



Full wwPDB EM Validation Report ⓘ

Mar 12, 2026 – 06:56 AM UTC

PDB ID : 6Y2L / pdb_00006y2l
EMDB ID : EMD-10674
Title : Structure of human ribosome in POST state
Authors : Bhaskar, V.; Schenk, A.D.; Cavadini, S.; von Loeffelholz, O.; Natchiar, S.K.;
Klaholz, B.P.; Chao, J.A.
Deposited on : 2020-02-16
Resolution : 3.00 Å(reported)
Based on initial models : 6QZP, 5AJ0, 5LKS

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

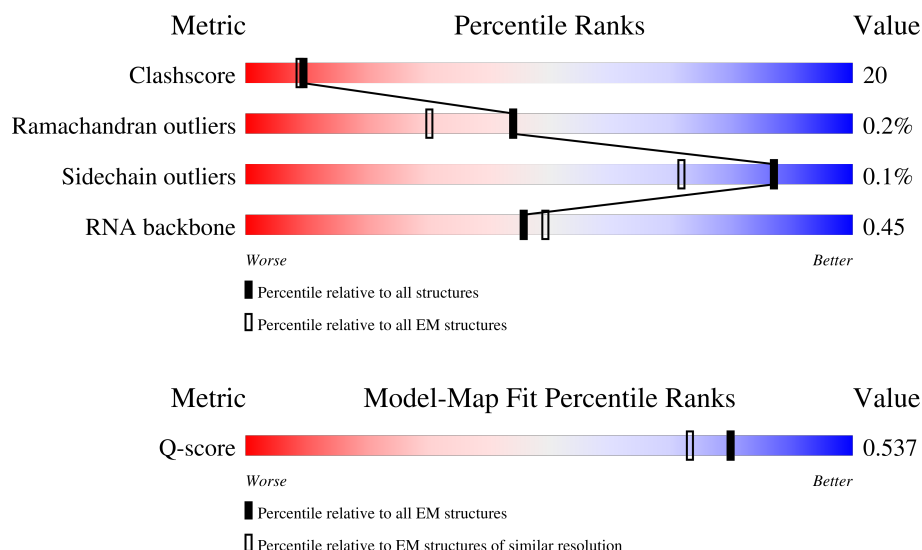
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

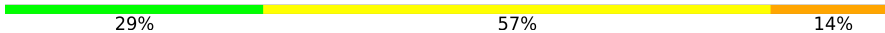
The reported resolution of this entry is 3.00 Å.

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



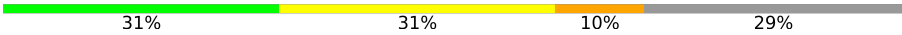
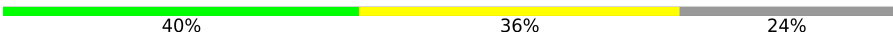
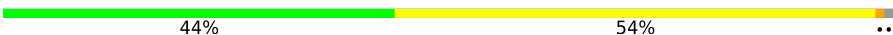
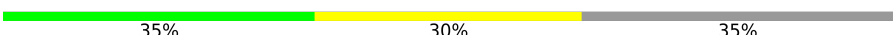
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	14081 (2.50 - 3.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A4	28	
2	B4	76	
3	C4	2	

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Mol	Chain	Length	Quality of chain
4	L5	5070	
5	L7	120	
6	L8	156	
7	LA	257	
8	LB	403	
9	LC	427	
10	LD	297	
11	LE	288	
12	LF	248	
13	LG	266	
14	LH	192	
15	LI	214	
16	LJ	178	
17	LL	211	
18	LM	215	
19	LN	204	
20	LO	203	
21	LP	184	
22	LQ	188	
23	LR	196	
24	LS	176	
25	LT	160	
26	LU	128	
27	LV	140	
28	LW	157	

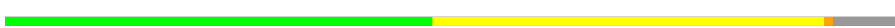
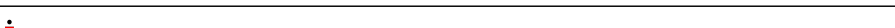
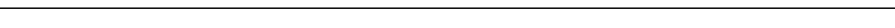
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Mol	Chain	Length	Quality of chain
29	LX	156	
30	LY	145	
31	LZ	136	
32	La	148	
33	Lb	159	
34	Lc	115	
35	Ld	125	
36	Le	135	
37	Lf	110	
38	Lg	117	
39	Lh	123	
40	Li	105	
41	Lj	97	
42	Lk	70	
43	Ll	51	
44	Lm	128	
45	Ln	25	
46	Lo	106	
47	Lp	92	
48	Lr	137	
49	S2	1869	
50	SA	295	
51	SB	264	
52	SC	293	
53	SD	243	

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Mol	Chain	Length	Quality of chain
54	SE	263	
55	SF	204	
56	SG	249	
57	SH	194	
58	SI	208	
59	SJ	194	
60	SK	165	
61	SL	158	
62	SN	151	
63	SO	151	
64	SP	145	
65	SQ	146	
66	SR	135	
67	SS	152	
68	ST	145	
69	SU	119	
70	SV	83	
71	SW	130	
72	SX	143	
73	SY	133	
74	SZ	125	
75	Sa	115	
76	Sb	84	
77	Sc	69	
78	Sd	56	

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Mol	Chain	Length	Quality of chain
79	Se	59	
80	Sg	317	

2 Entry composition [i](#)

There are 84 unique types of molecules in this entry. The entry contains 208946 atoms, of which 23 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 mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A4	15	Total	C	N	O	P	0	0
			300	135	30	120	15		

- Molecule 2 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B4	76	Total	C	N	O	P	0	0
			1623	723	290	534	76		

- Molecule 3 is a protein called Nascent polypeptide.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	C4	2	Total	C	N	O	0	0
			10	6	2	2		

- Molecule 4 is a RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	L5	3613	Total	C	N	O	P	0	0
			77447	34487	14167	25181	3612		

- Molecule 5 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	L7	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

- Molecule 6 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	L8	156	Total	C	N	O	P	0	0
			3314	1480	585	1094	155		

- Molecule 7 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LA	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 8 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LB	395	Total	C	N	O	S	0	0
			3183	2027	597	545	14		

- Molecule 9 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	LC	364	Total	C	N	O	S	0	0
			2884	1814	576	479	15		

- Molecule 10 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LD	293	Total	C	N	O	S	0	0
			2361	1496	430	421	14		

- Molecule 11 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	LE	219	Total	C	N	O	S	0	0
			1754	1129	334	287	4		

- Molecule 12 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LF	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

- Molecule 13 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LG	229	Total	C	N	O	S	0	0
			1818	1157	351	306	4		

- Molecule 14 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LH	190	Total	C	N	O	S	0	0
			1510	950	282	272	6		

- Molecule 15 is a protein called 60S ribosomal protein L10-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LI	206	Total	C	N	O	S	0	0
			1651	1051	318	268	14		

- Molecule 16 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LJ	169	Total	C	N	O	S	0	0
			1329	841	250	232	6		

- Molecule 17 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LL	205	Total	C	N	O	S	0	0
			1630	1020	340	266	4		

- Molecule 18 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LM	139	Total	C	N	O	S	0	0
			1122	720	216	179	7		

- Molecule 19 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LN	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 20 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LO	200	Total	C	N	O	S	0	0
			1633	1053	318	257	5		

- Molecule 21 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LP	153	Total	C	N	O	S	0	0
			1234	771	240	214	9		

- Molecule 22 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LQ	187	Total	C	N	O	S	0	0
			1502	939	313	245	5		

- Molecule 23 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LR	176	Total	C	N	O	S	0	0
			1452	898	318	227	9		

- Molecule 24 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LS	175	Total	C	N	O	S	0	0
			1452	925	283	234	10		

- Molecule 25 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LT	159	Total	C	N	O	S	0	0
			1282	813	250	213	6		

- Molecule 26 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LU	101	Total	C	N	O	S	0	0
			799	515	140	142	2		

- Molecule 27 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LV	131	Total	C	N	O	S	0	0
			971	613	183	170	5		

- Molecule 28 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LW	115	Total	C	N	O	S	0	0
			808	506	160	139	3		

- Molecule 29 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	LX	120	Total	C	N	O	S	0	0
			981	627	184	169	1		

- Molecule 30 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	LY	134	Total	C	N	O	S	0	0
			1111	697	225	186	3		

- Molecule 31 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	LZ	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 32 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	La	147	Total	C	N	O	S	0	0
			1154	731	236	184	3		

- Molecule 33 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Lb	75	Total	C	N	O	S	0	0
			590	367	123	97	3		

- Molecule 34 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lc	97	Total	C	N	O	S	0	0
			742	473	130	133	6		

- Molecule 35 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Ld	107	Total	C	N	O	S	0	0
			874	554	171	147	2		

- Molecule 36 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Le	128	Total	C	N	O	S	0	0
			1049	664	215	165	5		

- Molecule 37 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Lf	109	Total	C	N	O	S	0	0
			872	552	173	144	3		

- Molecule 38 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lg	114	Total	C	N	O	S	0	0
			889	557	184	142	6		

- Molecule 39 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Lh	121	Total	C	N	O	S	0	0
			1006	635	203	167	1		

- Molecule 40 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Li	102	Total	C	N	O	S	0	0
			813	510	176	123	4		

- Molecule 41 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lj	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 42 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Lk	69	Total	C	N	O	S	0	0
			542	350	100	91	1		

- Molecule 43 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Ll	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 44 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lm	52	Total	C	N	O	S	0	0
			425	264	90	65	6		

- Molecule 45 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Ln	24	Total	C	N	O	S	0	0
			230	139	62	26	3		

- Molecule 46 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Lo	105	Total	C	N	O	S	0	0
			848	532	173	137	6		

- Molecule 47 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Lp	91	Total	C	N	O	S	0	0
			696	440	135	114	7		

- Molecule 48 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Lr	125	Total	C	N	O	S	0	0
			997	618	207	168	4		

- Molecule 49 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S2	1713	Total	C	N	O	P	0	0
			36560	16319	6563	11966	1712		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SA	216	Total	C	N	O	S	0	0
			1671	1068	297	298	8		

- Molecule 51 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SB	213	Total	C	N	O	S	0	0
			1718	1092	308	304	14		

- Molecule 52 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SC	219	Total	C	N	O	S	0	0
			1661	1076	284	291	10		

- Molecule 53 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SD	223	Total	C	N	O	S	0	0
			1580	1016	286	271	7		

- Molecule 54 is a protein called 40S ribosomal protein S4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SE	262	Total	C	N	O	S	0	0
			1972	1270	370	324	8		

- Molecule 55 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SF	187	Total	C	N	O	S	0	0
			1416	886	269	254	7		

- Molecule 56 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SG	231	Total	C	N	O	S	0	0
			1634	1026	332	269	7		

- Molecule 57 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SH	183	Total	C	N	O	S	0	0
			1274	819	242	213			

- Molecule 58 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SI	206	Total	C	N	O	S	0	0
			1574	989	308	272	5		

- Molecule 59 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SJ	179	Total	C	N	O	S	0	0
			1431	915	290	224	2		

- Molecule 60 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SK	96	Total	C	N	O	S	0	0
			726	479	127	115	5		

- Molecule 61 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SL	144	Total	C	N	O	S	0	0
			1143	730	213	194	6		

- Molecule 62 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SN	150	Total	C	N	O	S	0	0
			1182	758	226	197	1		

- Molecule 63 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SO	134	Total	C	N	O	S	0	0
			969	596	194	173	6		

- Molecule 64 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SP	128	Total	C	N	O	S	0	0
			975	617	185	167	6		

- Molecule 65 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SQ	142	Total	C	N	O	S	0	0
			1071	687	204	177	3		

- Molecule 66 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SR	131	Total	C	N	O	S	0	0
			942	600	179	159	4		

- Molecule 67 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SS	141	Total	C	N	O	S	0	0
			1118	706	226	185	1		

- Molecule 68 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	ST	143	Total	C	N	O	S	0	0
			1081	679	210	189	3		

- Molecule 69 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	SU	101	Total	C	N	O	S	0	0
			713	447	137	125	4		

- Molecule 70 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	SV	83	Total	C	N	O	S	0	0
			618	385	115	113	5		

- Molecule 71 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SW	129	Total	C	N	O	S	0	0
			1026	655	193	172	6		

- Molecule 72 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SX	141	Total	C	N	O	S	0	0
			1078	682	212	181	3		

- Molecule 73 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SY	123	Total	C	N	O	S	0	0
			927	588	183	152	4		

- Molecule 74 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SZ	75	Total	C	N	O	S	0	0
			559	361	105	92	1		

- Molecule 75 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Sa	99	Total	C	N	O	S	0	0
			781	487	165	124	5		

- Molecule 76 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Sb	83	Total	C	N	O	S	0	0
			618	386	118	107	7		

- Molecule 77 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Sc	63	Total	C	N	O	S	0	0
			472	289	92	89	2		

- Molecule 78 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Sd	53	Total	C	N	O	S	0	0
			433	271	87	70	5		

- Molecule 79 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Se	57	Total	C	N	O	S	0	0
			426	259	96	70	1		

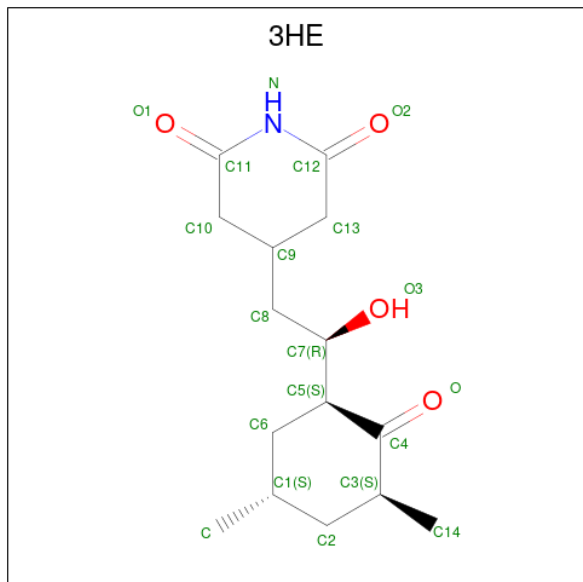
- Molecule 80 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Sg	308	Total	C	N	O	S	0	0
			2172	1388	379	394	11		

- Molecule 81 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
81	B4	1	Total	Mg	0
			1	1	
81	L5	129	Total	Mg	0
			129	129	
81	L7	3	Total	Mg	0
			3	3	
81	L8	3	Total	Mg	0
			3	3	
81	LA	1	Total	Mg	0
			1	1	
81	LN	1	Total	Mg	0
			1	1	
81	LP	1	Total	Mg	0
			1	1	
81	LV	1	Total	Mg	0
			1	1	
81	S2	53	Total	Mg	0
			53	53	

- Molecule 82 is 4-{(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl}piperidine-2,6-dione (CCD ID: 3HE) (formula: C₁₅H₂₃NO₄).



Mol	Chain	Residues	Atoms					AltConf
82	L5	1	Total	C	H	N	O	0
			43	15	23	1	4	

- Molecule 83 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
83	Lg	1	Total	Zn	0
			1	1	
83	Lj	1	Total	Zn	0
			1	1	
83	Lm	1	Total	Zn	0
			1	1	
83	Lo	1	Total	Zn	0
			1	1	
83	Lp	1	Total	Zn	0
			1	1	
83	Sa	1	Total	Zn	0
			1	1	
83	Sd	1	Total	Zn	0
			1	1	

- Molecule 84 is water.

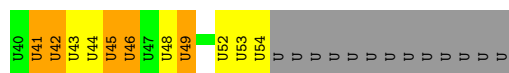
Mol	Chain	Residues	Atoms		AltConf
84	L5	3	Total 3	O 3	0
84	LD	1	Total 1	O 1	0
84	LI	1	Total 1	O 1	0
84	LN	1	Total 1	O 1	0
84	La	1	Total 1	O 1	0
84	Lp	1	Total 1	O 1	0
84	S2	3	Total 3	O 3	0

3 Residue-property plots

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

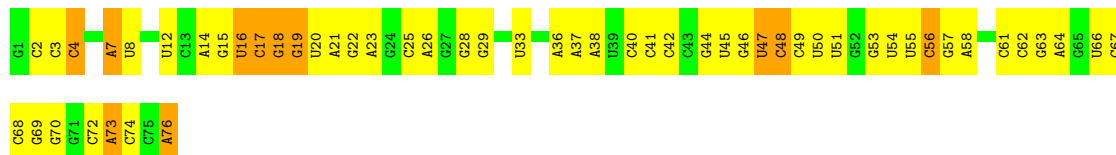
• Molecule 1: mRNA

Chain A4: 



• Molecule 2: tRNA

Chain B4: 

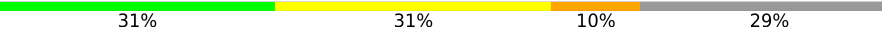


• Molecule 3: Nascent polypeptide

Chain C4: 



• Molecule 4: 28S ribosomal RNA

Chain L5: 







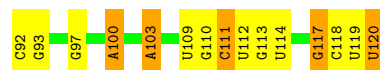
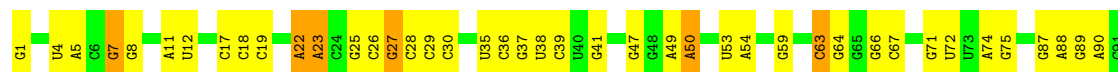


WORLDWIDE
PDB
PROTEIN DATA BANK

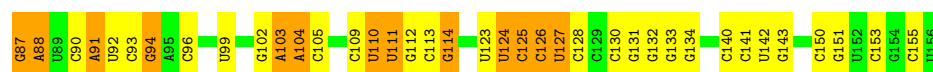
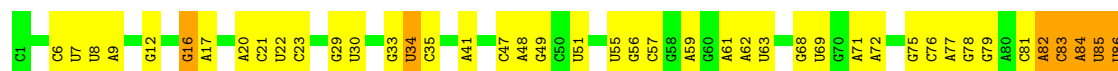




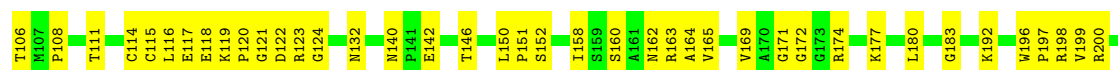
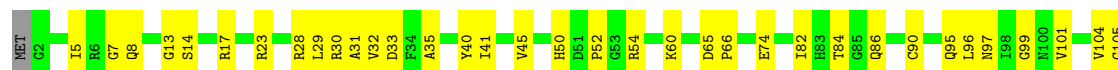
• Molecule 5: 5S ribosomal RNA



• Molecule 6: 5.8S ribosomal RNA

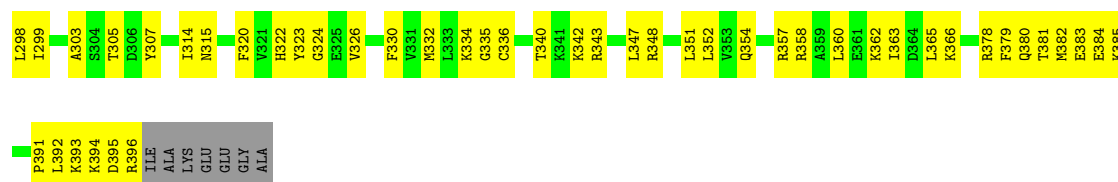


• Molecule 7: 60S ribosomal protein L8



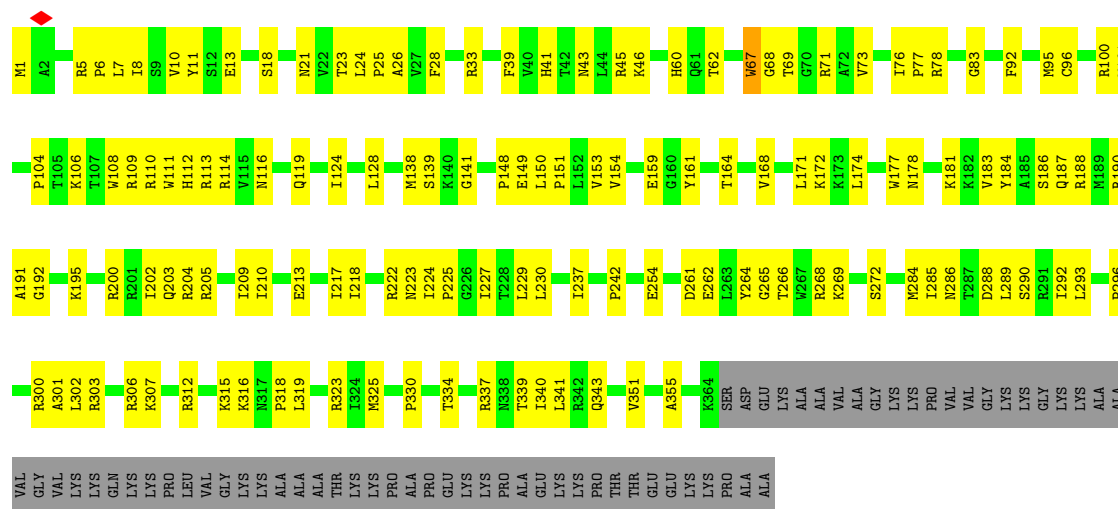
• Molecule 8: 60S ribosomal protein L3





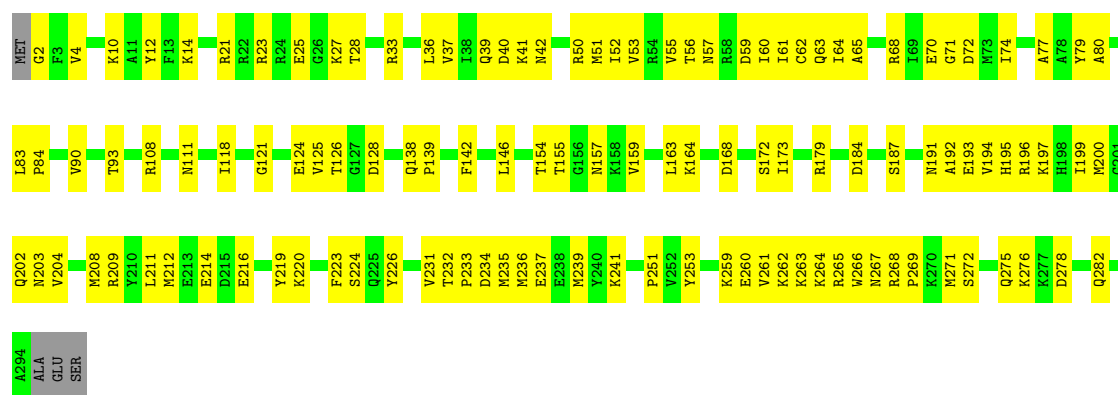
• Molecule 9: 60S ribosomal protein L4

Chain LC: 53% 32% 15%



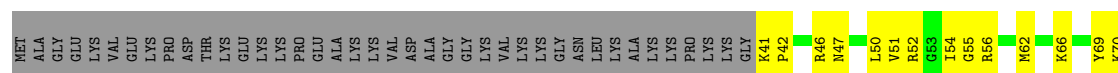
• Molecule 10: 60S ribosomal protein L5

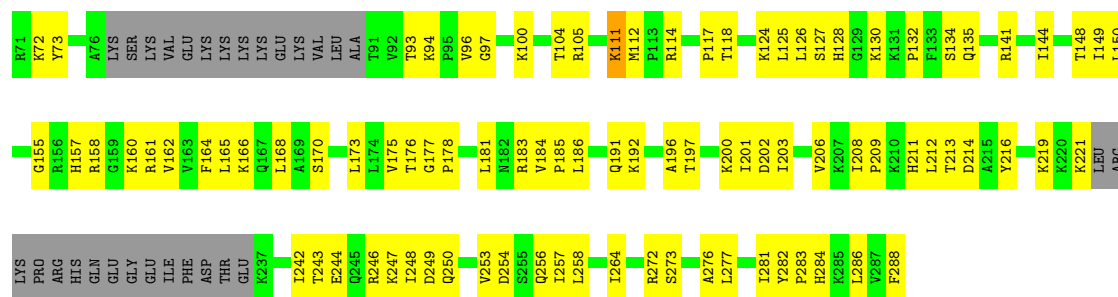
Chain LD: 59% 40%



• Molecule 11: 60S ribosomal protein L6

Chain LE: 40% 36% 24%





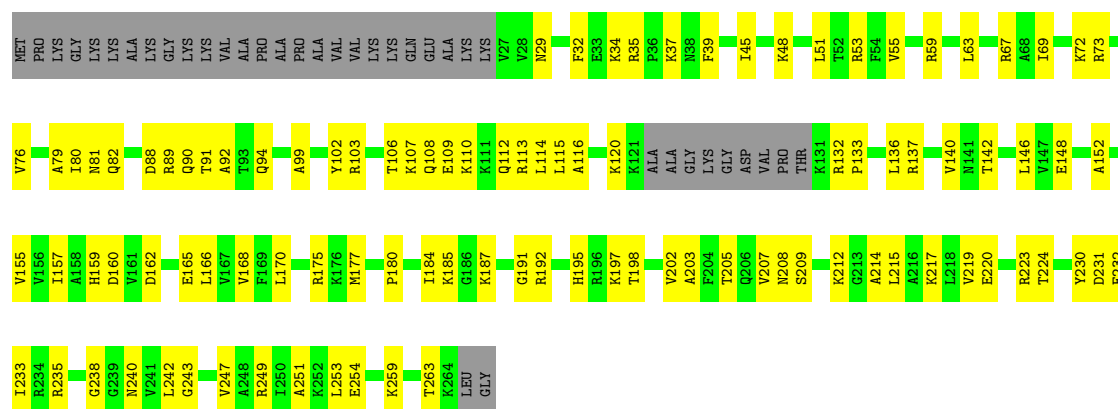
• Molecule 12: 60S ribosomal protein L7

Chain LF: 56% 35% 9%



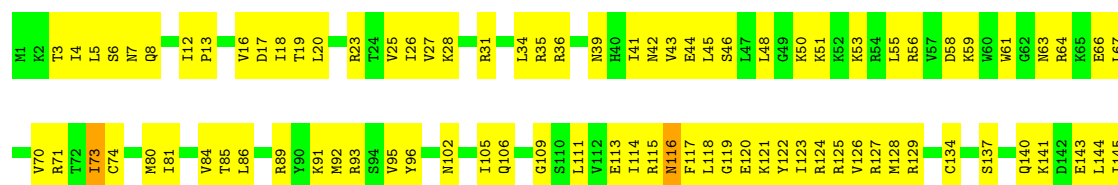
• Molecule 13: 60S ribosomal protein L7a

Chain LG: 48% 38% 14%



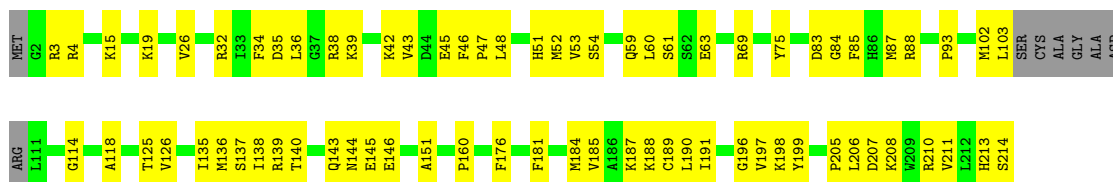
• Molecule 14: 60S ribosomal protein L9

Chain LH: 44% 54% ..

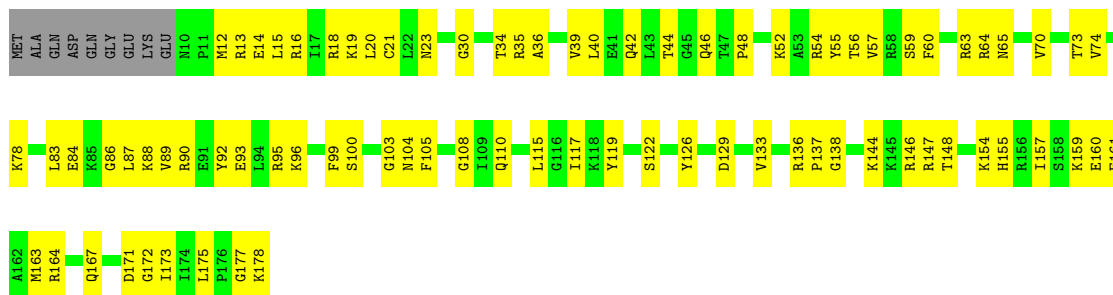




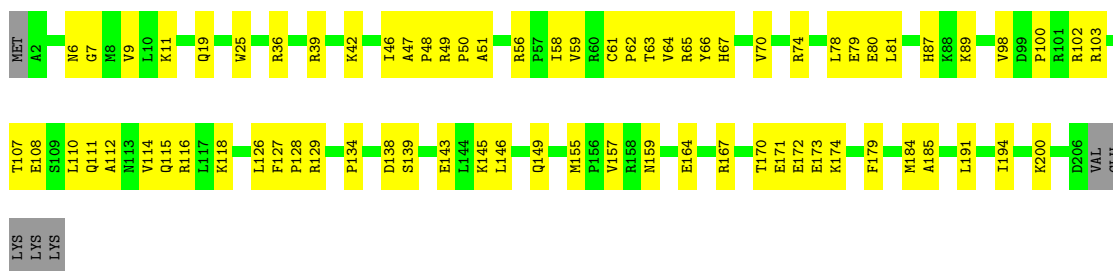
- Molecule 15: 60S ribosomal protein L10-like



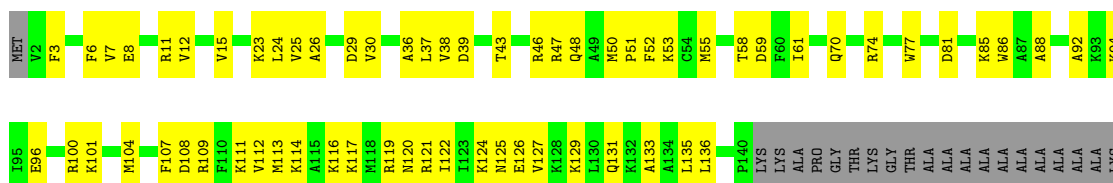
- Molecule 16: 60S ribosomal protein L11



- Molecule 17: 60S ribosomal protein L13

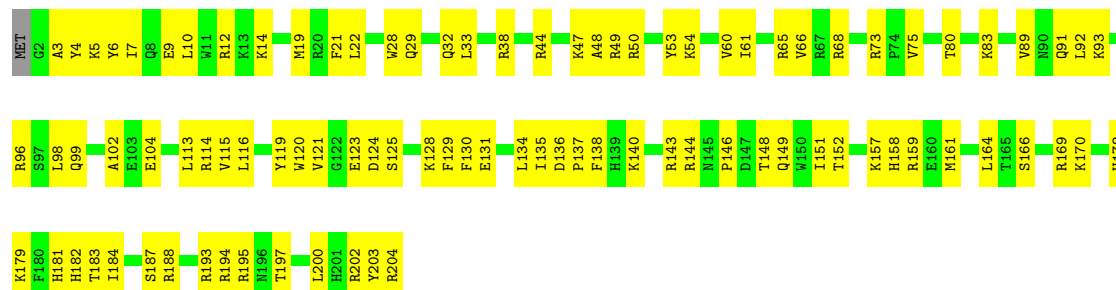


- Molecule 18: 60S ribosomal protein L14

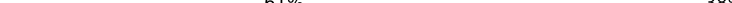


- Molecule 19: 60S ribosomal protein L15

Chain LN:



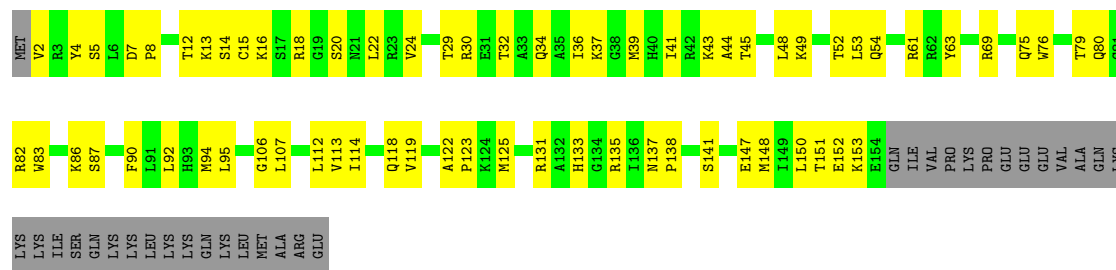
- Molecule 20: 60S ribosomal protein L13a

Chain LO: 

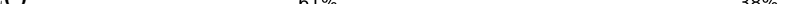


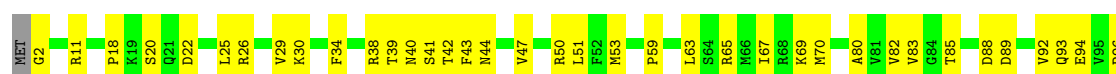
- Molecule 21: 60S ribosomal protein L17

Chain LP:



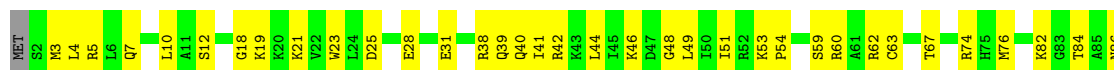
- Molecule 22: 60S ribosomal protein L18

Chain LO: 





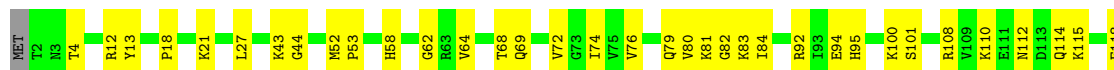
• Molecule 23: 60S ribosomal protein L19



• Molecule 24: 60S ribosomal protein L18a



• Molecule 25: 60S ribosomal protein L21



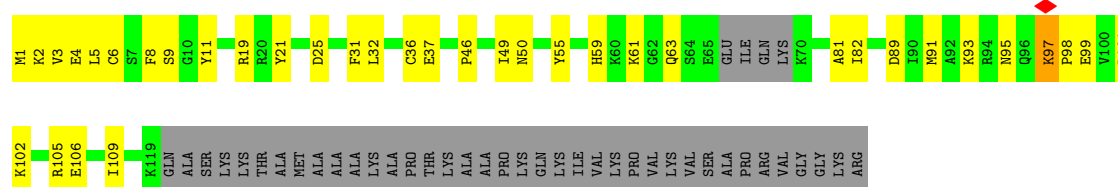
• Molecule 26: 60S ribosomal protein L22



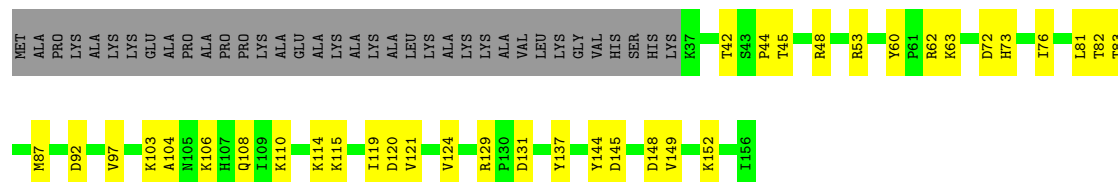
• Molecule 27: 60S ribosomal protein L23



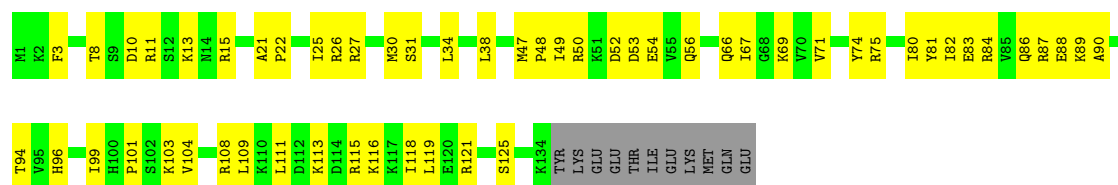
- Molecule 28: 60S ribosomal protein L24



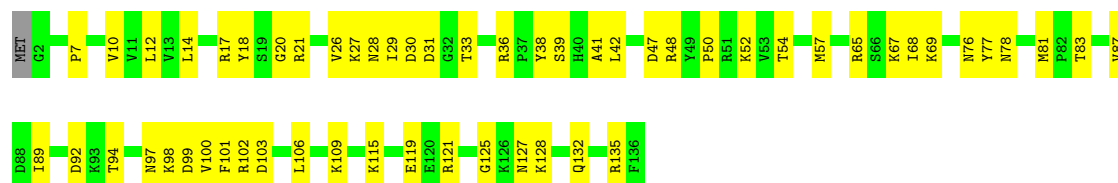
- Molecule 29: 60S ribosomal protein L23a



- Molecule 30: 60S ribosomal protein L26

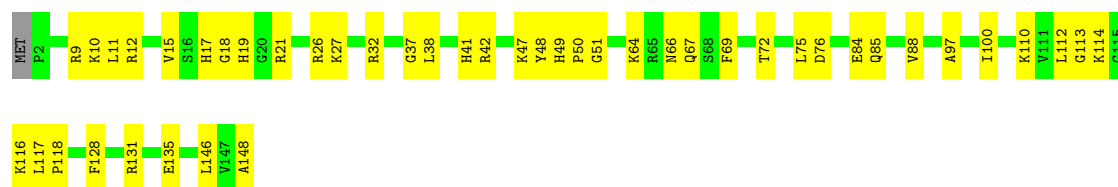


- Molecule 31: 60S ribosomal protein L27



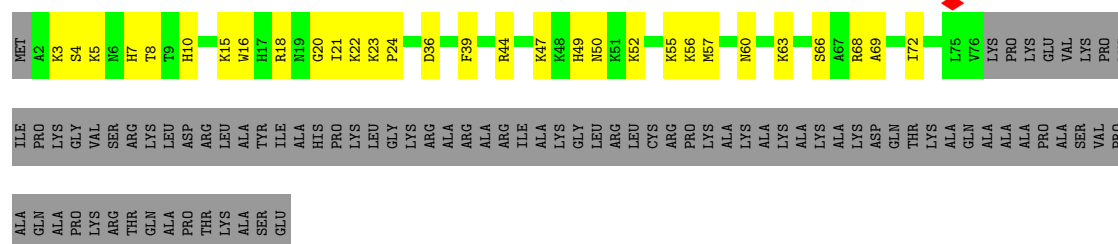
- Molecule 32: 60S ribosomal protein L27a

Chain La: 



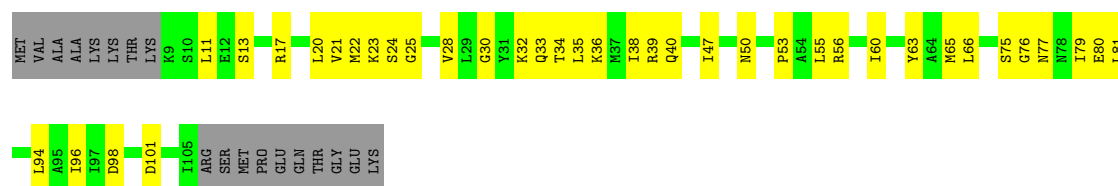
• Molecule 33: 60S ribosomal protein L29

Chain Lb: 



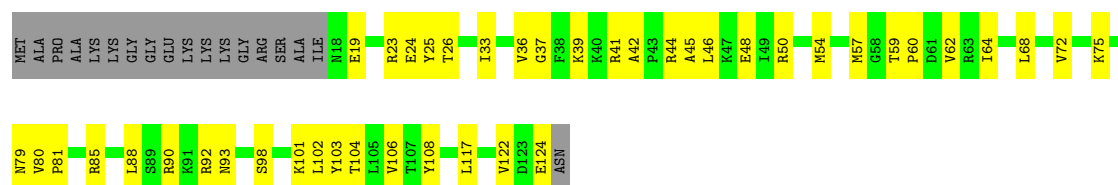
• Molecule 34: 60S ribosomal protein L30

Chain Lc: 



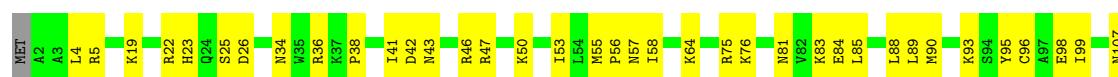
• Molecule 35: 60S ribosomal protein L31

Chain Ld: 



• Molecule 36: 60S ribosomal protein L32

Chain Le: 





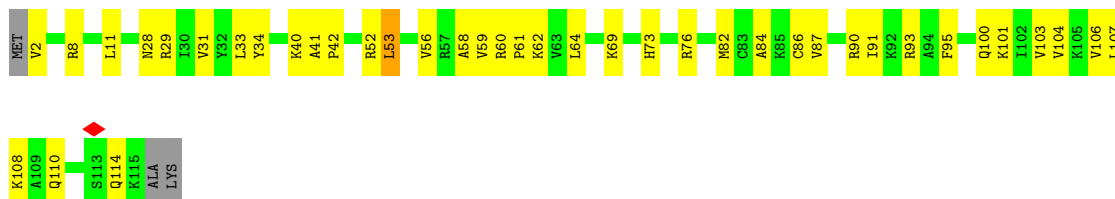
- Molecule 37: 60S ribosomal protein L35a

Chain Lf: 53% 45% ..



- Molecule 38: 60S ribosomal protein L34

Chain Lg: 63% 33% ..



- Molecule 39: 60S ribosomal protein L35

Chain Lh: 66% 33% .



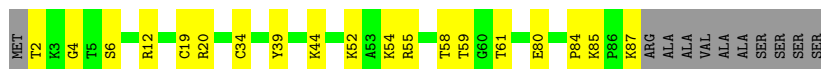
- Molecule 40: 60S ribosomal protein L36

Chain Li: 69% 29% .



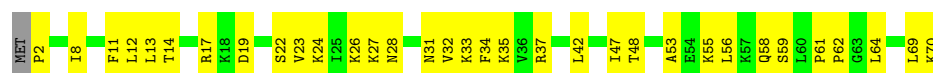
- Molecule 41: 60S ribosomal protein L37

Chain Lj: 69% 20% 11%



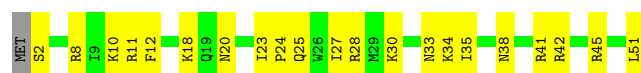
- Molecule 42: 60S ribosomal protein L38

Chain Lk:  51% 47%



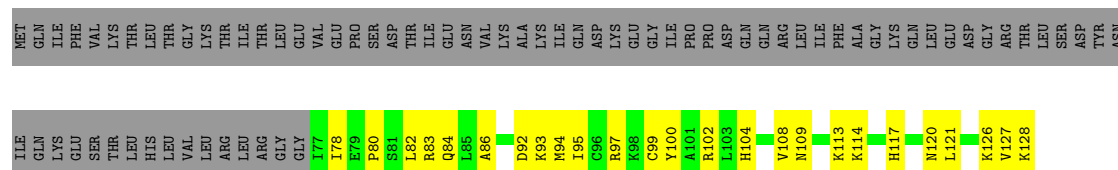
- Molecule 43: 60S ribosomal protein L39

Chain Ll:  57% 41%



- Molecule 44: Ubiquitin-60S ribosomal protein L40

Chain Lm:  21% 20% 59%



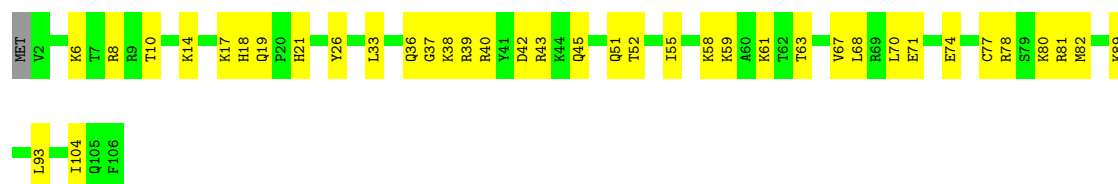
- Molecule 45: 60S ribosomal protein L41

Chain Ln:  64% 32%



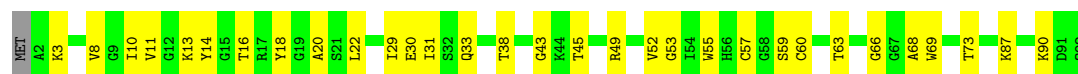
- Molecule 46: 60S ribosomal protein L36a

Chain Lo:  63% 36%



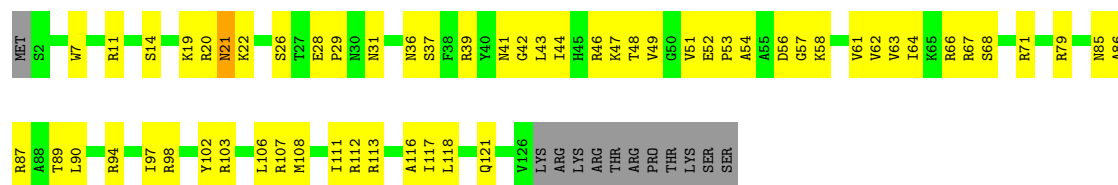
- Molecule 47: 60S ribosomal protein L37a

Chain Lp:  65% 34%

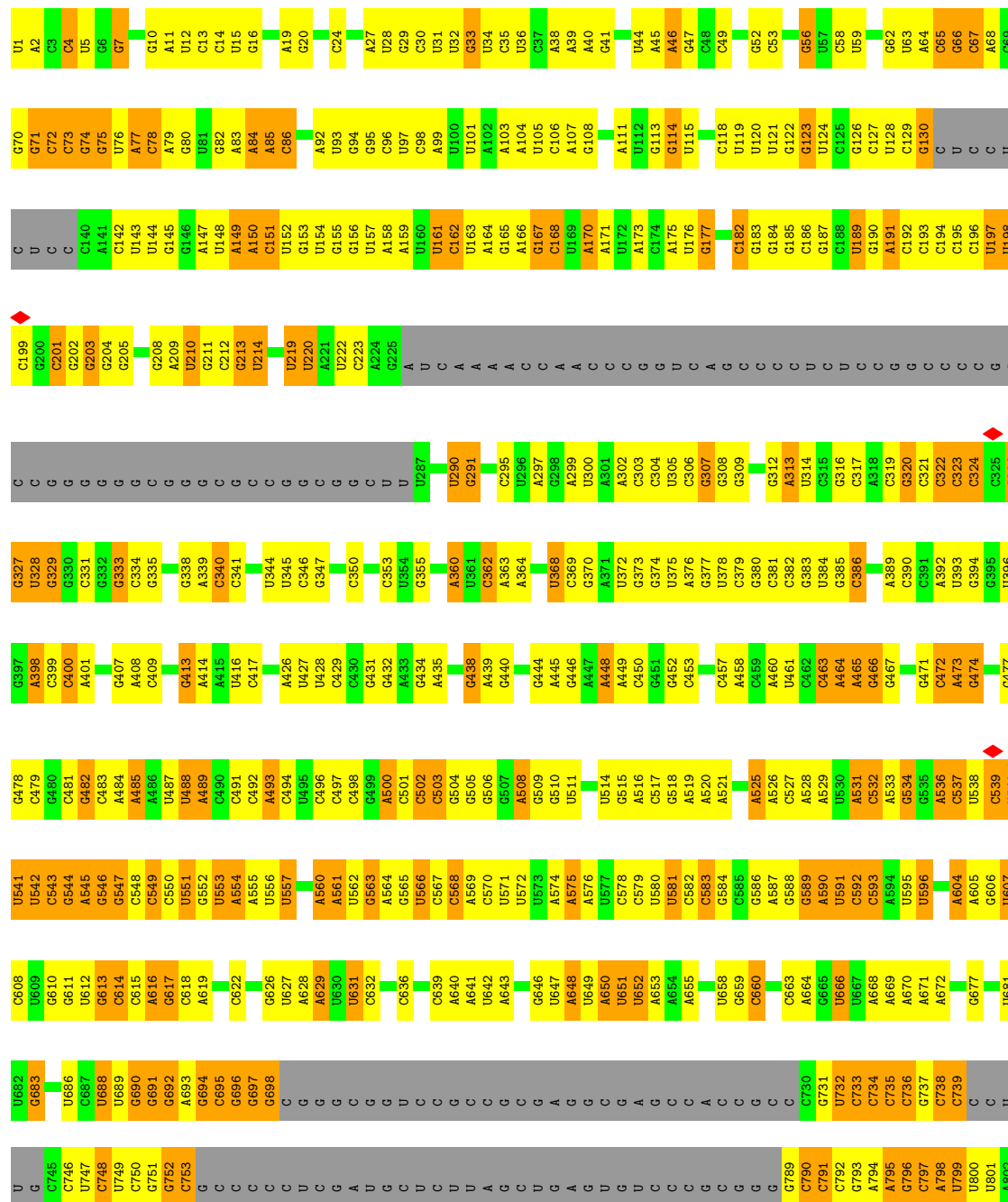


- Molecule 48: 60S ribosomal protein L28

Chain Lr:  49% 42% 9%

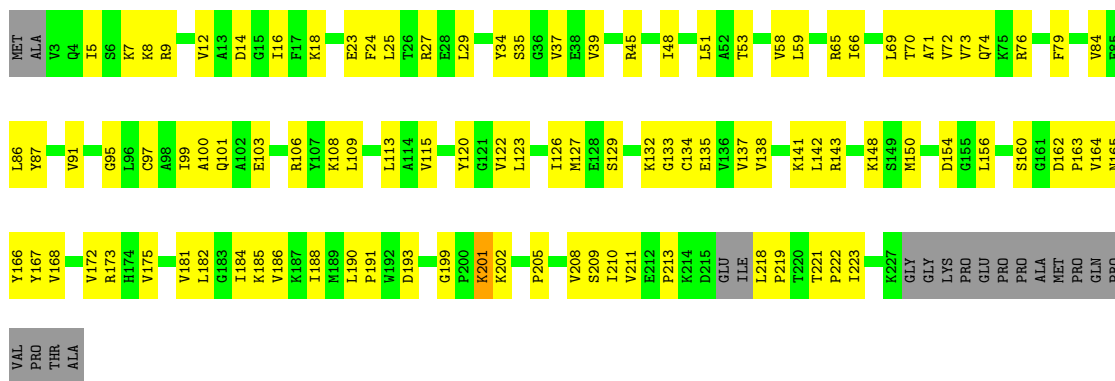


• Molecule 49: 18S ribosomal RNA



C1802	U1728	A1580	U1519	A1448	A1378	A1301	U1232	A1150	A1084	A1009	C931	A869	C803
U1803	U1729	C1581	G1520	G1449	A1379	G1302	G1233	G1151	C1085	A1009	G932	A870	U804
U1804		C1582	G1520	G1450	C1380	G1302	C1234	U1152	C1086	A1010	G933	U871	U805
G1805	G1734	C1583	G1521	G1451	G1381	U1304	G1235	C1153	A1087	A1011	G934	A872	U806
A1806		A1651	A1522	A1452	A1382		G1236	U1154	U1088	U1012	G935	G874	G807
C1807	U1741	U1585	C1523	C1453	A1383	U1308	C1237	U1155	G1089	U1013	G936	G874	A808
U1808	C1742	U1586	G1524	A1454	C1384	C1309	U1238	U1156	C1090	G1014	G937	A875	A809
A1809	G1743	G1587	C1525	A1455	G1385	U1310	U1239	U1157	C1091	U1015	A938	C876	A810
U1810	G1743	A1588	G1526	A1456	A1386	C1311	A1240	G1158	G1092	U1016	U939	C877	A811
C1811	A1745	C1590	C1527	U1457	G1387	G1312	U1241		A1093	U1017	U940	G878	A812
U1812	G1746	C1591	G1529	U1461	A1388	A1313	U1242	G1164	C1094	U1018	C941	C879	A813
A1813	C1747	C1592	U1530	U1462	C1389	U1314	U1243	G1165	U1095	C1019	G942	G880	U814
G1814	G1748	C1593	A1531	U1463	U1390	U1315		G1166	G1096	A1020	U943	G881	U815
A1815		A1594	C1532	C1464	C1391	C1316	U1248		G1097	U1021	A944	U882	A816
G1816	C1752	C1595	A1533	A1465			A1249	G1171	C1098	U1022	U945	U883	G817
C1817	G1753	U1595	C1534	G1466	C1395	U1319	C1250		C1099	A1023	U946	A818	C884
A1818	G1754	C1596	U1535	C1467	A1396	G1320	A1251	G1179	A1100	U1024	G947	U885	G819
U1819	C1755	C1597	G1536	C1468	U1397	G1321	C1252	G1180	U1101	U1025	C948	U820	U820
A1820	G1756	U1598	A1537	A1469	G1398	G1322	A1253	A1181	G1102	C1026	G949	G821	U821
U1821	C1757	U1599	C1538	C1470	C1399	U1323	G1254	A1182	G1103	A1027	C950	U822	U822
A1822	G1758	G1600	U1539	C1471	U1400	G1325	C1255	A1183	C1104	A1028	C951	U823	U823
C1823	G1759	A1601	C1540	C1472	A1402	U1326	G1256	G1184	G1105	C1032	C952	G891	C824
A1824	G1760	G1603	G1541	G1473	C1403	G1327	G1257		G1106			U892	A825
A1825		G1604	C1542	A1474	U1404		A1258	G1187	G1107	G1033	A955	G893	A826
G1826	C	G1605	U1543	G1475	A1405	G1330	A1280		G1108	A1034	G956	G894	A827
U1827	G	A1606	C1544	A1476	A1406	C1331		U1192		A1035	A957	G895	G828
C1828	G	A1607	G1545	U1477	U1407	A1332	C1284	A1195	U1114	A1036	G958	U896	C829
G1829	C	G1680	C1546		G1406	U1333	A1285		C1115	G1037	U960	U897	A830
U1830	C	U1681	C1547		C1410	G1334	C1266	A1199	C1116	G1040	G961	U898	C834
	A		G1548	A1480	G1411	G1335		A1200	G1117	A1041	A962	C900	C835
A1834	C	G1686	U1549	G1481		C1336	G1289		G1118	A1042	A963	G901	G836
A1835	C	C1687	U1550	A1482	A1414		G1270	G1203	A1119	G1043		G902	A837
G1836	G		U1551	A1483	C1415	U1342	C1271	A1204	U1120	G1044	U968	A903	G838
U1837	C	G1692	G1552	U1485	C1416	U1343	C1272	U1205	U1121	U1045	U968	A904	C839
U1838	G1772	C1563	C1553	A1486	C1417	A1344	C1273	G1206	A1122	U1046	G970	C905	C840
U1839	G1773	U1616	C1554	A1487	G1418	G1345	G1274	G1207	G1123		G971	U906	G841
U1840	C1774	U1555	U1555	C1488	C1419	U1346	G1275	A1208	C1124	A1050	A972	G907	C842
C1841	U1775	C1618	A1556	C1489	G1420	U1347	A1276		C1125	G1051		A908	C843
G1842	G1776	A1566	C1557	A1490	A1421	G1348	C1277	G1212	G1126	A1052	C977	G909	U844
U1843	C1777	C1558	G1558	G1491	G1422	U1349	A1278	C1213	C	C1053	C978	G910	G845
A1844	G1778	U1569	C1559	U1492	C1423	U1350	G1279	C1214	G1129	G1054	C979	C911	G846
A1845	G1779	U1560	C1560	C1493	G1424	G1351	G1280	A1215	G1130	U1055	A980	C912	A847
	G1780	A1561	A1561	C1493			G1281	C1216	G1131	C1057		A913	U848
G1849	A1781	C1562	C1562	G1497	G1428	G1354	A1282		G1132	C1067	A983	U914	A849
A1850	G1782	G1563	G1563	A1498			C1283	C1217	G1133	A1058	C984		A854
A1851	C1783	C1564	C1564	G1499	G1431	A1357	A1284	A1218	A1133	G1059	A987	U917	G854
C1852	G1784	C1565	C1565	U1504	U1432	U1358	G1285	C1219	A1134	A1060		U918	G855
C1853	G1785	C1566	G1566	U1505	C		G1286	G1220		U1061	A990	A919	C856
U1854	U1786	G1567	G1567	A1506	C	U1364	A1287	G1221	G1139	C1062	G991	A920	U857
	G1787	C1568	C1568	G1507	C	G1365	U1288	G1222	G1140	C1063	A992	G921	A858
G1857	G1788	U1631	A1569	A1508	C1436	G1366	U1289	A1223	G1141	C1064		G922	A859
G1858	A1789	C1569	G1570	U1509	C1437	U1367		G1224	A1142		G999	G923	G860
A1859	G1790	C1570	G1571	G1510	A1438	U1368	C1292	U1225	G1143	A1070	G999	G924	A861
U1860	A1791	C1571	C1572	U1511	C1439	A1369	A1293	G1226	A1144	G1071	A1000	G925	A862
G1861	G1792	C1572	C1573	U1512	U1442	A1370	G1294	G1227	A1145		A1001	A926	U863
G1862		C1574	C1574	C1513	C1443	U1371		A1228	C1146	A1080	U1002	C927	
A1863	U1797		U1578	G1514	C1446	U1372	G1288	C1229	C1147	U1081		G928	U866
U1864	C1798	U1643	G1515	G1514	A1446	C1373		C1230	A1148	A1082	G1005	A1082	G929
C1865	G1799	C1644	G1516	G1516	G1447		U1300	C1231	A1149	A1083	C1006	C930	G888

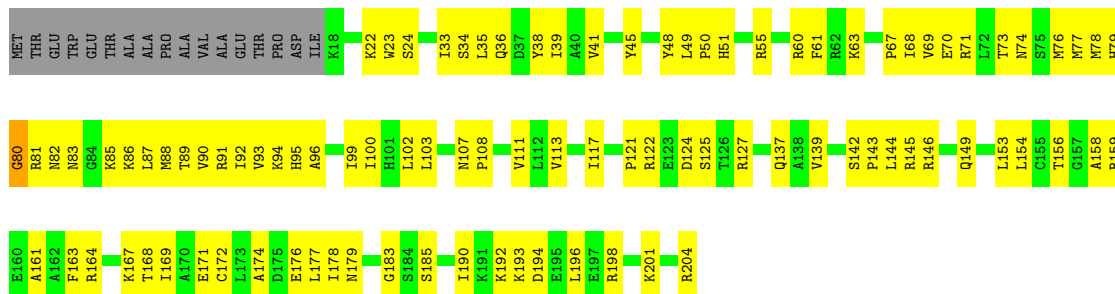
- Molecule 53: 40S ribosomal protein S3



- Molecule 54: 40S ribosomal protein S4, X isoform

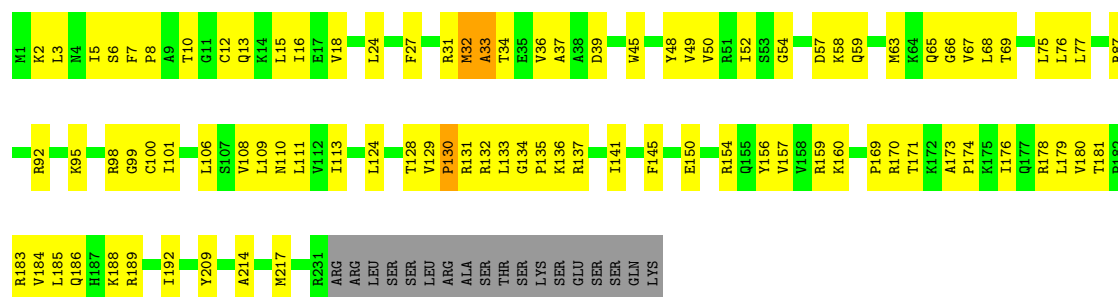


- Molecule 55: 40S ribosomal protein S5



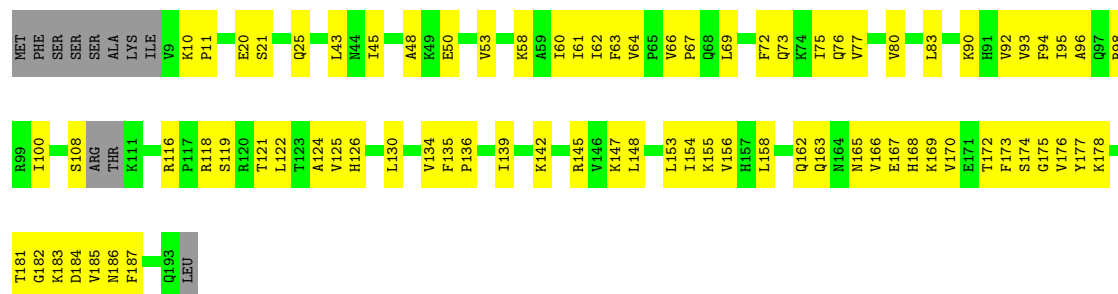
- Molecule 56: 40S ribosomal protein S6

Chain SG: 



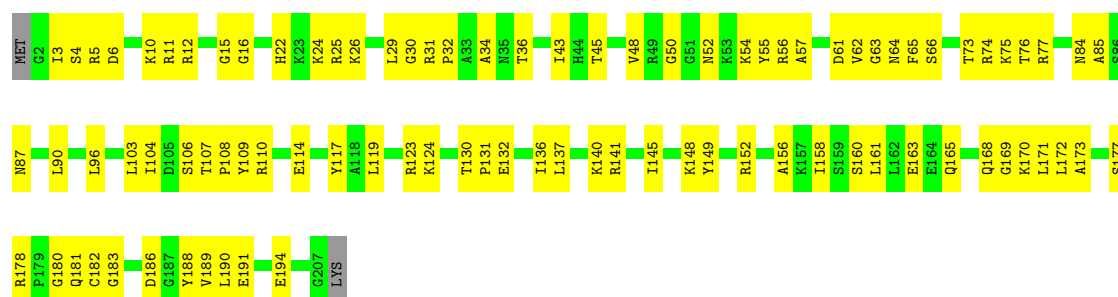
• Molecule 57: 40S ribosomal protein S7

Chain SH: 



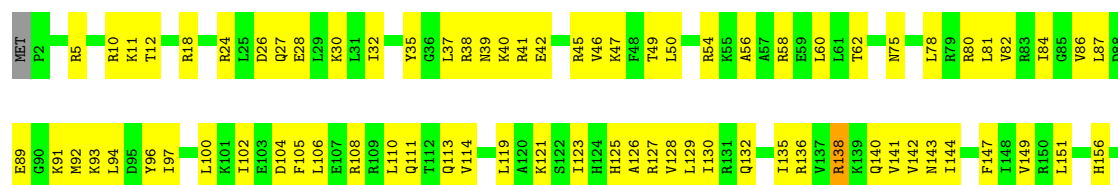
• Molecule 58: 40S ribosomal protein S8

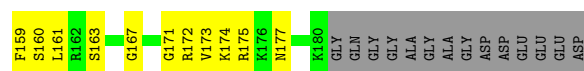
Chain SI: 



• Molecule 59: 40S ribosomal protein S9

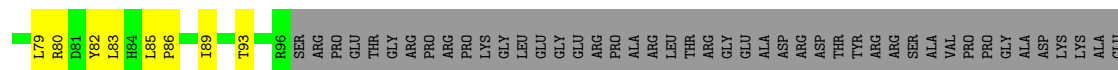
Chain SJ: 





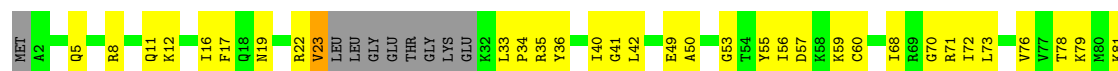
- Molecule 60: 40S ribosomal protein S10

Chain SK: 27% 32% 42%



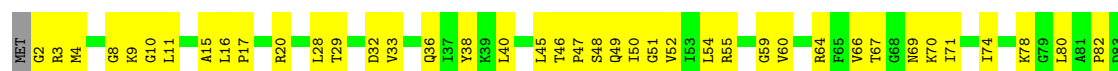
- Molecule 61: 40S ribosomal protein S11

Chain SL: 53% 37% 9%



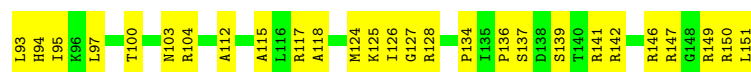
- Molecule 62: 40S ribosomal protein S13

Chain SN: 65% 34% 1%



- Molecule 63: 40S ribosomal protein S14

Chain SO: 54% 35% 11%

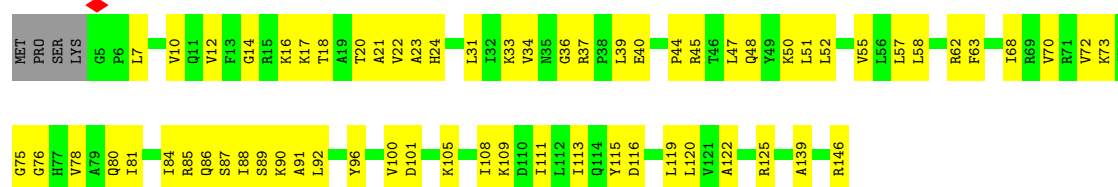


- Molecule 64: 40S ribosomal protein S15

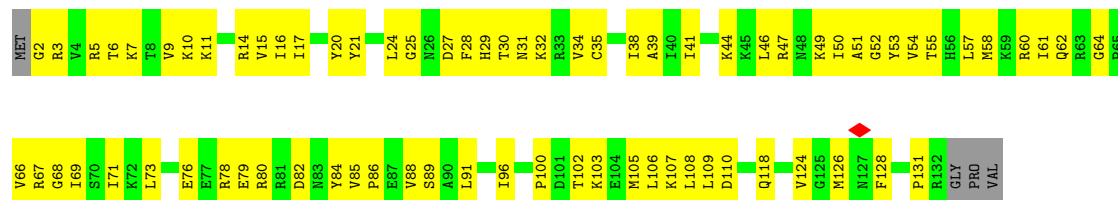
Chain SP: 40% 48% 12%



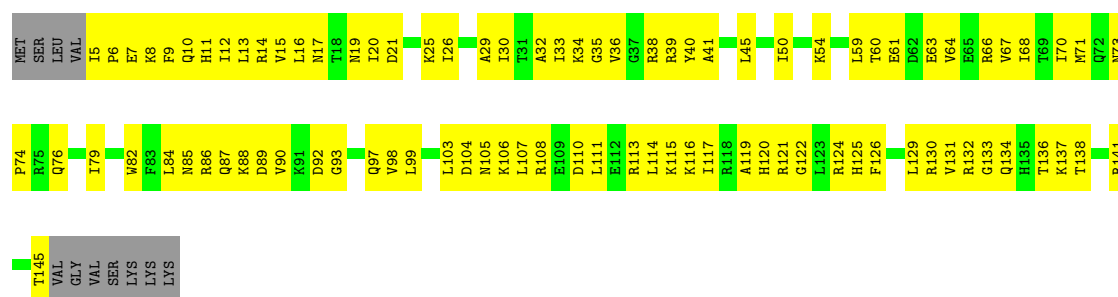
- Molecule 65: 40S ribosomal protein S16



- Molecule 66: 40S ribosomal protein S17



- Molecule 67: 40S ribosomal protein S18



- Molecule 68: 40S ribosomal protein S19





- Molecule 69: 40S ribosomal protein S20



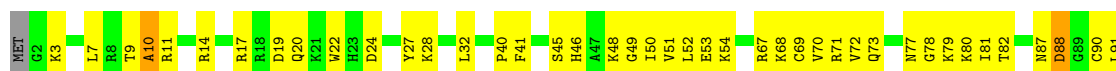
- Molecule 70: 40S ribosomal protein S21



- Molecule 71: 40S ribosomal protein S15a



- Molecule 72: 40S ribosomal protein S23



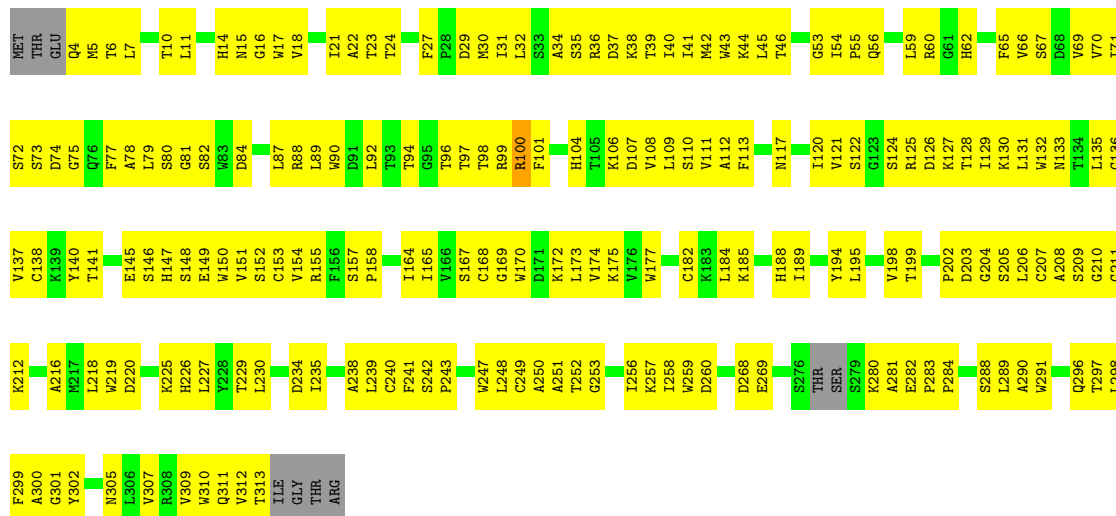
- Molecule 73: 40S ribosomal protein S24





- Molecule 80: Receptor of activated protein C kinase 1

Chain Sg: 35% 62%



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	64926	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.115	Depositor
Minimum map value	-0.028	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.009	Depositor
Map size (Å)	473.0, 473.0, 473.0	wwPDB
Map dimensions	550, 550, 550	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.86, 0.86, 0.86	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN, 3HE

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	A4	0.17	0/329	0.26	0/506
2	B4	0.17	0/1813	0.20	0/2823
4	L5	0.31	0/86626	0.25	0/135120
5	L7	0.31	0/2858	0.22	0/4455
6	L8	0.32	0/3701	0.25	0/5766
7	LA	0.33	0/1936	0.44	0/2596
8	LB	0.30	0/3251	0.42	0/4352
9	LC	0.33	0/2938	0.43	0/3947
10	LD	0.27	0/2407	0.40	0/3227
11	LE	0.28	0/1788	0.48	0/2399
12	LF	0.33	0/1905	0.42	1/2539 (0.0%)
13	LG	0.28	0/1849	0.43	0/2496
14	LH	0.28	0/1529	0.42	0/2058
15	LI	0.28	0/1690	0.40	0/2258
16	LJ	0.25	0/1352	0.43	0/1813
17	LL	0.31	0/1661	0.45	0/2229
18	LM	0.29	0/1145	0.46	1/1536 (0.1%)
19	LN	0.36	0/1746	0.42	0/2338
20	LO	0.31	0/1665	0.37	0/2229
21	LP	0.32	0/1260	0.37	0/1692
22	LQ	0.33	0/1526	0.42	0/2038
23	LR	0.30	0/1468	0.41	0/1945
24	LS	0.32	0/1492	0.40	0/2003
25	LT	0.31	0/1310	0.48	2/1752 (0.1%)
26	LU	0.25	0/813	0.38	0/1093
27	LV	0.29	0/985	0.37	0/1323
28	LW	0.26	0/820	0.52	0/1104
29	LX	0.30	0/998	0.39	0/1341
30	LY	0.31	0/1128	0.41	0/1500
31	LZ	0.29	0/1130	0.39	0/1507
32	La	0.34	0/1183	0.40	0/1582
33	Lb	0.27	0/600	0.39	0/796

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
34	Lc	0.31	0/752	0.37	0/1011
35	Ld	0.29	0/889	0.38	0/1198
36	Le	0.32	0/1067	0.40	0/1425
37	Lf	0.32	0/891	0.51	2/1194 (0.2%)
38	Lg	0.32	0/899	0.50	1/1200 (0.1%)
39	Lh	0.30	0/1014	0.37	0/1340
40	Li	0.27	0/824	0.39	0/1093
41	Lj	0.35	0/720	0.44	0/952
42	Lk	0.26	0/548	0.37	0/730
43	Ll	0.32	0/454	0.40	0/599
44	Lm	0.27	0/431	0.36	0/570
45	Ln	0.31	0/231	0.47	0/294
46	Lo	0.31	0/861	0.40	0/1137
47	Lp	0.30	0/706	0.37	0/939
48	Lr	0.32	0/1012	0.42	0/1358
49	S2	0.27	0/40879	0.27	1/63710 (0.0%)
50	SA	0.26	0/1708	0.46	0/2324
51	SB	0.27	0/1745	0.38	0/2337
52	SC	0.27	0/1697	0.42	0/2301
53	SD	0.22	0/1606	0.43	1/2181 (0.0%)
54	SE	0.24	0/2014	0.47	0/2726
55	SF	0.24	0/1437	0.44	0/1936
56	SG	0.22	0/1657	0.48	0/2247
57	SH	0.23	0/1295	0.44	0/1763
58	SI	0.26	0/1603	0.41	0/2161
59	SJ	0.24	0/1456	0.43	0/1957
60	SK	0.19	0/750	0.43	0/1026
61	SL	0.30	0/1163	0.43	0/1562
62	SN	0.29	0/1206	0.41	0/1626
63	SO	0.28	0/982	0.44	0/1320
64	SP	0.19	0/995	0.40	0/1344
65	SQ	0.25	0/1089	0.49	1/1465 (0.1%)
66	SR	0.25	0/955	0.52	0/1294
67	SS	0.23	0/1136	0.53	0/1528
68	ST	0.21	0/1100	0.37	0/1479
69	SU	0.25	0/722	0.54	0/983
70	SV	0.25	0/625	0.45	0/837
71	SW	0.31	0/1043	0.44	0/1396
72	SX	0.29	0/1096	0.53	1/1467 (0.1%)
73	SY	0.22	0/944	0.44	0/1271
74	SZ	0.23	0/565	0.53	1/764 (0.1%)
75	Sa	0.29	0/794	0.48	0/1065
76	Sb	0.25	0/632	0.48	0/851

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
77	Sc	0.25	0/474	0.58	0/638
78	Sd	0.23	0/443	0.41	0/589
79	Se	0.21	0/431	0.42	0/570
80	Sg	0.23	0/2227	0.61	0/3059
All	All	0.29	0/224670	0.33	12/331180 (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
17	LL	0	1
56	SG	0	1
67	SS	0	1
All	All	0	3

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	808	A	C2'-C3'-O3'	6.46	119.20	109.50
72	SX	106	GLY	N-CA-C	-6.29	104.76	112.68
37	Lf	52	LYS	CA-C-N	-6.12	114.19	121.90
37	Lf	52	LYS	C-N-CA	-6.12	114.19	121.90
65	SQ	116	ASP	N-CA-CB	-6.00	107.33	114.17
18	LM	88	ALA	N-CA-C	-5.58	107.47	114.56
53	SD	201	LYS	N-CA-CB	-5.16	108.28	114.17
12	LF	164	LYS	N-CA-C	-5.15	106.54	114.16
38	Lg	53	LEU	N-CA-C	5.09	116.87	110.91
74	SZ	96	LEU	N-CA-CB	-5.03	108.44	114.17
25	LT	137	GLU	CA-C-N	5.02	127.77	120.79
25	LT	137	GLU	C-N-CA	5.02	127.77	120.79

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
17	LL	47	ALA	Peptide
56	SG	32	MET	Peptide
67	SS	11	HIS	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A4	300	0	151	10	0
2	B4	1623	0	821	37	0
3	C4	10	0	4	1	0
4	L5	77447	0	39147	1702	0
5	L7	2558	0	1296	58	0
6	L8	3314	0	1683	66	0
7	LA	1898	0	1993	91	0
8	LB	3183	0	3316	143	0
9	LC	2884	0	3050	126	0
10	LD	2361	0	2378	123	0
11	LE	1754	0	1899	114	0
12	LF	1870	0	1996	76	0
13	LG	1818	0	1911	90	0
14	LH	1510	0	1579	104	0
15	LI	1651	0	1692	65	0
16	LJ	1329	0	1348	75	0
17	LL	1630	0	1715	78	0
18	LM	1122	0	1174	74	0
19	LN	1701	0	1749	90	0
20	LO	1633	0	1771	83	0
21	LP	1234	0	1254	63	0
22	LQ	1502	0	1616	65	0
23	LR	1452	0	1580	59	0
24	LS	1452	0	1490	56	0
25	LT	1282	0	1336	59	0
26	LU	799	0	811	52	0
27	LV	971	0	1024	52	0
28	LW	808	0	726	33	0
29	LX	981	0	1055	31	0
30	LY	1111	0	1194	59	0
31	LZ	1107	0	1182	50	0
32	La	1154	0	1198	53	0
33	Lb	590	0	613	32	0
34	Lc	742	0	774	29	0
35	Ld	874	0	918	35	0
36	Le	1049	0	1136	46	0
37	Lf	872	0	901	45	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	Lg	889	0	968	43	0
39	Lh	1006	0	1132	45	0
40	Li	813	0	887	32	0
41	Lj	705	0	737	21	0
42	Lk	542	0	590	28	0
43	Ll	444	0	483	23	0
44	Lm	425	0	462	25	0
45	Ln	230	0	276	6	0
46	Lo	848	0	911	38	0
47	Lp	696	0	745	32	0
48	Lr	997	0	1054	57	0
49	S2	36560	0	18473	1170	0
50	SA	1671	0	1672	128	0
51	SB	1718	0	1786	122	0
52	SC	1661	0	1710	98	0
53	SD	1580	0	1545	108	0
54	SE	1972	0	2012	150	0
55	SF	1416	0	1408	108	0
56	SG	1634	0	1568	123	0
57	SH	1274	0	1196	81	0
58	SI	1574	0	1540	92	0
59	SJ	1431	0	1497	93	0
60	SK	726	0	674	64	0
61	SL	1143	0	1177	53	0
62	SN	1182	0	1249	57	0
63	SO	969	0	982	61	0
64	SP	975	0	950	90	0
65	SQ	1071	0	1106	69	0
66	SR	942	0	913	98	0
67	SS	1118	0	1145	104	0
68	ST	1081	0	1093	82	0
69	SU	713	0	692	64	0
70	SV	618	0	617	38	0
71	SW	1026	0	1072	55	0
72	SX	1078	0	1130	68	0
73	SY	927	0	914	66	0
74	SZ	559	0	594	47	0
75	Sa	781	0	831	46	0
76	Sb	618	0	604	34	0
77	Sc	472	0	484	46	0
78	Sd	433	0	416	32	0
79	Se	426	0	438	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	Sg	2172	0	1951	230	0
81	B4	1	0	0	0	0
81	L5	129	0	0	0	0
81	L7	3	0	0	0	0
81	L8	3	0	0	0	0
81	LA	1	0	0	0	0
81	LN	1	0	0	0	0
81	LP	1	0	0	0	0
81	LV	1	0	0	0	0
81	S2	53	0	0	0	0
82	L5	20	23	23	2	0
83	Lg	1	0	0	0	0
83	Lj	1	0	0	0	0
83	Lm	1	0	0	0	0
83	Lo	1	0	0	0	0
83	Lp	1	0	0	0	0
83	Sa	1	0	0	0	0
83	Sd	1	0	0	0	0
84	L5	3	0	0	1	0
84	LD	1	0	0	1	0
84	LI	1	0	0	0	0
84	LN	1	0	0	0	0
84	La	1	0	0	0	0
84	Lp	1	0	0	1	0
84	S2	3	0	0	0	0
All	All	208923	23	151188	6850	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 20.

All (6850) 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)
80:Sg:195:LEU:HA	80:Sg:211:GLY:HA3	1.32	1.11
49:S2:1091:C:HO2'	71:SW:2:VAL:N	1.49	1.11
69:SU:61:LEU:HB2	69:SU:82:MET:HB3	1.36	1.07
64:SP:44:ARG:HD3	64:SP:84:ILE:HD11	1.37	1.06
63:SO:92:ALA:HB2	63:SO:125:LYS:HB2	1.37	1.04
50:SA:50:ASN:HA	66:SR:105:MET:HE1	1.41	1.03
12:LF:162:ILE:HD13	12:LF:167:ILE:HB	1.38	1.02
57:SH:142:LYS:HE3	57:SH:154:ILE:HD11	1.38	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1756:C:H1'	49:S2:1777:G:H1'	1.39	1.02
4:L5:703:G:H2'	4:L5:704:C:H4'	1.43	1.00
14:LH:41:ILE:HD13	14:LH:73:ILE:HD11	1.41	1.00
49:S2:1264:C:H4'	49:S2:1265:A:H5'	1.40	1.00
80:Sg:249:CYS:HA	80:Sg:258:ILE:HD12	1.41	0.98
80:Sg:87:LEU:HB2	80:Sg:101:PHE:HB2	1.43	0.98
50:SA:52:LYS:HE3	66:SR:108:LEU:HD12	1.46	0.97
19:LN:116:LEU:HD22	19:LN:135:ILE:HD11	1.46	0.96
52:SC:192:LEU:HB2	52:SC:227:ARG:HB2	1.46	0.96
13:LG:55:VAL:HG12	29:LX:44:PRO:HA	1.48	0.95
4:L5:4875:G:H2'	24:LS:169:THR:HG22	1.46	0.95
26:LU:28:PRO:HB2	26:LU:34:MET:HG2	1.49	0.95
80:Sg:70:VAL:HG11	80:Sg:113:PHE:HB2	1.46	0.94
69:SU:21:ARG:HG2	69:SU:90:ASP:HB3	1.46	0.93
14:LH:3:THR:HG21	14:LH:67:LEU:HD21	1.50	0.93
57:SH:100:ILE:HG13	57:SH:125:VAL:HG21	1.48	0.93
26:LU:26:THR:HG22	26:LU:68:SER:HB3	1.50	0.93
54:SE:80:ILE:HG23	54:SE:81:THR:HG23	1.48	0.93
77:Sc:6:VAL:HG12	77:Sc:8:PRO:HD3	1.51	0.93
17:LL:70:VAL:HG12	17:LL:159:ASN:HB3	1.52	0.92
80:Sg:120:ILE:HB	80:Sg:132:TRP:HB2	1.52	0.92
55:SF:73:THR:HG22	55:SF:93:VAL:HG11	1.51	0.92
56:SG:5:ILE:HG13	56:SG:111:LEU:HB2	1.50	0.92
75:Sa:53:ILE:HD11	75:Sa:64:LEU:HD21	1.51	0.92
53:SD:5:ILE:HD11	53:SD:9:ARG:HD2	1.52	0.92
56:SG:18:VAL:HG21	56:SG:24:LEU:HD21	1.51	0.91
51:SB:144:LYS:HD3	51:SB:208:HIS:HB3	1.52	0.91
36:Le:89:LEU:HG	36:Le:90:MET:HE2	1.51	0.91
58:SI:57:ALA:HB2	58:SI:183:GLY:HA2	1.53	0.91
49:S2:753:C:H4'	49:S2:792:C:H4'	1.52	0.91
4:L5:512:U:H2'	4:L5:513:U:H4'	1.53	0.91
4:L5:2906:G:H2'	4:L5:2908:U:H1'	1.52	0.90
13:LG:209:SER:HA	13:LG:212:LYS:HE3	1.51	0.90
39:Lh:25:LYS:HG2	39:Lh:54:ILE:HD11	1.54	0.90
4:L5:4929:C:H5'	18:LM:114:LYS:HD2	1.51	0.90
4:L5:686:A:H5'	11:LE:97:GLY:HA3	1.52	0.90
19:LN:73:ARG:HB3	19:LN:89:VAL:HG23	1.50	0.90
49:S2:1145:A:O2'	49:S2:1146:C:O4'	1.89	0.90
52:SC:214:LEU:HD23	52:SC:244:ILE:HD11	1.54	0.90
63:SO:53:ILE:HG23	63:SO:88:LEU:HD23	1.54	0.90
57:SH:100:ILE:HD11	57:SH:125:VAL:HG11	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:50:MET:HE2	18:LM:55:MET:HE2	1.54	0.89
49:S2:1753:C:H4'	49:S2:1780:G:H1	1.36	0.89
30:LY:8:THR:HG22	30:LY:10:ASP:H	1.34	0.89
80:Sg:24:THR:HG23	80:Sg:71:ILE:HD12	1.54	0.89
49:S2:73:C:H4'	49:S2:74:G:H5'	1.53	0.88
19:LN:75:VAL:HG11	19:LN:80:THR:HG22	1.52	0.88
7:LA:117:GLU:HB2	7:LA:162:ASN:HB2	1.56	0.88
73:SY:6:THR:HG23	73:SY:28:LEU:HD13	1.55	0.88
80:Sg:111:VAL:HG12	80:Sg:122:SER:HA	1.55	0.88
74:SZ:58:LEU:HG	74:SZ:62:VAL:HG21	1.56	0.88
50:SA:54:THR:HG22	50:SA:162:PRO:HG2	1.54	0.88
6:L8:103:A:H3'	6:L8:104:A:H5''	1.56	0.87
4:L5:5006:U:H4'	4:L5:5007:A:H5'	1.57	0.87
18:LM:119:ARG:HA	20:LO:189:ILE:HD11	1.57	0.87
32:La:146:LEU:HD13	40:Li:7:MET:HG2	1.57	0.87
10:LD:80:ALA:HA	10:LD:83:LEU:HD13	1.54	0.87
30:LY:47:MET:HE1	30:LY:118:ILE:HD11	1.57	0.87
49:S2:1677:U:H2'	49:S2:1678:A:H5''	1.54	0.87
4:L5:2901:G:H2'	4:L5:2902:G:H5''	1.57	0.87
10:LD:223:PHE:HB3	10:LD:226:TYR:HB2	1.56	0.86
26:LU:28:PRO:HB3	26:LU:100:LEU:HD11	1.58	0.86
27:LV:84:GLN:HA	27:LV:101:ASN:HB3	1.56	0.86
60:SK:31:LYS:HA	60:SK:41:PRO:HA	1.54	0.86
64:SP:75:VAL:HG12	64:SP:93:MET:HB3	1.57	0.86
18:LM:15:VAL:HG22	18:LM:50:MET:HE1	1.57	0.85
56:SG:2:LYS:HD2	56:SG:15:LEU:HD11	1.57	0.85
45:Ln:1:MET:HE1	45:Ln:9:ARG:HD3	1.58	0.85
51:SB:21:VAL:HG12	51:SB:22:VAL:HG13	1.59	0.85
38:Lg:42:PRO:HD2	38:Lg:56:VAL:HG21	1.58	0.85
53:SD:39:VAL:HG22	53:SD:48:ILE:HG22	1.59	0.85
61:SL:76:VAL:HG12	61:SL:125:ILE:HD13	1.59	0.85
16:LJ:55:TYR:HA	16:LJ:64:ARG:HG2	1.58	0.85
16:LJ:56:THR:HG23	16:LJ:63:ARG:HA	1.58	0.84
14:LH:102:ASN:HB3	14:LH:115:ARG:HB2	1.58	0.84
49:S2:617:G:H4'	72:SX:88:ASP:HB3	1.59	0.84
55:SF:49:LEU:HD13	65:SQ:50:LYS:HB2	1.59	0.84
49:S2:1860:A:H3'	75:Sa:8:ASN:HB3	1.59	0.84
8:LB:92:TYR:HB2	8:LB:159:VAL:HG22	1.60	0.83
9:LC:46:LYS:HD2	9:LC:113:ARG:HD3	1.59	0.83
17:LL:171:GLU:HA	17:LL:174:LYS:HG2	1.59	0.83
64:SP:25:LEU:HA	64:SP:28:MET:HE3	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1550:G:H3'	49:S2:1579:A:H61	1.43	0.83
54:SE:34:GLY:HA3	54:SE:83:PRO:HG2	1.60	0.83
67:SS:20:ILE:HD11	67:SS:33:ILE:HG13	1.59	0.83
8:LB:223:THR:HG22	8:LB:275:HIS:H	1.43	0.83
42:Lk:24:LYS:HD3	42:Lk:69:LEU:HD11	1.59	0.83
80:Sg:206:LEU:HD13	80:Sg:218:LEU:HD11	1.60	0.83
11:LE:201:ILE:HD13	11:LE:264:ILE:HD11	1.59	0.83
15:LI:93:PRO:HB2	15:LI:125:THR:HG22	1.58	0.83
58:SI:130:THR:HG23	58:SI:132:GLU:H	1.43	0.83
59:SJ:136:ARG:HG2	59:SJ:160:SER:HA	1.61	0.83
49:S2:1298:G:O2'	49:S2:1299:A:O4'	1.96	0.83
67:SS:12:ILE:HD12	67:SS:19:ASN:HD21	1.43	0.83
7:LA:28:ARG:HD2	7:LA:123:ARG:HG3	1.61	0.82
28:LW:99:GLU:HA	28:LW:102:LYS:HB3	1.59	0.82
12:LF:127:LYS:HB2	25:LT:133:ALA:HB3	1.61	0.82
6:L8:96:C:H5''	39:Lh:66:LYS:HD2	1.60	0.82
50:SA:50:ASN:HD21	50:SA:53:ARG:HG3	1.44	0.82
54:SE:115:THR:HG23	54:SE:118:GLU:H	1.44	0.82
13:LG:207:VAL:HG21	13:LG:215:LEU:HD22	1.62	0.82
24:LS:127:MET:HG2	25:LT:153:PRO:HG2	1.61	0.82
4:L5:4699:U:H1'	4:L5:4700:A:H5''	1.62	0.82
66:SR:69:ILE:HG22	66:SR:71:ILE:HG23	1.61	0.82
54:SE:123:LEU:HD12	54:SE:159:THR:HG21	1.59	0.82
4:L5:4139:G:H4'	4:L5:4146:G:H22	1.43	0.81
40:Li:63:VAL:HG23	40:Li:65:LYS:HG3	1.59	0.81
49:S2:103:A:H5''	58:SI:12:ARG:HH12	1.45	0.81
56:SG:159:ARG:HD2	56:SG:171:THR:HB	1.61	0.81
49:S2:1145:A:O2'	49:S2:1146:C:O5'	1.99	0.81
4:L5:4220:A:H2'	4:L5:4222:G:H5''	1.60	0.81
20:LO:186:GLU:HA	20:LO:189:ILE:HG22	1.62	0.81
27:LV:80:VAL:HG23	27:LV:106:VAL:HG11	1.61	0.81
49:S2:927:C:H1'	76:Sb:51:GLN:HE21	1.45	0.81
54:SE:125:LYS:HG2	54:SE:142:HIS:HB3	1.62	0.81
11:LE:254:ASP:HA	11:LE:257:ILE:HG22	1.62	0.81
55:SF:35:LEU:HD21	55:SF:146:ARG:HD3	1.63	0.81
65:SQ:105:LYS:HA	65:SQ:108:ILE:HG22	1.62	0.81
80:Sg:39:THR:HG21	80:Sg:60:ARG:HH11	1.45	0.81
4:L5:4523:A:H5''	4:L5:4524:G:H5'	1.63	0.81
49:S2:692:G:H22	49:S2:738:C:H2'	1.44	0.81
64:SP:20:VAL:HG23	64:SP:24:GLN:HG3	1.62	0.81
49:S2:413:G:H5'	49:S2:813:A:H61	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:542:U:H2'	49:S2:543:C:H5'	1.64	0.80
49:S2:1396:A:O2'	49:S2:1398:G:N7	2.14	0.80
73:SY:114:MET:HB2	73:SY:122:LYS:HG3	1.63	0.80
4:L5:4105:A:H4'	4:L5:4106:G:H5''	1.64	0.80
49:S2:925:G:H2'	49:S2:926:A:H5''	1.61	0.80
4:L5:489:C:H42	4:L5:664:G:H1	1.28	0.80
4:L5:150:U:H3	13:LG:162:ASP:HB2	1.47	0.80
4:L5:2611:A:H5'	4:L5:2688:G:H4'	1.64	0.80
8:LB:220:ILE:HG12	8:LB:278:THR:HG23	1.62	0.80
49:S2:1598:G:O2'	74:SZ:80:ARG:O	1.99	0.80
50:SA:17:LYS:HG3	50:SA:173:LEU:HD11	1.60	0.80
67:SS:59:LEU:HD13	67:SS:63:GLU:HB2	1.61	0.80
4:L5:1479:G:H21	17:LL:184:MET:HE2	1.46	0.80
55:SF:153:LEU:HA	55:SF:156:THR:HG22	1.61	0.80
66:SR:60:ARG:HE	66:SR:66:VAL:HG21	1.45	0.80
12:LF:222:LYS:HB3	12:LF:231:GLY:HA2	1.62	0.80
16:LJ:160:GLU:HA	16:LJ:163:MET:HE3	1.64	0.80
49:S2:531:A:H3'	49:S2:532:C:H5''	1.64	0.79
72:SX:52:LEU:HD12	72:SX:53:GLU:HG2	1.63	0.79
11:LE:50:LEU:HD23	11:LE:56:ARG:HA	1.62	0.79
74:SZ:68:ILE:HB	74:SZ:109:TYR:HB2	1.62	0.79
76:Sb:42:LYS:HZ1	76:Sb:57:VAL:HG22	1.46	0.79
60:SK:24:LYS:HE2	60:SK:26:ASP:HB2	1.64	0.79
62:SN:78:LYS:HB3	62:SN:80:LEU:HD13	1.64	0.79
27:LV:13:LYS:HD2	27:LV:128:LEU:HD11	1.64	0.79
4:L5:4946:U:HO2'	37:Lf:2:SER:HG	1.21	0.79
49:S2:925:G:H1	49:S2:1017:U:H3	1.31	0.79
80:Sg:170:TRP:HA	80:Sg:194:TYR:HB2	1.63	0.79
4:L5:5011:A:O2'	4:L5:5012:G:O4'	2.01	0.79
15:LI:184:MET:HE2	15:LI:190:LEU:HD11	1.65	0.78
49:S2:928:G:H1	49:S2:1013:U:H3	1.30	0.78
80:Sg:121:VAL:HG12	80:Sg:131:LEU:HD23	1.64	0.78
49:S2:888:U:O2'	49:S2:890:U:OP1	2.01	0.78
75:Sa:45:VAL:HG11	75:Sa:53:ILE:HD13	1.64	0.78
4:L5:1187:G:H1'	10:LD:275:GLN:HE21	1.47	0.78
51:SB:36:PRO:O	51:SB:42:ARG:NH2	2.16	0.78
8:LB:35:ASP:HB2	8:LB:186:ASN:HD22	1.48	0.78
19:LN:73:ARG:HG2	19:LN:75:VAL:HG13	1.64	0.78
53:SD:210:ILE:HG12	66:SR:16:ILE:HG22	1.66	0.78
49:S2:338:G:H2'	49:S2:339:A:H5''	1.66	0.78
68:ST:22:LEU:HD11	68:ST:28:LEU:HD22	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LN:138:PHE:HA	19:LN:143:ARG:HD2	1.63	0.77
68:ST:18:LEU:HB3	68:ST:58:ALA:HB1	1.65	0.77
80:Sg:87:LEU:HD21	80:Sg:111:VAL:HG11	1.64	0.77
4:L5:1656:U:OP2	32:La:26:ARG:NH2	2.17	0.77
50:SA:15:VAL:HG21	66:SR:109:LEU:HD22	1.66	0.77
50:SA:48:ILE:HG22	66:SR:105:MET:HE3	1.66	0.77
55:SF:41:VAL:HG11	55:SF:68:ILE:HG22	1.65	0.77
58:SI:106:SER:HB3	58:SI:171:LEU:HG	1.66	0.77
80:Sg:77:PHE:HB2	80:Sg:89:LEU:HD21	1.65	0.77
4:L5:496:G:H2'	4:L5:498:C:H5''	1.66	0.77
4:L5:500:G:O6	4:L5:654:C:N4	2.16	0.77
4:L5:3590:G:H2'	4:L5:3591:C:H5'	1.66	0.77
80:Sg:39:THR:HG23	80:Sg:41:ILE:HD11	1.66	0.77
48:Lr:89:THR:HG21	48:Lr:118:LEU:HD11	1.65	0.77
70:SV:14:PRO:HG2	70:SV:23:ILE:HD11	1.66	0.77
8:LB:380:GLN:N	8:LB:384:GLU:OE2	2.17	0.77
15:LI:190:LEU:HB3	15:LI:197:VAL:HG22	1.67	0.77
52:SC:86:LEU:HD11	52:SC:265:PRO:HG3	1.64	0.77
49:S2:1454:A:N1	49:S2:1476:A:O2'	2.17	0.77
53:SD:167:TYR:OH	53:SD:202:LYS:O	2.02	0.77
54:SE:247:THR:HG23	54:SE:250:GLU:H	1.48	0.77
4:L5:173:C:H1'	39:Lh:112:ARG:HG2	1.65	0.77
24:LS:84:TYR:HB2	24:LS:124:ILE:HG22	1.63	0.77
49:S2:1395:C:H2'	49:S2:1396:A:H5''	1.64	0.77
80:Sg:110:SER:HB3	80:Sg:153:CYS:HA	1.65	0.77
4:L5:1272:C:H5''	12:LF:34:ARG:HG3	1.66	0.77
4:L5:2562:G:N2	4:L5:2565:A:OP2	2.18	0.77
27:LV:45:ILE:HG21	27:LV:53:PRO:HB3	1.67	0.77
80:Sg:29:ASP:HA	80:Sg:45:LEU:HD11	1.65	0.77
4:L5:346:G:OP1	30:LY:8:THR:OG1	2.02	0.77
11:LE:209:PRO:HG2	11:LE:212:LEU:HD13	1.67	0.76
77:Sc:14:VAL:HA	77:Sc:32:VAL:HG12	1.65	0.76
31:LZ:87:VAL:HG12	31:LZ:89:ILE:HG13	1.65	0.76
55:SF:76:MET:HE3	55:SF:169:ILE:HD11	1.68	0.76
74:SZ:50:PHE:HB3	74:SZ:55:TYR:HB2	1.67	0.76
9:LC:67:TRP:HE1	9:LC:73:VAL:HG21	1.50	0.76
64:SP:18:ARG:O	67:SS:93:GLY:N	2.19	0.76
67:SS:7:GLU:HG2	67:SS:8:LYS:H	1.50	0.76
4:L5:1758:G:N2	4:L5:1758:G:OP2	2.18	0.76
12:LF:114:LEU:HD21	12:LF:121:THR:HG22	1.65	0.76
55:SF:154:LEU:HD21	55:SF:177:LEU:HD21	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SR:58:MET:O	66:SR:62:GLN:NE2	2.18	0.76
73:SY:18:LEU:HD23	73:SY:20:ARG:HE	1.50	0.76
80:Sg:31:ILE:HG22	80:Sg:43:TRP:HB2	1.66	0.76
5:L7:30:C:H5	5:L7:47:G:H1	1.32	0.76
35:Ld:85:ARG:HH12	35:Ld:117:LEU:HB3	1.50	0.76
2:B4:51:U:H3	2:B4:63:G:H1	1.34	0.76
4:L5:151:G:H3'	19:LN:49:ARG:HH22	1.51	0.76
49:S2:167:G:H3'	49:S2:168:C:H5''	1.66	0.76
4:L5:3689:G:O2'	4:L5:3818:U:OP2	2.04	0.76
31:LZ:27:LYS:HE2	31:LZ:29:ILE:HD11	1.66	0.76
55:SF:127:ARG:HH21	77:Sc:23:SER:HB2	1.50	0.76
77:Sc:16:LYS:HE3	77:Sc:18:LEU:HD21	1.66	0.76
60:SK:49:MET:HG2	60:SK:52:LEU:HD12	1.67	0.76
80:Sg:82:SER:OG	80:Sg:84:ASP:OD1	2.03	0.76
24:LS:80:ILE:HG12	24:LS:129:VAL:HG23	1.67	0.76
52:SC:200:ARG:O	59:SJ:54:ARG:NH1	2.18	0.76
80:Sg:5:MET:HG2	80:Sg:310:TRP:HB3	1.66	0.76
4:L5:1959:U:OP2	4:L5:2025:A:N6	2.20	0.75
4:L5:4349:C:H5'	4:L5:4350:C:H5'	1.68	0.75
14:LH:105:ILE:HD11	14:LH:109:GLY:HA2	1.67	0.75
49:S2:794:A:H2'	49:S2:795:A:H4'	1.69	0.75
49:S2:919:A:H5'	62:SN:16:LEU:HD23	1.66	0.75
7:LA:158:ILE:HG13	7:LA:162:ASN:HD21	1.50	0.75
4:L5:375:G:OP2	41:Lj:52:LYS:NZ	2.20	0.75
4:L5:3596:A:H2'	4:L5:3597:G:H5'	1.68	0.75
56:SG:67:VAL:HG21	56:SG:99:GLY:HA2	1.69	0.75
57:SH:98:ARG:HG2	57:SH:125:VAL:HG13	1.69	0.75
8:LB:189:THR:HG22	8:LB:192:GLU:HG2	1.66	0.75
54:SE:100:ARG:HG2	54:SE:114:ILE:HD13	1.68	0.75
4:L5:1811:G:H4'	33:Lb:60:ASN:HD22	1.52	0.75
80:Sg:11:LEU:HB2	80:Sg:307:VAL:HB	1.67	0.75
80:Sg:45:LEU:HA	80:Sg:53:GLY:HA3	1.67	0.75
4:L5:4097:G:N2	4:L5:4113:U:O4'	2.20	0.75
4:L5:4138:C:H1'	4:L5:4147:G:H22	1.52	0.75
13:LG:259:LYS:O	13:LG:263:THR:OG1	2.04	0.75
49:S2:636:C:H5''	79:Se:22:GLN:HE22	1.52	0.75
49:S2:1673:U:H5''	65:SQ:78:VAL:HG12	1.66	0.75
4:L5:2123:C:H1'	11:LE:72:LYS:HD3	1.67	0.75
49:S2:1158:G:O3'	71:SW:76:SER:OG	2.05	0.75
49:S2:1236:G:O2'	64:SP:131:PRO:O	2.05	0.75
50:SA:89:LYS:HD3	50:SA:201:LEU:HG	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LH:85:THR:HG23	14:LH:86:LEU:HG	1.68	0.75
15:LI:190:LEU:HD13	15:LI:197:VAL:HG21	1.69	0.75
49:S2:1746:U:OP1	56:SG:31:ARG:NH2	2.20	0.75
4:L5:1428:U:H5''	22:LQ:42:THR:HG23	1.68	0.74
4:L5:5027:C:H1'	4:L5:5028:G:H5''	1.67	0.74
17:LL:58:ILE:HG22	17:LL:157:VAL:HG22	1.69	0.74
53:SD:72:VAL:HG13	60:SK:22:VAL:HG22	1.68	0.74
32:La:11:LEU:HD21	32:La:18:GLY:H	1.51	0.74
49:S2:1422:G:O2'	49:S2:1424:G:OP2	2.04	0.74
4:L5:1364:U:OP2	17:LL:36:ARG:NH2	2.19	0.74
9:LC:340:ILE:HG21	11:LE:50:LEU:HD13	1.68	0.74
49:S2:1512:C:O2'	78:Sd:7:TYR:O	2.05	0.74
54:SE:185:GLY:H	54:SE:189:LEU:HD13	1.50	0.74
61:SL:11:GLN:HB3	61:SL:56:ILE:HG21	1.69	0.74
14:LH:7:ASN:ND2	14:LH:58:ASP:OD1	2.20	0.74
49:S2:1488:C:O2'	49:S2:1490:G:OP2	2.06	0.74
4:L5:4775:C:H2'	4:L5:4776:G:H5''	1.68	0.74
4:L5:2718:U:H5''	4:L5:2719:C:H5'	1.67	0.74
4:L5:3757:G:O2'	4:L5:3758:U:O5'	2.06	0.74
13:LG:88:ASP:OD1	13:LG:91:THR:OG1	2.06	0.74
49:S2:696:G:N2	49:S2:737:G:O6	2.20	0.74
56:SG:50:VAL:HG12	56:SG:113:ILE:HD13	1.70	0.74
4:L5:280:G:OP2	19:LN:14:LYS:NZ	2.19	0.74
4:L5:2562:G:O2'	4:L5:2565:A:N6	2.20	0.74
49:S2:1373:C:OP1	66:SR:7:LYS:N	2.20	0.74
80:Sg:145:GLU:O	80:Sg:148:SER:N	2.20	0.74
4:L5:1317:U:OP1	32:La:21:ARG:NH1	2.21	0.74
49:S2:114:G:HO2'	49:S2:382:C:HO2'	1.27	0.74
4:L5:517:C:N4	4:L5:646:G:OP1	2.20	0.74
4:L5:5010:U:H3'	4:L5:5011:A:H5''	1.69	0.74
7:LA:120:PRO:HA	7:LA:162:ASN:HB3	1.68	0.74
4:L5:492:U:OP1	9:LC:268:ARG:NH2	2.20	0.74
65:SQ:58:LEU:HB3	65:SQ:62:ARG:HD2	1.68	0.74
4:L5:1837:A:OP2	25:LT:130:ARG:NH2	2.21	0.73
4:L5:3751:G:H21	4:L5:3775:A:H8	1.36	0.73
27:LV:31:ASN:HD21	27:LV:115:SER:HG	1.35	0.73
49:S2:150:A:O2'	49:S2:151:C:O4'	2.05	0.73
49:S2:616:A:H1'	79:Se:12:VAL:HG23	1.70	0.73
4:L5:37:U:H4'	32:La:32:ARG:HD2	1.70	0.73
4:L5:1764:G:O2'	4:L5:1766:A:O2'	2.06	0.73
17:LL:50:PRO:HG3	39:Lh:121:VAL:HG12	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sg:206:LEU:HB2	80:Sg:218:LEU:HD21	1.68	0.73
4:L5:4293:U:O2'	46:Lo:81:ARG:NH2	2.22	0.73
8:LB:305:THR:HG23	8:LB:307:TYR:H	1.51	0.73
49:S2:556:U:H4'	49:S2:557:U:H5'	1.69	0.73
4:L5:1351:G:OP1	9:LC:33:ARG:NH1	2.21	0.73
19:LN:113:LEU:HD22	19:LN:136:ASP:HB3	1.71	0.73
49:S2:1256:G:N2	69:SU:64:THR:O	2.21	0.73
49:S2:1745:A:N6	49:S2:1789:G:O2'	2.21	0.73
51:SB:224:GLU:OE2	51:SB:227:LYS:N	2.21	0.73
4:L5:177:G:O6	4:L5:259:C:N4	2.21	0.73
4:L5:1699:A:O2'	9:LC:306:ARG:NH1	2.22	0.73
4:L5:4472:G:O2'	44:Lm:100:TYR:O	2.07	0.73
10:LD:55:VAL:HG23	10:LD:60:ILE:HG12	1.69	0.73
17:LL:170:THR:HG22	17:LL:172:GLU:H	1.52	0.73
22:LQ:157:GLY:O	22:LQ:188:ASN:ND2	2.21	0.73
28:LW:9:SER:OG	28:LW:36:CYS:SG	2.47	0.73
4:L5:4598:C:O2'	14:LH:121:LYS:NZ	2.22	0.73
5:L7:47:G:H4'	10:LD:204:VAL:HG12	1.71	0.73
49:S2:694:G:N7	49:S2:737:G:N1	2.35	0.73
73:SY:55:ILE:HG22	73:SY:75:ILE:HG22	1.70	0.73
4:L5:394:G:N2	4:L5:397:G:OP2	2.22	0.72
4:L5:4626:A:OP2	8:LB:224:LYS:NZ	2.19	0.72
4:L5:4893:A:OP1	20:LO:188:LYS:NZ	2.20	0.72
11:LE:162:VAL:HG12	11:LE:177:GLY:HA3	1.70	0.72
12:LF:86:GLU:OE2	25:LT:136:ARG:NH1	2.22	0.72
49:S2:1461:G:H3'	49:S2:1463:U:H3	1.54	0.72
60:SK:23:ALA:HB3	60:SK:69:TRP:HZ3	1.52	0.72
1:A4:49:U:O2'	49:S2:1825:A:O2'	2.08	0.72
40:Li:33:LEU:HD21	40:Li:38:LYS:HD3	1.71	0.72
49:S2:894:G:H3'	49:S2:895:G:H5''	1.69	0.72
49:S2:1752:C:H2'	49:S2:1753:C:H5'	1.69	0.72
51:SB:130:THR:OG1	51:SB:180:ASP:OD1	2.07	0.72
4:L5:513:U:H5''	4:L5:514:U:H4'	1.70	0.72
80:Sg:87:LEU:O	80:Sg:101:PHE:N	2.21	0.72
53:SD:53:THR:HA	53:SD:91:VAL:HG22	1.71	0.72
55:SF:55:ARG:HH11	65:SQ:125:ARG:HD3	1.53	0.72
4:L5:2287:G:N7	32:La:10:LYS:NZ	2.38	0.72
12:LF:182:TYR:HB3	12:LF:200:ARG:HG3	1.70	0.72
54:SE:208:VAL:HG21	54:SE:225:ILE:HD11	1.69	0.72
4:L5:2472:A:H1'	29:LX:48:ARG:HB3	1.71	0.72
10:LD:236:MET:HA	10:LD:239:MET:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LJ:90:ARG:NH2	16:LJ:108:GLY:O	2.22	0.72
47:Lp:38:THR:HA	47:Lp:45:THR:HA	1.70	0.72
49:S2:561:A:H5'	59:SJ:171:GLY:HA3	1.70	0.72
49:S2:1776:G:N2	49:S2:1776:G:OP2	2.22	0.72
54:SE:21:ASP:OD2	54:SE:24:THR:OG1	2.05	0.72
56:SG:5:ILE:HD13	56:SG:16:ILE:HD13	1.71	0.72
11:LE:284:HIS:HD1	37:Lf:42:TYR:HH	1.34	0.72
15:LI:84:GLY:O	15:LI:140:THR:OG1	2.07	0.72
49:S2:71:G:O2'	49:S2:72:C:OP1	2.08	0.72
49:S2:556:U:O4	49:S2:588:G:N2	2.23	0.72
49:S2:868:G:H3'	49:S2:869:A:H5''	1.70	0.72
66:SR:71:ILE:HG13	66:SR:73:LEU:HG	1.70	0.72
66:SR:84:TYR:HB2	66:SR:86:PRO:HD2	1.72	0.72
4:L5:684:G:H4'	11:LE:100:LYS:HB3	1.72	0.72
4:L5:4425:G:OP1	44:Lm:100:TYR:OH	2.07	0.72
21:LP:118:GLN:NE2	21:LP:147:GLU:OE2	2.22	0.72
31:LZ:30:ASP:HA	31:LZ:39:SER:HB2	1.70	0.72
49:S2:629:A:O2'	49:S2:631:U:OP1	2.07	0.72
49:S2:1060:A:O2'	49:S2:1062:A:N7	2.21	0.72
49:S2:1544:C:H2'	49:S2:1545:A:H5''	1.72	0.72
68:ST:104:LEU:HD13	68:ST:121:ARG:HD2	1.72	0.72
4:L5:4291:G:H4'	4:L5:4292:A:H5''	1.72	0.72
4:L5:4431:U:OP2	15:LI:3:ARG:NH2	2.22	0.72
49:S2:190:G:O2'	49:S2:209:A:N6	2.23	0.72
53:SD:72:VAL:HG21	60:SK:70:TYR:HE1	1.53	0.72
54:SE:147:ILE:HG21	54:SE:169:ILE:HD11	1.69	0.72
73:SY:20:ARG:NH2	73:SY:74:MET:SD	2.63	0.72
4:L5:1661:C:O2'	36:Le:36:ARG:NH2	2.22	0.71
55:SF:70:GLU:O	55:SF:74:ASN:ND2	2.22	0.71
8:LB:33:PRO:HD2	8:LB:44:THR:HG21	1.71	0.71
17:LL:80:GLU:OE2	17:LL:102:ARG:NH1	2.22	0.71
54:SE:66:MET:HE2	54:SE:66:MET:HA	1.70	0.71
74:SZ:79:ILE:HG23	74:SZ:83:LEU:HD23	1.72	0.71
49:S2:1226:G:N1	49:S2:1639:G:OP2	2.24	0.71
49:S2:1554:C:OP2	49:S2:1555:U:O2'	2.07	0.71
64:SP:81:ARG:NH1	64:SP:97:TYR:O	2.23	0.71
67:SS:14:ARG:NH1	67:SS:17:ASN:O	2.24	0.71
11:LE:155:GLY:O	11:LE:158:ARG:NH1	2.23	0.71
49:S2:384:U:O4	58:SI:5:ARG:NH2	2.22	0.71
49:S2:838:G:N2	49:S2:840:C:O2'	2.24	0.71
53:SD:163:PRO:HG3	53:SD:205:PRO:HG2	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sg:230:LEU:HD21	80:Sg:259:TRP:HB2	1.70	0.71
5:L7:1:G:O4'	10:LD:263:LYS:NZ	2.24	0.71
49:S2:1192:U:OP2	72:SX:119:ARG:NH1	2.23	0.71
4:L5:469:C:OP2	4:L5:684:G:N1	2.22	0.71
4:L5:4314:C:O2'	33:Lb:36:ASP:OD1	2.09	0.71
14:LH:91:LYS:HG2	14:LH:145:ILE:HD12	1.71	0.71
63:SO:74:ALA:HB1	63:SO:115:ALA:HB2	1.73	0.71
68:ST:137:GLN:O	68:ST:141:ALA:N	2.23	0.71
4:L5:2098:G:H4'	4:L5:2098:G:OP2	1.89	0.71
4:L5:3593:C:O2'	4:L5:3595:U:O4	2.07	0.71
8:LB:168:MET:HE2	8:LB:175:GLN:HG2	1.73	0.71
49:S2:664:A:O2'	49:S2:670:A:N1	2.22	0.71
49:S2:735:C:H5'	49:S2:736:C:H5	1.54	0.71
49:S2:1521:C:OP2	67:SS:136:THR:OG1	2.04	0.71
64:SP:98:ASN:OD1	64:SP:103:ASN:ND2	2.23	0.71
4:L5:215:C:OP1	4:L5:219:G:N2	2.24	0.71
4:L5:1438:U:H5''	4:L5:1439:C:H5'	1.73	0.71
4:L5:1968:G:OP2	4:L5:1970:A:N6	2.23	0.71
13:LG:72:LYS:O	13:LG:240:ASN:N	2.24	0.71
49:S2:115:U:O2'	49:S2:381:C:O2	2.07	0.71
49:S2:555:A:H3'	49:S2:556:U:H5''	1.72	0.71
55:SF:80:GLY:HA2	55:SF:83:ASN:HB2	1.72	0.71
4:L5:68:U:OP1	19:LN:178:HIS:ND1	2.23	0.71
4:L5:508:G:H21	32:La:85:GLN:HE22	1.38	0.71
4:L5:511:C:N4	4:L5:647:G:O6	2.23	0.71
6:L8:85:U:O2'	6:L8:86:U:O4'	2.09	0.71
25:LT:159:MET:HE2	25:LT:159:MET:HA	1.73	0.71
52:SC:259:THR:HG21	70:SV:15:ARG:HA	1.73	0.71
75:Sa:45:VAL:HB	75:Sa:49:ALA:HB3	1.71	0.71
4:L5:1697:G:N2	4:L5:2084:C:OP1	2.24	0.70
4:L5:2621:A:OP1	26:LU:80:LYS:NZ	2.23	0.70
6:L8:75:G:OP2	30:LY:74:TYR:OH	2.09	0.70
9:LC:209:ILE:HB	9:LC:229:LEU:HD13	1.73	0.70
49:S2:1506:A:O2'	49:S2:1508:A:OP2	2.07	0.70
65:SQ:23:ALA:HB2	65:SQ:70:VAL:HG22	1.73	0.70
68:ST:122:LYS:NZ	68:ST:123:LEU:O	2.24	0.70
8:LB:10:ARG:NH2	8:LB:12:GLY:O	2.23	0.70
49:S2:1570:G:N7	68:ST:97:LYS:NZ	2.39	0.70
58:SI:65:PHE:O	58:SI:109:TYR:OH	2.09	0.70
4:L5:1755:C:O2	10:LD:2:GLY:N	2.23	0.70
49:S2:616:A:OP1	72:SX:68:LYS:NZ	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1098:C:H5	49:S2:1134:G:H1	1.35	0.70
60:SK:80:ARG:NH1	60:SK:86:PRO:O	2.24	0.70
67:SS:54:LYS:HE3	67:SS:59:LEU:HB3	1.74	0.70
80:Sg:34:ALA:HB2	80:Sg:69:VAL:HG13	1.73	0.70
4:L5:2896:G:OP1	23:LR:136:ARG:NH1	2.24	0.70
49:S2:165:G:OP2	49:S2:165:G:N2	2.24	0.70
49:S2:326:C:H2'	49:S2:327:G:H21	1.56	0.70
49:S2:552:G:OP1	79:Se:39:ASN:ND2	2.24	0.70
49:S2:1252:C:N4	65:SQ:146:ARG:OXT	2.24	0.70
4:L5:2091:C:O2	4:L5:2094:G:O2'	2.08	0.70
49:S2:1454:A:H5''	66:SR:3:ARG:HD3	1.72	0.70
49:S2:1783:C:H4'	49:S2:1784:G:H5''	1.73	0.70
4:L5:3717:A:OP2	4:L5:3735:G:N2	2.24	0.70
10:LD:59:ASP:OD1	10:LD:80:ALA:N	2.24	0.70
8:LB:8:ALA:HB1	27:LV:48:ARG:HH22	1.55	0.70
30:LY:54:GLU:HG2	30:LY:67:ILE:HG22	1.74	0.70
49:S2:692:G:N2	49:S2:739:C:OP1	2.24	0.70
49:S2:693:A:H2'	49:S2:694:G:H5''	1.72	0.70
55:SF:108:PRO:HA	55:SF:111:VAL:HG12	1.72	0.70
70:SV:15:ARG:NH1	70:SV:33:GLN:OE1	2.24	0.70
80:Sg:14:HIS:NE2	80:Sg:35:SER:HB2	2.07	0.70
12:LF:86:GLU:HB2	25:LT:135:PRO:O	1.92	0.70
30:LY:48:PRO:O	30:LY:115:ARG:NH2	2.24	0.70
41:Lj:2:THR:N	41:Lj:6:SER:HG	1.88	0.70
49:S2:24:C:OP1	59:SJ:11:LYS:NZ	2.24	0.70
49:S2:1617:G:N1	49:S2:1620:A:OP2	2.24	0.70
54:SE:103:TYR:HB3	54:SE:107:GLY:HA2	1.74	0.70
4:L5:1177:U:O4'	10:LD:282:GLN:NE2	2.25	0.70
4:L5:2300:A:N6	9:LC:178:ASN:OD1	2.25	0.70
49:S2:1454:A:OP1	66:SR:49:LYS:NZ	2.25	0.70
50:SA:110:ASN:HD22	50:SA:113:GLN:HE21	1.40	0.70
4:L5:965:G:O2'	4:L5:966:A:O4'	2.10	0.70
4:L5:2894:A:H62	4:L5:3607:U:H3	1.40	0.70
18:LM:12:VAL:O	18:LM:58:THR:OG1	2.05	0.70
49:S2:1745:A:H1'	56:SG:66:GLY:HA2	1.73	0.70
4:L5:121:A:OP1	13:LG:110:LYS:NZ	2.24	0.69
4:L5:181:C:N4	4:L5:255:C:O2	2.25	0.69
4:L5:250:C:O3'	41:Lj:85:LYS:NZ	2.23	0.69
4:L5:4093:G:H2'	4:L5:4094:G:C8	2.27	0.69
10:LD:108:ARG:HA	10:LD:251:PRO:HB2	1.74	0.69
28:LW:2:LYS:NZ	28:LW:3:VAL:O	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sg:5:MET:HE2	80:Sg:312:VAL:HG12	1.73	0.69
80:Sg:88:ARG:HH11	80:Sg:97:THR:HG21	1.56	0.69
4:L5:4765:G:OP1	14:LH:23:ARG:NE	2.25	0.69
9:LC:71:ARG:HG3	9:LC:73:VAL:HG22	1.73	0.69
14:LH:36:ARG:NH1	14:LH:152:GLU:OE1	2.25	0.69
49:S2:1568:C:OP1	68:ST:96:SER:OG	2.10	0.69
4:L5:1390:G:N2	4:L5:1393:G:OP2	2.25	0.69
4:L5:3651:A:OP2	7:LA:200:ARG:NH1	2.25	0.69
8:LB:322:HIS:O	8:LB:342:LYS:NZ	2.25	0.69
49:S2:1746:U:O2'	56:SG:65:GLN:NE2	2.25	0.69
50:SA:49:ILE:HG21	50:SA:162:PRO:HB2	1.74	0.69
57:SH:170:VAL:HG23	57:SH:187:PHE:HB2	1.74	0.69
73:SY:10:ARG:HG3	73:SY:24:VAL:HG23	1.73	0.69
4:L5:2702:C:OP1	26:LU:101:ARG:NH2	2.26	0.69
4:L5:2789:A:O2'	43:LI:45:ARG:NH2	2.25	0.69
4:L5:3642:A:O2'	41:Lj:2:THR:OG1	2.09	0.69
42:Lk:61:PRO:HG2	42:Lk:62:PRO:HD3	1.72	0.69
63:SO:86:LYS:HG3	63:SO:124:MET:HE2	1.74	0.69
4:L5:702:U:H2'	4:L5:703:G:H5''	1.75	0.69
4:L5:729:G:H5''	12:LF:76:ARG:HD2	1.74	0.69
47:Lp:60:CYS:O	84:Lp:201:HOH:O	2.10	0.69
49:S2:1785:C:O2'	49:S2:1786:U:O4'	2.11	0.69
61:SL:35:ARG:NH2	61:SL:55:TYR:O	2.24	0.69
62:SN:29:THR:HG23	62:SN:32:ASP:H	1.58	0.69
64:SP:57:LEU:HD21	64:SP:86:LEU:HD21	1.74	0.69
4:L5:1267:C:OP2	4:L5:2121:C:N4	2.19	0.69
11:LE:157:HIS:HB3	11:LE:160:LYS:HD2	1.73	0.69
11:LE:250:GLN:NE2	11:LE:254:ASP:OD2	2.25	0.69
49:S2:1348:G:H1	49:S2:1381:G:H22	1.39	0.69
65:SQ:21:ALA:HB1	65:SQ:87:SER:HB3	1.75	0.69
4:L5:513:U:O2'	4:L5:647:G:N2	2.25	0.69
12:LF:216:PRO:HB3	12:LF:247:MET:HG3	1.75	0.69
49:S2:372:U:OP1	61:SL:136:LYS:NZ	2.24	0.69
2:B4:19:G:O4'	2:B4:57:G:N2	2.23	0.69
2:B4:33:U:OP2	65:SQ:146:ARG:NH1	2.25	0.69
4:L5:4882:U:OP1	18:LM:117:LYS:NZ	2.26	0.69
25:LT:79:GLN:NE2	25:LT:81:LYS:O	2.26	0.69
36:Le:114:ARG:HH11	36:Le:117:GLN:HE21	1.41	0.69
45:Ln:7:LYS:NZ	49:S2:1844:U:OP2	2.24	0.69
49:S2:1284:A:H4'	49:S2:1285:G:H3'	1.75	0.69
56:SG:176:ILE:HB	56:SG:179:LEU:HD23	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Lr:26:SER:OG	48:Lr:28:GLU:OE1	2.11	0.69
49:S2:1759:G:N2	49:S2:1773:C:O3'	2.25	0.69
52:SC:209:VAL:HG13	52:SC:210:PRO:HD3	1.74	0.69
14:LH:31:ARG:NH2	14:LH:147:GLU:OE2	2.23	0.69
40:Li:23:LYS:HE2	40:Li:24:PRO:HD2	1.75	0.69
62:SN:45:LEU:HD12	62:SN:49:GLN:HB3	1.74	0.69
67:SS:98:VAL:HG12	67:SS:103:LEU:HD22	1.75	0.69
69:SU:59:LYS:HB2	69:SU:84:ILE:HG23	1.74	0.69
4:L5:2695:A:OP1	42:Lk:35:LYS:NZ	2.24	0.68
13:LG:99:ALA:HB1	13:LG:136:LEU:HD11	1.74	0.68
19:LN:120:TRP:HZ2	19:LN:123:GLU:HB2	1.58	0.68
4:L5:2693:G:OP2	42:Lk:33:LYS:NZ	2.25	0.68
4:L5:4280:A:N6	10:LD:28:THR:O	2.26	0.68
11:LE:165:LEU:HD11	11:LE:176:THR:HG22	1.75	0.68
36:Le:90:MET:HE1	48:Lr:116:ALA:HB3	1.75	0.68
36:Le:90:MET:HE3	48:Lr:113:ARG:HG3	1.76	0.68
49:S2:360:A:N6	49:S2:400:C:O2'	2.26	0.68
49:S2:506:G:OP1	73:SY:108:LYS:NZ	2.26	0.68
52:SC:187:ARG:HG3	52:SC:192:LEU:HD22	1.75	0.68
4:L5:171:U:H5''	4:L5:172:C:H5	1.58	0.68
6:L8:47:C:H1'	6:L8:61:A:H2'	1.75	0.68
9:LC:204:ARG:NH2	9:LC:205:ARG:O	2.27	0.68
17:LL:146:LEU:HD11	39:Lh:122:LYS:HB3	1.75	0.68
20:LO:22:ILE:HD11	24:LS:166:ARG:HD3	1.75	0.68
21:LP:12:THR:HG1	21:LP:13:LYS:HZ3	1.42	0.68
49:S2:124:U:OP1	54:SE:148:ARG:NH2	2.27	0.68
49:S2:1230:C:OP1	67:SS:130:ARG:NH2	2.25	0.68
49:S2:1544:C:N4	49:S2:1588:A:O2'	2.26	0.68
50:SA:187:GLY:HA2	70:SV:45:ARG:HH11	1.57	0.68
52:SC:203:GLY:N	52:SC:221:ASP:OD1	2.25	0.68
4:L5:2848:G:O2'	4:L5:3838:U:O4	2.07	0.68
4:L5:4758:U:H5''	20:LO:116:LYS:HG3	1.75	0.68
49:S2:326:C:O2	49:S2:327:G:N2	2.26	0.68
49:S2:589:G:N2	49:S2:591:U:O2	2.26	0.68
49:S2:1542:C:OP1	68:ST:62:ARG:NE	2.25	0.68
58:SI:48:VAL:HG11	58:SI:54:LYS:HE2	1.75	0.68
65:SQ:40:GLU:O	65:SQ:45:ARG:NH1	2.27	0.68
5:L7:27:G:OP1	16:LJ:146:ARG:NH1	2.25	0.68
8:LB:351:LEU:HD12	8:LB:352:LEU:HD12	1.75	0.68
10:LD:209:ARG:NH1	10:LD:234:ASP:OD2	2.26	0.68
16:LJ:86:GLY:HA2	16:LJ:115:LEU:HD22	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Lo:59:LYS:NZ	46:Lo:61:LYS:O	2.26	0.68
46:Lo:63:THR:HG21	46:Lo:89:LYS:HG2	1.76	0.68
49:S2:1017:U:H5'	62:SN:55:ARG:HH11	1.59	0.68
64:SP:81:ARG:NH2	64:SP:117:GLY:O	2.26	0.68
66:SR:28:PHE:HA	66:SR:55:THR:HG21	1.75	0.68
4:L5:947:C:H5''	11:LE:51:VAL:HG21	1.76	0.68
15:LI:61:SER:HA	15:LI:126:VAL:HG22	1.75	0.68
31:LZ:48:ARG:HB2	31:LZ:69:LYS:HB3	1.76	0.68
73:SY:7:ILE:HD13	73:SY:40:ILE:HG23	1.74	0.68
80:Sg:89:LEU:O	80:Sg:98:THR:N	2.25	0.68
16:LJ:136:ARG:NH1	16:LJ:155:HIS:O	2.25	0.68
18:LM:116:LYS:O	18:LM:120:ASN:ND2	2.26	0.68
49:S2:1616:U:H3	49:S2:1620:A:H2	1.42	0.68
65:SQ:70:VAL:HG21	65:SQ:88:ILE:HD11	1.76	0.68
4:L5:518:G:H1	4:L5:643:C:H2'	1.58	0.68
4:L5:3712:A:H2'	4:L5:3713:U:H5'	1.75	0.68
30:LY:49:ILE:HD12	30:LY:80:ILE:HG21	1.74	0.68
54:SE:141:THR:OG1	54:SE:143:ASP:O	2.11	0.68
54:SE:182:MET:HE3	54:SE:190:GLY:HA2	1.75	0.68
4:L5:2782:U:OP2	43:Ll:10:LYS:NZ	2.26	0.68
10:LD:196:ARG:NH1	10:LD:200:MET:SD	2.67	0.68
15:LI:52:MET:HE2	15:LI:136:MET:HG2	1.74	0.68
19:LN:158:HIS:ND1	19:LN:161:MET:SD	2.67	0.68
21:LP:94:MET:HE2	21:LP:148:MET:HE3	1.76	0.68
49:S2:390:C:O2'	61:SL:8:ARG:NH2	2.27	0.68
60:SK:80:ARG:NH2	60:SK:89:ILE:O	2.27	0.68
66:SR:31:ASN:HD22	66:SR:55:THR:HG22	1.58	0.68
71:SW:11:LEU:HA	71:SW:14:ILE:HG22	1.75	0.68
4:L5:2487:G:O2'	4:L5:2489:C:O4'	2.12	0.68
9:LC:7:LEU:HG	9:LC:21:ASN:HB3	1.74	0.68
49:S2:591:U:OP2	49:S2:593:C:N4	2.26	0.68
49:S2:1060:A:O2'	49:S2:1061:U:OP2	2.12	0.68
49:S2:1436:C:O2'	49:S2:1438:A:OP2	2.11	0.68
57:SH:154:ILE:HG22	57:SH:184:ASP:O	1.94	0.68
69:SU:61:LEU:HD12	69:SU:82:MET:HG2	1.76	0.68
14:LH:19:THR:HG22	14:LH:26:ILE:HB	1.76	0.67
17:LL:164:GLU:OE2	17:LL:167:ARG:NH2	2.27	0.67
25:LT:43:LYS:O	25:LT:58:HIS:ND1	2.27	0.67
49:S2:500:A:H3'	49:S2:501:C:H6	1.59	0.67
67:SS:30:ILE:HD11	67:SS:41:ALA:HB1	1.76	0.67
80:Sg:157:SER:OG	80:Sg:164:ILE:O	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:295:A:OP2	46:Lo:39:ARG:NH1	2.27	0.67
4:L5:1182:C:OP2	4:L5:1183:C:H5'	1.94	0.67
4:L5:1890:G:N2	4:L5:1890:G:OP2	2.27	0.67
4:L5:3594:C:H3'	4:L5:3595:U:H5'	1.75	0.67
4:L5:4093:G:N2	4:L5:4093:G:OP2	2.21	0.67
4:L5:4748:U:OP1	37:Lf:54:LYS:NZ	2.27	0.67
12:LF:243:LEU:HD11	12:LF:247:MET:HE2	1.76	0.67
49:S2:152:U:H2'	49:S2:153:G:H5'	1.76	0.67
49:S2:158:A:O2'	49:S2:464:A:N6	2.27	0.67
50:SA:50:ASN:CA	66:SR:105:MET:HE1	2.22	0.67
59:SJ:128:VAL:O	59:SJ:132:GLN:HG2	1.93	0.67
80:Sg:72:SER:OG	80:Sg:74:ASP:OD1	2.13	0.67
4:L5:4892:A:H2'	4:L5:4893:A:O4'	1.93	0.67
6:L8:55:U:H3	6:L8:62:A:H2	1.41	0.67
15:LI:207:ASP:OD1	15:LI:210:ARG:NH2	2.26	0.67
46:Lo:6:LYS:NZ	46:Lo:93:LEU:O	2.27	0.67
49:S2:488:U:H3'	49:S2:489:A:H5'	1.75	0.67
49:S2:1276:A:H62	49:S2:1321:G:H8	1.40	0.67
53:SD:59:LEU:HD13	53:SD:66:ILE:HD11	1.77	0.67
59:SJ:75:ASN:HA	59:SJ:78:LEU:HD12	1.76	0.67
4:L5:1353:G:OP1	22:LQ:107:SER:OG	2.11	0.67
4:L5:2578:G:N7	31:LZ:17:ARG:NH1	2.43	0.67
4:L5:4546:A:N7	7:LA:215:ASN:ND2	2.41	0.67
62:SN:3:ARG:CG	62:SN:8:GLY:HA3	2.24	0.67
80:Sg:234:ASP:OD2	80:Sg:253:GLY:HA3	1.94	0.67
14:LH:137:SER:HB2	14:LH:145:ILE:HG12	1.77	0.67
14:LH:187:VAL:HG12	14:LH:188:GLN:H	1.59	0.67
42:Lk:24:LYS:HB3	42:Lk:69:LEU:HD13	1.75	0.67
49:S2:919:A:OP1	62:SN:20:ARG:NH1	2.28	0.67
49:S2:924:G:OP1	62:SN:4:MET:N	2.27	0.67
50:SA:5:LEU:HD13	70:SV:41:LYS:HA	1.76	0.67
6:L8:134:G:OP1	29:LX:63:LYS:NZ	2.27	0.67
7:LA:29:LEU:O	7:LA:123:ARG:NH1	2.27	0.67
50:SA:123:VAL:HG12	50:SA:145:ILE:HB	1.75	0.67
4:L5:1821:G:H3'	4:L5:1822:U:H5'	1.77	0.67
4:L5:2019:C:O2'	4:L5:2020:U:OP1	2.13	0.67
4:L5:2522:G:OP1	38:Lg:29:ARG:NH1	2.28	0.67
49:S2:895:G:H8	49:S2:896:U:H4'	1.60	0.67
4:L5:1266:G:H4'	4:L5:2121:C:H41	1.59	0.67
4:L5:2322:G:OP1	36:Le:36:ARG:NH1	2.27	0.67
4:L5:2378:G:N2	4:L5:2381:A:OP2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LG:67:ARG:HD3	19:LN:29:GLN:HE21	1.60	0.67
18:LM:11:ARG:NH2	18:LM:58:THR:O	2.28	0.67
49:S2:1545:A:O2'	49:S2:1546:G:OP2	2.13	0.67
51:SB:152:LYS:HB2	66:SR:131:PRO:HB3	1.75	0.67
4:L5:989:U:O2'	4:L5:990:C:O4'	2.13	0.67
9:LC:13:GLU:OE1	9:LC:161:TYR:OH	2.11	0.67
9:LC:337:ARG:NH1	11:LE:55:GLY:O	2.27	0.67
49:S2:373:G:OP1	61:SL:137:THR:OG1	2.11	0.67
4:L5:67:C:OP2	4:L5:312:G:N2	2.28	0.67
4:L5:935:A:O2'	18:LM:46:ARG:NH2	2.28	0.67
4:L5:4985:U:O2	8:LB:174:ARG:NH1	2.22	0.67
8:LB:80:GLU:OE1	8:LB:323:TYR:OH	2.08	0.67
49:S2:898:U:H2'	49:S2:899:U:H5	1.60	0.67
4:L5:408:A:O2'	4:L5:411:G:OP2	2.06	0.66
4:L5:1920:C:H3'	4:L5:1921:C:H5''	1.76	0.66
4:L5:4884:G:N7	11:LE:272:ARG:NH2	2.43	0.66
8:LB:58:ARG:HD2	8:LB:363:ILE:HG23	1.75	0.66
24:LS:71:SER:OG	24:LS:76:LYS:NZ	2.27	0.66
4:L5:5010:U:H3'	4:L5:5011:A:C5'	2.26	0.66
14:LH:59:LYS:HE3	14:LH:66:GLU:HG2	1.77	0.66
52:SC:102:LEU:HD12	52:SC:130:ILE:HG12	1.78	0.66
52:SC:166:ARG:HH11	70:SV:1:MET:HE3	1.57	0.66
58:SI:136:ILE:HG22	58:SI:137:LEU:HD12	1.78	0.66
63:SO:92:ALA:CB	63:SO:125:LYS:HB2	2.21	0.66
4:L5:501:C:H42	4:L5:506:C:H41	1.43	0.66
4:L5:2835:A:O2'	8:LB:228:TYR:O	2.11	0.66
4:L5:3614:G:O2'	4:L5:3615:G:OP1	2.09	0.66
10:LD:80:ALA:HA	10:LD:83:LEU:CD1	2.26	0.66
14:LH:13:PRO:HG2	14:LH:16:VAL:HG12	1.77	0.66
37:Lf:52:LYS:HG2	37:Lf:67:THR:HG22	1.78	0.66
40:Li:34:THR:HB	40:Li:37:THR:HG22	1.75	0.66
49:S2:84:A:O2'	49:S2:151:C:OP2	2.07	0.66
49:S2:1593:C:OP2	74:SZ:104:ARG:NH2	2.28	0.66
49:S2:1757:G:N2	49:S2:1758:G:N3	2.43	0.66
51:SB:89:GLU:OE1	51:SB:89:GLU:N	2.28	0.66
56:SG:39:ASP:HA	56:SG:45:TRP:O	1.95	0.66
67:SS:6:PRO:HD3	74:SZ:49:LEU:HG	1.77	0.66
4:L5:179:G:N2	4:L5:257:C:O2	2.29	0.66
16:LJ:164:ARG:HA	16:LJ:167:GLN:HG2	1.77	0.66
28:LW:81:ALA:HB1	56:SG:131:ARG:HG3	1.77	0.66
32:La:11:LEU:HD21	32:La:18:GLY:N	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1756:C:N4	49:S2:1776:G:O6	2.28	0.66
58:SI:11:ARG:O	61:SL:136:LYS:NZ	2.26	0.66
59:SJ:46:VAL:HG13	59:SJ:102:ILE:HD11	1.77	0.66
69:SU:22:ILE:N	69:SU:89:ILE:O	2.29	0.66
4:L5:4580:U:O2'	8:LB:182:GLU:OE2	2.08	0.66
4:L5:5022:U:O2'	4:L5:5024:C:OP2	2.13	0.66
5:L7:87:G:H5''	24:LS:87:ARG:HE	1.59	0.66
49:S2:152:U:H1'	56:SG:132:ARG:NE	2.11	0.66
4:L5:1362:G:OP1	17:LL:39:ARG:NH2	2.29	0.66
11:LE:93:THR:HB	11:LE:104:THR:HG22	1.77	0.66
17:LL:172:GLU:OE1	40:Li:2:ALA:N	2.29	0.66
68:ST:77:LYS:HG3	68:ST:94:ARG:HD2	1.78	0.66
13:LG:231:ASP:O	13:LG:235:ARG:NH1	2.29	0.66
21:LP:39:MET:HE3	21:LP:43:LYS:HG2	1.76	0.66
49:S2:1451:G:N7	66:SR:44:LYS:NZ	2.43	0.66
52:SC:168:GLY:N	52:SC:179:THR:O	2.25	0.66
77:Sc:17:VAL:HG23	77:Sc:30:VAL:HG12	1.77	0.66
4:L5:499:G:N3	4:L5:500:G:H5''	2.11	0.66
22:LQ:20:SER:O	22:LQ:26:ARG:NH1	2.28	0.66
27:LV:20:LEU:HD11	27:LV:101:ASN:HD22	1.59	0.66
30:LY:22:PRO:HD2	30:LY:25:ILE:HD11	1.77	0.66
33:Lb:60:ASN:HA	33:Lb:63:LYS:HE2	1.78	0.66
49:S2:85:A:H4'	49:S2:150:A:H4'	1.78	0.66
49:S2:150:A:O2'	49:S2:151:C:O5'	2.09	0.66
53:SD:76:ARG:HB2	60:SK:22:VAL:HG11	1.78	0.66
55:SF:88:MET:HE2	55:SF:92:ILE:HD11	1.77	0.66
67:SS:86:ARG:HG3	67:SS:98:VAL:HG23	1.77	0.66
4:L5:4105:A:O4'	4:L5:4106:G:N2	2.29	0.66
10:LD:128:ASP:HA	10:LD:192:ALA:HB1	1.76	0.66
49:S2:1563:G:OP1	68:ST:121:ARG:NH2	2.29	0.66
59:SJ:163:SER:O	59:SJ:167:GLY:N	2.24	0.66
69:SU:60:THR:HG22	69:SU:83:ARG:HG2	1.78	0.66
80:Sg:131:LEU:HD12	80:Sg:140:TYR:HB3	1.77	0.66
4:L5:759:G:H2'	4:L5:760:G:H5'	1.77	0.66
4:L5:2588:C:OP1	4:L5:2768:C:O2'	2.14	0.66
4:L5:2601:A:N6	4:L5:2744:A:OP2	2.26	0.66
20:LO:47:PHE:HZ	20:LO:144:GLU:HG3	1.60	0.66
30:LY:49:ILE:HD13	30:LY:101:PRO:HB3	1.78	0.66
40:Li:58:MET:HE1	40:Li:93:VAL:HG21	1.78	0.66
49:S2:66:G:H21	49:S2:82:G:H21	1.44	0.66
49:S2:1537:A:H5''	68:ST:84:ARG:HH12	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SG:214:ALA:HA	56:SG:217:MET:HE2	1.78	0.66
58:SI:110:ARG:HH21	58:SI:123:ARG:HH21	1.44	0.66
63:SO:94:HIS:HD1	63:SO:128:ARG:HB2	1.59	0.66
49:S2:526:A:OP1	79:Se:35:ARG:NH1	2.28	0.65
49:S2:1354:G:N2	49:S2:1357:A:OP2	2.27	0.65
49:S2:1754:G:C6	49:S2:1779:G:H1'	2.31	0.65
59:SJ:129:LEU:HB3	59:SJ:135:ILE:HD11	1.78	0.65
4:L5:517:C:O2'	4:L5:644:G:O6	2.14	0.65
4:L5:1764:G:H2'	4:L5:1766:A:H1'	1.77	0.65
4:L5:2622:G:O6	26:LU:81:ARG:NH2	2.29	0.65
16:LJ:13:ARG:NH2	16:LJ:154:LYS:O	2.23	0.65
49:S2:1512:C:H5''	78:Sd:8:TRP:HZ3	1.60	0.65
50:SA:25:LEU:O	50:SA:164:ASN:ND2	2.28	0.65
53:SD:211:VAL:O	66:SR:20:TYR:OH	2.12	0.65
54:SE:253:ASP:O	54:SE:257:ALA:N	2.26	0.65
69:SU:27:ARG:HH11	69:SU:82:MET:HE1	1.61	0.65
4:L5:1540:C:HO2'	4:L5:2449:A:HO2'	1.41	0.65
4:L5:1770:A:H2'	4:L5:1771:U:O4'	1.96	0.65
4:L5:2106:G:N2	4:L5:2107:C:O4'	2.25	0.65
4:L5:3657:U:OP1	7:LA:245:ARG:NH1	2.29	0.65
4:L5:4727:A:H4'	8:LB:128:LYS:O	1.95	0.65
4:L5:4873:G:N7	20:LO:179:LYS:NZ	2.43	0.65
6:L8:102:G:OP2	6:L8:104:A:O2'	2.13	0.65
17:LL:78:LEU:HD13	17:LL:100:PRO:HA	1.78	0.65
49:S2:1274:G:H1	60:SK:43:LEU:HD11	1.62	0.65
80:Sg:107:ASP:OD2	80:Sg:125:ARG:NE	2.27	0.65
4:L5:1181:C:H3'	4:L5:1182:C:H5'	1.78	0.65
4:L5:1629:G:H1	7:LA:208:GLU:HG2	1.61	0.65
9:LC:76:ILE:HD12	9:LC:77:PRO:HD2	1.77	0.65
13:LG:166:LEU:HD23	19:LN:7:ILE:HD11	1.77	0.65
28:LW:82:ILE:O	56:SG:130:PRO:HB2	1.97	0.65
29:LX:60:TYR:O	29:LX:62:ARG:NH1	2.30	0.65
31:LZ:121:ARG:NH1	31:LZ:127:ASN:OD1	2.30	0.65
50:SA:137:ALA:HB1	50:SA:142:LEU:HB2	1.78	0.65
4:L5:1253:G:O2'	4:L5:1257:A:N6	2.29	0.65
4:L5:4927:G:H5'	4:L5:4928:C:H5	1.60	0.65
19:LN:68:ARG:NH1	19:LN:124:ASP:O	2.27	0.65
53:SD:223:ILE:HG23	80:Sg:189:ILE:HB	1.77	0.65
64:SP:56:LEU:HD13	64:SP:78:THR:HG21	1.78	0.65
65:SQ:20:THR:O	65:SQ:72:VAL:HA	1.97	0.65
4:L5:425:U:OP1	21:LP:37:LYS:NZ	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:937:U:H5'	18:LM:48:GLN:NE2	2.11	0.65
4:L5:1919:G:O6	37:Lf:29:LYS:NZ	2.28	0.65
9:LC:150:LEU:HB3	9:LC:151:PRO:HD3	1.79	0.65
78:Sd:53:ILE:HG23	78:Sd:55:LEU:HD11	1.79	0.65
4:L5:496:G:N2	4:L5:658:C:O2	2.29	0.65
4:L5:2118:G:O2'	4:L5:2119:C:O5'	2.08	0.65
9:LC:187:GLN:HA	9:LC:202:ILE:O	1.96	0.65
35:Ld:24:GLU:HG3	35:Ld:122:VAL:HG21	1.78	0.65
44:Lm:127:VAL:HG23	44:Lm:128:LYS:HG2	1.78	0.65
49:S2:350:C:HO2'	49:S2:383:G:H1	1.45	0.65
49:S2:614:C:O2'	49:S2:626:G:N2	2.29	0.65
49:S2:1648:G:H5''	65:SQ:125:ARG:HB2	1.79	0.65
73:SY:18:LEU:O	73:SY:85:ASN:ND2	2.29	0.65
4:L5:513:U:N3	4:L5:516:C:OP2	2.30	0.65
4:L5:2503:G:O2'	4:L5:2505:C:O2	2.12	0.65
10:LD:265:ARG:NH1	84:LD:301:HOH:O	2.30	0.65
49:S2:317:C:OP2	56:SG:183:ARG:NH2	2.19	0.65
74:SZ:58:LEU:HA	74:SZ:62:VAL:HG23	1.77	0.65
80:Sg:21:ILE:HG13	80:Sg:290:ALA:HB2	1.79	0.65
4:L5:35:U:OP2	19:LN:83:LYS:NZ	2.27	0.65
4:L5:308:G:OP2	4:L5:308:G:N2	2.27	0.65
34:Lc:21:VAL:HG11	34:Lc:96:ILE:HD12	1.79	0.65
49:S2:1623:A:H5''	67:SS:133:GLY:HA3	1.79	0.65
50:SA:183:LEU:HB3	50:SA:189:ILE:HG12	1.78	0.65
66:SR:5:ARG:O	66:SR:10:LYS:NZ	2.27	0.65
68:ST:42:HIS:HB3	68:ST:93:SER:HB3	1.78	0.65
80:Sg:21:ILE:HD12	80:Sg:299:PHE:HB3	1.79	0.65
4:L5:668:C:H3'	4:L5:668:C:OP2	1.97	0.65
4:L5:1279:A:O2'	9:LC:323:ARG:NH1	2.29	0.65
4:L5:1881:C:H5'	4:L5:2281:U:H1'	1.79	0.65
4:L5:3842:C:OP1	8:LB:238:LYS:NZ	2.27	0.65
49:S2:29:G:OP1	72:SX:124:LYS:NZ	2.21	0.65
49:S2:71:G:O2'	49:S2:72:C:O4'	2.09	0.65
49:S2:830:A:OP2	49:S2:846:G:N2	2.27	0.65
64:SP:81:ARG:NH1	64:SP:120:SER:OG	2.27	0.65
64:SP:85:ILE:HD13	64:SP:89:MET:HE3	1.79	0.65
4:L5:492:U:C2	4:L5:493:G:H1'	2.31	0.64
4:L5:1272:C:C5'	12:LF:34:ARG:HG3	2.27	0.64
4:L5:1328:G:O2'	4:L5:2349:A:OP1	2.14	0.64
4:L5:4101:C:H1'	4:L5:4109:G:O6	1.97	0.64
4:L5:4910:G:H22	20:LO:107:GLY:HA3	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Lr:47:LYS:HB2	48:Lr:102:TYR:CZ	2.32	0.64
49:S2:56:G:OP1	73:SY:111:LYS:NZ	2.29	0.64
67:SS:5:ILE:HG21	74:SZ:49:LEU:HD11	1.79	0.64
80:Sg:124:SER:OG	80:Sg:126:ASP:OD1	2.13	0.64
4:L5:701:G:H5'	4:L5:969:C:H42	1.61	0.64
4:L5:1460:C:H5''	22:LQ:144:LYS:HG3	1.79	0.64
4:L5:2814:C:H5'	4:L5:2815:A:OP2	1.96	0.64
4:L5:3607:U:OP1	23:LR:88:ARG:NH1	2.29	0.64
4:L5:4076:G:OP1	13:LG:73:ARG:NE	2.30	0.64
41:Lj:2:THR:HG23	41:Lj:4:GLY:H	1.62	0.64
49:S2:1344:A:N1	49:S2:1385:G:O2'	2.29	0.64
49:S2:1679:A:H2'	55:SF:60:ARG:HD3	1.77	0.64
59:SJ:87:LEU:HD21	59:SJ:100:LEU:HD11	1.79	0.64
4:L5:119:G:OP1	13:LG:132:ARG:NH1	2.30	0.64
4:L5:4646:U:OP2	23:LR:62:ARG:NH2	2.27	0.64
4:L5:4938:A:H1'	11:LE:185:PRO:HG3	1.78	0.64
15:LI:176:PHE:HE2	15:LI:197:VAL:HG11	1.62	0.64
26:LU:20:LYS:HB3	26:LU:73:THR:HG22	1.78	0.64
49:S2:175:A:H2'	49:S2:176:U:H6	1.63	0.64
64:SP:34:MET:HE2	64:SP:45:LEU:HB3	1.78	0.64
4:L5:4670:C:O2'	4:L5:4672:A:OP2	2.15	0.64
8:LB:214:ASP:OD2	8:LB:362:LYS:HA	1.97	0.64
25:LT:82:GLY:HA3	33:Lb:16:TRP:HB2	1.79	0.64
73:SY:25:ILE:HD11	73:SY:60:PHE:CZ	2.32	0.64
80:Sg:198:VAL:HG12	80:Sg:209:SER:HB3	1.78	0.64
4:L5:5027:C:C1'	4:L5:5028:G:H5''	2.27	0.64
16:LJ:36:ALA:O	16:LJ:39:VAL:HG12	1.97	0.64
80:Sg:73:SER:OG	80:Sg:117:ASN:ND2	2.29	0.64
4:L5:4897:G:O2'	4:L5:4927:G:N7	2.31	0.64
31:LZ:94:THR:O	31:LZ:97:ASN:ND2	2.30	0.64
49:S2:96:C:O2	49:S2:473:A:O2'	2.14	0.64
49:S2:1241:A:HO2'	49:S2:1266:C:HO2'	1.43	0.64
4:L5:184:U:O2'	4:L5:189:G:O4'	2.16	0.64
4:L5:1741:G:O6	5:L7:103:A:O2'	2.09	0.64
4:L5:3672:G:H3'	4:L5:3673:C:H5''	1.78	0.64
4:L5:4691:A:OP1	14:LH:71:ARG:NH1	2.31	0.64
7:LA:30:ARG:O	7:LA:163:ARG:NH2	2.30	0.64
9:LC:60:HIS:HA	9:LC:92:PHE:HE1	1.63	0.64
11:LE:203:ILE:O	11:LE:206:VAL:HG12	1.98	0.64
12:LF:75:ALA:HB2	25:LT:140:PHE:CE1	2.33	0.64
14:LH:176:LEU:HD13	44:Lm:86:ALA:HB3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:71:G:H3'	49:S2:72:C:H5''	1.80	0.64
49:S2:677:G:N1	49:S2:1027:A:OP2	2.27	0.64
49:S2:1854:U:OP1	63:SO:150:ARG:NH1	2.25	0.64
53:SD:23:GLU:O	53:SD:27:ARG:HG2	1.98	0.64
73:SY:119:GLY:O	73:SY:120:THR:HG22	1.97	0.64
80:Sg:230:LEU:HD11	80:Sg:259:TRP:CD2	2.32	0.64
4:L5:3658:C:OP1	7:LA:242:ARG:NH1	2.30	0.64
19:LN:193:ARG:O	19:LN:197:THR:HG23	1.98	0.64
33:Lb:20:GLY:O	33:Lb:22:LYS:HG3	1.97	0.64
57:SH:53:VAL:HG23	57:SH:175:GLY:HA3	1.79	0.64
69:SU:80:PHE:HB3	78:Sd:52:PHE:HB3	1.80	0.64
4:L5:1735:U:H1'	4:L5:4214:A:H5'	1.80	0.64
4:L5:2479:G:H22	4:L5:2500:U:H1'	1.62	0.64
4:L5:4075:U:OP1	13:LG:249:ARG:NH1	2.30	0.64
4:L5:4363:A:H5''	46:Lo:36:GLN:HG2	1.80	0.64
23:LR:31:GLU:OE2	23:LR:49:LEU:HD23	1.97	0.64
49:S2:1238:U:H1'	64:SP:126:VAL:HG23	1.80	0.64
50:SA:20:ALA:CB	66:SR:91:LEU:HD12	2.28	0.64
57:SH:80:VAL:HG23	57:SH:92:VAL:CG2	2.28	0.64
80:Sg:216:ALA:HB3	80:Sg:230:LEU:O	1.97	0.64
4:L5:469:C:O2	11:LE:105:ARG:NH1	2.31	0.64
4:L5:1482:G:OP2	4:L5:1482:G:N2	2.27	0.64
4:L5:2025:A:N3	4:L5:2026:A:H1'	2.13	0.64
4:L5:2516:G:O2'	38:Lg:62:LYS:NZ	2.30	0.64
28:LW:89:ASP:O	28:LW:93:LYS:N	2.25	0.64
49:S2:912:C:C2	49:S2:914:U:H1'	2.32	0.64
51:SB:183:GLU:OE1	51:SB:183:GLU:N	2.31	0.64
68:ST:40:ALA:HB2	68:ST:95:GLY:HA2	1.78	0.64
4:L5:964:A:H2	4:L5:2093:A:H61	1.46	0.63
4:L5:1719:A:H2'	4:L5:1720:C:C6	2.33	0.63
4:L5:3680:U:OP1	7:LA:54:ARG:NH2	2.30	0.63
4:L5:4749:C:H2'	4:L5:4750:G:O4'	1.98	0.63
8:LB:348:ARG:HH12	8:LB:351:LEU:HD23	1.62	0.63
46:Lo:71:GLU:OE1	46:Lo:71:GLU:N	2.32	0.63
50:SA:61:ALA:HB2	50:SA:159:ILE:HG21	1.80	0.63
50:SA:149:ASN:O	50:SA:152:SER:OG	2.07	0.63
52:SC:106:VAL:HG12	52:SC:128:VAL:HG12	1.79	0.63
4:L5:700:G:O2'	4:L5:969:C:N4	2.31	0.63
4:L5:3937:C:H1'	19:LN:125:SER:HB2	1.80	0.63
6:L8:82:A:H62	6:L8:84:A:H5'	1.62	0.63
24:LS:83:ARG:HD2	25:LT:156:TYR:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LU:39:PHE:HZ	26:LU:87:THR:HG22	1.62	0.63
35:Ld:92:ARG:HA	35:Ld:102:LEU:HD12	1.79	0.63
49:S2:1115:U:H1'	49:S2:1117:C:OP2	1.98	0.63
49:S2:1473:G:N2	49:S2:1476:A:OP2	2.29	0.63
49:S2:1511:U:H2'	49:S2:1512:C:C6	2.32	0.63
4:L5:138:G:C2'	4:L5:139:G:H5'	2.28	0.63
4:L5:473:C:H1'	4:L5:474:C:H5'	1.80	0.63
4:L5:4763:U:O2'	24:LS:174:THR:HG21	1.99	0.63
5:L7:120:U:H2'	10:LD:260:GLU:O	1.98	0.63
14:LH:118:LEU:HD11	14:LH:177:ASP:OD2	1.98	0.63
15:LI:181:PHE:O	15:LI:185:VAL:HG23	1.97	0.63
49:S2:957:A:O2'	49:S2:958:G:N3	2.25	0.63
49:S2:1402:A:H5'	69:SU:51:LYS:HD2	1.80	0.63
50:SA:50:ASN:ND2	50:SA:53:ARG:HG3	2.11	0.63
59:SJ:78:LEU:HD21	59:SJ:94:LEU:HA	1.80	0.63
63:SO:28:PHE:HZ	75:Sa:58:VAL:HG21	1.63	0.63
4:L5:260:C:H2'	4:L5:261:G:H5'	1.80	0.63
4:L5:500:G:H1'	4:L5:504:G:C2'	2.28	0.63
4:L5:1404:G:H1	4:L5:1412:G:H22	1.45	0.63
4:L5:3811:G:O2'	4:L5:3814:U:OP2	2.16	0.63
4:L5:4085:A:OP1	29:LX:45:THR:HG22	1.98	0.63
4:L5:4247:G:H4'	10:LD:4:VAL:HG11	1.80	0.63
12:LF:203:GLU:OE1	12:LF:203:GLU:N	2.31	0.63
49:S2:1399:C:O3'	80:Sg:100:ARG:NH1	2.31	0.63
49:S2:1562:C:H4'	68:ST:119:GLY:HA3	1.78	0.63
53:SD:172:VAL:O	53:SD:173:ARG:NH1	2.25	0.63
68:ST:42:HIS:HA	68:ST:83:GLN:HG2	1.80	0.63
4:L5:478:G:OP1	48:Lr:66:ARG:NH2	2.29	0.63
10:LD:184:ASP:OD2	10:LD:187:SER:N	2.29	0.63
11:LE:141:ARG:HD3	11:LE:191:GLN:HE21	1.64	0.63
11:LE:209:PRO:HB2	11:LE:211:HIS:CD2	2.34	0.63
17:LL:65:ARG:HG3	32:La:69:PHE:CG	2.33	0.63
37:Lf:45:LYS:HD2	37:Lf:105:LEU:HA	1.81	0.63
49:S2:500:A:H3'	49:S2:501:C:C6	2.33	0.63
49:S2:1597:C:H4'	49:S2:1603:G:O6	1.98	0.63
52:SC:264:SER:HB3	52:SC:267:GLN:CB	2.29	0.63
56:SG:7:PHE:HB3	56:SG:12:CYS:HB2	1.80	0.63
66:SR:27:ASP:HB3	66:SR:30:THR:HG22	1.79	0.63
66:SR:86:PRO:HB2	66:SR:88:VAL:O	1.98	0.63
80:Sg:230:LEU:HD23	80:Sg:248:LEU:HD23	1.79	0.63
49:S2:78:C:OP2	56:SG:159:ARG:NH1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:491:C:O2	49:S2:493:A:N6	2.30	0.63
49:S2:503:C:OP1	54:SE:62:LYS:NZ	2.23	0.63
49:S2:1680:G:H2'	49:S2:1681:U:C6	2.34	0.63
80:Sg:34:ALA:HA	80:Sg:40:ILE:HD12	1.81	0.63
19:LN:96:ARG:NH1	19:LN:104:GLU:OE1	2.31	0.63
19:LN:140:LYS:O	19:LN:144:ARG:HG2	1.99	0.63
49:S2:1120:U:H2'	49:S2:1120:U:OP2	1.98	0.63
49:S2:1621:U:O2'	49:S2:1622:U:H2'	1.99	0.63
32:La:110:LYS:HG3	32:La:128:PHE:HB2	1.81	0.63
54:SE:147:ILE:HG21	54:SE:169:ILE:CD1	2.29	0.63
54:SE:208:VAL:HG11	54:SE:225:ILE:CD1	2.28	0.63
71:SW:66:THR:HG23	71:SW:68:ARG:H	1.63	0.63
75:Sa:54:SER:O	75:Sa:57:SER:OG	2.11	0.63
80:Sg:108:VAL:HA	80:Sg:124:SER:HA	1.80	0.63
4:L5:71:C:H1'	17:LL:62:PRO:O	1.99	0.63
4:L5:1083:U:O2'	4:L5:1084:C:H5'	1.99	0.63
4:L5:2500:U:C2'	4:L5:2501:C:H5'	2.29	0.63
4:L5:4763:U:H1'	24:LS:174:THR:HG22	1.80	0.63
14:LH:86:LEU:O	14:LH:187:VAL:HB	1.98	0.63
49:S2:196:C:O2'	49:S2:203:G:N2	2.31	0.63
49:S2:560:A:H5'	59:SJ:174:LYS:CG	2.29	0.63
58:SI:103:LEU:HG	58:SI:170:LYS:HG3	1.79	0.63
58:SI:165:GLN:HA	58:SI:168:GLN:HE21	1.62	0.63
61:SL:22:ARG:O	61:SL:23:VAL:HG13	1.99	0.63
71:SW:7:LEU:HA	71:SW:34:ILE:HD11	1.80	0.63
80:Sg:40:ILE:HD11	80:Sg:66:VAL:HG21	1.81	0.63
4:L5:23:C:OP1	41:Lj:44:LYS:NZ	2.29	0.62
4:L5:979:C:OP2	11:LE:66:LYS:NZ	2.22	0.62
11:LE:127:SER:O	11:LE:128:HIS:ND1	2.32	0.62
34:Lc:47:ILE:HB	34:Lc:94:LEU:HD21	1.81	0.62
48:Lr:103:ARG:HE	48:Lr:106:LEU:HD22	1.63	0.62
80:Sg:14:HIS:HE2	80:Sg:35:SER:HB2	1.64	0.62
4:L5:2117:G:O2'	4:L5:2118:G:OP2	2.14	0.62
4:L5:2407:G:O6	43:Ll:2:SER:N	2.32	0.62
5:L7:12:U:O3'	5:L7:109:U:O2'	2.15	0.62
5:L7:120:U:O2'	10:LD:261:VAL:HG22	1.99	0.62
9:LC:164:THR:HG23	9:LC:224:ILE:HD11	1.81	0.62
11:LE:150:LEU:HD11	11:LE:164:PHE:HB2	1.80	0.62
30:LY:8:THR:HG21	30:LY:13:LYS:HD3	1.81	0.62
49:S2:167:G:OP1	56:SG:8:PRO:HB3	1.99	0.62
49:S2:1274:G:N1	60:SK:43:LEU:HD11	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1274:G:H22	60:SK:27:VAL:HB	1.64	0.62
62:SN:3:ARG:HG3	62:SN:8:GLY:HA3	1.81	0.62
80:Sg:78:ALA:HB2	80:Sg:92:LEU:HD11	1.79	0.62
4:L5:1807:C:O3'	25:LT:110:LYS:NZ	2.29	0.62
4:L5:5011:A:O2'	4:L5:5012:G:O5'	2.16	0.62
11:LE:284:HIS:ND1	37:Lf:42:TYR:OH	2.28	0.62
14:LH:8:GLN:HG2	14:LH:74:CYS:SG	2.39	0.62
49:S2:816:A:OP2	59:SJ:10:ARG:NH2	2.23	0.62
49:S2:1523:C:OP1	67:SS:141:ARG:HB3	1.98	0.62
56:SG:52:ILE:HD11	56:SG:109:LEU:HD21	1.81	0.62
63:SO:85:CYS:HB2	63:SO:124:MET:HE3	1.81	0.62
64:SP:85:ILE:HA	64:SP:89:MET:CE	2.29	0.62
67:SS:16:LEU:HD23	67:SS:17:ASN:H	1.64	0.62
4:L5:5001:U:OP1	8:LB:385:LYS:NZ	2.31	0.62
5:L7:5:A:O2'	10:LD:63:GLN:NE2	2.33	0.62
34:Lc:20:LEU:O	34:Lc:24:SER:OG	2.18	0.62
49:S2:572:U:OP2	73:SY:37:LYS:NZ	2.25	0.62
49:S2:1273:C:O2	49:S2:1274:G:O2'	2.04	0.62
51:SB:36:PRO:HB3	51:SB:231:LEU:CD2	2.29	0.62
56:SG:63:MET:HE3	56:SG:100:CYS:HA	1.81	0.62
59:SJ:80:ARG:O	59:SJ:84:ILE:HD12	2.00	0.62
80:Sg:59:LEU:HD22	80:Sg:90:TRP:CD1	2.34	0.62
4:L5:4118:U:C4	7:LA:95:GLN:HG2	2.34	0.62
56:SG:67:VAL:CG2	56:SG:99:GLY:HA2	2.30	0.62
65:SQ:31:LEU:HD23	65:SQ:33:LYS:H	1.64	0.62
68:ST:99:VAL:O	68:ST:103:VAL:HG23	2.00	0.62
69:SU:56:MET:HG2	69:SU:86:LYS:HD2	1.82	0.62
4:L5:1763:C:H3'	4:L5:1764:G:C8	2.34	0.62
4:L5:3588:C:H2'	4:L5:3589:G:O4'	2.00	0.62
38:Lg:41:ALA:O	38:Lg:52:ARG:HD2	1.99	0.62
49:S2:195:C:H1'	49:S2:205:G:N2	2.15	0.62
49:S2:894:G:H3'	49:S2:895:G:C5'	2.30	0.62
49:S2:940:U:H3	49:S2:1002:U:H3	1.48	0.62
55:SF:96:ALA:HA	55:SF:99:ILE:HG22	1.80	0.62
56:SG:145:PHE:CD2	56:SG:156:TYR:HB3	2.34	0.62
66:SR:25:GLY:O	66:SR:31:ASN:ND2	2.22	0.62
80:Sg:106:LYS:CB	80:Sg:126:ASP:HB3	2.30	0.62
80:Sg:206:LEU:HA	80:Sg:220:ASP:HA	1.80	0.62
80:Sg:230:LEU:CD2	80:Sg:259:TRP:HB2	2.29	0.62
4:L5:2121:C:O2'	4:L5:2122:G:O4'	2.11	0.62
4:L5:4896:G:N1	4:L5:4924:C:O2	2.18	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LG:67:ARG:HD3	19:LN:29:GLN:NE2	2.15	0.62
48:Lr:52:GLU:OE2	48:Lr:79:ARG:NH2	2.31	0.62
49:S2:175:A:H2'	49:S2:176:U:C6	2.34	0.62
49:S2:574:A:O2'	49:S2:575:A:O4'	2.17	0.62
49:S2:955:A:N6	49:S2:971:G:H1'	2.15	0.62
71:SW:90:GLN:HA	71:SW:102:ILE:HD11	1.79	0.62
2:B4:26:A:H61	2:B4:44:G:H1	1.48	0.62
4:L5:2486:G:O6	4:L5:2494:U:N3	2.27	0.62
4:L5:3733:A:H2'	4:L5:3734:U:O4'	1.99	0.62
4:L5:5026:U:H1'	4:L5:5027:C:C5	2.35	0.62
9:LC:106:LYS:HD3	9:LC:108:TRP:CZ2	2.35	0.62
26:LU:61:VAL:HG12	26:LU:74:SER:HB3	1.80	0.62
34:Lc:65:MET:HE2	34:Lc:66:LEU:HD12	1.81	0.62
49:S2:1005:G:OP2	51:SB:162:ARG:NH1	2.31	0.62
49:S2:1667:U:H2'	49:S2:1668:U:C6	2.35	0.62
63:SO:31:CYS:HB2	63:SO:93:LEU:HD13	1.81	0.62
80:Sg:101:PHE:HE2	80:Sg:132:TRP:HB3	1.64	0.62
4:L5:717:U:H2'	4:L5:718:C:C6	2.33	0.62
4:L5:1695:U:H2'	4:L5:1696:C:C6	2.35	0.62
4:L5:1699:A:H2'	4:L5:1700:G:N3	2.15	0.62
7:LA:118:GLU:O	7:LA:158:ILE:HD11	2.00	0.62
11:LE:149:ILE:O	11:LE:197:THR:OG1	2.16	0.62
11:LE:276:ALA:HB2	37:Lf:3:GLY:HA3	1.81	0.62
35:Ld:68:LEU:HB2	35:Ld:108:TYR:HB2	1.82	0.62
49:S2:944:A:H5'	63:SO:134:PRO:HB2	1.82	0.62
50:SA:20:ALA:HB1	66:SR:91:LEU:HD12	1.81	0.62
67:SS:110:ASP:O	67:SS:114:LEU:N	2.27	0.62
4:L5:230:G:OP1	30:LY:15:ARG:NH1	2.32	0.62
4:L5:280:G:H5'	19:LN:14:LYS:NZ	2.14	0.62
4:L5:4575:G:O2'	4:L5:5069:U:OP1	2.17	0.62
11:LE:276:ALA:CB	37:Lf:3:GLY:HA3	2.30	0.62
12:LF:148:LYS:HD3	12:LF:245:ARG:HH11	1.65	0.62
14:LH:41:ILE:HG22	14:LH:43:VAL:HG13	1.82	0.62
17:LL:64:VAL:HA	17:LL:67:HIS:CD2	2.34	0.62
21:LP:22:LEU:HD13	21:LP:90:PHE:HD2	1.65	0.62
25:LT:44:GLY:HA2	25:LT:95:HIS:HB3	1.81	0.62
34:Lc:47:ILE:HB	34:Lc:94:LEU:CD2	2.30	0.62
36:Le:90:MET:HE1	48:Lr:113:ARG:HA	1.80	0.62
49:S2:1513:C:H5'	78:Sd:7:TYR:O	2.00	0.62
49:S2:1567:G:O2'	68:ST:37:VAL:HG21	2.00	0.62
49:S2:1606:G:H22	49:S2:1632:G:H2'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1623:A:O2'	49:S2:1624:U:OP1	2.16	0.62
54:SE:192:ILE:HG12	54:SE:243:GLY:HA3	1.81	0.62
56:SG:181:THR:H	56:SG:184:VAL:HG22	1.64	0.62
68:ST:28:LEU:HD11	68:ST:106:ALA:HB1	1.82	0.62
4:L5:956:A:H1'	4:L5:2076:G:H5''	1.82	0.61
4:L5:1077:C:H4'	4:L5:1215:C:C4	2.35	0.61
4:L5:1974:U:H4'	4:L5:1975:G:H2'	1.80	0.61
4:L5:2017:A:H3'	4:L5:2018:C:C5	2.35	0.61
18:LM:122:ILE:HD12	20:LO:189:ILE:HD13	1.82	0.61
22:LQ:50:ARG:HA	22:LQ:53:MET:HG3	1.82	0.61
49:S2:338:G:C2'	49:S2:339:A:H5''	2.29	0.61
49:S2:1480:A:O2'	78:Sd:56:ASP:O	2.17	0.61
49:S2:1531:A:H2'	49:S2:1532:C:C6	2.35	0.61
54:SE:182:MET:CE	54:SE:190:GLY:HA2	2.30	0.61
69:SU:59:LYS:HB2	69:SU:84:ILE:CG2	2.29	0.61
73:SY:25:ILE:HD11	73:SY:60:PHE:HZ	1.65	0.61
73:SY:37:LYS:HD2	73:SY:57:VAL:HG23	1.81	0.61
4:L5:958:G:C2	11:LE:124:LYS:HG3	2.35	0.61
37:Lf:24:HIS:ND1	37:Lf:25:THR:HG23	2.14	0.61
43:LI:24:PRO:HG2	43:LI:27:ILE:CG2	2.30	0.61
49:S2:528:A:H2'	49:S2:529:A:C8	2.35	0.61
49:S2:580:U:O2'	73:SY:62:THR:O	2.17	0.61
49:S2:1447:G:OP1	69:SU:85:HIS:ND1	2.33	0.61
49:S2:1857:G:OP2	63:SO:146:ARG:NH1	2.31	0.61
50:SA:207:PRO:HA	50:SA:210:ILE:HG22	1.81	0.61
60:SK:44:HIS:O	60:SK:48:ALA:N	2.31	0.61
80:Sg:238:ALA:HB3	80:Sg:289:LEU:HD23	1.82	0.61
4:L5:1442:C:O2'	4:L5:1443:A:H5''	2.00	0.61
8:LB:92:TYR:HB2	8:LB:159:VAL:CG2	2.29	0.61
10:LD:70:GLU:OE1	10:LD:70:GLU:N	2.30	0.61
17:LL:56:ARG:O	17:LL:116:ARG:NH1	2.24	0.61
20:LO:29:LEU:HB3	37:Lf:10:ILE:HD12	1.83	0.61
49:S2:748:C:H4'	49:S2:796:G:C6	2.35	0.61
52:SC:270:THR:O	52:SC:274:VAL:HG23	2.00	0.61
55:SF:34:SER:HA	77:Sc:55:VAL:HB	1.82	0.61
67:SS:15:VAL:HB	67:SS:68:ILE:HD11	1.82	0.61
4:L5:1756:U:O2'	4:L5:1758:G:N2	2.33	0.61
4:L5:1780:A:O2'	15:LI:198:LYS:NZ	2.34	0.61
4:L5:3878:C:O2	8:LB:258:HIS:NE2	2.33	0.61
4:L5:4138:C:O2'	4:L5:4147:G:N2	2.33	0.61
4:L5:5003:U:OP2	8:LB:378:ARG:NH1	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LI:36:LEU:HD11	15:LI:69:ARG:HH21	1.65	0.61
17:LL:42:LYS:O	17:LL:46:ILE:HG12	2.01	0.61
39:Lh:86:LYS:N	41:Lj:80:GLU:OE2	2.33	0.61
44:Lm:113:LYS:HG2	44:Lm:117:HIS:HE1	1.65	0.61
46:Lo:36:GLN:OE1	46:Lo:40:ARG:NH1	2.33	0.61
49:S2:560:A:H5'	59:SJ:174:LYS:HG2	1.82	0.61
49:S2:1256:G:N2	69:SU:65:THR:HA	2.15	0.61
61:SL:16:ILE:HD11	61:SL:36:TYR:HB2	1.83	0.61
68:ST:112:MET:HB3	68:ST:127:GLY:HA3	1.81	0.61
4:L5:375:G:OP1	9:LC:62:THR:HG23	2.01	0.61
4:L5:1173:G:O4'	4:L5:1189:G:N2	2.33	0.61
4:L5:1553:A:N6	4:L5:1574:G:H1'	2.15	0.61
7:LA:177:LYS:HB2	47:Lp:29:ILE:HD13	1.81	0.61
12:LF:75:ALA:HB2	25:LT:140:PHE:HE1	1.66	0.61
13:LG:159:HIS:CD2	13:LG:185:LYS:HA	2.34	0.61
27:LV:22:VAL:CG2	27:LV:53:PRO:HG2	2.30	0.61
51:SB:103:MET:HE1	51:SB:212:VAL:O	1.99	0.61
52:SC:121:ARG:NH2	52:SC:123:ARG:HD3	2.15	0.61
54:SE:208:VAL:HG11	54:SE:225:ILE:HD11	1.81	0.61
55:SF:61:PHE:CE2	77:Sc:51:ARG:HB3	2.35	0.61
55:SF:69:VAL:O	55:SF:73:THR:HG23	2.00	0.61
69:SU:26:SER:HB3	69:SU:110:VAL:HA	1.81	0.61
76:Sb:33:MET:HE3	76:Sb:48:SER:HA	1.82	0.61
80:Sg:45:LEU:HA	80:Sg:53:GLY:CA	2.30	0.61
80:Sg:149:GLU:OE1	80:Sg:170:TRP:HB2	2.00	0.61
4:L5:301:G:H5''	19:LN:98:LEU:CD1	2.31	0.61
8:LB:391:PRO:HD3	28:LW:63:GLN:NE2	2.16	0.61
10:LD:237:GLU:OE2	10:LD:241:LYS:NZ	2.29	0.61
42:Lk:37:ARG:HH11	42:Lk:42:LEU:HB2	1.66	0.61
49:S2:156:G:H4'	56:SG:108:VAL:HG21	1.82	0.61
49:S2:1269:G:H2'	49:S2:1270:G:H5''	1.81	0.61
51:SB:32:ASP:HB3	51:SB:46:LYS:HE3	1.82	0.61
52:SC:98:LEU:HD12	52:SC:102:LEU:HD21	1.83	0.61
52:SC:133:TYR:CE1	52:SC:216:MET:HA	2.35	0.61
67:SS:60:THR:OG1	67:SS:63:GLU:HG3	2.01	0.61
4:L5:235:A:O2'	84:L5:5301:HOH:O	2.16	0.61
4:L5:424:U:H2'	4:L5:425:U:C6	2.36	0.61
4:L5:4207:C:H3'	25:LT:4:THR:HG21	1.83	0.61
7:LA:101:VAL:HG22	7:LA:165:VAL:HG22	1.82	0.61
49:S2:913:A:N6	57:SH:98:ARG:O	2.34	0.61
80:Sg:127:LYS:HA	80:Sg:151:VAL:HG23	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sg:172:LYS:HA	80:Sg:195:LEU:HD22	1.81	0.61
4:L5:1837:A:O5'	25:LT:129:LYS:HB2	2.01	0.61
11:LE:166:LYS:HD3	11:LE:208:ILE:HD13	1.82	0.61
12:LF:125:LEU:HD22	12:LF:130:ILE:HG22	1.82	0.61
12:LF:236:ARG:HB3	12:LF:239:GLN:HB2	1.82	0.61
30:LY:111:LEU:HB3	30:LY:116:LYS:HZ3	1.66	0.61
49:S2:553:U:H2'	49:S2:554:A:O4'	2.01	0.61
51:SB:27:LYS:HA	51:SB:51:ARG:NH1	2.14	0.61
52:SC:121:ARG:HH22	52:SC:123:ARG:HD3	1.65	0.61
54:SE:106:LYS:HB2	54:SE:108:ARG:HG2	1.81	0.61
63:SO:146:ARG:HD2	75:Sa:29:CYS:HB2	1.82	0.61
73:SY:102:THR:O	73:SY:107:ARG:NH2	2.34	0.61
76:Sb:42:LYS:NZ	76:Sb:57:VAL:HG22	2.15	0.61
80:Sg:149:GLU:OE2	80:Sg:170:TRP:N	2.33	0.61
8:LB:65:SER:OG	8:LB:67:VAL:HG12	2.01	0.61
14:LH:18:ILE:HD11	14:LH:25:VAL:HG13	1.81	0.61
20:LO:22:ILE:HD13	20:LO:120:VAL:HG11	1.82	0.61
31:LZ:36:ARG:NH1	31:LZ:38:TYR:OH	2.33	0.61
35:Ld:36:VAL:HG23	35:Ld:41:ARG:HG2	1.82	0.61
49:S2:156:G:OP1	56:SG:2:LYS:HE3	2.01	0.61
49:S2:563:G:H1	49:S2:592:C:H5	1.46	0.61
49:S2:1552:G:O6	49:S2:1557:C:H2'	2.01	0.61
49:S2:1629:C:OP1	67:SS:39:ARG:NH2	2.32	0.61
49:S2:1673:U:H5''	65:SQ:78:VAL:CG1	2.31	0.61
64:SP:17:TYR:CD2	64:SP:18:ARG:HG2	2.35	0.61
66:SR:27:ASP:OD1	66:SR:30:THR:N	2.22	0.61
4:L5:737:C:C5	4:L5:739:G:H5''	2.36	0.61
4:L5:958:G:H1'	11:LE:125:LEU:HD13	1.81	0.61
4:L5:1821:G:H3'	4:L5:1822:U:C5'	2.30	0.61
5:L7:7:G:OP1	10:LD:33:ARG:NE	2.34	0.61
5:L7:36:C:O2'	10:LD:154:THR:HG21	2.00	0.61
21:LP:79:THR:HG23	21:LP:80:GLN:HG3	1.82	0.61
43:Ll:38:ASN:HD22	43:Ll:41:ARG:HD2	1.66	0.61
49:S2:346:C:OP1	54:SE:37:LYS:HG3	2.00	0.61
51:SB:34:LYS:O	51:SB:98:THR:HG22	2.01	0.61
67:SS:74:PRO:O	67:SS:79:ILE:HB	2.00	0.61
69:SU:20:ILE:HG22	69:SU:116:ILE:HA	1.83	0.61
73:SY:7:ILE:HG12	73:SY:27:VAL:HG22	1.82	0.61
80:Sg:256:ILE:HD13	80:Sg:289:LEU:HD11	1.83	0.61
4:L5:171:U:H5''	4:L5:172:C:C5	2.35	0.60
4:L5:500:G:OP1	4:L5:503:C:H1'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1270:A:N7	4:L5:2107:C:H1'	2.15	0.60
4:L5:2434:G:O3'	29:LX:83:THR:HG21	2.01	0.60
39:Lh:35:LYS:HA	39:Lh:44:LEU:HD21	1.83	0.60
47:Lp:57:CYS:SG	47:Lp:59:SER:OG	2.56	0.60
49:S2:158:A:H2'	49:S2:159:A:O4'	2.01	0.60
49:S2:1232:U:O4	67:SS:138:THR:OG1	2.12	0.60
49:S2:1428:G:N2	49:S2:1585:U:H5'	2.15	0.60
58:SI:48:VAL:CG1	58:SI:54:LYS:HE2	2.31	0.60
64:SP:20:VAL:HG11	64:SP:36:LEU:HD21	1.82	0.60
65:SQ:34:VAL:HG22	65:SQ:70:VAL:HB	1.82	0.60
71:SW:49:GLU:O	71:SW:64:ASN:ND2	2.33	0.60
4:L5:3775:A:H5'	4:L5:3776:G:OP2	2.01	0.60
4:L5:4091:G:H2'	4:L5:4092:G:H5'	1.83	0.60
4:L5:4741:C:H4'	4:L5:4742:G:C5'	2.31	0.60
16:LJ:16:ARG:HH11	16:LJ:137:PRO:HG3	1.66	0.60
52:SC:78:LEU:HD12	52:SC:97:PHE:HB2	1.84	0.60
52:SC:198:ALA:HB1	52:SC:202:THR:HG21	1.83	0.60
55:SF:113:VAL:O	55:SF:117:ILE:HG12	2.01	0.60
57:SH:154:ILE:CG2	57:SH:185:VAL:HG12	2.31	0.60
61:SL:78:THR:O	61:SL:122:ILE:HD11	2.00	0.60
65:SQ:55:VAL:HA	65:SQ:63:PHE:HE2	1.65	0.60
67:SS:98:VAL:HG21	67:SS:106:LYS:HG3	1.83	0.60
4:L5:3784:A:O2'	4:L5:3785:A:H3'	2.01	0.60
4:L5:3809:G:OP2	4:L5:3809:G:N2	2.30	0.60
4:L5:4112:C:H5''	4:L5:4113:U:H5	1.67	0.60
4:L5:4235:G:H2'	4:L5:4236:G:H5'	1.82	0.60
4:L5:4342:C:O3'	46:Lo:37:GLY:HA3	2.01	0.60
6:L8:87:G:H4'	6:L8:88:A:O5'	2.01	0.60
12:LF:134:ARG:HA	12:LF:137:GLU:HB2	1.83	0.60
17:LL:171:GLU:OE1	17:LL:171:GLU:N	2.34	0.60
43:Ll:20:ASN:OD1	43:Ll:41:ARG:NH1	2.34	0.60
49:S2:182:C:H4'	49:S2:183:G:H5''	1.83	0.60
49:S2:604:A:N3	49:S2:639:C:O2'	2.32	0.60
49:S2:1446:A:O2'	49:S2:1447:G:H5''	2.01	0.60
49:S2:1606:G:HO2'	49:S2:1607:A:H8	1.47	0.60
55:SF:102:LEU:HD11	74:SZ:100:VAL:HG21	1.83	0.60
71:SW:21:GLY:O	76:Sb:2:PRO:HB3	2.01	0.60
5:L7:87:G:N2	5:L7:90:A:OP2	2.34	0.60
11:LE:96:VAL:HG11	11:LE:105:ARG:HH21	1.66	0.60
31:LZ:52:LYS:O	31:LZ:65:ARG:NH1	2.26	0.60
49:S2:355:G:OP2	61:SL:107:LYS:NZ	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1664:A:O2'	49:S2:1665:G:OP1	2.18	0.60
49:S2:1858:G:OP2	63:SO:146:ARG:NH2	2.34	0.60
50:SA:48:ILE:CG2	66:SR:105:MET:HE3	2.31	0.60
51:SB:120:MET:HG3	51:SB:142:PHE:CE1	2.37	0.60
54:SE:19:MET:HE3	54:SE:108:ARG:HB2	1.84	0.60
75:Sa:22:ARG:HD2	75:Sa:27:ALA:O	2.01	0.60
4:L5:151:G:O6	13:LG:142:THR:HG23	2.01	0.60
4:L5:1441:C:N3	4:L5:1442:C:N4	2.50	0.60
4:L5:1969:G:N2	4:L5:2018:C:O2	2.35	0.60
4:L5:4741:C:H4'	4:L5:4742:G:H5''	1.82	0.60
17:LL:63:THR:HG22	17:LL:64:VAL:H	1.66	0.60
29:LX:145:ASP:HB3	29:LX:148:ASP:OD1	2.00	0.60
30:LY:54:GLU:OE1	30:LY:108:ARG:NH2	2.35	0.60
49:S2:320:G:H1	49:S2:331:C:H42	1.49	0.60
49:S2:1217:A:H2'	49:S2:1218:C:C6	2.36	0.60
49:S2:1347:U:H2'	49:S2:1348:G:C8	2.36	0.60
72:SX:54:LYS:HD2	72:SX:91:LEU:HD11	1.83	0.60
4:L5:662:C:H2'	4:L5:663:G:C8	2.37	0.60
4:L5:2075:G:OP1	9:LC:312:ARG:NH2	2.34	0.60
4:L5:2754:G:OP1	31:LZ:135:ARG:NH1	2.34	0.60
10:LD:36:LEU:HD12	10:LD:37:VAL:HG13	1.82	0.60
14:LH:42:ASN:HD21	20:LO:131:PRO:HB2	1.66	0.60
21:LP:15:CYS:SG	21:LP:150:LEU:HB2	2.41	0.60
30:LY:26:ARG:HD3	30:LY:75:ARG:O	2.01	0.60
49:S2:932:G:O2'	49:S2:934:G:OP2	2.12	0.60
49:S2:1791:A:H2'	49:S2:1792:G:O4'	2.01	0.60
51:SB:31:TYR:HD2	51:SB:62:LEU:HD22	1.67	0.60
51:SB:179:ASN:HB3	51:SB:183:GLU:HB2	1.82	0.60
59:SJ:84:ILE:HG22	59:SJ:108:ARG:HG2	1.83	0.60
65:SQ:39:LEU:HD12	65:SQ:51:LEU:HG	1.84	0.60
78:Sd:38:MET:HE2	78:Sd:43:PHE:HA	1.84	0.60
4:L5:937:U:H5'	18:LM:48:GLN:HE21	1.66	0.60
4:L5:2122:G:H5''	4:L5:2123:C:OP2	2.01	0.60
4:L5:2658:G:N2	4:L5:2676:A:OP2	2.34	0.60
4:L5:4518:A:OP2	8:LB:258:HIS:HB2	2.02	0.60
4:L5:4891:G:H2'	4:L5:4892:A:H5'	1.84	0.60
10:LD:36:LEU:HD13	10:LD:50:ARG:HD2	1.84	0.60
49:S2:1120:U:H4'	49:S2:1121:G:OP1	2.00	0.60
53:SD:109:LEU:HD21	53:SD:182:LEU:HD12	1.84	0.60
54:SE:89:VAL:HG22	54:SE:100:ARG:HE	1.66	0.60
4:L5:2267:U:OP1	48:Lr:37:SER:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3911:C:H2'	4:L5:3912:U:H6	1.67	0.60
9:LC:218:ILE:O	9:LC:222:ARG:HB2	2.01	0.60
10:LD:125:VAL:HG23	10:LD:126:THR:H	1.67	0.60
28:LW:99:GLU:HA	28:LW:102:LYS:CB	2.31	0.60
37:Lf:39:THR:HG21	37:Lf:77:ALA:HB2	1.82	0.60
49:S2:465:A:H5'	49:S2:466:G:C4	2.36	0.60
49:S2:493:A:H1'	49:S2:574:A:H5'	1.82	0.60
49:S2:534:G:H1	49:S2:549:C:H42	1.50	0.60
49:S2:917:U:O4'	57:SH:118:ARG:HG3	2.02	0.60
49:S2:1145:A:H1'	49:S2:1146:C:OP1	2.02	0.60
49:S2:1389:C:H4'	53:SD:205:PRO:HB3	1.84	0.60
49:S2:1587:G:C6	68:ST:78:ILE:HD11	2.37	0.60
49:S2:1781:A:OP1	49:S2:1783:C:N4	2.35	0.60
65:SQ:109:LYS:O	65:SQ:113:ILE:HG12	2.02	0.60
71:SW:7:LEU:HD12	71:SW:34:ILE:HD13	1.83	0.60
72:SX:105:PHE:HB3	72:SX:112:VAL:HG21	1.84	0.60
80:Sg:23:THR:HG21	80:Sg:291:TRP:O	2.00	0.60
80:Sg:235:ILE:O	80:Sg:252:THR:HA	2.00	0.60
4:L5:921:C:H2'	4:L5:922:C:H6	1.66	0.60
4:L5:1297:U:OP1	37:Lf:56:ASN:HB2	2.02	0.60
4:L5:2106:G:H2'	4:L5:2107:C:H4'	1.83	0.60
4:L5:4105:A:H4'	4:L5:4106:G:C5'	2.31	0.60
19:LN:178:HIS:HA	19:LN:181:HIS:CE1	2.36	0.60
21:LP:54:GLN:HA	21:LP:83:TRP:CD1	2.36	0.60
49:S2:114:G:H1'	49:S2:383:G:O4'	2.02	0.60
49:S2:129:C:OP2	49:S2:214:U:O2'	2.11	0.60
50:SA:25:LEU:HD12	50:SA:46:ILE:HG21	1.82	0.60
64:SP:20:VAL:HG23	64:SP:24:GLN:CG	2.30	0.60
80:Sg:62:HIS:NE2	80:Sg:66:VAL:HB	2.17	0.60
4:L5:1247:U:H2'	4:L5:1248:C:H6	1.67	0.60
4:L5:2258:C:N4	4:L5:2259:G:O6	2.35	0.60
4:L5:2565:A:H2'	4:L5:2566:G:H5'	1.83	0.60
4:L5:3759:A:O2'	49:S2:1826:G:O2'	2.16	0.60
4:L5:4098:A:N7	4:L5:4099:G:H1'	2.17	0.60
4:L5:4101:C:H2'	4:L5:4102:C:H5	1.66	0.60
9:LC:164:THR:O	9:LC:168:VAL:HG23	2.01	0.60
25:LT:108:ARG:O	25:LT:112:ASN:HB2	2.00	0.60
38:Lg:41:ALA:HB3	38:Lg:52:ARG:HG3	1.83	0.60
49:S2:182:C:H4'	49:S2:183:G:C5'	2.31	0.60
50:SA:8:LEU:HD23	50:SA:191:ARG:NH2	2.17	0.60
54:SE:123:LEU:HD12	54:SE:159:THR:CG2	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:153:LEU:HA	55:SF:156:THR:CG2	2.32	0.60
80:Sg:17:TRP:HB2	80:Sg:36:ARG:HB2	1.82	0.60
4:L5:194:C:O2	30:LY:121:ARG:NH1	2.35	0.59
4:L5:4095:G:N2	4:L5:4113:U:O2'	2.34	0.59
8:LB:392:LEU:HD23	8:LB:394:LYS:HE3	1.83	0.59
9:LC:319:LEU:HD23	9:LC:325:MET:HE1	1.84	0.59
21:LP:49:LYS:O	21:LP:52:THR:OG1	2.20	0.59
30:LY:54:GLU:HG2	30:LY:67:ILE:CG2	2.31	0.59
49:S2:4:C:H1'	59:SJ:18:ARG:NH2	2.17	0.59
49:S2:445:A:H4'	58:SI:50:GLY:O	2.02	0.59
49:S2:615:C:O2	79:Se:11:LYS:NZ	2.22	0.59
49:S2:990:A:OP1	51:SB:116:LYS:NZ	2.29	0.59
55:SF:86:LYS:O	55:SF:90:VAL:HG13	2.01	0.59
55:SF:100:ILE:HD12	55:SF:111:VAL:HG11	1.83	0.59
61:SL:120:VAL:HG12	61:SL:145:VAL:HG21	1.84	0.59
63:SO:26:ASN:HB2	63:SO:91:THR:HB	1.83	0.59
63:SO:43:HIS:CD2	63:SO:55:ARG:HG3	2.36	0.59
74:SZ:50:PHE:CZ	74:SZ:58:LEU:HD13	2.37	0.59
74:SZ:83:LEU:O	74:SZ:87:ALA:N	2.32	0.59
80:Sg:77:PHE:HB2	80:Sg:89:LEU:CD2	2.32	0.59
4:L5:1552:G:O2'	4:L5:1574:G:N2	2.20	0.59
4:L5:2698:G:OP1	4:L5:2711:G:N2	2.34	0.59
4:L5:2822:G:H5''	23:LR:18:GLY:HA3	1.83	0.59
50:SA:90:PHE:O	50:SA:94:THR:HG22	2.03	0.59
50:SA:144:THR:OG1	50:SA:157:VAL:HA	2.01	0.59
51:SB:67:PHE:O	51:SB:69:VAL:HG23	2.02	0.59
58:SI:130:THR:OG1	58:SI:131:PRO:HD2	2.02	0.59
67:SS:122:GLY:O	67:SS:126:PHE:N	2.34	0.59
76:Sb:42:LYS:HZ1	76:Sb:57:VAL:H	1.49	0.59
80:Sg:241:PHE:CE1	80:Sg:248:LEU:HD13	2.37	0.59
4:L5:1409:C:H3'	4:L5:1410:U:C4'	2.32	0.59
4:L5:4938:A:O2'	11:LE:242:ILE:HD11	2.01	0.59
7:LA:97:ASN:OD1	47:Lp:87:LYS:NZ	2.29	0.59
26:LU:20:LYS:CB	26:LU:73:THR:HG22	2.33	0.59
50:SA:33:GLN:HB3	50:SA:154:LEU:HD11	1.83	0.59
54:SE:180:LEU:CD1	54:SE:228:ILE:HB	2.32	0.59
58:SI:190:LEU:HD12	58:SI:194:GLU:HG2	1.83	0.59
63:SO:31:CYS:HB3	63:SO:95:ILE:HD13	1.83	0.59
67:SS:5:ILE:HB	74:SZ:49:LEU:HG	1.85	0.59
68:ST:10:ASN:HB3	68:ST:13:GLU:OE2	2.01	0.59
4:L5:151:G:H3'	19:LN:49:ARG:NH2	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:382:G:N1	4:L5:385:A:OP2	2.35	0.59
4:L5:2333:G:H5''	9:LC:195:LYS:NZ	2.17	0.59
4:L5:2579:G:N2	4:L5:2582:A:OP2	2.30	0.59
4:L5:2592:U:H2'	4:L5:2593:C:H5'	1.83	0.59
4:L5:4617:G:OP2	8:LB:358:ARG:NH2	2.35	0.59
5:L7:27:G:OP2	10:LD:56:THR:HB	2.02	0.59
9:LC:188:ARG:HD3	9:LC:188:ARG:H	1.68	0.59
21:LP:4:TYR:OH	21:LP:18:ARG:HG3	2.01	0.59
22:LQ:63:LEU:O	22:LQ:67:ILE:HG12	2.02	0.59
24:LS:154:LEU:HB2	24:LS:157:ARG:HD3	1.85	0.59
49:S2:463:C:O2'	49:S2:466:G:O6	2.19	0.59
50:SA:57:LYS:HD3	70:SV:70:LEU:HD12	1.85	0.59
55:SF:76:MET:CE	55:SF:169:ILE:HD11	2.32	0.59
65:SQ:23:ALA:CB	65:SQ:70:VAL:HG22	2.32	0.59
68:ST:64:LEU:HD11	68:ST:121:ARG:O	2.02	0.59
74:SZ:49:LEU:HD12	74:SZ:50:PHE:H	1.67	0.59
4:L5:1397:A:C8	32:La:114:LYS:HD2	2.38	0.59
4:L5:1865:G:H5'	15:LI:118:ALA:O	2.02	0.59
4:L5:2663:G:H4'	23:LR:117:ARG:HD2	1.85	0.59
19:LN:146:PRO:HB2	39:Lh:104:THR:HG22	1.84	0.59
34:Lc:11:LEU:HD22	34:Lc:75:SER:HB2	1.84	0.59
35:Ld:75:LYS:HE3	35:Ld:79:ASN:O	2.02	0.59
37:Lf:54:LYS:O	37:Lf:66:LYS:HE3	2.02	0.59
49:S2:219:U:O2'	49:S2:220:U:H5''	2.03	0.59
49:S2:898:U:H2'	49:S2:899:U:C5	2.37	0.59
50:SA:206:ASP:OD1	50:SA:209:GLU:HB3	2.03	0.59
57:SH:169:LYS:O	57:SH:172:THR:HG22	2.02	0.59
59:SJ:47:LYS:HG3	59:SJ:102:ILE:HD12	1.85	0.59
71:SW:30:CYS:SG	71:SW:31:SER:N	2.75	0.59
4:L5:4623:G:OP1	8:LB:19:ARG:NH2	2.36	0.59
4:L5:4743:G:H2'	4:L5:4744:A:C8	2.38	0.59
4:L5:4764:A:H4'	4:L5:4765:G:H5''	1.83	0.59
6:L8:141:C:H2'	6:L8:142:U:C6	2.38	0.59
36:Le:84:GLU:OE1	48:Lr:20:ARG:NH2	2.35	0.59
48:Lr:52:GLU:HG3	48:Lr:61:VAL:HG13	1.84	0.59
49:S2:465:A:H4'	49:S2:466:G:O5'	2.01	0.59
22:LQ:50:ARG:HG3	22:LQ:83:VAL:HG21	1.84	0.59
49:S2:65:C:C4	56:SG:133:LEU:HD22	2.36	0.59
49:S2:156:G:C5'	56:SG:108:VAL:HG21	2.33	0.59
49:S2:582:C:H1'	73:SY:33:ALA:HB2	1.84	0.59
49:S2:1372:U:O2'	49:S2:1373:C:O5'	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SU:94:PRO:O	69:SU:97:ILE:HG22	2.01	0.59
80:Sg:132:TRP:CZ3	80:Sg:138:CYS:HB2	2.37	0.59
4:L5:2093:A:O2'	4:L5:2094:G:OP2	2.18	0.59
4:L5:2545:U:P	4:L5:2546:G:H4'	2.43	0.59
11:LE:94:LYS:C	11:LE:104:THR:HG23	2.27	0.59
17:LL:50:PRO:HG3	39:Lh:121:VAL:CG1	2.32	0.59
21:LP:22:LEU:HD13	21:LP:90:PHE:CD2	2.37	0.59
31:LZ:125:GLY:O	31:LZ:128:LYS:HE2	2.02	0.59
49:S2:170:A:OP1	56:SG:136:LYS:N	2.36	0.59
49:S2:798:A:O2'	57:SH:108:SER:N	2.35	0.59
52:SC:65:LYS:HB2	52:SC:273:LEU:HD11	1.84	0.59
52:SC:84:PHE:CG	52:SC:265:PRO:HD3	2.38	0.59
66:SR:29:HIS:HA	66:SR:32:LYS:HE2	1.85	0.59
4:L5:369:G:N2	4:L5:372:A:OP2	2.30	0.59
4:L5:964:A:H2'	4:L5:965:G:H4'	1.85	0.59
4:L5:1396:G:N7	32:La:110:LYS:HE2	2.17	0.59
4:L5:1973:G:H5''	4:L5:1974:U:H3'	1.85	0.59
9:LC:5:ARG:HD2	9:LC:24:LEU:O	2.03	0.59
9:LC:11:TYR:OH	9:LC:148:PRO:HB2	2.02	0.59
19:LN:66:VAL:HG21	19:LN:102:ALA:HB2	1.85	0.59
19:LN:184:ILE:HG23	19:LN:194:ARG:HH12	1.68	0.59
20:LO:58:LEU:HD11	20:LO:74:ARG:NH2	2.18	0.59
21:LP:4:TYR:CE1	21:LP:16:LYS:HD3	2.38	0.59
37:Lf:43:LEU:HD11	37:Lf:76:ARG:HA	1.83	0.59
49:S2:881:G:H2'	49:S2:882:U:H6	1.68	0.59
56:SG:3:LEU:HB3	56:SG:5:ILE:HD11	1.84	0.59
66:SR:102:THR:O	66:SR:105:MET:HG3	2.03	0.59
69:SU:66:ARG:HG3	69:SU:68:THR:HG22	1.84	0.59
4:L5:685:C:H4'	4:L5:686:A:O4'	2.03	0.59
4:L5:3641:U:OP2	4:L5:3646:A:N6	2.35	0.59
4:L5:3777:G:O2'	4:L5:3815:G:O6	2.13	0.59
4:L5:4322:G:N2	4:L5:4325:A:OP2	2.34	0.59
7:LA:146:THR:N	7:LA:158:ILE:O	2.33	0.59
8:LB:161:ARG:HG2	8:LB:184:GLN:HA	1.85	0.59
18:LM:126:GLU:HG3	20:LO:185:VAL:HG11	1.84	0.59
49:S2:693:A:C2'	49:S2:694:G:H5''	2.33	0.59
49:S2:1016:U:C5	62:SN:17:PRO:HG3	2.38	0.59
49:S2:1124:C:H2'	49:S2:1125:C:O2	2.03	0.59
49:S2:1606:G:H1'	49:S2:1633:A:N6	2.17	0.59
49:S2:1782:G:O2'	49:S2:1784:G:O4'	2.09	0.59
50:SA:207:PRO:HA	50:SA:210:ILE:CG2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:181:VAL:O	53:SD:182:LEU:HD23	2.03	0.59
55:SF:167:LYS:HA	74:SZ:71:ALA:HB1	1.84	0.59
59:SJ:97:ILE:HA	59:SJ:100:LEU:HD13	1.83	0.59
59:SJ:136:ARG:NH1	59:SJ:138:ARG:O	2.35	0.59
63:SO:149:ARG:HH21	63:SO:151:LEU:HD22	1.67	0.59
65:SQ:31:LEU:O	65:SQ:68:ILE:N	2.29	0.59
73:SY:87:PRO:HG2	73:SY:90:ARG:NH2	2.18	0.59
80:Sg:99:ARG:HG2	80:Sg:100:ARG:H	1.67	0.59
4:L5:1375:C:O2'	4:L5:1376:C:H5'	2.03	0.58
4:L5:2856:C:O2	8:LB:242:ARG:NH2	2.36	0.58
4:L5:3612:C:H1'	4:L5:5016:A:C8	2.38	0.58
4:L5:4537:C:H2'	4:L5:4538:G:C8	2.37	0.58
9:LC:8:ILE:HD11	9:LC:24:LEU:HD13	1.85	0.58
11:LE:46:ARG:HH11	11:LE:66:LYS:HA	1.68	0.58
13:LG:103:ARG:NH1	13:LG:192:ARG:O	2.36	0.58
16:LJ:30:GLY:O	16:LJ:34:THR:HG23	2.03	0.58
20:LO:27:VAL:O	20:LO:101:ARG:NH1	2.35	0.58
21:LP:39:MET:HE2	21:LP:44:ALA:HA	1.85	0.58
21:LP:131:ARG:HG3	21:LP:137:ASN:OD1	2.03	0.58
23:LR:99:MET:HE2	23:LR:99:MET:HA	1.84	0.58
43:LI:33:ASN:OD1	43:LI:35:ILE:HG22	2.03	0.58
49:S2:49:C:H2'	49:S2:472:C:H41	1.68	0.58
49:S2:912:C:O2'	49:S2:913:A:OP1	2.17	0.58
58:SI:165:GLN:HG3	58:SI:171:LEU:HD23	1.85	0.58
60:SK:23:ALA:HB3	60:SK:69:TRP:CZ3	2.36	0.58
68:ST:126:GLN:O	68:ST:129:ARG:HG2	2.02	0.58
4:L5:660:A:C2'	4:L5:661:C:H5'	2.33	0.58
4:L5:2459:G:H2'	4:L5:2461:G:OP2	2.03	0.58
4:L5:2901:G:C2'	4:L5:2902:G:H5''	2.31	0.58
4:L5:3946:G:H21	4:L5:3947:A:H62	1.49	0.58
8:LB:285:TYR:CZ	8:LB:334:LYS:HG3	2.38	0.58
13:LG:152:ALA:HA	13:LG:205:THR:HG22	1.85	0.58
25:LT:115:LYS:HA	25:LT:118:GLU:HG2	1.85	0.58
49:S2:416:U:H2'	49:S2:417:C:O4'	2.03	0.58
51:SB:39:PHE:HA	51:SB:75:GLN:HE21	1.66	0.58
52:SC:192:LEU:HB2	52:SC:227:ARG:CB	2.27	0.58
56:SG:12:CYS:HB3	56:SG:124:LEU:O	2.03	0.58
65:SQ:10:VAL:O	65:SQ:24:HIS:HA	2.03	0.58
78:Sd:33:LYS:HE2	78:Sd:34:TYR:CZ	2.37	0.58
80:Sg:290:ALA:HB3	80:Sg:299:PHE:HB2	1.85	0.58
4:L5:389:A:H1'	30:LY:90:ALA:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:668:C:H5''	9:LC:6:PRO:HB3	1.84	0.58
4:L5:2504:C:O2'	4:L5:2505:C:H5'	2.03	0.58
5:L7:38:U:N3	5:L7:41:G:OP2	2.31	0.58
8:LB:222:VAL:O	8:LB:343:ARG:NH1	2.36	0.58
11:LE:165:LEU:HD11	11:LE:176:THR:CG2	2.33	0.58
16:LJ:136:ARG:NH2	16:LJ:161:GLU:OE2	2.37	0.58
46:Lo:8:ARG:O	46:Lo:21:HIS:N	2.28	0.58
49:S2:581:U:OP1	73:SY:65:GLY:N	2.24	0.58
49:S2:1140:G:H2'	49:S2:1141:G:O4'	2.03	0.58
49:S2:1585:U:O2'	49:S2:1587:G:OP2	2.18	0.58
50:SA:110:ASN:HB3	50:SA:113:GLN:HG3	1.86	0.58
55:SF:38:TYR:CD2	55:SF:143:PRO:HB2	2.37	0.58
55:SF:38:TYR:CE2	55:SF:143:PRO:HB2	2.38	0.58
57:SH:20:GLU:CB	57:SH:48:ALA:HB3	2.33	0.58
67:SS:5:ILE:HG22	74:SZ:49:LEU:HD21	1.84	0.58
68:ST:9:VAL:HG11	68:ST:138:VAL:HG23	1.85	0.58
68:ST:13:GLU:OE1	68:ST:13:GLU:N	2.35	0.58
1:A4:46:U:O2'	49:S2:1830:U:OP2	2.20	0.58
4:L5:1811:G:H21	33:Lb:57:MET:HE3	1.69	0.58
4:L5:2705:G:O2'	4:L5:2706:G:H5'	2.04	0.58
7:LA:115:CYS:SG	7:LA:124:GLY:HA3	2.43	0.58
9:LC:67:TRP:CD1	9:LC:68:GLY:H	2.21	0.58
9:LC:141:GLY:O	9:LC:204:ARG:NH1	2.37	0.58
19:LN:115:VAL:HA	19:LN:134:LEU:HD23	1.84	0.58
43:Ll:20:ASN:OD1	43:Ll:41:ARG:HG3	2.02	0.58
49:S2:96:C:H1'	49:S2:474:G:H5'	1.86	0.58
49:S2:493:A:C1'	49:S2:574:A:H5'	2.33	0.58
49:S2:1454:A:H3'	66:SR:5:ARG:NH1	2.19	0.58
50:SA:89:LYS:NZ	66:SR:82:ASP:HA	2.19	0.58
58:Sl:76:THR:HG21	58:Sl:104:ILE:HD12	1.85	0.58
64:SP:57:LEU:HB3	64:SP:61:ARG:HH12	1.68	0.58
72:SX:50:ILE:HA	72:SX:99:GLU:HA	1.85	0.58
72:SX:125:VAL:HG13	72:SX:126:ALA:H	1.67	0.58
4:L5:258:G:H2'	4:L5:259:C:C6	2.39	0.58
4:L5:501:C:O2	4:L5:505:G:H5''	2.04	0.58
4:L5:2573:A:O3'	31:LZ:115:LYS:NZ	2.35	0.58
4:L5:2658:G:O6	34:Lc:32:LYS:HE3	2.04	0.58
4:L5:4704:C:H4'	14:LH:129:ARG:HH21	1.66	0.58
13:LG:159:HIS:HD2	13:LG:185:LYS:HA	1.67	0.58
24:LS:99:ASP:OD1	24:LS:100:LEU:N	2.33	0.58
25:LT:94:GLU:N	25:LT:94:GLU:OE1	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:LZ:33:THR:O	31:LZ:36:ARG:N	2.26	0.58
49:S2:1594:A:N7	74:SZ:104:ARG:HD3	2.18	0.58
49:S2:1677:U:C2'	49:S2:1678:A:H5''	2.31	0.58
59:SJ:39:ASN:OD1	59:SJ:42:GLU:N	2.31	0.58
60:SK:11:ILE:HG21	60:SK:45:VAL:HG12	1.84	0.58
80:Sg:31:ILE:CG2	80:Sg:43:TRP:HB2	2.32	0.58
4:L5:278:G:H5'	4:L5:329:A:N6	2.19	0.58
4:L5:4769:G:OP1	20:LO:176:ARG:NE	2.30	0.58
8:LB:303:ALA:HB2	8:LB:314:ILE:HA	1.86	0.58
16:LJ:144:LYS:HE2	16:LJ:146:ARG:O	2.04	0.58
17:LL:81:LEU:HD21	17:LL:98:VAL:HG13	1.84	0.58
31:LZ:92:ASP:OD2	31:LZ:94:THR:HG22	2.04	0.58
49:S2:521:A:OP1	59:SJ:45:ARG:NH1	2.28	0.58
49:S2:616:A:H1'	79:Se:12:VAL:CG2	2.32	0.58
49:S2:1145:A:OP2	49:S2:1145:A:H2'	2.03	0.58
49:S2:1164:G:O2'	49:S2:1165:G:H5'	2.04	0.58
49:S2:1314:U:O2'	60:SK:8:ARG:NH2	2.28	0.58
58:SI:48:VAL:CG2	58:SI:52:ASN:HB2	2.33	0.58
64:SP:18:ARG:HD2	67:SS:88:LYS:HG3	1.84	0.58
4:L5:303:C:OP2	19:LN:68:ARG:NH2	2.36	0.58
4:L5:470:A:H2'	4:L5:471:A:O4'	2.03	0.58
4:L5:1208:G:C2'	4:L5:1209:U:H5'	2.33	0.58
4:L5:1409:C:H3'	4:L5:1410:U:O4'	2.03	0.58
4:L5:4125:C:H4'	13:LG:45:ILE:HD11	1.86	0.58
4:L5:4139:G:O2'	4:L5:4140:C:H5''	2.03	0.58
4:L5:4650:G:H2'	4:L5:4651:A:H5'	1.85	0.58
4:L5:4905:C:H2'	4:L5:4906:C:C6	2.39	0.58
8:LB:29:VAL:HG13	8:LB:348:ARG:HD3	1.85	0.58
9:LC:159:GLU:HA	9:LC:217:ILE:HB	1.85	0.58
17:LL:46:ILE:HD11	17:LL:51:ALA:HA	1.86	0.58
49:S2:540:U:H2'	49:S2:541:U:C5	2.37	0.58
49:S2:1629:C:O2'	67:SS:85:ASN:ND2	2.37	0.58
50:SA:140:VAL:HG23	50:SA:142:LEU:HG	1.86	0.58
53:SD:72:VAL:HG22	60:SK:20:VAL:HG21	1.86	0.58
56:SG:10:THR:CB	56:SG:128:THR:HG23	2.33	0.58
56:SG:66:GLY:O	56:SG:68:LEU:HG	2.03	0.58
63:SO:97:LEU:HD11	63:SO:112:ALA:HB1	1.84	0.58
80:Sg:251:ALA:HB1	80:Sg:256:ILE:HG12	1.85	0.58
4:L5:138:G:O2'	4:L5:139:G:H5'	2.04	0.58
4:L5:2630:U:O4	26:LU:89:LYS:HE2	2.04	0.58
20:LO:187:LYS:HE2	20:LO:187:LYS:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LU:39:PHE:CZ	26:LU:87:THR:HG22	2.39	0.58
49:S2:896:U:H2'	49:S2:897:U:C6	2.39	0.58
49:S2:927:C:H1'	76:Sb:51:GLN:NE2	2.15	0.58
49:S2:1677:U:OP1	55:SF:71:ARG:NH1	2.37	0.58
50:SA:104:THR:O	50:SA:107:THR:HG23	2.02	0.58
51:SB:138:PHE:O	51:SB:213:ARG:N	2.36	0.58
52:SC:125:LYS:HA	52:SC:143:CYS:HA	1.85	0.58
54:SE:241:GLY:O	54:SE:244:ILE:HG22	2.03	0.58
78:Sd:10:HIS:HB3	78:Sd:12:ARG:HH12	1.69	0.58
4:L5:1176:C:H42	4:L5:1184:A:H61	1.50	0.58
4:L5:1202:C:OP2	4:L5:1203:G:H5''	2.04	0.58
4:L5:1428:U:H5''	22:LQ:42:THR:CG2	2.33	0.58
4:L5:1761:G:C2'	4:L5:1762:C:H5'	2.33	0.58
4:L5:4913:G:H4'	4:L5:4914:C:O5'	2.02	0.58
8:LB:35:ASP:OD1	8:LB:187:GLY:N	2.32	0.58
10:LD:146:LEU:HD12	10:LD:163:LEU:HB2	1.86	0.58
13:LG:140:VAL:HG21	13:LG:166:LEU:O	2.04	0.58
16:LJ:19:LYS:HG2	16:LJ:133:VAL:HB	1.86	0.58
26:LU:23:LEU:HD11	26:LU:87:THR:HG21	1.86	0.58
33:Lb:16:TRP:CD1	33:Lb:21:ILE:HD11	2.39	0.58
38:Lg:8:ARG:HH21	38:Lg:31:VAL:HG11	1.69	0.58
49:S2:118:C:H2'	49:S2:119:U:H5'	1.86	0.58
49:S2:827:A:OP1	59:SJ:10:ARG:HG3	2.03	0.58
49:S2:1797:U:H2'	49:S2:1798:C:C6	2.39	0.58
55:SF:33:ILE:HG21	77:Sc:11:LEU:HD13	1.85	0.58
56:SG:52:ILE:HD11	56:SG:109:LEU:CG	2.33	0.58
73:SY:27:VAL:HB	73:SY:69:THR:CG2	2.34	0.58
77:Sc:31:ARG:CZ	77:Sc:43:ILE:HD11	2.34	0.58
4:L5:173:C:C1'	39:Lh:112:ARG:HG2	2.34	0.58
4:L5:1179:U:OP1	4:L5:1180:C:H5''	2.03	0.58
4:L5:4895:C:H3'	4:L5:4895:C:OP2	2.04	0.58
10:LD:108:ARG:NE	10:LD:251:PRO:O	2.28	0.58
13:LG:166:LEU:HD23	19:LN:7:ILE:CD1	2.32	0.58
35:Ld:24:GLU:HG3	35:Ld:122:VAL:CG2	2.34	0.58
38:Lg:84:ALA:O	38:Lg:87:VAL:HG12	2.04	0.58
49:S2:5:U:OP2	52:SC:230:THR:OG1	2.22	0.58
49:S2:752:G:OP1	49:S2:793:G:H1'	2.04	0.58
49:S2:1091:C:O2'	71:SW:2:VAL:N	2.28	0.58
49:S2:1474:A:H2'	49:S2:1475:G:O4'	2.04	0.58
53:SD:70:THR:OG1	53:SD:86:LEU:HD13	2.04	0.58
54:SE:179:ASN:O	54:SE:195:ILE:HD12	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SI:140:LYS:O	58:SI:145:ILE:HB	2.04	0.58
65:SQ:12:VAL:O	65:SQ:22:VAL:HA	2.04	0.58
73:SY:20:ARG:HD3	73:SY:76:TYR:CE1	2.38	0.58
80:Sg:18:VAL:HG22	80:Sg:302:TYR:O	2.03	0.58
2:B4:14:A:H2'	2:B4:15:G:H5'	1.86	0.57
4:L5:1082:C:N4	4:L5:1218:G:O6	2.37	0.57
4:L5:2020:U:H2'	4:L5:2021:G:C8	2.40	0.57
14:LH:150:ASP:O	14:LH:154:VAL:HG23	2.04	0.57
49:S2:381:C:OP2	58:SI:54:LYS:NZ	2.34	0.57
49:S2:453:C:O2'	56:SG:92:ARG:O	2.21	0.57
50:SA:30:LEU:CD1	50:SA:38:ILE:HG21	2.33	0.57
50:SA:52:LYS:CE	66:SR:108:LEU:HD12	2.29	0.57
51:SB:121:ILE:HG22	51:SB:168:MET:HE1	1.84	0.57
53:SD:12:VAL:O	53:SD:16:ILE:HG13	2.04	0.57
69:SU:51:LYS:HB2	69:SU:90:ASP:OD1	2.03	0.57
4:L5:1311:G:O3'	36:Le:50:LYS:NZ	2.36	0.57
4:L5:1617:G:H1'	4:L5:2513:A:N6	2.19	0.57
4:L5:2106:G:H1'	4:L5:2108:G:C1'	2.34	0.57
4:L5:2471:G:H5''	13:LG:59:ARG:HD2	1.86	0.57
4:L5:2518:G:H1'	4:L5:2539:C:H1'	1.87	0.57
4:L5:4101:C:H1'	4:L5:4109:G:C6	2.40	0.57
4:L5:4695:C:H2'	4:L5:4696:C:O4'	2.04	0.57
5:L7:29:C:H2'	5:L7:30:C:O2	2.04	0.57
10:LD:268:ARG:HG3	10:LD:269:PRO:HD2	1.84	0.57
15:LI:48:LEU:O	15:LI:139:ARG:HA	2.04	0.57
17:LL:87:HIS:HE1	17:LL:89:LYS:HD2	1.68	0.57
21:LP:125:MET:HB2	21:LP:141:SER:OG	2.05	0.57
49:S2:847:A:H2	54:SE:248:ILE:HD11	1.69	0.57
49:S2:902:G:C6	49:S2:903:A:H1'	2.39	0.57
50:SA:52:LYS:HG2	66:SR:108:LEU:HD12	1.86	0.57
51:SB:136:ARG:HG3	51:SB:218:LEU:HD11	1.86	0.57
52:SC:136:HIS:HB3	52:SC:162:ILE:HD11	1.84	0.57
64:SP:111:MET:HE3	64:SP:119:PHE:CE2	2.39	0.57
68:ST:110:LEU:O	68:ST:111:LYS:HG3	2.04	0.57
80:Sg:62:HIS:CE1	80:Sg:66:VAL:HB	2.40	0.57
80:Sg:79:LEU:CD1	80:Sg:120:ILE:HD13	2.33	0.57
1:A4:41:U:O2'	1:A4:42:U:O4'	2.21	0.57
4:L5:466:A:H2'	4:L5:467:U:C2	2.39	0.57
4:L5:481:G:O2'	4:L5:482:G:H5'	2.04	0.57
4:L5:660:A:O2'	4:L5:661:C:H5'	2.05	0.57
4:L5:1835:G:H4'	4:L5:1836:G:H5''	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2123:C:OP1	4:L5:2123:C:H2'	2.03	0.57
4:L5:4070:U:H2'	4:L5:4071:U:C6	2.39	0.57
4:L5:4548:A:H5'	4:L5:4549:G:OP1	2.04	0.57
4:L5:4744:A:H2'	4:L5:4745:G:O4'	2.04	0.57
8:LB:288:GLY:HA3	8:LB:330:PHE:CE2	2.39	0.57
11:LE:176:THR:HB	11:LE:186:LEU:HG	1.86	0.57
48:Lr:28:GLU:OE2	48:Lr:31:ASN:ND2	2.20	0.57
49:S2:546:G:C8	49:S2:547:G:H1'	2.38	0.57
49:S2:789:G:H2'	49:S2:790:C:O4'	2.05	0.57
49:S2:1692:U:H2'	49:S2:1693:G:C8	2.39	0.57
49:S2:1700:C:H4'	49:S2:1701:C:H5''	1.85	0.57
51:SB:108:ASP:OD1	75:Sa:65:PRO:HB2	2.05	0.57
51:SB:166:LYS:O	51:SB:170:GLU:HG3	2.04	0.57
51:SB:198:GLU:HG2	51:SB:210:VAL:CG2	2.34	0.57
57:SH:118:ARG:O	57:SH:121:THR:HG22	2.05	0.57
59:SJ:113:GLN:HG3	59:SJ:149:VAL:HG21	1.86	0.57
71:SW:28:ARG:HB3	71:SW:29:PRO:HD3	1.86	0.57
71:SW:36:ARG:HB2	71:SW:110:ILE:HD12	1.86	0.57
76:Sb:20:LYS:HG3	76:Sb:27:SER:O	2.04	0.57
80:Sg:101:PHE:CE2	80:Sg:132:TRP:HB3	2.39	0.57
4:L5:206:U:O2'	4:L5:208:A:N7	2.33	0.57
4:L5:325:U:H2'	4:L5:326:C:C6	2.38	0.57
4:L5:1090:G:O2'	4:L5:1091:C:H5'	2.05	0.57
4:L5:2481:G:H2'	4:L5:2482:C:C6	2.40	0.57
4:L5:4213:A:H5''	4:L5:4214:A:H5'	1.86	0.57
4:L5:4699:U:C1'	4:L5:4700:A:H5''	2.33	0.57
10:LD:191:ASN:HD22	10:LD:194:VAL:HG23	1.68	0.57
14:LH:95:VAL:HG13	44:Lm:78:ILE:HD11	1.85	0.57
20:LO:9:LEU:HD23	20:LO:118:MET:HB2	1.85	0.57
49:S2:681:U:OP1	61:SL:104:LYS:NZ	2.26	0.57
49:S2:798:A:H5'	49:S2:799:U:H5''	1.85	0.57
54:SE:166:THR:HG22	54:SE:168:LYS:HG2	1.85	0.57
56:SG:31:ARG:HG2	56:SG:101:ILE:HD13	1.87	0.57
57:SH:45:ILE:HD11	57:SH:62:ILE:HB	1.86	0.57
57:SH:69:LEU:HD11	57:SH:73:GLN:HE21	1.69	0.57
63:SO:136:PRO:HB2	63:SO:139:SER:HB3	1.86	0.57
73:SY:45:ALA:HB2	73:SY:52:PRO:HB3	1.87	0.57
77:Sc:42:ILE:HD11	77:Sc:64:GLU:H	1.69	0.57
78:Sd:10:HIS:ND1	78:Sd:11:PRO:HD2	2.20	0.57
80:Sg:172:LYS:HA	80:Sg:195:LEU:CD2	2.33	0.57
80:Sg:289:LEU:HD13	80:Sg:300:ALA:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1437:C:O2'	4:L5:2098:G:H3'	2.04	0.57
4:L5:1834:U:O4	25:LT:126:VAL:HG12	2.04	0.57
4:L5:4369:A:H4'	46:Lo:67:VAL:CG2	2.35	0.57
4:L5:4905:C:H2'	4:L5:4906:C:H6	1.69	0.57
14:LH:92:MET:HE2	14:LH:179:ILE:HG22	1.86	0.57
17:LL:65:ARG:HD2	17:LL:66:TYR:CE2	2.40	0.57
35:Ld:54:MET:HE2	35:Ld:60:PRO:O	2.04	0.57
37:Lf:78:HIS:HB2	37:Lf:85:ARG:HG3	1.85	0.57
49:S2:129:C:H4'	49:S2:130:G:H5''	1.86	0.57
49:S2:386:C:H5''	58:SI:10:LYS:HD2	1.86	0.57
49:S2:650:A:H5'	49:S2:651:U:OP2	2.05	0.57
49:S2:944:A:O2'	63:SO:136:PRO:HB3	2.04	0.57
49:S2:1759:G:H1'	49:S2:1774:C:C2	2.39	0.57
51:SB:171:ILE:O	51:SB:175:GLU:HG2	2.04	0.57
60:SK:64:TRP:CE3	78:Sd:23:VAL:HG12	2.39	0.57
72:SX:24:ASP:HB3	72:SX:27:TYR:HB3	1.87	0.57
4:L5:703:G:O2'	36:Le:5:ARG:NH2	2.37	0.57
4:L5:730:G:OP2	12:LF:76:ARG:NE	2.30	0.57
4:L5:1432:G:O2'	4:L5:1452:A:N6	2.37	0.57
4:L5:3606:U:OP2	23:LR:76:MET:HE1	2.05	0.57
4:L5:4291:G:H4'	4:L5:4292:A:C5'	2.33	0.57
8:LB:8:ALA:HB2	27:LV:49:LEU:HD22	1.86	0.57
8:LB:107:ALA:HB2	8:LB:201:LEU:HD21	1.87	0.57
14:LH:148:GLY:HA3	14:LH:154:VAL:HG22	1.87	0.57
27:LV:92:ASP:OD1	27:LV:94:VAL:HG22	2.05	0.57
49:S2:196:C:H1'	49:S2:203:G:H1	1.70	0.57
51:SB:85:LYS:CB	51:SB:101:HIS:HB3	2.35	0.57
51:SB:140:VAL:O	51:SB:210:VAL:HA	2.05	0.57
54:SE:125:LYS:O	54:SE:142:HIS:N	2.36	0.57
54:SE:181:CYS:HB3	54:SE:195:ILE:HD11	1.86	0.57
64:SP:136:THR:HG23	64:SP:138:SER:H	1.69	0.57
75:Sa:4:LYS:HG3	75:Sa:5:ARG:HG3	1.86	0.57
76:Sb:35:VAL:HG11	76:Sb:63:LEU:HD21	1.85	0.57
80:Sg:202:PRO:HG2	80:Sg:243:PRO:HA	1.86	0.57
80:Sg:290:ALA:N	80:Sg:299:PHE:O	2.36	0.57
4:L5:98:A:OP1	19:LN:195:ARG:HD3	2.03	0.57
16:LJ:35:ARG:HD2	16:LJ:122:SER:O	2.05	0.57
16:LJ:55:TYR:HA	16:LJ:64:ARG:CG	2.34	0.57
42:Lk:27:LYS:HG2	42:Lk:32:VAL:HG22	1.87	0.57
49:S2:589:G:O2'	49:S2:590:A:OP2	2.22	0.57
53:SD:163:PRO:HG3	53:SD:205:PRO:CG	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:171:GLY:O	59:SJ:175:ARG:HG3	2.05	0.57
73:SY:41:ARG:CB	73:SY:55:ILE:HD11	2.35	0.57
73:SY:74:MET:HE2	73:SY:90:ARG:HH12	1.70	0.57
80:Sg:23:THR:N	80:Sg:71:ILE:HD11	2.19	0.57
80:Sg:257:LYS:HA	80:Sg:269:GLU:N	2.20	0.57
2:B4:56:C:H4'	16:LJ:64:ARG:HD3	1.86	0.57
4:L5:74:G:H5''	17:LL:59:VAL:HB	1.87	0.57
4:L5:495:C:H2'	4:L5:496:G:C8	2.39	0.57
4:L5:1720:C:H2'	4:L5:1721:G:O4'	2.04	0.57
4:L5:2427:G:OP1	23:LR:5:ARG:NH2	2.38	0.57
4:L5:2821:U:OP1	23:LR:21:LYS:NZ	2.26	0.57
4:L5:4122:G:H4'	38:Lg:90:ARG:HH11	1.70	0.57
4:L5:4582:C:OP2	8:LB:28:LYS:NZ	2.27	0.57
4:L5:4883:C:O2'	4:L5:4884:G:H5'	2.04	0.57
30:LY:30:MET:HE2	30:LY:49:ILE:HD11	1.87	0.57
37:Lf:25:THR:HG22	37:Lf:87:LYS:HG2	1.87	0.57
49:S2:106:C:OP1	49:S2:431:G:O2'	2.22	0.57
49:S2:189:U:OP1	58:SI:152:ARG:NH2	2.38	0.57
49:S2:1018:U:H1'	62:SN:48:SER:OG	2.04	0.57
49:S2:1045:U:H2'	49:S2:1046:U:O4'	2.05	0.57
49:S2:1287:A:H3'	49:S2:1287:A:OP2	2.04	0.57
49:S2:1587:G:O6	68:ST:74:SER:OG	2.15	0.57
55:SF:96:ALA:O	55:SF:100:ILE:HG23	2.04	0.57
59:SJ:45:ARG:O	59:SJ:49:THR:HG23	2.05	0.57
63:SO:149:ARG:HE	63:SO:151:LEU:HD23	1.70	0.57
66:SR:10:LYS:O	66:SR:14:ARG:HG2	2.04	0.57
66:SR:85:VAL:HG13	66:SR:86:PRO:HD3	1.86	0.57
71:SW:32:LYS:O	71:SW:36:ARG:HG2	2.04	0.57
80:Sg:35:SER:OG	80:Sg:37:ASP:OD1	2.14	0.57
4:L5:488:G:H2'	4:L5:489:C:O4'	2.05	0.57
7:LA:35:ALA:HB3	7:LA:41:ILE:HD11	1.85	0.57
10:LD:27:LYS:HG2	16:LJ:147:ARG:HD2	1.86	0.57
23:LR:39:GLN:OE1	23:LR:42:ARG:NH2	2.34	0.57
34:Lc:77:ASN:OD1	34:Lc:80:GLU:HG2	2.05	0.57
49:S2:808:A:H2'	49:S2:809:A:N3	2.20	0.57
49:S2:1019:C:OP1	62:SN:71:ILE:HG22	2.05	0.57
49:S2:1388:A:H2'	49:S2:1389:C:H5'	1.86	0.57
49:S2:1521:C:OP1	67:SS:124:ARG:NH1	2.38	0.57
55:SF:80:GLY:CA	55:SF:83:ASN:HB2	2.34	0.57
59:SJ:121:LYS:H	59:SJ:125:HIS:HD2	1.51	0.57
62:SN:16:LEU:HD12	62:SN:17:PRO:HD2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:493:G:H3'	4:L5:494:U:C5	2.40	0.57
4:L5:728:U:OP1	12:LF:73:ARG:NH1	2.38	0.57
7:LA:28:ARG:HB2	7:LA:123:ARG:HG3	1.86	0.57
12:LF:87:PRO:HG2	12:LF:144:TYR:CE2	2.40	0.57
14:LH:115:ARG:NH1	14:LH:123:ILE:HG12	2.20	0.57
15:LI:205:PRO:O	15:LI:208:LYS:HG2	2.04	0.57
39:Lh:13:LYS:N	39:Lh:16:GLU:OE2	2.29	0.57
43:Ll:12:PHE:CD2	43:Ll:51:LEU:HD22	2.39	0.57
49:S2:483:C:OP2	72:SX:48:LYS:HE2	2.05	0.57
49:S2:483:C:C5'	72:SX:48:LYS:HG3	2.34	0.57
49:S2:528:A:H2'	49:S2:529:A:H8	1.69	0.57
49:S2:540:U:H2'	49:S2:541:U:H5	1.70	0.57
49:S2:683:G:N1	49:S2:1022:U:OP2	2.27	0.57
49:S2:795:A:O2'	49:S2:796:G:H5'	2.05	0.57
49:S2:936:G:C4'	62:SN:108:ASP:HB3	2.35	0.57
49:S2:1059:G:C3'	49:S2:1060:A:H5''	2.33	0.57
49:S2:1285:G:H4'	49:S2:1286:G:OP2	2.04	0.57
49:S2:1624:U:H2'	49:S2:1625:U:O4'	2.05	0.57
52:SC:166:ARG:O	52:SC:181:PRO:HD3	2.05	0.57
52:SC:166:ARG:HB2	52:SC:248:TYR:CE1	2.40	0.57
52:SC:198:ALA:CB	52:SC:202:THR:HG21	2.34	0.57
53:SD:48:ILE:HG13	53:SD:86:LEU:HG	1.86	0.57
57:SH:63:PHE:HA	57:SH:95:ILE:O	2.05	0.57
59:SJ:86:VAL:HG23	59:SJ:87:LEU:HD23	1.87	0.57
60:SK:64:TRP:CD2	78:Sd:23:VAL:HG12	2.40	0.57
67:SS:107:LEU:O	67:SS:111:LEU:HG	2.04	0.57
80:Sg:90:TRP:HA	80:Sg:97:THR:HA	1.87	0.57
4:L5:85:G:O2'	4:L5:97:G:O6	2.19	0.56
4:L5:387:G:O2'	4:L5:412:G:O6	2.10	0.56
4:L5:2095:A:O2'	4:L5:2096:G:O5'	2.22	0.56
4:L5:2538:U:H2'	4:L5:2539:C:C6	2.40	0.56
4:L5:3766:A:N1	49:S2:1827:U:O2'	2.35	0.56
9:LC:213:GLU:OE1	9:LC:213:GLU:N	2.37	0.56
10:LD:272:SER:OG	10:LD:275:GLN:HG3	2.05	0.56
11:LE:201:ILE:HD13	11:LE:264:ILE:CD1	2.32	0.56
14:LH:43:VAL:HG12	14:LH:59:LYS:HD3	1.87	0.56
34:Lc:11:LEU:CD2	34:Lc:75:SER:HB2	2.35	0.56
36:Le:26:ASP:OD1	36:Le:26:ASP:N	2.38	0.56
49:S2:640:A:H2'	49:S2:641:A:C8	2.39	0.56
49:S2:697:G:H5''	49:S2:734:C:O2	2.04	0.56
49:S2:917:U:H2'	49:S2:918:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:931:C:H5'	49:S2:1104:G:OP1	2.04	0.56
49:S2:1587:G:N1	68:ST:67:ARG:HD2	2.21	0.56
69:SU:25:THR:HG22	69:SU:86:LYS:HB2	1.86	0.56
73:SY:41:ARG:HB3	73:SY:55:ILE:HD11	1.87	0.56
4:L5:1248:C:H2'	4:L5:1249:C:C6	2.40	0.56
4:L5:1828:C:H1'	33:Lb:57:MET:HE2	1.87	0.56
17:LL:49:ARG:O	17:LL:149:GLN:HG3	2.05	0.56
17:LL:114:VAL:O	17:LL:118:LYS:HG2	2.05	0.56
26:LU:106:SER:O	26:LU:109:SER:HB3	2.05	0.56
27:LV:19:GLY:O	27:LV:20:LEU:HD12	2.04	0.56
33:Lb:66:SER:HA	33:Lb:69:ALA:HB3	1.87	0.56
49:S2:328:U:H1'	49:S2:329:G:O4'	2.05	0.56
49:S2:1087:A:OP1	75:Sa:3:LYS:HD3	2.05	0.56
49:S2:1139:C:H3'	49:S2:1140:G:H5''	1.87	0.56
49:S2:1223:A:H2'	49:S2:1224:G:O4'	2.04	0.56
49:S2:1378:A:H4'	49:S2:1379:A:O5'	2.04	0.56
57:SH:60:ILE:HG23	57:SH:92:VAL:HG12	1.86	0.56
60:SK:16:PHE:CE1	60:SK:79:LEU:HD23	2.40	0.56
76:Sb:74:THR:OG1	76:Sb:77:CYS:SG	2.49	0.56
80:Sg:7:LEU:HA	80:Sg:309:VAL:O	2.04	0.56
4:L5:479:G:H1	4:L5:675:C:H42	1.52	0.56
4:L5:1637:A:OP1	4:L5:1640:C:N4	2.38	0.56
4:L5:1707:C:O4'	4:L5:2118:G:N2	2.38	0.56
4:L5:1796:U:H2'	4:L5:1797:G:H5'	1.88	0.56
4:L5:1855:G:OP1	33:Lb:4:SER:HB2	2.06	0.56
4:L5:2253:A:O2'	4:L5:2254:G:OP2	2.21	0.56
4:L5:2268:A:OP1	48:Lr:11:ARG:NH1	2.36	0.56
4:L5:4894:A:H5'	4:L5:4895:C:C2	2.39	0.56
5:L7:12:U:OP2	5:L7:67:C:O2'	2.24	0.56
14:LH:91:LYS:HG2	14:LH:145:ILE:CD1	2.35	0.56
15:LI:45:GLU:O	15:LI:47:PRO:HD3	2.06	0.56
16:LJ:48:PRO:HB2	16:LJ:70:VAL:CG2	2.36	0.56
17:LL:145:LYS:HZ2	17:LL:146:LEU:HD23	1.68	0.56
18:LM:36:ALA:HB2	18:LM:52:PHE:CE1	2.40	0.56
38:Lg:107:LEU:O	38:Lg:110:GLN:HG3	2.05	0.56
49:S2:546:G:H3'	49:S2:547:G:O4'	2.04	0.56
49:S2:735:C:H5'	49:S2:736:C:C5	2.39	0.56
49:S2:808:A:O2'	49:S2:809:A:O5'	2.24	0.56
49:S2:1587:G:OP1	68:ST:77:LYS:NZ	2.35	0.56
49:S2:1834:A:H2	49:S2:1837:G:H22	1.53	0.56
51:SB:170:GLU:HA	51:SB:173:THR:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:141:LYS:O	53:SD:142:LEU:HD23	2.05	0.56
54:SE:42:LEU:HG	54:SE:46:ILE:HD11	1.86	0.56
55:SF:122:ARG:HE	77:Sc:59:LEU:HD21	1.70	0.56
56:SG:54:GLY:O	56:SG:110:ASN:ND2	2.36	0.56
56:SG:69:THR:O	56:SG:99:GLY:HA3	2.05	0.56
57:SH:73:GLN:HB3	57:SH:135:PHE:CE1	2.40	0.56
60:SK:83:LEU:HB2	60:SK:85:LEU:HG	1.88	0.56
63:SO:75:MET:O	63:SO:79:GLN:HG3	2.05	0.56
64:SP:85:ILE:HA	64:SP:89:MET:HE3	1.86	0.56
66:SR:76:GLU:HA	66:SR:79:GLU:OE1	2.06	0.56
75:Sa:24:THR:HG23	75:Sa:72:HIS:O	2.04	0.56
76:Sb:19:HIS:O	76:Sb:20:LYS:HB3	2.05	0.56
78:Sd:29:GLY:O	78:Sd:40:ARG:N	2.37	0.56
4:L5:260:C:C2'	4:L5:261:G:H5'	2.35	0.56
4:L5:494:U:H2'	4:L5:495:C:C6	2.40	0.56
4:L5:748:G:O6	24:LS:98:ARG:NH2	2.28	0.56
4:L5:1633:G:H5'	4:L5:1634:A:OP1	2.05	0.56
4:L5:1994:C:H3'	4:L5:1995:G:H4'	1.88	0.56
4:L5:2060:G:N2	24:LS:115:ALA:HB2	2.21	0.56
4:L5:4291:G:H5'	4:L5:4293:U:C6	2.40	0.56
7:LA:108:PRO:O	7:LA:111:THR:OG1	2.20	0.56
13:LG:51:LEU:O	13:LG:55:VAL:HG13	2.04	0.56
15:LI:184:MET:HE2	15:LI:190:LEU:CD1	2.35	0.56
17:LL:65:ARG:HD2	17:LL:66:TYR:CZ	2.40	0.56
19:LN:140:LYS:HE2	19:LN:144:ARG:HH21	1.70	0.56
21:LP:113:VAL:HG11	21:LP:153:LYS:HD3	1.85	0.56
26:LU:35:ASP:OD2	26:LU:38:ASN:N	2.22	0.56
32:La:38:LEU:O	32:La:42:ARG:NH1	2.38	0.56
44:Lm:120:ASN:O	44:Lm:121:LEU:HD23	2.06	0.56
49:S2:344:U:H2'	49:S2:345:U:C6	2.41	0.56
49:S2:641:A:H2'	49:S2:642:U:O4'	2.05	0.56
49:S2:1386:A:OP2	53:SD:160:SER:OG	2.10	0.56
49:S2:1747:C:H2'	49:S2:1748:G:O4'	2.04	0.56
51:SB:133:TYR:CG	51:SB:181:LEU:HD22	2.41	0.56
65:SQ:16:LYS:HD3	65:SQ:17:LYS:HG3	1.87	0.56
2:B4:3:C:H2'	2:B4:4:C:O4'	2.05	0.56
2:B4:37:A:H3'	2:B4:38:A:H8	1.71	0.56
4:L5:2479:G:N1	4:L5:2500:U:O2	2.38	0.56
4:L5:4627:U:H5'	8:LB:53:MET:HB2	1.86	0.56
4:L5:5053:U:H3'	4:L5:5054:C:C6	2.40	0.56
6:L8:85:U:C2'	6:L8:86:U:H5''	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LA:200:ARG:NH2	7:LA:217:GLN:OE1	2.37	0.56
13:LG:177:MET:HE2	13:LG:177:MET:HA	1.88	0.56
26:LU:21:PHE:CE1	26:LU:80:LYS:HB2	2.40	0.56
36:Le:22:ARG:HB2	36:Le:34:ASN:O	2.05	0.56
43:Ll:24:PRO:HG2	43:Ll:27:ILE:HG23	1.88	0.56
48:Lr:52:GLU:HG3	48:Lr:61:VAL:CG1	2.36	0.56
49:S2:340:C:H2'	49:S2:341:C:O4'	2.05	0.56
49:S2:368:U:H3'	49:S2:369:C:H2'	1.87	0.56
49:S2:870:A:H5''	49:S2:872:A:O4'	2.05	0.56
49:S2:1023:A:OP2	62:SN:124:ARG:NH2	2.31	0.56
49:S2:1506:A:O2'	49:S2:1507:G:H5''	2.06	0.56
55:SF:139:VAL:HG23	77:Sc:45:ASN:O	2.05	0.56
69:SU:56:MET:HG3	69:SU:57:PRO:HD2	1.87	0.56
74:SZ:92:LEU:HA	74:SZ:97:ILE:HD11	1.88	0.56
4:L5:1318:C:OP1	32:La:21:ARG:HB3	2.04	0.56
4:L5:2893:U:H2'	4:L5:2894:A:H5''	1.86	0.56
4:L5:3760:A:N6	49:S2:1824:A:H2'	2.20	0.56
4:L5:4112:C:H3'	4:L5:4113:U:C5	2.41	0.56
8:LB:28:LYS:HG3	8:LB:30:LYS:HG3	1.87	0.56
8:LB:79:VAL:O	8:LB:81:THR:HG23	2.06	0.56
9:LC:262:GLU:HB2	9:LC:272:SER:HB2	1.88	0.56
13:LG:106:THR:OG1	13:LG:107:LYS:N	2.37	0.56
15:LI:19:LYS:HD2	15:LI:26:VAL:CG1	2.36	0.56
16:LJ:146:ARG:HG2	16:LJ:147:ARG:HG2	1.86	0.56
17:LL:58:ILE:HG22	17:LL:157:VAL:CG2	2.36	0.56
18:LM:25:VAL:HG22	18:LM:38:VAL:HG12	1.87	0.56
21:LP:122:ALA:HB1	21:LP:123:PRO:HD2	1.88	0.56
34:Lc:30:GLY:O	34:Lc:34:THR:HG23	2.05	0.56
36:Le:90:MET:CE	48:Lr:113:ARG:HA	2.36	0.56
49:S2:1274:G:N2	60:SK:27:VAL:HB	2.20	0.56
53:SD:16:ILE:HD11	78:Sd:36:LEU:HD12	1.86	0.56
60:SK:5:LYS:O	60:SK:9:ILE:HG12	2.05	0.56
67:SS:105:ASN:HA	67:SS:108:ARG:NH2	2.21	0.56
73:SY:4:THR:OG1	73:SY:32:LYS:NZ	2.37	0.56
4:L5:182:G:H1	4:L5:254:G:H1	1.53	0.56
4:L5:206:U:H2'	4:L5:208:A:OP2	2.06	0.56
4:L5:3928:A:H2'	4:L5:3929:G:O4'	2.06	0.56
14:LH:16:VAL:HG23	14:LH:28:LYS:O	2.05	0.56
22:LQ:40:ASN:OD1	22:LQ:132:LYS:NZ	2.38	0.56
35:Ld:19:GLU:OE1	35:Ld:92:ARG:NH1	2.38	0.56
35:Ld:59:THR:OG1	35:Ld:104:THR:OG1	2.11	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Lp:14:TYR:OH	47:Lp:30:GLU:OE2	2.23	0.56
48:Lr:42:GLY:O	48:Lr:48:THR:HG21	2.06	0.56
48:Lr:89:THR:HG21	48:Lr:118:LEU:CD1	2.36	0.56
49:S2:72:C:H1'	49:S2:73:C:H2'	1.87	0.56
49:S2:880:G:H2'	49:S2:881:G:O4'	2.06	0.56
49:S2:1410:C:H2'	49:S2:1411:G:C8	2.40	0.56
50:SA:30:LEU:CD1	50:SA:38:ILE:HD13	2.35	0.56
50:SA:30:LEU:HD12	50:SA:38:ILE:HG21	1.88	0.56
61:SL:89:ARG:NH2	61:SL:91:ASP:OD1	2.28	0.56
65:SQ:96:TYR:HA	65:SQ:100:VAL:HG12	1.87	0.56
67:SS:7:GLU:OE1	67:SS:7:GLU:N	2.31	0.56
80:Sg:27:PHE:CE2	80:Sg:75:GLY:HA3	2.41	0.56
80:Sg:112:ALA:HB3	80:Sg:121:VAL:CG2	2.35	0.56
4:L5:137:G:H2'	4:L5:138:G:C8	2.40	0.56
4:L5:2611:A:C5'	4:L5:2688:G:H4'	2.36	0.56
4:L5:4475:G:OP2	14:LH:173:ARG:NH2	2.38	0.56
4:L5:5047:C:O2'	4:L5:5050:C:H5'	2.05	0.56
25:LT:139:HIS:ND1	25:LT:139:HIS:O	2.39	0.56
49:S2:857:U:H2'	49:S2:858:A:C8	2.41	0.56
53:SD:191:PRO:O	53:SD:199:GLY:HA2	2.06	0.56
57:SH:148:LEU:HA	71:SW:42:MET:SD	2.46	0.56
71:SW:22:LYS:O	71:SW:65:LEU:HD11	2.05	0.56
80:Sg:70:VAL:N	80:Sg:79:LEU:O	2.28	0.56
80:Sg:101:PHE:CE2	80:Sg:136:GLY:HA2	2.41	0.56
80:Sg:122:SER:OG	80:Sg:132:TRP:NE1	2.27	0.56
4:L5:506:C:H42	4:L5:652:G:H1	1.54	0.56
4:L5:965:G:N2	4:L5:2092:G:H1'	2.20	0.56
4:L5:1077:C:H4'	4:L5:1215:C:N4	2.21	0.56
4:L5:1240:G:H5'	4:L5:1241:C:OP1	2.06	0.56
4:L5:4093:G:H2'	4:L5:4094:G:H8	1.71	0.56
4:L5:4258:C:H2'	4:L5:4259:C:H6	1.70	0.56
4:L5:4458:C:H2'	4:L5:4459:U:C6	2.40	0.56
4:L5:4768:G:OP1	20:LO:168:TYR:OH	2.13	0.56
15:LI:190:LEU:O	15:LI:191:ILE:HD13	2.05	0.56
20:LO:126:VAL:HG13	20:LO:127:VAL:HG13	1.87	0.56
34:Lc:35:LEU:HD22	34:Lc:63:TYR:CD2	2.41	0.56
38:Lg:42:PRO:O	38:Lg:53:LEU:HB2	2.05	0.56
40:Li:90:LEU:O	40:Li:94:LEU:HD23	2.05	0.56
49:S2:4:C:H1'	59:SJ:18:ARG:HH21	1.71	0.56
49:S2:636:C:H5''	79:Se:22:GLN:NE2	2.19	0.56
49:S2:696:G:H2'	49:S2:734:C:C2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:34:SER:O	55:SF:35:LEU:HD23	2.06	0.56
55:SF:63:LYS:HD2	55:SF:71:ARG:NH1	2.20	0.56
56:SG:32:MET:HB2	56:SG:100:CYS:HB2	1.88	0.56
4:L5:216:C:N3	4:L5:217:C:H1'	2.21	0.56
4:L5:267:G:O2'	4:L5:268:G:H5'	2.06	0.56
4:L5:280:G:H5''	19:LN:14:LYS:HZ2	1.70	0.56
4:L5:751:G:H2'	4:L5:752:G:O4'	2.06	0.56
4:L5:3888:G:O6	20:LO:96:GLN:NE2	2.31	0.56
4:L5:4195:G:OP1	4:L5:4221:C:O2'	2.17	0.56
4:L5:4625:C:O2'	4:L5:4626:A:H5'	2.06	0.56
4:L5:4894:A:H5'	4:L5:4895:C:O2	2.05	0.56
7:LA:104:VAL:HG11	7:LA:116:LEU:HD21	1.87	0.56
7:LA:117:GLU:HG2	7:LA:123:ARG:O	2.06	0.56
8:LB:56:ILE:HD12	8:LB:365:LEU:HD22	1.86	0.56
9:LC:76:ILE:CD1	9:LC:77:PRO:HD2	2.35	0.56
9:LC:334:THR:HG21	12:LF:51:TYR:OH	2.05	0.56
14:LH:115:ARG:HH12	14:LH:123:ILE:HG12	1.71	0.56
24:LS:45:TRP:HA	24:LS:48:VAL:HG22	1.86	0.56
32:La:117:LEU:HD12	32:La:118:PRO:HD2	1.87	0.56
49:S2:1524:G:C2'	49:S2:1525:C:H5'	2.36	0.56
55:SF:149:GLN:O	55:SF:153:LEU:HG	2.06	0.56
61:SL:59:LYS:HB2	61:SL:112:HIS:CE1	2.41	0.56
70:SV:68:SER:O	70:SV:72:LEU:HG	2.06	0.56
71:SW:36:ARG:O	71:SW:40:VAL:HG23	2.05	0.56
71:SW:74:VAL:HG23	71:SW:126:LEU:O	2.06	0.56
79:Se:32:ALA:O	79:Se:35:ARG:HG2	2.06	0.56
80:Sg:129:ILE:CG2	80:Sg:151:VAL:HG11	2.36	0.56
4:L5:453:G:H4'	4:L5:454:U:H5'	1.88	0.55
4:L5:1187:G:H1'	10:LD:275:GLN:NE2	2.20	0.55
4:L5:3596:A:C2'	4:L5:3597:G:H5'	2.35	0.55
4:L5:3947:A:H2'	4:L5:3948:C:H5'	1.88	0.55
10:LD:197:LYS:NZ	10:LD:202:GLN:HG3	2.21	0.55
28:LW:4:GLU:OE1	28:LW:4:GLU:N	2.28	0.55
31:LZ:101:PHE:O	31:LZ:102:ARG:HG2	2.06	0.55
48:Lr:29:PRO:HD2	48:Lr:43:LEU:HD21	1.87	0.55
49:S2:1158:G:H5''	71:SW:76:SER:HB2	1.87	0.55
54:SE:92:ILE:CG2	73:SY:17:LEU:HD21	2.36	0.55
54:SE:254:LYS:HA	54:SE:257:ALA:HB3	1.87	0.55
55:SF:183:GLY:HA2	55:SF:190:ILE:HG12	1.88	0.55
67:SS:61:GLU:O	67:SS:64:VAL:HG22	2.06	0.55
68:ST:124:THR:HG23	68:ST:127:GLY:H	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SU:21:ARG:O	69:SU:22:ILE:HD13	2.06	0.55
70:SV:79:VAL:HG12	70:SV:83:PHE:HE1	1.71	0.55
80:Sg:120:ILE:CB	80:Sg:132:TRP:HB2	2.32	0.55
4:L5:711:A:OP1	11:LE:192:LYS:HD2	2.07	0.55
4:L5:1298:C:H2'	4:L5:1299:G:C8	2.42	0.55
4:L5:1734:G:N2	4:L5:1735:U:O4	2.24	0.55
4:L5:3802:U:O2'	4:L5:3803:A:H5'	2.05	0.55
4:L5:4135:G:H2'	4:L5:4136:G:O4'	2.05	0.55
5:L7:117:G:OP1	10:LD:253:TYR:OH	2.19	0.55
5:L7:120:U:O2'	10:LD:259:LYS:HD2	2.06	0.55
9:LC:301:ALA:O	22:LQ:39:THR:HG22	2.07	0.55
9:LC:339:THR:O	9:LC:343:GLN:HG3	2.06	0.55
19:LN:115:VAL:HG22	19:LN:134:LEU:HD21	1.89	0.55
30:LY:82:ILE:HG22	30:LY:83:GLU:H	1.71	0.55
49:S2:586:G:N7	59:SJ:172:ARG:HD2	2.21	0.55
49:S2:809:A:H2'	49:S2:810:A:C5'	2.37	0.55
49:S2:846:G:H5''	49:S2:847:A:O5'	2.07	0.55
49:S2:1605:G:OP1	68:ST:84:ARG:NH2	2.37	0.55
50:SA:99:ILE:HD11	50:SA:117:ARG:NH2	2.21	0.55
62:SN:38:TYR:CE1	62:SN:78:LYS:HG3	2.42	0.55
63:SO:91:THR:HG22	63:SO:92:ALA:H	1.70	0.55
69:SU:27:ARG:NH1	78:Sd:51:GLY:HA3	2.22	0.55
69:SU:82:MET:HB2	78:Sd:52:PHE:CD1	2.41	0.55
80:Sg:126:ASP:O	80:Sg:128:THR:HG23	2.07	0.55
4:L5:132:G:H2'	4:L5:133:C:H4'	1.88	0.55
4:L5:2097:U:N3	12:LF:35:LYS:HD2	2.21	0.55
4:L5:2705:G:O6	23:LR:46:LYS:HE3	2.06	0.55
4:L5:2705:G:H22	4:L5:2710:C:H5	1.55	0.55
4:L5:3732:A:H2'	4:L5:3733:A:C8	2.42	0.55
4:L5:4313:A:OP1	25:LT:92:ARG:NH2	2.27	0.55
4:L5:4900:C:OP1	4:L5:4901:G:H5'	2.07	0.55
4:L5:4938:A:N6	11:LE:247:LYS:HE2	2.21	0.55
6:L8:123:U:O2'	6:L8:126:C:N4	2.39	0.55
7:LA:13:GLY:O	7:LA:14:SER:OG	2.22	0.55
11:LE:164:PHE:CE1	11:LE:173:LEU:HD22	2.41	0.55
28:LW:8:PHE:CD1	28:LW:46:PRO:HG3	2.41	0.55
28:LW:50:ASN:HA	28:LW:55:TYR:CD2	2.41	0.55
35:Ld:64:ILE:HG23	35:Ld:68:LEU:HD23	1.89	0.55
46:Lo:71:GLU:HB3	46:Lo:80:LYS:HG2	1.87	0.55
49:S2:65:C:N4	56:SG:134:GLY:O	2.39	0.55
49:S2:628:A:N6	49:S2:1332:A:H1'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:987:A:C6	51:SB:120:MET:HE1	2.41	0.55
49:S2:1405:A:H2'	49:S2:1406:G:O4'	2.06	0.55
49:S2:1540:G:OP2	68:ST:43:LYS:NZ	2.31	0.55
49:S2:1580:A:O2'	49:S2:1581:C:H5'	2.06	0.55
55:SF:100:ILE:HG22	55:SF:174:ALA:HB1	1.87	0.55
55:SF:103:LEU:HD21	74:SZ:67:LEU:HD22	1.87	0.55
57:SH:139:ILE:HD12	57:SH:156:VAL:CG1	2.37	0.55
58:SI:12:ARG:HG2	58:SI:16:GLY:O	2.06	0.55
58:SI:48:VAL:HG11	58:SI:54:LYS:HB2	1.88	0.55
65:SQ:63:PHE:CE1	65:SQ:92:LEU:HD22	2.41	0.55
72:SX:53:GLU:OE2	72:SX:71:ARG:NH1	2.36	0.55
78:Sd:14:PHE:O	78:Sd:18:SER:OG	2.20	0.55
80:Sg:207:CYS:O	80:Sg:218:LEU:HG	2.05	0.55
4:L5:1577:G:H5'	4:L5:1578:U:H5''	1.89	0.55
4:L5:2605:G:O2'	4:L5:2606:G:H5'	2.06	0.55
4:L5:4988:U:H2'	4:L5:5061:A:N1	2.22	0.55
9:LC:192:GLY:O	9:LC:195:LYS:HE2	2.06	0.55
10:LD:193:GLU:O	10:LD:197:LYS:HG2	2.07	0.55
16:LJ:119:TYR:CD1	67:SS:12:ILE:HG12	2.42	0.55
30:LY:30:MET:O	30:LY:49:ILE:HG12	2.06	0.55
42:Lk:61:PRO:CG	42:Lk:62:PRO:HD3	2.35	0.55
49:S2:78:C:H3'	49:S2:79:A:H5'	1.89	0.55
49:S2:465:A:OP2	49:S2:465:A:H2'	2.06	0.55
49:S2:1016:U:H5'	62:SN:15:ALA:O	2.07	0.55
49:S2:1585:U:O3'	49:S2:1586:U:H4'	2.06	0.55
50:SA:209:GLU:O	50:SA:212:LYS:HG3	2.06	0.55
52:SC:242:ASP:O	52:SC:246:LYS:HG2	2.06	0.55
67:SS:45:LEU:HD12	67:SS:50:ILE:HD11	1.87	0.55
72:SX:90:CYS:HA	72:SX:93:PHE:CD2	2.42	0.55
75:Sa:44:ILE:CD1	75:Sa:65:PRO:HG2	2.37	0.55
76:Sb:6:ASP:OD2	76:Sb:9:HIS:ND1	2.37	0.55
4:L5:1268:G:H3'	4:L5:1269:G:H5''	1.88	0.55
4:L5:1771:U:H2'	4:L5:1772:C:C6	2.42	0.55
4:L5:2319:C:H1'	36:Le:57:ASN:O	2.06	0.55
5:L7:119:U:N3	10:LD:261:VAL:HG21	2.21	0.55
9:LC:25:PRO:HG2	9:LC:28:PHE:CD2	2.41	0.55
11:LE:96:VAL:HG22	11:LE:97:GLY:H	1.71	0.55
16:LJ:42:GLN:NE2	16:LJ:117:ILE:HD11	2.22	0.55
20:LO:84:VAL:HG21	20:LO:102:LEU:CD2	2.37	0.55
23:LR:104:ARG:O	23:LR:108:ARG:HG3	2.06	0.55
35:Ld:85:ARG:NH1	35:Ld:117:LEU:HB3	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1228:A:H2'	49:S2:1229:G:C8	2.42	0.55
49:S2:1416:C:O2'	68:ST:3:GLY:HA2	2.06	0.55
54:SE:57:THR:HG22	54:SE:58:GLY:H	1.72	0.55
54:SE:92:ILE:HG22	54:SE:94:LYS:H	1.72	0.55
80:Sg:4:GLN:O	80:Sg:313:THR:N	2.26	0.55
4:L5:266:C:O2'	4:L5:267:G:OP2	2.20	0.55
4:L5:648:G:H2'	4:L5:649:A:H5'	1.89	0.55
4:L5:1653:A:H5''	4:L5:1654:G:OP1	2.07	0.55
4:L5:1994:C:C3'	4:L5:1995:G:H4'	2.37	0.55
4:L5:3856:A:OP1	21:LP:82:ARG:HB3	2.07	0.55
4:L5:4272:G:OP2	4:L5:4272:G:N2	2.25	0.55
4:L5:4417:C:H2'	4:L5:4418:G:O4'	2.06	0.55
11:LE:41:LYS:HB3	11:LE:42:PRO:HD3	1.87	0.55
14:LH:80:MET:O	14:LH:84:VAL:HG22	2.06	0.55
23:LR:39:GLN:OE1	23:LR:42:ARG:HD2	2.06	0.55
37:Lf:28:LEU:O	37:Lf:83:MET:HA	2.07	0.55
49:S2:167:G:O2'	56:SG:131:ARG:NH2	2.40	0.55
54:SE:29:PRO:HG2	54:SE:46:ILE:CG2	2.37	0.55
61:SL:57:ASP:OD1	61:SL:59:LYS:N	2.39	0.55
72:SX:101:LEU:HB3	72:SX:123:VAL:O	2.07	0.55
4:L5:500:G:O2'	4:L5:504:G:H3'	2.07	0.55
4:L5:2845:A:H61	4:L5:3843:C:H42	1.53	0.55
4:L5:2898:G:OP2	23:LR:135:LYS:NZ	2.33	0.55
6:L8:61:A:OP1	39:Lh:52:LYS:NZ	2.31	0.55
8:LB:294:LYS:HG2	8:LB:295:ASP:H	1.71	0.55
15:LI:208:LYS:HA	15:LI:211:VAL:HG22	1.88	0.55
35:Ld:98:SER:O	35:Ld:101:LYS:NZ	2.27	0.55
36:Le:46:ARG:HA	36:Le:55:MET:SD	2.47	0.55
38:Lg:69:LYS:HG2	38:Lg:73:HIS:CD2	2.42	0.55
49:S2:556:U:C4'	49:S2:557:U:H5'	2.37	0.55
49:S2:1421:A:H5''	49:S2:1422:G:C4	2.42	0.55
53:SD:59:LEU:HD13	53:SD:66:ILE:CD1	2.36	0.55
63:SO:126:ILE:N	75:Sa:56:ALA:O	2.30	0.55
64:SP:96:VAL:O	64:SP:103:ASN:N	2.33	0.55
65:SQ:72:VAL:HG21	65:SQ:80:GLN:HB2	1.88	0.55
67:SS:85:ASN:OD1	67:SS:97:GLN:HG3	2.07	0.55
72:SX:105:PHE:HE2	72:SX:118:VAL:HG12	1.71	0.55
72:SX:124:LYS:HA	72:SX:129:SER:HA	1.89	0.55
4:L5:364:G:O6	41:Lj:55:ARG:NH1	2.40	0.55
4:L5:488:G:H1	4:L5:665:C:H5	1.55	0.55
4:L5:1269:G:O2'	4:L5:1440:U:O3'	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1732:C:O2'	4:L5:1733:G:H5'	2.06	0.55
4:L5:1820:C:C2'	4:L5:1821:G:H5''	2.36	0.55
4:L5:1846:G:H2'	4:L5:1847:C:C6	2.42	0.55
4:L5:3661:G:N7	7:LA:152:SER:OG	2.35	0.55
4:L5:4238:G:O2'	4:L5:4239:A:H5'	2.07	0.55
4:L5:4938:A:OP1	11:LE:183:ARG:HD2	2.07	0.55
35:Ld:44:ARG:O	35:Ld:48:GLU:HG2	2.06	0.55
39:Lh:51:ARG:O	39:Lh:54:ILE:HG22	2.07	0.55
49:S2:496:C:H4'	54:SE:28:ALA:O	2.06	0.55
49:S2:1539:U:H1'	68:ST:48:TYR:CD2	2.42	0.55
49:S2:1733:U:H2'	49:S2:1734:G:O4'	2.06	0.55
49:S2:1857:G:H5''	63:SO:146:ARG:HH12	1.72	0.55
55:SF:73:THR:HG22	55:SF:93:VAL:CG1	2.32	0.55
55:SF:91:ARG:O	55:SF:94:LYS:HG2	2.07	0.55
58:SI:117:TYR:CE1	58:SI:156:ALA:HB2	2.42	0.55
62:SN:46:THR:O	62:SN:50:ILE:HG13	2.07	0.55
65:SQ:58:LEU:O	65:SQ:62:ARG:NH2	2.40	0.55
75:Sa:44:ILE:HG13	75:Sa:67:LEU:CD2	2.37	0.55
80:Sg:195:LEU:HB2	80:Sg:210:GLY:O	2.06	0.55
4:L5:1439:C:N3	4:L5:2108:G:N1	2.54	0.55
4:L5:2118:G:HO2'	4:L5:2119:C:P	2.30	0.55
4:L5:2481:G:H2'	4:L5:2482:C:H6	1.72	0.55
4:L5:3715:U:H2'	4:L5:3716:C:O4'	2.06	0.55
4:L5:3911:C:H2'	4:L5:3912:U:C6	2.41	0.55
4:L5:4509:U:H2'	4:L5:4511:A:OP2	2.07	0.55
4:L5:4740:G:H3'	4:L5:4741:C:H5''	1.88	0.55
5:L7:29:C:O2'	5:L7:50:A:N1	2.29	0.55
8:LB:165:HIS:HB3	8:LB:180:LEU:CD1	2.37	0.55
12:LF:186:CYS:SG	12:LF:187:MET:N	2.80	0.55
18:LM:24:LEU:HD11	18:LM:86:TRP:CG	2.42	0.55
22:LQ:93:GLN:HG2	22:LQ:94:GLU:CD	2.32	0.55
28:LW:8:PHE:HZ	28:LW:49:ILE:HD12	1.71	0.55
37:Lf:74:VAL:HG13	37:Lf:84:VAL:HB	1.87	0.55
49:S2:1013:U:H1'	49:S2:1104:G:O2'	2.06	0.55
51:SB:37:ALA:HB2	51:SB:232:HIS:O	2.06	0.55
54:SE:185:GLY:N	54:SE:189:LEU:HD13	2.20	0.55
56:SG:189:ARG:HA	56:SG:192:ILE:CD1	2.37	0.55
57:SH:80:VAL:HG23	57:SH:92:VAL:HG23	1.87	0.55
80:Sg:194:TYR:O	80:Sg:212:LYS:N	2.38	0.55
80:Sg:226:HIS:HE2	80:Sg:229:THR:HG1	1.51	0.55
4:L5:678:C:H2'	4:L5:679:C:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1321:G:H2'	4:L5:3876:A:N7	2.22	0.55
4:L5:1342:A:O2'	4:L5:1343:A:H5'	2.07	0.55
4:L5:4701:A:H2'	4:L5:4702:G:H5'	1.90	0.55
7:LA:30:ARG:HB2	7:LA:74:GLU:OE1	2.07	0.55
8:LB:379:PHE:CD2	8:LB:385:LYS:HD2	2.41	0.55
11:LE:51:VAL:HG12	11:LE:54:ILE:HB	1.87	0.55
17:LL:146:LEU:HD12	17:LL:146:LEU:O	2.07	0.55
21:LP:133:HIS:O	21:LP:135:ARG:HG3	2.07	0.55
24:LS:8:ARG:HD2	24:LS:66:GLN:NE2	2.22	0.55
49:S2:414:A:OP1	49:S2:814:U:O2'	2.23	0.55
49:S2:520:A:H5''	59:SJ:12:THR:HG23	1.88	0.55
49:S2:881:G:H2'	49:S2:882:U:C6	2.42	0.55
49:S2:1310:U:H2'	49:S2:1311:C:H6	1.72	0.55
49:S2:1823:A:H5'	49:S2:1824:A:OP2	2.07	0.55
51:SB:65:ARG:O	51:SB:87:ILE:HD12	2.07	0.55
52:SC:152:ARG:O	52:SC:156:ILE:HG12	2.07	0.55
55:SF:185:SER:HA	55:SF:190:ILE:HG23	1.88	0.55
67:SS:45:LEU:CD1	67:SS:50:ILE:HD11	2.37	0.55
74:SZ:58:LEU:O	74:SZ:62:VAL:HB	2.07	0.55
74:SZ:94:LYS:O	74:SZ:96:LEU:HG	2.07	0.55
76:Sb:42:LYS:HE2	76:Sb:57:VAL:HG22	1.89	0.55
80:Sg:71:ILE:HG22	80:Sg:78:ALA:HB2	1.89	0.55
4:L5:1401:C:H2'	4:L5:1402:C:O4'	2.06	0.54
4:L5:1877:G:H2'	4:L5:1878:G:O4'	2.07	0.54
4:L5:2266:C:OP1	4:L5:2271:C:O2'	2.19	0.54
4:L5:2491:C:H3'	4:L5:2492:C:H6	1.72	0.54
4:L5:2862:G:N3	4:L5:3624:A:H2'	2.22	0.54
8:LB:189:THR:HG22	8:LB:192:GLU:CG	2.36	0.54
10:LD:155:THR:OG1	10:LD:179:ARG:NH2	2.38	0.54
29:LX:148:ASP:OD2	29:LX:149:VAL:HG13	2.07	0.54
37:Lf:78:HIS:HB3	37:Lf:83:MET:O	2.07	0.54
48:Lr:28:GLU:HG2	48:Lr:31:ASN:HB2	1.89	0.54
49:S2:72:C:O3'	49:S2:73:C:H2'	2.08	0.54
49:S2:574:A:H4'	73:SY:89:HIS:CB	2.37	0.54
50:SA:12:GLU:O	50:SA:16:LEU:HD23	2.07	0.54
59:SJ:130:ILE:HG22	59:SJ:143:ASN:HA	1.89	0.54
63:SO:100:THR:HG21	63:SO:104:ARG:HE	1.72	0.54
66:SR:102:THR:HA	66:SR:105:MET:HG2	1.89	0.54
67:SS:14:ARG:HA	67:SS:19:ASN:HA	1.89	0.54
80:Sg:296:GLN:O	80:Sg:312:VAL:HG22	2.07	0.54
4:L5:964:A:C8	4:L5:966:A:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1717:C:OP2	12:LF:200:ARG:NH1	2.40	0.54
4:L5:2292:C:H2'	4:L5:2293:U:C6	2.42	0.54
4:L5:3598:C:H2'	4:L5:3599:A:H5'	1.89	0.54
4:L5:4260:U:H2'	4:L5:4261:C:C6	2.42	0.54
4:L5:4303:C:O2'	4:L5:4304:A:H2'	2.06	0.54
4:L5:4507:A:H2'	4:L5:4508:C:C6	2.42	0.54
4:L5:4591:U:H2'	4:L5:4592:C:C6	2.42	0.54
6:L8:123:U:C5	6:L8:124:U:H1'	2.42	0.54
14:LH:177:ASP:O	14:LH:180:TYR:OH	2.13	0.54
21:LP:4:TYR:CZ	21:LP:16:LYS:HD3	2.42	0.54
35:Ld:90:ARG:HD2	35:Ld:102:LEU:HD21	1.88	0.54
49:S2:803:C:H4'	71:SW:80:ASP:OD2	2.07	0.54
49:S2:921:G:C2	76:Sb:22:LYS:HG3	2.42	0.54
49:S2:1204:A:H2'	49:S2:1205:C:O4'	2.08	0.54
49:S2:1536:G:H2'	49:S2:1537:A:C8	2.41	0.54
50:SA:30:LEU:HD11	50:SA:38:ILE:HD13	1.89	0.54
53:SD:23:GLU:HG3	60:SK:64:TRP:HE1	1.71	0.54
53:SD:76:ARG:CB	60:SK:22:VAL:HG11	2.36	0.54
53:SD:109:LEU:HD11	53:SD:115:VAL:HG12	1.88	0.54
54:SE:157:ASN:O	54:SE:175:PHE:HB2	2.07	0.54
57:SH:162:GLN:O	57:SH:166:VAL:HG22	2.07	0.54
65:SQ:58:LEU:HD13	65:SQ:108:ILE:HD11	1.89	0.54
72:SX:54:LYS:CD	72:SX:91:LEU:HD11	2.37	0.54
80:Sg:121:VAL:HG21	80:Sg:165:ILE:CD1	2.37	0.54
80:Sg:188:HIS:HB3	80:Sg:219:TRP:CE3	2.41	0.54
4:L5:1084:C:H2'	4:L5:1085:C:H6	1.72	0.54
4:L5:1337:A:N1	4:L5:1658:G:O2'	2.37	0.54
4:L5:1438:U:C5'	4:L5:1439:C:H5'	2.37	0.54
9:LC:315:LYS:NZ	12:LF:156:LYS:O	2.25	0.54
10:LD:262:LYS:H	10:LD:262:LYS:HD2	1.71	0.54
13:LG:249:ARG:O	13:LG:253:LEU:HD13	2.06	0.54
49:S2:1103:C:C3'	49:S2:1104:G:H5''	2.36	0.54
49:S2:1523:C:H4'	67:SS:145:THR:HB	1.88	0.54
51:SB:38:MET:HE3	51:SB:231:LEU:HD21	1.89	0.54
56:SG:57:ASP:HA	56:SG:106:LEU:HD13	1.88	0.54
68:ST:40:ALA:HB3	68:ST:42:HIS:CE1	2.42	0.54
2:B4:18:G:O6	2:B4:55:U:H1'	2.07	0.54
4:L5:468:U:H3	4:L5:688:U:H3	1.55	0.54
4:L5:1437:C:H5'	4:L5:1438:U:OP2	2.07	0.54
4:L5:1518:A:H61	17:LL:19:GLN:HE22	1.56	0.54
4:L5:1743:A:N1	4:L5:1789:C:O2'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1830:G:O2'	4:L5:1831:G:H5'	2.08	0.54
4:L5:2019:C:H2'	4:L5:2020:U:C5	2.41	0.54
4:L5:4162:C:N3	13:LG:73:ARG:NH1	2.54	0.54
4:L5:4199:C:H2'	4:L5:4200:G:H5'	1.90	0.54
6:L8:83:C:H5''	6:L8:87:G:OP1	2.08	0.54
14:LH:23:ARG:HH21	14:LH:39:ASN:HA	1.71	0.54
31:LZ:41:ALA:HB2	31:LZ:77:TYR:HE1	1.71	0.54
35:Ld:37:GLY:O	35:Ld:41:ARG:HG3	2.07	0.54
49:S2:152:U:C2'	49:S2:153:G:H5'	2.37	0.54
49:S2:690:G:C8	57:SH:182:GLY:HA3	2.43	0.54
49:S2:1395:C:C2'	49:S2:1396:A:H5''	2.36	0.54
57:SH:100:ILE:CD1	57:SH:125:VAL:HG11	2.32	0.54
69:SU:22:ILE:CD1	69:SU:114:VAL:HG12	2.38	0.54
4:L5:1236:C:O2'	4:L5:1237:C:H5'	2.07	0.54
4:L5:1622:U:O2'	4:L5:1627:G:O3'	2.25	0.54
4:L5:1966:C:H2'	4:L5:1967:A:O4'	2.07	0.54
4:L5:3717:A:H2'	4:L5:3718:A:C8	2.42	0.54
4:L5:3877:A:N3	4:L5:4401:G:O2'	2.36	0.54
4:L5:4390:A:OP1	9:LC:69:THR:HG21	2.07	0.54
4:L5:4635:A:H3'	4:L5:4636:U:H4'	1.88	0.54
20:LO:12:ARG:HB2	20:LO:37:ARG:HD3	1.87	0.54
29:LX:92:ASP:N	29:LX:92:ASP:OD1	2.39	0.54
33:Lb:60:ASN:HA	33:Lb:63:LYS:CE	2.37	0.54
49:S2:483:C:H5'	72:SX:48:LYS:HG3	1.90	0.54
49:S2:691:G:H5'	49:S2:692:G:H5''	1.89	0.54
49:S2:1606:G:N2	49:S2:1632:G:H2'	2.23	0.54
54:SE:125:LYS:HA	54:SE:158:ASP:O	2.07	0.54
60:SK:65:ARG:NE	78:Sd:25:SER:OG	2.39	0.54
69:SU:64:THR:HG22	69:SU:77:TRP:CE3	2.42	0.54
70:SV:59:ILE:HD13	70:SV:62:MET:CE	2.36	0.54
72:SX:77:ASN:OD1	72:SX:78:GLY:N	2.40	0.54
80:Sg:10:THR:OG1	80:Sg:307:VAL:O	2.21	0.54
4:L5:1070:G:O2'	4:L5:1071:C:O5'	2.22	0.54
4:L5:2554:U:H5'	4:L5:2555:G:OP1	2.06	0.54
4:L5:3690:U:H2'	4:L5:3691:G:O4'	2.06	0.54
4:L5:4389:C:H2'	4:L5:4390:A:C8	2.43	0.54
4:L5:5021:C:C3'	4:L5:5022:U:H5''	2.38	0.54
8:LB:378:ARG:HG2	28:LW:32:LEU:HD21	1.89	0.54
9:LC:195:LYS:HB3	9:LC:200:ARG:HD2	1.90	0.54
14:LH:140:GLN:HB3	14:LH:143:GLU:HB3	1.89	0.54
18:LM:127:VAL:HG13	20:LO:177:LEU:HD22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:131:GLN:O	18:LM:135:LEU:HD23	2.07	0.54
26:LU:61:VAL:HG12	26:LU:74:SER:CB	2.36	0.54
30:LY:88:GLU:OE2	30:LY:94:THR:HG22	2.08	0.54
31:LZ:92:ASP:CG	31:LZ:94:THR:HG22	2.33	0.54
31:LZ:128:LYS:O	31:LZ:132:GLN:HG2	2.08	0.54
49:S2:483:C:H5''	72:SX:48:LYS:NZ	2.23	0.54
49:S2:696:G:O2'	49:S2:735:C:H5''	2.06	0.54
49:S2:839:C:O2'	49:S2:840:C:O5'	2.25	0.54
49:S2:929:G:H2'	49:S2:930:C:O4'	2.08	0.54
49:S2:1298:G:O2'	49:S2:1299:A:O5'	2.25	0.54
49:S2:1597:C:H4'	49:S2:1603:G:C6	2.43	0.54
51:SB:110:MET:HA	51:SB:113:MET:HE2	1.88	0.54
52:SC:132:ASP:OD1	52:SC:136:HIS:HB2	2.07	0.54
52:SC:169:TYR:OH	52:SC:175:GLY:O	2.21	0.54
56:SG:98:ARG:HD2	56:SG:99:GLY:H	1.72	0.54
61:SL:86:ILE:HD13	61:SL:113:LEU:HD13	1.90	0.54
69:SU:56:MET:CB	69:SU:86:LYS:HD2	2.37	0.54
72:SX:73:GLN:HB2	72:SX:80:LYS:HG2	1.89	0.54
2:B4:56:C:C4	46:Lo:104:ILE:HD13	2.43	0.54
4:L5:298:G:OP1	19:LN:179:LYS:HD2	2.08	0.54
4:L5:462:G:H2'	4:L5:463:A:C8	2.43	0.54
4:L5:683:C:H2'	4:L5:684:G:O4'	2.07	0.54
4:L5:958:G:H21	11:LE:125:LEU:H	1.54	0.54
4:L5:1727:U:H5''	12:LF:131:ASN:HD22	1.72	0.54
4:L5:1779:U:H2'	4:L5:1780:A:C8	2.43	0.54
4:L5:1866:U:H2'	4:L5:1867:A:O4'	2.08	0.54
4:L5:4524:G:OP2	4:L5:4524:G:H4'	2.07	0.54
4:L5:4719:G:O2'	4:L5:4720:C:H5''	2.08	0.54
7:LA:114:CYS:SG	7:LA:165:VAL:HB	2.48	0.54
13:LG:148:GLU:OE2	19:LN:6:TYR:OH	2.14	0.54
14:LH:36:ARG:HB2	14:LH:80:MET:HE1	1.90	0.54
14:LH:106:GLN:HG3	14:LH:113:GLU:OE2	2.07	0.54
31:LZ:28:ASN:O	31:LZ:29:ILE:HD13	2.08	0.54
31:LZ:103:ASP:OD2	31:LZ:106:LEU:HG	2.06	0.54
49:S2:936:G:O4'	62:SN:108:ASP:HB3	2.08	0.54
49:S2:1651:A:H1'	55:SF:83:ASN:ND2	2.23	0.54
50:SA:183:LEU:HB3	50:SA:189:ILE:CG1	2.38	0.54
51:SB:37:ALA:HA	51:SB:42:ARG:HH12	1.73	0.54
52:SC:137:VAL:HG23	52:SC:241:PHE:HE1	1.71	0.54
54:SE:133:THR:O	54:SE:136:ILE:HG12	2.08	0.54
56:SG:7:PHE:HB3	56:SG:12:CYS:CB	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:81:LEU:HB3	59:SJ:86:VAL:CG2	2.38	0.54
60:SK:60:GLU:HB3	60:SK:69:TRP:CD1	2.41	0.54
61:SL:33:LEU:HG	61:SL:34:PRO:HD2	1.89	0.54
77:Sc:13:ARG:HB2	77:Sc:35:MET:SD	2.47	0.54
4:L5:185:C:O2	4:L5:187:U:H1'	2.07	0.54
4:L5:217:C:H3'	4:L5:218:A:H4'	1.89	0.54
4:L5:2905:C:O2'	4:L5:3590:G:O6	2.24	0.54
4:L5:3612:C:O4'	4:L5:5016:A:H1'	2.08	0.54
4:L5:4112:C:H3'	4:L5:4113:U:C6	2.43	0.54
4:L5:4615:C:H5''	8:LB:357:ARG:HE	1.73	0.54
6:L8:84:A:C2	30:LY:113:LYS:HD2	2.42	0.54
8:LB:262:VAL:HG11	8:LB:268:ARG:NH1	2.22	0.54
29:LX:114:LYS:HE2	29:LX:120:ASP:HA	1.90	0.54
33:Lb:8:THR:HG22	33:Lb:10:HIS:N	2.23	0.54
38:Lg:42:PRO:HD2	38:Lg:56:VAL:CG2	2.34	0.54
46:Lo:14:LYS:HD3	46:Lo:77:CYS:SG	2.48	0.54
46:Lo:17:LYS:HD3	46:Lo:19:GLN:NE2	2.23	0.54
49:S2:696:G:N3	49:S2:736:C:N4	2.56	0.54
49:S2:1282:A:C2	49:S2:1287:A:H4'	2.42	0.54
49:S2:1471:C:H2'	49:S2:1472:C:O4'	2.08	0.54
50:SA:198:MET:HG2	50:SA:200:ASP:H	1.73	0.54
51:SB:85:LYS:HB3	51:SB:101:HIS:HB3	1.89	0.54
52:SC:82:TYR:OH	52:SC:162:ILE:HG23	2.08	0.54
54:SE:194:VAL:O	54:SE:210:VAL:HA	2.08	0.54
60:SK:61:GLN:HB2	60:SK:68:TYR:HB2	1.90	0.54
68:ST:28:LEU:CD1	68:ST:106:ALA:HB1	2.38	0.54
4:L5:3612:C:H1'	4:L5:5016:A:H8	1.71	0.54
4:L5:5011:A:H2'	4:L5:5012:G:C8	2.43	0.54
11:LE:242:ILE:HG21	11:LE:247:LYS:HE3	1.90	0.54
12:LF:83:VAL:HG22	24:LS:62:VAL:HA	1.88	0.54
15:LI:187:LYS:HE2	15:LI:187:LYS:HA	1.90	0.54
16:LJ:144:LYS:O	16:LJ:148:THR:HB	2.06	0.54
21:LP:41:ILE:O	21:LP:45:THR:HG23	2.08	0.54
21:LP:106:GLY:O	21:LP:107:LEU:HD23	2.08	0.54
23:LR:12:SER:OG	23:LR:19:LYS:HG2	2.08	0.54
30:LY:34:LEU:HG	30:LY:38:LEU:HD11	1.89	0.54
31:LZ:83:THR:HG22	38:Lg:95:PHE:CZ	2.43	0.54
50:SA:123:VAL:HA	50:SA:145:ILE:O	2.08	0.54
56:SG:181:THR:O	56:SG:185:LEU:HG	2.07	0.54
58:SI:11:ARG:NH1	58:SI:15:GLY:O	2.39	0.54
65:SQ:96:TYR:CA	65:SQ:100:VAL:HG12	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sg:238:ALA:O	80:Sg:250:ALA:HA	2.08	0.54
4:L5:1332:C:H2'	4:L5:1333:A:C8	2.43	0.54
4:L5:1804:A:H5''	4:L5:1806:G:O4'	2.07	0.54
4:L5:4368:G:H21	46:Lo:82:MET:HE1	1.72	0.54
4:L5:4674:C:O2'	8:LB:335:GLY:HA3	2.08	0.54
4:L5:4903:G:H2'	4:L5:4904:G:H8	1.73	0.54
4:L5:4903:G:H2'	4:L5:4904:G:C8	2.43	0.54
6:L8:92:U:H2'	6:L8:93:C:O4'	2.08	0.54
17:LL:63:THR:HG21	32:La:66:ASN:CB	2.38	0.54
31:LZ:7:PRO:HD3	31:LZ:28:ASN:HD22	1.72	0.54
49:S2:162:C:H5''	56:SG:87:ARG:NH2	2.23	0.54
49:S2:384:U:H5'	61:SL:133:PRO:O	2.08	0.54
49:S2:1278:A:H61	49:S2:1319:U:H3	1.55	0.54
49:S2:1783:C:C4'	49:S2:1784:G:H5''	2.37	0.54
51:SB:66:VAL:HG22	51:SB:87:ILE:HD13	1.90	0.54
54:SE:105:THR:HG23	54:SE:245:ARG:HA	1.89	0.54
59:SJ:24:ARG:O	59:SJ:28:GLU:HG2	2.08	0.54
62:SN:69:ASN:HB3	62:SN:74:ILE:HD11	1.90	0.54
64:SP:25:LEU:HA	64:SP:28:MET:CE	2.36	0.54
79:Se:39:ASN:O	79:Se:43:VAL:HG12	2.08	0.54
2:B4:44:G:H2'	2:B4:45:U:O4'	2.07	0.53
4:L5:647:G:H2'	4:L5:648:G:C8	2.43	0.53
4:L5:1698:C:H3'	4:L5:1699:A:C8	2.43	0.53
4:L5:2809:G:O2'	4:L5:4644:G:OP1	2.24	0.53
4:L5:3748:A:O2'	7:LA:223:SER:OG	2.18	0.53
4:L5:4092:G:O2'	4:L5:4093:G:H5'	2.08	0.53
7:LA:31:ALA:HB2	7:LA:123:ARG:NH2	2.23	0.53
11:LE:46:ARG:NH1	11:LE:66:LYS:HA	2.23	0.53
11:LE:277:LEU:HA	11:LE:281:ILE:HD11	1.89	0.53
13:LG:152:ALA:HA	13:LG:205:THR:CG2	2.37	0.53
15:LI:59:GLN:HB2	15:LI:126:VAL:CG1	2.38	0.53
18:LM:133:ALA:O	18:LM:136:LEU:HG	2.07	0.53
23:LR:160:GLU:O	23:LR:164:SER:OG	2.12	0.53
26:LU:35:ASP:OD1	26:LU:38:ASN:HB3	2.08	0.53
34:Lc:50:ASN:OD1	34:Lc:76:GLY:N	2.42	0.53
40:Li:69:ALA:O	40:Li:73:ILE:HG13	2.08	0.53
48:Lr:54:ALA:HB3	48:Lr:57:GLY:O	2.07	0.53
49:S2:697:G:H5'	49:S2:698:G:H2'	1.89	0.53
49:S2:1417:C:H1'	68:ST:2:PRO:HB2	1.90	0.53
50:SA:89:LYS:CD	50:SA:201:LEU:HG	2.37	0.53
59:SJ:35:TYR:CD2	59:SJ:106:LEU:HD23	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SR:9:VAL:HG23	66:SR:50:ILE:HA	1.90	0.53
66:SR:11:LYS:O	66:SR:15:VAL:HG23	2.08	0.53
67:SS:121:ARG:O	67:SS:125:HIS:HB2	2.08	0.53
2:B4:7:A:O2'	2:B4:49:C:OP2	2.22	0.53
4:L5:490:C:H2'	4:L5:491:G:C8	2.43	0.53
4:L5:648:G:C2'	4:L5:649:A:H5'	2.39	0.53
4:L5:2055:G:H4'	4:L5:2056:G:OP2	2.09	0.53
4:L5:3663:A:N6	4:L5:4168:G:O2'	2.41	0.53
4:L5:4093:G:O6	4:L5:4114:C:O2'	2.18	0.53
4:L5:4927:G:O2'	4:L5:4928:C:H5'	2.08	0.53
4:L5:5027:C:H2'	58:SI:77:ARG:NH2	2.23	0.53
12:LF:226:HIS:ND1	12:LF:228:VAL:HG22	2.23	0.53
20:LO:191:LYS:HE2	20:LO:192:TYR:CZ	2.43	0.53
26:LU:42:PHE:CE1	26:LU:46:ARG:HD2	2.43	0.53
31:LZ:99:ASP:HB2	31:LZ:102:ARG:NH2	2.23	0.53
38:Lg:87:VAL:O	38:Lg:91:ILE:HG13	2.08	0.53
49:S2:753:C:N4	49:S2:790:C:H5''	2.22	0.53
49:S2:927:C:O2	76:Sb:51:GLN:NE2	2.41	0.53
49:S2:1218:C:H2'	49:S2:1219:C:H6	1.73	0.53
51:SB:126:ASP:OD1	51:SB:136:ARG:HG2	2.09	0.53
53:SD:35:SER:HB2	53:SD:51:LEU:O	2.09	0.53
53:SD:72:VAL:HG22	60:SK:20:VAL:CB	2.39	0.53
55:SF:100:ILE:HB	55:SF:178:ILE:HD11	1.89	0.53
56:SG:63:MET:HB3	56:SG:98:ARG:HB3	1.90	0.53
74:SZ:88:LEU:O	74:SZ:92:LEU:N	2.41	0.53
80:Sg:6:THR:O	80:Sg:311:GLN:N	2.38	0.53
4:L5:125:C:O2'	4:L5:126:C:H5'	2.08	0.53
4:L5:1438:U:O2'	4:L5:2099:G:H5'	2.09	0.53
4:L5:1591:U:OP2	8:LB:243:LYS:HG2	2.07	0.53
4:L5:1968:G:H1	4:L5:2020:U:H3	1.56	0.53
4:L5:1974:U:H5''	4:L5:1975:G:C5	2.44	0.53
4:L5:2741:U:H2'	7:LA:50:HIS:CD2	2.43	0.53
4:L5:4213:A:H5''	4:L5:4214:A:C5'	2.38	0.53
4:L5:4672:A:OP1	27:LV:15:ARG:NH2	2.36	0.53
9:LC:10:VAL:O	9:LC:18:SER:OG	2.19	0.53
12:LF:116:GLN:NE2	12:LF:212:LYS:HE2	2.23	0.53
16:LJ:35:ARG:HB2	16:LJ:126:TYR:OH	2.09	0.53
18:LM:96:GLU:O	18:LM:100:ARG:NH1	2.42	0.53
23:LR:160:GLU:OE1	23:LR:160:GLU:N	2.41	0.53
38:Lg:8:ARG:HB2	38:Lg:34:TYR:HE1	1.74	0.53
51:SB:35:ALA:HA	51:SB:98:THR:CG2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SE:44:LEU:HD23	54:SE:48:LEU:HD23	1.89	0.53
56:SG:3:LEU:HB3	56:SG:5:ILE:CD1	2.38	0.53
60:SK:57:TYR:O	60:SK:71:LEU:HD12	2.07	0.53
66:SR:61:ILE:HA	66:SR:64:GLY:O	2.08	0.53
4:L5:173:C:OP1	17:LL:129:ARG:NH1	2.33	0.53
4:L5:2062:C:O2'	4:L5:2063:G:H5'	2.08	0.53
4:L5:4091:G:C2'	4:L5:4092:G:H5'	2.39	0.53
4:L5:4311:A:O2'	4:L5:4312:U:H5'	2.09	0.53
4:L5:4371:G:O2'	4:L5:4372:U:OP2	2.24	0.53
4:L5:4881:U:H5'	4:L5:4882:U:OP1	2.09	0.53
4:L5:4927:G:H5'	4:L5:4928:C:C5	2.42	0.53
6:L8:126:C:O2	6:L8:127:U:H1'	2.08	0.53
8:LB:61:ASP:O	8:LB:63:PRO:HD3	2.09	0.53
10:LD:41:LYS:HB2	25:LT:68:THR:O	2.09	0.53
11:LE:161:ARG:NH2	11:LE:273:SER:OG	2.42	0.53
20:LO:110:PRO:HA	20:LO:113:ASP:OD2	2.07	0.53
21:LP:2:VAL:HG22	21:LP:18:ARG:HH12	1.74	0.53
28:LW:101:ARG:O	28:LW:105:ARG:HG3	2.07	0.53
29:LX:82:THR:HA	29:LX:87:MET:HE2	1.90	0.53
49:S2:197:U:H5'	49:S2:198:U:O5'	2.09	0.53
49:S2:1219:C:H4'	77:Sc:24:GLN:OE1	2.08	0.53
49:S2:1566:G:OP2	68:ST:102:ARG:NH1	2.41	0.53
50:SA:42:LYS:HG2	50:SA:48:ILE:HD11	1.91	0.53
54:SE:100:ARG:NH1	54:SE:121:TYR:O	2.41	0.53
64:SP:86:LEU:CD1	64:SP:88:GLU:HB3	2.39	0.53
67:SS:16:LEU:HD23	67:SS:17:ASN:N	2.22	0.53
68:ST:111:LYS:HD2	68:ST:111:LYS:O	2.07	0.53
80:Sg:158:PRO:HG2	80:Sg:204:GLY:HA3	1.89	0.53
4:L5:63:G:OP1	19:LN:169:ARG:NH1	2.41	0.53
4:L5:291:U:H4'	19:LN:182:HIS:NE2	2.24	0.53
4:L5:445:U:H2'	4:L5:446:C:O4'	2.09	0.53
4:L5:1274:A:H1'	4:L5:1275:G:H5'	1.89	0.53
4:L5:1789:C:H2'	4:L5:1790:U:C6	2.43	0.53
4:L5:1820:C:H5'	10:LD:139:PRO:HB3	1.91	0.53
4:L5:2105:A:H3'	4:L5:2106:G:H5''	1.91	0.53
4:L5:2121:C:H2'	4:L5:2122:G:C8	2.44	0.53
4:L5:2496:G:H2'	4:L5:2497:C:C6	2.44	0.53
4:L5:3768:U:O2'	4:L5:3769:C:H5'	2.08	0.53
4:L5:4147:G:H2'	4:L5:4148:C:C6	2.43	0.53
4:L5:4897:G:N2	4:L5:4924:C:H1'	2.24	0.53
4:L5:5057:C:H2'	4:L5:5058:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LH:105:ILE:CD1	14:LH:109:GLY:HA2	2.37	0.53
14:LH:173:ARG:HB3	44:Lm:127:VAL:HG13	1.91	0.53
15:LI:146:GLU:N	15:LI:146:GLU:OE1	2.41	0.53
28:LW:81:ALA:HB1	56:SG:131:ARG:CG	2.39	0.53
30:LY:69:LYS:H	30:LY:83:GLU:HB2	1.73	0.53
48:Lr:47:LYS:O	48:Lr:103:ARG:HD2	2.08	0.53
49:S2:191:A:N6	49:S2:208:G:O2'	2.41	0.53
49:S2:562:U:H2'	49:S2:563:G:C8	2.43	0.53
49:S2:691:G:H3'	49:S2:692:G:C4'	2.38	0.53
53:SD:223:ILE:CG2	80:Sg:189:ILE:HB	2.39	0.53
54:SE:73:ASP:HA	54:SE:164:LEU:HD13	1.89	0.53
64:SP:83:MET:HG3	64:SP:116:LEU:HD13	1.91	0.53
69:SU:87:ARG:O	69:SU:88:LEU:HD12	2.08	0.53
80:Sg:40:ILE:CD1	80:Sg:66:VAL:HG11	2.38	0.53
80:Sg:167:SER:O	80:Sg:174:VAL:HG23	2.09	0.53
4:L5:46:U:OP2	4:L5:47:A:O2'	2.20	0.53
4:L5:990:C:O2'	4:L5:991:C:H5'	2.08	0.53
4:L5:4130:C:H5'	4:L5:4131:G:OP2	2.07	0.53
4:L5:5027:C:H2'	58:SI:77:ARG:HH21	1.74	0.53
10:LD:33:ARG:O	10:LD:37:VAL:HG22	2.08	0.53
19:LN:181:HIS:O	19:LN:184:ILE:HB	2.09	0.53
49:S2:583:C:H2'	49:S2:584:G:H5'	1.91	0.53
49:S2:1232:U:H2'	49:S2:1233:G:H8	1.73	0.53
54:SE:179:ASN:O	54:SE:194:VAL:HA	2.07	0.53
56:SG:2:LYS:HB2	56:SG:108:VAL:HG22	1.91	0.53
59:SJ:38:ARG:HB3	59:SJ:42:GLU:OE2	2.09	0.53
60:SK:49:MET:CG	60:SK:52:LEU:HD12	2.37	0.53
61:SL:68:ILE:HG23	61:SL:130:GLU:H	1.71	0.53
75:Sa:51:ARG:O	75:Sa:54:SER:OG	2.11	0.53
4:L5:418:A:N6	6:L8:16:G:H1'	2.23	0.53
4:L5:702:U:C2'	4:L5:703:G:H5''	2.39	0.53
4:L5:1244:G:N2	4:L5:1267:C:O2	2.40	0.53
4:L5:4739:C:H1'	4:L5:4961:G:N2	2.23	0.53
8:LB:348:ARG:NH1	8:LB:351:LEU:HD23	2.24	0.53
23:LR:84:THR:O	23:LR:88:ARG:HG3	2.08	0.53
29:LX:120:ASP:H	29:LX:144:TYR:HE2	1.56	0.53
29:LX:131:ASP:O	43:Ll:18:LYS:NZ	2.41	0.53
49:S2:753:C:H42	49:S2:790:C:H3'	1.74	0.53
51:SB:186:ASN:HA	51:SB:189:ILE:CD1	2.39	0.53
58:SI:136:ILE:HG22	58:SI:137:LEU:CD1	2.37	0.53
64:SP:18:ARG:HG3	64:SP:36:LEU:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SU:23:THR:O	69:SU:24:LEU:HD23	2.08	0.53
78:Sd:53:ILE:HG23	78:Sd:55:LEU:CD1	2.37	0.53
80:Sg:248:LEU:O	80:Sg:258:ILE:HG23	2.06	0.53
4:L5:170:C:H1'	4:L5:171:U:C5	2.43	0.53
4:L5:954:C:O2'	4:L5:955:G:H5'	2.08	0.53
4:L5:1170:G:C2	4:L5:1192:C:H1'	2.43	0.53
4:L5:1408:G:H5''	4:L5:1409:C:C6	2.44	0.53
4:L5:2467:U:H4'	4:L5:2468:U:H5'	1.90	0.53
4:L5:4251:A:H5''	16:LJ:108:GLY:HA3	1.91	0.53
6:L8:85:U:H2'	6:L8:86:U:H5''	1.90	0.53
7:LA:104:VAL:HG22	7:LA:162:ASN:O	2.09	0.53
14:LH:91:LYS:HD2	14:LH:183:GLU:OE2	2.09	0.53
15:LI:102:MET:O	15:LI:103:LEU:HD22	2.08	0.53
18:LM:126:GLU:HG3	20:LO:185:VAL:CG1	2.39	0.53
30:LY:50:ARG:HB2	30:LY:115:ARG:NH2	2.23	0.53
49:S2:648:A:H4'	72:SX:104:GLY:O	2.09	0.53
49:S2:750:C:N3	49:S2:752:G:N2	2.57	0.53
49:S2:1107:G:H22	49:S2:1125:C:H5	1.55	0.53
49:S2:1741:U:H2'	49:S2:1742:C:O4'	2.08	0.53
57:SH:121:THR:O	57:SH:125:VAL:HG23	2.09	0.53
63:SO:56:VAL:HB	63:SO:81:VAL:HG23	1.91	0.53
63:SO:94:HIS:ND1	63:SO:128:ARG:HB2	2.24	0.53
69:SU:56:MET:HE1	69:SU:88:LEU:HD22	1.89	0.53
70:SV:81:LYS:H	70:SV:81:LYS:HD3	1.72	0.53
80:Sg:199:THR:OG1	80:Sg:239:LEU:HD12	2.09	0.53
4:L5:690:C:H5''	48:Lr:85:ASN:ND2	2.24	0.53
4:L5:1071:C:H4'	4:L5:1072:C:OP1	2.08	0.53
4:L5:1202:C:H3'	4:L5:1203:G:H5''	1.89	0.53
4:L5:2106:G:O2'	4:L5:2108:G:O5'	2.26	0.53
4:L5:2296:G:O4'	9:LC:45:ARG:NH2	2.41	0.53
4:L5:2370:A:N7	35:Ld:39:LYS:NZ	2.52	0.53
4:L5:3923:A:H2'	4:L5:3924:C:C6	2.44	0.53
6:L8:123:U:H2'	6:L8:124:U:H4'	1.91	0.53
8:LB:395:ASP:OD1	8:LB:396:ARG:N	2.41	0.53
13:LG:108:GLN:O	13:LG:112:GLN:N	2.38	0.53
17:LL:145:LYS:NZ	17:LL:146:LEU:HD23	2.24	0.53
27:LV:27:ASN:HB2	27:LV:102:ALA:HB2	1.90	0.53
46:Lo:70:LEU:HD12	46:Lo:70:LEU:O	2.08	0.53
49:S2:822:U:H5''	49:S2:824:C:P	2.49	0.53
49:S2:1248:U:H2'	49:S2:1249:C:C6	2.44	0.53
49:S2:1397:U:O4	65:SQ:12:VAL:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1462:U:O2'	49:S2:1463:U:H5'	2.09	0.53
49:S2:1780:G:H2'	49:S2:1781:A:C4'	2.39	0.53
50:SA:74:VAL:HG12	50:SA:121:LEU:HB3	1.90	0.53
52:SC:62:PRO:HG2	52:SC:68:ARG:HG2	1.91	0.53
57:SH:11:PRO:HD2	57:SH:45:ILE:O	2.09	0.53
57:SH:121:THR:HG23	57:SH:124:ALA:H	1.74	0.53
57:SH:142:LYS:HE3	57:SH:154:ILE:CD1	2.27	0.53
58:SI:107:THR:HB	58:SI:108:PRO:HD3	1.91	0.53
59:SJ:89:GLU:O	59:SJ:92:MET:HG2	2.09	0.53
69:SU:98:VAL:O	69:SU:102:THR:N	2.29	0.53
74:SZ:92:LEU:CA	74:SZ:97:ILE:HD11	2.38	0.53
4:L5:510:U:H3'	4:L5:511:C:H5''	1.91	0.53
4:L5:929:A:H3'	4:L5:930:G:H8	1.74	0.53
4:L5:1389:U:OP1	4:L5:1497:A:O2'	2.13	0.53
4:L5:2891:U:H5''	23:LR:74:ARG:NH1	2.24	0.53
4:L5:4143:G:C4	4:L5:4145:C:H1'	2.44	0.53
6:L8:33:G:H4'	6:L8:34:U:C5	2.44	0.53
6:L8:123:U:H5''	6:L8:124:U:O2	2.09	0.53
8:LB:381:THR:OG1	8:LB:383:GLU:HG3	2.09	0.53
9:LC:7:LEU:HD12	9:LC:23:THR:HG22	1.91	0.53
9:LC:296:PRO:O	9:LC:300:ARG:HG2	2.08	0.53
10:LD:146:LEU:CD1	10:LD:163:LEU:HB2	2.40	0.53
18:LM:24:LEU:O	18:LM:43:THR:HG21	2.08	0.53
19:LN:146:PRO:HB2	39:Lh:104:THR:CG2	2.39	0.53
20:LO:172:LYS:O	20:LO:176:ARG:HG3	2.08	0.53
24:LS:85:ASP:OD1	24:LS:90:THR:HG23	2.08	0.53
48:Lr:7:TRP:O	48:Lr:11:ARG:HB2	2.09	0.53
49:S2:85:A:O2'	49:S2:86:C:O5'	2.26	0.53
49:S2:290:U:H5'	49:S2:291:G:OP2	2.08	0.53
49:S2:482:G:N1	49:S2:485:A:OP2	2.38	0.53
49:S2:538:U:H3'	49:S2:539:C:H4'	1.90	0.53
49:S2:686:U:O2	57:SH:118:ARG:NH2	2.29	0.53
49:S2:866:U:H2'	49:S2:867:G:C8	2.44	0.53
49:S2:969:U:OP1	49:S2:970:G:O2'	2.15	0.53
49:S2:1603:G:O4'	67:SS:38:ARG:NH1	2.41	0.53
50:SA:7:VAL:HG13	50:SA:8:LEU:HG	1.91	0.53
54:SE:47:PHE:HD1	54:SE:48:LEU:HD22	1.74	0.53
60:SK:32:HIS:CD2	60:SK:45:VAL:HG21	2.44	0.53
69:SU:20:ILE:CD1	69:SU:98:VAL:HG11	2.38	0.53
72:SX:100:VAL:HA	72:SX:125:VAL:O	2.09	0.53
76:Sb:37:CYS:HB2	76:Sb:38:PRO:HD2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sc:14:VAL:HG12	77:Sc:15:THR:O	2.09	0.53
4:L5:2537:A:OP1	42:Lk:42:LEU:N	2.39	0.52
4:L5:2739:C:H4'	47:Lp:52:VAL:HG11	1.90	0.52
4:L5:4564:A:O2'	8:LB:261:ARG:HB3	2.09	0.52
4:L5:5018:C:O2'	4:L5:5019:A:H5'	2.09	0.52
13:LG:137:ARG:HG2	13:LG:146:LEU:CD1	2.38	0.52
16:LJ:103:GLY:HA3	16:LJ:157:ILE:HD11	1.91	0.52
31:LZ:12:LEU:HB2	31:LZ:81:MET:HB3	1.90	0.52
36:Le:23:HIS:HA	36:Le:53:ILE:HD12	1.90	0.52
40:Li:54:GLU:O	40:Li:58:MET:HG2	2.09	0.52
49:S2:448:A:N6	58:SI:29:LEU:HD13	2.23	0.52
49:S2:1513:C:H2'	49:S2:1514:G:H8	1.74	0.52
50:SA:10:MET:O	50:SA:11:LYS:HG2	2.08	0.52
50:SA:85:ARG:NE	50:SA:201:LEU:O	2.40	0.52
55:SF:99:ILE:HD13	55:SF:171:GLU:HA	1.91	0.52
63:SO:117:ARG:HG2	75:Sa:49:ALA:HB2	1.91	0.52
72:SX:7:LEU:O	72:SX:7:LEU:HD23	2.09	0.52
76:Sb:37:CYS:SG	76:Sb:40:CYS:HB3	2.49	0.52
76:Sb:42:LYS:CE	76:Sb:57:VAL:HG22	2.39	0.52
79:Se:39:ASN:HA	79:Se:43:VAL:HG12	1.90	0.52
80:Sg:199:THR:OG1	80:Sg:239:LEU:O	2.25	0.52
80:Sg:291:TRP:CZ2	80:Sg:298:LEU:HD13	2.44	0.52
4:L5:645:G:O2'	4:L5:646:G:OP1	2.27	0.52
4:L5:2282:A:H5''	32:La:21:ARG:HD2	1.91	0.52
4:L5:3948:C:H2'	4:L5:3949:A:C5	2.44	0.52
4:L5:4492:U:O2'	4:L5:4512:U:O2	2.24	0.52
4:L5:4668:U:O2'	4:L5:4669:A:H5'	2.09	0.52
4:L5:4954:G:H2'	4:L5:4955:A:C8	2.45	0.52
7:LA:96:LEU:HB2	47:Lp:90:LYS:NZ	2.24	0.52
10:LD:232:THR:HB	10:LD:233:PRO:HD2	1.89	0.52
11:LE:93:THR:CB	11:LE:104:THR:HG22	2.39	0.52
12:LF:226:HIS:HA	12:LF:233:ALA:HB3	1.91	0.52
16:LJ:93:GLU:HA	16:LJ:173:ILE:O	2.09	0.52
34:Lc:20:LEU:HD23	34:Lc:101:ASP:HB3	1.91	0.52
36:Le:38:PRO:HG2	36:Le:46:ARG:HB3	1.90	0.52
40:Li:23:LYS:HG2	40:Li:24:PRO:HD2	1.91	0.52
42:Lk:8:ILE:O	42:Lk:12:LEU:HD23	2.08	0.52
43:Ll:27:ILE:O	43:Ll:30:LYS:HG3	2.10	0.52
49:S2:394:G:H5'	61:SL:81:LYS:HB2	1.90	0.52
49:S2:429:C:O2'	49:S2:811:A:N1	2.33	0.52
49:S2:1623:A:C6	67:SS:132:ARG:HD3	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:58:ARG:O	59:SJ:62:THR:HG23	2.09	0.52
65:SQ:31:LEU:HD21	65:SQ:33:LYS:HB2	1.91	0.52
80:Sg:120:ILE:HG22	80:Sg:132:TRP:CD1	2.43	0.52
80:Sg:234:ASP:OD1	80:Sg:235:ILE:HD12	2.10	0.52
4:L5:192:G:O2'	4:L5:193:G:H5'	2.09	0.52
4:L5:1086:C:O2'	4:L5:1087:A:H5'	2.10	0.52
4:L5:1180:C:OP1	4:L5:1180:C:H4'	2.07	0.52
4:L5:1701:A:H2'	4:L5:1702:C:O4'	2.10	0.52
4:L5:1925:G:H2'	4:L5:1926:C:H6	1.74	0.52
4:L5:4457:U:O2	8:LB:252:ALA:HB3	2.09	0.52
4:L5:4460:U:H2'	4:L5:4461:C:C6	2.45	0.52
9:LC:60:HIS:HA	9:LC:92:PHE:CE1	2.44	0.52
9:LC:303:ARG:HG2	22:LQ:38:ARG:O	2.10	0.52
11:LE:117:PRO:O	48:Lr:112:ARG:HD2	2.09	0.52
14:LH:19:THR:CG2	14:LH:26:ILE:HB	2.39	0.52
20:LO:22:ILE:HD13	20:LO:120:VAL:CG1	2.40	0.52
49:S2:829:C:OP1	54:SE:21:ASP:HB2	2.09	0.52
51:SB:36:PRO:HB2	51:SB:38:MET:HG2	1.91	0.52
53:SD:168:VAL:HA	53:SD:188:ILE:O	2.09	0.52
57:SH:130:LEU:HG	57:SH:177:TYR:CE1	2.45	0.52
57:SH:172:THR:O	57:SH:176:VAL:HG23	2.09	0.52
60:SK:9:ILE:HG22	60:SK:82:TYR:HE2	1.74	0.52
60:SK:25:LYS:HB2	60:SK:67:PHE:CE2	2.44	0.52
61:SL:55:TYR:CD2	61:SL:115:PRO:HG2	2.44	0.52
70:SV:70:LEU:HD21	70:SV:83:PHE:HZ	1.74	0.52
80:Sg:168:CYS:HB3	80:Sg:198:VAL:CG1	2.39	0.52
4:L5:1601:A:OP2	41:Lj:4:GLY:HA3	2.08	0.52
4:L5:1764:G:H1'	4:L5:1767:A:H61	1.74	0.52
4:L5:1821:G:H5'	4:L5:1822:U:O5'	2.09	0.52
4:L5:1872:G:O2'	4:L5:4219:A:N3	2.36	0.52
4:L5:2090:U:OP2	9:LC:307:LYS:NZ	2.25	0.52
4:L5:2465:C:H2'	4:L5:2466:G:O4'	2.09	0.52
4:L5:2763:U:H4'	4:L5:2764:A:O5'	2.10	0.52
4:L5:3948:C:OP2	4:L5:3949:A:N6	2.43	0.52
4:L5:4962:C:H2'	4:L5:4963:G:O4'	2.09	0.52
8:LB:354:GLN:O	8:LB:360:LEU:HD11	2.10	0.52
21:LP:114:ILE:HA	21:LP:150:LEU:CD2	2.39	0.52
24:LS:29:ARG:NH2	25:LT:150:LEU:HB2	2.25	0.52
37:Lf:56:ASN:HA	37:Lf:65:ASN:O	2.09	0.52
46:Lo:68:LEU:HD12	46:Lo:68:LEU:O	2.09	0.52
49:S2:147:A:H61	49:S2:173:A:H61	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:538:U:H1'	49:S2:544:G:O6	2.10	0.52
49:S2:1106:C:H5''	76:Sb:70:LYS:HZ2	1.75	0.52
49:S2:1672:U:O3'	65:SQ:76:GLY:HA3	2.09	0.52
60:SK:24:LYS:HB2	60:SK:66:HIS:CD2	2.44	0.52
67:SS:54:LYS:CE	67:SS:59:LEU:HB3	2.40	0.52
73:SY:55:ILE:HA	73:SY:74:MET:O	2.09	0.52
4:L5:461:G:H3'	4:L5:462:G:H8	1.74	0.52
4:L5:1268:G:H5''	4:L5:1269:G:OP2	2.09	0.52
4:L5:1445:U:H2'	4:L5:1446:C:H6	1.75	0.52
4:L5:1676:C:O2'	4:L5:3914:U:N3	2.42	0.52
4:L5:2072:C:OP1	22:LQ:2:GLY:N	2.43	0.52
4:L5:2542:G:H2'	4:L5:2543:A:C8	2.44	0.52
7:LA:205:ASN:HB3	7:LA:206:PRO:HD2	1.92	0.52
10:LD:21:ARG:O	10:LD:25:GLU:HG3	2.10	0.52
13:LG:81:ASN:OD1	13:LG:238:GLY:HA3	2.09	0.52
15:LI:53:VAL:HG11	25:LT:158:PHE:CZ	2.45	0.52
18:LM:8:GLU:H	18:LM:11:ARG:HG3	1.75	0.52
20:LO:36:VAL:CG2	20:LO:108:ILE:HA	2.39	0.52
30:LY:31:SER:HA	30:LY:48:PRO:HA	1.91	0.52
37:Lf:106:TYR:HB2	37:Lf:107:PRO:HD3	1.90	0.52
49:S2:363:A:N6	49:S2:400:C:H1'	2.24	0.52
49:S2:520:A:O2'	49:S2:825:A:N3	2.35	0.52
49:S2:649:U:H5''	72:SX:108:LYS:HG3	1.91	0.52
53:SD:127:MET:HE1	53:SD:133:GLY:CA	2.40	0.52
59:SJ:39:ASN:OD1	59:SJ:42:GLU:HG3	2.08	0.52
64:SP:30:TYR:O	64:SP:34:MET:HG3	2.09	0.52
64:SP:77:LYS:HB3	64:SP:102:PHE:CD1	2.45	0.52
72:SX:87:ASN:HB3	72:SX:134:TYR:CE1	2.44	0.52
73:SY:27:VAL:O	73:SY:69:THR:HG22	2.09	0.52
1:A4:44:U:HO2'	1:A4:45:U:P	2.32	0.52
4:L5:137:G:H2'	4:L5:138:G:H8	1.75	0.52
4:L5:1369:C:OP2	4:L5:1370:G:O2'	2.25	0.52
4:L5:1706:A:N6	4:L5:2118:G:O4'	2.43	0.52
4:L5:1763:C:H3'	4:L5:1764:G:H8	1.70	0.52
4:L5:1817:U:C2'	4:L5:1818:G:H5'	2.39	0.52
4:L5:2296:G:O2'	9:LC:242:PRO:O	2.21	0.52
4:L5:4108:G:H2'	4:L5:4109:G:H8	1.74	0.52
4:L5:4346:U:O2'	46:Lo:80:LYS:O	2.23	0.52
4:L5:4763:U:H1'	24:LS:174:THR:CG2	2.39	0.52
4:L5:4980:C:N3	21:LP:69:ARG:NH2	2.47	0.52
4:L5:5021:C:H3'	4:L5:5022:U:H5''	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LB:378:ARG:CG	28:LW:32:LEU:HD21	2.40	0.52
9:LC:168:VAL:HG13	9:LC:177:TRP:CZ3	2.45	0.52
17:LL:126:LEU:HG	39:Lh:117:ARG:HH21	1.75	0.52
19:LN:200:LEU:HD22	19:LN:204:ARG:NH1	2.24	0.52
23:LR:154:LEU:O	23:LR:158:GLN:HG3	2.09	0.52
32:La:131:ARG:NH2	32:La:135:GLU:OE2	2.43	0.52
40:Li:43:MET:O	40:Li:46:GLU:HG2	2.10	0.52
49:S2:302:A:O5'	58:SI:74:ARG:NH1	2.42	0.52
49:S2:1152:U:H2'	71:SW:12:LYS:NZ	2.25	0.52
49:S2:1753:C:H4'	49:S2:1780:G:N1	2.17	0.52
49:S2:1861:G:H3'	49:S2:1861:G:OP2	2.09	0.52
53:SD:72:VAL:HG21	60:SK:70:TYR:CE1	2.38	0.52
56:SG:176:ILE:HB	56:SG:179:LEU:CD2	2.39	0.52
62:SN:3:ARG:HH11	62:SN:3:ARG:H	1.55	0.52
63:SO:44:VAL:HG11	63:SO:85:CYS:SG	2.49	0.52
68:ST:42:HIS:HA	68:ST:83:GLN:CG	2.39	0.52
70:SV:37:ALA:HB1	70:SV:46:PHE:CE1	2.45	0.52
80:Sg:257:LYS:C	80:Sg:258:ILE:HD13	2.35	0.52
4:L5:1380:G:H4'	4:L5:1381:U:H6	1.74	0.52
4:L5:2741:U:H2'	7:LA:50:HIS:HD2	1.75	0.52
4:L5:4882:U:O2'	4:L5:4883:C:H4'	2.09	0.52
7:LA:196:TRP:HB3	7:LA:197:PRO:HD3	1.91	0.52
9:LC:116:ASN:HB2	9:LC:119:GLN:HG2	1.91	0.52
17:LL:107:THR:HB	40:Li:18:THR:HG23	1.90	0.52
22:LQ:67:ILE:CD1	22:LQ:98:LEU:HD11	2.39	0.52
22:LQ:151:HIS:ND1	22:LQ:164:LYS:O	2.43	0.52
34:Lc:35:LEU:HD21	34:Lc:60:ILE:HD13	1.92	0.52
36:Le:114:ARG:CZ	36:Le:118:LEU:HD11	2.40	0.52
49:S2:120:U:H1'	54:SE:33:THR:O	2.08	0.52
49:S2:1037:G:H4'	49:S2:1845:A:H4'	1.91	0.52
49:S2:1414:A:O3'	68:ST:125:PRO:HB3	2.09	0.52
49:S2:1539:U:H1'	68:ST:48:TYR:CE2	2.45	0.52
50:SA:99:ILE:HD11	50:SA:117:ARG:HH22	1.73	0.52
54:SE:154:ILE:HG12	54:SE:172:PHE:CD2	2.45	0.52
55:SF:34:SER:HA	77:Sc:55:VAL:CB	2.40	0.52
59:SJ:86:VAL:HG23	59:SJ:87:LEU:CD2	2.40	0.52
61:SL:86:ILE:HD13	61:SL:113:LEU:CD1	2.39	0.52
67:SS:41:ALA:O	67:SS:45:LEU:HD23	2.09	0.52
68:ST:69:GLY:O	68:ST:120:GLY:HA3	2.09	0.52
69:SU:64:THR:HA	69:SU:78:ASP:O	2.10	0.52
4:L5:62:A:N3	4:L5:77:U:O2'	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1463:C:O2'	4:L5:1464:C:H5'	2.10	0.52
4:L5:2560:C:H2'	4:L5:2561:C:C6	2.44	0.52
4:L5:2561:C:H3'	4:L5:2562:G:H8	1.74	0.52
4:L5:2669:C:H2'	4:L5:2670:C:O4'	2.09	0.52
4:L5:4380:A:OP1	46:Lo:58:LYS:HE3	2.10	0.52
4:L5:4988:U:O2'	4:L5:5061:A:N6	2.41	0.52
13:LG:243:GLY:O	13:LG:247:VAL:HG13	2.08	0.52
15:LI:189:CYS:O	15:LI:190:LEU:HD23	2.10	0.52
20:LO:89:PRO:O	20:LO:95:GLY:HA3	2.10	0.52
26:LU:26:THR:HG22	26:LU:68:SER:CB	2.34	0.52
44:Lm:80:PRO:O	44:Lm:84:GLN:HG2	2.09	0.52
45:Ln:10:MET:O	45:Ln:14:LYS:HG3	2.10	0.52
46:Lo:51:GLN:HG2	46:Lo:55:ILE:HD11	1.91	0.52
49:S2:77:A:O2'	56:SG:174:PRO:O	2.21	0.52
49:S2:868:G:H3'	49:S2:869:A:C5'	2.40	0.52
49:S2:1607:A:N6	49:S2:1632:G:H1'	2.24	0.52
50:SA:77:ILE:HG21	50:SA:133:PRO:HG3	1.92	0.52
51:SB:143:THR:HB	51:SB:205:TYR:CE2	2.45	0.52
59:SJ:111:GLN:CD	59:SJ:127:ARG:HB2	2.34	0.52
72:SX:115:ILE:HG21	72:SX:118:VAL:HB	1.91	0.52
80:Sg:88:ARG:HA	80:Sg:100:ARG:HA	1.91	0.52
4:L5:960:A:C8	11:LE:126:LEU:HD12	2.44	0.52
4:L5:1084:C:H2'	4:L5:1085:C:C6	2.43	0.52
4:L5:1475:G:H2'	4:L5:1476:C:C6	2.45	0.52
4:L5:1686:C:O2'	33:Lb:18:ARG:NH2	2.43	0.52
4:L5:2583:C:OP2	38:Lg:76:ARG:NH2	2.36	0.52
4:L5:4138:C:O2	4:L5:4147:G:N1	2.43	0.52
4:L5:4592:C:O2'	4:L5:4593:C:H5'	2.09	0.52
6:L8:12:G:O4'	21:LP:5:SER:HB2	2.10	0.52
6:L8:123:U:H3'	6:L8:124:U:O4'	2.10	0.52
9:LC:110:ARG:O	9:LC:112:HIS:N	2.43	0.52
10:LD:111:ASN:HD22	10:LD:251:PRO:HG2	1.75	0.52
12:LF:238:ASP:OD1	12:LF:239:GLN:NE2	2.42	0.52
15:LI:190:LEU:HB3	15:LI:197:VAL:CG2	2.37	0.52
16:LJ:56:THR:CG2	16:LJ:63:ARG:HA	2.35	0.52
20:LO:140:ARG:O	20:LO:144:GLU:HG2	2.09	0.52
25:LT:112:ASN:OD1	25:LT:128:LEU:HD22	2.10	0.52
31:LZ:33:THR:HG21	31:LZ:98:LYS:HZ2	1.74	0.52
35:Ld:24:GLU:O	35:Ld:85:ARG:NE	2.42	0.52
35:Ld:50:ARG:HD2	35:Ld:62:VAL:CG2	2.39	0.52
39:Lh:53:SER:HA	39:Lh:56:ARG:HH21	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:835:C:H2'	49:S2:837:A:O4'	2.10	0.52
49:S2:1043:G:H2'	49:S2:1044:G:O4'	2.10	0.52
49:S2:1447:G:H1'	69:SU:55:ARG:HH22	1.73	0.52
49:S2:1563:G:H5'	68:ST:121:ARG:HH22	1.75	0.52
49:S2:1628:C:H2'	49:S2:1629:C:C6	2.45	0.52
49:S2:1710:C:O2'	49:S2:1711:U:H5'	2.10	0.52
50:SA:193:HIS:HB2	50:SA:194:PRO:HD2	1.91	0.52
53:SD:120:TYR:HA	53:SD:123:LEU:HD21	1.92	0.52
53:SD:135:GLU:O	53:SD:137:VAL:HG23	2.09	0.52
54:SE:64:ILE:HG22	54:SE:70:ILE:HD11	1.92	0.52
58:SI:141:ARG:O	58:SI:145:ILE:N	2.43	0.52
59:SJ:78:LEU:HD21	59:SJ:94:LEU:CA	2.39	0.52
67:SS:12:ILE:HD12	67:SS:19:ASN:ND2	2.19	0.52
71:SW:39:THR:O	71:SW:43:LYS:HG2	2.09	0.52
72:SX:9:THR:OG1	72:SX:10:ALA:N	2.36	0.52
74:SZ:64:ASN:O	74:SZ:111:ARG:NE	2.33	0.52
74:SZ:92:LEU:HD12	74:SZ:109:TYR:CE1	2.44	0.52
4:L5:1202:C:N3	4:L5:1203:G:O2'	2.35	0.52
4:L5:2022:C:H5'	4:L5:2023:C:OP2	2.09	0.52
4:L5:2752:G:H2'	4:L5:2753:G:O4'	2.10	0.52
4:L5:3784:A:O2'	4:L5:3786:U:OP2	2.21	0.52
4:L5:4336:A:H5''	4:L5:4337:C:H5'	1.91	0.52
4:L5:4572:U:H3'	4:L5:4573:G:H5''	1.92	0.52
4:L5:4646:U:OP1	23:LR:59:SER:N	2.36	0.52
9:LC:171:LEU:HD11	9:LC:227:ILE:HD11	1.92	0.52
10:LD:108:ARG:CA	10:LD:251:PRO:HB2	2.40	0.52
11:LE:144:ILE:HG12	11:LE:196:ALA:HB2	1.92	0.52
14:LH:5:LEU:HD12	14:LH:6:SER:H	1.75	0.52
16:LJ:39:VAL:HG13	16:LJ:40:LEU:HD23	1.90	0.52
27:LV:106:VAL:HG23	27:LV:111:GLU:O	2.10	0.52
49:S2:738:C:N3	49:S2:739:C:N4	2.49	0.52
49:S2:955:A:N1	49:S2:968:U:O2'	2.41	0.52
49:S2:1033:G:N1	49:S2:1080:A:O2'	2.39	0.52
49:S2:1208:A:O2'	49:S2:1209:A:H5'	2.10	0.52
49:S2:1446:A:OP1	69:SU:58:THR:HG22	2.10	0.52
49:S2:1560:U:O2'	49:S2:1583:C:O2'	2.13	0.52
49:S2:1567:G:H2'	49:S2:1568:C:H5'	1.91	0.52
50:SA:89:LYS:HZ1	66:SR:82:ASP:HA	1.75	0.52
57:SH:45:ILE:CD1	57:SH:62:ILE:HB	2.40	0.52
72:SX:108:LYS:H	72:SX:108:LYS:HD3	1.75	0.52
79:Se:11:LYS:HD3	79:Se:15:GLN:NE2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Sg:198:VAL:HG12	80:Sg:209:SER:CB	2.40	0.52
4:L5:1170:G:N2	4:L5:1192:C:H1'	2.24	0.51
4:L5:1786:A:H2'	4:L5:1789:C:C5	2.44	0.51
4:L5:2541:G:O2'	4:L5:2542:G:H5'	2.10	0.51
4:L5:4901:G:OP1	4:L5:4901:G:H3'	2.10	0.51
5:L7:28:C:H2'	5:L7:29:C:H5'	1.91	0.51
7:LA:196:TRP:O	7:LA:198:ARG:N	2.44	0.51
14:LH:95:VAL:HG22	44:Lm:82:LEU:HD11	1.92	0.51
24:LS:15:ARG:HB3	24:LS:27:LEU:HD23	1.92	0.51
26:LU:107:LYS:O	26:LU:108:GLU:HG3	2.10	0.51
41:Lj:20:ARG:NH1	41:Lj:39:TYR:OH	2.43	0.51
49:S2:464:A:H5''	49:S2:465:A:OP2	2.10	0.51
49:S2:580:U:H3'	49:S2:581:U:H5''	1.92	0.51
49:S2:649:U:C5'	72:SX:108:LYS:HG3	2.40	0.51
49:S2:860:G:H2'	71:SW:107:SER:OG	2.09	0.51
50:SA:137:ALA:HA	50:SA:142:LEU:HD12	1.92	0.51
55:SF:158:ALA:N	55:SF:176:GLU:OE1	2.43	0.51
59:SJ:111:GLN:HE21	59:SJ:123:ILE:HG12	1.75	0.51
60:SK:52:LEU:HD23	60:SK:55:ARG:HH11	1.75	0.51
61:SL:35:ARG:NE	61:SL:53:GLY:O	2.43	0.51
68:ST:74:SER:O	68:ST:78:ILE:HG13	2.10	0.51
68:ST:131:LEU:HA	68:ST:134:ILE:HG22	1.92	0.51
75:Sa:44:ILE:HD13	75:Sa:65:PRO:HG2	1.92	0.51
76:Sb:80:ARG:HA	76:Sb:80:ARG:NH1	2.24	0.51
77:Sc:20:ARG:HD2	77:Sc:28:THR:OG1	2.09	0.51
4:L5:75:G:H3'	17:LL:74:ARG:HD2	1.92	0.51
4:L5:216:C:H2'	4:L5:217:C:H4'	1.91	0.51
4:L5:965:G:H2'	4:L5:2092:G:N2	2.25	0.51
4:L5:1335:G:N2	9:LC:95:MET:O	2.23	0.51
4:L5:1439:C:H42	4:L5:2108:G:H22	1.57	0.51
4:L5:1503:A:H4'	4:L5:1504:G:H5'	1.91	0.51
4:L5:3635:A:H2'	4:L5:3636:C:H5'	1.91	0.51
4:L5:4128:A:H2	4:L5:4156:G:H21	1.55	0.51
4:L5:4258:C:H2'	4:L5:4259:C:C6	2.46	0.51
7:LA:180:LEU:HD22	47:Lp:18:TYR:HB3	1.91	0.51
8:LB:56:ILE:CD1	8:LB:365:LEU:HD22	2.40	0.51
11:LE:155:GLY:O	11:LE:158:ARG:HG3	2.09	0.51
14:LH:111:LEU:HD22	14:LH:127:ARG:HH21	1.76	0.51
31:LZ:7:PRO:HD3	31:LZ:28:ASN:ND2	2.26	0.51
47:Lp:13:LYS:HE3	47:Lp:14:TYR:CZ	2.46	0.51
49:S2:49:C:N4	49:S2:473:A:OP2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:167:G:C3'	49:S2:168:C:H5''	2.36	0.51
49:S2:752:G:H5''	49:S2:793:G:O2'	2.10	0.51
49:S2:933:G:H1'	49:S2:1001:A:O4'	2.10	0.51
49:S2:958:G:H2'	49:S2:959:G:C8	2.45	0.51
49:S2:1183:A:O2'	49:S2:1184:G:H5'	2.10	0.51
49:S2:1629:C:H2'	49:S2:1630:A:O4'	2.10	0.51
54:SE:180:LEU:HD11	54:SE:228:ILE:HB	1.92	0.51
55:SF:77:MET:HE1	55:SF:86:LYS:HB2	1.91	0.51
55:SF:163:PHE:CD2	55:SF:164:ARG:HG3	2.45	0.51
60:SK:51:SER:O	60:SK:55:ARG:NE	2.43	0.51
4:L5:1707:C:H5	4:L5:2119:C:H2'	1.76	0.51
4:L5:2714:G:O2'	4:L5:2715:G:H5'	2.10	0.51
4:L5:3619:G:O2'	23:LR:82:LYS:NZ	2.27	0.51
4:L5:3657:U:H4'	7:LA:244:GLY:O	2.11	0.51
4:L5:4108:G:H2'	4:L5:4109:G:C8	2.45	0.51
16:LJ:57:VAL:HG23	16:LJ:59:SER:O	2.10	0.51
18:LM:39:ASP:HB2	18:LM:47:ARG:HD2	1.91	0.51
20:LO:51:LYS:O	20:LO:55:LEU:HG	2.10	0.51
23:LR:3:MET:O	23:LR:4:LEU:HD23	2.10	0.51
49:S2:536:A:H5''	49:S2:537:C:H5''	1.91	0.51
49:S2:541:U:O2'	49:S2:542:U:H5'	2.10	0.51
49:S2:1088:U:H4'	49:S2:1089:G:OP2	2.11	0.51
50:SA:20:ALA:HB2	66:SR:96:ILE:HD11	1.92	0.51
50:SA:76:VAL:HG12	50:SA:123:VAL:HG22	1.90	0.51
51:SB:33:VAL:HG22	51:SB:96:CYS:SG	2.51	0.51
64:SP:43:ARG:O	64:SP:47:ARG:HG2	2.09	0.51
70:SV:59:ILE:HD13	70:SV:62:MET:HE3	1.92	0.51
80:Sg:5:MET:HE2	80:Sg:312:VAL:CG1	2.40	0.51
80:Sg:27:PHE:HB2	80:Sg:30:MET:HE3	1.90	0.51
80:Sg:29:ASP:O	80:Sg:45:LEU:HG	2.10	0.51
4:L5:517:C:H41	4:L5:646:G:H4'	1.75	0.51
4:L5:967:C:H4'	4:L5:969:C:OP2	2.10	0.51
4:L5:2808:G:O3'	23:LR:60:ARG:NH1	2.40	0.51
4:L5:2809:G:H5''	23:LR:63:CYS:SG	2.51	0.51
4:L5:4142:C:H3'	4:L5:4143:G:C4	2.46	0.51
4:L5:4411:G:O2'	4:L5:4412:C:H5'	2.10	0.51
4:L5:4492:U:OP2	8:LB:7:SER:OG	2.29	0.51
4:L5:4881:U:O4	18:LM:113:MET:HG3	2.11	0.51
7:LA:29:LEU:O	7:LA:123:ARG:HD2	2.11	0.51
11:LE:46:ARG:C	11:LE:62:MET:HE1	2.35	0.51
20:LO:74:ARG:HD3	20:LO:146:GLY:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:LR:101:ILE:HD13	23:LR:104:ARG:NH2	2.25	0.51
33:Lb:5:LYS:HE2	33:Lb:8:THR:OG1	2.11	0.51
37:Lf:15:LYS:HG3	37:Lf:22:ARG:HB2	1.93	0.51
49:S2:500:A:H5'	49:S2:501:C:H5	1.74	0.51
49:S2:798:A:H5'	49:S2:799:U:C5'	2.39	0.51
53:SD:7:LYS:HE2	53:SD:7:LYS:HA	1.92	0.51
54:SE:102:ILE:HG22	54:SE:103:TYR:O	2.10	0.51
57:SH:62:ILE:HD11	57:SH:94:PHE:CD2	2.44	0.51
64:SP:86:LEU:H	64:SP:89:MET:HE2	1.74	0.51
67:SS:6:PRO:HB2	67:SS:9:PHE:HB2	1.91	0.51
69:SU:61:LEU:HD22	78:Sd:34:TYR:CZ	2.46	0.51
4:L5:493:G:H3'	4:L5:494:U:H5	1.75	0.51
4:L5:2631:U:H5''	4:L5:2632:U:H5'	1.92	0.51
4:L5:2904:U:H3'	4:L5:2904:U:OP2	2.11	0.51
4:L5:2905:C:H2'	4:L5:3589:G:H22	1.75	0.51
4:L5:4098:A:C5	4:L5:4099:G:H1'	2.45	0.51
4:L5:4691:A:H5'	14:LH:71:ARG:NH1	2.25	0.51
4:L5:4990:C:OP2	4:L5:4991:U:H1'	2.11	0.51
18:LM:39:ASP:HB2	18:LM:47:ARG:CD	2.41	0.51
20:LO:7:LEU:HB2	20:LO:31:ARG:HH11	1.75	0.51
21:LP:41:ILE:CD1	21:LP:95:LEU:HD22	2.41	0.51
49:S2:59:U:H5''	49:S2:503:C:N4	2.26	0.51
49:S2:103:A:H4'	49:S2:104:A:C5'	2.40	0.51
49:S2:439:A:O2'	49:S2:440:G:H5'	2.11	0.51
49:S2:538:U:C2	49:S2:540:U:H5'	2.45	0.51
49:S2:1236:G:H4'	64:SP:135:ALA:HB2	1.92	0.51
49:S2:1758:G:H5'	49:S2:1759:G:OP2	2.11	0.51
52:SC:137:VAL:O	52:SC:162:ILE:HA	2.10	0.51
54:SE:105:THR:CG2	54:SE:245:ARG:HA	2.40	0.51
66:SR:27:ASP:OD1	66:SR:30:THR:HG22	2.10	0.51
78:Sd:31:ILE:HG22	78:Sd:38:MET:O	2.10	0.51
4:L5:173:C:O2'	4:L5:174:C:H5'	2.11	0.51
4:L5:407:A:O2'	4:L5:410:A:OP1	2.21	0.51
4:L5:650:C:O2'	4:L5:651:C:H5'	2.10	0.51
4:L5:921:C:H2'	4:L5:922:C:C6	2.46	0.51
4:L5:2745:A:H2'	4:L5:2746:A:C8	2.45	0.51
4:L5:3835:C:H2'	4:L5:3836:A:O4'	2.11	0.51
7:LA:45:VAL:HG23	7:LA:86:GLN:O	2.10	0.51
9:LC:330:PRO:HG3	12:LF:47:ARG:NH2	2.26	0.51
11:LE:51:VAL:CG1	11:LE:54:ILE:HB	2.40	0.51
14:LH:93:ARG:HG3	14:LH:182:SER:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:LO:51:LYS:HZ3	20:LO:144:GLU:HB3	1.76	0.51
20:LO:125:LYS:HE3	20:LO:135:PHE:CD1	2.45	0.51
26:LU:25:CYS:O	26:LU:29:VAL:HG13	2.11	0.51
30:LY:56:GLN:HB2	30:LY:67:ILE:CD1	2.41	0.51
31:LZ:99:ASP:HB2	31:LZ:102:ARG:HH22	1.76	0.51
49:S2:642:U:OP1	59:SJ:39:ASN:HB2	2.11	0.51
49:S2:1387:G:H2'	49:S2:1388:A:O4'	2.11	0.51
49:S2:1595:U:OP2	74:SZ:102:LYS:HE2	2.10	0.51
49:S2:1615:U:H2'	49:S2:1616:U:C6	2.45	0.51
50:SA:128:ARG:NH2	50:SA:153:PRO:HD3	2.25	0.51
53:SD:58:VAL:O	53:SD:65:ARG:HB3	2.11	0.51
80:Sg:40:ILE:HD11	80:Sg:66:VAL:HG11	1.91	0.51
4:L5:132:G:H3'	4:L5:133:C:H5''	1.92	0.51
4:L5:266:C:OP1	4:L5:266:C:H3'	2.10	0.51
4:L5:1920:C:O2'	4:L5:1922:G:H5''	2.11	0.51
4:L5:1941:A:C2	4:L5:4434:C:H5'	2.45	0.51
4:L5:2484:A:H5'	4:L5:2485:U:OP2	2.10	0.51
4:L5:3599:A:H2'	4:L5:3600:G:C8	2.46	0.51
4:L5:5011:A:H62	4:L5:5037:U:H3	1.57	0.51
6:L8:123:U:C4	6:L8:124:U:H1'	2.45	0.51
8:LB:234:ARG:NE	8:LB:271:GLN:O	2.43	0.51
10:LD:195:HIS:O	10:LD:199:ILE:HG13	2.11	0.51
15:LI:93:PRO:HB2	15:LI:125:THR:CG2	2.34	0.51
16:LJ:100:SER:HB3	16:LJ:104:ASN:H	1.74	0.51
34:Lc:81:LEU:HD21	34:Lc:94:LEU:HD22	1.92	0.51
48:Lr:63:VAL:HG12	48:Lr:79:ARG:HG2	1.92	0.51
49:S2:65:C:OP1	56:SG:136:LYS:NZ	2.43	0.51
49:S2:617:G:C4'	72:SX:88:ASP:HB3	2.38	0.51
49:S2:1192:U:P	72:SX:119:ARG:HH12	2.34	0.51
49:S2:1587:G:N1	68:ST:78:ILE:HD11	2.25	0.51
53:SD:122:VAL:O	53:SD:126:ILE:HG13	2.11	0.51
55:SF:78:MET:HB2	55:SF:159:ARG:CZ	2.40	0.51
55:SF:79:HIS:O	55:SF:81:ARG:N	2.44	0.51
56:SG:32:MET:O	56:SG:34:THR:N	2.44	0.51
59:SJ:119:LEU:HD22	59:SJ:159:PHE:CE1	2.46	0.51
4:L5:68:U:H2'	4:L5:69:A:O4'	2.11	0.51
4:L5:319:A:H5'	4:L5:3727:A:O2'	2.11	0.51
4:L5:1100:U:H1'	4:L5:1195:G:H22	1.75	0.51
4:L5:1359:G:H4'	19:LN:203:TYR:HB2	1.92	0.51
4:L5:2319:C:O2'	36:Le:56:PRO:HB3	2.10	0.51
4:L5:2882:A:H2'	4:L5:2883:G:H5'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3707:U:H2'	4:L5:3708:C:C6	2.46	0.51
4:L5:4095:G:H2'	4:L5:4096:C:C6	2.45	0.51
4:L5:4860:G:H5'	20:LO:169:ARG:CZ	2.41	0.51
13:LG:215:LEU:O	13:LG:219:VAL:HG23	2.11	0.51
15:LI:53:VAL:HG11	25:LT:158:PHE:CE2	2.45	0.51
16:LJ:52:LYS:HB3	16:LJ:65:ASN:HA	1.92	0.51
17:LL:111:GLN:O	17:LL:115:GLN:HG2	2.11	0.51
18:LM:100:ARG:HD3	20:LO:198:THR:O	2.10	0.51
26:LU:88:LYS:HG3	26:LU:102:VAL:HG11	1.93	0.51
36:Le:108:ARG:O	36:Le:112:VAL:HG23	2.11	0.51
41:Lj:19:CYS:SG	41:Lj:34:CYS:HB2	2.49	0.51
49:S2:12:U:H2'	49:S2:13:C:C6	2.45	0.51
49:S2:353:C:H1'	61:SL:71:ARG:NH1	2.26	0.51
49:S2:494:C:H5''	54:SE:57:THR:HG21	1.91	0.51
49:S2:692:G:H4'	49:S2:692:G:OP1	2.10	0.51
49:S2:1473:G:O2'	49:S2:1475:G:N2	2.44	0.51
49:S2:1674:G:OP1	55:SF:51:HIS:NE2	2.42	0.51
51:SB:172:MET:HA	51:SB:193:ILE:HD11	1.93	0.51
51:SB:185:VAL:O	51:SB:189:ILE:HD12	2.10	0.51
56:SG:33:ALA:HA	56:SG:52:ILE:HG22	1.92	0.51
57:SH:139:ILE:HD13	57:SH:158:LEU:HD23	1.92	0.51
62:SN:59:GLY:HA3	76:Sb:45:THR:CG2	2.41	0.51
62:SN:78:LYS:CB	62:SN:80:LEU:HD13	2.40	0.51
66:SR:61:ILE:HG22	66:SR:66:VAL:HG12	1.92	0.51
73:SY:11:LYS:HB2	73:SY:24:VAL:HG22	1.93	0.51
76:Sb:63:LEU:O	76:Sb:74:THR:HG23	2.10	0.51
80:Sg:54:ILE:HG23	80:Sg:55:PRO:HD2	1.93	0.51
4:L5:494:U:H1'	4:L5:660:A:C2	2.46	0.51
4:L5:518:G:N1	4:L5:643:C:H2'	2.26	0.51
4:L5:987:C:H2'	4:L5:988:C:C6	2.46	0.51
4:L5:1959:U:H4'	4:L5:1961:G:OP2	2.11	0.51
4:L5:2318:G:N2	4:L5:2321:G:OP2	2.32	0.51
4:L5:2838:G:H5''	8:LB:247:GLY:HA2	1.93	0.51
4:L5:4257:A:C2	16:LJ:60:PHE:HB3	2.46	0.51
4:L5:4620:U:OP2	4:L5:4670:C:N4	2.41	0.51
8:LB:16:PHE:O	8:LB:17:LEU:HD23	2.10	0.51
12:LF:222:LYS:HB3	12:LF:231:GLY:CA	2.38	0.51
40:Li:58:MET:CE	40:Li:90:LEU:HD22	2.40	0.51
49:S2:152:U:H1'	56:SG:132:ARG:CD	2.41	0.51
49:S2:1397:U:H4'	49:S2:1398:G:H5''	1.93	0.51
52:SC:195:LEU:HD21	52:SC:214:LEU:HD21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:24:SER:HB3	55:SF:107:ASN:OD1	2.10	0.51
59:SJ:138:ARG:HA	59:SJ:156:HIS:HB3	1.93	0.51
62:SN:4:MET:HE3	62:SN:124:ARG:NH1	2.26	0.51
62:SN:32:ASP:O	62:SN:36:GLN:HG3	2.10	0.51
64:SP:29:SER:OG	64:SP:32:GLN:OE1	2.26	0.51
72:SX:49:GLY:O	72:SX:100:VAL:N	2.36	0.51
80:Sg:288:SER:O	80:Sg:301:GLY:N	2.44	0.51
4:L5:478:G:H1	4:L5:676:C:H42	1.59	0.51
4:L5:715:G:H5''	9:LC:316:LYS:HG2	1.92	0.51
4:L5:1180:C:OP2	4:L5:1182:C:N4	2.43	0.51
4:L5:1444:G:H2'	4:L5:1445:U:H5'	1.92	0.51
4:L5:1950:U:OP1	14:LH:64:ARG:HB3	2.11	0.51
4:L5:1970:A:O3'	4:L5:2017:A:N6	2.44	0.51
4:L5:2490:U:OP1	4:L5:2491:C:H1'	2.11	0.51
4:L5:3892:U:O2'	21:LP:80:GLN:NE2	2.44	0.51
4:L5:3941:G:H2'	4:L5:3942:A:O4'	2.10	0.51
6:L8:56:G:H2'	6:L8:57:C:O4'	2.11	0.51
8:LB:206:PRO:HB2	8:LB:208:ASN:OD1	2.11	0.51
8:LB:392:LEU:CD2	8:LB:394:LYS:HE3	2.41	0.51
13:LG:187:LYS:HG3	13:LG:198:THR:HG23	1.91	0.51
13:LG:242:LEU:H	13:LG:242:LEU:HD12	1.75	0.51
18:LM:120:ASN:O	18:LM:124:LYS:HD3	2.11	0.51
21:LP:114:ILE:HG12	21:LP:150:LEU:CD2	2.41	0.51
37:Lf:4:ARG:NH1	37:Lf:8:LYS:HE3	2.26	0.51
49:S2:114:G:O2'	49:S2:382:C:O2'	2.07	0.51
49:S2:753:C:C2	49:S2:791:C:H4'	2.46	0.51
49:S2:1869:A:OP2	49:S2:1869:A:H4'	2.11	0.51
53:SD:34:TYR:OH	53:SD:37:VAL:HB	2.11	0.51
53:SD:99:ILE:HD13	53:SD:173:ARG:CZ	2.41	0.51
54:SE:214:ASN:CB	54:SE:244:ILE:HD11	2.41	0.51
59:SJ:30:LYS:HB3	79:Se:42:PHE:CZ	2.46	0.51
66:SR:57:LEU:O	66:SR:60:ARG:HB3	2.11	0.51
73:SY:44:LEU:HD22	73:SY:55:ILE:HD12	1.93	0.51
80:Sg:78:ALA:O	80:Sg:89:LEU:HG	2.11	0.51
80:Sg:230:LEU:HD11	80:Sg:259:TRP:CG	2.46	0.51
4:L5:502:C:H5'	4:L5:504:G:OP1	2.11	0.50
4:L5:2387:G:O2'	4:L5:2388:A:H5'	2.11	0.50
4:L5:2497:C:H2'	4:L5:2498:C:C6	2.46	0.50
4:L5:2596:G:O2'	4:L5:2597:G:H5'	2.11	0.50
4:L5:4251:A:H2'	4:L5:4252:C:C6	2.46	0.50
4:L5:4919:G:H2'	4:L5:4920:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LD:232:THR:N	10:LD:235:MET:SD	2.83	0.50
13:LG:251:ALA:HA	13:LG:254:GLU:HG3	1.92	0.50
14:LH:67:LEU:O	14:LH:70:VAL:HG12	2.12	0.50
15:LI:19:LYS:HD2	15:LI:26:VAL:HG11	1.93	0.50
18:LM:59:ASP:OD1	18:LM:59:ASP:N	2.40	0.50
32:La:47:LYS:HD3	32:La:48:TYR:CZ	2.46	0.50
49:S2:902:G:N1	49:S2:903:A:H1'	2.27	0.50
50:SA:10:MET:HG2	50:SA:55:TRP:CG	2.46	0.50
50:SA:158:ASP:O	70:SV:66:ASP:HA	2.11	0.50
55:SF:45:TYR:HB3	55:SF:67:PRO:HG3	1.93	0.50
58:SI:158:ILE:HD11	58:SI:163:GLU:OE1	2.10	0.50
61:SL:113:LEU:HD11	61:SL:120:VAL:HG21	1.94	0.50
74:SZ:77:LEU:HB2	74:SZ:79:ILE:HG13	1.93	0.50
80:Sg:147:HIS:HD2	80:Sg:169:GLY:HA3	1.75	0.50
4:L5:2106:G:H1'	4:L5:2108:G:N9	2.27	0.50
4:L5:2705:G:H1	4:L5:2710:C:H41	1.59	0.50
4:L5:4942:C:H5''	11:LE:155:GLY:HA2	1.93	0.50
10:LD:164:LYS:HG2	10:LD:195:HIS:CE1	2.46	0.50
13:LG:251:ALA:HA	13:LG:254:GLU:CG	2.42	0.50
31:LZ:10:VAL:CG2	31:LZ:87:VAL:HG23	2.41	0.50
46:Lo:63:THR:HG21	46:Lo:89:LYS:HA	1.93	0.50
49:S2:219:U:H2'	49:S2:219:U:OP2	2.12	0.50
49:S2:618:C:H2'	49:S2:619:A:O4'	2.11	0.50
49:S2:1504:U:H2'	49:S2:1505:U:O4'	2.11	0.50
49:S2:1718:G:O2'	49:S2:1815:A:N6	2.44	0.50
51:SB:87:ILE:H	51:SB:101:HIS:HB2	1.76	0.50
55:SF:103:LEU:CD2	74:SZ:67:LEU:HD22	2.42	0.50
70:SV:14:PRO:CG	70:SV:23:ILE:HD11	2.38	0.50
80:Sg:46:THR:H	80:Sg:53:GLY:HA2	1.76	0.50
4:L5:1174:G:H1	4:L5:1186:U:H3	1.59	0.50
4:L5:1719:A:O2'	4:L5:1720:C:O4'	2.22	0.50
4:L5:4734:A:H1'	4:L5:4735:G:C8	2.45	0.50
5:L7:120:U:H1'	10:LD:259:LYS:CD	2.41	0.50
15:LI:34:PHE:O	15:LI:88:ARG:HA	2.11	0.50
21:LP:29:THR:HG22	21:LP:119:VAL:HG11	1.93	0.50
28:LW:9:SER:HG	28:LW:36:CYS:HG	1.52	0.50
40:Li:62:LYS:HE2	40:Li:94:LEU:HD11	1.93	0.50
49:S2:877:C:H5'	49:S2:878:G:OP2	2.11	0.50
49:S2:1535:U:O2'	55:SF:88:MET:SD	2.67	0.50
49:S2:1678:A:H2'	49:S2:1679:A:O4'	2.12	0.50
49:S2:1859:A:O2'	49:S2:1860:A:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:29:ASP:OD1	51:SB:29:ASP:N	2.44	0.50
56:SG:52:ILE:HD11	56:SG:109:LEU:CD2	2.41	0.50
61:SL:57:ASP:OD1	61:SL:60:CYS:N	2.44	0.50
64:SP:76:VAL:O	64:SP:95:GLY:N	2.26	0.50
75:Sa:45:VAL:HG23	75:Sa:46:GLU:H	1.75	0.50
80:Sg:32:LEU:HD22	80:Sg:71:ILE:CG2	2.41	0.50
80:Sg:290:ALA:HB3	80:Sg:299:PHE:CB	2.41	0.50
2:B4:18:G:H2'	2:B4:18:G:N3	2.26	0.50
4:L5:106:A:H2'	4:L5:107:G:O4'	2.12	0.50
4:L5:159:C:OP2	40:Li:25:ARG:HG3	2.11	0.50
5:L7:8:G:OP1	10:LD:33:ARG:NH2	2.44	0.50
22:LQ:122:THR:OG1	22:LQ:124:ASP:OD1	2.19	0.50
23:LR:40:GLN:O	23:LR:44:LEU:HD13	2.12	0.50
23:LR:97:ARG:O	23:LR:101:ILE:HG12	2.12	0.50
25:LT:80:VAL:O	25:LT:81:LYS:HG3	2.11	0.50
27:LV:16:ILE:HD12	27:LV:57:VAL:HG12	1.92	0.50
35:Ld:36:VAL:CG2	35:Ld:41:ARG:HG2	2.41	0.50
46:Lo:40:ARG:HG3	46:Lo:43:ARG:NH1	2.27	0.50
49:S2:544:G:H5'	49:S2:545:A:OP2	2.12	0.50
49:S2:1092:G:O2'	49:S2:1093:A:H5'	2.11	0.50
49:S2:1447:G:O2'	49:S2:1448:A:H5'	2.12	0.50
49:S2:1467:C:O2'	49:S2:1468:C:H5'	2.12	0.50
49:S2:1541:G:O2'	49:S2:1542:C:H5'	2.10	0.50
49:S2:1615:U:O4	64:SP:40:ARG:NH2	2.44	0.50
58:SI:103:LEU:CD1	58:SI:172:LEU:HB3	2.42	0.50
65:SQ:21:ALA:CB	65:SQ:87:SER:HB3	2.40	0.50
65:SQ:44:PRO:HD3	65:SQ:81:ILE:HD11	1.93	0.50
66:SR:21:TYR:CD1	66:SR:58:MET:HE3	2.47	0.50
80:Sg:256:ILE:HG22	80:Sg:258:ILE:HD11	1.92	0.50
1:A4:44:U:O2'	1:A4:45:U:O5'	2.28	0.50
4:L5:173:C:OP1	17:LL:129:ARG:HD3	2.12	0.50
4:L5:496:G:H2'	4:L5:498:C:C5'	2.38	0.50
4:L5:942:G:OP1	12:LF:245:ARG:NH1	2.45	0.50
4:L5:1493:G:OP2	33:Lb:44:ARG:NH1	2.44	0.50
4:L5:2521:G:H5'	4:L5:2640:G:H1'	1.94	0.50
4:L5:2874:U:H1'	47:Lp:20:ALA:HB2	1.93	0.50
4:L5:4694:G:O2'	14:LH:71:ARG:NH2	2.45	0.50
6:L8:8:U:H2'	6:L8:9:A:C8	2.46	0.50
13:LG:110:LYS:O	13:LG:114:LEU:HG	2.11	0.50
13:LG:230:TYR:HA	13:LG:233:ILE:HG12	1.91	0.50
14:LH:128:MET:SD	14:LH:134:CYS:HB2	2.52	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LL:58:ILE:HD11	17:LL:112:ALA:HB1	1.94	0.50
17:LL:127:PHE:HB2	39:Lh:118:LYS:O	2.11	0.50
49:S2:413:G:H5'	49:S2:813:A:N6	2.23	0.50
49:S2:811:A:OP1	49:S2:811:A:H4'	2.11	0.50
49:S2:1273:C:H1'	49:S2:1274:G:OP2	2.11	0.50
49:S2:1523:C:P	67:SS:141:ARG:HD2	2.51	0.50
49:S2:1670:C:H2'	49:S2:1671:G:C8	2.46	0.50
53:SD:123:LEU:HD12	53:SD:154:ASP:OD2	2.12	0.50
53:SD:208:VAL:HG13	66:SR:41:ILE:HD13	1.93	0.50
57:SH:76:GLN:O	57:SH:80:VAL:N	2.39	0.50
64:SP:121:ILE:HD11	64:SP:123:TYR:CZ	2.46	0.50
72:SX:51:VAL:HG13	72:SX:70:VAL:CG1	2.41	0.50
72:SX:77:ASN:OD1	72:SX:79:LYS:HG3	2.11	0.50
80:Sg:27:PHE:HE2	80:Sg:75:GLY:HA3	1.76	0.50
4:L5:366:A:H2'	4:L5:367:C:O4'	2.11	0.50
4:L5:1266:G:H4'	4:L5:2121:C:N4	2.26	0.50
4:L5:1748:U:H2'	4:L5:1749:A:O4'	2.12	0.50
4:L5:1767:A:H5''	67:SS:116:LYS:NZ	2.25	0.50
4:L5:1921:C:C6	24:LS:161:ARG:HD3	2.47	0.50
4:L5:2545:U:OP2	4:L5:2546:G:H4'	2.10	0.50
4:L5:2677:G:C2'	4:L5:2678:A:H5'	2.42	0.50
4:L5:4650:G:C2'	4:L5:4651:A:H5'	2.41	0.50
9:LC:261:ASP:O	9:LC:265:GLY:HA2	2.12	0.50
9:LC:288:ASP:O	9:LC:292:ILE:HG13	2.12	0.50
10:LD:27:LYS:HG2	16:LJ:147:ARG:CD	2.42	0.50
16:LJ:48:PRO:HB2	16:LJ:70:VAL:HG22	1.93	0.50
19:LN:159:ARG:O	19:LN:164:LEU:HB2	2.12	0.50
25:LT:44:GLY:HA2	25:LT:95:HIS:ND1	2.27	0.50
33:Lb:8:THR:HG22	33:Lb:10:HIS:H	1.77	0.50
36:Le:128:ARG:O	36:Le:129:LEU:HG	2.12	0.50
42:Lk:47:ILE:HD11	42:Lk:53:ALA:HA	1.94	0.50
48:Lr:94:ARG:HG2	48:Lr:107:ARG:HH21	1.77	0.50
49:S2:478:G:O2'	49:S2:479:C:H5'	2.11	0.50
49:S2:1550:G:H3'	49:S2:1579:A:N6	2.22	0.50
51:SB:140:VAL:CG2	51:SB:213:ARG:HB2	2.42	0.50
53:SD:120:TYR:HA	53:SD:123:LEU:CD2	2.41	0.50
53:SD:213:PRO:HD3	66:SR:20:TYR:CZ	2.47	0.50
54:SE:45:ILE:HD12	54:SE:80:ILE:HD11	1.94	0.50
54:SE:160:ILE:HA	54:SE:172:PHE:HA	1.94	0.50
69:SU:56:MET:CG	69:SU:86:LYS:HD2	2.42	0.50
72:SX:81:ILE:HD12	72:SX:120:PHE:CD2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SY:7:ILE:CD1	73:SY:40:ILE:HG23	2.42	0.50
80:Sg:249:CYS:CA	80:Sg:258:ILE:HD12	2.27	0.50
4:L5:231:U:O2	30:LY:103:LYS:NZ	2.30	0.50
4:L5:253:G:H2'	4:L5:254:G:O4'	2.12	0.50
4:L5:270:U:O2'	4:L5:271:C:H5'	2.12	0.50
4:L5:500:G:O2'	4:L5:504:G:OP2	2.30	0.50
4:L5:512:U:H2'	4:L5:513:U:C4'	2.34	0.50
4:L5:741:C:H2'	4:L5:742:G:O4'	2.12	0.50
4:L5:1866:U:H5'	15:LI:4:ARG:HH22	1.76	0.50
4:L5:1895:G:O2'	4:L5:1907:A:N3	2.39	0.50
4:L5:1947:U:C5	44:Lm:108:VAL:HG21	2.47	0.50
4:L5:2638:G:O4'	38:Lg:28:ASN:ND2	2.44	0.50
4:L5:4239:A:O2'	4:L5:4240:G:H5'	2.12	0.50
14:LH:12:ILE:HG12	14:LH:53:LYS:O	2.11	0.50
16:LJ:88:LYS:HE2	16:LJ:92:TYR:OH	2.11	0.50
19:LN:166:SER:O	19:LN:170:LYS:HG3	2.12	0.50
20:LO:197:LYS:HA	20:LO:201:LEU:O	2.11	0.50
22:LQ:67:ILE:HD13	22:LQ:98:LEU:HD11	1.93	0.50
27:LV:16:ILE:CD1	27:LV:57:VAL:HG12	2.42	0.50
30:LY:22:PRO:HD2	30:LY:25:ILE:CD1	2.40	0.50
30:LY:66:GLN:OE1	30:LY:84:ARG:HD2	2.11	0.50
49:S2:824:C:C2	59:SJ:144:ILE:HG21	2.47	0.50
49:S2:1018:U:H5'	62:SN:71:ILE:CG2	2.42	0.50
49:S2:1082:A:H2'	49:S2:1084:A:OP1	2.12	0.50
49:S2:1462:U:H5'	49:S2:1463:U:N3	2.27	0.50
49:S2:1537:A:H2'	49:S2:1538:C:O4'	2.12	0.50
49:S2:1589:A:OP1	68:ST:81:GLY:HA2	2.12	0.50
52:SC:84:PHE:CD2	52:SC:265:PRO:HD3	2.47	0.50
55:SF:144:LEU:HD23	77:Sc:49:PRO:HG2	1.93	0.50
56:SG:137:ARG:CG	56:SG:178:ARG:HD3	2.41	0.50
58:SI:161:LEU:HD23	58:SI:161:LEU:H	1.76	0.50
59:SJ:78:LEU:O	59:SJ:82:VAL:HG12	2.11	0.50
60:SK:58:VAL:HG23	60:SK:70:TYR:O	2.12	0.50
64:SP:86:LEU:HD12	64:SP:89:MET:H	1.77	0.50
80:Sg:40:ILE:HB	80:Sg:59:LEU:HB2	1.94	0.50
80:Sg:109:LEU:CD1	80:Sg:125:ARG:HB2	2.42	0.50
80:Sg:168:CYS:HB3	80:Sg:198:VAL:HG13	1.93	0.50
4:L5:225:G:OP2	9:LC:223:ASN:HB2	2.11	0.50
4:L5:664:G:O2'	4:L5:665:C:H5'	2.12	0.50
4:L5:966:A:H5'	4:L5:967:C:H5	1.77	0.50
4:L5:1174:G:H2'	4:L5:1175:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2266:C:O2'	48:Lr:39:ARG:NH1	2.45	0.50
4:L5:4625:C:H1'	8:LB:336:CYS:SG	2.52	0.50
6:L8:49:G:OP1	39:Lh:48:ARG:HB2	2.12	0.50
8:LB:224:LYS:HG3	8:LB:340:THR:CG2	2.42	0.50
15:LI:48:LEU:HD21	15:LI:145:GLU:HA	1.94	0.50
16:LJ:110:GLN:OE1	16:LJ:110:GLN:N	2.45	0.50
33:Lb:36:ASP:HB3	33:Lb:39:PHE:HB3	1.94	0.50
42:Lk:24:LYS:HB3	42:Lk:69:LEU:CD1	2.41	0.50
49:S2:496:C:H5'	54:SE:29:PRO:HA	1.94	0.50
49:S2:790:C:H5'	49:S2:791:C:O4'	2.11	0.50
49:S2:866:U:H2'	49:S2:867:G:H8	1.77	0.50
49:S2:1364:U:H2'	49:S2:1365:G:H5'	1.94	0.50
49:S2:1454:A:C8	66:SR:3:ARG:HD2	2.46	0.50
52:SC:155:ILE:O	52:SC:159:LYS:HG3	2.12	0.50
57:SH:98:ARG:HG3	57:SH:125:VAL:HG22	1.94	0.50
57:SH:170:VAL:CG2	57:SH:187:PHE:HB2	2.42	0.50
59:SJ:87:LEU:HD12	59:SJ:91:LYS:CB	2.42	0.50
60:SK:19:GLY:HA3	60:SK:93:THR:HG21	1.93	0.50
66:SR:17:ILE:HD12	66:SR:57:LEU:HD12	1.93	0.50
67:SS:6:PRO:HD3	74:SZ:49:LEU:CG	2.42	0.50
80:Sg:34:ALA:HA	80:Sg:40:ILE:CD1	2.42	0.50
4:L5:347:A:OP2	30:LY:8:THR:HG23	2.12	0.50
4:L5:1755:C:H2'	4:L5:1756:U:H5'	1.94	0.50
4:L5:2262:G:OP2	48:Lr:98:ARG:NH2	2.44	0.50
4:L5:2904:U:O2	4:L5:3591:C:H2'	2.12	0.50
4:L5:4878:C:H2'	4:L5:4879:C:H6	1.77	0.50
11:LE:286:LEU:HD23	11:LE:288:PHE:CZ	2.47	0.50
14:LH:17:ASP:OD1	14:LH:28:LYS:HB2	2.11	0.50
17:LL:164:GLU:HG3	32:La:100:ILE:HD13	1.93	0.50
18:LM:127:VAL:HG13	20:LO:177:LEU:CD2	2.41	0.50
47:Lp:49:ARG:HB2	47:Lp:55:TRP:CZ3	2.47	0.50
49:S2:28:U:H2'	49:S2:29:G:H8	1.77	0.50
49:S2:201:C:H3'	49:S2:202:G:C8	2.47	0.50
49:S2:303:C:H2'	49:S2:304:C:O4'	2.11	0.50
51:SB:30:TRP:CG	63:SO:19:PRO:HB3	2.47	0.50
54:SE:173:ILE:HD11	54:SE:235:TRP:CD2	2.47	0.50
57:SH:139:ILE:HD12	57:SH:156:VAL:HG11	1.94	0.50
58:SI:96:LEU:O	58:SI:96:LEU:HD12	2.11	0.50
65:SQ:36:GLY:HA3	68:ST:7:LYS:NZ	2.27	0.50
72:SX:51:VAL:HG13	72:SX:70:VAL:HG13	1.94	0.50
72:SX:67:ARG:HG3	72:SX:115:ILE:HG12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SY:83:LYS:HE3	73:SY:96:LEU:HD11	1.93	0.50
77:Sc:44:ARG:HD2	77:Sc:58:LEU:HD21	1.94	0.50
80:Sg:17:TRP:O	80:Sg:36:ARG:N	2.45	0.50
80:Sg:59:LEU:HD13	80:Sg:90:TRP:CG	2.47	0.50
4:L5:26:C:O2'	4:L5:338:A:N3	2.39	0.49
4:L5:496:G:C2'	4:L5:498:C:H5''	2.39	0.49
4:L5:516:C:H1'	4:L5:646:G:C2	2.47	0.49
4:L5:1294:A:H1'	4:L5:1296:G:C2	2.47	0.49
4:L5:1303:A:H2'	4:L5:1304:C:H5'	1.94	0.49
4:L5:2029:A:O2'	4:L5:2030:A:H5'	2.11	0.49
4:L5:2563:C:H2'	4:L5:2564:G:O4'	2.12	0.49
4:L5:2745:A:H2'	4:L5:2746:A:H8	1.76	0.49
4:L5:3754:G:H2'	4:L5:3755:G:H5'	1.93	0.49
4:L5:4914:C:O2'	4:L5:4915:G:H5'	2.12	0.49
6:L8:8:U:H2'	6:L8:9:A:H8	1.77	0.49
24:LS:7:LEU:HB3	24:LS:107:THR:OG1	2.11	0.49
24:LS:81:TRP:HB2	24:LS:127:MET:O	2.12	0.49
26:LU:87:THR:O	26:LU:91:LEU:HG	2.12	0.49
38:Lg:82:MET:HE1	38:Lg:90:ARG:HH21	1.77	0.49
49:S2:92:A:O2'	54:SE:4:GLY:HA3	2.13	0.49
49:S2:202:G:H5''	49:S2:203:G:OP1	2.12	0.49
49:S2:1611:G:O2'	49:S2:1612:G:H5'	2.12	0.49
57:SH:69:LEU:HD22	57:SH:96:ALA:HB2	1.93	0.49
59:SJ:110:LEU:HG	59:SJ:130:ILE:CD1	2.42	0.49
64:SP:37:TYR:CD2	64:SP:41:GLN:HB2	2.47	0.49
66:SR:126:MET:HE3	66:SR:128:PHE:CE1	2.47	0.49
4:L5:362:A:N6	43:L1:35:ILE:HG13	2.28	0.49
4:L5:500:G:H1'	4:L5:504:G:C3'	2.43	0.49
4:L5:1882:U:OP1	4:L5:2280:G:O2'	2.19	0.49
4:L5:1943:A:H2'	4:L5:1944:A:H5'	1.93	0.49
4:L5:4293:U:OP2	4:L5:4329:G:O2'	2.20	0.49
4:L5:4736:C:H2'	4:L5:4737:G:H8	1.77	0.49
12:LF:232:ASP:OD1	12:LF:236:ARG:NH1	2.21	0.49
27:LV:78:PRO:HG2	27:LV:106:VAL:O	2.12	0.49
49:S2:122:G:OP1	54:SE:77:ARG:NH2	2.44	0.49
49:S2:297:A:H4'	54:SE:132:GLY:O	2.11	0.49
49:S2:1259:A:H2'	49:S2:1260:A:H5'	1.94	0.49
49:S2:1289:U:O2	49:S2:1311:C:H1'	2.12	0.49
49:S2:1756:C:C4	49:S2:1757:G:H1'	2.48	0.49
51:SB:25:PHE:CE1	63:SO:88:LEU:HD21	2.47	0.49
51:SB:198:GLU:HG2	51:SB:210:VAL:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:41:VAL:HG12	55:SF:68:ILE:H	1.77	0.49
56:SG:52:ILE:HD12	56:SG:111:LEU:HD13	1.93	0.49
56:SG:181:THR:H	56:SG:184:VAL:CG2	2.25	0.49
59:SJ:108:ARG:NH2	59:SJ:151:LEU:HA	2.27	0.49
63:SO:90:ILE:O	63:SO:124:MET:HE1	2.12	0.49
65:SQ:36:GLY:O	68:ST:7:LYS:HE2	2.11	0.49
70:SV:45:ARG:HG2	70:SV:46:PHE:H	1.77	0.49
2:B4:76:A:H3'	4:L5:4531:U:H5	1.78	0.49
4:L5:17:A:OP2	29:LX:60:TYR:OH	2.20	0.49
4:L5:74:G:C5'	17:LL:59:VAL:HB	2.42	0.49
4:L5:458:C:O2'	4:L5:459:C:H5'	2.12	0.49
4:L5:1301:C:H5''	4:L5:1302:U:OP2	2.12	0.49
4:L5:1757:U:H4'	4:L5:1758:G:OP2	2.11	0.49
4:L5:2894:A:H2'	4:L5:2895:A:O4'	2.12	0.49
4:L5:3856:A:H5''	21:LP:83:TRP:O	2.13	0.49
4:L5:5011:A:OP1	4:L5:5011:A:H4'	2.12	0.49
5:L7:39:C:O2'	16:LJ:46:GLN:HB3	2.12	0.49
7:LA:14:SER:HA	7:LA:17:ARG:CZ	2.42	0.49
9:LC:67:TRP:NE1	9:LC:71:ARG:HD2	2.27	0.49
10:LD:65:ALA:HB2	10:LD:74:ILE:HD13	1.95	0.49
10:LD:232:THR:O	10:LD:235:MET:HG2	2.12	0.49
11:LE:47:ASN:HB2	11:LE:62:MET:SD	2.52	0.49
11:LE:206:VAL:HG23	11:LE:256:GLN:HG2	1.94	0.49
15:LI:85:PHE:CE2	15:LI:87:MET:HE3	2.48	0.49
16:LJ:19:LYS:CG	16:LJ:133:VAL:HB	2.42	0.49
19:LN:28:TRP:O	19:LN:32:GLN:HG2	2.12	0.49
36:Le:75:ARG:HB2	36:Le:95:TYR:CD1	2.47	0.49
43:Ll:12:PHE:HD2	43:Ll:51:LEU:HD22	1.76	0.49
49:S2:477:G:O2'	49:S2:478:G:H5'	2.12	0.49
49:S2:845:G:H2'	49:S2:846:G:O4'	2.12	0.49
49:S2:903:A:H2'	49:S2:904:A:C4	2.48	0.49
49:S2:1171:G:O2'	49:S2:1187:G:O6	2.28	0.49
49:S2:1536:G:H1	49:S2:1597:C:H42	1.60	0.49
49:S2:1675:A:O2'	55:SF:74:ASN:HB3	2.13	0.49
55:SF:36:GLN:N	55:SF:36:GLN:OE1	2.45	0.49
66:SR:53:TYR:CZ	66:SR:57:LEU:HD21	2.48	0.49
69:SU:95:SER:O	69:SU:98:VAL:HG22	2.12	0.49
80:Sg:257:LYS:HA	80:Sg:269:GLU:CA	2.43	0.49
4:L5:2404:A:H1'	41:Lj:12:ARG:HH11	1.77	0.49
4:L5:3667:C:H4'	7:LA:7:GLY:O	2.12	0.49
4:L5:4066:U:H2'	4:L5:4067:U:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:81:C:H2'	6:L8:83:C:OP2	2.12	0.49
8:LB:143:LYS:O	8:LB:146:LEU:HB2	2.13	0.49
9:LC:318:PRO:CB	9:LC:325:MET:HE3	2.42	0.49
10:LD:53:VAL:HG22	10:LD:62:CYS:SG	2.53	0.49
13:LG:35:ARG:NH1	31:LZ:52:LYS:HD2	2.27	0.49
13:LG:137:ARG:HG2	13:LG:146:LEU:HD11	1.94	0.49
19:LN:149:GLN:HA	19:LN:152:THR:HG23	1.94	0.49
20:LO:51:LYS:NZ	20:LO:144:GLU:HB3	2.28	0.49
22:LQ:175:GLU:HA	32:La:51:GLY:O	2.12	0.49
23:LR:176:ARG:NH1	49:S2:910:G:OP1	2.45	0.49
24:LS:110:TYR:CE1	24:LS:124:ILE:HD11	2.47	0.49
49:S2:164:A:C2'	49:S2:165:G:H5'	2.42	0.49
49:S2:363:A:H61	49:S2:400:C:H1'	1.76	0.49
49:S2:533:A:H1'	49:S2:552:G:N2	2.27	0.49
49:S2:805:U:H2'	49:S2:806:U:O4'	2.12	0.49
49:S2:952:G:OP1	51:SB:56:LYS:NZ	2.45	0.49
49:S2:1310:U:H2'	49:S2:1311:C:C6	2.47	0.49
49:S2:1396:A:H4'	49:S2:1396:A:OP1	2.13	0.49
54:SE:36:HIS:CG	54:SE:85:GLY:HA3	2.48	0.49
54:SE:44:LEU:HD11	54:SE:70:ILE:HG21	1.94	0.49
60:SK:57:TYR:CD1	60:SK:75:GLY:HA2	2.47	0.49
71:SW:11:LEU:HA	71:SW:14:ILE:CG2	2.40	0.49
80:Sg:10:THR:C	80:Sg:11:LEU:HD12	2.37	0.49
80:Sg:120:ILE:O	80:Sg:132:TRP:N	2.44	0.49
80:Sg:154:VAL:O	80:Sg:155:ARG:NH1	2.44	0.49
4:L5:398:A:O3'	21:LP:20:SER:HB2	2.13	0.49
4:L5:1354:A:H4'	4:L5:1355:G:O5'	2.12	0.49
4:L5:1389:U:OP2	22:LQ:170:LYS:NZ	2.32	0.49
4:L5:1427:A:C2	22:LQ:138:LEU:HD22	2.48	0.49
4:L5:1737:A:H2'	4:L5:1738:A:O4'	2.13	0.49
4:L5:1828:C:C1'	33:Lb:57:MET:HE2	2.42	0.49
4:L5:2106:G:H1'	4:L5:2108:G:C4	2.47	0.49
4:L5:2761:U:H4'	4:L5:2762:G:O4'	2.12	0.49
4:L5:3597:G:O2'	4:L5:3598:C:O5'	2.30	0.49
4:L5:4877:G:H2'	4:L5:4878:C:C6	2.48	0.49
4:L5:4986:G:O2'	4:L5:4987:C:H5'	2.12	0.49
8:LB:66:LYS:HE3	27:LV:12:ALA:O	2.12	0.49
10:LD:204:VAL:O	10:LD:208:MET:HG3	2.13	0.49
14:LH:45:LEU:HA	14:LH:56:ARG:O	2.12	0.49
18:LM:8:GLU:HG2	24:LS:151:LYS:CB	2.42	0.49
18:LM:11:ARG:HH11	18:LM:61:ILE:HD11	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:29:ASP:OD1	18:LM:30:VAL:N	2.44	0.49
23:LR:53:LYS:HG2	23:LR:54:PRO:HD2	1.94	0.49
31:LZ:14:LEU:HD11	31:LZ:81:MET:HB2	1.94	0.49
42:Lk:13:LEU:HD12	42:Lk:14:THR:N	2.26	0.49
42:Lk:34:PHE:CE1	42:Lk:56:LEU:HD23	2.47	0.49
49:S2:166:A:H1'	56:SG:13:GLN:HE21	1.76	0.49
49:S2:398:A:H5''	49:S2:399:C:H3'	1.94	0.49
49:S2:445:A:H2'	49:S2:446:G:O4'	2.13	0.49
49:S2:545:A:N1	49:S2:548:C:N4	2.61	0.49
49:S2:1863:A:H1'	75:Sa:79:ILE:CD1	2.42	0.49
54:SE:9:LEU:HB3	54:SE:30:ARG:HB2	1.94	0.49
54:SE:195:ILE:HG22	54:SE:195:ILE:O	2.13	0.49
55:SF:87:LEU:O	55:SF:90:VAL:HG22	2.12	0.49
55:SF:91:ARG:HA	55:SF:94:LYS:HG2	1.94	0.49
55:SF:121:PRO:HA	55:SF:193:LYS:HG3	1.94	0.49
58:SI:114:GLU:HG3	58:SI:119:LEU:O	2.13	0.49
61:SL:104:LYS:O	72:SX:11:ARG:NH2	2.45	0.49
67:SS:134:GLN:OE1	67:SS:134:GLN:N	2.45	0.49
71:SW:111:MET:HE1	71:SW:119:LYS:HG3	1.94	0.49
80:Sg:104:HIS:CE1	80:Sg:124:SER:HB3	2.48	0.49
80:Sg:220:ASP:CG	80:Sg:227:LEU:HD11	2.38	0.49
4:L5:161:G:O2'	4:L5:162:A:H5'	2.12	0.49
4:L5:1455:G:O2'	4:L5:1456:C:H5'	2.12	0.49
4:L5:1955:G:O2'	4:L5:1956:A:H5'	2.12	0.49
4:L5:2469:C:H5'	4:L5:2470:C:OP2	2.12	0.49
4:L5:2891:U:OP2	23:LR:74:ARG:NH1	2.43	0.49
4:L5:2903:G:OP1	4:L5:2903:G:H2'	2.12	0.49
4:L5:4244:A:H2'	4:L5:4245:G:O4'	2.12	0.49
11:LE:242:ILE:CG2	11:LE:247:LYS:HE3	2.43	0.49
12:LF:24:ASN:OD1	12:LF:25:PHE:N	2.45	0.49
14:LH:113:GLU:HG2	14:LH:125:ARG:HG2	1.94	0.49
26:LU:80:LYS:HD2	26:LU:108:GLU:HA	1.95	0.49
31:LZ:26:VAL:HG22	31:LZ:42:LEU:O	2.13	0.49
31:LZ:28:ASN:HB2	31:LZ:77:TYR:OH	2.11	0.49
37:Lf:16:ARG:HG3	37:Lf:17:GLY:O	2.13	0.49
39:Lh:60:VAL:O	39:Lh:64:THR:HG22	2.13	0.49
40:Li:95:ALA:O	40:Li:99:LYS:HG3	2.12	0.49
49:S2:809:A:H2'	49:S2:810:A:H5'	1.93	0.49
49:S2:1571:G:O2'	49:S2:1572:C:H5'	2.12	0.49
51:SB:33:VAL:HG11	51:SB:44:ILE:HD11	1.94	0.49
53:SD:95:GLY:HA2	53:SD:101:GLN:NE2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SK:50:GLN:O	60:SK:54:SER:OG	2.25	0.49
62:SN:135:LEU:HD21	62:SN:139:TRP:CE3	2.47	0.49
63:SO:78:ALA:HB3	63:SO:118:ALA:HB3	1.93	0.49
73:SY:79:LEU:HG	73:SY:83:LYS:HZ2	1.77	0.49
74:SZ:84:ALA:O	74:SZ:88:LEU:HG	2.13	0.49
80:Sg:5:MET:CG	80:Sg:310:TRP:HB3	2.41	0.49
4:L5:276:C:OP2	40:Li:34:THR:HG21	2.11	0.49
4:L5:1791:U:H2'	4:L5:1792:U:H5'	1.94	0.49
4:L5:2117:G:OP2	4:L5:2117:G:H3'	2.12	0.49
10:LD:125:VAL:O	10:LD:126:THR:OG1	2.26	0.49
11:LE:69:TYR:O	11:LE:70:LYS:HB3	2.13	0.49
12:LF:147:LEU:O	12:LF:151:ASN:HB2	2.12	0.49
13:LG:155:VAL:HG12	13:LG:157:ILE:HG13	1.95	0.49
17:LL:170:THR:O	17:LL:173:GLU:HG2	2.13	0.49
21:LP:22:LEU:HD12	21:LP:24:VAL:HG12	1.93	0.49
33:Lb:49:HIS:HB3	33:Lb:52:LYS:HD3	1.94	0.49
48:Lr:21:ASN:N	48:Lr:21:ASN:OD1	2.44	0.49
48:Lr:108:MET:O	48:Lr:112:ARG:HG2	2.13	0.49
49:S2:156:G:H4'	56:SG:108:VAL:CG2	2.41	0.49
49:S2:691:G:O2'	57:SH:178:LYS:O	2.22	0.49
49:S2:1622:U:O4	64:SP:121:ILE:HA	2.12	0.49
49:S2:1839:U:H2'	49:S2:1840:U:C6	2.48	0.49
51:SB:195:LYS:HA	51:SB:195:LYS:HE2	1.94	0.49
61:SL:12:LYS:C	61:SL:56:ILE:HD11	2.37	0.49
63:SO:136:PRO:CB	63:SO:139:SER:HB3	2.42	0.49
65:SQ:90:LYS:HD2	65:SQ:120:LEU:O	2.13	0.49
66:SR:27:ASP:O	66:SR:31:ASN:ND2	2.46	0.49
66:SR:71:ILE:HD11	66:SR:73:LEU:HD23	1.95	0.49
1:A4:42:U:O2	49:S2:961:G:H4'	2.12	0.49
4:L5:698:G:O2'	4:L5:699:C:H5'	2.13	0.49
4:L5:1873:A:H5'	33:Lb:7:HIS:O	2.12	0.49
4:L5:2060:G:O2'	4:L5:2061:U:H5'	2.13	0.49
4:L5:2282:A:H2'	4:L5:2283:G:H5'	1.94	0.49
4:L5:3594:C:H3'	4:L5:3595:U:C5'	2.43	0.49
4:L5:4251:A:H5''	16:LJ:108:GLY:CA	2.43	0.49
4:L5:4626:A:H62	4:L5:4669:A:H2	1.61	0.49
4:L5:4946:U:H5''	4:L5:4947:U:OP2	2.12	0.49
5:L7:11:A:O2'	5:L7:12:U:H3'	2.13	0.49
9:LC:301:ALA:HB1	22:LQ:132:LYS:HD3	1.93	0.49
12:LF:91:PHE:HB2	12:LF:145:PRO:HG3	1.94	0.49
13:LG:112:GLN:OE1	13:LG:115:LEU:HD21	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LT:18:PRO:HG2	25:LT:21:LYS:HB2	1.95	0.49
27:LV:40:ILE:HG12	27:LV:62:MET:O	2.11	0.49
42:Lk:17:ARG:NH2	42:Lk:19:ASP:OD2	2.33	0.49
49:S2:203:G:H2'	49:S2:204:G:C8	2.47	0.49
49:S2:407:G:H5''	49:S2:408:A:C5'	2.43	0.49
49:S2:533:A:H1'	49:S2:552:G:H22	1.78	0.49
49:S2:536:A:H3'	49:S2:537:C:H4'	1.94	0.49
49:S2:571:U:H2'	49:S2:572:U:O4'	2.12	0.49
49:S2:927:C:O2'	49:S2:928:G:H5'	2.12	0.49
49:S2:1142:G:H21	49:S2:1145:A:H2	1.61	0.49
49:S2:1275:G:H5''	49:S2:1506:A:N1	2.28	0.49
49:S2:1588:A:H3'	49:S2:1588:A:OP2	2.12	0.49
50:SA:143:PRO:HB3	70:SV:34:MET:CE	2.42	0.49
51:SB:140:VAL:HG23	51:SB:213:ARG:HB2	1.95	0.49
52:SC:63:VAL:N	52:SC:90:GLU:OE2	2.45	0.49
54:SE:36:HIS:CD2	54:SE:85:GLY:HA3	2.47	0.49
54:SE:129:ILE:HG12	54:SE:139:LEU:HD13	1.95	0.49
57:SH:76:GLN:O	57:SH:80:VAL:HG12	2.13	0.49
57:SH:77:VAL:HA	57:SH:80:VAL:HG12	1.94	0.49
59:SJ:37:LEU:HD11	59:SJ:106:LEU:HD21	1.94	0.49
62:SN:49:GLN:O	62:SN:52:VAL:HG12	2.13	0.49
62:SN:66:VAL:HG13	62:SN:67:THR:HG23	1.94	0.49
73:SY:88:LYS:HD3	73:SY:97:TYR:CZ	2.48	0.49
77:Sc:56:LEU:O	77:Sc:58:LEU:HD12	2.12	0.49
80:Sg:242:SER:HB3	80:Sg:291:TRP:NE1	2.28	0.49
4:L5:449:C:N3	36:Le:126:ASN:ND2	2.60	0.49
4:L5:1458:C:H2'	4:L5:1459:A:O4'	2.13	0.49
4:L5:1758:G:H2'	4:L5:1759:G:C1'	2.42	0.49
4:L5:2020:U:H2'	4:L5:2021:G:H8	1.77	0.49
4:L5:2487:G:H2'	4:L5:2487:G:OP2	2.12	0.49
4:L5:4094:G:H2'	4:L5:4095:G:O4'	2.13	0.49
4:L5:4279:A:H5'	4:L5:4281:A:H1'	1.95	0.49
4:L5:4966:A:OP1	8:LB:128:LYS:NZ	2.45	0.49
8:LB:213:GLN:HG2	8:LB:214:ASP:OD1	2.13	0.49
15:LI:43:VAL:HG21	15:LI:196:GLY:O	2.13	0.49
17:LL:170:THR:HG22	17:LL:172:GLU:N	2.22	0.49
24:LS:159:LEU:HD13	24:LS:172:PRO:HB3	1.94	0.49
42:Lk:22:SER:HA	42:Lk:64:LEU:O	2.13	0.49
49:S2:550:C:H2'	49:S2:551:U:C6	2.48	0.49
49:S2:923:G:C3'	49:S2:924:G:H5''	2.43	0.49
49:S2:1130:G:H4'	62:SN:9:LYS:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SC:264:SER:OG	52:SC:265:PRO:HD2	2.13	0.49
55:SF:88:MET:HG3	55:SF:89:THR:N	2.28	0.49
55:SF:100:ILE:HD11	55:SF:108:PRO:CB	2.43	0.49
56:SG:159:ARG:CD	56:SG:171:THR:HB	2.38	0.49
57:SH:177:TYR:CZ	57:SH:181:THR:HG21	2.47	0.49
64:SP:84:ILE:H	64:SP:84:ILE:HD12	1.78	0.49
4:L5:168:C:H2'	4:L5:169:G:C8	2.48	0.49
4:L5:1693:U:H2'	4:L5:1694:C:O4'	2.13	0.49
4:L5:2749:C:H4'	38:Lg:64:LEU:HB3	1.95	0.49
4:L5:4704:C:H2'	4:L5:4705:A:C8	2.48	0.49
4:L5:4915:G:H2'	4:L5:4916:G:O4'	2.12	0.49
6:L8:133:G:O2'	6:L8:134:G:H5'	2.12	0.49
9:LC:8:ILE:CD1	9:LC:24:LEU:HD13	2.42	0.49
10:LD:211:LEU:HA	10:LD:214:GLU:HB2	1.94	0.49
11:LE:150:LEU:HD23	11:LE:196:ALA:HA	1.95	0.49
12:LF:152:GLU:HG3	12:LF:248:ASN:ND2	2.28	0.49
18:LM:39:ASP:OD2	18:LM:70:GLN:HG3	2.13	0.49
19:LN:148:THR:O	19:LN:151:ILE:HG22	2.13	0.49
20:LO:54:TYR:OH	20:LO:73:PHE:O	2.31	0.49
31:LZ:76:ASN:OD1	31:LZ:77:TYR:N	2.46	0.49
32:La:9:ARG:NH1	32:La:12:ARG:HH21	2.11	0.49
33:Lb:47:LYS:HA	33:Lb:50:ASN:ND2	2.28	0.49
39:Lh:97:LYS:HA	39:Lh:100:GLU:CG	2.42	0.49
49:S2:883:U:H3	49:S2:904:A:N6	2.11	0.49
49:S2:1391:C:H4'	78:Sd:55:LEU:HD23	1.95	0.49
49:S2:1570:G:H2'	49:S2:1571:G:H5'	1.94	0.49
49:S2:1754:G:N1	49:S2:1779:G:H1'	2.28	0.49
52:SC:78:LEU:O	52:SC:81:ILE:HG12	2.13	0.49
53:SD:97:CYS:HB3	53:SD:100:ALA:HB3	1.93	0.49
55:SF:154:LEU:HD21	55:SF:177:LEU:CD2	2.40	0.49
57:SH:58:LYS:HB3	57:SH:90:LYS:HG2	1.94	0.49
58:SI:34:ALA:HB2	58:SI:56:ARG:CD	2.42	0.49
58:SI:48:VAL:HG22	58:SI:52:ASN:HB2	1.95	0.49
64:SP:95:GLY:HA2	64:SP:103:ASN:O	2.12	0.49
69:SU:55:ARG:HG3	69:SU:87:ARG:CZ	2.43	0.49
69:SU:61:LEU:HD22	78:Sd:34:TYR:CE1	2.48	0.49
70:SV:73:ALA:HB1	70:SV:78:ILE:HB	1.95	0.49
72:SX:11:ARG:HA	72:SX:14:ARG:HB3	1.94	0.49
80:Sg:170:TRP:CA	80:Sg:194:TYR:HB2	2.38	0.49
80:Sg:175:LYS:NZ	80:Sg:184:LEU:HD21	2.28	0.49
2:B4:68:C:H2'	2:B4:69:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:179:G:H2'	4:L5:180:C:O4'	2.13	0.48
4:L5:285:G:H2'	4:L5:286:U:O4'	2.13	0.48
4:L5:2845:A:C2	27:LV:86:LYS:HE2	2.48	0.48
4:L5:3658:C:H2'	4:L5:3659:G:C8	2.47	0.48
4:L5:4098:A:H5''	4:L5:4099:G:OP2	2.13	0.48
4:L5:4582:C:O2'	4:L5:4583:C:H5'	2.13	0.48
4:L5:4697:U:H4'	44:Lm:104:HIS:CD2	2.48	0.48
6:L8:113:C:H2'	6:L8:114:G:O4'	2.13	0.48
10:LD:163:LEU:HD13	10:LD:173:ILE:HG21	1.95	0.48
14:LH:18:ILE:HG13	14:LH:26:ILE:O	2.13	0.48
14:LH:176:LEU:HD12	14:LH:176:LEU:O	2.13	0.48
20:LO:130:LYS:HB2	20:LO:133:ARG:HG2	1.94	0.48
21:LP:7:ASP:HB2	21:LP:8:PRO:HD2	1.94	0.48
27:LV:80:VAL:HG23	27:LV:106:VAL:CG1	2.37	0.48
39:Lh:21:LEU:O	39:Lh:25:LYS:HG3	2.12	0.48
47:Lp:33:GLN:HE21	47:Lp:49:ARG:HH22	1.60	0.48
49:S2:373:G:O2'	49:S2:374:G:H5'	2.13	0.48
49:S2:690:G:H1	49:S2:739:C:H42	1.60	0.48
49:S2:1450:G:H2'	49:S2:1451:G:O4'	2.13	0.48
49:S2:1521:C:OP1	67:SS:129:LEU:HD13	2.13	0.48
50:SA:76:VAL:HG12	50:SA:123:VAL:CG2	2.43	0.48
51:SB:79:VAL:HG21	51:SB:81:PHE:CE2	2.48	0.48
55:SF:41:VAL:CG1	55:SF:68:ILE:H	2.26	0.48
57:SH:174:SER:HA	57:SH:185:VAL:CG2	2.42	0.48
65:SQ:14:GLY:CA	65:SQ:21:ALA:HB3	2.43	0.48
75:Sa:40:VAL:CG2	75:Sa:42:ARG:HG3	2.43	0.48
80:Sg:220:ASP:OD2	80:Sg:227:LEU:HD11	2.13	0.48
4:L5:4163:U:H1'	13:LG:69:ILE:CD1	2.42	0.48
7:LA:90:CYS:HA	7:LA:101:VAL:O	2.13	0.48
7:LA:114:CYS:HB2	7:LA:169:VAL:HG23	1.94	0.48
8:LB:37:PRO:HA	8:LB:187:GLY:O	2.13	0.48
8:LB:291:TYR:CD1	8:LB:299:ILE:HG22	2.48	0.48
10:LD:33:ARG:HH21	25:LT:27:LEU:HD22	1.78	0.48
10:LD:42:ASN:ND2	25:LT:69:GLN:OE1	2.37	0.48
14:LH:137:SER:HB2	14:LH:145:ILE:CG1	2.42	0.48
18:LM:15:VAL:CG2	18:LM:50:MET:HE1	2.38	0.48
20:LO:190:ASP:HA	20:LO:193:THR:HG22	1.96	0.48
21:LP:36:ILE:HA	21:LP:39:MET:SD	2.53	0.48
34:Lc:53:PRO:HG2	34:Lc:56:ARG:HB3	1.94	0.48
44:Lm:80:PRO:HA	44:Lm:83:ARG:HG2	1.94	0.48
48:Lr:86:ALA:O	48:Lr:89:THR:HG22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:500:A:O2'	49:S2:501:C:H5'	2.13	0.48
49:S2:987:A:H4'	75:Sa:70:LYS:HD3	1.93	0.48
49:S2:1309:C:H2'	49:S2:1310:U:O4'	2.13	0.48
49:S2:1431:G:H2'	49:S2:1432:U:C6	2.47	0.48
49:S2:1514:G:O2'	49:S2:1515:G:H5'	2.13	0.48
49:S2:1534:C:H5''	49:S2:1536:G:O4'	2.13	0.48
49:S2:1623:A:C5'	67:SS:133:GLY:HA3	2.43	0.48
49:S2:1628:C:H2'	49:S2:1629:C:H6	1.78	0.48
49:S2:1754:G:O6	49:S2:1779:G:H1'	2.13	0.48
50:SA:206:ASP:O	50:SA:210:ILE:HG22	2.13	0.48
51:SB:62:LEU:HD23	51:SB:91:VAL:HG11	1.94	0.48
51:SB:69:VAL:O	51:SB:83:LYS:HA	2.14	0.48
57:SH:167:GLU:O	57:SH:170:VAL:HG12	2.12	0.48
60:SK:30:PRO:O	60:SK:41:PRO:HB3	2.13	0.48
61:SL:35:ARG:HD3	61:SL:50:ALA:O	2.12	0.48
75:Sa:10:ARG:HD2	75:Sa:12:LYS:HB3	1.95	0.48
4:L5:168:C:H2'	4:L5:169:G:H8	1.78	0.48
4:L5:433:A:C2	4:L5:3867:A:H4'	2.49	0.48
4:L5:1645:C:H2'	4:L5:1646:A:C8	2.48	0.48
4:L5:1973:G:H5''	4:L5:1974:U:C2'	2.43	0.48
4:L5:2295:C:O2'	9:LC:45:ARG:NH2	2.46	0.48
4:L5:2604:C:O2'	4:L5:2605:G:H5'	2.14	0.48
4:L5:4927:G:N3	4:L5:4927:G:H5''	2.28	0.48
4:L5:5007:A:N7	4:L5:5042:A:O2'	2.40	0.48
6:L8:6:C:H2'	6:L8:7:U:C6	2.48	0.48
7:LA:171:GLY:O	47:Lp:68:ALA:HB2	2.13	0.48
9:LC:190:ARG:O	9:LC:195:LYS:HD3	2.14	0.48
10:LD:60:ILE:HD11	10:LD:93:THR:HA	1.94	0.48
18:LM:104:MET:HE3	18:LM:109:ARG:HG2	1.94	0.48
19:LN:113:LEU:CD2	19:LN:136:ASP:HB3	2.40	0.48
19:LN:121:VAL:HG22	19:LN:129:PHE:O	2.13	0.48
42:Lk:8:ILE:H	42:Lk:8:ILE:HD12	1.78	0.48
49:S2:610:G:H2'	49:S2:611:G:O4'	2.12	0.48
49:S2:789:G:H2'	49:S2:790:C:C4'	2.43	0.48
49:S2:1127:C:H4'	76:Sb:17:ARG:HD2	1.95	0.48
49:S2:1235:G:N7	67:SS:137:LYS:NZ	2.56	0.48
49:S2:1366:G:H2'	49:S2:1367:U:O4'	2.13	0.48
49:S2:1369:A:OP1	66:SR:2:GLY:N	2.46	0.48
51:SB:30:TRP:CE2	63:SO:19:PRO:HD3	2.48	0.48
54:SE:89:VAL:HG22	54:SE:100:ARG:NE	2.27	0.48
56:SG:33:ALA:HA	56:SG:52:ILE:CG2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SG:179:LEU:HD12	56:SG:180:VAL:O	2.12	0.48
66:SR:107:LYS:HD3	66:SR:110:ASP:CB	2.42	0.48
72:SX:87:ASN:HB2	72:SX:90:CYS:SG	2.52	0.48
80:Sg:240:CYS:HG	80:Sg:291:TRP:CD1	2.31	0.48
4:L5:1281:G:C5	11:LE:128:HIS:HD2	2.31	0.48
4:L5:1800:U:O2'	4:L5:1801:A:H5'	2.14	0.48
4:L5:2073:C:H5'	12:LF:213:LEU:O	2.13	0.48
4:L5:2698:G:H2'	4:L5:2699:C:O4'	2.14	0.48
4:L5:2894:A:C2'	4:L5:2895:A:H5'	2.43	0.48
4:L5:2905:C:H2'	4:L5:3589:G:N2	2.29	0.48
4:L5:4417:C:N4	4:L5:4422:A:O2'	2.46	0.48
5:L7:120:U:O2	10:LD:259:LYS:HG2	2.14	0.48
6:L8:41:A:O2'	41:Lj:59:THR:OG1	2.21	0.48
8:LB:168:MET:CG	8:LB:178:ALA:HA	2.43	0.48
13:LG:180:PRO:HG3	13:LG:223:ARG:NH1	2.29	0.48
16:LJ:19:LYS:HE2	16:LJ:21:CYS:SG	2.54	0.48
16:LJ:103:GLY:HA3	16:LJ:157:ILE:CD1	2.43	0.48
17:LL:116:ARG:NH2	17:LL:155:MET:O	2.41	0.48
21:LP:30:ARG:HD2	21:LP:63:TYR:HE2	1.78	0.48
22:LQ:34:PHE:CE1	22:LQ:38:ARG:HG3	2.49	0.48
26:LU:42:PHE:CZ	26:LU:46:ARG:HD2	2.49	0.48
49:S2:153:G:H21	56:SG:13:GLN:HE22	1.61	0.48
49:S2:525:A:OP2	79:Se:26:LYS:NZ	2.36	0.48
49:S2:753:C:C4'	49:S2:792:C:H4'	2.36	0.48
49:S2:1368:U:H2'	49:S2:1370:A:OP2	2.12	0.48
49:S2:1485:U:H2'	49:S2:1486:A:O4'	2.14	0.48
53:SD:137:VAL:HG13	53:SD:150:MET:O	2.13	0.48
55:SF:127:ARG:NH2	77:Sc:23:SER:HB2	2.25	0.48
55:SF:192:LYS:HE3	55:SF:192:LYS:HB3	1.72	0.48
68:ST:5:THR:HG22	68:ST:8:ASP:OD2	2.13	0.48
68:ST:77:LYS:HG3	68:ST:94:ARG:NH1	2.28	0.48
70:SV:15:ARG:HH12	70:SV:33:GLN:HB2	1.78	0.48
4:L5:675:C:H5'	4:L5:676:C:OP2	2.13	0.48
4:L5:1097:C:H2'	4:L5:1098:G:C8	2.49	0.48
4:L5:1766:A:C8	67:SS:116:LYS:HE2	2.48	0.48
4:L5:2017:A:H3'	4:L5:2018:C:C6	2.48	0.48
4:L5:3635:A:C2'	4:L5:3636:C:H5'	2.43	0.48
4:L5:4369:A:H4'	46:Lo:67:VAL:HG21	1.95	0.48
4:L5:4390:A:H2'	4:L5:4391:G:O4'	2.14	0.48
4:L5:4956:A:O2'	4:L5:4957:C:H5'	2.13	0.48
4:L5:5022:U:O2'	4:L5:5024:C:H5''	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:5025:C:O2'	4:L5:5028:G:H1'	2.13	0.48
5:L7:18:C:O2'	5:L7:19:C:H5'	2.14	0.48
7:LA:246:LEU:HD23	7:LA:247:ARG:O	2.13	0.48
9:LC:124:ILE:HG21	9:LC:264:TYR:OH	2.13	0.48
11:LE:96:VAL:HG11	11:LE:105:ARG:NH2	2.28	0.48
27:LV:10:SER:OG	27:LV:11:GLY:N	2.47	0.48
30:LY:21:ALA:HB1	30:LY:25:ILE:HD11	1.95	0.48
37:Lf:52:LYS:HA	37:Lf:66:LYS:O	2.13	0.48
38:Lg:42:PRO:CD	38:Lg:56:VAL:HG21	2.38	0.48
49:S2:39:A:H2'	49:S2:40:A:O4'	2.14	0.48
49:S2:46:A:H4'	49:S2:47:G:C5'	2.42	0.48
49:S2:564:A:H2'	49:S2:565:G:O4'	2.13	0.48
49:S2:803:C:H5	49:S2:860:G:H1	1.58	0.48
49:S2:847:A:OP1	54:SE:108:ARG:NH2	2.46	0.48
49:S2:1406:G:H2'	49:S2:1407:U:C6	2.48	0.48
50:SA:66:VAL:HG21	50:SA:185:MET:HB3	1.95	0.48
51:SB:92:GLN:NE2	51:SB:229:MET:SD	2.87	0.48
52:SC:187:ARG:NH1	52:SC:192:LEU:HD21	2.28	0.48
54:SE:17:HIS:HB2	54:SE:108:ARG:HA	1.94	0.48
55:SF:174:ALA:O	55:SF:178:ILE:HG12	2.14	0.48
65:SQ:17:LYS:O	65:SQ:18:THR:OG1	2.25	0.48
73:SY:55:ILE:HG22	73:SY:75:ILE:CG2	2.42	0.48
74:SZ:48:VAL:HG12	74:SZ:80:ARG:HD2	1.94	0.48
79:Se:31:ARG:NH2	79:Se:31:ARG:HB3	2.28	0.48
4:L5:499:G:N3	4:L5:499:G:H2'	2.29	0.48
4:L5:730:G:C5	12:LF:73:ARG:HD3	2.49	0.48
4:L5:1199:G:H2'	4:L5:1200:G:C8	2.49	0.48
4:L5:1577:G:O2'	4:L5:1612:G:H4'	2.14	0.48
4:L5:2753:G:H2'	4:L5:2754:G:H1'	1.95	0.48
4:L5:3868:G:H22	4:L5:3900:G:H1'	1.79	0.48
4:L5:4143:G:N3	4:L5:4145:C:H1'	2.28	0.48
5:L7:1:G:H4'	10:LD:265:ARG:HD3	1.95	0.48
5:L7:49:A:N6	10:LD:57:ASN:O	2.47	0.48
8:LB:107:ALA:CB	8:LB:201:LEU:HD21	2.42	0.48
8:LB:189:THR:CG2	8:LB:192:GLU:HG2	2.38	0.48
9:LC:302:LEU:HD22	22:LQ:38:ARG:HB3	1.95	0.48
23:LR:28:GLU:HB3	23:LR:31:GLU:OE2	2.14	0.48
24:LS:112:ASP:OD1	24:LS:116:ARG:NH1	2.35	0.48
30:LY:71:VAL:HG22	30:LY:81:TYR:O	2.13	0.48
49:S2:373:G:H21	61:SL:83:GLN:NE2	2.11	0.48
49:S2:1086:G:O2'	49:S2:1087:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1140:G:H1'	49:S2:1151:G:O2'	2.14	0.48
49:S2:1333:U:O2'	49:S2:1334:G:H5'	2.14	0.48
49:S2:1422:G:H1'	49:S2:1424:G:O4'	2.13	0.48
49:S2:1428:G:H22	49:S2:1585:U:H5'	1.78	0.48
52:SC:133:TYR:CD1	52:SC:216:MET:HA	2.48	0.48
57:SH:10:LYS:HA	57:SH:45:ILE:O	2.12	0.48
57:SH:98:ARG:CG	57:SH:125:VAL:HG13	2.41	0.48
65:SQ:86:GLN:HG3	65:SQ:119:LEU:O	2.14	0.48
71:SW:111:MET:CE	71:SW:119:LYS:HG3	2.43	0.48
80:Sg:188:HIS:HB3	80:Sg:219:TRP:CZ3	2.49	0.48
2:B4:12:U:H1'	4:L5:3770:U:O2'	2.14	0.48
4:L5:93:G:H2'	4:L5:94:A:C8	2.48	0.48
4:L5:1284:G:O2'	4:L5:1285:U:H5''	2.13	0.48
4:L5:2028:C:O2'	4:L5:2029:A:H5'	2.13	0.48
4:L5:2379:A:H2'	4:L5:2380:G:O4'	2.13	0.48
4:L5:3609:G:O2'	4:L5:3610:A:H5'	2.13	0.48
4:L5:3805:U:O2'	4:L5:3806:G:H5'	2.14	0.48
4:L5:4904:G:O2'	4:L5:4905:C:H5'	2.14	0.48
6:L8:29:G:O2'	6:L8:30:U:H5'	2.14	0.48
7:LA:146:THR:OG1	7:LA:160:SER:HB3	2.14	0.48
9:LC:7:LEU:CD1	9:LC:23:THR:HG22	2.44	0.48
15:LI:102:MET:C	15:LI:103:LEU:HD22	2.39	0.48
28:LW:91:MET:O	28:LW:95:ASN:N	2.47	0.48
41:Lj:34:CYS:HB3	41:Lj:39:TYR:H	1.78	0.48
49:S2:392:A:C2'	49:S2:393:U:H5'	2.44	0.48
49:S2:582:C:O2'	73:SY:33:ALA:HB2	2.13	0.48
49:S2:888:U:O2'	49:S2:896:U:N3	2.46	0.48
49:S2:1449:G:H1'	49:S2:1450:G:H5'	1.95	0.48
49:S2:1584:G:O3'	49:S2:1585:U:H3'	2.13	0.48
51:SB:133:TYR:CD1	51:SB:181:LEU:HD22	2.49	0.48
53:SD:132:LYS:HE2	53:SD:191:PRO:HA	1.96	0.48
56:SG:36:VAL:O	56:SG:49:VAL:HA	2.14	0.48
57:SH:75:ILE:HG13	57:SH:75:ILE:O	2.14	0.48
57:SH:165:ASN:OD1	57:SH:166:VAL:HG13	2.13	0.48
58:SI:43:ILE:HG12	58:SI:57:ALA:HA	1.95	0.48
58:SI:64:ASN:HB3	58:SI:186:ASP:HB3	1.95	0.48
69:SU:67:LYS:HD3	69:SU:76:THR:OG1	2.13	0.48
71:SW:77:PRO:HG2	71:SW:79:PHE:CE2	2.49	0.48
71:SW:111:MET:HE1	71:SW:116:ALA:HA	1.96	0.48
75:Sa:39:PHE:HD1	75:Sa:70:LYS:HG3	1.79	0.48
80:Sg:155:ARG:O	80:Sg:165:ILE:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:120:A:H2'	4:L5:149:A:H61	1.79	0.48
4:L5:493:G:N2	4:L5:661:C:O2	2.47	0.48
4:L5:1077:C:C2'	4:L5:1078:A:H5'	2.44	0.48
4:L5:1423:U:O2'	4:L5:1424:G:H5'	2.14	0.48
4:L5:1829:G:C2'	4:L5:1830:G:H5'	2.43	0.48
4:L5:1925:G:O2'	4:L5:1926:C:H5'	2.14	0.48
4:L5:1965:G:H2'	4:L5:1965:G:N3	2.28	0.48
4:L5:2480:G:H1	4:L5:2498:C:H42	1.61	0.48
4:L5:3748:A:HO2'	7:LA:223:SER:HG	1.45	0.48
8:LB:46:PHE:CZ	8:LB:84:MET:HG3	2.49	0.48
8:LB:103:LYS:HD3	8:LB:149:ASP:OD2	2.14	0.48
9:LC:67:TRP:CZ2	9:LC:78:ARG:HD2	2.48	0.48
15:LI:190:LEU:HD13	15:LI:197:VAL:CG2	2.42	0.48
39:Lh:13:LYS:HG2	39:Lh:16:GLU:OE2	2.13	0.48
44:Lm:94:MET:O	44:Lm:95:ILE:HD13	2.12	0.48
45:Ln:2:ARG:HB3	45:Ln:5:TRP:CD1	2.49	0.48
49:S2:583:C:C2'	49:S2:584:G:H5'	2.44	0.48
49:S2:732:U:OP1	49:S2:733:C:H5''	2.14	0.48
49:S2:828:G:O2'	49:S2:829:C:H5'	2.14	0.48
49:S2:1132:C:H3'	49:S2:1133:A:H5''	1.96	0.48
51:SB:79:VAL:HG22	51:SB:80:ALA:H	1.78	0.48
51:SB:119:THR:OG1	51:SB:155:TYR:HA	2.14	0.48
52:SC:78:LEU:O	52:SC:78:LEU:HD23	2.14	0.48
52:SC:205:VAL:O	52:SC:224:THR:OG1	2.29	0.48
54:SE:178:GLY:O	54:SE:231:GLY:HA3	2.14	0.48
58:SI:3:ILE:H	58:SI:3:ILE:HD12	1.79	0.48
58:SI:103:LEU:CG	58:SI:170:LYS:HG3	2.42	0.48
59:SJ:104:ASP:OD1	59:SJ:105:PHE:N	2.47	0.48
61:SL:72:ILE:CD1	61:SL:129:GLY:HA2	2.43	0.48
64:SP:34:MET:O	64:SP:42:ARG:HD3	2.13	0.48
71:SW:33:VAL:HG23	71:SW:110:ILE:HD11	1.96	0.48
72:SX:115:ILE:CG2	72:SX:118:VAL:HB	2.44	0.48
75:Sa:21:ILE:HD12	75:Sa:72:HIS:CG	2.49	0.48
4:L5:109:G:OP2	17:LL:74:ARG:NH2	2.47	0.48
4:L5:142:G:O2'	4:L5:144:G:OP1	2.12	0.48
4:L5:500:G:H1'	4:L5:504:G:H2'	1.95	0.48
4:L5:740:G:O2'	4:L5:741:C:H5'	2.13	0.48
4:L5:986:C:H2'	4:L5:987:C:O4'	2.13	0.48
4:L5:1811:G:H4'	33:Lb:60:ASN:ND2	2.27	0.48
4:L5:2580:U:P	31:LZ:36:ARG:HH22	2.37	0.48
4:L5:2634:C:H2'	4:L5:2635:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:94:G:C5	41:Lj:84:PRO:HG3	2.49	0.48
9:LC:292:ILE:HG23	22:LQ:128:LEU:HD13	1.96	0.48
9:LC:340:ILE:HG21	11:LE:50:LEU:CD1	2.40	0.48
13:LG:175:ARG:NH1	13:LG:230:TYR:HB3	2.28	0.48
14:LH:115:ARG:O	14:LH:117:PHE:N	2.47	0.48
17:LL:9:VAL:HG23	32:La:49:HIS:CE1	2.49	0.48
17:LL:185:ALA:HB2	40:Li:7:MET:HE1	1.96	0.48
18:LM:26:ALA:HB2	18:LM:77:TRP:HZ3	1.78	0.48
21:LP:18:ARG:HG2	21:LP:147:GLU:CB	2.43	0.48
24:LS:99:ASP:OD2	24:LS:108:GLN:NE2	2.47	0.48
36:Le:108:ARG:HA	36:Le:111:ILE:HG22	1.95	0.48
49:S2:307:G:O2'	58:SI:45:THR:HB	2.14	0.48
49:S2:502:C:H3'	49:S2:503:C:C6	2.48	0.48
49:S2:1027:A:H5'	49:S2:1028:A:OP2	2.14	0.48
49:S2:1095:U:O2'	71:SW:20:ARG:HD2	2.14	0.48
49:S2:1529:C:H5'	49:S2:1666:C:OP1	2.14	0.48
49:S2:1535:U:H1'	55:SF:88:MET:HE1	1.96	0.48
49:S2:1589:A:H2'	49:S2:1590:C:C6	2.49	0.48
49:S2:1755:C:H2'	49:S2:1777:G:H21	1.78	0.48
66:SR:68:GLY:O	66:SR:69:ILE:HD13	2.13	0.48
4:L5:965:G:H3'	4:L5:2256:C:O2	2.14	0.48
4:L5:1176:C:O2'	4:L5:1177:U:H5'	2.14	0.48
4:L5:1446:C:H2'	4:L5:1447:C:O4'	2.13	0.48
4:L5:2060:G:H21	24:LS:115:ALA:HB2	1.76	0.48
4:L5:4486:C:H2'	4:L5:4487:A:H5'	1.96	0.48
4:L5:4765:G:H2'	4:L5:4766:C:O4'	2.14	0.48
4:L5:5054:C:H4'	4:L5:5055:G:O5'	2.14	0.48
6:L8:20:A:H2'	6:L8:21:C:O4'	2.14	0.48
9:LC:10:VAL:HG22	9:LC:153:VAL:CG1	2.44	0.48
12:LF:240:ILE:O	12:LF:244:ILE:HG13	2.14	0.48
16:LJ:15:LEU:HD23	16:LJ:15:LEU:H	1.79	0.48
17:LL:65:ARG:HG3	32:La:69:PHE:CD2	2.49	0.48
23:LR:124:TYR:O	23:LR:127:VAL:HG12	2.14	0.48
25:LT:114:GLN:O	25:LT:118:GLU:HG2	2.14	0.48
36:Le:22:ARG:HB3	36:Le:25:SER:OG	2.14	0.48
48:Lr:86:ALA:O	48:Lr:90:LEU:HG	2.14	0.48
49:S2:827:A:H2'	49:S2:828:G:H5'	1.95	0.48
49:S2:1648:G:H1'	49:S2:1649:U:H5	1.79	0.48
50:SA:35:GLU:O	50:SA:38:ILE:HG12	2.14	0.48
51:SB:189:ILE:HB	51:SB:190:PRO:HD3	1.95	0.48
52:SC:66:LEU:HD23	52:SC:93:ILE:HD13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:45:ARG:NH1	53:SD:87:TYR:OH	2.46	0.48
54:SE:180:LEU:HD12	54:SE:228:ILE:HB	1.96	0.48
54:SE:229:GLY:HA2	54:SE:235:TRP:CD1	2.49	0.48
57:SH:177:TYR:CE1	57:SH:181:THR:HG21	2.49	0.48
59:SJ:50:LEU:O	59:SJ:54:ARG:HG3	2.14	0.48
63:SO:43:HIS:HD2	63:SO:55:ARG:HG3	1.75	0.48
64:SP:87:PRO:O	64:SP:90:VAL:HG23	2.14	0.48
66:SR:71:ILE:HD11	66:SR:73:LEU:CD2	2.44	0.48
74:SZ:92:LEU:HD12	74:SZ:109:TYR:HE1	1.78	0.48
80:Sg:104:HIS:NE2	80:Sg:130:LYS:HD3	2.29	0.48
80:Sg:291:TRP:CE2	80:Sg:298:LEU:HD13	2.49	0.48
2:B4:15:G:H2'	2:B4:16:U:C6	2.49	0.47
4:L5:23:C:H2'	4:L5:24:G:O4'	2.14	0.47
4:L5:476:G:O2'	4:L5:477:C:H5'	2.14	0.47
4:L5:663:G:H2'	4:L5:664:G:O4'	2.14	0.47
4:L5:1393:G:O2'	4:L5:4352:U:OP1	2.31	0.47
4:L5:1661:C:O2'	4:L5:1662:C:H5'	2.14	0.47
4:L5:1863:U:OP1	15:LI:15:LYS:HE3	2.13	0.47
4:L5:2275:G:H2'	4:L5:2276:A:C8	2.49	0.47
4:L5:4119:C:H41	38:Lg:100:GLN:HE21	1.62	0.47
4:L5:4130:C:H5	4:L5:4154:G:H1	1.60	0.47
4:L5:4250:G:O2'	16:LJ:129:ASP:HB2	2.14	0.47
4:L5:4532:U:OP2	4:L5:4554:G:N1	2.39	0.47
9:LC:25:PRO:HG2	9:LC:28:PHE:CE2	2.48	0.47
12:LF:102:SER:HB2	12:LF:103:PRO:HD2	1.96	0.47
16:LJ:173:ILE:HG22	16:LJ:175:LEU:HD23	1.96	0.47
17:LL:65:ARG:HG3	32:La:69:PHE:CD1	2.49	0.47
17:LL:108:GLU:OE1	17:LL:108:GLU:N	2.44	0.47
22:LQ:41:SER:OG	22:LQ:44:ASN:ND2	2.47	0.47
22:LQ:88:ASP:HB2	22:LQ:109:ALA:HB2	1.96	0.47
36:Le:43:ASN:O	36:Le:47:ARG:HD3	2.14	0.47
39:Lh:25:LYS:HG2	39:Lh:54:ILE:CD1	2.35	0.47
49:S2:78:C:P	56:SG:173:ALA:HB3	2.53	0.47
49:S2:568:C:H2'	49:S2:569:A:C8	2.49	0.47
49:S2:591:U:C4	79:Se:26:LYS:HE2	2.49	0.47
50:SA:190:SER:O	50:SA:191:ARG:HB3	2.14	0.47
53:SD:58:VAL:HG12	53:SD:66:ILE:CG2	2.44	0.47
59:SJ:93:LYS:HB2	59:SJ:96:TYR:CE1	2.49	0.47
68:ST:83:GLN:HB2	68:ST:93:SER:HB2	1.95	0.47
69:SU:18:HIS:O	69:SU:92:HIS:HA	2.12	0.47
72:SX:46:HIS:ND1	72:SX:103:ALA:HB2	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:252:C:O2'	4:L5:253:G:H5'	2.14	0.47
4:L5:423:G:H2'	4:L5:424:U:O4'	2.15	0.47
4:L5:1097:C:H1'	4:L5:1199:G:N2	2.29	0.47
4:L5:1202:C:H3'	4:L5:1203:G:C5'	2.44	0.47
4:L5:1511:U:O2'	4:L5:1512:G:H5'	2.13	0.47
4:L5:4376:A:H5''	4:L5:4377:G:O5'	2.14	0.47
4:L5:4457:U:H1'	8:LB:252:ALA:HB3	1.95	0.47
4:L5:4742:G:N2	4:L5:4959:U:H1'	2.29	0.47
5:L7:22:A:H1'	10:LD:266:TRP:CZ3	2.49	0.47
11:LE:150:LEU:CD1	11:LE:164:PHE:HB2	2.43	0.47
14:LH:92:MET:SD	14:LH:161:ILE:HD11	2.54	0.47
14:LH:124:ARG:NH1	14:LH:164:ALA:O	2.46	0.47
15:LI:63:GLU:OE1	15:LI:63:GLU:N	2.47	0.47
18:LM:122:ILE:HD12	20:LO:189:ILE:CD1	2.44	0.47
20:LO:20:ALA:HB1	20:LO:84:VAL:HG12	1.96	0.47
20:LO:76:PRO:HB3	20:LO:138:LEU:HG	1.95	0.47
21:LP:75:GLN:OE1	21:LP:75:GLN:N	2.47	0.47
29:LX:106:LYS:HE3	29:LX:124:VAL:O	2.14	0.47
36:Le:85:LEU:HD21	36:Le:115:ALA:HB2	1.96	0.47
43:LI:25:GLN:OE1	43:LI:28:ARG:NE	2.46	0.47
49:S2:493:A:O2'	49:S2:494:C:H5'	2.13	0.47
49:S2:944:A:H5'	63:SO:134:PRO:CB	2.44	0.47
49:S2:1256:G:O6	78:Sd:31:ILE:HB	2.14	0.47
49:S2:1601:A:H4'	49:S2:1602:U:O5'	2.15	0.47
49:S2:1858:G:O2'	49:S2:1859:A:H5'	2.14	0.47
51:SB:225:LEU:O	51:SB:229:MET:HG2	2.14	0.47
61:SL:120:VAL:HG23	61:SL:120:VAL:O	2.14	0.47
68:ST:42:HIS:HB3	68:ST:93:SER:CB	2.44	0.47
69:SU:24:LEU:CD2	69:SU:112:VAL:HG22	2.44	0.47
73:SY:57:VAL:HB	73:SY:60:PHE:HE2	1.79	0.47
80:Sg:168:CYS:HB2	80:Sg:195:LEU:HG	1.96	0.47
4:L5:452:A:H4'	4:L5:453:G:H5'	1.96	0.47
4:L5:499:G:H21	4:L5:504:G:N2	2.12	0.47
4:L5:923:C:H3'	4:L5:925:C:OP2	2.15	0.47
4:L5:1591:U:N3	4:L5:4555:U:OP1	2.46	0.47
4:L5:1811:G:H21	33:Lb:57:MET:CE	2.28	0.47
4:L5:1837:A:H4'	25:LT:130:ARG:O	2.14	0.47
4:L5:2116:C:O2'	4:L5:2117:G:H2'	2.13	0.47
4:L5:2519:U:H1'	4:L5:2520:C:C6	2.49	0.47
4:L5:2906:G:H22	4:L5:2909:C:H1'	1.80	0.47
4:L5:4924:C:H2'	4:L5:4925:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:142:U:H2'	6:L8:143:G:O4'	2.14	0.47
8:LB:165:HIS:HB3	8:LB:180:LEU:HD12	1.96	0.47
10:LD:33:ARG:NH1	10:LD:72:ASP:OD1	2.48	0.47
10:LD:61:ILE:HG23	10:LD:79:TYR:CE2	2.49	0.47
10:LD:90:VAL:CG1	10:LD:231:VAL:HG11	2.44	0.47
12:LF:214:SER:O	12:LF:247:MET:HG2	2.14	0.47
12:LF:226:HIS:HB3	12:LF:229:GLU:HG2	1.95	0.47
14:LH:85:THR:O	14:LH:86:LEU:HD23	2.14	0.47
18:LM:38:VAL:HG21	18:LM:50:MET:HB3	1.97	0.47
19:LN:73:ARG:HB3	19:LN:89:VAL:CG2	2.34	0.47
21:LP:48:LEU:HB2	21:LP:92:LEU:HD21	1.96	0.47
33:Lb:68:ARG:O	33:Lb:72:ILE:HG13	2.15	0.47
39:Lh:47:ILE:O	39:Lh:51:ARG:HB2	2.13	0.47
49:S2:323:C:H5'	49:S2:324:C:OP1	2.14	0.47
49:S2:551:U:H2'	49:S2:552:G:C1'	2.44	0.47
49:S2:695:C:OP1	49:S2:695:C:H4'	2.14	0.47
49:S2:1035:A:H2'	49:S2:1036:A:O4'	2.14	0.47
49:S2:1115:U:O2	49:S2:1117:C:H3'	2.14	0.47
49:S2:1232:U:H2'	49:S2:1233:G:C8	2.50	0.47
49:S2:1493:C:H1'	49:S2:1498:A:N6	2.30	0.47
50:SA:121:LEU:HD21	50:SA:145:ILE:CD1	2.44	0.47
50:SA:205:ARG:NH1	50:SA:210:ILE:HG13	2.29	0.47
51:SB:59:SER:O	51:SB:63:LYS:HG3	2.14	0.47
52:SC:88:ILE:HG13	52:SC:88:ILE:O	2.15	0.47
54:SE:71:LYS:O	54:SE:90:ILE:HA	2.15	0.47
56:SG:57:ASP:CA	56:SG:106:LEU:HD13	2.45	0.47
56:SG:130:PRO:O	56:SG:131:ARG:HG2	2.13	0.47
58:SI:36:THR:OG1	58:SI:57:ALA:O	2.11	0.47
58:SI:148:LYS:HE3	58:SI:152:ARG:NH2	2.29	0.47
66:SR:60:ARG:NE	66:SR:66:VAL:HG21	2.20	0.47
67:SS:89:ASP:HB3	67:SS:92:ASP:O	2.14	0.47
73:SY:18:LEU:HD23	73:SY:20:ARG:NE	2.25	0.47
75:Sa:44:ILE:HG13	75:Sa:67:LEU:HD21	1.96	0.47
75:Sa:49:ALA:O	75:Sa:53:ILE:HG23	2.15	0.47
80:Sg:288:SER:C	80:Sg:289:LEU:HD22	2.40	0.47
4:L5:501:C:H42	4:L5:506:C:N4	2.11	0.47
4:L5:650:C:H2'	4:L5:651:C:C6	2.50	0.47
4:L5:660:A:H2'	4:L5:661:C:O4'	2.15	0.47
4:L5:1445:U:H2'	4:L5:1446:C:C6	2.48	0.47
4:L5:2045:G:O2'	4:L5:2046:G:H5''	2.15	0.47
4:L5:2078:C:OP1	36:Le:64:LYS:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:110:U:H3	6:L8:112:G:H1'	1.78	0.47
7:LA:245:ARG:HG3	7:LA:247:ARG:HH21	1.79	0.47
13:LG:63:LEU:HD13	19:LN:32:GLN:HB2	1.94	0.47
17:LL:128:PRO:HB3	17:LL:134:PRO:HD2	1.96	0.47
18:LM:8:GLU:HG2	24:LS:151:LYS:HB2	1.95	0.47
18:LM:25:VAL:CG2	18:LM:38:VAL:HG12	2.44	0.47
24:LS:159:LEU:HD23	24:LS:159:LEU:O	2.15	0.47
31:LZ:17:ARG:NH2	31:LZ:18:TYR:OH	2.43	0.47
35:Ld:68:LEU:HD22	35:Ld:106:VAL:O	2.14	0.47
49:S2:694:G:H5'	49:S2:695:C:OP2	2.15	0.47
49:S2:1203:G:O2'	49:S2:1204:A:H5'	2.15	0.47
49:S2:1238:U:O2'	64:SP:126:VAL:HG23	2.14	0.47
49:S2:1622:U:O4	64:SP:121:ILE:HD12	2.13	0.47
51:SB:125:VAL:HG23	51:SB:127:VAL:HG23	1.96	0.47
54:SE:42:LEU:HD23	54:SE:43:PRO:O	2.15	0.47
54:SE:92:ILE:HG23	73:SY:17:LEU:HD21	1.95	0.47
54:SE:139:LEU:HB3	54:SE:147:ILE:HB	1.96	0.47
55:SF:96:ALA:HA	55:SF:99:ILE:CG2	2.44	0.47
57:SH:116:ARG:NH2	57:SH:121:THR:HA	2.29	0.47
65:SQ:47:LEU:CD1	65:SQ:78:VAL:HG23	2.45	0.47
66:SR:100:PRO:HD3	66:SR:118:GLN:O	2.14	0.47
66:SR:124:VAL:O	66:SR:126:MET:HG3	2.14	0.47
67:SS:30:ILE:HD13	67:SS:45:LEU:HD21	1.97	0.47
67:SS:36:VAL:HG23	67:SS:40:TYR:HD2	1.80	0.47
67:SS:110:ASP:HA	67:SS:113:ARG:HB3	1.96	0.47
68:ST:11:GLN:HE21	68:ST:62:ARG:HH21	1.61	0.47
69:SU:36:CYS:SG	69:SU:53:PRO:HB3	2.55	0.47
80:Sg:297:THR:HA	80:Sg:310:TRP:O	2.14	0.47
80:Sg:300:ALA:O	80:Sg:307:VAL:HG13	2.14	0.47
4:L5:504:G:N3	4:L5:504:G:H5'	2.29	0.47
4:L5:684:G:C4'	11:LE:100:LYS:HB3	2.44	0.47
4:L5:2412:A:H2'	4:L5:2413:U:C6	2.49	0.47
4:L5:2517:A:O4'	38:Lg:62:LYS:HE2	2.14	0.47
4:L5:2608:G:O2'	4:L5:2609:G:H5'	2.14	0.47
4:L5:4158:C:O2'	4:L5:4159:C:H5'	2.14	0.47
4:L5:4873:G:H4'	4:L5:4874:A:OP2	2.15	0.47
6:L8:71:A:H4'	6:L8:72:A:O5'	2.14	0.47
9:LC:109:ARG:O	9:LC:110:ARG:HB2	2.14	0.47
13:LG:106:THR:HG22	13:LG:195:HIS:NE2	2.29	0.47
18:LM:24:LEU:HD11	18:LM:86:TRP:CD2	2.49	0.47
23:LR:10:LEU:HB3	23:LR:41:ILE:HD13	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LS:84:TYR:CB	24:LS:124:ILE:HG22	2.39	0.47
27:LV:20:LEU:HB2	27:LV:55:ALA:O	2.15	0.47
32:La:11:LEU:HD23	32:La:17:HIS:CD2	2.49	0.47
39:Lh:77:LYS:HA	39:Lh:77:LYS:HD3	1.73	0.47
49:S2:338:G:C3'	49:S2:339:A:H5''	2.43	0.47
49:S2:979:C:O2'	49:S2:980:A:H5'	2.14	0.47
49:S2:1056:U:C2'	49:S2:1057:C:H5'	2.44	0.47
49:S2:1070:A:H2'	49:S2:1071:G:O4'	2.14	0.47
49:S2:1240:A:C2	64:SP:100:LYS:HB2	2.50	0.47
49:S2:1255:G:OP1	49:S2:1256:G:O2'	2.32	0.47
49:S2:1497:G:H4'	49:S2:1498:A:O5'	2.14	0.47
49:S2:1609:C:OP2	67:SS:132:ARG:HG3	2.14	0.47
49:S2:1650:A:H2'	49:S2:1651:A:O4'	2.14	0.47
65:SQ:100:VAL:HG22	65:SQ:101:ASP:H	1.79	0.47
73:SY:44:LEU:O	73:SY:47:MET:HB3	2.14	0.47
73:SY:56:PHE:O	73:SY:73:GLY:HA2	2.15	0.47
74:SZ:98:LYS:HB3	74:SZ:110:THR:HB	1.95	0.47
2:B4:40:C:O2'	2:B4:41:C:H5'	2.14	0.47
4:L5:310:G:H5''	40:Li:85:ARG:CZ	2.45	0.47
4:L5:323:C:H2'	4:L5:324:A:C8	2.50	0.47
4:L5:500:G:H1'	4:L5:504:G:H3'	1.96	0.47
4:L5:513:U:H2'	4:L5:515:C:H6	1.80	0.47
4:L5:1185:G:O2'	4:L5:1186:U:H5'	2.15	0.47
4:L5:1430:C:O2'	4:L5:1431:C:H5'	2.15	0.47
4:L5:1929:A:H5'	4:L5:1930:U:OP1	2.14	0.47
4:L5:1951:G:O2'	24:LS:95:ARG:NH1	2.44	0.47
4:L5:1957:U:H2'	4:L5:1958:A:O4'	2.14	0.47
4:L5:1972:G:H1	4:L5:1994:C:N4	2.13	0.47
4:L5:2700:G:H2'	4:L5:2701:U:O4'	2.14	0.47
4:L5:2712:G:C2'	4:L5:2713:C:H5'	2.44	0.47
4:L5:2720:C:H2'	4:L5:2721:G:H5''	1.97	0.47
4:L5:4537:C:H2'	4:L5:4538:G:H8	1.80	0.47
4:L5:4916:G:O2'	4:L5:4917:C:H5'	2.14	0.47
7:LA:207:VAL:HG23	7:LA:208:GLU:CD	2.40	0.47
16:LJ:103:GLY:O	16:LJ:157:ILE:HD11	2.15	0.47
17:LL:179:PHE:CE2	32:La:131:ARG:HB2	2.50	0.47
22:LQ:82:VAL:O	22:LQ:102:ALA:HA	2.15	0.47
35:Ld:42:ALA:HA	35:Ld:80:VAL:HG21	1.97	0.47
49:S2:97:U:O2'	49:S2:98:C:H5'	2.13	0.47
49:S2:375:U:O2'	49:S2:376:A:H5'	2.14	0.47
49:S2:1284:A:O5'	49:S2:1285:G:O2'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1335:G:H2'	49:S2:1336:C:O4'	2.15	0.47
49:S2:1599:U:H5'	49:S2:1600:G:O4'	2.14	0.47
50:SA:110:ASN:ND2	50:SA:113:GLN:HE21	2.10	0.47
50:SA:200:ASP:OD2	66:SR:89:SER:HA	2.15	0.47
53:SD:59:LEU:HD23	53:SD:59:LEU:H	1.79	0.47
53:SD:59:LEU:HB3	53:SD:66:ILE:HG12	1.95	0.47
54:SE:126:VAL:HG21	54:SE:155:LYS:O	2.13	0.47
57:SH:135:PHE:HB3	57:SH:136:PRO:HD3	1.97	0.47
58:SI:190:LEU:O	58:SI:191:GLU:HG3	2.14	0.47
61:SL:129:GLY:O	61:SL:140:PHE:HD1	1.97	0.47
64:SP:34:MET:HB3	64:SP:42:ARG:HG3	1.96	0.47
65:SQ:14:GLY:HA3	65:SQ:21:ALA:HB3	1.95	0.47
71:SW:87:GLU:HA	71:SW:90:GLN:HG2	1.96	0.47
72:SX:9:THR:O	72:SX:11:ARG:N	2.45	0.47
80:Sg:38:LYS:HG2	80:Sg:65:PHE:H	1.79	0.47
80:Sg:230:LEU:HD21	80:Sg:259:TRP:HE3	1.79	0.47
4:L5:153:G:OP2	19:LN:54:LYS:NZ	2.48	0.47
4:L5:1247:U:H2'	4:L5:1248:C:C6	2.49	0.47
4:L5:1326:A:H2'	4:L5:1327:C:C6	2.49	0.47
4:L5:1837:A:O2'	4:L5:1838:A:H5'	2.14	0.47
4:L5:2463:G:C2'	4:L5:2464:C:H5'	2.44	0.47
4:L5:2622:G:OP2	26:LU:84:LYS:NZ	2.46	0.47
4:L5:2675:G:H4'	4:L5:2676:A:O5'	2.14	0.47
4:L5:2712:G:H2'	4:L5:2713:C:H5'	1.96	0.47
4:L5:3660:C:OP2	7:LA:241:ARG:NH2	2.48	0.47
4:L5:4738:C:H2'	4:L5:4739:C:O4'	2.15	0.47
4:L5:4891:G:C2'	4:L5:4892:A:H5'	2.44	0.47
4:L5:5001:U:H2'	4:L5:5002:U:O4'	2.15	0.47
5:L7:75:G:N2	5:L7:100:A:OP2	2.32	0.47
7:LA:234:LYS:HG2	7:LA:238:ILE:HG12	1.97	0.47
8:LB:29:VAL:HG12	8:LB:31:SER:H	1.80	0.47
8:LB:56:ILE:O	8:LB:73:VAL:HA	2.13	0.47
12:LF:222:LYS:HG2	12:LF:225:THR:OG1	2.15	0.47
14:LH:26:ILE:HD13	14:LH:35:ARG:HB2	1.96	0.47
16:LJ:44:THR:O	16:LJ:78:LYS:HE2	2.15	0.47
19:LN:14:LYS:HA	19:LN:19:MET:HG2	1.96	0.47
26:LU:78:PHE:HE2	26:LU:83:LEU:HD11	1.79	0.47
27:LV:57:VAL:HG21	27:LV:122:ALA:CB	2.45	0.47
29:LX:114:LYS:HG2	29:LX:119:ILE:O	2.15	0.47
32:La:64:LYS:O	32:La:67:GLN:HB2	2.13	0.47
35:Ld:33:ILE:HG21	35:Ld:45:ALA:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Le:108:ARG:HA	36:Le:111:ILE:CG2	2.44	0.47
38:Lg:110:GLN:O	38:Lg:114:GLN:N	2.34	0.47
48:Lr:107:ARG:O	48:Lr:111:ILE:HG12	2.14	0.47
49:S2:72:C:H4'	49:S2:73:C:OP1	2.14	0.47
49:S2:96:C:H42	49:S2:434:G:H1	1.62	0.47
49:S2:547:G:H2'	49:S2:548:C:H6	1.80	0.47
49:S2:562:U:O4	59:SJ:172:ARG:NH2	2.48	0.47
49:S2:795:A:N6	49:S2:797:C:O2	2.47	0.47
49:S2:919:A:OP2	62:SN:64:ARG:NH1	2.47	0.47
49:S2:1269:G:C2'	49:S2:1270:G:H5''	2.44	0.47
49:S2:1284:A:O3'	49:S2:1285:G:H3'	2.15	0.47
49:S2:1315:U:H2'	49:S2:1316:C:O4'	2.14	0.47
49:S2:1724:A:O2'	49:S2:1725:U:H5'	2.14	0.47
50:SA:5:LEU:CD1	70:SV:41:LYS:HA	2.41	0.47
50:SA:52:LYS:HG2	66:SR:108:LEU:CD1	2.44	0.47
50:SA:111:GLN:HA	50:SA:116:PHE:CD2	2.50	0.47
50:SA:137:ALA:HB1	50:SA:142:LEU:CB	2.45	0.47
50:SA:155:ARG:HG3	70:SV:61:ARG:O	2.15	0.47
53:SD:70:THR:CG2	53:SD:84:VAL:HG23	2.45	0.47
53:SD:133:GLY:HA3	53:SD:156:LEU:O	2.15	0.47
54:SE:72:ILE:HD13	54:SE:77:ARG:HB2	1.95	0.47
54:SE:87:MET:O	54:SE:122:LYS:HD2	2.15	0.47
55:SF:55:ARG:NH1	65:SQ:125:ARG:HD3	2.25	0.47
57:SH:69:LEU:CD1	57:SH:73:GLN:HE21	2.27	0.47
58:SI:73:THR:O	58:SI:74:ARG:HD3	2.15	0.47
58:SI:177:SER:OG	58:SI:178:ARG:N	2.46	0.47
61:SL:40:ILE:HD11	61:SL:68:ILE:CG1	2.44	0.47
62:SN:129:TYR:CD1	62:SN:134:VAL:HG21	2.49	0.47
63:SO:86:LYS:CG	63:SO:124:MET:HE2	2.43	0.47
64:SP:121:ILE:HG13	64:SP:123:TYR:H	1.79	0.47
67:SS:104:ASP:O	67:SS:108:ARG:N	2.46	0.47
71:SW:102:ILE:H	71:SW:113:HIS:CD2	2.33	0.47
75:Sa:22:ARG:HG3	75:Sa:27:ALA:HA	1.96	0.47
76:Sb:56:CYS:SG	76:Sb:59:CYS:HB2	2.54	0.47
80:Sg:6:THR:O	80:Sg:310:TRP:HA	2.15	0.47
80:Sg:125:ARG:HD3	80:Sg:150:TRP:CE2	2.50	0.47
80:Sg:290:ALA:O	80:Sg:298:LEU:HD12	2.15	0.47
4:L5:268:G:H2'	4:L5:269:G:H8	1.79	0.47
4:L5:426:A:O2'	4:L5:427:A:H5'	2.15	0.47
4:L5:494:U:H1'	4:L5:660:A:N1	2.29	0.47
4:L5:661:C:H2'	4:L5:662:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1377:G:H4'	4:L5:1378:C:H3'	1.97	0.47
4:L5:1522:G:H2'	4:L5:1653:A:H61	1.79	0.47
4:L5:1943:A:C2'	4:L5:1944:A:H5'	2.45	0.47
4:L5:2352:U:H1'	9:LC:96:CYS:HA	1.96	0.47
4:L5:3635:A:H61	47:Lp:18:TYR:HA	1.79	0.47
5:L7:25:G:O2'	5:L7:26:C:H5'	2.15	0.47
10:LD:278:ASP:N	10:LD:278:ASP:OD1	2.47	0.47
13:LG:214:ALA:HA	13:LG:217:LYS:HE3	1.97	0.47
14:LH:4:ILE:HG12	14:LH:61:TRP:CH2	2.49	0.47
16:LJ:14:GLU:HG2	16:LJ:14:GLU:O	2.13	0.47
21:LP:114:ILE:HG12	21:LP:150:LEU:HD21	1.97	0.47
23:LR:98:ARG:O	23:LR:102:LEU:HG	2.15	0.47
36:Le:76:LYS:HD2	36:Le:98:GLU:CD	2.40	0.47
38:Lg:40:LYS:HB3	38:Lg:52:ARG:NH1	2.30	0.47
49:S2:10:G:H21	52:SC:114:LYS:HA	1.80	0.47
49:S2:28:U:H2'	49:S2:29:G:C8	2.50	0.47
49:S2:1521:C:H5'	64:SP:126:VAL:HG12	1.97	0.47
49:S2:1817:G:O2'	49:S2:1818:A:H5'	2.14	0.47
51:SB:37:ALA:HA	51:SB:42:ARG:NH1	2.29	0.47
51:SB:71:LEU:HD21	51:SB:78:GLU:HG2	1.96	0.47
52:SC:121:ARG:HD2	52:SC:121:ARG:O	2.15	0.47
56:SG:75:LEU:HD11	56:SG:77:LEU:HD21	1.96	0.47
58:SI:66:SER:O	58:SI:189:VAL:HG23	2.15	0.47
60:SK:83:LEU:HB3	60:SK:85:LEU:HD21	1.96	0.47
62:SN:98:VAL:CG2	62:SN:115:LEU:HD13	2.45	0.47
72:SX:68:LYS:HB3	72:SX:91:LEU:HD22	1.96	0.47
2:B4:14:A:C2'	2:B4:15:G:H5'	2.45	0.47
4:L5:119:G:H3'	4:L5:120:A:H5''	1.96	0.47
4:L5:466:A:H2'	4:L5:467:U:N1	2.30	0.47
4:L5:1778:C:H2'	4:L5:1779:U:H6	1.80	0.47
4:L5:2422:C:H2'	4:L5:2423:A:O4'	2.15	0.47
4:L5:3684:G:H2'	4:L5:3685:C:C6	2.50	0.47
4:L5:4142:C:H5'	4:L5:4143:G:C5	2.50	0.47
5:L7:35:U:H2'	5:L7:36:C:O4'	2.14	0.47
7:LA:117:GLU:OE2	7:LA:163:ARG:NH1	2.48	0.47
7:LA:132:ASN:HD22	7:LA:151:PRO:HB3	1.79	0.47
8:LB:98:GLY:HA2	20:LO:149:TYR:CE1	2.49	0.47
10:LD:154:THR:HG22	10:LD:155:THR:H	1.80	0.47
11:LE:111:LYS:O	11:LE:112:MET:HG2	2.15	0.47
17:LL:126:LEU:O	17:LL:138:ASP:HB2	2.15	0.47
38:Lg:86:CYS:O	38:Lg:90:ARG:HG2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:122:G:OP1	54:SE:75:LYS:HE2	2.15	0.47
49:S2:376:A:H2'	49:S2:377:G:O4'	2.15	0.47
49:S2:843:C:O2'	49:S2:844:U:H5'	2.14	0.47
49:S2:963:A:OP2	63:SO:65:ASP:HB3	2.15	0.47
49:S2:1313:A:H2'	49:S2:1313:A:N3	2.30	0.47
49:S2:1370:A:H2'	49:S2:1372:U:H5'	1.96	0.47
50:SA:187:GLY:CA	70:SV:45:ARG:HD3	2.44	0.47
52:SC:139:LEU:HD23	52:SC:238:LYS:HA	1.96	0.47
52:SC:192:LEU:O	52:SC:226:ALA:HA	2.15	0.47
52:SC:203:GLY:O	52:SC:221:ASP:HA	2.14	0.47
53:SD:48:ILE:CG1	53:SD:86:LEU:HG	2.45	0.47
53:SD:218:LEU:HA	53:SD:219:PRO:HA	1.69	0.47
54:SE:31:PRO:HB3	54:SE:43:PRO:HB3	1.97	0.47
54:SE:154:ILE:O	54:SE:155:LYS:HE2	2.15	0.47
58:SI:62:VAL:HA	58:SI:77:ARG:HA	1.96	0.47
65:SQ:80:GLN:O	65:SQ:84:ILE:HG13	2.15	0.47
66:SR:21:TYR:CE1	66:SR:61:ILE:HD11	2.50	0.47
71:SW:2:VAL:HG23	71:SW:4:MET:HE3	1.95	0.47
71:SW:31:SER:OG	71:SW:33:VAL:HG12	2.15	0.47
78:Sd:38:MET:CE	78:Sd:43:PHE:HA	2.44	0.47
80:Sg:42:MET:O	80:Sg:56:GLN:N	2.47	0.47
4:L5:175:C:O2'	4:L5:176:G:H5'	2.15	0.47
4:L5:1609:U:H2'	4:L5:1610:C:O4'	2.15	0.47
4:L5:1742:A:OP2	10:LD:10:LYS:HE3	2.15	0.47
4:L5:1789:C:H2'	4:L5:1790:U:H6	1.79	0.47
4:L5:1947:U:H2'	44:Lm:109:ASN:OD1	2.14	0.47
4:L5:2106:G:O2'	4:L5:2108:G:O4'	2.26	0.47
4:L5:2115:G:H3'	4:L5:2116:C:H5'	1.97	0.47
4:L5:2431:A:O2'	4:L5:2432:U:H5'	2.15	0.47
4:L5:3808:C:C2'	4:L5:3809:G:H5'	2.45	0.47
4:L5:4633:G:N3	4:L5:4633:G:H2'	2.30	0.47
5:L7:120:U:H1'	10:LD:259:LYS:HD2	1.96	0.47
9:LC:95:MET:H	9:LC:95:MET:HG2	1.51	0.47
12:LF:149:SER:OG	12:LF:245:ARG:NH2	2.28	0.47
17:LL:61:CYS:HB2	17:LL:66:TYR:O	2.14	0.47
18:LM:101:LYS:HE2	20:LO:201:LEU:HD21	1.97	0.47
20:LO:88:LEU:HD13	20:LO:99:LEU:HD22	1.97	0.47
23:LR:166:THR:HG21	49:S2:873:G:H5''	1.97	0.47
24:LS:90:THR:HB	25:LT:156:TYR:CD2	2.50	0.47
31:LZ:31:ASP:OD1	31:LZ:31:ASP:N	2.44	0.47
34:Lc:13:SER:O	34:Lc:17:ARG:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Lc:28:VAL:CG1	34:Lc:33:GLN:HB3	2.45	0.47
38:Lg:41:ALA:HB2	38:Lg:58:ALA:HB2	1.97	0.47
40:Li:23:LYS:HD3	40:Li:24:PRO:O	2.14	0.47
49:S2:156:G:C4'	56:SG:108:VAL:HG21	2.45	0.47
49:S2:378:U:H2'	49:S2:379:C:O4'	2.15	0.47
49:S2:1321:G:H2'	49:S2:1322:G:O4'	2.15	0.47
49:S2:1331:C:H1'	49:S2:1489:A:C5	2.49	0.47
49:S2:1332:A:N3	53:SD:141:LYS:NZ	2.59	0.47
49:S2:1700:C:H4'	49:S2:1701:C:C5'	2.45	0.47
51:SB:59:SER:OG	51:SB:60:ASP:N	2.48	0.47
54:SE:7:LYS:O	54:SE:30:ARG:HG2	2.15	0.47
60:SK:19:GLY:HA3	60:SK:93:THR:CG2	2.45	0.47
63:SO:28:PHE:HA	63:SO:92:ALA:O	2.15	0.47
63:SO:42:VAL:HG11	63:SO:81:VAL:HG11	1.96	0.47
64:SP:17:TYR:HB3	64:SP:20:VAL:CG1	2.45	0.47
71:SW:70:ASN:HB2	71:SW:130:PHE:O	2.15	0.47
72:SX:41:PHE:HZ	72:SX:102:VAL:HG12	1.80	0.47
75:Sa:50:VAL:O	75:Sa:54:SER:HB3	2.15	0.47
75:Sa:88:SER:O	75:Sa:92:ARG:HG3	2.15	0.47
80:Sg:16:GLY:O	80:Sg:305:ASN:HA	2.15	0.47
80:Sg:126:ASP:O	80:Sg:127:LYS:HG2	2.14	0.47
80:Sg:175:LYS:HD3	80:Sg:177:TRP:CZ2	2.50	0.47
80:Sg:239:LEU:HD12	80:Sg:239:LEU:O	2.15	0.47
4:L5:406:C:O2'	4:L5:407:A:OP1	2.32	0.46
4:L5:924:C:H2'	4:L5:925:C:O4'	2.15	0.46
4:L5:4629:U:H3	4:L5:4669:A:H62	1.63	0.46
4:L5:4761:G:P	20:LO:37:ARG:HH12	2.38	0.46
4:L5:4966:A:H5'	8:LB:128:LYS:HG3	1.96	0.46
4:L5:5062:G:O2'	4:L5:5063:G:H5'	2.15	0.46
6:L8:110:U:N3	6:L8:112:G:H1'	2.30	0.46
6:L8:155:C:OP2	13:LG:89:ARG:HD2	2.15	0.46
13:LG:157:ILE:CD1	13:LG:170:LEU:HB3	2.46	0.46
14:LH:105:ILE:CG1	14:LH:109:GLY:HA2	2.45	0.46
15:LI:60:LEU:CD2	15:LI:160:PRO:HD2	2.44	0.46
20:LO:189:ILE:O	20:LO:193:THR:HG22	2.14	0.46
30:LY:52:ASP:OD1	30:LY:69:LYS:NZ	2.44	0.46
48:Lr:51:VAL:HG22	48:Lr:62:VAL:HG22	1.95	0.46
49:S2:103:A:H4'	49:S2:104:A:H5''	1.96	0.46
49:S2:219:U:H2'	49:S2:219:U:O2	2.15	0.46
49:S2:607:U:O4	53:SD:143:ARG:HA	2.15	0.46
49:S2:1468:C:O2'	49:S2:1469:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1717:C:H2'	49:S2:1718:G:O4'	2.16	0.46
49:S2:1786:U:O2'	49:S2:1787:G:H5'	2.15	0.46
50:SA:121:LEU:HD12	50:SA:143:PRO:HB2	1.97	0.46
51:SB:38:MET:SD	51:SB:185:VAL:HG11	2.55	0.46
54:SE:229:GLY:HA3	54:SE:233:LYS:O	2.16	0.46
56:SG:130:PRO:HG2	56:SG:131:ARG:H	1.79	0.46
57:SH:50:GLU:OE2	57:SH:58:LYS:HG3	2.15	0.46
58:SI:148:LYS:HE2	58:SI:149:TYR:CE1	2.50	0.46
59:SJ:110:LEU:HG	59:SJ:130:ILE:HD13	1.97	0.46
62:SN:38:TYR:CE2	62:SN:78:LYS:HE3	2.49	0.46
63:SO:85:CYS:HB3	63:SO:90:ILE:HG12	1.97	0.46
66:SR:126:MET:HE3	66:SR:128:PHE:HE1	1.80	0.46
69:SU:56:MET:HB2	69:SU:86:LYS:HD2	1.96	0.46
71:SW:102:ILE:HB	71:SW:113:HIS:HB3	1.97	0.46
76:Sb:42:LYS:NZ	76:Sb:57:VAL:H	2.13	0.46
80:Sg:78:ALA:CB	80:Sg:92:LEU:HD11	2.42	0.46
80:Sg:120:ILE:HG22	80:Sg:132:TRP:HD1	1.80	0.46
80:Sg:174:VAL:HG13	80:Sg:188:HIS:HB2	1.97	0.46
80:Sg:280:LYS:HD2	80:Sg:281:ALA:N	2.30	0.46
4:L5:151:G:OP2	19:LN:4:TYR:OH	2.21	0.46
4:L5:504:G:O2'	4:L5:505:G:O5'	2.34	0.46
4:L5:966:A:H5'	4:L5:967:C:C5	2.50	0.46
4:L5:1525:A:C2'	4:L5:1526:G:H5'	2.44	0.46
4:L5:2587:A:H2'	4:L5:2588:C:C2	2.51	0.46
4:L5:4740:G:N3	4:L5:4742:G:H1'	2.30	0.46
7:LA:114:CYS:HB2	7:LA:169:VAL:CG2	2.45	0.46
10:LD:212:MET:HE3	10:LD:219:TYR:CZ	2.50	0.46
11:LE:282:TYR:O	11:LE:286:LEU:HB2	2.15	0.46
13:LG:112:GLN:O	13:LG:115:LEU:HG	2.15	0.46
14:LH:96:TYR:HA	14:LH:177:ASP:OD1	2.15	0.46
16:LJ:18:ARG:HB3	16:LJ:133:VAL:O	2.15	0.46
17:LL:200:LYS:HE3	17:LL:200:LYS:HB3	1.76	0.46
26:LU:19:LEU:HD13	26:LU:21:PHE:CZ	2.49	0.46
26:LU:28:PRO:HB3	26:LU:100:LEU:CD1	2.38	0.46
30:LY:66:GLN:CD	30:LY:84:ARG:HD2	2.40	0.46
49:S2:156:G:H2'	49:S2:157:U:C6	2.50	0.46
49:S2:799:U:H2'	49:S2:800:U:O4'	2.15	0.46
49:S2:1103:C:H2'	49:S2:1104:G:H5''	1.97	0.46
49:S2:1505:U:O2'	49:S2:1508:A:N3	2.49	0.46
49:S2:1626:C:O2'	49:S2:1627:C:H5'	2.16	0.46
50:SA:118:GLU:HB2	52:SC:65:LYS:HE3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SC:185:THR:O	52:SC:246:LYS:HD2	2.15	0.46
53:SD:72:VAL:HG22	60:SK:20:VAL:CG2	2.46	0.46
56:SG:77:LEU:HD12	56:SG:95:LYS:HB3	1.97	0.46
56:SG:189:ARG:HA	56:SG:192:ILE:HD11	1.96	0.46
57:SH:168:HIS:CE1	57:SH:169:LYS:HG3	2.50	0.46
65:SQ:33:LYS:HG3	65:SQ:37:ARG:C	2.40	0.46
66:SR:103:LYS:O	66:SR:106:LEU:HD23	2.14	0.46
2:B4:53:G:O2'	2:B4:54:U:H5'	2.15	0.46
4:L5:6:C:O2'	4:L5:7:C:H5'	2.16	0.46
4:L5:958:G:C1'	11:LE:125:LEU:HD13	2.45	0.46
4:L5:2022:C:H3'	4:L5:2023:C:C6	2.50	0.46
4:L5:2684:C:O2'	4:L5:2685:C:H5'	2.15	0.46
4:L5:2690:C:H2'	4:L5:2691:U:O4'	2.15	0.46
4:L5:3712:A:C6	4:L5:3713:U:H1'	2.50	0.46
4:L5:4251:A:H2'	4:L5:4252:C:H6	1.80	0.46
4:L5:4260:U:H2'	4:L5:4261:C:H6	1.79	0.46
5:L7:23:A:H2'	5:L7:23:A:OP2	2.16	0.46
9:LC:150:LEU:HA	9:LC:150:LEU:HD12	1.67	0.46
11:LE:50:LEU:HD12	11:LE:51:VAL:N	2.29	0.46
13:LG:137:ARG:HB3	13:LG:203:ALA:HB3	1.97	0.46
15:LI:176:PHE:CE2	15:LI:197:VAL:HG11	2.47	0.46
19:LN:14:LYS:HA	19:LN:19:MET:HB3	1.96	0.46
33:Lb:23:LYS:HB3	33:Lb:24:PRO:HD2	1.97	0.46
35:Ld:36:VAL:HG11	35:Ld:44:ARG:HD3	1.97	0.46
49:S2:426:A:H2'	49:S2:427:U:H5'	1.97	0.46
49:S2:483:C:H5''	72:SX:48:LYS:HG3	1.97	0.46
49:S2:1493:C:H1'	49:S2:1498:A:H61	1.80	0.46
51:SB:33:VAL:CG1	51:SB:44:ILE:HD11	2.46	0.46
52:SC:183:LYS:HG2	71:SW:95:PRO:HA	1.97	0.46
54:SE:183:VAL:HG22	54:SE:191:ARG:H	1.81	0.46
54:SE:195:ILE:HG23	54:SE:208:VAL:HG21	1.96	0.46
57:SH:100:ILE:H	57:SH:100:ILE:HD12	1.80	0.46
58:SI:106:SER:OG	58:SI:169:GLY:HA2	2.15	0.46
61:SL:17:PHE:CZ	61:SL:19:ASN:HB2	2.50	0.46
64:SP:60:LEU:CD2	64:SP:76:VAL:HG21	2.45	0.46
80:Sg:35:SER:OG	80:Sg:36:ARG:N	2.48	0.46
80:Sg:195:LEU:HD23	80:Sg:195:LEU:H	1.79	0.46
80:Sg:203:ASP:O	80:Sg:205:SER:N	2.47	0.46
4:L5:108:A:H4'	4:L5:109:G:OP1	2.14	0.46
4:L5:310:G:OP1	40:Li:85:ARG:NH2	2.48	0.46
4:L5:679:C:O2'	4:L5:680:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1702:C:N4	4:L5:2097:U:H1'	2.30	0.46
4:L5:1731:C:OP1	25:LT:100:LYS:NZ	2.25	0.46
4:L5:1925:G:H2'	4:L5:1926:C:C6	2.50	0.46
4:L5:1973:G:H5''	4:L5:1974:U:C3'	2.44	0.46
4:L5:2487:G:N2	4:L5:2492:C:H1'	2.30	0.46
4:L5:2779:C:OP2	29:LX:106:LYS:HD3	2.15	0.46
4:L5:4080:C:O2'	4:L5:4081:G:H5'	2.15	0.46
4:L5:4154:G:H2'	4:L5:4154:G:OP2	2.15	0.46
4:L5:4341:C:O2	82:L5:5101:3HE:H13	2.16	0.46
4:L5:4408:G:O2'	4:L5:4409:C:H5'	2.15	0.46
4:L5:4541:G:N2	4:L5:4544:A:OP2	2.39	0.46
4:L5:4562:C:H2'	4:L5:4563:U:O4'	2.15	0.46
9:LC:106:LYS:O	9:LC:109:ARG:HG3	2.16	0.46
12:LF:125:LEU:HD22	12:LF:130:ILE:CG2	2.45	0.46
13:LG:209:SER:HA	13:LG:212:LYS:CE	2.35	0.46
21:LP:4:TYR:CZ	21:LP:18:ARG:HG3	2.51	0.46
25:LT:127:GLN:NE2	25:LT:128:LEU:O	2.49	0.46
26:LU:19:LEU:HD12	26:LU:19:LEU:O	2.16	0.46
27:LV:31:ASN:ND2	27:LV:115:SER:OG	2.29	0.46
30:LY:82:ILE:HD11	30:LY:99:ILE:HG12	1.95	0.46
37:Lf:104:MET:O	37:Lf:105:LEU:HB2	2.16	0.46
39:Lh:13:LYS:HG2	39:Lh:16:GLU:HG2	1.97	0.46
49:S2:14:C:OP2	52:SC:232:THR:HG21	2.15	0.46
49:S2:942:G:N2	63:SO:137:SER:O	2.49	0.46
49:S2:1213:C:O2'	49:S2:1214:A:H5'	2.16	0.46
49:S2:1416:C:H2'	49:S2:1417:C:C6	2.50	0.46
49:S2:1618:C:H4'	64:SP:50:ARG:NH2	2.30	0.46
49:S2:1678:A:O2'	49:S2:1679:A:H5'	2.16	0.46
49:S2:1745:A:H1'	56:SG:66:GLY:CA	2.42	0.46
50:SA:34:MET:HG3	50:SA:154:LEU:HD23	1.97	0.46
55:SF:145:ARG:HB2	77:Sc:49:PRO:HD2	1.97	0.46
58:SI:48:VAL:CG1	58:SI:54:LYS:HB2	2.44	0.46
58:SI:55:TYR:HB2	58:SI:182:CYS:O	2.16	0.46
58:SI:56:ARG:HD3	58:SI:180:GLY:HA2	1.97	0.46
63:SO:85:CYS:HB3	63:SO:90:ILE:CG1	2.45	0.46
64:SP:107:ILE:HA	64:SP:111:MET:SD	2.56	0.46
67:SS:132:ARG:HB2	67:SS:134:GLN:NE2	2.30	0.46
71:SW:7:LEU:CD1	71:SW:34:ILE:HD13	2.46	0.46
73:SY:6:THR:CG2	73:SY:28:LEU:HB2	2.46	0.46
74:SZ:96:LEU:H	74:SZ:112:ASN:ND2	2.12	0.46
80:Sg:248:LEU:N	80:Sg:259:TRP:O	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:272:U:O2'	4:L5:273:U:H5'	2.16	0.46
4:L5:667:A:OP1	48:Lr:46:ARG:NH1	2.49	0.46
4:L5:1348:U:H2'	4:L5:1349:G:C8	2.51	0.46
4:L5:4235:G:C2'	4:L5:4236:G:H5'	2.45	0.46
4:L5:4568:A:O2'	4:L5:4981:G:N7	2.48	0.46
4:L5:4875:G:C8	24:LS:169:THR:HG21	2.50	0.46
4:L5:5023:C:H3'	4:L5:5024:C:H4'	1.98	0.46
7:LA:180:LEU:HD21	47:Lp:22:LEU:HB3	1.98	0.46
9:LC:210:ILE:HA	9:LC:230:LEU:O	2.16	0.46
10:LD:216:GLU:O	10:LD:220:LYS:N	2.43	0.46
13:LG:207:VAL:CG2	13:LG:215:LEU:HD22	2.39	0.46
15:LI:143:GLN:HG3	15:LI:144:ASN:ND2	2.29	0.46
25:LT:64:VAL:HG13	25:LT:72:VAL:HG13	1.96	0.46
36:Le:43:ASN:HB3	36:Le:46:ARG:HG2	1.98	0.46
39:Lh:12:LYS:HD2	39:Lh:12:LYS:N	2.31	0.46
46:Lo:45:GLN:OE1	46:Lo:52:THR:N	2.32	0.46
46:Lo:77:CYS:C	46:Lo:78:ARG:HD3	2.41	0.46
48:Lr:52:GLU:HB2	48:Lr:53:PRO:HD2	1.98	0.46
49:S2:550:C:H2'	49:S2:551:U:N1	2.31	0.46
49:S2:752:G:H5'	49:S2:792:C:O2'	2.16	0.46
49:S2:818:A:H1'	49:S2:847:A:N1	2.31	0.46
49:S2:1016:U:O2	49:S2:1016:U:H2'	2.14	0.46
49:S2:1686:G:O2'	49:S2:1687:C:H5'	2.15	0.46
49:S2:1709:G:O2'	49:S2:1710:C:H5'	2.15	0.46
50:SA:15:VAL:HG21	66:SR:109:LEU:CD2	2.42	0.46
54:SE:179:ASN:HA	54:SE:231:GLY:CA	2.45	0.46
55:SF:88:MET:O	55:SF:91:ARG:HG2	2.14	0.46
64:SP:98:ASN:ND2	64:SP:101:THR:O	2.48	0.46
68:ST:120:GLY:O	68:ST:121:ARG:HG3	2.15	0.46
69:SU:24:LEU:HD22	69:SU:112:VAL:HG22	1.97	0.46
69:SU:66:ARG:NH2	69:SU:75:LYS:HG2	2.30	0.46
1:A4:48:U:O4	49:S2:1701:C:H5'	2.16	0.46
4:L5:362:A:OP1	43:Ll:34:LYS:HE2	2.15	0.46
4:L5:971:U:H5''	4:L5:972:C:OP1	2.15	0.46
4:L5:1854:G:H3'	4:L5:1855:G:H5''	1.96	0.46
4:L5:3598:C:C2'	4:L5:3599:A:H5'	2.45	0.46
4:L5:4341:C:N3	82:L5:5101:3HE:O3	2.38	0.46
4:L5:4473:A:P	44:Lm:102:ARG:HH21	2.38	0.46
7:LA:82:ILE:HD11	7:LA:99:GLY:HA3	1.98	0.46
8:LB:80:GLU:CD	8:LB:326:VAL:HG13	2.41	0.46
11:LE:114:ARG:HB3	48:Lr:87:ARG:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LJ:177:GLY:C	16:LJ:178:LYS:HD2	2.40	0.46
37:Lf:29:LYS:HB2	37:Lf:83:MET:SD	2.56	0.46
41:Lj:85:LYS:HB3	41:Lj:85:LYS:HE2	1.65	0.46
47:Lp:33:GLN:HB2	47:Lp:69:TRP:HD1	1.80	0.46
48:Lr:7:TRP:N	48:Lr:44:ILE:HD11	2.29	0.46
49:S2:222:U:O2'	49:S2:223:C:H5'	2.16	0.46
49:S2:494:C:H5''	54:SE:57:THR:CG2	2.45	0.46
49:S2:911:C:C2'	49:S2:912:C:H5'	2.46	0.46
49:S2:1351:G:O2'	49:S2:1378:A:N1	2.48	0.46
49:S2:1466:G:OP1	66:SR:10:LYS:NZ	2.45	0.46
49:S2:1611:G:OP2	67:SS:121:ARG:NH2	2.43	0.46
52:SC:86:LEU:HD11	52:SC:265:PRO:CG	2.40	0.46
53:SD:74:GLN:HA	53:SD:79:PHE:HB2	1.98	0.46
53:SD:127:MET:HE1	53:SD:133:GLY:HA2	1.98	0.46
54:SE:73:ASP:C	54:SE:164:LEU:HD13	2.40	0.46
54:SE:180:LEU:HG	54:SE:228:ILE:O	2.15	0.46
56:SG:186:GLN:HA	56:SG:189:ARG:NH2	2.31	0.46
57:SH:145:ARG:HB2	57:SH:155:LYS:HE3	1.98	0.46
68:ST:19:ALA:HB2	68:ST:55:THR:HA	1.96	0.46
80:Sg:257:LYS:HA	80:Sg:269:GLU:HA	1.97	0.46
4:L5:309:C:H1'	40:Li:32:ARG:NH2	2.30	0.46
4:L5:424:U:OP1	21:LP:34:GLN:NE2	2.49	0.46
4:L5:1268:G:O6	4:L5:2122:G:N2	2.45	0.46
4:L5:1764:G:H1'	4:L5:1767:A:N6	2.31	0.46
4:L5:1778:C:H2'	4:L5:1779:U:C6	2.50	0.46
4:L5:4199:C:C2'	4:L5:4200:G:H5'	2.46	0.46
4:L5:4760:G:H2'	4:L5:4761:G:O4'	2.16	0.46
5:L7:111:C:H2'	5:L7:112:U:O4'	2.15	0.46
10:LD:142:PHE:O	10:LD:172:SER:OG	2.34	0.46
11:LE:141:ARG:CD	11:LE:191:GLN:HE21	2.29	0.46
15:LI:19:LYS:HB2	15:LI:26:VAL:HG11	1.97	0.46
16:LJ:100:SER:N	16:LJ:104:ASN:O	2.38	0.46
20:LO:36:VAL:HG21	20:LO:108:ILE:HG23	1.97	0.46
26:LU:26:THR:O	26:LU:29:VAL:HG22	2.16	0.46
27:LV:95:PHE:HB3	28:LW:19:ARG:HG3	1.98	0.46
32:La:17:HIS:O	32:La:19:HIS:N	2.44	0.46
46:Lo:77:CYS:O	46:Lo:78:ARG:HD3	2.16	0.46
49:S2:302:A:H1'	58:SI:73:THR:CG2	2.46	0.46
49:S2:360:A:C2	49:S2:362:C:H2'	2.50	0.46
49:S2:448:A:H62	58:SI:29:LEU:HD13	1.80	0.46
49:S2:496:C:O2'	49:S2:497:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1017:U:H5'	62:SN:55:ARG:NH1	2.27	0.46
49:S2:1107:G:H1	49:S2:1125:C:H5	1.64	0.46
49:S2:1810:U:O2'	49:S2:1811:C:H5'	2.16	0.46
49:S2:1839:U:H1'	49:S2:1863:A:H2	1.80	0.46
54:SE:188:ASN:ND2	54:SE:218:PHE:HB2	2.31	0.46
56:SG:95:LYS:HE3	56:SG:95:LYS:HB2	1.81	0.46
58:SI:29:LEU:HD12	58:SI:30:GLY:H	1.80	0.46
58:SI:87:ASN:HB3	58:SI:90:LEU:HD12	1.96	0.46
60:SK:24:LYS:HA	60:SK:66:HIS:HA	1.98	0.46
65:SQ:76:GLY:O	65:SQ:80:GLN:HG2	2.16	0.46
72:SX:88:ASP:N	72:SX:88:ASP:OD1	2.49	0.46
80:Sg:127:LYS:HB3	80:Sg:149:GLU:O	2.15	0.46
80:Sg:282:GLU:O	80:Sg:284:PRO:HD3	2.15	0.46
4:L5:174:C:O2'	4:L5:175:C:H5'	2.16	0.46
4:L5:721:G:O2'	4:L5:722:G:H5'	2.16	0.46
4:L5:1525:A:H2'	4:L5:1526:G:H5'	1.98	0.46
4:L5:1749:A:H4'	15:LI:35:ASP:OD2	2.16	0.46
4:L5:1767:A:H1'	4:L5:1769:G:C8	2.51	0.46
4:L5:2534:C:O2'	4:L5:2535:G:H5'	2.16	0.46
4:L5:2545:U:OP1	4:L5:2546:G:H4'	2.16	0.46
4:L5:2557:G:H2'	4:L5:2558:C:O4'	2.16	0.46
7:LA:174:ARG:HA	47:Lp:69:TRP:CZ3	2.51	0.46
7:LA:225:ILE:HD13	7:LA:233:ARG:NH1	2.31	0.46
8:LB:142:GLY:O	8:LB:145:GLN:HG2	2.15	0.46
10:LD:41:LYS:HA	10:LD:41:LYS:HD3	1.65	0.46
11:LE:201:ILE:HD12	11:LE:202:ASP:H	1.81	0.46
14:LH:114:ILE:HB	14:LH:124:ARG:HB2	1.97	0.46
20:LO:119:VAL:HG13	20:LO:124:LEU:HD21	1.98	0.46
22:LQ:89:ASP:O	22:LQ:92:VAL:HG12	2.16	0.46
25:LT:44:GLY:HA2	25:LT:95:HIS:CB	2.46	0.46
27:LV:84:GLN:HA	27:LV:101:ASN:CB	2.39	0.46
31:LZ:29:ILE:HG21	31:LZ:33:THR:OG1	2.16	0.46
37:Lf:10:ILE:HA	37:Lf:99:HIS:O	2.15	0.46
42:Lk:59:SER:O	42:Lk:61:PRO:HD3	2.15	0.46
46:Lo:10:THR:HA	46:Lo:18:HIS:CD2	2.51	0.46
49:S2:106:C:OP1	49:S2:432:G:H5'	2.15	0.46
49:S2:212:C:H2'	49:S2:213:G:C8	2.51	0.46
49:S2:299:A:O2'	49:S2:300:U:H5'	2.16	0.46
49:S2:692:G:N2	49:S2:738:C:H2'	2.21	0.46
49:S2:1292:C:H3'	49:S2:1293:A:H5''	1.98	0.46
49:S2:1616:U:O2'	49:S2:1661:A:N3	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1857:G:H3'	63:SO:146:ARG:HH12	1.81	0.46
49:S2:1862:G:H4'	49:S2:1863:A:OP1	2.16	0.46
55:SF:82:ASN:HA	55:SF:85:LYS:HD2	1.97	0.46
57:SH:64:VAL:O	57:SH:96:ALA:HA	2.16	0.46
57:SH:98:ARG:CG	57:SH:125:VAL:HG22	2.45	0.46
58:SI:178:ARG:HE	58:SI:181:GLN:HG3	1.81	0.46
67:SS:19:ASN:OD1	67:SS:20:ILE:N	2.49	0.46
67:SS:82:TRP:HA	67:SS:87:GLN:OE1	2.15	0.46
68:ST:17:ALA:C	68:ST:134:ILE:HD11	2.41	0.46
71:SW:102:ILE:HG22	71:SW:104:LEU:CD1	2.46	0.46
72:SX:87:ASN:HB3	72:SX:134:TYR:CD1	2.50	0.46
74:SZ:98:LYS:O	74:SZ:110:THR:N	2.48	0.46
76:Sb:50:ALA:HB3	76:Sb:71:ALA:HB2	1.98	0.46
4:L5:100:C:H2'	4:L5:101:A:C8	2.51	0.46
4:L5:151:G:C6	13:LG:142:THR:HG23	2.51	0.46
4:L5:193:G:O2'	4:L5:194:C:H5'	2.16	0.46
4:L5:229:G:H5''	30:LY:11:ARG:HG3	1.98	0.46
4:L5:499:G:C2	4:L5:500:G:H5''	2.51	0.46
4:L5:1288:G:OP1	11:LE:134:SER:OG	2.28	0.46
4:L5:1410:U:H2'	4:L5:1815:G:O6	2.16	0.46
4:L5:1439:C:N4	4:L5:2108:G:H22	2.14	0.46
4:L5:4081:G:O2'	4:L5:4082:G:H5'	2.16	0.46
4:L5:4902:C:O2'	4:L5:4903:G:H5'	2.16	0.46
9:LC:293:LEU:HD22	22:LQ:34:PHE:CD2	2.50	0.46
10:LD:68:ARG:HD3	10:LD:68:ARG:HA	1.67	0.46
13:LG:108:GLN:O	13:LG:112:GLN:HG2	2.16	0.46
24:LS:47:PHE:O	24:LS:51:LEU:HG	2.16	0.46
29:LX:104:ALA:HA	29:LX:108:GLN:OE1	2.16	0.46
32:La:47:LYS:HD3	32:La:48:TYR:CE2	2.50	0.46
38:Lg:69:LYS:HG2	38:Lg:73:HIS:HD2	1.80	0.46
48:Lr:97:ILE:HG21	48:Lr:107:ARG:HB3	1.96	0.46
49:S2:62:G:H2'	49:S2:63:U:H5'	1.96	0.46
49:S2:65:C:C4	56:SG:174:PRO:HG3	2.51	0.46
49:S2:488:U:O2'	49:S2:489:A:OP1	2.31	0.46
49:S2:818:A:H5'	49:S2:819:G:OP2	2.16	0.46
49:S2:854:A:C2'	49:S2:855:G:H5'	2.46	0.46
49:S2:862:A:H2'	49:S2:863:U:O4'	2.16	0.46
51:SB:36:PRO:CB	51:SB:38:MET:HE3	2.46	0.46
53:SD:108:LYS:O	53:SD:113:LEU:HB2	2.16	0.46
55:SF:108:PRO:HA	55:SF:111:VAL:CG1	2.41	0.46
65:SQ:7:LEU:H	65:SQ:7:LEU:HD23	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SR:6:THR:HG22	66:SR:9:VAL:HG12	1.98	0.46
66:SR:27:ASP:CB	66:SR:30:THR:HG22	2.45	0.46
66:SR:60:ARG:HH21	66:SR:66:VAL:HG21	1.80	0.46
68:ST:84:ARG:HA	68:ST:90:SER:HB3	1.97	0.46
76:Sb:34:ASP:O	76:Sb:79:PHE:HA	2.16	0.46
78:Sd:23:VAL:HG21	78:Sd:42:CYS:HB3	1.98	0.46
4:L5:367:C:O2'	9:LC:83:GLY:O	2.33	0.46
4:L5:1173:G:O5'	4:L5:1189:G:N2	2.49	0.46
4:L5:1308:C:H2'	4:L5:1309:C:C6	2.52	0.46
4:L5:1428:U:OP1	22:LQ:42:THR:HG21	2.15	0.46
4:L5:1994:C:H2'	4:L5:1995:G:O2'	2.14	0.46
4:L5:2457:G:OP1	19:LN:65:ARG:NH1	2.43	0.46
4:L5:2520:C:H1'	4:L5:2640:G:H21	1.81	0.46
4:L5:4263:C:H2'	4:L5:4264:G:O4'	2.16	0.46
4:L5:4940:C:H3'	11:LE:219:LYS:HZ3	1.81	0.46
4:L5:4999:G:O2'	4:L5:5000:G:H5'	2.16	0.46
9:LC:183:VAL:O	9:LC:186:SER:OG	2.31	0.46
9:LC:289:LEU:HD11	22:LQ:30:LYS:HB2	1.97	0.46
15:LI:75:TYR:HD2	15:LI:151:ALA:HB2	1.80	0.46
16:LJ:35:ARG:NE	16:LJ:126:TYR:OH	2.48	0.46
21:LP:52:THR:C	21:LP:53:LEU:HD23	2.41	0.46
32:La:84:GLU:O	32:La:88:VAL:HG12	2.15	0.46
48:Lr:64:ILE:HG23	48:Lr:102:TYR:CZ	2.50	0.46
49:S2:552:G:H2'	49:S2:553:U:C6	2.51	0.46
49:S2:1005:G:O2'	49:S2:1006:C:H5'	2.15	0.46
49:S2:1115:U:H4'	49:S2:1116:C:C2	2.51	0.46
49:S2:1322:G:O2'	49:S2:1323:U:H5'	2.16	0.46
49:S2:1506:A:H1'	49:S2:1508:A:N7	2.31	0.46
49:S2:1813:A:H5'	49:S2:1814:G:OP2	2.15	0.46
49:S2:1850:A:H2'	49:S2:1851:A:O4'	2.16	0.46
50:SA:110:ASN:O	50:SA:111:GLN:HB3	2.16	0.46
51:SB:68:GLU:HA	51:SB:84:PHE:O	2.15	0.46
51:SB:127:VAL:HG11	51:SB:176:VAL:HB	1.98	0.46
51:SB:137:LEU:HB2	51:SB:172:MET:HE2	1.98	0.46
52:SC:261:PHE:HB2	70:SV:52:THR:HG21	1.98	0.46
52:SC:262:THR:HG22	52:SC:263:LYS:H	1.80	0.46
54:SE:236:ILE:HD12	54:SE:237:SER:H	1.79	0.46
56:SG:52:ILE:HD11	56:SG:109:LEU:HD11	1.97	0.46
56:SG:189:ARG:HA	56:SG:192:ILE:HG12	1.98	0.46
64:SP:57:LEU:CD2	64:SP:86:LEU:HD21	2.44	0.46
69:SU:61:LEU:HD12	69:SU:82:MET:CG	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SW:81:VAL:HG11	71:SW:86:LEU:HD13	1.98	0.46
80:Sg:146:SER:O	80:Sg:147:HIS:HB2	2.16	0.46
2:B4:56:C:C4'	16:LJ:64:ARG:HD3	2.46	0.45
4:L5:454:U:H2'	4:L5:455:C:C6	2.51	0.45
4:L5:678:C:H2'	4:L5:679:C:H6	1.81	0.45
4:L5:1474:C:H2'	4:L5:1475:G:O4'	2.17	0.45
4:L5:1961:G:N1	4:L5:2024:G:O2'	2.43	0.45
4:L5:3736:A:H2'	4:L5:3737:A:C8	2.51	0.45
4:L5:3749:C:H4'	7:LA:221:LYS:O	2.17	0.45
4:L5:3873:G:H2'	4:L5:3874:G:C8	2.51	0.45
4:L5:4320:G:H2'	4:L5:4321:U:O4'	2.16	0.45
4:L5:4699:U:H4'	4:L5:4700:A:OP1	2.13	0.45
9:LC:11:TYR:OH	9:LC:149:GLU:HG3	2.15	0.45
13:LG:90:GLN:HE22	13:LG:94:GLN:HE21	1.64	0.45
18:LM:3:PHE:CZ	24:LS:155:PRO:HB3	2.50	0.45
30:LY:53:ASP:OD2	30:LY:115:ARG:NH1	2.44	0.45
37:Lf:50:VAL:HG21	37:Lf:102:ARG:NH2	2.32	0.45
39:Lh:4:ILE:CD1	39:Lh:53:SER:HB2	2.46	0.45
43:Ll:8:ARG:O	43:Ll:11:ARG:HG2	2.16	0.45
49:S2:31:U:H5'	49:S2:596:U:OP1	2.17	0.45
49:S2:94:G:C2'	49:S2:95:G:H5'	2.46	0.45
49:S2:152:U:H1'	56:SG:132:ARG:CZ	2.45	0.45
49:S2:863:U:OP1	71:SW:32:LYS:HE3	2.16	0.45
49:S2:1010:G:H2'	49:S2:1011:A:C8	2.51	0.45
49:S2:1269:G:C3'	49:S2:1270:G:H5''	2.47	0.45
49:S2:1664:A:H2'	49:S2:1665:G:H5'	1.99	0.45
50:SA:170:SER:O	50:SA:174:MET:HG2	2.16	0.45
50:SA:205:ARG:NH2	66:SR:80:ARG:O	2.49	0.45
53:SD:163:PRO:HB3	53:SD:166:TYR:OH	2.16	0.45
53:SD:163:PRO:HB3	53:SD:166:TYR:CZ	2.51	0.45
62:SN:47:PRO:HD2	62:SN:86:GLU:HG3	1.98	0.45
62:SN:64:ARG:HD3	62:SN:70:LYS:CD	2.46	0.45
67:SS:132:ARG:HB2	67:SS:134:GLN:HE22	1.81	0.45
73:SY:9:THR:HG21	73:SY:48:TYR:OH	2.17	0.45
77:Sc:18:LEU:O	77:Sc:29:GLN:HB2	2.15	0.45
80:Sg:14:HIS:CE1	80:Sg:41:ILE:HD13	2.51	0.45
4:L5:270:U:H2'	4:L5:271:C:H6	1.81	0.45
4:L5:449:C:H4'	4:L5:450:G:OP2	2.16	0.45
4:L5:468:U:O2'	4:L5:469:C:H5'	2.16	0.45
4:L5:668:C:H4'	4:L5:669:C:OP1	2.16	0.45
4:L5:958:G:N2	11:LE:124:LYS:HG3	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1100:U:O2'	4:L5:1195:G:N2	2.50	0.45
4:L5:1172:C:O2'	4:L5:1189:G:N2	2.42	0.45
4:L5:1270:A:O2'	4:L5:1271:G:O5'	2.33	0.45
4:L5:1521:C:OP1	9:LC:100:ARG:NH2	2.49	0.45
4:L5:2120:G:H5'	4:L5:2121:C:OP2	2.16	0.45
4:L5:2333:G:H5''	9:LC:195:LYS:HZ2	1.79	0.45
4:L5:4265:U:OP1	10:LD:12:TYR:OH	2.34	0.45
4:L5:4475:G:H5''	4:L5:4476:C:H5''	1.99	0.45
4:L5:4675:U:O2'	4:L5:4676:G:H5'	2.17	0.45
4:L5:4728:U:OP2	8:LB:132:LYS:HE3	2.16	0.45
4:L5:4755:G:O2'	4:L5:4756:C:H5'	2.16	0.45
4:L5:4966:A:H2'	4:L5:4967:A:O4'	2.16	0.45
14:LH:63:ASN:OD1	14:LH:66:GLU:HB2	2.16	0.45
18:LM:131:GLN:HB3	20:LO:177:LEU:HD11	1.98	0.45
19:LN:44:ARG:NH1	19:LN:120:TRP:O	2.49	0.45
22:LQ:22:ASP:OD2	22:LQ:25:LEU:N	2.39	0.45
23:LR:93:VAL:O	23:LR:97:ARG:HB2	2.14	0.45
27:LV:87:SER:HA	27:LV:97:TYR:HB3	1.98	0.45
27:LV:87:SER:HB3	27:LV:97:TYR:HB3	1.98	0.45
29:LX:72:ASP:O	29:LX:76:ILE:HG12	2.15	0.45
38:Lg:108:LYS:HE2	38:Lg:108:LYS:HA	1.98	0.45
47:Lp:8:VAL:O	47:Lp:11:VAL:HG22	2.16	0.45
49:S2:305:U:O2'	58:SI:43:ILE:HD13	2.16	0.45
49:S2:580:U:C3'	49:S2:581:U:H5''	2.45	0.45
49:S2:1120:U:H1'	49:S2:1121:G:C5'	2.46	0.45
49:S2:1665:G:OP2	68:ST:91:HIS:NE2	2.45	0.45
50:SA:52:LYS:O	50:SA:56:GLU:HG2	2.16	0.45
50:SA:87:VAL:HG23	50:SA:88:LEU:HD12	1.98	0.45
51:SB:31:TYR:CD2	51:SB:62:LEU:HD22	2.50	0.45
52:SC:227:ARG:HD2	52:SC:227:ARG:HA	1.81	0.45
53:SD:58:VAL:HG12	53:SD:66:ILE:HG23	1.97	0.45
53:SD:163:PRO:HA	53:SD:166:TYR:CE1	2.50	0.45
54:SE:107:GLY:HA3	54:SE:189:LEU:HD23	1.98	0.45
54:SE:126:VAL:HG23	54:SE:156:VAL:HA	1.97	0.45
59:SJ:28:GLU:HG3	59:SJ:40:LYS:NZ	2.31	0.45
64:SP:109:PRO:O	64:SP:112:ILE:HG13	2.16	0.45
77:Sc:28:THR:O	77:Sc:46:VAL:N	2.38	0.45
80:Sg:175:LYS:HZ1	80:Sg:184:LEU:HD21	1.81	0.45
4:L5:75:G:O6	17:LL:103:ARG:NH1	2.49	0.45
4:L5:1178:G:H2'	4:L5:1178:G:N3	2.32	0.45
4:L5:1202:C:C2	4:L5:1203:G:H4'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2066:C:O2'	4:L5:2067:C:H5'	2.16	0.45
4:L5:2372:U:O2'	35:Ld:46:LEU:HD13	2.16	0.45
4:L5:2717:G:OP1	26:LU:107:LYS:NZ	2.33	0.45
4:L5:2753:G:H2'	4:L5:2754:G:C1'	2.46	0.45
4:L5:2845:A:H1'	4:L5:4630:G:O2'	2.16	0.45
4:L5:4129:G:H3'	4:L5:4130:C:O2	2.16	0.45
4:L5:4135:G:N2	4:L5:4136:G:H1'	2.31	0.45
4:L5:4474:A:OP2	4:L5:4476:C:N4	2.50	0.45
5:L7:88:A:H2'	5:L7:89:G:O4'	2.16	0.45
9:LC:139:SER:OG	48:Lr:14:SER:OG	2.33	0.45
9:LC:288:ASP:OD2	9:LC:290:SER:OG	2.24	0.45
16:LJ:12:MET:O	16:LJ:137:PRO:HD2	2.17	0.45
16:LJ:20:LEU:HB3	16:LJ:74:VAL:CG2	2.46	0.45
20:LO:125:LYS:HE3	20:LO:135:PHE:CE1	2.51	0.45
27:LV:106:VAL:HG22	27:LV:107:ASN:O	2.17	0.45
41:Lj:54:LYS:O	41:Lj:58:THR:HB	2.15	0.45
49:S2:834:C:H42	49:S2:839:C:H42	1.64	0.45
50:SA:11:LYS:HD3	50:SA:11:LYS:HA	1.69	0.45
55:SF:107:ASN:OD1	55:SF:108:PRO:HD2	2.15	0.45
56:SG:18:VAL:HG23	56:SG:24:LEU:HD11	1.99	0.45
56:SG:18:VAL:CG2	56:SG:24:LEU:HD11	2.46	0.45
56:SG:37:ALA:HA	56:SG:48:TYR:O	2.15	0.45
59:SJ:108:ARG:HH21	59:SJ:151:LEU:HA	1.81	0.45
63:SO:35:ALA:CB	63:SO:112:ALA:HB2	2.45	0.45
68:ST:71:GLY:HA2	68:ST:120:GLY:HA2	1.97	0.45
72:SX:19:ASP:HA	72:SX:22:TRP:HD1	1.82	0.45
4:L5:736:C:OP1	18:LM:74:ARG:NH2	2.43	0.45
4:L5:1208:G:H2'	4:L5:1209:U:H5'	1.96	0.45
4:L5:1827:C:O2'	4:L5:1828:C:H5'	2.16	0.45
4:L5:2026:A:H2'	4:L5:2027:U:H6	1.81	0.45
4:L5:2490:U:H3'	4:L5:2491:C:O4'	2.16	0.45
4:L5:2760:G:H1'	4:L5:2761:U:OP2	2.16	0.45
4:L5:4182:G:H4'	7:LA:226:ARG:HH21	1.80	0.45
4:L5:4871:C:OP1	18:LM:94:LYS:HD2	2.16	0.45
6:L8:21:C:H2'	6:L8:22:U:H5'	1.97	0.45
8:LB:189:THR:HG23	8:LB:192:GLU:H	1.82	0.45
8:LB:223:THR:HG22	8:LB:275:HIS:N	2.22	0.45
9:LC:154:VAL:HG11	9:LC:174:LEU:HD11	1.97	0.45
10:LD:50:ARG:CZ	10:LD:52:ILE:HD11	2.46	0.45
14:LH:27:VAL:HG22	14:LH:34:LEU:O	2.16	0.45
14:LH:140:GLN:OE1	14:LH:141:LYS:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:50:MET:HG2	18:LM:55:MET:HE3	1.98	0.45
20:LO:7:LEU:HD22	20:LO:31:ARG:NH1	2.31	0.45
25:LT:74:ILE:HG22	25:LT:76:VAL:HG23	1.98	0.45
38:Lg:59:VAL:HG22	38:Lg:60:ARG:H	1.80	0.45
49:S2:38:A:OP1	59:SJ:5:ARG:HB3	2.16	0.45
51:SB:227:LYS:O	51:SB:231:LEU:N	2.49	0.45
54:SE:177:THR:HG22	54:SE:195:ILE:O	2.16	0.45
54:SE:259:LYS:HA	54:SE:262:SER:OG	2.17	0.45
56:SG:181:THR:O	56:SG:184:VAL:HG22	2.17	0.45
57:SH:83:LEU:HD23	57:SH:83:LEU:O	2.16	0.45
60:SK:12:TYR:HB3	60:SK:79:LEU:HD11	1.97	0.45
68:ST:18:LEU:HD23	68:ST:58:ALA:CA	2.47	0.45
68:ST:111:LYS:O	68:ST:124:THR:HG21	2.17	0.45
70:SV:15:ARG:O	70:SV:23:ILE:HD12	2.17	0.45
70:SV:39:VAL:HA	70:SV:47:ASN:H	1.82	0.45
73:SY:26:ASP:OD1	73:SY:70:THR:HG22	2.16	0.45
4:L5:1812:C:O2'	4:L5:1813:U:H5'	2.16	0.45
4:L5:1920:C:C3'	4:L5:1921:C:H5''	2.46	0.45
4:L5:2267:U:H1'	48:Lr:36:ASN:O	2.17	0.45
4:L5:2478:C:H2'	4:L5:2479:G:O4'	2.17	0.45
4:L5:2500:U:H2'	4:L5:2501:C:H5'	1.98	0.45
4:L5:3641:U:H5	4:L5:3646:A:N7	2.15	0.45
4:L5:3667:C:O2'	4:L5:3668:C:H5'	2.17	0.45
4:L5:4305:G:H1	25:LT:80:VAL:HG21	1.81	0.45
4:L5:4691:A:O3'	14:LH:71:ARG:HD3	2.16	0.45
4:L5:4930:C:H3'	4:L5:4931:G:H5''	1.98	0.45
5:L7:7:G:O2'	10:LD:71:GLY:HA2	2.16	0.45
9:LC:39:PHE:O	9:LC:43:ASN:ND2	2.37	0.45
9:LC:67:TRP:HD1	9:LC:68:GLY:H	1.64	0.45
10:LD:236:MET:CA	10:LD:239:MET:HG2	2.45	0.45
11:LE:93:THR:HA	11:LE:105:ARG:O	2.15	0.45
12:LF:29:LYS:O	12:LF:33:LEU:N	2.49	0.45
20:LO:173:GLN:HA	20:LO:176:ARG:NH2	2.31	0.45
22:LQ:70:MET:HE3	22:LQ:80:ALA:HB2	1.98	0.45
27:LV:139:ILE:O	27:LV:139:ILE:HG13	2.15	0.45
31:LZ:78:ASN:OD1	34:Lc:39:ARG:NH1	2.49	0.45
34:Lc:79:ILE:HD11	47:Lp:43:GLY:O	2.17	0.45
35:Ld:80:VAL:HG13	35:Ld:81:PRO:HD2	1.97	0.45
39:Lh:73:TYR:O	39:Lh:79:LYS:HE3	2.16	0.45
42:Lk:11:PHE:CZ	42:Lk:34:PHE:HB3	2.52	0.45
46:Lo:38:LYS:NZ	46:Lo:42:ASP:OD1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:184:G:O2'	49:S2:185:G:H5'	2.17	0.45
49:S2:465:A:H5'	49:S2:466:G:N9	2.32	0.45
49:S2:579:C:H2'	49:S2:580:U:O4'	2.17	0.45
49:S2:613:G:O2'	49:S2:626:G:H4'	2.16	0.45
49:S2:971:G:H4'	49:S2:972:A:O5'	2.17	0.45
49:S2:1120:U:H5''	76:Sb:72:ARG:HH12	1.82	0.45
49:S2:1782:G:H1'	49:S2:1784:G:C1'	2.46	0.45
49:S2:1864:U:H5'	75:Sa:79:ILE:HD11	1.98	0.45
50:SA:37:TYR:OH	70:SV:66:ASP:OD2	2.31	0.45
52:SC:133:TYR:HE1	52:SC:216:MET:HA	1.80	0.45
58:SI:165:GLN:HA	58:SI:168:GLN:NE2	2.29	0.45
60:SK:12:TYR:CG	60:SK:79:LEU:HD11	2.52	0.45
60:SK:24:LYS:HB2	60:SK:66:HIS:CG	2.51	0.45
80:Sg:130:LYS:HG2	80:Sg:141:THR:HB	1.99	0.45
4:L5:137:G:O2'	4:L5:138:G:H5'	2.15	0.45
4:L5:1284:G:N3	11:LE:130:LYS:HD2	2.31	0.45
4:L5:4897:G:C2'	4:L5:4898:G:H5'	2.46	0.45
4:L5:5060:A:H3'	4:L5:5061:A:C5'	2.46	0.45
5:L7:63:C:O5'	15:LI:206:LEU:HB2	2.16	0.45
6:L8:142:U:P	19:LN:38:ARG:HH22	2.38	0.45
11:LE:47:ASN:HB2	11:LE:62:MET:CE	2.47	0.45
11:LE:124:LYS:C	11:LE:125:LEU:HD12	2.41	0.45
12:LF:182:TYR:CZ	12:LF:203:GLU:HG2	2.52	0.45
14:LH:12:ILE:HG22	14:LH:81:ILE:HD11	1.99	0.45
14:LH:92:MET:HG2	14:LH:181:VAL:HA	1.99	0.45
14:LH:128:MET:HE3	14:LH:157:SER:HB2	1.97	0.45
16:LJ:56:THR:OG1	16:LJ:64:ARG:N	2.50	0.45
26:LU:37:ALA:HB2	26:LU:65:ARG:HH12	1.81	0.45
48:Lr:41:ASN:OD1	48:Lr:42:GLY:N	2.50	0.45
49:S2:504:G:H2'	49:S2:505:G:O4'	2.16	0.45
52:SC:267:GLN:O	52:SC:270:THR:HG22	2.16	0.45
53:SD:164:VAL:O	53:SD:168:VAL:HG12	2.16	0.45
54:SE:34:GLY:CA	54:SE:83:PRO:HG2	2.40	0.45
54:SE:37:LYS:O	54:SE:41:CYS:HB3	2.16	0.45
65:SQ:50:LYS:HG2	65:SQ:85:ARG:HD2	1.98	0.45
66:SR:35:CYS:HA	66:SR:38:ILE:HG22	1.99	0.45
78:Sd:21:CYS:SG	78:Sd:22:ARG:N	2.89	0.45
4:L5:701:G:H2'	4:L5:702:U:O4'	2.16	0.45
4:L5:949:G:O2'	4:L5:950:G:H5'	2.17	0.45
4:L5:2416:G:N2	4:L5:2426:U:O4	2.49	0.45
4:L5:2500:U:O2'	4:L5:2501:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3857:G:H5''	21:LP:86:LYS:HB2	1.99	0.45
4:L5:3923:A:H2'	4:L5:3924:C:H6	1.80	0.45
4:L5:4265:U:H4'	4:L5:4266:G:O4'	2.17	0.45
5:L7:71:G:H2'	5:L7:72:U:O4'	2.17	0.45
8:LB:29:VAL:O	8:LB:30:LYS:HB2	2.17	0.45
11:LE:177:GLY:O	11:LE:184:VAL:HG13	2.17	0.45
16:LJ:23:ASN:HB3	16:LJ:129:ASP:OD1	2.16	0.45
19:LN:120:TRP:NE1	19:LN:123:GLU:OE1	2.45	0.45
26:LU:107:LYS:C	26:LU:108:GLU:HG3	2.42	0.45
27:LV:60:MET:HE2	27:LV:78:PRO:HB2	1.98	0.45
28:LW:6:CYS:SG	28:LW:32:LEU:N	2.85	0.45
31:LZ:67:LYS:HA	31:LZ:119:GLU:OE1	2.17	0.45
31:LZ:109:LYS:HE3	31:LZ:109:LYS:HB2	1.73	0.45
34:Lc:55:LEU:HD22	38:Lg:93:ARG:HG3	1.98	0.45
48:Lr:56:ASP:O	48:Lr:58:LYS:HG3	2.17	0.45
49:S2:488:U:H3'	49:S2:489:A:C5'	2.45	0.45
49:S2:731:G:H5''	49:S2:732:U:H5''	1.98	0.45
49:S2:923:G:H1	49:S2:1019:C:H5	1.63	0.45
49:S2:1009:A:O2'	49:S2:1010:G:H5'	2.17	0.45
49:S2:1171:G:N2	49:S2:1187:G:H2'	2.32	0.45
49:S2:1274:G:H22	60:SK:43:LEU:HG	1.81	0.45
49:S2:1370:A:H2'	49:S2:1372:U:C5'	2.47	0.45
49:S2:1759:G:N1	49:S2:1773:C:OP1	2.26	0.45
55:SF:77:MET:HE1	55:SF:86:LYS:CB	2.47	0.45
59:SJ:114:VAL:HG13	59:SJ:126:ALA:HB1	1.99	0.45
77:Sc:13:ARG:HA	77:Sc:54:ASP:O	2.16	0.45
4:L5:180:C:H2'	4:L5:181:C:O4'	2.17	0.45
4:L5:433:A:N1	4:L5:3866:C:O2'	2.43	0.45
4:L5:754:U:H2'	4:L5:755:C:C6	2.51	0.45
4:L5:1820:C:H2'	4:L5:1821:G:H5''	1.97	0.45
4:L5:2480:G:H1	4:L5:2498:C:N4	2.15	0.45
4:L5:2626:U:O2	26:LU:89:LYS:HG3	2.15	0.45
4:L5:2840:A:O2'	4:L5:2841:G:H5'	2.16	0.45
4:L5:4866:C:H2'	4:L5:4867:G:O4'	2.17	0.45
4:L5:4881:U:C4	18:LM:113:MET:HG3	2.52	0.45
5:L7:49:A:H5''	10:LD:224:SER:OG	2.16	0.45
6:L8:77:A:H2'	6:L8:78:G:C8	2.51	0.45
13:LG:76:VAL:HG22	19:LN:21:PHE:CZ	2.52	0.45
13:LG:232:GLU:OE1	13:LG:235:ARG:NH2	2.50	0.45
16:LJ:83:LEU:O	16:LJ:87:LEU:HD13	2.17	0.45
16:LJ:87:LEU:HB3	16:LJ:92:TYR:CD1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LL:191:LEU:HD22	17:LL:194:ILE:HD11	1.99	0.45
21:LP:12:THR:OG1	21:LP:13:LYS:NZ	2.26	0.45
25:LT:52:MET:HG2	25:LT:53:PRO:HD2	1.99	0.45
25:LT:62:GLY:HA3	25:LT:76:VAL:HG22	1.98	0.45
26:LU:65:ARG:HG2	26:LU:67:LYS:H	1.81	0.45
34:Lc:20:LEU:HD23	34:Lc:101:ASP:CB	2.47	0.45
49:S2:392:A:H2'	49:S2:393:U:H5'	1.99	0.45
49:S2:518:G:H2'	49:S2:519:A:H8	1.81	0.45
49:S2:941:C:O2'	49:S2:942:G:H5'	2.16	0.45
49:S2:1017:U:O2'	62:SN:51:GLY:HA3	2.17	0.45
49:S2:1053:C:O2'	49:S2:1054:G:H5'	2.16	0.45
49:S2:1422:G:N3	49:S2:1422:G:H2'	2.32	0.45
49:S2:1456:G:H2'	49:S2:1457:U:C6	2.52	0.45
49:S2:1629:C:OP1	67:SS:39:ARG:HG2	2.17	0.45
49:S2:1819:A:C2'	49:S2:1820:G:H5'	2.47	0.45
50:SA:3:GLY:N	70:SV:78:ILE:O	2.49	0.45
50:SA:20:ALA:HB3	66:SR:91:LEU:HD12	1.98	0.45
51:SB:36:PRO:HB3	51:SB:231:LEU:HD21	1.99	0.45
55:SF:142:SER:OG	77:Sc:49:PRO:O	2.25	0.45
59:SJ:32:ILE:CD1	59:SJ:40:LYS:HG2	2.47	0.45
59:SJ:39:ASN:CG	59:SJ:42:GLU:HG3	2.42	0.45
64:SP:53:GLN:HB3	64:SP:83:MET:CE	2.47	0.45
65:SQ:89:SER:CB	65:SQ:119:LEU:HB3	2.46	0.45
71:SW:26:LEU:HD12	71:SW:61:ILE:O	2.17	0.45
72:SX:53:GLU:OE2	72:SX:71:ARG:HD2	2.16	0.45
79:Se:6:LEU:HD23	79:Se:6:LEU:H	1.82	0.45
80:Sg:169:GLY:O	80:Sg:195:LEU:HD23	2.17	0.45
4:L5:444:G:O2'	4:L5:445:U:H5'	2.17	0.45
4:L5:667:A:H3'	4:L5:667:A:OP2	2.16	0.45
4:L5:960:A:H8	11:LE:126:LEU:HD12	1.82	0.45
4:L5:1249:C:O2'	4:L5:1250:C:H5'	2.17	0.45
4:L5:2677:G:H2'	4:L5:2678:A:H5'	1.99	0.45
4:L5:4189:U:H2'	4:L5:4190:U:O4'	2.16	0.45
4:L5:4420:U:O4	4:L5:4475:G:N2	2.49	0.45
8:LB:56:ILE:O	8:LB:73:VAL:HG23	2.17	0.45
10:LD:10:LYS:O	10:LD:14:LYS:HG3	2.17	0.45
10:LD:125:VAL:HG23	10:LD:126:THR:N	2.32	0.45
16:LJ:42:GLN:HG3	16:LJ:117:ILE:HD11	1.98	0.45
18:LM:7:VAL:O	24:LS:151:LYS:HA	2.16	0.45
21:LP:13:LYS:O	21:LP:14:SER:OG	2.34	0.45
23:LR:21:LYS:HD3	23:LR:21:LYS:HA	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:LX:97:VAL:HG22	29:LX:137:TYR:CD1	2.52	0.45
32:La:76:ASP:N	32:La:76:ASP:OD1	2.49	0.45
49:S2:194:C:H2'	49:S2:195:C:O4'	2.17	0.45
49:S2:508:A:H5'	49:S2:509:G:OP2	2.17	0.45
49:S2:897:U:H2'	49:S2:898:U:O4'	2.17	0.45
49:S2:1237:C:H4'	64:SP:130:ARG:O	2.17	0.45
49:S2:1303:C:H2'	49:S2:1304:U:C6	2.51	0.45
49:S2:1570:G:C2'	49:S2:1571:G:H5'	2.47	0.45
49:S2:1721:U:H3'	49:S2:1722:G:H5''	1.99	0.45
50:SA:191:ARG:HG3	50:SA:191:ARG:O	2.17	0.45
51:SB:85:LYS:HB2	51:SB:101:HIS:HB3	1.99	0.45
51:SB:127:VAL:O	51:SB:134:LEU:HD12	2.17	0.45
53:SD:72:VAL:CG1	60:SK:22:VAL:HG22	2.43	0.45
54:SE:173:ILE:HD11	54:SE:235:TRP:CE3	2.52	0.45
55:SF:74:ASN:O	55:SF:77:MET:HG2	2.17	0.45
56:SG:33:ALA:HA	56:SG:52:ILE:O	2.17	0.45
57:SH:60:ILE:CG2	57:SH:92:VAL:HG12	2.46	0.45
58:SI:186:ASP:OD1	58:SI:186:ASP:N	2.35	0.45
63:SO:103:ASN:ND2	63:SO:142:ARG:HA	2.32	0.45
68:ST:64:LEU:HB3	68:ST:123:LEU:HD11	1.98	0.45
73:SY:6:THR:HG22	73:SY:28:LEU:HB2	1.98	0.45
4:L5:162:A:O2'	4:L5:163:A:H5'	2.17	0.45
4:L5:182:G:N1	4:L5:184:U:O4'	2.50	0.45
4:L5:214:G:O2'	4:L5:215:C:H5'	2.17	0.45
4:L5:449:C:O5'	4:L5:450:G:H5'	2.17	0.45
4:L5:500:G:N3	4:L5:504:G:O2'	2.36	0.45
4:L5:982:U:O5'	11:LE:73:TYR:OH	2.28	0.45
4:L5:1241:C:OP2	11:LE:72:LYS:NZ	2.23	0.45
4:L5:1397:A:H8	32:La:114:LYS:HD2	1.82	0.45
4:L5:1722:C:O2'	4:L5:1723:A:H5'	2.17	0.45
4:L5:1755:C:O2'	10:LD:2:GLY:HA3	2.17	0.45
4:L5:2335:C:H2'	4:L5:2336:G:H8	1.81	0.45
4:L5:4587:G:OP1	20:LO:61:ARG:HD2	2.16	0.45
4:L5:5014:A:O2'	4:L5:5015:G:H5'	2.17	0.45
7:LA:115:CYS:O	7:LA:164:ALA:HA	2.17	0.45
10:LD:191:ASN:ND2	10:LD:194:VAL:HG23	2.29	0.45
11:LE:51:VAL:HG22	11:LE:52:ARG:H	1.81	0.45
12:LF:166:ARG:HD2	12:LF:209:TRP:CD1	2.51	0.45
18:LM:109:ARG:HA	18:LM:112:VAL:HG22	1.99	0.45
22:LQ:124:ASP:OD1	22:LQ:124:ASP:N	2.43	0.45
24:LS:96:GLU:HG2	24:LS:139:ARG:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:L1:25:GLN:O	43:L1:28:ARG:HG2	2.17	0.45
49:S2:818:A:OP1	59:SJ:80:ARG:NH2	2.50	0.45
49:S2:1164:G:C2'	49:S2:1165:G:H5'	2.46	0.45
49:S2:1292:C:H2'	49:S2:1293:A:H5''	1.99	0.45
49:S2:1588:A:O2'	49:S2:1589:A:OP2	2.30	0.45
50:SA:123:VAL:HG23	50:SA:175:TRP:HH2	1.80	0.45
52:SC:123:ARG:HG2	52:SC:144:SER:O	2.17	0.45
54:SE:35:PRO:HG2	54:SE:36:HIS:CD2	2.52	0.45
55:SF:143:PRO:O	55:SF:146:ARG:HG2	2.17	0.45
58:SI:4:SER:OG	58:SI:24:LYS:HD3	2.17	0.45
59:SJ:121:LYS:H	59:SJ:125:HIS:CD2	2.34	0.45
61:SL:138:VAL:O	61:SL:139:ARG:HD3	2.16	0.45
64:SP:84:ILE:HA	64:SP:114:HIS:O	2.18	0.45
67:SS:12:ILE:HG22	67:SS:21:ASP:HA	1.99	0.45
69:SU:38:ASP:O	69:SU:42:GLY:N	2.49	0.45
71:SW:3:ARG:HD3	71:SW:6:VAL:HG12	1.99	0.45
74:SZ:58:LEU:HG	74:SZ:62:VAL:CG2	2.37	0.45
4:L5:124:C:OP1	19:LN:144:ARG:HD2	2.17	0.44
4:L5:276:C:P	40:Li:34:THR:HG21	2.57	0.44
4:L5:735:G:H1	4:L5:928:C:H42	1.65	0.44
4:L5:1078:A:H2'	4:L5:1079:C:O4'	2.17	0.44
4:L5:1202:C:C6	4:L5:1203:G:H4'	2.52	0.44
4:L5:1958:A:O2'	4:L5:1962:A:H1'	2.17	0.44
4:L5:3777:G:N2	4:L5:3815:G:H2'	2.32	0.44
4:L5:4487:A:O2'	4:L5:4488:A:H5'	2.17	0.44
4:L5:4712:C:O2'	4:L5:4713:G:H5'	2.18	0.44
5:L7:23:A:N3	5:L7:118:C:O2'	2.45	0.44
8:LB:10:ARG:NH1	8:LB:14:LEU:HD13	2.33	0.44
9:LC:67:TRP:NE1	9:LC:73:VAL:HG21	2.27	0.44
9:LC:222:ARG:HD2	30:LY:3:PHE:HZ	1.83	0.44
12:LF:160:GLY:C	12:LF:162:ILE:HD12	2.43	0.44
13:LG:191:GLY:HA3	13:LG:197:LYS:O	2.17	0.44
18:LM:53:LYS:HA	24:LS:157:ARG:HH22	1.82	0.44
22:LQ:59:PRO:HG3	22:LQ:143:ARG:HA	1.97	0.44
26:LU:83:LEU:O	26:LU:87:THR:HG23	2.17	0.44
29:LX:110:LYS:HG3	29:LX:121:VAL:HB	1.99	0.44
30:LY:109:LEU:HD13	30:LY:119:LEU:HD21	1.99	0.44
35:Ld:117:LEU:HA	35:Ld:117:LEU:HD23	1.78	0.44
47:Lp:10:ILE:HG21	47:Lp:31:ILE:HG13	1.99	0.44
49:S2:503:C:O2'	49:S2:504:G:H5'	2.18	0.44
49:S2:1370:A:N3	49:S2:1372:U:H5'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1452:A:H4'	49:S2:1453:C:O4'	2.16	0.44
51:SB:38:MET:CE	51:SB:231:LEU:HD21	2.47	0.44
51:SB:217:MET:HE3	51:SB:217:MET:HB3	1.85	0.44
53:SD:14:ASP:O	53:SD:18:LYS:HG3	2.18	0.44
59:SJ:30:LYS:HA	79:Se:38:TYR:CE1	2.51	0.44
59:SJ:93:LYS:HB2	59:SJ:96:TYR:CD1	2.52	0.44
59:SJ:173:VAL:O	59:SJ:177:ASN:N	2.42	0.44
67:SS:84:LEU:HD12	67:SS:84:LEU:H	1.82	0.44
69:SU:93:SER:HB3	69:SU:94:PRO:HD2	2.00	0.44
80:Sg:121:VAL:HG21	80:Sg:165:ILE:HD11	1.99	0.44
80:Sg:133:ASN:OD1	80:Sg:137:VAL:HB	2.18	0.44
80:Sg:230:LEU:HD21	80:Sg:259:TRP:CE3	2.52	0.44
4:L5:1275:G:H2'	4:L5:1276:C:O4'	2.17	0.44
4:L5:1754:U:H3	4:L5:1776:A:H61	1.65	0.44
4:L5:1761:G:H2'	4:L5:1762:C:H5'	1.98	0.44
4:L5:1840:G:H5''	12:LF:113:ARG:HD3	1.99	0.44
4:L5:1853:G:H5''	4:L5:1854:G:C5'	2.47	0.44
4:L5:1963:C:H42	4:L5:4694:G:H1	1.65	0.44
4:L5:2731:C:H2'	4:L5:2732:G:O4'	2.17	0.44
4:L5:2789:A:H1'	4:L5:2796:G:O4'	2.16	0.44
4:L5:2849:A:O2'	4:L5:2855:G:N7	2.38	0.44
4:L5:2874:U:C1'	47:Lp:20:ALA:HB2	2.48	0.44
4:L5:3602:C:H2'	4:L5:3603:G:O4'	2.17	0.44
4:L5:3635:A:N6	47:Lp:18:TYR:HA	2.31	0.44
4:L5:4971:A:H2'	4:L5:4972:U:H5'	1.99	0.44
4:L5:4977:A:O2'	4:L5:4978:G:H5'	2.16	0.44
11:LE:284:HIS:CE1	37:Lf:33:VAL:HG22	2.53	0.44
19:LN:143:ARG:NH2	39:Lh:94:ARG:O	2.50	0.44
22:LQ:178:ARG:N	32:La:51:GLY:HA2	2.33	0.44
34:Lc:20:LEU:CD2	34:Lc:101:ASP:HB3	2.47	0.44
36:Le:76:LYS:HA	36:Le:96:CYS:O	2.17	0.44
37:Lf:74:VAL:CG1	37:Lf:84:VAL:HB	2.47	0.44
47:Lp:33:GLN:HB2	47:Lp:69:TRP:CD1	2.52	0.44
49:S2:186:C:O2'	49:S2:187:G:H5'	2.17	0.44
49:S2:460:A:O2'	49:S2:461:U:H5'	2.16	0.44
49:S2:658:U:O2	72:SX:17:ARG:NH2	2.50	0.44
49:S2:937:C:H2'	49:S2:938:A:O4'	2.16	0.44
49:S2:1017:U:H5'	62:SN:55:ARG:HD3	1.99	0.44
49:S2:1597:C:O2'	49:S2:1598:G:O5'	2.34	0.44
50:SA:84:GLN:NE2	50:SA:101:GLY:HA2	2.33	0.44
50:SA:177:MET:SD	50:SA:180:ARG:NH2	2.90	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SE:180:LEU:HA	54:SE:193:GLY:O	2.16	0.44
55:SF:88:MET:HE3	55:SF:88:MET:HB2	1.78	0.44
57:SH:178:LYS:O	57:SH:182:GLY:HA2	2.18	0.44
62:SN:40:LEU:HD12	62:SN:50:ILE:HG23	1.99	0.44
68:ST:18:LEU:HD12	68:ST:134:ILE:HD13	1.99	0.44
72:SX:94:ILE:HD13	72:SX:125:VAL:CG2	2.47	0.44
4:L5:1178:G:O2'	4:L5:1179:U:O5'	2.24	0.44
4:L5:1613:A:H5''	7:LA:183:GLY:CA	2.47	0.44
4:L5:1617:G:H1'	4:L5:2513:A:H61	1.81	0.44
4:L5:1821:G:H2'	4:L5:1821:G:N3	2.33	0.44
4:L5:2052:G:O2'	4:L5:2057:A:N1	2.45	0.44
4:L5:2770:C:O2'	4:L5:2771:G:H5'	2.16	0.44
4:L5:4516:G:O2'	4:L5:4517:A:H5'	2.18	0.44
4:L5:4631:G:H2'	4:L5:4632:U:O4'	2.18	0.44
4:L5:4633:G:H1'	4:L5:4635:A:OP2	2.17	0.44
4:L5:4903:G:O2'	4:L5:4904:G:H5'	2.16	0.44
4:L5:4910:G:O4'	20:LO:156:LEU:HD21	2.17	0.44
19:LN:183:THR:HA	19:LN:187:SER:O	2.17	0.44
21:LP:29:THR:HA	21:LP:32:THR:HG22	1.99	0.44
27:LV:39:ILE:HA	27:LV:63:ALA:HB2	1.99	0.44
30:LY:84:ARG:HA	30:LY:86:GLN:HE22	1.82	0.44
39:Lh:105:LYS:HE2	39:Lh:105:LYS:HB2	1.83	0.44
49:S2:484:A:H5''	49:S2:485:A:OP1	2.17	0.44
49:S2:538:U:H1'	49:S2:544:G:C6	2.53	0.44
49:S2:544:G:H2'	49:S2:545:A:H4'	1.98	0.44
49:S2:582:C:C1'	73:SY:33:ALA:HB2	2.47	0.44
49:S2:748:C:H4'	49:S2:796:G:N1	2.31	0.44
49:S2:1124:C:O3'	51:SB:150:ILE:HD12	2.18	0.44
49:S2:1809:A:H2'	49:S2:1810:U:C6	2.52	0.44
49:S2:1842:C:H2'	49:S2:1843:G:C8	2.52	0.44
49:S2:1863:A:H1'	75:Sa:79:ILE:HD12	1.98	0.44
53:SD:72:VAL:CG2	60:SK:20:VAL:HG11	2.48	0.44
55:SF:80:GLY:HA2	55:SF:83:ASN:CB	2.45	0.44
57:SH:181:THR:O	57:SH:183:LYS:HG3	2.18	0.44
64:SP:86:LEU:HD13	64:SP:88:GLU:HB3	1.98	0.44
64:SP:96:VAL:O	64:SP:102:PHE:HA	2.18	0.44
64:SP:111:MET:HE3	64:SP:119:PHE:CD2	2.53	0.44
74:SZ:103:HIS:N	74:SZ:106:GLN:O	2.50	0.44
75:Sa:12:LYS:HB2	75:Sa:33:ASP:OD2	2.18	0.44
80:Sg:22:ALA:HB1	80:Sg:71:ILE:HG12	1.98	0.44
80:Sg:42:MET:HE3	80:Sg:92:LEU:HD23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:316:U:OP1	4:L5:316:U:H3'	2.17	0.44
4:L5:513:U:H2'	4:L5:515:C:C6	2.53	0.44
4:L5:708:G:O2'	4:L5:709:C:H5'	2.17	0.44
4:L5:2268:A:OP2	48:Lr:11:ARG:HD2	2.18	0.44
4:L5:2408:U:H4'	4:L5:2409:U:O5'	2.17	0.44
4:L5:4431:U:P	15:LI:3:ARG:HH22	2.40	0.44
4:L5:4725:C:O2'	4:L5:4726:G:H5'	2.18	0.44
10:LD:157:ASN:OD1	10:LD:159:VAL:HG12	2.18	0.44
11:LE:166:LYS:NZ	11:LE:168:LEU:HD23	2.32	0.44
12:LF:49:LEU:HD21	12:LF:53:LYS:HD2	1.98	0.44
14:LH:95:VAL:HG22	44:Lm:82:LEU:CG	2.47	0.44
18:LM:100:ARG:HD3	20:LO:198:THR:C	2.43	0.44
27:LV:30:ASP:OD1	27:LV:32:THR:HG22	2.18	0.44
29:LX:73:HIS:NE2	29:LX:115:LYS:HD3	2.33	0.44
31:LZ:21:ARG:NH2	31:LZ:47:ASP:O	2.47	0.44
42:Lk:70:LYS:HD3	42:Lk:70:LYS:HA	1.79	0.44
49:S2:162:C:H5''	56:SG:87:ARG:HH21	1.82	0.44
49:S2:570:C:H2'	49:S2:571:U:O4'	2.18	0.44
49:S2:935:G:O2'	62:SN:108:ASP:HB2	2.18	0.44
49:S2:1283:C:H2'	49:S2:1284:A:H5''	1.99	0.44
49:S2:1523:C:H2'	49:S2:1524:G:H8	1.82	0.44
49:S2:1537:A:H5''	68:ST:84:ARG:NH1	2.30	0.44
49:S2:1803:U:O2'	49:S2:1804:U:H5'	2.18	0.44
50:SA:119:PRO:O	50:SA:142:LEU:HD21	2.17	0.44
52:SC:60:TRP:CZ3	52:SC:92:GLU:HB2	2.53	0.44
52:SC:201:GLY:N	52:SC:221:ASP:OD2	2.50	0.44
53:SD:132:LYS:HE2	53:SD:190:LEU:O	2.18	0.44
57:SH:153:LEU:HD11	57:SH:186:ASN:OD1	2.17	0.44
61:SL:142:VAL:C	61:SL:143:LEU:HD23	2.42	0.44
64:SP:93:MET:HE1	64:SP:106:GLU:HG2	1.98	0.44
67:SS:14:ARG:CB	67:SS:19:ASN:HA	2.47	0.44
67:SS:117:ILE:O	67:SS:119:ALA:N	2.49	0.44
71:SW:111:MET:CE	71:SW:115:GLU:HG3	2.47	0.44
75:Sa:12:LYS:HG3	75:Sa:15:ARG:HB2	2.00	0.44
80:Sg:31:ILE:HD12	80:Sg:299:PHE:CE2	2.52	0.44
4:L5:1662:C:H2'	4:L5:1663:C:C6	2.52	0.44
4:L5:2264:C:H2'	4:L5:2265:G:O4'	2.18	0.44
4:L5:2335:C:O2'	4:L5:2336:G:H5'	2.17	0.44
4:L5:2337:C:H4'	48:Lr:19:LYS:HB2	1.99	0.44
4:L5:2871:A:H2'	4:L5:2872:C:O4'	2.18	0.44
4:L5:2909:C:H4'	4:L5:3586:G:H22	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3897:G:OP2	8:LB:250:LYS:NZ	2.50	0.44
4:L5:4389:C:H2'	4:L5:4390:A:H8	1.82	0.44
4:L5:4656:A:OP1	4:L5:4658:G:H5''	2.18	0.44
4:L5:4760:G:OP1	20:LO:117:ARG:NH2	2.51	0.44
8:LB:268:ARG:HA	8:LB:268:ARG:HD3	1.56	0.44
8:LB:378:ARG:HD2	28:LW:11:TYR:CE2	2.53	0.44
9:LC:10:VAL:HG21	9:LC:254:GLU:OE1	2.17	0.44
9:LC:112:HIS:O	9:LC:113:ARG:HD2	2.17	0.44
13:LG:48:LYS:HB3	29:LX:42:THR:OG1	2.18	0.44
13:LG:157:ILE:HG12	13:LG:170:LEU:HD13	2.00	0.44
15:LI:54:SER:HB2	15:LI:135:ILE:HD11	2.00	0.44
25:LT:119:ALA:HB1	25:LT:124:THR:O	2.16	0.44
28:LW:6:CYS:SG	28:LW:31:PHE:HA	2.58	0.44
28:LW:106:GLU:HA	28:LW:109:ILE:HG22	2.00	0.44
41:Lj:54:LYS:HZ3	41:Lj:54:LYS:HG2	1.55	0.44
49:S2:63:U:O2'	49:S2:170:A:N3	2.46	0.44
49:S2:85:A:C4'	49:S2:150:A:H4'	2.46	0.44
49:S2:118:C:C2'	49:S2:119:U:H5'	2.47	0.44
49:S2:1617:G:N7	64:SP:43:ARG:NH1	2.63	0.44
49:S2:1755:C:H2'	49:S2:1777:G:N2	2.32	0.44
51:SB:87:ILE:HG21	51:SB:220:LYS:NZ	2.33	0.44
51:SB:139:CYS:HB2	51:SB:172:MET:SD	2.58	0.44
51:SB:147:ASN:N	51:SB:147:ASN:OD1	2.49	0.44
53:SD:95:GLY:HA3	53:SD:129:SER:OG	2.18	0.44
53:SD:123:LEU:HB2	53:SD:134:CYS:SG	2.56	0.44
53:SD:127:MET:HE3	53:SD:134:CYS:SG	2.57	0.44
54:SE:247:THR:CG2	54:SE:250:GLU:H	2.25	0.44
57:SH:61:ILE:HG12	57:SH:93:VAL:CG2	2.47	0.44
58:SI:22:HIS:CD2	58:SI:25:ARG:HG2	2.53	0.44
58:SI:29:LEU:HD12	58:SI:30:GLY:N	2.33	0.44
62:SN:59:GLY:HA3	76:Sb:45:THR:HG23	1.99	0.44
73:SY:27:VAL:HG12	73:SY:29:HIS:HD2	1.82	0.44
79:Se:45:VAL:HG23	79:Se:46:VAL:H	1.81	0.44
4:L5:319:A:O2'	4:L5:320:C:H5'	2.17	0.44
4:L5:680:G:O2'	4:L5:681:G:H5'	2.18	0.44
4:L5:2513:A:OP1	38:Lg:11:LEU:HD13	2.17	0.44
4:L5:2789:A:H1'	4:L5:2796:G:C1'	2.48	0.44
4:L5:2818:C:H1'	4:L5:4644:G:O2'	2.17	0.44
4:L5:2847:G:O2'	27:LV:21:PRO:HG2	2.18	0.44
4:L5:2847:G:O2'	27:LV:24:ALA:HB2	2.18	0.44
4:L5:4462:C:O2'	4:L5:4463:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L7:59:G:H4'	10:LD:267:ASN:HD21	1.83	0.44
8:LB:224:LYS:HG3	8:LB:340:THR:HG23	2.00	0.44
9:LC:128:LEU:HD23	9:LC:128:LEU:HA	1.77	0.44
11:LE:243:THR:HG23	11:LE:246:ARG:HB2	2.00	0.44
13:LG:136:LEU:HD22	13:LG:202:VAL:CG1	2.47	0.44
13:LG:160:ASP:OD1	13:LG:160:ASP:N	2.51	0.44
14:LH:91:LYS:HB2	14:LH:182:SER:OG	2.18	0.44
17:LL:63:THR:HG21	32:La:66:ASN:HB2	1.99	0.44
30:LY:22:PRO:O	30:LY:26:ARG:HB2	2.17	0.44
49:S2:35:C:O2'	49:S2:36:U:H5'	2.18	0.44
49:S2:67:C:N3	56:SG:170:ARG:NH2	2.66	0.44
49:S2:448:A:H5''	58:SI:25:ARG:HA	2.00	0.44
49:S2:794:A:C2'	49:S2:795:A:H4'	2.41	0.44
49:S2:807:G:H3'	49:S2:808:A:H5''	2.00	0.44
49:S2:835:C:O2	49:S2:839:C:H5''	2.17	0.44
49:S2:1218:C:H2'	49:S2:1219:C:C6	2.52	0.44
49:S2:1233:G:O6	67:SS:138:THR:HG21	2.16	0.44
49:S2:1298:G:HO2'	49:S2:1299:A:C1'	2.30	0.44
49:S2:1589:A:H2'	49:S2:1590:C:O4'	2.17	0.44
51:SB:65:ARG:O	51:SB:88:THR:HG22	2.18	0.44
53:SD:186:VAL:O	53:SD:186:VAL:HG12	2.17	0.44
54:SE:252:ARG:O	54:SE:256:LEU:HD13	2.17	0.44
56:SG:135:PRO:HG2	56:SG:141:ILE:HG12	2.00	0.44
58:SI:34:ALA:HB2	58:SI:56:ARG:HD2	1.98	0.44
67:SS:111:LEU:HD13	67:SS:125:HIS:CD2	2.52	0.44
74:SZ:57:LYS:HG3	74:SZ:58:LEU:N	2.32	0.44
4:L5:465:G:H2'	4:L5:466:A:O4'	2.18	0.44
4:L5:677:G:H2'	4:L5:678:C:C6	2.52	0.44
4:L5:685:C:O2	4:L5:686:A:N6	2.50	0.44
4:L5:752:G:OP1	4:L5:916:C:N4	2.51	0.44
4:L5:1182:C:H3'	4:L5:1183:C:H5''	1.99	0.44
4:L5:1244:G:H2'	4:L5:1245:C:C1'	2.48	0.44
4:L5:1442:C:H2'	4:L5:1442:C:OP2	2.18	0.44
4:L5:1875:C:H2'	4:L5:1876:U:C6	2.52	0.44
4:L5:1958:A:O2'	4:L5:1959:U:OP2	2.35	0.44
4:L5:2026:A:H2'	4:L5:2027:U:C6	2.53	0.44
4:L5:2642:A:C2	42:Lk:2:PRO:HD2	2.53	0.44
4:L5:3712:A:C2'	4:L5:3713:U:H5'	2.44	0.44
4:L5:4971:A:C2'	4:L5:4972:U:H5'	2.48	0.44
7:LA:117:GLU:OE1	7:LA:121:GLY:N	2.38	0.44
7:LA:123:ARG:HD3	7:LA:123:ARG:HA	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:LC:11:TYR:CZ	9:LC:148:PRO:HB2	2.52	0.44
13:LG:157:ILE:HD11	13:LG:170:LEU:HB3	2.00	0.44
13:LG:175:ARG:HD2	13:LG:175:ARG:O	2.17	0.44
14:LH:89:ARG:NH1	14:LH:187:VAL:HA	2.32	0.44
15:LI:46:PHE:HB2	15:LI:139:ARG:HD2	1.99	0.44
19:LN:114:ARG:NE	19:LN:137:PRO:HG3	2.33	0.44
19:LN:183:THR:HG22	19:LN:188:ARG:CA	2.48	0.44
22:LQ:43:PHE:CD2	22:LQ:133:GLY:HA3	2.53	0.44
22:LQ:130:SER:O	22:LQ:130:SER:OG	2.33	0.44
25:LT:157:GLU:N	25:LT:157:GLU:OE2	2.51	0.44
30:LY:56:GLN:HB2	30:LY:67:ILE:HD12	1.98	0.44
33:Lb:8:THR:CG2	33:Lb:10:HIS:HB2	2.48	0.44
42:Lk:26:LYS:HZ3	42:Lk:28:ASN:HB3	1.82	0.44
48:Lr:41:ASN:ND2	48:Lr:44:ILE:HB	2.32	0.44
49:S2:544:G:C3'	49:S2:545:A:H4'	2.48	0.44
49:S2:688:U:OP1	57:SH:122:LEU:HB3	2.17	0.44
49:S2:1156:U:OP1	71:SW:71:LYS:HE3	2.18	0.44
49:S2:1204:A:H62	49:S2:1694:U:H3	1.64	0.44
49:S2:1410:C:O2'	49:S2:1411:G:H5'	2.17	0.44
52:SC:207:ALA:C	52:SC:210:PRO:HD2	2.42	0.44
53:SD:209:SER:O	66:SR:39:ALA:HB1	2.17	0.44
56:SG:76:LEU:HD12	56:SG:77:LEU:H	1.83	0.44
56:SG:159:ARG:HD2	56:SG:171:THR:CB	2.38	0.44
59:SJ:136:ARG:NH2	59:SJ:161:LEU:HD21	2.33	0.44
64:SP:20:VAL:HG22	64:SP:21:ASP:O	2.17	0.44
64:SP:93:MET:HE1	64:SP:106:GLU:CG	2.48	0.44
65:SQ:57:LEU:HD11	65:SQ:115:TYR:CG	2.53	0.44
65:SQ:105:LYS:O	65:SQ:109:LYS:N	2.44	0.44
66:SR:61:ILE:HD12	66:SR:71:ILE:HD13	1.99	0.44
69:SU:21:ARG:HG2	69:SU:90:ASP:CB	2.34	0.44
73:SY:10:ARG:HG3	73:SY:24:VAL:CG2	2.46	0.44
74:SZ:69:THR:H	74:SZ:72:VAL:HG22	1.83	0.44
80:Sg:15:ASN:HB3	80:Sg:37:ASP:OD2	2.18	0.44
80:Sg:21:ILE:HG13	80:Sg:21:ILE:O	2.18	0.44
4:L5:18:C:H4'	19:LN:138:PHE:CD2	2.52	0.44
4:L5:139:G:O2'	4:L5:140:G:H5'	2.18	0.44
4:L5:733:A:O2'	24:LS:72:PRO:HD2	2.18	0.44
4:L5:962:C:H4'	4:L5:963:G:O4'	2.18	0.44
4:L5:1080:C:O2'	4:L5:1081:C:H5'	2.18	0.44
4:L5:2289:C:O2'	48:Lr:22:LYS:HE2	2.18	0.44
4:L5:2561:C:H2'	4:L5:2562:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2696:A:H62	42:Lk:35:LYS:HZ2	1.65	0.44
4:L5:2720:C:H2'	4:L5:2721:G:O4'	2.17	0.44
4:L5:3711:A:H2'	4:L5:3712:A:H8	1.83	0.44
4:L5:4461:C:O2'	4:L5:4462:C:H5'	2.18	0.44
4:L5:4625:C:HO2'	8:LB:336:CYS:HG	1.60	0.44
5:L7:11:A:N1	5:L7:66:G:O2'	2.49	0.44
6:L8:96:C:OP1	39:Lh:66:LYS:HD3	2.17	0.44
8:LB:223:THR:O	8:LB:274:TYR:HA	2.18	0.44
13:LG:37:LYS:HD2	13:LG:39:PHE:CZ	2.53	0.44
20:LO:106:ASP:N	20:LO:106:ASP:OD1	2.50	0.44
26:LU:48:LYS:HA	26:LU:52:LYS:O	2.18	0.44
27:LV:80:VAL:CG2	27:LV:106:VAL:HG11	2.41	0.44
27:LV:123:LYS:HE2	27:LV:123:LYS:HB3	1.84	0.44
31:LZ:10:VAL:O	31:LZ:83:THR:OG1	2.21	0.44
37:Lf:106:TYR:O	37:Lf:108:SER:N	2.51	0.44
43:Ll:20:ASN:ND2	43:Ll:42:ARG:O	2.51	0.44
46:Lo:26:TYR:HB3	46:Lo:67:VAL:O	2.18	0.44
49:S2:71:G:O6	56:SG:170:ARG:NE	2.50	0.44
49:S2:192:C:H2'	49:S2:193:C:H5'	2.00	0.44
49:S2:379:C:O2	58:SI:5:ARG:NH1	2.50	0.44
49:S2:618:C:H41	72:SX:67:ARG:NH1	2.15	0.44
49:S2:753:C:N4	49:S2:790:C:H3'	2.32	0.44
49:S2:926:A:H61	49:S2:1015:U:H3	1.65	0.44
49:S2:943:U:OP1	51:SB:214:LYS:NZ	2.51	0.44
49:S2:1524:G:O2'	49:S2:1525:C:H5'	2.18	0.44
49:S2:1728:U:H2'	49:S2:1729:U:O4'	2.18	0.44
49:S2:1828:C:H2'	49:S2:1829:G:O4'	2.18	0.44
50:SA:68:ILE:HD11	50:SA:121:LEU:HB2	1.98	0.44
50:SA:81:ASN:HA	50:SA:84:GLN:CD	2.43	0.44
50:SA:147:LEU:HB3	50:SA:163:CYS:SG	2.58	0.44
51:SB:30:TRP:NE1	51:SB:48:LEU:HD21	2.32	0.44
51:SB:53:GLN:HA	51:SB:53:GLN:OE1	2.17	0.44
52:SC:98:LEU:CD1	52:SC:102:LEU:HD21	2.48	0.44
56:SG:52:ILE:HD11	56:SG:109:LEU:HG	2.00	0.44
57:SH:145:ARG:CB	57:SH:155:LYS:HE3	2.48	0.44
57:SH:168:HIS:ND1	57:SH:169:LYS:HG3	2.32	0.44
61:SL:72:ILE:O	61:SL:73:LEU:HD23	2.18	0.44
62:SN:10:GLY:O	62:SN:11:LEU:HD22	2.18	0.44
80:Sg:11:LEU:HD23	80:Sg:43:TRP:CE2	2.52	0.44
80:Sg:207:CYS:SG	80:Sg:208:ALA:N	2.90	0.44
4:L5:649:A:H2'	4:L5:650:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1354:A:OP2	22:LQ:106:THR:HG21	2.17	0.44
4:L5:1727:U:C5'	12:LF:131:ASN:HD22	2.31	0.44
4:L5:2056:G:H5''	20:LO:128:ARG:NH1	2.33	0.44
4:L5:2614:C:H2'	4:L5:2615:C:O4'	2.18	0.44
4:L5:2675:G:O6	34:Lc:30:GLY:HA3	2.18	0.44
4:L5:4182:G:H4'	7:LA:226:ARG:NH2	2.33	0.44
4:L5:4302:U:H2'	4:L5:4303:C:H5'	2.00	0.44
4:L5:4368:G:N2	46:Lo:82:MET:HE1	2.32	0.44
4:L5:4457:U:H1'	8:LB:252:ALA:CB	2.48	0.44
6:L8:92:U:C2'	6:L8:93:C:H5'	2.47	0.44
20:LO:119:VAL:O	20:LO:121:PRO:HD3	2.17	0.44
23:LR:129:GLY:O	23:LR:131:VAL:N	2.50	0.44
31:LZ:54:THR:HG22	31:LZ:57:MET:HG3	1.99	0.44
49:S2:438:G:N3	49:S2:438:G:H5''	2.32	0.44
49:S2:497:C:O2'	49:S2:498:C:H5'	2.17	0.44
49:S2:574:A:H4'	73:SY:89:HIS:HB2	2.00	0.44
49:S2:1059:G:H3'	49:S2:1060:A:H5''	2.00	0.44
50:SA:44:ASP:O	66:SR:126:MET:HG2	2.17	0.44
54:SE:192:ILE:CG1	54:SE:243:GLY:HA3	2.48	0.44
55:SF:201:LYS:HG3	55:SF:204:ARG:NH1	2.33	0.44
59:SJ:110:LEU:CB	59:SJ:147:PHE:HB3	2.48	0.44
65:SQ:48:GLN:O	65:SQ:52:LEU:HD13	2.18	0.44
67:SS:30:ILE:HD11	67:SS:41:ALA:CB	2.46	0.44
72:SX:69:CYS:SG	72:SX:118:VAL:HG21	2.58	0.44
73:SY:55:ILE:CG2	73:SY:75:ILE:HG22	2.45	0.44
80:Sg:135:LEU:HD23	80:Sg:135:LEU:O	2.17	0.44
4:L5:1202:C:N1	4:L5:1203:G:H4'	2.33	0.43
4:L5:2115:G:C3'	4:L5:2116:C:H5'	2.48	0.43
4:L5:2273:G:H2'	4:L5:2274:C:C6	2.53	0.43
4:L5:2527:A:P	23:LR:38:ARG:HH22	2.40	0.43
4:L5:3712:A:H62	49:S2:970:G:H1	1.64	0.43
4:L5:3893:C:O2'	4:L5:4979:A:N1	2.50	0.43
4:L5:4526:U:C2'	4:L5:4527:G:H5'	2.48	0.43
8:LB:40:PRO:O	8:LB:187:GLY:HA3	2.18	0.43
8:LB:132:LYS:H	8:LB:132:LYS:HG2	1.63	0.43
8:LB:288:GLY:HA3	8:LB:330:PHE:CZ	2.52	0.43
10:LD:203:ASN:OD1	10:LD:203:ASN:N	2.47	0.43
13:LG:220:GLU:O	13:LG:224:THR:HG23	2.17	0.43
15:LI:32:ARG:NE	15:LI:32:ARG:HA	2.33	0.43
19:LN:53:TYR:CE1	19:LN:61:ILE:HD11	2.53	0.43
20:LO:108:ILE:HD12	20:LO:160:ARG:NH1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LP:29:THR:HA	21:LP:87:SER:OG	2.17	0.43
22:LQ:83:VAL:HG12	22:LQ:123:PHE:CZ	2.53	0.43
36:Le:83:LYS:HB2	36:Le:83:LYS:HE3	1.73	0.43
40:Li:45:ARG:HD3	40:Li:45:ARG:HA	1.81	0.43
46:Lo:10:THR:O	46:Lo:18:HIS:HA	2.18	0.43
49:S2:321:C:H2'	49:S2:322:C:C6	2.52	0.43
49:S2:651:U:H2'	49:S2:652:U:H5''	2.00	0.43
49:S2:809:A:H2'	49:S2:810:A:H5''	2.00	0.43
49:S2:951:C:H1'	63:SO:50:LYS:NZ	2.33	0.43
49:S2:1120:U:H1'	49:S2:1121:G:H5''	2.00	0.43
49:S2:1512:C:H5''	78:Sd:8:TRP:CZ3	2.47	0.43
49:S2:1616:U:OP2	64:SP:43:ARG:NH2	2.51	0.43
49:S2:1808:U:O2'	49:S2:1809:A:H5'	2.18	0.43
59:SJ:32:ILE:HD11	59:SJ:40:LYS:HA	1.99	0.43
60:SK:41:PRO:HD2	60:SK:44:HIS:ND1	2.33	0.43
63:SO:94:HIS:HA	63:SO:127:GLY:O	2.18	0.43
66:SR:31:ASN:ND2	66:SR:55:THR:HG22	2.30	0.43
67:SS:33:ILE:HB	67:SS:36:VAL:CG1	2.48	0.43
68:ST:22:LEU:HD11	68:ST:28:LEU:CD2	2.43	0.43
69:SU:64:THR:HG22	69:SU:77:TRP:HE3	1.82	0.43
74:SZ:46:ASN:CB	74:SZ:80:ARG:HA	2.47	0.43
80:Sg:45:LEU:HD12	80:Sg:45:LEU:O	2.18	0.43
80:Sg:173:LEU:O	80:Sg:175:LYS:HG3	2.17	0.43
80:Sg:184:LEU:HD23	80:Sg:185:LYS:O	2.18	0.43
80:Sg:280:LYS:HD2	80:Sg:281:ALA:HB2	1.99	0.43
4:L5:3:C:H2'	4:L5:4:G:O4'	2.17	0.43
4:L5:114:G:N2	4:L5:158:A:H61	2.15	0.43
4:L5:195:C:O2'	30:LY:125:SER:OG	2.18	0.43
4:L5:287:U:O2'	19:LN:91:GLN:OE1	2.32	0.43
4:L5:513:U:H5''	4:L5:514:U:C4'	2.42	0.43
4:L5:1415:G:O2'	4:L5:1416:G:H5'	2.18	0.43
4:L5:2480:G:H2'	4:L5:2481:G:C8	2.53	0.43
4:L5:4452:U:OP2	4:L5:4522:G:N1	2.40	0.43
4:L5:4694:G:H5'	4:L5:4695:C:H5	1.83	0.43
7:LA:119:LYS:HB3	7:LA:120:PRO:HD2	1.99	0.43
10:LD:202:GLN:HE22	10:LD:237:GLU:HB2	1.83	0.43
12:LF:156:LYS:HD3	12:LF:248:ASN:OD1	2.18	0.43
15:LI:60:LEU:O	15:LI:126:VAL:HG13	2.18	0.43
19:LN:119:TYR:OH	19:LN:131:GLU:OE1	2.28	0.43
23:LR:172:ARG:NE	49:S2:909:G:OP1	2.50	0.43
26:LU:24:ASP:OD1	26:LU:69:LYS:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Lh:29:SER:O	39:Lh:33:VAL:HG23	2.17	0.43
40:Li:35:LYS:HB3	40:Li:35:LYS:HE2	1.78	0.43
49:S2:107:A:H2'	49:S2:108:G:C8	2.53	0.43
49:S2:151:C:OP2	73:SY:120:THR:HB	2.17	0.43
49:S2:457:C:O2'	49:S2:458:A:H5'	2.17	0.43
49:S2:493:A:O4'	49:S2:574:A:H5'	2.18	0.43
49:S2:527:C:H5'	59:SJ:125:HIS:HB2	2.00	0.43
49:S2:666:U:H3	49:S2:1145:A:N6	2.15	0.43
49:S2:854:A:O2'	49:S2:855:G:H5'	2.18	0.43
49:S2:1513:C:O2'	49:S2:1514:G:H5'	2.18	0.43
49:S2:1756:C:N4	49:S2:1757:G:N3	2.66	0.43
49:S2:1759:G:H21	49:S2:1774:C:P	2.41	0.43
50:SA:68:ILE:CD1	50:SA:121:LEU:HB2	2.48	0.43
51:SB:78:GLU:HG3	51:SB:79:VAL:H	1.82	0.43
51:SB:99:ASN:OD1	51:SB:100:PHE:N	2.50	0.43
52:SC:260:VAL:HG23	52:SC:260:VAL:O	2.17	0.43
54:SE:143:ASP:OD1	54:SE:144:ALA:N	2.51	0.43
55:SF:33:ILE:CG2	77:Sc:11:LEU:HD13	2.47	0.43
56:SG:110:ASN:C	56:SG:111:LEU:HD22	2.42	0.43
58:SI:141:ARG:CB	58:SI:145:ILE:HG12	2.49	0.43
64:SP:86:LEU:HB2	64:SP:87:PRO:HD2	1.99	0.43
4:L5:5:A:H2'	4:L5:6:C:O4'	2.18	0.43
4:L5:504:G:H2'	4:L5:504:G:N3	2.33	0.43
4:L5:517:C:H2'	4:L5:645:G:N2	2.32	0.43
4:L5:1071:C:H5''	4:L5:1072:C:OP2	2.18	0.43
4:L5:2487:G:C2	4:L5:2492:C:H1'	2.53	0.43
4:L5:3658:C:H2'	4:L5:3659:G:H8	1.82	0.43
4:L5:4212:A:H4'	4:L5:4213:A:O5'	2.17	0.43
4:L5:4693:C:O2'	4:L5:4695:C:N4	2.50	0.43
4:L5:4897:G:H2'	4:L5:4898:G:H5'	1.99	0.43
6:L8:68:G:H2'	6:L8:69:U:O4'	2.18	0.43
12:LF:221:LYS:O	12:LF:222:LYS:HB2	2.18	0.43
13:LG:92:ALA:HB1	13:LG:184:ILE:HD11	2.00	0.43
24:LS:45:TRP:HA	24:LS:48:VAL:CG2	2.47	0.43
28:LW:25:ASP:OD1	28:LW:25:ASP:N	2.51	0.43
36:Le:99:ILE:H	36:Le:99:ILE:HD12	1.83	0.43
37:Lf:37:ASP:OD1	37:Lf:38:GLU:N	2.50	0.43
38:Lg:60:ARG:HB3	38:Lg:61:PRO:HD2	2.00	0.43
47:Lp:49:ARG:HB2	47:Lp:55:TRP:CH2	2.53	0.43
49:S2:105:U:H2'	49:S2:106:C:H5'	2.00	0.43
49:S2:111:A:H5'	61:SL:70:GLY:HA2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:546:G:OP1	49:S2:546:G:H4'	2.18	0.43
49:S2:848:U:O2'	49:S2:849:A:H5'	2.19	0.43
49:S2:1223:A:OP1	55:SF:79:HIS:N	2.41	0.43
49:S2:1273:C:H42	49:S2:1508:A:H62	1.65	0.43
49:S2:1780:G:H2'	49:S2:1781:A:O4'	2.18	0.43
49:S2:1798:C:H2'	49:S2:1799:G:O4'	2.16	0.43
50:SA:8:LEU:HA	50:SA:191:ARG:HH22	1.84	0.43
51:SB:225:LEU:HD11	51:SB:229:MET:SD	2.58	0.43
60:SK:49:MET:HE3	60:SK:49:MET:HB2	1.83	0.43
60:SK:63:ALA:HB3	60:SK:66:HIS:O	2.19	0.43
62:SN:28:LEU:HD23	62:SN:33:VAL:HG12	1.99	0.43
65:SQ:18:THR:HB	65:SQ:75:GLY:HA2	2.00	0.43
67:SS:5:ILE:CG2	74:SZ:49:LEU:HD21	2.47	0.43
69:SU:17:ILE:HA	69:SU:92:HIS:O	2.18	0.43
73:SY:88:LYS:HD3	73:SY:97:TYR:OH	2.18	0.43
80:Sg:130:LYS:HG2	80:Sg:141:THR:CB	2.48	0.43
80:Sg:174:VAL:CG1	80:Sg:188:HIS:HB2	2.49	0.43
2:B4:55:U:H2'	2:B4:57:G:OP2	2.18	0.43
4:L5:43:U:H2'	4:L5:44:A:H5'	1.99	0.43
4:L5:456:C:OP2	4:L5:456:C:H2'	2.17	0.43
4:L5:1436:C:H5'	4:L5:2119:C:N4	2.33	0.43
4:L5:1507:C:H4'	9:LC:114:ARG:O	2.18	0.43
4:L5:1667:G:H5'	4:L5:1688:G:OP1	2.18	0.43
4:L5:2093:A:OP1	4:L5:2093:A:H4'	2.18	0.43
4:L5:4112:C:H5''	4:L5:4113:U:C5	2.50	0.43
4:L5:4579:U:O2'	4:L5:4580:U:H5'	2.19	0.43
5:L7:113:G:H2'	5:L7:114:U:C6	2.53	0.43
6:L8:125:C:H4'	6:L8:126:C:H2'	2.00	0.43
8:LB:14:LEU:HD12	8:LB:17:LEU:HD11	2.00	0.43
8:LB:47:LEU:HD13	8:LB:84:MET:CE	2.49	0.43
12:LF:25:PHE:O	12:LF:29:LYS:HG3	2.18	0.43
13:LG:34:LYS:O	13:LG:34:LYS:HG3	2.18	0.43
15:LI:42:LYS:HB2	15:LI:45:GLU:HG3	2.01	0.43
17:LL:51:ALA:HB2	17:LL:149:GLN:CD	2.43	0.43
20:LO:110:PRO:HA	20:LO:113:ASP:CG	2.44	0.43
20:LO:197:LYS:HE2	20:LO:197:LYS:HB3	1.72	0.43
23:LR:23:TRP:CZ3	23:LR:51:ILE:HD13	2.53	0.43
38:Lg:8:ARG:HE	38:Lg:31:VAL:HG13	1.82	0.43
49:S2:302:A:H1'	58:SI:73:THR:HG22	2.01	0.43
49:S2:847:A:C2	54:SE:248:ILE:HD11	2.51	0.43
49:S2:1123:C:O2'	49:S2:1124:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1358:U:H5'	52:SC:114:LYS:HD2	2.00	0.43
49:S2:1613:G:C5'	64:SP:42:ARG:HH12	2.31	0.43
50:SA:210:ILE:O	50:SA:213:GLU:HB3	2.19	0.43
55:SF:33:ILE:HG23	77:Sc:55:VAL:HG11	2.00	0.43
56:SG:109:LEU:HD12	56:SG:110:ASN:H	1.83	0.43
56:SG:132:ARG:O	56:SG:133:LEU:HG	2.19	0.43
58:SI:178:ARG:NE	58:SI:181:GLN:HG3	2.33	0.43
59:SJ:142:VAL:HG12	59:SJ:144:ILE:H	1.84	0.43
66:SR:21:TYR:CE1	66:SR:58:MET:HE3	2.54	0.43
66:SR:41:ILE:HD12	66:SR:50:ILE:HD12	2.00	0.43
72:SX:72:VAL:O	72:SX:81:ILE:N	2.40	0.43
75:Sa:4:LYS:HD3	75:Sa:5:ARG:NH1	2.33	0.43
76:Sb:49:HIS:HA	76:Sb:70:LYS:HA	2.00	0.43
77:Sc:36:ASP:OD1	77:Sc:37:ASP:N	2.51	0.43
78:Sd:20:SER:OG	78:Sd:21:CYS:N	2.51	0.43
80:Sg:67:SER:N	80:Sg:81:GLY:O	2.43	0.43
2:B4:16:U:H5''	2:B4:17:C:OP1	2.18	0.43
4:L5:1076:C:H2'	4:L5:1077:C:C6	2.53	0.43
4:L5:1278:C:H2'	4:L5:1279:A:O4'	2.19	0.43
4:L5:1415:G:H2'	4:L5:1416:G:H8	1.83	0.43
4:L5:2744:A:H2'	4:L5:2745:A:C8	2.53	0.43
4:L5:2876:G:C8	47:Lp:16:THR:HG22	2.54	0.43
4:L5:4142:C:H5'	4:L5:4143:G:C6	2.53	0.43
5:L7:59:G:H4'	10:LD:267:ASN:ND2	2.33	0.43
6:L8:82:A:OP2	6:L8:82:A:H4'	2.18	0.43
7:LA:28:ARG:HB2	7:LA:123:ARG:CG	2.48	0.43
7:LA:199:VAL:HG13	7:LA:204:MET:HE3	2.00	0.43
8:LB:298:LEU:HD12	8:LB:298:LEU:O	2.18	0.43
8:LB:382:MET:HE2	8:LB:382:MET:HB3	1.87	0.43
15:LI:35:ASP:O	15:LI:36:LEU:HD23	2.18	0.43
18:LM:37:LEU:HD12	18:LM:48:GLN:O	2.17	0.43
18:LM:107:PHE:CE2	18:LM:111:LYS:HE2	2.54	0.43
21:LP:52:THR:O	21:LP:53:LEU:HD23	2.19	0.43
22:LQ:83:VAL:O	22:LQ:83:VAL:HG23	2.18	0.43
22:LQ:85:THR:HA	22:LQ:104:ARG:O	2.19	0.43
23:LR:38:ARG:O	23:LR:39:GLN:HB2	2.18	0.43
28:LW:19:ARG:HH11	28:LW:37:GLU:CD	2.26	0.43
33:Lb:55:LYS:HG3	33:Lb:56:LYS:H	1.84	0.43
38:Lg:101:LYS:O	38:Lg:104:VAL:HG22	2.18	0.43
39:Lh:97:LYS:HA	39:Lh:100:GLU:HG2	2.00	0.43
49:S2:560:A:H5'	59:SJ:174:LYS:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:753:C:O4'	49:S2:791:C:O2'	2.36	0.43
49:S2:911:C:H2'	49:S2:912:C:H5'	2.01	0.43
49:S2:942:G:H2'	49:S2:943:U:C6	2.52	0.43
51:SB:217:MET:HE2	51:SB:220:LYS:HE2	2.00	0.43
54:SE:160:ILE:HG22	54:SE:172:PHE:HB2	1.99	0.43
66:SR:27:ASP:HB3	66:SR:30:THR:CG2	2.47	0.43
66:SR:84:TYR:CB	66:SR:86:PRO:HD2	2.47	0.43
70:SV:32:ILE:HG12	70:SV:60:ARG:HD2	2.01	0.43
72:SX:71:ARG:HA	72:SX:82:THR:HA	2.01	0.43
1:A4:54:U:C5	53:SD:148:LYS:HE2	2.53	0.43
2:B4:50:U:H3	2:B4:64:A:H61	1.66	0.43
4:L5:655:C:H5'	4:L5:656:C:OP2	2.18	0.43
4:L5:1604:G:H2'	4:L5:1605:G:C8	2.52	0.43
4:L5:1959:U:P	4:L5:2025:A:H61	2.41	0.43
4:L5:2822:G:H5''	23:LR:18:GLY:CA	2.47	0.43
4:L5:4701:A:C2'	4:L5:4702:G:H5'	2.48	0.43
4:L5:4765:G:OP1	14:LH:23:ARG:HG3	2.18	0.43
4:L5:5064:G:O2'	4:L5:5065:U:H5'	2.17	0.43
5:L7:120:U:O3'	10:LD:261:VAL:HG13	2.18	0.43
6:L8:71:A:OP1	30:LY:27:ARG:NH2	2.52	0.43
6:L8:90:C:H2'	6:L8:91:A:C8	2.54	0.43
7:LA:140:ASN:ND2	7:LA:142:GLU:O	2.52	0.43
8:LB:27:GLY:HA2	8:LB:276:HIS:CD2	2.53	0.43
20:LO:189:ILE:HD12	20:LO:189:ILE:HA	1.85	0.43
21:LP:61:ARG:NH1	21:LP:76:TRP:HB3	2.33	0.43
29:LX:81:LEU:HD12	29:LX:97:VAL:CG1	2.49	0.43
31:LZ:50:PRO:HD3	31:LZ:68:ILE:HG12	2.01	0.43
49:S2:64:A:H2	49:S2:83:A:H62	1.64	0.43
49:S2:158:A:H1'	49:S2:464:A:N7	2.34	0.43
49:S2:651:U:C2'	49:S2:652:U:H5''	2.49	0.43
49:S2:1127:C:O2'	76:Sb:17:ARG:HB2	2.19	0.43
49:S2:1238:U:C1'	64:SP:126:VAL:HG23	2.46	0.43
49:S2:1301:A:H2'	49:S2:1303:C:C6	2.54	0.43
49:S2:1464:C:H4'	66:SR:60:ARG:HH22	1.84	0.43
49:S2:1523:C:H2'	49:S2:1524:G:C8	2.53	0.43
49:S2:1615:U:H2'	49:S2:1616:U:H6	1.84	0.43
49:S2:1617:G:N2	49:S2:1619:A:H3'	2.34	0.43
49:S2:1673:U:H2'	49:S2:1674:G:O4'	2.18	0.43
49:S2:1680:G:H4'	77:Sc:20:ARG:HG2	2.01	0.43
49:S2:1743:G:H21	49:S2:1791:A:H62	1.66	0.43
50:SA:49:ILE:CG2	50:SA:162:PRO:HB2	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:120:MET:HG3	51:SB:142:PHE:HE1	1.84	0.43
52:SC:193:VAL:HG12	52:SC:195:LEU:CD1	2.47	0.43
53:SD:172:VAL:HG22	53:SD:185:LYS:HD3	2.01	0.43
53:SD:184:ILE:HG22	53:SD:186:VAL:CG2	2.48	0.43
54:SE:208:VAL:HG12	54:SE:220:THR:O	2.19	0.43
56:SG:2:LYS:C	56:SG:3:LEU:HD12	2.44	0.43
67:SS:20:ILE:CD1	67:SS:32:ALA:HB3	2.48	0.43
71:SW:48:GLY:N	71:SW:64:ASN:O	2.43	0.43
71:SW:79:PHE:O	71:SW:124:LYS:HA	2.19	0.43
73:SY:18:LEU:HD23	73:SY:20:ARG:HH11	1.83	0.43
73:SY:27:VAL:HB	73:SY:69:THR:HG23	1.99	0.43
75:Sa:96:THR:OG1	75:Sa:97:PRO:HD2	2.19	0.43
77:Sc:29:GLN:HA	77:Sc:45:ASN:HA	2.00	0.43
80:Sg:258:ILE:HB	80:Sg:268:ASP:CB	2.49	0.43
2:B4:47:U:H3'	2:B4:48:C:H5'	2.01	0.43
4:L5:135:G:C5	39:Lh:97:LYS:HD2	2.54	0.43
4:L5:362:A:C6	43:Ll:35:ILE:HG13	2.54	0.43
4:L5:1817:U:H2'	4:L5:1818:G:H5'	2.01	0.43
4:L5:2056:G:H5''	20:LO:128:ARG:HH11	1.84	0.43
4:L5:2561:C:H3'	4:L5:2562:G:C8	2.54	0.43
4:L5:3661:G:C4	7:LA:150:LEU:HD13	2.53	0.43
4:L5:4305:G:N1	25:LT:80:VAL:HG21	2.34	0.43
4:L5:4695:C:H3'	4:L5:4695:C:OP2	2.19	0.43
4:L5:5003:U:H2'	4:L5:5004:C:C6	2.53	0.43
7:LA:90:CYS:SG	7:LA:101:VAL:HB	2.59	0.43
8:LB:91:GLY:HA3	8:LB:157:CYS:SG	2.59	0.43
10:LD:154:THR:HG22	10:LD:155:THR:N	2.34	0.43
11:LE:249:ASP:O	11:LE:253:VAL:HG23	2.18	0.43
12:LF:159:TYR:CE2	12:LF:168:ALA:HB2	2.54	0.43
18:LM:86:TRP:CE2	18:LM:92:ALA:HB2	2.53	0.43
19:LN:60:VAL:HG13	19:LN:134:LEU:HB2	2.01	0.43
26:LU:66:SER:O	26:LU:67:LYS:HB3	2.17	0.43
28:LW:59:HIS:HB2	28:LW:61:LYS:HG2	1.99	0.43
32:La:146:LEU:HD23	32:La:146:LEU:HA	1.87	0.43
37:Lf:36:ARG:O	37:Lf:39:THR:HG22	2.19	0.43
38:Lg:8:ARG:HB2	38:Lg:34:TYR:CE1	2.53	0.43
44:Lm:93:LYS:HD3	44:Lm:102:ARG:CG	2.48	0.43
46:Lo:51:GLN:HG2	46:Lo:55:ILE:CD1	2.48	0.43
49:S2:7:G:O2'	49:S2:622:C:H4'	2.19	0.43
49:S2:344:U:O2'	49:S2:345:U:H5'	2.19	0.43
49:S2:544:G:C5	49:S2:545:A:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:880:G:H2'	49:S2:881:G:C8	2.54	0.43
49:S2:1587:G:C6	68:ST:67:ARG:HD2	2.52	0.43
50:SA:24:HIS:O	50:SA:48:ILE:HA	2.18	0.43
52:SC:166:ARG:HB2	52:SC:248:TYR:CZ	2.53	0.43
52:SC:166:ARG:NH1	70:SV:1:MET:HE3	2.30	0.43
55:SF:95:HIS:HB3	74:SZ:106:GLN:HG3	2.00	0.43
58:SI:62:VAL:HG21	58:SI:75:LYS:HE3	2.00	0.43
59:SJ:47:LYS:CG	59:SJ:102:ILE:HD12	2.47	0.43
59:SJ:78:LEU:HD13	59:SJ:92:MET:O	2.19	0.43
62:SN:78:LYS:HB3	62:SN:80:LEU:CD1	2.43	0.43
63:SO:103:ASN:HD21	63:SO:141:ARG:C	2.27	0.43
65:SQ:86:GLN:HE22	65:SQ:122:ALA:HA	1.83	0.43
66:SR:32:LYS:HD2	66:SR:47:ARG:HH21	1.84	0.43
67:SS:66:ARG:O	67:SS:70:ILE:HG12	2.19	0.43
72:SX:40:PRO:HA	72:SX:79:LYS:CD	2.49	0.43
80:Sg:247:TRP:H	80:Sg:260:ASP:CB	2.32	0.43
4:L5:759:G:H2'	4:L5:759:G:N3	2.33	0.43
4:L5:1905:U:H2'	4:L5:1906:U:O4'	2.19	0.43
4:L5:2105:A:C3'	4:L5:2106:G:H5''	2.48	0.43
4:L5:2121:C:H5'	12:LF:41:MET:HG3	2.00	0.43
4:L5:4357:G:O2'	4:L5:4358:U:H5'	2.18	0.43
4:L5:4588:U:C2'	4:L5:4589:A:H5''	2.49	0.43
4:L5:4877:G:O2'	4:L5:4878:C:H5'	2.19	0.43
8:LB:180:LEU:HD12	8:LB:180:LEU:HA	1.85	0.43
9:LC:187:GLN:HG2	9:LC:203:GLN:HB3	2.01	0.43
10:LD:93:THR:O	10:LD:93:THR:HG22	2.19	0.43
15:LI:51:HIS:ND1	15:LI:137:SER:HB2	2.34	0.43
17:LL:63:THR:HG21	32:La:66:ASN:HB3	2.01	0.43
17:LL:139:SER:O	17:LL:143:GLU:HB3	2.19	0.43
20:LO:20:ALA:CB	20:LO:84:VAL:HG12	2.49	0.43
20:LO:122:ALA:O	20:LO:128:ARG:HD3	2.19	0.43
22:LQ:25:LEU:O	22:LQ:29:VAL:HG23	2.18	0.43
22:LQ:119:LYS:HD3	22:LQ:121:LEU:HD11	2.00	0.43
28:LW:5:LEU:HA	28:LW:11:TYR:O	2.18	0.43
30:LY:50:ARG:HB2	30:LY:115:ARG:CZ	2.49	0.43
36:Le:4:LEU:HD12	36:Le:4:LEU:HA	1.88	0.43
41:Lj:55:ARG:O	41:Lj:61:THR:HG21	2.19	0.43
42:Lk:31:ASN:HB3	42:Lk:48:THR:HG22	2.01	0.43
42:Lk:37:ARG:NH1	42:Lk:42:LEU:HB2	2.32	0.43
46:Lo:36:GLN:HB3	46:Lo:39:ARG:NH2	2.34	0.43
49:S2:78:C:OP1	56:SG:173:ALA:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:92:A:H4'	49:S2:93:U:OP2	2.18	0.43
49:S2:444:G:O6	58:SI:26:LYS:NZ	2.51	0.43
49:S2:818:A:H1'	49:S2:847:A:C2	2.53	0.43
49:S2:867:G:H5''	49:S2:868:G:OP1	2.18	0.43
49:S2:875:A:H2'	49:S2:876:C:O4'	2.19	0.43
49:S2:1274:G:OP2	49:S2:1274:G:H3'	2.18	0.43
50:SA:17:LYS:HE3	50:SA:17:LYS:HB2	1.83	0.43
50:SA:69:GLU:HG2	52:SC:270:THR:HG21	2.00	0.43
50:SA:176:TRP:CD1	50:SA:199:PRO:HA	2.53	0.43
51:SB:150:ILE:O	66:SR:131:PRO:HA	2.19	0.43
54:SE:106:LYS:HB2	54:SE:108:ARG:CG	2.49	0.43
55:SF:22:LYS:HG2	55:SF:23:TRP:N	2.34	0.43
55:SF:161:ALA:HB3	55:SF:172:CYS:SG	2.58	0.43
57:SH:21:SER:O	57:SH:25:GLN:HG3	2.18	0.43
74:SZ:46:ASN:HB2	74:SZ:80:ARG:HA	2.01	0.43
80:Sg:14:HIS:CD2	80:Sg:18:VAL:HG12	2.54	0.43
80:Sg:282:GLU:N	80:Sg:283:PRO:HD3	2.34	0.43
4:L5:180:C:H41	4:L5:255:C:H42	1.64	0.43
4:L5:389:A:H2'	4:L5:390:C:O4'	2.19	0.43
4:L5:739:G:OP1	4:L5:739:G:H3'	2.19	0.43
4:L5:1355:G:P	22:LQ:108:ARG:HH22	2.39	0.43
4:L5:1686:C:O3'	33:Lb:18:ARG:HD2	2.19	0.43
4:L5:1764:G:C2'	4:L5:1766:A:H1'	2.44	0.43
4:L5:2499:C:H2'	4:L5:2500:U:C6	2.54	0.43
4:L5:4940:C:OP2	11:LE:219:LYS:NZ	2.23	0.43
8:LB:217:ILE:HD12	8:LB:347:LEU:HG	2.00	0.43
9:LC:110:ARG:HA	19:LN:204:ARG:HH21	1.84	0.43
9:LC:318:PRO:HB3	9:LC:325:MET:HE3	2.01	0.43
10:LD:118:ILE:CD1	10:LD:138:GLN:HG2	2.49	0.43
11:LE:118:THR:OG1	36:Le:93:LYS:HG3	2.18	0.43
11:LE:176:THR:HG23	11:LE:176:THR:O	2.18	0.43
11:LE:243:THR:CG2	11:LE:246:ARG:HB2	2.49	0.43
16:LJ:160:GLU:HA	16:LJ:163:MET:CE	2.43	0.43
22:LQ:47:VAL:O	22:LQ:51:LEU:HB2	2.19	0.43
22:LQ:65:ARG:O	22:LQ:69:LYS:HG2	2.19	0.43
24:LS:17:LEU:HD11	25:LT:136:ARG:NH2	2.34	0.43
24:LS:110:TYR:CD1	24:LS:124:ILE:HD11	2.53	0.43
25:LT:79:GLN:CG	25:LT:84:ILE:HG12	2.49	0.43
27:LV:43:LYS:HB3	27:LV:43:LYS:HE2	1.76	0.43
30:LY:84:ARG:HA	30:LY:86:GLN:NE2	2.34	0.43
30:LY:88:GLU:CD	30:LY:94:THR:HG22	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Le:81:ASN:N	36:Le:81:ASN:OD1	2.52	0.43
37:Lf:8:LYS:HB2	37:Lf:31:GLU:CD	2.43	0.43
39:Lh:66:LYS:O	39:Lh:70:ARG:N	2.49	0.43
45:Ln:4:LYS:HB2	49:S2:1842:C:OP2	2.19	0.43
49:S2:153:G:H21	56:SG:13:GLN:NE2	2.16	0.43
49:S2:429:C:OP1	54:SE:10:LYS:HD3	2.18	0.43
49:S2:536:A:H3'	49:S2:537:C:C5'	2.49	0.43
49:S2:838:G:N3	49:S2:840:C:H1'	2.34	0.43
49:S2:878:G:C2	49:S2:879:C:H1'	2.54	0.43
49:S2:1461:G:C6	49:S2:1463:U:H1'	2.54	0.43
49:S2:1505:U:H5'	49:S2:1506:A:OP1	2.18	0.43
49:S2:1564:C:O2'	49:S2:1565:C:H5'	2.19	0.43
50:SA:134:LEU:HD11	50:SA:156:TYR:O	2.18	0.43
50:SA:159:ILE:HD11	70:SV:34:MET:SD	2.58	0.43
50:SA:195:TRP:CD2	50:SA:197:VAL:HG22	2.54	0.43
51:SB:87:ILE:HB	51:SB:101:HIS:CG	2.53	0.43
51:SB:134:LEU:HD12	51:SB:135:LEU:H	1.83	0.43
53:SD:103:GLU:O	53:SD:106:ARG:HB3	2.19	0.43
55:SF:124:ASP:O	55:SF:139:VAL:N	2.51	0.43
55:SF:192:LYS:O	55:SF:196:LEU:HD23	2.19	0.43
56:SG:58:LYS:O	56:SG:59:GLN:HB2	2.19	0.43
58:SI:173:ALA:HB1	58:SI:188:TYR:O	2.18	0.43
59:SJ:39:ASN:OD1	59:SJ:41:ARG:N	2.49	0.43
59:SJ:129:LEU:HB3	59:SJ:135:ILE:CD1	2.46	0.43
62:SN:3:ARG:HD3	62:SN:3:ARG:HA	1.61	0.43
62:SN:82:PRO:HB2	62:SN:84:LEU:O	2.19	0.43
62:SN:112:LYS:O	62:SN:116:ILE:HG12	2.19	0.43
63:SO:128:ARG:HG2	75:Sa:59:PHE:CE2	2.54	0.43
64:SP:121:ILE:HD11	64:SP:123:TYR:CE2	2.54	0.43
72:SX:124:LYS:HA	72:SX:128:VAL:O	2.19	0.43
80:Sg:257:LYS:HA	80:Sg:269:GLU:H	1.83	0.43
4:L5:197:A:N3	4:L5:222:C:O2'	2.51	0.43
4:L5:743:G:H2'	4:L5:744:G:O4'	2.19	0.43
4:L5:1843:A:O2'	4:L5:1844:G:H5'	2.19	0.43
4:L5:2334:C:C5	9:LC:191:ALA:HB2	2.54	0.43
4:L5:2482:C:H5''	4:L5:2483:G:OP2	2.19	0.43
4:L5:2569:G:H2'	4:L5:2570:U:C6	2.54	0.43
4:L5:2721:G:C2'	4:L5:2722:G:H5'	2.48	0.43
4:L5:3799:A:N3	27:LV:40:ILE:HD12	2.34	0.43
4:L5:4499:G:H2'	4:L5:4500:U:O4'	2.19	0.43
4:L5:4884:G:H2'	4:L5:4885:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LD:202:GLN:NE2	10:LD:237:GLU:HB2	2.34	0.43
14:LH:126:VAL:HG11	14:LH:161:ILE:HG22	1.99	0.43
14:LH:148:GLY:HA3	14:LH:154:VAL:CG2	2.48	0.43
15:LI:190:LEU:HD23	15:LI:199:TYR:HA	1.99	0.43
18:LM:81:ASP:O	18:LM:85:LYS:HG2	2.18	0.43
22:LQ:18:PRO:HG3	22:LQ:29:VAL:HG21	2.01	0.43
31:LZ:33:THR:HG21	31:LZ:98:LYS:NZ	2.34	0.43
34:Lc:38:ILE:HG21	34:Lc:63:TYR:HB3	2.01	0.43
46:Lo:74:GLU:OE1	46:Lo:77:CYS:N	2.51	0.43
49:S2:14:C:H5'	52:SC:190:SER:OG	2.19	0.43
49:S2:444:G:N2	49:S2:446:G:H3'	2.33	0.43
49:S2:534:G:H1	49:S2:549:C:N4	2.16	0.43
49:S2:538:U:O3'	49:S2:546:G:N2	2.52	0.43
49:S2:1404:U:P	69:SU:21:ARG:HH12	2.41	0.43
49:S2:1489:A:H4'	49:S2:1490:G:OP2	2.17	0.43
49:S2:1566:G:H2'	49:S2:1567:G:H5''	2.01	0.43
49:S2:1613:G:H5'	64:SP:42:ARG:HH12	1.84	0.43
52:SC:133:TYR:HE1	52:SC:216:MET:HG2	1.84	0.43
52:SC:273:LEU:O	52:SC:273:LEU:HD23	2.18	0.43
53:SD:74:GLN:HB3	53:SD:84:VAL:HG21	2.01	0.43
54:SE:153:LEU:HD23	54:SE:153:LEU:HA	1.81	0.43
54:SE:246:LEU:HD23	54:SE:246:LEU:HA	1.87	0.43
60:SK:29:MET:HG3	60:SK:30:PRO:HD2	2.00	0.43
61:SL:5:GLN:NE2	61:SL:11:GLN:O	2.48	0.43
62:SN:45:LEU:HD12	62:SN:49:GLN:CB	2.47	0.43
67:SS:14:ARG:HG3	67:SS:19:ASN:HA	2.00	0.43
67:SS:36:VAL:HG23	67:SS:40:TYR:CD2	2.53	0.43
67:SS:71:MET:HB3	67:SS:99:LEU:HD11	2.01	0.43
68:ST:73:GLY:HA2	68:ST:76:THR:HG22	2.00	0.43
68:ST:83:GLN:HB2	68:ST:93:SER:CB	2.48	0.43
69:SU:62:ARG:NH2	69:SU:81:GLN:OE1	2.51	0.43
71:SW:11:LEU:CA	71:SW:14:ILE:HG22	2.48	0.43
74:SZ:78:LYS:HD3	74:SZ:78:LYS:HA	1.77	0.43
4:L5:119:G:P	13:LG:132:ARG:HH12	2.42	0.42
4:L5:455:C:O2'	4:L5:456:C:H5'	2.19	0.42
4:L5:474:C:H2'	4:L5:475:G:O4'	2.19	0.42
4:L5:1348:U:H2'	4:L5:1349:G:H8	1.84	0.42
4:L5:1707:C:H2'	4:L5:2119:C:C4	2.54	0.42
4:L5:1759:G:N2	4:L5:1774:C:H1'	2.34	0.42
4:L5:1973:G:C5'	4:L5:1974:U:H3'	2.49	0.42
4:L5:2060:G:O2'	24:LS:114:GLY:O	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2079:G:H2'	4:L5:2080:U:C6	2.54	0.42
4:L5:2081:C:O3'	22:LQ:11:ARG:HA	2.19	0.42
4:L5:2550:G:O2'	4:L5:2587:A:N1	2.39	0.42
4:L5:3597:G:HO2'	4:L5:3598:C:C4'	2.32	0.42
4:L5:3654:G:O2'	4:L5:3693:U:OP1	2.31	0.42
4:L5:3890:A:N6	4:L5:4570:G:O2'	2.52	0.42
4:L5:4186:A:H2'	4:L5:4187:G:C8	2.54	0.42
4:L5:4505:C:O2'	4:L5:4506:C:H5'	2.19	0.42
4:L5:4759:C:H2'	4:L5:4760:G:O4'	2.18	0.42
8:LB:33:PRO:HD2	8:LB:44:THR:CG2	2.45	0.42
9:LC:285:ILE:N	22:LQ:124:ASP:OD2	2.52	0.42
12:LF:220:MET:O	12:LF:221:LYS:HB3	2.19	0.42
24:LS:17:LEU:HD21	25:LT:136:ARG:NH2	2.33	0.42
24:LS:30:MET:HG3	25:LT:151:LEU:O	2.19	0.42
31:LZ:30:ASP:CA	31:LZ:39:SER:HB2	2.44	0.42
34:Lc:81:LEU:HD23	34:Lc:81:LEU:O	2.18	0.42
48:Lr:117:ILE:O	48:Lr:121:GLN:HG2	2.18	0.42
49:S2:19:A:H2'	49:S2:20:G:O4'	2.19	0.42
49:S2:884:C:H2'	49:S2:885:U:C6	2.54	0.42
49:S2:1257:G:H4'	49:S2:1258:A:C5'	2.49	0.42
49:S2:1822:A:H2'	49:S2:1823:A:O4'	2.19	0.42
51:SB:160:GLN:O	51:SB:164:ILE:HG13	2.19	0.42
53:SD:69:LEU:HD23	53:SD:69:LEU:HA	1.83	0.42
53:SD:123:LEU:HD12	53:SD:154:ASP:CG	2.44	0.42
53:SD:221:THR:CB	53:SD:222:PRO:HD3	2.49	0.42
54:SE:106:LYS:HB2	54:SE:108:ARG:CD	2.49	0.42
54:SE:131:VAL:CG1	54:SE:135:GLY:HA2	2.48	0.42
55:SF:125:SER:HA	55:SF:137:GLN:O	2.18	0.42
59:SJ:26:ASP:OD1	59:SJ:27:GLN:N	2.51	0.42
60:SK:15:LEU:HD23	60:SK:15:LEU:HA	1.73	0.42
61:SL:33:LEU:HD23	61:SL:34:PRO:N	2.34	0.42
61:SL:72:ILE:HD12	61:SL:129:GLY:HA2	2.00	0.42
64:SP:53:GLN:HB3	64:SP:83:MET:HE1	2.01	0.42
67:SS:98:VAL:CG1	67:SS:103:LEU:HD22	2.46	0.42
68:ST:18:LEU:HA	68:ST:134:ILE:CD1	2.49	0.42
72:SX:125:VAL:HG13	72:SX:126:ALA:N	2.32	0.42
73:SY:57:VAL:HB	73:SY:60:PHE:CE2	2.54	0.42
77:Sc:20:ARG:NH1	77:Sc:25:GLY:O	2.52	0.42
4:L5:146:G:O2'	4:L5:147:A:H5'	2.19	0.42
4:L5:519:C:O2	4:L5:519:C:H2'	2.18	0.42
4:L5:730:G:C4	12:LF:73:ARG:HD3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1341:U:O2'	4:L5:1342:A:H5'	2.20	0.42
4:L5:1433:A:H2'	4:L5:1434:G:O4'	2.19	0.42
4:L5:1629:G:N1	7:LA:208:GLU:HG2	2.31	0.42
4:L5:1633:G:H4'	4:L5:1634:A:O5'	2.19	0.42
4:L5:2565:A:C2'	4:L5:2566:G:H5'	2.48	0.42
4:L5:2710:C:H3'	4:L5:2710:C:O2	2.19	0.42
4:L5:4543:G:H5''	7:LA:220:GLY:HA3	2.01	0.42
6:L8:131:G:O2'	6:L8:132:G:H5'	2.19	0.42
8:LB:95:THR:HG22	8:LB:98:GLY:O	2.18	0.42
10:LD:155:THR:HA	10:LD:179:ARG:HD2	2.00	0.42
12:LF:112:LEU:CD1	12:LF:132:MET:HE2	2.48	0.42
24:LS:132:ILE:HG22	24:LS:133:ALA:O	2.19	0.42
29:LX:97:VAL:HG22	29:LX:137:TYR:HD1	1.83	0.42
30:LY:115:ARG:O	30:LY:119:LEU:HD13	2.20	0.42
36:Le:22:ARG:O	36:Le:25:SER:OG	2.33	0.42
36:Le:109:LYS:HE3	36:Le:109:LYS:HB2	1.80	0.42
38:Lg:100:GLN:O	38:Lg:103:VAL:HG22	2.19	0.42
44:Lm:92:ASP:OD1	44:Lm:126:LYS:NZ	2.52	0.42
49:S2:15:U:H2'	49:S2:16:G:O4'	2.19	0.42
49:S2:156:G:H1	49:S2:162:C:H42	1.66	0.42
49:S2:578:C:H2'	49:S2:579:C:O4'	2.20	0.42
49:S2:794:A:N7	49:S2:795:A:H1'	2.34	0.42
49:S2:1050:A:H2'	49:S2:1051:G:H5'	2.00	0.42
49:S2:1238:U:H1'	64:SP:126:VAL:CG2	2.49	0.42
49:S2:1350:U:H3	49:S2:1379:A:H61	1.66	0.42
49:S2:1481:G:H2'	49:S2:1482:C:O4'	2.18	0.42
51:SB:36:PRO:HB3	51:SB:231:LEU:HD22	2.01	0.42
52:SC:194:ARG:O	52:SC:224:THR:HA	2.19	0.42
53:SD:69:LEU:O	53:SD:73:VAL:HG12	2.19	0.42
57:SH:122:LEU:HD11	57:SH:126:HIS:NE2	2.34	0.42
62:SN:64:ARG:HD3	62:SN:70:LYS:HD3	2.01	0.42
65:SQ:84:ILE:O	65:SQ:88:ILE:HD12	2.20	0.42
70:SV:51:LYS:HE2	70:SV:76:ASP:CG	2.44	0.42
72:SX:28:LYS:HE2	72:SX:32:LEU:HD22	2.00	0.42
77:Sc:39:SER:OG	77:Sc:40:ARG:N	2.52	0.42
77:Sc:44:ARG:HH22	77:Sc:63:ARG:HB3	1.84	0.42
80:Sg:79:LEU:HD13	80:Sg:120:ILE:HD13	1.99	0.42
2:B4:72:C:H2'	2:B4:73:A:O4'	2.19	0.42
4:L5:123:C:H2'	4:L5:124:C:C6	2.55	0.42
4:L5:473:C:O2'	4:L5:474:C:H5'	2.20	0.42
4:L5:492:U:OP1	9:LC:1:MET:HE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:714:G:O2'	4:L5:715:G:H5'	2.18	0.42
4:L5:1087:A:H2'	4:L5:1088:C:C6	2.54	0.42
4:L5:1448:G:H2'	4:L5:1449:C:C6	2.54	0.42
4:L5:1690:C:H2'	4:L5:1691:G:O4'	2.20	0.42
4:L5:1782:U:O2'	4:L5:1783:C:H5'	2.19	0.42
4:L5:2718:U:C5'	4:L5:2719:C:H5'	2.44	0.42
4:L5:2838:G:C5'	8:LB:247:GLY:HA2	2.49	0.42
4:L5:3754:G:C2'	4:L5:3755:G:H5'	2.49	0.42
4:L5:3783:A:OP2	4:L5:3808:C:N4	2.47	0.42
4:L5:4185:G:O2'	4:L5:4186:A:H5'	2.19	0.42
4:L5:4688:C:O3'	14:LH:155:SER:HB3	2.18	0.42
7:LA:106:THR:HG22	7:LA:106:THR:O	2.19	0.42
8:LB:340:THR:O	8:LB:343:ARG:HB3	2.19	0.42
9:LC:26:ALA:HB3	9:LC:266:THR:HA	2.01	0.42
9:LC:184:TYR:CZ	9:LC:225:PRO:HG2	2.54	0.42
10:LD:212:MET:HE3	10:LD:219:TYR:OH	2.19	0.42
17:LL:108:GLU:CD	40:Li:18:THR:HG22	2.44	0.42
17:LL:167:ARG:O	32:La:97:ALA:HA	2.19	0.42
19:LN:14:LYS:HA	19:LN:19:MET:CB	2.50	0.42
22:LQ:111:SER:O	22:LQ:115:ARG:HG2	2.19	0.42
24:LS:137:CYS:O	24:LS:143:LYS:NZ	2.52	0.42
26:LU:20:LYS:HB2	26:LU:20:LYS:HE3	1.82	0.42
28:LW:97:LYS:O	28:LW:99:GLU:N	2.52	0.42
29:LX:148:ASP:OD2	29:LX:149:VAL:N	2.52	0.42
49:S2:94:G:H2'	49:S2:95:G:H5'	1.99	0.42
49:S2:147:A:H2'	49:S2:148:U:O4'	2.20	0.42
49:S2:1165:G:H1	72:SX:20:GLN:NE2	2.17	0.42
49:S2:1199:A:O2'	49:S2:1200:A:H5'	2.19	0.42
49:S2:1344:A:H4'	49:S2:1345:G:OP1	2.18	0.42
49:S2:1611:G:P	67:SS:121:ARG:HH22	2.40	0.42
49:S2:1651:A:H1'	55:SF:83:ASN:HD22	1.84	0.42
51:SB:181:LEU:O	51:SB:185:VAL:HG12	2.18	0.42
51:SB:227:LYS:O	51:SB:231:LEU:HB2	2.19	0.42
52:SC:148:ALA:O	52:SC:152:ARG:HG2	2.19	0.42
53:SD:24:PHE:CD2	53:SD:25:LEU:HD12	2.53	0.42
57:SH:66:VAL:N	57:SH:67:PRO:HD2	2.35	0.42
63:SO:53:ILE:CG2	63:SO:88:LEU:HD23	2.39	0.42
80:Sg:225:LYS:O	80:Sg:227:LEU:HD12	2.20	0.42
4:L5:457:G:O2'	4:L5:458:C:H5'	2.18	0.42
4:L5:1303:A:C2'	4:L5:1304:C:H5'	2.50	0.42
4:L5:1503:A:H3'	22:LQ:145:GLY:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2054:U:OP2	20:LO:44:SER:OG	2.32	0.42
4:L5:2264:C:O2'	4:L5:2265:G:H5'	2.20	0.42
4:L5:3619:G:H22	4:L5:3624:A:H1'	1.85	0.42
4:L5:3947:A:H61	4:L5:4068:U:H1'	1.83	0.42
4:L5:4762:A:C2'	4:L5:4763:U:H5'	2.49	0.42
4:L5:5023:C:H5''	58:SI:124:LYS:HE2	2.00	0.42
14:LH:116:ASN:HD21	14:LH:119:GLY:HA2	1.84	0.42
18:LM:119:ARG:HG3	20:LO:189:ILE:CG1	2.49	0.42
19:LN:140:LYS:CE	19:LN:144:ARG:HH21	2.32	0.42
23:LR:154:LEU:HD23	23:LR:154:LEU:HA	1.85	0.42
27:LV:69:LYS:HB3	27:LV:71:GLU:OE1	2.20	0.42
28:LW:97:LYS:C	28:LW:99:GLU:H	2.27	0.42
40:Li:60:LEU:HB3	40:Li:69:ALA:HB2	2.00	0.42
41:Lj:19:CYS:SG	41:Lj:39:TYR:HB2	2.60	0.42
48:Lr:47:LYS:HB2	48:Lr:102:TYR:CE1	2.53	0.42
49:S2:103:A:H4'	49:S2:104:A:O5'	2.19	0.42
49:S2:396:U:OP2	61:SL:79:LYS:NZ	2.37	0.42
49:S2:1513:C:H2'	49:S2:1514:G:C8	2.53	0.42
49:S2:1515:G:H2'	49:S2:1516:G:O4'	2.19	0.42
49:S2:1606:G:H1'	49:S2:1633:A:H62	1.83	0.42
50:SA:111:GLN:OE1	52:SC:89:LYS:HB3	2.19	0.42
50:SA:148:CYS:HB3	50:SA:152:SER:OG	2.19	0.42
51:SB:49:VAL:HA	63:SO:51:GLU:OE2	2.18	0.42
51:SB:165:ARG:O	51:SB:169:MET:N	2.52	0.42
52:SC:179:THR:OG1	52:SC:180:VAL:N	2.53	0.42
56:SG:3:LEU:N	56:SG:16:ILE:O	2.40	0.42
58:SI:160:SER:O	58:SI:163:GLU:HB3	2.19	0.42
65:SQ:18:THR:O	65:SQ:75:GLY:HA3	2.20	0.42
65:SQ:108:ILE:O	65:SQ:111:ILE:HG22	2.20	0.42
66:SR:106:LEU:O	66:SR:106:LEU:HG	2.18	0.42
71:SW:36:ARG:O	71:SW:39:THR:HG22	2.19	0.42
71:SW:36:ARG:CB	71:SW:110:ILE:HD12	2.49	0.42
71:SW:81:VAL:HG22	71:SW:89:TRP:CD1	2.55	0.42
80:Sg:6:THR:HG22	80:Sg:7:LEU:H	1.84	0.42
80:Sg:104:HIS:HE1	80:Sg:122:SER:CB	2.32	0.42
4:L5:956:A:N6	4:L5:1283:G:H1'	2.35	0.42
4:L5:2303:C:OP1	36:Le:107:ASN:ND2	2.48	0.42
4:L5:4941:G:O2'	4:L5:4942:C:H5'	2.19	0.42
7:LA:84:THR:HG23	47:Lp:63:THR:HB	2.02	0.42
10:LD:121:GLY:HA3	10:LD:168:ASP:O	2.20	0.42
12:LF:105:VAL:O	12:LF:109:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LH:55:LEU:HD12	14:LH:56:ARG:H	1.84	0.42
18:LM:36:ALA:O	18:LM:38:VAL:HG23	2.19	0.42
20:LO:29:LEU:HB3	37:Lf:10:ILE:CD1	2.48	0.42
20:LO:191:LYS:HE2	20:LO:192:TYR:CE2	2.55	0.42
24:LS:77:ASN:OD1	24:LS:98:ARG:NH1	2.52	0.42
26:LU:100:LEU:HD13	26:LU:112:LEU:HD23	2.01	0.42
27:LV:99:GLU:HG3	28:LW:21:TYR:OH	2.20	0.42
42:Lk:55:LYS:HA	42:Lk:58:GLN:HE21	1.83	0.42
49:S2:171:A:P	56:SG:137:ARG:HH21	2.40	0.42
49:S2:510:G:O2'	49:S2:511:U:H5'	2.19	0.42
49:S2:1280:G:C2	49:S2:1281:G:H1'	2.54	0.42
49:S2:1389:C:O2'	53:SD:163:PRO:HD3	2.19	0.42
49:S2:1632:G:OP1	67:SS:34:LYS:NZ	2.36	0.42
49:S2:1805:G:O2'	49:S2:1806:A:H5'	2.18	0.42
51:SB:124:HIS:HA	51:SB:137:LEU:O	2.19	0.42
52:SC:146:GLU:HB2	52:SC:149:THR:OG1	2.19	0.42
54:SE:183:VAL:CG2	54:SE:191:ARG:H	2.33	0.42
56:SG:27:PHE:CE1	56:SG:36:VAL:HG21	2.54	0.42
67:SS:26:ILE:HG22	67:SS:54:LYS:O	2.20	0.42
70:SV:37:ALA:HB1	70:SV:46:PHE:HE1	1.83	0.42
77:Sc:16:LYS:HA	77:Sc:52:GLU:OE1	2.19	0.42
4:L5:86:U:OP1	22:LQ:168:ARG:NH1	2.52	0.42
4:L5:474:C:O2'	4:L5:475:G:H5'	2.20	0.42
4:L5:496:G:H5''	4:L5:497:G:P	2.59	0.42
4:L5:654:C:O2'	9:LC:269:LYS:HD2	2.20	0.42
4:L5:754:U:H2'	4:L5:755:C:H6	1.84	0.42
4:L5:1420:A:H2'	4:L5:1420:A:N3	2.33	0.42
4:L5:1733:G:N3	4:L5:4214:A:H2'	2.35	0.42
4:L5:2891:U:H5''	23:LR:74:ARG:HH11	1.85	0.42
4:L5:4306:U:OP2	22:LQ:159:PRO:HD2	2.20	0.42
4:L5:4988:U:OP2	8:LB:123:HIS:ND1	2.50	0.42
7:LA:40:TYR:HA	7:LA:90:CYS:O	2.19	0.42
8:LB:286:LYS:HB2	8:LB:286:LYS:HE3	1.77	0.42
9:LC:138:MET:HE2	9:LC:138:MET:HB3	1.95	0.42
13:LG:106:THR:HG22	13:LG:195:HIS:CE1	2.55	0.42
15:LI:102:MET:HE1	15:LI:114:GLY:O	2.19	0.42
20:LO:42:ASN:ND2	20:LO:125:LYS:HD2	2.35	0.42
30:LY:86:GLN:HE21	30:LY:96:HIS:CE1	2.38	0.42
32:La:37:GLY:N	32:La:41:HIS:HB2	2.35	0.42
34:Lc:25:GLY:HA3	34:Lc:98:ASP:O	2.19	0.42
38:Lg:103:VAL:HA	38:Lg:106:VAL:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:Li:90:LEU:O	40:Li:93:VAL:HG22	2.19	0.42
48:Lr:66:ARG:HG2	48:Lr:68:SER:H	1.84	0.42
49:S2:161:U:O2'	56:SG:87:ARG:NE	2.46	0.42
49:S2:1743:G:N2	49:S2:1791:A:H62	2.18	0.42
50:SA:10:MET:SD	50:SA:15:VAL:HG12	2.60	0.42
50:SA:15:VAL:O	50:SA:19:LEU:HD23	2.19	0.42
50:SA:72:ALA:O	50:SA:97:THR:OG1	2.37	0.42
50:SA:187:GLY:HA3	70:SV:45:ARG:HD3	2.00	0.42
51:SB:179:ASN:HB3	51:SB:183:GLU:CB	2.50	0.42
53:SD:137:VAL:HB	53:SD:185:LYS:HB2	2.00	0.42
56:SG:137:ARG:CD	56:SG:178:ARG:HD3	2.50	0.42
56:SG:154:ARG:O	56:SG:157:VAL:HG12	2.20	0.42
58:SI:172:LEU:HD12	58:SI:172:LEU:O	2.19	0.42
58:SI:190:LEU:CD1	58:SI:194:GLU:HG2	2.49	0.42
69:SU:60:THR:HG22	69:SU:83:ARG:CG	2.49	0.42
80:Sg:35:SER:HB3	80:Sg:39:THR:O	2.20	0.42
80:Sg:44:LYS:N	80:Sg:54:ILE:O	2.52	0.42
2:B4:28:G:O2'	2:B4:29:G:H5'	2.20	0.42
4:L5:294:G:H3'	4:L5:294:G:N3	2.34	0.42
4:L5:1488:G:O2'	4:L5:1489:G:H5'	2.19	0.42
4:L5:1707:C:H2'	4:L5:2119:C:N4	2.34	0.42
4:L5:1951:G:H4'	24:LS:116:ARG:HD3	2.02	0.42
4:L5:2564:G:H2'	4:L5:2565:A:O4'	2.19	0.42
4:L5:2597:G:O2'	38:Lg:42:PRO:HA	2.19	0.42
4:L5:4183:G:H2'	4:L5:4183:G:N3	2.35	0.42
4:L5:4457:U:OP1	27:LV:50:ASN:ND2	2.47	0.42
4:L5:4690:G:O6	4:L5:4698:C:H5''	2.19	0.42
10:LD:36:LEU:HD12	10:LD:37:VAL:CG1	2.48	0.42
11:LE:132:PRO:HG2	11:LE:135:GLN:HG3	2.01	0.42
13:LG:79:ALA:O	13:LG:82:GLN:HG2	2.20	0.42
13:LG:80:ILE:HD13	19:LN:22:LEU:HD21	2.01	0.42
14:LH:13:PRO:HG2	14:LH:16:VAL:CG1	2.47	0.42
14:LH:48:LEU:O	14:LH:48:LEU:HD23	2.19	0.42
14:LH:95:VAL:HG22	44:Lm:82:LEU:CD1	2.49	0.42
14:LH:150:ASP:OD2	14:LH:153:LEU:HB2	2.19	0.42
15:LI:208:LYS:O	15:LI:211:VAL:HG22	2.19	0.42
18:LM:50:MET:HA	18:LM:51:PRO:HD3	1.92	0.42
18:LM:119:ARG:CA	20:LO:189:ILE:HD11	2.38	0.42
19:LN:99:GLN:HB2	19:LN:130:PHE:CE1	2.55	0.42
19:LN:183:THR:HG22	19:LN:188:ARG:N	2.34	0.42
21:LP:20:SER:O	21:LP:22:LEU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LP:39:MET:CE	21:LP:44:ALA:HA	2.48	0.42
22:LQ:159:PRO:HA	22:LQ:160:HIS:HA	1.53	0.42
23:LR:23:TRP:CH2	23:LR:25:ASP:HA	2.55	0.42
23:LR:48:GLY:O	23:LR:51:ILE:HD11	2.20	0.42
39:Lh:52:LYS:HD3	39:Lh:52:LYS:HA	1.75	0.42
49:S2:33:G:O2'	49:S2:34:U:H5'	2.19	0.42
49:S2:333:G:O2'	49:S2:334:C:H5'	2.20	0.42
49:S2:923:G:H2'	49:S2:924:G:H5''	2.01	0.42
49:S2:1143:A:H2'	49:S2:1144:A:C1'	2.50	0.42
49:S2:1472:C:H2'	49:S2:1473:G:O4'	2.20	0.42
49:S2:1529:C:O2'	49:S2:1530:U:H5'	2.20	0.42
49:S2:1613:G:H5''	64:SP:39:ALA:HB2	2.02	0.42
49:S2:1624:U:H2'	49:S2:1625:U:H6	1.84	0.42
49:S2:1839:U:H1'	49:S2:1863:A:C2	2.54	0.42
51:SB:23:ASP:OD1	51:SB:25:PHE:N	2.52	0.42
51:SB:85:LYS:HG2	51:SB:102:GLY:O	2.20	0.42
52:SC:211:LYS:O	52:SC:215:MET:HG3	2.18	0.42
56:SG:10:THR:O	56:SG:129:VAL:HG22	2.20	0.42
57:SH:62:ILE:HD11	57:SH:94:PHE:CE2	2.55	0.42
59:SJ:47:LYS:HG3	59:SJ:102:ILE:CD1	2.49	0.42
64:SP:60:LEU:HD21	64:SP:76:VAL:HG21	2.01	0.42
65:SQ:87:SER:OG	65:SQ:88:ILE:HD12	2.19	0.42
68:ST:40:ALA:HB2	68:ST:95:GLY:CA	2.46	0.42
68:ST:84:ARG:HA	68:ST:90:SER:CB	2.49	0.42
70:SV:13:VAL:O	70:SV:13:VAL:HG13	2.20	0.42
1:A4:43:U:H5'	49:S2:961:G:H1'	2.02	0.42
4:L5:34:A:O2'	4:L5:35:U:H5'	2.20	0.42
4:L5:418:A:H62	6:L8:16:G:H1'	1.84	0.42
4:L5:499:G:N2	4:L5:655:C:H42	2.16	0.42
4:L5:515:C:H5	4:L5:646:G:H1	1.66	0.42
4:L5:1696:C:H3'	4:L5:1697:G:O4'	2.19	0.42
4:L5:2378:G:O2'	4:L5:2380:G:N7	2.44	0.42
4:L5:2487:G:N2	4:L5:2492:C:O2'	2.50	0.42
4:L5:4582:C:C2'	4:L5:4583:C:H5'	2.50	0.42
4:L5:4737:G:O2'	4:L5:4738:C:H5'	2.20	0.42
4:L5:4990:C:O2	4:L5:4990:C:H2'	2.19	0.42
5:L7:36:C:O2'	5:L7:37:G:H5'	2.20	0.42
6:L8:90:C:H2'	6:L8:91:A:H8	1.85	0.42
12:LF:27:GLU:O	12:LF:30:ILE:HG12	2.19	0.42
12:LF:220:MET:HE2	12:LF:220:MET:HB3	1.96	0.42
13:LG:187:LYS:CG	13:LG:198:THR:HG23	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LH:28:LYS:HE3	14:LH:28:LYS:HB3	1.91	0.42
15:LI:35:ASP:HB3	15:LI:39:LYS:HG2	2.01	0.42
17:LL:61:CYS:CB	17:LL:66:TYR:HB3	2.49	0.42
19:LN:48:ALA:C	19:LN:53:TYR:HB3	2.44	0.42
28:LW:105:ARG:NH1	56:SG:150:GLU:H	2.17	0.42
28:LW:106:GLU:HA	28:LW:109:ILE:CG2	2.49	0.42
49:S2:83:A:C4	49:S2:84:A:H1'	2.54	0.42
49:S2:166:A:O2'	56:SG:6:SER:OG	2.35	0.42
49:S2:547:G:H2'	49:S2:548:C:C6	2.54	0.42
49:S2:586:G:C5	59:SJ:172:ARG:HD2	2.55	0.42
49:S2:807:G:C3'	49:S2:808:A:H5''	2.50	0.42
49:S2:1107:G:H1	49:S2:1125:C:H41	1.67	0.42
49:S2:1253:A:H1'	49:S2:1666:C:O2'	2.20	0.42
49:S2:1442:U:O2'	49:S2:1443:C:H5'	2.20	0.42
49:S2:1597:C:O2'	49:S2:1598:G:O4'	2.38	0.42
54:SE:9:LEU:CB	54:SE:30:ARG:HB2	2.50	0.42
55:SF:34:SER:HA	77:Sc:55:VAL:CG2	2.50	0.42
64:SP:121:ILE:HD13	67:SS:120:HIS:HD2	1.84	0.42
66:SR:46:LEU:O	66:SR:50:ILE:HG13	2.19	0.42
68:ST:110:LEU:C	68:ST:111:LYS:HG3	2.44	0.42
71:SW:56:HIS:O	71:SW:57:ARG:HG3	2.20	0.42
4:L5:222:C:H2'	4:L5:223:G:O4'	2.20	0.42
4:L5:699:C:O2'	4:L5:968:C:N3	2.43	0.42
4:L5:1306:C:O2'	4:L5:1307:A:H5'	2.20	0.42
4:L5:1834:U:C4	25:LT:126:VAL:HG12	2.55	0.42
4:L5:2469:C:H5	4:L5:2471:G:H1	1.66	0.42
4:L5:2519:U:H4'	4:L5:2520:C:OP1	2.20	0.42
4:L5:2634:C:H2'	4:L5:2635:U:H6	1.85	0.42
4:L5:3895:G:H2'	4:L5:3896:C:O4'	2.19	0.42
4:L5:4275:G:O2'	25:LT:12:ARG:HG3	2.20	0.42
4:L5:4643:G:H2'	4:L5:4644:G:O4'	2.20	0.42
4:L5:4913:G:H4'	4:L5:4914:C:C5'	2.50	0.42
6:L8:76:C:O2'	6:L8:77:A:H5'	2.20	0.42
6:L8:140:C:H2'	6:L8:141:C:C6	2.55	0.42
8:LB:84:MET:HE2	8:LB:164:ALA:CB	2.50	0.42
8:LB:392:LEU:O	8:LB:394:LYS:N	2.53	0.42
11:LE:141:ARG:NE	37:Lf:109:ARG:O	2.52	0.42
15:LI:188:LYS:HG3	15:LI:213:HIS:CE1	2.55	0.42
17:LL:7:GLY:O	32:La:49:HIS:NE2	2.49	0.42
21:LP:18:ARG:HG2	21:LP:147:GLU:HB2	2.02	0.42
21:LP:112:LEU:HA	21:LP:152:GLU:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:LR:115:ILE:HB	23:LR:119:MET:SD	2.60	0.42
26:LU:76:VAL:HG23	26:LU:77:PRO:O	2.19	0.42
27:LV:87:SER:CB	27:LV:97:TYR:HB3	2.50	0.42
31:LZ:100:VAL:HG23	31:LZ:106:LEU:HB3	2.00	0.42
35:Ld:57:MET:HE3	35:Ld:88:LEU:O	2.20	0.42
40:Li:38:LYS:NZ	40:Li:42:ASP:HB3	2.35	0.42
49:S2:31:U:O2'	49:S2:32:U:H5'	2.19	0.42
49:S2:616:A:H2'	49:S2:617:G:O4'	2.19	0.42
49:S2:646:G:H2'	49:S2:647:U:O2	2.20	0.42
49:S2:736:C:H2'	49:S2:737:G:C8	2.55	0.42
49:S2:1106:C:H2'	49:S2:1107:G:O4'	2.19	0.42
49:S2:1107:G:C2	49:S2:1108:G:H1'	2.55	0.42
49:S2:1236:G:C4'	64:SP:135:ALA:HB2	2.49	0.42
49:S2:1265:A:H4'	49:S2:1327:G:P	2.60	0.42
49:S2:1383:A:H5''	53:SD:156:LEU:HD21	2.01	0.42
49:S2:1623:A:H61	67:SS:132:ARG:CZ	2.33	0.42
49:S2:1669:G:O2'	49:S2:1670:C:H5'	2.20	0.42
54:SE:59:ASP:O	54:SE:62:LYS:HB3	2.20	0.42
56:SG:188:LYS:O	56:SG:192:ILE:HG23	2.19	0.42
60:SK:24:LYS:HD2	60:SK:66:HIS:NE2	2.35	0.42
65:SQ:55:VAL:HA	65:SQ:63:PHE:CE2	2.49	0.42
71:SW:53:ILE:CD1	71:SW:62:VAL:HG23	2.50	0.42
77:Sc:37:ASP:OD2	77:Sc:39:SER:OG	2.33	0.42
4:L5:226:G:H2'	9:LC:223:ASN:OD1	2.20	0.42
4:L5:1339:U:H2'	4:L5:1340:C:C6	2.55	0.42
4:L5:1377:G:H4'	4:L5:1378:C:H5''	2.00	0.42
4:L5:1548:G:H2'	4:L5:1549:G:O4'	2.20	0.42
4:L5:2491:C:H3'	4:L5:2492:C:C6	2.53	0.42
4:L5:2591:A:N6	4:L5:2754:G:O2'	2.53	0.42
4:L5:2620:G:OP1	26:LU:80:LYS:N	2.51	0.42
4:L5:2627:C:OP1	26:LU:92:LYS:HE3	2.19	0.42
4:L5:2631:U:O4	26:LU:51:GLY:N	2.49	0.42
4:L5:2767:U:O2'	4:L5:2768:C:H5'	2.20	0.42
4:L5:2845:A:N3	27:LV:86:LYS:HE2	2.35	0.42
4:L5:4320:G:O2'	4:L5:4321:U:H5'	2.20	0.42
6:L8:68:G:OP1	41:Lj:87:LYS:HD3	2.20	0.42
6:L8:130:C:O2'	6:L8:131:G:H5'	2.20	0.42
7:LA:122:ASP:OD1	7:LA:122:ASP:N	2.52	0.42
8:LB:220:ILE:CG1	8:LB:278:THR:HG23	2.43	0.42
11:LE:148:THR:HA	11:LE:200:LYS:HB3	2.02	0.42
15:LI:210:ARG:O	15:LI:214:SER:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LJ:89:VAL:CG2	16:LJ:115:LEU:HB3	2.50	0.42
16:LJ:96:LYS:O	16:LJ:159:LYS:NZ	2.45	0.42
16:LJ:167:GLN:O	16:LJ:171:ASP:HA	2.20	0.42
17:LL:146:LEU:HD11	39:Lh:122:LYS:CB	2.47	0.42
18:LM:15:VAL:HG23	18:LM:23:LYS:O	2.20	0.42
18:LM:104:MET:HG3	18:LM:108:ASP:HB2	2.02	0.42
23:LR:98:ARG:NH1	23:LR:132:PHE:O	2.52	0.42
23:LR:103:ARG:NH1	23:LR:124:TYR:OH	2.53	0.42
23:LR:126:LYS:HE3	23:LR:126:LYS:HB2	1.81	0.42
29:LX:129:ARG:HB2	29:LX:131:ASP:OD1	2.20	0.42
30:LY:49:ILE:HD12	30:LY:80:ILE:CG2	2.45	0.42
30:LY:84:ARG:CZ	30:LY:84:ARG:HB3	2.49	0.42
30:LY:101:PRO:O	30:LY:104:VAL:HG22	2.20	0.42
49:S2:52:G:H2'	49:S2:53:C:C6	2.54	0.42
49:S2:649:U:H1'	72:SX:45:SER:HB3	2.02	0.42
49:S2:901:G:N2	49:S2:902:G:H1'	2.35	0.42
49:S2:1331:C:H5'	49:S2:1332:A:OP1	2.20	0.42
49:S2:1747:C:C3'	49:S2:1748:G:H5''	2.50	0.42
51:SB:198:GLU:HG2	51:SB:210:VAL:HG21	2.01	0.42
53:SD:72:VAL:HG22	60:SK:20:VAL:HG11	2.02	0.42
54:SE:194:VAL:O	54:SE:210:VAL:HG13	2.19	0.42
54:SE:227:VAL:C	54:SE:228:ILE:HG13	2.45	0.42
57:SH:134:VAL:HG12	57:SH:173:PHE:CE2	2.54	0.42
58:SI:84:ASN:HB3	58:SI:87:ASN:O	2.20	0.42
59:SJ:56:ALA:O	59:SJ:60:LEU:HG	2.19	0.42
59:SJ:129:LEU:HD23	59:SJ:129:LEU:HA	1.84	0.42
70:SV:81:LYS:HE2	70:SV:81:LYS:HB2	1.94	0.42
75:Sa:11:ALA:HB3	75:Sa:33:ASP:HB2	2.01	0.42
80:Sg:131:LEU:O	80:Sg:138:CYS:HA	2.20	0.42
2:B4:29:G:H1	2:B4:41:C:H42	1.67	0.41
4:L5:95:G:N7	17:LL:11:LYS:HE2	2.35	0.41
4:L5:642:G:H2'	4:L5:643:C:C5	2.54	0.41
4:L5:690:C:H2'	4:L5:691:C:C6	2.55	0.41
4:L5:982:U:H2'	4:L5:983:C:O4'	2.19	0.41
4:L5:1317:U:OP1	32:La:15:VAL:HG21	2.20	0.41
4:L5:1347:G:OP1	22:LQ:146:ARG:NH2	2.50	0.41
4:L5:1730:U:H1'	25:LT:101:SER:HB3	2.01	0.41
4:L5:1921:C:C2	24:LS:161:ARG:HG2	2.54	0.41
4:L5:2068:C:OP1	37:Lf:15:LYS:HE3	2.20	0.41
4:L5:2696:A:H62	42:Lk:35:LYS:NZ	2.17	0.41
4:L5:2857:A:C2	4:L5:3840:U:H5'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4446:U:O2'	4:L5:4450:U:OP1	2.38	0.41
8:LB:84:MET:HE2	8:LB:164:ALA:HB1	2.01	0.41
8:LB:168:MET:HG3	8:LB:178:ALA:HA	2.01	0.41
9:LC:237:ILE:HD12	9:LC:237:ILE:HA	1.86	0.41
10:LD:197:LYS:HE3	10:LD:202:GLN:HB2	2.02	0.41
13:LG:29:ASN:HB3	13:LG:32:PHE:CD2	2.56	0.41
14:LH:44:GLU:C	14:LH:45:LEU:HD23	2.45	0.41
14:LH:128:MET:HE2	14:LH:128:MET:HB3	1.84	0.41
25:LT:115:LYS:HA	25:LT:118:GLU:CG	2.49	0.41
32:La:72:THR:HB	32:La:112:LEU:HG	2.02	0.41
34:Lc:22:MET:O	34:Lc:23:LYS:HB2	2.20	0.41
39:Lh:46:LYS:HE3	39:Lh:46:LYS:HB3	1.86	0.41
46:Lo:14:LYS:HB3	46:Lo:77:CYS:SG	2.60	0.41
46:Lo:33:LEU:O	46:Lo:33:LEU:HG	2.20	0.41
49:S2:386:C:H5''	58:SI:10:LYS:CD	2.49	0.41
49:S2:426:A:C2'	49:S2:427:U:H5'	2.50	0.41
49:S2:496:C:H2'	49:S2:497:C:C6	2.55	0.41
49:S2:835:C:O3'	49:S2:837:A:H5''	2.20	0.41
49:S2:937:C:O2'	49:S2:938:A:H5'	2.20	0.41
49:S2:983:A:O2'	49:S2:984:C:H5'	2.20	0.41
51:SB:135:LEU:CD1	51:SB:137:LEU:HD11	2.50	0.41
51:SB:144:LYS:HD3	51:SB:208:HIS:CB	2.37	0.41
52:SC:196:ILE:HB	52:SC:223:TYR:HB2	2.01	0.41
55:SF:48:TYR:C	55:SF:49:LEU:HD12	2.45	0.41
59:SJ:50:LEU:HD23	59:SJ:50:LEU:HA	1.87	0.41
60:SK:60:GLU:HA	60:SK:68:TYR:O	2.19	0.41
66:SR:24:LEU:HD23	66:SR:34:VAL:HG11	2.01	0.41
67:SS:64:VAL:HA	67:SS:67:VAL:HG12	2.02	0.41
73:SY:60:PHE:CE1	73:SY:71:GLY:HA3	2.55	0.41
80:Sg:94:THR:CG2	80:Sg:96:THR:HG22	2.50	0.41
4:L5:963:G:H3'	4:L5:963:G:N3	2.35	0.41
4:L5:1964:A:N3	4:L5:1964:A:H2'	2.35	0.41
4:L5:2062:C:C2'	4:L5:2063:G:H5'	2.51	0.41
4:L5:2103:G:H3'	4:L5:2103:G:OP2	2.20	0.41
4:L5:4481:U:H2'	4:L5:4482:U:C6	2.55	0.41
4:L5:4635:A:OP1	4:L5:4636:U:O2'	2.37	0.41
5:L7:27:G:H5''	10:LD:57:ASN:ND2	2.35	0.41
7:LA:23:ARG:HA	7:LA:52:PRO:HD2	2.01	0.41
7:LA:60:LYS:HE3	7:LA:60:LYS:HB2	1.72	0.41
7:LA:95:GLN:HB3	47:Lp:87:LYS:HE3	2.01	0.41
8:LB:229:LYS:HD3	8:LB:229:LYS:HA	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LB:285:TYR:CE1	8:LB:363:ILE:HD13	2.54	0.41
9:LC:318:PRO:HB2	9:LC:325:MET:HE3	2.01	0.41
9:LC:337:ARG:O	9:LC:341:LEU:HG	2.20	0.41
13:LG:102:TYR:OH	13:LG:208:ASN:HB2	2.20	0.41
14:LH:27:VAL:CG2	14:LH:34:LEU:HB3	2.49	0.41
14:LH:50:LYS:C	14:LH:51:LYS:HD3	2.45	0.41
19:LN:47:LYS:HD2	19:LN:50:ARG:NH2	2.35	0.41
26:LU:23:LEU:O	26:LU:69:LYS:HA	2.20	0.41
26:LU:28:PRO:HB2	26:LU:34:MET:CG	2.35	0.41
27:LV:83:ARG:HD3	27:LV:120:PRO:O	2.20	0.41
30:LY:10:ASP:HB3	30:LY:13:LYS:HB2	2.01	0.41
30:LY:50:ARG:HB3	30:LY:53:ASP:CG	2.44	0.41
36:Le:81:ASN:ND2	36:Le:83:LYS:HG2	2.35	0.41
49:S2:1:U:O2	52:SC:205:VAL:HG22	2.20	0.41
49:S2:86:C:OP2	49:S2:149:A:O2'	2.38	0.41
49:S2:481:C:H5''	49:S2:482:G:OP2	2.21	0.41
49:S2:1064:C:O3'	63:SO:149:ARG:NH1	2.53	0.41
49:S2:1453:C:O2'	66:SR:52:GLY:HA3	2.21	0.41
50:SA:15:VAL:HG23	50:SA:16:LEU:HD22	2.02	0.41
50:SA:121:LEU:HD21	50:SA:145:ILE:HD11	2.02	0.41
51:SB:144:LYS:HB2	51:SB:208:HIS:HB3	2.02	0.41
52:SC:202:THR:HG22	52:SC:221:ASP:HB3	2.01	0.41
53:SD:106:ARG:HG3	53:SD:175:VAL:HG22	2.02	0.41
53:SD:181:VAL:C	53:SD:182:LEU:HD23	2.45	0.41
54:SE:59:ASP:OD1	54:SE:60:GLU:N	2.53	0.41
54:SE:122:LYS:HE2	54:SE:124:CYS:SG	2.60	0.41
56:SG:6:SER:HA	56:SG:12:CYS:O	2.20	0.41
56:SG:63:MET:HA	56:SG:98:ARG:O	2.20	0.41
58:SI:76:THR:CG2	58:SI:104:ILE:HD12	2.50	0.41
64:SP:94:VAL:HG23	64:SP:105:VAL:HB	2.03	0.41
67:SS:10:GLN:HG3	67:SS:13:LEU:HG	2.02	0.41
68:ST:131:LEU:O	68:ST:134:ILE:HG22	2.19	0.41
70:SV:32:ILE:CG1	70:SV:60:ARG:HD2	2.50	0.41
75:Sa:23:CYS:SG	75:Sa:24:THR:N	2.94	0.41
80:Sg:251:ALA:HB2	80:Sg:256:ILE:HG23	2.01	0.41
2:B4:19:G:N2	2:B4:57:G:H1'	2.35	0.41
4:L5:1:C:H4'	4:L5:2:G:O4'	2.20	0.41
4:L5:137:G:H4'	39:Lh:98:HIS:CD2	2.55	0.41
4:L5:1194:G:H2'	4:L5:1195:G:C8	2.55	0.41
4:L5:1250:C:H1'	4:L5:1261:G:N2	2.35	0.41
4:L5:1590:C:H4'	4:L5:2857:A:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2106:G:H21	4:L5:2107:C:C1'	2.30	0.41
4:L5:3947:A:N6	4:L5:4068:U:H1'	2.35	0.41
4:L5:3949:A:H8	4:L5:4064:C:N3	2.18	0.41
4:L5:4280:A:OP2	10:LD:23:ARG:NH1	2.41	0.41
4:L5:4878:C:O2'	4:L5:4879:C:H5'	2.21	0.41
4:L5:4989:U:OP1	4:L5:4991:U:O2'	2.37	0.41
5:L7:28:C:O3'	16:LJ:138:GLY:HA2	2.20	0.41
6:L8:77:A:O2'	6:L8:78:G:H5'	2.20	0.41
9:LC:67:TRP:CD1	9:LC:71:ARG:HD2	2.55	0.41
9:LC:101:MET:HE2	9:LC:104:PRO:HA	2.02	0.41
10:LD:124:GLU:O	10:LD:126:THR:HG23	2.20	0.41
10:LD:264:LYS:HD3	10:LD:266:TRP:CZ2	2.55	0.41
13:LG:132:ARG:HG3	13:LG:133:PRO:HD2	2.01	0.41
14:LH:20:LEU:HD21	14:LH:45:LEU:HB2	2.01	0.41
16:LJ:88:LYS:HD3	16:LJ:88:LYS:HA	1.94	0.41
17:LL:46:ILE:CD1	17:LL:51:ALA:HA	2.50	0.41
19:LN:91:GLN:O	19:LN:93:LYS:NZ	2.47	0.41
20:LO:108:ILE:HD12	20:LO:160:ARG:CZ	2.50	0.41
21:LP:48:LEU:HD23	21:LP:48:LEU:HA	1.86	0.41
25:LT:83:LYS:HB2	25:LT:83:LYS:HE2	1.81	0.41
37:Lf:49:TYR:CZ	37:Lf:96:ALA:HB2	2.56	0.41
47:Lp:33:GLN:HE21	47:Lp:49:ARG:NH2	2.18	0.41
49:S2:482:G:N2	49:S2:484:A:H3'	2.35	0.41
49:S2:659:G:H5''	49:S2:660:C:OP1	2.20	0.41
49:S2:1179:G:N2	49:S2:1182:A:OP2	2.46	0.41
49:S2:1324:G:C2'	49:S2:1325:G:H5'	2.50	0.41
49:S2:1643:U:H2'	49:S2:1644:C:C6	2.56	0.41
49:S2:1713:C:O2'	49:S2:1714:U:H5'	2.20	0.41
52:SC:78:LEU:HD12	52:SC:97:PHE:CB	2.50	0.41
53:SD:162:ASP:O	53:SD:165:ASN:ND2	2.53	0.41
54:SE:44:LEU:CD2	54:SE:48:LEU:HD23	2.50	0.41
54:SE:149:TYR:HB3	56:SG:209:TYR:HB2	2.02	0.41
55:SF:33:ILE:HD12	55:SF:36:GLN:NE2	2.35	0.41
55:SF:61:PHE:HB3	77:Sc:51:ARG:NH2	2.35	0.41
55:SF:179:ASN:O	55:SF:183:GLY:N	2.51	0.41
56:SG:160:LYS:N	56:SG:171:THR:O	2.43	0.41
58:SI:6:ASP:N	58:SI:6:ASP:OD1	2.53	0.41
59:SJ:94:LEU:H	59:SJ:94:LEU:HD23	1.85	0.41
59:SJ:97:ILE:O	59:SJ:100:LEU:HD13	2.20	0.41
63:SO:117:ARG:CG	75:Sa:49:ALA:HB2	2.50	0.41
64:SP:56:LEU:O	64:SP:59:ARG:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SQ:20:THR:OG1	65:SQ:73:LYS:HB3	2.19	0.41
66:SR:66:VAL:HG22	66:SR:67:ARG:H	1.85	0.41
67:SS:7:GLU:HG2	67:SS:8:LYS:N	2.26	0.41
68:ST:17:ALA:O	68:ST:134:ILE:HD11	2.19	0.41
73:SY:41:ARG:CA	73:SY:55:ILE:HD11	2.51	0.41
73:SY:45:ALA:HB1	73:SY:50:THR:O	2.19	0.41
74:SZ:110:THR:HG22	74:SZ:111:ARG:N	2.36	0.41
76:Sb:50:ALA:CB	76:Sb:71:ALA:HB2	2.50	0.41
77:Sc:28:THR:O	77:Sc:45:ASN:HA	2.20	0.41
2:B4:66:U:H2'	2:B4:67:C:O4'	2.21	0.41
4:L5:6:C:H2'	4:L5:7:C:C6	2.55	0.41
4:L5:440:U:O2'	37:Lf:91:ASN:O	2.34	0.41
4:L5:487:G:H2'	4:L5:488:G:O4'	2.20	0.41
4:L5:1174:G:H22	4:L5:1186:U:H3	1.68	0.41
4:L5:1258:G:H2'	4:L5:1259:G:O4'	2.20	0.41
4:L5:1419:G:O2'	32:La:116:LYS:HE2	2.20	0.41
4:L5:1896:A:OP1	12:LF:223:LYS:NZ	2.35	0.41
4:L5:3946:G:N2	4:L5:3947:A:H62	2.16	0.41
4:L5:4860:G:O2'	4:L5:4861:G:H5'	2.20	0.41
6:L8:78:G:H2'	6:L8:79:G:C8	2.55	0.41
7:LA:32:VAL:HG12	7:LA:163:ARG:NH1	2.36	0.41
9:LC:181:LYS:HA	9:LC:184:TYR:HD2	1.86	0.41
10:LD:83:LEU:N	10:LD:84:PRO:HD2	2.34	0.41
10:LD:197:LYS:HE3	10:LD:202:GLN:CB	2.50	0.41
11:LE:181:LEU:HA	11:LE:181:LEU:HD23	1.75	0.41
11:LE:213:THR:O	11:LE:216:TYR:HB3	2.21	0.41
12:LF:225:THR:OG1	12:LF:231:GLY:HA3	2.21	0.41
13:LG:63:LEU:HD22	19:LN:33:LEU:HD21	2.03	0.41
16:LJ:95:ARG:NH2	16:LJ:177:GLY:O	2.46	0.41
18:LM:50:MET:HG2	18:LM:55:MET:CE	2.51	0.41
19:LN:3:ALA:O	19:LN:7:ILE:HG13	2.21	0.41
23:LR:7:GLN:OE1	23:LR:7:GLN:N	2.53	0.41
25:LT:52:MET:CG	25:LT:53:PRO:HD2	2.50	0.41
33:Lb:8:THR:HG21	33:Lb:10:HIS:HB2	2.02	0.41
33:Lb:60:ASN:HA	33:Lb:63:LYS:NZ	2.35	0.41
39:Lh:24:LEU:HD23	39:Lh:24:LEU:HA	1.87	0.41
43:Ll:23:ILE:HD12	43:Ll:27:ILE:HD11	2.03	0.41
49:S2:123:G:H5'	49:S2:124:U:OP2	2.21	0.41
49:S2:918:U:H5''	62:SN:20:ARG:HH12	1.84	0.41
49:S2:1389:C:C4'	53:SD:205:PRO:HB3	2.49	0.41
49:S2:1619:A:H4'	64:SP:44:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1653:U:H2'	49:S2:1654:G:C8	2.55	0.41
49:S2:1664:A:HO2'	49:S2:1665:G:P	2.42	0.41
49:S2:1721:U:H3'	49:S2:1722:G:C5'	2.50	0.41
50:SA:58:LEU:HD11	50:SA:178:LEU:HB2	2.01	0.41
53:SD:126:ILE:HD13	53:SD:188:ILE:HD11	2.02	0.41
55:SF:168:THR:OG1	55:SF:171:GLU:HG3	2.19	0.41
58:SI:31:ARG:HB3	58:SI:32:PRO:HD2	2.02	0.41
62:SN:54:LEU:O	62:SN:60:VAL:HB	2.20	0.41
67:SS:25:LYS:O	67:SS:29:ALA:N	2.52	0.41
67:SS:86:ARG:HG3	67:SS:98:VAL:CG2	2.46	0.41
79:Se:8:ARG:H	79:Se:8:ARG:HD3	1.86	0.41
4:L5:36:U:OP1	4:L5:1651:G:N2	2.52	0.41
4:L5:136:C:OP1	39:Lh:96:ASN:ND2	2.53	0.41
4:L5:216:C:N4	4:L5:217:C:O2	2.53	0.41
4:L5:286:U:H2'	4:L5:287:U:C6	2.55	0.41
4:L5:1247:U:O2'	4:L5:1248:C:H5'	2.21	0.41
4:L5:1772:C:H2'	4:L5:1773:U:O4'	2.20	0.41
4:L5:2079:G:H4'	36:Le:58:ILE:CD1	2.51	0.41
7:LA:30:ARG:NH2	7:LA:33:ASP:OD2	2.52	0.41
8:LB:201:LEU:O	8:LB:202:GLU:HB2	2.21	0.41
10:LD:39:GLN:HG2	10:LD:40:ASP:H	1.84	0.41
11:LE:162:VAL:HG21	11:LE:175:VAL:HG21	2.03	0.41
12:LF:122:PHE:CZ	12:LF:150:VAL:HG23	2.56	0.41
14:LH:50:LYS:O	14:LH:51:LYS:HD3	2.20	0.41
14:LH:176:LEU:HB2	44:Lm:86:ALA:HB1	2.03	0.41
17:LL:6:ASN:HB2	32:La:48:TYR:CD1	2.56	0.41
17:LL:63:THR:HG22	17:LL:64:VAL:N	2.34	0.41
26:LU:27:HIS:O	26:LU:30:GLU:HG3	2.21	0.41
35:Ld:85:ARG:NH1	35:Ld:117:LEU:HD13	2.34	0.41
38:Lg:33:LEU:HD23	38:Lg:33:LEU:HA	1.88	0.41
49:S2:72:C:H1'	49:S2:73:C:C2'	2.48	0.41
49:S2:526:A:O2'	59:SJ:125:HIS:ND1	2.52	0.41
49:S2:587:A:H4'	49:S2:588:G:OP1	2.21	0.41
49:S2:857:U:H2'	49:S2:858:A:H8	1.85	0.41
49:S2:960:U:H2'	49:S2:962:A:OP2	2.20	0.41
49:S2:1650:A:H5''	65:SQ:139:ALA:HB2	2.03	0.41
49:S2:1741:U:H3'	49:S2:1742:C:H5''	2.02	0.41
50:SA:57:LYS:HD3	70:SV:70:LEU:CD1	2.50	0.41
50:SA:178:LEU:O	50:SA:182:VAL:HG23	2.20	0.41
51:SB:189:ILE:HB	51:SB:190:PRO:CD	2.51	0.41
53:SD:193:ASP:O	53:SD:201:LYS:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SH:53:VAL:HG21	57:SH:172:THR:HA	2.01	0.41
58:SI:165:GLN:HA	58:SI:168:GLN:HG2	2.02	0.41
61:SL:59:LYS:HB3	61:SL:134:LEU:CD2	2.49	0.41
64:SP:17:TYR:N	64:SP:20:VAL:O	2.51	0.41
66:SR:84:TYR:HD2	66:SR:86:PRO:HD2	1.85	0.41
67:SS:34:LYS:HE2	67:SS:34:LYS:HB2	1.86	0.41
67:SS:115:LYS:C	67:SS:117:ILE:H	2.28	0.41
69:SU:27:ARG:CD	69:SU:82:MET:HE1	2.51	0.41
71:SW:30:CYS:SG	71:SW:61:ILE:HD11	2.60	0.41
77:Sc:44:ARG:CD	77:Sc:58:LEU:HD21	2.50	0.41
2:B4:22:G:H2'	2:B4:23:A:H8	1.86	0.41
4:L5:649:A:C2'	4:L5:650:C:H5'	2.51	0.41
4:L5:908:G:O2'	4:L5:909:A:H5'	2.21	0.41
4:L5:980:U:H2'	4:L5:981:C:C6	2.55	0.41
4:L5:1702:C:H41	4:L5:2097:U:H1'	1.85	0.41
4:L5:1969:G:H2'	4:L5:1970:A:O4'	2.21	0.41
4:L5:2318:G:O6	36:Le:19:LYS:NZ	2.53	0.41
4:L5:2525:U:H2'	4:L5:2527:A:OP2	2.20	0.41
4:L5:2759:G:O2'	4:L5:2760:G:H5'	2.20	0.41
4:L5:3801:U:O2	4:L5:4497:U:H5'	2.20	0.41
4:L5:4621:C:OP1	27:LV:48:ARG:HG3	2.20	0.41
4:L5:4928:C:H4'	18:LM:121:ARG:HH22	1.86	0.41
7:LA:5:ILE:HG12	7:LA:8:GLN:HB2	2.02	0.41
8:LB:320:PHE:HB2	8:LB:324:GLY:O	2.20	0.41
9:LC:11:TYR:O	9:LC:154:VAL:HA	2.21	0.41
11:LE:244:GLU:O	11:LE:248:ILE:HG12	2.20	0.41
14:LH:46:SER:O	14:LH:55:LEU:HD12	2.21	0.41
22:LQ:133:GLY:O	22:LQ:136:THR:HG22	2.21	0.41
25:LT:92:ARG:HG2	25:LT:94:GLU:OE1	2.20	0.41
31:LZ:20:GLY:HA2	38:Lg:91:ILE:HD13	2.01	0.41
31:LZ:68:ILE:HB	31:LZ:119:GLU:HG2	2.02	0.41
32:La:148:ALA:HB2	40:Li:7:MET:C	2.46	0.41
34:Lc:36:LYS:O	34:Lc:40:GLN:HG2	2.19	0.41
37:Lf:8:LYS:HD2	37:Lf:31:GLU:OE2	2.21	0.41
37:Lf:14:TYR:OH	37:Lf:92:LEU:O	2.32	0.41
45:Ln:1:MET:HE1	45:Ln:9:ARG:CD	2.42	0.41
47:Lp:53:GLY:HA2	47:Lp:66:GLY:O	2.20	0.41
49:S2:74:G:O3'	49:S2:75:G:H4'	2.20	0.41
49:S2:150:A:HO2'	49:S2:151:C:P	2.39	0.41
49:S2:514:U:H2'	49:S2:515:G:H5'	2.02	0.41
49:S2:686:U:OP1	71:SW:32:LYS:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:844:U:O2'	49:S2:845:G:H5'	2.21	0.41
49:S2:1432:U:H4'	49:S2:1437:C:O2	2.19	0.41
49:S2:1610:G:O2'	49:S2:1611:G:H5'	2.21	0.41
49:S2:1630:A:H4'	67:SS:35:GLY:O	2.21	0.41
49:S2:1802:C:O2'	49:S2:1803:U:H5'	2.21	0.41
52:SC:94:ILE:HD12	52:SC:162:ILE:HG21	2.02	0.41
52:SC:199:PRO:HG2	59:SJ:58:ARG:HD2	2.02	0.41
53:SD:8:LYS:O	53:SD:12:VAL:HG23	2.20	0.41
54:SE:236:ILE:O	54:SE:238:LEU:HD12	2.20	0.41
55:SF:194:ASP:O	55:SF:198:ARG:N	2.51	0.41
58:SI:85:ALA:O	61:SL:8:ARG:HG2	2.21	0.41
65:SQ:33:LYS:HB2	65:SQ:33:LYS:HE3	1.86	0.41
65:SQ:87:SER:O	65:SQ:91:ALA:N	2.44	0.41
69:SU:25:THR:HA	69:SU:85:HIS:O	2.21	0.41
74:SZ:92:LEU:HA	74:SZ:97:ILE:CG1	2.50	0.41
80:Sg:140:TYR:CE2	80:Sg:182:CYS:HB3	2.55	0.41
4:L5:1374:G:O2'	4:L5:1375:C:H5'	2.21	0.41
4:L5:1570:G:N7	47:Lp:3:LYS:NZ	2.68	0.41
4:L5:1685:G:H21	33:Lb:15:LYS:NZ	2.18	0.41
4:L5:2611:A:H2'	4:L5:2612:G:C8	2.55	0.41
4:L5:2639:U:O2'	4:L5:2694:G:O6	2.31	0.41
4:L5:2807:A:O4'	38:Lg:2:VAL:HG11	2.20	0.41
4:L5:2837:U:H2'	4:L5:2838:G:O4'	2.20	0.41
4:L5:4143:G:C2	4:L5:4145:C:H1'	2.55	0.41
4:L5:4212:A:OP2	15:LI:15:LYS:NZ	2.53	0.41
4:L5:4232:U:H4'	4:L5:4233:A:O4'	2.20	0.41
4:L5:4876:U:H3'	4:L5:4877:G:C5'	2.50	0.41
5:L7:17:C:O2'	5:L7:18:C:H5'	2.20	0.41
5:L7:119:U:H2'	10:LD:261:VAL:CG1	2.50	0.41
6:L8:111:U:OP1	6:L8:111:U:H4'	2.21	0.41
8:LB:159:VAL:O	8:LB:160:ILE:HD13	2.21	0.41
8:LB:366:LYS:HE3	28:LW:1:MET:CE	2.50	0.41
11:LE:178:PRO:O	11:LE:181:LEU:N	2.45	0.41
11:LE:254:ASP:HA	11:LE:257:ILE:CG2	2.42	0.41
12:LF:126:ASN:O	12:LF:130:ILE:HG12	2.21	0.41
14:LH:176:LEU:HD13	44:Lm:86:ALA:CB	2.46	0.41
16:LJ:84:GLU:OE2	16:LJ:92:TYR:OH	2.38	0.41
16:LJ:99:PHE:CD2	16:LJ:105:PHE:HB3	2.56	0.41
17:LL:25:TRP:O	19:LN:202:ARG:HD2	2.21	0.41
17:LL:108:GLU:OE2	40:Li:18:THR:HG22	2.20	0.41
19:LN:92:LEU:C	19:LN:93:LYS:HD2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LP:18:ARG:HG2	21:LP:147:GLU:HB3	2.02	0.41
21:LP:137:ASN:HD22	21:LP:138:PRO:HD2	1.86	0.41
23:LR:63:CYS:O	23:LR:67:THR:HG23	2.21	0.41
24:LS:104:GLY:O	24:LS:108:GLN:HG3	2.20	0.41
32:La:75:LEU:HG	32:La:113:GLY:HA2	2.03	0.41
35:Ld:23:ARG:HB2	35:Ld:25:TYR:CE1	2.56	0.41
48:Lr:67:ARG:O	48:Lr:67:ARG:HG2	2.20	0.41
49:S2:394:G:H4'	61:SL:81:LYS:O	2.20	0.41
49:S2:913:A:N6	57:SH:119:SER:O	2.49	0.41
49:S2:946:U:O2'	49:S2:947:G:H5'	2.21	0.41
49:S2:1364:U:C2'	49:S2:1365:G:H5'	2.51	0.41
49:S2:1544:C:C2'	49:S2:1545:A:H5''	2.47	0.41
49:S2:1549:U:O2'	49:S2:1550:G:H5'	2.20	0.41
49:S2:1819:A:O2'	49:S2:1820:G:H5'	2.21	0.41
50:SA:32:PHE:CE1	50:SA:33:GLN:HG2	2.56	0.41
52:SC:151:ILE:O	52:SC:155:ILE:HG23	2.21	0.41
55:SF:35:LEU:O	55:SF:39:ILE:HG12	2.20	0.41
55:SF:153:LEU:CA	55:SF:156:THR:HG22	2.41	0.41
59:SJ:174:LYS:HE2	59:SJ:174:LYS:HB3	1.83	0.41
60:SK:58:VAL:HG21	60:SK:69:TRP:HB3	2.03	0.41
61:SL:11:GLN:CB	61:SL:56:ILE:HG21	2.44	0.41
65:SQ:63:PHE:HE1	65:SQ:92:LEU:HD22	1.82	0.41
65:SQ:85:ARG:NH1	65:SQ:119:LEU:HD21	2.36	0.41
2:B4:66:U:H2'	2:B4:67:C:H6	1.85	0.41
4:L5:28:C:O2'	4:L5:29:G:H5'	2.21	0.41
4:L5:162:A:H2'	4:L5:163:A:C8	2.56	0.41
4:L5:194:C:O2'	30:LY:121:ARG:HD3	2.20	0.41
4:L5:247:G:O2'	4:L5:248:C:H5'	2.21	0.41
4:L5:921:C:O2'	4:L5:922:C:H5'	2.21	0.41
4:L5:979:C:O2'	4:L5:980:U:H5'	2.20	0.41
4:L5:1414:C:H3'	4:L5:1415:G:H8	1.86	0.41
4:L5:1550:G:OP1	23:LR:86:ASN:HB3	2.21	0.41
4:L5:2708:U:H4'	4:L5:2709:C:H5''	2.03	0.41
4:L5:2750:G:H2'	4:L5:2751:G:O4'	2.21	0.41
4:L5:3948:C:O2'	4:L5:4065:G:N2	2.45	0.41
4:L5:4623:G:H2'	4:L5:4624:A:O4'	2.21	0.41
4:L5:4977:A:H2'	4:L5:4978:G:O4'	2.20	0.41
10:LD:90:VAL:HG12	10:LD:231:VAL:HG11	2.01	0.41
11:LE:283:PRO:HB2	37:Lf:41:PHE:CE2	2.56	0.41
12:LF:179:LEU:HD23	12:LF:179:LEU:HA	1.88	0.41
14:LH:95:VAL:HG22	44:Lm:82:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LI:38:ARG:HD2	15:LI:83:ASP:CG	2.45	0.41
18:LM:39:ASP:OD2	18:LM:47:ARG:HD3	2.20	0.41
22:LQ:50:ARG:CG	22:LQ:83:VAL:HG21	2.49	0.41
22:LQ:67:ILE:HD12	22:LQ:96:PRO:HD2	2.02	0.41
22:LQ:106:THR:HG22	22:LQ:108:ARG:H	1.86	0.41
30:LY:87:ARG:O	30:LY:94:THR:HA	2.21	0.41
32:La:11:LEU:HD23	32:La:17:HIS:HD2	1.86	0.41
44:Lm:99:CYS:SG	44:Lm:114:LYS:HE3	2.61	0.41
49:S2:177:G:H1'	49:S2:313:A:N6	2.36	0.41
49:S2:389:A:O2'	49:S2:390:C:H5'	2.21	0.41
49:S2:591:U:H5	79:Se:26:LYS:HD3	1.85	0.41
49:S2:879:C:C3'	49:S2:880:G:H5''	2.50	0.41
49:S2:881:G:N2	49:S2:906:U:O2	2.54	0.41
49:S2:923:G:H5'	62:SN:2:GLY:HA2	2.01	0.41
49:S2:977:C:H2'	49:S2:978:G:O4'	2.20	0.41
49:S2:1271:C:H2'	49:S2:1272:C:O4'	2.21	0.41
49:S2:1391:C:H4'	78:Sd:55:LEU:CD2	2.51	0.41
49:S2:1539:U:OP1	68:ST:44:GLU:N	2.35	0.41
51:SB:79:VAL:HG21	51:SB:81:PHE:CZ	2.55	0.41
51:SB:86:LEU:HA	51:SB:99:ASN:O	2.21	0.41
54:SE:45:ILE:HB	54:SE:80:ILE:HG12	2.03	0.41
54:SE:46:ILE:O	54:SE:50:ASN:HB2	2.21	0.41
56:SG:50:VAL:CG2	56:SG:111:LEU:HD12	2.51	0.41
62:SN:55:ARG:O	62:SN:55:ARG:HG2	2.20	0.41
66:SR:31:ASN:HA	66:SR:34:VAL:HG12	2.03	0.41
75:Sa:44:ILE:HD11	75:Sa:65:PRO:HG2	2.02	0.41
76:Sb:53:VAL:HG13	76:Sb:53:VAL:O	2.21	0.41
77:Sc:22:GLY:HA3	77:Sc:27:CYS:SG	2.61	0.41
80:Sg:79:LEU:HD21	80:Sg:87:LEU:HD22	2.02	0.41
80:Sg:152:SER:HG	80:Sg:168:CYS:C	2.28	0.41
2:B4:25:C:H2'	2:B4:26:A:O4'	2.20	0.41
2:B4:62:C:H2'	2:B4:63:G:C8	2.56	0.41
4:L5:248:C:O2'	4:L5:249:C:H5'	2.21	0.41
4:L5:278:G:H4'	4:L5:279:A:OP2	2.21	0.41
4:L5:466:A:H3'	4:L5:467:U:C6	2.55	0.41
4:L5:667:A:H2'	4:L5:668:C:H5'	2.03	0.41
4:L5:685:C:OP1	11:LE:100:LYS:HB2	2.21	0.41
4:L5:726:G:O2'	4:L5:727:C:H5'	2.21	0.41
4:L5:2101:C:H5'	4:L5:2102:G:OP2	2.20	0.41
4:L5:2601:A:H4'	4:L5:2602:G:OP1	2.20	0.41
4:L5:4149:C:H2'	4:L5:4150:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4613:C:O4'	14:LH:122:TYR:HB2	2.21	0.41
4:L5:4621:C:O2'	4:L5:4622:A:H5'	2.21	0.41
4:L5:4685:U:O2'	4:L5:4686:G:H5'	2.21	0.41
4:L5:4881:U:H5''	18:LM:117:LYS:HE3	2.02	0.41
4:L5:4996:C:H4'	35:Ld:26:THR:HG23	2.03	0.41
5:L7:92:C:H2'	5:L7:93:G:H8	1.86	0.41
6:L8:99:U:O2'	29:LX:103:LYS:NZ	2.51	0.41
8:LB:232:THR:O	8:LB:236:HIS:HA	2.21	0.41
9:LC:41:HIS:NE2	9:LC:45:ARG:HD2	2.36	0.41
9:LC:269:LYS:HE3	9:LC:269:LYS:HB2	1.78	0.41
9:LC:351:VAL:O	9:LC:355:ALA:N	2.40	0.41
10:LD:51:MET:HB2	10:LD:64:ILE:CD1	2.51	0.41
10:LD:63:GLN:HB3	10:LD:77:ALA:HB2	2.03	0.41
10:LD:208:MET:HE2	10:LD:233:PRO:HD3	2.03	0.41
10:LD:231:VAL:O	10:LD:231:VAL:HG13	2.21	0.41
11:LE:170:SER:OG	11:LE:214:ASP:OD2	2.31	0.41
11:LE:254:ASP:O	11:LE:258:LEU:N	2.46	0.41
13:LG:53:ARG:HH11	13:LG:53:ARG:HG3	1.86	0.41
13:LG:109:GLU:O	13:LG:113:ARG:HG2	2.20	0.41
13:LG:116:ALA:O	13:LG:120:LYS:N	2.50	0.41
13:LG:170:LEU:HD23	13:LG:170:LEU:HA	1.84	0.41
16:LJ:54:ARG:HD3	16:LJ:54:ARG:HA	1.84	0.41
17:LL:126:LEU:HD21	39:Lh:117:ARG:HE	1.85	0.41
18:LM:8:GLU:H	18:LM:11:ARG:CG	2.33	0.41
18:LM:125:ASN:O	18:LM:129:LYS:HD3	2.20	0.41
19:LN:10:LEU:HG	19:LN:19:MET:CE	2.51	0.41
19:LN:98:LEU:HD22	19:LN:128:LYS:HD3	2.02	0.41
20:LO:124:LEU:O	20:LO:128:ARG:HG2	2.20	0.41
20:LO:197:LYS:H	20:LO:197:LYS:HG2	1.74	0.41
21:LP:113:VAL:HG12	21:LP:151:THR:O	2.20	0.41
23:LR:107:ARG:O	23:LR:111:GLU:HG2	2.21	0.41
26:LU:26:THR:O	26:LU:30:GLU:HG3	2.21	0.41
31:LZ:115:LYS:O	31:LZ:119:GLU:HG3	2.20	0.41
32:La:27:LYS:HE3	32:La:27:LYS:HB3	1.87	0.41
35:Ld:85:ARG:HD2	35:Ld:85:ARG:HA	1.85	0.41
35:Ld:124:GLU:N	35:Ld:124:GLU:OE1	2.54	0.41
44:Lm:97:ARG:HD2	44:Lm:120:ASN:HB3	2.02	0.41
49:S2:164:A:O2'	49:S2:165:G:H5'	2.21	0.41
49:S2:182:C:H5'	49:S2:183:G:C4	2.56	0.41
49:S2:196:C:H1'	49:S2:203:G:N1	2.35	0.41
49:S2:209:A:C5	49:S2:210:U:H1'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:374:G:H1'	61:SL:83:GLN:NE2	2.34	0.41
49:S2:652:U:H6	49:S2:652:U:H5'	1.86	0.41
49:S2:846:G:OP2	54:SE:108:ARG:NH1	2.53	0.41
49:S2:942:G:OP1	51:SB:216:LYS:NZ	2.54	0.41
49:S2:957:A:OP2	63:SO:59:GLY:HA3	2.21	0.41
49:S2:1018:U:H5'	62:SN:71:ILE:HG22	2.02	0.41
49:S2:1040:G:O2'	49:S2:1041:G:H5'	2.20	0.41
49:S2:1103:C:H3'	49:S2:1104:G:H5''	2.02	0.41
49:S2:1259:A:H3'	49:S2:1259:A:N3	2.35	0.41
49:S2:1578:U:H5'	49:S2:1578:U:O2	2.21	0.41
50:SA:10:MET:HE2	50:SA:52:LYS:HA	2.03	0.41
51:SB:71:LEU:CD2	51:SB:78:GLU:HG2	2.51	0.41
52:SC:84:PHE:CD1	52:SC:265:PRO:HD3	2.56	0.41
52:SC:156:ILE:O	52:SC:160:LEU:HG	2.21	0.41
52:SC:262:THR:HG22	52:SC:263:LYS:N	2.36	0.41
53:SD:29:LEU:HD12	53:SD:34:TYR:CD1	2.56	0.41
53:SD:138:VAL:HG12	53:SD:184:ILE:CD1	2.51	0.41
53:SD:223:ILE:HG23	80:Sg:189:ILE:CB	2.49	0.41
54:SE:43:PRO:HG2	54:SE:46:ILE:HG12	2.02	0.41
54:SE:103:TYR:CD2	54:SE:189:LEU:HD11	2.55	0.41
55:SF:50:PRO:O	55:SF:70:GLU:HG3	2.21	0.41
56:SG:57:ASP:HA	56:SG:106:LEU:HA	2.02	0.41
57:SH:163:GLN:O	57:SH:167:GLU:N	2.53	0.41
58:SI:34:ALA:HB2	58:SI:56:ARG:HD3	2.03	0.41
58:SI:61:ASP:OD1	58:SI:61:ASP:N	2.52	0.41
58:SI:63:GLY:O	58:SI:75:LYS:HA	2.20	0.41
59:SJ:78:LEU:HD22	59:SJ:92:MET:O	2.21	0.41
61:SL:41:GLY:C	61:SL:42:LEU:HD12	2.46	0.41
62:SN:3:ARG:HH11	62:SN:3:ARG:N	2.19	0.41
63:SO:35:ALA:HB3	63:SO:112:ALA:HB2	2.03	0.41
63:SO:147:ARG:HA	75:Sa:28:ARG:HD2	2.01	0.41
66:SR:38:ILE:HD12	66:SR:38:ILE:HA	1.91	0.41
66:SR:51:ALA:O	66:SR:54:VAL:HG22	2.20	0.41
68:ST:22:LEU:HD21	68:ST:28:LEU:HD22	2.03	0.41
69:SU:59:LYS:HE3	69:SU:59:LYS:HB3	1.95	0.41
73:SY:17:LEU:HA	73:SY:17:LEU:HD23	1.79	0.41
73:SY:20:ARG:CZ	73:SY:22:GLN:HE21	2.34	0.41
77:Sc:9:ILE:HG13	77:Sc:9:ILE:O	2.20	0.41
80:Sg:256:ILE:O	80:Sg:269:GLU:HA	2.21	0.41
1:A4:43:U:H5'	49:S2:961:G:C1'	2.51	0.41
2:B4:55:U:C2	2:B4:57:G:H5''	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:12:A:O2'	29:LX:53:ARG:HG3	2.21	0.41
4:L5:323:C:H2'	4:L5:324:A:H8	1.85	0.41
4:L5:1691:G:H2'	4:L5:1692:C:O4'	2.21	0.41
4:L5:1766:A:O5'	67:SS:116:LYS:HG3	2.21	0.41
4:L5:2324:C:H1'	36:Le:76:LYS:HZ1	1.86	0.41
4:L5:2408:U:P	43:Ll:42:ARG:HH22	2.43	0.41
4:L5:2544:G:H4'	4:L5:2545:U:O5'	2.21	0.41
4:L5:3588:C:O2	4:L5:3589:G:H1'	2.21	0.41
4:L5:3600:G:O2'	4:L5:3601:C:H5'	2.21	0.41
4:L5:4195:G:OP2	33:Lb:3:LYS:NZ	2.54	0.41
4:L5:4307:A:H4'	22:LQ:186:TYR:CG	2.56	0.41
4:L5:4612:C:C2	14:LH:120:GLU:HA	2.55	0.41
4:L5:5025:C:H5'	4:L5:5026:U:OP2	2.21	0.41
5:L7:28:C:C2'	5:L7:29:C:H5'	2.50	0.41
5:L7:39:C:N3	16:LJ:73:THR:HG22	2.36	0.41
6:L8:51:U:O2	6:L8:51:U:H2'	2.20	0.41
7:LA:105:GLY:HA3	7:LA:160:SER:HB2	2.03	0.41
9:LC:195:LYS:HB3	9:LC:200:ARG:CD	2.50	0.41
11:LE:162:VAL:CG2	11:LE:175:VAL:HG21	2.51	0.41
12:LF:154:ILE:O	12:LF:158:GLY:HA3	2.21	0.41
13:LG:165:GLU:HA	13:LG:168:VAL:HG13	2.02	0.41
16:LJ:92:TYR:HB3	16:LJ:172:GLY:HA2	2.03	0.41
16:LJ:136:ARG:NH1	16:LJ:157:ILE:HG22	2.36	0.41
19:LN:14:LYS:HA	19:LN:19:MET:CG	2.51	0.41
19:LN:114:ARG:HH22	19:LN:157:LYS:HG3	1.86	0.41
23:LR:163:ARG:HG2	49:S2:873:G:OP1	2.21	0.41
26:LU:27:HIS:HA	26:LU:30:GLU:CG	2.51	0.41
27:LV:22:VAL:HG23	27:LV:53:PRO:HG2	2.03	0.41
29:LX:60:TYR:CD1	39:Lh:78:TYR:HB3	2.56	0.41
32:La:110:LYS:HD3	32:La:112:LEU:HD21	2.02	0.41
35:Ld:93:ASN:HB2	35:Ld:103:TYR:HD1	1.86	0.41
38:Lg:8:ARG:NH2	38:Lg:31:VAL:HG11	2.35	0.41
38:Lg:40:LYS:HB3	38:Lg:52:ARG:HH12	1.86	0.41
46:Lo:45:GLN:NE2	46:Lo:51:GLN:OE1	2.54	0.41
49:S2:118:C:H1'	49:S2:445:A:C5	2.56	0.41
49:S2:663:C:OP2	72:SX:3:LYS:NZ	2.34	0.41
49:S2:1016:U:C6	62:SN:17:PRO:HG3	2.56	0.41
54:SE:55:ALA:HB3	54:SE:61:VAL:HG22	2.02	0.41
54:SE:137:PRO:HG2	56:SG:209:TYR:OH	2.21	0.41
54:SE:139:LEU:HB2	54:SE:150:PRO:HG3	2.02	0.41
54:SE:183:VAL:HG23	54:SE:189:LEU:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:33:ILE:O	77:Sc:55:VAL:HG21	2.21	0.41
55:SF:100:ILE:CG2	55:SF:174:ALA:HB1	2.50	0.41
64:SP:83:MET:CG	64:SP:116:LEU:HD13	2.51	0.41
65:SQ:44:PRO:HD3	65:SQ:81:ILE:CD1	2.51	0.41
67:SS:73:ASN:CB	67:SS:76:GLN:HE22	2.34	0.41
67:SS:110:ASP:OD1	67:SS:110:ASP:N	2.53	0.41
73:SY:117:VAL:CG2	73:SY:121:ALA:HB3	2.51	0.41
77:Sc:26:GLN:H	77:Sc:26:GLN:HG2	1.66	0.41
77:Sc:50:VAL:HG23	77:Sc:54:ASP:OD2	2.21	0.41
78:Sd:4:GLN:O	78:Sd:6:LEU:HD23	2.21	0.41
2:B4:16:U:O2'	2:B4:17:C:H2'	2.21	0.40
4:L5:262:G:H2'	4:L5:263:G:O4'	2.21	0.40
4:L5:1077:C:H2'	4:L5:1078:A:H5'	2.03	0.40
4:L5:1250:C:H2'	4:L5:1251:C:C6	2.56	0.40
4:L5:1291:G:H2'	4:L5:1292:C:H6	1.86	0.40
4:L5:1310:C:O2'	4:L5:1311:G:H5'	2.21	0.40
4:L5:1660:U:O2'	32:La:12:ARG:HG3	2.21	0.40
4:L5:2487:G:N1	4:L5:2492:C:O2	2.46	0.40
4:L5:2639:U:H1'	4:L5:2694:G:O6	2.21	0.40
4:L5:2657:G:O2'	4:L5:2658:G:H5'	2.21	0.40
4:L5:3621:A:H3'	4:L5:3622:C:C6	2.56	0.40
4:L5:3648:A:H1'	4:L5:3785:A:N6	2.36	0.40
4:L5:4089:G:O2'	4:L5:4090:G:H5'	2.21	0.40
4:L5:4668:U:P	8:LB:226:LYS:HE3	2.61	0.40
7:LA:65:ASP:OD1	7:LA:66:PRO:HD2	2.21	0.40
11:LE:221:LYS:HD2	11:LE:221:LYS:HA	1.89	0.40
15:LI:87:MET:HB3	15:LI:138:ILE:HG12	2.03	0.40
15:LI:184:MET:HE2	15:LI:190:LEU:CG	2.51	0.40
25:LT:134:PRO:HA	25:LT:135:PRO:HD3	1.92	0.40
27:LV:38:TYR:O	27:LV:63:ALA:HB1	2.21	0.40
27:LV:60:MET:CE	27:LV:78:PRO:HB2	2.50	0.40
30:LY:82:ILE:HG22	30:LY:83:GLU:N	2.34	0.40
32:La:37:GLY:H	32:La:41:HIS:HB2	1.85	0.40
37:Lf:33:VAL:HG21	37:Lf:42:TYR:CE2	2.56	0.40
39:Lh:13:LYS:HG2	39:Lh:16:GLU:CG	2.50	0.40
48:Lr:71:ARG:HB2	48:Lr:71:ARG:NH2	2.36	0.40
49:S2:195:C:H1'	49:S2:205:G:C2	2.56	0.40
49:S2:201:C:H5''	49:S2:202:G:C8	2.56	0.40
49:S2:798:A:H5'	49:S2:799:U:P	2.61	0.40
49:S2:875:A:O2'	49:S2:876:C:H5'	2.21	0.40
49:S2:999:G:OP2	75:Sa:17:HIS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1103:C:C2'	49:S2:1104:G:H5''	2.50	0.40
49:S2:1143:A:H5'	52:SC:190:SER:HB3	2.03	0.40
49:S2:1313:A:O2'	49:S2:1314:U:H5''	2.20	0.40
49:S2:1332:A:H2'	53:SD:141:LYS:CE	2.51	0.40
49:S2:1464:C:H4'	66:SR:60:ARG:HH12	1.86	0.40
49:S2:1599:U:H4'	49:S2:1600:G:C5'	2.52	0.40
50:SA:45:GLY:HA3	66:SR:126:MET:SD	2.61	0.40
51:SB:37:ALA:HA	51:SB:42:ARG:HH22	1.84	0.40
53:SD:5:ILE:CD1	53:SD:9:ARG:HD2	2.36	0.40
54:SE:44:LEU:HD23	54:SE:44:LEU:O	2.22	0.40
54:SE:46:ILE:HG13	54:SE:47:PHE:N	2.34	0.40
59:SJ:140:GLN:OE1	59:SJ:141:VAL:N	2.54	0.40
64:SP:36:LEU:HD12	64:SP:36:LEU:HA	1.77	0.40
67:SS:14:ARG:O	67:SS:14:ARG:HG2	2.21	0.40
68:ST:125:PRO:HA	68:ST:128:GLN:HB3	2.02	0.40
72:SX:105:PHE:HB3	72:SX:112:VAL:CG2	2.51	0.40
75:Sa:24:THR:CG2	75:Sa:72:HIS:H	2.34	0.40
80:Sg:79:LEU:HD23	80:Sg:80:SER:N	2.35	0.40
80:Sg:125:ARG:HG2	80:Sg:150:TRP:CD1	2.55	0.40
4:L5:120:A:H4'	4:L5:121:A:O5'	2.21	0.40
4:L5:166:C:H2'	4:L5:167:C:C6	2.56	0.40
4:L5:690:C:H2'	4:L5:691:C:H6	1.85	0.40
4:L5:1893:C:H1'	4:L5:1937:C:O2	2.20	0.40
4:L5:2405:G:N7	43:L1:2:SER:HB3	2.36	0.40
4:L5:2891:U:H5'	4:L5:2892:C:OP2	2.21	0.40
4:L5:2893:U:C2'	4:L5:2894:A:H5''	2.51	0.40
4:L5:3592:G:H5'	4:L5:3593:C:OP1	2.20	0.40
4:L5:3773:U:H1'	4:L5:3775:A:H2	1.86	0.40
4:L5:4082:G:H2'	4:L5:4083:U:C6	2.57	0.40
7:LA:28:ARG:HB2	7:LA:123:ARG:HB3	2.03	0.40
8:LB:74:GLU:OE2	8:LB:285:TYR:OH	2.23	0.40
9:LC:168:VAL:O	9:LC:172:LYS:HG3	2.21	0.40
10:LD:271:MET:SD	10:LD:276:LYS:HG3	2.61	0.40
18:LM:6:PHE:HE1	24:LS:153:PRO:HD3	1.87	0.40
18:LM:36:ALA:HB2	18:LM:52:PHE:CZ	2.55	0.40
18:LM:55:MET:HE2	18:LM:55:MET:HB3	1.97	0.40
19:LN:116:LEU:HD22	19:LN:135:ILE:CD1	2.34	0.40
21:LP:45:THR:O	21:LP:49:LYS:HG3	2.21	0.40
22:LQ:93:GLN:HG2	22:LQ:94:GLU:OE2	2.21	0.40
22:LQ:157:GLY:HA2	32:La:50:PRO:HG3	2.03	0.40
30:LY:89:LYS:HE2	30:LY:89:LYS:HB3	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Lr:118:LEU:HA	48:Lr:121:GLN:HG3	2.02	0.40
49:S2:11:A:H2'	49:S2:12:U:H5'	2.04	0.40
49:S2:78:C:H3'	49:S2:79:A:C5'	2.50	0.40
49:S2:161:U:H3'	49:S2:162:C:C5'	2.51	0.40
49:S2:163:U:O2'	49:S2:164:A:H5'	2.22	0.40
49:S2:904:A:H5'	49:S2:905:C:OP2	2.22	0.40
49:S2:1199:A:H2'	49:S2:1200:A:O4'	2.21	0.40
49:S2:1223:A:H2'	49:S2:1224:G:C4'	2.50	0.40
52:SC:137:VAL:O	52:SC:162:ILE:HG13	2.21	0.40
52:SC:209:VAL:HG13	52:SC:210:PRO:CD	2.46	0.40
53:SD:25:LEU:HB3	53:SD:34:TYR:CZ	2.56	0.40
53:SD:71:ALA:O	53:SD:74:GLN:HG3	2.21	0.40
54:SE:100:ARG:HB3	54:SE:102:ILE:CD1	2.51	0.40
59:SJ:35:TYR:HA	59:SJ:123:ILE:HD13	2.03	0.40
61:SL:17:PHE:CE1	61:SL:19:ASN:HB2	2.56	0.40
67:SS:59:LEU:HD11	67:SS:64:VAL:HG12	2.04	0.40
68:ST:57:ALA:HA	68:ST:103:VAL:CG1	2.51	0.40
69:SU:20:ILE:HG12	69:SU:91:LEU:O	2.22	0.40
75:Sa:22:ARG:HA	75:Sa:22:ARG:HD3	1.84	0.40
76:Sb:35:VAL:CG1	76:Sb:63:LEU:HD21	2.51	0.40
79:Se:23:GLU:C	79:Se:24:LYS:HD3	2.45	0.40
80:Sg:99:ARG:CG	80:Sg:100:ARG:H	2.34	0.40
80:Sg:248:LEU:C	80:Sg:258:ILE:HG23	2.46	0.40
2:B4:66:U:H2'	2:B4:67:C:C6	2.56	0.40
4:L5:323:C:O2'	4:L5:324:A:H5'	2.21	0.40
4:L5:399:G:P	21:LP:20:SER:HB2	2.61	0.40
4:L5:499:G:H3'	4:L5:500:G:H5'	2.03	0.40
4:L5:663:G:O2'	4:L5:664:G:H5'	2.22	0.40
4:L5:1272:C:O5'	12:LF:34:ARG:HG3	2.21	0.40
4:L5:1347:G:P	22:LQ:146:ARG:HH22	2.43	0.40
4:L5:2372:U:H2'	4:L5:2373:C:C6	2.56	0.40
4:L5:2597:G:O2'	4:L5:2598:A:H5'	2.21	0.40
4:L5:2838:G:OP1	8:LB:247:GLY:HA2	2.20	0.40
4:L5:3728:A:H2'	4:L5:3729:U:H5'	2.03	0.40
4:L5:3807:A:C2'	4:L5:3808:C:H5'	2.52	0.40
4:L5:3884:U:H2'	4:L5:3885:G:O4'	2.21	0.40
4:L5:3946:G:H21	4:L5:3947:A:N6	2.18	0.40
4:L5:3949:A:H3'	4:L5:3949:A:N3	2.36	0.40
4:L5:4188:U:H2'	4:L5:4189:U:C6	2.56	0.40
4:L5:4508:C:N3	4:L5:4512:U:H5	2.19	0.40
7:LA:172:GLY:CA	47:Lp:73:THR:HG21	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LA:192:LYS:HE2	7:LA:192:LYS:HB3	1.86	0.40
8:LB:291:TYR:OH	8:LB:315:ASN:ND2	2.55	0.40
11:LE:124:LYS:O	11:LE:125:LEU:HD12	2.22	0.40
12:LF:87:PRO:HG2	12:LF:144:TYR:CD2	2.57	0.40
13:LG:136:LEU:HD13	13:LG:202:VAL:HG11	2.04	0.40
17:LL:79:GLU:OE1	17:LL:110:LEU:HD11	2.21	0.40
18:LM:11:ARG:HH11	18:LM:61:ILE:CD1	2.34	0.40
21:LP:114:ILE:HA	21:LP:150:LEU:HD23	2.02	0.40
24:LS:74:ARG:O	24:LS:76:LYS:HE3	2.20	0.40
27:LV:22:VAL:HG21	27:LV:53:PRO:HG2	2.02	0.40
48:Lr:49:VAL:HG11	48:Lr:97:ILE:HD11	2.02	0.40
49:S2:316:G:C2'	49:S2:317:C:H5'	2.52	0.40
49:S2:496:C:OP1	54:SE:49:ARG:NH1	2.51	0.40
49:S2:566:U:H3	49:S2:584:G:H1	1.69	0.40
49:S2:931:C:H2'	49:S2:932:G:C8	2.57	0.40
49:S2:1025:U:H2'	49:S2:1026:C:O4'	2.20	0.40
49:S2:1324:G:O2'	49:S2:1325:G:H5'	2.22	0.40
49:S2:1860:A:N7	75:Sa:34:LYS:NZ	2.69	0.40
53:SD:72:VAL:HG22	60:SK:20:VAL:HB	2.03	0.40
54:SE:101:LEU:HD23	54:SE:101:LEU:HA	1.80	0.40
54:SE:126:VAL:CG2	54:SE:156:VAL:HA	2.52	0.40
54:SE:252:ARG:HA	54:SE:255:ARG:NH2	2.36	0.40
65:SQ:108:ILE:C	65:SQ:111:ILE:HG22	2.47	0.40
66:SR:78:ARG:HA	66:SR:78:ARG:HD3	1.88	0.40
67:SS:121:ARG:HG3	67:SS:131:VAL:CG2	2.50	0.40
72:SX:54:LYS:HE2	72:SX:94:ILE:HB	2.04	0.40
74:SZ:100:VAL:HG23	74:SZ:110:THR:OG1	2.21	0.40
79:Se:22:GLN:HG2	79:Se:24:LYS:HD2	2.04	0.40
79:Se:45:VAL:HG23	79:Se:46:VAL:N	2.36	0.40
4:L5:113:A:H2'	4:L5:114:G:O4'	2.20	0.40
4:L5:308:G:O6	19:LN:12:ARG:NH1	2.54	0.40
4:L5:496:G:C2	4:L5:498:C:H1'	2.56	0.40
4:L5:512:U:H2'	4:L5:513:U:C5'	2.51	0.40
4:L5:652:G:H2'	4:L5:653:U:O4'	2.21	0.40
4:L5:1682:A:C2'	4:L5:1683:U:H5'	2.52	0.40
4:L5:1741:G:N3	4:L5:1781:U:H5'	2.37	0.40
4:L5:2508:U:H2'	4:L5:2509:C:C6	2.57	0.40
4:L5:3704:U:H2'	4:L5:3705:G:O4'	2.21	0.40
4:L5:4424:A:H2'	4:L5:4425:G:H5'	2.03	0.40
4:L5:5053:U:H5'	4:L5:5054:C:C5	2.56	0.40
5:L7:22:A:H2	5:L7:119:U:H4'	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:LC:284:MET:HE2	9:LC:286:ASN:O	2.21	0.40
10:LD:211:LEU:HB2	10:LD:219:TYR:HB2	2.03	0.40
16:LJ:56:THR:H	16:LJ:64:ARG:HG3	1.86	0.40
23:LR:114:LYS:O	23:LR:146:LYS:HE3	2.22	0.40
36:Le:41:ILE:HG13	36:Le:42:ASP:N	2.36	0.40
48:Lr:94:ARG:O	48:Lr:98:ARG:HB3	2.21	0.40
49:S2:30:C:O2'	49:S2:596:U:OP1	2.31	0.40
49:S2:328:U:H1'	49:S2:329:G:C1'	2.52	0.40
49:S2:572:U:H5'	73:SY:60:PHE:O	2.21	0.40
49:S2:947:G:O2'	49:S2:948:C:H5'	2.21	0.40
49:S2:1227:G:H2'	49:S2:1227:G:N3	2.36	0.40
49:S2:1491:G:H1'	69:SU:72:GLU:HG2	2.02	0.40
49:S2:1521:C:H4'	49:S2:1522:A:OP1	2.20	0.40
49:S2:1649:U:H3	49:S2:1675:A:H2	1.70	0.40
49:S2:1665:G:C5	68:ST:88:MET:HG2	2.57	0.40
49:S2:1783:C:H6	49:S2:1783:C:H2'	1.70	0.40
50:SA:30:LEU:HD11	50:SA:38:ILE:HG21	2.02	0.40
52:SC:207:ALA:O	52:SC:210:PRO:HD2	2.20	0.40
54:SE:92:ILE:O	54:SE:93:ASP:HB2	2.20	0.40
55:SF:143:PRO:HG2	77:Sc:54:ASP:HB3	2.03	0.40
56:SG:32:MET:SD	56:SG:65:GLN:HB2	2.62	0.40
57:SH:43:LEU:HB3	57:SH:72:PHE:CE1	2.57	0.40
57:SH:147:LYS:NZ	57:SH:153:LEU:HB2	2.36	0.40
60:SK:32:HIS:HD2	60:SK:45:VAL:HG21	1.86	0.40
64:SP:20:VAL:CG2	64:SP:24:GLN:HG3	2.43	0.40
66:SR:27:ASP:CG	66:SR:30:THR:HG22	2.46	0.40
67:SS:15:VAL:O	67:SS:16:LEU:HB2	2.22	0.40
3:C4:23:UNK:O	4:L5:4452:U:N3	2.48	0.40
4:L5:268:G:H2'	4:L5:269:G:C8	2.56	0.40
4:L5:516:C:O2'	4:L5:646:G:N2	2.54	0.40
4:L5:720:G:O2'	4:L5:721:G:H5'	2.20	0.40
4:L5:1216:C:N3	4:L5:1217:G:H1'	2.36	0.40
4:L5:1398:A:OP1	32:La:114:LYS:HA	2.21	0.40
4:L5:1725:U:H2'	4:L5:1726:U:C6	2.57	0.40
4:L5:1790:U:OP2	25:LT:13:TYR:OH	2.29	0.40
4:L5:2557:G:H1	4:L5:2570:U:H3	1.70	0.40
4:L5:2571:C:O2'	4:L5:2572:C:H5'	2.21	0.40
4:L5:4477:A:N3	4:L5:4603:C:O2'	2.50	0.40
4:L5:4736:C:H2'	4:L5:4737:G:C8	2.54	0.40
4:L5:4761:G:O2'	4:L5:4762:A:H5'	2.22	0.40
5:L7:4:U:O2'	5:L7:5:A:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LB:73:VAL:O	27:LV:89:ARG:NH1	2.47	0.40
8:LB:77:THR:O	8:LB:332:MET:HA	2.21	0.40
8:LB:107:ALA:HB2	8:LB:201:LEU:CD2	2.51	0.40
8:LB:285:TYR:OH	8:LB:334:LYS:HG3	2.22	0.40
14:LH:134:CYS:SG	14:LH:144:LEU:HD21	2.62	0.40
18:LM:108:ASP:HB3	20:LO:199:HIS:CE1	2.57	0.40
19:LN:5:LYS:O	19:LN:9:GLU:HG2	2.21	0.40
21:LP:32:THR:HG21	21:LP:87:SER:OG	2.22	0.40
29:LX:148:ASP:O	29:LX:152:LYS:HG3	2.21	0.40
35:Ld:72:VAL:HG23	35:Ld:80:VAL:HG13	2.03	0.40
36:Le:88:LEU:HB2	36:Le:120:ILE:HD13	2.04	0.40
42:Lk:23:VAL:O	42:Lk:23:VAL:HG13	2.21	0.40
49:S2:77:A:H4'	56:SG:157:VAL:HG11	2.02	0.40
49:S2:93:U:H2'	49:S2:94:G:H5'	2.03	0.40
49:S2:483:C:H5''	72:SX:48:LYS:HZ1	1.85	0.40
49:S2:538:U:N3	49:S2:542:U:OP1	2.54	0.40
49:S2:591:U:O4	79:Se:26:LYS:HE2	2.22	0.40
49:S2:691:G:H5'	49:S2:692:G:O4'	2.21	0.40
49:S2:925:G:C2'	49:S2:926:A:H5''	2.41	0.40
49:S2:951:C:O2'	63:SO:50:LYS:NZ	2.54	0.40
49:S2:1093:A:H2'	49:S2:1094:C:C6	2.56	0.40
49:S2:1292:C:C3'	49:S2:1293:A:H5''	2.50	0.40
49:S2:1648:G:N2	49:S2:1674:G:H2'	2.36	0.40
51:SB:81:PHE:CD2	51:SB:109:LYS:HD3	2.57	0.40
56:SG:169:PRO:C	56:SG:170:ARG:HD2	2.46	0.40
61:SL:49:GLU:HB3	61:SL:116:CYS:O	2.21	0.40
61:SL:95:TYR:HE2	61:SL:97:ARG:HG3	1.85	0.40
64:SP:18:ARG:HD3	67:SS:90:VAL:HA	2.03	0.40
64:SP:18:ARG:HH21	64:SP:37:TYR:CB	2.35	0.40
64:SP:39:ALA:HA	64:SP:42:ARG:HB3	2.03	0.40
68:ST:18:LEU:HD23	68:ST:58:ALA:HB1	2.03	0.40
69:SU:25:THR:HG22	69:SU:86:LYS:CB	2.52	0.40
69:SU:62:ARG:C	69:SU:63:ILE:HD12	2.46	0.40
69:SU:68:THR:O	78:Sd:40:ARG:NH1	2.54	0.40
80:Sg:88:ARG:HG3	80:Sg:90:TRP:CH2	2.56	0.40
80:Sg:113:PHE:CE2	80:Sg:117:ASN:HA	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
7	LA	246/257 (96%)	229 (93%)	17 (7%)	0	100	100
8	LB	393/403 (98%)	363 (92%)	29 (7%)	1 (0%)	36	70
9	LC	362/427 (85%)	335 (92%)	25 (7%)	2 (1%)	21	56
10	LD	291/297 (98%)	268 (92%)	23 (8%)	0	100	100
11	LE	213/288 (74%)	188 (88%)	24 (11%)	1 (0%)	24	60
12	LF	223/248 (90%)	208 (93%)	15 (7%)	0	100	100
13	LG	225/266 (85%)	208 (92%)	17 (8%)	0	100	100
14	LH	188/192 (98%)	174 (93%)	13 (7%)	1 (0%)	24	60
15	LI	202/214 (94%)	187 (93%)	15 (7%)	0	100	100
16	LJ	167/178 (94%)	158 (95%)	9 (5%)	0	100	100
17	LL	203/211 (96%)	190 (94%)	12 (6%)	1 (0%)	24	60
18	LM	137/215 (64%)	126 (92%)	11 (8%)	0	100	100
19	LN	201/204 (98%)	196 (98%)	5 (2%)	0	100	100
20	LO	198/203 (98%)	195 (98%)	3 (2%)	0	100	100
21	LP	151/184 (82%)	141 (93%)	10 (7%)	0	100	100
22	LQ	185/188 (98%)	172 (93%)	13 (7%)	0	100	100
23	LR	174/196 (89%)	172 (99%)	2 (1%)	0	100	100
24	LS	173/176 (98%)	157 (91%)	16 (9%)	0	100	100
25	LT	157/160 (98%)	142 (90%)	14 (9%)	1 (1%)	21	56
26	LU	99/128 (77%)	89 (90%)	10 (10%)	0	100	100
27	LV	129/140 (92%)	117 (91%)	12 (9%)	0	100	100
28	LW	111/157 (71%)	97 (87%)	12 (11%)	2 (2%)	6	31
29	LX	118/156 (76%)	107 (91%)	11 (9%)	0	100	100
30	LY	132/145 (91%)	122 (92%)	10 (8%)	0	100	100
31	LZ	133/136 (98%)	127 (96%)	6 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	La	145/148 (98%)	132 (91%)	13 (9%)	0	100	100
33	Lb	73/159 (46%)	68 (93%)	5 (7%)	0	100	100
34	Lc	95/115 (83%)	87 (92%)	8 (8%)	0	100	100
35	Ld	105/125 (84%)	99 (94%)	6 (6%)	0	100	100
36	Le	126/135 (93%)	120 (95%)	6 (5%)	0	100	100
37	Lf	107/110 (97%)	99 (92%)	8 (8%)	0	100	100
38	Lg	112/117 (96%)	104 (93%)	8 (7%)	0	100	100
39	Lh	119/123 (97%)	114 (96%)	5 (4%)	0	100	100
40	Li	100/105 (95%)	97 (97%)	3 (3%)	0	100	100
41	Lj	84/97 (87%)	82 (98%)	2 (2%)	0	100	100
42	Lk	67/70 (96%)	59 (88%)	8 (12%)	0	100	100
43	Ll	48/51 (94%)	46 (96%)	2 (4%)	0	100	100
44	Lm	50/128 (39%)	49 (98%)	1 (2%)	0	100	100
45	Ln	22/25 (88%)	21 (96%)	1 (4%)	0	100	100
46	Lo	103/106 (97%)	98 (95%)	5 (5%)	0	100	100
47	Lp	89/92 (97%)	83 (93%)	6 (7%)	0	100	100
48	Lr	123/137 (90%)	117 (95%)	6 (5%)	0	100	100
50	SA	214/295 (72%)	200 (94%)	12 (6%)	2 (1%)	14	48
51	SB	211/264 (80%)	199 (94%)	12 (6%)	0	100	100
52	SC	217/293 (74%)	204 (94%)	13 (6%)	0	100	100
53	SD	219/243 (90%)	198 (90%)	21 (10%)	0	100	100
54	SE	260/263 (99%)	249 (96%)	11 (4%)	0	100	100
55	SF	185/204 (91%)	168 (91%)	16 (9%)	1 (0%)	24	60
56	SG	229/249 (92%)	208 (91%)	19 (8%)	2 (1%)	14	48
57	SH	179/194 (92%)	169 (94%)	10 (6%)	0	100	100
58	SI	204/208 (98%)	191 (94%)	13 (6%)	0	100	100
59	SJ	177/194 (91%)	172 (97%)	4 (2%)	1 (1%)	21	56
60	SK	94/165 (57%)	89 (95%)	5 (5%)	0	100	100
61	SL	140/158 (89%)	130 (93%)	10 (7%)	0	100	100
62	SN	148/151 (98%)	140 (95%)	8 (5%)	0	100	100
63	SO	132/151 (87%)	116 (88%)	16 (12%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
64	SP	126/145 (87%)	116 (92%)	10 (8%)	0	100	100
65	SQ	140/146 (96%)	127 (91%)	13 (9%)	0	100	100
66	SR	129/135 (96%)	113 (88%)	16 (12%)	0	100	100
67	SS	139/152 (91%)	122 (88%)	17 (12%)	0	100	100
68	ST	141/145 (97%)	135 (96%)	6 (4%)	0	100	100
69	SU	99/119 (83%)	90 (91%)	8 (8%)	1 (1%)	12	45
70	SV	81/83 (98%)	76 (94%)	5 (6%)	0	100	100
71	SW	127/130 (98%)	120 (94%)	7 (6%)	0	100	100
72	SX	139/143 (97%)	123 (88%)	14 (10%)	2 (1%)	9	36
73	SY	121/133 (91%)	115 (95%)	6 (5%)	0	100	100
74	SZ	73/125 (58%)	65 (89%)	8 (11%)	0	100	100
75	Sa	97/115 (84%)	84 (87%)	13 (13%)	0	100	100
76	Sb	81/84 (96%)	76 (94%)	5 (6%)	0	100	100
77	Sc	61/69 (88%)	52 (85%)	9 (15%)	0	100	100
78	Sd	51/56 (91%)	50 (98%)	1 (2%)	0	100	100
79	Se	55/59 (93%)	44 (80%)	11 (20%)	0	100	100
80	Sg	304/317 (96%)	242 (80%)	61 (20%)	1 (0%)	36	70
All	All	10952/12400 (88%)	10126 (92%)	807 (7%)	19 (0%)	44	76

All (19) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
8	LB	393	LYS
9	LC	111	TRP
14	LH	116	ASN
28	LW	98	PRO
55	SF	80	GLY
56	SG	33	ALA
72	SX	10	ALA
28	LW	97	LYS
50	SA	10	MET
50	SA	11	LYS
56	SG	130	PRO
9	LC	67	TRP
11	LE	111	LYS
17	LL	48	PRO

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Mol	Chain	Res	Type
72	SX	88	ASP
80	Sg	100	ARG
59	SJ	138	ARG
25	LT	129	LYS
69	SU	71	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	LA	190/199 (96%)	190 (100%)	0	100	100
8	LB	343/349 (98%)	343 (100%)	0	100	100
9	LC	299/348 (86%)	299 (100%)	0	100	100
10	LD	241/250 (96%)	241 (100%)	0	100	100
11	LE	191/252 (76%)	191 (100%)	0	100	100
12	LF	194/215 (90%)	194 (100%)	0	100	100
13	LG	188/223 (84%)	188 (100%)	0	100	100
14	LH	167/171 (98%)	166 (99%)	1 (1%)	78	88
15	LI	172/181 (95%)	172 (100%)	0	100	100
16	LJ	136/149 (91%)	136 (100%)	0	100	100
17	LL	164/177 (93%)	164 (100%)	0	100	100
18	LM	114/161 (71%)	114 (100%)	0	100	100
19	LN	171/172 (99%)	171 (100%)	0	100	100
20	LO	170/174 (98%)	170 (100%)	0	100	100
21	LP	132/163 (81%)	132 (100%)	0	100	100
22	LQ	161/165 (98%)	161 (100%)	0	100	100
23	LR	150/175 (86%)	150 (100%)	0	100	100
24	LS	156/157 (99%)	156 (100%)	0	100	100
25	LT	135/140 (96%)	135 (100%)	0	100	100
26	LU	84/115 (73%)	84 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	LV	99/107 (92%)	99 (100%)	0	100	100
28	LW	61/126 (48%)	61 (100%)	0	100	100
29	LX	107/133 (80%)	107 (100%)	0	100	100
30	LY	123/135 (91%)	123 (100%)	0	100	100
31	LZ	117/118 (99%)	117 (100%)	0	100	100
32	La	118/121 (98%)	118 (100%)	0	100	100
33	Lb	59/126 (47%)	59 (100%)	0	100	100
34	Lc	79/97 (81%)	79 (100%)	0	100	100
35	Ld	94/110 (86%)	94 (100%)	0	100	100
36	Le	113/121 (93%)	113 (100%)	0	100	100
37	Lf	87/89 (98%)	87 (100%)	0	100	100
38	Lg	93/100 (93%)	93 (100%)	0	100	100
39	Lh	108/110 (98%)	108 (100%)	0	100	100
40	Li	81/89 (91%)	81 (100%)	0	100	100
41	Lj	73/80 (91%)	73 (100%)	0	100	100
42	Lk	57/65 (88%)	57 (100%)	0	100	100
43	Ll	47/48 (98%)	47 (100%)	0	100	100
44	Lm	47/116 (40%)	47 (100%)	0	100	100
45	Ln	23/24 (96%)	23 (100%)	0	100	100
46	Lo	90/94 (96%)	90 (100%)	0	100	100
47	Lp	71/75 (95%)	71 (100%)	0	100	100
48	Lr	107/121 (88%)	106 (99%)	1 (1%)	70	85
50	SA	170/243 (70%)	170 (100%)	0	100	100
51	SB	191/231 (83%)	191 (100%)	0	100	100
52	SC	175/225 (78%)	175 (100%)	0	100	100
53	SD	145/202 (72%)	145 (100%)	0	100	100
54	SE	196/225 (87%)	196 (100%)	0	100	100
55	SF	139/170 (82%)	139 (100%)	0	100	100
56	SG	138/218 (63%)	138 (100%)	0	100	100
57	SH	109/174 (63%)	109 (100%)	0	100	100
58	SI	149/180 (83%)	149 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	SJ	143/168 (85%)	143 (100%)	0	100	100
60	SK	65/136 (48%)	65 (100%)	0	100	100
61	SL	121/142 (85%)	120 (99%)	1 (1%)	73	86
62	SN	123/131 (94%)	123 (100%)	0	100	100
63	SO	95/119 (80%)	95 (100%)	0	100	100
64	SP	96/130 (74%)	96 (100%)	0	100	100
65	SQ	102/121 (84%)	102 (100%)	0	100	100
66	SR	84/122 (69%)	84 (100%)	0	100	100
67	SS	110/132 (83%)	110 (100%)	0	100	100
68	ST	105/115 (91%)	105 (100%)	0	100	100
69	SU	68/107 (64%)	67 (98%)	1 (2%)	57	80
70	SV	62/67 (92%)	61 (98%)	1 (2%)	55	79
71	SW	110/113 (97%)	110 (100%)	0	100	100
72	SX	109/115 (95%)	109 (100%)	0	100	100
73	SY	86/115 (75%)	86 (100%)	0	100	100
74	SZ	56/103 (54%)	56 (100%)	0	100	100
75	Sa	83/98 (85%)	83 (100%)	0	100	100
76	Sb	65/76 (86%)	65 (100%)	0	100	100
77	Sc	51/62 (82%)	51 (100%)	0	100	100
78	Sd	44/49 (90%)	44 (100%)	0	100	100
79	Se	39/48 (81%)	39 (100%)	0	100	100
80	Sg	199/275 (72%)	199 (100%)	0	100	100
All	All	8840/10553 (84%)	8835 (100%)	5 (0%)	87	93

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
14	LH	73	ILE
48	Lr	21	ASN
61	SL	23	VAL
69	SU	84	ILE
70	SV	83	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (153) such sidechains are listed below:

Mol	Chain	Res	Type
7	LA	50	HIS
7	LA	162	ASN
7	LA	205	ASN
7	LA	218	HIS
8	LB	138	GLN
8	LB	245	HIS
8	LB	315	ASN
8	LB	328	ASN
9	LC	61	GLN
9	LC	212	ASN
9	LC	231	ASN
10	LD	63	GLN
10	LD	111	ASN
10	LD	175	HIS
10	LD	191	ASN
10	LD	202	GLN
10	LD	244	HIS
11	LE	167	GLN
11	LE	191	GLN
11	LE	211	HIS
12	LF	206	ASN
12	LF	239	GLN
13	LG	46	GLN
13	LG	90	GLN
13	LG	153	GLN
14	LH	39	ASN
14	LH	42	ASN
14	LH	116	ASN
14	LH	189	GLN
15	LI	73	ASN
15	LI	143	GLN
15	LI	144	ASN
15	LI	213	HIS
16	LJ	42	GLN
16	LJ	65	ASN
17	LL	19	GLN
17	LL	111	GLN
18	LM	56	GLN
18	LM	78	GLN
19	LN	109	HIS
19	LN	181	HIS
19	LN	199	GLN
20	LO	46	ASN

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Mol	Chain	Res	Type
21	LP	28	ASN
21	LP	80	GLN
22	LQ	21	GLN
22	LQ	44	ASN
23	LR	121	HIS
23	LR	141	HIS
24	LS	37	HIS
24	LS	117	HIS
24	LS	146	HIS
24	LS	163	HIS
25	LT	66	ASN
25	LT	70	HIS
25	LT	127	GLN
26	LU	38	ASN
27	LV	77	HIS
28	LW	17	HIS
30	LY	14	ASN
30	LY	20	ASN
30	LY	24	HIS
30	LY	96	HIS
30	LY	127	GLN
31	LZ	28	ASN
31	LZ	40	HIS
32	La	14	HIS
32	La	40	HIS
32	La	67	GLN
32	La	85	GLN
32	La	89	ASN
33	Lb	49	HIS
34	Lc	40	GLN
34	Lc	72	HIS
34	Lc	73	HIS
35	Ld	18	ASN
35	Ld	28	ASN
36	Le	68	HIS
36	Le	117	GLN
37	Lf	21	GLN
39	Lh	20	GLN
39	Lh	98	HIS
39	Lh	108	GLN
40	Li	80	HIS
41	Lj	13	ASN

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Mol	Chain	Res	Type
41	Lj	30	GLN
41	Lj	66	HIS
42	Lk	58	GLN
43	Ll	4	HIS
43	Ll	38	ASN
44	Lm	117	HIS
46	Lo	21	HIS
47	Lp	33	GLN
48	Lr	30	ASN
48	Lr	45	HIS
50	SA	9	GLN
50	SA	110	ASN
50	SA	164	ASN
51	SB	124	HIS
51	SB	202	GLN
52	SC	136	HIS
53	SD	57	ASN
53	SD	101	GLN
53	SD	145	GLN
53	SD	165	ASN
54	SE	209	HIS
55	SF	79	HIS
55	SF	95	HIS
55	SF	137	GLN
56	SG	13	GLN
56	SG	56	ASN
56	SG	65	GLN
56	SG	81	HIS
56	SG	202	ASN
57	SH	73	GLN
58	SI	168	GLN
60	SK	73	ASN
61	SL	11	GLN
61	SL	83	GLN
61	SL	106	HIS
62	SN	36	GLN
62	SN	62	GLN
62	SN	101	HIS
62	SN	105	ASN
63	SO	38	ASN
64	SP	41	GLN
64	SP	98	ASN

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Mol	Chain	Res	Type
64	SP	103	ASN
66	SR	29	HIS
67	SS	11	HIS
67	SS	85	ASN
67	SS	87	GLN
67	SS	125	HIS
68	ST	11	GLN
71	SW	24	GLN
71	SW	56	HIS
71	SW	82	GLN
71	SW	113	HIS
72	SX	20	GLN
73	SY	89	HIS
74	SZ	112	ASN
75	Sa	72	HIS
76	Sb	49	HIS
76	Sb	51	GLN
77	Sc	29	GLN
79	Se	37	GLN
79	Se	58	ASN
80	Sg	4	GLN
80	Sg	14	HIS
80	Sg	64	HIS
80	Sg	117	ASN
80	Sg	147	HIS
80	Sg	191	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A4	14/28 (50%)	7 (50%)	0
2	B4	75/76 (98%)	22 (29%)	0
4	L5	3596/5070 (70%)	814 (22%)	29 (0%)
49	S2	1704/1869 (91%)	505 (29%)	22 (1%)
5	L7	119/120 (99%)	17 (14%)	0
6	L8	155/156 (99%)	31 (20%)	3 (1%)
All	All	5663/7319 (77%)	1396 (24%)	54 (0%)

All (1396) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A4	41	U
1	A4	42	U
1	A4	45	U
1	A4	46	U
1	A4	49	U
1	A4	52	U
1	A4	53	U
2	B4	2	C
2	B4	4	C
2	B4	7	A
2	B4	8	U
2	B4	16	U
2	B4	17	C
2	B4	18	G
2	B4	19	G
2	B4	20	U
2	B4	21	A
2	B4	36	A
2	B4	42	C
2	B4	46	G
2	B4	47	U
2	B4	48	C
2	B4	56	C
2	B4	58	A
2	B4	61	C
2	B4	70	G
2	B4	73	A
2	B4	74	C
2	B4	76	A
4	L5	21	G
4	L5	30	C
4	L5	39	A
4	L5	42	A
4	L5	48	G
4	L5	56	A
4	L5	59	A
4	L5	64	A
4	L5	65	A
4	L5	73	A
4	L5	91	G
4	L5	104	G
4	L5	108	A
4	L5	109	G

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Mol	Chain	Res	Type
4	L5	110	C
4	L5	119	G
4	L5	120	A
4	L5	121	A
4	L5	133	C
4	L5	134	G
4	L5	136	C
4	L5	137	G
4	L5	139	G
4	L5	141	C
4	L5	144	G
4	L5	152	U
4	L5	159	C
4	L5	165	A
4	L5	180	C
4	L5	181	C
4	L5	183	C
4	L5	184	U
4	L5	185	C
4	L5	188	G
4	L5	189	G
4	L5	200	U
4	L5	209	U
4	L5	211	G
4	L5	213	G
4	L5	216	C
4	L5	217	C
4	L5	218	A
4	L5	219	G
4	L5	220	C
4	L5	234	G
4	L5	254	G
4	L5	255	C
4	L5	258	G
4	L5	259	C
4	L5	261	G
4	L5	266	C
4	L5	267	G
4	L5	269	G
4	L5	278	G
4	L5	280	G
4	L5	297	U

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Mol	Chain	Res	Type
4	L5	306	A
4	L5	315	G
4	L5	316	U
4	L5	340	C
4	L5	350	C
4	L5	362	A
4	L5	379	G
4	L5	387	G
4	L5	388	A
4	L5	396	A
4	L5	407	A
4	L5	408	A
4	L5	409	G
4	L5	410	A
4	L5	411	G
4	L5	412	G
4	L5	414	C
4	L5	440	U
4	L5	449	C
4	L5	450	G
4	L5	452	A
4	L5	453	G
4	L5	454	U
4	L5	456	C
4	L5	457	G
4	L5	461	G
4	L5	463	A
4	L5	464	G
4	L5	466	A
4	L5	467	U
4	L5	474	C
4	L5	485	C
4	L5	486	C
4	L5	489	C
4	L5	493	G
4	L5	494	U
4	L5	497	G
4	L5	498	C
4	L5	500	G
4	L5	501	C
4	L5	502	C
4	L5	503	C

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Mol	Chain	Res	Type
4	L5	504	G
4	L5	505	G
4	L5	509	A
4	L5	510	U
4	L5	511	C
4	L5	512	U
4	L5	513	U
4	L5	514	U
4	L5	515	C
4	L5	517	C
4	L5	518	G
4	L5	643	C
4	L5	644	G
4	L5	645	G
4	L5	646	G
4	L5	653	U
4	L5	654	C
4	L5	655	C
4	L5	658	C
4	L5	660	A
4	L5	661	C
4	L5	662	C
4	L5	665	C
4	L5	666	G
4	L5	667	A
4	L5	668	C
4	L5	669	C
4	L5	670	G
4	L5	671	G
4	L5	673	C
4	L5	674	G
4	L5	675	C
4	L5	676	C
4	L5	685	C
4	L5	686	A
4	L5	687	U
4	L5	688	U
4	L5	692	A
4	L5	696	C
4	L5	697	G
4	L5	703	G
4	L5	704	C

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Mol	Chain	Res	Type
4	L5	706	C
4	L5	708	G
4	L5	731	G
4	L5	738	C
4	L5	739	G
4	L5	740	G
4	L5	742	G
4	L5	753	C
4	L5	758	G
4	L5	759	G
4	L5	904	C
4	L5	906	C
4	L5	907	C
4	L5	912	G
4	L5	913	U
4	L5	914	U
4	L5	915	A
4	L5	916	C
4	L5	917	A
4	L5	918	G
4	L5	923	C
4	L5	924	C
4	L5	926	G
4	L5	929	A
4	L5	932	A
4	L5	933	G
4	L5	934	C
4	L5	937	U
4	L5	943	A
4	L5	945	U
4	L5	946	C
4	L5	959	G
4	L5	960	A
4	L5	961	G
4	L5	962	C
4	L5	964	A
4	L5	965	G
4	L5	966	A
4	L5	967	C
4	L5	968	C
4	L5	969	C
4	L5	970	G

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Mol	Chain	Res	Type
4	L5	972	C
4	L5	977	C
4	L5	982	U
4	L5	988	C
4	L5	989	U
4	L5	990	C
4	L5	991	C
4	L5	992	C
4	L5	993	G
4	L5	1069	G
4	L5	1070	G
4	L5	1071	C
4	L5	1072	C
4	L5	1074	G
4	L5	1075	G
4	L5	1083	U
4	L5	1092	G
4	L5	1168	G
4	L5	1171	G
4	L5	1172	C
4	L5	1173	G
4	L5	1178	G
4	L5	1179	U
4	L5	1180	C
4	L5	1181	C
4	L5	1182	C
4	L5	1183	C
4	L5	1184	A
4	L5	1187	G
4	L5	1196	G
4	L5	1198	G
4	L5	1202	C
4	L5	1203	G
4	L5	1205	G
4	L5	1209	U
4	L5	1211	G
4	L5	1214	C
4	L5	1215	C
4	L5	1217	G
4	L5	1218	G
4	L5	1220	G
4	L5	1238	A

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Mol	Chain	Res	Type
4	L5	1240	G
4	L5	1241	C
4	L5	1245	C
4	L5	1253	G
4	L5	1258	G
4	L5	1259	G
4	L5	1260	G
4	L5	1266	G
4	L5	1269	G
4	L5	1270	A
4	L5	1271	G
4	L5	1272	C
4	L5	1273	G
4	L5	1274	A
4	L5	1275	G
4	L5	1280	C
4	L5	1284	G
4	L5	1287	G
4	L5	1293	G
4	L5	1294	A
4	L5	1295	C
4	L5	1296	G
4	L5	1301	C
4	L5	1303	A
4	L5	1304	C
4	L5	1312	A
4	L5	1326	A
4	L5	1337	A
4	L5	1354	A
4	L5	1358	G
4	L5	1359	G
4	L5	1360	G
4	L5	1365	C
4	L5	1366	G
4	L5	1378	C
4	L5	1379	C
4	L5	1381	U
4	L5	1387	A
4	L5	1393	G
4	L5	1394	G
4	L5	1397	A
4	L5	1399	G

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Mol	Chain	Res	Type
4	L5	1404	G
4	L5	1405	C
4	L5	1408	G
4	L5	1410	U
4	L5	1415	G
4	L5	1417	C
4	L5	1420	A
4	L5	1435	G
4	L5	1437	C
4	L5	1438	U
4	L5	1439	C
4	L5	1441	C
4	L5	1442	C
4	L5	1443	A
4	L5	1444	G
4	L5	1454	G
4	L5	1483	C
4	L5	1497	A
4	L5	1498	G
4	L5	1501	C
4	L5	1502	G
4	L5	1504	G
4	L5	1514	U
4	L5	1516	G
4	L5	1527	A
4	L5	1534	A
4	L5	1547	A
4	L5	1564	A
4	L5	1566	C
4	L5	1578	U
4	L5	1586	G
4	L5	1591	U
4	L5	1596	U
4	L5	1624	G
4	L5	1625	G
4	L5	1631	A
4	L5	1633	G
4	L5	1634	A
4	L5	1640	C
4	L5	1641	G
4	L5	1654	G
4	L5	1661	C

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Mol	Chain	Res	Type
4	L5	1663	C
4	L5	1676	C
4	L5	1680	G
4	L5	1694	C
4	L5	1697	G
4	L5	1699	A
4	L5	1700	G
4	L5	1701	A
4	L5	1703	C
4	L5	1704	C
4	L5	1705	G
4	L5	1707	C
4	L5	1719	A
4	L5	1721	G
4	L5	1731	C
4	L5	1732	C
4	L5	1734	G
4	L5	1741	G
4	L5	1742	A
4	L5	1750	G
4	L5	1758	G
4	L5	1759	G
4	L5	1760	G
4	L5	1762	C
4	L5	1765	A
4	L5	1766	A
4	L5	1767	A
4	L5	1775	A
4	L5	1787	A
4	L5	1804	A
4	L5	1810	G
4	L5	1820	C
4	L5	1821	G
4	L5	1822	U
4	L5	1834	U
4	L5	1836	G
4	L5	1837	A
4	L5	1842	G
4	L5	1855	G
4	L5	1869	G
4	L5	1882	U
4	L5	1891	A

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Mol	Chain	Res	Type
4	L5	1897	A
4	L5	1912	G
4	L5	1916	G
4	L5	1918	U
4	L5	1919	G
4	L5	1920	C
4	L5	1921	C
4	L5	1922	G
4	L5	1924	C
4	L5	1930	U
4	L5	1931	C
4	L5	1932	A
4	L5	1936	C
4	L5	1940	G
4	L5	1948	G
4	L5	1950	U
4	L5	1959	U
4	L5	1960	A
4	L5	1961	G
4	L5	1962	A
4	L5	1963	C
4	L5	1964	A
4	L5	1965	G
4	L5	1966	C
4	L5	1974	U
4	L5	1975	G
4	L5	1976	G
4	L5	1995	G
4	L5	1996	C
4	L5	1997	U
4	L5	1998	A
4	L5	2018	C
4	L5	2020	U
4	L5	2022	C
4	L5	2024	G
4	L5	2025	A
4	L5	2026	A
4	L5	2046	G
4	L5	2048	U
4	L5	2055	G
4	L5	2056	G
4	L5	2069	A

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Mol	Chain	Res	Type
4	L5	2084	C
4	L5	2085	G
4	L5	2088	A
4	L5	2090	U
4	L5	2092	G
4	L5	2094	G
4	L5	2095	A
4	L5	2096	G
4	L5	2098	G
4	L5	2099	G
4	L5	2101	C
4	L5	2103	G
4	L5	2106	G
4	L5	2107	C
4	L5	2108	G
4	L5	2116	C
4	L5	2117	G
4	L5	2118	G
4	L5	2119	C
4	L5	2120	G
4	L5	2121	C
4	L5	2123	C
4	L5	2250	C
4	L5	2251	G
4	L5	2252	G
4	L5	2253	A
4	L5	2254	G
4	L5	2255	C
4	L5	2256	C
4	L5	2258	C
4	L5	2259	G
4	L5	2289	C
4	L5	2300	A
4	L5	2301	G
4	L5	2313	A
4	L5	2332	A
4	L5	2333	G
4	L5	2337	C
4	L5	2343	G
4	L5	2348	G
4	L5	2351	C
4	L5	2395	A

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Mol	Chain	Res	Type
4	L5	2397	G
4	L5	2417	A
4	L5	2421	G
4	L5	2422	C
4	L5	2424	G
4	L5	2425	U
4	L5	2441	C
4	L5	2447	U
4	L5	2450	G
4	L5	2453	A
4	L5	2464	C
4	L5	2465	C
4	L5	2470	C
4	L5	2475	G
4	L5	2476	G
4	L5	2478	C
4	L5	2483	G
4	L5	2484	A
4	L5	2485	U
4	L5	2487	G
4	L5	2489	C
4	L5	2490	U
4	L5	2491	C
4	L5	2493	G
4	L5	2501	C
4	L5	2503	G
4	L5	2504	C
4	L5	2505	C
4	L5	2506	G
4	L5	2513	A
4	L5	2519	U
4	L5	2537	A
4	L5	2545	U
4	L5	2546	G
4	L5	2547	G
4	L5	2554	U
4	L5	2583	C
4	L5	2587	A
4	L5	2589	C
4	L5	2607	C
4	L5	2618	G
4	L5	2627	C

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Mol	Chain	Res	Type
4	L5	2653	C
4	L5	2662	G
4	L5	2669	C
4	L5	2676	A
4	L5	2687	U
4	L5	2694	G
4	L5	2695	A
4	L5	2696	A
4	L5	2703	G
4	L5	2710	C
4	L5	2711	G
4	L5	2721	G
4	L5	2724	G
4	L5	2726	G
4	L5	2729	C
4	L5	2732	G
4	L5	2739	C
4	L5	2742	G
4	L5	2743	A
4	L5	2746	A
4	L5	2754	G
4	L5	2756	G
4	L5	2761	U
4	L5	2763	U
4	L5	2764	A
4	L5	2769	U
4	L5	2770	C
4	L5	2772	C
4	L5	2788	U
4	L5	2789	A
4	L5	2791	C
4	L5	2814	C
4	L5	2815	A
4	L5	2826	U
4	L5	2827	G
4	L5	2828	U
4	L5	2846	G
4	L5	2848	G
4	L5	2855	G
4	L5	2856	C
4	L5	2877	G
4	L5	2890	C

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Mol	Chain	Res	Type
4	L5	2891	U
4	L5	2892	C
4	L5	2894	A
4	L5	2897	G
4	L5	2899	C
4	L5	2900	U
4	L5	2902	G
4	L5	2903	G
4	L5	2904	U
4	L5	2905	C
4	L5	2906	G
4	L5	2907	G
4	L5	2908	U
4	L5	3585	G
4	L5	3588	C
4	L5	3590	G
4	L5	3591	C
4	L5	3593	C
4	L5	3594	C
4	L5	3595	U
4	L5	3596	A
4	L5	3597	G
4	L5	3599	A
4	L5	3604	A
4	L5	3605	C
4	L5	3606	U
4	L5	3615	G
4	L5	3618	C
4	L5	3620	G
4	L5	3626	G
4	L5	3630	A
4	L5	3635	A
4	L5	3644	U
4	L5	3646	A
4	L5	3653	A
4	L5	3662	A
4	L5	3673	C
4	L5	3674	G
4	L5	3685	C
4	L5	3705	G
4	L5	3711	A
4	L5	3735	G

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Mol	Chain	Res	Type
4	L5	3736	A
4	L5	3750	G
4	L5	3753	G
4	L5	3758	U
4	L5	3759	A
4	L5	3760	A
4	L5	3763	A
4	L5	3771	C
4	L5	3772	U
4	L5	3775	A
4	L5	3776	G
4	L5	3777	G
4	L5	3783	A
4	L5	3784	A
4	L5	3786	U
4	L5	3811	G
4	L5	3814	U
4	L5	3817	A
4	L5	3818	U
4	L5	3819	G
4	L5	3823	G
4	L5	3838	U
4	L5	3840	U
4	L5	3867	A
4	L5	3877	A
4	L5	3878	C
4	L5	3879	G
4	L5	3885	G
4	L5	3890	A
4	L5	3897	G
4	L5	3901	A
4	L5	3906	A
4	L5	3907	G
4	L5	3908	A
4	L5	3915	U
4	L5	3926	C
4	L5	3942	A
4	L5	3943	A
4	L5	3944	G
4	L5	3947	A
4	L5	3949	A
4	L5	4065	G

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Mol	Chain	Res	Type
4	L5	4076	G
4	L5	4084	G
4	L5	4091	G
4	L5	4099	G
4	L5	4102	C
4	L5	4103	C
4	L5	4104	G
4	L5	4105	A
4	L5	4107	G
4	L5	4108	G
4	L5	4111	U
4	L5	4113	U
4	L5	4114	C
4	L5	4115	G
4	L5	4116	C
4	L5	4119	C
4	L5	4122	G
4	L5	4128	A
4	L5	4129	G
4	L5	4130	C
4	L5	4131	G
4	L5	4132	C
4	L5	4133	C
4	L5	4135	G
4	L5	4137	C
4	L5	4138	C
4	L5	4139	G
4	L5	4140	C
4	L5	4141	G
4	L5	4143	G
4	L5	4144	C
4	L5	4149	C
4	L5	4150	G
4	L5	4154	G
4	L5	4155	C
4	L5	4162	C
4	L5	4163	U
4	L5	4170	A
4	L5	4177	C
4	L5	4183	G
4	L5	4184	G
4	L5	4191	G

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Mol	Chain	Res	Type
4	L5	4201	G
4	L5	4203	A
4	L5	4214	A
4	L5	4222	G
4	L5	4225	G
4	L5	4229	U
4	L5	4233	A
4	L5	4237	C
4	L5	4251	A
4	L5	4254	G
4	L5	4256	A
4	L5	4257	A
4	L5	4268	A
4	L5	4273	A
4	L5	4281	A
4	L5	4291	G
4	L5	4297	G
4	L5	4305	G
4	L5	4314	C
4	L5	4319	C
4	L5	4330	G
4	L5	4339	A
4	L5	4349	C
4	L5	4350	C
4	L5	4354	U
4	L5	4364	G
4	L5	4373	G
4	L5	4376	A
4	L5	4377	G
4	L5	4378	A
4	L5	4381	A
4	L5	4387	C
4	L5	4391	G
4	L5	4393	G
4	L5	4394	A
4	L5	4420	U
4	L5	4422	A
4	L5	4438	U
4	L5	4444	C
4	L5	4448	G
4	L5	4449	A
4	L5	4452	U

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Mol	Chain	Res	Type
4	L5	4453	C
4	L5	4464	A
4	L5	4477	A
4	L5	4478	G
4	L5	4500	U
4	L5	4512	U
4	L5	4513	A
4	L5	4515	G
4	L5	4519	C
4	L5	4523	A
4	L5	4524	G
4	L5	4548	A
4	L5	4549	G
4	L5	4554	G
4	L5	4556	U
4	L5	4560	C
4	L5	4567	G
4	L5	4573	G
4	L5	4575	G
4	L5	4584	A
4	L5	4589	A
4	L5	4590	A
4	L5	4600	G
4	L5	4601	U
4	L5	4627	U
4	L5	4628	U
4	L5	4636	U
4	L5	4637	G
4	L5	4638	U
4	L5	4639	G
4	L5	4640	C
4	L5	4656	A
4	L5	4658	G
4	L5	4669	A
4	L5	4670	C
4	L5	4672	A
4	L5	4693	C
4	L5	4695	C
4	L5	4700	A
4	L5	4708	A
4	L5	4709	U
4	L5	4719	G

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Mol	Chain	Res	Type
4	L5	4732	G
4	L5	4733	C
4	L5	4734	A
4	L5	4739	C
4	L5	4741	C
4	L5	4742	G
4	L5	4743	G
4	L5	4745	G
4	L5	4751	G
4	L5	4754	G
4	L5	4757	C
4	L5	4759	C
4	L5	4761	G
4	L5	4765	G
4	L5	4767	C
4	L5	4771	C
4	L5	4772	C
4	L5	4775	C
4	L5	4776	G
4	L5	4860	G
4	L5	4868	G
4	L5	4869	U
4	L5	4870	G
4	L5	4871	C
4	L5	4875	G
4	L5	4877	G
4	L5	4880	C
4	L5	4881	U
4	L5	4882	U
4	L5	4883	C
4	L5	4888	U
4	L5	4889	G
4	L5	4894	A
4	L5	4895	C
4	L5	4896	G
4	L5	4900	C
4	L5	4901	G
4	L5	4902	C
4	L5	4910	G
4	L5	4912	G
4	L5	4914	C
4	L5	4921	C

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Mol	Chain	Res	Type
4	L5	4925	U
4	L5	4927	G
4	L5	4928	C
4	L5	4930	C
4	L5	4931	G
4	L5	4934	A
4	L5	4935	C
4	L5	4937	C
4	L5	4940	C
4	L5	4941	G
4	L5	4943	A
4	L5	4944	C
4	L5	4946	U
4	L5	4947	U
4	L5	4955	A
4	L5	4960	G
4	L5	4966	A
4	L5	4967	A
4	L5	4976	U
4	L5	4985	U
4	L5	4988	U
4	L5	4989	U
4	L5	4990	C
4	L5	4991	U
4	L5	5009	G
4	L5	5010	U
4	L5	5011	A
4	L5	5012	G
4	L5	5014	A
4	L5	5017	G
4	L5	5021	C
4	L5	5023	C
4	L5	5024	C
4	L5	5026	U
4	L5	5028	G
4	L5	5029	C
4	L5	5030	U
4	L5	5034	A
4	L5	5041	G
4	L5	5050	C
4	L5	5054	C
4	L5	5060	A

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Mol	Chain	Res	Type
4	L5	5061	A
4	L5	5069	U
5	L7	7	G
5	L7	22	A
5	L7	23	A
5	L7	27	G
5	L7	50	A
5	L7	53	U
5	L7	54	A
5	L7	63	C
5	L7	64	G
5	L7	74	A
5	L7	97	G
5	L7	100	A
5	L7	103	A
5	L7	110	G
5	L7	111	C
5	L7	117	G
5	L7	120	U
6	L8	17	A
6	L8	23	C
6	L8	34	U
6	L8	35	C
6	L8	48	A
6	L8	59	A
6	L8	63	U
6	L8	82	A
6	L8	83	C
6	L8	84	A
6	L8	85	U
6	L8	86	U
6	L8	87	G
6	L8	88	A
6	L8	91	A
6	L8	94	G
6	L8	103	A
6	L8	104	A
6	L8	105	C
6	L8	109	C
6	L8	110	U
6	L8	111	U
6	L8	114	G

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Mol	Chain	Res	Type
6	L8	124	U
6	L8	125	C
6	L8	126	C
6	L8	127	U
6	L8	128	C
6	L8	150	C
6	L8	151	G
6	L8	153	C
49	S2	2	A
49	S2	4	C
49	S2	7	G
49	S2	27	A
49	S2	33	G
49	S2	41	G
49	S2	44	U
49	S2	45	A
49	S2	46	A
49	S2	56	G
49	S2	58	C
49	S2	65	C
49	S2	66	G
49	S2	67	C
49	S2	68	A
49	S2	70	G
49	S2	71	G
49	S2	72	C
49	S2	73	C
49	S2	74	G
49	S2	75	G
49	S2	76	U
49	S2	77	A
49	S2	78	C
49	S2	80	G
49	S2	84	A
49	S2	85	A
49	S2	86	C
49	S2	99	A
49	S2	101	U
49	S2	113	G
49	S2	114	G
49	S2	121	U
49	S2	123	G

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Mol	Chain	Res	Type
49	S2	126	G
49	S2	127	C
49	S2	128	U
49	S2	130	G
49	S2	142	C
49	S2	143	U
49	S2	144	U
49	S2	145	G
49	S2	149	A
49	S2	151	C
49	S2	154	U
49	S2	155	G
49	S2	161	U
49	S2	162	C
49	S2	167	G
49	S2	168	C
49	S2	170	A
49	S2	177	G
49	S2	182	C
49	S2	189	U
49	S2	191	A
49	S2	197	U
49	S2	198	U
49	S2	199	C
49	S2	201	C
49	S2	203	G
49	S2	210	U
49	S2	211	G
49	S2	214	U
49	S2	219	U
49	S2	220	U
49	S2	290	U
49	S2	291	G
49	S2	295	C
49	S2	306	C
49	S2	307	G
49	S2	308	G
49	S2	309	G
49	S2	312	G
49	S2	313	A
49	S2	314	U
49	S2	319	C

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Mol	Chain	Res	Type
49	S2	320	G
49	S2	322	C
49	S2	323	C
49	S2	324	C
49	S2	326	C
49	S2	328	U
49	S2	329	G
49	S2	333	G
49	S2	335	G
49	S2	340	C
49	S2	347	G
49	S2	360	A
49	S2	362	C
49	S2	364	A
49	S2	368	U
49	S2	370	G
49	S2	380	G
49	S2	385	G
49	S2	386	C
49	S2	398	A
49	S2	400	C
49	S2	401	A
49	S2	409	C
49	S2	413	G
49	S2	428	U
49	S2	435	A
49	S2	438	G
49	S2	448	A
49	S2	449	A
49	S2	450	C
49	S2	452	G
49	S2	463	C
49	S2	464	A
49	S2	465	A
49	S2	466	G
49	S2	467	G
49	S2	471	G
49	S2	472	C
49	S2	473	A
49	S2	474	G
49	S2	482	G
49	S2	485	A

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Mol	Chain	Res	Type
49	S2	487	U
49	S2	488	U
49	S2	489	A
49	S2	492	C
49	S2	493	A
49	S2	500	A
49	S2	502	C
49	S2	503	C
49	S2	508	A
49	S2	516	A
49	S2	517	C
49	S2	525	A
49	S2	531	A
49	S2	532	C
49	S2	534	G
49	S2	536	A
49	S2	537	C
49	S2	539	C
49	S2	540	U
49	S2	541	U
49	S2	542	U
49	S2	543	C
49	S2	544	G
49	S2	545	A
49	S2	546	G
49	S2	547	G
49	S2	549	C
49	S2	551	U
49	S2	553	U
49	S2	554	A
49	S2	557	U
49	S2	560	A
49	S2	561	A
49	S2	563	G
49	S2	566	U
49	S2	567	C
49	S2	568	C
49	S2	575	A
49	S2	576	A
49	S2	581	U
49	S2	583	C
49	S2	589	G

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Mol	Chain	Res	Type
49	S2	590	A
49	S2	591	U
49	S2	592	C
49	S2	593	C
49	S2	595	U
49	S2	596	U
49	S2	604	A
49	S2	605	A
49	S2	606	G
49	S2	607	U
49	S2	608	C
49	S2	612	U
49	S2	613	G
49	S2	614	C
49	S2	616	A
49	S2	617	G
49	S2	627	U
49	S2	629	A
49	S2	631	U
49	S2	632	C
49	S2	643	A
49	S2	648	A
49	S2	650	A
49	S2	651	U
49	S2	652	U
49	S2	653	A
49	S2	655	A
49	S2	660	C
49	S2	666	U
49	S2	668	A
49	S2	669	A
49	S2	671	A
49	S2	672	A
49	S2	683	G
49	S2	688	U
49	S2	689	U
49	S2	690	G
49	S2	691	G
49	S2	692	G
49	S2	694	G
49	S2	695	C
49	S2	696	G

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Mol	Chain	Res	Type
49	S2	697	G
49	S2	698	G
49	S2	732	U
49	S2	733	C
49	S2	734	C
49	S2	735	C
49	S2	736	C
49	S2	738	C
49	S2	739	C
49	S2	746	C
49	S2	747	U
49	S2	748	C
49	S2	749	U
49	S2	751	G
49	S2	752	G
49	S2	753	C
49	S2	790	C
49	S2	791	C
49	S2	795	A
49	S2	796	G
49	S2	797	C
49	S2	798	A
49	S2	799	U
49	S2	801	U
49	S2	806	U
49	S2	808	A
49	S2	809	A
49	S2	810	A
49	S2	811	A
49	S2	812	A
49	S2	818	A
49	S2	821	G
49	S2	822	U
49	S2	830	A
49	S2	834	C
49	S2	835	C
49	S2	836	G
49	S2	837	A
49	S2	838	G
49	S2	839	C
49	S2	840	C
49	S2	841	G

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Mol	Chain	Res	Type
49	S2	842	C
49	S2	847	A
49	S2	857	U
49	S2	858	A
49	S2	859	G
49	S2	862	A
49	S2	868	G
49	S2	869	A
49	S2	870	A
49	S2	872	A
49	S2	874	G
49	S2	878	G
49	S2	880	G
49	S2	883	U
49	S2	888	U
49	S2	889	U
49	S2	890	U
49	S2	891	G
49	S2	892	U
49	S2	893	U
49	S2	894	G
49	S2	895	G
49	S2	896	U
49	S2	898	U
49	S2	900	C
49	S2	901	G
49	S2	903	A
49	S2	904	A
49	S2	905	C
49	S2	907	G
49	S2	908	A
49	S2	912	C
49	S2	913	A
49	S2	919	A
49	S2	920	A
49	S2	924	G
49	S2	926	A
49	S2	930	C
49	S2	933	G
49	S2	934	G
49	S2	950	C
49	S2	958	G

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Mol	Chain	Res	Type
49	S2	970	G
49	S2	971	G
49	S2	972	A
49	S2	990	A
49	S2	992	A
49	S2	1001	A
49	S2	1017	U
49	S2	1018	U
49	S2	1019	C
49	S2	1020	A
49	S2	1021	U
49	S2	1023	A
49	S2	1027	A
49	S2	1032	C
49	S2	1042	A
49	S2	1061	U
49	S2	1062	A
49	S2	1083	A
49	S2	1084	A
49	S2	1085	C
49	S2	1091	C
49	S2	1096	G
49	S2	1098	C
49	S2	1100	A
49	S2	1102	G
49	S2	1103	C
49	S2	1104	G
49	S2	1107	G
49	S2	1108	G
49	S2	1113	A
49	S2	1114	U
49	S2	1115	U
49	S2	1116	C
49	S2	1119	A
49	S2	1120	U
49	S2	1121	G
49	S2	1125	C
49	S2	1126	G
49	S2	1133	A
49	S2	1140	G
49	S2	1142	G
49	S2	1143	A

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Mol	Chain	Res	Type
49	S2	1144	A
49	S2	1145	A
49	S2	1146	C
49	S2	1147	C
49	S2	1149	A
49	S2	1153	C
49	S2	1154	U
49	S2	1157	G
49	S2	1166	G
49	S2	1181	A
49	S2	1183	A
49	S2	1195	A
49	S2	1207	G
49	S2	1212	G
49	S2	1215	C
49	S2	1216	C
49	S2	1217	A
49	S2	1221	G
49	S2	1224	G
49	S2	1242	U
49	S2	1243	U
49	S2	1251	A
49	S2	1253	A
49	S2	1256	G
49	S2	1257	G
49	S2	1259	A
49	S2	1260	A
49	S2	1265	A
49	S2	1269	G
49	S2	1270	G
49	S2	1273	C
49	S2	1274	G
49	S2	1275	G
49	S2	1276	A
49	S2	1281	G
49	S2	1282	A
49	S2	1285	G
49	S2	1286	G
49	S2	1287	A
49	S2	1293	A
49	S2	1294	G
49	S2	1298	G

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Mol	Chain	Res	Type
49	S2	1299	A
49	S2	1300	U
49	S2	1302	G
49	S2	1303	C
49	S2	1308	U
49	S2	1313	A
49	S2	1314	U
49	S2	1315	U
49	S2	1320	G
49	S2	1321	G
49	S2	1326	U
49	S2	1330	G
49	S2	1331	C
49	S2	1332	A
49	S2	1342	U
49	S2	1371	U
49	S2	1372	U
49	S2	1373	C
49	S2	1378	A
49	S2	1384	C
49	S2	1396	A
49	S2	1397	U
49	S2	1401	A
49	S2	1402	A
49	S2	1404	U
49	S2	1406	G
49	S2	1415	C
49	S2	1419	C
49	S2	1421	A
49	S2	1422	G
49	S2	1423	C
49	S2	1438	A
49	S2	1442	U
49	S2	1447	G
49	S2	1449	G
49	S2	1450	G
49	S2	1454	A
49	S2	1462	U
49	S2	1463	U
49	S2	1474	A
49	S2	1476	A
49	S2	1477	U

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Mol	Chain	Res	Type
49	S2	1484	A
49	S2	1487	A
49	S2	1489	A
49	S2	1490	G
49	S2	1498	A
49	S2	1505	U
49	S2	1506	A
49	S2	1507	G
49	S2	1508	A
49	S2	1510	G
49	S2	1519	U
49	S2	1520	G
49	S2	1521	C
49	S2	1522	A
49	S2	1524	G
49	S2	1527	C
49	S2	1528	G
49	S2	1533	A
49	S2	1536	G
49	S2	1543	U
49	S2	1544	C
49	S2	1546	G
49	S2	1548	G
49	S2	1553	C
49	S2	1556	A
49	S2	1558	C
49	S2	1563	G
49	S2	1567	G
49	S2	1570	G
49	S2	1574	C
49	S2	1580	A
49	S2	1585	U
49	S2	1586	U
49	S2	1587	G
49	S2	1588	A
49	S2	1589	A
49	S2	1591	C
49	S2	1595	U
49	S2	1599	U
49	S2	1601	A
49	S2	1602	U
49	S2	1621	U

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Mol	Chain	Res	Type
49	S2	1623	A
49	S2	1624	U
49	S2	1626	C
49	S2	1632	G
49	S2	1634	A
49	S2	1639	G
49	S2	1644	C
49	S2	1648	G
49	S2	1654	G
49	S2	1661	A
49	S2	1663	A
49	S2	1664	A
49	S2	1665	G
49	S2	1678	A
49	S2	1680	G
49	S2	1695	A
49	S2	1699	A
49	S2	1719	A
49	S2	1721	U
49	S2	1722	G
49	S2	1742	C
49	S2	1743	G
49	S2	1744	G
49	S2	1745	A
49	S2	1748	G
49	S2	1753	C
49	S2	1754	G
49	S2	1755	C
49	S2	1759	G
49	S2	1773	C
49	S2	1782	G
49	S2	1783	C
49	S2	1784	G
49	S2	1786	U
49	S2	1789	G
49	S2	1813	A
49	S2	1823	A
49	S2	1824	A
49	S2	1829	G
49	S2	1835	A
49	S2	1838	U
49	S2	1849	G

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Mol	Chain	Res	Type
49	S2	1850	A
49	S2	1851	A
49	S2	1852	C
49	S2	1857	G
49	S2	1861	G
49	S2	1862	G
49	S2	1863	A
49	S2	1865	C
49	S2	1869	A

All (54) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
4	L5	183	C
4	L5	233	U
4	L5	406	C
4	L5	408	A
4	L5	493	G
4	L5	504	G
4	L5	645	G
4	L5	914	U
4	L5	1071	C
4	L5	1082	C
4	L5	1270	A
4	L5	1633	G
4	L5	1958	A
4	L5	1960	A
4	L5	2019	C
4	L5	2095	A
4	L5	2102	G
4	L5	2117	G
4	L5	2416	G
4	L5	2544	G
4	L5	2675	G
4	L5	2760	G
4	L5	3614	G
4	L5	3673	C
4	L5	4142	C
4	L5	4600	G
4	L5	4699	U
4	L5	4913	G
4	L5	5027	C

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Mol	Chain	Res	Type
6	L8	16	G
6	L8	86	U
6	L8	87	G
49	S2	85	A
49	S2	144	U
49	S2	150	A
49	S2	213	G
49	S2	327	G
49	S2	465	A
49	S2	604	A
49	S2	688	U
49	S2	808	A
49	S2	912	C
49	S2	971	G
49	S2	1120	U
49	S2	1145	A
49	S2	1273	C
49	S2	1285	G
49	S2	1422	G
49	S2	1519	U
49	S2	1535	U
49	S2	1585	U
49	S2	1601	A
49	S2	1664	A
49	S2	1860	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 201 ligands modelled in this entry, 200 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
82	3HE	L5	5101	-	21,21,21	0.94	2 (9%)	23,30,30	1.87	7 (30%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
82	3HE	L5	5101	-	-	1/8/36/36	0/2/2/2

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	L5	5101	3HE	C12-N	-2.58	1.33	1.37
82	L5	5101	3HE	C11-N	-2.47	1.33	1.37

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	L5	5101	3HE	C13-C12-N	3.89	120.64	115.92
82	L5	5101	3HE	C10-C11-N	3.35	119.99	115.92
82	L5	5101	3HE	C11-N-C12	-3.20	122.02	125.87
82	L5	5101	3HE	C9-C10-C11	-2.77	109.81	114.46
82	L5	5101	3HE	C-C1-C2	-2.50	107.03	111.17
82	L5	5101	3HE	C9-C13-C12	-2.33	110.55	114.46
82	L5	5101	3HE	C13-C9-C10	2.06	119.66	110.52

There are no chirality outliers.

All (1) torsion outliers are listed below:

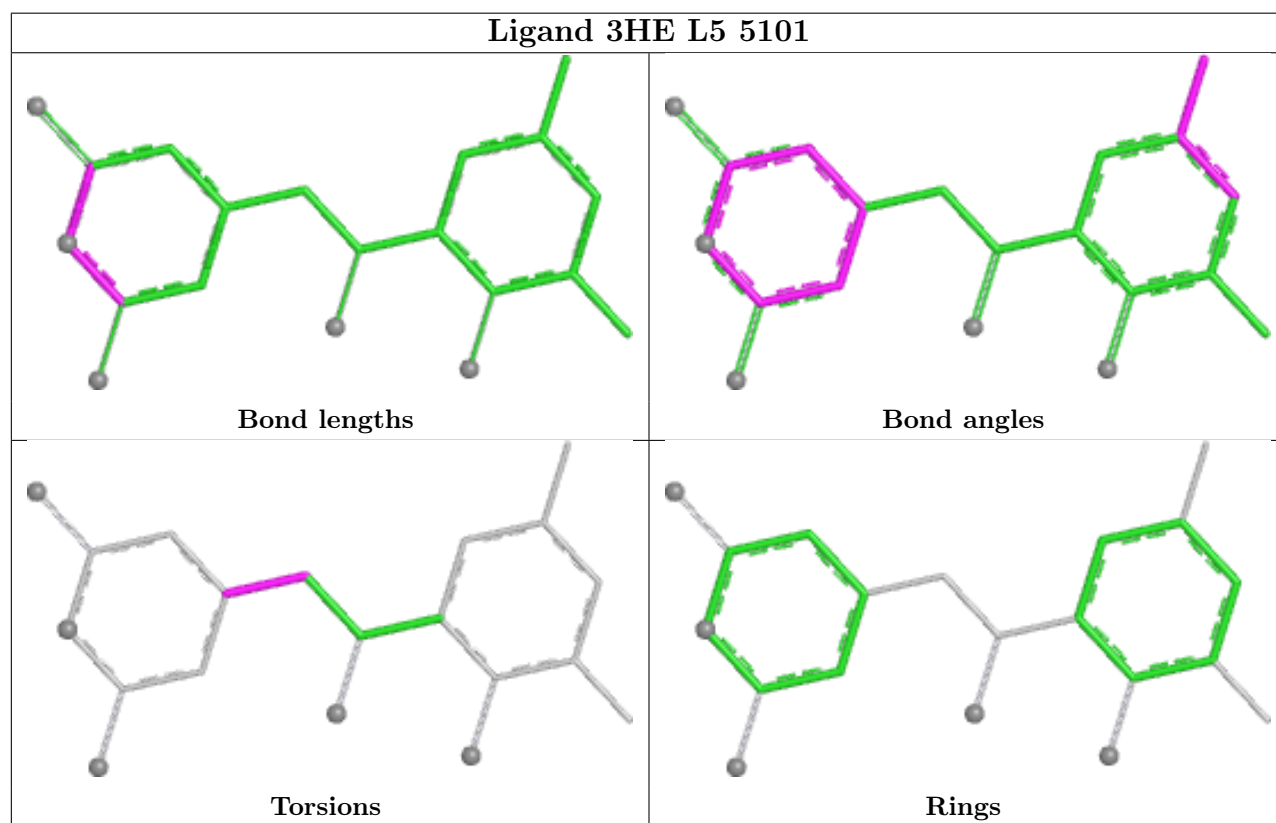
Mol	Chain	Res	Type	Atoms
82	L5	5101	3HE	C7-C8-C9-C10

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
82	L5	5101	3HE	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

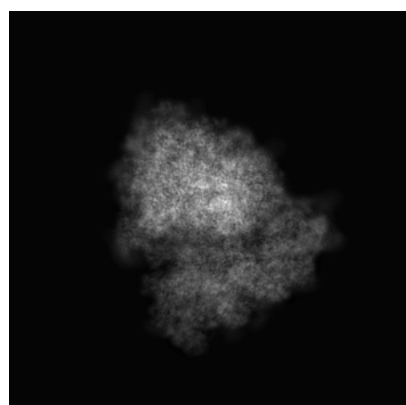
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10674. These allow visual inspection of the internal detail of the map and identification of artifacts.

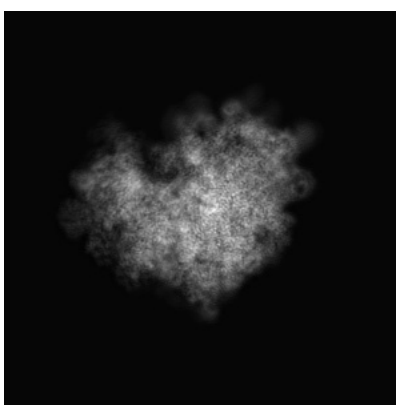
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

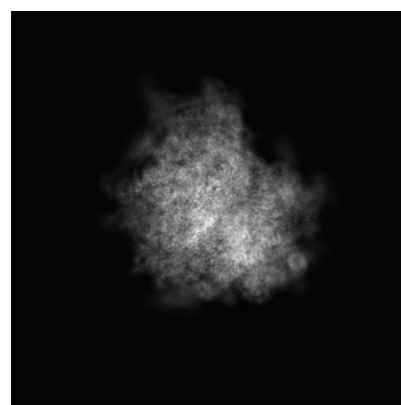
6.1.1 Primary map



X



Y

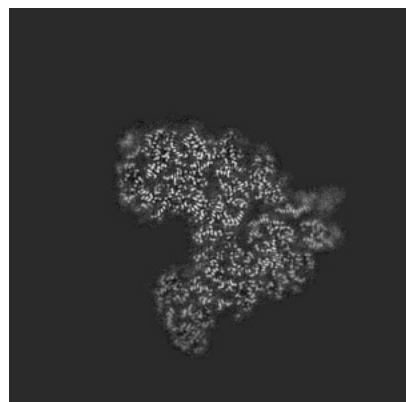


Z

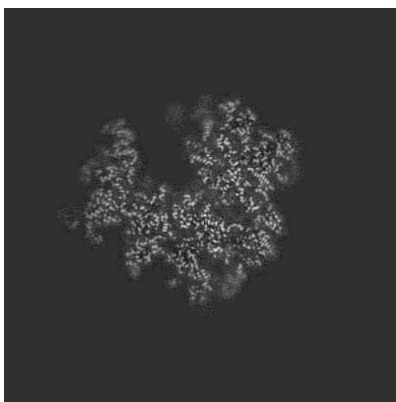
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

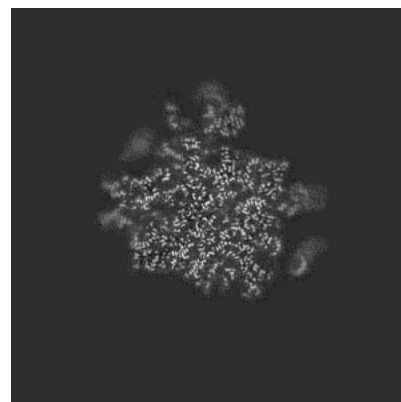
6.2.1 Primary map



X Index: 275



Y Index: 275

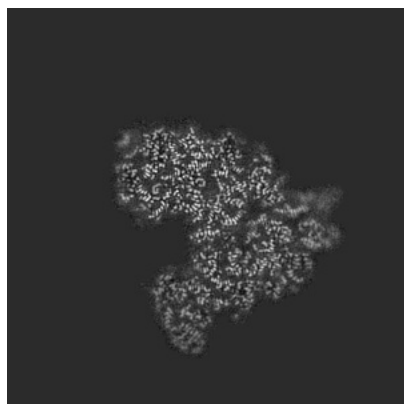


Z Index: 275

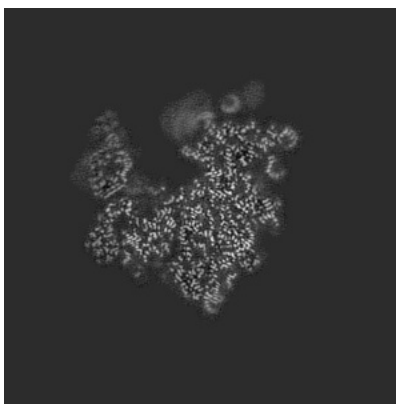
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

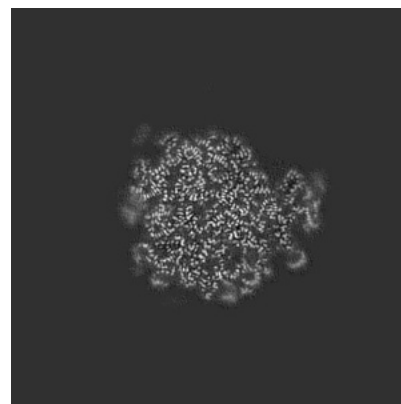
6.3.1 Primary map



X Index: 276



Y Index: 297

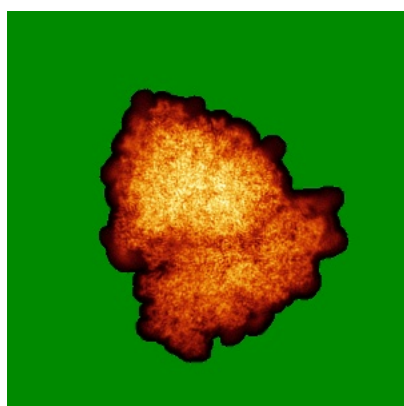


Z Index: 308

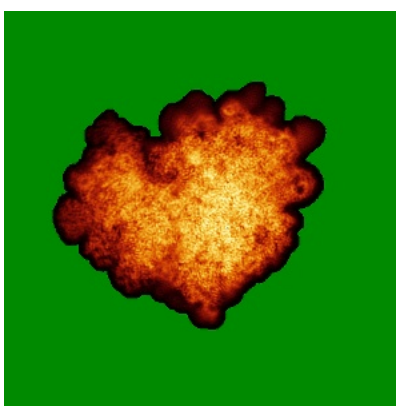
The images above show the largest variance slices of the map in three orthogonal directions.

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

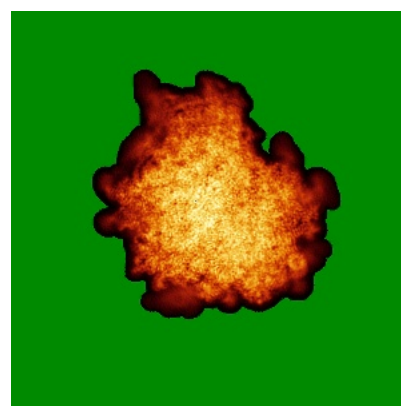
6.4.1 Primary map



X



Y

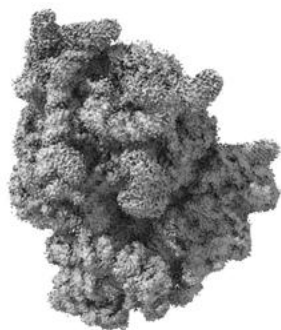


Z

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

6.5 Orthogonal surface views [i](#)

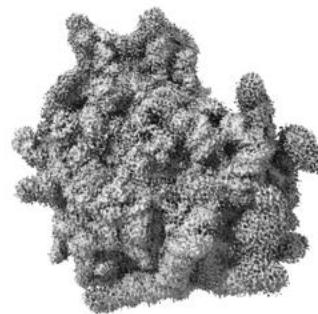
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.009. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

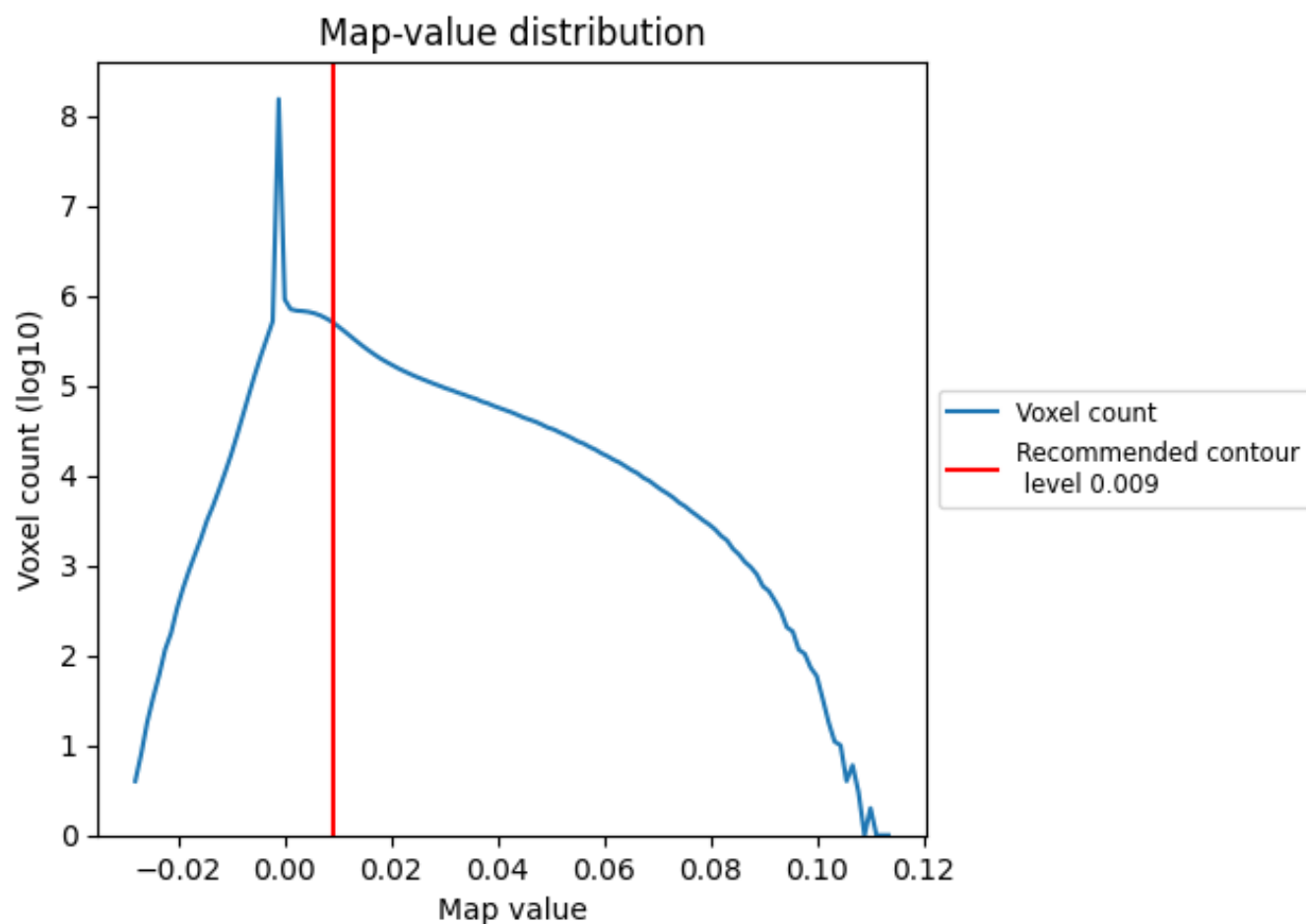
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

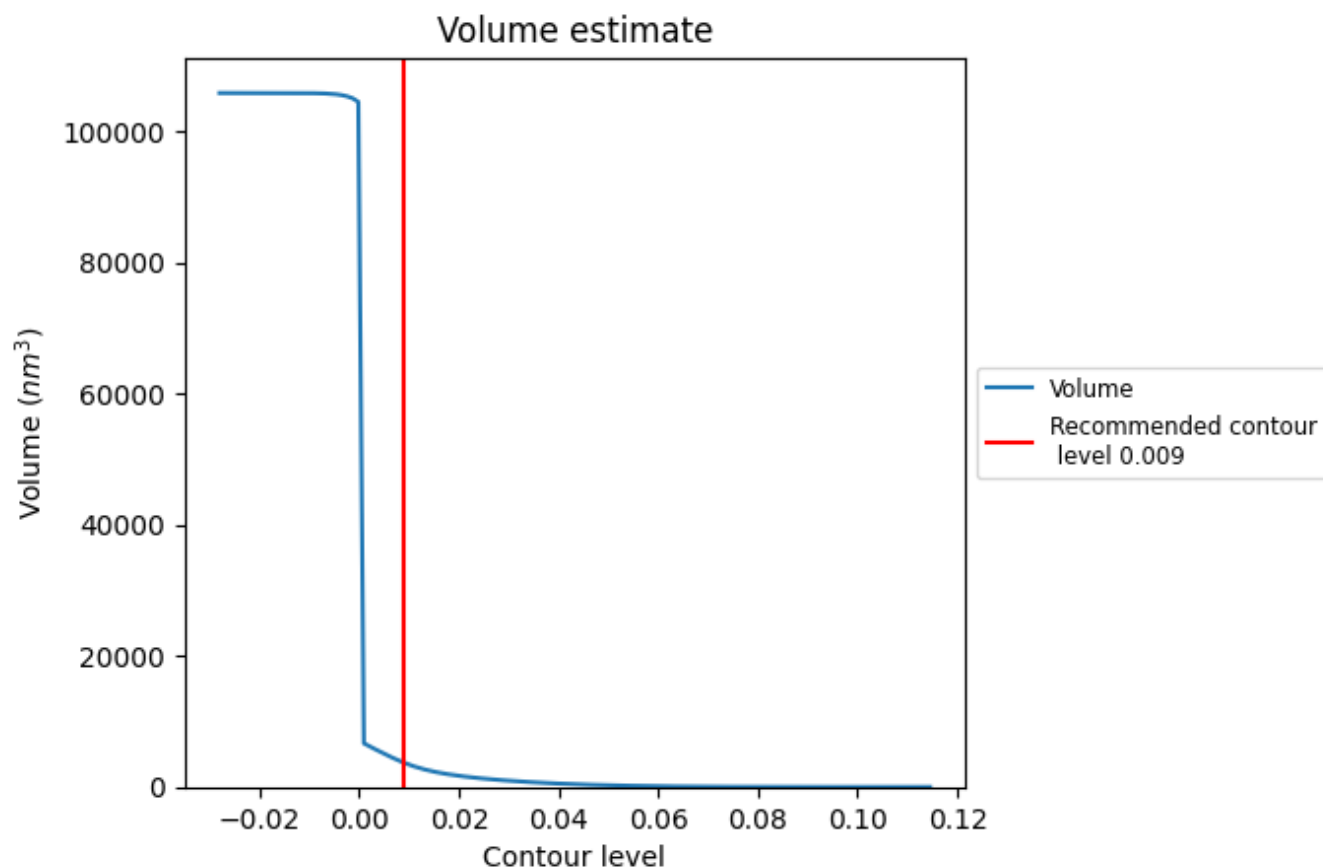
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

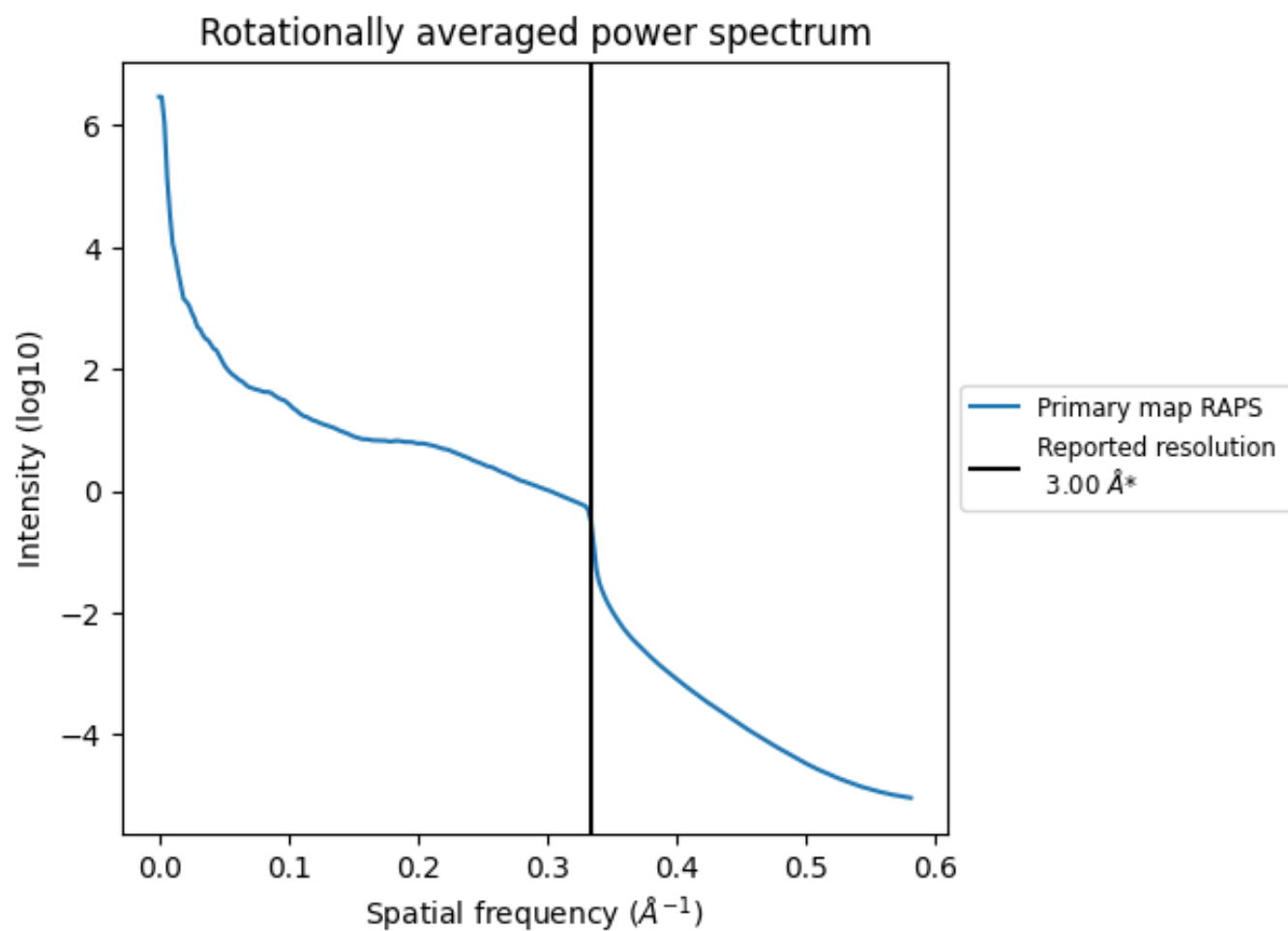
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3703 nm³; this corresponds to an approximate mass of 3345 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.333 Å⁻¹

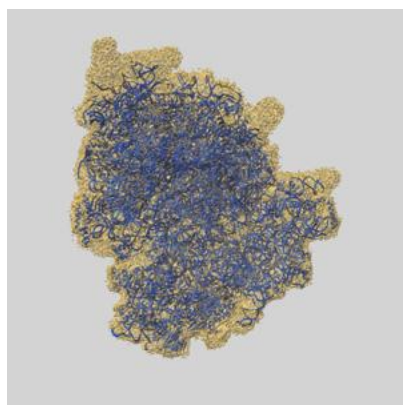
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

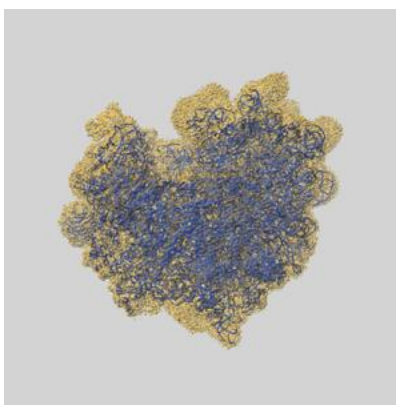
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-10674 and PDB model 6Y2L. Per-residue inclusion information can be found in section [3](#) on page [21](#).

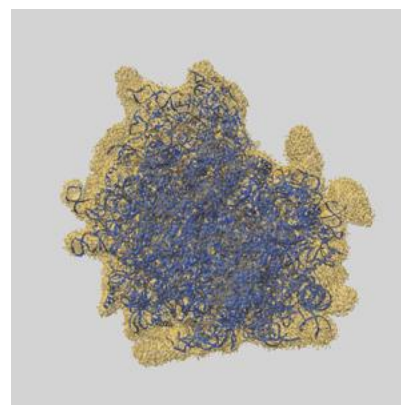
9.1 Map-model overlay [i](#)



X



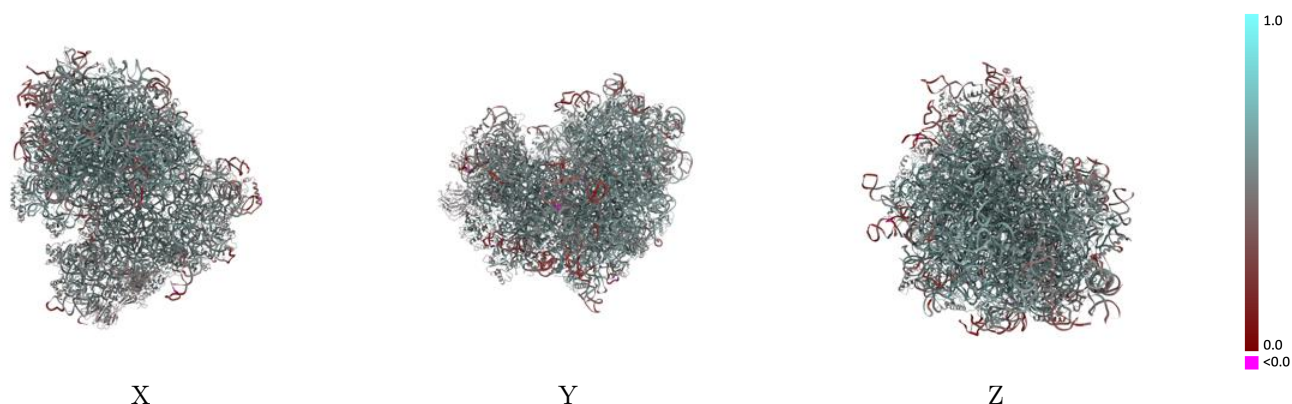
Y



Z

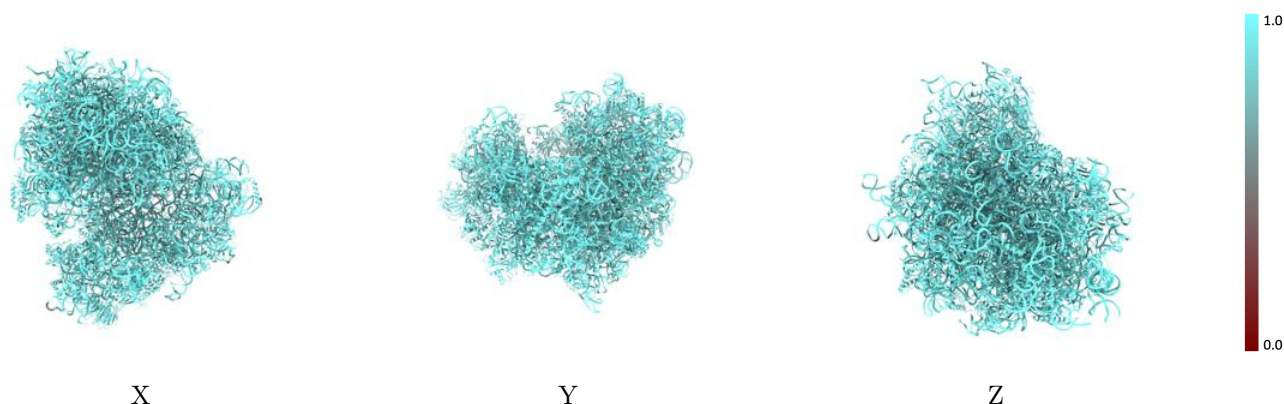
The images above show the 3D surface view of the map at the recommended contour level 0.009 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



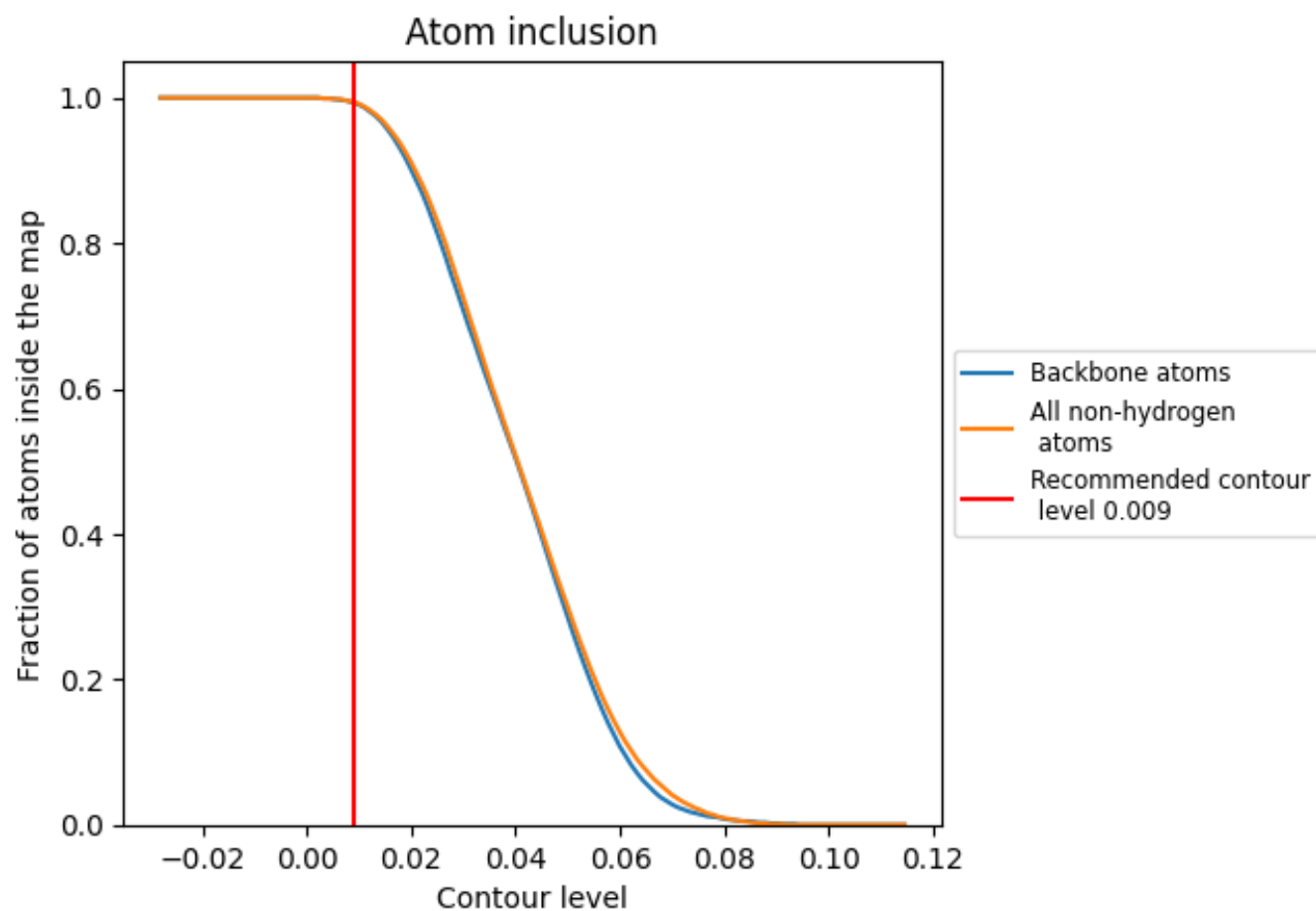
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.009).

9.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 99% 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 (0.009) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9940	 0.5370
A4	 0.9870	 0.4160
B4	 0.9870	 0.4860
C4	 0.9000	 0.4000
L5	 0.9970	 0.5420
L7	 0.9990	 0.5730
L8	 0.9970	 0.5640
LA	 0.9950	 0.5910
LB	 0.9940	 0.5690
LC	 0.9950	 0.5740
LD	 0.9980	 0.5370
LE	 0.9940	 0.5310
LF	 0.9970	 0.5730
LG	 0.9890	 0.5420
LH	 0.9920	 0.5400
LI	 0.9940	 0.5570
LJ	 0.9880	 0.5270
LL	 0.9940	 0.5630
LM	 0.9950	 0.5520
LN	 0.9980	 0.5980
LO	 0.9960	 0.5700
LP	 0.9980	 0.5790
LQ	 0.9980	 0.5870
LR	 0.9930	 0.5590
LS	 0.9970	 0.5770
LT	 0.9920	 0.5590
LU	 0.9920	 0.5160
LV	 0.9970	 0.5720
LW	 0.9770	 0.4750
LX	 0.9990	 0.5650
LY	 0.9950	 0.5690
LZ	 0.9940	 0.5580
La	 0.9980	 0.5900
Lb	 0.9780	 0.5280
Lc	 0.9960	 0.5670



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Chain	Atom inclusion	Q-score
Ld	 0.9990	 0.5630
Le	 0.9980	 0.5890
Lf	 0.9930	 0.5840
Lg	 0.9930	 0.5600
Lh	 0.9960	 0.5570
Li	 0.9940	 0.5480
Lj	 0.9970	 0.5930
Lk	 0.9870	 0.5320
Ll	 0.9980	 0.5660
Lm	 0.9880	 0.5560
Ln	 1.0000	 0.5930
Lo	 0.9950	 0.5710
Lp	 0.9970	 0.5810
Lr	 0.9960	 0.5730
S2	 0.9920	 0.5130
SA	 0.9750	 0.5240
SB	 0.9860	 0.5450
SC	 0.9870	 0.5380
SD	 0.9860	 0.4900
SE	 0.9890	 0.5270
SF	 0.9890	 0.5050
SG	 0.9980	 0.4830
SH	 0.9860	 0.5050
SI	 0.9950	 0.5440
SJ	 0.9940	 0.5190
SK	 0.9900	 0.4650
SL	 0.9920	 0.5580
SN	 0.9910	 0.5550
SO	 0.9870	 0.5520
SP	 0.9850	 0.4910
SQ	 0.9860	 0.5000
SR	 0.9730	 0.4870
SS	 0.9890	 0.4900
ST	 0.9860	 0.5000
SU	 0.9870	 0.4770
SV	 0.9830	 0.5290
SW	 0.9950	 0.5560
SX	 0.9950	 0.5470
SY	 0.9940	 0.5010
SZ	 0.9870	 0.4800
Sa	 0.9960	 0.5520
Sb	 0.9850	 0.5220

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Chain	Atom inclusion	Q-score
Sc	 0.9830	 0.5090
Sd	 0.9980	 0.5370
Se	 0.9810	 0.4750
Sg	 0.9750	 0.4470