57
3:C1:2393:G:O2'	3:C1:2982:A:N6	2.34	0.57
8:SC:106:ASP:OD1	8:SC:106:ASP:N	2.29	0.57
9:SD:134:CYS:SG	9:SD:135:GLU:N	2.77	0.57
10:SE:112:HIS:NE2	10:SE:237:SER:OG	2.34	0.57
13:SH:51:VAL:HG13	13:SH:53:GLY:H	1.69	0.57
51:LN:146:ALA:C	51:LN:148:TYR:H	2.11	0.57
1:C2:1537:C:O2'	1:C2:1540:G:O6	2.22	0.57
1:C2:1601:G:N2	25:ST:88:VAL:HG22	2.17	0.57
1:C2:1675:C:H1'	14:SI:32:GLN:HG3	1.86	0.57
3:C1:712:G:OP1	49:LL:174:ARG:NH1	2.37	0.57
3:C1:1035:G:H3'	3:C1:1036:A:H8	1.68	0.57
10:SE:12:LEU:HD11	15:SJ:4:ALA:HB2	1.86	0.57
24:SS:45:LEU:HD23	24:SS:48:LYS:HB2	1.86	0.57
30:SY:7:ILE:HG13	30:SY:27:VAL:HG12	1.86	0.57
1:C2:442:C:O2'	1:C2:525:A:N1	2.37	0.57
1:C2:749:U:C2	1:C2:801:G:N1	2.72	0.57
9:SD:76:ARG:NH1	9:SD:76:ARG:O	2.33	0.57
19:SN:67:THR:HG21	19:SN:74:ILE:HD11	1.87	0.57
25:ST:11:ALA:O	25:ST:15:ILE:HG13	2.05	0.57
1:C2:258:C:O4'	14:SI:64:ASN:ND2	2.37	0.57
1:C2:1561:U:H2'	1:C2:1562:G:H8	1.69	0.57
1:C2:1593:A:H2'	1:C2:1594:G:C8	2.40	0.57
3:C1:585:A:H2'	3:C1:586:C:C6	2.40	0.57
3:C1:914:A:C2	39:LA:204:MET:HG2	2.38	0.57
6:SA:120:LEU:HD21	6:SA:144:ILE:HD13	1.86	0.57
44:LF:156:ILE:O	44:LF:159:GLN:N	2.33	0.57
50:LM:23:ILE:HG12	50:LM:63:VAL:HG12	1.86	0.57
67:Ld:31:ARG:O	67:Ld:35:GLU:HG2	2.04	0.57
75:Ll:21:ARG:HH12	75:Ll:24:PRO:HG3	1.69	0.57
1:C2:205:U:O2	1:C2:263:C:N3	2.37	0.57
1:C2:936:G:OP1	1:C2:1074:G:N2	2.34	0.57
8:SC:151:PRO:HD2	27:SV:9:VAL:HG11	1.86	0.57
9:SD:141:LYS:HZ1	9:SD:180:GLY:H	1.51	0.57
10:SE:100:ARG:HB2	10:SE:114:ILE:HD13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:SN:16:ILE:HG23	19:SN:62:GLN:HE22	1.70	0.57
21:SP:16:SER:OG	21:SP:21:ASP:OD1	2.19	0.57
24:SS:100:THR:HB	24:SS:105:VAL:HG12	1.86	0.57
30:SY:41:ARG:NH1	30:SY:55:VAL:O	2.37	0.57
47:LI:208:ASN:N	47:LI:208:ASN:OD1	2.33	0.57
1:C2:1738:U:H2'	1:C2:1739:C:C6	2.38	0.57
3:C1:15:C:O2	5:C3:144:G:N2	2.19	0.57
3:C1:596:C:OP1	44:LF:33:ARG:NH1	2.35	0.57
3:C1:1104:G:H2'	3:C1:1105:A:C8	2.38	0.57
3:C1:3356:G:HO2'	3:C1:3357:U:P	2.28	0.57
11:SF:179:ALA:HA	11:SF:193:THR:HG22	1.87	0.57
24:SS:108:LYS:HD3	24:SS:111:ASP:HB2	1.87	0.57
47:LI:189:GLU:CD	47:LI:189:GLU:H	2.13	0.57
49:LL:53:LEU:HB2	49:LL:55:ARG:NH1	2.20	0.57
61:LX:53:HIS:ND1	61:LX:54:TYR:O	2.33	0.57
1:C2:1446:A:C8	1:C2:1448:G:O6	2.57	0.57
3:C1:1659:U:H2'	3:C1:1660:C:H6	1.69	0.57
3:C1:2542:U:H3	3:C1:2544:U:H5	1.52	0.57
3:C1:3121:U:O4	3:C1:3124:G:O6	2.20	0.57
4:C4:76:A:N3	56:LS:50:LYS:NZ	2.51	0.57
9:SD:211:PRO:HG3	23:SR:19:ARG:O	2.04	0.57
23:SR:51:ALA:O	23:SR:55:THR:HG23	2.05	0.57
35:Sd:6:VAL:HB	35:Sd:7:TRP:CE3	2.39	0.57
47:LI:193:ASP:OD1	47:LI:194:GLY:N	2.37	0.57
52:LO:119:VAL:HG21	56:LS:167:ARG:HD2	1.86	0.57
68:Le:95:GLU:HG2	68:Le:120:THR:OG1	2.03	0.57
3:C1:737:G:H2'	3:C1:738:A:C8	2.40	0.57
3:C1:1240:A:H1'	3:C1:1249:G:H22	1.69	0.57
3:C1:2418:G:OP2	3:C1:2606:G:N2	2.35	0.57
6:SA:39:ASN:OD1	6:SA:40:ALA:N	2.38	0.57
7:SB:28:GLU:N	7:SB:28:GLU:OE1	2.37	0.57
43:LE:40:LEU:HB3	43:LE:84:VAL:HG13	1.87	0.57
54:LQ:100:THR:HG22	54:LQ:120:GLU:HB3	1.86	0.57
1:C2:197:A:H61	14:SI:138:ASN:HD22	1.52	0.57
1:C2:448:C:OP2	10:SE:49:ARG:NH1	2.37	0.57
1:C2:504:U:H2'	1:C2:505:A:H8	1.70	0.57
3:C1:438:A:OP1	68:Le:118:LYS:NZ	2.38	0.57
3:C1:2584:G:H1'	45:LG:240:ASN:HD22	1.70	0.57
25:ST:73:VAL:HG12	25:ST:105:LEU:HD12	1.86	0.57
38:Sg:172:ALA:HB1	38:Sg:199:ILE:HD12	1.87	0.57
39:LA:142:ASP:OD2	39:LA:142:ASP:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:LZ:99:GLU:H	63:LZ:99:GLU:CD	2.12	0.57
1:C2:1433:G:H2'	1:C2:1434:U:C6	2.40	0.57
3:C1:1240:A:H1'	3:C1:1249:G:N2	2.20	0.57
6:SA:59:LEU:HD22	27:SV:79:LEU:HD11	1.87	0.57
10:SE:241:GLY:O	10:SE:244:ILE:HG12	2.05	0.57
16:SK:24:LYS:O	16:SK:26:ASP:N	2.37	0.57
23:SR:23:LYS:NZ	38:Sg:149:ASP:OD2	2.33	0.57
57:LT:57:TYR:CG	57:LT:89:LEU:HD21	2.40	0.57
64:La:64:GLN:O	64:La:67:HIS:HB2	2.05	0.57
3:C1:501:A:H2'	3:C1:502:U:C6	2.40	0.56
3:C1:1347:U:O2	3:C1:1357:G:O6	2.23	0.56
3:C1:1716:U:O2'	3:C1:1717:U:O5'	2.22	0.56
3:C1:1764:U:C4	3:C1:1765:U:H1'	2.40	0.56
5:C3:95:G:OP2	73:Lj:72:ARG:NH1	2.38	0.56
11:SF:214:LYS:O	11:SF:218:GLU:HG2	2.04	0.56
23:SR:24:LEU:HD23	23:SR:34:LEU:HD13	1.87	0.56
40:LB:159:ARG:HD2	40:LB:180:GLU:OE1	2.05	0.56
41:LC:122:THR:O	41:LC:126:ILE:HG13	2.04	0.56
74:Lk:14:LEU:O	74:Lk:17:ARG:HB2	2.05	0.56
1:C2:86:A:H2'	1:C2:87:C:H6	1.70	0.56
1:C2:918:U:H2'	1:C2:919:A:H8	1.68	0.56
1:C2:1211:A:C6	1:C2:1453:G:O6	2.57	0.56
3:C1:1544:G:H5'	51:LN:67:ARG:HD2	1.87	0.56
3:C1:1573:G:C5	3:C1:1574:C:H1'	2.40	0.56
3:C1:2213:A:N3	3:C1:2601:A:O2'	2.33	0.56
3:C1:3228:C:H4'	3:C1:3229:G:O5'	2.04	0.56
4:C4:15:C:O3'	42:LD:8:LYS:NZ	2.38	0.56
10:SE:121:TYR:HA	10:SE:163:ASP:O	2.05	0.56
24:SS:132:ARG:HH12	24:SS:145:ARG:NH2	2.02	0.56
26:SU:95:ALA:HB3	26:SU:100:VAL:HG23	1.87	0.56
29:SX:3:LYS:HG3	29:SX:7:ARG:HH22	1.70	0.56
64:La:111:LYS:HD2	64:La:129:PHE:HB3	1.86	0.56
1:C2:333:A:N6	14:SI:27:PHE:HB2	2.20	0.56
1:C2:407:A:H2'	1:C2:408:C:C6	2.40	0.56
1:C2:1349:G:N1	1:C2:1377:U:N3	2.54	0.56
1:C2:1542:G:N2	1:C2:1569:A:OP2	2.39	0.56
3:C1:1910:A:H2'	3:C1:1911:A:H8	1.69	0.56
3:C1:2119:A:O5'	3:C1:2119:A:H8	1.89	0.56
3:C1:2131:A:N1	79:Lp:17:ARG:HB2	2.20	0.56
3:C1:2432:A:H2	51:LN:125:SER:HG	1.53	0.56
5:C3:36:G:OP2	71:Lh:85:THR:OG1	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C3:97:A:OP1	71:Lh:67:ARG:NH2	2.38	0.56
7:SB:197:ILE:O	7:SB:201:THR:HG22	2.05	0.56
10:SE:121:TYR:OH	10:SE:235:TYR:O	2.23	0.56
10:SE:163:ASP:OD1	10:SE:164:LEU:N	2.37	0.56
15:SJ:175:ARG:HE	15:SJ:179:ARG:HH12	1.51	0.56
17:SL:109:VAL:HG11	17:SL:125:VAL:HG11	1.87	0.56
18:SM:94:ALA:O	18:SM:118:ALA:HB3	2.06	0.56
23:SR:24:LEU:HD13	23:SR:58:MET:HE1	1.87	0.56
41:LC:59:GLN:HE22	73:Lj:55:ARG:HH22	1.54	0.56
45:LG:153:ILE:HD11	45:LG:166:LEU:HB3	1.87	0.56
67:Ld:36:ILE:HD12	67:Ld:59:ILE:HD11	1.86	0.56
70:Lg:54:ILE:HD11	70:Lg:78:GLY:HA2	1.86	0.56
71:Lh:29:ALA:HA	71:Lh:32:LYS:HE2	1.86	0.56
1:C2:1204:A:OP1	1:C2:1456:C:N4	2.39	0.56
1:C2:1420:C:OP1	35:Sd:54:LYS:NZ	2.37	0.56
4:C4:44:C:H4'	42:LD:152:ARG:HG3	1.87	0.56
11:SF:120:ILE:HG12	31:SZ:100:ILE:HD12	1.87	0.56
16:SK:22:VAL:HG23	16:SK:23:ALA:H	1.70	0.56
23:SR:47:ARG:NH1	23:SR:48:ASN:OD1	2.38	0.56
24:SS:66:LEU:O	24:SS:70:VAL:HG23	2.05	0.56
24:SS:106:GLU:HA	24:SS:109:LEU:HG	1.88	0.56
32:Sa:74:CYS:SG	32:Sa:75:VAL:N	2.79	0.56
38:Sg:149:ASP:OD1	38:Sg:150:TRP:N	2.36	0.56
55:LR:139:VAL:O	55:LR:143:ILE:HG12	2.05	0.56
1:C2:523:G:N1	1:C2:528:U:OP2	2.34	0.56
3:C1:182:U:O2	3:C1:234:G:N2	2.28	0.56
3:C1:2848:G:OP1	76:Lm:100:TYR:OH	2.14	0.56
10:SE:230:GLU:HB3	10:SE:233:LYS:HE3	1.87	0.56
29:SX:107:PHE:CE1	29:SX:123:LYS:HB3	2.41	0.56
38:Sg:116:ASP:OD2	38:Sg:120:SER:OG	2.23	0.56
45:LG:34:PHE:H	45:LG:39:ALA:HB3	1.70	0.56
64:La:100:PRO:HG2	64:La:123:VAL:HG12	1.85	0.56
1:C2:1677:C:H42	1:C2:1724:U:H3	0.69	0.56
9:SD:31:GLU:HA	9:SD:107:PHE:CE2	2.39	0.56
12:SG:27:PHE:HA	12:SG:30:LYS:NZ	2.20	0.56
15:SJ:54:ARG:HH21	15:SJ:57:ARG:HH21	1.54	0.56
18:SM:28:LEU:HA	18:SM:31:VAL:HG12	1.87	0.56
18:SM:51:ALA:HB1	18:SM:57:ALA:HB2	1.86	0.56
19:SN:99:ARG:NH2	19:SN:119:GLU:OE2	2.38	0.56
21:SP:118:GLU:OE2	24:SS:121:ALA:HB1	2.06	0.56
40:LB:57:VAL:HG22	40:LB:73:VAL:HG12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:LB:287:LYS:HE3	40:LB:290:ASP:HB2	1.87	0.56
54:LQ:133:LYS:HB2	54:LQ:135:GLN:NE2	2.20	0.56
56:LS:66:GLU:OE2	56:LS:99:ARG:N	2.39	0.56
1:C2:848:C:H2'	1:C2:849:C:C6	2.41	0.56
1:C2:1304:G:OP2	1:C2:1305:U:O2'	2.17	0.56
1:C2:1364:G:H2'	1:C2:1365:C:H6	1.70	0.56
3:C1:1776:G:H2'	3:C1:1777:U:O4'	2.06	0.56
3:C1:2654:C:OP2	78:Lo:2:VAL:N	2.38	0.56
11:SF:37:GLN:HG2	22:SQ:46:PHE:CE2	2.41	0.56
14:SI:36:THR:HG21	14:SI:173:PRO:HB2	1.88	0.56
15:SJ:162:SER:O	15:SJ:165:GLY:N	2.30	0.56
26:SU:99:ILE:O	26:SU:103:ILE:HG12	2.06	0.56
33:Sb:75:GLU:O	33:Sb:77:THR:HG23	2.06	0.56
1:C2:188:A:H2'	1:C2:189:C:H5'	1.86	0.56
1:C2:829:A:H1'	1:C2:830:U:C5	2.41	0.56
1:C2:1220:C:H2'	1:C2:1221:A:C8	2.41	0.56
3:C1:1697:A:H5'	70:Lg:33:GLN:HE22	1.70	0.56
10:SE:123:LEU:HD12	10:SE:236:ILE:HD11	1.88	0.56
53:LP:178:ALA:O	53:LP:182:ILE:HG12	2.05	0.56
55:LR:7:GLN:OE1	55:LR:7:GLN:N	2.39	0.56
63:LZ:127:ASN:HB3	63:LZ:130:PHE:HB3	1.88	0.56
66:Lc:10:ILE:HD12	66:Lc:10:ILE:H	1.70	0.56
1:C2:891:A:H2'	1:C2:892:A:C8	2.41	0.56
1:C2:1360:A:H2	1:C2:1364:G:C6	2.23	0.56
4:C4:71:G:H2'	4:C4:72:A:C8	2.41	0.56
9:SD:164:VAL:HG13	9:SD:168:ILE:HD11	1.88	0.56
12:SG:197:ASN:O	12:SG:201:GLN:HG2	2.06	0.56
14:SI:188:GLU:HB3	17:SL:13:PHE:CE2	2.41	0.56
20:SO:43:THR:H	20:SO:46:MET:HB2	1.70	0.56
20:SO:91:THR:OG1	20:SO:92:LYS:N	2.38	0.56
45:LG:106:LYS:O	45:LG:110:THR:HG23	2.06	0.56
63:LZ:28:PRO:O	63:LZ:77:TYR:OH	2.11	0.56
1:C2:485:A:C6	1:C2:503:G:C6	2.93	0.56
1:C2:1003:A:H1'	1:C2:1005:A:N7	2.20	0.56
3:C1:1280:C:H2'	3:C1:1281:G:H8	1.71	0.56
3:C1:2307:G:O2'	3:C1:2310:U:OP2	2.24	0.56
3:C1:2712:U:HO2'	3:C1:2743:A:HO2'	1.54	0.56
3:C1:2767:U:H4'	78:Lo:31:GLY:HA3	1.87	0.56
5:C3:9:A:H2'	5:C3:10:A:H8	1.71	0.56
8:SC:49:LYS:NZ	8:SC:246:GLU:OE2	2.28	0.56
8:SC:153:SER:OG	8:SC:154:LEU:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:SG:31:ARG:HB3	12:SG:101:ILE:HD13	1.88	0.56
13:SH:10:SER:O	13:SH:10:SER:OG	2.23	0.56
14:SI:159:GLN:OE1	14:SI:166:TYR:N	2.37	0.56
20:SO:80:HIS:HA	20:SO:113:GLY:O	2.04	0.56
22:SQ:52:LEU:HA	22:SQ:60:PHE:HE2	1.70	0.56
42:LD:55:PHE:HD1	42:LD:60:ILE:HG12	1.71	0.56
42:LD:286:VAL:O	42:LD:290:ILE:HG13	2.06	0.56
63:LZ:83:THR:OG1	63:LZ:84:ARG:N	2.38	0.56
70:Lg:10:ARG:HG3	75:Ll:4:GLN:NE2	2.20	0.56
1:C2:1356:U:H2'	1:C2:1357:A:H8	1.71	0.55
1:C2:1586:A:OP1	22:SQ:134:ALA:N	2.39	0.55
2:C5:46:SER:OG	2:C5:47:ARG:N	2.40	0.55
3:C1:1639:C:OP2	70:Lg:74:ARG:NH2	2.39	0.55
11:SF:28:PRO:HG2	22:SQ:37:THR:HG21	1.87	0.55
38:Sg:221:MET:HE2	38:Sg:223:TRP:HE1	1.70	0.55
38:Sg:246:SER:OG	38:Sg:249:ARG:NH2	2.39	0.55
39:LA:96:LEU:HD12	39:LA:166:ILE:HD13	1.88	0.55
42:LD:50:ARG:NH2	42:LD:72:ASP:OD2	2.38	0.55
44:LF:163:LEU:HD13	44:LF:169:ILE:HD11	1.88	0.55
45:LG:97:TYR:OH	45:LG:204:ARG:N	2.23	0.55
1:C2:826:U:H3	1:C2:846:G:H1	1.53	0.55
1:C2:838:G:H2'	1:C2:839:U:C6	2.41	0.55
3:C1:336:A:O2'	41:LC:48:GLN:NE2	2.36	0.55
3:C1:662:U:H2'	3:C1:663:C:C6	2.40	0.55
3:C1:3356:G:O2'	3:C1:3357:U:OP1	2.19	0.55
6:SA:148:ASP:OD2	6:SA:149:LEU:N	2.36	0.55
7:SB:130:SER:HB2	7:SB:180:THR:HG23	1.88	0.55
10:SE:195:ILE:O	10:SE:197:HIS:N	2.40	0.55
13:SH:56:LYS:HB2	13:SH:88:ARG:HG2	1.88	0.55
25:ST:66:TYR:CE2	25:ST:129:GLN:HG3	2.41	0.55
40:LB:47:LEU:HD11	40:LB:179:ALA:HB3	1.88	0.55
40:LB:113:GLU:HB3	40:LB:176:ALA:HB2	1.88	0.55
47:LI:73:ASN:O	47:LI:77:THR:HG23	2.06	0.55
64:La:16:SER:O	64:La:16:SER:OG	2.22	0.55
1:C2:1202:A:N6	1:C2:1456:C:C2	2.74	0.55
1:C2:1202:A:N7	1:C2:1456:C:N3	2.54	0.55
1:C2:1499:G:N2	1:C2:1508:U:O2	2.37	0.55
1:C2:1756:A:H2'	3:C1:2256:A:H62	1.70	0.55
3:C1:2507:C:H2'	3:C1:2508:U:H6	1.71	0.55
3:C1:3070:A:OP1	55:LR:62:ARG:NH1	2.39	0.55
6:SA:79:ARG:HH11	6:SA:125:ASP:HB2	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:LS:1:MET:N	56:LS:32:SER:HB3	2.20	0.55
58:LU:32:SER:OG	58:LU:83:TYR:OH	2.23	0.55
1:C2:219:A:H2	1:C2:843:U:H1'	1.72	0.55
1:C2:225:A:H2'	1:C2:226:A:O4'	2.07	0.55
1:C2:754:A:N6	1:C2:793:A:N7	2.54	0.55
1:C2:1483:A:H2'	1:C2:1484:G:C8	2.41	0.55
3:C1:1066:G:H2'	3:C1:1067:U:H6	1.70	0.55
3:C1:2152:A:HO2'	3:C1:2243:A:HO2'	1.54	0.55
3:C1:2573:G:H2'	3:C1:2574:G:H8	1.71	0.55
3:C1:3105:U:OP2	3:C1:3128:G:N1	2.30	0.55
3:C1:3345:G:C6	3:C1:3361:G:C2	2.93	0.55
10:SE:180:LEU:N	10:SE:229:GLY:O	2.39	0.55
11:SF:69:PHE:CG	22:SQ:46:PHE:HD2	2.24	0.55
13:SH:141:ARG:HG2	28:SW:51:GLU:HG2	1.88	0.55
16:SK:32:HIS:CE1	16:SK:34:GLU:HB3	2.40	0.55
38:Sg:180:ALA:HB3	38:Sg:190:ALA:HB3	1.89	0.55
49:LL:5:LYS:H	49:LL:5:LYS:HD3	1.72	0.55
62:LY:56:VAL:HG21	62:LY:104:LEU:HD23	1.88	0.55
63:LZ:14:VAL:HG12	63:LZ:79:HIS:O	2.06	0.55
1:C2:5:U:O2'	1:C2:553:G:H4'	2.05	0.55
3:C1:525:C:OP2	50:LM:77:ARG:NH2	2.39	0.55
3:C1:1288:U:H2'	3:C1:1289:G:H8	1.71	0.55
3:C1:2208:A:H5'	3:C1:2209:U:OP2	2.06	0.55
3:C1:2773:C:H2'	3:C1:2774:C:H6	1.71	0.55
14:SI:11:ARG:NH1	14:SI:15:GLY:O	2.39	0.55
25:ST:78:LYS:HA	25:ST:95:ASP:OD1	2.07	0.55
43:LE:169:ASP:HB3	43:LE:174:LEU:HD11	1.89	0.55
53:LP:122:ALA:HB3	53:LP:143:PRO:HB2	1.87	0.55
54:LQ:112:ALA:O	54:LQ:116:LYS:HG2	2.07	0.55
66:Lc:78:GLY:HA2	66:Lc:87:VAL:HG12	1.87	0.55
6:SA:107:PHE:HB3	6:SA:139:VAL:HG11	1.89	0.55
11:SF:123:VAL:O	31:SZ:58:ARG:NE	2.36	0.55
12:SG:49:VAL:HB	12:SG:115:LYS:HB3	1.88	0.55
12:SG:137:ARG:NH2	12:SG:177:ARG:HH21	2.04	0.55
14:SI:120:THR:HG22	14:SI:121:LEU:H	1.71	0.55
15:SJ:110:GLN:NE2	15:SJ:126:ARG:HB2	2.20	0.55
24:SS:5:VAL:HG22	24:SS:7:GLU:H	1.70	0.55
41:LC:188:ARG:NE	41:LC:197:ARG:HB3	2.22	0.55
63:LZ:4:PHE:HE2	63:LZ:82:PRO:HG3	1.71	0.55
68:Le:6:HIS:O	68:Le:6:HIS:CG	2.60	0.55
69:Lf:13:HIS:O	69:Lf:95:GLY:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:271:A:H61	12:SG:185:GLN:HE22	1.53	0.55
1:C2:590:C:H2'	1:C2:591:A:H8	1.70	0.55
1:C2:609:U:H1'	29:SX:19:ARG:NH2	2.21	0.55
1:C2:810:G:C5	13:SH:111:LYS:HD3	2.42	0.55
1:C2:979:A:N3	1:C2:1775:U:O2'	2.40	0.55
1:C2:1467:C:H1'	1:C2:1601:G:H21	1.71	0.55
3:C1:290:G:H5''	51:LN:98:LEU:HD13	1.89	0.55
3:C1:353:G:O6	73:Lj:52:LYS:NZ	2.32	0.55
3:C1:1019:G:H1	3:C1:1033:U:H3	0.72	0.55
3:C1:1152:G:N2	3:C1:1200:A:C6	2.69	0.55
3:C1:1491:A:O2'	3:C1:1843:C:O2'	2.24	0.55
3:C1:2181:C:H5''	39:LA:193:ARG:NH2	2.22	0.55
8:SC:135:SER:O	8:SC:135:SER:OG	2.23	0.55
10:SE:24:SER:O	10:SE:24:SER:OG	2.22	0.55
11:SF:200:ASN:O	11:SF:203:LYS:O	2.24	0.55
13:SH:67:LEU:HD12	13:SH:71:HIS:NE2	2.21	0.55
18:SM:97:LEU:HD22	18:SM:119:SER:N	2.18	0.55
34:Sc:64:ARG:HG3	34:Sc:65:ARG:H	1.72	0.55
42:LD:38:THR:HG22	57:LT:30:TYR:HB3	1.89	0.55
53:LP:31:GLU:OE2	53:LP:61:ARG:N	2.40	0.55
66:Lc:98:SER:OG	66:Lc:99:ASP:N	2.35	0.55
69:Lf:56:SER:O	69:Lf:63:LYS:NZ	2.28	0.55
1:C2:174:U:H3	1:C2:266:A:H62	1.55	0.55
1:C2:479:C:P	36:Se:37:ARG:HH22	2.30	0.55
1:C2:1727:G:H2'	1:C2:1728:A:C8	2.41	0.55
3:C1:2400:G:H5'	3:C1:2401:A:OP2	2.07	0.55
6:SA:172:LEU:O	6:SA:176:LEU:HG	2.07	0.55
8:SC:140:ARG:HB2	8:SC:222:TYR:CE1	2.41	0.55
11:SF:112:ARG:HH21	31:SZ:95:HIS:HD2	1.52	0.55
22:SQ:82:ARG:HH22	22:SQ:114:ARG:HB2	1.71	0.55
32:Sa:30:ILE:HG23	32:Sa:35:ALA:HB2	1.89	0.55
36:Se:12:GLY:O	36:Se:16:SER:OG	2.15	0.55
38:Sg:205:SER:HB3	38:Sg:210:LEU:HB2	1.89	0.55
44:LF:121:LYS:HB2	57:LT:133:ALA:HB3	1.89	0.55
46:LH:133:THR:HG1	46:LH:147:SER:HG	1.53	0.55
1:C2:241:U:O2'	1:C2:242:U:O4'	2.14	0.55
1:C2:571:G:H4'	29:SX:114:LYS:HD2	1.89	0.55
1:C2:640:U:H2'	1:C2:641:G:O4'	2.07	0.55
1:C2:1524:A:H2'	1:C2:1525:A:C8	2.41	0.55
3:C1:1047:A:N3	3:C1:2633:U:O2'	2.40	0.55
3:C1:1217:A:N1	3:C1:1289:G:C6	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1474:A:O2'	67:Ld:57:GLN:OE1	2.25	0.55
3:C1:2684:C:H1'	48:LJ:99:THR:HG21	1.88	0.55
31:SZ:78:ILE:HA	31:SZ:81:ARG:HD2	1.87	0.55
40:LB:85:VAL:HG12	40:LB:202:THR:HG22	1.89	0.55
43:LE:58:LEU:HD12	43:LE:78:ARG:HG3	1.89	0.55
1:C2:1476:C:H2'	1:C2:1477:G:H8	1.72	0.55
3:C1:2772:C:H4'	3:C1:2773:C:H5'	1.88	0.55
9:SD:110:LEU:HA	9:SD:178:ARG:HH12	1.72	0.55
17:SL:124:THR:HB	17:SL:141:LYS:HB3	1.89	0.55
29:SX:107:PHE:HD2	29:SX:114:LYS:HB3	1.72	0.55
29:SX:133:LEU:O	29:SX:137:LYS:HG2	2.07	0.55
46:LH:176:LEU:HD13	76:Lm:86:ALA:HB3	1.89	0.55
67:Ld:20:LEU:HD11	67:Ld:32:ALA:HB2	1.87	0.55
1:C2:5:U:H2'	1:C2:6:G:C8	2.42	0.54
3:C1:63:A:N3	3:C1:78:U:O2'	2.33	0.54
3:C1:2148:U:H2'	3:C1:2149:A:C8	2.42	0.54
3:C1:3304:U:OP2	40:LB:332:ARG:NH2	2.37	0.54
6:SA:144:ILE:HG13	6:SA:158:VAL:CG1	2.37	0.54
8:SC:147:ASN:HB2	27:SV:3:ASN:HA	1.88	0.54
44:LF:147:LEU:HD11	44:LF:240:VAL:HG11	1.89	0.54
51:LN:163:GLY:O	51:LN:172:ARG:NH1	2.39	0.54
1:C2:14:C:O5'	8:SC:164:SER:OG	2.16	0.54
1:C2:564:G:N2	1:C2:580:A:OP2	2.37	0.54
1:C2:829:A:N1	1:C2:842:C:N4	2.54	0.54
3:C1:209:A:H2'	41:LC:162:THR:HG21	1.88	0.54
3:C1:714:G:HO2'	3:C1:753:C:HO2'	1.50	0.54
3:C1:1595:U:OP2	70:Lg:36:LYS:NZ	2.27	0.54
3:C1:2794:G:O2'	3:C1:2795:U:OP2	2.20	0.54
3:C1:3121:U:C4	3:C1:3124:G:C6	2.96	0.54
3:C1:3129:A:H2'	3:C1:3130:A:H5''	1.90	0.54
4:C4:71:G:H2'	4:C4:72:A:H8	1.71	0.54
6:SA:41:ARG:HD3	6:SA:45:VAL:HB	1.89	0.54
7:SB:156:ALA:HB3	7:SB:161:ILE:HD11	1.89	0.54
24:SS:127:HIS:CD2	24:SS:133:VAL:HG21	2.42	0.54
57:LT:79:MET:HG3	65:Lb:21:ILE:HG21	1.88	0.54
63:LZ:10:VAL:O	63:LZ:83:THR:HG22	2.07	0.54
3:C1:2392:C:N3	3:C1:2987:A:N1	2.56	0.54
3:C1:3069:G:C2	3:C1:3070:A:C8	2.96	0.54
7:SB:225:VAL:HG22	7:SB:229:MET:HE2	1.90	0.54
16:SK:16:PHE:CZ	16:SK:87:VAL:HA	2.41	0.54
19:SN:74:ILE:O	19:SN:78:ASN:ND2	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:ST:99:SER:O	25:ST:103:LYS:HG2	2.07	0.54
40:LB:332:ARG:HG2	40:LB:333:LYS:HG3	1.89	0.54
1:C2:386:G:OP2	14:SI:25:ARG:NH2	2.39	0.54
1:C2:447:U:O2'	10:SE:27:TYR:O	2.25	0.54
1:C2:1253:U:H4'	37:Sf:145:HIS:HE1	1.73	0.54
1:C2:1372:U:H2'	1:C2:1373:C:C6	2.43	0.54
3:C1:1852:G:H1'	73:Lj:9:GLY:HA3	1.88	0.54
3:C1:2213:A:H2'	3:C1:2214:A:C8	2.42	0.54
3:C1:2521:U:O2'	3:C1:2524:A:OP1	2.19	0.54
3:C1:2522:G:O6	39:LA:70:ARG:NH2	2.40	0.54
3:C1:3006:A:H2'	3:C1:3007:U:O4'	2.08	0.54
4:C4:46:A:OP1	42:LD:158:ARG:HG3	2.06	0.54
5:C3:8:C:H2'	5:C3:9:A:H8	1.72	0.54
12:SG:2:LYS:HB3	12:SG:108:VAL:HG22	1.88	0.54
13:SH:17:GLU:HG3	13:SH:46:ILE:HG12	1.89	0.54
22:SQ:31:VAL:HA	22:SQ:67:VAL:HB	1.89	0.54
47:LI:177:ASP:OD2	47:LI:177:ASP:N	2.36	0.54
55:LR:92:GLN:O	55:LR:96:ILE:HG13	2.06	0.54
63:LZ:88:ASP:HB3	63:LZ:121:ARG:HH12	1.73	0.54
69:Lf:54:ARG:HG2	69:Lf:64:ILE:HD12	1.88	0.54
1:C2:7:G:O6	8:SC:205:ARG:NH2	2.31	0.54
1:C2:1636:C:N3	1:C2:1765:A:N1	2.56	0.54
15:SJ:168:ARG:CZ	15:SJ:174:ARG:HH12	2.20	0.54
49:LL:18:TRP:CD1	49:LL:18:TRP:H	2.26	0.54
63:LZ:33:SER:OG	63:LZ:35:SER:O	2.23	0.54
1:C2:827:C:H2'	1:C2:828:U:H6	1.72	0.54
1:C2:976:G:N1	1:C2:1023:A:O2'	2.32	0.54
1:C2:1115:U:H5''	77:Ln:10:THR:HG21	1.88	0.54
1:C2:1174:C:H42	1:C2:1465:C:H42	1.55	0.54
1:C2:1201:G:N2	1:C2:1600:A:H5'	2.22	0.54
1:C2:1202:A:N7	1:C2:1456:C:C4	2.76	0.54
3:C1:959:C:O2	3:C1:2614:G:O2'	2.20	0.54
3:C1:1737:U:O2	70:Lg:52:GLN:NE2	2.41	0.54
3:C1:2540:A:H2'	3:C1:2541:U:H2'	1.89	0.54
4:C4:121:U:H3	42:LD:268:GLU:HB3	1.73	0.54
6:SA:185:ARG:HA	27:SV:44:ARG:HA	1.89	0.54
21:SP:24:LYS:O	21:SP:28:MET:HB2	2.07	0.54
38:Sg:88:THR:HG21	38:Sg:102:ARG:HH22	1.71	0.54
46:LH:67:ALA:O	46:LH:70:THR:HG22	2.07	0.54
61:LX:65:GLN:NE2	61:LX:66:PRO:O	2.41	0.54
79:Lp:75:ALA:O	79:Lp:79:VAL:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1565:C:OP1	24:SS:41:ARG:NH2	2.40	0.54
3:C1:649:A:OP2	3:C1:2868:U:O2'	2.26	0.54
3:C1:3115:C:H1'	3:C1:3117:C:H41	1.73	0.54
6:SA:84:ARG:NH2	23:SR:82:ASP:O	2.41	0.54
9:SD:154:ASP:OD1	9:SD:154:ASP:N	2.38	0.54
16:SK:59:PHE:HE1	16:SK:62:GLN:HA	1.73	0.54
22:SQ:28:LEU:HD11	22:SQ:66:ARG:HE	1.73	0.54
26:SU:38:SER:O	26:SU:42:VAL:HG22	2.08	0.54
29:SX:55:GLU:HG2	29:SX:56:LYS:H	1.71	0.54
38:Sg:263:PHE:HA	38:Sg:270:LEU:HA	1.88	0.54
1:C2:591:A:H2'	1:C2:592:A:C8	2.43	0.54
1:C2:898:A:N3	1:C2:899:G:H1'	2.23	0.54
1:C2:1020:A:OP1	19:SN:106:ARG:NH1	2.40	0.54
1:C2:1534:G:N7	31:SZ:77:ARG:NH2	2.37	0.54
3:C1:1062:A:N3	57:LT:130:ARG:NH2	2.56	0.54
3:C1:1265:U:H2'	3:C1:1266:G:O4'	2.08	0.54
3:C1:2207:A:N3	3:C1:2207:A:H2'	2.23	0.54
11:SF:37:GLN:HB3	22:SQ:53:LEU:HD13	1.90	0.54
13:SH:143:LEU:HB2	13:SH:147:ASN:OD1	2.08	0.54
18:SM:42:ALA:HB1	18:SM:47:GLU:HB2	1.89	0.54
18:SM:132:GLU:O	18:SM:136:ILE:HG13	2.08	0.54
22:SQ:27:GLY:HA2	22:SQ:63:ILE:O	2.08	0.54
31:SZ:38:HIS:HA	31:SZ:70:LYS:HZ1	1.72	0.54
39:LA:50:HIS:HB2	79:Lp:51:ALA:HB1	1.89	0.54
48:LJ:87:LYS:NZ	48:LJ:105:GLY:O	2.33	0.54
67:Ld:26:LYS:HD3	67:Ld:64:VAL:HG21	1.90	0.54
1:C2:138:A:N7	1:C2:142:G:H5'	2.23	0.54
1:C2:333:A:H62	14:SI:27:PHE:HB2	1.73	0.54
1:C2:485:A:C6	1:C2:486:G:C8	2.96	0.54
1:C2:1202:A:H8	1:C2:1207:C:H42	1.56	0.54
1:C2:1459:C:H5'	24:SS:131:LEU:HD22	1.90	0.54
3:C1:170:G:O2'	3:C1:171:G:OP1	2.25	0.54
11:SF:120:ILE:O	11:SF:123:VAL:HG12	2.07	0.54
12:SG:164:LYS:HG3	12:SG:165:GLY:H	1.73	0.54
53:LP:13:LYS:NZ	53:LP:154:GLU:OE2	2.34	0.54
63:LZ:54:THR:H	63:LZ:57:HIS:HD2	1.56	0.54
1:C2:123:G:H21	10:SE:146:THR:HG21	1.73	0.54
1:C2:181:A:H2'	1:C2:182:A:C8	2.43	0.54
1:C2:1158:C:N4	1:C2:1163:A:H61	1.98	0.54
1:C2:1368:G:H2'	1:C2:1369:U:O4'	2.08	0.54
1:C2:1471:A:N6	1:C2:1538:U:N3	2.50	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1794:G:O2'	3:C1:1796:G:N2	2.41	0.54
10:SE:103:TYR:HE2	10:SE:184:THR:HG23	1.72	0.54
10:SE:199:GLU:HG2	10:SE:201:HIS:CD2	2.42	0.54
11:SF:90:ILE:O	11:SF:94:THR:HG23	2.08	0.54
11:SF:133:VAL:HG22	11:SF:198:LEU:HD13	1.89	0.54
13:SH:27:LEU:HD21	13:SH:80:GLU:HG2	1.90	0.54
13:SH:141:ARG:NE	28:SW:49:GLU:OE2	2.33	0.54
19:SN:19:SER:OG	19:SN:21:ASN:O	2.25	0.54
39:LA:109:GLU:HG3	39:LA:139:HIS:CD2	2.43	0.54
49:LL:62:THR:OG1	49:LL:63:VAL:N	2.37	0.54
51:LN:148:TYR:O	51:LN:151:ILE:N	2.41	0.54
63:LZ:110:ALA:O	63:LZ:114:VAL:HG23	2.07	0.54
1:C2:153:G:H2'	1:C2:154:G:C8	2.37	0.53
3:C1:679:U:O2'	3:C1:788:C:O2	2.26	0.53
5:C3:9:A:H2'	5:C3:10:A:C8	2.43	0.53
5:C3:149:A:N3	45:LG:55:TYR:OH	2.31	0.53
6:SA:56:LYS:NZ	27:SV:70:ASN:OD1	2.33	0.53
9:SD:120:TYR:HA	9:SD:123:VAL:HG22	1.90	0.53
16:SK:34:GLU:HG3	16:SK:35:ILE:HG12	1.90	0.53
25:ST:23:GLN:NE2	25:ST:52:GLY:HA2	2.23	0.53
38:Sg:34:LEU:HD23	38:Sg:73:LEU:HD21	1.90	0.53
38:Sg:113:VAL:HA	38:Sg:123:ILE:O	2.08	0.53
38:Sg:260:ILE:HD13	38:Sg:274:LEU:HD23	1.90	0.53
40:LB:92:TYR:OH	40:LB:180:GLU:OE1	2.20	0.53
1:C2:887:A:H5''	20:SO:120:PRO:HB2	1.89	0.53
3:C1:1307:G:H5'	52:LO:60:LYS:HE2	1.90	0.53
3:C1:1603:A:H61	61:LX:71:THR:HG21	1.72	0.53
3:C1:2615:G:H2'	3:C1:2616:C:H6	1.73	0.53
6:SA:140:ASN:ND2	27:SV:31:SER:O	2.42	0.53
8:SC:151:PRO:CD	27:SV:9:VAL:HG11	2.38	0.53
12:SG:27:PHE:HE1	12:SG:36:VAL:HG21	1.73	0.53
13:SH:45:SER:OG	13:SH:46:ILE:N	2.41	0.53
32:Sa:12:LYS:O	32:Sa:15:ARG:NH1	2.36	0.53
44:LF:223:PHE:HA	44:LF:227:GLY:O	2.06	0.53
47:LI:36:LEU:HD21	47:LI:69:ARG:HH11	1.73	0.53
50:LM:68:LEU:HD23	50:LM:90:VAL:HG23	1.90	0.53
56:LS:80:ARG:HD3	57:LT:156:TYR:HB2	1.90	0.53
61:LX:103:TYR:O	61:LX:105:VAL:HG13	2.08	0.53
3:C1:151:A:C5	3:C1:152:U:C5	2.96	0.53
3:C1:293:C:H2'	3:C1:294:U:O4'	2.08	0.53
3:C1:709:A:OP1	54:LQ:179:ARG:NH2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:776:U:H5	3:C1:2719:U:O2	1.90	0.53
3:C1:1184:A:H2'	3:C1:1185:C:C6	2.42	0.53
4:C4:110:G:C6	4:C4:111:U:C4	2.96	0.53
12:SG:109:LEU:HD23	12:SG:110:ALA:N	2.22	0.53
13:SH:86:GLN:OE1	13:SH:86:GLN:N	2.42	0.53
57:LT:101:CYS:SG	57:LT:102:ARG:N	2.81	0.53
62:LY:116:LYS:O	62:LY:120:GLN:HG2	2.08	0.53
75:Ll:24:PRO:HD2	75:Ll:27:ILE:HD12	1.91	0.53
1:C2:1732:A:H2'	1:C2:1733:C:C6	2.43	0.53
3:C1:2297:U:O2	3:C1:2920:U:H5'	2.08	0.53
3:C1:2824:G:H2'	3:C1:2825:C:C6	2.44	0.53
4:C4:1:G:H4'	42:LD:273:ARG:HH12	1.74	0.53
6:SA:71:GLU:HA	6:SA:94:GLY:HA3	1.90	0.53
14:SI:136:SER:O	14:SI:139:ALA:N	2.41	0.53
38:Sg:214:ALA:HB1	38:Sg:240:VAL:HG11	1.90	0.53
55:LR:41:ILE:O	55:LR:45:VAL:HG23	2.08	0.53
63:LZ:27:LYS:O	63:LZ:41:ALA:HA	2.09	0.53
71:Lh:100:VAL:HG22	71:Lh:104:GLN:HB3	1.91	0.53
1:C2:241:U:H2'	1:C2:242:U:C6	2.44	0.53
1:C2:375:U:OP1	29:SX:23:ARG:NH2	2.42	0.53
1:C2:1321:A:OP2	6:SA:101:ARG:NH2	2.40	0.53
3:C1:785:G:N2	54:LQ:89:ASP:O	2.21	0.53
3:C1:1067:U:H2'	3:C1:1068:C:C6	2.43	0.53
3:C1:1269:U:H3	3:C1:1271:A:H3'	1.74	0.53
3:C1:1744:G:H2'	3:C1:1745:C:H6	1.73	0.53
4:C4:40:C:H4'	48:LJ:43:GLN:NE2	2.23	0.53
7:SB:70:LEU:HD21	7:SB:189:ILE:HG23	1.89	0.53
11:SF:82:PHE:HE2	34:Sc:49:ARG:HH11	1.57	0.53
17:SL:5:LEU:HD23	17:SL:5:LEU:H	1.73	0.53
40:LB:2:SER:O	40:LB:2:SER:OG	2.21	0.53
79:Lp:49:ARG:NH1	79:Lp:68:ALA:O	2.42	0.53
1:C2:10:G:O2'	8:SC:87:GLN:OE1	2.26	0.53
1:C2:878:G:O2'	19:SN:108:ASP:OD1	2.17	0.53
1:C2:1222:C:H2'	1:C2:1223:A:C8	2.44	0.53
3:C1:100:A:H2'	3:C1:101:G:N3	2.24	0.53
3:C1:1895:A:O2'	3:C1:3053:G:H4'	2.09	0.53
3:C1:2761:G:N7	78:Lo:63:LYS:NZ	2.54	0.53
9:SD:74:GLN:NE2	9:SD:81:PRO:HA	2.24	0.53
11:SF:41:LYS:HZ1	22:SQ:54:LEU:HG	1.74	0.53
11:SF:222:LYS:HA	11:SF:225:ARG:NE	2.24	0.53
12:SG:163:THR:HG22	12:SG:168:THR:HG22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:SH:25:VAL:HA	13:SH:28:GLU:OE1	2.08	0.53
15:SJ:84:GLY:HA3	15:SJ:150:LEU:HD13	1.90	0.53
38:Sg:231:MET:HB3	38:Sg:232:TYR:HD1	1.74	0.53
41:LC:140:HIS:CD2	41:LC:247:PHE:H	2.26	0.53
45:LG:133:LYS:HB2	45:LG:199:ALA:O	2.09	0.53
49:LL:56:PRO:HG3	49:LL:74:GLY:O	2.09	0.53
51:LN:68:ARG:HA	51:LN:98:LEU:HD21	1.89	0.53
63:LZ:87:LEU:HD12	63:LZ:127:ASN:ND2	2.23	0.53
1:C2:13:C:H4'	1:C2:1298:U:H3	1.73	0.53
3:C1:608:A:OP1	41:LC:315:LYS:NZ	2.42	0.53
7:SB:154:SER:OG	7:SB:154:SER:O	2.24	0.53
9:SD:31:GLU:HB3	9:SD:32:GLU:OE1	2.09	0.53
17:SL:3:THR:OG1	17:SL:4:GLU:N	2.42	0.53
24:SS:30:TYR:O	24:SS:34:THR:HG23	2.09	0.53
25:ST:65:ILE:HG12	25:ST:71:VAL:HG22	1.91	0.53
44:LF:47:ARG:NH1	44:LF:183:ASP:OD2	2.41	0.53
3:C1:735:A:O2'	3:C1:736:A:OP1	2.24	0.53
3:C1:1127:G:P	47:LI:98:ARG:HH21	2.32	0.53
3:C1:1240:A:H2	3:C1:1248:C:H41	1.57	0.53
3:C1:3205:G:OP2	3:C1:3206:C:N4	2.41	0.53
3:C1:3243:A:N6	52:LO:157:GLU:OE2	2.38	0.53
3:C1:3357:U:O2'	3:C1:3358:U:OP1	2.26	0.53
11:SF:200:ASN:O	11:SF:203:LYS:C	2.51	0.53
12:SG:70:PRO:HB3	12:SG:101:ILE:HB	1.91	0.53
13:SH:71:HIS:NE2	13:SH:128:ASP:OD1	2.35	0.53
35:Sd:15:GLY:HA2	35:Sd:19:ARG:NH1	2.24	0.53
48:LJ:109:HIS:HB3	48:LJ:123:PHE:O	2.09	0.53
50:LM:15:VAL:HG22	50:LM:65:LEU:HD11	1.91	0.53
51:LN:140:LYS:HB3	51:LN:144:ARG:NH1	2.24	0.53
71:Lh:118:ILE:O	71:Lh:118:ILE:HG13	2.08	0.53
1:C2:220:A:C2	1:C2:842:C:H1'	2.44	0.53
1:C2:885:G:H2'	1:C2:886:U:C6	2.43	0.53
1:C2:1260:U:H2'	1:C2:1261:G:C8	2.44	0.53
1:C2:1316:G:H5'	23:SR:7:LYS:HG2	1.91	0.53
1:C2:1521:G:N2	1:C2:1523:G:O4'	2.42	0.53
3:C1:1582:C:H4'	3:C1:1583:A:OP1	2.09	0.53
3:C1:2585:G:N3	3:C1:2585:G:H2'	2.23	0.53
19:SN:30:SER:OG	19:SN:31:GLU:OE2	2.27	0.53
40:LB:41:VAL:HA	40:LB:185:GLY:HA3	1.91	0.53
40:LB:139:GLN:HG3	40:LB:140:ASP:H	1.74	0.53
48:LJ:27:GLY:O	48:LJ:31:THR:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Lf:12:LYS:HA	69:Lf:96:ALA:O	2.09	0.53
1:C2:300:A:H2'	1:C2:301:A:C8	2.44	0.53
1:C2:689:G:H2'	1:C2:690:G:C8	2.44	0.53
1:C2:826:U:C2	1:C2:827:C:C5	2.97	0.53
1:C2:1509:C:H6	1:C2:1509:C:O5'	1.92	0.53
3:C1:1252:A:H2	3:C1:1263:A:H2'	1.74	0.53
3:C1:1896:A:N6	3:C1:2339:C:H42	1.98	0.53
3:C1:2303:A:OP1	77:Ln:23:ARG:NH2	2.42	0.53
3:C1:2945:G:O2'	3:C1:2948:C:OP2	2.22	0.53
8:SC:230:TRP:CE2	28:SW:68:ARG:HD3	2.44	0.53
11:SF:25:LEU:HB2	11:SF:29:ILE:HD11	1.91	0.53
19:SN:65:VAL:HG13	19:SN:66:ILE:HG23	1.91	0.53
31:SZ:43:ASP:O	31:SZ:44:GLN:HG3	2.08	0.53
59:LV:19:VAL:HG23	59:LV:50:PRO:O	2.09	0.53
63:LZ:108:GLU:OE2	63:LZ:112:LYS:HD2	2.08	0.53
1:C2:1299:G:H5'	8:SC:212:LYS:HZ1	1.74	0.52
3:C1:714:G:O2'	3:C1:753:C:O2'	2.21	0.52
3:C1:817:A:C8	73:Lj:15:SER:HB2	2.44	0.52
3:C1:826:G:H21	3:C1:1589:A:H61	1.58	0.52
3:C1:2112:U:H4'	3:C1:2113:A:O5'	2.09	0.52
3:C1:2513:U:H4'	3:C1:2514:U:OP1	2.09	0.52
3:C1:2717:U:O3'	78:Lo:13:LYS:NZ	2.42	0.52
3:C1:2736:A:O2'	57:LT:68:THR:HG21	2.08	0.52
3:C1:3163:A:N6	3:C1:3288:G:C6	2.76	0.52
3:C1:3206:C:H5'	3:C1:3207:U:O4'	2.09	0.52
20:SO:65:GLN:OE1	20:SO:108:SER:OG	2.24	0.52
52:LO:43:ILE:HD11	52:LO:138:LEU:HD13	1.91	0.52
67:Ld:75:ILE:HG23	67:Ld:93:VAL:HG22	1.91	0.52
1:C2:836:U:H2'	1:C2:837:G:C8	2.43	0.52
1:C2:1684:U:H2'	1:C2:1685:G:C8	2.45	0.52
3:C1:184:U:H3	3:C1:232:G:H1	1.55	0.52
3:C1:1222:G:N2	3:C1:1285:G:O2'	2.32	0.52
3:C1:1404:G:N2	3:C1:1407:A:OP2	2.34	0.52
3:C1:1686:U:O2	3:C1:1688:U:H1'	2.10	0.52
3:C1:2516:U:O2'	3:C1:2595:A:N1	2.35	0.52
3:C1:2801:A:O2'	3:C1:2802:A:H2'	2.10	0.52
3:C1:2900:A:N3	3:C1:3025:C:O2'	2.37	0.52
3:C1:3000:A:H2'	3:C1:3001:C:C6	2.44	0.52
5:C3:38:U:H5	71:Lh:82:ALA:O	1.92	0.52
11:SF:89:ILE:HG13	11:SF:90:ILE:N	2.25	0.52
15:SJ:54:ARG:NH2	15:SJ:57:ARG:HE	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:SR:33:ARG:HG3	38:Sg:127:ARG:NH1	2.23	0.52
25:ST:50:ALA:HA	25:ST:53:TRP:HD1	1.72	0.52
38:Sg:8:VAL:C	38:Sg:313:TRP:HD1	2.17	0.52
39:LA:28:LYS:HB3	39:LA:123:ARG:HB3	1.91	0.52
45:LG:115:ALA:O	45:LG:120:LYS:N	2.42	0.52
55:LR:157:GLU:OE1	55:LR:157:GLU:HA	2.08	0.52
1:C2:749:U:N3	1:C2:801:G:N1	2.58	0.52
1:C2:1023:A:OP1	1:C2:1126:G:N2	2.35	0.52
1:C2:1267:G:O2'	1:C2:1448:G:O2'	2.27	0.52
3:C1:549:U:H2'	3:C1:550:A:H8	1.74	0.52
3:C1:744:A:H2'	3:C1:745:C:O4'	2.10	0.52
3:C1:1072:G:H2'	3:C1:1073:U:C6	2.44	0.52
3:C1:2523:A:OP1	61:LX:31:THR:OG1	2.20	0.52
3:C1:2988:C:OP1	52:LO:65:ASN:ND2	2.40	0.52
5:C3:51:G:C5	75:Ll:26:TRP:HH2	2.27	0.52
6:SA:107:PHE:HD2	6:SA:135:GLU:HB3	1.74	0.52
8:SC:238:SER:O	8:SC:241:ASP:N	2.42	0.52
9:SD:39:VAL:HG12	9:SD:48:VAL:HG13	1.91	0.52
20:SO:30:VAL:HG12	20:SO:39:ILE:HB	1.90	0.52
25:ST:60:SER:OG	25:ST:80:TYR:OH	2.20	0.52
29:SX:90:ASP:OD1	36:Se:12:GLY:HA2	2.10	0.52
31:SZ:59:TYR:CE1	31:SZ:100:ILE:HG13	2.44	0.52
38:Sg:239:GLU:O	38:Sg:257:ALA:N	2.43	0.52
38:Sg:274:LEU:HD21	38:Sg:313:TRP:CE2	2.44	0.52
41:LC:120:TYR:CE2	41:LC:277:PRO:HB3	2.44	0.52
41:LC:261:VAL:HG23	41:LC:262:TRP:CD1	2.44	0.52
44:LF:191:VAL:O	44:LF:195:PHE:HB2	2.09	0.52
49:LL:185:LYS:HD3	49:LL:188:ARG:HE	1.74	0.52
1:C2:1402:G:OP2	23:SR:5:ARG:NH1	2.42	0.52
1:C2:1785:U:H5''	20:SO:136:ARG:HH22	1.73	0.52
3:C1:40:A:O2'	3:C1:937:G:O6	2.20	0.52
3:C1:735:A:OP2	3:C1:735:A:H8	1.92	0.52
3:C1:1194:G:H2'	3:C1:1195:A:C8	2.44	0.52
3:C1:2716:U:H5''	78:Lo:83:LEU:HD11	1.91	0.52
9:SD:31:GLU:HA	9:SD:107:PHE:HE2	1.75	0.52
34:Sc:10:ALA:O	34:Sc:53:ILE:HA	2.10	0.52
40:LB:31:ALA:O	40:LB:339:ARG:NH1	2.42	0.52
40:LB:238:LEU:HB3	40:LB:242:THR:HG21	1.90	0.52
46:LH:103:ILE:O	46:LH:103:ILE:HG13	2.08	0.52
56:LS:83:SER:OG	56:LS:86:GLY:O	2.22	0.52
63:LZ:99:GLU:OE1	63:LZ:99:GLU:N	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:La:3:SER:O	64:La:6:THR:N	2.41	0.52
1:C2:1188:G:O2'	1:C2:1430:U:OP1	2.26	0.52
3:C1:1626:U:H3	3:C1:1817:G:H1	1.58	0.52
3:C1:2610:G:H5''	3:C1:2610:G:H8	1.75	0.52
3:C1:3322:A:H2'	3:C1:3323:A:C8	2.45	0.52
4:C4:12:U:OP2	4:C4:68:C:O2'	2.24	0.52
8:SC:51:THR:C	8:SC:72:LEU:HD11	2.34	0.52
18:SM:130:THR:O	18:SM:132:GLU:N	2.42	0.52
20:SO:61:MET:O	20:SO:65:GLN:HG2	2.09	0.52
32:Sa:36:ILE:H	32:Sa:36:ILE:HD12	1.75	0.52
33:Sb:35:VAL:HA	33:Sb:78:SER:O	2.10	0.52
38:Sg:91:LEU:O	38:Sg:100:TYR:N	2.41	0.52
38:Sg:111:MET:HE1	38:Sg:127:ARG:HH21	1.75	0.52
39:LA:47:GLN:HE21	39:LA:60:LYS:HD2	1.73	0.52
45:LG:128:LYS:HE2	45:LG:202:GLU:OE2	2.10	0.52
59:LV:61:THR:HG22	59:LV:73:VAL:HA	1.90	0.52
67:Ld:41:LYS:O	67:Ld:45:GLY:CA	2.47	0.52
1:C2:1565:C:H2'	1:C2:1566:U:C6	2.42	0.52
3:C1:999:G:H2'	3:C1:1000:C:C6	2.44	0.52
3:C1:1637:A:P	63:LZ:73:LYS:HZ1	2.31	0.52
3:C1:2437:G:N2	3:C1:2511:A:H1'	2.24	0.52
3:C1:3139:A:H4'	40:LB:20:LYS:HD3	1.91	0.52
3:C1:3291:G:H2'	3:C1:3292:A:C8	2.44	0.52
4:C4:49:G:OP1	42:LD:90:HIS:ND1	2.43	0.52
9:SD:167:PHE:CE1	9:SD:192:PRO:HB3	2.44	0.52
11:SF:128:ASN:HB3	11:SF:131:GLN:HB3	1.92	0.52
40:LB:375:GLU:OE2	60:LW:14:TYR:OH	2.27	0.52
1:C2:625:C:H2'	1:C2:626:U:C6	2.45	0.52
1:C2:1362:U:H1'	1:C2:1363:U:C5	2.45	0.52
1:C2:1523:G:N7	25:ST:68:ARG:NE	2.54	0.52
3:C1:98:G:N7	49:LL:13:HIS:NE2	2.56	0.52
3:C1:528:U:H2'	3:C1:529:A:C8	2.45	0.52
3:C1:993:G:N1	3:C1:1057:A:N6	2.58	0.52
3:C1:1035:G:H3'	3:C1:1036:A:C8	2.45	0.52
3:C1:1389:G:OP1	68:Le:104:ASN:ND2	2.43	0.52
3:C1:1784:G:H2'	3:C1:1785:U:O4'	2.10	0.52
5:C3:125:U:H3'	5:C3:126:A:C8	2.44	0.52
8:SC:81:MET:HE1	8:SC:186:LYS:HB3	1.90	0.52
12:SG:1:MET:HE2	12:SG:109:LEU:HB2	1.91	0.52
16:SK:32:HIS:NE2	16:SK:37:THR:O	2.43	0.52
18:SM:98:GLY:O	18:SM:101:ALA:O	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:SP:53:PRO:HB2	21:SP:57:MET:HG2	1.92	0.52
22:SQ:46:PHE:O	22:SQ:50:GLU:HG3	2.09	0.52
27:SV:87:ARG:HH12	33:Sb:2:VAL:HG12	1.75	0.52
42:LD:153:THR:O	42:LD:179:ARG:NH1	2.43	0.52
42:LD:156:GLY:HA2	42:LD:181:PRO:HD3	1.90	0.52
51:LN:155:VAL:O	51:LN:162:ARG:NH2	2.33	0.52
61:LX:76:VAL:HG13	61:LX:132:ALA:HB1	1.92	0.52
67:Ld:46:THR:HG23	67:Ld:48:ASP:H	1.75	0.52
1:C2:36:C:H2'	1:C2:37:U:C6	2.45	0.52
1:C2:79:C:H5'	12:SG:172:ALA:HB3	1.92	0.52
3:C1:164:A:C2	3:C1:258:G:N1	2.78	0.52
3:C1:1669:C:OP1	70:Lg:24:LYS:NZ	2.35	0.52
22:SQ:55:VAL:HG13	22:SQ:105:LEU:HD22	1.92	0.52
30:SY:78:SER:O	30:SY:81:GLU:N	2.43	0.52
34:Sc:11:LYS:HZ3	34:Sc:53:ILE:HG13	1.74	0.52
38:Sg:101:GLN:HB3	38:Sg:103:PHE:CE1	2.44	0.52
39:LA:111:THR:HG22	39:LA:136:ILE:HB	1.92	0.52
48:LJ:107:ASP:OD1	48:LJ:107:ASP:N	2.38	0.52
51:LN:35:VAL:HG12	51:LN:36:ILE:HG13	1.91	0.52
78:Lo:26:THR:OG1	78:Lo:27:GLN:N	2.43	0.52
1:C2:219:A:C2	1:C2:843:U:H1'	2.45	0.52
1:C2:486:G:N2	1:C2:501:U:O2	2.36	0.52
1:C2:1453:G:H2'	1:C2:1454:G:C8	2.44	0.52
3:C1:1039:U:H2'	3:C1:1040:A:C8	2.45	0.52
3:C1:1260:A:H2'	3:C1:1261:G:C4	2.45	0.52
3:C1:1456:A:N1	3:C1:1476:G:O2'	2.37	0.52
3:C1:1716:U:HO2'	3:C1:1717:U:P	2.33	0.52
3:C1:1729:A:O4'	66:Lc:52:ARG:NH1	2.39	0.52
3:C1:2568:C:O2'	3:C1:2569:A:O5'	2.22	0.52
3:C1:2883:U:H2'	3:C1:2884:C:H6	1.74	0.52
5:C3:6:U:H2'	5:C3:7:U:C6	2.45	0.52
15:SJ:163:PRO:HA	15:SJ:166:GLY:O	2.10	0.52
23:SR:66:VAL:HG11	23:SR:69:ILE:HG22	1.91	0.52
24:SS:52:VAL:HG21	24:SS:69:ILE:HD11	1.92	0.52
41:LC:29:PRO:HB3	54:LQ:25:TYR:CE2	2.45	0.52
49:LL:126:PHE:O	71:Lh:114:ARG:NH2	2.42	0.52
50:LM:48:GLY:O	50:LM:52:GLY:N	2.39	0.52
53:LP:28:ASN:O	53:LP:32:THR:HG23	2.09	0.52
66:Lc:7:GLN:HE21	66:Lc:9:SER:HA	1.75	0.52
68:Le:21:HIS:CE1	68:Le:24:ARG:HD2	2.45	0.52
70:Lg:93:PHE:O	70:Lg:97:GLU:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:Lj:28:HIS:HD2	73:Lj:31:LYS:HB2	1.75	0.52
75:Ll:24:PRO:HB2	75:Ll:27:ILE:HG13	1.92	0.52
1:C2:1758:U:H2'	1:C2:1759:C:C6	2.45	0.52
3:C1:1813:A:OP1	3:C1:1817:G:H4'	2.09	0.52
3:C1:2349:U:O2'	3:C1:3307:A:N3	2.43	0.52
7:SB:96:LEU:HD23	7:SB:96:LEU:H	1.75	0.52
7:SB:179:SER:HB3	7:SB:183:GLN:HB2	1.91	0.52
8:SC:67:GLN:O	8:SC:71:THR:HG23	2.10	0.52
40:LB:227:GLU:HG2	40:LB:270:ARG:HE	1.75	0.52
42:LD:60:ILE:HB	42:LD:80:SER:HB3	1.90	0.52
47:LI:30:LYS:HG3	47:LI:63:GLU:HB3	1.92	0.52
1:C2:1255:G:O2'	1:C2:1256:A:O5'	2.26	0.51
3:C1:1419:A:H5''	41:LC:193:LYS:HZ2	1.73	0.51
3:C1:1471:U:OP1	55:LR:5:ARG:NH2	2.39	0.51
3:C1:1750:A:OP2	74:Lk:42:LYS:NZ	2.28	0.51
3:C1:1927:G:N7	79:Lp:16:VAL:HG23	2.25	0.51
23:SR:5:ARG:HB3	23:SR:9:VAL:HG21	1.91	0.51
28:SW:88:LYS:O	28:SW:92:ASN:ND2	2.43	0.51
31:SZ:62:VAL:O	31:SZ:66:VAL:HG23	2.11	0.51
38:Sg:40:LYS:HG2	38:Sg:66:HIS:O	2.08	0.51
38:Sg:155:ARG:O	38:Sg:169:ILE:HG13	2.10	0.51
38:Sg:224:ASN:O	38:Sg:228:LYS:N	2.43	0.51
39:LA:96:LEU:O	79:Lp:87:ARG:HD3	2.10	0.51
41:LC:26:PHE:HE1	41:LC:126:ILE:HG22	1.74	0.51
41:LC:308:LYS:HE3	41:LC:310:THR:HG22	1.92	0.51
44:LF:202:LEU:HD13	44:LF:205:PHE:HZ	1.75	0.51
1:C2:1473:U:O2	11:SF:102:ARG:NH1	2.35	0.51
3:C1:386:A:H8	3:C1:386:A:O5'	1.93	0.51
3:C1:826:G:H21	3:C1:1589:A:N6	2.08	0.51
3:C1:1861:G:O2'	3:C1:3066:U:OP1	2.27	0.51
5:C3:150:G:O2'	5:C3:152:G:OP1	2.25	0.51
6:SA:64:ILE:HD12	6:SA:177:LEU:HD21	1.91	0.51
10:SE:195:ILE:O	10:SE:195:ILE:HG22	2.10	0.51
11:SF:118:LEU:HD22	11:SF:129:PRO:HB2	1.92	0.51
16:SK:25:LYS:HB2	16:SK:64:TYR:CE2	2.44	0.51
17:SL:78:THR:HG23	17:SL:84:ILE:HG22	1.92	0.51
23:SR:73:LEU:O	23:SR:77:GLU:HG2	2.10	0.51
38:Sg:40:LYS:HD3	38:Sg:65:SER:C	2.36	0.51
46:LH:90:MET:HE2	46:LH:179:ILE:HG22	1.92	0.51
70:Lg:65:VAL:HG22	70:Lg:66:SER:H	1.75	0.51
1:C2:472:U:H2'	1:C2:473:A:H8	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:476:U:OP2	36:Se:33:ARG:NH1	2.21	0.51
3:C1:1559:A:H62	3:C1:1581:C:N4	2.01	0.51
3:C1:2882:U:H2'	3:C1:2883:U:C6	2.45	0.51
9:SD:126:VAL:O	9:SD:129:SER:OG	2.24	0.51
12:SG:109:LEU:HD22	12:SG:111:LEU:HG	1.93	0.51
39:LA:37:ARG:HB3	39:LA:38:HIS:HD2	1.76	0.51
44:LF:132:PRO:HA	44:LF:229:PHE:CD1	2.45	0.51
46:LH:89:LYS:HB3	46:LH:145:VAL:HG22	1.92	0.51
48:LJ:92:ARG:HA	48:LJ:172:LEU:HB3	1.91	0.51
61:LX:115:ARG:HD2	61:LX:121:LYS:HD2	1.91	0.51
1:C2:223:U:H2'	1:C2:224:C:C6	2.45	0.51
1:C2:827:C:C2	1:C2:828:U:C5	2.99	0.51
1:C2:1545:A:P	24:SS:132:ARG:HE	2.34	0.51
3:C1:1255:C:H2'	3:C1:1256:G:C8	2.45	0.51
3:C1:1312:C:H2'	3:C1:1313:G:O4'	2.10	0.51
3:C1:2198:A:C6	3:C1:2199:G:C8	2.99	0.51
3:C1:2573:G:H2'	3:C1:2574:G:C8	2.45	0.51
8:SC:235:LEU:HD23	27:SV:52:THR:HG22	1.93	0.51
19:SN:127:ARG:O	19:SN:131:THR:OG1	2.15	0.51
22:SQ:94:GLN:HB2	22:SQ:102:LYS:HE2	1.93	0.51
26:SU:84:MET:HB2	35:Sd:52:PHE:CD1	2.46	0.51
49:LL:74:GLY:HA3	49:LL:98:ASP:HB2	1.91	0.51
58:LU:31:ALA:HA	58:LU:58:GLU:OE1	2.10	0.51
1:C2:209:U:H2'	1:C2:210:A:C8	2.44	0.51
1:C2:939:A:H2'	1:C2:940:A:C8	2.45	0.51
3:C1:992:A:N6	3:C1:993:G:O6	2.43	0.51
3:C1:2567:C:N4	3:C1:2575:G:O6	2.44	0.51
3:C1:2967:A:H5''	39:LA:213:GLY:HA3	1.91	0.51
5:C3:39:G:H1'	5:C3:104:A:N6	2.26	0.51
11:SF:174:LEU:HA	11:SF:177:ILE:HD12	1.93	0.51
21:SP:50:THR:O	21:SP:52:LYS:NZ	2.29	0.51
38:Sg:45:TRP:HA	38:Sg:57:PRO:HA	1.92	0.51
54:LQ:78:ASN:HA	54:LQ:99:THR:HG21	1.92	0.51
59:LV:79:VAL:HG12	59:LV:122:CYS:SG	2.50	0.51
64:La:65:GLN:OE1	64:La:65:GLN:N	2.43	0.51
1:C2:961:U:H2'	1:C2:962:C:H6	1.76	0.51
1:C2:1221:A:C6	1:C2:1263:G:N1	2.79	0.51
1:C2:1357:A:H4'	25:ST:126:GLU:HG2	1.93	0.51
1:C2:1559:A:C8	24:SS:134:ARG:HB3	2.46	0.51
3:C1:407:A:C2	5:C3:17:A:H1'	2.46	0.51
3:C1:1326:A:H2'	3:C1:1327:C:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:3162:C:N4	3:C1:3163:A:H62	2.08	0.51
22:SQ:58:ASP:N	22:SQ:58:ASP:OD1	2.43	0.51
22:SQ:87:LYS:HA	22:SQ:90:VAL:HG12	1.91	0.51
28:SW:37:PHE:HE2	28:SW:41:MET:HE3	1.75	0.51
38:Sg:22:SER:HB2	38:Sg:70:ASP:HA	1.93	0.51
38:Sg:42:LEU:HD13	38:Sg:92:TRP:CH2	2.46	0.51
47:LI:5:PRO:HB2	47:LI:7:ARG:HG2	1.92	0.51
78:Lo:4:VAL:O	78:Lo:94:GLY:N	2.44	0.51
1:C2:30:G:H2'	1:C2:31:C:C6	2.46	0.51
3:C1:2506:U:O2'	3:C1:2507:C:OP2	2.24	0.51
3:C1:2655:U:O2	78:Lo:5:PRO:HG3	2.10	0.51
3:C1:3317:U:H4'	3:C1:3318:G:O5'	2.11	0.51
23:SR:66:VAL:HG13	23:SR:69:ILE:H	1.75	0.51
24:SS:100:THR:O	24:SS:101:LEU:HD22	2.10	0.51
27:SV:36:VAL:HG23	27:SV:51:VAL:HB	1.91	0.51
38:Sg:54:PHE:HZ	38:Sg:314:GLN:HE21	1.57	0.51
41:LC:178:LEU:HD21	41:LC:225:VAL:HG23	1.91	0.51
45:LG:28:HIS:NE2	63:LZ:128:GLN:HG3	2.26	0.51
47:LI:178:ARG:O	47:LI:182:LEU:HG	2.10	0.51
48:LJ:77:GLU:O	48:LJ:81:GLU:HG3	2.11	0.51
53:LP:10:ASN:HD21	53:LP:12:ALA:HB3	1.76	0.51
68:Le:3:SER:HB3	68:Le:71:HIS:NE2	2.25	0.51
73:Lj:21:ARG:NH1	73:Lj:37:CYS:O	2.44	0.51
1:C2:230:C:H2'	1:C2:231:U:H6	1.75	0.51
1:C2:828:U:C2	1:C2:829:A:C8	2.99	0.51
1:C2:1142:A:H2'	1:C2:1143:A:C8	2.46	0.51
1:C2:1446:A:N7	1:C2:1448:G:C6	2.79	0.51
3:C1:1250:G:H2'	3:C1:1251:A:C8	2.46	0.51
3:C1:1662:G:H2'	3:C1:1663:C:H6	1.76	0.51
3:C1:1856:C:C2	3:C1:1857:C:C5	2.98	0.51
3:C1:2947:G:N3	40:LB:250:ALA:HB1	2.26	0.51
5:C3:88:A:H2'	5:C3:89:A:O4'	2.11	0.51
9:SD:141:LYS:NZ	9:SD:179:GLN:HG2	2.26	0.51
9:SD:221:SER:OG	9:SD:223:LYS:NZ	2.31	0.51
10:SE:151:ASP:OD1	10:SE:153:ASN:N	2.43	0.51
18:SM:63:VAL:HG22	18:SM:65:SER:N	2.25	0.51
38:Sg:200:ASN:ND2	38:Sg:201:THR:OG1	2.42	0.51
42:LD:55:PHE:HE2	42:LD:159:VAL:HB	1.75	0.51
44:LF:229:PHE:CG	44:LF:229:PHE:O	2.64	0.51
47:LI:99:ILE:O	47:LI:120:GLY:CA	2.56	0.51
47:LI:191:LYS:HB2	47:LI:213:PHE:CE2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:LZ:4:PHE:CE1	66:Lc:35:ARG:HA	2.46	0.51
1:C2:393:C:H2'	1:C2:394:C:C6	2.46	0.51
1:C2:590:C:H2'	1:C2:591:A:C8	2.46	0.51
1:C2:918:U:H2'	1:C2:919:A:C8	2.46	0.51
1:C2:1170:G:H1'	1:C2:1574:G:H1'	1.92	0.51
1:C2:1317:C:H2'	1:C2:1318:G:O4'	2.10	0.51
1:C2:1525:A:H2'	1:C2:1526:A:O4'	2.11	0.51
3:C1:165:A:H2'	3:C1:166:C:C6	2.46	0.51
3:C1:388:G:H4'	53:LP:18:ARG:O	2.11	0.51
3:C1:1219:C:O2'	3:C1:1286:A:N1	2.40	0.51
3:C1:1270:A:H5''	3:C1:1271:A:N7	2.26	0.51
3:C1:2997:G:H1'	3:C1:3396:U:H5'	1.91	0.51
21:SP:72:LYS:NZ	21:SP:93:VAL:HG21	2.26	0.51
24:SS:52:VAL:HG22	24:SS:65:GLU:HB3	1.92	0.51
25:ST:23:GLN:HG3	25:ST:55:TYR:CG	2.46	0.51
40:LB:387:LEU:H	40:LB:387:LEU:HD12	1.74	0.51
46:LH:132:VAL:HG21	46:LH:157:ASN:ND2	2.26	0.51
51:LN:75:VAL:HG12	51:LN:76:PRO:HD2	1.92	0.51
72:Li:26:ILE:O	72:Li:29:LYS:N	2.44	0.51
1:C2:85:A:N3	1:C2:148:A:O2'	2.40	0.51
1:C2:518:A:C2'	1:C2:519:C:H5''	2.40	0.51
1:C2:1039:A:H4'	27:SV:62:ARG:HH22	1.73	0.51
1:C2:1166:A:H2'	1:C2:1167:G:O4'	2.11	0.51
1:C2:1740:A:H2'	1:C2:1741:U:C6	2.46	0.51
3:C1:1593:A:N3	3:C1:1615:C:O2'	2.38	0.51
3:C1:1813:A:O2'	3:C1:1817:G:O4'	2.22	0.51
4:C4:77:G:O2'	4:C4:101:G:O6	2.27	0.51
8:SC:174:ARG:HA	8:SC:195:ASP:OD2	2.11	0.51
9:SD:74:GLN:HE22	9:SD:81:PRO:HA	1.75	0.51
11:SF:62:VAL:HG23	11:SF:89:ILE:HG21	1.93	0.51
11:SF:101:GLY:HA2	11:SF:104:ASN:CG	2.36	0.51
12:SG:74:LYS:HA	12:SG:96:SER:HA	1.93	0.51
18:SM:128:ALA:HB3	18:SM:133:LEU:HD13	1.93	0.51
21:SP:31:GLU:O	21:SP:35:LYS:HG3	2.11	0.51
21:SP:78:THR:HG22	21:SP:80:MET:H	1.76	0.51
50:LM:21:VAL:HG12	50:LM:65:LEU:HD23	1.91	0.51
50:LM:103:ILE:O	50:LM:107:GLU:HG2	2.11	0.51
71:Lh:102:GLU:HG3	71:Lh:106:LYS:HE3	1.93	0.51
1:C2:592:A:H2'	1:C2:593:U:O4'	2.11	0.50
1:C2:1673:G:OP1	12:SG:94:ARG:NH2	2.44	0.50
3:C1:243:G:H2'	3:C1:244:G:H8	1.71	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:578:A:H5''	3:C1:579:G:O5'	2.11	0.50
3:C1:2163:C:O2'	39:LA:11:GLY:HA3	2.11	0.50
3:C1:3185:U:C5	52:LO:126:VAL:HG11	2.46	0.50
4:C4:110:G:C6	4:C4:111:U:O4	2.64	0.50
11:SF:33:VAL:O	11:SF:37:GLN:HB2	2.11	0.50
15:SJ:119:ALA:O	15:SJ:120:LYS:HG2	2.11	0.50
18:SM:47:GLU:CD	18:SM:47:GLU:H	2.18	0.50
21:SP:44:ARG:HG2	21:SP:84:ILE:CD1	2.38	0.50
61:LX:97:LYS:O	61:LX:101:GLU:HG2	2.12	0.50
63:LZ:53:VAL:HG11	63:LZ:62:VAL:HG23	1.93	0.50
1:C2:1252:C:OP1	37:Sf:133:ALA:HB2	2.12	0.50
3:C1:926:A:H2'	3:C1:927:C:C6	2.46	0.50
3:C1:1193:A:OP2	52:LO:49:ARG:NH1	2.29	0.50
8:SC:223:GLY:HA2	27:SV:25:LYS:HE2	1.94	0.50
10:SE:126:VAL:HG13	10:SE:158:ASP:H	1.76	0.50
15:SJ:93:LEU:O	15:SJ:96:VAL:HG12	2.11	0.50
22:SQ:52:LEU:HA	22:SQ:60:PHE:CE2	2.46	0.50
22:SQ:74:HIS:O	22:SQ:78:VAL:HG23	2.11	0.50
24:SS:55:HIS:C	24:SS:56:LYS:HD2	2.36	0.50
37:Sf:130:VAL:CG1	37:Sf:142:GLY:H	2.23	0.50
43:LE:157:GLN:OE1	43:LE:157:GLN:N	2.43	0.50
46:LH:90:MET:HB2	46:LH:144:ILE:HG23	1.94	0.50
47:LI:66:GLU:OE2	47:LI:69:ARG:NH2	2.44	0.50
51:LN:110:ALA:HB1	51:LN:113:LEU:HD12	1.93	0.50
55:LR:17:VAL:HG22	55:LR:18:GLY:H	1.76	0.50
60:LW:33:ASN:OD1	60:LW:33:ASN:N	2.41	0.50
64:La:60:TYR:CE2	64:La:63:LYS:HA	2.46	0.50
67:Ld:46:THR:HG21	67:Ld:91:SER:CB	2.40	0.50
1:C2:329:G:H2'	1:C2:330:G:H8	1.76	0.50
1:C2:417:A:H4'	1:C2:418:G:O5'	2.11	0.50
1:C2:842:C:H2'	1:C2:843:U:O4'	2.11	0.50
1:C2:1251:U:HO2'	1:C2:1252:C:H6	1.59	0.50
3:C1:267:G:OP2	3:C1:318:A:N6	2.44	0.50
3:C1:965:A:C2	64:La:43:ILE:HD12	2.46	0.50
3:C1:1621:A:H2'	3:C1:1622:U:C6	2.47	0.50
3:C1:3377:G:O2'	40:LB:313:HIS:NE2	2.42	0.50
4:C4:96:U:OP1	56:LS:43:TYR:OH	2.26	0.50
5:C3:106:C:H5''	5:C3:108:C:OP2	2.11	0.50
10:SE:23:LEU:HD11	15:SJ:6:ARG:HD3	1.94	0.50
16:SK:24:LYS:HD3	16:SK:63:TYR:CZ	2.47	0.50
17:SL:33:ARG:NH2	17:SL:51:GLY:O	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Sg:147:HIS:CE1	38:Sg:177:MET:HB3	2.46	0.50
40:LB:260:VAL:HG21	40:LB:266:ARG:NH2	2.25	0.50
53:LP:125:GLN:HB3	53:LP:141:SER:OG	2.11	0.50
62:LY:85:VAL:HG12	62:LY:97:ILE:HD11	1.93	0.50
72:Li:25:LYS:HE3	72:Li:28:TYR:CE1	2.47	0.50
1:C2:205:U:H2'	1:C2:206:A:H8	1.77	0.50
3:C1:1696:A:H2'	3:C1:1697:A:H8	1.76	0.50
3:C1:2323:G:O2'	3:C1:2325:G:OP2	2.29	0.50
14:SI:83:TYR:HB2	14:SI:196:LEU:HD21	1.92	0.50
18:SM:47:GLU:OE1	18:SM:47:GLU:N	2.44	0.50
19:SN:42:ARG:HG2	19:SN:80:LEU:HD21	1.94	0.50
22:SQ:99:GLU:OE2	38:Sg:60:SER:OG	2.15	0.50
26:SU:95:ALA:HB1	26:SU:99:ILE:HG22	1.93	0.50
32:Sa:44:ILE:HD13	32:Sa:65:PRO:HG2	1.93	0.50
35:Sd:20:GLN:HB3	35:Sd:25:SER:HA	1.93	0.50
41:LC:26:PHE:CE1	41:LC:126:ILE:HG22	2.46	0.50
48:LJ:37:LEU:HD12	48:LJ:67:VAL:HG22	1.94	0.50
1:C2:1604:U:N3	1:C2:1605:G:N7	2.59	0.50
3:C1:265:A:O2'	51:LN:5:LYS:NZ	2.43	0.50
3:C1:550:A:H2'	3:C1:551:A:C8	2.47	0.50
3:C1:1953:G:N1	3:C1:2093:A:C6	2.79	0.50
3:C1:3159:C:H2'	3:C1:3160:U:H6	1.77	0.50
5:C3:142:C:H2'	5:C3:143:U:C6	2.47	0.50
10:SE:55:ALA:HB1	10:SE:60:GLU:HB3	1.94	0.50
13:SH:30:SER:N	13:SH:31:SER:HA	2.25	0.50
13:SH:143:LEU:HD11	13:SH:149:ILE:HD12	1.93	0.50
13:SH:161:GLN:N	13:SH:161:GLN:OE1	2.43	0.50
50:LM:32:LEU:HD11	50:LM:94:TRP:CD1	2.47	0.50
54:LQ:122:ILE:HG22	54:LQ:123:THR:O	2.11	0.50
1:C2:1471:A:H2	1:C2:1474:G:N3	2.10	0.50
1:C2:1603:U:H2'	1:C2:1604:U:H6	1.77	0.50
1:C2:1758:U:H2'	1:C2:1759:C:H6	1.75	0.50
3:C1:107:A:H1'	3:C1:325:A:N3	2.27	0.50
3:C1:1063:G:C8	3:C1:1066:G:H1'	2.47	0.50
3:C1:2507:C:H2'	3:C1:2508:U:C6	2.46	0.50
3:C1:3033:A:H2'	3:C1:3034:C:C6	2.45	0.50
6:SA:54:TRP:O	6:SA:58:VAL:HG23	2.11	0.50
11:SF:69:PHE:HB3	22:SQ:46:PHE:HB3	1.94	0.50
13:SH:126:LEU:HD21	13:SH:152:VAL:HG21	1.93	0.50
20:SO:127:ARG:NH2	32:Sa:22:ARG:HH12	2.09	0.50
31:SZ:88:ILE:O	31:SZ:104:ALA:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Sd:31:ILE:HG22	35:Sd:38:ILE:O	2.11	0.50
48:LJ:95:ASN:O	48:LJ:102:PHE:HB2	2.12	0.50
1:C2:350:U:H4'	1:C2:351:C:H5''	1.92	0.50
1:C2:1482:C:N4	1:C2:1524:A:OP2	2.41	0.50
1:C2:1516:A:OP1	26:SU:88:LYS:NZ	2.45	0.50
1:C2:1591:C:H2'	1:C2:1592:A:H8	1.76	0.50
3:C1:118:U:N3	3:C1:122:A:OP2	2.23	0.50
3:C1:266:A:N6	72:Li:30:LYS:HA	2.25	0.50
3:C1:1662:G:H22	3:C1:1787:A:H2	1.60	0.50
3:C1:1677:G:OP1	58:LU:97:SER:OG	2.28	0.50
3:C1:1733:G:H2'	3:C1:1734:G:C8	2.47	0.50
3:C1:2510:U:O2'	3:C1:2511:A:OP2	2.22	0.50
3:C1:2565:U:H2'	3:C1:2566:C:C6	2.47	0.50
3:C1:2814:G:P	41:LC:73:ARG:HH22	2.34	0.50
3:C1:2912:G:N1	3:C1:3130:A:C8	2.79	0.50
3:C1:3198:U:O2	46:LH:21:LYS:N	2.44	0.50
11:SF:147:THR:HG21	34:Sc:25:VAL:HG21	1.93	0.50
13:SH:16:LEU:O	13:SH:19:GLN:HG2	2.11	0.50
19:SN:76:LYS:HD3	19:SN:81:ALA:HB2	1.94	0.50
24:SS:113:LEU:O	24:SS:117:LYS:NZ	2.38	0.50
42:LD:40:HIS:CD2	57:LT:69:LYS:HA	2.46	0.50
55:LR:135:LYS:O	55:LR:139:VAL:HG23	2.12	0.50
1:C2:393:C:H2'	1:C2:394:C:H6	1.76	0.50
1:C2:686:C:H2'	1:C2:687:G:O4'	2.12	0.50
1:C2:1472:C:O2	1:C2:1534:G:N2	2.44	0.50
2:C5:8:SER:O	2:C5:12:LYS:HB2	2.12	0.50
3:C1:1385:C:OP1	41:LC:141:ARG:NH2	2.44	0.50
7:SB:144:ARG:HG2	7:SB:206:PRO:HB2	1.93	0.50
23:SR:16:LEU:HD11	23:SR:54:THR:HG21	1.93	0.50
24:SS:62:THR:OG1	24:SS:64:GLU:OE1	2.30	0.50
24:SS:89:GLN:HA	24:SS:97:ASP:HA	1.93	0.50
34:Sc:25:VAL:HA	34:Sc:44:VAL:O	2.12	0.50
39:LA:58:LEU:HD22	39:LA:75:ILE:HG22	1.92	0.50
40:LB:212:ASN:ND2	40:LB:353:GLU:HA	2.27	0.50
60:LW:45:ASN:O	60:LW:49:ILE:HG12	2.12	0.50
1:C2:121:U:O2	10:SE:34:GLY:HA2	2.11	0.50
1:C2:199:G:O2'	1:C2:200:A:O5'	2.29	0.50
1:C2:1230:A:C5	1:C2:1256:A:C8	2.99	0.50
1:C2:1258:U:H2'	1:C2:1259:U:O4'	2.11	0.50
1:C2:1770:U:H2'	1:C2:1771:U:C6	2.47	0.50
2:C5:15:GLY:O	2:C5:18:ARG:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:315:C:OP2	72:Li:28:TYR:OH	2.23	0.50
3:C1:729:C:H2'	3:C1:730:C:H6	1.76	0.50
3:C1:1695:U:O2'	3:C1:1749:A:N6	2.27	0.50
3:C1:1868:G:N2	3:C1:2118:C:C2	2.78	0.50
3:C1:1953:G:N1	3:C1:2093:A:N6	2.60	0.50
5:C3:6:U:C2	5:C3:7:U:C5	2.99	0.50
7:SB:108:ASP:OD1	32:Sa:66:LYS:N	2.34	0.50
12:SG:67:VAL:HG13	12:SG:99:GLY:HA2	1.93	0.50
15:SJ:66:ASP:O	15:SJ:70:LEU:HG	2.11	0.50
16:SK:34:GLU:HG3	16:SK:35:ILE:H	1.77	0.50
19:SN:12:SER:O	19:SN:12:SER:OG	2.30	0.50
21:SP:30:THR:O	21:SP:34:VAL:HG22	2.12	0.50
45:LG:78:PHE:O	45:LG:79:GLN:HG2	2.11	0.50
45:LG:172:LYS:HD2	72:Li:43:LEU:HD12	1.93	0.50
48:LJ:59:ILE:HB	48:LJ:65:ILE:HD11	1.94	0.50
50:LM:2:SER:OG	50:LM:3:THR:N	2.44	0.50
78:Lo:22:GLN:O	78:Lo:75:VAL:HG22	2.12	0.50
1:C2:30:G:H2'	1:C2:31:C:H6	1.75	0.49
1:C2:534:A:H2'	1:C2:535:A:O4'	2.12	0.49
1:C2:629:U:OP2	1:C2:969:C:N4	2.40	0.49
1:C2:1037:C:O2	28:SW:16:ASN:ND2	2.44	0.49
1:C2:1039:A:O2'	1:C2:1040:G:O5'	2.28	0.49
1:C2:1175:U:H2'	1:C2:1176:G:H8	1.76	0.49
1:C2:1232:U:H2'	1:C2:1233:G:C8	2.47	0.49
1:C2:1533:C:H4'	1:C2:1539:G:O6	2.11	0.49
3:C1:757:C:H2'	3:C1:758:C:O4'	2.12	0.49
3:C1:1751:G:H5'	74:Lk:26:LYS:HE2	1.93	0.49
3:C1:2209:U:HO2'	3:C1:2210:G:P	2.31	0.49
6:SA:88:LYS:HE3	23:SR:83:GLN:HE22	1.76	0.49
15:SJ:139:GLN:OE1	30:SY:63:GLN:NE2	2.45	0.49
18:SM:89:ILE:HD11	18:SM:140:PHE:CD2	2.47	0.49
18:SM:92:ALA:HB3	18:SM:100:TRP:HH2	1.77	0.49
39:LA:62:VAL:HG22	39:LA:73:GLU:HG3	1.94	0.49
53:LP:25:SER:OG	53:LP:28:ASN:ND2	2.45	0.49
62:LY:36:SER:OG	62:LY:37:LYS:N	2.45	0.49
65:Lb:16:ALA:O	65:Lb:20:GLY:HA2	2.12	0.49
67:Ld:88:PRO:HG2	67:Ld:89:LEU:HD12	1.94	0.49
79:Lp:72:SER:O	79:Lp:72:SER:OG	2.28	0.49
1:C2:1588:G:O6	1:C2:1608:U:O4	2.30	0.49
3:C1:63:A:H5''	51:LN:174:ILE:HG21	1.95	0.49
3:C1:1619:A:N1	3:C1:1826:C:N3	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1816:A:O2'	3:C1:1817:G:H5'	2.11	0.49
3:C1:1936:A:H2'	3:C1:1937:U:C6	2.47	0.49
3:C1:3275:U:O2'	69:Lf:99:ARG:NH1	2.45	0.49
7:SB:24:PHE:HZ	20:SO:39:ILE:HA	1.76	0.49
7:SB:26:ARG:HH21	7:SB:49:ASN:ND2	2.09	0.49
12:SG:2:LYS:O	12:SG:108:VAL:HA	2.11	0.49
21:SP:41:VAL:HG12	21:SP:84:ILE:HG12	1.93	0.49
24:SS:105:VAL:O	24:SS:109:LEU:HG	2.12	0.49
26:SU:42:VAL:O	26:SU:46:GLU:HG2	2.12	0.49
26:SU:69:LYS:HG2	26:SU:80:GLU:HB3	1.94	0.49
29:SX:111:GLY:O	29:SX:121:ARG:NH1	2.45	0.49
38:Sg:123:ILE:HG21	38:Sg:169:ILE:HD13	1.94	0.49
45:LG:69:LEU:HD11	51:LN:24:ARG:CZ	2.42	0.49
73:Lj:28:HIS:CD2	73:Lj:31:LYS:HB2	2.47	0.49
1:C2:571:G:C5'	29:SX:114:LYS:HD2	2.42	0.49
1:C2:788:A:OP1	10:SE:106:LYS:NZ	2.45	0.49
1:C2:948:G:H2'	1:C2:949:C:C6	2.48	0.49
1:C2:1211:A:H1'	21:SP:99:GLY:O	2.12	0.49
1:C2:1244:A:O2'	1:C2:1245:G:OP1	2.29	0.49
1:C2:1299:G:H5'	8:SC:212:LYS:NZ	2.27	0.49
1:C2:1592:A:H2'	1:C2:1593:A:H8	1.77	0.49
1:C2:1620:C:O2'	1:C2:1621:U:OP1	2.28	0.49
3:C1:528:U:H2'	3:C1:529:A:H8	1.76	0.49
3:C1:596:C:O2	41:LC:326:ARG:HD3	2.12	0.49
3:C1:664:U:H2'	3:C1:665:A:H8	1.77	0.49
3:C1:2207:A:C2'	3:C1:2208:A:H4'	2.43	0.49
11:SF:37:GLN:HG2	22:SQ:46:PHE:HE2	1.75	0.49
12:SG:1:MET:CE	12:SG:109:LEU:HB2	2.42	0.49
12:SG:27:PHE:HA	12:SG:30:LYS:HZ2	1.77	0.49
39:LA:7:ASN:N	39:LA:7:ASN:OD1	2.44	0.49
40:LB:236:LYS:HG3	40:LB:237:LYS:O	2.11	0.49
44:LF:48:ASN:ND2	44:LF:182:ASP:OD2	2.45	0.49
45:LG:196:ALA:O	45:LG:197:VAL:HG23	2.11	0.49
55:LR:90:PRO:O	55:LR:93:VAL:HG12	2.12	0.49
74:Lk:16:ARG:O	74:Lk:18:ALA:N	2.45	0.49
1:C2:514:G:O2'	1:C2:515:A:H8	1.95	0.49
1:C2:1608:U:H5''	22:SQ:72:GLY:HA2	1.95	0.49
3:C1:408:A:H61	5:C3:15:G:H1'	1.76	0.49
3:C1:1257:C:H2'	3:C1:1258:U:O4'	2.13	0.49
3:C1:1639:C:H5''	70:Lg:72:VAL:HG21	1.93	0.49
3:C1:2148:U:O2'	39:LA:182:ALA:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2219:A:OP2	72:Li:68:ARG:NH2	2.45	0.49
3:C1:2254:U:H2'	3:C1:2261:G:N2	2.27	0.49
3:C1:2441:A:N6	3:C1:2506:U:H3	2.09	0.49
3:C1:3022:G:O2'	3:C1:3031:G:O6	2.25	0.49
4:C4:48:U:OP2	42:LD:94:ASN:HB3	2.13	0.49
6:SA:147:THR:O	6:SA:161:PRO:HA	2.12	0.49
9:SD:176:LEU:HA	9:SD:181:VAL:HG12	1.94	0.49
16:SK:38:LYS:O	16:SK:42:VAL:HG23	2.11	0.49
21:SP:60:LEU:HD12	21:SP:92:SER:HB2	1.94	0.49
23:SR:32:LYS:HD2	23:SR:48:ASN:OD1	2.12	0.49
24:SS:16:ARG:HD3	24:SS:19:ASN:H	1.77	0.49
25:ST:66:TYR:HE2	25:ST:129:GLN:HG3	1.77	0.49
38:Sg:24:ALA:HB3	38:Sg:73:LEU:HD13	1.95	0.49
40:LB:84:VAL:HG12	40:LB:164:THR:HA	1.93	0.49
43:LE:66:SER:C	43:LE:68:PRO:HA	2.38	0.49
56:LS:79:VAL:HG13	56:LS:90:MET:HB3	1.94	0.49
68:Le:79:VAL:HG13	68:Le:111:ARG:HG2	1.93	0.49
1:C2:151:G:N1	1:C2:164:A:C6	2.80	0.49
1:C2:647:G:N2	1:C2:688:G:C2	2.81	0.49
1:C2:765:G:N7	15:SJ:149:ARG:CZ	2.76	0.49
1:C2:1785:U:H2'	1:C2:1786:G:H8	1.77	0.49
3:C1:3250:U:H2'	3:C1:3251:U:H6	1.77	0.49
7:SB:48:VAL:HG22	7:SB:64:ARG:NH2	2.27	0.49
15:SJ:77:ILE:HG21	15:SJ:91:LYS:HB3	1.95	0.49
16:SK:10:LYS:HE3	16:SK:35:ILE:HB	1.94	0.49
37:Sf:120:GLU:N	37:Sf:131:PHE:H	2.11	0.49
38:Sg:262:VAL:O	38:Sg:271:VAL:N	2.45	0.49
51:LN:186:GLY:O	51:LN:190:THR:HG23	2.12	0.49
53:LP:85:ALA:O	53:LP:89:LYS:HG3	2.13	0.49
53:LP:155:GLU:OE1	53:LP:155:GLU:N	2.45	0.49
55:LR:15:VAL:HG11	55:LR:52:LYS:HB2	1.94	0.49
57:LT:92:ARG:HB2	57:LT:95:HIS:CD2	2.48	0.49
1:C2:224:C:C2	1:C2:225:A:N7	2.81	0.49
1:C2:610:G:H21	29:SX:19:ARG:HH12	1.61	0.49
1:C2:897:C:O2	20:SO:41:ARG:NH2	2.46	0.49
1:C2:1160:A:H2'	1:C2:1161:C:C6	2.48	0.49
1:C2:1219:A:C6	1:C2:1265:G:H1'	2.48	0.49
1:C2:1225:U:N3	1:C2:1230:A:O2'	2.43	0.49
1:C2:1250:U:O4	1:C2:1251:U:C4	2.66	0.49
1:C2:1315:U:O2	23:SR:4:VAL:HG11	2.13	0.49
3:C1:896:A:H5'	39:LA:183:GLY:HA2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2117:A:O2'	3:C1:3080:G:O2'	2.26	0.49
3:C1:2407:C:H2'	3:C1:2408:U:H6	1.77	0.49
9:SD:45:LYS:HE2	9:SD:85:VAL:HG21	1.95	0.49
10:SE:65:LEU:HD13	10:SE:80:THR:HA	1.93	0.49
12:SG:146:GLY:C	12:SG:147:LEU:HD23	2.38	0.49
14:SI:171:SER:OG	14:SI:172:ARG:N	2.46	0.49
38:Sg:47:LEU:HD22	38:Sg:54:PHE:HD1	1.78	0.49
46:LH:90:MET:HE1	46:LH:161:LEU:HB3	1.95	0.49
61:LX:50:ALA:HB2	71:Lh:79:ASP:HB3	1.94	0.49
73:Lj:64:MET:HE2	73:Lj:67:LEU:HB2	1.95	0.49
1:C2:972:G:H21	3:C1:846:A:H61	1.61	0.49
1:C2:1172:G:H2'	1:C2:1173:C:O4'	2.12	0.49
1:C2:1564:U:O2'	1:C2:1565:C:H5'	2.12	0.49
1:C2:1588:G:C2	1:C2:1609:U:C2	3.01	0.49
3:C1:1262:G:O6	3:C1:1264:G:N2	2.45	0.49
3:C1:1604:G:H4'	3:C1:1835:A:H4'	1.95	0.49
3:C1:1733:G:H2'	3:C1:1734:G:H8	1.78	0.49
3:C1:3279:A:N6	69:Lf:54:ARG:HD3	2.28	0.49
7:SB:191:GLU:HB2	7:SB:194:ASN:ND2	2.26	0.49
9:SD:70:THR:HA	9:SD:73:VAL:HG22	1.95	0.49
10:SE:60:GLU:OE2	10:SE:60:GLU:N	2.46	0.49
11:SF:82:PHE:CZ	34:Sc:49:ARG:HB2	2.48	0.49
19:SN:46:THR:OG1	19:SN:49:GLN:OE1	2.30	0.49
31:SZ:44:GLN:HA	31:SZ:47:TYR:HB3	1.94	0.49
45:LG:137:ASN:HD21	51:LN:4:TYR:HE2	1.59	0.49
1:C2:223:U:H2'	1:C2:224:C:H6	1.78	0.49
1:C2:258:C:O2	14:SI:178:ARG:NH2	2.46	0.49
1:C2:585:A:H2'	1:C2:586:G:H8	1.78	0.49
1:C2:851:U:O2	1:C2:851:U:H2'	2.12	0.49
1:C2:891:A:H2'	1:C2:892:A:H8	1.75	0.49
1:C2:919:A:H2'	1:C2:920:U:C6	2.47	0.49
2:C5:70:ARG:NH1	3:C1:1008:U:OP1	2.46	0.49
3:C1:144:A:H2'	3:C1:145:G:O4'	2.12	0.49
3:C1:307:A:H2'	3:C1:308:A:C8	2.47	0.49
3:C1:1317:A:O2'	3:C1:1318:A:H3'	2.12	0.49
3:C1:1573:G:N1	3:C1:1574:C:O2'	2.44	0.49
3:C1:1771:C:H2'	3:C1:1772:U:O4'	2.13	0.49
3:C1:2724:U:H4'	57:LT:54:HIS:CE1	2.48	0.49
3:C1:2864:A:H5''	47:LI:114:GLY:HA2	1.95	0.49
4:C4:79:A:H2'	4:C4:80:G:O4'	2.12	0.49
10:SE:212:ASP:OD1	10:SE:216:ASN:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:SL:3:THR:HG21	55:LR:144:GLN:HE21	1.78	0.49
17:SL:101:GLU:HB3	29:SX:12:ALA:HB3	1.95	0.49
33:Sb:67:THR:HG22	33:Sb:68:GLY:N	2.26	0.49
38:Sg:201:THR:HB	38:Sg:243:LEU:HD23	1.95	0.49
40:LB:147:GLU:OE1	40:LB:150:ARG:NH1	2.46	0.49
44:LF:103:LEU:HG	44:LF:130:ILE:HD11	1.95	0.49
47:LI:36:LEU:HD21	47:LI:69:ARG:NH1	2.28	0.49
57:LT:17:ARG:NH1	57:LT:45:ASN:OD1	2.45	0.49
59:LV:45:ARG:HG2	59:LV:48:ARG:HH21	1.77	0.49
67:Ld:9:THR:OG1	67:Ld:109:VAL:HB	2.13	0.49
79:Lp:51:ALA:HB3	79:Lp:54:ILE:HD11	1.95	0.49
1:C2:127:G:N7	12:SG:202:ARG:NH2	2.60	0.49
3:C1:999:G:N2	3:C1:1050:U:O2	2.45	0.49
3:C1:2102:U:H2'	3:C1:2103:U:C6	2.47	0.49
3:C1:2155:G:O2'	39:LA:227:ARG:NH2	2.46	0.49
3:C1:2427:U:H2'	3:C1:2428:U:C6	2.47	0.49
3:C1:3358:U:H2'	3:C1:3359:A:H8	1.77	0.49
5:C3:39:G:H1'	5:C3:104:A:H61	1.77	0.49
8:SC:148:LEU:HD23	27:SV:4:ASP:HB2	1.94	0.49
21:SP:64:LYS:NZ	21:SP:90:ILE:O	2.46	0.49
22:SQ:131:GLY:HA2	22:SQ:138:PHE:CE1	2.48	0.49
25:ST:18:TYR:CD1	25:ST:135:ILE:HG21	2.46	0.49
38:Sg:155:ARG:C	38:Sg:169:ILE:HG13	2.38	0.49
41:LC:8:VAL:HG22	41:LC:18:ASN:HB2	1.95	0.49
41:LC:33:ASP:O	41:LC:37:THR:HG23	2.12	0.49
42:LD:163:LEU:HD21	42:LD:175:HIS:ND1	2.28	0.49
47:LI:52:LEU:HB3	47:LI:136:PHE:HB2	1.94	0.49
47:LI:174:THR:HG22	47:LI:196:PHE:CE1	2.48	0.49
48:LJ:172:LEU:HG	48:LJ:173:ASP:H	1.78	0.49
61:LX:73:MET:O	61:LX:77:GLU:HG3	2.13	0.49
63:LZ:46:ILE:HG23	63:LZ:68:ILE:HG23	1.94	0.49
63:LZ:98:THR:OG1	63:LZ:99:GLU:OE1	2.30	0.49
64:La:24:LYS:HD2	64:La:26:ARG:HH21	1.78	0.49
1:C2:841:U:H2'	1:C2:842:C:O4'	2.13	0.49
1:C2:1242:A:O2'	1:C2:1244:A:OP1	2.21	0.49
1:C2:1546:G:P	24:SS:123:ARG:HH22	2.36	0.49
3:C1:59:G:H2'	5:C3:33:A:H2'	1.95	0.49
3:C1:149:U:P	51:LN:49:ARG:HH22	2.35	0.49
3:C1:240:U:O2'	3:C1:241:G:H5'	2.13	0.49
3:C1:985:U:H2'	3:C1:986:U:H6	1.78	0.49
3:C1:2369:G:H2'	3:C1:2370:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2849:C:H2'	3:C1:2850:G:O4'	2.13	0.49
3:C1:3159:C:H2'	3:C1:3160:U:C6	2.48	0.49
5:C3:95:G:O2'	73:Lj:81:GLY:O	2.24	0.49
7:SB:113:MET:HE1	7:SB:211:HIS:CD2	2.47	0.49
8:SC:147:ASN:OD1	8:SC:147:ASN:N	2.40	0.49
9:SD:223:LYS:HB2	9:SD:225:TYR:CZ	2.48	0.49
15:SJ:153:GLU:O	15:SJ:156:ILE:HG22	2.13	0.49
15:SJ:162:SER:O	15:SJ:164:PHE:N	2.46	0.49
21:SP:36:LEU:HD23	21:SP:36:LEU:O	2.13	0.49
38:Sg:103:PHE:CE2	38:Sg:138:GLY:HA2	2.47	0.49
45:LG:52:TRP:NE1	45:LG:60:ARG:HH12	2.11	0.49
58:LU:23:THR:HG21	58:LU:30:PRO:HG3	1.95	0.49
1:C2:777:C:H2'	1:C2:778:G:C8	2.47	0.48
1:C2:1202:A:H8	1:C2:1207:C:N4	2.11	0.48
1:C2:1351:G:H2'	1:C2:1352:G:C8	2.48	0.48
3:C1:517:G:O2'	3:C1:518:G:H5'	2.13	0.48
3:C1:518:G:OP2	3:C1:518:G:N2	2.40	0.48
3:C1:542:G:C6	3:C1:550:A:C6	3.01	0.48
3:C1:993:G:N2	3:C1:1057:A:C2	2.81	0.48
3:C1:1225:A:H2'	3:C1:1226:G:H8	1.78	0.48
3:C1:1642:A:N3	3:C1:1822:C:O2'	2.42	0.48
3:C1:1712:G:N2	3:C1:1733:G:O6	2.46	0.48
3:C1:1898:G:N2	3:C1:1901:A:N6	2.60	0.48
3:C1:2102:U:H2'	3:C1:2103:U:H6	1.78	0.48
3:C1:3305:A:H2'	3:C1:3306:U:O4'	2.12	0.48
8:SC:225:LEU:HD12	8:SC:226:THR:H	1.78	0.48
12:SG:145:PHE:HB3	12:SG:147:LEU:HD21	1.94	0.48
18:SM:33:ARG:O	18:SM:37:VAL:HG23	2.13	0.48
26:SU:88:LYS:C	26:SU:89:ARG:HD2	2.38	0.48
27:SV:20:THR:HA	28:SW:23:ARG:HH12	1.78	0.48
41:LC:107:ARG:HG2	41:LC:108:LYS:N	2.27	0.48
44:LF:151:ARG:HH12	44:LF:244:ASN:HA	1.78	0.48
44:LF:190:THR:O	44:LF:190:THR:OG1	2.24	0.48
71:Lh:39:PRO:O	71:Lh:40:SER:OG	2.28	0.48
78:Lo:73:GLU:HG3	78:Lo:80:ARG:HG2	1.95	0.48
1:C2:168:A:O2'	1:C2:169:A:H5'	2.13	0.48
1:C2:588:U:O2	36:Se:57:ASN:ND2	2.46	0.48
1:C2:1176:G:C6	1:C2:1464:G:C6	3.01	0.48
3:C1:1268:G:O2'	3:C1:1273:A:N6	2.43	0.48
3:C1:3315:G:P	40:LB:116:ARG:HH21	2.35	0.48
4:C4:119:U:P	42:LD:258:LYS:HZ1	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C3:39:G:O2'	5:C3:105:A:N6	2.41	0.48
6:SA:184:LEU:O	6:SA:186:GLY:N	2.46	0.48
21:SP:58:LYS:N	21:SP:61:ARG:HH21	2.11	0.48
21:SP:102:PHE:O	21:SP:104:GLN:NE2	2.44	0.48
24:SS:7:GLU:HB3	24:SS:11:PHE:HE2	1.76	0.48
37:Sf:130:VAL:HG22	37:Sf:143:LYS:HB2	1.95	0.48
45:LG:187:GLY:HA2	45:LG:195:SER:OG	2.13	0.48
48:LJ:11:ASP:N	48:LJ:11:ASP:OD1	2.45	0.48
63:LZ:18:TYR:HE1	63:LZ:47:GLU:HG3	1.79	0.48
79:Lp:49:ARG:HD3	79:Lp:52:ALA:HA	1.94	0.48
1:C2:430:G:H2'	1:C2:431:C:C6	2.48	0.48
3:C1:980:A:H2	3:C1:1104:G:H21	1.61	0.48
3:C1:1340:G:H2'	3:C1:1341:U:C6	2.48	0.48
3:C1:2367:A:H2'	3:C1:2368:A:C8	2.48	0.48
3:C1:2818:U:H6	3:C1:2818:U:H5'	1.78	0.48
3:C1:2968:G:N7	39:LA:215:ASN:HB2	2.27	0.48
3:C1:3232:G:H2'	3:C1:3233:C:C6	2.49	0.48
4:C4:98:C:O2'	44:LF:131:GLU:OE1	2.29	0.48
8:SC:41:LEU:O	8:SC:45:VAL:HG23	2.14	0.48
9:SD:157:LEU:HD13	9:SD:189:MET:HB2	1.95	0.48
9:SD:225:TYR:CE2	38:Sg:191:ASP:HB3	2.48	0.48
10:SE:47:PHE:CE2	10:SE:90:ILE:HD11	2.48	0.48
11:SF:121:ILE:HD12	11:SF:199:ILE:HG12	1.95	0.48
19:SN:47:PRO:HD2	19:SN:86:GLU:HG2	1.95	0.48
26:SU:101:LYS:HA	26:SU:104:THR:HG22	1.95	0.48
27:SV:77:GLY:O	27:SV:80:LYS:NZ	2.46	0.48
56:LS:171:PHE:CG	56:LS:172:TYR:N	2.81	0.48
60:LW:20:LEU:HD23	60:LW:21:PHE:N	2.28	0.48
69:Lf:74:THR:HA	69:Lf:81:VAL:HG23	1.95	0.48
74:Lk:24:THR:HG23	74:Lk:44:LYS:HB2	1.95	0.48
1:C2:93:A:O4'	10:SE:3:ARG:NH1	2.47	0.48
1:C2:407:A:H2'	1:C2:408:C:H6	1.78	0.48
1:C2:1146:G:H2'	1:C2:1147:A:C8	2.48	0.48
2:C5:6:SER:OG	2:C5:7:GLU:N	2.45	0.48
3:C1:590:G:O2'	41:LC:309:ARG:NH1	2.46	0.48
3:C1:1447:G:H3'	53:LP:67:ILE:HD11	1.95	0.48
3:C1:1555:U:O5'	3:C1:1555:U:H6	1.96	0.48
3:C1:1620:U:H2'	3:C1:1621:A:C8	2.47	0.48
3:C1:2542:U:O2'	3:C1:2543:U:O5'	2.31	0.48
3:C1:3027:A:H2'	3:C1:3028:G:C8	2.48	0.48
15:SJ:37:LYS:HB2	15:SJ:126:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:SN:87:ASP:OD2	19:SN:87:ASP:N	2.46	0.48
23:SR:106:THR:O	23:SR:110:VAL:HG13	2.13	0.48
38:Sg:255:ALA:N	38:Sg:292:LEU:HD11	2.27	0.48
49:LL:29:ALA:O	49:LL:33:VAL:HG23	2.12	0.48
49:LL:89:TYR:CE2	49:LL:93:ILE:HD11	2.48	0.48
54:LQ:67:ILE:HD11	54:LQ:83:VAL:HG21	1.95	0.48
54:LQ:176:ARG:HB2	64:La:53:PHE:O	2.14	0.48
59:LV:11:PHE:HB2	59:LV:88:ARG:NH2	2.28	0.48
1:C2:210:A:H2'	1:C2:211:U:C6	2.49	0.48
1:C2:647:G:N2	1:C2:687:G:H22	2.12	0.48
1:C2:931:C:O2'	7:SB:118:GLN:O	2.31	0.48
1:C2:1088:A:O3'	32:Sa:89:ARG:NH2	2.46	0.48
1:C2:1422:A:H2'	1:C2:1423:U:C6	2.48	0.48
3:C1:253:A:O2'	3:C1:254:A:H8	1.96	0.48
3:C1:541:U:N3	3:C1:542:G:N7	2.62	0.48
3:C1:733:G:N2	3:C1:735:A:H3'	2.28	0.48
3:C1:1282:G:C2	3:C1:1283:C:C5	3.01	0.48
3:C1:2667:A:H2'	3:C1:2668:U:O4'	2.13	0.48
3:C1:2795:U:OP2	78:Lo:63:LYS:HG2	2.13	0.48
3:C1:3047:U:O2'	3:C1:3048:A:H5'	2.13	0.48
3:C1:3165:A:H2'	3:C1:3166:C:H6	1.77	0.48
4:C4:1:G:C2	4:C4:2:G:C8	3.01	0.48
15:SJ:54:ARG:HH21	15:SJ:57:ARG:HE	1.60	0.48
17:SL:108:PRO:HB2	17:SL:135:VAL:HG22	1.94	0.48
18:SM:63:VAL:HG22	18:SM:65:SER:H	1.77	0.48
19:SN:61:THR:OG1	19:SN:62:GLN:N	2.46	0.48
23:SR:79:GLU:O	23:SR:83:GLN:HG2	2.13	0.48
29:SX:91:GLY:O	29:SX:94:ASN:N	2.46	0.48
30:SY:29:HIS:O	30:SY:31:ASN:N	2.47	0.48
30:SY:57:VAL:HB	30:SY:60:PHE:HE2	1.77	0.48
38:Sg:135:THR:HG22	38:Sg:139:GLN:O	2.12	0.48
39:LA:48:ILE:HD12	79:Lp:65:ALA:HB2	1.95	0.48
39:LA:118:GLU:OE2	39:LA:156:LYS:NZ	2.39	0.48
40:LB:37:ARG:HA	40:LB:186:GLY:HA3	1.95	0.48
49:LL:6:ASN:O	54:LQ:164:ARG:NH1	2.45	0.48
51:LN:38:ARG:HG3	51:LN:39:ALA:N	2.28	0.48
51:LN:70:ASN:HD21	51:LN:93:LYS:HE3	1.78	0.48
57:LT:91:LEU:HD12	57:LT:96:ILE:HD11	1.95	0.48
1:C2:114:C:C4	1:C2:247:A:C6	3.01	0.48
1:C2:388:G:C6	1:C2:410:A:N1	2.82	0.48
1:C2:1565:C:OP1	24:SS:41:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C5:27:GLN:HE21	2:C5:31:MET:HE3	1.79	0.48
3:C1:398:A:O2'	3:C1:1416:C:OP1	2.22	0.48
3:C1:755:A:H2'	3:C1:756:U:H6	1.78	0.48
5:C3:8:C:H2'	5:C3:9:A:C8	2.48	0.48
5:C3:133:G:OP1	61:LX:94:GLN:NE2	2.47	0.48
9:SD:46:THR:CG2	9:SD:84:ILE:HG22	2.44	0.48
12:SG:76:LEU:HB2	12:SG:94:ARG:HE	1.77	0.48
12:SG:162:VAL:HB	12:SG:169:TYR:CE2	2.49	0.48
15:SJ:123:HIS:O	15:SJ:127:VAL:HG23	2.13	0.48
24:SS:45:LEU:HD12	24:SS:85:PHE:CE1	2.49	0.48
25:ST:67:MET:HB2	25:ST:68:ARG:NH1	2.28	0.48
26:SU:72:ASN:ND2	26:SU:74:GLU:OE1	2.42	0.48
32:Sa:39:MET:HE3	32:Sa:41:ILE:HD11	1.94	0.48
37:Sf:122:SER:HB2	37:Sf:148:TYR:OH	2.14	0.48
48:LJ:91:LEU:O	48:LJ:171:VAL:HA	2.13	0.48
52:LO:16:VAL:HG22	52:LO:41:LEU:HD13	1.95	0.48
52:LO:54:TYR:CE2	52:LO:58:LEU:HD13	2.49	0.48
55:LR:86:GLU:O	55:LR:86:GLU:HG3	2.13	0.48
66:Lc:34:LEU:HD23	66:Lc:59:TYR:HB3	1.95	0.48
68:Le:76:VAL:HG11	68:Le:82:LEU:HB2	1.95	0.48
1:C2:8:U:C4	1:C2:1140:G:O6	2.67	0.48
1:C2:139:C:N4	1:C2:266:A:N1	2.61	0.48
1:C2:237:C:N4	1:C2:834:G:N7	2.62	0.48
1:C2:1361:U:H2'	1:C2:1362:U:H3'	1.96	0.48
3:C1:904:A:H2	39:LA:15:ILE:HD11	1.79	0.48
3:C1:1015:U:O2'	3:C1:1016:C:OP1	2.25	0.48
3:C1:1744:G:H2'	3:C1:1745:C:C6	2.48	0.48
3:C1:1922:A:H2'	3:C1:1923:C:O4'	2.14	0.48
3:C1:2551:U:O4	39:LA:95:SER:N	2.47	0.48
3:C1:3324:C:O2'	67:Ld:105:GLN:HA	2.13	0.48
3:C1:3341:U:H4'	3:C1:3342:A:OP1	2.14	0.48
5:C3:142:C:OP1	51:LN:38:ARG:NH1	2.47	0.48
8:SC:35:TRP:O	8:SC:46:LYS:NZ	2.47	0.48
9:SD:225:TYR:H	38:Sg:228:LYS:NZ	2.12	0.48
16:SK:49:LEU:HG	16:SK:55:VAL:HG22	1.96	0.48
18:SM:89:ILE:HD11	18:SM:140:PHE:HD2	1.79	0.48
21:SP:44:ARG:NH2	21:SP:82:ASN:OD1	2.47	0.48
21:SP:72:LYS:CE	21:SP:106:GLU:HB2	2.43	0.48
24:SS:16:ARG:HB2	48:LJ:110:ILE:HD12	1.96	0.48
29:SX:75:GLN:OE1	29:SX:82:LYS:HE2	2.14	0.48
42:LD:226:TYR:HE2	42:LD:236:LEU:HD21	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:LI:125:LEU:HD23	47:LI:125:LEU:HA	1.71	0.48
48:LJ:92:ARG:HG2	48:LJ:172:LEU:HD23	1.96	0.48
54:LQ:176:ARG:N	64:La:51:GLY:HA2	2.28	0.48
58:LU:101:ASN:HA	58:LU:103:TYR:CZ	2.48	0.48
1:C2:329:G:H5''	14:SI:98:LYS:HB3	1.96	0.48
1:C2:354:C:H5''	14:SI:16:ALA:HB2	1.96	0.48
1:C2:647:G:N2	1:C2:687:G:H1	2.12	0.48
1:C2:1009:U:P	20:SO:129:LYS:HZ1	2.36	0.48
3:C1:1025:A:H3'	3:C1:1026:A:C5'	2.44	0.48
3:C1:1059:G:H21	57:LT:61:THR:HG1	1.61	0.48
3:C1:1354:G:C2	43:LE:9:TRP:HB2	2.49	0.48
3:C1:1619:A:C2	3:C1:1826:C:C2	3.01	0.48
3:C1:3303:G:C6	3:C1:3305:A:C2	3.01	0.48
9:SD:72:LEU:HD23	9:SD:75:LYS:HE3	1.95	0.48
16:SK:26:ASP:O	16:SK:29:GLN:HG2	2.14	0.48
38:Sg:82:SER:O	38:Sg:89:LEU:HA	2.13	0.48
40:LB:211:GLN:HG3	40:LB:283:TYR:O	2.13	0.48
44:LF:164:SER:O	44:LF:164:SER:OG	2.30	0.48
48:LJ:109:HIS:HB2	48:LJ:125:MET:CE	2.44	0.48
61:LX:57:LEU:HD12	61:LX:62:VAL:HG22	1.96	0.48
63:LZ:41:ALA:HB2	63:LZ:77:TYR:HE1	1.77	0.48
68:Le:73:THR:CG2	68:Le:95:GLU:HG3	2.44	0.48
69:Lf:18:ARG:HA	69:Lf:23:ASN:HA	1.96	0.48
1:C2:565:C:H5''	1:C2:566:C:C5	2.48	0.48
1:C2:895:G:C5	1:C2:896:U:N3	2.82	0.48
1:C2:1491:U:H4'	1:C2:1492:A:H5''	1.96	0.48
1:C2:1685:G:C6	1:C2:1717:G:C6	3.01	0.48
3:C1:639:G:OP1	68:Le:37:GLY:HA3	2.14	0.48
3:C1:849:C:H2'	3:C1:850:U:H6	1.78	0.48
3:C1:1274:A:H2'	3:C1:1275:C:H6	1.74	0.48
3:C1:1807:G:OP1	63:LZ:133:LYS:HE2	2.14	0.48
3:C1:1809:A:H2'	3:C1:1810:A:O4'	2.14	0.48
3:C1:3165:A:H2'	3:C1:3166:C:C6	2.49	0.48
6:SA:147:THR:HB	6:SA:151:SER:OG	2.14	0.48
9:SD:104:SER:O	9:SD:108:LYS:HD3	2.14	0.48
10:SE:191:ARG:HD3	10:SE:218:PHE:CE1	2.49	0.48
12:SG:214:LYS:O	12:SG:217:SER:OG	2.27	0.48
14:SI:76:THR:HG21	14:SI:105:ASP:O	2.13	0.48
17:SL:116:ARG:HD3	55:LR:151:ARG:HH22	1.79	0.48
18:SM:44:GLY:HA3	18:SM:47:GLU:OE2	2.14	0.48
19:SN:124:ARG:O	19:SN:127:ARG:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:SQ:39:VAL:HG13	22:SQ:41:PRO:HD2	1.94	0.48
33:Sb:40:CYS:SG	33:Sb:41:LEU:N	2.82	0.48
38:Sg:39:ASP:OD1	38:Sg:39:ASP:N	2.42	0.48
38:Sg:134:TRP:CZ3	38:Sg:140:CYS:HB2	2.49	0.48
38:Sg:256:THR:HG22	38:Sg:257:ALA:H	1.78	0.48
62:LY:57:LEU:HD13	62:LY:67:GLU:HG2	1.96	0.48
62:LY:100:HIS:CD2	62:LY:101:PRO:HD2	2.49	0.48
1:C2:63:G:N2	1:C2:88:U:H1'	2.29	0.48
1:C2:812:A:H62	1:C2:858:G:H2'	1.77	0.48
3:C1:351:A:N6	75:Ll:37:TYR:O	2.41	0.48
3:C1:1057:A:OP1	44:LF:98:LYS:NZ	2.47	0.48
3:C1:2769:A:H5''	78:Lo:80:ARG:HD2	1.96	0.48
5:C3:141:C:O2	51:LN:112:ASN:ND2	2.46	0.48
13:SH:93:LEU:HD23	13:SH:93:LEU:HA	1.65	0.48
18:SM:108:ARG:O	18:SM:110:GLY:N	2.46	0.48
24:SS:32:LEU:HD13	24:SS:35:ILE:HD12	1.95	0.48
38:Sg:105:GLY:HA3	38:Sg:134:TRP:HZ2	1.79	0.48
40:LB:218:ILE:HG12	40:LB:276:THR:HG23	1.95	0.48
42:LD:129:TYR:HE1	42:LD:175:HIS:CD2	2.32	0.48
43:LE:36:PRO:HB3	43:LE:55:LEU:O	2.14	0.48
48:LJ:97:SER:OG	48:LJ:99:THR:HG22	2.13	0.48
63:LZ:16:GLY:C	63:LZ:18:TYR:H	2.21	0.48
66:Lc:40:LYS:NZ	66:Lc:93:LEU:O	2.27	0.48
69:Lf:27:VAL:HG11	69:Lf:82:ARG:HD3	1.96	0.48
1:C2:759:U:H2'	1:C2:760:A:H8	1.78	0.47
1:C2:1208:A:H4'	1:C2:1270:G:P	2.53	0.47
1:C2:1209:C:H2'	1:C2:1210:C:C6	2.49	0.47
1:C2:1334:U:H2'	1:C2:1335:U:O4'	2.14	0.47
3:C1:805:G:H2'	3:C1:936:A:H61	1.79	0.47
3:C1:1348:U:C5'	3:C1:1355:A:H61	2.27	0.47
3:C1:1479:U:H2'	3:C1:1480:G:H5'	1.96	0.47
3:C1:1597:C:H2'	3:C1:1598:G:C8	2.49	0.47
3:C1:1639:C:OP1	70:Lg:52:GLN:HB3	2.14	0.47
3:C1:1757:A:C6	3:C1:1769:G:C6	3.02	0.47
3:C1:2656:A:H4'	78:Lo:98:LYS:HD2	1.96	0.47
3:C1:2748:A:H1'	42:LD:36:LEU:HD23	1.95	0.47
3:C1:3158:G:H2'	3:C1:3159:C:C6	2.47	0.47
7:SB:83:LYS:O	7:SB:103:MET:HG2	2.13	0.47
9:SD:71:LEU:O	9:SD:75:LYS:HG2	2.13	0.47
11:SF:163:SER:HB3	34:Sc:46:GLY:HA3	1.96	0.47
13:SH:107:ARG:HH11	13:SH:108:GLN:H	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:SI:167:ALA:HA	14:SI:183:ILE:HA	1.95	0.47
24:SS:32:LEU:O	24:SS:35:ILE:N	2.46	0.47
26:SU:70:THR:OG1	26:SU:71:PRO:O	2.24	0.47
29:SX:14:LYS:HE2	29:SX:18:HIS:NE2	2.29	0.47
46:LH:132:VAL:HG21	46:LH:157:ASN:HD22	1.77	0.47
52:LO:78:ARG:HD3	52:LO:78:ARG:HA	1.75	0.47
1:C2:12:U:H2'	1:C2:13:C:C6	2.48	0.47
1:C2:191:C:O2'	1:C2:192:U:O5'	2.27	0.47
1:C2:400:A:H5''	14:SI:25:ARG:HA	1.96	0.47
1:C2:569:C:H5''	29:SX:89:ASN:ND2	2.29	0.47
1:C2:781:U:H6	1:C2:782:U:H3	1.62	0.47
1:C2:791:A:H2'	1:C2:792:U:C6	2.49	0.47
1:C2:1492:A:HO2'	1:C2:1493:A:P	2.35	0.47
1:C2:1509:C:H2'	1:C2:1510:U:O4'	2.14	0.47
1:C2:1649:G:H2'	1:C2:1650:U:C6	2.49	0.47
3:C1:1097:G:H4'	57:LT:129:LYS:HE2	1.96	0.47
3:C1:1671:C:H5''	55:LR:60:LYS:NZ	2.28	0.47
3:C1:2203:U:H2'	3:C1:2204:C:C6	2.49	0.47
3:C1:2206:G:N2	3:C1:2207:A:N1	2.62	0.47
3:C1:2439:A:H2'	3:C1:2440:G:O4'	2.14	0.47
5:C3:125:U:O2'	5:C3:126:A:H5'	2.14	0.47
14:SI:116:HIS:HD2	14:SI:117:TYR:CZ	2.32	0.47
18:SM:46:ARG:HH21	37:Sf:143:LYS:HE2	1.79	0.47
24:SS:113:LEU:C	24:SS:117:LYS:HZ2	2.21	0.47
27:SV:10:GLU:HG3	27:SV:10:GLU:O	2.14	0.47
28:SW:6:VAL:HG23	28:SW:29:PRO:HD2	1.96	0.47
39:LA:22:LEU:HB3	39:LA:52:SER:OG	2.14	0.47
39:LA:51:ASP:HB2	39:LA:58:LEU:HG	1.96	0.47
47:LI:3:ARG:NH2	47:LI:63:GLU:OE2	2.47	0.47
48:LJ:141:ARG:NH2	48:LJ:144:CYS:O	2.44	0.47
58:LU:80:THR:O	58:LU:84:LEU:HG	2.14	0.47
59:LV:39:VAL:HG12	59:LV:40:LYS:N	2.29	0.47
1:C2:41:A:O2'	1:C2:437:A:O2'	2.14	0.47
1:C2:332:U:P	14:SI:56:ARG:HH22	2.37	0.47
1:C2:433:C:H2'	1:C2:434:G:O4'	2.14	0.47
1:C2:843:U:H2'	1:C2:844:A:C8	2.50	0.47
1:C2:1237:G:C2	1:C2:1238:A:C5	3.03	0.47
1:C2:1580:C:H2'	1:C2:1581:C:C6	2.48	0.47
1:C2:1645:G:H2'	1:C2:1646:C:C6	2.50	0.47
3:C1:1273:A:H3'	3:C1:1274:A:H8	1.79	0.47
3:C1:1765:U:H4'	3:C1:1765:U:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2507:C:C2	3:C1:2508:U:C5	3.02	0.47
3:C1:3000:A:H2'	3:C1:3001:C:H6	1.79	0.47
4:C4:60:G:H2'	4:C4:61:G:C8	2.48	0.47
7:SB:32:ILE:HG22	7:SB:96:LEU:HD11	1.97	0.47
8:SC:82:ASN:OD1	8:SC:83:ILE:N	2.47	0.47
9:SD:54:ARG:NE	9:SD:57:ASP:OD2	2.36	0.47
25:ST:23:GLN:NE2	25:ST:51:GLU:O	2.47	0.47
30:SY:15:ASN:HD22	30:SY:20:ARG:HE	1.62	0.47
38:Sg:25:THR:OG1	38:Sg:26:SER:N	2.45	0.47
41:LC:206:LEU:HD12	41:LC:226:GLU:O	2.13	0.47
47:LI:12:GLN:HG2	47:LI:59:GLN:HG3	1.95	0.47
48:LJ:87:LYS:O	48:LJ:88:GLU:HG2	2.14	0.47
73:Lj:60:GLY:HA2	73:Lj:64:MET:SD	2.54	0.47
1:C2:216:U:O3'	1:C2:830:U:O2'	2.30	0.47
1:C2:513:U:C4	15:SJ:171:ARG:NH1	2.80	0.47
1:C2:1044:U:H2'	1:C2:1045:C:C6	2.50	0.47
1:C2:1298:U:O3'	8:SC:212:LYS:NZ	2.47	0.47
1:C2:1311:U:N3	1:C2:1314:U:OP2	2.36	0.47
3:C1:1310:G:O2'	3:C1:2380:U:O2'	2.16	0.47
3:C1:1560:G:C6	3:C1:1580:A:N1	2.82	0.47
3:C1:1711:C:H2'	3:C1:1712:G:O4'	2.14	0.47
3:C1:2618:G:O2'	3:C1:2865:U:OP1	2.18	0.47
3:C1:2828:G:HO2'	47:LI:4:ARG:HH11	1.54	0.47
9:SD:195:SER:HB2	9:SD:200:LYS:HA	1.96	0.47
11:SF:140:THR:HG23	11:SF:171:ALA:HA	1.95	0.47
13:SH:9:LEU:HD11	13:SH:17:GLU:HG2	1.96	0.47
13:SH:107:ARG:NH1	13:SH:108:GLN:H	2.11	0.47
18:SM:63:VAL:HG21	18:SM:66:VAL:CG1	2.45	0.47
20:SO:42:VAL:CG1	20:SO:67:VAL:HG23	2.42	0.47
22:SQ:58:ASP:OD1	22:SQ:59:LYS:NZ	2.43	0.47
23:SR:43:SER:HB2	23:SR:46:LEU:HB3	1.96	0.47
24:SS:96:LYS:HB2	24:SS:98:TYR:CZ	2.49	0.47
26:SU:84:MET:HB2	35:Sd:52:PHE:HD1	1.78	0.47
29:SX:50:LYS:O	29:SX:77:ILE:HG22	2.13	0.47
30:SY:106:GLN:O	30:SY:110:GLN:HG3	2.14	0.47
31:SZ:54:VAL:HG12	31:SZ:55:PRO:HD3	1.97	0.47
32:Sa:62:TYR:CG	32:Sa:63:ALA:N	2.82	0.47
34:Sc:32:PHE:CZ	34:Sc:59:SER:HB3	2.50	0.47
38:Sg:90:ARG:HD3	38:Sg:92:TRP:HE1	1.80	0.47
38:Sg:92:TRP:CD1	38:Sg:99:THR:HA	2.42	0.47
45:LG:160:ILE:O	45:LG:164:VAL:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:LL:93:ILE:HG22	49:LL:94:GLY:H	1.79	0.47
53:LP:126:ARG:O	53:LP:127:ARG:HG3	2.14	0.47
1:C2:15:U:H2'	1:C2:16:G:O4'	2.15	0.47
1:C2:743:U:C4	1:C2:809:A:C2	3.02	0.47
1:C2:1132:A:OP1	29:SX:30:LYS:HE2	2.14	0.47
1:C2:1255:G:H4'	1:C2:1256:A:OP1	2.15	0.47
1:C2:1454:G:C6	1:C2:1455:G:C6	3.02	0.47
1:C2:1617:U:H2'	1:C2:1618:C:C6	2.50	0.47
3:C1:675:C:O2'	3:C1:679:U:OP1	2.25	0.47
3:C1:710:A:H2'	3:C1:711:A:C8	2.49	0.47
3:C1:2748:A:O2'	42:LD:48:LYS:NZ	2.43	0.47
10:SE:127:LYS:HG3	10:SE:142:HIS:HA	1.97	0.47
23:SR:33:ARG:NH2	38:Sg:109:ASP:OD2	2.47	0.47
26:SU:53:LYS:HE3	26:SU:92:ASP:OD1	2.15	0.47
32:Sa:46:GLU:O	32:Sa:49:ALA:N	2.30	0.47
38:Sg:64:HIS:CE1	38:Sg:84:SER:HB3	2.50	0.47
38:Sg:90:ARG:HB3	38:Sg:92:TRP:NE1	2.28	0.47
38:Sg:170:ILE:HD12	38:Sg:202:LEU:HG	1.96	0.47
39:LA:56:ALA:N	39:LA:130:SER:OG	2.48	0.47
39:LA:104:LEU:HA	39:LA:107:VAL:HG12	1.96	0.47
41:LC:8:VAL:CG2	41:LC:18:ASN:HB2	2.44	0.47
43:LE:52:VAL:HG23	43:LE:67:GLY:HA2	1.96	0.47
44:LF:23:ALA:O	44:LF:26:VAL:HG12	2.14	0.47
45:LG:81:THR:O	45:LG:82:LEU:HB2	2.13	0.47
46:LH:7:GLU:O	46:LH:8:GLN:NE2	2.48	0.47
52:LO:110:PRO:O	52:LO:113:ASP:HB3	2.15	0.47
58:LU:50:LEU:HG	58:LU:54:VAL:HB	1.96	0.47
66:Lc:22:LYS:HG3	66:Lc:94:GLU:HB3	1.96	0.47
70:Lg:71:THR:OG1	70:Lg:72:VAL:N	2.46	0.47
1:C2:103:A:H4'	1:C2:105:A:C8	2.49	0.47
1:C2:488:G:H1'	1:C2:500:C:H42	1.80	0.47
1:C2:1042:G:C2	1:C2:1077:C:O2	2.67	0.47
1:C2:1252:C:H2'	1:C2:1253:U:O4'	2.13	0.47
1:C2:1508:U:H2'	1:C2:1509:C:C6	2.50	0.47
3:C1:1062:A:O2'	3:C1:1063:G:OP2	2.23	0.47
3:C1:1724:U:H1'	3:C1:1725:C:C6	2.49	0.47
3:C1:2819:A:OP1	3:C1:2866:U:O2'	2.17	0.47
3:C1:3028:G:H2'	3:C1:3029:A:C8	2.50	0.47
3:C1:3213:A:H2'	3:C1:3214:U:O4'	2.13	0.47
21:SP:15:HIS:HB3	21:SP:22:LEU:HD12	1.96	0.47
22:SQ:73:GLY:O	22:SQ:77:GLN:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:LF:87:VAL:HG21	44:LF:243:MET:HE1	1.95	0.47
50:LM:22:LEU:O	50:LM:64:VAL:HG12	2.14	0.47
64:La:114:GLY:O	64:La:137:LYS:NZ	2.47	0.47
66:Lc:17:VAL:HG11	66:Lc:92:ILE:HD12	1.96	0.47
69:Lf:19:SER:OG	69:Lf:20:LYS:N	2.48	0.47
1:C2:503:G:H2'	1:C2:504:U:C6	2.49	0.47
1:C2:587:C:H2'	1:C2:588:U:C6	2.50	0.47
1:C2:749:U:O2	1:C2:801:G:C2	2.67	0.47
1:C2:753:A:OP1	10:SE:186:GLY:HA3	2.14	0.47
1:C2:810:G:C4	13:SH:111:LYS:HB2	2.50	0.47
1:C2:1044:U:H2'	1:C2:1045:C:H6	1.79	0.47
1:C2:1107:G:O2'	1:C2:1108:G:H5'	2.15	0.47
1:C2:1213:G:H2'	1:C2:1214:U:H6	1.79	0.47
1:C2:1303:U:O2'	1:C2:1322:A:OP2	2.29	0.47
1:C2:1661:U:H2'	1:C2:1662:G:O4'	2.14	0.47
1:C2:1789:G:OP2	20:SO:132:ARG:NH1	2.46	0.47
2:C5:29:ALA:O	2:C5:32:GLU:HG3	2.14	0.47
3:C1:96:G:OP1	49:LL:15:ARG:NH2	2.47	0.47
3:C1:177:U:C2	3:C1:178:U:C6	3.03	0.47
3:C1:951:A:OP2	3:C1:1367:G:N2	2.34	0.47
3:C1:1746:U:C2	3:C1:1747:G:C8	3.03	0.47
3:C1:1818:U:H2'	3:C1:1819:U:C6	2.48	0.47
3:C1:1857:C:O2	70:Lg:4:ARG:HB3	2.14	0.47
4:C4:37:G:N2	4:C4:41:G:N3	2.63	0.47
8:SC:142:GLY:N	8:SC:153:SER:O	2.29	0.47
9:SD:93:ASP:HB3	9:SD:96:LEU:HD12	1.96	0.47
13:SH:45:SER:O	13:SH:46:ILE:HD13	2.15	0.47
18:SM:43:ARG:NH2	18:SM:120:VAL:O	2.47	0.47
20:SO:61:MET:HE1	34:Sc:60:GLU:O	2.14	0.47
21:SP:71:GLU:OE1	21:SP:72:LYS:HG2	2.15	0.47
22:SQ:109:PHE:CD1	22:SQ:116:LEU:HD13	2.49	0.47
26:SU:40:ASN:O	26:SU:44:ASN:ND2	2.47	0.47
26:SU:59:PRO:O	26:SU:61:LYS:NZ	2.31	0.47
35:Sd:33:LYS:HG2	35:Sd:34:TYR:CD2	2.50	0.47
42:LD:260:PHE:HA	42:LD:264:GLN:OE1	2.13	0.47
42:LD:270:LYS:O	42:LD:271:LYS:HE2	2.15	0.47
46:LH:174:LYS:HE2	76:Lm:127:LEU:HD21	1.97	0.47
48:LJ:53:THR:HG22	48:LJ:60:ARG:CA	2.44	0.47
49:LL:6:ASN:O	49:LL:7:LEU:HD23	2.15	0.47
49:LL:140:SER:OG	49:LL:143:ALA:N	2.46	0.47
51:LN:68:ARG:HH11	51:LN:128:LYS:HE3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:LQ:72:LYS:HE2	54:LQ:72:LYS:HB2	1.78	0.47
61:LX:77:GLU:HA	61:LX:133:LEU:CD1	2.45	0.47
62:LY:28:ARG:HD2	62:LY:75:ARG:NH2	2.30	0.47
62:LY:82:VAL:HG23	62:LY:85:VAL:HB	1.95	0.47
63:LZ:83:THR:HB	70:Lg:93:PHE:HZ	1.80	0.47
64:La:15:VAL:O	64:La:16:SER:OG	2.31	0.47
64:La:113:LEU:HD23	64:La:113:LEU:HA	1.63	0.47
70:Lg:46:ASP:OD1	70:Lg:46:ASP:N	2.48	0.47
73:Lj:28:HIS:O	73:Lj:32:LYS:N	2.48	0.47
1:C2:195:G:O2'	1:C2:196:G:H5'	2.14	0.47
1:C2:226:A:H2'	1:C2:227:U:O4'	2.15	0.47
1:C2:742:U:O2'	1:C2:744:U:OP2	2.20	0.47
3:C1:541:U:C2	3:C1:542:G:N7	2.83	0.47
3:C1:1201:C:H42	3:C1:2857:C:H5''	1.80	0.47
3:C1:1448:U:H4'	53:LP:66:SER:HB2	1.96	0.47
3:C1:1628:C:H5'	3:C1:1813:A:H62	1.79	0.47
3:C1:2137:U:OP2	3:C1:2142:A:N6	2.39	0.47
9:SD:80:ALA:O	9:SD:83:THR:OG1	2.29	0.47
10:SE:11:ARG:C	10:SE:13:ALA:H	2.23	0.47
17:SL:109:VAL:HG12	17:SL:137:PHE:HB2	1.97	0.47
38:Sg:149:ASP:CG	38:Sg:150:TRP:H	2.21	0.47
48:LJ:102:PHE:CZ	48:LJ:129:VAL:HG21	2.50	0.47
48:LJ:125:MET:HG3	48:LJ:127:PHE:HE1	1.79	0.47
50:LM:113:THR:CG2	50:LM:116:GLU:HG3	2.45	0.47
51:LN:30:TYR:HD2	51:LN:129:TYR:HD2	1.62	0.47
62:LY:59:VAL:HG22	62:LY:103:LYS:O	2.15	0.47
70:Lg:105:VAL:O	70:Lg:109:THR:HG22	2.14	0.47
73:Lj:31:LYS:O	73:Lj:33:THR:HG23	2.15	0.47
75:Ll:20:ASN:ND2	75:Ll:41:ARG:HH21	2.12	0.47
1:C2:591:A:C6	1:C2:592:A:N6	2.83	0.47
1:C2:1202:A:N3	1:C2:1202:A:H3'	2.30	0.47
1:C2:1515:A:O2'	1:C2:1518:C:N4	2.47	0.47
3:C1:54:C:O2'	3:C1:1547:G:O2'	2.31	0.47
3:C1:197:G:N2	3:C1:372:A:C8	2.83	0.47
3:C1:273:A:N6	3:C1:293:C:H42	2.12	0.47
3:C1:1201:C:N4	3:C1:2857:C:H5''	2.30	0.47
3:C1:1691:U:C2	3:C1:1692:U:C5	3.03	0.47
3:C1:1747:G:N2	74:Lk:2:ALA:HB1	2.27	0.47
8:SC:143:TYR:CE2	8:SC:151:PRO:HG3	2.50	0.47
8:SC:208:GLU:H	8:SC:208:GLU:CD	2.22	0.47
10:SE:100:ARG:HE	10:SE:114:ILE:HD13	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:SN:100:LYS:HB2	19:SN:100:LYS:HE2	1.61	0.47
25:ST:61:VAL:HG13	25:ST:76:LEU:HD11	1.96	0.47
26:SU:36:ASN:O	26:SU:39:SER:OG	2.18	0.47
29:SX:107:PHE:HE1	29:SX:123:LYS:HB3	1.79	0.47
37:Sf:130:VAL:HG13	37:Sf:143:LYS:N	2.25	0.47
45:LG:82:LEU:HD13	45:LG:222:PHE:HE2	1.80	0.47
49:LL:140:SER:OG	49:LL:141:ALA:N	2.48	0.47
52:LO:27:LEU:HD11	52:LO:102:LEU:HB2	1.96	0.47
79:Lp:50:GLY:O	79:Lp:54:ILE:HG13	2.15	0.47
1:C2:852:C:C6	1:C2:852:C:C4'	2.98	0.47
1:C2:938:G:N2	1:C2:941:A:OP2	2.45	0.47
1:C2:1125:A:C5	1:C2:1126:G:H1'	2.50	0.47
1:C2:1251:U:O2'	1:C2:1252:C:H6	1.97	0.47
1:C2:1266:U:H2'	1:C2:1267:G:H8	1.79	0.47
1:C2:1454:G:H2'	1:C2:1455:G:C8	2.50	0.47
1:C2:1551:U:H2'	1:C2:1552:U:C6	2.50	0.47
3:C1:252:U:H4'	3:C1:253:A:H5'	1.97	0.47
3:C1:307:A:H2'	3:C1:308:A:H8	1.79	0.47
3:C1:1227:C:H2'	3:C1:1228:C:C6	2.50	0.47
3:C1:1412:G:OP1	68:Le:105:ARG:NH2	2.48	0.47
3:C1:2213:A:H2'	3:C1:2214:A:H8	1.80	0.47
3:C1:3010:U:O2'	3:C1:3011:A:H2'	2.14	0.47
5:C3:68:G:H2'	5:C3:69:U:H6	1.79	0.47
7:SB:136:ARG:HG2	7:SB:138:PHE:CE1	2.48	0.47
12:SG:203:GLU:O	12:SG:207:GLU:HG2	2.15	0.47
19:SN:29:SER:HG	19:SN:32:SER:HG	1.43	0.47
23:SR:108:ASP:HA	23:SR:111:LYS:CE	2.45	0.47
24:SS:62:THR:O	24:SS:66:LEU:HG	2.14	0.47
28:SW:37:PHE:CE2	28:SW:41:MET:HE3	2.50	0.47
37:Sf:121:CYS:SG	37:Sf:130:VAL:HG11	2.55	0.47
53:LP:153:LYS:HG2	53:LP:154:GLU:N	2.30	0.47
55:LR:99:LEU:HD23	55:LR:99:LEU:HA	1.52	0.47
78:Lo:71:ARG:HH11	78:Lo:80:ARG:HD3	1.80	0.47
1:C2:430:G:H2'	1:C2:431:C:H6	1.79	0.46
1:C2:752:A:H2'	1:C2:753:A:C8	2.50	0.46
1:C2:1180:C:O2'	21:SP:128:HIS:O	2.25	0.46
1:C2:1356:U:H2'	1:C2:1357:A:C8	2.49	0.46
1:C2:1719:A:H2'	1:C2:1720:G:O4'	2.15	0.46
2:C5:59:LYS:O	2:C5:63:LYS:HG2	2.14	0.46
3:C1:13:A:H4'	61:LX:39:LYS:HE3	1.97	0.46
3:C1:127:G:H2'	3:C1:128:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1515:A:H2'	3:C1:1516:C:C6	2.49	0.46
3:C1:1688:U:H2'	3:C1:1689:U:C6	2.50	0.46
3:C1:2217:U:H2'	3:C1:2218:G:H8	1.79	0.46
3:C1:2898:G:N7	76:Lm:125:LYS:NZ	2.58	0.46
4:C4:47:C:OP1	42:LD:94:ASN:HB2	2.16	0.46
10:SE:147:ILE:HG13	10:SE:169:ILE:HD11	1.97	0.46
11:SF:131:GLN:O	11:SF:131:GLN:NE2	2.48	0.46
18:SM:42:ALA:HB3	18:SM:122:VAL:HB	1.97	0.46
24:SS:132:ARG:NE	24:SS:132:ARG:HA	2.30	0.46
28:SW:8:ALA:CB	28:SW:74:VAL:HG11	2.45	0.46
37:Sf:130:VAL:HG12	37:Sf:142:GLY:H	1.81	0.46
38:Sg:42:LEU:HD22	38:Sg:92:TRP:HZ3	1.80	0.46
38:Sg:85:TRP:C	38:Sg:87:LYS:H	2.23	0.46
45:LG:140:VAL:HG22	45:LG:166:LEU:HD21	1.97	0.46
46:LH:76:ASP:O	46:LH:80:THR:HG23	2.15	0.46
52:LO:126:VAL:O	56:LS:154:HIS:NE2	2.46	0.46
67:Ld:29:ALA:HB3	67:Ld:30:PRO:HD3	1.97	0.46
1:C2:844:A:H2'	1:C2:845:G:H8	1.76	0.46
1:C2:1503:A:O2'	25:ST:37:VAL:HG12	2.15	0.46
1:C2:1795:U:OP2	32:Sa:4:LYS:NZ	2.35	0.46
3:C1:221:A:O2'	3:C1:223:U:OP2	2.30	0.46
3:C1:313:A:H2'	3:C1:314:U:O4'	2.14	0.46
3:C1:771:A:H2'	3:C1:772:U:O4'	2.16	0.46
3:C1:2144:A:H1'	3:C1:2281:A:N6	2.30	0.46
3:C1:2738:A:H2'	3:C1:2739:A:C8	2.50	0.46
3:C1:2881:C:H2'	3:C1:2882:U:C6	2.50	0.46
5:C3:75:G:P	75:Ll:31:THR:HG1	2.35	0.46
9:SD:44:THR:O	9:SD:44:THR:OG1	2.31	0.46
17:SL:129:ARG:O	17:SL:130:PRO:C	2.58	0.46
22:SQ:12:LYS:N	22:SQ:83:GLN:OE1	2.47	0.46
23:SR:58:MET:HE2	23:SR:58:MET:HB2	1.80	0.46
24:SS:120:ARG:CZ	24:SS:120:ARG:HB3	2.45	0.46
32:Sa:27:SER:O	32:Sa:27:SER:OG	2.30	0.46
38:Sg:266:ASP:N	38:Sg:266:ASP:OD1	2.48	0.46
39:LA:211:HIS:CD2	39:LA:219:ILE:HG23	2.51	0.46
44:LF:26:VAL:HA	44:LF:29:GLU:HG2	1.96	0.46
46:LH:86:TYR:CE2	46:LH:151:VAL:HB	2.50	0.46
47:LI:191:LYS:HB2	47:LI:213:PHE:HE2	1.81	0.46
52:LO:25:LYS:HD2	52:LO:25:LYS:HA	1.74	0.46
56:LS:1:MET:H3	56:LS:32:SER:HB3	1.79	0.46
59:LV:20:GLY:N	59:LV:36:ILE:O	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Lf:41:ALA:O	69:Lf:44:TYR:N	2.48	0.46
73:Lj:17:THR:OG1	73:Lj:18:LEU:N	2.46	0.46
74:Lk:26:LYS:HG3	74:Lk:27:ILE:N	2.31	0.46
1:C2:477:A:OP1	36:Se:28:LYS:NZ	2.34	0.46
1:C2:569:C:H5''	29:SX:89:ASN:HD22	1.81	0.46
1:C2:600:U:H1'	29:SX:47:SER:HB3	1.98	0.46
1:C2:749:U:C4	1:C2:801:G:C6	3.04	0.46
1:C2:846:G:H2'	1:C2:847:A:C8	2.50	0.46
1:C2:1659:A:H2'	1:C2:1660:A:C8	2.50	0.46
3:C1:65:A:H4'	3:C1:66:A:O5'	2.16	0.46
3:C1:245:U:H2'	3:C1:246:U:C6	2.49	0.46
3:C1:761:A:C2	3:C1:771:A:H1'	2.50	0.46
3:C1:991:G:H2'	3:C1:992:A:O4'	2.15	0.46
3:C1:1307:G:O2'	3:C1:1308:A:OP2	2.30	0.46
3:C1:2258:U:C2	3:C1:2259:A:C8	3.03	0.46
3:C1:2840:C:H2'	3:C1:2841:G:O4'	2.15	0.46
3:C1:3063:C:H2'	3:C1:3064:U:H6	1.81	0.46
5:C3:154:C:H2'	5:C3:155:A:C8	2.51	0.46
6:SA:143:VAL:O	6:SA:157:ASP:HB2	2.16	0.46
11:SF:61:TYR:HE2	11:SF:164:PRO:HG2	1.81	0.46
11:SF:63:GLN:HB3	11:SF:88:PRO:HA	1.98	0.46
12:SG:31:ARG:HG3	12:SG:32:ILE:O	2.15	0.46
14:SI:193:LEU:HD23	14:SI:193:LEU:HA	1.76	0.46
15:SJ:154:LYS:HG3	15:SJ:155:HIS:CD2	2.47	0.46
16:SK:10:LYS:HE2	16:SK:36:ASP:HB3	1.97	0.46
19:SN:132:VAL:O	19:SN:132:VAL:HG12	2.16	0.46
34:Sc:11:LYS:NZ	34:Sc:53:ILE:HG13	2.30	0.46
38:Sg:276:PRO:HG3	38:Sg:313:TRP:CH2	2.50	0.46
40:LB:322:ILE:HG22	40:LB:324:VAL:HG23	1.96	0.46
42:LD:17:GLN:NE2	57:LT:22:HIS:O	2.45	0.46
43:LE:28:GLN:HG2	43:LE:29:LYS:N	2.29	0.46
44:LF:127:LEU:HA	44:LF:130:ILE:HG22	1.98	0.46
45:LG:130:TYR:HD1	45:LG:202:GLU:HB3	1.80	0.46
47:LI:51:HIS:CD2	47:LI:168:SER:HB2	2.50	0.46
53:LP:30:ARG:HD2	53:LP:63:PHE:HE2	1.80	0.46
54:LQ:23:ASN:HB3	54:LQ:26:LEU:HB3	1.97	0.46
56:LS:28:ARG:HH11	56:LS:99:ARG:HH21	1.63	0.46
74:Lk:2:ALA:N	74:Lk:51:LEU:O	2.48	0.46
1:C2:333:A:OP1	14:SI:31:ARG:NH2	2.48	0.46
1:C2:513:U:OP1	15:SJ:133:HIS:NE2	2.49	0.46
1:C2:520:A:H3'	1:C2:521:A:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1561:U:H4'	1:C2:1599:C:H4'	1.96	0.46
3:C1:1187:C:O2'	3:C1:1295:G:N2	2.42	0.46
3:C1:1729:A:C6	66:Lc:49:PRO:HD3	2.51	0.46
3:C1:2205:U:O2'	3:C1:2206:G:H5'	2.15	0.46
3:C1:2289:U:H2'	3:C1:2290:C:C6	2.50	0.46
3:C1:2604:U:H2'	3:C1:2605:G:O4'	2.15	0.46
3:C1:2674:A:N6	48:LJ:124:GLY:O	2.49	0.46
3:C1:2960:C:H2'	3:C1:2961:G:H8	1.80	0.46
4:C4:61:G:C6	4:C4:62:U:C4	3.04	0.46
7:SB:48:VAL:CG2	7:SB:61:LEU:HD12	2.45	0.46
39:LA:36:GLU:HG3	39:LA:91:GLY:HA2	1.98	0.46
39:LA:177:LYS:HE3	79:Lp:26:VAL:HG23	1.98	0.46
40:LB:151:ILE:O	40:LB:155:ALA:HB3	2.15	0.46
59:LV:13:ILE:HD13	59:LV:54:LEU:HB3	1.96	0.46
70:Lg:61:GLN:HA	70:Lg:64:THR:HG22	1.96	0.46
1:C2:860:U:O4'	13:SH:114:ARG:HG3	2.15	0.46
1:C2:1659:A:H2'	1:C2:1660:A:H8	1.80	0.46
3:C1:847:A:OP2	3:C1:847:A:H8	1.99	0.46
3:C1:1658:G:H2'	3:C1:1659:U:C6	2.51	0.46
3:C1:3303:G:O2'	3:C1:3305:A:N6	2.47	0.46
6:SA:200:ASP:HA	6:SA:203:PHE:CD2	2.51	0.46
10:SE:21:ASP:N	10:SE:21:ASP:OD1	2.47	0.46
11:SF:108:LEU:HD21	22:SQ:44:LEU:HD11	1.96	0.46
13:SH:112:ARG:HH21	13:SH:117:THR:HA	1.80	0.46
21:SP:33:PHE:O	21:SP:37:ALA:HB2	2.16	0.46
24:SS:8:GLN:OE1	24:SS:8:GLN:N	2.48	0.46
26:SU:92:ASP:O	26:SU:93:LEU:HD12	2.15	0.46
26:SU:95:ALA:HB1	26:SU:99:ILE:CG2	2.45	0.46
39:LA:83:HIS:HB3	79:Lp:64:VAL:HG22	1.98	0.46
39:LA:230:VAL:HG22	39:LA:233:GLN:OE1	2.16	0.46
41:LC:99:MET:SD	41:LC:102:PRO:HA	2.56	0.46
48:LJ:131:MET:HE3	48:LJ:131:MET:HB2	1.67	0.46
48:LJ:162:TRP:CZ2	48:LJ:166:LYS:HD3	2.51	0.46
55:LR:156:ASN:ND2	55:LR:156:ASN:C	2.72	0.46
72:Li:33:ALA:HB1	72:Li:38:LYS:HE3	1.97	0.46
78:Lo:103:ALA:HB3	78:Lo:105:GLN:HE22	1.80	0.46
1:C2:264:G:H5''	1:C2:265:A:H5'	1.96	0.46
1:C2:524:U:N3	1:C2:527:A:OP2	2.39	0.46
1:C2:829:A:H4'	1:C2:830:U:OP1	2.14	0.46
1:C2:1239:U:H2'	1:C2:1240:U:C6	2.50	0.46
1:C2:1636:C:O2	1:C2:1765:A:N6	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:216:G:H4'	62:LY:19:TYR:CE2	2.50	0.46
3:C1:661:G:H4'	3:C1:662:U:C6	2.50	0.46
3:C1:717:C:OP1	3:C1:718:G:N2	2.49	0.46
3:C1:1208:U:H4'	3:C1:1209:G:OP1	2.14	0.46
3:C1:1260:A:H5'	3:C1:1280:C:H4'	1.98	0.46
3:C1:1327:C:H2'	3:C1:1328:C:H6	1.80	0.46
3:C1:1411:C:OP1	68:Le:98:HIS:N	2.47	0.46
3:C1:2255:A:OP2	3:C1:2261:G:N1	2.40	0.46
3:C1:2557:A:OP1	39:LA:69:TYR:OH	2.34	0.46
4:C4:11:A:N1	4:C4:67:G:O2'	2.46	0.46
6:SA:153:SER:O	6:SA:156:VAL:HG12	2.15	0.46
9:SD:38:GLU:HB2	9:SD:51:ARG:HH22	1.81	0.46
12:SG:98:ARG:HH11	12:SG:105:ASP:CG	2.23	0.46
16:SK:15:LEU:HD11	16:SK:21:VAL:HG22	1.98	0.46
18:SM:56:GLU:O	18:SM:124:LYS:HG3	2.15	0.46
21:SP:108:ARG:CZ	21:SP:109:PRO:HD3	2.46	0.46
22:SQ:13:LYS:HG3	22:SQ:14:LYS:H	1.80	0.46
25:ST:28:LEU:HD21	25:ST:54:PHE:CE2	2.50	0.46
42:LD:265:TYR:HA	42:LD:269:SER:OG	2.16	0.46
46:LH:55:VAL:HG23	46:LH:68:LEU:HD11	1.96	0.46
47:LI:210:ILE:HA	47:LI:217:PHE:CD1	2.50	0.46
49:LL:89:TYR:CZ	49:LL:93:ILE:HD11	2.50	0.46
51:LN:172:ARG:NH2	51:LN:174:ILE:HG13	2.30	0.46
63:LZ:42:LEU:HD23	63:LZ:96:VAL:HG12	1.97	0.46
63:LZ:108:GLU:O	63:LZ:112:LYS:HG3	2.15	0.46
1:C2:66:U:O2	12:SG:160:ARG:NE	2.49	0.46
1:C2:127:G:N2	1:C2:178:U:O2	2.48	0.46
1:C2:289:U:N3	1:C2:290:G:C8	2.83	0.46
1:C2:591:A:N6	1:C2:592:A:N6	2.64	0.46
3:C1:637:C:C2	3:C1:638:C:C5	3.03	0.46
3:C1:679:U:O5'	3:C1:679:U:H6	1.99	0.46
3:C1:1454:A:N6	3:C1:1879:A:O2'	2.49	0.46
3:C1:1573:G:C6	3:C1:1574:C:H1'	2.51	0.46
3:C1:1878:G:O2'	3:C1:1879:A:OP1	2.33	0.46
3:C1:2373:A:O2'	3:C1:2823:G:N2	2.44	0.46
3:C1:2696:A:H2'	3:C1:2697:A:C8	2.50	0.46
3:C1:3324:C:OP1	67:Ld:19:ARG:NH2	2.49	0.46
5:C3:58:G:O6	73:Lj:63:ARG:NH2	2.49	0.46
5:C3:60:U:OP1	61:LX:54:TYR:OH	2.15	0.46
9:SD:73:VAL:HG23	9:SD:84:ILE:HD11	1.97	0.46
9:SD:105:MET:HE1	9:SD:119:ALA:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:SG:147:LEU:HB3	12:SG:151:ASP:OD2	2.15	0.46
13:SH:107:ARG:HD2	13:SH:107:ARG:HA	1.61	0.46
24:SS:23:ASP:CG	24:SS:25:ASN:H	2.23	0.46
28:SW:5:SER:O	28:SW:8:ALA:N	2.48	0.46
43:LE:138:GLN:NE2	43:LE:142:ASP:HB2	2.30	0.46
43:LE:150:LYS:HB2	43:LE:150:LYS:HE3	1.76	0.46
44:LF:208:SER:OG	44:LF:209:ASN:N	2.47	0.46
52:LO:111:PRO:O	52:LO:115:LYS:HG2	2.15	0.46
56:LS:48:LEU:HB3	56:LS:49:HIS:HD2	1.81	0.46
64:La:21:ARG:NH1	68:Le:38:ILE:HG23	2.31	0.46
69:Lf:84:THR:HG23	69:Lf:84:THR:O	2.16	0.46
74:Lk:23:ALA:O	74:Lk:75:VAL:HA	2.16	0.46
1:C2:150:U:H2'	1:C2:151:G:C8	2.51	0.46
1:C2:189:C:O2'	1:C2:190:C:H5'	2.15	0.46
1:C2:410:A:H2'	1:C2:411:C:C6	2.51	0.46
1:C2:757:A:C5	1:C2:758:U:C6	3.04	0.46
1:C2:1454:G:C2	1:C2:1455:G:C2	3.03	0.46
2:C5:75:THR:O	2:C5:79:GLU:HG2	2.16	0.46
3:C1:75:G:H5''	49:LL:58:VAL:HG22	1.98	0.46
3:C1:408:A:N6	5:C3:15:G:H1'	2.31	0.46
3:C1:1428:A:OP2	64:La:2:PRO:HA	2.16	0.46
3:C1:2762:A:H2'	3:C1:2763:U:H6	1.80	0.46
3:C1:2939:G:OP2	40:LB:3:HIS:HB2	2.14	0.46
4:C4:13:A:O2'	4:C4:14:U:H5'	2.16	0.46
6:SA:107:PHE:HB2	6:SA:135:GLU:HG3	1.97	0.46
10:SE:251:GLU:O	10:SE:255:ARG:HG2	2.16	0.46
11:SF:184:PHE:CE2	11:SF:185:ARG:HG3	2.51	0.46
13:SH:17:GLU:OE1	13:SH:17:GLU:N	2.49	0.46
14:SI:87:ASN:CG	14:SI:89:GLU:HG2	2.41	0.46
21:SP:116:LEU:H	21:SP:116:LEU:HD12	1.81	0.46
25:ST:85:SER:C	25:ST:87:GLY:H	2.23	0.46
30:SY:83:LYS:NZ	30:SY:96:LEU:HB3	2.31	0.46
38:Sg:203:THR:HG23	38:Sg:245:PHE:HE2	1.80	0.46
39:LA:107:VAL:CG2	39:LA:111:THR:HG21	2.45	0.46
41:LC:264:SER:OG	41:LC:265:GLU:N	2.48	0.46
42:LD:21:ARG:O	42:LD:25:GLU:HG2	2.16	0.46
46:LH:9:GLN:HB3	46:LH:52:LEU:HD11	1.96	0.46
1:C2:36:C:N3	1:C2:473:A:C6	2.84	0.46
1:C2:206:A:C2'	1:C2:207:U:H5'	2.46	0.46
1:C2:751:G:C2	1:C2:799:A:C2	3.04	0.46
1:C2:1475:A:H2'	1:C2:1476:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:230:U:H2'	3:C1:231:G:O4'	2.16	0.46
3:C1:385:A:H2'	3:C1:386:A:C8	2.51	0.46
3:C1:1501:U:H2'	3:C1:1502:C:H6	1.81	0.46
3:C1:1761:C:H4'	3:C1:1762:C:OP1	2.16	0.46
3:C1:2885:C:C2	3:C1:2938:G:N2	2.84	0.46
3:C1:3129:A:C6	3:C1:3131:U:H1'	2.51	0.46
3:C1:3242:G:H5'	3:C1:3245:A:C8	2.42	0.46
3:C1:3345:G:C6	3:C1:3361:G:N2	2.84	0.46
15:SJ:126:ARG:HD2	15:SJ:144:PRO:HG2	1.98	0.46
24:SS:45:LEU:HD12	24:SS:85:PHE:CZ	2.51	0.46
24:SS:82:PRO:HG2	24:SS:85:PHE:HB2	1.98	0.46
25:ST:25:GLN:HE22	25:ST:27:LYS:HD3	1.81	0.46
40:LB:117:ARG:HA	40:LB:175:LYS:HG3	1.97	0.46
46:LH:143:GLU:O	46:LH:145:VAL:HG23	2.15	0.46
46:LH:188:THR:HG22	46:LH:189:GLU:H	1.81	0.46
48:LJ:45:PRO:HA	48:LJ:69:VAL:HG22	1.97	0.46
68:Le:32:TRP:CE2	68:Le:53:PRO:HD2	2.51	0.46
74:Lk:40:GLN:HG3	74:Lk:57:ASN:ND2	2.30	0.46
1:C2:276:C:H1'	1:C2:277:U:C5	2.51	0.46
1:C2:388:G:C6	1:C2:410:A:C6	3.04	0.46
1:C2:420:A:H2'	1:C2:421:A:C8	2.51	0.46
1:C2:453:U:H2'	1:C2:453:U:O2	2.15	0.46
1:C2:1273:G:H4'	1:C2:1274:C:H5''	1.98	0.46
1:C2:1566:U:N3	1:C2:1567:U:C5	2.84	0.46
3:C1:3:U:C4	5:C3:157:U:C2	3.04	0.46
3:C1:1259:A:N6	3:C1:1260:A:H61	2.11	0.46
3:C1:1824:U:H4'	74:Lk:17:ARG:HH21	1.81	0.46
3:C1:1846:C:N4	53:LP:134:GLY:O	2.46	0.46
3:C1:2748:A:C2	42:LD:35:ARG:HB2	2.51	0.46
3:C1:2987:A:H2'	3:C1:2988:C:C6	2.51	0.46
6:SA:33:GLN:HG3	6:SA:149:LEU:O	2.16	0.46
8:SC:231:ALA:O	27:SV:16:LYS:NZ	2.27	0.46
9:SD:194:LYS:HD2	9:SD:194:LYS:HA	1.78	0.46
21:SP:16:SER:HB3	21:SP:21:ASP:HA	1.98	0.46
24:SS:132:ARG:NH1	24:SS:145:ARG:HH22	2.12	0.46
32:Sa:11:ASN:OD1	32:Sa:11:ASN:N	2.47	0.46
36:Se:29:LYS:HE2	36:Se:29:LYS:HB2	1.63	0.46
38:Sg:251:TRP:HD1	38:Sg:264:SER:HA	1.81	0.46
39:LA:33:ASP:O	39:LA:37:ARG:HB2	2.15	0.46
41:LC:20:LEU:HD11	41:LC:252:GLU:HB2	1.97	0.46
41:LC:144:LYS:O	41:LC:145:ILE:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:LF:90:LYS:HD3	44:LF:220:PHE:CE1	2.51	0.46
48:LJ:16:LYS:HD2	48:LJ:70:THR:CG2	2.46	0.46
48:LJ:53:THR:HG22	48:LJ:61:ARG:H	1.81	0.46
52:LO:41:LEU:HD23	52:LO:41:LEU:HA	1.78	0.46
52:LO:124:LEU:HA	52:LO:124:LEU:HD23	1.69	0.46
52:LO:190:VAL:O	52:LO:194:LEU:HB2	2.16	0.46
63:LZ:5:LEU:HD13	63:LZ:77:TYR:CE2	2.51	0.46
69:Lf:49:ILE:HG12	69:Lf:100:ILE:HG12	1.98	0.46
72:Li:30:LYS:O	72:Li:32:ALA:N	2.48	0.46
1:C2:116:U:H2'	1:C2:117:U:C6	2.50	0.45
1:C2:1562:G:C5	1:C2:1563:C:C5	3.04	0.45
3:C1:817:A:H8	73:Lj:15:SER:HB2	1.80	0.45
3:C1:902:G:N3	3:C1:1535:A:H2	2.14	0.45
3:C1:3029:A:H8	3:C1:3029:A:O5'	1.99	0.45
3:C1:3223:A:H2'	3:C1:3224:G:O4'	2.16	0.45
8:SC:235:LEU:HD21	27:SV:54:ALA:HB2	1.97	0.45
11:SF:168:VAL:O	11:SF:172:ILE:HG13	2.16	0.45
13:SH:13:PRO:HA	13:SH:14:THR:HA	1.77	0.45
15:SJ:31:ALA:HB2	15:SJ:42:ILE:HD11	1.98	0.45
18:SM:98:GLY:HA2	18:SM:101:ALA:HB3	1.98	0.45
21:SP:75:PRO:CA	21:SP:93:VAL:HG13	2.46	0.45
22:SQ:112:TYR:O	22:SQ:112:TYR:CG	2.68	0.45
29:SX:42:PRO:HA	29:SX:81:LYS:HD2	1.99	0.45
32:Sa:41:ILE:HG22	32:Sa:66:LYS:HD3	1.98	0.45
40:LB:133:TYR:O	40:LB:136:LYS:HB2	2.16	0.45
48:LJ:17:LEU:HD21	48:LJ:19:LEU:HD21	1.98	0.45
48:LJ:90:GLN:OE1	48:LJ:91:LEU:N	2.50	0.45
49:LL:21:ARG:HB3	51:LN:196:THR:HA	1.98	0.45
49:LL:141:ALA:HA	49:LL:144:THR:HB	1.97	0.45
53:LP:122:ALA:HB2	53:LP:145:HIS:CD2	2.52	0.45
59:LV:11:PHE:HB2	59:LV:88:ARG:HH21	1.81	0.45
70:Lg:92:ALA:O	70:Lg:96:GLU:HG3	2.15	0.45
1:C2:158:U:O2'	1:C2:159:U:H3'	2.16	0.45
1:C2:759:U:H2'	1:C2:760:A:C8	2.51	0.45
1:C2:773:C:H5''	10:SE:21:ASP:HB3	1.98	0.45
1:C2:863:A:O2'	1:C2:864:U:H5'	2.16	0.45
3:C1:563:U:N3	3:C1:564:G:N7	2.64	0.45
3:C1:1357:G:H2'	3:C1:1358:C:H6	1.81	0.45
3:C1:3250:U:H2'	3:C1:3251:U:C6	2.50	0.45
5:C3:17:A:H2'	5:C3:18:U:H6	1.81	0.45
5:C3:75:G:N3	75:Ll:26:TRP:HB2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:SE:57:ASN:HB2	10:SE:60:GLU:OE2	2.16	0.45
10:SE:247:SER:OG	10:SE:248:ILE:N	2.49	0.45
12:SG:155:ASP:C	12:SG:157:VAL:H	2.24	0.45
14:SI:172:ARG:O	14:SI:176:SER:OG	2.31	0.45
19:SN:43:LYS:HA	66:Lc:97:ASP:OD1	2.17	0.45
20:SO:39:ILE:HG21	20:SO:74:VAL:HG11	1.98	0.45
31:SZ:59:TYR:CZ	31:SZ:61:SER:HB3	2.51	0.45
35:Sd:21:CYS:HB3	35:Sd:26:SER:H	1.82	0.45
38:Sg:116:ASP:OD1	38:Sg:116:ASP:N	2.39	0.45
41:LC:92:ASN:HA	41:LC:98:ARG:O	2.17	0.45
50:LM:58:ILE:HG13	50:LM:59:ASN:H	1.81	0.45
53:LP:120:ASN:OD1	53:LP:120:ASN:N	2.49	0.45
57:LT:56:PHE:CE2	57:LT:78:LYS:HE3	2.52	0.45
57:LT:126:VAL:HG23	57:LT:127:GLN:H	1.81	0.45
63:LZ:7:ALA:O	63:LZ:89:VAL:HG11	2.16	0.45
63:LZ:51:LEU:HB3	63:LZ:65:ARG:NH1	2.31	0.45
71:Lh:35:LYS:HB2	71:Lh:44:ILE:HD11	1.98	0.45
1:C2:86:A:H2'	1:C2:87:C:C6	2.50	0.45
1:C2:210:A:H2'	1:C2:211:U:H6	1.80	0.45
1:C2:371:G:N2	1:C2:612:U:O2	2.50	0.45
1:C2:1195:C:H42	22:SQ:143:ARG:C	2.24	0.45
1:C2:1231:U:H2'	1:C2:1232:U:H6	1.81	0.45
3:C1:67:A:N6	3:C1:271:C:O2'	2.49	0.45
3:C1:148:G:OP2	51:LN:4:TYR:OH	2.31	0.45
3:C1:379:C:H2'	3:C1:380:U:H6	1.81	0.45
3:C1:1295:G:O2'	56:LS:115:ARG:HD3	2.16	0.45
3:C1:1419:A:H5''	41:LC:193:LYS:NZ	2.31	0.45
3:C1:2193:U:H5''	3:C1:2194:G:H5'	1.98	0.45
3:C1:2824:G:H2'	3:C1:2825:C:H6	1.80	0.45
3:C1:2978:U:O2'	3:C1:2979:U:H5'	2.16	0.45
3:C1:3356:G:H2'	3:C1:3357:U:C6	2.52	0.45
6:SA:17:LEU:HD13	6:SA:50:VAL:HG13	1.98	0.45
7:SB:229:MET:O	7:SB:232:HIS:C	2.59	0.45
8:SC:188:LEU:CD2	8:SC:196:VAL:HG21	2.44	0.45
17:SL:132:SER:O	17:SL:132:SER:OG	2.28	0.45
28:SW:34:ILE:O	28:SW:38:LEU:HG	2.16	0.45
33:Sb:35:VAL:CG1	33:Sb:63:LEU:HD21	2.46	0.45
38:Sg:44:SER:OG	38:Sg:59:ARG:HB2	2.17	0.45
38:Sg:283:LYS:HA	38:Sg:283:LYS:HE3	1.97	0.45
42:LD:224:LYS:HB2	42:LD:224:LYS:HE3	1.56	0.45
47:LI:47:PRO:HD2	47:LI:141:LYS:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:LJ:125:MET:HG3	48:LJ:127:PHE:CE1	2.51	0.45
49:LL:132:ALA:HB3	49:LL:134:GLU:HG2	1.98	0.45
52:LO:6:VAL:HG22	52:LO:32:LYS:HD2	1.96	0.45
53:LP:126:ARG:HG2	53:LP:140:GLU:OE2	2.16	0.45
1:C2:176:C:H3'	1:C2:177:U:C6	2.52	0.45
1:C2:416:A:H3'	1:C2:417:A:H8	1.81	0.45
1:C2:472:U:H2'	1:C2:473:A:C8	2.52	0.45
1:C2:512:A:H2'	1:C2:513:U:O4'	2.16	0.45
1:C2:532:U:H2'	1:C2:533:U:O4'	2.16	0.45
1:C2:585:A:H2'	1:C2:586:G:C8	2.51	0.45
1:C2:886:U:C2	1:C2:887:A:C8	3.05	0.45
1:C2:1253:U:H4'	37:Sf:145:HIS:CE1	2.51	0.45
3:C1:63:A:OP1	51:LN:169:LYS:HE2	2.17	0.45
3:C1:109:A:O2'	3:C1:323:A:N6	2.50	0.45
3:C1:670:C:OP1	54:LQ:147:ARG:NH2	2.49	0.45
3:C1:706:A:C6	3:C1:714:G:C2	3.05	0.45
3:C1:834:U:H2'	3:C1:835:G:H5'	1.99	0.45
3:C1:1704:A:C8	3:C1:1739:U:O4	2.69	0.45
3:C1:1805:C:H2'	3:C1:1806:A:H8	1.81	0.45
3:C1:3095:U:H2'	3:C1:3096:C:C6	2.51	0.45
3:C1:3275:U:H5'	69:Lf:68:TRP:CZ2	2.52	0.45
10:SE:181:VAL:O	10:SE:192:ILE:HA	2.16	0.45
12:SG:47:GLY:C	12:SG:117:GLY:HA2	2.41	0.45
12:SG:137:ARG:HB3	12:SG:140:ASN:HB2	1.98	0.45
13:SH:111:LYS:HG2	13:SH:112:ARG:N	2.31	0.45
16:SK:3:MET:HG3	16:SK:8:ARG:CG	2.46	0.45
17:SL:9:SER:OG	17:SL:10:GLU:OE2	2.32	0.45
19:SN:5:HIS:CE1	19:SN:121:ARG:HG3	2.51	0.45
25:ST:144:GLU:H	25:ST:144:GLU:HG2	1.63	0.45
27:SV:71:ARG:HD3	33:Sb:4:VAL:HG11	1.99	0.45
34:Sc:32:PHE:HZ	34:Sc:59:SER:HB3	1.81	0.45
38:Sg:9:LEU:HB2	38:Sg:313:TRP:NE1	2.31	0.45
41:LC:22:LEU:HD22	41:LC:26:PHE:CD2	2.52	0.45
41:LC:188:ARG:NE	41:LC:197:ARG:O	2.44	0.45
46:LH:91:ARG:HD3	46:LH:143:GLU:CD	2.41	0.45
46:LH:114:VAL:HG11	46:LH:165:CYS:SG	2.57	0.45
49:LL:46:ILE:O	49:LL:49:ARG:HG2	2.15	0.45
53:LP:14:SER:HB2	53:LP:151:THR:HG22	1.97	0.45
57:LT:86:GLU:O	57:LT:86:GLU:HG3	2.15	0.45
59:LV:89:ASP:OD1	59:LV:89:ASP:N	2.47	0.45
62:LY:51:ARG:HG2	62:LY:52:ARG:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:Ld:55:LEU:HB2	67:Ld:95:PRO:HD3	1.99	0.45
1:C2:814:A:H2'	1:C2:814:A:N3	2.30	0.45
1:C2:1261:G:C6	1:C2:1262:U:C4	3.04	0.45
1:C2:1389:C:H6	23:SR:28:PHE:CZ	2.34	0.45
1:C2:1749:A:O2'	77:Ln:13:LEU:HD11	2.17	0.45
3:C1:2344:U:H2'	3:C1:2345:A:H8	1.82	0.45
3:C1:2437:G:OP1	45:LG:70:LYS:NZ	2.49	0.45
6:SA:118:PRO:HG2	6:SA:141:ILE:HD13	1.99	0.45
18:SM:33:ARG:HA	18:SM:36:LEU:HD12	1.97	0.45
18:SM:97:LEU:HD21	18:SM:121:VAL:HG23	1.99	0.45
24:SS:91:ASP:N	24:SS:95:GLY:HA2	2.30	0.45
29:SX:93:LEU:HD12	29:SX:93:LEU:HA	1.64	0.45
33:Sb:38:PRO:HG3	33:Sb:76:GLY:O	2.17	0.45
38:Sg:42:LEU:HD11	38:Sg:68:VAL:HG21	1.98	0.45
41:LC:22:LEU:HA	41:LC:23:PRO:HD3	1.78	0.45
44:LF:96:PRO:HB2	44:LF:99:PRO:HD2	1.97	0.45
45:LG:200:LEU:HD12	45:LG:201:THR:H	1.82	0.45
48:LJ:11:ASP:O	48:LJ:12:LEU:HG	2.16	0.45
55:LR:93:VAL:O	55:LR:97:ARG:HG3	2.16	0.45
63:LZ:57:HIS:ND1	63:LZ:61:LYS:HG2	2.31	0.45
1:C2:97:C:H2'	1:C2:98:U:C6	2.52	0.45
1:C2:273:G:C2	1:C2:274:G:C8	3.04	0.45
1:C2:351:C:H3'	1:C2:352:A:H5'	1.99	0.45
1:C2:542:A:P	1:C2:542:A:H3'	2.57	0.45
1:C2:1351:G:C6	1:C2:1375:A:C6	3.04	0.45
1:C2:1457:C:H1'	24:SS:137:HIS:CD2	2.51	0.45
1:C2:1783:C:OP2	77:Ln:1:MET:HB2	2.17	0.45
3:C1:275:U:H2'	3:C1:276:U:C6	2.51	0.45
3:C1:289:A:H2'	3:C1:290:G:H8	1.80	0.45
3:C1:942:U:N3	64:La:16:SER:HA	2.32	0.45
3:C1:971:G:H2'	3:C1:972:A:C8	2.52	0.45
3:C1:978:G:O2'	3:C1:979:U:O4'	2.34	0.45
3:C1:2294:U:OP2	59:LV:71:LYS:NZ	2.49	0.45
3:C1:2898:G:O6	76:Lm:125:LYS:NZ	2.50	0.45
7:SB:55:LYS:HA	7:SB:55:LYS:HD2	1.76	0.45
8:SC:113:LEU:HD21	8:SC:115:ILE:HD11	1.98	0.45
9:SD:35:SER:OG	9:SD:51:ARG:O	2.21	0.45
10:SE:36:HIS:CE1	10:SE:143:ASP:HB3	2.52	0.45
10:SE:237:SER:O	10:SE:237:SER:OG	2.35	0.45
11:SF:113:ILE:O	11:SF:117:THR:OG1	2.32	0.45
11:SF:140:THR:OG1	11:SF:210:ALA:HB1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:SH:67:LEU:HD12	13:SH:71:HIS:HE2	1.81	0.45
14:SI:169:ILE:HD12	14:SI:179:CYS:SG	2.55	0.45
15:SJ:127:VAL:HG22	36:Se:33:ARG:HH21	1.81	0.45
19:SN:29:SER:OG	19:SN:32:SER:OG	2.18	0.45
21:SP:82:ASN:HA	21:SP:115:TYR:HD2	1.82	0.45
22:SQ:93:HIS:HA	22:SQ:97:VAL:HG22	1.98	0.45
24:SS:2:SER:OG	31:SZ:85:LYS:HG3	2.17	0.45
24:SS:115:ARG:O	24:SS:119:ILE:HG12	2.16	0.45
34:Sc:49:ARG:HG2	34:Sc:50:GLU:N	2.31	0.45
46:LH:113:GLU:HG2	46:LH:125:ASN:OD1	2.17	0.45
48:LJ:153:LYS:O	48:LJ:153:LYS:HG3	2.17	0.45
64:La:3:SER:O	64:La:6:THR:HG22	2.17	0.45
1:C2:1080:U:H2'	1:C2:1081:A:C8	2.51	0.45
1:C2:1471:A:N6	1:C2:1538:U:C2	2.85	0.45
3:C1:20:A:H2'	3:C1:21:G:C8	2.52	0.45
3:C1:249:U:O2	3:C1:250:U:N3	2.49	0.45
3:C1:960:U:H4'	3:C1:963:G:C2	2.52	0.45
3:C1:965:A:H2	64:La:43:ILE:HD12	1.82	0.45
3:C1:1081:U:H1'	3:C1:1082:U:OP2	2.17	0.45
3:C1:1603:A:H61	61:LX:71:THR:CG2	2.30	0.45
3:C1:1729:A:OP2	66:Lc:27:TYR:N	2.47	0.45
3:C1:3107:U:H2'	3:C1:3108:G:H8	1.82	0.45
12:SG:162:VAL:O	12:SG:168:THR:HA	2.16	0.45
19:SN:31:GLU:OE2	19:SN:31:GLU:N	2.49	0.45
19:SN:87:ASP:HB2	19:SN:125:LEU:HD21	1.98	0.45
20:SO:46:MET:HE2	20:SO:46:MET:HB3	1.76	0.45
23:SR:107:SER:O	23:SR:110:VAL:HG22	2.17	0.45
24:SS:11:PHE:CD1	31:SZ:41:ILE:HD13	2.52	0.45
32:Sa:23:CYS:SG	32:Sa:24:VAL:N	2.90	0.45
52:LO:47:PHE:CE1	52:LO:140:LYS:HG2	2.52	0.45
55:LR:43:LYS:HB2	55:LR:43:LYS:HE3	1.78	0.45
65:Lb:7:HIS:O	65:Lb:8:THR:OG1	2.28	0.45
1:C2:986:G:H2'	1:C2:987:G:O4'	2.16	0.45
1:C2:1191:U:H1'	22:SQ:143:ARG:HH22	1.81	0.45
1:C2:1382:A:H1'	26:SU:57:ARG:HD2	1.99	0.45
3:C1:280:U:O2	3:C1:286:U:C2	2.69	0.45
3:C1:758:C:O2	3:C1:774:G:N2	2.50	0.45
3:C1:993:G:C2	3:C1:1057:A:N1	2.85	0.45
3:C1:1436:U:N3	41:LC:71:VAL:O	2.50	0.45
3:C1:2103:U:H2'	3:C1:2104:A:H8	1.81	0.45
3:C1:2551:U:OP1	70:Lg:102:LYS:NZ	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2838:A:OP1	47:LI:154:ARG:NH1	2.47	0.45
3:C1:2843:U:OP2	3:C1:2844:C:N4	2.23	0.45
6:SA:12:GLU:OE1	6:SA:12:GLU:N	2.44	0.45
7:SB:172:LEU:O	7:SB:176:VAL:HG23	2.17	0.45
11:SF:30:PRO:O	11:SF:34:GLN:HG3	2.17	0.45
13:SH:30:SER:OG	13:SH:34:LEU:HB2	2.17	0.45
13:SH:47:ARG:HE	13:SH:48:GLU:H	1.65	0.45
13:SH:49:ILE:HG12	13:SH:175:LYS:HG2	1.97	0.45
14:SI:117:TYR:CD2	14:SI:150:ALA:HB2	2.51	0.45
22:SQ:44:LEU:HD23	22:SQ:47:LYS:HG3	1.98	0.45
22:SQ:131:GLY:HA3	22:SQ:137:ARG:HA	1.99	0.45
26:SU:53:LYS:CG	26:SU:92:ASP:H	2.30	0.45
38:Sg:171:SER:HB3	38:Sg:181:TRP:HE1	1.82	0.45
41:LC:23:PRO:HD2	41:LC:26:PHE:CE2	2.52	0.45
42:LD:163:LEU:HD21	42:LD:175:HIS:CG	2.52	0.45
44:LF:176:TYR:CZ	44:LF:197:GLN:HG2	2.52	0.45
49:LL:93:ILE:HG22	49:LL:94:GLY:N	2.31	0.45
49:LL:122:LYS:HD3	71:Lh:120:ALA:HA	1.99	0.45
51:LN:7:LEU:HB3	51:LN:46:ASP:OD2	2.17	0.45
55:LR:158:GLU:C	55:LR:158:GLU:CD	2.85	0.45
56:LS:6:GLU:OE1	56:LS:28:ARG:NH1	2.50	0.45
58:LU:79:LEU:HD23	58:LU:79:LEU:HA	1.83	0.45
68:Le:91:THR:HG23	68:Le:92:TYR:HD1	1.82	0.45
1:C2:52:U:H2'	1:C2:53:G:H8	1.80	0.45
1:C2:115:G:C8	17:SL:129:ARG:HG3	2.52	0.45
1:C2:275:C:H2'	1:C2:276:C:C6	2.52	0.45
1:C2:1174:C:H42	1:C2:1465:C:N4	2.15	0.45
3:C1:503:C:H2'	3:C1:504:A:H8	1.81	0.45
3:C1:566:G:O2'	3:C1:567:G:H5'	2.17	0.45
3:C1:609:G:O2'	41:LC:312:VAL:HG22	2.16	0.45
3:C1:914:A:N1	39:LA:204:MET:HE3	2.32	0.45
3:C1:1760:A:N6	3:C1:1761:C:N3	2.64	0.45
3:C1:2708:C:C2	3:C1:2709:C:C5	3.05	0.45
3:C1:2999:U:H2'	3:C1:3000:A:C8	2.52	0.45
3:C1:3008:A:N6	3:C1:3139:A:N6	2.64	0.45
4:C4:28:C:OP1	48:LJ:137:ARG:NH1	2.50	0.45
13:SH:9:LEU:HG	13:SH:10:SER:N	2.22	0.45
16:SK:25:LYS:HG3	16:SK:64:TYR:HE2	1.80	0.45
19:SN:28:LEU:O	19:SN:29:SER:HB3	2.16	0.45
22:SQ:86:ALA:HB1	22:SQ:109:PHE:CE2	2.52	0.45
24:SS:80:LYS:O	24:SS:81:ILE:HD13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Sd:31:ILE:HG23	35:Sd:31:ILE:O	2.17	0.45
38:Sg:135:THR:OG1	38:Sg:136:ILE:N	2.50	0.45
40:LB:166:ILE:CD1	40:LB:173:GLN:HE21	2.29	0.45
40:LB:256:HIS:HA	40:LB:257:PRO:C	2.41	0.45
41:LC:210:ALA:HA	41:LC:230:VAL:HG22	1.99	0.45
46:LH:52:LEU:HD12	46:LH:53:ILE:N	2.32	0.45
49:LL:194:GLU:HA	49:LL:195:ALA:HA	1.57	0.45
54:LQ:89:ASP:OD2	54:LQ:90:ASP:N	2.49	0.45
56:LS:66:GLU:CD	56:LS:99:ARG:H	2.25	0.45
58:LU:30:PRO:HB2	58:LU:58:GLU:OE2	2.17	0.45
64:La:60:TYR:HE2	64:La:63:LYS:HA	1.81	0.45
1:C2:16:G:H2'	1:C2:17:C:C6	2.52	0.45
1:C2:217:A:C5	1:C2:218:A:N7	2.85	0.45
1:C2:393:C:OP2	14:SI:2:GLY:N	2.50	0.45
1:C2:591:A:N1	1:C2:592:A:C6	2.85	0.45
1:C2:611:U:H5'	29:SX:15:LEU:HD13	1.99	0.45
1:C2:753:A:C6	1:C2:754:A:C8	3.05	0.45
1:C2:884:A:H2'	1:C2:885:G:C8	2.52	0.45
1:C2:1217:A:H2	16:SK:27:PHE:CG	2.35	0.45
1:C2:1459:C:H1'	21:SP:128:HIS:CE1	2.52	0.45
1:C2:1497:U:N3	1:C2:1511:U:O2	2.49	0.45
1:C2:1602:C:H2'	1:C2:1603:U:C6	2.52	0.45
1:C2:1614:A:H61	11:SF:78:ALA:HB1	1.82	0.45
3:C1:150:A:C5	3:C1:151:A:N7	2.85	0.45
3:C1:193:C:H2'	3:C1:194:U:C6	2.52	0.45
3:C1:195:U:H2'	3:C1:196:G:O4'	2.17	0.45
3:C1:818:C:O2'	3:C1:2138:A:N1	2.47	0.45
3:C1:1039:U:H2'	3:C1:1040:A:H8	1.82	0.45
3:C1:1229:G:C6	3:C1:1281:G:C6	3.04	0.45
3:C1:2565:U:H2'	3:C1:2566:C:H6	1.82	0.45
3:C1:3357:U:C2	3:C1:3358:U:C5	3.05	0.45
4:C4:2:G:H4'	42:LD:270:LYS:NZ	2.32	0.45
11:SF:222:LYS:HA	11:SF:225:ARG:HE	1.81	0.45
13:SH:130:VAL:O	13:SH:130:VAL:HG12	2.17	0.45
15:SJ:87:SER:HB3	15:SJ:90:LYS:HB2	1.99	0.45
15:SJ:175:ARG:HG3	15:SJ:179:ARG:NH2	2.28	0.45
22:SQ:69:VAL:HG11	22:SQ:77:GLN:HB3	1.99	0.45
23:SR:61:ILE:HD13	23:SR:61:ILE:HA	1.84	0.45
38:Sg:155:ARG:HD2	38:Sg:203:THR:HA	1.99	0.45
38:Sg:177:MET:HE3	38:Sg:191:ASP:OD1	2.17	0.45
38:Sg:203:THR:HG23	38:Sg:245:PHE:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LA:214:GLY:O	39:LA:215:ASN:HB2	2.17	0.45
44:LF:38:LYS:HA	44:LF:38:LYS:HD3	1.84	0.45
46:LH:92:TYR:HD1	46:LH:179:ILE:HG23	1.82	0.45
59:LV:109:MET:HE2	59:LV:109:MET:HB3	1.90	0.45
68:Le:78:ASN:HA	68:Le:108:ILE:HD11	1.98	0.45
73:Lj:14:LYS:HA	73:Lj:14:LYS:HD3	1.77	0.45
1:C2:36:C:H2'	1:C2:37:U:H6	1.80	0.44
1:C2:224:C:H2'	1:C2:225:A:H8	1.78	0.44
1:C2:610:G:H21	29:SX:19:ARG:HH22	1.64	0.44
1:C2:991:G:N2	1:C2:1012:U:C5	2.85	0.44
1:C2:1063:U:H3'	1:C2:1064:G:H8	1.82	0.44
1:C2:1171:A:H2'	1:C2:1172:G:H8	1.82	0.44
1:C2:1251:U:O2'	1:C2:1252:C:H5''	2.16	0.44
1:C2:1335:U:C2	1:C2:1336:A:N7	2.85	0.44
1:C2:1454:G:H2'	1:C2:1455:G:N9	2.32	0.44
1:C2:1658:G:C5	1:C2:1744:A:N6	2.85	0.44
3:C1:968:G:N3	65:Lb:15:LYS:NZ	2.65	0.44
3:C1:1384:U:H2'	3:C1:1385:C:C6	2.52	0.44
3:C1:1579:C:H2'	3:C1:1580:A:H8	1.78	0.44
3:C1:2096:A:H2'	3:C1:2097:U:O4'	2.17	0.44
3:C1:2101:C:HO2'	3:C1:2102:U:P	2.40	0.44
3:C1:2786:G:N2	64:La:58:MET:SD	2.82	0.44
7:SB:127:VAL:HG11	7:SB:176:VAL:HB	1.98	0.44
7:SB:145:LYS:HG2	7:SB:154:SER:HB3	1.99	0.44
11:SF:150:GLY:H	34:Sc:67:ARG:C	2.23	0.44
13:SH:73:VAL:C	13:SH:75:THR:H	2.25	0.44
14:SI:159:GLN:NE2	14:SI:189:LEU:HD21	2.33	0.44
16:SK:11:ILE:HD12	16:SK:11:ILE:HA	1.88	0.44
21:SP:61:ARG:O	21:SP:65:LEU:HG	2.17	0.44
24:SS:92:ILE:HG23	24:SS:93:THR:HG22	1.99	0.44
35:Sd:19:ARG:HD3	35:Sd:32:ARG:HD3	1.97	0.44
40:LB:187:SER:O	40:LB:190:GLU:N	2.50	0.44
42:LD:134:ALA:CB	42:LD:141:PRO:HD3	2.44	0.44
52:LO:72:HIS:O	52:LO:74:ARG:NH1	2.46	0.44
56:LS:42:TRP:CE3	56:LS:42:TRP:HA	2.52	0.44
57:LT:100:LYS:O	57:LT:104:GLU:HG2	2.17	0.44
59:LV:19:VAL:HG13	59:LV:37:ILE:HA	1.99	0.44
61:LX:103:TYR:C	61:LX:104:GLU:HG3	2.42	0.44
74:Lk:56:ILE:HG22	74:Lk:58:ASP:H	1.81	0.44
1:C2:151:G:H21	12:SG:13:GLN:CD	2.24	0.44
1:C2:151:G:N2	12:SG:13:GLN:OE1	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:246:G:N3	17:SL:40:LEU:HG	2.32	0.44
1:C2:442:C:H2'	1:C2:443:C:C6	2.52	0.44
1:C2:485:A:N6	1:C2:503:G:O6	2.51	0.44
1:C2:528:U:H2'	1:C2:529:A:O4'	2.16	0.44
1:C2:1036:A:H1'	28:SW:9:ASP:OD2	2.18	0.44
1:C2:1118:G:H2'	1:C2:1119:G:O4'	2.16	0.44
1:C2:1157:A:O2'	1:C2:1159:C:OP2	2.34	0.44
1:C2:1203:A:C2	1:C2:1556:A:N3	2.85	0.44
1:C2:1554:U:OP2	21:SP:47:ARG:NH2	2.50	0.44
3:C1:30:G:O2'	51:LN:96:ARG:NH2	2.50	0.44
3:C1:649:A:H2'	3:C1:650:C:C6	2.52	0.44
3:C1:1217:A:C6	3:C1:1289:G:C6	3.05	0.44
3:C1:1834:U:OP2	75:LI:10:LYS:NZ	2.46	0.44
3:C1:3236:U:H2'	3:C1:3237:U:C6	2.53	0.44
3:C1:3362:A:H5''	3:C1:3363:U:C5	2.52	0.44
8:SC:237:VAL:O	8:SC:237:VAL:HG12	2.16	0.44
9:SD:40:ARG:HH22	26:SU:108:ILE:HG23	1.82	0.44
12:SG:68:LEU:H	12:SG:68:LEU:HD12	1.82	0.44
14:SI:136:SER:HB3	14:SI:139:ALA:HB3	2.00	0.44
20:SO:80:HIS:ND1	20:SO:114:ARG:HB2	2.31	0.44
21:SP:111:MET:HG2	24:SS:119:ILE:HB	1.98	0.44
23:SR:60:ARG:NH1	23:SR:66:VAL:HG23	2.33	0.44
24:SS:3:LEU:HD13	24:SS:55:HIS:CE1	2.52	0.44
24:SS:11:PHE:CG	31:SZ:41:ILE:HG21	2.53	0.44
24:SS:40:ARG:C	25:ST:45:MET:HE1	2.42	0.44
30:SY:7:ILE:HD13	30:SY:43:LYS:HD3	1.99	0.44
38:Sg:177:MET:SD	38:Sg:193:ILE:HD11	2.57	0.44
39:LA:104:LEU:HG	39:LA:162:ALA:O	2.18	0.44
56:LS:92:LYS:NZ	56:LS:109:ASP:OD1	2.34	0.44
59:LV:39:VAL:HB	59:LV:42:SER:HB2	1.98	0.44
59:LV:74:MET:SD	59:LV:102:ILE:HD13	2.58	0.44
61:LX:81:ILE:HG12	61:LX:125:ARG:HB2	2.00	0.44
73:Lj:22:CYS:C	73:Lj:24:ARG:H	2.25	0.44
1:C2:101:U:H2'	1:C2:102:U:O4'	2.17	0.44
1:C2:365:G:H4'	1:C2:757:A:N1	2.32	0.44
1:C2:606:A:H1'	1:C2:609:U:OP1	2.18	0.44
1:C2:852:C:C6	1:C2:852:C:C5'	2.85	0.44
1:C2:1131:A:H2'	1:C2:1132:A:O4'	2.17	0.44
1:C2:1158:C:C5	1:C2:1582:U:N3	2.84	0.44
1:C2:1340:U:H3'	1:C2:1341:A:H5'	1.99	0.44
1:C2:1734:U:H2'	1:C2:1735:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:521:A:C6	3:C1:572:A:C2	3.05	0.44
3:C1:625:G:N2	3:C1:1401:A:OP1	2.47	0.44
3:C1:942:U:C4	64:La:16:SER:HA	2.52	0.44
3:C1:954:U:OP2	65:Lb:5:LYS:HD2	2.17	0.44
3:C1:1266:G:C2	3:C1:1276:U:C2	3.05	0.44
3:C1:1284:C:HO2'	3:C1:1285:G:P	2.38	0.44
7:SB:86:LEU:HB3	7:SB:98:THR:HB	2.00	0.44
8:SC:99:LYS:HA	8:SC:116:LYS:O	2.17	0.44
17:SL:76:VAL:HG12	17:SL:85:VAL:O	2.16	0.44
22:SQ:41:PRO:O	22:SQ:43:ILE:HG12	2.17	0.44
22:SQ:79:TYR:O	22:SQ:82:ARG:HG2	2.17	0.44
24:SS:64:GLU:HG2	24:SS:65:GLU:N	2.32	0.44
24:SS:105:VAL:HG23	24:SS:106:GLU:N	2.32	0.44
38:Sg:42:LEU:HD22	38:Sg:92:TRP:CZ3	2.52	0.44
38:Sg:106:HIS:HE1	38:Sg:130:THR:HG23	1.81	0.44
41:LC:177:ASP:OD2	41:LC:205:PRO:HD3	2.17	0.44
48:LJ:15:GLU:H	48:LJ:131:MET:HA	1.83	0.44
51:LN:46:ASP:OD1	51:LN:47:LYS:N	2.50	0.44
56:LS:91:TYR:OH	56:LS:93:GLU:OE2	2.32	0.44
57:LT:12:ARG:O	57:LT:16:GLN:HG3	2.17	0.44
57:LT:56:PHE:CE2	57:LT:78:LYS:HB2	2.52	0.44
62:LY:53:ASP:O	62:LY:110:HIS:HB2	2.17	0.44
1:C2:811:A:C2	1:C2:858:G:H1'	2.53	0.44
1:C2:1031:U:H4'	1:C2:1032:G:OP2	2.16	0.44
1:C2:1373:C:H2'	1:C2:1374:C:C6	2.53	0.44
1:C2:1615:C:OP2	34:Sc:47:PRO:HB3	2.18	0.44
1:C2:1722:A:H2'	1:C2:1723:U:O4'	2.16	0.44
3:C1:264:G:OP1	72:Li:34:SER:HB2	2.17	0.44
3:C1:535:G:N2	3:C1:555:U:O2	2.51	0.44
3:C1:673:U:H2'	3:C1:674:G:H8	1.82	0.44
3:C1:2241:U:HO2'	39:LA:243:THR:H	1.66	0.44
3:C1:2353:G:H2'	3:C1:2354:C:H6	1.83	0.44
3:C1:2532:U:O5'	3:C1:2532:U:H6	2.00	0.44
3:C1:2561:A:C2	45:LG:32:LYS:HG2	2.52	0.44
3:C1:2883:U:H2'	3:C1:2884:C:C6	2.53	0.44
3:C1:3107:U:H2'	3:C1:3108:G:C8	2.53	0.44
8:SC:35:TRP:NE1	8:SC:36:VAL:O	2.51	0.44
9:SD:139:SER:HA	9:SD:149:ALA:HA	2.00	0.44
10:SE:77:ARG:HA	10:SE:77:ARG:HD3	1.65	0.44
13:SH:14:THR:OG1	13:SH:15:GLU:N	2.49	0.44
17:SL:55:ASP:OD2	17:SL:58:CYS:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29: SX:43: PHE:CE1	29: SX:49: ALA:HB3	2.53	0.44
34: Sc:16: LEU:HD11	34: Sc:29: ARG:HG2	2.00	0.44
34: Sc:64: ARG:CG	34: Sc:65: ARG:H	2.31	0.44
40: LB:37: ARG:HA	40: LB:186: GLY:CA	2.48	0.44
40: LB:96: PRO:HB3	52: LO:153: VAL:HG22	2.00	0.44
44: LF:102: VAL:HG13	44: LF:126: LEU:HD22	1.99	0.44
52: LO:28: LEU:HD22	52: LO:94: ARG:NH1	2.33	0.44
53: LP:52: LEU:HD12	53: LP:52: LEU:HA	1.70	0.44
56: LS:18: SER:C	56: LS:20: PRO:HD3	2.43	0.44
57: LT:126: VAL:HG23	57: LT:127: GLN:N	2.31	0.44
64: La:77: LYS:C	64: La:79: TRP:N	2.72	0.44
71: Lh:78: LYS:HG2	71: Lh:81: ARG:NH1	2.31	0.44
72: Li:68: ARG:HD3	72: Li:71: LYS:HE3	2.00	0.44
1: C2:239: C:OP1	1: C2:240: U:N3	2.50	0.44
1: C2:606: A:H4'	1: C2:607: G:H3'	2.00	0.44
1: C2:1241: G:H3'	1: C2:1242: A:H8	1.82	0.44
1: C2:1388: A:N7	1: C2:1411: A:N6	2.65	0.44
3: C1:609: G:HO2'	41: LC:312: VAL:HG22	1.83	0.44
3: C1:849: C:H2'	3: C1:850: U:C6	2.52	0.44
3: C1:876: A:H4'	3: C1:1890: U:H4'	2.00	0.44
3: C1:1117: G:OP1	65: Lb:4: SER:HB2	2.18	0.44
3: C1:2746: A:C2	42: LD:146: LEU:HD23	2.53	0.44
3: C1:3159: C:N3	3: C1:3292: A:N1	2.66	0.44
5: C3:69: U:H2'	5: C3:70: G:O4'	2.17	0.44
9: SD:17: PHE:HA	9: SD:20: GLU:OE2	2.18	0.44
9: SD:123: VAL:O	9: SD:127: MET:HG2	2.17	0.44
10: SE:236: ILE:HG22	10: SE:237: SER:N	2.33	0.44
15: SJ:63: ASP:OD1	15: SJ:64: GLU:N	2.51	0.44
18: SM:92: ALA:HB3	18: SM:100: TRP:CH2	2.52	0.44
24: SS:38: VAL:HG23	24: SS:42: TYR:CD2	2.52	0.44
24: SS:96: LYS:HB2	24: SS:98: TYR:CE1	2.52	0.44
26: SU:82: TYR:HB3	35: Sd:52: PHE:HB3	1.99	0.44
29: SX:131: SER:HB3	29: SX:134: ALA:HB3	1.99	0.44
38: Sg:301: LEU:HD11	38: Sg:313: TRP:HB2	2.00	0.44
46: LH:45: PHE:CE1	46: LH:55: VAL:HG12	2.53	0.44
46: LH:67: ALA:HA	46: LH:70: THR:HG22	2.00	0.44
48: LJ:101: ASN:CG	48: LJ:130: VAL:HG23	2.43	0.44
50: LM:47: ASP:OD2	50: LM:48: GLY:N	2.51	0.44
52: LO:188: SER:O	52: LO:192: LYS:HG2	2.17	0.44
54: LQ:173: GLU:HA	64: La:51: GLY:O	2.18	0.44
59: LV:35: TYR:O	59: LV:37: ILE:HG23	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Lf:49:ILE:HD11	69:Lf:71:VAL:HG22	2.00	0.44
74:Lk:17:ARG:HB3	74:Lk:20:VAL:HG23	2.00	0.44
1:C2:108:A:H2'	1:C2:109:G:C8	2.53	0.44
1:C2:454:U:C5	10:SE:66:MET:HB3	2.53	0.44
1:C2:607:G:H5'	1:C2:613:G:N2	2.33	0.44
1:C2:1202:A:C5	1:C2:1456:C:N3	2.86	0.44
3:C1:996:A:N3	4:C4:80:G:O2'	2.49	0.44
3:C1:1246:G:H3'	3:C1:1246:G:OP1	2.17	0.44
3:C1:1563:C:H2'	3:C1:1564:U:C6	2.53	0.44
3:C1:1667:A:H2'	3:C1:1668:G:C8	2.53	0.44
3:C1:2186:U:OP2	39:LA:200:ARG:HD2	2.18	0.44
3:C1:2202:C:H5''	39:LA:226:SER:OG	2.16	0.44
5:C3:39:G:HO2'	5:C3:105:A:H61	1.63	0.44
11:SF:198:LEU:HD23	11:SF:198:LEU:HA	1.81	0.44
13:SH:64:VAL:HA	13:SH:67:LEU:HD23	1.99	0.44
19:SN:49:GLN:HA	19:SN:52:VAL:HG12	1.98	0.44
19:SN:140:LYS:O	19:SN:142:GLU:HG2	2.17	0.44
20:SO:51:ASP:HA	20:SO:54:GLU:HG3	1.99	0.44
24:SS:51:ASP:HB3	24:SS:68:ARG:NH2	2.33	0.44
32:Sa:10:ARG:CD	32:Sa:34:LYS:HA	2.44	0.44
33:Sb:31:TYR:HE1	33:Sb:33:LEU:HD21	1.82	0.44
43:LE:43:LEU:HD11	43:LE:85:ILE:CG1	2.48	0.44
49:LL:17:HIS:HB3	49:LL:20:GLU:OE2	2.16	0.44
50:LM:32:LEU:HD23	50:LM:32:LEU:HA	1.74	0.44
56:LS:79:VAL:HG23	56:LS:122:HIS:O	2.18	0.44
57:LT:96:ILE:HD13	57:LT:96:ILE:HA	1.80	0.44
59:LV:80:ARG:O	59:LV:98:ASN:HA	2.17	0.44
61:LX:24:LEU:HD12	61:LX:24:LEU:HA	1.83	0.44
64:La:48:TYR:O	64:La:49:HIS:CG	2.71	0.44
65:Lb:28:LYS:HE3	65:Lb:29:TYR:CE2	2.52	0.44
1:C2:329:G:H2'	1:C2:330:G:C8	2.52	0.44
1:C2:919:A:O2'	20:SO:36:LYS:NZ	2.50	0.44
1:C2:1342:C:H2'	1:C2:1343:U:C6	2.53	0.44
1:C2:1728:A:H1'	14:SI:32:GLN:HE22	1.82	0.44
3:C1:964:G:OP2	3:C1:1115:G:N1	2.44	0.44
3:C1:1819:U:H2'	3:C1:1820:U:H5'	1.98	0.44
4:C4:57:G:C8	4:C4:58:C:C5	3.05	0.44
6:SA:56:LYS:HE3	6:SA:158:VAL:HG23	1.99	0.44
6:SA:107:PHE:CD2	6:SA:135:GLU:HB3	2.52	0.44
8:SC:72:LEU:HA	8:SC:72:LEU:HD12	1.72	0.44
8:SC:212:LYS:O	8:SC:216:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:SF:65:ARG:HD3	11:SF:65:ARG:HA	1.81	0.44
14:SI:31:ARG:NH2	14:SI:48:THR:HG22	2.33	0.44
15:SJ:97:LEU:HA	15:SJ:97:LEU:HD23	1.76	0.44
23:SR:31:ASN:OD1	23:SR:55:THR:HG22	2.18	0.44
30:SY:35:VAL:HG11	30:SY:60:PHE:CD1	2.53	0.44
30:SY:56:SER:OG	30:SY:94:TYR:HE2	2.00	0.44
32:Sa:64:LEU:HD12	32:Sa:64:LEU:HA	1.78	0.44
38:Sg:220:ILE:N	38:Sg:234:LEU:O	2.50	0.44
38:Sg:241:PHE:N	38:Sg:255:ALA:O	2.48	0.44
40:LB:102:LEU:HG	40:LB:103:THR:OG1	2.17	0.44
40:LB:209:PHE:HE1	40:LB:340:LYS:HG2	1.82	0.44
41:LC:110:ASN:OD1	51:LN:201:ARG:HB3	2.17	0.44
41:LC:269:SER:C	41:LC:271:LYS:H	2.26	0.44
45:LG:109:LEU:HD23	45:LG:109:LEU:HA	1.68	0.44
45:LG:195:SER:C	45:LG:197:VAL:H	2.25	0.44
48:LJ:14:ILE:HD13	48:LJ:131:MET:HG2	2.00	0.44
54:LQ:176:ARG:H	64:La:51:GLY:HA2	1.83	0.44
61:LX:61:LYS:HB2	61:LX:61:LYS:HE3	1.59	0.44
63:LZ:102:GLU:O	63:LZ:103:GLN:HB2	2.17	0.44
64:La:72:VAL:HG11	64:La:113:LEU:HD12	1.99	0.44
67:Ld:68:GLU:OE2	67:Ld:69:TYR:N	2.50	0.44
1:C2:235:G:H2'	1:C2:236:A:H8	1.82	0.44
1:C2:256:A:H2'	1:C2:257:A:O4'	2.18	0.44
3:C1:203:G:O6	3:C1:204:A:N6	2.51	0.44
3:C1:892:U:H2'	3:C1:893:C:O4'	2.17	0.44
3:C1:1031:C:O5'	3:C1:1031:C:H6	2.01	0.44
3:C1:1034:U:H2'	3:C1:1035:G:H8	1.83	0.44
3:C1:1225:A:H2'	3:C1:1226:G:C8	2.52	0.44
3:C1:1616:U:N3	3:C1:1617:G:N7	2.65	0.44
3:C1:1939:G:OP1	55:LR:77:GLY:HA3	2.17	0.44
3:C1:2749:G:P	42:LD:48:LYS:HZ1	2.41	0.44
3:C1:3269:U:H4'	3:C1:3270:U:O5'	2.15	0.44
6:SA:146:LEU:HD23	6:SA:160:ILE:HD12	1.99	0.44
13:SH:12:ALA:HB3	13:SH:13:PRO:HD3	1.99	0.44
13:SH:71:HIS:HB3	13:SH:131:PHE:CE1	2.53	0.44
24:SS:44:ASN:HD22	25:ST:46:PRO:HG2	1.82	0.44
24:SS:101:LEU:HD13	24:SS:101:LEU:HA	1.75	0.44
30:SY:41:ARG:HG2	30:SY:55:VAL:HG23	2.00	0.44
38:Sg:221:MET:HG3	38:Sg:232:TYR:O	2.18	0.44
38:Sg:263:PHE:CD2	38:Sg:270:LEU:HG	2.50	0.44
39:LA:214:GLY:C	39:LA:216:HIS:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:LF:102:VAL:HG12	44:LF:130:ILE:HD12	1.98	0.44
44:LF:197:GLN:OE1	44:LF:197:GLN:N	2.50	0.44
49:LL:11:LYS:HB3	49:LL:11:LYS:HE2	1.65	0.44
52:LO:65:ASN:O	52:LO:68:ARG:HG2	2.18	0.44
1:C2:391:A:OP2	14:SI:23:LYS:NZ	2.41	0.44
1:C2:823:G:C6	1:C2:850:A:C6	3.05	0.44
1:C2:1362:U:H6	1:C2:1362:U:H2'	1.65	0.44
1:C2:1381:U:H4'	26:SU:59:PRO:HG3	1.99	0.44
1:C2:1420:C:H2'	1:C2:1421:A:O4'	2.17	0.44
1:C2:1490:C:H4'	1:C2:1491:U:H5'	2.00	0.44
1:C2:1732:A:H2'	1:C2:1733:C:H6	1.81	0.44
3:C1:541:U:H2'	3:C1:542:G:H8	1.82	0.44
3:C1:686:G:H2'	3:C1:687:U:O4'	2.18	0.44
3:C1:1152:G:N1	3:C1:1199:C:N4	2.66	0.44
3:C1:1186:G:H2'	3:C1:1187:C:H6	1.82	0.44
3:C1:1264:G:H21	3:C1:1277:C:H42	1.66	0.44
3:C1:1288:U:H2'	3:C1:1289:G:C8	2.51	0.44
3:C1:2308:C:H3'	3:C1:2309:A:H2'	2.00	0.44
4:C4:7:G:C2	4:C4:8:G:C8	3.05	0.44
4:C4:81:U:H2'	4:C4:82:G:H8	1.82	0.44
17:SL:121:ASP:O	17:SL:123:VAL:HG23	2.17	0.44
21:SP:17:TYR:CD2	21:SP:36:LEU:HD22	2.53	0.44
25:ST:17:ALA:O	25:ST:20:SER:OG	2.29	0.44
25:ST:128:GLY:O	25:ST:132:LEU:HD23	2.18	0.44
26:SU:53:LYS:HZ2	26:SU:91:ILE:HA	1.83	0.44
34:Sc:19:THR:HG22	34:Sc:20:GLY:N	2.26	0.44
38:Sg:59:ARG:HD2	38:Sg:59:ARG:HA	1.73	0.44
38:Sg:90:ARG:NH2	38:Sg:102:ARG:HE	2.15	0.44
43:LE:172:HIS:HB3	69:Lf:43:PHE:CD2	2.53	0.44
44:LF:202:LEU:HA	44:LF:202:LEU:HD23	1.73	0.44
48:LJ:29:ARG:HE	48:LJ:123:PHE:HE1	1.66	0.44
49:LL:77:LEU:HD12	49:LL:78:ALA:N	2.32	0.44
57:LT:66:ASN:O	57:LT:73:GLY:N	2.47	0.44
59:LV:42:SER:O	59:LV:42:SER:OG	2.32	0.44
61:LX:116:PRO:C	61:LX:118:GLY:H	2.26	0.44
67:Ld:94:GLU:HB2	67:Ld:95:PRO:HD2	1.99	0.44
68:Le:75:LEU:HD23	68:Le:95:GLU:HB2	1.99	0.44
1:C2:142:G:C2	1:C2:266:A:C4	3.06	0.43
1:C2:158:U:O2'	1:C2:160:C:OP2	2.32	0.43
1:C2:510:G:O2'	1:C2:511:A:OP1	2.34	0.43
1:C2:558:U:H3'	9:SD:143:ARG:NH1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1217:A:H2	16:SK:27:PHE:CD2	2.36	0.43
1:C2:1257:U:H4'	16:SK:8:ARG:NH2	2.33	0.43
1:C2:1336:A:H2'	1:C2:1337:A:H8	1.83	0.43
1:C2:1535:U:H1'	1:C2:1536:G:C6	2.53	0.43
1:C2:1648:A:H2'	1:C2:1649:G:C8	2.53	0.43
2:C5:12:LYS:HB2	2:C5:12:LYS:HE2	1.78	0.43
3:C1:726:G:N2	3:C1:743:C:H5	2.16	0.43
3:C1:1294:A:O2'	3:C1:1295:G:H5''	2.18	0.43
3:C1:1857:C:C2'	3:C1:1858:A:H5'	2.47	0.43
3:C1:2577:C:H2'	3:C1:2578:U:C6	2.53	0.43
3:C1:3354:U:O2'	3:C1:3355:U:OP2	2.35	0.43
21:SP:83:MET:HB2	21:SP:116:LEU:HD11	2.00	0.43
38:Sg:123:ILE:HG23	38:Sg:133:VAL:HG12	1.99	0.43
38:Sg:278:PHE:HE1	38:Sg:311:ARG:HH22	1.61	0.43
39:LA:137:ILE:HG12	39:LA:147:ARG:O	2.17	0.43
50:LM:113:THR:HG23	50:LM:116:GLU:HG3	1.99	0.43
51:LN:128:LYS:C	51:LN:129:TYR:HD1	2.26	0.43
53:LP:67:ILE:HD12	53:LP:82:ARG:CZ	2.48	0.43
54:LQ:185:LYS:HG2	54:LQ:186:VAL:HG23	2.00	0.43
63:LZ:88:ASP:HB3	63:LZ:121:ARG:NH1	2.32	0.43
65:Lb:57:ALA:C	65:Lb:59:LYS:HD2	2.42	0.43
76:Lm:109:ASN:ND2	76:Lm:119:ASN:HB3	2.33	0.43
1:C2:55:A:C2	1:C2:426:G:C4	3.06	0.43
1:C2:170:U:OP1	1:C2:267:U:O2'	2.34	0.43
1:C2:240:U:H4'	1:C2:241:U:OP2	2.17	0.43
1:C2:692:C:H2'	1:C2:693:U:O4'	2.18	0.43
1:C2:915:A:C5	1:C2:916:U:C5	3.06	0.43
1:C2:980:G:H4'	1:C2:1776:A:H4'	1.99	0.43
1:C2:1351:G:H2'	1:C2:1352:G:H8	1.83	0.43
1:C2:1477:G:H2'	1:C2:1478:G:H8	1.83	0.43
1:C2:1586:A:H2'	1:C2:1587:A:O4'	2.18	0.43
1:C2:1648:A:H2'	1:C2:1649:G:H8	1.82	0.43
3:C1:120:G:C8	45:LG:128:LYS:HG3	2.53	0.43
3:C1:177:U:C4	3:C1:178:U:C5	3.06	0.43
3:C1:728:G:H5''	54:LQ:43:PRO:HB2	1.99	0.43
3:C1:759:U:O4	3:C1:760:G:N1	2.52	0.43
3:C1:1073:U:H2'	3:C1:1074:U:C6	2.52	0.43
3:C1:1185:C:C4	3:C1:1186:G:N7	2.86	0.43
3:C1:1356:U:H6	3:C1:1356:U:O5'	2.01	0.43
3:C1:1419:A:H3'	41:LC:193:LYS:NZ	2.33	0.43
3:C1:1560:G:C6	3:C1:1561:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1886:A:O2'	40:LB:226:PHE:O	2.31	0.43
3:C1:2505:U:O2'	3:C1:2506:U:O4'	2.25	0.43
3:C1:3317:U:H1'	3:C1:3318:G:OP2	2.17	0.43
3:C1:3337:G:H2'	3:C1:3338:C:C6	2.53	0.43
4:C4:49:G:N3	4:C4:50:U:H5	2.15	0.43
8:SC:203:LYS:HB2	8:SC:203:LYS:HE2	1.65	0.43
16:SK:50:THR:HG22	16:SK:55:VAL:HG23	1.99	0.43
21:SP:125:PRO:HG3	24:SS:129:TRP:CH2	2.52	0.43
26:SU:70:THR:O	35:Sd:40:ARG:NH1	2.51	0.43
32:Sa:10:ARG:HB2	32:Sa:34:LYS:HG3	1.99	0.43
35:Sd:12:ARG:HD3	35:Sd:17:GLY:O	2.18	0.43
38:Sg:131:ILE:HG12	38:Sg:154:VAL:HG11	2.01	0.43
41:LC:257:LYS:O	41:LC:261:VAL:HG13	2.17	0.43
41:LC:266:THR:OG1	41:LC:267:VAL:N	2.51	0.43
44:LF:202:LEU:HD13	44:LF:205:PHE:CZ	2.53	0.43
47:LI:44:ASP:HA	47:LI:171:TRP:HE1	1.83	0.43
49:LL:43:ALA:HA	49:LL:46:ILE:HG22	1.99	0.43
71:Lh:83:LYS:O	71:Lh:84:LYS:C	2.60	0.43
1:C2:144:U:H2'	1:C2:145:A:C8	2.52	0.43
1:C2:485:A:C2	1:C2:486:G:H1'	2.52	0.43
1:C2:900:A:OP1	20:SO:43:THR:OG1	2.35	0.43
1:C2:1227:A:H4'	1:C2:1228:G:OP2	2.18	0.43
1:C2:1330:G:H2'	1:C2:1331:A:O4'	2.17	0.43
1:C2:1537:C:H5'	1:C2:1538:U:C5	2.53	0.43
1:C2:1582:U:H5''	22:SQ:135:ARG:NH1	2.34	0.43
3:C1:236:G:H2'	3:C1:237:G:O4'	2.18	0.43
3:C1:817:A:N3	73:Lj:11:ARG:HB3	2.34	0.43
3:C1:1083:G:H2'	3:C1:1084:A:C8	2.54	0.43
3:C1:1109:U:H2'	3:C1:1110:U:O4'	2.18	0.43
3:C1:1169:A:H4'	44:LF:219:LYS:HE2	2.00	0.43
3:C1:1252:A:C2	3:C1:1263:A:H2'	2.53	0.43
3:C1:2418:G:H4'	3:C1:2419:A:OP2	2.19	0.43
3:C1:2594:C:H2'	3:C1:2595:A:O4'	2.18	0.43
3:C1:3210:A:C2	3:C1:3211:C:C2	3.06	0.43
6:SA:30:GLN:O	6:SA:32:HIS:N	2.51	0.43
7:SB:138:PHE:HB2	7:SB:214:LYS:HB3	1.99	0.43
10:SE:31:PRO:HG3	10:SE:43:PRO:HG3	2.00	0.43
20:SO:20:TYR:HE1	20:SO:86:THR:HA	1.83	0.43
21:SP:15:HIS:CE1	21:SP:110:GLU:HG3	2.53	0.43
24:SS:113:LEU:HA	24:SS:116:LEU:HG	2.00	0.43
27:SV:17:CYS:SG	27:SV:18:SER:N	2.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:LB:214:MET:O	40:LB:341:SER:OG	2.30	0.43
42:LD:52:VAL:HA	42:LD:147:ASP:HB3	2.00	0.43
46:LH:18:VAL:O	50:LM:5:SER:HB2	2.18	0.43
52:LO:12:LYS:HD2	52:LO:37:ARG:NH2	2.33	0.43
63:LZ:133:LYS:HD3	63:LZ:135:ARG:HG2	2.00	0.43
1:C2:60:U:H1'	1:C2:453:U:H5''	2.00	0.43
1:C2:177:U:O2	12:SG:191:ARG:NH1	2.50	0.43
1:C2:628:G:OP1	19:SN:124:ARG:NH1	2.42	0.43
1:C2:870:C:H2'	1:C2:871:G:H8	1.83	0.43
1:C2:1145:U:C2	1:C2:1146:G:C8	3.06	0.43
1:C2:1476:C:H2'	1:C2:1477:G:C8	2.53	0.43
3:C1:507:U:H2'	3:C1:508:U:C6	2.53	0.43
3:C1:532:A:C2	3:C1:533:A:C5	3.06	0.43
3:C1:953:G:O2'	3:C1:1115:G:H4'	2.18	0.43
3:C1:1030:A:C6	3:C1:1031:C:N4	2.87	0.43
3:C1:1220:U:OP1	3:C1:1221:A:O2'	2.30	0.43
3:C1:1229:G:H2'	3:C1:1230:G:H8	1.83	0.43
3:C1:1648:A:H2'	3:C1:1649:U:O4'	2.18	0.43
3:C1:2129:U:H2'	3:C1:2130:G:C8	2.53	0.43
3:C1:3163:A:O2'	3:C1:3164:C:H5'	2.18	0.43
3:C1:3296:A:H2'	3:C1:3297:U:H6	1.82	0.43
12:SG:52:ILE:HD12	12:SG:109:LEU:HD21	1.99	0.43
21:SP:28:MET:SD	21:SP:32:ASP:HB3	2.58	0.43
22:SQ:67:VAL:HG11	22:SQ:81:ILE:HG22	1.99	0.43
24:SS:101:LEU:O	24:SS:105:VAL:HG13	2.19	0.43
36:Se:4:VAL:HG13	36:Se:5:HIS:CD2	2.53	0.43
38:Sg:48:THR:OG1	38:Sg:50:ASP:OD2	2.29	0.43
38:Sg:66:HIS:CD2	38:Sg:67:ILE:HG12	2.53	0.43
38:Sg:183:LEU:HA	38:Sg:186:PHE:HA	2.00	0.43
39:LA:126:LEU:HD13	39:LA:150:LEU:CD2	2.47	0.43
40:LB:92:TYR:HB2	40:LB:157:VAL:HB	2.01	0.43
41:LC:152:VAL:HG11	41:LC:156:LEU:HD12	1.99	0.43
42:LD:22:ARG:HE	42:LD:22:ARG:HB3	1.65	0.43
43:LE:128:LYS:HD3	43:LE:129:GLU:H	1.84	0.43
45:LG:71:VAL:HG12	45:LG:72:PRO:O	2.18	0.43
45:LG:225:LYS:O	45:LG:229:VAL:HG13	2.19	0.43
45:LG:230:LYS:HE2	45:LG:230:LYS:HB3	1.62	0.43
46:LH:36:LYS:HB3	46:LH:78:MET:SD	2.58	0.43
49:LL:187:ALA:O	49:LL:190:LYS:HG2	2.18	0.43
57:LT:72:VAL:HG22	57:LT:96:ILE:HG13	2.00	0.43
59:LV:86:ARG:HB2	59:LV:92:PHE:CE2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Li:25:LYS:O	72:Li:28:TYR:HB2	2.18	0.43
1:C2:1124:A:H2'	1:C2:1125:A:C8	2.53	0.43
1:C2:1388:A:N6	1:C2:1411:A:N7	2.65	0.43
1:C2:1500:C:H2'	1:C2:1501:C:C6	2.53	0.43
1:C2:1580:C:H2'	1:C2:1581:C:H6	1.83	0.43
3:C1:177:U:N3	3:C1:178:U:C5	2.86	0.43
3:C1:181:U:H2'	3:C1:182:U:O4'	2.17	0.43
3:C1:519:A:OP1	56:LS:62:ASN:ND2	2.47	0.43
3:C1:2615:G:H2'	3:C1:2616:C:C6	2.50	0.43
3:C1:2778:G:H2'	3:C1:2779:A:H5'	2.00	0.43
3:C1:3161:C:H2'	3:C1:3162:C:C6	2.54	0.43
6:SA:13:ASP:OD2	6:SA:179:ARG:NH2	2.49	0.43
7:SB:174:LYS:O	7:SB:177:GLN:HG3	2.18	0.43
8:SC:67:GLN:O	8:SC:70:ASP:HB2	2.19	0.43
10:SE:157:ASN:HD22	10:SE:222:LEU:HG	1.83	0.43
12:SG:20:ASP:OD2	12:SG:23:ARG:N	2.45	0.43
13:SH:111:LYS:HB3	13:SH:111:LYS:HE2	1.73	0.43
14:SI:137:LYS:HA	14:SI:140:GLU:CD	2.42	0.43
22:SQ:65:ILE:C	22:SQ:66:ARG:HD2	2.44	0.43
25:ST:22:LEU:HD21	25:ST:28:LEU:HD12	1.99	0.43
25:ST:105:LEU:HD23	25:ST:105:LEU:HA	1.87	0.43
26:SU:53:LYS:NZ	26:SU:91:ILE:HA	2.33	0.43
30:SY:27:VAL:HG11	30:SY:40:LEU:HD11	2.00	0.43
30:SY:82:ALA:O	30:SY:86:GLU:HB2	2.19	0.43
32:Sa:15:ARG:N	32:Sa:15:ARG:HD2	2.33	0.43
48:LJ:59:ILE:O	48:LJ:59:ILE:HG13	2.17	0.43
49:LL:43:ALA:HB2	49:LL:51:LEU:HD12	2.00	0.43
54:LQ:149:ALA:O	54:LQ:152:HIS:N	2.42	0.43
56:LS:46:GLN:HG2	56:LS:51:VAL:O	2.18	0.43
63:LZ:98:THR:O	63:LZ:101:PHE:HB2	2.19	0.43
1:C2:1378:U:C2	22:SQ:8:GLN:HG3	2.53	0.43
1:C2:1461:C:N4	24:SS:139:LYS:O	2.34	0.43
1:C2:1600:A:N3	1:C2:1600:A:H2'	2.34	0.43
1:C2:1667:A:H2'	1:C2:1668:G:H8	1.83	0.43
3:C1:600:G:O2'	3:C1:602:A:N6	2.42	0.43
3:C1:801:A:H61	49:LL:19:GLN:HE22	1.64	0.43
3:C1:900:G:H1'	3:C1:1589:A:N6	2.33	0.43
3:C1:1714:A:C2	3:C1:1731:A:C8	3.07	0.43
3:C1:1738:C:H2'	3:C1:1739:U:C6	2.54	0.43
3:C1:1760:A:H62	3:C1:1761:C:N4	2.16	0.43
3:C1:1769:G:O2'	58:LU:99:LYS:NZ	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2366:C:H2'	3:C1:2367:A:H8	1.82	0.43
3:C1:2903:A:H2'	3:C1:2904:U:O4'	2.18	0.43
7:SB:27:LYS:HD3	7:SB:47:LEU:HD13	1.99	0.43
7:SB:90:GLU:OE1	7:SB:225:VAL:HG23	2.18	0.43
8:SC:140:ARG:HB3	8:SC:221:THR:HG22	1.99	0.43
11:SF:73:THR:HA	22:SQ:47:LYS:HZ3	1.82	0.43
13:SH:130:VAL:HG11	13:SH:154:LEU:HD22	2.01	0.43
25:ST:29:GLU:HG2	25:ST:29:GLU:O	2.19	0.43
26:SU:65:ILE:CG2	35:Sd:31:ILE:HD11	2.49	0.43
28:SW:94:LEU:HA	28:SW:94:LEU:HD23	1.74	0.43
38:Sg:220:ILE:HG22	38:Sg:234:LEU:O	2.18	0.43
43:LE:19:LYS:HB2	43:LE:19:LYS:HE3	1.75	0.43
43:LE:40:LEU:HD11	43:LE:54:TYR:HB2	2.00	0.43
43:LE:133:GLU:H	43:LE:133:GLU:CD	2.27	0.43
46:LH:156:GLN:O	46:LH:156:GLN:NE2	2.50	0.43
56:LS:144:LEU:HA	56:LS:144:LEU:HD23	1.78	0.43
58:LU:90:ARG:C	58:LU:92:TRP:H	2.27	0.43
59:LV:81:GLN:NE2	59:LV:83:LYS:O	2.51	0.43
73:Lj:39:TYR:CD1	73:Lj:40:PRO:HA	2.53	0.43
1:C2:39:A:OP1	15:SJ:3:ARG:NH1	2.50	0.43
1:C2:149:C:N3	1:C2:166:C:N4	2.67	0.43
1:C2:339:C:C2	1:C2:340:U:C5	3.07	0.43
1:C2:422:G:H4'	1:C2:423:G:OP1	2.18	0.43
1:C2:591:A:C6	1:C2:592:A:C6	3.07	0.43
1:C2:592:A:OP2	15:SJ:39:LYS:HE3	2.19	0.43
1:C2:1020:A:C6	1:C2:1021:C:C5	3.06	0.43
1:C2:1540:G:C6	1:C2:1541:G:C4	3.06	0.43
1:C2:1606:C:H2'	1:C2:1607:G:H8	1.80	0.43
3:C1:563:U:C2	3:C1:564:G:C8	3.06	0.43
3:C1:656:A:H2'	3:C1:657:A:C8	2.53	0.43
3:C1:799:G:O2'	49:LL:18:TRP:NE1	2.52	0.43
3:C1:1036:A:C5	3:C1:1037:C:C5	3.06	0.43
3:C1:1584:U:H2'	3:C1:1585:C:H6	1.83	0.43
3:C1:2198:A:H2'	3:C1:2198:A:N3	2.33	0.43
3:C1:2330:C:C2	3:C1:2331:C:C5	3.06	0.43
3:C1:2570:U:H5''	3:C1:2572:C:H42	1.83	0.43
3:C1:2572:C:H2'	3:C1:2572:C:OP2	2.18	0.43
3:C1:3286:G:C6	3:C1:3287:U:C4	3.06	0.43
13:SH:166:LEU:HD23	13:SH:166:LEU:HA	1.89	0.43
14:SI:34:ALA:HB2	14:SI:56:ARG:HD2	2.01	0.43
18:SM:75:VAL:O	18:SM:79:ALA:CB	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LA:29:LEU:HB2	39:LA:123:ARG:HA	2.01	0.43
39:LA:150:LEU:O	39:LA:153:GLY:N	2.52	0.43
41:LC:74:ILE:HG12	41:LC:94:CYS:SG	2.58	0.43
41:LC:181:VAL:HG11	41:LC:224:GLY:HA3	2.01	0.43
42:LD:244:HIS:O	42:LD:248:ARG:HG2	2.18	0.43
43:LE:39:VAL:O	43:LE:87:THR:OG1	2.31	0.43
44:LF:156:ILE:O	44:LF:156:ILE:HG13	2.17	0.43
55:LR:23:TRP:HE3	55:LR:51:VAL:HB	1.83	0.43
59:LV:39:VAL:HG12	59:LV:40:LYS:H	1.83	0.43
62:LY:71:SER:N	62:LY:81:GLN:O	2.48	0.43
1:C2:271:A:N6	1:C2:272:U:O4	2.51	0.43
1:C2:555:A:N3	1:C2:590:C:O2'	2.44	0.43
1:C2:1202:A:C8	1:C2:1456:C:N4	2.86	0.43
1:C2:1321:A:N6	6:SA:135:GLU:OE1	2.52	0.43
1:C2:1433:G:C2	35:Sd:41:GLN:HB3	2.53	0.43
3:C1:150:A:C4	3:C1:151:A:C8	3.06	0.43
3:C1:602:A:H2'	3:C1:603:A:C4	2.53	0.43
3:C1:1062:A:HO2'	3:C1:1063:G:P	2.38	0.43
3:C1:1711:C:OP1	63:LZ:78:ASN:ND2	2.51	0.43
3:C1:1884:A:OP1	67:Ld:31:ARG:NH2	2.52	0.43
3:C1:2344:U:H2'	3:C1:2345:A:C8	2.53	0.43
3:C1:2773:C:H2'	3:C1:2774:C:C6	2.53	0.43
3:C1:3296:A:H2'	3:C1:3297:U:C6	2.53	0.43
6:SA:41:ARG:HG2	6:SA:42:PRO:O	2.19	0.43
6:SA:155:PHE:O	27:SV:60:ARG:NH2	2.52	0.43
7:SB:126:THR:HA	7:SB:135:LEU:O	2.18	0.43
8:SC:148:LEU:HD13	15:SJ:94:ASP:OD2	2.18	0.43
9:SD:110:LEU:HA	9:SD:110:LEU:HD23	1.83	0.43
15:SJ:40:LYS:HB2	15:SJ:40:LYS:HE3	1.60	0.43
18:SM:29:LYS:HE2	18:SM:100:TRP:HD1	1.84	0.43
18:SM:43:ARG:HH22	18:SM:120:VAL:H	1.65	0.43
21:SP:95:GLY:O	21:SP:102:PHE:HD1	2.01	0.43
22:SQ:114:ARG:HA	22:SQ:114:ARG:HD3	1.73	0.43
24:SS:20:THR:OG1	24:SS:35:ILE:HG12	2.18	0.43
24:SS:122:HIS:HA	24:SS:125:ILE:HG12	2.01	0.43
29:SX:132:LEU:HD23	29:SX:132:LEU:HA	1.74	0.43
34:Sc:27:GLN:HE21	34:Sc:41:VAL:CG1	2.31	0.43
40:LB:77:THR:HG21	40:LB:328:ILE:HG23	2.01	0.43
41:LC:26:PHE:CD1	41:LC:130:ALA:HB2	2.54	0.43
41:LC:219:LEU:HA	41:LC:219:LEU:HD23	1.81	0.43
45:LG:225:LYS:HA	45:LG:225:LYS:HD3	1.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:LI:14:ASN:O	47:LI:128:ARG:NH2	2.52	0.43
52:LO:53:LYS:HE2	52:LO:53:LYS:HB3	1.55	0.43
54:LQ:125:ASP:OD1	54:LQ:126:GLN:N	2.49	0.43
56:LS:8:GLN:O	56:LS:8:GLN:HG3	2.19	0.43
64:La:16:SER:O	64:La:17:ALA:C	2.61	0.43
1:C2:139:C:H4'	1:C2:140:A:O5'	2.19	0.43
1:C2:260:U:H6	1:C2:260:U:H2'	1.60	0.43
1:C2:295:A:O2'	10:SE:140:VAL:HG21	2.19	0.43
1:C2:315:A:C2	1:C2:353:A:C6	3.07	0.43
1:C2:1144:U:H2'	1:C2:1145:U:H6	1.84	0.43
1:C2:1171:A:H2'	1:C2:1172:G:C8	2.53	0.43
1:C2:1172:G:C6	1:C2:1173:C:C4	3.07	0.43
1:C2:1226:A:H4'	1:C2:1230:A:OP1	2.18	0.43
1:C2:1338:C:O2'	1:C2:1339:C:H5'	2.18	0.43
3:C1:93:C:OP2	3:C1:2764:C:H1'	2.18	0.43
3:C1:280:U:O2	3:C1:286:U:N3	2.52	0.43
3:C1:1259:A:N7	3:C1:1260:A:N6	2.67	0.43
3:C1:1678:G:H5'	3:C1:1756:C:O2'	2.19	0.43
3:C1:2260:U:H2'	3:C1:2261:G:C8	2.54	0.43
3:C1:2911:A:H4'	3:C1:2912:G:H5'	1.99	0.43
3:C1:3164:C:O2'	3:C1:3165:A:H8	2.02	0.43
5:C3:154:C:H2'	5:C3:155:A:H8	1.83	0.43
7:SB:103:MET:HE1	7:SB:212:VAL:O	2.19	0.43
9:SD:162:GLN:N	9:SD:163:PRO:HD2	2.33	0.43
13:SH:138:LYS:HE3	13:SH:138:LYS:HB2	1.82	0.43
13:SH:144:VAL:C	13:SH:146:GLY:H	2.27	0.43
15:SJ:117:GLY:C	15:SJ:119:ALA:H	2.27	0.43
17:SL:132:SER:O	17:SL:134:THR:N	2.44	0.43
18:SM:124:LYS:HE2	18:SM:124:LYS:HB2	1.84	0.43
21:SP:39:ALA:HA	21:SP:42:ARG:HB2	2.01	0.43
21:SP:45:PHE:CE1	21:SP:84:ILE:HD13	2.46	0.43
25:ST:5:SER:HB2	25:ST:8:ASP:OD1	2.18	0.43
26:SU:80:GLU:OE2	35:Sd:44:ARG:NH1	2.38	0.43
31:SZ:102:THR:HG22	31:SZ:103:ARG:N	2.34	0.43
34:Sc:30:VAL:HG23	34:Sc:40:ILE:HB	2.00	0.43
35:Sd:36:LEU:HD23	35:Sd:36:LEU:HA	1.75	0.43
39:LA:58:LEU:HD13	39:LA:75:ILE:HG21	2.01	0.43
41:LC:22:LEU:HD22	41:LC:26:PHE:HD2	1.84	0.43
48:LJ:62:ASN:HD21	78:Lo:101:GLY:HA2	1.84	0.43
54:LQ:67:ILE:HG12	54:LQ:81:VAL:HG11	2.01	0.43
62:LY:83:ASP:HB3	62:LY:84:LYS:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Lk:64:LYS:O	74:Lk:67:GLN:HG3	2.19	0.43
77:Ln:2:ARG:HB3	77:Ln:5:TRP:CD1	2.54	0.43
1:C2:178:U:O4	12:SG:194:LYS:HD2	2.19	0.43
1:C2:206:A:P	10:SE:133:LYS:HZ1	2.37	0.43
1:C2:447:U:H2'	1:C2:448:C:O4'	2.19	0.43
1:C2:953:G:H2'	1:C2:954:G:H8	1.84	0.43
1:C2:958:U:H2'	19:SN:14:SER:HB3	2.00	0.43
3:C1:594:U:O2'	3:C1:595:G:H5'	2.19	0.43
3:C1:612:U:O5'	43:LE:21:THR:HG21	2.19	0.43
3:C1:665:A:H1'	49:LL:14:PHE:CE2	2.54	0.43
3:C1:1868:G:H2'	3:C1:1869:C:H6	1.84	0.43
3:C1:2328:U:H2'	3:C1:2329:C:H6	1.83	0.43
3:C1:3066:U:H2'	3:C1:3067:C:C6	2.54	0.43
3:C1:3158:G:O2'	3:C1:3159:C:OP1	2.35	0.43
4:C4:13:A:HO2'	4:C4:14:U:H5'	1.83	0.43
4:C4:74:C:H2'	4:C4:75:G:C8	2.54	0.43
4:C4:97:A:H2'	4:C4:98:C:C6	2.53	0.43
5:C3:51:G:C4	75:LI:26:TRP:HH2	2.37	0.43
5:C3:72:A:C5	5:C3:73:U:C5	3.06	0.43
9:SD:202:LEU:C	9:SD:204:ASP:H	2.27	0.43
10:SE:118:GLU:HA	10:SE:121:TYR:CD1	2.53	0.43
10:SE:153:ASN:HA	10:SE:155:LYS:HE2	2.01	0.43
13:SH:133:THR:O	13:SH:133:THR:OG1	2.35	0.43
21:SP:28:MET:SD	21:SP:33:PHE:N	2.91	0.43
22:SQ:98:ASP:O	22:SQ:101:SER:OG	2.28	0.43
24:SS:64:GLU:OE1	24:SS:64:GLU:N	2.34	0.43
31:SZ:80:LEU:O	31:SZ:84:GLU:HG2	2.19	0.43
38:Sg:165:ASP:OD1	38:Sg:165:ASP:N	2.47	0.43
38:Sg:243:LEU:HD13	38:Sg:243:LEU:HA	1.87	0.43
39:LA:247:ARG:HA	39:LA:248:GLY:HA3	1.82	0.43
40:LB:60:LEU:HD23	40:LB:67:PHE:HB3	2.00	0.43
41:LC:119:ARG:HA	41:LC:122:THR:HG22	2.01	0.43
41:LC:299:ILE:HD13	41:LC:299:ILE:HA	1.88	0.43
41:LC:339:LEU:HD12	41:LC:339:LEU:HA	1.83	0.43
44:LF:98:LYS:HB3	44:LF:99:PRO:HD3	2.01	0.43
46:LH:139:ASN:OD1	46:LH:139:ASN:N	2.48	0.43
51:LN:35:VAL:O	51:LN:64:VAL:HA	2.17	0.43
53:LP:62:ARG:HE	53:LP:62:ARG:HB2	1.45	0.43
68:Le:20:HIS:CG	68:Le:42:VAL:HG21	2.54	0.43
79:Lp:29:LEU:HD22	79:Lp:69:TYR:CD2	2.53	0.43
1:C2:755:A:H2'	1:C2:756:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:794:U:OP2	1:C2:794:U:H2'	2.19	0.42
1:C2:870:C:H2'	1:C2:871:G:C8	2.55	0.42
1:C2:963:A:H8	1:C2:963:A:O5'	2.02	0.42
1:C2:1120:U:H2'	1:C2:1121:C:H6	1.83	0.42
1:C2:1160:A:H2'	1:C2:1161:C:H6	1.82	0.42
1:C2:1566:U:H5''	24:SS:39:GLY:H	1.83	0.42
1:C2:1591:C:H2'	1:C2:1592:A:C8	2.54	0.42
1:C2:1685:G:H2'	1:C2:1686:C:C6	2.54	0.42
1:C2:1714:A:C6	1:C2:1715:G:C6	3.07	0.42
1:C2:1777:G:N2	1:C2:1785:U:O2	2.52	0.42
1:C2:1789:G:C8	20:SO:132:ARG:NH2	2.87	0.42
3:C1:277:G:H2'	3:C1:278:U:C6	2.53	0.42
3:C1:916:G:H4'	3:C1:917:A:O5'	2.18	0.42
3:C1:987:U:H2'	3:C1:988:U:H6	1.84	0.42
3:C1:1084:A:H2'	3:C1:1085:A:C8	2.54	0.42
3:C1:1186:G:N3	56:LS:112:ALA:HB1	2.34	0.42
3:C1:1284:C:H2'	3:C1:1285:G:O4'	2.19	0.42
3:C1:1811:G:H5''	3:C1:1812:G:OP2	2.19	0.42
3:C1:2253:G:H2'	3:C1:2254:U:O4'	2.19	0.42
3:C1:2545:C:H2'	3:C1:2546:C:C6	2.54	0.42
3:C1:3081:C:H2'	3:C1:3082:C:H6	1.84	0.42
9:SD:38:GLU:CB	9:SD:51:ARG:HH22	2.32	0.42
10:SE:92:LEU:HD12	30:SY:17:LEU:HD11	1.99	0.42
10:SE:195:ILE:O	10:SE:196:VAL:C	2.61	0.42
11:SF:25:LEU:HB2	11:SF:29:ILE:CD1	2.48	0.42
12:SG:98:ARG:HH12	12:SG:103:GLY:H	1.67	0.42
13:SH:47:ARG:HB2	13:SH:61:PHE:CE2	2.51	0.42
14:SI:76:THR:HG23	14:SI:108:PRO:HG2	2.01	0.42
16:SK:59:PHE:HZ	16:SK:62:GLN:NE2	2.17	0.42
21:SP:60:LEU:HD13	21:SP:60:LEU:HA	1.80	0.42
23:SR:57:LEU:HA	23:SR:60:ARG:HG2	2.01	0.42
25:ST:127:ASN:HA	25:ST:130:ARG:NH1	2.34	0.42
37:Sf:123:ASN:OD1	37:Sf:124:PRO:HD2	2.17	0.42
38:Sg:74:THR:CG2	38:Sg:78:ALA:H	2.32	0.42
39:LA:83:HIS:O	39:LA:86:GLN:HB2	2.19	0.42
40:LB:266:ARG:HG3	40:LB:267:ALA:N	2.34	0.42
41:LC:329:PRO:O	41:LC:330:TYR:HB3	2.19	0.42
47:LI:47:PRO:HB3	47:LI:171:TRP:CZ2	2.53	0.42
70:Lg:15:THR:HG22	70:Lg:16:ARG:H	1.83	0.42
75:Ll:13:MET:HE2	75:Ll:13:MET:HB2	1.81	0.42
1:C2:464:A:C2	1:C2:465:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:633:U:H5'	29:SX:8:GLY:HA3	2.00	0.42
1:C2:875:G:OP2	7:SB:158:SER:OG	2.33	0.42
1:C2:1128:C:C4	1:C2:1129:U:C5	3.07	0.42
1:C2:1191:U:H2'	1:C2:1192:C:C6	2.54	0.42
1:C2:1401:A:OP1	23:SR:56:HIS:HE1	2.01	0.42
1:C2:1610:G:OP1	11:SF:72:HIS:NE2	2.52	0.42
3:C1:550:A:C2	3:C1:551:A:C5	3.06	0.42
3:C1:552:G:H2'	3:C1:553:U:C6	2.54	0.42
3:C1:1454:A:O5'	3:C1:1454:A:H8	2.02	0.42
3:C1:3170:A:C2	3:C1:3281:U:C2	3.07	0.42
3:C1:3208:G:O3'	56:LS:161:LYS:NZ	2.52	0.42
5:C3:14:C:O2'	5:C3:15:G:H5'	2.19	0.42
5:C3:62:C:H4'	5:C3:63:G:O5'	2.19	0.42
5:C3:143:U:H2'	5:C3:144:G:O4'	2.18	0.42
9:SD:67:ASN:OD1	9:SD:68:GLU:N	2.52	0.42
11:SF:186:ASN:OD1	11:SF:187:ILE:N	2.52	0.42
12:SG:28:PHE:CZ	12:SG:104:PRO:HB3	2.54	0.42
13:SH:73:VAL:O	13:SH:75:THR:HG22	2.19	0.42
13:SH:106:SER:O	13:SH:106:SER:OG	2.37	0.42
14:SI:36:THR:HG22	14:SI:57:ALA:O	2.19	0.42
15:SJ:39:LYS:H	15:SJ:39:LYS:HG2	1.55	0.42
21:SP:75:PRO:HB3	21:SP:93:VAL:HG22	2.00	0.42
25:ST:108:LEU:HD12	25:ST:108:LEU:HA	1.71	0.42
30:SY:37:LYS:HG2	30:SY:57:VAL:HG23	2.01	0.42
42:LD:125:VAL:HG11	42:LD:199:ILE:HG21	2.01	0.42
43:LE:91:VAL:HG22	43:LE:155:LEU:HD21	2.00	0.42
44:LF:124:LEU:HA	44:LF:124:LEU:HD23	1.70	0.42
46:LH:47:LYS:NZ	50:LM:5:SER:O	2.44	0.42
50:LM:65:LEU:HG	56:LS:172:TYR:OH	2.19	0.42
51:LN:13:LYS:HA	51:LN:13:LYS:HD3	1.72	0.42
54:LQ:134:GLY:O	54:LQ:137:THR:HG22	2.18	0.42
59:LV:54:LEU:HD21	59:LV:119:GLY:HA3	2.01	0.42
60:LW:51:TRP:H	60:LW:51:TRP:CD1	2.35	0.42
64:La:124:ILE:HG12	64:La:144:VAL:HG12	2.01	0.42
74:Lk:43:PHE:HZ	74:Lk:66:ILE:HG13	1.84	0.42
1:C2:446:A:N6	1:C2:461:G:H21	2.17	0.42
1:C2:765:G:N7	15:SJ:149:ARG:NH2	2.68	0.42
1:C2:1360:A:C6	1:C2:1361:U:C2	3.08	0.42
1:C2:1552:U:OP2	21:SP:43:ARG:NH2	2.51	0.42
1:C2:1561:U:C2	1:C2:1562:G:C8	3.08	0.42
1:C2:1588:G:N1	1:C2:1609:U:C2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:213:A:N6	3:C1:228:U:O4'	2.52	0.42
3:C1:499:G:H5''	69:Lf:48:ARG:NH2	2.31	0.42
3:C1:559:A:H2'	3:C1:560:G:O4'	2.19	0.42
3:C1:567:G:C6	3:C1:568:G:C6	3.08	0.42
3:C1:665:A:H2	49:LL:12:ASN:ND2	2.17	0.42
3:C1:709:A:H2'	3:C1:710:A:O4'	2.19	0.42
3:C1:715:A:H2	3:C1:781:G:N3	2.17	0.42
3:C1:1153:A:O2'	3:C1:1154:A:H5'	2.19	0.42
3:C1:2767:U:H2'	3:C1:2768:U:C6	2.54	0.42
3:C1:3041:U:H2'	3:C1:3042:U:C6	2.54	0.42
5:C3:73:U:C4	5:C3:74:U:C4	3.07	0.42
7:SB:33:LYS:NZ	7:SB:95:ASN:HB3	2.33	0.42
8:SC:40:LYS:HG3	8:SC:247:ALA:HB1	2.01	0.42
12:SG:132:ARG:O	12:SG:133:LEU:HD12	2.19	0.42
12:SG:135:PRO:HB3	12:SG:140:ASN:HB3	2.01	0.42
20:SO:132:ARG:O	20:SO:132:ARG:HG3	2.19	0.42
28:SW:105:THR:OG1	28:SW:126:LEU:HD13	2.19	0.42
30:SY:76:TYR:HB2	30:SY:82:ALA:HB2	2.01	0.42
32:Sa:37:LYS:O	32:Sa:38:ARG:HD3	2.18	0.42
41:LC:49:ALA:HB2	49:LL:26:PHE:CZ	2.54	0.42
45:LG:146:LYS:HE2	45:LG:146:LYS:HB2	1.90	0.42
45:LG:184:ALA:O	45:LG:188:THR:HG22	2.19	0.42
46:LH:71:VAL:O	46:LH:75:VAL:HG23	2.19	0.42
47:LI:36:LEU:HD11	47:LI:69:ARG:HD2	2.01	0.42
50:LM:8:LYS:HE2	50:LM:8:LYS:HB3	1.85	0.42
50:LM:68:LEU:HD21	50:LM:93:LYS:HB2	2.00	0.42
51:LN:183:THR:HB	51:LN:187:ARG:HB2	2.00	0.42
56:LS:94:ILE:HD11	56:LS:106:LEU:HB2	2.01	0.42
1:C2:183:U:H2'	1:C2:184:C:H6	1.83	0.42
1:C2:221:A:C2	1:C2:841:U:C2	3.07	0.42
1:C2:737:A:H2'	1:C2:738:G:O4'	2.19	0.42
1:C2:846:G:H2'	1:C2:847:A:H8	1.85	0.42
1:C2:932:U:OP2	7:SB:155:TYR:OH	2.20	0.42
1:C2:1218:G:O4'	1:C2:1444:A:N6	2.52	0.42
1:C2:1416:G:C2	1:C2:1417:A:C4	3.08	0.42
1:C2:1472:C:N4	1:C2:1535:U:O2	2.52	0.42
3:C1:158:G:H2'	3:C1:159:A:C8	2.49	0.42
3:C1:539:C:H2'	3:C1:540:U:C6	2.54	0.42
3:C1:549:U:H2'	3:C1:550:A:C8	2.54	0.42
3:C1:640:U:H2'	3:C1:641:C:C6	2.54	0.42
3:C1:706:A:C5	3:C1:714:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:748:U:H2'	3:C1:749:C:C6	2.54	0.42
3:C1:824:C:H5''	39:LA:21:ARG:HG3	2.01	0.42
3:C1:1225:A:H2'	3:C1:1226:G:O4'	2.20	0.42
3:C1:1246:G:H1'	3:C1:1264:G:H2'	2.02	0.42
3:C1:1501:U:O2'	3:C1:1502:C:H5'	2.19	0.42
3:C1:1595:U:C2	3:C1:1596:C:C5	3.08	0.42
3:C1:1919:G:H8	3:C1:1919:G:O5'	2.02	0.42
3:C1:2435:G:O2'	51:LN:24:ARG:NH2	2.53	0.42
3:C1:2689:A:H2'	3:C1:2689:A:N3	2.33	0.42
3:C1:2910:A:O2'	3:C1:3130:A:N1	2.44	0.42
6:SA:20:ALA:HB2	6:SA:172:LEU:HD13	2.01	0.42
7:SB:164:ILE:O	7:SB:168:ILE:HG13	2.20	0.42
8:SC:168:ARG:HB3	8:SC:199:GLN:HB2	2.00	0.42
10:SE:118:GLU:HA	10:SE:121:TYR:CE1	2.54	0.42
13:SH:73:VAL:HG23	13:SH:74:GLN:N	2.22	0.42
22:SQ:4:VAL:HG23	22:SQ:23:LYS:HE2	2.01	0.42
24:SS:30:TYR:CD1	24:SS:40:ARG:HG2	2.54	0.42
26:SU:102:ARG:O	26:SU:106:ILE:HG13	2.18	0.42
35:Sd:15:GLY:O	35:Sd:18:SER:OG	2.23	0.42
38:Sg:120:SER:OG	38:Sg:121:MET:HG2	2.19	0.42
43:LE:128:LYS:HD3	43:LE:129:GLU:N	2.34	0.42
45:LG:176:PRO:HB3	45:LG:219:ASP:OD1	2.19	0.42
47:LI:89:VAL:HG23	47:LI:136:PHE:HE1	1.85	0.42
55:LR:155:LEU:HD12	55:LR:155:LEU:HA	1.72	0.42
57:LT:92:ARG:HB2	57:LT:95:HIS:HD2	1.84	0.42
61:LX:88:MET:HE2	61:LX:88:MET:HB2	1.89	0.42
62:LY:63:LYS:HA	62:LY:63:LYS:HD3	1.79	0.42
63:LZ:115:LYS:O	63:LZ:119:GLU:HG3	2.18	0.42
67:Ld:8:VAL:O	67:Ld:76:SER:HA	2.19	0.42
1:C2:65:A:OP2	12:SG:174:LYS:NZ	2.52	0.42
1:C2:90:C:H2'	1:C2:91:G:O4'	2.19	0.42
1:C2:140:A:OP1	12:SG:187:LYS:NZ	2.52	0.42
1:C2:312:A:C2	1:C2:315:A:C8	3.07	0.42
1:C2:575:C:N4	29:SX:65:ASN:OD1	2.45	0.42
1:C2:591:A:H2'	1:C2:592:A:H8	1.84	0.42
3:C1:212:G:H2'	41:LC:221:ASN:OD1	2.20	0.42
3:C1:521:A:C5	3:C1:572:A:C6	3.07	0.42
3:C1:682:U:H5	41:LC:112:LYS:HE2	1.85	0.42
3:C1:1314:C:H6	3:C1:1314:C:O5'	2.03	0.42
3:C1:1394:A:H2'	3:C1:1395:G:O4'	2.18	0.42
3:C1:1704:A:C6	3:C1:1741:A:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:3124:G:H2'	3:C1:3125:U:O4'	2.19	0.42
3:C1:3150:A:OP1	40:LB:132:LYS:HB2	2.19	0.42
3:C1:3294:A:H2'	3:C1:3295:A:O4'	2.19	0.42
7:SB:70:LEU:HB3	7:SB:79:HIS:HB3	2.02	0.42
9:SD:54:ARG:NH2	9:SD:57:ASP:OD1	2.52	0.42
11:SF:41:LYS:H	11:SF:41:LYS:HG2	1.68	0.42
11:SF:70:VAL:HG23	11:SF:111:VAL:HG21	2.00	0.42
16:SK:21:VAL:HG12	16:SK:23:ALA:HB2	2.01	0.42
21:SP:108:ARG:NH1	21:SP:108:ARG:HA	2.34	0.42
22:SQ:81:ILE:O	22:SQ:85:ILE:HG12	2.20	0.42
22:SQ:116:LEU:HA	22:SQ:116:LEU:HD23	1.83	0.42
24:SS:86:LEU:HD23	24:SS:86:LEU:HA	1.80	0.42
24:SS:126:ARG:HD2	24:SS:126:ARG:HA	1.79	0.42
30:SY:38:ASP:OD1	30:SY:39:GLU:N	2.47	0.42
33:Sb:35:VAL:HG12	33:Sb:44:THR:O	2.18	0.42
39:LA:225:ILE:HG22	39:LA:226:SER:N	2.34	0.42
40:LB:131:THR:O	40:LB:134:SER:OG	2.33	0.42
40:LB:187:SER:OG	40:LB:190:GLU:HB2	2.20	0.42
42:LD:44:TYR:O	57:LT:33:VAL:HG11	2.20	0.42
44:LF:101:LYS:HB2	44:LF:101:LYS:HE2	1.84	0.42
53:LP:109:ALA:HA	53:LP:112:LEU:HG	2.01	0.42
64:La:84:GLU:O	64:La:87:ARG:HB3	2.19	0.42
1:C2:48:G:C6	1:C2:432:G:C2	3.07	0.42
1:C2:399:A:C4	1:C2:401:A:C8	3.07	0.42
1:C2:609:U:H1'	29:SX:19:ARG:HH22	1.83	0.42
1:C2:1365:C:H2'	1:C2:1366:U:O4'	2.20	0.42
1:C2:1473:U:O2'	1:C2:1474:G:O5'	2.38	0.42
1:C2:1540:G:C5	1:C2:1541:G:C5	3.07	0.42
1:C2:1552:U:O2'	1:C2:1597:A:N3	2.45	0.42
1:C2:1588:G:C6	1:C2:1609:U:N3	2.87	0.42
1:C2:1603:U:H5''	22:SQ:138:PHE:CE2	2.54	0.42
1:C2:1767:G:OP1	1:C2:1770:U:H4'	2.19	0.42
2:C5:59:LYS:HD3	2:C5:59:LYS:HA	1.79	0.42
3:C1:151:A:C4	3:C1:152:U:C5	3.08	0.42
3:C1:632:G:H2'	3:C1:633:C:C6	2.54	0.42
3:C1:707:U:O2'	3:C1:754:G:N3	2.52	0.42
3:C1:826:G:C2	3:C1:900:G:C5	3.07	0.42
3:C1:978:G:C2	3:C1:1104:G:C6	3.08	0.42
3:C1:1098:A:OP2	57:LT:108:ARG:NH2	2.52	0.42
3:C1:1231:A:H5''	3:C1:1232:C:C5'	2.41	0.42
3:C1:1294:A:C2	3:C1:1295:G:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1560:G:O2'	3:C1:1561:G:O5'	2.28	0.42
3:C1:1783:U:H2'	3:C1:1784:G:C8	2.55	0.42
3:C1:2106:A:H2'	3:C1:2107:A:H8	1.85	0.42
3:C1:2129:U:H2'	3:C1:2130:G:H8	1.85	0.42
3:C1:2244:A:H5''	39:LA:243:THR:HB	2.01	0.42
3:C1:2340:U:H2'	3:C1:2341:A:H8	1.84	0.42
3:C1:2352:A:H5''	53:LP:83:TRP:O	2.19	0.42
3:C1:2720:G:C2	3:C1:2721:A:C8	3.08	0.42
3:C1:3371:G:H2'	3:C1:3372:A:C8	2.54	0.42
5:C3:10:A:H2	53:LP:6:ALA:HB2	1.85	0.42
5:C3:155:A:H5'	45:LG:185:ARG:NH1	2.34	0.42
6:SA:82:GLY:O	6:SA:86:VAL:HG23	2.19	0.42
8:SC:111:VAL:O	8:SC:137:ILE:N	2.53	0.42
9:SD:25:PHE:CE2	9:SD:50:ILE:HD11	2.54	0.42
9:SD:216:PRO:O	38:Sg:196:ASN:ND2	2.53	0.42
10:SE:35:PRO:HB2	10:SE:36:HIS:CD2	2.54	0.42
11:SF:128:ASN:HB3	11:SF:131:GLN:CB	2.49	0.42
15:SJ:80:LEU:HA	15:SJ:83:VAL:HG12	2.02	0.42
16:SK:3:MET:HG3	16:SK:8:ARG:HG3	2.02	0.42
17:SL:44:THR:HG23	17:SL:60:PHE:CD1	2.54	0.42
21:SP:32:ASP:HA	21:SP:35:LYS:HE3	2.01	0.42
22:SQ:9:THR:HG21	22:SQ:88:GLY:HA2	2.02	0.42
35:Sd:10:HIS:CG	35:Sd:11:PRO:HD2	2.55	0.42
52:LO:119:VAL:HG11	52:LO:124:LEU:HD11	2.02	0.42
53:LP:22:LEU:HD22	53:LP:90:PHE:CE2	2.55	0.42
56:LS:3:HIS:ND1	56:LS:3:HIS:O	2.52	0.42
66:Lc:75:ASN:HD21	66:Lc:86:ARG:HE	1.68	0.42
68:Le:8:LYS:HD2	68:Le:8:LYS:HA	1.82	0.42
70:Lg:79:SER:OG	70:Lg:80:ARG:NH1	2.52	0.42
74:Lk:45:VAL:O	74:Lk:51:LEU:HD12	2.19	0.42
1:C2:526:A:H2'	1:C2:527:A:O4'	2.20	0.42
1:C2:610:G:N2	29:SX:19:ARG:HH22	2.18	0.42
1:C2:793:A:C3'	1:C2:794:U:H5'	2.49	0.42
1:C2:830:U:O2	1:C2:830:U:H2'	2.20	0.42
1:C2:961:U:H2'	1:C2:962:C:C6	2.53	0.42
1:C2:1039:A:H3'	1:C2:1039:A:P	2.59	0.42
1:C2:1087:A:H2'	1:C2:1088:A:C8	2.55	0.42
1:C2:1250:U:H2'	1:C2:1251:U:H5'	2.01	0.42
1:C2:1266:U:H2'	1:C2:1267:G:C8	2.54	0.42
1:C2:1524:A:H2'	1:C2:1525:A:H8	1.84	0.42
3:C1:41:G:N2	3:C1:2803:A:N7	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:411:U:H2'	3:C1:412:G:H8	1.84	0.42
3:C1:501:A:H2'	3:C1:502:U:H6	1.84	0.42
3:C1:589:A:O2'	3:C1:1338:C:OP1	2.37	0.42
3:C1:593:C:O2'	3:C1:594:U:H5'	2.20	0.42
3:C1:684:G:H5''	49:LL:35:ARG:HH12	1.85	0.42
3:C1:713:U:O2	3:C1:754:G:H4'	2.19	0.42
3:C1:2181:C:H5''	39:LA:193:ARG:CZ	2.50	0.42
3:C1:2703:A:N6	42:LD:28:THR:O	2.49	0.42
4:C4:24:A:H2'	4:C4:25:G:C8	2.54	0.42
5:C3:40:A:OP2	5:C3:103:G:N1	2.51	0.42
10:SE:51:ARG:HD3	10:SE:51:ARG:HA	1.92	0.42
10:SE:105:VAL:HG21	10:SE:245:LYS:H	1.85	0.42
10:SE:126:VAL:HG23	10:SE:139:VAL:HB	2.02	0.42
10:SE:255:ARG:O	10:SE:259:GLN:HG2	2.20	0.42
13:SH:58:LEU:HD23	13:SH:88:ARG:HB3	2.01	0.42
22:SQ:34:SER:OG	22:SQ:38:LEU:HD12	2.19	0.42
23:SR:25:THR:H	23:SR:31:ASN:ND2	2.18	0.42
23:SR:105:GLN:HA	23:SR:108:ASP:OD2	2.20	0.42
27:SV:9:VAL:O	27:SV:10:GLU:HG2	2.20	0.42
36:Se:46:ASN:OD1	36:Se:46:ASN:N	2.52	0.42
38:Sg:113:VAL:HG12	38:Sg:124:SER:HB3	2.01	0.42
40:LB:261:MET:HE3	40:LB:261:MET:HB3	1.86	0.42
40:LB:316:GLU:H	40:LB:316:GLU:CD	2.26	0.42
41:LC:10:SER:OG	41:LC:14:GLU:HB3	2.20	0.42
43:LE:137:ASP:O	43:LE:141:VAL:HG23	2.20	0.42
45:LG:133:LYS:HG3	45:LG:201:THR:CG2	2.49	0.42
45:LG:151:VAL:O	45:LG:152:LEU:HD23	2.20	0.42
47:LI:80:SER:OG	47:LI:144:ASN:OD1	2.29	0.42
49:LL:76:THR:O	49:LL:78:ALA:N	2.53	0.42
51:LN:88:GLY:HA3	78:Lo:50:PHE:CE2	2.54	0.42
67:Ld:62:ARG:HD2	67:Ld:66:GLY:O	2.20	0.42
1:C2:107:C:H5''	1:C2:383:G:O2'	2.19	0.42
1:C2:334:G:H2'	1:C2:335:U:H6	1.85	0.42
1:C2:454:U:H3'	1:C2:455:C:C6	2.54	0.42
1:C2:631:G:H2'	1:C2:632:U:C6	2.54	0.42
1:C2:861:U:H2'	1:C2:862:A:O4'	2.20	0.42
1:C2:948:G:H2'	1:C2:949:C:H6	1.84	0.42
1:C2:1167:G:H2'	1:C2:1168:U:H6	1.84	0.42
1:C2:1480:G:OP1	25:ST:60:SER:OG	2.27	0.42
1:C2:1608:U:H2'	1:C2:1609:U:H6	1.85	0.42
3:C1:900:G:H1'	3:C1:1589:A:H62	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:2259:A:C5	3:C1:2260:U:C5	3.07	0.42
3:C1:3003:G:H2'	3:C1:3004:C:H6	1.85	0.42
9:SD:40:ARG:N	9:SD:47:GLU:O	2.38	0.42
13:SH:47:ARG:HB3	13:SH:59:ALA:HB3	2.02	0.42
17:SL:67:ARG:O	17:SL:127:GLN:HB3	2.20	0.42
24:SS:62:THR:N	24:SS:65:GLU:OE1	2.53	0.42
24:SS:101:LEU:HB3	24:SS:102:ALA:H	1.65	0.42
33:Sb:14:SER:O	33:Sb:17:ARG:HG2	2.19	0.42
34:Sc:11:LYS:HD3	34:Sc:12:VAL:H	1.85	0.42
39:LA:148:VAL:O	39:LA:155:LYS:HA	2.20	0.42
40:LB:215:ILE:HD13	40:LB:282:ILE:HD11	2.02	0.42
40:LB:366:GLY:O	40:LB:368:GLY:N	2.49	0.42
44:LF:90:LYS:HB3	44:LF:133:TYR:HB3	2.02	0.42
45:LG:78:PHE:CZ	45:LG:163:VAL:HG12	2.55	0.42
50:LM:128:ARG:HA	50:LM:131:VAL:HG12	2.02	0.42
54:LQ:29:LEU:HA	54:LQ:29:LEU:HD23	1.87	0.42
56:LS:66:GLU:HG3	56:LS:98:SER:HB3	2.02	0.42
1:C2:151:G:C2	1:C2:164:A:C6	3.08	0.42
1:C2:390:G:H5''	1:C2:390:G:N3	2.34	0.42
1:C2:486:G:C2	1:C2:487:G:C5	3.08	0.42
1:C2:622:A:H4'	1:C2:623:A:C5'	2.49	0.42
1:C2:1380:U:H2'	1:C2:1381:U:C6	2.55	0.42
3:C1:5:G:H2'	3:C1:6:A:O4'	2.20	0.42
3:C1:192:C:H2'	3:C1:193:C:C6	2.55	0.42
3:C1:608:A:C4	43:LE:22:ARG:NH1	2.88	0.42
3:C1:1290:A:H2'	3:C1:1291:A:C8	2.54	0.42
3:C1:1595:U:H1'	3:C1:1596:C:C6	2.54	0.42
3:C1:2425:G:OP2	51:LN:90:ASN:ND2	2.50	0.42
9:SD:212:LYS:HE2	9:SD:212:LYS:HB2	1.84	0.42
10:SE:18:TRP:HH2	10:SE:31:PRO:HD3	1.85	0.42
10:SE:95:THR:HG22	30:SY:16:PRO:HG2	2.02	0.42
10:SE:195:ILE:HD13	10:SE:195:ILE:HA	1.76	0.42
12:SG:2:LYS:HE3	12:SG:2:LYS:HB2	1.92	0.42
21:SP:75:PRO:HA	21:SP:93:VAL:O	2.20	0.42
22:SQ:35:PRO:HD2	22:SQ:38:LEU:HD12	2.01	0.42
23:SR:72:LYS:O	23:SR:76:GLU:HG2	2.19	0.42
27:SV:79:LEU:HD13	27:SV:82:VAL:HG11	2.01	0.42
28:SW:113:HIS:O	28:SW:117:ARG:HG3	2.19	0.42
30:SY:20:ARG:HB3	30:SY:76:TYR:CD2	2.55	0.42
31:SZ:81:ARG:HA	31:SZ:84:GLU:HG2	2.00	0.42
32:Sa:35:ALA:HA	32:Sa:73:TYR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Sg:267:PRO:HD2	38:Sg:269:TYR:CE2	2.48	0.42
42:LD:53:VAL:O	42:LD:54:ARG:NH1	2.39	0.42
43:LE:56:LYS:NZ	43:LE:101:PHE:O	2.53	0.42
47:LI:48:LEU:HD12	47:LI:178:ARG:HH21	1.83	0.42
52:LO:22:VAL:O	52:LO:26:GLN:HG2	2.20	0.42
67:Ld:15:ASN:O	67:Ld:19:ARG:HG2	2.19	0.42
67:Ld:48:ASP:OD2	67:Ld:50:ARG:NH1	2.53	0.42
74:Lk:40:GLN:HE21	74:Lk:55:VAL:HG21	1.85	0.42
79:Lp:26:VAL:O	79:Lp:30:GLU:HB2	2.19	0.42
1:C2:121:U:H1'	10:SE:33:ALA:O	2.19	0.42
1:C2:448:C:H2'	1:C2:449:C:H6	1.85	0.42
1:C2:755:A:OP2	1:C2:755:A:H4'	2.19	0.42
1:C2:1237:G:C2	1:C2:1238:A:N7	2.88	0.42
1:C2:1357:A:C2	1:C2:1358:G:C5	3.08	0.42
1:C2:1454:G:C6	1:C2:1455:G:O6	2.73	0.42
1:C2:1477:G:C2	1:C2:1478:G:C5	3.08	0.42
3:C1:31:C:C4	3:C1:32:U:C4	3.08	0.42
3:C1:241:G:C6	3:C1:242:C:C4	3.08	0.42
3:C1:340:C:H2'	3:C1:341:G:O4'	2.20	0.42
3:C1:715:A:H4'	3:C1:716:A:OP1	2.20	0.42
3:C1:920:A:OP1	3:C1:923:C:N4	2.45	0.42
3:C1:1157:G:O2'	3:C1:1169:A:N3	2.41	0.42
3:C1:1731:A:C5	3:C1:1732:U:C5	3.07	0.42
3:C1:2259:A:H2'	3:C1:2260:U:O4'	2.20	0.42
3:C1:2353:G:H2'	3:C1:2354:C:C6	2.55	0.42
3:C1:2529:A:C2	3:C1:2530:G:H1'	2.55	0.42
3:C1:2656:A:C8	3:C1:2658:G:C8	3.08	0.42
3:C1:2837:A:H2'	3:C1:2845:A:C2	2.55	0.42
3:C1:3345:G:C5	3:C1:3361:G:N2	2.88	0.42
5:C3:23:U:P	62:LY:16:ARG:HH21	2.41	0.42
9:SD:13:ALA:HA	9:SD:16:VAL:HG12	2.02	0.42
11:SF:164:PRO:O	11:SF:167:ARG:HB2	2.20	0.42
12:SG:123:GLY:O	12:SG:127:THR:OG1	2.27	0.42
12:SG:134:GLY:HA3	12:SG:158:ILE:HG21	2.00	0.42
13:SH:17:GLU:HG3	13:SH:46:ILE:CG1	2.49	0.42
20:SO:47:LYS:HA	20:SO:47:LYS:HD2	1.81	0.42
20:SO:136:ARG:H	20:SO:136:ARG:HD3	1.84	0.42
21:SP:123:TYR:HH	24:SS:122:HIS:CE1	2.34	0.42
22:SQ:48:VAL:HG13	22:SQ:78:VAL:HG13	2.02	0.42
24:SS:45:LEU:HD23	24:SS:45:LEU:HA	1.78	0.42
25:ST:113:ILE:HD13	25:ST:128:GLY:HA2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:LD:236:LEU:HA	42:LD:239:ILE:HG12	2.02	0.42
42:LD:265:TYR:O	42:LD:269:SER:CB	2.66	0.42
44:LF:208:SER:O	44:LF:243:MET:HG2	2.20	0.42
46:LH:1:MET:HE3	46:LH:1:MET:HB2	1.73	0.42
47:LI:53:VAL:HA	47:LI:134:ILE:HA	2.02	0.42
47:LI:145:LYS:HB2	47:LI:145:LYS:HE3	1.80	0.42
52:LO:35:VAL:HG21	52:LO:80:PHE:HE2	1.85	0.42
53:LP:175:ARG:O	53:LP:179:GLN:HG2	2.20	0.42
1:C2:486:G:H4'	1:C2:486:G:OP1	2.20	0.41
1:C2:922:G:H2'	1:C2:923:A:C8	2.55	0.41
1:C2:942:G:OP2	32:Sa:17:HIS:HB2	2.20	0.41
1:C2:1254:U:H2'	1:C2:1255:G:C4	2.55	0.41
1:C2:1481:C:H4'	1:C2:1482:C:OP1	2.20	0.41
1:C2:1561:U:H2'	1:C2:1562:G:C8	2.50	0.41
1:C2:1562:G:C6	1:C2:1563:C:C4	3.08	0.41
1:C2:1566:U:H5''	24:SS:39:GLY:N	2.35	0.41
3:C1:1128:U:H5'	47:LI:4:ARG:NH2	2.35	0.41
3:C1:1510:G:N2	3:C1:1512:U:O2	2.53	0.41
3:C1:1704:A:N6	3:C1:1741:A:N7	2.68	0.41
3:C1:2540:A:H3'	3:C1:2540:A:N3	2.35	0.41
3:C1:2662:G:O2'	3:C1:2663:G:OP1	2.35	0.41
3:C1:2679:A:N1	48:LJ:56:THR:OG1	2.50	0.41
3:C1:2688:U:OP1	42:LD:12:TYR:OH	2.32	0.41
3:C1:3183:A:P	52:LO:37:ARG:HH22	2.42	0.41
5:C3:42:G:N2	73:Lj:21:ARG:O	2.36	0.41
6:SA:183:ARG:HH21	6:SA:191:ARG:HB3	1.84	0.41
15:SJ:80:LEU:HA	15:SJ:80:LEU:HD23	1.82	0.41
18:SM:75:VAL:O	18:SM:79:ALA:HB2	2.20	0.41
26:SU:50:LEU:HD23	26:SU:50:LEU:HA	1.76	0.41
26:SU:81:THR:HG23	26:SU:81:THR:O	2.20	0.41
26:SU:98:GLN:NE2	26:SU:99:ILE:HB	2.35	0.41
33:Sb:31:TYR:CE1	33:Sb:33:LEU:HD21	2.55	0.41
35:Sd:16:LYS:C	35:Sd:18:SER:H	2.28	0.41
39:LA:42:ARG:HD3	39:LA:89:TYR:CE1	2.55	0.41
39:LA:191:LEU:HA	39:LA:191:LEU:HD13	1.87	0.41
40:LB:163:HIS:HB3	40:LB:178:LEU:HD12	2.03	0.41
46:LH:52:LEU:HD12	46:LH:53:ILE:H	1.85	0.41
47:LI:169:LYS:O	47:LI:177:ASP:HB3	2.20	0.41
53:LP:116:HIS:HB3	53:LP:149:VAL:CG1	2.50	0.41
56:LS:90:MET:HE3	56:LS:90:MET:HB2	1.89	0.41
59:LV:10:LYS:HD3	59:LV:125:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:LX:125:ARG:HH21	61:LX:125:ARG:HD3	1.73	0.41
63:LZ:51:LEU:HB2	63:LZ:65:ARG:HD2	2.02	0.41
1:C2:535:A:P	15:SJ:168:ARG:HH11	2.44	0.41
1:C2:828:U:H2'	1:C2:829:A:C8	2.54	0.41
1:C2:1104:U:OP1	29:SX:14:LYS:NZ	2.52	0.41
1:C2:1536:G:O2'	1:C2:1538:U:OP1	2.33	0.41
1:C2:1787:C:OP2	20:SO:132:ARG:HB3	2.19	0.41
3:C1:157:A:N7	72:Li:26:ILE:HD13	2.34	0.41
3:C1:269:G:OP1	51:LN:47:LYS:HE2	2.21	0.41
3:C1:393:U:H2'	3:C1:394:G:O4'	2.20	0.41
3:C1:591:G:N2	3:C1:612:U:OP1	2.45	0.41
3:C1:595:G:H2'	3:C1:596:C:C6	2.55	0.41
3:C1:645:A:H1'	3:C1:647:A:OP2	2.21	0.41
3:C1:726:G:N2	3:C1:743:C:C5	2.88	0.41
3:C1:750:G:OP1	65:Lb:44:LYS:HD3	2.19	0.41
3:C1:785:G:O4'	54:LQ:92:ARG:NH1	2.53	0.41
3:C1:1192:C:N4	3:C1:1301:A:O2'	2.53	0.41
3:C1:1238:C:N3	3:C1:1239:C:C5	2.88	0.41
3:C1:1501:U:C2	3:C1:1502:C:H5	2.39	0.41
3:C1:1559:A:OP1	61:LX:33:ARG:HG2	2.20	0.41
3:C1:2127:U:OP1	77:Ln:25:LYS:HE2	2.20	0.41
3:C1:2599:U:OP1	51:LN:70:ASN:HB2	2.20	0.41
3:C1:2733:A:H2'	3:C1:2734:A:O4'	2.20	0.41
4:C4:1:G:H4'	42:LD:273:ARG:NH1	2.35	0.41
8:SC:244:SER:HA	8:SC:247:ALA:HB3	2.01	0.41
10:SE:236:ILE:HG22	10:SE:237:SER:H	1.85	0.41
12:SG:186:ARG:O	12:SG:190:GLN:HG2	2.19	0.41
13:SH:56:LYS:O	13:SH:88:ARG:HA	2.19	0.41
13:SH:155:ASP:OD2	13:SH:156:SER:N	2.43	0.41
18:SM:97:LEU:HD13	18:SM:119:SER:HA	2.01	0.41
19:SN:138:ASN:O	19:SN:140:LYS:N	2.49	0.41
22:SQ:54:LEU:HD11	22:SQ:112:TYR:CD2	2.55	0.41
22:SQ:59:LYS:HE2	22:SQ:59:LYS:HB2	1.90	0.41
23:SR:7:LYS:HD3	23:SR:7:LYS:HA	1.76	0.41
30:SY:83:LYS:NZ	30:SY:96:LEU:HD23	2.35	0.41
38:Sg:68:VAL:HA	38:Sg:84:SER:HB2	2.02	0.41
40:LB:323:MET:HE3	40:LB:323:MET:HB2	1.91	0.41
41:LC:317:PRO:O	41:LC:324:LEU:HB2	2.20	0.41
42:LD:41:LYS:NZ	57:LT:30:TYR:O	2.44	0.41
42:LD:65:ILE:CG2	42:LD:72:ASP:HB3	2.51	0.41
42:LD:146:LEU:HD22	42:LD:163:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:LF:185:ILE:O	44:LF:189:ILE:HG22	2.20	0.41
45:LG:65:LEU:O	45:LG:68:ARG:C	2.63	0.41
47:LI:170:LYS:HA	47:LI:177:ASP:HA	2.02	0.41
54:LQ:158:HIS:H	54:LQ:186:VAL:CG1	2.33	0.41
59:LV:37:ILE:HG12	59:LV:59:MET:O	2.20	0.41
60:LW:6:ASP:HB3	60:LW:10:GLY:H	1.85	0.41
67:Ld:12:TYR:CD2	67:Ld:75:ILE:HD12	2.55	0.41
1:C2:1120:U:H2'	1:C2:1121:C:C6	2.55	0.41
1:C2:1228:G:H2'	1:C2:1228:G:N3	2.35	0.41
1:C2:1759:C:H2'	1:C2:1760:G:O4'	2.20	0.41
3:C1:155:G:H1'	72:Li:26:ILE:HD12	2.03	0.41
3:C1:1283:C:H2'	3:C1:1284:C:C6	2.55	0.41
3:C1:1599:G:H2'	3:C1:1600:U:O4'	2.20	0.41
3:C1:2562:A:O2'	45:LG:28:HIS:O	2.35	0.41
3:C1:3106:A:H2'	3:C1:3107:U:O4'	2.21	0.41
8:SC:37:PRO:HD3	8:SC:46:LYS:HD3	2.02	0.41
9:SD:67:ASN:O	9:SD:70:THR:HG22	2.20	0.41
9:SD:73:VAL:HG23	9:SD:84:ILE:CD1	2.50	0.41
9:SD:179:GLN:HG2	9:SD:180:GLY:H	1.85	0.41
13:SH:58:LEU:HD21	13:SH:88:ARG:HD3	2.01	0.41
13:SH:113:PRO:HB2	13:SH:116:ARG:HG2	2.01	0.41
15:SJ:60:LEU:HD23	15:SJ:60:LEU:HA	1.70	0.41
19:SN:42:ARG:HH12	19:SN:80:LEU:HD11	1.86	0.41
19:SN:55:ARG:HH22	33:Sb:51:GLN:NE2	2.18	0.41
22:SQ:131:GLY:HA2	22:SQ:138:PHE:CD1	2.56	0.41
26:SU:71:PRO:O	26:SU:72:ASN:C	2.63	0.41
28:SW:35:ILE:HD13	28:SW:35:ILE:HA	1.83	0.41
30:SY:20:ARG:HE	30:SY:22:GLN:HE21	1.66	0.41
46:LH:7:GLU:HA	46:LH:55:VAL:O	2.20	0.41
50:LM:23:ILE:O	50:LM:30:GLY:N	2.53	0.41
50:LM:105:GLN:NE2	50:LM:109:ARG:HH21	2.18	0.41
64:La:128:ARG:HB3	64:La:129:PHE:HD2	1.85	0.41
66:Lc:13:LYS:HD3	66:Lc:100:ILE:HD13	2.03	0.41
79:Lp:23:ARG:HA	79:Lp:26:VAL:HG12	2.01	0.41
1:C2:30:G:C6	1:C2:597:G:C6	3.08	0.41
1:C2:828:U:N3	1:C2:829:A:N7	2.69	0.41
1:C2:1163:A:N1	1:C2:1582:U:C4	2.89	0.41
1:C2:1166:A:C6	1:C2:1167:G:C8	3.08	0.41
1:C2:1389:C:O2'	23:SR:52:GLY:HA3	2.21	0.41
1:C2:1778:G:N2	1:C2:1784:C:C2	2.89	0.41
1:C2:1783:C:H5	77:Ln:5:TRP:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C5:53:LYS:HA	2:C5:53:LYS:HD2	1.98	0.41
3:C1:361:A:N7	3:C1:362:U:H1'	2.36	0.41
3:C1:523:A:O2'	56:LS:69:PRO:HD2	2.20	0.41
3:C1:1237:G:C4	3:C1:1238:C:C5	3.08	0.41
3:C1:1414:G:C6	3:C1:1415:U:C4	3.08	0.41
3:C1:3018:C:C4	3:C1:3019:U:C4	3.08	0.41
4:C4:3:U:H2'	4:C4:4:U:C6	2.55	0.41
4:C4:6:C:C4	4:C4:7:G:C8	3.08	0.41
4:C4:109:G:H5''	42:LD:279:LYS:HE3	2.01	0.41
6:SA:33:GLN:NE2	6:SA:153:SER:OG	2.53	0.41
7:SB:94:LYS:O	7:SB:95:ASN:ND2	2.54	0.41
9:SD:6:SER:O	9:SD:10:LYS:HB2	2.20	0.41
11:SF:70:VAL:CG1	22:SQ:47:LYS:HG2	2.50	0.41
12:SG:184:LEU:HD23	12:SG:184:LEU:HA	1.84	0.41
13:SH:50:ASP:HA	13:SH:56:LYS:HD2	2.02	0.41
15:SJ:110:GLN:HB2	15:SJ:144:PRO:HB3	2.03	0.41
20:SO:33:LEU:HD12	20:SO:33:LEU:HA	1.74	0.41
27:SV:86:SER:O	27:SV:86:SER:OG	2.35	0.41
29:SX:24:TRP:HE3	29:SX:30:LYS:HG3	1.85	0.41
39:LA:206:PRO:HA	39:LA:212:GLY:HA3	2.02	0.41
40:LB:187:SER:HG	40:LB:190:GLU:HB2	1.85	0.41
40:LB:262:TRP:CD1	40:LB:262:TRP:H	2.38	0.41
42:LD:123:GLU:HG2	42:LD:248:ARG:CZ	2.51	0.41
44:LF:239:LEU:HD12	44:LF:239:LEU:HA	1.86	0.41
45:LG:206:GLU:H	45:LG:206:GLU:CD	2.28	0.41
45:LG:231:LYS:HB2	45:LG:231:LYS:HE3	1.72	0.41
48:LJ:23:VAL:HG12	48:LJ:25:GLU:H	1.84	0.41
49:LL:106:GLN:HB3	72:Li:18:THR:HG23	2.02	0.41
54:LQ:178:ARG:HE	54:LQ:178:ARG:HB3	1.48	0.41
55:LR:60:LYS:HB3	55:LR:60:LYS:HE2	1.49	0.41
64:La:19:LYS:HB3	64:La:25:HIS:HB2	2.03	0.41
67:Ld:11:GLU:HA	67:Ld:73:LEU:O	2.20	0.41
1:C2:193:U:C4	1:C2:195:G:C5	3.09	0.41
1:C2:291:G:H2'	1:C2:292:U:C6	2.56	0.41
1:C2:304:U:H2'	1:C2:305:C:C6	2.55	0.41
1:C2:357:G:H2'	1:C2:358:U:O4'	2.20	0.41
1:C2:424:C:O2'	1:C2:425:A:O5'	2.36	0.41
1:C2:545:A:O4'	1:C2:594:A:N6	2.54	0.41
1:C2:838:G:H2'	1:C2:839:U:H6	1.82	0.41
1:C2:844:A:C6	1:C2:845:G:C6	3.08	0.41
1:C2:955:A:H2'	1:C2:956:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1057:U:O4	1:C2:1060:U:H1'	2.21	0.41
1:C2:1172:G:H2'	1:C2:1173:C:C6	2.55	0.41
1:C2:1215:C:H2'	1:C2:1216:C:C6	2.56	0.41
1:C2:1287:A:H4'	1:C2:1288:G:OP1	2.21	0.41
1:C2:1370:U:O3'	1:C2:1371:A:H4'	2.20	0.41
1:C2:1450:U:H2'	1:C2:1451:C:C6	2.54	0.41
1:C2:1734:U:H2'	1:C2:1735:U:C6	2.55	0.41
1:C2:1783:C:O2'	1:C2:1784:C:H5'	2.21	0.41
2:C5:47:ARG:HD2	2:C5:47:ARG:HA	1.81	0.41
2:C5:60:ARG:HD3	3:C1:1036:A:H4'	2.03	0.41
3:C1:243:G:H5''	49:LL:134:GLU:OE2	2.20	0.41
3:C1:260:C:H2'	3:C1:261:U:C6	2.56	0.41
3:C1:347:G:C6	73:Lj:55:ARG:NH1	2.87	0.41
3:C1:531:G:H2'	3:C1:532:A:C8	2.55	0.41
3:C1:732:C:H2'	3:C1:733:G:C8	2.55	0.41
3:C1:1069:C:C2	3:C1:1070:U:C5	3.09	0.41
3:C1:1243:G:O6	3:C1:1244:A:N6	2.54	0.41
3:C1:1549:U:H2'	3:C1:1550:C:C6	2.56	0.41
3:C1:1621:A:H2'	3:C1:1622:U:H6	1.84	0.41
3:C1:1942:U:OP2	55:LR:74:ARG:NE	2.48	0.41
3:C1:2232:A:H2'	3:C1:2233:A:C8	2.55	0.41
3:C1:2328:U:H2'	3:C1:2329:C:C6	2.55	0.41
3:C1:2537:U:O2	3:C1:2537:U:H2'	2.20	0.41
3:C1:2578:U:H2'	3:C1:2579:G:O4'	2.21	0.41
3:C1:2768:U:H2'	3:C1:2769:A:C8	2.50	0.41
3:C1:2881:C:H2'	3:C1:2882:U:H6	1.86	0.41
3:C1:3113:A:O2'	46:LH:69:ARG:HB3	2.19	0.41
6:SA:139:VAL:O	6:SA:139:VAL:HG22	2.20	0.41
7:SB:64:ARG:HH12	20:SO:37:GLU:HG3	1.86	0.41
11:SF:156:ARG:HG2	11:SF:157:ARG:N	2.36	0.41
16:SK:34:GLU:CG	16:SK:35:ILE:H	2.33	0.41
26:SU:69:LYS:HG2	26:SU:80:GLU:OE1	2.21	0.41
28:SW:24:GLN:HE22	33:Sb:5:GLN:H	1.68	0.41
38:Sg:219:GLU:HB3	38:Sg:233:THR:OG1	2.21	0.41
38:Sg:295:SER:OG	38:Sg:300:THR:HB	2.20	0.41
41:LC:150:LEU:HD12	41:LC:150:LEU:HA	1.93	0.41
47:LI:17:TYR:CE2	47:LI:98:ARG:HD3	2.55	0.41
48:LJ:17:LEU:HD12	48:LJ:129:VAL:CG1	2.50	0.41
53:LP:95:LEU:HD23	53:LP:95:LEU:HA	1.83	0.41
54:LQ:46:LYS:HE3	54:LQ:46:LYS:HB3	1.75	0.41
54:LQ:96:PHE:CG	54:LQ:97:PRO:HD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:LS:41:TYR:CZ	56:LS:45:LEU:HD22	2.55	0.41
56:LS:50:LYS:HE3	56:LS:50:LYS:HB2	1.87	0.41
59:LV:85:TRP:HH2	59:LV:95:PHE:CE2	2.38	0.41
1:C2:181:A:C4	1:C2:182:A:C8	3.08	0.41
1:C2:190:C:HO2'	1:C2:191:C:H6	1.60	0.41
1:C2:511:A:N6	1:C2:539:G:O6	2.38	0.41
1:C2:534:A:C2	1:C2:535:A:H1'	2.56	0.41
1:C2:592:A:P	15:SJ:39:LYS:HE3	2.60	0.41
1:C2:756:A:C5	1:C2:757:A:C8	3.08	0.41
1:C2:959:U:H5''	19:SN:15:ALA:O	2.19	0.41
1:C2:1223:A:N6	1:C2:1261:G:O6	2.53	0.41
1:C2:1311:U:O3'	23:SR:2:GLY:N	2.54	0.41
1:C2:1472:C:C2	1:C2:1534:G:C2	3.08	0.41
3:C1:42:C:O2'	3:C1:43:A:H5'	2.19	0.41
3:C1:208:C:H2'	3:C1:209:A:O4'	2.20	0.41
3:C1:269:G:H5'	51:LN:120:TRP:CE3	2.56	0.41
3:C1:1903:U:H6	3:C1:1903:U:O5'	2.04	0.41
3:C1:2567:C:O2'	3:C1:2568:C:H5'	2.20	0.41
3:C1:2901:G:N2	3:C1:3030:G:O2'	2.53	0.41
3:C1:3225:C:H2'	3:C1:3226:A:H8	1.85	0.41
3:C1:3308:C:O5'	3:C1:3308:C:H6	2.04	0.41
5:C3:23:U:OP2	62:LY:16:ARG:NE	2.28	0.41
6:SA:64:ILE:CD1	6:SA:177:LEU:HD21	2.51	0.41
9:SD:67:ASN:O	9:SD:71:LEU:HD13	2.20	0.41
13:SH:87:ASP:O	13:SH:88:ARG:HG3	2.21	0.41
16:SK:33:GLU:OE2	16:SK:33:GLU:N	2.51	0.41
18:SM:131:ASP:O	18:SM:135:MET:HG2	2.20	0.41
19:SN:43:LYS:HE2	19:SN:43:LYS:HB2	1.85	0.41
21:SP:74:ALA:HA	21:SP:75:PRO:HD3	1.91	0.41
31:SZ:70:LYS:HE3	31:SZ:70:LYS:HB3	1.92	0.41
39:LA:21:ARG:HE	39:LA:22:LEU:HG	1.85	0.41
41:LC:188:ARG:HG2	41:LC:189:ALA:H	1.85	0.41
42:LD:41:LYS:HB2	57:LT:68:THR:O	2.21	0.41
42:LD:217:GLU:HG2	42:LD:218:ARG:N	2.35	0.41
48:LJ:32:ARG:NE	48:LJ:120:ILE:O	2.51	0.41
49:LL:64:LYS:O	49:LL:67:ARG:NH1	2.53	0.41
51:LN:153:ASP:OD1	51:LN:155:VAL:HG23	2.19	0.41
64:La:24:LYS:HD2	64:La:26:ARG:NH2	2.35	0.41
67:Ld:80:ASN:OD1	67:Ld:81:GLU:N	2.42	0.41
68:Le:126:LEU:HA	68:Le:126:LEU:HD23	1.78	0.41
74:Lk:32:ASN:OD1	74:Lk:34:ALA:N	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:29:U:H2'	1:C2:30:G:H8	1.85	0.41
1:C2:224:C:N3	1:C2:225:A:N6	2.69	0.41
1:C2:875:G:P	7:SB:158:SER:HG	2.44	0.41
1:C2:1172:G:H21	25:ST:88:VAL:CG2	2.34	0.41
1:C2:1172:G:C2	1:C2:1173:C:C2	3.09	0.41
1:C2:1278:G:H2'	1:C2:1279:C:O4'	2.21	0.41
1:C2:1573:A:OP2	11:SF:185:ARG:NH1	2.53	0.41
1:C2:1587:A:O2'	11:SF:104:ASN:ND2	2.54	0.41
1:C2:1592:A:H2'	1:C2:1593:A:C8	2.55	0.41
1:C2:1740:A:H2'	1:C2:1741:U:H6	1.85	0.41
1:C2:1762:A:H1'	1:C2:1783:C:H5'	2.02	0.41
3:C1:177:U:C2	3:C1:178:U:C5	3.09	0.41
3:C1:1080:A:P	42:LD:140:ARG:HH21	2.44	0.41
3:C1:1672:U:H1'	3:C1:1776:G:N2	2.36	0.41
3:C1:1746:U:N3	3:C1:1747:G:N7	2.68	0.41
3:C1:1816:A:O2'	3:C1:1817:G:OP1	2.36	0.41
7:SB:67:GLU:OE2	7:SB:83:LYS:HD3	2.20	0.41
11:SF:188:LYS:HD2	31:SZ:63:SER:HB2	2.03	0.41
38:Sg:199:ILE:HA	38:Sg:215:GLY:HA3	2.01	0.41
39:LA:225:ILE:HG22	39:LA:226:SER:H	1.85	0.41
43:LE:52:VAL:CG2	43:LE:65:ILE:HG23	2.49	0.41
47:LI:46:PHE:HB2	47:LI:139:ARG:HD2	2.02	0.41
47:LI:115:MET:HE3	47:LI:115:MET:HB3	1.89	0.41
59:LV:66:LYS:HA	59:LV:67:PRO:HD3	1.94	0.41
61:LX:127:THR:HG22	61:LX:128:ALA:N	2.36	0.41
65:Lb:18:ARG:HD2	65:Lb:18:ARG:HA	1.92	0.41
71:Lh:13:SER:N	71:Lh:16:GLN:OE1	2.50	0.41
1:C2:162:A:H2'	1:C2:163:G:C8	2.56	0.41
1:C2:584:C:C2	1:C2:585:A:C8	3.09	0.41
1:C2:696:C:H4'	1:C2:697:C:H6	1.86	0.41
1:C2:907:A:H8	1:C2:907:A:O5'	2.04	0.41
1:C2:1593:A:C2	1:C2:1594:G:C5	3.09	0.41
1:C2:1667:A:H2'	1:C2:1668:G:C8	2.56	0.41
1:C2:1735:U:C2	1:C2:1736:G:C8	3.09	0.41
1:C2:1778:G:O6	77:Ln:12:ARG:NH2	2.42	0.41
3:C1:423:A:H2'	3:C1:424:G:O4'	2.20	0.41
3:C1:626:U:C4	3:C1:627:U:C4	3.09	0.41
3:C1:778:U:H6	3:C1:778:U:O5'	2.03	0.41
3:C1:2655:U:H4'	3:C1:2656:A:O4'	2.19	0.41
3:C1:2810:C:OP2	3:C1:2955:U:O2'	2.39	0.41
3:C1:3033:A:H2	46:LH:120:ASP:HB3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:3163:A:C6	3:C1:3288:G:C6	3.09	0.41
4:C4:17:A:C6	4:C4:18:C:C4	3.09	0.41
4:C4:87:G:O2'	56:LS:119:ARG:NH2	2.49	0.41
8:SC:116:LYS:HG2	8:SC:127:ALA:CB	2.49	0.41
9:SD:223:LYS:HB2	9:SD:225:TYR:OH	2.19	0.41
10:SE:195:ILE:HD12	10:SE:195:ILE:HG23	1.68	0.41
11:SF:100:ASN:O	11:SF:102:ARG:N	2.54	0.41
11:SF:128:ASN:OD1	11:SF:130:ILE:HG12	2.19	0.41
19:SN:107:LYS:HE3	19:SN:107:LYS:HB3	1.76	0.41
22:SQ:47:LYS:NZ	22:SQ:79:TYR:OH	2.41	0.41
23:SR:33:ARG:HG3	38:Sg:127:ARG:HH12	1.86	0.41
24:SS:78:HIS:HB3	24:SS:79:TYR:CD2	2.56	0.41
25:ST:22:LEU:HD23	25:ST:55:TYR:HD1	1.85	0.41
25:ST:35:ASP:OD1	25:ST:36:ILE:HG13	2.21	0.41
26:SU:24:ILE:HB	26:SU:91:ILE:O	2.20	0.41
28:SW:106:THR:HG21	28:SW:121:VAL:HG23	2.03	0.41
38:Sg:88:THR:HG22	38:Sg:104:VAL:HG12	2.03	0.41
39:LA:187:HIS:O	39:LA:190:ARG:HG2	2.21	0.41
40:LB:212:ASN:HD21	40:LB:354:VAL:N	2.06	0.41
40:LB:216:ASP:OD1	40:LB:216:ASP:N	2.51	0.41
45:LG:94:PHE:HD2	45:LG:189:LEU:HD21	1.85	0.41
46:LH:92:TYR:CD1	46:LH:179:ILE:HG23	2.56	0.41
47:LI:212:GLU:C	47:LI:214:PRO:HD3	2.46	0.41
49:LL:172:LEU:HA	49:LL:172:LEU:HD23	1.70	0.41
50:LM:32:LEU:HD11	50:LM:94:TRP:CG	2.55	0.41
57:LT:158:THR:HG23	57:LT:158:THR:O	2.20	0.41
60:LW:6:ASP:OD1	60:LW:31:PHE:HA	2.19	0.41
61:LX:142:ILE:HD13	61:LX:142:ILE:HA	1.88	0.41
66:Lc:99:ASP:N	66:Lc:99:ASP:OD2	2.52	0.41
71:Lh:47:VAL:O	71:Lh:51:ILE:HG13	2.21	0.41
1:C2:434:G:H5'	29:SX:78:LYS:HB3	2.02	0.41
1:C2:502:U:N3	1:C2:503:G:N7	2.69	0.41
1:C2:503:G:H4'	36:Se:46:ASN:ND2	2.36	0.41
1:C2:787:G:H5'	10:SE:255:ARG:NH2	2.35	0.41
1:C2:867:G:H21	19:SN:87:ASP:CG	2.29	0.41
1:C2:1127:G:C5	1:C2:1128:C:C5	3.09	0.41
1:C2:1158:C:C5	1:C2:1582:U:C2	3.09	0.41
1:C2:1202:A:C8	1:C2:1456:C:C4	3.09	0.41
1:C2:1281:G:C2	1:C2:1428:G:C2	3.09	0.41
1:C2:1281:G:H2'	1:C2:1282:U:O4'	2.21	0.41
1:C2:1312:A:OP1	23:SR:2:GLY:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:1369:U:H5''	1:C2:1370:U:OP1	2.21	0.41
1:C2:1454:G:C2	1:C2:1455:G:N1	2.89	0.41
1:C2:1467:C:H2'	1:C2:1468:U:H6	1.85	0.41
1:C2:1471:A:OP1	11:SF:185:ARG:NH1	2.54	0.41
1:C2:1775:U:P	77:Ln:11:ARG:NH2	2.94	0.41
3:C1:95:A:H5''	64:La:34:MET:HB2	2.03	0.41
3:C1:352:A:N1	3:C1:365:A:H5''	2.36	0.41
3:C1:537:A:C2	3:C1:538:G:H1'	2.56	0.41
3:C1:706:A:H2'	3:C1:707:U:O4'	2.20	0.41
3:C1:744:A:OP1	54:LQ:66:ARG:NH1	2.32	0.41
3:C1:765:C:H3'	3:C1:766:U:H6	1.86	0.41
3:C1:1226:G:C6	3:C1:1227:C:C4	3.08	0.41
3:C1:1259:A:H62	3:C1:1260:A:N6	2.16	0.41
3:C1:1641:U:O2'	3:C1:1642:A:H3'	2.21	0.41
3:C1:1662:G:H2'	3:C1:1663:C:C6	2.54	0.41
3:C1:2303:A:C6	3:C1:2304:C:C4	3.09	0.41
3:C1:2355:G:O2'	3:C1:2356:A:O4'	2.37	0.41
3:C1:2838:A:H2'	3:C1:2839:G:O4'	2.20	0.41
3:C1:2960:C:H2'	3:C1:2961:G:C8	2.56	0.41
3:C1:2989:U:H2'	3:C1:2990:G:O4'	2.21	0.41
3:C1:3210:A:C6	3:C1:3211:C:C4	3.08	0.41
3:C1:3384:U:H2'	3:C1:3385:U:C6	2.56	0.41
5:C3:68:G:H2'	5:C3:69:U:C6	2.56	0.41
6:SA:34:GLU:N	6:SA:35:PRO:HD2	2.35	0.41
6:SA:38:PHE:CD2	23:SR:109:LEU:HD12	2.55	0.41
6:SA:69:ASN:O	6:SA:71:GLU:N	2.53	0.41
7:SB:128:LYS:HA	7:SB:133:TYR:O	2.21	0.41
7:SB:144:ARG:HB3	7:SB:208:GLN:HB3	2.03	0.41
8:SC:53:ILE:HG23	8:SC:72:LEU:HD23	2.02	0.41
9:SD:7:LYS:HZ1	9:SD:10:LYS:HE2	1.85	0.41
9:SD:7:LYS:NZ	9:SD:10:LYS:HE2	2.36	0.41
10:SE:91:THR:HG23	10:SE:98:ASN:OD1	2.20	0.41
10:SE:92:LEU:HD13	10:SE:92:LEU:HA	1.91	0.41
11:SF:61:TYR:CE2	11:SF:164:PRO:HG2	2.55	0.41
11:SF:99:MET:HG3	11:SF:100:ASN:H	1.86	0.41
14:SI:89:GLU:O	14:SI:93:THR:HG23	2.21	0.41
14:SI:114:GLU:OE1	14:SI:120:THR:HG23	2.20	0.41
19:SN:55:ARG:HH22	33:Sb:51:GLN:HE22	1.68	0.41
21:SP:84:ILE:N	21:SP:84:ILE:HD12	2.36	0.41
22:SQ:99:GLU:OE1	22:SQ:102:LYS:HE3	2.20	0.41
26:SU:51:VAL:HG23	26:SU:52:LYS:N	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:SV:37:ALA:HB1	27:SV:45:ALA:HB1	2.02	0.41
27:SV:55:LEU:HA	27:SV:55:LEU:HD23	1.77	0.41
30:SY:112:LYS:HE2	30:SY:112:LYS:HB3	1.92	0.41
32:Sa:82:ARG:HD2	32:Sa:85:ARG:HH21	1.86	0.41
35:Sd:10:HIS:O	35:Sd:12:ARG:HG3	2.21	0.41
38:Sg:82:SER:OG	38:Sg:90:ARG:HB2	2.21	0.41
38:Sg:91:LEU:HD23	38:Sg:101:GLN:HB2	2.02	0.41
38:Sg:125:GLY:HA2	38:Sg:131:ILE:HG13	2.03	0.41
38:Sg:227:ALA:O	38:Sg:229:LYS:HG2	2.21	0.41
39:LA:8:GLN:HE21	39:LA:231:SER:C	2.29	0.41
40:LB:10:ARG:HG2	40:LB:11:HIS:N	2.36	0.41
40:LB:73:VAL:HG22	59:LV:90:GLY:HA3	2.03	0.41
40:LB:227:GLU:CD	40:LB:270:ARG:HH21	2.28	0.41
41:LC:208:VAL:O	41:LC:251:THR:HG23	2.20	0.41
41:LC:222:VAL:HA	41:LC:223:PRO:HD3	1.94	0.41
41:LC:338:LYS:C	41:LC:340:GLY:H	2.28	0.41
42:LD:143:LYS:HB3	42:LD:143:LYS:HE2	1.86	0.41
43:LE:58:LEU:HD23	43:LE:58:LEU:HA	1.84	0.41
43:LE:66:SER:O	43:LE:74:VAL:HG23	2.20	0.41
43:LE:78:ARG:HH21	43:LE:106:PHE:CB	2.34	0.41
44:LF:229:PHE:CD1	44:LF:229:PHE:C	2.99	0.41
46:LH:68:LEU:O	46:LH:71:VAL:HG12	2.21	0.41
47:LI:23:ASN:HD21	47:LI:96:VAL:HG21	1.86	0.41
47:LI:89:VAL:HG23	47:LI:136:PHE:CE1	2.56	0.41
47:LI:185:ARG:NE	47:LI:186:GLU:OE1	2.54	0.41
48:LJ:60:ARG:O	48:LJ:63:GLU:HB3	2.20	0.41
49:LL:160:GLN:N	49:LL:160:GLN:OE1	2.53	0.41
54:LQ:40:THR:HG22	54:LQ:41:ASP:N	2.35	0.41
56:LS:156:VAL:O	56:LS:156:VAL:HG13	2.20	0.41
63:LZ:41:ALA:O	63:LZ:43:VAL:HG13	2.20	0.41
64:La:82:ILE:HD11	64:La:102:ILE:HG12	2.02	0.41
68:Le:33:ARG:HD3	68:Le:33:ARG:HA	1.77	0.41
69:Lf:54:ARG:HG2	69:Lf:64:ILE:CD1	2.50	0.41
71:Lh:21:LEU:HA	71:Lh:21:LEU:HD23	1.83	0.41
75:Ll:20:ASN:HD21	75:Ll:41:ARG:HH21	1.68	0.41
1:C2:386:G:P	14:SI:25:ARG:HH22	2.43	0.41
1:C2:609:U:O2'	29:SX:23:ARG:HD3	2.20	0.41
1:C2:783:G:H2'	1:C2:784:C:H6	1.86	0.41
1:C2:1163:A:N1	1:C2:1582:U:O4	2.54	0.41
1:C2:1487:A:H2'	1:C2:1488:G:H8	1.82	0.41
3:C1:120:G:N2	45:LG:126:SER:HB2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:384:A:H8	3:C1:384:A:OP1	2.02	0.41
3:C1:1332:A:H2'	3:C1:1333:C:C6	2.56	0.41
3:C1:1438:U:O5'	3:C1:1438:U:H6	2.04	0.41
3:C1:1494:U:H4'	3:C1:1495:U:O5'	2.21	0.41
3:C1:1811:G:H2'	3:C1:1812:G:O4'	2.20	0.41
3:C1:1953:G:C2	3:C1:2093:A:N7	2.88	0.41
3:C1:2895:G:H21	76:Lm:100:TYR:HD2	1.67	0.41
4:C4:28:C:OP1	48:LJ:137:ARG:HD3	2.21	0.41
5:C3:107:G:C8	5:C3:137:C:N4	2.89	0.41
6:SA:11:PRO:O	6:SA:15:GLN:HG3	2.20	0.41
6:SA:27:ARG:NE	6:SA:44:GLY:O	2.54	0.41
6:SA:88:LYS:O	6:SA:92:HIS:ND1	2.42	0.41
7:SB:103:MET:HE2	7:SB:188:LEU:HD11	2.03	0.41
8:SC:116:LYS:HD3	8:SC:131:ILE:HD12	2.03	0.41
12:SG:7:TYR:CE2	12:SG:9:VAL:HB	2.56	0.41
12:SG:98:ARG:HD3	12:SG:99:GLY:N	2.36	0.41
20:SO:78:ALA:HB2	20:SO:111:ARG:HB2	2.03	0.41
24:SS:69:ILE:O	24:SS:72:ILE:HG22	2.21	0.41
30:SY:91:LEU:HD23	30:SY:91:LEU:HA	1.78	0.41
38:Sg:289:ALA:HB2	38:Sg:305:TYR:CZ	2.55	0.41
39:LA:2:GLY:HA2	39:LA:207:VAL:HG23	2.02	0.41
44:LF:156:ILE:O	44:LF:157:ASN:C	2.63	0.41
47:LI:49:CYS:SG	47:LI:51:HIS:CE1	3.14	0.41
47:LI:175:ASN:HB3	47:LI:176:LEU:HG	2.03	0.41
51:LN:148:TYR:O	51:LN:151:ILE:HG22	2.21	0.41
59:LV:45:ARG:HB3	59:LV:48:ARG:HE	1.86	0.41
62:LY:84:LYS:HE3	62:LY:84:LYS:HB2	1.69	0.41
63:LZ:22:LYS:NZ	63:LZ:132:SER:O	2.54	0.41
66:Lc:10:ILE:HG21	66:Lc:68:TYR:HE2	1.85	0.41
68:Le:75:LEU:HD23	68:Le:75:LEU:HA	1.88	0.41
1:C2:138:A:H61	1:C2:266:A:H61	1.68	0.40
1:C2:518:A:H2'	1:C2:519:C:H5''	2.02	0.40
1:C2:749:U:H2'	1:C2:750:U:C6	2.56	0.40
1:C2:812:A:N6	1:C2:858:G:H2'	2.36	0.40
1:C2:1196:A:H4'	1:C2:1197:C:O5'	2.21	0.40
1:C2:1446:A:N7	1:C2:1448:G:O6	2.54	0.40
1:C2:1619:C:H2'	1:C2:1620:C:H6	1.86	0.40
2:C5:52:LYS:HG3	3:C1:2691:A:OP2	2.21	0.40
3:C1:152:U:N3	3:C1:153:U:C5	2.88	0.40
3:C1:717:C:O2'	3:C1:718:G:H5'	2.21	0.40
3:C1:1150:A:H2	3:C1:2379:U:O2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C1:1281:G:C2	3:C1:1282:G:C4	3.09	0.40
3:C1:1336:U:C2	3:C1:1337:A:C8	3.09	0.40
3:C1:1363:A:H2'	3:C1:1364:C:C6	2.56	0.40
3:C1:1498:A:H2'	3:C1:1499:C:C6	2.56	0.40
3:C1:1534:A:C8	3:C1:1586:G:N2	2.89	0.40
3:C1:1729:A:N6	66:Lc:49:PRO:HD3	2.36	0.40
3:C1:2561:A:N3	3:C1:2562:A:C8	2.89	0.40
3:C1:3069:G:HO2'	55:LR:61:SER:HG	1.67	0.40
3:C1:3259:U:H4'	3:C1:3260:G:O5'	2.21	0.40
3:C1:3273:A:P	43:LE:77:ARG:HH12	2.43	0.40
6:SA:13:ASP:OD2	6:SA:179:ARG:NH1	2.51	0.40
7:SB:70:LEU:HD13	7:SB:84:ILE:CG1	2.50	0.40
8:SC:99:LYS:NZ	8:SC:208:GLU:HG2	2.36	0.40
9:SD:20:GLU:HB3	16:SK:61:TRP:CH2	2.56	0.40
9:SD:55:THR:HG23	9:SD:90:ARG:HB2	2.03	0.40
12:SG:146:GLY:O	12:SG:147:LEU:HD23	2.21	0.40
12:SG:163:THR:HA	12:SG:167:LYS:O	2.21	0.40
18:SM:97:LEU:HD21	18:SM:121:VAL:CG2	2.51	0.40
28:SW:66:ASN:OD1	28:SW:68:ARG:HG2	2.21	0.40
38:Sg:66:HIS:CD2	38:Sg:67:ILE:H	2.39	0.40
38:Sg:95:ALA:O	38:Sg:96:THR:OG1	2.28	0.40
38:Sg:102:ARG:NH1	38:Sg:102:ARG:HB3	2.35	0.40
41:LC:217:LYS:HE2	41:LC:217:LYS:HB2	1.94	0.40
41:LC:281:ILE:HG22	54:LQ:25:TYR:HB3	2.03	0.40
42:LD:8:LYS:HB3	42:LD:12:TYR:CD2	2.56	0.40
42:LD:247:ILE:O	42:LD:251:PRO:HG3	2.21	0.40
43:LE:52:VAL:HG23	43:LE:74:VAL:HG21	2.03	0.40
43:LE:99:GLU:H	43:LE:99:GLU:CD	2.29	0.40
46:LH:118:LEU:HD23	46:LH:118:LEU:HA	1.85	0.40
46:LH:126:VAL:HG21	46:LH:161:LEU:CD1	2.52	0.40
47:LI:189:GLU:OE1	47:LI:189:GLU:N	2.49	0.40
51:LN:172:ARG:HH21	51:LN:174:ILE:HG13	1.86	0.40
65:Lb:5:LYS:HD3	65:Lb:8:THR:OG1	2.21	0.40
78:Lo:70:LEU:O	78:Lo:82:GLN:HA	2.22	0.40
1:C2:7:G:H2'	1:C2:8:U:H5''	2.03	0.40
1:C2:68:A:H5'	12:SG:160:ARG:NH2	2.31	0.40
1:C2:138:A:C8	1:C2:142:G:H5'	2.55	0.40
1:C2:182:A:H2'	1:C2:183:U:C6	2.55	0.40
1:C2:202:A:H2'	1:C2:203:U:O4'	2.21	0.40
1:C2:359:A:N6	29:SX:39:LYS:HE3	2.36	0.40
1:C2:416:A:H3'	1:C2:417:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C2:637:C:O2	13:SH:114:ARG:NH2	2.36	0.40
1:C2:639:U:OP2	13:SH:119:THR:HG23	2.21	0.40
1:C2:688:G:C2	1:C2:689:G:C8	3.09	0.40
1:C2:1161:C:H2'	1:C2:1162:C:H6	1.86	0.40
1:C2:1169:G:H8	1:C2:1169:G:O5'	2.03	0.40
1:C2:1645:G:N2	1:C2:1646:C:C2	2.89	0.40
1:C2:1647:U:H2'	1:C2:1648:A:H8	1.86	0.40
3:C1:152:U:C2	3:C1:153:U:C5	3.10	0.40
3:C1:273:A:N1	3:C1:293:C:N3	2.69	0.40
3:C1:878:G:H2'	3:C1:2980:U:O2'	2.21	0.40
3:C1:1152:G:N1	3:C1:1199:C:C4	2.89	0.40
3:C1:1493:G:OP2	3:C1:1493:G:N2	2.54	0.40
3:C1:1637:A:H1'	3:C1:1709:C:O2'	2.21	0.40
3:C1:2198:A:C6	3:C1:2199:G:N7	2.89	0.40
3:C1:2209:U:H1'	3:C1:2210:G:O5'	2.21	0.40
3:C1:2821:C:H2'	3:C1:2822:U:O4'	2.20	0.40
3:C1:3065:G:H2'	3:C1:3066:U:O4'	2.21	0.40
3:C1:3275:U:N3	3:C1:3277:U:O4'	2.51	0.40
5:C3:98:U:H2'	5:C3:99:C:O4'	2.21	0.40
7:SB:64:ARG:HH22	20:SO:37:GLU:CG	2.35	0.40
10:SE:97:GLU:HB3	10:SE:99:PHE:CE1	2.55	0.40
13:SH:74:GLN:HG2	13:SH:131:PHE:CD2	2.56	0.40
24:SS:65:GLU:O	24:SS:69:ILE:HG13	2.21	0.40
29:SX:68:ILE:HD12	36:Se:6:GLY:HA3	2.03	0.40
38:Sg:59:ARG:HH12	38:Sg:96:THR:C	2.29	0.40
39:LA:5:ILE:HG13	39:LA:7:ASN:OD1	2.21	0.40
41:LC:205:PRO:HB3	41:LC:247:PHE:CD2	2.56	0.40
45:LG:24:ASN:HA	45:LG:25:PRO:HD3	1.84	0.40
45:LG:26:LEU:HD13	45:LG:26:LEU:HA	1.87	0.40
47:LI:38:LYS:HD3	47:LI:41:ALA:HB2	2.02	0.40
47:LI:91:VAL:HG22	47:LI:127:ALA:HB1	2.02	0.40
47:LI:152:LEU:HA	47:LI:152:LEU:HD23	1.77	0.40
51:LN:140:LYS:HB3	51:LN:144:ARG:HH12	1.86	0.40
51:LN:160:GLU:HG2	51:LN:161:ALA:N	2.37	0.40
52:LO:155:LYS:HE3	52:LO:155:LYS:HB3	1.83	0.40
53:LP:108:ASP:OD2	53:LP:111:LYS:HB2	2.22	0.40
63:LZ:26:VAL:HG11	63:LZ:96:VAL:HB	2.02	0.40
64:La:72:VAL:CG1	64:La:113:LEU:HD12	2.51	0.40
71:Lh:36:LEU:HA	71:Lh:36:LEU:HD23	1.86	0.40
72:Li:86:LYS:HA	72:Li:89:GLU:OE1	2.21	0.40
78:Lo:55:LYS:HE2	78:Lo:55:LYS:HB3	1.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Lp:28:LYS:HE2	79:Lp:28:LYS:HB2	1.88	0.40
1:C2:250:C:H2'	1:C2:251:A:C8	2.56	0.40
1:C2:467:G:H8	1:C2:467:G:O5'	2.05	0.40
1:C2:698:U:O2	1:C2:698:U:H2'	2.22	0.40
1:C2:1446:A:C5	1:C2:1448:G:C6	3.09	0.40
1:C2:1469:A:C6	1:C2:1470:C:N4	2.89	0.40
1:C2:1475:A:H2'	1:C2:1476:C:H6	1.86	0.40
1:C2:1501:C:P	25:ST:106:GLN:HE22	2.43	0.40
1:C2:1776:A:OP2	77:Ln:11:ARG:NH1	2.48	0.40
3:C1:129:U:H2'	3:C1:130:A:C8	2.56	0.40
3:C1:628:A:C6	3:C1:629:U:C4	3.09	0.40
3:C1:810:A:H2'	3:C1:811:U:C6	2.55	0.40
3:C1:950:G:N7	3:C1:1367:G:C6	2.89	0.40
3:C1:1034:U:H2'	3:C1:1035:G:C8	2.56	0.40
3:C1:1144:U:H6	3:C1:1144:U:H2'	1.70	0.40
3:C1:1189:C:N4	52:LO:133:ARG:HE	2.18	0.40
3:C1:1332:A:H2'	3:C1:1333:C:H6	1.86	0.40
3:C1:1396:C:H2'	3:C1:1397:C:H6	1.85	0.40
3:C1:1503:A:C4	3:C1:1504:A:C8	3.09	0.40
3:C1:1929:G:H4'	3:C1:2321:A:H5''	2.03	0.40
3:C1:2279:A:N7	3:C1:2288:G:C8	2.89	0.40
3:C1:3127:A:H2'	3:C1:3128:G:O4'	2.21	0.40
3:C1:3275:U:H5'	69:Lf:68:TRP:HZ2	1.86	0.40
6:SA:79:ARG:NH1	6:SA:125:ASP:HB2	2.36	0.40
6:SA:84:ARG:HA	6:SA:87:LEU:HD12	2.03	0.40
11:SF:120:ILE:HD11	31:SZ:98:GLN:HE22	1.85	0.40
11:SF:188:LYS:HB3	11:SF:188:LYS:HE3	1.69	0.40
13:SH:46:ILE:HD12	13:SH:60:ILE:HD13	2.04	0.40
13:SH:154:LEU:HD21	13:SH:183:PHE:CD1	2.57	0.40
18:SM:43:ARG:NH2	18:SM:120:VAL:H	2.20	0.40
19:SN:60:VAL:HG13	19:SN:66:ILE:CD1	2.51	0.40
19:SN:102:LEU:HA	19:SN:102:LEU:HD23	1.83	0.40
21:SP:60:LEU:O	21:SP:64:LYS:HG2	2.22	0.40
25:ST:64:HIS:NE2	25:ST:79:LEU:HD22	2.36	0.40
29:SX:29:TYR:CD2	29:SX:29:TYR:C	2.98	0.40
30:SY:8:ARG:HB2	30:SY:26:ASP:OD1	2.21	0.40
40:LB:348:ARG:HA	40:LB:351:LEU:HB2	2.03	0.40
41:LC:326:ARG:HD3	41:LC:326:ARG:HH21	1.73	0.40
46:LH:26:LYS:HE2	46:LH:26:LYS:HB3	1.88	0.40
48:LJ:21:ILE:HD11	48:LJ:125:MET:HB3	2.03	0.40
50:LM:16:GLU:HA	50:LM:38:ILE:HD11	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:LN:80:THR:C	51:LN:82:GLY:H	2.28	0.40
52:LO:140:LYS:HB2	52:LO:140:LYS:HE3	1.75	0.40
54:LQ:152:HIS:ND1	54:LQ:162:ALA:O	2.40	0.40
55:LR:55:VAL:HG12	55:LR:56:THR:O	2.21	0.40
60:LW:44:LYS:HD3	60:LW:44:LYS:HA	1.66	0.40
61:LX:65:GLN:HA	61:LX:66:PRO:HD3	1.97	0.40
61:LX:135:ILE:HD13	61:LX:135:ILE:HA	1.91	0.40
69:Lf:50:ALA:HB1	69:Lf:66:VAL:CG1	2.52	0.40
71:Lh:43:LYS:O	71:Lh:46:THR:HG22	2.21	0.40
73:Lj:63:ARG:O	73:Lj:68:LYS:HE3	2.21	0.40
1:C2:151:G:N2	1:C2:163:G:H22	2.19	0.40
1:C2:222:A:C6	1:C2:840:U:N3	2.89	0.40
1:C2:416:A:H5''	1:C2:417:A:N7	2.37	0.40
1:C2:1018:U:C4	1:C2:1019:A:N7	2.89	0.40
1:C2:1366:U:O3'	25:ST:7:ARG:NE	2.55	0.40
1:C2:1502:G:C2	1:C2:1506:G:C6	3.10	0.40
3:C1:22:G:O2'	5:C3:40:A:N1	2.51	0.40
3:C1:29:C:H4'	3:C1:62:A:H4'	2.03	0.40
3:C1:70:A:H2	3:C1:72:C:H42	1.68	0.40
3:C1:664:U:H5'	41:LC:107:ARG:HA	2.03	0.40
3:C1:709:A:N3	3:C1:2787:G:O2'	2.50	0.40
3:C1:1072:G:H2'	3:C1:1073:U:H6	1.85	0.40
3:C1:1170:A:OP1	44:LF:218:ARG:HA	2.22	0.40
3:C1:1196:C:H6	3:C1:1196:C:H2'	1.68	0.40
3:C1:1525:G:C2	3:C1:1526:U:C4	3.09	0.40
3:C1:1856:C:H2'	3:C1:1857:C:C6	2.56	0.40
3:C1:2273:G:N2	3:C1:2311:G:H2'	2.36	0.40
3:C1:2987:A:H2'	3:C1:2988:C:H6	1.87	0.40
3:C1:2996:U:H4'	3:C1:2996:U:OP1	2.21	0.40
6:SA:62:ARG:NH2	27:SV:78:LEU:O	2.54	0.40
7:SB:36:SER:HA	7:SB:41:ARG:HE	1.87	0.40
8:SC:53:ILE:HA	8:SC:56:ILE:HB	2.04	0.40
10:SE:156:VAL:HG12	10:SE:157:ASN:OD1	2.21	0.40
13:SH:72:LYS:C	13:SH:72:LYS:HD3	2.45	0.40
13:SH:168:SER:O	13:SH:172:VAL:HG12	2.22	0.40
14:SI:34:ALA:HB2	14:SI:56:ARG:CD	2.51	0.40
14:SI:72:ILE:HG21	14:SI:112:TRP:CZ2	2.56	0.40
17:SL:78:THR:O	17:SL:78:THR:HG22	2.21	0.40
17:SL:112:SER:C	17:SL:114:ALA:H	2.30	0.40
23:SR:27:ASP:OD2	23:SR:30:THR:HG23	2.22	0.40
29:SX:29:TYR:CZ	29:SX:33:LEU:HD22	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Sg:116:ASP:CG	38:Sg:120:SER:HG	2.25	0.40
38:Sg:133:VAL:HG23	38:Sg:142:ALA:H	1.87	0.40
41:LC:234:ASN:OD1	41:LC:235:LEU:N	2.54	0.40
43:LE:82:ARG:HA	43:LE:82:ARG:HD2	1.91	0.40
45:LG:82:LEU:HD13	45:LG:222:PHE:CE2	2.55	0.40
49:LL:3:ILE:H	64:La:41:HIS:CE1	2.39	0.40
50:LM:13:ARG:NE	50:LM:65:LEU:O	2.55	0.40
51:LN:129:TYR:N	51:LN:129:TYR:CD1	2.87	0.40
61:LX:39:LYS:HE2	61:LX:39:LYS:HB3	1.95	0.40
1:C2:404:G:H2'	1:C2:405:C:C6	2.56	0.40
1:C2:541:A:H3'	1:C2:541:A:N3	2.37	0.40
1:C2:589:C:H2'	1:C2:590:C:H6	1.86	0.40
1:C2:825:U:O2'	1:C2:826:U:H6	2.04	0.40
1:C2:833:U:H5'	1:C2:834:G:H5''	2.03	0.40
1:C2:1078:C:H2'	1:C2:1079:U:H6	1.86	0.40
1:C2:1365:C:O3'	22:SQ:30:LYS:NZ	2.36	0.40
1:C2:1388:A:N1	1:C2:1412:G:C5	2.89	0.40
1:C2:1613:U:C4	1:C2:1614:A:N1	2.90	0.40
1:C2:1739:C:C2	1:C2:1740:A:C8	3.10	0.40
3:C1:192:C:C2	3:C1:193:C:C5	3.10	0.40
3:C1:1238:C:O2	3:C1:1238:C:H2'	2.21	0.40
3:C1:1348:U:H5''	3:C1:1355:A:H61	1.86	0.40
3:C1:1383:G:H2'	3:C1:1384:U:C6	2.56	0.40
3:C1:1877:U:H5''	3:C1:1878:G:O5'	2.21	0.40
3:C1:2333:C:H2'	3:C1:2334:U:O4'	2.20	0.40
3:C1:2431:C:C4	3:C1:2432:A:N7	2.90	0.40
3:C1:3158:G:HO2'	3:C1:3159:C:P	2.43	0.40
5:C3:121:U:H2'	5:C3:122:U:C6	2.56	0.40
8:SC:140:ARG:HH22	8:SC:229:LEU:HD23	1.87	0.40
9:SD:167:PHE:CD1	9:SD:192:PRO:HB3	2.57	0.40
9:SD:192:PRO:HG3	9:SD:202:LEU:CD2	2.52	0.40
10:SE:2:ALA:O	10:SE:3:ARG:HB2	2.21	0.40
10:SE:162:ILE:H	10:SE:162:ILE:HD12	1.85	0.40
11:SF:82:PHE:CE2	34:Sc:49:ARG:HD2	2.56	0.40
12:SG:36:VAL:HG22	12:SG:50:PHE:HB2	2.03	0.40
12:SG:176:GLN:HG3	12:SG:177:ARG:N	2.36	0.40
19:SN:148:ALA:HA	19:SN:151:ASN:O	2.22	0.40
20:SO:50:ALA:C	20:SO:52:ARG:H	2.29	0.40
22:SQ:13:LYS:O	22:SQ:14:LYS:C	2.64	0.40
22:SQ:32:ASN:N	22:SQ:67:VAL:O	2.52	0.40
22:SQ:87:LYS:HE3	22:SQ:87:LYS:HB2	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:SR:5:ARG:H	23:SR:5:ARG:HG3	1.69	0.40
24:SS:18:LEU:O	24:SS:20:THR:HG23	2.22	0.40
27:SV:38:LYS:HE3	27:SV:51:VAL:CG2	2.51	0.40
29:SX:130:VAL:HG23	29:SX:131:SER:N	2.27	0.40
32:Sa:38:ARG:HD3	32:Sa:38:ARG:HH11	1.77	0.40
34:Sc:42:ARG:HD3	34:Sc:42:ARG:HA	1.86	0.40
38:Sg:261:LYS:NZ	38:Sg:275:ARG:HH12	2.20	0.40
39:LA:117:GLU:OE1	39:LA:163:ARG:NH2	2.54	0.40
41:LC:106:TRP:O	51:LN:203:ARG:NH2	2.55	0.40
42:LD:34:LYS:HE2	42:LD:38:THR:HG21	2.03	0.40
43:LE:93:VAL:O	43:LE:96:VAL:HG22	2.21	0.40
47:LI:99:ILE:HB	47:LI:123:HIS:HB2	2.02	0.40
48:LJ:26:SER:OG	48:LJ:27:GLY:N	2.54	0.40
50:LM:91:CYS:HA	50:LM:94:TRP:HB3	2.02	0.40
51:LN:80:THR:C	51:LN:82:GLY:N	2.80	0.40
56:LS:99:ARG:NH1	56:LS:126:VAL:HG13	2.37	0.40
57:LT:70:SER:O	57:LT:92:ARG:HD3	2.21	0.40
57:LT:103:GLN:OE1	57:LT:103:GLN:HA	2.21	0.40
61:LX:91:ASN:OD1	61:LX:91:ASN:N	2.53	0.40
63:LZ:104:PRO:HA	63:LZ:107:ARG:HB2	2.02	0.40
67:Ld:20:LEU:CD1	67:Ld:67:VAL:HG11	2.51	0.40
69:Lf:50:ALA:HB2	69:Lf:68:TRP:CZ3	2.57	0.40
72:Li:80:PHE:CE2	72:Li:84:LYS:HD2	2.56	0.40
74:Lk:20:VAL:HG11	74:Lk:45:VAL:CG2	2.52	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	C5	77/91 (85%)	71 (92%)	6 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	SA	204/252 (81%)	167 (82%)	35 (17%)	2 (1%)	12	40
7	SB	214/255 (84%)	190 (89%)	23 (11%)	1 (0%)	24	54
8	SC	215/254 (85%)	194 (90%)	21 (10%)	0	100	100
9	SD	221/240 (92%)	188 (85%)	32 (14%)	1 (0%)	24	54
10	SE	258/261 (99%)	216 (84%)	41 (16%)	1 (0%)	30	59
11	SF	204/225 (91%)	173 (85%)	30 (15%)	1 (0%)	24	54
12	SG	216/236 (92%)	194 (90%)	21 (10%)	1 (0%)	24	54
13	SH	183/190 (96%)	154 (84%)	27 (15%)	2 (1%)	11	38
14	SI	184/200 (92%)	170 (92%)	14 (8%)	0	100	100
15	SJ	183/197 (93%)	164 (90%)	18 (10%)	1 (0%)	24	54
16	SK	90/105 (86%)	66 (73%)	23 (26%)	1 (1%)	11	38
17	SL	144/156 (92%)	125 (87%)	19 (13%)	0	100	100
18	SM	122/143 (85%)	82 (67%)	36 (30%)	4 (3%)	3	17
19	SN	148/151 (98%)	130 (88%)	17 (12%)	1 (1%)	18	47
20	SO	126/137 (92%)	107 (85%)	19 (15%)	0	100	100
21	SP	117/142 (82%)	97 (83%)	19 (16%)	1 (1%)	14	42
22	SQ	139/143 (97%)	120 (86%)	18 (13%)	1 (1%)	18	47
23	SR	111/136 (82%)	97 (87%)	14 (13%)	0	100	100
24	SS	143/146 (98%)	125 (87%)	17 (12%)	1 (1%)	18	47
25	ST	141/144 (98%)	125 (89%)	16 (11%)	0	100	100
26	SU	99/121 (82%)	90 (91%)	8 (8%)	1 (1%)	12	40
27	SV	85/87 (98%)	76 (89%)	9 (11%)	0	100	100
28	SW	127/130 (98%)	117 (92%)	10 (8%)	0	100	100
29	SX	142/145 (98%)	121 (85%)	19 (13%)	2 (1%)	9	31
30	SY	132/135 (98%)	113 (86%)	16 (12%)	3 (2%)	5	23
31	SZ	67/108 (62%)	59 (88%)	8 (12%)	0	100	100
32	Sa	95/119 (80%)	77 (81%)	17 (18%)	1 (1%)	11	38
33	Sb	79/82 (96%)	62 (78%)	16 (20%)	1 (1%)	9	33
34	Sc	61/67 (91%)	54 (88%)	7 (12%)	0	100	100
35	Sd	51/56 (91%)	44 (86%)	7 (14%)	0	100	100
36	Se	58/63 (92%)	48 (83%)	10 (17%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
37	Sf	31/152 (20%)	20 (64%)	11 (36%)	0	100	100
38	Sg	311/319 (98%)	269 (86%)	42 (14%)	0	100	100
39	LA	250/254 (98%)	207 (83%)	43 (17%)	0	100	100
40	LB	384/387 (99%)	347 (90%)	37 (10%)	0	100	100
41	LC	359/362 (99%)	303 (84%)	54 (15%)	2 (1%)	21	50
42	LD	292/297 (98%)	271 (93%)	21 (7%)	0	100	100
43	LE	153/176 (87%)	132 (86%)	21 (14%)	0	100	100
44	LF	221/244 (91%)	208 (94%)	12 (5%)	1 (0%)	24	54
45	LG	229/256 (90%)	194 (85%)	35 (15%)	0	100	100
46	LH	188/191 (98%)	172 (92%)	16 (8%)	0	100	100
47	LI	205/221 (93%)	184 (90%)	20 (10%)	1 (0%)	24	54
48	LJ	167/174 (96%)	135 (81%)	30 (18%)	2 (1%)	10	35
49	LL	192/199 (96%)	160 (83%)	24 (12%)	8 (4%)	2	14
50	LM	135/138 (98%)	130 (96%)	5 (4%)	0	100	100
51	LN	201/204 (98%)	180 (90%)	19 (10%)	2 (1%)	12	40
52	LO	195/199 (98%)	180 (92%)	15 (8%)	0	100	100
53	LP	171/184 (93%)	156 (91%)	15 (9%)	0	100	100
54	LQ	183/186 (98%)	167 (91%)	16 (9%)	0	100	100
55	LR	172/189 (91%)	162 (94%)	10 (6%)	0	100	100
56	LS	170/172 (99%)	160 (94%)	10 (6%)	0	100	100
57	LT	157/160 (98%)	146 (93%)	10 (6%)	1 (1%)	21	50
58	LU	96/121 (79%)	92 (96%)	4 (4%)	0	100	100
59	LV	132/137 (96%)	121 (92%)	11 (8%)	0	100	100
60	LW	61/155 (39%)	58 (95%)	3 (5%)	0	100	100
61	LX	118/142 (83%)	104 (88%)	14 (12%)	0	100	100
62	LY	122/127 (96%)	111 (91%)	11 (9%)	0	100	100
63	LZ	133/136 (98%)	118 (89%)	12 (9%)	3 (2%)	5	23
64	La	146/149 (98%)	116 (80%)	27 (18%)	3 (2%)	5	24
65	Lb	56/59 (95%)	46 (82%)	9 (16%)	1 (2%)	6	26
66	Lc	98/105 (93%)	93 (95%)	5 (5%)	0	100	100
67	Ld	107/113 (95%)	94 (88%)	13 (12%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
68	Le	125/130 (96%)	111 (89%)	14 (11%)	0	100	100
69	Lf	104/107 (97%)	96 (92%)	8 (8%)	0	100	100
70	Lg	110/121 (91%)	99 (90%)	11 (10%)	0	100	100
71	Lh	117/120 (98%)	107 (92%)	10 (8%)	0	100	100
72	Li	97/100 (97%)	87 (90%)	10 (10%)	0	100	100
73	Lj	80/88 (91%)	70 (88%)	10 (12%)	0	100	100
74	Lk	75/78 (96%)	68 (91%)	6 (8%)	1 (1%)	9	33
75	Ll	48/51 (94%)	41 (85%)	7 (15%)	0	100	100
76	Lm	50/128 (39%)	47 (94%)	3 (6%)	0	100	100
77	Ln	23/25 (92%)	22 (96%)	1 (4%)	0	100	100
78	Lo	103/106 (97%)	96 (93%)	7 (7%)	0	100	100
79	Lp	89/92 (97%)	79 (89%)	10 (11%)	0	100	100
All	All	10892/11971 (91%)	9575 (88%)	1265 (12%)	52 (0%)	26	54

All (52) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
22	SQ	116	LEU
41	LC	339	LEU
48	LJ	95	ASN
49	LL	48	PRO
49	LL	62	THR
51	LN	147	ARG
64	La	78	LEU
11	SF	101	GLY
13	SH	74	GLN
18	SM	109	GLU
18	SM	131	ASP
24	SS	91	ASP
30	SY	32	ARG
30	SY	52	LYS
49	LL	76	THR
49	LL	77	LEU
63	LZ	102	GLU
64	La	48	TYR
74	Lk	17	ARG
12	SG	68	LEU
18	SM	130	THR

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Mol	Chain	Res	Type
49	LL	61	PRO
49	LL	140	SER
6	SA	185	ARG
16	SK	25	LYS
19	SN	139	TRP
29	SX	89	ASN
30	SY	49	LYS
32	Sa	46	GLU
49	LL	47	ALA
51	LN	146	ALA
63	LZ	101	PHE
7	SB	106	THR
18	SM	119	SER
26	SU	72	ASN
41	LC	301	PRO
48	LJ	115	LYS
65	Lb	20	GLY
47	LI	175	ASN
64	La	18	GLY
10	SE	196	VAL
49	LL	60	ALA
6	SA	31	VAL
33	Sb	76	GLY
44	LF	191	VAL
9	SD	180	GLY
21	SP	68	PRO
57	LT	135	PRO
13	SH	65	PRO
15	SJ	163	PRO
29	SX	88	PRO
63	LZ	103	GLN

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	C5	60/69 (87%)	60 (100%)	0	100	100
6	SA	165/210 (79%)	164 (99%)	1 (1%)	78	80
7	SB	192/224 (86%)	192 (100%)	0	100	100
8	SC	176/205 (86%)	175 (99%)	1 (1%)	78	80
9	SD	182/195 (93%)	181 (100%)	1 (0%)	81	81
10	SE	221/222 (100%)	219 (99%)	2 (1%)	70	76
11	SF	173/191 (91%)	172 (99%)	1 (1%)	78	80
12	SG	187/201 (93%)	186 (100%)	1 (0%)	81	81
13	SH	165/170 (97%)	165 (100%)	0	100	100
14	SI	150/161 (93%)	149 (99%)	1 (1%)	76	78
15	SJ	158/166 (95%)	158 (100%)	0	100	100
16	SK	73/98 (74%)	73 (100%)	0	100	100
17	SL	129/137 (94%)	129 (100%)	0	100	100
18	SM	88/119 (74%)	88 (100%)	0	100	100
19	SN	127/128 (99%)	126 (99%)	1 (1%)	73	77
20	SO	97/105 (92%)	97 (100%)	0	100	100
21	SP	98/118 (83%)	96 (98%)	2 (2%)	48	65
22	SQ	117/119 (98%)	117 (100%)	0	100	100
23	SR	92/124 (74%)	91 (99%)	1 (1%)	65	74
24	SS	128/129 (99%)	126 (98%)	2 (2%)	55	68
25	ST	115/116 (99%)	115 (100%)	0	100	100
26	SU	94/114 (82%)	94 (100%)	0	100	100
27	SV	74/74 (100%)	73 (99%)	1 (1%)	59	70
28	SW	110/111 (99%)	110 (100%)	0	100	100
29	SX	119/120 (99%)	119 (100%)	0	100	100
30	SY	112/113 (99%)	112 (100%)	0	100	100
31	SZ	61/89 (68%)	60 (98%)	1 (2%)	55	68
32	Sa	83/100 (83%)	82 (99%)	1 (1%)	63	72
33	Sb	70/71 (99%)	70 (100%)	0	100	100
34	Sc	56/60 (93%)	56 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	Sd	47/49 (96%)	47 (100%)	0	100	100
36	Se	51/54 (94%)	51 (100%)	0	100	100
37	Sf	27/135 (20%)	27 (100%)	0	100	100
38	Sg	255/262 (97%)	253 (99%)	2 (1%)	73	77
39	LA	192/196 (98%)	189 (98%)	3 (2%)	55	68
40	LB	318/323 (98%)	310 (98%)	8 (2%)	42	62
41	LC	288/289 (100%)	284 (99%)	4 (1%)	59	70
42	LD	243/245 (99%)	242 (100%)	1 (0%)	84	83
43	LE	135/153 (88%)	133 (98%)	2 (2%)	57	69
44	LF	187/205 (91%)	185 (99%)	2 (1%)	65	74
45	LG	177/208 (85%)	177 (100%)	0	100	100
46	LH	170/171 (99%)	170 (100%)	0	100	100
47	LI	177/187 (95%)	176 (99%)	1 (1%)	78	80
48	LJ	147/150 (98%)	146 (99%)	1 (1%)	76	78
49	LL	154/159 (97%)	149 (97%)	5 (3%)	34	58
50	LM	108/109 (99%)	107 (99%)	1 (1%)	70	76
51	LN	175/176 (99%)	173 (99%)	2 (1%)	65	74
52	LO	160/162 (99%)	160 (100%)	0	100	100
53	LP	139/146 (95%)	136 (98%)	3 (2%)	45	63
54	LQ	150/151 (99%)	150 (100%)	0	100	100
55	LR	133/154 (86%)	128 (96%)	5 (4%)	29	54
56	LS	156/156 (100%)	155 (99%)	1 (1%)	78	80
57	LT	136/137 (99%)	135 (99%)	1 (1%)	76	78
58	LU	85/107 (79%)	85 (100%)	0	100	100
59	LV	103/105 (98%)	103 (100%)	0	100	100
60	LW	55/129 (43%)	55 (100%)	0	100	100
61	LX	104/118 (88%)	103 (99%)	1 (1%)	68	75
62	LY	107/110 (97%)	107 (100%)	0	100	100
63	LZ	115/116 (99%)	114 (99%)	1 (1%)	70	76
64	La	118/119 (99%)	117 (99%)	1 (1%)	73	77
65	Lb	46/47 (98%)	46 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
66	Lc	84/88 (96%)	84 (100%)	0	100	100
67	Ld	94/97 (97%)	93 (99%)	1 (1%)	65	74
68	Le	109/111 (98%)	109 (100%)	0	100	100
69	Lf	90/91 (99%)	90 (100%)	0	100	100
70	Lg	95/103 (92%)	95 (100%)	0	100	100
71	Lh	103/105 (98%)	103 (100%)	0	100	100
72	Li	80/82 (98%)	80 (100%)	0	100	100
73	Lj	67/71 (94%)	67 (100%)	0	100	100
74	Lk	67/69 (97%)	67 (100%)	0	100	100
75	Ll	45/46 (98%)	45 (100%)	0	100	100
76	Lm	47/116 (40%)	47 (100%)	0	100	100
77	Ln	23/23 (100%)	23 (100%)	0	100	100
78	Lo	90/91 (99%)	90 (100%)	0	100	100
79	Lp	71/72 (99%)	71 (100%)	0	100	100
All	All	9195/10052 (92%)	9132 (99%)	63 (1%)	73	78

All (63) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	SA	158	VAL
8	SC	101	VAL
9	SD	93	ASP
10	SE	12	LEU
10	SE	181	VAL
11	SF	70	VAL
12	SG	68	LEU
14	SI	183	ILE
19	SN	87	ASP
21	SP	28	MET
21	SP	57	MET
23	SR	106	THR
24	SS	101	LEU
24	SS	137	HIS
27	SV	9	VAL
31	SZ	80	LEU
32	Sa	67	THR
38	Sg	109	ASP

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Mol	Chain	Res	Type
38	Sg	167	VAL
39	LA	45	VAL
39	LA	112	ILE
39	LA	134	VAL
40	LB	56	ILE
40	LB	85	VAL
40	LB	216	ASP
40	LB	229	VAL
40	LB	246	LEU
40	LB	260	VAL
40	LB	306	THR
40	LB	320	ASP
41	LC	105	THR
41	LC	129	THR
41	LC	194	TYR
41	LC	299	ILE
42	LD	148	ILE
43	LE	65	ILE
43	LE	84	VAL
44	LF	188	ILE
44	LF	229	PHE
47	LI	208	ASN
48	LJ	152	HIS
49	LL	57	VAL
49	LL	58	VAL
49	LL	69	VAL
49	LL	77	LEU
49	LL	86	THR
50	LM	66	THR
51	LN	75	VAL
51	LN	129	TYR
53	LP	9	THR
53	LP	41	LEU
53	LP	94	LEU
55	LR	151	ARG
55	LR	152	GLU
55	LR	153	LYS
55	LR	155	LEU
55	LR	156	ASN
56	LS	172	TYR
57	LT	25	VAL
61	LX	119	THR

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Mol	Chain	Res	Type
63	LZ	80	LEU
64	La	85	ASP
67	Ld	108	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (187) such sidechains are listed below:

Mol	Chain	Res	Type
2	C5	27	GLN
6	SA	33	GLN
7	SB	40	ASN
7	SB	95	ASN
7	SB	160	HIS
7	SB	194	ASN
8	SC	108	ASN
8	SC	110	HIS
8	SC	150	GLN
9	SD	74	GLN
9	SD	101	GLN
9	SD	111	ASN
9	SD	159	HIS
9	SD	174	HIS
10	SE	17	HIS
10	SE	36	HIS
10	SE	57	ASN
10	SE	209	HIS
11	SF	35	GLN
11	SF	104	ASN
11	SF	139	ASN
11	SF	200	ASN
12	SG	80	ASN
12	SG	119	GLN
12	SG	185	GLN
12	SG	190	GLN
12	SG	201	GLN
13	SH	122	HIS
13	SH	170	GLN
14	SI	9	HIS
14	SI	32	GLN
14	SI	116	HIS
15	SJ	48	GLN
15	SJ	74	ASN
15	SJ	133	HIS

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Mol	Chain	Res	Type
15	SJ	142	ASN
15	SJ	155	HIS
16	SK	39	ASN
18	SM	96	GLN
18	SM	139	HIS
19	SN	21	ASN
19	SN	123	HIS
23	SR	31	ASN
23	SR	56	HIS
23	SR	83	GLN
23	SR	104	ASN
24	SS	44	ASN
24	SS	137	HIS
25	ST	23	GLN
25	ST	77	ASN
25	ST	93	HIS
26	SU	44	ASN
26	SU	98	GLN
27	SV	81	ASN
28	SW	56	HIS
28	SW	92	ASN
28	SW	120	HIS
29	SX	28	ASN
29	SX	79	ASN
29	SX	89	ASN
30	SY	15	ASN
30	SY	22	GLN
30	SY	34	ASN
30	SY	63	GLN
31	SZ	95	HIS
31	SZ	98	GLN
32	Sa	17	HIS
32	Sa	94	ASN
33	Sb	19	HIS
33	Sb	26	GLN
33	Sb	42	ASN
35	Sd	53	ASN
36	Se	5	HIS
36	Se	17	GLN
38	Sg	66	HIS
38	Sg	69	GLN
38	Sg	101	GLN

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Mol	Chain	Res	Type
38	Sg	187	GLN
38	Sg	200	ASN
38	Sg	288	HIS
39	LA	38	HIS
39	LA	47	GLN
39	LA	211	HIS
39	LA	218	HIS
40	LB	165	GLN
40	LB	173	GLN
40	LB	212	ASN
41	LC	9	HIS
41	LC	48	GLN
41	LC	58	HIS
41	LC	59	GLN
41	LC	87	GLN
41	LC	160	GLN
41	LC	213	ASN
41	LC	260	GLN
41	LC	279	HIS
41	LC	296	GLN
42	LD	40	HIS
42	LD	175	HIS
43	LE	138	GLN
44	LF	25	GLN
44	LF	52	GLN
44	LF	81	HIS
44	LF	194	HIS
45	LG	24	ASN
45	LG	33	ASN
45	LG	38	GLN
45	LG	41	GLN
45	LG	137	ASN
45	LG	221	ASN
46	LH	8	GLN
46	LH	50	ASN
46	LH	59	ASN
47	LI	14	ASN
47	LI	51	HIS
47	LI	59	GLN
47	LI	86	HIS
47	LI	95	HIS
47	LI	123	HIS

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Mol	Chain	Res	Type
47	LI	163	GLN
48	LJ	20	ASN
48	LJ	62	ASN
48	LJ	150	ASN
49	LL	19	GLN
49	LL	102	GLN
49	LL	149	GLN
50	LM	41	GLN
51	LN	11	GLN
51	LN	86	ASN
51	LN	87	GLN
51	LN	175	ASN
52	LO	31	GLN
52	LO	50	ASN
52	LO	55	HIS
53	LP	10	ASN
53	LP	28	ASN
53	LP	45	GLN
53	LP	92	GLN
53	LP	97	ASN
53	LP	145	HIS
54	LQ	58	ASN
54	LQ	78	ASN
54	LQ	158	HIS
55	LR	34	GLN
55	LR	66	HIS
55	LR	141	HIS
55	LR	144	GLN
55	LR	156	ASN
56	LS	49	HIS
56	LS	65	ASN
56	LS	88	HIS
56	LS	142	GLN
57	LT	26	HIS
57	LT	54	HIS
57	LT	98	HIS
57	LT	122	GLN
58	LU	25	ASN
58	LU	40	HIS
58	LU	101	ASN
60	LW	45	ASN
61	LX	65	GLN

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Mol	Chain	Res	Type
62	LY	91	ASN
62	LY	120	GLN
63	LZ	40	HIS
63	LZ	57	HIS
64	La	38	GLN
65	Lb	7	HIS
65	Lb	43	HIS
66	Lc	7	GLN
66	Lc	12	GLN
66	Lc	75	ASN
68	Le	20	HIS
68	Le	26	HIS
68	Le	31	ASN
69	Lf	17	GLN
70	Lg	33	GLN
70	Lg	34	HIS
71	Lh	34	GLN
72	Li	91	ASN
73	Lj	12	HIS
73	Lj	28	HIS
74	Lk	57	ASN
75	Ll	20	ASN
75	Ll	33	ASN
78	Lo	105	GLN
79	Lp	33	GLN
79	Lp	34	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	C2	1695/1800 (94%)	427 (25%)	34 (2%)
3	C1	3120/3396 (91%)	647 (20%)	44 (1%)
4	C4	120/121 (99%)	17 (14%)	0
5	C3	156/158 (98%)	34 (21%)	1 (0%)
All	All	5091/5475 (92%)	1125 (22%)	79 (1%)

All (1125) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	C2	2	A
1	C2	4	C

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Mol	Chain	Res	Type
1	C2	17	C
1	C2	25	C
1	C2	26	A
1	C2	27	U
1	C2	34	G
1	C2	43	A
1	C2	45	U
1	C2	47	A
1	C2	57	G
1	C2	60	U
1	C2	63	G
1	C2	67	A
1	C2	68	A
1	C2	72	A
1	C2	77	U
1	C2	78	A
1	C2	104	A
1	C2	114	C
1	C2	115	G
1	C2	116	U
1	C2	126	A
1	C2	127	G
1	C2	130	C
1	C2	132	U
1	C2	137	U
1	C2	140	A
1	C2	141	U
1	C2	146	U
1	C2	153	G
1	C2	158	U
1	C2	166	C
1	C2	178	U
1	C2	179	A
1	C2	180	A
1	C2	185	U
1	C2	188	A
1	C2	190	C
1	C2	191	C
1	C2	192	U
1	C2	193	U
1	C2	194	U
1	C2	195	G

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Mol	Chain	Res	Type
1	C2	196	G
1	C2	197	A
1	C2	198	A
1	C2	200	A
1	C2	207	U
1	C2	216	U
1	C2	220	A
1	C2	224	C
1	C2	226	A
1	C2	228	G
1	C2	230	C
1	C2	233	C
1	C2	235	G
1	C2	238	U
1	C2	239	C
1	C2	240	U
1	C2	241	U
1	C2	250	C
1	C2	261	U
1	C2	265	A
1	C2	270	C
1	C2	271	A
1	C2	272	U
1	C2	273	G
1	C2	277	U
1	C2	278	U
1	C2	280	U
1	C2	299	A
1	C2	302	U
1	C2	313	U
1	C2	316	A
1	C2	320	U
1	C2	321	C
1	C2	322	G
1	C2	333	A
1	C2	337	G
1	C2	338	C
1	C2	350	U
1	C2	351	C
1	C2	352	A
1	C2	359	A
1	C2	360	A

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Mol	Chain	Res	Type
1	C2	361	C
1	C2	369	A
1	C2	381	C
1	C2	387	A
1	C2	400	A
1	C2	401	A
1	C2	402	C
1	C2	403	G
1	C2	404	G
1	C2	411	C
1	C2	416	A
1	C2	417	A
1	C2	418	G
1	C2	419	G
1	C2	423	G
1	C2	424	C
1	C2	425	A
1	C2	426	G
1	C2	427	C
1	C2	434	G
1	C2	435	C
1	C2	439	U
1	C2	444	C
1	C2	448	C
1	C2	454	U
1	C2	459	G
1	C2	475	A
1	C2	477	A
1	C2	486	G
1	C2	488	G
1	C2	501	U
1	C2	506	A
1	C2	507	U
1	C2	508	U
1	C2	510	G
1	C2	511	A
1	C2	512	A
1	C2	513	U
1	C2	514	G
1	C2	515	A
1	C2	519	C
1	C2	520	A

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Mol	Chain	Res	Type
1	C2	527	A
1	C2	530	C
1	C2	533	U
1	C2	534	A
1	C2	536	C
1	C2	538	A
1	C2	539	G
1	C2	540	G
1	C2	541	A
1	C2	542	A
1	C2	543	C
1	C2	546	U
1	C2	548	G
1	C2	555	A
1	C2	556	A
1	C2	557	G
1	C2	558	U
1	C2	559	C
1	C2	561	G
1	C2	565	C
1	C2	568	G
1	C2	574	G
1	C2	578	U
1	C2	579	A
1	C2	580	A
1	C2	594	A
1	C2	595	G
1	C2	606	A
1	C2	611	U
1	C2	619	A
1	C2	620	A
1	C2	623	A
1	C2	624	G
1	C2	630	A
1	C2	635	A
1	C2	639	U
1	C2	640	U
1	C2	648	G
1	C2	685	A
1	C2	690	G
1	C2	691	C
1	C2	696	C

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Mol	Chain	Res	Type
1	C2	697	C
1	C2	698	U
1	C2	702	G
1	C2	703	G
1	C2	739	G
1	C2	740	A
1	C2	742	U
1	C2	743	U
1	C2	744	U
1	C2	754	A
1	C2	755	A
1	C2	756	A
1	C2	764	U
1	C2	765	G
1	C2	766	U
1	C2	771	A
1	C2	774	A
1	C2	775	G
1	C2	780	A
1	C2	781	U
1	C2	782	U
1	C2	783	G
1	C2	787	G
1	C2	793	A
1	C2	794	U
1	C2	811	A
1	C2	812	A
1	C2	813	U
1	C2	814	A
1	C2	815	G
1	C2	816	G
1	C2	820	U
1	C2	821	U
1	C2	826	U
1	C2	829	A
1	C2	830	U
1	C2	831	U
1	C2	833	U
1	C2	835	U
1	C2	850	A
1	C2	851	U
1	C2	855	A

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Mol	Chain	Res	Type
1	C2	856	A
1	C2	863	A
1	C2	886	U
1	C2	892	A
1	C2	912	U
1	C2	913	G
1	C2	914	G
1	C2	928	U
1	C2	931	C
1	C2	932	U
1	C2	933	A
1	C2	934	C
1	C2	935	U
1	C2	942	G
1	C2	959	U
1	C2	960	U
1	C2	966	A
1	C2	969	C
1	C2	970	A
1	C2	971	A
1	C2	992	A
1	C2	1004	U
1	C2	1005	A
1	C2	1014	G
1	C2	1025	A
1	C2	1026	A
1	C2	1028	C
1	C2	1030	A
1	C2	1032	G
1	C2	1039	A
1	C2	1040	G
1	C2	1052	U
1	C2	1053	G
1	C2	1057	U
1	C2	1058	U
1	C2	1059	U
1	C2	1060	U
1	C2	1061	A
1	C2	1062	A
1	C2	1063	U
1	C2	1074	G
1	C2	1082	C

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Mol	Chain	Res	Type
1	C2	1090	C
1	C2	1092	A
1	C2	1093	A
1	C2	1096	C
1	C2	1097	U
1	C2	1098	U
1	C2	1099	U
1	C2	1100	G
1	C2	1138	A
1	C2	1147	A
1	C2	1150	G
1	C2	1155	G
1	C2	1158	C
1	C2	1159	C
1	C2	1160	A
1	C2	1167	G
1	C2	1185	U
1	C2	1188	G
1	C2	1193	A
1	C2	1194	A
1	C2	1196	A
1	C2	1197	C
1	C2	1199	G
1	C2	1200	G
1	C2	1202	A
1	C2	1212	G
1	C2	1216	C
1	C2	1217	A
1	C2	1218	G
1	C2	1220	C
1	C2	1225	U
1	C2	1226	A
1	C2	1227	A
1	C2	1228	G
1	C2	1229	G
1	C2	1230	A
1	C2	1231	U
1	C2	1239	U
1	C2	1240	U
1	C2	1243	G
1	C2	1244	A
1	C2	1245	G

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Mol	Chain	Res	Type
1	C2	1246	C
1	C2	1252	C
1	C2	1253	U
1	C2	1255	G
1	C2	1256	A
1	C2	1257	U
1	C2	1258	U
1	C2	1274	C
1	C2	1276	U
1	C2	1284	C
1	C2	1286	U
1	C2	1287	A
1	C2	1291	G
1	C2	1300	A
1	C2	1314	U
1	C2	1315	U
1	C2	1316	G
1	C2	1321	A
1	C2	1325	A
1	C2	1338	C
1	C2	1341	A
1	C2	1344	A
1	C2	1345	A
1	C2	1355	C
1	C2	1360	A
1	C2	1361	U
1	C2	1362	U
1	C2	1363	U
1	C2	1364	G
1	C2	1367	G
1	C2	1370	U
1	C2	1371	A
1	C2	1382	A
1	C2	1388	A
1	C2	1390	U
1	C2	1396	U
1	C2	1398	U
1	C2	1399	C
1	C2	1402	G
1	C2	1406	A
1	C2	1413	U
1	C2	1414	U

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Mol	Chain	Res	Type
1	C2	1415	U
1	C2	1421	A
1	C2	1425	A
1	C2	1426	C
1	C2	1427	A
1	C2	1428	G
1	C2	1433	G
1	C2	1435	G
1	C2	1436	A
1	C2	1444	A
1	C2	1445	G
1	C2	1446	A
1	C2	1448	G
1	C2	1457	C
1	C2	1458	G
1	C2	1459	C
1	C2	1460	A
1	C2	1461	C
1	C2	1462	G
1	C2	1469	A
1	C2	1471	A
1	C2	1474	G
1	C2	1481	C
1	C2	1482	C
1	C2	1486	G
1	C2	1487	A
1	C2	1489	U
1	C2	1490	C
1	C2	1491	U
1	C2	1492	A
1	C2	1493	A
1	C2	1496	U
1	C2	1510	U
1	C2	1516	A
1	C2	1518	C
1	C2	1521	G
1	C2	1523	G
1	C2	1524	A
1	C2	1526	A
1	C2	1531	G
1	C2	1534	G
1	C2	1535	U

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Mol	Chain	Res	Type
1	C2	1536	G
1	C2	1537	C
1	C2	1540	G
1	C2	1542	G
1	C2	1548	G
1	C2	1553	G
1	C2	1557	U
1	C2	1558	U
1	C2	1559	A
1	C2	1565	C
1	C2	1569	A
1	C2	1573	A
1	C2	1574	G
1	C2	1583	A
1	C2	1584	G
1	C2	1590	G
1	C2	1600	A
1	C2	1601	G
1	C2	1607	G
1	C2	1616	G
1	C2	1619	C
1	C2	1621	U
1	C2	1634	C
1	C2	1635	A
1	C2	1658	G
1	C2	1663	G
1	C2	1680	G
1	C2	1686	C
1	C2	1716	C
1	C2	1717	G
1	C2	1718	G
1	C2	1750	A
1	C2	1755	A
1	C2	1757	G
1	C2	1760	G
1	C2	1766	A
1	C2	1767	G
1	C2	1769	U
1	C2	1780	G
1	C2	1782	A
1	C2	1783	C
1	C2	1792	G

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Mol	Chain	Res	Type
1	C2	1793	G
1	C2	1794	A
1	C2	1796	C
1	C2	1799	U
1	C2	1800	A
3	C1	6	A
3	C1	22	G
3	C1	26	A
3	C1	40	A
3	C1	43	A
3	C1	44	U
3	C1	49	A
3	C1	59	G
3	C1	60	A
3	C1	65	A
3	C1	66	A
3	C1	67	A
3	C1	92	G
3	C1	96	G
3	C1	99	A
3	C1	110	G
3	C1	111	C
3	C1	116	A
3	C1	117	U
3	C1	122	A
3	C1	124	U
3	C1	133	U
3	C1	134	U
3	C1	135	C
3	C1	136	G
3	C1	140	C
3	C1	143	G
3	C1	148	G
3	C1	151	A
3	C1	152	U
3	C1	156	G
3	C1	157	A
3	C1	165	A
3	C1	171	G
3	C1	180	C
3	C1	182	U
3	C1	187	A

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Mol	Chain	Res	Type
3	C1	190	U
3	C1	191	U
3	C1	200	C
3	C1	210	U
3	C1	211	A
3	C1	213	A
3	C1	218	G
3	C1	219	A
3	C1	222	A
3	C1	239	G
3	C1	240	U
3	C1	241	G
3	C1	246	U
3	C1	248	U
3	C1	251	G
3	C1	252	U
3	C1	253	A
3	C1	254	A
3	C1	263	C
3	C1	269	G
3	C1	283	G
3	C1	284	A
3	C1	286	U
3	C1	295	A
3	C1	305	U
3	C1	315	C
3	C1	323	A
3	C1	329	U
3	C1	339	C
3	C1	350	C
3	C1	351	A
3	C1	352	A
3	C1	359	U
3	C1	368	G
3	C1	375	A
3	C1	376	G
3	C1	395	A
3	C1	396	A
3	C1	398	A
3	C1	399	A
3	C1	401	U
3	C1	402	A

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Mol	Chain	Res	Type
3	C1	403	C
3	C1	404	G
3	C1	421	G
3	C1	422	A
3	C1	440	A
3	C1	495	G
3	C1	505	G
3	C1	510	G
3	C1	521	A
3	C1	523	A
3	C1	532	A
3	C1	535	G
3	C1	536	U
3	C1	541	U
3	C1	544	C
3	C1	545	U
3	C1	546	C
3	C1	548	G
3	C1	550	A
3	C1	555	U
3	C1	556	U
3	C1	557	A
3	C1	558	U
3	C1	559	A
3	C1	569	A
3	C1	578	A
3	C1	579	G
3	C1	581	U
3	C1	585	A
3	C1	590	G
3	C1	597	G
3	C1	603	A
3	C1	604	G
3	C1	607	A
3	C1	609	G
3	C1	611	A
3	C1	620	U
3	C1	621	A
3	C1	622	A
3	C1	625	G
3	C1	636	C
3	C1	649	A

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Mol	Chain	Res	Type
3	C1	677	A
3	C1	681	U
3	C1	690	A
3	C1	691	A
3	C1	705	A
3	C1	712	G
3	C1	715	A
3	C1	716	A
3	C1	717	C
3	C1	735	A
3	C1	736	A
3	C1	737	G
3	C1	750	G
3	C1	766	U
3	C1	767	U
3	C1	776	U
3	C1	777	U
3	C1	779	G
3	C1	780	A
3	C1	781	G
3	C1	785	G
3	C1	786	A
3	C1	799	G
3	C1	801	A
3	C1	806	A
3	C1	816	A
3	C1	817	A
3	C1	830	A
3	C1	837	A
3	C1	861	C
3	C1	874	U
3	C1	879	U
3	C1	880	G
3	C1	890	C
3	C1	895	A
3	C1	896	A
3	C1	897	U
3	C1	907	G
3	C1	908	G
3	C1	914	A
3	C1	915	A
3	C1	916	G

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Mol	Chain	Res	Type
3	C1	917	A
3	C1	921	A
3	C1	923	C
3	C1	932	U
3	C1	933	A
3	C1	936	A
3	C1	937	G
3	C1	944	C
3	C1	953	G
3	C1	959	C
3	C1	960	U
3	C1	961	C
3	C1	967	A
3	C1	970	A
3	C1	971	G
3	C1	979	U
3	C1	984	G
3	C1	1002	A
3	C1	1010	G
3	C1	1015	U
3	C1	1016	C
3	C1	1017	C
3	C1	1019	G
3	C1	1021	G
3	C1	1024	G
3	C1	1025	A
3	C1	1026	A
3	C1	1028	U
3	C1	1029	G
3	C1	1032	C
3	C1	1035	G
3	C1	1045	C
3	C1	1047	A
3	C1	1049	C
3	C1	1062	A
3	C1	1063	G
3	C1	1064	A
3	C1	1065	A
3	C1	1066	G
3	C1	1070	U
3	C1	1072	G
3	C1	1081	U

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Mol	Chain	Res	Type
3	C1	1082	U
3	C1	1094	U
3	C1	1097	G
3	C1	1098	A
3	C1	1103	A
3	C1	1104	G
3	C1	1117	G
3	C1	1131	G
3	C1	1135	A
3	C1	1143	A
3	C1	1144	U
3	C1	1151	U
3	C1	1159	A
3	C1	1179	A
3	C1	1180	A
3	C1	1181	U
3	C1	1196	C
3	C1	1201	C
3	C1	1206	G
3	C1	1208	U
3	C1	1209	G
3	C1	1222	G
3	C1	1224	C
3	C1	1235	U
3	C1	1236	G
3	C1	1239	C
3	C1	1241	U
3	C1	1242	G
3	C1	1244	A
3	C1	1245	A
3	C1	1246	G
3	C1	1247	U
3	C1	1255	C
3	C1	1262	G
3	C1	1263	A
3	C1	1264	G
3	C1	1265	U
3	C1	1266	G
3	C1	1270	A
3	C1	1271	A
3	C1	1285	G
3	C1	1286	A

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Mol	Chain	Res	Type
3	C1	1287	A
3	C1	1301	A
3	C1	1307	G
3	C1	1308	A
3	C1	1309	U
3	C1	1313	G
3	C1	1330	A
3	C1	1345	G
3	C1	1348	U
3	C1	1354	G
3	C1	1357	G
3	C1	1380	G
3	C1	1386	A
3	C1	1390	A
3	C1	1399	A
3	C1	1400	G
3	C1	1408	G
3	C1	1419	A
3	C1	1421	G
3	C1	1430	U
3	C1	1433	A
3	C1	1434	G
3	C1	1437	C
3	C1	1446	A
3	C1	1450	G
3	C1	1475	A
3	C1	1481	A
3	C1	1482	A
3	C1	1483	G
3	C1	1488	G
3	C1	1494	U
3	C1	1503	A
3	C1	1508	C
3	C1	1523	U
3	C1	1525	G
3	C1	1527	C
3	C1	1533	U
3	C1	1536	G
3	C1	1539	A
3	C1	1546	A
3	C1	1554	U
3	C1	1555	U

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Mol	Chain	Res	Type
3	C1	1559	A
3	C1	1560	G
3	C1	1561	G
3	C1	1562	C
3	C1	1574	C
3	C1	1575	A
3	C1	1576	G
3	C1	1577	G
3	C1	1578	C
3	C1	1581	C
3	C1	1582	C
3	C1	1583	A
3	C1	1587	A
3	C1	1589	A
3	C1	1593	A
3	C1	1596	C
3	C1	1619	A
3	C1	1620	U
3	C1	1629	U
3	C1	1630	U
3	C1	1631	C
3	C1	1639	C
3	C1	1643	A
3	C1	1644	C
3	C1	1645	U
3	C1	1646	G
3	C1	1657	C
3	C1	1658	G
3	C1	1677	G
3	C1	1683	A
3	C1	1694	U
3	C1	1696	A
3	C1	1703	U
3	C1	1705	U
3	C1	1713	G
3	C1	1716	U
3	C1	1717	U
3	C1	1724	U
3	C1	1728	G
3	C1	1736	G
3	C1	1741	A
3	C1	1749	A

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Mol	Chain	Res	Type
3	C1	1750	A
3	C1	1751	G
3	C1	1752	A
3	C1	1756	C
3	C1	1760	A
3	C1	1762	C
3	C1	1763	U
3	C1	1765	U
3	C1	1766	G
3	C1	1770	G
3	C1	1775	G
3	C1	1780	G
3	C1	1797	A
3	C1	1812	G
3	C1	1814	A
3	C1	1816	A
3	C1	1817	G
3	C1	1818	U
3	C1	1821	U
3	C1	1839	A
3	C1	1842	A
3	C1	1846	C
3	C1	1849	C
3	C1	1850	A
3	C1	1858	A
3	C1	1866	C
3	C1	1878	G
3	C1	1879	A
3	C1	1880	U
3	C1	1886	A
3	C1	1893	A
3	C1	1904	C
3	C1	1906	G
3	C1	1907	C
3	C1	1930	A
3	C1	2096	A
3	C1	2101	C
3	C1	2102	U
3	C1	2110	G
3	C1	2111	G
3	C1	2112	U
3	C1	2113	A

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Mol	Chain	Res	Type
3	C1	2114	C
3	C1	2121	G
3	C1	2122	G
3	C1	2126	A
3	C1	2131	A
3	C1	2144	A
3	C1	2145	A
3	C1	2158	A
3	C1	2169	G
3	C1	2170	U
3	C1	2171	G
3	C1	2176	U
3	C1	2192	C
3	C1	2194	G
3	C1	2198	A
3	C1	2205	U
3	C1	2206	G
3	C1	2207	A
3	C1	2208	A
3	C1	2209	U
3	C1	2210	G
3	C1	2223	A
3	C1	2225	U
3	C1	2229	A
3	C1	2244	A
3	C1	2248	C
3	C1	2249	G
3	C1	2252	A
3	C1	2255	A
3	C1	2256	A
3	C1	2257	C
3	C1	2272	G
3	C1	2273	G
3	C1	2276	G
3	C1	2279	A
3	C1	2281	A
3	C1	2285	C
3	C1	2286	U
3	C1	2288	G
3	C1	2307	G
3	C1	2308	C
3	C1	2310	U

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Mol	Chain	Res	Type
3	C1	2313	A
3	C1	2315	G
3	C1	2334	U
3	C1	2372	A
3	C1	2373	A
3	C1	2374	C
3	C1	2375	G
3	C1	2385	G
3	C1	2388	U
3	C1	2395	G
3	C1	2397	A
3	C1	2401	A
3	C1	2402	A
3	C1	2403	G
3	C1	2404	A
3	C1	2405	C
3	C1	2411	U
3	C1	2412	G
3	C1	2418	G
3	C1	2419	A
3	C1	2437	G
3	C1	2440	G
3	C1	2507	C
3	C1	2510	U
3	C1	2511	A
3	C1	2514	U
3	C1	2515	A
3	C1	2522	G
3	C1	2523	A
3	C1	2524	A
3	C1	2526	C
3	C1	2530	G
3	C1	2534	G
3	C1	2535	A
3	C1	2537	U
3	C1	2538	U
3	C1	2539	C
3	C1	2540	A
3	C1	2541	U
3	C1	2542	U
3	C1	2543	U
3	C1	2544	U

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Mol	Chain	Res	Type
3	C1	2547	A
3	C1	2549	G
3	C1	2551	U
3	C1	2552	C
3	C1	2554	A
3	C1	2557	A
3	C1	2562	A
3	C1	2568	C
3	C1	2569	A
3	C1	2570	U
3	C1	2571	U
3	C1	2572	C
3	C1	2573	G
3	C1	2578	U
3	C1	2585	G
3	C1	2589	G
3	C1	2593	A
3	C1	2606	G
3	C1	2607	G
3	C1	2610	G
3	C1	2614	G
3	C1	2626	A
3	C1	2629	U
3	C1	2635	A
3	C1	2648	G
3	C1	2652	U
3	C1	2656	A
3	C1	2663	G
3	C1	2672	G
3	C1	2674	A
3	C1	2677	G
3	C1	2688	U
3	C1	2689	A
3	C1	2691	A
3	C1	2694	A
3	C1	2696	A
3	C1	2704	A
3	C1	2714	G
3	C1	2719	U
3	C1	2726	C
3	C1	2727	A
3	C1	2728	G

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Mol	Chain	Res	Type
3	C1	2729	U
3	C1	2752	U
3	C1	2753	G
3	C1	2755	C
3	C1	2772	C
3	C1	2773	C
3	C1	2777	G
3	C1	2778	G
3	C1	2779	A
3	C1	2782	U
3	C1	2796	G
3	C1	2797	C
3	C1	2798	C
3	C1	2799	A
3	C1	2800	G
3	C1	2801	A
3	C1	2803	A
3	C1	2810	C
3	C1	2816	G
3	C1	2817	A
3	C1	2818	U
3	C1	2819	A
3	C1	2839	G
3	C1	2844	C
3	C1	2845	A
3	C1	2849	C
3	C1	2853	A
3	C1	2856	G
3	C1	2861	U
3	C1	2871	G
3	C1	2872	A
3	C1	2875	U
3	C1	2876	C
3	C1	2887	A
3	C1	2889	C
3	C1	2899	C
3	C1	2900	A
3	C1	2911	A
3	C1	2912	G
3	C1	2922	G
3	C1	2923	U
3	C1	2925	C

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Mol	Chain	Res	Type
3	C1	2935	U
3	C1	2936	A
3	C1	2938	G
3	C1	2941	A
3	C1	2945	G
3	C1	2947	G
3	C1	2971	A
3	C1	2983	C
3	C1	2996	U
3	C1	2997	G
3	C1	3012	A
3	C1	3021	A
3	C1	3022	G
3	C1	3028	G
3	C1	3059	G
3	C1	3069	G
3	C1	3078	U
3	C1	3079	U
3	C1	3080	G
3	C1	3086	A
3	C1	3092	C
3	C1	3104	U
3	C1	3116	G
3	C1	3117	C
3	C1	3129	A
3	C1	3130	A
3	C1	3131	U
3	C1	3142	A
3	C1	3143	C
3	C1	3153	U
3	C1	3158	G
3	C1	3159	C
3	C1	3165	A
3	C1	3172	A
3	C1	3173	G
3	C1	3174	A
3	C1	3175	U
3	C1	3176	G
3	C1	3179	U
3	C1	3181	C
3	C1	3185	U
3	C1	3187	A

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Mol	Chain	Res	Type
3	C1	3196	U
3	C1	3206	C
3	C1	3207	U
3	C1	3208	G
3	C1	3210	A
3	C1	3217	C
3	C1	3218	A
3	C1	3219	G
3	C1	3224	G
3	C1	3227	A
3	C1	3228	C
3	C1	3229	G
3	C1	3234	A
3	C1	3235	C
3	C1	3238	G
3	C1	3239	G
3	C1	3242	G
3	C1	3243	A
3	C1	3245	A
3	C1	3247	G
3	C1	3259	U
3	C1	3260	G
3	C1	3263	G
3	C1	3268	A
3	C1	3269	U
3	C1	3270	U
3	C1	3273	A
3	C1	3276	G
3	C1	3279	A
3	C1	3280	U
3	C1	3281	U
3	C1	3283	U
3	C1	3287	U
3	C1	3288	G
3	C1	3289	G
3	C1	3290	G
3	C1	3294	A
3	C1	3304	U
3	C1	3313	U
3	C1	3316	A
3	C1	3317	U
3	C1	3318	G

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Mol	Chain	Res	Type
3	C1	3319	U
3	C1	3331	U
3	C1	3334	U
3	C1	3341	U
3	C1	3342	A
3	C1	3345	G
3	C1	3348	G
3	C1	3351	U
3	C1	3352	U
3	C1	3355	U
3	C1	3356	G
3	C1	3357	U
3	C1	3358	U
3	C1	3363	U
3	C1	3368	U
3	C1	3369	G
3	C1	3375	A
3	C1	3378	C
3	C1	3382	U
3	C1	3389	U
3	C1	3390	G
3	C1	3396	U
4	C4	7	G
4	C4	10	C
4	C4	11	A
4	C4	19	C
4	C4	22	A
4	C4	52	G
4	C4	54	U
4	C4	55	A
4	C4	65	G
4	C4	73	C
4	C4	74	C
4	C4	76	A
4	C4	91	G
4	C4	93	C
4	C4	102	A
4	C4	112	G
4	C4	121	U
5	C3	23	U
5	C3	25	G
5	C3	34	U

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Mol	Chain	Res	Type
5	C3	35	C
5	C3	49	G
5	C3	52	A
5	C3	59	A
5	C3	62	C
5	C3	63	G
5	C3	75	G
5	C3	80	A
5	C3	81	U
5	C3	82	U
5	C3	83	C
5	C3	84	C
5	C3	85	G
5	C3	86	U
5	C3	87	G
5	C3	95	G
5	C3	97	A
5	C3	100	U
5	C3	104	A
5	C3	106	C
5	C3	111	A
5	C3	113	U
5	C3	116	G
5	C3	125	U
5	C3	126	A
5	C3	127	U
5	C3	128	U
5	C3	129	C
5	C3	138	A
5	C3	155	A
5	C3	156	U

All (79) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	C2	25	C
1	C2	76	A
1	C2	103	A
1	C2	114	C
1	C2	136	C
1	C2	139	C
1	C2	187	G

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Mol	Chain	Res	Type
1	C2	272	U
1	C2	277	U
1	C2	319	U
1	C2	321	C
1	C2	417	A
1	C2	422	G
1	C2	424	C
1	C2	512	A
1	C2	542	A
1	C2	555	A
1	C2	558	U
1	C2	755	A
1	C2	820	U
1	C2	855	A
1	C2	1051	G
1	C2	1058	U
1	C2	1097	U
1	C2	1196	A
1	C2	1227	A
1	C2	1244	A
1	C2	1255	G
1	C2	1344	A
1	C2	1481	C
1	C2	1535	U
1	C2	1568	C
1	C2	1573	A
1	C2	1620	C
3	C1	65	A
3	C1	151	A
3	C1	170	G
3	C1	210	U
3	C1	282	G
3	C1	715	A
3	C1	735	A
3	C1	916	G
3	C1	1015	U
3	C1	1016	C
3	C1	1027	A
3	C1	1062	A
3	C1	1064	A
3	C1	1081	U
3	C1	1241	U

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Mol	Chain	Res	Type
3	C1	1284	C
3	C1	1307	G
3	C1	1560	G
3	C1	1581	C
3	C1	1582	C
3	C1	1716	U
3	C1	1815	U
3	C1	1816	A
3	C1	1878	G
3	C1	2101	C
3	C1	2112	U
3	C1	2204	C
3	C1	2209	U
3	C1	2418	G
3	C1	2513	U
3	C1	2537	U
3	C1	2662	G
3	C1	2772	C
3	C1	2818	U
3	C1	3078	U
3	C1	3158	G
3	C1	3218	A
3	C1	3228	C
3	C1	3269	U
3	C1	3289	G
3	C1	3317	U
3	C1	3341	U
3	C1	3356	G
3	C1	3357	U
5	C3	80	A

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 9 ligands modelled in this entry, 9 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

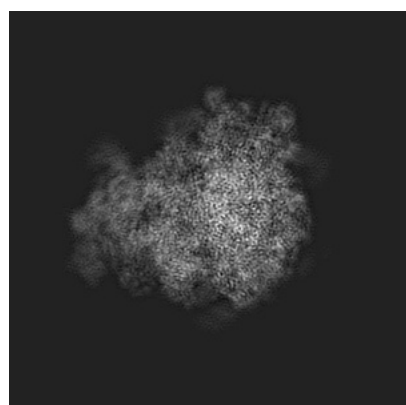
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-11097. These allow visual inspection of the internal detail of the map and identification of artifacts.

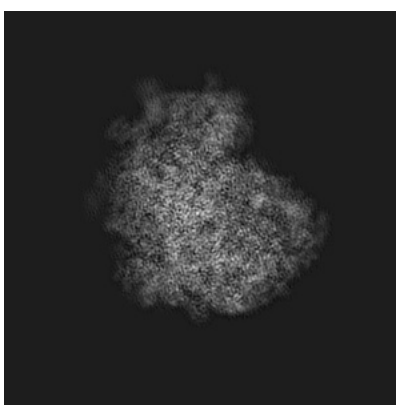
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

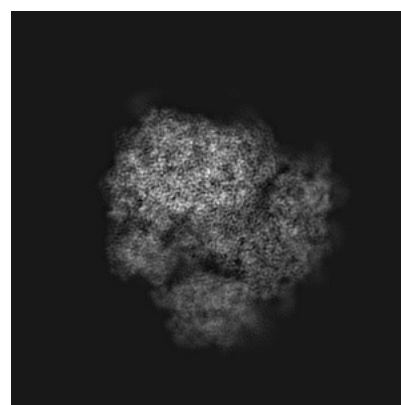
6.1.1 Primary map



X



Y

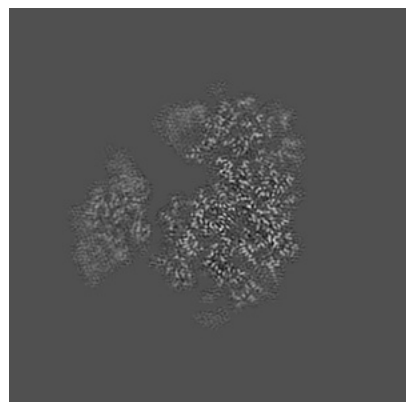


Z

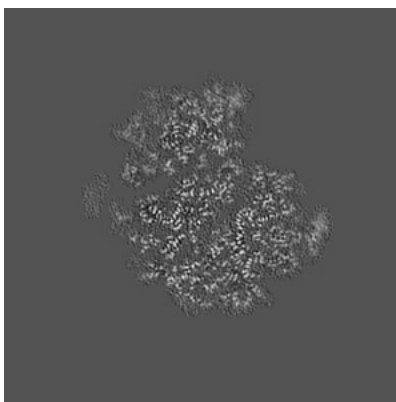
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

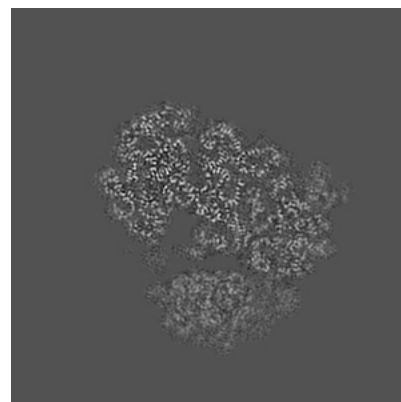
6.2.1 Primary map



X Index: 200



Y Index: 200

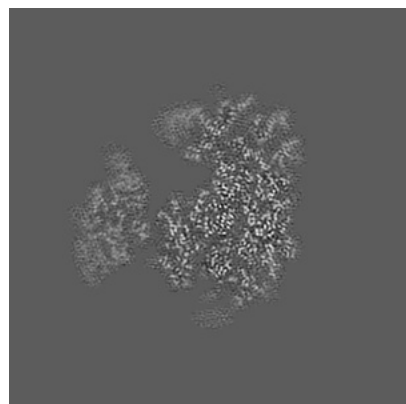


Z Index: 200

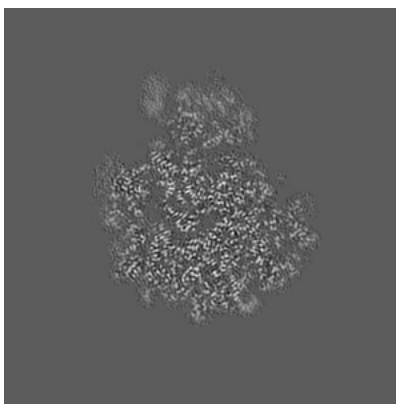
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

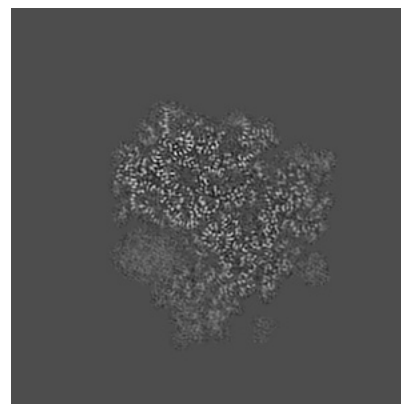
6.3.1 Primary map



X Index: 202



Y Index: 227

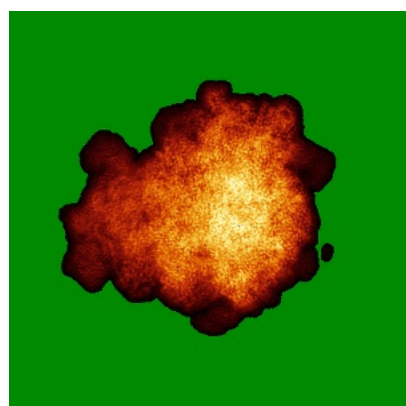


Z Index: 172

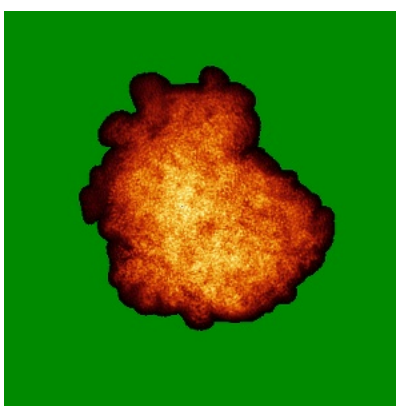
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

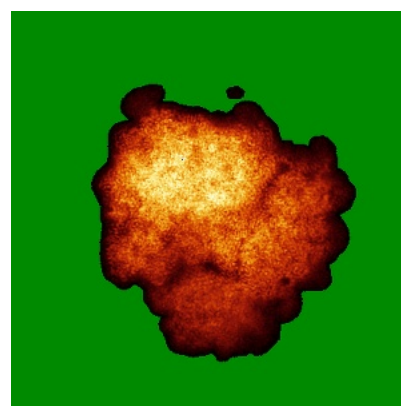
6.4.1 Primary map



X



Y

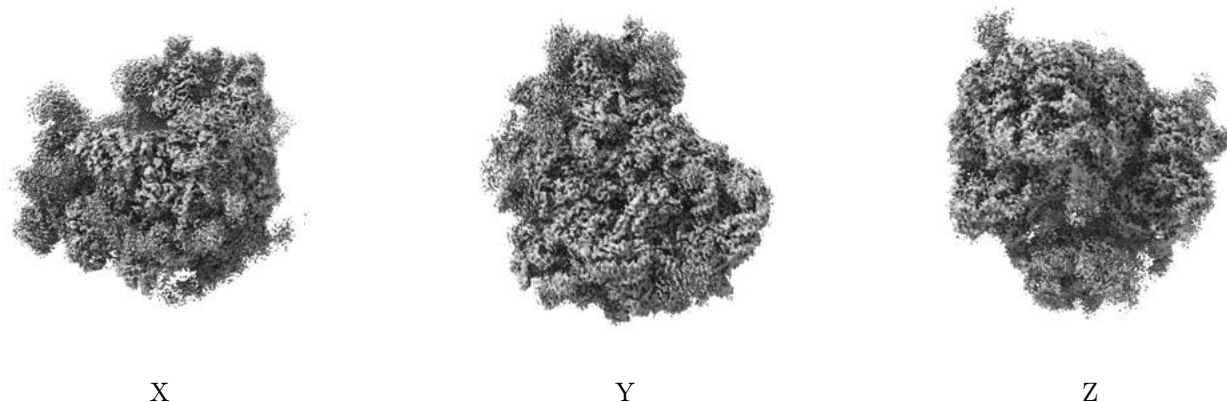


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

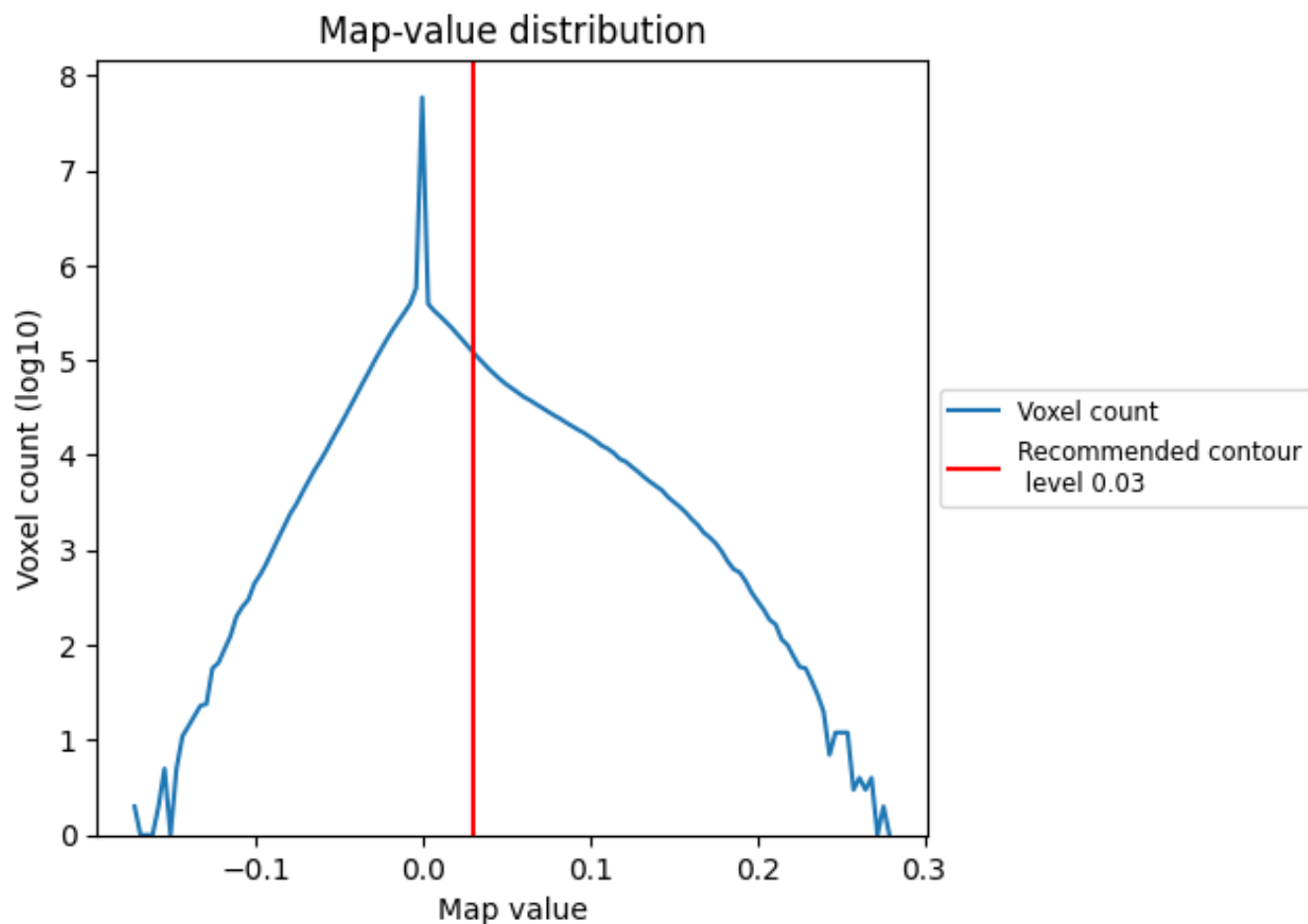
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

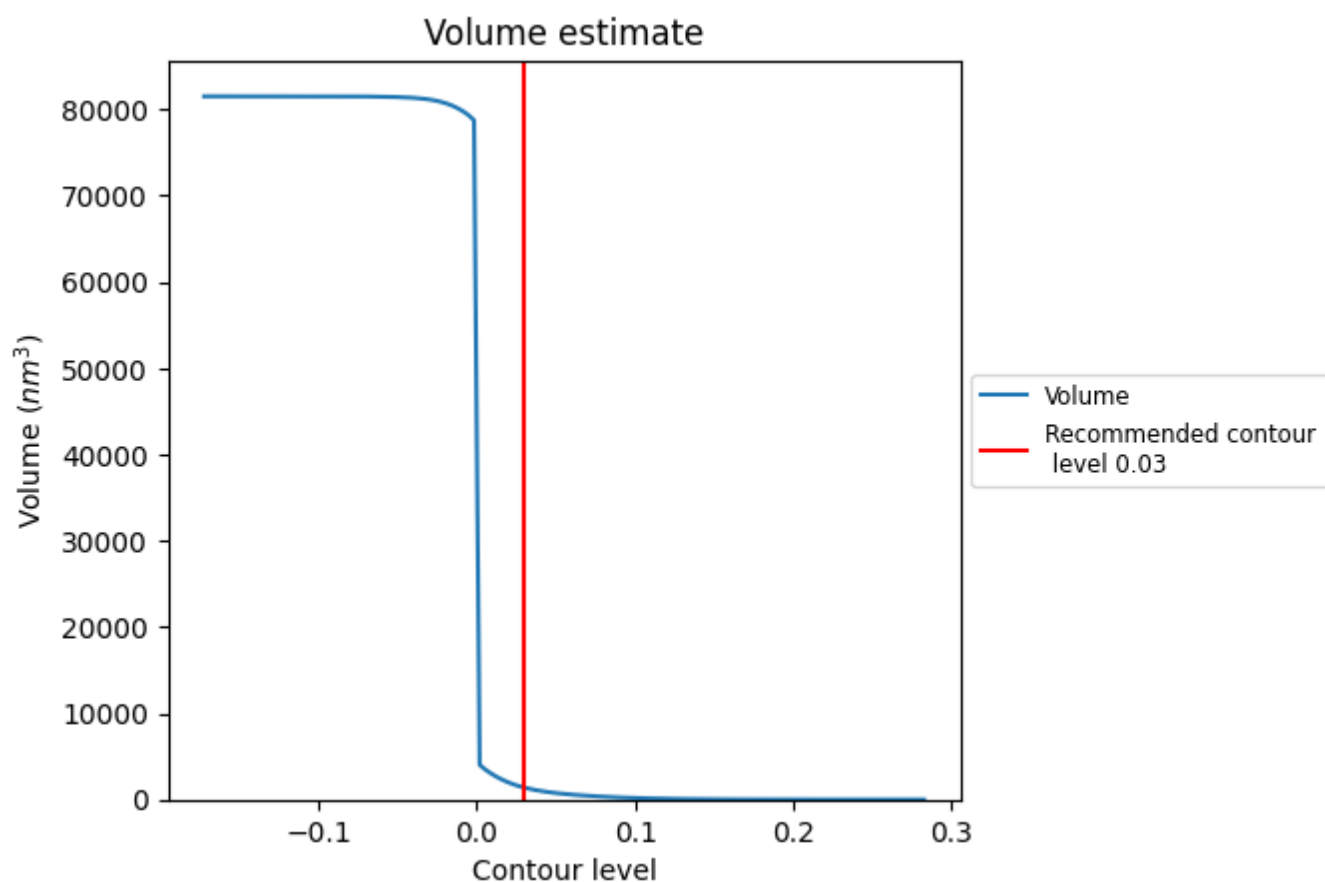
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

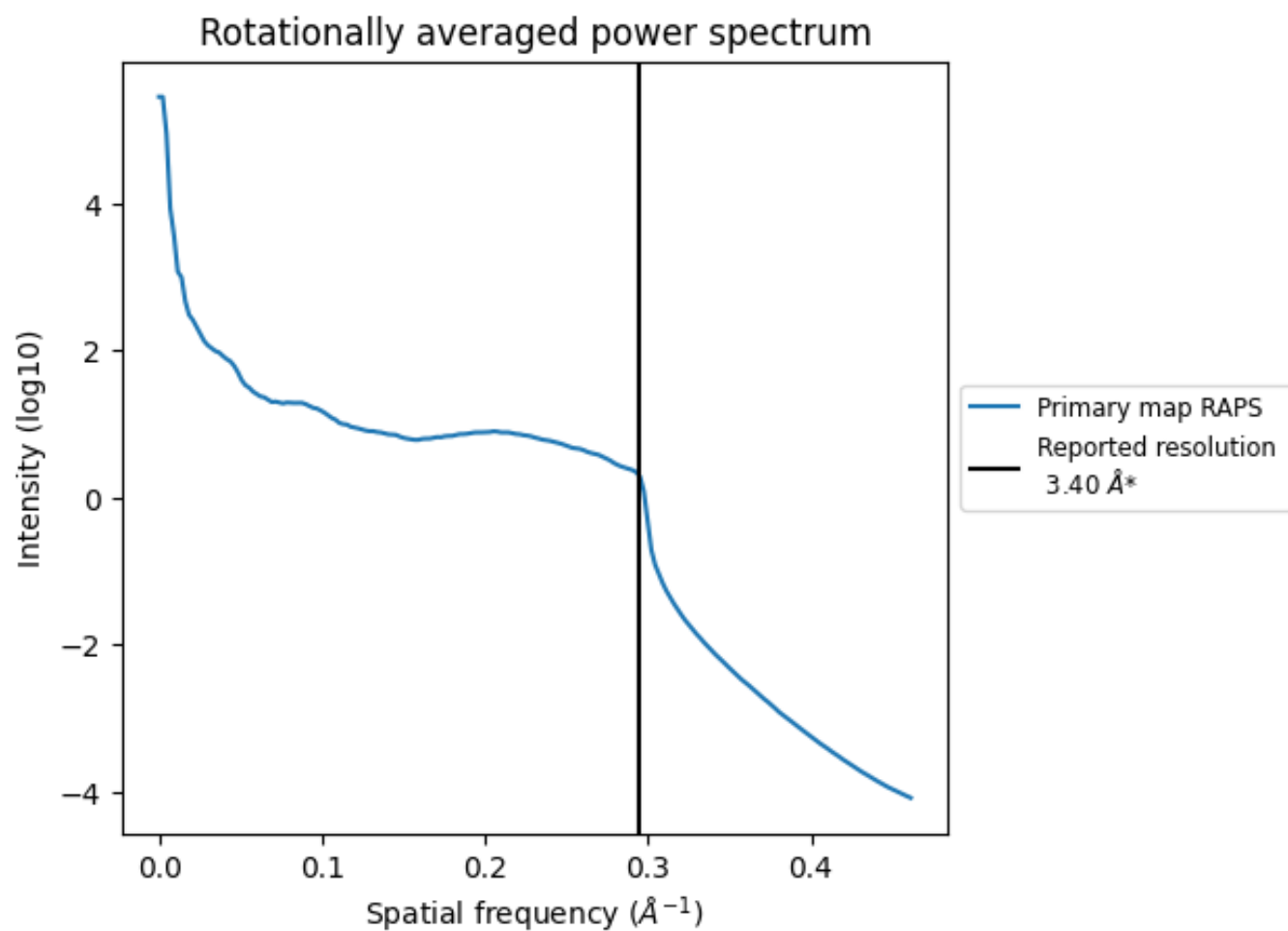
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1384 nm^3 ; this corresponds to an approximate mass of 1250 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

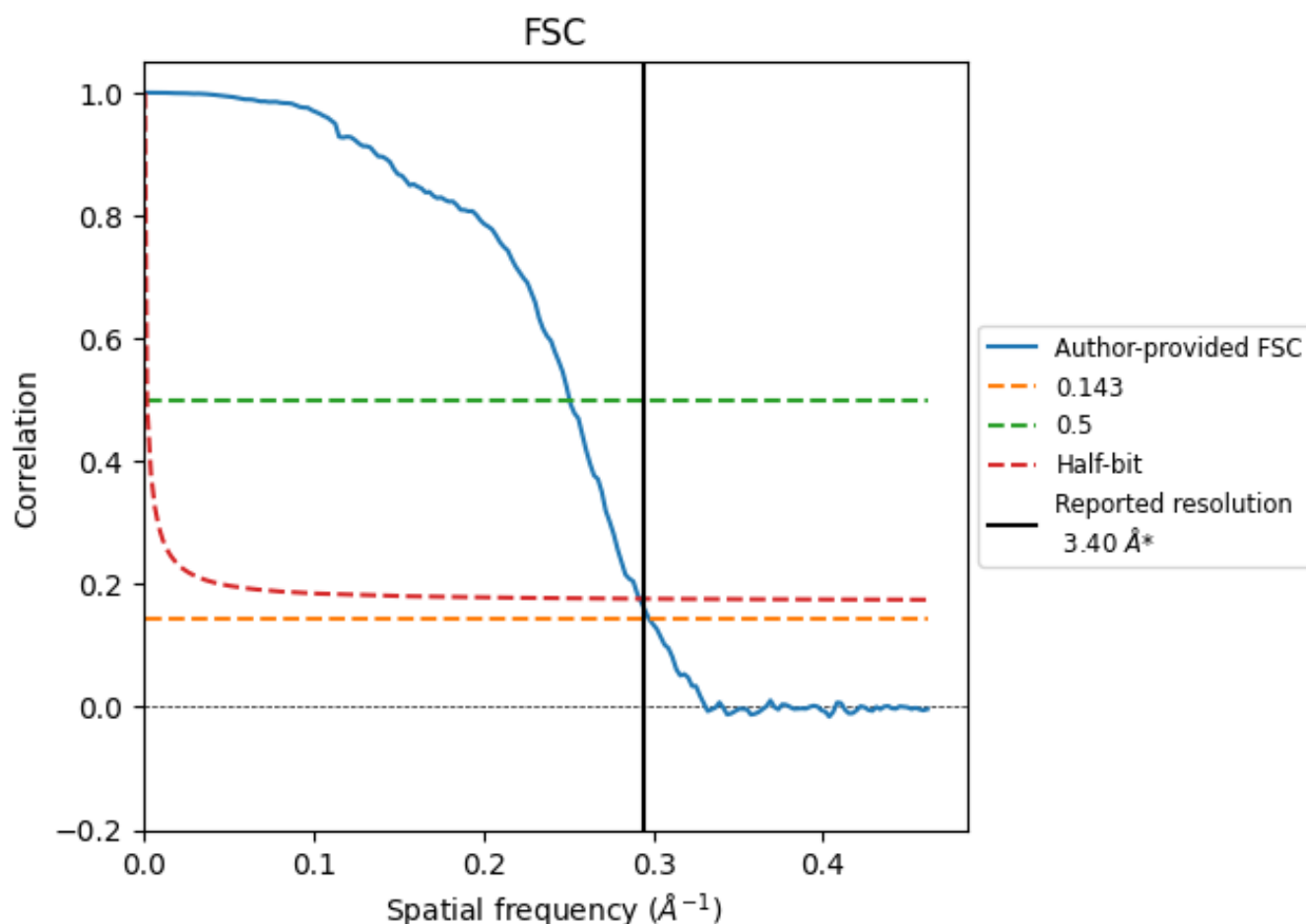


*Reported resolution corresponds to spatial frequency of 0.294 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.294 Å⁻¹

8.2 Resolution estimates [i](#)

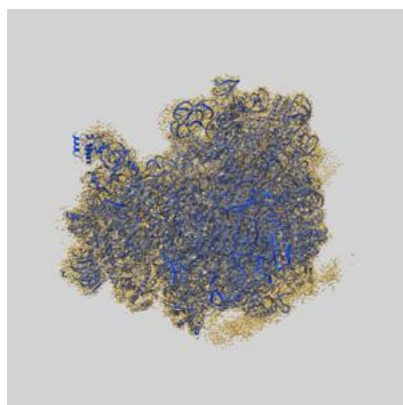
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	3.36	3.99	3.42
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

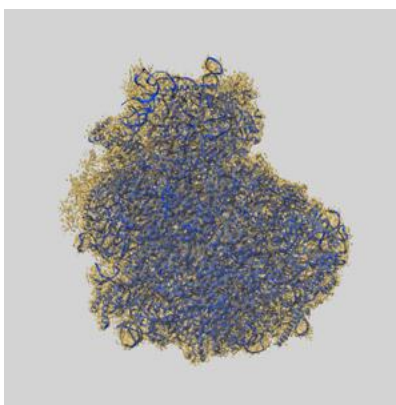
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-11097 and PDB model 6Z6K. Per-residue inclusion information can be found in section [3](#) on page [19](#).

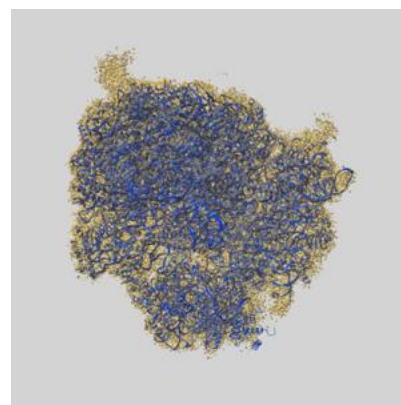
9.1 Map-model overlay [i](#)



X



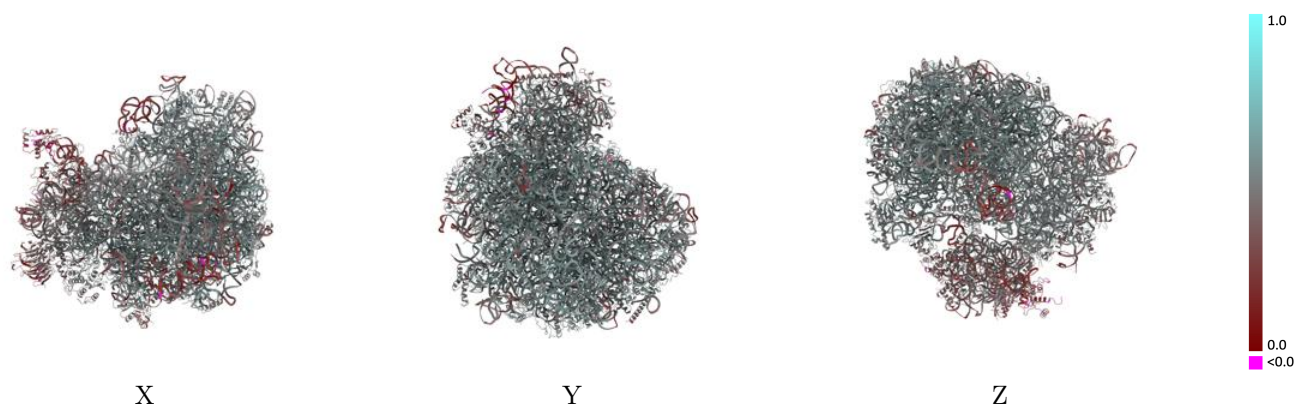
Y



Z

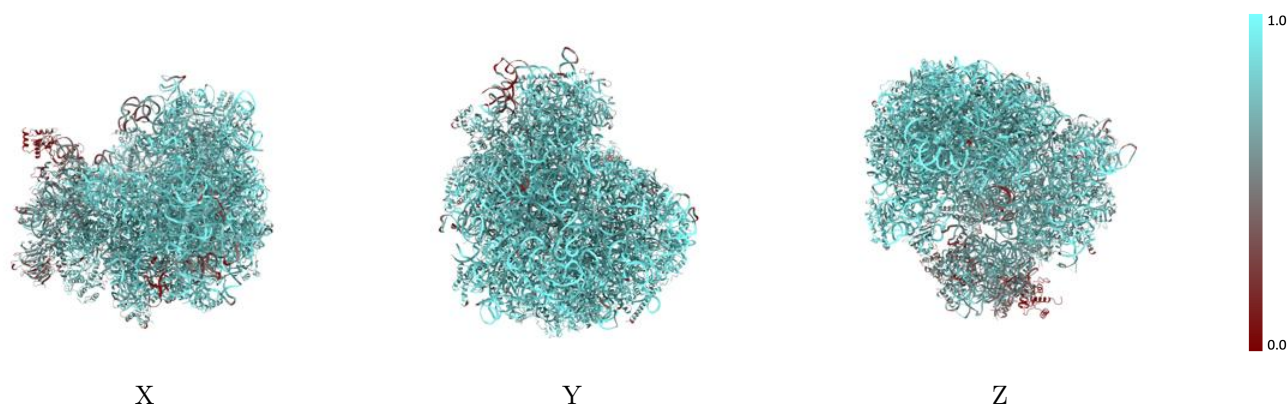
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



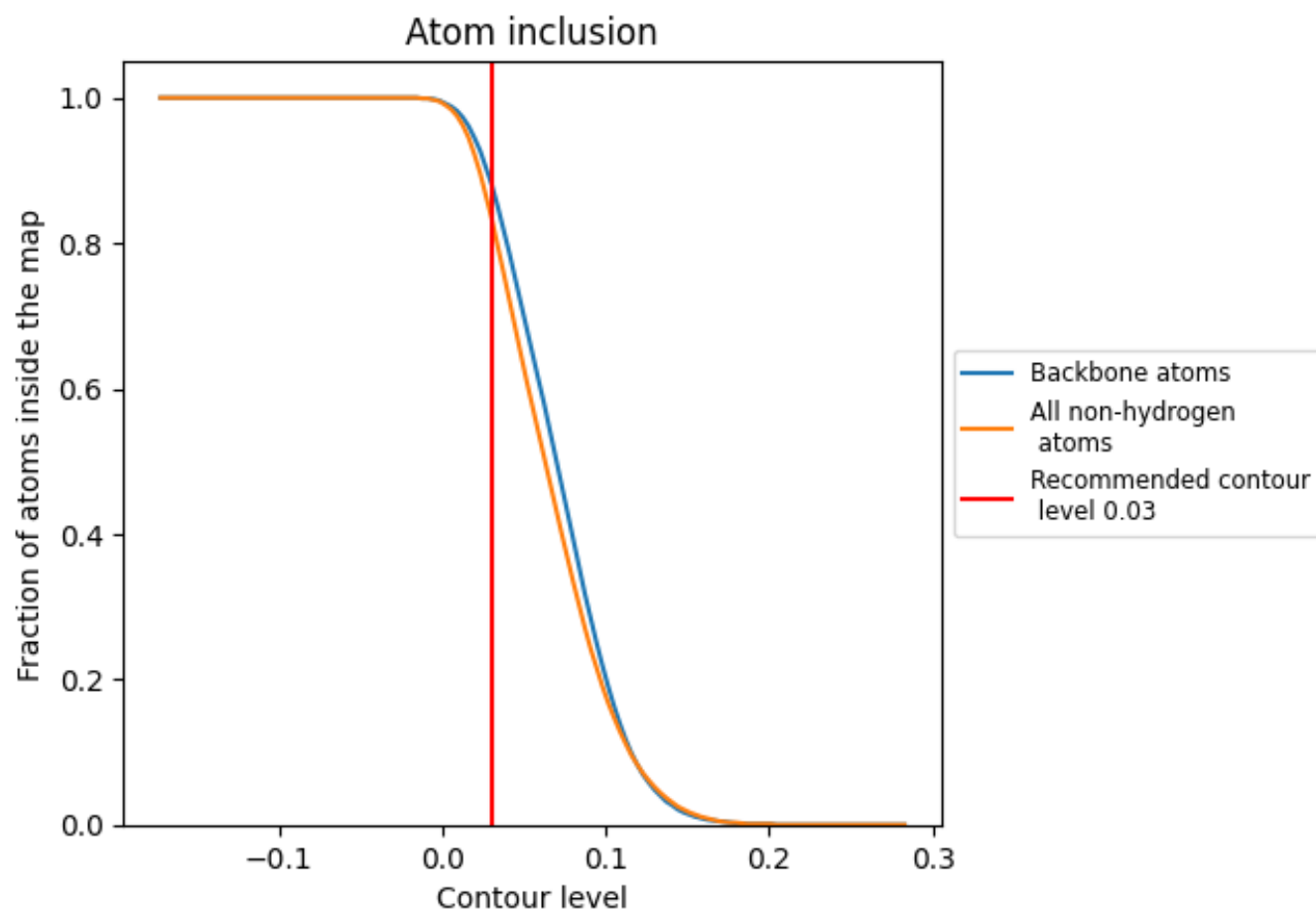
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.03).

9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 83% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8340	 0.4940
C1	 0.9130	 0.5130
C2	 0.8380	 0.4520
C3	 0.9430	 0.5300
C4	 0.9480	 0.5190
C5	 0.6510	 0.4580
LA	 0.8620	 0.5580
LB	 0.8710	 0.5440
LC	 0.8570	 0.5390
LD	 0.7960	 0.5000
LE	 0.7980	 0.5050
LF	 0.8330	 0.5270
LG	 0.8330	 0.5150
LH	 0.8210	 0.5140
LI	 0.8090	 0.5200
LJ	 0.7740	 0.4810
LL	 0.8350	 0.5210
LM	 0.8270	 0.5130
LN	 0.8810	 0.5650
LO	 0.8390	 0.5360
LP	 0.8550	 0.5440
LQ	 0.8610	 0.5450
LR	 0.8250	 0.5160
LS	 0.8260	 0.5330
LT	 0.8300	 0.5380
LU	 0.7760	 0.4860
LV	 0.8120	 0.5370
LW	 0.8320	 0.5390
LX	 0.8610	 0.5370
LY	 0.8400	 0.5370
LZ	 0.8530	 0.5290
La	 0.8760	 0.5500
Lb	 0.8160	 0.5140
Lc	 0.7720	 0.5280
Ld	 0.8000	 0.5220



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Chain	Atom inclusion	Q-score
Le	 0.8580	 0.5460
Lf	 0.8670	 0.5540
Lg	 0.8090	 0.5330
Lh	 0.8480	 0.5280
Li	 0.8130	 0.5070
Lj	 0.9100	 0.5770
Lk	 0.7230	 0.4960
Ll	 0.8410	 0.5470
Lm	 0.8170	 0.5400
Ln	 0.6560	 0.5320
Lo	 0.8410	 0.5480
Lp	 0.8040	 0.5410
SA	 0.7570	 0.4770
SB	 0.7620	 0.4980
SC	 0.7880	 0.5120
SD	 0.5790	 0.4140
SE	 0.7820	 0.5070
SF	 0.5870	 0.4150
SG	 0.7290	 0.4500
SH	 0.6930	 0.4540
SI	 0.7900	 0.5160
SJ	 0.7690	 0.4920
SK	 0.5560	 0.3740
SL	 0.8040	 0.5310
SM	 0.1300	 0.2320
SN	 0.7870	 0.5070
SO	 0.7830	 0.5130
SP	 0.4490	 0.3420
SQ	 0.6220	 0.4250
SR	 0.6250	 0.4180
SS	 0.5510	 0.3580
ST	 0.6200	 0.3920
SU	 0.5800	 0.3770
SV	 0.7600	 0.5000
SW	 0.8280	 0.5320
SX	 0.7930	 0.5240
SY	 0.7490	 0.4630
SZ	 0.5000	 0.3660
Sa	 0.8270	 0.5280
Sb	 0.7820	 0.5020
Sc	 0.5910	 0.4420
Sd	 0.7380	 0.4650

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Chain	Atom inclusion	Q-score
Se	 0.6970	 0.4500
Sf	 0.2370	 0.2560
Sg	 0.4840	 0.3540