



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 03:09 AM UTC

PDB ID : 8ZH3 / pdb_00008zh3
EMDB ID : EMD-60094
Title : 80S ribosome with A/P-P/E tRNA and mRNA of WNV
Authors : Wu, M.; Yuan, S.
Deposited on : 2024-05-10
Resolution : 2.70 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:

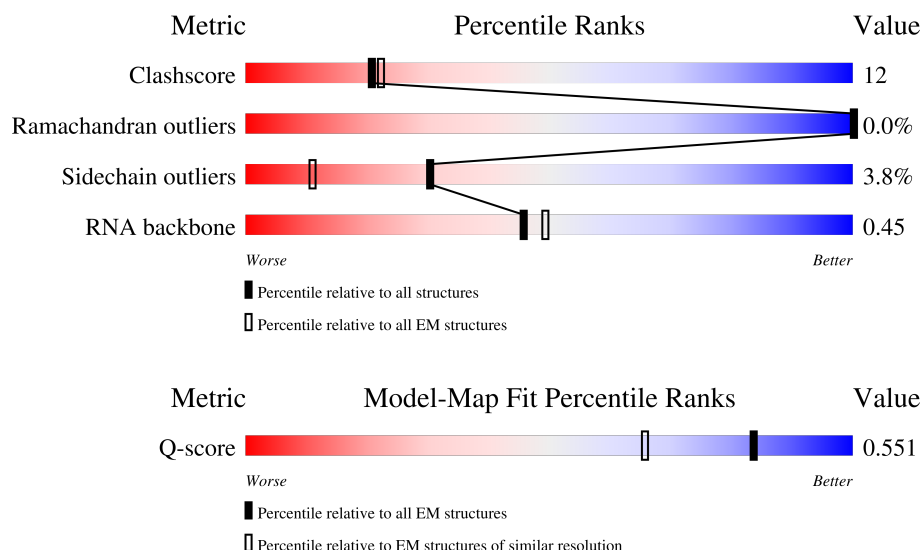
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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 2.70 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.



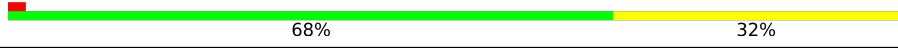
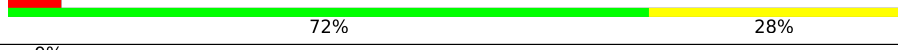
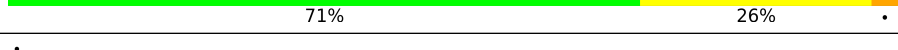
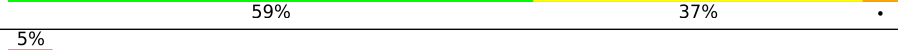
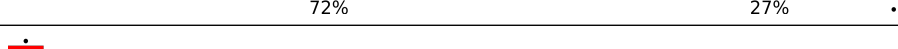
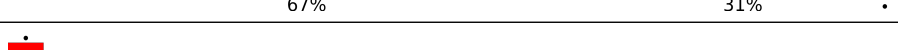
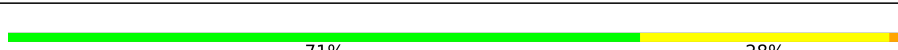
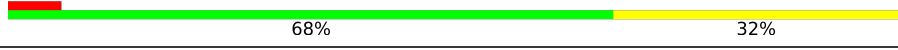
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	10327 (2.20 - 3.20)

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	LA	3393	
2	LB	121	
3	LC	158	

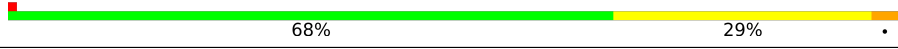
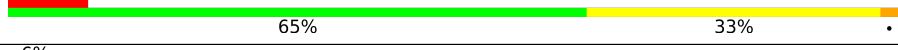
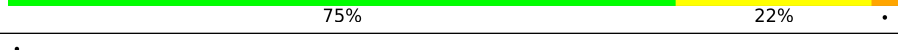
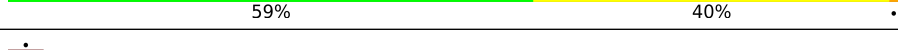
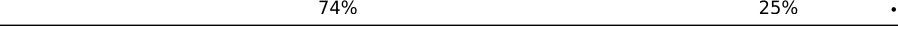
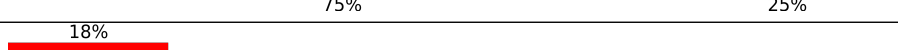
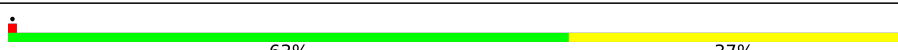
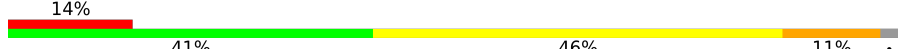
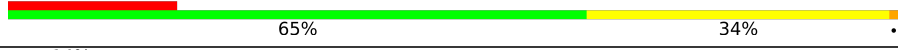
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Mol	Chain	Length	Quality of chain
4	LD	251	
5	LE	386	
6	LF	361	
7	LG	294	
8	LH	175	
9	LI	222	
10	LJ	233	
11	LK	191	
12	LL	218	
13	LM	169	
14	LN	193	
15	LO	136	
16	LP	203	
17	LQ	197	
18	LR	183	
19	LS	185	
20	LT	188	
21	LU	171	
22	LV	159	
23	LW	100	
24	LX	136	
25	LY	65	
26	LZ	121	
27	La	125	
28	Lb	135	

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Mol	Chain	Length	Quality of chain
29	Lc	148	
30	Ld	58	
31	Le	96	
32	Lf	109	
33	Lg	127	
34	Lh	106	
35	Li	112	
36	Lj	119	
37	Lk	99	
38	Ll	81	
39	Lm	77	
40	Ln	50	
41	Lo	52	
42	Lp	25	
43	Lq	103	
44	Lr	91	
45	S2	1799	
46	SA	223	
47	SB	206	
48	SC	92	
49	SD	124	
50	SE	117	
51	SF	141	
52	SG	125	
53	SH	145	

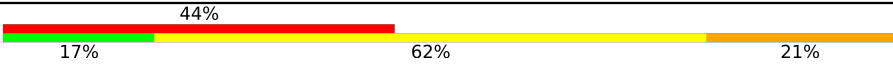
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Mol	Chain	Length	Quality of chain
54	SI	143	
55	SJ	101	
56	SK	82	
57	SL	63	
58	SM	53	
59	SN	73	
60	SO	312	
61	SP	206	
62	SQ	232	
63	SR	217	
64	SS	260	
65	ST	228	
66	SU	185	
67	SV	199	
68	SW	185	
69	SX	146	
70	SY	150	
71	SZ	128	
72	Sa	87	
73	Sb	129	
74	Sc	144	
75	Sd	134	
76	Se	97	
77	Sf	81	
78	Sg	57	

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Mol	Chain	Length	Quality of chain
79	Ta	77	
80	Tb	77	
81	mR	25	

2 Entry composition

There are 81 unique types of molecules in this entry. The entry contains 202539 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 25S rRNA (3393-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
1	LA	3184	Total	C	N	O	P	0	0
			68091	30415	12259	22233	3184		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LA	?	-	G	deletion	GB 2209526103

- Molecule 2 is a RNA chain called 5S rRNA (121-MER).

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

- Molecule 3 is a RNA chain called 5.8S rRNA (158-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
3	LC	158	Total	C	N	O	P	0	0
			3353	1500	586	1109	158		

- Molecule 4 is a protein called Large ribosomal subunit protein uL2A.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	LD	251	Total	C	N	O	S	0	0
			1899	1182	385	331	1		

- Molecule 5 is a protein called Large ribosomal subunit protein uL3.

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

- Molecule 6 is a protein called Large ribosomal subunit protein uL4A.

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

- Molecule 7 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LG	294	Total	C	N	O	S	0	0
			2351	1484	410	455	2		

- Molecule 8 is a protein called Large ribosomal subunit protein eL6B.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LH	167	Total	C	N	O	S	0	0
			1307	843	234	230			

- Molecule 9 is a protein called Large ribosomal subunit protein uL30A.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	LI	222	Total	C	N	O	S	0	0
			1784	1151	324	308	1		

- Molecule 10 is a protein called Large ribosomal subunit protein eL8A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LJ	233	Total	C	N	O	S	0	0
			1804	1151	323	327	3		

- Molecule 11 is a protein called Large ribosomal subunit protein uL6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	LK	191	Total	C	N	O	S	0	0
			1508	957	274	273	4		

- Molecule 12 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LL	218	Total	C	N	O	S	0	0
			1764	1117	334	306	7		

- Molecule 13 is a protein called Large ribosomal subunit protein uL5B.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LM	169	Total	C	N	O	S	0	0
			1346	843	252	247	4		

- Molecule 14 is a protein called Large ribosomal subunit protein eL13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LN	193	Total	C	N	O		0	0
			1543	962	315	266			

- Molecule 15 is a protein called Large ribosomal subunit protein eL14A.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LO	136	Total	C	N	O	S	0	0
			1053	675	199	177	2		

- Molecule 16 is a protein called Large ribosomal subunit protein eL15A.

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

- Molecule 17 is a protein called Large ribosomal subunit protein uL13A.

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

- Molecule 18 is a protein called Large ribosomal subunit protein uL22A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LR	183	Total	C	N	O		0	0
			1416	879	284	253			

- Molecule 19 is a protein called Large ribosomal subunit protein eL18A.

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

- Molecule 20 is a protein called Large ribosomal subunit protein eL19A.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	LT	188	Total	C	N	O		
			1515	932	323	260	0	0

- Molecule 21 is a protein called Large ribosomal subunit protein eL20A.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LU	171	Total	C	N	O	S		
			1437	925	266	243	3	0	0

- Molecule 22 is a protein called Large ribosomal subunit protein eL21A.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LV	159	Total	C	N	O	S		
			1272	802	245	221	4	0	0

- Molecule 23 is a protein called Large ribosomal subunit protein eL22A.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	LW	100	Total	C	N	O		
			796	516	131	149	0	0

- Molecule 24 is a protein called Large ribosomal subunit protein uL14A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LX	136	Total	C	N	O	S		
			1003	628	189	179	7	0	0

- Molecule 25 is a protein called Large ribosomal subunit protein eL24A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LY	65	Total	C	N	O	S		
			528	339	104	84	1	0	0

- Molecule 26 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LZ	121	Total	C	N	O	S		
			964	620	169	173	2	0	0

- Molecule 27 is a protein called Large ribosomal subunit protein uL24A.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	La	125	Total	C	N	O	0	0
			984	620	191	173		

- Molecule 28 is a protein called Large ribosomal subunit protein eL27A.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	Lb	135	Total	C	N	O	0	0
			1080	701	199	180		

- Molecule 29 is a protein called Large ribosomal subunit protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Lc	148	Total	C	N	O	S	0	0
			1169	747	231	188	3		

- Molecule 30 is a protein called Large ribosomal subunit protein eL29.

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

- Molecule 31 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Le	96	Total	C	N	O	S	0	0
			737	476	123	137	1		

- Molecule 32 is a protein called Large ribosomal subunit protein eL31A.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Lf	109	Total	C	N	O	S	0	0
			876	556	167	152	1		

- Molecule 33 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Lg	127	Total	C	N	O	S	0	0
			1017	644	205	167	1		

- Molecule 34 is a protein called Large ribosomal subunit protein eL33A.

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

- Molecule 35 is a protein called Large ribosomal subunit protein eL34A.

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

- Molecule 36 is a protein called Large ribosomal subunit protein uL29A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Lj	119	Total	C	N	O	S	0	0
			969	615	186	167	1		

- Molecule 37 is a protein called Large ribosomal subunit protein eL36A.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Lk	99	Total	C	N	O	S	0	0
			766	478	154	132	2		

- Molecule 38 is a protein called Large ribosomal subunit protein eL37A.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Ll	81	Total	C	N	O	S	0	0
			645	393	141	106	5		

- Molecule 39 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms				AltConf	Trace
39	Lm	77	Total	C	N	O	0	0
			612	391	115	106		

- Molecule 40 is a protein called Large ribosomal subunit protein eL39.

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

- Molecule 41 is a protein called Large ribosomal subunit protein eL40A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lo	52	Total	C	N	O	S	0	0
			410	254	86	65	5		

- Molecule 42 is a protein called Large ribosomal subunit protein eL41A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Lp	25	Total	C	N	O	S	0	0
			229	139	62	27	1		

- Molecule 43 is a protein called Large ribosomal subunit protein eL42A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lq	103	Total	C	N	O	S	0	0
			824	517	167	135	5		

- Molecule 44 is a protein called Large ribosomal subunit protein eL43A.

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

- Molecule 45 is a RNA chain called chain 2 18S rRNA (1771-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
45	S2	1771	Total	C	N	O	P	0	0
			37739	16872	6683	12413	1771		

- Molecule 46 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	SA	222	Total	C	N	O	S	0	0
			1729	1098	312	313	6		

- Molecule 47 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	SB	206	Total	C	N	O	S	0	0
			1605	1005	299	298	3		

- Molecule 48 is a protein called Small ribosomal subunit protein eS10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	SC	92	Total	C	N	O	S	0	0
			752	487	122	141	2		

- Molecule 49 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SD	121	Total	C	N	O	S	0	0
			875	551	153	169	2		

- Molecule 50 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SE	117	Total	C	N	O	S	0	0
			916	583	171	155	7		

- Molecule 51 is a protein called Small ribosomal subunit protein uS9A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SF	141	Total	C	N	O		0	0
			1105	708	203	194			

- Molecule 52 is a protein called Small ribosomal subunit protein eS17A.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SG	121	Total	C	N	O	S	0	0
			948	596	179	171	2		

- Molecule 53 is a protein called Small ribosomal subunit protein uS13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SH	145	Total	C	N	O	S	0	0
			1188	741	237	208	2		

- Molecule 54 is a protein called Small ribosomal subunit protein eS19A.

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

- Molecule 55 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SJ	100	Total	C	N	O	S	0	0
			797	506	144	146	1		

- Molecule 56 is a protein called Small ribosomal subunit protein eS25A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SK	82	Total	C	N	O		0	0
			651	416	123	112			

- Molecule 57 is a protein called Small ribosomal subunit protein eS28A.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SL	63	Total	C	N	O	S	0	0
			491	303	96	91	1		

- Molecule 58 is a protein called Small ribosomal subunit protein uS14A.

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

- Molecule 59 is a protein called Small ribosomal subunit protein eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SN	73	Total	C	N	O	S	0	0
			556	352	105	95	4		

- Molecule 60 is a protein called Small ribosomal subunit protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SO	312	Total	C	N	O	S	0	0
			2383	1514	409	452	8		

- Molecule 61 is a protein called Small ribosomal subunit protein uS2A.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SP	206	Total	C	N	O	S	0	0
			1603	1030	284	287	2		

- Molecule 62 is a protein called Small ribosomal subunit protein eS1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SQ	226	Total	C	N	O	S	0	0
			1798	1139	330	325	4		

- Molecule 63 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SR	216	Total	C	N	O	S	0	0
			1626	1042	287	295	2		

- Molecule 64 is a protein called Small ribosomal subunit protein eS4A.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SS	258	Total	C	N	O	S	0	0
			2056	1308	387	358	3		

- Molecule 65 is a protein called Small ribosomal subunit protein eS6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	ST	228	Total	C	N	O	S	0	0
			1815	1138	351	323	3		

- Molecule 66 is a protein called Small ribosomal subunit protein eS7A.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SU	184	Total	C	N	O	S	0	0
			1473	946	263	264			

- Molecule 67 is a protein called Small ribosomal subunit protein eS8A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SV	187	Total	C	N	O	S	0	0
			1476	916	295	263	2		

- Molecule 68 is a protein called Small ribosomal subunit protein uS4A.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SW	184	Total	C	N	O	S	0	0
			1479	935	285	258	1		

- Molecule 69 is a protein called Small ribosomal subunit protein uS17A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	SX	142	Total	C	N	O	S	0	0
			1142	733	217	189	3		

- Molecule 70 is a protein called Small ribosomal subunit protein uS15.

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

- Molecule 71 is a protein called Small ribosomal subunit protein uS11B.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SZ	127	Total	C	N	O	S	0	0
			923	568	185	167	3		

- Molecule 72 is a protein called Small ribosomal subunit protein eS21A.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Sa	87	Total	C	N	O	S	0	0
			673	415	125	131	2		

- Molecule 73 is a protein called Small ribosomal subunit protein uS8A.

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

- Molecule 74 is a protein called Small ribosomal subunit protein uS12A.

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

- Molecule 75 is a protein called Small ribosomal subunit protein eS24A.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Sd	134	Total	C	N	O		0	0
			1032	651	195	186			

- Molecule 76 is a protein called Small ribosomal subunit protein eS26B.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Se	97	Total	C	N	O	S	0	0
			765	473	160	127	5		

- Molecule 77 is a protein called Small ribosomal subunit protein eS27A.

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

- Molecule 78 is a protein called Small ribosomal subunit protein eS30A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Sg	57	Total	C	N	O	S	0	0
			451	284	93	73	1		

- Molecule 79 is a RNA chain called tRNA (77-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Ta	77	Total	C	N	O	P	0	0
			1650	734	303	536	77		

- Molecule 80 is a RNA chain called tRNA (77-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Tb	77	Total	C	N	O	P	0	0
			1645	732	298	538	77		

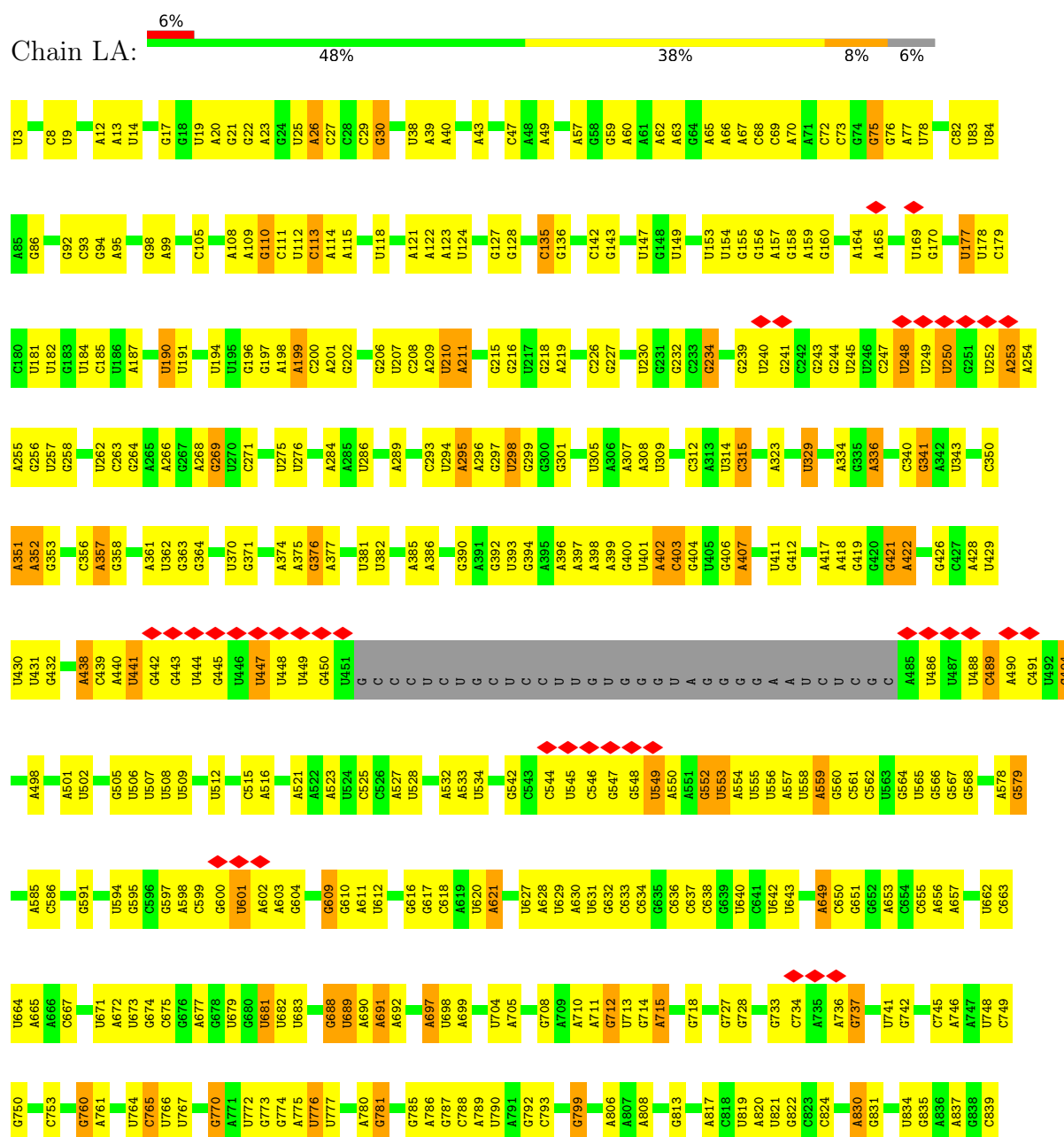
- Molecule 81 is a RNA chain called RNA (5'-R(P*AP*UP*UP*GP*AP*CP*CP*CP*UP*U)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
81	mR	10	Total	C	N	O	P	0	0
			207	93	32	72	10		

3 Residue-property plots

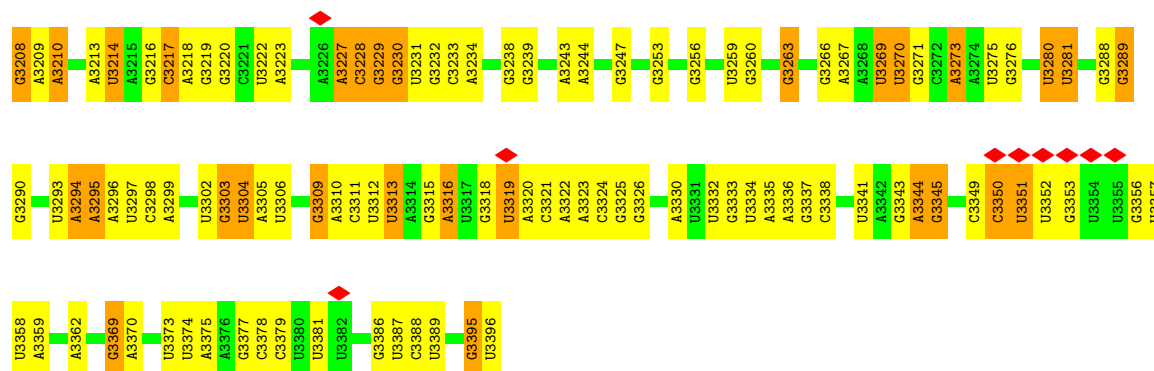
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: 25S rRNA (3393-MER)



U	C1907	U1819	U1740	C1633	G1560	U1455	A1350	G1267	A1197	U1111	A1026	U954	A846
G	A1908	U1820	A1741	G1634	G1561	U1456	U1351	G1268	A1200	G1117	A1027	U955	A847
C	A1909	U1821		G1635	C1562	A1460	A1352	U1269	C1201	C1118	U1028	U956	A848
U	A1910		U1746		C1563	A1461	U1353	A1270	A1202	C1119	G1029	C959	C849
U	A1911	U1824	G1747	A1638	U1564	A1462	G1354	C1271	A1203	C1120	A1030	U960	U850
G	C1826	G1825	G1748	G1639	G1565	U1463		A1272	A1204	U1121	C1031	C961	C861
U	A1912	G1826	A1749	G1640	A1566	U1464	G1357	C1272	U1208	U1128	C1032	U962	U862
G	G1827	U1827	G1750	U1641	U1567	A1465	G1358	A1273	U1211	A1129	U1033	G863	G854
G	A1915	A1828	A1751	A1642	U1568	G1466	C1359	A1274	A1130	A1130	U1034		
A	U1916	G1829	C1759	A1643	U1569	G1467	C1360	C1275	A1212	G1131	G1035		
C	G1830			C1644	U1570	U1470	U1361	U1276					
U	A1760	U1761	A1760	U1651	A1571	U1471	G1362	C1277					
U	C1761						A1363						
U	U1763	U1763	U1763	C1657	U1572	A1477	C1364	C1278	U1220	U1039	U1039	A972	U871
U	U1764	U1764	U1764	G1658	G1573			C1279	U1221	A1040	A1040	A973	U872
G	U1765	U1765	U1765	U1659	C1574	G1480	G1367	C1280	A1221	G1139	U1041	A974	U873
G	G1766	G1661	A1481	G1660	C1574	A1481	U1368	G1281	U1222	G1140	U1042	G975	G875
U	C1767	G1662	A1482	G1661	A1575	A1482	U1369	G1282	A1223	G1141	U1043	U976	A876
G		C1663	A1483	G1662		G1483	U1378	G1283	C1224	G1142	U1044	C977	C877
G		A1578	U1584	G1664	C1578		G1379	C1284		U1144	C1045	U978	G878
G		U1579	C1580	G1665	A1579	G1487	A1381	C1285		U1152	A1046	U979	U879
G		C1581	C1581	G1666	C1581		G1382	A1286		A1153	A1047	A980	G880
C				G1667		G1492	G1383	A1287		A1154	C1049	C982	G887
U				G1668			U1384	U1288		C1155	U1050		A888
U							A1495	G1289		G1156			
G							C1496	A1290		U1157	A1061	U985	A896
G							A1497	C1291		A1158	A1062	U986	G900
C							A1498	C1292		A1159	G1063	U987	
C							C1499	C1292		U1160	A1064	U988	
C										G1161	A1065	C991	G907
G										U1162	A1066	A992	G908
C										U1167	U1067	G993	C911
C												U995	A914
C												A996	A915
A												A997	G916
G												A998	A917
G												C1000	
G												G1001	A921
C												U922	U922
C												C923	C923
A												G924	G924
U												A925	A925
C												G934	G934
C												G937	G937
C												C938	C938
G												U943	U943
U												C944	C944
G												U946	U946
C												G947	G947
U												C948	C948
U												A952	A952
U												U1022	U1022
C												C1023	C1023
G												U1109	U1109
G												A1025	A1025





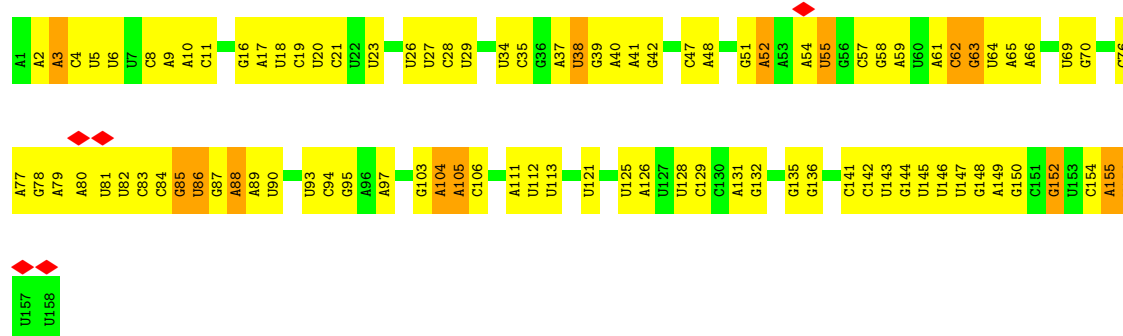
• Molecule 2: 5S rRNA (121-MER)

Chain LB: 57% 36% 7%



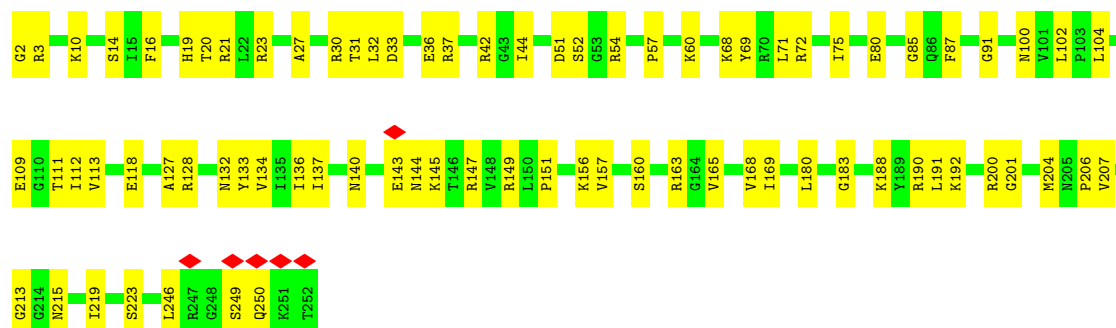
• Molecule 3: 5.8S rRNA (158-MER)

Chain LC: 41% 51% 9%

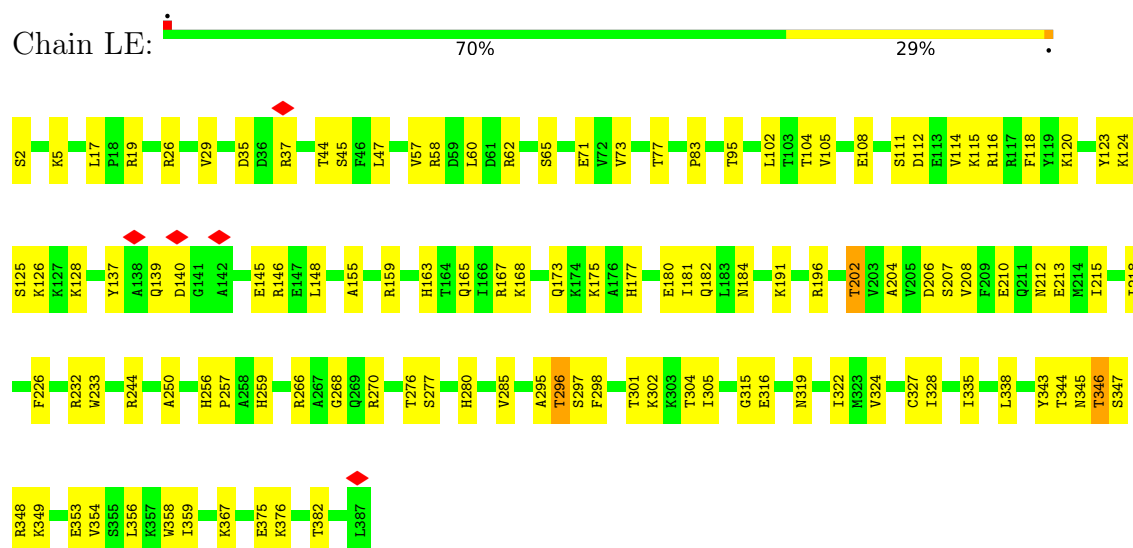


• Molecule 4: Large ribosomal subunit protein uL2A

Chain LD: 69% 31%



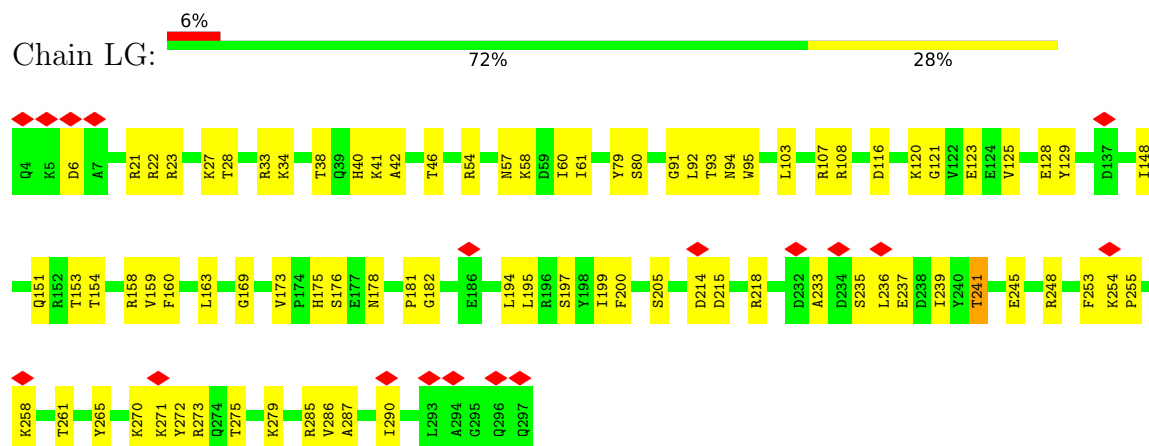
• Molecule 5: Large ribosomal subunit protein uL3



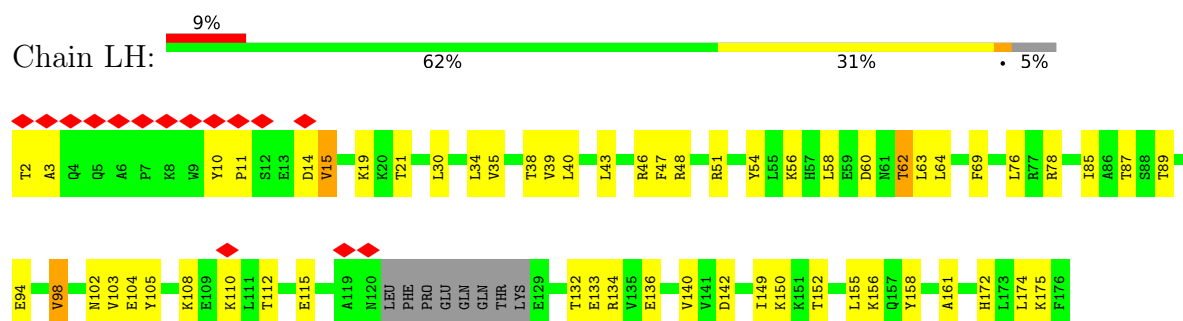
• Molecule 6: Large ribosomal subunit protein uL4A



• Molecule 7: Large ribosomal subunit protein uL18



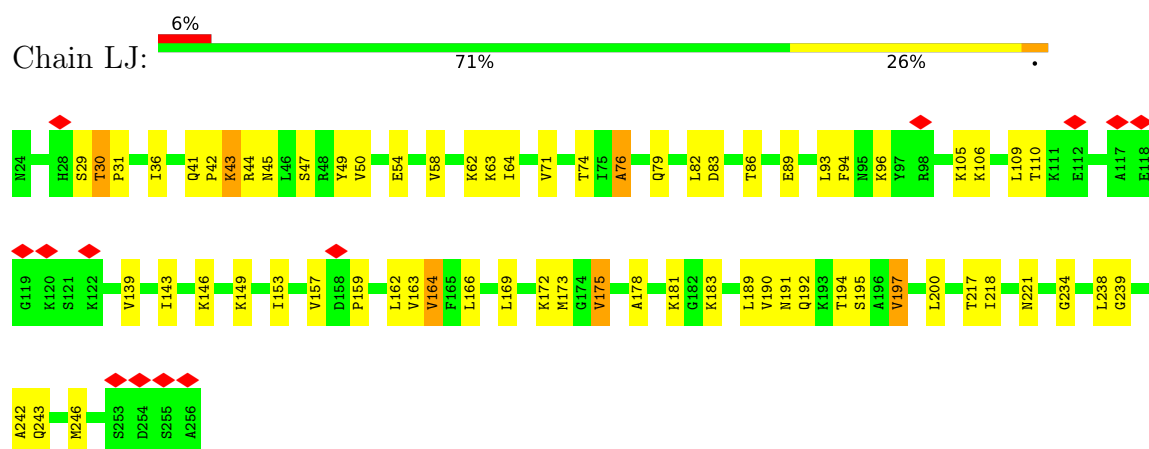
• Molecule 8: Large ribosomal subunit protein eL6B



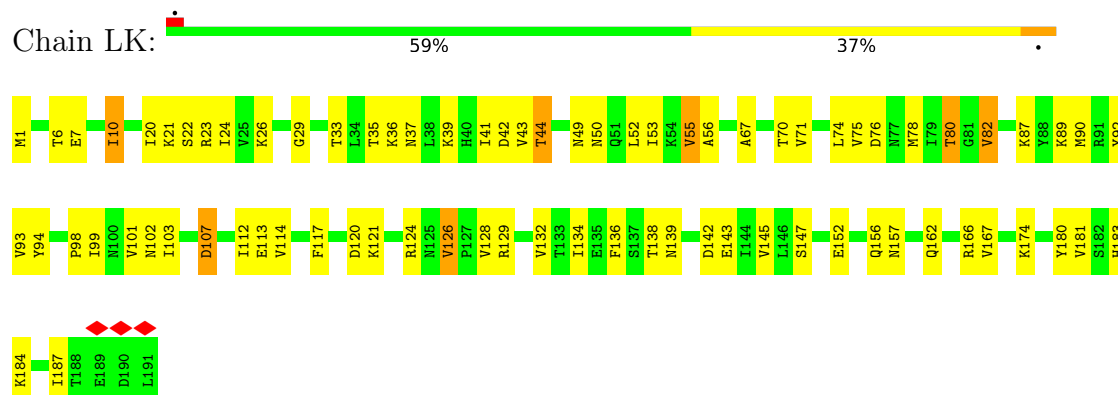
• Molecule 9: Large ribosomal subunit protein uL30A



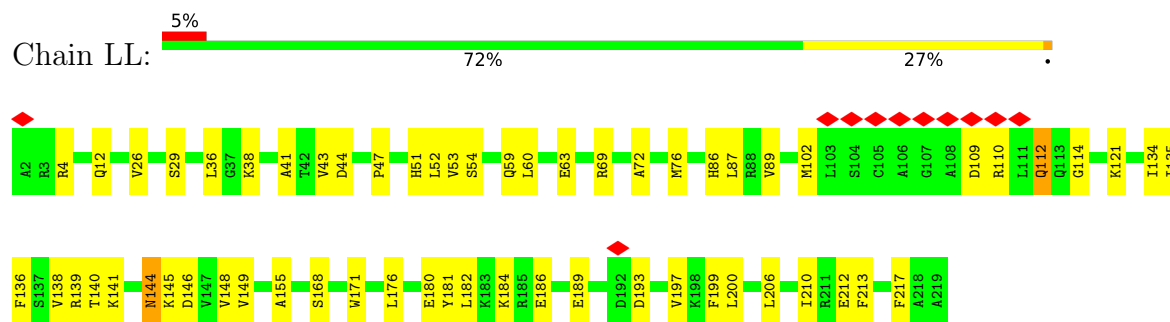
• Molecule 10: Large ribosomal subunit protein eL8A



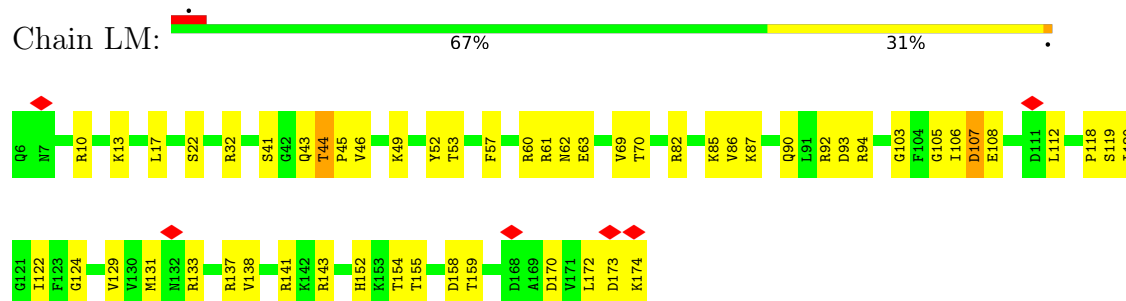
• Molecule 11: Large ribosomal subunit protein uL6A



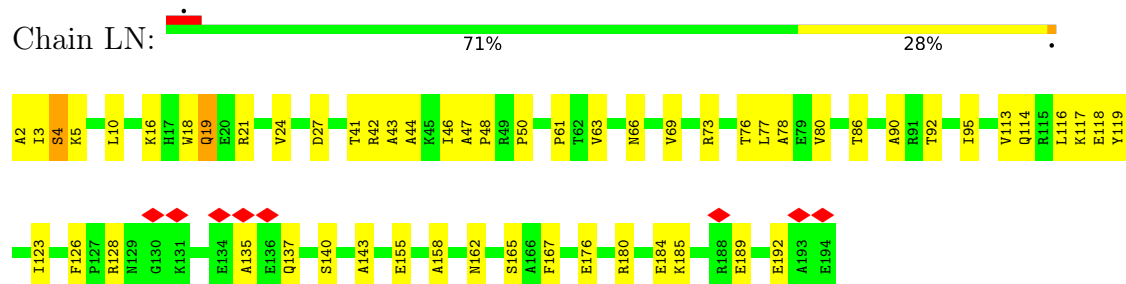
- Molecule 12: Large ribosomal subunit protein uL16



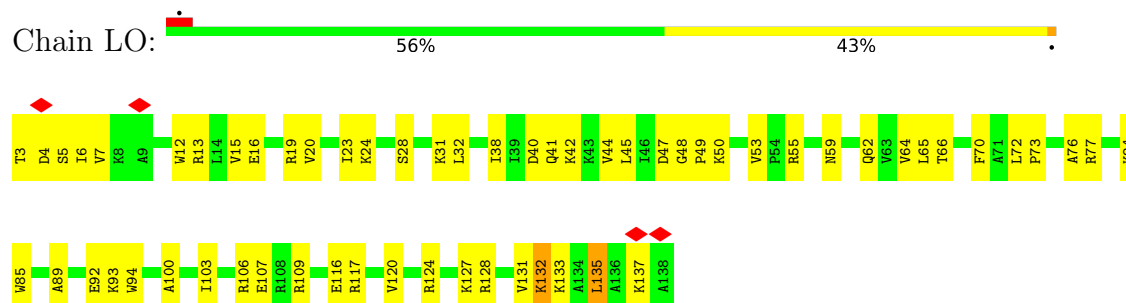
- Molecule 13: Large ribosomal subunit protein uL5B



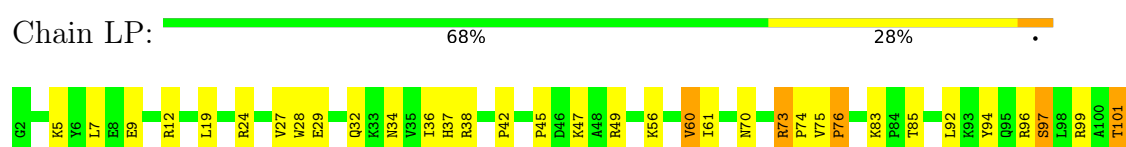
- Molecule 14: Large ribosomal subunit protein eL13A



- Molecule 15: Large ribosomal subunit protein eL14A

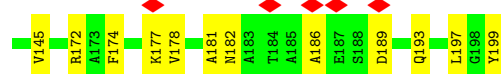
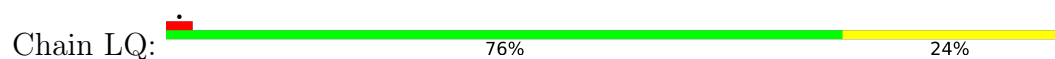


- Molecule 16: Large ribosomal subunit protein eL15A

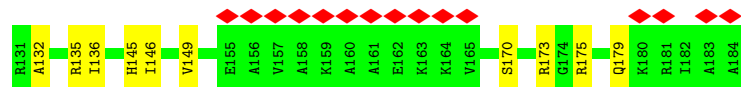
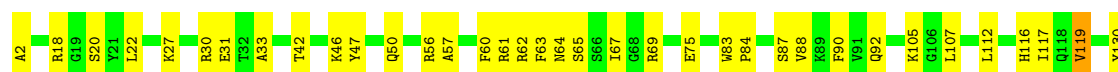
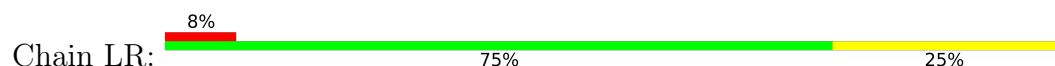




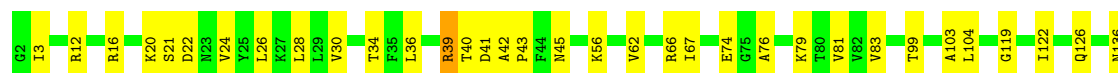
- Molecule 17: Large ribosomal subunit protein uL13A



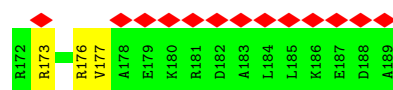
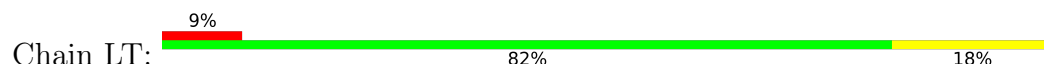
- Molecule 18: Large ribosomal subunit protein uL22A



- Molecule 19: Large ribosomal subunit protein eL18A

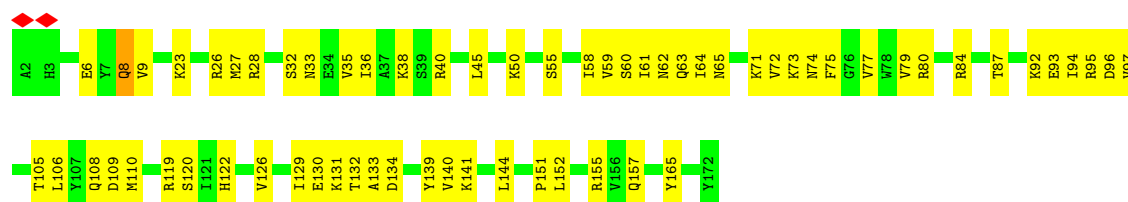


- Molecule 20: Large ribosomal subunit protein eL19A

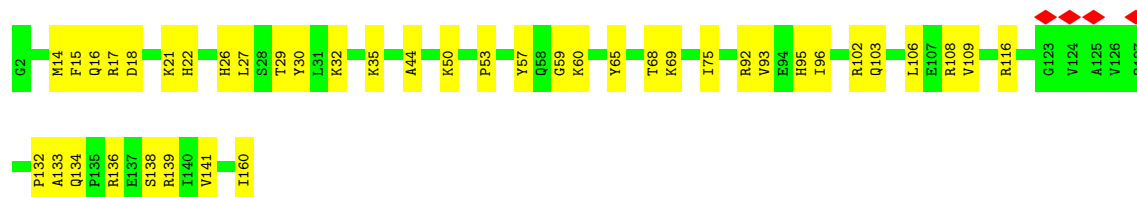
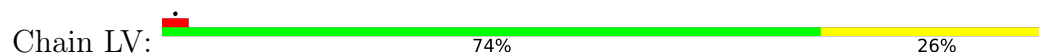


- Molecule 21: Large ribosomal subunit protein eL20A

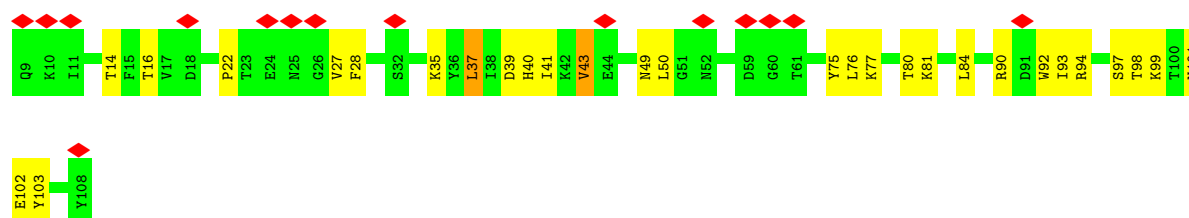
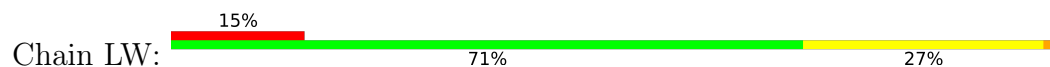




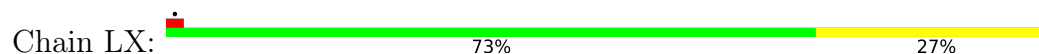
- Molecule 22: Large ribosomal subunit protein eL21A



- Molecule 23: Large ribosomal subunit protein eL22A



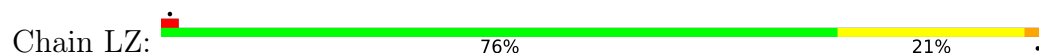
- Molecule 24: Large ribosomal subunit protein uL14A

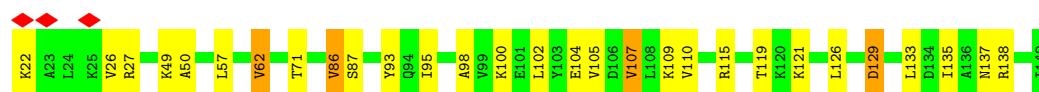


- Molecule 25: Large ribosomal subunit protein eL24A

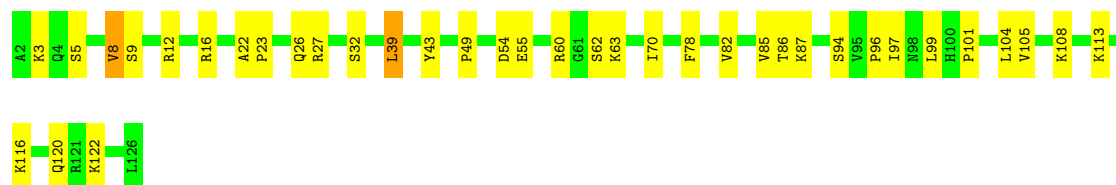


- Molecule 26: Large ribosomal subunit protein uL23

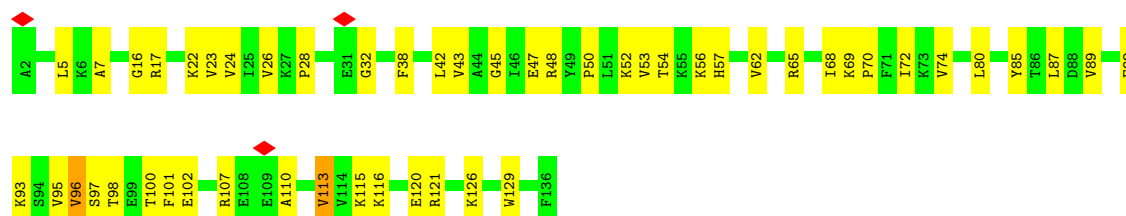




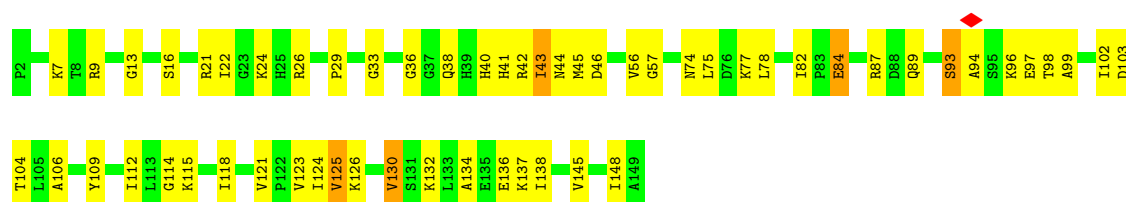
- Molecule 27: Large ribosomal subunit protein uL24A



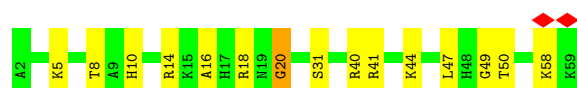
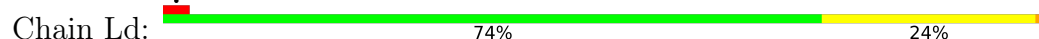
- Molecule 28: Large ribosomal subunit protein eL27A



- Molecule 29: Large ribosomal subunit protein uL15



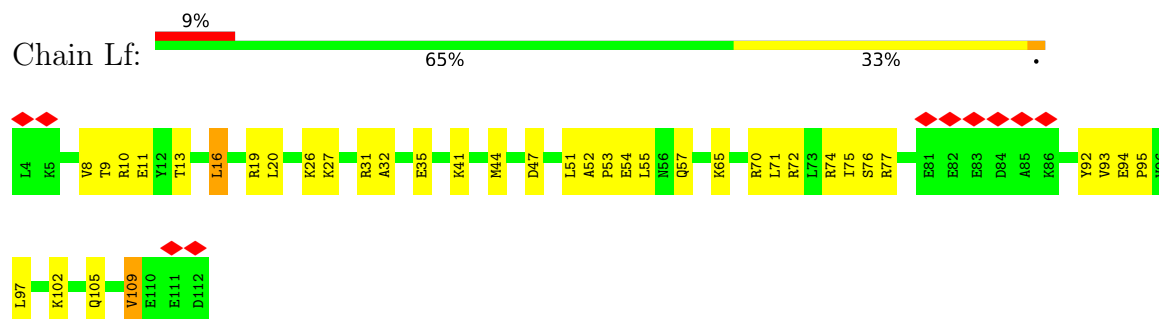
- Molecule 30: Large ribosomal subunit protein eL29



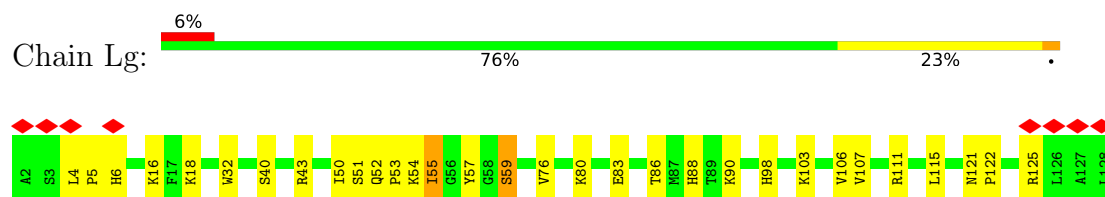
- Molecule 31: Large ribosomal subunit protein eL30



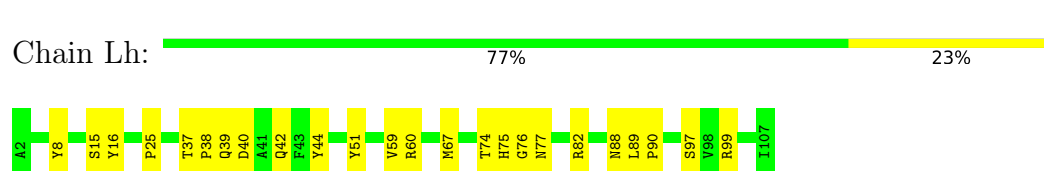
- Molecule 32: Large ribosomal subunit protein eL31A



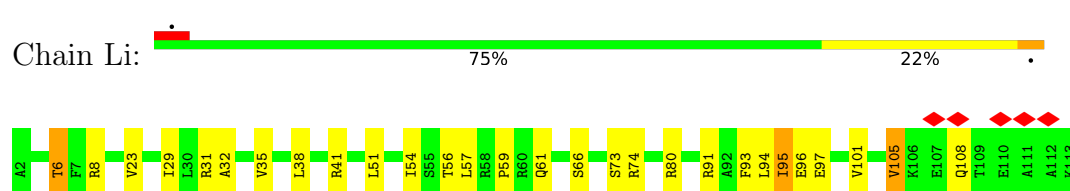
- Molecule 33: Large ribosomal subunit protein eL32



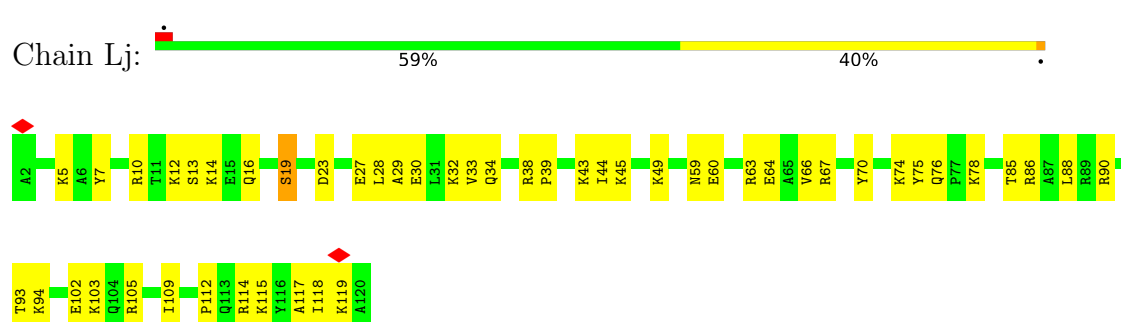
- Molecule 34: Large ribosomal subunit protein eL33A



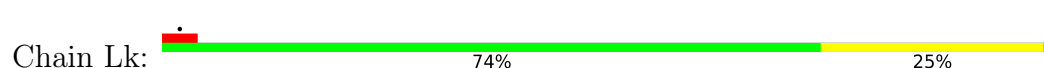
- Molecule 35: Large ribosomal subunit protein eL34A



- Molecule 36: Large ribosomal subunit protein uL29A



- Molecule 37: Large ribosomal subunit protein eL36A

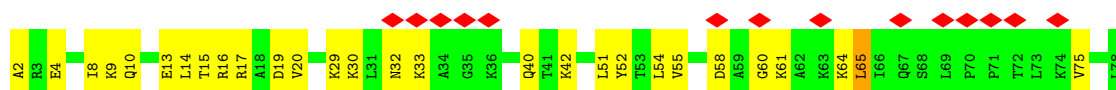




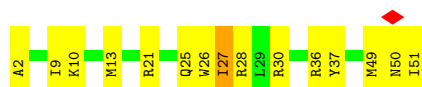
- Molecule 38: Large ribosomal subunit protein eL37A



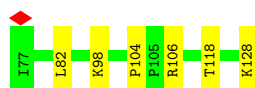
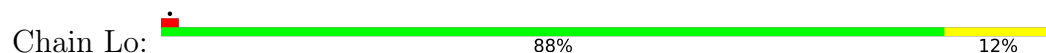
- Molecule 39: Large ribosomal subunit protein eL38



- Molecule 40: Large ribosomal subunit protein eL39



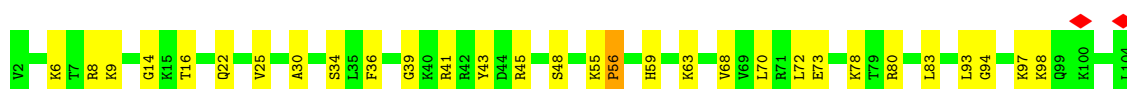
- Molecule 41: Large ribosomal subunit protein eL40A



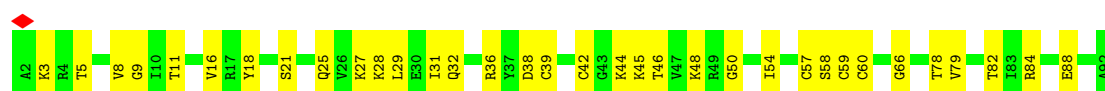
- Molecule 42: Large ribosomal subunit protein eL41A



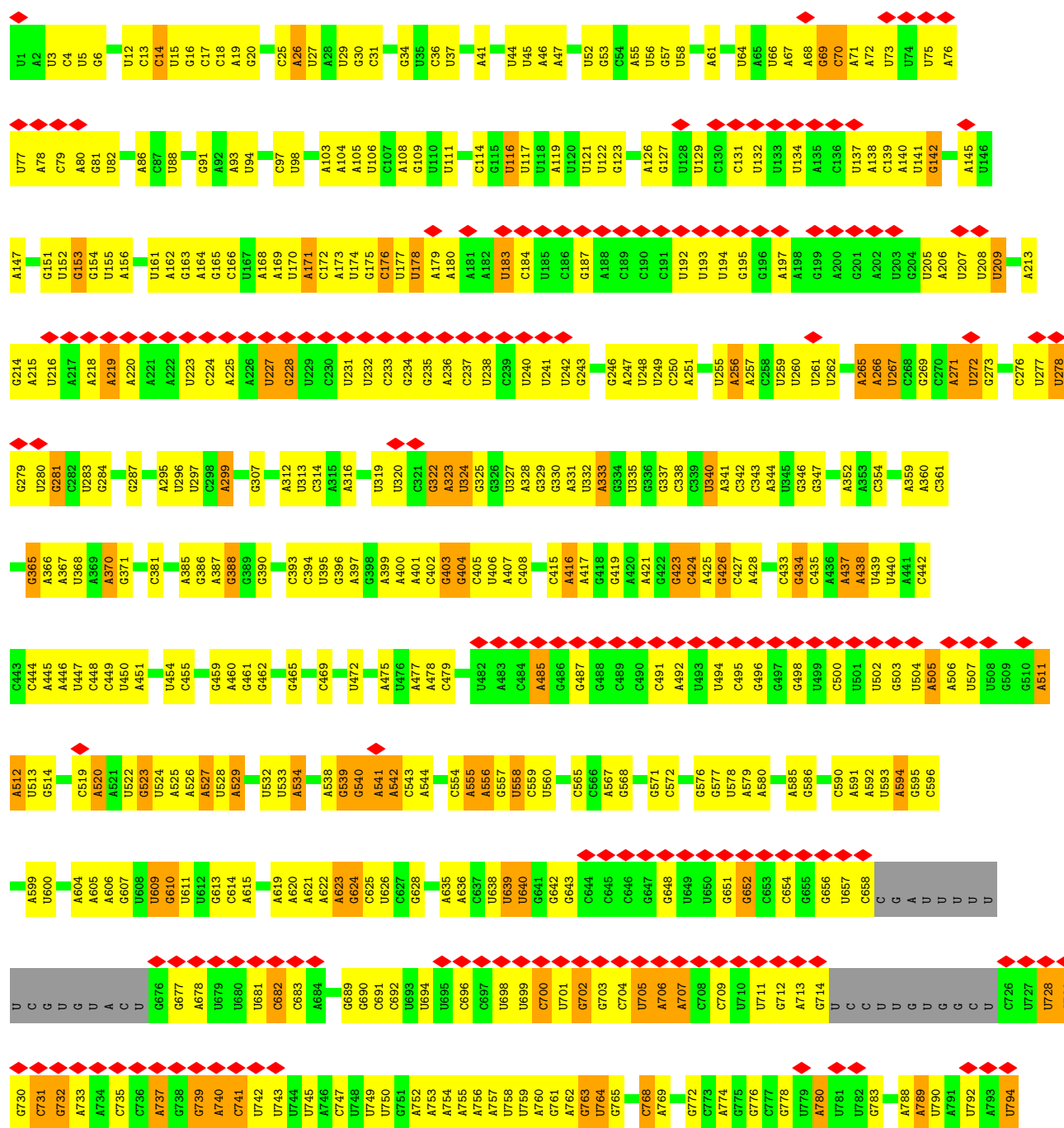
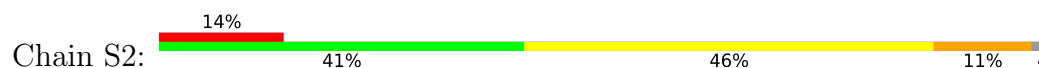
- Molecule 43: Large ribosomal subunit protein eL42A

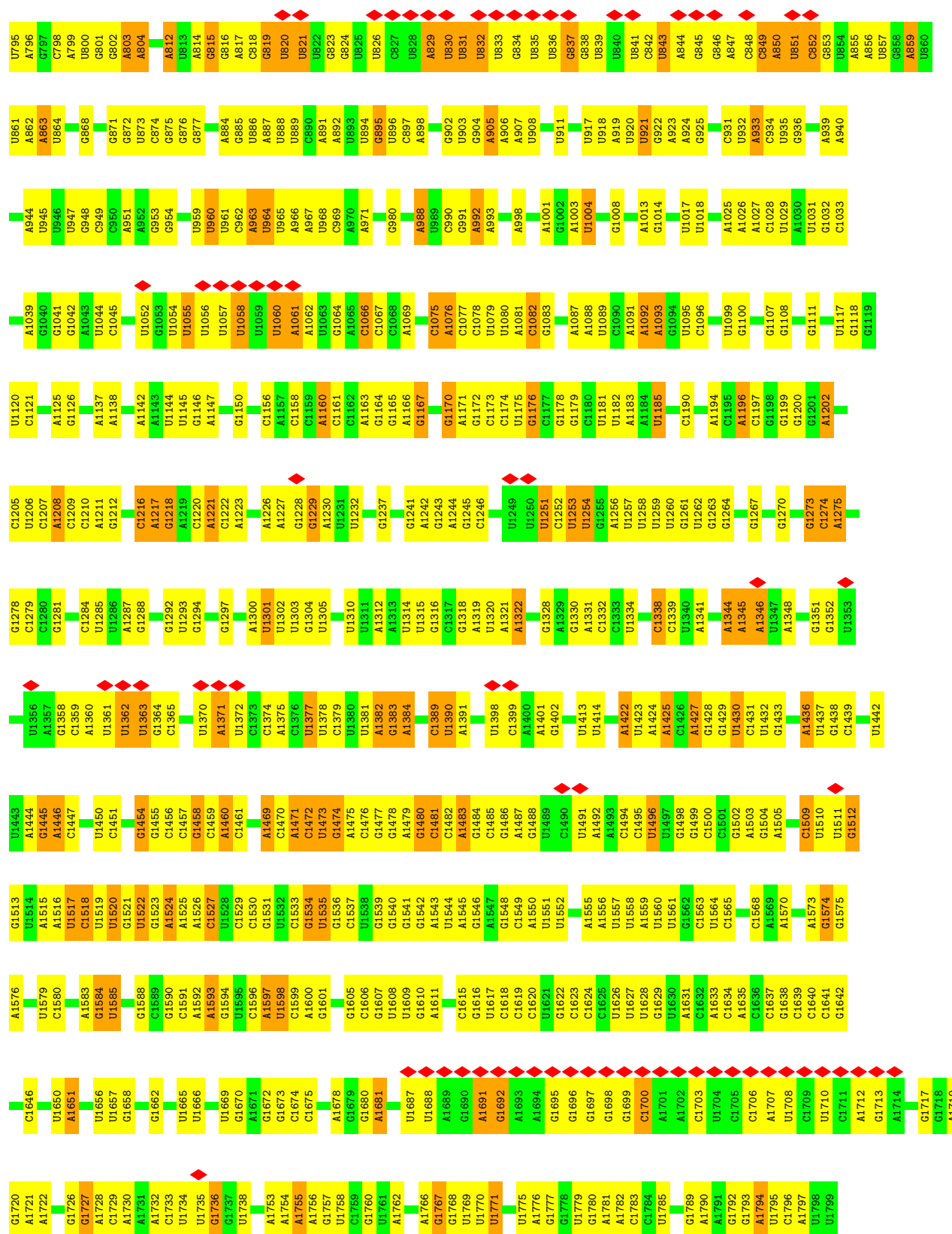


- Molecule 44: Large ribosomal subunit protein eL43A



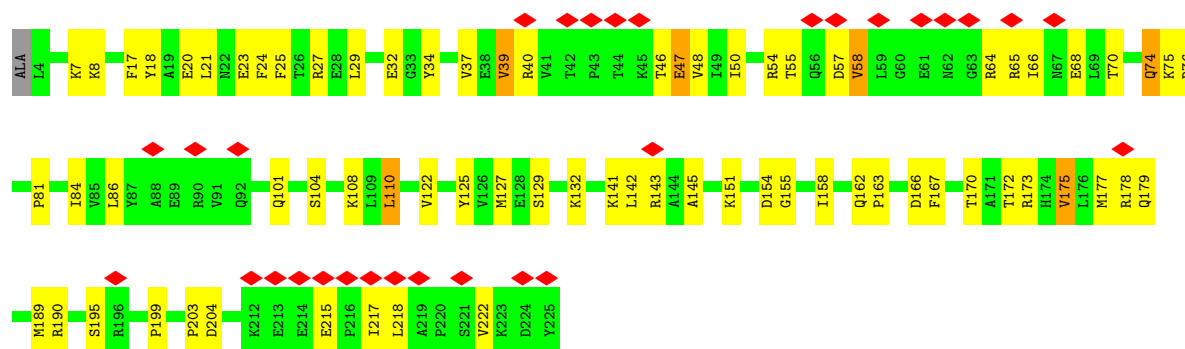
• Molecule 45: chain 2 18S rRNA (1771-MER)



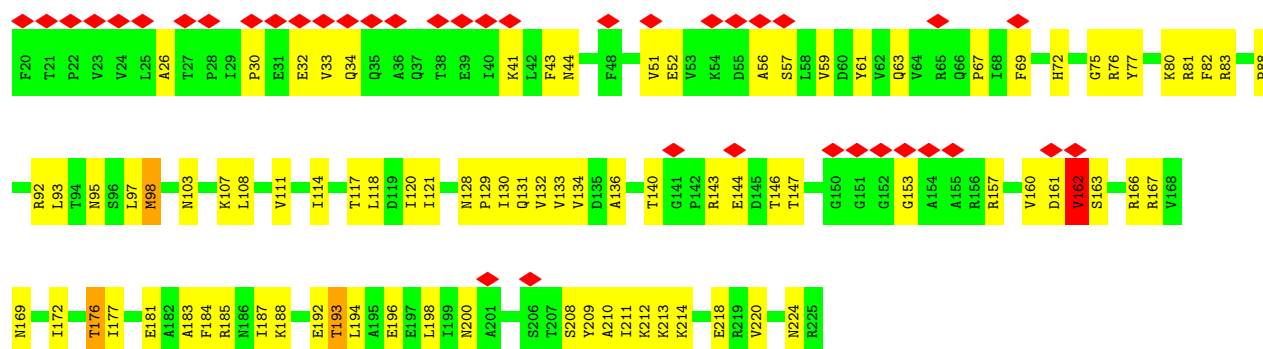


• Molecule 46: Small ribosomal subunit protein uS3

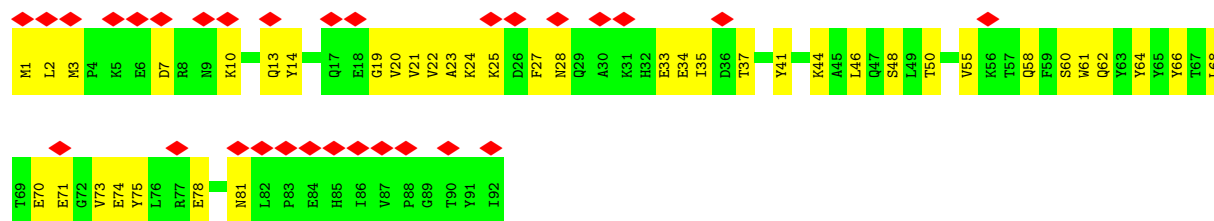




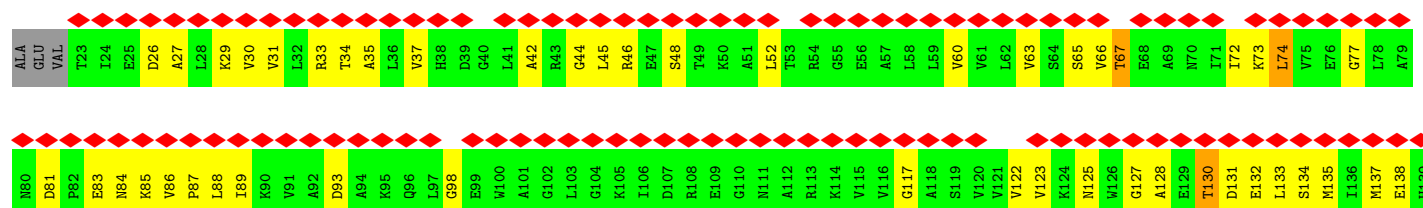
• Molecule 47: Small ribosomal subunit protein uS7



• Molecule 48: Small ribosomal subunit protein eS10A

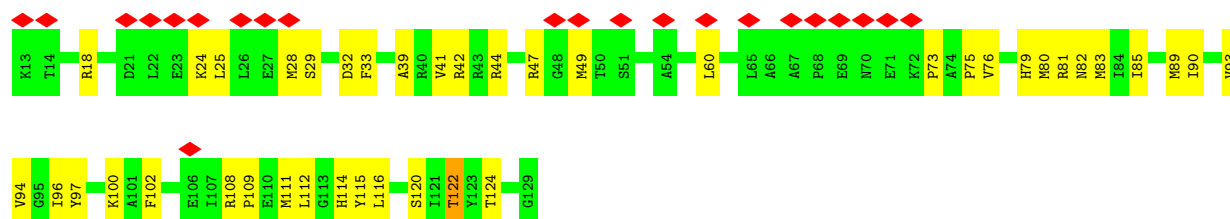


• Molecule 49: Small ribosomal subunit protein eS12

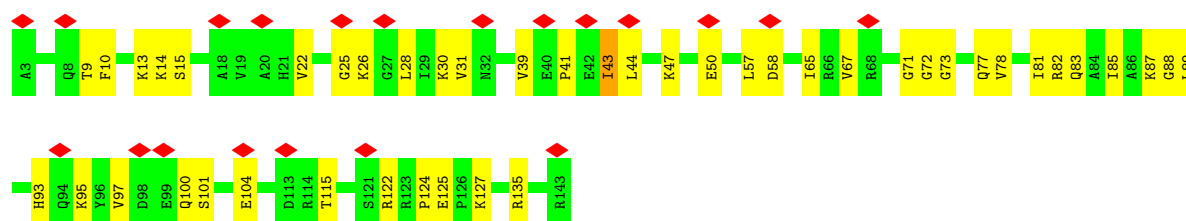




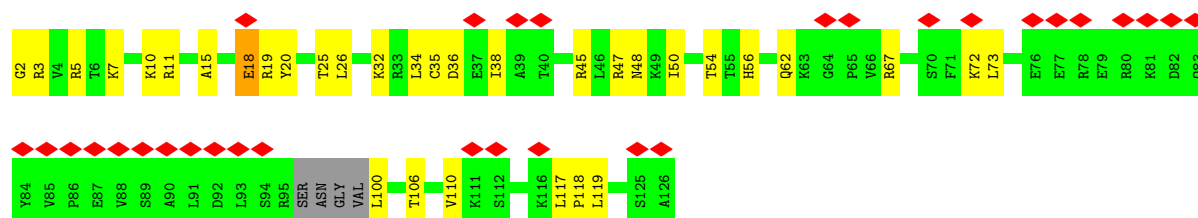
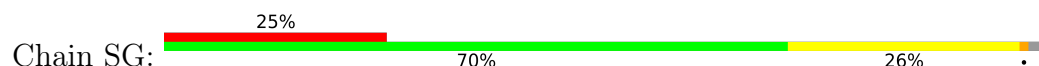
- Molecule 50: Small ribosomal subunit protein uS19



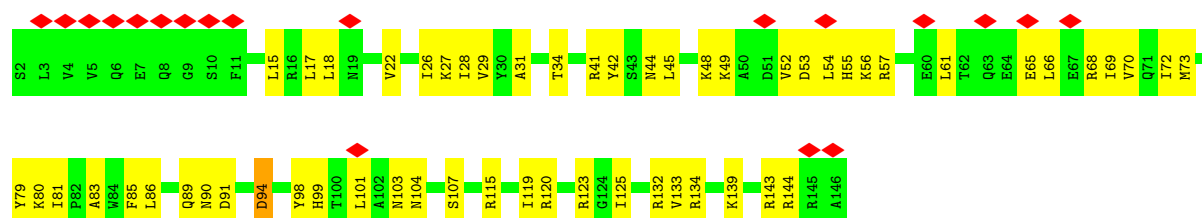
- Molecule 51: Small ribosomal subunit protein uS9A



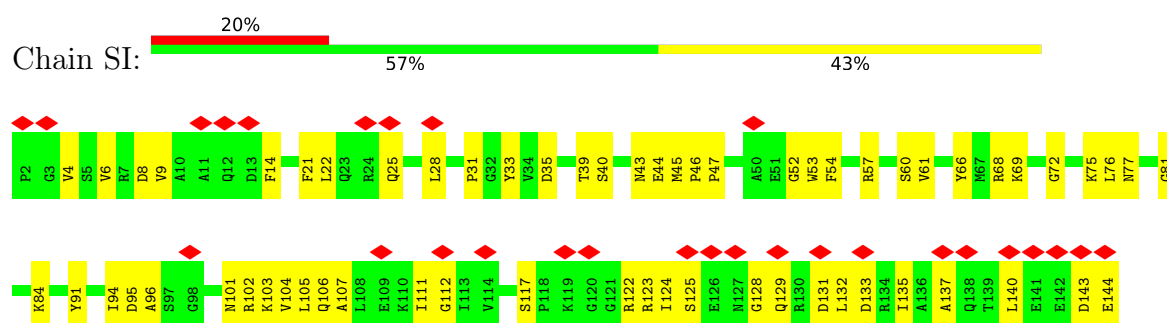
- Molecule 52: Small ribosomal subunit protein eS17A



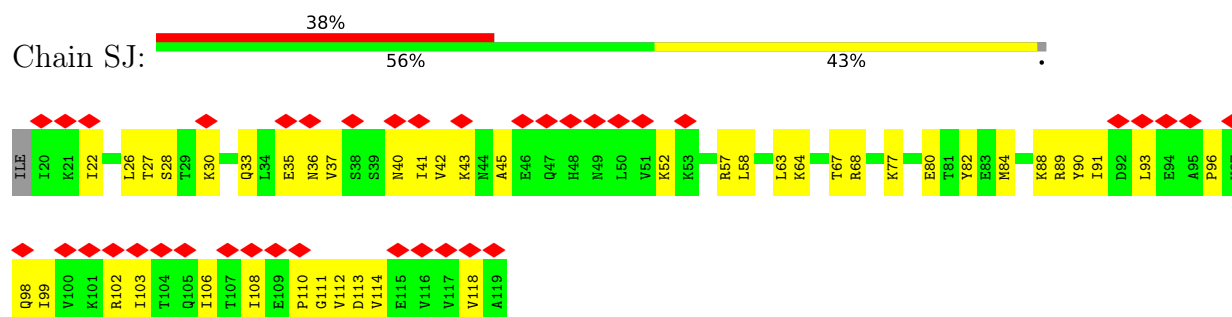
- Molecule 53: Small ribosomal subunit protein uS13A



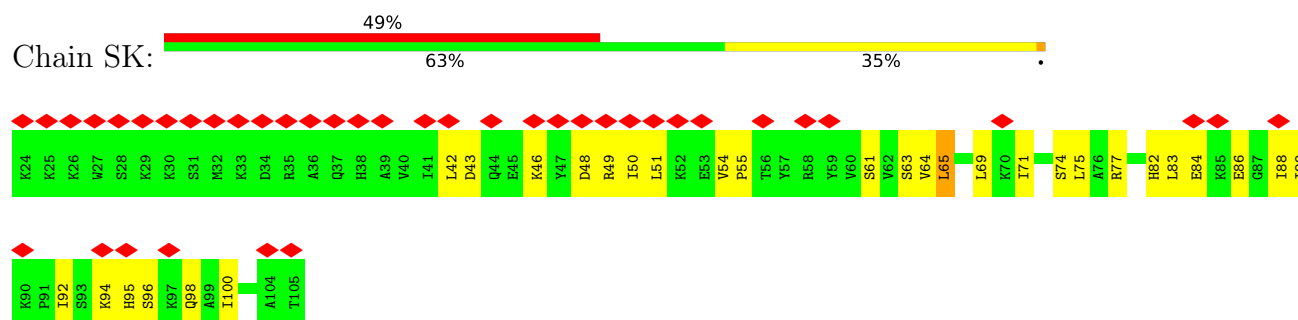
- Molecule 54: Small ribosomal subunit protein eS19A



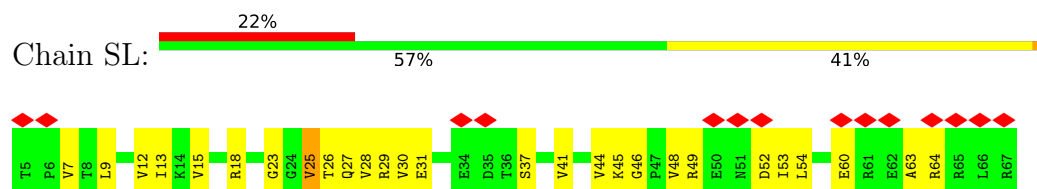
- Molecule 55: Small ribosomal subunit protein uS10



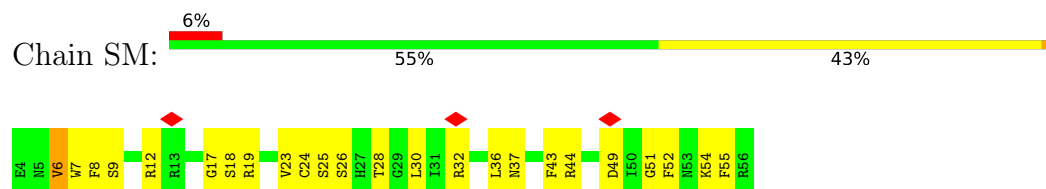
- Molecule 56: Small ribosomal subunit protein eS25A



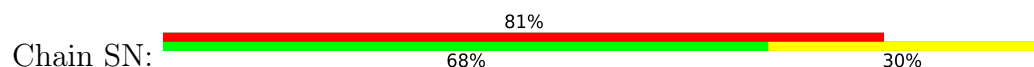
- Molecule 57: Small ribosomal subunit protein eS28A



- Molecule 58: Small ribosomal subunit protein uS14A

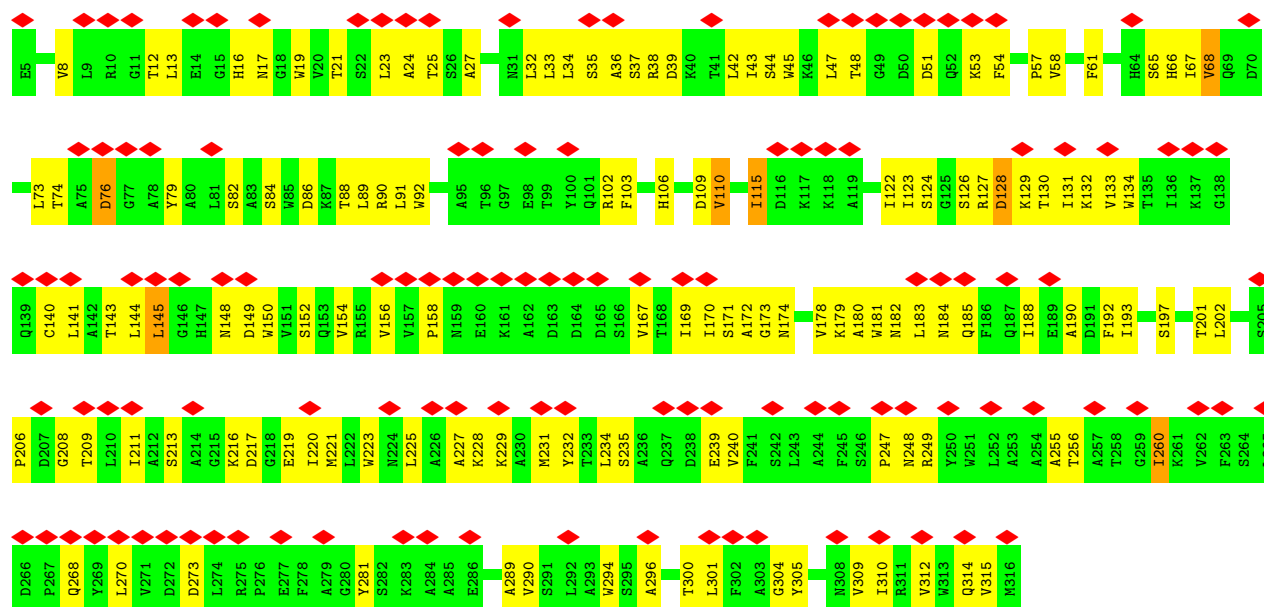
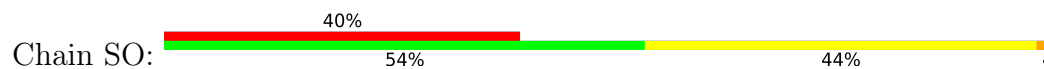


- Molecule 59: Small ribosomal subunit protein eS31

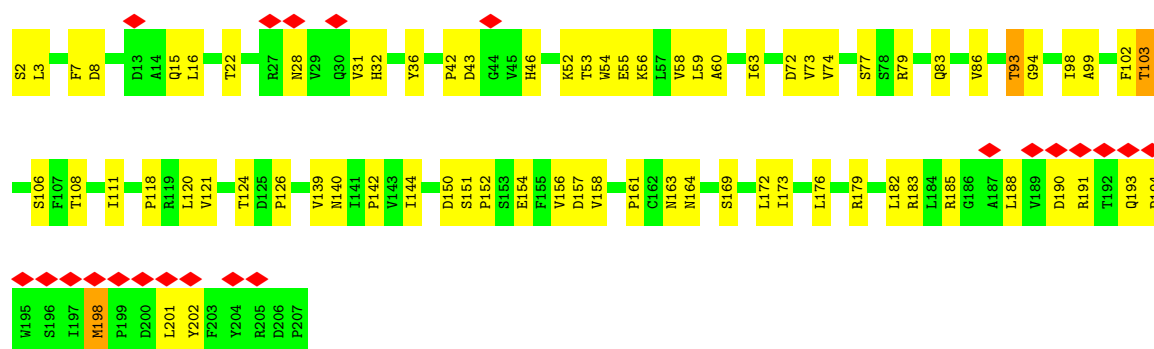




• Molecule 60: Small ribosomal subunit protein RACK1

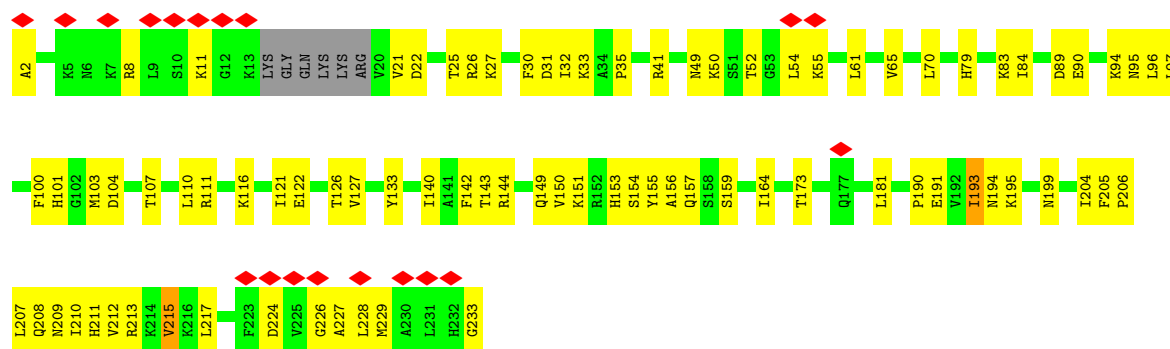


• Molecule 61: Small ribosomal subunit protein uS2A

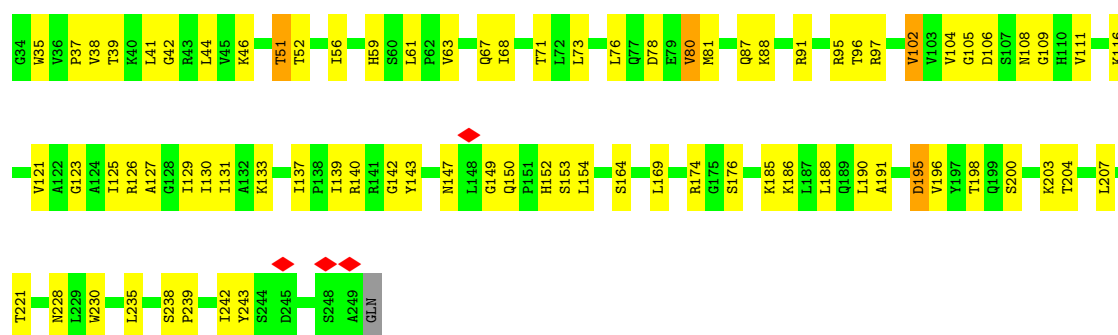


• Molecule 62: Small ribosomal subunit protein eS1A

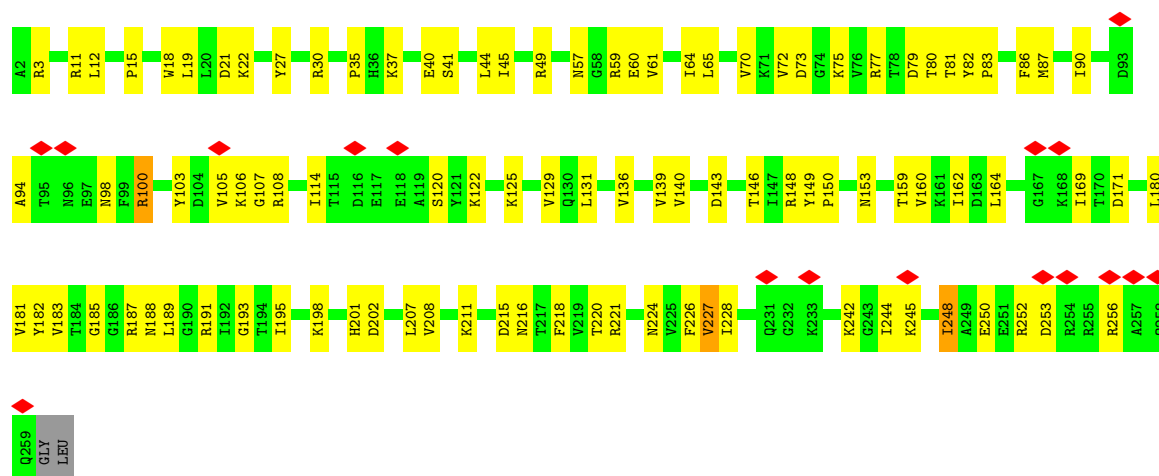




- Molecule 63: Small ribosomal subunit protein uS5

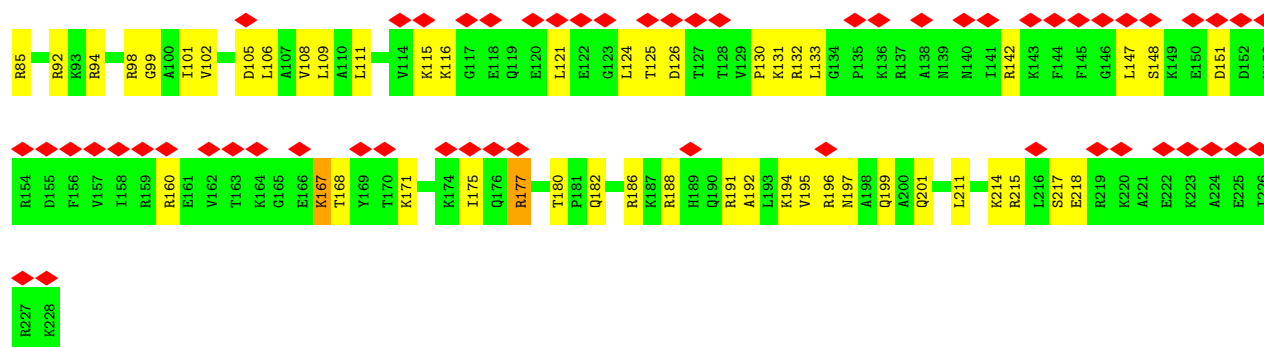


- Molecule 64: Small ribosomal subunit protein eS4A

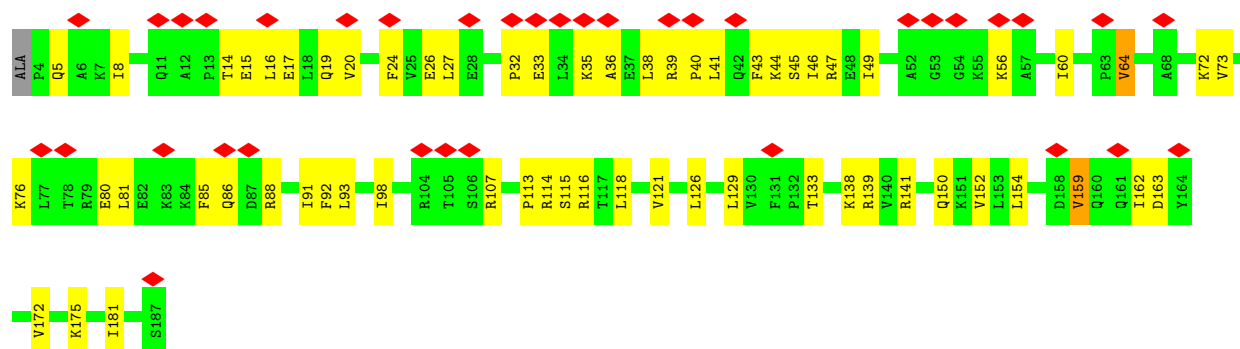


- Molecule 65: Small ribosomal subunit protein eS6A

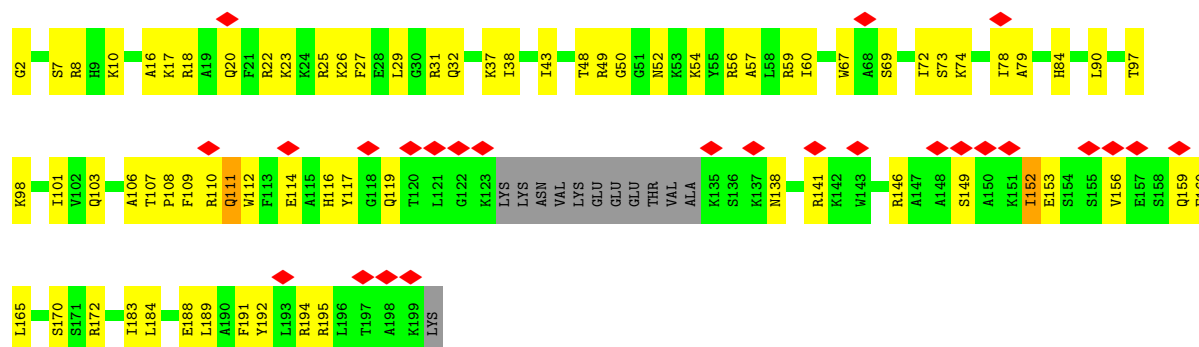




• Molecule 66: Small ribosomal subunit protein eS7A

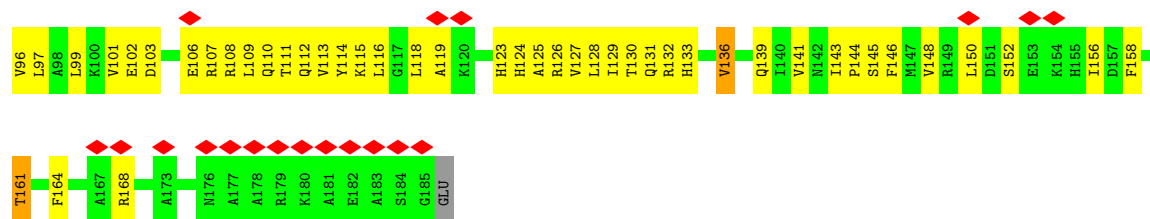


• Molecule 67: Small ribosomal subunit protein eS8A

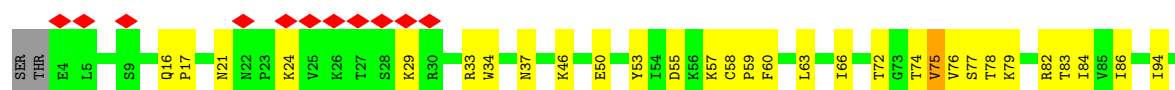


• Molecule 68: Small ribosomal subunit protein uS4A





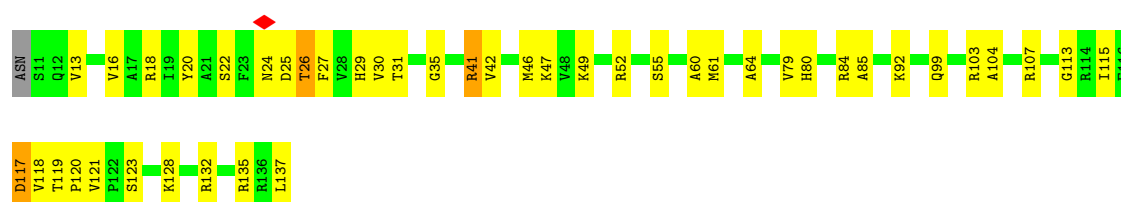
- Molecule 69: Small ribosomal subunit protein uS17A



- Molecule 70: Small ribosomal subunit protein uS15



- Molecule 71: Small ribosomal subunit protein uS11B

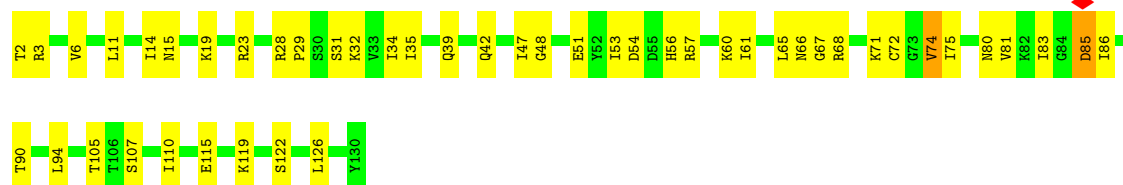


- Molecule 72: Small ribosomal subunit protein eS21A



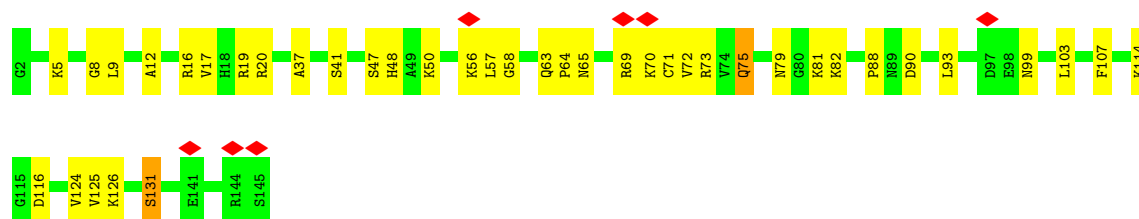
- Molecule 73: Small ribosomal subunit protein uS8A

Chain Sb: 



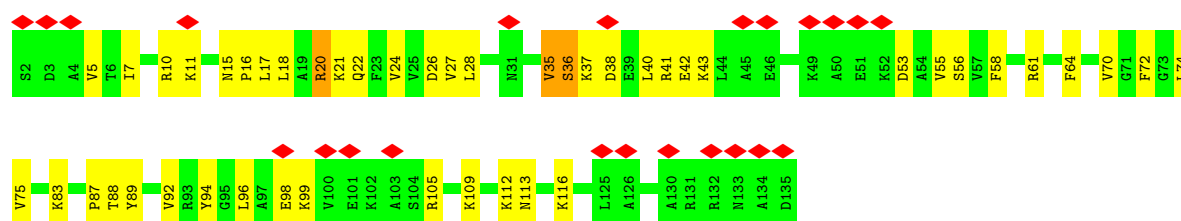
- Molecule 74: Small ribosomal subunit protein uS12A

Chain Sc: 



- Molecule 75: Small ribosomal subunit protein eS24A

Chain Sd: 



- Molecule 76: Small ribosomal subunit protein eS26B

Chain Se: 



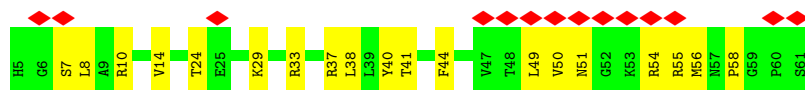
- Molecule 77: Small ribosomal subunit protein eS27A

Chain Sf: 



- Molecule 78: Small ribosomal subunit protein eS30A

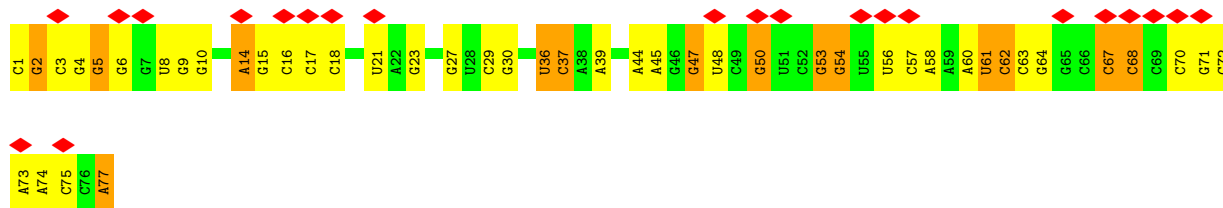
Chain Sg: 



• Molecule 79: tRNA (77-MER)



• Molecule 80: tRNA (77-MER)



• Molecule 81: RNA (5'-R(P*AP*UP*UP*GP*AP*CP*CP*CP*UP*U)-3')



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	85406	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	3.237	Depositor
Minimum map value	-1.818	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.090	Depositor
Recommended contour level	0.26	Depositor
Map size (Å)	570.0, 570.0, 570.0	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.95, 0.95, 0.95	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	LA	0.26	0/76214	0.32	0/118821
2	LB	0.22	0/2883	0.26	0/4491
3	LC	0.25	0/3746	0.33	0/5832
4	LD	0.25	0/1933	0.38	0/2598
5	LE	0.23	0/3146	0.36	0/4228
6	LF	0.50	1/2800 (0.0%)	0.49	2/3790 (0.1%)
7	LG	0.19	0/2400	0.37	0/3239
8	LH	0.19	0/1329	0.35	0/1794
9	LI	0.24	0/1821	0.39	0/2451
10	LJ	0.20	0/1836	0.39	0/2481
11	LK	0.19	0/1529	0.39	0/2060
12	LL	0.21	0/1801	0.34	0/2416
13	LM	0.17	0/1367	0.38	0/1834
14	LN	0.21	0/1568	0.38	0/2106
15	LO	0.19	0/1068	0.35	0/1438
16	LP	0.46	2/1757 (0.1%)	0.44	1/2354 (0.0%)
17	LQ	0.23	0/1585	0.37	0/2128
18	LR	0.23	0/1439	0.36	0/1938
19	LS	0.24	0/1465	0.40	0/1965
20	LT	0.19	0/1532	0.33	0/2043
21	LU	0.23	0/1473	0.39	0/1980
22	LV	0.22	0/1296	0.34	0/1739
23	LW	0.16	0/812	0.43	1/1099 (0.1%)
24	LX	0.22	0/1018	0.34	0/1369
25	LY	0.22	0/540	0.36	0/717
26	LZ	0.19	0/979	0.32	0/1321
27	La	0.19	0/995	0.32	0/1329
28	Lb	0.18	0/1106	0.33	0/1485
29	Lc	0.25	0/1200	0.40	0/1607
30	Ld	0.20	0/473	0.35	0/629
31	Le	0.19	0/745	0.35	0/1001
32	Lf	0.21	0/890	0.39	0/1196
33	Lg	0.23	0/1038	0.35	0/1390
34	Lh	0.24	0/868	0.38	0/1168

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	Li	0.22	0/890	0.36	0/1189
36	Lj	0.20	0/978	0.35	0/1301
37	Lk	0.18	0/772	0.36	0/1026
38	Ll	0.26	0/660	0.36	0/875
39	Lm	0.17	0/618	0.40	0/826
40	Ln	0.22	0/443	0.31	0/588
41	Lo	0.18	0/416	0.29	0/553
42	Lp	0.17	0/230	0.26	0/296
43	Lq	0.57	3/836 (0.4%)	0.58	1/1104 (0.1%)
44	Lr	0.24	0/701	0.41	0/934
45	S2	0.20	0/42211	0.31	0/65773
46	SA	0.16	0/1754	0.37	0/2361
47	SB	0.17	0/1625	0.38	0/2197
48	SC	0.21	0/769	0.46	0/1039
49	SD	0.14	0/883	0.49	0/1199
50	SE	0.16	0/936	0.36	0/1259
51	SF	0.17	0/1125	0.40	0/1510
52	SG	0.15	0/957	0.36	0/1283
53	SH	0.15	0/1207	0.38	0/1623
54	SI	0.16	0/1130	0.41	0/1517
55	SJ	0.17	0/807	0.38	0/1091
56	SK	0.15	0/661	0.34	0/888
57	SL	0.21	0/493	0.44	0/663
58	SM	0.17	0/452	0.33	0/600
59	SN	0.13	0/567	0.36	0/764
60	SO	0.18	0/2436	0.46	0/3318
61	SP	0.19	0/1644	0.44	0/2249
62	SQ	0.20	0/1823	0.48	0/2447
63	SR	0.20	0/1656	0.39	0/2251
64	SS	0.16	0/2097	0.37	0/2823
65	ST	0.15	0/1839	0.39	0/2460
66	SU	0.17	0/1498	0.37	0/2019
67	SV	0.16	0/1501	0.34	0/2006
68	SW	0.16	0/1504	0.37	0/2016
69	SX	0.19	0/1168	0.36	0/1575
70	SY	0.21	0/1215	0.39	0/1638
71	SZ	0.26	0/934	0.44	0/1257
72	Sa	0.17	0/682	0.38	0/921
73	Sb	0.24	0/1038	0.42	0/1395
74	Sc	0.21	0/1139	0.40	0/1518
75	Sd	0.16	0/1046	0.37	0/1401
76	Se	0.21	0/778	0.41	0/1042
77	Sf	0.17	0/620	0.38	0/838

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
78	Sg	0.14	0/459	0.38	0/611
79	Ta	0.14	0/1844	0.32	0/2873
80	Tb	0.16	0/1837	0.32	0/2861
All	All	0.23	6/217531 (0.0%)	0.34	5/320015 (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
10	LJ	0	2
30	Ld	0	1
47	SB	0	1
61	SP	0	2
66	SU	0	1
All	All	0	7

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	LF	301	PRO	N-CD	23.03	1.79	1.47
16	LP	76	PRO	CA-C	-6.94	1.45	1.52
43	Lq	55	LYS	C-O	-6.24	1.17	1.24
43	Lq	55	LYS	N-CA	-5.34	1.41	1.45
16	LP	73	ARG	CA-C	-5.29	1.47	1.53
43	Lq	59	HIS	CA-C	-5.05	1.46	1.52

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	LF	301	PRO	CA-N-CD	-16.07	89.50	112.00
6	LF	301	PRO	N-CD-CG	-7.18	92.43	103.20
43	Lq	56	PRO	N-CA-C	7.10	121.53	110.80
23	LW	27	VAL	N-CA-C	-5.12	108.30	113.47
16	LP	76	PRO	CB-CA-C	-5.01	105.24	111.11

There are no chirality outliers.

All (7) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
10	LJ	30	THR	Peptide
10	LJ	76	ALA	Peptide
30	Ld	20	GLY	Peptide
47	SB	162	VAL	Peptide
61	SP	193	GLN	Peptide
61	SP	198	MET	Peptide
66	SU	64	VAL	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	LA	68091	0	34217	1005	0
2	LB	2579	0	1304	45	0
3	LC	3353	0	1695	75	0
4	LD	1899	0	1957	70	0
5	LE	3075	0	3142	94	0
6	LF	2748	0	2859	99	0
7	LG	2351	0	2294	67	0
8	LH	1307	0	1377	42	0
9	LI	1784	0	1862	51	0
10	LJ	1804	0	1877	45	0
11	LK	1508	0	1572	66	0
12	LL	1764	0	1804	42	0
13	LM	1346	0	1370	38	0
14	LN	1543	0	1608	47	0
15	LO	1053	0	1149	54	0
16	LP	1720	0	1779	58	0
17	LQ	1555	0	1659	42	0
18	LR	1416	0	1433	35	0
19	LS	1441	0	1543	45	0
20	LT	1515	0	1606	27	0
21	LU	1437	0	1475	56	0
22	LV	1272	0	1312	34	0
23	LW	796	0	812	22	0
24	LX	1003	0	1048	26	0
25	LY	528	0	546	20	0
26	LZ	964	0	1025	19	0
27	La	984	0	1075	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	Lb	1080	0	1122	43	0
29	Lc	1169	0	1211	44	0
30	Ld	462	0	491	12	0
31	Le	737	0	792	23	0
32	Lf	876	0	912	31	0
33	Lg	1017	0	1081	23	0
34	Lh	850	0	880	18	0
35	Li	880	0	945	24	0
36	Lj	969	0	1078	47	0
37	Lk	766	0	844	18	0
38	Ll	645	0	649	20	0
39	Lm	612	0	682	28	0
40	Ln	436	0	475	13	0
41	Lo	410	0	446	6	0
42	Lp	229	0	273	7	0
43	Lq	824	0	892	19	0
44	Lr	694	0	738	29	0
45	S2	37739	0	18988	704	0
46	SA	1729	0	1812	67	0
47	SB	1605	0	1669	75	0
48	SC	752	0	719	39	0
49	SD	875	0	878	39	0
50	SE	916	0	941	44	0
51	SF	1105	0	1166	33	0
52	SG	948	0	990	29	0
53	SH	1188	0	1216	53	0
54	SI	1112	0	1124	49	0
55	SJ	797	0	863	36	0
56	SK	651	0	682	23	0
57	SL	491	0	524	26	0
58	SM	442	0	432	28	0
59	SN	556	0	549	18	0
60	SO	2383	0	2332	122	0
61	SP	1603	0	1610	54	0
62	SQ	1798	0	1890	73	0
63	SR	1626	0	1715	66	0
64	SS	2056	0	2140	88	0
65	ST	1815	0	1894	65	0
66	SU	1473	0	1555	51	0
67	SV	1476	0	1501	62	0
68	SW	1479	0	1556	76	0
69	SX	1142	0	1209	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
70	SY	1192	0	1255	36	0
71	SZ	923	0	948	40	0
72	Sa	673	0	662	25	0
73	Sb	1021	0	1060	45	0
74	Sc	1121	0	1196	34	0
75	Sd	1032	0	1044	43	0
76	Se	765	0	814	21	0
77	Sf	610	0	633	22	0
78	Sg	451	0	494	19	0
79	Ta	1650	0	838	31	0
80	Tb	1645	0	837	22	0
81	mR	207	0	0	0	0
All	All	202539	0	148647	4167	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 12.

All (4167) 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)
53:SH:101:LEU:CD2	53:SH:104:ASN:ND2	1.67	1.50
46:SA:175:VAL:CG2	46:SA:177:MET:HE3	1.46	1.44
46:SA:175:VAL:HG23	46:SA:177:MET:CE	1.48	1.42
11:LK:23:ARG:HH12	11:LK:42:ASP:CA	1.37	1.36
6:LF:301:PRO:CD	6:LF:301:PRO:N	1.80	1.31
60:SO:13:LEU:HB3	60:SO:45:TRP:CZ3	1.67	1.28
60:SO:34:LEU:HD12	60:SO:73:LEU:CD2	1.63	1.26
19:LS:81:VAL:HG13	19:LS:140:LEU:CD2	1.74	1.17
11:LK:23:ARG:NH1	11:LK:42:ASP:HA	1.57	1.17
45:S2:821:U:H3	45:S2:852:C:N4	1.43	1.16
53:SH:101:LEU:HD21	53:SH:104:ASN:ND2	1.29	1.16
36:Lj:70:TYR:HB3	36:Lj:76:GLN:HE22	1.13	1.12
11:LK:23:ARG:HH12	11:LK:42:ASP:HA	1.01	1.11
28:Lb:102:GLU:N	28:Lb:107:ARG:HH21	1.49	1.10
28:Lb:102:GLU:H	28:Lb:107:ARG:NH2	1.49	1.09
44:Lr:38:ASP:OD1	44:Lr:45:LYS:NZ	1.86	1.08
53:SH:101:LEU:HD23	53:SH:104:ASN:ND2	1.48	1.08
60:SO:34:LEU:HD12	60:SO:73:LEU:HD23	1.36	1.05
39:Lm:30:LYS:NZ	39:Lm:40:GLN:OE1	1.90	1.03
1:LA:2537:U:H5'	62:SQ:229:MET:CE	1.88	1.03
45:S2:1301:U:OP2	63:SR:97:ARG:NH2	1.94	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SB:162:VAL:HG13	57:SL:54:LEU:HD11	1.43	1.01
67:SV:194:ARG:HH11	67:SV:194:ARG:HB2	1.23	1.00
79:Ta:31:G:N2	79:Ta:41:C:O2	1.95	1.00
11:LK:23:ARG:HH12	11:LK:42:ASP:N	1.59	0.99
1:LA:2537:U:H5'	62:SQ:229:MET:HE2	1.41	0.99
19:LS:81:VAL:HG13	19:LS:140:LEU:HD21	1.45	0.99
19:LS:81:VAL:HG13	19:LS:140:LEU:HD23	1.43	0.98
36:Lj:76:GLN:HA	36:Lj:76:GLN:HE21	1.27	0.98
11:LK:23:ARG:NH1	11:LK:42:ASP:CA	2.19	0.97
60:SO:24:ALA:C	60:SO:73:LEU:HD11	1.87	0.97
45:S2:273:G:H1	45:S2:283:U:H3	1.11	0.97
69:SX:94:ILE:HD11	69:SX:101:GLU:OE2	1.65	0.96
36:Lj:76:GLN:HA	36:Lj:76:GLN:NE2	1.81	0.96
46:SA:175:VAL:HG21	46:SA:177:MET:HE3	1.45	0.96
1:LA:1019:G:H1	1:LA:1033:U:H3	1.09	0.95
25:LY:60:LYS:HE3	25:LY:60:LYS:HA	1.45	0.95
46:SA:175:VAL:HG23	46:SA:177:MET:HE3	0.97	0.95
10:LJ:62:LYS:HE2	16:LP:29:GLU:OE1	1.67	0.95
3:LC:121:U:H3	3:LC:132:G:H1	0.97	0.95
45:S2:69:G:H1	45:S2:82:U:H3	1.15	0.95
45:S2:142:G:H1	45:S2:173:A:N6	1.63	0.95
1:LA:2442:G:H1	1:LA:2505:U:H3	1.10	0.94
79:Ta:31:G:N1	79:Ta:41:C:N3	2.15	0.94
1:LA:512:U:H3	1:LA:579:G:H1	1.03	0.93
54:SI:131:ASP:O	54:SI:135:ILE:HD12	1.68	0.93
79:Ta:32:G:N2	79:Ta:40:C:N3	2.15	0.92
52:SG:47:ARG:HH21	52:SG:48:ASN:HD21	1.10	0.92
9:LI:39:GLU:OE2	9:LI:43:ILE:HD11	1.69	0.92
1:LA:418:A:N1	3:LC:5:U:O4	2.02	0.92
19:LS:81:VAL:CG1	19:LS:140:LEU:HD23	2.00	0.90
1:LA:1664:G:H1	1:LA:1785:U:H3	1.20	0.90
46:SA:175:VAL:HG23	46:SA:177:MET:HE2	1.53	0.90
45:S2:142:G:H1	45:S2:173:A:H61	0.91	0.90
45:S2:1055:U:H3	45:S2:1064:G:H1	0.92	0.89
21:LU:63:GLN:NE2	21:LU:65:ASN:HD21	1.70	0.88
1:LA:418:A:N1	3:LC:5:U:C4	2.42	0.88
1:LA:3349:C:O2	1:LA:3356:G:N2	2.06	0.88
49:SD:63:VAL:HG11	49:SD:66:VAL:HG23	1.56	0.88
75:Sd:61:ARG:NH1	75:Sd:61:ARG:HB3	1.87	0.88
45:S2:1673:G:H1	45:S2:1728:A:H2	0.90	0.88
1:LA:341:G:C5	6:LF:194:TYR:HE2	1.92	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3234:A:H2	1:LA:3253:G:H1	1.17	0.88
50:SE:96:ILE:HD11	50:SE:116:LEU:HD11	1.55	0.87
21:LU:63:GLN:HE22	21:LU:65:ASN:ND2	1.72	0.87
65:ST:22:HIS:HA	65:ST:25:ARG:HG3	1.57	0.87
1:LA:2138:A:HO2'	38:LI:2:GLY:N	1.71	0.87
62:SQ:207:LEU:O	62:SQ:210:ILE:HD11	1.73	0.87
1:LA:2537:U:C5'	62:SQ:229:MET:HE2	2.04	0.87
1:LA:341:G:C6	6:LF:194:TYR:CE2	2.63	0.86
1:LA:2450:G:N2	1:LA:2496:C:O2	2.08	0.86
1:LA:3349:C:N3	1:LA:3356:G:N1	2.23	0.86
60:SO:24:ALA:O	60:SO:73:LEU:HD11	1.75	0.86
70:SY:26:PHE:HE1	70:SY:59:GLY:O	1.59	0.86
45:S2:555:A:N7	45:S2:590:C:O2'	2.08	0.86
66:SU:17:GLU:HG3	66:SU:46:ILE:HG12	1.55	0.86
66:SU:27:LEU:HD12	66:SU:38:LEU:HD21	1.55	0.86
70:SY:26:PHE:CE1	70:SY:59:GLY:O	2.27	0.86
72:Sa:64:GLU:N	72:Sa:64:GLU:OE1	2.08	0.86
45:S2:1588:G:H1	45:S2:1608:U:H3	0.90	0.85
30:Ld:16:ALA:O	30:Ld:20:GLY:HA3	1.76	0.85
1:LA:760:G:O2'	1:LA:770:G:N2	2.09	0.85
21:LU:63:GLN:HE22	21:LU:65:ASN:HD21	0.88	0.85
46:SA:175:VAL:CG2	46:SA:177:MET:CE	2.26	0.85
45:S2:741:C:H1'	66:SU:107:ARG:HH12	1.42	0.85
45:S2:1673:G:N1	45:S2:1728:A:C2	2.45	0.84
45:S2:1673:G:N1	45:S2:1728:A:H2	1.74	0.84
24:LX:109:MET:HE1	24:LX:114:ILE:HD11	1.59	0.84
1:LA:528:U:H3	1:LA:564:G:H1	1.25	0.83
66:SU:46:ILE:HD12	66:SU:60:ILE:HD13	1.58	0.83
45:S2:1483:A:H4'	51:SF:71:GLY:HA2	1.58	0.83
66:SU:15:GLU:O	66:SU:19:GLN:OE1	1.96	0.83
45:S2:1673:G:O6	45:S2:1728:A:N1	2.11	0.82
74:Sc:65:ASN:ND2	74:Sc:116:ASP:OD2	2.12	0.82
60:SO:106:HIS:CD2	60:SO:132:LYS:HD2	2.15	0.82
10:LJ:83:ASP:OD1	10:LJ:86:THR:HG22	1.78	0.82
8:LH:102:ASN:ND2	8:LH:104:GLU:OE1	2.13	0.82
45:S2:442:C:O2'	45:S2:525:A:N6	2.12	0.82
60:SO:106:HIS:HD1	60:SO:126:SER:HB3	1.45	0.82
60:SO:13:LEU:HB3	60:SO:45:TRP:CH2	2.14	0.81
60:SO:127:ARG:HA	60:SO:150:TRP:HB2	1.61	0.81
61:SP:74:VAL:CG2	61:SP:121:VAL:HG12	2.09	0.81
4:LD:27:ALA:O	4:LD:128:ARG:NH2	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:643:G:N2	45:S2:691:C:O2	2.13	0.81
9:LI:175:LYS:H	9:LI:175:LYS:HD2	1.46	0.81
36:Lj:70:TYR:HB3	36:Lj:76:GLN:NE2	1.95	0.81
55:SJ:68:ARG:HH12	55:SJ:77:LYS:HA	1.46	0.81
47:SB:57:SER:HA	57:SL:53:ILE:HB	1.64	0.80
61:SP:163:ASN:O	61:SP:169:SER:OG	1.99	0.80
69:SX:78:THR:HA	69:SX:84:ILE:HG22	1.63	0.80
3:LC:97:A:O2'	36:Lj:59:ASN:OD1	1.98	0.80
8:LH:94:GLU:C	8:LH:94:GLU:OE1	2.25	0.80
67:SV:194:ARG:HB2	67:SV:194:ARG:NH1	1.97	0.80
60:SO:34:LEU:HD12	60:SO:73:LEU:HD22	1.63	0.79
1:LA:439:C:O2	1:LA:494:G:N2	2.14	0.79
1:LA:618:C:OP1	18:LR:173:ARG:NH2	2.15	0.79
11:LK:23:ARG:NH2	11:LK:42:ASP:H	1.80	0.79
36:Lj:70:TYR:CB	36:Lj:76:GLN:HE22	1.92	0.79
68:SW:110:GLN:HG3	68:SW:144:PRO:HB3	1.63	0.79
47:SB:162:VAL:HG22	57:SL:54:LEU:HD21	1.63	0.79
55:SJ:26:LEU:HD22	55:SJ:114:VAL:HG22	1.65	0.79
47:SB:61:TYR:OH	57:SL:49:ARG:NH1	2.15	0.79
7:LG:200:PHE:HB3	7:LG:237:GLU:OE1	1.82	0.79
45:S2:1482:C:O2'	51:SF:72:GLY:O	2.00	0.79
40:Ln:25:GLN:OE1	40:Ln:28:ARG:NH2	2.16	0.79
34:Lh:39:GLN:OE1	34:Lh:39:GLN:N	2.16	0.78
45:S2:175:G:H22	45:S2:266:A:H5'	1.48	0.78
1:LA:1666:G:H1	1:LA:1783:U:H3	1.31	0.78
22:LV:18:ASP:HB3	22:LV:21:LYS:HB2	1.64	0.78
55:SJ:82:TYR:HB3	58:SM:52:PHE:HB3	1.66	0.78
45:S2:14:C:OP2	63:SR:203:LYS:HE2	1.82	0.78
47:SB:162:VAL:HG13	57:SL:54:LEU:CD1	2.13	0.78
1:LA:2565:U:H3	1:LA:2576:G:H1	1.31	0.78
1:LA:2206:G:O2'	1:LA:2208:A:N7	2.17	0.78
24:LX:81:GLN:O	24:LX:98:ASN:ND2	2.15	0.78
60:SO:249:ARG:HH12	60:SO:315:VAL:HG11	1.49	0.78
65:ST:2:LYS:HB2	65:ST:108:VAL:HG12	1.65	0.78
5:LE:212:ASN:HD21	5:LE:354:VAL:HB	1.48	0.78
28:Lb:57:HIS:HB2	28:Lb:62:VAL:HG23	1.65	0.78
1:LA:177:U:O2	1:LA:241:G:O6	2.02	0.78
10:LJ:190:VAL:HG23	10:LJ:192:GLN:HG3	1.66	0.78
64:SS:79:ASP:HB3	64:SS:82:TYR:HB2	1.65	0.78
1:LA:2255:A:H8	45:S2:1758:U:H1'	1.49	0.77
31:Le:76:GLU:N	31:Le:76:GLU:OE2	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1584:G:N2	45:S2:1611:A:OP2	2.16	0.77
64:SS:181:VAL:HG22	64:SS:193:GLY:HA3	1.66	0.77
1:LA:2450:G:N1	1:LA:2496:C:N3	2.33	0.77
41:Lo:98:LYS:HG3	41:Lo:118:THR:HG21	1.66	0.77
50:SE:96:ILE:CD1	50:SE:116:LEU:HD11	2.14	0.77
69:SX:84:ILE:HD12	69:SX:109:VAL:HG12	1.67	0.77
70:SY:52:VAL:O	70:SY:56:ASP:HB2	1.83	0.77
1:LA:2526:C:OP1	4:LD:37:ARG:NH1	2.17	0.77
44:Lr:45:LYS:HE2	44:Lr:45:LYS:N	1.99	0.77
45:S2:936:G:N7	76:Se:15:ARG:NH1	2.33	0.77
69:SX:99:ARG:HG3	74:Sc:12:ALA:HB2	1.66	0.77
45:S2:992:A:O2'	45:S2:1785:U:O2	2.02	0.77
71:SZ:132:ARG:HH11	71:SZ:132:ARG:HG3	1.48	0.77
19:LS:30:VAL:O	19:LS:34:THR:HG23	1.84	0.77
61:SP:190:ASP:HA	61:SP:194:PRO:HG2	1.67	0.77
47:SB:92:ARG:NH2	47:SB:169:ASN:OD1	2.17	0.76
3:LC:104:A:H3'	3:LC:105:A:H5''	1.68	0.76
75:Sd:56:SER:HG	75:Sd:94:TYR:HH	1.31	0.76
67:SV:57:ALA:HB1	67:SV:60:ILE:HG13	1.68	0.76
10:LJ:94:PHE:HB3	10:LJ:189:LEU:HD21	1.65	0.76
8:LH:108:LYS:HE3	8:LH:110:LYS:HG2	1.65	0.76
14:LN:123:ILE:HG22	36:Lj:118:ILE:HG13	1.67	0.76
46:SA:162:GLN:NE2	46:SA:166:ASP:OD2	2.19	0.76
68:SW:110:GLN:HE21	68:SW:126:ARG:HD3	1.50	0.76
1:LA:1863:G:N1	1:LA:1866:C:OP2	2.15	0.75
18:LR:42:THR:O	18:LR:46:LYS:HE2	1.86	0.75
21:LU:140:VAL:O	21:LU:144:LEU:HD12	1.86	0.75
29:Lc:104:THR:HG22	29:Lc:109:TYR:HB2	1.68	0.75
64:SS:35:PRO:HD2	64:SS:83:PRO:HG2	1.67	0.75
65:ST:192:ALA:O	65:ST:196:ARG:HG3	1.86	0.75
17:LQ:56[A]:ASP:HA	17:LQ:59[A]:ARG:HH12	1.51	0.75
47:SB:72:HIS:O	51:SF:47:LYS:NZ	2.18	0.75
60:SO:34:LEU:CD1	60:SO:73:LEU:CD2	2.56	0.75
45:S2:1171:A:H2'	45:S2:1172:G:C8	2.21	0.75
45:S2:1341:A:H1'	60:SO:65:SER:HB2	1.68	0.75
1:LA:879:U:O2'	18:LR:135:ARG:NH2	2.20	0.75
50:SE:25:LEU:HD23	50:SE:28:MET:HE1	1.69	0.75
1:LA:271:C:O2	37:Lk:82:ARG:NH2	2.20	0.75
11:LK:23:ARG:NH1	11:LK:42:ASP:N	2.29	0.75
20:LT:173:ARG:NH1	45:S2:853:G:OP2	2.20	0.74
62:SQ:144:ARG:HD3	62:SQ:208:GLN:HB3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LH:102:ASN:CG	8:LH:104:GLU:OE1	2.29	0.74
62:SQ:22:ASP:HB3	62:SQ:25:THR:HG22	1.70	0.74
1:LA:1364:C:H5'	19:LS:3:ILE:HD13	1.68	0.74
45:S2:397:A:H4'	67:SV:50:GLY:HA2	1.70	0.74
60:SO:13:LEU:HB2	60:SO:310:ILE:HB	1.69	0.74
65:ST:148:SER:HB2	65:ST:151:ASP:HB2	1.69	0.74
65:ST:215:ARG:HA	65:ST:218:GLU:OE1	1.88	0.74
45:S2:1377:U:O2	45:S2:1379:C:N4	2.19	0.74
1:LA:3003:G:OP2	5:LE:26:ARG:NH2	2.18	0.73
71:SZ:99:GLN:NE2	76:Se:44:ILE:O	2.21	0.73
66:SU:27:LEU:CD1	66:SU:38:LEU:HD21	2.19	0.73
68:SW:107:ARG:HH21	68:SW:150:LEU:HG	1.51	0.73
1:LA:1477:A:OP1	1:LA:3075:G:O2'	2.07	0.73
1:LA:2880:U:OP1	24:LX:47:ASN:ND2	2.20	0.73
1:LA:1661:G:H2'	1:LA:1662:G:C8	2.23	0.73
1:LA:2522:G:H1	4:LD:68:LYS:NZ	1.87	0.73
17:LQ:12[A]:LYS:HD3	17:LQ:37[A]:ARG:HH21	1.53	0.73
1:LA:2452:G:H1	1:LA:2493:U:H3	0.78	0.73
11:LK:23:ARG:NH1	11:LK:42:ASP:H	1.87	0.73
45:S2:776:G:N7	75:Sd:11:LYS:NZ	2.36	0.73
1:LA:1237:G:N1	1:LA:1251:A:N6	2.37	0.73
1:LA:3299:A:H61	1:LA:3315:G:H1	1.36	0.72
10:LJ:42:PRO:HD2	10:LJ:44:ARG:HH21	1.54	0.72
14:LN:3:ILE:HD13	29:Lc:45:MET:HE1	1.71	0.72
45:S2:478:A:O2'	68:SW:124:HIS:ND1	2.13	0.72
56:SK:83:LEU:HD23	56:SK:89:ILE:HD13	1.71	0.72
47:SB:43:PHE:HD1	47:SB:44:ASN:H	1.35	0.72
1:LA:2356:A:H61	1:LA:2983:C:H5	1.35	0.72
21:LU:80:ARG:HG2	21:LU:122:HIS:HB2	1.71	0.72
1:LA:2442:G:O6	1:LA:2505:U:O4	2.06	0.72
6:LF:82:THR:HG22	6:LF:84:ARG:H	1.54	0.72
1:LA:77:A:N7	14:LN:73:ARG:NH2	2.38	0.72
28:Lb:42:LEU:HD22	28:Lb:74:VAL:HG22	1.72	0.72
53:SH:79:TYR:HA	53:SH:80:LYS:HZ3	1.52	0.72
65:ST:130:PRO:HB2	65:ST:160:ARG:HH21	1.53	0.72
8:LH:87:THR:HG22	8:LH:89:THR:H	1.53	0.72
23:LW:99:LYS:HD2	23:LW:102:GLU:OE1	1.90	0.72
49:SD:66:VAL:HG12	49:SD:67:THR:HG22	1.70	0.72
62:SQ:2:ALA:N	71:SZ:49:LYS:O	2.23	0.72
64:SS:256:ARG:HH22	68:SW:78:ARG:CZ	2.01	0.72
13:LM:133:ARG:NH2	13:LM:158:ASP:OD2	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SH:144:ARG:CZ	53:SH:144:ARG:HA	2.20	0.72
15:LO:38:ILE:HA	15:LO:44:VAL:HG12	1.71	0.72
45:S2:459:G:OP1	75:Sd:109:LYS:NZ	2.22	0.72
79:Ta:31:G:H3'	79:Ta:32:G:C8	2.25	0.72
39:Lm:40:GLN:HE22	39:Lm:42:LYS:HG3	1.55	0.71
45:S2:1450:U:H5''	58:SM:8:PHE:HE1	1.54	0.71
77:Sf:55:THR:HB	77:Sf:62:ILE:HD12	1.71	0.71
1:LA:341:G:C6	6:LF:194:TYR:HE2	2.02	0.71
60:SO:182:ASN:HD21	60:SO:185:GLN:HB2	1.55	0.71
1:LA:2537:U:OP2	62:SQ:228:LEU:N	2.21	0.71
11:LK:23:ARG:HH22	11:LK:42:ASP:H	1.36	0.71
45:S2:558:U:OP1	78:Sg:55:ARG:NH2	2.24	0.71
60:SO:128:ASP:N	60:SO:128:ASP:OD1	2.23	0.71
9:LI:86:VAL:HG13	9:LI:136:TYR:HB3	1.72	0.71
63:SR:95:ARG:HH22	63:SR:97:ARG:NH1	1.87	0.71
14:LN:48:PRO:HG2	36:Lj:115:LYS:HE3	1.71	0.71
42:Lp:12:ARG:NH1	45:S2:1779:U:O4	2.23	0.71
66:SU:98:ILE:HG12	66:SU:121:VAL:HG11	1.72	0.71
12:LL:110:ARG:NH2	79:Ta:75:C:O2'	2.24	0.71
14:LN:43:ALA:O	14:LN:47:ALA:HA	1.91	0.71
45:S2:513:U:H5'	68:SW:133:HIS:HE1	1.54	0.71
48:SC:7:ASP:HA	48:SC:10:LYS:HG3	1.72	0.71
1:LA:1634:G:N7	28:Lb:17:ARG:NH2	2.38	0.71
1:LA:2901:G:O2'	1:LA:3024:A:N1	2.23	0.71
45:S2:164:A:H1'	65:ST:13:GLN:OE1	1.91	0.71
73:Sb:81:VAL:HG23	73:Sb:85:ASP:HB2	1.71	0.71
75:Sd:61:ARG:HB3	75:Sd:61:ARG:HH11	1.54	0.71
6:LF:126:ILE:O	6:LF:129:THR:OG1	2.08	0.71
45:S2:699:U:O2	45:S2:739:G:O6	2.09	0.71
61:SP:172:LEU:O	61:SP:176:LEU:HD12	1.91	0.71
7:LG:41:LYS:NZ	22:LV:32:LYS:O	2.24	0.70
15:LO:92:GLU:N	15:LO:92:GLU:OE2	2.22	0.70
19:LS:170:ARG:HD2	29:Lc:57:GLY:HA3	1.73	0.70
13:LM:82:ARG:HA	13:LM:85:LYS:HD2	1.73	0.70
45:S2:1310:U:HO2'	45:S2:1402:G:HO2'	1.39	0.70
55:SJ:57:ARG:HG2	55:SJ:89:ARG:HD2	1.71	0.70
1:LA:2948:C:OP1	5:LE:244:ARG:NH2	2.23	0.70
1:LA:3234:A:N1	1:LA:3253:G:O6	2.24	0.70
28:Lb:95:VAL:HG21	28:Lb:113:VAL:HG11	1.71	0.70
46:SA:190:ARG:NH2	46:SA:195:SER:HA	2.06	0.70
64:SS:188:ASN:HB3	64:SS:191:ARG:HD2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LK:23:ARG:CZ	11:LK:42:ASP:H	2.03	0.70
26:LZ:50:ALA:HB1	36:Lj:66:VAL:HG11	1.73	0.70
6:LF:113:VAL:HB	6:LF:118:LYS:HE3	1.74	0.70
45:S2:14:C:H5''	63:SR:203:LYS:HE2	1.71	0.70
24:LX:2:SER:OG	24:LX:3:GLY:N	2.24	0.70
45:S2:837:G:H2'	45:S2:838:G:C8	2.25	0.70
45:S2:1520:U:OP2	54:SI:75:LYS:NZ	2.23	0.70
57:SL:15:VAL:HA	57:SL:28:VAL:HG22	1.72	0.70
55:SJ:80:GLU:HB2	58:SM:54:LYS:HD3	1.72	0.70
4:LD:118:GLU:OE2	4:LD:156:LYS:NZ	2.25	0.70
45:S2:523:G:H22	45:S2:528:U:H5	1.38	0.70
53:SH:15:LEU:HD12	53:SH:66:LEU:HD21	1.73	0.70
1:LA:1639:C:OP2	35:Li:74:ARG:NH1	2.20	0.70
1:LA:2836:C:H5	1:LA:2852:C:H42	1.37	0.70
16:LP:96:ARG:NH2	16:LP:104:GLU:OE1	2.24	0.70
39:Lm:61:LYS:HA	39:Lm:64:LYS:HD2	1.74	0.70
3:LC:52:A:H5'	40:Ln:21:ARG:HD3	1.72	0.69
1:LA:3042:U:OP2	1:LA:3092:C:N4	2.25	0.69
1:LA:896:A:H5''	4:LD:183:GLY:HA2	1.73	0.69
5:LE:19:ARG:NH2	5:LE:232:ARG:O	2.26	0.69
6:LF:35:VAL:HG21	6:LF:244:LEU:HD21	1.74	0.69
23:LW:102:GLU:CG	23:LW:102:GLU:O	2.37	0.69
22:LV:17:ARG:HG2	22:LV:22:HIS:HA	1.73	0.69
28:Lb:50:PRO:HD3	28:Lb:68:ILE:HG12	1.75	0.69
45:S2:1267:G:H1	45:S2:1442:U:H3	1.38	0.69
6:LF:181:VAL:HG11	6:LF:224:GLY:HA3	1.73	0.69
11:LK:23:ARG:HE	11:LK:39:LYS:HA	1.58	0.69
47:SB:162:VAL:HB	57:SL:44:VAL:HA	1.74	0.69
14:LN:10:LEU:HD23	19:LS:166:LEU:HD11	1.74	0.69
1:LA:63:A:OP1	16:LP:172:ARG:NH2	2.25	0.69
1:LA:182:U:H3	1:LA:234:G:H1	1.39	0.69
1:LA:341:G:C6	6:LF:194:TYR:CD2	2.79	0.69
1:LA:3016:A:H2'	1:LA:3017:A:H8	1.57	0.69
14:LN:135:ALA:HB1	36:Lj:119:LYS:HG2	1.74	0.69
47:SB:93:LEU:O	47:SB:97:LEU:HD23	1.92	0.69
52:SG:47:ARG:NH2	52:SG:48:ASN:HD21	1.88	0.69
1:LA:2228:A:H2'	1:LA:2229:A:C8	2.28	0.69
1:LA:3228:C:H5''	15:LO:137:LYS:HZ1	1.58	0.69
2:LB:1:G:H4'	7:LG:273:ARG:HH22	1.57	0.69
19:LS:40:THR:O	19:LS:41:ASP:OD1	2.10	0.69
31:Le:52:ARG:HH11	31:Le:52:ARG:HG3	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Lg:98:HIS:O	33:Lg:125:ARG:NH2	2.26	0.69
45:S2:447:U:OP1	64:SS:49:ARG:NH1	2.26	0.69
45:S2:700:C:N4	45:S2:739:G:O6	2.26	0.69
45:S2:1499:G:OP1	54:SI:122:ARG:NH1	2.26	0.69
46:SA:75:LYS:NZ	48:SC:20:VAL:O	2.23	0.69
64:SS:164:LEU:O	64:SS:164:LEU:HD13	1.91	0.69
1:LA:2535:A:C5	1:LA:2536:A:H1'	2.28	0.69
1:LA:3160:U:H3	1:LA:3290:G:H1	1.41	0.69
42:Lp:15:ARG:HH21	45:S2:1125:A:H5''	1.57	0.69
1:LA:1018:G:O6	1:LA:1034:U:O2	2.11	0.68
6:LF:187:LEU:HD22	6:LF:193:LYS:HD3	1.75	0.68
11:LK:89:LYS:HG2	11:LK:145:VAL:HG22	1.74	0.68
73:Sb:11:LEU:HD12	73:Sb:74:VAL:HG23	1.74	0.68
49:SD:26:ASP:HA	49:SD:29:LYS:HE2	1.75	0.68
66:SU:150:GLN:HB3	66:SU:181:ILE:HG22	1.75	0.68
1:LA:1009:A:H61	1:LA:1041:U:H3	1.40	0.68
3:LC:21:C:OP1	6:LF:193:LYS:NZ	2.26	0.68
23:LW:39:ASP:OD1	23:LW:40:HIS:ND1	2.23	0.68
46:SA:17:PHE:O	46:SA:21:LEU:HD23	1.93	0.68
49:SD:35:ALA:HB2	49:SD:123:VAL:HG13	1.76	0.68
68:SW:110:GLN:NE2	68:SW:126:ARG:HB2	2.07	0.68
32:Lf:74:ARG:HH12	32:Lf:109:VAL:HG11	1.57	0.68
45:S2:139:C:N4	45:S2:175:G:O2'	2.26	0.68
45:S2:868:G:H1	45:S2:960:U:H3	1.42	0.68
46:SA:190:ARG:HH21	46:SA:195:SER:HA	1.58	0.68
67:SV:117:TYR:HB3	67:SV:119:GLN:HG2	1.75	0.68
80:Tb:27:G:H1	80:Tb:45:A:H2	1.39	0.68
1:LA:2177:G:OP2	4:LD:128:ARG:NH1	2.26	0.68
1:LA:2185:G:O2'	1:LA:2314:U:OP2	2.11	0.68
22:LV:102:ARG:O	22:LV:106:LEU:HD22	1.94	0.68
1:LA:2452:G:O6	1:LA:2493:U:O4	2.12	0.68
1:LA:2960:C:H2'	1:LA:2961:G:C8	2.29	0.68
1:LA:3316:A:OP1	1:LA:3318:G:N2	2.27	0.68
15:LO:65:LEU:HD11	21:LU:152:LEU:HD12	1.74	0.68
21:LU:77:VAL:HG22	21:LU:126:VAL:HG13	1.75	0.68
32:Lf:41:LYS:NZ	32:Lf:47:ASP:OD1	2.25	0.68
57:SL:12:VAL:HG22	57:SL:52:ASP:H	1.58	0.68
60:SO:34:LEU:HB2	60:SO:73:LEU:HD21	1.76	0.68
6:LF:299:ILE:HG23	19:LS:39:ARG:HB3	1.74	0.68
1:LA:418:A:C6	3:LC:5:U:O4	2.47	0.68
1:LA:1794:G:H4'	4:LD:191:LEU:HD21	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LS:74:GLU:OE2	19:LS:74:GLU:N	2.17	0.68
57:SL:27:GLN:NE2	57:SL:63:ALA:O	2.26	0.68
1:LA:994:G:N2	1:LA:995:U:O4	2.25	0.67
1:LA:3275:U:O2'	34:Lh:99:ARG:NH1	2.26	0.67
21:LU:94:ILE:HG21	21:LU:105:THR:HG21	1.76	0.67
45:S2:1041:G:H2'	45:S2:1042:G:C8	2.29	0.67
60:SO:106:HIS:ND1	60:SO:126:SER:HB3	2.09	0.67
45:S2:524:U:N3	45:S2:527:A:OP2	2.21	0.67
45:S2:1588:G:O6	45:S2:1608:U:O4	2.12	0.67
1:LA:2450:G:N2	1:LA:2496:C:C2	2.62	0.67
46:SA:23:GLU:OE2	46:SA:27:ARG:NH2	2.26	0.67
63:SR:116:LYS:HG2	63:SR:127:ALA:HB3	1.77	0.67
1:LA:110:G:OP2	14:LN:73:ARG:NH1	2.22	0.67
1:LA:402:A:OP1	40:Ln:36:ARG:NH2	2.21	0.67
24:LX:54:LEU:HD21	24:LX:119:GLY:HA3	1.77	0.67
45:S2:1534:G:OP2	56:SK:74:SER:OG	2.12	0.67
47:SB:162:VAL:HG11	57:SL:44:VAL:HG22	1.76	0.67
53:SH:79:TYR:HA	53:SH:80:LYS:NZ	2.08	0.67
25:LY:9:SER:HA	25:LY:52:THR:HG23	1.76	0.67
29:Lc:82:ILE:O	29:Lc:87:ARG:NH1	2.28	0.67
45:S2:1695:G:N2	45:S2:1707:A:O2'	2.27	0.67
29:Lc:38:GLN:O	29:Lc:42:ARG:NH1	2.27	0.67
45:S2:187:G:N1	45:S2:197:A:N1	2.32	0.67
45:S2:534:A:OP1	68:SW:168:ARG:NH2	2.27	0.67
45:S2:1610:G:N7	51:SF:14:LYS:NZ	2.42	0.67
66:SU:113:PRO:HG2	66:SU:116:ARG:HD3	1.75	0.67
8:LH:40:LEU:HD11	8:LH:54:TYR:HB2	1.76	0.67
44:Lr:36:ARG:HD3	44:Lr:48:LYS:HD3	1.75	0.67
1:LA:3325:G:H1	1:LA:3381:U:H3	1.42	0.67
5:LE:17:LEU:HD11	5:LE:233:TRP:HH2	1.60	0.67
8:LH:35:VAL:O	8:LH:38:THR:OG1	2.12	0.67
34:Lh:38:PRO:HB3	34:Lh:74:THR:HG21	1.77	0.67
60:SO:24:ALA:C	60:SO:73:LEU:CD1	2.65	0.67
68:SW:80:LEU:HB3	68:SW:86:LEU:HB2	1.75	0.67
1:LA:688:G:N2	1:LA:692:A:C2	2.60	0.67
1:LA:2772:C:H4'	1:LA:2773:C:H5'	1.76	0.67
40:Ln:27:ILE:HA	40:Ln:30:ARG:HG3	1.77	0.67
45:S2:652:G:N2	45:S2:682:C:O2	2.27	0.67
63:SR:105:GLY:HA3	63:SR:190:LEU:HB3	1.77	0.67
45:S2:614:C:OP2	74:Sc:5:LYS:NZ	2.28	0.67
61:SP:52:LYS:HA	61:SP:55:GLU:OE1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2674:A:H5''	13:LM:105:GLY:HA3	1.76	0.66
6:LF:317:PRO:C	6:LF:319:LYS:H	2.02	0.66
24:LX:40:LYS:HG3	24:LX:57:MET:HG2	1.77	0.66
50:SE:81:ARG:NH2	50:SE:120:SER:O	2.28	0.66
51:SF:22:VAL:HG22	51:SF:65:ILE:HG12	1.77	0.66
1:LA:2270:A:H2'	1:LA:2271:A:C8	2.29	0.66
1:LA:2432:A:H2	16:LP:125:SER:HG	1.41	0.66
6:LF:351:PRO:HA	9:LI:71:ALA:HA	1.77	0.66
1:LA:765:C:H41	14:LN:176:GLU:HG2	1.60	0.66
1:LA:656:A:H2'	1:LA:657:A:C8	2.31	0.66
19:LS:62:VAL:HG13	19:LS:66:ARG:HD2	1.76	0.66
27:La:22:ALA:O	27:La:27:ARG:NH1	2.25	0.66
45:S2:963:A:O2'	45:S2:964:U:O5'	2.14	0.66
47:SB:76:ARG:HD3	51:SF:122:ARG:HD3	1.76	0.66
62:SQ:107:THR:O	62:SQ:111:ARG:HG2	1.95	0.66
68:SW:113:VAL:HG12	68:SW:119:ALA:HB2	1.78	0.66
19:LS:40:THR:HG21	19:LS:45:ASN:OD1	1.95	0.66
45:S2:903:U:O4	71:SZ:24:ASN:ND2	2.29	0.66
63:SR:95:ARG:NH2	63:SR:97:ARG:NH1	2.44	0.66
65:ST:115:LYS:NZ	65:ST:116:LYS:O	2.28	0.66
66:SU:38:LEU:HD12	66:SU:38:LEU:O	1.94	0.66
45:S2:17:C:O2'	45:S2:1137:A:N1	2.27	0.66
61:SP:74:VAL:HG23	61:SP:121:VAL:HG12	1.76	0.66
15:LO:48:GLY:HA3	15:LO:53:VAL:HB	1.78	0.66
21:LU:71:LYS:HZ1	21:LU:73:LYS:HB3	1.59	0.66
43:Lq:36:PHE:O	43:Lq:41:ARG:NH1	2.29	0.66
49:SD:137:MET:HA	49:SD:137:MET:HE3	1.78	0.66
21:LU:77:VAL:HG11	21:LU:106:LEU:HD22	1.77	0.66
45:S2:393:C:OP1	67:SV:2:GLY:N	2.28	0.66
45:S2:636:A:H5''	73:Sb:31:SER:HB2	1.76	0.66
47:SB:163:SER:HB3	47:SB:166:ARG:HB3	1.77	0.66
45:S2:590:C:H2'	45:S2:591:A:H8	1.58	0.66
45:S2:1390:U:H5''	52:SG:3:ARG:HD3	1.78	0.66
45:S2:1487:A:OP2	46:SA:8:LYS:NZ	2.29	0.66
1:LA:68:C:OP2	1:LA:301:G:N2	2.29	0.65
1:LA:2969:A:N7	4:LD:215:ASN:ND2	2.43	0.65
11:LK:75:VAL:HA	11:LK:78:MET:HE3	1.77	0.65
73:Sb:15:ASN:ND2	73:Sb:72:CYS:O	2.29	0.65
1:LA:3230:G:H4'	15:LO:132:LYS:HD3	1.77	0.65
45:S2:590:C:H2'	45:S2:591:A:C8	2.32	0.65
45:S2:1672:G:H2'	45:S2:1673:G:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:ST:98:ARG:HH21	65:ST:105:ASP:HB3	1.62	0.65
66:SU:38:LEU:HD12	66:SU:38:LEU:C	2.22	0.65
11:LK:23:ARG:HH22	11:LK:42:ASP:N	1.92	0.65
27:La:23:PRO:HG2	27:La:26:GLN:HG3	1.78	0.65
45:S2:539:G:N3	45:S2:540:G:N2	2.44	0.65
71:SZ:20:TYR:HB3	71:SZ:27:PHE:HB2	1.78	0.65
45:S2:447:U:O2'	64:SS:27:TYR:O	2.14	0.65
45:S2:1171:A:H2'	45:S2:1172:G:H8	1.61	0.65
72:Sa:1:MET:HE2	72:Sa:10:GLU:HB2	1.79	0.65
21:LU:71:LYS:NZ	21:LU:73:LYS:HB3	2.11	0.65
45:S2:1045:C:OP1	62:SQ:153:HIS:NE2	2.26	0.65
45:S2:1480:G:O2'	45:S2:1481:C:OP1	2.14	0.65
65:ST:57:ASP:HA	65:ST:106:LEU:HA	1.78	0.65
73:Sb:105:THR:HG22	73:Sb:110:ILE:HG12	1.79	0.65
1:LA:154:U:OP2	36:Lj:103:LYS:NZ	2.21	0.65
45:S2:91:G:OP1	45:S2:397:A:N6	2.30	0.65
45:S2:319:U:H4'	45:S2:323:A:C8	2.32	0.65
10:LJ:139:VAL:O	10:LJ:143:ILE:HD12	1.97	0.65
12:LL:140:THR:HG21	12:LL:148:VAL:HG21	1.79	0.65
19:LS:36:LEU:O	19:LS:40:THR:HG22	1.97	0.65
21:LU:71:LYS:HE3	21:LU:73:LYS:HD3	1.77	0.65
45:S2:307:G:OP2	69:SX:105:LYS:NZ	2.29	0.65
67:SV:48:THR:OG1	67:SV:52:ASN:O	2.15	0.65
19:LS:67:ILE:HD12	19:LS:81:VAL:HG11	1.79	0.65
28:Lb:47:GLU:HB3	28:Lb:69:LYS:HG2	1.77	0.65
47:SB:118:LEU:HD22	47:SB:129:PRO:HB2	1.77	0.65
60:SO:82:SER:OG	60:SO:92:TRP:NE1	2.22	0.65
11:LK:23:ARG:HH21	11:LK:39:LYS:C	2.04	0.65
45:S2:532:U:OP1	68:SW:132:ARG:NH2	2.30	0.65
45:S2:897:C:O2	71:SZ:41:ARG:NH2	2.30	0.65
5:LE:45:SER:HB3	5:LE:181:ILE:HG12	1.80	0.65
8:LH:43:LEU:HD11	8:LH:85:ILE:HG13	1.79	0.65
8:LH:69:PHE:N	8:LH:142:ASP:OD2	2.29	0.65
45:S2:446:A:OP1	64:SS:59:ARG:NE	2.28	0.65
60:SO:34:LEU:CD2	60:SO:44:SER:HB3	2.27	0.65
64:SS:103:TYR:O	64:SS:182:TYR:OH	2.15	0.65
1:LA:177:U:C2	1:LA:241:G:O6	2.51	0.64
1:LA:1390:A:N6	1:LA:1418:A:O2'	2.30	0.64
27:La:99:LEU:HD11	27:La:104:LEU:HD11	1.79	0.64
45:S2:1591:C:H2'	45:S2:1592:A:H8	1.60	0.64
59:SN:134:ASN:ND2	59:SN:138:ARG:O	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2307:G:O2'	1:LA:2310:U:OP2	2.13	0.64
71:SZ:132:ARG:HG3	71:SZ:132:ARG:NH1	2.08	0.64
73:Sb:83:ILE:HD12	73:Sb:122:SER:HB2	1.78	0.64
2:LB:7:G:OP1	7:LG:33:ARG:NH1	2.30	0.64
14:LN:128:ARG:NH1	36:Lj:112:PRO:HG3	2.11	0.64
17:LQ:121[A]:PRO:HA	17:LQ:124[A]:LEU:HD12	1.80	0.64
43:Lq:25:VAL:HG22	43:Lq:72:LEU:HD13	1.80	0.64
45:S2:333:A:N7	67:SV:49:ARG:HD3	2.12	0.64
60:SO:202:LEU:HD23	60:SO:213:SER:HB3	1.79	0.64
62:SQ:110:LEU:HD11	62:SQ:213:ARG:HD2	1.79	0.64
64:SS:45:ILE:HA	64:SS:61:VAL:HG11	1.80	0.64
45:S2:472:U:O2'	45:S2:769:A:N3	2.28	0.64
63:SR:106:ASP:OD1	63:SR:108:ASN:N	2.30	0.64
64:SS:44:LEU:HD12	64:SS:82:TYR:HB3	1.77	0.64
1:LA:2373:A:N3	1:LA:2824:G:O2'	2.26	0.64
45:S2:1297:G:N2	45:S2:1300:A:OP2	2.28	0.64
51:SF:83:GLN:NE2	51:SF:115:THR:O	2.29	0.64
1:LA:1222:G:N2	1:LA:1285:G:O2'	2.27	0.64
18:LR:31:GLU:HA	18:LR:31:GLU:OE2	1.96	0.64
19:LS:40:THR:HG23	19:LS:42:ALA:H	1.62	0.64
45:S2:513:U:H2'	45:S2:514:G:C8	2.33	0.64
60:SO:42:LEU:HB2	60:SO:61:PHE:HB2	1.78	0.64
60:SO:90:ARG:HE	60:SO:102:ARG:HG2	1.63	0.64
64:SS:65:LEU:HD13	64:SS:80:THR:HA	1.80	0.64
64:SS:80:THR:HG23	64:SS:81:THR:HG23	1.80	0.64
7:LG:107:ARG:NH1	7:LG:169:GLY:O	2.30	0.64
10:LJ:74:THR:HG22	10:LJ:164:VAL:HG22	1.79	0.64
1:LA:664:U:H2'	1:LA:665:A:C8	2.32	0.64
23:LW:84:LEU:HD13	23:LW:93:ILE:HB	1.80	0.64
24:LX:120:LYS:NZ	24:LX:124:ASP:OD1	2.29	0.64
29:Lc:104:THR:HG21	29:Lc:112:ILE:HD11	1.79	0.64
45:S2:271:A:H2'	45:S2:272:U:H4'	1.78	0.64
65:ST:31:ARG:HG2	65:ST:32:ILE:H	1.62	0.64
35:Li:80:ARG:HH11	35:Li:80:ARG:HG3	1.63	0.64
45:S2:178:U:OP2	65:ST:191:ARG:NH2	2.30	0.64
45:S2:898:A:N1	45:S2:911:U:O2'	2.31	0.64
5:LE:29:VAL:HG22	5:LE:218:ILE:HD13	1.80	0.63
7:LG:270:LYS:HG3	7:LG:273:ARG:HH21	1.63	0.63
44:Lr:46:THR:OG1	44:Lr:57:CYS:SG	2.54	0.63
47:SB:128:ASN:HB3	47:SB:131:GLN:HB2	1.80	0.63
1:LA:1487:G:H1'	35:Li:6:THR:HG21	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Lb:102:GLU:H	28:Lb:107:ARG:HH21	0.73	0.63
45:S2:1218:G:N2	45:S2:1444:A:OP2	2.29	0.63
45:S2:1474:G:H2'	45:S2:1475:A:H8	1.63	0.63
65:ST:78:THR:HG23	65:ST:92:ARG:HG2	1.81	0.63
67:SV:48:THR:HG21	67:SV:54:LYS:HD2	1.80	0.63
11:LK:92:TYR:HB2	11:LK:142:ASP:HB3	1.80	0.63
44:Lr:59:CYS:SG	44:Lr:60:CYS:N	2.71	0.63
51:SF:50:GLU:OE1	51:SF:82:ARG:NH2	2.31	0.63
68:SW:125:ALA:O	68:SW:129:ILE:HG13	1.99	0.63
1:LA:655:C:H2'	1:LA:656:A:C8	2.34	0.63
1:LA:1203:A:H2'	1:LA:1204:A:C8	2.34	0.63
11:LK:41:ILE:HG21	11:LK:71:VAL:HG11	1.80	0.63
34:Lh:38:PRO:O	34:Lh:42:GLN:HG2	1.99	0.63
45:S2:967:A:OP2	70:SY:124:ARG:NH2	2.31	0.63
45:S2:1081:A:H2	45:S2:1082:C:H42	1.43	0.63
71:SZ:103:ARG:HD2	76:Se:49:ALA:HB2	1.80	0.63
1:LA:1447:G:OP1	18:LR:65:SER:OG	2.15	0.63
9:LI:47:ARG:NH1	9:LI:183:ASP:OD2	2.24	0.63
9:LI:140:SER:O	9:LI:144:ILE:HG13	1.98	0.63
45:S2:1179:G:H21	45:S2:1460:A:H62	1.46	0.63
52:SG:35:CYS:HA	52:SG:38:ILE:HG22	1.80	0.63
1:LA:938:C:OP2	29:Lc:26:ARG:NH1	2.32	0.63
1:LA:2383:C:OP2	17:LQ:85[A]:ARG:NH2	2.30	0.63
61:SP:172:LEU:HG	61:SP:176:LEU:HD11	1.80	0.63
70:SY:33:VAL:HG21	70:SY:66:ILE:HG21	1.81	0.63
71:SZ:117:ASP:OD1	71:SZ:117:ASP:N	2.31	0.63
1:LA:1223:A:N6	1:LA:1285:G:O2'	2.31	0.63
14:LN:185:LYS:O	14:LN:189:GLU:HG2	1.99	0.63
52:SG:34:LEU:HD12	52:SG:35:CYS:N	2.13	0.63
60:SO:19:TRP:HB2	60:SO:38:ARG:HD2	1.80	0.63
1:LA:1027:A:H2'	1:LA:1028:U:H2'	1.80	0.63
60:SO:152:SER:H	60:SO:173:GLY:HA2	1.64	0.63
20:LT:30:SER:O	20:LT:34:GLN:HG2	1.98	0.63
31:Le:34:LEU:HD13	31:Le:59:TYR:HB3	1.80	0.63
52:SG:18:GLU:HG2	52:SG:19:ARG:HG3	1.81	0.63
56:SK:54:VAL:HG23	56:SK:55:PRO:HD3	1.81	0.63
70:SY:33:VAL:O	70:SY:37:ILE:HD13	1.99	0.63
1:LA:1019:G:O6	1:LA:1033:U:O4	2.17	0.62
1:LA:3295:A:H2'	1:LA:3296:A:C8	2.34	0.62
45:S2:299:A:OP1	64:SS:30:ARG:NH2	2.30	0.62
45:S2:1099:U:OP1	73:Sb:71:LYS:NZ	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1288:G:O2'	45:S2:1422:A:N6	2.32	0.62
1:LA:655:C:H2'	1:LA:656:A:H8	1.64	0.62
1:LA:1014:U:O2	1:LA:1016:C:N4	2.30	0.62
1:LA:1604:G:H4'	1:LA:1835:A:H4'	1.82	0.62
1:LA:2546:C:N4	1:LA:2547:A:H62	1.98	0.62
11:LK:102:ASN:HB2	11:LK:113:GLU:OE2	1.99	0.62
28:Lb:68:ILE:O	28:Lb:115:LYS:NZ	2.30	0.62
1:LA:69:C:OP1	16:LP:178:HIS:ND1	2.24	0.62
45:S2:142:G:N2	45:S2:173:A:N1	2.40	0.62
45:S2:1331:A:OP1	52:SG:45:ARG:NH2	2.30	0.62
45:S2:1594:G:OP2	45:S2:1596:C:N4	2.32	0.62
60:SO:126:SER:OG	60:SO:127:ARG:N	2.24	0.62
1:LA:112:U:O2'	1:LA:113:C:O5'	2.18	0.62
3:LC:142:C:OP1	16:LP:38:ARG:NH1	2.32	0.62
31:Le:27:TYR:OH	31:Le:55:GLU:OE2	2.16	0.62
45:S2:871:G:H2'	45:S2:872:G:C8	2.34	0.62
60:SO:131:ILE:HG23	60:SO:144:LEU:HB2	1.80	0.62
1:LA:1237:G:C6	1:LA:1251:A:N6	2.67	0.62
5:LE:277:SER:OG	5:LE:280:HIS:NE2	2.31	0.62
45:S2:106:U:OP1	67:SV:8:ARG:NH2	2.33	0.62
58:SM:24:CYS:SG	58:SM:26:SER:OG	2.58	0.62
1:LA:498:A:O2'	1:LA:3273:A:N1	2.29	0.62
1:LA:649:A:OP2	1:LA:2868:U:O2'	2.17	0.62
1:LA:1717:U:H2'	1:LA:1718:G:C8	2.35	0.62
19:LS:122:ILE:HG23	19:LS:126:GLN:HB2	1.81	0.62
45:S2:959:U:O2	77:Sf:30:SER:OG	2.17	0.62
45:S2:1061:A:N6	77:Sf:75:GLU:OE2	2.29	0.62
45:S2:1445:G:N2	59:SN:87:THR:OG1	2.33	0.62
16:LP:155:VAL:O	16:LP:162:ARG:NH2	2.32	0.62
50:SE:28:MET:HG2	50:SE:29:SER:N	2.15	0.62
75:Sd:38:ASP:HA	75:Sd:41:ARG:HD2	1.82	0.62
75:Sd:83:LYS:HE2	75:Sd:96:LEU:HB3	1.82	0.62
1:LA:3092:C:O2'	1:LA:3094:A:OP2	2.17	0.62
1:LA:3313:U:OP1	5:LE:173:GLN:NE2	2.32	0.62
60:SO:106:HIS:HD1	60:SO:126:SER:CB	2.13	0.62
60:SO:167:VAL:HG13	60:SO:183:LEU:HD21	1.82	0.62
64:SS:153:ASN:OD1	65:ST:215:ARG:NH1	2.33	0.62
67:SV:17:LYS:NZ	67:SV:18:ARG:O	2.33	0.62
78:Sg:50:VAL:HG12	78:Sg:54:ARG:HG2	1.81	0.62
1:LA:2176:U:OP1	4:LD:54:ARG:NH2	2.29	0.62
1:LA:2522:G:O6	4:LD:72:ARG:NH2	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LH:175:LYS:O	15:LO:117:ARG:NH2	2.32	0.62
13:LM:107:ASP:OD1	13:LM:107:ASP:N	2.31	0.62
35:Li:91:ARG:O	35:Li:95:ILE:HG23	1.99	0.62
36:Lj:30:GLU:O	36:Lj:34:GLN:HG3	2.00	0.62
36:Lj:76:GLN:NE2	36:Lj:76:GLN:CA	2.56	0.62
39:Lm:17:ARG:NH1	39:Lm:52:TYR:OH	2.32	0.62
45:S2:385:A:H5''	67:SV:22:ARG:HG2	1.82	0.62
62:SQ:32:ILE:HA	62:SQ:96:LEU:HD12	1.82	0.62
1:LA:900:G:H1'	1:LA:1589:A:N6	2.14	0.61
47:SB:162:VAL:HG12	57:SL:44:VAL:HG13	1.82	0.61
49:SD:65:SER:HA	49:SD:72:ILE:HD11	1.82	0.61
1:LA:1385:C:HO2'	8:LH:2:THR:N	1.98	0.61
45:S2:591:A:H2'	45:S2:592:A:C8	2.35	0.61
45:S2:763:G:O2'	45:S2:764:U:OP1	2.18	0.61
47:SB:98:MET:HE2	47:SB:107:LYS:HG3	1.83	0.61
60:SO:109:ASP:HB2	60:SO:127:ARG:HD2	1.81	0.61
1:LA:356:C:HO2'	1:LA:357:A:H8	1.47	0.61
1:LA:2344:U:H2'	1:LA:2345:A:C8	2.35	0.61
1:LA:2878:G:H5''	5:LE:5:LYS:HE2	1.82	0.61
1:LA:3002:C:O2'	5:LE:180:GLU:OE2	2.15	0.61
1:LA:3334:U:H4'	1:LA:3335:A:H5'	1.82	0.61
4:LD:3:ARG:HB2	4:LD:207:VAL:HG22	1.81	0.61
6:LF:289:ILE:O	6:LF:292:SER:OG	2.18	0.61
9:LI:39:GLU:O	9:LI:43:ILE:HG13	2.00	0.61
20:LT:85:ARG:NH1	20:LT:85:ARG:HB2	2.16	0.61
30:Ld:16:ALA:O	30:Ld:20:GLY:CA	2.46	0.61
35:Li:41:ARG:HA	35:Li:56:THR:HG22	1.81	0.61
39:Lm:9:LYS:O	39:Lm:13:GLU:OE1	2.18	0.61
66:SU:56:LYS:HB2	66:SU:88:ARG:HG2	1.82	0.61
68:SW:111:THR:OG1	68:SW:115:LYS:HE2	2.00	0.61
9:LI:110:ARG:HG3	9:LI:113:SER:HB2	1.81	0.61
45:S2:885:G:H2'	45:S2:886:U:C6	2.34	0.61
46:SA:40:ARG:HB2	46:SA:47:GLU:HG3	1.82	0.61
64:SS:211:LYS:CE	64:SS:215:ASP:HA	2.31	0.61
75:Sd:21:LYS:HG2	75:Sd:75:VAL:HG12	1.81	0.61
1:LA:1624:G:O2'	1:LA:1643:A:N1	2.33	0.61
1:LA:3016:A:H2'	1:LA:3017:A:C8	2.34	0.61
18:LR:88:VAL:O	18:LR:92:GLN:HG2	2.01	0.61
45:S2:859:A:C5	70:SY:73:ARG:HD3	2.36	0.61
46:SA:172:THR:O	46:SA:173:ARG:NH1	2.29	0.61
44:Lr:27:LYS:O	44:Lr:31:ILE:HG12	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Lr:84:ARG:O	44:Lr:88:GLU:HG2	2.01	0.61
45:S2:14:C:C5'	63:SR:203:LYS:HE2	2.29	0.61
47:SB:146:THR:O	57:SL:45:LYS:NZ	2.32	0.61
3:LC:103:G:OP2	3:LC:105:A:O2'	2.18	0.61
13:LM:10:ARG:O	13:LM:133:ARG:NH1	2.33	0.61
46:SA:18:TYR:HE2	58:SM:49:ASP:HB2	1.65	0.61
61:SP:154:GLU:OE2	72:Sa:61:SER:O	2.19	0.61
65:ST:126:ASP:OD1	65:ST:126:ASP:N	2.32	0.61
1:LA:216:G:OP1	27:La:16:ARG:NH1	2.33	0.61
27:La:63:LYS:HD2	27:La:85:VAL:HG13	1.83	0.61
60:SO:90:ARG:HH21	60:SO:102:ARG:HE	1.47	0.61
62:SQ:8:ARG:HH21	62:SQ:11:LYS:HB2	1.65	0.61
64:SS:86:PHE:CZ	64:SS:87:MET:HE2	2.36	0.61
74:Sc:56:LYS:HA	74:Sc:70:LYS:HE3	1.82	0.61
1:LA:3118:C:H4'	41:Lo:106:ARG:HH22	1.65	0.61
16:LP:156:HIS:HB3	16:LP:159:ARG:HD2	1.82	0.61
29:Lc:132:LYS:O	29:Lc:136:GLU:HG3	2.01	0.61
34:Lh:67:MET:HE1	34:Lh:90:PRO:HD3	1.83	0.61
37:Lk:66:GLU:OE1	37:Lk:91:ASN:ND2	2.28	0.61
45:S2:325:G:H4'	69:SX:83:THR:HG21	1.82	0.61
45:S2:1477:G:H2'	45:S2:1478:G:C8	2.35	0.61
45:S2:1502:G:N7	54:SI:102:ARG:NH2	2.47	0.61
1:LA:1632:A:OP1	28:Lb:48:ARG:NH2	2.34	0.60
11:LK:129:ARG:NH2	11:LK:156:GLN:OE1	2.31	0.60
45:S2:163:G:OP2	45:S2:163:G:N2	2.33	0.60
45:S2:643:G:N1	45:S2:691:C:N3	2.34	0.60
45:S2:918:U:H2'	45:S2:919:A:C8	2.36	0.60
45:S2:924:A:H2'	45:S2:925:G:C8	2.36	0.60
1:LA:177:U:H3'	1:LA:178:U:H6	1.65	0.60
2:LB:72:A:O2'	2:LB:74:C:OP1	2.17	0.60
3:LC:143:U:OP1	16:LP:38:ARG:NH2	2.33	0.60
20:LT:105:LEU:HD22	20:LT:135:LYS:HG3	1.83	0.60
45:S2:615:A:O2'	45:S2:621:A:N1	2.34	0.60
66:SU:49:ILE:HD12	66:SU:172:VAL:HG12	1.82	0.60
79:Ta:25:U:H2'	79:Ta:26:C:H5''	1.83	0.60
1:LA:688:G:H21	1:LA:692:A:H2	1.48	0.60
16:LP:110:ALA:HB1	16:LP:113:LEU:HD23	1.83	0.60
19:LS:99:THR:O	19:LS:119:GLY:HA3	2.00	0.60
45:S2:278:U:OP1	45:S2:279:G:N2	2.34	0.60
72:Sa:32:VAL:HG22	72:Sa:60:ARG:HD3	1.83	0.60
75:Sd:26:ASP:HB3	75:Sd:70:VAL:HG22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2256:A:N1	79:Ta:38:A:O2'	2.30	0.60
28:Lb:96:VAL:HG12	28:Lb:110:ALA:HB1	1.83	0.60
45:S2:932:U:O2	76:Se:32:LYS:NZ	2.33	0.60
45:S2:1294:G:O2'	61:SP:108:THR:OG1	2.19	0.60
73:Sb:28:ARG:HD3	73:Sb:60:LYS:HE2	1.83	0.60
1:LA:1724:U:H1'	1:LA:1725:C:C6	2.37	0.60
1:LA:3330:A:OP2	5:LE:376:LYS:NZ	2.35	0.60
26:LZ:100:LYS:NZ	26:LZ:100:LYS:HB2	2.17	0.60
28:Lb:101:PHE:O	28:Lb:102:GLU:HG2	2.01	0.60
33:Lg:16:LYS:HE3	33:Lg:18:LYS:HG2	1.84	0.60
33:Lg:86:THR:HG22	33:Lg:115:LEU:HD13	1.83	0.60
63:SR:123:GLY:HA2	63:SR:126:ARG:HE	1.66	0.60
1:LA:2099:A:O2'	1:LA:2100:A:N7	2.32	0.60
9:LI:185:ILE:O	9:LI:189:ILE:HG22	2.02	0.60
45:S2:1450:U:O2'	58:SM:7:TRP:O	2.14	0.60
80:Tb:61:U:H5''	80:Tb:62:C:H5	1.66	0.60
1:LA:182:U:O4	1:LA:234:G:O6	2.18	0.60
1:LA:407:A:C2	3:LC:17:A:H1'	2.37	0.60
1:LA:1062:A:H5''	1:LA:1063:G:H5'	1.82	0.60
1:LA:1657:C:O2'	1:LA:1797:A:OP2	2.17	0.60
1:LA:1721:U:OP2	20:LT:124:TYR:OH	2.17	0.60
1:LA:3315:G:OP2	5:LE:116:ARG:NH2	2.35	0.60
13:LM:49:LYS:HB2	13:LM:62:ASN:HA	1.83	0.60
17:LQ:189[A]:ASP:O	17:LQ:193[A]:GLN:HG2	2.02	0.60
27:La:86:THR:HG22	27:La:96:PRO:HA	1.84	0.60
47:SB:69:PHE:HD2	51:SF:50:GLU:HG2	1.67	0.60
51:SF:9:THR:HG21	51:SF:88:GLY:HA2	1.82	0.60
54:SI:57:ARG:NH1	54:SI:101:ASN:OD1	2.35	0.60
58:SM:32:ARG:NH1	58:SM:37:ASN:OD1	2.34	0.60
1:LA:1222:G:H22	1:LA:1285:G:HO2'	1.48	0.60
7:LG:258:LYS:O	7:LG:265:TYR:OH	2.15	0.60
45:S2:1611:A:O2'	47:SB:95:ASN:O	2.20	0.60
53:SH:81:ILE:HG22	53:SH:83:ALA:H	1.66	0.60
60:SO:110:VAL:HA	60:SO:126:SER:HB2	1.82	0.60
60:SO:221:MET:HB3	60:SO:223:TRP:CZ3	2.36	0.60
66:SU:32:PRO:HA	66:SU:35:LYS:HB2	1.83	0.60
67:SV:116:HIS:CE1	67:SV:146:ARG:HD3	2.35	0.60
1:LA:12:A:H2'	1:LA:13:A:C8	2.37	0.60
1:LA:2537:U:H5'	62:SQ:229:MET:HE3	1.79	0.60
5:LE:108:GLU:HG2	5:LE:137:TYR:CD1	2.36	0.60
21:LU:8:GLN:HB3	21:LU:64:ILE:HD11	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:209:U:O3'	67:SV:170:SER:OG	2.19	0.60
45:S2:610:G:OP2	74:Sc:19:ARG:NE	2.34	0.60
45:S2:939:A:H2'	45:S2:940:A:C8	2.37	0.60
49:SD:81:ASP:O	49:SD:83:GLU:N	2.33	0.60
70:SY:34:ILE:HD11	70:SY:67:THR:HG21	1.83	0.60
15:LO:109:ARG:HD3	17:LQ:199[A]:TYR:CE1	2.37	0.60
39:Lm:2:ALA:N	39:Lm:51:LEU:O	2.35	0.60
47:SB:157:ARG:NH1	47:SB:224:ASN:HD22	1.99	0.60
48:SC:23:ALA:O	48:SC:64:TYR:HB2	2.02	0.60
56:SK:82:HIS:NE2	56:SK:86:GLU:OE2	2.34	0.60
69:SX:78:THR:HG22	69:SX:84:ILE:HG21	1.84	0.60
1:LA:341:G:O6	6:LF:194:TYR:CD2	2.55	0.59
1:LA:2561:A:OP2	1:LA:2580:A:N6	2.33	0.59
36:Lj:10:ARG:NH1	36:Lj:60:GLU:OE1	2.35	0.59
45:S2:1217:A:C8	48:SC:1:MET:HE1	2.37	0.59
68:SW:32:GLY:HA3	78:Sg:40:TYR:CG	2.37	0.59
1:LA:341:G:C5	6:LF:194:TYR:CE2	2.79	0.59
3:LC:128:U:OP1	3:LC:129:C:N4	2.29	0.59
6:LF:280:ILE:HD12	19:LS:104:LEU:HD22	1.83	0.59
15:LO:40:ASP:OD1	15:LO:41:GLN:N	2.34	0.59
23:LW:22:PRO:HB2	23:LW:28:PHE:HB2	1.84	0.59
45:S2:821:U:H3	45:S2:852:C:H42	0.70	0.59
56:SK:71:ILE:HD12	56:SK:75:LEU:HB3	1.84	0.59
60:SO:240:VAL:HG22	60:SO:256:THR:HG22	1.84	0.59
1:LA:358:G:N2	1:LA:361:A:OP2	2.33	0.59
1:LA:2213:A:H2'	1:LA:2214:A:C8	2.36	0.59
3:LC:58:G:O6	38:Ll:63:ARG:NH1	2.35	0.59
12:LL:72:ALA:HB2	12:LL:155:ALA:HB2	1.83	0.59
12:LL:102:MET:SD	12:LL:112:GLN:NE2	2.75	0.59
45:S2:1319:A:P	52:SG:67:ARG:HH22	2.25	0.59
47:SB:80:LYS:HG3	47:SB:81:ARG:H	1.67	0.59
62:SQ:35:PRO:O	62:SQ:41:ARG:NH1	2.36	0.59
65:ST:78:THR:HG22	65:ST:79:LYS:H	1.66	0.59
69:SX:55:ASP:OD2	69:SX:58:CYS:HB2	2.02	0.59
1:LA:2432:A:H2	16:LP:125:SER:OG	1.84	0.59
2:LB:112:G:H2'	2:LB:113:C:C6	2.38	0.59
12:LL:44:ASP:OD1	12:LL:181:TYR:OH	2.18	0.59
45:S2:555:A:O2'	45:S2:556:A:O5'	2.19	0.59
45:S2:1605:G:OP2	51:SF:127:LYS:NZ	2.28	0.59
70:SY:67:THR:HG22	70:SY:68:GLY:H	1.67	0.59
1:LA:937:G:H5''	29:Lc:29:PRO:HA	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2382:G:N7	17:LQ:91[A]:LYS:NZ	2.50	0.59
1:LA:2522:G:O6	4:LD:68:LYS:NZ	2.31	0.59
1:LA:3107:U:H2'	1:LA:3108:G:C8	2.37	0.59
32:Lf:74:ARG:NH1	32:Lf:109:VAL:HG11	2.17	0.59
45:S2:1182:U:H5	45:S2:1185:U:H5''	1.67	0.59
46:SA:127:MET:HG3	46:SA:154:ASP:OD2	2.01	0.59
49:SD:45:LEU:HD13	59:SN:102:VAL:HG23	1.83	0.59
52:SG:36:ASP:HB2	52:SG:47:ARG:HH11	1.67	0.59
61:SP:28:ASN:HA	61:SP:46:HIS:HE1	1.66	0.59
1:LA:1405:U:OP2	33:Lg:59:SER:OG	2.20	0.59
45:S2:405:C:O2'	65:ST:92:ARG:O	2.19	0.59
45:S2:522:U:H5''	75:Sd:37:LYS:HG3	1.84	0.59
45:S2:594:A:OP2	68:SW:38:ASN:ND2	2.31	0.59
45:S2:843:U:H2'	45:S2:844:A:C8	2.38	0.59
51:SF:9:THR:HB	51:SF:87:LYS:HD3	1.85	0.59
62:SQ:207:LEU:C	62:SQ:210:ILE:HD11	2.27	0.59
1:LA:2759:U:H5''	1:LA:2760:C:H5'	1.84	0.59
9:LI:87:VAL:HG11	9:LI:243:MET:HE1	1.85	0.59
10:LJ:50:VAL:HG21	26:LZ:27:ARG:HD3	1.85	0.59
11:LK:93:VAL:HG22	41:Lo:82:LEU:HD12	1.84	0.59
45:S2:699:U:O4	45:S2:737:A:N6	2.35	0.59
45:S2:1673:G:C6	45:S2:1728:A:N1	2.71	0.59
47:SB:72:HIS:CD2	47:SB:107:LYS:HD3	2.37	0.59
50:SE:49:MET:N	50:SE:49:MET:SD	2.76	0.59
1:LA:1262:G:O2'	1:LA:1264:G:OP1	2.19	0.59
45:S2:513:U:H5'	68:SW:133:HIS:CE1	2.37	0.59
51:SF:39:VAL:C	51:SF:41:PRO:HD3	2.27	0.59
64:SS:45:ILE:HD12	64:SS:61:VAL:HG21	1.85	0.59
1:LA:1916:U:H5''	20:LT:85:ARG:HH12	1.67	0.59
1:LA:2357:A:H2'	1:LA:2358:A:C8	2.37	0.59
12:LL:76:MET:CE	12:LL:148:VAL:HG13	2.33	0.59
52:SG:34:LEU:HD12	52:SG:34:LEU:C	2.27	0.59
60:SO:13:LEU:CB	60:SO:45:TRP:CZ3	2.63	0.59
61:SP:60:ALA:HB1	61:SP:144:ILE:HD13	1.83	0.59
68:SW:44:ARG:O	68:SW:48:GLN:HG3	2.02	0.59
1:LA:2448:G:O2'	1:LA:2449:A:OP1	2.19	0.59
1:LA:2943:G:OP2	5:LE:2:SER:OG	2.21	0.59
20:LT:162:ARG:CZ	45:S2:815:G:H1'	2.33	0.59
45:S2:803:A:O2'	45:S2:804:A:OP2	2.21	0.59
45:S2:1486:G:N2	45:S2:1522:U:O4	2.36	0.59
45:S2:1502:G:O6	54:SI:102:ARG:NH1	2.25	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1672:G:H2'	45:S2:1673:G:H8	1.66	0.59
48:SC:24:LYS:HD2	48:SC:25:LYS:N	2.18	0.59
57:SL:18:ARG:NH1	57:SL:23:GLY:O	2.36	0.59
65:ST:37:ASP:HB3	65:ST:39:GLU:OE1	2.03	0.59
68:SW:113:VAL:HG13	68:SW:118:LEU:HB2	1.85	0.59
4:LD:249:SER:OG	4:LD:250:GLN:N	2.36	0.58
10:LJ:76:ALA:HA	10:LJ:79:GLN:HG2	1.84	0.58
45:S2:931:C:H5''	62:SQ:116:LYS:HB3	1.84	0.58
56:SK:95:HIS:ND1	56:SK:96:SER:O	2.36	0.58
61:SP:36:TYR:OH	72:Sa:66:ASP:OD2	2.21	0.58
69:SX:109:VAL:HG23	69:SX:137:PHE:HB2	1.83	0.58
73:Sb:6:VAL:HG13	73:Sb:29:PRO:HD2	1.83	0.58
1:LA:426:G:H5'	33:Lg:50:ILE:HG22	1.85	0.58
1:LA:974:G:H5'	19:LS:16:ARG:HG3	1.84	0.58
1:LA:1596:C:H2'	1:LA:1597:C:C6	2.37	0.58
1:LA:2572:C:H3'	1:LA:2573:G:H4'	1.85	0.58
11:LK:89:LYS:HB2	11:LK:183:HIS:HB3	1.84	0.58
12:LL:176:LEU:HB3	12:LL:180:GLU:OE2	2.03	0.58
14:LN:92:THR:HG22	36:Lj:114:ARG:HG2	1.85	0.58
45:S2:329:G:H2'	45:S2:330:G:H8	1.68	0.58
45:S2:386:G:OP2	67:SV:25:ARG:NH2	2.36	0.58
57:SL:60:GLU:O	71:SZ:61:MET:HE1	2.03	0.58
63:SR:41:LEU:HD11	63:SR:56:ILE:CD1	2.33	0.58
8:LH:172:HIS:ND1	34:Lh:40:ASP:OD1	2.32	0.58
33:Lg:107:VAL:HG13	33:Lg:111:ARG:HH21	1.67	0.58
45:S2:1217:A:H5''	48:SC:1:MET:HE3	1.85	0.58
46:SA:34:TYR:HE1	46:SA:37:VAL:HG13	1.67	0.58
46:SA:125:TYR:O	46:SA:129:SER:OG	2.19	0.58
54:SI:31:PRO:HB3	54:SI:103:LYS:HD3	1.84	0.58
56:SK:50:ILE:O	56:SK:54:VAL:HG22	2.03	0.58
70:SY:61:THR:O	70:SY:62:GLN:HG3	2.04	0.58
75:Sd:98:GLU:N	75:Sd:98:GLU:OE1	2.35	0.58
3:LC:154:C:H5''	10:LJ:181:LYS:HG2	1.85	0.58
7:LG:91:GLY:O	7:LG:94:ASN:ND2	2.36	0.58
24:LX:15:LEU:HD13	24:LX:51:ALA:HB3	1.85	0.58
45:S2:322:G:H4'	45:S2:323:A:H5'	1.85	0.58
53:SH:94:ASP:OD2	53:SH:98:TYR:OH	2.16	0.58
55:SJ:42:VAL:O	55:SJ:52:LYS:NZ	2.35	0.58
64:SS:57:ASN:O	64:SS:61:VAL:HG23	2.03	0.58
1:LA:736:A:C5	1:LA:737:G:H1'	2.38	0.58
1:LA:1667:A:H2'	1:LA:1668:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2107:A:H2	1:LA:3344:A:H8	1.49	0.58
19:LS:147:ARG:HB2	19:LS:150:VAL:HG13	1.84	0.58
45:S2:29:U:H2'	45:S2:30:G:H8	1.69	0.58
45:S2:354:C:H5''	67:SV:16:ALA:HB2	1.85	0.58
53:SH:143:ARG:O	53:SH:144:ARG:NH2	2.37	0.58
65:ST:39:GLU:OE1	65:ST:39:GLU:N	2.37	0.58
78:Sg:37:ARG:O	78:Sg:41:THR:HG23	2.02	0.58
1:LA:2853:A:H5'	12:LL:63:GLU:HB3	1.86	0.58
45:S2:399:A:H4'	64:SS:3:ARG:HG2	1.85	0.58
45:S2:1533:C:OP2	56:SK:77:ARG:NH2	2.28	0.58
62:SQ:122:GLU:HG3	62:SQ:140:ILE:HD12	1.85	0.58
77:Sf:31:TYR:HE1	77:Sf:33:LEU:HD23	1.69	0.58
1:LA:675:C:O2'	1:LA:679:U:OP1	2.21	0.58
1:LA:1235:U:H4'	1:LA:1236:G:H2'	1.86	0.58
1:LA:1834:U:OP2	40:Ln:10:LYS:NZ	2.35	0.58
8:LH:60:ASP:OD1	8:LH:62:THR:OG1	2.21	0.58
66:SU:43:PHE:HE2	66:SU:46:ILE:HD11	1.69	0.58
69:SX:72:THR:HG23	69:SX:124:THR:HG22	1.84	0.58
71:SZ:16:VAL:O	71:SZ:30:VAL:HA	2.04	0.58
1:LA:1161:G:O2'	33:Lg:54:LYS:HD2	2.03	0.58
1:LA:1679:A:OP1	23:LW:94:ARG:NH1	2.36	0.58
1:LA:3318:G:O2'	1:LA:3319:U:O3'	2.21	0.58
21:LU:74:ASN:HB2	21:LU:129:ILE:HG23	1.86	0.58
45:S2:567:A:H1'	78:Sg:14:VAL:HG13	1.85	0.58
45:S2:1217:A:C5'	48:SC:1:MET:HE3	2.34	0.58
56:SK:46:LYS:O	56:SK:50:ILE:HG23	2.04	0.58
64:SS:136:VAL:HG21	64:SS:148:ARG:HH21	1.68	0.58
69:SX:123:VAL:HG12	69:SX:142:VAL:HG13	1.85	0.58
1:LA:662:U:H2'	1:LA:663:C:C6	2.39	0.58
1:LA:715:A:H8	29:Lc:115:LYS:HG3	1.69	0.58
8:LH:56:LYS:HD3	8:LH:98:VAL:HG13	1.85	0.58
11:LK:138:THR:O	11:LK:139:ASN:ND2	2.37	0.58
45:S2:164:A:C1'	65:ST:13:GLN:OE1	2.52	0.58
45:S2:407:A:H2'	45:S2:408:C:C6	2.39	0.58
45:S2:1436:A:OP2	46:SA:27:ARG:NH1	2.37	0.58
47:SB:146:THR:HG21	47:SB:157:ARG:HD2	1.85	0.58
1:LA:341:G:O6	6:LF:194:TYR:HD2	1.87	0.58
1:LA:525:C:OP2	15:LO:77:ARG:NH1	2.36	0.58
1:LA:799:G:O2'	14:LN:18:TRP:NE1	2.30	0.58
1:LA:2514:U:OP2	1:LA:2586:G:N2	2.36	0.58
4:LD:33:ASP:O	4:LD:37:ARG:NH2	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LK:50:ASN:HD21	15:LO:4:ASP:HA	1.68	0.58
20:LT:154:ALA:O	20:LT:157:GLU:HG3	2.04	0.58
35:Li:57:LEU:HB3	35:Li:61:GLN:HB3	1.86	0.58
45:S2:187:G:N7	67:SV:138:ASN:ND2	2.52	0.58
45:S2:800:U:H2'	45:S2:801:G:C8	2.39	0.58
45:S2:1055:U:O4	45:S2:1064:G:O6	2.21	0.58
45:S2:1069:A:OP1	61:SP:28:ASN:ND2	2.37	0.58
63:SR:80:VAL:HG11	63:SR:125:ILE:HD12	1.86	0.58
1:LA:1696:A:H2'	1:LA:1697:A:C8	2.39	0.57
1:LA:3000:A:H5''	5:LE:120:LYS:HE2	1.86	0.57
4:LD:144:ASN:HB2	4:LD:160:SER:HB2	1.86	0.57
8:LH:112:THR:HG23	8:LH:115:GLU:H	1.69	0.57
67:SV:84:HIS:NE2	67:SV:97:THR:OG1	2.37	0.57
80:Tb:63:C:H2'	80:Tb:64:G:C8	2.39	0.57
1:LA:19:U:H2'	1:LA:20:A:C8	2.38	0.57
1:LA:127:G:H2'	1:LA:128:G:H8	1.68	0.57
45:S2:752:A:N6	45:S2:798:C:N3	2.52	0.57
47:SB:93:LEU:HD12	47:SB:172:ILE:HG23	1.84	0.57
54:SI:112:GLY:O	54:SI:125:SER:OG	2.15	0.57
60:SO:170:ILE:HG12	60:SO:211:ILE:CD1	2.34	0.57
64:SS:252:ARG:NH1	64:SS:253:ASP:OD1	2.36	0.57
1:LA:507:U:H2'	1:LA:508:U:C6	2.39	0.57
1:LA:1333:C:H5''	9:LI:110:ARG:NH1	2.17	0.57
1:LA:1534:A:H2'	1:LA:1535:A:C8	2.40	0.57
1:LA:2206:G:H4'	62:SQ:11:LYS:HE3	1.84	0.57
6:LF:144:LYS:NZ	6:LF:144:LYS:HB3	2.20	0.57
8:LH:54:TYR:CE1	8:LH:63:LEU:HG	2.38	0.57
16:LP:9:GLU:HG3	37:Lk:40:VAL:HG12	1.86	0.57
31:Le:66:LYS:NZ	31:Le:101:LEU:O	2.37	0.57
45:S2:407:A:H2'	45:S2:408:C:H6	1.68	0.57
45:S2:1471:A:H2	45:S2:1474:G:N3	2.02	0.57
46:SA:66:ILE:HD11	46:SA:86:LEU:HB3	1.87	0.57
58:SM:19:ARG:HD3	58:SM:32:ARG:NH2	2.19	0.57
66:SU:38:LEU:HB2	66:SU:41:LEU:HD12	1.86	0.57
67:SV:110:ARG:NH1	67:SV:160:PHE:O	2.32	0.57
68:SW:77:ILE:HG12	68:SW:96:VAL:HG21	1.85	0.57
77:Sf:33:LEU:HD13	77:Sf:35:VAL:HG23	1.85	0.57
1:LA:94:G:H2'	1:LA:95:A:C8	2.40	0.57
1:LA:178:U:H2'	1:LA:179:C:C6	2.40	0.57
1:LA:1009:A:N6	1:LA:1041:U:H3	2.02	0.57
1:LA:1119:C:H2'	1:LA:1120:A:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1809:A:OP2	28:Lb:65:ARG:NH1	2.35	0.57
5:LE:304:THR:HG22	5:LE:305:ILE:N	2.18	0.57
12:LL:76:MET:HE2	12:LL:148:VAL:HG13	1.86	0.57
36:Lj:27:GLU:OE2	36:Lj:43:LYS:NZ	2.38	0.57
45:S2:759:U:H2'	45:S2:760:A:C8	2.39	0.57
63:SR:87:GLN:OE1	63:SR:96:THR:OG1	2.23	0.57
1:LA:689:U:O4	6:LF:209:TYR:OH	2.16	0.57
6:LF:175:HIS:O	6:LF:179:LEU:HD22	2.03	0.57
10:LJ:146:LYS:HD2	10:LJ:173:MET:HB3	1.85	0.57
11:LK:112:ILE:HB	11:LK:126:VAL:HG22	1.86	0.57
17:LQ:84[A]:LEU:HD22	17:LQ:102[A]:LEU:HD22	1.87	0.57
26:LZ:115:ARG:NH2	26:LZ:119:THR:OG1	2.29	0.57
29:Lc:36:GLY:HA3	29:Lc:40:HIS:CE1	2.39	0.57
45:S2:1027:A:OP1	45:S2:1789:G:O2'	2.19	0.57
45:S2:1628:U:H2'	45:S2:1629:G:C8	2.40	0.57
55:SJ:33:GLN:HA	55:SJ:36:ASN:ND2	2.19	0.57
62:SQ:27:LYS:NZ	62:SQ:49:ASN:OD1	2.33	0.57
67:SV:184:LEU:HB2	67:SV:189:LEU:HD23	1.85	0.57
68:SW:59:LEU:HD21	68:SW:72:GLU:HB3	1.86	0.57
75:Sd:27:VAL:HG21	75:Sd:35:VAL:HG11	1.86	0.57
1:LA:512:U:O2	1:LA:579:G:N2	2.30	0.57
1:LA:1727:G:OP1	44:Lr:44:LYS:NZ	2.36	0.57
27:La:116:LYS:O	27:La:120:GLN:HG2	2.05	0.57
34:Lh:51:TYR:HD2	34:Lh:67:MET:HE2	1.70	0.57
45:S2:1301:U:P	63:SR:97:ARG:NH2	2.77	0.57
45:S2:1474:G:H2'	45:S2:1475:A:C8	2.39	0.57
45:S2:1591:C:H2'	45:S2:1592:A:C8	2.37	0.57
64:SS:60:GLU:HG2	75:Sd:18:LEU:HD21	1.85	0.57
1:LA:1144:U:OP1	1:LA:1367:G:O2'	2.20	0.57
1:LA:2758:A:O2'	1:LA:2759:U:OP1	2.20	0.57
1:LA:3343:G:H21	1:LA:3362:A:H2	1.51	0.57
13:LM:52:TYR:HA	13:LM:61:ARG:HG3	1.86	0.57
29:Lc:99:ALA:HB3	29:Lc:124:ILE:HD12	1.86	0.57
39:Lm:61:LYS:O	39:Lm:64:LYS:HG2	2.05	0.57
1:LA:149:U:OP2	16:LP:49:ARG:NH1	2.36	0.57
1:LA:268:A:C5	16:LP:12:ARG:HG2	2.40	0.57
1:LA:532:A:H2'	1:LA:533:A:C8	2.39	0.57
1:LA:3153:U:OP2	1:LA:3293:U:O2'	2.20	0.57
7:LG:181:PRO:HD2	7:LG:195:LEU:HD13	1.87	0.57
17:LQ:56[A]:ASP:HA	17:LQ:59[A]:ARG:NH1	2.20	0.57
45:S2:1681:A:N6	45:S2:1720:G:O2'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SY:84:ILE:HG22	70:SY:135:LEU:HD21	1.86	0.57
8:LH:152:THR:HB	8:LH:155:LEU:HD12	1.86	0.57
45:S2:623:A:O2'	45:S2:624:G:OP1	2.21	0.57
45:S2:884:A:H2'	45:S2:885:G:C8	2.40	0.57
47:SB:214:LYS:HD2	47:SB:214:LYS:C	2.30	0.57
60:SO:115:ILE:HG22	60:SO:122:ILE:HD12	1.87	0.57
64:SS:256:ARG:NH2	68:SW:78:ARG:CZ	2.68	0.57
79:Ta:31:G:N2	79:Ta:41:C:C2	2.70	0.57
1:LA:792:G:H2'	1:LA:793:C:C6	2.40	0.57
1:LA:2433:U:H1'	16:LP:125:SER:HB2	1.86	0.57
45:S2:539:G:O2'	45:S2:540:G:OP2	2.19	0.57
45:S2:1500:C:OP1	54:SI:106:GLN:NE2	2.33	0.57
56:SK:88:ILE:HG13	56:SK:89:ILE:N	2.19	0.57
60:SO:89:LEU:HD13	60:SO:134:TRP:HZ3	1.70	0.57
62:SQ:209:ASN:OD1	62:SQ:211:HIS:NE2	2.36	0.57
71:SZ:61:MET:HG3	71:SZ:104:ALA:HB2	1.87	0.57
72:Sa:62:ARG:HH11	72:Sa:62:ARG:HG3	1.69	0.57
1:LA:1597:C:H5'	1:LA:1696:A:H1'	1.87	0.56
3:LC:57:C:H4'	3:LC:63:G:N7	2.19	0.56
12:LL:36:LEU:HD11	12:LL:69:ARG:HH11	1.70	0.56
12:LL:182:LEU:O	12:LL:186:GLU:HG2	2.05	0.56
45:S2:1205:C:O2	58:SM:17:GLY:N	2.38	0.56
60:SO:45:TRP:CZ2	60:SO:310:ILE:HD13	2.39	0.56
6:LF:16:THR:OG1	6:LF:18:ASN:OD1	2.22	0.56
6:LF:104:LYS:HD2	6:LF:106:TRP:CZ2	2.40	0.56
6:LF:129:THR:HG22	6:LF:246:ARG:O	2.05	0.56
9:LI:163:LEU:HA	9:LI:168:ILE:HD11	1.87	0.56
45:S2:386:G:H5''	67:SV:23:LYS:HE2	1.87	0.56
45:S2:1592:A:H2'	45:S2:1593:A:C8	2.40	0.56
51:SF:31:VAL:HG12	51:SF:67:VAL:HB	1.87	0.56
55:SJ:57:ARG:HE	55:SJ:89:ARG:NH1	2.03	0.56
70:SY:16:ILE:O	73:Sb:57:ARG:NH2	2.37	0.56
1:LA:371:G:N1	1:LA:374:A:OP2	2.35	0.56
1:LA:595:G:H1	1:LA:609:G:H5''	1.70	0.56
1:LA:1024:G:O2'	1:LA:1026:A:OP1	2.19	0.56
1:LA:1635:G:N2	1:LA:1638:A:OP2	2.35	0.56
1:LA:1804:A:H2'	1:LA:1805:C:H6	1.69	0.56
1:LA:3058:U:O4	32:Lf:65:LYS:NZ	2.31	0.56
6:LF:58:HIS:HA	6:LF:90:PHE:HE1	1.70	0.56
12:LL:53:VAL:HG12	12:LL:134:ILE:HG13	1.85	0.56
40:Ln:13:MET:CE	40:Ln:49:MET:HE3	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:44:U:OP2	45:S2:437:A:N6	2.37	0.56
45:S2:393:C:H2'	45:S2:394:C:C6	2.40	0.56
45:S2:1075:C:O2'	76:Se:13:LYS:O	2.23	0.56
45:S2:1365:C:O2'	51:SF:30:LYS:NZ	2.37	0.56
45:S2:1650:U:H2'	45:S2:1651:A:C8	2.40	0.56
61:SP:74:VAL:HG13	61:SP:118:PRO:HB3	1.85	0.56
63:SR:142:GLY:N	63:SR:153:SER:O	2.36	0.56
66:SU:98:ILE:HD13	66:SU:118:LEU:HD13	1.86	0.56
72:Sa:36:VAL:HB	72:Sa:51:VAL:HG13	1.87	0.56
1:LA:1802:C:O2'	35:Li:59:PRO:O	2.20	0.56
10:LJ:157:VAL:HG21	10:LJ:163:VAL:HG22	1.88	0.56
57:SL:53:ILE:HG22	57:SL:54:LEU:H	1.71	0.56
67:SV:43:ILE:HD11	67:SV:60:ILE:HD11	1.87	0.56
1:LA:837:A:OP1	44:Lr:5:THR:OG1	2.21	0.56
1:LA:1203:A:H2'	1:LA:1204:A:H8	1.70	0.56
1:LA:2531:C:C4	1:LA:2532:U:H1'	2.41	0.56
1:LA:2697:A:H2'	1:LA:2698:G:C8	2.40	0.56
1:LA:3006:A:H2'	1:LA:3007:U:O4'	2.06	0.56
5:LE:140:ASP:OD1	5:LE:140:ASP:N	2.38	0.56
14:LN:4:SER:O	29:Lc:44:ASN:ND2	2.37	0.56
19:LS:148:GLU:O	19:LS:151:ARG:HG2	2.04	0.56
28:Lb:23:VAL:HG12	28:Lb:45:GLY:HA3	1.87	0.56
45:S2:623:A:H3'	45:S2:624:G:H5''	1.87	0.56
45:S2:1456:C:H5''	45:S2:1457:C:H5''	1.86	0.56
49:SD:77:GLY:HA3	59:SN:114:VAL:HG23	1.87	0.56
70:SY:37:ILE:HD12	70:SY:54:LEU:HD11	1.87	0.56
1:LA:82:C:H4'	16:LP:204:LYS:HE2	1.87	0.56
1:LA:2537:U:C5'	62:SQ:229:MET:CE	2.69	0.56
6:LF:150:LEU:HD23	6:LF:249:ILE:HG12	1.86	0.56
45:S2:625:C:H2'	45:S2:626:U:C6	2.40	0.56
49:SD:44:GLY:O	49:SD:48:SER:OG	2.22	0.56
53:SH:45:LEU:O	53:SH:49:LYS:HG3	2.05	0.56
63:SR:44:LEU:HD21	63:SR:243:TYR:HB2	1.86	0.56
69:SX:55:ASP:HB2	69:SX:82:ARG:CZ	2.35	0.56
71:SZ:26:THR:HG21	71:SZ:60:ALA:HB2	1.87	0.56
1:LA:178:U:H2'	1:LA:179:C:H6	1.70	0.56
1:LA:559:A:O2'	15:LO:84:LYS:NZ	2.26	0.56
1:LA:1804:A:H2'	1:LA:1805:C:C6	2.40	0.56
6:LF:102:PRO:O	6:LF:104:LYS:NZ	2.36	0.56
29:Lc:22:ILE:HD12	29:Lc:22:ILE:H	1.71	0.56
45:S2:265:A:OP2	65:ST:194:LYS:NZ	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1473:U:O2'	47:SB:103:ASN:OD1	2.14	0.56
64:SS:198:LYS:HB2	64:SS:208:VAL:HG12	1.87	0.56
80:Tb:14:A:H2'	80:Tb:15:G:O4'	2.05	0.56
1:LA:418:A:C2	3:LC:5:U:C5	2.94	0.56
1:LA:911:C:OP1	4:LD:14:SER:OG	2.20	0.56
1:LA:2552:C:N4	31:Le:54:SER:OG	2.39	0.56
17:LQ:54[A]:TYR:OH	17:LQ:73[A]:PHE:O	2.23	0.56
18:LR:47:TYR:OH	18:LR:57:ALA:O	2.22	0.56
20:LT:116:ASP:C	20:LT:116:ASP:OD1	2.49	0.56
26:LZ:86:VAL:HG11	26:LZ:95:ILE:HD11	1.87	0.56
36:Lj:64:GLU:OE1	36:Lj:67:ARG:NH1	2.39	0.56
45:S2:1058:U:H1'	45:S2:1060:U:H5''	1.88	0.56
45:S2:1254:U:OP2	49:SD:46:ARG:NH2	2.38	0.56
48:SC:81:ASN:ND2	49:SD:37:VAL:HG11	2.21	0.56
53:SH:81:ILE:HG21	53:SH:86:LEU:HD21	1.87	0.56
1:LA:361:A:O3'	38:Ll:45:ARG:NH2	2.38	0.56
3:LC:40:A:OP2	3:LC:103:G:N1	2.32	0.56
6:LF:321:LYS:H	6:LF:321:LYS:HD3	1.71	0.56
18:LR:56:ARG:NH2	18:LR:75:GLU:OE2	2.19	0.56
54:SI:33:TYR:HE2	54:SI:103:LYS:HD2	1.71	0.56
74:Sc:57:LEU:O	74:Sc:71:CYS:N	2.39	0.56
75:Sd:105:ARG:O	75:Sd:109:LYS:HG3	2.05	0.56
79:Ta:22:A:N6	79:Ta:45:A:OP2	2.39	0.56
5:LE:57:VAL:HG22	5:LE:73:VAL:HG22	1.88	0.56
6:LF:177:ASP:HB3	6:LF:205:PRO:HD3	1.87	0.56
25:LY:60:LYS:HA	25:LY:60:LYS:CE	2.28	0.56
31:Le:52:ARG:HG3	31:Le:52:ARG:NH1	2.19	0.56
39:Lm:58:ASP:HB3	39:Lm:61:LYS:HB2	1.88	0.56
49:SD:81:ASP:OD2	49:SD:85:LYS:NZ	2.37	0.56
63:SR:106:ASP:OD1	63:SR:106:ASP:C	2.48	0.56
64:SS:94:ALA:HB1	75:Sd:16:PRO:HB2	1.88	0.56
1:LA:1666:G:H2'	1:LA:1667:A:H8	1.71	0.55
1:LA:1940:G:H21	1:LA:3362:A:H8	1.53	0.55
1:LA:2103:U:H2'	1:LA:2104:A:C8	2.41	0.55
14:LN:21:ARG:HB3	16:LP:196:THR:HA	1.88	0.55
45:S2:438:A:O2'	45:S2:465:G:N2	2.38	0.55
47:SB:161:ASP:HB2	47:SB:162:VAL:HG23	1.88	0.55
50:SE:81:ARG:NH1	50:SE:97:TYR:O	2.38	0.55
52:SG:26:LEU:HD21	52:SG:62:GLN:HG3	1.88	0.55
53:SH:18:LEU:HD13	53:SH:101:LEU:HB2	1.87	0.55
61:SP:173:ILE:HA	61:SP:176:LEU:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SS:211:LYS:HA	64:SS:216:ASN:O	2.05	0.55
65:ST:197:ASN:O	65:ST:201:GLN:HG2	2.05	0.55
66:SU:16:LEU:O	66:SU:20:VAL:HG13	2.06	0.55
1:LA:2344:U:H2'	1:LA:2345:A:H8	1.70	0.55
1:LA:2947:G:N3	5:LE:250:ALA:HB1	2.22	0.55
1:LA:3121:U:H1'	1:LA:3122:A:H5''	1.88	0.55
4:LD:180:LEU:HD22	44:Lr:18:TYR:HB3	1.88	0.55
6:LF:286:VAL:HG21	19:LS:28:LEU:HB3	1.88	0.55
45:S2:55:A:H5'	75:Sd:109:LYS:HZ2	1.72	0.55
45:S2:1424:A:OP2	46:SA:151:LYS:NZ	2.36	0.55
47:SB:133:VAL:HG22	47:SB:198:LEU:HD13	1.88	0.55
60:SO:43:ILE:HG23	60:SO:45:TRP:HE1	1.71	0.55
65:ST:56:ASN:H	65:ST:108:VAL:HG23	1.70	0.55
68:SW:106:GLU:HA	68:SW:111:THR:HG21	1.87	0.55
1:LA:268:A:C4	16:LP:12:ARG:HG2	2.41	0.55
1:LA:978:G:N2	1:LA:979:U:O4	2.31	0.55
4:LD:51:ASP:OD2	4:LD:54:ARG:NH1	2.40	0.55
4:LD:127:ALA:O	4:LD:169:ILE:HD11	2.06	0.55
8:LH:2:THR:OG1	8:LH:3:ALA:N	2.40	0.55
45:S2:123:G:H21	64:SS:146:THR:HG21	1.70	0.55
45:S2:325:G:OP1	69:SX:132:SER:OG	2.24	0.55
45:S2:1220:C:OP1	48:SC:48:SER:OG	2.21	0.55
45:S2:1312:A:N7	52:SG:2:GLY:N	2.54	0.55
45:S2:1615:C:H2'	47:SB:81:ARG:HD2	1.89	0.55
45:S2:1698:G:O6	45:S2:1700:C:O2'	2.21	0.55
46:SA:162:GLN:N	46:SA:163:PRO:HD2	2.22	0.55
76:Se:36:ILE:HB	76:Se:73:TYR:HB2	1.88	0.55
77:Sf:67:THR:OG1	77:Sf:70:LYS:O	2.17	0.55
80:Tb:27:G:O6	80:Tb:45:A:N1	2.40	0.55
1:LA:364:G:OP2	38:Ll:52:LYS:NZ	2.30	0.55
1:LA:1746:U:O2'	39:Lm:4:GLU:OE2	2.23	0.55
7:LG:41:LYS:HD2	22:LV:93:VAL:HG11	1.89	0.55
45:S2:15:U:H2'	45:S2:16:G:O4'	2.06	0.55
45:S2:219:A:H5''	45:S2:831:U:O2'	2.06	0.55
45:S2:502:U:H2'	45:S2:503:G:C8	2.42	0.55
53:SH:144:ARG:HA	53:SH:144:ARG:NH1	2.22	0.55
64:SS:11:ARG:NH1	64:SS:21:ASP:O	2.39	0.55
68:SW:59:LEU:HD11	68:SW:72:GLU:HG3	1.88	0.55
79:Ta:71:G:N2	79:Ta:72:C:O4'	2.40	0.55
1:LA:1128:U:OP1	12:LL:4:ARG:NH1	2.30	0.55
1:LA:1466:G:N2	1:LA:1510:G:H5''	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1867:A:N3	1:LA:1867:A:H2'	2.20	0.55
3:LC:69:U:H2'	3:LC:70:G:O4'	2.07	0.55
32:Lf:52:ALA:HB1	32:Lf:54:GLU:OE1	2.06	0.55
45:S2:1446:A:OP1	59:SN:85:TYR:OH	2.24	0.55
52:SG:117:LEU:HD22	61:SP:15:GLN:HG3	1.88	0.55
53:SH:115:ARG:O	53:SH:119:ILE:HG23	2.07	0.55
60:SO:156:VAL:HG22	60:SO:169:ILE:HG22	1.88	0.55
71:SZ:80:HIS:HA	71:SZ:113:GLY:O	2.05	0.55
1:LA:776:U:H5	1:LA:2719:U:O2	1.90	0.55
1:LA:2515:A:H5''	16:LP:28:TRP:CD1	2.42	0.55
1:LA:2534:G:H2'	1:LA:2535:A:C8	2.41	0.55
19:LS:76:ALA:HA	19:LS:79:LYS:HD2	1.88	0.55
31:Le:30:THR:HG23	31:Le:91:SER:HB3	1.88	0.55
45:S2:323:A:H2'	45:S2:324:U:C6	2.42	0.55
46:SA:20:GLU:HG2	48:SC:61:TRP:CE3	2.41	0.55
53:SH:44:ASN:O	53:SH:48:LYS:HG3	2.06	0.55
79:Ta:11:A:H2'	79:Ta:12:G:C8	2.42	0.55
1:LA:831:G:O2'	1:LA:1864:A:N3	2.36	0.55
16:LP:5:LYS:O	16:LP:9:GLU:HG2	2.06	0.55
21:LU:80:ARG:HH21	21:LU:87:THR:HG21	1.72	0.55
28:Lb:101:PHE:HB3	28:Lb:107:ARG:NH2	2.21	0.55
45:S2:953:G:H2'	45:S2:954:G:C8	2.42	0.55
45:S2:1477:G:H2'	45:S2:1478:G:H8	1.71	0.55
46:SA:40:ARG:NH2	46:SA:47:GLU:OE1	2.40	0.55
48:SC:33:GLU:HG3	48:SC:34:GLU:HG3	1.88	0.55
54:SI:4:VAL:HG11	54:SI:137:ALA:HB2	1.89	0.55
62:SQ:121:ILE:HD12	62:SQ:207:LEU:HD11	1.89	0.55
68:SW:84:GLY:HA3	68:SW:107:ARG:HE	1.71	0.55
74:Sc:17:VAL:HG22	74:Sc:20:ARG:NH2	2.21	0.55
1:LA:406:G:OP1	1:LA:1415:U:O2'	2.24	0.55
1:LA:673:U:H2'	1:LA:674:G:C8	2.42	0.55
1:LA:2450:G:N3	1:LA:2494:A:N6	2.54	0.55
6:LF:106:TRP:CZ2	14:LN:19:GLN:HG2	2.42	0.55
11:LK:128:VAL:HG21	11:LK:134:ILE:HD11	1.89	0.55
12:LL:109:ASP:N	12:LL:109:ASP:OD1	2.39	0.55
39:Lm:60:GLY:O	39:Lm:64:LYS:HE3	2.06	0.55
45:S2:164:A:H2'	45:S2:165:G:H8	1.72	0.55
45:S2:1579:U:H2'	45:S2:1580:C:C6	2.41	0.55
52:SG:7:LYS:HE3	52:SG:11:ARG:CB	2.37	0.55
60:SO:66:HIS:CG	60:SO:67:ILE:H	2.24	0.55
69:SX:84:ILE:HD12	69:SX:109:VAL:CG1	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Tb:56:U:H2'	80:Tb:57:C:H2'	1.88	0.55
1:LA:2255:A:C8	45:S2:1758:U:H1'	2.37	0.55
1:LA:3309:G:H1'	18:LR:69:ARG:HD3	1.88	0.55
5:LE:83:PRO:HB2	5:LE:202:THR:HG22	1.89	0.55
17:LQ:74[A]:ARG:O	17:LQ:142[A]:SER:OG	2.15	0.55
31:Le:43:ILE:HG23	31:Le:68:TYR:HD2	1.71	0.55
45:S2:162:A:H2'	45:S2:163:G:C4	2.42	0.55
45:S2:754:A:H5''	45:S2:755:A:H5'	1.88	0.55
1:LA:1786:G:H2'	1:LA:1787:A:C8	2.42	0.55
1:LA:2522:G:N1	4:LD:68:LYS:NZ	2.50	0.55
6:LF:23:PRO:HD2	6:LF:26:PHE:CD2	2.42	0.55
6:LF:315:LYS:HB2	6:LF:323:VAL:HG21	1.89	0.55
45:S2:1401:A:OP1	52:SG:56:HIS:NE2	2.37	0.55
47:SB:111:VAL:HA	47:SB:114:ILE:HG22	1.89	0.55
49:SD:128:ALA:HB3	49:SD:133:LEU:HD12	1.87	0.55
60:SO:202:LEU:HD11	60:SO:211:ILE:HD11	1.88	0.55
63:SR:152:HIS:ND1	63:SR:195:ASP:OD2	2.36	0.55
64:SS:100:ARG:HB2	64:SS:114:ILE:HD13	1.89	0.55
70:SY:132:VAL:HG13	70:SY:134:VAL:HG13	1.89	0.55
1:LA:314:U:H2'	1:LA:315:C:C6	2.41	0.54
1:LA:363:G:N2	6:LF:82:THR:OG1	2.40	0.54
1:LA:1063:G:C6	22:LV:109:VAL:HG23	2.42	0.54
1:LA:1312:C:O2'	17:LQ:83[A]:ALA:O	2.25	0.54
19:LS:67:ILE:HG23	19:LS:81:VAL:HG11	1.89	0.54
23:LW:37:LEU:O	23:LW:41:ILE:HG12	2.07	0.54
32:Lf:9:THR:HG22	32:Lf:109:VAL:HG13	1.88	0.54
39:Lm:13:GLU:HG3	39:Lm:16:ARG:NH2	2.23	0.54
44:Lr:45:LYS:HE2	44:Lr:45:LYS:H	1.70	0.54
45:S2:844:A:H2'	45:S2:845:G:C8	2.41	0.54
55:SJ:58:LEU:HD21	55:SJ:90:TYR:HE2	1.71	0.54
56:SK:88:ILE:HG13	56:SK:89:ILE:HG23	1.89	0.54
61:SP:201:LEU:HG	61:SP:202:TYR:H	1.72	0.54
68:SW:152:SER:O	68:SW:156:ILE:HG12	2.08	0.54
1:LA:507:U:H2'	1:LA:508:U:H6	1.72	0.54
1:LA:1688:U:H2'	1:LA:1689:U:C6	2.43	0.54
1:LA:3322:A:H2'	1:LA:3323:A:C8	2.42	0.54
5:LE:58:ARG:HD2	5:LE:354:VAL:HG13	1.89	0.54
45:S2:739:G:O2'	45:S2:740:A:OP1	2.25	0.54
45:S2:1526:A:H2'	45:S2:1527:C:H5'	1.89	0.54
45:S2:1776:A:H2'	45:S2:1777:G:C8	2.43	0.54
73:Sb:6:VAL:HG12	73:Sb:34:ILE:HD11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:93:C:OP2	1:LA:2764:C:O2'	2.20	0.54
1:LA:3313:U:H4'	5:LE:173:GLN:HG3	1.88	0.54
13:LM:138:VAL:HA	13:LM:141:ARG:HE	1.72	0.54
15:LO:19:ARG:NH1	15:LO:66:THR:O	2.38	0.54
28:Lb:42:LEU:HD13	28:Lb:101:PHE:HE1	1.71	0.54
28:Lb:97:SER:H	28:Lb:100:THR:HB	1.73	0.54
39:Lm:32:ASN:OD1	39:Lm:33:LYS:N	2.40	0.54
50:SE:108:ARG:H	50:SE:111:MET:HE3	1.73	0.54
55:SJ:102:ARG:HH12	55:SJ:106:ILE:HD13	1.73	0.54
59:SN:106:TYR:OH	59:SN:129:GLY:O	2.22	0.54
62:SQ:229:MET:O	62:SQ:233:GLY:C	2.51	0.54
63:SR:188:LEU:HD13	63:SR:196:VAL:HG11	1.88	0.54
66:SU:163:ASP:OD1	66:SU:163:ASP:N	2.38	0.54
68:SW:89:ASP:OD1	68:SW:89:ASP:N	2.39	0.54
1:LA:266:A:N6	37:Lk:30:LYS:HA	2.23	0.54
1:LA:746:A:OP1	19:LS:145:ASN:ND2	2.41	0.54
1:LA:2357:A:H2'	1:LA:2358:A:H8	1.72	0.54
1:LA:2715:A:O2'	43:Lq:8:ARG:NH2	2.41	0.54
17:LQ:61[A]:ALA:HA	17:LQ:70[A]:PRO:HD2	1.89	0.54
18:LR:46:LYS:O	18:LR:50:GLN:HG3	2.08	0.54
45:S2:108:A:H2'	45:S2:109:G:C8	2.42	0.54
45:S2:170:U:OP1	45:S2:267:U:O2'	2.26	0.54
1:LA:1046:A:H2'	1:LA:1049:C:C5	2.43	0.54
1:LA:1799:A:H2'	1:LA:1800:A:C8	2.43	0.54
1:LA:2107:A:N3	1:LA:3344:A:O2'	2.37	0.54
6:LF:161:LYS:HB2	6:LF:164:GLU:HG2	1.90	0.54
7:LG:60:ILE:N	7:LG:80:SER:OG	2.36	0.54
10:LJ:159:PRO:HB2	10:LJ:162:LEU:HD23	1.89	0.54
13:LM:53:THR:OG1	13:LM:61:ARG:N	2.40	0.54
16:LP:83:LYS:HB2	16:LP:85:THR:HG22	1.90	0.54
31:Le:32:LYS:O	31:Le:36:GLN:HG3	2.08	0.54
36:Lj:38:ARG:HG3	36:Lj:39:PRO:HD2	1.90	0.54
45:S2:1592:A:H2'	45:S2:1593:A:H8	1.72	0.54
45:S2:1641:C:H2'	45:S2:1642:G:C8	2.43	0.54
60:SO:106:HIS:NE2	60:SO:132:LYS:HD2	2.23	0.54
60:SO:149:ASP:HB3	60:SO:174:ASN:HB2	1.88	0.54
62:SQ:164:ILE:HD11	62:SQ:204:ILE:HB	1.90	0.54
1:LA:692:A:H4'	6:LF:46:LYS:HB2	1.89	0.54
1:LA:772:U:H2'	1:LA:773:G:O4'	2.07	0.54
1:LA:877:C:HO2'	1:LA:880:G:HO2'	1.51	0.54
1:LA:1220:U:H4'	1:LA:1221:A:H3'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LM:131:MET:HA	13:LM:131:MET:HE3	1.89	0.54
32:Lf:75:ILE:HG13	32:Lf:93:VAL:HG13	1.89	0.54
45:S2:980:G:H4'	45:S2:1776:A:H4'	1.89	0.54
45:S2:1691:A:H2'	45:S2:1692:G:C8	2.42	0.54
3:LC:8:C:H2'	3:LC:9:A:C8	2.42	0.54
27:La:101:PRO:HA	27:La:104:LEU:HD23	1.90	0.54
45:S2:52:U:H2'	45:S2:53:G:C8	2.43	0.54
45:S2:151:G:N2	65:ST:13:GLN:HB3	2.23	0.54
45:S2:622:A:H4'	45:S2:623:A:H5''	1.89	0.54
45:S2:1196:A:H4'	45:S2:1197:C:H5''	1.89	0.54
53:SH:69:ILE:O	53:SH:73:MET:HG2	2.08	0.54
67:SV:107:THR:O	67:SV:111:GLN:OE1	2.26	0.54
68:SW:128:LEU:HD22	68:SW:133:HIS:HB2	1.88	0.54
1:LA:1615:C:H2'	1:LA:1616:U:C6	2.43	0.54
1:LA:2700:G:O2'	1:LA:2705:A:N1	2.36	0.54
14:LN:119:TYR:O	14:LN:123:ILE:HG23	2.08	0.54
20:LT:136:ARG:O	20:LT:140:GLU:HG3	2.08	0.54
45:S2:93:A:H1'	64:SS:3:ARG:HB3	1.90	0.54
45:S2:346:G:H5'	69:SX:79:LYS:HE3	1.89	0.54
62:SQ:195:LYS:HD2	62:SQ:199:ASN:HD21	1.72	0.54
64:SS:201:HIS:HD2	64:SS:207:LEU:HD12	1.73	0.54
65:ST:7:TYR:HB2	65:ST:124:LEU:HD11	1.90	0.54
1:LA:2406:C:H2'	1:LA:2407:C:C6	2.43	0.54
1:LA:2500:A:N6	1:LA:2501:U:O2	2.41	0.54
7:LG:54:ARG:HA	7:LG:151:GLN:HE22	1.73	0.54
28:Lb:24:VAL:HG21	28:Lb:87:LEU:HB3	1.90	0.54
46:SA:32:GLU:OE2	46:SA:65:ARG:NH1	2.40	0.54
50:SE:47:ARG:C	50:SE:49:MET:HE1	2.33	0.54
60:SO:219:GLU:HA	60:SO:235:SER:HA	1.90	0.54
61:SP:198:MET:HG3	61:SP:198:MET:O	2.07	0.54
1:LA:643:U:O2'	1:LA:1153:A:N1	2.31	0.54
1:LA:1230:G:H2'	1:LA:1231:A:C8	2.42	0.54
3:LC:47:C:H1'	3:LC:61:A:H2'	1.89	0.54
10:LJ:162:LEU:HA	16:LP:7:LEU:HD11	1.90	0.54
11:LK:129:ARG:HH12	11:LK:156:GLN:HB3	1.73	0.54
13:LM:32:ARG:HD2	13:LM:120:ILE:HA	1.90	0.54
15:LO:23:ILE:HG21	15:LO:28:SER:HB2	1.89	0.54
45:S2:861:U:OP1	70:SY:64:ARG:NH1	2.33	0.54
45:S2:1160:A:H2'	45:S2:1161:C:C6	2.43	0.54
55:SJ:63:LEU:HD12	55:SJ:84:MET:HE2	1.88	0.54
55:SJ:80:GLU:OE2	58:SM:44:ARG:NH1	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SL:13:ILE:HD13	57:SL:31:GLU:HB2	1.88	0.54
60:SO:65:SER:N	60:SO:86:ASP:OD2	2.40	0.54
60:SO:133:VAL:HG23	60:SO:141:LEU:HB3	1.88	0.54
64:SS:220:THR:HG22	64:SS:224:ASN:HB3	1.90	0.54
75:Sd:61:ARG:HB3	75:Sd:61:ARG:CZ	2.38	0.54
1:LA:72:C:H1'	14:LN:61:PRO:O	2.08	0.53
1:LA:394:G:N1	1:LA:397:A:OP2	2.41	0.53
1:LA:846:A:N6	45:S2:971:A:N1	2.56	0.53
1:LA:945:C:H2'	1:LA:946:U:C6	2.42	0.53
1:LA:1765:U:C5'	20:LT:43:LYS:HZ1	2.21	0.53
9:LI:138:TYR:CE2	9:LI:233:GLU:HB3	2.43	0.53
47:SB:80:LYS:HB3	47:SB:83:ARG:HG2	1.90	0.53
60:SO:25:THR:HG22	60:SO:33:LEU:HD23	1.89	0.53
1:LA:241:G:N2	14:LN:44:ALA:O	2.42	0.53
1:LA:400:G:H4'	1:LA:401:U:H5'	1.90	0.53
1:LA:2452:G:N2	1:LA:2493:U:O2	2.30	0.53
1:LA:3210:A:OP1	15:LO:109:ARG:NH1	2.41	0.53
1:LA:3234:A:C2	1:LA:3253:G:N1	2.63	0.53
3:LC:42:G:O2'	38:LI:57:HIS:NE2	2.34	0.53
9:LI:120:THR:H	9:LI:123:THR:HB	1.73	0.53
23:LW:80:THR:O	23:LW:84:LEU:HG	2.08	0.53
45:S2:67:A:O2'	45:S2:69:G:OP1	2.25	0.53
45:S2:1226:A:H4'	45:S2:1230:A:H5'	1.90	0.53
53:SH:144:ARG:HA	53:SH:144:ARG:NE	2.23	0.53
54:SI:128:GLY:O	54:SI:132:LEU:HG	2.08	0.53
60:SO:47:LEU:HD11	60:SO:54:PHE:CE2	2.43	0.53
67:SV:43:ILE:HD13	67:SV:57:ALA:HA	1.89	0.53
1:LA:429:U:H2'	1:LA:430:U:C6	2.43	0.53
1:LA:1555:U:H5'	1:LA:1556:C:OP2	2.08	0.53
1:LA:1643:A:H2'	1:LA:1644:C:C2	2.43	0.53
10:LJ:45:ASN:OD1	10:LJ:47:SER:OG	2.19	0.53
45:S2:448:C:OP1	64:SS:49:ARG:NH2	2.42	0.53
45:S2:1482:C:N4	45:S2:1524:A:OP2	2.36	0.53
45:S2:1534:G:OP1	53:SH:57:ARG:NH2	2.41	0.53
49:SD:87:PRO:O	49:SD:88:LEU:HD12	2.09	0.53
73:Sb:35:ILE:HD11	73:Sb:61:ILE:HD11	1.90	0.53
77:Sf:50:ALA:O	77:Sf:52:THR:N	2.40	0.53
1:LA:2352:A:H5''	18:LR:83:TRP:O	2.08	0.53
9:LI:218:ARG:HD3	9:LI:221:LYS:HZ1	1.74	0.53
11:LK:67:ALA:O	11:LK:71:VAL:HG13	2.07	0.53
29:Lc:93:SER:O	29:Lc:93:SER:OG	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SQ:26:ARG:O	62:SQ:50:LYS:HG3	2.09	0.53
62:SQ:33:LYS:HZ2	62:SQ:95:ASN:HA	1.74	0.53
1:LA:381:U:H2'	1:LA:382:U:C6	2.43	0.53
1:LA:3294:A:H2'	1:LA:3295:A:O4'	2.09	0.53
5:LE:347:SER:C	5:LE:349:LYS:H	2.16	0.53
13:LM:13:LYS:O	13:LM:131:MET:HE3	2.08	0.53
29:Lc:89:GLN:OE1	29:Lc:89:GLN:HA	2.09	0.53
45:S2:829:A:O2'	45:S2:830:U:O5'	2.25	0.53
45:S2:917:U:O2'	71:SZ:29:HIS:NE2	2.39	0.53
45:S2:1252:C:H2'	45:S2:1253:U:O4'	2.07	0.53
45:S2:1535:U:H3	47:SB:187:ILE:HD12	1.74	0.53
47:SB:121:ILE:HG12	47:SB:132:VAL:HG11	1.90	0.53
62:SQ:61:LEU:HD21	62:SQ:96:LEU:CD2	2.38	0.53
62:SQ:61:LEU:HD21	62:SQ:96:LEU:HD22	1.88	0.53
1:LA:20:A:H2'	1:LA:21:G:C8	2.43	0.53
1:LA:2864:A:H5''	12:LL:114:GLY:HA2	1.89	0.53
14:LN:140:SER:HB3	14:LN:143:ALA:HB3	1.90	0.53
17:LQ:174[A]:PHE:O	17:LQ:178[A]:VAL:HG12	2.09	0.53
42:Lp:1:MET:HB2	45:S2:1642:G:H5'	1.89	0.53
55:SJ:27:THR:OG1	55:SJ:113:ASP:OD1	2.24	0.53
65:ST:27:PHE:HZ	65:ST:111:LEU:HD21	1.72	0.53
74:Sc:48:HIS:HB3	74:Sc:103:LEU:HD11	1.90	0.53
1:LA:824:C:H5''	4:LD:21:ARG:HD3	1.90	0.53
2:LB:13:A:OP2	2:LB:67:G:N2	2.40	0.53
5:LE:210:GLU:O	5:LE:213:GLU:HB2	2.08	0.53
10:LJ:239:GLY:O	10:LJ:243:GLN:HG2	2.09	0.53
18:LR:33:ALA:HB1	18:LR:117:ILE:HG12	1.89	0.53
28:Lb:87:LEU:CD2	28:Lb:121:ARG:HH21	2.22	0.53
31:Le:42:ILE:HD11	31:Le:67:VAL:HG22	1.91	0.53
44:Lr:8:VAL:O	44:Lr:11:THR:OG1	2.25	0.53
45:S2:844:A:H2'	45:S2:845:G:H8	1.74	0.53
45:S2:884:A:H2'	45:S2:885:G:H8	1.74	0.53
45:S2:1001:A:OP1	80:Tb:39:A:O2'	2.24	0.53
45:S2:1498:G:H2'	45:S2:1499:G:H8	1.73	0.53
68:SW:131:GLN:O	68:SW:132:ARG:HG2	2.08	0.53
77:Sf:50:ALA:H	77:Sf:71:ALA:HB2	1.73	0.53
1:LA:209:A:O2'	1:LA:211:A:OP2	2.21	0.53
1:LA:1064:A:H4'	1:LA:1065:A:O5'	2.08	0.53
1:LA:1134:G:O2'	1:LA:2642:A:N3	2.35	0.53
1:LA:2228:A:H2'	1:LA:2229:A:H8	1.73	0.53
54:SI:4:VAL:HG23	54:SI:140:LEU:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SI:117:SER:HB3	54:SI:123:ARG:HB2	1.90	0.53
71:SZ:84:ARG:HA	71:SZ:119:THR:HG22	1.91	0.53
1:LA:1350:A:H2'	1:LA:1351:U:H4'	1.91	0.53
1:LA:2506:U:H2'	1:LA:2507:C:C6	2.44	0.53
1:LA:2537:U:O5'	62:SQ:226:GLY:N	2.42	0.53
1:LA:3199:G:H5'	15:LO:6:ILE:HD12	1.90	0.53
1:LA:3298:C:C2	1:LA:3299:A:C8	2.97	0.53
2:LB:4:U:H2'	2:LB:5:G:H8	1.73	0.53
3:LC:26:U:H2'	3:LC:27:U:C6	2.44	0.53
5:LE:71:GLU:OE1	25:LY:1:MET:N	2.41	0.53
9:LI:42:ALA:O	9:LI:46:GLU:HG2	2.08	0.53
15:LO:38:ILE:O	21:LU:95:ARG:NH2	2.40	0.53
45:S2:249:U:N3	69:SX:17:PRO:O	2.42	0.53
45:S2:1087:A:H2'	45:S2:1088:A:C8	2.43	0.53
51:SF:100:GLN:HG2	60:SO:57:PRO:HG2	1.90	0.53
54:SI:69:LYS:O	54:SI:123:ARG:HG2	2.08	0.53
1:LA:916:G:H5'	1:LA:917:A:OP1	2.09	0.53
1:LA:2197:C:N4	1:LA:2241:U:H2'	2.24	0.53
1:LA:2257:C:N4	45:S2:1646:C:O3'	2.42	0.53
1:LA:2686:A:H2'	1:LA:2687:G:O4'	2.09	0.53
2:LB:89:G:H4'	21:LU:84:ARG:HD3	1.90	0.53
3:LC:42:G:HO2'	38:LI:57:HIS:HE2	1.54	0.53
3:LC:63:G:H22	3:LC:97:A:H2	1.56	0.53
7:LG:22:ARG:HB3	7:LG:28:THR:HG23	1.90	0.53
7:LG:128:GLU:OE2	7:LG:128:GLU:N	2.42	0.53
7:LG:235:SER:O	7:LG:239:ILE:HG23	2.10	0.53
8:LH:39:VAL:HG11	8:LH:158:TYR:HE2	1.74	0.53
21:LU:132:THR:HG22	21:LU:133:ALA:H	1.74	0.53
45:S2:749:U:H5''	73:Sb:83:ILE:HD13	1.90	0.53
45:S2:768:C:H1'	68:SW:143:ILE:HG21	1.91	0.53
58:SM:12:ARG:O	58:SM:18:SER:HB3	2.09	0.53
60:SO:35:SER:O	60:SO:42:LEU:HA	2.09	0.53
61:SP:3:LEU:HD13	61:SP:7:PHE:HB2	1.89	0.53
63:SR:35:TRP:HB3	63:SR:46:LYS:HE3	1.89	0.53
74:Sc:75:GLN:HG2	74:Sc:82:LYS:HD3	1.91	0.53
1:LA:418:A:N1	3:LC:5:U:C5	2.77	0.52
1:LA:925:A:N6	4:LD:2:GLY:O	2.26	0.52
1:LA:1378:U:H2'	1:LA:1379:G:H8	1.74	0.52
4:LD:27:ALA:HA	4:LD:75:ILE:HG22	1.92	0.52
6:LF:300:ARG:C	6:LF:301:PRO:CD	2.75	0.52
11:LK:90:MET:HG3	11:LK:181:VAL:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:604:A:H2'	45:S2:605:A:O4'	2.09	0.52
45:S2:1081:A:O2'	45:S2:1083:G:N7	2.42	0.52
61:SP:103:THR:O	61:SP:106:SER:OG	2.22	0.52
64:SS:201:HIS:CD2	64:SS:207:LEU:HD12	2.44	0.52
65:ST:27:PHE:HE1	65:ST:52:ILE:HD11	1.74	0.52
1:LA:422:A:C2	1:LA:2363:A:H4'	2.44	0.52
1:LA:1659:U:H2'	1:LA:1660:C:C6	2.44	0.52
1:LA:2660:G:H1'	1:LA:2744:U:H1'	1.90	0.52
1:LA:2960:C:H2'	1:LA:2961:G:H8	1.72	0.52
6:LF:295:ILE:O	6:LF:299:ILE:HG12	2.09	0.52
11:LK:75:VAL:HA	11:LK:78:MET:CE	2.38	0.52
16:LP:60:VAL:HG22	16:LP:134:LEU:HB2	1.91	0.52
20:LT:105:LEU:HD23	20:LT:138:LEU:HD23	1.90	0.52
24:LX:62:VAL:O	24:LX:70:ARG:HG2	2.09	0.52
28:Lb:72:ILE:HD11	28:Lb:107:ARG:HG2	1.90	0.52
28:Lb:85:TYR:OH	35:Li:97:GLU:OE2	2.18	0.52
45:S2:395:U:H2'	45:S2:396:G:O4'	2.09	0.52
50:SE:90:ILE:HD12	50:SE:109:PRO:HA	1.91	0.52
56:SK:50:ILE:HG13	56:SK:51:LEU:N	2.23	0.52
60:SO:289:ALA:HA	60:SO:305:TYR:HA	1.91	0.52
61:SP:120:LEU:HD11	61:SP:144:ILE:HG13	1.91	0.52
70:SY:70:LYS:O	70:SY:74:ILE:HG12	2.09	0.52
1:LA:728:G:H5''	19:LS:43:PRO:HB2	1.92	0.52
1:LA:1084:A:H2'	1:LA:1085:A:C8	2.44	0.52
1:LA:1795:U:N3	44:Lr:50:GLY:O	2.42	0.52
1:LA:3379:C:H4'	5:LE:315:GLY:HA2	1.91	0.52
2:LB:29:C:O2'	2:LB:51:A:N1	2.31	0.52
26:LZ:57:LEU:HD22	26:LZ:62:VAL:HG12	1.90	0.52
29:Lc:96:LYS:O	29:Lc:97:GLU:HG3	2.08	0.52
45:S2:585:A:H2'	45:S2:586:G:H8	1.74	0.52
45:S2:592:A:H2'	45:S2:593:U:O4'	2.09	0.52
45:S2:1674:C:OP1	65:ST:92:ARG:NH1	2.32	0.52
64:SS:211:LYS:HE2	64:SS:215:ASP:HA	1.91	0.52
1:LA:1063:G:N7	1:LA:1097:G:H2'	2.24	0.52
1:LA:1460:A:H2'	1:LA:1461:A:H8	1.75	0.52
1:LA:2115:G:H22	1:LA:2120:A:H1'	1.75	0.52
5:LE:204:ALA:O	5:LE:207:SER:OG	2.28	0.52
14:LN:76:THR:HG22	14:LN:78:ALA:H	1.74	0.52
19:LS:152:HIS:ND1	19:LS:162:ALA:O	2.39	0.52
50:SE:75:PRO:HA	50:SE:93:VAL:HG13	1.91	0.52
54:SI:143:ASP:OD1	54:SI:144:GLU:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:63:A:N3	1:LA:78:U:O2'	2.36	0.52
1:LA:2881:C:H2'	1:LA:2882:U:C6	2.43	0.52
5:LE:111:SER:O	5:LE:114:VAL:HG12	2.10	0.52
45:S2:907:A:H2'	45:S2:908:U:H6	1.74	0.52
46:SA:162:GLN:HE22	46:SA:199:PRO:HG2	1.75	0.52
63:SR:59:HIS:CD2	63:SR:239:PRO:HD3	2.44	0.52
69:SX:94:ILE:CD1	69:SX:101:GLU:OE2	2.48	0.52
71:SZ:103:ARG:O	71:SZ:107:ARG:HG2	2.09	0.52
79:Ta:5:G:O2'	79:Ta:6:G:O4'	2.17	0.52
1:LA:1765:U:H5'	20:LT:43:LYS:NZ	2.24	0.52
1:LA:2419:A:H2'	1:LA:2420:C:C6	2.44	0.52
5:LE:346:THR:OG1	5:LE:347:SER:N	2.43	0.52
6:LF:252:GLU:O	6:LF:256:THR:HG23	2.09	0.52
11:LK:101:VAL:HG22	11:LK:114:VAL:HG13	1.91	0.52
11:LK:103:ILE:HD11	11:LK:134:ILE:HG21	1.91	0.52
36:Lj:76:GLN:HE21	36:Lj:76:GLN:CA	2.00	0.52
37:Lk:74:LYS:HD2	37:Lk:80:PHE:HD1	1.75	0.52
43:Lq:6:LYS:HE2	43:Lq:94:GLY:HA2	1.92	0.52
45:S2:17:C:H2'	45:S2:18:C:C6	2.45	0.52
47:SB:41:LYS:HG3	47:SB:67:PRO:HB2	1.91	0.52
1:LA:750:G:OP1	30:Ld:44:LYS:HE2	2.08	0.52
1:LA:1353:U:O2	8:LH:10:TYR:N	2.33	0.52
1:LA:1622:U:H2'	1:LA:1623:G:H8	1.74	0.52
1:LA:1913:A:N3	1:LA:2120:A:H2'	2.25	0.52
2:LB:56:A:H4'	13:LM:152:HIS:HB2	1.91	0.52
6:LF:356:THR:OG1	6:LF:360:LYS:NZ	2.42	0.52
10:LJ:178:ALA:HB2	10:LJ:218:ILE:HG23	1.91	0.52
29:Lc:102:ILE:HD12	29:Lc:123:VAL:HG21	1.90	0.52
45:S2:502:U:H2'	45:S2:503:G:H8	1.74	0.52
60:SO:248:ASN:OD1	60:SO:249:ARG:N	2.43	0.52
65:ST:195:VAL:O	65:ST:199:GLN:HG2	2.09	0.52
77:Sf:36:LYS:HD2	77:Sf:43:ILE:HD11	1.91	0.52
4:LD:201:GLY:HA2	4:LD:204:MET:HG3	1.90	0.52
5:LE:173:GLN:NE2	5:LE:175:LYS:O	2.43	0.52
10:LJ:195:SER:OG	10:LJ:197:VAL:O	2.27	0.52
16:LP:99:ARG:O	16:LP:103:GLU:HG2	2.10	0.52
23:LW:102:GLU:O	23:LW:102:GLU:HG2	2.10	0.52
43:Lq:73:GLU:HG3	43:Lq:80:ARG:HG3	1.90	0.52
45:S2:41:A:O2'	45:S2:437:A:O2'	2.16	0.52
45:S2:340:U:H2'	45:S2:341:A:H8	1.75	0.52
50:SE:39:ALA:HA	50:SE:42:ARG:HE	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SH:94:ASP:OD1	53:SH:94:ASP:N	2.34	0.52
58:SM:24:CYS:HG	58:SM:26:SER:HG	1.55	0.52
63:SR:67:GLN:O	63:SR:71:THR:OG1	2.17	0.52
1:LA:501:A:H2'	1:LA:502:U:C6	2.44	0.52
1:LA:671:U:O2'	19:LS:20:LYS:HD3	2.09	0.52
1:LA:1110:U:H2'	1:LA:1111:U:C6	2.45	0.52
1:LA:1348:U:OP1	19:LS:39:ARG:NE	2.43	0.52
9:LI:110:ARG:HH11	9:LI:110:ARG:HB2	1.75	0.52
32:Lf:9:THR:OG1	32:Lf:76:SER:HB2	2.10	0.52
33:Lg:32:TRP:CZ2	33:Lg:53:PRO:HD2	2.45	0.52
45:S2:933:A:OP1	76:Se:70:LYS:NZ	2.43	0.52
47:SB:140:THR:HG21	47:SB:210:ALA:HB1	1.90	0.52
79:Ta:41:C:H2'	79:Ta:42:C:H6	1.75	0.52
80:Tb:5:G:H2'	80:Tb:6:G:C8	2.45	0.52
1:LA:1071:U:O2'	1:LA:1072:G:N7	2.35	0.52
7:LG:160:PHE:HA	7:LG:163:LEU:HB3	1.91	0.52
7:LG:254:LYS:HD2	7:LG:255:PRO:HD2	1.92	0.52
12:LL:87:LEU:HD13	12:LL:138:VAL:HG22	1.92	0.52
45:S2:1208:A:O2'	45:S2:1270:G:OP2	2.23	0.52
53:SH:15:LEU:HD23	53:SH:22:VAL:O	2.09	0.52
76:Se:37:LYS:HA	76:Se:71:LEU:O	2.10	0.52
1:LA:629:U:H2'	1:LA:630:A:C8	2.45	0.51
1:LA:2902:A:H2'	1:LA:2903:A:O4'	2.09	0.51
1:LA:3209:A:C5	15:LO:106:ARG:HD3	2.45	0.51
2:LB:8:G:O6	7:LG:21:ARG:NH2	2.38	0.51
8:LH:58:LEU:HD22	8:LH:102:ASN:HA	1.91	0.51
17:LQ:107[A]:GLY:C	17:LQ:108[A]:ILE:HD12	2.35	0.51
23:LW:102:GLU:O	23:LW:102:GLU:HG3	2.08	0.51
36:Lj:45:LYS:HD2	36:Lj:49:LYS:HD3	1.90	0.51
45:S2:30:G:H2'	45:S2:31:C:C6	2.45	0.51
45:S2:329:G:H5''	67:SV:98:LYS:HB3	1.92	0.51
47:SB:63:GLN:HB3	47:SB:88:PRO:HA	1.92	0.51
49:SD:73:LYS:HZ1	59:SN:108:VAL:HA	1.75	0.51
54:SI:45:MET:HE3	54:SI:46:PRO:HD2	1.93	0.51
61:SP:179:ARG:HH11	61:SP:179:ARG:HG2	1.74	0.51
68:SW:32:GLY:HA3	78:Sg:40:TYR:CD1	2.45	0.51
1:LA:114:A:N1	1:LA:266:A:O2'	2.38	0.51
1:LA:601:U:H2'	1:LA:602:A:O4'	2.11	0.51
1:LA:1119:C:H2'	1:LA:1120:A:C8	2.45	0.51
1:LA:1176:C:H2'	1:LA:1177:G:N2	2.25	0.51
12:LL:210:ILE:HD13	12:LL:217:PHE:CD2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LY:6:ASP:OD2	25:LY:32:GLN:N	2.21	0.51
38:LI:31:LYS:HB3	38:LI:33:THR:HG22	1.92	0.51
45:S2:1216:C:O2'	45:S2:1217:A:H5'	2.10	0.51
45:S2:1450:U:H5''	58:SM:8:PHE:CE1	2.40	0.51
47:SB:209:TYR:CZ	47:SB:213:LYS:HE3	2.45	0.51
50:SE:28:MET:HG2	50:SE:32:ASP:OD2	2.10	0.51
1:LA:813:G:H4'	38:LI:47:TYR:OH	2.10	0.51
5:LE:159:ARG:HD3	5:LE:182:GLN:HB2	1.92	0.51
24:LX:35:TYR:CE1	24:LX:37:ILE:HG22	2.46	0.51
46:SA:39:VAL:HG13	46:SA:48:VAL:HG22	1.91	0.51
48:SC:19:GLY:HA2	48:SC:68:LEU:HD22	1.92	0.51
53:SH:31:ALA:O	53:SH:34:THR:HG22	2.10	0.51
61:SP:22:THR:HG22	61:SP:169:SER:HB2	1.92	0.51
1:LA:196:G:N1	1:LA:199:A:OP2	2.43	0.51
1:LA:874:U:N3	1:LA:2978:U:OP1	2.37	0.51
1:LA:3034:C:C6	11:LK:120:ASP:HB2	2.45	0.51
2:LB:44:C:OP2	13:LM:137:ARG:NH1	2.43	0.51
11:LK:166:ARG:HG2	11:LK:166:ARG:HH11	1.73	0.51
37:Lk:4:LYS:O	37:Lk:16:LYS:NZ	2.43	0.51
39:Lm:40:GLN:NE2	39:Lm:55:VAL:HG13	2.24	0.51
45:S2:69:G:O6	45:S2:82:U:O4	2.28	0.51
45:S2:175:G:N2	45:S2:266:A:H5'	2.20	0.51
45:S2:269:G:N7	65:ST:186:ARG:NH2	2.58	0.51
45:S2:1100:G:O2'	73:Sb:74:VAL:O	2.26	0.51
48:SC:61:TRP:CD1	58:SM:23:VAL:HG23	2.45	0.51
55:SJ:37:VAL:HA	55:SJ:40:ASN:ND2	2.25	0.51
65:ST:132:ARG:HG3	65:ST:133:LEU:HD12	1.92	0.51
1:LA:329:U:N3	6:LF:54:GLU:OE1	2.43	0.51
1:LA:1073:U:H2'	1:LA:1074:U:C6	2.46	0.51
1:LA:1246:G:O4'	1:LA:1264:G:O2'	2.23	0.51
1:LA:1315:U:OP2	17:LQ:44[A]:SER:OG	2.27	0.51
3:LC:64:U:H5''	36:Lj:49:LYS:HG3	1.91	0.51
4:LD:137:ILE:HD11	4:LD:149:ARG:HB2	1.93	0.51
5:LE:215:ILE:HD12	5:LE:338:LEU:HB3	1.92	0.51
7:LG:120:LYS:HE3	7:LG:123:GLU:HG3	1.93	0.51
8:LH:104:GLU:CD	8:LH:104:GLU:H	2.18	0.51
13:LM:118:PRO:HD3	53:SH:103:ASN:OD1	2.11	0.51
16:LP:9:GLU:HB2	37:Lk:44:VAL:HG21	1.93	0.51
45:S2:1691:A:H2'	45:S2:1692:G:N7	2.26	0.51
54:SI:105:LEU:HD13	54:SI:122:ARG:HD2	1.93	0.51
60:SO:76:ASP:OD1	60:SO:76:ASP:N	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SU:76:LYS:O	66:SU:80:GLU:HG2	2.11	0.51
1:LA:1317:A:O2'	1:LA:1318:A:H3'	2.11	0.51
1:LA:1622:U:H2'	1:LA:1623:G:C8	2.46	0.51
1:LA:1940:G:OP1	20:LT:75:HIS:ND1	2.42	0.51
1:LA:3295:A:H2'	1:LA:3296:A:H8	1.73	0.51
7:LG:38:THR:HG23	22:LV:30:TYR:HB3	1.92	0.51
8:LH:11:PRO:HG2	33:Lg:88:HIS:CD2	2.46	0.51
15:LO:73:PRO:HG2	15:LO:76:ALA:HB2	1.92	0.51
20:LT:162:ARG:NH2	45:S2:815:G:C4	2.79	0.51
27:La:3:LYS:HD2	27:La:8:VAL:HG13	1.92	0.51
36:Lj:13:SER:OG	36:Lj:14:LYS:N	2.42	0.51
45:S2:812:A:H62	45:S2:859:A:H5'	1.75	0.51
45:S2:1382:A:H2'	45:S2:1383:G:H8	1.75	0.51
45:S2:1584:G:HO2'	45:S2:1585:U:P	2.32	0.51
51:SF:93:HIS:HA	51:SF:97:VAL:HB	1.92	0.51
55:SJ:30:LYS:HE3	55:SJ:111:GLY:HA3	1.92	0.51
63:SR:143:TYR:OH	63:SR:149:GLY:O	2.23	0.51
71:SZ:85:ALA:H	71:SZ:119:THR:HG22	1.76	0.51
73:Sb:90:THR:O	73:Sb:94:LEU:HB2	2.11	0.51
79:Ta:9:G:H1'	79:Ta:46:G:H2'	1.91	0.51
1:LA:1141:C:O2'	1:LA:1153:A:N3	2.40	0.51
1:LA:1525:G:H5'	1:LA:1830:G:OP2	2.11	0.51
1:LA:1695:U:O2'	1:LA:1749:A:N1	2.33	0.51
1:LA:1868:G:O2'	1:LA:2118:C:O2'	2.27	0.51
11:LK:24:ILE:HD11	11:LK:39:LYS:HE2	1.92	0.51
14:LN:162:ASN:OD1	14:LN:162:ASN:N	2.44	0.51
15:LO:59:ASN:HB2	15:LO:62:GLN:HG2	1.92	0.51
25:LY:18:GLY:HA3	25:LY:31:PHE:O	2.11	0.51
45:S2:86:A:O2'	45:S2:147:A:O2'	2.25	0.51
45:S2:1488:G:H3'	45:S2:1515:A:H61	1.75	0.51
45:S2:1729:C:H2'	45:S2:1730:A:O4'	2.10	0.51
46:SA:74:GLN:HG3	46:SA:84:ILE:CG2	2.41	0.51
46:SA:101:GLN:HG3	46:SA:122:VAL:HG13	1.93	0.51
47:SB:72:HIS:HD2	47:SB:107:LYS:HD3	1.74	0.51
53:SH:120:ARG:HD3	53:SH:125:ILE:HD11	1.93	0.51
64:SS:19:LEU:HD21	64:SS:108:ARG:HD2	1.93	0.51
76:Se:41:ILE:HG12	76:Se:68:TYR:CD2	2.45	0.51
1:LA:671:U:H2'	1:LA:672:A:C8	2.46	0.51
1:LA:2522:G:H1	4:LD:68:LYS:HZ3	1.58	0.51
1:LA:3047:U:O2'	1:LA:3048:A:H5'	2.10	0.51
3:LC:142:C:H2'	3:LC:143:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LG:182:GLY:HA2	7:LG:194:LEU:HD23	1.92	0.51
11:LK:162:GLN:HE21	11:LK:180:TYR:HD1	1.59	0.51
45:S2:340:U:H2'	45:S2:341:A:C8	2.46	0.51
45:S2:917:U:HO2'	45:S2:918:U:H5'	1.75	0.51
45:S2:1361:U:O2'	45:S2:1363:U:OP2	2.20	0.51
45:S2:1450:U:H2'	45:S2:1451:C:C6	2.46	0.51
45:S2:1523:G:H21	45:S2:1523:G:P	2.33	0.51
48:SC:27:PHE:C	48:SC:28:ASN:OD1	2.54	0.51
60:SO:300:THR:OG1	60:SO:314:GLN:OE1	2.28	0.51
1:LA:127:G:H2'	1:LA:128:G:C8	2.46	0.51
1:LA:430:U:H2'	1:LA:431:U:C6	2.45	0.51
1:LA:1541:G:H1'	1:LA:1557:A:C5	2.46	0.51
1:LA:2611:U:H2'	1:LA:2612:U:C6	2.46	0.51
1:LA:3068:U:OP2	20:LT:62:ARG:NH2	2.35	0.51
5:LE:296:THR:OG1	5:LE:297:SER:N	2.44	0.51
44:Lr:21:SER:O	44:Lr:25:GLN:HG3	2.11	0.51
45:S2:172:C:H2'	45:S2:173:A:H8	1.76	0.51
45:S2:1182:U:H4'	50:SE:124:THR:HB	1.92	0.51
45:S2:1525:A:H2'	45:S2:1526:A:C8	2.46	0.51
62:SQ:52:THR:HG23	62:SQ:54:LEU:H	1.76	0.51
65:ST:56:ASN:HD22	65:ST:62:PRO:HA	1.76	0.51
65:ST:180:THR:HG22	65:ST:182:GLN:H	1.76	0.51
71:SZ:29:HIS:HB3	71:SZ:41:ARG:HA	1.92	0.51
1:LA:177:U:O2	1:LA:241:G:C6	2.63	0.51
1:LA:671:U:H2'	1:LA:672:A:H8	1.76	0.51
1:LA:2100:A:H2'	1:LA:2101:C:C6	2.46	0.51
2:LB:4:U:H2'	2:LB:5:G:C8	2.46	0.51
14:LN:114:GLN:NE2	14:LN:118:GLU:OE2	2.42	0.51
19:LS:170:ARG:O	19:LS:171:LYS:HG2	2.10	0.51
20:LT:176:ARG:HH21	20:LT:177:VAL:HG22	1.76	0.51
23:LW:43:VAL:HG13	23:LW:49:ASN:HB2	1.92	0.51
67:SV:138:ASN:O	67:SV:141:ARG:HG3	2.11	0.51
73:Sb:115:GLU:HG2	73:Sb:119:LYS:HD2	1.93	0.51
1:LA:616:G:H2'	1:LA:617:G:C8	2.46	0.50
1:LA:3053:G:H2'	1:LA:3054:U:H6	1.76	0.50
6:LF:300:ARG:O	19:LS:39:ARG:NH1	2.37	0.50
10:LJ:143:ILE:HG23	10:LJ:175:VAL:HG11	1.94	0.50
45:S2:447:U:H2'	45:S2:448:C:O4'	2.10	0.50
45:S2:585:A:H2'	45:S2:586:G:C8	2.46	0.50
45:S2:689:G:H2'	45:S2:690:G:H8	1.76	0.50
45:S2:778:G:H5'	45:S2:780:A:N7	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1253:U:H3'	49:SD:46:ARG:HH21	1.76	0.50
45:S2:1389:C:N4	45:S2:1391:A:O4'	2.44	0.50
45:S2:1496:U:H4'	45:S2:1519:U:O2'	2.11	0.50
45:S2:1610:G:OP1	47:SB:72:HIS:NE2	2.39	0.50
60:SO:13:LEU:CB	60:SO:45:TRP:CH2	2.92	0.50
64:SS:98:ASN:HB2	64:SS:114:ILE:HG13	1.92	0.50
1:LA:153:U:H4'	1:LA:158:G:H4'	1.93	0.50
1:LA:750:G:OP1	30:Ld:40:ARG:NH2	2.44	0.50
1:LA:2221:G:N2	1:LA:2224:A:OP2	2.35	0.50
5:LE:173:GLN:HG2	5:LE:175:LYS:H	1.75	0.50
6:LF:157:GLU:HG3	6:LF:251:THR:HG21	1.93	0.50
9:LI:110:ARG:NH1	9:LI:110:ARG:HB2	2.26	0.50
45:S2:962:C:H2'	45:S2:963:A:O4'	2.10	0.50
48:SC:46:LEU:O	48:SC:50:THR:HG23	2.11	0.50
60:SO:51:ASP:N	60:SO:51:ASP:OD1	2.41	0.50
61:SP:98:ILE:HG21	61:SP:102:PHE:HD1	1.77	0.50
63:SR:140:ARG:NH2	63:SR:228:ASN:OD1	2.42	0.50
65:ST:142:ARG:NH2	65:ST:177:ARG:HG2	2.26	0.50
75:Sd:53:ASP:HB3	75:Sd:96:LEU:HD21	1.93	0.50
1:LA:2167:A:H2'	1:LA:2168:A:C8	2.46	0.50
1:LA:3015:G:H2'	1:LA:3016:A:H8	1.75	0.50
3:LC:8:C:H2'	3:LC:9:A:H8	1.76	0.50
17:LQ:116[A]:LYS:NZ	21:LU:165:TYR:O	2.38	0.50
27:La:32:SER:HA	27:La:49:PRO:HA	1.93	0.50
31:Le:18:ILE:HD11	31:Le:81:VAL:HG13	1.92	0.50
45:S2:396:G:N1	45:S2:399:A:OP2	2.43	0.50
49:SD:130:THR:O	49:SD:134:SER:HB3	2.11	0.50
77:Sf:19:HIS:HB3	77:Sf:22:LYS:HG3	1.93	0.50
1:LA:297:G:OP2	1:LA:297:G:N2	2.29	0.50
1:LA:1666:G:H2'	1:LA:1667:A:C8	2.46	0.50
1:LA:1791:C:H2'	1:LA:1792:C:C6	2.46	0.50
2:LB:27:A:H2'	2:LB:28:C:C6	2.47	0.50
18:LR:46:LYS:HE2	18:LR:46:LYS:H	1.75	0.50
23:LW:101:ASN:OD1	23:LW:103:TYR:OH	2.27	0.50
39:Lm:58:ASP:OD2	39:Lm:61:LYS:HD3	2.11	0.50
43:Lq:9:LYS:NZ	43:Lq:22:GLN:OE1	2.35	0.50
44:Lr:78:THR:O	44:Lr:82:THR:HG23	2.10	0.50
45:S2:1533:C:H4'	45:S2:1539:G:C6	2.46	0.50
45:S2:1611:A:O3'	47:SB:95:ASN:HB3	2.12	0.50
46:SA:76:ARG:HB2	48:SC:22:VAL:HG11	1.93	0.50
60:SO:103:PHE:HB3	60:SO:134:TRP:CZ3	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SS:15:PRO:HG2	64:SS:18:TRP:CE2	2.46	0.50
67:SV:153:GLU:HG3	67:SV:156:VAL:HG22	1.94	0.50
70:SY:29:SER:O	70:SY:33:VAL:HG23	2.11	0.50
78:Sg:55:ARG:CZ	78:Sg:58:PRO:HA	2.41	0.50
1:LA:627:U:H2'	1:LA:628:A:C8	2.46	0.50
1:LA:2426:U:H2'	1:LA:2427:U:C6	2.46	0.50
4:LD:109:GLU:HG2	4:LD:137:ILE:O	2.11	0.50
13:LM:158:ASP:OD1	13:LM:159:THR:N	2.44	0.50
18:LR:175:ARG:O	18:LR:179:GLN:HG2	2.11	0.50
45:S2:1220:C:H2'	45:S2:1221:A:C8	2.47	0.50
45:S2:1767:G:OP1	45:S2:1770:U:H4'	2.12	0.50
62:SQ:70:LEU:HB3	62:SQ:79:HIS:HB3	1.94	0.50
66:SU:93:LEU:HD21	66:SU:129:LEU:HD12	1.93	0.50
68:SW:23:ARG:O	68:SW:27:GLU:HG3	2.10	0.50
70:SY:91:LEU:HB3	70:SY:122:ILE:HG12	1.92	0.50
71:SZ:16:VAL:HG12	71:SZ:18:ARG:HG2	1.94	0.50
76:Se:12:LYS:HB2	76:Se:33:ASP:OD2	2.10	0.50
1:LA:185:C:H5''	27:La:122:LYS:HD3	1.93	0.50
1:LA:1827:C:H2'	1:LA:1828:A:C8	2.47	0.50
1:LA:2257:C:O2'	1:LA:2258:U:O4'	2.28	0.50
1:LA:2369:G:H2'	1:LA:2370:G:C8	2.46	0.50
1:LA:2565:U:O4	1:LA:2576:G:O6	2.28	0.50
1:LA:3343:G:O2'	1:LA:3362:A:N6	2.44	0.50
3:LC:9:A:H2'	3:LC:10:A:C8	2.45	0.50
4:LD:104:LEU:HD22	4:LD:136:ILE:HD11	1.93	0.50
7:LG:41:LYS:HB2	22:LV:68:THR:O	2.11	0.50
15:LO:24:LYS:HE3	15:LO:64:VAL:HG22	1.93	0.50
24:LX:81:GLN:HG2	24:LX:83:LYS:H	1.76	0.50
36:Lj:5:LYS:HD2	36:Lj:7:TYR:CE1	2.47	0.50
37:Lk:70:ARG:HD3	37:Lk:84:LYS:HG3	1.94	0.50
45:S2:220:A:N6	45:S2:841:U:C4	2.80	0.50
45:S2:1182:U:C5	45:S2:1185:U:H5''	2.46	0.50
45:S2:1512:G:H2'	45:S2:1513:G:C8	2.47	0.50
45:S2:1544:U:H5''	53:SH:132:ARG:NH1	2.26	0.50
48:SC:35:ILE:HG22	48:SC:37:THR:HG22	1.93	0.50
55:SJ:28:SER:HB3	55:SJ:112:VAL:HG13	1.93	0.50
55:SJ:84:MET:HB2	58:SM:52:PHE:CD1	2.47	0.50
72:Sa:9:VAL:HG22	72:Sa:10:GLU:H	1.77	0.50
1:LA:2801:A:O2'	1:LA:2802:A:H2'	2.12	0.50
1:LA:2941:A:H8	1:LA:2941:A:OP2	1.95	0.50
3:LC:19:C:H2'	3:LC:20:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:LD:20:THR:HG22	4:LD:23:ARG:NE	2.27	0.50
11:LK:37:ASN:HD21	11:LK:39:LYS:HG3	1.77	0.50
20:LT:139:VAL:O	20:LT:143:ILE:HD13	2.12	0.50
38:LI:25:ARG:O	38:LI:25:ARG:HD3	2.11	0.50
45:S2:322:G:O2'	67:SV:10:LYS:NZ	2.45	0.50
45:S2:1145:U:H5	45:S2:1633:A:N1	2.09	0.50
49:SD:42:ALA:HB1	49:SD:48:SER:HA	1.93	0.50
52:SG:32:LYS:HE2	52:SG:47:ARG:NH2	2.27	0.50
53:SH:48:LYS:HG2	53:SH:54:LEU:HD21	1.94	0.50
54:SI:6:VAL:HG12	54:SI:14:PHE:CE2	2.47	0.50
54:SI:77:ASN:HB3	54:SI:95:ASP:HB3	1.94	0.50
60:SO:294:TRP:CZ3	60:SO:301:LEU:HB2	2.47	0.50
71:SZ:135:ARG:HH12	71:SZ:137:LEU:HD13	1.77	0.50
1:LA:1455:U:H1'	32:Lf:26:LYS:HE3	1.94	0.50
1:LA:1895:A:O2'	1:LA:3053:G:H4'	2.12	0.50
1:LA:2530:G:H2'	1:LA:2530:G:N3	2.27	0.50
7:LG:120:LYS:CE	7:LG:123:GLU:HG3	2.42	0.50
11:LK:22:SER:OG	11:LK:39:LYS:NZ	2.45	0.50
15:LO:47:ASP:OD1	15:LO:49:PRO:HD3	2.12	0.50
28:Lb:92:PHE:HA	28:Lb:95:VAL:HG22	1.94	0.50
39:Lm:13:GLU:CG	39:Lm:16:ARG:HH22	2.24	0.50
45:S2:837:G:H2'	45:S2:838:G:H8	1.74	0.50
60:SO:184:ASN:ND2	60:SO:185:GLN:HG3	2.27	0.50
60:SO:209:THR:O	60:SO:225:LEU:N	2.45	0.50
61:SP:36:TYR:HD1	61:SP:52:LYS:HD3	1.77	0.50
62:SQ:194:ASN:ND2	62:SQ:212:VAL:HG23	2.27	0.50
64:SS:191:ARG:HD3	64:SS:218:PHE:CZ	2.46	0.50
66:SU:36:ALA:HA	66:SU:39:ARG:HD3	1.93	0.50
68:SW:108:ARG:NH2	68:SW:145:SER:HB3	2.27	0.50
74:Sc:69:ARG:HA	78:Sg:8:LEU:HA	1.94	0.50
1:LA:911:C:H42	4:LD:3:ARG:HD3	1.75	0.50
1:LA:1061:A:O3'	22:LV:102:ARG:NH1	2.45	0.50
1:LA:1229:G:O2'	1:LA:1230:G:O4'	2.17	0.50
1:LA:1348:U:H4'	1:LA:1349:G:H5'	1.94	0.50
1:LA:3013:U:H2'	1:LA:3014:U:C6	2.47	0.50
3:LC:85:G:OP2	27:La:113:LYS:NZ	2.40	0.50
7:LG:40:HIS:CE1	7:LG:42:ALA:HB3	2.47	0.50
9:LI:151:ARG:HD2	9:LI:207:LEU:HD23	1.93	0.50
18:LR:2:ALA:O	18:LR:18:ARG:NH1	2.43	0.50
45:S2:762:A:C8	45:S2:789:A:N6	2.80	0.50
45:S2:772:G:OP1	64:SS:22:LYS:NZ	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1680:G:H1'	45:S2:1721:A:H61	1.75	0.50
45:S2:1726:G:H2'	45:S2:1727:G:O4'	2.12	0.50
45:S2:1797:A:N6	76:Se:84:VAL:HB	2.27	0.50
53:SH:41:ARG:NE	54:SI:46:PRO:HD3	2.27	0.50
54:SI:14:PHE:CD1	54:SI:14:PHE:C	2.90	0.50
67:SV:149:SER:HB3	69:SX:24:LYS:HE3	1.93	0.50
1:LA:1509:A:H2'	1:LA:1510:G:C8	2.47	0.49
5:LE:77:THR:HG21	5:LE:328:ILE:HG12	1.93	0.49
5:LE:111:SER:O	5:LE:115:LYS:HG2	2.12	0.49
5:LE:146:ARG:HA	5:LE:146:ARG:HE	1.77	0.49
5:LE:212:ASN:OD1	5:LE:353:GLU:OE1	2.30	0.49
5:LE:343:TYR:CE2	5:LE:345:ASN:HB2	2.47	0.49
22:LV:57:TYR:HA	22:LV:60:LYS:HG3	1.92	0.49
45:S2:70:C:H2'	45:S2:71:A:C8	2.46	0.49
52:SG:15:ALA:O	52:SG:19:ARG:HD3	2.12	0.49
55:SJ:36:ASN:OD1	55:SJ:37:VAL:N	2.45	0.49
63:SR:81:MET:HB3	63:SR:207:LEU:HD21	1.94	0.49
64:SS:181:VAL:HG11	64:SS:195:ILE:HD11	1.94	0.49
66:SU:15:GLU:HG3	66:SU:16:LEU:HD22	1.94	0.49
68:SW:63:ASP:OD1	68:SW:63:ASP:N	2.43	0.49
1:LA:876:A:H5''	1:LA:1890:U:H5''	1.95	0.49
2:LB:87:G:O2'	21:LU:119:ARG:NH2	2.46	0.49
3:LC:37:A:OP2	36:Lj:86:ARG:HD2	2.11	0.49
3:LC:55:U:O4	3:LC:62:C:N3	2.44	0.49
10:LJ:183:LYS:HB2	10:LJ:194:THR:HG23	1.93	0.49
15:LO:103:ILE:O	15:LO:107:GLU:HG3	2.12	0.49
35:Li:41:ARG:HG2	35:Li:56:THR:HG21	1.94	0.49
44:Lr:36:ARG:CD	44:Lr:48:LYS:HD3	2.41	0.49
45:S2:424:C:O2'	45:S2:426:G:OP1	2.22	0.49
45:S2:1275:A:N3	46:SA:141:LYS:NZ	2.54	0.49
46:SA:18:TYR:CE2	58:SM:49:ASP:HB2	2.46	0.49
51:SF:39:VAL:HG13	51:SF:41:PRO:HD3	1.93	0.49
64:SS:12:LEU:HD21	64:SS:22:LYS:HB2	1.93	0.49
72:Sa:12:TYR:CG	72:Sa:12:TYR:O	2.65	0.49
79:Ta:14:A:H3'	79:Ta:15:G:H8	1.77	0.49
1:LA:447:U:O4	1:LA:489:C:O2'	2.30	0.49
1:LA:664:U:H5'	6:LF:107:ARG:HA	1.94	0.49
1:LA:790:U:H5''	6:LF:112:LYS:HB3	1.94	0.49
1:LA:1018:G:O6	1:LA:1034:U:C2	2.66	0.49
1:LA:1824:U:C2	1:LA:1825:G:C8	2.99	0.49
1:LA:3150:A:H4'	5:LE:128:LYS:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LF:169:LEU:HG	6:LF:174:ALA:HB3	1.94	0.49
8:LH:136:GLU:O	8:LH:140:VAL:HG23	2.11	0.49
11:LK:49:ASN:OD1	11:LK:52:LEU:HD12	2.13	0.49
17:LQ:74[A]:ARG:HG3	17:LQ:145[A]:VAL:HG23	1.95	0.49
45:S2:888:U:H2'	45:S2:889:U:C6	2.47	0.49
45:S2:1304:G:OP2	45:S2:1305:U:O2'	2.27	0.49
46:SA:154:ASP:OD1	46:SA:155:GLY:N	2.45	0.49
55:SJ:37:VAL:HA	55:SJ:40:ASN:HD21	1.76	0.49
57:SL:12:VAL:HG12	57:SL:30:VAL:HG12	1.94	0.49
60:SO:240:VAL:HG22	60:SO:256:THR:CG2	2.41	0.49
61:SP:93:THR:OG1	61:SP:94:GLY:N	2.46	0.49
63:SR:238:SER:O	63:SR:242:ILE:HG22	2.12	0.49
66:SU:45:SER:C	66:SU:46:ILE:HD13	2.37	0.49
68:SW:30:LEU:HD21	68:SW:102:GLU:HG3	1.92	0.49
1:LA:428:A:O2'	34:Lh:88:ASN:ND2	2.41	0.49
1:LA:1167:U:H2'	1:LA:1168:U:O4'	2.12	0.49
1:LA:2656:A:H4'	43:Lq:98:LYS:HE3	1.94	0.49
1:LA:2680:A:C2	13:LM:57:PHE:HB3	2.47	0.49
1:LA:2882:U:H2'	1:LA:2883:U:C6	2.47	0.49
1:LA:3207:U:O2'	1:LA:3208:G:H5'	2.13	0.49
2:LB:119:U:OP2	7:LG:258:LYS:NZ	2.40	0.49
8:LH:30:LEU:HD22	8:LH:34:LEU:HD23	1.94	0.49
9:LI:163:LEU:HD13	9:LI:169:ILE:HD11	1.92	0.49
33:Lg:83:GLU:HA	33:Lg:86:THR:HG23	1.93	0.49
35:Li:80:ARG:HG3	35:Li:80:ARG:NH1	2.28	0.49
45:S2:823:G:N7	45:S2:849:C:O2'	2.44	0.49
45:S2:1144:U:H2'	45:S2:1145:U:O2	2.13	0.49
45:S2:1669:U:H2'	45:S2:1670:G:O4'	2.11	0.49
49:SD:93:ASP:OD1	49:SD:93:ASP:N	2.46	0.49
54:SI:124:ILE:HG12	54:SI:129:GLN:HE21	1.78	0.49
60:SO:180:ALA:O	60:SO:188:ILE:HD12	2.11	0.49
68:SW:94:ASP:OD1	68:SW:95:TYR:N	2.46	0.49
68:SW:126:ARG:HG2	78:Sg:33:ARG:HD3	1.95	0.49
72:Sa:17:CYS:HB2	72:Sa:56:SER:HB2	1.94	0.49
77:Sf:45:THR:OG1	77:Sf:82:LYS:NZ	2.34	0.49
1:LA:68:C:O3'	16:LP:177:GLY:HA2	2.13	0.49
1:LA:952:A:H4'	1:LA:968:G:N2	2.28	0.49
1:LA:2413:A:H2'	1:LA:2414:G:H8	1.77	0.49
1:LA:2696:A:H2'	1:LA:2697:A:C8	2.48	0.49
4:LD:132:ASN:HD22	4:LD:151:PRO:HB3	1.77	0.49
10:LJ:106:LYS:O	10:LJ:110:THR:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Lj:59:ASN:HD21	36:Lj:63:ARG:HD2	1.78	0.49
37:Lk:66:GLU:HA	37:Lk:66:GLU:OE2	2.13	0.49
45:S2:523:G:H1'	45:S2:529:A:H61	1.77	0.49
45:S2:607:G:H5'	45:S2:613:G:N2	2.27	0.49
45:S2:1488:G:O2'	45:S2:1494:C:O2	2.22	0.49
45:S2:1502:G:N2	45:S2:1505:A:OP2	2.44	0.49
45:S2:1617:U:H2'	45:S2:1618:C:C6	2.47	0.49
45:S2:1680:G:H1'	45:S2:1721:A:N6	2.27	0.49
63:SR:150:GLN:O	63:SR:174:ARG:NH2	2.45	0.49
64:SS:181:VAL:HA	64:SS:227:VAL:HA	1.93	0.49
1:LA:431:U:H2'	1:LA:432:G:H8	1.77	0.49
1:LA:1181:U:H2'	17:LQ:122[A]:GLN:NE2	2.28	0.49
1:LA:2836:C:H5	1:LA:2852:C:N4	2.08	0.49
1:LA:3110:C:H2'	1:LA:3111:U:C6	2.47	0.49
5:LE:102:LEU:HD21	5:LE:155:ALA:HB2	1.94	0.49
6:LF:178:LEU:HD21	6:LF:225:VAL:HG22	1.94	0.49
9:LI:116:PHE:CZ	9:LI:144:ILE:HG23	2.46	0.49
45:S2:953:G:H2'	45:S2:954:G:H8	1.77	0.49
50:SE:28:MET:HG2	50:SE:32:ASP:CG	2.37	0.49
60:SO:21:THR:HG23	60:SO:37:SER:HA	1.95	0.49
65:ST:57:ASP:HB3	65:ST:98:ARG:HD2	1.94	0.49
70:SY:102:LEU:HD11	70:SY:112:LYS:HA	1.95	0.49
1:LA:532:A:H2'	1:LA:533:A:H8	1.76	0.49
1:LA:651:G:O2'	1:LA:1435:A:OP1	2.31	0.49
1:LA:688:G:N2	1:LA:692:A:H2	2.08	0.49
1:LA:1211:U:H2'	1:LA:1212:A:C8	2.48	0.49
1:LA:1861:G:O2'	1:LA:3066:U:OP1	2.30	0.49
1:LA:2152:A:H2'	1:LA:2153:U:H6	1.78	0.49
1:LA:2407:C:H2'	1:LA:2408:U:H6	1.78	0.49
1:LA:2536:A:H5'	62:SQ:224:ASP:OD1	2.12	0.49
1:LA:3168:A:H2'	1:LA:3169:U:C6	2.48	0.49
5:LE:148:LEU:CD2	5:LE:196:ARG:HE	2.25	0.49
11:LK:99:ILE:HD12	11:LK:117:PHE:HD1	1.77	0.49
31:Le:74:ASN:OD1	31:Le:74:ASN:N	2.45	0.49
36:Lj:86:ARG:O	36:Lj:90:ARG:HG2	2.13	0.49
45:S2:819:G:H4'	45:S2:820:U:O5'	2.12	0.49
64:SS:136:VAL:HG21	64:SS:148:ARG:NH2	2.28	0.49
75:Sd:56:SER:OG	75:Sd:94:TYR:OH	2.08	0.49
75:Sd:92:VAL:HG11	75:Sd:99:LYS:HB3	1.93	0.49
1:LA:411:U:H2'	1:LA:412:G:H8	1.77	0.49
1:LA:506:U:H2'	1:LA:507:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:714:G:O2'	1:LA:753:C:O2'	2.21	0.49
1:LA:2257:C:O2'	1:LA:2258:U:O5'	2.30	0.49
1:LA:2961:G:H2'	1:LA:2962:U:C6	2.48	0.49
1:LA:3050:U:O2'	25:LY:16:GLY:O	2.30	0.49
1:LA:3066:U:H2'	1:LA:3067:C:C6	2.48	0.49
3:LC:41:A:H4'	38:LI:59:THR:HG23	1.94	0.49
6:LF:136:LEU:HD21	6:LF:143:GLU:HG3	1.95	0.49
9:LI:189:ILE:HG23	9:LI:190:THR:H	1.78	0.49
14:LN:48:PRO:HA	14:LN:137:GLN:HB3	1.95	0.49
36:Lj:74:LYS:HG3	36:Lj:75:TYR:CD2	2.47	0.49
45:S2:12:U:H2'	45:S2:13:C:C6	2.46	0.49
45:S2:863:A:O5'	73:Sb:57:ARG:HG2	2.12	0.49
61:SP:28:ASN:HA	61:SP:46:HIS:CE1	2.46	0.49
64:SS:73:ASP:C	64:SS:164:LEU:HD11	2.38	0.49
1:LA:1378:U:H2'	1:LA:1379:G:C8	2.48	0.49
1:LA:1463:U:H2'	1:LA:1464:G:O4'	2.13	0.49
1:LA:3234:A:N1	1:LA:3253:G:C6	2.80	0.49
3:LC:121:U:O2	3:LC:132:G:N2	2.31	0.49
4:LD:80:GLU:HG3	44:Lr:66:GLY:HA2	1.95	0.49
6:LF:177:ASP:OD1	6:LF:180:LYS:HE3	2.13	0.49
20:LT:116:ASP:OD1	20:LT:118:HIS:N	2.46	0.49
29:Lc:96:LYS:C	29:Lc:98:THR:H	2.21	0.49
45:S2:577:G:C2	79:Ta:36:G:H8	2.31	0.49
45:S2:1359:C:H3'	45:S2:1360:A:C8	2.48	0.49
50:SE:85:ILE:HG12	50:SE:114:HIS:O	2.12	0.49
60:SO:34:LEU:HD23	60:SO:44:SER:HA	1.94	0.49
60:SO:134:TRP:CD1	60:SO:140:CYS:HA	2.48	0.49
60:SO:220:ILE:N	60:SO:234:LEU:O	2.45	0.49
79:Ta:4:G:O2'	79:Ta:5:G:OP1	2.29	0.49
1:LA:1497:C:H2'	1:LA:1498:A:H8	1.78	0.49
1:LA:2106:A:H2'	1:LA:2107:A:C8	2.47	0.49
1:LA:2592:G:H4'	1:LA:2594:C:C2	2.48	0.49
1:LA:2615:G:H2'	1:LA:2616:C:H6	1.78	0.49
1:LA:3315:G:P	5:LE:116:ARG:HH22	2.36	0.49
2:LB:109:G:H5''	7:LG:279:LYS:HE2	1.95	0.49
3:LC:26:U:O2'	6:LF:51:ALA:O	2.30	0.49
4:LD:102:LEU:HD12	4:LD:102:LEU:H	1.78	0.49
7:LG:129:TYR:OH	7:LG:175:HIS:O	2.22	0.49
24:LX:20:GLY:HA2	24:LX:35:TYR:CE2	2.48	0.49
45:S2:903:U:H5''	71:SZ:135:ARG:HH21	1.78	0.49
45:S2:1451:C:P	58:SM:12:ARG:HH22	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SC:2:LEU:HD23	48:SC:2:LEU:H	1.77	0.49
67:SV:37:LYS:HB2	67:SV:59:ARG:HG2	1.95	0.49
1:LA:118:U:O2	1:LA:121:A:H5''	2.13	0.48
1:LA:3015:G:H2'	1:LA:3016:A:C8	2.48	0.48
6:LF:185:LYS:HG3	6:LF:199:TRP:CD1	2.47	0.48
8:LH:15:VAL:HG13	33:Lg:5:PRO:HD3	1.94	0.48
9:LI:52:GLN:HA	9:LI:52:GLN:HE21	1.78	0.48
15:LO:16:GLU:HA	15:LO:38:ILE:HD11	1.95	0.48
15:LO:28:SER:HA	15:LO:31:LYS:NZ	2.27	0.48
34:Lh:75:HIS:HB2	34:Lh:82:ARG:HG3	1.95	0.48
45:S2:1095:U:H4'	73:Sb:19:LYS:NZ	2.27	0.48
45:S2:1183:A:C4	50:SE:100:LYS:HD2	2.48	0.48
45:S2:1241:G:H1'	50:SE:79:HIS:HB2	1.94	0.48
47:SB:208:SER:HB3	47:SB:211:ILE:HG22	1.95	0.48
52:SG:26:LEU:HD11	52:SG:62:GLN:HG3	1.95	0.48
62:SQ:157:GLN:C	62:SQ:159:SER:H	2.20	0.48
63:SR:78:ASP:HB3	63:SR:104:VAL:HG22	1.95	0.48
64:SS:64:ILE:HD13	75:Sd:17:LEU:HD23	1.95	0.48
64:SS:181:VAL:HG12	64:SS:227:VAL:HB	1.95	0.48
67:SV:101:ILE:HD11	67:SV:192:TYR:CE1	2.48	0.48
67:SV:153:GLU:OE2	67:SV:156:VAL:N	2.46	0.48
75:Sd:58:PHE:CE2	75:Sd:72:PHE:HB3	2.48	0.48
79:Ta:2:G:O2'	79:Ta:3:C:OP1	2.25	0.48
1:LA:2407:C:H2'	1:LA:2408:U:C6	2.48	0.48
1:LA:2662:G:H2'	1:LA:2663:G:H8	1.77	0.48
1:LA:2703:A:OP2	7:LG:23:ARG:NE	2.43	0.48
2:LB:12:U:OP2	2:LB:68:C:O2'	2.32	0.48
7:LG:205:SER:HB3	7:LG:236:LEU:HD11	1.94	0.48
13:LM:108:GLU:HA	13:LM:122:ILE:HG23	1.95	0.48
19:LS:157:PRO:HA	19:LS:186:VAL:HG12	1.94	0.48
21:LU:6:GLU:HG2	21:LU:64:ILE:HD12	1.95	0.48
21:LU:8:GLN:HG3	21:LU:8:GLN:O	2.12	0.48
45:S2:763:G:O2'	45:S2:764:U:H5'	2.12	0.48
45:S2:1606:C:H2'	45:S2:1607:G:C8	2.48	0.48
55:SJ:52:LYS:HB3	55:SJ:93:LEU:HD13	1.96	0.48
56:SK:65:LEU:O	56:SK:69:LEU:HB2	2.13	0.48
63:SR:51:THR:HG23	63:SR:52:THR:HG23	1.93	0.48
64:SS:182:TYR:N	64:SS:226:PHE:O	2.34	0.48
64:SS:220:THR:HG22	64:SS:221:ARG:H	1.78	0.48
66:SU:17:GLU:CG	66:SU:46:ILE:HG12	2.36	0.48
67:SV:194:ARG:HH11	67:SV:194:ARG:CB	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sd:26:ASP:N	75:Sd:26:ASP:OD1	2.46	0.48
1:LA:440:A:O2'	1:LA:489:C:N4	2.38	0.48
1:LA:1498:A:H2'	1:LA:1499:C:C6	2.48	0.48
1:LA:2392:C:O2'	5:LE:266:ARG:NH1	2.35	0.48
1:LA:2964:G:N2	1:LA:2967:A:OP2	2.41	0.48
7:LG:34:LYS:O	7:LG:38:THR:OG1	2.13	0.48
7:LG:272:TYR:HD1	7:LG:272:TYR:O	1.96	0.48
15:LO:45:LEU:HD12	21:LU:72:VAL:HG23	1.95	0.48
16:LP:177:GLY:O	16:LP:184:LYS:HE2	2.13	0.48
45:S2:116:U:H2'	45:S2:117:U:C6	2.47	0.48
45:S2:1484:G:H2'	45:S2:1485:C:C6	2.48	0.48
45:S2:1545:A:OP2	53:SH:134:ARG:HD2	2.13	0.48
61:SP:42:PRO:O	61:SP:43:ASP:HB3	2.14	0.48
62:SQ:133:TYR:CE2	62:SQ:181:LEU:HD22	2.48	0.48
64:SS:185:GLY:N	64:SS:189:LEU:HD13	2.28	0.48
74:Sc:57:LEU:HD11	74:Sc:73:ARG:HD3	1.95	0.48
1:LA:114:A:H2'	1:LA:115:A:O4'	2.13	0.48
1:LA:598:A:H4'	6:LF:325:LEU:HD13	1.96	0.48
1:LA:2367:A:H2'	1:LA:2368:A:C8	2.49	0.48
1:LA:2947:G:C2	5:LE:250:ALA:HB1	2.48	0.48
1:LA:3343:G:H2'	1:LA:3344:A:C2	2.48	0.48
1:LA:3358:U:H2'	1:LA:3359:A:H8	1.76	0.48
3:LC:78:G:H2'	3:LC:79:A:H8	1.78	0.48
17:LQ:77[A]:SER:HB2	17:LQ:104[A]:VAL:HG22	1.95	0.48
22:LV:106:LEU:HA	22:LV:109:VAL:HG12	1.95	0.48
45:S2:86:A:HO2'	45:S2:147:A:HO2'	1.52	0.48
45:S2:1509:C:H2'	45:S2:1510:U:C6	2.49	0.48
46:SA:34:TYR:CE1	46:SA:37:VAL:HG13	2.48	0.48
47:SB:41:LYS:HE2	47:SB:69:PHE:CZ	2.48	0.48
51:SF:101:SER:O	51:SF:104:GLU:HG3	2.13	0.48
53:SH:17:LEU:HD23	53:SH:18:LEU:HG	1.95	0.48
55:SJ:40:ASN:HA	55:SJ:43:LYS:HG2	1.96	0.48
58:SM:6:VAL:HA	58:SM:9:SER:HB3	1.96	0.48
64:SS:191:ARG:HE	64:SS:245:LYS:HD2	1.78	0.48
69:SX:33:ARG:NH2	69:SX:53:TYR:O	2.46	0.48
71:SZ:92:LYS:HB2	71:SZ:92:LYS:HE3	1.67	0.48
73:Sb:105:THR:HG23	73:Sb:126:LEU:HD11	1.95	0.48
9:LI:130:ILE:HD12	9:LI:134:VAL:HG11	1.95	0.48
12:LL:76:MET:HE3	12:LL:148:VAL:HA	1.96	0.48
16:LP:183:THR:HG22	16:LP:187:ARG:HG3	1.95	0.48
39:Lm:8:ILE:HD13	39:Lm:54:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:702:G:N7	45:S2:732:G:N1	2.60	0.48
45:S2:759:U:H2'	45:S2:760:A:H8	1.76	0.48
45:S2:1170:G:C2	45:S2:1171:A:C8	3.01	0.48
46:SA:158:ILE:CD1	46:SA:163:PRO:HB2	2.44	0.48
48:SC:44:LYS:HA	48:SC:44:LYS:HD2	1.70	0.48
60:SO:43:ILE:HG23	60:SO:45:TRP:NE1	2.27	0.48
60:SO:131:ILE:CG2	60:SO:144:LEU:HB2	2.42	0.48
63:SR:76:LEU:HA	63:SR:106:ASP:HA	1.95	0.48
64:SS:72:VAL:N	64:SS:75:LYS:O	2.45	0.48
68:SW:123:HIS:HD2	78:Sg:33:ARG:HH11	1.61	0.48
70:SY:54:LEU:HD22	70:SY:60:VAL:HG21	1.95	0.48
1:LA:29:C:H4'	1:LA:62:A:H4'	1.95	0.48
1:LA:1153:A:O2'	1:LA:1154:A:O5'	2.25	0.48
1:LA:1480:G:O2'	1:LA:1871:U:O4	2.21	0.48
1:LA:1765:U:C5'	20:LT:43:LYS:NZ	2.76	0.48
1:LA:1926:C:H5'	44:Lr:8:VAL:HG13	1.95	0.48
1:LA:2585:G:N3	1:LA:2585:G:H2'	2.28	0.48
1:LA:2727:A:OP2	1:LA:2728:G:N2	2.42	0.48
1:LA:3204:C:H2'	1:LA:3205:G:C8	2.49	0.48
2:LB:11:A:N1	2:LB:67:G:O2'	2.44	0.48
4:LD:10:LYS:HA	4:LD:16:PHE:CD2	2.48	0.48
11:LK:129:ARG:HD3	11:LK:157:ASN:HD21	1.79	0.48
14:LN:180:ARG:O	14:LN:184:GLU:HG2	2.13	0.48
18:LR:119:VAL:HA	18:LR:145:HIS:O	2.12	0.48
30:Ld:47:LEU:HA	30:Ld:50:THR:HG22	1.95	0.48
34:Lh:37:THR:HG23	34:Lh:40:ASP:H	1.79	0.48
45:S2:153:G:N2	65:ST:56:ASN:OD1	2.46	0.48
45:S2:990:C:H2'	45:S2:991:G:O4'	2.13	0.48
45:S2:1089:U:O2'	45:S2:1093:A:N1	2.39	0.48
45:S2:1564:U:H2'	45:S2:1565:C:C6	2.48	0.48
50:SE:116:LEU:HD12	50:SE:116:LEU:O	2.13	0.48
61:SP:83:GLN:HG2	61:SP:99:ALA:HB1	1.95	0.48
61:SP:172:LEU:C	61:SP:176:LEU:HD12	2.38	0.48
66:SU:133:THR:HG21	66:SU:159:VAL:HG13	1.96	0.48
1:LA:3:U:OP2	26:LZ:22:LYS:N	2.46	0.48
1:LA:73:C:C5	14:LN:66:ASN:OD1	2.66	0.48
1:LA:1352:A:H4'	1:LA:1353:U:H5'	1.94	0.48
1:LA:1616:U:H2'	1:LA:1617:G:C8	2.48	0.48
1:LA:2406:C:H2'	1:LA:2407:C:H6	1.77	0.48
1:LA:2449:A:H2'	1:LA:2450:G:C8	2.49	0.48
5:LE:148:LEU:HD23	5:LE:196:ARG:HE	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:LW:16:THR:HB	23:LW:102:GLU:HA	1.96	0.48
26:LZ:62:VAL:HA	26:LZ:87:SER:HB3	1.96	0.48
45:S2:1175:U:H2'	45:S2:1176:G:C8	2.49	0.48
46:SA:76:ARG:O	46:SA:76:ARG:NH1	2.36	0.48
49:SD:42:ALA:HB3	49:SD:122:VAL:HB	1.95	0.48
51:SF:25:GLY:C	51:SF:26:LYS:HE2	2.38	0.48
54:SI:72:GLY:H	54:SI:75:LYS:HG3	1.79	0.48
60:SO:86:ASP:OD1	60:SO:88:THR:OG1	2.26	0.48
66:SU:72:LYS:HG2	66:SU:73:VAL:HG13	1.94	0.48
76:Se:69:ASN:HD21	76:Se:71:LEU:HD21	1.79	0.48
78:Sg:51:ASN:OD1	78:Sg:51:ASN:N	2.47	0.48
1:LA:8:C:H2'	1:LA:9:U:C6	2.48	0.48
1:LA:419:G:N2	3:LC:4:C:O2	2.31	0.48
1:LA:1901:A:O3'	1:LA:2918:G:H5'	2.14	0.48
1:LA:2553:U:O2'	35:Li:91:ARG:NE	2.46	0.48
1:LA:2557:A:OP1	4:LD:69:TYR:OH	2.16	0.48
6:LF:178:LEU:HD11	6:LF:222:VAL:HG22	1.96	0.48
39:Lm:8:ILE:HD12	39:Lm:65:LEU:HD21	1.95	0.48
58:SM:43:PHE:CD1	58:SM:43:PHE:C	2.91	0.48
60:SO:179:LYS:HG2	60:SO:188:ILE:CD1	2.43	0.48
69:SX:121:ASP:HA	69:SX:144:ALA:HB3	1.95	0.48
80:Tb:67:C:C2	80:Tb:68:C:H5	2.32	0.48
1:LA:765:C:N4	14:LN:176:GLU:HG2	2.27	0.48
1:LA:943:U:H3'	29:Lc:13:GLY:HA2	1.96	0.48
1:LA:993:G:N3	1:LA:2637:A:H2'	2.29	0.48
1:LA:1612:A:H5''	39:Lm:51:LEU:HD22	1.95	0.48
1:LA:2529:A:C2	1:LA:2530:G:H1'	2.49	0.48
32:Lf:53:PRO:O	32:Lf:57:GLN:HG3	2.13	0.48
45:S2:592:A:O2'	45:S2:596:C:OP1	2.30	0.48
45:S2:788:A:C6	64:SS:19:LEU:HD13	2.49	0.48
46:SA:27:ARG:HG2	48:SC:58:GLN:HE22	1.79	0.48
47:SB:117:THR:HG21	47:SB:194:LEU:HD23	1.96	0.48
54:SI:39:THR:OG1	54:SI:43:ASN:ND2	2.46	0.48
54:SI:101:ASN:O	54:SI:104:VAL:HG12	2.14	0.48
56:SK:42:LEU:HB2	56:SK:46:LYS:HB3	1.96	0.48
64:SS:107:GLY:HA2	64:SS:189:LEU:HG	1.95	0.48
65:ST:27:PHE:CE1	65:ST:52:ILE:HD11	2.48	0.48
69:SX:55:ASP:HB2	69:SX:82:ARG:NH2	2.29	0.48
69:SX:116:ARG:HH12	69:SX:118:GLN:HG2	1.79	0.48
71:SZ:25:ASP:N	71:SZ:55:SER:HB3	2.28	0.48
1:LA:595:G:N1	1:LA:609:G:H5''	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:874:U:OP2	1:LA:1907:C:O2'	2.23	0.48
1:LA:1801:U:H2'	1:LA:1802:C:C6	2.49	0.48
1:LA:2113:A:O2'	1:LA:2116:G:N7	2.42	0.48
1:LA:2180:G:H2'	1:LA:2181:C:C6	2.49	0.48
1:LA:2376:G:H2'	1:LA:2377:G:C8	2.49	0.48
11:LK:23:ARG:NH1	11:LK:43:VAL:H	2.12	0.48
16:LP:140:LYS:O	16:LP:144:ARG:HG3	2.14	0.48
45:S2:789:A:H2	64:SS:248:ILE:HG21	1.79	0.48
45:S2:802:G:H21	73:Sb:107:SER:HB3	1.79	0.48
45:S2:1079:U:H2'	45:S2:1080:U:C6	2.49	0.48
45:S2:1753:A:H2'	45:S2:1754:A:O4'	2.14	0.48
46:SA:75:LYS:HZ3	48:SC:21:VAL:HA	1.78	0.48
50:SE:44:ARG:NH2	50:SE:82:ASN:O	2.47	0.48
60:SO:34:LEU:HD12	60:SO:73:LEU:HD21	1.81	0.48
60:SO:109:ASP:O	60:SO:126:SER:OG	2.32	0.48
68:SW:136:VAL:HA	68:SW:156:ILE:HD13	1.96	0.48
70:SY:94:LYS:HG2	70:SY:118:ILE:HD13	1.96	0.48
1:LA:19:U:H2'	1:LA:20:A:H8	1.78	0.47
1:LA:307:A:H2'	1:LA:308:A:C8	2.49	0.47
1:LA:748:U:H5''	30:Ld:31:SER:HA	1.96	0.47
1:LA:1010:G:N2	12:LL:193:ASP:OD2	2.45	0.47
1:LA:1049:C:H2'	1:LA:1050:U:C6	2.49	0.47
1:LA:1157:G:H2'	1:LA:1158:A:O4'	2.14	0.47
1:LA:2112:U:H4'	1:LA:2113:A:H5'	1.95	0.47
1:LA:2137:U:OP2	1:LA:2142:A:N6	2.37	0.47
1:LA:2208:A:O2'	1:LA:2210:G:N7	2.47	0.47
1:LA:3238:G:H2'	1:LA:3239:G:O4'	2.14	0.47
6:LF:191:LYS:HG2	6:LF:194:TYR:OH	2.14	0.47
27:La:27:ARG:HG2	27:La:78:PHE:CE1	2.48	0.47
37:Lk:57:LEU:HD21	37:Lk:73:ALA:HB2	1.96	0.47
43:Lq:56:PRO:O	80:Tb:77:A:H2'	2.13	0.47
45:S2:1359:C:H3'	45:S2:1360:A:H8	1.78	0.47
46:SA:215:GLU:OE1	46:SA:215:GLU:N	2.45	0.47
49:SD:89:ILE:HD11	49:SD:140:PHE:HB2	1.95	0.47
57:SL:25:VAL:HA	57:SL:44:VAL:O	2.14	0.47
58:SM:19:ARG:NH1	58:SM:32:ARG:HB2	2.29	0.47
60:SO:152:SER:N	60:SO:173:GLY:HA2	2.29	0.47
61:SP:56:LYS:NZ	72:Sa:66:ASP:OD1	2.31	0.47
62:SQ:127:VAL:HG11	62:SQ:173:THR:HA	1.95	0.47
68:SW:58:ASP:O	68:SW:61:THR:HG22	2.14	0.47
1:LA:1128:U:H2'	1:LA:1129:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1460:A:H2'	1:LA:1461:A:C8	2.49	0.47
1:LA:2150:G:O2'	1:LA:2189:U:OP1	2.28	0.47
1:LA:2204:C:H2'	1:LA:2205:U:H5''	1.96	0.47
1:LA:2267:C:H2'	1:LA:2268:U:C6	2.49	0.47
4:LD:132:ASN:O	4:LD:169:ILE:HG13	2.13	0.47
5:LE:167:ARG:HH12	5:LE:168:LYS:HG3	1.79	0.47
8:LH:51:ARG:NH1	8:LH:161:ALA:O	2.46	0.47
14:LN:158:ALA:HA	29:Lc:97:GLU:HA	1.95	0.47
29:Lc:22:ILE:HD12	29:Lc:22:ILE:N	2.29	0.47
29:Lc:75:LEU:HB3	29:Lc:118:ILE:HG23	1.96	0.47
42:Lp:11:ARG:NH2	45:S2:1775:U:OP1	2.47	0.47
45:S2:88:U:H4'	45:S2:171:A:H5'	1.96	0.47
45:S2:577:G:H1'	79:Ta:36:G:O2'	2.14	0.47
47:SB:95:ASN:OD1	47:SB:107:LYS:HE2	2.14	0.47
53:SH:41:ARG:HB3	53:SH:85:PHE:HZ	1.79	0.47
60:SO:91:LEU:HD11	60:SO:103:PHE:CE2	2.49	0.47
61:SP:2:SER:HB3	72:Sa:78:LEU:HA	1.96	0.47
61:SP:139:VAL:O	61:SP:140:ASN:HB2	2.15	0.47
64:SS:211:LYS:HE2	64:SS:211:LYS:HB2	1.51	0.47
1:LA:250:U:C4	1:LA:253:A:H1'	2.50	0.47
1:LA:937:G:N2	1:LA:961:C:OP1	2.47	0.47
1:LA:2597:U:H2'	1:LA:2598:G:H8	1.79	0.47
4:LD:112:ILE:HG13	44:Lr:79:VAL:HG22	1.96	0.47
6:LF:125:ALA:HB1	6:LF:238:LEU:HB3	1.97	0.47
31:Le:55:GLU:HB2	35:Li:94:LEU:HD11	1.96	0.47
33:Lg:32:TRP:HH2	33:Lg:52:GLN:HG2	1.79	0.47
45:S2:333:A:OP2	67:SV:31:ARG:NH2	2.44	0.47
45:S2:832:U:H2'	45:S2:833:U:C6	2.49	0.47
45:S2:1173:C:H2'	45:S2:1174:C:H6	1.80	0.47
45:S2:1226:A:O2'	45:S2:1256:A:N1	2.47	0.47
45:S2:1351:G:O6	45:S2:1375:A:N6	2.47	0.47
45:S2:1461:C:OP1	53:SH:144:ARG:NH2	2.47	0.47
49:SD:45:LEU:HD23	49:SD:45:LEU:H	1.79	0.47
49:SD:74:LEU:HD11	59:SN:106:TYR:HB2	1.96	0.47
53:SH:86:LEU:HD22	53:SH:99:HIS:HB2	1.96	0.47
55:SJ:58:LEU:HD21	55:SJ:90:TYR:CE2	2.48	0.47
60:SO:12:THR:HG23	60:SO:309:VAL:HG13	1.97	0.47
60:SO:231:MET:H	60:SO:231:MET:HG3	1.56	0.47
63:SR:126:ARG:O	63:SR:130:ILE:HD13	2.14	0.47
73:Sb:14:ILE:HG23	73:Sb:65:LEU:HD21	1.96	0.47
1:LA:428:A:H2'	1:LA:429:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:673:U:H2'	1:LA:674:G:H8	1.79	0.47
1:LA:674:G:O6	19:LS:56:LYS:NZ	2.47	0.47
1:LA:1492:G:N7	40:Ln:2:ALA:N	2.62	0.47
1:LA:1497:C:H2'	1:LA:1498:A:C8	2.49	0.47
1:LA:3038:U:H2'	1:LA:3039:C:O4'	2.14	0.47
1:LA:3217:C:C5	1:LA:3220:G:H1'	2.49	0.47
1:LA:3304:U:OP2	1:LA:3377:G:C4	2.68	0.47
2:LB:39:C:H4'	13:LM:44:THR:HG23	1.96	0.47
7:LG:236:LEU:O	7:LG:239:ILE:HG12	2.15	0.47
9:LI:184:LEU:HD12	9:LI:198:ALA:HB1	1.96	0.47
12:LL:206:LEU:O	12:LL:210:ILE:HG12	2.14	0.47
29:Lc:125:VAL:HG11	29:Lc:138:ILE:HD13	1.97	0.47
31:Le:77:LEU:HD21	31:Le:90:VAL:HG12	1.94	0.47
45:S2:896:U:H2'	45:S2:897:C:C6	2.50	0.47
45:S2:1229:G:H21	45:S2:1256:A:H62	1.63	0.47
45:S2:1288:G:OP1	45:S2:1624:C:O2'	2.32	0.47
45:S2:1552:U:O2'	45:S2:1597:A:N3	2.33	0.47
45:S2:1563:C:OP1	54:SI:84:LYS:HE2	2.15	0.47
45:S2:1575:G:H2'	45:S2:1576:A:C8	2.50	0.47
47:SB:162:VAL:CG1	57:SL:54:LEU:HD11	2.31	0.47
52:SG:106:THR:O	52:SG:110:VAL:HG23	2.14	0.47
60:SO:216:LYS:HA	60:SO:239:GLU:HG2	1.96	0.47
62:SQ:143:THR:HG21	62:SQ:156:ALA:HB2	1.97	0.47
66:SU:60:ILE:HB	66:SU:92:PHE:HD1	1.79	0.47
79:Ta:22:A:O2'	79:Ta:47:G:O6	2.32	0.47
1:LA:377:A:H1'	1:LA:392:G:N2	2.28	0.47
1:LA:1487:G:H1'	35:Li:6:THR:CG2	2.44	0.47
1:LA:2660:G:OP1	1:LA:2750:U:O2'	2.31	0.47
1:LA:3033:A:H2'	1:LA:3034:C:O2	2.13	0.47
1:LA:3180:A:H5'	17:LQ:116[A]:LYS:HB2	1.96	0.47
15:LO:127:LYS:NZ	17:LQ:186[A]:ALA:HA	2.30	0.47
21:LU:92:LYS:NZ	21:LU:109:ASP:OD2	2.48	0.47
22:LV:93:VAL:HA	22:LV:96:ILE:HB	1.95	0.47
23:LW:101:ASN:HA	23:LW:103:TYR:CZ	2.49	0.47
45:S2:416:A:H3'	45:S2:417:A:H8	1.79	0.47
45:S2:505:A:H2'	45:S2:505:A:N3	2.29	0.47
45:S2:691:C:H2'	45:S2:692:C:C6	2.49	0.47
45:S2:919:A:H2'	45:S2:920:U:C6	2.50	0.47
45:S2:1029:U:OP2	76:Se:12:LYS:NZ	2.46	0.47
45:S2:1480:G:H2'	45:S2:1481:C:N1	2.30	0.47
46:SA:40:ARG:HG3	55:SJ:110:PRO:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SG:7:LYS:HE3	52:SG:11:ARG:HB3	1.95	0.47
1:LA:991:G:N2	22:LV:59:GLY:O	2.39	0.47
1:LA:1570:U:H3	1:LA:1573:G:H21	1.61	0.47
1:LA:2160:G:H2'	1:LA:2161:G:H8	1.79	0.47
1:LA:2880:U:H1'	5:LE:250:ALA:HB3	1.97	0.47
1:LA:3163:A:N6	1:LA:3288:G:O6	2.48	0.47
3:LC:3:A:H4'	18:LR:61:ARG:HD3	1.96	0.47
3:LC:155:A:O2'	3:LC:156:U:OP1	2.27	0.47
11:LK:23:ARG:NE	11:LK:39:LYS:HA	2.28	0.47
15:LO:4:ASP:OD1	15:LO:4:ASP:N	2.45	0.47
23:LW:50:LEU:H	23:LW:50:LEU:HD12	1.80	0.47
28:Lb:89:VAL:HG22	28:Lb:92:PHE:HE1	1.80	0.47
45:S2:247:A:H4'	69:SX:37:ASN:OD1	2.14	0.47
45:S2:707:A:H8	45:S2:731:C:H42	1.61	0.47
45:S2:1319:A:H2'	45:S2:1320:U:O4'	2.14	0.47
45:S2:1483:A:H2	45:S2:1607:G:H1'	1.79	0.47
45:S2:1510:U:H2'	45:S2:1511:U:C6	2.49	0.47
45:S2:1555:A:OP2	50:SE:47:ARG:NH2	2.47	0.47
50:SE:108:ARG:HG2	50:SE:111:MET:HE3	1.97	0.47
57:SL:18:ARG:HA	57:SL:26:THR:HA	1.96	0.47
63:SR:186:LYS:HE2	63:SR:186:LYS:HB2	1.59	0.47
64:SS:139:VAL:HG13	64:SS:150:PRO:HG3	1.97	0.47
67:SV:79:ALA:N	67:SV:103:GLN:O	2.41	0.47
1:LA:63:A:H5''	16:LP:174:ILE:HG21	1.96	0.47
1:LA:269:G:OP1	16:LP:47:LYS:NZ	2.46	0.47
1:LA:275:U:H2'	1:LA:276:U:C6	2.50	0.47
1:LA:421:G:O6	1:LA:2383:C:O2'	2.24	0.47
1:LA:565:U:C2	1:LA:566:G:C8	3.02	0.47
1:LA:640:U:OP1	29:Lc:21:ARG:NH2	2.46	0.47
1:LA:839:C:H4'	1:LA:1724:U:O2'	2.15	0.47
1:LA:1511:U:H5''	1:LA:1512:U:H5	1.79	0.47
1:LA:1909:A:H2'	1:LA:1910:A:C8	2.50	0.47
1:LA:2276:G:OP1	42:Lp:16:LYS:NZ	2.47	0.47
1:LA:2282:U:O2	1:LA:2310:U:H4'	2.15	0.47
1:LA:2662:G:H2'	1:LA:2663:G:C8	2.50	0.47
1:LA:2727:A:C2	29:Lc:43:ILE:HG23	2.50	0.47
1:LA:3107:U:H2'	1:LA:3108:G:H8	1.76	0.47
1:LA:3302:U:N3	1:LA:3303:G:O6	2.48	0.47
1:LA:3344:A:H3'	1:LA:3345:G:O4'	2.14	0.47
1:LA:3395:G:N2	1:LA:3396:U:O4	2.41	0.47
2:LB:71:G:H2'	2:LB:72:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:LC:40:A:H2'	3:LC:41:A:C8	2.50	0.47
4:LD:206:PRO:HD3	4:LD:213:GLY:CA	2.45	0.47
7:LG:254:LYS:HD2	7:LG:254:LYS:HA	1.66	0.47
9:LI:89:ILE:HD12	9:LI:214:TRP:CH2	2.50	0.47
15:LO:120:VAL:O	15:LO:124:ARG:HB2	2.14	0.47
16:LP:56:LYS:HB2	16:LP:56:LYS:HE3	1.67	0.47
22:LV:50:LYS:O	22:LV:92:ARG:HD2	2.15	0.47
23:LW:99:LYS:CD	23:LW:102:GLU:OE1	2.60	0.47
32:Lf:74:ARG:HH12	32:Lf:109:VAL:CG1	2.27	0.47
45:S2:126:A:OP1	65:ST:201:GLN:HG3	2.14	0.47
45:S2:237:C:O2'	45:S2:238:U:O4'	2.27	0.47
45:S2:284:G:O6	65:ST:188:ARG:NH2	2.47	0.47
45:S2:329:G:H2'	45:S2:330:G:C8	2.49	0.47
45:S2:541:A:O2'	45:S2:542:A:OP1	2.28	0.47
45:S2:699:U:O2	45:S2:700:C:N4	2.48	0.47
45:S2:780:A:H2	75:Sd:10:ARG:HE	1.62	0.47
45:S2:906:A:H2'	45:S2:907:A:C8	2.50	0.47
45:S2:923:A:H2'	45:S2:924:A:C8	2.50	0.47
45:S2:1160:A:H2'	45:S2:1161:C:H6	1.78	0.47
45:S2:1346:A:N7	45:S2:1371:A:N6	2.63	0.47
45:S2:1389:C:O2	45:S2:1390:U:H4'	2.15	0.47
45:S2:1457:C:O2'	45:S2:1458:G:H5'	2.14	0.47
45:S2:1584:G:O2'	45:S2:1585:U:P	2.73	0.47
46:SA:166:ASP:OD1	46:SA:167:PHE:N	2.46	0.47
52:SG:3:ARG:HD2	52:SG:5:ARG:NH1	2.30	0.47
61:SP:157:ASP:OD1	72:Sa:60:ARG:HD2	2.15	0.47
66:SU:64:VAL:HG22	66:SU:64:VAL:O	2.14	0.47
67:SV:67:TRP:HB3	67:SV:72:ILE:HG22	1.97	0.47
69:SX:16:GLN:NE2	69:SX:34:TRP:O	2.48	0.47
69:SX:98:ASN:OD1	69:SX:98:ASN:O	2.33	0.47
72:Sa:38:LYS:O	72:Sa:46:ILE:HD12	2.15	0.47
74:Sc:70:LYS:HD3	74:Sc:93:LEU:HD21	1.97	0.47
75:Sd:22:GLN:HG3	75:Sd:74:LEU:HD21	1.97	0.47
1:LA:874:U:H5''	1:LA:2950:G:OP1	2.13	0.47
1:LA:915:A:H8	1:LA:2136:C:O2'	1.98	0.47
4:LD:188:LYS:O	4:LD:192:LYS:HG3	2.15	0.47
10:LJ:191:ASN:O	10:LJ:191:ASN:ND2	2.48	0.47
29:Lc:114:GLY:O	29:Lc:137:LYS:NZ	2.48	0.47
45:S2:122:U:H2'	45:S2:123:G:C8	2.50	0.47
45:S2:296:U:H2'	45:S2:297:U:C6	2.49	0.47
45:S2:445:A:C2	45:S2:446:A:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1590:G:H2'	45:S2:1591:C:C6	2.50	0.47
48:SC:14:TYR:OH	48:SC:34:GLU:OE1	2.25	0.47
60:SO:131:ILE:HD11	60:SO:154:VAL:HG11	1.97	0.47
60:SO:148:ASN:OD1	60:SO:149:ASP:N	2.48	0.47
75:Sd:112:LYS:HB3	75:Sd:112:LYS:HE3	1.54	0.47
1:LA:356:C:O2'	1:LA:357:A:H8	1.96	0.47
1:LA:3127:A:H2'	1:LA:3128:G:O4'	2.15	0.47
6:LF:317:PRO:C	6:LF:319:LYS:N	2.71	0.47
10:LJ:82:LEU:HB3	10:LJ:86:THR:HG23	1.96	0.47
14:LN:165:SER:C	14:LN:167:PHE:H	2.23	0.47
23:LW:76:LEU:O	23:LW:80:THR:OG1	2.28	0.47
29:Lc:134:ALA:O	29:Lc:138:ILE:HG13	2.15	0.47
32:Lf:102:LYS:HE3	32:Lf:102:LYS:HB2	1.75	0.47
45:S2:55:A:H3'	45:S2:403:G:H22	1.80	0.47
45:S2:331:A:N7	67:SV:172:ARG:NH2	2.62	0.47
45:S2:747:C:H4'	73:Sb:80:ASN:ND2	2.30	0.47
45:S2:922:G:H2'	45:S2:923:A:C8	2.50	0.47
49:SD:125:ASN:C	49:SD:127:GLY:H	2.23	0.47
56:SK:65:LEU:HD12	56:SK:69:LEU:HD12	1.96	0.47
61:SP:142:PRO:HB3	72:Sa:34:ILE:HD13	1.96	0.47
63:SR:35:TRP:CE2	63:SR:37:PRO:HB3	2.50	0.47
63:SR:143:TYR:CD1	63:SR:147:ASN:HA	2.50	0.47
64:SS:59:ARG:HH22	75:Sd:87:PRO:HG3	1.80	0.47
78:Sg:7:SER:HA	78:Sg:10:ARG:NH1	2.29	0.47
80:Tb:50:G:P	80:Tb:50:G:H8	2.38	0.47
1:LA:561:C:H2'	1:LA:562:C:H6	1.79	0.47
1:LA:965:A:H2	29:Lc:43:ILE:HD12	1.80	0.47
1:LA:1584:U:H2'	1:LA:1585:C:C6	2.49	0.47
1:LA:2427:U:H2'	1:LA:2428:U:C6	2.50	0.47
1:LA:3198:U:O4	11:LK:26:LYS:HB2	2.15	0.47
1:LA:3322:A:H2'	1:LA:3323:A:H8	1.80	0.47
4:LD:57:PRO:HB3	44:Lr:54:ILE:CD1	2.44	0.47
12:LL:38:LYS:HD3	12:LL:41:ALA:HB2	1.97	0.47
24:LX:123:ALA:HB1	24:LX:130:ALA:HB2	1.96	0.47
45:S2:902:G:H2'	45:S2:903:U:C6	2.50	0.47
45:S2:998:A:N6	45:S2:1004:U:OP2	2.48	0.47
45:S2:1590:G:H2'	45:S2:1591:C:H6	1.80	0.47
48:SC:61:TRP:C	48:SC:62:GLN:HG2	2.40	0.47
58:SM:36:LEU:HD23	58:SM:36:LEU:H	1.79	0.47
59:SN:145:HIS:C	59:SN:145:HIS:ND1	2.73	0.47
66:SU:44:LYS:HD2	66:SU:44:LYS:HA	1.75	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SW:123:HIS:O	68:SW:127:VAL:HG22	2.14	0.47
69:SX:75:VAL:HA	69:SX:86:ILE:HA	1.97	0.47
1:LA:177:U:H3'	1:LA:178:U:C6	2.49	0.46
1:LA:792:G:H2'	1:LA:793:C:H6	1.79	0.46
1:LA:1120:A:H2'	1:LA:1121:U:C6	2.50	0.46
1:LA:1621:A:H2'	1:LA:1622:U:C6	2.50	0.46
2:LB:5:G:OP1	13:LM:143:ARG:NH2	2.38	0.46
3:LC:2:A:H2'	3:LC:2:A:N3	2.30	0.46
9:LI:120:THR:HB	22:LV:132:PRO:HB2	1.97	0.46
11:LK:107:ASP:OD1	11:LK:107:ASP:N	2.47	0.46
12:LL:43:VAL:HG21	12:LL:197:VAL:HG23	1.96	0.46
14:LN:47:ALA:HB3	14:LN:48:PRO:HD3	1.96	0.46
17:LQ:110[A]:PRO:N	17:LQ:111[A]:PRO:HD2	2.30	0.46
37:Lk:90:MET:O	37:Lk:94:ILE:HG23	2.14	0.46
38:LI:25:ARG:NH1	40:Ln:50:ASN:O	2.48	0.46
44:Lr:3:LYS:HE2	44:Lr:3:LYS:HB3	1.59	0.46
45:S2:533:U:H2'	45:S2:534:A:H5''	1.96	0.46
55:SJ:45:ALA:HB3	55:SJ:52:LYS:HZ3	1.81	0.46
62:SQ:205:PHE:CD2	62:SQ:206:PRO:HD2	2.50	0.46
63:SR:39:THR:HG22	63:SR:41:LEU:H	1.80	0.46
65:ST:13:GLN:HE21	65:ST:13:GLN:HB2	1.51	0.46
66:SU:129:LEU:HD11	66:SU:172:VAL:CG2	2.45	0.46
68:SW:88:GLU:OE1	68:SW:88:GLU:N	2.47	0.46
70:SY:56:ASP:OD2	77:Sf:50:ALA:O	2.33	0.46
80:Tb:5:G:H2'	80:Tb:6:G:H8	1.80	0.46
1:LA:294:U:H4'	37:Lk:77:LEU:HD23	1.96	0.46
1:LA:298:U:O2'	1:LA:299:G:N7	2.48	0.46
2:LB:45:A:H2'	2:LB:46:A:C8	2.51	0.46
2:LB:74:C:H2'	2:LB:75:G:C8	2.50	0.46
5:LE:304:THR:CG2	5:LE:305:ILE:N	2.77	0.46
6:LF:106:TRP:HZ2	14:LN:19:GLN:HG2	1.80	0.46
7:LG:153:THR:HG23	7:LG:160:PHE:HZ	1.80	0.46
18:LR:107:LEU:HD23	18:LR:112:LEU:HD21	1.96	0.46
33:Lg:4:LEU:O	33:Lg:6:HIS:ND1	2.47	0.46
45:S2:948:G:H2'	45:S2:949:C:C6	2.50	0.46
45:S2:1091:A:H4'	45:S2:1092:A:O4'	2.15	0.46
45:S2:1164:G:H2'	45:S2:1165:G:C8	2.50	0.46
60:SO:206:PRO:HG2	60:SO:247:PRO:HA	1.96	0.46
69:SX:109:VAL:HG21	69:SX:125:VAL:HG11	1.96	0.46
75:Sd:113:ASN:O	75:Sd:116:LYS:HG2	2.15	0.46
1:LA:552:G:H2'	1:LA:553:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1431:G:N7	29:Lc:9:ARG:NH2	2.61	0.46
1:LA:2656:A:OP2	43:Lq:97:LYS:HG3	2.16	0.46
1:LA:2822:U:H4'	1:LA:2942:C:OP2	2.15	0.46
1:LA:3084:C:O2'	1:LA:3332:U:OP1	2.33	0.46
4:LD:52:SER:HB3	4:LD:191:LEU:HD22	1.97	0.46
5:LE:298:PHE:CD1	5:LE:298:PHE:C	2.93	0.46
6:LF:269:SER:C	6:LF:271:LYS:H	2.23	0.46
22:LV:132:PRO:O	22:LV:134:GLN:NE2	2.46	0.46
27:La:63:LYS:HZ1	27:La:97:ILE:HG13	1.81	0.46
32:Lf:54:GLU:HB2	32:Lf:95:PRO:HG3	1.96	0.46
45:S2:119:A:H1'	45:S2:397:A:C5	2.50	0.46
50:SE:76:VAL:O	50:SE:94:VAL:HA	2.16	0.46
54:SI:124:ILE:HG21	54:SI:129:GLN:HE21	1.80	0.46
63:SR:56:ILE:HD13	63:SR:61:LEU:HD12	1.97	0.46
63:SR:235:LEU:HG	72:Sa:33:GLN:HE22	1.81	0.46
65:ST:214:LYS:O	65:ST:218:GLU:OE1	2.34	0.46
73:Sb:53:ILE:HD13	77:Sf:24:LEU:HD22	1.96	0.46
1:LA:158:G:H2'	1:LA:159:A:H8	1.80	0.46
1:LA:595:G:OP1	9:LI:33:ARG:NH2	2.46	0.46
1:LA:863:C:H2'	1:LA:864:G:O4'	2.16	0.46
1:LA:911:C:N4	4:LD:3:ARG:HD3	2.31	0.46
1:LA:3119:U:H4'	41:Lo:104:PRO:HG2	1.96	0.46
9:LI:168:ILE:HG13	9:LI:169:ILE:N	2.30	0.46
10:LJ:54:GLU:O	10:LJ:58:VAL:HG23	2.16	0.46
11:LK:44:THR:HG22	11:LK:56:ALA:HB3	1.97	0.46
28:Lb:5:LEU:HD12	31:Le:35:ARG:HG3	1.98	0.46
35:Li:29:ILE:HD11	35:Li:31:ARG:NE	2.30	0.46
43:Lq:6:LYS:HD3	43:Lq:93:LEU:HD12	1.98	0.46
45:S2:365:G:H5'	45:S2:757:A:H61	1.80	0.46
45:S2:1179:G:O6	53:SH:139:LYS:HE3	2.16	0.46
45:S2:1273:G:O2'	45:S2:1430:U:OP2	2.23	0.46
45:S2:1619:C:H2'	45:S2:1620:C:H6	1.80	0.46
49:SD:42:ALA:O	49:SD:48:SER:OG	2.33	0.46
50:SE:80:MET:HE2	50:SE:83:MET:HB2	1.96	0.46
53:SH:143:ARG:O	53:SH:144:ARG:CZ	2.63	0.46
62:SQ:89:ASP:HB3	62:SQ:90:GLU:OE2	2.15	0.46
77:Sf:34:ASP:HB3	77:Sf:43:ILE:HG23	1.97	0.46
1:LA:710:A:H2'	1:LA:711:A:C8	2.50	0.46
1:LA:1498:A:H2'	1:LA:1499:C:H6	1.81	0.46
1:LA:2330:C:H2'	1:LA:2331:C:H6	1.80	0.46
1:LA:2537:U:H4'	62:SQ:226:GLY:C	2.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3084:C:H2'	1:LA:3085:G:O4'	2.15	0.46
1:LA:3369:G:OP2	25:LY:61:LYS:HE3	2.14	0.46
2:LB:64:A:OP1	12:LL:206:LEU:HB2	2.15	0.46
4:LD:42:ARG:HD3	4:LD:87:PHE:CD1	2.51	0.46
11:LK:36:LYS:NZ	11:LK:74:LEU:HD12	2.31	0.46
25:LY:1:MET:HE2	25:LY:15:PRO:CG	2.46	0.46
32:Lf:31:ARG:O	32:Lf:35:GLU:HG2	2.16	0.46
36:Lj:85:THR:HB	36:Lj:88:LEU:HB2	1.98	0.46
45:S2:29:U:H2'	45:S2:30:G:C8	2.49	0.46
45:S2:97:C:H2'	45:S2:98:U:C6	2.51	0.46
45:S2:461:G:H2'	45:S2:462:G:H8	1.80	0.46
60:SO:34:LEU:CD2	60:SO:44:SER:CB	2.94	0.46
63:SR:41:LEU:HG	63:SR:68:ILE:CD1	2.45	0.46
64:SS:122:LYS:HE2	64:SS:143:ASP:OD2	2.16	0.46
68:SW:51:LYS:HE3	68:SW:51:LYS:HB3	1.83	0.46
73:Sb:31:SER:H	73:Sb:34:ILE:HD12	1.80	0.46
73:Sb:57:ARG:NH2	77:Sf:26:GLN:OE1	2.49	0.46
75:Sd:58:PHE:CE1	75:Sd:74:LEU:HD12	2.50	0.46
80:Tb:53:G:O2'	80:Tb:54:G:H8	1.99	0.46
1:LA:1295:G:OP1	21:LU:84:ARG:HG3	2.15	0.46
1:LA:2416:U:H2'	1:LA:2417:U:C6	2.51	0.46
1:LA:2508:U:H2'	1:LA:2509:U:C6	2.51	0.46
1:LA:3206:C:O2	15:LO:13:ARG:NH1	2.39	0.46
1:LA:3228:C:H4'	1:LA:3229:G:O5'	2.14	0.46
12:LL:181:TYR:CD1	12:LL:181:TYR:C	2.93	0.46
13:LM:106:ILE:HD13	13:LM:112:LEU:HD21	1.98	0.46
24:LX:104:ASN:OD1	24:LX:108:GLU:N	2.47	0.46
28:Lb:16:GLY:O	35:Li:74:ARG:HG3	2.15	0.46
45:S2:251:A:H2	64:SS:131:LEU:HD22	1.80	0.46
45:S2:800:U:H2'	45:S2:801:G:H8	1.79	0.46
45:S2:1041:G:OP1	61:SP:32:HIS:ND1	2.45	0.46
45:S2:1220:C:H2'	45:S2:1221:A:H8	1.81	0.46
45:S2:1564:U:H2'	45:S2:1565:C:H6	1.81	0.46
45:S2:1674:C:H2'	45:S2:1675:C:C6	2.51	0.46
45:S2:1755:A:H5''	74:Sc:63:GLN:HG2	1.98	0.46
48:SC:25:LYS:HB3	48:SC:62:GLN:HB2	1.98	0.46
49:SD:27:ALA:O	49:SD:31:VAL:HG12	2.16	0.46
52:SG:50:ILE:O	52:SG:54:THR:OG1	2.32	0.46
54:SI:22:LEU:HD22	54:SI:28:LEU:HD11	1.98	0.46
62:SQ:157:GLN:O	62:SQ:159:SER:N	2.49	0.46
65:ST:50:PHE:HB3	65:ST:111:LEU:HD22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:17:G:H4'	36:Lj:75:TYR:CE1	2.50	0.46
1:LA:375:A:H1'	27:La:87:LYS:HE3	1.98	0.46
1:LA:748:U:H2'	1:LA:749:C:C6	2.51	0.46
1:LA:3296:A:H2'	1:LA:3297:U:C6	2.51	0.46
6:LF:139:GLY:O	6:LF:180:LYS:HE2	2.16	0.46
6:LF:157:GLU:HG2	6:LF:209:TYR:HB2	1.98	0.46
11:LK:20:ILE:HB	15:LO:7:VAL:HG13	1.98	0.46
15:LO:120:VAL:HG23	17:LQ:197[A]:LEU:HD23	1.97	0.46
27:La:54:ASP:O	27:La:70:ILE:HG12	2.15	0.46
45:S2:255:U:H2'	45:S2:256:A:C8	2.50	0.46
45:S2:448:C:H2'	45:S2:449:C:C6	2.51	0.46
45:S2:478:A:P	78:Sg:37:ARG:HH21	2.39	0.46
45:S2:1639:C:H2'	45:S2:1640:C:O4'	2.15	0.46
56:SK:43:ASP:OD1	56:SK:43:ASP:N	2.48	0.46
60:SO:90:ARG:HH21	60:SO:102:ARG:NE	2.13	0.46
64:SS:211:LYS:HG3	64:SS:211:LYS:O	2.16	0.46
66:SU:43:PHE:HD1	66:SU:43:PHE:H	1.63	0.46
67:SV:72:ILE:HG13	67:SV:73:SER:N	2.31	0.46
1:LA:399:A:O2'	1:LA:403:C:O2'	2.30	0.46
1:LA:1237:G:H1	1:LA:1251:A:N6	2.11	0.46
1:LA:1914:G:O2'	20:LT:82:LYS:O	2.33	0.46
1:LA:1927:G:C8	44:Lr:16:VAL:HG12	2.51	0.46
1:LA:2767:U:O2'	43:Lq:30:ALA:O	2.22	0.46
9:LI:232:ARG:HB2	9:LI:235:PHE:HB2	1.96	0.46
12:LL:176:LEU:HD21	12:LL:199:PHE:HE2	1.80	0.46
14:LN:189:GLU:HA	14:LN:192:GLU:HG2	1.97	0.46
17:LQ:110[A]:PRO:HA	17:LQ:113[A]:ASP:OD1	2.15	0.46
24:LX:74:MET:HE2	24:LX:74:MET:HB3	1.72	0.46
24:LX:125:LEU:HD12	24:LX:125:LEU:HA	1.76	0.46
29:Lc:112:ILE:HB	29:Lc:130:VAL:HG23	1.98	0.46
30:Ld:14:ARG:O	30:Ld:18:ARG:HG2	2.16	0.46
39:Lm:61:LYS:HA	39:Lm:64:LYS:CD	2.43	0.46
45:S2:886:U:C2	45:S2:887:A:C8	3.04	0.46
53:SH:104:ASN:HA	53:SH:107:SER:HB2	1.98	0.46
61:SP:53:THR:OG1	61:SP:161:PRO:O	2.25	0.46
62:SQ:33:LYS:NZ	62:SQ:95:ASN:HA	2.31	0.46
62:SQ:149:GLN:NE2	62:SQ:151:LYS:O	2.48	0.46
72:Sa:25:LYS:HB2	72:Sa:28:ASP:HB2	1.97	0.46
1:LA:567:G:H2'	1:LA:568:G:C8	2.51	0.46
1:LA:697:A:H2'	1:LA:698:U:C6	2.51	0.46
1:LA:745:C:H2'	1:LA:746:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:972:A:H2'	1:LA:973:A:C8	2.51	0.46
1:LA:2292:U:O2'	45:S2:1656:U:O2'	2.26	0.46
1:LA:2892:A:N3	1:LA:3129:A:O2'	2.42	0.46
1:LA:3023:U:H2'	1:LA:3024:A:H8	1.80	0.46
1:LA:3066:U:H2'	1:LA:3067:C:H6	1.80	0.46
1:LA:3118:C:H4'	41:Lo:106:ARG:NH2	2.30	0.46
1:LA:3190:C:OP1	17:LQ:172[A]:ARG:NH1	2.49	0.46
1:LA:3373:U:OP2	32:Lf:102:LYS:NZ	2.33	0.46
4:LD:147:ARG:HG3	4:LD:157:VAL:HG22	1.98	0.46
6:LF:3:ARG:HG3	6:LF:22:LEU:HD12	1.97	0.46
14:LN:113:VAL:O	14:LN:117:LYS:HG3	2.16	0.46
15:LO:32:LEU:HB3	15:LO:85:TRP:HH2	1.81	0.46
16:LP:94:TYR:CZ	16:LP:96:ARG:HB2	2.51	0.46
19:LS:83:VAL:O	19:LS:103:ALA:HA	2.15	0.46
25:LY:33:ASN:ND2	25:LY:35:LYS:H	2.14	0.46
45:S2:332:U:P	67:SV:56:ARG:HH21	2.39	0.46
45:S2:1273:G:H4'	45:S2:1274:C:H3'	1.98	0.46
45:S2:1381:U:H2'	45:S2:1382:A:C8	2.50	0.46
47:SB:114:ILE:HA	47:SB:117:THR:HG22	1.97	0.46
53:SH:80:LYS:HD3	53:SH:80:LYS:N	2.31	0.46
60:SO:25:THR:N	60:SO:73:LEU:CD1	2.79	0.46
70:SY:94:LYS:HB2	70:SY:94:LYS:HE3	1.64	0.46
71:SZ:29:HIS:CB	71:SZ:41:ARG:HA	2.46	0.46
77:Sf:59:CYS:SG	77:Sf:60:SER:N	2.89	0.46
1:LA:987:U:H2'	1:LA:988:U:C6	2.51	0.46
1:LA:1029:G:H5'	1:LA:1030:A:H8	1.81	0.46
1:LA:1143:A:H5'	1:LA:1368:U:H1'	1.97	0.46
1:LA:1230:G:H2'	1:LA:1231:A:H8	1.81	0.46
1:LA:2419:A:H2'	1:LA:2420:C:H6	1.81	0.46
1:LA:2953:U:H2'	1:LA:2954:U:H2'	1.98	0.46
18:LR:46:LYS:HE2	18:LR:46:LYS:N	2.30	0.46
22:LV:26:HIS:O	22:LV:29:THR:HG22	2.16	0.46
45:S2:255:U:H2'	45:S2:256:A:H8	1.81	0.46
45:S2:1232:U:O4	45:S2:1253:U:N3	2.36	0.46
51:SF:125:GLU:OE1	51:SF:135:ARG:NH2	2.47	0.46
60:SO:270:LEU:HD21	60:SO:273:ASP:HB3	1.98	0.46
63:SR:42:GLY:HA2	63:SR:68:ILE:HD11	1.98	0.46
63:SR:102:VAL:HG21	63:SR:129:ILE:HA	1.98	0.46
67:SV:110:ARG:O	67:SV:114:GLU:HG2	2.16	0.46
74:Sc:17:VAL:HG22	74:Sc:20:ARG:HH22	1.81	0.46
1:LA:1034:U:H2'	1:LA:1035:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2860:U:H1'	1:LA:2938:G:H4'	1.97	0.45
5:LE:83:PRO:O	5:LE:165:GLN:HG3	2.16	0.45
5:LE:115:LYS:HA	5:LE:118:PHE:CD2	2.51	0.45
6:LF:23:PRO:HD2	6:LF:26:PHE:CE2	2.51	0.45
8:LH:94:GLU:OE1	8:LH:94:GLU:O	2.33	0.45
12:LL:184:LYS:HG2	12:LL:189:GLU:HB2	1.98	0.45
17:LQ:108[A]:ILE:HD12	17:LQ:108[A]:ILE:N	2.31	0.45
18:LR:27:LYS:HD3	18:LR:63:PHE:HB3	1.98	0.45
21:LU:40:ARG:HA	21:LU:40:ARG:HD2	1.71	0.45
32:Lf:9:THR:HG22	32:Lf:109:VAL:CG1	2.46	0.45
35:Li:105:VAL:O	35:Li:108:GLN:HG3	2.16	0.45
42:Lp:2:ARG:HB3	42:Lp:5:TRP:CD1	2.51	0.45
45:S2:58:U:O2'	45:S2:451:A:N3	2.48	0.45
45:S2:576:G:H4'	45:S2:580:A:C4	2.51	0.45
45:S2:968:U:H2'	45:S2:969:C:O4'	2.15	0.45
45:S2:1066:C:O3'	62:SQ:149:GLN:HG3	2.15	0.45
45:S2:1494:C:H2'	45:S2:1495:C:C6	2.51	0.45
46:SA:74:GLN:CD	46:SA:81:PRO:HA	2.41	0.45
47:SB:75:GLY:HA3	47:SB:77:TYR:CZ	2.51	0.45
55:SJ:41:ILE:HD12	55:SJ:103:ILE:HG23	1.98	0.45
61:SP:191:ARG:O	61:SP:191:ARG:NH1	2.47	0.45
72:Sa:4:ASP:N	72:Sa:4:ASP:OD1	2.47	0.45
1:LA:594:U:H2'	1:LA:609:G:O6	2.16	0.45
1:LA:1194:G:H2'	1:LA:1195:A:C8	2.51	0.45
1:LA:1495:U:H5	1:LA:1835:A:N1	2.15	0.45
1:LA:1624:G:H2'	1:LA:1625:A:H8	1.81	0.45
1:LA:2273:G:O2'	1:LA:2311:G:O6	2.28	0.45
1:LA:2883:U:H2'	1:LA:2884:C:C6	2.51	0.45
1:LA:3280:U:O2'	1:LA:3281:U:H6	1.99	0.45
3:LC:135:G:OP1	26:LZ:49:LYS:NZ	2.40	0.45
7:LG:40:HIS:CE1	22:LV:69:LYS:HA	2.51	0.45
16:LP:94:TYR:CE2	16:LP:96:ARG:HB2	2.51	0.45
31:Le:81:VAL:HG12	31:Le:83:LYS:HG2	1.98	0.45
39:Lm:15:THR:HA	39:Lm:20:VAL:HG21	1.98	0.45
45:S2:885:G:N2	71:SZ:123:SER:O	2.49	0.45
45:S2:1171:A:O2'	45:S2:1570:A:N3	2.44	0.45
45:S2:1175:U:H2'	45:S2:1176:G:H8	1.81	0.45
45:S2:1665:U:O2	45:S2:1736:G:O6	2.33	0.45
46:SA:143:ARG:HD3	46:SA:143:ARG:HA	1.76	0.45
57:SL:44:VAL:HG11	57:SL:48:VAL:HB	1.97	0.45
61:SP:191:ARG:HH11	61:SP:191:ARG:C	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SU:139:ARG:HB3	73:Sb:51:GLU:OE2	2.16	0.45
76:Se:69:ASN:C	76:Se:69:ASN:OD1	2.58	0.45
1:LA:431:U:H2'	1:LA:432:G:C8	2.51	0.45
1:LA:631:U:H4'	1:LA:3172:A:N6	2.31	0.45
1:LA:1362:G:H2'	1:LA:1363:A:C8	2.52	0.45
1:LA:1621:A:H2'	1:LA:1622:U:H6	1.80	0.45
1:LA:1719:G:H2'	1:LA:1720:U:O4'	2.16	0.45
1:LA:2758:A:HO2'	1:LA:2759:U:P	2.39	0.45
5:LE:165:GLN:HB3	5:LE:168:LYS:HG3	1.97	0.45
7:LG:108:ARG:NE	7:LG:253:PHE:HB2	2.32	0.45
7:LG:214:ASP:OD1	7:LG:215:ASP:N	2.49	0.45
12:LL:86:HIS:HB3	12:LL:139:ARG:HG3	1.98	0.45
13:LM:90:GLN:NE2	13:LM:170:ASP:OD2	2.40	0.45
21:LU:33:ASN:OD1	21:LU:36:ILE:HG13	2.16	0.45
21:LU:110:MET:HE3	21:LU:110:MET:HB3	1.83	0.45
22:LV:106:LEU:O	22:LV:109:VAL:HG12	2.16	0.45
31:Le:36:GLN:HB2	31:Le:38:LYS:HG2	1.99	0.45
38:Ll:27:PHE:HA	38:Ll:34:CYS:HA	1.98	0.45
38:Ll:39:TYR:CD1	38:Ll:40:PRO:HA	2.51	0.45
45:S2:220:A:OP2	45:S2:831:U:O2'	2.29	0.45
45:S2:1790:A:P	76:Se:10:ARG:HH12	2.39	0.45
48:SC:64:TYR:HB3	48:SC:66:TYR:CE2	2.51	0.45
50:SE:25:LEU:HD23	50:SE:28:MET:CE	2.44	0.45
62:SQ:144:ARG:HB3	62:SQ:208:GLN:HB3	1.98	0.45
64:SS:129:VAL:HG12	64:SS:139:VAL:HG12	1.98	0.45
64:SS:159:THR:HG21	64:SS:227:VAL:O	2.15	0.45
69:SX:59:PRO:HB3	69:SX:66:ILE:HD11	1.99	0.45
70:SY:37:ILE:CD1	70:SY:54:LEU:HD11	2.46	0.45
71:SZ:84:ARG:HB2	71:SZ:118:VAL:HG23	1.99	0.45
72:Sa:5:LYS:O	72:Sa:7:GLN:HG2	2.17	0.45
1:LA:149:U:P	16:LP:49:ARG:HH12	2.40	0.45
1:LA:215:G:H5''	27:La:12:ARG:HG3	1.98	0.45
1:LA:393:U:H2'	1:LA:394:G:O4'	2.16	0.45
1:LA:2282:U:OP1	1:LA:2973:G:O2'	2.23	0.45
1:LA:2523:A:H2'	10:LJ:49:TYR:O	2.16	0.45
1:LA:2916:U:H1'	24:LX:44:SER:HB3	1.97	0.45
1:LA:3294:A:H5''	5:LE:126:LYS:HE3	1.99	0.45
5:LE:60:LEU:HD11	5:LE:62:ARG:HB2	1.97	0.45
5:LE:62:ARG:HB3	5:LE:65:SER:OG	2.16	0.45
12:LL:212:GLU:HB2	12:LL:213:PHE:HD1	1.81	0.45
22:LV:65:TYR:HB3	22:LV:75:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:LW:90:ARG:C	23:LW:92:TRP:H	2.25	0.45
36:Lj:45:LYS:HE3	36:Lj:45:LYS:HB3	1.78	0.45
45:S2:968:U:OP1	45:S2:1033:C:O2'	2.33	0.45
62:SQ:193:ILE:H	62:SQ:193:ILE:HG13	1.49	0.45
63:SR:153:SER:OG	63:SR:154:LEU:N	2.50	0.45
65:ST:214:LYS:HD3	65:ST:217:SER:OG	2.16	0.45
66:SU:141:ARG:HG3	73:Sb:51:GLU:OE1	2.17	0.45
68:SW:93:LEU:HA	68:SW:96:VAL:HG23	1.98	0.45
72:Sa:86:SER:O	72:Sa:86:SER:OG	2.32	0.45
79:Ta:69:C:O2'	79:Ta:70:C:O4'	2.27	0.45
80:Tb:29:C:H2'	80:Tb:30:G:C8	2.52	0.45
1:LA:263:C:H2'	1:LA:264:G:O4'	2.17	0.45
1:LA:1740:U:H1'	1:LA:1741:A:H2	1.81	0.45
1:LA:2712:U:H2'	1:LA:2713:U:C6	2.51	0.45
7:LG:57:ASN:O	7:LG:58:LYS:HG2	2.16	0.45
19:LS:81:VAL:CG1	19:LS:140:LEU:CD2	2.60	0.45
36:Lj:23:ASP:N	36:Lj:23:ASP:OD1	2.49	0.45
39:Lm:13:GLU:HG3	39:Lm:16:ARG:HH22	1.82	0.45
39:Lm:16:ARG:O	39:Lm:16:ARG:HG2	2.16	0.45
39:Lm:17:ARG:NH2	39:Lm:19:ASP:OD2	2.28	0.45
45:S2:183:U:H2'	45:S2:184:C:C6	2.51	0.45
45:S2:961:U:O2'	70:SY:86:GLU:OE2	2.35	0.45
45:S2:1120:U:H2'	45:S2:1121:C:C6	2.51	0.45
45:S2:1259:U:H2'	45:S2:1260:U:C6	2.51	0.45
45:S2:1302:U:OP1	63:SR:88:LYS:NZ	2.50	0.45
45:S2:1469:A:H4'	45:S2:1541:G:H4'	1.99	0.45
45:S2:1600:A:N3	45:S2:1600:A:H2'	2.32	0.45
58:SM:55:PHE:N	58:SM:55:PHE:CD1	2.85	0.45
63:SR:174:ARG:O	68:SW:97:LEU:HD13	2.16	0.45
64:SS:37:LYS:O	64:SS:41:SER:HB3	2.16	0.45
67:SV:184:LEU:HD23	67:SV:188:GLU:HG2	1.98	0.45
1:LA:26:A:H2'	1:LA:27:C:H6	1.82	0.45
1:LA:86:G:O2'	1:LA:98:G:O6	2.33	0.45
1:LA:1327:C:O2'	34:Lh:76:GLY:HA2	2.16	0.45
1:LA:1616:U:H2'	1:LA:1617:G:H8	1.82	0.45
1:LA:1651:U:H5''	4:LD:71:LEU:HD12	1.99	0.45
1:LA:2233:A:H2'	1:LA:2234:G:O4'	2.17	0.45
1:LA:2673:A:C2	1:LA:2681:U:H5	2.34	0.45
1:LA:3232:G:H2'	1:LA:3233:C:C6	2.51	0.45
2:LB:94:C:H2'	2:LB:95:A:H8	1.81	0.45
4:LD:140:ASN:O	4:LD:144:ASN:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LF:142:VAL:HG12	6:LF:145:ILE:HD12	1.99	0.45
6:LF:234:ASN:ND2	6:LF:236:LEU:HB2	2.32	0.45
15:LO:93:LYS:HB3	15:LO:93:LYS:HE3	1.83	0.45
45:S2:161:U:OP1	65:ST:85:ARG:N	2.42	0.45
45:S2:333:A:N6	67:SV:27:PHE:HB2	2.32	0.45
45:S2:366:A:OP1	45:S2:758:U:O2'	2.33	0.45
54:SI:102:ARG:O	54:SI:106:GLN:HG3	2.17	0.45
65:ST:46:LYS:HD3	65:ST:46:LYS:HA	1.74	0.45
65:ST:78:THR:HG22	65:ST:79:LYS:N	2.30	0.45
75:Sd:35:VAL:HG22	75:Sd:40:LEU:HG	1.97	0.45
1:LA:819:U:H2'	1:LA:820:A:H8	1.82	0.45
1:LA:871:U:H2'	1:LA:872:U:C6	2.51	0.45
1:LA:1805:C:H2'	1:LA:1806:A:H8	1.81	0.45
1:LA:3139:A:H2'	1:LA:3140:G:O4'	2.17	0.45
3:LC:146:U:H2'	3:LC:147:U:C6	2.52	0.45
5:LE:316:GLU:OE1	5:LE:316:GLU:N	2.50	0.45
9:LI:163:LEU:O	9:LI:165:ASP:N	2.50	0.45
11:LK:114:VAL:HB	11:LK:124:ARG:HB2	1.98	0.45
16:LP:158:HIS:HB3	16:LP:161:ALA:HB3	1.97	0.45
17:LQ:177[A]:LYS:HE3	17:LQ:177[A]:LYS:HB3	1.68	0.45
30:Ld:5:LYS:HE3	30:Ld:8:THR:HB	1.98	0.45
45:S2:14:C:OP1	63:SR:164:SER:N	2.43	0.45
45:S2:1146:G:H2'	45:S2:1147:A:C8	2.52	0.45
45:S2:1241:G:H2'	45:S2:1242:A:O4'	2.16	0.45
45:S2:1332:C:H4'	46:SA:203:PRO:HB3	1.98	0.45
45:S2:1469:A:H2'	45:S2:1470:C:C6	2.52	0.45
45:S2:1550:A:H2'	45:S2:1551:U:C6	2.52	0.45
46:SA:217:ILE:HG13	46:SA:218:LEU:H	1.81	0.45
52:SG:5:ARG:O	52:SG:10:LYS:NZ	2.50	0.45
68:SW:95:TYR:O	68:SW:99:LEU:HD22	2.16	0.45
1:LA:656:A:H2'	1:LA:657:A:H8	1.77	0.45
1:LA:1190:A:H2'	1:LA:1190:A:N3	2.32	0.45
1:LA:1836:C:O2'	1:LA:1842:A:N1	2.36	0.45
1:LA:2677:G:H2'	1:LA:2677:G:N3	2.32	0.45
1:LA:2765:C:O3'	43:Lq:39:GLY:HA3	2.16	0.45
1:LA:2813:A:H2'	1:LA:2814:G:O4'	2.17	0.45
1:LA:3041:U:H2'	1:LA:3042:U:C6	2.52	0.45
4:LD:133:TYR:HB3	4:LD:168:VAL:HG12	1.99	0.45
5:LE:37:ARG:HH12	5:LE:191:LYS:NZ	2.15	0.45
8:LH:174:LEU:HG	15:LO:117:ARG:NH2	2.32	0.45
14:LN:135:ALA:HB3	36:Lj:117:ALA:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Lc:103:ASP:HB3	29:Lc:106:ALA:HB3	1.98	0.45
30:Ld:58:LYS:HB3	30:Ld:58:LYS:HE2	1.72	0.45
35:Li:8:ARG:HD2	35:Li:32:ALA:O	2.17	0.45
45:S2:333:A:C8	67:SV:49:ARG:HD3	2.50	0.45
45:S2:1044:U:H2'	45:S2:1045:C:C6	2.52	0.45
45:S2:1117:U:H2'	45:S2:1118:G:C8	2.52	0.45
45:S2:1767:G:H4'	45:S2:1768:G:C4	2.52	0.45
60:SO:170:ILE:HG13	60:SO:171:SER:N	2.31	0.45
68:SW:128:LEU:HD23	68:SW:128:LEU:HA	1.84	0.45
70:SY:128:TYR:O	70:SY:132:VAL:HG12	2.16	0.45
71:SZ:84:ARG:HD2	71:SZ:120:PRO:HD3	1.98	0.45
80:Tb:23:G:N7	80:Tb:47:G:O6	2.50	0.45
1:LA:781:G:OP1	19:LS:151:ARG:NH1	2.50	0.45
1:LA:1211:U:H2'	1:LA:1212:A:H8	1.81	0.45
1:LA:2130:G:O4'	1:LA:2144:A:H4'	2.17	0.45
1:LA:2152:A:H2'	1:LA:2153:U:C6	2.52	0.45
1:LA:2506:U:H2'	1:LA:2507:C:H6	1.82	0.45
1:LA:2713:U:H3'	43:Lq:9:LYS:O	2.17	0.45
1:LA:2737:C:OP1	22:LV:69:LYS:HB3	2.17	0.45
1:LA:3214:U:OP2	15:LO:128:ARG:NH1	2.50	0.45
1:LA:3288:G:O2'	1:LA:3289:G:O5'	2.29	0.45
1:LA:3350:C:O2'	1:LA:3351:U:OP1	2.33	0.45
3:LC:18:U:H2'	3:LC:19:C:C6	2.52	0.45
5:LE:57:VAL:HG23	5:LE:358:TRP:HE3	1.82	0.45
7:LG:108:ARG:CZ	7:LG:253:PHE:HB2	2.47	0.45
10:LJ:47:SER:HA	10:LJ:50:VAL:HG23	1.97	0.45
11:LK:76:ASP:O	11:LK:80:THR:OG1	2.35	0.45
13:LM:173:ASP:OD1	13:LM:174:LYS:N	2.49	0.45
21:LU:9:VAL:HG22	21:LU:61:ILE:HG13	1.98	0.45
21:LU:23:LYS:HD2	21:LU:23:LYS:HA	1.64	0.45
45:S2:14:C:OP2	63:SR:203:LYS:CE	2.61	0.45
45:S2:14:C:H5''	63:SR:203:LYS:CE	2.41	0.45
45:S2:571:G:H5''	74:Sc:114:LYS:NZ	2.32	0.45
45:S2:1076:A:O5'	76:Se:13:LYS:HB3	2.17	0.45
45:S2:1142:A:H5''	76:Se:2:PRO:HB3	1.99	0.45
45:S2:1166:A:H2'	45:S2:1167:G:O4'	2.16	0.45
45:S2:1383:G:H2'	45:S2:1384:A:C8	2.51	0.45
45:S2:1555:A:P	50:SE:47:ARG:HH21	2.40	0.45
47:SB:224:ASN:C	47:SB:224:ASN:OD1	2.60	0.45
50:SE:111:MET:HG3	50:SE:111:MET:O	2.16	0.45
53:SH:41:ARG:HB3	53:SH:85:PHE:CZ	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SO:260:ILE:HD12	60:SO:260:ILE:O	2.17	0.45
65:ST:27:PHE:CZ	65:ST:111:LEU:HD21	2.50	0.45
65:ST:121:LEU:HB2	65:ST:124:LEU:HB3	1.98	0.45
68:SW:109:LEU:HB2	68:SW:146:PHE:HB3	1.99	0.45
69:SX:109:VAL:HG23	69:SX:137:PHE:CB	2.47	0.45
73:Sb:2:THR:HG22	73:Sb:3:ARG:N	2.31	0.45
77:Sf:72:LYS:HE2	77:Sf:72:LYS:HB3	1.60	0.45
80:Tb:62:C:H2'	80:Tb:63:C:C6	2.52	0.45
1:LA:830:A:H2'	1:LA:831:G:O4'	2.17	0.45
1:LA:976:U:H2'	1:LA:977:C:O4'	2.17	0.45
1:LA:2413:A:H2'	1:LA:2414:G:C8	2.52	0.45
1:LA:2762:A:H2'	1:LA:2763:U:H6	1.82	0.45
2:LB:87:G:OP1	9:LI:221:LYS:NZ	2.50	0.45
19:LS:174:ARG:O	29:Lc:56:VAL:HG11	2.17	0.45
35:Li:93:PHE:O	35:Li:96:GLU:HG3	2.17	0.45
42:Lp:8:LYS:O	42:Lp:12:ARG:HG3	2.17	0.45
45:S2:19:A:H2'	45:S2:20:G:O4'	2.16	0.45
45:S2:448:C:H2'	45:S2:449:C:H6	1.82	0.45
45:S2:1361:U:O3'	45:S2:1362:U:H3'	2.17	0.45
51:SF:44:LEU:HB3	51:SF:78:VAL:HG11	1.98	0.45
51:SF:58:ASP:OD1	51:SF:58:ASP:N	2.47	0.45
60:SO:68:VAL:HA	60:SO:84:SER:HA	1.98	0.45
79:Ta:66:C:H2'	79:Ta:67:C:C5	2.52	0.45
80:Tb:53:G:HO2'	80:Tb:54:G:H8	1.65	0.45
1:LA:25:U:H5'	1:LA:26:A:OP1	2.16	0.44
1:LA:1404:G:N2	1:LA:1407:A:OP2	2.44	0.44
1:LA:2218:G:H2'	1:LA:2219:A:H8	1.81	0.44
1:LA:2619:G:H1	79:Ta:76:C:H5	1.64	0.44
1:LA:2714:G:H4'	1:LA:2715:A:H5''	1.99	0.44
1:LA:2745:G:N2	1:LA:2748:A:OP2	2.40	0.44
9:LI:233:GLU:HG3	21:LU:35:VAL:HG22	1.98	0.44
18:LR:60:PHE:HB3	18:LR:64:ASN:HB3	1.98	0.44
26:LZ:100:LYS:HB2	26:LZ:100:LYS:HZ3	1.81	0.44
29:Lc:84:GLU:H	29:Lc:84:GLU:HG2	1.55	0.44
45:S2:103:A:H4'	45:S2:105:A:C8	2.52	0.44
45:S2:756:A:C4	45:S2:757:A:C8	3.05	0.44
45:S2:1017:U:H2'	45:S2:1018:U:C6	2.52	0.44
45:S2:1211:A:H2'	45:S2:1212:G:O4'	2.16	0.44
45:S2:1480:G:H2'	45:S2:1481:C:C6	2.52	0.44
50:SE:96:ILE:HD12	50:SE:116:LEU:HG	1.99	0.44
53:SH:66:LEU:O	53:SH:70:VAL:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SR:111:VAL:HG13	63:SR:191:ALA:HA	1.99	0.44
64:SS:185:GLY:H	64:SS:189:LEU:HD13	1.82	0.44
65:ST:98:ARG:NH1	65:ST:101:ILE:O	2.50	0.44
71:SZ:115:ILE:HD11	76:Se:53:LEU:HD12	1.98	0.44
73:Sb:35:ILE:O	73:Sb:39:GLN:HG3	2.18	0.44
1:LA:289:A:OP2	16:LP:170:LYS:NZ	2.50	0.44
1:LA:1339:C:H2'	1:LA:1340:G:C8	2.52	0.44
1:LA:1798:A:H2'	1:LA:1799:A:C8	2.52	0.44
5:LE:146:ARG:HA	5:LE:146:ARG:NE	2.32	0.44
14:LN:95:ILE:HD13	14:LN:116:LEU:HD22	1.97	0.44
15:LO:55:ARG:NH1	15:LO:76:ALA:O	2.48	0.44
15:LO:135:LEU:HD22	15:LO:135:LEU:HA	1.73	0.44
29:Lc:42:ARG:HG2	29:Lc:46:ASP:OD2	2.18	0.44
31:Le:14:LEU:HA	31:Le:17:VAL:HG12	2.00	0.44
32:Lf:19:ARG:HB3	32:Lf:35:GLU:HG3	1.98	0.44
45:S2:213:A:H2'	45:S2:214:G:O4'	2.17	0.44
45:S2:1178:G:H5'	45:S2:1190:C:H42	1.83	0.44
45:S2:1185:U:H1'	45:S2:1455:G:O2'	2.17	0.44
46:SA:110:LEU:HD13	46:SA:177:MET:HE1	1.99	0.44
47:SB:108:LEU:H	47:SB:108:LEU:HD22	1.81	0.44
52:SG:32:LYS:HE2	52:SG:47:ARG:HH22	1.81	0.44
59:SN:116:LYS:HG2	59:SN:119:ARG:HG2	1.99	0.44
62:SQ:32:ILE:HA	62:SQ:96:LEU:CD1	2.46	0.44
62:SQ:32:ILE:HG12	62:SQ:96:LEU:HD11	1.98	0.44
65:ST:55:GLY:O	65:ST:63:MET:HB2	2.18	0.44
68:SW:96:VAL:HA	68:SW:99:LEU:HD21	1.99	0.44
75:Sd:41:ARG:NH2	75:Sd:94:TYR:CG	2.86	0.44
1:LA:1152:G:OP2	1:LA:1152:G:N2	2.49	0.44
1:LA:1236:G:N2	1:LA:1272:C:H42	2.15	0.44
1:LA:2148:U:H2'	1:LA:2149:A:C5	2.52	0.44
1:LA:3228:C:H5''	15:LO:137:LYS:NZ	2.30	0.44
1:LA:3303:G:O2'	1:LA:3305:A:N6	2.48	0.44
2:LB:90:U:H2'	2:LB:91:G:O4'	2.17	0.44
6:LF:6:VAL:HG21	6:LF:255:PHE:CE2	2.52	0.44
6:LF:233:LEU:HD23	6:LF:233:LEU:HA	1.63	0.44
16:LP:5:LYS:HE2	16:LP:9:GLU:OE2	2.17	0.44
23:LW:97:SER:HA	23:LW:103:TYR:HA	2.00	0.44
28:Lb:70:PRO:HD3	28:Lb:115:LYS:HD2	2.00	0.44
32:Lf:9:THR:HG21	32:Lf:74:ARG:HH11	1.82	0.44
33:Lg:103:LYS:O	33:Lg:106:VAL:HG22	2.17	0.44
45:S2:16:G:H2'	45:S2:17:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:406:U:H5''	65:ST:94:ARG:HB2	1.99	0.44
45:S2:886:U:O2'	71:SZ:121:VAL:O	2.34	0.44
45:S2:1695:G:H2'	45:S2:1696:G:C8	2.52	0.44
46:SA:75:LYS:HD3	48:SC:22:VAL:HG22	1.99	0.44
47:SB:146:THR:HG21	47:SB:157:ARG:HB3	1.98	0.44
50:SE:18:ARG:NH1	53:SH:90:ASN:O	2.50	0.44
51:SF:10:PHE:CD1	51:SF:10:PHE:C	2.96	0.44
67:SV:38:ILE:HG12	67:SV:78:ILE:HD12	1.98	0.44
67:SV:109:PHE:HE2	67:SV:183:ILE:HD11	1.81	0.44
1:LA:637:C:C2	1:LA:638:C:C5	3.05	0.44
1:LA:1062:A:O2'	22:LV:108:ARG:NH2	2.51	0.44
1:LA:2111:G:H5''	25:LY:48:ARG:CZ	2.48	0.44
1:LA:2338:C:H5''	24:LX:47:ASN:O	2.17	0.44
1:LA:2615:G:H2'	1:LA:2616:C:C6	2.53	0.44
1:LA:3069:G:H2'	1:LA:3070:A:H8	1.81	0.44
1:LA:3269:U:H4'	1:LA:3270:U:O5'	2.17	0.44
2:LB:44:C:P	13:LM:137:ARG:HH12	2.40	0.44
3:LC:85:G:H4'	3:LC:86:U:OP1	2.17	0.44
4:LD:30:ARG:NH2	4:LD:33:ASP:OD2	2.51	0.44
5:LE:173:GLN:HE21	5:LE:175:LYS:HB3	1.82	0.44
6:LF:141:ARG:CZ	6:LF:180:LYS:HD3	2.47	0.44
11:LK:1:MET:HE3	21:LU:139:TYR:HA	1.98	0.44
15:LO:89:ALA:O	15:LO:93:LYS:HG2	2.17	0.44
15:LO:94:TRP:CE2	15:LO:100:ALA:HB2	2.52	0.44
21:LU:129:ILE:HD11	21:LU:131:LYS:HG2	1.99	0.44
23:LW:77:LYS:O	23:LW:81:LYS:HG3	2.17	0.44
26:LZ:129:ASP:N	26:LZ:129:ASP:OD1	2.51	0.44
29:Lc:74:ASN:OD1	29:Lc:115:LYS:HB2	2.18	0.44
45:S2:401:A:H4'	64:SS:3:ARG:HD3	2.00	0.44
45:S2:1546:G:OP1	53:SH:123:ARG:NH1	2.47	0.44
48:SC:3:MET:HG3	48:SC:41:TYR:CD2	2.53	0.44
48:SC:62:GLN:OE1	58:SM:25:SER:OG	2.33	0.44
52:SG:20:TYR:CE1	52:SG:38:ILE:HD11	2.52	0.44
61:SP:77:SER:HB2	61:SP:86:VAL:HG11	1.99	0.44
67:SV:106:ALA:HB2	67:SV:165:LEU:HB2	1.99	0.44
73:Sb:42:GLN:HG3	73:Sb:48:GLY:O	2.17	0.44
80:Tb:44:A:H2'	80:Tb:45:A:C8	2.52	0.44
1:LA:1613:A:OP1	39:Lm:51:LEU:N	2.50	0.44
1:LA:1615:C:H2'	1:LA:1616:U:H6	1.81	0.44
1:LA:1729:A:C6	31:Lc:49:PRO:HD3	2.53	0.44
1:LA:1856:C:H2'	1:LA:1857:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3357:U:H2'	1:LA:3358:U:C6	2.53	0.44
2:LB:22:A:H2'	2:LB:23:A:C8	2.52	0.44
9:LI:118:LYS:HE2	9:LI:191:VAL:HG11	1.99	0.44
10:LJ:29:SER:C	10:LJ:31:PRO:HD3	2.43	0.44
15:LO:20:VAL:O	15:LO:66:THR:OG1	2.28	0.44
16:LP:124:ASP:OD1	16:LP:129:TYR:HE1	2.01	0.44
21:LU:141:LYS:HA	21:LU:144:LEU:HD13	1.99	0.44
24:LX:18:PRO:HA	24:LX:51:ALA:HA	1.99	0.44
43:Lq:70:LEU:HD12	43:Lq:83:LEU:HD11	2.00	0.44
45:S2:341:A:H2'	45:S2:342:C:C6	2.53	0.44
45:S2:388:G:OP1	45:S2:423:G:O2'	2.27	0.44
45:S2:539:G:H4'	45:S2:540:G:O5'	2.18	0.44
45:S2:609:U:H4'	45:S2:610:G:O5'	2.16	0.44
45:S2:963:A:H1'	45:S2:965:U:O4	2.18	0.44
45:S2:1013:A:H2'	45:S2:1014:G:O4'	2.18	0.44
45:S2:1263:G:H2'	45:S2:1264:G:O4'	2.17	0.44
45:S2:1549:C:OP2	50:SE:39:ALA:N	2.50	0.44
45:S2:1597:A:O2'	45:S2:1598:U:OP1	2.34	0.44
47:SB:81:ARG:HG2	47:SB:82:PHE:CE2	2.53	0.44
49:SD:135:MET:O	49:SD:138:GLU:HG3	2.17	0.44
52:SG:72:LYS:HA	52:SG:72:LYS:HD2	1.64	0.44
53:SH:41:ARG:HD2	54:SI:45:MET:HE3	2.00	0.44
53:SH:42:TYR:HD1	53:SH:85:PHE:HD2	1.64	0.44
53:SH:79:TYR:CA	53:SH:80:LYS:NZ	2.79	0.44
54:SI:44:GLU:HG3	54:SI:45:MET:HG2	1.99	0.44
54:SI:81:GLY:HA3	54:SI:94:ILE:O	2.18	0.44
60:SO:16:HIS:CE1	60:SO:43:ILE:HG22	2.52	0.44
67:SV:152:ILE:HB	67:SV:156:VAL:HG21	1.99	0.44
1:LA:38:U:H2'	1:LA:39:A:O4'	2.18	0.44
1:LA:336:A:OP2	27:La:9:SER:OG	2.34	0.44
1:LA:1556:C:H2'	1:LA:2169:G:N2	2.33	0.44
1:LA:3064:U:H2'	1:LA:3065:G:H8	1.82	0.44
5:LE:148:LEU:HD21	5:LE:196:ARG:HG3	1.99	0.44
12:LL:47:PRO:HB3	12:LL:171:TRP:CZ2	2.53	0.44
13:LM:60:ARG:N	13:LM:63:GLU:OE1	2.43	0.44
16:LP:42:PRO:HD3	16:LP:61:ILE:HG13	2.00	0.44
21:LU:129:ILE:HG12	21:LU:134:ASP:HB3	1.99	0.44
26:LZ:105:VAL:HG11	26:LZ:135:ILE:HG13	1.99	0.44
45:S2:30:G:OP1	74:Sc:126:LYS:NZ	2.50	0.44
45:S2:347:G:OP1	69:SX:77:SER:OG	2.25	0.44
45:S2:519:C:H3'	45:S2:520:A:H5''	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:576:G:O6	74:Sc:65:ASN:HA	2.18	0.44
45:S2:817:A:H2'	45:S2:818:C:C6	2.53	0.44
45:S2:1262:U:H2'	45:S2:1263:G:C8	2.53	0.44
46:SA:132:LYS:HE2	46:SA:132:LYS:HB3	1.82	0.44
49:SD:44:GLY:O	49:SD:48:SER:CB	2.66	0.44
50:SE:73:PRO:HG2	50:SE:93:VAL:HG12	2.00	0.44
54:SI:9:VAL:HG22	54:SI:140:LEU:HD21	1.99	0.44
57:SL:29:ARG:HG3	57:SL:41:VAL:HG22	2.00	0.44
60:SO:123:ILE:HD12	60:SO:123:ILE:HA	1.85	0.44
60:SO:232:TYR:OH	60:SO:268:GLN:HG2	2.18	0.44
61:SP:72:ASP:OD1	61:SP:73:VAL:N	2.51	0.44
61:SP:126:PRO:HG2	61:SP:152:PRO:HD2	2.00	0.44
62:SQ:126:THR:HG23	62:SQ:126:THR:O	2.16	0.44
69:SX:21:ASN:OD1	69:SX:21:ASN:N	2.50	0.44
74:Sc:47:SER:OG	74:Sc:48:HIS:ND1	2.38	0.44
1:LA:411:U:H2'	1:LA:412:G:C8	2.52	0.44
1:LA:1066:G:H2'	1:LA:1067:U:C6	2.53	0.44
1:LA:1360:C:H5''	6:LF:309:ARG:HG3	2.00	0.44
1:LA:1846:C:O2'	18:LR:130:TYR:OH	2.34	0.44
1:LA:1942:U:H2'	1:LA:1943:C:O4'	2.18	0.44
1:LA:2712:U:H4'	1:LA:2743:A:O3'	2.17	0.44
2:LB:94:C:H2'	2:LB:95:A:C8	2.53	0.44
6:LF:2:SER:OG	6:LF:3:ARG:N	2.51	0.44
9:LI:98:LYS:HB3	9:LI:99:PRO:HD3	2.00	0.44
45:S2:93:A:H4'	45:S2:94:U:OP2	2.18	0.44
45:S2:728:U:H5'	45:S2:729:G:OP2	2.18	0.44
45:S2:739:G:HO2'	45:S2:740:A:P	2.41	0.44
45:S2:762:A:OP1	68:SW:79:ARG:NH1	2.50	0.44
45:S2:1330:G:H2'	45:S2:1331:A:O4'	2.17	0.44
45:S2:1590:G:OP1	54:SI:91:TYR:HB2	2.18	0.44
45:S2:1719:A:H2'	45:S2:1720:G:O4'	2.18	0.44
50:SE:96:ILE:CD1	50:SE:116:LEU:CD1	2.91	0.44
54:SI:61:VAL:HG22	54:SI:76:LEU:HD22	2.00	0.44
54:SI:107:ALA:O	54:SI:111:ILE:HG12	2.17	0.44
55:SJ:35:GLU:OE2	55:SJ:89:ARG:NH1	2.43	0.44
60:SO:158:PRO:O	60:SO:208:GLY:HA3	2.18	0.44
66:SU:175:LYS:HB2	66:SU:175:LYS:HE2	1.72	0.44
75:Sd:88:THR:O	75:Sd:92:VAL:HG23	2.17	0.44
79:Ta:4:G:N3	79:Ta:4:G:H2'	2.33	0.44
1:LA:340:C:H2'	1:LA:341:G:O4'	2.18	0.44
1:LA:847:A:H5'	70:SY:123:HIS:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:955:U:H2'	1:LA:956:U:C6	2.52	0.44
1:LA:1084:A:H5''	22:LV:35:LYS:HD3	1.99	0.44
1:LA:2129:U:H2'	1:LA:2130:G:C8	2.53	0.44
1:LA:2232:A:H2'	1:LA:2233:A:C8	2.52	0.44
1:LA:3122:A:N1	11:LK:70:THR:OG1	2.46	0.44
1:LA:3231:U:H2'	1:LA:3232:G:H8	1.83	0.44
3:LC:65:A:C4	3:LC:66:A:C8	3.05	0.44
4:LD:219:ILE:HD13	4:LD:223:SER:HB3	2.00	0.44
6:LF:39:PHE:HA	6:LF:42:VAL:HG22	2.00	0.44
8:LH:64:LEU:HD11	8:LH:76:LEU:HD22	2.00	0.44
9:LI:236:ILE:HD12	9:LI:236:ILE:HA	1.89	0.44
10:LJ:169:LEU:HB2	37:Lk:43:LEU:HD11	2.00	0.44
12:LL:54:SER:HB2	12:LL:135:ILE:HD11	1.98	0.44
36:Lj:29:ALA:O	36:Lj:33:VAL:HG23	2.18	0.44
38:Ll:16:HIS:HB3	38:Ll:25:ARG:O	2.18	0.44
45:S2:789:A:C2	64:SS:248:ILE:HG21	2.53	0.44
45:S2:859:A:C6	70:SY:73:ARG:HD3	2.52	0.44
45:S2:1303:U:O2'	45:S2:1322:A:OP2	2.32	0.44
45:S2:1561:U:H4'	45:S2:1599:C:H4'	1.98	0.44
45:S2:1755:A:O2'	45:S2:1756:A:O4'	2.26	0.44
47:SB:143:ARG:HA	47:SB:167:ARG:HD3	2.00	0.44
51:SF:81:ILE:O	51:SF:85:ILE:HG12	2.17	0.44
60:SO:170:ILE:HG12	60:SO:211:ILE:HD11	1.99	0.44
60:SO:197:SER:HB2	60:SO:217:ASP:HB3	1.99	0.44
60:SO:248:ASN:OD1	60:SO:249:ARG:HD3	2.17	0.44
62:SQ:103:MET:HE3	62:SQ:215:VAL:HG12	2.00	0.44
64:SS:72:VAL:HG22	64:SS:90:ILE:HG13	2.00	0.44
70:SY:60:VAL:HG13	70:SY:66:ILE:HD12	2.00	0.44
1:LA:197:G:H2'	1:LA:198:A:C8	2.53	0.44
1:LA:210:U:C2	1:LA:230:U:H4'	2.53	0.44
1:LA:257:U:H2'	1:LA:258:G:H8	1.83	0.44
1:LA:533:A:O2'	1:LA:534:U:H3'	2.18	0.44
1:LA:1090:G:O6	1:LA:1091:A:N6	2.51	0.44
1:LA:2426:U:H2'	1:LA:2427:U:H6	1.81	0.44
1:LA:2525:G:N2	10:LJ:44:ARG:HH12	2.16	0.44
1:LA:2836:C:H2'	1:LA:2837:A:O4'	2.18	0.44
1:LA:3305:A:H2'	1:LA:3306:U:O4'	2.18	0.44
6:LF:98:ARG:HG2	6:LF:99:MET:O	2.18	0.44
10:LJ:93:LEU:HA	10:LJ:96:LYS:HZ3	1.83	0.44
11:LK:78:MET:HE3	11:LK:78:MET:HB2	1.75	0.44
17:LQ:37[A]:ARG:HG2	17:LQ:108[A]:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Lf:44:MET:O	32:Lf:77:ARG:NH1	2.51	0.44
34:Lh:8:TYR:CE2	34:Lh:99:ARG:HD3	2.53	0.44
45:S2:367:A:H2'	45:S2:368:U:O4'	2.18	0.44
45:S2:920:U:H2'	45:S2:921:U:O4'	2.17	0.44
45:S2:1556:A:OP1	50:SE:115:TYR:OH	2.35	0.44
45:S2:1619:C:H2'	45:S2:1620:C:C6	2.53	0.44
47:SB:196:GLU:O	47:SB:200:ASN:ND2	2.51	0.44
59:SN:120:GLU:HG2	59:SN:132:LEU:HG	1.99	0.44
60:SO:115:ILE:HG22	60:SO:122:ILE:CD1	2.46	0.44
67:SV:26:LYS:HE2	67:SV:29:LEU:HD21	1.99	0.44
67:SV:84:HIS:CD2	67:SV:90:LEU:HD12	2.53	0.44
67:SV:152:ILE:H	67:SV:152:ILE:HG12	1.51	0.44
67:SV:191:PHE:O	67:SV:195:ARG:HG2	2.18	0.44
71:SZ:20:TYR:CD1	71:SZ:20:TYR:C	2.95	0.44
71:SZ:31:THR:OG1	71:SZ:35:GLY:HA2	2.18	0.44
71:SZ:64:ALA:HB3	71:SZ:104:ALA:HB3	2.00	0.44
77:Sf:15:GLU:HA	77:Sf:15:GLU:OE2	2.18	0.44
1:LA:351:A:H4'	3:LC:54:A:C8	2.52	0.43
1:LA:650:C:H2'	1:LA:651:G:C8	2.53	0.43
1:LA:2103:U:H2'	1:LA:2104:A:H8	1.81	0.43
1:LA:2201:G:H2'	1:LA:2202:C:C6	2.53	0.43
1:LA:2201:G:H2'	1:LA:2202:C:H6	1.82	0.43
1:LA:2213:A:H2'	1:LA:2214:A:H8	1.82	0.43
1:LA:2681:U:H1'	13:LM:22:SER:HB3	1.99	0.43
1:LA:2883:U:H2'	1:LA:2884:C:H6	1.83	0.43
1:LA:3296:A:H2'	1:LA:3297:U:H6	1.82	0.43
3:LC:143:U:H2'	3:LC:144:G:O4'	2.18	0.43
5:LE:256:HIS:HA	5:LE:257:PRO:C	2.44	0.43
7:LG:286:VAL:O	7:LG:290:ILE:HG12	2.18	0.43
11:LK:129:ARG:HD3	11:LK:157:ASN:ND2	2.33	0.43
14:LN:2:ALA:HB3	29:Lc:41:HIS:CE1	2.53	0.43
17:LQ:22[A]:VAL:HG22	17:LQ:122[A]:GLN:OE1	2.18	0.43
21:LU:140:VAL:HG12	21:LU:144:LEU:HD11	2.01	0.43
26:LZ:133:LEU:O	26:LZ:137:ASN:ND2	2.51	0.43
29:Lc:126:LYS:HB3	29:Lc:148:ILE:HD13	2.00	0.43
32:Lf:92:TYR:CE1	32:Lf:94:GLU:HG2	2.53	0.43
40:Ln:13:MET:HE2	40:Ln:49:MET:HE3	2.00	0.43
45:S2:72:A:H62	65:ST:167:LYS:NZ	2.16	0.43
45:S2:1055:U:H2'	45:S2:1056:U:C6	2.53	0.43
45:S2:1481:C:O2'	45:S2:1482:C:O4'	2.29	0.43
53:SH:27:LYS:HE2	53:SH:55:HIS:HA	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SN:107:LYS:HG3	59:SN:115:THR:OG1	2.18	0.43
62:SQ:84:ILE:CD1	62:SQ:100:PHE:HE1	2.31	0.43
65:ST:78:THR:O	65:ST:81:VAL:HG22	2.18	0.43
67:SV:74:LYS:HB2	67:SV:109:PHE:CE1	2.53	0.43
1:LA:610:G:O6	6:LF:309:ARG:NH2	2.47	0.43
1:LA:947:G:H2'	1:LA:948:C:C6	2.53	0.43
1:LA:1290:A:H2'	1:LA:1291:A:C8	2.53	0.43
1:LA:1764:U:H5'	1:LA:1765:U:H5''	1.99	0.43
1:LA:2697:A:H2'	1:LA:2698:G:H8	1.80	0.43
1:LA:3013:U:O2	1:LA:3041:U:H5	2.00	0.43
2:LB:23:A:H2'	2:LB:24:A:C8	2.54	0.43
8:LH:14:ASP:OD1	8:LH:14:ASP:N	2.51	0.43
10:LJ:42:PRO:HD2	10:LJ:44:ARG:NH2	2.27	0.43
28:Lb:22:LYS:HD3	28:Lb:129:TRP:CZ3	2.53	0.43
28:Lb:42:LEU:CD2	28:Lb:74:VAL:HG22	2.46	0.43
36:Lj:28:LEU:HG	36:Lj:32:LYS:HE2	2.00	0.43
45:S2:1164:G:H2'	45:S2:1165:G:H8	1.83	0.43
46:SA:158:ILE:HD13	46:SA:189:MET:HE1	2.00	0.43
46:SA:158:ILE:HD12	46:SA:163:PRO:HB2	2.01	0.43
63:SR:73:LEU:O	63:SR:76:LEU:HG	2.17	0.43
65:ST:116:LYS:HD2	65:ST:125:THR:HG23	2.00	0.43
65:ST:180:THR:HG22	65:ST:182:GLN:N	2.32	0.43
67:SV:69:SER:OG	69:SX:24:LYS:HG3	2.18	0.43
68:SW:59:LEU:HD22	68:SW:69:ARG:HA	2.00	0.43
79:Ta:61:U:H3'	79:Ta:62:C:C6	2.52	0.43
1:LA:209:A:N3	6:LF:221:ASN:ND2	2.60	0.43
1:LA:374:A:N3	1:LA:376:G:H5''	2.33	0.43
1:LA:542:G:C6	1:LA:550:A:C6	3.07	0.43
1:LA:715:A:N1	1:LA:781:G:O2'	2.49	0.43
1:LA:787:G:H2'	1:LA:788:C:C6	2.52	0.43
1:LA:1522:U:OP2	26:LZ:121:LYS:NZ	2.49	0.43
1:LA:2566:C:H2'	1:LA:2567:C:C6	2.54	0.43
1:LA:3038:U:H5''	5:LE:62:ARG:HG2	2.00	0.43
1:LA:3133:C:H2'	1:LA:3134:A:O4'	2.18	0.43
1:LA:3217:C:H6	1:LA:3266:G:H21	1.66	0.43
4:LD:32:LEU:HD11	4:LD:37:ARG:HB3	2.00	0.43
5:LE:19:ARG:HB2	5:LE:232:ARG:NH2	2.33	0.43
5:LE:44:THR:HG21	5:LE:184:ASN:OD1	2.18	0.43
5:LE:47:LEU:HD22	5:LE:335:ILE:HD11	1.99	0.43
5:LE:108:GLU:OE2	5:LE:137:TYR:HB3	2.18	0.43
5:LE:226:PHE:CE1	5:LE:268:GLY:HA2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LE:375:GLU:OE1	25:LY:14:TYR:OH	2.36	0.43
10:LJ:74:THR:HG21	37:Lk:47:ILE:HG13	2.00	0.43
26:LZ:107:VAL:HA	26:LZ:126:LEU:HA	2.01	0.43
45:S2:1257:U:H2'	48:SC:2:LEU:HB2	2.00	0.43
50:SE:47:ARG:O	50:SE:49:MET:HE1	2.18	0.43
51:SF:13:LYS:HD2	51:SF:13:LYS:HA	1.87	0.43
52:SG:32:LYS:CE	52:SG:47:ARG:NH2	2.81	0.43
54:SI:52:GLY:C	54:SI:54:PHE:H	2.26	0.43
55:SJ:96:PRO:HD2	55:SJ:99:ILE:HD12	1.99	0.43
60:SO:23:LEU:HD11	60:SO:304:GLY:H	1.83	0.43
60:SO:53:LYS:HG3	60:SO:54:PHE:H	1.83	0.43
61:SP:183:ARG:HG3	61:SP:188:LEU:HD23	2.00	0.43
62:SQ:100:PHE:HB3	62:SQ:181:LEU:HD21	2.00	0.43
64:SS:159:THR:HG23	64:SS:227:VAL:HG13	1.99	0.43
1:LA:343:U:H1'	6:LF:95:ARG:HG3	2.00	0.43
1:LA:429:U:O2'	34:Lh:88:ASN:O	2.29	0.43
1:LA:746:A:P	19:LS:145:ASN:HD22	2.42	0.43
1:LA:1597:C:H2'	1:LA:1598:G:C8	2.52	0.43
1:LA:1623:G:C4	1:LA:1624:G:C8	3.06	0.43
1:LA:2160:G:H2'	1:LA:2161:G:C8	2.52	0.43
1:LA:2272:G:OP2	1:LA:2272:G:N2	2.39	0.43
1:LA:2450:G:C2	1:LA:2496:C:O2	2.70	0.43
1:LA:2536:A:H3'	62:SQ:227:ALA:H	1.83	0.43
1:LA:2557:A:OP2	1:LA:2557:A:H8	2.00	0.43
1:LA:3297:U:H2'	1:LA:3298:C:H6	1.82	0.43
1:LA:3333:G:N2	1:LA:3369:G:O2'	2.51	0.43
3:LC:152:G:O3'	10:LJ:63:LYS:HD2	2.19	0.43
4:LD:127:ALA:HB2	4:LD:134:VAL:HG23	2.00	0.43
6:LF:234:ASN:HD21	6:LF:236:LEU:HD12	1.83	0.43
8:LH:51:ARG:HH12	8:LH:161:ALA:HB3	1.82	0.43
8:LH:78:ARG:HH12	8:LH:103:VAL:HG13	1.83	0.43
14:LN:2:ALA:HB1	29:Lc:33:GLY:O	2.18	0.43
15:LO:135:LEU:HD21	17:LQ:178[A]:VAL:HG23	2.00	0.43
16:LP:5:LYS:HD2	16:LP:5:LYS:HA	1.66	0.43
20:LT:85:ARG:NH1	20:LT:85:ARG:CB	2.82	0.43
22:LV:32:LYS:HB2	22:LV:32:LYS:HE2	1.73	0.43
32:Lf:8:VAL:HG21	32:Lf:10:ARG:NH1	2.34	0.43
35:Li:29:ILE:HD11	35:Li:31:ARG:HE	1.83	0.43
38:Ll:43:LYS:HB2	38:Ll:43:LYS:HE3	1.71	0.43
45:S2:5:U:H2'	45:S2:6:G:H8	1.84	0.43
45:S2:279:G:H1'	45:S2:281:G:H1'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:404:G:H2'	45:S2:405:C:C6	2.53	0.43
45:S2:799:A:HO2'	64:SS:201:HIS:HE2	1.66	0.43
45:S2:934:C:C4	45:S2:1077:C:H4'	2.54	0.43
49:SD:31:VAL:HB	49:SD:133:LEU:HD22	1.99	0.43
49:SD:31:VAL:O	49:SD:34:THR:HG22	2.17	0.43
63:SR:41:LEU:HG	63:SR:68:ILE:HD13	1.99	0.43
64:SS:256:ARG:HH22	68:SW:78:ARG:NH1	2.17	0.43
69:SX:76:VAL:HA	69:SX:119:VAL:HG13	1.99	0.43
1:LA:196:G:H22	1:LA:199:A:H5'	1.84	0.43
1:LA:293:C:H2'	1:LA:294:U:O4'	2.19	0.43
1:LA:631:U:H2'	1:LA:632:G:C8	2.53	0.43
1:LA:681:U:O2'	1:LA:697:A:N1	2.51	0.43
1:LA:834:U:H2'	1:LA:835:G:O4'	2.18	0.43
1:LA:1252:A:H2'	1:LA:1253:U:C5	2.54	0.43
1:LA:1447:G:OP2	18:LR:27:LYS:NZ	2.51	0.43
1:LA:1810:A:H2'	1:LA:1811:G:C8	2.53	0.43
1:LA:2216:G:H22	1:LA:2229:A:H2	1.65	0.43
1:LA:2947:G:OP2	1:LA:2947:G:H4'	2.19	0.43
1:LA:2991:A:O2'	1:LA:3309:G:N7	2.51	0.43
3:LC:10:A:H2'	3:LC:11:C:C6	2.52	0.43
4:LD:36:GLU:HA	4:LD:91:GLY:HA2	2.00	0.43
6:LF:321:LYS:HD3	6:LF:321:LYS:N	2.32	0.43
8:LH:105:TYR:CD1	8:LH:105:TYR:C	2.95	0.43
11:LK:29:GLY:HA3	11:LK:82:VAL:HG13	1.99	0.43
15:LO:135:LEU:HD22	17:LQ:181[A]:ALA:HB3	2.00	0.43
21:LU:38:LYS:HG2	21:LU:58:ILE:HD13	1.99	0.43
32:Lf:51:LEU:HB3	32:Lf:55:LEU:HD23	2.01	0.43
45:S2:174:U:H2'	45:S2:175:G:O4'	2.18	0.43
45:S2:236:A:H2'	45:S2:237:C:O4'	2.18	0.43
45:S2:343:C:H2'	45:S2:344:A:H8	1.83	0.43
45:S2:795:U:C2	45:S2:796:A:C8	3.07	0.43
45:S2:1209:C:H2'	45:S2:1210:C:H6	1.82	0.43
45:S2:1278:G:H2'	45:S2:1279:C:O4'	2.19	0.43
45:S2:1523:G:N7	54:SI:68:ARG:HD3	2.33	0.43
45:S2:1530:C:OP1	56:SK:95:HIS:HA	2.18	0.43
47:SB:136:ALA:O	47:SB:140:THR:OG1	2.26	0.43
62:SQ:84:ILE:HD12	62:SQ:100:PHE:HE1	1.83	0.43
63:SR:116:LYS:HB2	63:SR:131:ILE:HD12	2.01	0.43
65:ST:171:LYS:HE2	65:ST:171:LYS:HB2	1.88	0.43
67:SV:107:THR:HG22	67:SV:108:PRO:HD3	2.01	0.43
69:SX:53:TYR:HD2	69:SX:55:ASP:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SY:26:PHE:CD1	70:SY:59:GLY:O	2.70	0.43
70:SY:34:ILE:CD1	70:SY:74:ILE:HD12	2.48	0.43
1:LA:75:G:H1'	14:LN:61:PRO:HG3	1.99	0.43
1:LA:682:U:H5''	1:LA:683:U:H5	1.84	0.43
1:LA:1448:U:H2'	1:LA:1449:A:H8	1.83	0.43
1:LA:1596:C:H2'	1:LA:1597:C:H6	1.82	0.43
3:LC:149:A:H2'	3:LC:150:G:C8	2.53	0.43
9:LI:145:ARG:HA	9:LI:185:ILE:HD13	2.00	0.43
13:LM:32:ARG:NH1	13:LM:119:SER:O	2.52	0.43
29:Lc:77:LYS:HG3	29:Lc:77:LYS:O	2.19	0.43
32:Lf:16:LEU:HD23	32:Lf:71:LEU:HD13	2.01	0.43
36:Lj:5:LYS:HD2	36:Lj:7:TYR:HE1	1.82	0.43
37:Lk:9:ILE:HD12	37:Lk:10:GLY:H	1.83	0.43
46:SA:17:PHE:CE1	46:SA:21:LEU:HD22	2.54	0.43
53:SH:79:TYR:C	53:SH:80:LYS:HE2	2.43	0.43
62:SQ:209:ASN:C	62:SQ:210:ILE:HD13	2.44	0.43
62:SQ:210:ILE:HD13	62:SQ:210:ILE:N	2.33	0.43
74:Sc:58:GLY:HA2	74:Sc:70:LYS:HA	2.01	0.43
1:LA:352:A:H3'	3:LC:54:A:N3	2.34	0.43
1:LA:2389:C:H2'	1:LA:2390:A:C8	2.54	0.43
1:LA:2655:U:H4'	1:LA:2656:A:O4'	2.19	0.43
1:LA:2667:A:H2'	1:LA:2668:U:O4'	2.19	0.43
1:LA:3095:U:H2'	1:LA:3096:C:C6	2.54	0.43
3:LC:76:C:H2'	3:LC:77:A:O4'	2.18	0.43
6:LF:361:HIS:O	21:LU:28:ARG:NH1	2.51	0.43
7:LG:287:ALA:HA	7:LG:290:ILE:HG12	2.01	0.43
8:LH:48:ARG:H	8:LH:48:ARG:HG2	1.58	0.43
24:LX:32:ARG:HD3	45:S2:1734:U:H5'	2.00	0.43
43:Lq:78:LYS:HE2	43:Lq:78:LYS:HB2	1.72	0.43
45:S2:14:C:C6	63:SR:203:LYS:NZ	2.85	0.43
45:S2:30:G:H4'	74:Sc:131:SER:HB2	2.01	0.43
45:S2:749:U:H2'	45:S2:750:U:C6	2.54	0.43
45:S2:874:C:H2'	45:S2:875:G:C8	2.53	0.43
45:S2:1287:A:N1	45:S2:1328:G:O2'	2.45	0.43
45:S2:1358:G:O2'	54:SI:133:ASP:OD2	2.21	0.43
48:SC:28:ASN:ND2	58:SM:8:PHE:CG	2.87	0.43
55:SJ:41:ILE:HD13	55:SJ:41:ILE:HA	1.91	0.43
61:SP:63:ILE:HD13	61:SP:158:VAL:HG21	1.99	0.43
62:SQ:101:HIS:O	62:SQ:217:LEU:HB3	2.18	0.43
68:SW:103:ASP:O	68:SW:106:GLU:HG3	2.19	0.43
1:LA:996:A:H2'	1:LA:997:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2653:C:O2'	1:LA:2657:A:N1	2.45	0.43
1:LA:3162:C:H2'	1:LA:3163:A:H8	1.84	0.43
3:LC:4:C:H2'	3:LC:5:U:O2	2.18	0.43
6:LF:165:ALA:HB1	6:LF:219:LEU:HD13	2.00	0.43
9:LI:24:GLU:HG2	9:LI:26:VAL:HG22	2.00	0.43
9:LI:118:LYS:HE2	9:LI:191:VAL:CG1	2.49	0.43
12:LL:76:MET:CE	12:LL:148:VAL:HA	2.49	0.43
14:LN:155:GLU:H	14:LN:155:GLU:CD	2.26	0.43
15:LO:12:TRP:CD1	21:LU:151:PRO:HB2	2.52	0.43
21:LU:129:ILE:HD12	21:LU:130:GLU:H	1.84	0.43
26:LZ:98:ALA:O	26:LZ:102:LEU:HB2	2.19	0.43
35:Li:51:LEU:HB3	35:Li:54:ILE:HD13	2.01	0.43
36:Lj:105:ARG:O	36:Lj:109:ILE:CD1	2.67	0.43
37:Lk:56:ARG:HH22	37:Lk:76:ARG:NH2	2.17	0.43
43:Lq:45:ARG:O	43:Lq:48:SER:OG	2.36	0.43
45:S2:760:A:H2'	45:S2:761:G:O4'	2.19	0.43
45:S2:876:G:H1'	45:S2:944:A:O4'	2.18	0.43
45:S2:1275:A:O2'	46:SA:145:ALA:O	2.24	0.43
45:S2:1472:C:H2'	45:S2:1535:U:O4	2.17	0.43
54:SI:47:PRO:HG2	54:SI:53:TRP:CD2	2.54	0.43
59:SN:113:LYS:NZ	59:SN:114:VAL:O	2.49	0.43
61:SP:79:ARG:NH2	61:SP:164:ASN:O	2.52	0.43
65:ST:211:LEU:O	65:ST:215:ARG:HG2	2.18	0.43
68:SW:40:LYS:HB2	68:SW:40:LYS:HE3	1.79	0.43
69:SX:63:LEU:HD12	69:SX:63:LEU:HA	1.87	0.43
79:Ta:41:C:H2'	79:Ta:42:C:C6	2.53	0.43
1:LA:1120:A:H2'	1:LA:1121:U:H6	1.84	0.43
1:LA:1631:C:H5''	1:LA:1632:A:H5''	2.00	0.43
1:LA:1740:U:H4'	1:LA:1741:A:H5'	2.01	0.43
1:LA:2118:C:H2'	1:LA:2119:A:O4'	2.19	0.43
1:LA:2835:U:H2'	1:LA:2836:C:O2	2.18	0.43
7:LG:241:THR:O	7:LG:245:GLU:HG2	2.18	0.43
8:LH:51:ARG:HD2	8:LH:158:TYR:CZ	2.52	0.43
8:LH:133:GLU:HG3	8:LH:134:ARG:N	2.32	0.43
11:LK:71:VAL:O	11:LK:75:VAL:HG23	2.18	0.43
11:LK:94:TYR:CD2	11:LK:98:PRO:HA	2.54	0.43
15:LO:28:SER:HA	15:LO:31:LYS:HZ2	1.82	0.43
18:LR:105:LYS:HE3	18:LR:105:LYS:HB3	1.82	0.43
19:LS:21:SER:HB3	19:LS:26:LEU:HD23	2.01	0.43
28:Lb:87:LEU:HD21	28:Lb:121:ARG:HH21	1.83	0.43
44:Lr:29:LEU:HD23	44:Lr:29:LEU:HA	1.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:26:A:H2'	45:S2:27:U:C6	2.54	0.43
45:S2:385:A:H5''	67:SV:22:ARG:CG	2.48	0.43
45:S2:821:U:N3	45:S2:852:C:N4	2.24	0.43
45:S2:849:C:H5''	45:S2:850:A:OP1	2.19	0.43
45:S2:1330:G:H22	46:SA:204:ASP:HB3	1.82	0.43
45:S2:1556:A:C5	45:S2:1560:U:C2	3.06	0.43
45:S2:1574:G:H5''	45:S2:1575:G:OP1	2.19	0.43
46:SA:104:SER:O	46:SA:108:LYS:HG3	2.19	0.43
47:SB:93:LEU:O	47:SB:97:LEU:CD2	2.65	0.43
60:SO:17:ASN:OD1	60:SO:39:ASP:HB3	2.19	0.43
63:SR:80:VAL:HA	63:SR:102:VAL:HA	2.00	0.43
66:SU:24:PHE:HE1	66:SU:81:LEU:HD11	1.84	0.43
66:SU:129:LEU:HD11	66:SU:172:VAL:HG21	2.01	0.43
75:Sd:15:ASN:OD1	75:Sd:20:ARG:HG2	2.18	0.43
79:Ta:40:C:H2'	79:Ta:41:C:N1	2.34	0.43
1:LA:1237:G:H2'	1:LA:1237:G:N3	2.34	0.43
1:LA:1504:A:N1	1:LA:1515:A:O2'	2.43	0.43
1:LA:1660:C:H2'	1:LA:1661:G:C8	2.53	0.43
1:LA:1899:G:O2'	1:LA:2334:U:O4	2.29	0.43
1:LA:2674:A:N6	13:LM:124:GLY:O	2.52	0.43
5:LE:105:VAL:HG11	5:LE:148:LEU:HD11	2.01	0.43
7:LG:93:THR:HG22	7:LG:158:ARG:NH1	2.34	0.43
7:LG:116:ASP:OD1	7:LG:116:ASP:N	2.40	0.43
18:LR:132:ALA:O	18:LR:135:ARG:NH1	2.52	0.43
45:S2:64:U:O2'	45:S2:168:A:N3	2.45	0.43
45:S2:461:G:H2'	45:S2:462:G:C8	2.54	0.43
45:S2:554:C:H1'	45:S2:555:A:H2	1.84	0.43
45:S2:638:U:OP2	73:Sb:32:LYS:NZ	2.39	0.43
46:SA:24:PHE:HA	48:SC:60:SER:OG	2.19	0.43
58:SM:19:ARG:HB3	58:SM:30:LEU:HD23	2.01	0.43
60:SO:145:LEU:O	60:SO:181:TRP:HH2	2.01	0.43
60:SO:158:PRO:HD2	60:SO:208:GLY:HA2	2.00	0.43
65:ST:102:VAL:HG13	65:ST:106:LEU:HD12	2.01	0.43
69:SX:84:ILE:CD1	69:SX:109:VAL:CG1	2.96	0.43
1:LA:1129:A:H2'	1:LA:1130:A:C8	2.54	0.42
1:LA:1169:A:H2'	1:LA:1170:A:C8	2.54	0.42
1:LA:1274:A:N3	1:LA:1274:A:H2'	2.34	0.42
1:LA:2175:U:O2'	4:LD:23:ARG:HD2	2.19	0.42
1:LA:2249:G:H2'	1:LA:2250:G:O4'	2.19	0.42
1:LA:2450:G:O2'	1:LA:2494:A:N6	2.52	0.42
1:LA:3146:G:H2'	1:LA:3147:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:LD:44:ILE:HD11	4:LD:85:GLY:HA2	2.00	0.42
4:LD:246:LEU:HD23	4:LD:246:LEU:H	1.84	0.42
6:LF:261:VAL:HG13	6:LF:262:TRP:CD1	2.54	0.42
12:LL:200:LEU:HB2	12:LL:213:PHE:CD2	2.54	0.42
13:LM:87:LYS:HB3	13:LM:87:LYS:HE3	1.82	0.42
21:LU:96:ASP:OD1	21:LU:97:VAL:N	2.49	0.42
24:LX:10:LYS:HD3	24:LX:125:LEU:HD22	2.00	0.42
44:Lr:39:CYS:HB3	44:Lr:42:CYS:SG	2.59	0.42
45:S2:14:C:H6	63:SR:203:LYS:HZ3	1.64	0.42
45:S2:628:G:OP1	70:SY:124:ARG:NH1	2.45	0.42
45:S2:1031:U:H4'	45:S2:1032:G:OP2	2.19	0.42
45:S2:1181:U:H2'	45:S2:1182:U:O4'	2.19	0.42
45:S2:1529:C:H2'	45:S2:1530:C:C6	2.54	0.42
45:S2:1638:G:H2'	45:S2:1639:C:O4'	2.19	0.42
47:SB:177:ILE:O	47:SB:181:GLU:HG3	2.19	0.42
56:SK:48:ASP:OD1	56:SK:49:ARG:N	2.52	0.42
59:SN:89:LYS:HG3	59:SN:91:ILE:HG22	2.01	0.42
60:SO:34:LEU:HD23	60:SO:44:SER:CB	2.49	0.42
64:SS:160:VAL:HG11	64:SS:169:ILE:HD13	2.01	0.42
65:ST:79:LYS:HE2	65:ST:79:LYS:HB3	1.67	0.42
68:SW:71:PHE:CD1	68:SW:71:PHE:C	2.97	0.42
75:Sd:43:LYS:HE2	75:Sd:43:LYS:HB3	1.59	0.42
1:LA:708:G:N2	1:LA:711:A:OP2	2.45	0.42
1:LA:1482:A:H2'	1:LA:1482:A:N3	2.34	0.42
1:LA:1561:G:HO2'	1:LA:1562:C:C5'	2.30	0.42
1:LA:1765:U:H5''	20:LT:43:LYS:HZ1	1.84	0.42
1:LA:1771:C:H2'	1:LA:1772:U:O4'	2.19	0.42
5:LE:167:ARG:NH1	5:LE:168:LYS:HG3	2.34	0.42
15:LO:116:GLU:HG2	17:LQ:197[A]:LEU:HD11	2.00	0.42
15:LO:131:VAL:HG22	17:LQ:182[A]:ASN:HB2	2.00	0.42
16:LP:38:ARG:HD2	16:LP:61:ILE:O	2.19	0.42
19:LS:150:VAL:HA	19:LS:153:PHE:CD2	2.53	0.42
45:S2:788:A:C5	64:SS:19:LEU:HD13	2.54	0.42
45:S2:1542:G:N2	45:S2:1568:C:H1'	2.34	0.42
45:S2:1584:G:O3'	51:SF:124:PRO:HA	2.20	0.42
46:SA:7:LYS:HD3	46:SA:7:LYS:HA	1.65	0.42
47:SB:56:ALA:O	47:SB:59:VAL:HG12	2.19	0.42
54:SI:21:PHE:O	54:SI:25:GLN:HG2	2.18	0.42
62:SQ:52:THR:H	62:SQ:55:LYS:HG2	1.85	0.42
66:SU:5:GLN:HA	66:SU:8:ILE:HG22	2.02	0.42
68:SW:123:HIS:CD2	78:Sg:33:ARG:HH11	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Ta:38:A:H2'	79:Ta:39:A:O4'	2.19	0.42
1:LA:821:U:H2'	1:LA:822:G:H8	1.84	0.42
1:LA:3176:G:N2	1:LA:3213:A:H1'	2.34	0.42
1:LA:3299:A:N6	1:LA:3315:G:H1	2.09	0.42
1:LA:3337:G:H2'	1:LA:3338:C:C6	2.54	0.42
2:LB:7:G:H8	7:LG:22:ARG:NH1	2.16	0.42
2:LB:48:U:OP2	7:LG:94:ASN:HB3	2.19	0.42
2:LB:76:A:N3	21:LU:50:LYS:NZ	2.60	0.42
3:LC:93:U:H2'	3:LC:94:C:O4'	2.18	0.42
5:LE:367:LYS:HD2	25:LY:33:ASN:HB2	2.00	0.42
6:LF:11:LEU:HD21	6:LF:156:LEU:HB2	2.00	0.42
7:LG:153:THR:HG23	7:LG:160:PHE:CZ	2.54	0.42
9:LI:163:LEU:HD23	9:LI:168:ILE:HD11	2.00	0.42
10:LJ:153:ILE:HD13	10:LJ:166:LEU:HB3	2.01	0.42
36:Lj:94:LYS:HB3	36:Lj:94:LYS:HE3	1.89	0.42
36:Lj:102:GLU:OE2	36:Lj:105:ARG:NE	2.52	0.42
45:S2:328:A:H2'	45:S2:329:G:C8	2.53	0.42
45:S2:435:C:H5''	74:Sc:50:LYS:HD3	2.02	0.42
45:S2:485:A:N6	45:S2:503:G:O6	2.53	0.42
45:S2:511:A:H4'	45:S2:512:A:OP1	2.19	0.42
45:S2:778:G:N2	45:S2:780:A:N1	2.66	0.42
45:S2:1041:G:H2'	45:S2:1042:G:H8	1.81	0.42
45:S2:1056:U:H2'	45:S2:1057:U:C6	2.55	0.42
45:S2:1382:A:O2'	55:SJ:57:ARG:HD3	2.20	0.42
46:SA:25:PHE:CD2	46:SA:37:VAL:HG11	2.53	0.42
47:SB:183:ALA:HB2	47:SB:193:THR:HG21	2.01	0.42
50:SE:108:ARG:CG	50:SE:111:MET:HE3	2.50	0.42
53:SH:68:ARG:O	53:SH:72:ILE:HG12	2.19	0.42
64:SS:40:GLU:H	64:SS:40:GLU:HG2	1.57	0.42
65:ST:67:VAL:CG2	65:ST:99:GLY:HA2	2.49	0.42
66:SU:114:ARG:HD3	66:SU:114:ARG:HA	1.77	0.42
69:SX:101:GLU:OE1	74:Sc:16:ARG:NH2	2.52	0.42
75:Sd:41:ARG:HG2	75:Sd:42:GLU:N	2.35	0.42
79:Ta:15:G:N2	79:Ta:49:C:H42	2.16	0.42
1:LA:371:G:H4'	1:LA:396:A:N1	2.34	0.42
1:LA:505:G:OP1	6:LF:320:ASN:ND2	2.40	0.42
1:LA:633:C:H2'	1:LA:634:C:O4'	2.20	0.42
1:LA:900:G:H1'	1:LA:1589:A:H61	1.82	0.42
1:LA:1031:C:H2'	1:LA:1032:C:H6	1.84	0.42
1:LA:1155:C:O2'	1:LA:1197:A:N1	2.44	0.42
1:LA:1343:A:H2'	1:LA:1344:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1384:U:H2'	1:LA:1385:C:C6	2.55	0.42
1:LA:1687:U:H1'	23:LW:75:TYR:CD2	2.55	0.42
1:LA:2562:A:H2'	1:LA:2563:G:O4'	2.20	0.42
2:LB:45:A:H2'	2:LB:46:A:H8	1.84	0.42
2:LB:113:C:H2'	2:LB:114:U:O4'	2.20	0.42
5:LE:126:LYS:HB3	5:LE:128:LYS:HG2	2.02	0.42
10:LJ:149:LYS:N	10:LJ:200:LEU:O	2.52	0.42
11:LK:10:ILE:HG22	11:LK:53:ILE:O	2.19	0.42
11:LK:103:ILE:HG12	11:LK:136:PHE:CZ	2.55	0.42
11:LK:174:LYS:HE2	11:LK:174:LYS:HB2	1.89	0.42
16:LP:45:PRO:O	16:LP:49:ARG:HG3	2.20	0.42
17:LQ:138[A]:LEU:HD12	17:LQ:138[A]:LEU:HA	1.83	0.42
18:LR:130:TYR:CE1	18:LR:136:ILE:CD1	3.02	0.42
20:LT:165:LYS:HG3	20:LT:166:ASN:N	2.34	0.42
24:LX:128:ARG:HD2	24:LX:128:ARG:HA	1.85	0.42
43:Lq:43:TYR:OH	80:Tb:77:A:H5'	2.20	0.42
45:S2:333:A:OP1	67:SV:49:ARG:HG3	2.19	0.42
45:S2:830:U:O2	45:S2:830:U:H2'	2.19	0.42
45:S2:932:U:OP2	62:SQ:155:TYR:OH	2.28	0.42
45:S2:1107:G:O2'	45:S2:1108:G:H5'	2.19	0.42
45:S2:1293:U:H1'	61:SP:111:ILE:HG12	2.02	0.42
45:S2:1479:A:H5''	54:SI:60:SER:HB2	2.01	0.42
48:SC:28:ASN:ND2	58:SM:8:PHE:CD2	2.88	0.42
48:SC:81:ASN:HD22	49:SD:37:VAL:HG11	1.82	0.42
50:SE:18:ARG:HG3	53:SH:91:ASP:O	2.18	0.42
54:SI:40:SER:HB2	54:SI:96:ALA:HA	2.00	0.42
64:SS:250:GLU:HA	64:SS:253:ASP:OD2	2.18	0.42
67:SV:112:TRP:O	67:SV:116:HIS:HB2	2.19	0.42
68:SW:139:GLN:HE22	75:Sd:64:PHE:HB3	1.85	0.42
70:SY:25:TRP:HB2	77:Sf:82:LYS:HE2	2.01	0.42
70:SY:40:TYR:HB3	70:SY:50:ILE:HG12	2.00	0.42
75:Sd:56:SER:N	75:Sd:74:LEU:O	2.45	0.42
79:Ta:74:A:H2'	79:Ta:74:A:N3	2.34	0.42
1:LA:370:U:H4'	1:LA:404:G:H5'	2.01	0.42
1:LA:597:G:H2'	1:LA:598:A:H8	1.85	0.42
1:LA:617:G:H5''	18:LR:170:SER:OG	2.18	0.42
1:LA:1312:C:H2'	1:LA:1313:G:O4'	2.19	0.42
1:LA:1728:G:H5''	1:LA:1730:G:O4'	2.19	0.42
1:LA:1945:A:H2'	1:LA:1946:A:C8	2.54	0.42
1:LA:2532:U:O2	1:LA:2532:U:H2'	2.20	0.42
1:LA:2689:A:H2'	1:LA:2689:A:N3	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:LD:143:GLU:O	4:LD:145:LYS:HG2	2.19	0.42
19:LS:79:LYS:HD3	19:LS:138:LEU:HD12	2.01	0.42
26:LZ:104:GLU:OE1	26:LZ:138:ARG:NH2	2.48	0.42
37:Lk:38:LYS:HB2	37:Lk:38:LYS:HE3	1.72	0.42
43:Lq:14:GLY:C	43:Lq:16:THR:H	2.27	0.42
45:S2:122:U:O3'	64:SS:77:ARG:NH2	2.52	0.42
45:S2:273:G:O6	45:S2:283:U:O4	2.37	0.42
45:S2:894:U:H2'	45:S2:895:G:C8	2.55	0.42
45:S2:1095:U:H4'	73:Sb:19:LYS:HZ1	1.84	0.42
45:S2:1382:A:H2'	45:S2:1383:G:C8	2.55	0.42
45:S2:1517:U:H5''	45:S2:1518:C:H5	1.84	0.42
45:S2:1734:U:H2'	45:S2:1735:U:C2	2.54	0.42
47:SB:52:GLU:OE2	47:SB:52:GLU:N	2.35	0.42
48:SC:71:GLU:O	48:SC:74:GLU:HG3	2.19	0.42
49:SD:31:VAL:HG22	49:SD:123:VAL:HG11	2.00	0.42
50:SE:96:ILE:HD12	50:SE:116:LEU:CG	2.50	0.42
51:SF:73:GLY:O	51:SF:77:GLN:HG3	2.19	0.42
60:SO:21:THR:N	60:SO:36:ALA:O	2.52	0.42
60:SO:54:PHE:CD2	60:SO:312:VAL:HG11	2.54	0.42
67:SV:72:ILE:HD13	67:SV:112:TRP:CE2	2.55	0.42
74:Sc:37:ALA:O	74:Sc:41:SER:OG	2.26	0.42
75:Sd:36:SER:HB2	75:Sd:38:ASP:OD1	2.18	0.42
1:LA:47:C:H5''	14:LN:16:LYS:HG2	2.01	0.42
1:LA:226:C:H2'	1:LA:227:G:O4'	2.20	0.42
1:LA:938:C:OP1	1:LA:962:A:O2'	2.37	0.42
1:LA:1162:U:H4'	33:Lg:57:TYR:CE1	2.54	0.42
1:LA:2428:U:H2'	1:LA:2429:G:H8	1.84	0.42
1:LA:2635:A:H4'	1:LA:2636:A:O5'	2.20	0.42
1:LA:2943:G:H2'	1:LA:2944:U:O4'	2.19	0.42
1:LA:3034:C:H5	11:LK:121:LYS:H	1.67	0.42
2:LB:47:C:OP1	7:LG:95:TRP:N	2.42	0.42
3:LC:5:U:C4	3:LC:6:U:C4	3.08	0.42
3:LC:39:G:O2'	3:LC:105:A:N1	2.51	0.42
5:LE:105:VAL:HG11	5:LE:148:LEU:CD1	2.49	0.42
6:LF:178:LEU:HD21	6:LF:225:VAL:CG2	2.50	0.42
7:LG:218:ARG:HD3	7:LG:218:ARG:HA	1.78	0.42
16:LP:110:ALA:HB1	16:LP:113:LEU:CD2	2.48	0.42
25:LY:8:PHE:CD2	25:LY:46:PRO:HG3	2.55	0.42
27:La:70:ILE:HD13	27:La:82:VAL:HG22	2.02	0.42
45:S2:433:C:H2'	45:S2:434:G:O4'	2.20	0.42
45:S2:445:A:H1'	45:S2:525:A:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:449:C:H2'	45:S2:450:U:C6	2.55	0.42
45:S2:639:U:H4'	45:S2:640:U:O5'	2.19	0.42
45:S2:707:A:H5''	45:S2:731:C:N4	2.34	0.42
45:S2:802:G:O2'	73:Sb:107:SER:HB2	2.20	0.42
45:S2:1017:U:H2'	45:S2:1018:U:H6	1.83	0.42
45:S2:1147:A:OP1	63:SR:91:ARG:NH1	2.53	0.42
45:S2:1209:C:H2'	45:S2:1210:C:C6	2.55	0.42
45:S2:1563:C:H2'	45:S2:1564:U:H6	1.85	0.42
47:SB:51:VAL:HG11	47:SB:130:ILE:HG22	2.01	0.42
54:SI:6:VAL:HG22	54:SI:66:TYR:CE1	2.55	0.42
60:SO:13:LEU:HB3	60:SO:45:TRP:CE3	2.39	0.42
61:SP:139:VAL:O	61:SP:139:VAL:HG12	2.20	0.42
62:SQ:83:LYS:N	62:SQ:104:ASP:O	2.51	0.42
64:SS:125:LYS:HA	64:SS:159:THR:HG22	2.01	0.42
65:ST:30:LYS:HD3	65:ST:30:LYS:HA	1.76	0.42
65:ST:64:LYS:HG3	65:ST:83:CYS:SG	2.60	0.42
68:SW:66:ASP:HB3	68:SW:69:ARG:HB3	2.00	0.42
68:SW:97:LEU:HD23	68:SW:97:LEU:HA	1.74	0.42
68:SW:112:GLN:O	68:SW:116:LEU:HD12	2.20	0.42
69:SX:99:ARG:HB2	74:Sc:9:LEU:O	2.18	0.42
74:Sc:70:LYS:HB3	74:Sc:93:LEU:HD11	2.02	0.42
1:LA:269:G:H5'	16:LP:120:TRP:CE3	2.55	0.42
1:LA:1222:G:N2	1:LA:1285:G:HO2'	2.11	0.42
1:LA:1595:U:C2	1:LA:1596:C:C5	3.08	0.42
1:LA:1639:C:N4	35:Li:73:SER:HB2	2.35	0.42
1:LA:2573:G:H5'	28:Lb:56:LYS:O	2.19	0.42
1:LA:2597:U:H2'	1:LA:2598:G:C8	2.54	0.42
1:LA:3159:C:H4'	1:LA:3395:G:C4	2.54	0.42
4:LD:19:HIS:ND1	4:LD:190:ARG:O	2.46	0.42
5:LE:35:ASP:CG	5:LE:184:ASN:HD22	2.28	0.42
5:LE:356:LEU:HD23	5:LE:359:ILE:HD11	2.01	0.42
9:LI:121:LYS:HB2	22:LV:133:ALA:HB3	2.02	0.42
12:LL:168:SER:OG	22:LV:160:ILE:O	2.34	0.42
13:LM:93:ASP:N	13:LM:93:ASP:OD1	2.52	0.42
16:LP:73:ARG:HA	16:LP:74:PRO:HD3	1.85	0.42
21:LU:132:THR:HG23	21:LU:144:LEU:HD22	2.02	0.42
24:LX:75:PRO:HG2	24:LX:105:PRO:HD3	2.01	0.42
45:S2:804:A:C8	73:Sb:107:SER:HA	2.54	0.42
45:S2:1251:U:H1'	59:SN:135:HIS:NE2	2.34	0.42
45:S2:1292:G:H2'	45:S2:1293:U:C6	2.54	0.42
45:S2:1339:C:O2'	45:S2:1341:A:N7	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1478:G:OP1	54:SI:39:THR:OG1	2.27	0.42
45:S2:1674:C:H2'	45:S2:1675:C:H6	1.84	0.42
55:SJ:98:GLN:HG2	55:SJ:99:ILE:N	2.34	0.42
59:SN:121:CYS:H	59:SN:132:LEU:HD12	1.84	0.42
63:SR:104:VAL:HG21	63:SR:133:LYS:HG3	2.01	0.42
63:SR:230:TRP:CE2	73:Sb:68:ARG:HB3	2.54	0.42
66:SU:45:SER:OG	66:SU:46:ILE:N	2.53	0.42
66:SU:60:ILE:HB	66:SU:92:PHE:CD1	2.54	0.42
72:Sa:32:VAL:CG2	72:Sa:60:ARG:HD3	2.50	0.42
1:LA:190:U:H2'	27:La:60:ARG:HH22	1.85	0.42
1:LA:417:A:C2	3:LC:6:U:H5	2.38	0.42
1:LA:649:A:H2'	1:LA:650:C:C6	2.54	0.42
1:LA:849:C:H2'	1:LA:850:U:C6	2.54	0.42
1:LA:1718:G:H2'	1:LA:1719:G:H8	1.85	0.42
1:LA:1922:A:H2'	1:LA:1923:C:O4'	2.19	0.42
1:LA:2186:U:H5	4:LD:200:ARG:HD3	1.85	0.42
1:LA:2522:G:C6	4:LD:68:LYS:NZ	2.75	0.42
1:LA:2537:U:H5''	62:SQ:229:MET:H	1.84	0.42
1:LA:2909:U:H2'	1:LA:2910:A:O4'	2.20	0.42
1:LA:3222:U:H3	1:LA:3263:G:H1	1.67	0.42
1:LA:3349:C:N4	1:LA:3356:G:O6	2.32	0.42
4:LD:100:ASN:O	4:LD:165:VAL:HA	2.20	0.42
6:LF:138:ARG:HH21	6:LF:240:PRO:CG	2.33	0.42
9:LI:96:PRO:HB2	9:LI:99:PRO:HD2	2.01	0.42
22:LV:14:MET:HG2	22:LV:15:PHE:CD1	2.55	0.42
28:Lb:26:VAL:HG13	28:Lb:93:LYS:HA	2.01	0.42
33:Lg:32:TRP:CH2	33:Lg:52:GLN:HG2	2.54	0.42
37:Lk:75:LYS:HA	37:Lk:75:LYS:HD2	1.76	0.42
45:S2:176:C:H2'	45:S2:177:U:C6	2.54	0.42
45:S2:205:U:C2	45:S2:206:A:C8	3.07	0.42
45:S2:512:A:H5'	68:SW:164:PHE:CZ	2.55	0.42
45:S2:705:U:O2'	45:S2:706:A:N7	2.53	0.42
45:S2:752:A:P	64:SS:187:ARG:HE	2.42	0.42
45:S2:753:A:O2'	45:S2:754:A:H5'	2.19	0.42
45:S2:1202:A:N6	45:S2:1457:C:O5'	2.53	0.42
45:S2:1722:A:H4'	65:ST:75:LEU:HD21	2.00	0.42
45:S2:1770:U:H2'	45:S2:1771:U:C6	2.55	0.42
56:SK:92:ILE:HD13	56:SK:100:ILE:HG22	2.02	0.42
61:SP:179:ARG:HG2	61:SP:179:ARG:NH1	2.35	0.42
63:SR:109:GLY:O	63:SR:139:ILE:N	2.53	0.42
64:SS:136:VAL:HG13	64:SS:149:TYR:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SW:83:VAL:HG13	68:SW:85:VAL:HG22	2.01	0.42
69:SX:29:LYS:HD2	69:SX:29:LYS:HA	1.81	0.42
75:Sd:5:VAL:HG12	75:Sd:7:ILE:HG13	2.01	0.42
1:LA:553:U:H3'	1:LA:554:A:C8	2.55	0.42
1:LA:873:C:H5''	1:LA:874:U:O5'	2.19	0.42
1:LA:999:G:N3	1:LA:1002:A:N6	2.67	0.42
1:LA:1018:G:N7	1:LA:1035:G:N2	2.68	0.42
1:LA:1578:C:H2'	1:LA:1579:C:O4'	2.19	0.42
1:LA:2577:C:H2'	1:LA:2578:U:O4'	2.20	0.42
1:LA:2651:G:H5''	1:LA:2652:U:O4'	2.20	0.42
1:LA:2746:A:H2'	1:LA:2747:A:O4'	2.19	0.42
1:LA:2931:C:H2'	1:LA:2932:U:O4'	2.20	0.42
1:LA:3299:A:N1	1:LA:3315:G:N2	2.46	0.42
2:LB:9:C:OP1	22:LV:26:HIS:ND1	2.53	0.42
5:LE:295:ALA:HB2	5:LE:301:THR:O	2.20	0.42
5:LE:302:LYS:HB3	5:LE:302:LYS:HE2	1.48	0.42
6:LF:54:GLU:OE2	6:LF:54:GLU:N	2.42	0.42
6:LF:342:LYS:HD2	6:LF:342:LYS:HA	1.82	0.42
7:LG:121:GLY:HA3	7:LG:248:ARG:HH22	1.84	0.42
9:LI:121:LYS:O	9:LI:125:GLU:HG2	2.19	0.42
17:LQ:174[A]:PHE:HA	17:LQ:177[A]:LYS:HE3	2.01	0.42
21:LU:45:LEU:HA	21:LU:45:LEU:HD23	1.72	0.42
21:LU:71:LYS:HD2	21:LU:71:LYS:C	2.45	0.42
23:LW:35:LYS:O	23:LW:35:LYS:HD3	2.20	0.42
24:LX:125:LEU:HB3	24:LX:126:TRP:CD1	2.55	0.42
27:La:113:LYS:HE3	27:La:113:LYS:HB2	1.72	0.42
39:Lm:10:GLN:HA	39:Lm:13:GLU:OE1	2.19	0.42
45:S2:156:A:C2	45:S2:415:C:H1'	2.54	0.42
45:S2:248:U:N3	45:S2:250:C:O4'	2.52	0.42
45:S2:1241:G:H5'	50:SE:102:PHE:CZ	2.55	0.42
45:S2:1450:U:H2'	45:S2:1451:C:H6	1.84	0.42
45:S2:1623:C:H2'	45:S2:1624:C:H6	1.85	0.42
46:SA:178:ARG:HE	46:SA:178:ARG:HB3	1.82	0.42
47:SB:144:GLU:HB2	47:SB:218:GLU:OE1	2.20	0.42
50:SE:44:ARG:HH21	50:SE:82:ASN:HB2	1.84	0.42
53:SH:61:LEU:HD23	53:SH:65:GLU:HB3	2.02	0.42
55:SJ:22:ILE:HG22	55:SJ:118:VAL:HG22	2.02	0.42
65:ST:147:LEU:HD23	65:ST:147:LEU:H	1.85	0.42
68:SW:146:PHE:HD2	68:SW:148:VAL:HG12	1.85	0.42
69:SX:78:THR:HG21	69:SX:118:GLN:HA	2.02	0.42
74:Sc:79:ASN:HB3	74:Sc:81:LYS:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sf:53:ALA:HB1	77:Sf:62:ILE:HG13	2.02	0.42
1:LA:67:A:O2'	1:LA:315:C:O2	2.38	0.42
1:LA:419:G:N2	3:LC:4:C:C2	2.81	0.42
1:LA:428:A:H1'	34:Lh:25:PRO:HG2	2.02	0.42
1:LA:1202:A:C2	1:LA:2857:C:H5'	2.53	0.42
1:LA:1448:U:H2'	1:LA:1449:A:C8	2.54	0.42
1:LA:1584:U:H2'	1:LA:1585:C:H6	1.85	0.42
1:LA:1844:C:O2	38:LI:9:GLY:HA2	2.19	0.42
1:LA:2366:C:H5'	5:LE:259:HIS:CE1	2.55	0.42
1:LA:2673:A:O3'	13:LM:105:GLY:N	2.53	0.42
1:LA:3332:U:H2'	1:LA:3333:G:O4'	2.20	0.42
2:LB:118:A:H5''	7:LG:253:PHE:CZ	2.55	0.42
3:LC:29:U:H5''	14:LN:27:ASP:HB3	2.01	0.42
3:LC:38:U:H5'	36:Lj:78:LYS:HD3	2.02	0.42
9:LI:124:LEU:HD23	9:LI:124:LEU:HA	1.88	0.42
13:LM:17:LEU:HD13	13:LM:129:VAL:HG22	2.02	0.42
14:LN:50:PRO:HG3	36:Lj:118:ILE:HD13	2.01	0.42
16:LP:183:THR:O	16:LP:183:THR:OG1	2.34	0.42
17:LQ:3[A]:VAL:HG22	17:LQ:4[A]:GLU:OE1	2.20	0.42
21:LU:63:GLN:NE2	21:LU:65:ASN:ND2	2.48	0.42
21:LU:73:LYS:HG3	21:LU:75:PHE:CE2	2.55	0.42
21:LU:75:PHE:O	21:LU:93:GLU:HA	2.20	0.42
25:LY:1:MET:HE2	25:LY:15:PRO:CD	2.50	0.42
25:LY:52:THR:HG22	25:LY:54:LEU:H	1.85	0.42
45:S2:151:G:O6	45:S2:164:A:C6	2.73	0.42
45:S2:227:U:H2'	45:S2:228:G:C8	2.54	0.42
45:S2:511:A:O2'	45:S2:512:A:O5'	2.35	0.42
45:S2:872:G:H2'	45:S2:873:U:O4'	2.20	0.42
46:SA:37:VAL:HG12	46:SA:50:ILE:HA	2.01	0.42
48:SC:75:TYR:O	48:SC:78:GLU:HG3	2.20	0.42
51:SF:95:LYS:HD2	51:SF:95:LYS:HA	1.91	0.42
55:SJ:84:MET:HG3	58:SM:51:GLY:O	2.20	0.42
55:SJ:102:ARG:O	55:SJ:106:ILE:HG23	2.20	0.42
64:SS:120:SER:O	64:SS:164:LEU:HB3	2.19	0.42
1:LA:887:G:H2'	1:LA:888:A:C8	2.54	0.41
1:LA:2428:U:H2'	1:LA:2429:G:C8	2.55	0.41
1:LA:3269:U:H5'	1:LA:3271:G:O4'	2.19	0.41
1:LA:3324:C:OP1	32:Lf:19:ARG:NH1	2.45	0.41
6:LF:355:PHE:CZ	9:LI:70:LYS:HD3	2.55	0.41
7:LG:92:LEU:HD23	7:LG:92:LEU:HA	1.91	0.41
10:LJ:238:LEU:HB3	10:LJ:242:ALA:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LR:30:ARG:HD2	18:LR:63:PHE:CE2	2.54	0.41
22:LV:103:GLN:HA	22:LV:106:LEU:HD23	2.02	0.41
32:Lf:11:GLU:OE2	32:Lf:74:ARG:HB2	2.20	0.41
40:Ln:26:TRP:CD1	40:Ln:26:TRP:H	2.38	0.41
45:S2:1067:C:H5''	62:SQ:150:VAL:H	1.85	0.41
45:S2:1338:C:H2'	45:S2:1339:C:C6	2.55	0.41
45:S2:1424:A:H2'	45:S2:1425:A:O4'	2.19	0.41
45:S2:1584:G:H1'	45:S2:1585:U:H5	1.85	0.41
49:SD:33:ARG:O	49:SD:37:VAL:HG23	2.20	0.41
50:SE:60:LEU:HD13	50:SE:89:MET:HB3	2.01	0.41
53:SH:26:ILE:HG13	53:SH:31:ALA:HB2	2.01	0.41
62:SQ:154:SER:O	62:SQ:154:SER:OG	2.38	0.41
63:SR:121:VAL:O	63:SR:125:ILE:HG12	2.20	0.41
66:SU:85:PHE:HB3	66:SU:88:ARG:NH1	2.35	0.41
68:SW:77:ILE:HD11	68:SW:93:LEU:HB2	2.02	0.41
79:Ta:31:G:O6	79:Ta:41:C:N4	2.38	0.41
1:LA:598:A:H2'	1:LA:599:C:C6	2.56	0.41
1:LA:745:C:H2'	1:LA:746:A:C8	2.56	0.41
1:LA:1747:G:H5''	39:Lm:42:LYS:HE2	2.02	0.41
1:LA:2389:C:H2'	1:LA:2390:A:H8	1.84	0.41
1:LA:2876:C:H2'	1:LA:2877:G:O4'	2.21	0.41
1:LA:2927:C:H2'	1:LA:2928:C:C6	2.55	0.41
1:LA:3192:U:H2'	1:LA:3193:C:C6	2.55	0.41
1:LA:3194:C:H2'	1:LA:3195:U:H5''	2.01	0.41
1:LA:3356:G:H2'	1:LA:3357:U:O4'	2.20	0.41
1:LA:3358:U:H2'	1:LA:3359:A:C8	2.53	0.41
10:LJ:41:GLN:OE1	10:LJ:44:ARG:NH2	2.53	0.41
11:LK:21:LYS:O	11:LK:22:SER:C	2.63	0.41
28:Lb:7:ALA:HB2	28:Lb:28:PRO:HD3	2.01	0.41
45:S2:323:A:H2'	45:S2:324:U:H6	1.85	0.41
45:S2:404:G:H2'	45:S2:405:C:H6	1.84	0.41
45:S2:556:A:H5'	78:Sg:56:MET:HE3	2.00	0.41
45:S2:794:U:H3'	45:S2:795:U:H6	1.84	0.41
45:S2:1609:U:H2'	45:S2:1610:G:O4'	2.20	0.41
46:SA:48:VAL:HB	46:SA:86:LEU:HD22	2.02	0.41
54:SI:8:ASP:C	54:SI:8:ASP:OD1	2.62	0.41
57:SL:12:VAL:HA	57:SL:30:VAL:HG12	2.02	0.41
60:SO:106:HIS:CE1	60:SO:126:SER:HB3	2.54	0.41
62:SQ:30:PHE:CD2	62:SQ:94:LYS:HA	2.55	0.41
62:SQ:96:LEU:HD12	62:SQ:96:LEU:O	2.20	0.41
63:SR:39:THR:HG22	63:SR:41:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SS:256:ARG:NH2	68:SW:78:ARG:NH2	2.68	0.41
68:SW:118:LEU:HD23	68:SW:158:PHE:CE1	2.55	0.41
71:SZ:24:ASN:C	71:SZ:55:SER:HB3	2.44	0.41
80:Tb:36:U:O2'	80:Tb:37:C:H6	2.02	0.41
1:LA:27:C:H42	1:LA:57:A:N6	2.18	0.41
1:LA:308:A:H2'	1:LA:309:U:C6	2.56	0.41
1:LA:396:A:O2'	1:LA:399:A:OP1	2.33	0.41
1:LA:585:A:H2'	1:LA:586:C:C6	2.55	0.41
1:LA:973:A:H2'	1:LA:974:G:O4'	2.21	0.41
1:LA:1381:A:H2'	1:LA:1382:G:H8	1.86	0.41
1:LA:2218:G:H2'	1:LA:2219:A:C8	2.54	0.41
1:LA:2450:G:C2	1:LA:2496:C:C2	3.08	0.41
1:LA:2562:A:H4'	28:Lb:52:LYS:HE2	2.02	0.41
1:LA:2812:C:H2'	1:LA:2813:A:C8	2.56	0.41
1:LA:2894:C:H2'	1:LA:2895:G:H8	1.86	0.41
1:LA:3310:A:C2	1:LA:3311:C:H1'	2.55	0.41
3:LC:27:U:H2'	3:LC:28:C:H6	1.84	0.41
4:LD:36:GLU:HG2	4:LD:163:ARG:NH1	2.35	0.41
4:LD:168:VAL:HG13	44:Lr:79:VAL:HG21	2.03	0.41
12:LL:199:PHE:N	12:LL:199:PHE:CD1	2.87	0.41
14:LN:77:LEU:HA	14:LN:80:VAL:HG22	2.02	0.41
16:LP:34:ASN:O	16:LP:37:HIS:ND1	2.51	0.41
24:LX:90:GLY:O	25:LY:16:GLY:HA2	2.21	0.41
32:Lf:13:THR:OG1	32:Lf:72:ARG:NH1	2.50	0.41
32:Lf:16:LEU:HD13	32:Lf:16:LEU:HA	1.90	0.41
33:Lg:40:SER:HB3	33:Lg:43:ARG:HB3	2.02	0.41
36:Lj:12:LYS:HE3	36:Lj:16:GLN:HB3	2.01	0.41
44:Lr:36:ARG:HD2	44:Lr:46:THR:HA	2.02	0.41
45:S2:97:C:O2'	45:S2:426:G:H5'	2.20	0.41
45:S2:370:A:H2'	45:S2:371:G:C8	2.55	0.41
45:S2:959:U:OP2	77:Sf:20:LYS:NZ	2.51	0.41
45:S2:1429:G:H2'	45:S2:1430:U:C6	2.56	0.41
46:SA:46:THR:HG23	46:SA:84:ILE:HA	2.01	0.41
60:SO:132:LYS:HG2	60:SO:143:THR:HG22	2.02	0.41
69:SX:58:CYS:SG	69:SX:60:PHE:N	2.87	0.41
71:SZ:42:VAL:HA	71:SZ:46:MET:SD	2.61	0.41
75:Sd:41:ARG:NH2	75:Sd:94:TYR:CD1	2.89	0.41
1:LA:30:G:H5'	16:LP:172:ARG:HG2	2.03	0.41
1:LA:115:A:O2'	16:LP:5:LYS:HD3	2.21	0.41
1:LA:207:U:H2'	1:LA:208:C:C6	2.55	0.41
1:LA:247:C:H3'	1:LA:248:U:H4'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3096:C:H2'	1:LA:3097:C:C6	2.55	0.41
2:LB:16:U:H2'	2:LB:17:A:C8	2.56	0.41
2:LB:121:U:OP2	7:LG:265:TYR:OH	2.38	0.41
4:LD:20:THR:HA	4:LD:23:ARG:HG3	2.03	0.41
4:LD:57:PRO:HB3	44:Lr:54:ILE:HD12	2.02	0.41
7:LG:103:LEU:O	7:LG:107:ARG:HG2	2.20	0.41
7:LG:148:ILE:HD12	7:LG:151:GLN:O	2.20	0.41
7:LG:195:LEU:O	7:LG:199:ILE:HG13	2.20	0.41
13:LM:172:LEU:HD23	13:LM:172:LEU:HA	1.89	0.41
15:LO:109:ARG:HD3	17:LQ:199[A]:TYR:CD1	2.55	0.41
17:LQ:113[A]:ASP:OD1	17:LQ:113[A]:ASP:N	2.53	0.41
33:Lg:80:LYS:HB3	33:Lg:80:LYS:HE3	1.82	0.41
45:S2:162:A:H2'	45:S2:163:G:N3	2.35	0.41
45:S2:381:C:O2'	45:S2:755:A:N1	2.47	0.41
45:S2:406:U:H2'	45:S2:407:A:C8	2.56	0.41
45:S2:624:G:OP1	45:S2:624:G:C8	2.74	0.41
45:S2:1524:A:H2'	45:S2:1525:A:C8	2.56	0.41
45:S2:1626:U:H2'	45:S2:1627:U:C6	2.55	0.41
45:S2:1794:A:H1'	76:Se:79:ILE:HD13	2.01	0.41
46:SA:64:ARG:O	46:SA:68:GLU:HG3	2.21	0.41
47:SB:83:ARG:HA	47:SB:83:ARG:HD2	1.91	0.41
51:SF:41:PRO:C	51:SF:43:ILE:H	2.29	0.41
60:SO:172:ALA:HB2	60:SO:202:LEU:HG	2.02	0.41
61:SP:31:VAL:HG23	61:SP:150:ASP:HA	2.03	0.41
61:SP:182:LEU:HB3	61:SP:188:LEU:HB2	2.01	0.41
66:SU:32:PRO:HA	66:SU:35:LYS:HE3	2.01	0.41
66:SU:91:ILE:HD12	66:SU:92:PHE:H	1.86	0.41
70:SY:40:TYR:HE2	70:SY:53:LEU:HB2	1.85	0.41
74:Sc:88:PRO:HD3	74:Sc:124:VAL:HG22	2.02	0.41
78:Sg:49:LEU:HD12	78:Sg:49:LEU:HA	1.87	0.41
1:LA:351:A:N6	40:Ln:37:TYR:O	2.54	0.41
1:LA:2148:U:H2'	1:LA:2149:A:C8	2.54	0.41
1:LA:2562:A:H1'	10:LJ:30:THR:HB	2.03	0.41
2:LB:8:G:OP1	22:LV:27:LEU:HD23	2.20	0.41
10:LJ:71:VAL:HG22	10:LJ:234:GLY:C	2.46	0.41
13:LM:155:THR:HG23	13:LM:158:ASP:H	1.86	0.41
21:LU:60:SER:OG	21:LU:62:ASN:OD1	2.39	0.41
25:LY:13:ILE:HG12	25:LY:32:GLN:HA	2.02	0.41
25:LY:33:ASN:HD21	25:LY:35:LYS:HB3	1.86	0.41
27:La:55:GLU:HB3	27:La:108:LYS:HB3	2.02	0.41
28:Lb:23:VAL:HB	28:Lb:43:VAL:HB	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Lb:26:VAL:HG11	28:Lb:96:VAL:HG22	2.00	0.41
29:Lc:94:ALA:HA	29:Lc:121:VAL:HG13	2.01	0.41
33:Lg:55:ILE:HD12	33:Lg:55:ILE:HA	1.82	0.41
36:Lj:14:LYS:HE2	36:Lj:14:LYS:HB3	1.84	0.41
41:Lo:128:LYS:HE2	41:Lo:128:LYS:HB2	1.85	0.41
45:S2:435:C:OP2	74:Sc:50:LYS:HB2	2.20	0.41
45:S2:525:A:H4'	75:Sd:89:TYR:HB2	2.01	0.41
45:S2:599:A:H2'	45:S2:600:U:C6	2.56	0.41
45:S2:1077:C:H2'	45:S2:1078:C:H6	1.86	0.41
45:S2:1512:G:H2'	45:S2:1513:G:H8	1.86	0.41
45:S2:1776:A:H2'	45:S2:1777:G:H8	1.84	0.41
47:SB:30:PRO:HB2	47:SB:32:GLU:OE2	2.21	0.41
47:SB:184:PHE:HE1	47:SB:185:ARG:HE	1.67	0.41
56:SK:84:GLU:OE2	56:SK:94:LYS:NZ	2.53	0.41
59:SN:117:LEU:HD23	59:SN:117:LEU:HA	1.93	0.41
60:SO:178:VAL:HB	60:SO:192:PHE:HB2	2.03	0.41
60:SO:227:ALA:O	60:SO:229:LYS:HG2	2.20	0.41
61:SP:120:LEU:HD12	61:SP:142:PRO:O	2.20	0.41
63:SR:137:ILE:HG22	72:Sa:27:ASP:OD2	2.20	0.41
71:SZ:20:TYR:C	71:SZ:20:TYR:HD1	2.28	0.41
77:Sf:19:HIS:HE1	77:Sf:21:LEU:HD12	1.85	0.41
1:LA:181:U:H2'	1:LA:182:U:O4'	2.21	0.41
1:LA:208:C:H2'	1:LA:209:A:O4'	2.20	0.41
1:LA:837:A:H5'	44:Lr:9:GLY:C	2.46	0.41
1:LA:1520:G:O2'	1:LA:1603:A:N1	2.45	0.41
1:LA:1718:G:H2'	1:LA:1719:G:C8	2.55	0.41
1:LA:2147:A:OP2	4:LD:200:ARG:NH2	2.54	0.41
1:LA:2508:U:H2'	1:LA:2509:U:H6	1.84	0.41
1:LA:2760:C:N3	43:Lq:63:LYS:HE3	2.36	0.41
1:LA:3137:C:H5''	5:LE:276:THR:HB	2.03	0.41
1:LA:3325:G:H2'	1:LA:3326:G:H8	1.86	0.41
3:LC:39:G:H1'	3:LC:104:A:N6	2.35	0.41
4:LD:36:GLU:HG2	4:LD:163:ARG:HH11	1.85	0.41
6:LF:326:ARG:O	9:LI:41:ARG:NH1	2.53	0.41
8:LH:150:LYS:HD3	8:LH:156:LYS:NZ	2.36	0.41
9:LI:229:PHE:CD1	9:LI:229:PHE:C	2.99	0.41
11:LK:7:GLU:HA	11:LK:55:VAL:O	2.19	0.41
12:LL:52:LEU:HB3	12:LL:136:PHE:HB2	2.02	0.41
15:LO:3:THR:HG23	15:LO:4:ASP:N	2.35	0.41
15:LO:70:PHE:CE2	15:LO:72:LEU:HD13	2.56	0.41
17:LQ:62[A]:THR:H	17:LQ:69[A]:GLY:HA3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LR:84:PRO:HB2	18:LR:87:SER:HB2	2.03	0.41
27:La:70:ILE:CD1	27:La:82:VAL:HG22	2.51	0.41
28:Lb:42:LEU:HD13	28:Lb:101:PHE:CE1	2.52	0.41
29:Lc:7:LYS:HD3	29:Lc:7:LYS:HA	1.88	0.41
32:Lf:97:LEU:HD12	32:Lf:97:LEU:O	2.21	0.41
33:Lg:54:LYS:HD3	33:Lg:55:ILE:N	2.34	0.41
34:Lh:59:VAL:HG23	34:Lh:60:ARG:H	1.85	0.41
38:Ll:25:ARG:HH12	40:Ln:50:ASN:HB3	1.86	0.41
45:S2:1475:A:C6	45:S2:1476:C:C4	3.08	0.41
45:S2:1498:G:H2'	45:S2:1499:G:C8	2.55	0.41
47:SB:26:ALA:HB3	51:SF:28:LEU:HB3	2.03	0.41
60:SO:74:THR:HG21	60:SO:79:TYR:HD2	1.86	0.41
63:SR:41:LEU:HD11	63:SR:56:ILE:HD11	2.01	0.41
63:SR:200:SER:OG	63:SR:204:THR:HG21	2.20	0.41
63:SR:235:LEU:HG	72:Sa:33:GLN:NE2	2.35	0.41
64:SS:94:ALA:HB3	75:Sd:17:LEU:HD12	2.02	0.41
66:SU:33:GLU:H	66:SU:33:GLU:CD	2.28	0.41
67:SV:20:GLN:NE2	67:SV:22:ARG:O	2.53	0.41
68:SW:45:ILE:HG22	68:SW:101:VAL:HG22	2.03	0.41
73:Sb:32:LYS:HB2	73:Sb:32:LYS:HE2	1.88	0.41
73:Sb:54:ASP:OD1	73:Sb:54:ASP:C	2.64	0.41
75:Sd:41:ARG:HB2	75:Sd:55:VAL:HG13	2.02	0.41
1:LA:268:A:N1	1:LA:295:A:H5'	2.36	0.41
1:LA:419:G:N1	3:LC:4:C:N3	2.67	0.41
1:LA:440:A:C6	1:LA:441:U:H1'	2.55	0.41
1:LA:642:U:OP1	29:Lc:22:ILE:HG23	2.20	0.41
1:LA:691:A:N1	3:LC:28:C:O2'	2.48	0.41
1:LA:704:U:O2	29:Lc:77:LYS:NZ	2.54	0.41
1:LA:1047:A:H2'	1:LA:1048:A:C8	2.56	0.41
1:LA:1856:C:H2'	1:LA:1857:C:C6	2.55	0.41
1:LA:2553:U:H3'	1:LA:2554:A:H5''	2.02	0.41
4:LD:132:ASN:ND2	4:LD:151:PRO:HB3	2.36	0.41
5:LE:123:TYR:CE1	5:LE:124:LYS:HG2	2.56	0.41
5:LE:145:GLU:HG3	5:LE:146:ARG:NH2	2.35	0.41
9:LI:59:GLU:O	9:LI:63:ILE:HG13	2.21	0.41
11:LK:152:GLU:O	11:LK:156:GLN:HB2	2.21	0.41
15:LO:50:LYS:HD2	15:LO:85:TRP:CD1	2.55	0.41
16:LP:47:LYS:HA	16:LP:47:LYS:HD2	1.87	0.41
18:LR:22:LEU:HD12	18:LR:146:ILE:HD12	2.03	0.41
18:LR:22:LEU:HB3	18:LR:90:PHE:CE1	2.56	0.41
21:LU:38:LYS:HG3	21:LU:61:ILE:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LX:54:LEU:HA	24:LX:54:LEU:HD12	1.85	0.41
31:Le:14:LEU:HA	31:Le:14:LEU:HD12	1.87	0.41
32:Lf:20:LEU:HD11	32:Lf:32:ALA:HB2	2.03	0.41
40:Ln:9:ILE:HG23	40:Ln:51:ILE:HD11	2.02	0.41
45:S2:151:G:H2'	45:S2:152:U:C6	2.56	0.41
45:S2:183:U:H2'	45:S2:184:C:H6	1.86	0.41
45:S2:851:U:H1'	45:S2:853:G:O6	2.21	0.41
45:S2:1358:G:H2'	45:S2:1359:C:C6	2.55	0.41
49:SD:98:GLY:HA3	49:SD:117:GLY:HA2	2.02	0.41
51:SF:41:PRO:HG2	51:SF:44:LEU:HB2	2.03	0.41
53:SH:28:ILE:HD13	53:SH:61:LEU:HD11	2.02	0.41
61:SP:16:LEU:HD13	61:SP:172:LEU:HD11	2.02	0.41
64:SS:242:LYS:HD3	64:SS:242:LYS:N	2.36	0.41
71:SZ:128:LYS:HE3	76:Se:27:SER:HB3	2.03	0.41
72:Sa:21:ASN:HB3	73:Sb:67:GLY:HA3	2.03	0.41
1:LA:406:G:N3	3:LC:16:G:C2	2.89	0.41
1:LA:412:G:OP1	18:LR:62:ARG:NH1	2.53	0.41
1:LA:542:G:O6	1:LA:549:U:O2	2.38	0.41
1:LA:698:U:H2'	1:LA:699:A:O4'	2.20	0.41
1:LA:712:G:H2'	1:LA:713:U:C6	2.56	0.41
1:LA:1110:U:OP1	19:LS:164:ARG:NH2	2.44	0.41
1:LA:1185:C:OP1	15:LO:42:LYS:HD3	2.21	0.41
1:LA:1667:A:H2'	1:LA:1668:G:H8	1.84	0.41
1:LA:2709:C:H2'	1:LA:2710:C:C6	2.56	0.41
1:LA:2987:A:O2'	5:LE:259:HIS:HB3	2.20	0.41
1:LA:3320:A:H2'	1:LA:3321:C:C6	2.56	0.41
3:LC:145:U:H2'	3:LC:146:U:C6	2.56	0.41
5:LE:163:HIS:HA	5:LE:177:HIS:O	2.21	0.41
6:LF:23:PRO:HD2	6:LF:26:PHE:HD2	1.84	0.41
6:LF:138:ARG:HH21	6:LF:240:PRO:HG2	1.86	0.41
12:LL:89:VAL:HG13	12:LL:136:PHE:HE1	1.84	0.41
12:LL:199:PHE:N	12:LL:199:PHE:HD1	2.19	0.41
13:LM:45:PRO:HB3	13:LM:69:VAL:HB	2.02	0.41
14:LN:90:ALA:HB1	14:LN:95:ILE:HB	2.02	0.41
14:LN:126:PHE:CD2	36:Lj:115:LYS:HG2	2.55	0.41
17:LQ:27[A]:LEU:CD1	17:LQ:102[A]:LEU:HB2	2.50	0.41
18:LR:116:HIS:HB3	18:LR:149:VAL:HB	2.02	0.41
27:La:39:LEU:HD22	27:La:43:TYR:HE2	1.85	0.41
33:Lg:83:GLU:O	33:Lg:86:THR:OG1	2.35	0.41
33:Lg:121:ASN:N	33:Lg:122:PRO:HD3	2.36	0.41
35:Li:41:ARG:NH2	35:Li:51:LEU:O	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:L1:64:MET:O	38:L1:68:LYS:HG2	2.20	0.41
45:S2:164:A:H2'	45:S2:165:G:C8	2.53	0.41
45:S2:905:A:H5'	71:SZ:52:ARG:HB3	2.03	0.41
45:S2:963:A:O2'	45:S2:964:U:P	2.79	0.41
45:S2:1437:U:H2'	45:S2:1438:G:H8	1.84	0.41
45:S2:1478:G:H2'	45:S2:1479:A:H8	1.85	0.41
46:SA:29:LEU:HD13	46:SA:58:VAL:HG21	2.01	0.41
52:SG:118:PRO:HD2	61:SP:15:GLN:HE21	1.86	0.41
60:SO:144:LEU:HB3	60:SO:181:TRP:CZ3	2.55	0.41
61:SP:7:PHE:O	61:SP:54:TRP:NE1	2.42	0.41
63:SR:140:ARG:HB3	63:SR:221:THR:HG22	2.01	0.41
68:SW:114:TYR:HD2	68:SW:115:LYS:NZ	2.17	0.41
68:SW:114:TYR:HD2	68:SW:115:LYS:HZ3	1.67	0.41
73:Sb:47:ILE:HG22	73:Sb:65:LEU:HD23	2.02	0.41
1:LA:353:G:O6	38:L1:55:ARG:NH2	2.52	0.41
1:LA:438:A:H2'	1:LA:439:C:O4'	2.21	0.41
1:LA:979:U:H4'	1:LA:980:A:O4'	2.21	0.41
1:LA:1436:U:O5'	1:LA:1437:C:H5''	2.21	0.41
1:LA:1560:G:H2'	1:LA:1561:G:C8	2.56	0.41
1:LA:1766:G:H2'	1:LA:1767:C:C6	2.56	0.41
1:LA:1912:U:H2'	1:LA:1913:A:O4'	2.20	0.41
1:LA:2424:A:H2'	1:LA:2425:G:O4'	2.21	0.41
1:LA:2552:C:C5	31:Le:53:LYS:HE2	2.56	0.41
1:LA:2566:C:H2'	1:LA:2567:C:H6	1.85	0.41
1:LA:2573:G:H2'	1:LA:2574:G:O4'	2.20	0.41
1:LA:3065:G:H2'	1:LA:3066:U:C6	2.56	0.41
1:LA:3192:U:H2'	1:LA:3193:C:H6	1.84	0.41
2:LB:62:U:O3'	7:LG:285:ARG:NH2	2.50	0.41
3:LC:27:U:H2'	3:LC:28:C:C6	2.56	0.41
3:LC:141:C:H2'	3:LC:142:C:H6	1.85	0.41
4:LD:51:ASP:HB3	4:LD:54:ARG:HB3	2.02	0.41
5:LE:232:ARG:HA	5:LE:270:ARG:HD3	2.03	0.41
8:LH:46:ARG:HD3	8:LH:47:PHE:CZ	2.56	0.41
8:LH:172:HIS:HD2	34:Lh:44:TYR:OH	2.04	0.41
13:LM:41:SER:OG	13:LM:43:GLN:HG2	2.20	0.41
14:LN:42:ARG:O	14:LN:46:ILE:HG12	2.21	0.41
18:LR:42:THR:O	18:LR:46:LYS:CE	2.62	0.41
20:LT:85:ARG:CB	20:LT:85:ARG:HH11	2.34	0.41
21:LU:26:ARG:HG2	21:LU:27:MET:N	2.36	0.41
21:LU:80:ARG:NH2	21:LU:87:THR:HG21	2.33	0.41
21:LU:132:THR:C	21:LU:134:ASP:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Lb:54:THR:H	28:Lb:57:HIS:CE1	2.39	0.41
28:Lb:102:GLU:N	28:Lb:107:ARG:NH2	2.30	0.41
28:Lb:116:LYS:O	28:Lb:120:GLU:HG2	2.21	0.41
32:Lf:16:LEU:HD13	32:Lf:19:ARG:HB2	2.03	0.41
33:Lg:90:LYS:HB2	33:Lg:90:LYS:HE2	1.74	0.41
34:Lh:16:TYR:OH	34:Lh:89:LEU:O	2.26	0.41
36:Lj:19:SER:O	36:Lj:23:ASP:OD1	2.39	0.41
45:S2:14:C:H6	63:SR:203:LYS:NZ	2.18	0.41
45:S2:640:U:C4	66:SU:118:LEU:HD21	2.56	0.41
45:S2:829:A:HO2'	45:S2:830:U:P	2.44	0.41
45:S2:1125:A:C5	45:S2:1126:G:H1'	2.56	0.41
47:SB:34:GLN:HG2	51:SF:57:LEU:HD12	2.02	0.41
47:SB:188:LYS:HG2	47:SB:192:GLU:HG3	2.03	0.41
47:SB:200:ASN:HD22	47:SB:200:ASN:N	2.19	0.41
48:SC:10:LYS:HA	48:SC:13:GLN:HG2	2.02	0.41
48:SC:70:GLU:O	48:SC:73:VAL:HG12	2.21	0.41
50:SE:24:LYS:O	50:SE:28:MET:HB3	2.20	0.41
50:SE:33:PHE:CZ	50:SE:112:LEU:HB3	2.56	0.41
54:SI:22:LEU:HD22	54:SI:28:LEU:HD21	2.02	0.41
57:SL:31:GLU:OE2	57:SL:37:SER:N	2.54	0.41
60:SO:128:ASP:O	60:SO:130:THR:HG23	2.21	0.41
60:SO:180:ALA:HB3	60:SO:190:ALA:HB3	2.03	0.41
64:SS:86:PHE:CD2	64:SS:87:MET:HG2	2.55	0.41
65:ST:67:VAL:HG23	65:ST:99:GLY:HA2	2.02	0.41
68:SW:123:HIS:CE1	78:Sg:37:ARG:HD3	2.56	0.41
68:SW:136:VAL:HG13	68:SW:152:SER:OG	2.21	0.41
69:SX:99:ARG:HD3	74:Sc:8:GLY:O	2.21	0.41
71:SZ:47:LYS:HA	71:SZ:47:LYS:HD2	1.89	0.41
74:Sc:70:LYS:HD3	74:Sc:93:LEU:HD11	2.01	0.41
80:Tb:1:C:N3	80:Tb:74:A:H2'	2.36	0.41
1:LA:663:C:H2'	1:LA:664:U:C6	2.56	0.41
1:LA:1495:U:C5	1:LA:1835:A:N1	2.89	0.41
1:LA:3227:A:O2'	15:LO:133:LYS:NZ	2.54	0.41
1:LA:3387:U:H2'	1:LA:3388:C:C6	2.56	0.41
6:LF:234:ASN:HB3	6:LF:237:GLN:HG3	2.03	0.41
9:LI:86:VAL:O	9:LI:114:GLY:HA2	2.21	0.41
10:LJ:200:LEU:HD23	10:LJ:200:LEU:HA	1.92	0.41
11:LK:87:LYS:HE3	11:LK:187:ILE:HA	2.02	0.41
12:LL:144:ASN:O	12:LL:148:VAL:HG23	2.21	0.41
16:LP:24:ARG:O	16:LP:27:VAL:HG12	2.21	0.41
19:LS:161:LYS:HD2	19:LS:161:LYS:HA	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LU:27:MET:HE3	21:LU:27:MET:HB2	1.84	0.41
22:LV:44:ALA:HB2	22:LV:53:PRO:HG2	2.03	0.41
38:LI:39:TYR:CG	38:LI:40:PRO:HA	2.56	0.41
39:Lm:13:GLU:CG	39:Lm:16:ARG:NH2	2.84	0.41
45:S2:918:U:H2'	45:S2:919:A:H8	1.81	0.41
45:S2:1374:C:H2'	45:S2:1375:A:C8	2.56	0.41
49:SD:131:ASP:OD1	49:SD:131:ASP:N	2.52	0.41
55:SJ:64:LYS:HA	55:SJ:82:TYR:O	2.21	0.41
55:SJ:88:LYS:O	55:SJ:89:ARG:HD3	2.20	0.41
56:SK:61:SER:H	56:SK:64:VAL:HB	1.85	0.41
60:SO:27:ALA:HA	60:SO:296:ALA:HB2	2.02	0.41
60:SO:255:ALA:HB1	60:SO:289:ALA:HB3	2.02	0.41
68:SW:96:VAL:HA	68:SW:99:LEU:CD2	2.51	0.41
69:SX:46:LYS:O	69:SX:50:GLU:HG3	2.21	0.41
70:SY:94:LYS:O	70:SY:98:VAL:HG23	2.20	0.41
73:Sb:81:VAL:CG2	73:Sb:86:ILE:HD13	2.50	0.41
78:Sg:29:LYS:HB3	78:Sg:29:LYS:HE3	1.86	0.41
1:LA:22:G:H1'	3:LC:104:A:N3	2.35	0.40
1:LA:184:U:H3	1:LA:232:G:H1	1.68	0.40
1:LA:201:A:H2'	1:LA:202:G:H8	1.86	0.40
1:LA:591:G:H1'	8:LH:19:LYS:HG3	2.02	0.40
1:LA:987:U:H5'	9:LI:125:GLU:HG3	2.04	0.40
1:LA:992:A:O2'	1:LA:993:G:H5'	2.21	0.40
1:LA:1097:G:O6	22:LV:116:ARG:NH1	2.45	0.40
1:LA:1326:A:O2'	34:Lh:77:ASN:OD1	2.22	0.40
1:LA:1563:C:H2'	1:LA:1564:U:C6	2.56	0.40
1:LA:1640:G:O6	35:Li:73:SER:OG	2.31	0.40
1:LA:1799:A:H2'	1:LA:1800:A:H8	1.86	0.40
1:LA:2668:U:H2'	1:LA:2669:G:H8	1.86	0.40
1:LA:2673:A:H4'	13:LM:103:GLY:C	2.46	0.40
1:LA:2812:C:H2'	1:LA:2813:A:H8	1.86	0.40
1:LA:3232:G:C6	1:LA:3256:G:C6	3.08	0.40
6:LF:327:LEU:HD23	6:LF:327:LEU:HA	1.89	0.40
7:LG:61:ILE:HG12	7:LG:79:TYR:CE2	2.56	0.40
7:LG:271:LYS:HE3	7:LG:271:LYS:HB3	1.75	0.40
10:LJ:86:THR:HA	10:LJ:89:GLU:HG2	2.03	0.40
12:LL:12:GLN:HA	12:LL:59:GLN:NE2	2.37	0.40
16:LP:36:ILE:HG21	16:LP:109:ARG:HD2	2.02	0.40
16:LP:97:SER:O	16:LP:101:THR:HG22	2.21	0.40
35:Li:31:ARG:NH1	35:Li:31:ARG:HG3	2.35	0.40
39:Lm:14:LEU:HD23	39:Lm:14:LEU:HA	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Lr:28:LYS:NZ	44:Lr:32:GLN:HE22	2.18	0.40
45:S2:36:C:H2'	45:S2:37:U:H6	1.85	0.40
45:S2:902:G:O2'	45:S2:1008:G:H4'	2.21	0.40
45:S2:1042:G:H22	45:S2:1076:A:H2	1.69	0.40
45:S2:1344:A:H4'	45:S2:1345:A:OP1	2.21	0.40
45:S2:1548:G:H5'	53:SH:89:GLN:O	2.22	0.40
46:SA:54:ARG:HB3	46:SA:57:ASP:OD2	2.21	0.40
46:SA:70:THR:OG1	46:SA:86:LEU:HB2	2.21	0.40
47:SB:130:ILE:O	47:SB:134:VAL:HG12	2.20	0.40
48:SC:46:LEU:HB3	48:SC:66:TYR:CE1	2.56	0.40
50:SE:25:LEU:CD2	50:SE:28:MET:HE1	2.46	0.40
52:SG:117:LEU:O	52:SG:119:LEU:HD12	2.20	0.40
66:SU:39:ARG:N	66:SU:40:PRO:HD2	2.37	0.40
66:SU:162:ILE:HD12	66:SU:162:ILE:O	2.21	0.40
73:Sb:23:ARG:HA	73:Sb:23:ARG:HD2	1.89	0.40
73:Sb:28:ARG:HA	73:Sb:29:PRO:HA	1.90	0.40
1:LA:184:U:H2'	1:LA:185:C:C6	2.57	0.40
1:LA:385:A:H2'	1:LA:386:A:C8	2.56	0.40
1:LA:515:C:H2'	1:LA:516:A:H8	1.85	0.40
1:LA:620:U:O2'	1:LA:621:A:O5'	2.34	0.40
1:LA:1083:G:H2'	1:LA:1084:A:C8	2.56	0.40
1:LA:1448:U:OP1	18:LR:67:ILE:HG22	2.21	0.40
1:LA:1868:G:H2'	1:LA:1869:C:C6	2.56	0.40
1:LA:2527:G:H2'	1:LA:2528:G:O4'	2.22	0.40
1:LA:2724:U:OP2	1:LA:2726:C:N4	2.53	0.40
1:LA:2742:C:H2'	1:LA:2743:A:H8	1.86	0.40
1:LA:3037:U:H5''	5:LE:348:ARG:HD2	2.03	0.40
1:LA:3232:G:H2'	1:LA:3233:C:H6	1.86	0.40
2:LB:38:U:N3	2:LB:41:G:OP2	2.45	0.40
3:LC:88:A:H3'	3:LC:89:A:C8	2.56	0.40
3:LC:131:A:H5''	26:LZ:93:TYR:CE2	2.56	0.40
4:LD:60:LYS:HD2	4:LD:75:ILE:HG13	2.03	0.40
4:LD:111:THR:HB	4:LD:136:ILE:HG13	2.03	0.40
5:LE:346:THR:C	5:LE:348:ARG:H	2.29	0.40
6:LF:144:LYS:HB3	6:LF:144:LYS:HZ1	1.87	0.40
6:LF:154:THR:HG23	6:LF:157:GLU:OE1	2.21	0.40
10:LJ:105:LYS:HZ2	10:LJ:109:LEU:HD21	1.87	0.40
10:LJ:172:LYS:HB2	10:LJ:172:LYS:HE3	1.88	0.40
11:LK:37:ASN:ND2	11:LK:39:LYS:HG3	2.35	0.40
12:LL:51:HIS:CD2	12:LL:168:SER:HB2	2.56	0.40
26:LZ:109:LYS:HG3	26:LZ:110:VAL:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:12:U:H2'	45:S2:13:C:H6	1.85	0.40
45:S2:768:C:C2	68:SW:143:ILE:HG13	2.57	0.40
45:S2:861:U:O2'	73:Sb:56:HIS:O	2.39	0.40
45:S2:1445:G:N1	59:SN:85:TYR:HB3	2.37	0.40
49:SD:30:VAL:HG21	49:SD:132:GLU:HG3	2.03	0.40
49:SD:130:THR:OG1	49:SD:131:ASP:N	2.54	0.40
53:SH:41:ARG:HE	54:SI:46:PRO:HD3	1.86	0.40
56:SK:42:LEU:HD23	56:SK:42:LEU:H	1.86	0.40
57:SL:27:GLN:HE22	57:SL:64:ARG:C	2.29	0.40
60:SO:179:LYS:HG2	60:SO:188:ILE:HD13	2.02	0.40
60:SO:281:TYR:N	60:SO:281:TYR:CD1	2.89	0.40
63:SR:169:LEU:HD22	63:SR:198:THR:HG22	2.03	0.40
67:SV:159:GLN:HE21	67:SV:165:LEU:HG	1.86	0.40
68:SW:107:ARG:HD2	68:SW:107:ARG:HA	1.90	0.40
74:Sc:73:ARG:HH21	74:Sc:82:LYS:HB2	1.86	0.40
80:Tb:1:C:H5''	80:Tb:2:G:OP1	2.21	0.40
1:LA:741:U:H2'	1:LA:742:G:O4'	2.20	0.40
1:LA:877:C:O2'	1:LA:880:G:O2'	2.23	0.40
1:LA:985:U:H2'	1:LA:986:U:H6	1.86	0.40
1:LA:1139:G:O6	30:Ld:10:HIS:NE2	2.51	0.40
1:LA:2223:A:H2'	1:LA:2224:A:C8	2.56	0.40
1:LA:2255:A:H2	1:LA:2260:U:H3	1.65	0.40
1:LA:2630:C:H4'	1:LA:2758:A:O4'	2.22	0.40
1:LA:2672:G:H5''	13:LM:94:ARG:O	2.21	0.40
1:LA:3313:U:H5'	5:LE:175:LYS:HD3	2.03	0.40
7:LG:22:ARG:HH21	7:LG:27:LYS:HB3	1.86	0.40
11:LK:1:MET:HG3	21:LU:139:TYR:HB3	2.03	0.40
14:LN:119:TYR:CZ	14:LN:123:ILE:HG21	2.57	0.40
16:LP:70:ASN:HB3	16:LP:92:LEU:O	2.21	0.40
22:LV:136:ARG:HB3	22:LV:139:ARG:HH22	1.86	0.40
31:Le:26:GLY:O	31:Le:30:THR:OG1	2.31	0.40
36:Lj:38:ARG:NH1	36:Lj:38:ARG:HB2	2.36	0.40
45:S2:106:U:P	67:SV:8:ARG:HH22	2.44	0.40
45:S2:121:U:H2'	45:S2:122:U:C6	2.56	0.40
46:SA:222:VAL:HG11	60:SO:228:LYS:HD2	2.03	0.40
47:SB:120:ILE:HD11	56:SK:98:GLN:NE2	2.36	0.40
47:SB:163:SER:HB2	57:SL:46:GLY:H	1.86	0.40
48:SC:50:THR:HG22	48:SC:55:VAL:O	2.21	0.40
62:SQ:8:ARG:NH2	62:SQ:11:LYS:HB2	2.35	0.40
62:SQ:33:LYS:NZ	62:SQ:95:ASN:OD1	2.49	0.40
62:SQ:142:PHE:O	62:SQ:208:GLN:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SQ:190:PRO:C	62:SQ:191:GLU:HG2	2.46	0.40
66:SU:126:LEU:HD21	66:SU:152:VAL:HG11	2.03	0.40
66:SU:138:LYS:HB2	73:Sb:54:ASP:HB3	2.04	0.40
68:SW:29:LYS:HD3	78:Sg:44:PHE:CD2	2.56	0.40
68:SW:109:LEU:O	68:SW:112:GLN:N	2.53	0.40
72:Sa:2:GLU:HB3	72:Sa:6:GLY:O	2.21	0.40
1:LA:76:G:H22	1:LA:315:C:H5'	1.86	0.40
1:LA:123:A:H5'	1:LA:124:U:OP2	2.21	0.40
1:LA:135:C:H1'	36:Lj:93:THR:HB	2.04	0.40
1:LA:296:A:N3	1:LA:299:G:O2'	2.47	0.40
1:LA:578:A:H2'	6:LF:334:PHE:CD1	2.56	0.40
1:LA:775:A:H5''	30:Ld:41:ARG:HE	1.85	0.40
1:LA:1073:U:O2'	30:Ld:49:GLY:HA3	2.22	0.40
1:LA:1347:U:H5''	6:LF:302:ALA:HB1	2.04	0.40
1:LA:1471:U:H5''	20:LT:5:ARG:HG3	2.02	0.40
1:LA:2364:G:H22	1:LA:2396:G:H1'	1.86	0.40
1:LA:2746:A:H5'	7:LG:178:ASN:OD1	2.22	0.40
1:LA:3086:A:OP1	5:LE:367:LYS:NZ	2.48	0.40
1:LA:3267:A:H2'	8:LH:69:PHE:CE1	2.56	0.40
6:LF:22:LEU:HA	6:LF:23:PRO:HD3	1.83	0.40
6:LF:99:MET:SD	6:LF:102:PRO:HA	2.61	0.40
10:LJ:43:LYS:HD3	10:LJ:43:LYS:HA	1.81	0.40
10:LJ:243:GLN:HA	10:LJ:246:MET:HE3	2.04	0.40
12:LL:47:PRO:HD2	12:LL:141:LYS:HA	2.04	0.40
12:LL:146:ASP:HA	12:LL:149:VAL:HG22	2.02	0.40
16:LP:42:PRO:HA	16:LP:131:GLU:OE2	2.21	0.40
16:LP:112:ASN:OD1	16:LP:113:LEU:HD22	2.21	0.40
19:LS:151:ARG:O	19:LS:162:ALA:HB3	2.22	0.40
20:LT:60:LYS:HE3	20:LT:60:LYS:HB3	1.91	0.40
21:LU:155:ARG:NE	21:LU:157:GLN:HE21	2.19	0.40
22:LV:44:ALA:HA	22:LV:95:HIS:HB3	2.02	0.40
27:La:5:SER:OG	27:La:8:VAL:HG12	2.21	0.40
28:Lb:70:PRO:HG3	28:Lb:115:LYS:HB2	2.03	0.40
28:Lb:80:LEU:HD23	28:Lb:80:LEU:HA	1.95	0.40
45:S2:327:U:H2'	45:S2:328:A:C8	2.57	0.40
45:S2:427:C:C4	45:S2:428:A:N7	2.90	0.40
45:S2:622:A:O2'	45:S2:1032:G:OP2	2.28	0.40
45:S2:861:U:H2'	45:S2:862:A:O4'	2.21	0.40
45:S2:875:G:O2'	45:S2:877:G:OP2	2.32	0.40
45:S2:891:A:H2'	45:S2:892:A:H8	1.85	0.40
55:SJ:80:GLU:OE1	58:SM:54:LYS:NZ	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SS:182:TYR:HD2	64:SS:228:ILE:HD13	1.86	0.40
66:SU:47:ARG:HG2	66:SU:47:ARG:HH11	1.86	0.40
67:SV:195:ARG:HA	67:SV:195:ARG:HD3	1.91	0.40
69:SX:57:LYS:HE2	69:SX:131:ILE:HG23	2.03	0.40
71:SZ:84:ARG:HG3	71:SZ:85:ALA:O	2.21	0.40
1:LA:83:U:H2'	1:LA:84:U:O4'	2.22	0.40
1:LA:397:A:H5'	1:LA:399:A:OP1	2.21	0.40
1:LA:1193:A:OP1	17:LQ:49[A]:ARG:NH2	2.50	0.40
1:LA:2137:U:C6	1:LA:2141:U:C4	3.09	0.40
1:LA:2746:A:O2'	7:LG:175:HIS:HA	2.21	0.40
1:LA:3044:G:H2'	1:LA:3045:G:C8	2.56	0.40
1:LA:3243:A:H4'	5:LE:95:THR:HB	2.04	0.40
1:LA:3374:U:OP2	32:Lf:70:ARG:NH2	2.54	0.40
2:LB:1:G:O2'	7:LG:273:ARG:NH2	2.54	0.40
3:LC:104:A:C3'	3:LC:105:A:H5''	2.45	0.40
5:LE:137:TYR:O	5:LE:139:GLN:NE2	2.54	0.40
5:LE:285:VAL:HG22	5:LE:322:ILE:HD13	2.04	0.40
7:LG:120:LYS:NZ	7:LG:123:GLU:HG3	2.37	0.40
7:LG:123:GLU:HG2	7:LG:248:ARG:NE	2.36	0.40
7:LG:200:PHE:CB	7:LG:237:GLU:OE1	2.61	0.40
7:LG:205:SER:HB2	7:LG:233:ALA:HB1	2.03	0.40
9:LI:129:LEU:HA	9:LI:129:LEU:HD23	1.84	0.40
16:LP:75:VAL:HA	16:LP:76:PRO:HD3	1.85	0.40
25:LY:2:LYS:HB2	25:LY:2:LYS:HE3	1.59	0.40
28:Lb:32:GLY:HA2	28:Lb:38:PHE:O	2.21	0.40
45:S2:445:A:C1'	45:S2:525:A:H5'	2.52	0.40
45:S2:568:G:O5'	74:Sc:90:ASP:HA	2.22	0.40
45:S2:789:A:O2'	64:SS:106:LYS:NZ	2.50	0.40
45:S2:888:U:O2	45:S2:988:A:O2'	2.37	0.40
45:S2:1145:U:H5	45:S2:1633:A:C2	2.39	0.40
45:S2:1274:C:H5'	45:S2:1427:A:H2'	2.04	0.40
45:S2:1454:G:H4'	50:SE:122:THR:HG21	2.03	0.40
45:S2:1504:G:N3	45:S2:1563:C:O2'	2.53	0.40
47:SB:172:ILE:O	47:SB:176:THR:OG1	2.38	0.40
47:SB:208:SER:O	47:SB:212:LYS:HB2	2.21	0.40
49:SD:27:ALA:HA	49:SD:30:VAL:HG22	2.04	0.40
53:SH:53:ASP:HB3	53:SH:56:LYS:HE3	2.03	0.40
60:SO:32:LEU:HD11	60:SO:34:LEU:HG	2.04	0.40
62:SQ:55:LYS:HE2	62:SQ:55:LYS:HB2	1.84	0.40
62:SQ:90:GLU:OE1	62:SQ:229:MET:HE1	2.21	0.40
68:SW:161:THR:O	68:SW:161:THR:OG1	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:Sb:75:ILE:HD13	73:Sb:75:ILE:HA	1.92	0.40
74:Sc:56:LYS:C	74:Sc:57:LEU:HD23	2.46	0.40
76:Se:10:ARG:HB3	76:Se:34:LYS:HG3	2.03	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	
4	LD	249/251 (99%)	236 (95%)	13 (5%)	0	100	100
5	LE	384/386 (100%)	358 (93%)	26 (7%)	0	100	100
6	LF	359/361 (99%)	335 (93%)	24 (7%)	0	100	100
7	LG	292/294 (99%)	274 (94%)	18 (6%)	0	100	100
8	LH	163/175 (93%)	156 (96%)	7 (4%)	0	100	100
9	LI	220/222 (99%)	214 (97%)	6 (3%)	0	100	100
10	LJ	231/233 (99%)	218 (94%)	13 (6%)	0	100	100
11	LK	189/191 (99%)	176 (93%)	13 (7%)	0	100	100
12	LL	216/218 (99%)	205 (95%)	11 (5%)	0	100	100
13	LM	167/169 (99%)	158 (95%)	9 (5%)	0	100	100
14	LN	191/193 (99%)	174 (91%)	17 (9%)	0	100	100
15	LO	134/136 (98%)	130 (97%)	4 (3%)	0	100	100
16	LP	201/203 (99%)	187 (93%)	14 (7%)	0	100	100
17	LQ	195/197 (99%)	191 (98%)	4 (2%)	0	100	100
18	LR	181/183 (99%)	167 (92%)	14 (8%)	0	100	100
19	LS	183/185 (99%)	173 (94%)	10 (6%)	0	100	100
20	LT	186/188 (99%)	182 (98%)	4 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	LU	169/171 (99%)	159 (94%)	10 (6%)	0	100	100
22	LV	157/159 (99%)	148 (94%)	9 (6%)	0	100	100
23	LW	98/100 (98%)	88 (90%)	10 (10%)	0	100	100
24	LX	134/136 (98%)	130 (97%)	4 (3%)	0	100	100
25	LY	63/65 (97%)	60 (95%)	3 (5%)	0	100	100
26	LZ	119/121 (98%)	118 (99%)	1 (1%)	0	100	100
27	La	123/125 (98%)	118 (96%)	5 (4%)	0	100	100
28	Lb	133/135 (98%)	121 (91%)	12 (9%)	0	100	100
29	Lc	146/148 (99%)	135 (92%)	11 (8%)	0	100	100
30	Ld	56/58 (97%)	52 (93%)	4 (7%)	0	100	100
31	Le	94/96 (98%)	94 (100%)	0	0	100	100
32	Lf	107/109 (98%)	101 (94%)	6 (6%)	0	100	100
33	Lg	125/127 (98%)	120 (96%)	5 (4%)	0	100	100
34	Lh	104/106 (98%)	101 (97%)	3 (3%)	0	100	100
35	Li	110/112 (98%)	108 (98%)	2 (2%)	0	100	100
36	Lj	117/119 (98%)	111 (95%)	6 (5%)	0	100	100
37	Lk	97/99 (98%)	91 (94%)	6 (6%)	0	100	100
38	Ll	79/81 (98%)	77 (98%)	2 (2%)	0	100	100
39	Lm	75/77 (97%)	74 (99%)	1 (1%)	0	100	100
40	Ln	48/50 (96%)	48 (100%)	0	0	100	100
41	Lo	50/52 (96%)	49 (98%)	1 (2%)	0	100	100
42	Lp	23/25 (92%)	23 (100%)	0	0	100	100
43	Lq	101/103 (98%)	95 (94%)	6 (6%)	0	100	100
44	Lr	89/91 (98%)	86 (97%)	3 (3%)	0	100	100
46	SA	220/223 (99%)	212 (96%)	8 (4%)	0	100	100
47	SB	204/206 (99%)	183 (90%)	20 (10%)	1 (0%)	24	48
48	SC	90/92 (98%)	78 (87%)	12 (13%)	0	100	100
49	SD	119/124 (96%)	97 (82%)	22 (18%)	0	100	100
50	SE	115/117 (98%)	101 (88%)	14 (12%)	0	100	100
51	SF	139/141 (99%)	130 (94%)	9 (6%)	0	100	100
52	SG	117/125 (94%)	112 (96%)	5 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	SH	143/145 (99%)	136 (95%)	7 (5%)	0	100	100
54	SI	141/143 (99%)	131 (93%)	10 (7%)	0	100	100
55	SJ	98/101 (97%)	92 (94%)	6 (6%)	0	100	100
56	SK	80/82 (98%)	70 (88%)	10 (12%)	0	100	100
57	SL	61/63 (97%)	54 (88%)	7 (12%)	0	100	100
58	SM	51/53 (96%)	49 (96%)	2 (4%)	0	100	100
59	SN	71/73 (97%)	55 (78%)	16 (22%)	0	100	100
60	SO	310/312 (99%)	275 (89%)	35 (11%)	0	100	100
61	SP	204/206 (99%)	177 (87%)	27 (13%)	0	100	100
62	SQ	222/232 (96%)	203 (91%)	19 (9%)	0	100	100
63	SR	214/217 (99%)	203 (95%)	11 (5%)	0	100	100
64	SS	256/260 (98%)	232 (91%)	24 (9%)	0	100	100
65	ST	226/228 (99%)	211 (93%)	13 (6%)	2 (1%)	14	35
66	SU	182/185 (98%)	172 (94%)	10 (6%)	0	100	100
67	SV	183/199 (92%)	177 (97%)	6 (3%)	0	100	100
68	SW	182/185 (98%)	170 (93%)	12 (7%)	0	100	100
69	SX	140/146 (96%)	132 (94%)	8 (6%)	0	100	100
70	SY	148/150 (99%)	138 (93%)	10 (7%)	0	100	100
71	SZ	125/128 (98%)	113 (90%)	12 (10%)	0	100	100
72	Sa	85/87 (98%)	73 (86%)	12 (14%)	0	100	100
73	Sb	127/129 (98%)	119 (94%)	8 (6%)	0	100	100
74	Sc	142/144 (99%)	124 (87%)	18 (13%)	0	100	100
75	Sd	132/134 (98%)	128 (97%)	4 (3%)	0	100	100
76	Se	95/97 (98%)	89 (94%)	6 (6%)	0	100	100
77	Sf	79/81 (98%)	68 (86%)	10 (13%)	1 (1%)	9	25
78	Sg	55/57 (96%)	48 (87%)	7 (13%)	0	100	100
All	All	10914/11115 (98%)	10193 (93%)	717 (7%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
65	ST	177	ARG
65	ST	175	ILE

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Mol	Chain	Res	Type
77	Sf	51	GLN
47	SB	162	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	LD	190/193 (98%)	188 (99%)	2 (1%)	65	85
5	LE	318/322 (99%)	305 (96%)	13 (4%)	27	56
6	LF	288/288 (100%)	281 (98%)	7 (2%)	43	72
7	LG	241/243 (99%)	230 (95%)	11 (5%)	24	51
8	LH	139/154 (90%)	133 (96%)	6 (4%)	26	54
9	LI	186/186 (100%)	181 (97%)	5 (3%)	39	69
10	LJ	187/191 (98%)	179 (96%)	8 (4%)	26	54
11	LK	168/171 (98%)	153 (91%)	15 (9%)	9	23
12	LL	185/185 (100%)	178 (96%)	7 (4%)	29	58
13	LM	145/147 (99%)	138 (95%)	7 (5%)	23	50
14	LN	154/154 (100%)	146 (95%)	8 (5%)	21	47
15	LO	107/107 (100%)	103 (96%)	4 (4%)	30	59
16	LP	175/175 (100%)	166 (95%)	9 (5%)	21	48
17	LQ	160/160 (100%)	158 (99%)	2 (1%)	61	83
18	LR	138/145 (95%)	136 (99%)	2 (1%)	59	82
19	LS	150/150 (100%)	144 (96%)	6 (4%)	28	56
20	LT	152/153 (99%)	146 (96%)	6 (4%)	28	57
21	LU	155/155 (100%)	148 (96%)	7 (4%)	24	52
22	LV	135/136 (99%)	132 (98%)	3 (2%)	45	74
23	LW	87/87 (100%)	83 (95%)	4 (5%)	24	51
24	LX	104/104 (100%)	103 (99%)	1 (1%)	68	86
25	LY	54/57 (95%)	53 (98%)	1 (2%)	50	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	LZ	104/105 (99%)	98 (94%)	6 (6%)	18	42
27	La	108/108 (100%)	103 (95%)	5 (5%)	24	51
28	Lb	112/115 (97%)	107 (96%)	5 (4%)	24	52
29	Lc	117/118 (99%)	108 (92%)	9 (8%)	12	30
30	Ld	46/46 (100%)	46 (100%)	0	100	100
31	Le	81/81 (100%)	77 (95%)	4 (5%)	22	49
32	Lf	92/96 (96%)	88 (96%)	4 (4%)	26	54
33	Lg	108/109 (99%)	104 (96%)	4 (4%)	30	59
34	Lh	90/90 (100%)	88 (98%)	2 (2%)	45	74
35	Li	95/95 (100%)	87 (92%)	8 (8%)	10	26
36	Lj	104/104 (100%)	102 (98%)	2 (2%)	50	77
37	Lk	80/81 (99%)	78 (98%)	2 (2%)	42	71
38	Ll	67/67 (100%)	67 (100%)	0	100	100
39	Lm	68/68 (100%)	65 (96%)	3 (4%)	25	53
40	Ln	45/45 (100%)	44 (98%)	1 (2%)	45	74
41	Lo	45/47 (96%)	45 (100%)	0	100	100
42	Lp	22/23 (96%)	22 (100%)	0	100	100
43	Lq	87/88 (99%)	85 (98%)	2 (2%)	44	73
44	Lr	71/71 (100%)	70 (99%)	1 (1%)	59	82
46	SA	182/182 (100%)	172 (94%)	10 (6%)	19	45
47	SB	172/173 (99%)	165 (96%)	7 (4%)	27	56
48	SC	77/85 (91%)	77 (100%)	0	100	100
49	SD	88/100 (88%)	81 (92%)	7 (8%)	11	28
50	SE	95/98 (97%)	93 (98%)	2 (2%)	47	75
51	SF	117/117 (100%)	114 (97%)	3 (3%)	40	70
52	SG	101/113 (89%)	97 (96%)	4 (4%)	28	56
53	SH	127/128 (99%)	123 (97%)	4 (3%)	35	65
54	SI	115/115 (100%)	114 (99%)	1 (1%)	70	87
55	SJ	93/94 (99%)	90 (97%)	3 (3%)	34	64
56	SK	67/73 (92%)	65 (97%)	2 (3%)	36	66
57	SL	55/56 (98%)	52 (94%)	3 (6%)	19	45

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
58	SM	47/47 (100%)	45 (96%)	2 (4%)	26	54
59	SN	56/64 (88%)	54 (96%)	2 (4%)	31	60
60	SO	250/257 (97%)	235 (94%)	15 (6%)	17	41
61	SP	170/173 (98%)	161 (95%)	9 (5%)	20	46
62	SQ	200/205 (98%)	194 (97%)	6 (3%)	36	66
63	SR	175/176 (99%)	167 (95%)	8 (5%)	24	51
64	SS	220/221 (100%)	208 (94%)	12 (6%)	19	45
65	ST	189/195 (97%)	184 (97%)	5 (3%)	40	70
66	SU	163/165 (99%)	157 (96%)	6 (4%)	30	59
67	SV	148/160 (92%)	144 (97%)	4 (3%)	39	69
68	SW	156/158 (99%)	147 (94%)	9 (6%)	18	42
69	SX	126/129 (98%)	121 (96%)	5 (4%)	28	56
70	SY	127/127 (100%)	124 (98%)	3 (2%)	43	72
71	SZ	90/97 (93%)	84 (93%)	6 (7%)	15	36
72	Sa	71/74 (96%)	69 (97%)	2 (3%)	38	68
73	Sb	110/110 (100%)	107 (97%)	3 (3%)	39	69
74	Sc	119/119 (100%)	113 (95%)	6 (5%)	22	48
75	Sd	102/112 (91%)	97 (95%)	5 (5%)	22	49
76	Se	82/83 (99%)	80 (98%)	2 (2%)	43	72
77	Sf	70/70 (100%)	70 (100%)	0	100	100
78	Sg	48/49 (98%)	46 (96%)	2 (4%)	26	55
All	All	9168/9345 (98%)	8818 (96%)	350 (4%)	30	58

All (350) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	LD	31	THR
4	LD	113	VAL
5	LE	104	THR
5	LE	112	ASP
5	LE	125	SER
5	LE	202	THR
5	LE	206	ASP
5	LE	208	VAL
5	LE	296	THR

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Mol	Chain	Res	Type
5	LE	319	ASN
5	LE	324	VAL
5	LE	327	CYS
5	LE	344	THR
5	LE	346	THR
5	LE	382	THR
6	LF	111	VAL
6	LF	219	LEU
6	LF	227	THR
6	LF	270	SER
6	LF	278	SER
6	LF	333	VAL
6	LF	349	THR
7	LG	6	ASP
7	LG	46	THR
7	LG	125	VAL
7	LG	154	THR
7	LG	159	VAL
7	LG	173	VAL
7	LG	176	SER
7	LG	197	SER
7	LG	241	THR
7	LG	261	THR
7	LG	275	THR
8	LH	15	VAL
8	LH	21	THR
8	LH	62	THR
8	LH	98	VAL
8	LH	132	THR
8	LH	149	ILE
9	LI	52	GLN
9	LI	86	VAL
9	LI	161	VAL
9	LI	168	ILE
9	LI	183	ASP
10	LJ	36	ILE
10	LJ	43	LYS
10	LJ	64	ILE
10	LJ	164	VAL
10	LJ	175	VAL
10	LJ	197	VAL
10	LJ	217	THR

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Mol	Chain	Res	Type
10	LJ	221	ASN
11	LK	6	THR
11	LK	10	ILE
11	LK	33	THR
11	LK	35	THR
11	LK	44	THR
11	LK	55	VAL
11	LK	80	THR
11	LK	82	VAL
11	LK	107	ASP
11	LK	126	VAL
11	LK	132	VAL
11	LK	143	GLU
11	LK	147	SER
11	LK	167	VAL
11	LK	184	LYS
12	LL	26	VAL
12	LL	29	SER
12	LL	60	LEU
12	LL	112	GLN
12	LL	121	LYS
12	LL	144	ASN
12	LL	145	LYS
13	LM	44	THR
13	LM	46	VAL
13	LM	70	THR
13	LM	86	VAL
13	LM	92	ARG
13	LM	107	ASP
13	LM	154	THR
14	LN	4	SER
14	LN	5	LYS
14	LN	19	GLN
14	LN	24	VAL
14	LN	41	THR
14	LN	63	VAL
14	LN	69	VAL
14	LN	86	THR
15	LO	5	SER
15	LO	15	VAL
15	LO	132	LYS
15	LO	135	LEU

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Mol	Chain	Res	Type
16	LP	19	LEU
16	LP	32	GLN
16	LP	60	VAL
16	LP	97	SER
16	LP	101	THR
16	LP	113	LEU
16	LP	125	SER
16	LP	151	ILE
16	LP	155	VAL
17	LQ	103[A]	LYS
17	LQ	142[A]	SER
18	LR	20	SER
18	LR	119	VAL
19	LS	12	ARG
19	LS	22	ASP
19	LS	24	VAL
19	LS	39	ARG
19	LS	136	ASN
19	LS	181	SER
20	LT	14	VAL
20	LT	29	THR
20	LT	45	VAL
20	LT	55	VAL
20	LT	66	HIS
20	LT	93	VAL
21	LU	8	GLN
21	LU	32	SER
21	LU	55	SER
21	LU	59	VAL
21	LU	79	VAL
21	LU	108	GLN
21	LU	120	SER
22	LV	16	GLN
22	LV	138	SER
22	LV	141	VAL
23	LW	14	THR
23	LW	37	LEU
23	LW	43	VAL
23	LW	98	THR
24	LX	42	SER
25	LY	23	ARG
26	LZ	26	VAL

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Mol	Chain	Res	Type
26	LZ	62	VAL
26	LZ	71	THR
26	LZ	86	VAL
26	LZ	107	VAL
26	LZ	129	ASP
27	La	8	VAL
27	La	39	LEU
27	La	62	SER
27	La	94	SER
27	La	105	VAL
28	Lb	53	VAL
28	Lb	96	VAL
28	Lb	98	THR
28	Lb	113	VAL
28	Lb	126	LYS
29	Lc	16	SER
29	Lc	24	LYS
29	Lc	43	ILE
29	Lc	78	LEU
29	Lc	84	GLU
29	Lc	93	SER
29	Lc	125	VAL
29	Lc	130	VAL
29	Lc	145	VAL
31	Le	31	VAL
31	Le	54	SER
31	Le	81	VAL
31	Le	90	VAL
32	Lf	16	LEU
32	Lf	27	LYS
32	Lf	105	GLN
32	Lf	109	VAL
33	Lg	51	SER
33	Lg	55	ILE
33	Lg	59	SER
33	Lg	76	VAL
34	Lh	15	SER
34	Lh	97	SER
35	Li	6	THR
35	Li	23	VAL
35	Li	35	VAL
35	Li	38	LEU

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Mol	Chain	Res	Type
35	Li	66	SER
35	Li	95	ILE
35	Li	101	VAL
35	Li	105	VAL
36	Lj	19	SER
36	Lj	44	ILE
37	Lk	17	VAL
37	Lk	57	LEU
39	Lm	29	LYS
39	Lm	65	LEU
39	Lm	75	VAL
40	Ln	27	ILE
43	Lq	34	SER
43	Lq	68	VAL
44	Lr	58	SER
46	SA	39	VAL
46	SA	47	GLU
46	SA	55	THR
46	SA	58	VAL
46	SA	74	GLN
46	SA	110	LEU
46	SA	142	LEU
46	SA	170	THR
46	SA	175	VAL
46	SA	179	GLN
47	SB	33	VAL
47	SB	98	MET
47	SB	147	THR
47	SB	160	VAL
47	SB	176	THR
47	SB	193	THR
47	SB	220	VAL
49	SD	52	LEU
49	SD	60	VAL
49	SD	67	THR
49	SD	74	LEU
49	SD	84	ASN
49	SD	86	VAL
49	SD	130	THR
50	SE	41	VAL
50	SE	122	THR
51	SF	15	SER

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Mol	Chain	Res	Type
51	SF	43	ILE
51	SF	89	LEU
52	SG	18	GLU
52	SG	25	THR
52	SG	73	LEU
52	SG	100	LEU
53	SH	29	VAL
53	SH	52	VAL
53	SH	94	ASP
53	SH	133	VAL
54	SI	35	ASP
55	SJ	67	THR
55	SJ	91	ILE
55	SJ	108	ILE
56	SK	63	SER
56	SK	65	LEU
57	SL	7	VAL
57	SL	9	LEU
57	SL	25	VAL
58	SM	6	VAL
58	SM	28	THR
59	SN	98	VAL
59	SN	145	HIS
60	SO	8	VAL
60	SO	48	THR
60	SO	58	VAL
60	SO	68	VAL
60	SO	76	ASP
60	SO	110	VAL
60	SO	115	ILE
60	SO	124	SER
60	SO	128	ASP
60	SO	129	LYS
60	SO	145	LEU
60	SO	193	ILE
60	SO	201	THR
60	SO	260	ILE
60	SO	290	VAL
61	SP	8	ASP
61	SP	58	VAL
61	SP	59	LEU
61	SP	93	THR

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Mol	Chain	Res	Type
61	SP	103	THR
61	SP	124	THR
61	SP	151	SER
61	SP	156	VAL
61	SP	185	ARG
62	SQ	21	VAL
62	SQ	31	ASP
62	SQ	65	VAL
62	SQ	97	LEU
62	SQ	193	ILE
62	SQ	215	VAL
63	SR	38	VAL
63	SR	51	THR
63	SR	63	VAL
63	SR	80	VAL
63	SR	102	VAL
63	SR	176	SER
63	SR	185	LYS
63	SR	195	ASP
64	SS	70	VAL
64	SS	100	ARG
64	SS	105	VAL
64	SS	140	VAL
64	SS	162	ILE
64	SS	171	ASP
64	SS	180	LEU
64	SS	183	VAL
64	SS	202	ASP
64	SS	227	VAL
64	SS	244	ILE
64	SS	248	ILE
65	ST	12	SER
65	ST	109	LEU
65	ST	131	LYS
65	ST	167	LYS
65	ST	168	THR
66	SU	14	THR
66	SU	26	GLU
66	SU	86	GLN
66	SU	115	SER
66	SU	154	LEU
66	SU	159	VAL

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Mol	Chain	Res	Type
67	SV	7	SER
67	SV	32	GLN
67	SV	111	GLN
67	SV	152	ILE
68	SW	21	SER
68	SW	49	LEU
68	SW	80	LEU
68	SW	87	SER
68	SW	93	LEU
68	SW	130	THR
68	SW	136	VAL
68	SW	141	VAL
68	SW	161	THR
69	SX	74	THR
69	SX	75	VAL
69	SX	107	VAL
69	SX	132	SER
69	SX	138	ASN
70	SY	11	ILE
70	SY	49	GLN
70	SY	134	VAL
71	SZ	13	VAL
71	SZ	22	SER
71	SZ	26	THR
71	SZ	41	ARG
71	SZ	79	VAL
71	SZ	117	ASP
72	Sa	39	VAL
72	Sa	51	VAL
73	Sb	66	ASN
73	Sb	74	VAL
73	Sb	85	ASP
74	Sc	72	VAL
74	Sc	75	GLN
74	Sc	99	ASN
74	Sc	107	PHE
74	Sc	125	VAL
74	Sc	131	SER
75	Sd	20	ARG
75	Sd	24	VAL
75	Sd	28	LEU
75	Sd	35	VAL

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Mol	Chain	Res	Type
75	Sd	36	SER
76	Se	29	SER
76	Se	58	VAL
78	Sg	24	THR
78	Sg	38	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (97) such sidechains are listed below:

Mol	Chain	Res	Type
4	LD	140	ASN
4	LD	205	ASN
5	LE	173	GLN
5	LE	184	ASN
5	LE	212	ASN
6	LF	116	ASN
6	LF	260	GLN
6	LF	296	GLN
7	LG	57	ASN
8	LH	138	GLN
9	LI	37	ASN
9	LI	52	GLN
11	LK	37	ASN
11	LK	64	HIS
12	LL	12	GLN
12	LL	86	HIS
12	LL	113	GLN
13	LM	95	ASN
13	LM	101	ASN
14	LN	66	ASN
14	LN	120	GLN
14	LN	160	GLN
15	LO	105	GLN
18	LR	55	GLN
18	LR	121	GLN
21	LU	65	ASN
21	LU	138	GLN
22	LV	5	HIS
22	LV	127	GLN
22	LV	131	GLN
24	LX	7	GLN
24	LX	98	ASN
25	LY	33	ASN

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Mol	Chain	Res	Type
26	LZ	137	ASN
27	La	4	GLN
28	Lb	29	HIS
28	Lb	122	HIS
28	Lb	127	ASN
28	Lb	128	GLN
30	Ld	6	ASN
32	Lf	57	GLN
33	Lg	26	HIS
33	Lg	49	ASN
34	Lh	26	ASN
34	Lh	88	ASN
35	Li	61	GLN
36	Lj	76	GLN
37	Lk	92	ASN
39	Lm	10	GLN
39	Lm	57	ASN
40	Ln	33	ASN
44	Lr	32	GLN
46	SA	101	GLN
46	SA	162	GLN
47	SB	35	GLN
48	SC	9	ASN
48	SC	13	GLN
48	SC	29	GLN
49	SD	96	GLN
50	SE	70	ASN
50	SE	104	GLN
51	SF	8	GLN
52	SG	42	GLN
52	SG	48	ASN
54	SI	43	ASN
54	SI	129	GLN
55	SJ	44	ASN
57	SL	27	GLN
59	SN	134	ASN
60	SO	182	ASN
60	SO	184	ASN
60	SO	299	GLN
60	SO	308	ASN
61	SP	15	GLN
61	SP	23	HIS

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Mol	Chain	Res	Type
62	SQ	194	ASN
64	SS	197	HIS
65	ST	13	GLN
65	ST	59	GLN
65	ST	119	GLN
66	SU	29	ASN
66	SU	42	GLN
67	SV	116	HIS
67	SV	138	ASN
68	SW	110	GLN
68	SW	139	GLN
68	SW	176	ASN
70	SY	36	GLN
72	Sa	33	GLN
73	Sb	16	ASN
73	Sb	42	GLN
73	Sb	64	GLN
73	Sb	70	ASN
73	Sb	120	HIS
74	Sc	63	GLN
74	Sc	75	GLN
77	Sf	9	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	LA	3180/3393 (93%)	677 (21%)	15 (0%)
2	LB	120/121 (99%)	11 (9%)	0
3	LC	157/158 (99%)	34 (21%)	2 (1%)
45	S2	1768/1799 (98%)	485 (27%)	29 (1%)
79	Ta	76/77 (98%)	44 (57%)	0
80	Tb	76/77 (98%)	31 (40%)	0
81	mR	0/25	-	-
All	All	5377/5650 (95%)	1282 (23%)	46 (0%)

All (1282) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	LA	14	U
1	LA	23	A
1	LA	26	A

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Mol	Chain	Res	Type
1	LA	30	G
1	LA	40	A
1	LA	43	A
1	LA	49	A
1	LA	59	G
1	LA	60	A
1	LA	65	A
1	LA	66	A
1	LA	70	A
1	LA	75	G
1	LA	92	G
1	LA	99	A
1	LA	105	C
1	LA	108	A
1	LA	109	A
1	LA	110	G
1	LA	111	C
1	LA	113	C
1	LA	122	A
1	LA	135	C
1	LA	136	G
1	LA	142	C
1	LA	143	G
1	LA	147	U
1	LA	155	G
1	LA	156	G
1	LA	157	A
1	LA	160	G
1	LA	164	A
1	LA	165	A
1	LA	169	U
1	LA	170	G
1	LA	177	U
1	LA	187	A
1	LA	190	U
1	LA	191	U
1	LA	194	U
1	LA	199	A
1	LA	200	C
1	LA	206	G
1	LA	210	U
1	LA	211	A

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Mol	Chain	Res	Type
1	LA	218	G
1	LA	219	A
1	LA	234	G
1	LA	239	G
1	LA	240	U
1	LA	243	G
1	LA	244	G
1	LA	245	U
1	LA	248	U
1	LA	249	U
1	LA	250	U
1	LA	252	U
1	LA	253	A
1	LA	254	A
1	LA	255	A
1	LA	256	G
1	LA	262	U
1	LA	269	G
1	LA	284	A
1	LA	286	U
1	LA	295	A
1	LA	298	U
1	LA	305	U
1	LA	312	C
1	LA	315	C
1	LA	323	A
1	LA	329	U
1	LA	334	A
1	LA	336	A
1	LA	341	G
1	LA	350	C
1	LA	351	A
1	LA	352	A
1	LA	357	A
1	LA	362	U
1	LA	376	G
1	LA	390	G
1	LA	398	A
1	LA	402	A
1	LA	403	C
1	LA	407	A
1	LA	421	G

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Mol	Chain	Res	Type
1	LA	422	A
1	LA	438	A
1	LA	441	U
1	LA	442	G
1	LA	443	G
1	LA	444	U
1	LA	445	G
1	LA	447	U
1	LA	448	U
1	LA	449	U
1	LA	450	G
1	LA	486	U
1	LA	488	U
1	LA	489	C
1	LA	490	A
1	LA	491	C
1	LA	494	G
1	LA	509	U
1	LA	521	A
1	LA	523	A
1	LA	527	A
1	LA	544	C
1	LA	545	U
1	LA	546	C
1	LA	547	G
1	LA	548	G
1	LA	549	U
1	LA	552	G
1	LA	553	U
1	LA	555	U
1	LA	556	U
1	LA	557	A
1	LA	558	U
1	LA	559	A
1	LA	560	G
1	LA	579	G
1	LA	600	G
1	LA	601	U
1	LA	603	A
1	LA	604	G
1	LA	609	G
1	LA	611	A

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Mol	Chain	Res	Type
1	LA	612	U
1	LA	621	A
1	LA	636	C
1	LA	649	A
1	LA	653	A
1	LA	667	C
1	LA	677	A
1	LA	681	U
1	LA	688	G
1	LA	689	U
1	LA	690	A
1	LA	691	A
1	LA	697	A
1	LA	705	A
1	LA	712	G
1	LA	715	A
1	LA	718	G
1	LA	727	G
1	LA	733	G
1	LA	734	C
1	LA	737	G
1	LA	760	G
1	LA	761	A
1	LA	764	U
1	LA	765	C
1	LA	766	U
1	LA	767	U
1	LA	770	G
1	LA	774	G
1	LA	776	U
1	LA	777	U
1	LA	780	A
1	LA	781	G
1	LA	785	G
1	LA	786	A
1	LA	789	A
1	LA	799	G
1	LA	806	A
1	LA	808	A
1	LA	817	A
1	LA	830	A
1	LA	849	C

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Mol	Chain	Res	Type
1	LA	861	C
1	LA	874	U
1	LA	879	U
1	LA	880	G
1	LA	896	A
1	LA	907	G
1	LA	908	G
1	LA	914	A
1	LA	916	G
1	LA	917	A
1	LA	921	A
1	LA	923	C
1	LA	924	G
1	LA	925	A
1	LA	934	G
1	LA	937	G
1	LA	938	C
1	LA	944	C
1	LA	953	G
1	LA	959	C
1	LA	960	U
1	LA	962	A
1	LA	980	A
1	LA	981	U
1	LA	982	C
1	LA	994	G
1	LA	1000	C
1	LA	1002	A
1	LA	1010	G
1	LA	1012	G
1	LA	1018	G
1	LA	1023	C
1	LA	1024	G
1	LA	1025	A
1	LA	1026	A
1	LA	1029	G
1	LA	1030	A
1	LA	1031	C
1	LA	1039	U
1	LA	1040	A
1	LA	1041	U
1	LA	1042	U

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Mol	Chain	Res	Type
1	LA	1043	C
1	LA	1045	C
1	LA	1047	A
1	LA	1049	C
1	LA	1050	U
1	LA	1064	A
1	LA	1065	A
1	LA	1071	U
1	LA	1072	G
1	LA	1075	A
1	LA	1081	U
1	LA	1083	G
1	LA	1091	A
1	LA	1092	C
1	LA	1094	U
1	LA	1096	U
1	LA	1097	G
1	LA	1098	A
1	LA	1103	A
1	LA	1108	U
1	LA	1117	G
1	LA	1131	G
1	LA	1143	A
1	LA	1144	U
1	LA	1153	A
1	LA	1154	A
1	LA	1159	A
1	LA	1161	G
1	LA	1168	U
1	LA	1174	G
1	LA	1178	G
1	LA	1179	A
1	LA	1180	A
1	LA	1181	U
1	LA	1182	A
1	LA	1186	G
1	LA	1189	C
1	LA	1192	C
1	LA	1193	A
1	LA	1196	C
1	LA	1200	A
1	LA	1201	C

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Mol	Chain	Res	Type
1	LA	1202	A
1	LA	1208	U
1	LA	1220	U
1	LA	1221	A
1	LA	1222	G
1	LA	1223	A
1	LA	1224	C
1	LA	1232	C
1	LA	1235	U
1	LA	1236	G
1	LA	1237	G
1	LA	1238	C
1	LA	1239	C
1	LA	1240	A
1	LA	1241	U
1	LA	1245	A
1	LA	1248	C
1	LA	1249	G
1	LA	1252	A
1	LA	1253	U
1	LA	1260	A
1	LA	1263	A
1	LA	1264	G
1	LA	1268	G
1	LA	1270	A
1	LA	1272	C
1	LA	1273	A
1	LA	1275	C
1	LA	1278	A
1	LA	1279	C
1	LA	1281	G
1	LA	1284	C
1	LA	1285	G
1	LA	1286	A
1	LA	1287	A
1	LA	1288	U
1	LA	1292	C
1	LA	1295	G
1	LA	1307	G
1	LA	1308	A
1	LA	1309	U
1	LA	1313	G

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Mol	Chain	Res	Type
1	LA	1325	U
1	LA	1330	A
1	LA	1331	U
1	LA	1346	G
1	LA	1348	U
1	LA	1351	U
1	LA	1352	A
1	LA	1357	G
1	LA	1359	C
1	LA	1383	G
1	LA	1386	A
1	LA	1391	C
1	LA	1399	A
1	LA	1400	G
1	LA	1418	A
1	LA	1419	A
1	LA	1425	U
1	LA	1431	G
1	LA	1434	G
1	LA	1437	C
1	LA	1443	G
1	LA	1446	A
1	LA	1450	G
1	LA	1469	C
1	LA	1477	A
1	LA	1481	A
1	LA	1482	A
1	LA	1483	G
1	LA	1487	G
1	LA	1508	C
1	LA	1511	U
1	LA	1523	U
1	LA	1536	G
1	LA	1554	U
1	LA	1555	U
1	LA	1556	C
1	LA	1557	A
1	LA	1560	G
1	LA	1562	C
1	LA	1563	C
1	LA	1566	A
1	LA	1567	U

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Mol	Chain	Res	Type
1	LA	1568	U
1	LA	1569	U
1	LA	1571	A
1	LA	1574	C
1	LA	1575	A
1	LA	1579	C
1	LA	1587	A
1	LA	1589	A
1	LA	1593	A
1	LA	1605	A
1	LA	1619	A
1	LA	1621	A
1	LA	1628	C
1	LA	1629	U
1	LA	1632	A
1	LA	1639	C
1	LA	1642	A
1	LA	1643	A
1	LA	1657	C
1	LA	1684	U
1	LA	1694	U
1	LA	1700	G
1	LA	1713	G
1	LA	1724	U
1	LA	1727	G
1	LA	1728	G
1	LA	1736	G
1	LA	1741	A
1	LA	1750	A
1	LA	1751	G
1	LA	1759	C
1	LA	1762	C
1	LA	1764	U
1	LA	1765	U
1	LA	1766	G
1	LA	1770	G
1	LA	1775	G
1	LA	1780	G
1	LA	1796	G
1	LA	1797	A
1	LA	1813	A
1	LA	1814	A

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Mol	Chain	Res	Type
1	LA	1815	U
1	LA	1816	A
1	LA	1819	U
1	LA	1821	U
1	LA	1839	A
1	LA	1842	A
1	LA	1849	C
1	LA	1858	A
1	LA	1866	C
1	LA	1867	A
1	LA	1868	G
1	LA	1872	C
1	LA	1878	G
1	LA	1880	U
1	LA	1881	A
1	LA	1893	A
1	LA	1896	A
1	LA	1899	G
1	LA	1906	G
1	LA	1907	C
1	LA	1926	C
1	LA	1939	G
1	LA	1952	G
1	LA	1954	G
1	LA	1955	U
1	LA	2096	A
1	LA	2098	C
1	LA	2099	A
1	LA	2100	A
1	LA	2111	G
1	LA	2113	A
1	LA	2121	G
1	LA	2122	G
1	LA	2126	A
1	LA	2131	A
1	LA	2138	A
1	LA	2140	U
1	LA	2142	A
1	LA	2144	A
1	LA	2158	A
1	LA	2159	U
1	LA	2169	G

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Mol	Chain	Res	Type
1	LA	2188	A
1	LA	2205	U
1	LA	2207	A
1	LA	2209	U
1	LA	2211	U
1	LA	2224	A
1	LA	2238	G
1	LA	2244	A
1	LA	2256	A
1	LA	2257	C
1	LA	2258	U
1	LA	2262	A
1	LA	2265	C
1	LA	2269	U
1	LA	2270	A
1	LA	2273	G
1	LA	2281	A
1	LA	2285	C
1	LA	2307	G
1	LA	2310	U
1	LA	2313	A
1	LA	2314	U
1	LA	2315	G
1	LA	2334	U
1	LA	2335	G
1	LA	2336	U
1	LA	2366	C
1	LA	2373	A
1	LA	2374	C
1	LA	2375	G
1	LA	2385	G
1	LA	2388	U
1	LA	2391	G
1	LA	2393	G
1	LA	2397	A
1	LA	2402	A
1	LA	2403	G
1	LA	2404	A
1	LA	2411	U
1	LA	2418	G
1	LA	2432	A
1	LA	2435	G

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Mol	Chain	Res	Type
1	LA	2437	G
1	LA	2443	A
1	LA	2445	A
1	LA	2446	U
1	LA	2447	A
1	LA	2449	A
1	LA	2451	G
1	LA	2452	G
1	LA	2493	U
1	LA	2494	A
1	LA	2496	C
1	LA	2498	U
1	LA	2499	U
1	LA	2501	U
1	LA	2502	A
1	LA	2504	U
1	LA	2514	U
1	LA	2530	G
1	LA	2531	C
1	LA	2533	G
1	LA	2535	A
1	LA	2536	A
1	LA	2537	U
1	LA	2538	U
1	LA	2539	C
1	LA	2540	A
1	LA	2547	A
1	LA	2548	C
1	LA	2549	G
1	LA	2551	U
1	LA	2552	C
1	LA	2554	A
1	LA	2555	G
1	LA	2559	U
1	LA	2561	A
1	LA	2562	A
1	LA	2569	A
1	LA	2570	U
1	LA	2572	C
1	LA	2573	G
1	LA	2579	G
1	LA	2580	A

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Mol	Chain	Res	Type
1	LA	2585	G
1	LA	2593	A
1	LA	2606	G
1	LA	2607	G
1	LA	2614	G
1	LA	2626	A
1	LA	2648	G
1	LA	2651	G
1	LA	2652	U
1	LA	2656	A
1	LA	2657	A
1	LA	2674	A
1	LA	2677	G
1	LA	2680	A
1	LA	2684	C
1	LA	2688	U
1	LA	2689	A
1	LA	2690	G
1	LA	2691	A
1	LA	2694	A
1	LA	2696	A
1	LA	2704	A
1	LA	2705	A
1	LA	2714	G
1	LA	2727	A
1	LA	2728	G
1	LA	2729	U
1	LA	2740	A
1	LA	2753	G
1	LA	2755	C
1	LA	2758	A
1	LA	2759	U
1	LA	2762	A
1	LA	2772	C
1	LA	2773	C
1	LA	2777	G
1	LA	2778	G
1	LA	2780	A
1	LA	2796	G
1	LA	2799	A
1	LA	2800	G
1	LA	2801	A

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Mol	Chain	Res	Type
1	LA	2810	C
1	LA	2814	G
1	LA	2817	A
1	LA	2828	G
1	LA	2842	U
1	LA	2843	U
1	LA	2844	C
1	LA	2845	A
1	LA	2853	A
1	LA	2856	G
1	LA	2861	U
1	LA	2862	U
1	LA	2867	C
1	LA	2871	G
1	LA	2876	C
1	LA	2887	A
1	LA	2889	C
1	LA	2898	G
1	LA	2900	A
1	LA	2911	A
1	LA	2914	G
1	LA	2916	U
1	LA	2918	G
1	LA	2923	U
1	LA	2927	C
1	LA	2930	A
1	LA	2933	A
1	LA	2935	U
1	LA	2936	A
1	LA	2938	G
1	LA	2942	C
1	LA	2943	G
1	LA	2947	G
1	LA	2948	C
1	LA	2954	U
1	LA	2971	A
1	LA	2979	U
1	LA	2983	C
1	LA	2990	G
1	LA	2996	U
1	LA	2997	G
1	LA	3003	G

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Mol	Chain	Res	Type
1	LA	3011	A
1	LA	3012	A
1	LA	3022	G
1	LA	3028	G
1	LA	3069	G
1	LA	3070	A
1	LA	3071	U
1	LA	3072	C
1	LA	3073	A
1	LA	3078	U
1	LA	3086	A
1	LA	3087	A
1	LA	3092	C
1	LA	3109	G
1	LA	3122	A
1	LA	3129	A
1	LA	3130	A
1	LA	3131	U
1	LA	3141	A
1	LA	3142	A
1	LA	3143	C
1	LA	3154	C
1	LA	3155	U
1	LA	3156	U
1	LA	3157	U
1	LA	3165	A
1	LA	3170	A
1	LA	3172	A
1	LA	3173	G
1	LA	3174	A
1	LA	3179	U
1	LA	3181	C
1	LA	3182	G
1	LA	3187	A
1	LA	3194	C
1	LA	3195	U
1	LA	3196	U
1	LA	3197	G
1	LA	3198	U
1	LA	3207	U
1	LA	3208	G
1	LA	3210	A

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Mol	Chain	Res	Type
1	LA	3214	U
1	LA	3216	G
1	LA	3217	C
1	LA	3218	A
1	LA	3219	G
1	LA	3223	A
1	LA	3227	A
1	LA	3228	C
1	LA	3229	G
1	LA	3230	G
1	LA	3244	A
1	LA	3247	G
1	LA	3259	U
1	LA	3260	G
1	LA	3263	G
1	LA	3270	U
1	LA	3273	A
1	LA	3276	G
1	LA	3280	U
1	LA	3281	U
1	LA	3289	G
1	LA	3294	A
1	LA	3295	A
1	LA	3303	G
1	LA	3304	U
1	LA	3309	G
1	LA	3312	U
1	LA	3313	U
1	LA	3316	A
1	LA	3319	U
1	LA	3336	A
1	LA	3341	U
1	LA	3344	A
1	LA	3345	G
1	LA	3351	U
1	LA	3352	U
1	LA	3353	G
1	LA	3369	G
1	LA	3370	A
1	LA	3375	A
1	LA	3378	C
1	LA	3386	G

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Mol	Chain	Res	Type
1	LA	3389	U
1	LA	3395	G
2	LB	7	G
2	LB	22	A
2	LB	41	G
2	LB	51	A
2	LB	54	U
2	LB	65	G
2	LB	74	C
2	LB	76	A
2	LB	102	A
2	LB	112	G
2	LB	121	U
3	LC	3	A
3	LC	23	U
3	LC	34	U
3	LC	35	C
3	LC	38	U
3	LC	48	A
3	LC	51	G
3	LC	52	A
3	LC	55	U
3	LC	59	A
3	LC	62	C
3	LC	63	G
3	LC	80	A
3	LC	81	U
3	LC	82	U
3	LC	83	C
3	LC	84	C
3	LC	86	U
3	LC	87	G
3	LC	88	A
3	LC	90	U
3	LC	95	G
3	LC	104	A
3	LC	105	A
3	LC	106	C
3	LC	111	A
3	LC	112	U
3	LC	113	U
3	LC	125	U

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Mol	Chain	Res	Type
3	LC	126	A
3	LC	136	G
3	LC	148	G
3	LC	152	G
3	LC	156	U
45	S2	3	U
45	S2	4	C
45	S2	14	C
45	S2	25	C
45	S2	26	A
45	S2	34	G
45	S2	45	U
45	S2	46	A
45	S2	47	A
45	S2	56	U
45	S2	57	G
45	S2	61	A
45	S2	66	U
45	S2	68	A
45	S2	69	G
45	S2	70	C
45	S2	73	U
45	S2	75	U
45	S2	76	A
45	S2	77	U
45	S2	78	A
45	S2	79	C
45	S2	80	A
45	S2	81	G
45	S2	104	A
45	S2	111	U
45	S2	114	C
45	S2	116	U
45	S2	127	G
45	S2	129	U
45	S2	131	C
45	S2	132	U
45	S2	134	U
45	S2	137	U
45	S2	138	A
45	S2	140	A
45	S2	141	U

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Mol	Chain	Res	Type
45	S2	142	G
45	S2	145	A
45	S2	153	G
45	S2	154	G
45	S2	155	U
45	S2	166	C
45	S2	169	A
45	S2	171	A
45	S2	176	C
45	S2	178	U
45	S2	179	A
45	S2	180	A
45	S2	183	U
45	S2	192	U
45	S2	193	U
45	S2	194	U
45	S2	195	G
45	S2	207	U
45	S2	208	U
45	S2	209	U
45	S2	215	A
45	S2	216	U
45	S2	218	A
45	S2	219	A
45	S2	223	U
45	S2	224	C
45	S2	225	A
45	S2	227	U
45	S2	228	G
45	S2	231	U
45	S2	232	U
45	S2	233	C
45	S2	234	G
45	S2	235	G
45	S2	240	U
45	S2	241	U
45	S2	242	U
45	S2	243	G
45	S2	246	G
45	S2	256	A
45	S2	257	A
45	S2	259	U

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Mol	Chain	Res	Type
45	S2	260	U
45	S2	261	U
45	S2	262	U
45	S2	265	A
45	S2	266	A
45	S2	267	U
45	S2	271	A
45	S2	272	U
45	S2	276	C
45	S2	277	U
45	S2	278	U
45	S2	280	U
45	S2	281	G
45	S2	287	G
45	S2	295	A
45	S2	299	A
45	S2	312	A
45	S2	313	U
45	S2	314	C
45	S2	316	A
45	S2	320	U
45	S2	322	G
45	S2	323	A
45	S2	324	U
45	S2	333	A
45	S2	335	U
45	S2	337	G
45	S2	338	C
45	S2	340	U
45	S2	352	A
45	S2	359	A
45	S2	360	A
45	S2	361	C
45	S2	365	G
45	S2	370	A
45	S2	388	G
45	S2	390	G
45	S2	400	A
45	S2	402	C
45	S2	403	G
45	S2	404	G
45	S2	416	A

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Mol	Chain	Res	Type
45	S2	419	G
45	S2	421	A
45	S2	423	G
45	S2	424	C
45	S2	425	A
45	S2	426	G
45	S2	434	G
45	S2	437	A
45	S2	438	A
45	S2	439	U
45	S2	440	U
45	S2	444	C
45	S2	454	U
45	S2	455	C
45	S2	460	A
45	S2	469	C
45	S2	475	A
45	S2	477	A
45	S2	479	C
45	S2	485	A
45	S2	487	G
45	S2	491	C
45	S2	492	A
45	S2	494	U
45	S2	495	C
45	S2	496	G
45	S2	498	G
45	S2	500	C
45	S2	505	A
45	S2	506	A
45	S2	507	U
45	S2	511	A
45	S2	512	A
45	S2	520	A
45	S2	523	G
45	S2	526	A
45	S2	527	A
45	S2	529	A
45	S2	534	A
45	S2	538	A
45	S2	539	G
45	S2	540	G

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Mol	Chain	Res	Type
45	S2	541	A
45	S2	542	A
45	S2	543	C
45	S2	544	A
45	S2	555	A
45	S2	556	A
45	S2	557	G
45	S2	558	U
45	S2	559	C
45	S2	560	U
45	S2	565	C
45	S2	572	C
45	S2	578	U
45	S2	579	A
45	S2	594	A
45	S2	595	G
45	S2	606	A
45	S2	610	G
45	S2	611	U
45	S2	619	A
45	S2	620	A
45	S2	623	A
45	S2	624	G
45	S2	635	A
45	S2	639	U
45	S2	640	U
45	S2	642	G
45	S2	648	G
45	S2	651	G
45	S2	652	G
45	S2	654	C
45	S2	656	G
45	S2	657	U
45	S2	658	C
45	S2	677	G
45	S2	678	A
45	S2	681	U
45	S2	682	C
45	S2	683	C
45	S2	694	U
45	S2	696	C
45	S2	698	U

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Mol	Chain	Res	Type
45	S2	700	C
45	S2	701	U
45	S2	702	G
45	S2	703	G
45	S2	704	C
45	S2	705	U
45	S2	706	A
45	S2	707	A
45	S2	709	C
45	S2	712	G
45	S2	713	A
45	S2	714	G
45	S2	728	U
45	S2	729	G
45	S2	730	G
45	S2	731	C
45	S2	732	G
45	S2	733	A
45	S2	735	C
45	S2	737	A
45	S2	740	A
45	S2	741	C
45	S2	742	U
45	S2	743	U
45	S2	745	U
45	S2	764	U
45	S2	765	G
45	S2	768	C
45	S2	774	A
45	S2	780	A
45	S2	783	G
45	S2	789	A
45	S2	790	U
45	S2	792	U
45	S2	794	U
45	S2	804	A
45	S2	812	A
45	S2	814	A
45	S2	815	G
45	S2	816	G
45	S2	819	G
45	S2	820	U

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Mol	Chain	Res	Type
45	S2	821	U
45	S2	824	G
45	S2	826	U
45	S2	829	A
45	S2	830	U
45	S2	831	U
45	S2	832	U
45	S2	834	G
45	S2	835	U
45	S2	836	U
45	S2	837	G
45	S2	839	U
45	S2	842	C
45	S2	843	U
45	S2	846	G
45	S2	847	A
45	S2	848	C
45	S2	849	C
45	S2	850	A
45	S2	851	U
45	S2	852	C
45	S2	855	A
45	S2	856	A
45	S2	857	U
45	S2	859	A
45	S2	863	A
45	S2	864	U
45	S2	895	G
45	S2	904	G
45	S2	905	A
45	S2	921	U
45	S2	933	A
45	S2	935	U
45	S2	945	U
45	S2	947	U
45	S2	951	A
45	S2	960	U
45	S2	964	U
45	S2	966	A
45	S2	988	A
45	S2	992	A
45	S2	993	A

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Mol	Chain	Res	Type
45	S2	1003	A
45	S2	1004	U
45	S2	1025	A
45	S2	1026	A
45	S2	1028	C
45	S2	1039	A
45	S2	1052	U
45	S2	1054	U
45	S2	1055	U
45	S2	1058	U
45	S2	1060	U
45	S2	1061	A
45	S2	1062	A
45	S2	1066	C
45	S2	1075	C
45	S2	1076	A
45	S2	1082	C
45	S2	1092	A
45	S2	1093	A
45	S2	1096	C
45	S2	1111	G
45	S2	1138	A
45	S2	1150	G
45	S2	1156	C
45	S2	1158	C
45	S2	1160	A
45	S2	1163	A
45	S2	1167	G
45	S2	1170	G
45	S2	1176	G
45	S2	1185	U
45	S2	1194	A
45	S2	1196	A
45	S2	1199	G
45	S2	1200	G
45	S2	1202	A
45	S2	1206	U
45	S2	1208	A
45	S2	1216	C
45	S2	1217	A
45	S2	1218	G
45	S2	1221	A

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Mol	Chain	Res	Type
45	S2	1222	C
45	S2	1223	A
45	S2	1227	A
45	S2	1228	G
45	S2	1229	G
45	S2	1237	G
45	S2	1243	G
45	S2	1244	A
45	S2	1245	G
45	S2	1246	C
45	S2	1251	U
45	S2	1253	U
45	S2	1254	U
45	S2	1258	U
45	S2	1261	G
45	S2	1273	G
45	S2	1274	C
45	S2	1275	A
45	S2	1281	G
45	S2	1284	C
45	S2	1285	U
45	S2	1301	U
45	S2	1314	U
45	S2	1315	U
45	S2	1316	G
45	S2	1318	G
45	S2	1321	A
45	S2	1322	A
45	S2	1334	U
45	S2	1338	C
45	S2	1344	A
45	S2	1345	A
45	S2	1346	A
45	S2	1348	A
45	S2	1352	G
45	S2	1362	U
45	S2	1363	U
45	S2	1364	G
45	S2	1370	U
45	S2	1371	A
45	S2	1372	U
45	S2	1377	U

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Mol	Chain	Res	Type
45	S2	1378	U
45	S2	1383	G
45	S2	1384	A
45	S2	1389	C
45	S2	1390	U
45	S2	1398	U
45	S2	1399	C
45	S2	1413	U
45	S2	1414	U
45	S2	1422	A
45	S2	1423	U
45	S2	1425	A
45	S2	1427	A
45	S2	1428	G
45	S2	1431	C
45	S2	1432	U
45	S2	1433	G
45	S2	1436	A
45	S2	1439	C
45	S2	1445	G
45	S2	1446	A
45	S2	1447	C
45	S2	1454	G
45	S2	1459	C
45	S2	1460	A
45	S2	1469	A
45	S2	1471	A
45	S2	1472	C
45	S2	1473	U
45	S2	1474	G
45	S2	1481	C
45	S2	1483	A
45	S2	1491	U
45	S2	1492	A
45	S2	1496	U
45	S2	1503	A
45	S2	1509	C
45	S2	1512	G
45	S2	1516	A
45	S2	1517	U
45	S2	1518	C
45	S2	1520	U

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Mol	Chain	Res	Type
45	S2	1521	G
45	S2	1522	U
45	S2	1524	A
45	S2	1527	C
45	S2	1531	G
45	S2	1535	U
45	S2	1536	G
45	S2	1537	C
45	S2	1540	G
45	S2	1543	A
45	S2	1557	U
45	S2	1558	U
45	S2	1559	A
45	S2	1573	A
45	S2	1574	G
45	S2	1583	A
45	S2	1584	G
45	S2	1585	U
45	S2	1593	A
45	S2	1598	U
45	S2	1601	G
45	S2	1616	G
45	S2	1622	G
45	S2	1631	A
45	S2	1634	C
45	S2	1635	A
45	S2	1637	C
45	S2	1651	A
45	S2	1657	U
45	S2	1658	G
45	S2	1662	G
45	S2	1666	U
45	S2	1678	A
45	S2	1681	A
45	S2	1687	U
45	S2	1688	U
45	S2	1691	A
45	S2	1692	G
45	S2	1697	G
45	S2	1699	G
45	S2	1700	C
45	S2	1703	C

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Mol	Chain	Res	Type
45	S2	1706	C
45	S2	1708	U
45	S2	1710	U
45	S2	1712	A
45	S2	1713	G
45	S2	1717	G
45	S2	1727	G
45	S2	1732	A
45	S2	1733	C
45	S2	1736	G
45	S2	1738	U
45	S2	1755	A
45	S2	1757	G
45	S2	1760	G
45	S2	1762	A
45	S2	1766	A
45	S2	1767	G
45	S2	1769	U
45	S2	1771	U
45	S2	1780	G
45	S2	1781	A
45	S2	1782	A
45	S2	1783	C
45	S2	1792	G
45	S2	1793	G
45	S2	1794	A
45	S2	1795	U
45	S2	1796	C
79	Ta	2	G
79	Ta	3	C
79	Ta	5	G
79	Ta	7	G
79	Ta	8	U
79	Ta	9	G
79	Ta	16	C
79	Ta	17	C
79	Ta	18	C
79	Ta	19	G
79	Ta	21	U
79	Ta	22	A
79	Ta	23	G
79	Ta	26	C

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Mol	Chain	Res	Type
79	Ta	28	U
79	Ta	30	G
79	Ta	32	G
79	Ta	33	C
79	Ta	34	U
79	Ta	35	A
79	Ta	37	G
79	Ta	48	U
79	Ta	49	C
79	Ta	50	G
79	Ta	51	U
79	Ta	52	C
79	Ta	54	G
79	Ta	56	U
79	Ta	57	C
79	Ta	58	A
79	Ta	59	A
79	Ta	60	A
79	Ta	62	C
79	Ta	63	C
79	Ta	64	G
79	Ta	65	G
79	Ta	67	C
79	Ta	69	C
79	Ta	70	C
79	Ta	71	G
79	Ta	72	C
79	Ta	73	A
79	Ta	74	A
79	Ta	75	C
80	Tb	2	G
80	Tb	3	C
80	Tb	4	G
80	Tb	5	G
80	Tb	8	U
80	Tb	9	G
80	Tb	10	G
80	Tb	14	A
80	Tb	16	C
80	Tb	17	C
80	Tb	18	C
80	Tb	21	U

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Mol	Chain	Res	Type
80	Tb	36	U
80	Tb	37	C
80	Tb	47	G
80	Tb	48	U
80	Tb	50	G
80	Tb	53	G
80	Tb	54	G
80	Tb	58	A
80	Tb	60	A
80	Tb	61	U
80	Tb	62	C
80	Tb	67	C
80	Tb	68	C
80	Tb	70	C
80	Tb	71	G
80	Tb	72	C
80	Tb	73	A
80	Tb	75	C
80	Tb	77	A

All (46) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	LA	873	C
1	LA	916	G
1	LA	1064	A
1	LA	1097	G
1	LA	1307	G
1	LA	2112	U
1	LA	2284	C
1	LA	2445	A
1	LA	2448	G
1	LA	2758	A
1	LA	3069	G
1	LA	3121	U
1	LA	3228	C
1	LA	3269	U
1	LA	3350	C
3	LC	85	G
3	LC	155	A
45	S2	387	A
45	S2	504	U

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Mol	Chain	Res	Type
45	S2	511	A
45	S2	539	G
45	S2	541	A
45	S2	555	A
45	S2	609	U
45	S2	639	U
45	S2	711	U
45	S2	739	G
45	S2	763	G
45	S2	803	A
45	S2	819	G
45	S2	829	A
45	S2	848	C
45	S2	963	A
45	S2	1207	C
45	S2	1273	G
45	S2	1274	C
45	S2	1344	A
45	S2	1382	A
45	S2	1430	U
45	S2	1446	A
45	S2	1458	G
45	S2	1480	G
45	S2	1534	G
45	S2	1558	U
45	S2	1584	G
45	S2	1597	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

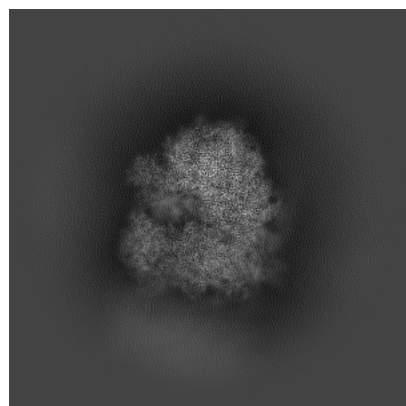
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-60094. These allow visual inspection of the internal detail of the map and identification of artifacts.

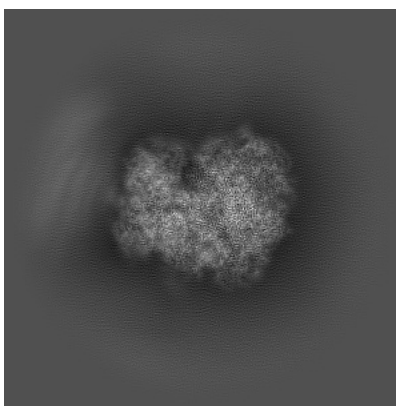
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

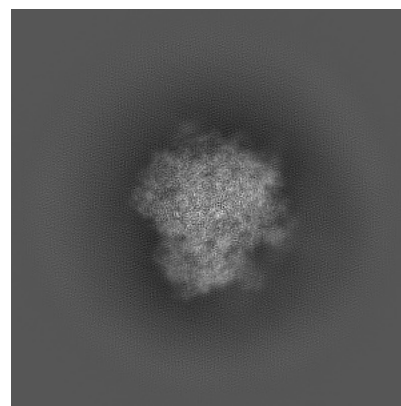
6.1.1 Primary map



X

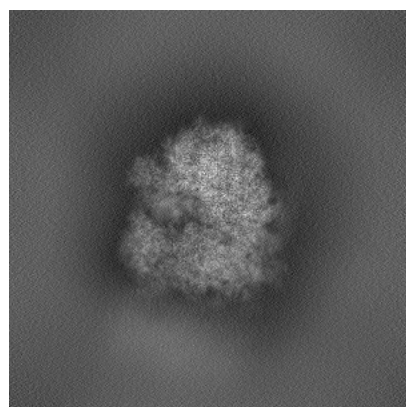


Y

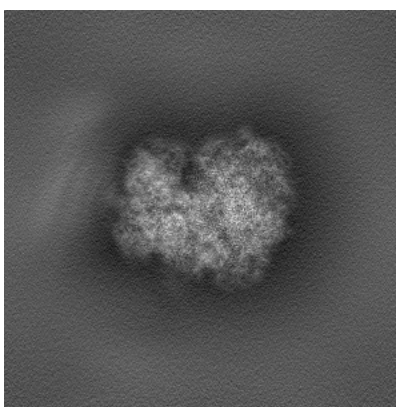


Z

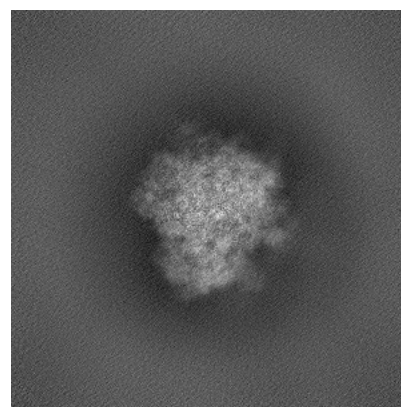
6.1.2 Raw map



X



Y

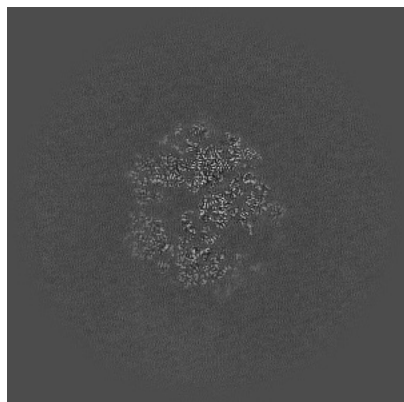


Z

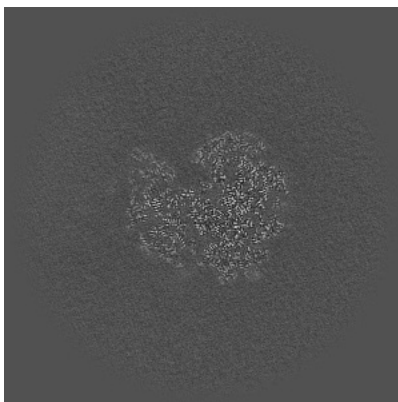
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

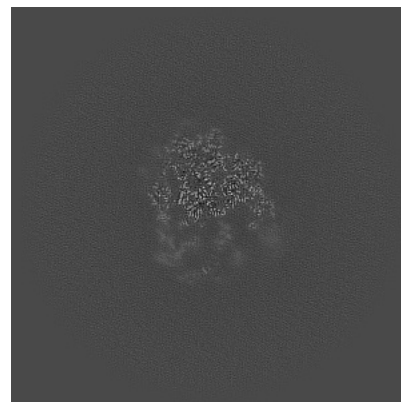
6.2.1 Primary map



X Index: 300

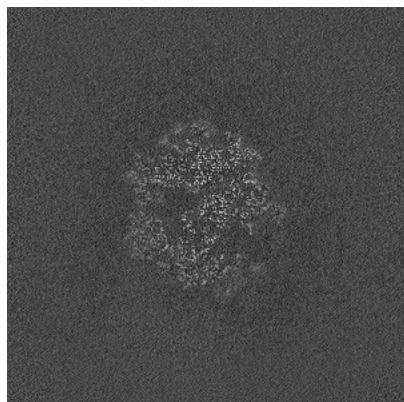


Y Index: 300

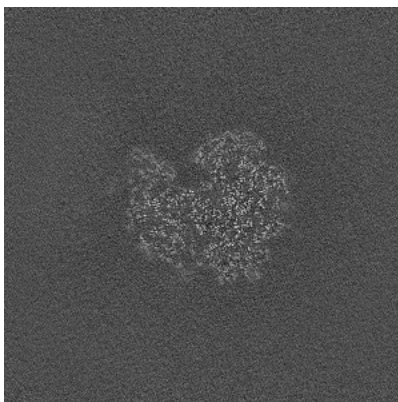


Z Index: 300

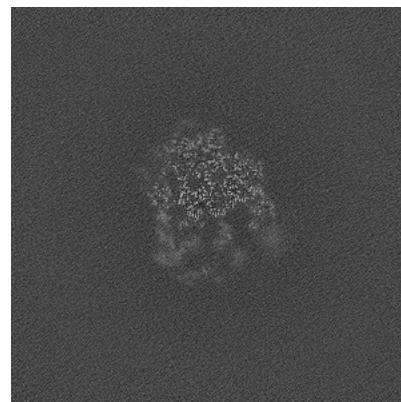
6.2.2 Raw map



X Index: 300



Y Index: 300

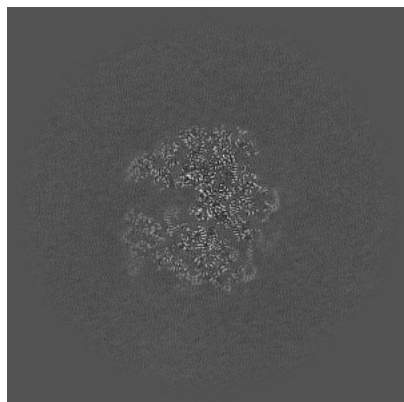


Z Index: 300

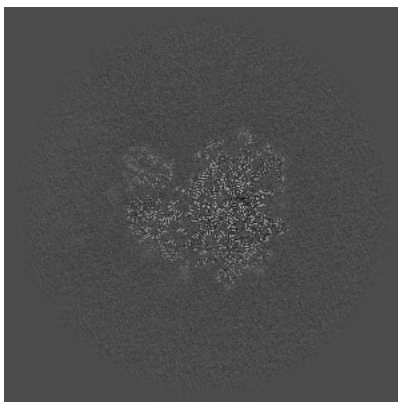
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

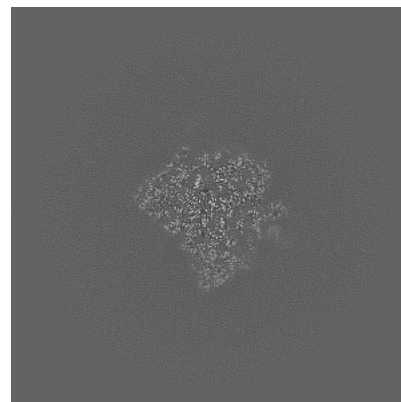
6.3.1 Primary map



X Index: 283

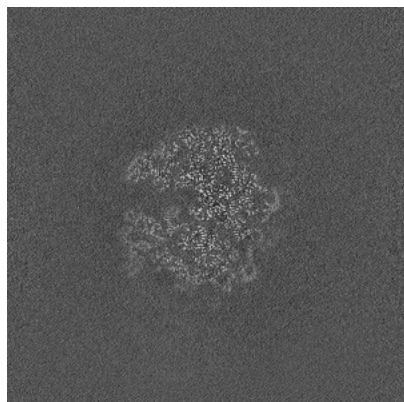


Y Index: 309

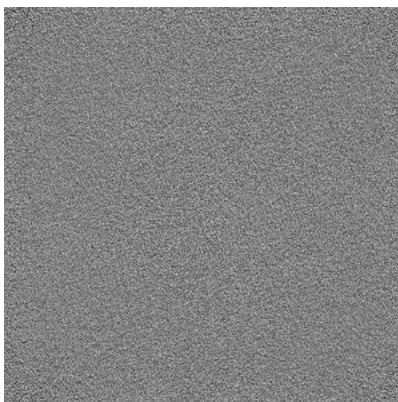


Z Index: 345

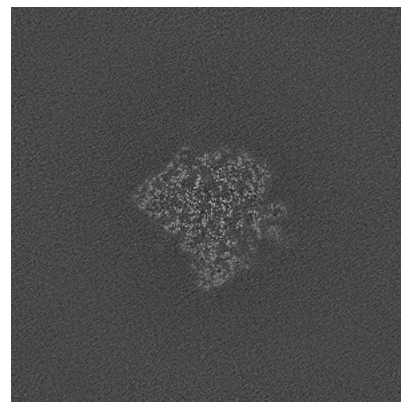
6.3.2 Raw map



X Index: 283



Y Index: 0

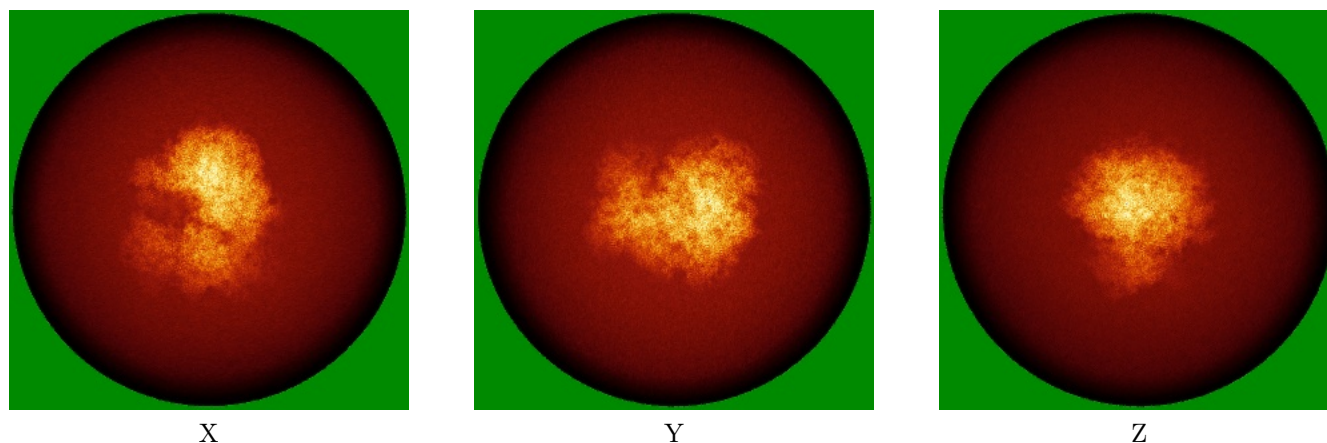


Z Index: 345

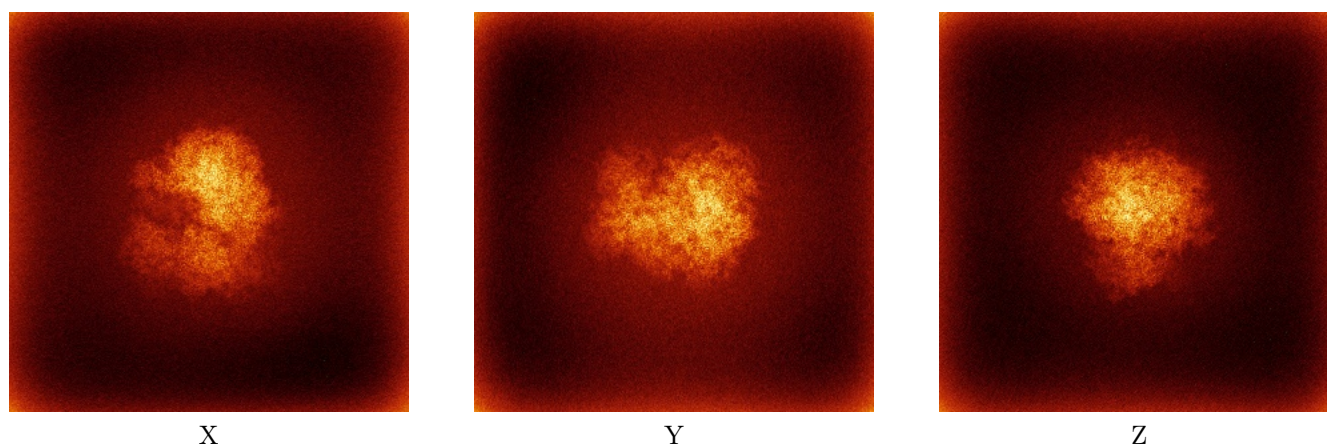
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



6.4.2 Raw map



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](#)

This section was not generated.

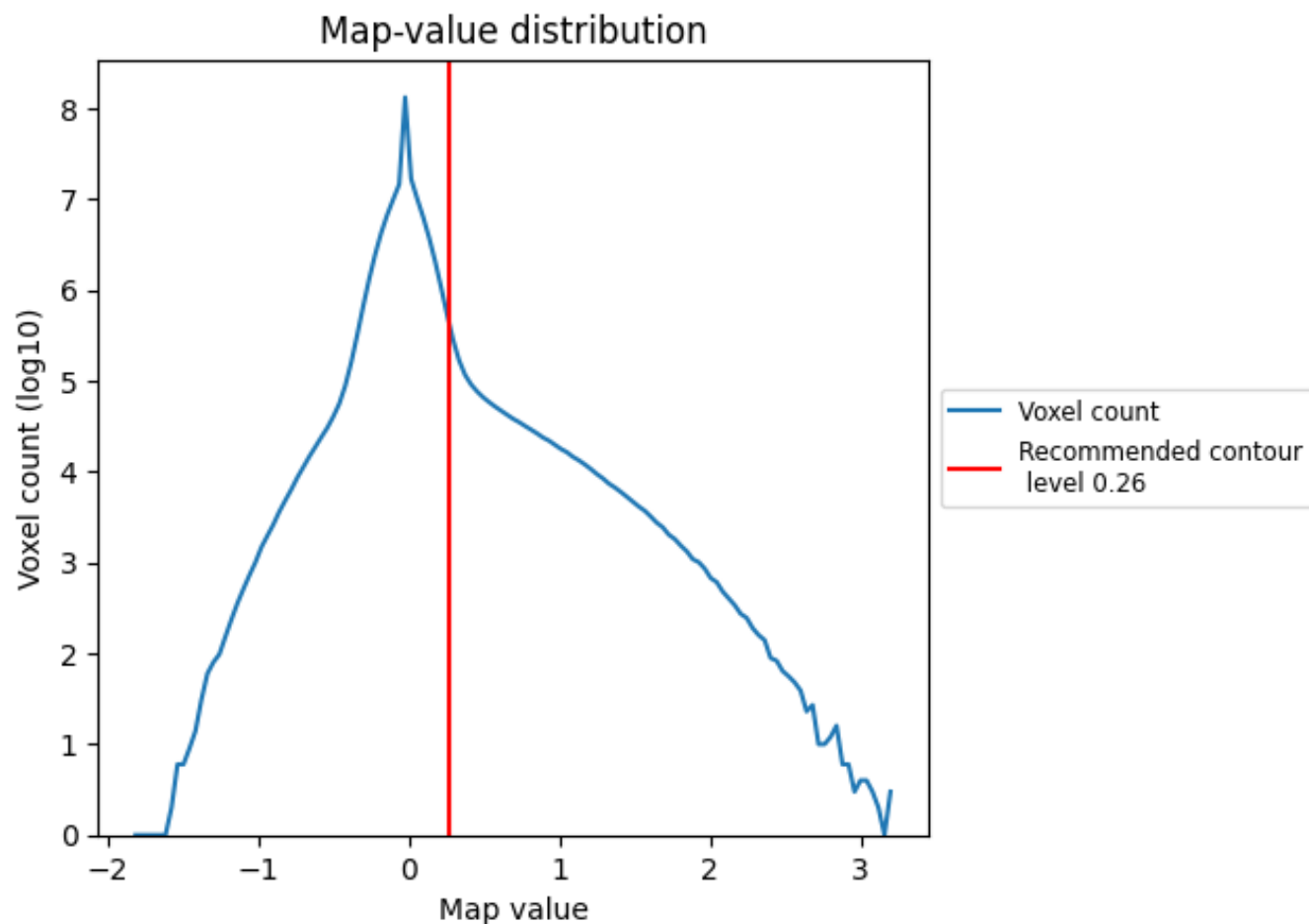
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

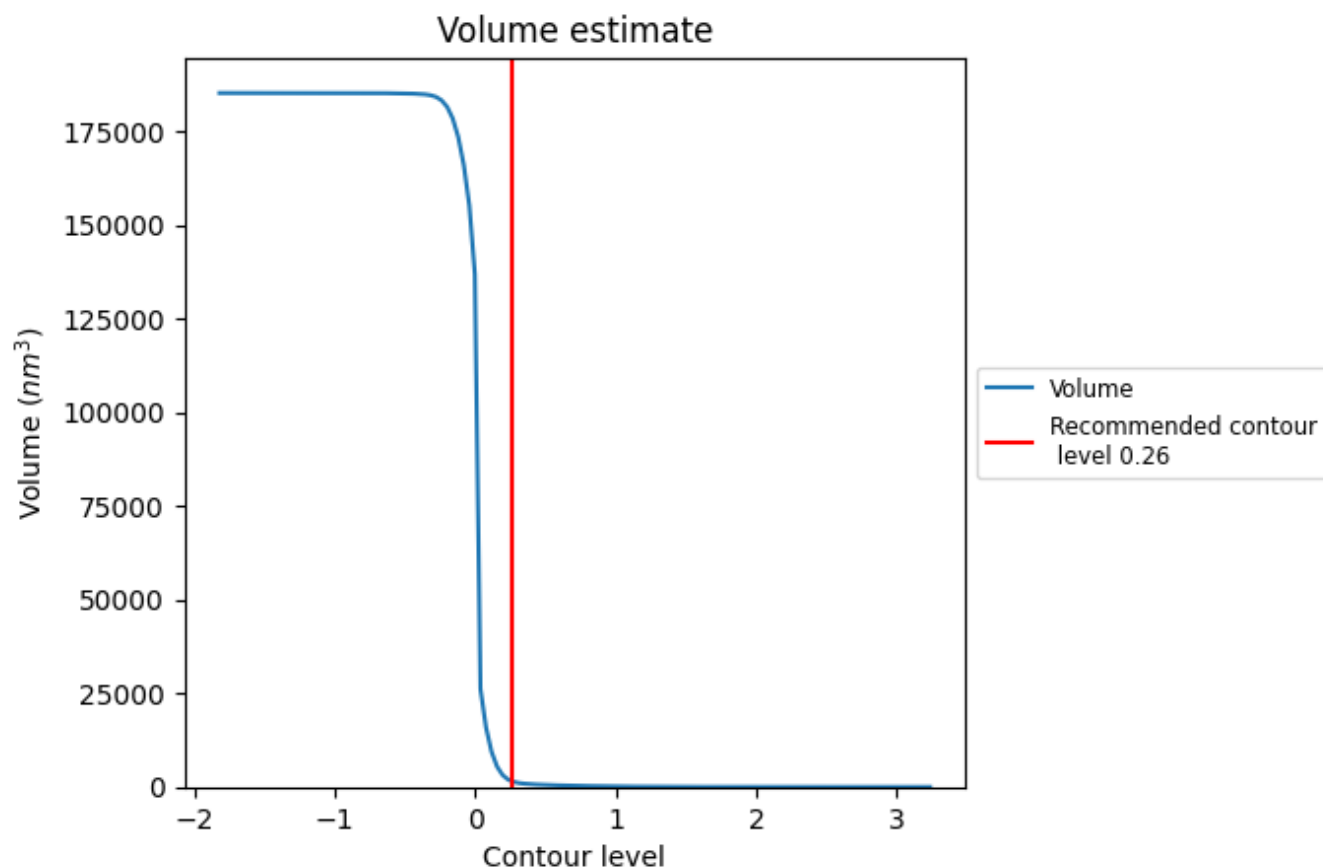
This section contains the results of statistical analysis of the map.

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.

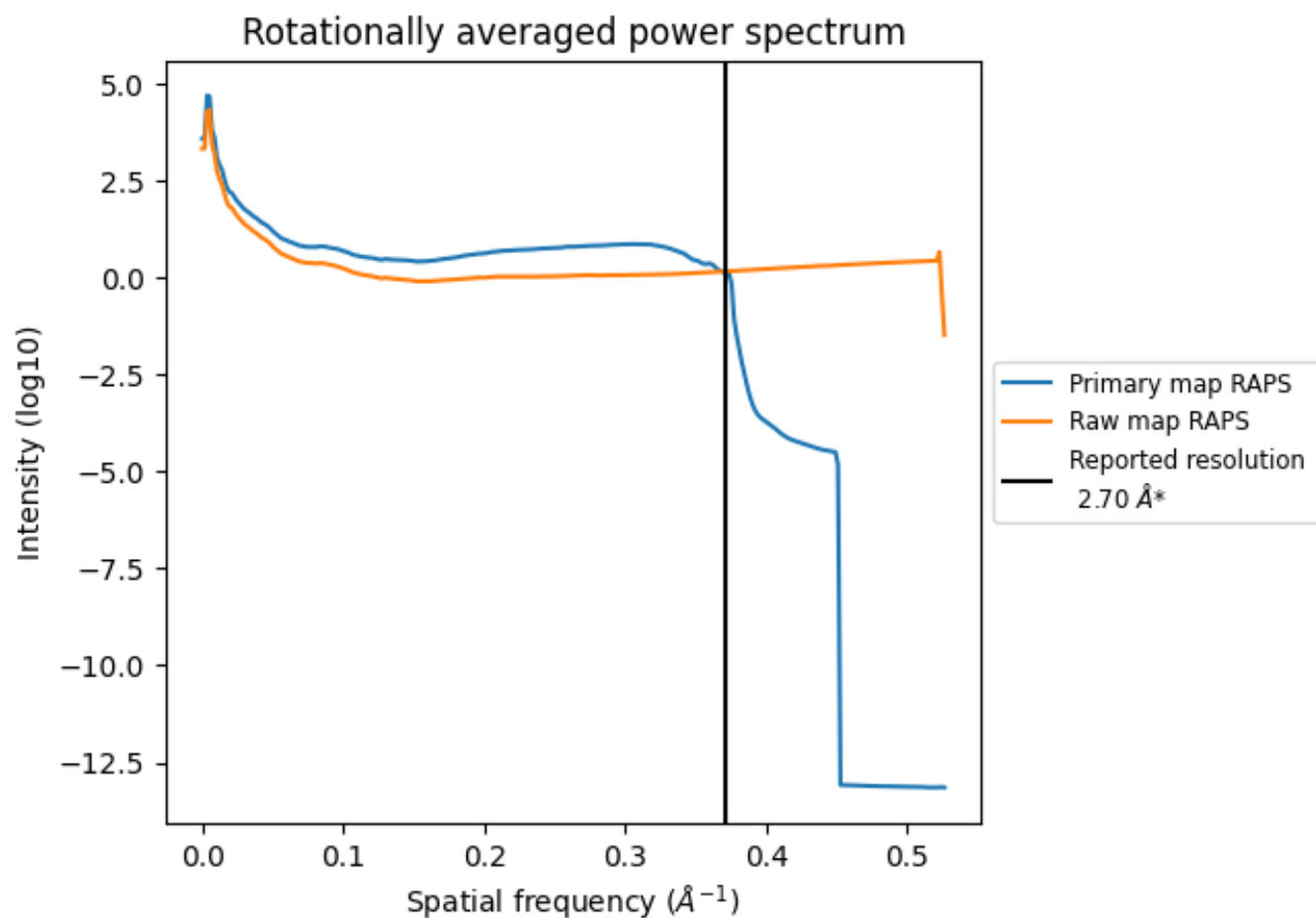
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1584 nm^3 ; this corresponds to an approximate mass of 1431 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 ⓘ

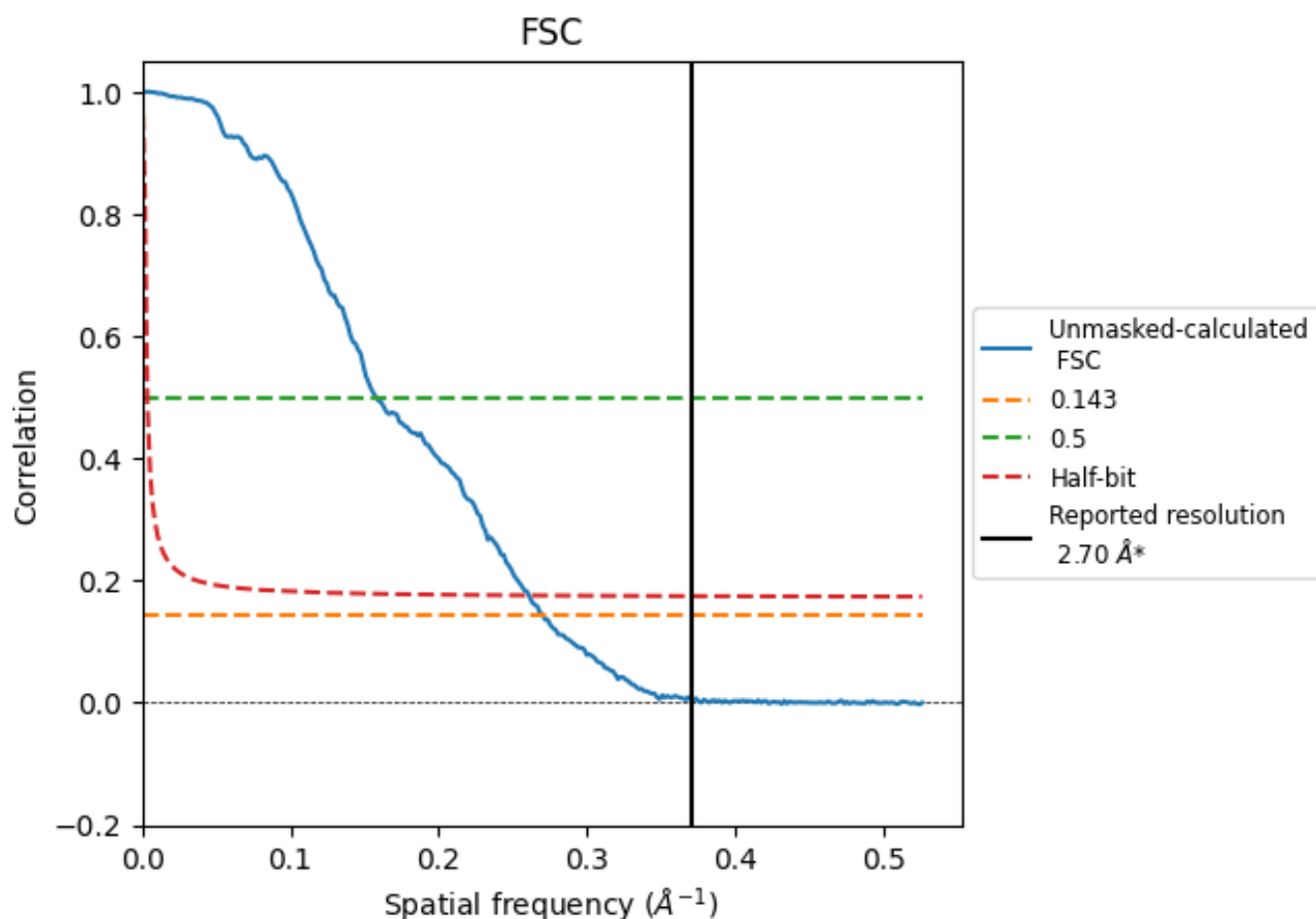


*Reported resolution corresponds to spatial frequency of 0.370 Å⁻¹

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 0.370 Å⁻¹

8.2 Resolution estimates [i](#)

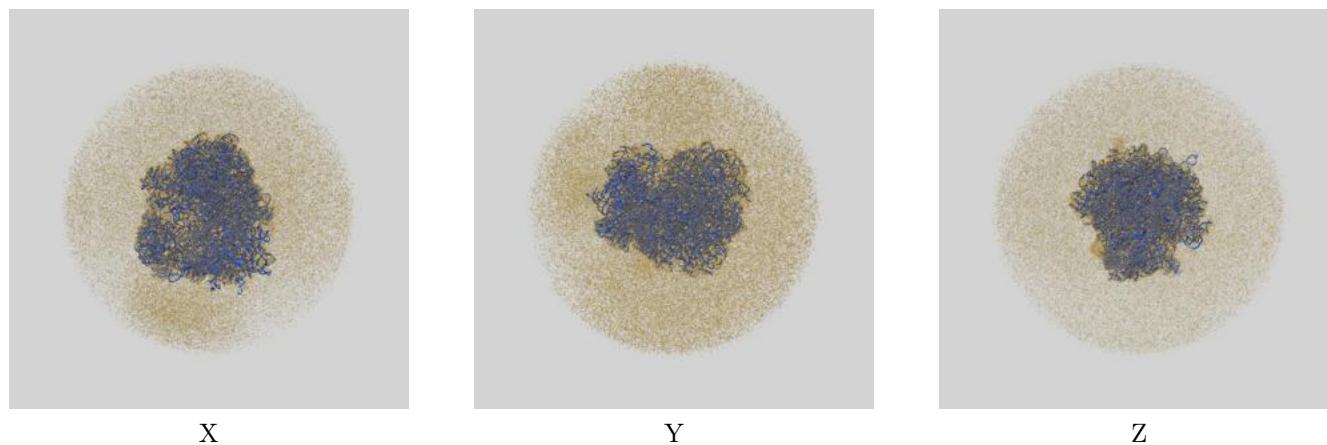
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.70	6.34	3.83

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.70 differs from the reported value 2.7 by more than 10 %

9 Map-model fit [i](#)

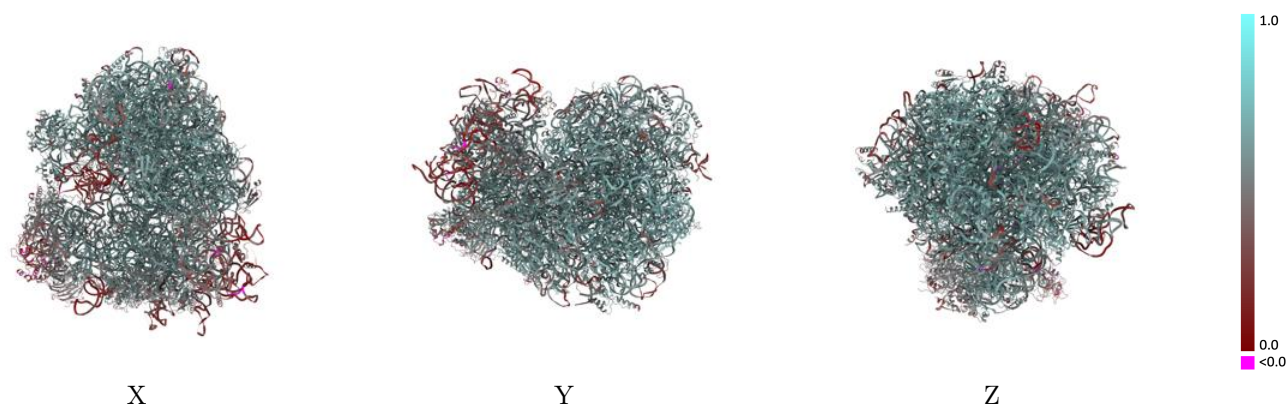
This section contains information regarding the fit between EMDB map EMD-60094 and PDB model 8ZH3. Per-residue inclusion information can be found in section [3](#) on page [19](#).

9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.26 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](#)

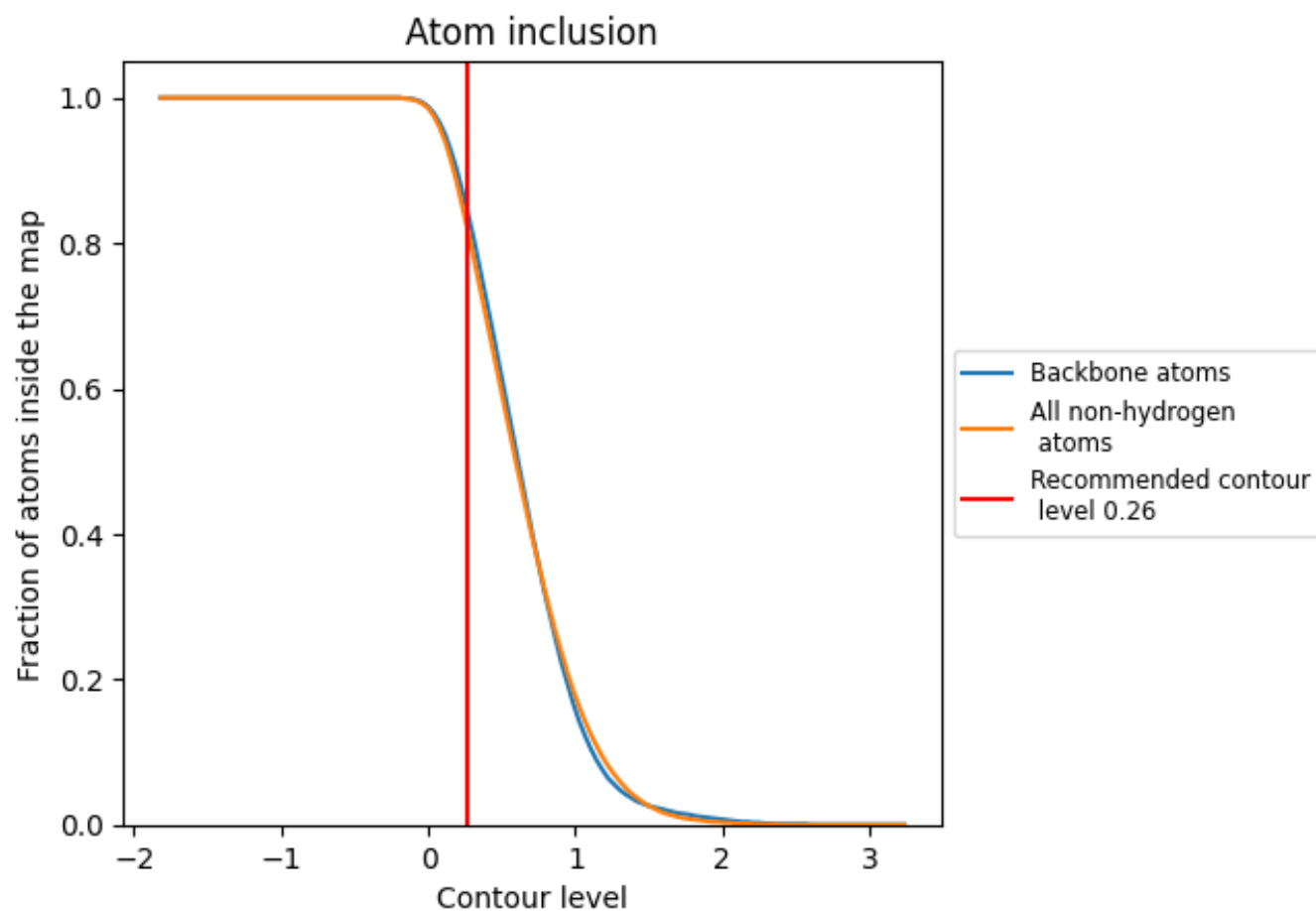


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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](#)

This section was not generated.

9.4 Atom inclusion ⓘ



At the recommended contour level, 85% 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 (0.26) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8270	 0.5510
LA	 0.9040	 0.5850
LB	 0.9610	 0.6070
LC	 0.9360	 0.6000
LD	 0.9450	 0.6420
LE	 0.9120	 0.6070
LF	 0.9110	 0.6120
LG	 0.8170	 0.5570
LH	 0.8040	 0.5400
LI	 0.9110	 0.6170
LJ	 0.8130	 0.5490
LK	 0.8310	 0.5690
LL	 0.8740	 0.6040
LM	 0.8030	 0.5450
LN	 0.8740	 0.5910
LO	 0.8600	 0.5700
LP	 0.9620	 0.6420
LQ	 0.9110	 0.6050
LR	 0.8880	 0.6070
LS	 0.9510	 0.6350
LT	 0.8000	 0.5640
LU	 0.9050	 0.6070
LV	 0.9040	 0.6120
LW	 0.6670	 0.4810
LX	 0.9200	 0.6200
LY	 0.9040	 0.6100
LZ	 0.8750	 0.6030
La	 0.9170	 0.6190
Lb	 0.8420	 0.5710
Lc	 0.9310	 0.6300
Ld	 0.8760	 0.5890
Le	 0.8650	 0.5870
Lf	 0.8450	 0.5810
Lg	 0.8810	 0.6100
Lh	 0.9350	 0.6320



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Chain	Atom inclusion	Q-score
Li	 0.8790	 0.5970
Lj	 0.8930	 0.5980
Lk	 0.8430	 0.5630
Ll	 0.9660	 0.6450
Lm	 0.6540	 0.4900
Ln	 0.9080	 0.6160
Lo	 0.8990	 0.6060
Lp	 0.8560	 0.6170
Lq	 0.9060	 0.6170
Lr	 0.9250	 0.6330
S2	 0.7870	 0.5050
SA	 0.6520	 0.5100
SB	 0.6090	 0.4650
SC	 0.5300	 0.4260
SD	 0.1310	 0.2180
SE	 0.6800	 0.4680
SF	 0.6630	 0.4800
SG	 0.6000	 0.4490
SH	 0.6790	 0.4980
SI	 0.6220	 0.4530
SJ	 0.5220	 0.4360
SK	 0.4050	 0.3760
SL	 0.6240	 0.4530
SM	 0.8060	 0.5490
SN	 0.2150	 0.2700
SO	 0.4670	 0.3910
SP	 0.7360	 0.5050
SQ	 0.7770	 0.5360
SR	 0.8430	 0.5870
SS	 0.7360	 0.5220
ST	 0.5320	 0.4140
SU	 0.6410	 0.4880
SV	 0.6880	 0.4860
SW	 0.6660	 0.4870
SX	 0.8140	 0.5670
SY	 0.8570	 0.5830
SZ	 0.8400	 0.5640
Sa	 0.7980	 0.5530
Sb	 0.9110	 0.6210
Sc	 0.8510	 0.5880
Sd	 0.6520	 0.4500
Se	 0.8920	 0.6010

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Chain	Atom inclusion	Q-score
Sf	 0.7550	 0.5430
Sg	 0.6480	 0.4640
Ta	 0.4490	 0.2740
Tb	 0.5820	 0.3670
mR	 0.9320	 0.5910