Full wwPDB EM Validation Report ⓘ

May 12, 2025 – 01:34 AM JST

PDB ID	:	8ZGR / pdb_00008zgr
EMDB ID	:	EMD-60088
Title	:	80S ribosome with A/A tRNA and mRNA of WNV
Authors	:	Wu, M.; Yuan, S.
Deposited on	:	2024-05-09
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:

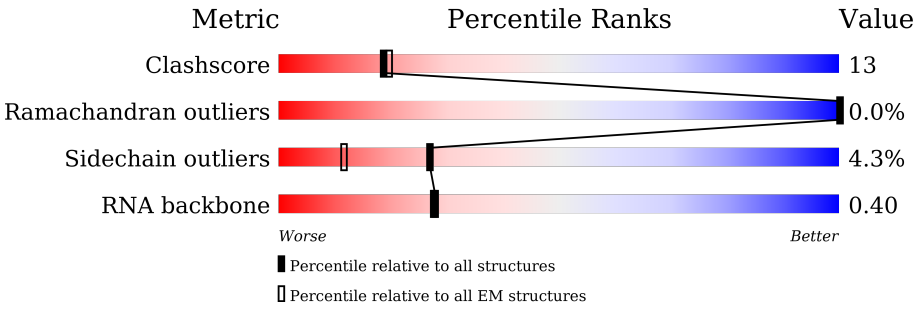
EMDB validation analysis	:	0.0.1.dev118
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

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 <=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	9% 46% 40% 8% 6%
2	LB	121	50% 40% 10%
3	LC	158	5% 37% 53% 9%
4	LD	251	65% 31%
5	LE	386	72% 28%
6	LF	361	65% 34%
7	LG	294	11% 65% 34%

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Mol	Chain	Length	Quality of chain
8	LH	175	12% 67% 26% 5%
9	LI	222	75% 25%
10	LJ	233	12% 68% 31%
11	LK	191	5% 57% 38% 5%
12	LL	218	9% 56% 41%
13	LM	169	18% 54% 42%
14	LN	193	6% 72% 26%
15	LO	136	5% 69% 29%
16	LP	203	65% 34%
17	LQ	197	68% 30%
18	LR	183	9% 79% 20%
19	LS	185	66% 34%
20	LT	188	15% 73% 27%
21	LU	171	68% 28%
22	LV	159	5% 65% 31%
23	LW	100	16% 71% 27%
24	LX	136	68% 31%
25	LY	65	69% 31%
26	LZ	121	69% 28%
27	La	125	66% 31%
28	Lb	135	5% 68% 30%
29	Lc	148	69% 28%
30	Ld	58	66% 33%
31	Le	96	69% 29%
32	Lf	109	11% 72% 28%

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Mol	Chain	Length	Quality of chain
33	Lg	127	9% 71% 28%
34	Lh	106	69% 28%
35	Li	112	71% 29%
36	Lj	119	70% 30%
37	Lk	99	6% 72% 27%
38	Ll	81	70% 30%
39	Lm	77	23% 66% 32%
40	Ln	50	74% 26%
41	Lo	52	75% 25%
42	Lp	25	12% 56% 44%
43	Lq	103	77% 23%
44	Lr	91	73% 26%
45	S2	1800	38% 32% 48% 19%
46	SA	223	88% 65% 32%
47	SB	206	95% 68% 31%
48	SC	92	96% 57% 42%
49	SD	124	98% 66% 31%
50	SE	117	82% 62% 37%
51	SF	141	91% 57% 40%
52	SG	125	85% 58% 36%
53	SH	145	88% 58% 39%
54	SI	143	88% 57% 43%
55	SJ	101	87% 66% 33%
56	SK	82	100% 73% 27%
57	SL	63	89% 67% 33%

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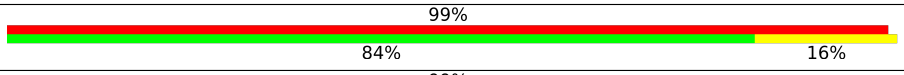
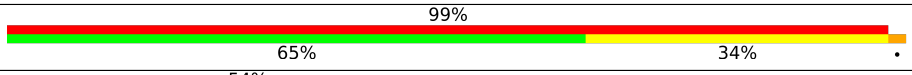
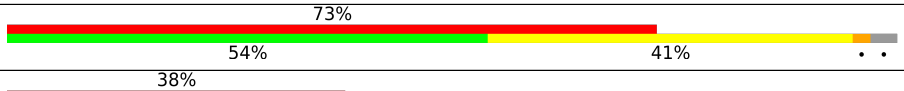
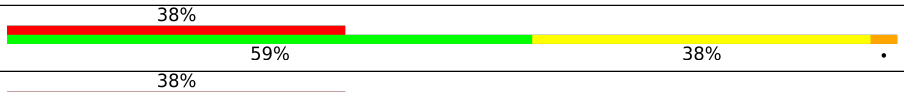
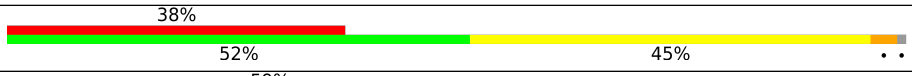
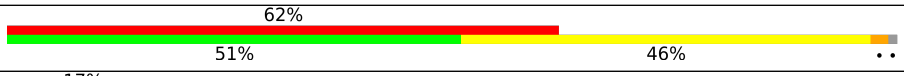
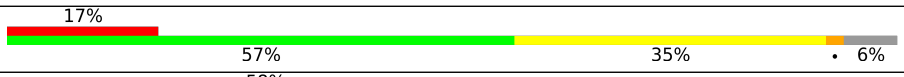
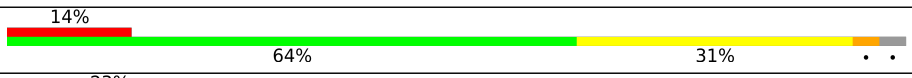
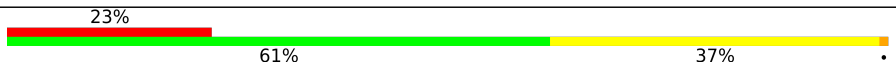
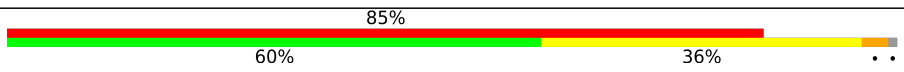
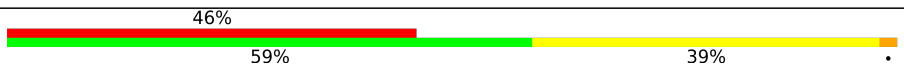
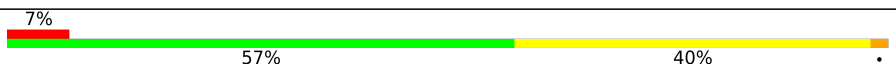
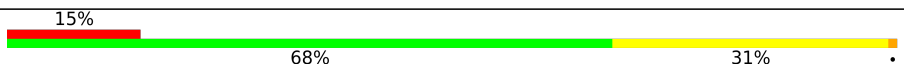
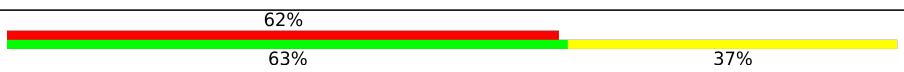
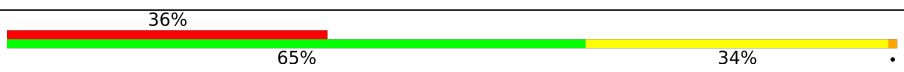
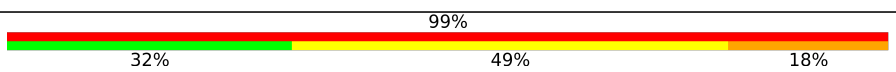
Mol	Chain	Length	Quality of chain
58	SM	53	
59	SN	73	
60	SO	312	
61	SP	206	
62	SQ	232	
63	SR	217	
64	SS	260	
65	ST	228	
66	SU	185	
67	SV	199	
68	SW	185	
69	SX	146	
70	SY	150	
71	SZ	128	
72	Sa	87	
73	Sb	129	
74	Sc	144	
75	Sd	134	
76	Se	97	
77	Sf	81	
78	Sg	57	
79	Ta	77	

2 Entry composition (i)

There are 79 unique types of molecules in this entry. The entry contains 200681 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
			Total	C	N	O	P		
1	LA	3184	68091	30415	12259	22233	3184	0	0

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
			Total	C	N	O	P		
2	LB	121	2579	1152	461	845	121	0	0

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

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

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

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

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

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

- 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	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	0	0
			1515	932	323	260		

- 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	0	0
			1437	925	266	243	3		

- 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	0	0
			1272	802	245	221	4		

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

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

- 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	0	0
			1003	628	189	179	7		

- 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	0	0
			528	339	104	84	1		

- 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	0	0
			964	620	169	173	2		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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 (1800-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	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).

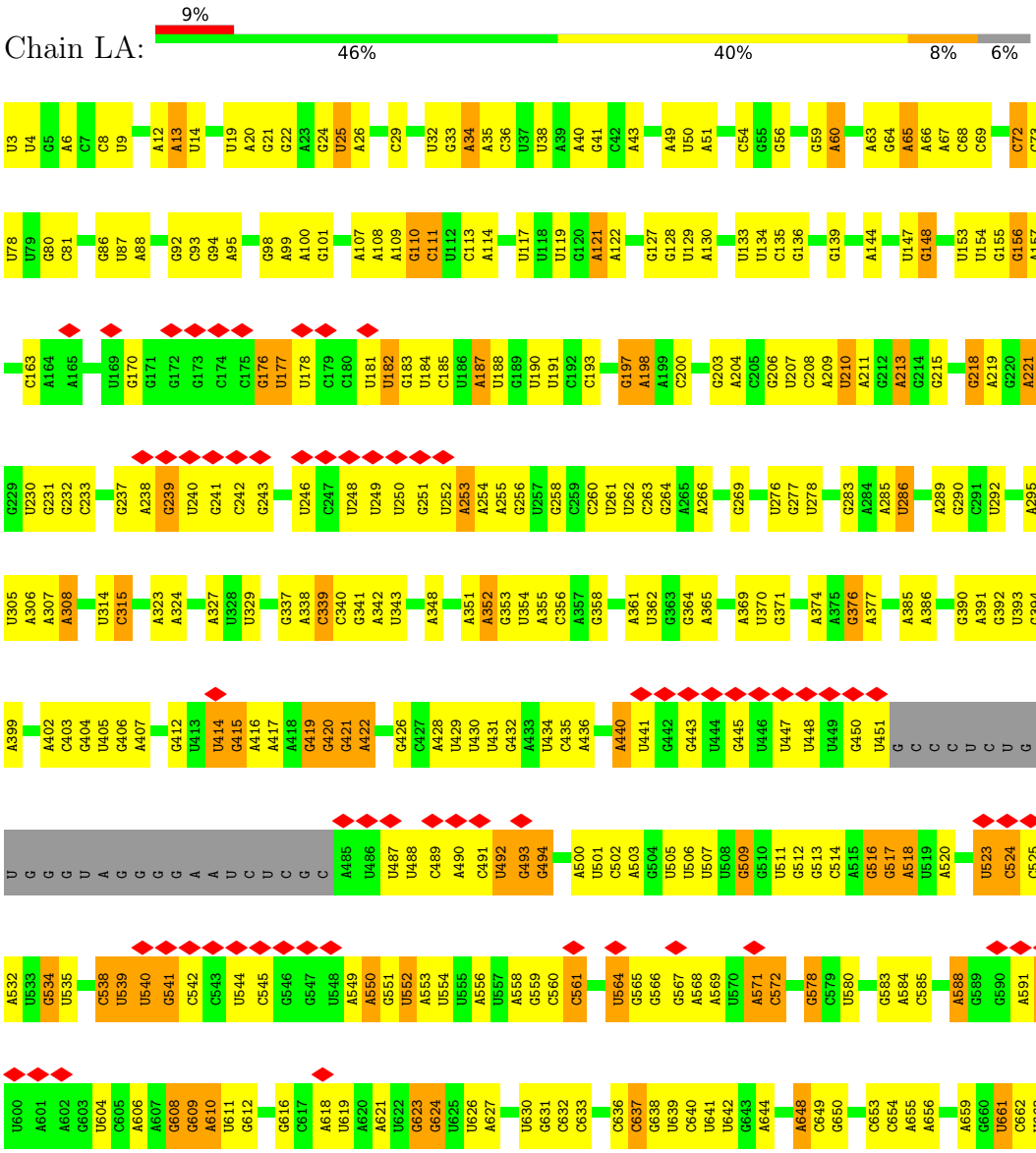
Mol	Chain	Residues	Atoms					AltConf	Trace
79	Ta	77	Total	C	N	O	P	0	0
			1644	732	298	537	77		

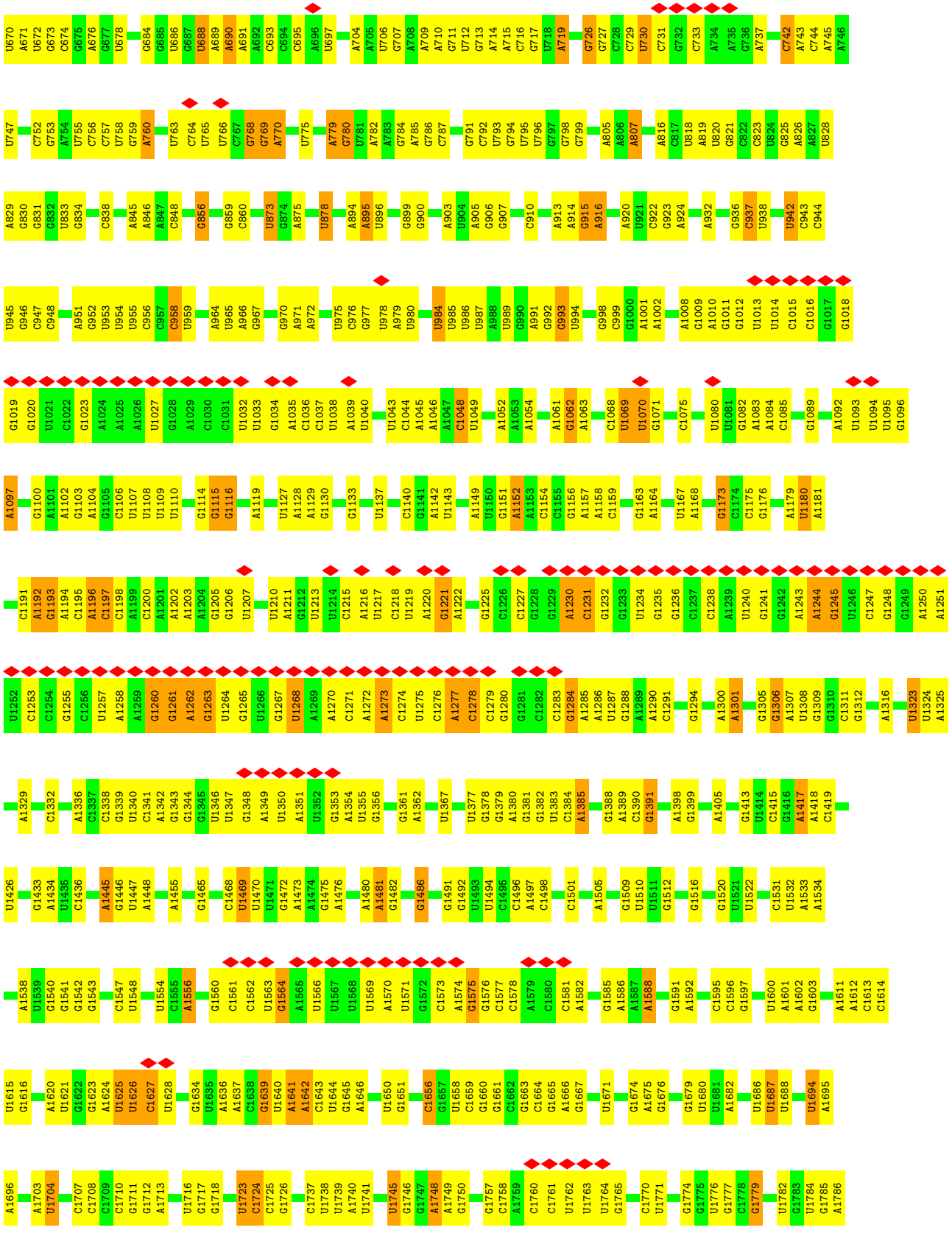
3 Residue-property plots (i)

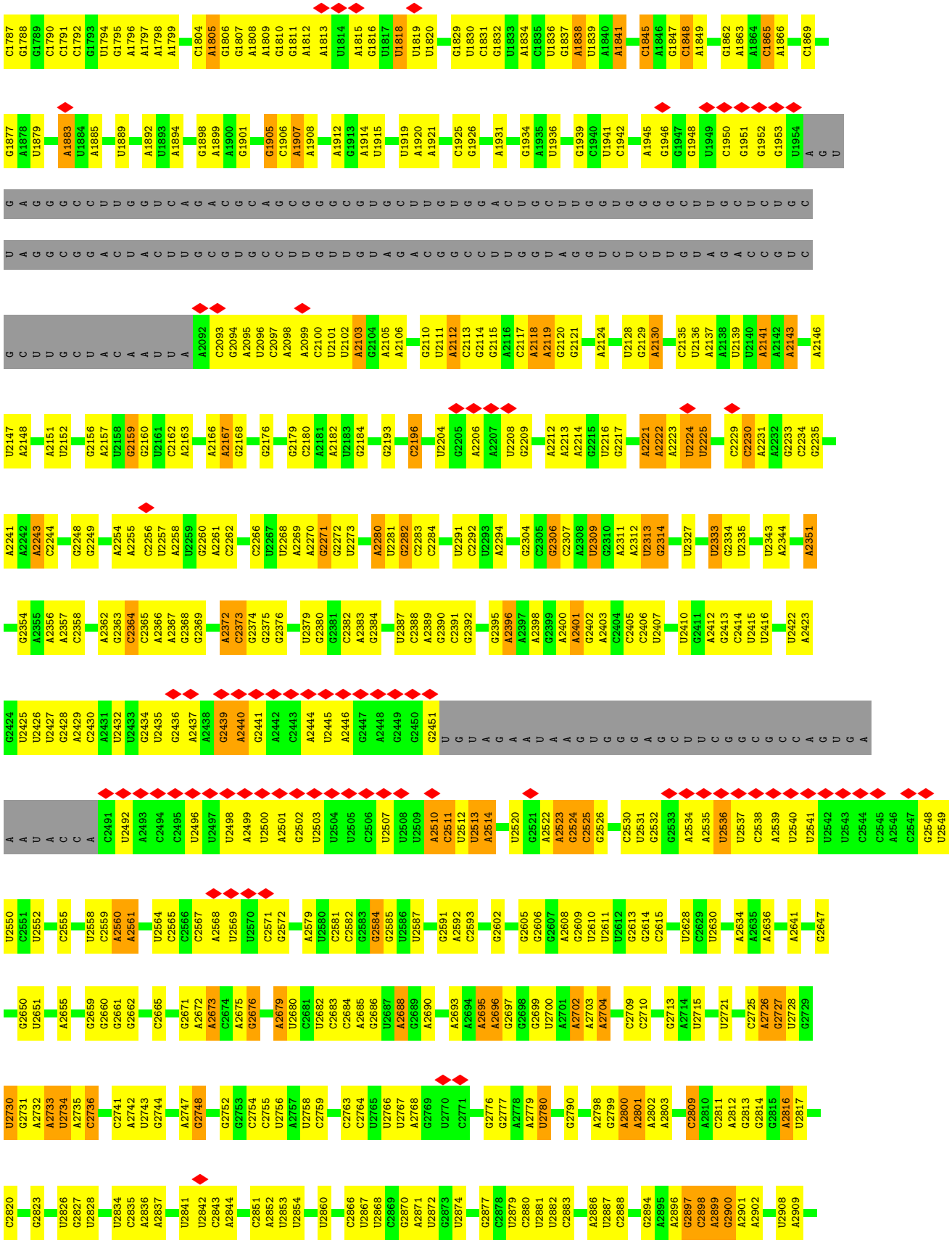
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

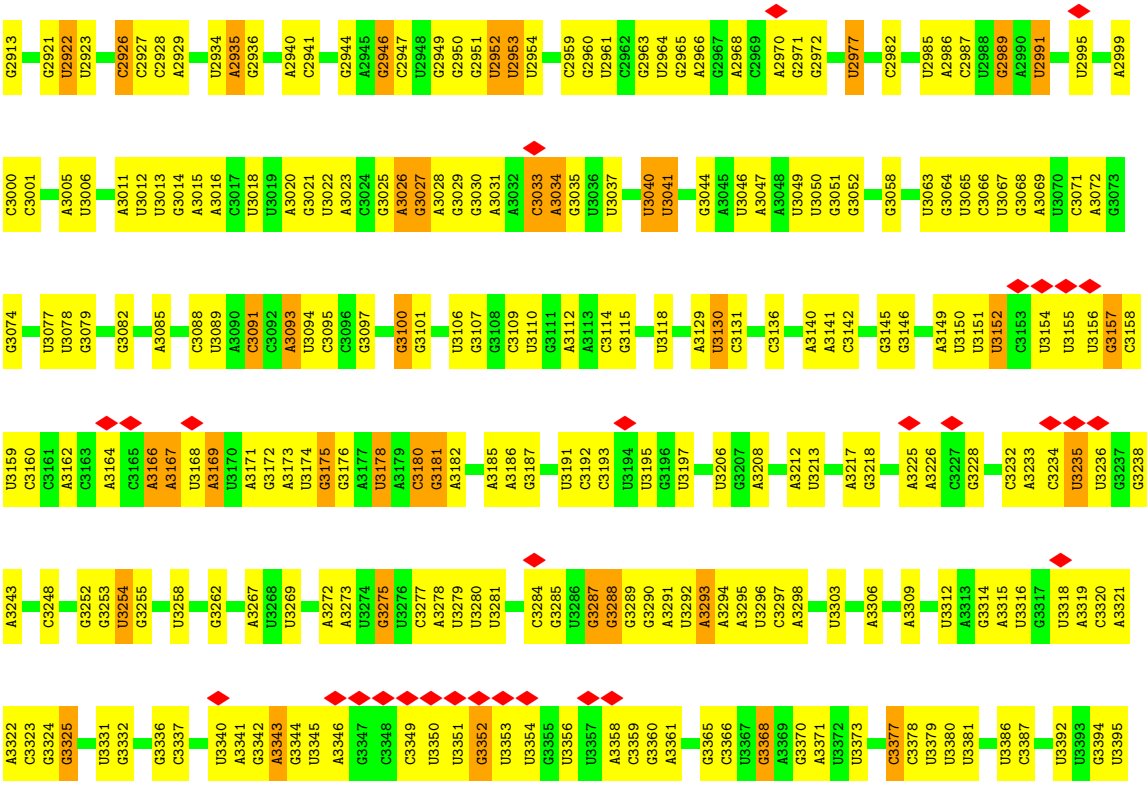
- Molecule 1: 25S rRNA (3393-MER)

Chain LA:



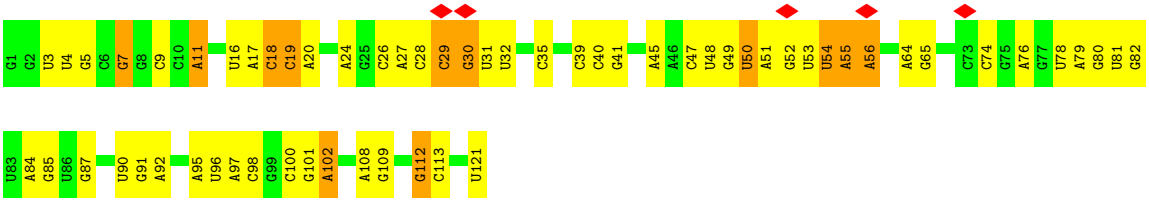






• Molecule 2: 5S rRNA (121-MER)

Chain LB:

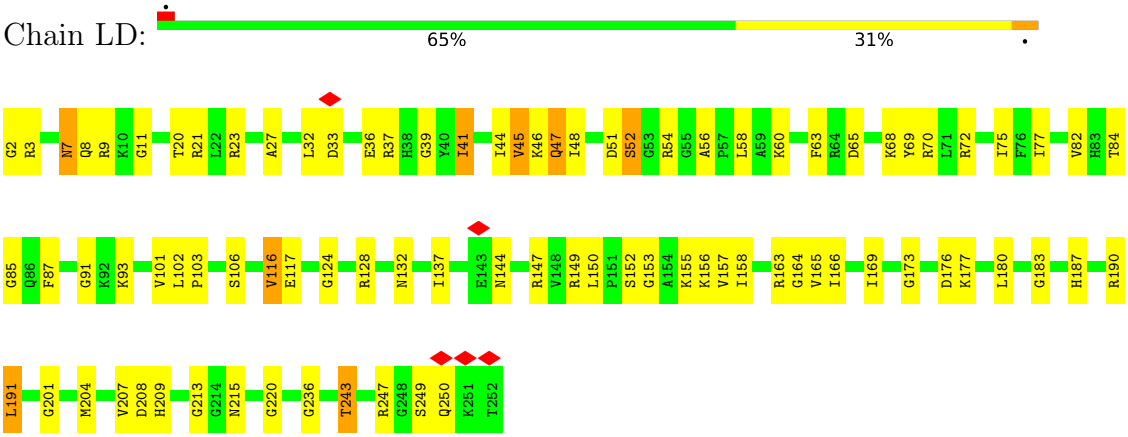


• Molecule 3: 5.8S rRNA (158-MER)

Chain LC:

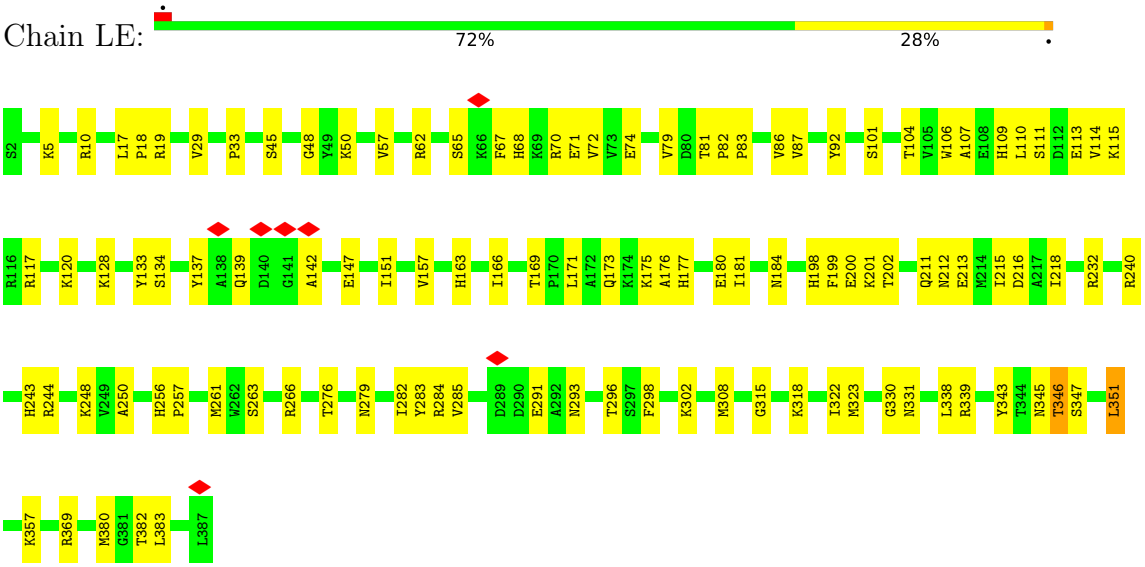
• Molecule 4: Large ribosomal subunit protein uL2A

Chain LD:



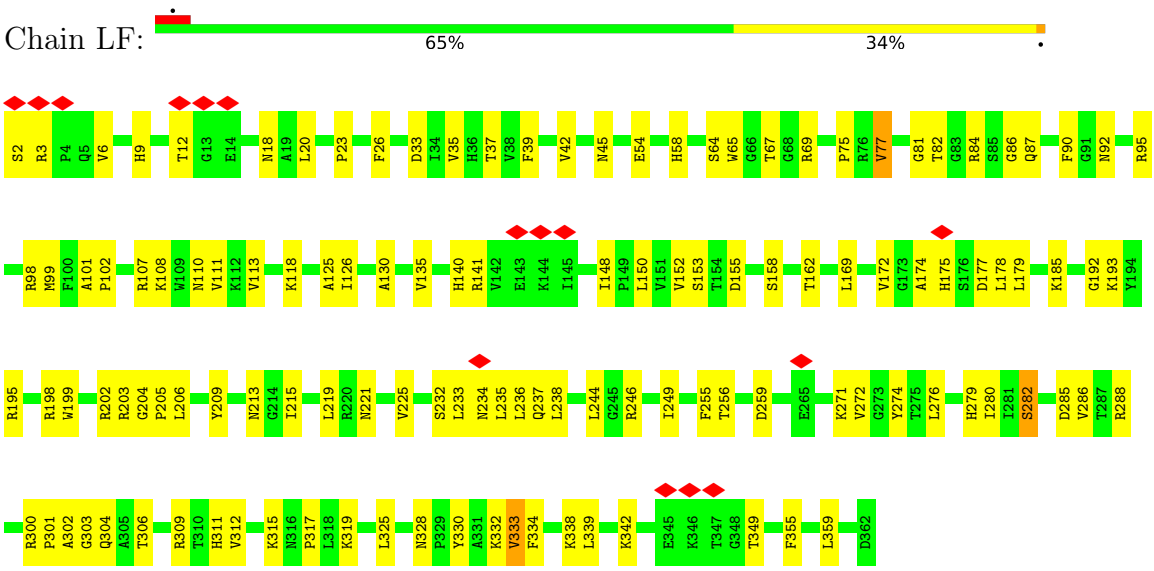
• Molecule 5: Large ribosomal subunit protein uL3

Chain LE:



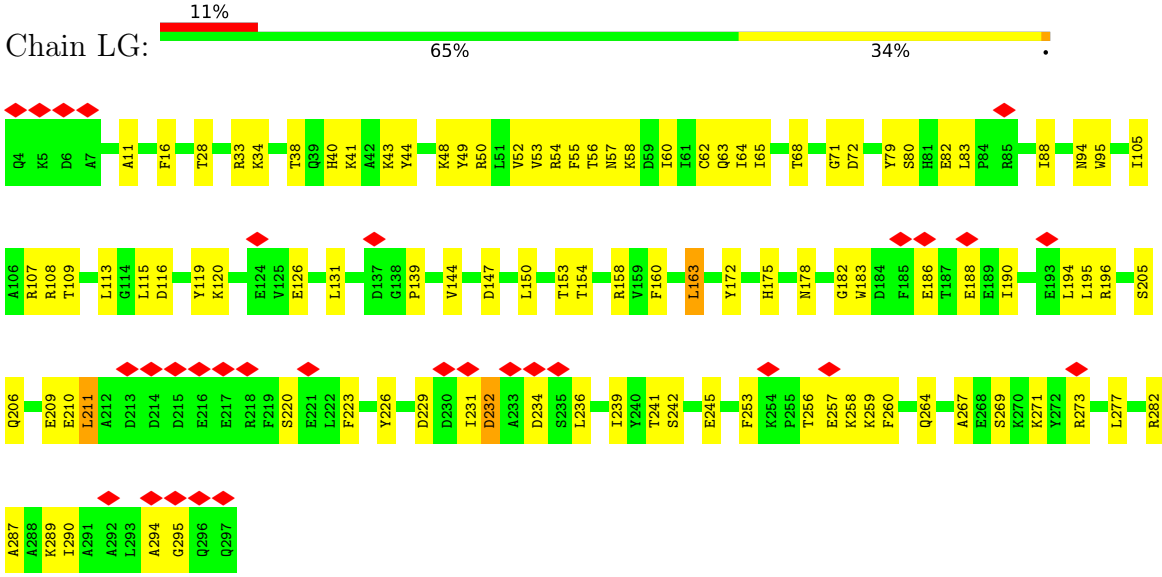
• Molecule 6: Large ribosomal subunit protein uL4A

Chain LF:



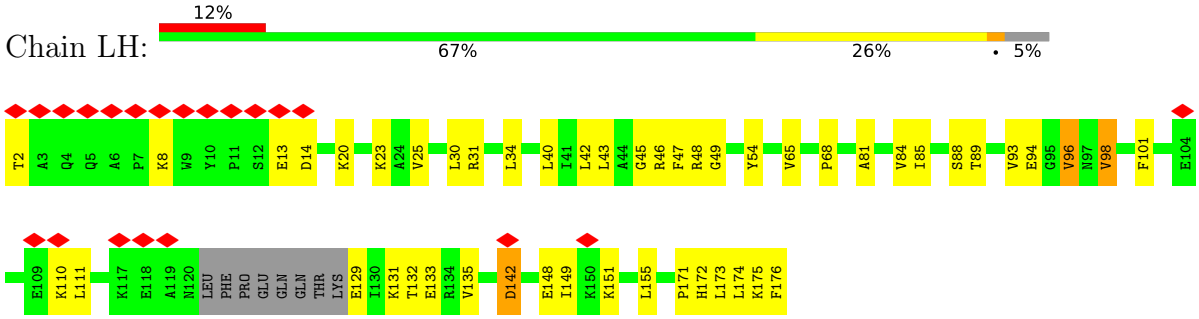
• Molecule 7: Large ribosomal subunit protein uL18

Chain LG:



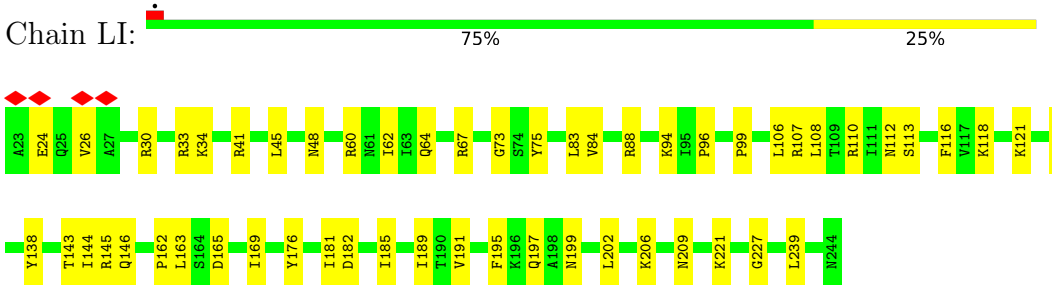
• Molecule 8: Large ribosomal subunit protein eL6B

Chain LH:



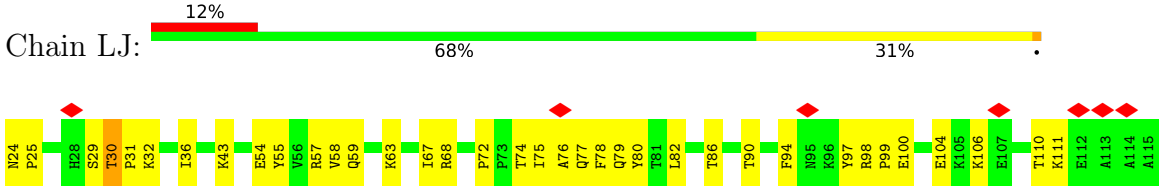
• Molecule 9: Large ribosomal subunit protein uL30A

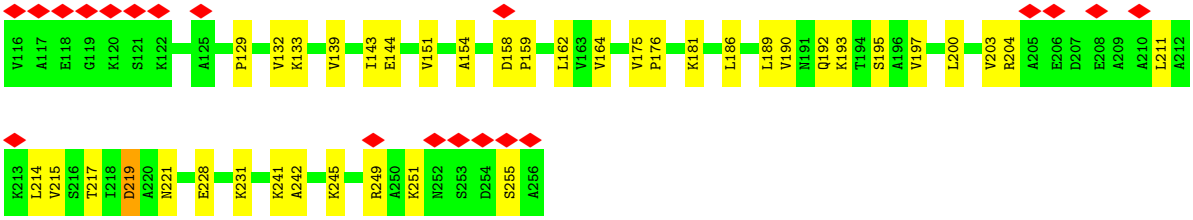
Chain LI:



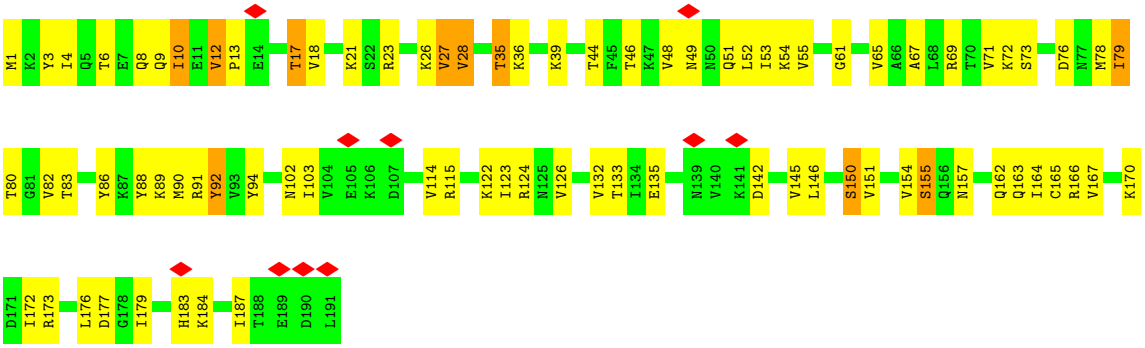
• Molecule 10: Large ribosomal subunit protein eL8A

Chain LJ:

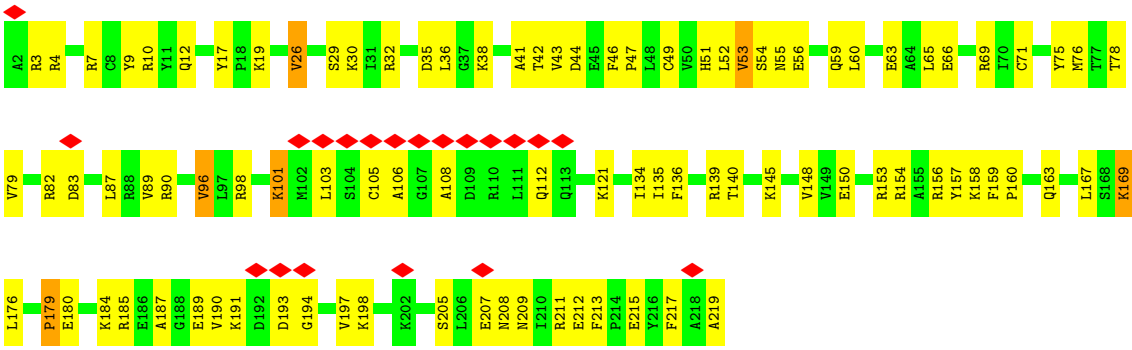




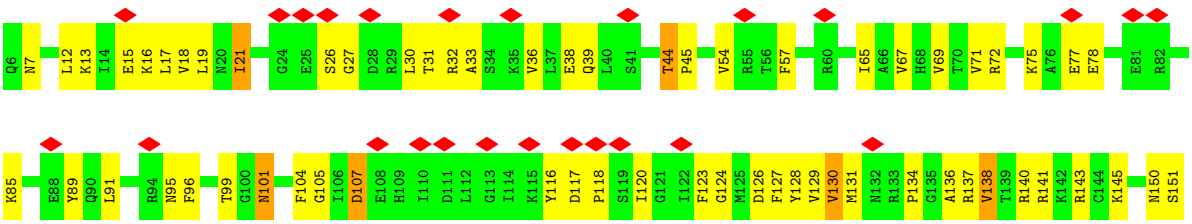
• Molecule 11: Large ribosomal subunit protein uL6A

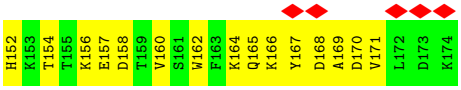


• Molecule 12: Large ribosomal subunit protein uL16

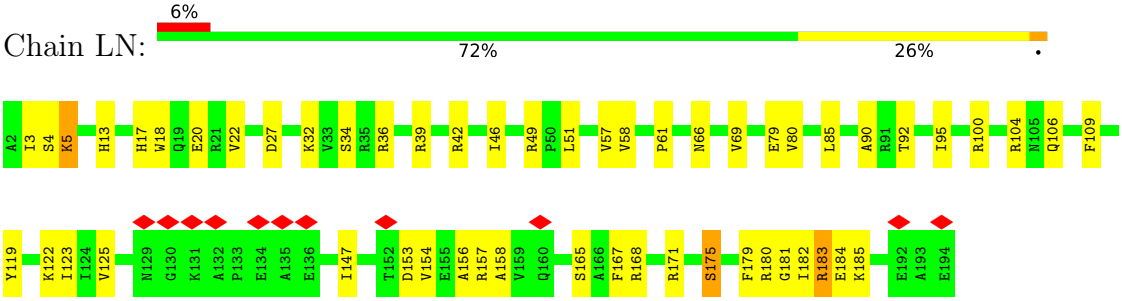


• Molecule 13: Large ribosomal subunit protein uL5B

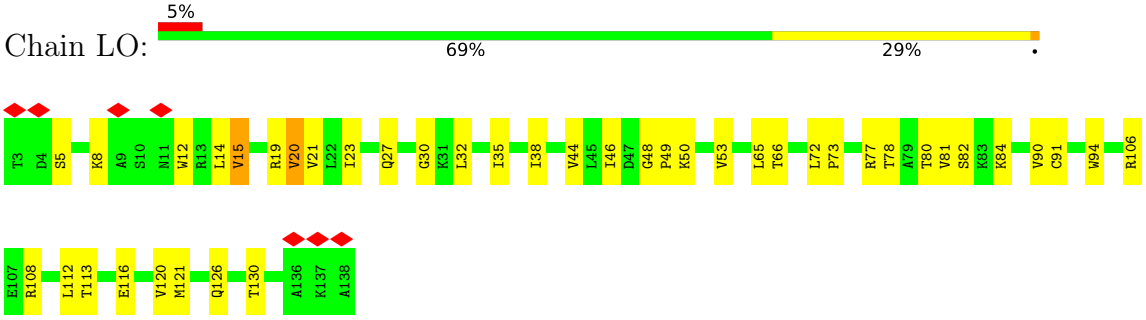




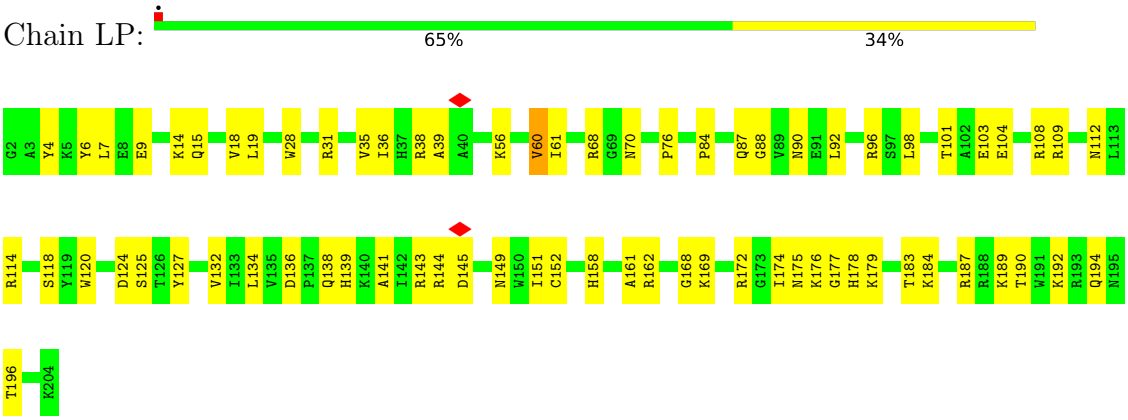
• Molecule 14: Large ribosomal subunit protein eL13A



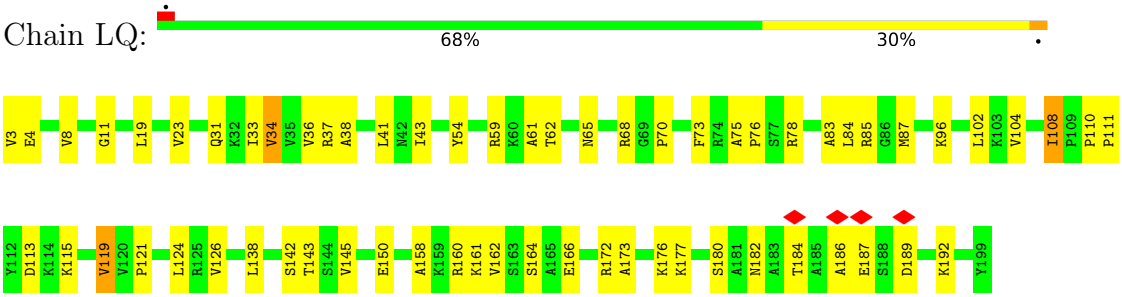
• Molecule 15: Large ribosomal subunit protein eL14A



• Molecule 16: Large ribosomal subunit protein eL15A

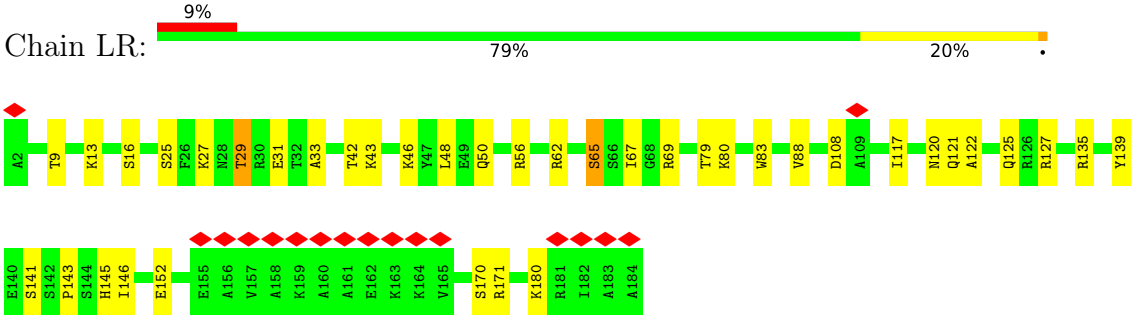


• Molecule 17: Large ribosomal subunit protein uL13A



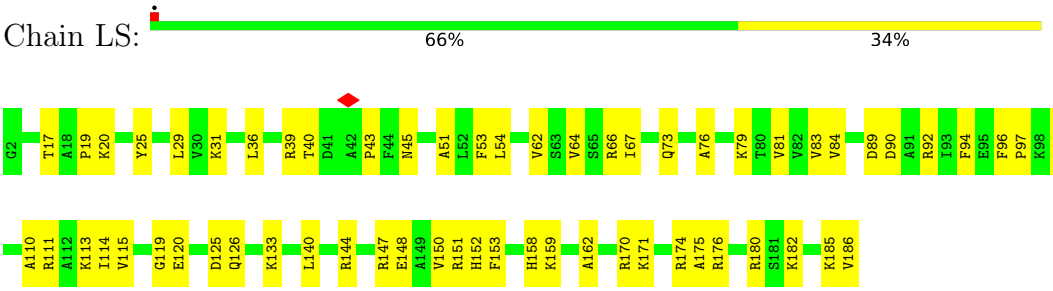
• Molecule 18: Large ribosomal subunit protein uL22A

Chain LR:



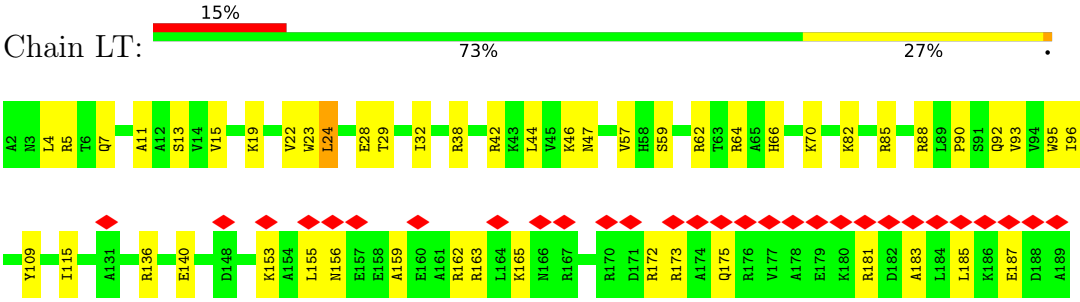
• Molecule 19: Large ribosomal subunit protein eL18A

Chain LS:



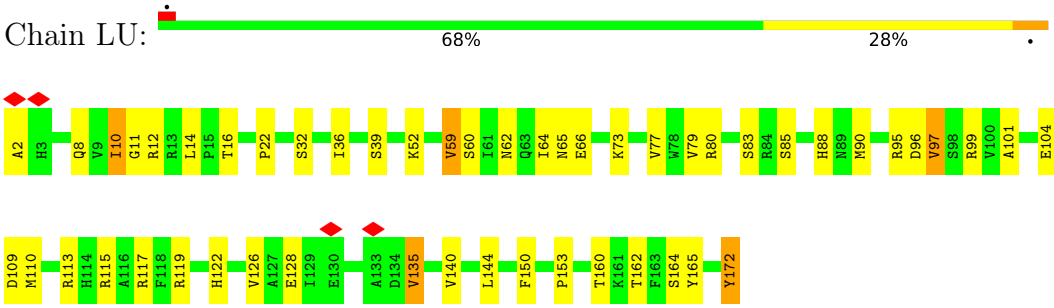
• Molecule 20: Large ribosomal subunit protein eL19A

Chain LT:



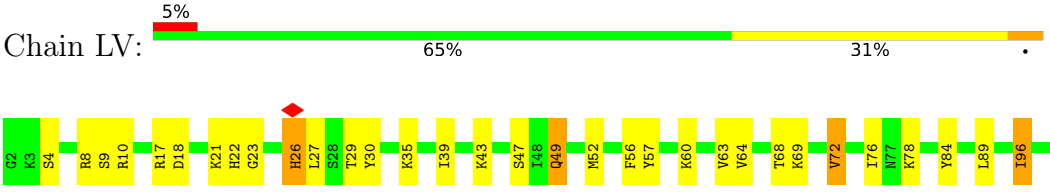
• Molecule 21: Large ribosomal subunit protein eL20A

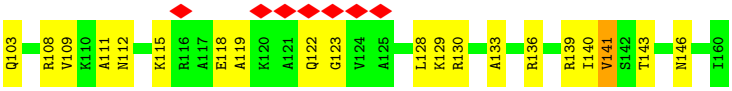
Chain LU:



• Molecule 22: Large ribosomal subunit protein eL21A

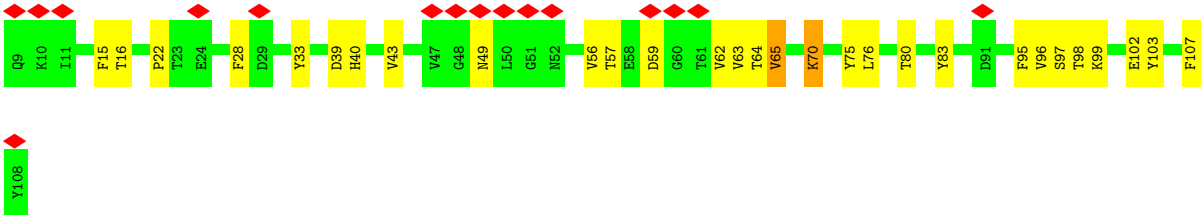
Chain LV:





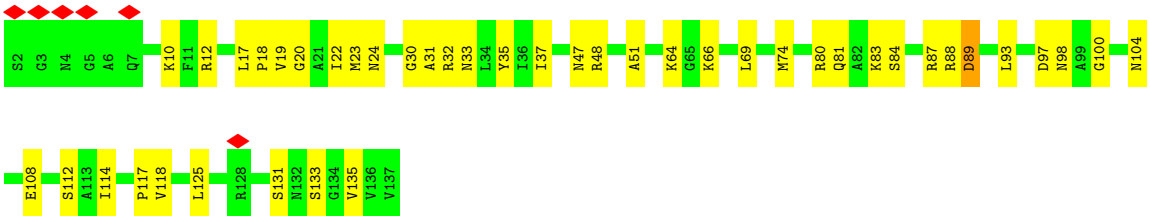
• Molecule 23: Large ribosomal subunit protein eL22A

Chain LW:



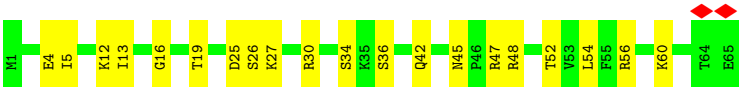
• Molecule 24: Large ribosomal subunit protein uL14A

Chain LX:



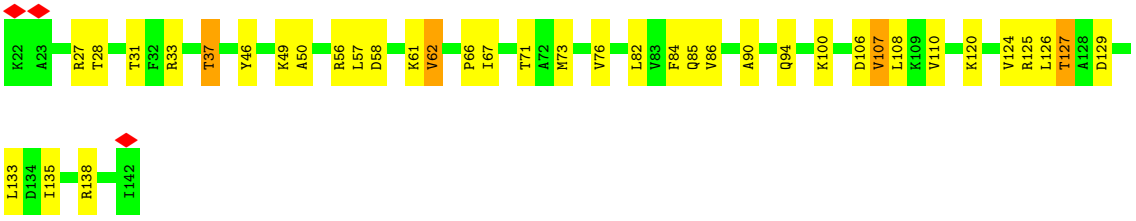
• Molecule 25: Large ribosomal subunit protein eL24A

Chain LY:



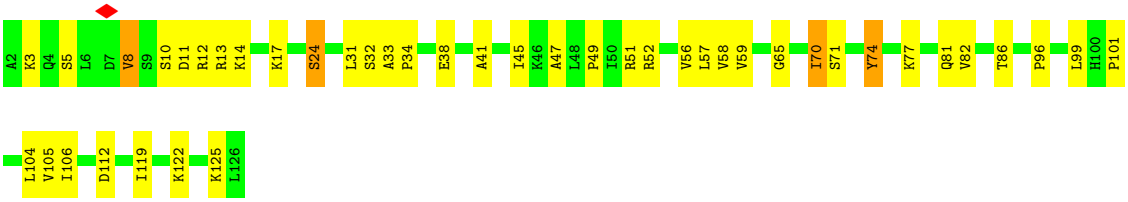
• Molecule 26: Large ribosomal subunit protein uL23

Chain LZ:

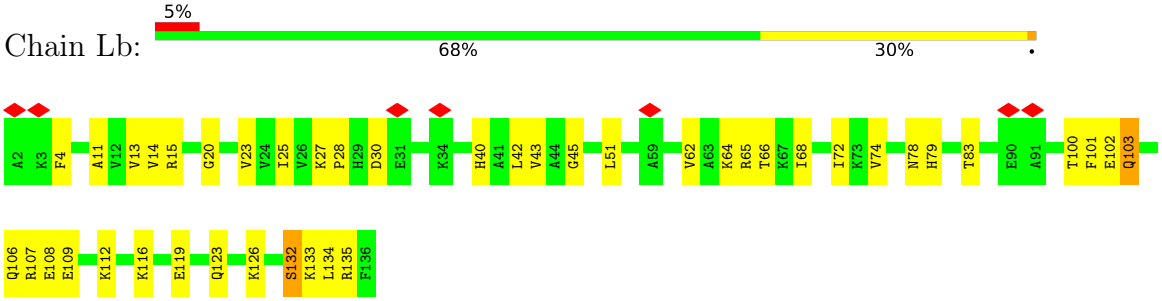


• Molecule 27: Large ribosomal subunit protein uL24A

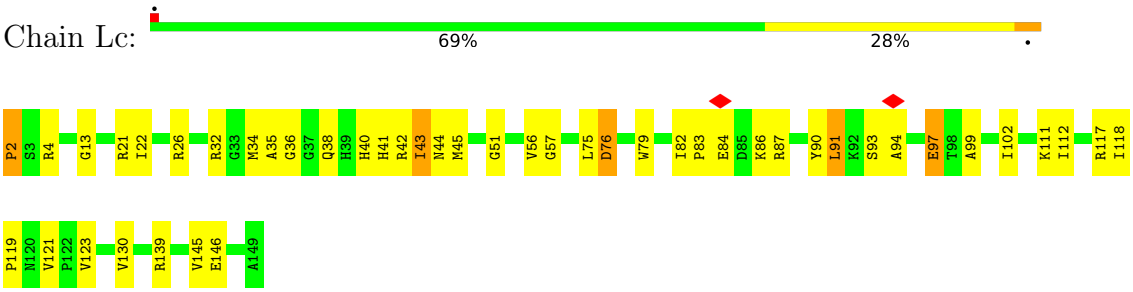
Chain La:



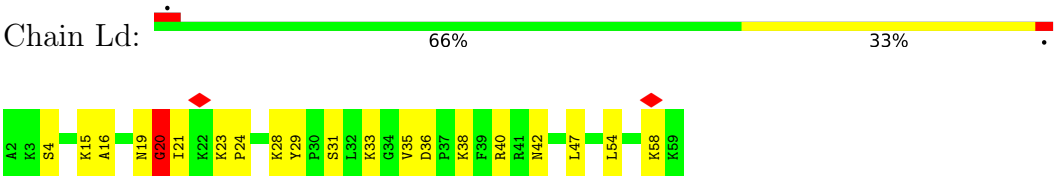
• Molecule 28: Large ribosomal subunit protein eL27A



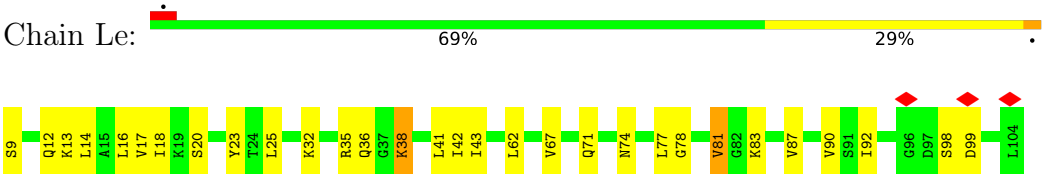
• Molecule 29: Large ribosomal subunit protein uL15



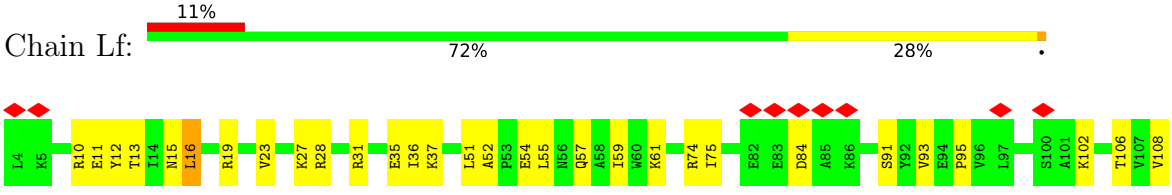
• Molecule 30: Large ribosomal subunit protein eL29



• Molecule 31: Large ribosomal subunit protein eL30

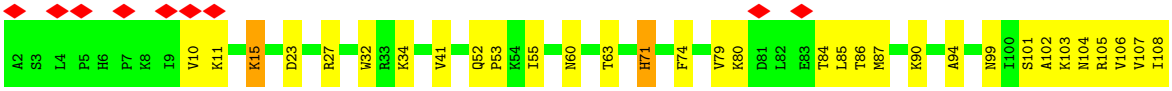


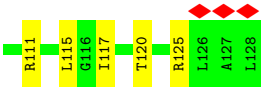
• Molecule 32: Large ribosomal subunit protein eL31A



• Molecule 33: Large ribosomal subunit protein eL32

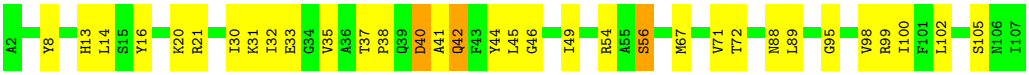
Chain Lg:





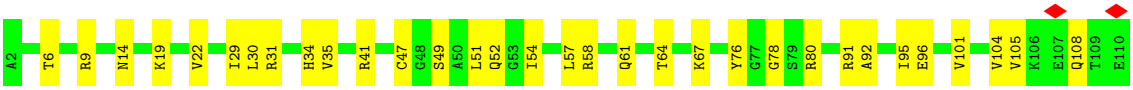
• Molecule 34: Large ribosomal subunit protein eL33A

Chain Lh:



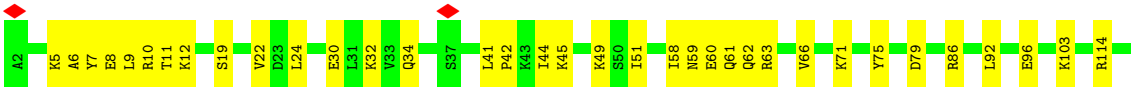
• Molecule 35: Large ribosomal subunit protein eL34A

Chain Li:



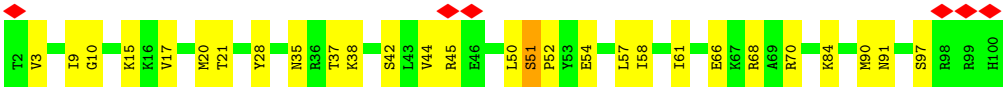
• Molecule 36: Large ribosomal subunit protein uL29A

Chain Lj:

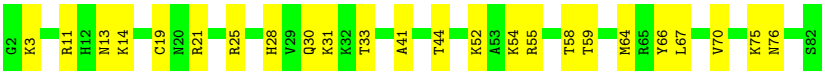


• Molecule 37: Large ribosomal subunit protein eL36A

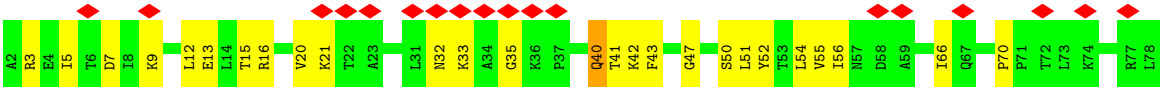
Chain Lk:



• Molecule 38: Large ribosomal subunit protein eL37A

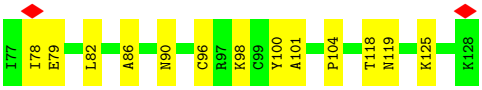


• Molecule 39: Large ribosomal subunit protein eL38

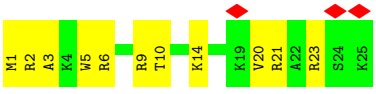


• Molecule 40: Large ribosomal subunit protein eL39

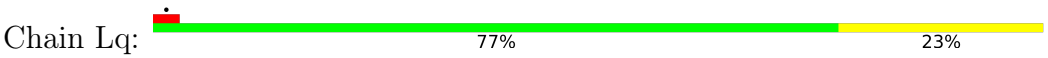
• Molecule 41: Large ribosomal subunit protein eL40A



• Molecule 42: Large ribosomal subunit protein eL41A

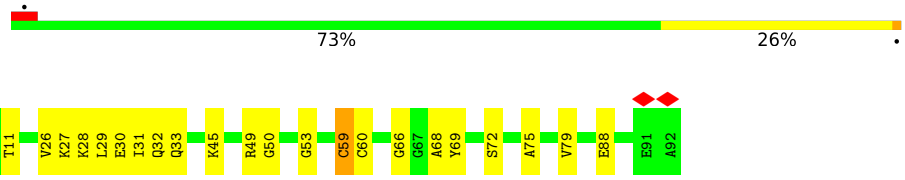


• Molecule 43: Large ribosomal subunit protein eL42A



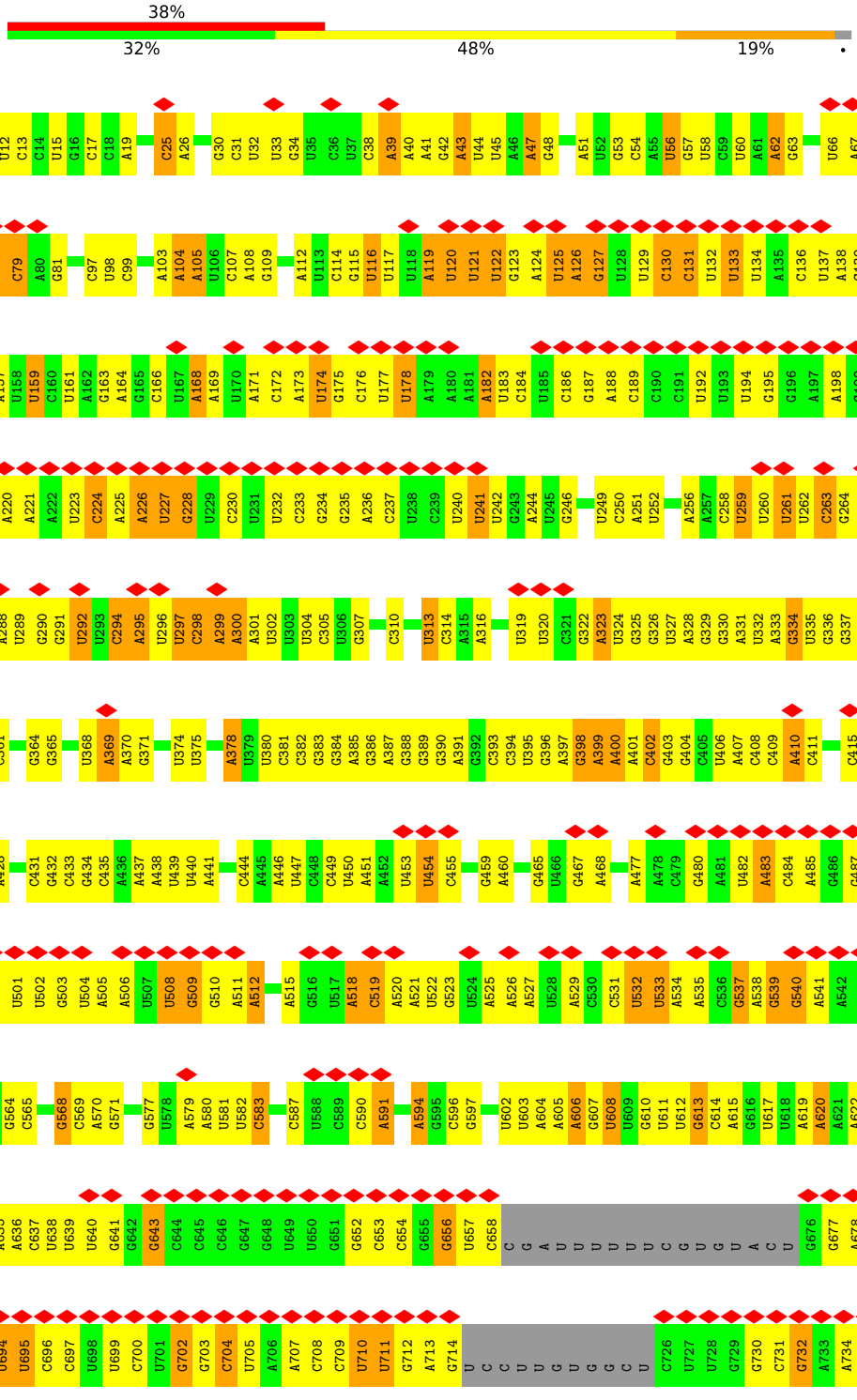
• Molecule 44: Large ribosomal subunit protein eL43A

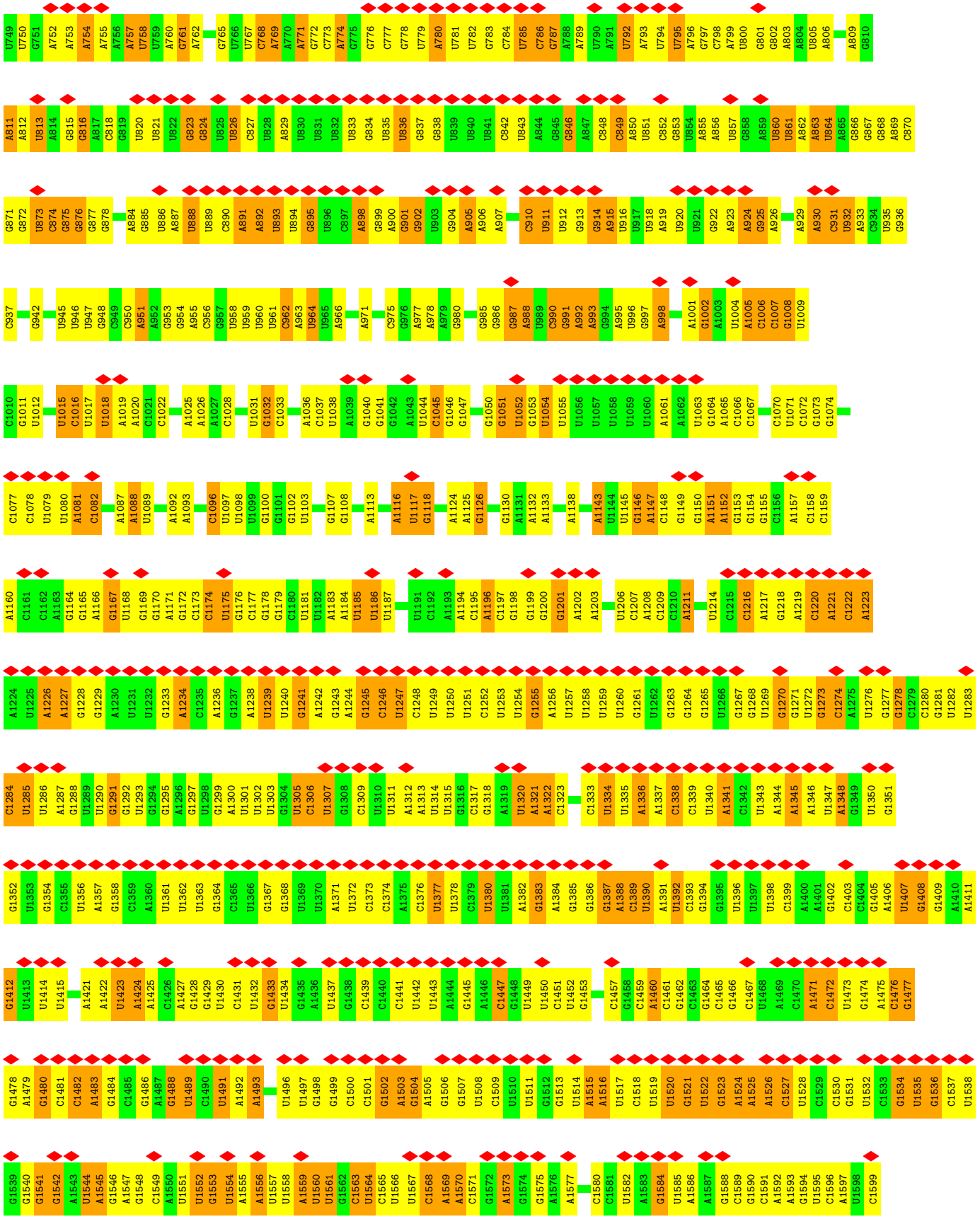
Chain Lr:

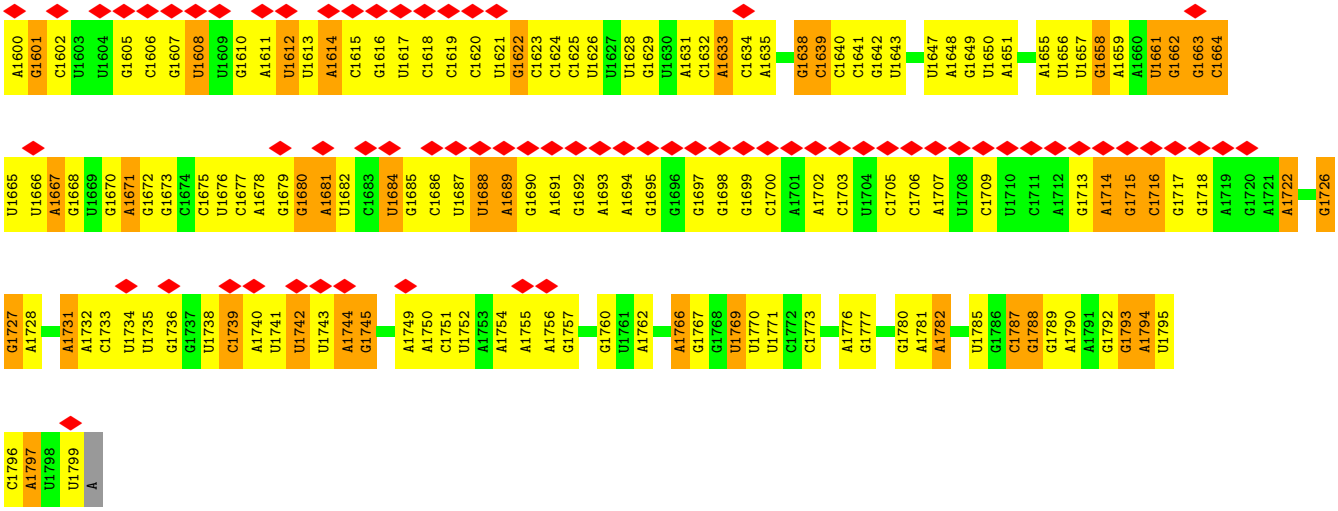


• Molecule 45: chain 2 18S rRNA (1800-MER)

Chain S2:

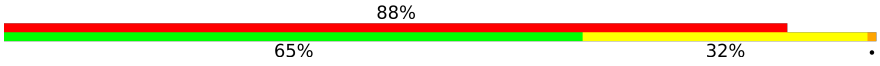


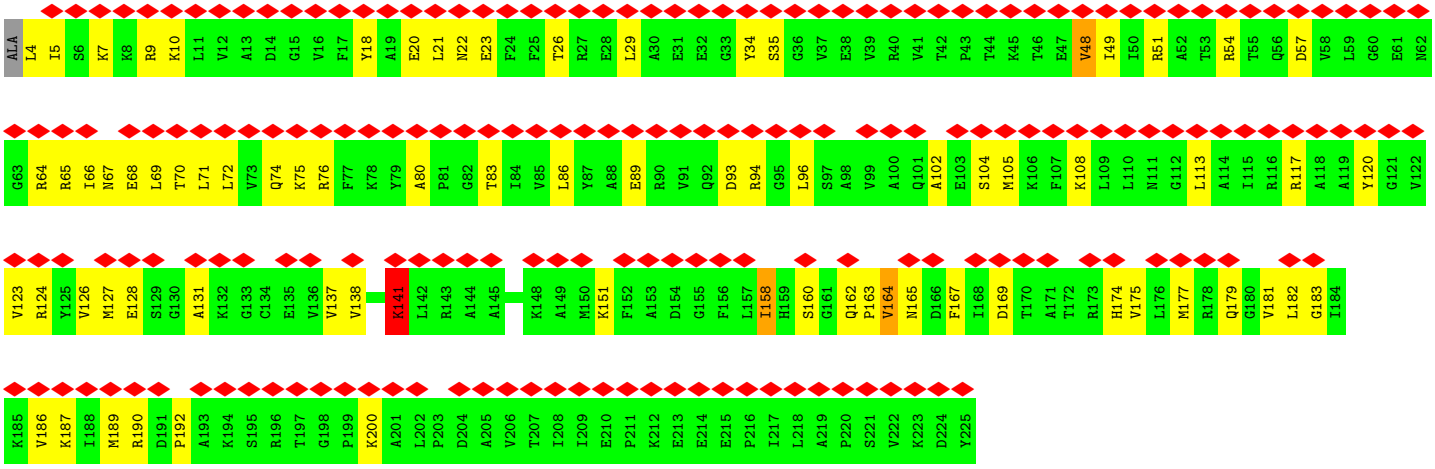




• Molecule 46: Small ribosomal subunit protein uS3

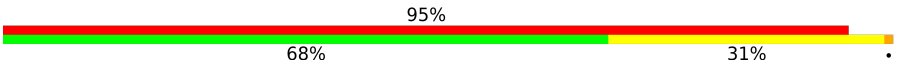
Chain SA:

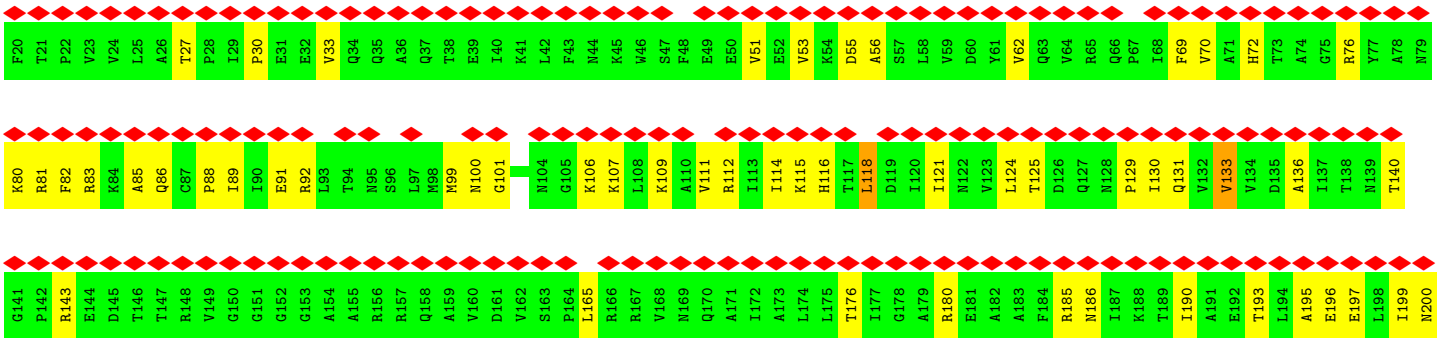


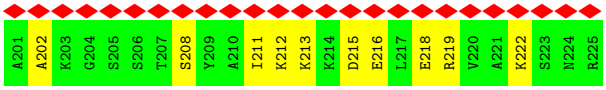


• Molecule 47: Small ribosomal subunit protein uS7

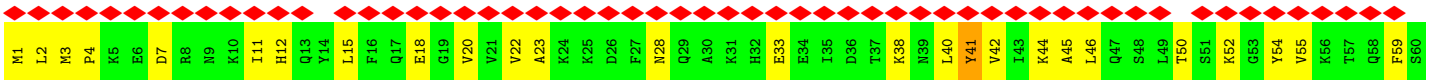
Chain SB:



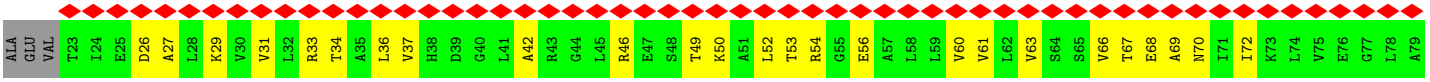


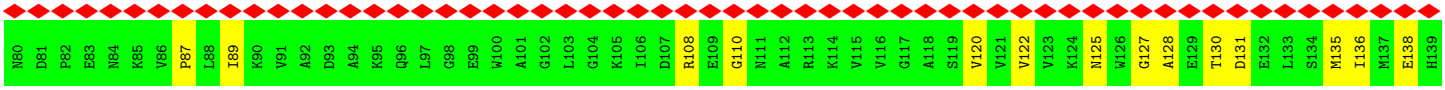


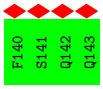
• Molecule 48: Small ribosomal subunit protein eS10A



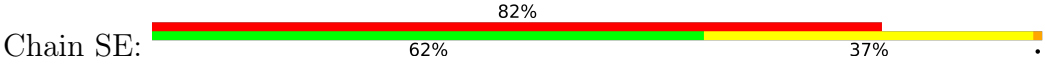
• Molecule 49: Small ribosomal subunit protein eS12

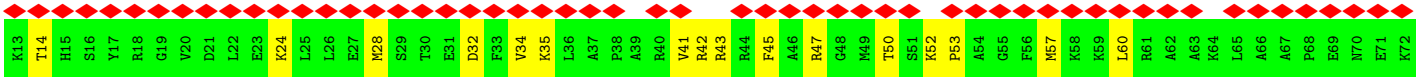


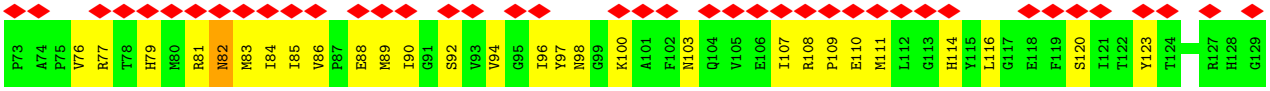




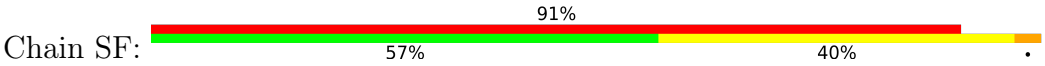
• Molecule 50: Small ribosomal subunit protein uS19

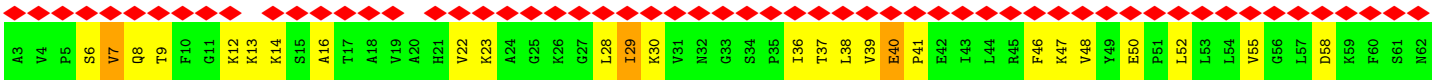


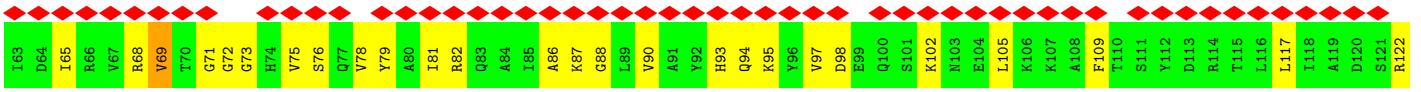


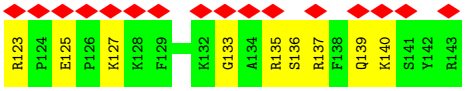


• Molecule 51: Small ribosomal subunit protein uS9A



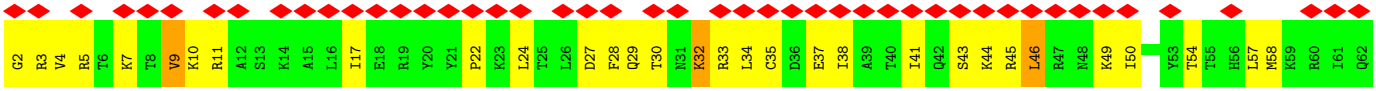


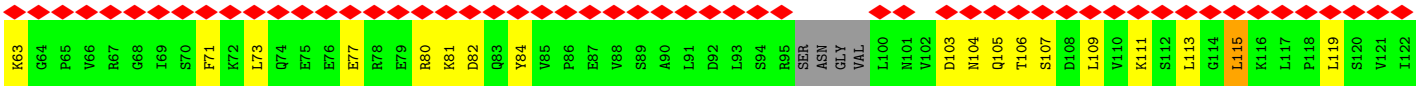


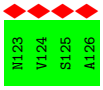


• Molecule 52: Small ribosomal subunit protein eS17A

Chain SG:

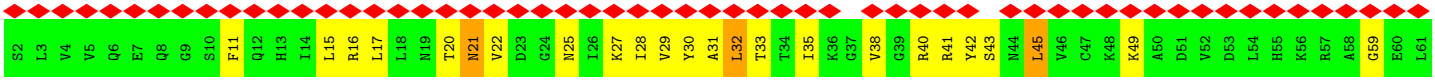


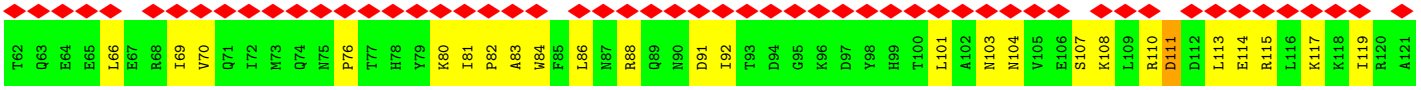


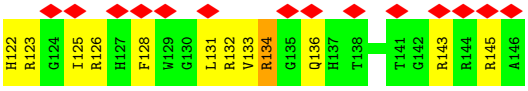


• Molecule 53: Small ribosomal subunit protein uS13A

Chain SH:

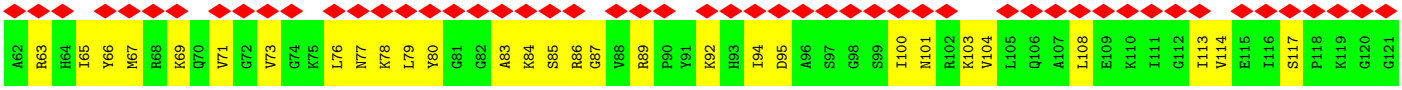


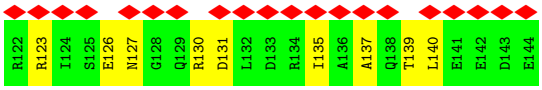




• Molecule 54: Small ribosomal subunit protein eS19A

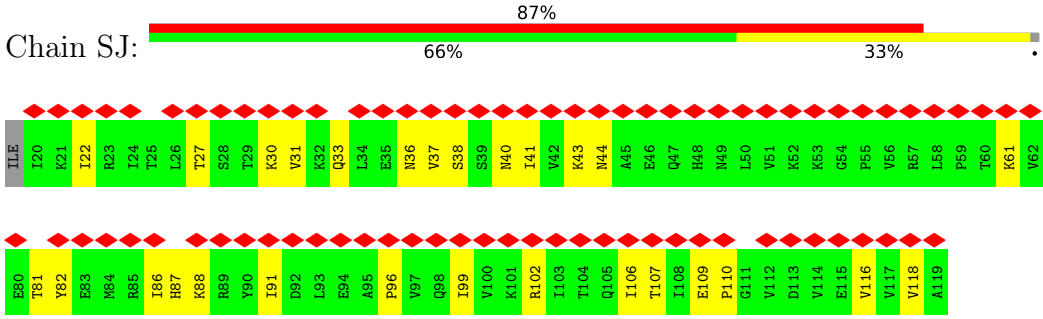
Chain SI:





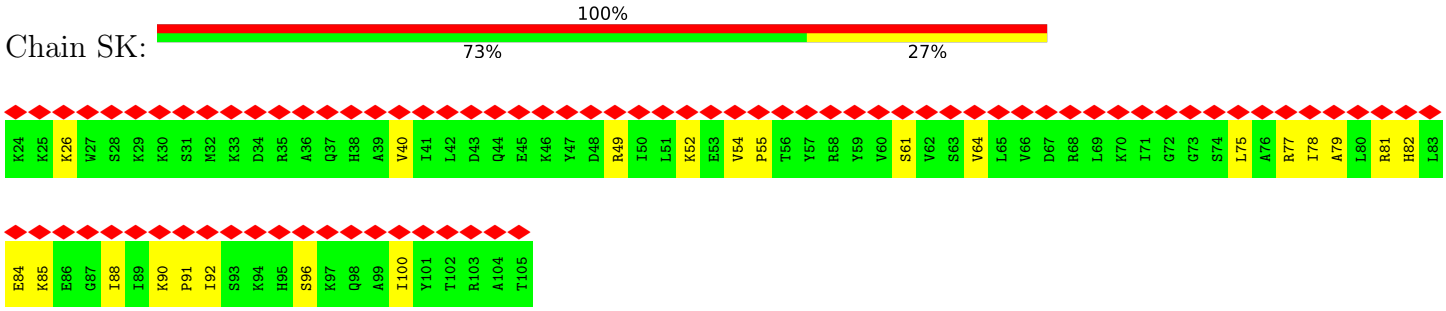
• Molecule 55: Small ribosomal subunit protein uS10

Chain SJ:



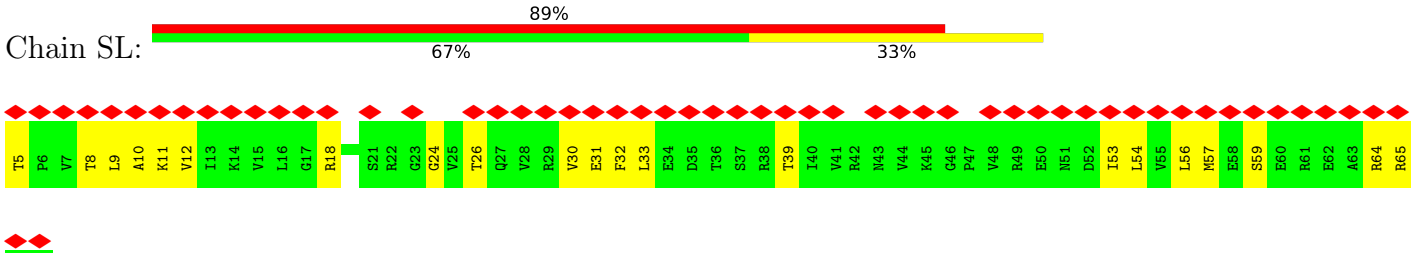
• Molecule 56: Small ribosomal subunit protein eS25A

Chain SK:



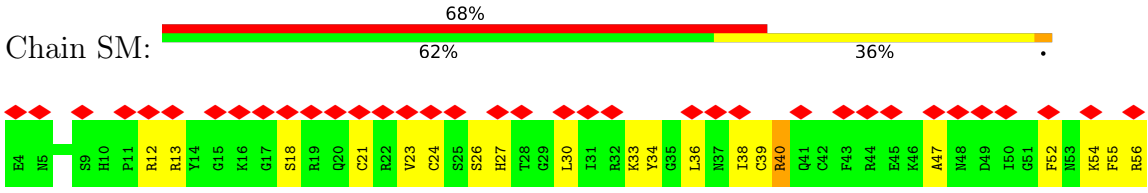
• Molecule 57: Small ribosomal subunit protein eS28A

Chain SL:



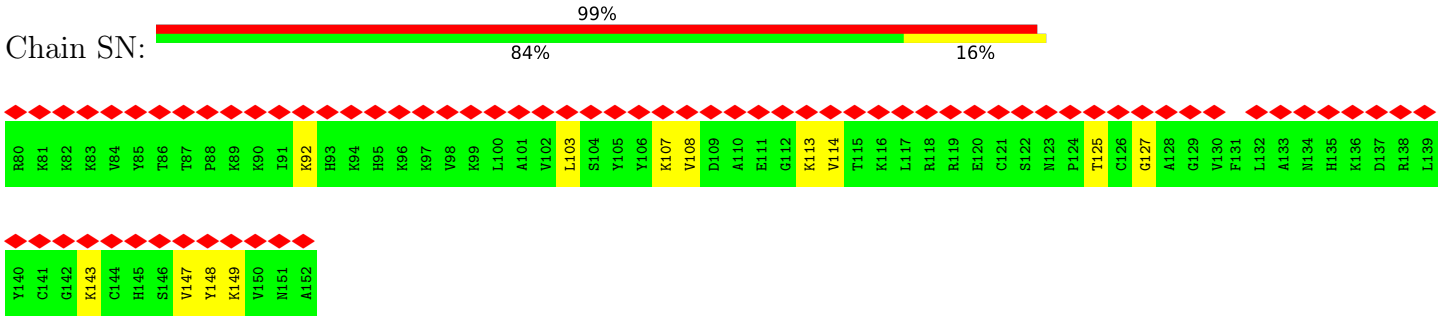
• Molecule 58: Small ribosomal subunit protein uS14A

Chain SM:



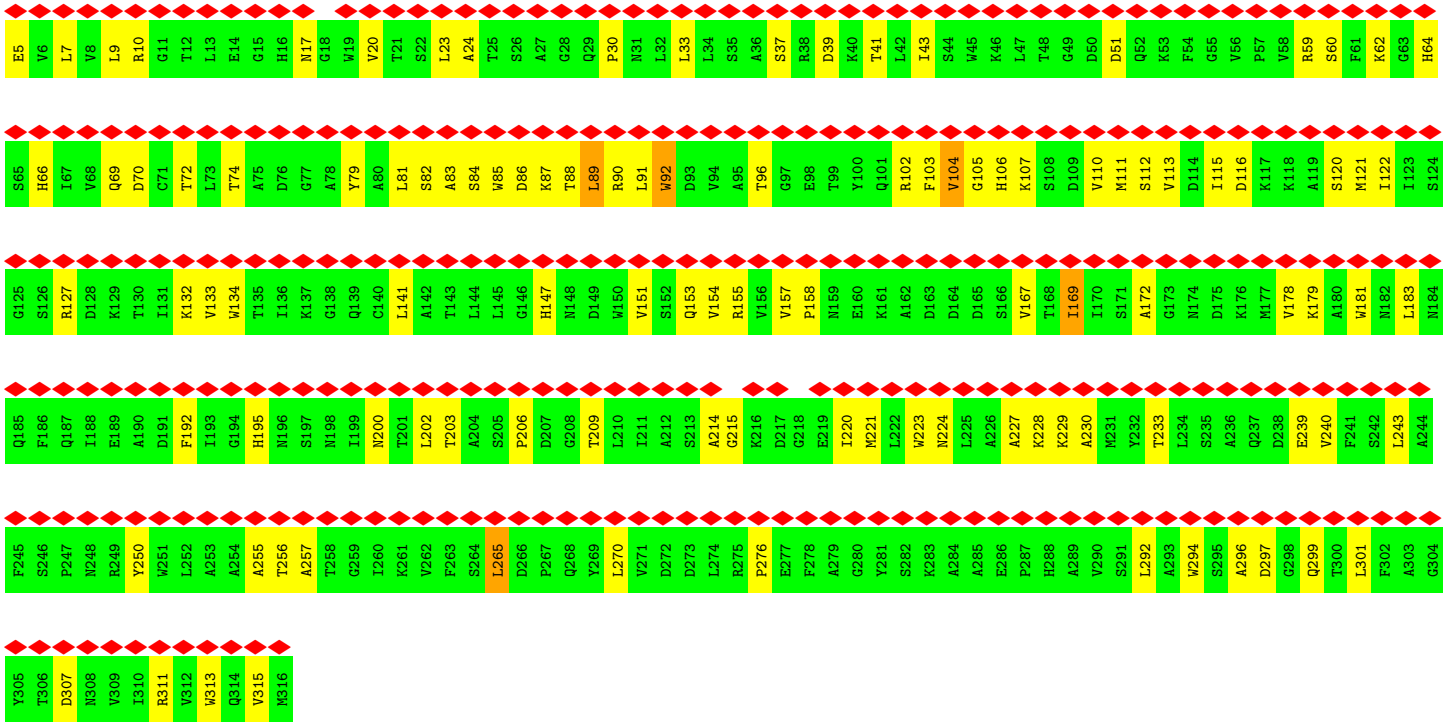
• Molecule 59: Small ribosomal subunit protein eS31

Chain SN:



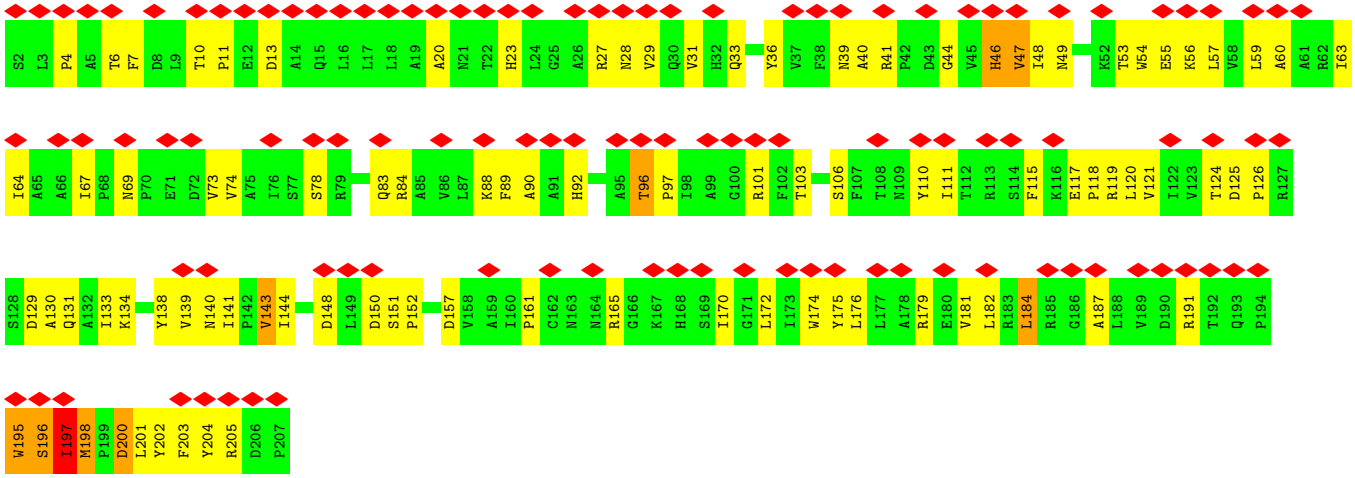
• Molecule 60: Small ribosomal subunit protein RACK1

Chain SO:



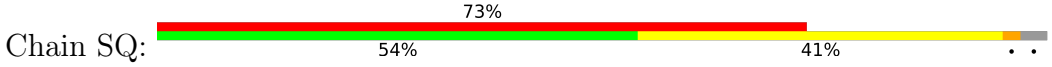
• Molecule 61: Small ribosomal subunit protein uS2A

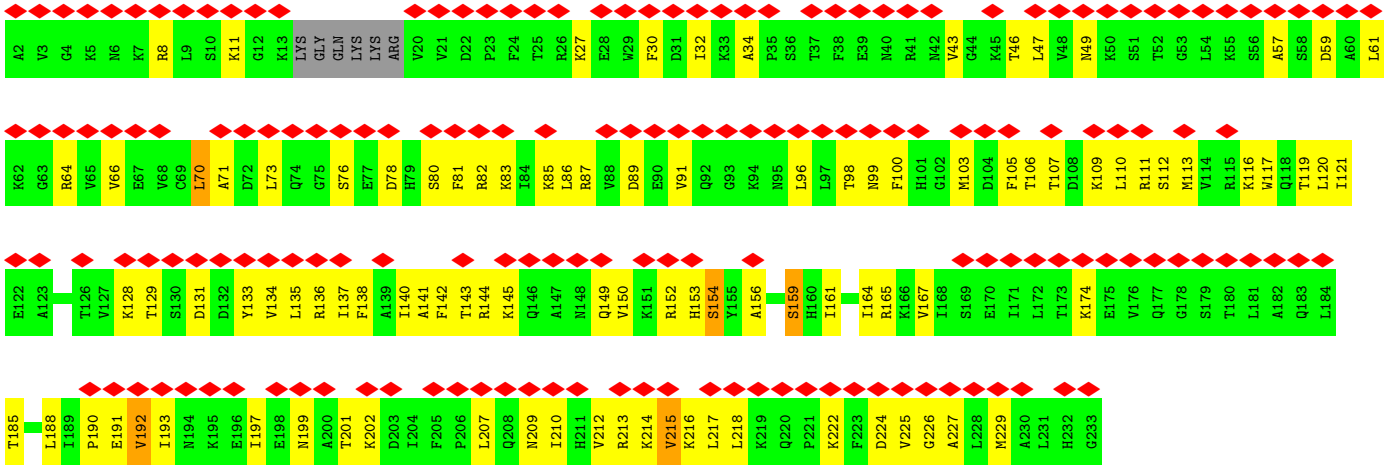
Chain SP:



• Molecule 62: Small ribosomal subunit protein eS1A

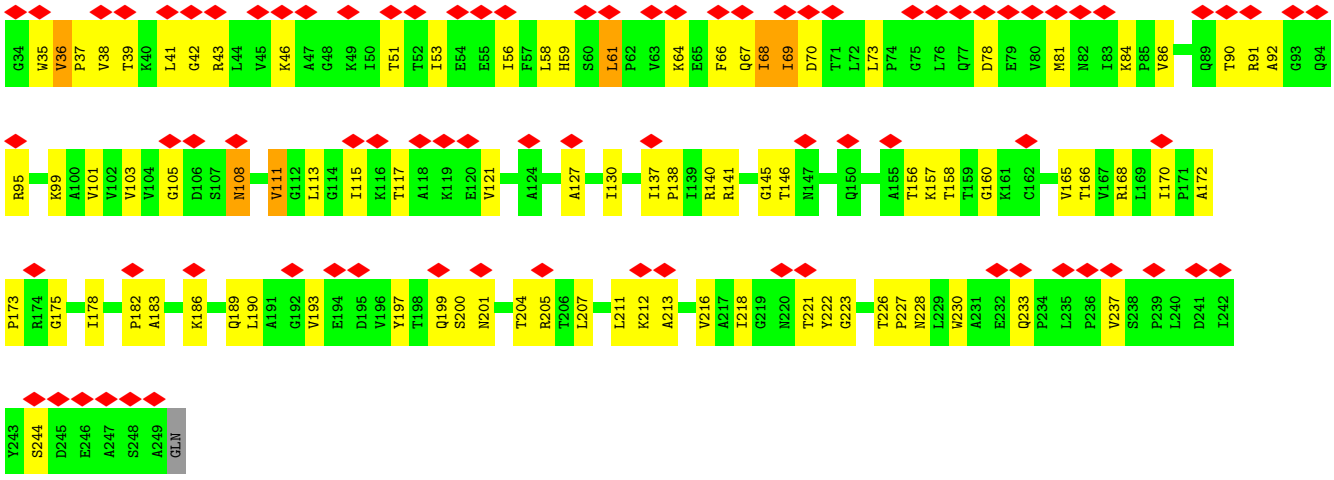
Chain SQ:





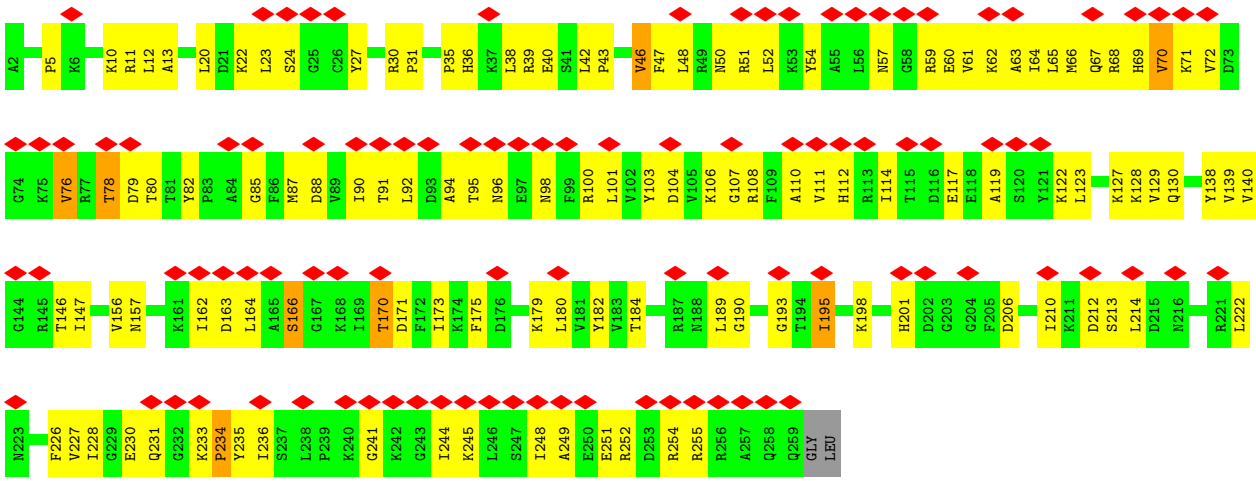
• Molecule 63: Small ribosomal subunit protein uS5

Chain SR:



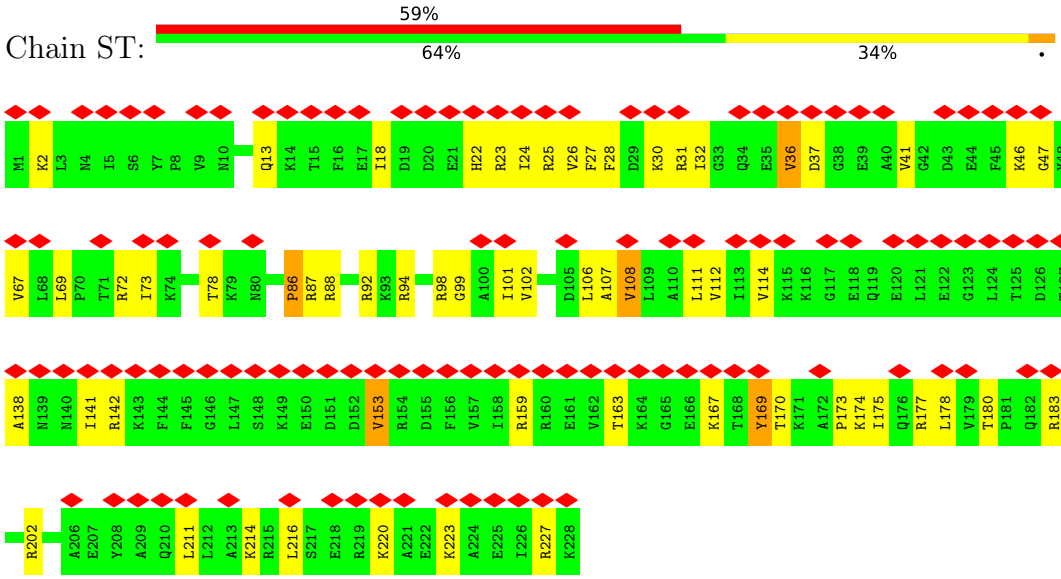
• Molecule 64: Small ribosomal subunit protein eS4A

Chain SS:



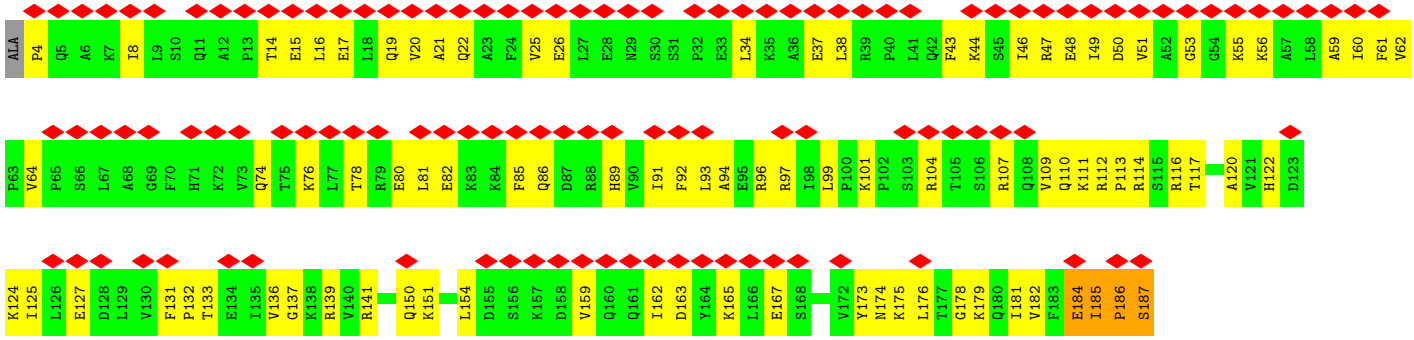
• Molecule 65: Small ribosomal subunit protein eS6A

Chain ST:



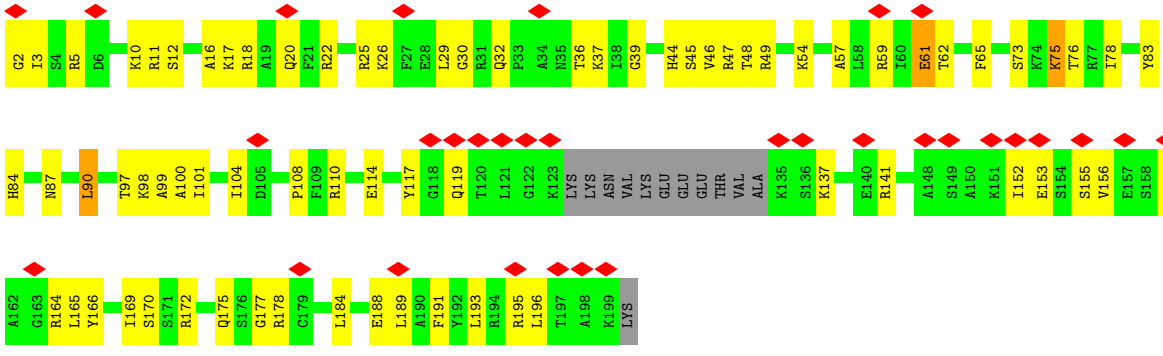
• Molecule 66: Small ribosomal subunit protein eS7A

Chain SU:



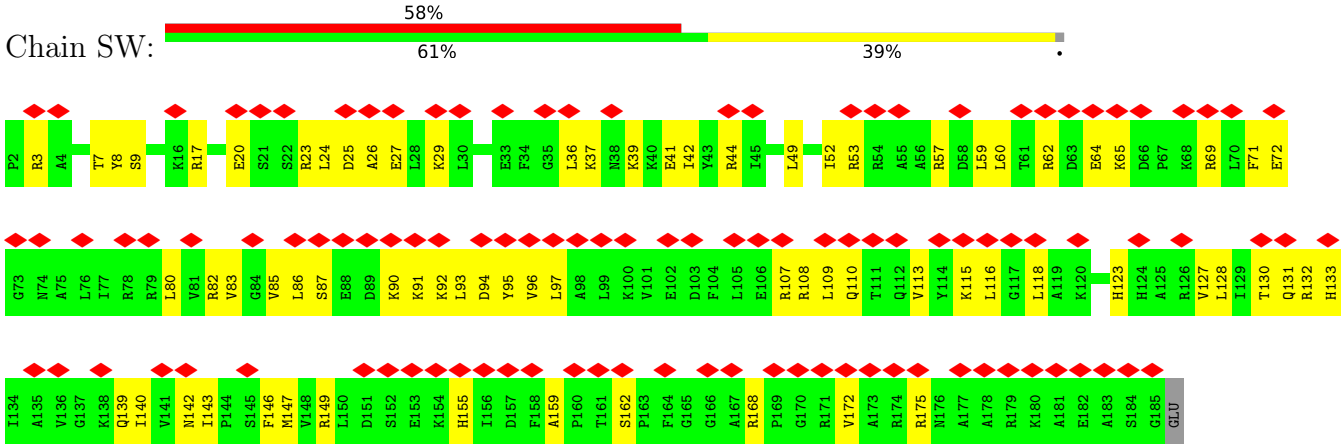
• Molecule 67: Small ribosomal subunit protein eS8A

Chain SV:



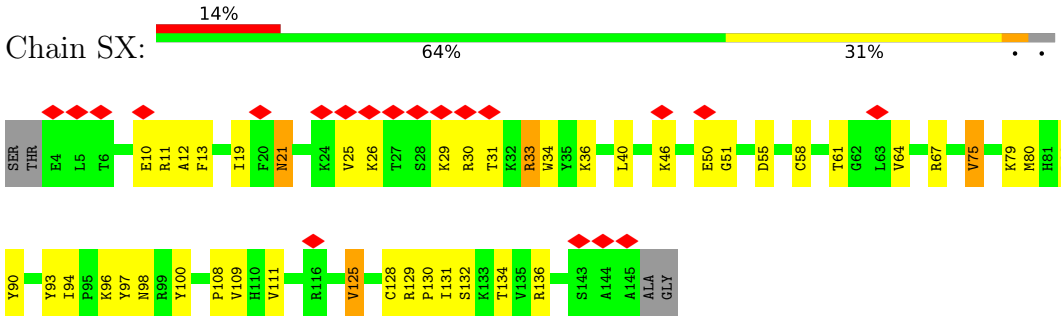
• Molecule 68: Small ribosomal subunit protein uS4A

Chain SW:



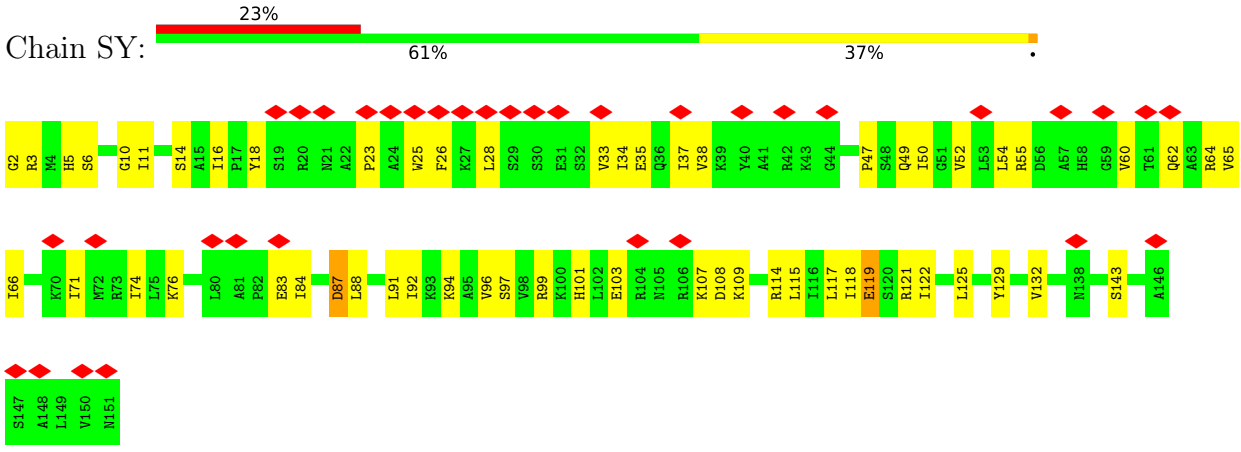
• Molecule 69: Small ribosomal subunit protein uS17A

Chain SX:



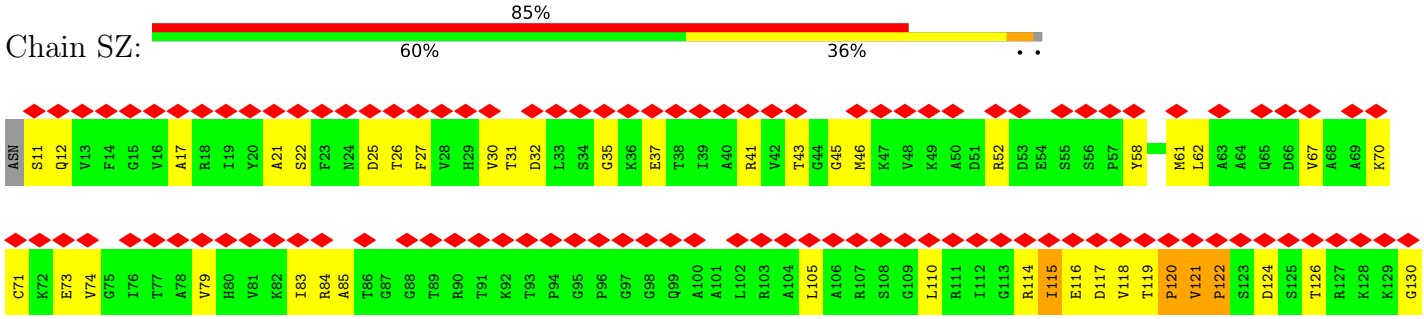
• Molecule 70: Small ribosomal subunit protein uS15

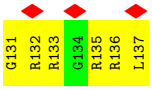
Chain SY:



• Molecule 71: Small ribosomal subunit protein uS11B

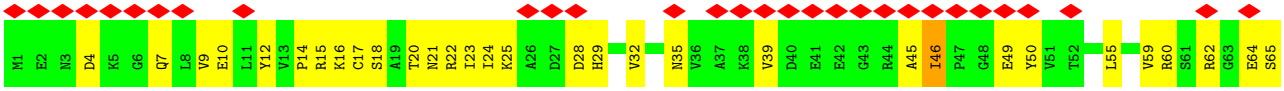
Chain SZ:

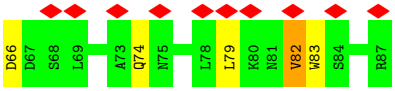




• Molecule 72: Small ribosomal subunit protein eS21A

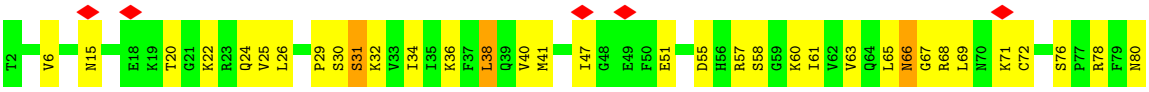
Chain Sa:

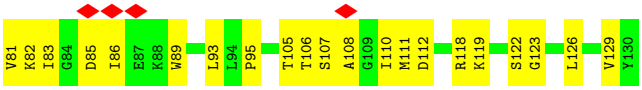




• Molecule 73: Small ribosomal subunit protein uS8A

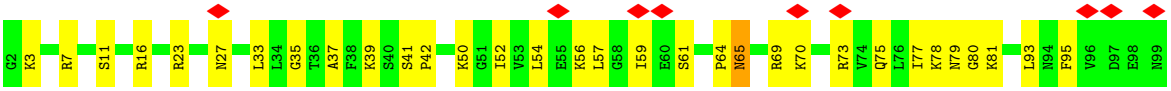
Chain Sb:





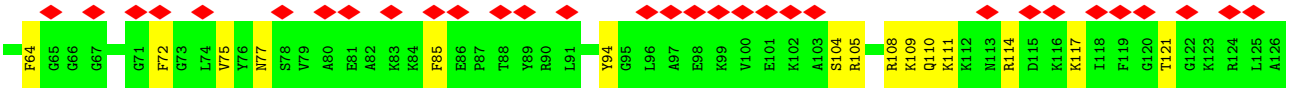
• Molecule 74: Small ribosomal subunit protein uS12A

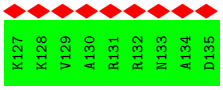
Chain Sc:



• Molecule 75: Small ribosomal subunit protein eS24A

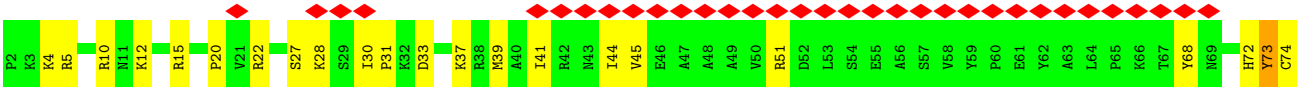
Chain Sd:

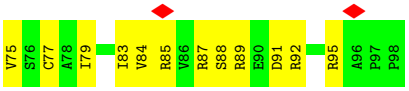




• Molecule 76: Small ribosomal subunit protein eS26B

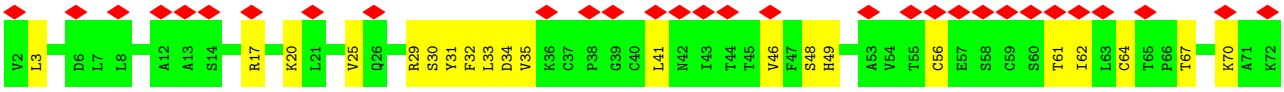
Chain Se:

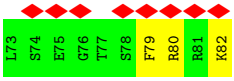




• Molecule 77: Small ribosomal subunit protein eS27A

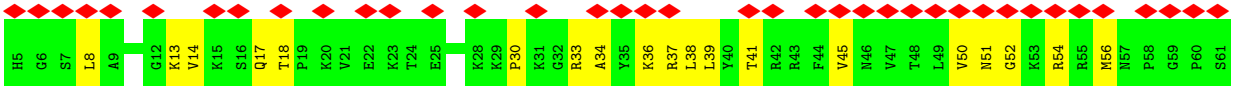
Chain Sf:





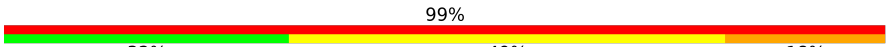
• Molecule 78: Small ribosomal subunit protein eS30A

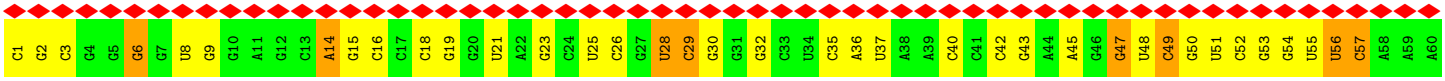
Chain Sg:

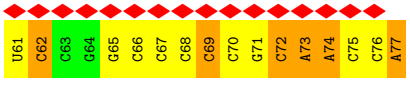


• Molecule 79: tRNA (77-MER)

Chain Ta:







4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	80753	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 ($e^-/Å^2$)	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	2.638	Depositor
Minimum map value	-1.211	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.072	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	0.18	0/76214	0.27	0/118821
2	LB	0.15	0/2883	0.24	0/4491
3	LC	0.17	0/3746	0.26	0/5832
4	LD	0.20	0/1933	0.39	0/2598
5	LE	0.21	1/3146 (0.0%)	0.34	1/4228 (0.0%)
6	LF	0.17	0/2800	0.37	0/3790
7	LG	0.15	0/2400	0.36	0/3239
8	LH	0.16	0/1329	0.36	0/1794
9	LI	0.18	0/1821	0.33	0/2451
10	LJ	0.16	0/1836	0.36	0/2481
11	LK	0.17	0/1529	0.40	0/2060
12	LL	0.26	1/1801 (0.1%)	0.43	1/2416 (0.0%)
13	LM	0.18	0/1367	0.39	0/1834
14	LN	0.15	0/1568	0.33	0/2106
15	LO	0.16	0/1068	0.34	0/1438
16	LP	0.20	0/1757	0.36	1/2354 (0.0%)
17	LQ	0.19	0/1585	0.34	0/2128
18	LR	0.17	0/1439	0.30	0/1938
19	LS	0.17	0/1465	0.35	0/1965
20	LT	0.17	0/1532	0.32	0/2043
21	LU	0.16	0/1473	0.32	0/1980
22	LV	0.17	0/1296	0.33	0/1739
23	LW	0.16	0/812	0.38	0/1099
24	LX	0.15	0/1018	0.29	0/1369
25	LY	0.15	0/540	0.32	0/717
26	LZ	0.15	0/979	0.34	0/1321
27	La	0.14	0/995	0.34	0/1329
28	Lb	0.17	0/1106	0.38	0/1485
29	Lc	0.23	0/1200	0.49	2/1607 (0.1%)
30	Ld	0.17	0/473	0.49	1/629 (0.2%)
31	Le	0.16	0/745	0.32	0/1001
32	Lf	0.15	0/890	0.32	0/1196
33	Lg	0.15	0/1038	0.31	0/1390
34	Lh	0.18	0/868	0.36	0/1168

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	Li	0.18	0/890	0.37	0/1189
36	Lj	0.16	0/978	0.32	0/1301
37	Lk	0.15	0/772	0.36	0/1026
38	Ll	0.19	0/660	0.34	0/875
39	Lm	0.46	1/618 (0.2%)	0.57	1/826 (0.1%)
40	Ln	0.16	0/443	0.28	0/588
41	Lo	0.15	0/416	0.32	0/553
42	Lp	0.12	0/230	0.23	0/296
43	Lq	0.48	0/836	0.49	0/1104
44	Lr	0.18	0/701	0.36	0/934
45	S2	0.13	0/42211	0.27	1/65773 (0.0%)
46	SA	0.30	1/1754 (0.1%)	0.62	1/2361 (0.0%)
47	SB	0.14	0/1625	0.35	0/2197
48	SC	0.22	0/769	0.34	0/1039
49	SD	0.17	0/883	0.49	0/1199
50	SE	0.15	0/936	0.35	0/1259
51	SF	0.14	0/1125	0.38	0/1510
52	SG	0.14	0/957	0.44	0/1283
53	SH	0.12	0/1207	0.32	0/1623
54	SI	0.14	0/1130	0.37	0/1517
55	SJ	0.14	0/807	0.33	0/1091
56	SK	0.11	0/661	0.34	0/888
57	SL	0.11	0/493	0.29	0/663
58	SM	0.11	0/452	0.27	0/600
59	SN	0.09	0/567	0.30	0/764
60	SO	0.13	0/2436	0.36	0/3318
61	SP	0.33	0/1644	0.62	5/2249 (0.2%)
62	SQ	0.15	0/1823	0.38	0/2447
63	SR	0.18	0/1656	0.45	0/2251
64	SS	0.39	4/2097 (0.2%)	0.58	2/2823 (0.1%)
65	ST	0.27	1/1839 (0.1%)	0.61	5/2460 (0.2%)
66	SU	0.32	0/1498	0.56	3/2019 (0.1%)
67	SV	0.37	2/1501 (0.1%)	0.55	2/2006 (0.1%)
68	SW	0.14	0/1504	0.35	0/2016
69	SX	0.15	0/1168	0.36	0/1575
70	SY	0.24	1/1215 (0.1%)	0.38	0/1638
71	SZ	0.21	0/934	0.84	5/1257 (0.4%)
72	Sa	0.18	0/682	0.48	0/921
73	Sb	0.19	0/1038	0.38	0/1395
74	Sc	0.15	0/1139	0.36	0/1518
75	Sd	0.13	0/1046	0.34	0/1401
76	Se	0.14	0/778	0.34	0/1042
77	Sf	0.14	0/620	0.31	0/838

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
78	Sg	0.15	0/459	0.36	0/611
79	Ta	0.18	0/1836	0.34	0/2859
All	All	0.18	12/215686 (0.0%)	0.33	31/317140 (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
63	SR	0	1
71	SZ	0	4
All	All	0	8

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
64	SS	234	PRO	N-CD	11.04	1.63	1.47
39	Lm	70	PRO	CA-C	9.80	1.58	1.52
67	SV	108	PRO	N-CD	8.95	1.60	1.47
67	SV	108	PRO	CG-CD	-7.32	1.25	1.50
12	LL	179	PRO	N-CD	6.96	1.57	1.47
5	LE	82	PRO	CA-C	-6.91	1.48	1.51
65	ST	86	PRO	CG-CD	-6.34	1.29	1.50
64	SS	234	PRO	CG-CD	-5.88	1.30	1.50
70	SY	119	GLU	CD-OE1	-5.86	1.14	1.25
46	SA	141	LYS	CD-CE	-5.79	1.35	1.52
64	SS	233	LYS	C-N	5.76	1.47	1.33
64	SS	234	PRO	N-CA	-5.50	1.40	1.47

All (31) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
64	SS	234	PRO	CA-N-CD	-19.19	85.13	112.00
65	ST	86	PRO	CA-CB-CG	-15.78	74.51	104.50
67	SV	108	PRO	CA-N-CD	-14.35	91.91	112.00
46	SA	192	PRO	CA-N-CD	-14.32	91.94	112.00
65	ST	86	PRO	N-CD-CG	-12.88	83.88	103.20
71	SZ	120	PRO	CA-C-N	12.79	128.29	120.24
71	SZ	120	PRO	C-N-CA	12.79	128.29	120.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	Lc	2	PRO	CA-N-CD	-10.97	96.64	112.00
67	SV	108	PRO	N-CD-CG	-10.28	87.78	103.20
39	Lm	70	PRO	O-C-N	9.67	125.69	121.15
30	Ld	20	GLY	N-CA-C	9.47	118.83	110.21
71	SZ	117	ASP	CA-C-N	8.23	131.28	122.14
71	SZ	117	ASP	C-N-CA	8.23	131.28	122.14
61	SP	198	MET	N-CA-C	-8.08	100.94	108.22
61	SP	196	SER	N-CA-C	7.23	119.78	111.11
66	SU	178	GLY	N-CA-C	-7.22	104.18	115.67
64	SS	233	LYS	C-N-CD	7.17	154.39	125.00
12	LL	179	PRO	CA-N-CD	-6.89	102.35	112.00
61	SP	195	TRP	N-CA-C	6.34	119.11	110.55
61	SP	201	LEU	N-CA-C	-6.19	104.61	111.36
65	ST	86	PRO	N-CA-CB	-6.01	99.20	103.23
65	ST	86	PRO	CB-CG-CD	5.96	125.17	106.10
29	Lc	2	PRO	N-CD-CG	-5.94	94.29	103.20
45	S2	1147	A	C2'-C3'-O3'	-5.94	104.79	113.70
65	ST	86	PRO	CA-N-CD	-5.71	104.00	112.00
61	SP	200	ASP	N-CA-C	-5.56	106.27	113.16
71	SZ	121	VAL	CB-CA-C	-5.28	108.75	114.35
16	LP	76	PRO	CA-N-CD	-5.25	104.65	112.00
5	LE	82	PRO	O-C-N	-5.12	118.96	121.31
66	SU	185	ILE	CA-C-N	-5.03	113.55	119.84
66	SU	185	ILE	C-N-CA	-5.03	113.55	119.84

There are no chirality outliers.

All (8) 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
63	SR	233	GLN	Peptide
71	SZ	114	ARG	Peptide
71	SZ	115	ILE	Peptide
71	SZ	121	VAL	Peptide
71	SZ	122	PRO	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	1018	0
2	LB	2579	0	1304	53	0
3	LC	3353	0	1695	67	0
4	LD	1899	0	1957	79	0
5	LE	3075	0	3142	80	0
6	LF	2748	0	2859	94	0
7	LG	2351	0	2294	83	0
8	LH	1307	0	1377	36	0
9	LI	1784	0	1862	47	0
10	LJ	1804	0	1877	53	0
11	LK	1508	0	1572	79	0
12	LL	1764	0	1804	81	0
13	LM	1346	0	1370	67	0
14	LN	1543	0	1608	49	0
15	LO	1053	0	1149	33	0
16	LP	1720	0	1779	57	0
17	LQ	1555	0	1659	45	0
18	LR	1416	0	1433	30	0
19	LS	1441	0	1543	45	0
20	LT	1515	0	1606	39	0
21	LU	1437	0	1475	38	0
22	LV	1272	0	1312	47	0
23	LW	796	0	812	20	0
24	LX	1003	0	1048	27	0
25	LY	528	0	546	14	0
26	LZ	964	0	1025	28	0
27	La	984	0	1075	32	0
28	Lb	1080	0	1122	34	0
29	Lc	1169	0	1211	42	0
30	Ld	462	0	491	18	0
31	Le	737	0	792	26	0
32	Lf	876	0	912	18	0
33	Lg	1017	0	1081	29	0
34	Lh	850	0	880	25	0
35	Li	880	0	945	25	0
36	Lj	969	0	1078	27	0
37	Lk	766	0	844	21	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	Ll	645	0	649	20	0
39	Lm	612	0	682	24	0
40	Ln	436	0	475	12	0
41	Lo	410	0	446	11	0
42	Lp	229	0	273	8	0
43	Lq	824	0	892	19	0
44	Lr	694	0	738	22	0
45	S2	37739	0	18988	770	0
46	SA	1729	0	1812	69	0
47	SB	1605	0	1669	56	0
48	SC	752	0	719	42	0
49	SD	875	0	878	26	0
50	SE	916	0	941	37	0
51	SF	1105	0	1166	53	0
52	SG	948	0	990	42	0
53	SH	1188	0	1218	53	0
54	SI	1112	0	1124	55	0
55	SJ	797	0	863	32	0
56	SK	651	0	682	13	0
57	SL	491	0	524	16	0
58	SM	442	0	432	24	0
59	SN	556	0	549	8	0
60	SO	2383	0	2332	84	0
61	SP	1603	0	1610	72	0
62	SQ	1798	0	1890	81	0
63	SR	1626	0	1715	72	0
64	SS	2056	0	2140	106	0
65	ST	1815	0	1894	83	0
66	SU	1473	0	1555	79	0
67	SV	1476	0	1501	59	0
68	SW	1479	0	1556	65	0
69	SX	1142	0	1209	40	0
70	SY	1192	0	1255	52	0
71	SZ	923	0	948	52	0
72	Sa	673	0	662	36	0
73	Sb	1021	0	1060	57	0
74	Sc	1121	0	1196	35	0
75	Sd	1032	0	1044	48	0
76	Se	765	0	814	31	0
77	Sf	610	0	633	15	0
78	Sg	451	0	494	13	0
79	Ta	1644	0	837	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	200681	0	147811	4369	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 13.

All (4369) 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)
45:S2:123:G:C6	45:S2:295:A:N1	1.75	1.51
1:LA:2923:U:O4	79:Ta:74:A:C2	1.67	1.45
64:SS:234:PRO:CB	64:SS:234:PRO:CG	1.74	1.39
45:S2:123:G:N1	45:S2:295:A:C2	1.94	1.36
45:S2:123:G:N1	45:S2:295:A:N1	1.71	1.34
44:Lr:53:GLY:HA2	44:Lr:66:GLY:O	1.22	1.30
46:SA:141:LYS:CE	46:SA:179:GLN:HG3	1.62	1.29
45:S2:123:G:C2	45:S2:295:A:C2	2.27	1.23
46:SA:141:LYS:HE2	46:SA:179:GLN:CG	1.75	1.16
39:Lm:41:THR:HG22	39:Lm:56:ILE:HD11	1.23	1.14
54:SI:31:PRO:HG3	54:SI:103:LYS:NZ	1.62	1.14
66:SU:127:GLU:HG2	66:SU:131:PHE:HE1	1.09	1.11
66:SU:127:GLU:CG	66:SU:131:PHE:HE1	1.64	1.10
45:S2:774:A:H61	45:S2:786:C:N4	1.50	1.10
48:SC:59:PHE:CE1	48:SC:64:TYR:HE1	1.71	1.08
25:LY:4:GLU:O	25:LY:12:LYS:HA	1.52	1.06
28:Lb:103:GLN:HE22	28:Lb:106:GLN:CD	1.61	1.06
75:Sd:111:LYS:HD2	75:Sd:114:ARG:HH21	0.90	1.06
45:S2:123:G:C6	45:S2:295:A:C6	2.43	1.05
71:SZ:83:ILE:O	71:SZ:118:VAL:HA	1.56	1.03
11:LK:23:ARG:HE	11:LK:39:LYS:HA	1.17	1.03
64:SS:122:LYS:HE3	64:SS:162:ILE:HD12	1.39	1.03
66:SU:127:GLU:HG2	66:SU:131:PHE:CE1	1.93	1.02
3:LC:121:U:H3	3:LC:132:G:H1	1.06	1.02
75:Sd:111:LYS:HD2	75:Sd:114:ARG:NH2	1.73	1.02
45:S2:774:A:N6	45:S2:786:C:H42	1.58	1.00
45:S2:214:G:N2	45:S2:251:A:H62	1.61	0.99
45:S2:214:G:H21	45:S2:251:A:N6	1.63	0.97
1:LA:2899:A:HO2'	1:LA:2900:G:H8	1.01	0.97
45:S2:1673:G:H1	45:S2:1728:A:H2	1.01	0.97
1:LA:509:G:H1	1:LA:580:U:H3	0.99	0.97
45:S2:1396:U:H3	45:S2:1402:G:H1	1.00	0.95
1:LA:2923:U:O4	79:Ta:74:A:H2	1.14	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:2:A:H2'	63:SR:197:TYR:HD2	1.32	0.94
45:S2:142:G:H1	45:S2:173:A:H61	1.11	0.94
39:Lm:41:THR:HG22	39:Lm:56:ILE:CD1	1.96	0.94
73:Sb:47:ILE:HD11	73:Sb:63:VAL:HG11	1.50	0.94
1:LA:2922:U:C4	79:Ta:74:A:N6	2.37	0.93
6:LF:175:HIS:O	6:LF:179:LEU:HD13	1.69	0.93
46:SA:141:LYS:O	46:SA:141:LYS:HD3	1.68	0.93
63:SR:61:LEU:HD23	63:SR:61:LEU:H	1.34	0.92
46:SA:141:LYS:NZ	46:SA:177:MET:SD	2.42	0.92
45:S2:1157:A:H62	45:S2:1618:C:N4	1.67	0.92
64:SS:59:ARG:HA	64:SS:62:LYS:HD2	1.51	0.92
1:LA:2922:U:C5	79:Ta:74:A:C6	2.58	0.92
48:SC:1:MET:N	48:SC:3:MET:HE3	1.85	0.92
4:LD:70:ARG:HD3	4:LD:72:ARG:NH2	1.85	0.91
66:SU:133:THR:HG22	66:SU:162:ILE:HD13	1.52	0.91
54:SI:31:PRO:HG3	54:SI:103:LYS:HZ1	1.34	0.91
54:SI:31:PRO:HG3	54:SI:103:LYS:HZ2	1.31	0.91
1:LA:3159:U:H3	1:LA:3289:G:H1	1.13	0.91
45:S2:187:G:N2	45:S2:198:A:H62	1.69	0.90
66:SU:55:LYS:HZ1	66:SU:89:HIS:CD2	1.90	0.90
45:S2:294:C:N3	45:S2:295:A:C2	2.40	0.89
45:S2:385:A:H5"	67:SV:22:ARG:HG3	1.53	0.89
45:S2:1658:G:H1	45:S2:1743:U:H3	1.16	0.89
27:La:38:GLU:N	27:La:38:GLU:OE2	2.05	0.89
66:SU:127:GLU:O	66:SU:131:PHE:HD1	1.54	0.89
48:SC:59:PHE:CE1	48:SC:64:TYR:CE1	2.60	0.89
45:S2:40:A:N6	45:S2:467:G:H21	1.69	0.89
74:Sc:64:PRO:O	74:Sc:65:ASN:ND2	2.04	0.89
75:Sd:111:LYS:CD	75:Sd:114:ARG:HH21	1.84	0.88
1:LA:1236:G:H1	1:LA:1250:A:H2	1.16	0.88
71:SZ:31:THR:OG1	71:SZ:37:GLU:O	1.91	0.88
72:Sa:55:LEU:HD12	72:Sa:65:SER:OG	1.73	0.88
1:LA:2922:U:C5	79:Ta:74:A:N1	2.42	0.88
45:S2:40:A:H62	45:S2:467:G:N2	1.71	0.88
45:S2:1727:G:H21	67:SV:32:GLN:HE21	1.22	0.88
48:SC:1:MET:H2	48:SC:3:MET:HE3	1.38	0.87
66:SU:127:GLU:CG	66:SU:131:PHE:CE1	2.55	0.87
48:SC:2:LEU:C	48:SC:3:MET:HE2	2.00	0.87
9:LI:110:ARG:HG3	9:LI:113:SER:HB2	1.54	0.87
11:LK:23:ARG:NE	11:LK:39:LYS:HA	1.90	0.87
46:SA:72:LEU:CD1	48:SC:20:VAL:HG11	2.04	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LK:23:ARG:HH21	11:LK:39:LYS:CA	1.88	0.86
66:SU:96:ARG:HH11	66:SU:124:LYS:HG3	1.39	0.86
45:S2:79:C:O4'	65:ST:174:LYS:HE3	1.75	0.86
45:S2:1047:G:H1	45:S2:1071:U:H3	0.87	0.86
1:LA:2923:U:C4	79:Ta:74:A:H2	1.94	0.85
45:S2:187:G:H21	45:S2:198:A:N6	1.74	0.85
44:Lr:53:GLY:CA	44:Lr:66:GLY:O	2.17	0.85
1:LA:2382:C:OP2	17:LQ:85[A]:ARG:NH2	2.10	0.85
22:LV:111:ALA:HB1	22:LV:115:LYS:HZ1	1.39	0.85
45:S2:774:A:H61	45:S2:786:C:H42	0.85	0.85
45:S2:187:G:H21	45:S2:198:A:H62	1.25	0.85
12:LL:108:ALA:O	12:LL:112:GLN:HB2	1.77	0.84
45:S2:122:U:N3	45:S2:123:G:C6	2.44	0.84
45:S2:2:A:H2'	63:SR:197:TYR:CD2	2.14	0.83
1:LA:2922:U:C4	79:Ta:74:A:C6	2.68	0.82
5:LE:284:ARG:HB3	5:LE:323:MET:HE2	1.61	0.82
31:Le:36:GLN:HB3	31:Le:38:LYS:HZ3	1.44	0.82
45:S2:142:G:H1	45:S2:173:A:N6	1.76	0.82
1:LA:2923:U:C4	79:Ta:74:A:C2	2.67	0.82
55:SJ:41:ILE:HD13	55:SJ:91:ILE:HD13	1.60	0.82
1:LA:1656:C:H42	1:LA:1797:A:H2	1.28	0.82
53:SH:126:ARG:HE	53:SH:133:VAL:HA	1.43	0.82
45:S2:1593:A:H2'	45:S2:1594:G:H8	1.44	0.81
54:SI:77:ASN:HB3	54:SI:95:ASP:HB3	1.61	0.81
55:SJ:31:VAL:HG22	55:SJ:87:HIS:NE2	1.93	0.81
45:S2:124:A:H2'	45:S2:125:U:H4'	1.62	0.81
38:Ll:54:LYS:O	38:Ll:58:THR:HB	1.80	0.81
63:SR:182:PRO:HG3	68:SW:17:ARG:HH22	1.46	0.81
11:LK:27:VAL:HG11	11:LK:78:MET:HG3	1.61	0.81
31:Le:36:GLN:CB	31:Le:38:LYS:HZ3	1.92	0.81
45:S2:643:G:N2	45:S2:691:C:O2	2.13	0.81
12:LL:191:LYS:HE3	12:LL:198:LYS:HD2	1.62	0.81
4:LD:70:ARG:NH1	4:LD:72:ARG:HH21	1.79	0.81
35:Li:19:LYS:HB3	35:Li:35:VAL:HG23	1.63	0.81
61:SP:150:ASP:O	61:SP:150:ASP:OD1	1.99	0.81
66:SU:167:GLU:N	66:SU:167:GLU:OE1	2.13	0.80
52:SG:77:GLU:HA	52:SG:80:ARG:HG2	1.62	0.80
46:SA:76:ARG:HH21	48:SC:22:VAL:HG13	1.46	0.80
45:S2:1679:G:H1	45:S2:1722:A:H61	1.26	0.80
60:SO:214:ALA:HB1	60:SO:240:VAL:HG11	1.63	0.80
64:SS:234:PRO:HD2	64:SS:234:PRO:O	1.77	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SR:178:ILE:HD13	63:SR:189:GLN:HE21	1.46	0.79
1:LA:160:G:H1	1:LA:261:U:H3	1.27	0.79
45:S2:122:U:O4	45:S2:123:G:C6	2.36	0.79
66:SU:96:ARG:NH1	66:SU:124:LYS:HG3	1.97	0.79
8:LH:172:HIS:ND1	8:LH:173:LEU:HD13	1.97	0.78
31:Le:36:GLN:HB3	31:Le:38:LYS:NZ	1.98	0.78
45:S2:214:G:H21	45:S2:251:A:H62	0.86	0.78
76:Se:20:PRO:HB3	76:Se:31:PRO:HA	1.64	0.78
1:LA:2922:U:C5	79:Ta:74:A:N6	2.52	0.78
67:SV:57:ALA:HB2	67:SV:177:GLY:HA2	1.66	0.78
4:LD:137:ILE:HG23	45:S2:923:A:H1'	1.66	0.78
46:SA:141:LYS:HE2	46:SA:179:GLN:HG3	0.82	0.78
45:S2:123:G:C5	45:S2:295:A:C6	2.72	0.78
45:S2:1282:U:H3	45:S2:1425:A:H61	1.32	0.78
58:SM:36:LEU:HD13	58:SM:38:ILE:HG22	1.66	0.78
1:LA:654:C:H2'	1:LA:655:A:H8	1.49	0.78
7:LG:83:LEU:HD22	7:LG:88:ILE:HB	1.66	0.78
45:S2:1673:G:O6	45:S2:1728:A:N1	2.17	0.78
45:S2:123:G:C6	45:S2:295:A:N6	2.51	0.78
62:SQ:213:ARG:HD2	62:SQ:214:LYS:HD2	1.65	0.78
1:LA:1625:U:H3	1:LA:1816:G:H1	1.32	0.77
30:Ld:16:ALA:O	30:Ld:20:GLY:HA3	1.84	0.77
45:S2:1670:G:O2'	45:S2:1731:A:N6	2.18	0.77
46:SA:72:LEU:HD13	48:SC:20:VAL:HG11	1.65	0.77
45:S2:1305:U:H5"	45:S2:1306:C:H5	1.50	0.77
45:S2:1423:U:H3	63:SR:95:ARG:HH12	1.30	0.77
63:SR:81:MET:N	63:SR:81:MET:SD	2.58	0.77
66:SU:55:LYS:HZ1	66:SU:89:HIS:HD2	1.31	0.77
1:LA:493:G:O2'	1:LA:494:G:N7	2.17	0.77
1:LA:1601:A:N6	26:LZ:71:THR:OG1	2.18	0.77
1:LA:315:C:OP2	37:Lk:28:TYR:OH	2.02	0.76
45:S2:1679:G:H1	45:S2:1722:A:N6	1.83	0.76
48:SC:59:PHE:HE1	48:SC:64:TYR:HE1	1.32	0.76
45:S2:295:A:H8	64:SS:146:THR:HG21	1.50	0.76
65:ST:78:THR:HG22	65:ST:92:ARG:HG3	1.68	0.76
24:LX:81:GLN:O	24:LX:98:ASN:ND2	2.18	0.76
64:SS:147:ILE:HD12	64:SS:147:ILE:O	1.85	0.76
8:LH:175:LYS:HE2	8:LH:176:PHE:O	1.86	0.76
45:S2:155:U:H1'	65:ST:59:GLN:HA	1.67	0.76
65:ST:78:THR:HG22	65:ST:92:ARG:CG	2.15	0.76
1:LA:1236:G:N1	1:LA:1250:A:C2	2.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1478:G:OP1	54:SI:43:ASN:ND2	2.18	0.75
20:LT:11:ALA:O	20:LT:15:VAL:HG12	1.86	0.75
35:Li:22:VAL:CG1	35:Li:30:LEU:HD22	2.16	0.75
41:Lo:86:ALA:O	41:Lo:90:ASN:HB2	1.87	0.75
64:SS:234:PRO:O	64:SS:234:PRO:CD	2.34	0.75
15:LO:38:ILE:HA	15:LO:44:VAL:HG12	1.67	0.75
17:LQ:172[A]:ARG:NH1	17:LQ:172[A]:ARG:HB3	2.01	0.75
45:S2:643:G:N1	45:S2:691:C:N3	2.34	0.75
60:SO:81:LEU:HD11	60:SO:113:VAL:HG11	1.68	0.75
1:LA:405:U:H4'	1:LA:1415:C:H4'	1.68	0.75
67:SV:166:TYR:HB3	67:SV:184:LEU:HD12	1.69	0.75
70:SY:115:LEU:CD1	70:SY:119:GLU:OE1	2.34	0.75
1:LA:3091:C:O2'	1:LA:3093:A:OP2	2.05	0.75
45:S2:1146:G:H4'	63:SR:91:ARG:HG2	1.68	0.75
73:Sb:47:ILE:HD11	73:Sb:63:VAL:CG1	2.16	0.74
7:LG:294:ALA:HB1	12:LL:217:PHE:HB3	1.69	0.74
1:LA:690:A:N1	3:LC:28:C:O2'	2.20	0.74
1:LA:900:G:OP1	38:Ll:13:ASN:ND2	2.19	0.74
2:LB:7:G:OP1	7:LG:33:ARG:NH1	2.20	0.74
11:LK:6:THR:HG21	11:LK:65:VAL:HG13	1.69	0.74
1:LA:1656:C:N4	1:LA:1797:A:OP2	2.20	0.74
68:SW:59:LEU:HD11	68:SW:72:GLU:HB2	1.69	0.74
37:Lk:54:GLU:HB3	37:Lk:90:MET:HE2	1.69	0.74
39:Lm:41:THR:CG2	39:Lm:56:ILE:HD11	2.12	0.74
45:S2:79:C:C1'	65:ST:174:LYS:HE3	2.18	0.74
45:S2:1679:G:N1	45:S2:1722:A:N6	2.33	0.74
21:LU:96:ASP:OD1	21:LU:97:VAL:N	2.19	0.74
39:Lm:40:GLN:HE22	39:Lm:55:VAL:HG13	1.52	0.74
45:S2:375:U:OP1	74:Sc:23:ARG:NH2	2.18	0.74
45:S2:925:G:OP1	45:S2:986:G:O2'	2.06	0.74
66:SU:55:LYS:NZ	66:SU:89:HIS:CD2	2.55	0.74
62:SQ:71:ALA:HB2	62:SQ:80:SER:HA	1.69	0.73
62:SQ:188:LEU:HD12	62:SQ:193:ILE:HD12	1.70	0.73
45:S2:104:A:H4'	45:S2:105:A:H5'	1.68	0.73
7:LG:40:HIS:HB3	7:LG:43:LYS:HG3	1.70	0.73
45:S2:1673:G:N1	45:S2:1728:A:C2	2.52	0.73
62:SQ:103:MET:HE3	62:SQ:215:VAL:HG12	1.69	0.73
1:LA:2853:U:OP2	12:LL:3:ARG:NH2	2.21	0.73
26:LZ:31:THR:HG21	26:LZ:33:ARG:NH2	2.03	0.73
26:LZ:86:VAL:HG23	26:LZ:120:LYS:HB3	1.71	0.73
45:S2:1297:G:N2	45:S2:1300:A:OP2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1300:A:H4'	1:LA:1301:A:H5"	1.71	0.73
26:LZ:108:LEU:N	26:LZ:125:ARG:O	2.20	0.73
29:Lc:76:ASP:OD1	29:Lc:76:ASP:N	2.20	0.73
11:LK:17:THR:HG23	11:LK:28:VAL:HG13	1.68	0.73
15:LO:49:PRO:HB3	15:LO:78:THR:HG23	1.69	0.73
57:SL:9:LEU:HB3	57:SL:33:LEU:HD23	1.70	0.73
66:SU:162:ILE:HG22	66:SU:165:LYS:HZ1	1.54	0.73
22:LV:111:ALA:HB1	22:LV:115:LYS:NZ	2.04	0.73
45:S2:15:U:O2'	45:S2:620:A:N6	2.22	0.73
45:S2:123:G:N2	45:S2:295:A:C2	2.55	0.73
45:S2:1506:G:H2'	45:S2:1507:G:C8	2.24	0.73
45:S2:1586:A:H4'	51:SF:136:SER:HB2	1.69	0.73
60:SO:5:GLU:HA	60:SO:315:VAL:HG13	1.71	0.73
68:SW:132:ARG:HG3	68:SW:132:ARG:O	1.86	0.73
1:LA:1100:G:H5"	9:LI:107:ARG:HD2	1.71	0.73
43:Lq:25:VAL:HG22	43:Lq:72:LEU:HD22	1.71	0.73
73:Sb:78:ARG:HD2	73:Sb:126:LEU:HD23	1.69	0.73
37:Lk:57:LEU:O	37:Lk:61:ILE:HD12	1.88	0.73
45:S2:1077:C:O2'	76:Se:95:ARG:NH2	2.22	0.72
66:SU:82:GLU:O	66:SU:86:GLN:NE2	2.21	0.72
11:LK:23:ARG:NH2	11:LK:39:LYS:O	2.22	0.72
66:SU:127:GLU:O	66:SU:131:PHE:CD1	2.41	0.72
5:LE:298:PHE:O	65:ST:25:ARG:NH1	2.21	0.72
12:LL:209:ASN:O	12:LL:212:GLU:O	2.06	0.72
60:SO:112:SER:HB2	60:SO:154:VAL:HG22	1.71	0.72
45:S2:1157:A:N6	45:S2:1618:C:N4	2.38	0.72
2:LB:49:G:O6	7:LG:57:ASN:ND2	2.22	0.72
45:S2:123:G:O6	45:S2:295:A:N1	2.21	0.72
23:LW:99:LYS:HG2	23:LW:102:GLU:HG3	1.70	0.72
31:Le:32:LYS:O	31:Le:36:GLN:HG3	1.89	0.72
45:S2:40:A:N6	45:S2:467:G:N2	2.33	0.72
55:SJ:38:SER:O	55:SJ:41:ILE:HG22	1.89	0.72
62:SQ:107:THR:HG21	71:SZ:119:THR:HG21	1.71	0.72
6:LF:330:TYR:HA	6:LF:333:VAL:HG13	1.72	0.72
20:LT:163:ARG:HH12	45:S2:813:U:H5"	1.54	0.72
45:S2:837:G:H2'	45:S2:838:G:C8	2.25	0.72
45:S2:1467:C:H1'	45:S2:1601:G:H21	1.55	0.72
1:LA:2291:U:O2'	45:S2:1656:U:O2'	2.07	0.72
45:S2:212:U:O4	45:S2:213:A:N6	2.21	0.72
1:LA:799:G:H22	6:LF:101:ALA:HA	1.53	0.71
40:Ln:27:ILE:HA	40:Ln:30:ARG:HG3	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LK:23:ARG:HH21	11:LK:39:LYS:C	1.97	0.71
15:LO:15:VAL:HG12	15:LO:65:LEU:HD11	1.72	0.71
74:Sc:107:PHE:HD2	74:Sc:114:LYS:HB2	1.55	0.71
10:LJ:80:TYR:OH	10:LJ:221:ASN:O	2.08	0.71
33:Lg:104:ASN:O	33:Lg:108:ILE:HG13	1.90	0.71
45:S2:1433:G:H1	58:SM:39:CYS:HG	1.36	0.71
1:LA:1660:G:H2'	1:LA:1661:G:C8	2.25	0.71
45:S2:122:U:O4	45:S2:123:G:O6	2.07	0.71
1:LA:2260:G:O2'	1:LA:2262:C:N4	2.24	0.71
45:S2:174:U:H3	45:S2:266:A:H62	1.37	0.71
45:S2:1722:A:H1'	65:ST:67:VAL:HA	1.73	0.71
61:SP:117:GLU:OE1	61:SP:117:GLU:O	2.08	0.71
75:Sd:55:VAL:HG13	75:Sd:75:VAL:HG22	1.71	0.71
16:LP:174:ILE:O	16:LP:175:ASN:ND2	2.24	0.71
25:LY:45:ASN:HB3	25:LY:48:ARG:HG3	1.73	0.71
45:S2:699:U:O2	45:S2:700:C:N4	2.21	0.71
48:SC:3:MET:HE2	48:SC:3:MET:N	2.05	0.71
1:LA:1765:G:N7	20:LT:46:LYS:NZ	2.34	0.71
45:S2:877:G:H1	45:S2:951:A:H2	1.38	0.71
1:LA:1236:G:O6	1:LA:1250:A:N1	2.24	0.70
10:LJ:90:THR:HG23	10:LJ:214:LEU:HD11	1.72	0.70
52:SG:7:LYS:NZ	52:SG:11:ARG:HD3	2.06	0.70
62:SQ:138:PHE:HB2	62:SQ:213:ARG:HB3	1.73	0.70
12:LL:121:LYS:H	12:LL:121:LYS:HD3	1.53	0.70
45:S2:1240:U:O2'	45:S2:1241:G:N2	2.24	0.70
46:SA:74:GLN:NE2	46:SA:80:ALA:O	2.24	0.70
63:SR:178:ILE:HD13	63:SR:189:GLN:NE2	2.07	0.70
26:LZ:107:VAL:HA	26:LZ:126:LEU:HA	1.73	0.70
68:SW:123:HIS:O	68:SW:127:VAL:HG23	1.91	0.70
1:LA:511:U:H3	1:LA:578:G:H1	1.39	0.70
1:LA:2163:A:OP1	4:LD:8:GLN:NE2	2.23	0.70
22:LV:118:GLU:OE2	22:LV:122:GLN:NE2	2.24	0.70
14:LN:123:ILE:HG22	36:Lj:118:ILE:HG12	1.74	0.70
45:S2:44:U:OP2	45:S2:437:A:N6	2.24	0.70
45:S2:752:A:C2	45:S2:797:G:N1	2.58	0.70
71:SZ:83:ILE:O	71:SZ:118:VAL:CA	2.35	0.70
75:Sd:41:ARG:HD2	75:Sd:55:VAL:O	1.92	0.70
1:LA:1039:A:H2'	1:LA:1040:U:H4'	1.74	0.70
4:LD:201:GLY:HA2	4:LD:204:MET:HG3	1.74	0.70
28:Lb:119:GLU:O	28:Lb:123:GLN:HG2	1.92	0.70
45:S2:1624:C:H2'	45:S2:1625:C:C6	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SW:27:GLU:HG3	68:SW:39:LYS:HE3	1.72	0.70
71:SZ:136:ARG:HG2	71:SZ:136:ARG:O	1.92	0.70
1:LA:2217:G:OP1	37:Lk:68:ARG:NH1	2.25	0.70
6:LF:158:SER:HA	6:LF:213:ASN:HB2	1.73	0.70
23:LW:56:VAL:HG23	23:LW:65:VAL:HG12	1.74	0.70
45:S2:1173:C:OP1	53:SH:132:ARG:NH2	2.24	0.70
57:SL:11:LYS:NZ	57:SL:12:VAL:O	2.25	0.70
63:SR:166:THR:OG1	63:SR:201:ASN:OD1	2.09	0.70
5:LE:244:ARG:O	5:LE:248:LYS:NZ	2.24	0.70
12:LL:44:ASP:OD1	12:LL:185:ARG:NH1	2.24	0.70
45:S2:1157:A:N6	45:S2:1618:C:H42	1.90	0.70
64:SS:122:LYS:HE3	64:SS:162:ILE:CD1	2.19	0.70
45:S2:871:G:H2'	45:S2:872:G:C8	2.27	0.69
12:LL:38:LYS:HG2	12:LL:41:ALA:HB2	1.72	0.69
1:LA:1221:G:H22	1:LA:1284:G:H2'	1.58	0.69
13:LM:107:ASP:OD1	13:LM:107:ASP:N	2.23	0.69
45:S2:1558:U:O4	50:SE:81:ARG:NH2	2.25	0.69
48:SC:59:PHE:HE1	48:SC:64:TYR:CE1	2.05	0.69
67:SV:84:HIS:NE2	67:SV:97:THR:OG1	2.25	0.69
76:Se:22:ARG:HE	76:Se:27:SER:HB2	1.57	0.69
3:LC:58:G:O2'	3:LC:100:U:O2	2.10	0.69
52:SG:43:SER:HB3	52:SG:46:LEU:HB2	1.74	0.69
61:SP:89:PHE:HB2	61:SP:174:TRP:HE1	1.57	0.69
64:SS:180:LEU:HD13	64:SS:231:GLN:HA	1.73	0.69
70:SY:16:ILE:O	73:Sb:57:ARG:NH2	2.25	0.69
17:LQ:3[A]:VAL:HG23	17:LQ:4[A]:GLU:H	1.56	0.69
45:S2:415:C:O2	45:S2:418:G:O6	2.11	0.69
45:S2:438:A:H1'	45:S2:465:G:H22	1.57	0.69
61:SP:64:ILE:HA	61:SP:67:ILE:HD12	1.75	0.69
1:LA:68:C:OP2	1:LA:301:G:N2	2.23	0.69
8:LH:175:LYS:NZ	15:LO:113:THR:HB	2.07	0.69
9:LI:30:ARG:NH1	9:LI:34:LYS:HE2	2.07	0.69
27:La:32:SER:HA	27:La:49:PRO:HA	1.72	0.69
69:SX:10:GLU:HG3	69:SX:12:ALA:H	1.57	0.69
1:LA:2767:U:H2'	1:LA:2768:A:H8	1.56	0.69
10:LJ:54:GLU:O	10:LJ:58:VAL:HG23	1.93	0.69
45:S2:294:C:C2	45:S2:295:A:C2	2.80	0.69
47:SB:143:ARG:HH11	47:SB:143:ARG:HA	1.58	0.69
53:SH:81:ILE:HG22	53:SH:83:ALA:H	1.56	0.69
66:SU:25:VAL:HG23	66:SU:26:GLU:OE2	1.93	0.69
76:Se:83:ILE:HG22	76:Se:84:VAL:HG23	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LO:38:ILE:O	21:LU:95:ARG:NH1	2.26	0.69
23:LW:28:PHE:HE1	23:LW:33:TYR:HB2	1.57	0.69
34:Lh:38:PRO:O	34:Lh:42:GLN:HG2	1.92	0.69
62:SQ:81:PHE:O	62:SQ:106:THR:HB	1.93	0.69
45:S2:123:G:C5	45:S2:295:A:N6	2.61	0.69
45:S2:1295:G:H1	45:S2:1302:U:H3	1.40	0.69
71:SZ:131:GLY:O	76:Se:22:ARG:NH1	2.26	0.69
1:LA:958:C:H41	1:LA:2800:A:H2'	1.57	0.68
1:LA:2432:U:H1'	16:LP:125:SER:HB3	1.75	0.68
1:LA:2894:G:O2'	41:Lo:100:TYR:O	2.10	0.68
1:LA:2513:U:OP2	1:LA:2585:G:N2	2.26	0.68
12:LL:30:LYS:HG2	12:LL:63:GLU:HG3	1.74	0.68
64:SS:46:VAL:HG23	64:SS:50:ASN:HD21	1.58	0.68
45:S2:1181:U:H3	45:S2:1185:U:H3	1.40	0.68
46:SA:169:ASP:HB2	46:SA:190:ARG:HH22	1.58	0.68
31:Le:18:ILE:HD11	31:Le:81:VAL:HG22	1.75	0.68
45:S2:122:U:C4	45:S2:123:G:C6	2.81	0.68
52:SG:27:ASP:HB3	52:SG:30:THR:HG22	1.75	0.68
34:Lh:14:LEU:HD11	34:Lh:31:LYS:HB2	1.74	0.68
53:SH:15:LEU:HB2	53:SH:22:VAL:HB	1.75	0.68
59:SN:107:LYS:HE3	59:SN:108:VAL:H	1.58	0.68
16:LP:15:GLN:HB3	37:Lk:51:SER:HB3	1.75	0.68
1:LA:1777:G:O2'	1:LA:1779:G:OP2	2.11	0.68
1:LA:2879:U:OP1	24:LX:47:ASN:ND2	2.24	0.68
1:LA:2922:U:H5	79:Ta:74:A:N1	1.91	0.68
5:LE:67:PHE:HD2	5:LE:70:ARG:HH21	1.41	0.68
29:Lc:82:ILE:HD13	29:Lc:102:ILE:HG12	1.75	0.68
45:S2:1018:U:OP1	70:SY:107:LYS:NZ	2.27	0.68
50:SE:83:MET:C	50:SE:83:MET:HE3	2.19	0.68
62:SQ:128:LYS:HA	62:SQ:134:VAL:HG12	1.75	0.68
1:LA:594:G:OP1	9:LI:33:ARG:NH2	2.26	0.68
4:LD:137:ILE:HD11	4:LD:149:ARG:HB2	1.74	0.68
12:LL:190:VAL:HG13	12:LL:197:VAL:HG21	1.75	0.68
27:La:45:ILE:HD12	27:La:122:LYS:HB3	1.75	0.68
45:S2:298:C:O2'	64:SS:30:ARG:NH2	2.27	0.68
1:LA:1496:C:H2'	1:LA:1497:A:H8	1.57	0.68
45:S2:415:C:O2	45:S2:418:G:C6	2.47	0.68
62:SQ:134:VAL:HG23	62:SQ:218:LEU:HB2	1.76	0.68
77:Sf:34:ASP:HB3	77:Sf:80:ARG:HG3	1.75	0.68
2:LB:54:U:O2'	2:LB:56:A:N6	2.27	0.68
6:LF:325:LEU:O	9:LI:41:ARG:NH2	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:393:C:OP1	67:SV:2:GLY:N	2.27	0.68
45:S2:1167:G:N2	45:S2:1466:G:OP2	2.27	0.68
45:S2:1608:U:H4'	51:SF:75:VAL:HB	1.75	0.68
63:SR:56:ILE:HA	63:SR:61:LEU:HD21	1.75	0.68
1:LA:654:C:H2'	1:LA:655:A:C8	2.29	0.67
1:LA:1804:C:H2'	1:LA:1805:A:H8	1.60	0.67
1:LA:1883:A:H4'	32:Lf:31:ARG:HH12	1.57	0.67
52:SG:5:ARG:H	52:SG:5:ARG:HD2	1.59	0.67
1:LA:527:U:H2'	1:LA:528:A:H8	1.58	0.67
17:LQ:43[A]:ILE:HD11	17:LQ:138[A]:LEU:HD13	1.76	0.67
47:SB:70:VAL:HG21	51:SF:47:LYS:HB2	1.76	0.67
2:LB:40:C:O2	13:LM:72:ARG:NH1	2.25	0.67
9:LI:110:ARG:HD2	9:LI:206:LYS:HD3	1.77	0.67
45:S2:628:G:H21	45:S2:971:A:H62	1.41	0.67
45:S2:1241:G:O6	45:S2:1451:C:O2'	2.11	0.67
7:LG:256:THR:HB	7:LG:258:LYS:NZ	2.10	0.67
69:SX:94:ILE:HD11	69:SX:97:TYR:HD2	1.58	0.67
1:LA:209:A:N3	6:LF:221:ASN:ND2	2.42	0.67
1:LA:3378:C:H4'	5:LE:315:GLY:HA2	1.76	0.67
9:LI:110:ARG:HD2	9:LI:206:LYS:CD	2.25	0.67
12:LL:66:GLU:OE1	12:LL:69:ARG:NH1	2.27	0.67
20:LT:165:LYS:HE2	45:S2:850:A:H5'	1.75	0.67
60:SO:228:LYS:O	60:SO:229:LYS:HE2	1.95	0.67
6:LF:26:PHE:CD1	6:LF:130:ALA:HB2	2.30	0.67
60:SO:115:ILE:HD13	60:SO:122:ILE:HG12	1.75	0.67
63:SR:66:PHE:HB3	63:SR:130:ILE:HD12	1.76	0.67
64:SS:122:LYS:HD2	64:SS:123:LEU:N	2.09	0.67
21:LU:8:GLN:HB3	21:LU:64:ILE:HD11	1.77	0.67
66:SU:44:LYS:N	66:SU:61:PHE:O	2.26	0.67
79:Ta:55:U:H5'	79:Ta:56:U:H5"	1.76	0.67
45:S2:73:U:N3	65:ST:169:TYR:OH	2.27	0.67
45:S2:122:U:N3	45:S2:123:G:N1	2.39	0.67
45:S2:1606:C:H2'	45:S2:1607:G:C8	2.29	0.67
52:SG:7:LYS:HZ1	52:SG:11:ARG:HD3	1.59	0.67
1:LA:686:U:OP2	14:LN:36:ARG:NH2	2.28	0.67
11:LK:9:GLN:HE22	11:LK:48:VAL:HG21	1.59	0.67
45:S2:758:U:OP1	64:SS:22:LYS:NZ	2.24	0.67
45:S2:951:A:H1'	70:SY:101:HIS:HD2	1.59	0.67
67:SV:54:LYS:HE2	67:SV:175:GLN:HG3	1.77	0.67
1:LA:2959:C:H2'	1:LA:2960:G:C8	2.29	0.67
28:Lb:51:LEU:HD12	28:Lb:65:ARG:HG2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SH:107:SER:O	53:SH:111:ASP:OD1	2.13	0.67
60:SO:88:THR:HG22	60:SO:104:VAL:HG13	1.77	0.67
53:SH:134:ARG:NH1	53:SH:136:GLN:OE1	2.29	0.66
1:LA:2221:A:H2'	1:LA:2222:A:C8	2.30	0.66
45:S2:1520:U:OP1	54:SI:78:LYS:NZ	2.28	0.66
60:SO:158:PRO:HG2	60:SO:206:PRO:HA	1.77	0.66
65:ST:46:LYS:HE2	65:ST:46:LYS:HA	1.77	0.66
45:S2:1555:A:O2'	50:SE:82:ASN:ND2	2.27	0.66
1:LA:1039:A:H1'	12:LL:198:LYS:HB3	1.76	0.66
1:LA:1127:U:OP1	12:LL:4:ARG:NH1	2.27	0.66
27:La:101:PRO:HA	27:La:104:LEU:HG	1.76	0.66
35:Li:91:ARG:HH11	35:Li:91:ARG:HG3	1.61	0.66
45:S2:1565:C:OP1	53:SH:41:ARG:NH1	2.28	0.66
61:SP:59:LEU:HD22	72:Sa:79:LEU:HD11	1.77	0.66
64:SS:130:GLN:NE2	64:SS:138:TYR:OH	2.28	0.66
29:Lc:45:MET:HE2	29:Lc:45:MET:HA	1.78	0.66
45:S2:1334:U:H3	58:SM:55:PHE:HE1	1.43	0.66
45:S2:1380:U:O2	45:S2:1516:A:N6	2.29	0.66
45:S2:1588:G:O6	45:S2:1608:U:O4	2.14	0.66
1:LA:1626:U:O2	1:LA:1812:A:O2'	2.11	0.66
62:SQ:141:ALA:HB2	62:SQ:210:ILE:HG23	1.77	0.66
1:LA:633:C:OP1	34:Lh:21:ARG:NE	2.29	0.66
46:SA:96:LEU:O	46:SA:190:ARG:NH1	2.28	0.66
1:LA:798:G:O2'	14:LN:18:TRP:NE1	2.28	0.66
1:LA:937:C:OP2	29:Lc:26:ARG:NH1	2.29	0.66
2:LB:47:C:OP1	7:LG:95:TRP:N	2.28	0.66
9:LI:107:ARG:NH2	9:LI:202:LEU:O	2.29	0.66
45:S2:1388:A:N6	45:S2:1411:A:OP2	2.27	0.66
45:S2:1475:A:H1'	45:S2:1540:G:H5"	1.78	0.66
13:LM:91:LEU:HD23	13:LM:96:PHE:HE1	1.60	0.66
20:LT:66:HIS:O	20:LT:70:LYS:HG2	1.96	0.66
34:Lh:16:TYR:OH	34:Lh:89:LEU:O	2.14	0.66
45:S2:354:C:H5"	67:SV:16:ALA:HB2	1.77	0.66
1:LA:1389:A:N6	1:LA:1417:A:O2'	2.28	0.66
1:LA:1516:G:OP1	40:Ln:41:ARG:NH1	2.21	0.66
1:LA:1894:A:HO2'	1:LA:3052:G:H4'	1.61	0.66
19:LS:125:ASP:OD1	19:LS:126:GLN:N	2.29	0.66
45:S2:862:A:H5'	70:SY:16:ILE:HG13	1.76	0.66
64:SS:23:LEU:HA	68:SW:3:ARG:HH22	1.60	0.66
70:SY:91:LEU:HB3	70:SY:122:ILE:HG12	1.78	0.66
1:LA:531:A:H61	1:LA:559:G:H1	1.42	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LL:209:ASN:O	12:LL:212:GLU:C	2.40	0.65
46:SA:94:ARG:HH22	46:SA:104:SER:HB3	1.60	0.65
1:LA:394:G:N1	1:LA:397:A:OP2	2.29	0.65
1:LA:759:G:N2	1:LA:769:G:O2'	2.28	0.65
1:LA:3325:G:H1	1:LA:3379:U:H3	1.43	0.65
12:LL:36:LEU:HD23	12:LL:87:LEU:HD23	1.77	0.65
23:LW:16:THR:HG22	23:LW:64:THR:HG22	1.78	0.65
35:Li:29:ILE:HD11	35:Li:31:ARG:HH11	1.61	0.65
45:S2:992:A:H2	45:S2:1012:U:H3	1.44	0.65
45:S2:1588:G:H1	45:S2:1608:U:H3	1.44	0.65
45:S2:1211:A:N3	50:SE:97:TYR:OH	2.27	0.65
1:LA:1390:C:HO2'	33:Lg:101:SER:HG	1.44	0.65
14:LN:5:LYS:H	14:LN:5:LYS:HD3	1.60	0.65
45:S2:992:A:O2'	45:S2:1785:U:O2	2.14	0.65
52:SG:113:LEU:HD11	61:SP:49:ASN:OD1	1.96	0.65
6:LF:169:LEU:HG	6:LF:174:ALA:HB3	1.77	0.65
21:LU:12:ARG:HD2	21:LU:22:PRO:HD2	1.78	0.65
45:S2:107:C:H2'	45:S2:108:A:H8	1.62	0.65
45:S2:1527:C:OP1	47:SB:109:LYS:NZ	2.28	0.65
46:SA:105:MET:HE1	46:SA:186:VAL:HG11	1.78	0.65
6:LF:150:LEU:HD21	6:LF:172:VAL:HB	1.79	0.65
8:LH:149:ILE:HG23	8:LH:155:LEU:HD23	1.79	0.65
17:LQ:158[A]:ALA:O	17:LQ:162[A]:VAL:HG23	1.97	0.65
45:S2:1588:G:H21	47:SB:106:LYS:H	1.44	0.65
63:SR:101:VAL:HG22	63:SR:115:ILE:HG22	1.78	0.65
1:LA:1623:G:H1	1:LA:1818:U:H3	1.44	0.65
1:LA:2702:A:N6	7:LG:28:THR:O	2.29	0.65
5:LE:169:THR:HG23	5:LE:171:LEU:H	1.61	0.65
6:LF:150:LEU:HD23	6:LF:249:ILE:HG13	1.79	0.65
8:LH:175:LYS:HZ3	15:LO:113:THR:HB	1.59	0.65
27:La:56:VAL:HB	27:La:104:LEU:HD13	1.78	0.65
45:S2:905:A:O2'	71:SZ:52:ARG:NH1	2.30	0.65
60:SO:81:LEU:CD1	60:SO:113:VAL:HG11	2.26	0.65
1:LA:713:G:HO2'	1:LA:752:C:HO2'	1.45	0.65
1:LA:2726:A:OP2	1:LA:2727:G:N2	2.29	0.65
12:LL:211:ARG:HH11	12:LL:211:ARG:HG3	1.62	0.65
45:S2:1022:C:O2'	45:S2:1125:A:N1	2.29	0.65
58:SM:12:ARG:O	58:SM:18:SER:OG	2.15	0.65
73:Sb:72:CYS:SG	73:Sb:129:VAL:HG23	2.37	0.65
7:LG:63:GLN:HB2	7:LG:65:ILE:HD11	1.78	0.65
17:LQ:61[A]:ALA:HA	17:LQ:70[A]:PRO:HD2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SB:219:ARG:HA	47:SB:222:LYS:HE3	1.78	0.65
61:SP:78:SER:O	61:SP:83:GLN:NE2	2.30	0.65
64:SS:129:VAL:HG22	64:SS:139:VAL:HG12	1.79	0.65
64:SS:251:GLU:O	64:SS:255:ARG:HG3	1.97	0.65
1:LA:2959:C:H2'	1:LA:2960:G:H8	1.62	0.65
10:LJ:251:LYS:O	10:LJ:255:SER:OG	2.14	0.65
11:LK:23:ARG:HH21	11:LK:39:LYS:CB	2.08	0.65
1:LA:3267:A:OP1	8:LH:46:ARG:NH2	2.30	0.64
15:LO:72:LEU:HD21	15:LO:81:VAL:HG22	1.78	0.64
45:S2:122:U:N3	45:S2:123:G:C5	2.65	0.64
45:S2:294:C:N3	45:S2:295:A:H2	1.95	0.64
45:S2:1358:G:H5'	54:SI:130:ARG:HD3	1.78	0.64
1:LA:726:G:H1	1:LA:742:C:H41	1.44	0.64
1:LA:2391:C:O2'	5:LE:266:ARG:NH2	2.27	0.64
1:LA:2733:A:H1'	1:LA:2734:U:O2	1.97	0.64
3:LC:83:C:H42	27:La:52:ARG:HH22	1.43	0.64
6:LF:317:PRO:C	6:LF:319:LYS:H	2.05	0.64
16:LP:190:THR:O	16:LP:194:GLN:HG2	1.96	0.64
45:S2:811:A:H2	45:S2:816:G:H21	1.46	0.64
51:SF:6:SER:OG	51:SF:8:GLN:NE2	2.31	0.64
4:LD:173:GLY:O	4:LD:176:ASP:HB2	1.98	0.64
4:LD:247:ARG:HB3	45:S2:1012:U:H4'	1.78	0.64
45:S2:868:G:OP1	70:SY:121:ARG:NH1	2.31	0.64
1:LA:144:A:OP1	10:LJ:193:LYS:NZ	2.28	0.64
31:Le:43:ILE:HB	31:Le:90:VAL:HG22	1.80	0.64
45:S2:1321:A:H4'	45:S2:1322:A:H5'	1.78	0.64
50:SE:94:VAL:HG12	50:SE:96:ILE:HG22	1.78	0.64
54:SI:6:VAL:HA	54:SI:9:VAL:HG12	1.78	0.64
1:LA:364:G:OP2	38:Ll:52:LYS:NZ	2.28	0.64
5:LE:10:ARG:NH2	5:LE:263:SER:O	2.31	0.64
6:LF:77:VAL:O	6:LF:86:GLY:N	2.30	0.64
45:S2:1067:C:H5"	62:SQ:150:VAL:HG22	1.79	0.64
64:SS:170:THR:OG1	64:SS:171:ASP:OD1	2.14	0.64
3:LC:23:U:H5"	27:La:13:ARG:HG3	1.78	0.64
21:LU:36:ILE:H	21:LU:36:ILE:HD12	1.62	0.64
70:SY:33:VAL:HG21	70:SY:66:ILE:HD11	1.79	0.64
9:LI:60:ARG:O	9:LI:64:GLN:HG2	1.97	0.64
28:Lb:103:GLN:NE2	28:Lb:106:GLN:CD	2.46	0.64
1:LA:98:G:N7	14:LN:13:HIS:NE2	2.45	0.64
4:LD:70:ARG:HD3	4:LD:72:ARG:CZ	2.28	0.64
45:S2:1528:U:OP1	47:SB:112:ARG:NH1	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SJ:30:LYS:HB2	55:SJ:33:GLN:HB2	1.78	0.64
1:LA:1445:A:H5”	18:LR:65:SER:HB2	1.79	0.64
1:LA:1512:G:OP1	20:LT:5:ARG:NH2	2.30	0.64
47:SB:76:ARG:HH12	51:SF:122:ARG:HB3	1.63	0.64
1:LA:1446:G:N7	18:LR:25:SER:OG	2.31	0.64
1:LA:1496:C:H2’	1:LA:1497:A:C8	2.33	0.64
1:LA:1785:G:H2’	1:LA:1786:A:C8	2.33	0.64
1:LA:2555:C:O2	28:Lb:135:ARG:NH2	2.30	0.64
1:LA:2853:U:H5”	12:LL:160:PRO:HG3	1.78	0.64
1:LA:3277:C:OP1	34:Lh:54:ARG:NH2	2.26	0.64
14:LN:17:HIS:HB3	14:LN:20:GLU:HG3	1.80	0.64
32:Lf:36:ILE:HD12	32:Lf:59:ILE:HD11	1.81	0.64
45:S2:757:A:H5”	45:S2:758:U:H5	1.63	0.64
45:S2:1441:C:O2’	45:S2:1447:C:N4	2.31	0.64
45:S2:1672:G:H2’	45:S2:1673:G:C8	2.32	0.64
68:SW:139:GLN:HE22	75:Sd:64:PHE:HB3	1.62	0.64
1:LA:2103:A:OP1	20:LT:85:ARG:NH2	2.32	0.63
1:LA:2212:A:OP2	1:LA:2230:C:N4	2.31	0.63
4:LD:117:GLU:HG2	4:LD:124:GLY:H	1.63	0.63
14:LN:80:VAL:HG13	14:LN:85:LEU:HD12	1.80	0.63
28:Lb:13:VAL:O	28:Lb:20:GLY:N	2.31	0.63
62:SQ:119:THR:H	62:SQ:143:THR:HG22	1.63	0.63
1:LA:991:A:H5”	22:LV:43:LYS:HD2	1.79	0.63
45:S2:139:C:N4	45:S2:175:G:O2’	2.31	0.63
73:Sb:25:VAL:CG2	73:Sb:63:VAL:HB	2.27	0.63
1:LA:663:U:H2’	1:LA:664:A:C8	2.34	0.63
1:LA:1663:G:H1	1:LA:1784:U:H3	1.45	0.63
11:LK:151:VAL:O	11:LK:155:SER:OG	2.16	0.63
12:LL:212:GLU:OE1	12:LL:213:PHE:N	2.31	0.63
45:S2:656:G:N2	45:S2:678:A:O2’	2.32	0.63
48:SC:38:LYS:HB2	48:SC:41:TYR:HB2	1.80	0.63
52:SG:71:PHE:HB3	52:SG:73:LEU:HG	1.80	0.63
3:LC:141:C:OP1	16:LP:109:ARG:NH2	2.32	0.63
45:S2:1679:G:C6	45:S2:1722:A:N6	2.65	0.63
55:SJ:31:VAL:HG22	55:SJ:87:HIS:CE1	2.33	0.63
66:SU:89:HIS:CE1	66:SU:165:LYS:HG2	2.33	0.63
1:LA:1347:U:OP1	19:LS:39:ARG:NH1	2.31	0.63
1:LA:1716:U:H3	1:LA:1726:G:H1	1.44	0.63
45:S2:752:A:H2	45:S2:797:G:H1	1.41	0.63
64:SS:92:LEU:O	64:SS:96:ASN:HA	1.98	0.63
66:SU:15:GLU:O	66:SU:19:GLN:NE2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1473:A:O2'	32:Lf:57:GLN:OE1	2.15	0.63
1:LA:2747:A:O2'	7:LG:48:LYS:NZ	2.31	0.63
2:LB:39:C:H4'	13:LM:44:THR:HG23	1.78	0.63
10:LJ:143:ILE:HG23	10:LJ:175:VAL:HG11	1.81	0.63
45:S2:1787:C:H5'	71:SZ:131:GLY:HA2	1.81	0.63
46:SA:105:MET:CE	46:SA:186:VAL:HG11	2.28	0.63
64:SS:54:TYR:O	75:Sd:22:GLN:NE2	2.30	0.63
73:Sb:25:VAL:HG23	73:Sb:63:VAL:HB	1.79	0.63
10:LJ:72:PRO:HG3	16:LP:18:VAL:HA	1.81	0.63
18:LR:25:SER:O	18:LR:29:THR:OG1	2.15	0.63
24:LX:30:GLY:HA3	24:LX:66:LYS:HD3	1.81	0.63
45:S2:1335:U:H3'	45:S2:1336:A:H5'	1.81	0.63
51:SF:22:VAL:HG22	51:SF:65:ILE:HG12	1.80	0.63
61:SP:36:TYR:OH	61:SP:56:LYS:NZ	2.32	0.63
62:SQ:70:LEU:HD13	62:SQ:82:ARG:HH11	1.63	0.63
1:LA:993:G:N2	1:LA:994:U:O4	2.26	0.63
12:LL:191:LYS:HZ3	12:LL:212:GLU:CD	2.07	0.63
45:S2:1171:A:O2'	45:S2:1570:A:N3	2.28	0.63
45:S2:1532:U:OP1	45:S2:1534:G:N1	2.32	0.63
62:SQ:46:THR:OG1	62:SQ:64:ARG:NH1	2.32	0.63
62:SQ:111:ARG:HH11	62:SQ:112:SER:HA	1.64	0.63
1:LA:415:G:H1	3:LC:7:U:H3	1.45	0.63
4:LD:32:LEU:HG	4:LD:37:ARG:HD3	1.81	0.63
7:LG:113:LEU:HD11	7:LG:115:LEU:HD12	1.80	0.63
9:LI:73:GLY:O	22:LV:143:THR:OG1	2.16	0.63
11:LK:8:GLN:HE22	11:LK:69:ARG:HD2	1.63	0.63
21:LU:77:VAL:HG13	21:LU:126:VAL:HG22	1.80	0.63
45:S2:1483:A:H4'	51:SF:71:GLY:HA2	1.81	0.63
46:SA:94:ARG:C	46:SA:94:ARG:HD3	2.24	0.63
71:SZ:21:ALA:HB2	71:SZ:83:ILE:HD11	1.80	0.63
75:Sd:105:ARG:HH21	75:Sd:109:LYS:HZ1	1.47	0.63
1:LA:538:C:O2'	1:LA:539:U:OP1	2.16	0.62
1:LA:768:G:H1'	14:LN:168:ARG:HH12	1.64	0.62
1:LA:1083:A:H2'	1:LA:1084:A:C8	2.34	0.62
1:LA:2901:A:OP1	11:LK:170:LYS:NZ	2.32	0.62
11:LK:46:THR:HB	11:LK:54:LYS:HG2	1.81	0.62
45:S2:332:U:O4	67:SV:172:ARG:NH2	2.32	0.62
45:S2:428:A:N3	45:S2:440:U:O2'	2.30	0.62
47:SB:197:GLU:OE1	47:SB:208:SER:OG	2.16	0.62
54:SI:31:PRO:CG	54:SI:103:LYS:NZ	2.52	0.62
66:SU:55:LYS:NZ	66:SU:89:HIS:HD2	1.93	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:63:A:OP1	16:LP:172:ARG:NH2	2.32	0.62
1:LA:289:A:H2'	1:LA:290:G:H8	1.64	0.62
12:LL:105:CYS:SG	12:LL:106:ALA:N	2.71	0.62
45:S2:545:A:N6	45:S2:594:A:OP2	2.32	0.62
45:S2:1096:C:OP2	73:Sb:71:LYS:NZ	2.32	0.62
48:SC:2:LEU:N	48:SC:3:MET:CE	2.63	0.62
50:SE:90:ILE:HD12	50:SE:109:PRO:HA	1.80	0.62
62:SQ:76:SER:OG	62:SQ:78:ASP:OD1	2.17	0.62
78:Sg:50:VAL:HG12	78:Sg:54:ARG:HG2	1.81	0.62
1:LA:1156:G:O2'	1:LA:1168:A:N3	2.30	0.62
45:S2:1650:U:H2'	45:S2:1651:A:C8	2.34	0.62
62:SQ:81:PHE:CD2	62:SQ:106:THR:HG21	2.35	0.62
62:SQ:109:LYS:O	62:SQ:113:MET:HG3	1.99	0.62
64:SS:79:ASP:HB3	64:SS:82:TYR:HB2	1.81	0.62
73:Sb:36:LYS:HG3	73:Sb:110:ILE:HD13	1.81	0.62
1:LA:989:U:H4'	22:LV:100:LYS:HB3	1.80	0.62
1:LA:1268:U:O2	1:LA:1273:A:N6	2.32	0.62
1:LA:1806:G:OP1	28:Lb:133:LYS:NZ	2.32	0.62
24:LX:24:ASN:ND2	24:LX:97:ASP:OD2	2.31	0.62
45:S2:1545:A:OP1	53:SH:134:ARG:NH1	2.32	0.62
60:SO:214:ALA:HB1	60:SO:240:VAL:CG1	2.29	0.62
62:SQ:217:LEU:HD23	62:SQ:217:LEU:H	1.65	0.62
1:LA:1591:G:OP1	35:Li:58:ARG:NH2	2.32	0.62
1:LA:2835:C:H5	1:LA:2851:C:H42	1.46	0.62
45:S2:107:C:OP1	45:S2:383:G:O2'	2.17	0.62
45:S2:124:A:N6	45:S2:291:G:N7	2.46	0.62
45:S2:451:A:N6	45:S2:454:U:OP2	2.33	0.62
45:S2:1164:G:H2'	45:S2:1165:G:H8	1.65	0.62
50:SE:43:ARG:HE	50:SE:47:ARG:HD2	1.64	0.62
71:SZ:22:SER:OG	71:SZ:25:ASP:OD1	2.10	0.62
1:LA:648:A:OP2	1:LA:2867:U:O2'	2.18	0.62
1:LA:1377:U:H2'	1:LA:1378:G:H8	1.65	0.62
1:LA:2852:A:H5"	12:LL:63:GLU:HB3	1.80	0.62
22:LV:18:ASP:HB3	22:LV:21:LYS:HB2	1.82	0.62
45:S2:1320:U:OP2	61:SP:101:ARG:NH1	2.32	0.62
45:S2:1523:G:OP1	54:SI:78:LYS:NZ	2.29	0.62
45:S2:1795:U:OP2	76:Se:4:LYS:NZ	2.31	0.62
2:LB:29:C:H2'	2:LB:30:G:H8	1.64	0.62
6:LF:192:GLY:HA2	6:LF:195:ARG:HB2	1.82	0.62
45:S2:878:G:O2'	70:SY:108:ASP:OD1	2.16	0.62
45:S2:1170:G:N2	45:S2:1571:C:O2'	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SB:121:ILE:HG23	47:SB:129:PRO:HB3	1.81	0.62
48:SC:23:ALA:O	48:SC:64:TYR:HB2	2.00	0.62
64:SS:103:TYR:O	64:SS:182:TYR:OH	2.17	0.62
1:LA:1119:A:H62	1:LA:1137:U:H3	1.48	0.62
1:LA:2671:G:H2'	1:LA:2672:A:H8	1.64	0.62
1:LA:3001:C:O2'	5:LE:180:GLU:OE2	2.16	0.62
11:LK:8:GLN:HE22	11:LK:69:ARG:CD	2.13	0.62
11:LK:13:PRO:HG2	11:LK:83:THR:HG21	1.81	0.62
45:S2:1502:G:N2	45:S2:1505:A:OP1	2.30	0.62
61:SP:64:ILE:HD12	61:SP:181:VAL:HG21	1.81	0.62
64:SS:67:GLN:OE1	64:SS:69:HIS:ND1	2.28	0.62
1:LA:3033:C:O3'	11:LK:122:LYS:NZ	2.31	0.62
16:LP:84:PRO:HA	16:LP:87:GLN:HB3	1.82	0.62
34:Lh:8:TYR:CE2	34:Lh:99:ARG:HD3	2.35	0.62
36:Lj:10:ARG:NH1	36:Lj:60:GLU:OE2	2.33	0.62
45:S2:947:U:H2'	45:S2:948:G:H8	1.65	0.62
45:S2:1532:U:OP1	56:SK:77:ARG:NH2	2.31	0.62
16:LP:192:LYS:O	16:LP:196:THR:HG23	2.00	0.61
44:Lr:27:LYS:O	44:Lr:31:ILE:HD12	1.99	0.61
45:S2:1081:A:H1'	45:S2:1082:C:H5	1.65	0.61
64:SS:108:ARG:HH11	64:SS:108:ARG:HG3	1.65	0.61
65:ST:220:LYS:HA	65:ST:223:LYS:HE3	1.81	0.61
1:LA:769:G:OP1	14:LN:171:ARG:NH2	2.33	0.61
1:LA:1277:A:H2'	1:LA:1278:C:C6	2.35	0.61
1:LA:3234:C:H2'	1:LA:3235:U:C6	2.35	0.61
30:Ld:21:ILE:O	30:Ld:21:ILE:HG22	1.98	0.61
45:S2:1245:G:H4'	45:S2:1246:C:O5'	2.00	0.61
1:LA:530:G:H2'	1:LA:531:A:H8	1.65	0.61
1:LA:3293:A:OP1	5:LE:128:LYS:NZ	2.33	0.61
19:LS:152:HIS:ND1	19:LS:162:ALA:O	2.30	0.61
45:S2:108:A:H2'	45:S2:109:G:C8	2.36	0.61
45:S2:518:A:O2'	45:S2:534:A:N6	2.32	0.61
49:SD:61:VAL:HA	49:SD:89:ILE:HB	1.82	0.61
8:LH:43:LEU:HD11	8:LH:85:ILE:HG13	1.81	0.61
15:LO:20:VAL:HG11	15:LO:90:VAL:HG11	1.81	0.61
32:Lf:51:LEU:HD12	32:Lf:55:LEU:HD23	1.81	0.61
50:SE:96:ILE:HD12	50:SE:116:LEU:HB3	1.83	0.61
75:Sd:105:ARG:HH21	75:Sd:109:LYS:NZ	1.98	0.61
7:LG:182:GLY:HA2	7:LG:194:LEU:HD23	1.83	0.61
19:LS:170:ARG:HD2	29:Lc:57:GLY:HA3	1.82	0.61
23:LW:99:LYS:CG	23:LW:102:GLU:HG3	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SW:147:MET:N	68:SW:147:MET:SD	2.74	0.61
78:Sg:30:PRO:HG2	78:Sg:38:LEU:HD11	1.82	0.61
17:LQ:65[A]:ASN:HB3	17:LQ:68[A]:ARG:HG2	1.83	0.61
45:S2:867:G:N2	70:SY:87:ASP:OD1	2.33	0.61
45:S2:877:G:O6	45:S2:951:A:N1	2.33	0.61
49:SD:54:ARG:HD2	49:SD:56:GLU:HB3	1.81	0.61
65:ST:141:ILE:HG12	65:ST:175:ILE:HD11	1.81	0.61
68:SW:36:LEU:HD23	68:SW:42:ILE:HG13	1.83	0.61
3:LC:103:G:OP2	3:LC:105:A:O2'	2.17	0.61
6:LF:175:HIS:NE2	6:LF:179:LEU:HD11	2.16	0.61
45:S2:62:A:H1'	45:S2:287:G:H21	1.65	0.61
53:SH:28:ILE:O	53:SH:32:LEU:HD22	1.99	0.61
66:SU:132:PRO:HB2	66:SU:162:ILE:HG21	1.82	0.61
69:SX:55:ASP:OD1	69:SX:82:ARG:NH1	2.33	0.61
74:Sc:109:ARG:O	74:Sc:112:LYS:NZ	2.32	0.61
13:LM:38:GLU:HB2	13:LM:45:PRO:HD3	1.81	0.61
29:Lc:94:ALA:HB2	29:Lc:121:VAL:HG22	1.82	0.61
31:Le:81:VAL:HG13	31:Le:83:LYS:HG2	1.83	0.61
61:SP:84:ARG:O	61:SP:88:LYS:HG2	2.01	0.61
66:SU:74:GLN:O	66:SU:78:THR:HG23	2.01	0.61
71:SZ:31:THR:OG1	71:SZ:37:GLU:C	2.42	0.61
23:LW:28:PHE:CE1	23:LW:33:TYR:HB2	2.35	0.61
45:S2:1047:G:O6	45:S2:1071:U:O4	2.19	0.61
46:SA:76:ARG:HH22	48:SC:63:TYR:HB3	1.65	0.61
46:SA:163:PRO:HB3	46:SA:167:PHE:HB2	1.82	0.61
51:SF:7:VAL:HG23	51:SF:22:VAL:HB	1.83	0.61
61:SP:157:ASP:CG	72:Sa:60:ARG:HH12	2.08	0.61
64:SS:104:ASP:HB3	64:SS:110:ALA:HB2	1.83	0.61
73:Sb:30:SER:HB2	73:Sb:61:ILE:HG12	1.82	0.61
74:Sc:70:LYS:HE2	74:Sc:93:LEU:HG	1.83	0.61
1:LA:158:G:H2'	1:LA:159:A:H8	1.66	0.61
39:Lm:5:ILE:HB	39:Lm:54:LEU:HA	1.83	0.61
64:SS:59:ARG:NH2	75:Sd:85:PHE:O	2.34	0.61
71:SZ:58:TYR:HA	71:SZ:61:MET:HE3	1.82	0.61
1:LA:828:U:H3	1:LA:894:A:H62	1.47	0.60
7:LG:131:LEU:HD23	7:LG:172:TYR:HE1	1.66	0.60
15:LO:20:VAL:O	15:LO:66:THR:OG1	2.19	0.60
29:Lc:112:ILE:HD11	29:Lc:130:VAL:HG23	1.83	0.60
45:S2:863:A:H62	45:S2:964:U:H3	1.48	0.60
45:S2:899:G:H2'	45:S2:900:A:H8	1.65	0.60
45:S2:1684:U:H2'	45:S2:1685:G:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SB:91:GLU:OE1	47:SB:107:LYS:NZ	2.34	0.60
52:SG:28:PHE:O	52:SG:32:LYS:HG2	2.00	0.60
64:SS:122:LYS:HZ3	64:SS:164:LEU:HD11	1.67	0.60
67:SV:62:THR:CG2	67:SV:75:LYS:HZ2	2.14	0.60
3:LC:60:U:O4	36:Lj:59:ASN:ND2	2.35	0.60
14:LN:18:TRP:O	14:LN:22:VAL:HG23	2.01	0.60
17:LQ:11[A]:GLY:N	17:LQ:36[A]:VAL:O	2.33	0.60
45:S2:1367:G:H2'	45:S2:1368:G:C8	2.36	0.60
46:SA:64:ARG:NH1	48:SC:70:GLU:OE2	2.34	0.60
60:SO:167:VAL:HG13	60:SO:183:LEU:HD11	1.82	0.60
1:LA:3321:A:H2'	1:LA:3322:A:C8	2.36	0.60
2:LB:112:G:H2'	2:LB:113:C:C6	2.35	0.60
20:LT:136:ARG:HG2	20:LT:140:GLU:OE2	2.00	0.60
34:Lh:13:HIS:O	34:Lh:95:GLY:N	2.35	0.60
45:S2:863:A:N7	45:S2:964:U:O4	2.34	0.60
45:S2:1673:G:N1	45:S2:1728:A:H2	1.84	0.60
62:SQ:105:PHE:CD2	62:SQ:213:ARG:HA	2.36	0.60
64:SS:47:PHE:HA	64:SS:51:ARG:HG3	1.82	0.60
71:SZ:26:THR:O	71:SZ:43:THR:OG1	2.19	0.60
2:LB:5:G:OP1	13:LM:143:ARG:NH2	2.33	0.60
45:S2:12:U:H2'	45:S2:13:C:C6	2.36	0.60
45:S2:58:U:O2'	45:S2:451:A:N3	2.33	0.60
51:SF:125:GLU:OE1	51:SF:135:ARG:NH1	2.33	0.60
69:SX:21:ASN:HD22	69:SX:31:THR:HA	1.67	0.60
1:LA:339:C:OP1	1:LA:1379:G:O2'	2.19	0.60
1:LA:358:G:N2	1:LA:361:A:OP2	2.30	0.60
1:LA:1595:C:H2'	1:LA:1596:C:C6	2.37	0.60
7:LG:190:ILE:HD11	7:LG:195:LEU:HD22	1.82	0.60
11:LK:76:ASP:O	11:LK:80:THR:HG23	2.01	0.60
12:LL:101:LYS:HB2	12:LL:121:LYS:NZ	2.16	0.60
37:Lk:70:ARG:HD3	37:Lk:84:LYS:HG3	1.81	0.60
45:S2:1658:G:O6	45:S2:1743:U:O4	2.18	0.60
4:LD:187:HIS:HA	4:LD:190:ARG:HG2	1.84	0.60
5:LE:29:VAL:HG22	5:LE:218:ILE:HD13	1.83	0.60
5:LE:380:MET:HE3	5:LE:383:LEU:HD21	1.84	0.60
45:S2:108:A:H2'	45:S2:109:G:H8	1.66	0.60
50:SE:34:VAL:HG22	50:SE:45:PHE:HD2	1.66	0.60
64:SS:31:PRO:HG3	64:SS:43:PRO:HG3	1.84	0.60
1:LA:181:U:H5"	38:Ll:75:LYS:HD3	1.82	0.60
1:LA:530:G:N3	1:LA:561:C:N4	2.50	0.60
6:LF:328:ASN:OD1	9:LI:48:ASN:ND2	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LP:103:GLU:OE2	16:LP:118:SER:OG	2.16	0.60
23:LW:15:PHE:HB2	23:LW:65:VAL:HG22	1.82	0.60
45:S2:1483:A:H61	45:S2:1591:C:H1'	1.65	0.60
45:S2:1797:A:O2'	76:Se:95:ARG:O	2.18	0.60
47:SB:80:LYS:HD2	47:SB:83:ARG:HG3	1.84	0.60
51:SF:28:LEU:HD12	51:SF:30:LYS:HE3	1.84	0.60
65:ST:18:ILE:HG23	65:ST:24:ILE:HD11	1.83	0.60
66:SU:50:ASP:O	66:SU:175:LYS:NZ	2.35	0.60
67:SV:191:PHE:O	67:SV:195:ARG:HG2	2.01	0.60
1:LA:1832:G:OP1	40:Ln:10:LYS:NZ	2.32	0.60
4:LD:180:LEU:HD22	44:Lr:26:VAL:HG21	1.84	0.60
9:LI:181:ILE:HD12	9:LI:182:ASP:N	2.17	0.60
15:LO:72:LEU:HD12	15:LO:73:PRO:HD2	1.83	0.60
45:S2:131:C:OP1	45:S2:133:U:O2'	2.19	0.60
1:LA:584:A:H4'	34:Lh:72:THR:HB	1.84	0.60
1:LA:1202:A:H2'	1:LA:1203:A:C8	2.37	0.60
1:LA:2743:U:H2'	1:LA:2744:G:C8	2.37	0.60
45:S2:760:A:C5	45:S2:761:G:H1'	2.37	0.60
62:SQ:82:ARG:NH2	62:SQ:191:GLU:OE2	2.34	0.60
65:ST:69:LEU:HD13	65:ST:73:ILE:HD11	1.84	0.60
67:SV:137:LYS:HE3	67:SV:141:ARG:HH21	1.67	0.60
78:Sg:34:ALA:O	78:Sg:38:LEU:HD12	2.01	0.60
11:LK:23:ARG:HH21	11:LK:39:LYS:HB3	1.66	0.60
13:LM:15:GLU:HB3	13:LM:130:VAL:HG23	1.83	0.60
45:S2:434:G:N2	45:S2:437:A:OP2	2.34	0.60
45:S2:1166:A:H5"	47:SB:101:GLY:HA2	1.84	0.60
78:Sg:13:LYS:O	78:Sg:17:GLN:HG3	2.01	0.60
4:LD:101:VAL:HG22	4:LD:165:VAL:HG22	1.84	0.59
6:LF:219:LEU:HD22	6:LF:225:VAL:HG11	1.84	0.59
1:LA:509:G:O6	1:LA:580:U:O4	2.20	0.59
15:LO:19:ARG:HG2	15:LO:65:LEU:HD22	1.84	0.59
45:S2:1175:U:OP2	45:S2:1202:A:N6	2.33	0.59
45:S2:1672:G:H2'	45:S2:1673:G:H8	1.67	0.59
48:SC:12:HIS:HB3	48:SC:76:LEU:HD11	1.84	0.59
62:SQ:121:ILE:HG12	62:SQ:161:ILE:HG23	1.84	0.59
73:Sb:81:VAL:O	73:Sb:122:SER:OG	2.17	0.59
1:LA:2780:U:OP1	14:LN:181:GLY:HA3	2.01	0.59
20:LT:165:LYS:NZ	45:S2:849:C:O3'	2.31	0.59
45:S2:122:U:N3	45:S2:123:G:C2	2.70	0.59
45:S2:1345:A:OP1	45:S2:1348:A:N6	2.35	0.59
49:SD:66:VAL:HG12	49:SD:67:THR:HG22	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SP:182:LEU:HB3	61:SP:187:ALA:HB3	1.84	0.59
64:SS:92:LEU:HD11	75:Sd:17:LEU:HD21	1.85	0.59
1:LA:1476:A:OP1	1:LA:3074:G:O2'	2.15	0.59
1:LA:2115:G:OP1	1:LA:2117:C:N4	2.35	0.59
1:LA:2561:A:H1'	10:LJ:30:THR:HB	1.83	0.59
2:LB:26:C:H2'	13:LM:137:ARG:HH22	1.66	0.59
28:Lb:30:ASP:N	28:Lb:30:ASP:OD1	2.34	0.59
32:Lf:75:ILE:HG13	32:Lf:93:VAL:HG22	1.84	0.59
33:Lg:60:ASN:HB3	33:Lg:63:THR:HG22	1.84	0.59
44:Lr:75:ALA:O	44:Lr:79:VAL:HG13	2.03	0.59
45:S2:1585:U:H2'	45:S2:1586:A:H8	1.67	0.59
46:SA:65:ARG:NH1	46:SA:68:GLU:OE2	2.34	0.59
48:SC:80:LEU:HB3	48:SC:82:LEU:HD23	1.84	0.59
50:SE:110:GLU:O	53:SH:115:ARG:NH1	2.35	0.59
64:SS:62:LYS:O	64:SS:66:MET:HG2	2.02	0.59
70:SY:115:LEU:HD12	70:SY:119:GLU:OE1	2.01	0.59
71:SZ:132:ARG:HG2	71:SZ:133:ARG:N	2.18	0.59
73:Sb:29:PRO:O	73:Sb:58:SER:OG	2.21	0.59
1:LA:2106:A:H2	1:LA:3343:A:H8	1.49	0.59
1:LA:3067:U:OP2	20:LT:62:ARG:NH2	2.36	0.59
15:LO:126:GLN:O	15:LO:130:THR:HG23	2.02	0.59
45:S2:122:U:O2	45:S2:123:G:C2	2.56	0.59
45:S2:874:C:H2'	45:S2:875:G:C8	2.37	0.59
45:S2:1477:G:H2'	45:S2:1478:G:C8	2.37	0.59
53:SH:133:VAL:HG12	53:SH:134:ARG:HH21	1.66	0.59
66:SU:133:THR:HG22	66:SU:162:ILE:CD1	2.31	0.59
1:LA:64:G:OP2	16:LP:169:LYS:NZ	2.34	0.59
9:LI:121:LYS:HB2	22:LV:133:ALA:HB3	1.84	0.59
45:S2:103:A:H4'	45:S2:105:A:C8	2.37	0.59
45:S2:1051:G:O2'	45:S2:1052:U:OP1	2.20	0.59
45:S2:1177:C:H2'	45:S2:1178:G:H8	1.67	0.59
45:S2:1535:U:O2	47:SB:186:ASN:ND2	2.35	0.59
54:SI:77:ASN:OD1	54:SI:101:ASN:ND2	2.35	0.59
64:SS:106:LYS:HB3	64:SS:108:ARG:HH12	1.68	0.59
1:LA:661:U:H2'	1:LA:662:C:C6	2.38	0.59
1:LA:2216:U:H2'	1:LA:2217:G:H8	1.66	0.59
3:LC:52:A:H62	40:Ln:27:ILE:HD13	1.67	0.59
6:LF:193:LYS:HA	6:LF:198:ARG:HA	1.85	0.59
11:LK:91:ARG:NH1	11:LK:142:ASP:OD1	2.35	0.59
21:LU:83:SER:OG	21:LU:88:HIS:NE2	2.30	0.59
33:Lg:111:ARG:O	33:Lg:115:LEU:HD12	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Li:92:ALA:O	35:Li:96:GLU:HG2	2.03	0.59
45:S2:1311:U:HO2'	52:SG:2:GLY:N	2.00	0.59
45:S2:1407:U:OP2	45:S2:1408:G:N1	2.32	0.59
45:S2:1667:A:H2'	45:S2:1668:G:C8	2.37	0.59
64:SS:10:LYS:HA	64:SS:27:TYR:HA	1.85	0.59
66:SU:154:LEU:HB2	66:SU:185:ILE:HG13	1.83	0.59
75:Sd:110:GLN:O	75:Sd:114:ARG:HG3	2.03	0.59
78:Sg:51:ASN:OD1	78:Sg:52:GLY:N	2.35	0.59
1:LA:129:U:H3	1:LA:139:G:H1	1.50	0.59
1:LA:517:G:H3'	1:LA:518:A:H3'	1.84	0.59
1:LA:530:G:H2'	1:LA:531:A:C8	2.38	0.59
27:La:34:PRO:HA	27:La:47:ALA:HA	1.85	0.59
45:S2:1486:G:H21	45:S2:1592:A:H4'	1.67	0.59
51:SF:14:LYS:O	51:SF:123:ARG:NH1	2.36	0.59
66:SU:59:ALA:HA	66:SU:91:ILE:HG13	1.85	0.59
73:Sb:55:ASP:HB3	77:Sf:25:VAL:HG22	1.83	0.59
75:Sd:104:SER:O	75:Sd:108:ARG:HG2	2.02	0.59
1:LA:655:A:H2'	1:LA:656:A:C8	2.38	0.59
1:LA:1792:C:N4	4:LD:177:LYS:O	2.30	0.59
1:LA:2661:G:H2'	1:LA:2662:G:H8	1.68	0.59
1:LA:3041:U:OP2	24:LX:48:ARG:NH1	2.36	0.59
21:LU:110:MET:HE2	21:LU:110:MET:HA	1.84	0.59
52:SG:105:GLN:O	52:SG:109:LEU:HD23	2.03	0.59
55:SJ:37:VAL:HA	55:SJ:40:ASN:ND2	2.17	0.59
57:SL:57:MET:N	57:SL:57:MET:SD	2.76	0.59
63:SR:43:ARG:HA	63:SR:46:LYS:HG3	1.84	0.59
63:SR:237:VAL:HG13	72:Sa:35:ASN:HD21	1.67	0.59
1:LA:3159:U:O4	1:LA:3289:G:O6	2.21	0.59
6:LF:152:VAL:HG12	6:LF:153:SER:H	1.66	0.59
14:LN:182:ILE:H	14:LN:182:ILE:HD12	1.68	0.59
26:LZ:67:ILE:HD11	26:LZ:85:GLN:HB2	1.85	0.59
27:La:33:ALA:HB2	27:La:101:PRO:HB2	1.83	0.59
45:S2:931:C:H1'	62:SQ:119:THR:HG23	1.85	0.59
45:S2:1283:U:H3'	45:S2:1284:C:H2'	1.84	0.59
61:SP:6:THR:O	61:SP:191:ARG:NH2	2.35	0.59
1:LA:526:A:C5	1:LA:527:U:H1'	2.38	0.58
1:LA:2118:A:O2'	1:LA:2119:A:OP1	2.19	0.58
1:LA:2851:C:N3	12:LL:158:LYS:NZ	2.51	0.58
8:LH:68:PRO:HB3	8:LH:142:ASP:HB2	1.85	0.58
15:LO:108:ARG:HH11	15:LO:112:LEU:HD23	1.67	0.58
64:SS:117:GLU:OE1	64:SS:117:GLU:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:153:U:H4'	1:LA:158:G:H4'	1.85	0.58
1:LA:2699:G:O2'	1:LA:2704:A:N1	2.32	0.58
21:LU:101:ALA:O	21:LU:105:THR:HG23	2.03	0.58
45:S2:519:C:OP1	45:S2:534:A:N6	2.37	0.58
48:SC:3:MET:SD	48:SC:45:ALA:HB2	2.44	0.58
73:Sb:105:THR:HG23	73:Sb:126:LEU:HD11	1.84	0.58
1:LA:951:A:H4'	1:LA:967:G:N2	2.17	0.58
1:LA:2968:A:N7	4:LD:215:ASN:ND2	2.50	0.58
7:LG:83:LEU:HD21	7:LG:88:ILE:HD12	1.84	0.58
11:LK:10:ILE:HD11	11:LK:79:ILE:HD12	1.86	0.58
16:LP:96:ARG:NH2	16:LP:104:GLU:OE1	2.36	0.58
21:LU:60:SER:OG	21:LU:62:ASN:OD1	2.19	0.58
45:S2:187:G:N2	45:S2:198:A:N6	2.41	0.58
45:S2:399:A:OP1	67:SV:49:ARG:NH1	2.34	0.58
45:S2:956:C:OP1	45:S2:1072:C:O2'	2.21	0.58
53:SH:117:LYS:HE3	53:SH:128:PHE:HB2	1.84	0.58
65:ST:78:THR:HG22	65:ST:92:ARG:HG2	1.85	0.58
74:Sc:103:LEU:HB3	74:Sc:126:LYS:HG2	1.84	0.58
1:LA:1236:G:N1	1:LA:1250:A:H2	1.95	0.58
1:LA:2899:A:O2'	1:LA:2900:G:O5'	2.20	0.58
45:S2:482:U:H2'	45:S2:483:A:H8	1.67	0.58
45:S2:1424:A:H2'	63:SR:92:ALA:HB3	1.84	0.58
65:ST:32:ILE:HA	65:ST:52:ILE:HB	1.85	0.58
68:SW:116:LEU:HD23	68:SW:118:LEU:HD22	1.85	0.58
11:LK:115:ARG:HH21	11:LK:123:ILE:HD11	1.68	0.58
20:LT:28:GLU:O	20:LT:32:ILE:HG12	2.04	0.58
60:SO:228:LYS:C	60:SO:229:LYS:HE2	2.28	0.58
71:SZ:83:ILE:HG22	71:SZ:116:GLU:O	2.04	0.58
77:Sf:35:VAL:HG23	77:Sf:79:PHE:HB3	1.86	0.58
1:LA:626:U:H2'	1:LA:627:A:C8	2.39	0.58
11:LK:126:VAL:CG2	11:LK:164:ILE:HD13	2.34	0.58
28:Lb:72:ILE:HD11	28:Lb:107:ARG:HG2	1.86	0.58
31:Le:36:GLN:CB	31:Le:38:LYS:NZ	2.61	0.58
41:Lo:96:CYS:HB3	41:Lo:101:ALA:HB3	1.85	0.58
45:S2:1661:U:O2'	45:S2:1663:G:OP1	2.21	0.58
1:LA:86:G:O2'	1:LA:98:G:O6	2.21	0.58
1:LA:337:G:H1	3:LC:26:U:H5	1.51	0.58
22:LV:111:ALA:O	22:LV:115:LYS:HG2	2.04	0.58
24:LX:10:LYS:HD2	24:LX:125:LEU:HD11	1.85	0.58
49:SD:50:LYS:NZ	59:SN:127:GLY:O	2.34	0.58
57:SL:10:ALA:HB1	57:SL:30:VAL:HB	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1202:A:H2'	1:LA:1203:A:H8	1.69	0.58
1:LA:2136:U:OP2	1:LA:2141:A:N6	2.33	0.58
8:LH:42:LEU:O	8:LH:49:GLY:N	2.37	0.58
45:S2:551:G:H2'	45:S2:552:G:H8	1.67	0.58
45:S2:1350:U:H2'	45:S2:1351:G:H8	1.68	0.58
45:S2:1584:G:N7	51:SF:14:LYS:NZ	2.45	0.58
45:S2:1641:C:H2'	45:S2:1642:G:C8	2.39	0.58
65:ST:41:VAL:HG11	65:ST:50:PHE:HE2	1.67	0.58
67:SV:36:THR:OG1	67:SV:57:ALA:O	2.21	0.58
1:LA:895:A:H61	1:LA:2146:A:H8	1.52	0.58
1:LA:1665:G:H2'	1:LA:1666:A:H8	1.69	0.58
1:LA:1811:G:O6	28:Lb:64:LYS:NZ	2.24	0.58
1:LA:2671:G:H2'	1:LA:2672:A:C8	2.39	0.58
12:LL:54:SER:HB3	12:LL:135:ILE:HD11	1.85	0.58
45:S2:1667:A:H2'	45:S2:1668:G:H8	1.69	0.58
47:SB:69:PHE:HD2	51:SF:50:GLU:HG2	1.69	0.58
47:SB:85:ALA:O	47:SB:92:ARG:NH1	2.37	0.58
60:SO:223:TRP:HA	60:SO:230:ALA:HA	1.86	0.58
64:SS:87:MET:HE1	64:SS:236:ILE:HG12	1.86	0.58
65:ST:58:LYS:HD2	65:ST:107:ALA:HB2	1.85	0.58
67:SV:48:THR:HG21	67:SV:54:LYS:HG3	1.86	0.58
75:Sd:36:SER:OG	75:Sd:38:ASP:OD1	2.12	0.58
1:LA:1151:G:OP2	1:LA:1151:G:N2	2.36	0.58
1:LA:2842:U:H5"	1:LA:2843:C:H5	1.67	0.58
34:Lh:49:ILE:HD11	34:Lh:71:VAL:HG23	1.85	0.58
43:Lq:61:LYS:NZ	43:Lq:63:LYS:O	2.33	0.58
45:S2:374:U:O2'	45:S2:603:U:OP1	2.21	0.58
45:S2:915:A:N1	71:SZ:41:ARG:NH2	2.52	0.58
1:LA:1193:G:H2'	1:LA:1194:A:C8	2.38	0.57
17:LQ:75[A]:ALA:HB3	17:LQ:78[A]:ARG:HG2	1.86	0.57
26:LZ:135:ILE:HG23	26:LZ:138:ARG:HH21	1.68	0.57
34:Lh:8:TYR:CZ	34:Lh:99:ARG:HD3	2.39	0.57
45:S2:1513:G:O2'	45:S2:1515:A:N3	2.35	0.57
45:S2:1564:U:H5"	54:SI:38:LYS:HD2	1.86	0.57
47:SB:51:VAL:HG12	47:SB:130:ILE:HG12	1.86	0.57
60:SO:178:VAL:HG23	60:SO:195:HIS:HE2	1.69	0.57
62:SQ:30:PHE:HB3	62:SQ:96:LEU:HD23	1.85	0.57
67:SV:26:LYS:O	67:SV:29:LEU:HD22	2.03	0.57
74:Sc:126:LYS:HB2	74:Sc:131:SER:HA	1.86	0.57
1:LA:845:A:N6	45:S2:971:A:N1	2.51	0.57
1:LA:895:A:H5"	4:LD:183:GLY:HA2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2100:C:O2'	1:LA:2101:U:O2	2.14	0.57
1:LA:2514:A:H5"	16:LP:28:TRP:CD1	2.39	0.57
1:LA:3015:A:H2'	1:LA:3016:A:H8	1.68	0.57
45:S2:1149:G:H2'	45:S2:1151:A:H8	1.69	0.57
66:SU:15:GLU:HG2	66:SU:16:LEU:HD23	1.86	0.57
1:LA:1837:G:H5"	1:LA:1838:A:H5'	1.86	0.57
1:LA:2423:A:OP1	16:LP:90:ASN:ND2	2.33	0.57
6:LF:206:LEU:HD13	6:LF:237:GLN:HG3	1.86	0.57
23:LW:22:PRO:HB2	23:LW:28:PHE:HD2	1.70	0.57
54:SI:61:VAL:O	54:SI:65:ILE:HG13	2.04	0.57
60:SO:43:ILE:HD13	60:SO:60:SER:HB3	1.85	0.57
63:SR:41:LEU:HD13	63:SR:68:ILE:HD13	1.84	0.57
67:SV:78:ILE:HA	67:SV:104:ILE:HG22	1.86	0.57
68:SW:27:GLU:HG3	68:SW:39:LYS:CE	2.34	0.57
1:LA:1231:C:H2'	1:LA:1232:G:C8	2.40	0.57
1:LA:2682:U:H2'	1:LA:2683:C:H6	1.68	0.57
27:La:71:SER:N	27:La:81:GLN:O	2.33	0.57
45:S2:895:G:OP1	62:SQ:49:ASN:ND2	2.36	0.57
45:S2:1321:A:N7	61:SP:131:GLN:NE2	2.52	0.57
45:S2:1605:G:H5"	51:SF:127:LYS:HB2	1.85	0.57
48:SC:15:LEU:HD22	48:SC:68:LEU:HD13	1.86	0.57
62:SQ:87:ARG:NH2	62:SQ:100:PHE:O	2.38	0.57
70:SY:83:GLU:HG2	70:SY:84:ILE:HG23	1.87	0.57
1:LA:107:A:O2'	1:LA:324:A:N3	2.31	0.57
1:LA:684:G:OP1	14:LN:39:ARG:NH2	2.37	0.57
6:LF:113:VAL:HB	6:LF:118:LYS:HE3	1.87	0.57
12:LL:140:THR:HG21	12:LL:148:VAL:HG11	1.86	0.57
12:LL:215:GLU:O	12:LL:219:ALA:HB3	2.04	0.57
30:Ld:23:LYS:HG3	30:Ld:24:PRO:HD2	1.86	0.57
41:Lo:98:LYS:HG3	41:Lo:118:THR:HG21	1.87	0.57
45:S2:480:G:N7	45:S2:509:G:N2	2.52	0.57
45:S2:899:G:H2'	45:S2:900:A:C8	2.39	0.57
61:SP:55:GLU:HG3	72:Sa:79:LEU:HD22	1.86	0.57
62:SQ:174:LYS:O	62:SQ:174:LYS:NZ	2.31	0.57
73:Sb:105:THR:HG22	73:Sb:110:ILE:HG13	1.87	0.57
74:Sc:52:ILE:HG12	74:Sc:77:ILE:HD11	1.87	0.57
1:LA:60:A:N6	1:LA:327:A:H1'	2.19	0.57
1:LA:1798:A:H2'	1:LA:1799:A:H8	1.69	0.57
1:LA:2216:U:H2'	1:LA:2217:G:C8	2.39	0.57
1:LA:2564:U:H2'	1:LA:2565:C:C6	2.40	0.57
31:Le:36:GLN:HB2	31:Le:38:LYS:HZ3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:623:A:H3'	45:S2:624:G:H5"	1.85	0.57
53:SH:66:LEU:O	53:SH:70:VAL:HG23	2.05	0.57
75:Sd:43:LYS:O	75:Sd:47:VAL:HG23	2.03	0.57
1:LA:3323:C:OP1	32:Lf:19:ARG:NH1	2.31	0.57
5:LE:215:ILE:HD12	5:LE:338:LEU:HB3	1.87	0.57
24:LX:114:ILE:HB	24:LX:133:SER:HA	1.85	0.57
64:SS:100:ARG:NH2	64:SS:236:ILE:HG21	2.20	0.57
71:SZ:84:ARG:HG2	71:SZ:122:PRO:HG3	1.87	0.57
1:LA:653:C:OP1	33:Lg:27:ARG:NH2	2.36	0.57
1:LA:1278:C:H2'	1:LA:1279:C:C6	2.40	0.57
1:LA:1676:G:OP1	23:LW:97:SER:OG	2.18	0.57
1:LA:2731:G:H4'	1:LA:2759:C:H4'	1.86	0.57
1:LA:3166:A:O2'	1:LA:3167:A:OP1	2.21	0.57
22:LV:39:ILE:HD12	22:LV:102:ARG:HD3	1.87	0.57
33:Lg:10:VAL:HG12	33:Lg:11:LYS:HG2	1.86	0.57
45:S2:142:G:N2	45:S2:173:A:N1	2.47	0.57
54:SI:103:LYS:HG3	54:SI:104:VAL:N	2.19	0.57
60:SO:214:ALA:HB2	60:SO:243:LEU:HD11	1.87	0.57
60:SO:297:ASP:OD1	60:SO:297:ASP:N	2.36	0.57
62:SQ:32:ILE:HA	62:SQ:96:LEU:HG	1.85	0.57
72:Sa:7:GLN:HE21	72:Sa:9:VAL:HB	1.70	0.57
74:Sc:64:PRO:C	74:Sc:65:ASN:HD22	2.08	0.57
1:LA:1912:A:N3	1:LA:2119:A:H2'	2.19	0.57
1:LA:1945:A:O3'	20:LT:136:ARG:NH2	2.38	0.57
1:LA:3021:G:N2	1:LA:3031:A:OP2	2.37	0.57
12:LL:156:ARG:HG3	12:LL:163:GLN:HB2	1.87	0.57
19:LS:76:ALA:HA	19:LS:79:LYS:HG3	1.87	0.57
43:Lq:23:HIS:HB3	43:Lq:72:LEU:HB3	1.87	0.57
43:Lq:71:ARG:HD2	43:Lq:80:ARG:HG2	1.86	0.57
45:S2:123:G:C2	45:S2:295:A:N3	2.71	0.57
47:SB:124:LEU:HD12	47:SB:125:THR:H	1.69	0.57
54:SI:38:LYS:HD3	54:SI:38:LYS:H	1.69	0.57
56:SK:77:ARG:HH11	56:SK:81:ARG:HH12	1.53	0.57
64:SS:68:ARG:HD2	64:SS:76:VAL:HG11	1.86	0.57
67:SV:39:GLY:O	67:SV:59:ARG:HB3	2.05	0.57
1:LA:1018:G:H2'	1:LA:1019:G:C8	2.40	0.57
3:LC:135:G:OP2	26:LZ:56:ARG:NH2	2.27	0.57
7:LG:50:ARG:NH2	7:LG:72:ASP:OD2	2.38	0.57
22:LV:84:TYR:HB2	30:Ld:24:PRO:HD3	1.85	0.57
27:La:70:ILE:H	27:La:70:ILE:HD12	1.70	0.57
45:S2:778:G:N2	45:S2:780:A:OP2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1433:G:H21	58:SM:26:SER:HB3	1.69	0.57
46:SA:141:LYS:CE	46:SA:179:GLN:CG	2.56	0.57
47:SB:72:HIS:O	51:SF:79:TYR:OH	2.23	0.57
51:SF:93:HIS:HA	51:SF:97:VAL:HB	1.87	0.57
60:SO:7:LEU:HD12	60:SO:313:TRP:HB3	1.87	0.57
67:SV:78:ILE:HD12	67:SV:78:ILE:H	1.69	0.57
8:LH:30:LEU:HD22	8:LH:34:LEU:HD11	1.86	0.56
19:LS:100:THR:HG23	19:LS:120:GLU:HG3	1.85	0.56
39:Lm:40:GLN:NE2	39:Lm:55:VAL:HG13	2.20	0.56
45:S2:1524:A:H62	54:SI:78:LYS:HE3	1.70	0.56
64:SS:23:LEU:HD12	64:SS:24:SER:HB2	1.87	0.56
64:SS:122:LYS:NZ	64:SS:164:LEU:HD11	2.19	0.56
65:ST:195:VAL:O	65:ST:199:GLN:HG3	2.05	0.56
1:LA:1660:G:H2'	1:LA:1661:G:H8	1.70	0.56
2:LB:56:A:OP1	13:LM:151:SER:OG	2.22	0.56
3:LC:47:C:H1'	3:LC:61:A:H2'	1.87	0.56
20:LT:181:ARG:O	20:LT:185:LEU:HG	2.04	0.56
21:LU:115:ARG:O	21:LU:117:ARG:NH1	2.37	0.56
45:S2:555:A:N7	45:S2:590:C:O2'	2.33	0.56
45:S2:884:A:H2'	45:S2:885:G:C8	2.40	0.56
45:S2:1541:G:N2	45:S2:1568:C:O2'	2.37	0.56
50:SE:81:ARG:NH2	50:SE:120:SER:O	2.37	0.56
53:SH:16:ARG:NH2	53:SH:21:ASN:OD1	2.38	0.56
55:SJ:61:LYS:HD2	55:SJ:88:LYS:HE3	1.87	0.56
61:SP:55:GLU:HG2	72:Sa:82:VAL:HG13	1.87	0.56
61:SP:130:ALA:O	61:SP:134:LYS:HG3	2.05	0.56
63:SR:212:LYS:O	63:SR:216:VAL:HG23	2.05	0.56
75:Sd:29:HIS:HB2	75:Sd:32:ARG:HB2	1.87	0.56
1:LA:1659:C:H2'	1:LA:1660:G:H8	1.71	0.56
1:LA:3352:G:H3'	67:SV:164:ARG:HH21	1.69	0.56
7:LG:120:LYS:H	7:LG:120:LYS:CD	2.17	0.56
13:LM:77:GLU:OE2	13:LM:167:TYR:OH	2.23	0.56
18:LR:122:ALA:HB3	18:LR:143:PRO:HB2	1.87	0.56
28:Lb:100:THR:HA	28:Lb:106:GLN:HE21	1.70	0.56
45:S2:1716:C:H2'	45:S2:1717:G:C8	2.40	0.56
61:SP:60:ALA:O	61:SP:63:ILE:HG22	2.06	0.56
71:SZ:83:ILE:HG23	71:SZ:118:VAL:HB	1.88	0.56
77:Sf:32:PHE:HB2	77:Sf:82:LYS:HB3	1.87	0.56
1:LA:94:G:H2'	1:LA:95:A:C8	2.41	0.56
1:LA:1353:G:H5'	8:LH:8:LYS:HE3	1.86	0.56
1:LA:1695:A:H2'	1:LA:1696:A:C8	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2525:C:H2'	1:LA:2526:G:H8	1.70	0.56
1:LA:2696:A:H2'	1:LA:2697:G:C8	2.41	0.56
12:LL:191:LYS:NZ	12:LL:212:GLU:OE2	2.29	0.56
14:LN:4:SER:O	29:Lc:44:ASN:ND2	2.38	0.56
22:LV:136:ARG:NH1	22:LV:136:ARG:HB3	2.21	0.56
45:S2:211:U:H2'	45:S2:212:U:C6	2.40	0.56
45:S2:418:G:H1'	65:ST:59:GLN:HE21	1.69	0.56
45:S2:603:U:H2'	45:S2:604:A:H8	1.71	0.56
45:S2:905:A:H4'	71:SZ:52:ARG:HB3	1.87	0.56
45:S2:978:A:H4'	45:S2:1788:G:H5'	1.87	0.56
45:S2:1198:G:O3'	58:SM:40:ARG:NH2	2.37	0.56
45:S2:1350:U:H2'	45:S2:1351:G:C8	2.41	0.56
45:S2:1788:G:P	45:S2:1788:G:H8	2.28	0.56
65:ST:30:LYS:HE3	65:ST:36:VAL:HG12	1.87	0.56
75:Sd:2:SER:OG	75:Sd:3:ASP:N	2.38	0.56
1:LA:355:A:N1	6:LF:82:THR:HG23	2.21	0.56
10:LJ:195:SER:OG	10:LJ:197:VAL:O	2.22	0.56
13:LM:136:ALA:O	13:LM:140:ARG:HG2	2.05	0.56
45:S2:325:G:OP1	69:SX:132:SER:OG	2.23	0.56
45:S2:1303:U:O2'	45:S2:1322:A:OP2	2.20	0.56
65:ST:169:TYR:HD1	65:ST:170:THR:H	1.53	0.56
74:Sc:107:PHE:CD2	74:Sc:114:LYS:HB2	2.38	0.56
78:Sg:8:LEU:HD23	78:Sg:8:LEU:H	1.70	0.56
1:LA:2445:U:H2'	1:LA:2446:A:C8	2.40	0.56
12:LL:52:LEU:HB3	12:LL:136:PHE:HB2	1.88	0.56
13:LM:85:LYS:HA	13:LM:89:TYR:CE1	2.40	0.56
13:LM:91:LEU:HD11	13:LM:104:PHE:CD2	2.41	0.56
17:LQ:111[A]:PRO:O	17:LQ:115[A]:LYS:HD2	2.05	0.56
17:LQ:182[A]:ASN:O	17:LQ:186[A]:ALA:HB2	2.06	0.56
18:LR:69:ARG:HB3	18:LR:79:THR:HG22	1.88	0.56
29:Lc:36:GLY:HA3	29:Lc:40:HIS:CE1	2.41	0.56
45:S2:1743:U:O4	45:S2:1744:A:N6	2.38	0.56
62:SQ:137:ILE:HD11	62:SQ:212:VAL:HG12	1.87	0.56
63:SR:69:ILE:HG23	63:SR:73:LEU:HD11	1.87	0.56
67:SV:184:LEU:HB3	67:SV:189:LEU:HB2	1.87	0.56
1:LA:1792:C:OP2	44:Lr:49:ARG:NH2	2.38	0.56
1:LA:2112:A:O2'	1:LA:2115:G:N7	2.33	0.56
1:LA:2661:G:H2'	1:LA:2662:G:C8	2.41	0.56
1:LA:3152:U:OP2	1:LA:3292:U:O2'	2.24	0.56
4:LD:249:SER:HB2	45:S2:987:G:H8	1.71	0.56
6:LF:279:HIS:HE1	19:LS:25:TYR:CG	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LS:64:VAL:HA	19:LS:67:ILE:HD12	1.86	0.56
29:Lc:22:ILE:HD12	29:Lc:22:ILE:H	1.71	0.56
45:S2:555:A:O2'	45:S2:556:A:O4'	2.21	0.56
48:SC:2:LEU:N	48:SC:3:MET:HE3	2.21	0.56
68:SW:37:LYS:HA	78:Sg:36:LYS:HG2	1.88	0.56
1:LA:63:A:H5"	16:LP:174:ILE:HG21	1.88	0.56
1:LA:1492:G:N2	1:LA:1492:G:OP2	2.37	0.56
6:LF:334:PHE:HA	6:LF:339:LEU:HD12	1.86	0.56
12:LL:43:VAL:O	12:LL:171:TRP:NE1	2.26	0.56
45:S2:435:C:H5"	74:Sc:50:LYS:HE3	1.87	0.56
45:S2:446:A:H5"	64:SS:57:ASN:OD1	2.06	0.56
45:S2:1168:U:O2'	45:S2:1465:C:OP2	2.24	0.56
61:SP:40:ALA:HA	61:SP:47:VAL:HG23	1.87	0.56
62:SQ:70:LEU:HA	62:SQ:73:LEU:HD12	1.88	0.56
67:SV:3:ILE:O	67:SV:30:GLY:N	2.39	0.56
6:LF:174:ALA:HB1	6:LF:205:PRO:HG3	1.87	0.56
9:LI:185:ILE:O	9:LI:189:ILE:HG22	2.06	0.56
18:LR:50:GLN:OE1	18:LR:56:ARG:NH1	2.38	0.56
28:Lb:23:VAL:HG12	28:Lb:45:GLY:HA3	1.87	0.56
45:S2:930:A:OP1	45:S2:932:U:O2'	2.17	0.56
45:S2:1102:G:OP1	73:Sb:76:SER:OG	2.19	0.56
45:S2:1280:C:H2'	45:S2:1281:G:H8	1.71	0.56
73:Sb:24:GLN:HA	73:Sb:63:VAL:O	2.06	0.56
1:LA:2343:U:H2'	1:LA:2344:A:H8	1.71	0.56
5:LE:113:GLU:HB2	5:LE:176:ALA:HB2	1.88	0.56
45:S2:419:G:H5'	65:ST:72:ARG:NH2	2.21	0.56
45:S2:1504:G:N2	45:S2:1564:U:OP1	2.39	0.56
64:SS:123:LEU:HD11	64:SS:235:TYR:HB3	1.88	0.56
68:SW:37:LYS:HA	78:Sg:36:LYS:HE2	1.88	0.56
1:LA:77:A:O2'	16:LP:176:LYS:NZ	2.39	0.55
1:LA:1140:C:O2'	1:LA:1152:A:N3	2.38	0.55
1:LA:1244:A:O2'	1:LA:1245:G:OP1	2.23	0.55
1:LA:2128:U:H2'	1:LA:2129:G:C8	2.41	0.55
1:LA:2343:U:H2'	1:LA:2344:A:C8	2.41	0.55
1:LA:3176:G:O2'	1:LA:3178:U:OP1	2.22	0.55
24:LX:23:MET:HE3	24:LX:100:GLY:HA3	1.86	0.55
30:Ld:40:ARG:HG2	30:Ld:40:ARG:HH11	1.71	0.55
45:S2:772:G:H4'	64:SS:23:LEU:HD23	1.88	0.55
45:S2:986:G:H2'	45:S2:987:G:H5'	1.87	0.55
67:SV:117:TYR:HB3	67:SV:119:GLN:HG2	1.88	0.55
1:LA:2105:A:H2'	1:LA:2106:A:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LF:54:GLU:OE1	6:LF:54:GLU:N	2.40	0.55
12:LL:145:LYS:HE2	12:LL:167:LEU:HD21	1.87	0.55
54:SI:4:VAL:HG11	54:SI:137:ALA:HB2	1.89	0.55
61:SP:130:ALA:O	61:SP:133:ILE:HG13	2.05	0.55
64:SS:128:LYS:HE2	64:SS:140:VAL:HG21	1.87	0.55
1:LA:3294:A:H2'	1:LA:3295:A:C8	2.42	0.55
5:LE:87:VAL:HG23	5:LE:107:ALA:HB3	1.87	0.55
10:LJ:211:LEU:O	10:LJ:215:VAL:HG12	2.06	0.55
12:LL:82:ARG:HH22	79:Ta:57:C:H5"	1.71	0.55
26:LZ:129:ASP:N	26:LZ:129:ASP:OD1	2.39	0.55
36:Lj:5:LYS:HB2	36:Lj:8:GLU:OE1	2.05	0.55
45:S2:344:A:H2'	45:S2:345:U:H4'	1.88	0.55
45:S2:784:C:H2'	45:S2:785:U:H4'	1.88	0.55
45:S2:936:G:OP1	45:S2:1074:G:N2	2.39	0.55
45:S2:1676:U:OP1	67:SV:44:HIS:ND1	2.35	0.55
46:SA:126:VAL:HG22	46:SA:131:ALA:HB3	1.89	0.55
51:SF:29:ILE:HG22	51:SF:65:ILE:HB	1.89	0.55
51:SF:39:VAL:HG13	51:SF:41:PRO:HD2	1.86	0.55
73:Sb:106:THR:HG23	73:Sb:108:ALA:H	1.70	0.55
1:LA:185:C:OP1	27:La:122:LYS:NZ	2.39	0.55
1:LA:2356:A:H2'	1:LA:2357:A:H8	1.70	0.55
4:LD:249:SER:OG	4:LD:250:GLN:N	2.40	0.55
9:LI:165:ASP:O	9:LI:169:ILE:HD12	2.07	0.55
19:LS:180:ARG:HD3	19:LS:185:LYS:HB2	1.88	0.55
26:LZ:57:LEU:HG	26:LZ:62:VAL:HG12	1.89	0.55
45:S2:56:U:OP1	45:S2:403:G:N1	2.36	0.55
45:S2:1268:G:O2'	45:S2:1270:G:OP1	2.23	0.55
45:S2:1341:A:H61	45:S2:1384:A:H62	1.55	0.55
60:SO:69:GLN:H	60:SO:84:SER:HA	1.70	0.55
74:Sc:95:PHE:HB3	74:Sc:135:LEU:HD13	1.89	0.55
1:LA:820:U:H2'	1:LA:821:G:H8	1.71	0.55
7:LG:50:ARG:NH1	7:LG:147:ASP:OD2	2.40	0.55
13:LM:91:LEU:HD23	13:LM:96:PHE:CE1	2.41	0.55
15:LO:27:GLN:OE1	15:LO:27:GLN:N	2.40	0.55
45:S2:172:C:H2'	45:S2:173:A:C8	2.41	0.55
45:S2:1647:U:H2'	45:S2:1648:A:C8	2.41	0.55
46:SA:49:ILE:HD11	46:SA:89:GLU:HB2	1.88	0.55
70:SY:88:LEU:HG	70:SY:125:LEU:HD23	1.87	0.55
70:SY:114:ARG:O	70:SY:118:ILE:HG13	2.06	0.55
74:Sc:61:SER:HB3	74:Sc:116:ASP:HB2	1.89	0.55
1:LA:237:G:H2'	1:LA:238:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:899:G:H1'	1:LA:1588:A:N6	2.22	0.55
1:LA:2665:C:OP2	1:LA:2686:G:N1	2.32	0.55
7:LG:120:LYS:H	7:LG:120:LYS:HD3	1.71	0.55
12:LL:212:GLU:CD	12:LL:213:PHE:H	2.13	0.55
14:LN:90:ALA:HB1	14:LN:95:ILE:HB	1.89	0.55
16:LP:149:ASN:HB2	36:Lj:92:LEU:HD21	1.88	0.55
17:LQ:62[A]:THR:HG22	17:LQ:65[A]:ASN:H	1.71	0.55
52:SG:24:LEU:HD11	52:SG:58:MET:HE3	1.88	0.55
55:SJ:81:THR:OG1	58:SM:56:ARG:O	2.24	0.55
61:SP:10:THR:OG1	61:SP:13:ASP:OD2	2.23	0.55
62:SQ:197:ILE:O	62:SQ:201:THR:HG22	2.07	0.55
1:LA:2368:G:H2'	1:LA:2369:G:C8	2.42	0.55
1:LA:3005:A:H2'	1:LA:3006:U:O4'	2.07	0.55
6:LF:234:ASN:HB3	6:LF:237:GLN:NE2	2.21	0.55
12:LL:46:PHE:HB3	12:LL:139:ARG:HG2	1.87	0.55
36:Lj:6:ALA:O	36:Lj:10:ARG:HG3	2.06	0.55
45:S2:603:U:H2'	45:S2:604:A:C8	2.42	0.55
45:S2:951:A:H1'	70:SY:101:HIS:CD2	2.41	0.55
45:S2:1216:C:N4	45:S2:1443:U:O2'	2.40	0.55
45:S2:1506:G:H5'	45:S2:1551:U:H4'	1.88	0.55
49:SD:26:ASP:HA	49:SD:29:LYS:HE2	1.88	0.55
51:SF:36:ILE:HD13	51:SF:48:VAL:HG11	1.89	0.55
60:SO:59:ARG:HE	60:SO:96:THR:HA	1.71	0.55
62:SQ:224:ASP:HB3	62:SQ:227:ALA:HB3	1.88	0.55
63:SR:175:GLY:O	68:SW:53:ARG:NH1	2.39	0.55
1:LA:1626:U:H2'	1:LA:1813:A:C5	2.42	0.55
5:LE:284:ARG:CB	5:LE:323:MET:HE2	2.35	0.55
7:LG:277:LEU:O	7:LG:282:ARG:NH1	2.40	0.55
24:LX:104:ASN:OD1	24:LX:108:GLU:N	2.40	0.55
28:Lb:27:LYS:HB3	28:Lb:42:LEU:HB2	1.89	0.55
37:Lk:35:ASN:HA	37:Lk:38:LYS:HE3	1.87	0.55
45:S2:1070:C:O2'	77:Sf:17:ARG:O	2.21	0.55
64:SS:65:LEU:HD12	64:SS:80:THR:HA	1.88	0.55
70:SY:26:PHE:HD1	70:SY:26:PHE:H	1.54	0.55
77:Sf:20:LYS:HB3	77:Sf:29:ARG:HG2	1.89	0.55
1:LA:1600:U:OP1	20:LT:42:ARG:NH2	2.40	0.55
3:LC:48:A:H61	3:LC:54:A:N6	2.05	0.55
18:LR:33:ALA:HB1	18:LR:117:ILE:HG12	1.89	0.55
45:S2:900:A:H3'	45:S2:901:G:C8	2.41	0.55
61:SP:74:VAL:HB	61:SP:118:PRO:HB3	1.88	0.55
61:SP:78:SER:OG	61:SP:129:ASP:OD1	2.23	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SW:82:ARG:HE	68:SW:149:ARG:HD3	1.70	0.55
1:LA:72:C:O2'	14:LN:66:ASN:OD1	2.25	0.55
1:LA:2736:C:O2'	30:Ld:36:ASP:OD1	2.25	0.55
1:LA:2766:U:O2'	43:Lq:30:ALA:O	2.18	0.55
21:LU:10:ILE:HG12	21:LU:59:VAL:HG22	1.89	0.55
28:Lb:11:ALA:HA	28:Lb:83:THR:HG23	1.90	0.55
28:Lb:103:GLN:HE22	28:Lb:106:GLN:CG	2.20	0.55
45:S2:122:U:C2	45:S2:123:G:C2	2.95	0.55
1:LA:114:A:N1	1:LA:266:A:O2'	2.38	0.54
1:LA:416:A:H2'	1:LA:417:A:C8	2.42	0.54
1:LA:1210:U:H2'	1:LA:1211:A:C8	2.42	0.54
1:LA:1640:U:H3'	1:LA:1641:A:H5"	1.89	0.54
1:LA:3321:A:H2'	1:LA:3322:A:H8	1.72	0.54
12:LL:106:ALA:HB3	79:Ta:73:A:H1'	1.90	0.54
14:LN:42:ARG:O	14:LN:46:ILE:HG12	2.07	0.54
18:LR:125:GLN:HG3	18:LR:141:SER:OG	2.07	0.54
35:Li:41:ARG:HH22	35:Li:52:GLN:HA	1.72	0.54
39:Lm:7:ASP:OD2	39:Lm:9:LYS:HG2	2.07	0.54
45:S2:142:G:N7	65:ST:177:ARG:NH2	2.55	0.54
45:S2:294:C:N3	45:S2:295:A:N1	2.55	0.54
45:S2:399:A:H61	65:ST:88:ARG:HH22	1.55	0.54
45:S2:547:U:O2	45:S2:596:C:O2'	2.18	0.54
65:ST:53:SER:HB3	65:ST:112:VAL:HG13	1.88	0.54
66:SU:4:PRO:O	66:SU:8:ILE:HG12	2.06	0.54
69:SX:128:CYS:SG	69:SX:131:ILE:HD11	2.47	0.54
1:LA:534:G:O2'	1:LA:553:A:N1	2.38	0.54
1:LA:1862:G:N1	1:LA:1865:C:OP2	2.35	0.54
45:S2:119:A:H1'	45:S2:397:A:N7	2.23	0.54
45:S2:151:G:H21	65:ST:13:GLN:HG2	1.72	0.54
45:S2:301:A:H5"	67:SV:25:ARG:HH12	1.72	0.54
75:Sd:57:VAL:O	75:Sd:94:TYR:OH	2.24	0.54
15:LO:48:GLY:HA3	15:LO:53:VAL:HB	1.90	0.54
17:LQ:36[A]:VAL:HG11	17:LQ:108[A]:ILE:HG23	1.89	0.54
17:LQ:54[A]:TYR:OH	17:LQ:73[A]:PHE:O	2.26	0.54
44:Lr:8:VAL:O	44:Lr:11:THR:OG1	2.26	0.54
45:S2:1387:G:OP1	60:SO:66:HIS:NE2	2.40	0.54
70:SY:47:PRO:HA	70:SY:50:ILE:HD12	1.89	0.54
1:LA:20:A:H2'	1:LA:21:G:C8	2.41	0.54
1:LA:785:A:H4'	1:LA:786:G:H5'	1.90	0.54
1:LA:2896:A:H2'	1:LA:2898:C:H5"	1.88	0.54
3:LC:41:A:H4'	38:Ll:59:THR:HG23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LX:31:ALA:HB2	24:LX:69:LEU:HD13	1.89	0.54
35:Li:22:VAL:HG12	35:Li:30:LEU:HD22	1.88	0.54
45:S2:336:G:O6	67:SV:5:ARG:NH1	2.34	0.54
54:SI:45:MET:HE2	54:SI:46:PRO:O	2.07	0.54
65:ST:56:ASN:HB2	65:ST:108:VAL:HG22	1.90	0.54
70:SY:5:HIS:HB3	70:SY:117:LEU:HD12	1.90	0.54
73:Sb:82:LYS:O	73:Sb:86:ILE:HG23	2.07	0.54
74:Sc:27:ASN:N	74:Sc:27:ASN:OD1	2.39	0.54
1:LA:2767:U:H2'	1:LA:2768:A:C8	2.40	0.54
1:LA:3014:G:H2'	1:LA:3015:A:H8	1.73	0.54
45:S2:116:U:OP1	45:S2:334:G:O2'	2.26	0.54
45:S2:1054:U:H2'	45:S2:1055:U:C6	2.42	0.54
45:S2:1338:C:OP2	51:SF:12:LYS:NZ	2.39	0.54
45:S2:1525:A:H2'	45:S2:1526:A:C4	2.42	0.54
45:S2:1573:A:N6	47:SB:100:ASN:OD1	2.31	0.54
51:SF:109:PHE:HB3	51:SF:117:LEU:HD11	1.88	0.54
63:SR:108:ASN:O	63:SR:108:ASN:ND2	2.38	0.54
1:LA:197:G:O2'	1:LA:198:A:OP1	2.24	0.54
1:LA:3049:U:O2'	25:LY:16:GLY:O	2.26	0.54
1:LA:3185:A:N3	11:LK:44:THR:OG1	2.40	0.54
16:LP:183:THR:HG22	16:LP:187:ARG:HB2	1.89	0.54
44:Lr:28:LYS:HE3	44:Lr:29:LEU:HD23	1.89	0.54
45:S2:384:G:H2'	45:S2:385:A:H8	1.73	0.54
45:S2:1673:G:C6	45:S2:1728:A:N1	2.75	0.54
52:SG:82:ASP:O	61:SP:205:ARG:NH2	2.41	0.54
60:SO:23:LEU:HD22	60:SO:33:LEU:HD11	1.90	0.54
68:SW:159:ALA:HB3	68:SW:162:SER:HB3	1.89	0.54
71:SZ:43:THR:HG23	71:SZ:45:GLY:H	1.70	0.54
76:Se:74:CYS:HB3	76:Se:77:CYS:HB2	1.88	0.54
1:LA:674:C:O2'	1:LA:678:U:OP1	2.26	0.54
1:LA:2179:G:H2'	1:LA:2180:C:C6	2.42	0.54
1:LA:2826:U:O2'	1:LA:2828:U:O4	2.21	0.54
6:LF:23:PRO:HD2	6:LF:26:PHE:CD2	2.43	0.54
7:LG:188:GLU:N	7:LG:188:GLU:OE2	2.40	0.54
9:LI:110:ARG:HD2	9:LI:206:LYS:NZ	2.22	0.54
35:Li:22:VAL:HG13	35:Li:30:LEU:HD22	1.89	0.54
47:SB:130:ILE:HD12	47:SB:131:GLN:N	2.23	0.54
68:SW:90:LYS:HD2	68:SW:92:LYS:H	1.72	0.54
1:LA:1346:U:H5"	6:LF:302:ALA:HB1	1.88	0.54
1:LA:2630:U:OP2	22:LV:4:SER:OG	2.25	0.54
1:LA:2721:U:OP1	30:Ld:33:LYS:NZ	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:LD:51:ASP:HB2	4:LD:58:LEU:HG	1.90	0.54
7:LG:150:LEU:HD12	13:LM:143:ARG:HG3	1.89	0.54
13:LM:140:ARG:HA	13:LM:145:LYS:HE3	1.90	0.54
45:S2:130:C:H4'	45:S2:176:C:H5"	1.89	0.54
45:S2:273:G:H2'	45:S2:284:G:N2	2.23	0.54
45:S2:1688:U:O2'	45:S2:1689:A:O5'	2.22	0.54
47:SB:83:ARG:HA	47:SB:86:GLN:HB2	1.89	0.54
52:SG:109:LEU:O	52:SG:113:LEU:HD22	2.08	0.54
61:SP:148:ASP:O	61:SP:151:SER:OG	2.24	0.54
1:LA:823:C:H5"	4:LD:21:ARG:HD3	1.89	0.54
1:LA:2156:G:N7	4:LD:152:SER:OG	2.37	0.54
12:LL:191:LYS:CE	12:LL:198:LYS:HD2	2.35	0.54
13:LM:131:MET:HE1	13:LM:162:TRP:CH2	2.43	0.54
19:LS:110:ALA:O	19:LS:114:ILE:HG12	2.07	0.54
31:Le:16:LEU:O	31:Le:20:SER:OG	2.26	0.54
45:S2:553:G:N2	45:S2:571:G:N7	2.56	0.54
45:S2:702:G:P	45:S2:732:G:H22	2.31	0.54
45:S2:800:U:H2'	45:S2:801:G:C8	2.42	0.54
46:SA:94:ARG:NH2	46:SA:104:SER:HB3	2.23	0.54
51:SF:139:GLN:OE1	51:SF:140:LYS:N	2.41	0.54
67:SV:159:GLN:HG2	67:SV:165:LEU:HD23	1.89	0.54
1:LA:523:U:O5'	15:LO:77:ARG:NH1	2.41	0.54
1:LA:1665:G:H2'	1:LA:1666:A:C8	2.42	0.54
3:LC:46:G:O2'	3:LC:61:A:N1	2.39	0.54
3:LC:128:U:OP1	3:LC:129:C:N4	2.41	0.54
3:LC:143:U:OP1	16:LP:38:ARG:NH2	2.41	0.54
17:LQ:121[A]:PRO:HA	17:LQ:124[A]:LEU:HD12	1.90	0.54
22:LV:119:ALA:O	22:LV:123:GLY:N	2.41	0.54
45:S2:891:A:O2'	45:S2:892:A:OP1	2.22	0.54
45:S2:1549:C:P	50:SE:42:ARG:HH22	2.31	0.54
1:LA:642:U:O2'	1:LA:1152:A:N1	2.33	0.53
1:LA:2176:G:H2'	4:LD:128:ARG:HG3	1.89	0.53
1:LA:3235:U:H2'	1:LA:3236:U:C6	2.43	0.53
4:LD:33:ASP:O	4:LD:37:ARG:NE	2.41	0.53
4:LD:44:ILE:HD12	4:LD:87:PHE:CD1	2.43	0.53
10:LJ:63:LYS:O	10:LJ:67:ILE:HG23	2.07	0.53
28:Lb:108:GLU:O	28:Lb:112:LYS:HG2	2.08	0.53
45:S2:605:A:OP2	45:S2:606:A:O2'	2.26	0.53
45:S2:856:A:N6	66:SU:116:ARG:HD3	2.23	0.53
45:S2:1478:G:O2'	54:SI:53:TRP:HB2	2.08	0.53
51:SF:13:LYS:HG3	51:SF:14:LYS:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:ST:184:LEU:O	65:ST:188:ARG:HG3	2.08	0.53
66:SU:51:VAL:HG12	66:SU:53:GLY:H	1.72	0.53
1:LA:1202:A:N3	1:LA:2854:U:O2'	2.41	0.53
4:LD:156:LYS:HG2	4:LD:158:ILE:HG23	1.90	0.53
12:LL:55:ASN:O	12:LL:55:ASN:ND2	2.41	0.53
25:LY:4:GLU:O	25:LY:12:LYS:CA	2.43	0.53
45:S2:959:U:H5"	70:SY:14:SER:HB2	1.90	0.53
45:S2:1179:G:H21	45:S2:1460:A:H62	1.56	0.53
46:SA:141:LYS:HD3	46:SA:141:LYS:C	2.33	0.53
55:SJ:63:LEU:HB3	58:SM:34:TYR:CE2	2.44	0.53
60:SO:133:VAL:HG23	60:SO:141:LEU:HB2	1.89	0.53
61:SP:57:LEU:HD21	61:SP:176:LEU:HB2	1.90	0.53
1:LA:1716:U:H2'	1:LA:1717:G:C8	2.43	0.53
1:LA:1723:U:H1'	1:LA:1724:C:C6	2.43	0.53
1:LA:2233:G:O2'	1:LA:2602:G:O2'	2.26	0.53
1:LA:2241:A:H5'	4:LD:243:THR:HG22	1.91	0.53
1:LA:2755:C:O4'	22:LV:49:GLN:HG2	2.08	0.53
1:LA:2811:C:H2'	1:LA:2812:A:C8	2.43	0.53
1:LA:2900:G:O2'	1:LA:3023:A:N1	2.39	0.53
3:LC:23:U:H4'	27:La:17:LYS:HB2	1.90	0.53
4:LD:47:GLN:HG2	4:LD:60:LYS:HB2	1.90	0.53
6:LF:35:VAL:HG21	6:LF:244:LEU:HD21	1.89	0.53
17:LQ:4[A]:GLU:O	17:LQ:31[A]:GLN:NE2	2.29	0.53
18:LR:29:THR:HG21	18:LR:146:ILE:HD11	1.90	0.53
45:S2:127:G:N7	65:ST:202:ARG:NH2	2.47	0.53
45:S2:384:G:H2'	45:S2:385:A:C8	2.44	0.53
45:S2:1789:G:H2'	45:S2:1790:A:H8	1.74	0.53
47:SB:53:VAL:HG22	47:SB:55:ASP:H	1.73	0.53
55:SJ:96:PRO:HG2	55:SJ:99:ILE:HG12	1.89	0.53
62:SQ:138:PHE:HE1	62:SQ:216:LYS:HE2	1.72	0.53
69:SX:132:SER:O	69:SX:136:ARG:NH1	2.41	0.53
72:Sa:28:ASP:OD1	72:Sa:28:ASP:N	2.41	0.53
74:Sc:69:ARG:HG3	74:Sc:117:ILE:HG12	1.90	0.53
75:Sd:41:ARG:HD2	75:Sd:56:SER:HA	1.90	0.53
1:LA:730:U:H2'	1:LA:731:C:C6	2.43	0.53
1:LA:2610:U:H2'	1:LA:2611:U:C6	2.44	0.53
5:LE:134:SER:O	5:LE:137:TYR:C	2.50	0.53
17:LQ:76[A]:PRO:HB3	17:LQ:138[A]:LEU:HG	1.90	0.53
23:LW:43:VAL:HG23	23:LW:49:ASN:HB2	1.90	0.53
26:LZ:90:ALA:O	26:LZ:120:LYS:NZ	2.42	0.53
44:Lr:27:LYS:O	44:Lr:31:ILE:CD1	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Lr:88:GLU:OE1	44:Lr:88:GLU:HA	2.07	0.53
45:S2:6:G:OP2	63:SR:205:ARG:NE	2.37	0.53
45:S2:1066:C:O3'	62:SQ:149:GLN:NE2	2.42	0.53
45:S2:1479:A:H4'	54:SI:60:SER:HB2	1.90	0.53
64:SS:248:ILE:HG13	68:SW:71:PHE:CE2	2.44	0.53
1:LA:2834:U:H2'	1:LA:2835:C:O2	2.09	0.53
2:LB:84:A:H2'	2:LB:85:G:C8	2.44	0.53
3:LC:133:G:OP1	26:LZ:94:GLN:NE2	2.41	0.53
4:LD:204:MET:HE2	4:LD:209:HIS:HB2	1.90	0.53
13:LM:156:LYS:O	13:LM:160:VAL:HG13	2.09	0.53
38:Ll:75:LYS:HD2	38:Ll:75:LYS:C	2.32	0.53
46:SA:105:MET:HE1	46:SA:186:VAL:CG1	2.39	0.53
50:SE:108:ARG:NH2	50:SE:110:GLU:OE1	2.40	0.53
52:SG:45:ARG:O	52:SG:49:LYS:HG2	2.08	0.53
55:SJ:33:GLN:HA	55:SJ:36:ASN:ND2	2.24	0.53
60:SO:105:GLY:O	60:SO:107:LYS:NZ	2.41	0.53
65:ST:27:PHE:HZ	65:ST:111:LEU:HD21	1.73	0.53
68:SW:86:LEU:HD12	68:SW:87:SER:H	1.74	0.53
1:LA:1522:U:OP2	1:LA:1603:G:O2'	2.26	0.53
1:LA:2514:A:N1	1:LA:2593:C:N4	2.54	0.53
9:LI:181:ILE:HD12	9:LI:182:ASP:H	1.73	0.53
10:LJ:100:GLU:HB2	10:LJ:104:GLU:HG2	1.91	0.53
17:LQ:187[A]:GLU:O	17:LQ:192[A]:LYS:NZ	2.42	0.53
45:S2:1586:A:N7	45:S2:1610:G:N1	2.56	0.53
46:SA:71:LEU:O	46:SA:75:LYS:HG2	2.07	0.53
48:SC:1:MET:CA	48:SC:3:MET:HE3	2.39	0.53
65:ST:57:ASP:OD1	65:ST:58:LYS:O	2.27	0.53
1:LA:1575:G:H2'	1:LA:1576:G:H8	1.74	0.53
1:LA:2388:C:H2'	1:LA:2389:A:H8	1.73	0.53
2:LB:27:A:H4'	13:LM:137:ARG:CZ	2.38	0.53
11:LK:69:ARG:HH11	11:LK:69:ARG:HA	1.73	0.53
12:LL:71:CYS:SG	12:LL:154:ARG:HB3	2.49	0.53
12:LL:215:GLU:O	12:LL:219:ALA:CB	2.56	0.53
26:LZ:31:THR:HG21	26:LZ:33:ARG:CZ	2.38	0.53
45:S2:1006:C:O2'	71:SZ:136:ARG:HD2	2.08	0.53
46:SA:21:LEU:HD12	46:SA:22:ASN:N	2.23	0.53
60:SO:64:HIS:ND1	60:SO:86:ASP:OD1	2.42	0.53
68:SW:90:LYS:HZ3	68:SW:95:TYR:HB2	1.73	0.53
1:LA:67:A:O2'	1:LA:315:C:O2	2.24	0.53
1:LA:942:U:H3'	29:Lc:13:GLY:HA2	1.90	0.53
1:LA:1332:C:H5"	9:LI:110:ARG:HH12	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:LC:139:U:H2'	3:LC:140:G:H8	1.74	0.53
23:LW:39:ASP:OD1	23:LW:40:HIS:ND1	2.38	0.53
28:Lb:106:GLN:HA	28:Lb:109:GLU:HB3	1.91	0.53
45:S2:142:G:H2'	45:S2:143:G:C8	2.44	0.53
45:S2:385:A:H2'	45:S2:386:G:C8	2.44	0.53
45:S2:539:G:H21	45:S2:540:G:H22	1.55	0.53
45:S2:861:U:H2'	45:S2:862:A:O4'	2.09	0.53
49:SD:33:ARG:HD3	49:SD:36:LEU:HD21	1.89	0.53
60:SO:155:ARG:HG3	60:SO:203:THR:HA	1.90	0.53
65:ST:41:VAL:HG11	65:ST:50:PHE:CE2	2.43	0.53
66:SU:127:GLU:CD	66:SU:131:PHE:HE1	2.14	0.53
72:Sa:9:VAL:HG22	72:Sa:10:GLU:H	1.74	0.53
76:Se:85:ARG:HG2	76:Se:87:ARG:HG3	1.90	0.53
1:LA:1659:C:H2'	1:LA:1660:G:C8	2.44	0.53
1:LA:1798:A:H2'	1:LA:1799:A:C8	2.43	0.53
1:LA:2184:G:O2'	1:LA:2313:U:OP2	2.17	0.53
1:LA:2814:G:N2	1:LA:2817:U:O2	2.41	0.53
7:LG:34:LYS:O	7:LG:38:THR:OG1	2.18	0.53
32:Lf:55:LEU:HB2	32:Lf:95:PRO:HD3	1.91	0.53
33:Lg:86:THR:HA	33:Lg:117:ILE:HD11	1.90	0.53
45:S2:1411:A:H2'	45:S2:1412:G:H4'	1.90	0.53
1:LA:989:U:H1'	22:LV:101:CYS:HB3	1.90	0.53
1:LA:2391:C:HO2'	5:LE:266:ARG:HH22	1.52	0.53
1:LA:2881:U:H2'	1:LA:2882:U:C6	2.44	0.53
1:LA:3232:C:H2'	1:LA:3233:A:C8	2.44	0.53
7:LG:211:LEU:HD12	7:LG:223:PHE:HE2	1.73	0.53
10:LJ:190:VAL:HG23	10:LJ:192:GLN:HB2	1.91	0.53
24:LX:32:ARG:HG3	24:LX:64:LYS:HD3	1.91	0.53
45:S2:1164:G:O2'	45:S2:1612:U:O4	2.23	0.53
45:S2:1307:U:H3	45:S2:1318:G:H21	1.57	0.53
45:S2:1794:A:H1'	76:Se:79:ILE:HD13	1.90	0.53
60:SO:84:SER:OG	60:SO:85:TRP:N	2.42	0.53
64:SS:193:GLY:HA3	64:SS:210:ILE:HG22	1.90	0.53
69:SX:109:VAL:HG21	69:SX:125:VAL:HG11	1.91	0.53
1:LA:903:A:OP2	38:Ll:30:GLN:NE2	2.41	0.52
1:LA:2768:A:H4'	43:Lq:80:ARG:HB3	1.90	0.52
5:LE:74:GLU:OE1	5:LE:283:TYR:OH	2.25	0.52
5:LE:291:GLU:OE1	5:LE:291:GLU:N	2.41	0.52
9:LI:96:PRO:HG2	9:LI:99:PRO:HG2	1.89	0.52
10:LJ:74:THR:HA	10:LJ:77:GLN:HG2	1.90	0.52
24:LX:81:GLN:NE2	24:LX:83:LYS:O	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LZ:56:ARG:O	26:LZ:61:LYS:NZ	2.42	0.52
29:Lc:93:SER:O	29:Lc:93:SER:OG	2.22	0.52
36:Lj:24:LEU:HB3	36:Lj:51:ILE:HG12	1.90	0.52
45:S2:149:C:OP1	75:Sd:121:THR:OG1	2.17	0.52
45:S2:327:U:H2'	45:S2:328:A:H8	1.73	0.52
45:S2:346:G:H5'	69:SX:79:LYS:HB2	1.91	0.52
45:S2:1642:G:O2'	45:S2:1781:A:O3'	2.25	0.52
47:SB:111:VAL:HA	47:SB:114:ILE:HG12	1.91	0.52
51:SF:95:LYS:O	60:SO:59:ARG:NH2	2.42	0.52
70:SY:23:PRO:HB2	70:SY:25:TRP:HD1	1.74	0.52
73:Sb:38:LEU:HD13	73:Sb:47:ILE:CD1	2.39	0.52
1:LA:1491:G:OP1	38:Ll:14:LYS:NZ	2.38	0.52
1:LA:1505:A:OP2	18:LR:127:ARG:NH1	2.38	0.52
1:LA:1703:A:O2'	1:LA:1704:U:H5"	2.10	0.52
1:LA:1898:G:O2'	1:LA:2333:U:O4	2.22	0.52
1:LA:2244:C:O2'	4:LD:220:GLY:O	2.27	0.52
1:LA:2372:A:N3	1:LA:2823:G:O2'	2.28	0.52
1:LA:2695:A:H2'	1:LA:2696:A:C8	2.44	0.52
8:LH:13:GLU:OE2	33:Lg:90:LYS:NZ	2.42	0.52
24:LX:18:PRO:HA	24:LX:51:ALA:HA	1.91	0.52
36:Lj:59:ASN:O	36:Lj:63:ARG:HG3	2.10	0.52
45:S2:2:A:C2'	63:SR:197:TYR:HD2	2.14	0.52
45:S2:1184:A:H61	50:SE:123:TYR:HA	1.74	0.52
46:SA:117:ARG:HH21	46:SA:120:TYR:HB3	1.73	0.52
50:SE:32:ASP:HA	50:SE:35:LYS:HG2	1.90	0.52
52:SG:84:TYR:O	61:SP:205:ARG:NE	2.41	0.52
54:SI:100:ILE:HA	54:SI:103:LYS:HG2	1.91	0.52
70:SY:87:ASP:OD2	70:SY:129:TYR:OH	2.28	0.52
71:SZ:135:ARG:HH21	71:SZ:137:LEU:HD12	1.73	0.52
72:Sa:14:PRO:HG3	72:Sa:23:ILE:HD11	1.90	0.52
1:LA:307:A:O2'	1:LA:2222:A:H1'	2.10	0.52
1:LA:415:G:H2'	1:LA:416:A:H8	1.75	0.52
1:LA:592:C:O2'	1:LA:593:U:OP1	2.23	0.52
1:LA:1261:G:H2'	1:LA:1262:A:H3'	1.91	0.52
4:LD:101:VAL:O	4:LD:101:VAL:HG12	2.10	0.52
6:LF:58:HIS:HA	6:LF:90:PHE:HE1	1.73	0.52
13:LM:27:GLY:O	13:LM:31:THR:HG22	2.08	0.52
14:LN:4:SER:HB3	14:LN:5:LYS:HD3	1.92	0.52
17:LQ:8[A]:VAL:HG13	17:LQ:34[A]:VAL:HG22	1.92	0.52
29:Lc:38:GLN:O	29:Lc:42:ARG:NH1	2.42	0.52
32:Lf:52:ALA:HB1	32:Lf:54:GLU:OE1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Li:91:ARG:HG3	35:Li:91:ARG:NH1	2.24	0.52
45:S2:328:A:H2'	45:S2:329:G:H8	1.74	0.52
45:S2:747:C:O5'	73:Sb:80:ASN:ND2	2.35	0.52
45:S2:1450:U:H2'	45:S2:1451:C:H6	1.74	0.52
45:S2:1472:C:H42	45:S2:1534:G:H21	1.57	0.52
50:SE:76:VAL:HB	50:SE:94:VAL:HG22	1.91	0.52
63:SR:35:TRP:CD1	63:SR:37:PRO:HD3	2.45	0.52
68:SW:155:HIS:O	68:SW:155:HIS:ND1	2.42	0.52
1:LA:1043:U:OP1	12:LL:90:ARG:NH2	2.30	0.52
1:LA:2294:A:N3	1:LA:2928:C:O2'	2.40	0.52
1:LA:2524:G:O2'	1:LA:2525:C:OP2	2.21	0.52
1:LA:2699:G:H5"	22:LV:17:ARG:HB2	1.90	0.52
1:LA:3298:A:H61	1:LA:3314:G:H22	1.56	0.52
2:LB:29:C:H2'	2:LB:30:G:C8	2.45	0.52
7:LG:38:THR:HG23	22:LV:30:TYR:HB3	1.90	0.52
8:LH:40:LEU:HD11	8:LH:54:TYR:HB2	1.91	0.52
10:LJ:139:VAL:O	10:LJ:143:ILE:HG12	2.09	0.52
15:LO:12:TRP:HE1	21:LU:153:PRO:HA	1.75	0.52
34:Lh:8:TYR:CD1	34:Lh:99:ARG:HB3	2.44	0.52
44:Lr:59:CYS:SG	44:Lr:60:CYS:N	2.82	0.52
45:S2:329:G:H2'	45:S2:330:G:H8	1.75	0.52
45:S2:482:U:H2'	45:S2:483:A:C8	2.43	0.52
45:S2:1206:U:H4'	58:SM:27:HIS:CD2	2.45	0.52
45:S2:1593:A:H2'	45:S2:1594:G:C8	2.34	0.52
51:SF:73:GLY:N	51:SF:76:SER:OG	2.42	0.52
63:SR:78:ASP:OD1	63:SR:78:ASP:N	2.41	0.52
66:SU:43:PHE:HA	66:SU:62:VAL:HG23	1.91	0.52
67:SV:62:THR:HB	67:SV:75:LYS:NZ	2.24	0.52
1:LA:1455:A:N1	1:LA:1475:G:O2'	2.40	0.52
1:LA:1666:A:H2'	1:LA:1667:G:C8	2.44	0.52
1:LA:2672:A:H4'	13:LM:104:PHE:HA	1.92	0.52
1:LA:3197:U:O2	11:LK:21:LYS:N	2.43	0.52
2:LB:11:A:N6	7:LG:16:PHE:O	2.42	0.52
5:LE:50:LYS:HA	5:LE:79:VAL:HG12	1.90	0.52
5:LE:147:GLU:O	5:LE:151:ILE:HG13	2.09	0.52
6:LF:99:MET:HE2	6:LF:102:PRO:HA	1.90	0.52
22:LV:112:ASN:OD1	22:LV:128:LEU:HD12	2.09	0.52
27:La:33:ALA:HB3	27:La:106:ILE:HD11	1.92	0.52
28:Lb:103:GLN:NE2	28:Lb:106:GLN:OE1	2.41	0.52
37:Lk:50:LEU:HD22	37:Lk:90:MET:HE1	1.92	0.52
54:SI:45:MET:HE1	54:SI:48:GLN:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SJ:106:ILE:HG23	55:SJ:107:THR:HG23	1.90	0.52
56:SK:91:PRO:HA	56:SK:100:ILE:O	2.09	0.52
62:SQ:135:LEU:HD12	62:SQ:215:VAL:HG22	1.92	0.52
79:Ta:6:G:H1	79:Ta:69:C:H42	1.55	0.52
1:LA:24:G:N2	1:LA:25:U:O4’	2.43	0.52
1:LA:155:G:H5”	1:LA:156:G:H2’	1.91	0.52
1:LA:2375:G:H2’	1:LA:2376:G:C8	2.45	0.52
1:LA:2991:U:OP1	1:LA:3309:A:O2’	2.14	0.52
1:LA:3297:C:C2	1:LA:3298:A:C8	2.97	0.52
7:LG:34:LYS:HB2	22:LV:27:LEU:HD21	1.91	0.52
9:LI:112:ASN:ND2	9:LI:209:ASN:OD1	2.41	0.52
14:LN:154:VAL:HG13	14:LN:157:ARG:HG2	1.90	0.52
16:LP:158:HIS:HB3	16:LP:161:ALA:HB3	1.92	0.52
32:Lf:54:GLU:CD	32:Lf:54:GLU:H	2.17	0.52
45:S2:51:A:OP2	45:S2:424:C:N4	2.42	0.52
45:S2:1482:C:O2’	45:S2:1483:A:O5’	2.26	0.52
61:SP:88:LYS:O	61:SP:92:HIS:ND1	2.42	0.52
61:SP:175:TYR:HD2	61:SP:176:LEU:HD23	1.74	0.52
62:SQ:27:LYS:HB3	62:SQ:47:LEU:HG	1.92	0.52
1:LA:1596:C:H5’	1:LA:1695:A:H1’	1.92	0.52
1:LA:3394:G:N2	1:LA:3395:U:O4	2.33	0.52
4:LD:147:ARG:HG2	4:LD:157:VAL:HG22	1.90	0.52
5:LE:216:ASP:OD2	5:LE:339:ARG:NH2	2.29	0.52
15:LO:50:LYS:HE3	15:LO:91:CYS:SG	2.50	0.52
16:LP:60:VAL:HG22	16:LP:134:LEU:HB2	1.90	0.52
17:LQ:172[A]:ARG:HB3	17:LQ:172[A]:ARG:CZ	2.40	0.52
45:S2:327:U:O2’	69:SX:10:GLU:HG2	2.10	0.52
45:S2:860:U:H2’	45:S2:861:U:C5	2.44	0.52
45:S2:1433:G:N2	58:SM:24:CYS:SG	2.83	0.52
45:S2:1522:U:N3	45:S2:1591:C:O2’	2.43	0.52
77:Sf:62:ILE:HD12	77:Sf:62:ILE:O	2.10	0.52
79:Ta:61:U:H4’	79:Ta:62:C:C5	2.45	0.52
1:LA:2552:U:O2’	35:Li:91:ARG:NH1	2.42	0.52
1:LA:3295:A:H2’	1:LA:3296:U:H6	1.73	0.52
10:LJ:162:LEU:HA	16:LP:7:LEU:HD11	1.91	0.52
11:LK:69:ARG:NH1	11:LK:69:ARG:O	2.41	0.52
12:LL:101:LYS:HB2	12:LL:121:LYS:HZ2	1.74	0.52
21:LU:109:ASP:OD1	21:LU:113:ARG:NH1	2.40	0.52
45:S2:1500:C:H2’	45:S2:1501:C:C6	2.45	0.52
49:SD:27:ALA:HB2	49:SD:135:MET:SD	2.50	0.52
63:SR:237:VAL:HG11	72:Sa:50:TYR:HD2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:50:U:H2'	1:LA:51:A:H8	1.75	0.52
1:LA:526:A:N6	1:LA:564:U:O4	2.43	0.52
1:LA:540:U:H2'	1:LA:541:G:H8	1.74	0.52
1:LA:2682:U:H2'	1:LA:2683:C:C6	2.44	0.52
7:LG:206:GLN:O	7:LG:210:GLU:HG2	2.10	0.52
17:LQ:84[A]:LEU:HD22	17:LQ:102[A]:LEU:HD22	1.91	0.52
45:S2:60:U:N3	45:S2:63:G:OP1	2.36	0.52
45:S2:610:G:O2'	45:S2:613:G:O2'	2.27	0.52
45:S2:1459:C:O2'	53:SH:143:ARG:NH2	2.42	0.52
45:S2:1479:A:H2'	45:S2:1480:G:C8	2.45	0.52
45:S2:1546:G:P	53:SH:123:ARG:HH21	2.33	0.52
48:SC:82:LEU:HD13	48:SC:83:PRO:HD2	1.91	0.52
61:SP:20:ALA:HB3	61:SP:172:LEU:HD12	1.91	0.52
1:LA:584:A:H2'	1:LA:585:C:C6	2.45	0.52
1:LA:1645:G:O2'	1:LA:1807:G:N2	2.41	0.52
1:LA:1710:C:OP1	28:Lb:78:ASN:ND2	2.43	0.52
1:LA:2105:A:H2'	1:LA:2106:A:C8	2.44	0.52
1:LA:3012:U:H2'	1:LA:3013:U:C6	2.45	0.52
1:LA:3312:U:OP1	5:LE:173:GLN:NE2	2.43	0.52
2:LB:49:G:O2'	7:LG:58:LYS:HD3	2.10	0.52
43:Lq:26:THR:HA	43:Lq:93:LEU:HD21	1.92	0.52
45:S2:562:G:H21	78:Sg:14:VAL:HG11	1.75	0.52
45:S2:1234:A:H4'	45:S2:1243:G:H4'	1.91	0.52
47:SB:196:GLU:O	47:SB:200:ASN:ND2	2.43	0.52
53:SH:88:ARG:HH21	53:SH:108:LYS:HD2	1.74	0.52
60:SO:192:PHE:HB3	60:SO:223:TRP:CZ3	2.44	0.52
63:SR:37:PRO:HD2	63:SR:46:LYS:NZ	2.25	0.52
71:SZ:31:THR:HG21	71:SZ:35:GLY:C	2.35	0.52
71:SZ:71:CYS:HA	71:SZ:74:VAL:HG22	1.91	0.52
1:LA:1577:C:H2'	1:LA:1578:C:C6	2.45	0.51
1:LA:2744:G:N2	1:LA:2747:A:OP2	2.33	0.51
4:LD:70:ARG:CD	4:LD:72:ARG:NH2	2.68	0.51
7:LG:68:THR:OG1	7:LG:71:GLY:O	2.28	0.51
11:LK:69:ARG:HH12	11:LK:72:LYS:HB3	1.75	0.51
45:S2:323:A:H5"	67:SV:11:ARG:HD2	1.93	0.51
45:S2:874:C:OP1	62:SQ:159:SER:OG	2.16	0.51
45:S2:888:U:O4	45:S2:988:A:O2'	2.23	0.51
45:S2:894:U:N3	45:S2:895:G:O6	2.43	0.51
45:S2:912:U:H4'	45:S2:914:G:H21	1.76	0.51
45:S2:1087:A:H2'	45:S2:1088:A:C8	2.44	0.51
51:SF:39:VAL:O	51:SF:40:GLU:HB2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SQ:226:GLY:HA2	62:SQ:229:MET:HG3	1.92	0.51
1:LA:758:U:H2'	1:LA:759:G:O4'	2.10	0.51
1:LA:2522:A:OP1	26:LZ:31:THR:OG1	2.15	0.51
1:LA:2587:U:OP1	10:LJ:241:LYS:NZ	2.37	0.51
1:LA:2768:A:O2'	43:Lq:80:ARG:O	2.28	0.51
1:LA:2835:C:H2'	1:LA:2836:A:O4'	2.11	0.51
2:LB:96:U:H2'	2:LB:97:A:H8	1.75	0.51
7:LG:55:PHE:CE1	7:LG:60:ILE:HG12	2.45	0.51
39:Lm:16:ARG:HG2	39:Lm:16:ARG:HH11	1.75	0.51
39:Lm:43:PHE:HE1	39:Lm:66:ILE:HD13	1.76	0.51
45:S2:826:U:O4	45:S2:827:C:N4	2.43	0.51
45:S2:1222:C:H2'	45:S2:1223:A:C8	2.45	0.51
45:S2:1280:C:H2'	45:S2:1281:G:C8	2.45	0.51
48:SC:61:TRP:CD2	58:SM:23:VAL:HG22	2.46	0.51
49:SD:42:ALA:HB3	49:SD:122:VAL:HB	1.92	0.51
55:SJ:37:VAL:HA	55:SJ:40:ASN:HD21	1.75	0.51
65:ST:55:GLY:C	65:ST:56:ASN:HD22	2.18	0.51
68:SW:143:ILE:HD11	68:SW:146:PHE:HD1	1.74	0.51
69:SX:19:ILE:HD12	69:SX:34:TRP:HB2	1.92	0.51
70:SY:87:ASP:HB2	70:SY:125:LEU:HD21	1.92	0.51
1:LA:72:C:H1'	14:LN:61:PRO:O	2.10	0.51
1:LA:3015:A:H2'	1:LA:3016:A:C8	2.46	0.51
1:LA:3191:U:H2'	1:LA:3192:C:C6	2.46	0.51
3:LC:10:A:H2'	3:LC:11:C:C6	2.45	0.51
4:LD:70:ARG:HH11	4:LD:72:ARG:HH21	1.54	0.51
5:LE:33:PRO:O	5:LE:184:ASN:ND2	2.41	0.51
6:LF:280:ILE:HD11	19:LS:105:ARG:NH2	2.26	0.51
7:LG:290:ILE:O	7:LG:295:GLY:N	2.44	0.51
10:LJ:106:LYS:O	10:LJ:110:THR:HG22	2.10	0.51
23:LW:22:PRO:HA	23:LW:107:PHE:HE2	1.76	0.51
31:Le:17:VAL:HG11	31:Le:92:ILE:CD1	2.40	0.51
45:S2:747:C:H2'	45:S2:748:U:H5'	1.91	0.51
45:S2:1073:G:H4'	70:SY:10:GLY:HA2	1.92	0.51
45:S2:1552:U:OP2	50:SE:43:ARG:NH2	2.44	0.51
60:SO:215:GLY:O	60:SO:240:VAL:HG12	2.10	0.51
62:SQ:87:ARG:O	62:SQ:99:ASN:N	2.38	0.51
66:SU:14:THR:HG22	66:SU:17:GLU:OE1	2.10	0.51
69:SX:80:MET:SD	69:SX:83:THR:HG23	2.50	0.51
70:SY:35:GLU:HA	70:SY:38:VAL:HG22	1.92	0.51
1:LA:2213:A:H2'	1:LA:2214:A:O4'	2.10	0.51
1:LA:2405:C:H2'	1:LA:2406:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2733:A:H1'	1:LA:2734:U:C2	2.46	0.51
8:LH:110:LYS:HD2	8:LH:111:LEU:H	1.75	0.51
11:LK:61:GLY:O	11:LK:65:VAL:HG23	2.10	0.51
15:LO:112:LEU:HD22	15:LO:116:GLU:HB3	1.91	0.51
45:S2:47:A:H61	45:S2:385:A:H2	1.57	0.51
45:S2:710:U:H5"	45:S2:711:U:H5	1.75	0.51
45:S2:1429:G:H2'	45:S2:1430:U:C6	2.46	0.51
45:S2:1452:U:H2'	45:S2:1453:G:C8	2.45	0.51
45:S2:1793:G:H22	76:Se:28:LYS:HE2	1.75	0.51
49:SD:69:ALA:HB1	49:SD:72:ILE:HB	1.91	0.51
51:SF:93:HIS:HB3	51:SF:102:LYS:HB2	1.92	0.51
68:SW:26:ALA:HA	68:SW:29:LYS:HD2	1.92	0.51
74:Sc:56:LYS:HE2	74:Sc:93:LEU:HD11	1.91	0.51
77:Sf:56:CYS:SG	77:Sf:61:THR:OG1	2.57	0.51
79:Ta:28:U:O2'	79:Ta:29:C:OP1	2.28	0.51
1:LA:209:A:O2'	1:LA:211:A:OP2	2.27	0.51
1:LA:672:U:H2'	1:LA:673:G:C8	2.46	0.51
1:LA:1245:G:N2	1:LA:1263:G:O2'	2.43	0.51
1:LA:1575:G:H2'	1:LA:1576:G:C8	2.46	0.51
1:LA:1576:G:H2'	1:LA:1577:C:C6	2.45	0.51
1:LA:1679:G:H2'	1:LA:1680:U:H6	1.75	0.51
1:LA:2412:A:H2'	1:LA:2413:G:H8	1.75	0.51
1:LA:2696:A:H2'	1:LA:2697:G:H8	1.75	0.51
6:LF:65:TRP:HB3	6:LF:69:ARG:HD3	1.93	0.51
7:LG:160:PHE:HA	7:LG:163:LEU:HB3	1.92	0.51
21:LU:79:VAL:HG11	21:LU:106:LEU:HD11	1.92	0.51
22:LV:136:ARG:HB3	22:LV:136:ARG:CZ	2.40	0.51
45:S2:211:U:H2'	45:S2:212:U:H6	1.76	0.51
45:S2:1449:U:H2'	45:S2:1450:U:H6	1.74	0.51
60:SO:239:GLU:O	60:SO:256:THR:OG1	2.29	0.51
61:SP:119:ARG:NH2	63:SR:244:SER:OG	2.44	0.51
61:SP:195:TRP:CD1	61:SP:196:SER:H	2.28	0.51
70:SY:118:ILE:O	70:SY:122:ILE:HG13	2.11	0.51
1:LA:209:A:H4'	1:LA:211:A:N7	2.26	0.51
1:LA:2428:G:H2'	1:LA:2429:A:H8	1.75	0.51
3:LC:121:U:O2	3:LC:132:G:N2	2.26	0.51
3:LC:150:G:OP1	26:LZ:27:ARG:NH2	2.42	0.51
5:LE:92:TYR:HB2	5:LE:157:VAL:HB	1.92	0.51
45:S2:1176:G:N3	45:S2:1195:C:O2'	2.38	0.51
47:SB:208:SER:HB3	47:SB:211:ILE:HB	1.93	0.51
48:SC:11:ILE:HD11	48:SC:42:VAL:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SF:6:SER:HB2	51:SF:23:LYS:HZ3	1.76	0.51
61:SP:184:LEU:HD13	72:Sa:45:ALA:HB2	1.93	0.51
63:SR:61:LEU:H	63:SR:61:LEU:CD2	2.13	0.51
64:SS:107:GLY:HA2	64:SS:189:LEU:HB3	1.93	0.51
66:SU:141:ARG:HA	73:Sb:51:GLU:HA	1.92	0.51
1:LA:530:G:H21	1:LA:561:C:H41	1.57	0.51
1:LA:742:C:O2	19:LS:73:GLN:NE2	2.44	0.51
1:LA:1309:G:O2'	1:LA:2379:U:O2'	2.27	0.51
1:LA:2811:C:H2'	1:LA:2812:A:H8	1.76	0.51
6:LF:204:GLY:O	6:LF:246:ARG:NH2	2.32	0.51
11:LK:69:ARG:NH1	11:LK:72:LYS:HB3	2.26	0.51
16:LP:183:THR:O	16:LP:183:THR:OG1	2.29	0.51
17:LQ:23[A]:VAL:HG13	17:LQ:33[A]:ILE:HD13	1.93	0.51
26:LZ:100:LYS:HZ2	26:LZ:106:ASP:HA	1.76	0.51
27:La:112:ASP:OD1	27:La:112:ASP:N	2.37	0.51
45:S2:860:U:H2'	45:S2:861:U:H5	1.75	0.51
45:S2:1492:A:H2'	45:S2:1493:A:H4'	1.93	0.51
56:SK:55:PRO:HB3	56:SK:88:ILE:HD11	1.93	0.51
60:SO:89:LEU:HD23	60:SO:103:PHE:HB2	1.93	0.51
60:SO:299:GLN:NE2	60:SO:315:VAL:O	2.44	0.51
64:SS:248:ILE:O	64:SS:251:GLU:HG3	2.11	0.51
70:SY:62:GLN:HB3	70:SY:65:VAL:HG22	1.92	0.51
1:LA:502:C:H2'	1:LA:503:A:H8	1.76	0.51
1:LA:1192:A:O2'	1:LA:1193:G:OP1	2.27	0.51
1:LA:3106:U:H2'	1:LA:3107:G:C8	2.46	0.51
3:LC:10:A:H2'	3:LC:11:C:H6	1.76	0.51
11:LK:23:ARG:NH2	11:LK:39:LYS:CA	2.66	0.51
28:Lb:132:SER:OG	28:Lb:133:LYS:N	2.42	0.51
31:Le:17:VAL:HG11	31:Le:92:ILE:HD12	1.93	0.51
43:Lq:2:VAL:N	43:Lq:90:HIS:O	2.44	0.51
64:SS:252:ARG:HB3	68:SW:71:PHE:HE2	1.76	0.51
77:Sf:67:THR:OG1	77:Sf:70:LYS:O	2.28	0.51
1:LA:407:A:C2	3:LC:17:A:H1'	2.46	0.51
2:LB:16:U:H2'	2:LB:17:A:H8	1.75	0.51
4:LD:20:THR:HA	4:LD:23:ARG:HG3	1.93	0.51
45:S2:79:C:H1'	65:ST:174:LYS:HE3	1.90	0.51
45:S2:1344:A:H62	45:S2:1377:U:H2'	1.75	0.51
63:SR:186:LYS:O	63:SR:190:LEU:HG	2.10	0.51
71:SZ:70:LYS:O	71:SZ:73:GLU:HG3	2.11	0.51
1:LA:215:G:H5"	27:La:12:ARG:HG3	1.93	0.51
1:LA:594:G:OP2	9:LI:30:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2440:A:O2'	1:LA:2441:G:N7	2.44	0.51
8:LH:31:ARG:NH2	8:LH:81:ALA:O	2.42	0.51
12:LL:65:LEU:HD23	12:LL:159:PHE:HZ	1.75	0.51
18:LR:13:LYS:HE3	18:LR:152:GLU:OE1	2.10	0.51
19:LS:96:PHE:CD1	19:LS:97:PRO:HD2	2.45	0.51
35:Li:47:CYS:SG	35:Li:49:SER:OG	2.62	0.51
45:S2:551:G:H2'	45:S2:552:G:C8	2.45	0.51
45:S2:799:A:H5'	64:SS:201:HIS:HD2	1.76	0.51
45:S2:1186:U:H5"	45:S2:1208:A:H61	1.74	0.51
54:SI:86:ARG:NH2	54:SI:89:ARG:HB3	2.24	0.51
61:SP:56:LYS:HG3	61:SP:161:PRO:HD3	1.93	0.51
62:SQ:197:ILE:HG21	62:SQ:210:ILE:HG21	1.93	0.51
66:SU:34:LEU:HD21	66:SU:38:LEU:HB2	1.93	0.51
1:LA:348:A:N3	1:LA:352:A:O2'	2.44	0.50
1:LA:421:G:O6	1:LA:2382:C:O2'	2.24	0.50
1:LA:531:A:H2'	1:LA:532:A:C8	2.46	0.50
1:LA:655:A:H2'	1:LA:656:A:H8	1.75	0.50
1:LA:1939:G:H21	1:LA:3361:A:H8	1.57	0.50
1:LA:2406:C:H2'	1:LA:2407:U:H6	1.75	0.50
9:LI:116:PHE:O	9:LI:199:ASN:ND2	2.42	0.50
11:LK:172:ILE:O	11:LK:176:LEU:HD23	2.11	0.50
25:LY:52:THR:O	25:LY:56:ARG:HG2	2.10	0.50
45:S2:164:A:H1'	65:ST:13:GLN:NE2	2.25	0.50
47:SB:112:ARG:HE	47:SB:116:HIS:CE1	2.30	0.50
60:SO:224:ASN:HD21	60:SO:227:ALA:HB3	1.76	0.50
61:SP:31:VAL:HG12	61:SP:33:GLN:H	1.76	0.50
61:SP:64:ILE:HD11	61:SP:181:VAL:HB	1.93	0.50
1:LA:3071:C:H2'	1:LA:3072:A:O4'	2.11	0.50
5:LE:45:SER:HB3	5:LE:181:ILE:HG23	1.93	0.50
11:LK:90:MET:HE2	11:LK:179:ILE:HG22	1.93	0.50
35:Li:51:LEU:HB3	35:Li:54:ILE:HD12	1.92	0.50
35:Li:105:VAL:O	35:Li:108:GLN:HG3	2.10	0.50
45:S2:935:U:O2	76:Se:15:ARG:NH1	2.44	0.50
45:S2:1662:G:O2'	45:S2:1664:C:N4	2.44	0.50
46:SA:80:ALA:O	46:SA:83:THR:HG22	2.11	0.50
51:SF:6:SER:HB2	51:SF:23:LYS:NZ	2.26	0.50
65:ST:191:ARG:HG2	65:ST:191:ARG:HH11	1.76	0.50
66:SU:114:ARG:HG2	66:SU:114:ARG:HH11	1.76	0.50
67:SV:12:SER:HB2	67:SV:18:ARG:HE	1.74	0.50
72:Sa:55:LEU:CD1	72:Sa:65:SER:OG	2.53	0.50
1:LA:623:G:O2'	1:LA:624:G:OP1	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1109:U:H2'	1:LA:1110:U:C6	2.46	0.50
1:LA:2766:U:H2'	1:LA:2767:U:C6	2.47	0.50
2:LB:9:C:OP1	22:LV:26:HIS:HB2	2.12	0.50
3:LC:94:C:OP1	38:Ll:75:LYS:HE3	2.12	0.50
11:LK:18:VAL:H	15:LO:5:SER:HB3	1.76	0.50
12:LL:46:PHE:CB	12:LL:139:ARG:HG2	2.42	0.50
13:LM:116:TYR:CD1	13:LM:116:TYR:C	2.90	0.50
32:Lf:19:ARG:HB3	32:Lf:35:GLU:HG2	1.93	0.50
45:S2:107:C:H2'	45:S2:108:A:C8	2.44	0.50
45:S2:1356:U:H2'	45:S2:1357:A:C8	2.45	0.50
51:SF:16:ALA:HB2	51:SF:72:GLY:HA3	1.93	0.50
60:SO:132:LYS:HG3	60:SO:134:TRP:NE1	2.25	0.50
65:ST:211:LEU:HA	65:ST:214:LYS:HE2	1.92	0.50
67:SV:37:LYS:HB2	67:SV:59:ARG:HD3	1.94	0.50
77:Sf:31:TYR:HE1	77:Sf:33:LEU:HG	1.76	0.50
1:LA:944:C:H2'	1:LA:945:U:C6	2.47	0.50
1:LA:964:A:H2	29:Lc:43:ILE:HD12	1.75	0.50
1:LA:3097:G:OP1	5:LE:279:ASN:ND2	2.33	0.50
2:LB:35:C:O2	2:LB:45:A:O2'	2.29	0.50
4:LD:39:GLY:HA2	4:LD:93:LYS:HG3	1.92	0.50
7:LG:186:GLU:OE1	7:LG:186:GLU:N	2.44	0.50
20:LT:153:LYS:HA	20:LT:156:ASN:ND2	2.26	0.50
42:Lp:20:VAL:O	42:Lp:23:ARG:HG3	2.12	0.50
45:S2:294:C:C2	45:S2:295:A:H2	2.29	0.50
45:S2:1681:A:O3'	65:ST:31:ARG:NH1	2.43	0.50
52:SG:29:GLN:O	52:SG:33:ARG:HG2	2.11	0.50
61:SP:4:PRO:HD2	61:SP:7:PHE:HE1	1.76	0.50
61:SP:110:TYR:HA	61:SP:115:PHE:CD2	2.47	0.50
61:SP:148:ASP:OD2	61:SP:165:ARG:NH2	2.42	0.50
63:SR:115:ILE:HD12	63:SR:115:ILE:O	2.10	0.50
65:ST:57:ASP:HA	65:ST:106:LEU:HA	1.92	0.50
65:ST:138:ALA:O	65:ST:141:ILE:HG13	2.11	0.50
65:ST:142:ARG:HB2	65:ST:153:VAL:HG21	1.94	0.50
75:Sd:56:SER:HB2	75:Sd:94:TYR:HE2	1.75	0.50
1:LA:1061:A:N3	22:LV:130:ARG:NH2	2.55	0.50
1:LA:1614:C:H2'	1:LA:1615:U:C6	2.46	0.50
1:LA:1948:G:O6	1:LA:2095:A:N6	2.44	0.50
1:LA:2405:C:H2'	1:LA:2406:C:H6	1.77	0.50
5:LE:72:VAL:HG12	24:LX:88:ARG:HG3	1.94	0.50
21:LU:140:VAL:HG12	21:LU:144:LEU:HD11	1.92	0.50
45:S2:54:C:O2'	45:S2:459:G:N7	2.35	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:876:G:O6	76:Se:15:ARG:NH1	2.37	0.50
45:S2:975:C:H5"	70:SY:109:LYS:HD2	1.93	0.50
45:S2:1518:C:H2'	45:S2:1519:U:C6	2.47	0.50
45:S2:1714:A:H2'	45:S2:1715:G:C8	2.46	0.50
50:SE:24:LYS:HB3	50:SE:28:MET:HE2	1.93	0.50
52:SG:35:CYS:HA	52:SG:38:ILE:HG12	1.93	0.50
60:SO:79:TYR:HB3	60:SO:91:LEU:HD11	1.92	0.50
65:ST:132:ARG:HH11	65:ST:132:ARG:HG3	1.76	0.50
76:Se:73:TYR:HE1	76:Se:77:CYS:HB3	1.77	0.50
1:LA:3151:U:H2'	1:LA:3157:G:H21	1.77	0.50
7:LG:83:LEU:CD2	7:LG:88:ILE:HB	2.39	0.50
8:LH:171:PRO:HA	8:LH:174:LEU:HB3	1.94	0.50
10:LJ:203:VAL:HG21	10:LJ:211:LEU:HG	1.94	0.50
11:LK:23:ARG:CZ	11:LK:39:LYS:HA	2.39	0.50
47:SB:76:ARG:O	47:SB:80:LYS:NZ	2.42	0.50
50:SE:89:MET:HE2	50:SE:89:MET:N	2.27	0.50
57:SL:10:ALA:HA	57:SL:32:PHE:HA	1.94	0.50
63:SR:103:VAL:HG12	63:SR:113:LEU:HB3	1.94	0.50
1:LA:593:U:H2'	1:LA:608:G:O6	2.12	0.50
1:LA:1532:U:O2'	1:LA:1797:A:H8	1.94	0.50
1:LA:2196:C:H5'	1:LA:2241:A:H61	1.77	0.50
1:LA:2356:A:H2'	1:LA:2357:A:C8	2.46	0.50
1:LA:2730:U:C2	1:LA:2731:G:C8	2.99	0.50
1:LA:3208:A:C4	15:LO:106:ARG:HD3	2.47	0.50
15:LO:21:VAL:HG12	15:LO:65:LEU:HD23	1.93	0.50
16:LP:14:LYS:HA	16:LP:19:LEU:HD22	1.93	0.50
25:LY:13:ILE:HD12	25:LY:30:ARG:HB3	1.94	0.50
28:Lb:40:HIS:HD1	28:Lb:74:VAL:HG13	1.77	0.50
29:Lc:91:LEU:HD22	29:Lc:121:VAL:HG21	1.94	0.50
36:Lj:58:ILE:O	36:Lj:61:GLN:HG3	2.11	0.50
45:S2:1341:A:OP2	60:SO:90:ARG:NH2	2.44	0.50
45:S2:1503:A:H61	53:SH:84:TRP:HB2	1.75	0.50
45:S2:1650:U:H2'	45:S2:1651:A:H8	1.75	0.50
45:S2:1787:C:H5'	71:SZ:131:GLY:CA	2.41	0.50
62:SQ:66:VAL:HG12	62:SQ:86:LEU:HB2	1.93	0.50
62:SQ:91:VAL:HG22	62:SQ:96:LEU:HB2	1.93	0.50
63:SR:36:VAL:HA	63:SR:46:LYS:NZ	2.27	0.50
76:Se:4:LYS:HD3	76:Se:5:ARG:HH21	1.76	0.50
1:LA:21:G:H3'	1:LA:22:G:H8	1.77	0.50
1:LA:895:A:H5"	4:LD:183:GLY:CA	2.42	0.50
1:LA:2520:U:O2'	1:LA:2523:A:OP1	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:LC:21:C:O2'	3:LC:22:U:OP1	2.27	0.50
7:LG:60:ILE:HB	7:LG:80:SER:HB3	1.94	0.50
8:LH:172:HIS:CE1	8:LH:173:LEU:HD13	2.45	0.50
9:LI:169:ILE:CD1	9:LI:181:ILE:HG23	2.42	0.50
17:LQ:83[A]:ALA:O	17:LQ:87[A]:MET:HG3	2.12	0.50
46:SA:7:LYS:HE3	55:SJ:27:THR:HG21	1.94	0.50
46:SA:137:VAL:HG22	46:SA:151:LYS:HB2	1.93	0.50
51:SF:69:VAL:HG11	51:SF:81:ILE:HD11	1.93	0.50
52:SG:107:SER:O	52:SG:111:LYS:HG2	2.12	0.50
66:SU:89:HIS:ND1	66:SU:165:LYS:HG2	2.26	0.50
66:SU:96:ARG:HD2	66:SU:124:LYS:HG3	1.93	0.50
70:SY:18:TYR:HE1	73:Sb:55:ASP:HA	1.76	0.50
76:Se:10:ARG:NH2	76:Se:31:PRO:HG2	2.26	0.50
1:LA:714:A:N1	1:LA:780:G:O2'	2.45	0.50
1:LA:1790:C:H2'	1:LA:1791:C:C6	2.46	0.50
1:LA:1832:G:O2'	40:Ln:3:ALA:O	2.29	0.50
1:LA:2124:A:N1	1:LA:2327:U:H5	2.09	0.50
1:LA:2842:U:H5"	1:LA:2843:C:C5	2.45	0.50
1:LA:3296:U:H2'	1:LA:3297:C:H6	1.76	0.50
2:LB:18:C:OP2	13:LM:150:ASN:ND2	2.45	0.50
7:LG:269:SER:O	7:LG:273:ARG:HB2	2.12	0.50
10:LJ:228:GLU:H	10:LJ:228:GLU:CD	2.20	0.50
11:LK:69:ARG:HA	11:LK:69:ARG:NH1	2.27	0.50
11:LK:135:GLU:HG3	11:LK:145:VAL:HB	1.93	0.50
15:LO:35:ILE:HA	15:LO:46:ILE:HG22	1.93	0.50
27:La:11:ASP:HB3	27:La:14:LYS:HB2	1.94	0.50
35:Li:57:LEU:HB3	35:Li:61:GLN:HB2	1.93	0.50
45:S2:1341:A:O2'	60:SO:102:ARG:NH1	2.45	0.50
68:SW:64:GLU:HA	68:SW:69:ARG:HH12	1.77	0.50
73:Sb:118:ARG:NH1	73:Sb:118:ARG:HB2	2.27	0.50
79:Ta:14:A:N6	79:Ta:61:U:O2'	2.41	0.50
1:LA:19:U:H4'	16:LP:138:GLN:HG2	1.94	0.49
1:LA:63:A:N3	1:LA:78:U:O2'	2.33	0.49
1:LA:2388:C:H2'	1:LA:2389:A:C8	2.47	0.49
2:LB:98:C:OP1	21:LU:39:SER:OG	2.29	0.49
3:LC:154:C:H5'	10:LJ:181:LYS:HD3	1.94	0.49
6:LF:92:ASN:OD1	6:LF:92:ASN:N	2.44	0.49
8:LH:131:LYS:HE2	8:LH:133:GLU:H	1.77	0.49
11:LK:173:ARG:NH1	41:Lo:125:LYS:O	2.41	0.49
12:LL:49:CYS:SG	12:LL:51:HIS:NE2	2.84	0.49
12:LL:103:LEU:H	12:LL:112:GLN:NE2	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LM:19:LEU:HB2	13:LM:69:VAL:HG12	1.94	0.49
16:LP:9:GLU:HB2	37:Lk:44:VAL:HG21	1.94	0.49
24:LX:89:ASP:OD1	24:LX:89:ASP:N	2.32	0.49
35:Li:61:GLN:HA	35:Li:64:THR:HG22	1.94	0.49
40:Ln:27:ILE:HA	40:Ln:30:ARG:CG	2.40	0.49
45:S2:215:A:N7	45:S2:242:U:N3	2.59	0.49
53:SH:28:ILE:H	53:SH:28:ILE:HD12	1.77	0.49
64:SS:182:TYR:CE1	64:SS:190:GLY:HA2	2.47	0.49
64:SS:230:GLU:CD	64:SS:231:GLN:H	2.20	0.49
1:LA:588:A:H1'	1:LA:1336:A:H5"	1.94	0.49
1:LA:2143:A:H1'	1:LA:2280:A:N6	2.27	0.49
1:LA:3100:G:H2'	1:LA:3101:G:C8	2.48	0.49
5:LE:285:VAL:HG22	5:LE:322:ILE:HG12	1.93	0.49
12:LL:176:LEU:HG	12:LL:180:GLU:HG2	1.94	0.49
13:LM:17:LEU:HD12	13:LM:129:VAL:HG22	1.95	0.49
19:LS:64:VAL:HG21	19:LS:113:LYS:HE3	1.95	0.49
21:LU:90:MET:HE2	21:LU:110:MET:HE1	1.95	0.49
31:Le:25:LEU:HD13	31:Le:87:VAL:HG11	1.93	0.49
37:Lk:21:THR:HG23	37:Lk:21:THR:O	2.12	0.49
45:S2:518:A:O2'	45:S2:519:C:OP1	2.26	0.49
45:S2:873:U:H2'	45:S2:874:C:C5	2.48	0.49
45:S2:1560:U:H5"	45:S2:1561:U:H5	1.76	0.49
45:S2:1788:G:C8	45:S2:1788:G:OP2	2.65	0.49
47:SB:124:LEU:HD12	47:SB:125:THR:N	2.27	0.49
52:SG:44:LYS:H	52:SG:44:LYS:HD3	1.77	0.49
64:SS:91:THR:HG23	64:SS:98:ASN:HB2	1.94	0.49
1:LA:639:U:OP1	29:Lc:21:ARG:NH1	2.43	0.49
1:LA:743:A:O2'	19:LS:144:ARG:HG3	2.13	0.49
1:LA:1039:A:C4	12:LL:198:LYS:HD3	2.47	0.49
1:LA:1133:G:O2'	1:LA:2641:A:N3	2.40	0.49
1:LA:1339:G:H2'	1:LA:1340:U:C6	2.47	0.49
1:LA:1665:G:H1	1:LA:1782:U:H3	1.59	0.49
6:LF:177:ASP:HB3	6:LF:205:PRO:HD3	1.94	0.49
17:LQ:59[A]:ARG:HH11	17:LQ:59[A]:ARG:HG3	1.78	0.49
17:LQ:160[A]:ARG:HH21	17:LQ:161[A]:LYS:HZ2	1.59	0.49
20:LT:159:ALA:O	20:LT:163:ARG:HG2	2.12	0.49
26:LZ:135:ILE:HD12	26:LZ:138:ARG:NH2	2.27	0.49
44:Lr:49:ARG:NH1	44:Lr:68:ALA:O	2.37	0.49
58:SM:47:ALA:HB1	58:SM:52:PHE:HB2	1.93	0.49
63:SR:157:LYS:HG3	73:Sb:95:PRO:HA	1.95	0.49
65:ST:67:VAL:HG21	65:ST:99:GLY:HA2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:76:G:O2'	14:LN:100:ARG:NH1	2.34	0.49
1:LA:768:G:H5'	14:LN:175:SER:HB2	1.93	0.49
1:LA:1830:U:O2'	3:LC:114:G:OP1	2.17	0.49
14:LN:165:SER:H	29:Lc:139:ARG:NH2	2.11	0.49
20:LT:109:TYR:HB3	20:LT:115:ILE:HG12	1.95	0.49
42:Lp:9:ARG:NH2	45:S2:1642:G:O3'	2.45	0.49
45:S2:298:C:H5"	64:SS:38:LEU:HB2	1.94	0.49
45:S2:752:A:H2	45:S2:797:G:N1	2.01	0.49
45:S2:1536:G:H2'	45:S2:1536:G:N3	2.28	0.49
45:S2:1586:A:H5"	51:SF:133:GLY:HA3	1.94	0.49
45:S2:1632:C:H2'	45:S2:1633:A:C4	2.47	0.49
45:S2:1680:G:H21	45:S2:1722:A:H62	1.61	0.49
45:S2:1776:A:H2'	45:S2:1777:G:C8	2.47	0.49
47:SB:213:LYS:O	47:SB:216:GLU:HG3	2.12	0.49
54:SI:31:PRO:CG	54:SI:103:LYS:HZ1	2.15	0.49
60:SO:169:ILE:HG13	60:SO:181:TRP:HB2	1.93	0.49
72:Sa:21:ASN:HD22	73:Sb:67:GLY:H	1.58	0.49
74:Sc:54:LEU:N	74:Sc:73:ARG:O	2.38	0.49
1:LA:8:C:H2'	1:LA:9:U:C6	2.48	0.49
1:LA:197:G:H2'	1:LA:198:A:C8	2.48	0.49
1:LA:430:U:H2'	1:LA:431:U:C6	2.48	0.49
1:LA:2675:A:H5'	1:LA:2676:G:C8	2.47	0.49
6:LF:26:PHE:HD1	6:LF:130:ALA:HB2	1.77	0.49
6:LF:205:PRO:HG2	6:LF:225:VAL:HG22	1.94	0.49
9:LI:88:ARG:HB2	9:LI:108:LEU:HB3	1.94	0.49
11:LK:132:VAL:HG13	11:LK:154:VAL:HG12	1.93	0.49
20:LT:13:SER:OG	20:LT:38:ARG:NH2	2.45	0.49
44:Lr:9:GLY:HA3	44:Lr:27:LYS:HE3	1.93	0.49
46:SA:96:LEU:HB3	46:SA:190:ARG:HD3	1.94	0.49
53:SH:29:VAL:O	53:SH:33:THR:HG23	2.11	0.49
61:SP:28:ASN:HA	61:SP:46:HIS:CE1	2.48	0.49
69:SX:93:TYR:HB2	69:SX:100:TYR:CE2	2.48	0.49
1:LA:986:U:H2'	1:LA:987:U:C6	2.47	0.49
1:LA:2510:A:O2'	10:LJ:249:ARG:NH2	2.42	0.49
1:LA:2882:U:H2'	1:LA:2883:C:C6	2.48	0.49
34:Lh:35:VAL:HG13	34:Lh:40:ASP:HB2	1.95	0.49
42:Lp:2:ARG:NE	45:S2:1773:C:OP2	2.43	0.49
45:S2:97:C:H2'	45:S2:98:U:C6	2.48	0.49
45:S2:899:G:H21	45:S2:915:A:H1'	1.77	0.49
51:SF:38:LEU:HD22	54:SI:10:ALA:HA	1.94	0.49
62:SQ:136:ARG:HH11	62:SQ:216:LYS:HE3	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SS:123:LEU:HD13	64:SS:236:ILE:HG23	1.94	0.49
67:SV:110:ARG:O	67:SV:114:GLU:HG2	2.13	0.49
69:SX:83:THR:HA	69:SX:111:VAL:HG12	1.94	0.49
75:Sd:41:ARG:CD	75:Sd:56:SER:HA	2.42	0.49
1:LA:711:G:N2	1:LA:753:G:O3'	2.45	0.49
1:LA:971:A:H2'	1:LA:972:A:C8	2.48	0.49
1:LA:1039:A:N9	12:LL:198:LYS:HD3	2.27	0.49
1:LA:1920:A:H2'	1:LA:1921:A:C8	2.48	0.49
3:LC:30:C:H2'	3:LC:31:G:H8	1.76	0.49
7:LG:267:ALA:O	7:LG:271:LYS:HG2	2.13	0.49
21:LU:12:ARG:HB2	21:LU:22:PRO:HB2	1.94	0.49
29:Lc:75:LEU:HB3	29:Lc:118:ILE:HG23	1.95	0.49
32:Lf:37:LYS:HG3	32:Lf:51:LEU:HD21	1.94	0.49
37:Lk:42:SER:HA	37:Lk:45:ARG:HE	1.77	0.49
45:S2:125:U:HO2'	45:S2:126:A:P	2.35	0.49
45:S2:622:A:H4'	45:S2:623:A:H5"	1.94	0.49
46:SA:65:ARG:HH21	46:SA:69:LEU:HG	1.78	0.49
61:SP:64:ILE:HD12	61:SP:181:VAL:CG2	2.43	0.49
64:SS:122:LYS:HD2	64:SS:123:LEU:C	2.38	0.49
68:SW:41:GLU:O	68:SW:44:ARG:HG2	2.13	0.49
72:Sa:20:THR:HG23	72:Sa:22:ARG:HG2	1.95	0.49
76:Se:39:MET:HE1	76:Se:68:TYR:HB3	1.95	0.49
1:LA:210:U:C2	1:LA:230:U:H4'	2.47	0.49
1:LA:1332:C:H5"	9:LI:110:ARG:NH1	2.28	0.49
1:LA:2114:G:H22	1:LA:2119:A:H1'	1.77	0.49
1:LA:3109:C:H2'	1:LA:3110:U:C6	2.47	0.49
11:LK:23:ARG:NH2	11:LK:39:LYS:HA	2.27	0.49
11:LK:92:TYR:HD1	11:LK:179:ILE:HG12	1.78	0.49
12:LL:191:LYS:HE3	12:LL:198:LYS:CD	2.38	0.49
14:LN:106:GLN:HA	37:Lk:20:MET:HE1	1.94	0.49
17:LQ:3[A]:VAL:HG23	17:LQ:4[A]:GLU:N	2.27	0.49
45:S2:643:G:O6	45:S2:691:C:N4	2.45	0.49
1:LA:73:C:C2	37:Lk:15:LYS:HE3	2.47	0.49
1:LA:524:C:H3'	1:LA:527:U:C4	2.48	0.49
1:LA:2560:A:C2	10:LJ:32:LYS:HG2	2.47	0.49
2:LB:48:U:OP1	7:LG:94:ASN:ND2	2.38	0.49
17:LQ:38[A]:ALA:HA	17:LQ:41[A]:LEU:HD12	1.95	0.49
18:LR:43:LYS:HA	18:LR:46:LYS:HE3	1.94	0.49
19:LS:111:ARG:O	19:LS:115:VAL:HG22	2.12	0.49
45:S2:1334:U:H2'	45:S2:1335:U:C6	2.46	0.49
45:S2:1520:U:H4'	45:S2:1521:G:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1532:U:H4'	53:SH:27:LYS:HE2	1.95	0.49
45:S2:1554:U:OP1	58:SM:13:ARG:NH2	2.46	0.49
48:SC:71:GLU:O	48:SC:74:GLU:HG3	2.12	0.49
49:SD:49:THR:HA	49:SD:52:LEU:HG	1.95	0.49
55:SJ:71:PRO:O	58:SM:40:ARG:NH1	2.38	0.49
60:SO:20:VAL:HA	60:SO:37:SER:HA	1.95	0.49
60:SO:30:PRO:HB3	60:SO:296:ALA:HB3	1.94	0.49
3:LC:140:G:H22	16:LP:112:ASN:HB3	1.78	0.49
10:LJ:143:ILE:HD12	10:LJ:175:VAL:HG11	1.95	0.49
27:La:31:LEU:HB3	27:La:101:PRO:HG3	1.95	0.49
37:Lk:54:GLU:HB3	37:Lk:90:MET:CE	2.40	0.49
39:Lm:50:SER:HB2	39:Lm:52:TYR:CZ	2.47	0.49
45:S2:120:U:H2'	45:S2:121:U:O3'	2.13	0.49
45:S2:342:C:O2'	69:SX:11:ARG:NH2	2.46	0.49
45:S2:773:C:O2'	45:S2:787:G:N2	2.40	0.49
46:SA:120:TYR:O	46:SA:124:ARG:HG2	2.13	0.49
47:SB:215:ASP:O	47:SB:218:GLU:HG3	2.13	0.49
55:SJ:30:LYS:NZ	55:SJ:109:GLU:OE1	2.43	0.49
64:SS:64:ILE:HD11	75:Sd:18:LEU:HG	1.94	0.49
64:SS:69:HIS:HB3	75:Sd:17:LEU:HD13	1.94	0.49
65:ST:193:LEU:HA	65:ST:196:ARG:NE	2.28	0.49
66:SU:26:GLU:OE2	66:SU:26:GLU:N	2.46	0.49
68:SW:41:GLU:HG3	68:SW:44:ARG:HE	1.78	0.49
1:LA:688:U:O4	6:LF:209:TYR:OH	2.26	0.48
1:LA:1175:C:H2'	1:LA:1176:G:N2	2.27	0.48
1:LA:2741:C:H2'	1:LA:2742:A:H8	1.78	0.48
13:LM:138:VAL:HG22	13:LM:141:ARG:HH12	1.78	0.48
17:LQ:119[A]:VAL:HG12	21:LU:164:SER:HB3	1.94	0.48
21:LU:22:PRO:O	22:LV:146:ASN:ND2	2.29	0.48
45:S2:78:A:OP1	65:ST:159:ARG:NH2	2.25	0.48
45:S2:327:U:H2'	45:S2:328:A:C8	2.47	0.48
49:SD:53:THR:O	49:SD:53:THR:HG22	2.13	0.48
54:SI:9:VAL:HG23	54:SI:140:LEU:HB2	1.95	0.48
59:SN:148:TYR:O	59:SN:149:LYS:NZ	2.36	0.48
61:SP:120:LEU:HD11	61:SP:144:ILE:HD11	1.94	0.48
61:SP:174:TRP:HD1	61:SP:202:TYR:HE2	1.61	0.48
62:SQ:164:ILE:HA	62:SQ:167:VAL:HG12	1.95	0.48
1:LA:154:U:OP2	36:Lj:103:LYS:NZ	2.26	0.48
1:LA:390:G:C2	1:LA:391:A:H1'	2.48	0.48
1:LA:727:G:H5"	19:LS:43:PRO:HB2	1.94	0.48
1:LA:965:U:H2'	1:LA:966:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:993:G:HO2'	1:LA:1052:A:H61	1.54	0.48
1:LA:1210:U:H2'	1:LA:1211:A:H8	1.76	0.48
1:LA:2151:A:H2'	1:LA:2152:U:H6	1.78	0.48
1:LA:2179:G:H2'	1:LA:2180:C:H6	1.78	0.48
1:LA:3331:U:H2'	1:LA:3332:G:O4'	2.12	0.48
6:LF:237:GLN:HB2	6:LF:246:ARG:HH12	1.78	0.48
35:Li:101:VAL:HA	35:Li:104:VAL:HG22	1.95	0.48
45:S2:418:G:H1'	65:ST:59:GLN:NE2	2.27	0.48
45:S2:1007:C:H2'	45:S2:1008:G:H5"	1.95	0.48
45:S2:1641:C:H2'	45:S2:1642:G:H8	1.77	0.48
46:SA:102:ALA:HA	46:SA:105:MET:HE3	1.95	0.48
47:SB:56:ALA:HB1	57:SL:53:ILE:HG21	1.95	0.48
49:SD:128:ALA:HB1	49:SD:130:THR:HG22	1.95	0.48
55:SJ:82:TYR:HB3	58:SM:52:PHE:HB3	1.94	0.48
57:SL:18:ARG:HD2	57:SL:26:THR:HG23	1.95	0.48
60:SO:90:ARG:CZ	60:SO:102:ARG:HE	2.25	0.48
73:Sb:41:MET:HB3	73:Sb:47:ILE:HG22	1.94	0.48
1:LA:1069:U:H5"	1:LA:1070:U:OP2	2.13	0.48
1:LA:2283:C:N4	1:LA:2307:C:OP2	2.42	0.48
1:LA:2306:G:O2'	1:LA:2309:U:OP2	2.26	0.48
1:LA:3034:A:P	11:LK:122:LYS:HZ2	2.35	0.48
2:LB:87:G:O2'	21:LU:119:ARG:NH2	2.45	0.48
3:LC:4:C:H5'	18:LR:62:ARG:HE	1.77	0.48
3:LC:9:A:H3'	3:LC:10:A:C5'	2.44	0.48
5:LE:302:LYS:HE3	5:LE:302:LYS:HB2	1.66	0.48
14:LN:180:ARG:O	14:LN:184:GLU:HG2	2.13	0.48
45:S2:68:A:O2'	45:S2:69:G:OP2	2.24	0.48
45:S2:958:U:O2'	70:SY:55:ARG:NH2	2.46	0.48
45:S2:1322:A:H2'	45:S2:1323:C:C6	2.48	0.48
57:SL:11:LYS:HB2	57:SL:53:ILE:HD13	1.94	0.48
60:SO:200:ASN:N	60:SO:214:ALA:O	2.39	0.48
63:SR:59:HIS:HA	72:Sa:15:ARG:HH21	1.78	0.48
64:SS:35:PRO:HG2	64:SS:36:HIS:HD2	1.77	0.48
68:SW:91:LYS:HD3	68:SW:91:LYS:HA	1.58	0.48
1:LA:505:U:H2'	1:LA:506:U:O4'	2.13	0.48
1:LA:639:U:H2'	1:LA:640:C:C6	2.48	0.48
1:LA:1361:G:H2'	1:LA:1362:A:C8	2.48	0.48
1:LA:1794:U:N3	44:Lr:50:GLY:O	2.46	0.48
8:LH:96:VAL:HG23	8:LH:98:VAL:HG13	1.95	0.48
11:LK:176:LEU:HB3	41:Lo:86:ALA:HB1	1.95	0.48
22:LV:57:TYR:HA	22:LV:60:LYS:HG3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:99:C:OP2	45:S2:378:A:O2'	2.24	0.48
45:S2:395:U:H2'	45:S2:396:G:O4'	2.13	0.48
45:S2:1151:A:H4'	45:S2:1766:A:H62	1.78	0.48
45:S2:1290:U:H2'	45:S2:1291:G:N3	2.28	0.48
48:SC:1:MET:H2	48:SC:3:MET:CE	2.20	0.48
1:LA:276:U:H2'	1:LA:277:G:C8	2.48	0.48
1:LA:1809:A:H2'	1:LA:1810:G:C8	2.49	0.48
1:LA:2366:A:H2'	1:LA:2367:A:C8	2.48	0.48
1:LA:3063:U:H2'	1:LA:3064:G:H8	1.78	0.48
3:LC:142:C:H2'	3:LC:143:U:C6	2.48	0.48
4:LD:3:ARG:HG2	4:LD:207:VAL:HG22	1.95	0.48
5:LE:346:THR:OG1	5:LE:347:SER:N	2.46	0.48
24:LX:22:ILE:HG23	24:LX:33:ASN:HB2	1.95	0.48
26:LZ:50:ALA:HB1	36:Lj:66:VAL:HG21	1.95	0.48
45:S2:408:C:H1'	45:S2:1731:A:H8	1.77	0.48
45:S2:893:U:N3	45:S2:919:A:C6	2.81	0.48
48:SC:44:LYS:HA	48:SC:44:LYS:HD3	1.74	0.48
62:SQ:136:ARG:O	62:SQ:215:VAL:HA	2.13	0.48
64:SS:173:ILE:HD11	64:SS:235:TYR:CE2	2.48	0.48
65:ST:37:ASP:O	65:ST:41:VAL:HG12	2.14	0.48
1:LA:36:C:H4'	1:LA:807:A:C2	2.48	0.48
1:LA:370:U:H4'	1:LA:404:G:H5'	1.95	0.48
1:LA:571:A:H2'	1:LA:572:C:H5'	1.95	0.48
1:LA:2426:U:H2'	1:LA:2427:U:C6	2.49	0.48
1:LA:2428:G:H2'	1:LA:2429:A:C8	2.48	0.48
1:LA:3149:A:H2'	1:LA:3150:U:O4'	2.14	0.48
6:LF:2:SER:OG	6:LF:3:ARG:N	2.47	0.48
8:LH:2:THR:OG1	33:Lg:84:THR:HG21	2.13	0.48
13:LM:116:TYR:OH	53:SH:110:ARG:NH1	2.46	0.48
35:Li:54:ILE:HD11	35:Li:78:GLY:HA2	1.96	0.48
45:S2:1488:G:O5'	46:SA:9:ARG:NH2	2.47	0.48
45:S2:1600:A:O2'	45:S2:1601:G:H5"	2.13	0.48
45:S2:1769:U:O2	71:SZ:136:ARG:HD3	2.14	0.48
55:SJ:22:ILE:HG22	55:SJ:118:VAL:HG22	1.96	0.48
75:Sd:33:ALA:O	75:Sd:34:ASN:ND2	2.46	0.48
1:LA:24:G:H2'	1:LA:25:U:H5"	1.95	0.48
1:LA:1045:A:H2'	1:LA:1048:C:C5	2.48	0.48
1:LA:1465:G:N2	1:LA:1509:G:H5"	2.28	0.48
4:LD:70:ARG:CZ	4:LD:72:ARG:HH21	2.26	0.48
5:LE:50:LYS:NZ	5:LE:330:GLY:O	2.36	0.48
5:LE:284:ARG:NH1	5:LE:293:ASN:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LG:79:TYR:O	7:LG:82:GLU:HG3	2.14	0.48
13:LM:12:LEU:HD21	13:LM:158:ASP:OD2	2.14	0.48
13:LM:164:LYS:HZ2	13:LM:171:VAL:H	1.60	0.48
16:LP:38:ARG:NH1	16:LP:39:ALA:O	2.46	0.48
27:La:41:ALA:O	27:La:125:LYS:NZ	2.46	0.48
45:S2:123:G:H1	45:S2:295:A:H2	1.55	0.48
45:S2:328:A:H2'	45:S2:329:G:C8	2.49	0.48
45:S2:568:G:HO2'	45:S2:583:C:HO2'	1.59	0.48
45:S2:862:A:H8	45:S2:862:A:OP2	1.97	0.48
45:S2:1751:C:H2'	45:S2:1752:U:C6	2.49	0.48
46:SA:177:MET:H	46:SA:177:MET:HE3	1.79	0.48
53:SH:76:PRO:HG3	53:SH:86:LEU:HD11	1.96	0.48
63:SR:53:ILE:O	63:SR:56:ILE:HG12	2.13	0.48
66:SU:60:ILE:HG13	66:SU:92:PHE:HA	1.96	0.48
68:SW:23:ARG:NH1	68:SW:27:GLU:OE1	2.47	0.48
68:SW:39:LYS:HA	68:SW:42:ILE:HD12	1.94	0.48
1:LA:421:G:O2'	1:LA:2364:C:OP2	2.19	0.48
1:LA:2731:G:O2'	1:LA:2758:U:OP1	2.28	0.48
1:LA:3332:G:N2	1:LA:3368:G:O2'	2.47	0.48
12:LL:108:ALA:HB1	12:LL:112:GLN:OE1	2.13	0.48
13:LM:96:PHE:CD2	13:LM:160:VAL:HG12	2.49	0.48
14:LN:165:SER:C	14:LN:167:PHE:H	2.21	0.48
16:LP:35:VAL:HG12	16:LP:36:ILE:HG13	1.94	0.48
16:LP:141:ALA:O	16:LP:144:ARG:C	2.57	0.48
20:LT:92:GLN:O	20:LT:96:ILE:HG13	2.12	0.48
27:La:58:VAL:O	27:La:65:GLY:N	2.47	0.48
45:S2:43:A:H2'	45:S2:44:U:C6	2.49	0.48
45:S2:398:G:H21	64:SS:5:PRO:HD2	1.78	0.48
45:S2:406:U:H5"	65:ST:94:ARG:HG2	1.95	0.48
45:S2:1787:C:P	71:SZ:131:GLY:HA3	2.53	0.48
46:SA:175:VAL:HG23	46:SA:182:LEU:HB3	1.94	0.48
54:SI:22:LEU:HD23	54:SI:55:TYR:HD1	1.78	0.48
64:SS:13:ALA:O	64:SS:39:ARG:NH2	2.47	0.48
66:SU:93:LEU:HD21	66:SU:125:ILE:HG23	1.94	0.48
67:SV:87:ASN:HB3	67:SV:90:LEU:HD22	1.96	0.48
79:Ta:53:G:H2'	79:Ta:54:G:C8	2.49	0.48
1:LA:1018:G:N1	1:LA:1032:U:C2	2.81	0.48
1:LA:1757:G:H2'	1:LA:1758:C:C6	2.48	0.48
1:LA:2151:A:H2'	1:LA:2152:U:C6	2.49	0.48
1:LA:2525:C:H2'	1:LA:2526:G:C8	2.47	0.48
1:LA:3112:A:OP1	11:LK:73:SER:OG	2.23	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LG:105:ILE:O	7:LG:109:THR:HG22	2.13	0.48
45:S2:389:G:H2'	45:S2:390:G:O4'	2.14	0.48
45:S2:805:U:O4	45:S2:806:A:N6	2.47	0.48
45:S2:893:U:C4	45:S2:919:A:N1	2.82	0.48
45:S2:953:G:OP2	70:SY:94:LYS:NZ	2.36	0.48
47:SB:88:PRO:O	47:SB:92:ARG:HG2	2.13	0.48
51:SF:46:PHE:O	51:SF:50:GLU:HG3	2.14	0.48
60:SO:81:LEU:C	60:SO:81:LEU:HD13	2.39	0.48
67:SV:62:THR:HB	67:SV:75:LYS:HZ2	1.78	0.48
68:SW:109:LEU:O	68:SW:113:VAL:HG12	2.13	0.48
72:Sa:21:ASN:OD1	72:Sa:21:ASN:O	2.32	0.48
1:LA:20:A:OP2	36:Lj:86:ARG:NH2	2.46	0.48
1:LA:895:A:N6	1:LA:2146:A:H8	2.11	0.48
1:LA:1338:C:H2'	1:LA:1339:G:C8	2.49	0.48
1:LA:1845:C:OP1	1:LA:1848:C:N4	2.37	0.48
1:LA:3046:U:O2'	1:LA:3047:A:H5'	2.13	0.48
5:LE:109:HIS:CD2	5:LE:200:GLU:OE1	2.67	0.48
14:LN:153:ASP:OD1	14:LN:153:ASP:N	2.47	0.48
27:La:86:THR:HG22	27:La:96:PRO:HA	1.95	0.48
44:Lr:29:LEU:HD13	44:Lr:69:TYR:CD2	2.49	0.48
45:S2:305:C:O3'	69:SX:88:ARG:NH2	2.47	0.48
45:S2:431:C:H2'	45:S2:432:G:H8	1.79	0.48
45:S2:553:G:OP2	45:S2:554:C:O2'	2.19	0.48
47:SB:130:ILE:HD12	47:SB:131:GLN:H	1.78	0.48
52:SG:104:ASN:O	52:SG:107:SER:OG	2.28	0.48
55:SJ:33:GLN:O	55:SJ:37:VAL:HG12	2.13	0.48
60:SO:221:MET:HG3	60:SO:233:THR:HB	1.96	0.48
70:SY:37:ILE:HD11	70:SY:54:LEU:HD22	1.95	0.48
1:LA:673:G:H2'	1:LA:674:C:C6	2.49	0.47
1:LA:914:A:H8	1:LA:2135:C:O2'	1.97	0.47
1:LA:1196:A:O2'	1:LA:1197:C:OP1	2.30	0.47
1:LA:2726:A:C2	29:Lc:43:ILE:HG23	2.49	0.47
1:LA:2734:U:H2'	1:LA:2735:A:H8	1.79	0.47
7:LG:236:LEU:O	7:LG:239:ILE:HG13	2.14	0.47
12:LL:19:LYS:HD2	12:LL:26:VAL:HG22	1.95	0.47
16:LP:141:ALA:O	16:LP:145:ASP:HB2	2.14	0.47
21:LU:80:ARG:HG2	21:LU:122:HIS:HB2	1.96	0.47
45:S2:125:U:O2'	45:S2:126:A:OP1	2.26	0.47
45:S2:993:A:H62	45:S2:1011:G:H21	1.62	0.47
45:S2:1530:C:H2'	45:S2:1531:G:C8	2.49	0.47
62:SQ:137:ILE:HB	62:SQ:215:VAL:HG23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SX:64:VAL:HG12	69:SX:129:ARG:HH21	1.78	0.47
74:Sc:37:ALA:O	74:Sc:41:SER:OG	2.21	0.47
1:LA:377:A:O2'	1:LA:391:A:N1	2.42	0.47
1:LA:431:U:H2'	1:LA:432:G:H8	1.79	0.47
1:LA:435:C:H2'	1:LA:436:A:C8	2.49	0.47
1:LA:663:U:H2'	1:LA:664:A:H8	1.79	0.47
1:LA:1323:U:C4	1:LA:1324:U:H1'	2.48	0.47
1:LA:3065:U:H2'	1:LA:3066:C:C6	2.49	0.47
7:LG:282:ARG:O	7:LG:286:VAL:HG22	2.14	0.47
14:LN:154:VAL:HG22	14:LN:156:ALA:H	1.79	0.47
19:LS:31:LYS:HB2	19:LS:31:LYS:HE3	1.65	0.47
33:Lg:102:ALA:O	33:Lg:106:VAL:HG13	2.13	0.47
45:S2:539:G:H21	45:S2:540:G:N2	2.12	0.47
45:S2:856:A:OP2	66:SU:97:ARG:NH1	2.47	0.47
60:SO:240:VAL:HA	60:SO:256:THR:HA	1.96	0.47
71:SZ:120:PRO:O	71:SZ:122:PRO:HD2	2.14	0.47
73:Sb:106:THR:OG1	73:Sb:122:SER:O	2.28	0.47
77:Sf:33:LEU:HD22	77:Sf:79:PHE:HB2	1.95	0.47
1:LA:34:A:H2'	1:LA:35:A:C8	2.50	0.47
1:LA:2114:G:O2'	20:LT:82:LYS:HD3	2.14	0.47
1:LA:2162:C:O2'	4:LD:11:GLY:HA3	2.14	0.47
1:LA:2221:A:O2'	1:LA:2222:A:OP1	2.30	0.47
1:LA:2734:U:H2'	1:LA:2735:A:C8	2.50	0.47
4:LD:45:VAL:O	4:LD:85:GLY:N	2.46	0.47
7:LG:108:ARG:NE	7:LG:253:PHE:HB2	2.30	0.47
13:LM:19:LEU:HD23	13:LM:127:PHE:CD1	2.50	0.47
18:LR:48:LEU:HD22	18:LR:88:VAL:HG13	1.96	0.47
19:LS:176:ARG:HA	19:LS:182:LYS:O	2.14	0.47
45:S2:12:U:H2'	45:S2:13:C:H6	1.79	0.47
45:S2:1618:C:O2	45:S2:1620:C:N4	2.41	0.47
45:S2:1638:G:O6	45:S2:1767:G:N2	2.47	0.47
60:SO:74:THR:HG23	60:SO:79:TYR:O	2.13	0.47
1:LA:412:G:OP1	18:LR:62:ARG:NH1	2.47	0.47
1:LA:527:U:H2'	1:LA:528:A:C8	2.45	0.47
1:LA:2365:C:H2'	1:LA:2366:A:H8	1.79	0.47
1:LA:2395:G:OP1	1:LA:2396:A:O2'	2.26	0.47
11:LK:114:VAL:HB	11:LK:124:ARG:HB2	1.96	0.47
24:LX:74:MET:HE2	24:LX:74:MET:HB3	1.85	0.47
28:Lb:62:VAL:O	28:Lb:66:THR:OG1	2.24	0.47
44:Lr:27:LYS:HG3	44:Lr:31:ILE:CD1	2.44	0.47
45:S2:625:C:H2'	45:S2:626:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:987:G:H5”	45:S2:988:A:H8	1.79	0.47
48:SC:1:MET:C	48:SC:3:MET:HE3	2.40	0.47
48:SC:20:VAL:HG13	48:SC:66:TYR:O	2.14	0.47
51:SF:9:THR:HB	51:SF:87:LYS:HD3	1.95	0.47
56:SK:82:HIS:HA	56:SK:85:LYS:HG2	1.96	0.47
62:SQ:103:MET:HE3	62:SQ:215:VAL:CG1	2.41	0.47
62:SQ:136:ARG:HB2	62:SQ:218:LEU:HD11	1.95	0.47
62:SQ:190:PRO:HB2	62:SQ:192:VAL:HG13	1.97	0.47
64:SS:11:ARG:HH21	64:SS:20:LEU:HG	1.80	0.47
64:SS:70:VAL:HG23	64:SS:92:LEU:HD12	1.95	0.47
66:SU:96:ARG:HD2	66:SU:124:LYS:CD	2.44	0.47
1:LA:1002:A:N1	1:LA:1048:C:O2’	2.45	0.47
8:LH:54:TYR:HA	8:LH:65:VAL:HG12	1.95	0.47
8:LH:132:THR:HA	8:LH:135:VAL:HG12	1.97	0.47
11:LK:1:MET:HG2	11:LK:3:TYR:CZ	2.49	0.47
12:LL:53:VAL:HG12	12:LL:134:ILE:HD13	1.96	0.47
13:LM:16:LYS:HG2	13:LM:130:VAL:HG22	1.96	0.47
45:S2:522:U:H4’	75:Sd:60:PHE:CD2	2.50	0.47
45:S2:912:U:O3’	45:S2:914:G:N2	2.47	0.47
45:S2:1396:U:O4	45:S2:1402:G:O6	2.31	0.47
46:SA:174:HIS:HA	46:SA:183:GLY:HA2	1.96	0.47
54:SI:127:ASN:OD1	54:SI:127:ASN:N	2.48	0.47
55:SJ:69:LYS:HE2	55:SJ:69:LYS:HB3	1.71	0.47
57:SL:18:ARG:NH2	57:SL:24:GLY:O	2.46	0.47
68:SW:127:VAL:HA	68:SW:130:THR:HG22	1.97	0.47
70:SY:115:LEU:HG	70:SY:119:GLU:OE1	2.13	0.47
71:SZ:83:ILE:HD12	71:SZ:84:ARG:H	1.79	0.47
72:Sa:46:ILE:HB	72:Sa:49:GLU:OE1	2.15	0.47
1:LA:197:G:HO2’	1:LA:198:A:P	2.35	0.47
1:LA:1666:A:H2’	1:LA:1667:G:H8	1.80	0.47
1:LA:2128:U:H2’	1:LA:2129:G:H8	1.78	0.47
5:LE:57:VAL:HG13	5:LE:71:GLU:CG	2.44	0.47
8:LH:94:GLU:C	8:LH:94:GLU:OE2	2.57	0.47
28:Lb:101:PHE:O	28:Lb:102:GLU:HG2	2.15	0.47
28:Lb:103:GLN:OE1	28:Lb:106:GLN:HG2	2.15	0.47
45:S2:263:C:H2’	45:S2:264:G:C8	2.50	0.47
46:SA:35:SER:HB3	46:SA:51:ARG:O	2.14	0.47
46:SA:76:ARG:NH2	48:SC:63:TYR:HB3	2.29	0.47
60:SO:39:ASP:OD1	60:SO:41:THR:OG1	2.26	0.47
60:SO:111:MET:HE2	60:SO:111:MET:HA	1.96	0.47
60:SO:255:ALA:HB2	60:SO:292:LEU:HD22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SP:124:THR:OG1	61:SP:170:ILE:HD11	2.14	0.47
64:SS:212:ASP:OD1	64:SS:213:SER:N	2.47	0.47
65:ST:136:LYS:O	65:ST:175:ILE:HG13	2.14	0.47
66:SU:76:LYS:O	66:SU:80:GLU:HG2	2.15	0.47
71:SZ:31:THR:HG23	71:SZ:32:ASP:N	2.29	0.47
73:Sb:30:SER:O	73:Sb:30:SER:OG	2.30	0.47
1:LA:41:G:N2	1:LA:2802:A:H62	2.12	0.47
1:LA:1062:G:C6	22:LV:109:VAL:HG22	2.50	0.47
1:LA:1075:C:H4'	30:Ld:38:LYS:HG2	1.97	0.47
1:LA:2552:U:HO2'	35:Li:91:ARG:NH1	2.13	0.47
1:LA:2608:A:H2'	1:LA:2609:G:C8	2.50	0.47
1:LA:2947:C:H5"	5:LE:243:HIS:HB3	1.96	0.47
1:LA:3026:A:HO2'	1:LA:3027:G:P	2.37	0.47
1:LA:3106:U:H2'	1:LA:3107:G:H8	1.78	0.47
1:LA:3343:A:C2	1:LA:3360:G:N2	2.75	0.47
3:LC:39:G:H1'	3:LC:104:A:N6	2.30	0.47
3:LC:41:A:H5'	38:Ll:67:LEU:HD23	1.96	0.47
4:LD:27:ALA:HA	4:LD:75:ILE:HG22	1.97	0.47
5:LE:67:PHE:O	24:LX:88:ARG:NH2	2.48	0.47
6:LF:300:ARG:NH1	6:LF:301:PRO:O	2.46	0.47
7:LG:41:LYS:HB2	22:LV:68:THR:O	2.14	0.47
10:LJ:78:PHE:O	10:LJ:79:GLN:HG2	2.14	0.47
11:LK:115:ARG:NH2	11:LK:123:ILE:HD11	2.29	0.47
12:LL:35:ASP:O	12:LL:36:LEU:HD13	2.15	0.47
12:LL:208:ASN:HA	12:LL:211:ARG:HG2	1.97	0.47
22:LV:96:ILE:HD12	22:LV:96:ILE:HA	1.76	0.47
29:Lc:34:MET:HB3	29:Lc:34:MET:HE3	1.77	0.47
45:S2:295:A:C8	64:SS:146:THR:HG21	2.41	0.47
45:S2:777:C:O2'	45:S2:778:G:O4'	2.33	0.47
45:S2:945:U:H2'	45:S2:946:U:C6	2.50	0.47
45:S2:992:A:OP2	45:S2:1011:G:N1	2.38	0.47
45:S2:1143:A:H8	45:S2:1300:A:H2	1.61	0.47
45:S2:1179:G:H21	45:S2:1460:A:N6	2.13	0.47
45:S2:1391:A:H3'	45:S2:1392:U:C6	2.49	0.47
45:S2:1403:C:OP1	52:SG:3:ARG:NH2	2.44	0.47
45:S2:1452:U:H2'	45:S2:1453:G:H8	1.80	0.47
49:SD:31:VAL:HG11	49:SD:136:ILE:HD12	1.97	0.47
61:SP:172:LEU:O	61:SP:176:LEU:HG	2.15	0.47
62:SQ:199:ASN:HA	62:SQ:202:LYS:HE2	1.97	0.47
65:ST:135:PRO:HG2	65:ST:141:ILE:HG22	1.97	0.47
66:SU:47:ARG:HB3	66:SU:59:ALA:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SV:20:GLN:NE2	67:SV:22:ARG:O	2.47	0.47
71:SZ:31:THR:CG2	71:SZ:35:GLY:HA2	2.44	0.47
73:Sb:22:LYS:HA	77:Sf:3:LEU:HG	1.95	0.47
76:Se:41:ILE:HD12	76:Se:68:TYR:CD1	2.50	0.47
1:LA:21:G:OP2	3:LC:36:G:N2	2.48	0.47
1:LA:351:A:N6	40:Ln:37:TYR:O	2.46	0.47
1:LA:594:G:H1	1:LA:608:G:H5"	1.80	0.47
1:LA:791:G:O3'	29:Lc:2:PRO:HG2	2.15	0.47
1:LA:2406:C:H2'	1:LA:2407:U:C6	2.50	0.47
1:LA:3040:U:OP2	24:LX:12:ARG:HG3	2.15	0.47
2:LB:4:U:H2'	2:LB:5:G:H8	1.80	0.47
13:LM:134:PRO:O	13:LM:152:HIS:NE2	2.48	0.47
28:Lb:25:ILE:HD11	28:Lb:28:PRO:HB3	1.96	0.47
45:S2:924:A:H4'	45:S2:925:G:OP1	2.15	0.47
45:S2:1005:A:H2'	45:S2:1006:C:C6	2.50	0.47
45:S2:1271:G:H2'	45:S2:1272:U:C6	2.49	0.47
45:S2:1742:U:H2'	45:S2:1743:U:C6	2.49	0.47
60:SO:223:TRP:CE3	60:SO:230:ALA:HB2	2.49	0.47
63:SR:41:LEU:HD21	63:SR:64:LYS:H	1.80	0.47
63:SR:172:ALA:HB2	63:SR:197:TYR:CD1	2.49	0.47
64:SS:42:LEU:HD23	64:SS:101:LEU:HD11	1.96	0.47
65:ST:193:LEU:HA	65:ST:196:ARG:HE	1.80	0.47
67:SV:83:TYR:HD2	67:SV:101:ILE:HD13	1.80	0.47
69:SX:67:ARG:HH12	69:SX:129:ARG:N	2.13	0.47
73:Sb:122:SER:OG	73:Sb:123:GLY:N	2.47	0.47
1:LA:68:C:O3'	16:LP:177:GLY:HA2	2.15	0.47
1:LA:1694:U:O2'	1:LA:1748:A:N1	2.33	0.47
1:LA:2614:G:H2'	1:LA:2615:C:H6	1.80	0.47
2:LB:90:U:H2'	2:LB:91:G:O4'	2.15	0.47
4:LD:20:THR:HG22	4:LD:23:ARG:HD2	1.97	0.47
4:LD:41:ILE:HG12	4:LD:63:PHE:HD2	1.79	0.47
10:LJ:29:SER:C	10:LJ:31:PRO:HD3	2.39	0.47
11:LK:146:LEU:HD22	11:LK:157:ASN:HB3	1.97	0.47
11:LK:165:CYS:SG	11:LK:179:ILE:N	2.80	0.47
12:LL:38:LYS:HD3	12:LL:83:ASP:OD1	2.14	0.47
12:LL:160:PRO:O	12:LL:163:GLN:NE2	2.40	0.47
13:LM:19:LEU:HD23	13:LM:127:PHE:HD1	1.80	0.47
18:LR:67:ILE:HG12	18:LR:80:LYS:HD2	1.97	0.47
24:LX:17:LEU:HD21	24:LX:98:ASN:HB3	1.97	0.47
30:Ld:40:ARG:HG2	30:Ld:40:ARG:NH1	2.30	0.47
45:S2:43:A:H4'	45:S2:99:C:OP1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:532:U:OP1	68:SW:132:ARG:NE	2.47	0.47
45:S2:823:G:H2'	45:S2:824:G:O3'	2.15	0.47
45:S2:900:A:H4'	71:SZ:27:PHE:HZ	1.80	0.47
45:S2:1168:U:H5"	45:S2:1169:G:OP2	2.15	0.47
45:S2:1183:A:C8	50:SE:100:LYS:HD3	2.50	0.47
48:SC:2:LEU:N	48:SC:3:MET:HE2	2.29	0.47
50:SE:89:MET:HB3	50:SE:107:ILE:HD13	1.95	0.47
63:SR:226:THR:HB	63:SR:228:ASN:OD1	2.15	0.47
66:SU:34:LEU:HD13	66:SU:80:GLU:OE2	2.15	0.47
68:SW:93:LEU:HD23	68:SW:97:LEU:HD23	1.96	0.47
69:SX:33:ARG:NH1	69:SX:51:GLY:O	2.48	0.47
1:LA:121:A:O2'	10:LJ:100:GLU:OE2	2.29	0.47
1:LA:292:U:OP2	16:LP:68:ARG:NH2	2.48	0.47
1:LA:663:U:H5'	6:LF:107:ARG:HA	1.96	0.47
1:LA:1540:G:H1'	1:LA:1556:A:C5	2.50	0.47
1:LA:1676:G:OP2	23:LW:103:TYR:OH	2.27	0.47
1:LA:1894:A:O2'	1:LA:3052:G:H4'	2.14	0.47
1:LA:3037:U:H4'	5:LE:65:SER:HA	1.97	0.47
1:LA:3150:U:H4'	1:LA:3293:A:H1'	1.97	0.47
4:LD:177:LYS:NZ	44:Lr:33:GLN:OE1	2.44	0.47
5:LE:211:GLN:HG3	5:LE:212:ASN:N	2.30	0.47
7:LG:257:GLU:CD	7:LG:257:GLU:H	2.23	0.47
13:LM:13:LYS:HB2	13:LM:13:LYS:HE3	1.74	0.47
19:LS:94:PHE:CE2	29:Lc:119:PRO:HD3	2.50	0.47
37:Lk:58:ILE:HG13	37:Lk:90:MET:HE3	1.97	0.47
37:Lk:66:GLU:CD	37:Lk:91:ASN:HD21	2.19	0.47
43:Lq:35:LEU:HD12	43:Lq:36:PHE:H	1.80	0.47
45:S2:768:C:HO2'	45:S2:769:A:P	2.37	0.47
45:S2:866:G:H5"	70:SY:2:GLY:HA3	1.96	0.47
45:S2:1612:U:P	47:SB:92:ARG:HE	2.38	0.47
54:SI:22:LEU:HD21	54:SI:28:LEU:HD13	1.97	0.47
61:SP:89:PHE:HB2	61:SP:174:TRP:NE1	2.28	0.47
64:SS:72:VAL:HG13	64:SS:90:ILE:HG22	1.97	0.47
66:SU:81:LEU:HG	66:SU:85:PHE:HE1	1.79	0.47
67:SV:193:LEU:HA	67:SV:196:LEU:HD12	1.97	0.47
69:SX:34:TRP:HH2	69:SX:36:LYS:HD3	1.80	0.47
1:LA:158:G:H2'	1:LA:159:A:C8	2.50	0.46
1:LA:609:G:N7	6:LF:309:ARG:NH2	2.63	0.46
1:LA:637:C:N4	1:LA:638:G:O6	2.48	0.46
1:LA:938:U:O2'	1:LA:2401:A:N1	2.46	0.46
1:LA:2182:A:O2'	4:LD:236:GLY:N	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2682:U:H5”	13:LM:18:VAL:HG11	1.97	0.46
2:LB:45:A:H4’	7:LG:154:THR:HG21	1.96	0.46
7:LG:53:VAL:O	7:LG:54:ARG:NH1	2.39	0.46
11:LK:90:MET:HE2	11:LK:90:MET:HB3	1.83	0.46
12:LL:184:LYS:O	12:LL:187:ALA:C	2.58	0.46
15:LO:80:THR:O	15:LO:84:LYS:HG2	2.15	0.46
15:LO:113:THR:HG23	15:LO:116:GLU:H	1.80	0.46
17:LQ:172[A]:ARG:HB3	17:LQ:172[A]:ARG:HH11	1.77	0.46
20:LT:7:GLN:HG2	20:LT:32:ILE:HG22	1.96	0.46
45:S2:596:C:H2’	45:S2:597:G:H8	1.80	0.46
45:S2:1222:C:O2’	45:S2:1223:A:OP1	2.32	0.46
45:S2:1388:A:H62	45:S2:1409:G:H2’	1.80	0.46
46:SA:70:THR:HG23	46:SA:86:LEU:HD23	1.96	0.46
48:SC:46:LEU:O	48:SC:50:THR:HG23	2.15	0.46
54:SI:126:GLU:O	54:SI:130:ARG:HG3	2.15	0.46
55:SJ:30:LYS:NZ	55:SJ:110:PRO:O	2.47	0.46
58:SM:33:LYS:HE2	58:SM:34:TYR:CE1	2.50	0.46
64:SS:249:ALA:O	64:SS:252:ARG:HG3	2.15	0.46
71:SZ:58:TYR:CZ	71:SZ:62:LEU:HD11	2.49	0.46
73:Sb:41:MET:HE3	73:Sb:72:CYS:SG	2.55	0.46
1:LA:183:G:H2’	1:LA:184:U:C6	2.49	0.46
1:LA:371:G:N1	1:LA:374:A:OP2	2.35	0.46
1:LA:531:A:N6	1:LA:559:G:H1	2.13	0.46
1:LA:560:C:OP1	15:LO:77:ARG:HB2	2.15	0.46
1:LA:1075:C:C6	30:Ld:42:ASN:ND2	2.83	0.46
1:LA:2908:U:H2’	1:LA:2909:A:O4’	2.16	0.46
1:LA:2999:A:H2’	1:LA:3000:C:C6	2.49	0.46
7:LG:153:THR:HG23	7:LG:160:PHE:CZ	2.50	0.46
13:LM:165:GLN:OE1	13:LM:166:LYS:N	2.48	0.46
19:LS:36:LEU:HB3	19:LS:45:ASN:ND2	2.31	0.46
19:LS:174:ARG:O	29:Lc:56:VAL:HG21	2.15	0.46
38:Ll:21:ARG:NH1	38:Ll:41:ALA:O	2.45	0.46
45:S2:259:U:O4’	67:SV:178:ARG:NH2	2.48	0.46
45:S2:364:G:H2’	45:S2:757:A:H62	1.80	0.46
45:S2:1036:A:H2’	45:S2:1037:C:C6	2.50	0.46
45:S2:1132:A:H2’	45:S2:1133:A:H8	1.80	0.46
45:S2:1216:C:H2’	45:S2:1217:A:H2’	1.97	0.46
45:S2:1280:C:O2’	55:SJ:70:THR:HB	2.16	0.46
45:S2:1739:C:H2’	45:S2:1740:A:C8	2.51	0.46
50:SE:53:PRO:O	50:SE:57:MET:HG2	2.15	0.46
52:SG:5:ARG:H	52:SG:5:ARG:CD	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SP:157:ASP:OD1	72:Sa:60:ARG:NH1	2.42	0.46
63:SR:58:LEU:HA	72:Sa:12:TYR:CE1	2.50	0.46
63:SR:108:ASN:ND2	63:SR:108:ASN:C	2.73	0.46
64:SS:12:LEU:HD21	64:SS:22:LYS:HB3	1.97	0.46
64:SS:78:THR:O	64:SS:78:THR:OG1	2.31	0.46
72:Sa:17:CYS:SG	72:Sa:18:SER:N	2.87	0.46
1:LA:502:C:H2'	1:LA:503:A:C8	2.51	0.46
1:LA:823:C:O2'	1:LA:1533:A:N3	2.46	0.46
1:LA:975:U:H3	1:LA:1104:A:H62	1.63	0.46
1:LA:2758:U:H5"	1:LA:2759:C:H5'	1.98	0.46
1:LA:2880:C:H2'	1:LA:2881:U:C6	2.50	0.46
2:LB:3:U:H2'	2:LB:4:U:C6	2.50	0.46
4:LD:27:ALA:HB1	4:LD:77:ILE:HG13	1.98	0.46
13:LM:21:ILE:HD11	13:LM:67:VAL:HG12	1.97	0.46
32:Lf:10:ARG:HG3	32:Lf:108:VAL:HA	1.96	0.46
33:Lg:105:ARG:HD2	33:Lg:125:ARG:HD2	1.97	0.46
38:Ll:25:ARG:NH2	40:Ln:50:ASN:HB3	2.29	0.46
45:S2:1334:U:N3	58:SM:55:PHE:CE1	2.80	0.46
62:SQ:131:ASP:HB3	62:SQ:133:TYR:HD1	1.79	0.46
67:SV:98:LYS:HG3	67:SV:99:ALA:N	2.28	0.46
1:LA:19:U:H2'	1:LA:20:A:C8	2.50	0.46
1:LA:221:A:O2'	1:LA:223:U:OP2	2.32	0.46
1:LA:598:C:OP1	6:LF:332:LYS:NZ	2.33	0.46
1:LA:838:C:H4'	1:LA:1723:U:O2'	2.15	0.46
1:LA:1008:A:H2'	1:LA:1009:G:O4'	2.15	0.46
1:LA:1163:G:H2'	1:LA:1164:A:C8	2.51	0.46
1:LA:1340:U:H2'	1:LA:1341:C:C6	2.50	0.46
1:LA:1486:G:H1'	35:Li:6:THR:HG21	1.96	0.46
1:LA:1661:G:H22	1:LA:1786:A:H2	1.64	0.46
1:LA:2146:A:H2'	1:LA:2147:U:O4'	2.15	0.46
1:LA:2429:A:H2'	1:LA:2430:C:C6	2.51	0.46
11:LK:89:LYS:HD3	11:LK:183:HIS:HB2	1.97	0.46
11:LK:126:VAL:HG23	11:LK:164:ILE:HD13	1.98	0.46
19:LS:81:VAL:HG13	19:LS:140:LEU:HD23	1.97	0.46
33:Lg:23:ASP:OD1	33:Lg:23:ASP:N	2.47	0.46
45:S2:39:A:H2'	45:S2:39:A:N3	2.30	0.46
45:S2:950:C:O2	70:SY:101:HIS:NE2	2.47	0.46
45:S2:1087:A:H2'	45:S2:1088:A:H8	1.79	0.46
45:S2:1770:U:H2'	45:S2:1771:U:C6	2.51	0.46
68:SW:132:ARG:O	68:SW:132:ARG:CG	2.61	0.46
68:SW:168:ARG:HD2	68:SW:168:ARG:HA	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SX:34:TRP:O	69:SX:61:THR:OG1	2.21	0.46
75:Sd:56:SER:HB2	75:Sd:94:TYR:CE2	2.51	0.46
1:LA:1614:C:H2'	1:LA:1615:U:H6	1.80	0.46
1:LA:2801:A:H5'	43:Lq:56:PRO:HB3	1.98	0.46
3:LC:69:U:H2'	3:LC:70:G:O4'	2.15	0.46
5:LE:139:GLN:HB2	5:LE:142:ALA:HB2	1.97	0.46
6:LF:23:PRO:HD2	6:LF:26:PHE:HD2	1.80	0.46
7:LG:289:LYS:NZ	12:LL:207:GLU:OE2	2.48	0.46
9:LI:169:ILE:HD13	9:LI:181:ILE:HG23	1.98	0.46
11:LK:23:ARG:NH2	11:LK:39:LYS:HB3	2.31	0.46
19:LS:64:VAL:HG22	19:LS:90:ASP:H	1.81	0.46
30:Ld:54:LEU:O	30:Ld:58:LYS:HG2	2.16	0.46
45:S2:62:A:O2'	45:S2:287:G:N2	2.49	0.46
45:S2:515:A:H62	45:S2:537:G:H21	1.63	0.46
45:S2:947:U:H2'	45:S2:948:G:C8	2.47	0.46
45:S2:1373:C:H2'	45:S2:1374:C:C6	2.51	0.46
45:S2:1588:G:O6	45:S2:1608:U:C4	2.69	0.46
45:S2:1662:G:O3'	45:S2:1664:C:N4	2.48	0.46
47:SB:185:ARG:HD2	47:SB:185:ARG:HA	1.72	0.46
50:SE:88:GLU:O	50:SE:92:SER:OG	2.32	0.46
51:SF:58:ASP:OD1	51:SF:58:ASP:N	2.49	0.46
53:SH:25:ASN:HB2	56:SK:40:VAL:HG21	1.98	0.46
61:SP:121:VAL:O	61:SP:143:VAL:HA	2.16	0.46
68:SW:17:ARG:HB2	68:SW:20:GLU:OE2	2.16	0.46
70:SY:115:LEU:CG	70:SY:119:GLU:OE1	2.63	0.46
71:SZ:21:ALA:CB	71:SZ:83:ILE:HD11	2.45	0.46
71:SZ:85:ALA:HB2	71:SZ:118:VAL:HG21	1.96	0.46
73:Sb:82:LYS:H	73:Sb:85:ASP:HB2	1.81	0.46
1:LA:393:U:H2'	1:LA:394:G:O4'	2.15	0.46
1:LA:845:A:H2'	1:LA:846:A:C8	2.51	0.46
1:LA:2364:C:H5'	1:LA:2985:U:H4'	1.97	0.46
1:LA:2966:A:H5"	4:LD:213:GLY:HA3	1.98	0.46
8:LH:172:HIS:CD2	34:Lh:44:TYR:HE2	2.33	0.46
10:LJ:54:GLU:HG2	10:LJ:57:ARG:HH12	1.80	0.46
15:LO:12:TRP:HD1	21:LU:172:TYR:HB3	1.80	0.46
45:S2:25:C:O4'	68:SW:8:TYR:OH	2.29	0.46
45:S2:121:U:C4	45:S2:122:U:H1'	2.50	0.46
45:S2:1647:U:H2'	45:S2:1648:A:H8	1.80	0.46
46:SA:189:MET:HE3	46:SA:189:MET:HB2	1.48	0.46
62:SQ:32:ILE:HG22	62:SQ:96:LEU:HD21	1.98	0.46
62:SQ:103:MET:HE2	62:SQ:188:LEU:CD2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SQ:140:ILE:HB	62:SQ:213:ARG:NH2	2.30	0.46
66:SU:22:GLN:O	66:SU:26:GLU:OE2	2.34	0.46
67:SV:188:GLU:HG2	69:SX:13:PHE:CE2	2.51	0.46
68:SW:25:ASP:O	68:SW:29:LYS:HG3	2.15	0.46
71:SZ:105:LEU:HB3	71:SZ:110:LEU:HD12	1.96	0.46
72:Sa:4:ASP:N	72:Sa:4:ASP:OD1	2.48	0.46
1:LA:1341:C:H2'	1:LA:1342:A:H8	1.81	0.46
1:LA:1341:C:H2'	1:LA:1342:A:C8	2.50	0.46
1:LA:1491:G:O2'	40:Ln:48:LYS:NZ	2.46	0.46
1:LA:2365:C:H2'	1:LA:2366:A:C8	2.51	0.46
1:LA:2584:G:N3	1:LA:2584:G:H2'	2.31	0.46
1:LA:3365:G:H2'	1:LA:3366:C:C6	2.51	0.46
13:LM:89:TYR:HB3	13:LM:169:ALA:HB1	1.97	0.46
14:LN:122:LYS:HG3	36:Lj:118:ILE:CG2	2.46	0.46
19:LS:19:PRO:HD3	19:LS:53:PHE:CD1	2.50	0.46
35:Li:9:ARG:HD3	35:Li:34:HIS:CE1	2.51	0.46
38:Ll:66:TYR:O	38:Ll:70:VAL:HG23	2.15	0.46
45:S2:259:U:O2'	45:S2:261:U:O2'	2.29	0.46
45:S2:636:A:H5"	73:Sb:31:SER:HB2	1.98	0.46
51:SF:9:THR:HG21	51:SF:88:GLY:HA2	1.98	0.46
52:SG:5:ARG:HD3	52:SG:10:LYS:HE3	1.98	0.46
52:SG:80:ARG:HG3	52:SG:81:LYS:N	2.31	0.46
60:SO:294:TRP:CE3	60:SO:301:LEU:HB2	2.51	0.46
71:SZ:124:ASP:O	71:SZ:126:THR:HG23	2.15	0.46
75:Sd:7:ILE:HG12	75:Sd:27:VAL:HG22	1.98	0.46
1:LA:353:G:O6	38:Ll:55:ARG:NH2	2.34	0.46
1:LA:759:G:H1'	1:LA:770:A:H61	1.81	0.46
1:LA:875:A:H5"	1:LA:1889:U:H5"	1.98	0.46
1:LA:944:C:H2'	1:LA:945:U:H6	1.81	0.46
1:LA:1106:C:H2'	1:LA:1107:U:O2	2.16	0.46
1:LA:1110:U:H5"	14:LN:5:LYS:HE3	1.98	0.46
1:LA:1205:G:OP1	12:LL:157:TYR:OH	2.32	0.46
1:LA:1919:U:O2'	1:LA:1931:A:N7	2.43	0.46
1:LA:3295:A:H2'	1:LA:3296:U:C6	2.50	0.46
1:LA:3312:U:H5'	5:LE:175:LYS:HD3	1.98	0.46
3:LC:73:U:OP1	27:La:24:SER:OG	2.33	0.46
10:LJ:94:PHE:HB3	10:LJ:189:LEU:HD21	1.96	0.46
16:LP:168:GLY:O	16:LP:172:ARG:HG3	2.15	0.46
21:LU:66:GLU:OE1	21:LU:99:ARG:N	2.47	0.46
22:LV:9:SER:O	22:LV:10:ARG:HG2	2.16	0.46
24:LX:20:GLY:HA2	24:LX:35:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Lj:19:SER:O	36:Lj:22:VAL:HG12	2.16	0.46
45:S2:1367:G:O2'	54:SI:69:LYS:HG3	2.16	0.46
49:SD:67:THR:C	49:SD:68:GLU:OE2	2.58	0.46
62:SQ:225:VAL:HG22	62:SQ:229:MET:HE2	1.97	0.46
64:SS:91:THR:HA	64:SS:98:ASN:HA	1.98	0.46
66:SU:133:THR:CG2	66:SU:162:ILE:HD13	2.37	0.46
67:SV:99:ALA:H	67:SV:170:SER:HA	1.80	0.46
73:Sb:111:MET:HE2	73:Sb:119:LYS:HD2	1.98	0.46
1:LA:209:A:H2'	6:LF:162:THR:HG21	1.98	0.46
1:LA:640:C:H2'	1:LA:641:U:O4'	2.16	0.46
1:LA:2422:U:H2'	1:LA:2423:A:C8	2.50	0.46
11:LK:23:ARG:NH2	11:LK:39:LYS:C	2.67	0.46
19:LS:67:ILE:HG23	19:LS:81:VAL:HG11	1.98	0.46
19:LS:89:ASP:HB2	19:LS:110:ALA:N	2.31	0.46
22:LV:111:ALA:O	22:LV:115:LYS:NZ	2.49	0.46
29:Lc:22:ILE:HD12	29:Lc:22:ILE:N	2.29	0.46
45:S2:115:G:H5'	69:SX:129:ARG:HD3	1.97	0.46
45:S2:898:A:N6	45:S2:914:G:N3	2.63	0.46
45:S2:1544:U:O2'	45:S2:1569:A:N6	2.48	0.46
45:S2:1727:G:H21	67:SV:32:GLN:NE2	2.02	0.46
47:SB:27:THR:HG21	51:SF:37:THR:HG21	1.98	0.46
47:SB:176:THR:HB	47:SB:180:ARG:HH21	1.81	0.46
53:SH:113:LEU:O	53:SH:117:LYS:HG2	2.16	0.46
54:SI:83:ALA:HA	54:SI:92:LYS:O	2.16	0.46
60:SO:9:LEU:HD23	60:SO:311:ARG:HE	1.80	0.46
60:SO:122:ILE:HB	60:SO:134:TRP:HB2	1.96	0.46
64:SS:46:VAL:HG23	64:SS:50:ASN:ND2	2.28	0.46
64:SS:127:LYS:HA	64:SS:127:LYS:HD2	1.75	0.46
65:ST:30:LYS:HE2	65:ST:30:LYS:HB2	1.61	0.46
74:Sc:69:ARG:NH2	74:Sc:116:ASP:OD2	2.35	0.46
1:LA:1497:A:H2'	1:LA:1498:C:C6	2.51	0.46
1:LA:2159:G:H2'	1:LA:2160:G:H8	1.80	0.46
1:LA:2351:A:H5"	18:LR:83:TRP:O	2.15	0.46
1:LA:3044:G:OP1	5:LE:19:ARG:NH2	2.49	0.46
1:LA:3064:G:H2'	1:LA:3065:U:C6	2.51	0.46
1:LA:3145:G:H2'	1:LA:3146:G:C8	2.51	0.46
2:LB:18:C:H2'	2:LB:19:C:C6	2.51	0.46
3:LC:36:G:C5	36:Lj:86:ARG:HD3	2.51	0.46
4:LD:47:GLN:HA	4:LD:84:THR:HG22	1.97	0.46
4:LD:144:ASN:O	4:LD:144:ASN:OD1	2.33	0.46
9:LI:118:LYS:HB2	9:LI:195:PHE:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LN:179:PHE:O	14:LN:183:ARG:HD3	2.16	0.46
15:LO:32:LEU:HD11	15:LO:94:TRP:CD1	2.50	0.46
17:LQ:189[A]:ASP:N	17:LQ:189[A]:ASP:OD1	2.49	0.46
28:Lb:126:LYS:HB2	28:Lb:126:LYS:HE3	1.68	0.46
39:Lm:16:ARG:HG2	39:Lm:16:ARG:NH1	2.29	0.46
39:Lm:32:ASN:OD1	39:Lm:33:LYS:N	2.43	0.46
45:S2:910:C:H2'	45:S2:911:U:O4'	2.16	0.46
46:SA:48:VAL:O	46:SA:86:LEU:HA	2.15	0.46
52:SG:4:VAL:HA	52:SG:5:ARG:NH1	2.31	0.46
55:SJ:31:VAL:CG2	55:SJ:87:HIS:CE1	2.98	0.46
60:SO:307:ASP:OD1	60:SO:307:ASP:O	2.34	0.46
61:SP:125:ASP:C	61:SP:125:ASP:OD1	2.58	0.46
62:SQ:81:PHE:CE2	62:SQ:109:LYS:HD3	2.51	0.46
63:SR:200:SER:HB3	63:SR:204:THR:HG21	1.98	0.46
63:SR:227:PRO:HA	63:SR:230:TRP:CG	2.51	0.46
64:SS:60:GLU:HB3	75:Sd:18:LEU:HD21	1.98	0.46
75:Sd:12:VAL:HG13	75:Sd:23:PHE:HD2	1.80	0.46
79:Ta:76:C:H2'	79:Ta:77:A:C4	2.51	0.46
1:LA:422:A:C2	1:LA:2362:A:H4'	2.52	0.45
1:LA:516:G:OP1	9:LI:67:ARG:NH2	2.48	0.45
1:LA:795:U:H2'	1:LA:796:U:C6	2.51	0.45
1:LA:1305:G:C5	17:LQ:62[A]:THR:HA	2.52	0.45
1:LA:2270:A:H2'	1:LA:2271:G:O4'	2.16	0.45
1:LA:3370:G:H2'	1:LA:3371:A:H8	1.81	0.45
5:LE:369:ARG:HH11	5:LE:369:ARG:HG3	1.81	0.45
7:LG:226:TYR:HD1	7:LG:231:ILE:HB	1.82	0.45
8:LH:14:ASP:OD1	8:LH:14:ASP:N	2.48	0.45
8:LH:110:LYS:HD2	8:LH:111:LEU:N	2.30	0.45
10:LJ:24:ASN:HB3	10:LJ:25:PRO:HD3	1.98	0.45
24:LX:80:ARG:NH1	24:LX:117:PRO:O	2.39	0.45
26:LZ:127:THR:HB	26:LZ:129:ASP:OD1	2.16	0.45
31:Le:99:ASP:OD1	31:Le:99:ASP:N	2.44	0.45
45:S2:602:U:H2'	45:S2:603:U:H6	1.81	0.45
45:S2:629:U:C2	45:S2:630:A:C8	3.04	0.45
45:S2:639:U:H4'	45:S2:640:U:H5'	1.97	0.45
45:S2:963:A:O2'	45:S2:964:U:O4'	2.34	0.45
45:S2:985:G:N2	45:S2:1017:U:C2	2.84	0.45
45:S2:1197:C:O2'	55:SJ:77:LYS:NZ	2.48	0.45
45:S2:1208:A:O2'	45:S2:1270:G:OP2	2.33	0.45
45:S2:1307:U:H3	45:S2:1318:G:N2	2.13	0.45
46:SA:4:LEU:HG	46:SA:5:ILE:HG12	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SB:212:LYS:HA	47:SB:215:ASP:OD2	2.15	0.45
52:SG:41:ILE:HG22	52:SG:43:SER:H	1.81	0.45
56:SK:84:GLU:O	56:SK:90:LYS:NZ	2.47	0.45
64:SS:47:PHE:CZ	64:SS:52:LEU:HD11	2.51	0.45
68:SW:172:VAL:HA	68:SW:175:ARG:HG2	1.98	0.45
1:LA:296:A:N3	1:LA:299:G:O2'	2.44	0.45
1:LA:953:U:O4	1:LA:1114:G:H1'	2.16	0.45
1:LA:1481:A:C2	1:LA:1865:C:H2'	2.52	0.45
1:LA:1642:A:H2'	1:LA:1643:C:C2	2.50	0.45
1:LA:1724:C:H2'	1:LA:1725:C:H6	1.81	0.45
1:LA:2222:A:H2'	1:LA:2223:A:C8	2.52	0.45
1:LA:2363:G:H22	1:LA:2395:G:H1'	1.81	0.45
1:LA:3050:U:C2	1:LA:3051:G:C8	3.03	0.45
2:LB:49:G:N3	2:LB:50:U:H5	2.15	0.45
10:LJ:158:ASP:HB2	10:LJ:159:PRO:HD3	1.97	0.45
12:LL:60:LEU:HD22	12:LL:160:PRO:HD2	1.99	0.45
12:LL:193:ASP:CG	12:LL:194:GLY:H	2.24	0.45
15:LO:8:LYS:HD2	15:LO:8:LYS:HA	1.80	0.45
17:LQ:173[A]:ALA:O	17:LQ:176[A]:LYS:HG2	2.17	0.45
19:LS:90:ASP:OD2	19:LS:92:ARG:NH2	2.32	0.45
19:LS:133:LYS:HE3	19:LS:133:LYS:HB3	1.74	0.45
26:LZ:82:LEU:HB2	26:LZ:124:VAL:HG22	1.97	0.45
27:La:57:LEU:O	27:La:59:VAL:HG13	2.17	0.45
31:Le:14:LEU:HD23	31:Le:14:LEU:HA	1.83	0.45
45:S2:246:G:H1'	69:SX:40:LEU:H	1.82	0.45
45:S2:571:G:H5"	74:Sc:114:LYS:HG3	1.97	0.45
45:S2:602:U:H2'	45:S2:603:U:C6	2.50	0.45
45:S2:990:C:O2'	71:SZ:130:GLY:HA3	2.16	0.45
51:SF:13:LYS:HG2	51:SF:76:SER:HA	1.99	0.45
53:SH:111:ASP:OD1	53:SH:111:ASP:N	2.49	0.45
54:SI:94:ILE:HD12	54:SI:94:ILE:N	2.30	0.45
60:SO:200:ASN:H	60:SO:215:GLY:HA2	1.81	0.45
74:Sc:109:ARG:HD3	74:Sc:114:LYS:HA	1.98	0.45
1:LA:207:U:H2'	1:LA:208:C:H6	1.82	0.45
1:LA:859:G:O2'	1:LA:894:A:H4'	2.17	0.45
1:LA:1206:G:OP1	41:Lo:119:ASN:ND2	2.43	0.45
1:LA:2414:C:OP1	4:LD:2:GLY:HA3	2.17	0.45
1:LA:2879:U:H1'	5:LE:250:ALA:HB3	1.97	0.45
2:LB:18:C:H2'	2:LB:19:C:H6	1.81	0.45
6:LF:84:ARG:O	6:LF:87:GLN:HB2	2.16	0.45
13:LM:164:LYS:O	13:LM:168:ASP:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Lj:7:TYR:O	36:Lj:11:THR:HG23	2.16	0.45
38:Ll:11:ARG:HG3	38:Ll:11:ARG:O	2.16	0.45
45:S2:480:G:O6	45:S2:508:U:O2	2.34	0.45
45:S2:1164:G:H2'	45:S2:1165:G:C8	2.49	0.45
46:SA:158:ILE:H	46:SA:158:ILE:HG13	1.52	0.45
51:SF:86:ALA:O	51:SF:90:VAL:HG23	2.16	0.45
63:SR:35:TRP:CG	63:SR:37:PRO:HD3	2.50	0.45
71:SZ:11:SER:OG	71:SZ:12:GLN:N	2.45	0.45
73:Sb:47:ILE:O	73:Sb:65:LEU:HA	2.16	0.45
1:LA:110:G:C2	1:LA:111:C:H1'	2.52	0.45
1:LA:946:G:H5"	33:Lg:55:ILE:HB	1.98	0.45
1:LA:951:A:H5"	30:Ld:15:LYS:HD2	1.98	0.45
1:LA:975:U:H3	1:LA:1104:A:N6	2.15	0.45
1:LA:1084:A:H2'	1:LA:1085:C:C6	2.51	0.45
1:LA:1472:G:H5"	20:LT:23:TRP:CD1	2.52	0.45
1:LA:2877:G:H5"	5:LE:5:LYS:HE2	1.98	0.45
1:LA:3373:U:H2'	1:LA:3377:C:H41	1.81	0.45
3:LC:26:U:H2'	3:LC:27:U:C6	2.50	0.45
4:LD:116:VAL:HG22	4:LD:164:GLY:HA3	1.98	0.45
7:LG:229:ASP:OD1	7:LG:229:ASP:N	2.49	0.45
10:LJ:82:LEU:HD12	10:LJ:86:THR:HB	1.97	0.45
17:LQ:177[A]:LYS:HE2	17:LQ:177[A]:LYS:HA	1.97	0.45
19:LS:170:ARG:O	19:LS:171:LYS:HG2	2.16	0.45
44:Lr:45:LYS:HD3	44:Lr:45:LYS:N	2.32	0.45
45:S2:449:C:H2'	45:S2:450:U:C6	2.52	0.45
45:S2:512:A:O3'	68:SW:133:HIS:NE2	2.48	0.45
45:S2:895:G:C8	71:SZ:37:GLU:HA	2.52	0.45
45:S2:954:G:H3'	45:S2:955:A:H8	1.81	0.45
47:SB:195:ALA:O	47:SB:199:ILE:HG12	2.17	0.45
54:SI:7:ARG:HE	54:SI:67:MET:HE1	1.81	0.45
64:SS:47:PHE:HE1	64:SS:111:VAL:HG11	1.81	0.45
65:ST:98:ARG:NH2	65:ST:101:ILE:O	2.48	0.45
76:Se:10:ARG:HH21	76:Se:31:PRO:HG2	1.81	0.45
1:LA:183:G:H2'	1:LA:184:U:H6	1.81	0.45
1:LA:428:A:H2'	1:LA:429:U:C6	2.51	0.45
1:LA:506:U:H2'	1:LA:507:U:C6	2.51	0.45
1:LA:834:G:O2'	1:LA:856:G:N2	2.32	0.45
1:LA:1280:G:H8	1:LA:1280:G:O5'	2.00	0.45
1:LA:2358:C:H4'	1:LA:2398:A:H4'	1.98	0.45
1:LA:2882:U:H2'	1:LA:2883:C:H6	1.79	0.45
2:LB:78:U:H5	2:LB:102:A:N7	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:LC:32:C:H2'	3:LC:33:A:C8	2.51	0.45
7:LG:65:ILE:HG21	7:LG:72:ASP:HB3	1.98	0.45
7:LG:205:SER:O	7:LG:209:GLU:HG3	2.16	0.45
11:LK:67:ALA:O	11:LK:71:VAL:HG13	2.16	0.45
11:LK:172:ILE:HB	41:Lo:90:ASN:ND2	2.30	0.45
41:Lo:78:ILE:HG23	41:Lo:79:GLU:H	1.81	0.45
45:S2:846:G:C8	69:SX:46:LYS:NZ	2.85	0.45
45:S2:1299:G:O3'	63:SR:99:LYS:NZ	2.49	0.45
45:S2:1393:C:H2'	45:S2:1394:G:C8	2.51	0.45
45:S2:1788:G:H8	45:S2:1788:G:OP2	2.00	0.45
46:SA:66:ILE:HG13	46:SA:67:ASN:N	2.31	0.45
49:SD:63:VAL:HG21	49:SD:66:VAL:HG23	1.97	0.45
51:SF:12:LYS:HE3	51:SF:12:LYS:HB2	1.77	0.45
52:SG:54:THR:O	52:SG:57:LEU:HG	2.16	0.45
53:SH:40:ARG:NH2	54:SI:45:MET:HG3	2.32	0.45
53:SH:122:HIS:NE2	53:SH:126:ARG:HD2	2.30	0.45
57:SL:54:LEU:HD12	57:SL:54:LEU:HA	1.83	0.45
60:SO:87:LYS:HA	60:SO:110:VAL:HG22	1.99	0.45
61:SP:126:PRO:HG2	61:SP:152:PRO:HD2	1.98	0.45
61:SP:139:VAL:O	61:SP:141:ILE:HG23	2.17	0.45
64:SS:245:LYS:HD2	64:SS:245:LYS:HA	1.78	0.45
67:SV:137:LYS:HE3	67:SV:141:ARG:NH2	2.32	0.45
68:SW:94:ASP:N	68:SW:94:ASP:OD1	2.48	0.45
78:Sg:37:ARG:O	78:Sg:41:THR:HG23	2.16	0.45
1:LA:314:U:H2'	1:LA:315:C:C6	2.52	0.45
1:LA:609:G:N1	1:LA:1336:A:OP1	2.29	0.45
1:LA:948:C:O2'	1:LA:970:G:OP1	2.26	0.45
1:LA:1377:U:H2'	1:LA:1378:G:C8	2.48	0.45
1:LA:1686:U:H1'	23:LW:75:TYR:CD2	2.51	0.45
1:LA:2780:U:H4'	14:LN:185:LYS:HD2	1.98	0.45
1:LA:3082:G:O3'	25:LY:42:GLN:NE2	2.49	0.45
1:LA:3253:G:H2'	1:LA:3254:U:O4'	2.17	0.45
5:LE:198:HIS:HA	5:LE:201:LYS:HD3	1.99	0.45
6:LF:33:ASP:O	6:LF:37:THR:HG23	2.16	0.45
10:LJ:214:LEU:O	10:LJ:217:THR:HG22	2.17	0.45
11:LK:4:ILE:HD11	21:LU:150:PHE:CG	2.52	0.45
14:LN:158:ALA:HA	29:Lc:97:GLU:HA	1.99	0.45
18:LR:120:ASN:OD1	18:LR:145:HIS:HB2	2.16	0.45
19:LS:148:GLU:O	19:LS:151:ARG:HG2	2.16	0.45
22:LV:57:TYR:CD2	22:LV:89:LEU:HD11	2.50	0.45
22:LV:64:VAL:HG13	22:LV:72:VAL:HG13	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LY:5:ILE:N	25:LY:5:ILE:HD12	2.32	0.45
31:Le:41:LEU:O	31:Le:42:ILE:HD13	2.17	0.45
34:Lh:8:TYR:CG	34:Lh:99:ARG:HB3	2.51	0.45
42:Lp:21:ARG:NH2	45:S2:1117:U:O3'	2.32	0.45
45:S2:295:A:O2'	64:SS:140:VAL:HG13	2.16	0.45
45:S2:1544:U:OP2	53:SH:136:GLN:NE2	2.49	0.45
45:S2:1795:U:H5'	76:Se:79:ILE:HD11	1.99	0.45
46:SA:18:TYR:HA	46:SA:21:LEU:HG	1.99	0.45
47:SB:30:PRO:HB2	47:SB:33:VAL:HG12	1.99	0.45
49:SD:130:THR:OG1	49:SD:131:ASP:N	2.49	0.45
62:SQ:207:LEU:HD12	62:SQ:207:LEU:HA	1.85	0.45
62:SQ:222:LYS:HE2	62:SQ:222:LYS:HB2	1.82	0.45
1:LA:80:G:H2'	1:LA:81:C:H6	1.81	0.45
1:LA:532:A:N1	1:LA:559:G:N2	2.65	0.45
1:LA:670:U:H2'	1:LA:671:A:H8	1.82	0.45
1:LA:1391:G:H1'	1:LA:1417:A:N6	2.32	0.45
1:LA:2373:C:N4	1:LA:2940:A:O4'	2.50	0.45
1:LA:2676:G:H2'	1:LA:2676:G:N3	2.32	0.45
1:LA:2926:C:H2'	1:LA:2927:C:C6	2.51	0.45
1:LA:2952:U:H2'	1:LA:2953:U:H2'	1.99	0.45
7:LG:44:TYR:HE2	22:LV:35:LYS:HA	1.81	0.45
13:LM:17:LEU:HD11	13:LM:127:PHE:HB3	1.99	0.45
16:LP:31:ARG:NH1	16:LP:124:ASP:OD2	2.49	0.45
20:LT:165:LYS:CE	45:S2:850:A:H5'	2.44	0.45
34:Lh:67:MET:HE3	34:Lh:67:MET:HB2	1.77	0.45
38:Ll:64:MET:HE3	38:Ll:64:MET:HB3	1.82	0.45
45:S2:407:A:H2'	45:S2:408:C:C6	2.52	0.45
45:S2:1292:G:H2'	45:S2:1293:U:C6	2.51	0.45
47:SB:62:VAL:HG22	47:SB:89:ILE:HD11	1.99	0.45
60:SO:153:GLN:OE1	60:SO:155:ARG:NH1	2.49	0.45
62:SQ:81:PHE:HD1	62:SQ:81:PHE:H	1.64	0.45
65:ST:178:LEU:O	65:ST:183:ARG:NH1	2.50	0.45
66:SU:186:PRO:HB2	66:SU:187:SER:H	1.50	0.45
70:SY:34:ILE:O	70:SY:38:VAL:HG22	2.17	0.45
72:Sa:21:ASN:ND2	73:Sb:67:GLY:H	2.14	0.45
1:LA:187:A:H2'	1:LA:188:U:C6	2.52	0.45
1:LA:1382:G:OP1	6:LF:203:ARG:HD3	2.17	0.45
1:LA:1492:G:O5'	40:Ln:49:MET:HE2	2.17	0.45
1:LA:1679:G:H2'	1:LA:1680:U:C6	2.51	0.45
1:LA:2243:A:O4'	4:LD:243:THR:HG21	2.17	0.45
1:LA:2401:A:H2'	6:LF:67:THR:HG21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2425:U:H2'	1:LA:2426:U:C6	2.51	0.45
2:LB:4:U:H2'	2:LB:5:G:C8	2.51	0.45
5:LE:111:SER:O	5:LE:114:VAL:HG12	2.17	0.45
6:LF:198:ARG:HG2	6:LF:199:TRP:CZ3	2.52	0.45
7:LG:119:TYR:OH	7:LG:139:PRO:O	2.22	0.45
8:LH:43:LEU:HD13	34:Lh:102:LEU:HB2	1.99	0.45
9:LI:24:GLU:HG3	9:LI:26:VAL:H	1.81	0.45
27:La:74:TYR:HB3	27:La:77:LYS:HB2	1.98	0.45
31:Le:18:ILE:HD13	31:Le:23:TYR:CE1	2.52	0.45
33:Lg:103:LYS:HB2	33:Lg:103:LYS:HE2	1.77	0.45
37:Lk:66:GLU:OE1	37:Lk:91:ASN:ND2	2.37	0.45
39:Lm:9:LYS:O	39:Lm:13:GLU:CD	2.60	0.45
45:S2:71:A:O2'	45:S2:72:A:O4'	2.22	0.45
45:S2:628:G:N2	45:S2:971:A:H62	2.12	0.45
45:S2:1220:C:H5	45:S2:1221:A:C4	2.35	0.45
45:S2:1433:G:N1	58:SM:39:CYS:SG	2.74	0.45
45:S2:1566:U:H5'	53:SH:42:TYR:HD2	1.82	0.45
46:SA:108:LYS:HB3	46:SA:113:LEU:HD21	1.98	0.45
53:SH:40:ARG:HH22	54:SI:45:MET:HG3	1.82	0.45
55:SJ:86:ILE:O	55:SJ:88:LYS:NZ	2.50	0.45
59:SN:113:LYS:NZ	59:SN:114:VAL:O	2.33	0.45
62:SQ:145:LYS:HE3	62:SQ:145:LYS:HB3	1.80	0.45
63:SR:230:TRP:CZ2	73:Sb:68:ARG:HB3	2.51	0.45
64:SS:94:ALA:O	64:SS:95:THR:OG1	2.33	0.45
69:SX:108:PRO:HG3	69:SX:134:THR:HB	1.97	0.45
70:SY:76:LYS:HE3	70:SY:76:LYS:HB3	1.66	0.45
74:Sc:126:LYS:HE3	74:Sc:129:GLY:HA2	1.97	0.45
1:LA:148:G:OP2	16:LP:4:TYR:OH	2.27	0.45
1:LA:672:U:H2'	1:LA:673:G:H8	1.81	0.45
1:LA:792:C:OP1	29:Lc:2:PRO:HG2	2.17	0.45
1:LA:1107:U:H2'	1:LA:1108:U:C6	2.52	0.45
1:LA:1116:G:OP1	30:Ld:4:SER:HB2	2.16	0.45
1:LA:1127:U:H2'	1:LA:1128:A:O4'	2.17	0.45
1:LA:1339:G:H2'	1:LA:1340:U:H6	1.81	0.45
1:LA:1346:U:H5"	6:LF:303:GLY:H	1.82	0.45
1:LA:1383:U:H2'	1:LA:1384:C:C6	2.51	0.45
1:LA:1492:G:O6	40:Ln:2:ALA:N	2.50	0.45
1:LA:2581:C:H2'	1:LA:2582:C:C6	2.52	0.45
1:LA:2766:U:H2'	1:LA:2767:U:H6	1.81	0.45
3:LC:55:U:O4	3:LC:62:C:N3	2.50	0.45
6:LF:18:ASN:OD1	6:LF:18:ASN:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LK:86:TYR:CE1	11:LK:151:VAL:HB	2.52	0.45
20:LT:173:ARG:HH22	45:S2:851:U:H2'	1.82	0.45
23:LW:59:ASP:OD1	23:LW:62:VAL:N	2.39	0.45
30:Ld:16:ALA:O	30:Ld:20:GLY:CA	2.61	0.45
45:S2:30:G:H2'	45:S2:31:C:C6	2.52	0.45
45:S2:564:G:N2	45:S2:577:G:OP1	2.49	0.45
45:S2:633:U:O2'	45:S2:1102:G:H4'	2.17	0.45
45:S2:1151:A:H4'	45:S2:1766:A:N6	2.32	0.45
54:SI:108:LEU:HD22	54:SI:113:ILE:HB	1.99	0.45
60:SO:250:TYR:HD2	60:SO:265:LEU:HB3	1.82	0.45
61:SP:103:THR:O	61:SP:106:SER:OG	2.35	0.45
62:SQ:78:ASP:OD1	62:SQ:78:ASP:N	2.49	0.45
62:SQ:144:ARG:NH2	62:SQ:209:ASN:HB3	2.30	0.45
63:SR:222:TYR:OH	72:Sa:12:TYR:O	2.34	0.45
64:SS:251:GLU:O	64:SS:254:ARG:HG2	2.17	0.45
68:SW:142:ASN:OD1	75:Sd:64:PHE:HE2	2.00	0.45
69:SX:46:LYS:O	69:SX:50:GLU:HG3	2.16	0.45
71:SZ:30:VAL:HG11	71:SZ:79:VAL:HG11	1.98	0.45
72:Sa:15:ARG:NH1	72:Sa:24:ILE:HD13	2.32	0.45
72:Sa:74:GLN:OE1	72:Sa:83:TRP:O	2.35	0.45
74:Sc:3:LYS:HE3	74:Sc:7:ARG:HH22	1.80	0.45
79:Ta:61:U:H4'	79:Ta:62:C:H5	1.82	0.45
1:LA:283:G:OP2	1:LA:285:A:O2'	2.23	0.45
1:LA:616:G:H5"	18:LR:170:SER:HB3	1.98	0.45
1:LA:1388:G:OP1	33:Lg:104:ASN:ND2	2.45	0.45
1:LA:1634:G:N2	1:LA:1637:A:OP2	2.33	0.45
1:LA:1920:A:H2'	1:LA:1921:A:H8	1.81	0.45
1:LA:2660:G:H2'	1:LA:2661:G:H8	1.81	0.45
1:LA:2944:G:O2'	1:LA:2947:C:OP2	2.30	0.45
6:LF:256:THR:O	6:LF:259:ASP:HB2	2.17	0.45
8:LH:175:LYS:CE	8:LH:176:PHE:O	2.62	0.45
20:LT:153:LYS:HA	20:LT:156:ASN:HD21	1.80	0.45
28:Lb:4:PHE:CE1	31:Le:35:ARG:HA	2.52	0.45
43:Lq:17:CYS:O	43:Lq:19:LYS:HE3	2.17	0.45
45:S2:279:G:H2'	45:S2:280:U:H4'	1.98	0.45
45:S2:551:G:H5'	45:S2:581:U:C2	2.52	0.45
45:S2:800:U:H2'	45:S2:801:G:H8	1.80	0.45
45:S2:1050:G:H2'	45:S2:1051:G:C8	2.52	0.45
45:S2:1641:C:O2	45:S2:1782:A:O2'	2.28	0.45
64:SS:57:ASN:HB2	64:SS:60:GLU:CD	2.42	0.45
1:LA:500:A:H2'	1:LA:501:U:C6	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:518:A:H5'	6:LF:359:LEU:HD22	1.99	0.44
1:LA:518:A:N6	21:LU:65:ASN:O	2.43	0.44
1:LA:578:G:OP2	6:LF:338:LYS:NZ	2.50	0.44
1:LA:631:G:H2'	1:LA:632:C:C6	2.51	0.44
1:LA:1615:U:H2'	1:LA:1616:G:H8	1.82	0.44
1:LA:1676:G:OP1	23:LW:103:TYR:HE1	2.00	0.44
1:LA:3050:U:H2'	1:LA:3051:G:H8	1.81	0.44
6:LF:125:ALA:HA	6:LF:244:LEU:HD22	1.99	0.44
15:LO:116:GLU:O	15:LO:120:VAL:HG23	2.17	0.44
19:LS:150:VAL:HA	19:LS:153:PHE:CD2	2.52	0.44
32:Lf:11:GLU:O	32:Lf:106:THR:HA	2.17	0.44
45:S2:331:A:H2'	45:S2:332:U:C6	2.52	0.44
45:S2:433:C:H2'	45:S2:434:G:C8	2.52	0.44
45:S2:1045:C:H2'	45:S2:1046:G:H8	1.82	0.44
45:S2:1171:A:H2'	45:S2:1172:G:C8	2.52	0.44
45:S2:1358:G:H5'	54:SI:130:ARG:CD	2.46	0.44
52:SG:28:PHE:C	52:SG:32:LYS:HZ3	2.25	0.44
62:SQ:110:LEU:HD12	62:SQ:213:ARG:NH1	2.32	0.44
63:SR:41:LEU:HD13	63:SR:68:ILE:CD1	2.48	0.44
74:Sc:42:PRO:HB3	74:Sc:81:LYS:HD2	1.99	0.44
76:Se:37:LYS:HE2	76:Se:37:LYS:HB2	1.65	0.44
1:LA:184:U:H2'	1:LA:185:C:C6	2.52	0.44
1:LA:1061:A:O2'	22:LV:108:ARG:NH2	2.49	0.44
1:LA:1097:A:H5'	22:LV:129:LYS:HD3	1.99	0.44
1:LA:1595:C:H2'	1:LA:1596:C:H6	1.79	0.44
1:LA:1830:U:C2	1:LA:1831:C:C5	3.05	0.44
1:LA:2257:U:C2	1:LA:2258:A:C8	3.05	0.44
1:LA:2985:U:H2'	1:LA:2986:A:H8	1.83	0.44
1:LA:3145:G:O2'	5:LE:101:SER:O	2.35	0.44
1:LA:3287:G:HO2'	1:LA:3288:G:H8	1.64	0.44
4:LD:52:SER:OG	4:LD:191:LEU:HD12	2.16	0.44
5:LE:369:ARG:HG3	5:LE:369:ARG:NH1	2.31	0.44
6:LF:237:GLN:HB2	6:LF:246:ARG:NH1	2.32	0.44
8:LH:98:VAL:HA	8:LH:101:PHE:HE1	1.82	0.44
10:LJ:228:GLU:CD	10:LJ:228:GLU:N	2.76	0.44
11:LK:150:SER:O	11:LK:154:VAL:HG22	2.18	0.44
15:LO:23:ILE:O	15:LO:30:GLY:N	2.40	0.44
16:LP:15:GLN:HG2	37:Lk:52:PRO:HD2	1.99	0.44
21:LU:73:LYS:HD2	21:LU:128:GLU:CD	2.42	0.44
45:S2:1476:C:OP2	54:SI:85:SER:OG	2.32	0.44
50:SE:79:HIS:HA	50:SE:97:TYR:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SG:33:ARG:HB3	60:SO:127:ARG:HH12	1.82	0.44
57:SL:59:SER:O	76:Se:51:ARG:NH1	2.50	0.44
60:SO:307:ASP:OD1	60:SO:307:ASP:C	2.60	0.44
63:SR:84:LYS:HE3	63:SR:84:LYS:HB3	1.84	0.44
71:SZ:17:ALA:HB1	71:SZ:30:VAL:HG22	1.99	0.44
72:Sa:62:ARG:HH12	73:Sb:20:THR:HG23	1.83	0.44
74:Sc:103:LEU:CD2	74:Sc:125:VAL:HG13	2.48	0.44
1:LA:637:C:H2'	1:LA:638:G:C8	2.53	0.44
1:LA:1010:A:H2'	1:LA:1011:G:H8	1.83	0.44
1:LA:1533:A:H2'	1:LA:1534:A:C8	2.52	0.44
1:LA:1674:G:H2'	1:LA:1675:A:H8	1.83	0.44
1:LA:2591:G:H4'	1:LA:2593:C:C2	2.52	0.44
2:LB:26:C:H4'	7:LG:56:THR:HB	1.99	0.44
4:LD:54:ARG:HG3	4:LD:56:ALA:H	1.82	0.44
4:LD:103:PRO:HD2	4:LD:106:SER:HB2	1.97	0.44
5:LE:62:ARG:H	5:LE:68:HIS:HD2	1.64	0.44
6:LF:317:PRO:C	6:LF:319:LYS:N	2.73	0.44
7:LG:234:ASP:OD1	7:LG:234:ASP:N	2.38	0.44
10:LJ:245:LYS:HD2	10:LJ:249:ARG:HH12	1.82	0.44
19:LS:20:LYS:HE3	19:LS:20:LYS:HB3	1.72	0.44
36:Lj:32:LYS:HA	36:Lj:44:ILE:HD11	1.99	0.44
43:Lq:96:GLU:OE1	43:Lq:96:GLU:N	2.50	0.44
45:S2:310:C:H4'	74:Sc:33:LEU:HD21	1.99	0.44
45:S2:1177:C:H2'	45:S2:1178:G:C8	2.51	0.44
45:S2:1391:A:H5"	45:S2:1392:U:H5	1.82	0.44
45:S2:1491:U:H4'	45:S2:1492:A:C8	2.52	0.44
52:SG:58:MET:HE2	52:SG:58:MET:HB2	1.69	0.44
53:SH:91:ASP:N	53:SH:91:ASP:OD1	2.49	0.44
61:SP:53:THR:HA	61:SP:161:PRO:HD2	1.99	0.44
64:SS:157:ASN:O	64:SS:175:PHE:HB2	2.16	0.44
69:SX:75:VAL:HA	69:SX:86:ILE:HA	1.99	0.44
74:Sc:70:LYS:HG3	74:Sc:70:LYS:O	2.16	0.44
77:Sf:48:SER:OG	77:Sf:49:HIS:ND1	2.48	0.44
1:LA:434:U:H2'	1:LA:435:C:C6	2.53	0.44
1:LA:2960:G:H2'	1:LA:2961:U:C6	2.52	0.44
1:LA:3272:A:H2'	1:LA:3273:A:C8	2.53	0.44
3:LC:106:C:H5"	3:LC:108:C:OP2	2.17	0.44
10:LJ:80:TYR:CG	10:LJ:80:TYR:O	2.70	0.44
16:LP:70:ASN:HB3	16:LP:92:LEU:O	2.17	0.44
21:LU:14:LEU:HD23	21:LU:14:LEU:HA	1.78	0.44
45:S2:226:A:H2'	45:S2:227:U:H4'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:849:C:O2'	45:S2:850:A:H8	2.00	0.44
45:S2:1402:G:H2'	45:S2:1403:C:H6	1.82	0.44
49:SD:60:VAL:HB	49:SD:87:PRO:HB2	1.99	0.44
51:SF:28:LEU:H	51:SF:28:LEU:HD23	1.82	0.44
65:ST:46:LYS:HD3	65:ST:47:GLY:N	2.33	0.44
1:LA:35:A:H2'	1:LA:36:C:H6	1.81	0.44
1:LA:552:U:H2'	1:LA:553:A:O4'	2.17	0.44
1:LA:610:A:P	8:LH:23:LYS:HE2	2.58	0.44
1:LA:650:G:O2'	1:LA:1434:A:OP1	2.36	0.44
1:LA:818:U:H2'	1:LA:819:A:H8	1.83	0.44
1:LA:1626:U:H5"	1:LA:1627:C:H5'	2.00	0.44
1:LA:1776:U:O2'	1:LA:2098:A:O2'	2.33	0.44
6:LF:311:HIS:CE1	9:LI:162:PRO:HG3	2.52	0.44
7:LG:65:ILE:CG2	7:LG:72:ASP:HB3	2.47	0.44
9:LI:118:LYS:HG3	9:LI:191:VAL:HG11	1.99	0.44
11:LK:9:GLN:OE1	11:LK:9:GLN:HA	2.17	0.44
13:LM:75:LYS:O	13:LM:78:GLU:HG2	2.18	0.44
17:LQ:143[A]:THR:OG1	17:LQ:150[A]:GLU:OE1	2.32	0.44
25:LY:4:GLU:HG2	25:LY:30:ARG:HD2	2.00	0.44
45:S2:771:A:H5'	68:SW:7:THR:HG23	1.99	0.44
45:S2:1174:C:O2'	45:S2:1201:G:N2	2.50	0.44
45:S2:1563:C:O2'	45:S2:1564:U:OP1	2.31	0.44
45:S2:1727:G:H2'	45:S2:1728:A:C8	2.53	0.44
46:SA:187:LYS:HE3	46:SA:187:LYS:HB3	1.67	0.44
52:SG:34:LEU:O	52:SG:37:GLU:HG3	2.17	0.44
54:SI:49:ASP:OD1	54:SI:49:ASP:N	2.50	0.44
62:SQ:152:ARG:O	62:SQ:152:ARG:NH1	2.50	0.44
66:SU:96:ARG:HD2	66:SU:124:LYS:HD2	1.98	0.44
67:SV:188:GLU:HG2	69:SX:13:PHE:CD2	2.52	0.44
68:SW:36:LEU:HD12	68:SW:36:LEU:HA	1.72	0.44
1:LA:611:U:H2'	1:LA:612:G:H8	1.81	0.44
1:LA:706:U:OP1	1:LA:779:A:O2'	2.29	0.44
1:LA:984:U:H2'	1:LA:985:U:H6	1.81	0.44
1:LA:1157:A:H62	9:LI:94:LYS:HD2	1.82	0.44
1:LA:1469:U:H2'	1:LA:1470:U:C6	2.53	0.44
1:LA:1601:A:C4	1:LA:1602:A:C8	3.06	0.44
1:LA:2610:U:H2'	1:LA:2611:U:H6	1.80	0.44
1:LA:2709:C:H2'	1:LA:2710:C:C6	2.53	0.44
1:LA:3022:U:H5	1:LA:3031:A:H62	1.65	0.44
1:LA:3100:G:H2'	1:LA:3101:G:H8	1.82	0.44
1:LA:3298:A:N6	1:LA:3314:G:H22	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3386:U:H2'	1:LA:3387:C:C6	2.53	0.44
2:LB:101:G:OP2	21:LU:52:LYS:NZ	2.38	0.44
3:LC:67:U:H2'	3:LC:68:G:H8	1.81	0.44
6:LF:333:VAL:HG11	9:LI:45:LEU:HD11	2.00	0.44
11:LK:126:VAL:HG21	11:LK:164:ILE:HD13	1.98	0.44
14:LN:46:ILE:HD11	14:LN:51:LEU:HA	1.99	0.44
18:LR:27:LYS:O	18:LR:31:GLU:HG2	2.18	0.44
33:Lg:15:LYS:HE3	33:Lg:15:LYS:HB3	1.62	0.44
43:Lq:71:ARG:HH11	43:Lq:80:ARG:HD2	1.82	0.44
45:S2:533:U:O2'	68:SW:168:ARG:NH1	2.47	0.44
45:S2:606:A:C5	45:S2:608:U:H5	2.36	0.44
45:S2:632:U:O2'	45:S2:1103:U:OP1	2.29	0.44
45:S2:1171:A:H2'	45:S2:1172:G:H8	1.83	0.44
45:S2:1336:A:O2'	51:SF:123:ARG:HG3	2.18	0.44
45:S2:1639:C:H2'	45:S2:1640:C:O4'	2.17	0.44
45:S2:1658:G:H8	45:S2:1658:G:OP2	2.00	0.44
50:SE:85:ILE:HD12	50:SE:114:HIS:HB2	2.00	0.44
51:SF:127:LYS:HD3	51:SF:127:LYS:HA	1.80	0.44
61:SP:89:PHE:HD2	61:SP:174:TRP:CE2	2.35	0.44
64:SS:94:ALA:HB1	75:Sd:16:PRO:HG2	1.99	0.44
65:ST:23:ARG:O	65:ST:26:VAL:HG22	2.18	0.44
65:ST:57:ASP:OD2	65:ST:98:ARG:HD3	2.18	0.44
66:SU:62:VAL:HG13	66:SU:64:VAL:H	1.82	0.44
68:SW:108:ARG:HE	68:SW:110:GLN:HG2	1.83	0.44
1:LA:269:G:H5"	16:LP:120:TRP:CE3	2.53	0.44
1:LA:1287:U:H2'	1:LA:1288:G:C8	2.52	0.44
1:LA:2946:G:C2	5:LE:250:ALA:HB1	2.53	0.44
1:LA:3088:C:H2'	1:LA:3089:U:O4'	2.18	0.44
6:LF:155:ASP:OD1	6:LF:155:ASP:N	2.51	0.44
6:LF:234:ASN:ND2	6:LF:236:LEU:HB2	2.32	0.44
6:LF:349:THR:O	6:LF:349:THR:OG1	2.35	0.44
7:LG:115:LEU:HD22	7:LG:119:TYR:HD2	1.83	0.44
7:LG:258:LYS:HE2	7:LG:258:LYS:N	2.32	0.44
16:LP:88:GLY:HA3	43:Lq:50:PHE:CG	2.53	0.44
16:LP:114:ARG:HB3	16:LP:151:ILE:HD11	1.99	0.44
24:LX:114:ILE:HG21	24:LX:118:VAL:HG23	2.00	0.44
25:LY:25:ASP:OD1	25:LY:25:ASP:N	2.50	0.44
30:Ld:28:LYS:HG3	30:Ld:29:TYR:N	2.33	0.44
35:Li:76:TYR:CD2	35:Li:80:ARG:HD2	2.52	0.44
45:S2:3:U:O2'	45:S2:4:C:O4'	2.33	0.44
45:S2:323:A:OP2	67:SV:10:LYS:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1117:U:H2'	45:S2:1118:G:H5'	2.00	0.44
45:S2:1152:A:O2'	76:Se:85:ARG:HD2	2.17	0.44
45:S2:1648:A:H2'	45:S2:1649:G:C8	2.51	0.44
61:SP:20:ALA:CB	61:SP:172:LEU:HD12	2.48	0.44
63:SR:168:ARG:HD3	63:SR:199:GLN:HB2	2.00	0.44
65:ST:132:ARG:HG3	65:ST:132:ARG:NH1	2.33	0.44
66:SU:96:ARG:HD2	66:SU:124:LYS:CG	2.48	0.44
73:Sb:29:PRO:HB2	73:Sb:58:SER:OG	2.17	0.44
79:Ta:47:G:H2'	79:Ta:49:C:H5"	1.98	0.44
1:LA:998:G:H2'	1:LA:999:C:C6	2.53	0.44
1:LA:1264:U:H2'	1:LA:1265:G:C8	2.52	0.44
1:LA:1520:G:O2'	1:LA:1602:A:N3	2.49	0.44
3:LC:53:A:C4	3:LC:54:A:C8	3.06	0.44
4:LD:191:LEU:HD13	4:LD:191:LEU:HA	1.83	0.44
5:LE:57:VAL:HG22	5:LE:71:GLU:OE1	2.18	0.44
7:LG:287:ALA:O	7:LG:290:ILE:HG13	2.17	0.44
13:LM:26:SER:OG	13:LM:27:GLY:N	2.50	0.44
13:LM:141:ARG:O	13:LM:145:LYS:HD2	2.18	0.44
14:LN:179:PHE:HA	14:LN:182:ILE:CD1	2.47	0.44
18:LR:13:LYS:HD2	18:LR:13:LYS:HA	1.69	0.44
20:LT:95:TRP:CZ2	20:LT:99:LEU:HD22	2.53	0.44
34:Lh:20:LYS:HB2	34:Lh:20:LYS:HE2	1.75	0.44
45:S2:864:U:O4	73:Sb:60:LYS:NZ	2.37	0.44
45:S2:1471:A:O2'	45:S2:1472:C:OP1	2.28	0.44
45:S2:1504:G:H2'	45:S2:1505:A:C4	2.52	0.44
45:S2:1628:U:H2'	45:S2:1629:G:C8	2.53	0.44
46:SA:72:LEU:HD11	48:SC:20:VAL:HG11	1.93	0.44
47:SB:130:ILE:O	47:SB:133:VAL:HG12	2.18	0.44
53:SH:11:PHE:CD1	53:SH:59:GLY:HA3	2.53	0.44
56:SK:78:ILE:HG13	56:SK:79:ALA:N	2.33	0.44
61:SP:40:ALA:HB1	61:SP:46:HIS:HA	2.00	0.44
61:SP:64:ILE:CD1	61:SP:181:VAL:HB	2.48	0.44
68:SW:24:LEU:O	68:SW:27:GLU:HG2	2.17	0.44
1:LA:8:C:H2'	1:LA:9:U:H6	1.82	0.44
1:LA:709:A:H2'	1:LA:710:A:C8	2.52	0.44
1:LA:954:U:H2'	1:LA:955:U:C6	2.53	0.44
1:LA:1426:U:OP2	29:Lc:4:ARG:NH1	2.40	0.44
1:LA:1717:G:H2'	1:LA:1718:G:H8	1.83	0.44
1:LA:2137:A:C4	38:Ll:3:LYS:HB3	2.53	0.44
1:LA:2935:A:H2'	1:LA:2936:G:C8	2.53	0.44
4:LD:44:ILE:HG23	4:LD:46:LYS:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LG:126:GLU:O	7:LG:196:ARG:HB2	2.17	0.44
7:LG:259:LYS:O	7:LG:260:PHE:HD1	2.01	0.44
9:LI:126:LEU:O	9:LI:130:ILE:HG12	2.18	0.44
10:LJ:90:THR:HG22	10:LJ:214:LEU:HD21	1.99	0.44
16:LP:39:ALA:HB3	16:LP:61:ILE:HB	2.00	0.44
19:LS:67:ILE:HG23	19:LS:81:VAL:HG21	2.00	0.44
26:LZ:73:MET:O	26:LZ:76:VAL:HG12	2.17	0.44
36:Lj:41:LEU:HA	36:Lj:42:PRO:HD3	1.83	0.44
45:S2:116:U:O2'	45:S2:333:A:N3	2.47	0.44
45:S2:374:U:OP1	69:SX:96:LYS:NZ	2.33	0.44
45:S2:607:G:H21	45:S2:614:C:H5"	1.83	0.44
45:S2:1277:G:N3	45:S2:1277:G:H2'	2.33	0.44
45:S2:1317:C:H2'	45:S2:1318:G:O4'	2.18	0.44
45:S2:1483:A:OP1	45:S2:1522:U:H3'	2.18	0.44
49:SD:34:THR:HA	49:SD:37:VAL:HG22	2.00	0.44
57:SL:11:LYS:O	57:SL:31:GLU:N	2.36	0.44
60:SO:220:ILE:HD11	60:SO:240:VAL:HG21	1.99	0.44
60:SO:239:GLU:O	60:SO:257:ALA:N	2.43	0.44
66:SU:46:ILE:HD12	66:SU:60:ILE:HG22	2.00	0.44
66:SU:127:GLU:CD	66:SU:131:PHE:CE1	2.95	0.44
67:SV:100:ALA:HB3	67:SV:169:ILE:HD11	2.00	0.44
73:Sb:6:VAL:HB	73:Sb:29:PRO:HD2	1.99	0.44
75:Sd:61:ARG:HH11	75:Sd:61:ARG:HA	1.83	0.44
1:LA:538:C:HO2'	1:LA:539:U:P	2.38	0.43
1:LA:1603:G:H4'	1:LA:1834:A:H4'	2.00	0.43
1:LA:2291:U:H2'	1:LA:2292:C:C6	2.52	0.43
1:LA:3026:A:O2'	1:LA:3027:G:OP1	2.29	0.43
5:LE:83:PRO:HB2	5:LE:202:THR:HB	2.00	0.43
11:LK:8:GLN:NE2	11:LK:69:ARG:HD2	2.31	0.43
14:LN:171:ARG:HA	14:LN:171:ARG:HD2	1.66	0.43
20:LT:183:ALA:O	20:LT:187:GLU:HB3	2.17	0.43
22:LV:99:SER:O	22:LV:103:GLN:HG3	2.18	0.43
39:Lm:20:VAL:O	39:Lm:21:LYS:HD3	2.18	0.43
45:S2:161:U:P	65:ST:87:ARG:HH12	2.40	0.43
45:S2:330:G:H2'	45:S2:331:A:C8	2.53	0.43
45:S2:409:C:H2'	45:S2:410:A:H5"	1.99	0.43
45:S2:741:C:O2	66:SU:107:ARG:NH1	2.51	0.43
45:S2:1006:C:H3'	45:S2:1007:C:C6	2.53	0.43
45:S2:1408:G:H5'	60:SO:17:ASN:HB2	2.00	0.43
51:SF:97:VAL:HG12	51:SF:98:ASP:H	1.83	0.43
57:SL:11:LYS:N	57:SL:31:GLU:O	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SO:9:LEU:HD21	60:SO:276:PRO:HB3	1.99	0.43
61:SP:90:ALA:HB2	61:SP:97:PRO:HG3	1.99	0.43
66:SU:21:ALA:O	66:SU:25:VAL:HG22	2.18	0.43
68:SW:36:LEU:HD21	68:SW:41:GLU:HB3	1.99	0.43
69:SX:34:TRP:CH2	69:SX:36:LYS:HD3	2.53	0.43
72:Sa:16:LYS:HZ2	72:Sa:16:LYS:HG2	1.56	0.43
75:Sd:51:GLU:OE1	75:Sd:53:ASP:N	2.44	0.43
76:Se:37:LYS:HG2	76:Se:72:HIS:ND1	2.32	0.43
1:LA:12:A:N3	26:LZ:37:THR:HG21	2.33	0.43
1:LA:695:C:OP1	6:LF:272:VAL:HG22	2.18	0.43
1:LA:946:G:H2'	1:LA:947:C:C6	2.52	0.43
1:LA:1687:U:H2'	1:LA:1688:U:C6	2.52	0.43
1:LA:2947:C:OP1	5:LE:244:ARG:NH2	2.30	0.43
1:LA:2985:U:H2'	1:LA:2986:A:C8	2.52	0.43
5:LE:163:HIS:HA	5:LE:177:HIS:O	2.18	0.43
6:LF:304:GLN:C	6:LF:306:THR:H	2.25	0.43
8:LH:20:LYS:HD2	8:LH:20:LYS:N	2.33	0.43
27:La:3:LYS:HD2	27:La:8:VAL:HG13	1.99	0.43
29:Lc:35:ALA:O	29:Lc:41:HIS:ND1	2.50	0.43
45:S2:307:G:OP1	69:SX:90:TYR:OH	2.31	0.43
45:S2:332:U:OP2	67:SV:54:LYS:NZ	2.51	0.43
45:S2:522:U:H4'	75:Sd:60:PHE:HD2	1.83	0.43
45:S2:1050:G:H2'	45:S2:1051:G:H8	1.83	0.43
63:SR:56:ILE:O	63:SR:61:LEU:HD23	2.17	0.43
66:SU:48:GLU:OE2	66:SU:56:LYS:HB2	2.18	0.43
66:SU:159:VAL:HA	66:SU:162:ILE:HD11	2.00	0.43
66:SU:159:VAL:O	66:SU:163:ASP:HB3	2.17	0.43
67:SV:78:ILE:HD12	67:SV:78:ILE:N	2.31	0.43
72:Sa:25:LYS:HE2	72:Sa:25:LYS:HB3	1.74	0.43
1:LA:426:G:OP1	33:Lg:15:LYS:NZ	2.51	0.43
1:LA:583:G:H4'	34:Lh:46:GLY:HA3	2.00	0.43
1:LA:744:C:H2'	1:LA:745:A:C8	2.53	0.43
1:LA:910:C:OP2	4:LD:9:ARG:HD2	2.19	0.43
1:LA:1173:G:H1'	1:LA:1180:U:N3	2.33	0.43
1:LA:1658:U:H2'	1:LA:1659:C:C6	2.54	0.43
1:LA:1717:G:H2'	1:LA:1718:G:C8	2.53	0.43
1:LA:2281:U:OP1	1:LA:2972:G:O2'	2.22	0.43
1:LA:2282:G:H1'	1:LA:2284:C:N4	2.33	0.43
1:LA:2383:A:N1	17:LQ:96[A]:LYS:HE2	2.33	0.43
5:LE:343:TYR:CE2	5:LE:345:ASN:HB2	2.53	0.43
8:LH:40:LEU:HD13	8:LH:84:VAL:HG21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:127:G:N2	45:S2:178:U:O2'	2.49	0.43
45:S2:936:G:H2'	45:S2:937:C:C6	2.53	0.43
45:S2:1671:A:H3'	45:S2:1672:G:H8	1.83	0.43
47:SB:136:ALA:O	47:SB:140:THR:HG22	2.18	0.43
54:SI:117:SER:HB3	54:SI:123:ARG:HB2	2.00	0.43
58:SM:54:LYS:HB3	58:SM:54:LYS:HE3	1.67	0.43
60:SO:81:LEU:CD1	60:SO:113:VAL:CG1	2.96	0.43
64:SS:71:LYS:HE3	64:SS:91:THR:HB	1.99	0.43
64:SS:179:LYS:O	64:SS:195:ILE:HG22	2.19	0.43
64:SS:206:ASP:HB2	64:SS:222:LEU:HB2	2.00	0.43
65:ST:132:ARG:HD2	65:ST:132:ARG:HA	1.76	0.43
68:SW:140:ILE:H	68:SW:140:ILE:HD12	1.82	0.43
75:Sd:48:TYR:O	75:Sd:49:LYS:HG2	2.18	0.43
1:LA:823:C:OP1	4:LD:21:ARG:NE	2.41	0.43
1:LA:826:A:H5"	35:Li:14:ASN:O	2.18	0.43
1:LA:1061:A:H5"	1:LA:1062:G:H5'	2.01	0.43
1:LA:2585:G:O6	10:LJ:242:ALA:N	2.47	0.43
1:LA:3180:C:O2'	17:LQ:164[A]:SER:OG	2.18	0.43
2:LB:16:U:H2'	2:LB:17:A:C8	2.52	0.43
3:LC:128:U:P	3:LC:129:C:H41	2.41	0.43
14:LN:3:ILE:HG21	29:Lc:45:MET:HE3	2.00	0.43
19:LS:66:ARG:HG2	19:LS:140:LEU:HD12	2.00	0.43
22:LV:17:ARG:HB3	22:LV:22:HIS:CE1	2.53	0.43
29:Lc:111:LYS:HG3	29:Lc:112:ILE:N	2.33	0.43
31:Le:78:GLY:HA2	31:Le:81:VAL:HG12	2.00	0.43
45:S2:419:G:H5'	65:ST:72:ARG:HH21	1.83	0.43
45:S2:1143:A:H8	45:S2:1300:A:C2	2.36	0.43
45:S2:1411:A:C2	45:S2:1415:U:H5'	2.54	0.43
46:SA:158:ILE:HD13	46:SA:163:PRO:HG2	2.00	0.43
47:SB:109:LYS:HB3	47:SB:109:LYS:HE2	1.78	0.43
47:SB:136:ALA:HB2	47:SB:202:ALA:HB2	2.00	0.43
52:SG:22:PRO:HD3	52:SG:71:PHE:CZ	2.53	0.43
61:SP:140:ASN:HB3	72:Sa:29:HIS:C	2.42	0.43
61:SP:197:ILE:HB	61:SP:198:MET:H	1.52	0.43
62:SQ:8:ARG:HD3	62:SQ:11:LYS:HG2	2.01	0.43
62:SQ:154:SER:O	62:SQ:154:SER:OG	2.30	0.43
63:SR:158:THR:HB	63:SR:221:THR:HB	2.01	0.43
65:ST:102:VAL:HG13	65:ST:106:LEU:HD12	1.98	0.43
67:SV:137:LYS:O	67:SV:141:ARG:HG2	2.18	0.43
79:Ta:72:C:H6	79:Ta:72:C:H2'	1.66	0.43
1:LA:121:A:C2	10:LJ:129:PRO:HB3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:263:C:H2'	1:LA:264:G:O4'	2.18	0.43
1:LA:341:G:O2'	3:LC:22:U:O4	2.36	0.43
1:LA:640:C:OP1	29:Lc:21:ARG:HB3	2.19	0.43
1:LA:715:A:C6	29:Lc:117:ARG:HG3	2.54	0.43
1:LA:1385:A:H5"	6:LF:141:ARG:NH2	2.33	0.43
1:LA:1596:C:H2'	1:LA:1597:G:C8	2.53	0.43
1:LA:1926:G:P	44:Lr:6:LYS:H	2.42	0.43
2:LB:55:A:C5	2:LB:56:A:H1'	2.53	0.43
5:LE:106:TRP:N	5:LE:133:TYR:OH	2.45	0.43
6:LF:169:LEU:HD21	6:LF:225:VAL:HG21	2.00	0.43
19:LS:125:ASP:OD1	19:LS:126:GLN:HG3	2.18	0.43
24:LX:135:VAL:HG11	25:LY:26:SER:HB3	2.01	0.43
27:La:56:VAL:HG21	27:La:104:LEU:HD22	2.00	0.43
28:Lb:25:ILE:HA	28:Lb:43:VAL:HG12	2.00	0.43
29:Lc:75:LEU:HB3	29:Lc:118:ILE:CG2	2.49	0.43
33:Lg:87:MET:HE3	33:Lg:87:MET:HB2	1.86	0.43
45:S2:123:G:N2	45:S2:295:A:N3	2.67	0.43
45:S2:174:U:O4	45:S2:266:A:N7	2.51	0.43
45:S2:637:C:OP1	73:Sb:32:LYS:HG2	2.18	0.43
45:S2:754:A:N6	45:S2:792:U:O3'	2.51	0.43
45:S2:1451:C:C2	45:S2:1452:U:C5	3.07	0.43
45:S2:1569:A:N7	53:SH:145:ARG:NH2	2.66	0.43
45:S2:1655:A:N6	45:S2:1745:G:O2'	2.50	0.43
46:SA:124:ARG:O	46:SA:127:MET:HG3	2.17	0.43
52:SG:32:LYS:HG2	52:SG:32:LYS:H	1.64	0.43
54:SI:73:VAL:HG23	54:SI:101:ASN:HB3	2.01	0.43
60:SO:120:SER:HB3	60:SO:121:MET:SD	2.59	0.43
62:SQ:156:ALA:HB3	62:SQ:161:ILE:HD11	2.00	0.43
69:SX:85:VAL:HA	69:SX:108:PRO:HA	1.99	0.43
75:Sd:77:ASN:OD1	75:Sd:77:ASN:N	2.52	0.43
78:Sg:13:LYS:NZ	78:Sg:17:GLN:OE1	2.48	0.43
1:LA:405:U:H2'	1:LA:406:G:H5'	2.01	0.43
1:LA:440:A:H5'	1:LA:492:U:C4	2.53	0.43
1:LA:2415:U:H2'	1:LA:2416:U:C6	2.53	0.43
1:LA:2439:G:O2'	1:LA:2440:A:OP1	2.32	0.43
1:LA:2764:C:O3'	43:Lq:39:GLY:HA3	2.18	0.43
1:LA:2987:C:OP1	17:LQ:65[A]:ASN:ND2	2.52	0.43
1:LA:2989:G:OP1	5:LE:19:ARG:N	2.52	0.43
3:LC:9:A:N3	3:LC:10:A:H5"	2.33	0.43
4:LD:103:PRO:HA	4:LD:163:ARG:HA	1.98	0.43
5:LE:110:LEU:HD12	5:LE:114:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LE:296:THR:OG1	5:LE:357:LYS:O	2.21	0.43
12:LL:75:TYR:CZ	12:LL:150:GLU:HG2	2.53	0.43
13:LM:91:LEU:HD11	13:LM:104:PHE:CE2	2.53	0.43
13:LM:140:ARG:HE	13:LM:140:ARG:HB3	1.64	0.43
13:LM:164:LYS:NZ	13:LM:171:VAL:H	2.17	0.43
14:LN:57:VAL:HG22	14:LN:147:ILE:HG12	2.01	0.43
19:LS:159:LYS:HE2	19:LS:159:LYS:HB3	1.84	0.43
27:La:5:SER:HB3	27:La:8:VAL:HG12	2.00	0.43
29:Lc:82:ILE:HG13	29:Lc:83:PRO:HD2	2.00	0.43
43:Lq:71:ARG:NH1	43:Lq:80:ARG:HD2	2.33	0.43
45:S2:40:A:C2	45:S2:41:A:H1'	2.54	0.43
45:S2:294:C:C4	45:S2:295:A:N1	2.86	0.43
45:S2:885:G:OP1	62:SQ:136:ARG:NH1	2.52	0.43
45:S2:980:G:H4'	45:S2:1776:A:H4'	2.01	0.43
45:S2:1273:G:H4'	45:S2:1274:C:O5'	2.19	0.43
53:SH:101:LEU:HB3	53:SH:104:ASN:HB2	1.99	0.43
60:SO:172:ALA:HB3	60:SO:202:LEU:HD22	2.00	0.43
63:SR:127:ALA:HA	63:SR:130:ILE:HG22	1.99	0.43
64:SS:175:PHE:HE1	64:SS:198:LYS:HE2	1.83	0.43
76:Se:30:ILE:CD1	76:Se:75:VAL:H	2.32	0.43
76:Se:44:ILE:HG23	76:Se:45:VAL:HG13	2.00	0.43
1:LA:56:G:O2'	16:LP:162:ARG:HD3	2.18	0.43
1:LA:706:U:O2'	1:LA:753:G:N3	2.52	0.43
1:LA:992:G:N3	1:LA:2636:A:H2'	2.34	0.43
1:LA:1039:A:C8	12:LL:198:LYS:HD3	2.53	0.43
1:LA:1082:G:H2'	1:LA:1083:A:H8	1.83	0.43
1:LA:1338:C:H2'	1:LA:1339:G:H8	1.83	0.43
1:LA:2166:A:H2'	1:LA:2167:A:C8	2.54	0.43
1:LA:2552:U:C4	35:Li:95:ILE:HG12	2.54	0.43
12:LL:205:SER:OG	12:LL:208:ASN:HB2	2.18	0.43
14:LN:32:LYS:O	14:LN:36:ARG:HG3	2.19	0.43
16:LP:56:LYS:NZ	16:LP:145:ASP:OD2	2.46	0.43
16:LP:141:ALA:O	16:LP:144:ARG:O	2.36	0.43
31:Le:12:GLN:H	31:Le:12:GLN:HG2	1.58	0.43
32:Lf:16:LEU:HD13	32:Lf:16:LEU:HA	1.79	0.43
33:Lg:80:LYS:O	33:Lg:84:THR:HG23	2.19	0.43
33:Lg:103:LYS:O	33:Lg:106:VAL:HG22	2.19	0.43
37:Lk:9:ILE:HD12	37:Lk:10:GLY:H	1.84	0.43
44:Lr:29:LEU:HD23	44:Lr:29:LEU:HA	1.66	0.43
45:S2:66:U:H5	65:ST:173:PRO:HB3	1.84	0.43
45:S2:169:A:OP1	65:ST:177:ARG:HD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:569:C:H2'	45:S2:570:A:O4'	2.19	0.43
45:S2:1474:G:H2'	45:S2:1475:A:C8	2.54	0.43
45:S2:1507:G:H2'	45:S2:1508:U:H6	1.83	0.43
45:S2:1622:G:H2'	45:S2:1623:C:H6	1.83	0.43
49:SD:27:ALA:O	49:SD:31:VAL:HG13	2.19	0.43
50:SE:89:MET:O	50:SE:107:ILE:HB	2.18	0.43
53:SH:31:ALA:O	53:SH:35:ILE:HG12	2.17	0.43
56:SK:49:ARG:HA	56:SK:52:LYS:HE3	2.00	0.43
68:SW:65:LYS:H	68:SW:69:ARG:HH22	1.67	0.43
1:LA:277:G:H2'	1:LA:278:U:C6	2.53	0.43
1:LA:512:G:H2'	1:LA:513:G:H8	1.84	0.43
1:LA:530:G:N2	1:LA:561:C:H41	2.17	0.43
1:LA:549:A:N6	1:LA:550:A:N1	2.66	0.43
1:LA:719:A:C5	1:LA:782:A:H4'	2.54	0.43
1:LA:830:G:O2'	1:LA:1863:A:N3	2.35	0.43
1:LA:945:U:H2'	1:LA:946:G:H8	1.84	0.43
1:LA:1119:A:N6	1:LA:1137:U:H3	2.14	0.43
1:LA:1615:U:H2'	1:LA:1616:G:C8	2.54	0.43
1:LA:2427:U:H2'	1:LA:2428:G:H8	1.82	0.43
1:LA:3159:U:H2'	1:LA:3160:C:C6	2.53	0.43
4:LD:48:ILE:HD11	4:LD:82:VAL:HG12	2.01	0.43
7:LG:64:ILE:HG12	7:LG:105:ILE:HD11	2.01	0.43
10:LJ:144:GLU:OE2	16:LP:6:TYR:OH	2.26	0.43
12:LL:169:LYS:H	12:LL:169:LYS:HG2	1.55	0.43
12:LL:211:ARG:HG3	12:LL:211:ARG:NH1	2.31	0.43
14:LN:17:HIS:ND1	14:LN:20:GLU:OE2	2.50	0.43
21:LU:104:GLU:OE2	21:LU:108:GLN:NE2	2.51	0.43
45:S2:153:G:H2'	45:S2:154:G:C8	2.54	0.43
45:S2:1066:C:H2'	45:S2:1067:C:C6	2.54	0.43
49:SD:131:ASP:N	49:SD:131:ASP:OD1	2.52	0.43
53:SH:88:ARG:NH2	53:SH:108:LYS:HD2	2.33	0.43
53:SH:101:LEU:H	53:SH:104:ASN:HB2	1.83	0.43
58:SM:55:PHE:HE1	58:SM:56:ARG:HE	1.63	0.43
60:SO:116:ASP:OD2	60:SO:121:MET:HG2	2.18	0.43
66:SU:124:LYS:HD3	66:SU:125:ILE:HG12	2.01	0.43
71:SZ:61:MET:SD	71:SZ:62:LEU:N	2.92	0.43
1:LA:429:U:O2'	34:Lh:88:ASN:O	2.24	0.43
1:LA:1663:G:H2'	1:LA:1664:C:C6	2.54	0.43
1:LA:2558:U:H5'	1:LA:2560:A:H5'	2.00	0.43
1:LA:2581:C:H2'	1:LA:2582:C:H6	1.83	0.43
1:LA:3033:C:H5	1:LA:3034:A:N7	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3158:C:H4'	1:LA:3394:G:C4	2.54	0.43
1:LA:3370:G:H2'	1:LA:3371:A:C8	2.53	0.43
4:LD:60:LYS:HA	4:LD:60:LYS:HD2	1.89	0.43
4:LD:149:ARG:HH21	4:LD:155:LYS:HG2	1.84	0.43
5:LE:117:ARG:HA	5:LE:175:LYS:HE3	2.01	0.43
6:LF:135:VAL:HG12	6:LF:140:HIS:HB2	2.01	0.43
18:LR:108:ASP:HB2	18:LR:152:GLU:OE2	2.18	0.43
24:LX:87:ARG:HG3	24:LX:93:LEU:HD21	2.01	0.43
33:Lg:32:TRP:CZ2	33:Lg:53:PRO:HD2	2.53	0.43
45:S2:122:U:N3	45:S2:123:G:C4	2.87	0.43
45:S2:182:A:H2'	45:S2:183:U:C6	2.54	0.43
45:S2:946:U:H4'	62:SQ:165:ARG:HD3	2.00	0.43
45:S2:1152:A:N6	45:S2:1626:U:H3	2.17	0.43
45:S2:1167:G:H2'	45:S2:1168:U:O4'	2.19	0.43
45:S2:1545:A:H2'	45:S2:1546:G:C8	2.54	0.43
53:SH:27:LYS:HB2	53:SH:30:TYR:HD2	1.83	0.43
60:SO:51:ASP:OD1	60:SO:51:ASP:N	2.52	0.43
60:SO:81:LEU:HD22	60:SO:82:SER:N	2.34	0.43
62:SQ:116:LYS:HB3	62:SQ:117:TRP:CD1	2.54	0.43
64:SS:226:PHE:CD1	64:SS:226:PHE:C	2.95	0.43
71:SZ:31:THR:HG21	71:SZ:35:GLY:HA2	1.99	0.43
71:SZ:85:ALA:H	71:SZ:118:VAL:HG23	1.83	0.43
1:LA:182:U:H2'	1:LA:183:G:H8	1.84	0.43
1:LA:198:A:N3	1:LA:218:G:O2'	2.50	0.43
1:LA:203:G:O6	1:LA:204:A:N6	2.52	0.43
1:LA:340:C:H2'	1:LA:341:G:O4'	2.19	0.43
1:LA:356:C:O2'	6:LF:81:GLY:O	2.19	0.43
1:LA:596:G:H5'	9:LI:41:ARG:HD2	2.01	0.43
1:LA:833:U:H2'	1:LA:834:G:O4'	2.19	0.43
1:LA:951:A:H4'	1:LA:967:G:H22	1.84	0.43
1:LA:955:U:H2'	1:LA:956:C:C6	2.54	0.43
1:LA:1054:A:H5"	2:LB:100:C:O2'	2.18	0.43
1:LA:1236:G:C6	1:LA:1250:A:N1	2.86	0.43
1:LA:1385:A:H5"	6:LF:141:ARG:HH22	1.84	0.43
1:LA:1505:A:H1'	1:LA:1847:G:O6	2.19	0.43
1:LA:1907:A:H1'	5:LE:240:ARG:NH1	2.34	0.43
2:LB:108:A:H2'	2:LB:109:G:H8	1.84	0.43
4:LD:68:LYS:HG2	4:LD:69:TYR:N	2.34	0.43
7:LG:256:THR:HB	7:LG:258:LYS:HZ3	1.83	0.43
9:LI:163:LEU:O	9:LI:165:ASP:N	2.52	0.43
10:LJ:94:PHE:CZ	10:LJ:200:LEU:HG	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LK:92:TYR:CD1	11:LK:179:ILE:HG12	2.54	0.43
11:LK:187:ILE:H	11:LK:187:ILE:HG13	1.68	0.43
13:LM:116:TYR:C	13:LM:116:TYR:HD1	2.27	0.43
20:LT:19:LYS:HE2	20:LT:19:LYS:HB2	1.87	0.43
27:La:45:ILE:HG13	27:La:119:ILE:HD13	2.01	0.43
45:S2:175:G:H22	45:S2:266:A:H5'	1.84	0.43
45:S2:371:G:N2	45:S2:612:U:O2	2.51	0.43
45:S2:1070:C:H2'	45:S2:1071:U:O4'	2.19	0.43
45:S2:1152:A:H61	45:S2:1626:U:H3	1.66	0.43
50:SE:83:MET:HE1	50:SE:84:ILE:O	2.19	0.43
53:SH:45:LEU:O	53:SH:49:LYS:HG2	2.19	0.43
54:SI:11:ALA:HA	54:SI:14:PHE:HB3	2.01	0.43
59:SN:147:VAL:O	59:SN:147:VAL:HG23	2.19	0.43
60:SO:153:GLN:HB3	60:SO:202:LEU:HD23	2.01	0.43
65:ST:216:LEU:HD12	65:ST:216:LEU:O	2.19	0.43
66:SU:113:PRO:HD2	66:SU:116:ARG:HG3	2.01	0.43
66:SU:139:ARG:HD3	66:SU:151:LYS:HD2	2.01	0.43
72:Sa:59:VAL:HG13	72:Sa:64:GLU:CD	2.44	0.43
73:Sb:15:ASN:ND2	73:Sb:72:CYS:O	2.27	0.43
74:Sc:103:LEU:HD13	74:Sc:126:LYS:HD3	2.00	0.43
1:LA:253:A:H1'	1:LA:254:A:C8	2.55	0.42
1:LA:343:U:H1'	6:LF:95:ARG:HG3	2.01	0.42
1:LA:713:G:H4'	1:LA:752:C:O3'	2.19	0.42
1:LA:799:G:C2	1:LA:932:A:N6	2.87	0.42
1:LA:1009:G:C8	1:LA:1010:A:C8	3.07	0.42
1:LA:1419:C:OP2	6:LF:193:LYS:NZ	2.49	0.42
1:LA:1446:G:O2'	1:LA:2354:G:O6	2.35	0.42
1:LA:1472:G:H5'	20:LT:24:LEU:O	2.18	0.42
1:LA:1494:U:H2'	1:LA:1841:A:C2	2.54	0.42
1:LA:1746:G:OP1	39:Lm:42:LYS:NZ	2.31	0.42
1:LA:2498:U:H2'	1:LA:2499:A:C8	2.54	0.42
1:LA:2899:A:C4	1:LA:2900:G:C8	3.07	0.42
1:LA:3324:G:O2'	1:LA:3325:G:H8	2.02	0.42
2:LB:3:U:H2'	2:LB:4:U:H6	1.84	0.42
2:LB:91:G:H2'	2:LB:92:A:C8	2.53	0.42
3:LC:149:A:N3	10:LJ:55:TYR:OH	2.42	0.42
6:LF:309:ARG:HG2	6:LF:312:VAL:HG12	2.01	0.42
17:LQ:108[A]:ILE:HD12	17:LQ:160[A]:ARG:CZ	2.49	0.42
29:Lc:86:LYS:O	29:Lc:90:TYR:CD1	2.71	0.42
45:S2:1523:G:H8	54:SI:79:LEU:HB2	1.83	0.42
45:S2:1553:G:N2	45:S2:1556:A:OP2	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:1558:U:H5”	45:S2:1559:A:H5”	2.01	0.42
51:SF:52:LEU:HA	51:SF:55:VAL:HG22	2.01	0.42
53:SH:17:LEU:O	53:SH:20:THR:OG1	2.22	0.42
53:SH:29:VAL:HG13	53:SH:43:SER:HB2	2.01	0.42
61:SP:110:TYR:HB3	63:SR:64:LYS:HD2	2.01	0.42
63:SR:183:ALA:HB1	63:SR:211:LEU:HD21	2.01	0.42
76:Se:30:ILE:HD11	76:Se:75:VAL:H	1.84	0.42
1:LA:370:U:H2’	1:LA:371:G:O4’	2.20	0.42
1:LA:637:C:H2’	1:LA:638:G:H8	1.83	0.42
1:LA:1311:C:H2’	1:LA:1312:G:O4’	2.18	0.42
1:LA:1380:A:H2’	1:LA:1381:G:H8	1.85	0.42
1:LA:1533:A:OP2	1:LA:1585:G:N1	2.40	0.42
1:LA:1564:G:N3	1:LA:1564:G:H2’	2.34	0.42
1:LA:2673:A:C2	13:LM:124:GLY:HA3	2.54	0.42
1:LA:2809:C:OP2	1:LA:2954:U:O2’	2.37	0.42
1:LA:3014:G:H2’	1:LA:3015:A:C8	2.52	0.42
3:LC:13:A:O2’	18:LR:121:GLN:O	2.36	0.42
5:LE:357:LYS:HB3	5:LE:357:LYS:HE3	1.66	0.42
11:LK:6:THR:HG21	11:LK:65:VAL:CG1	2.46	0.42
12:LL:47:PRO:HB3	12:LL:171:TRP:CZ2	2.54	0.42
17:LQ:162[A]:VAL:O	17:LQ:166[A]:GLU:OE2	2.36	0.42
32:Lf:15:ASN:O	32:Lf:19:ARG:HG3	2.19	0.42
36:Lj:71:LYS:HA	36:Lj:71:LYS:HD2	1.77	0.42
42:Lp:3:ALA:HB3	45:S2:1773:C:OP1	2.19	0.42
45:S2:224:C:N4	45:S2:835:U:O4	2.52	0.42
45:S2:325:G:H2’	45:S2:326:G:H8	1.84	0.42
49:SD:108:ARG:O	49:SD:110:GLY:N	2.52	0.42
53:SH:80:LYS:HD3	53:SH:80:LYS:HA	1.70	0.42
58:SM:33:LYS:HE2	58:SM:34:TYR:CZ	2.54	0.42
62:SQ:83:LYS:HZ2	62:SQ:85:LYS:HG3	1.84	0.42
63:SR:38:VAL:O	63:SR:39:THR:OG1	2.31	0.42
65:ST:22:HIS:O	65:ST:26:VAL:HG13	2.18	0.42
71:SZ:58:TYR:CE1	71:SZ:62:LEU:HD11	2.53	0.42
72:Sa:55:LEU:HD12	72:Sa:65:SER:HG	1.78	0.42
1:LA:69:C:OP1	16:LP:178:HIS:ND1	2.35	0.42
1:LA:385:A:H2’	1:LA:386:A:C8	2.54	0.42
1:LA:630:U:H2’	1:LA:631:G:C8	2.54	0.42
1:LA:760:A:H62	1:LA:769:G:H21	1.66	0.42
1:LA:1836:U:H2’	1:LA:1837:G:O4’	2.20	0.42
1:LA:2102:U:OP1	20:LT:88:ARG:NE	2.52	0.42
1:LA:2963:G:H5’	1:LA:2964:U:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2999:A:H2'	1:LA:3000:C:H6	1.84	0.42
1:LA:3158:C:H2'	1:LA:3159:U:H6	1.85	0.42
1:LA:3191:U:H2'	1:LA:3192:C:H6	1.84	0.42
3:LC:29:U:H5"	14:LN:27:ASP:HB3	2.01	0.42
4:LD:44:ILE:HG23	4:LD:46:LYS:CG	2.49	0.42
4:LD:249:SER:HB2	45:S2:987:G:C8	2.53	0.42
6:LF:107:ARG:HG2	6:LF:108:LYS:N	2.34	0.42
6:LF:233:LEU:HD23	6:LF:233:LEU:HA	1.72	0.42
8:LH:34:LEU:HD12	8:LH:34:LEU:O	2.18	0.42
9:LI:128:LYS:HB3	9:LI:128:LYS:HE2	1.79	0.42
11:LK:9:GLN:CD	11:LK:52:LEU:HD22	2.44	0.42
11:LK:162:GLN:HG2	11:LK:179:ILE:O	2.19	0.42
12:LL:184:LYS:HD3	12:LL:189:GLU:HB2	2.01	0.42
14:LN:27:ASP:C	14:LN:27:ASP:OD1	2.62	0.42
22:LV:8:ARG:NH1	22:LV:52:MET:HE1	2.34	0.42
29:Lc:99:ALA:HB1	29:Lc:123:VAL:HA	2.02	0.42
45:S2:121:U:O2	45:S2:297:U:N3	2.52	0.42
45:S2:299:A:H4'	45:S2:300:A:OP1	2.19	0.42
45:S2:394:C:H2'	45:S2:395:U:C6	2.55	0.42
45:S2:1392:U:H2'	45:S2:1393:C:C6	2.54	0.42
60:SO:132:LYS:HG3	60:SO:134:TRP:HE1	1.83	0.42
63:SR:67:GLN:HA	63:SR:70:ASP:OD2	2.19	0.42
63:SR:223:GLY:HA3	72:Sa:25:LYS:HE3	2.01	0.42
68:SW:115:LYS:HE3	68:SW:115:LYS:HB3	1.80	0.42
69:SX:130:PRO:HA	69:SX:136:ARG:HD3	2.01	0.42
70:SY:16:ILE:HD13	70:SY:16:ILE:N	2.34	0.42
70:SY:60:VAL:HG13	70:SY:66:ILE:HD13	2.00	0.42
70:SY:99:ARG:O	70:SY:103:GLU:HG2	2.19	0.42
1:LA:286:U:O2'	16:LP:179:LYS:O	2.35	0.42
1:LA:512:G:H2'	1:LA:513:G:C8	2.53	0.42
1:LA:2679:A:C2	13:LM:57:PHE:HB3	2.55	0.42
3:LC:83:C:N4	27:La:52:ARG:HH22	2.11	0.42
4:LD:36:GLU:HA	4:LD:91:GLY:HA2	2.01	0.42
5:LE:256:HIS:HA	5:LE:257:PRO:C	2.44	0.42
10:LJ:74:THR:HG23	10:LJ:75:ILE:HD12	2.01	0.42
12:LL:10:ARG:O	12:LL:59:GLN:HG3	2.19	0.42
21:LU:165:TYR:N	21:LU:165:TYR:CD1	2.87	0.42
28:Lb:51:LEU:HB2	28:Lb:65:ARG:HB3	2.01	0.42
33:Lg:32:TRP:CZ2	33:Lg:52:GLN:HG2	2.55	0.42
36:Lj:30:GLU:OE2	36:Lj:34:GLN:HG3	2.19	0.42
45:S2:607:G:H5'	45:S2:613:G:N2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S2:997:G:O2'	45:S2:998:A:H5'	2.19	0.42
45:S2:1107:G:O2'	45:S2:1108:G:H5'	2.19	0.42
45:S2:1255:G:N7	49:SD:46:ARG:NH1	2.68	0.42
45:S2:1472:C:H42	45:S2:1534:G:N2	2.18	0.42
46:SA:54:ARG:HB2	46:SA:57:ASP:HB2	2.00	0.42
48:SC:54:TYR:HB3	48:SC:72:GLY:HA2	2.01	0.42
51:SF:68:ARG:HD3	51:SF:68:ARG:HA	1.86	0.42
66:SU:104:ARG:H	66:SU:104:ARG:HD3	1.84	0.42
67:SV:62:THR:CB	67:SV:75:LYS:HZ2	2.33	0.42
68:SW:128:LEU:O	68:SW:131:GLN:HG2	2.20	0.42
71:SZ:120:PRO:C	71:SZ:122:PRO:HD2	2.44	0.42
75:Sd:14:SER:HB3	75:Sd:21:LYS:HE2	2.02	0.42
1:LA:93:C:OP2	1:LA:2763:C:O2'	2.24	0.42
1:LA:230:U:H2'	1:LA:231:G:O4'	2.19	0.42
1:LA:792:C:P	29:Lc:2:PRO:HG2	2.60	0.42
1:LA:1142:A:H5'	1:LA:1367:U:H1'	2.00	0.42
1:LA:1342:A:H2'	1:LA:1343:G:C8	2.54	0.42
1:LA:2946:G:N3	5:LE:250:ALA:HB1	2.33	0.42
1:LA:3118:U:H4'	41:Lo:104:PRO:HG2	2.01	0.42
4:LD:7:ASN:OD1	4:LD:7:ASN:N	2.50	0.42
5:LE:17:LEU:HB2	5:LE:18:PRO:HA	2.00	0.42
5:LE:106:TRP:HB2	5:LE:133:TYR:CE2	2.55	0.42
6:LF:355:PHE:CE1	9:LI:75:TYR:CE1	3.08	0.42
7:LG:49:TYR:HB3	7:LG:144:VAL:HG12	2.01	0.42
20:LT:165:LYS:NZ	45:S2:849:C:H4'	2.35	0.42
22:LV:76:ILE:HD13	22:LV:89:LEU:HD12	2.01	0.42
31:Le:71:GLN:OE1	31:Le:71:GLN:HA	2.18	0.42
45:S2:406:U:H2'	45:S2:407:A:C8	2.54	0.42
45:S2:1002:G:N2	45:S2:1760:G:O3'	2.53	0.42
45:S2:1032:G:H2'	45:S2:1033:C:C6	2.55	0.42
45:S2:1267:G:O6	45:S2:1442:U:N3	2.52	0.42
46:SA:29:LEU:HB3	46:SA:34:TYR:HB2	2.01	0.42
48:SC:4:PRO:HD3	48:SC:41:TYR:CE2	2.55	0.42
48:SC:52:LYS:HA	48:SC:52:LYS:HD3	1.88	0.42
62:SQ:201:THR:HG21	62:SQ:207:LEU:HD23	2.02	0.42
63:SR:173:PRO:HG2	68:SW:57:ARG:HD2	2.02	0.42
65:ST:27:PHE:CZ	65:ST:111:LEU:HD21	2.54	0.42
70:SY:3:ARG:NH1	70:SY:10:GLY:O	2.53	0.42
71:SZ:43:THR:HG22	71:SZ:46:MET:SD	2.59	0.42
72:Sa:62:ARG:HB3	72:Sa:64:GLU:OE1	2.20	0.42
73:Sb:83:ILE:O	73:Sb:86:ILE:HG12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Sc:132:LEU:HD23	74:Sc:132:LEU:HA	1.90	0.42
1:LA:87:U:H2'	1:LA:88:A:H8	1.85	0.42
1:LA:176:G:H2'	1:LA:177:U:O4'	2.20	0.42
1:LA:786:G:H2'	1:LA:787:C:C6	2.54	0.42
1:LA:793:U:C2	1:LA:794:G:C8	3.07	0.42
1:LA:2422:U:H2'	1:LA:2423:A:H8	1.85	0.42
1:LA:3267:A:H4'	8:LH:47:PHE:HZ	1.84	0.42
2:LB:19:C:H2'	2:LB:20:A:H8	1.85	0.42
2:LB:100:C:H2'	2:LB:101:G:O4'	2.20	0.42
3:LC:94:C:OP1	38:Ll:76:ASN:ND2	2.45	0.42
4:LD:32:LEU:HD13	4:LD:163:ARG:HD3	2.01	0.42
4:LD:204:MET:CE	4:LD:209:HIS:HB2	2.49	0.42
5:LE:70:ARG:HB2	24:LX:88:ARG:NH1	2.34	0.42
5:LE:213:GLU:O	5:LE:282:ILE:HD12	2.20	0.42
5:LE:346:THR:HB	5:LE:351:LEU:HD11	2.02	0.42
7:LG:178:ASN:HA	7:LG:183:TRP:CD2	2.54	0.42
9:LI:84:VAL:HG12	9:LI:138:TYR:HD1	1.84	0.42
11:LK:49:ASN:C	11:LK:51:GLN:H	2.27	0.42
12:LL:29:SER:O	12:LL:32:ARG:HD3	2.19	0.42
19:LS:51:ALA:O	19:LS:54:LEU:HB2	2.19	0.42
20:LT:44:LEU:HA	20:LT:47:ASN:ND2	2.35	0.42
20:LT:155:LEU:HD12	20:LT:155:LEU:HA	1.82	0.42
20:LT:172:ARG:O	20:LT:175:GLN:HG3	2.20	0.42
45:S2:159:U:H5"	75:Sd:117:LYS:HG2	2.02	0.42
45:S2:626:U:H2'	45:S2:627:C:H6	1.84	0.42
45:S2:931:C:H5'	45:S2:932:U:OP2	2.19	0.42
45:S2:977:A:H2	45:S2:1788:G:H1'	1.85	0.42
45:S2:1525:A:OP1	54:SI:83:ALA:HB2	2.19	0.42
45:S2:1776:A:H2'	45:S2:1777:G:H8	1.83	0.42
45:S2:1787:C:OP2	71:SZ:131:GLY:HA3	2.19	0.42
57:SL:8:THR:OG1	57:SL:9:LEU:N	2.52	0.42
61:SP:7:PHE:HZ	72:Sa:39:VAL:HG11	1.85	0.42
63:SR:90:THR:O	63:SR:92:ALA:N	2.52	0.42
63:SR:141:ARG:HE	63:SR:141:ARG:HB2	1.68	0.42
64:SS:47:PHE:CD2	64:SS:48:LEU:HD12	2.55	0.42
66:SU:137:GLY:HA2	70:SY:18:TYR:CE2	2.55	0.42
68:SW:49:LEU:O	68:SW:49:LEU:HD13	2.19	0.42
68:SW:113:VAL:HG23	68:SW:118:LEU:HG	2.02	0.42
68:SW:118:LEU:HD23	68:SW:118:LEU:H	1.84	0.42
69:SX:26:LYS:NZ	69:SX:30:ARG:HE	2.16	0.42
70:SY:28:LEU:HD23	70:SY:28:LEU:HA	1.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SY:71:ILE:O	70:SY:74:ILE:HG13	2.20	0.42
73:Sb:34:ILE:O	73:Sb:38:LEU:HD23	2.19	0.42
75:Sd:110:GLN:HB3	75:Sd:114:ARG:NH1	2.34	0.42
1:LA:354:U:H5	1:LA:365:A:N7	2.17	0.42
1:LA:648:A:H2'	1:LA:649:C:C6	2.54	0.42
1:LA:1612:A:OP1	39:Lm:51:LEU:N	2.53	0.42
1:LA:2963:G:N2	1:LA:2966:A:OP2	2.41	0.42
3:LC:9:A:H3'	3:LC:10:A:H5"	2.01	0.42
3:LC:135:G:H5"	26:LZ:49:LYS:HD3	2.02	0.42
7:LG:80:SER:HA	7:LG:83:LEU:HB2	2.02	0.42
7:LG:107:ARG:NH2	7:LG:116:ASP:OD1	2.50	0.42
12:LL:76:MET:HE2	12:LL:76:MET:HB2	1.73	0.42
12:LL:76:MET:SD	12:LL:148:VAL:HA	2.59	0.42
13:LM:18:VAL:HG23	13:LM:128:TYR:HB3	2.02	0.42
13:LM:99:THR:O	13:LM:154:THR:OG1	2.36	0.42
22:LV:136:ARG:NH1	22:LV:136:ARG:CB	2.83	0.42
26:LZ:66:PRO:HA	26:LZ:84:PHE:HA	2.02	0.42
31:Le:9:SER:O	31:Le:13:LYS:HG2	2.19	0.42
35:Li:19:LYS:HA	35:Li:19:LYS:HD3	1.65	0.42
45:S2:258:C:H5"	67:SV:75:LYS:HD2	2.02	0.42
45:S2:313:U:H5	45:S2:1130:G:H4'	1.85	0.42
45:S2:1726:G:H2'	45:S2:1727:G:O4'	2.20	0.42
46:SA:200:LYS:O	46:SA:200:LYS:HD3	2.19	0.42
49:SD:33:ARG:HD3	49:SD:33:ARG:HA	1.91	0.42
52:SG:103:ASP:N	52:SG:106:THR:OG1	2.36	0.42
53:SH:108:LYS:HD3	53:SH:108:LYS:HA	1.82	0.42
54:SI:135:ILE:O	54:SI:139:THR:HG22	2.19	0.42
63:SR:137:ILE:HG13	63:SR:138:PRO:HD2	2.02	0.42
66:SU:139:ARG:HG2	73:Sb:51:GLU:OE1	2.20	0.42
68:SW:80:LEU:HA	68:SW:83:VAL:HG12	2.02	0.42
68:SW:93:LEU:HA	68:SW:96:VAL:HG12	2.01	0.42
75:Sd:43:LYS:O	75:Sd:46:GLU:HG3	2.20	0.42
1:LA:21:G:P	3:LC:36:G:H22	2.43	0.42
1:LA:65:A:H1'	1:LA:77:A:H1'	2.00	0.42
1:LA:226:C:H2'	1:LA:227:G:O4'	2.20	0.42
1:LA:238:A:N6	1:LA:239:G:N3	2.67	0.42
1:LA:262:U:H2'	1:LA:263:C:O4'	2.19	0.42
1:LA:1230:A:N3	1:LA:1230:A:H2'	2.35	0.42
1:LA:1869:C:H1'	1:LA:3065:U:H1'	2.01	0.42
1:LA:2129:G:H2'	1:LA:2130:A:O3'	2.20	0.42
1:LA:2827:G:O2'	12:LL:4:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3025:G:N2	1:LA:3027:G:H3'	2.34	0.42
2:LB:5:G:O3'	7:LG:54:ARG:HG3	2.20	0.42
2:LB:27:A:OP1	7:LG:57:ASN:HB2	2.20	0.42
4:LD:102:LEU:HD13	4:LD:166:ILE:HD12	2.02	0.42
5:LE:19:ARG:HB2	5:LE:232:ARG:NH2	2.35	0.42
6:LF:285:ASP:OD2	6:LF:288:ARG:HD3	2.19	0.42
10:LJ:154:ALA:HB2	10:LJ:186:LEU:HD12	2.00	0.42
11:LK:10:ILE:HG23	11:LK:53:ILE:HB	2.02	0.42
11:LK:23:ARG:HH21	11:LK:39:LYS:HA	1.72	0.42
11:LK:36:LYS:HB2	11:LK:78:MET:HE1	2.01	0.42
12:LL:4:ARG:HD2	12:LL:9:TYR:CE2	2.55	0.42
16:LP:143:ARG:HB3	36:Lj:96:GLU:CD	2.45	0.42
18:LR:127:ARG:HB2	18:LR:139:TYR:O	2.20	0.42
34:Lh:49:ILE:HD11	34:Lh:71:VAL:CG2	2.50	0.42
39:Lm:16:ARG:HG2	39:Lm:16:ARG:O	2.20	0.42
43:Lq:91:PHE:CZ	43:Lq:93:LEU:HD13	2.54	0.42
45:S2:1507:G:H2'	45:S2:1508:U:C6	2.55	0.42
47:SB:176:THR:HB	47:SB:180:ARG:HE	1.85	0.42
49:SD:135:MET:O	49:SD:138:GLU:HG3	2.20	0.42
53:SH:133:VAL:H	53:SH:134:ARG:NH2	2.18	0.42
56:SK:54:VAL:HG23	56:SK:55:PRO:HD3	2.02	0.42
56:SK:75:LEU:HD23	56:SK:75:LEU:HA	1.93	0.42
62:SQ:34:ALA:HA	62:SQ:98:THR:HG22	2.01	0.42
71:SZ:31:THR:HG21	71:SZ:35:GLY:CA	2.50	0.42
1:LA:1469:U:H2'	1:LA:1470:U:H6	1.85	0.42
1:LA:2733:A:H4'	1:LA:2734:U:OP1	2.20	0.42
1:LA:3294:A:H2'	1:LA:3295:A:H8	1.84	0.42
4:LD:65:ASP:HB3	4:LD:68:LYS:O	2.19	0.42
4:LD:150:LEU:O	4:LD:153:GLY:N	2.53	0.42
7:LG:286:VAL:O	7:LG:290:ILE:HG23	2.19	0.42
13:LM:105:GLY:HA2	13:LM:126:ASP:HA	2.02	0.42
24:LX:35:TYR:CE1	24:LX:37:ILE:HG22	2.55	0.42
29:Lc:79:TRP:CZ3	29:Lc:82:ILE:HG21	2.55	0.42
33:Lg:32:TRP:CH2	33:Lg:52:GLN:HG2	2.55	0.42
45:S2:5:U:O2'	45:S2:553:G:H4'	2.20	0.42
45:S2:754:A:H2	45:S2:795:U:H3	1.68	0.42
45:S2:945:U:H2'	45:S2:946:U:H6	1.84	0.42
45:S2:991:G:N1	45:S2:1012:U:OP2	2.31	0.42
46:SA:54:ARG:H	46:SA:54:ARG:HG2	1.65	0.42
50:SE:111:MET:HA	53:SH:115:ARG:HH22	1.85	0.42
57:SL:64:ARG:HE	57:SL:65:ARG:HG2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SO:10:ARG:HA	60:SO:10:ARG:HD3	1.92	0.42
60:SO:106:HIS:NE2	60:SO:132:LYS:HD2	2.35	0.42
62:SQ:57:ALA:O	62:SQ:61:LEU:HG	2.20	0.42
63:SR:230:TRP:CE2	73:Sb:68:ARG:HB3	2.55	0.42
64:SS:98:ASN:ND2	64:SS:119:ALA:HA	2.34	0.42
64:SS:108:ARG:HG3	64:SS:108:ARG:NH1	2.33	0.42
64:SS:230:GLU:CD	64:SS:231:GLN:N	2.78	0.42
72:Sa:79:LEU:HD13	72:Sa:82:VAL:HG11	2.01	0.42
78:Sg:39:LEU:HD13	78:Sg:39:LEU:HA	1.89	0.42
1:LA:431:U:H2'	1:LA:432:G:C8	2.54	0.42
1:LA:747:U:H5"	30:Ld:31:SER:HA	2.01	0.42
1:LA:878:U:O2'	18:LR:135:ARG:NH2	2.34	0.42
1:LA:878:U:HO2'	18:LR:135:ARG:HH22	1.63	0.42
1:LA:993:G:O2'	1:LA:1052:A:N6	2.31	0.42
1:LA:2511:C:H2'	1:LA:2512:U:C6	2.54	0.42
1:LA:3130:U:H2'	1:LA:3131:C:C6	2.54	0.42
1:LA:3182:A:OP1	17:LQ:37[A]:ARG:NH2	2.53	0.42
6:LF:45:ASN:O	6:LF:110:ASN:ND2	2.53	0.42
7:LG:242:SER:HA	7:LG:245:GLU:HG2	2.02	0.42
9:LI:75:TYR:HB2	22:LV:141:VAL:HG22	2.01	0.42
11:LK:89:LYS:HG2	11:LK:145:VAL:HG22	2.00	0.42
11:LK:94:TYR:HA	11:LK:177:ASP:OD2	2.19	0.42
13:LM:33:ALA:HB2	13:LM:123:PHE:CZ	2.55	0.42
13:LM:116:TYR:CE1	13:LM:118:PRO:HA	2.54	0.42
16:LP:98:LEU:HA	16:LP:101:THR:HG22	2.02	0.42
23:LW:83:TYR:CD1	23:LW:83:TYR:C	2.98	0.42
34:Lh:37:THR:HG22	34:Lh:40:ASP:OD2	2.20	0.42
37:Lk:51:SER:OG	37:Lk:54:GLU:HG3	2.20	0.42
40:Ln:43:ASN:HB3	40:Ln:46:ARG:HB2	2.02	0.42
45:S2:335:U:O2'	69:SX:130:PRO:O	2.29	0.42
45:S2:553:G:H3'	45:S2:554:C:H2'	2.02	0.42
45:S2:1388:A:O2'	45:S2:1389:C:OP2	2.34	0.42
46:SA:7:LYS:HB2	46:SA:7:LYS:HE2	1.89	0.42
51:SF:90:VAL:HG22	51:SF:105:LEU:HD11	2.02	0.42
52:SG:44:LYS:H	52:SG:44:LYS:CD	2.33	0.42
54:SI:84:LYS:CB	54:SI:94:ILE:HD13	2.49	0.42
57:SL:8:THR:HG21	57:SL:59:SER:HB3	2.02	0.42
67:SV:99:ALA:N	67:SV:169:ILE:O	2.52	0.42
74:Sc:35:GLY:O	74:Sc:39:LYS:HG2	2.20	0.42
75:Sd:13:ILE:HG12	75:Sd:22:GLN:HG3	2.01	0.42
1:LA:119:U:O2'	10:LJ:133:LYS:HE2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:127:G:H2'	1:LA:128:G:C8	2.55	0.41
1:LA:429:U:H2'	1:LA:430:U:C6	2.55	0.41
1:LA:670:U:H2'	1:LA:671:A:C8	2.55	0.41
1:LA:915:G:H5'	1:LA:916:A:OP1	2.19	0.41
1:LA:1611:A:H5"	39:Lm:51:LEU:HD22	2.02	0.41
1:LA:2425:U:H2'	1:LA:2426:U:H6	1.85	0.41
1:LA:2535:A:N6	1:LA:2536:U:O2	2.52	0.41
1:LA:3319:A:H2'	1:LA:3320:C:C6	2.55	0.41
6:LF:42:VAL:HA	6:LF:45:ASN:ND2	2.35	0.41
7:LG:52:VAL:HG22	7:LG:147:ASP:HB3	2.01	0.41
13:LM:95:ASN:HD21	13:LM:104:PHE:HB3	1.85	0.41
16:LP:104:GLU:HG2	16:LP:108:ARG:HH21	1.85	0.41
18:LR:67:ILE:HD11	18:LR:80:LYS:HB3	2.02	0.41
22:LV:139:ARG:C	22:LV:140:ILE:HD12	2.45	0.41
26:LZ:46:TYR:HB3	36:Lj:75:TYR:O	2.20	0.41
36:Lj:62:GLN:O	36:Lj:66:VAL:HG12	2.19	0.41
45:S2:120:U:H3'	45:S2:121:U:H4'	2.02	0.41
45:S2:799:A:H5'	64:SS:201:HIS:CD2	2.54	0.41
45:S2:961:U:H2'	45:S2:962:C:C6	2.55	0.41
45:S2:1066:C:H2'	45:S2:1067:C:H6	1.84	0.41
45:S2:1143:A:H5'	76:Se:89:ARG:HH12	1.85	0.41
47:SB:99:MET:SD	47:SB:180:ARG:NH1	2.93	0.41
53:SH:82:PRO:HB2	53:SH:84:TRP:NE1	2.35	0.41
60:SO:70:ASP:OD1	60:SO:83:ALA:HB3	2.19	0.41
61:SP:74:VAL:HG22	61:SP:96:THR:OG1	2.19	0.41
63:SR:156:THR:HB	73:Sb:95:PRO:HB3	2.02	0.41
65:ST:106:LEU:HA	65:ST:106:LEU:HD23	1.90	0.41
65:ST:174:LYS:HA	65:ST:174:LYS:HD3	1.86	0.41
73:Sb:60:LYS:O	73:Sb:61:ILE:HD13	2.20	0.41
74:Sc:69:ARG:HD3	74:Sc:69:ARG:HA	1.61	0.41
74:Sc:78:LYS:HG3	74:Sc:79:ASN:OD1	2.20	0.41
1:LA:820:U:H2'	1:LA:821:G:C8	2.54	0.41
1:LA:1600:U:P	20:LT:42:ARG:HH22	2.43	0.41
1:LA:1664:C:H2'	1:LA:1665:G:H8	1.84	0.41
1:LA:1808:A:P	28:Lb:65:ARG:HH12	2.43	0.41
1:LA:2118:A:HO2'	1:LA:2119:A:P	2.42	0.41
1:LA:2388:C:O2'	1:LA:3306:A:N1	2.50	0.41
1:LA:2684:C:H2'	1:LA:2685:A:H8	1.85	0.41
1:LA:2868:U:O2'	1:LA:2872:U:OP1	2.38	0.41
1:LA:3287:G:C2	1:LA:3288:G:C5	3.08	0.41
13:LM:33:ALA:HA	13:LM:36:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LN:157:ARG:HE	14:LN:157:ARG:HB2	1.64	0.41
17:LQ:180[A]:SER:O	17:LQ:184[A]:THR:HG23	2.20	0.41
19:LS:29:LEU:HD23	19:LS:29:LEU:HA	1.93	0.41
20:LT:162:ARG:HD2	45:S2:849:C:OP1	2.19	0.41
33:Lg:85:LEU:HD12	33:Lg:85:LEU:HA	1.82	0.41
39:Lm:12:LEU:O	39:Lm:15:THR:HG22	2.19	0.41
42:Lp:1:MET:HE1	42:Lp:9:ARG:HE	1.84	0.41
42:Lp:6:ARG:HD3	42:Lp:6:ARG:HA	1.77	0.41
45:S2:168:A:O2'	45:S2:169:A:O4'	2.30	0.41
45:S2:329:G:H2'	45:S2:330:G:C8	2.53	0.41
45:S2:368:U:C4	45:S2:369:A:H1'	2.55	0.41
45:S2:752:A:N1	45:S2:797:G:O6	2.54	0.41
45:S2:1125:A:C5	45:S2:1126:G:H1'	2.55	0.41
45:S2:1211:A:H1'	50:SE:100:LYS:HA	2.02	0.41
45:S2:1261:G:P	45:S2:1261:G:H8	2.43	0.41
45:S2:1501:C:H5	45:S2:1502:G:C4	2.38	0.41
45:S2:1614:A:H5"	45:S2:1615:C:C5	2.56	0.41
49:SD:125:ASN:C	49:SD:127:GLY:H	2.26	0.41
54:SI:54:PHE:O	54:SI:57:ARG:HG2	2.19	0.41
54:SI:76:LEU:O	54:SI:80:TYR:HD2	2.04	0.41
55:SJ:33:GLN:HA	55:SJ:36:ASN:HD21	1.84	0.41
60:SO:132:LYS:HE2	60:SO:132:LYS:HB3	1.86	0.41
65:ST:31:ARG:HG2	65:ST:32:ILE:N	2.36	0.41
66:SU:46:ILE:HG13	66:SU:47:ARG:N	2.34	0.41
68:SW:108:ARG:HG3	68:SW:110:GLN:H	1.85	0.41
69:SX:33:ARG:HE	69:SX:33:ARG:HB2	1.62	0.41
69:SX:93:TYR:OH	69:SX:98:ASN:OD1	2.35	0.41
70:SY:92:ILE:O	70:SY:96:VAL:HG13	2.20	0.41
73:Sb:112:ASP:OD1	73:Sb:112:ASP:N	2.54	0.41
1:LA:759:G:H1'	1:LA:770:A:N6	2.35	0.41
1:LA:1639:G:H5"	1:LA:1737:C:OP1	2.20	0.41
1:LA:2700:U:OP1	22:LV:23:GLY:N	2.52	0.41
1:LA:3065:U:H2'	1:LA:3066:C:H6	1.84	0.41
6:LF:39:PHE:HA	6:LF:42:VAL:HG22	2.01	0.41
6:LF:235:LEU:HA	6:LF:238:LEU:HB2	2.00	0.41
9:LI:83:LEU:HD11	9:LI:116:PHE:HB3	2.01	0.41
9:LI:145:ARG:HG3	9:LI:185:ILE:HD13	2.03	0.41
11:LK:12:VAL:HG22	11:LK:51:GLN:HA	2.02	0.41
12:LL:153:ARG:CZ	12:LL:153:ARG:HB3	2.50	0.41
15:LO:108:ARG:NH1	15:LO:112:LEU:HD23	2.34	0.41
17:LQ:110[A]:PRO:HA	17:LQ:113[A]:ASP:OD1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:La:99:LEU:HD12	27:La:104:LEU:HB3	2.01	0.41
31:Le:77:LEU:HG	31:Le:87:VAL:HG23	2.02	0.41
32:Lf:10:ARG:HB3	32:Lf:12:TYR:CE2	2.55	0.41
36:Lj:12:LYS:HE2	36:Lj:12:LYS:HB3	1.76	0.41
44:Lr:26:VAL:O	44:Lr:30:GLU:HB2	2.20	0.41
45:S2:54:C:O3'	75:Sd:109:LYS:HD2	2.21	0.41
45:S2:227:U:H2'	45:S2:228:G:H5"	2.02	0.41
45:S2:431:C:H2'	45:S2:432:G:C8	2.56	0.41
45:S2:1002:G:N2	45:S2:1760:G:O2'	2.54	0.41
47:SB:81:ARG:HG3	47:SB:82:PHE:H	1.85	0.41
47:SB:118:LEU:HA	47:SB:121:ILE:HG22	2.01	0.41
50:SE:50:THR:HG23	50:SE:52:LYS:HG2	2.01	0.41
50:SE:98:ASN:HB2	50:SE:103:ASN:ND2	2.34	0.41
54:SI:66:TYR:O	54:SI:69:LYS:NZ	2.49	0.41
61:SP:28:ASN:OD1	61:SP:44:GLY:HA2	2.19	0.41
65:ST:49:VAL:HG23	65:ST:114:VAL:HG23	2.01	0.41
68:SW:143:ILE:HD12	68:SW:143:ILE:O	2.21	0.41
70:SY:26:PHE:CD1	70:SY:26:PHE:N	2.87	0.41
75:Sd:111:LYS:HA	75:Sd:114:ARG:HE	1.85	0.41
77:Sf:41:LEU:HD23	77:Sf:41:LEU:H	1.85	0.41
1:LA:369:A:HO2'	1:LA:404:G:H8	1.67	0.41
1:LA:419:G:O2'	1:LA:420:G:OP1	2.34	0.41
1:LA:1671:U:OP1	20:LT:64:ARG:NH1	2.43	0.41
1:LA:1770:C:H2'	1:LA:1771:U:O4'	2.21	0.41
1:LA:1941:U:H2'	1:LA:1942:C:O4'	2.21	0.41
1:LA:3068:G:C2	1:LA:3069:A:C8	3.08	0.41
5:LE:48:GLY:HA3	5:LE:81:THR:HG22	2.02	0.41
5:LE:331:ASN:OD1	5:LE:331:ASN:N	2.51	0.41
10:LJ:176:PRO:HB3	10:LJ:219:ASP:OD1	2.21	0.41
11:LK:9:GLN:OE1	11:LK:52:LEU:HD22	2.20	0.41
18:LR:180:LYS:HB2	18:LR:180:LYS:HE2	1.80	0.41
19:LS:36:LEU:O	19:LS:40:THR:HB	2.21	0.41
19:LS:158:HIS:H	19:LS:186:VAL:CG1	2.33	0.41
21:LU:11:GLY:HA2	21:LU:59:VAL:HG13	2.02	0.41
21:LU:135:VAL:HG11	21:LU:144:LEU:CD1	2.50	0.41
22:LV:56:PHE:CZ	22:LV:78:LYS:HG3	2.55	0.41
36:Lj:45:LYS:HE3	36:Lj:49:LYS:HE3	2.02	0.41
45:S2:304:U:H2'	45:S2:305:C:C6	2.56	0.41
45:S2:1483:A:H2'	45:S2:1484:G:C8	2.55	0.41
46:SA:20:GLU:O	46:SA:23:GLU:HG2	2.21	0.41
47:SB:143:ARG:HA	47:SB:143:ARG:NH1	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SO:81:LEU:HD11	60:SO:113:VAL:CG1	2.45	0.41
61:SP:69:ASN:O	61:SP:73:VAL:HG23	2.20	0.41
64:SS:241:GLY:O	64:SS:244:ILE:HG12	2.20	0.41
68:SW:49:LEU:HD22	68:SW:52:ILE:HD11	2.01	0.41
68:SW:62:ARG:HD2	68:SW:69:ARG:HB2	2.03	0.41
73:Sb:66:ASN:C	73:Sb:68:ARG:H	2.27	0.41
75:Sd:12:VAL:HA	75:Sd:23:PHE:HB3	2.03	0.41
75:Sd:24:VAL:HG12	75:Sd:72:PHE:CE1	2.55	0.41
77:Sf:46:VAL:HG21	77:Sf:64:CYS:SG	2.60	0.41
1:LA:297:G:OP2	1:LA:297:G:N2	2.22	0.41
1:LA:1613:C:H2'	1:LA:1614:C:H6	1.85	0.41
1:LA:1620:A:H2'	1:LA:1621:U:C6	2.56	0.41
1:LA:2614:G:H2'	1:LA:2615:C:C6	2.56	0.41
1:LA:3275:G:O6	18:LR:171:ARG:NH1	2.53	0.41
3:LC:21:C:HO2'	3:LC:22:U:P	2.42	0.41
3:LC:145:U:H2'	3:LC:146:U:C6	2.55	0.41
7:LG:64:ILE:HD12	7:LG:144:VAL:HG11	2.02	0.41
9:LI:176:TYR:CZ	9:LI:197:GLN:HG2	2.56	0.41
10:LJ:74:THR:OG1	10:LJ:164:VAL:HG12	2.21	0.41
10:LJ:111:LYS:HE3	10:LJ:111:LYS:HB3	1.93	0.41
28:Lb:116:LYS:HE3	28:Lb:116:LYS:HB2	1.75	0.41
31:Le:41:LEU:HB3	31:Le:92:ILE:HB	2.03	0.41
39:Lm:5:ILE:HB	39:Lm:54:LEU:CA	2.48	0.41
45:S2:151:G:N2	65:ST:13:GLN:HG2	2.36	0.41
45:S2:153:G:O2'	65:ST:108:VAL:HG11	2.21	0.41
45:S2:1116:A:HO2'	45:S2:1117:U:H6	1.68	0.41
45:S2:1226:A:O2'	45:S2:1227:A:OP1	2.32	0.41
47:SB:114:ILE:HG13	47:SB:115:LYS:N	2.36	0.41
47:SB:219:ARG:HD2	47:SB:219:ARG:C	2.44	0.41
50:SE:34:VAL:HG13	50:SE:42:ARG:HA	2.03	0.41
52:SG:7:LYS:HA	52:SG:10:LYS:HB2	2.02	0.41
61:SP:7:PHE:HA	61:SP:191:ARG:HH21	1.85	0.41
64:SS:40:GLU:HG3	64:SS:103:TYR:OH	2.20	0.41
64:SS:163:ASP:CG	64:SS:166:SER:H	2.28	0.41
65:ST:163:THR:OG1	65:ST:167:LYS:O	2.37	0.41
70:SY:3:ARG:HB3	70:SY:6:SER:OG	2.21	0.41
76:Se:88:SER:O	76:Se:92:ARG:HB2	2.20	0.41
1:LA:374:A:O2'	1:LA:376:G:H5'	2.20	0.41
1:LA:416:A:H2'	1:LA:417:A:H8	1.86	0.41
1:LA:726:G:H1	1:LA:742:C:N4	2.15	0.41
1:LA:744:C:H2'	1:LA:745:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:1010:A:H2'	1:LA:1011:G:C8	2.55	0.41
1:LA:1154:C:O2'	1:LA:1196:A:N1	2.49	0.41
1:LA:1260:G:O2'	1:LA:1277:A:N1	2.45	0.41
1:LA:1323:U:OP1	21:LU:2:ALA:N	2.53	0.41
1:LA:3021:G:O2'	1:LA:3030:G:O6	2.37	0.41
1:LA:3094:U:H2'	1:LA:3095:C:C6	2.56	0.41
8:LH:45:GLY:O	8:LH:48:ARG:NH1	2.51	0.41
9:LI:106:LEU:HD23	9:LI:106:LEU:HA	1.90	0.41
11:LK:163:GLN:O	11:LK:166:ARG:HG2	2.20	0.41
12:LL:169:LYS:HB3	12:LL:169:LYS:HE2	1.88	0.41
13:LM:157:GLU:O	13:LM:160:VAL:HG22	2.20	0.41
19:LS:175:ALA:C	29:Lc:51:GLY:HA2	2.46	0.41
27:La:51:ARG:HG2	27:La:52:ARG:H	1.86	0.41
33:Lg:94:ALA:O	33:Lg:120:THR:HG23	2.21	0.41
33:Lg:99:ASN:OD1	33:Lg:99:ASN:N	2.41	0.41
38:Ll:31:LYS:HB3	38:Ll:33:THR:HG22	2.01	0.41
39:Lm:20:VAL:HG12	39:Lm:47:GLY:HA2	2.03	0.41
45:S2:166:C:O2	65:ST:133:LEU:HB2	2.20	0.41
45:S2:209:U:H6	45:S2:209:U:H2'	1.71	0.41
45:S2:548:G:N1	45:S2:591:A:N6	2.68	0.41
45:S2:694:U:H3'	45:S2:695:U:H5'	2.02	0.41
45:S2:835:U:H2'	45:S2:836:U:C5	2.55	0.41
45:S2:861:U:OP1	70:SY:64:ARG:NH2	2.54	0.41
46:SA:138:VAL:HG13	46:SA:182:LEU:HD21	2.02	0.41
46:SA:177:MET:SD	46:SA:179:GLN:HG2	2.60	0.41
47:SB:112:ARG:NH2	56:SK:96:SER:H	2.18	0.41
51:SF:94:GLN:HE21	60:SO:62:LYS:HG3	1.85	0.41
54:SI:84:LYS:HB2	54:SI:94:ILE:HD13	2.02	0.41
60:SO:24:ALA:O	60:SO:33:LEU:HD12	2.20	0.41
61:SP:27:ARG:CG	61:SP:28:ASN:H	2.33	0.41
64:SS:85:GLY:N	64:SS:88:ASP:OD2	2.54	0.41
65:ST:25:ARG:HA	65:ST:28:PHE:CD2	2.56	0.41
66:SU:111:LYS:HA	66:SU:111:LYS:HD2	1.71	0.41
66:SU:151:LYS:NZ	66:SU:184:GLU:HG2	2.35	0.41
74:Sc:75:GLN:NE2	74:Sc:80:GLY:O	2.54	0.41
1:LA:707:G:N2	1:LA:710:A:OP2	2.47	0.41
1:LA:1541:G:H2'	1:LA:1542:G:C8	2.56	0.41
1:LA:1640:U:H3'	1:LA:1641:A:C5'	2.51	0.41
3:LC:132:G:H2'	3:LC:133:G:H8	1.85	0.41
6:LF:282:SER:OG	19:LS:126:GLN:OE1	2.31	0.41
13:LM:15:GLU:CD	13:LM:72:ARG:HH21	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:LV:84:TYR:HE1	30:Ld:21:ILE:O	2.04	0.41
25:LY:47:ARG:HG3	25:LY:54:LEU:HD23	2.02	0.41
28:Lb:15:ARG:HB2	28:Lb:79:HIS:HB3	2.03	0.41
29:Lc:83:PRO:O	29:Lc:87:ARG:HB2	2.20	0.41
39:Lm:33:LYS:HE3	39:Lm:35:GLY:H	1.84	0.41
45:S2:631:G:H2'	45:S2:632:U:C6	2.55	0.41
45:S2:1196:A:H4'	45:S2:1197:C:H5"	2.01	0.41
45:S2:1489:U:OP1	45:S2:1515:A:N6	2.54	0.41
45:S2:1675:C:H2'	45:S2:1676:U:O4'	2.21	0.41
52:SG:28:PHE:HB2	52:SG:32:LYS:HZ1	1.86	0.41
55:SJ:63:LEU:HB3	58:SM:34:TYR:CZ	2.55	0.41
62:SQ:135:LEU:HD12	62:SQ:215:VAL:HG13	2.02	0.41
64:SS:106:LYS:CB	64:SS:108:ARG:HH12	2.33	0.41
67:SV:65:PHE:O	67:SV:73:SER:HA	2.21	0.41
67:SV:172:ARG:HB3	67:SV:175:GLN:HE21	1.86	0.41
68:SW:39:LYS:HA	68:SW:42:ILE:CD1	2.51	0.41
1:LA:38:U:H4'	29:Lc:32:ARG:HD2	2.02	0.41
1:LA:76:G:N1	1:LA:315:C:OP1	2.50	0.41
1:LA:213:A:N6	1:LA:228:U:O4'	2.54	0.41
1:LA:308:A:H1'	1:LA:2221:A:N3	2.35	0.41
1:LA:435:C:H2'	1:LA:436:A:H8	1.86	0.41
1:LA:726:G:H1'	1:LA:976:C:OP1	2.20	0.41
1:LA:755:U:H2'	1:LA:756:C:C6	2.55	0.41
1:LA:1447:U:H2'	1:LA:1448:A:C8	2.56	0.41
1:LA:1447:U:H2'	1:LA:1448:A:H8	1.86	0.41
1:LA:1613:C:H2'	1:LA:1614:C:C6	2.56	0.41
1:LA:2630:U:OP1	1:LA:2756:U:O2'	2.33	0.41
1:LA:3005:A:C2	1:LA:3140:A:C4	3.09	0.41
1:LA:3336:G:H2'	1:LA:3337:C:C6	2.55	0.41
2:LB:91:G:N2	12:LL:56:GLU:OE2	2.51	0.41
3:LC:121:U:H2'	3:LC:122:U:C6	2.56	0.41
6:LF:271:LYS:HB2	6:LF:274:TYR:HB3	2.03	0.41
9:LI:84:VAL:HG12	9:LI:138:TYR:CD1	2.56	0.41
13:LM:170:ASP:C	13:LM:170:ASP:OD1	2.63	0.41
14:LN:106:GLN:HG2	37:Lk:20:MET:SD	2.61	0.41
14:LN:179:PHE:HA	14:LN:182:ILE:HD13	2.02	0.41
16:LP:149:ASN:HA	16:LP:152:CYS:HB2	2.02	0.41
18:LR:42:THR:O	18:LR:46:LYS:HG3	2.21	0.41
31:Le:74:ASN:OD1	31:Le:74:ASN:N	2.52	0.41
45:S2:387:A:H2'	45:S2:402:C:H5'	2.02	0.41
45:S2:894:U:H2'	45:S2:895:G:N7	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:SA:71:LEU:HD21	48:SC:18:GLU:HB3	2.03	0.41
48:SC:50:THR:HG22	48:SC:55:VAL:O	2.21	0.41
53:SH:111:ASP:O	53:SH:114:GLU:HG3	2.20	0.41
62:SQ:120:LEU:HD12	62:SQ:142:PHE:CE2	2.56	0.41
63:SR:105:GLY:HA3	63:SR:111:VAL:HA	2.03	0.41
64:SS:43:PRO:HB2	64:SS:46:VAL:HG12	2.02	0.41
64:SS:62:LYS:HG2	64:SS:63:ALA:N	2.35	0.41
64:SS:180:LEU:HB3	64:SS:228:ILE:CD1	2.51	0.41
65:ST:227:ARG:O	65:ST:227:ARG:HG3	2.21	0.41
66:SU:34:LEU:O	66:SU:37:GLU:HB2	2.20	0.41
70:SY:35:GLU:HA	70:SY:38:VAL:CG2	2.51	0.41
74:Sc:56:LYS:HE2	74:Sc:93:LEU:CD1	2.50	0.41
76:Se:12:LYS:HB2	76:Se:33:ASP:OD2	2.21	0.41
79:Ta:67:C:H2'	79:Ta:68:C:O4'	2.21	0.41
1:LA:12:A:H2'	1:LA:13:A:C8	2.56	0.41
1:LA:54:C:H4'	1:LA:1547:C:H1'	2.02	0.41
1:LA:255:A:H2'	1:LA:256:G:C8	2.55	0.41
1:LA:352:A:N1	1:LA:365:A:H5"	2.36	0.41
1:LA:1009:G:N1	1:LA:1040:U:O2	2.54	0.41
1:LA:1019:G:H2'	1:LA:1020:G:C8	2.56	0.41
1:LA:1115:G:N2	1:LA:2816:A:O4'	2.54	0.41
1:LA:1128:A:H2'	1:LA:1129:A:C8	2.56	0.41
1:LA:1219:U:H3	1:LA:1284:G:H5"	1.86	0.41
1:LA:1383:U:O5'	6:LF:202:ARG:HD3	2.21	0.41
1:LA:1620:A:H2'	1:LA:1621:U:H6	1.85	0.41
1:LA:1745:U:C2	1:LA:1746:G:C8	3.09	0.41
1:LA:1914:A:H2'	1:LA:1915:U:C6	2.56	0.41
1:LA:2212:A:H2'	1:LA:2213:A:N3	2.35	0.41
1:LA:2673:A:C8	13:LM:105:GLY:HA3	2.56	0.41
1:LA:2684:C:H2'	1:LA:2685:A:C8	2.56	0.41
1:LA:2921:G:H1'	1:LA:2950:G:N3	2.36	0.41
1:LA:3169:A:H5"	34:Lh:56:SER:HB3	2.02	0.41
1:LA:3174:U:H4'	1:LA:3175:G:H5'	2.03	0.41
2:LB:17:A:P	13:LM:150:ASN:HD21	2.44	0.41
2:LB:79:A:H2'	2:LB:80:G:O4'	2.20	0.41
3:LC:112:U:O2'	3:LC:114:G:O4'	2.33	0.41
3:LC:142:C:H2'	3:LC:143:U:H6	1.84	0.41
4:LD:3:ARG:NH1	4:LD:208:ASP:OD1	2.48	0.41
4:LD:132:ASN:O	4:LD:169:ILE:HG12	2.20	0.41
4:LD:150:LEU:HD11	4:LD:156:LYS:HE2	2.01	0.41
6:LF:126:ILE:HD11	6:LF:233:LEU:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LF:175:HIS:CD2	6:LF:179:LEU:HD11	2.56	0.41
6:LF:185:LYS:HG2	6:LF:199:TRP:HD1	1.85	0.41
7:LG:40:HIS:CE1	22:LV:69:LYS:HA	2.56	0.41
7:LG:153:THR:HG23	7:LG:160:PHE:HZ	1.85	0.41
8:LH:148:GLU:O	8:LH:151:LYS:HG2	2.20	0.41
10:LJ:98:ARG:HD2	10:LJ:99:PRO:O	2.19	0.41
10:LJ:186:LEU:HB3	10:LJ:195:SER:HB3	2.03	0.41
12:LL:12:GLN:HG3	12:LL:59:GLN:HG2	2.03	0.41
13:LM:32:ARG:HD3	13:LM:120:ILE:HA	2.02	0.41
13:LM:101:ASN:HB3	13:LM:129:VAL:O	2.21	0.41
14:LN:92:THR:HB	36:Lj:114:ARG:HG2	2.02	0.41
19:LS:99:THR:O	19:LS:119:GLY:HA3	2.21	0.41
19:LS:147:ARG:H	19:LS:150:VAL:HG22	1.85	0.41
22:LV:136:ARG:HH11	22:LV:139:ARG:HH22	1.68	0.41
23:LW:80:THR:HG21	23:LW:95:PHE:CD2	2.56	0.41
25:LY:25:ASP:HB2	25:LY:27:LYS:HG3	2.02	0.41
26:LZ:58:ASP:O	26:LZ:62:VAL:HG13	2.20	0.41
29:Lc:84:GLU:H	29:Lc:84:GLU:CD	2.28	0.41
33:Lg:74:PHE:HD2	33:Lg:85:LEU:HD13	1.85	0.41
39:Lm:56:ILE:HD12	39:Lm:56:ILE:O	2.20	0.41
45:S2:97:C:H2'	45:S2:98:U:H6	1.85	0.41
45:S2:241:U:H2'	45:S2:242:U:O4'	2.21	0.41
45:S2:263:C:H1'	45:S2:292:U:C4	2.55	0.41
45:S2:298:C:HO2'	64:SS:30:ARG:NH2	2.18	0.41
45:S2:398:G:P	67:SV:47:ARG:HH12	2.44	0.41
45:S2:400:A:H5"	67:SV:25:ARG:HA	2.03	0.41
45:S2:772:G:H21	45:S2:774:A:H1'	1.86	0.41
45:S2:802:G:H21	73:Sb:107:SER:HB3	1.86	0.41
45:S2:869:A:H2'	45:S2:870:C:C6	2.56	0.41
45:S2:1196:A:O2'	45:S2:1602:C:H4'	2.20	0.41
45:S2:1239:U:O2'	50:SE:77:ARG:NH2	2.53	0.41
45:S2:1277:G:H3'	45:S2:1278:G:H8	1.86	0.41
45:S2:1502:G:H21	45:S2:1505:A:P	2.43	0.41
45:S2:1551:U:O2'	45:S2:1552:U:H5"	2.21	0.41
45:S2:1566:U:H5'	53:SH:42:TYR:CD2	2.55	0.41
45:S2:1739:C:H2'	45:S2:1740:A:N7	2.36	0.41
46:SA:23:GLU:HA	46:SA:26:THR:HG22	2.02	0.41
46:SA:64:ARG:O	46:SA:68:GLU:HG2	2.21	0.41
46:SA:141:LYS:HE2	46:SA:179:GLN:CD	2.41	0.41
47:SB:72:HIS:O	51:SF:47:LYS:HE3	2.21	0.41
48:SC:62:GLN:NE2	58:SM:23:VAL:O	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SE:60:LEU:HG	50:SE:76:VAL:HG21	2.03	0.41
52:SG:115:LEU:HD11	61:SP:11:PRO:HD3	2.03	0.41
53:SH:125:ILE:HD12	53:SH:125:ILE:HA	1.88	0.41
55:SJ:38:SER:C	55:SJ:41:ILE:HG22	2.46	0.41
55:SJ:40:ASN:HA	55:SJ:43:LYS:HG2	2.02	0.41
56:SK:61:SER:HB3	56:SK:64:VAL:HG23	2.02	0.41
62:SQ:47:LEU:HD12	62:SQ:47:LEU:HA	1.89	0.41
62:SQ:81:PHE:CE2	62:SQ:106:THR:HG21	2.55	0.41
63:SR:140:ARG:NH2	63:SR:228:ASN:HD21	2.19	0.41
63:SR:145:GLY:O	63:SR:146:THR:OG1	2.33	0.41
63:SR:218:ILE:HA	63:SR:221:THR:HG22	2.03	0.41
64:SS:234:PRO:HB2	64:SS:236:ILE:O	2.21	0.41
66:SU:94:ALA:O	66:SU:124:LYS:NZ	2.54	0.41
67:SV:153:GLU:HG3	67:SV:156:VAL:H	1.85	0.41
69:SX:29:LYS:HD2	69:SX:29:LYS:HA	1.94	0.41
73:Sb:38:LEU:CD1	73:Sb:47:ILE:CD1	2.99	0.41
75:Sd:40:LEU:HD12	75:Sd:40:LEU:HA	1.87	0.41
1:LA:218:G:P	1:LA:218:G:H8	2.44	0.41
1:LA:514:C:O2'	6:LF:342:LYS:O	2.34	0.41
1:LA:742:C:H5"	1:LA:743:A:OP2	2.21	0.41
1:LA:2129:G:O4'	1:LA:2143:A:H4'	2.21	0.41
2:LB:112:G:H2'	2:LB:113:C:H6	1.83	0.41
3:LC:107:G:H5'	3:LC:138:A:H5'	2.03	0.41
5:LE:166:ILE:HD12	5:LE:166:ILE:HA	1.88	0.41
6:LF:198:ARG:HB3	6:LF:199:TRP:HE3	1.86	0.41
9:LI:221:LYS:HB2	9:LI:227:GLY:HA3	2.03	0.41
10:LJ:43:LYS:HB3	26:LZ:28:THR:OG1	2.21	0.41
10:LJ:231:LYS:HB2	10:LJ:231:LYS:HE2	1.80	0.41
13:LM:15:GLU:OE1	13:LM:72:ARG:NH2	2.49	0.41
14:LN:46:ILE:O	14:LN:49:ARG:N	2.47	0.41
20:LT:4:LEU:HD11	20:LT:29:THR:HG23	2.02	0.41
34:Lh:38:PRO:HA	34:Lh:41:ALA:HB3	2.03	0.41
44:Lr:28:LYS:NZ	44:Lr:32:GLN:OE1	2.52	0.41
45:S2:1183:A:H2'	45:S2:1184:A:C8	2.56	0.41
45:S2:1580:C:H5"	51:SF:137:ARG:HB2	2.03	0.41
45:S2:1622:G:H2'	45:S2:1623:C:C6	2.56	0.41
52:SG:17:ILE:HD11	52:SG:54:THR:HG23	2.03	0.41
54:SI:63:ARG:O	54:SI:67:MET:HG2	2.21	0.41
60:SO:89:LEU:HB2	60:SO:103:PHE:HB2	2.03	0.41
61:SP:203:PHE:HB3	61:SP:204:TYR:H	1.71	0.41
65:ST:2:LYS:HB2	65:ST:108:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:ST:25:ARG:O	65:ST:28:PHE:HB2	2.20	0.41
66:SU:101:LYS:HA	66:SU:112:ARG:HH12	1.86	0.41
70:SY:62:GLN:O	70:SY:66:ILE:HG23	2.21	0.41
73:Sb:26:LEU:HD11	73:Sb:60:LYS:HD3	2.03	0.41
73:Sb:89:TRP:HE3	73:Sb:93:LEU:HD11	1.86	0.41
76:Se:87:ARG:NH2	76:Se:91:ASP:O	2.53	0.41
1:LA:21:G:H3'	1:LA:22:G:C8	2.55	0.40
1:LA:29:C:OP1	16:LP:189:LYS:HB2	2.22	0.40
1:LA:32:U:H2'	1:LA:33:G:O4'	2.21	0.40
1:LA:100:A:H2'	1:LA:101:G:N3	2.37	0.40
1:LA:261:U:H2'	1:LA:262:U:C6	2.56	0.40
1:LA:944:C:O2'	1:LA:1405:A:H1'	2.21	0.40
1:LA:1236:G:N3	1:LA:1236:G:H2'	2.37	0.40
1:LA:1306:G:OP2	17:LQ:59[A]:ARG:NH2	2.54	0.40
1:LA:1481:A:H2'	1:LA:1481:A:N3	2.36	0.40
1:LA:2217:G:H1	1:LA:2225:U:H5	1.68	0.40
1:LA:2249:G:O6	1:LA:2266:C:N4	2.53	0.40
1:LA:2311:A:H2'	1:LA:2314:G:H21	1.86	0.40
1:LA:2427:U:H2'	1:LA:2428:G:C8	2.56	0.40
7:LG:232:ASP:OD1	7:LG:232:ASP:N	2.54	0.40
10:LJ:97:TYR:OH	10:LJ:204:ARG:N	2.36	0.40
13:LM:21:ILE:O	13:LM:21:ILE:HG13	2.20	0.40
14:LN:79:GLU:HG3	14:LN:109:PHE:CE1	2.56	0.40
16:LP:176:LYS:HA	16:LP:184:LYS:HE2	2.02	0.40
17:LQ:19[A]:LEU:HD23	17:LQ:41[A]:LEU:HD21	2.03	0.40
34:Lh:32:ILE:HG12	34:Lh:100:ILE:HD13	2.03	0.40
39:Lm:3:ARG:CZ	39:Lm:50:SER:OG	2.68	0.40
45:S2:140:A:C2	45:S2:281:G:H5'	2.56	0.40
45:S2:382:C:H2'	45:S2:383:G:H8	1.86	0.40
45:S2:418:G:H8	65:ST:59:GLN:HG2	1.86	0.40
45:S2:1159:C:H42	45:S2:1285:U:H5'	1.86	0.40
45:S2:1638:G:H2'	45:S2:1639:C:O4'	2.21	0.40
45:S2:1649:G:H2'	45:S2:1650:U:C6	2.56	0.40
46:SA:7:LYS:HA	46:SA:10:LYS:HB3	2.03	0.40
48:SC:4:PRO:HD2	48:SC:7:ASP:HB2	2.02	0.40
50:SE:108:ARG:HH22	53:SH:119:ILE:HG22	1.86	0.40
54:SI:23:GLN:HG3	54:SI:55:TYR:CE2	2.56	0.40
58:SM:21:CYS:HB2	58:SM:30:LEU:HD11	2.02	0.40
60:SO:92:TRP:CD1	60:SO:92:TRP:N	2.89	0.40
61:SP:54:TRP:HH2	61:SP:179:ARG:HH22	1.68	0.40
63:SR:42:GLY:O	63:SR:46:LYS:HG3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SR:160:GLY:O	63:SR:213:ALA:HB1	2.21	0.40
63:SR:173:PRO:HD3	63:SR:197:TYR:HE1	1.86	0.40
63:SR:207:LEU:O	63:SR:211:LEU:HD23	2.21	0.40
66:SU:80:GLU:HG2	66:SU:80:GLU:H	1.76	0.40
66:SU:117:THR:HG23	66:SU:120:ALA:H	1.86	0.40
68:SW:85:VAL:HG12	68:SW:107:ARG:HG2	2.02	0.40
70:SY:52:VAL:HG23	70:SY:55:ARG:NH1	2.36	0.40
1:LA:87:U:H2'	1:LA:88:A:C8	2.57	0.40
1:LA:825:G:C5	1:LA:899:G:O6	2.74	0.40
1:LA:873:U:H3	1:LA:2977:U:P	2.43	0.40
1:LA:1290:A:H2'	1:LA:1291:C:O4'	2.22	0.40
1:LA:1650:U:H2'	1:LA:1651:G:C8	2.56	0.40
1:LA:1707:C:H2'	1:LA:1708:C:H6	1.86	0.40
1:LA:1899:A:O2'	1:LA:1905:G:N7	2.50	0.40
1:LA:2147:U:H2'	1:LA:2148:A:C8	2.56	0.40
1:LA:2897:G:OP2	1:LA:2898:C:H5'	2.21	0.40
1:LA:2949:G:OP2	1:LA:2949:G:N2	2.42	0.40
1:LA:3180:C:H2'	1:LA:3181:G:C8	2.55	0.40
2:LB:27:A:P	7:LG:57:ASN:HB2	2.62	0.40
4:LD:149:ARG:NH2	4:LD:155:LYS:HG2	2.36	0.40
23:LW:98:THR:OG1	23:LW:99:LYS:N	2.54	0.40
25:LY:60:LYS:HB3	25:LY:60:LYS:HE2	1.86	0.40
34:Lh:13:HIS:HA	34:Lh:30:ILE:HD13	2.02	0.40
45:S2:703:G:H3'	45:S2:704:C:C5	2.55	0.40
45:S2:757:A:H5"	45:S2:758:U:C5	2.50	0.40
45:S2:900:A:H4'	71:SZ:27:PHE:CZ	2.56	0.40
45:S2:1383:G:OP1	55:SJ:31:VAL:CG1	2.69	0.40
45:S2:1542:G:OP1	54:SI:87:GLY:HA2	2.21	0.40
50:SE:41:VAL:HG22	50:SE:84:ILE:HG21	2.03	0.40
50:SE:107:ILE:HG23	50:SE:111:MET:HE3	2.04	0.40
51:SF:78:VAL:O	51:SF:82:ARG:HG3	2.22	0.40
54:SI:131:ASP:O	54:SI:135:ILE:HG12	2.22	0.40
62:SQ:89:ASP:HB3	62:SQ:99:ASN:HB2	2.03	0.40
66:SU:163:ASP:N	66:SU:163:ASP:OD1	2.54	0.40
73:Sb:69:LEU:HD21	73:Sb:72:CYS:SG	2.61	0.40
1:LA:377:A:H1'	1:LA:392:G:N2	2.37	0.40
1:LA:608:G:P	6:LF:315:LYS:HZ3	2.44	0.40
1:LA:611:U:H2'	1:LA:612:G:C8	2.55	0.40
1:LA:915:G:H4'	1:LA:916:A:O5'	2.21	0.40
1:LA:1531:C:H2'	1:LA:1532:U:C6	2.56	0.40
1:LA:1636:A:H5'	28:Lb:79:HIS:ND1	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:2608:A:H2'	1:LA:2609:G:H8	1.85	0.40
1:LA:3026:A:H2'	1:LA:3027:G:C8	2.57	0.40
1:LA:3213:U:C4	15:LO:121:MET:HG2	2.56	0.40
1:LA:3368:G:N2	5:LE:380:MET:O	2.49	0.40
2:LB:95:A:N3	21:LU:119:ARG:HD3	2.36	0.40
3:LC:149:A:H2'	3:LC:150:G:C8	2.57	0.40
4:LD:137:ILE:HD12	4:LD:155:LYS:HD3	2.03	0.40
5:LE:166:ILE:HD12	5:LE:169:THR:HG21	2.03	0.40
6:LF:64:SER:HA	6:LF:75:PRO:HA	2.03	0.40
11:LK:26:LYS:HB3	11:LK:35:THR:HG23	2.04	0.40
11:LK:88:TYR:CE1	11:LK:184:LYS:HB3	2.56	0.40
14:LN:119:TYR:CZ	14:LN:123:ILE:HG21	2.56	0.40
21:LU:36:ILE:HD12	21:LU:36:ILE:N	2.31	0.40
21:LU:140:VAL:O	21:LU:144:LEU:HG	2.21	0.40
27:La:70:ILE:HA	27:La:82:VAL:HA	2.03	0.40
41:Lo:78:ILE:HG13	41:Lo:82:LEU:HD12	2.04	0.40
42:Lp:2:ARG:HB3	42:Lp:5:TRP:CD1	2.56	0.40
45:S2:122:U:C4	45:S2:123:G:C5	3.09	0.40
45:S2:177:U:H2'	65:ST:191:ARG:NH2	2.36	0.40
45:S2:427:C:H2'	45:S2:428:A:C8	2.56	0.40
45:S2:1015:U:H3'	45:S2:1016:C:H5	1.85	0.40
45:S2:1390:U:P	52:SG:49:LYS:HE3	2.62	0.40
47:SB:193:THR:HA	47:SB:196:GLU:HG2	2.04	0.40
52:SG:9:VAL:HG23	52:SG:50:ILE:CD1	2.52	0.40
53:SH:92:ILE:H	53:SH:92:ILE:HG12	1.70	0.40
60:SO:147:HIS:HD2	60:SO:179:LYS:NZ	2.20	0.40
60:SO:250:TYR:CD2	60:SO:265:LEU:HB3	2.56	0.40
64:SS:122:LYS:HG2	64:SS:123:LEU:H	1.86	0.40
66:SU:122:HIS:O	66:SU:173:TYR:OH	2.38	0.40
78:Sg:33:ARG:NH1	78:Sg:37:ARG:HH21	2.20	0.40
79:Ta:1:C:H5	79:Ta:74:A:H1'	1.86	0.40
79:Ta:53:G:H2'	79:Ta:54:G:H8	1.85	0.40
1:LA:693:C:H4'	6:LF:232:SER:O	2.21	0.40
1:LA:712:U:H2'	1:LA:713:G:O4'	2.21	0.40
1:LA:1048:C:H2'	1:LA:1049:U:C6	2.56	0.40
1:LA:1082:G:H2'	1:LA:1083:A:C8	2.57	0.40
1:LA:1083:A:H2'	1:LA:1084:A:H8	1.82	0.40
1:LA:1192:A:HO2'	1:LA:1193:G:P	2.42	0.40
1:LA:1808:A:OP2	28:Lb:65:ARG:NH1	2.40	0.40
1:LA:2659:G:O3'	1:LA:2748:G:N2	2.54	0.40
1:LA:3136:C:H5"	5:LE:276:THR:HB	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:LA:3175:G:C6	1:LA:3212:A:C2	3.09	0.40
3:LC:78:G:H2'	3:LC:79:A:C8	2.56	0.40
5:LE:111:SER:O	5:LE:115:LYS:HG3	2.20	0.40
5:LE:261:MET:HE3	5:LE:261:MET:HB3	1.75	0.40
7:LG:163:LEU:HD11	7:LG:175:HIS:HB3	2.03	0.40
12:LL:212:GLU:CG	12:LL:213:PHE:H	2.34	0.40
16:LP:9:GLU:HA	16:LP:9:GLU:OE2	2.21	0.40
20:LT:90:PRO:O	20:LT:93:VAL:HG12	2.22	0.40
36:Lj:63:ARG:NH2	36:Lj:79:ASP:O	2.49	0.40
38:Ll:28:HIS:HB3	38:Ll:31:LYS:HB2	2.04	0.40
45:S2:123:G:C2	45:S2:295:A:N1	2.57	0.40
45:S2:901:G:C8	45:S2:902:G:N7	2.89	0.40
45:S2:1247:U:H4'	59:SN:92:LYS:NZ	2.36	0.40
45:S2:1789:G:H2'	45:S2:1790:A:C8	2.55	0.40
46:SA:141:LYS:HE3	46:SA:179:GLN:C	2.46	0.40
48:SC:28:ASN:OD1	48:SC:40:LEU:HD13	2.22	0.40
53:SH:115:ARG:HE	53:SH:119:ILE:HD13	1.87	0.40
55:SJ:43:LYS:HG3	55:SJ:44:ASN:N	2.35	0.40
55:SJ:99:ILE:O	55:SJ:102:ARG:HG2	2.22	0.40
59:SN:125:THR:HB	59:SN:143:LYS:HG2	2.03	0.40
61:SP:198:MET:HG2	61:SP:200:ASP:H	1.86	0.40
65:ST:194:LYS:HA	65:ST:194:LYS:HD3	1.94	0.40
66:SU:49:ILE:HG23	66:SU:175:LYS:HD3	2.03	0.40
66:SU:109:VAL:HG22	66:SU:110:GLN:H	1.86	0.40
70:SY:49:GLN:HA	70:SY:52:VAL:HG12	2.04	0.40
75:Sd:61:ARG:HA	75:Sd:61:ARG:NH1	2.36	0.40
1:LA:414:U:C5	1:LA:415:G:H1'	2.56	0.40
1:LA:662:C:H2'	1:LA:663:U:C6	2.56	0.40
1:LA:1002:A:H5'	7:LG:11:ALA:HB1	2.03	0.40
1:LA:1108:U:H2'	1:LA:1109:U:C6	2.56	0.40
1:LA:1163:G:H2'	1:LA:1164:A:H8	1.84	0.40
1:LA:1543:G:OP1	16:LP:127:TYR:OH	2.35	0.40
1:LA:2223:A:N7	1:LA:2224:U:N3	2.69	0.40
1:LA:2234:C:C2	1:LA:2235:G:C8	3.09	0.40
1:LA:2362:A:H2'	1:LA:2363:G:C8	2.57	0.40
1:LA:2688:A:H2'	1:LA:2688:A:N3	2.36	0.40
2:LB:47:C:OP2	7:LG:158:ARG:HD3	2.21	0.40
2:LB:81:U:H2'	2:LB:82:G:H8	1.86	0.40
9:LI:144:ILE:HG22	9:LI:185:ILE:HG23	2.04	0.40
11:LK:102:ASN:C	11:LK:103:ILE:HD12	2.47	0.40
12:LL:9:TYR:OH	12:LL:98:ARG:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LL:17:TYR:O	12:LL:96:VAL:HG13	2.21	0.40
13:LM:116:TYR:HD1	13:LM:117:ASP:N	2.20	0.40
16:LP:136:ASP:HB3	16:LP:139:HIS:HB2	2.03	0.40
17:LQ:142[A]:SER:HA	17:LQ:145[A]:VAL:HG22	2.02	0.40
23:LW:70:LYS:HE3	23:LW:70:LYS:HB3	1.71	0.40
30:Ld:54:LEU:HD12	30:Ld:54:LEU:HA	1.90	0.40
31:Le:62:LEU:HD23	31:Le:62:LEU:HA	1.88	0.40
32:Lf:11:GLU:OE2	32:Lf:74:ARG:NH2	2.51	0.40
32:Lf:23:VAL:HB	32:Lf:28:ARG:HD2	2.03	0.40
33:Lg:34:LYS:HE2	33:Lg:34:LYS:HB3	1.68	0.40
33:Lg:71:HIS:ND1	33:Lg:71:HIS:N	2.69	0.40
43:Lq:9:LYS:HE3	43:Lq:9:LYS:HB2	1.97	0.40
45:S2:183:U:H2'	45:S2:184:C:C6	2.56	0.40
45:S2:390:G:H8	45:S2:1731:A:O2'	2.05	0.40
45:S2:415:C:C2	45:S2:418:G:N1	2.89	0.40
45:S2:1064:G:C4	45:S2:1065:A:C8	3.09	0.40
45:S2:1563:C:O2'	45:S2:1564:U:P	2.80	0.40
46:SA:72:LEU:HD12	46:SA:72:LEU:HA	1.78	0.40
46:SA:123:VAL:O	46:SA:126:VAL:HG12	2.20	0.40
47:SB:106:LYS:HB3	47:SB:109:LYS:HE3	2.02	0.40
49:SD:70:ASN:OD1	49:SD:70:ASN:N	2.55	0.40
51:SF:97:VAL:HG12	51:SF:98:ASP:N	2.37	0.40
59:SN:103:LEU:HD12	59:SN:103:LEU:HA	1.96	0.40
62:SQ:105:PHE:H	62:SQ:214:LYS:CG	2.34	0.40
62:SQ:106:THR:HG21	62:SQ:109:LYS:HD3	2.03	0.40
64:SS:100:ARG:HH22	64:SS:236:ILE:HG21	1.87	0.40
65:ST:27:PHE:HZ	65:ST:111:LEU:CD2	2.33	0.40
66:SU:64:VAL:HG13	66:SU:64:VAL:O	2.21	0.40
67:SV:61:GLU:H	67:SV:61:GLU:HG3	1.75	0.40
67:SV:152:ILE:H	67:SV:152:ILE:HG12	1.73	0.40
69:SX:94:ILE:HG21	74:Sc:16:ARG:HH21	1.86	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%)	231 (93%)	18 (7%)	0	100	100
5	LE	384/386 (100%)	358 (93%)	26 (7%)	0	100	100
6	LF	359/361 (99%)	338 (94%)	21 (6%)	0	100	100
7	LG	292/294 (99%)	274 (94%)	18 (6%)	0	100	100
8	LH	163/175 (93%)	151 (93%)	12 (7%)	0	100	100
9	LI	220/222 (99%)	210 (96%)	10 (4%)	0	100	100
10	LJ	231/233 (99%)	220 (95%)	11 (5%)	0	100	100
11	LK	189/191 (99%)	172 (91%)	17 (9%)	0	100	100
12	LL	216/218 (99%)	201 (93%)	15 (7%)	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%)	190 (94%)	11 (6%)	0	100	100
17	LQ	195/197 (99%)	189 (97%)	6 (3%)	0	100	100
18	LR	181/183 (99%)	171 (94%)	10 (6%)	0	100	100
19	LS	183/185 (99%)	173 (94%)	10 (6%)	0	100	100
20	LT	186/188 (99%)	180 (97%)	6 (3%)	0	100	100
21	LU	169/171 (99%)	161 (95%)	8 (5%)	0	100	100
22	LV	157/159 (99%)	147 (94%)	10 (6%)	0	100	100
23	LW	98/100 (98%)	95 (97%)	3 (3%)	0	100	100
24	LX	134/136 (98%)	132 (98%)	2 (2%)	0	100	100
25	LY	63/65 (97%)	61 (97%)	2 (3%)	0	100	100
26	LZ	119/121 (98%)	116 (98%)	3 (2%)	0	100	100
27	La	123/125 (98%)	118 (96%)	5 (4%)	0	100	100
28	Lb	133/135 (98%)	123 (92%)	10 (8%)	0	100	100
29	Lc	146/148 (99%)	135 (92%)	11 (8%)	0	100	100
30	Ld	56/58 (97%)	50 (89%)	6 (11%)	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%)	115 (92%)	10 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	112 (96%)	5 (4%)	0	100	100
37	Lk	97/99 (98%)	92 (95%)	5 (5%)	0	100	100
38	Ll	79/81 (98%)	77 (98%)	2 (2%)	0	100	100
39	Lm	75/77 (97%)	75 (100%)	0	0	100	100
40	Ln	48/50 (96%)	46 (96%)	2 (4%)	0	100	100
41	Lo	50/52 (96%)	48 (96%)	2 (4%)	0	100	100
42	Lp	23/25 (92%)	23 (100%)	0	0	100	100
43	Lq	101/103 (98%)	94 (93%)	7 (7%)	0	100	100
44	Lr	89/91 (98%)	85 (96%)	4 (4%)	0	100	100
46	SA	220/223 (99%)	212 (96%)	7 (3%)	1 (0%)	25	49
47	SB	204/206 (99%)	191 (94%)	13 (6%)	0	100	100
48	SC	90/92 (98%)	83 (92%)	7 (8%)	0	100	100
49	SD	119/124 (96%)	97 (82%)	22 (18%)	0	100	100
50	SE	115/117 (98%)	108 (94%)	7 (6%)	0	100	100
51	SF	139/141 (99%)	129 (93%)	9 (6%)	1 (1%)	19	42
52	SG	117/125 (94%)	105 (90%)	12 (10%)	0	100	100
53	SH	143/145 (99%)	136 (95%)	7 (5%)	0	100	100
54	SI	141/143 (99%)	130 (92%)	11 (8%)	0	100	100
55	SJ	98/101 (97%)	91 (93%)	7 (7%)	0	100	100
56	SK	80/82 (98%)	73 (91%)	7 (9%)	0	100	100
57	SL	61/63 (97%)	57 (93%)	4 (7%)	0	100	100
58	SM	51/53 (96%)	51 (100%)	0	0	100	100
59	SN	71/73 (97%)	58 (82%)	13 (18%)	0	100	100
60	SO	310/312 (99%)	288 (93%)	22 (7%)	0	100	100
61	SP	204/206 (99%)	182 (89%)	21 (10%)	1 (0%)	25	49
62	SQ	222/232 (96%)	207 (93%)	15 (7%)	0	100	100
63	SR	214/217 (99%)	196 (92%)	18 (8%)	0	100	100
64	SS	256/260 (98%)	234 (91%)	22 (9%)	0	100	100
65	ST	226/228 (99%)	215 (95%)	11 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
66	SU	182/185 (98%)	172 (94%)	9 (5%)	1 (0%)	25 49
67	SV	183/199 (92%)	169 (92%)	14 (8%)	0	100 100
68	SW	182/185 (98%)	171 (94%)	11 (6%)	0	100 100
69	SX	140/146 (96%)	133 (95%)	7 (5%)	0	100 100
70	SY	148/150 (99%)	143 (97%)	5 (3%)	0	100 100
71	SZ	125/128 (98%)	108 (86%)	16 (13%)	1 (1%)	16 38
72	Sa	85/87 (98%)	78 (92%)	7 (8%)	0	100 100
73	Sb	127/129 (98%)	119 (94%)	8 (6%)	0	100 100
74	Sc	142/144 (99%)	134 (94%)	8 (6%)	0	100 100
75	Sd	132/134 (98%)	125 (95%)	7 (5%)	0	100 100
76	Se	95/97 (98%)	89 (94%)	6 (6%)	0	100 100
77	Sf	79/81 (98%)	73 (92%)	6 (8%)	0	100 100
78	Sg	55/57 (96%)	50 (91%)	5 (9%)	0	100 100
All	All	10914/11115 (98%)	10236 (94%)	673 (6%)	5 (0%)	100 100

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
46	SA	164	VAL
51	SF	40	GLU
66	SU	186	PRO
71	SZ	115	ILE
61	SP	197	ILE

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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%)	182 (96%)	8 (4%)	25 53
5	LE	318/322 (99%)	309 (97%)	9 (3%)	38 68

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
6	LF	288/288 (100%)	273 (95%)	15 (5%)	19 44
7	LG	241/243 (99%)	234 (97%)	7 (3%)	37 67
8	LH	139/154 (90%)	131 (94%)	8 (6%)	17 39
9	LI	186/186 (100%)	182 (98%)	4 (2%)	47 76
10	LJ	187/191 (98%)	181 (97%)	6 (3%)	34 63
11	LK	168/171 (98%)	154 (92%)	14 (8%)	9 22
12	LL	185/185 (100%)	174 (94%)	11 (6%)	16 38
13	LM	145/147 (99%)	133 (92%)	12 (8%)	9 22
14	LN	154/154 (100%)	146 (95%)	8 (5%)	19 44
15	LO	107/107 (100%)	103 (96%)	4 (4%)	29 58
16	LP	175/175 (100%)	173 (99%)	2 (1%)	70 87
17	LQ	160/160 (100%)	155 (97%)	5 (3%)	35 64
18	LR	138/145 (95%)	134 (97%)	4 (3%)	37 67
19	LS	150/150 (100%)	146 (97%)	4 (3%)	40 69
20	LT	152/153 (99%)	148 (97%)	4 (3%)	41 70
21	LU	155/155 (100%)	144 (93%)	11 (7%)	12 30
22	LV	135/136 (99%)	126 (93%)	9 (7%)	13 33
23	LW	87/87 (100%)	81 (93%)	6 (7%)	13 31
24	LX	104/104 (100%)	99 (95%)	5 (5%)	21 48
25	LY	54/57 (95%)	51 (94%)	3 (6%)	17 41
26	LZ	104/105 (99%)	98 (94%)	6 (6%)	17 39
27	La	108/108 (100%)	102 (94%)	6 (6%)	17 41
28	Lb	112/115 (97%)	107 (96%)	5 (4%)	23 50
29	Lc	117/118 (99%)	111 (95%)	6 (5%)	20 45
30	Ld	46/46 (100%)	43 (94%)	3 (6%)	14 34
31	Le	81/81 (100%)	77 (95%)	4 (5%)	21 47
32	Lf	92/96 (96%)	84 (91%)	8 (9%)	8 20
33	Lg	108/109 (99%)	103 (95%)	5 (5%)	23 49
34	Lh	90/90 (100%)	83 (92%)	7 (8%)	10 26
35	Li	95/95 (100%)	94 (99%)	1 (1%)	70 87
36	Lj	104/104 (100%)	103 (99%)	1 (1%)	73 89

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	Lk	80/81 (99%)	75 (94%)	5 (6%)	15	35
38	Ll	67/67 (100%)	65 (97%)	2 (3%)	36	65
39	Lm	68/68 (100%)	67 (98%)	1 (2%)	60	83
40	Ln	45/45 (100%)	44 (98%)	1 (2%)	47	76
41	Lo	45/47 (96%)	45 (100%)	0	100	100
42	Lp	22/23 (96%)	20 (91%)	2 (9%)	7	19
43	Lq	87/88 (99%)	85 (98%)	2 (2%)	45	74
44	Lr	71/71 (100%)	69 (97%)	2 (3%)	38	68
46	SA	182/182 (100%)	172 (94%)	10 (6%)	18	41
47	SB	172/173 (99%)	168 (98%)	4 (2%)	45	74
48	SC	77/85 (91%)	75 (97%)	2 (3%)	41	70
49	SD	88/100 (88%)	87 (99%)	1 (1%)	70	87
50	SE	95/98 (97%)	92 (97%)	3 (3%)	34	63
51	SF	117/117 (100%)	114 (97%)	3 (3%)	41	70
52	SG	101/113 (89%)	95 (94%)	6 (6%)	16	38
53	SH	127/128 (99%)	118 (93%)	9 (7%)	12	30
54	SI	115/115 (100%)	112 (97%)	3 (3%)	41	70
55	SJ	93/94 (99%)	92 (99%)	1 (1%)	70	87
56	SK	67/73 (92%)	65 (97%)	2 (3%)	36	65
57	SL	55/56 (98%)	52 (94%)	3 (6%)	18	41
58	SM	47/47 (100%)	46 (98%)	1 (2%)	48	76
59	SN	56/64 (88%)	56 (100%)	0	100	100
60	SO	250/257 (97%)	240 (96%)	10 (4%)	27	55
61	SP	170/173 (98%)	157 (92%)	13 (8%)	11	27
62	SQ	200/205 (98%)	190 (95%)	10 (5%)	20	46
63	SR	175/176 (99%)	162 (93%)	13 (7%)	11	28
64	SS	220/221 (100%)	206 (94%)	14 (6%)	14	34
65	ST	189/195 (97%)	181 (96%)	8 (4%)	25	53
66	SU	163/165 (99%)	152 (93%)	11 (7%)	13	33
67	SV	148/160 (92%)	140 (95%)	8 (5%)	18	42
68	SW	156/158 (99%)	154 (99%)	2 (1%)	65	85

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
69	SX	126/129 (98%)	120 (95%)	6 (5%)	21 48
70	SY	127/127 (100%)	122 (96%)	5 (4%)	27 56
71	SZ	90/97 (93%)	89 (99%)	1 (1%)	70 87
72	Sa	71/74 (96%)	67 (94%)	4 (6%)	17 41
73	Sb	110/110 (100%)	106 (96%)	4 (4%)	30 59
74	Sc	119/119 (100%)	114 (96%)	5 (4%)	25 53
75	Sd	102/112 (91%)	101 (99%)	1 (1%)	73 89
76	Se	82/83 (99%)	81 (99%)	1 (1%)	67 86
77	Sf	70/70 (100%)	69 (99%)	1 (1%)	62 84
78	Sg	48/49 (98%)	45 (94%)	3 (6%)	15 35
All	All	9168/9345 (98%)	8774 (96%)	394 (4%)	27 52

All (394) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	LD	7	ASN
4	LD	41	ILE
4	LD	45	VAL
4	LD	47	GLN
4	LD	52	SER
4	LD	116	VAL
4	LD	191	LEU
4	LD	243	THR
5	LE	86	VAL
5	LE	104	THR
5	LE	120	LYS
5	LE	199	PHE
5	LE	308	MET
5	LE	318	LYS
5	LE	346	THR
5	LE	351	LEU
5	LE	382	THR
6	LF	6	VAL
6	LF	9	HIS
6	LF	12	THR
6	LF	20	LEU
6	LF	77	VAL
6	LF	98	ARG

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Mol	Chain	Res	Type
6	LF	111	VAL
6	LF	148	ILE
6	LF	178	LEU
6	LF	215	ILE
6	LF	255	PHE
6	LF	276	LEU
6	LF	282	SER
6	LF	286	VAL
6	LF	333	VAL
7	LG	62	CYS
7	LG	163	LEU
7	LG	211	LEU
7	LG	220	SER
7	LG	232	ASP
7	LG	241	THR
7	LG	264	GLN
8	LH	25	VAL
8	LH	88	SER
8	LH	89	THR
8	LH	93	VAL
8	LH	96	VAL
8	LH	98	VAL
8	LH	129	GLU
8	LH	142	ASP
9	LI	62	ILE
9	LI	143	THR
9	LI	146	GLN
9	LI	239	LEU
10	LJ	36	ILE
10	LJ	59	GLN
10	LJ	68	ARG
10	LJ	132	VAL
10	LJ	151	VAL
10	LJ	219	ASP
11	LK	10	ILE
11	LK	12	VAL
11	LK	17	THR
11	LK	27	VAL
11	LK	28	VAL
11	LK	35	THR
11	LK	55	VAL
11	LK	79	ILE

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Mol	Chain	Res	Type
11	LK	82	VAL
11	LK	92	TYR
11	LK	133	THR
11	LK	150	SER
11	LK	155	SER
11	LK	167	VAL
12	LL	7	ARG
12	LL	26	VAL
12	LL	42	THR
12	LL	53	VAL
12	LL	78	THR
12	LL	79	VAL
12	LL	89	VAL
12	LL	96	VAL
12	LL	101	LYS
12	LL	169	LYS
12	LL	179	PRO
13	LM	7	ASN
13	LM	21	ILE
13	LM	30	LEU
13	LM	39	GLN
13	LM	44	THR
13	LM	54	VAL
13	LM	65	ILE
13	LM	71	VAL
13	LM	101	ASN
13	LM	107	ASP
13	LM	130	VAL
13	LM	138	VAL
14	LN	5	LYS
14	LN	34	SER
14	LN	58	VAL
14	LN	69	VAL
14	LN	104	ARG
14	LN	125	VAL
14	LN	175	SER
14	LN	183	ARG
15	LO	14	LEU
15	LO	15	VAL
15	LO	20	VAL
15	LO	82	SER
16	LP	60	VAL

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Mol	Chain	Res	Type
16	LP	132	VAL
17	LQ	34[A]	VAL
17	LQ	104[A]	VAL
17	LQ	108[A]	ILE
17	LQ	119[A]	VAL
17	LQ	126[A]	VAL
18	LR	9	THR
18	LR	16	SER
18	LR	29	THR
18	LR	65	SER
19	LS	17	THR
19	LS	62	VAL
19	LS	83	VAL
19	LS	84	VAL
20	LT	22	VAL
20	LT	24	LEU
20	LT	57	VAL
20	LT	59	SER
21	LU	10	ILE
21	LU	16	THR
21	LU	32	SER
21	LU	59	VAL
21	LU	85	SER
21	LU	97	VAL
21	LU	108	GLN
21	LU	135	VAL
21	LU	160	THR
21	LU	162	THR
21	LU	172	TYR
22	LV	26	HIS
22	LV	29	THR
22	LV	47	SER
22	LV	49	GLN
22	LV	63	VAL
22	LV	72	VAL
22	LV	96	ILE
22	LV	99	SER
22	LV	141	VAL
23	LW	57	THR
23	LW	63	VAL
23	LW	65	VAL
23	LW	70	LYS

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Mol	Chain	Res	Type
23	LW	76	LEU
23	LW	96	VAL
24	LX	19	VAL
24	LX	84	SER
24	LX	89	ASP
24	LX	112	SER
24	LX	131	SER
25	LY	19	THR
25	LY	34	SER
25	LY	36	SER
26	LZ	37	THR
26	LZ	62	VAL
26	LZ	107	VAL
26	LZ	110	VAL
26	LZ	127	THR
26	LZ	133	LEU
27	La	8	VAL
27	La	10	SER
27	La	24	SER
27	La	70	ILE
27	La	74	TYR
27	La	105	VAL
28	Lb	14	VAL
28	Lb	68	ILE
28	Lb	103	GLN
28	Lb	132	SER
28	Lb	134	LEU
29	Lc	43	ILE
29	Lc	76	ASP
29	Lc	91	LEU
29	Lc	97	GLU
29	Lc	145	VAL
29	Lc	146	GLU
30	Ld	19	ASN
30	Ld	35	VAL
30	Ld	47	LEU
31	Le	38	LYS
31	Le	67	VAL
31	Le	81	VAL
31	Le	98	SER
32	Lf	13	THR
32	Lf	16	LEU

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Mol	Chain	Res	Type
32	Lf	27	LYS
32	Lf	61	LYS
32	Lf	84	ASP
32	Lf	91	SER
32	Lf	102	LYS
32	Lf	109	VAL
33	Lg	15	LYS
33	Lg	41	VAL
33	Lg	71	HIS
33	Lg	79	VAL
33	Lg	107	VAL
34	Lh	33	GLU
34	Lh	40	ASP
34	Lh	42	GLN
34	Lh	45	LEU
34	Lh	56	SER
34	Lh	98	VAL
34	Lh	105	SER
35	Li	67	LYS
36	Lj	9	LEU
37	Lk	3	VAL
37	Lk	17	VAL
37	Lk	37	THR
37	Lk	51	SER
37	Lk	97	SER
38	Ll	19	CYS
38	Ll	44	THR
39	Lm	40	GLN
40	Ln	23	LEU
42	Lp	10	THR
42	Lp	14	LYS
43	Lq	34	SER
43	Lq	60	LYS
44	Lr	59	CYS
44	Lr	72	SER
46	SA	48	VAL
46	SA	93	ASP
46	SA	128	GLU
46	SA	141	LYS
46	SA	158	ILE
46	SA	160	SER
46	SA	162	GLN

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Mol	Chain	Res	Type
46	SA	164	VAL
46	SA	165	ASN
46	SA	181	VAL
47	SB	118	LEU
47	SB	133	VAL
47	SB	165	LEU
47	SB	190	ILE
48	SC	33	GLU
48	SC	41	TYR
49	SD	120	VAL
50	SE	14	THR
50	SE	82	ASN
50	SE	86	VAL
51	SF	7	VAL
51	SF	29	ILE
51	SF	69	VAL
52	SG	9	VAL
52	SG	32	LYS
52	SG	46	LEU
52	SG	63	LYS
52	SG	115	LEU
52	SG	119	LEU
53	SH	21	ASN
53	SH	32	LEU
53	SH	38	VAL
53	SH	45	LEU
53	SH	69	ILE
53	SH	103	ASN
53	SH	111	ASP
53	SH	131	LEU
53	SH	134	ARG
54	SI	34	VAL
54	SI	71	VAL
54	SI	114	VAL
55	SJ	116	VAL
56	SK	26	LYS
56	SK	92	ILE
57	SL	5	THR
57	SL	39	THR
57	SL	56	LEU
58	SM	40	ARG
60	SO	72	THR

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Mol	Chain	Res	Type
60	SO	89	LEU
60	SO	92	TRP
60	SO	104	VAL
60	SO	151	VAL
60	SO	157	VAL
60	SO	169	ILE
60	SO	209	THR
60	SO	265	LEU
60	SO	270	LEU
61	SP	23	HIS
61	SP	29	VAL
61	SP	39	ASN
61	SP	41	ARG
61	SP	46	HIS
61	SP	47	VAL
61	SP	48	ILE
61	SP	96	THR
61	SP	111	ILE
61	SP	138	TYR
61	SP	143	VAL
61	SP	184	LEU
61	SP	197	ILE
62	SQ	43	VAL
62	SQ	59	ASP
62	SQ	70	LEU
62	SQ	129	THR
62	SQ	153	HIS
62	SQ	154	SER
62	SQ	159	SER
62	SQ	185	THR
62	SQ	192	VAL
62	SQ	215	VAL
63	SR	36	VAL
63	SR	51	THR
63	SR	61	LEU
63	SR	68	ILE
63	SR	69	ILE
63	SR	86	VAL
63	SR	108	ASN
63	SR	111	VAL
63	SR	117	THR
63	SR	121	VAL

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Mol	Chain	Res	Type
63	SR	165	VAL
63	SR	170	ILE
63	SR	193	VAL
64	SS	46	VAL
64	SS	61	VAL
64	SS	70	VAL
64	SS	76	VAL
64	SS	78	THR
64	SS	112	HIS
64	SS	114	ILE
64	SS	156	VAL
64	SS	166	SER
64	SS	170	THR
64	SS	184	THR
64	SS	195	ILE
64	SS	214	LEU
64	SS	227	VAL
65	ST	36	VAL
65	ST	59	GLN
65	ST	86	PRO
65	ST	108	VAL
65	ST	128	THR
65	ST	153	VAL
65	ST	169	TYR
65	ST	180	THR
66	SU	20	VAL
66	SU	99	LEU
66	SU	136	VAL
66	SU	150	GLN
66	SU	174	ASN
66	SU	176	LEU
66	SU	179	LYS
66	SU	181	ILE
66	SU	182	VAL
66	SU	184	GLU
66	SU	187	SER
67	SV	17	LYS
67	SV	45	SER
67	SV	46	VAL
67	SV	61	GLU
67	SV	75	LYS
67	SV	76	THR

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Mol	Chain	Res	Type
67	SV	90	LEU
67	SV	155	SER
68	SW	9	SER
68	SW	60	LEU
69	SX	21	ASN
69	SX	25	VAL
69	SX	33	ARG
69	SX	58	CYS
69	SX	75	VAL
69	SX	125	VAL
70	SY	11	ILE
70	SY	87	ASP
70	SY	97	SER
70	SY	132	VAL
70	SY	143	SER
71	SZ	67	VAL
72	Sa	32	VAL
72	Sa	46	ILE
72	Sa	66	ASP
72	Sa	82	VAL
73	Sb	31	SER
73	Sb	38	LEU
73	Sb	40	VAL
73	Sb	66	ASN
74	Sc	11	SER
74	Sc	57	LEU
74	Sc	59	ILE
74	Sc	65	ASN
74	Sc	120	VAL
75	Sd	9	THR
76	Se	73	TYR
77	Sf	30	SER
78	Sg	18	THR
78	Sg	45	VAL
78	Sg	56	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (95) such sidechains are listed below:

Mol	Chain	Res	Type
4	LD	97	ASN
4	LD	205	ASN
5	LE	109	HIS

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Mol	Chain	Res	Type
5	LE	182	GLN
5	LE	224	HIS
6	LF	201	GLN
6	LF	279	HIS
7	LG	151	GLN
7	LG	296	GLN
8	LH	61	ASN
9	LI	25	GLN
9	LI	186	HIS
9	LI	231	ASN
10	LJ	240	ASN
11	LK	96	HIS
12	LL	12	GLN
12	LL	209	ASN
13	LM	7	ASN
13	LM	62	ASN
13	LM	90	GLN
13	LM	150	ASN
14	LN	106	GLN
15	LO	119	GLN
17	LQ	42[A]	ASN
19	LS	9	GLN
22	LV	103	GLN
23	LW	101	ASN
24	LX	98	ASN
25	LY	59	HIS
26	LZ	85	GLN
28	Lb	127	ASN
29	Lc	120	ASN
30	Ld	6	ASN
30	Ld	42	ASN
31	Le	75	ASN
35	Li	18	ASN
35	Li	52	GLN
38	Ll	69	HIS
39	Lm	40	GLN
39	Lm	57	ASN
46	SA	179	GLN
47	SB	66	GLN
47	SB	79	ASN
47	SB	95	ASN
47	SB	200	ASN

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Mol	Chain	Res	Type
48	SC	9	ASN
48	SC	13	GLN
48	SC	29	GLN
48	SC	39	ASN
49	SD	96	GLN
51	SF	32	ASN
53	SH	6	GLN
53	SH	71	GLN
55	SJ	105	GLN
56	SK	82	HIS
58	SM	37	ASN
60	SO	106	HIS
60	SO	184	ASN
60	SO	248	ASN
61	SP	46	HIS
61	SP	168	HIS
62	SQ	74	GLN
62	SQ	124	ASN
62	SQ	146	GLN
62	SQ	157	GLN
62	SQ	183	GLN
62	SQ	209	ASN
63	SR	189	GLN
64	SS	50	ASN
64	SS	209	HIS
65	ST	13	GLN
65	ST	139	ASN
65	ST	199	GLN
66	SU	19	GLN
66	SU	89	HIS
66	SU	122	HIS
67	SV	32	GLN
67	SV	52	ASN
67	SV	94	ASN
67	SV	175	GLN
68	SW	38	ASN
68	SW	131	GLN
68	SW	139	GLN
69	SX	92	HIS
70	SY	105	ASN
71	SZ	80	HIS
72	Sa	7	GLN

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Mol	Chain	Res	Type
74	Sc	28	ASN
75	Sd	34	ASN
75	Sd	107	GLN
76	Se	8	ASN
76	Se	25	ASN
76	Se	72	HIS
77	Sf	51	GLN
78	Sg	57	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	LA	3181/3393 (93%)	752 (23%)	33 (1%)
2	LB	120/121 (99%)	24 (20%)	1 (0%)
3	LC	157/158 (99%)	43 (27%)	3 (1%)
45	S2	1768/1800 (98%)	764 (43%)	29 (1%)
79	Ta	76/77 (98%)	44 (57%)	0
All	All	5302/5549 (95%)	1627 (30%)	66 (1%)

All (1627) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	LA	4	U
1	LA	6	A
1	LA	13	A
1	LA	14	U
1	LA	25	U
1	LA	26	A
1	LA	34	A
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	72	C
1	LA	92	G
1	LA	99	A
1	LA	108	A
1	LA	109	A

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Mol	Chain	Res	Type
1	LA	110	G
1	LA	111	C
1	LA	113	C
1	LA	117	U
1	LA	121	A
1	LA	122	A
1	LA	130	A
1	LA	133	U
1	LA	134	U
1	LA	135	C
1	LA	136	G
1	LA	147	U
1	LA	148	G
1	LA	156	G
1	LA	157	A
1	LA	163	C
1	LA	170	G
1	LA	176	G
1	LA	177	U
1	LA	178	U
1	LA	182	U
1	LA	187	A
1	LA	190	U
1	LA	191	U
1	LA	193	C
1	LA	197	G
1	LA	198	A
1	LA	200	C
1	LA	206	G
1	LA	210	U
1	LA	213	A
1	LA	218	G
1	LA	219	A
1	LA	221	A
1	LA	232	G
1	LA	233	C
1	LA	239	G
1	LA	240	U
1	LA	241	G
1	LA	242	C
1	LA	243	G
1	LA	246	U

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Mol	Chain	Res	Type
1	LA	248	U
1	LA	249	U
1	LA	250	U
1	LA	251	G
1	LA	252	U
1	LA	253	A
1	LA	258	G
1	LA	260	C
1	LA	286	U
1	LA	295	A
1	LA	298	U
1	LA	305	U
1	LA	306	A
1	LA	308	A
1	LA	315	C
1	LA	323	A
1	LA	329	U
1	LA	338	A
1	LA	339	C
1	LA	342	A
1	LA	352	A
1	LA	362	U
1	LA	376	G
1	LA	398	A
1	LA	399	A
1	LA	402	A
1	LA	403	C
1	LA	414	U
1	LA	415	G
1	LA	420	G
1	LA	421	G
1	LA	422	A
1	LA	440	A
1	LA	441	U
1	LA	443	G
1	LA	445	G
1	LA	447	U
1	LA	448	U
1	LA	450	G
1	LA	451	U
1	LA	487	U
1	LA	488	U

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Mol	Chain	Res	Type
1	LA	489	C
1	LA	490	A
1	LA	491	C
1	LA	492	U
1	LA	493	G
1	LA	494	G
1	LA	509	G
1	LA	517	G
1	LA	518	A
1	LA	520	A
1	LA	523	U
1	LA	524	C
1	LA	525	C
1	LA	526	A
1	LA	527	U
1	LA	529	G
1	LA	530	G
1	LA	534	G
1	LA	535	U
1	LA	539	U
1	LA	540	U
1	LA	541	G
1	LA	542	C
1	LA	544	U
1	LA	545	C
1	LA	550	A
1	LA	551	G
1	LA	552	U
1	LA	554	U
1	LA	556	A
1	LA	558	A
1	LA	561	C
1	LA	564	U
1	LA	565	G
1	LA	566	G
1	LA	567	G
1	LA	568	A
1	LA	569	A
1	LA	571	A
1	LA	572	C
1	LA	578	G
1	LA	588	A

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Mol	Chain	Res	Type
1	LA	591	A
1	LA	592	C
1	LA	593	U
1	LA	604	U
1	LA	606	A
1	LA	608	G
1	LA	609	G
1	LA	610	A
1	LA	618	A
1	LA	619	U
1	LA	621	A
1	LA	624	G
1	LA	636	C
1	LA	637	C
1	LA	644	A
1	LA	648	A
1	LA	659	A
1	LA	661	U
1	LA	666	C
1	LA	676	A
1	LA	688	U
1	LA	689	A
1	LA	690	A
1	LA	691	A
1	LA	697	U
1	LA	704	A
1	LA	716	C
1	LA	717	G
1	LA	719	A
1	LA	726	G
1	LA	729	C
1	LA	730	U
1	LA	733	C
1	LA	737	A
1	LA	742	C
1	LA	757	C
1	LA	760	A
1	LA	763	U
1	LA	764	C
1	LA	765	U
1	LA	766	U
1	LA	768	G

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Mol	Chain	Res	Type
1	LA	769	G
1	LA	770	A
1	LA	775	U
1	LA	779	A
1	LA	780	G
1	LA	784	G
1	LA	805	A
1	LA	807	A
1	LA	816	A
1	LA	829	A
1	LA	831	G
1	LA	848	C
1	LA	856	G
1	LA	860	C
1	LA	873	U
1	LA	878	U
1	LA	895	A
1	LA	896	U
1	LA	905	A
1	LA	906	G
1	LA	907	G
1	LA	913	A
1	LA	915	G
1	LA	916	A
1	LA	920	A
1	LA	922	C
1	LA	923	G
1	LA	924	A
1	LA	936	G
1	LA	937	C
1	LA	942	U
1	LA	943	C
1	LA	952	G
1	LA	958	C
1	LA	959	U
1	LA	977	G
1	LA	978	U
1	LA	979	A
1	LA	980	U
1	LA	984	U
1	LA	993	G
1	LA	1001	A

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Mol	Chain	Res	Type
1	LA	1012	G
1	LA	1013	U
1	LA	1014	U
1	LA	1015	C
1	LA	1016	C
1	LA	1023	G
1	LA	1027	U
1	LA	1033	U
1	LA	1034	G
1	LA	1035	A
1	LA	1036	C
1	LA	1037	C
1	LA	1038	U
1	LA	1044	C
1	LA	1046	A
1	LA	1048	C
1	LA	1062	G
1	LA	1063	A
1	LA	1068	C
1	LA	1069	U
1	LA	1070	U
1	LA	1071	G
1	LA	1080	U
1	LA	1089	G
1	LA	1092	A
1	LA	1093	U
1	LA	1094	U
1	LA	1095	U
1	LA	1096	G
1	LA	1097	A
1	LA	1102	A
1	LA	1103	G
1	LA	1115	G
1	LA	1116	G
1	LA	1130	G
1	LA	1143	U
1	LA	1149	A
1	LA	1152	A
1	LA	1158	A
1	LA	1159	C
1	LA	1167	U
1	LA	1173	G

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Mol	Chain	Res	Type
1	LA	1179	A
1	LA	1180	U
1	LA	1181	A
1	LA	1191	C
1	LA	1192	A
1	LA	1193	G
1	LA	1195	C
1	LA	1197	C
1	LA	1198	C
1	LA	1200	C
1	LA	1207	U
1	LA	1213	U
1	LA	1216	A
1	LA	1217	U
1	LA	1218	C
1	LA	1220	A
1	LA	1221	G
1	LA	1222	A
1	LA	1225	G
1	LA	1227	C
1	LA	1230	A
1	LA	1231	C
1	LA	1234	U
1	LA	1235	G
1	LA	1238	C
1	LA	1240	U
1	LA	1241	G
1	LA	1243	A
1	LA	1244	A
1	LA	1245	G
1	LA	1247	C
1	LA	1248	G
1	LA	1251	A
1	LA	1253	C
1	LA	1255	G
1	LA	1257	U
1	LA	1258	A
1	LA	1260	G
1	LA	1261	G
1	LA	1262	A
1	LA	1263	G
1	LA	1267	G

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Mol	Chain	Res	Type
1	LA	1268	U
1	LA	1271	C
1	LA	1272	A
1	LA	1273	A
1	LA	1274	C
1	LA	1275	U
1	LA	1276	C
1	LA	1277	A
1	LA	1278	C
1	LA	1283	C
1	LA	1284	G
1	LA	1285	A
1	LA	1286	A
1	LA	1294	G
1	LA	1301	A
1	LA	1306	G
1	LA	1307	A
1	LA	1308	U
1	LA	1316	A
1	LA	1323	U
1	LA	1325	A
1	LA	1329	A
1	LA	1344	G
1	LA	1348	G
1	LA	1349	A
1	LA	1350	U
1	LA	1351	A
1	LA	1354	A
1	LA	1355	U
1	LA	1356	G
1	LA	1385	A
1	LA	1391	G
1	LA	1398	A
1	LA	1399	G
1	LA	1413	G
1	LA	1417	A
1	LA	1418	A
1	LA	1433	G
1	LA	1436	C
1	LA	1445	A
1	LA	1468	C
1	LA	1469	U

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Mol	Chain	Res	Type
1	LA	1480	A
1	LA	1481	A
1	LA	1482	G
1	LA	1486	G
1	LA	1501	C
1	LA	1510	U
1	LA	1538	A
1	LA	1548	U
1	LA	1554	U
1	LA	1556	A
1	LA	1560	G
1	LA	1561	C
1	LA	1562	C
1	LA	1563	U
1	LA	1564	G
1	LA	1566	U
1	LA	1569	U
1	LA	1570	A
1	LA	1571	U
1	LA	1573	C
1	LA	1574	A
1	LA	1575	G
1	LA	1581	C
1	LA	1582	A
1	LA	1586	A
1	LA	1588	A
1	LA	1592	A
1	LA	1624	A
1	LA	1625	U
1	LA	1626	U
1	LA	1627	C
1	LA	1628	U
1	LA	1639	G
1	LA	1641	A
1	LA	1642	A
1	LA	1644	U
1	LA	1646	A
1	LA	1656	C
1	LA	1682	A
1	LA	1687	U
1	LA	1694	U
1	LA	1704	U

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Mol	Chain	Res	Type
1	LA	1711	G
1	LA	1712	G
1	LA	1713	A
1	LA	1723	U
1	LA	1724	C
1	LA	1739	U
1	LA	1740	A
1	LA	1741	U
1	LA	1745	U
1	LA	1748	A
1	LA	1749	A
1	LA	1750	G
1	LA	1760	C
1	LA	1761	C
1	LA	1762	U
1	LA	1763	U
1	LA	1764	U
1	LA	1774	G
1	LA	1779	G
1	LA	1787	C
1	LA	1788	G
1	LA	1795	G
1	LA	1796	A
1	LA	1805	A
1	LA	1815	A
1	LA	1818	U
1	LA	1819	U
1	LA	1820	U
1	LA	1829	G
1	LA	1838	A
1	LA	1839	U
1	LA	1841	A
1	LA	1845	C
1	LA	1848	C
1	LA	1849	A
1	LA	1865	C
1	LA	1866	A
1	LA	1877	G
1	LA	1879	U
1	LA	1883	A
1	LA	1885	A
1	LA	1892	A

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Mol	Chain	Res	Type
1	LA	1901	G
1	LA	1905	G
1	LA	1906	C
1	LA	1907	A
1	LA	1908	A
1	LA	1925	C
1	LA	1934	G
1	LA	1936	U
1	LA	1946	G
1	LA	1950	C
1	LA	1951	G
1	LA	1952	G
1	LA	1953	G
1	LA	2093	C
1	LA	2094	G
1	LA	2096	U
1	LA	2097	C
1	LA	2099	A
1	LA	2103	A
1	LA	2110	G
1	LA	2111	U
1	LA	2112	A
1	LA	2113	C
1	LA	2119	A
1	LA	2120	G
1	LA	2121	G
1	LA	2130	A
1	LA	2139	U
1	LA	2141	A
1	LA	2143	A
1	LA	2157	A
1	LA	2159	G
1	LA	2167	A
1	LA	2168	G
1	LA	2193	G
1	LA	2196	C
1	LA	2204	U
1	LA	2206	A
1	LA	2208	U
1	LA	2209	G
1	LA	2221	A
1	LA	2222	A

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Mol	Chain	Res	Type
1	LA	2224	U
1	LA	2225	U
1	LA	2229	C
1	LA	2230	C
1	LA	2231	A
1	LA	2243	A
1	LA	2248	G
1	LA	2254	A
1	LA	2255	A
1	LA	2256	C
1	LA	2261	A
1	LA	2268	U
1	LA	2269	A
1	LA	2271	G
1	LA	2272	G
1	LA	2273	U
1	LA	2280	A
1	LA	2282	G
1	LA	2304	G
1	LA	2306	G
1	LA	2309	U
1	LA	2312	A
1	LA	2313	U
1	LA	2314	G
1	LA	2333	U
1	LA	2334	G
1	LA	2335	U
1	LA	2351	A
1	LA	2364	C
1	LA	2372	A
1	LA	2373	C
1	LA	2374	G
1	LA	2380	G
1	LA	2384	G
1	LA	2387	U
1	LA	2390	G
1	LA	2392	G
1	LA	2396	A
1	LA	2400	A
1	LA	2401	A
1	LA	2402	G
1	LA	2403	A

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Mol	Chain	Res	Type
1	LA	2410	U
1	LA	2434	G
1	LA	2435	U
1	LA	2436	G
1	LA	2437	A
1	LA	2439	G
1	LA	2440	A
1	LA	2444	A
1	LA	2451	G
1	LA	2492	U
1	LA	2496	U
1	LA	2500	U
1	LA	2501	A
1	LA	2502	G
1	LA	2503	U
1	LA	2507	U
1	LA	2510	A
1	LA	2511	C
1	LA	2513	U
1	LA	2514	A
1	LA	2523	A
1	LA	2524	G
1	LA	2525	C
1	LA	2530	C
1	LA	2531	U
1	LA	2532	G
1	LA	2534	A
1	LA	2536	U
1	LA	2537	U
1	LA	2538	C
1	LA	2539	A
1	LA	2540	U
1	LA	2541	U
1	LA	2548	G
1	LA	2549	U
1	LA	2550	U
1	LA	2559	C
1	LA	2560	A
1	LA	2561	A
1	LA	2567	C
1	LA	2568	A
1	LA	2569	U

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Mol	Chain	Res	Type
1	LA	2571	C
1	LA	2572	G
1	LA	2579	A
1	LA	2584	G
1	LA	2592	A
1	LA	2605	G
1	LA	2606	G
1	LA	2613	G
1	LA	2628	U
1	LA	2634	A
1	LA	2647	G
1	LA	2650	G
1	LA	2651	U
1	LA	2655	A
1	LA	2673	A
1	LA	2676	G
1	LA	2679	A
1	LA	2680	U
1	LA	2688	A
1	LA	2690	A
1	LA	2693	A
1	LA	2695	A
1	LA	2696	A
1	LA	2702	A
1	LA	2703	A
1	LA	2704	A
1	LA	2713	G
1	LA	2715	U
1	LA	2725	C
1	LA	2726	A
1	LA	2727	G
1	LA	2728	U
1	LA	2730	U
1	LA	2732	A
1	LA	2734	U
1	LA	2736	C
1	LA	2748	G
1	LA	2752	G
1	LA	2754	C
1	LA	2776	G
1	LA	2777	G
1	LA	2780	U

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Mol	Chain	Res	Type
1	LA	2790	G
1	LA	2798	A
1	LA	2799	G
1	LA	2800	A
1	LA	2801	A
1	LA	2803	A
1	LA	2809	C
1	LA	2813	G
1	LA	2816	A
1	LA	2820	C
1	LA	2837	A
1	LA	2841	U
1	LA	2844	A
1	LA	2860	U
1	LA	2866	C
1	LA	2870	G
1	LA	2871	A
1	LA	2874	U
1	LA	2886	A
1	LA	2887	U
1	LA	2888	C
1	LA	2897	G
1	LA	2898	C
1	LA	2899	A
1	LA	2900	G
1	LA	2902	A
1	LA	2913	G
1	LA	2922	U
1	LA	2926	C
1	LA	2929	A
1	LA	2934	U
1	LA	2935	A
1	LA	2941	C
1	LA	2946	G
1	LA	2951	G
1	LA	2952	U
1	LA	2953	U
1	LA	2965	G
1	LA	2970	A
1	LA	2971	G
1	LA	2977	U
1	LA	2982	C

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Mol	Chain	Res	Type
1	LA	2989	G
1	LA	2991	U
1	LA	2995	U
1	LA	3011	A
1	LA	3018	U
1	LA	3020	A
1	LA	3026	A
1	LA	3027	G
1	LA	3028	A
1	LA	3029	G
1	LA	3033	C
1	LA	3034	A
1	LA	3035	G
1	LA	3040	U
1	LA	3041	U
1	LA	3058	G
1	LA	3077	U
1	LA	3078	U
1	LA	3079	G
1	LA	3085	A
1	LA	3091	C
1	LA	3093	A
1	LA	3100	G
1	LA	3114	C
1	LA	3115	G
1	LA	3129	A
1	LA	3130	U
1	LA	3141	A
1	LA	3142	C
1	LA	3152	U
1	LA	3154	U
1	LA	3155	U
1	LA	3156	U
1	LA	3157	G
1	LA	3162	A
1	LA	3164	A
1	LA	3166	A
1	LA	3167	A
1	LA	3168	U
1	LA	3169	A
1	LA	3171	A
1	LA	3172	G

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Mol	Chain	Res	Type
1	LA	3173	A
1	LA	3175	G
1	LA	3178	U
1	LA	3180	C
1	LA	3181	G
1	LA	3186	A
1	LA	3187	G
1	LA	3193	C
1	LA	3195	U
1	LA	3206	U
1	LA	3217	A
1	LA	3218	G
1	LA	3225	A
1	LA	3226	A
1	LA	3228	G
1	LA	3235	U
1	LA	3238	G
1	LA	3243	A
1	LA	3248	C
1	LA	3252	G
1	LA	3254	U
1	LA	3255	G
1	LA	3258	U
1	LA	3262	G
1	LA	3269	U
1	LA	3275	G
1	LA	3278	A
1	LA	3279	U
1	LA	3280	U
1	LA	3281	U
1	LA	3284	C
1	LA	3285	G
1	LA	3287	G
1	LA	3288	G
1	LA	3290	G
1	LA	3291	A
1	LA	3293	A
1	LA	3303	U
1	LA	3315	A
1	LA	3316	U
1	LA	3318	U
1	LA	3325	G

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Mol	Chain	Res	Type
1	LA	3340	U
1	LA	3341	A
1	LA	3343	A
1	LA	3344	G
1	LA	3345	U
1	LA	3346	A
1	LA	3350	U
1	LA	3351	U
1	LA	3352	G
1	LA	3353	U
1	LA	3354	U
1	LA	3356	U
1	LA	3358	A
1	LA	3359	C
1	LA	3368	G
1	LA	3377	C
1	LA	3380	U
1	LA	3381	U
1	LA	3392	U
2	LB	7	G
2	LB	11	A
2	LB	19	C
2	LB	24	A
2	LB	28	C
2	LB	29	C
2	LB	30	G
2	LB	31	U
2	LB	32	U
2	LB	41	G
2	LB	50	U
2	LB	51	A
2	LB	52	G
2	LB	53	U
2	LB	54	U
2	LB	55	A
2	LB	56	A
2	LB	64	A
2	LB	65	G
2	LB	74	C
2	LB	76	A
2	LB	102	A
2	LB	112	G

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Mol	Chain	Res	Type
2	LB	121	U
3	LC	4	C
3	LC	5	U
3	LC	6	U
3	LC	9	A
3	LC	10	A
3	LC	22	U
3	LC	23	U
3	LC	27	U
3	LC	34	U
3	LC	35	C
3	LC	38	U
3	LC	39	G
3	LC	40	A
3	LC	44	A
3	LC	48	A
3	LC	51	G
3	LC	59	A
3	LC	62	C
3	LC	63	G
3	LC	71	A
3	LC	75	G
3	LC	80	A
3	LC	81	U
3	LC	83	C
3	LC	86	U
3	LC	87	G
3	LC	90	U
3	LC	91	C
3	LC	95	G
3	LC	97	A
3	LC	104	A
3	LC	106	C
3	LC	107	G
3	LC	111	A
3	LC	112	U
3	LC	113	U
3	LC	125	U
3	LC	126	A
3	LC	148	G
3	LC	151	C
3	LC	152	G

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Mol	Chain	Res	Type
3	LC	157	U
3	LC	158	U
45	S2	2	A
45	S2	4	C
45	S2	17	C
45	S2	19	A
45	S2	25	C
45	S2	26	A
45	S2	32	U
45	S2	33	U
45	S2	34	G
45	S2	38	C
45	S2	39	A
45	S2	42	G
45	S2	43	A
45	S2	45	U
45	S2	47	A
45	S2	48	G
45	S2	53	G
45	S2	56	U
45	S2	57	G
45	S2	62	A
45	S2	67	A
45	S2	68	A
45	S2	69	G
45	S2	73	U
45	S2	74	U
45	S2	75	U
45	S2	77	U
45	S2	78	A
45	S2	79	C
45	S2	81	G
45	S2	104	A
45	S2	105	A
45	S2	112	A
45	S2	114	C
45	S2	116	U
45	S2	117	U
45	S2	119	A
45	S2	120	U
45	S2	121	U
45	S2	122	U

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Mol	Chain	Res	Type
45	S2	125	U
45	S2	126	A
45	S2	127	G
45	S2	129	U
45	S2	130	C
45	S2	131	C
45	S2	132	U
45	S2	133	U
45	S2	134	U
45	S2	136	C
45	S2	137	U
45	S2	138	A
45	S2	140	A
45	S2	141	U
45	S2	142	G
45	S2	143	G
45	S2	146	U
45	S2	147	A
45	S2	149	C
45	S2	151	G
45	S2	152	U
45	S2	155	U
45	S2	157	A
45	S2	159	U
45	S2	163	G
45	S2	168	A
45	S2	171	A
45	S2	174	U
45	S2	178	U
45	S2	182	A
45	S2	186	C
45	S2	188	A
45	S2	189	C
45	S2	192	U
45	S2	194	U
45	S2	195	G
45	S2	201	G
45	S2	202	A
45	S2	209	U
45	S2	210	A
45	S2	214	G
45	S2	215	A

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Mol	Chain	Res	Type
45	S2	216	U
45	S2	218	A
45	S2	219	A
45	S2	220	A
45	S2	221	A
45	S2	223	U
45	S2	224	C
45	S2	225	A
45	S2	226	A
45	S2	227	U
45	S2	228	G
45	S2	230	C
45	S2	232	U
45	S2	233	C
45	S2	234	G
45	S2	235	G
45	S2	236	A
45	S2	237	C
45	S2	240	U
45	S2	241	U
45	S2	244	A
45	S2	249	U
45	S2	250	C
45	S2	252	U
45	S2	256	A
45	S2	259	U
45	S2	260	U
45	S2	261	U
45	S2	262	U
45	S2	263	C
45	S2	265	A
45	S2	266	A
45	S2	267	U
45	S2	273	G
45	S2	274	G
45	S2	275	C
45	S2	276	C
45	S2	280	U
45	S2	283	U
45	S2	288	A
45	S2	289	U
45	S2	290	G

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Mol	Chain	Res	Type
45	S2	292	U
45	S2	294	C
45	S2	295	A
45	S2	296	U
45	S2	297	U
45	S2	298	C
45	S2	300	A
45	S2	302	U
45	S2	313	U
45	S2	314	C
45	S2	316	A
45	S2	319	U
45	S2	320	U
45	S2	322	G
45	S2	323	A
45	S2	324	U
45	S2	334	G
45	S2	337	G
45	S2	338	C
45	S2	342	C
45	S2	345	U
45	S2	346	G
45	S2	352	A
45	S2	359	A
45	S2	360	A
45	S2	361	C
45	S2	365	G
45	S2	369	A
45	S2	370	A
45	S2	378	A
45	S2	380	U
45	S2	381	C
45	S2	388	G
45	S2	391	A
45	S2	398	G
45	S2	399	A
45	S2	400	A
45	S2	401	A
45	S2	402	C
45	S2	404	G
45	S2	410	A
45	S2	411	C

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Mol	Chain	Res	Type
45	S2	417	A
45	S2	418	G
45	S2	419	G
45	S2	422	G
45	S2	423	G
45	S2	424	C
45	S2	425	A
45	S2	426	G
45	S2	439	U
45	S2	441	A
45	S2	444	C
45	S2	447	U
45	S2	453	U
45	S2	454	U
45	S2	455	C
45	S2	460	A
45	S2	468	A
45	S2	477	A
45	S2	483	A
45	S2	484	C
45	S2	485	A
45	S2	487	G
45	S2	490	C
45	S2	492	A
45	S2	494	U
45	S2	498	G
45	S2	499	U
45	S2	500	C
45	S2	501	U
45	S2	502	U
45	S2	503	G
45	S2	504	U
45	S2	505	A
45	S2	506	A
45	S2	508	U
45	S2	509	G
45	S2	510	G
45	S2	511	A
45	S2	512	A
45	S2	518	A
45	S2	519	C
45	S2	520	A

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Mol	Chain	Res	Type
45	S2	521	A
45	S2	523	G
45	S2	525	A
45	S2	526	A
45	S2	527	A
45	S2	529	A
45	S2	531	C
45	S2	532	U
45	S2	533	U
45	S2	535	A
45	S2	537	G
45	S2	538	A
45	S2	539	G
45	S2	540	G
45	S2	541	A
45	S2	545	A
45	S2	548	G
45	S2	554	C
45	S2	555	A
45	S2	556	A
45	S2	557	G
45	S2	558	U
45	S2	560	U
45	S2	565	C
45	S2	568	G
45	S2	579	A
45	S2	580	A
45	S2	582	U
45	S2	583	C
45	S2	587	C
45	S2	591	A
45	S2	594	A
45	S2	606	A
45	S2	608	U
45	S2	611	U
45	S2	613	G
45	S2	615	A
45	S2	617	U
45	S2	619	A
45	S2	620	A
45	S2	623	A
45	S2	624	G

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Mol	Chain	Res	Type
45	S2	628	G
45	S2	635	A
45	S2	638	U
45	S2	641	G
45	S2	643	G
45	S2	652	G
45	S2	653	C
45	S2	654	C
45	S2	656	G
45	S2	657	U
45	S2	658	C
45	S2	677	G
45	S2	681	U
45	S2	682	C
45	S2	684	A
45	S2	686	C
45	S2	687	G
45	S2	688	G
45	S2	690	G
45	S2	694	U
45	S2	695	U
45	S2	696	C
45	S2	697	C
45	S2	702	G
45	S2	704	C
45	S2	705	U
45	S2	707	A
45	S2	708	C
45	S2	709	C
45	S2	710	U
45	S2	711	U
45	S2	712	G
45	S2	713	A
45	S2	714	G
45	S2	730	G
45	S2	731	C
45	S2	732	G
45	S2	734	A
45	S2	736	C
45	S2	742	U
45	S2	743	U
45	S2	744	U

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Mol	Chain	Res	Type
45	S2	747	C
45	S2	748	U
45	S2	750	U
45	S2	753	A
45	S2	754	A
45	S2	755	A
45	S2	757	A
45	S2	758	U
45	S2	761	G
45	S2	762	A
45	S2	765	G
45	S2	767	U
45	S2	768	C
45	S2	769	A
45	S2	771	A
45	S2	774	A
45	S2	776	G
45	S2	779	U
45	S2	780	A
45	S2	781	U
45	S2	782	U
45	S2	783	G
45	S2	785	U
45	S2	786	C
45	S2	787	G
45	S2	789	A
45	S2	792	U
45	S2	793	A
45	S2	794	U
45	S2	795	U
45	S2	796	A
45	S2	798	C
45	S2	803	A
45	S2	809	A
45	S2	811	A
45	S2	812	A
45	S2	813	U
45	S2	815	G
45	S2	816	G
45	S2	818	C
45	S2	820	U
45	S2	821	U

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Mol	Chain	Res	Type
45	S2	823	G
45	S2	824	G
45	S2	826	U
45	S2	829	A
45	S2	833	U
45	S2	834	G
45	S2	836	U
45	S2	842	C
45	S2	843	U
45	S2	846	G
45	S2	848	C
45	S2	849	C
45	S2	852	C
45	S2	853	G
45	S2	855	A
45	S2	857	U
45	S2	860	U
45	S2	861	U
45	S2	863	A
45	S2	864	U
45	S2	873	U
45	S2	874	C
45	S2	875	G
45	S2	876	G
45	S2	886	U
45	S2	888	U
45	S2	889	U
45	S2	890	C
45	S2	891	A
45	S2	892	A
45	S2	893	U
45	S2	895	G
45	S2	898	A
45	S2	901	G
45	S2	902	G
45	S2	904	G
45	S2	905	A
45	S2	906	A
45	S2	907	A
45	S2	910	C
45	S2	911	U
45	S2	913	G

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Mol	Chain	Res	Type
45	S2	914	G
45	S2	915	A
45	S2	916	U
45	S2	918	U
45	S2	920	U
45	S2	922	G
45	S2	924	A
45	S2	925	G
45	S2	926	A
45	S2	929	A
45	S2	930	A
45	S2	931	C
45	S2	932	U
45	S2	933	A
45	S2	942	G
45	S2	951	A
45	S2	960	U
45	S2	962	C
45	S2	964	U
45	S2	966	A
45	S2	987	G
45	S2	988	A
45	S2	991	G
45	S2	992	A
45	S2	993	A
45	S2	995	A
45	S2	996	U
45	S2	998	A
45	S2	1001	A
45	S2	1002	G
45	S2	1004	U
45	S2	1005	A
45	S2	1006	C
45	S2	1007	C
45	S2	1008	G
45	S2	1009	U
45	S2	1015	U
45	S2	1016	C
45	S2	1018	U
45	S2	1019	A
45	S2	1020	A
45	S2	1025	A

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Mol	Chain	Res	Type
45	S2	1026	A
45	S2	1028	C
45	S2	1031	U
45	S2	1032	G
45	S2	1038	U
45	S2	1040	G
45	S2	1041	G
45	S2	1044	U
45	S2	1045	C
45	S2	1052	U
45	S2	1053	G
45	S2	1054	U
45	S2	1061	A
45	S2	1063	U
45	S2	1078	C
45	S2	1079	U
45	S2	1080	U
45	S2	1081	A
45	S2	1082	C
45	S2	1088	A
45	S2	1089	U
45	S2	1092	A
45	S2	1093	A
45	S2	1096	C
45	S2	1097	U
45	S2	1098	U
45	S2	1100	G
45	S2	1113	A
45	S2	1116	A
45	S2	1117	U
45	S2	1118	G
45	S2	1124	A
45	S2	1126	G
45	S2	1138	A
45	S2	1143	A
45	S2	1145	U
45	S2	1146	G
45	S2	1147	A
45	S2	1148	C
45	S2	1150	G
45	S2	1151	A
45	S2	1152	A

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Mol	Chain	Res	Type
45	S2	1153	G
45	S2	1154	G
45	S2	1155	G
45	S2	1158	C
45	S2	1160	A
45	S2	1167	G
45	S2	1174	C
45	S2	1175	U
45	S2	1185	U
45	S2	1186	U
45	S2	1187	U
45	S2	1194	A
45	S2	1196	A
45	S2	1199	G
45	S2	1200	G
45	S2	1201	G
45	S2	1203	A
45	S2	1207	C
45	S2	1209	C
45	S2	1211	A
45	S2	1214	U
45	S2	1216	C
45	S2	1218	G
45	S2	1219	A
45	S2	1220	C
45	S2	1221	A
45	S2	1223	A
45	S2	1226	A
45	S2	1227	A
45	S2	1228	G
45	S2	1229	G
45	S2	1233	G
45	S2	1234	A
45	S2	1236	A
45	S2	1238	A
45	S2	1239	U
45	S2	1241	G
45	S2	1242	A
45	S2	1244	A
45	S2	1245	G
45	S2	1246	C
45	S2	1247	U

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Mol	Chain	Res	Type
45	S2	1248	C
45	S2	1249	U
45	S2	1250	U
45	S2	1251	U
45	S2	1252	C
45	S2	1253	U
45	S2	1254	U
45	S2	1255	G
45	S2	1256	A
45	S2	1257	U
45	S2	1258	U
45	S2	1259	U
45	S2	1260	U
45	S2	1263	G
45	S2	1264	G
45	S2	1265	G
45	S2	1269	U
45	S2	1270	G
45	S2	1273	G
45	S2	1274	C
45	S2	1276	U
45	S2	1278	G
45	S2	1284	C
45	S2	1285	U
45	S2	1286	U
45	S2	1287	A
45	S2	1288	G
45	S2	1291	G
45	S2	1301	U
45	S2	1305	U
45	S2	1306	C
45	S2	1307	U
45	S2	1309	C
45	S2	1312	A
45	S2	1313	A
45	S2	1314	U
45	S2	1315	U
45	S2	1320	U
45	S2	1321	A
45	S2	1322	A
45	S2	1333	C
45	S2	1334	U

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Mol	Chain	Res	Type
45	S2	1336	A
45	S2	1337	A
45	S2	1338	C
45	S2	1339	C
45	S2	1340	U
45	S2	1341	A
45	S2	1343	U
45	S2	1345	A
45	S2	1346	A
45	S2	1347	U
45	S2	1348	A
45	S2	1352	G
45	S2	1354	G
45	S2	1361	U
45	S2	1362	U
45	S2	1363	U
45	S2	1364	G
45	S2	1371	A
45	S2	1372	U
45	S2	1376	C
45	S2	1377	U
45	S2	1378	U
45	S2	1380	U
45	S2	1382	A
45	S2	1383	G
45	S2	1385	G
45	S2	1386	G
45	S2	1387	G
45	S2	1388	A
45	S2	1389	C
45	S2	1390	U
45	S2	1392	U
45	S2	1398	U
45	S2	1399	C
45	S2	1405	G
45	S2	1406	A
45	S2	1407	U
45	S2	1408	G
45	S2	1412	G
45	S2	1414	U
45	S2	1422	A
45	S2	1423	U

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Mol	Chain	Res	Type
45	S2	1424	A
45	S2	1427	A
45	S2	1428	G
45	S2	1431	C
45	S2	1432	U
45	S2	1433	G
45	S2	1434	U
45	S2	1437	U
45	S2	1439	C
45	S2	1445	G
45	S2	1447	C
45	S2	1457	C
45	S2	1460	A
45	S2	1461	C
45	S2	1462	G
45	S2	1464	G
45	S2	1471	A
45	S2	1472	C
45	S2	1473	U
45	S2	1476	C
45	S2	1477	G
45	S2	1480	G
45	S2	1481	C
45	S2	1482	C
45	S2	1483	A
45	S2	1488	G
45	S2	1489	U
45	S2	1491	U
45	S2	1493	A
45	S2	1496	U
45	S2	1497	U
45	S2	1498	G
45	S2	1499	G
45	S2	1502	G
45	S2	1503	A
45	S2	1504	G
45	S2	1509	C
45	S2	1511	U
45	S2	1514	U
45	S2	1515	A
45	S2	1516	A
45	S2	1517	U

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Mol	Chain	Res	Type
45	S2	1520	U
45	S2	1521	G
45	S2	1522	U
45	S2	1523	G
45	S2	1524	A
45	S2	1525	A
45	S2	1526	A
45	S2	1527	C
45	S2	1534	G
45	S2	1535	U
45	S2	1536	G
45	S2	1537	C
45	S2	1538	U
45	S2	1541	G
45	S2	1542	G
45	S2	1544	U
45	S2	1545	A
45	S2	1547	A
45	S2	1548	G
45	S2	1552	U
45	S2	1553	G
45	S2	1554	U
45	S2	1556	A
45	S2	1557	U
45	S2	1559	A
45	S2	1560	U
45	S2	1561	U
45	S2	1564	U
45	S2	1567	U
45	S2	1568	C
45	S2	1569	A
45	S2	1570	A
45	S2	1573	A
45	S2	1575	G
45	S2	1577	A
45	S2	1582	U
45	S2	1584	G
45	S2	1589	C
45	S2	1590	G
45	S2	1595	U
45	S2	1596	C
45	S2	1597	A

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Mol	Chain	Res	Type
45	S2	1599	C
45	S2	1601	G
45	S2	1608	U
45	S2	1611	A
45	S2	1612	U
45	S2	1613	U
45	S2	1614	A
45	S2	1616	G
45	S2	1617	U
45	S2	1619	C
45	S2	1621	U
45	S2	1622	G
45	S2	1631	A
45	S2	1633	A
45	S2	1634	C
45	S2	1635	A
45	S2	1639	C
45	S2	1643	U
45	S2	1657	U
45	S2	1658	G
45	S2	1659	A
45	S2	1661	U
45	S2	1662	G
45	S2	1663	G
45	S2	1664	C
45	S2	1665	U
45	S2	1666	U
45	S2	1667	A
45	S2	1671	A
45	S2	1677	C
45	S2	1678	A
45	S2	1680	G
45	S2	1681	A
45	S2	1682	U
45	S2	1684	U
45	S2	1686	C
45	S2	1687	U
45	S2	1688	U
45	S2	1689	A
45	S2	1690	G
45	S2	1691	A
45	S2	1692	G

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Mol	Chain	Res	Type
45	S2	1693	A
45	S2	1694	A
45	S2	1695	G
45	S2	1697	G
45	S2	1698	G
45	S2	1699	G
45	S2	1700	C
45	S2	1702	A
45	S2	1703	C
45	S2	1705	C
45	S2	1706	C
45	S2	1707	A
45	S2	1709	C
45	S2	1713	G
45	S2	1714	A
45	S2	1715	G
45	S2	1716	C
45	S2	1718	G
45	S2	1722	A
45	S2	1726	G
45	S2	1727	G
45	S2	1731	A
45	S2	1732	A
45	S2	1733	C
45	S2	1734	U
45	S2	1735	U
45	S2	1736	G
45	S2	1738	U
45	S2	1739	C
45	S2	1741	U
45	S2	1742	U
45	S2	1744	A
45	S2	1745	G
45	S2	1749	A
45	S2	1750	A
45	S2	1754	A
45	S2	1755	A
45	S2	1756	A
45	S2	1757	G
45	S2	1762	A
45	S2	1766	A
45	S2	1769	U

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Mol	Chain	Res	Type
45	S2	1780	G
45	S2	1782	A
45	S2	1787	C
45	S2	1788	G
45	S2	1792	G
45	S2	1793	G
45	S2	1794	A
45	S2	1796	C
45	S2	1797	A
45	S2	1799	U
79	Ta	2	G
79	Ta	3	C
79	Ta	6	G
79	Ta	8	U
79	Ta	9	G
79	Ta	14	A
79	Ta	15	G
79	Ta	16	C
79	Ta	18	C
79	Ta	19	G
79	Ta	21	U
79	Ta	23	G
79	Ta	25	U
79	Ta	26	C
79	Ta	28	U
79	Ta	29	C
79	Ta	30	G
79	Ta	32	G
79	Ta	35	C
79	Ta	36	A
79	Ta	37	U
79	Ta	40	C
79	Ta	42	C
79	Ta	43	G
79	Ta	45	A
79	Ta	47	G
79	Ta	48	U
79	Ta	49	C
79	Ta	50	G
79	Ta	51	U
79	Ta	52	C
79	Ta	56	U

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Mol	Chain	Res	Type
79	Ta	57	C
79	Ta	62	C
79	Ta	65	G
79	Ta	66	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
79	Ta	77	A

All (66) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	LA	3	U
1	LA	13	A
1	LA	197	G
1	LA	419	G
1	LA	492	U
1	LA	516	G
1	LA	524	C
1	LA	538	C
1	LA	540	U
1	LA	551	G
1	LA	565	G
1	LA	592	C
1	LA	623	G
1	LA	915	G
1	LA	1192	A
1	LA	1196	A
1	LA	1215	C
1	LA	1270	A
1	LA	1306	G
1	LA	1738	U
1	LA	2118	A
1	LA	2221	A
1	LA	2439	G
1	LA	2502	G
1	LA	2524	G
1	LA	2536	U

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Mol	Chain	Res	Type
1	LA	2733	A
1	LA	2779	A
1	LA	3026	A
1	LA	3166	A
1	LA	3167	A
1	LA	3342	G
1	LA	3349	C
2	LB	18	C
3	LC	21	C
3	LC	85	G
3	LC	156	U
45	S2	68	A
45	S2	125	U
45	S2	299	A
45	S2	323	A
45	S2	400	A
45	S2	422	G
45	S2	518	A
45	S2	768	C
45	S2	887	A
45	S2	891	A
45	S2	924	A
45	S2	990	C
45	S2	1015	U
45	S2	1051	G
45	S2	1146	G
45	S2	1147	A
45	S2	1222	C
45	S2	1226	A
45	S2	1241	G
45	S2	1245	G
45	S2	1252	C
45	S2	1273	G
45	S2	1421	A
45	S2	1471	A
45	S2	1480	G
45	S2	1482	C
45	S2	1563	C
45	S2	1638	G
45	S2	1688	U

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

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.

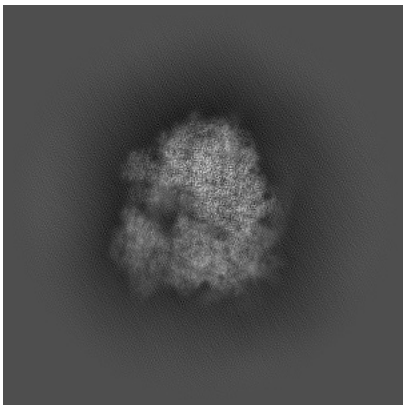
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-60088. These allow visual inspection of the internal detail of the map and identification of artifacts.

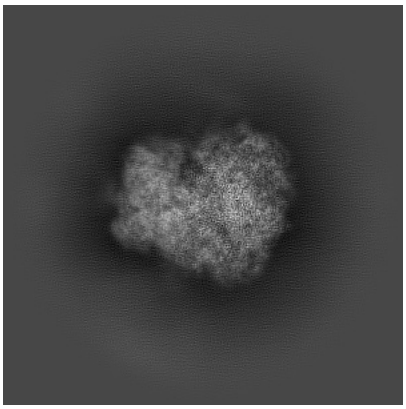
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

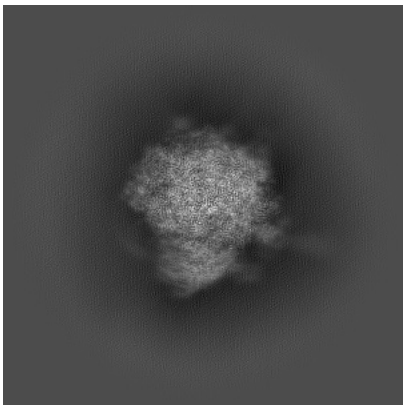
6.1.1 Primary map



X

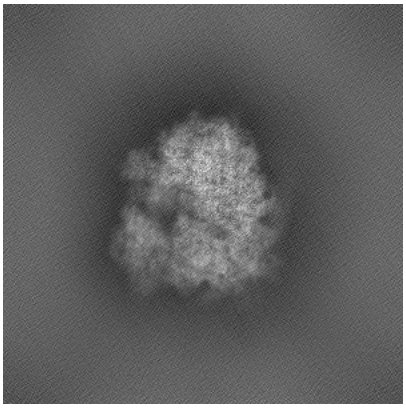


Y

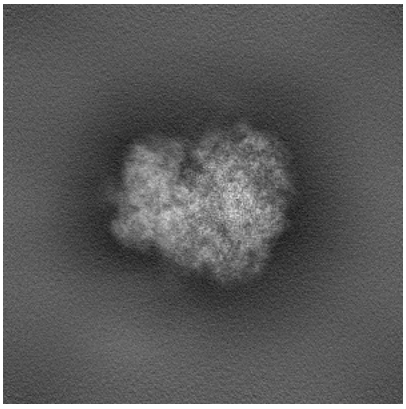


Z

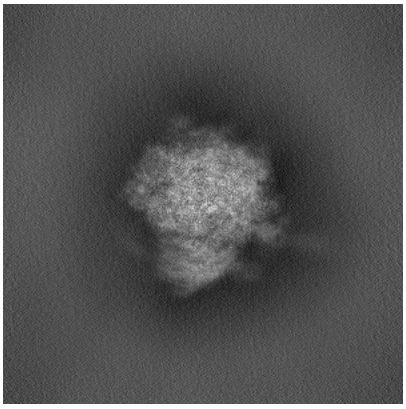
6.1.2 Raw map



X



Y

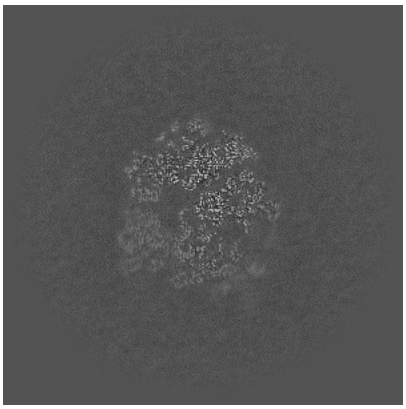


Z

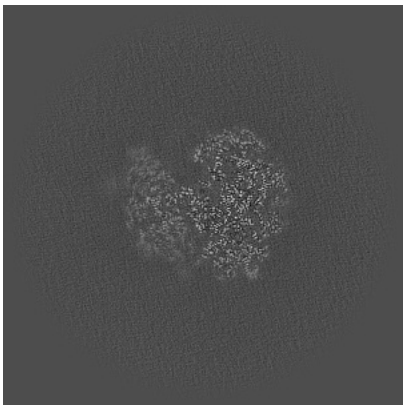
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

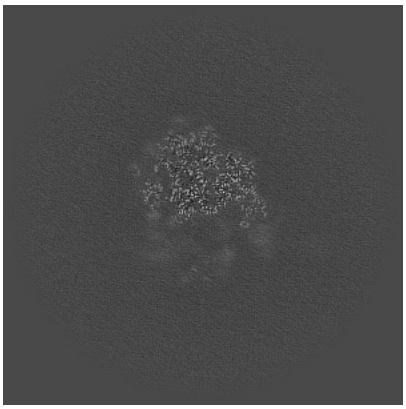
6.2.1 Primary map



X Index: 300

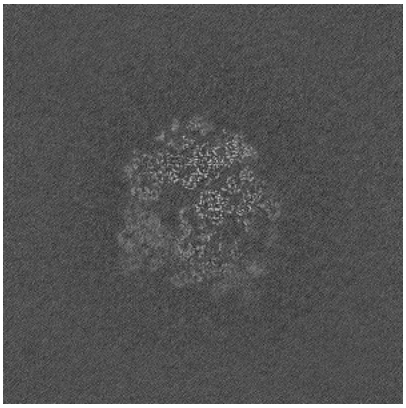


Y Index: 300

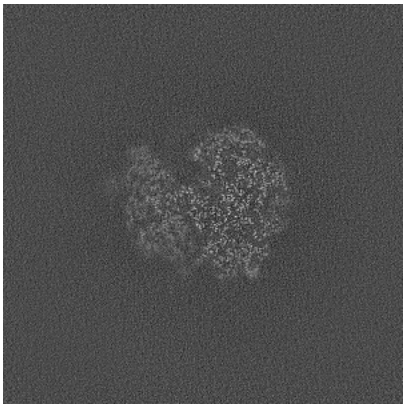


Z Index: 300

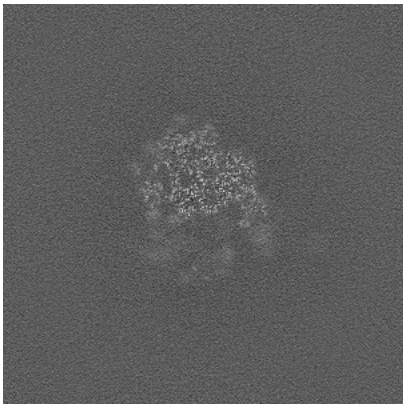
6.2.2 Raw map



X Index: 300



Y Index: 300

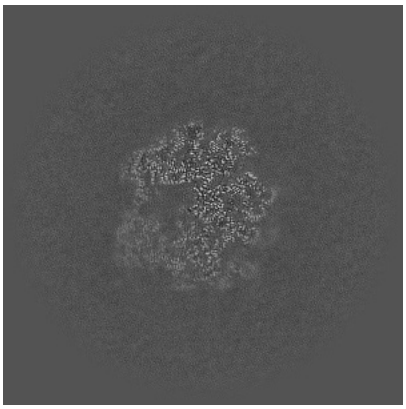


Z Index: 300

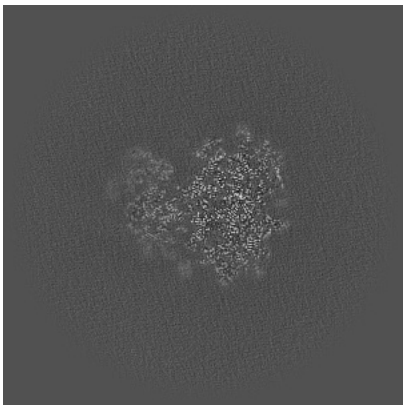
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

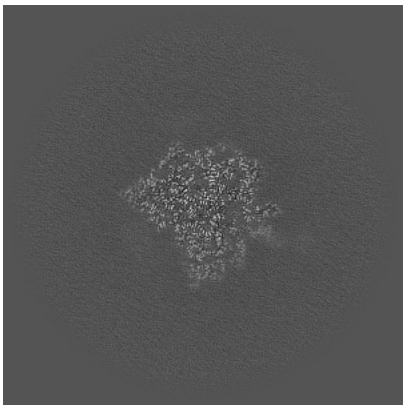
6.3.1 Primary map



X Index: 288

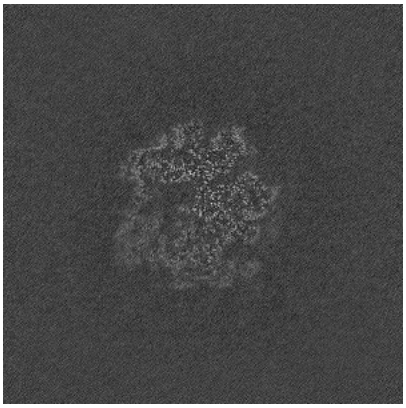


Y Index: 307

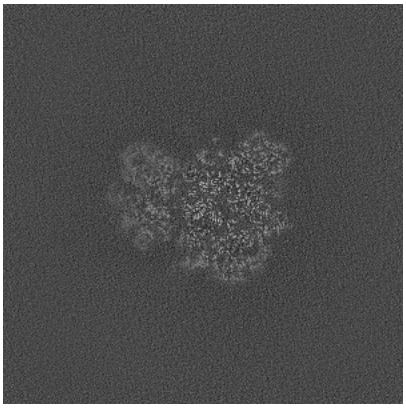


Z Index: 341

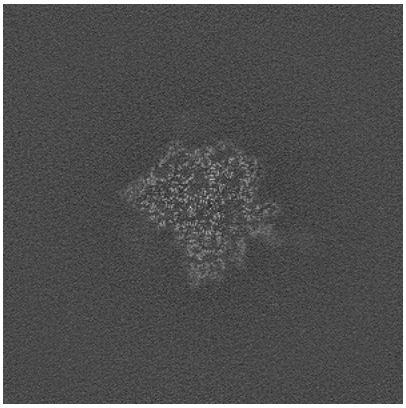
6.3.2 Raw map



X Index: 289



Y Index: 319

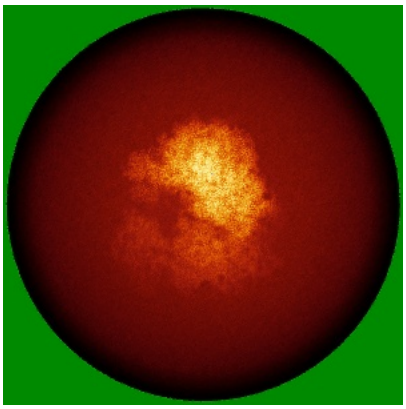


Z Index: 341

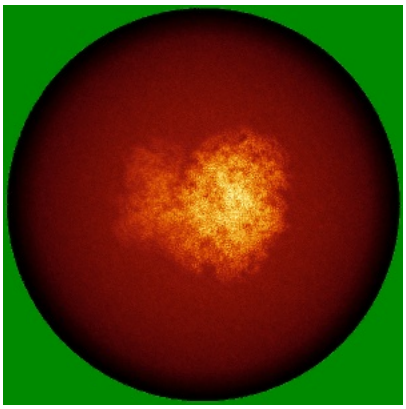
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

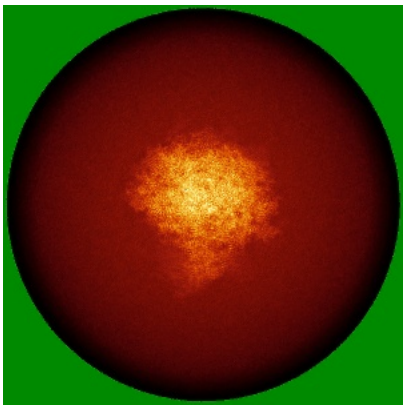
6.4.1 Primary map



X

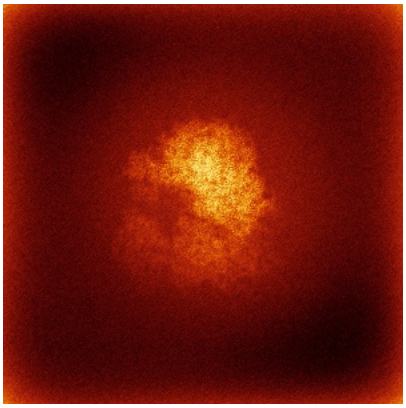


Y

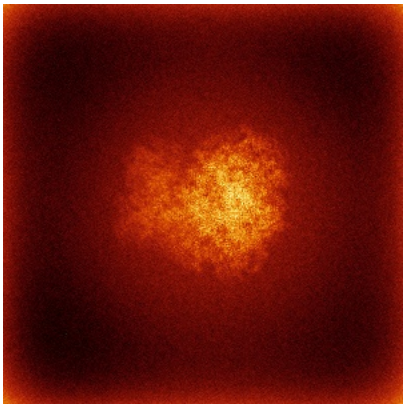


Z

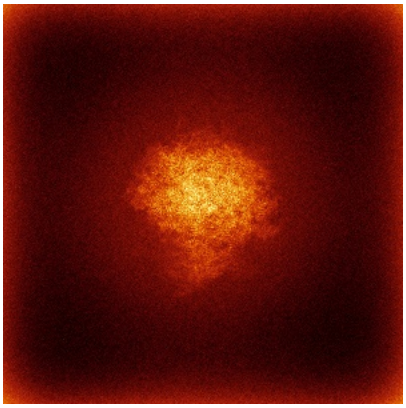
6.4.2 Raw map



X



Y

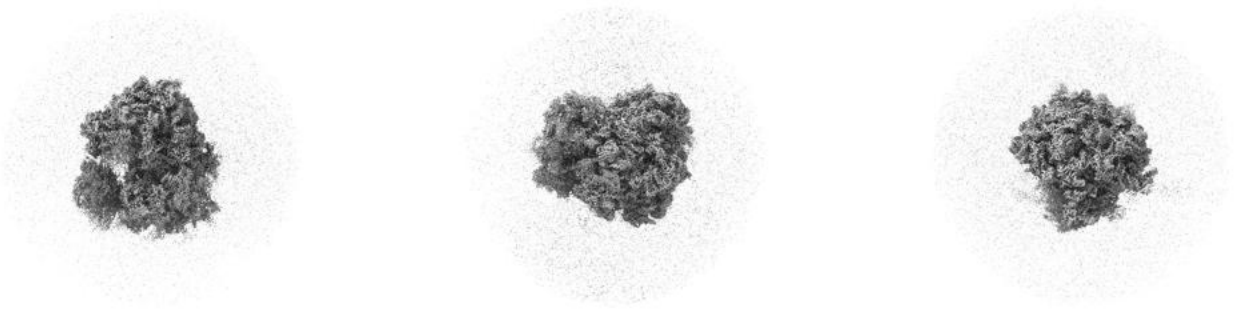


Z

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

6.5 Orthogonal surface views (i)

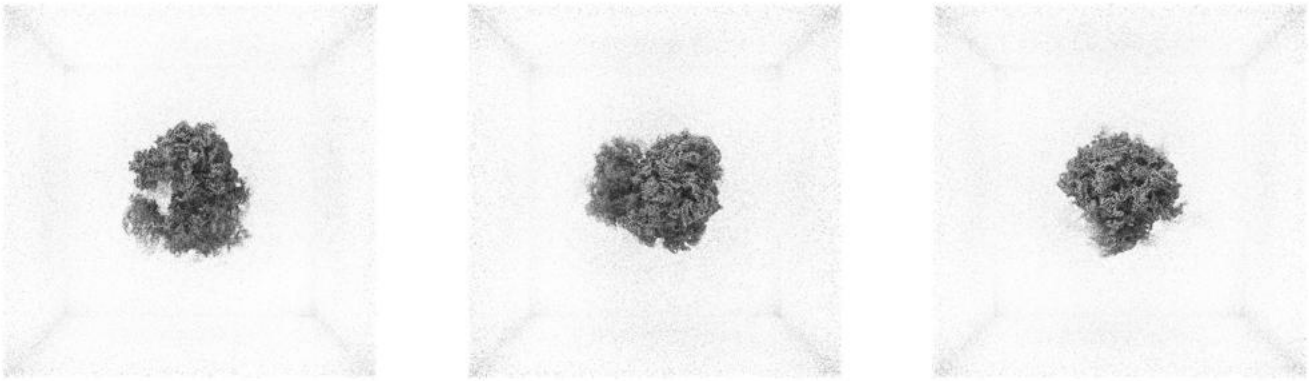
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.26. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

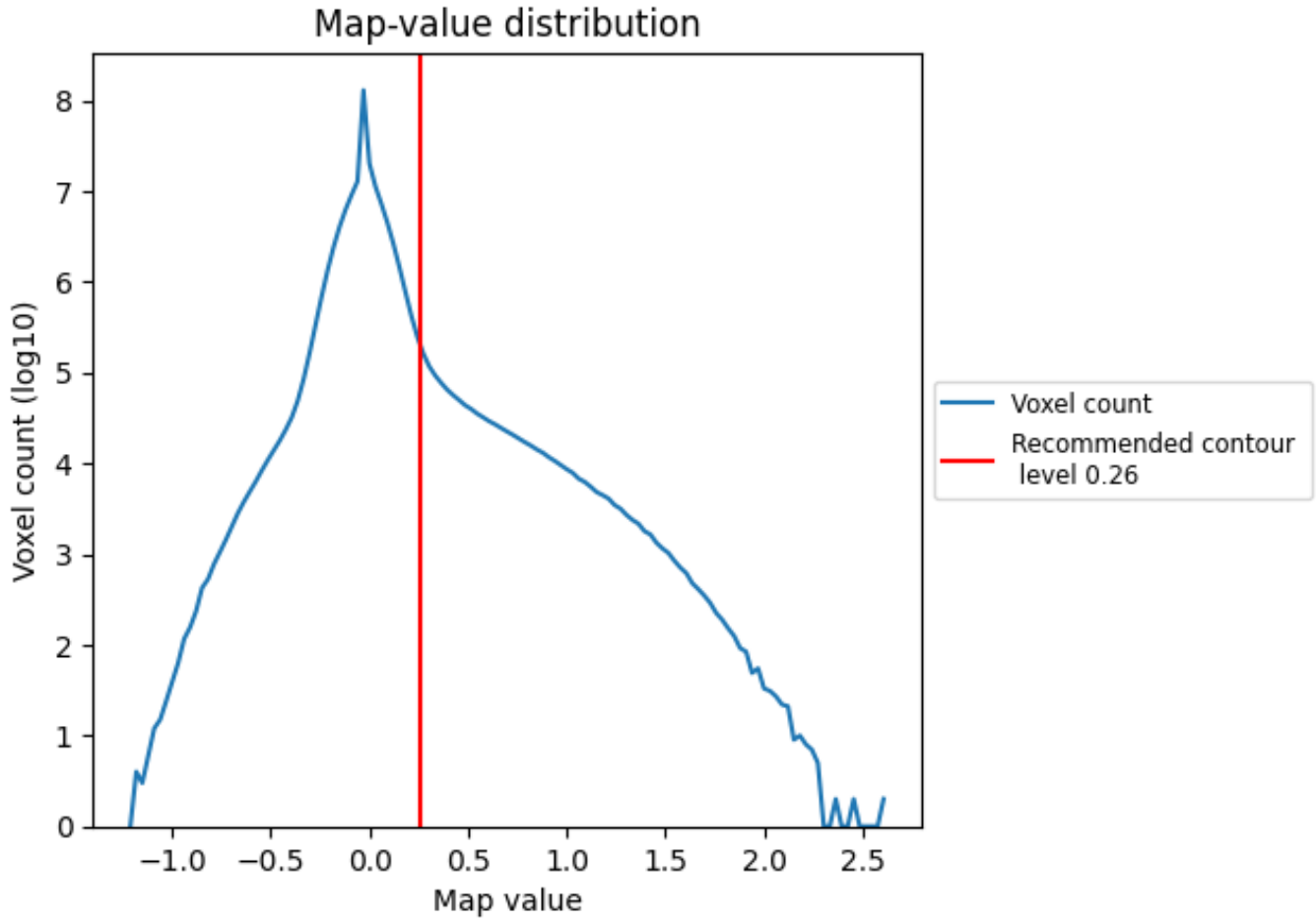
6.6 Mask visualisation (i)

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

7 Map analysis

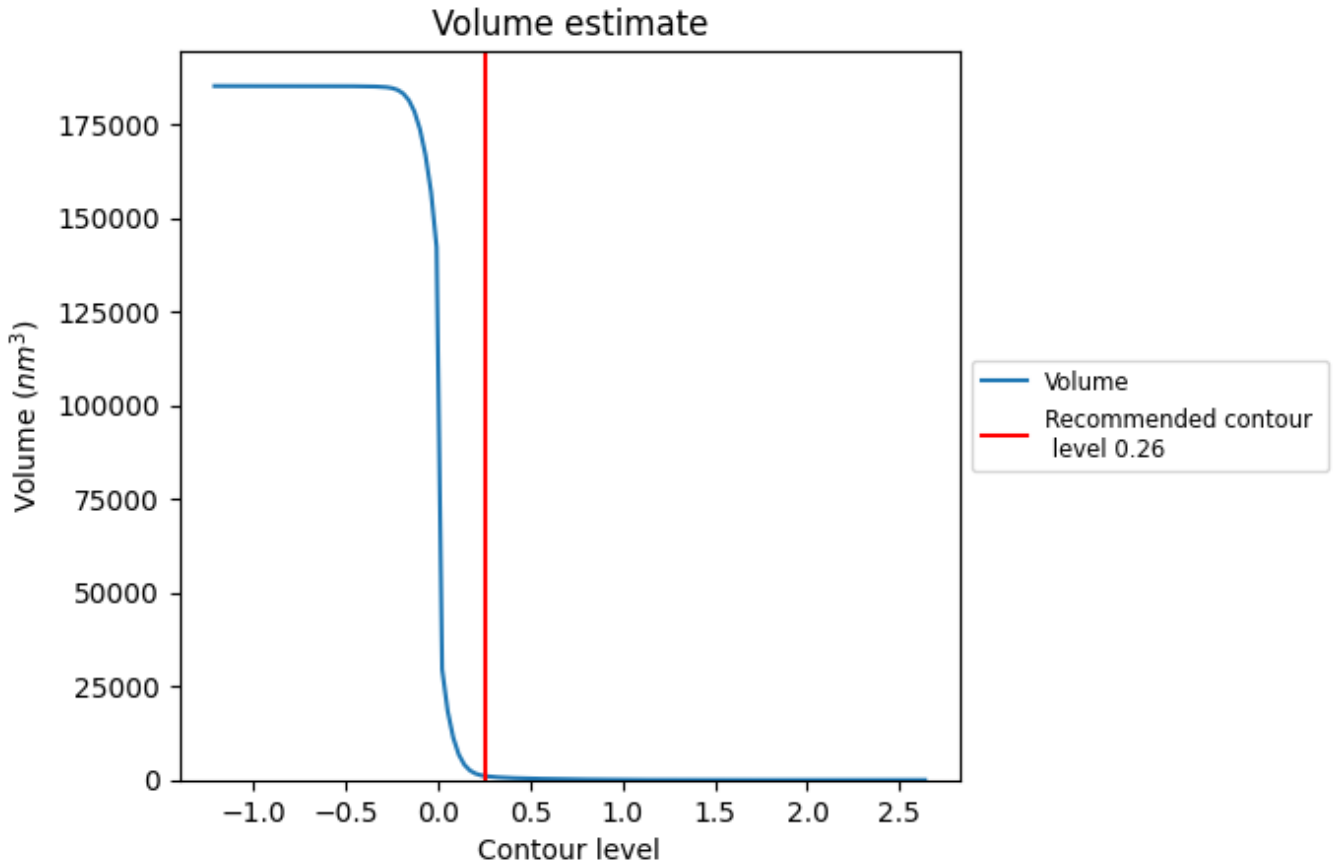
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

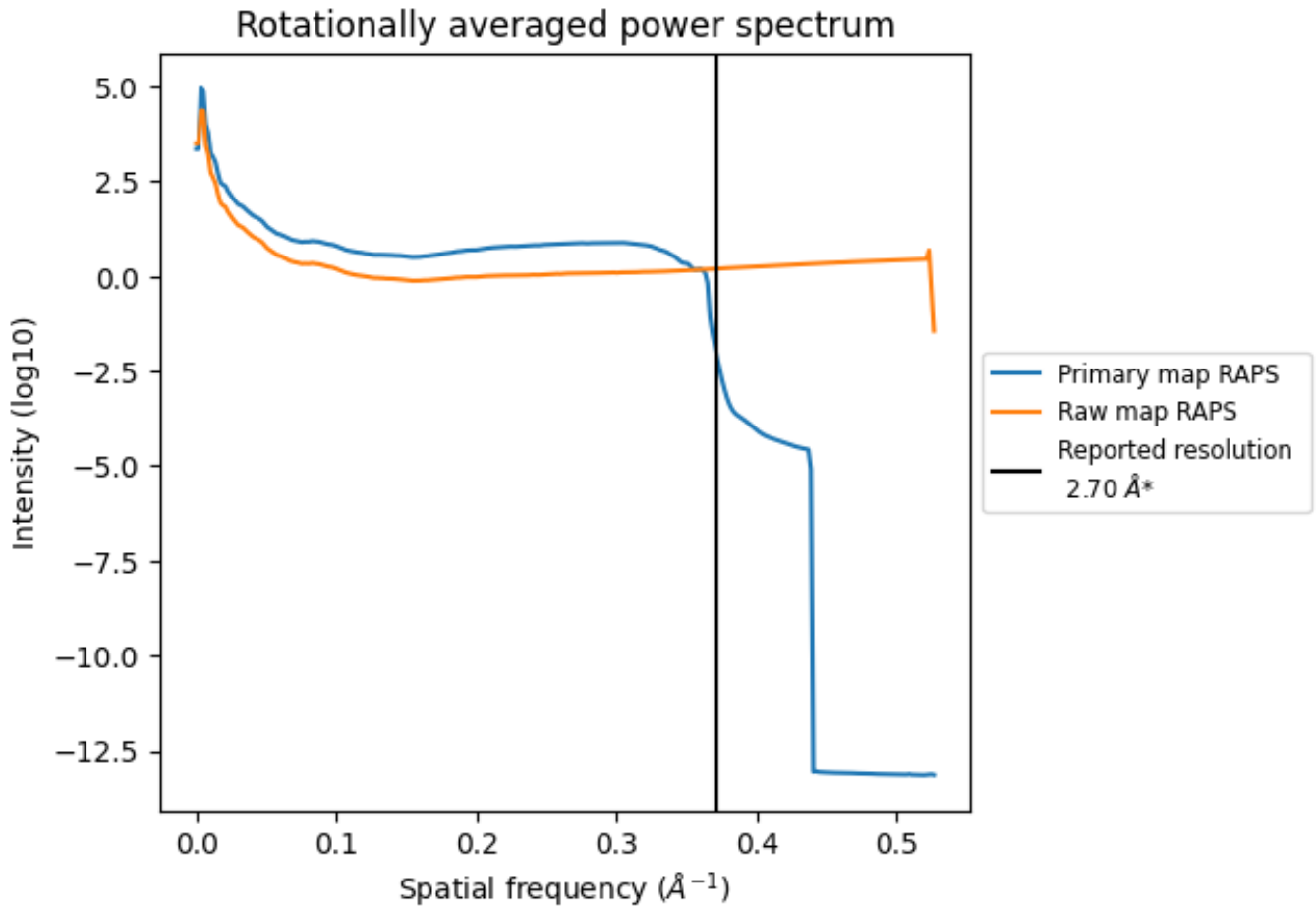
7.2 Volume estimate



The volume at the recommended contour level is 1015 nm^3; this corresponds to an approximate mass of 917 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 (i)

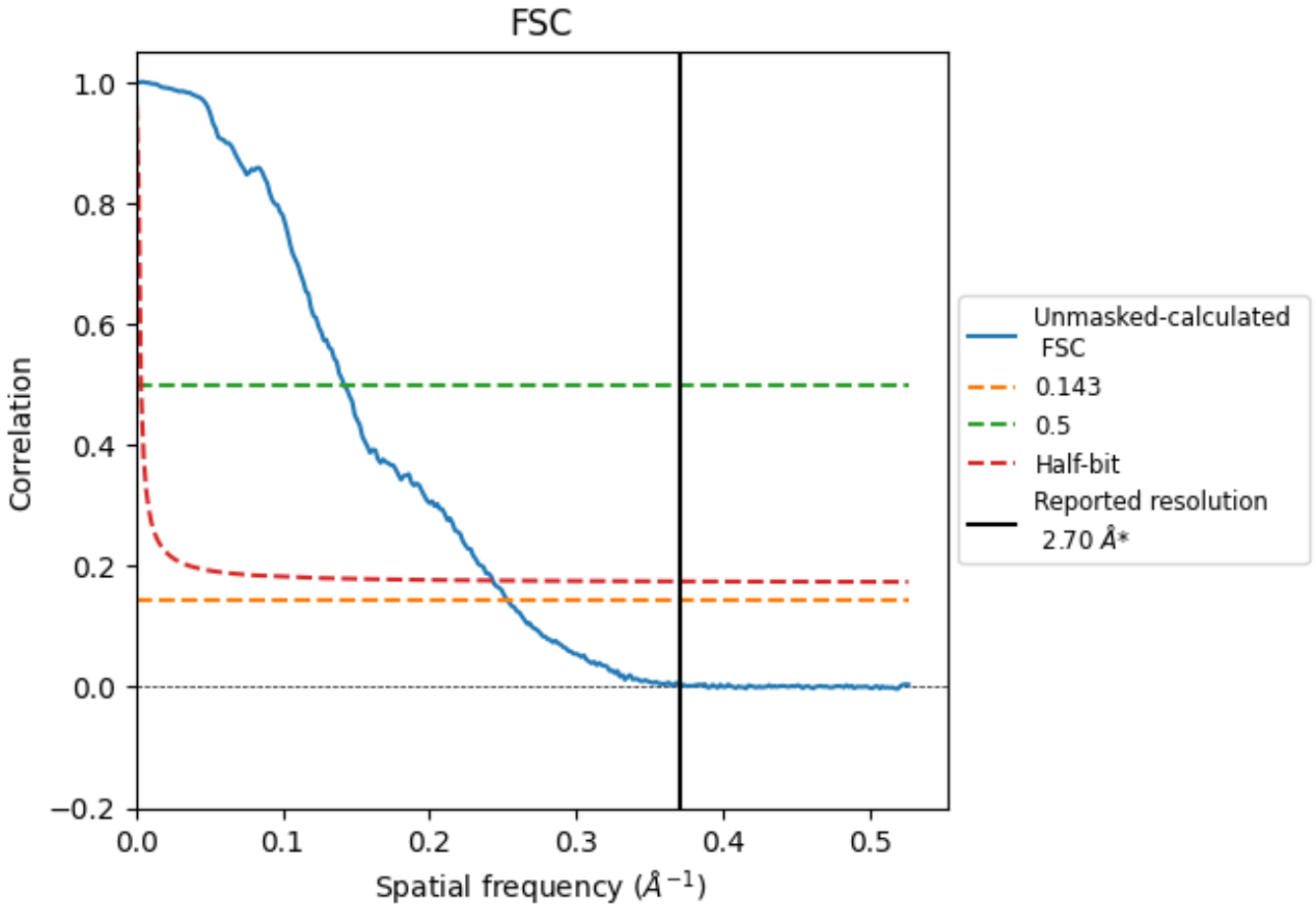


*Reported resolution corresponds to spatial frequency of 0.370 $Å^{-1}$

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.370 Å^{-1}

8.2 Resolution estimates (i)

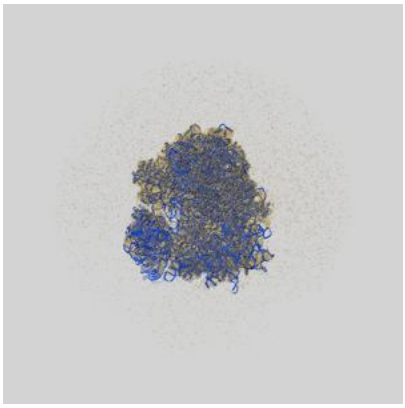
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.95	7.06	4.11

*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 3.95 differs from the reported value 2.7 by more than 10 %

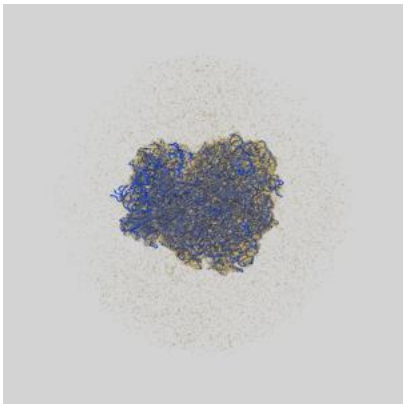
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-60088 and PDB model 8ZGR. Per-residue inclusion information can be found in section 3 on page 18.

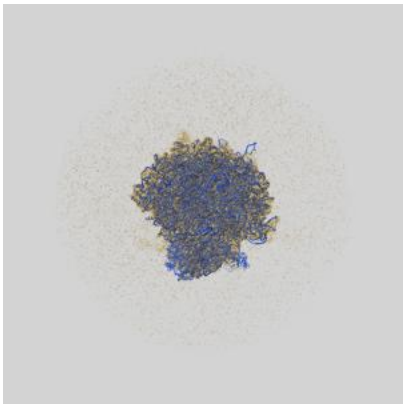
9.1 Map-model overlay



X



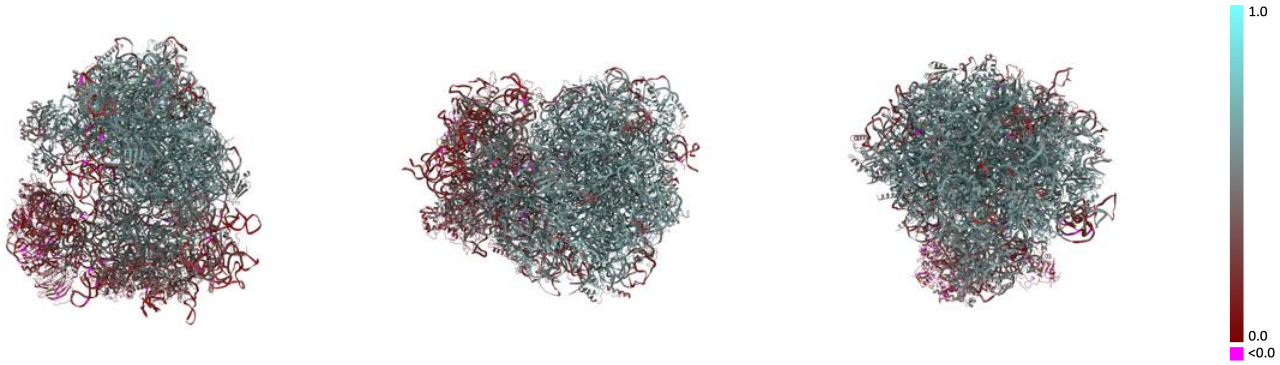
Y



Z

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.

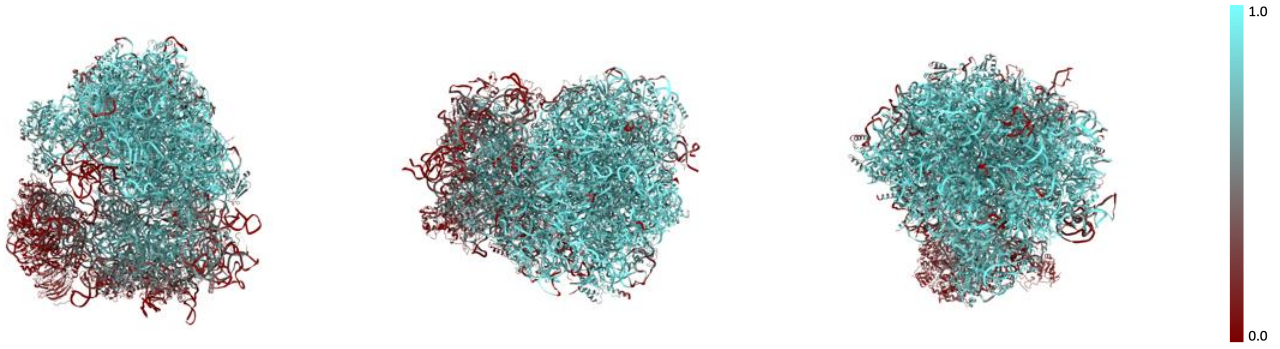
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

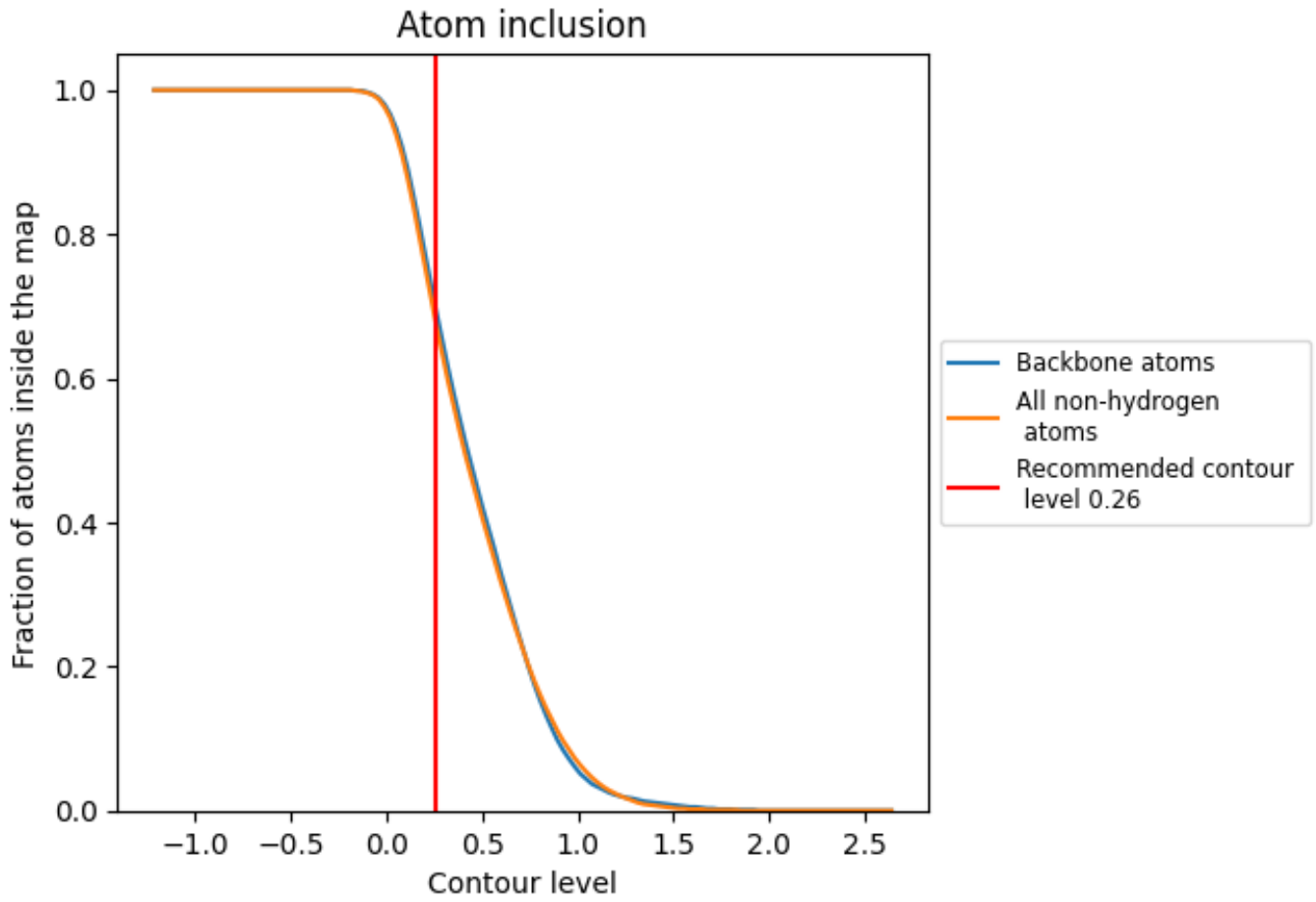
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.26).

9.4 Atom inclusion (i)



At the recommended contour level, 70% of all backbone atoms, 68% 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	0.6750	0.4660
LA	0.8560	0.5480
LB	0.8740	0.5350
LC	0.8870	0.5630
LD	0.9030	0.6170
LE	0.8760	0.5970
LF	0.8200	0.5610
LG	0.7300	0.5140
LH	0.7310	0.5170
LI	0.8730	0.5900
LJ	0.7470	0.5300
LK	0.7870	0.5560
LL	0.7950	0.5560
LM	0.6720	0.4850
LN	0.8120	0.5740
LO	0.8170	0.5600
LP	0.9080	0.6120
LQ	0.8690	0.5890
LR	0.8370	0.5970
LS	0.8700	0.5930
LT	0.7440	0.5360
LU	0.8700	0.5870
LV	0.8580	0.5880
LW	0.6650	0.4770
LX	0.8680	0.6000
LY	0.8710	0.5950
LZ	0.8150	0.5740
La	0.8290	0.5680
Lb	0.7670	0.5320
Lc	0.8710	0.5870
Ld	0.8360	0.5720
Le	0.7830	0.5550
Lf	0.8120	0.5670
Lg	0.7840	0.5520
Lh	0.9090	0.6170

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Chain	Atom inclusion	Q-score
Li	0.8180	0.5760
Lj	0.7970	0.5640
Lk	0.7740	0.5510
Ll	0.9320	0.6140
Lm	0.6080	0.4580
Ln	0.8700	0.5970
Lo	0.8410	0.5770
Lp	0.7310	0.5700
Lq	0.8310	0.5940
Lr	0.8010	0.5880
S2	0.5150	0.3330
SA	0.1560	0.2670
SB	0.1050	0.1940
SC	0.1220	0.2120
SD	0.0200	0.1490
SE	0.2130	0.2720
SF	0.1730	0.2630
SG	0.1570	0.2500
SH	0.1970	0.2560
SI	0.1670	0.2220
SJ	0.1500	0.2470
SK	0.0380	0.1490
SL	0.1400	0.2670
SM	0.3240	0.3470
SN	0.0240	0.1910
SO	0.0700	0.2050
SP	0.3840	0.3650
SQ	0.2510	0.2570
SR	0.4750	0.4110
SS	0.4690	0.4040
ST	0.3680	0.3810
SU	0.3360	0.3500
SV	0.6280	0.4770
SW	0.3720	0.3250
SX	0.6960	0.5150
SY	0.6040	0.4670
SZ	0.1710	0.1630
Sa	0.4410	0.3770
Sb	0.6780	0.5070
Sc	0.6330	0.5050
Sd	0.3350	0.3290
Se	0.4990	0.3600

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Chain	Atom inclusion	Q-score
Sf	0.4560	0.3950
Sg	0.3100	0.3190
Ta	0.0230	0.1620