Full wwPDB EM Validation Report

Mar 8, 2026 – 03:00 PM UTC

PDB ID	:	3J78 / pdb_00003j78
EMDB ID	:	EMD-5977
Title	:	Structures of yeast 80S ribosome-tRNA complexes in the rotated and non-rotated conformations (Class I - non-rotated ribosome with 2 tRNAs)
Authors	:	Svidritskiy, E.; Brilot, A.F.; Koh, C.S.; Grigorieff, N.; Korostelev, A.A.
Deposited on	:	2014-05-29
Resolution	:	6.30 Å(reported)
Based on initial models	:	3U5B, 3J3B, 3I9B, 3U5E, 3U5D, 3U5C

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 (i) 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 (i)) were used in the production of this report:

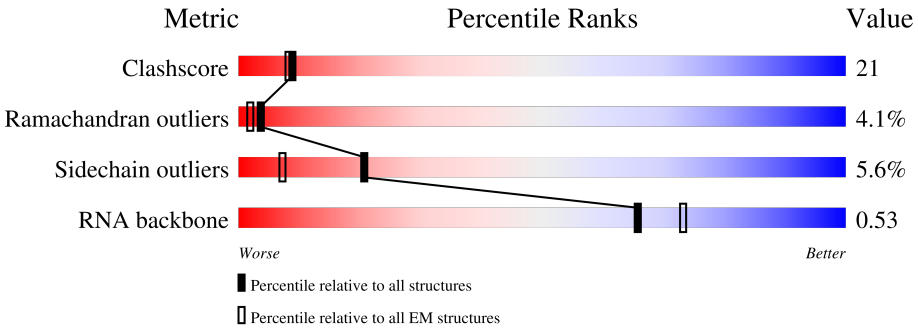
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

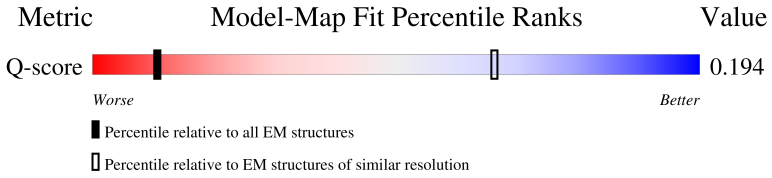
1 Overall quality at a glance

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

The reported resolution of this entry is 6.30 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	550 (5.80 - 6.80)

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

Mol	Chain	Length	Quality of chain
1	L1	217	78% 45% 40% 9% • 6%
2	L2	254	11% 42% 52% 5% •
3	L3	387	13% 51% 45% •

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Mol	Chain	Length	Quality of chain
4	L4	362	11% 50% 45% 5%
5	L5	297	25% 51% 44% 5%
6	L6	176	11% 51% 33% 11%
7	L7	244	6% 40% 46% 9%
8	L8	256	6% 41% 42% 7% 9%
9	L9	191	6% 46% 47% 7%
10	60	221	5% 49% 42% 5%
11	61	174	11% 43% 44% 10%
12	62	165	58% 65% 16% 5% 13%
13	63	199	10% 48% 42% 7%
14	64	138	55% 41%
15	65	204	7% 43% 51% 5%
16	66	199	42% 50% 7%
17	67	184	11% 53% 41%
18	68	186	19% 40% 54% 5%
19	69	189	6% 47% 49%
20	70	172	40% 54% 6%
21	71	160	14% 51% 46%
22	72	121	14% 46% 33% 17%
23	73	137	30% 49% 47%
24	74	155	12% 23% 17% 59%
25	75	142	6% 37% 40% 8% 15%
26	76	127	6% 54% 39% 6%
27	77	136	5% 56% 38% 6%
28	78	149	19% 46% 47% 6%

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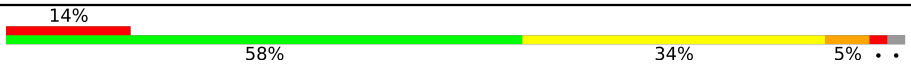
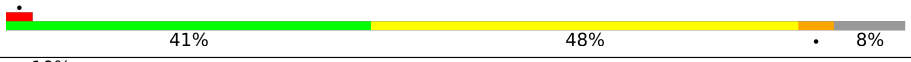
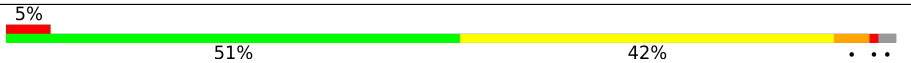
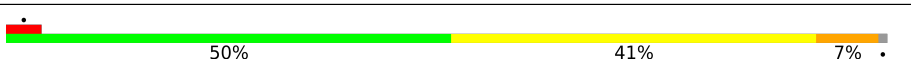
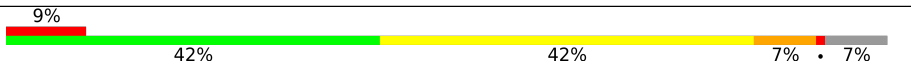
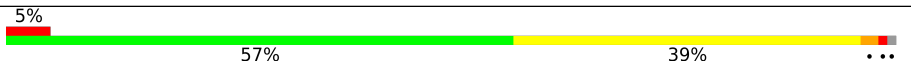
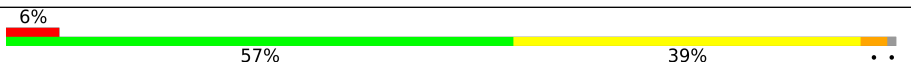
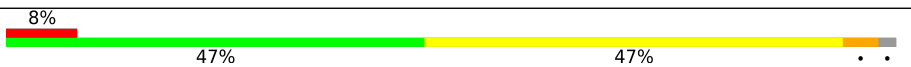
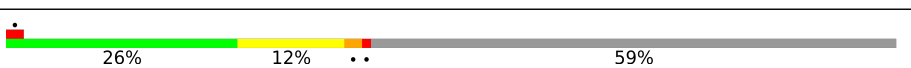
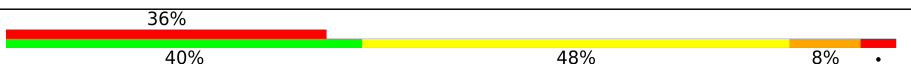
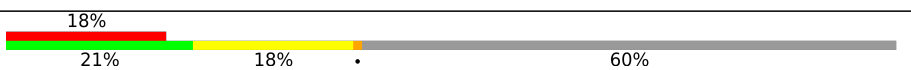
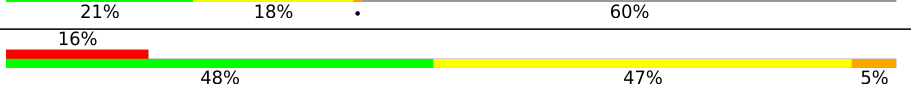
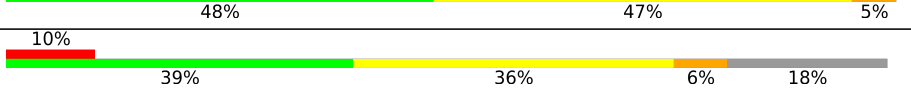
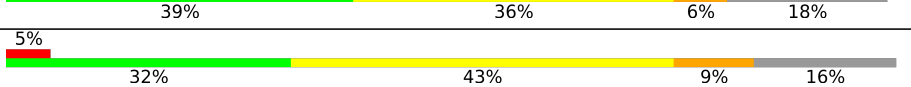
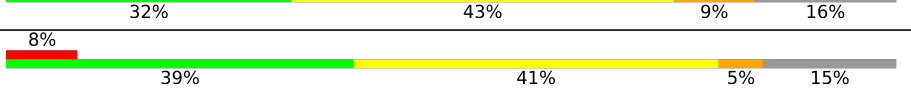
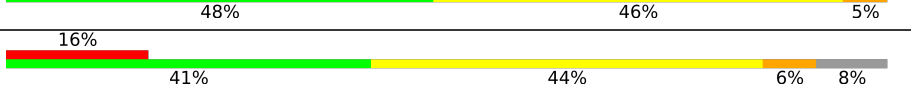
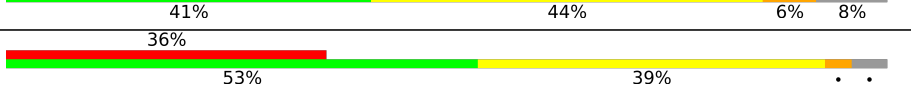
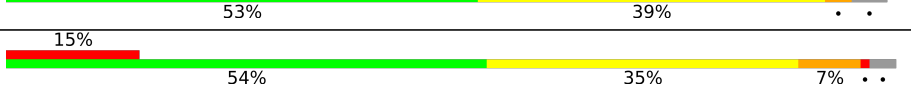
Mol	Chain	Length	Quality of chain
29	79	59	
30	80	105	
31	81	113	
32	82	130	
33	83	107	
34	84	121	
35	85	120	
36	86	100	
37	87	88	
38	88	78	
39	89	51	
40	90	128	
41	91	25	
42	92	106	
43	93	92	
44	P0	312	
45	RC	319	
46	S0	252	
47	S1	255	
48	S2	254	
49	S3	240	
50	S4	261	
51	S5	225	
52	S6	236	
53	S7	190	

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Mol	Chain	Length	Quality of chain
54	S8	200	24% 46% 42% 6% 6%
55	S9	197	17% 38% 48% 8% 6%
56	10	105	7% 39% 41% 10% 9%
57	11	156	29% 52% 40% 6%
58	12	143	37% 38% 38% 9% 13%
59	13	151	7% 54% 37% 8%
60	14	137	18% 47% 39% 6% 7%
61	15	142	15% 37% 43% 7% 13%
62	16	143	9% 44% 48% 6%
63	17	136	27% 40% 35% 10% 12%
64	18	146	14% 49% 42% 7%
65	19	144	19% 49% 42% 8%
66	20	121	13% 34% 45% 10% 12%
67	21	87	11% 45% 47% 8%
68	22	130	12% 38% 55% 6%
69	23	145	24% 46% 45% 7%
70	24	135	22% 45% 46% 8%
71	25	108	15% 28% 28% 8% 35%
72	26	119	6% 31% 39% 10% 18%
73	27	82	13% 54% 41%
74	28	67	19% 43% 43% 7% 6%
75	29	56	39% 55% 5%
76	30	63	25% 44% 38% 13% 5%
77	31	152	12% 26% 14% 7% 53%
78	1S	1798	5% 35% 52% 11%

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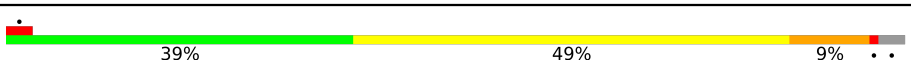
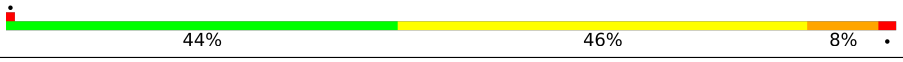
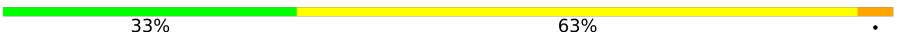
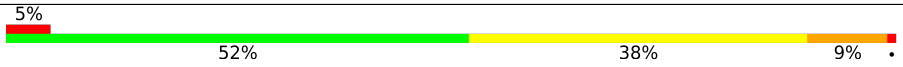
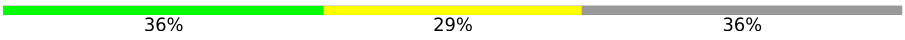
Mol	Chain	Length	Quality of chain
79	2S	3395	
80	8S	158	
81	5S	121	
82	ET	77	
82	PT	77	
83	MR	14	

2 Entry composition (i)

There are 83 unique types of molecules in this entry. The entry contains 209136 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called 60S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	L1	204	1609	1031	279	290	9	0	0

- Molecule 2 is a protein called 60S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	L2	252	1918	1193	389	335	1	0	0

- Molecule 3 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	L3	386	3082	1956	584	534	8	0	0

- Molecule 4 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	L4	361	2750	1730	522	495	3	0	0

- Molecule 5 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	L5	296	2376	1501	414	459	2	0	0

- Molecule 6 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	L6	156	1240	800	222	217	1	0	0

- Molecule 7 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	L7	222	Total	C	N	O	S	0	0
			1785	1151	324	309	1		

- Molecule 8 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	L8	233	Total	C	N	O	S	0	0
			1818	1159	326	330	3		

- Molecule 9 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	L9	191	Total	C	N	O	S	0	0
			1519	963	274	278	4		

- Molecule 10 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	60	211	Total	C	N	O	S	0	0
			1718	1089	325	298	6		

- Molecule 11 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	61	169	Total	C	N	O	S	0	0
			1354	847	253	250	4		

- Molecule 12 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	62	143	Total	C	N	O	0	0
			703	417	143	143		

- Molecule 13 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	63	193	Total	C	N	O	0	0
			1543	962	315	266		

- Molecule 14 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	64	136	Total	C	N	O	S	0	0
			1054	675	199	178	2		

- Molecule 15 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	65	203	Total	C	N	O	S	0	0
			1721	1077	361	282	1		

- Molecule 16 is a protein called 60S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	66	197	Total	C	N	O	S	0	0
			1556	1003	289	263	1		

- Molecule 17 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	67	183	Total	C	N	O	0	0
			1443	896	287	260		

- Molecule 18 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	68	185	Total	C	N	O	S	0	0
			1442	908	290	242	2		

- Molecule 19 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	69	188	Total	C	N	O	0	0
			1522	935	326	261		

- Molecule 20 is a protein called 60S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	70	172	Total	C	N	O	S	0	0
			1446	930	267	245	4		

- Molecule 21 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	71	159	Total	C	N	O	S	0	0
			1277	805	246	222	4		

- Molecule 22 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms				AltConf	Trace
22	72	100	Total	C	N	O	0	0
			796	516	131	149		

- Molecule 23 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	73	136	Total	C	N	O	S	0	0
			1004	628	189	180	7		

- Molecule 24 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	74	64	Total	C	N	O	S	0	0
			528	340	103	84	1		

- Molecule 25 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	75	121	Total	C	N	O	S	0	0
			969	623	170	174	2		

- Molecule 26 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	76	126	Total	C	N	O	0	0
			994	625	192	177		

- Molecule 27 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	77	135	Total	C	N	O	0	0
			1093	710	202	181		

- Molecule 28 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	78	148	Total	C	N	O	S	0	0
			1174	749	231	191	3		

- Molecule 29 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	79	58	Total	C	N	O	0	0
			463	289	100	74		

- Molecule 30 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	80	97	Total	C	N	O	S	0	0
			743	479	124	139	1		

- Molecule 31 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	81	109	Total	C	N	O	S	0	0
			890	565	168	156	1		

- Molecule 32 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	82	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 33 is a protein called 60S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	83	106	Total	C	N	O	S	0	0
			851	540	165	145	1		

- Molecule 34 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	84	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 35 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	85	119	Total	C	N	O	S	0	0
			970	615	186	168	1		

- Molecule 36 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	86	99	Total	C	N	O	S	0	0
			772	481	156	133	2		

- Molecule 37 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	87	87	Total	C	N	O	S	0	0
			682	414	148	115	5		

- Molecule 38 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	88	77	Total	C	N	O	0	0
			613	391	115	107		

- Molecule 39 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	89	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 40 is a protein called 60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	90	52	Total	C	N	O	S	0	0
			418	259	86	68	5		

- Molecule 41 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	91	25	Total	C	N	O	S	0	0
			234	142	63	28	1		

- Molecule 42 is a protein called 60S ribosomal protein L42.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	92	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 43 is a protein called 60S ribosomal protein L43.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	93	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 44 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	P0	125	Total	C	N	O	S	0	0
			987	633	174	177	3		

- Molecule 45 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	RC	318	Total	C	N	O	S	0	0
			2445	1546	419	472	8		

- Molecule 46 is a protein called 40S ribosomal protein S0.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	S0	206	Total	C	N	O	S	0	0
			1612	1034	285	291	2		

- Molecule 47 is a protein called 40S ribosomal protein S1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	S1	214	Total	C	N	O	S	0	0
			1709	1084	310	311	4		

- Molecule 48 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	S2	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 49 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S3	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 50 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	S4	260	Total	C	N	O	S	0	0
			2069	1316	389	361	3		

- Molecule 51 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	S5	206	Total	C	N	O	S	0	0
			1610	1007	300	300	3		

- Molecule 52 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	S6	226	Total	C	N	O	S	0	0
			1820	1142	350	325	3		

- Molecule 53 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms				AltConf	Trace
53	S7	184	Total	C	N	O	0	0
			1481	951	265	265		

- Molecule 54 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	S8	188	Total	C	N	O	S	0	0
			1490	925	298	265	2		

- Molecule 55 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	S9	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 56 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	10	96	Total	C	N	O	S	0	0
			817	529	133	153	2		

- Molecule 57 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	11	155	Total	C	N	O	S	0	0
			1245	798	235	209	3		

- Molecule 58 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	12	124	Total	C	N	O	S	0	0
			935	587	165	181	2		

- Molecule 59 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	13	150	Total	C	N	O	S	0	0
			1193	759	224	208	2		

- Molecule 60 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	14	127	Total	C	N	O	S	0	0
			942	578	186	175	3		

- Molecule 61 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	15	124	Total	C	N	O	S	0	0
			991	631	187	166	7		

- Molecule 62 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms				AltConf	Trace
62	16	141	Total	C	N	O	0	0
			1106	708	203	195		

- Molecule 63 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	17	120	Total	C	N	O	S	0	0
			965	603	183	177	2		

- Molecule 64 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	18	145	Total	C	N	O	S	0	0
			1193	743	237	211	2		

- Molecule 65 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	19	143	Total	C	N	O	S	0	0
			1113	694	208	209	2		

- Molecule 66 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	20	107	Total	C	N	O	S	0	0
			856	539	156	160	1		

- Molecule 67 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	21	87	Total	C	N	O	S	0	0
			685	420	125	138	2		

- Molecule 68 is a protein called 40S ribosomal protein S22.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	22	129	Total	C	N	O	S	0	0
			1022	650	188	181	3		

- Molecule 69 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	23	144	Total	C	N	O	S	0	0
			1122	708	220	192	2		

- Molecule 70 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms				AltConf	Trace
70	24	134	Total	C	N	O	0	0
			1074	676	208	190		

- Molecule 71 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms				AltConf	Trace
71	25	70	Total	C	N	O	0	0
			563	360	104	99		

- Molecule 72 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	26	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 73 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	27	81	Total	C	N	O	S	0	0
			611	382	110	114	5		

- Molecule 74 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	28	63	Total	C	N	O	S	0	0
			498	306	99	92	1		

- Molecule 75 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	29	53	Total	C	N	O	S	0	0
			444	275	92	73	4		

- Molecule 76 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	30	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 77 is a protein called 40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	31	71	Total	C	N	O	S	0	0
			498	309	93	92	4		

- Molecule 78 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	1S	1781	Total	C	N	O	P	0	0
			37949	16965	6715	12488	1781		

- Molecule 79 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	2S	3302	Total	C	N	O	P	0	0
			70616	31540	12710	23064	3302		

- Molecule 80 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	8S	158	Total	C	N	O	P	0	0
			3354	1500	586	1110	158		

- Molecule 81 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	5S	121	Total	C	N	O	P	0	0
			2580	1152	461	846	121		

- Molecule 82 is a RNA chain called P/E-site initiator transfer RNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	ET	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		
82	PT	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		

- Molecule 83 is a RNA chain called messenger RNA.

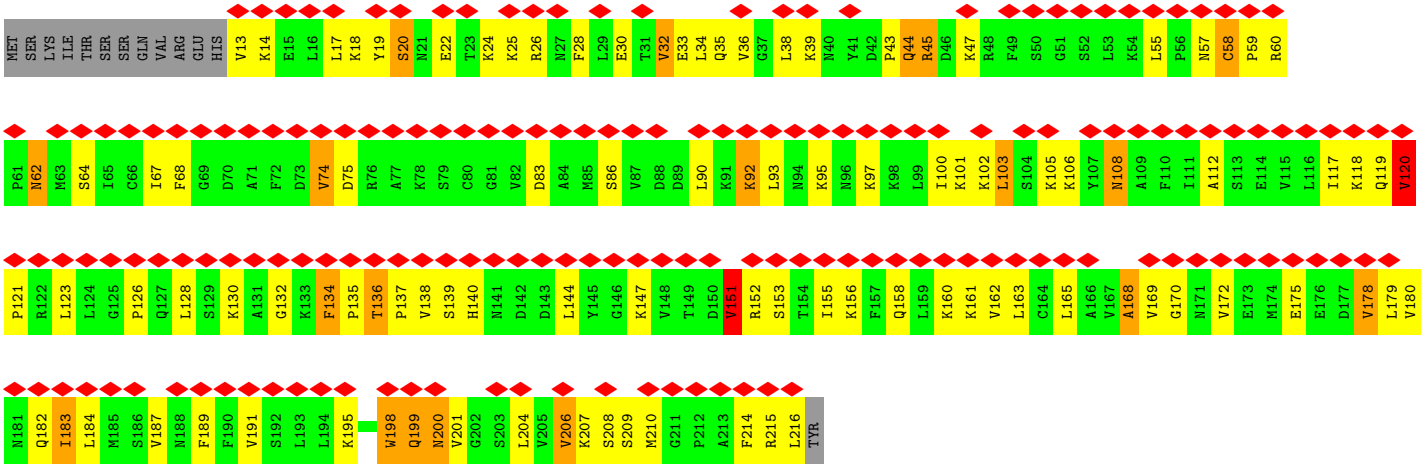
Mol	Chain	Residues	Atoms					AltConf	Trace
83	MR	9	Total	C	N	O	P	0	0
			195	88	39	59	9		

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

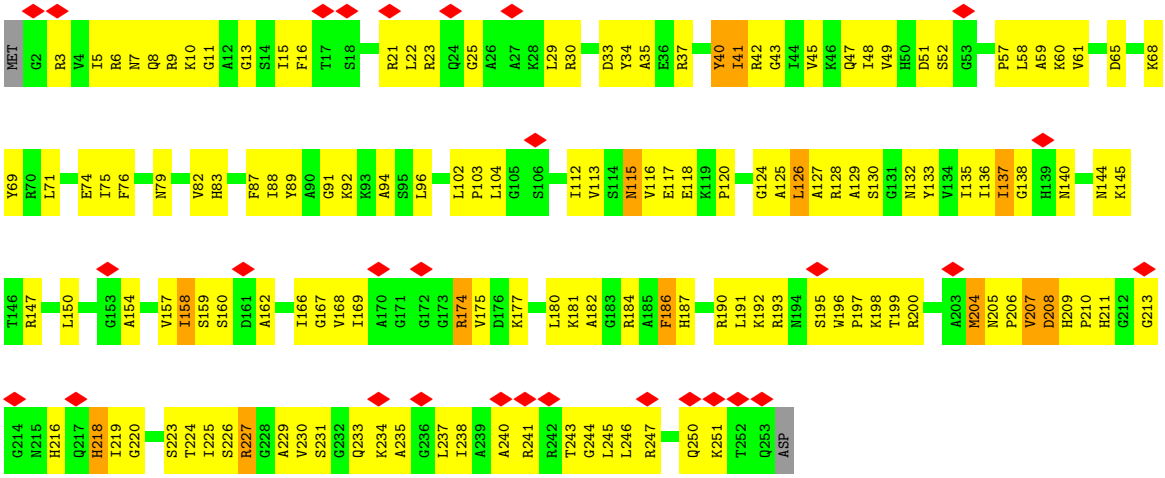
• Molecule 1: 60S ribosomal protein L1

Chain L1:



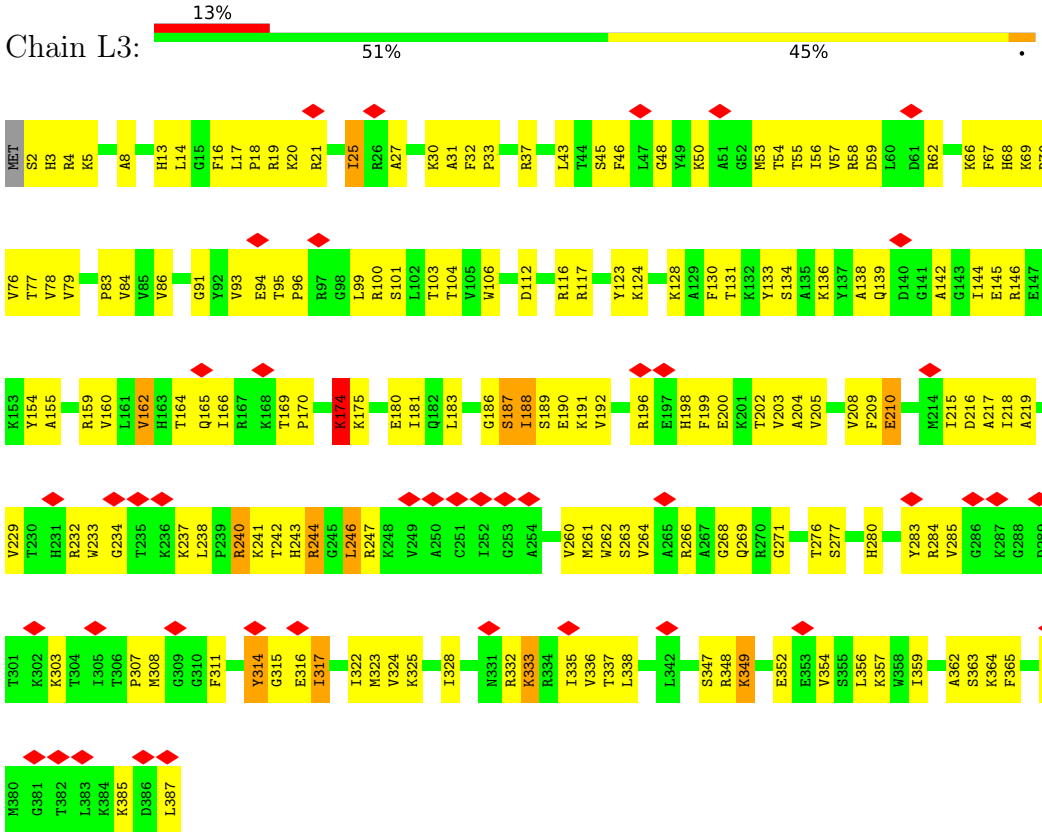
• Molecule 2: 60S ribosomal protein L2

Chain L2:



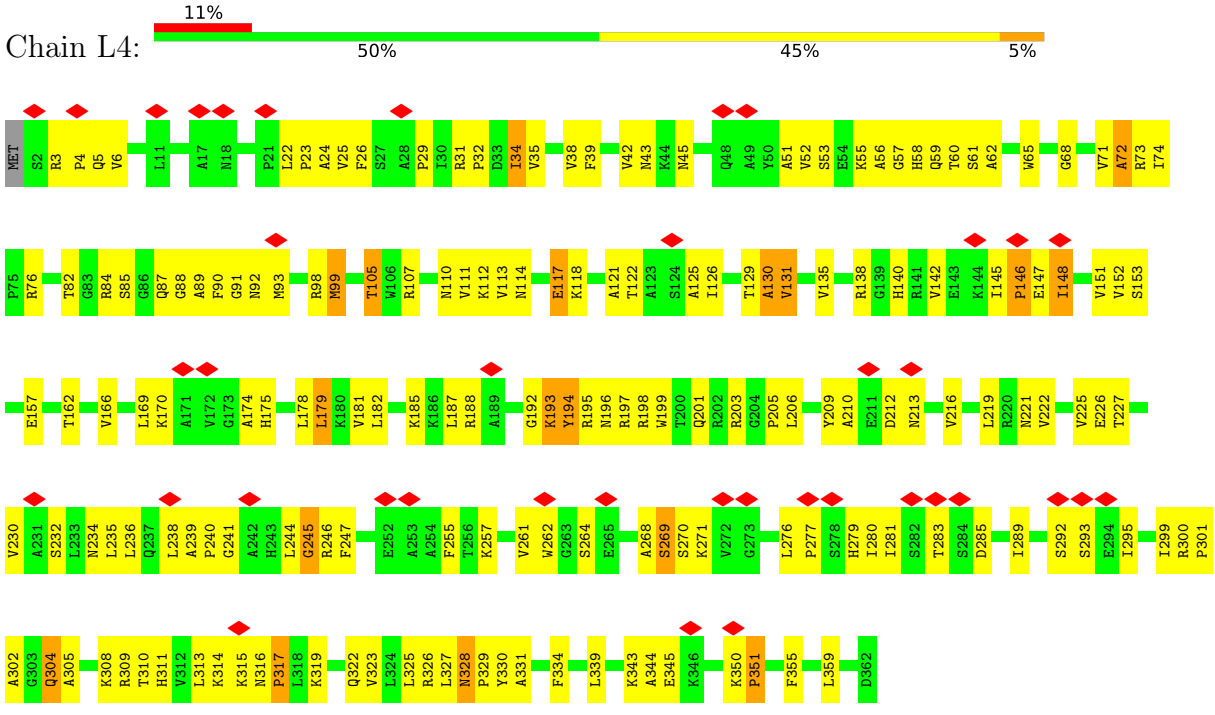
• Molecule 3: 60S ribosomal protein L3

Chain L3:



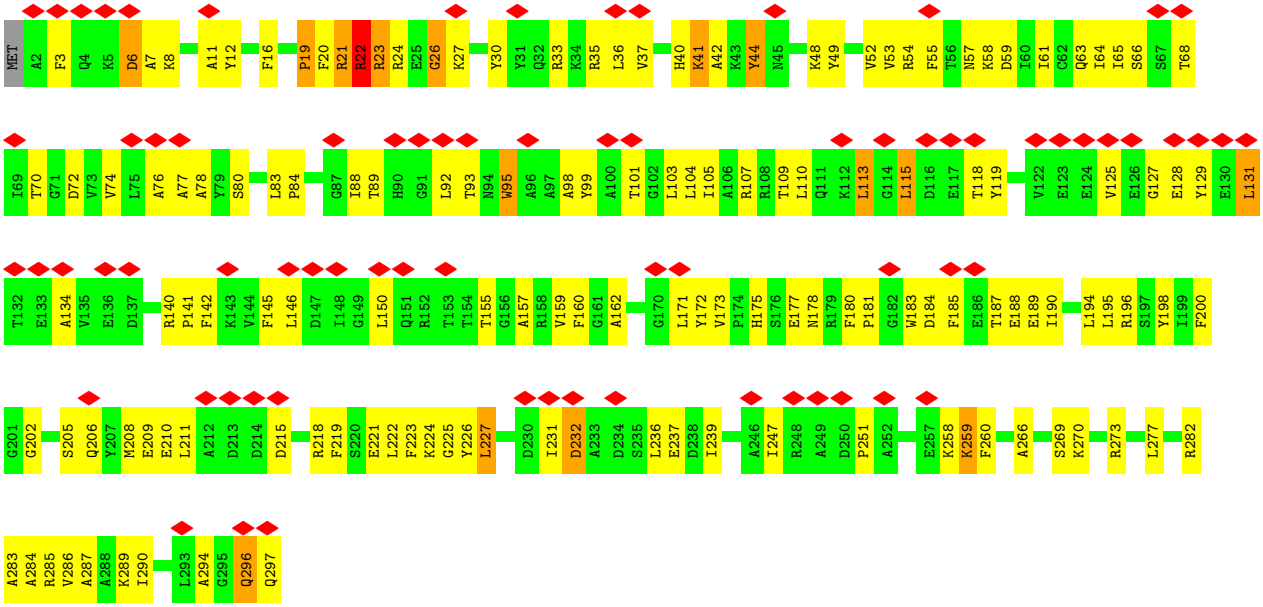
• Molecule 4: 60S ribosomal protein L4

Chain L4:



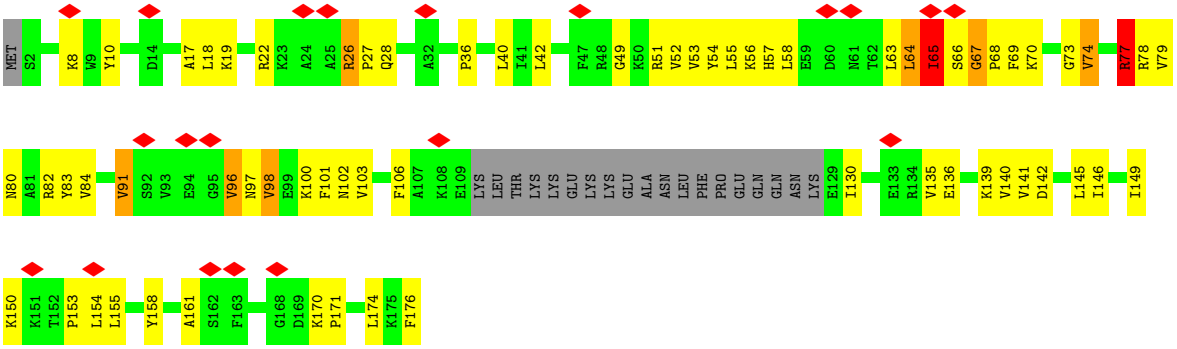
• Molecule 5: 60S ribosomal protein L5

Chain L5:



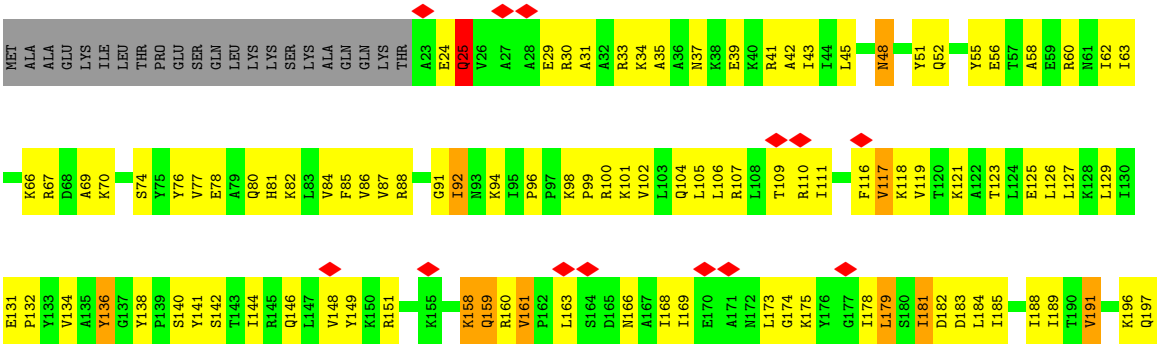
• Molecule 6: 60S ribosomal protein L6

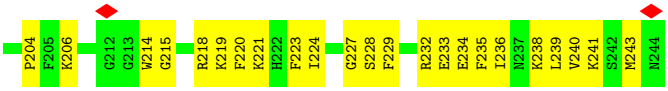
Chain L6:



• Molecule 7: 60S ribosomal protein L7

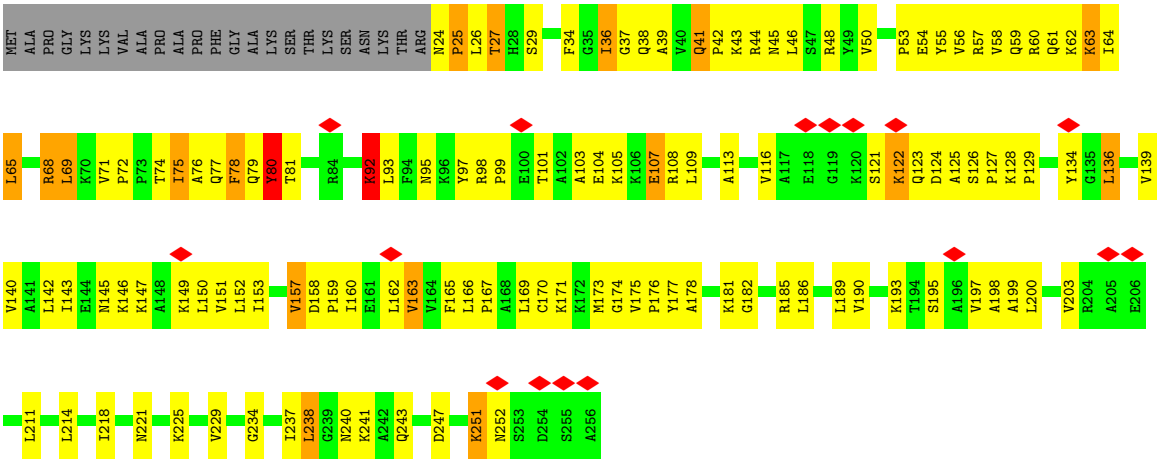
Chain L7:





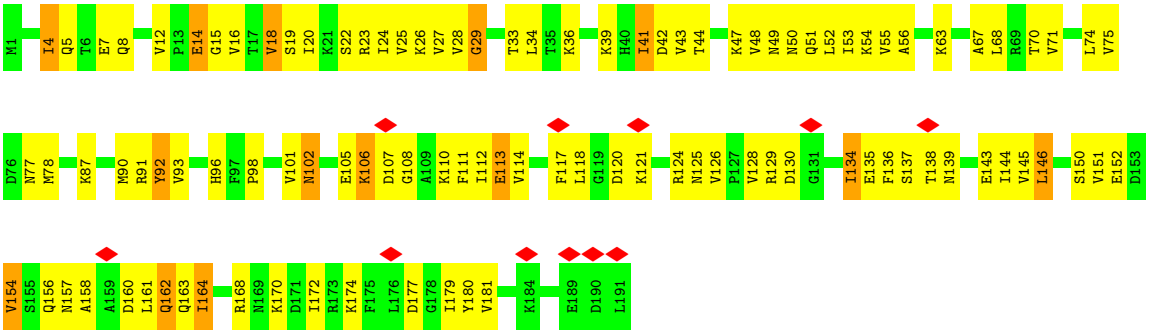
• Molecule 8: 60S ribosomal protein L8

Chain L8:



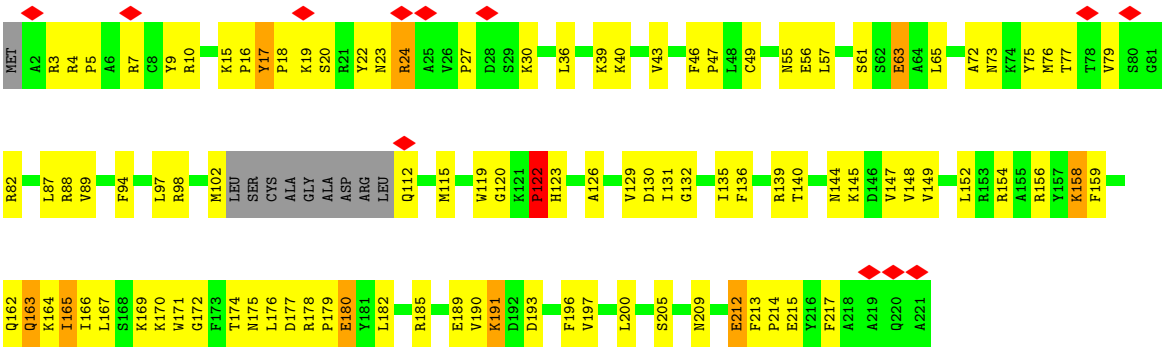
• Molecule 9: 60S ribosomal protein L9

Chain L9:



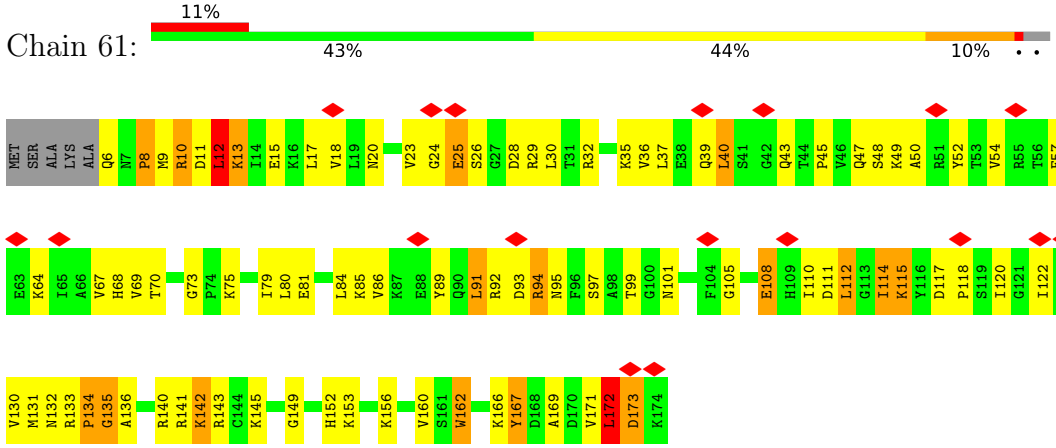
• Molecule 10: 60S ribosomal protein L10

Chain 60:



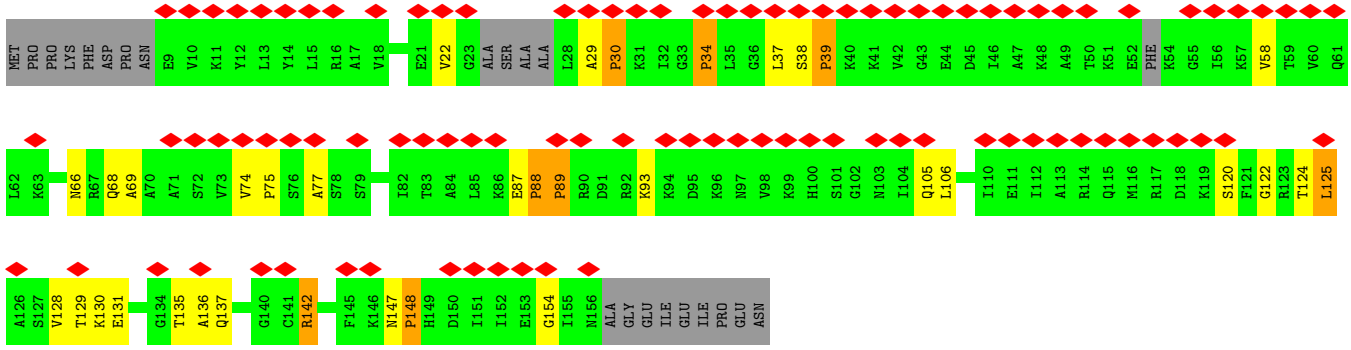
• Molecule 11: 60S ribosomal protein L11

Chain 61:



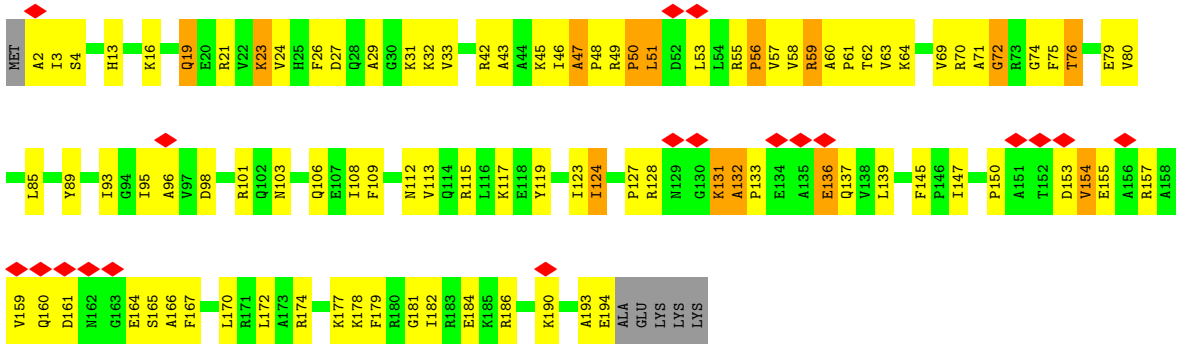
• Molecule 12: 60S ribosomal protein L12

Chain 62:



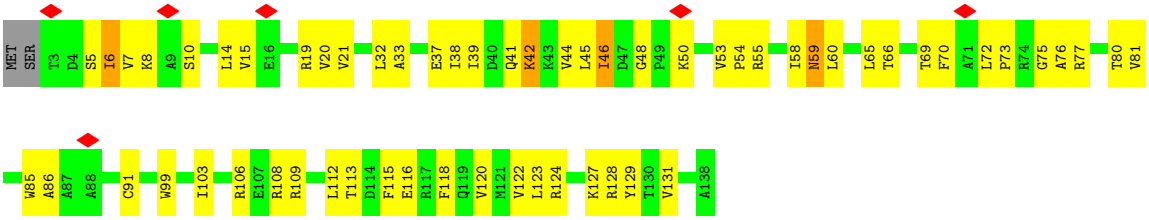
• Molecule 13: 60S ribosomal protein L13

Chain 63:



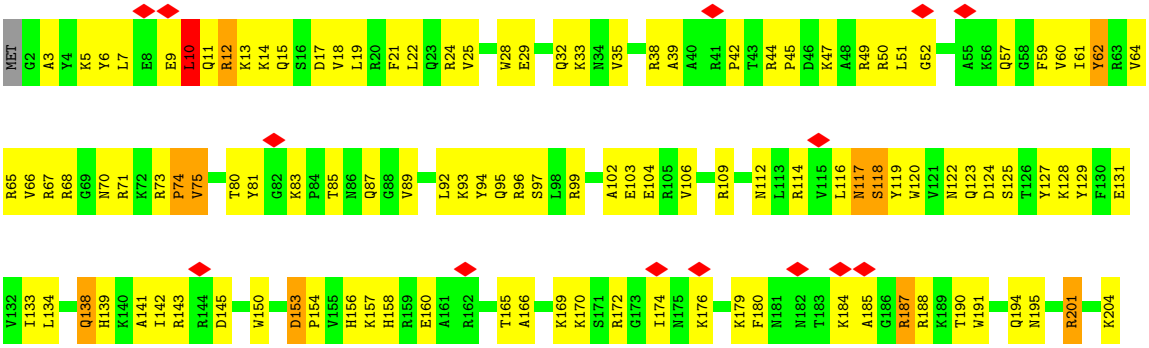
• Molecule 14: 60S ribosomal protein L14

Chain 64:



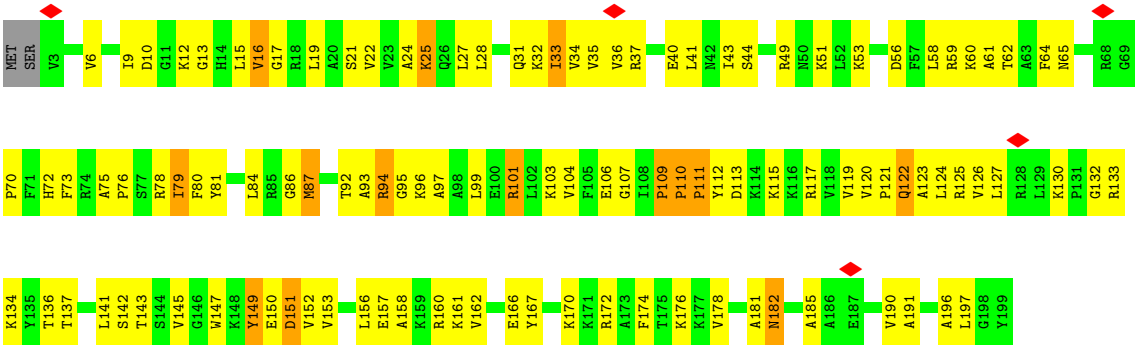
• Molecule 15: 60S ribosomal protein L15

Chain 65:



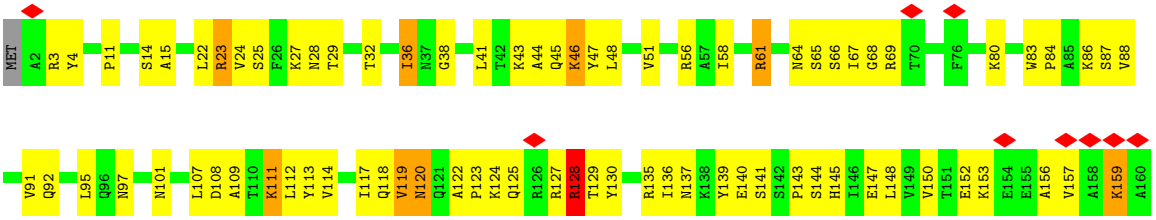
• Molecule 16: 60S ribosomal protein L16

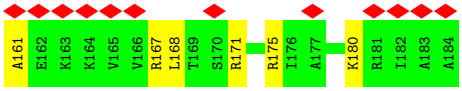
Chain 66:



• Molecule 17: 60S ribosomal protein L17

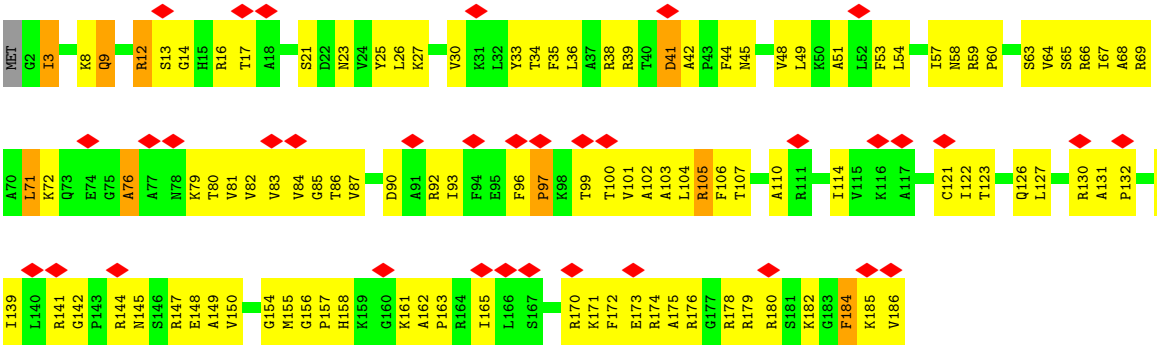
Chain 67:





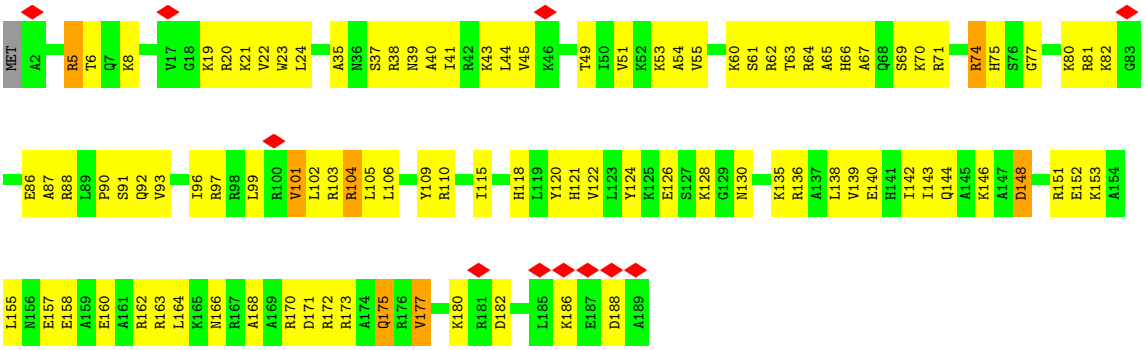
• Molecule 18: 60S ribosomal protein L18

Chain 68:



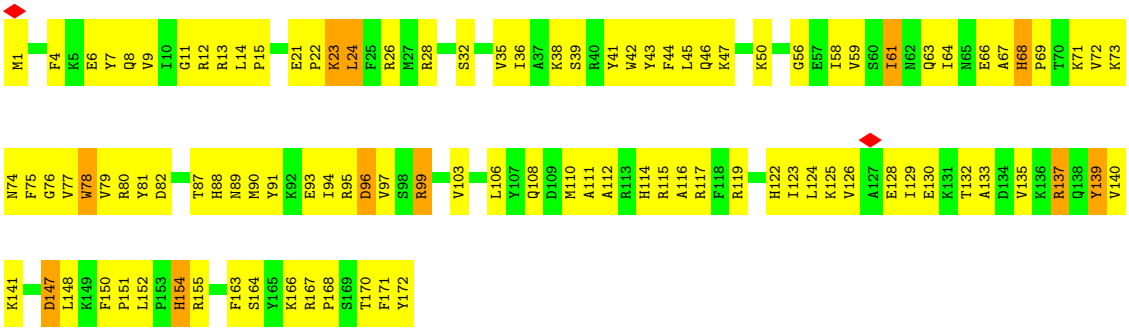
• Molecule 19: 60S ribosomal protein L19

Chain 69:



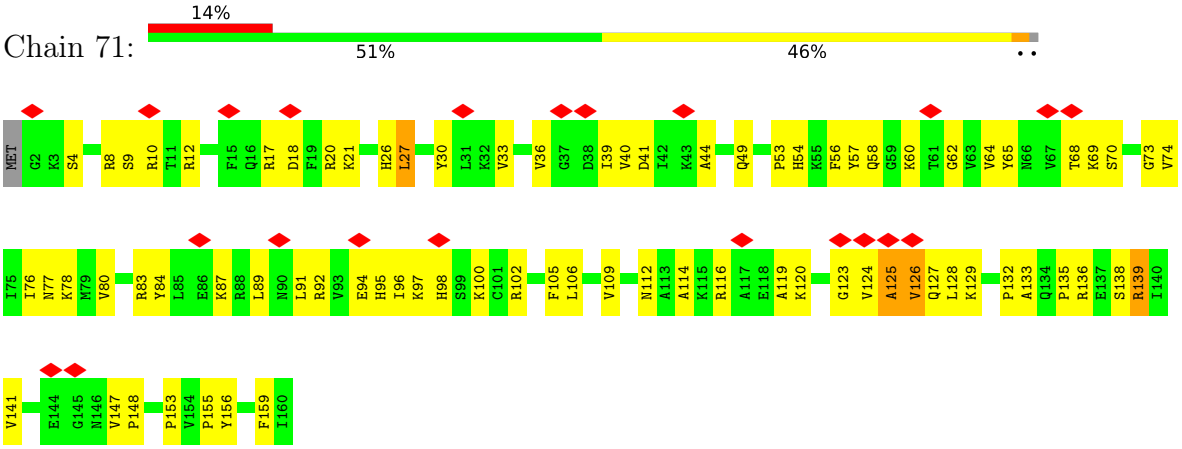
• Molecule 20: 60S ribosomal protein L20

Chain 70:



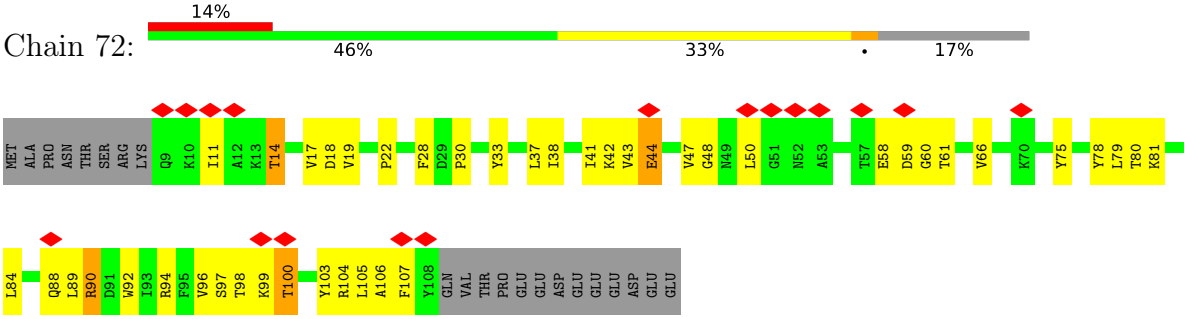
• Molecule 21: 60S ribosomal protein L21

Chain 71:



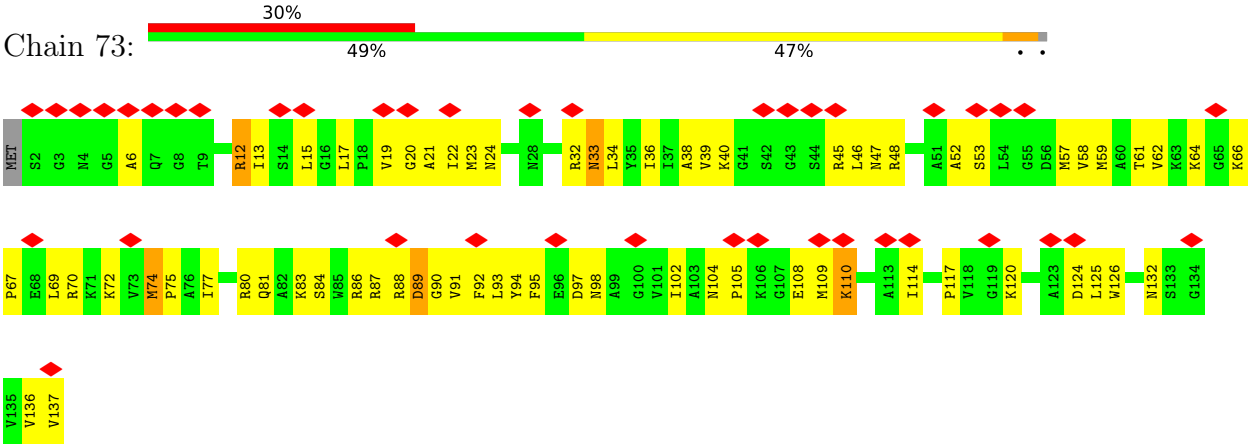
• Molecule 22: 60S ribosomal protein L22

Chain 72:



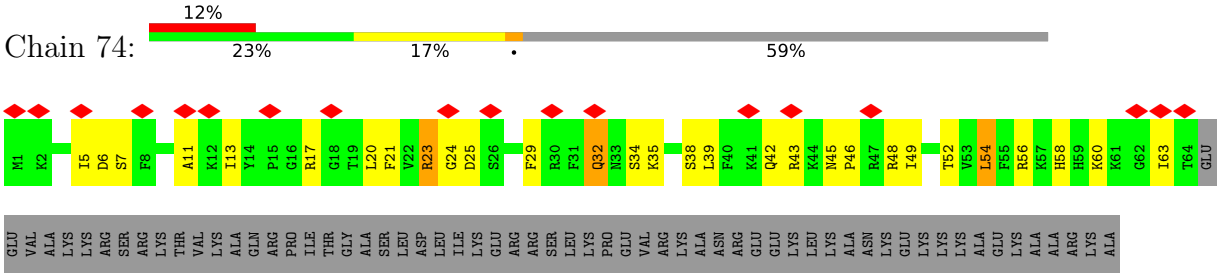
• Molecule 23: 60S ribosomal protein L23

Chain 73:

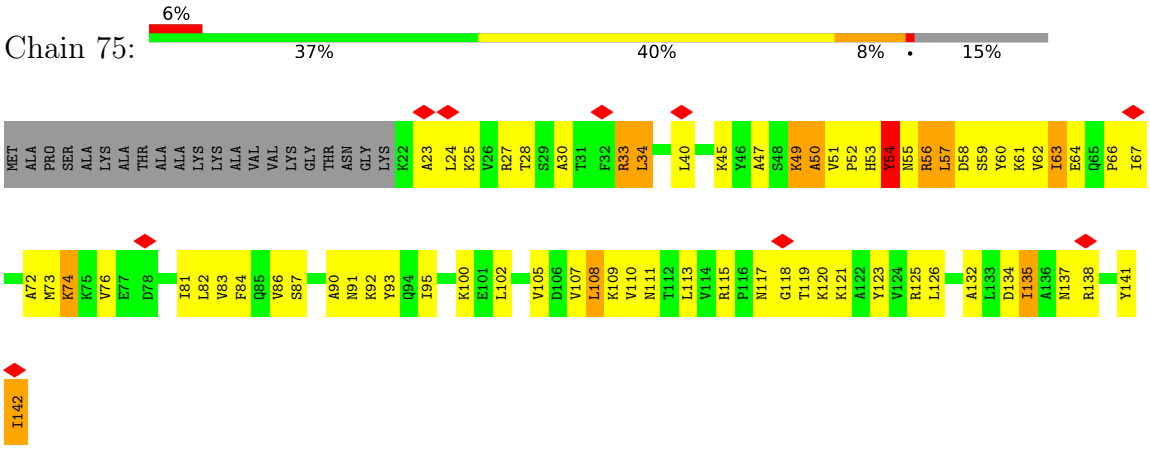


• Molecule 24: 60S ribosomal protein L24

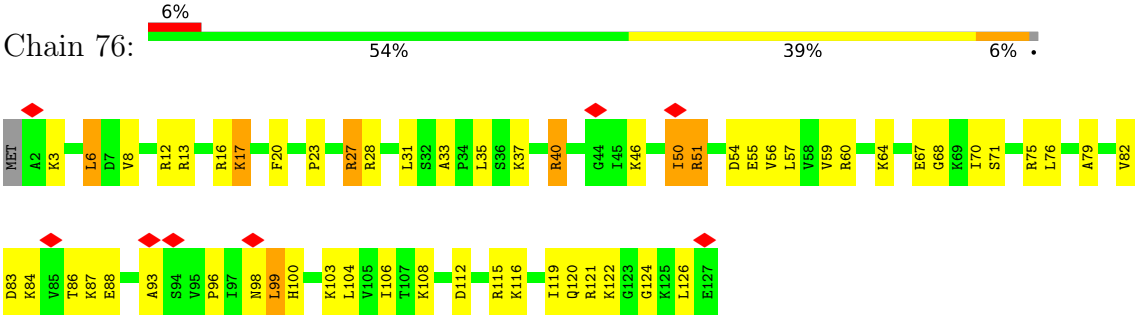
Chain 74:



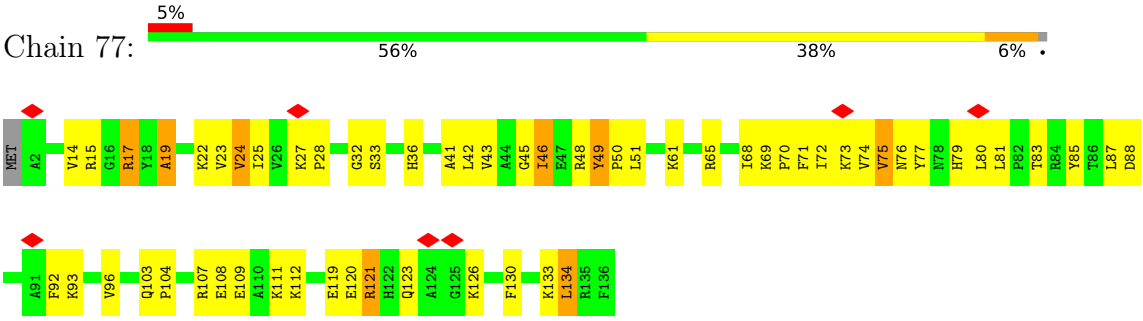
• Molecule 25: 60S ribosomal protein L25



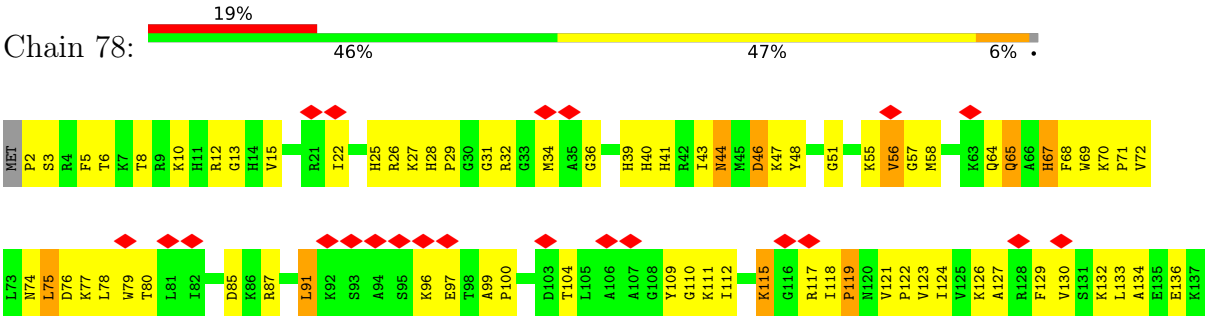
• Molecule 26: 60S ribosomal protein L26

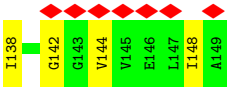


• Molecule 27: 60S ribosomal protein L27



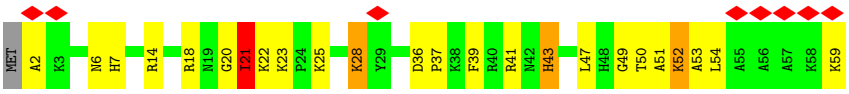
• Molecule 28: 60S ribosomal protein L28





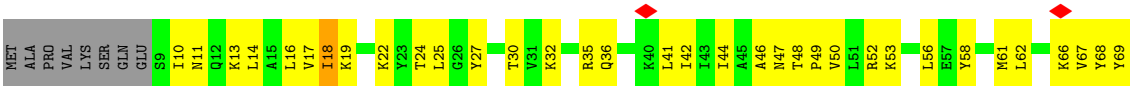
• Molecule 29: 60S ribosomal protein L29

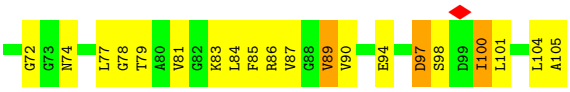
Chain 79:



• Molecule 30: 60S ribosomal protein L30

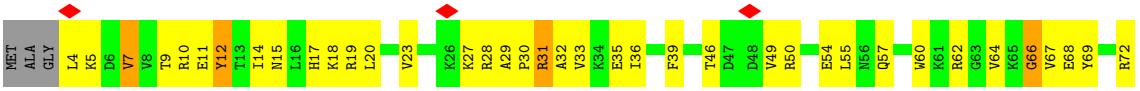
Chain 80:

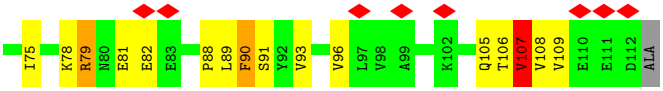




• Molecule 31: 60S ribosomal protein L31

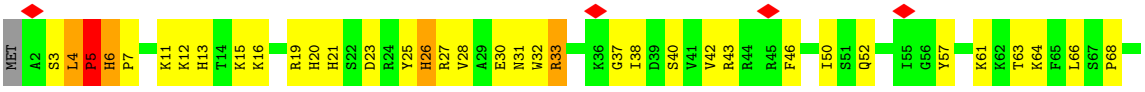
Chain 81:





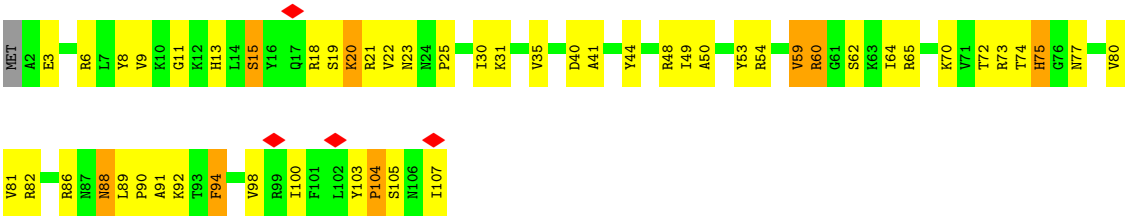
• Molecule 32: 60S ribosomal protein L32

Chain 82:

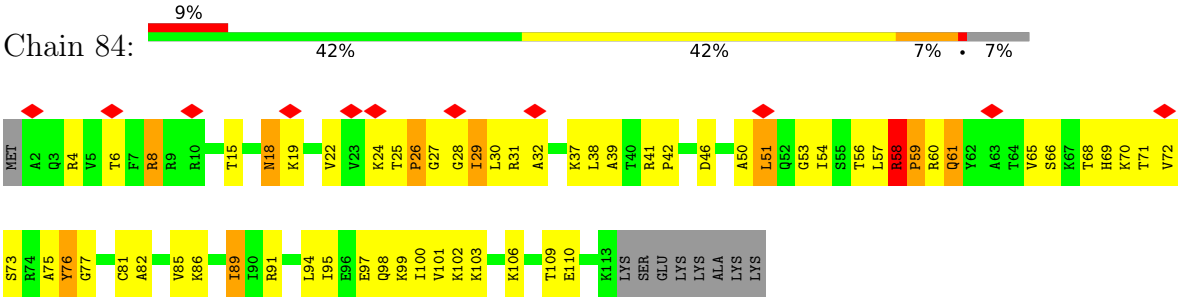


• Molecule 33: 60S ribosomal protein L33

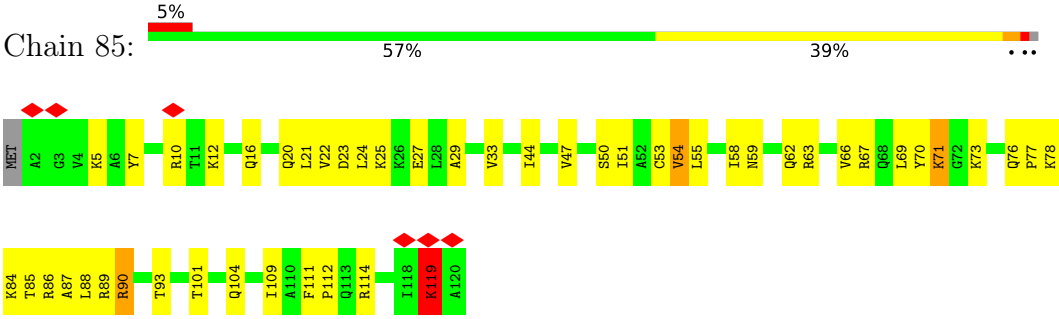
Chain 83:



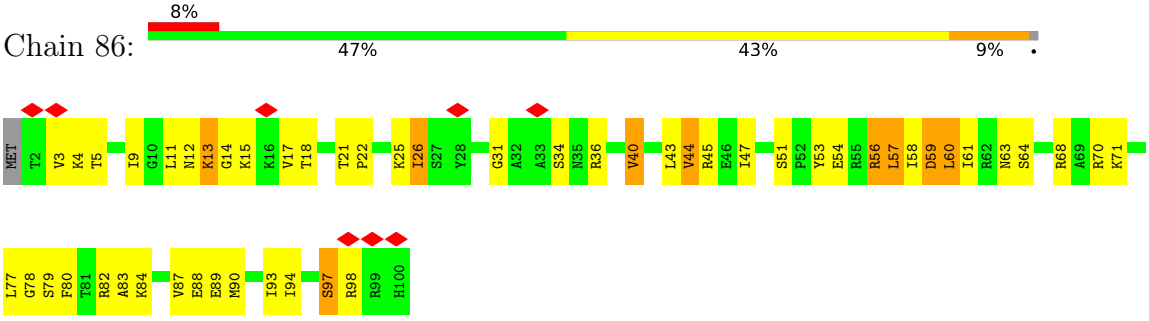
• Molecule 34: 60S ribosomal protein L34



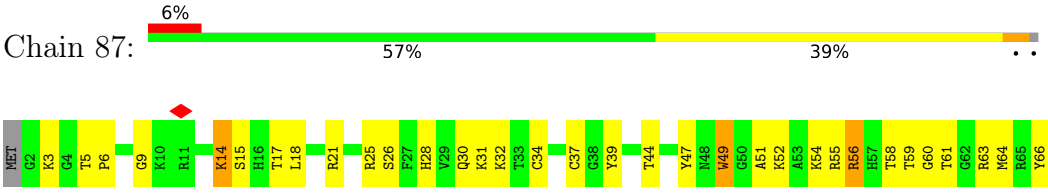
• Molecule 35: 60S ribosomal protein L35

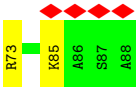


• Molecule 36: 60S ribosomal protein L36



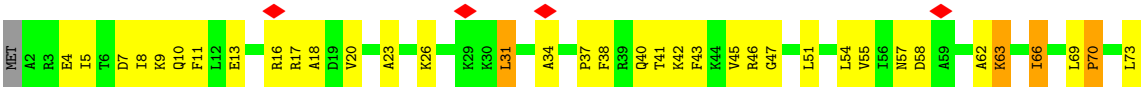
• Molecule 37: 60S ribosomal protein L37





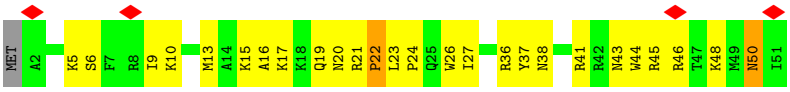
• Molecule 38: 60S ribosomal protein L38

Chain 88:



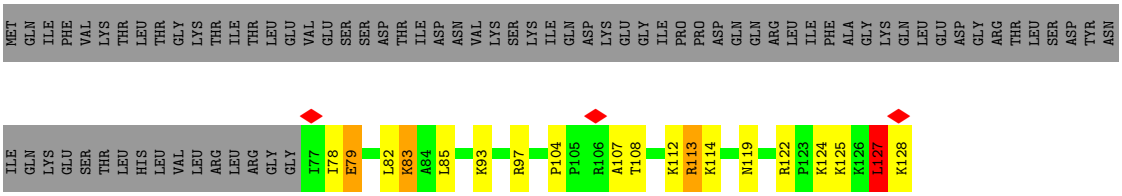
• Molecule 39: 60S ribosomal protein L39

Chain 89:



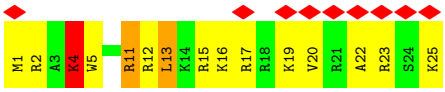
• Molecule 40: 60S ribosomal protein L40

Chain 90:



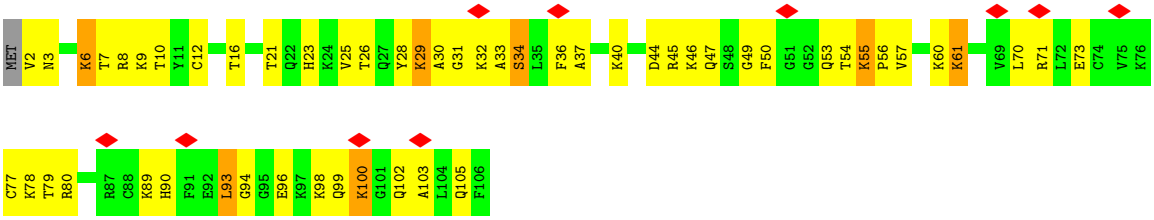
• Molecule 41: 60S ribosomal protein L41

Chain 91:



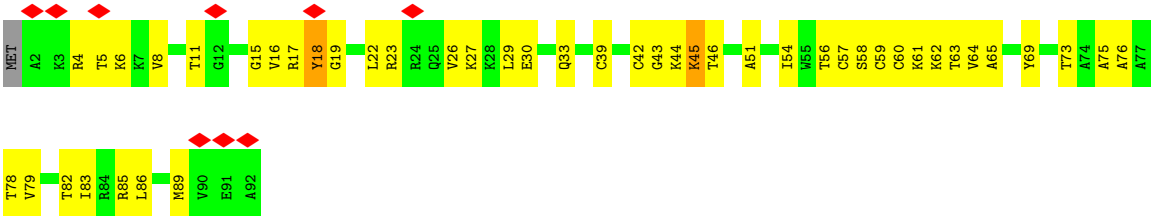
• Molecule 42: 60S ribosomal protein L42

Chain 92:



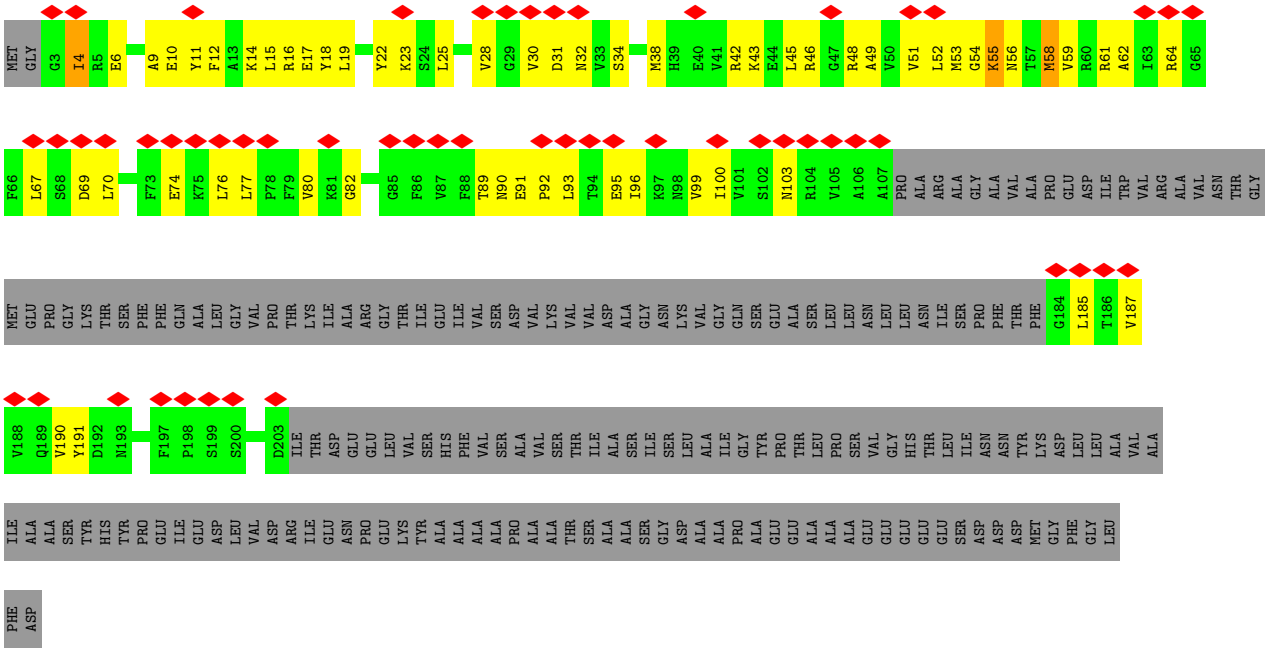
• Molecule 43: 60S ribosomal protein L43

Chain 93:



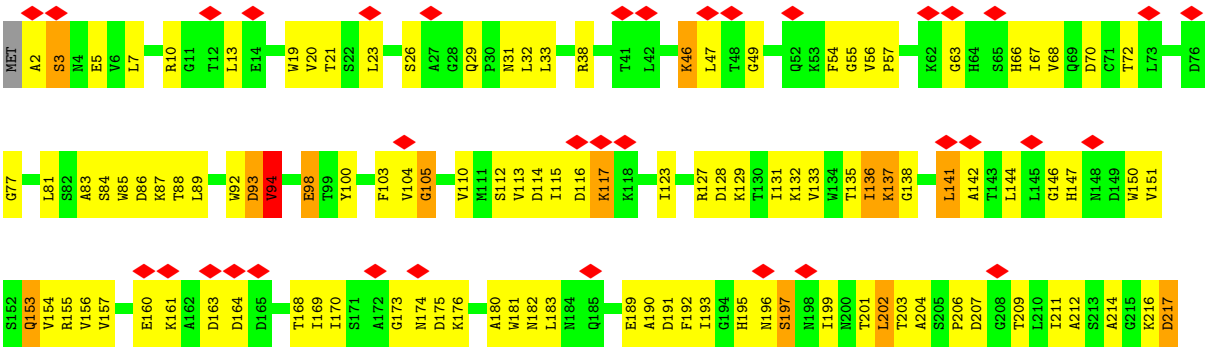
• Molecule 44: 60S acidic ribosomal protein P0

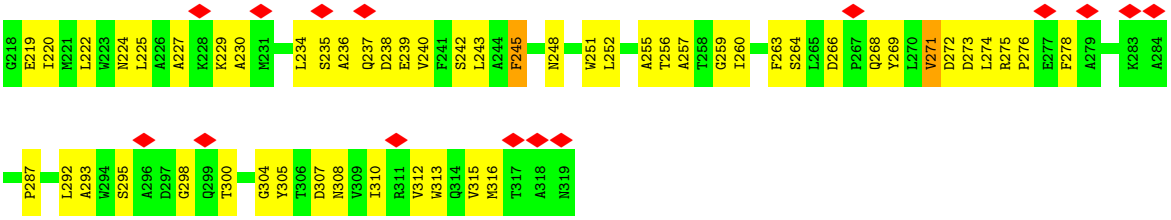
Chain P0:



• Molecule 45: Guanine nucleotide-binding protein subunit beta-like protein

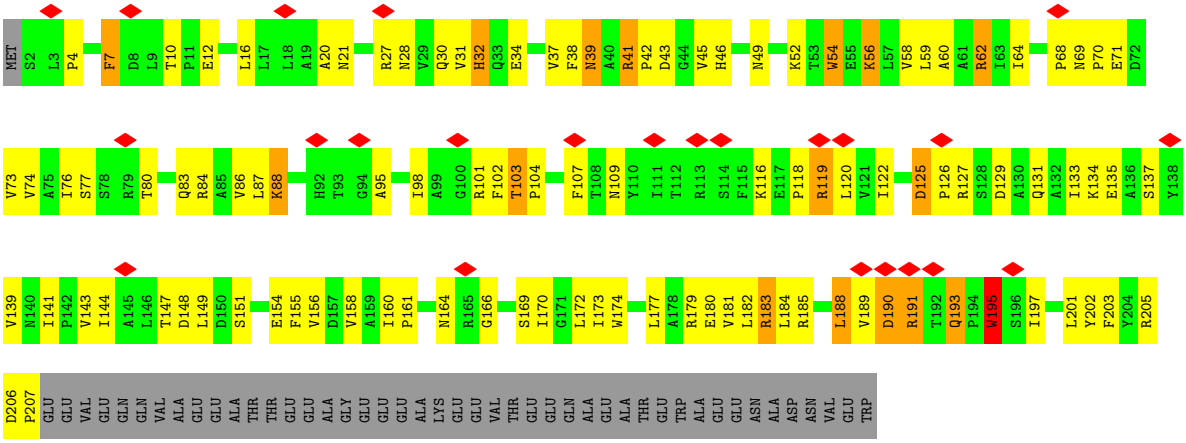
Chain RC:





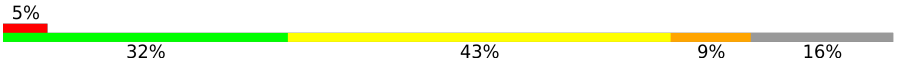
• Molecule 46: 40S ribosomal protein S0

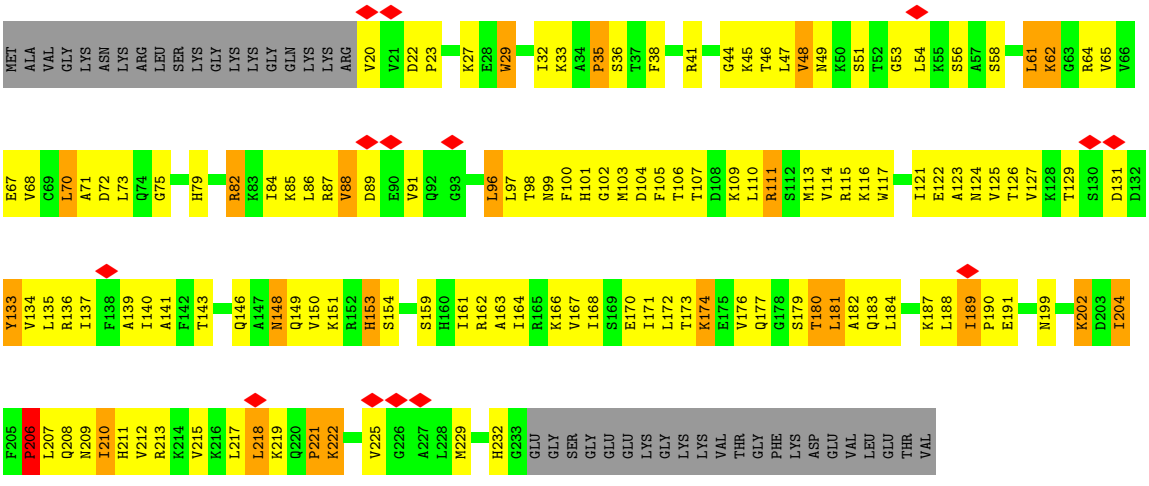
Chain S0:



• Molecule 47: 40S ribosomal protein S1

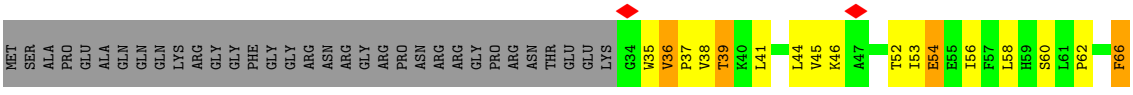
Chain S1:

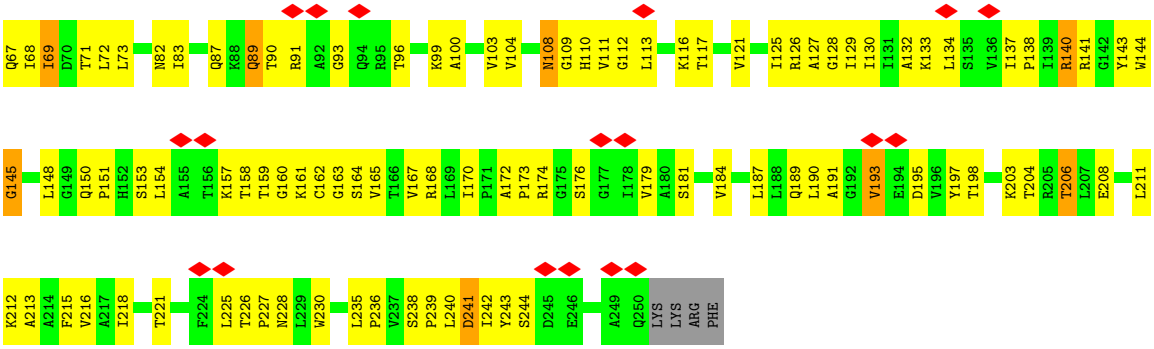




• Molecule 48: 40S ribosomal protein S2

Chain S2:



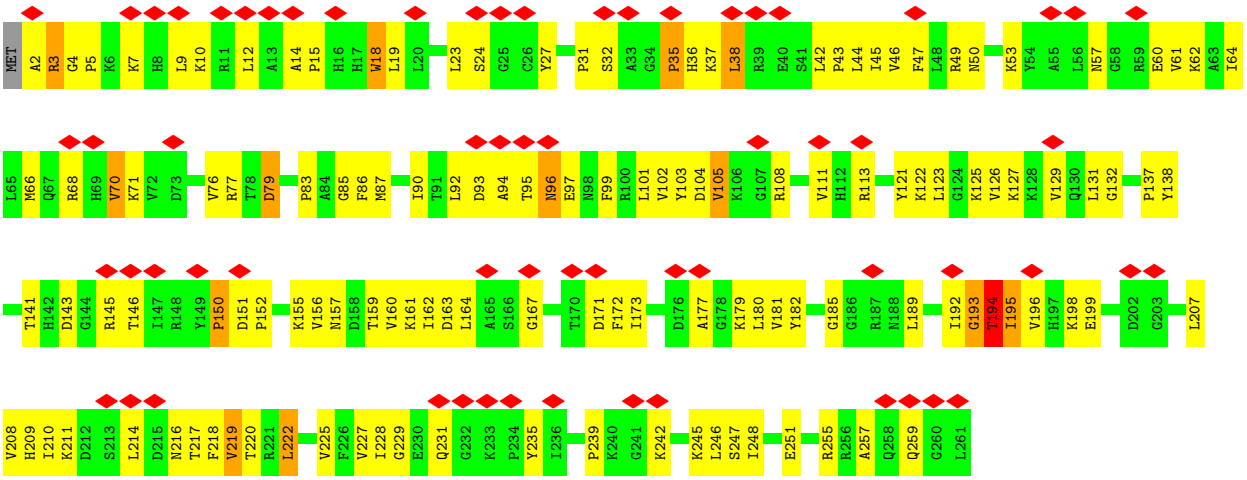


• Molecule 49: 40S ribosomal protein S3

Chain S3:

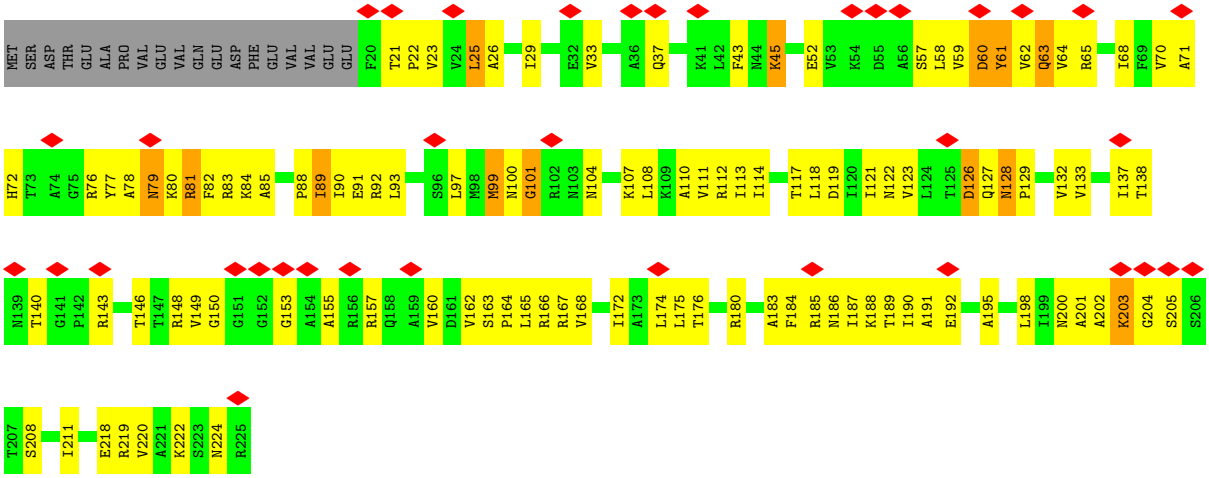
• Molecule 50: 40S ribosomal protein S4

Chain S4:



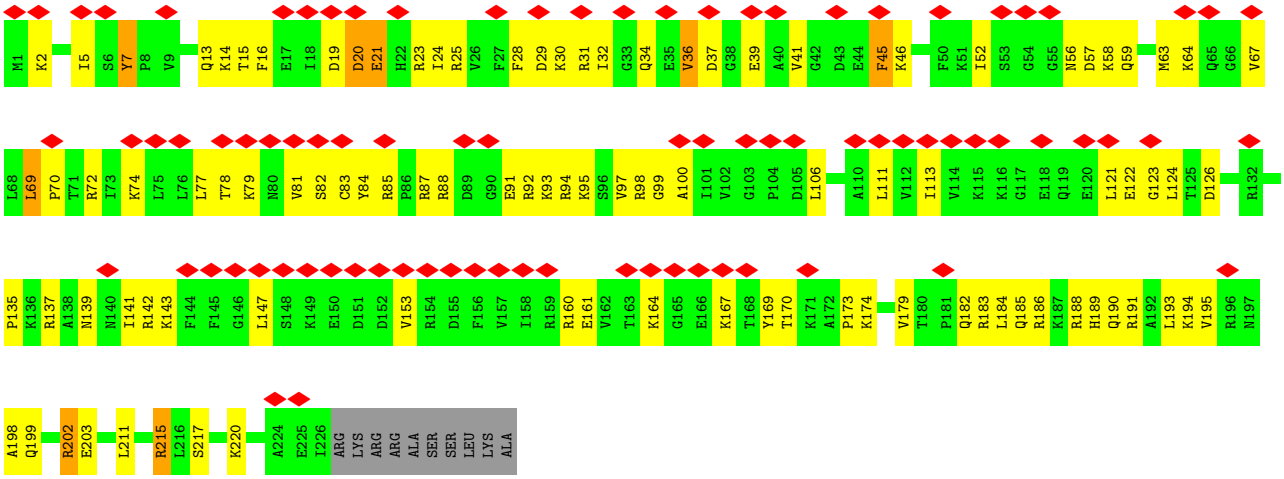
• Molecule 51: 40S ribosomal protein S5

Chain S5:



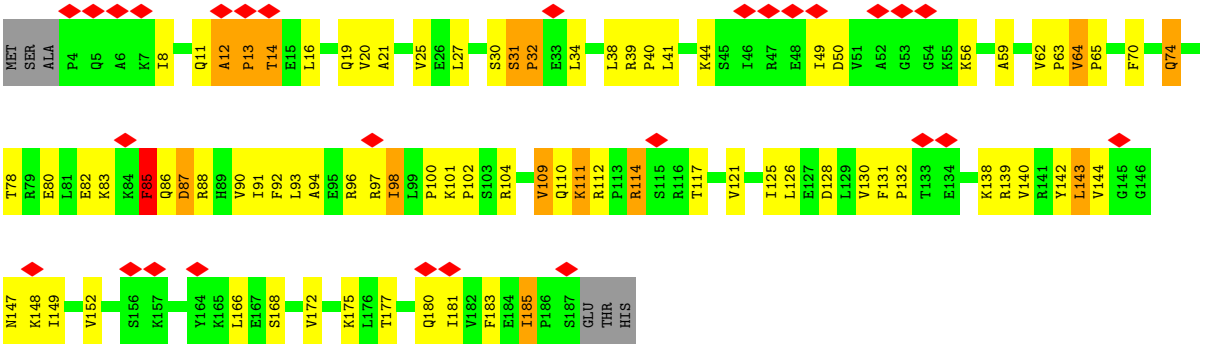
• Molecule 52: 40S ribosomal protein S6

Chain S6:



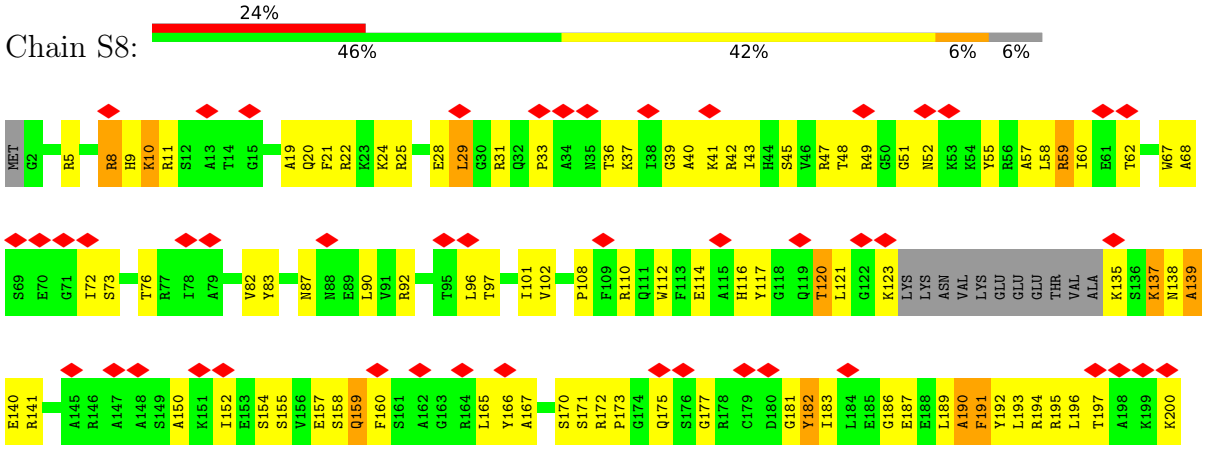
• Molecule 53: 40S ribosomal protein S7

Chain S7:



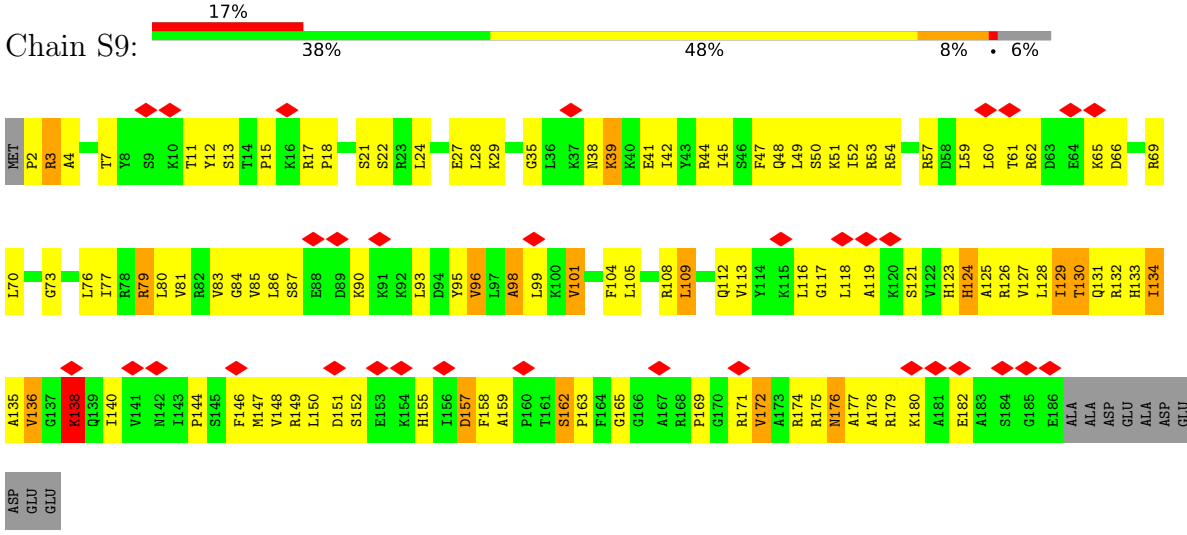
• Molecule 54: 40S ribosomal protein S8

Chain S8:



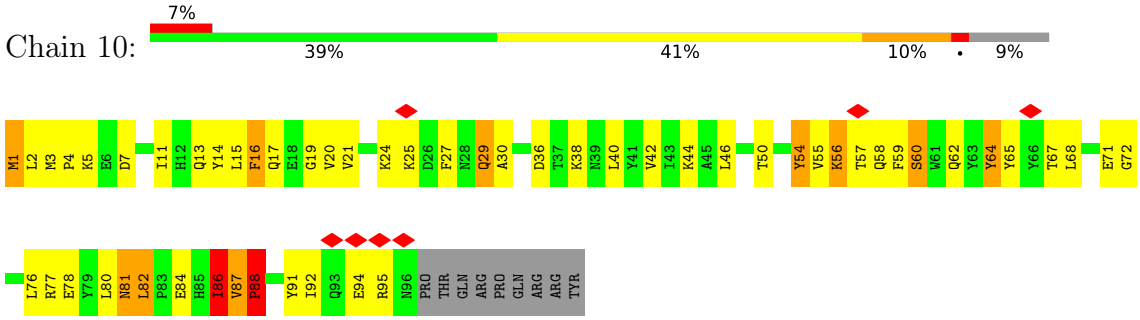
• Molecule 55: 40S ribosomal protein S9

Chain S9:



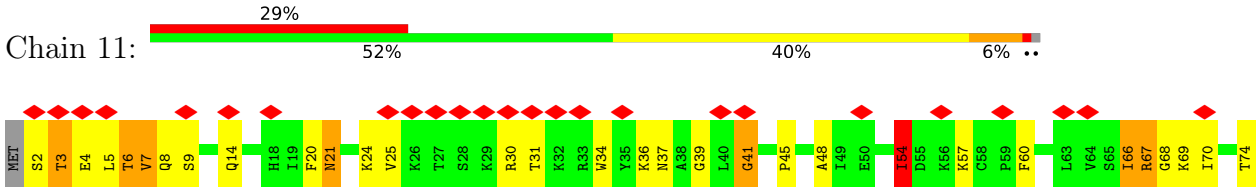
• Molecule 56: 40S ribosomal protein S10

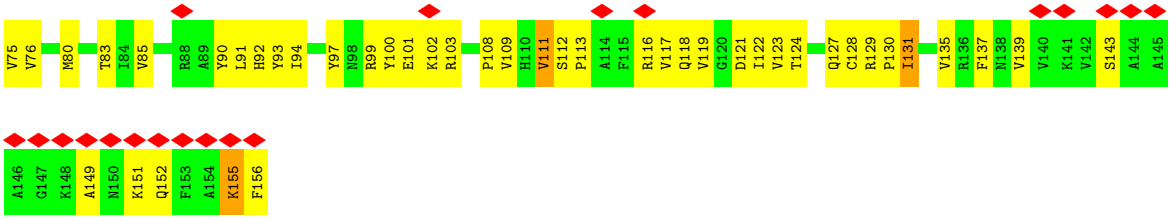
Chain 10:



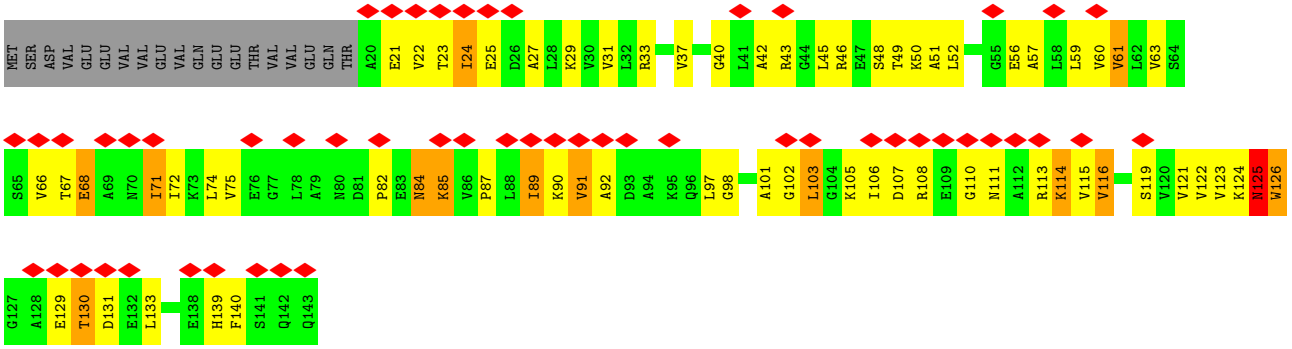
• Molecule 57: 40S ribosomal protein S11

Chain 11:

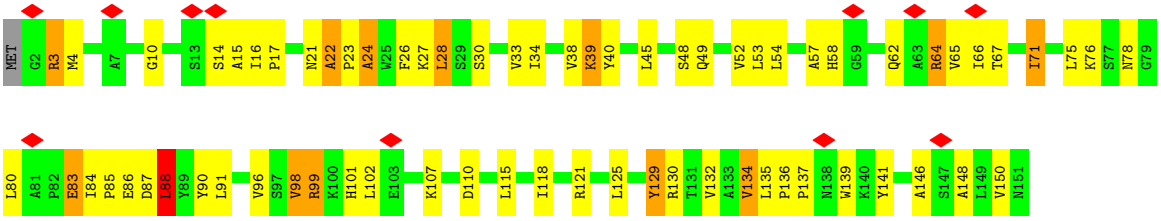




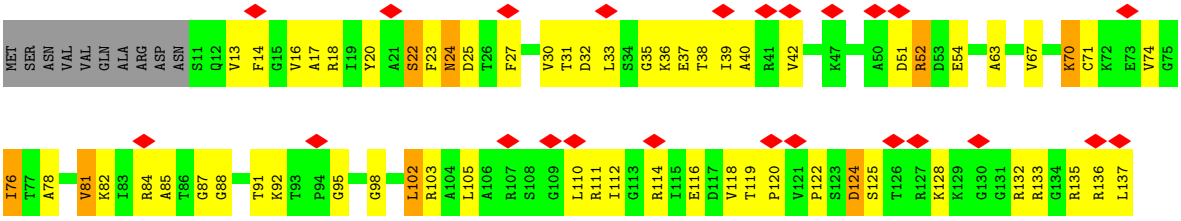
• Molecule 58: 40S ribosomal protein S12



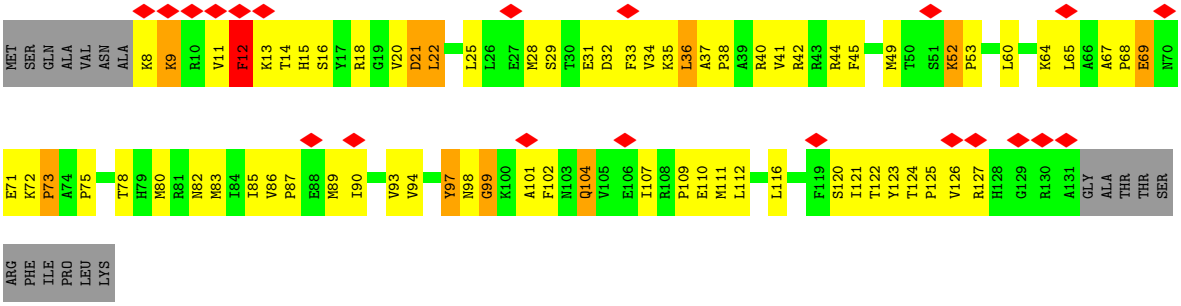
• Molecule 59: 40S ribosomal protein S13



• Molecule 60: 40S ribosomal protein S14

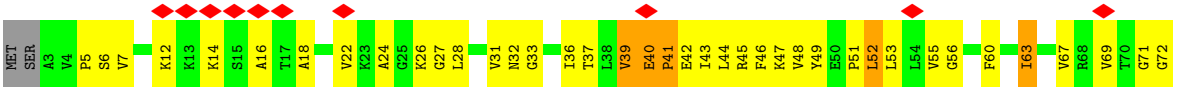


• Molecule 61: 40S ribosomal protein S15



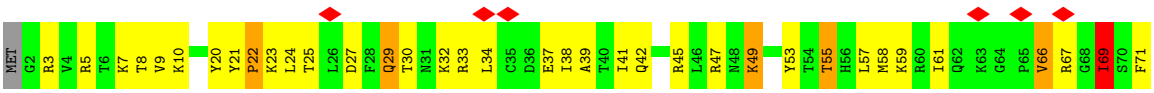
• Molecule 62: 40S ribosomal protein S16

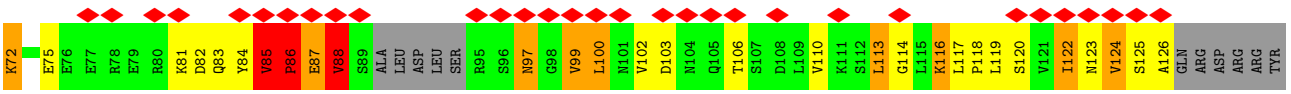
Chain 16:



• Molecule 63: 40S ribosomal protein S17

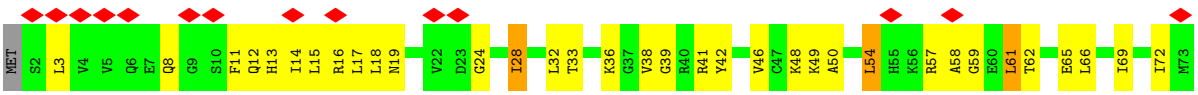
Chain 17:

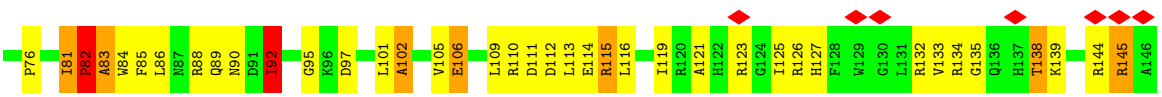




• Molecule 64: 40S ribosomal protein S18

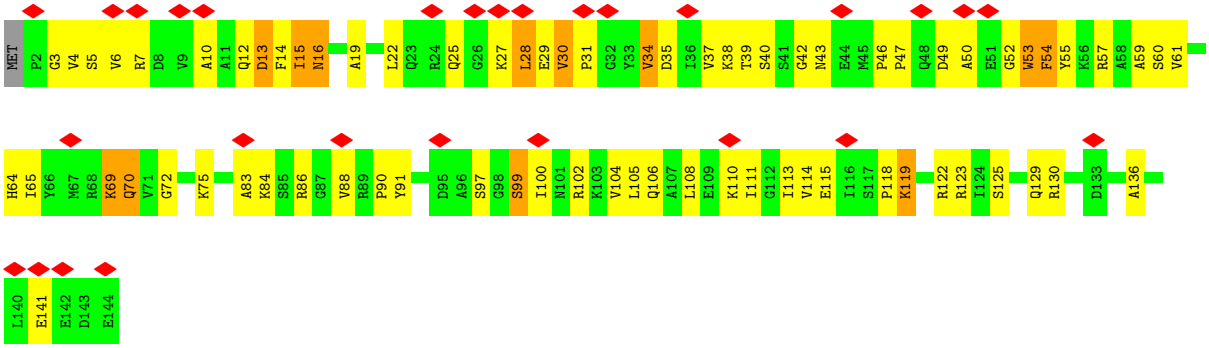
Chain 18:



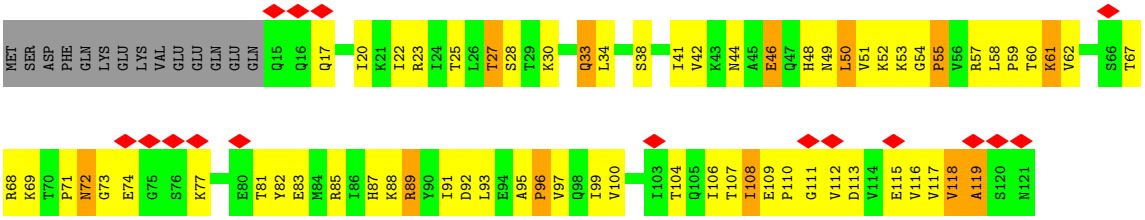


• Molecule 65: 40S ribosomal protein S19

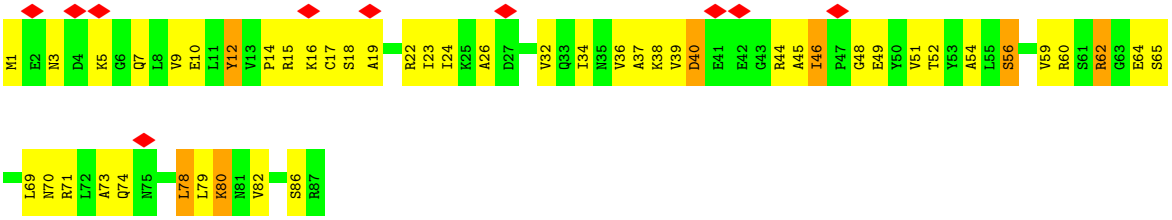
Chain 19:



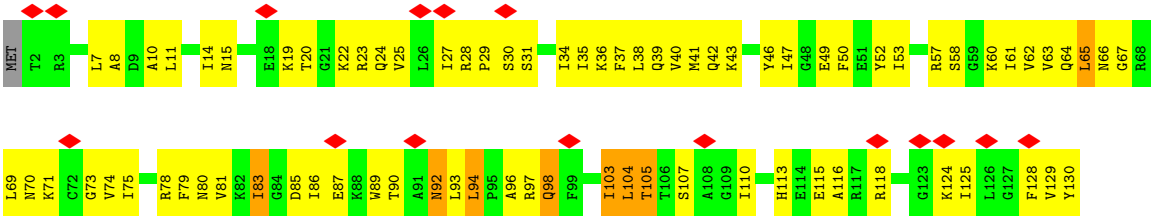
• Molecule 66: 40S ribosomal protein S20



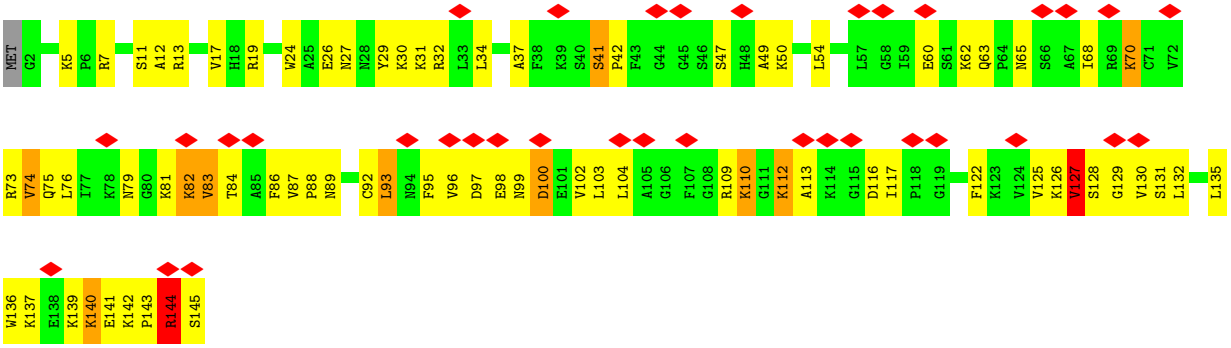
• Molecule 67: 40S ribosomal protein S21



• Molecule 68: 40S ribosomal protein S22

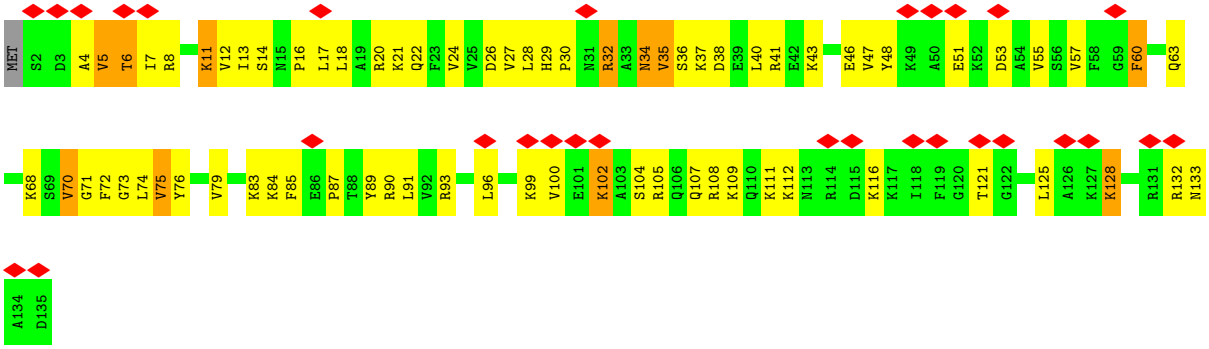


• Molecule 69: 40S ribosomal protein S23



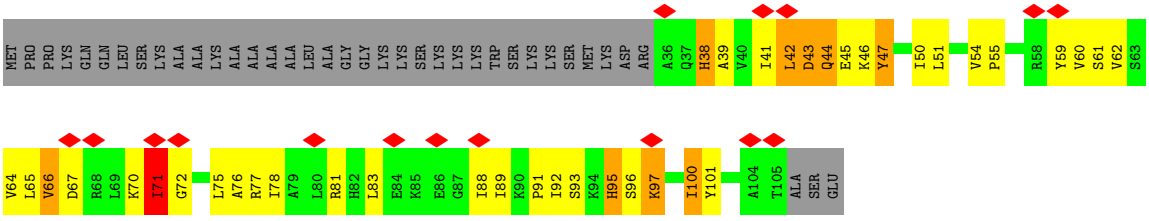
• Molecule 70: 40S ribosomal protein S24

Chain 24:



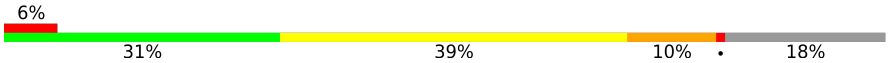
• Molecule 71: 40S ribosomal protein S25

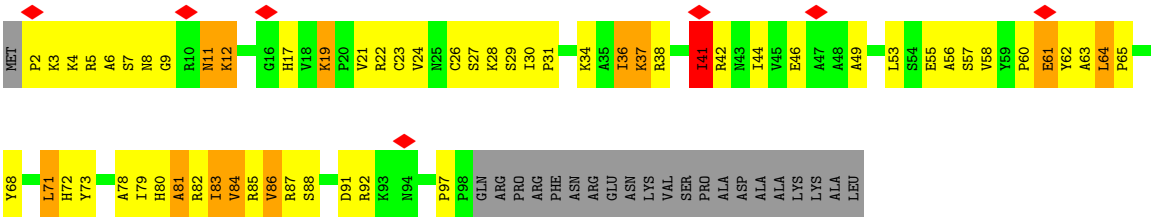
Chain 25:



• Molecule 72: 40S ribosomal protein S26

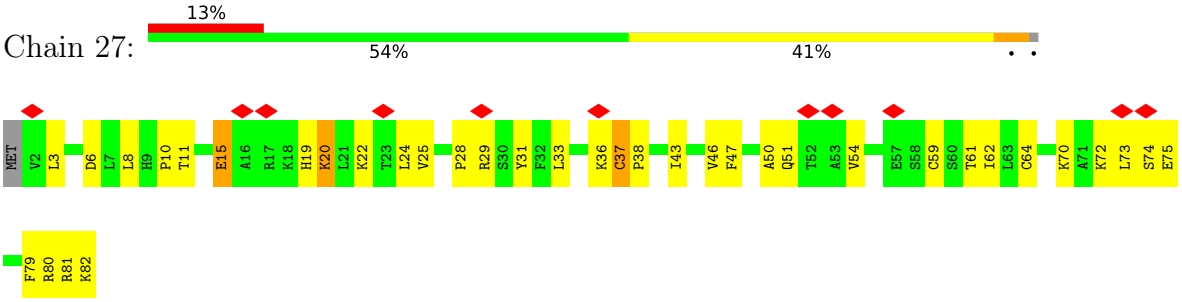
Chain 26:





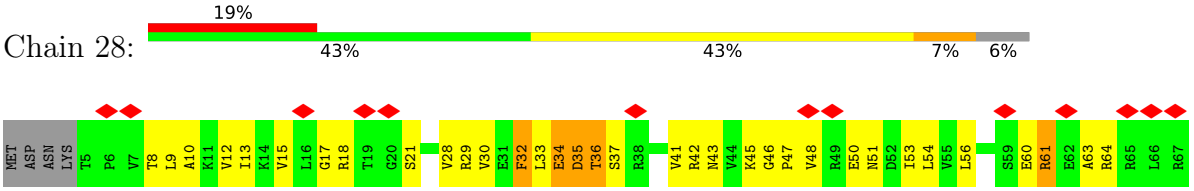
• Molecule 73: 40S ribosomal protein S27

Chain 27:



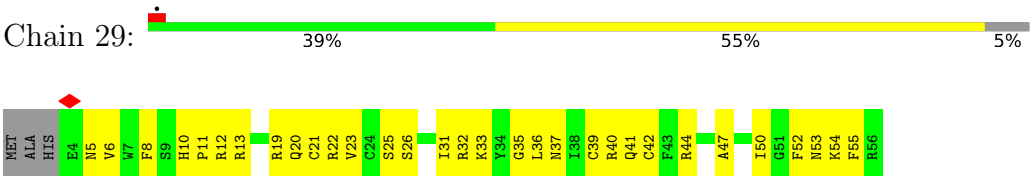
• Molecule 74: 40S ribosomal protein S28

Chain 28:



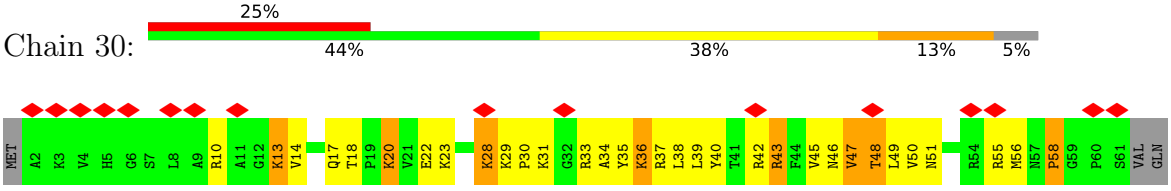
• Molecule 75: 40S ribosomal protein S29

Chain 29:



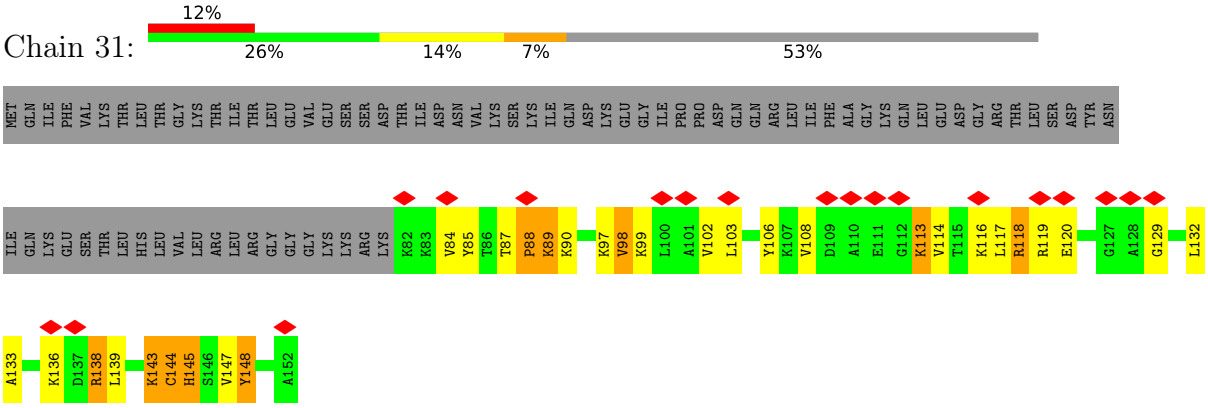
• Molecule 76: 40S ribosomal protein S30

Chain 30:



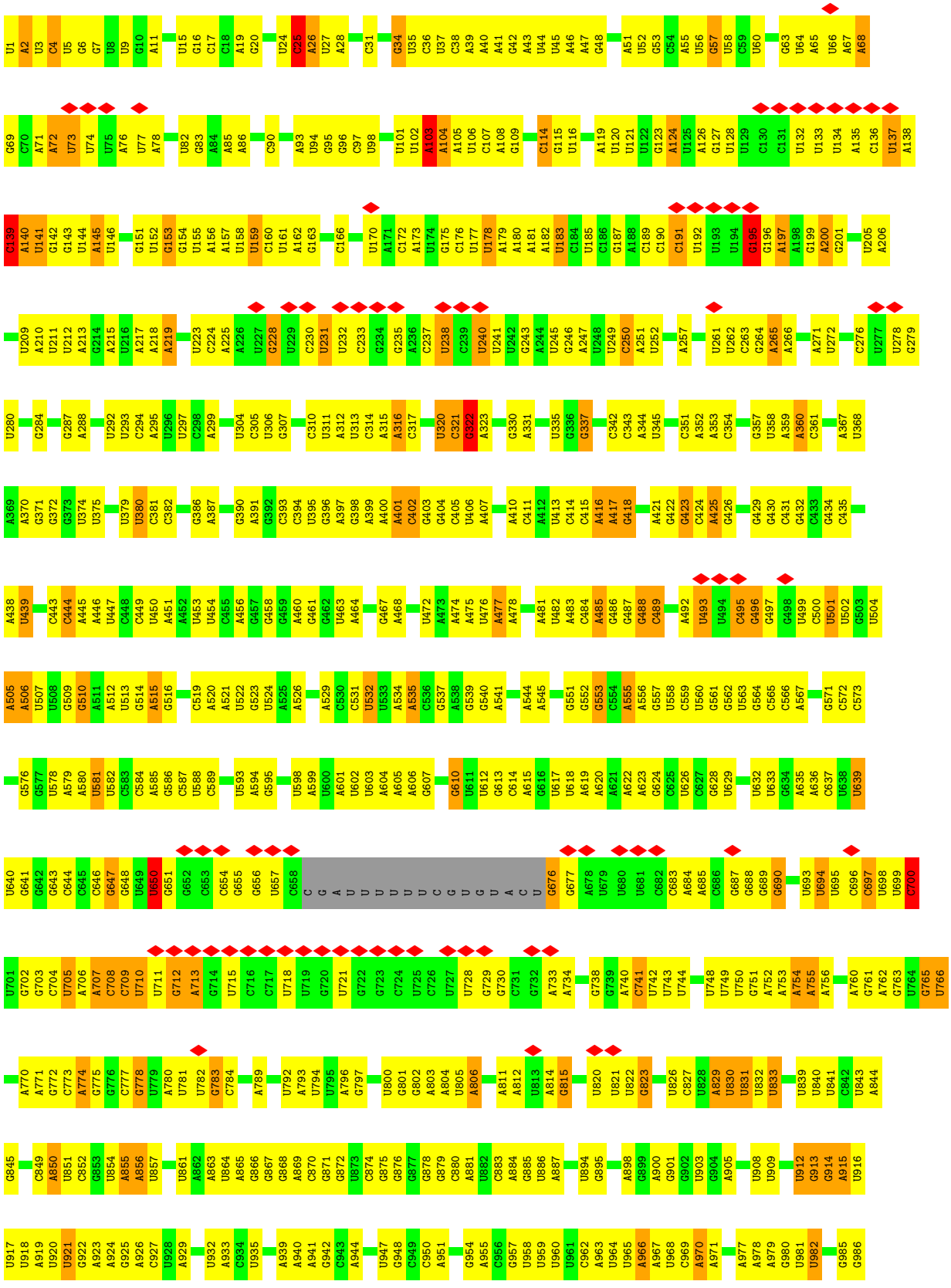
• Molecule 77: 40S ribosomal protein S31

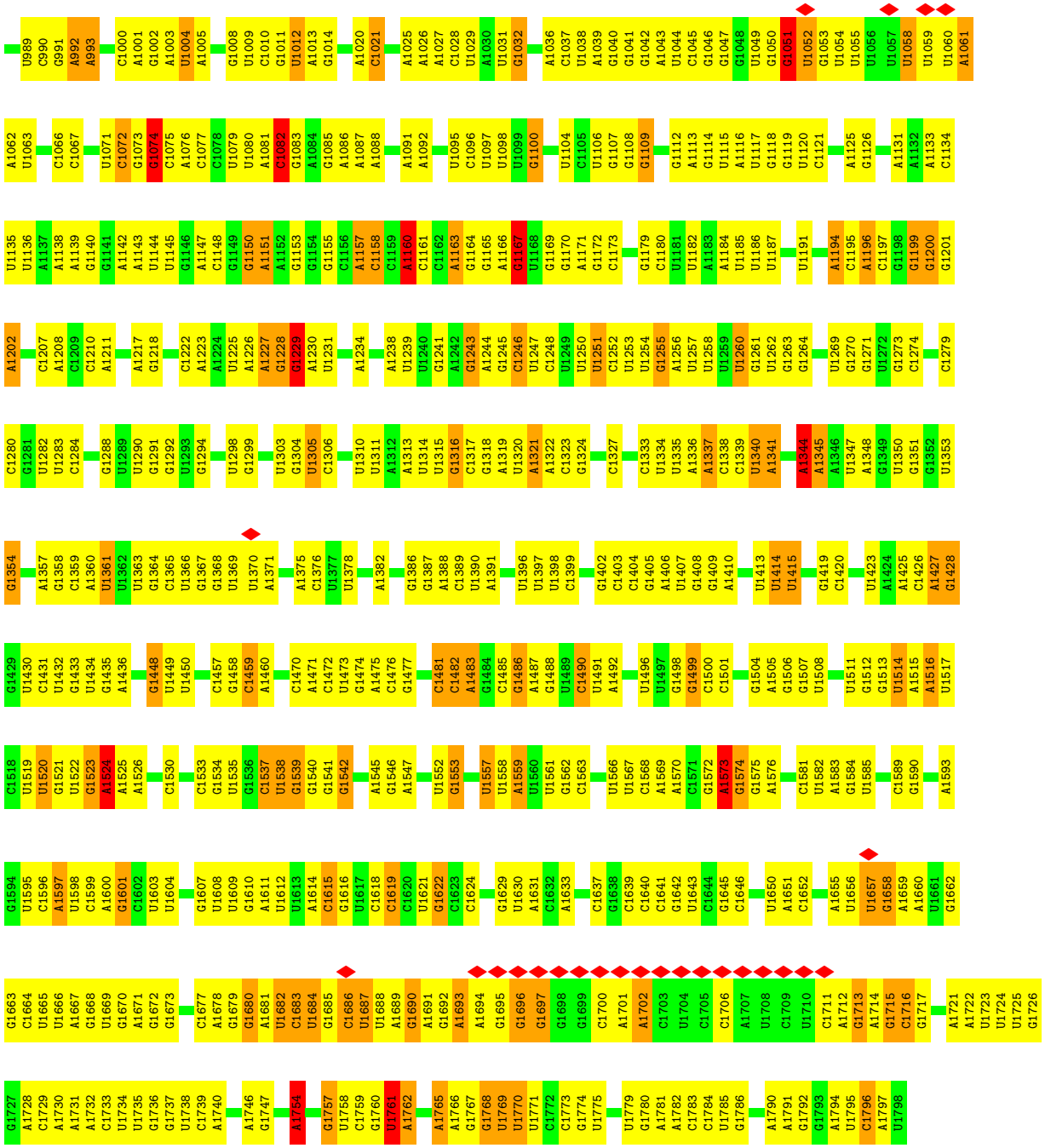
Chain 31:



• Molecule 78: 18S ribosomal RNA

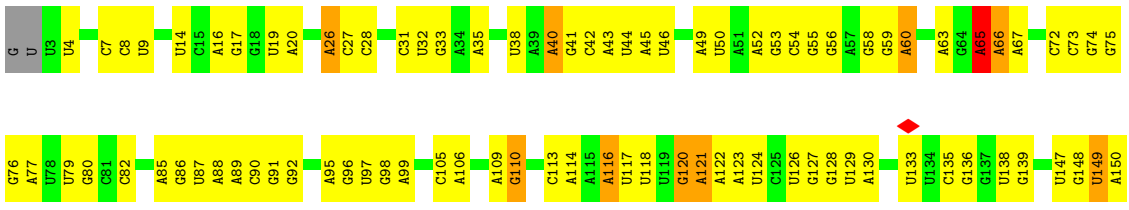
Chain 1S:

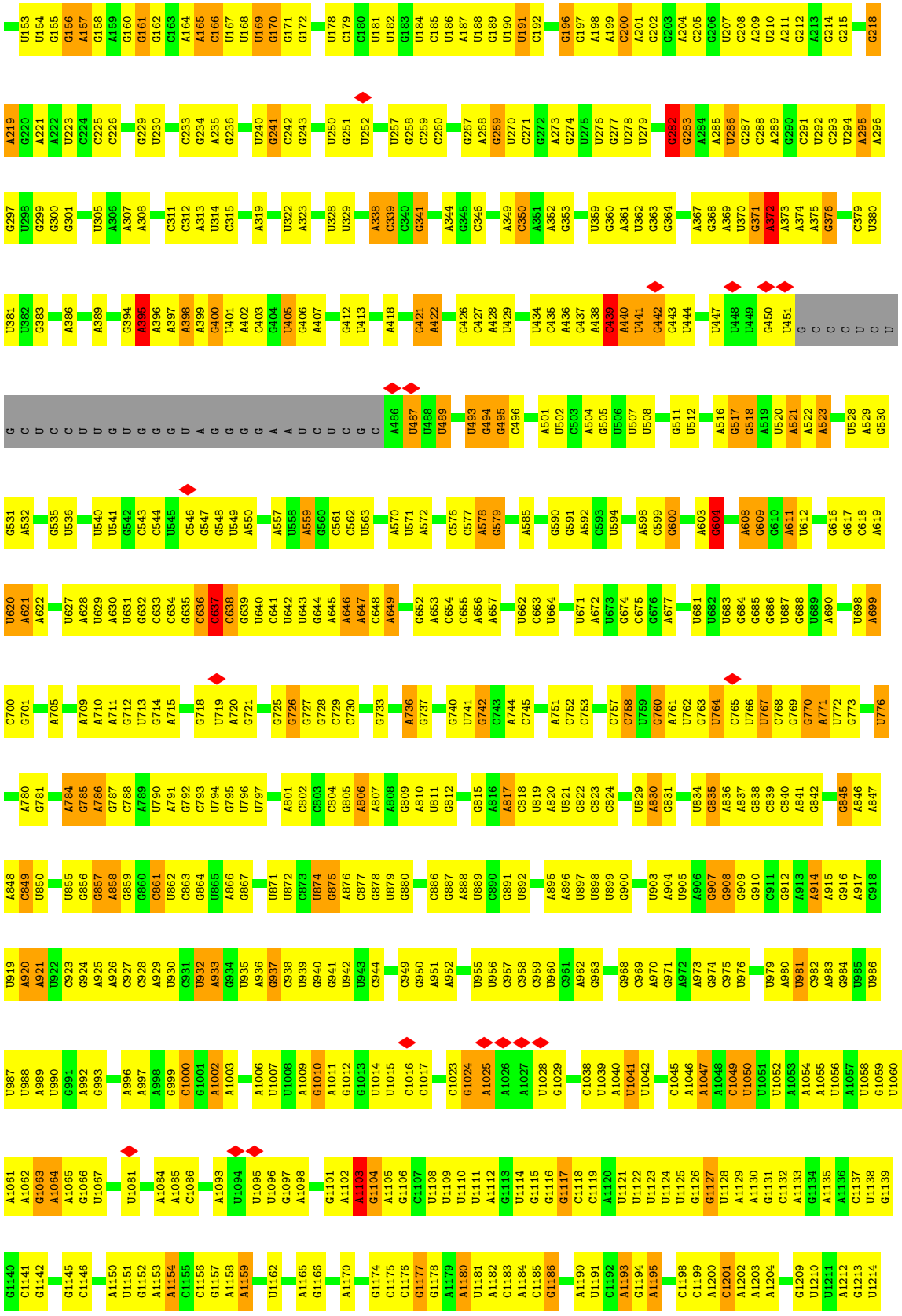


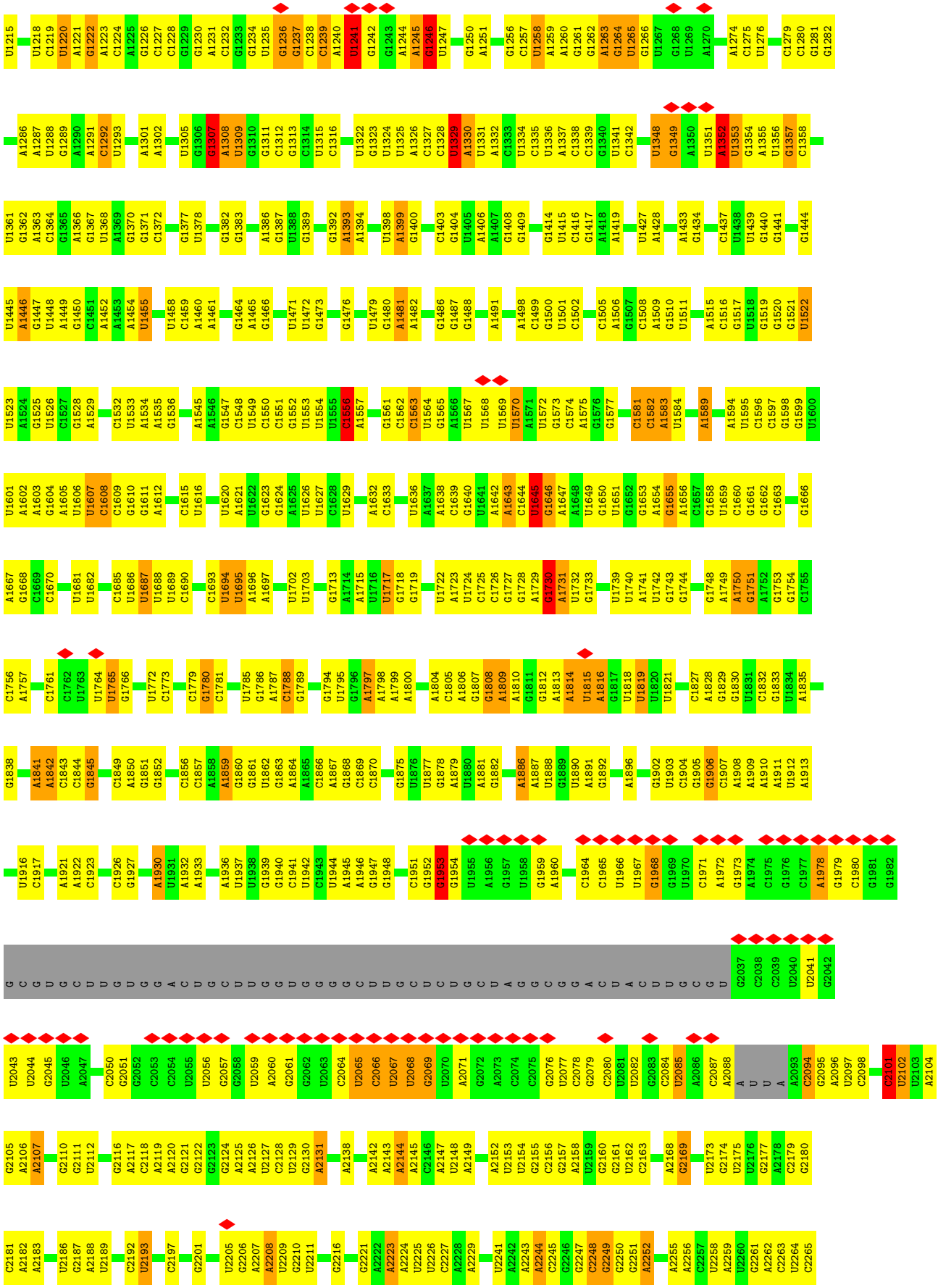


• Molecule 79: 25S ribosomal RNA

Chain 2S:






U1215 A1286 C2181
U1218 A1287 A2182
C1219 U1288 A2183
U1220 G1289 U2186
A1221 A1290 G2187
G1222 A1291 A2188
A1223 C1292 U2189
C1224 U1293 C2192
A1225 A1301 U2193
G1226 A1302 C2197
C1227 U1305 G2201
C1228 G1306 U2205
G1229 G1307 G2206
G1230 A1308 A2207
A1231 U1309 A2208
C1232 G1310 U2209
G1233 G1311 G2210
G1234 U1235 C1312 G1313 C1314 U1315 C1316 U2211
G1236 G2216
G1237 U1322 G2221
C1238 G1323 A2222
C1239 U1324 A2223
A1240 U1325 A2224
U1941 A1326 U2225
G1242 C1327 U2226
G1243 C1328 C2227
A1244 U1329 A2228
A1245 A1330 A2229
G1946 U1331 U2241
U1247 A1332 A2242
G1250 C1333 A2243
A1251 U1334 A2244
G1256 C1335 C2245
C1257 U1336 G2246
U1258 A1337 C2247
A1259 C1338 C2248
A1260 C1339 G2249
G1261 G1340 G2250
G1262 U1341 U2251
A1263 C1342 A2252
G1264 U1265 G1266 U1267 G1268 U1269 A1270 A1274 C1275 U1276 C1279 C1280 G1281 G1282
U1348 G1349 A1350 U1351 A1352 U1353 G1354 A1355 U1356 G1357 C1358
U1361 G1362 A1363 C1364 G1365 A1366 G1367 U1368 A1369 G1370 G1371 C1372 G1377 U1378 G1382 G1383 A1386 G1387 U1388 G1389 G1392 A1393 A1394 U1398 A1399 G1400 C1403 G1404 U1405 A1406 A1407 G1408 G1409 G1414 U1415 C1416 G1417 A1418 A1419 U1427 A1428 A1433 G1434 C1437 U1438 U1439 G1440 G1441 G1444
U1445 A1446 G1447 U1448 A1449 G1450 C1451 A1452 A1453 A1454 U1455 U1458 C1459 A1460 A1461 G1464 A1465 G1466 U1471 U1472 G1473 G1476 U1479 G1480 A1481 A1482 G1486 G1487 G1488 A1491 A1498 C1499 G1500 U1501 C1502 C1505 A1506 G1507 C1508 A1509 G1510 U1511 A1515 C1516 G1517 U1518 G1519 G1520 G1521 U1522
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U1601 A1602 A1603 G1604 A1605 U1606 U1607 C1608 C1609 G1610 G1611 A1612 C1615 U1616 U1620 A1621 U1622 G1623 G1624 A1625 U1626 U1627 C1628 U1629 A1632 C1633 U1636 A1637 A1638 C1639 G1640 U1641 A1642 A1643 C1644 U1645 G1646 A1647 A1648 U1649 G1650 U1651 G1652 G1653 A1654 G1655 A1656 C1657 G1658 U1659 C1660 G1661 G1662 C1663 G1666
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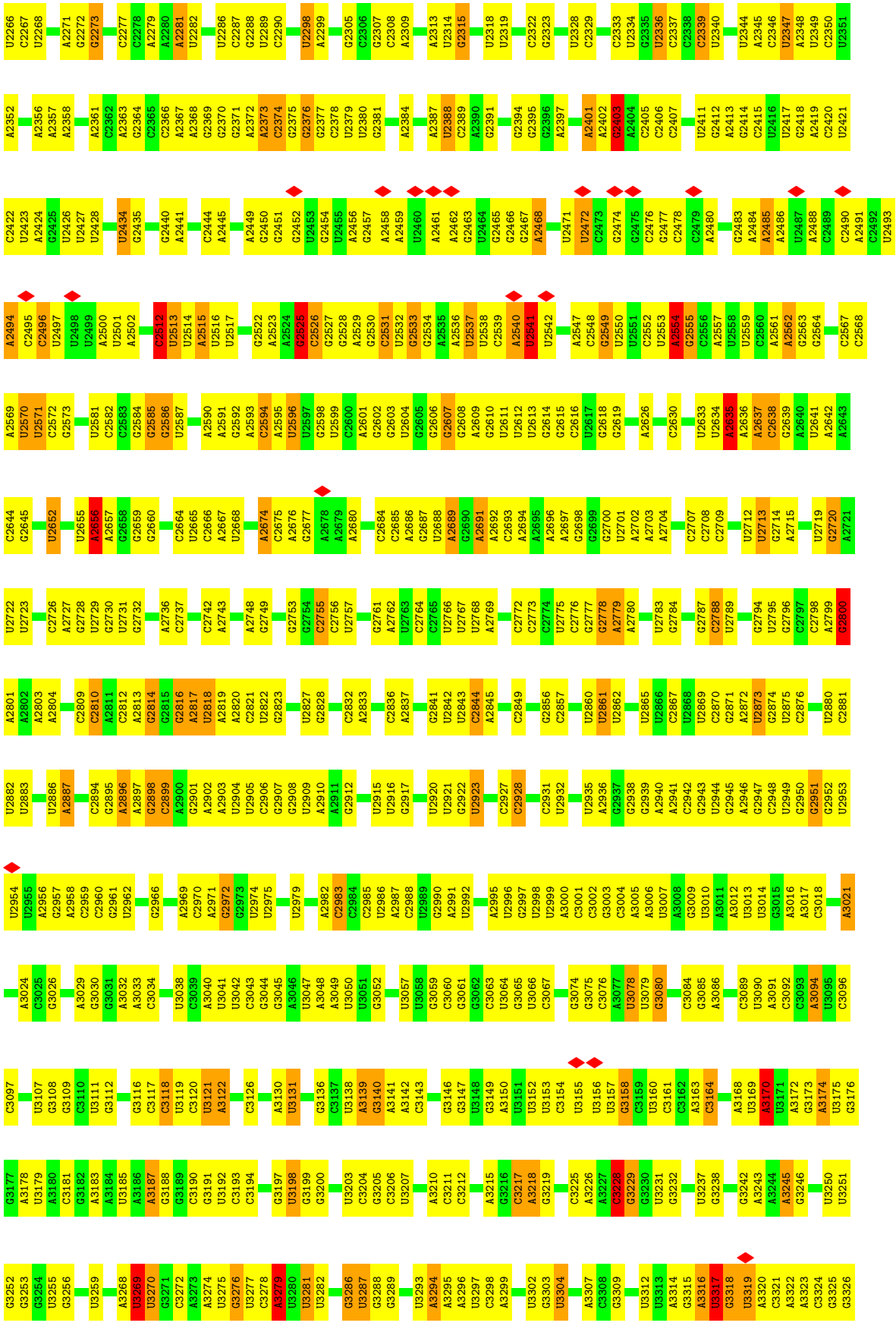
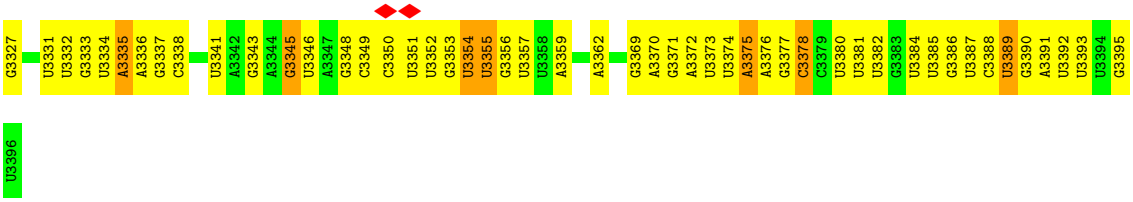
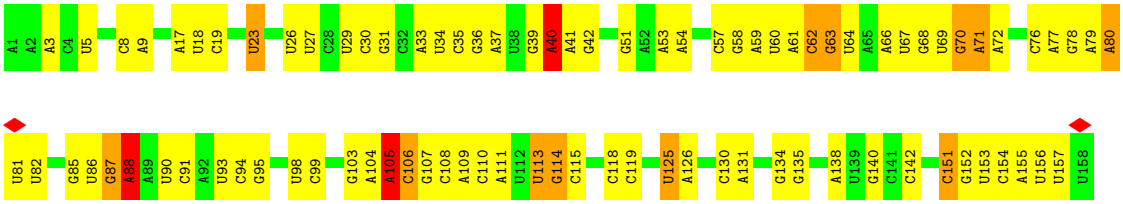
U1916 C1917 A1921 A1922 C1923 C1926 G1927 A1930 U1931 A1932 A1933 A1936 U1937 U1938 G1939 G1940 C1941 U1942 C1943 U1944 A1945 A1946 G1947 G1948 C1951 G1952 G1953 G1954 U1955 A1956 G1957 U1958 G1959 A1960 C1964 C1965 U1966 U1967 G1968 G1969 U1970 C1971 A1972 G1973 A1974 C1975 G1976 C1977 A1978 G1979 C1980 G1981 G1982
G U C G U G C U U G U G G A C U U G C U G C U U G U G G G C U U A G G C G C G A C U A C U U G C G C U G G U G2037 C2038 C2039 U2040 U2041 C2042
U2043 U2044 G2045 U2046 A2047 C2050 G2051 G2052 C2053 C2054 U2055 U2056 G2057 G2058 U2059 A2060 G2061 G2062 U2063 C2064 U2065 C2066 U2067 U2068 G2069 U2070 A2071 G2072 A2073 C2074 C2075 G2076 U2077 C2078 G2079 C2080 U2081 U2082 G2083 C2084 U2085 A2086 C2087 A2088 A U U A A2093 C2094 G2095 A2096 U2097 C2098 C2101 U2102 U2103 A2104
G2105 A2106 A2107 G2110 G2111 U2112 G2116 A2117 C2118 A2119 A2120 G2121 G2122 G2123 G2124 A2125 A2126 U2127 C2128 U2129 G2130 A2131 A2138 A2142 A2143 A2144 A2145 C2146 A2147 U2148 A2149 A2152 U2153 U2154 G2155 C2156 G2157 A2158 U2159 G2160 G2161 U2162 C2163 A2168 G2169 U2173 G2174 U2175 U2176 G2177 A2178 C2179 G2180
C2181 A2182 A2183 U2186 G2187 A2188 U2189 C2192 U2193 C2197 G2201 U2205 G2206 A2207 A2208 U2209 G2210 U2211 G2216 G2221 A2222 A2223 A2224 U2225 U2226 C2227 A2228 A2229 U2241 A2242 A2243 A2244 C2245 C2246 G2247 C2248 G2249 G2250 G2251 A2252 A2255 A2256 C2257 U2258 A2259 U2260 G2261 A2262 C2263 U2264 C2265





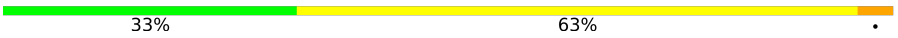
• Molecule 80: 5.8S ribosomal RNA

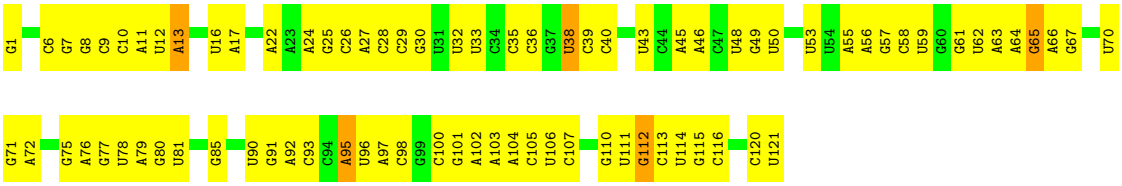
Chain 8S:



• Molecule 81: 5S ribosomal RNA

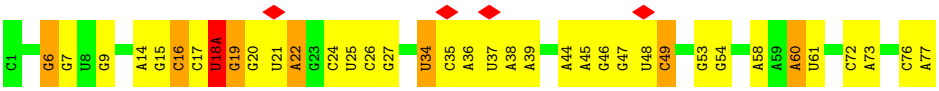
Chain 5S:





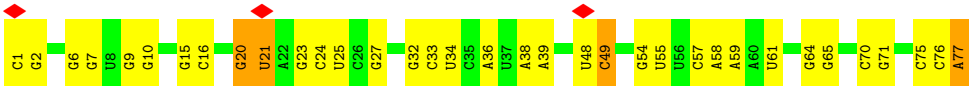
• Molecule 82: P/E-site initiator transfer RNAfMet

Chain ET:



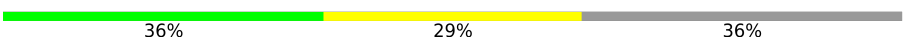
• Molecule 82: P/E-site initiator transfer RNAfMet

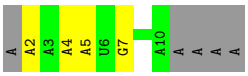
Chain PT:



• Molecule 83: messenger RNA

Chain MR:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	23163	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	CTFFIND3, FREALIGN per micrograph	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	1159	Depositor
Maximum defocus (nm)	4844	Depositor
Magnification	133333	Depositor
Image detector	FEI FALCON I (4k x 4k)	Depositor
Maximum map value	0.430	Depositor
Minimum map value	-0.198	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.048	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	377.99997, 377.99997, 377.99997	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.05, 1.05, 1.05	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	L1	0.84	0/1634	1.06	8/2195 (0.4%)
2	L2	0.55	0/1952	0.92	4/2622 (0.2%)
3	L3	0.61	0/3153	0.91	8/4239 (0.2%)
4	L4	0.59	0/2802	0.96	11/3792 (0.3%)
5	L5	0.62	0/2426	0.99	8/3271 (0.2%)
6	L6	0.67	0/1261	1.00	7/1694 (0.4%)
7	L7	0.57	0/1822	1.05	4/2451 (0.2%)
8	L8	0.60	0/1850	1.00	8/2495 (0.3%)
9	L9	0.64	0/1540	0.97	11/2073 (0.5%)
10	60	0.56	0/1754	0.92	3/2350 (0.1%)
11	61	0.63	0/1375	0.94	4/1842 (0.2%)
12	62	0.82	0/700	1.24	11/968 (1.1%)
13	63	0.59	0/1568	0.99	7/2106 (0.3%)
14	64	0.65	0/1069	0.93	2/1438 (0.1%)
15	65	0.53	0/1758	0.90	3/2354 (0.1%)
16	66	0.56	0/1586	1.04	13/2128 (0.6%)
17	67	0.61	0/1466	0.95	6/1968 (0.3%)
18	68	0.60	0/1466	0.99	7/1965 (0.4%)
19	69	0.50	0/1539	1.02	8/2050 (0.4%)
20	70	0.62	0/1482	0.93	1/1990 (0.1%)
21	71	0.61	0/1301	0.95	1/1743 (0.1%)
22	72	0.75	2/812 (0.2%)	0.91	0/1099
23	73	0.58	0/1019	0.95	2/1369 (0.1%)
24	74	0.55	0/540	0.92	1/717 (0.1%)
25	75	0.62	0/984	0.97	2/1325 (0.2%)
26	76	0.60	0/1005	0.95	6/1341 (0.4%)
27	77	0.61	0/1119	0.92	4/1497 (0.3%)
28	78	0.57	0/1205	1.02	6/1612 (0.4%)
29	79	0.57	0/474	1.09	4/629 (0.6%)
30	80	0.59	0/751	0.85	1/1008 (0.1%)
31	81	0.56	0/904	0.91	1/1213 (0.1%)
32	82	0.55	0/1041	0.93	5/1394 (0.4%)
33	83	0.61	0/869	0.97	5/1168 (0.4%)
34	84	0.61	0/891	0.96	4/1191 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	85	0.54	0/979	0.97	1/1301 (0.1%)
36	86	0.56	0/779	1.09	4/1034 (0.4%)
37	87	0.53	0/697	0.88	2/923 (0.2%)
38	88	0.71	1/619 (0.2%)	0.87	1/826 (0.1%)
39	89	0.51	0/444	0.87	0/588
40	90	0.54	0/424	0.90	1/562 (0.2%)
41	91	0.50	0/235	0.94	1/300 (0.3%)
42	92	0.57	0/861	0.91	5/1136 (0.4%)
43	93	0.51	0/702	0.90	0/934
44	P0	0.80	0/1002	1.08	7/1348 (0.5%)
45	RC	0.69	0/2498	0.93	5/3398 (0.1%)
46	S0	0.69	0/1653	1.00	7/2261 (0.3%)
47	S1	0.64	1/1735 (0.1%)	0.92	2/2335 (0.1%)
48	S2	0.67	0/1665	0.97	8/2263 (0.4%)
49	S3	0.64	0/1759	0.98	6/2368 (0.3%)
50	S4	0.66	0/2110	0.97	7/2839 (0.2%)
51	S5	0.65	0/1630	0.98	6/2202 (0.3%)
52	S6	0.65	0/1844	0.96	5/2464 (0.2%)
53	S7	0.68	0/1506	1.00	1/2028 (0.0%)
54	S8	0.57	0/1515	0.95	6/2021 (0.3%)
55	S9	0.59	0/1519	1.06	14/2035 (0.7%)
56	10	0.69	0/837	1.01	4/1131 (0.4%)
57	11	0.68	1/1273 (0.1%)	0.93	7/1712 (0.4%)
58	12	0.78	0/943	1.04	5/1274 (0.4%)
59	13	0.60	0/1216	1.05	6/1638 (0.4%)
60	14	0.64	0/953	0.97	2/1279 (0.2%)
61	15	0.70	0/1012	1.08	3/1356 (0.2%)
62	16	0.65	0/1126	0.99	2/1510 (0.1%)
63	17	0.76	0/974	1.10	5/1304 (0.4%)
64	18	0.64	0/1212	0.98	4/1628 (0.2%)
65	19	0.64	0/1131	1.03	8/1517 (0.5%)
66	20	0.78	0/866	0.90	0/1169
67	21	0.60	0/694	0.87	1/935 (0.1%)
68	22	0.57	0/1039	0.96	6/1395 (0.4%)
69	23	0.58	0/1140	0.93	5/1518 (0.3%)
70	24	0.66	0/1088	1.00	2/1449 (0.1%)
71	25	0.68	0/571	1.11	5/768 (0.7%)
72	26	0.64	0/782	0.90	1/1047 (0.1%)
73	27	0.68	0/621	0.90	1/838 (0.1%)
74	28	0.71	0/500	0.88	0/670
75	29	0.57	0/454	0.89	1/602 (0.2%)
76	30	0.66	0/483	0.98	1/643 (0.2%)
77	31	0.78	0/505	1.12	4/682 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
78	1S	0.68	0/42445	0.66	35/66138 (0.1%)
79	2S	0.66	2/79038 (0.0%)	0.64	47/123226 (0.0%)
80	8S	0.64	0/3747	0.62	2/5832 (0.0%)
81	5S	0.65	0/2884	0.61	0/4491
82	ET	0.72	0/1836	0.64	1/2859 (0.0%)
82	PT	0.68	0/1836	0.62	0/2859
83	MR	0.81	0/219	0.69	0/339
All	All	0.65	7/224719 (0.0%)	0.79	423/330272 (0.1%)

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
78	1S	0	23
79	2S	3	56
80	8S	0	6
All	All	3	85

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	S1	189	ILE	CA-CB	7.49	1.58	1.54
22	72	107	PHE	CA-C	6.78	1.55	1.52
57	11	155	LYS	CA-C	5.69	1.55	1.52
38	88	70	PRO	CA-C	5.35	1.54	1.51
22	72	100	THR	CA-CB	5.14	1.59	1.52
79	2S	489	U	O5'-C5'	5.08	1.50	1.42
79	2S	444	U	O5'-C5'	5.02	1.50	1.42

All (423) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
78	1S	829	A	C2'-C3'-O3'	13.26	129.39	109.50
7	L7	161	VAL	N-CA-C	12.06	118.53	107.56
77	31	144	CYS	N-CA-C	-9.99	92.32	108.41
79	2S	2065	U	C2'-C3'-O3'	9.99	128.69	113.70
79	2S	2512	C	C2'-C3'-O3'	9.26	127.58	113.70
44	P0	95	GLU	N-CA-C	9.08	121.26	111.36
78	1S	1051	G	C2'-C3'-O3'	9.05	123.07	109.50
5	L5	232	ASP	N-CA-C	8.96	117.35	108.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
71	25	95	HIS	N-CA-C	8.94	122.95	109.63
79	2S	2541	U	C2'-C3'-O3'	8.92	122.88	109.50
59	13	134	VAL	N-CA-C	-8.83	104.88	113.53
78	1S	139	C	C2'-C3'-O3'	8.79	122.68	109.50
79	2S	1307	G	C2'-C3'-O3'	8.75	122.62	109.50
3	L3	349	LYS	N-CA-C	-8.57	102.08	112.54
46	S0	201	LEU	N-CA-C	-8.37	103.21	113.50
19	69	180	LYS	N-CA-C	-8.31	103.27	113.41
75	29	6	VAL	N-CA-C	-8.24	104.67	112.83
79	2S	2554	A	C2'-C3'-O3'	8.22	121.83	109.50
78	1S	829	A	C4'-C3'-O3'	8.13	121.60	109.40
55	S9	177	ALA	N-CA-C	-8.12	103.17	113.23
79	2S	493	U	N1-C1'-C2'	8.10	124.15	112.00
77	31	145	HIS	N-CA-C	8.05	121.07	111.33
79	2S	3228	C	C2'-C3'-O3'	8.04	121.56	109.50
52	S6	215	ARG	N-CA-C	-7.91	104.23	114.04
33	83	89	LEU	CA-C-N	7.86	127.53	119.19
33	83	89	LEU	C-N-CA	7.86	127.53	119.19
65	19	30	VAL	N-CA-C	7.86	116.65	108.95
78	1S	676	G	C2'-C3'-O3'	7.85	121.28	109.50
78	1S	1761	U	C2'-C3'-O3'	7.77	121.16	109.50
79	2S	1329	U	C2'-C3'-O3'	7.67	121.00	109.50
16	66	110	PRO	N-CA-C	7.66	120.05	110.70
50	S4	248	ILE	N-CA-C	7.60	117.71	110.42
78	1S	103	A	C2'-C3'-O3'	7.49	120.74	109.50
16	66	176	LYS	N-CA-C	-7.48	104.31	113.50
55	S9	39	LYS	N-CA-C	-7.47	104.16	113.28
79	2S	1241	U	C2'-C3'-O3'	7.47	120.70	109.50
9	L9	15	GLY	N-CA-C	7.45	123.53	113.99
50	S4	94	ALA	N-CA-C	-7.36	99.38	110.28
82	ET	18(A)	U	C2'-C3'-O3'	7.35	120.53	109.50
79	2S	1556	C	C2'-C3'-O3'	7.31	120.46	109.50
79	2S	2512	C	C4'-C3'-O3'	7.30	123.94	113.00
8	L8	251	LYS	N-CA-C	-7.27	105.33	114.56
33	83	92	LYS	N-CA-C	-7.25	104.17	113.16
1	L1	44	GLN	N-CA-C	7.22	117.80	108.34
79	2S	3317	U	C2'-C3'-O3'	7.22	120.33	109.50
28	78	13	GLY	N-CA-C	-7.21	105.87	113.58
78	1S	25	C	C2'-C3'-O3'	7.16	120.25	109.50
16	66	101	ARG	N-CA-C	-7.16	104.56	112.72
57	11	131	ILE	N-CA-C	-7.14	104.81	111.45
79	2S	169	U	C2'-C3'-O3'	7.10	120.14	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	74	54	LEU	N-CA-C	-7.09	104.09	112.89
64	18	101	LEU	N-CA-C	7.05	119.91	108.41
12	62	88	PRO	N-CA-CB	7.05	109.92	103.08
7	L7	56	GLU	N-CA-C	6.95	118.85	111.28
11	61	85	LYS	N-CA-C	-6.89	103.85	111.36
4	L4	117	GLU	N-CA-C	-6.89	104.69	113.23
68	22	113	HIS	N-CA-C	6.87	118.77	111.28
61	15	64	LYS	N-CA-C	-6.87	105.05	113.50
51	S5	61	TYR	N-CA-C	-6.86	104.05	113.18
78	1S	1573	A	C2'-C3'-O3'	6.83	119.75	109.50
79	2S	1103	A	C2'-C3'-O3'	6.81	119.71	109.50
8	L8	113	ALA	N-CA-C	-6.79	104.00	112.90
12	62	30	PRO	N-CA-CB	6.74	110.33	103.25
79	2S	2101	C	C2'-C3'-O3'	6.70	119.56	109.50
55	S9	109	LEU	N-CA-C	-6.70	103.79	112.23
12	62	148	PRO	N-CA-CB	6.68	110.26	103.25
12	62	89	PRO	N-CA-CB	6.64	110.23	103.25
78	1S	861	U	N1-C1'-C2'	6.63	121.94	112.00
44	P0	9	ALA	N-CA-C	-6.62	104.67	112.89
17	67	46	LYS	N-CA-C	-6.61	104.15	111.82
28	78	44	ASN	N-CA-C	-6.61	103.90	112.23
1	L1	175	GLU	N-CA-C	-6.58	105.88	114.04
5	L5	283	ALA	N-CA-C	-6.58	105.00	113.16
78	1S	453	U	N1-C1'-C2'	6.57	121.85	112.00
78	1S	1052	U	N1-C1'-C2'	6.53	121.80	112.00
78	1S	1754	A	N9-C1'-C2'	6.49	121.73	112.00
10	60	158	LYS	N-CA-C	-6.48	106.59	114.75
12	62	75	PRO	N-CA-CB	6.47	110.05	103.25
78	1S	1481	C	C4'-C3'-O3'	6.47	119.10	109.40
3	L3	138	ALA	N-CA-C	-6.45	103.49	112.45
53	S7	85	PHE	N-CA-C	-6.43	102.75	111.55
12	62	34	PRO	N-CA-CB	6.42	110.00	103.25
50	S4	255	ARG	N-CA-C	-6.42	105.08	113.17
23	73	97	ASP	N-CA-C	6.41	116.92	107.88
33	83	86	ARG	N-CA-C	-6.40	103.59	111.40
2	L2	186	PHE	N-CA-C	-6.39	104.23	111.14
78	1S	240	U	C2'-C3'-O3'	6.39	119.09	109.50
63	17	85	VAL	N-CA-C	6.39	122.68	108.88
77	31	143	LYS	N-CA-C	-6.37	104.26	111.14
78	1S	228	G	N9-C1'-C2'	6.35	121.53	112.00
62	16	111	SER	N-CA-C	-6.34	105.37	113.23
16	66	109	PRO	CA-C-N	6.33	126.90	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	66	109	PRO	C-N-CA	6.33	126.90	120.38
79	2S	1481	A	N9-C1'-C2'	6.31	121.47	112.00
12	62	39	PRO	N-CA-CB	6.30	109.86	103.25
55	S9	130	THR	N-CA-C	6.30	118.95	111.71
78	1S	1524	A	N9-C1'-C2'	6.30	121.44	112.00
58	12	92	ALA	N-CA-C	6.28	118.10	109.18
78	1S	1768	G	N9-C1'-C2'	6.28	121.41	112.00
69	23	5	LYS	N-CA-C	6.26	116.19	108.11
61	15	65	LEU	N-CA-C	-6.26	105.28	113.17
13	63	184	GLU	N-CA-C	-6.25	105.48	113.23
5	L5	284	ALA	N-CA-C	-6.24	105.83	113.50
5	L5	22	ARG	N-CA-C	-6.23	105.64	113.18
79	2S	65	A	C4'-C3'-O3'	6.23	118.74	109.40
79	2S	3170	A	N9-C1'-C2'	6.22	121.34	112.00
6	L6	26	ARG	CA-C-N	6.21	126.18	119.78
6	L6	26	ARG	C-N-CA	6.21	126.18	119.78
69	23	110	LYS	N-CA-C	-6.21	102.68	111.56
45	RC	153	GLN	N-CA-C	6.20	118.38	109.14
50	S4	257	ALA	N-CA-C	-6.18	105.39	113.12
55	S9	80	LEU	N-CA-C	-6.18	105.56	113.23
4	L4	34	ILE	N-CA-C	-6.18	104.48	110.72
46	S0	107	PHE	N-CA-C	-6.17	106.38	114.04
8	L8	80	TYR	N-CA-C	-6.17	103.04	111.56
44	P0	54	GLY	N-CA-C	6.17	117.62	111.21
28	78	75	LEU	N-CA-C	-6.16	105.62	113.01
45	RC	116	ASP	N-CA-C	6.16	119.90	110.36
77	31	88	PRO	N-CA-CB	6.14	109.58	102.33
7	L7	42	ALA	N-CA-C	-6.13	104.50	112.23
63	17	114	GLY	N-CA-C	6.13	122.58	112.89
79	2S	1246	G	N9-C1'-C2'	6.13	121.20	112.00
17	67	58	ILE	CA-C-N	6.12	126.44	119.83
17	67	58	ILE	C-N-CA	6.12	126.44	119.83
71	25	43	ASP	N-CA-C	6.12	119.70	110.64
5	L5	209	GLU	N-CA-C	-6.11	106.46	114.04
5	L5	227	LEU	N-CA-C	-6.11	103.95	112.45
55	S9	22	SER	N-CA-C	6.11	118.73	111.71
18	68	66	ARG	N-CA-C	-6.09	105.68	113.23
48	S2	191	ALA	N-CA-C	-6.09	106.49	114.04
79	2S	282	G	C2'-C3'-O3'	6.08	122.82	113.70
4	L4	276	LEU	CA-C-N	6.08	126.09	119.89
4	L4	276	LEU	C-N-CA	6.08	126.09	119.89
5	L5	113	LEU	N-CA-C	-6.08	105.89	113.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
78	1S	700	C	N1-C1'-C2'	6.08	121.11	112.00
4	L4	179	LEU	N-CA-C	-6.07	104.01	112.45
79	2S	487	U	N1-C1'-C2'	6.07	121.10	112.00
63	17	55	THR	N-CA-C	-6.04	105.40	112.89
29	79	7	HIS	N-CA-C	6.04	118.79	109.07
49	S3	218	LEU	CB-CA-C	-6.02	109.65	116.63
48	S2	226	THR	CA-C-N	6.01	126.17	119.32
48	S2	226	THR	C-N-CA	6.01	126.17	119.32
64	18	12	GLN	N-CA-C	6.01	118.09	108.41
16	66	132	GLY	N-CA-C	-5.98	107.18	113.58
44	P0	58	MET	N-CA-C	-5.97	106.12	113.41
1	L1	183	ILE	N-CA-C	-5.97	105.88	113.22
37	87	54	LYS	N-CA-C	-5.96	105.86	113.01
25	75	56	ARG	N-CA-C	-5.95	105.93	112.72
54	S8	19	ALA	N-CA-C	5.95	117.76	109.31
19	69	65	ALA	N-CA-C	-5.95	105.52	112.89
1	L1	206	VAL	N-CA-C	5.94	117.21	107.24
69	23	93	LEU	N-CA-C	-5.93	106.04	113.28
20	70	130	GLU	N-CA-C	5.93	118.51	111.33
6	L6	27	PRO	N-CA-C	5.93	120.64	111.21
57	11	112	SER	CA-C-N	5.92	126.69	120.12
57	11	112	SER	C-N-CA	5.92	126.69	120.12
19	69	87	ALA	N-CA-C	-5.91	104.84	111.28
3	L3	134	SER	N-CA-C	-5.90	106.08	113.28
42	92	45	ARG	N-CA-C	-5.87	102.57	111.56
78	1S	1074	G	N9-C1'-C2'	5.87	120.81	112.00
79	2S	1352	A	C2'-C3'-O3'	5.85	118.28	109.50
60	14	116	GLU	N-CA-C	5.85	115.74	108.19
65	19	16	ASN	N-CA-C	-5.85	104.32	112.45
12	62	120	SER	CB-CA-C	-5.84	109.82	116.54
55	S9	172	VAL	N-CA-C	5.84	116.62	110.72
44	P0	30	VAL	N-CA-C	5.83	116.82	107.73
65	19	12	GLN	N-CA-C	5.83	117.43	111.14
36	86	56	ARG	N-CA-C	-5.82	106.16	113.20
63	17	67	ARG	N-CA-C	5.82	117.53	109.15
45	RC	272	ASP	N-CA-C	5.81	117.37	108.42
52	S6	188	ARG	N-CA-C	-5.81	105.69	112.89
78	1S	1344	A	C2'-C3'-O3'	5.81	122.41	113.70
18	68	96	PHE	CA-C-N	5.80	127.09	119.84
18	68	96	PHE	C-N-CA	5.80	127.09	119.84
36	86	59	ASP	N-CA-C	-5.80	106.03	113.23
56	10	29	GLN	N-CA-C	-5.80	106.16	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	S3	155	GLY	N-CA-C	5.79	117.41	111.56
1	L1	182	GLN	N-CA-C	-5.78	106.28	113.38
49	S3	26	THR	N-CA-C	-5.77	106.00	113.16
56	10	17	GLN	N-CA-C	-5.77	107.23	114.56
70	24	109	LYS	N-CA-C	-5.77	104.59	111.69
45	RC	164	ASP	N-CA-C	5.77	118.00	108.49
2	L2	15	ILE	N-CA-C	-5.76	107.13	112.83
37	87	56	ARG	N-CA-C	-5.76	106.42	113.50
62	16	63	ILE	N-CA-C	5.75	116.15	108.27
14	64	46	ILE	N-CA-C	5.73	115.86	107.37
48	S2	189	GLN	N-CA-C	-5.73	104.95	111.14
58	12	139	HIS	N-CA-C	-5.72	106.06	113.16
29	79	36	ASP	CA-C-N	5.72	124.92	118.97
29	79	36	ASP	C-N-CA	5.72	124.92	118.97
44	P0	55	LYS	N-CA-C	5.71	117.98	109.59
63	17	69	ILE	N-CA-C	5.70	116.96	108.46
17	67	97	ASN	N-CA-C	-5.70	104.68	111.69
79	2S	439	C	N1-C1'-C2'	5.70	120.54	112.00
50	S4	36	HIS	N-CA-C	5.69	117.88	110.53
52	S6	202	ARG	N-CA-C	-5.69	105.22	111.82
58	12	84	ASN	CB-CA-C	-5.69	110.03	116.63
72	26	97	PRO	N-CA-C	5.69	117.64	110.70
9	L9	126	VAL	N-CA-C	5.68	114.09	107.89
48	S2	215	PHE	N-CA-C	-5.68	105.84	112.89
78	1S	650	U	N1-C1'-C2'	5.68	120.53	112.00
59	13	4	MET	N-CA-C	5.68	117.56	111.36
18	68	131	ALA	CA-C-N	5.68	125.53	119.28
18	68	131	ALA	C-N-CA	5.68	125.53	119.28
25	75	119	THR	N-CA-C	5.67	117.29	109.29
4	L4	129	THR	N-CA-C	-5.67	106.40	113.38
28	78	3	SER	N-CA-C	-5.67	105.86	112.89
76	30	56	MET	N-CA-C	-5.66	106.25	114.12
59	13	88	LEU	N-CA-C	-5.65	105.89	112.89
42	92	6	LYS	N-CA-C	-5.65	107.03	114.31
27	77	93	LYS	N-CA-C	-5.64	106.16	113.16
79	2S	3269	U	C2'-C3'-O3'	5.64	117.97	109.50
9	L9	14	GLU	N-CA-C	5.64	122.81	110.80
15	65	10	LEU	N-CA-C	-5.63	105.22	111.36
44	P0	23	LYS	N-CA-C	5.63	117.28	111.03
9	L9	4	ILE	N-CA-C	5.61	116.25	110.36
23	73	110	LYS	N-CA-C	-5.61	106.42	113.72
50	S4	93	ASP	N-CA-C	-5.61	104.66	112.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	S0	125	ASP	CA-C-N	5.60	125.31	119.82
46	S0	125	ASP	C-N-CA	5.60	125.31	119.82
47	S1	188	LEU	N-CA-C	-5.60	106.58	113.41
35	85	54	VAL	N-CA-C	5.59	116.36	110.72
78	1S	1167	G	N9-C1'-C2'	5.59	120.38	112.00
51	S5	126	ASP	CB-CA-C	-5.58	110.15	116.63
1	L1	62	ASN	N-CA-C	-5.58	105.97	112.89
36	86	44	VAL	N-CA-C	5.58	115.77	110.42
78	1S	555	A	C2'-C3'-O3'	5.57	122.06	113.70
65	19	15	ILE	N-CA-C	-5.57	106.39	112.80
42	92	55	LYS	CA-C-N	5.57	126.80	119.84
42	92	55	LYS	C-N-CA	5.57	126.80	119.84
68	22	94	LEU	CA-C-N	5.57	125.66	119.32
68	22	94	LEU	C-N-CA	5.57	125.66	119.32
79	2S	3168	A	N9-C1'-C2'	5.57	120.35	112.00
50	S4	194	THR	N-CA-C	5.56	122.65	110.80
46	S0	202	TYR	N-CA-C	-5.55	101.43	109.31
27	77	120	GLU	N-CA-C	-5.55	107.06	113.88
16	66	79	ILE	N-CA-C	-5.54	105.12	110.72
55	S9	178	ALA	N-CA-C	-5.54	106.29	113.16
46	S0	62	ARG	N-CA-C	-5.54	106.02	112.89
67	21	32	VAL	N-CA-C	5.54	115.92	108.17
55	S9	124	HIS	N-CA-C	-5.53	106.03	112.89
65	19	30	VAL	CA-C-N	5.53	125.18	119.05
65	19	30	VAL	C-N-CA	5.53	125.18	119.05
13	63	145	PHE	CA-C-N	5.52	125.28	119.76
13	63	145	PHE	C-N-CA	5.52	125.28	119.76
65	19	141	GLU	N-CA-C	-5.52	106.38	113.23
79	2S	2193	U	N1-C1'-C2'	5.52	120.28	112.00
79	2S	3218	A	C2'-C3'-O3'	5.52	121.97	113.70
2	L2	130	SER	N-CA-C	5.51	118.47	110.42
52	S6	7	TYR	CA-C-N	5.51	125.61	119.87
52	S6	7	TYR	C-N-CA	5.51	125.61	119.87
13	63	190	LYS	N-CA-C	-5.51	106.61	113.55
6	L6	65	ILE	N-CA-C	5.51	117.58	108.99
56	10	19	GLY	N-CA-C	-5.50	106.94	114.64
68	22	23	ARG	N-CA-C	-5.50	106.57	113.72
4	L4	31	ARG	CA-C-N	5.49	125.58	119.87
4	L4	31	ARG	C-N-CA	5.49	125.58	119.87
9	L9	29	GLY	CA-C-N	5.48	125.13	119.05
9	L9	29	GLY	C-N-CA	5.48	125.13	119.05
55	S9	15	PRO	N-CA-C	5.48	118.89	111.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
71	25	44	GLN	N-CA-C	5.47	122.46	110.80
79	2S	1645	U	N1-C1'-C2'	5.47	120.20	112.00
5	L5	225	GLY	N-CA-C	-5.47	107.88	114.66
17	67	58	ILE	N-CA-C	5.46	113.95	107.73
16	66	196	ALA	N-CA-C	-5.46	106.60	113.20
3	L3	210	GLU	N-CA-C	5.45	115.76	108.23
78	1S	195	G	N9-C1'-C2'	5.45	120.17	112.00
8	L8	171	LYS	N-CA-C	-5.44	106.65	113.28
19	69	175	GLN	N-CA-C	-5.43	106.79	113.41
12	62	120	SER	N-CA-C	5.42	116.55	108.31
36	86	40	VAL	N-CA-C	5.42	115.62	110.53
8	L8	68	ARG	N-CA-C	5.42	117.26	111.36
26	76	51	ARG	N-CA-C	5.41	117.47	109.69
78	1S	957	G	N9-C1'-C2'	5.40	120.11	112.00
79	2S	2417	U	N1-C1'-C2'	5.40	120.10	112.00
55	S9	79	ARG	N-CA-C	-5.40	106.54	113.23
16	66	172	ARG	N-CA-C	-5.39	106.54	113.23
49	S3	132	LYS	N-CA-C	-5.39	107.25	113.88
4	L4	326	ARG	N-CA-C	-5.39	105.41	111.28
17	67	128	ARG	N-CA-C	5.39	117.58	109.23
54	S8	139	ALA	N-CA-C	-5.38	106.69	113.20
59	13	98	VAL	N-CA-C	-5.38	106.60	113.22
78	1S	501	U	C2'-C3'-O3'	5.38	121.77	113.70
27	77	119	GLU	N-CA-C	-5.38	106.59	112.72
31	81	12	TYR	N-CA-C	5.37	117.15	108.34
3	L3	244	ARG	N-CA-C	5.36	118.98	111.90
4	L4	130	ALA	N-CA-C	-5.36	102.11	110.42
78	1S	584	C	N1-C1'-C2'	5.36	120.04	112.00
33	83	89	LEU	N-CA-C	5.36	117.54	110.36
79	2S	451	U	N1-C1'-C2'	5.36	120.04	112.00
38	88	70	PRO	N-CA-C	5.36	115.61	110.47
49	S3	27	ARG	N-CA-C	-5.35	107.12	113.97
80	8S	88	A	N9-C1'-C2'	5.35	120.03	112.00
11	61	73	GLY	CA-C-N	5.35	124.97	119.56
11	61	73	GLY	C-N-CA	5.35	124.97	119.56
15	65	12	ARG	N-CA-C	-5.35	105.80	114.09
71	25	45	GLU	N-CA-C	5.34	117.85	111.71
78	1S	535	A	N9-C1'-C2'	5.34	120.01	112.00
9	L9	163	GLN	N-CA-C	-5.33	106.54	113.16
8	L8	75	ILE	N-CA-C	-5.33	102.10	109.46
78	1S	185	U	N1-C1'-C2'	5.33	119.99	112.00
16	66	17	GLY	N-CA-C	5.33	118.68	112.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	11	66	ILE	N-CA-C	5.33	116.25	108.58
13	63	108	ILE	N-CA-C	-5.32	104.44	111.09
6	L6	74	VAL	N-CA-C	5.32	113.14	107.76
79	2S	2525	G	C4'-C3'-O3'	5.32	120.98	113.00
57	11	5	LEU	CB-CA-C	-5.30	108.89	115.89
65	19	54	PHE	N-CA-C	-5.29	106.99	113.50
78	1S	610	G	N9-C1'-C2'	5.29	119.94	112.00
4	L4	25	VAL	N-CA-C	-5.29	104.90	112.35
16	66	36	VAL	N-CA-C	5.29	115.51	108.11
79	2S	764	U	N1-C1'-C2'	5.29	119.93	112.00
64	18	81	ILE	CA-C-N	5.28	126.44	119.84
64	18	81	ILE	C-N-CA	5.28	126.44	119.84
34	84	58	ARG	CA-C-N	5.28	126.44	119.84
34	84	58	ARG	C-N-CA	5.28	126.44	119.84
9	L9	154	VAL	N-CA-C	5.27	115.54	110.74
19	69	110	ARG	N-CA-C	-5.26	105.60	112.23
60	14	81	VAL	N-CA-C	5.26	117.13	108.97
68	22	116	ALA	N-CA-C	-5.26	106.81	113.18
27	77	96	VAL	N-CA-C	5.26	115.64	107.28
12	62	130	LYS	N-CA-C	-5.26	106.90	113.15
57	11	25	VAL	N-CA-C	5.24	115.13	107.37
51	S5	52	GLU	N-CA-C	5.24	118.35	109.76
28	78	123	VAL	N-CA-C	5.23	115.44	108.11
26	76	27	ARG	N-CA-C	-5.23	106.40	112.89
32	82	26	HIS	N-CA-C	-5.23	106.75	113.23
49	S3	105	MET	N-CA-C	-5.23	106.05	112.90
54	S8	20	GLN	N-CA-C	5.23	117.28	109.59
45	RC	271	VAL	N-CA-C	5.23	115.95	110.62
16	66	33	ILE	N-CA-C	5.22	115.64	108.12
48	S2	241	ASP	N-CA-C	-5.22	105.98	112.93
46	S0	119	ARG	N-CA-C	-5.22	106.87	114.12
78	1S	1257	U	N1-C1'-C2'	5.21	119.82	112.00
34	84	89	ILE	N-CA-C	-5.21	106.06	111.58
42	92	16	THR	N-CA-C	-5.21	106.88	113.18
51	S5	60	ASP	N-CA-C	-5.21	105.80	113.72
57	11	111	VAL	N-CA-C	5.21	115.35	107.75
26	76	40	ARG	N-CA-C	-5.20	106.89	113.18
78	1S	1082	C	N1-C1'-C2'	5.20	119.80	112.00
58	12	27	ALA	N-CA-C	-5.20	105.65	112.72
6	L6	77	ARG	N-CA-C	5.20	116.19	108.86
15	65	201	ARG	N-CA-C	-5.19	105.53	111.14
48	S2	235	LEU	CA-C-N	5.19	126.33	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	S2	235	LEU	C-N-CA	5.19	126.33	119.84
70	24	133	ASN	N-CA-C	-5.19	106.90	113.18
79	2S	2452	G	N9-C1'-C2'	5.19	119.78	112.00
18	68	17	THR	N-CA-C	-5.18	107.12	113.50
12	62	74	VAL	N-CA-C	5.18	113.64	107.73
18	68	71	LEU	N-CA-C	-5.17	106.81	113.02
21	71	114	ALA	N-CA-C	-5.17	105.32	111.69
55	S9	180	LYS	N-CA-C	-5.17	106.82	113.23
80	8S	40	A	N9-C1'-C2'	5.17	119.76	112.00
7	L7	215	GLY	N-CA-C	5.17	117.55	111.35
55	S9	176	ASN	N-CA-C	-5.17	106.82	113.23
13	63	137	GLN	N-CA-C	5.17	116.93	108.76
61	15	15	HIS	N-CA-C	5.17	118.24	109.76
8	L8	252	ASN	N-CA-C	-5.17	106.38	113.30
14	64	122	VAL	N-CA-C	5.16	115.93	110.72
3	L3	162	VAL	N-CA-C	5.16	116.08	108.45
8	L8	92	LYS	N-CA-C	-5.16	106.77	113.16
79	2S	282	G	C3'-C2'-O2'	5.16	118.43	110.70
13	63	19	GLN	N-CA-C	-5.15	106.94	113.18
9	L9	121	LYS	N-CA-C	-5.15	107.51	112.97
41	91	4	LYS	N-CA-C	-5.15	105.74	112.23
79	2S	604	G	N9-C1'-C2'	5.15	119.72	112.00
1	L1	100	ILE	N-CA-C	5.15	116.32	109.37
26	76	99	LEU	N-CA-C	5.15	117.95	109.72
73	27	31	TYR	N-CA-C	5.14	117.17	110.53
79	2S	2870	C	N1-C1'-C2'	5.14	119.71	112.00
59	13	83	GLU	N-CA-C	-5.14	104.75	111.02
26	76	33	ALA	CA-C-N	5.14	125.04	119.85
26	76	33	ALA	C-N-CA	5.14	125.04	119.85
55	S9	116	LEU	N-CA-C	-5.13	105.32	112.30
34	84	109	THR	N-CA-C	-5.13	107.02	113.28
28	78	15	VAL	N-CA-C	5.13	115.27	110.30
79	2S	637	C	C2'-C3'-O3'	5.13	121.39	113.70
29	79	53	ALA	N-CA-C	-5.12	106.88	113.02
10	60	17	TYR	CA-C-N	5.12	125.59	120.52
10	60	17	TYR	C-N-CA	5.12	125.59	120.52
78	1S	418	G	N9-C1'-C2'	5.12	119.68	112.00
79	2S	1953	G	N9-C1'-C2'	5.12	121.68	114.00
54	S8	96	LEU	N-CA-C	5.12	116.95	108.20
78	1S	1687	U	N1-C1'-C2'	5.11	119.67	112.00
19	69	177	VAL	N-CA-C	-5.11	108.00	112.90
59	13	27	LYS	CA-C-O	5.10	120.90	117.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	66	9	ILE	N-CA-C	5.09	115.31	107.77
47	S1	62	LYS	CB-CA-C	-5.09	110.30	117.23
32	82	6	HIS	N-CA-C	5.09	117.33	110.31
51	S5	81	ARG	N-CA-C	5.09	117.22	111.11
54	S8	160	PHE	N-CA-C	-5.09	105.43	111.69
2	L2	233	GLN	N-CA-C	-5.09	105.82	112.23
69	23	47	SER	N-CA-C	-5.09	107.46	113.97
3	L3	174	LYS	N-CA-C	5.08	121.63	110.80
6	L6	67	GLY	N-CA-C	5.08	122.70	112.34
32	82	78	ASN	N-CA-C	5.08	114.85	108.45
58	12	46	ARG	N-CA-C	5.08	116.81	111.28
79	2S	2712	U	N1-C1'-C2'	5.07	119.61	112.00
51	S5	79	ASN	N-CA-C	-5.07	105.84	112.23
3	L3	314	TYR	N-CA-C	5.07	116.21	108.30
79	2S	1050	U	N1-C1'-C2'	5.07	119.61	112.00
79	2S	447	U	N1-C1'-C2'	5.06	119.60	112.00
9	L9	18	VAL	N-CA-C	5.06	115.93	107.18
1	L1	178	VAL	N-CA-C	-5.06	108.57	113.53
9	L9	164	ILE	N-CA-C	-5.05	105.96	113.39
79	2S	3118	C	N1-C1'-C2'	5.05	119.58	112.00
71	25	66	VAL	N-CA-C	-5.05	105.64	113.16
19	69	101	VAL	N-CA-C	-5.05	106.76	111.45
32	82	4	LEU	CA-C-N	5.05	126.15	119.84
32	82	4	LEU	C-N-CA	5.05	126.15	119.84
19	69	91	SER	N-CA-C	-5.03	106.40	112.54
54	S8	190	ALA	N-CA-C	-5.03	105.46	112.45
79	2S	3279	A	N9-C1'-C2'	5.03	119.55	112.00
79	2S	395	A	N9-C1'-C2'	5.02	119.54	112.00
79	2S	2248	C	N1-C1'-C2'	5.02	119.53	112.00
30	80	89	VAL	N-CA-C	5.02	115.35	108.12
40	90	113	ARG	N-CA-C	-5.02	107.16	113.28
56	10	2	LEU	N-CA-C	5.01	116.44	108.67
69	23	87	VAL	N-CA-C	5.01	112.12	107.56
79	2S	197	G	N9-C1'-C2'	5.01	119.52	112.00
11	61	162	TRP	N-CA-C	-5.01	105.90	111.36
68	22	129	VAL	N-CA-C	5.01	115.86	108.45
79	2S	855	U	N1-C1'-C2'	5.00	119.51	112.00

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
79	2S	65	A	C3'

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Mol	Chain	Res	Type	Atom
79	2S	2065	U	C3'
79	2S	2512	C	C3'

All (85) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
78	1S	1074	G	Sidechain
78	1S	1085	G	Sidechain
78	1S	1160	A	Sidechain
78	1S	1229	G	Sidechain
78	1S	1230	A	Sidechain
78	1S	1251	U	Sidechain
78	1S	1255	G	Sidechain
78	1S	1524	A	Sidechain
78	1S	1542	G	Sidechain
78	1S	1553	G	Sidechain
78	1S	1680	G	Sidechain
78	1S	1754	A	Sidechain
78	1S	183	U	Sidechain
78	1S	199	G	Sidechain
78	1S	228	G	Sidechain
78	1S	287	G	Sidechain
78	1S	313	U	Sidechain
78	1S	322	G	Sidechain
78	1S	337	G	Sidechain
78	1S	447	U	Sidechain
78	1S	535	A	Sidechain
78	1S	553	G	Sidechain
78	1S	576	G	Sidechain
79	2S	1000	C	Sidechain
79	2S	1127	G	Sidechain
79	2S	1154	A	Sidechain
79	2S	1195	A	Sidechain
79	2S	1315	U	Sidechain
79	2S	1393	A	Sidechain
79	2S	1417	G	Sidechain
79	2S	1561	G	Sidechain
79	2S	1646	G	Sidechain
79	2S	1695	U	Sidechain
79	2S	1713	G	Sidechain
79	2S	1730	G	Sidechain
79	2S	1731	A	Sidechain

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Mol	Chain	Res	Type	Group
79	2S	1808	G	Sidechain
79	2S	1809	A	Sidechain
79	2S	1930	A	Sidechain
79	2S	196	G	Sidechain
79	2S	2376	G	Sidechain
79	2S	2403	G	Sidechain
79	2S	2541	U	Sidechain
79	2S	26	A	Sidechain
79	2S	2635	A	Sidechain
79	2S	2642	A	Sidechain
79	2S	2656	A	Sidechain
79	2S	2704	A	Sidechain
79	2S	2713	U	Sidechain
79	2S	2800	G	Sidechain
79	2S	2844	C	Sidechain
79	2S	2898	G	Sidechain
79	2S	2901	G	Sidechain
79	2S	3026	G	Sidechain
79	2S	3118	C	Sidechain
79	2S	3140	G	Sidechain
79	2S	3170	A	Sidechain
79	2S	322	U	Sidechain
79	2S	3333	G	Sidechain
79	2S	341	G	Sidechain
79	2S	371	G	Sidechain
79	2S	372	A	Sidechain
79	2S	383	G	Sidechain
79	2S	394	G	Sidechain
79	2S	395	A	Sidechain
79	2S	40	A	Sidechain
79	2S	400	G	Sidechain
79	2S	405	U	Sidechain
79	2S	489	U	Sidechain
79	2S	733	G	Sidechain
79	2S	736	A	Sidechain
79	2S	760	G	Sidechain
79	2S	770	G	Sidechain
79	2S	771	A	Sidechain
79	2S	835	G	Sidechain
79	2S	845	G	Sidechain
79	2S	857	G	Sidechain
79	2S	858	A	Sidechain

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Mol	Chain	Res	Type	Group
79	2S	907	G	Sidechain
80	8S	105	A	Sidechain
80	8S	40	A	Sidechain
80	8S	70	G	Sidechain
80	8S	71	A	Sidechain
80	8S	87	G	Sidechain
80	8S	88	A	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	L1	1609	0	1701	107	0
2	L2	1918	0	1987	162	0
3	L3	3082	0	3165	186	0
4	L4	2750	0	2863	154	0
5	L5	2376	0	2325	129	0
6	L6	1240	0	1326	76	0
7	L7	1785	0	1862	128	0
8	L8	1818	0	1908	132	0
9	L9	1519	0	1587	91	0
10	60	1718	0	1754	91	0
11	61	1354	0	1383	82	0
12	62	703	0	324	8	0
13	63	1543	0	1608	88	0
14	64	1054	0	1149	56	0
15	65	1721	0	1779	133	0
16	66	1556	0	1659	93	0
17	67	1443	0	1485	86	0
18	68	1442	0	1543	115	0
19	69	1522	0	1617	83	0
20	70	1446	0	1487	101	0
21	71	1277	0	1323	81	0
22	72	796	0	812	38	0
23	73	1004	0	1048	80	0
24	74	528	0	558	30	0
25	75	969	0	1036	58	0
26	76	994	0	1081	48	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	77	1093	0	1155	45	0
28	78	1174	0	1215	77	0
29	79	463	0	491	18	0
30	80	743	0	797	43	0
31	81	890	0	938	51	0
32	82	1020	0	1090	57	0
33	83	851	0	880	59	0
34	84	881	0	949	62	0
35	85	970	0	1078	42	0
36	86	772	0	849	52	0
37	87	682	0	687	47	0
38	88	613	0	682	38	0
39	89	437	0	475	20	0
40	90	418	0	459	18	0
41	91	234	0	284	16	0
42	92	848	0	918	46	0
43	93	695	0	738	47	0
44	P0	987	0	999	46	0
45	RC	2445	0	2401	117	0
46	S0	1612	0	1623	109	0
47	S1	1709	0	1784	142	0
48	S2	1635	0	1723	104	0
49	S3	1734	0	1817	98	0
50	S4	2069	0	2154	123	0
51	S5	1610	0	1675	114	0
52	S6	1820	0	1918	84	0
53	S7	1481	0	1572	82	0
54	S8	1490	0	1525	83	0
55	S9	1494	0	1573	106	0
56	10	817	0	804	56	0
57	11	1245	0	1314	65	0
58	12	935	0	975	45	0
59	13	1193	0	1255	68	0
60	14	942	0	979	64	0
61	15	991	0	1035	67	0
62	16	1106	0	1166	82	0
63	17	965	0	1026	71	0
64	18	1193	0	1222	73	0
65	19	1113	0	1124	66	0
66	20	856	0	917	73	0
67	21	685	0	672	39	0
68	22	1022	0	1060	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	23	1122	0	1196	84	0
70	24	1074	0	1132	56	0
71	25	563	0	603	41	0
72	26	769	0	818	69	0
73	27	611	0	633	33	0
74	28	498	0	535	33	0
75	29	444	0	436	27	0
76	30	475	0	525	32	0
77	31	498	0	441	23	0
78	1S	37949	0	19093	954	0
79	2S	70616	0	35486	1792	0
80	8S	3354	0	1695	74	0
81	5S	2580	0	1304	75	0
82	ET	1644	0	836	30	0
82	PT	1644	0	836	24	0
83	MR	195	0	98	3	0
All	All	209136	0	154035	7575	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 21.

All (7575) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:30:GLU:HB2	1:L1:34:LEU:HD11	1.32	1.10
78:1S:712:G:H2'	78:1S:713:A:H5"	1.34	1.09
1:L1:93:LEU:HD21	1:L1:118:LYS:HD2	1.35	1.08
79:2S:1604:G:H4'	79:2S:1835:A:H4'	1.35	1.08
79:2S:1971:C:H2'	79:2S:1972:A:H4'	1.27	1.07
79:2S:1844:C:H2'	79:2S:1845:G:H5"	1.37	1.07
79:2S:2476:C:H2'	79:2S:2477:G:H4'	1.35	1.06
79:2S:1626:U:H4'	79:2S:1632:A:H4'	1.39	1.04
56:10:87:VAL:H	56:10:88:PRO:HD2	1.21	1.04
17:67:36:ILE:HD11	17:67:44:ALA:HB1	1.35	1.04
78:1S:138:A:N6	78:1S:266:A:H61	1.56	1.03
72:26:82:ARG:HG3	72:26:83:ILE:H	1.22	1.03
79:2S:441:U:H3	79:2S:494:G:H4'	1.19	1.02
47:S1:71:ALA:HB2	47:S1:79:HIS:HB2	1.38	1.02
78:1S:1701:A:H3'	78:1S:1702:A:H5"	1.41	1.01
60:14:52:ARG:HD3	78:1S:905:A:H5"	1.42	1.00
3:L3:53:MET:HG2	3:L3:77:THR:HG22	1.44	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:76:THR:HG22	54:S8:108:PRO:HG2	1.41	1.00
74:28:10:ALA:HA	74:28:32:PHE:HA	1.42	0.99
31:81:5:LYS:HA	31:81:89:LEU:HD21	1.45	0.99
5:L5:140:ARG:HG3	5:L5:141:PRO:HD2	1.42	0.99
53:S7:27:LEU:HD21	53:S7:80:GLU:HG2	1.46	0.98
68:22:40:VAL:HG21	68:22:103:ILE:HD12	1.45	0.98
78:1S:740:A:H3'	78:1S:741:C:H5"	1.42	0.98
31:81:62:ARG:HB2	31:81:66:GLY:HA3	1.46	0.98
37:87:25:ARG:HH21	79:2S:817:A:H61	1.10	0.98
79:2S:2513:U:H3	79:2S:2593:A:H62	1.13	0.97
79:2S:725:G:H2'	79:2S:726:G:H5"	1.46	0.97
25:75:117:ASN:HA	39:89:17:LYS:HD3	1.42	0.97
65:19:102:ARG:HD3	78:1S:1500:C:H5"	1.44	0.97
78:1S:515:A:H62	78:1S:537:G:H21	0.98	0.97
64:18:126:ARG:HG2	64:18:133:VAL:HB	1.43	0.96
44:P0:46:ARG:HH22	79:2S:1257:C:H4'	1.30	0.96
59:13:64:ARG:HB3	59:13:64:ARG:HH11	1.30	0.95
78:1S:593:U:H4'	78:1S:595:G:H4'	1.45	0.95
79:2S:1896:A:H61	79:2S:2339:C:H42	1.13	0.95
52:S6:72:ARG:HG2	52:S6:98:ARG:HG2	1.46	0.95
10:60:15:LYS:HE3	79:2S:1047:A:H5"	1.48	0.95
25:75:47:ALA:HB3	35:85:77:PRO:HG3	1.45	0.94
78:1S:237:C:H5"	78:1S:238:U:H5'	1.49	0.94
22:72:84:LEU:HB3	22:72:90:ARG:HG2	1.48	0.94
57:11:68:GLY:HA3	57:11:127:GLN:HB3	1.47	0.94
78:1S:707:A:H3'	78:1S:708:C:H5"	1.47	0.94
7:L7:25:GLN:HG2	7:L7:29:GLU:HB2	1.48	0.94
23:73:38:ALA:HB3	23:73:59:MET:HB2	1.48	0.94
78:1S:1657:U:H4'	78:1S:1658:G:H5"	1.50	0.94
77:31:144:CYS:HB3	77:31:147:VAL:HG13	1.50	0.94
4:L4:206:LEU:HG	4:L4:226:GLU:HB2	1.49	0.94
23:73:66:LYS:HB2	23:73:69:LEU:HD13	1.49	0.94
79:2S:2493:U:H3'	79:2S:2494:A:H5"	1.46	0.94
18:68:12:ARG:H	18:68:12:ARG:HE	1.11	0.93
60:14:85:ALA:H	60:14:119:THR:HG22	1.33	0.93
78:1S:1169:G:H21	78:1S:1576:A:H62	1.11	0.93
7:L7:63:ILE:HA	7:L7:66:LYS:HE3	1.48	0.93
49:S3:134:CYS:H	49:S3:157:LEU:HD11	1.34	0.93
79:2S:2068:U:H3'	79:2S:2069:G:H5'	1.47	0.93
79:2S:109:A:H4'	79:2S:110:G:H5'	1.48	0.93
79:2S:2798:C:H5"	79:2S:2800:G:H5'	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:71:128:LEU:HD11	79:2S:1096:U:H5'	1.50	0.92
44:P0:28:VAL:HG12	44:P0:187:VAL:HG22	1.49	0.92
79:2S:829:U:H3	79:2S:895:A:H62	1.09	0.92
36:86:94:ILE:HA	36:86:98:ARG:HD3	1.50	0.92
10:60:154:ARG:HH12	79:2S:2837:A:H5"	1.31	0.92
79:2S:1951:C:H6	79:2S:2095:G:H22	1.17	0.92
19:69:163:ARG:HG2	78:1S:815:G:H5"	1.51	0.92
55:S9:148:VAL:HG12	55:S9:150:LEU:H	1.32	0.92
2:L2:22:LEU:HB3	2:L2:52:SER:HB2	1.50	0.92
55:S9:39:LYS:HD3	55:S9:42:ILE:HD12	1.50	0.92
62:16:73:GLY:H	62:16:76:SER:HB3	1.32	0.92
59:13:71:ILE:H	59:13:71:ILE:HD12	1.33	0.91
21:71:78:LYS:HB2	21:71:87:LYS:HE2	1.50	0.91
30:80:13:LYS:HB3	30:80:100:ILE:HG12	1.52	0.91
39:89:43:ASN:HB3	39:89:46:ARG:HB2	1.52	0.91
50:S4:31:PRO:HG3	50:S4:43:PRO:HG3	1.49	0.91
79:2S:2361:A:H61	79:2S:2377:G:H1	1.13	0.91
4:L4:300:ARG:HB2	4:L4:301:PRO:HD2	1.53	0.91
25:75:113:LEU:HB3	79:2S:1523:U:H5'	1.51	0.91
81:5S:12:U:H4'	81:5S:110:G:H21	1.36	0.91
3:L3:94:GLU:HB3	16:66:152:VAL:HG13	1.53	0.91
78:1S:505:A:H3'	78:1S:506:A:H5"	1.53	0.90
66:20:62:VAL:HG22	66:20:85:ARG:HG3	1.53	0.90
78:1S:913:G:H3'	78:1S:914:G:H5"	1.50	0.90
47:S1:48:VAL:HG12	47:S1:49:ASN:H	1.35	0.90
55:S9:93:LEU:HD12	55:S9:96:VAL:HG21	1.52	0.90
79:2S:1565:G:H1	79:2S:1574:C:H42	1.14	0.90
79:2S:2536:A:H3'	79:2S:2537:U:H5"	1.51	0.90
79:2S:2530:G:H2'	79:2S:2531:C:H5"	1.54	0.90
49:S3:203:PRO:HA	63:17:42:GLN:HG3	1.52	0.90
13:63:70:ARG:HG2	13:63:71:ALA:H	1.36	0.90
79:2S:3334:U:H4'	79:2S:3335:A:H5"	1.51	0.90
59:13:130:ARG:HD2	59:13:137:PRO:HA	1.52	0.90
49:S3:134:CYS:HB3	49:S3:154:ASP:HB3	1.52	0.89
69:23:11:SER:HB3	78:1S:632:U:H4'	1.54	0.89
4:L4:152:VAL:HG12	4:L4:153:SER:H	1.36	0.89
3:L3:43:LEU:HD23	3:L3:181:ILE:HB	1.52	0.89
11:61:35:LYS:HD2	11:61:120:ILE:HG12	1.55	0.89
28:78:65:GLN:HA	28:78:68:PHE:HD2	1.37	0.89
34:84:58:ARG:HG3	34:84:59:PRO:HD2	1.52	0.89
78:1S:1229:G:H21	78:1S:1256:A:H62	1.20	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:186:LEU:HB3	8:L8:195:SER:HB3	1.53	0.89
9:L9:23:ARG:HD2	9:L9:39:LYS:HA	1.54	0.89
79:2S:153:U:H2'	79:2S:154:U:H5"	1.53	0.89
3:L3:25:ILE:HD13	3:L3:25:ILE:H	1.37	0.89
10:60:174:THR:HG22	10:60:176:LEU:H	1.38	0.88
79:2S:2821:C:H42	79:2S:2869:U:H3	1.16	0.88
79:2S:2346:C:H2'	79:2S:2347:U:H5"	1.55	0.88
2:L2:48:ILE:HD11	43:93:63:THR:HG22	1.55	0.88
11:61:25:GLU:HG2	11:61:29:ARG:HD2	1.54	0.88
12:62:122:GLY:HA2	44:P0:43:LYS:HD3	1.53	0.88
47:S1:218:LEU:HD13	47:S1:218:LEU:H	1.36	0.88
79:2S:1064:A:H62	79:2S:1096:U:H3	1.16	0.88
20:70:80:ARG:HB3	20:70:122:HIS:HB2	1.54	0.88
33:83:9:VAL:HB	33:83:100:ILE:HB	1.55	0.88
50:S4:145:ARG:HH22	50:S4:167:GLY:HA2	1.39	0.87
56:10:16:PHE:HE1	56:10:82:LEU:HD11	1.36	0.87
79:2S:2483:G:H2'	79:2S:2484:A:H2'	1.55	0.87
4:L4:42:VAL:HA	4:L4:45:ASN:HD22	1.38	0.87
53:S7:11:GLN:HG3	53:S7:13:PRO:HD2	1.55	0.87
58:12:45:LEU:HD22	77:31:103:LEU:HD12	1.56	0.87
48:S2:164:SER:HB2	78:1S:1086:A:H5'	1.57	0.87
50:S4:19:LEU:HD21	50:S4:108:ARG:HD2	1.57	0.86
5:L5:141:PRO:HB2	5:L5:172:TYR:HB2	1.56	0.86
36:86:26:ILE:HD12	36:86:26:ILE:H	1.38	0.86
11:61:11:ASP:O	11:61:12:LEU:HB2	1.73	0.86
18:68:145:ASN:HD22	79:2S:745:C:H5"	1.39	0.86
48:S2:90:THR:HG23	48:S2:93:GLY:H	1.40	0.86
61:15:78:THR:HA	78:1S:1241:G:H4'	1.57	0.86
71:25:93:SER:HB2	71:25:100:ILE:HG22	1.56	0.86
79:2S:58:G:H2'	79:2S:59:G:C8	2.09	0.86
13:63:47:ALA:HB1	13:63:48:PRO:HD2	1.57	0.86
16:66:60:LYS:HE3	79:2S:1307:G:H5"	1.56	0.86
79:2S:2778:G:H2'	79:2S:2779:A:H5"	1.58	0.86
63:17:122:ILE:HG12	63:17:123:ASN:H	1.39	0.86
64:18:116:LEU:HD21	64:18:123:ARG:HB3	1.58	0.86
69:23:96:VAL:HG23	69:23:97:ASP:H	1.40	0.86
75:29:11:PRO:HB3	75:29:13:ARG:HH12	1.40	0.86
3:L3:332:ARG:HD3	3:L3:332:ARG:H	1.39	0.86
68:22:81:VAL:HG13	68:22:85:ASP:HB2	1.55	0.86
78:1S:1350:U:H2'	78:1S:1351:G:C8	2.11	0.86
78:1S:777:C:H2'	78:1S:778:G:H5"	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:11:155:LYS:HD3	59:13:83:GLU:HA	1.58	0.85
67:21:18:SER:H	67:21:54:ALA:HB3	1.41	0.85
78:1S:1498:G:H2'	78:1S:1499:G:H5"	1.58	0.85
2:L2:227:ARG:HH21	79:2S:2161:G:H5"	1.41	0.85
30:80:79:THR:HG23	59:13:148:ALA:HA	1.58	0.85
79:2S:1581:C:H2'	79:2S:1582:C:H5'	1.58	0.85
54:S8:47:ARG:NH1	78:1S:397:A:H5"	1.91	0.85
54:S8:47:ARG:HH12	78:1S:397:A:H5"	1.40	0.85
62:16:40:GLU:HA	62:16:42:GLU:H	1.41	0.85
78:1S:1058:U:H5	78:1S:1061:A:N1	1.74	0.85
79:2S:1654:A:H2'	79:2S:1655:G:H5'	1.59	0.85
79:2S:3242:G:H5'	79:2S:3245:A:H1'	1.57	0.85
10:60:36:LEU:HD13	10:60:87:LEU:HD22	1.59	0.84
27:77:75:VAL:HG22	27:77:76:ASN:H	1.38	0.84
37:87:56:ARG:HH22	79:2S:362:U:H3'	1.40	0.84
47:S1:219:LYS:HE2	47:S1:219:LYS:HA	1.58	0.84
28:78:112:ILE:HB	28:78:130:VAL:HG12	1.57	0.84
79:2S:599:C:H2'	79:2S:600:G:H5"	1.59	0.84
60:14:76:ILE:H	60:14:76:ILE:HD12	1.41	0.84
79:2S:726:G:H21	79:2S:744:A:H62	1.24	0.84
81:5S:85:G:H1	81:5S:95:A:H61	1.24	0.84
18:68:179:ARG:HB3	18:68:179:ARG:NH1	1.93	0.84
68:22:89:TRP:HA	68:22:92:ASN:HB2	1.59	0.84
20:70:94:ILE:HG22	20:70:95:ARG:H	1.41	0.84
48:S2:140:ARG:HB3	48:S2:221:THR:HB	1.59	0.84
54:S8:137:LYS:H	54:S8:137:LYS:HD3	1.43	0.84
15:65:204:LYS:HZ1	79:2S:82:C:H4'	1.42	0.84
45:RC:137:LYS:HE3	45:RC:137:LYS:HA	1.58	0.84
53:S7:98:ILE:HG12	53:S7:121:VAL:HG21	1.59	0.83
7:L7:121:LYS:HD2	21:71:133:ALA:HB3	1.61	0.83
46:S0:10:THR:HG21	46:S0:191:ARG:HE	1.41	0.83
9:L9:135:GLU:O	9:L9:144:ILE:HG13	1.79	0.83
79:2S:250:U:H5'	79:2S:251:G:H5"	1.60	0.83
18:68:179:ARG:HB3	18:68:179:ARG:HH11	1.44	0.83
79:2S:2895:G:H2'	79:2S:2896:A:H5"	1.60	0.83
50:S4:137:PRO:HG2	50:S4:150:PRO:HD2	1.60	0.83
42:92:89:LYS:HE3	79:2S:2652:U:H4'	1.61	0.83
55:S9:38:ASN:HB2	55:S9:41:GLU:HG3	1.60	0.83
79:2S:915:A:H4'	79:2S:2957:G:H4'	1.60	0.83
51:S5:81:ARG:HH21	74:28:47:PRO:HA	1.42	0.83
69:23:50:LYS:HE2	78:1S:435:C:H5"	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:185:ARG:HD3	80:8S:155:A:H5'	1.61	0.83
66:20:27:THR:HG23	66:20:113:ASP:HB3	1.61	0.83
79:2S:405:U:H2'	79:2S:406:G:H5'	1.60	0.83
10:60:185:ARG:HA	10:60:190:VAL:HB	1.60	0.83
25:75:81:ILE:HG12	25:75:125:ARG:HB2	1.61	0.83
55:S9:90:LYS:HB3	55:S9:95:TYR:HB2	1.59	0.83
61:15:14:THR:HB	61:15:22:LEU:HD21	1.61	0.83
62:16:115:THR:HA	62:16:118:ILE:HG22	1.60	0.83
13:63:161:ASP:HB2	28:78:144:VAL:HG12	1.61	0.82
26:76:17:LYS:HG2	80:8S:23:U:H4'	1.61	0.82
3:L3:100:ARG:HH22	79:2S:3242:G:H1'	1.44	0.82
5:L5:64:ILE:HD13	5:L5:76:ALA:HB3	1.59	0.82
13:63:70:ARG:HG2	13:63:71:ALA:N	1.93	0.82
13:63:59:ARG:HH22	13:63:150:PRO:HG2	1.44	0.82
68:22:24:GLN:HB3	68:22:64:GLN:HE22	1.43	0.82
79:2S:58:G:H2'	79:2S:59:G:H8	1.40	0.82
79:2S:627:U:H2'	79:2S:628:A:C8	2.14	0.82
23:73:20:GLY:H	23:73:36:ILE:HB	1.45	0.82
63:17:33:ARG:O	63:17:37:GLU:HG2	1.79	0.82
64:18:110:ARG:O	64:18:114:GLU:HG2	1.80	0.82
65:19:102:ARG:HH22	78:1S:1501:C:H41	1.23	0.82
72:26:86:VAL:HG22	72:26:87:ARG:H	1.42	0.82
8:L8:143:ILE:HG22	8:L8:173:MET:HG3	1.60	0.82
58:12:42:ALA:HB3	58:12:122:VAL:HB	1.61	0.82
62:16:97:VAL:HG12	62:16:98:ASP:H	1.43	0.82
2:L2:191:LEU:HD11	79:2S:1794:G:H4'	1.62	0.81
28:78:32:ARG:HD2	79:2S:38:U:H4'	1.60	0.81
36:86:79:SER:HB2	36:86:82:ARG:HG3	1.60	0.81
47:S1:135:LEU:HB3	47:S1:217:LEU:HG	1.61	0.81
79:2S:160:G:H3'	79:2S:161:G:H5"	1.60	0.81
47:S1:33:LYS:HA	47:S1:41:ARG:O	1.80	0.81
64:18:115:ARG:HB3	64:18:115:ARG:HH21	1.45	0.81
44:P0:25:LEU:HB3	44:P0:191:TYR:HB3	1.62	0.81
66:20:106:ILE:HG13	66:20:107:THR:H	1.44	0.81
69:23:102:VAL:HG12	69:23:127:VAL:HG12	1.60	0.81
79:2S:1257:C:H3'	79:2S:1258:U:H5"	1.62	0.81
53:S7:138:LYS:HG3	53:S7:152:VAL:HG22	1.61	0.81
20:70:71:LYS:HD2	79:2S:562:C:H5"	1.60	0.81
2:L2:224:THR:HG21	79:2S:2201:G:H21	1.46	0.81
1:L1:169:VAL:HG12	1:L1:170:GLY:H	1.45	0.81
10:60:200:LEU:HD11	10:60:209:ASN:HD21	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:81:106:THR:HG22	79:2S:3324:C:H1'	1.63	0.81
78:1S:1350:U:H2'	78:1S:1351:G:H8	1.45	0.81
79:2S:4:U:H3	80:8S:155:A:H2	1.28	0.80
27:77:14:VAL:HG13	27:77:15:ARG:HG3	1.63	0.80
36:86:77:LEU:HD13	36:86:82:ARG:HB3	1.63	0.80
48:S2:66:PHE:HB2	48:S2:133:LYS:HD2	1.61	0.80
11:61:110:ILE:HG13	64:18:16:ARG:HD2	1.62	0.80
23:73:59:MET:HE1	23:73:75:PRO:HG3	1.63	0.80
56:10:87:VAL:H	56:10:88:PRO:CD	1.92	0.80
38:88:69:LEU:HD21	38:88:73:LEU:HD22	1.64	0.80
47:S1:148:ASN:H	47:S1:148:ASN:HD22	1.29	0.80
72:26:78:ALA:HA	72:26:82:ARG:HB3	1.62	0.80
79:2S:516:A:H2'	79:2S:517:G:H5"	1.63	0.80
2:L2:21:ARG:HD3	79:2S:824:C:H5"	1.64	0.80
3:L3:84:VAL:HG22	3:L3:164:THR:HG22	1.63	0.80
73:27:33:LEU:HB2	73:27:79:PHE:HB2	1.62	0.80
79:2S:2971:A:H5"	79:2S:2972:G:H5"	1.62	0.80
25:75:82:LEU:HD21	25:75:132:ALA:HB1	1.63	0.80
16:66:119:VAL:HG23	20:70:164:SER:HB3	1.63	0.80
56:10:58:GLN:HB2	56:10:65:TYR:HB2	1.63	0.80
26:76:121:ARG:HG2	79:2S:185:C:H5'	1.63	0.80
1:L1:32:VAL:HG22	1:L1:33:GLU:H	1.44	0.80
78:1S:755:A:H2'	78:1S:756:A:O4'	1.81	0.80
5:L5:294:ALA:HB1	10:60:217:PHE:HB3	1.63	0.79
51:S5:112:ARG:HA	51:S5:112:ARG:HE	1.47	0.79
59:13:99:ARG:NH2	59:13:102:LEU:HD12	1.97	0.79
9:L9:23:ARG:HB2	9:L9:39:LYS:HG2	1.62	0.79
49:S3:70:THR:HG22	49:S3:86:LEU:HD13	1.63	0.79
53:S7:185:ILE:H	53:S7:185:ILE:HD13	1.47	0.79
1:L1:120:VAL:HG23	1:L1:121:PRO:HD3	1.65	0.79
2:L2:68:LYS:HG2	2:L2:69:TYR:H	1.47	0.79
74:28:12:VAL:HA	74:28:30:VAL:HG12	1.64	0.79
79:2S:3299:A:H61	79:2S:3315:G:H1	1.30	0.79
1:L1:169:VAL:HB	1:L1:172:VAL:HG23	1.63	0.79
4:L4:322:GLN:HB3	79:2S:608:A:H5'	1.65	0.79
7:L7:86:VAL:HG22	7:L7:136:TYR:HB3	1.65	0.79
36:86:89:GLU:O	36:86:93:ILE:HG12	1.82	0.79
39:89:22:PRO:HG3	79:2S:1517:G:H5"	1.63	0.79
42:92:36:PHE:HZ	79:2S:2225:U:H4'	1.46	0.79
47:S1:134:VAL:HB	47:S1:219:LYS:HB2	1.63	0.79
79:2S:2356:A:H61	79:2S:2983:C:H41	1.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2356:A:N6	79:2S:2983:C:H5	1.79	0.79
79:2S:2501:U:H2'	79:2S:2502:A:H5'	1.65	0.79
4:L4:52:VAL:HG22	4:L4:53:SER:H	1.47	0.79
49:S3:49:ILE:HG13	49:S3:87:TYR:HB2	1.63	0.79
52:S6:14:LYS:HD2	52:S6:123:GLY:HA3	1.64	0.79
58:12:74:LEU:HD21	77:31:106:TYR:HB2	1.63	0.79
70:24:132:ARG:O	70:24:132:ARG:HD3	1.83	0.79
78:1S:1621:U:H3'	78:1S:1622:G:H5"	1.64	0.79
79:2S:618:C:H2'	79:2S:619:A:H5'	1.65	0.79
79:2S:2700:G:H2'	79:2S:2701:U:C6	2.18	0.79
79:2S:3348:G:H1	79:2S:3357:U:H3	1.27	0.79
10:60:72:ALA:HB1	10:60:76:MET:HE3	1.64	0.79
19:69:106:LEU:HB3	19:69:120:TYR:HE1	1.48	0.79
45:RC:157:VAL:HG11	45:RC:225:LEU:CD2	2.13	0.79
78:1S:492:A:H5"	78:1S:493:U:H5'	1.65	0.79
79:2S:1238:C:H3'	79:2S:1239:C:H5"	1.63	0.79
17:67:3:ARG:HA	17:67:3:ARG:HE	1.48	0.78
24:74:13:ILE:HG12	24:74:32:GLN:HG2	1.65	0.78
79:2S:1488:G:H5"	79:2S:1838:G:O6	1.82	0.78
48:S2:225:LEU:HB3	48:S2:230:TRP:HE1	1.48	0.78
66:20:55:PRO:HB2	66:20:89:ARG:HG2	1.64	0.78
9:L9:27:VAL:HG21	9:L9:78:MET:HB3	1.65	0.78
34:84:31:ARG:HG3	34:84:32:ALA:H	1.48	0.78
35:85:78:LYS:HA	35:85:81:ARG:HD3	1.64	0.78
17:67:135:ARG:HB2	17:67:135:ARG:HH11	1.46	0.78
46:S0:76:ILE:HD13	46:S0:98:ILE:HB	1.63	0.78
2:L2:133:TYR:HB3	2:L2:168:VAL:HG12	1.64	0.78
35:85:71:LYS:HA	35:85:71:LYS:HE3	1.65	0.78
2:L2:219:ILE:HD12	79:2S:2245:C:H5"	1.66	0.78
14:64:14:LEU:HD22	20:70:151:PRO:HD3	1.63	0.78
18:68:3:ILE:HD13	79:2S:1364:C:H5"	1.65	0.78
54:S8:97:THR:HA	54:S8:173:PRO:HG2	1.64	0.78
78:1S:868:G:H1	78:1S:960:U:H3	1.31	0.78
13:63:106:GLN:HB3	36:86:18:THR:HG23	1.64	0.78
16:66:12:LYS:HA	16:66:40:GLU:HB3	1.64	0.78
79:2S:118:U:O2	79:2S:121:A:H5'	1.83	0.78
79:2S:1040:A:H3'	79:2S:1041:U:H5"	1.64	0.78
1:L1:158:GLN:HG3	1:L1:162:VAL:HG12	1.65	0.78
79:2S:1016:C:H2'	79:2S:1017:C:H5'	1.66	0.78
79:2S:1844:C:C2'	79:2S:1845:G:H5"	2.13	0.78
48:S2:37:PRO:HD2	48:S2:46:LYS:HD2	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:92:44:ASP:HA	42:92:47:GLN:HB3	1.66	0.78
52:S6:98:ARG:HD3	52:S6:99:GLY:H	1.49	0.78
78:1S:391:A:H4'	78:1S:1730:A:H5"	1.65	0.77
59:13:136:PRO:HG2	59:13:139:TRP:HB2	1.66	0.77
64:18:105:VAL:HG13	64:18:106:GLU:H	1.49	0.77
23:73:67:PRO:HA	23:73:70:ARG:HD3	1.67	0.77
2:L2:246:LEU:HD22	2:L2:250:GLN:HG3	1.67	0.77
78:1S:689:G:H2'	78:1S:690:G:H5"	1.66	0.77
2:L2:206:PRO:HG3	2:L2:213:GLY:HA3	1.66	0.77
62:16:7:VAL:HG13	62:16:96:TYR:HE2	1.49	0.77
65:19:130:ARG:HA	78:1S:1358:G:H4'	1.64	0.77
69:23:76:LEU:HD12	69:23:81:LYS:HB2	1.66	0.77
26:76:12:ARG:HG3	79:2S:215:G:H5"	1.67	0.77
53:S7:121:VAL:O	53:S7:125:ILE:HG13	1.84	0.77
54:S8:41:LYS:HA	54:S8:60:ILE:HG12	1.67	0.77
68:22:78:ARG:HB3	68:22:124:LYS:HD3	1.66	0.77
71:25:96:SER:O	71:25:97:LYS:HB3	1.85	0.77
10:60:190:VAL:HG13	10:60:197:VAL:HG21	1.65	0.77
11:61:140:ARG:HB3	81:5S:43:U:H4'	1.65	0.77
16:66:43:ILE:HG22	16:66:44:SER:H	1.49	0.77
31:81:107:VAL:HG12	31:81:108:VAL:H	1.49	0.77
34:84:68:THR:HG21	79:2S:1644:C:H41	1.50	0.77
78:1S:138:A:H61	78:1S:266:A:H61	1.33	0.77
2:L2:117:GLU:HG2	2:L2:124:GLY:H	1.50	0.77
47:S1:176:VAL:HG12	47:S1:177:GLN:H	1.50	0.77
49:S3:15:GLY:HA3	75:29:50:ILE:HG23	1.67	0.77
50:S4:198:LYS:HG2	50:S4:208:VAL:HG22	1.65	0.77
59:13:22:ALA:HB1	59:13:23:PRO:HA	1.66	0.77
74:28:29:ARG:HG3	74:28:41:VAL:HG22	1.67	0.77
2:L2:207:VAL:HG13	79:2S:2415:C:H5"	1.67	0.77
35:85:85:THR:HG22	35:85:87:ALA:H	1.50	0.77
36:86:5:THR:HG23	36:86:12:ASN:HB2	1.65	0.77
45:RC:157:VAL:HG11	45:RC:225:LEU:HD21	1.66	0.77
55:S9:65:LYS:HD3	55:S9:70:LEU:HD11	1.66	0.77
65:19:15:ILE:HG23	65:19:59:ALA:HB3	1.67	0.77
79:2S:428:A:H2'	79:2S:429:U:C6	2.19	0.77
27:77:25:ILE:HA	27:77:43:VAL:HG12	1.66	0.76
45:RC:123:ILE:HD12	45:RC:154:VAL:HB	1.68	0.76
75:29:54:LYS:HE3	78:1S:1419:G:H4'	1.65	0.76
78:1S:1519:U:H2'	78:1S:1520:U:C5	2.19	0.76
79:2S:1951:C:C5	79:2S:2095:G:N1	2.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2612:U:H2'	79:2S:2613:U:O4'	1.85	0.76
2:L2:115:ASN:HA	2:L2:126:LEU:O	1.85	0.76
3:L3:283:TYR:HE1	3:L3:325:LYS:HB2	1.50	0.76
17:67:25:SER:HB3	17:67:28:ASN:ND2	1.98	0.76
22:72:19:VAL:HG12	22:72:105:LEU:HD13	1.67	0.76
13:63:57:VAL:HG22	13:63:147:ILE:HD12	1.67	0.76
17:67:135:ARG:HB2	17:67:135:ARG:NH1	2.00	0.76
60:14:87:GLY:HA3	60:14:120:PRO:HG2	1.66	0.76
47:S1:96:LEU:HD23	47:S1:96:LEU:H	1.50	0.76
52:S6:78:THR:HG22	52:S6:79:LYS:H	1.50	0.76
10:60:154:ARG:NH1	79:2S:2837:A:H5"	2.00	0.76
45:RC:196:ASN:ND2	45:RC:219:GLU:HG3	2.01	0.76
10:60:165:ILE:HD13	10:60:165:ILE:H	1.50	0.76
24:74:13:ILE:HA	24:74:32:GLN:HE21	1.51	0.76
70:24:7:ILE:HG23	70:24:27:VAL:HG22	1.68	0.76
78:1S:218:A:H3'	78:1S:219:A:H5"	1.67	0.76
78:1S:515:A:N6	78:1S:537:G:H21	1.82	0.76
21:71:40:VAL:HB	21:71:96:ILE:HG23	1.68	0.76
27:77:22:LYS:HE3	27:77:134:LEU:HD23	1.67	0.76
57:11:149:ALA:O	57:11:152:GLN:HG2	1.86	0.76
79:2S:725:G:C2'	79:2S:726:G:H5"	2.16	0.76
1:L1:201:VAL:HG13	1:L1:204:LEU:HD11	1.67	0.76
45:RC:89:LEU:HB2	45:RC:103:PHE:HB2	1.66	0.76
52:S6:179:VAL:HA	52:S6:183:ARG:HD3	1.68	0.76
78:1S:773:C:H4'	78:1S:774:A:H5'	1.66	0.76
81:5S:29:C:H2'	81:5S:30:G:H8	1.49	0.76
5:L5:63:GLN:HG2	5:L5:77:ALA:HA	1.66	0.76
45:RC:10:ARG:HB3	45:RC:312:VAL:HG23	1.67	0.76
76:30:47:VAL:HG22	76:30:48:THR:H	1.50	0.76
78:1S:1589:C:H2'	78:1S:1590:G:C8	2.20	0.76
31:81:79:ARG:HE	31:81:81:GLU:HG2	1.48	0.76
36:86:84:LYS:O	36:86:88:GLU:HG2	1.86	0.76
49:S3:134:CYS:N	49:S3:157:LEU:HD11	2.01	0.76
59:13:96:VAL:HA	59:13:99:ARG:HB2	1.66	0.76
71:25:70:LYS:HG3	71:25:71:ILE:H	1.49	0.76
45:RC:196:ASN:HD22	45:RC:219:GLU:HG3	1.50	0.75
60:14:30:VAL:HG12	60:14:40:ALA:HB3	1.67	0.75
60:14:70:LYS:HA	60:14:70:LYS:HE2	1.68	0.75
61:15:98:ASN:HB2	61:15:122:THR:HG22	1.66	0.75
79:2S:1312:C:H2'	79:2S:1313:G:O4'	1.85	0.75
62:16:40:GLU:HG3	62:16:41:PRO:HA	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1573:A:H4'	78:1S:1574:G:H5'	1.69	0.75
79:2S:3174:A:H2'	79:2S:3175:U:H5'	1.67	0.75
16:66:34:VAL:HG12	16:66:103:LYS:HB2	1.68	0.75
18:68:100:THR:HG23	18:68:122:ILE:HD13	1.68	0.75
2:L2:140:ASN:HB3	2:L2:145:LYS:HB2	1.68	0.75
55:S9:59:LEU:HD22	55:S9:69:ARG:HA	1.66	0.75
62:16:31:VAL:HG13	62:16:67:VAL:HB	1.66	0.75
70:24:35:VAL:HG13	70:24:36:SER:H	1.50	0.75
72:26:36:ILE:HG23	72:26:73:TYR:HB2	1.66	0.75
78:1S:386:G:H2'	78:1S:387:A:C8	2.22	0.75
11:61:49:LYS:HB3	11:61:62:ASN:HA	1.69	0.75
18:68:147:ARG:NH2	18:68:149:ALA:HB3	2.00	0.75
52:S6:93:LYS:HE3	78:1S:405:C:H5"	1.67	0.75
56:10:16:PHE:CE1	56:10:82:LEU:HD11	2.22	0.75
59:13:62:GLN:HB2	59:13:65:VAL:HG23	1.68	0.75
78:1S:1012:U:H5'	78:1S:1012:U:H6	1.50	0.75
78:1S:1552:U:H2'	78:1S:1553:G:O4'	1.86	0.75
79:2S:1951:C:C6	79:2S:2095:G:N1	2.54	0.75
16:66:160:ARG:HB3	16:66:160:ARG:HH11	1.51	0.75
46:S0:189:VAL:HG13	46:S0:190:ASP:H	1.50	0.75
53:S7:91:ILE:HG13	53:S7:92:PHE:H	1.50	0.75
78:1S:189:C:H3'	78:1S:190:C:H5"	1.67	0.75
78:1S:1158:C:C5	78:1S:1581:C:H2'	2.21	0.75
79:2S:1565:G:H21	79:2S:1575:A:H62	1.35	0.75
2:L2:104:LEU:HD22	2:L2:162:ALA:HB3	1.68	0.75
7:L7:118:LYS:HE2	7:L7:191:VAL:HG11	1.69	0.75
64:18:54:LEU:H	64:18:54:LEU:HD22	1.50	0.75
79:2S:2347:U:H2'	79:2S:2348:A:O4'	1.86	0.75
1:L1:60:ARG:HB2	1:L1:180:VAL:HG21	1.69	0.75
36:86:26:ILE:HG22	79:2S:155:G:H21	1.52	0.75
45:RC:19:TRP:HB2	45:RC:38:ARG:HD2	1.68	0.75
56:10:80:LEU:O	56:10:82:LEU:HG	1.87	0.75
59:13:121:ARG:HD3	78:1S:867:G:H4'	1.68	0.75
72:26:84:VAL:HG13	72:26:85:ARG:H	1.48	0.75
79:2S:1951:C:H6	79:2S:2095:G:N2	1.83	0.75
20:70:6:GLU:O	20:70:63:GLN:HG3	1.87	0.75
28:78:118:ILE:HB	28:78:119:PRO:HD2	1.67	0.75
51:S5:29:ILE:HA	62:16:37:THR:HG21	1.67	0.75
78:1S:1711:C:H2'	78:1S:1712:A:H4'	1.69	0.75
79:2S:1238:C:C3'	79:2S:1239:C:H5"	2.17	0.75
2:L2:74:GLU:HB3	2:L2:76:PHE:HE1	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:19:102:ARG:NH2	78:1S:1501:C:H41	1.85	0.74
3:L3:20:LYS:HB3	79:2S:2990:G:H5'	1.68	0.74
6:L6:82:ARG:HD2	33:83:104:PRO:HB3	1.68	0.74
25:75:74:LYS:HE2	25:75:74:LYS:HA	1.68	0.74
58:12:24:ILE:HD13	58:12:24:ILE:H	1.51	0.74
70:24:5:VAL:HG13	70:24:29:HIS:HB3	1.69	0.74
22:72:17:VAL:HG22	22:72:103:TYR:HD2	1.50	0.74
46:S0:184:LEU:HD13	67:21:39:VAL:HG11	1.70	0.74
50:S4:31:PRO:HB3	50:S4:83:PRO:HB3	1.67	0.74
79:2S:543:C:H42	79:2S:548:G:H1	1.31	0.74
79:2S:3192:U:H2'	79:2S:3193:C:C6	2.22	0.74
3:L3:152:LYS:HG2	3:L3:192:VAL:HG11	1.69	0.74
68:22:29:PRO:HB2	68:22:58:SER:HB2	1.68	0.74
79:2S:1764:U:H3'	79:2S:1765:U:H5"	1.70	0.74
19:69:82:LYS:HD3	79:2S:1863:G:H4'	1.68	0.74
65:19:114:VAL:HG22	65:19:115:GLU:H	1.51	0.74
69:23:76:LEU:HD13	69:23:79:ASN:HD22	1.49	0.74
78:1S:138:A:H8	78:1S:141:U:H4'	1.51	0.74
3:L3:136:LYS:O	3:L3:144:ILE:HD11	1.86	0.74
8:L8:50:VAL:HG12	25:75:30:ALA:HA	1.69	0.74
15:65:104:GLU:HG2	15:65:160:GLU:HG2	1.68	0.74
25:75:51:VAL:HG11	35:85:62:GLN:HE21	1.50	0.74
44:P0:34:SER:O	44:P0:38:MET:HG2	1.88	0.74
47:S1:180:THR:O	47:S1:184:LEU:HD23	1.87	0.74
78:1S:230:C:H3'	78:1S:231:U:H5"	1.68	0.74
78:1S:709:C:H2'	78:1S:710:U:H4'	1.70	0.74
8:L8:101:THR:HG22	8:L8:104:GLU:HG3	1.69	0.74
19:69:90:PRO:HB2	19:69:93:VAL:HG23	1.69	0.74
33:83:59:VAL:HG23	33:83:60:ARG:H	1.52	0.74
72:26:12:LYS:HE3	78:1S:1790:A:H5"	1.68	0.74
78:1S:138:A:N6	78:1S:266:A:N6	2.35	0.74
78:1S:811:A:H2	78:1S:814:A:H62	1.35	0.74
78:1S:1701:A:H3'	78:1S:1702:A:C5'	2.17	0.74
79:2S:2271:A:H2'	79:2S:2272:G:H4'	1.70	0.74
16:66:37:ARG:HG2	16:66:107:GLY:HA2	1.67	0.74
18:68:147:ARG:O	18:68:150:VAL:HG22	1.88	0.74
20:70:79:VAL:HB	20:70:90:MET:HB2	1.68	0.74
42:92:49:GLY:HA2	79:2S:277:G:H5"	1.70	0.74
65:19:49:ASP:HB3	65:19:53:TRP:HD1	1.52	0.74
3:L3:86:VAL:HA	3:L3:162:VAL:HG12	1.68	0.74
15:65:80:THR:HG21	15:65:87:GLN:HG2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:93:51:ALA:HB3	43:93:54:ILE:HD12	1.68	0.74
68:22:96:ALA:HB1	68:22:98:GLN:HE21	1.51	0.74
48:S2:69:ILE:HG12	48:S2:133:LYS:HB3	1.67	0.74
50:S4:102:VAL:HG22	50:S4:103:TYR:H	1.52	0.74
78:1S:871:G:H2'	78:1S:872:G:C8	2.22	0.74
45:RC:170:ILE:HD11	45:RC:204:ALA:HB2	1.70	0.73
72:26:44:ILE:HD13	72:26:65:PRO:HG2	1.70	0.73
80:8S:107:G:H2'	80:8S:108:C:C6	2.22	0.73
51:S5:77:TYR:HB3	51:S5:84:LYS:HA	1.69	0.73
55:S9:163:PRO:HG3	78:1S:512:A:H5"	1.68	0.73
57:11:21:ASN:HB3	57:11:31:THR:HG23	1.69	0.73
2:L2:227:ARG:NH2	79:2S:2161:G:H5"	2.01	0.73
21:71:68:THR:HG23	21:71:69:LYS:H	1.52	0.73
49:S3:212:LYS:HG2	49:S3:213:GLU:H	1.52	0.73
69:23:74:VAL:HG12	69:23:75:GLN:H	1.53	0.73
76:30:14:VAL:HA	76:30:17:GLN:HG2	1.70	0.73
79:2S:2346:C:C2'	79:2S:2347:U:H5"	2.19	0.73
1:L1:207:LYS:HD3	79:2S:2491:A:C1'	2.19	0.73
4:L4:29:PRO:HD2	4:L4:277:PRO:HB2	1.71	0.73
34:84:39:ALA:HB2	34:84:58:ARG:HD2	1.68	0.73
51:S5:160:VAL:HG21	74:28:45:LYS:HD2	1.70	0.73
61:15:126:VAL:HG13	61:15:127:ARG:H	1.52	0.73
7:L7:196:LYS:HD3	7:L7:197:GLN:HE21	1.54	0.73
18:68:12:ARG:HG3	79:2S:1342:C:H5"	1.71	0.73
79:2S:763:G:C2	79:2S:764:U:H1'	2.22	0.73
82:ET:21:U:H3'	82:ET:22:A:H5'	1.70	0.73
8:L8:116:VAL:HA	8:L8:121:SER:HB2	1.71	0.73
13:63:3:ILE:HD11	28:78:34:MET:HA	1.70	0.73
26:76:55:GLU:HB2	26:76:108:LYS:HB2	1.70	0.73
26:76:68:GLY:HA2	26:76:84:LYS:HD2	1.71	0.73
49:S3:92:GLN:NE2	49:S3:92:GLN:H	1.87	0.73
79:2S:1472:U:H2'	79:2S:1473:G:C8	2.23	0.73
10:60:213:PHE:N	10:60:214:PRO:HD3	2.04	0.73
78:1S:1646:C:H42	78:1S:1754:A:H61	1.37	0.73
35:85:84:LYS:HE3	35:85:88:LEU:HD13	1.69	0.73
71:25:55:PRO:HA	71:25:88:ILE:HG21	1.71	0.73
79:2S:257:U:H2'	79:2S:258:G:H8	1.54	0.73
18:68:81:VAL:HG23	18:68:101:VAL:HA	1.69	0.73
60:14:14:PHE:HA	60:14:78:ALA:HB3	1.71	0.73
68:22:29:PRO:HB2	68:22:58:SER:CB	2.17	0.73
79:2S:2516:U:H1'	79:2S:2595:A:H62	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:71:129:LYS:HE3	79:2S:1096:U:H5”	1.70	0.73
33:83:35:VAL:HG13	33:83:40:ASP:HB2	1.70	0.73
79:2S:72:C:H1’	79:2S:74:G:H1’	1.71	0.73
4:L4:205:PRO:HG2	4:L4:225:VAL:HG22	1.70	0.72
5:L5:40:HIS:HA	21:71:69:LYS:HG3	1.68	0.72
14:64:85:TRP:HE1	14:64:91:CYS:HB3	1.54	0.72
1:L1:207:LYS:HD3	79:2S:2491:A:H1’	1.70	0.72
19:69:106:LEU:HB3	19:69:120:TYR:CE1	2.24	0.72
79:2S:2536:A:H3’	79:2S:2537:U:C5’	2.18	0.72
46:S0:30:GLN:HG2	46:S0:149:LEU:HD22	1.72	0.72
70:24:102:LYS:HB2	70:24:108:ARG:HH11	1.53	0.72
2:L2:150:LEU:HD13	79:2S:2157:G:C8	2.24	0.72
18:68:16:ARG:HH22	79:2S:671:U:H5”	1.53	0.72
48:S2:228:ASN:HD22	67:21:1:MET:HG2	1.54	0.72
66:20:55:PRO:HB3	66:20:91:ILE:HG12	1.70	0.72
79:2S:2533:G:H5’	79:2S:2533:G:H8	1.54	0.72
51:S5:60:ASP:O	51:S5:85:ALA:HB1	1.88	0.72
77:31:108:VAL:HB	77:31:114:VAL:HG22	1.71	0.72
78:1S:1158:C:H5	78:1S:1581:C:H2’	1.55	0.72
1:L1:59:PRO:HG2	1:L1:180:VAL:HG22	1.70	0.72
7:L7:123:THR:HA	7:L7:126:LEU:HD12	1.69	0.72
18:68:86:THR:HG22	18:68:105:ARG:HB2	1.71	0.72
22:72:84:LEU:HD23	22:72:89:LEU:HB2	1.70	0.72
46:S0:45:VAL:HG12	46:S0:46:HIS:H	1.54	0.72
54:S8:37:LYS:HB2	54:S8:59:ARG:HG2	1.71	0.72
56:10:46:LEU:O	56:10:50:THR:HG23	1.90	0.72
23:73:80:ARG:HD3	23:73:117:PRO:HG2	1.70	0.72
47:S1:106:THR:O	47:S1:110:LEU:HD13	1.89	0.72
56:10:87:VAL:N	56:10:88:PRO:HD2	2.01	0.72
64:18:102:ALA:O	64:18:105:VAL:HG12	1.90	0.72
79:2S:2525:G:H5”	79:2S:2526:C:O5’	1.89	0.72
79:2S:3317:U:H4’	79:2S:3318:G:H5’	1.71	0.72
24:74:17:ARG:CZ	79:2S:3050:U:H5”	2.19	0.72
38:88:26:LYS:HZ1	79:2S:1750:A:H4’	1.55	0.72
48:S2:83:ILE:HG12	48:S2:100:ALA:HA	1.71	0.72
69:23:73:ARG:HG2	69:23:84:THR:HG22	1.71	0.72
73:27:61:THR:HG23	73:27:62:ILE:H	1.54	0.72
78:1S:395:U:H2’	78:1S:396:G:O4’	1.90	0.72
78:1S:912:U:H5’	78:1S:913:G:H2’	1.70	0.72
78:1S:1058:U:C5	78:1S:1061:A:N1	2.57	0.72
78:1S:1686:C:H5’	78:1S:1686:C:H6	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:317:PRO:HG2	7:L7:149:TYR:HD2	1.54	0.72
78:1S:926:A:H2'	78:1S:927:C:C6	2.25	0.72
78:1S:1667:A:H2'	78:1S:1668:G:C8	2.25	0.72
79:2S:1291:A:H3'	79:2S:1292:C:H5"	1.72	0.72
5:L5:109:THR:O	5:L5:113:LEU:HB2	1.90	0.72
5:L5:236:LEU:HD12	5:L5:239:ILE:HD12	1.71	0.72
46:S0:83:GLN:O	46:S0:87:LEU:HD13	1.90	0.72
48:S2:38:VAL:HG22	48:S2:39:THR:H	1.52	0.72
78:1S:495:C:H5'	78:1S:496:G:H4'	1.72	0.72
79:2S:2094:C:H2'	79:2S:2095:G:H8	1.55	0.72
13:63:157:ARG:HH21	28:78:124:ILE:HG21	1.55	0.71
56:10:86:ILE:HD13	56:10:88:PRO:HD2	1.72	0.71
68:22:97:ARG:HB3	68:22:97:ARG:NH1	2.04	0.71
78:1S:913:G:H3'	78:1S:914:G:C5'	2.20	0.71
79:2S:920:A:H4'	79:2S:921:A:H5"	1.70	0.71
79:2S:2344:U:H2'	79:2S:2345:A:C8	2.24	0.71
3:L3:84:VAL:HG12	3:L3:162:VAL:HB	1.71	0.71
6:L6:176:PHE:HD2	33:83:107:ILE:HG21	1.55	0.71
7:L7:30:ARG:O	7:L7:34:LYS:HB2	1.90	0.71
7:L7:142:SER:OG	79:2S:576:C:H5"	1.90	0.71
15:65:204:LYS:NZ	79:2S:82:C:H4'	2.04	0.71
51:S5:128:ASN:O	51:S5:132:VAL:HG23	1.90	0.71
9:L9:111:PHE:HB3	9:L9:125:ASN:HB3	1.70	0.71
72:26:42:ARG:NH1	72:26:42:ARG:HB2	2.06	0.71
76:30:48:THR:HB	76:30:49:LEU:HD23	1.71	0.71
79:2S:1787:A:C3'	79:2S:1788:C:H5"	2.20	0.71
79:2S:3389:U:H6	79:2S:3389:U:H5'	1.55	0.71
2:L2:41:ILE:HG12	2:L2:42:ARG:H	1.55	0.71
7:L7:224:ILE:HD13	20:70:39:SER:HB2	1.72	0.71
51:S5:128:ASN:HD22	51:S5:129:PRO:HD2	1.55	0.71
76:30:55:ARG:HB3	76:30:58:PRO:HG3	1.72	0.71
79:2S:2207:A:H3'	79:2S:2208:A:H5'	1.72	0.71
5:L5:30:TYR:HA	5:L5:33:ARG:HB3	1.72	0.71
6:L6:130:ILE:H	6:L6:130:ILE:HD12	1.55	0.71
14:64:21:VAL:HG12	14:64:65:LEU:HA	1.71	0.71
48:S2:240:LEU:O	48:S2:244:SER:HB2	1.91	0.71
66:20:82:TYR:HB3	75:29:52:PHE:HB3	1.73	0.71
78:1S:390:G:H8	78:1S:1731:A:H4'	1.55	0.71
78:1S:878:G:H2'	78:1S:879:G:C8	2.25	0.71
79:2S:1066:G:H2'	79:2S:1067:U:C6	2.26	0.71
79:2S:1176:C:H3'	79:2S:1177:G:H2'	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:82:38:ILE:HA	32:82:43:ARG:HE	1.55	0.71
48:S2:187:LEU:HD22	48:S2:211:LEU:HD22	1.71	0.71
69:23:126:LYS:HE3	69:23:129:GLY:HA2	1.71	0.71
79:2S:2356:A:N6	79:2S:2983:C:C5	2.57	0.71
79:2S:2778:G:C2'	79:2S:2779:A:H5"	2.21	0.71
17:67:29:THR:HA	17:67:32:THR:HG22	1.73	0.71
38:88:51:LEU:HD22	79:2S:1612:A:H5"	1.71	0.71
55:S9:101:VAL:O	55:S9:105:LEU:HD13	1.89	0.71
79:2S:153:U:C2'	79:2S:154:U:H5"	2.21	0.71
79:2S:2485:A:H2'	79:2S:2486:A:H5'	1.72	0.71
79:2S:2567:C:H3'	79:2S:2568:C:H5"	1.73	0.71
30:80:24:THR:HG23	30:80:30:THR:HG22	1.70	0.71
79:2S:744:A:H2'	79:2S:745:C:H5'	1.72	0.71
79:2S:3079:U:H3'	79:2S:3080:G:H5"	1.71	0.71
7:L7:166:ASN:HA	7:L7:169:ILE:HD12	1.73	0.71
64:18:105:VAL:HG13	64:18:106:GLU:N	2.06	0.71
66:20:23:ARG:HB3	66:20:117:VAL:HG13	1.73	0.71
10:60:87:LEU:HD23	10:60:88:ARG:N	2.05	0.71
15:65:154:PRO:HA	15:65:157:LYS:HE3	1.71	0.71
45:RC:20:VAL:HG23	45:RC:308:ASN:HA	1.73	0.71
47:S1:68:VAL:HG22	47:S1:72:ASP:HB2	1.73	0.71
48:S2:145:GLY:HA3	68:22:97:ARG:HH11	1.54	0.71
66:20:58:LEU:HD12	66:20:88:LYS:HG2	1.73	0.71
78:1S:920:U:H2'	78:1S:921:U:H5"	1.73	0.71
78:1S:992:A:H2'	78:1S:993:A:H5'	1.73	0.71
79:2S:2180:G:H2'	79:2S:2181:C:C6	2.25	0.71
7:L7:126:LEU:HA	7:L7:129:LEU:HD12	1.71	0.70
34:84:99:LYS:O	34:84:103:LYS:HG2	1.91	0.70
79:2S:1654:A:C2'	79:2S:1655:G:H5'	2.21	0.70
1:L1:13:VAL:HG22	1:L1:14:LYS:H	1.54	0.70
3:L3:27:ALA:HB3	3:L3:218:ILE:HG22	1.72	0.70
4:L4:313:LEU:HD21	79:2S:1336:U:H5"	1.72	0.70
33:83:19:SER:HB3	79:2S:1329:U:H4'	1.71	0.70
57:11:80:MET:HB3	57:11:83:THR:HG23	1.73	0.70
63:17:27:ASP:HB3	63:17:30:THR:HG22	1.73	0.70
72:26:36:ILE:HD12	72:26:73:TYR:HD2	1.55	0.70
2:L2:132:ASN:HD21	79:2S:2179:C:H2'	1.55	0.70
7:L7:77:VAL:HG22	21:71:139:ARG:O	1.91	0.70
45:RC:136:ILE:HD13	45:RC:136:ILE:H	1.55	0.70
61:15:90:ILE:HD11	61:15:112:LEU:HD21	1.73	0.70
79:2S:1553:U:H4'	79:2S:1554:U:H5'	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2376:G:H2'	79:2S:2377:G:C8	2.26	0.70
18:68:35:PHE:HA	18:68:38:ARG:HD3	1.72	0.70
23:73:12:ARG:HB2	79:2S:3040:A:H5"	1.73	0.70
53:S7:16:LEU:O	53:S7:20:VAL:HG23	1.91	0.70
54:S8:29:LEU:HD12	78:1S:400:A:H61	1.56	0.70
57:11:91:LEU:HD23	57:11:102:LYS:HA	1.73	0.70
69:23:126:LYS:HA	69:23:131:SER:HA	1.74	0.70
79:2S:2356:A:H61	79:2S:2983:C:N4	1.88	0.70
69:23:83:VAL:HG12	69:23:84:THR:H	1.55	0.70
78:1S:145:A:HO2'	78:1S:146:U:H6	1.39	0.70
78:1S:292:U:H2'	78:1S:293:U:O4'	1.92	0.70
78:1S:805:U:H2'	78:1S:806:A:H5"	1.74	0.70
79:2S:283:G:H21	79:2S:285:A:H5"	1.55	0.70
81:5S:75:G:H1'	81:5S:104:A:H61	1.56	0.70
6:L6:40:LEU:HD13	6:L6:84:VAL:HG11	1.73	0.70
6:L6:52:VAL:HG22	6:L6:53:VAL:H	1.56	0.70
15:65:49:ARG:HG2	79:2S:114:A:H4'	1.74	0.70
62:16:40:GLU:HA	62:16:42:GLU:N	2.07	0.70
78:1S:1340:U:H3'	78:1S:1341:A:C5'	2.21	0.70
2:L2:150:LEU:HD12	2:L2:154:ALA:HB3	1.73	0.70
18:68:64:VAL:HG13	18:68:93:ILE:HD11	1.73	0.70
51:S5:71:ALA:HB1	51:S5:91:GLU:HA	1.74	0.70
55:S9:133:HIS:NE2	55:S9:163:PRO:HG2	2.06	0.70
58:12:21:GLU:HG3	58:12:22:VAL:H	1.57	0.70
79:2S:1809:A:H2'	79:2S:1810:A:O4'	1.92	0.70
82:ET:21:U:H3'	82:ET:22:A:C5'	2.21	0.70
3:L3:261:MET:O	3:L3:264:VAL:HG22	1.91	0.70
34:84:97:GLU:O	34:84:101:VAL:HG23	1.91	0.70
48:S2:141:ARG:HB2	48:S2:153:SER:O	1.92	0.70
72:26:36:ILE:CG2	72:26:73:TYR:HB2	2.22	0.70
78:1S:754:A:H61	78:1S:793:A:H2'	1.57	0.70
19:69:40:ALA:O	19:69:44:LEU:HD23	1.92	0.70
47:S1:176:VAL:HG12	47:S1:177:GLN:N	2.06	0.70
54:S8:31:ARG:HH22	54:S8:48:THR:HG22	1.54	0.70
78:1S:751:G:H2'	78:1S:752:A:O4'	1.91	0.70
9:L9:156:GLN:HE22	79:2S:3109:G:H21	1.38	0.70
19:69:120:TYR:O	19:69:124:TYR:HB2	1.92	0.70
25:75:105:VAL:HG11	25:75:126:LEU:HD13	1.74	0.70
74:28:33:LEU:HD21	74:28:53:ILE:HG23	1.72	0.70
78:1S:5:U:H2'	78:1S:6:G:H8	1.57	0.70
79:2S:3286:G:H2'	79:2S:3287:U:H5"	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:60:ARG:HG2	80:8S:152:G:H5'	1.73	0.69
16:66:160:ARG:HB3	16:66:160:ARG:NH1	2.07	0.69
28:78:55:LYS:HG3	79:2S:2764:C:H5"	1.74	0.69
28:78:124:ILE:HG12	28:78:144:VAL:HG22	1.74	0.69
54:S8:172:ARG:HD3	54:S8:175:GLN:HG3	1.72	0.69
69:23:26:GLU:HB2	69:23:29:TYR:HB3	1.74	0.69
79:2S:2601:A:H2'	79:2S:2602:G:C8	2.27	0.69
80:8S:8:C:H2'	80:8S:9:A:C8	2.27	0.69
4:L4:23:PRO:HD2	4:L4:26:PHE:HE2	1.57	0.69
15:65:122:ASN:HB3	15:65:129:TYR:CD2	2.28	0.69
28:78:133:LEU:HD13	79:2S:715:A:H5"	1.73	0.69
38:88:43:PHE:HZ	38:88:62:ALA:HB1	1.57	0.69
39:89:10:LYS:HA	39:89:13:MET:HE3	1.73	0.69
49:S3:158:ILE:H	49:S3:158:ILE:HD13	1.57	0.69
70:24:5:VAL:HA	70:24:29:HIS:HA	1.73	0.69
79:2S:1564:U:H2'	79:2S:1565:G:O4'	1.91	0.69
6:L6:63:LEU:HB2	6:L6:79:VAL:HG23	1.75	0.69
50:S4:62:LYS:O	50:S4:66:MET:HG2	1.93	0.69
50:S4:125:LYS:HA	50:S4:159:THR:HA	1.73	0.69
60:14:122:PRO:HA	78:1S:886:U:O2'	1.91	0.69
78:1S:1336:A:H3'	78:1S:1337:A:H5"	1.72	0.69
82:ET:26:C:H2'	82:ET:27:G:H5'	1.73	0.69
15:65:188:ARG:HA	15:65:191:TRP:HB3	1.74	0.69
28:78:70:LYS:HD3	28:78:129:PHE:CD2	2.27	0.69
30:80:22:LYS:HB2	30:80:94:GLU:HB2	1.74	0.69
37:87:58:THR:HB	37:87:61:THR:HG23	1.75	0.69
49:S3:211:PRO:HG3	63:17:20:TYR:HE1	1.58	0.69
79:2S:1460:A:H2'	79:2S:1461:A:C8	2.27	0.69
79:2S:2530:G:C2'	79:2S:2531:C:H5"	2.21	0.69
80:8S:41:A:H61	80:8S:103:G:H1'	1.57	0.69
82:PT:54:G:H2'	82:PT:55:U:C6	2.27	0.69
9:L9:48:VAL:HG13	9:L9:49:ASN:H	1.58	0.69
14:64:50:LYS:NZ	14:64:86:ALA:HB2	2.07	0.69
20:70:74:ASN:HB3	20:70:129:ILE:HD12	1.74	0.69
49:S3:176:LEU:HA	49:S3:181:VAL:HG12	1.74	0.69
60:14:16:VAL:O	60:14:30:VAL:HG23	1.91	0.69
78:1S:1686:C:H2'	78:1S:1687:U:H5'	1.73	0.69
79:2S:1967:U:H5"	79:2S:1968:G:H5"	1.74	0.69
20:70:94:ILE:HG22	20:70:95:ARG:N	2.06	0.69
32:82:33:ARG:HA	32:82:33:ARG:HE	1.58	0.69
33:83:72:THR:HG22	79:2S:585:A:H4'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RC:133:VAL:HB	45:RC:142:ALA:HB3	1.73	0.69
49:S3:119:ALA:O	49:S3:123:VAL:HG23	1.92	0.69
55:S9:175:ARG:O	55:S9:179:ARG:HG3	1.93	0.69
4:L4:280:ILE:HD11	18:68:25:TYR:HB2	1.73	0.69
8:L8:72:PRO:HD2	8:L8:75:ILE:HD12	1.74	0.69
56:10:68:LEU:HD11	56:10:72:GLY:HA3	1.75	0.69
79:2S:3121:U:H1'	79:2S:3122:A:H5"	1.75	0.69
7:L7:88:ARG:HG2	7:L7:110:ARG:O	1.93	0.69
14:64:113:THR:HG22	14:64:115:PHE:H	1.58	0.69
18:68:174:ARG:HA	18:68:178:ARG:HG3	1.74	0.69
34:84:41:ARG:HG2	34:84:56:THR:HG21	1.75	0.69
51:S5:203:LYS:HA	51:S5:203:LYS:HE3	1.72	0.69
57:11:122:ILE:HB	57:11:143:SER:HB2	1.72	0.69
63:17:61:ILE:HG12	63:17:66:VAL:HG21	1.73	0.69
69:23:24:TRP:HE3	69:23:30:LYS:HD2	1.56	0.69
78:1S:524:U:H2'	78:1S:526:A:OP2	1.92	0.69
78:1S:822:U:H2'	78:1S:823:G:H5"	1.75	0.69
79:2S:1218:U:H2'	79:2S:1219:C:H5'	1.72	0.69
79:2S:1238:C:H2'	79:2S:1239:C:H5"	1.75	0.69
79:2S:2197:C:N4	79:2S:2241:U:H2'	2.08	0.69
80:8S:40:A:H2'	80:8S:41:A:C8	2.27	0.69
26:76:31:LEU:HD11	26:76:75:ARG:HG2	1.75	0.69
47:S1:32:ILE:HD12	60:14:33:LEU:HD22	1.75	0.69
60:14:124:ASP:HB2	78:1S:929:A:C4'	2.22	0.69
69:23:103:LEU:HD12	69:23:125:VAL:HB	1.74	0.69
78:1S:44:U:H2'	78:1S:45:U:H5	1.56	0.69
78:1S:477:A:H2'	78:1S:478:A:H8	1.55	0.69
79:2S:1787:A:H3'	79:2S:1788:C:H5"	1.73	0.69
10:60:97:LEU:HD21	10:60:126:ALA:HB2	1.75	0.69
46:S0:102:PHE:HZ	46:S0:135:GLU:HG3	1.58	0.69
55:S9:134:ILE:HA	55:S9:158:PHE:HA	1.72	0.69
72:26:82:ARG:HG3	72:26:83:ILE:N	2.04	0.69
79:2S:307:A:H2'	79:2S:308:A:C8	2.28	0.69
9:L9:7:GLU:HB3	9:L9:56:ALA:HA	1.74	0.68
27:77:50:PRO:HD3	27:77:68:ILE:HG12	1.75	0.68
30:80:16:LEU:HD12	30:80:98:SER:HB2	1.73	0.68
42:92:98:LYS:HD2	79:2S:2656:A:H4'	1.74	0.68
78:1S:5:U:H2'	78:1S:6:G:C8	2.29	0.68
78:1S:72:A:H3'	78:1S:73:U:H5"	1.73	0.68
6:L6:63:LEU:HB2	6:L6:79:VAL:CG2	2.23	0.68
18:68:23:ASN:O	18:68:27:LYS:HG3	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:71:41:ASP:O	21:71:96:ILE:HA	1.93	0.68
34:84:85:VAL:O	34:84:89:ILE:HG13	1.93	0.68
45:RC:260:ILE:HB	45:RC:274:LEU:HB2	1.74	0.68
47:S1:111:ARG:HB3	72:26:68:TYR:HD2	1.58	0.68
1:L1:178:VAL:HG13	1:L1:179:LEU:HG	1.75	0.68
17:67:107:LEU:HD23	17:67:112:LEU:HD11	1.75	0.68
33:83:88:ASN:HB2	79:2S:429:U:H5'	1.75	0.68
44:P0:45:LEU:HD13	44:P0:49:ALA:HB3	1.75	0.68
54:S8:116:HIS:HD1	54:S8:117:TYR:HD2	1.42	0.68
54:S8:159:GLN:HB3	54:S8:165:LEU:HD23	1.75	0.68
64:18:24:GLY:HA2	64:18:58:ALA:HB3	1.74	0.68
66:20:71:PRO:HB3	75:29:41:GLN:HG2	1.76	0.68
79:2S:443:G:H22	79:2S:493:U:H1'	1.58	0.68
79:2S:2372:A:H5"	79:2S:2373:A:H5'	1.76	0.68
4:L4:135:VAL:HG11	4:L4:142:VAL:HG11	1.75	0.68
46:S0:56:LYS:HG3	46:S0:161:PRO:HD2	1.75	0.68
79:2S:129:U:H2'	79:2S:130:A:C8	2.28	0.68
79:2S:830:A:H2'	79:2S:831:G:O4'	1.93	0.68
26:76:115:ARG:O	26:76:119:ILE:HG13	1.94	0.68
27:77:24:VAL:HG22	27:77:130:PHE:HZ	1.59	0.68
46:S0:30:GLN:HE21	46:S0:149:LEU:HD22	1.59	0.68
63:17:21:TYR:N	63:17:22:PRO:HD2	2.09	0.68
78:1S:1524:A:H2'	78:1S:1525:A:C8	2.28	0.68
78:1S:1650:U:H2'	78:1S:1651:A:C8	2.29	0.68
79:2S:549:U:H2'	79:2S:550:A:C8	2.28	0.68
79:2S:3006:A:H2'	79:2S:3007:U:O4'	1.94	0.68
1:L1:62:ASN:HA	1:L1:168:ALA:HA	1.75	0.68
2:L2:61:VAL:O	2:L2:74:GLU:HB2	1.93	0.68
2:L2:216:HIS:HB2	2:L2:218:HIS:CD2	2.28	0.68
5:L5:7:ALA:C	5:L5:8:LYS:HD2	2.17	0.68
15:65:6:TYR:O	15:65:10:LEU:HB2	1.94	0.68
33:83:13:HIS:HA	33:83:30:ILE:HD13	1.76	0.68
46:S0:56:LYS:HB2	46:S0:160:ILE:HG23	1.75	0.68
48:S2:90:THR:CG2	48:S2:93:GLY:H	2.07	0.68
48:S2:170:ILE:HB	48:S2:197:TYR:HB2	1.73	0.68
71:25:77:ARG:HB3	71:25:81:ARG:HH12	1.58	0.68
3:L3:66:LYS:HB3	23:73:88:ARG:NH1	2.09	0.68
47:S1:71:ALA:CB	47:S1:79:HIS:HB2	2.22	0.68
53:S7:49:ILE:HG21	53:S7:175:LYS:HG2	1.76	0.68
78:1S:1166:A:H2'	78:1S:1167:G:H4'	1.75	0.68
79:2S:516:A:C2'	79:2S:517:G:H5"	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:820:A:H2'	79:2S:821:U:C6	2.29	0.68
8:L8:46:LEU:O	8:L8:50:VAL:HG13	1.94	0.68
9:L9:96:HIS:O	9:L9:98:PRO:HD3	1.94	0.68
15:65:70:ASN:ND2	79:2S:2599:U:H5"	2.08	0.68
31:81:28:ARG:HB2	31:81:64:VAL:O	1.94	0.68
62:16:69:VAL:HG21	62:16:81:ILE:HG22	1.74	0.68
78:1S:1770:U:H2'	78:1S:1771:U:C6	2.29	0.68
79:2S:2060:A:H2'	79:2S:2061:G:H5'	1.76	0.68
79:2S:3346:U:H3	79:2S:3359:A:H61	1.42	0.68
1:L1:103:LEU:HD11	1:L1:128:LEU:HB3	1.76	0.68
8:L8:193:LYS:HD2	79:2S:7:C:H5"	1.75	0.68
35:85:119:LYS:HE2	35:85:119:LYS:HA	1.76	0.68
48:S2:165:VAL:HG13	48:S2:204:THR:HG22	1.73	0.68
51:S5:78:ALA:HB3	78:1S:1583:A:N7	2.09	0.68
61:15:28:MET:HG2	61:15:29:SER:H	1.58	0.68
71:25:92:ILE:HG13	71:25:100:ILE:HG23	1.76	0.68
79:2S:627:U:H2'	79:2S:628:A:H8	1.57	0.68
2:L2:104:LEU:HD13	2:L2:162:ALA:O	1.93	0.68
4:L4:23:PRO:HD2	4:L4:26:PHE:CE2	2.29	0.68
30:80:78:GLY:O	30:80:81:VAL:HG22	1.93	0.68
46:S0:170:ILE:H	46:S0:170:ILE:HD12	1.58	0.68
57:11:14:GLN:HB3	57:11:54:ILE:HG12	1.74	0.68
70:24:53:ASP:HB3	70:24:79:VAL:HG13	1.76	0.68
78:1S:44:U:H2'	78:1S:45:U:C5	2.28	0.68
78:1S:1320:U:O2	78:1S:1322:A:H5'	1.94	0.68
78:1S:1496:U:H4'	78:1S:1519:U:O2'	1.93	0.68
79:2S:66:A:N6	79:2S:76:G:H1'	2.09	0.68
3:L3:142:ALA:O	3:L3:146:ARG:HB2	1.93	0.67
5:L5:19:PRO:HB3	5:L5:23:ARG:HD3	1.74	0.67
8:L8:181:LYS:HG2	80:8S:154:C:H5"	1.76	0.67
34:84:60:ARG:NH2	79:2S:1616:U:H4'	2.08	0.67
37:87:25:ARG:HH21	79:2S:817:A:N6	1.88	0.67
47:S1:103:MET:HB3	47:S1:215:VAL:HG12	1.76	0.67
55:S9:90:LYS:HE3	55:S9:95:TYR:HB2	1.76	0.67
66:20:53:LYS:HB2	66:20:92:ASP:HB2	1.75	0.67
79:2S:2515:A:C6	79:2S:2593:A:H1'	2.29	0.67
31:81:62:ARG:HB2	31:81:66:GLY:CA	2.22	0.67
78:1S:16:G:H21	78:1S:1138:A:H62	1.40	0.67
78:1S:41:A:H2'	78:1S:438:A:N7	2.09	0.67
78:1S:519:C:H3'	78:1S:520:A:H8	1.58	0.67
79:2S:2501:U:C2'	79:2S:2502:A:H5'	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2775:U:H2'	79:2S:2776:C:C6	2.28	0.67
4:L4:82:THR:C	4:L4:84:ARG:H	2.00	0.67
4:L4:234:ASN:O	4:L4:238:LEU:HG	1.94	0.67
42:92:36:PHE:CZ	79:2S:2225:U:H4'	2.29	0.67
47:S1:71:ALA:HB3	60:14:114:ARG:HH12	1.59	0.67
79:2S:3334:U:H4'	79:2S:3335:A:C5'	2.24	0.67
79:2S:3375:A:H5"	79:2S:3378:C:H5	1.58	0.67
5:L5:83:LEU:HB3	5:L5:88:ILE:HB	1.76	0.67
7:L7:146:GLN:HE22	7:L7:241:LYS:HG3	1.60	0.67
16:66:73:PHE:HA	79:2S:3007:U:OP1	1.93	0.67
65:19:40:SER:HB3	65:19:43:ASN:HB2	1.75	0.67
78:1S:1291:G:H2'	78:1S:1292:G:H8	1.58	0.67
78:1S:1357:A:H2'	78:1S:1358:G:C8	2.30	0.67
6:L6:82:ARG:HB3	33:83:104:PRO:HA	1.77	0.67
9:L9:24:ILE:HD11	9:L9:39:LYS:HD2	1.77	0.67
9:L9:41:ILE:HD12	9:L9:43:VAL:HG13	1.77	0.67
25:75:115:ARG:HE	25:75:121:LYS:HB2	1.58	0.67
44:P0:4:ILE:HD13	44:P0:4:ILE:H	1.58	0.67
46:S0:59:LEU:HD11	67:21:78:LEU:HD12	1.77	0.67
48:S2:45:VAL:HG11	48:S2:68:ILE:HG23	1.77	0.67
63:17:55:THR:O	63:17:59:LYS:HG3	1.94	0.67
78:1S:626:U:H5'	78:1S:939:A:H1'	1.75	0.67
79:2S:528:U:H2'	79:2S:529:A:C8	2.29	0.67
79:2S:2387:A:H3'	79:2S:2388:U:H5"	1.75	0.67
14:64:85:TRP:NE1	14:64:91:CYS:HB3	2.08	0.67
16:66:76:PRO:HD2	16:66:106:GLU:OE2	1.95	0.67
17:67:24:VAL:HG22	17:67:86:LYS:HE2	1.75	0.67
45:RC:214:ALA:HB2	45:RC:220:ILE:HG12	1.75	0.67
79:2S:1040:A:C3'	79:2S:1041:U:H5"	2.23	0.67
19:69:86:GLU:HG2	19:69:90:PRO:HA	1.77	0.67
46:S0:38:PHE:O	46:S0:39:ASN:HB2	1.94	0.67
52:S6:135:PRO:HB2	52:S6:141:ILE:HG12	1.75	0.67
53:S7:98:ILE:CG1	53:S7:121:VAL:HG21	2.23	0.67
62:16:82:ARG:HH22	62:16:116:LEU:HD11	1.59	0.67
78:1S:707:A:H3'	78:1S:708:C:C5'	2.22	0.67
79:2S:2798:C:C5'	79:2S:2800:G:H5'	2.21	0.67
2:L2:35:ALA:HA	8:L8:36:ILE:HD13	1.77	0.67
32:82:102:ALA:HA	32:82:105:ARG:HD3	1.77	0.67
71:25:59:TYR:CE2	71:25:100:ILE:HG12	2.30	0.67
79:2S:1054:A:H5"	79:2S:2637:A:H61	1.58	0.67
79:2S:1236:G:H3'	79:2S:1237:G:C5'	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2076:G:H2'	79:2S:2077:U:H5"	1.77	0.67
2:L2:33:ASP:O	2:L2:37:ARG:HG2	1.95	0.67
17:67:43:LYS:HA	17:67:46:LYS:HE2	1.77	0.67
20:70:119:ARG:HB2	81:5S:96:U:H4'	1.75	0.67
47:S1:71:ALA:HB2	47:S1:79:HIS:CB	2.19	0.67
62:16:71:GLY:HA2	78:1S:1483:A:H4'	1.77	0.67
78:1S:1291:G:H1	78:1S:1324:G:H22	1.43	0.67
79:2S:2688:U:H5'	79:2S:2689:A:C8	2.30	0.67
79:2S:2995:A:H2'	79:2S:2996:U:H5"	1.77	0.67
11:61:40:LEU:HD22	11:61:114:ILE:HG12	1.76	0.67
50:S4:45:ILE:O	50:S4:49:ARG:HB3	1.95	0.67
50:S4:126:VAL:HA	50:S4:141:THR:HA	1.75	0.67
64:18:109:LEU:O	64:18:113:LEU:HG	1.95	0.67
78:1S:205:U:H2'	78:1S:206:A:H8	1.59	0.67
78:1S:602:U:H2'	78:1S:603:U:C6	2.31	0.67
79:2S:3079:U:H3'	79:2S:3080:G:C5'	2.24	0.67
3:L3:210:GLU:HA	3:L3:285:VAL:HG21	1.77	0.66
15:65:176:LYS:NZ	79:2S:65:A:H5'	2.09	0.66
16:66:92:THR:O	16:66:96:LYS:HG3	1.95	0.66
18:68:34:THR:HA	18:68:49:LEU:HD11	1.77	0.66
28:78:6:THR:HG22	28:78:8:THR:HG23	1.77	0.66
45:RC:131:ILE:HB	45:RC:144:LEU:HB2	1.77	0.66
47:S1:35:PRO:HA	47:S1:232:HIS:NE2	2.09	0.66
47:S1:136:ARG:HD3	78:1S:884:A:H5"	1.76	0.66
53:S7:111:LYS:HG3	53:S7:112:ARG:N	2.10	0.66
53:S7:114:ARG:HH11	53:S7:114:ARG:HB2	1.59	0.66
61:15:52:LYS:HB3	61:15:80:MET:HE1	1.77	0.66
5:L5:260:PHE:HE2	81:5S:121:U:H5'	1.60	0.66
16:66:56:ASP:HB3	16:66:60:LYS:NZ	2.10	0.66
20:70:124:LEU:HA	21:71:153:PRO:HG2	1.78	0.66
35:85:24:LEU:HB3	35:85:51:ILE:HG12	1.77	0.66
52:S6:137:ARG:HH12	78:1S:144:U:H5	1.43	0.66
78:1S:71:A:H2'	78:1S:72:A:H4'	1.75	0.66
79:2S:671:U:H2'	79:2S:672:A:C8	2.30	0.66
1:L1:169:VAL:HG12	1:L1:170:GLY:N	2.09	0.66
6:L6:136:GLU:O	6:L6:140:VAL:HG23	1.95	0.66
26:76:87:LYS:HE2	79:2S:375:A:O2'	1.95	0.66
45:RC:21:THR:HG21	45:RC:38:ARG:HE	1.60	0.66
52:S6:59:GLN:HE21	78:1S:156:A:H62	1.43	0.66
60:14:87:GLY:HA2	60:14:92:LYS:HB3	1.75	0.66
82:PT:58:A:H2'	82:PT:59:A:H5'	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:112:ILE:HG23	2:L2:133:TYR:HB2	1.78	0.66
3:L3:100:ARG:NH2	79:2S:3242:G:H1'	2.08	0.66
4:L4:6:VAL:HG21	4:L4:22:LEU:HD21	1.78	0.66
17:67:122:ALA:HB3	17:67:143:PRO:HB2	1.77	0.66
47:S1:91:VAL:HB	47:S1:96:LEU:HB3	1.77	0.66
55:S9:109:LEU:O	55:S9:113:VAL:HG23	1.95	0.66
61:15:68:PRO:HG2	61:15:71:GLU:HB3	1.77	0.66
69:23:7:ARG:HH12	78:1S:1100:G:H1'	1.60	0.66
79:2S:235:A:H2'	79:2S:236:G:C8	2.30	0.66
79:2S:599:C:C2'	79:2S:600:G:H5"	2.24	0.66
1:L1:58:CYS:HB2	1:L1:152:ARG:HA	1.76	0.66
2:L2:51:ASP:HB2	2:L2:58:LEU:HG	1.76	0.66
18:68:51:ALA:HB1	18:68:84:VAL:HG11	1.78	0.66
30:80:11:ASN:HA	30:80:14:LEU:HD12	1.78	0.66
57:11:74:THR:HG22	57:11:122:ILE:HG12	1.76	0.66
61:15:31:GLU:O	61:15:34:VAL:HG22	1.94	0.66
79:2S:571:U:H2'	79:2S:572:A:H8	1.59	0.66
7:L7:121:LYS:HD2	21:71:133:ALA:CB	2.24	0.66
8:L8:26:LEU:HD11	27:77:123:GLN:HA	1.78	0.66
22:72:30:PRO:HG2	22:72:60:GLY:O	1.96	0.66
32:82:75:LEU:HG	32:82:95:GLU:OE1	1.96	0.66
60:14:17:ALA:HB3	60:14:81:VAL:HA	1.75	0.66
78:1S:1738:U:H2'	78:1S:1739:C:C6	2.30	0.66
79:2S:178:U:H2'	79:2S:179:C:H6	1.58	0.66
79:2S:1787:A:H2'	79:2S:1788:C:H5"	1.77	0.66
79:2S:3317:U:H1'	79:2S:3318:G:OP2	1.95	0.66
4:L4:39:PHE:HE1	4:L4:236:LEU:HA	1.60	0.66
4:L4:328:ASN:HD21	4:L4:330:TYR:HB3	1.61	0.66
15:65:116:LEU:HB3	15:65:133:ILE:HG23	1.77	0.66
27:77:25:ILE:CG2	27:77:28:PRO:HD3	2.26	0.66
30:80:32:LYS:HG3	30:80:36:GLN:HE21	1.61	0.66
30:80:42:ILE:HD11	30:80:67:VAL:HG22	1.77	0.66
31:81:10:ARG:HD2	31:81:12:TYR:OH	1.96	0.66
52:S6:191:ARG:O	52:S6:195:VAL:HG23	1.96	0.66
55:S9:174:ARG:HA	55:S9:174:ARG:HE	1.59	0.66
66:20:118:VAL:HG13	66:20:119:ALA:H	1.59	0.66
79:2S:796:U:H2'	79:2S:797:U:C6	2.31	0.66
79:2S:1951:C:H5	79:2S:2095:G:H1	1.35	0.66
11:61:47:GLN:HB3	11:61:64:LYS:HD3	1.75	0.66
14:64:15:VAL:HG22	20:70:150:PHE:O	1.96	0.66
16:66:24:ALA:O	16:66:28:LEU:HG	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:74:23:ARG:HG2	24:74:24:GLY:H	1.59	0.66
66:20:95:ALA:HB1	66:20:96:PRO:HD2	1.78	0.66
75:29:10:HIS:ND1	75:29:11:PRO:HD2	2.11	0.66
79:2S:178:U:H2'	79:2S:179:C:C6	2.30	0.66
5:L5:285:ARG:O	5:L5:289:LYS:HG3	1.96	0.66
15:65:71:ARG:O	15:65:92:LEU:HB2	1.96	0.66
51:S5:101:GLY:HA2	78:1S:1166:A:H5"	1.76	0.66
72:26:7:SER:HB2	72:26:11:ASN:H	1.61	0.66
79:2S:1534:A:H2'	79:2S:1535:A:C8	2.30	0.66
79:2S:1959:G:H2'	79:2S:1960:A:H5'	1.77	0.66
79:2S:2322:C:O2'	79:2S:2323:G:H5'	1.96	0.66
33:83:13:HIS:HA	33:83:30:ILE:CD1	2.26	0.66
52:S6:139:ASN:O	52:S6:143:LYS:HD3	1.96	0.66
72:26:41:ILE:HD13	72:26:41:ILE:H	1.59	0.66
78:1S:1681:A:C2'	78:1S:1682:U:H5'	2.26	0.66
79:2S:989:A:H2'	79:2S:990:U:C6	2.30	0.66
79:2S:1454:A:H5"	79:2S:1455:U:H5'	1.78	0.66
79:2S:1594:A:H1'	79:2S:1615:C:H1'	1.77	0.66
79:2S:2843:U:H5"	79:2S:2844:C:H5	1.61	0.66
7:L7:80:GLN:HB2	21:71:135:PRO:HB2	1.78	0.65
17:67:117:ILE:HG13	17:67:148:LEU:HB3	1.78	0.65
18:68:34:THR:HG22	18:68:49:LEU:HD21	1.77	0.65
38:88:26:LYS:NZ	79:2S:1750:A:H4'	2.11	0.65
40:90:113:ARG:HH12	79:2S:1190:A:H4'	1.60	0.65
45:RC:189:GLU:HA	49:S3:225:TYR:HB2	1.76	0.65
49:S3:24:PHE:HZ	49:S3:72:LEU:HD13	1.60	0.65
51:S5:79:ASN:HB2	51:S5:83:ARG:NH2	2.11	0.65
56:10:30:ALA:O	56:10:38:LYS:HA	1.95	0.65
65:19:28:LEU:HD21	65:19:30:VAL:HG13	1.78	0.65
79:2S:1913:A:N3	79:2S:2120:A:H2'	2.11	0.65
79:2S:2374:C:H5	79:2S:2823:G:H1'	1.61	0.65
23:73:84:SER:HA	23:73:94:TYR:HB3	1.78	0.65
31:81:54:GLU:HA	31:81:57:GLN:NE2	2.12	0.65
34:84:66:SER:HB2	34:84:69:HIS:ND1	2.11	0.65
48:S2:53:ILE:HG12	48:S2:72:LEU:HB3	1.77	0.65
51:S5:187:ILE:HA	78:1S:1534:G:N2	2.11	0.65
70:24:8:ARG:O	70:24:26:ASP:HB2	1.96	0.65
78:1S:515:A:H62	78:1S:537:G:N2	1.82	0.65
78:1S:760:A:H2'	78:1S:761:G:O4'	1.97	0.65
79:2S:751:A:H2'	79:2S:752:C:C6	2.31	0.65
79:2S:926:A:H2'	79:2S:927:C:C6	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1805:C:H2'	79:2S:1806:A:H8	1.61	0.65
4:L4:42:VAL:HA	4:L4:45:ASN:ND2	2.11	0.65
8:L8:178:ALA:HB2	8:L8:218:ILE:HG23	1.79	0.65
11:61:97:SER:HB2	11:61:101:ASN:HB2	1.78	0.65
13:63:63:VAL:HG13	79:2S:72:C:H5'	1.78	0.65
17:67:129:THR:HB	17:67:137:ASN:HB2	1.77	0.65
19:69:102:LEU:HD21	19:69:135:LYS:HA	1.77	0.65
22:72:42:LYS:HE2	22:72:47:VAL:HG13	1.79	0.65
23:73:93:LEU:HD23	23:73:93:LEU:H	1.61	0.65
31:81:32:ALA:O	31:81:36:ILE:HG13	1.96	0.65
36:86:26:ILE:HD12	36:86:26:ILE:N	2.10	0.65
42:92:77:CYS:SG	42:92:79:THR:HG22	2.36	0.65
46:S0:56:LYS:HB3	46:S0:160:ILE:HG12	1.79	0.65
59:13:64:ARG:HB3	59:13:64:ARG:NH1	2.08	0.65
65:19:119:LYS:HE2	78:1S:1369:U:H5"	1.75	0.65
68:22:22:LYS:HD2	73:27:3:LEU:HD23	1.78	0.65
72:26:84:VAL:HG13	72:26:85:ARG:N	2.11	0.65
78:1S:1672:G:H2'	78:1S:1673:G:C8	2.31	0.65
79:2S:442:G:O6	79:2S:493:U:H2'	1.96	0.65
6:L6:82:ARG:O	33:83:103:TYR:HB2	1.96	0.65
25:75:63:ILE:HA	25:75:86:VAL:HG23	1.76	0.65
34:84:41:ARG:HB2	34:84:50:ALA:HB1	1.78	0.65
68:22:83:ILE:O	68:22:86:ILE:HG12	1.97	0.65
78:1S:989:U:H2'	78:1S:990:C:C6	2.31	0.65
79:2S:598:A:H2'	79:2S:599:C:C6	2.31	0.65
4:L4:317:PRO:HG3	4:L4:323:VAL:HG13	1.77	0.65
5:L5:84:PRO:HB3	5:L5:89:THR:HG22	1.78	0.65
6:L6:56:LYS:HG2	6:L6:57:HIS:N	2.11	0.65
23:73:66:LYS:CB	23:73:69:LEU:HD13	2.26	0.65
37:87:18:LEU:HD23	37:87:25:ARG:HB2	1.78	0.65
59:13:17:PRO:HG3	73:27:28:PRO:HG3	1.79	0.65
69:23:103:LEU:HD13	69:23:104:LEU:N	2.12	0.65
78:1S:16:G:H2'	78:1S:17:C:C6	2.32	0.65
78:1S:1036:A:H2'	78:1S:1037:C:C6	2.32	0.65
78:1S:1171:A:H2'	78:1S:1172:G:C8	2.31	0.65
78:1S:1225:U:H2'	78:1S:1226:A:H5'	1.78	0.65
79:2S:209:A:H4'	79:2S:211:A:C8	2.32	0.65
2:L2:68:LYS:HG2	2:L2:69:TYR:N	2.11	0.65
47:S1:172:LEU:O	47:S1:176:VAL:HG23	1.96	0.65
53:S7:131:PHE:H	53:S7:132:PRO:HD2	1.61	0.65
56:10:25:LYS:HD3	56:10:62:GLN:NE2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:17:97:ASN:ND2	63:17:97:ASN:H	1.95	0.65
74:28:8:THR:HB	74:28:56:LEU:HB2	1.77	0.65
79:2S:296:A:O2'	79:2S:297:G:H5'	1.96	0.65
28:78:36:GLY:HA3	28:78:40:HIS:CE1	2.32	0.65
33:83:73:ARG:O	33:83:81:VAL:HG13	1.96	0.65
47:S1:176:VAL:O	47:S1:177:GLN:HG2	1.97	0.65
55:S9:135:ALA:HB2	55:S9:159:ALA:HB2	1.77	0.65
78:1S:177:U:H3'	78:1S:178:U:H5"	1.79	0.65
78:1S:1107:G:O2'	78:1S:1108:G:H5'	1.97	0.65
1:L1:64:SER:H	1:L1:151:VAL:HG21	1.61	0.65
1:L1:144:LEU:HD13	1:L1:147:LYS:HD2	1.79	0.65
3:L3:187:SER:O	3:L3:191:LYS:HG3	1.95	0.65
8:L8:169:LEU:O	8:L8:173:MET:HG2	1.97	0.65
18:68:147:ARG:HB3	18:68:150:VAL:HG13	1.79	0.65
50:S4:122:LYS:HG2	50:S4:164:LEU:HD21	1.78	0.65
52:S6:31:ARG:HD2	52:S6:34:GLN:HE22	1.62	0.65
53:S7:91:ILE:HG13	53:S7:92:PHE:N	2.11	0.65
78:1S:969:C:H4'	78:1S:1104:U:H4'	1.78	0.65
78:1S:1060:U:H3'	78:1S:1061:A:H5"	1.78	0.65
79:2S:1363:A:H2'	79:2S:1364:C:C6	2.31	0.65
79:2S:2346:C:C3'	79:2S:2347:U:H5"	2.27	0.65
79:2S:3354:U:H5"	79:2S:3356:G:H5'	1.79	0.65
81:5S:100:C:H2'	81:5S:101:G:O4'	1.97	0.65
2:L2:251:LYS:HE2	2:L2:251:LYS:HA	1.78	0.65
26:76:3:LYS:HE2	26:76:8:VAL:HG13	1.78	0.65
47:S1:143:THR:HA	47:S1:207:LEU:HG	1.79	0.65
54:S8:29:LEU:HD21	54:S8:31:ARG:HG3	1.79	0.65
69:23:127:VAL:O	69:23:130:VAL:HG22	1.97	0.65
78:1S:484:C:H2'	78:1S:485:A:H5"	1.79	0.65
78:1S:1425:A:H2'	78:1S:1426:C:C6	2.32	0.65
79:2S:549:U:H2'	79:2S:550:A:H8	1.62	0.65
79:2S:1605:A:O2'	79:2S:1607:U:H5'	1.97	0.65
79:2S:2601:A:H2'	79:2S:2602:G:H8	1.62	0.65
79:2S:2843:U:H5"	79:2S:2844:C:C5	2.32	0.65
2:L2:128:ARG:HB2	79:2S:2177:G:H2'	1.78	0.65
3:L3:3:HIS:HD2	79:2S:2938:G:H3'	1.62	0.65
9:L9:63:LYS:HE3	79:2S:1210:U:H5'	1.78	0.65
10:60:65:LEU:HD23	10:60:159:PHE:CZ	2.32	0.65
55:S9:48:GLN:HA	55:S9:51:LYS:HE2	1.78	0.65
59:13:134:VAL:HG23	59:13:135:LEU:HG	1.79	0.65
69:23:13:ARG:O	69:23:17:VAL:HG23	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1190:A:H5'	79:2S:1191:U:OP1	1.96	0.65
79:2S:1460:A:H2'	79:2S:1461:A:H8	1.62	0.65
79:2S:1814:A:H4'	79:2S:1815:U:O4'	1.97	0.65
79:2S:1951:C:H6	79:2S:2095:G:H1	1.40	0.65
79:2S:2050:C:H2'	79:2S:2051:G:C8	2.32	0.65
81:5S:85:G:H1	81:5S:95:A:N6	1.94	0.65
1:L1:62:ASN:H	1:L1:151:VAL:HB	1.62	0.64
3:L3:159:ARG:HB3	3:L3:180:GLU:HB3	1.79	0.64
16:66:124:LEU:HB3	16:66:127:LEU:HD12	1.79	0.64
22:72:33:TYR:O	22:72:37:LEU:HD13	1.97	0.64
27:77:24:VAL:HG22	27:77:130:PHE:CZ	2.32	0.64
36:86:9:ILE:HA	36:86:13:LYS:HG3	1.79	0.64
54:S8:137:LYS:HA	54:S8:140:GLU:HB2	1.78	0.64
78:1S:886:U:H2'	78:1S:887:A:C8	2.32	0.64
78:1S:1160:A:H2'	78:1S:1161:C:C6	2.32	0.64
78:1S:1561:U:H4'	78:1S:1599:C:H4'	1.77	0.64
79:2S:600:G:H1'	79:2S:603:A:N6	2.12	0.64
79:2S:2821:C:N4	79:2S:2869:U:H3	1.92	0.64
79:2S:3163:A:H3'	79:2S:3164:C:H5"	1.77	0.64
3:L3:123:TYR:CE2	3:L3:124:LYS:HG3	2.33	0.64
16:66:153:VAL:O	16:66:157:GLU:HG2	1.96	0.64
25:75:63:ILE:HD13	25:75:64:GLU:H	1.61	0.64
32:82:95:GLU:HG2	32:82:96:ILE:H	1.62	0.64
48:S2:126:ARG:O	48:S2:130:ILE:HD13	1.98	0.64
53:S7:139:ARG:HD2	68:22:53:ILE:HG22	1.80	0.64
62:16:73:GLY:N	62:16:76:SER:HB3	2.10	0.64
78:1S:1310:U:H3	78:1S:1315:U:H3	1.45	0.64
79:2S:2635:A:H4'	79:2S:2636:A:O5'	1.96	0.64
31:81:75:ILE:HG23	31:81:93:VAL:HG22	1.79	0.64
34:84:65:VAL:HG12	34:84:66:SER:H	1.62	0.64
78:1S:822:U:C3'	78:1S:823:G:H5"	2.28	0.64
79:2S:3231:U:H2'	79:2S:3232:G:C8	2.32	0.64
3:L3:332:ARG:HD3	3:L3:332:ARG:N	2.10	0.64
5:L5:52:VAL:HG13	5:L5:54:ARG:NH1	2.13	0.64
9:L9:168:ARG:HH12	79:2S:3034:C:H4'	1.62	0.64
14:64:39:ILE:HG23	20:70:72:VAL:HG11	1.78	0.64
17:67:87:SER:O	17:67:91:VAL:HG23	1.98	0.64
26:76:122:LYS:HG2	79:2S:185:C:H5"	1.78	0.64
46:S0:169:SER:O	46:S0:173:ILE:HG12	1.98	0.64
78:1S:138:A:H62	78:1S:266:A:N6	1.94	0.64
10:60:17:TYR:HE2	79:2S:1047:A:H62	1.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:154:GLY:O	18:68:161:LYS:HG3	1.97	0.64
20:70:66:GLU:O	20:70:69:PRO:HG3	1.97	0.64
21:71:20:ARG:NH1	21:71:20:ARG:HB3	2.12	0.64
30:80:52:ARG:O	30:80:56:LEU:HG	1.97	0.64
43:93:16:VAL:HG22	79:2S:1927:G:C8	2.32	0.64
51:S5:76:ARG:HD3	51:S5:76:ARG:N	2.12	0.64
63:17:10:LYS:HG2	63:17:53:TYR:HE1	1.62	0.64
63:17:97:ASN:HD22	63:17:97:ASN:N	1.95	0.64
72:26:9:GLY:HA3	72:26:34:LYS:HE2	1.79	0.64
79:2S:1764:U:H3'	79:2S:1765:U:C5'	2.27	0.64
79:2S:2953:U:H2'	79:2S:2954:U:H2'	1.79	0.64
18:68:157:PRO:HD3	28:78:47:LYS:HE2	1.80	0.64
19:69:77:GLY:O	19:69:81:ARG:HD3	1.98	0.64
43:93:22:LEU:HD11	79:2S:2189:U:H5"	1.78	0.64
46:S0:118:PRO:HG2	46:S0:141:ILE:HD13	1.79	0.64
47:S1:122:GLU:HG3	47:S1:139:ALA:O	1.98	0.64
51:S5:29:ILE:HG12	62:16:37:THR:HG23	1.79	0.64
65:19:14:PHE:HE1	65:19:136:ALA:HA	1.62	0.64
78:1S:941:A:H2'	78:1S:942:G:H5'	1.79	0.64
79:2S:2186:U:H5"	79:2S:2315:G:OP2	1.97	0.64
4:L4:334:PHE:CD2	79:2S:578:A:H2'	2.33	0.64
13:63:109:PHE:O	13:63:113:VAL:HG23	1.97	0.64
28:78:126:LYS:HB3	28:78:148:ILE:HG21	1.80	0.64
36:86:36:ARG:HE	36:86:36:ARG:HA	1.61	0.64
40:90:127:LEU:HD22	40:90:128:LYS:HG2	1.78	0.64
58:12:87:PRO:HA	58:12:140:PHE:HZ	1.62	0.64
76:30:36:LYS:N	76:30:36:LYS:HD2	2.12	0.64
79:2S:600:G:H1'	79:2S:603:A:H62	1.63	0.64
79:2S:1212:A:H2'	79:2S:1213:G:C8	2.33	0.64
79:2S:1238:C:C2'	79:2S:1239:C:H5"	2.28	0.64
79:2S:1601:U:H2'	79:2S:1603:A:OP2	1.97	0.64
5:L5:141:PRO:HB2	5:L5:172:TYR:CB	2.27	0.64
32:82:95:GLU:HG2	32:82:96:ILE:N	2.12	0.64
45:RC:29:GLN:HE21	45:RC:32:LEU:HB2	1.62	0.64
45:RC:83:ALA:HB1	45:RC:110:VAL:HG12	1.79	0.64
49:S3:40:ARG:HB2	49:S3:47:GLU:HB2	1.79	0.64
51:S5:187:ILE:HA	78:1S:1534:G:H21	1.63	0.64
2:L2:196:TRP:CG	2:L2:197:PRO:HA	2.33	0.64
6:L6:64:LEU:HD21	6:L6:106:PHE:HE2	1.62	0.64
11:61:105:GLY:HA3	79:2S:2674:A:H5"	1.80	0.64
18:68:64:VAL:HA	18:68:67:ILE:HD12	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:78:36:GLY:HA2	28:78:39:HIS:HD2	1.63	0.64
31:81:79:ARG:NE	31:81:81:GLU:HG2	2.12	0.64
65:19:88:VAL:HG21	78:1S:1173:C:O2'	1.98	0.64
79:2S:1843:C:H2'	79:2S:1844:C:C6	2.32	0.64
10:60:65:LEU:HD23	10:60:159:PHE:HZ	1.62	0.64
19:69:38:ARG:HG3	79:2S:1602:A:H5"	1.80	0.64
21:71:78:LYS:CB	21:71:87:LYS:HE2	2.25	0.64
22:72:14:THR:HG23	22:72:66:VAL:HG22	1.80	0.64
38:88:63:LYS:HE3	38:88:66:ILE:HD12	1.78	0.64
47:S1:67:GLU:HB2	47:S1:85:LYS:HD3	1.80	0.64
63:17:66:VAL:HB	63:17:69:ILE:HG12	1.80	0.64
79:2S:1696:A:H2'	79:2S:1697:A:C8	2.32	0.64
79:2S:2094:C:H2'	79:2S:2095:G:C8	2.32	0.64
79:2S:2493:U:H3'	79:2S:2494:A:C5'	2.23	0.64
7:L7:107:ARG:HB3	7:L7:204:PRO:HG2	1.79	0.63
15:65:21:PHE:O	15:65:25:VAL:HG23	1.98	0.63
32:82:25:TYR:HB3	32:82:27:ARG:HG2	1.79	0.63
34:84:6:THR:HG22	79:2S:1486:G:H21	1.62	0.63
36:86:36:ARG:HA	36:86:36:ARG:NE	2.13	0.63
53:S7:34:LEU:O	53:S7:38:LEU:HD13	1.98	0.63
60:14:18:ARG:HH12	60:14:35:GLY:HA3	1.61	0.63
70:24:5:VAL:H	70:24:30:PRO:HD2	1.63	0.63
72:26:79:ILE:HA	72:26:84:VAL:HG11	1.79	0.63
78:1S:190:C:O2'	78:1S:191:C:H5'	1.99	0.63
6:L6:56:LYS:HG2	6:L6:57:HIS:H	1.62	0.63
8:L8:71:VAL:HG12	15:65:21:PHE:CE2	2.34	0.63
14:64:106:ARG:HA	14:64:109:ARG:HD2	1.80	0.63
17:67:91:VAL:O	17:67:95:LEU:HG	1.99	0.63
43:93:46:THR:HB	43:93:58:SER:HB2	1.78	0.63
66:20:41:ILE:HA	66:20:44:ASN:HB3	1.78	0.63
78:1S:138:A:H62	78:1S:266:A:H61	1.38	0.63
78:1S:271:A:H2	78:1S:284:G:H22	1.45	0.63
79:2S:760:G:H1'	79:2S:771:A:N6	2.12	0.63
79:2S:900:G:H1'	79:2S:1589:A:N6	2.13	0.63
79:2S:1728:G:H5'	79:2S:1728:G:N3	2.12	0.63
79:2S:3392:U:H2'	79:2S:3393:U:C6	2.34	0.63
2:L2:209:HIS:CD2	2:L2:211:HIS:HB2	2.33	0.63
5:L5:113:LEU:HD23	5:L5:115:LEU:HD23	1.80	0.63
6:L6:96:VAL:HG12	6:L6:97:ASN:H	1.62	0.63
15:65:180:PHE:O	15:65:184:LYS:HG3	1.99	0.63
16:66:152:VAL:O	16:66:156:LEU:HG	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:71:100:LYS:HB2	79:2S:990:U:H4'	1.80	0.63
40:90:125:LYS:HD2	79:2S:2897:A:H5"	1.79	0.63
44:P0:34:SER:HA	79:2S:1230:G:H4'	1.81	0.63
55:S9:24:LEU:O	55:S9:28:LEU:HG	1.97	0.63
69:23:142:LYS:HG2	69:23:143:PRO:HD2	1.80	0.63
72:26:36:ILE:HG12	72:26:38:ARG:NH1	2.13	0.63
78:1S:772:G:H2'	78:1S:773:C:C6	2.34	0.63
79:2S:1911:A:H2'	79:2S:1912:U:C6	2.34	0.63
79:2S:2895:G:C2'	79:2S:2896:A:H5"	2.27	0.63
2:L2:190:ARG:HH12	79:2S:1794:G:H1'	1.61	0.63
6:L6:19:LYS:H	79:2S:591:G:H1'	1.64	0.63
17:67:3:ARG:HA	17:67:3:ARG:NE	2.13	0.63
55:S9:3:ARG:HB2	55:S9:3:ARG:NH2	2.14	0.63
79:2S:374:A:H4'	79:2S:375:A:H5'	1.80	0.63
79:2S:1141:C:H2'	79:2S:1142:G:O4'	1.98	0.63
3:L3:243:HIS:HB3	79:2S:2948:C:H5"	1.80	0.63
7:L7:178:ILE:HG23	7:L7:183:ASP:HB2	1.80	0.63
8:L8:241:LYS:HB3	8:L8:241:LYS:NZ	2.14	0.63
50:S4:92:LEU:HD13	50:S4:97:GLU:HB2	1.80	0.63
55:S9:136:VAL:O	55:S9:155:HIS:HB3	1.98	0.63
57:11:67:ARG:O	57:11:67:ARG:HG2	1.99	0.63
58:12:57:ALA:HB2	58:12:122:VAL:CG1	2.28	0.63
63:17:5:ARG:HG3	63:17:9:VAL:HG11	1.79	0.63
68:22:8:ALA:HB2	68:22:74:VAL:HG11	1.80	0.63
79:2S:1805:C:H2'	79:2S:1806:A:C8	2.34	0.63
79:2S:3075:G:H2'	79:2S:3076:C:C6	2.33	0.63
3:L3:116:ARG:O	3:L3:175:LYS:HE2	1.98	0.63
3:L3:332:ARG:H	3:L3:332:ARG:CD	2.10	0.63
4:L4:219:LEU:O	4:L4:222:VAL:HG12	1.98	0.63
7:L7:119:VAL:O	21:71:135:PRO:HD3	1.99	0.63
35:85:86:ARG:HD2	80:8S:36:G:H3'	1.81	0.63
51:S5:33:VAL:O	51:S5:37:GLN:HG3	1.99	0.63
52:S6:78:THR:HG23	52:S6:92:ARG:HG2	1.81	0.63
78:1S:689:G:C2'	78:1S:690:G:H5"	2.28	0.63
79:2S:2722:U:H2'	79:2S:2723:U:C6	2.33	0.63
79:2S:3269:U:H1'	79:2S:3270:U:OP2	1.98	0.63
2:L2:209:HIS:ND1	2:L2:210:PRO:HD2	2.13	0.63
3:L3:32:PHE:HE2	3:L3:159:ARG:HH21	1.45	0.63
4:L4:6:VAL:CG2	4:L4:22:LEU:HD21	2.29	0.63
4:L4:42:VAL:HB	4:L4:236:LEU:HD21	1.79	0.63
16:66:86:GLY:O	16:66:87:MET:HG3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:5:ARG:HD3	79:2S:1471:U:H5”	1.81	0.63
19:69:102:LEU:HD22	19:69:138:LEU:HD13	1.80	0.63
38:88:40:GLN:HG2	38:88:41:THR:N	2.13	0.63
46:S0:126:PRO:HG3	46:S0:147:THR:HG22	1.81	0.63
50:S4:31:PRO:HD2	50:S4:38:LEU:HD11	1.79	0.63
51:S5:183:ALA:HB3	51:S5:190:ILE:HD13	1.80	0.63
53:S7:131:PHE:N	53:S7:132:PRO:HD2	2.14	0.63
78:1S:805:U:C2’	78:1S:806:A:H5”	2.28	0.63
78:1S:1273:G:N7	78:1S:1431:C:H5”	2.13	0.63
79:2S:1856:C:H2’	79:2S:1857:C:C6	2.33	0.63
79:2S:3295:A:H2’	79:2S:3296:A:C8	2.34	0.63
4:L4:192:GLY:HA2	4:L4:195:ARG:HB2	1.78	0.63
4:L4:203:ARG:HD2	4:L4:226:GLU:OE2	1.98	0.63
15:65:139:HIS:HB3	15:65:142:ILE:HD13	1.81	0.63
45:RC:38:ARG:HG2	45:RC:67:ILE:HG23	1.81	0.63
47:S1:180:THR:HG22	47:S1:181:LEU:H	1.63	0.63
49:S3:159:HIS:O	49:S3:160:SER:HB3	1.99	0.63
60:14:87:GLY:HA2	60:14:92:LYS:CB	2.28	0.63
78:1S:924:A:H2’	78:1S:925:G:C8	2.34	0.63
79:2S:440:A:H3’	79:2S:441:U:H4’	1.80	0.63
79:2S:727:G:H2’	79:2S:728:G:O4’	1.99	0.63
79:2S:1182:A:H2’	79:2S:1183:C:C6	2.34	0.63
13:63:29:ALA:H	15:65:201:ARG:NH2	1.97	0.63
14:64:55:ARG:NH1	14:64:77:ARG:HG3	2.14	0.63
32:82:4:LEU:HD12	32:82:5:PRO:HD2	1.79	0.63
47:S1:71:ALA:HB3	60:14:114:ARG:NH1	2.13	0.63
64:18:139:LYS:HE3	78:1S:1458:G:OP2	1.99	0.63
71:25:39:ALA:HB1	71:25:72:GLY:N	2.14	0.63
74:28:15:VAL:HG23	74:28:28:VAL:HG22	1.80	0.63
75:29:11:PRO:HB3	75:29:13:ARG:NH1	2.12	0.63
78:1S:304:U:H2’	78:1S:305:C:C6	2.33	0.63
2:L2:9:ARG:HH21	2:L2:9:ARG:HB2	1.62	0.62
3:L3:14:LEU:HD21	3:L3:263:SER:HA	1.81	0.62
9:L9:47:LYS:HG3	9:L9:53:ILE:HG12	1.81	0.62
10:60:182:LEU:HD23	10:60:185:ARG:NH1	2.14	0.62
19:69:138:LEU:O	19:69:142:ILE:HG13	1.99	0.62
28:78:28:HIS:HB3	28:78:31:GLY:O	1.99	0.62
48:S2:228:ASN:HD22	67:21:1:MET:CG	2.11	0.62
78:1S:82:U:H2’	78:1S:83:G:O4’	1.99	0.62
79:2S:656:A:H2’	79:2S:657:A:C8	2.34	0.62
79:2S:3197:G:H2’	79:2S:3198:U:H3’	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:47:LYS:N	1:L1:47:LYS:HD2	2.13	0.62
9:L9:118:LEU:HD21	9:L9:177:ASP:HB2	1.81	0.62
23:73:21:ALA:HB3	23:73:36:ILE:HD12	1.80	0.62
28:78:43:ILE:HD11	79:2S:957:C:H1'	1.81	0.62
33:83:103:TYR:HA	33:83:104:PRO:C	2.24	0.62
34:84:29:ILE:HD13	34:84:29:ILE:H	1.64	0.62
52:S6:122:GLU:HA	52:S6:126:ASP:HB2	1.80	0.62
77:31:132:LEU:HD13	77:31:139:LEU:HB3	1.81	0.62
2:L2:219:ILE:CD1	79:2S:2245:C:H5"	2.29	0.62
3:L3:46:PHE:HB2	3:L3:209:PHE:HE2	1.64	0.62
5:L5:72:ASP:H	81:5S:115:G:H21	1.46	0.62
11:61:36:VAL:O	11:61:40:LEU:HB2	1.98	0.62
20:70:13:ARG:HG2	20:70:14:LEU:H	1.65	0.62
31:81:10:ARG:NH2	79:2S:3386:G:H5"	2.15	0.62
37:87:25:ARG:NH2	79:2S:817:A:H61	1.90	0.62
43:93:75:ALA:O	43:93:78:THR:HG22	1.99	0.62
53:S7:111:LYS:HG3	53:S7:112:ARG:H	1.64	0.62
69:23:76:LEU:HD13	69:23:79:ASN:ND2	2.13	0.62
70:24:89:TYR:O	70:24:93:ARG:HG3	1.98	0.62
3:L3:62:ARG:HG3	3:L3:348:ARG:HH21	1.65	0.62
10:60:24:ARG:NH1	10:60:24:ARG:HB2	2.15	0.62
15:65:190:THR:O	15:65:194:GLN:HG2	2.00	0.62
28:78:5:PHE:O	79:2S:793:C:H5"	1.99	0.62
28:78:91:LEU:HD22	28:78:121:VAL:HG21	1.82	0.62
47:S1:61:LEU:CD2	47:S1:62:LYS:H	2.12	0.62
57:11:94:ILE:HG21	57:11:97:TYR:HD2	1.64	0.62
61:15:34:VAL:O	61:15:42:ARG:HG2	2.00	0.62
78:1S:1519:U:H2'	78:1S:1520:U:H5	1.63	0.62
79:2S:288:C:H2'	79:2S:289:A:C8	2.33	0.62
79:2S:955:U:H2'	79:2S:956:U:C6	2.35	0.62
81:5S:92:A:H2'	81:5S:93:C:O4'	2.00	0.62
2:L2:225:ILE:HG21	2:L2:234:LYS:HA	1.80	0.62
17:67:88:VAL:O	17:67:92:GLN:HG2	1.98	0.62
25:75:86:VAL:HG22	25:75:87:SER:H	1.64	0.62
46:S0:174:TRP:HA	46:S0:177:LEU:HD12	1.81	0.62
48:S2:66:PHE:HD1	48:S2:66:PHE:H	1.45	0.62
53:S7:177:THR:HA	78:1S:641:G:H21	1.64	0.62
55:S9:3:ARG:HB2	55:S9:3:ARG:HH21	1.64	0.62
71:25:91:PRO:HB3	71:25:101:TYR:HE1	1.65	0.62
78:1S:481:A:H2'	78:1S:482:U:O4'	2.00	0.62
79:2S:861:C:H2'	79:2S:862:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1126:G:H2'	79:2S:1127:G:O4'	2.00	0.62
79:2S:1501:U:H3	79:2S:1515:A:H61	1.48	0.62
79:2S:1565:G:N2	79:2S:1575:A:H62	1.97	0.62
1:L1:32:VAL:HG11	79:2S:2468:A:H5"	1.81	0.62
3:L3:73:VAL:CG2	23:73:90:GLY:HA3	2.30	0.62
4:L4:111:VAL:HG12	4:L4:112:LYS:H	1.64	0.62
17:67:113:TYR:CE2	17:67:153:LYS:HA	2.35	0.62
19:69:41:ILE:O	19:69:45:VAL:HG23	2.00	0.62
31:81:17:HIS:HB2	31:81:69:TYR:HB3	1.81	0.62
33:83:60:ARG:NH2	33:83:60:ARG:HB2	2.14	0.62
50:S4:42:LEU:HD23	50:S4:101:LEU:HD11	1.81	0.62
55:S9:123:HIS:HE1	76:30:37:ARG:HB2	1.64	0.62
64:18:115:ARG:HB3	64:18:115:ARG:NH2	2.15	0.62
66:20:67:THR:HG21	75:29:40:ARG:HB2	1.81	0.62
78:1S:985:G:H2'	78:1S:986:G:O4'	1.99	0.62
79:2S:311:C:H2'	79:2S:312:C:C6	2.34	0.62
79:2S:1322:U:H2'	79:2S:1323:G:C8	2.35	0.62
79:2S:1608:C:H2'	79:2S:1609:C:H6	1.64	0.62
79:2S:2356:A:N6	79:2S:2983:C:H41	1.97	0.62
79:2S:2536:A:C3'	79:2S:2537:U:H5"	2.28	0.62
79:2S:2922:G:H3'	79:2S:2923:U:H5"	1.81	0.62
5:L5:33:ARG:HG3	5:L5:33:ARG:HH11	1.63	0.62
37:87:18:LEU:HA	37:87:25:ARG:H	1.65	0.62
48:S2:130:ILE:O	48:S2:134:LEU:HD23	1.99	0.62
53:S7:21:ALA:O	53:S7:25:VAL:HG23	2.00	0.62
61:15:22:LEU:H	61:15:22:LEU:HD22	1.64	0.62
78:1S:505:A:C3'	78:1S:506:A:H5"	2.29	0.62
79:2S:2493:U:H2'	79:2S:2494:A:H4'	1.81	0.62
3:L3:262:TRP:HH2	79:2S:3009:G:H4'	1.64	0.62
3:L3:283:TYR:HB2	3:L3:323:MET:HE2	1.81	0.62
4:L4:114:ASN:O	4:L4:118:LYS:HG3	2.00	0.62
8:L8:24:ASN:N	8:L8:25:PRO:HD2	2.14	0.62
15:65:64:VAL:HG11	15:65:102:ALA:HB1	1.80	0.62
33:83:30:ILE:HG22	33:83:31:LYS:N	2.14	0.62
47:S1:126:THR:HG22	47:S1:136:ARG:HG3	1.80	0.62
52:S6:137:ARG:HE	52:S6:139:ASN:HB2	1.65	0.62
79:2S:903:U:H2'	79:2S:904:A:C8	2.35	0.62
81:5S:13:A:OP1	81:5S:111:U:H1'	1.99	0.62
1:L1:28:PHE:HB2	1:L1:210:MET:HB3	1.80	0.62
5:L5:107:ARG:HB3	5:L5:251:PRO:HB3	1.82	0.62
15:65:154:PRO:HB2	79:2S:58:G:H5'	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:74:20:LEU:HD23	24:74:21:PHE:N	2.15	0.62
26:76:116:LYS:O	26:76:120:GLN:HG2	2.00	0.62
41:91:23:ARG:HH11	79:2S:2277:C:H5"	1.64	0.62
45:RC:10:ARG:HA	45:RC:10:ARG:HE	1.65	0.62
47:S1:113:MET:HE3	47:S1:209:ASN:HD22	1.65	0.62
52:S6:36:VAL:HG12	52:S6:37:ASP:H	1.64	0.62
78:1S:740:A:H3'	78:1S:741:C:C5'	2.25	0.62
78:1S:979:A:H2'	78:1S:980:G:H8	1.64	0.62
78:1S:1081:A:H2'	78:1S:1083:G:C5	2.35	0.62
79:2S:1693:C:H2'	79:2S:1773:C:H5	1.64	0.62
2:L2:207:VAL:HG13	79:2S:2415:C:C5'	2.29	0.62
5:L5:59:ASP:HA	5:L5:80:SER:HB3	1.82	0.62
18:68:23:ASN:HB3	18:68:26:LEU:HB3	1.82	0.62
25:75:67:ILE:HD12	25:75:83:VAL:HG12	1.82	0.62
25:75:113:LEU:CB	79:2S:1523:U:H5'	2.29	0.62
57:11:80:MET:CB	57:11:83:THR:HG23	2.29	0.62
68:22:79:PHE:H	68:22:125:ILE:HG22	1.65	0.62
71:25:41:ILE:HG13	71:25:42:LEU:H	1.64	0.62
72:26:86:VAL:HG23	78:1S:1795:U:H5"	1.81	0.62
78:1S:1511:U:H2'	78:1S:1512:G:C8	2.34	0.62
1:L1:18:LYS:HE3	1:L1:20:SER:HA	1.82	0.61
4:L4:188:ARG:NH2	4:L4:197:ARG:HB3	2.15	0.61
13:63:59:ARG:HG2	13:63:60:ALA:H	1.65	0.61
23:73:120:LYS:HD2	23:73:137:VAL:HG22	1.81	0.61
49:S3:31:GLU:HA	49:S3:107:PHE:HZ	1.65	0.61
49:S3:116:ARG:O	49:S3:120:TYR:HB2	2.00	0.61
50:S4:122:LYS:HG2	50:S4:164:LEU:CD2	2.29	0.61
53:S7:148:LYS:HE2	78:1S:641:G:H4'	1.82	0.61
79:2S:1246:G:O2'	79:2S:1264:G:H5"	1.99	0.61
79:2S:1662:G:H2'	79:2S:1663:C:H6	1.65	0.61
79:2S:3041:U:H2'	79:2S:3042:U:C6	2.35	0.61
6:L6:58:LEU:HG	6:L6:64:LEU:HD23	1.82	0.61
32:82:105:ARG:O	32:82:109:LEU:HG	2.00	0.61
49:S3:135:GLU:HB3	49:S3:187:LYS:HB3	1.81	0.61
64:18:72:ILE:HG22	64:18:81:ILE:HD11	1.81	0.61
66:20:27:THR:HA	66:20:87:HIS:O	1.99	0.61
69:23:24:TRP:CE3	69:23:30:LYS:HD2	2.35	0.61
78:1S:922:G:H2'	78:1S:923:A:C8	2.35	0.61
79:2S:962:A:O2'	79:2S:963:G:H5'	2.00	0.61
79:2S:1060:U:H2'	79:2S:1061:A:C8	2.34	0.61
80:8S:79:A:H2'	80:8S:80:A:H4'	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:131:GLU:HB2	7:L7:132:PRO:HD3	1.80	0.61
7:L7:160:ARG:HH12	7:L7:206:LYS:HD3	1.64	0.61
17:67:15:ALA:HB3	17:67:150:VAL:HG23	1.83	0.61
18:68:44:PHE:HB2	79:2S:729:C:OP1	2.00	0.61
19:69:53:LYS:HG2	19:69:54:ALA:H	1.66	0.61
30:80:58:TYR:O	30:80:62:LEU:HG	2.00	0.61
37:87:18:LEU:HD23	37:87:25:ARG:N	2.16	0.61
38:88:62:ALA:O	38:88:66:ILE:HG13	1.99	0.61
47:S1:48:VAL:HG12	47:S1:49:ASN:N	2.11	0.61
50:S4:10:LYS:HA	50:S4:27:TYR:HA	1.81	0.61
53:S7:109:VAL:HG22	53:S7:110:GLN:H	1.64	0.61
64:18:38:VAL:HG12	64:18:42:TYR:CD2	2.35	0.61
64:18:84:TRP:H	64:18:84:TRP:CD1	2.17	0.61
78:1S:144:U:HO2'	78:1S:145:A:H8	1.46	0.61
78:1S:1166:A:H2'	78:1S:1167:G:C4'	2.31	0.61
78:1S:1171:A:H2'	78:1S:1172:G:H8	1.65	0.61
79:2S:105:C:H2'	79:2S:106:A:C8	2.35	0.61
79:2S:2154:U:H2'	79:2S:2155:G:C8	2.35	0.61
79:2S:2496:C:H2'	79:2S:2497:U:C6	2.36	0.61
82:PT:24:C:H2'	82:PT:25:U:C6	2.35	0.61
7:L7:161:VAL:HG11	7:L7:168:ILE:HG21	1.83	0.61
10:60:177:ASP:HB2	10:60:180:GLU:HB2	1.82	0.61
19:69:97:ARG:O	19:69:101:VAL:HG23	2.00	0.61
46:S0:131:GLN:O	46:S0:135:GLU:HG2	2.00	0.61
46:S0:205:ARG:HD3	63:17:82:ASP:HB3	1.81	0.61
47:S1:96:LEU:HD23	47:S1:96:LEU:N	2.15	0.61
47:S1:148:ASN:H	47:S1:148:ASN:ND2	1.96	0.61
47:S1:187:LYS:O	47:S1:191:GLU:HA	2.00	0.61
53:S7:20:VAL:HG22	53:S7:85:PHE:HE1	1.65	0.61
53:S7:56:LYS:HB2	53:S7:88:ARG:CD	2.31	0.61
53:S7:114:ARG:HB2	53:S7:114:ARG:NH1	2.15	0.61
54:S8:92:ARG:NH1	79:2S:3345:G:H4'	2.15	0.61
60:14:85:ALA:H	60:14:119:THR:CG2	2.09	0.61
69:23:7:ARG:NH1	78:1S:1100:G:H1'	2.14	0.61
78:1S:1402:G:H2'	78:1S:1403:C:C6	2.35	0.61
79:2S:1787:A:C2'	79:2S:1788:C:H5"	2.30	0.61
79:2S:1921:A:H2'	79:2S:1922:A:C8	2.35	0.61
79:2S:2079:G:H2'	79:2S:2080:C:H5'	1.81	0.61
79:2S:3225:C:H2'	79:2S:3226:A:C8	2.35	0.61
2:L2:187:HIS:HA	2:L2:190:ARG:HD3	1.83	0.61
3:L3:83:PRO:HB3	3:L3:202:THR:OG1	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:148:VAL:HG12	7:L7:181:ILE:HD11	1.83	0.61
10:60:152:LEU:HD13	10:60:165:ILE:HG21	1.81	0.61
13:63:85:LEU:HD23	13:63:85:LEU:H	1.65	0.61
29:79:14:ARG:O	29:79:18:ARG:HG2	2.00	0.61
34:84:22:VAL:HG12	34:84:30:LEU:HD22	1.81	0.61
34:84:54:ILE:HD12	34:84:70:LYS:O	2.01	0.61
41:91:1:MET:SD	78:1S:1642:G:H5'	2.40	0.61
45:RC:191:ASP:O	49:S3:223:LYS:HD3	2.00	0.61
69:23:50:LYS:HG3	78:1S:435:C:H5'	1.82	0.61
72:26:23:CYS:O	72:26:27:SER:HA	2.00	0.61
78:1S:209:U:H2'	78:1S:210:A:C8	2.35	0.61
78:1S:689:G:C3'	78:1S:690:G:H5"	2.31	0.61
78:1S:1701:A:C3'	78:1S:1702:A:H5"	2.24	0.61
78:1S:1711:C:H2'	78:1S:1712:A:C4'	2.31	0.61
79:2S:85:A:N1	79:2S:99:A:H5"	2.14	0.61
79:2S:571:U:H2'	79:2S:572:A:C8	2.35	0.61
79:2S:634:C:H2'	79:2S:635:G:C8	2.35	0.61
79:2S:2076:G:C2'	79:2S:2077:U:H5"	2.29	0.61
81:5S:105:C:H2'	81:5S:106:U:C6	2.36	0.61
7:L7:51:TYR:HE2	7:L7:183:ASP:HA	1.65	0.61
15:65:93:LYS:O	15:65:94:TYR:HB3	2.01	0.61
19:69:60:LYS:O	19:69:64:ARG:HG3	2.00	0.61
31:81:11:GLU:HG3	31:81:109:VAL:CG2	2.30	0.61
31:81:88:PRO:HG2	31:81:89:LEU:HD12	1.81	0.61
46:S0:120:LEU:HD11	46:S0:144:ILE:HD11	1.83	0.61
52:S6:91:GLU:HG2	52:S6:92:ARG:N	2.14	0.61
54:S8:47:ARG:HE	54:S8:51:GLY:HA2	1.66	0.61
54:S8:73:SER:HB2	78:1S:257:A:H1'	1.82	0.61
55:S9:179:ARG:HA	55:S9:182:GLU:HG2	1.82	0.61
70:24:7:ILE:HD11	70:24:40:LEU:HD22	1.82	0.61
78:1S:628:G:H21	78:1S:971:A:H62	1.47	0.61
79:2S:662:U:H2'	79:2S:663:C:C6	2.36	0.61
79:2S:1662:G:H2'	79:2S:1663:C:C6	2.35	0.61
79:2S:2856:G:H2'	79:2S:2857:C:C6	2.35	0.61
8:L8:97:TYR:OH	8:L8:203:VAL:HG23	2.00	0.61
15:65:150:TRP:CD1	15:65:150:TRP:H	2.17	0.61
37:87:31:LYS:NZ	79:2S:815:G:H5"	2.16	0.61
52:S6:57:ASP:HB3	52:S6:106:LEU:HD23	1.83	0.61
59:13:10:GLY:HA2	78:1S:1073:G:H4'	1.82	0.61
67:21:37:ALA:HA	67:21:49:GLU:O	2.01	0.61
73:27:24:LEU:HG	73:27:25:VAL:HG23	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:413:U:H2'	78:1S:414:C:C6	2.36	0.61
78:1S:814:A:H61	78:1S:857:U:H3	1.49	0.61
79:2S:214:G:H2'	79:2S:215:G:C8	2.36	0.61
79:2S:218:G:H1'	79:2S:372:A:H1'	1.83	0.61
79:2S:2068:U:H3'	79:2S:2069:G:C5'	2.24	0.61
3:L3:226:PHE:CE1	3:L3:268:GLY:HA2	2.36	0.61
13:63:57:VAL:HG12	13:63:69:VAL:HG22	1.83	0.61
18:68:30:VAL:O	18:68:34:THR:HG23	2.01	0.61
34:84:58:ARG:CG	34:84:59:PRO:HD2	2.26	0.61
50:S4:121:TYR:HA	50:S4:164:LEU:HD23	1.81	0.61
50:S4:132:GLY:O	78:1S:252:U:H4'	2.00	0.61
76:30:30:PRO:HB2	76:30:34:ALA:HB3	1.83	0.61
78:1S:1087:A:H5'	78:1S:1298:U:O4	2.00	0.61
79:2S:643:U:H2'	79:2S:644:G:O4'	2.01	0.61
79:2S:2388:U:H2'	79:2S:2389:C:C6	2.35	0.61
2:L2:230:VAL:HG11	79:2S:2424:A:H2	1.65	0.61
3:L3:66:LYS:HB3	23:73:88:ARG:HH11	1.65	0.61
17:67:135:ARG:HH11	17:67:135:ARG:CB	2.14	0.61
47:S1:121:ILE:HD12	47:S1:207:LEU:HD21	1.82	0.61
53:S7:109:VAL:HG13	53:S7:110:GLN:N	2.16	0.61
56:10:5:LYS:HD3	78:1S:1256:A:OP1	2.01	0.61
67:21:12:TYR:CE2	67:21:14:PRO:HG3	2.36	0.61
78:1S:393:C:H2'	78:1S:394:C:C6	2.36	0.61
78:1S:1298:U:H2'	78:1S:1299:G:O4'	2.00	0.61
79:2S:1786:G:H2'	79:2S:1787:A:C8	2.36	0.61
6:L6:65:ILE:HD13	6:L6:65:ILE:H	1.66	0.61
10:60:152:LEU:O	10:60:156:ARG:HG3	2.01	0.61
11:61:156:LYS:O	11:61:160:VAL:HG23	2.00	0.61
16:66:124:LEU:HG	16:66:126:VAL:HG12	1.83	0.61
18:68:79:LYS:HD3	18:68:138:LEU:HD23	1.83	0.61
31:81:60:TRP:O	79:2S:1476:G:H4'	2.01	0.61
36:86:59:ASP:O	36:86:63:ASN:HB3	2.01	0.61
39:89:9:ILE:HG22	39:89:13:MET:HE2	1.83	0.61
39:89:48:LYS:HD2	39:89:48:LYS:N	2.15	0.61
48:S2:104:VAL:CG2	48:S2:112:GLY:HA3	2.31	0.61
52:S6:77:LEU:HD13	52:S6:84:TYR:HB2	1.83	0.61
57:11:90:TYR:CE1	57:11:103:ARG:HB3	2.36	0.61
64:18:76:PRO:HA	64:18:81:ILE:HD12	1.82	0.61
78:1S:1522:U:H3'	78:1S:1523:G:C5'	2.30	0.61
78:1S:1525:A:H2'	78:1S:1526:A:O4'	2.01	0.61
79:2S:794:U:H2'	79:2S:795:G:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1203:A:H2'	79:2S:1204:A:C8	2.36	0.61
13:63:56:PRO:HB3	13:63:75:PHE:CE1	2.36	0.60
18:68:42:ALA:HB3	18:68:45:ASN:ND2	2.16	0.60
20:70:81:TYR:CE1	20:70:88:HIS:HB2	2.36	0.60
21:71:105:PHE:O	21:71:109:VAL:HG23	2.00	0.60
52:S6:164:LYS:HD2	78:1S:72:A:N7	2.15	0.60
55:S9:108:ARG:O	55:S9:112:GLN:HG2	2.01	0.60
68:22:42:GLN:HE21	68:22:49:GLU:HA	1.65	0.60
78:1S:1304:G:H5'	78:1S:1322:A:OP2	2.00	0.60
3:L3:311:PHE:CB	3:L3:314:TYR:HB3	2.31	0.60
4:L4:111:VAL:HG12	4:L4:112:LYS:N	2.16	0.60
9:L9:20:ILE:HB	14:64:7:VAL:HG13	1.83	0.60
17:67:45:GLN:HA	17:67:48:LEU:HD12	1.82	0.60
30:80:27:TYR:HB2	79:2S:1729:A:OP2	2.01	0.60
46:S0:45:VAL:HG12	46:S0:46:HIS:N	2.15	0.60
48:S2:36:VAL:HA	48:S2:46:LYS:HE3	1.82	0.60
55:S9:126:ARG:O	55:S9:130:THR:HG22	2.01	0.60
56:10:54:TYR:HA	56:10:71:GLU:HG3	1.83	0.60
72:26:79:ILE:HG12	72:26:84:VAL:HG21	1.82	0.60
73:27:10:PRO:HB2	73:27:15:GLU:OE1	2.01	0.60
79:2S:250:U:C5'	79:2S:251:G:H5"	2.31	0.60
79:2S:822:G:H2'	79:2S:823:C:C6	2.35	0.60
79:2S:1936:A:H2'	79:2S:1937:U:C6	2.36	0.60
81:5S:97:A:H2'	81:5S:98:C:C6	2.34	0.60
3:L3:95:THR:HG22	79:2S:3243:A:C5'	2.31	0.60
8:L8:42:PRO:HD2	8:L8:44:ARG:HH12	1.66	0.60
17:67:23:ARG:HH21	17:67:125:GLN:HG3	1.65	0.60
22:72:41:ILE:O	22:72:47:VAL:HA	2.01	0.60
31:81:11:GLU:HG3	31:81:109:VAL:HG21	1.84	0.60
32:82:26:HIS:HB2	79:2S:655:C:H5"	1.83	0.60
33:83:54:ARG:HG3	33:83:64:ILE:CG1	2.31	0.60
46:S0:188:LEU:CD1	46:S0:193:GLN:HG2	2.30	0.60
47:S1:110:LEU:O	47:S1:114:VAL:HG23	2.01	0.60
49:S3:40:ARG:HA	66:20:110:PRO:HB3	1.83	0.60
56:10:7:ASP:O	56:10:11:ILE:HG12	2.01	0.60
70:24:70:VAL:HG12	70:24:71:GLY:H	1.67	0.60
76:30:33:ARG:NH1	76:30:33:ARG:HB3	2.16	0.60
79:2S:736:A:H2'	79:2S:737:G:O4'	2.01	0.60
79:2S:878:G:H22	79:2S:2979:U:H5"	1.66	0.60
79:2S:1055:A:H5"	81:5S:100:C:O2'	2.00	0.60
79:2S:1722:U:H2'	79:2S:1723:A:O4'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1729:A:H3'	79:2S:1730:G:H5'	1.82	0.60
79:2S:1877:U:H5"	79:2S:1878:G:O4'	2.01	0.60
3:L3:277:SER:HB3	3:L3:280:HIS:NE2	2.16	0.60
8:L8:136:LEU:O	8:L8:140:VAL:HG23	2.02	0.60
8:L8:200:LEU:HD13	8:L8:211:LEU:HD13	1.82	0.60
9:L9:106:LYS:O	9:L9:107:ASP:HB2	2.00	0.60
23:73:70:ARG:HB2	23:73:70:ARG:HH11	1.66	0.60
41:91:15:ARG:O	41:91:19:LYS:HD3	2.01	0.60
71:25:50:ILE:O	71:25:54:VAL:HG23	2.01	0.60
77:31:136:LYS:C	77:31:138:ARG:H	2.10	0.60
78:1S:1169:G:N2	78:1S:1576:A:H62	1.92	0.60
79:2S:1581:C:C2'	79:2S:1582:C:H5'	2.30	0.60
79:2S:1829:G:H5"	79:2S:1830:G:H5'	1.83	0.60
79:2S:2585:G:H22	80:8S:151:C:H3'	1.65	0.60
1:L1:18:LYS:HZ3	1:L1:24:LYS:HE2	1.67	0.60
2:L2:177:LYS:HD2	43:93:26:VAL:HG13	1.82	0.60
3:L3:215:ILE:HD12	3:L3:338:LEU:HD12	1.84	0.60
4:L4:334:PHE:HD2	79:2S:578:A:H2'	1.64	0.60
5:L5:22:ARG:HH12	81:5S:6:C:H5	1.48	0.60
5:L5:266:ALA:HA	81:5S:1:G:H1'	1.84	0.60
14:64:127:LYS:O	14:64:131:VAL:HG23	2.02	0.60
28:78:28:HIS:CD2	28:78:32:ARG:HG2	2.36	0.60
51:S5:162:VAL:HG23	51:S5:166:ARG:HD3	1.82	0.60
54:S8:167:ALA:HA	54:S8:183:ILE:HA	1.83	0.60
59:13:3:ARG:H	78:1S:866:G:H5"	1.66	0.60
78:1S:108:A:H2'	78:1S:109:G:C8	2.36	0.60
78:1S:140:A:H4'	78:1S:141:U:H5'	1.82	0.60
78:1S:854:U:H2'	78:1S:855:A:O4'	2.01	0.60
78:1S:1680:G:H1'	78:1S:1721:A:N6	2.16	0.60
78:1S:1695:G:H21	78:1S:1706:C:H41	1.49	0.60
3:L3:91:GLY:O	3:L3:101:SER:HA	2.02	0.60
8:L8:48:ARG:HG3	79:2S:2585:G:H8	1.66	0.60
20:70:58:ILE:H	20:70:58:ILE:HD12	1.67	0.60
46:S0:188:LEU:HD11	46:S0:193:GLN:HG2	1.82	0.60
48:S2:87:GLN:HG2	48:S2:96:THR:HB	1.84	0.60
63:17:122:ILE:HG12	63:17:123:ASN:N	2.13	0.60
64:18:132:ARG:HB2	64:18:138:THR:HB	1.83	0.60
69:23:32:ARG:NH1	78:1S:375:U:H5"	2.15	0.60
78:1S:195:G:H2'	78:1S:196:G:H5"	1.82	0.60
78:1S:487:G:H3'	78:1S:488:G:H5"	1.83	0.60
81:5S:79:A:H2'	81:5S:80:G:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:62:ASN:HB3	1:L1:151:VAL:CG1	2.31	0.60
9:L9:23:ARG:CB	9:L9:39:LYS:HG2	2.31	0.60
9:L9:156:GLN:HE22	79:2S:3109:G:N2	2.00	0.60
22:72:96:VAL:HG12	22:72:97:SER:H	1.67	0.60
29:79:49:GLY:HA2	29:79:52:LYS:HE2	1.81	0.60
33:83:20:LYS:HB3	33:83:20:LYS:NZ	2.16	0.60
35:85:23:ASP:O	35:85:27:GLU:HG2	2.01	0.60
37:87:25:ARG:O	37:87:25:ARG:HD3	2.02	0.60
56:10:77:ARG:NH1	56:10:84:GLU:HG3	2.16	0.60
60:14:23:PHE:HE2	60:14:91:THR:HG21	1.65	0.60
62:16:143:ARG:HD2	78:1S:1191:U:H4'	1.83	0.60
65:19:111:ILE:HG23	65:19:113:ILE:HG13	1.83	0.60
66:20:38:SER:O	66:20:42:VAL:HG23	2.02	0.60
67:21:15:ARG:HB2	67:21:24:ILE:HB	1.83	0.60
1:L1:44:GLN:HG3	1:L1:160:LYS:O	2.02	0.60
9:L9:74:LEU:HA	9:L9:77:ASN:ND2	2.16	0.60
10:60:61:SER:HB2	10:60:63:GLU:OE2	2.02	0.60
16:66:28:LEU:HD22	16:66:94:ARG:NH2	2.17	0.60
16:66:174:PHE:O	16:66:178:VAL:HG23	2.02	0.60
45:RC:180:ALA:HB3	45:RC:190:ALA:HB3	1.84	0.60
46:S0:73:VAL:O	46:S0:95:ALA:HB1	2.02	0.60
62:16:118:ILE:HG13	62:16:119:ALA:H	1.67	0.60
78:1S:617:U:H2'	78:1S:618:U:C6	2.36	0.60
78:1S:885:G:H2'	78:1S:886:U:C6	2.37	0.60
79:2S:641:C:H42	79:2S:645:A:H8	1.46	0.60
79:2S:835:G:H1'	79:2S:858:A:N6	2.17	0.60
79:2S:1458:U:H2'	79:2S:1459:C:C6	2.36	0.60
79:2S:2210:G:H2'	79:2S:2211:U:C6	2.36	0.60
79:2S:2371:G:H2'	79:2S:2373:A:OP1	2.02	0.60
79:2S:2995:A:C3'	79:2S:2996:U:H5"	2.30	0.60
3:L3:21:ARG:HG3	3:L3:269:GLN:HG2	1.83	0.60
4:L4:51:ALA:HB2	4:L4:105:THR:HG23	1.84	0.60
5:L5:53:VAL:HA	5:L5:61:ILE:O	2.02	0.60
15:65:39:ALA:HB3	15:65:61:ILE:CG2	2.31	0.60
25:75:63:ILE:HD13	25:75:64:GLU:N	2.17	0.60
26:76:51:ARG:HB3	26:76:115:ARG:NH2	2.17	0.60
28:78:46:ASP:O	28:78:47:LYS:HB3	2.00	0.60
30:80:10:ILE:O	30:80:14:LEU:HG	2.01	0.60
32:82:100:ILE:HB	32:82:105:ARG:HH11	1.67	0.60
46:S0:42:PRO:O	46:S0:43:ASP:HB2	2.02	0.60
53:S7:86:GLN:O	53:S7:87:ASP:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:22:ARG:HB2	54:S8:25:ARG:HH21	1.66	0.60
59:13:21:ASN:O	59:13:65:VAL:HG13	2.01	0.60
78:1S:1656:U:H3'	78:1S:1657:U:H5"	1.84	0.60
79:2S:293:C:H2'	79:2S:294:U:O4'	2.02	0.60
79:2S:653:A:H2'	79:2S:654:C:C6	2.37	0.60
79:2S:2097:U:H2'	79:2S:2098:C:C6	2.37	0.60
79:2S:3153:U:H3	79:2S:3293:U:H3	1.49	0.60
3:L3:262:TRP:CH2	79:2S:3009:G:H4'	2.36	0.60
4:L4:344:ALA:HB3	79:2S:516:A:H5"	1.84	0.60
14:64:58:ILE:HG12	14:64:59:ASN:H	1.66	0.60
15:65:10:LEU:HD13	15:65:19:LEU:HD11	1.83	0.60
16:66:143:THR:HG23	16:66:147:TRP:O	2.02	0.60
27:77:17:ARG:C	27:77:19:ALA:H	2.10	0.60
33:83:23:ASN:HD21	79:2S:633:C:H1'	1.67	0.60
38:88:40:GLN:HG3	38:88:57:ASN:HA	1.84	0.60
44:P0:56:ASN:HB3	44:P0:80:VAL:CG2	2.32	0.60
49:S3:105:MET:HG2	49:S3:122:VAL:HG21	1.82	0.60
50:S4:68:ARG:HB3	50:S4:76:VAL:HG21	1.83	0.60
54:S8:72:ILE:HG21	54:S8:112:TRP:CZ3	2.36	0.60
57:11:69:LYS:H	57:11:69:LYS:HD2	1.66	0.60
64:18:16:ARG:HH12	64:18:19:ASN:HA	1.65	0.60
67:21:65:SER:O	67:21:69:LEU:HB2	2.01	0.60
81:5S:9:C:H2'	81:5S:10:C:H5'	1.83	0.60
15:65:120:TRP:CE3	79:2S:269:G:H5'	2.37	0.59
15:65:179:LYS:HB3	79:2S:287:G:H5'	1.82	0.59
46:S0:12:GLU:O	46:S0:16:LEU:HG	2.02	0.59
49:S3:6:SER:HA	78:1S:1514:U:O2'	2.01	0.59
55:S9:11:THR:HG23	78:1S:472:U:H5"	1.84	0.59
69:23:93:LEU:HD12	69:23:96:VAL:HG21	1.84	0.59
78:1S:294:C:H2'	78:1S:295:A:O4'	2.02	0.59
79:2S:1655:G:H1'	79:2S:1800:A:H61	1.67	0.59
80:8S:93:U:H2'	80:8S:94:C:O4'	2.01	0.59
3:L3:45:SER:HB2	3:L3:181:ILE:HG12	1.84	0.59
9:L9:67:ALA:O	9:L9:71:VAL:HG23	2.02	0.59
15:65:50:ARG:HB3	15:65:50:ARG:NH1	2.17	0.59
28:78:56:VAL:HG23	28:78:57:GLY:H	1.66	0.59
28:78:65:GLN:HA	28:78:68:PHE:CD2	2.28	0.59
42:92:8:ARG:HD2	79:2S:2713:U:H2'	1.84	0.59
44:P0:15:LEU:O	44:P0:19:LEU:HG	2.02	0.59
45:RC:155:ARG:HB2	45:RC:170:ILE:HG13	1.84	0.59
47:S1:23:PRO:O	47:S1:27:LYS:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:95:THR:HG22	70:24:16:PRO:HB2	1.83	0.59
50:S4:214:LEU:HD23	50:S4:216:ASN:HD21	1.68	0.59
51:S5:140:THR:HG21	51:S5:175:LEU:HD21	1.84	0.59
52:S6:190:GLN:HE22	78:1S:265:A:H8	1.49	0.59
63:17:97:ASN:H	63:17:97:ASN:HD22	1.49	0.59
66:20:118:VAL:HG22	66:20:119:ALA:N	2.17	0.59
70:24:11:LYS:HB2	70:24:24:VAL:HG23	1.84	0.59
72:26:37:LYS:HA	72:26:71:LEU:O	2.02	0.59
76:30:31:LYS:HG2	78:1S:477:A:OP1	2.02	0.59
78:1S:754:A:N6	78:1S:793:A:H2'	2.17	0.59
79:2S:698:U:H2'	79:2S:699:A:O4'	2.02	0.59
79:2S:822:G:H2'	79:2S:823:C:H6	1.67	0.59
3:L3:308:MET:HB2	3:L3:363:SER:HB2	1.84	0.59
5:L5:26:GLY:HA2	79:2S:2703:A:N1	2.17	0.59
7:L7:236:ILE:HD12	7:L7:239:LEU:HD12	1.84	0.59
8:L8:126:SER:HB3	8:L8:127:PRO:HD2	1.85	0.59
11:61:94:ARG:HD3	11:61:94:ARG:N	2.16	0.59
20:70:139:TYR:H	20:70:139:TYR:HD1	1.49	0.59
21:71:116:ARG:O	21:71:120:LYS:HB2	2.02	0.59
34:84:66:SER:HB2	34:84:69:HIS:HD1	1.68	0.59
37:87:66:TYR:O	37:87:70:VAL:HG23	2.02	0.59
50:S4:2:ALA:O	50:S4:3:ARG:HB2	2.02	0.59
53:S7:13:PRO:O	53:S7:14:THR:HG22	2.03	0.59
53:S7:152:VAL:HG21	53:S7:181:ILE:HD11	1.84	0.59
64:18:36:LYS:HB2	64:18:102:ALA:HA	1.84	0.59
79:2S:757:C:H2'	79:2S:758:C:C4'	2.32	0.59
79:2S:1009:A:H2'	79:2S:1010:G:C8	2.37	0.59
79:2S:2349:U:H2'	79:2S:2350:C:C6	2.37	0.59
79:2S:3091:A:H2'	79:2S:3094:A:N7	2.18	0.59
6:L6:17:ALA:O	79:2S:592:A:H5'	2.03	0.59
25:75:100:LYS:NZ	25:75:107:VAL:H	2.01	0.59
31:81:78:LYS:HD2	31:81:90:PHE:CE1	2.37	0.59
38:88:63:LYS:HE3	38:88:63:LYS:HA	1.83	0.59
41:91:16:LYS:O	41:91:20:VAL:HG23	2.02	0.59
42:92:37:ALA:HB1	79:2S:2766:U:H5"	1.84	0.59
61:15:72:LYS:H	61:15:72:LYS:HD2	1.67	0.59
62:16:40:GLU:CA	62:16:42:GLU:H	2.14	0.59
63:17:72:LYS:NZ	63:17:72:LYS:HB3	2.18	0.59
72:26:84:VAL:HG22	72:26:85:ARG:N	2.17	0.59
79:2S:19:U:H2'	79:2S:20:A:C8	2.36	0.59
79:2S:1265:U:H2'	79:2S:1266:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1818:U:H3'	79:2S:1819:U:H5"	1.83	0.59
79:2S:2434:U:H5'	79:2S:2593:A:H2	1.67	0.59
2:L2:230:VAL:HG21	79:2S:2424:A:N1	2.17	0.59
14:64:38:ILE:HG13	14:64:44:VAL:HG12	1.84	0.59
16:66:22:VAL:HG21	16:66:120:VAL:HG11	1.84	0.59
21:71:36:VAL:HG13	21:71:65:TYR:HA	1.83	0.59
25:75:73:MET:HE3	25:75:76:VAL:HB	1.84	0.59
36:86:58:ILE:HG23	36:86:90:MET:SD	2.42	0.59
56:10:81:ASN:HB3	58:12:37:VAL:HG12	1.84	0.59
62:16:101:SER:O	62:16:105:LEU:HD13	2.02	0.59
78:1S:1194:A:H2'	78:1S:1195:C:H5'	1.85	0.59
79:2S:522:A:H62	79:2S:570:A:H2	1.50	0.59
79:2S:1869:C:H2'	79:2S:1870:C:C6	2.36	0.59
79:2S:2896:A:H5'	79:2S:2896:A:H8	1.66	0.59
80:8S:36:G:H2'	80:8S:37:A:H2	1.67	0.59
53:S7:104:ARG:HG3	78:1S:803:A:C4	2.38	0.59
57:11:8:GLN:HE22	57:11:14:GLN:H	1.51	0.59
59:13:102:LEU:HD11	59:13:115:LEU:HG	1.84	0.59
72:26:24:VAL:HG12	72:26:72:HIS:O	2.02	0.59
78:1S:872:G:H22	78:1S:955:A:H2	1.50	0.59
79:2S:709:A:C8	79:2S:2788:C:H5'	2.37	0.59
79:2S:968:G:H2'	79:2S:969:C:C6	2.37	0.59
79:2S:3275:U:H3'	79:2S:3276:G:C5'	2.32	0.59
2:L2:25:GLY:HA2	79:2S:2175:U:O2	2.02	0.59
10:60:196:PHE:CE2	79:2S:1042:U:H4'	2.37	0.59
11:61:125:MET:HG2	11:61:126:ASP:N	2.18	0.59
13:63:50:PRO:HA	13:63:139:LEU:HA	1.84	0.59
25:75:134:ASP:HA	25:75:137:ASN:OD1	2.02	0.59
26:76:99:LEU:HB3	26:76:104:LEU:HD11	1.85	0.59
48:S2:66:PHE:O	48:S2:69:ILE:HG13	2.02	0.59
48:S2:212:LYS:O	48:S2:216:VAL:HG23	2.02	0.59
51:S5:165:LEU:HD23	74:28:47:PRO:HB2	1.84	0.59
55:S9:76:LEU:HD13	55:S9:79:ARG:HH21	1.67	0.59
58:12:126:TRP:CZ2	58:12:129:GLU:HG3	2.37	0.59
66:20:61:LYS:NZ	66:20:61:LYS:HB3	2.18	0.59
79:2S:1951:C:H5	79:2S:2095:G:N1	1.95	0.59
22:72:84:LEU:HB3	22:72:90:ARG:CG	2.28	0.59
23:73:38:ALA:O	23:73:58:VAL:HB	2.02	0.59
25:75:51:VAL:HG11	35:85:62:GLN:NE2	2.18	0.59
35:85:77:PRO:HB2	35:85:80:LEU:HG	1.84	0.59
43:93:79:VAL:O	43:93:83:ILE:HG12	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:187:ILE:H	51:S5:187:ILE:HD12	1.68	0.59
59:13:99:ARG:HA	59:13:99:ARG:CZ	2.31	0.59
63:17:110:VAL:HG11	63:17:117:LEU:O	2.01	0.59
76:30:20:LYS:HE2	76:30:20:LYS:HA	1.85	0.59
78:1S:1118:G:H2'	78:1S:1119:G:O4'	2.02	0.59
79:2S:3029:A:H2'	79:2S:3030:G:O4'	2.02	0.59
82:PT:57:C:O2	82:PT:57:C:H2'	2.03	0.59
2:L2:240:ALA:CB	79:2S:2154:U:H4'	2.33	0.59
3:L3:73:VAL:HG21	23:73:90:GLY:HA3	1.85	0.59
6:L6:96:VAL:HG11	6:L6:141:VAL:HG13	1.85	0.59
7:L7:48:ASN:HA	7:L7:51:TYR:HB2	1.85	0.59
33:83:18:ARG:HB3	33:83:23:ASN:HA	1.84	0.59
36:86:26:ILE:HG12	79:2S:157:A:C8	2.38	0.59
37:87:28:HIS:CD2	79:2S:815:G:H5'	2.38	0.59
49:S3:42:THR:HB	49:S3:43:PRO:HD2	1.84	0.59
50:S4:155:LYS:HE2	50:S4:155:LYS:HA	1.85	0.59
56:10:1:MET:HG3	56:10:44:LYS:HB3	1.84	0.59
78:1S:766:U:H3	78:1S:770:A:H62	1.51	0.59
78:1S:1474:G:H2'	78:1S:1475:A:C8	2.38	0.59
79:2S:1288:U:H2'	79:2S:1289:G:C8	2.37	0.59
79:2S:2456:A:O2'	79:2S:2457:G:H5'	2.03	0.59
79:2S:2907:G:O2'	79:2S:2908:G:H5'	2.02	0.59
79:2S:2995:A:C2'	79:2S:2996:U:H5"	2.33	0.59
1:L1:22:GLU:HG2	1:L1:25:LYS:HE2	1.85	0.59
3:L3:295:ALA:HA	3:L3:299:ASP:HB2	1.84	0.59
7:L7:74:SER:HB3	21:71:141:VAL:O	2.03	0.59
8:L8:27:THR:CG2	79:2S:2563:G:H5"	2.33	0.59
22:72:33:TYR:OH	22:72:80:THR:HG22	2.03	0.59
34:84:19:LYS:NZ	34:84:38:LEU:HD12	2.17	0.59
43:93:29:LEU:HD13	43:93:69:TYR:CD2	2.38	0.59
43:93:57:CYS:HB3	43:93:62:LYS:H	1.68	0.59
50:S4:162:ILE:HG22	50:S4:163:ASP:H	1.66	0.59
51:S5:122:ASN:HD22	51:S5:129:PRO:HD3	1.66	0.59
52:S6:63:MET:HB3	52:S6:99:GLY:O	2.03	0.59
54:S8:45:SER:HB3	54:S8:55:TYR:CD1	2.38	0.59
68:22:53:ILE:HG13	68:22:53:ILE:O	2.00	0.59
78:1S:320:U:O2'	78:1S:321:C:H2'	2.03	0.59
78:1S:391:A:O2'	78:1S:1730:A:H4'	2.03	0.59
78:1S:826:U:H2'	78:1S:827:C:C6	2.38	0.59
78:1S:1641:C:H2'	78:1S:1642:G:C8	2.38	0.59
7:L7:82:LYS:HA	7:L7:119:VAL:HB	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:100:ARG:O	7:L7:104:GLN:HG3	2.02	0.58
16:66:119:VAL:CG2	20:70:164:SER:HB3	2.33	0.58
22:72:17:VAL:HG13	22:72:103:TYR:HB2	1.85	0.58
38:88:23:ALA:HB2	38:88:45:VAL:HG12	1.85	0.58
60:14:31:THR:HG22	60:14:38:THR:CB	2.33	0.58
72:26:36:ILE:HG12	72:26:38:ARG:HH11	1.67	0.58
77:31:147:VAL:O	77:31:148:TYR:HB2	2.01	0.58
78:1S:900:A:H3'	78:1S:901:G:H21	1.68	0.58
78:1S:1449:U:H2'	78:1S:1450:U:C6	2.38	0.58
79:2S:3016:A:H2'	79:2S:3017:A:C8	2.38	0.58
4:L4:329:PRO:HG3	7:L7:41:ARG:O	2.03	0.58
29:79:20:GLY:O	29:79:21:ILE:HG22	2.03	0.58
35:85:85:THR:C	35:85:89:ARG:HE	2.10	0.58
38:88:26:LYS:HD2	38:88:78:LEU:HD13	1.84	0.58
47:S1:153:HIS:HE2	78:1S:1044:U:H5"	1.68	0.58
49:S3:212:LYS:HG2	49:S3:213:GLU:N	2.18	0.58
57:11:37:ASN:OD1	78:1S:247:A:H4'	2.03	0.58
72:26:88:SER:O	72:26:92:ARG:HG3	2.03	0.58
79:2S:95:A:H8	79:2S:95:A:O5'	1.85	0.58
79:2S:1693:C:H2'	79:2S:1773:C:C5	2.38	0.58
79:2S:1818:U:H2'	79:2S:1819:U:C4'	2.33	0.58
79:2S:3374:U:H4'	79:2S:3376:A:H61	1.67	0.58
2:L2:57:PRO:HB3	43:93:54:ILE:HD11	1.85	0.58
7:L7:181:ILE:HG23	7:L7:182:ASP:OD1	2.03	0.58
10:60:189:GLU:HG2	10:60:200:LEU:HD23	1.85	0.58
18:68:58:ASN:C	18:68:60:PRO:HD3	2.29	0.58
18:68:144:ARG:O	18:68:150:VAL:HG11	2.03	0.58
20:70:110:MET:HE3	20:70:116:ALA:CB	2.34	0.58
31:81:20:LEU:HD23	31:81:23:VAL:HG21	1.84	0.58
34:84:65:VAL:HG12	34:84:66:SER:N	2.19	0.58
45:RC:206:PRO:HD3	45:RC:245:PHE:HB3	1.85	0.58
45:RC:248:ASN:HD21	45:RC:298:GLY:HA3	1.66	0.58
54:S8:158:SER:HB3	79:2S:2067:U:C6	2.38	0.58
78:1S:521:A:H2'	78:1S:522:U:O4'	2.02	0.58
79:2S:2958:A:H2'	79:2S:2959:C:C6	2.38	0.58
31:81:72:ARG:HG3	31:81:96:VAL:HG21	1.85	0.58
45:RC:238:ASP:HB3	45:RC:257:ALA:H	1.68	0.58
68:22:31:SER:HB3	78:1S:636:A:H5"	1.84	0.58
68:22:115:GLU:HG3	68:22:118:ARG:HH12	1.68	0.58
78:1S:25:C:H4'	78:1S:26:A:H5'	1.85	0.58
78:1S:224:C:H2'	78:1S:225:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:757:C:H3'	79:2S:758:C:H5"	1.86	0.58
79:2S:1221:A:H3'	79:2S:1222:G:H5"	1.85	0.58
79:2S:1556:C:H3'	79:2S:2169:G:N2	2.18	0.58
79:2S:2367:A:H2'	79:2S:2368:A:C8	2.39	0.58
79:2S:3017:A:H2'	79:2S:3018:C:C6	2.38	0.58
1:L1:13:VAL:HG22	1:L1:14:LYS:N	2.17	0.58
9:L9:111:PHE:HB2	9:L9:125:ASN:HD22	1.68	0.58
9:L9:111:PHE:CB	9:L9:125:ASN:HD22	2.16	0.58
10:60:19:LYS:HE3	10:60:24:ARG:O	2.04	0.58
18:68:147:ARG:HH21	18:68:149:ALA:HB3	1.69	0.58
29:79:21:ILE:HG23	29:79:21:ILE:O	2.02	0.58
33:83:75:HIS:HB3	33:83:80:VAL:CG1	2.34	0.58
47:S1:221:PRO:HG2	47:S1:222:LYS:H	1.67	0.58
51:S5:189:THR:HB	71:25:97:LYS:NZ	2.19	0.58
55:S9:49:LEU:HD11	55:S9:53:ARG:HD3	1.84	0.58
57:11:75:VAL:HG21	57:11:117:VAL:HG11	1.85	0.58
73:27:70:LYS:HE3	78:1S:1049:U:H5"	1.86	0.58
78:1S:156:A:C2	78:1S:415:C:H1'	2.39	0.58
78:1S:1334:U:H2'	78:1S:1335:U:O4'	2.03	0.58
78:1S:1496:U:H4'	78:1S:1519:U:HO2'	1.67	0.58
79:2S:259:C:H2'	79:2S:260:C:C6	2.39	0.58
79:2S:1472:U:H2'	79:2S:1473:G:H8	1.65	0.58
79:2S:1534:A:H1'	79:2S:1797:A:H2	1.68	0.58
79:2S:2056:U:H2'	79:2S:2057:G:H5'	1.85	0.58
79:2S:2626:A:H1'	79:2S:2644:C:H5'	1.85	0.58
79:2S:2692:A:H2'	79:2S:2693:C:O4'	2.03	0.58
3:L3:266:ARG:HA	3:L3:266:ARG:HE	1.69	0.58
4:L4:52:VAL:HG22	4:L4:53:SER:N	2.15	0.58
4:L4:152:VAL:HG12	4:L4:153:SER:N	2.15	0.58
48:S2:184:VAL:HG22	48:S2:211:LEU:HD23	1.85	0.58
50:S4:23:LEU:HD13	55:S9:4:ALA:HB3	1.85	0.58
50:S4:162:ILE:HG22	50:S4:164:LEU:H	1.69	0.58
54:S8:83:TYR:H	54:S8:101:ILE:HB	1.67	0.58
55:S9:65:LYS:HA	55:S9:70:LEU:HD11	1.85	0.58
78:1S:551:G:H5'	78:1S:581:U:H2'	1.84	0.58
78:1S:1020:A:H3'	78:1S:1021:C:H5"	1.85	0.58
78:1S:1681:A:H2'	78:1S:1682:U:O4'	2.02	0.58
79:2S:54:C:H2'	79:2S:55:G:C8	2.38	0.58
79:2S:1231:A:H4'	79:2S:1261:G:C8	2.39	0.58
79:2S:1341:U:H2'	79:2S:1342:C:C6	2.37	0.58
79:2S:1788:C:H2'	79:2S:1789:G:C8	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1887:A:C2	79:2S:2391:G:H4'	2.39	0.58
81:5S:38:U:H2'	81:5S:40:C:OP2	2.04	0.58
15:65:176:LYS:HZ3	79:2S:65:A:H5'	1.69	0.58
20:70:58:ILE:HD12	20:70:58:ILE:N	2.19	0.58
22:72:28:PHE:CE2	22:72:30:PRO:HG3	2.39	0.58
23:73:19:VAL:HG13	23:73:36:ILE:HG22	1.85	0.58
35:85:22:VAL:HA	35:85:25:LYS:HD2	1.86	0.58
37:87:85:LYS:HB2	80:8S:67:U:H5"	1.85	0.58
50:S4:196:VAL:CG2	50:S4:211:LYS:HG2	2.34	0.58
51:S5:63:GLN:HG3	51:S5:88:PRO:HA	1.86	0.58
60:14:124:ASP:HB2	78:1S:929:A:H4'	1.85	0.58
65:19:75:LYS:H	65:19:75:LYS:HD2	1.69	0.58
78:1S:1573:A:H4'	78:1S:1574:G:C5'	2.33	0.58
81:5S:104:A:H2'	81:5S:105:C:H5'	1.83	0.58
2:L2:147:ARG:HD2	2:L2:157:VAL:HB	1.85	0.58
4:L4:334:PHE:CD1	4:L4:339:LEU:HD12	2.39	0.58
10:60:49:CYS:HB2	10:60:172:GLY:HA2	1.86	0.58
25:75:58:ASP:O	25:75:62:VAL:HG23	2.04	0.58
41:91:2:ARG:HH22	78:1S:1773:C:H5	1.50	0.58
45:RC:81:LEU:HD13	45:RC:113:VAL:HG22	1.85	0.58
45:RC:93:ASP:HB2	45:RC:100:TYR:CE1	2.38	0.58
47:S1:146:GLN:HE21	47:S1:148:ASN:HD21	1.50	0.58
51:S5:37:GLN:HB3	62:16:53:LEU:HD22	1.85	0.58
54:S8:87:ASN:HB3	54:S8:90:LEU:HG	1.85	0.58
64:18:28:ILE:O	64:18:28:ILE:HD13	2.03	0.58
78:1S:832:U:H2'	78:1S:833:U:H5"	1.84	0.58
78:1S:1042:G:H22	78:1S:1076:A:H2	1.52	0.58
79:2S:1448:U:H2'	79:2S:1449:A:C8	2.39	0.58
79:2S:1653:G:H2'	79:2S:1654:A:C8	2.38	0.58
79:2S:2516:U:H2'	79:2S:2517:U:C6	2.39	0.58
14:64:19:ARG:HA	14:64:69:THR:HG22	1.84	0.58
17:67:117:ILE:HA	17:67:148:LEU:HA	1.86	0.58
19:69:171:ASP:O	19:69:175:GLN:HB2	2.04	0.58
23:73:33:ASN:HD21	23:73:64:LYS:N	2.01	0.58
33:83:20:LYS:HE2	33:83:21:ARG:NH1	2.19	0.58
34:84:53:GLY:HA2	79:2S:1640:G:OP1	2.04	0.58
36:86:93:ILE:O	36:86:97:SER:HB3	2.04	0.58
45:RC:57:PRO:HG2	62:16:100:GLN:HB2	1.86	0.58
45:RC:295:SER:HB2	45:RC:300:THR:HB	1.84	0.58
54:S8:114:GLU:HG3	54:S8:120:THR:HG22	1.85	0.58
78:1S:138:A:C8	78:1S:141:U:H4'	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:822:U:C2'	78:1S:823:G:H5"	2.33	0.58
80:8S:62:C:H4'	80:8S:63:G:O5'	2.04	0.58
1:L1:162:VAL:HB	79:2S:2493:U:H4'	1.85	0.58
3:L3:67:PHE:CD2	23:73:88:ARG:HD3	2.38	0.58
17:67:66:SER:HA	79:2S:2389:C:H5"	1.83	0.58
17:67:118:GLN:HG2	17:67:119:VAL:H	1.69	0.58
46:S0:122:ILE:HG12	46:S0:144:ILE:HD12	1.85	0.58
61:15:72:LYS:HD2	61:15:72:LYS:N	2.18	0.58
72:26:84:VAL:O	72:26:85:ARG:HB2	2.04	0.58
78:1S:844:A:H2'	78:1S:845:G:H8	1.69	0.58
78:1S:1304:G:OP2	78:1S:1306:C:H5'	2.03	0.58
79:2S:992:A:O2'	79:2S:993:G:H5'	2.04	0.58
79:2S:1200:A:H5'	79:2S:1201:C:H4'	1.84	0.58
2:L2:204:MET:HB2	2:L2:208:ASP:HB2	1.86	0.57
3:L3:56:ILE:HG21	3:L3:356:LEU:HD22	1.85	0.57
9:L9:91:ARG:HD2	9:L9:143:GLU:HB2	1.86	0.57
21:71:27:LEU:HD22	21:71:27:LEU:N	2.18	0.57
54:S8:58:LEU:O	54:S8:59:ARG:HB2	2.04	0.57
75:29:36:LEU:HD12	75:29:37:ASN:N	2.19	0.57
78:1S:1273:G:O6	78:1S:1430:U:H2'	2.04	0.57
78:1S:1323:C:H2'	78:1S:1324:G:O4'	2.03	0.57
79:2S:1951:C:H5	79:2S:2095:G:C6	2.22	0.57
1:L1:14:LYS:HB3	1:L1:216:LEU:CD1	2.34	0.57
2:L2:193:ARG:HD2	79:2S:2182:A:OP1	2.05	0.57
3:L3:130:PHE:CE1	79:2S:3149:G:H4'	2.39	0.57
3:L3:311:PHE:HB2	3:L3:314:TYR:HB3	1.86	0.57
17:67:11:PRO:HA	17:67:14:SER:HB2	1.86	0.57
38:88:20:VAL:HG22	38:88:47:GLY:HA2	1.85	0.57
41:91:23:ARG:NH1	79:2S:2277:C:H5"	2.19	0.57
45:RC:103:PHE:CE1	45:RC:138:GLY:HA2	2.39	0.57
54:S8:171:SER:HB3	78:1S:209:U:H5'	1.86	0.57
61:15:25:LEU:O	61:15:87:PRO:HB2	2.03	0.57
66:20:50:LEU:HD13	66:20:95:ALA:HB2	1.85	0.57
78:1S:903:U:H2'	78:1S:905:A:OP2	2.05	0.57
78:1S:920:U:C2'	78:1S:921:U:H5"	2.34	0.57
79:2S:1287:A:O2'	79:2S:1288:U:H5'	2.04	0.57
79:2S:2394:G:H2'	79:2S:2395:G:O4'	2.03	0.57
14:64:50:LYS:HZ2	14:64:86:ALA:HB2	1.68	0.57
38:88:31:LEU:HB3	38:88:37:PRO:HB3	1.85	0.57
42:92:25:VAL:HG13	42:92:70:LEU:HD13	1.84	0.57
44:P0:91:GLU:CD	44:P0:96:ILE:HD11	2.30	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:207:LEU:HB3	50:S4:219:VAL:CG1	2.34	0.57
78:1S:564:G:H4'	78:1S:566:C:N3	2.19	0.57
78:1S:598:U:H2'	78:1S:599:A:C8	2.39	0.57
78:1S:636:A:H2'	78:1S:637:C:H5'	1.86	0.57
78:1S:1476:C:H2'	78:1S:1477:G:C8	2.39	0.57
79:2S:719:U:H3'	79:2S:720:A:H4'	1.86	0.57
79:2S:3297:U:H2'	79:2S:3298:C:O4'	2.04	0.57
3:L3:348:ARG:O	3:L3:352:GLU:HB2	2.04	0.57
4:L4:285:ASP:O	4:L4:289:ILE:HG13	2.04	0.57
8:L8:61:GLN:O	8:L8:65:LEU:HB2	2.04	0.57
20:70:94:ILE:CG2	20:70:95:ARG:H	2.16	0.57
27:77:33:SER:HB3	27:77:36:HIS:HB2	1.84	0.57
45:RC:222:LEU:HD21	45:RC:234:LEU:HD13	1.86	0.57
49:S3:92:GLN:H	49:S3:92:GLN:HE21	1.52	0.57
50:S4:64:ILE:HD13	70:24:17:LEU:HD13	1.86	0.57
62:16:105:LEU:O	62:16:109:PHE:HB2	2.04	0.57
78:1S:1662:G:H2'	78:1S:1663:G:H8	1.68	0.57
79:2S:543:C:H2'	79:2S:544:C:H5'	1.87	0.57
79:2S:760:G:H1'	79:2S:771:A:H61	1.68	0.57
79:2S:2495:C:H3'	79:2S:2496:C:C5'	2.35	0.57
2:L2:129:ALA:HB3	2:L2:132:ASN:HD22	1.69	0.57
3:L3:56:ILE:HD13	3:L3:76:VAL:HG21	1.85	0.57
25:75:86:VAL:HG22	25:75:87:SER:N	2.19	0.57
26:76:70:ILE:HD12	26:76:70:ILE:N	2.19	0.57
27:77:104:PRO:HA	27:77:107:ARG:HD2	1.87	0.57
47:S1:70:LEU:HA	47:S1:73:LEU:HG	1.87	0.57
48:S2:121:VAL:O	48:S2:125:ILE:HG13	2.04	0.57
53:S7:94:ALA:HB3	53:S7:96:ARG:NH1	2.19	0.57
62:16:12:LYS:HA	62:16:16:ALA:O	2.05	0.57
68:22:53:ILE:HD11	68:22:60:LYS:HB2	1.87	0.57
78:1S:410:A:H2'	78:1S:411:C:O4'	2.04	0.57
78:1S:1541:G:H21	78:1S:1570:A:H62	1.52	0.57
78:1S:1562:G:H2'	78:1S:1563:C:C6	2.40	0.57
78:1S:1614:A:H2'	78:1S:1615:C:O4'	2.04	0.57
79:2S:2689:A:H1'	79:2S:2702:A:N6	2.20	0.57
79:2S:2768:U:H2'	79:2S:2769:A:C8	2.39	0.57
80:8S:70:G:H1'	80:8S:88:A:N6	2.19	0.57
1:L1:36:VAL:HA	1:L1:208:SER:HA	1.86	0.57
2:L2:234:LYS:HB3	2:L2:238:ILE:HD13	1.85	0.57
12:62:66:ASN:H	12:62:69:ALA:HB3	1.69	0.57
15:65:169:LYS:HA	15:65:174:ILE:HD12	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:51:LYS:HG3	16:66:141:LEU:HD11	1.85	0.57
20:70:78:TRP:CE3	20:70:125:LYS:HE3	2.39	0.57
20:70:155:ARG:H	20:70:170:THR:HB	1.69	0.57
25:75:57:LEU:HA	25:75:61:LYS:HD2	1.86	0.57
46:S0:27:ARG:O	46:S0:46:HIS:HE1	1.87	0.57
49:S3:43:PRO:O	49:S3:44:THR:HB	2.04	0.57
64:18:92:ILE:O	64:18:92:ILE:HD13	2.05	0.57
66:20:118:VAL:HG13	66:20:119:ALA:N	2.20	0.57
69:23:126:LYS:CE	69:23:129:GLY:HA2	2.34	0.57
69:23:127:VAL:O	69:23:128:SER:HB2	2.05	0.57
76:30:10:ARG:HD2	76:30:13:LYS:HD2	1.86	0.57
78:1S:487:G:H22	78:1S:500:C:N4	2.02	0.57
79:2S:637:C:H2'	79:2S:638:C:C6	2.40	0.57
79:2S:1038:C:H2'	79:2S:1039:U:C6	2.39	0.57
79:2S:1348:U:H4'	79:2S:1349:G:C5'	2.35	0.57
79:2S:1689:U:H2'	79:2S:1690:C:C6	2.39	0.57
79:2S:1903:U:H2'	79:2S:1905:G:OP2	2.03	0.57
79:2S:3199:G:H2'	79:2S:3200:G:C8	2.40	0.57
1:L1:55:LEU:HD23	1:L1:135:PRO:HD2	1.84	0.57
4:L4:107:ARG:HG3	79:2S:663:C:O3'	2.05	0.57
7:L7:134:VAL:O	7:L7:229:PHE:HB2	2.05	0.57
15:65:154:PRO:HB2	79:2S:58:G:C5'	2.35	0.57
16:66:43:ILE:HB	16:66:136:THR:HB	1.86	0.57
19:69:62:ARG:HH21	19:69:62:ARG:HG3	1.68	0.57
19:69:63:THR:HA	19:69:66:HIS:HB3	1.85	0.57
45:RC:88:THR:HG22	45:RC:104:VAL:HG13	1.85	0.57
57:11:94:ILE:HG12	69:23:12:ALA:HB1	1.87	0.57
60:14:24:ASN:O	60:14:54:GLU:HB2	2.05	0.57
70:24:29:HIS:HB2	70:24:32:ARG:CB	2.35	0.57
70:24:102:LYS:N	70:24:102:LYS:HD2	2.19	0.57
78:1S:212:U:H2'	78:1S:213:A:C8	2.39	0.57
79:2S:1828:A:H2'	79:2S:1829:G:C8	2.40	0.57
79:2S:2881:C:H2'	79:2S:2882:U:C6	2.40	0.57
82:PT:76:C:H2'	82:PT:77:A:H4'	1.85	0.57
2:L2:34:TYR:CD1	79:2S:2525:G:H2'	2.40	0.57
5:L5:140:ARG:HG3	5:L5:141:PRO:CD	2.27	0.57
6:L6:142:ASP:O	6:L6:146:ILE:HG12	2.05	0.57
7:L7:82:LYS:NZ	7:L7:191:VAL:HB	2.19	0.57
11:61:86:VAL:HG21	11:61:111:ASP:HB3	1.87	0.57
13:63:76:THR:O	13:63:80:VAL:HG23	2.04	0.57
13:63:103:ASN:O	36:86:22:PRO:HD3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:131:LYS:HB3	13:63:131:LYS:NZ	2.20	0.57
14:64:55:ARG:HH12	14:64:77:ARG:HG3	1.70	0.57
24:74:38:SER:O	24:74:42:GLN:HG3	2.04	0.57
32:82:19:ARG:HG2	32:82:20:HIS:N	2.20	0.57
42:92:49:GLY:HA2	79:2S:277:G:C5'	2.34	0.57
45:RC:83:ALA:HA	45:RC:89:LEU:HD23	1.86	0.57
46:S0:206:ASP:HB2	46:S0:207:PRO:HA	1.86	0.57
58:12:63:VAL:HG23	58:12:66:VAL:HG23	1.86	0.57
79:2S:1123:U:H2'	79:2S:1124:U:H5'	1.85	0.57
79:2S:1568:U:H4'	79:2S:1570:U:H5	1.68	0.57
79:2S:1756:C:H2'	79:2S:1757:A:C8	2.40	0.57
79:2S:2927:C:H2'	79:2S:2928:C:C6	2.40	0.57
1:L1:24:LYS:O	1:L1:24:LYS:HD2	2.04	0.57
13:63:46:ILE:HG22	13:63:49:ARG:HB2	1.87	0.57
15:65:57:GLN:O	15:65:142:ILE:HD11	2.04	0.57
15:65:172:ARG:NE	15:65:174:ILE:HD11	2.20	0.57
21:71:116:ARG:O	21:71:120:LYS:HE3	2.05	0.57
43:93:29:LEU:HD13	43:93:69:TYR:HD2	1.68	0.57
44:P0:49:ALA:HB2	44:P0:89:THR:HB	1.85	0.57
46:S0:126:PRO:HG2	46:S0:151:SER:HB3	1.86	0.57
48:S2:137:ILE:HG13	48:S2:138:PRO:HD2	1.85	0.57
50:S4:15:PRO:HD2	50:S4:18:TRP:HZ3	1.69	0.57
51:S5:189:THR:HG21	71:25:97:LYS:HG3	1.87	0.57
61:15:94:VAL:O	61:15:104:GLN:HA	2.04	0.57
64:18:115:ARG:O	64:18:119:ILE:HD13	2.05	0.57
78:1S:1629:G:H2'	78:1S:1630:U:C6	2.40	0.57
79:2S:1545:A:H2'	79:2S:1547:G:OP2	2.05	0.57
79:2S:1702:U:H2'	79:2S:1703:U:C6	2.39	0.57
79:2S:2106:A:H2'	79:2S:2107:A:C8	2.39	0.57
80:8S:81:U:H4'	80:8S:82:U:H5'	1.87	0.57
1:L1:162:VAL:HG22	1:L1:163:LEU:H	1.69	0.57
5:L5:48:LYS:HG3	5:L5:145:PHE:CE2	2.40	0.57
13:63:29:ALA:O	13:63:33:VAL:HG23	2.03	0.57
20:70:132:THR:O	20:70:133:ALA:HB3	2.04	0.57
30:80:48:THR:HG21	30:80:52:ARG:HD2	1.86	0.57
33:83:54:ARG:HG3	33:83:64:ILE:HG13	1.87	0.57
35:85:76:GLN:HB2	35:85:77:PRO:CD	2.35	0.57
43:93:6:LYS:C	43:93:6:LYS:HD3	2.30	0.57
50:S4:159:THR:HG21	50:S4:227:VAL:HB	1.87	0.57
52:S6:14:LYS:HD2	52:S6:123:GLY:CA	2.33	0.57
52:S6:113:ILE:HD11	52:S6:124:LEU:HD22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:137:ARG:HH21	52:S6:137:ARG:HG3	1.70	0.57
55:S9:152:SER:HB3	55:S9:155:HIS:HB2	1.86	0.57
56:10:50:THR:HG21	56:10:57:THR:OG1	2.05	0.57
78:1S:209:U:H2'	78:1S:210:A:H8	1.70	0.57
78:1S:1733:C:H2'	78:1S:1734:U:C6	2.40	0.57
79:2S:341:G:H4'	79:2S:344:A:H1'	1.87	0.57
79:2S:794:U:H2'	79:2S:795:G:C8	2.39	0.57
79:2S:1611:G:H2'	79:2S:1612:A:C8	2.39	0.57
79:2S:1940:G:H21	79:2S:3362:A:H8	1.53	0.57
82:PT:15:G:H22	82:PT:49:C:H42	1.53	0.57
2:L2:112:ILE:HG13	2:L2:135:ILE:HG12	1.86	0.56
5:L5:269:SER:O	5:L5:273:ARG:HB2	2.05	0.56
7:L7:29:GLU:O	7:L7:33:ARG:HB3	2.05	0.56
9:L9:105:GLU:CG	9:L9:108:GLY:HA2	2.34	0.56
16:66:136:THR:HG22	16:66:137:THR:N	2.20	0.56
23:73:57:MET:HB2	23:73:77:ILE:HG12	1.87	0.56
28:78:74:ASN:HB3	28:78:115:LYS:HB2	1.87	0.56
50:S4:194:THR:O	50:S4:195:ILE:HB	2.05	0.56
51:S5:146:THR:HB	51:S5:157:ARG:HB3	1.87	0.56
52:S6:184:LEU:HD21	78:1S:140:A:H5'	1.86	0.56
54:S8:189:LEU:O	54:S8:193:LEU:HB2	2.05	0.56
57:11:2:SER:HA	57:11:113:PRO:HA	1.87	0.56
65:19:100:ILE:O	65:19:104:VAL:HG23	2.05	0.56
78:1S:1513:G:O2'	78:1S:1515:A:H1'	2.05	0.56
79:2S:2328:U:H2'	79:2S:2329:C:C6	2.40	0.56
79:2S:2387:A:C3'	79:2S:2388:U:H5"	2.35	0.56
80:8S:37:A:H5"	80:8S:39:G:O4'	2.05	0.56
3:L3:223:GLY:HA2	3:L3:271:GLY:HA3	1.87	0.56
4:L4:170:LYS:HE3	4:L4:178:LEU:HD12	1.87	0.56
10:60:200:LEU:HD11	10:60:209:ASN:ND2	2.18	0.56
25:75:135:ILE:O	25:75:135:ILE:HD13	2.04	0.56
52:S6:67:VAL:HG23	52:S6:99:GLY:HA2	1.87	0.56
60:14:102:LEU:O	60:14:105:LEU:HG	2.05	0.56
64:18:105:VAL:CG1	64:18:106:GLU:H	2.18	0.56
69:23:49:ALA:O	69:23:103:LEU:HD22	2.04	0.56
78:1S:381:C:H2'	78:1S:382:C:H6	1.68	0.56
79:2S:1274:A:H2'	79:2S:1275:C:C6	2.39	0.56
79:2S:1718:G:H2'	79:2S:1719:G:H8	1.69	0.56
79:2S:2119:A:H2'	79:2S:2120:A:O4'	2.04	0.56
79:2S:2271:A:H3'	79:2S:2272:G:H5"	1.87	0.56
79:2S:3013:U:H2'	79:2S:3014:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:14:LYS:HB3	1:L1:216:LEU:HD12	1.87	0.56
3:L3:189:SER:HA	3:L3:192:VAL:HG12	1.86	0.56
4:L4:107:ARG:HA	79:2S:664:U:H5'	1.86	0.56
5:L5:64:ILE:HD12	5:L5:64:ILE:N	2.21	0.56
8:L8:158:ASP:HB2	8:L8:159:PRO:HD3	1.87	0.56
14:64:41:GLN:HB3	14:64:42:LYS:HD3	1.88	0.56
15:65:5:LYS:HG3	36:86:40:VAL:HG11	1.86	0.56
18:68:147:ARG:HG2	18:68:148:GLU:H	1.70	0.56
19:69:136:ARG:O	19:69:140:GLU:HG3	2.06	0.56
20:70:82:ASP:HB3	20:70:87:THR:HG22	1.87	0.56
26:76:60:ARG:HB2	26:76:103:LYS:HD2	1.86	0.56
28:78:72:VAL:HG12	28:78:111:LYS:HB3	1.86	0.56
34:84:91:ARG:O	34:84:95:ILE:HB	2.05	0.56
38:88:5:ILE:HD12	38:88:11:PHE:CD2	2.40	0.56
38:88:26:LYS:HD2	38:88:78:LEU:CD1	2.35	0.56
45:RC:46:LYS:O	45:RC:55:GLY:HA2	2.06	0.56
45:RC:85:TRP:CZ3	63:17:29:GLN:HB3	2.39	0.56
47:S1:189:ILE:HB	47:S1:190:PRO:HD3	1.87	0.56
57:11:20:PHE:HB2	78:1S:211:U:H5"	1.86	0.56
59:13:30:SER:O	59:13:33:VAL:HG22	2.05	0.56
61:15:60:LEU:O	61:15:60:LEU:HD13	2.05	0.56
63:17:57:LEU:O	63:17:61:ILE:HG13	2.05	0.56
63:17:85:VAL:N	63:17:86:PRO:HD2	2.20	0.56
66:20:58:LEU:HB2	66:20:88:LYS:HB3	1.86	0.56
68:22:20:THR:OG1	68:22:22:LYS:HD3	2.04	0.56
78:1S:51:A:H62	78:1S:429:G:H21	1.53	0.56
78:1S:205:U:H2'	78:1S:206:A:C8	2.40	0.56
78:1S:401:A:O2'	78:1S:402:C:H4'	2.04	0.56
78:1S:650:U:H2'	78:1S:651:G:C8	2.39	0.56
78:1S:796:A:H2'	78:1S:797:G:H8	1.69	0.56
78:1S:870:C:H2'	78:1S:871:G:C8	2.40	0.56
78:1S:1227:A:H4'	78:1S:1228:G:H5"	1.87	0.56
78:1S:1269:U:H4'	78:1S:1270:G:H5"	1.85	0.56
79:2S:87:U:H2'	79:2S:88:A:C8	2.40	0.56
79:2S:912:G:H2'	79:2S:914:A:N7	2.20	0.56
79:2S:1174:G:H2'	79:2S:1175:C:C6	2.41	0.56
79:2S:1260:A:H4'	79:2S:1280:C:H4'	1.86	0.56
79:2S:1526:U:H1'	79:2S:1595:U:H5'	1.87	0.56
79:2S:1658:G:H2'	79:2S:1659:U:C6	2.40	0.56
79:2S:2221:G:C2	79:2S:2223:A:H5"	2.40	0.56
79:2S:2756:C:H2'	79:2S:2757:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:3146:G:H2'	79:2S:3147:G:H8	1.70	0.56
2:L2:79:ASN:O	2:L2:82:VAL:HG22	2.06	0.56
5:L5:19:PRO:HB2	5:L5:24:ARG:HG2	1.87	0.56
6:L6:18:LEU:HD22	6:L6:18:LEU:H	1.70	0.56
10:60:98:ARG:HD2	10:60:120:GLY:O	2.05	0.56
17:67:22:LEU:C	17:67:24:VAL:H	2.13	0.56
18:68:21:SER:HB2	79:2S:672:A:H5"	1.87	0.56
32:82:15:LYS:HG2	32:82:16:LYS:H	1.70	0.56
35:85:59:ASN:O	35:85:63:ARG:HG3	2.05	0.56
38:88:42:LYS:HG2	38:88:55:VAL:HG13	1.88	0.56
45:RC:89:LEU:HD21	45:RC:110:VAL:HG11	1.88	0.56
47:S1:151:LYS:HD2	47:S1:153:HIS:CE1	2.41	0.56
50:S4:86:PHE:O	50:S4:87:MET:HB2	2.03	0.56
58:12:49:THR:HG21	77:31:103:LEU:HD21	1.87	0.56
65:19:28:LEU:HG	65:19:55:TYR:HE1	1.69	0.56
69:23:96:VAL:HG23	69:23:97:ASP:N	2.17	0.56
71:25:100:ILE:HD13	71:25:101:TYR:N	2.20	0.56
78:1S:1003:A:H4'	78:1S:1004:U:H5"	1.88	0.56
78:1S:1279:C:H2'	78:1S:1280:C:C6	2.40	0.56
79:2S:418:A:H2	80:8S:5:U:H3	1.51	0.56
79:2S:1620:U:H2'	79:2S:1621:A:C8	2.41	0.56
79:2S:2216:G:H22	79:2S:2229:A:H2	1.53	0.56
79:2S:2271:A:H2'	79:2S:2272:G:C4'	2.35	0.56
4:L4:329:PRO:HG2	7:L7:45:LEU:HB2	1.88	0.56
5:L5:224:LYS:HD2	81:5S:50:U:O2'	2.05	0.56
10:60:61:SER:O	10:60:65:LEU:HG	2.06	0.56
11:61:29:ARG:HG2	11:61:32:ARG:HH21	1.70	0.56
17:67:61:ARG:HH21	80:8S:3:A:H4'	1.71	0.56
18:68:9:GLN:HB3	79:2S:949:C:H5"	1.87	0.56
19:69:69:SER:HB2	19:69:74:ARG:HB2	1.88	0.56
32:82:37:GLY:HA3	79:2S:639:G:OP1	2.06	0.56
46:S0:116:LYS:O	46:S0:118:PRO:HD3	2.05	0.56
52:S6:21:GLU:HA	52:S6:24:ILE:HB	1.86	0.56
58:12:67:THR:O	58:12:68:GLU:HB2	2.03	0.56
65:19:47:PRO:HA	78:1S:1477:G:O2'	2.05	0.56
70:24:8:ARG:HD3	70:24:28:LEU:HG	1.87	0.56
78:1S:830:U:O2'	78:1S:831:U:H5"	2.05	0.56
78:1S:1150:G:H22	83:MR:4:A:H3'	1.71	0.56
79:2S:225:C:H2'	79:2S:226:C:C6	2.40	0.56
79:2S:495:G:H2'	79:2S:496:C:C6	2.39	0.56
79:2S:2422:C:H2'	79:2S:2423:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2567:C:C3’	79:2S:2568:C:H5”	2.35	0.56
81:5S:12:U:H4’	81:5S:110:G:N2	2.14	0.56
82:PT:20:G:H3’	82:PT:21:U:C5	2.41	0.56
11:61:25:GLU:CG	11:61:29:ARG:HD2	2.33	0.56
20:70:99:ARG:O	20:70:103:VAL:HG23	2.06	0.56
30:80:27:TYR:HA	30:80:89:VAL:HG11	1.86	0.56
34:84:60:ARG:HH21	79:2S:1616:U:H4’	1.70	0.56
48:S2:225:LEU:HB2	68:22:70:ASN:HD21	1.71	0.56
54:S8:5:ARG:HH12	54:S8:28:GLU:C	2.14	0.56
59:13:34:ILE:O	59:13:38:VAL:HG23	2.05	0.56
59:13:71:ILE:HD12	59:13:71:ILE:N	2.12	0.56
65:19:28:LEU:HD21	65:19:30:VAL:CG1	2.36	0.56
78:1S:1524:A:H2’	78:1S:1525:A:H8	1.70	0.56
78:1S:1603:U:H2’	78:1S:1604:U:C6	2.40	0.56
78:1S:1757:G:N3	78:1S:1757:G:H2’	2.21	0.56
79:2S:374:A:N3	79:2S:376:G:H5”	2.20	0.56
79:2S:636:C:O4’	79:2S:2378:C:H5’	2.04	0.56
79:2S:2349:U:H2’	79:2S:2350:C:H6	1.70	0.56
79:2S:3302:U:H2’	79:2S:3303:G:C8	2.40	0.56
79:2S:3387:U:H2’	79:2S:3388:C:C6	2.41	0.56
1:L1:32:VAL:HG22	1:L1:33:GLU:N	2.17	0.56
1:L1:67:ILE:HD11	1:L1:86:SER:HB2	1.87	0.56
3:L3:369:ARG:HH22	24:74:11:ALA:HB1	1.70	0.56
8:L8:45:ASN:HA	25:75:28:THR:HA	1.88	0.56
18:68:3:ILE:H	18:68:3:ILE:HD12	1.70	0.56
28:78:122:PRO:HB3	28:78:142:GLY:O	2.05	0.56
32:82:11:LYS:C	32:82:13:HIS:H	2.11	0.56
35:85:21:LEU:HD12	35:85:24:LEU:HD12	1.88	0.56
43:93:19:GLY:O	43:93:23:ARG:HG3	2.05	0.56
45:RC:114:ASP:OD2	45:RC:156:VAL:HG23	2.06	0.56
47:S1:176:VAL:CG1	47:S1:177:GLN:H	2.18	0.56
50:S4:49:ARG:O	50:S4:53:LYS:HA	2.05	0.56
59:13:84:ILE:HD11	59:13:150:VAL:HG23	1.88	0.56
63:17:45:ARG:HG2	63:17:49:LYS:HE2	1.87	0.56
66:20:28:SER:HB3	66:20:34:LEU:HB2	1.86	0.56
72:26:30:ILE:HD12	72:26:31:PRO:HD2	1.88	0.56
78:1S:531:C:H2’	78:1S:532:U:H5”	1.87	0.56
79:2S:845:G:H2’	79:2S:847:A:OP2	2.06	0.56
79:2S:1110:U:H2’	79:2S:1111:U:C6	2.41	0.56
3:L3:332:ARG:O	3:L3:333:LYS:HB2	2.06	0.56
4:L4:110:ASN:HB2	15:65:201:ARG:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L6:149:ILE:HG23	6:L6:155:LEU:HD12	1.88	0.56
10:60:30:LYS:N	10:60:30:LYS:HD2	2.21	0.56
11:61:17:LEU:HD13	11:61:129:VAL:HG22	1.87	0.56
15:65:118:SER:HB2	15:65:131:GLU:O	2.06	0.56
32:82:101:SER:O	32:82:105:ARG:HG3	2.05	0.56
36:86:58:ILE:HD12	36:86:98:ARG:HH22	1.71	0.56
49:S3:37:VAL:HG12	49:S3:50:ILE:CD1	2.35	0.56
56:10:82:LEU:HD13	56:10:86:ILE:HG12	1.88	0.56
58:12:87:PRO:HA	58:12:140:PHE:CZ	2.40	0.56
58:12:103:LEU:H	58:12:103:LEU:HD22	1.70	0.56
60:14:88:GLY:HA2	60:14:122:PRO:HD3	1.87	0.56
64:18:86:LEU:HD22	64:18:97:ASP:HB3	1.88	0.56
78:1S:181:A:H2'	78:1S:182:A:O4'	2.05	0.56
78:1S:703:G:H2'	78:1S:704:C:H5'	1.88	0.56
79:2S:59:G:H2'	80:8S:33:A:O2'	2.06	0.56
79:2S:1231:A:H4'	79:2S:1261:G:H8	1.69	0.56
79:2S:2207:A:H3'	79:2S:2208:A:C5'	2.36	0.56
4:L4:162:THR:O	4:L4:166:VAL:HG23	2.06	0.56
7:L7:60:ARG:HA	7:L7:60:ARG:HE	1.71	0.56
7:L7:239:LEU:O	7:L7:243:MET:HG3	2.06	0.56
16:66:109:PRO:HG2	16:66:112:TYR:HD2	1.71	0.56
19:69:23:TRP:HB3	19:69:51:VAL:CG2	2.36	0.56
38:88:7:ASP:HB3	38:88:10:GLN:CB	2.36	0.56
46:S0:41:ARG:HH11	46:S0:45:VAL:HG21	1.71	0.56
47:S1:179:SER:HB3	47:S1:183:GLN:HB2	1.87	0.56
49:S3:164:VAL:HG13	49:S3:168:ILE:HD11	1.87	0.56
50:S4:196:VAL:HG21	50:S4:211:LYS:HG2	1.87	0.56
53:S7:168:SER:O	53:S7:172:VAL:HG23	2.05	0.56
57:11:129:ARG:HD3	78:1S:115:G:C8	2.41	0.56
61:15:110:GLU:HB2	64:18:119:ILE:HD11	1.88	0.56
75:29:19:ARG:HG3	75:29:19:ARG:HH11	1.71	0.56
78:1S:1474:G:H2'	78:1S:1475:A:H8	1.70	0.56
79:2S:511:G:H2'	79:2S:512:U:O4'	2.05	0.56
79:2S:1308:A:C2	79:2S:1311:G:H5"	2.41	0.56
79:2S:2527:G:H2'	79:2S:2528:G:C8	2.41	0.56
79:2S:2581:U:H2'	79:2S:2582:C:C6	2.41	0.56
3:L3:25:ILE:H	3:L3:25:ILE:CD1	2.13	0.56
3:L3:57:VAL:O	3:L3:357:LYS:HB2	2.05	0.56
5:L5:63:GLN:OE1	5:L5:74:VAL:HG11	2.06	0.56
5:L5:78:ALA:HB1	5:L5:101:THR:HG22	1.88	0.56
8:L8:186:LEU:CB	8:L8:195:SER:HB3	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:19:GLN:CD	13:63:19:GLN:H	2.14	0.56
13:63:42:ARG:HA	13:63:45:LYS:HB3	1.87	0.56
33:83:74:THR:O	33:83:82:ARG:HG3	2.06	0.56
48:S2:160:GLY:HA3	48:S2:216:VAL:HB	1.88	0.56
50:S4:145:ARG:NH2	50:S4:167:GLY:HA2	2.17	0.56
53:S7:149:ILE:HG12	53:S7:180:GLN:HB2	1.87	0.56
58:12:29:LYS:O	58:12:33:ARG:HG2	2.04	0.56
61:15:18:ARG:HG3	61:15:36:LEU:HB2	1.87	0.56
62:16:78:VAL:O	62:16:82:ARG:HG2	2.06	0.56
65:19:118:PRO:O	65:19:119:LYS:HB2	2.06	0.56
68:22:103:ILE:HD11	68:22:110:ILE:HG22	1.88	0.56
68:22:107:SER:HA	78:1S:804:A:C8	2.41	0.56
70:24:35:VAL:HG21	70:24:40:LEU:HD21	1.87	0.56
71:25:89:ILE:HB	71:25:101:TYR:HB3	1.88	0.56
78:1S:219:A:H4'	78:1S:219:A:OP1	2.06	0.56
78:1S:312:A:C2	78:1S:314:C:H2'	2.41	0.56
78:1S:694:U:O2	78:1S:694:U:H2'	2.05	0.56
78:1S:900:A:C2'	78:1S:901:G:H5'	2.35	0.56
79:2S:350:C:N3	79:2S:367:A:H2'	2.21	0.56
79:2S:516:A:C3'	79:2S:517:G:H5"	2.36	0.56
79:2S:757:C:C3'	79:2S:758:C:H5"	2.36	0.56
79:2S:1028:U:H3'	79:2S:1029:G:H5"	1.88	0.56
79:2S:1444:G:H2'	79:2S:1445:U:O4'	2.06	0.56
79:2S:2471:U:H2'	79:2S:2472:U:H5'	1.87	0.56
79:2S:3314:A:H2'	79:2S:3315:G:C8	2.40	0.56
3:L3:95:THR:HB	79:2S:3243:A:H4'	1.87	0.55
4:L4:39:PHE:CE1	4:L4:236:LEU:HA	2.40	0.55
4:L4:221:ASN:HD21	79:2S:212:G:H3'	1.70	0.55
5:L5:55:PHE:HE2	5:L5:159:VAL:HG22	1.72	0.55
5:L5:61:ILE:HG23	5:L5:63:GLN:HE21	1.70	0.55
7:L7:82:LYS:HZ1	7:L7:191:VAL:HB	1.71	0.55
9:L9:18:VAL:HG12	9:L9:27:VAL:HG22	1.88	0.55
11:61:115:LYS:HB2	11:61:115:LYS:NZ	2.21	0.55
13:63:128:ARG:HG3	35:85:114:ARG:HH11	1.70	0.55
20:70:89:ASN:ND2	21:71:156:TYR:HB3	2.21	0.55
35:85:63:ARG:O	35:85:67:ARG:HG3	2.07	0.55
36:86:68:ARG:HA	36:86:71:LYS:HE2	1.88	0.55
38:88:46:ARG:HG2	38:88:46:ARG:HH11	1.71	0.55
46:S0:166:GLY:HA2	46:S0:170:ILE:HD11	1.88	0.55
51:S5:110:ALA:O	51:S5:114:ILE:HG12	2.06	0.55
59:13:86:GLU:HG3	59:13:87:ASP:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:14:112:ILE:O	72:26:58:VAL:HG22	2.05	0.55
61:15:37:ALA:HB1	61:15:38:PRO:HD2	1.88	0.55
63:17:53:TYR:O	63:17:57:LEU:HG	2.06	0.55
65:19:27:LYS:HB3	65:19:27:LYS:NZ	2.21	0.55
78:1S:1621:U:C3'	78:1S:1622:G:H5"	2.35	0.55
79:2S:438:A:H2'	79:2S:439:C:O4'	2.05	0.55
79:2S:1024:G:H3'	79:2S:1025:A:C5'	2.35	0.55
79:2S:1808:G:H4'	79:2S:2559:U:O4	2.06	0.55
79:2S:2361:A:N6	79:2S:2377:G:H1	1.95	0.55
81:5S:28:C:H2'	81:5S:29:C:O4'	2.06	0.55
2:L2:23:ARG:HH11	2:L2:23:ARG:HG3	1.71	0.55
4:L4:29:PRO:HB3	18:68:25:TYR:HE2	1.71	0.55
4:L4:82:THR:HG23	4:L4:85:SER:H	1.72	0.55
4:L4:329:PRO:HB3	7:L7:41:ARG:HH12	1.71	0.55
10:60:205:SER:O	10:60:209:ASN:HB2	2.06	0.55
13:63:177:LYS:HG3	36:86:11:LEU:HD13	1.88	0.55
16:66:130:LYS:NZ	16:66:133:ARG:HH21	2.04	0.55
20:70:152:LEU:HD12	20:70:172:TYR:HE2	1.72	0.55
34:84:94:LEU:O	34:84:98:GLN:HG2	2.05	0.55
62:16:51:PRO:HG2	62:16:52:LEU:HD23	1.87	0.55
68:22:25:VAL:HG22	68:22:63:VAL:O	2.06	0.55
68:22:71:LYS:HB3	68:22:130:TYR:CE2	2.42	0.55
70:24:14:SER:C	70:24:16:PRO:HD3	2.32	0.55
79:2S:87:U:H2'	79:2S:88:A:H8	1.72	0.55
79:2S:1250:G:H2'	79:2S:1251:A:C8	2.41	0.55
79:2S:1966:U:H2'	79:2S:1967:U:H5'	1.89	0.55
79:2S:2226:U:H2'	79:2S:2227:C:C6	2.41	0.55
79:2S:2922:G:H2'	79:2S:2923:U:H4'	1.88	0.55
79:2S:2960:C:H2'	79:2S:2961:G:C8	2.41	0.55
80:8S:53:A:H2'	80:8S:54:A:C8	2.41	0.55
4:L4:185:LYS:HG2	4:L4:199:TRP:CE3	2.42	0.55
9:L9:87:LYS:HE3	9:L9:145:VAL:HG13	1.87	0.55
20:70:81:TYR:CD1	20:70:90:MET:HG3	2.41	0.55
26:76:79:ALA:HA	26:76:99:LEU:O	2.06	0.55
45:RC:13:LEU:HD21	45:RC:54:PHE:HB3	1.87	0.55
47:S1:87:ARG:NH2	47:S1:101:HIS:HA	2.21	0.55
50:S4:162:ILE:HG22	50:S4:163:ASP:N	2.21	0.55
53:S7:63:PRO:C	53:S7:65:PRO:HD2	2.30	0.55
59:13:98:VAL:O	59:13:102:LEU:HG	2.06	0.55
68:22:71:LYS:HD3	78:1S:1098:U:H1'	1.87	0.55
70:24:29:HIS:HB2	70:24:32:ARG:HB3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:264:G:H5”	78:1S:265:A:H5’	1.89	0.55
78:1S:477:A:H2’	78:1S:478:A:C8	2.40	0.55
78:1S:1060:U:H3’	78:1S:1061:A:C5’	2.36	0.55
78:1S:1112:G:H2’	78:1S:1113:A:C8	2.41	0.55
79:2S:1130:A:H8	79:2S:1130:A:O5’	1.89	0.55
79:2S:1220:U:H5”	79:2S:1286:A:N6	2.22	0.55
79:2S:1660:C:H2’	79:2S:1661:G:C8	2.41	0.55
79:2S:2783:U:H2’	79:2S:2784:G:O4’	2.05	0.55
79:2S:3064:U:H2’	79:2S:3065:G:C8	2.41	0.55
79:2S:3121:U:C1’	79:2S:3122:A:H5”	2.35	0.55
2:L2:144:ASN:HB2	2:L2:160:SER:HB2	1.88	0.55
3:L3:59:ASP:OD1	3:L3:71:GLU:HG2	2.06	0.55
6:L6:40:LEU:HB3	6:L6:84:VAL:HG13	1.87	0.55
7:L7:121:LYS:HB2	21:71:133:ALA:HB3	1.88	0.55
8:L8:48:ARG:HG3	79:2S:2585:G:C8	2.42	0.55
19:69:166:ASN:O	19:69:170:ARG:HB2	2.06	0.55
27:77:121:ARG:NH1	27:77:126:LYS:HD3	2.21	0.55
40:90:97:ARG:NE	40:90:122:ARG:HB3	2.21	0.55
41:91:13:LEU:O	41:91:17:ARG:HG3	2.06	0.55
47:S1:100:PHE:HZ	47:S1:103:MET:HB2	1.71	0.55
49:S3:209:ILE:HG22	63:17:38:ILE:HG13	1.88	0.55
51:S5:200:ASN:HA	51:S5:205:SER:HB2	1.88	0.55
54:S8:68:ALA:HB2	78:1S:210:A:O2’	2.07	0.55
55:S9:50:SER:HB3	78:1S:1:U:H5	1.71	0.55
57:11:109:VAL:HG23	57:11:137:PHE:C	2.32	0.55
60:14:103:ARG:HD2	72:26:49:ALA:HB2	1.87	0.55
78:1S:562:G:H2’	78:1S:563:U:C6	2.41	0.55
79:2S:191:U:H2’	79:2S:192:C:C6	2.42	0.55
79:2S:371:G:H2’	79:2S:373:A:OP2	2.07	0.55
79:2S:725:G:H2’	79:2S:726:G:C5’	2.28	0.55
79:2S:1115:G:H5”	79:2S:1116:G:C5’	2.36	0.55
79:2S:1951:C:H5	79:2S:2095:G:O6	1.90	0.55
4:L4:92:ASN:HA	4:L4:98:ARG:O	2.07	0.55
5:L5:184:ASP:HB3	5:L5:187:THR:HG23	1.87	0.55
20:70:71:LYS:NZ	79:2S:562:C:H4’	2.20	0.55
21:71:27:LEU:HD22	21:71:27:LEU:H	1.71	0.55
32:82:57:TYR:CE1	79:2S:1162:U:H4’	2.41	0.55
34:84:42:PRO:O	34:84:50:ALA:HA	2.07	0.55
36:86:15:LYS:HG3	36:86:17:VAL:HG23	1.87	0.55
38:88:8:ILE:H	38:88:8:ILE:HD12	1.71	0.55
44:P0:56:ASN:HB3	44:P0:80:VAL:HG23	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S2:41:LEU:O	48:S2:45:VAL:HG23	2.07	0.55
59:13:14:SER:HB3	78:1S:959:U:H5"	1.88	0.55
60:14:71:CYS:SG	60:14:76:ILE:HB	2.47	0.55
67:21:16:LYS:HA	67:21:23:ILE:HA	1.88	0.55
70:24:37:LYS:HG2	70:24:60:PHE:CE2	2.41	0.55
72:26:36:ILE:C	72:26:36:ILE:HD13	2.31	0.55
78:1S:106:U:H2'	78:1S:107:C:C6	2.40	0.55
78:1S:181:A:H2'	78:1S:182:A:C8	2.41	0.55
78:1S:370:A:H2'	78:1S:371:G:O4'	2.06	0.55
78:1S:920:U:C3'	78:1S:921:U:H5"	2.35	0.55
78:1S:1690:G:H2'	78:1S:1691:A:C8	2.42	0.55
1:L1:119:GLN:HB3	1:L1:123:LEU:HD12	1.87	0.55
1:L1:155:ILE:HG23	1:L1:163:LEU:HD11	1.88	0.55
11:61:15:GLU:HB3	11:61:130:VAL:O	2.06	0.55
11:61:141:ARG:O	11:61:145:LYS:HB2	2.06	0.55
13:63:75:PHE:O	13:63:79:GLU:HB2	2.07	0.55
18:68:33:TYR:CD1	18:68:36:LEU:HD12	2.42	0.55
49:S3:12:VAL:O	49:S3:16:VAL:HG23	2.06	0.55
51:S5:189:THR:HB	71:25:97:LYS:HZ2	1.70	0.55
52:S6:58:LYS:O	52:S6:59:GLN:HB2	2.07	0.55
68:22:57:ARG:HG2	78:1S:864:U:OP2	2.06	0.55
69:23:50:LYS:CE	78:1S:435:C:H5"	2.35	0.55
78:1S:310:C:H2'	78:1S:311:U:C6	2.42	0.55
78:1S:446:A:N6	78:1S:461:G:H21	2.04	0.55
78:1S:1147:A:H2'	78:1S:1148:C:C6	2.41	0.55
78:1S:1725:U:H2'	78:1S:1726:G:C8	2.41	0.55
79:2S:1718:G:H2'	79:2S:1719:G:C8	2.42	0.55
79:2S:1764:U:C3'	79:2S:1765:U:H5"	2.37	0.55
81:5S:32:U:H1'	81:5S:33:U:H5	1.72	0.55
82:ET:17:C:H2'	82:ET:18(A):U:C5	2.41	0.55
1:L1:38:LEU:HA	1:L1:206:VAL:HG22	1.88	0.55
1:L1:207:LYS:HD3	79:2S:2491:A:O4'	2.06	0.55
2:L2:240:ALA:HB2	79:2S:2154:U:H4'	1.89	0.55
13:63:27:ASP:HB3	80:8S:29:U:H5"	1.88	0.55
13:63:57:VAL:HG13	13:63:147:ILE:HG23	1.89	0.55
15:65:66:VAL:HG22	15:65:128:LYS:O	2.07	0.55
20:70:41:TYR:O	20:70:45:LEU:HD23	2.07	0.55
25:75:59:SER:HB3	25:75:102:LEU:HD11	1.89	0.55
30:80:48:THR:CG2	30:80:52:ARG:HD2	2.36	0.55
35:85:86:ARG:O	35:85:90:ARG:HG2	2.07	0.55
51:S5:58:LEU:O	51:S5:62:VAL:HG23	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:107:LYS:O	51:S5:111:VAL:HG23	2.06	0.55
51:S5:143:ARG:O	51:S5:162:VAL:HG12	2.07	0.55
52:S6:199:GLN:O	52:S6:203:GLU:HG2	2.07	0.55
54:S8:138:ASN:ND2	78:1S:197:A:H61	2.04	0.55
63:17:3:ARG:HB2	78:1S:1414:U:H5'	1.88	0.55
68:22:41:MET:HB3	68:22:46:TYR:HB2	1.87	0.55
72:26:3:LYS:HZ3	72:26:6:ALA:HA	1.72	0.55
78:1S:640:U:H2'	78:1S:641:G:C8	2.42	0.55
78:1S:1485:C:H3'	78:1S:1486:G:H5"	1.89	0.55
78:1S:1669:U:H2'	78:1S:1670:G:O4'	2.06	0.55
79:2S:2761:G:H1	79:2S:2795:U:H3'	1.72	0.55
79:2S:2971:A:H5"	79:2S:2972:G:C5'	2.34	0.55
2:L2:112:ILE:HD12	2:L2:112:ILE:N	2.22	0.55
6:L6:52:VAL:HG22	6:L6:53:VAL:N	2.20	0.55
13:63:166:ALA:O	13:63:170:LEU:HG	2.07	0.55
14:64:21:VAL:CG1	14:64:65:LEU:HD23	2.36	0.55
27:77:75:VAL:HG22	27:77:76:ASN:N	2.17	0.55
44:P0:6:GLU:O	44:P0:10:GLU:HB2	2.06	0.55
44:P0:61:ARG:HA	44:P0:64:ARG:HD2	1.89	0.55
51:S5:189:THR:OG1	51:S5:192:GLU:HG3	2.07	0.55
60:14:30:VAL:CG1	60:14:40:ALA:HB3	2.34	0.55
62:16:115:THR:HA	62:16:118:ILE:CG2	2.36	0.55
63:17:24:LEU:HD23	63:17:34:LEU:HD13	1.87	0.55
73:27:20:LYS:HD3	73:27:20:LYS:H	1.72	0.55
78:1S:381:C:H2'	78:1S:382:C:C6	2.41	0.55
78:1S:552:G:H2'	78:1S:553:G:O4'	2.07	0.55
79:2S:2407:C:H1'	79:2S:2818:U:O2	2.06	0.55
79:2S:2476:C:C2'	79:2S:2477:G:H4'	2.23	0.55
79:2S:2633:U:O2'	79:2S:2634:U:H5'	2.06	0.55
79:2S:2794:G:H1'	79:2S:2795:U:C6	2.41	0.55
79:2S:2898:G:OP2	79:2S:2899:C:H5'	2.06	0.55
81:5S:9:C:C2'	81:5S:10:C:H5'	2.37	0.55
82:PT:70:C:H2'	82:PT:71:G:H8	1.71	0.55
1:L1:199:GLN:C	1:L1:201:VAL:H	2.15	0.55
3:L3:27:ALA:CB	3:L3:218:ILE:HG22	2.37	0.55
5:L5:22:ARG:HG3	5:L5:27:LYS:HB2	1.89	0.55
5:L5:36:LEU:HD23	79:2S:2748:A:H1'	1.88	0.55
6:L6:176:PHE:CD2	33:83:107:ILE:HG21	2.40	0.55
11:61:32:ARG:O	11:61:36:VAL:HG23	2.07	0.55
13:63:124:ILE:HD13	13:63:124:ILE:N	2.22	0.55
15:65:124:ASP:CG	15:65:125:SER:H	2.15	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:83:VAL:HB	18:68:103:ALA:HB2	1.88	0.55
27:77:27:LYS:O	27:77:42:LEU:HB2	2.07	0.55
28:78:22:ILE:HB	79:2S:1114:U:OP1	2.06	0.55
30:80:44:ILE:HD13	30:80:53:LYS:HG3	1.89	0.55
34:84:19:LYS:NZ	34:84:37:LYS:HA	2.22	0.55
34:84:25:THR:HG22	79:2S:1597:C:H5"	1.89	0.55
34:84:81:CYS:O	34:84:82:ALA:HB3	2.07	0.55
42:92:37:ALA:HB3	42:92:40:LYS:HB2	1.88	0.55
43:93:45:LYS:HB2	43:93:45:LYS:NZ	2.22	0.55
45:RC:222:LEU:CD2	45:RC:234:LEU:HD13	2.37	0.55
64:18:144:ARG:O	64:18:145:ARG:HB2	2.07	0.55
73:27:36:LYS:HG2	73:27:43:ILE:HG22	1.88	0.55
78:1S:422:G:H2'	78:1S:423:G:C8	2.42	0.55
78:1S:1488:G:H3'	78:1S:1515:A:H61	1.72	0.55
79:2S:1023:C:C2	79:2S:1024:G:H1'	2.42	0.55
79:2S:3193:C:H2'	79:2S:3194:C:C6	2.42	0.55
80:8S:26:U:H2'	80:8S:27:U:C6	2.42	0.55
2:L2:209:HIS:HD2	2:L2:211:HIS:HB2	1.71	0.55
2:L2:230:VAL:HG12	2:L2:231:SER:N	2.21	0.55
5:L5:277:LEU:HB2	5:L5:282:ARG:HG3	1.88	0.55
6:L6:26:ARG:NH1	6:L6:26:ARG:HB2	2.22	0.55
9:L9:23:ARG:HH12	79:2S:3185:U:H5"	1.71	0.55
14:64:75:GLY:O	79:2S:561:C:H5"	2.07	0.55
17:67:171:ARG:HD2	79:2S:3274:A:OP2	2.07	0.55
25:75:53:HIS:CE1	25:75:56:ARG:HG2	2.41	0.55
31:81:62:ARG:CB	31:81:66:GLY:HA3	2.29	0.55
31:81:81:GLU:O	31:81:82:GLU:HB3	2.05	0.55
44:P0:56:ASN:HD22	79:2S:1282:G:H5"	1.72	0.55
45:RC:66:HIS:HB3	45:RC:85:TRP:HB2	1.88	0.55
53:S7:56:LYS:HB2	53:S7:88:ARG:HD2	1.89	0.55
60:14:85:ALA:N	60:14:119:THR:HG22	2.13	0.55
72:26:23:CYS:HB3	72:26:28:LYS:H	1.71	0.55
78:1S:564:G:H4'	78:1S:566:C:C2	2.42	0.55
78:1S:941:A:C2'	78:1S:942:G:H5'	2.37	0.55
78:1S:1386:G:H2'	78:1S:1387:G:C8	2.42	0.55
79:2S:1583:A:H3'	79:2S:1584:U:H6	1.72	0.55
79:2S:1647:A:N6	79:2S:1808:G:H1'	2.22	0.55
79:2S:2873:U:O2'	79:2S:2874:G:H5'	2.06	0.55
1:L1:136:THR:HB	1:L1:137:PRO:HD3	1.87	0.54
2:L2:247:ARG:HG2	2:L2:247:ARG:HH11	1.72	0.54
4:L4:135:VAL:HG12	4:L4:140:HIS:HB2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:64:ILE:HD12	5:L5:64:ILE:H	1.72	0.54
10:60:23:ASN:HD22	10:60:23:ASN:N	2.05	0.54
10:60:145:LYS:O	10:60:149:VAL:HG23	2.07	0.54
10:60:200:LEU:CD1	10:60:209:ASN:HD21	2.15	0.54
16:66:136:THR:HG22	16:66:137:THR:H	1.71	0.54
18:68:71:LEU:HD21	18:68:99:THR:HG21	1.89	0.54
20:70:67:ALA:C	20:70:69:PRO:HD3	2.32	0.54
21:71:39:ILE:HD12	21:71:102:ARG:HB2	1.88	0.54
39:89:6:SER:OG	39:89:9:ILE:HG12	2.07	0.54
44:P0:46:ARG:NH2	79:2S:1257:C:H4'	2.12	0.54
46:S0:119:ARG:HE	46:S0:119:ARG:HA	1.72	0.54
46:S0:183:ARG:HG3	46:S0:188:LEU:HG	1.88	0.54
47:S1:107:THR:HA	47:S1:110:LEU:HD22	1.89	0.54
49:S3:148:LYS:NZ	49:S3:148:LYS:HB3	2.22	0.54
50:S4:37:LYS:HD2	78:1S:297:U:H5"	1.89	0.54
59:13:99:ARG:HH22	59:13:102:LEU:HD12	1.72	0.54
63:17:84:TYR:C	63:17:86:PRO:HD2	2.32	0.54
74:28:50:GLU:O	74:28:51:ASN:HB2	2.07	0.54
78:1S:822:U:H3'	78:1S:823:G:H5"	1.89	0.54
78:1S:1690:G:H21	78:1S:1712:A:N6	2.05	0.54
78:1S:1692:G:H2'	78:1S:1693:A:C8	2.43	0.54
79:2S:434:U:H2'	79:2S:435:C:C6	2.41	0.54
79:2S:1138:U:H2'	79:2S:1139:G:O4'	2.07	0.54
79:2S:2344:U:H2'	79:2S:2345:A:H8	1.71	0.54
79:2S:3108:G:H2'	79:2S:3109:G:O4'	2.07	0.54
2:L2:74:GLU:HB3	2:L2:76:PHE:CE1	2.38	0.54
5:L5:202:GLY:O	5:L5:206:GLN:HB2	2.08	0.54
8:L8:99:PRO:HB2	8:L8:190:VAL:HG23	1.89	0.54
15:65:3:ALA:O	15:65:7:LEU:HD13	2.06	0.54
15:65:66:VAL:O	15:65:127:TYR:HA	2.07	0.54
18:68:60:PRO:HB2	18:68:142:GLY:HA3	1.89	0.54
42:92:37:ALA:HB3	42:92:40:LYS:CB	2.37	0.54
44:P0:99:VAL:HA	44:P0:103:ASN:HD22	1.72	0.54
49:S3:164:VAL:O	49:S3:168:ILE:HG13	2.07	0.54
51:S5:149:VAL:HG13	51:S5:149:VAL:O	2.07	0.54
58:12:24:ILE:O	58:12:25:GLU:HB2	2.06	0.54
63:17:100:LEU:HD22	63:17:117:LEU:HB3	1.88	0.54
68:22:73:GLY:HA3	68:22:128:PHE:CZ	2.42	0.54
69:23:109:ARG:HB3	69:23:112:LYS:HB2	1.88	0.54
69:23:142:LYS:HG2	69:23:143:PRO:CD	2.38	0.54
72:26:4:LYS:HE3	72:26:5:ARG:HH21	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:967:A:H2'	78:1S:968:U:C6	2.42	0.54
78:1S:1151:A:H4'	78:1S:1766:A:N7	2.21	0.54
78:1S:1458:G:N3	78:1S:1458:G:H2'	2.22	0.54
78:1S:1533:C:H4'	78:1S:1539:G:H1	1.71	0.54
79:2S:1813:A:H2'	79:2S:1814:A:H5'	1.89	0.54
4:L4:60:THR:HG22	4:L4:62:ALA:H	1.72	0.54
8:L8:53:PRO:HB2	8:L8:55:TYR:CD2	2.43	0.54
9:L9:12:VAL:O	9:L9:51:GLN:HB3	2.07	0.54
28:78:2:PRO:HD2	28:78:5:PHE:HB2	1.90	0.54
29:79:23:LYS:HG3	79:2S:982:C:H5"	1.89	0.54
30:80:18:ILE:HG12	30:80:81:VAL:HA	1.88	0.54
31:81:27:LYS:O	31:81:31:ARG:HB2	2.07	0.54
45:RC:157:VAL:HG11	45:RC:225:LEU:HD22	1.88	0.54
46:S0:129:ASP:O	46:S0:133:ILE:HD13	2.07	0.54
49:S3:54:ARG:HD2	49:S3:57:ASP:HB2	1.88	0.54
51:S5:58:LEU:HD13	51:S5:138:THR:HG22	1.89	0.54
61:15:124:THR:HG21	78:1S:1182:U:H4'	1.90	0.54
63:17:21:TYR:C	63:17:23:LYS:H	2.16	0.54
78:1S:406:U:H2'	78:1S:407:A:C8	2.42	0.54
78:1S:1506:G:H2'	78:1S:1507:G:C8	2.42	0.54
78:1S:1723:U:H2'	78:1S:1724:U:C6	2.43	0.54
79:2S:599:C:C3'	79:2S:600:G:H5"	2.37	0.54
79:2S:2261:G:H21	79:2S:2262:A:N6	2.04	0.54
79:2S:3163:A:C3'	79:2S:3164:C:H5"	2.36	0.54
2:L2:42:ARG:HD2	2:L2:87:PHE:HB3	1.89	0.54
3:L3:362:ALA:HB1	3:L3:368:GLY:HA3	1.88	0.54
4:L4:322:GLN:CB	79:2S:608:A:H5'	2.37	0.54
5:L5:64:ILE:HD11	5:L5:105:ILE:HG23	1.89	0.54
7:L7:224:ILE:HD11	20:70:35:VAL:HG12	1.89	0.54
17:67:3:ARG:HG3	79:2S:398:A:C5'	2.37	0.54
18:68:158:HIS:H	18:68:186:VAL:CG1	2.21	0.54
26:76:17:LYS:CG	80:8S:23:U:H4'	2.36	0.54
30:80:16:LEU:HA	30:80:19:LYS:HE2	1.89	0.54
45:RC:176:LYS:HE3	45:RC:197:SER:HA	1.90	0.54
47:S1:127:VAL:HB	47:S1:173:THR:HG22	1.88	0.54
49:S3:170:THR:HA	49:S3:186:VAL:O	2.07	0.54
54:S8:10:LYS:NZ	54:S8:10:LYS:HB2	2.23	0.54
54:S8:76:THR:HG22	54:S8:108:PRO:CG	2.26	0.54
60:14:20:TYR:HB3	60:14:27:PHE:HB2	1.88	0.54
65:19:49:ASP:O	65:19:50:ALA:HB3	2.07	0.54
69:23:144:ARG:HD2	69:23:145:SER:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:31:119:ARG:HE	77:31:139:LEU:HD21	1.72	0.54
78:1S:1116:A:H2'	78:1S:1117:U:C6	2.43	0.54
79:2S:2609:A:H2'	79:2S:2610:G:C8	2.41	0.54
1:L1:120:VAL:H	1:L1:121:PRO:CD	2.20	0.54
4:L4:35:VAL:HG21	4:L4:244:LEU:HD21	1.90	0.54
14:64:103:ILE:O	14:64:106:ARG:HG2	2.08	0.54
20:70:38:LYS:HE2	20:70:61:ILE:HG12	1.90	0.54
25:75:62:VAL:HG13	25:75:90:ALA:HB2	1.90	0.54
39:89:26:TRP:CD1	39:89:26:TRP:H	2.25	0.54
39:89:36:ARG:HH11	39:89:36:ARG:HG2	1.72	0.54
50:S4:192:ILE:HD13	50:S4:228:ILE:CD1	2.38	0.54
51:S5:63:GLN:C	51:S5:65:ARG:H	2.16	0.54
52:S6:59:GLN:HA	78:1S:155:U:H4'	1.88	0.54
53:S7:97:ARG:O	53:S7:98:ILE:HB	2.08	0.54
53:S7:109:VAL:HG13	53:S7:110:GLN:H	1.72	0.54
56:10:77:ARG:HH21	56:10:86:ILE:HD11	1.73	0.54
59:13:90:TYR:CD2	78:1S:869:A:H5"	2.43	0.54
61:15:52:LYS:H	61:15:53:PRO:HD2	1.73	0.54
63:17:58:MET:HE2	63:17:61:ILE:HD12	1.89	0.54
65:19:31:PRO:HD2	65:19:34:VAL:HB	1.90	0.54
67:21:62:ARG:HB3	67:21:64:GLU:HG2	1.90	0.54
78:1S:1419:G:H2'	78:1S:1420:C:O4'	2.07	0.54
79:2S:987:U:H2'	79:2S:988:U:C6	2.43	0.54
79:2S:1014:U:H2'	79:2S:1015:U:H5"	1.89	0.54
79:2S:1221:A:H3'	79:2S:1222:G:C5'	2.36	0.54
79:2S:1913:A:C2	79:2S:2120:A:H2'	2.43	0.54
79:2S:2456:A:C2'	79:2S:2457:G:H5'	2.38	0.54
82:ET:9:G:H1'	82:ET:46:G:H2'	1.88	0.54
3:L3:56:ILE:HD11	3:L3:359:ILE:HG23	1.89	0.54
7:L7:88:ARG:HH21	7:L7:92:ILE:HA	1.73	0.54
7:L7:140:SER:O	7:L7:144:ILE:HG13	2.08	0.54
10:60:46:PHE:CD1	10:60:140:THR:HA	2.43	0.54
10:60:56:GLU:HA	10:60:131:ILE:HG12	1.89	0.54
23:73:33:ASN:HD21	23:73:64:LYS:H	1.54	0.54
49:S3:209:ILE:HG22	63:17:38:ILE:CG1	2.38	0.54
50:S4:195:ILE:HA	50:S4:210:ILE:HD13	1.89	0.54
65:19:15:ILE:HD13	65:19:60:SER:HB2	1.90	0.54
70:24:35:VAL:HG13	70:24:36:SER:N	2.22	0.54
73:27:81:ARG:O	73:27:82:LYS:HB2	2.08	0.54
78:1S:114:C:H42	78:1S:245:U:H1'	1.72	0.54
78:1S:870:C:H2'	78:1S:871:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1525:A:H3'	78:1S:1526:A:H8	1.71	0.54
79:2S:1818:U:C3'	79:2S:1819:U:H5"	2.38	0.54
79:2S:2593:A:N3	79:2S:2593:A:H2'	2.21	0.54
79:2S:3199:G:H2'	79:2S:3200:G:H8	1.73	0.54
3:L3:16:PHE:CD2	79:2S:3045:G:H4'	2.43	0.54
3:L3:232:ARG:HH11	3:L3:268:GLY:N	2.05	0.54
3:L3:385:LYS:C	3:L3:387:LEU:H	2.16	0.54
6:L6:52:VAL:CG2	6:L6:65:ILE:HB	2.38	0.54
9:L9:48:VAL:HG13	9:L9:49:ASN:N	2.23	0.54
13:63:29:ALA:HB2	15:65:201:ARG:HH12	1.73	0.54
14:64:108:ARG:HG2	14:64:108:ARG:HH21	1.73	0.54
21:71:53:PRO:HB3	21:71:91:LEU:CD1	2.38	0.54
25:75:115:ARG:NE	25:75:121:LYS:HB2	2.23	0.54
29:79:14:ARG:HD2	29:79:14:ARG:C	2.31	0.54
47:S1:29:TRP:CD1	47:S1:47:LEU:HD23	2.43	0.54
48:S2:148:LEU:O	67:21:3:ASN:HB2	2.07	0.54
49:S3:211:PRO:HG3	63:17:20:TYR:CE1	2.39	0.54
61:15:52:LYS:HB2	61:15:53:PRO:HD3	1.90	0.54
69:23:26:GLU:O	69:23:30:LYS:HB2	2.08	0.54
76:30:38:LEU:O	76:30:42:ARG:HB2	2.07	0.54
76:30:49:LEU:HD12	76:30:51:ASN:HB2	1.88	0.54
78:1S:316:A:H2'	78:1S:317:C:C6	2.43	0.54
78:1S:698:U:H2'	78:1S:699:U:O4'	2.07	0.54
78:1S:947:U:H2'	78:1S:948:G:C8	2.43	0.54
79:2S:2181:C:H2'	79:2S:2182:A:C8	2.43	0.54
3:L3:50:LYS:HG3	3:L3:328:ILE:HD12	1.89	0.54
3:L3:260:VAL:HG21	79:2S:2987:A:C2	2.43	0.54
7:L7:80:GLN:HB2	21:71:135:PRO:CB	2.37	0.54
7:L7:91:GLY:O	7:L7:92:ILE:HB	2.08	0.54
13:63:174:ARG:O	13:63:178:LYS:HB2	2.07	0.54
15:65:15:GLN:HG3	36:86:51:SER:HB2	1.90	0.54
18:68:16:ARG:HD2	18:68:53:PHE:O	2.08	0.54
18:68:67:ILE:O	18:68:71:LEU:HG	2.08	0.54
18:68:170:ARG:HB2	28:78:56:VAL:HG11	1.90	0.54
19:69:61:SER:HB3	79:2S:1689:U:H5"	1.90	0.54
21:71:17:ARG:O	21:71:18:ASP:HB2	2.07	0.54
32:82:26:HIS:HD2	79:2S:655:C:H5'	1.72	0.54
37:87:31:LYS:HZ1	79:2S:815:G:H5"	1.73	0.54
41:91:22:ALA:HA	41:91:25:LYS:HE2	1.89	0.54
45:RC:32:LEU:HD21	45:RC:94:VAL:HG11	1.90	0.54
45:RC:227:ALA:HB1	45:RC:229:LYS:NZ	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RC:235:SER:HB3	45:RC:237:GLN:HE21	1.73	0.54
51:S5:187:ILE:HD12	51:S5:187:ILE:N	2.21	0.54
55:S9:162:SER:HB2	55:S9:163:PRO:HD2	1.90	0.54
55:S9:175:ARG:O	55:S9:175:ARG:HD2	2.07	0.54
59:13:45:LEU:HD12	59:13:49:GLN:HB3	1.90	0.54
64:18:57:ARG:O	64:18:61:LEU:HD23	2.08	0.54
68:22:10:ALA:O	68:22:14:ILE:HG13	2.07	0.54
78:1S:1291:G:H2'	78:1S:1292:G:C8	2.41	0.54
78:1S:1656:U:H3'	78:1S:1657:U:C5'	2.35	0.54
78:1S:1746:A:H2'	78:1S:1747:G:O4'	2.08	0.54
79:2S:725:G:C3'	79:2S:726:G:H5"	2.38	0.54
79:2S:1240:A:H61	79:2S:1244:A:H5"	1.72	0.54
79:2S:1739:U:H2'	79:2S:1740:U:H5'	1.90	0.54
5:L5:11:ALA:HB1	79:2S:1003:A:H5'	1.89	0.54
8:L8:99:PRO:HG2	8:L8:190:VAL:HG23	1.89	0.54
16:66:6:VAL:HG13	16:66:32:LYS:HB2	1.90	0.54
17:67:64:ASN:O	17:67:80:LYS:HD2	2.08	0.54
20:70:7:TYR:CE1	20:70:63:GLN:HB2	2.43	0.54
35:85:29:ALA:O	35:85:33:VAL:HG23	2.08	0.54
38:88:26:LYS:HZ1	79:2S:1751:G:H5'	1.72	0.54
52:S6:185:GLN:O	52:S6:189:HIS:HB2	2.08	0.54
53:S7:143:LEU:HD13	53:S7:144:VAL:H	1.73	0.54
54:S8:8:ARG:HD3	54:S8:21:PHE:HB3	1.90	0.54
54:S8:110:ARG:HE	54:S8:121:LEU:HD21	1.73	0.54
59:13:129:TYR:HA	59:13:132:VAL:HG22	1.90	0.54
67:21:56:SER:OG	67:21:59:VAL:HG23	2.08	0.54
71:25:77:ARG:HB3	71:25:81:ARG:NH1	2.23	0.54
75:29:5:ASN:HD22	75:29:8:PHE:HB2	1.72	0.54
78:1S:145:A:O2'	78:1S:146:U:H6	1.91	0.54
78:1S:158:U:H3'	78:1S:159:U:H5"	1.89	0.54
78:1S:843:U:H2'	78:1S:844:A:C8	2.42	0.54
78:1S:849:C:H2'	78:1S:850:A:C8	2.43	0.54
79:2S:79:U:H2'	79:2S:80:G:C8	2.42	0.54
79:2S:790:U:H2'	79:2S:791:A:C8	2.42	0.54
79:2S:1653:G:H2'	79:2S:1654:A:H8	1.73	0.54
79:2S:2056:U:C2'	79:2S:2057:G:H5'	2.38	0.54
4:L4:210:ALA:HA	4:L4:230:VAL:HG23	1.90	0.54
5:L5:286:VAL:HG11	81:5S:64:A:H1'	1.89	0.54
6:L6:80:ASN:HB3	6:L6:83:TYR:HD2	1.72	0.54
10:60:40:LYS:N	10:60:40:LYS:HD2	2.22	0.54
17:67:136:ILE:C	17:67:137:ASN:HD22	2.15	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:170:ARG:HD2	28:78:56:VAL:HG21	1.90	0.54
19:69:92:GLN:O	19:69:96:ILE:HG13	2.08	0.54
21:71:49:GLN:HG2	79:2S:2755:C:O2'	2.08	0.54
23:73:39:VAL:O	79:2S:2931:C:H4'	2.08	0.54
32:82:4:LEU:CD1	32:82:5:PRO:HD2	2.38	0.54
32:82:50:ILE:HG22	79:2S:426:G:H4'	1.89	0.54
37:87:21:ARG:NH2	37:87:39:TYR:HA	2.23	0.54
39:89:15:LYS:HE3	39:89:19:GLN:NE2	2.23	0.54
51:S5:89:ILE:HD12	51:S5:90:ILE:HG12	1.88	0.54
52:S6:63:MET:HG2	52:S6:98:ARG:HB3	1.90	0.54
55:S9:49:LEU:CD1	55:S9:53:ARG:HD3	2.37	0.54
60:14:22:SER:HA	60:14:95:GLY:N	2.23	0.54
61:15:22:LEU:H	61:15:22:LEU:CD2	2.21	0.54
68:22:41:MET:HB2	68:22:47:ILE:HG12	1.90	0.54
78:1S:572:C:H2'	78:1S:573:C:C6	2.42	0.54
78:1S:588:U:H2'	78:1S:589:C:C6	2.43	0.54
78:1S:712:G:H2'	78:1S:713:A:C5'	2.24	0.54
79:2S:2904:U:H2'	79:2S:2905:U:C6	2.43	0.54
79:2S:3317:U:H4'	79:2S:3318:G:C5'	2.37	0.54
2:L2:34:TYR:HA	2:L2:37:ARG:NH2	2.22	0.53
4:L4:350:LYS:CG	4:L4:351:PRO:HD2	2.37	0.53
9:L9:16:VAL:HG12	9:L9:29:GLY:HA2	1.89	0.53
14:64:32:LEU:O	14:64:48:GLY:HA3	2.08	0.53
26:76:70:ILE:HD12	26:76:70:ILE:H	1.72	0.53
27:77:72:ILE:H	27:77:111:LYS:HE2	1.73	0.53
29:79:47:LEU:O	29:79:50:THR:HG22	2.08	0.53
42:92:12:CYS:HB2	42:92:23:HIS:CE1	2.43	0.53
51:S5:183:ALA:CB	51:S5:190:ILE:HD13	2.38	0.53
56:10:4:PRO:HG2	56:10:7:ASP:OD1	2.07	0.53
68:22:83:ILE:HD13	78:1S:749:U:OP1	2.08	0.53
73:27:50:ALA:O	73:27:51:GLN:HB2	2.07	0.53
78:1S:586:G:H2'	78:1S:587:C:C6	2.43	0.53
78:1S:694:U:H5"	78:1S:695:U:H5	1.73	0.53
78:1S:1569:A:H2'	78:1S:1570:A:C8	2.43	0.53
79:2S:380:U:H2'	79:2S:381:U:C6	2.43	0.53
79:2S:435:C:H2'	79:2S:436:A:C8	2.42	0.53
79:2S:877:C:H2'	79:2S:878:G:O4'	2.07	0.53
79:2S:1509:A:H2'	79:2S:1510:G:O4'	2.08	0.53
5:L5:208:MET:HA	5:L5:219:PHE:HE2	1.73	0.53
7:L7:125:GLU:HG3	79:2S:987:U:H5'	1.90	0.53
20:70:72:VAL:HA	20:70:97:VAL:HA	1.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:75:ALA:O	34:84:76:TYR:HB2	2.07	0.53
35:85:16:GLN:O	35:85:20:GLN:HB2	2.08	0.53
41:91:19:LYS:HD2	41:91:19:LYS:N	2.23	0.53
46:S0:144:ILE:HG23	46:S0:158:VAL:HG13	1.90	0.53
47:S1:29:TRP:HD1	47:S1:47:LEU:HD23	1.73	0.53
49:S3:8:LYS:O	49:S3:12:VAL:HG23	2.09	0.53
51:S5:153:GLY:HA2	83:MR:2:A:C8	2.43	0.53
54:S8:172:ARG:HB3	54:S8:175:GLN:HB2	1.90	0.53
60:14:63:ALA:O	60:14:67:VAL:HG23	2.07	0.53
71:25:93:SER:HB2	71:25:100:ILE:H	1.72	0.53
78:1S:1025:A:H5"	78:1S:1027:A:N7	2.23	0.53
78:1S:1186:U:H2'	78:1S:1187:U:O4'	2.08	0.53
78:1S:1662:G:H2'	78:1S:1663:G:C8	2.43	0.53
79:2S:1055:A:H1'	81:5S:81:U:O2'	2.08	0.53
79:2S:1234:G:H2'	79:2S:1235:U:C5	2.42	0.53
79:2S:3302:U:H3	79:2S:3312:U:H3	1.55	0.53
80:8S:114:G:H2'	80:8S:115:C:C6	2.43	0.53
82:ET:9:G:H4'	82:ET:47:G:H5'	1.90	0.53
15:65:122:ASN:HB3	15:65:129:TYR:HD2	1.73	0.53
15:65:158:HIS:CG	79:2S:56:G:H4'	2.44	0.53
21:71:26:HIS:HB2	81:5S:9:C:OP1	2.08	0.53
26:76:17:LYS:HG2	80:8S:23:U:C4'	2.35	0.53
26:76:56:VAL:HG22	26:76:57:LEU:H	1.72	0.53
33:83:70:LYS:HE2	79:2S:585:A:H5"	1.89	0.53
37:87:51:ALA:O	37:87:55:ARG:HB2	2.08	0.53
40:90:125:LYS:HD2	79:2S:2897:A:C5'	2.38	0.53
49:S3:174:HIS:O	49:S3:176:LEU:HD12	2.09	0.53
54:S8:5:ARG:HH11	54:S8:5:ARG:HG3	1.73	0.53
59:13:23:PRO:O	59:13:24:ALA:HB3	2.08	0.53
61:15:83:MET:O	61:15:116:LEU:HG	2.08	0.53
68:22:31:SER:O	68:22:35:ILE:HG12	2.08	0.53
73:27:72:LYS:HD3	73:27:73:LEU:N	2.23	0.53
74:28:36:THR:HG23	74:28:37:SER:H	1.73	0.53
78:1S:353:A:H2'	78:1S:354:C:O4'	2.07	0.53
78:1S:922:G:H2'	78:1S:923:A:H8	1.73	0.53
82:PT:70:C:H2'	82:PT:71:G:C8	2.43	0.53
5:L5:72:ASP:OD1	81:5S:7:G:H1'	2.08	0.53
13:63:128:ARG:HG3	35:85:114:ARG:NH1	2.24	0.53
18:68:170:ARG:NH1	28:78:56:VAL:HG21	2.23	0.53
19:69:102:LEU:HD13	19:69:138:LEU:HD12	1.90	0.53
36:86:4:LYS:HG3	36:86:15:LYS:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:84:TYR:HD2	52:S6:95:LYS:HD2	1.73	0.53
55:S9:13:SER:HB2	55:S9:47:PHE:CD1	2.42	0.53
63:17:103:ASP:OD1	63:17:122:ILE:HG21	2.08	0.53
65:19:27:LYS:HB3	65:19:27:LYS:HZ2	1.72	0.53
65:19:72:GLY:HA3	78:1S:1498:G:OP1	2.09	0.53
66:20:118:VAL:HG22	66:20:119:ALA:H	1.72	0.53
67:21:86:SER:HA	73:27:6:ASP:CB	2.39	0.53
78:1S:397:A:H2'	78:1S:398:G:O4'	2.07	0.53
78:1S:1260:U:H2'	78:1S:1261:G:C8	2.43	0.53
79:2S:1505:C:H2'	79:2S:1506:A:C8	2.43	0.53
79:2S:1951:C:H6	79:2S:2095:G:N1	2.02	0.53
79:2S:2173:U:H3'	79:2S:2174:G:H2'	1.90	0.53
79:2S:2882:U:H2'	79:2S:2883:U:C6	2.42	0.53
79:2S:2949:U:C2'	79:2S:2950:G:H5'	2.37	0.53
80:8S:104:A:OP2	80:8S:105:A:H2'	2.09	0.53
10:60:131:ILE:HD11	81:5S:93:C:H4'	1.90	0.53
17:67:41:LEU:O	17:67:45:GLN:HG3	2.09	0.53
20:70:171:PHE:H	20:70:171:PHE:HD1	1.57	0.53
30:80:66:LYS:HD3	30:80:66:LYS:N	2.24	0.53
33:83:59:VAL:HG23	33:83:60:ARG:N	2.22	0.53
34:84:39:ALA:HB2	34:84:58:ARG:CD	2.38	0.53
45:RC:128:ASP:O	45:RC:129:LYS:HG2	2.09	0.53
46:S0:84:ARG:O	46:S0:88:LYS:HD2	2.09	0.53
51:S5:76:ARG:HD2	62:16:122:ARG:NE	2.23	0.53
51:S5:184:PHE:CD2	51:S5:185:ARG:HG3	2.44	0.53
58:12:98:GLY:O	58:12:103:LEU:HD11	2.08	0.53
61:15:98:ASN:HB3	61:15:120:SER:OG	2.09	0.53
68:22:15:ASN:O	68:22:19:LYS:HG3	2.08	0.53
71:25:47:TYR:O	71:25:51:LEU:HD13	2.09	0.53
71:25:65:LEU:HB3	71:25:71:ILE:HD11	1.90	0.53
78:1S:482:U:H2'	78:1S:483:A:H8	1.74	0.53
78:1S:560:U:H2'	78:1S:561:G:C8	2.43	0.53
78:1S:981:U:H2'	78:1S:982:U:H5'	1.91	0.53
78:1S:1414:U:H2'	78:1S:1414:U:O2	2.09	0.53
79:2S:200:C:H5'	79:2S:221:A:C2	2.43	0.53
79:2S:700:C:H2'	79:2S:701:G:C8	2.44	0.53
79:2S:1158:A:H2'	79:2S:1159:A:H4'	1.90	0.53
79:2S:2060:A:H2'	79:2S:2061:G:C5'	2.39	0.53
1:L1:169:VAL:CG1	1:L1:170:GLY:H	2.20	0.53
8:L8:101:THR:HG22	8:L8:104:GLU:CG	2.39	0.53
10:60:36:LEU:HD23	10:60:73:ASN:HD22	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:72:96:VAL:HG12	22:72:97:SER:N	2.22	0.53
26:76:50:ILE:HD13	26:76:51:ARG:N	2.24	0.53
44:P0:15:LEU:HD21	44:P0:52:LEU:HD12	1.91	0.53
46:S0:148:ASP:HB2	46:S0:164:ASN:ND2	2.22	0.53
47:S1:61:LEU:HD13	47:S1:61:LEU:N	2.23	0.53
47:S1:148:ASN:HD22	47:S1:148:ASN:N	1.96	0.53
48:S2:54:GLU:O	48:S2:58:LEU:HB2	2.08	0.53
59:13:129:TYR:O	59:13:134:VAL:HG22	2.07	0.53
61:15:34:VAL:HG11	61:15:45:PHE:HB2	1.91	0.53
62:16:49:TYR:O	62:16:53:LEU:HG	2.09	0.53
64:18:111:ASP:O	64:18:115:ARG:HB2	2.08	0.53
65:19:97:SER:HB2	78:1S:1504:G:OP1	2.09	0.53
68:22:103:ILE:HD11	68:22:110:ILE:CG2	2.39	0.53
69:23:32:ARG:HH12	78:1S:375:U:H5”	1.72	0.53
69:23:109:ARG:HH21	69:23:112:LYS:HG3	1.74	0.53
79:2S:1548:C:C5	79:2S:1549:U:H1’	2.44	0.53
79:2S:1726:C:H2’	79:2S:1727:G:H8	1.73	0.53
79:2S:2043:U:H2’	79:2S:2044:U:O4’	2.08	0.53
79:2S:2812:C:H2’	79:2S:2813:A:C8	2.44	0.53
79:2S:3017:A:H2’	79:2S:3018:C:H6	1.74	0.53
2:L2:177:LYS:HD3	43:93:29:LEU:HD12	1.90	0.53
6:L6:55:LEU:HD11	6:L6:66:SER:OG	2.09	0.53
8:L8:124:ASP:HA	79:2S:120:G:H22	1.72	0.53
11:61:166:LYS:O	11:61:167:TYR:HB2	2.09	0.53
21:71:95:HIS:HB2	21:71:96:ILE:HD12	1.91	0.53
24:74:23:ARG:HB2	24:74:29:PHE:HE2	1.74	0.53
29:79:39:PHE:O	29:79:43:HIS:HB2	2.08	0.53
38:88:8:ILE:HD12	38:88:8:ILE:N	2.23	0.53
39:89:6:SER:HB2	80:8S:113:U:OP2	2.08	0.53
53:S7:142:TYR:O	68:22:49:GLU:HB2	2.08	0.53
55:S9:144:PRO:HD2	78:1S:474:A:H5”	1.91	0.53
61:15:97:TYR:HB2	61:15:102:PHE:CE1	2.44	0.53
65:19:29:GLU:OE2	65:19:110:LYS:HD2	2.09	0.53
78:1S:487:G:H22	78:1S:500:C:H42	1.55	0.53
78:1S:1760:G:O2’	78:1S:1761:U:H5’	2.08	0.53
79:2S:2809:C:H5”	79:2S:2956:A:H4’	1.91	0.53
79:2S:2920:U:H2’	79:2S:2921:U:C6	2.44	0.53
79:2S:3203:U:H2’	79:2S:3204:C:C6	2.44	0.53
81:5S:24:A:H2’	81:5S:25:G:O4’	2.09	0.53
81:5S:75:G:H1’	81:5S:104:A:N6	2.22	0.53
1:L1:17:LEU:HD13	1:L1:215:ARG:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:154:TYR:O	3:L3:155:ALA:HB3	2.08	0.53
4:L4:317:PRO:HG2	7:L7:149:TYR:CD2	2.41	0.53
5:L5:157:ALA:HA	81:5S:46:A:OP1	2.09	0.53
15:65:10:LEU:O	15:65:19:LEU:HD21	2.08	0.53
18:68:65:SER:HB3	18:68:90:ASP:OD2	2.08	0.53
22:72:84:LEU:HD13	22:72:90:ARG:CD	2.39	0.53
22:72:84:LEU:HD13	22:72:90:ARG:HD2	1.91	0.53
28:78:36:GLY:HA2	28:78:39:HIS:CD2	2.43	0.53
28:78:56:VAL:HG23	28:78:57:GLY:N	2.24	0.53
36:86:56:ARG:O	36:86:60:LEU:HB2	2.09	0.53
47:S1:164:ILE:O	47:S1:168:ILE:HG13	2.09	0.53
50:S4:193:GLY:HA3	50:S4:210:ILE:HG22	1.90	0.53
50:S4:210:ILE:HB	50:S4:218:PHE:CE1	2.44	0.53
61:15:90:ILE:HG12	61:15:107:ILE:HG22	1.90	0.53
65:19:52:GLY:HA2	65:19:55:TYR:CE2	2.43	0.53
78:1S:705:U:H2'	78:1S:706:A:H8	1.74	0.53
78:1S:918:U:H2'	78:1S:919:A:C8	2.43	0.53
78:1S:1486:G:H8	78:1S:1593:A:H5'	1.73	0.53
78:1S:1686:C:C2'	78:1S:1687:U:H5'	2.38	0.53
79:2S:308:A:H5'	79:2S:2223:A:O2'	2.08	0.53
79:2S:1338:C:H2'	79:2S:1339:C:C6	2.43	0.53
79:2S:1921:A:H2'	79:2S:1922:A:H8	1.74	0.53
79:2S:3016:A:H2'	79:2S:3017:A:H8	1.74	0.53
81:5S:56:A:H2'	81:5S:57:G:H8	1.72	0.53
4:L4:212:ASP:OD1	4:L4:216:VAL:HG13	2.09	0.53
15:65:150:TRP:HE3	15:65:156:HIS:NE2	2.07	0.53
31:81:46:THR:HG21	31:81:91:SER:OG	2.08	0.53
48:S2:238:SER:HB3	48:S2:241:ASP:OD2	2.08	0.53
51:S5:172:ILE:O	51:S5:176:THR:HG23	2.09	0.53
51:S5:184:PHE:HD2	51:S5:185:ARG:HG3	1.73	0.53
60:14:124:ASP:O	60:14:125:SER:HB2	2.09	0.53
73:27:54:VAL:O	73:27:62:ILE:HD12	2.09	0.53
79:2S:85:A:H61	79:2S:99:A:H3'	1.74	0.53
79:2S:241:G:C2'	79:2S:242:C:H5'	2.39	0.53
79:2S:866:A:H3'	79:2S:867:G:H8	1.74	0.53
79:2S:2279:A:H2	79:2S:2305:G:N7	2.07	0.53
79:2S:2675:C:O5'	79:2S:2675:C:H6	1.92	0.53
80:8S:98:U:H2'	80:8S:99:C:H5'	1.91	0.53
4:L4:241:GLY:HA2	79:2S:1382:G:H21	1.72	0.53
6:L6:155:LEU:O	6:L6:155:LEU:HD13	2.09	0.53
15:65:165:THR:O	15:65:169:LYS:HG3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:47:TYR:O	17:67:51:VAL:HG23	2.08	0.53
20:70:61:ILE:HG13	20:70:61:ILE:O	2.08	0.53
21:71:53:PRO:HB3	21:71:91:LEU:HD13	1.91	0.53
44:P0:82:GLY:O	79:2S:1282:G:H4'	2.08	0.53
53:S7:11:GLN:HG3	53:S7:13:PRO:CD	2.35	0.53
59:13:88:LEU:HA	59:13:91:LEU:HD12	1.91	0.53
66:20:109:GLU:OE1	66:20:110:PRO:HD2	2.08	0.53
75:29:31:ILE:HG22	75:29:33:LYS:H	1.73	0.53
78:1S:1164:G:H2'	78:1S:1165:G:C8	2.44	0.53
78:1S:1765:A:H8	78:1S:1768:G:H22	1.54	0.53
79:2S:398:A:H1'	79:2S:1416:C:OP1	2.08	0.53
79:2S:810:A:H2'	79:2S:811:U:C6	2.44	0.53
79:2S:1117:G:H2'	79:2S:1118:C:C6	2.44	0.53
79:2S:2444:C:H2'	79:2S:2445:A:O4'	2.09	0.53
79:2S:2611:U:H2'	79:2S:2612:U:C6	2.44	0.53
79:2S:2949:U:O2'	79:2S:2950:G:H5'	2.08	0.53
80:8S:41:A:N6	80:8S:103:G:H1'	2.21	0.53
80:8S:107:G:H2'	80:8S:108:C:H6	1.72	0.53
3:L3:68:HIS:O	3:L3:69:LYS:HB2	2.09	0.52
4:L4:304:GLN:O	4:L4:305:ALA:HB3	2.09	0.52
7:L7:60:ARG:HH21	7:L7:63:ILE:HD12	1.75	0.52
9:L9:8:GLN:HG2	9:L9:68:LEU:CD1	2.39	0.52
15:65:35:VAL:O	15:65:64:VAL:HA	2.09	0.52
15:65:39:ALA:HB3	15:65:61:ILE:HG22	1.90	0.52
18:68:58:ASN:O	18:68:60:PRO:HD3	2.07	0.52
18:68:180:ARG:HD2	18:68:185:LYS:HB2	1.91	0.52
19:69:139:VAL:O	19:69:143:ILE:HG13	2.10	0.52
23:73:61:THR:HG22	23:73:72:LYS:O	2.08	0.52
24:74:52:THR:O	24:74:56:ARG:HG2	2.09	0.52
28:78:126:LYS:HB3	28:78:148:ILE:HD13	1.89	0.52
43:93:59:CYS:O	43:93:60:CYS:HB3	2.09	0.52
46:S0:71:GLU:HA	46:S0:95:ALA:HA	1.90	0.52
46:S0:197:ILE:H	46:S0:197:ILE:HD12	1.74	0.52
47:S1:117:TRP:HB3	47:S1:153:HIS:HA	1.90	0.52
47:S1:148:ASN:CB	63:17:126:ALA:HB3	2.40	0.52
49:S3:5:ILE:HG22	49:S3:6:SER:H	1.72	0.52
51:S5:150:GLY:HA2	51:S5:155:ALA:HA	1.91	0.52
51:S5:163:SER:O	51:S5:167:ARG:HG3	2.08	0.52
51:S5:186:ASN:ND2	51:S5:188:LYS:HB2	2.24	0.52
60:14:23:PHE:CE2	60:14:91:THR:HG21	2.42	0.52
62:16:74:HIS:O	62:16:78:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:22:85:ASP:O	68:22:89:TRP:HD1	1.92	0.52
70:24:20:ARG:HD2	70:24:74:LEU:HD22	1.91	0.52
73:27:59:CYS:O	73:27:61:THR:HG22	2.07	0.52
78:1S:223:U:H2'	78:1S:224:C:C6	2.44	0.52
79:2S:1439:U:O5'	79:2S:1439:U:H6	1.91	0.52
79:2S:2476:C:H2'	79:2S:2477:G:C4'	2.22	0.52
79:2S:2590:A:H2'	79:2S:2591:A:C8	2.44	0.52
79:2S:3146:G:H2'	79:2S:3147:G:C8	2.44	0.52
3:L3:13:HIS:HB3	3:L3:16:PHE:HD1	1.73	0.52
5:L5:57:ASN:ND2	81:5S:26:C:H3'	2.25	0.52
5:L5:150:LEU:HB3	11:61:142:LYS:HD2	1.90	0.52
21:71:20:ARG:HB3	21:71:20:ARG:HH11	1.74	0.52
23:73:15:LEU:CD2	23:73:53:SER:HB3	2.39	0.52
25:75:52:PRO:HB3	80:8S:135:G:H5'	1.90	0.52
28:78:26:ARG:HB2	28:78:29:PRO:HG3	1.90	0.52
32:82:4:LEU:HD13	32:82:90:LYS:HE3	1.92	0.52
43:93:73:THR:HG23	43:93:76:ALA:H	1.74	0.52
47:S1:45:LYS:HB2	60:14:13:VAL:HG23	1.91	0.52
48:S2:53:ILE:HG23	48:S2:56:ILE:HD12	1.90	0.52
49:S3:105:MET:O	49:S3:109:LEU:HG	2.08	0.52
59:13:99:ARG:HA	59:13:99:ARG:NE	2.25	0.52
68:22:24:GLN:HB3	68:22:64:GLN:NE2	2.21	0.52
78:1S:157:A:H2'	78:1S:158:U:H5"	1.91	0.52
79:2S:1525:G:H2'	79:2S:1525:G:N3	2.24	0.52
79:2S:1886:A:H2'	79:2S:1887:A:H8	1.74	0.52
79:2S:2144:A:H1'	79:2S:2281:A:N6	2.24	0.52
79:2S:3169:U:H2'	79:2S:3170:A:O4'	2.09	0.52
79:2S:3374:U:H5"	79:2S:3376:A:N1	2.23	0.52
82:ET:49:C:H2'	82:ET:60:A:H4'	1.91	0.52
3:L3:2:SER:N	79:2S:2940:A:C8	2.77	0.52
11:61:35:LYS:HD2	11:61:120:ILE:CG1	2.34	0.52
20:70:112:ALA:HB1	79:2S:1186:G:N3	2.24	0.52
31:81:105:GLN:HA	79:2S:3324:C:O2'	2.08	0.52
38:88:43:PHE:CZ	38:88:62:ALA:HB1	2.43	0.52
42:92:99:GLN:NE2	42:92:102:GLN:HB2	2.25	0.52
46:S0:127:ARG:HG3	46:S0:127:ARG:HH11	1.75	0.52
47:S1:61:LEU:HD23	47:S1:62:LYS:H	1.72	0.52
48:S2:172:ALA:HB3	48:S2:195:ASP:HB3	1.92	0.52
53:S7:38:LEU:HD23	53:S7:38:LEU:O	2.09	0.52
62:16:18:ALA:CB	62:16:69:VAL:HG22	2.40	0.52
62:16:128:LYS:HB2	62:16:137:ARG:NH2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:18:145:ARG:HA	64:18:145:ARG:HE	1.74	0.52
65:19:102:ARG:O	65:19:106:GLN:HG3	2.10	0.52
69:23:27:ASN:O	69:23:31:LYS:HG2	2.09	0.52
76:30:28:LYS:HD3	76:30:29:LYS:N	2.25	0.52
78:1S:271:A:H2	78:1S:284:G:N2	2.07	0.52
78:1S:941:A:H8	78:1S:941:A:O5'	1.92	0.52
78:1S:1585:U:N3	78:1S:1611:A:H2	2.07	0.52
79:2S:359:U:H2'	79:2S:360:G:O4'	2.10	0.52
79:2S:421:G:C6	79:2S:2384:A:H4'	2.44	0.52
79:2S:671:U:H2'	79:2S:672:A:H8	1.71	0.52
79:2S:992:A:C2'	79:2S:993:G:H5'	2.38	0.52
79:2S:1598:G:H2'	79:2S:1599:G:C8	2.44	0.52
79:2S:3120:C:O2'	79:2S:3121:U:H2'	2.08	0.52
82:ET:6:G:O2'	82:ET:7:G:H5'	2.10	0.52
1:L1:24:LYS:HG3	1:L1:214:PHE:HE1	1.74	0.52
3:L3:78:VAL:HG12	3:L3:79:VAL:H	1.72	0.52
3:L3:95:THR:CB	79:2S:3243:A:H4'	2.39	0.52
6:L6:36:PRO:HB3	6:L6:55:LEU:O	2.09	0.52
10:60:57:LEU:HB2	10:60:131:ILE:HG13	1.90	0.52
18:68:176:ARG:O	28:78:51:GLY:HA2	2.09	0.52
27:77:46:ILE:HA	27:77:70:PRO:HA	1.91	0.52
28:78:75:LEU:HA	28:78:78:LEU:HD23	1.91	0.52
33:83:90:PRO:O	33:83:91:ALA:HB3	2.10	0.52
37:87:5:THR:N	37:87:6:PRO:HD2	2.24	0.52
37:87:56:ARG:NH2	79:2S:362:U:H3'	2.17	0.52
42:92:26:THR:OG1	42:92:71:ARG:HB3	2.09	0.52
50:S4:211:LYS:HB3	50:S4:217:THR:HG22	1.91	0.52
57:11:68:GLY:CA	57:11:127:GLN:HB3	2.32	0.52
62:16:39:VAL:HB	62:16:45:ARG:HD3	1.92	0.52
63:17:7:LYS:HG3	63:17:8:THR:N	2.24	0.52
68:22:7:LEU:O	68:22:11:LEU:HG	2.08	0.52
69:23:137:LYS:HD2	69:23:139:LYS:HE2	1.90	0.52
71:25:55:PRO:CA	71:25:88:ILE:HG21	2.37	0.52
76:30:14:VAL:HG21	78:1S:567:A:N3	2.25	0.52
78:1S:643:G:H2'	78:1S:644:C:C6	2.45	0.52
78:1S:1671:A:H2'	78:1S:1672:G:O4'	2.09	0.52
79:2S:235:A:H2'	79:2S:236:G:H8	1.72	0.52
79:2S:421:G:H3'	79:2S:421:G:N3	2.24	0.52
79:2S:718:G:N2	79:2S:721:G:H1'	2.23	0.52
79:2S:1198:C:H2'	79:2S:1199:C:C5	2.44	0.52
79:2S:3375:A:H2'	79:2S:3378:C:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5S:11:A:O2'	81:5S:13:A:H5"	2.09	0.52
1:L1:120:VAL:CG2	1:L1:121:PRO:HD3	2.35	0.52
2:L2:9:ARG:HB2	2:L2:9:ARG:NH2	2.23	0.52
2:L2:71:LEU:HD22	79:2S:1651:U:H4'	1.91	0.52
9:L9:162:GLN:OE1	9:L9:181:VAL:HG23	2.09	0.52
11:61:20:ASN:OD1	11:61:68:HIS:HB3	2.08	0.52
19:69:173:ARG:O	19:69:177:VAL:HG23	2.09	0.52
26:76:27:ARG:O	26:76:31:LEU:HG	2.09	0.52
33:83:15:SER:HA	33:83:94:PHE:CE1	2.44	0.52
42:92:53:GLN:HB2	79:2S:2421:U:H5"	1.92	0.52
44:P0:12:PHE:HZ	44:P0:61:ARG:HG3	1.75	0.52
50:S4:123:LEU:HG	50:S4:161:LYS:HG2	1.92	0.52
54:S8:10:LYS:HG2	54:S8:11:ARG:H	1.74	0.52
56:10:24:LYS:NZ	56:10:29:GLN:HE22	2.07	0.52
56:10:56:LYS:HE2	56:10:67:THR:HB	1.92	0.52
64:18:66:LEU:HA	64:18:69:ILE:HD12	1.91	0.52
69:23:63:GLN:HA	69:23:65:ASN:H	1.74	0.52
78:1S:1058:U:H5	78:1S:1061:A:C6	2.28	0.52
78:1S:1338:C:H1'	78:1S:1410:A:C4	2.45	0.52
79:2S:66:A:H61	79:2S:76:G:H1'	1.70	0.52
79:2S:188:U:H2'	79:2S:223:U:O2'	2.09	0.52
79:2S:207:U:H2'	79:2S:208:C:C6	2.45	0.52
79:2S:1039:U:H2'	79:2S:1040:A:C8	2.45	0.52
79:2S:1123:U:C2'	79:2S:1124:U:H5'	2.40	0.52
79:2S:3138:U:C3'	79:2S:3139:A:H5"	2.39	0.52
1:L1:17:LEU:HD23	1:L1:17:LEU:H	1.73	0.52
9:L9:16:VAL:HG12	9:L9:29:GLY:CA	2.40	0.52
9:L9:96:HIS:CD2	79:2S:3024:A:H5"	2.45	0.52
11:61:94:ARG:O	11:61:95:ASN:HB2	2.10	0.52
24:74:6:ASP:HB3	24:74:11:ALA:H	1.74	0.52
27:77:48:ARG:HB2	27:77:69:LYS:HB3	1.92	0.52
33:83:30:ILE:CG2	33:83:31:LYS:N	2.72	0.52
38:88:16:ARG:HD3	38:88:70:PRO:HG2	1.92	0.52
47:S1:87:ARG:N	47:S1:101:HIS:HB2	2.25	0.52
51:S5:185:ARG:HA	78:1S:1472:C:OP2	2.10	0.52
58:12:90:LYS:O	58:12:91:VAL:HB	2.09	0.52
63:17:7:LYS:HG3	63:17:8:THR:H	1.75	0.52
69:23:86:PHE:O	69:23:88:PRO:HD3	2.09	0.52
78:1S:195:G:C2'	78:1S:196:G:H5"	2.39	0.52
78:1S:839:U:H2'	78:1S:840:U:H5"	1.90	0.52
78:1S:1246:C:H2'	78:1S:1247:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1516:A:O2'	78:1S:1517:U:H5'	2.09	0.52
78:1S:1684:U:H2'	78:1S:1685:G:C8	2.44	0.52
79:2S:631:U:H4'	79:2S:3172:A:H61	1.75	0.52
79:2S:1202:A:C2	79:2S:2857:C:H5'	2.45	0.52
79:2S:1445:U:H2'	79:2S:1446:A:C8	2.45	0.52
79:2S:2451:G:H22	79:2S:2495:C:H42	1.56	0.52
79:2S:2809:C:C5'	79:2S:2956:A:H4'	2.39	0.52
1:L1:24:LYS:HG3	1:L1:214:PHE:CE1	2.43	0.52
1:L1:103:LEU:CD1	1:L1:106:LYS:HG3	2.40	0.52
3:L3:369:ARG:NH2	24:74:11:ALA:HB1	2.25	0.52
4:L4:230:VAL:HB	4:L4:257:LYS:HD3	1.92	0.52
8:L8:99:PRO:CB	8:L8:190:VAL:HG23	2.40	0.52
10:60:170:LYS:HA	10:60:177:ASP:HA	1.92	0.52
11:61:17:LEU:HD22	11:61:80:LEU:HG	1.91	0.52
11:61:47:GLN:CB	11:61:64:LYS:HD3	2.39	0.52
18:68:92:ARG:HB3	79:2S:784:A:C2	2.45	0.52
23:73:57:MET:HE1	23:73:105:PRO:HA	1.92	0.52
45:RC:7:LEU:HB3	45:RC:313:TRP:HB3	1.91	0.52
46:S0:41:ARG:HH21	46:S0:41:ARG:HG3	1.74	0.52
49:S3:5:ILE:HG22	49:S3:6:SER:N	2.24	0.52
53:S7:63:PRO:O	53:S7:64:VAL:HB	2.10	0.52
54:S8:41:LYS:HB2	54:S8:60:ILE:HG23	1.92	0.52
55:S9:149:ARG:O	55:S9:150:LEU:HB3	2.09	0.52
56:10:94:GLU:HG3	56:10:95:ARG:H	1.75	0.52
65:19:61:VAL:O	65:19:65:ILE:HG13	2.09	0.52
72:26:87:ARG:HD3	72:26:91:ASP:O	2.09	0.52
74:28:64:ARG:HG2	74:28:64:ARG:HH11	1.75	0.52
78:1S:306:U:H2'	78:1S:307:G:C8	2.44	0.52
78:1S:832:U:H2'	78:1S:833:U:C5'	2.40	0.52
78:1S:1737:G:H2'	78:1S:1738:U:C6	2.44	0.52
79:2S:958:C:H5"	79:2S:2800:G:P	2.50	0.52
79:2S:1686:U:O2	79:2S:1688:U:H1'	2.09	0.52
79:2S:1756:C:H2'	79:2S:1757:A:H8	1.75	0.52
79:2S:2124:G:H2'	79:2S:2125:A:C8	2.43	0.52
79:2S:2181:C:H2'	79:2S:2182:A:H8	1.74	0.52
79:2S:2836:C:C2'	79:2S:2837:A:H5'	2.39	0.52
79:2S:2985:C:H2'	79:2S:2986:U:C6	2.44	0.52
4:L4:193:LYS:HB2	4:L4:193:LYS:NZ	2.25	0.52
7:L7:196:LYS:HD3	7:L7:197:GLN:NE2	2.21	0.52
15:65:114:ARG:NH1	15:65:157:LYS:HG2	2.25	0.52
32:82:38:ILE:HA	32:82:43:ARG:NE	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:184:LEU:O	46:S0:185:ARG:HB3	2.08	0.52
53:S7:117:THR:O	53:S7:121:VAL:HG23	2.10	0.52
54:S8:138:ASN:HD21	78:1S:197:A:H61	1.58	0.52
55:S9:123:HIS:O	55:S9:127:VAL:HG23	2.10	0.52
55:S9:129:ILE:HD13	55:S9:144:PRO:HA	1.92	0.52
56:10:59:PHE:CZ	56:10:62:GLN:HA	2.44	0.52
60:14:18:ARG:HH12	60:14:35:GLY:CA	2.23	0.52
60:14:51:ASP:O	60:14:54:GLU:HG3	2.10	0.52
62:16:93:HIS:HB3	62:16:102:LYS:HB2	1.92	0.52
64:18:62:THR:O	64:18:66:LEU:HG	2.10	0.52
65:19:102:ARG:HD3	78:1S:1500:C:C5'	2.30	0.52
78:1S:844:A:H2'	78:1S:845:G:C8	2.44	0.52
78:1S:1082:C:H2'	78:1S:1082:C:O2	2.10	0.52
78:1S:1426:C:H3'	78:1S:1427:A:H5"	1.92	0.52
78:1S:1482:C:H41	78:1S:1524:A:H3'	1.75	0.52
78:1S:1506:G:H2'	78:1S:1507:G:H8	1.75	0.52
78:1S:1567:U:H2'	78:1S:1568:C:H5'	1.92	0.52
78:1S:1770:U:H2'	78:1S:1771:U:H6	1.74	0.52
78:1S:1779:U:H2'	78:1S:1781:A:OP2	2.09	0.52
79:2S:1235:U:H4'	79:2S:1236:G:C5'	2.39	0.52
79:2S:1598:G:H2'	79:2S:1599:G:H8	1.75	0.52
79:2S:1682:U:H1'	79:2S:1685:C:H41	1.74	0.52
79:2S:2155:G:H2'	79:2S:2156:C:C6	2.44	0.52
3:L3:219:ALA:HB2	3:L3:336:VAL:HG13	1.91	0.52
6:L6:8:LYS:HE2	79:2S:1354:G:H4'	1.92	0.52
7:L7:233:GLU:O	7:L7:236:ILE:HG22	2.09	0.52
8:L8:197:VAL:O	8:L8:197:VAL:HG23	2.09	0.52
9:L9:158:ALA:HA	9:L9:161:LEU:HD12	1.92	0.52
13:63:103:ASN:HD22	13:63:109:PHE:HD2	1.57	0.52
15:65:45:PRO:O	15:65:49:ARG:HB2	2.09	0.52
20:70:71:LYS:HZ2	79:2S:562:C:H4'	1.73	0.52
21:71:136:ARG:HG3	21:71:136:ARG:HH11	1.74	0.52
23:73:125:LEU:HG	23:73:126:TRP:CD1	2.45	0.52
32:82:3:SER:HB3	32:82:71:HIS:CE1	2.45	0.52
37:87:55:ARG:HD2	79:2S:353:G:N7	2.25	0.52
38:88:31:LEU:HA	38:88:37:PRO:HA	1.91	0.52
51:S5:107:LYS:HD2	78:1S:1610:G:H5"	1.91	0.52
53:S7:19:GLN:HB3	53:S7:85:PHE:CZ	2.45	0.52
55:S9:109:LEU:HD12	55:S9:146:PHE:HB3	1.91	0.52
55:S9:174:ARG:HA	55:S9:174:ARG:NE	2.25	0.52
58:12:61:VAL:HG23	58:12:90:LYS:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:20:109:GLU:HB3	66:20:112:VAL:HB	1.92	0.52
78:1S:416:A:H5'	78:1S:417:A:C8	2.45	0.52
78:1S:1575:G:H2'	78:1S:1576:A:C8	2.45	0.52
79:2S:1104:G:H2'	79:2S:1105:A:C8	2.45	0.52
79:2S:1693:C:O2'	79:2S:1772:U:H4'	2.10	0.52
79:2S:2060:A:C2'	79:2S:2061:G:H5'	2.39	0.52
79:2S:2513:U:H3	79:2S:2593:A:N6	1.96	0.52
79:2S:3250:U:H2'	79:2S:3251:U:C6	2.45	0.52
5:L5:98:ALA:HB1	5:L5:162:ALA:HB2	1.92	0.52
5:L5:134:ALA:HB2	5:L5:141:PRO:HD3	1.90	0.52
6:L6:54:TYR:HD2	6:L6:55:LEU:H	1.58	0.52
6:L6:58:LEU:CD2	6:L6:102:ASN:HA	2.39	0.52
23:73:84:SER:HB3	23:73:94:TYR:CD2	2.45	0.52
25:75:60:TYR:CG	35:85:25:LYS:HB3	2.45	0.52
28:78:134:ALA:O	28:78:138:ILE:HG13	2.10	0.52
41:91:4:LYS:HE3	78:1S:1774:G:N7	2.25	0.52
52:S6:64:LYS:HD3	52:S6:67:VAL:HG13	1.92	0.52
55:S9:138:LYS:HB2	55:S9:138:LYS:NZ	2.24	0.52
56:10:1:MET:HG3	56:10:44:LYS:CB	2.40	0.52
69:23:89:ASN:HB3	69:23:136:TRP:CD1	2.45	0.52
75:29:32:ARG:HD3	78:1S:1596:C:OP2	2.09	0.52
78:1S:979:A:H2'	78:1S:980:G:C8	2.43	0.52
78:1S:1336:A:H2'	78:1S:1337:A:C4'	2.40	0.52
79:2S:8:C:H2'	79:2S:9:U:O4'	2.10	0.52
79:2S:428:A:H2'	79:2S:429:U:H6	1.69	0.52
79:2S:529:A:H2'	79:2S:530:G:C8	2.44	0.52
79:2S:846:A:H2'	79:2S:847:A:C8	2.45	0.52
79:2S:1006:A:H2'	79:2S:1007:U:O4'	2.10	0.52
79:2S:2666:C:H1'	79:2S:2691:A:C2	2.45	0.52
79:2S:3112:G:O6	79:2S:3119:U:H3'	2.10	0.52
79:2S:3295:A:H2'	79:2S:3296:A:H8	1.75	0.52
1:L1:74:VAL:HG12	1:L1:75:ASP:N	2.25	0.51
2:L2:113:VAL:HA	2:L2:167:GLY:O	2.10	0.51
3:L3:246:LEU:HD12	3:L3:247:ARG:N	2.25	0.51
4:L4:55:LYS:O	4:L4:59:GLN:HG3	2.09	0.51
5:L5:41:LYS:H	21:71:69:LYS:HA	1.74	0.51
8:L8:41:GLN:N	8:L8:41:GLN:HE21	2.08	0.51
9:L9:138:THR:O	9:L9:139:ASN:HB3	2.10	0.51
13:63:2:ALA:HB3	28:78:41:HIS:HE1	1.75	0.51
13:63:47:ALA:HB1	13:63:48:PRO:CD	2.33	0.51
15:65:97:SER:HB3	79:2S:289:A:H5"	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:142:ILE:HD12	15:65:142:ILE:N	2.25	0.51
16:66:58:LEU:HA	16:66:72:HIS:CD2	2.45	0.51
19:69:40:ALA:HA	19:69:43:LYS:HD2	1.92	0.51
31:81:50:ARG:HB2	31:81:90:PHE:HE2	1.75	0.51
31:81:54:GLU:HA	31:81:57:GLN:HE21	1.74	0.51
44:P0:190:VAL:HG12	44:P0:191:TYR:N	2.25	0.51
45:RC:92:TRP:HA	45:RC:98:GLU:O	2.10	0.51
53:S7:166:LEU:HD11	53:S7:183:PHE:HB2	1.92	0.51
56:10:77:ARG:NH2	56:10:86:ILE:HD11	2.25	0.51
57:11:57:LYS:HD3	57:11:131:ILE:HG23	1.92	0.51
61:15:25:LEU:HB3	61:15:87:PRO:CB	2.41	0.51
71:25:88:ILE:HD12	71:25:88:ILE:N	2.24	0.51
72:26:3:LYS:NZ	72:26:6:ALA:HA	2.24	0.51
72:26:82:ARG:CG	72:26:83:ILE:H	2.05	0.51
79:2S:700:C:H2'	79:2S:701:G:H8	1.75	0.51
79:2S:801:A:H4'	79:2S:802:C:H5"	1.91	0.51
79:2S:1661:G:H2'	79:2S:1662:G:C8	2.45	0.51
79:2S:1896:A:H61	79:2S:2339:C:N4	1.96	0.51
2:L2:42:ARG:HA	2:L2:88:ILE:O	2.10	0.51
3:L3:363:SER:C	3:L3:365:PHE:H	2.18	0.51
4:L4:121:ALA:HB3	4:L4:235:LEU:HD21	1.92	0.51
4:L4:138:ARG:NH1	4:L4:246:ARG:HG2	2.25	0.51
5:L5:37:VAL:HG12	21:71:30:TYR:HB2	1.93	0.51
17:67:27:LYS:HD2	79:2S:1447:G:C8	2.45	0.51
18:68:68:ALA:O	18:68:72:LYS:HG3	2.10	0.51
18:68:170:ARG:HH11	28:78:56:VAL:HG21	1.75	0.51
19:69:144:GLN:O	19:69:148:ASP:HB2	2.11	0.51
28:78:118:ILE:HB	28:78:119:PRO:CD	2.40	0.51
33:83:48:ARG:HG3	33:83:104:PRO:HD3	1.91	0.51
33:83:60:ARG:HB2	33:83:60:ARG:HH21	1.75	0.51
46:S0:60:ALA:O	46:S0:64:ILE:HG13	2.10	0.51
46:S0:189:VAL:HG13	46:S0:190:ASP:N	2.21	0.51
48:S2:218:ILE:HA	48:S2:221:THR:HG23	1.93	0.51
48:S2:227:PRO:HA	48:S2:230:TRP:CE3	2.46	0.51
51:S5:112:ARG:HD2	62:16:43:ILE:HD12	1.91	0.51
52:S6:2:LYS:HD3	52:S6:15:THR:HB	1.92	0.51
61:15:18:ARG:HD2	64:18:95:GLY:HA2	1.91	0.51
68:22:50:PHE:HB3	68:22:63:VAL:HG22	1.91	0.51
70:24:79:VAL:O	70:24:83:LYS:HG3	2.10	0.51
75:29:47:ALA:HB1	75:29:52:PHE:HB2	1.91	0.51
78:1S:230:C:H3'	78:1S:231:U:C5'	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:610:G:H5'	78:1S:612:U:O4	2.10	0.51
78:1S:1553:G:H1'	78:1S:1597:A:H2	1.76	0.51
79:2S:874:U:H5'	79:2S:875:G:H5'	1.91	0.51
79:2S:1231:A:H5"	79:2S:1232:C:H5'	1.93	0.51
79:2S:2719:U:H2'	79:2S:2720:G:C8	2.45	0.51
80:8S:109:A:H2'	80:8S:110:C:H5'	1.92	0.51
82:PT:16:C:O2	82:PT:61:U:H4'	2.10	0.51
2:L2:22:LEU:CB	2:L2:52:SER:HB2	2.34	0.51
3:L3:186:GLY:O	3:L3:190:GLU:HB2	2.10	0.51
5:L5:200:PHE:HB3	5:L5:237:GLU:HG3	1.92	0.51
8:L8:71:VAL:HG12	15:65:21:PHE:HE2	1.74	0.51
8:L8:160:ILE:HD12	15:65:22:LEU:HG	1.91	0.51
11:61:132:ASN:ND2	11:61:136:ALA:HB2	2.25	0.51
17:67:48:LEU:HD11	17:67:95:LEU:HD12	1.93	0.51
22:72:78:TYR:HA	22:72:81:LYS:HE2	1.92	0.51
34:84:25:THR:CG2	79:2S:1597:C:H5"	2.40	0.51
34:84:73:SER:HB2	79:2S:1639:C:N4	2.25	0.51
38:88:40:GLN:HG2	38:88:41:THR:H	1.74	0.51
44:P0:45:LEU:HD22	44:P0:49:ALA:HB3	1.93	0.51
51:S5:77:TYR:HB3	51:S5:84:LYS:CA	2.39	0.51
58:12:66:VAL:HG12	58:12:67:THR:O	2.10	0.51
72:26:41:ILE:H	72:26:41:ILE:CD1	2.22	0.51
73:27:11:THR:O	73:27:15:GLU:HB2	2.10	0.51
76:30:22:GLU:HG3	76:30:23:LYS:H	1.75	0.51
77:31:108:VAL:HA	77:31:113:LYS:O	2.09	0.51
78:1S:750:U:H2'	78:1S:751:G:O4'	2.11	0.51
78:1S:1388:A:N6	78:1S:1409:G:H1'	2.25	0.51
78:1S:1691:A:H61	78:1S:1711:C:H42	1.57	0.51
79:2S:368:G:H2'	79:2S:369:A:H5'	1.92	0.51
79:2S:521:A:H2'	79:2S:522:A:O4'	2.10	0.51
79:2S:856:G:H2'	79:2S:857:G:O4'	2.10	0.51
79:2S:2160:G:H2'	79:2S:2161:G:H8	1.75	0.51
79:2S:2615:G:H2'	79:2S:2616:C:C6	2.45	0.51
2:L2:49:VAL:HG13	2:L2:58:LEU:HB2	1.93	0.51
3:L3:79:VAL:HG12	3:L3:322:ILE:HB	1.92	0.51
6:L6:19:LYS:HA	79:2S:592:A:H5"	1.92	0.51
6:L6:19:LYS:HB2	79:2S:591:G:H1'	1.92	0.51
7:L7:236:ILE:O	7:L7:240:VAL:HG23	2.11	0.51
8:L8:99:PRO:HD2	8:L8:190:VAL:HA	1.92	0.51
10:60:179:PRO:HA	10:60:182:LEU:HD12	1.91	0.51
11:61:48:SER:O	11:61:64:LYS:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:162:ARG:O	19:69:166:ASN:HB2	2.11	0.51
24:74:35:LYS:O	24:74:39:LEU:HD23	2.11	0.51
24:74:54:LEU:O	24:74:58:HIS:HB2	2.11	0.51
25:75:50:ALA:HB2	35:85:77:PRO:HB3	1.90	0.51
26:76:6:LEU:H	26:76:6:LEU:HD23	1.75	0.51
45:RC:242:SER:HB3	45:RC:292:LEU:HD23	1.92	0.51
63:17:84:TYR:O	63:17:85:VAL:HB	2.10	0.51
68:22:104:LEU:HB2	68:22:124:LYS:O	2.10	0.51
69:23:19:ARG:HA	69:23:19:ARG:HE	1.76	0.51
72:26:80:HIS:O	72:26:81:ALA:HB2	2.10	0.51
78:1S:120:U:H2'	78:1S:121:U:H6	1.75	0.51
78:1S:504:U:H2'	78:1S:505:A:H4'	1.92	0.51
79:2S:618:C:C2'	79:2S:619:A:H5'	2.37	0.51
79:2S:924:G:H3'	79:2S:925:A:H5'	1.92	0.51
79:2S:1024:G:H3'	79:2S:1025:A:H5"	1.93	0.51
79:2S:1944:U:H2'	79:2S:1945:A:C8	2.46	0.51
79:2S:2570:U:H1'	79:2S:2571:U:O2	2.10	0.51
2:L2:243:THR:OG1	79:2S:2244:A:H5"	2.11	0.51
2:L2:247:ARG:HB3	78:1S:1012:U:H4'	1.91	0.51
3:L3:217:ALA:HB3	3:L3:277:SER:HB2	1.93	0.51
4:L4:300:ARG:HG2	18:68:39:ARG:HB3	1.92	0.51
8:L8:139:VAL:HA	8:L8:142:LEU:HD12	1.93	0.51
8:L8:150:LEU:HD21	8:L8:218:ILE:HD13	1.93	0.51
9:L9:157:ASN:O	9:L9:161:LEU:HG	2.09	0.51
13:63:29:ALA:CB	15:65:201:ARG:HH12	2.23	0.51
19:69:23:TRP:HE3	19:69:51:VAL:HG22	1.75	0.51
28:78:119:PRO:HG2	28:78:121:VAL:HG23	1.92	0.51
47:S1:218:LEU:H	47:S1:218:LEU:CD1	2.13	0.51
49:S3:26:THR:HA	49:S3:30:ALA:HB2	1.92	0.51
55:S9:17:ARG:HH21	55:S9:17:ARG:HG2	1.76	0.51
55:S9:149:ARG:C	55:S9:151:ASP:H	2.17	0.51
64:18:18:LEU:O	64:18:19:ASN:HB2	2.11	0.51
78:1S:56:U:H4'	78:1S:57:G:H5'	1.93	0.51
78:1S:488:G:H2'	78:1S:489:C:H5'	1.93	0.51
78:1S:800:U:H2'	78:1S:801:G:C8	2.45	0.51
78:1S:1201:G:N2	78:1S:1600:A:H5'	2.26	0.51
78:1S:1679:G:O2'	78:1S:1680:G:H5'	2.10	0.51
79:2S:214:G:H2'	79:2S:215:G:H8	1.74	0.51
79:2S:435:C:H3'	79:2S:621:A:H61	1.75	0.51
79:2S:1667:A:H2'	79:2S:1668:G:C8	2.46	0.51
79:2S:1971:C:C2'	79:2S:1972:A:H4'	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2298:U:O2'	79:2S:2299:A:H5'	2.11	0.51
79:2S:2714:G:H4'	79:2S:2715:A:H5"	1.92	0.51
3:L3:3:HIS:CD2	79:2S:2938:G:H5"	2.46	0.51
5:L5:127:GLY:HA3	5:L5:196:ARG:HB2	1.93	0.51
8:L8:77:GLN:HE22	8:L8:167:PRO:HG2	1.75	0.51
8:L8:181:LYS:HD2	80:8S:154:C:OP1	2.11	0.51
9:L9:152:GLU:O	9:L9:156:GLN:HB3	2.10	0.51
10:60:165:ILE:H	10:60:165:ILE:CD1	2.23	0.51
11:61:18:VAL:HG22	11:61:70:THR:HG22	1.92	0.51
11:61:143:ARG:HG3	11:61:143:ARG:HH11	1.74	0.51
16:66:56:ASP:O	16:66:59:ARG:HG2	2.10	0.51
20:70:4:PHE:HA	20:70:32:SER:HA	1.93	0.51
23:73:17:LEU:HB2	23:73:52:ALA:H	1.75	0.51
32:82:19:ARG:HG3	32:82:33:ARG:H	1.76	0.51
33:83:60:ARG:HH11	79:2S:622:A:H5'	1.75	0.51
41:91:4:LYS:HB2	41:91:4:LYS:NZ	2.25	0.51
48:S2:157:LYS:HD3	48:S2:168:ARG:HH21	1.76	0.51
49:S3:142:LEU:C	49:S3:144:ALA:H	2.17	0.51
50:S4:9:LEU:HD21	50:S4:14:ALA:HB2	1.91	0.51
50:S4:185:GLY:H	50:S4:189:LEU:HD13	1.75	0.51
50:S4:192:ILE:HG21	50:S4:228:ILE:HD11	1.93	0.51
53:S7:50:ASP:HA	53:S7:56:LYS:HG2	1.93	0.51
57:11:93:TYR:C	57:11:94:ILE:HD12	2.35	0.51
57:11:94:ILE:HD12	57:11:94:ILE:N	2.26	0.51
66:20:55:PRO:CB	66:20:91:ILE:HG12	2.39	0.51
68:22:90:THR:O	68:22:94:LEU:HB2	2.11	0.51
72:26:84:VAL:HG22	72:26:85:ARG:H	1.75	0.51
73:27:29:ARG:HH11	73:27:29:ARG:HG3	1.74	0.51
78:1S:20:G:H5'	78:1S:571:G:C8	2.46	0.51
78:1S:271:A:H2'	78:1S:272:U:H4'	1.91	0.51
78:1S:1041:G:H2'	78:1S:1042:G:C8	2.46	0.51
78:1S:1498:G:H2'	78:1S:1499:G:C5'	2.37	0.51
79:2S:1354:G:N1	79:2S:1358:C:H5'	2.26	0.51
79:2S:1608:C:H2'	79:2S:1609:C:C6	2.43	0.51
79:2S:2465:G:H2'	79:2S:2466:G:O4'	2.10	0.51
79:2S:2611:U:H2'	79:2S:2612:U:H6	1.76	0.51
79:2S:3278:C:H3'	79:2S:3279:A:H5"	1.92	0.51
82:ET:26:C:C2'	82:ET:27:G:H5'	2.40	0.51
2:L2:88:ILE:HD12	2:L2:88:ILE:N	2.26	0.51
2:L2:187:HIS:O	2:L2:191:LEU:HG	2.11	0.51
3:L3:45:SER:H	3:L3:181:ILE:HG21	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:333:LYS:HE2	79:2S:3304:U:C6	2.46	0.51
4:L4:87:GLN:NE2	79:2S:1439:U:H5"	2.25	0.51
6:L6:40:LEU:HB3	6:L6:84:VAL:CG1	2.39	0.51
8:L8:74:THR:HG21	15:65:18:VAL:HB	1.92	0.51
8:L8:169:LEU:O	8:L8:169:LEU:HD23	2.10	0.51
9:L9:117:PHE:O	9:L9:120:ASP:HB2	2.10	0.51
13:63:47:ALA:HB3	13:63:49:ARG:HE	1.76	0.51
16:66:10:ASP:HB2	16:66:117:ARG:HG3	1.92	0.51
23:73:6:ALA:HB2	23:73:126:TRP:CZ2	2.46	0.51
24:74:49:ILE:HG21	24:74:52:THR:HG23	1.93	0.51
26:76:28:ARG:NH2	80:8S:70:G:H5"	2.26	0.51
28:78:10:LYS:N	28:78:10:LYS:HD2	2.26	0.51
36:86:31:GLY:HA3	79:2S:299:G:C4	2.45	0.51
36:86:57:LEU:O	36:86:61:ILE:HG13	2.11	0.51
43:93:8:VAL:O	43:93:11:THR:HG22	2.11	0.51
50:S4:180:LEU:HB3	50:S4:228:ILE:HD11	1.92	0.51
53:S7:138:LYS:O	53:S7:139:ARG:HD3	2.11	0.51
55:S9:113:VAL:HG12	55:S9:119:ALA:HB2	1.92	0.51
78:1S:1135:U:H2'	78:1S:1136:U:C6	2.46	0.51
79:2S:196:G:H21	79:2S:219:A:H61	1.57	0.51
79:2S:1322:U:H2'	79:2S:1323:G:H8	1.75	0.51
79:2S:2422:C:H2'	79:2S:2423:U:H6	1.74	0.51
79:2S:2457:G:N2	79:2S:2485:A:N7	2.59	0.51
79:2S:2861:U:H2'	79:2S:2862:U:O4'	2.11	0.51
79:2S:3139:A:H2'	79:2S:3140:G:O4'	2.10	0.51
79:2S:3231:U:H2'	79:2S:3232:G:H8	1.74	0.51
3:L3:83:PRO:HB2	3:L3:165:GLN:NE2	2.25	0.51
3:L3:146:ARG:HA	3:L3:146:ARG:HE	1.75	0.51
5:L5:33:ARG:O	5:L5:37:VAL:HG23	2.11	0.51
8:L8:247:ASP:O	8:L8:251:LYS:HE3	2.11	0.51
19:69:81:ARG:HG2	19:69:88:ARG:NH1	2.25	0.51
25:75:115:ARG:HG3	25:75:115:ARG:NH1	2.26	0.51
26:76:16:ARG:O	26:76:20:PHE:HD2	1.93	0.51
28:78:58:MET:HE2	79:2S:709:A:N3	2.26	0.51
30:80:46:ALA:HB3	30:80:72:GLY:H	1.75	0.51
34:84:38:LEU:HD21	79:2S:1785:U:H4'	1.91	0.51
36:86:26:ILE:H	36:86:26:ILE:CD1	2.14	0.51
42:92:71:ARG:NH2	42:92:80:ARG:HH11	2.09	0.51
45:RC:129:LYS:HB2	45:RC:147:HIS:O	2.10	0.51
49:S3:16:VAL:O	49:S3:20:GLU:HB2	2.10	0.51
53:S7:59:ALA:HB1	53:S7:93:LEU:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:13:130:ARG:CD	59:13:137:PRO:HA	2.34	0.51
60:14:98:GLY:O	60:14:102:LEU:HB2	2.10	0.51
62:16:39:VAL:O	62:16:40:GLU:CB	2.59	0.51
68:22:97:ARG:HB3	68:22:97:ARG:CZ	2.39	0.51
78:1S:52:U:H2'	78:1S:53:G:C8	2.46	0.51
78:1S:1667:A:H2'	78:1S:1668:G:H8	1.74	0.51
79:2S:818:C:H2'	79:2S:819:U:O4'	2.11	0.51
79:2S:1085:A:H2'	79:2S:1086:C:C6	2.46	0.51
79:2S:1352:A:H1'	79:2S:1353:U:O5'	2.11	0.51
79:2S:1404:G:H2'	79:2S:1406:A:OP2	2.11	0.51
79:2S:1427:U:O2'	79:2S:1428:A:H5'	2.10	0.51
3:L3:67:PHE:CE1	3:L3:70:ARG:HD2	2.45	0.51
4:L4:122:THR:CG2	4:L4:235:LEU:HD13	2.41	0.51
7:L7:25:GLN:HA	7:L7:29:GLU:H	1.76	0.51
7:L7:151:ARG:HH11	7:L7:151:ARG:HG3	1.75	0.51
7:L7:221:LYS:HB2	7:L7:227:GLY:HA3	1.93	0.51
9:L9:112:ILE:HD11	9:L9:128:VAL:HG22	1.93	0.51
10:60:115:MET:HB2	79:2S:2865:U:OP1	2.11	0.51
15:65:71:ARG:CG	15:65:94:TYR:HB2	2.41	0.51
19:69:128:LYS:HE2	79:2S:1724:U:C5	2.46	0.51
21:71:78:LYS:O	21:71:84:TYR:HA	2.11	0.51
23:73:39:VAL:HG13	23:73:58:VAL:HG12	1.93	0.51
28:78:79:TRP:HB3	28:78:87:ARG:HG3	1.91	0.51
42:92:8:ARG:HG2	42:92:8:ARG:HH11	1.74	0.51
46:S0:155:PHE:HA	67:21:60:ARG:HB3	1.93	0.51
49:S3:49:ILE:HD12	49:S3:49:ILE:N	2.26	0.51
49:S3:191:ASP:OD2	49:S3:192:PRO:HD2	2.11	0.51
55:S9:112:GLN:HG3	55:S9:148:VAL:HG21	1.92	0.51
56:10:14:TYR:CE2	56:10:21:VAL:HG22	2.45	0.51
58:12:31:VAL:HG13	58:12:133:LEU:HG	1.92	0.51
59:13:125:LEU:C	59:13:125:LEU:HD13	2.35	0.51
60:14:22:SER:HA	60:14:95:GLY:H	1.76	0.51
62:16:27:GLY:HA2	62:16:63:ILE:O	2.10	0.51
64:18:16:ARG:HH11	64:18:16:ARG:HG3	1.76	0.51
64:18:105:VAL:CG1	64:18:106:GLU:N	2.74	0.51
78:1S:694:U:H3'	78:1S:695:U:H6	1.76	0.51
78:1S:1196:A:H4'	78:1S:1197:C:H5"	1.92	0.51
78:1S:1537:C:H4'	78:1S:1538:U:C5	2.45	0.51
79:2S:858:A:H2'	79:2S:859:G:C8	2.46	0.51
79:2S:1118:C:H2'	79:2S:1119:C:C6	2.45	0.51
79:2S:1128:U:O2	79:2S:2827:U:H4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1176:C:H2'	79:2S:1177:G:C2	2.45	0.51
1:L1:189:PHE:CE1	1:L1:200:ASN:HB2	2.46	0.51
3:L3:364:LYS:N	3:L3:364:LYS:HD2	2.26	0.51
5:L5:20:PHE:HD1	5:L5:23:ARG:HG3	1.75	0.51
8:L8:152:LEU:O	8:L8:197:VAL:HA	2.11	0.51
11:61:60:ARG:HH12	42:92:103:ALA:HB1	1.75	0.51
14:64:123:LEU:HD22	16:66:190:VAL:HG23	1.93	0.51
16:66:130:LYS:O	16:66:133:ARG:HG2	2.11	0.51
17:67:159:LYS:HD3	17:67:159:LYS:N	2.26	0.51
18:68:69:ARG:HH22	79:2S:720:A:H5"	1.76	0.51
19:69:23:TRP:HB3	19:69:51:VAL:HG23	1.93	0.51
25:75:111:ASN:HB2	25:75:123:TYR:HB2	1.91	0.51
32:82:19:ARG:HB2	32:82:31:ASN:O	2.11	0.51
32:82:37:GLY:HA2	79:2S:640:U:OP2	2.10	0.51
34:84:72:VAL:HG22	34:84:77:GLY:HA2	1.93	0.51
40:90:112:LYS:HB3	40:90:114:LYS:HG2	1.92	0.51
50:S4:44:LEU:HD12	50:S4:79:ASP:O	2.10	0.51
50:S4:152:PRO:HG2	52:S6:215:ARG:HG2	1.93	0.51
51:S5:58:LEU:O	51:S5:61:TYR:HB2	2.11	0.51
54:S8:9:HIS:O	54:S8:10:LYS:HB3	2.11	0.51
62:16:6:SER:HA	62:16:22:VAL:O	2.11	0.51
69:23:127:VAL:HG23	69:23:130:VAL:CG2	2.41	0.51
72:26:42:ARG:HB2	72:26:42:ARG:HH11	1.76	0.51
75:29:39:CYS:SG	75:29:42:CYS:HB2	2.51	0.51
78:1S:160:C:H2'	78:1S:161:U:O4'	2.10	0.51
78:1S:1010:C:H2'	78:1S:1011:G:O4'	2.11	0.51
78:1S:1246:C:H2'	78:1S:1247:U:C6	2.46	0.51
78:1S:1732:A:H2'	78:1S:1733:C:C6	2.46	0.51
79:2S:2126:A:H2'	79:2S:2127:U:C6	2.45	0.51
79:2S:2719:U:H2'	79:2S:2720:G:H8	1.76	0.51
79:2S:3138:U:H3'	79:2S:3139:A:H5"	1.93	0.51
81:5S:113:C:H2'	81:5S:114:U:C6	2.46	0.51
1:L1:14:LYS:HA	1:L1:17:LEU:HD21	1.92	0.50
4:L4:281:ILE:O	4:L4:281:ILE:HG23	2.11	0.50
8:L8:157:VAL:HG12	8:L8:159:PRO:HD2	1.92	0.50
15:65:117:ASN:H	15:65:133:ILE:HG23	1.77	0.50
22:72:19:VAL:HG21	22:72:28:PHE:HE2	1.76	0.50
42:92:46:LYS:HG2	42:92:54:THR:HG21	1.93	0.50
45:RC:192:PHE:CE1	49:S3:222:VAL:HG23	2.46	0.50
50:S4:159:THR:CG2	50:S4:227:VAL:HB	2.41	0.50
66:20:96:PRO:HG2	66:20:99:ILE:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:26:31:PRO:HB2	72:26:34:LYS:HB3	1.93	0.50
73:27:74:SER:O	73:27:75:GLU:HB3	2.11	0.50
78:1S:7:G:H4'	78:1S:573:C:O2'	2.10	0.50
78:1S:883:C:H2'	78:1S:884:A:C8	2.46	0.50
78:1S:970:A:H3'	78:1S:971:A:H8	1.77	0.50
78:1S:1470:C:O2'	78:1S:1572:G:H5'	2.11	0.50
79:2S:709:A:H2	79:2S:2787:G:H21	1.59	0.50
79:2S:957:C:H2'	79:2S:958:C:C6	2.46	0.50
79:2S:1238:C:H3'	79:2S:1239:C:C5'	2.38	0.50
79:2S:1288:U:H2'	79:2S:1289:G:H8	1.75	0.50
79:2S:1647:A:H8	79:2S:1647:A:O5'	1.93	0.50
79:2S:1841:A:O2'	79:2S:1842:A:H5"	2.12	0.50
79:2S:2533:G:H5'	79:2S:2533:G:C8	2.41	0.50
4:L4:65:TRP:CZ3	4:L4:76:ARG:HD3	2.47	0.50
6:L6:145:LEU:O	6:L6:149:ILE:HG13	2.11	0.50
8:L8:126:SER:HB2	79:2S:121:A:H61	1.75	0.50
19:69:37:SER:O	19:69:41:ILE:HD13	2.10	0.50
23:73:86:ARG:HA	23:73:91:VAL:O	2.11	0.50
26:76:79:ALA:HB1	26:76:98:ASN:HB3	1.93	0.50
29:79:28:LYS:HG2	79:2S:1065:A:C4	2.47	0.50
29:79:51:ALA:HA	29:79:54:LEU:HB2	1.94	0.50
30:80:48:THR:CG2	30:80:49:PRO:HD2	2.42	0.50
32:82:103:LYS:O	32:82:106:VAL:HG12	2.10	0.50
42:92:77:CYS:O	42:92:78:LYS:HB3	2.11	0.50
47:S1:181:LEU:HA	47:S1:184:LEU:HB2	1.93	0.50
48:S2:174:ARG:HD2	55:S9:98:ALA:HB2	1.92	0.50
49:S3:24:PHE:CZ	49:S3:72:LEU:HD13	2.45	0.50
50:S4:131:LEU:HD21	78:1S:243:G:H1'	1.93	0.50
50:S4:181:VAL:HG22	50:S4:227:VAL:HG22	1.94	0.50
53:S7:31:SER:O	53:S7:32:PRO:O	2.30	0.50
57:11:70:ILE:HD12	57:11:70:ILE:N	2.26	0.50
61:15:28:MET:HE1	61:15:33:PHE:HD1	1.75	0.50
64:18:121:ALA:O	64:18:125:ILE:HG13	2.11	0.50
68:22:104:LEU:HD13	68:22:104:LEU:N	2.26	0.50
69:23:82:LYS:HD3	69:23:82:LYS:N	2.27	0.50
78:1S:515:A:H2'	78:1S:516:G:O4'	2.10	0.50
78:1S:1681:A:O2'	78:1S:1682:U:H5'	2.11	0.50
79:2S:2079:G:C2'	79:2S:2080:C:H5'	2.41	0.50
1:L1:39:LYS:HA	1:L1:163:LEU:O	2.12	0.50
1:L1:103:LEU:CD1	1:L1:128:LEU:HB3	2.41	0.50
4:L4:3:ARG:HE	4:L4:22:LEU:HB2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:74:ILE:HD12	4:L4:74:ILE:O	2.11	0.50
5:L5:177:GLU:HA	5:L5:180:PHE:CD2	2.45	0.50
7:L7:52:GLN:HA	7:L7:55:TYR:CD2	2.47	0.50
20:70:26:ARG:HH22	20:70:28:ARG:HH21	1.58	0.50
24:74:34:SER:HB3	79:2S:3052:G:OP1	2.11	0.50
28:78:91:LEU:CD2	28:78:121:VAL:HG21	2.41	0.50
30:80:32:LYS:O	30:80:36:GLN:HG3	2.11	0.50
32:82:63:THR:HA	32:82:66:LEU:HD12	1.94	0.50
43:93:19:GLY:HA3	79:2S:2189:U:H4'	1.91	0.50
48:S2:52:THR:HB	48:S2:54:GLU:HG2	1.93	0.50
50:S4:211:LYS:HA	50:S4:216:ASN:O	2.12	0.50
51:S5:63:GLN:CG	51:S5:88:PRO:HA	2.40	0.50
53:S7:111:LYS:CG	53:S7:112:ARG:H	2.23	0.50
57:11:103:ARG:HA	78:1S:351:C:O2	2.12	0.50
62:16:136:SER:C	62:16:137:ARG:HE	2.19	0.50
64:18:134:ARG:HH11	64:18:134:ARG:HG3	1.75	0.50
66:20:100:VAL:O	66:20:104:THR:HG23	2.11	0.50
72:26:23:CYS:HB3	72:26:28:LYS:N	2.26	0.50
78:1S:372:G:H1'	78:1S:612:U:O2	2.11	0.50
78:1S:601:A:H2'	78:1S:602:U:C6	2.46	0.50
78:1S:693:U:H5"	78:1S:694:U:H5'	1.93	0.50
79:2S:973:A:H2'	79:2S:974:G:O4'	2.11	0.50
79:2S:975:C:H2'	79:2S:976:U:C6	2.46	0.50
79:2S:1666:G:H2'	79:2S:1667:A:C8	2.46	0.50
79:2S:1951:C:H6	79:2S:2095:G:C2	2.28	0.50
79:2S:2813:A:H2'	79:2S:2814:G:O4'	2.11	0.50
79:2S:2909:U:H2'	79:2S:2910:A:O4'	2.12	0.50
79:2S:3096:C:H2'	79:2S:3097:C:C6	2.46	0.50
1:L1:45:ARG:HD2	1:L1:195:LYS:HE3	1.93	0.50
2:L2:104:LEU:HD21	2:L2:116:VAL:HG21	1.93	0.50
3:L3:243:HIS:O	3:L3:244:ARG:HG2	2.11	0.50
6:L6:19:LYS:HE3	79:2S:590:G:H21	1.76	0.50
7:L7:102:VAL:HG12	7:L7:106:LEU:HD11	1.94	0.50
10:60:55:ASN:ND2	10:60:164:LYS:HE2	2.27	0.50
10:60:213:PHE:N	10:60:214:PRO:CD	2.74	0.50
15:65:67:ARG:NH2	79:2S:2168:A:H5"	2.27	0.50
15:65:89:VAL:HG21	79:2S:2424:A:H5'	1.92	0.50
15:65:157:LYS:O	15:65:158:HIS:HB2	2.11	0.50
16:66:87:MET:HG2	79:2S:1175:C:O2	2.10	0.50
16:66:157:GLU:O	16:66:161:LYS:HG3	2.11	0.50
18:68:82:VAL:HB	18:68:139:ILE:HA	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:99:LEU:HD12	79:2S:1722:U:H5"	1.92	0.50
19:69:139:VAL:HA	19:69:142:ILE:HD12	1.92	0.50
19:69:168:ALA:O	19:69:172:ARG:HG3	2.11	0.50
20:70:106:LEU:O	20:70:106:LEU:HD23	2.11	0.50
33:83:49:ILE:HG22	33:83:50:ALA:H	1.77	0.50
35:85:86:ARG:HG2	35:85:89:ARG:NH2	2.26	0.50
37:87:47:TYR:HB3	37:87:49:TRP:NE1	2.26	0.50
42:92:61:LYS:NZ	42:92:61:LYS:HB3	2.26	0.50
45:RC:240:VAL:HA	45:RC:255:ALA:O	2.11	0.50
47:S1:109:LYS:O	47:S1:113:MET:HG3	2.12	0.50
48:S2:228:ASN:ND2	67:21:1:MET:HG2	2.24	0.50
50:S4:47:PHE:HE1	50:S4:111:VAL:HG22	1.76	0.50
51:S5:164:PRO:O	51:S5:168:VAL:HG23	2.11	0.50
51:S5:198:LEU:O	51:S5:202:ALA:HB2	2.11	0.50
62:16:39:VAL:HG22	62:16:48:VAL:HG11	1.93	0.50
65:19:52:GLY:HA2	65:19:55:TYR:HE2	1.77	0.50
78:1S:391:A:O4'	78:1S:1731:A:H5'	2.11	0.50
78:1S:1569:A:H2'	78:1S:1570:A:H8	1.76	0.50
78:1S:1739:C:H2'	78:1S:1740:A:C8	2.47	0.50
79:2S:751:A:H2'	79:2S:752:C:H6	1.75	0.50
79:2S:1105:A:H2'	79:2S:1106:G:C8	2.47	0.50
79:2S:1178:G:H1'	79:2S:1328:C:O2'	2.11	0.50
79:2S:2726:C:O2'	79:2S:2727:A:H2'	2.11	0.50
5:L5:33:ARG:HG3	5:L5:33:ARG:NH1	2.26	0.50
6:L6:42:LEU:O	6:L6:49:GLY:HA2	2.12	0.50
8:L8:68:ARG:HD3	8:L8:237:ILE:O	2.10	0.50
8:L8:78:PHE:C	8:L8:80:TYR:H	2.18	0.50
11:61:86:VAL:CG2	11:61:111:ASP:HB3	2.42	0.50
13:63:59:ARG:HG2	13:63:60:ALA:N	2.24	0.50
15:65:18:VAL:O	15:65:22:LEU:HD13	2.11	0.50
20:70:117:ARG:HG3	20:70:119:ARG:HH12	1.76	0.50
48:S2:117:THR:HG23	48:S2:117:THR:O	2.12	0.50
50:S4:15:PRO:HD2	50:S4:18:TRP:CZ3	2.47	0.50
55:S9:52:ILE:HG23	55:S9:76:LEU:HD11	1.93	0.50
56:10:58:GLN:CB	56:10:65:TYR:HB2	2.38	0.50
57:11:34:TRP:HH2	57:11:36:LYS:HD3	1.76	0.50
59:13:71:ILE:O	59:13:75:LEU:HD13	2.12	0.50
60:14:87:GLY:H	60:14:92:LYS:HA	1.77	0.50
61:15:22:LEU:HD22	61:15:22:LEU:N	2.25	0.50
78:1S:17:C:H5'	78:1S:1109:G:H5'	1.94	0.50
79:2S:1334:U:H2'	79:2S:1335:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1532:C:H2'	79:2S:1533:U:C6	2.46	0.50
79:2S:2466:G:C2'	79:2S:2467:G:H5'	2.42	0.50
79:2S:3376:A:H5'	79:2S:3377:G:H5"	1.94	0.50
81:5S:58:C:H2'	81:5S:59:U:C6	2.47	0.50
3:L3:117:ARG:HA	3:L3:175:LYS:HD3	1.92	0.50
3:L3:166:ILE:O	3:L3:166:ILE:HG13	2.11	0.50
4:L4:138:ARG:HH12	4:L4:246:ARG:HG2	1.76	0.50
4:L4:169:LEU:O	4:L4:174:ALA:HB3	2.11	0.50
4:L4:194:TYR:HD1	4:L4:194:TYR:H	1.58	0.50
5:L5:44:TYR:CD1	21:71:33:VAL:HG13	2.47	0.50
6:L6:176:PHE:CE2	33:83:107:ILE:HD13	2.47	0.50
15:65:13:LYS:C	15:65:19:LEU:HD22	2.37	0.50
18:68:102:ALA:HA	18:68:122:ILE:O	2.12	0.50
23:73:75:PRO:HG2	23:73:105:PRO:HD3	1.94	0.50
36:86:60:LEU:O	36:86:64:SER:HB3	2.11	0.50
42:92:57:VAL:HG22	82:ET:76:C:H4'	1.94	0.50
43:93:5:THR:HB	43:93:8:VAL:HG22	1.94	0.50
48:S2:38:VAL:HG22	48:S2:39:THR:N	2.23	0.50
48:S2:242:ILE:HD12	48:S2:242:ILE:N	2.26	0.50
49:S3:141:LYS:O	49:S3:141:LYS:HD3	2.12	0.50
51:S5:148:ARG:HH12	82:ET:36:A:H62	1.60	0.50
56:10:50:THR:HG22	56:10:55:VAL:HG13	1.94	0.50
58:12:113:ARG:HG3	58:12:114:LYS:H	1.77	0.50
59:13:14:SER:OG	78:1S:958:U:H2'	2.12	0.50
69:23:141:GLU:HG2	69:23:142:LYS:N	2.26	0.50
71:25:64:VAL:HA	71:25:67:ASP:HB2	1.94	0.50
78:1S:1058:U:O2'	78:1S:1059:U:H2'	2.12	0.50
78:1S:1459:C:OP2	78:1S:1459:C:H6	1.95	0.50
79:2S:741:U:C2	79:2S:742:G:H1'	2.47	0.50
79:2S:757:C:H2'	79:2S:758:C:O4'	2.10	0.50
79:2S:2267:C:H2'	79:2S:2268:U:O4'	2.12	0.50
79:2S:2553:U:O2	79:2S:2553:U:H2'	2.10	0.50
79:2S:3152:U:O2'	79:2S:3153:U:H5'	2.12	0.50
82:ET:60:A:H3'	82:ET:61:U:C6	2.46	0.50
5:L5:55:PHE:CE2	5:L5:159:VAL:HG22	2.46	0.50
8:L8:116:VAL:HG23	8:L8:125:ALA:HB2	1.93	0.50
15:65:114:ARG:HD2	15:65:157:LYS:HA	1.94	0.50
18:68:127:LEU:O	18:68:127:LEU:HD13	2.12	0.50
26:76:82:VAL:HG12	26:76:84:LYS:H	1.75	0.50
28:78:117:ARG:O	28:78:118:ILE:HG23	2.12	0.50
29:79:2:ALA:HB2	79:2S:2818:U:H5"	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:82:71:HIS:HB2	32:82:93:ALA:HB2	1.93	0.50
46:S0:64:ILE:HG12	46:S0:120:LEU:HD21	1.92	0.50
47:S1:111:ARG:HG2	47:S1:111:ARG:HH11	1.77	0.50
50:S4:86:PHE:HE2	50:S4:102:VAL:HA	1.75	0.50
57:11:69:LYS:HD2	57:11:69:LYS:N	2.27	0.50
62:16:114:ARG:H	62:16:116:LEU:CD2	2.24	0.50
64:18:38:VAL:HG12	64:18:42:TYR:HD2	1.74	0.50
65:19:104:VAL:O	65:19:108:LEU:HG	2.12	0.50
77:31:145:HIS:HB2	78:1S:1234:A:H4'	1.94	0.50
78:1S:38:C:O2'	78:1S:39:A:H5'	2.12	0.50
78:1S:699:U:H2'	78:1S:700:C:C6	2.47	0.50
79:2S:1812:G:O2'	79:2S:1818:U:H4'	2.12	0.50
79:2S:1881:A:H2'	79:2S:1882:G:H8	1.76	0.50
79:2S:2529:A:H2'	79:2S:2530:G:O4'	2.11	0.50
79:2S:2736:A:H2'	79:2S:2737:C:O4'	2.12	0.50
79:2S:2915:U:H5"	79:2S:2916:U:H5'	1.94	0.50
80:8S:106:C:H4'	80:8S:107:G:H5"	1.93	0.50
3:L3:3:HIS:NE2	79:2S:2938:G:H5"	2.26	0.50
4:L4:295:ILE:O	4:L4:299:ILE:HG12	2.12	0.50
10:60:47:PRO:HB3	10:60:171:TRP:CZ2	2.46	0.50
12:62:105:GLN:HA	12:62:142:ARG:O	2.12	0.50
18:68:26:LEU:O	18:68:30:VAL:HG23	2.12	0.50
21:71:96:ILE:HD12	21:71:96:ILE:N	2.27	0.50
23:73:39:VAL:HA	23:73:58:VAL:HB	1.93	0.50
36:86:83:ALA:O	36:86:87:VAL:HG23	2.12	0.50
45:RC:7:LEU:N	45:RC:7:LEU:HD12	2.27	0.50
54:S8:135:LYS:O	54:S8:135:LYS:HD3	2.12	0.50
55:S9:163:PRO:C	55:S9:165:GLY:H	2.19	0.50
56:10:15:LEU:HD13	56:10:21:VAL:HG23	1.94	0.50
57:11:6:THR:HB	57:11:9:SER:OG	2.12	0.50
59:13:62:GLN:HB2	59:13:65:VAL:CG2	2.39	0.50
64:18:72:ILE:CG2	64:18:81:ILE:HD11	2.42	0.50
70:24:57:VAL:HA	70:24:73:GLY:HA2	1.94	0.50
78:1S:251:A:H2'	78:1S:252:U:O4'	2.11	0.50
78:1S:1250:U:C2'	78:1S:1251:U:H5'	2.42	0.50
79:2S:72:C:C1'	79:2S:74:G:H1'	2.41	0.50
79:2S:1055:A:H2'	79:2S:1056:U:O4'	2.12	0.50
79:2S:3356:G:H2'	79:2S:3357:U:C6	2.46	0.50
82:ET:38:A:H2'	82:ET:39:A:O4'	2.11	0.50
82:PT:1:C:H2'	82:PT:2:G:H8	1.76	0.50
2:L2:83:HIS:CB	43:93:64:VAL:HG22	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:225:ILE:HB	2:L2:238:ILE:HG12	1.94	0.50
3:L3:95:THR:HG22	79:2S:3243:A:H5"	1.93	0.50
4:L4:32:PRO:HG3	4:L4:244:LEU:HD12	1.94	0.50
8:L8:93:LEU:C	8:L8:95:ASN:H	2.20	0.50
9:L9:114:VAL:HB	9:L9:124:ARG:HB2	1.94	0.50
11:61:23:VAL:CG1	11:61:29:ARG:HD3	2.42	0.50
16:66:158:ALA:O	16:66:162:VAL:HG23	2.12	0.50
31:81:18:LYS:HB3	79:2S:3376:A:N3	2.26	0.50
33:83:54:ARG:HG3	33:83:64:ILE:HG12	1.94	0.50
35:85:66:VAL:HA	35:85:69:LEU:HG	1.93	0.50
42:92:32:LYS:HG2	42:92:34:SER:H	1.77	0.50
46:S0:76:ILE:CD1	46:S0:98:ILE:HB	2.37	0.50
48:S2:218:ILE:C	48:S2:218:ILE:HD12	2.37	0.50
51:S5:59:VAL:O	51:S5:60:ASP:HB2	2.12	0.50
52:S6:78:THR:HG22	52:S6:79:LYS:N	2.24	0.50
53:S7:83:LYS:O	53:S7:86:GLN:HB2	2.11	0.50
55:S9:117:GLY:O	55:S9:118:LEU:HB3	2.10	0.50
56:10:13:GLN:HA	56:10:80:LEU:HD11	1.94	0.50
56:10:60:SER:HB3	56:10:65:TYR:HE2	1.76	0.50
57:11:8:GLN:OE1	57:11:14:GLN:HG2	2.12	0.50
57:11:99:ARG:HB3	69:23:12:ALA:HB2	1.93	0.50
58:12:89:ILE:HG23	58:12:90:LYS:N	2.26	0.50
78:1S:162:A:H3'	78:1S:163:G:H21	1.77	0.50
78:1S:839:U:H2'	78:1S:840:U:C5'	2.41	0.50
78:1S:1210:C:H2'	78:1S:1211:A:C8	2.47	0.50
78:1S:1567:U:C2'	78:1S:1568:C:H5'	2.42	0.50
78:1S:1713:G:H2'	78:1S:1714:A:H5'	1.92	0.50
79:2S:300:G:H2'	79:2S:301:G:C8	2.47	0.50
79:2S:839:C:O2'	79:2S:840:C:H5'	2.12	0.50
79:2S:2466:G:H2'	79:2S:2467:G:H5'	1.93	0.50
3:L3:237:LYS:HD3	79:2S:2340:U:H5"	1.93	0.49
5:L5:3:PHE:HB2	5:L5:6:ASP:HB2	1.93	0.49
5:L5:12:TYR:O	5:L5:16:PHE:HB2	2.12	0.49
5:L5:134:ALA:HB2	5:L5:141:PRO:CD	2.42	0.49
7:L7:125:GLU:HG3	79:2S:987:U:C5'	2.42	0.49
9:L9:28:VAL:HG22	9:L9:33:THR:HG22	1.94	0.49
11:61:114:ILE:N	11:61:114:ILE:HD12	2.27	0.49
11:61:115:LYS:HB2	11:61:115:LYS:HZ2	1.77	0.49
17:67:38:GLY:H	17:67:114:VAL:HG13	1.77	0.49
20:70:15:PRO:HG3	20:70:22:PRO:CD	2.42	0.49
21:71:8:ARG:HB2	79:2S:2757:U:O2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:71:17:ARG:HG3	21:71:21:LYS:O	2.12	0.49
21:71:102:ARG:HG2	21:71:102:ARG:HH11	1.77	0.49
21:71:116:ARG:HG3	21:71:116:ARG:HH11	1.77	0.49
30:80:74:ASN:HB2	30:80:87:VAL:O	2.12	0.49
46:S0:197:ILE:HD12	46:S0:197:ILE:N	2.26	0.49
50:S4:86:PHE:CE2	50:S4:102:VAL:HA	2.47	0.49
50:S4:122:LYS:C	50:S4:123:LEU:HD12	2.37	0.49
54:S8:166:TYR:HD2	54:S8:189:LEU:HD21	1.77	0.49
64:18:65:GLU:O	64:18:69:ILE:HG13	2.12	0.49
68:22:89:TRP:HA	68:22:92:ASN:HD22	1.77	0.49
70:24:84:LYS:HE3	70:24:85:PHE:CE2	2.47	0.49
78:1S:177:U:H3'	78:1S:178:U:C5'	2.42	0.49
78:1S:224:C:H2'	78:1S:225:A:H8	1.77	0.49
78:1S:1044:U:H2'	78:1S:1045:C:C5	2.47	0.49
78:1S:1360:A:H2'	78:1S:1361:U:H4'	1.94	0.49
78:1S:1785:U:H2'	78:1S:1786:G:H8	1.77	0.49
79:2S:1551:C:H2'	79:2S:1552:G:C8	2.47	0.49
79:2S:2095:G:H2'	79:2S:2096:A:C8	2.47	0.49
79:2S:2152:A:H1'	79:2S:2243:A:C2	2.47	0.49
79:2S:2333:C:H2'	79:2S:2334:U:O4'	2.11	0.49
79:2S:3048:A:H4'	79:2S:3049:A:H5'	1.94	0.49
4:L4:308:LYS:HG2	4:L4:309:ARG:H	1.77	0.49
4:L4:350:LYS:HG2	4:L4:351:PRO:HD2	1.94	0.49
7:L7:160:ARG:NH1	7:L7:206:LYS:HD3	2.26	0.49
8:L8:150:LEU:HD13	8:L8:151:VAL:N	2.27	0.49
9:L9:23:ARG:CD	9:L9:39:LYS:HA	2.36	0.49
9:L9:41:ILE:O	9:L9:42:ASP:HB2	2.11	0.49
10:60:27:PRO:HD2	10:60:122:PRO:HB3	1.94	0.49
16:66:32:LYS:HA	16:66:101:ARG:HB3	1.94	0.49
16:66:37:ARG:HB3	16:66:40:GLU:HG2	1.92	0.49
19:69:93:VAL:HG12	19:69:97:ARG:NE	2.27	0.49
19:69:153:LYS:O	19:69:157:GLU:HG3	2.12	0.49
30:80:86:ARG:HD2	43:93:44:LYS:HE2	1.95	0.49
34:84:106:LYS:O	34:84:110:GLU:HG3	2.12	0.49
47:S1:140:ILE:HG23	47:S1:211:HIS:HB2	1.95	0.49
48:S2:44:LEU:HD22	48:S2:243:TYR:HB3	1.95	0.49
48:S2:125:ILE:O	48:S2:129:ILE:HG13	2.11	0.49
48:S2:238:SER:O	48:S2:241:ASP:HB2	2.12	0.49
49:S3:167:PHE:CE1	49:S3:192:PRO:HA	2.46	0.49
51:S5:129:PRO:O	51:S5:133:VAL:HG23	2.12	0.49
53:S7:109:VAL:HG22	53:S7:110:GLN:N	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:17:5:ARG:CG	63:17:9:VAL:HG11	2.42	0.49
69:23:144:ARG:CD	69:23:145:SER:H	2.25	0.49
78:1S:487:G:H1	78:1S:500:C:H41	1.61	0.49
78:1S:915:A:H3'	78:1S:916:U:C6	2.47	0.49
79:2S:436:A:H2'	79:2S:437:G:H5'	1.95	0.49
79:2S:861:C:H2'	79:2S:862:U:H6	1.74	0.49
79:2S:1627:U:HO2'	79:2S:1813:A:H8	1.59	0.49
79:2S:1910:A:O2'	79:2S:2334:U:H4'	2.11	0.49
2:L2:118:GLU:HG3	2:L2:125:ALA:HB3	1.94	0.49
4:L4:235:LEU:HD12	4:L4:238:LEU:HD12	1.94	0.49
10:60:162:GLN:HG2	10:60:163:GLN:N	2.26	0.49
10:60:166:ILE:HG22	10:60:167:LEU:N	2.27	0.49
18:68:80:THR:HG22	18:68:100:THR:HB	1.94	0.49
18:68:126:GLN:O	18:68:130:ARG:HG3	2.12	0.49
20:70:124:LEU:HD13	21:71:155:PRO:HG3	1.93	0.49
33:83:74:THR:HA	33:83:81:VAL:HA	1.94	0.49
33:83:75:HIS:HB3	33:83:80:VAL:HB	1.93	0.49
47:S1:87:ARG:HH22	47:S1:101:HIS:HA	1.76	0.49
50:S4:173:ILE:HD12	50:S4:173:ILE:N	2.27	0.49
52:S6:142:ARG:HG2	52:S6:147:LEU:HB2	1.94	0.49
54:S8:24:LYS:O	54:S8:25:ARG:HD3	2.12	0.49
64:18:76:PRO:HB2	64:18:81:ILE:HB	1.93	0.49
67:21:86:SER:HA	73:27:6:ASP:HB3	1.93	0.49
73:27:33:LEU:HA	73:27:80:ARG:O	2.12	0.49
79:2S:405:U:C2'	79:2S:406:G:H5'	2.38	0.49
79:2S:937:G:OP2	79:2S:938:C:H5	1.94	0.49
79:2S:982:C:O2'	79:2S:983:A:H5'	2.12	0.49
79:2S:1367:G:H2'	79:2S:1368:U:H5	1.77	0.49
79:2S:1525:G:O2'	79:2S:1829:G:H2'	2.12	0.49
79:2S:1655:G:H2'	79:2S:1656:A:C8	2.47	0.49
79:2S:1694:U:O2'	79:2S:1695:U:H5'	2.13	0.49
79:2S:1813:A:C3'	79:2S:1814:A:H5'	2.41	0.49
79:2S:2363:A:H2'	79:2S:2364:G:O4'	2.12	0.49
79:2S:2369:G:H2'	79:2S:2370:G:C8	2.48	0.49
79:2S:2998:U:H2'	79:2S:2999:U:C6	2.47	0.49
79:2S:3294:A:H2'	79:2S:3295:A:O4'	2.12	0.49
80:8S:68:G:H2'	80:8S:69:U:C6	2.48	0.49
80:8S:153:U:H2'	80:8S:154:C:C6	2.47	0.49
3:L3:146:ARG:HA	3:L3:146:ARG:NE	2.27	0.49
5:L5:226:TYR:HD2	5:L5:231:ILE:HB	1.77	0.49
7:L7:96:PRO:HB2	7:L7:99:PRO:HD2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:64:76:ALA:HB1	14:64:80:THR:HB	1.95	0.49
18:68:85:GLY:N	18:68:104:LEU:HD12	2.28	0.49
23:73:109:MET:HE2	23:73:132:ASN:OD1	2.12	0.49
28:78:47:LYS:O	28:78:48:TYR:HB2	2.13	0.49
36:86:26:ILE:CG2	79:2S:155:G:H21	2.22	0.49
36:86:40:VAL:O	36:86:44:VAL:HG23	2.12	0.49
36:86:90:MET:HE2	36:86:90:MET:HA	1.94	0.49
45:RC:72:THR:CG2	45:RC:81:LEU:HD12	2.42	0.49
45:RC:169:ILE:HD13	45:RC:183:LEU:HD21	1.95	0.49
48:S2:104:VAL:HG22	48:S2:132:ALA:HB1	1.93	0.49
52:S6:56:ASN:HD21	78:1S:153:G:N2	2.10	0.49
52:S6:198:ALA:O	52:S6:202:ARG:HG2	2.12	0.49
63:17:113:LEU:HD23	63:17:113:LEU:N	2.27	0.49
71:25:70:LYS:HG3	71:25:71:ILE:HG13	1.94	0.49
78:1S:431:C:H2'	78:1S:432:G:C8	2.48	0.49
78:1S:1774:G:H2'	78:1S:1775:U:C6	2.47	0.49
79:2S:1311:G:H2'	79:2S:1312:C:C6	2.48	0.49
79:2S:1348:U:H4'	79:2S:1349:G:H5"	1.94	0.49
79:2S:2379:U:H2'	79:2S:2380:U:C6	2.48	0.49
79:2S:2731:U:H2'	79:2S:2732:G:C8	2.47	0.49
3:L3:128:LYS:NZ	79:2S:3293:U:H5'	2.27	0.49
3:L3:375:GLU:O	3:L3:379:PHE:HB2	2.13	0.49
4:L4:239:ALA:N	4:L4:240:PRO:HD3	2.28	0.49
10:60:36:LEU:HD12	10:60:36:LEU:N	2.28	0.49
13:63:89:TYR:O	13:63:93:ILE:HG12	2.13	0.49
14:64:37:GLU:H	14:64:45:LEU:HB3	1.77	0.49
18:68:16:ARG:HG2	79:2S:974:G:OP1	2.12	0.49
20:70:110:MET:HE3	20:70:116:ALA:HB2	1.93	0.49
22:72:19:VAL:HG23	22:72:61:THR:HA	1.93	0.49
23:73:33:ASN:ND2	23:73:64:LYS:H	2.11	0.49
45:RC:112:SER:HB2	45:RC:153:GLN:HA	1.93	0.49
46:S0:32:HIS:HB2	78:1S:1040:G:H4'	1.94	0.49
46:S0:52:LYS:O	46:S0:56:LYS:HG2	2.13	0.49
47:S1:82:ARG:HA	47:S1:105:PHE:HA	1.94	0.49
53:S7:130:VAL:O	53:S7:130:VAL:HG23	2.12	0.49
59:13:15:ALA:C	78:1S:959:U:H5'	2.37	0.49
62:16:92:TYR:O	62:16:97:VAL:HG23	2.12	0.49
63:17:122:ILE:HG23	63:17:123:ASN:N	2.28	0.49
69:23:37:ALA:HA	69:23:41:SER:HB3	1.94	0.49
69:23:50:LYS:HE2	78:1S:435:C:C5'	2.39	0.49
70:24:22:GLN:HB2	70:24:72:PHE:CZ	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:30:47:VAL:HG22	76:30:48:THR:N	2.23	0.49
78:1S:34:G:H2'	78:1S:35:U:C6	2.47	0.49
78:1S:97:C:H2'	78:1S:98:U:C6	2.47	0.49
78:1S:387:A:H4'	78:1S:425:A:H61	1.77	0.49
78:1S:900:A:H2'	78:1S:901:G:H5'	1.93	0.49
78:1S:1340:U:H3'	78:1S:1341:A:H5"	1.91	0.49
79:2S:165:A:H2'	79:2S:166:C:O4'	2.12	0.49
79:2S:528:U:H2'	79:2S:529:A:H8	1.73	0.49
79:2S:616:G:H2'	79:2S:617:G:C8	2.48	0.49
79:2S:791:A:H2'	79:2S:792:G:C8	2.47	0.49
79:2S:2265:C:H2'	79:2S:2266:U:C6	2.47	0.49
79:2S:2799:A:H4'	79:2S:2800:G:C5	2.48	0.49
79:2S:3319:U:OP1	79:2S:3320:A:H5'	2.13	0.49
80:8S:30:C:H2'	80:8S:31:G:C8	2.47	0.49
2:L2:21:ARG:CD	79:2S:824:C:H5"	2.38	0.49
2:L2:40:TYR:HA	2:L2:91:GLY:HA3	1.95	0.49
2:L2:91:GLY:O	2:L2:102:LEU:HG	2.13	0.49
3:L3:99:LEU:HB2	79:2S:3004:C:H4'	1.94	0.49
6:L6:158:TYR:CE1	14:64:115:PHE:HA	2.47	0.49
17:67:29:THR:O	17:67:32:THR:HG22	2.13	0.49
20:70:46:GLN:O	20:70:47:LYS:HG3	2.13	0.49
30:80:83:LYS:N	30:80:83:LYS:HD2	2.26	0.49
31:81:49:VAL:HG22	31:81:91:SER:HB2	1.95	0.49
34:84:97:GLU:O	34:84:100:ILE:HG22	2.13	0.49
49:S3:40:ARG:HG2	66:20:110:PRO:HB3	1.94	0.49
57:11:20:PHE:CG	78:1S:211:U:H5"	2.47	0.49
59:13:88:LEU:HD23	59:13:125:LEU:HD12	1.95	0.49
60:14:133:ARG:HB2	60:14:136:ARG:HH21	1.78	0.49
64:18:36:LYS:HB3	64:18:105:VAL:HG21	1.94	0.49
69:23:19:ARG:HA	69:23:19:ARG:NE	2.28	0.49
69:23:79:ASN:HB3	69:23:81:LYS:HG3	1.95	0.49
69:23:93:LEU:O	69:23:96:VAL:HG22	2.12	0.49
78:1S:95:G:H2'	78:1S:96:G:H8	1.77	0.49
78:1S:467:G:H2'	78:1S:468:A:H5"	1.94	0.49
78:1S:1071:U:H2'	78:1S:1072:C:C6	2.48	0.49
78:1S:1340:U:H3'	78:1S:1341:A:H5'	1.94	0.49
79:2S:970:A:H2'	79:2S:971:G:C8	2.48	0.49
79:2S:1158:A:H2'	79:2S:1159:A:C4'	2.43	0.49
79:2S:1861:G:H21	79:2S:3066:U:H5'	1.77	0.49
79:2S:1878:G:H3'	79:2S:1878:G:N3	2.27	0.49
79:2S:2882:U:H2'	79:2S:2883:U:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5S:90:U:H2'	81:5S:91:G:O4'	2.13	0.49
1:L1:58:CYS:CB	1:L1:152:ARG:HA	2.42	0.49
2:L2:224:THR:HA	2:L2:237:LEU:HB2	1.94	0.49
3:L3:62:ARG:HD3	79:2S:3038:U:H5"	1.94	0.49
6:L6:22:ARG:NH1	79:2S:608:A:H2'	2.27	0.49
8:L8:238:LEU:HD22	8:L8:238:LEU:N	2.28	0.49
13:63:43:ALA:HA	13:63:51:LEU:HD21	1.95	0.49
15:65:29:GLU:O	15:65:33:LYS:HG3	2.12	0.49
16:66:16:VAL:HA	16:66:41:LEU:HD21	1.94	0.49
16:66:22:VAL:HG11	16:66:122:GLN:CG	2.42	0.49
17:67:3:ARG:HG3	79:2S:398:A:H5"	1.95	0.49
17:67:22:LEU:HB3	17:67:24:VAL:HG23	1.93	0.49
17:67:29:THR:CA	17:67:32:THR:HG22	2.41	0.49
17:67:118:GLN:HG2	17:67:119:VAL:N	2.28	0.49
22:72:37:LEU:O	22:72:41:ILE:HG13	2.13	0.49
23:73:22:ILE:HG22	23:73:33:ASN:HB2	1.94	0.49
24:74:5:ILE:N	24:74:5:ILE:HD12	2.28	0.49
24:74:23:ARG:CG	24:74:24:GLY:H	2.25	0.49
30:80:17:VAL:O	30:80:17:VAL:HG12	2.11	0.49
47:S1:163:ALA:O	47:S1:167:VAL:HG23	2.12	0.49
48:S2:161:LYS:HG2	48:S2:162:CYS:N	2.26	0.49
55:S9:93:LEU:O	55:S9:96:VAL:HG22	2.13	0.49
56:10:60:SER:HB3	56:10:65:TYR:CE2	2.47	0.49
58:12:51:ALA:HB2	58:12:124:LYS:HD2	1.94	0.49
59:13:26:PHE:HZ	59:13:28:LEU:HD12	1.78	0.49
62:16:107:LYS:O	62:16:111:SER:HB2	2.13	0.49
62:16:143:ARG:CD	78:1S:1191:U:H4'	2.43	0.49
63:17:29:GLN:HA	63:17:32:LYS:HE2	1.93	0.49
69:23:140:LYS:HB2	69:23:140:LYS:NZ	2.26	0.49
74:28:34:GLU:O	74:28:35:ASP:HB2	2.12	0.49
78:1S:9:U:H2'	78:1S:11:A:OP2	2.12	0.49
78:1S:874:C:H2'	78:1S:875:G:C8	2.47	0.49
78:1S:964:U:H4'	78:1S:965:U:O4'	2.13	0.49
78:1S:1139:A:C2'	78:1S:1140:G:H5'	2.42	0.49
78:1S:1250:U:H2'	78:1S:1251:U:H5'	1.94	0.49
78:1S:1682:U:O2'	78:1S:1683:C:H2'	2.13	0.49
79:2S:399:A:H2'	79:2S:400:G:H5'	1.95	0.49
79:2S:811:U:H2'	79:2S:812:G:C8	2.47	0.49
79:2S:3043:C:O2'	79:2S:3044:G:H5'	2.12	0.49
81:5S:71:G:H2'	81:5S:72:A:C8	2.48	0.49
3:L3:55:THR:C	3:L3:56:ILE:HD12	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:240:ARG:NH2	3:L3:241:LYS:HB2	2.28	0.49
5:L5:128:GLU:HG3	5:L5:129:TYR:H	1.78	0.49
7:L7:136:TYR:N	7:L7:136:TYR:CD1	2.81	0.49
13:63:112:ASN:HA	13:63:115:ARG:HB3	1.95	0.49
15:65:44:ARG:HB2	15:65:119:TYR:CE2	2.48	0.49
16:66:147:TRP:CZ2	16:66:149:TYR:HB2	2.48	0.49
19:69:88:ARG:HG2	79:2S:1864:A:H5'	1.95	0.49
34:84:26:PRO:HB3	79:2S:1695:U:O2	2.13	0.49
38:88:31:LEU:N	38:88:31:LEU:HD23	2.28	0.49
51:S5:77:TYR:HD2	51:S5:83:ARG:O	1.95	0.49
51:S5:166:ARG:HD2	74:28:46:GLY:CA	2.43	0.49
52:S6:14:LYS:HD3	52:S6:16:PHE:CE1	2.48	0.49
57:11:39:GLY:HA2	78:1S:246:G:O2'	2.13	0.49
63:17:27:ASP:HB3	63:17:30:THR:CG2	2.42	0.49
66:20:74:GLU:HG2	78:1S:1428:G:H21	1.77	0.49
67:21:34:ILE:HG22	67:21:36:VAL:HG23	1.94	0.49
78:1S:390:G:O2'	78:1S:1731:A:H5"	2.12	0.49
78:1S:913:G:C3'	78:1S:914:G:H5"	2.33	0.49
79:2S:79:U:H2'	79:2S:80:G:H8	1.78	0.49
79:2S:225:C:H2'	79:2S:226:C:H6	1.78	0.49
79:2S:1002:A:H2'	79:2S:1003:A:H8	1.78	0.49
79:2S:1785:U:H2'	79:2S:1786:G:C8	2.46	0.49
79:2S:1902:G:H2'	79:2S:1903:U:O4'	2.12	0.49
79:2S:2633:U:H2'	79:2S:2634:U:O4'	2.13	0.49
79:2S:2638:C:H2'	79:2S:2639:G:O4'	2.13	0.49
79:2S:3005:A:H2	79:2S:3141:A:N7	2.11	0.49
80:8S:53:A:H2'	80:8S:54:A:H8	1.76	0.49
1:L1:106:LYS:O	1:L1:136:THR:HG23	2.12	0.49
2:L2:30:ARG:HG2	2:L2:76:PHE:HZ	1.78	0.49
3:L3:78:VAL:HG12	3:L3:79:VAL:N	2.27	0.49
5:L5:109:THR:HG23	5:L5:110:LEU:HD12	1.94	0.49
5:L5:183:TRP:HA	5:L5:189:GLU:O	2.13	0.49
8:L8:78:PHE:C	8:L8:80:TYR:N	2.70	0.49
12:62:135:THR:C	12:62:137:GLN:H	2.21	0.49
15:65:83:LYS:HE2	79:2S:46:U:O4	2.13	0.49
17:67:125:GLN:O	17:67:140:GLU:HA	2.13	0.49
24:74:23:ARG:HB2	24:74:29:PHE:CE2	2.47	0.49
30:80:16:LEU:HD13	30:80:16:LEU:C	2.37	0.49
38:88:7:ASP:HB3	38:88:10:GLN:HB3	1.94	0.49
42:92:3:ASN:HD22	79:2S:2655:U:H3'	1.77	0.49
44:P0:55:LYS:HG3	79:2S:1281:G:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RC:46:LYS:HB3	45:RC:56:VAL:HG22	1.94	0.49
50:S4:47:PHE:CE1	50:S4:111:VAL:HG22	2.48	0.49
54:S8:196:LEU:HG	54:S8:200:LYS:NZ	2.28	0.49
59:13:85:PRO:HB2	59:13:88:LEU:HB3	1.94	0.49
60:14:133:ARG:HG2	60:14:133:ARG:HH11	1.78	0.49
62:16:7:VAL:HG13	62:16:96:TYR:CE2	2.38	0.49
65:19:42:GLY:HA2	65:19:84:LYS:HD2	1.95	0.49
68:22:86:ILE:HG13	68:22:87:GLU:N	2.27	0.49
69:23:113:ALA:HB1	69:23:117:ILE:HB	1.94	0.49
79:2S:838:G:H2'	79:2S:839:C:C6	2.48	0.49
79:2S:2591:A:C2'	79:2S:2592:G:H5'	2.43	0.49
79:2S:2635:A:N6	79:2S:2641:U:H2'	2.27	0.49
79:2S:2816:G:C8	79:2S:2869:U:H3'	2.47	0.49
79:2S:3158:G:H21	79:2S:3395:G:H1	1.60	0.49
79:2S:3211:C:H2'	79:2S:3212:C:H6	1.78	0.49
1:L1:198:TRP:O	1:L1:199:GLN:C	2.56	0.49
3:L3:145:GLU:HA	3:L3:148:LEU:HB2	1.94	0.49
3:L3:295:ALA:HB2	3:L3:303:LYS:HE2	1.94	0.49
10:60:4:ARG:NH2	79:2S:1128:U:H5'	2.28	0.49
11:61:172:LEU:O	11:61:173:ASP:HB2	2.11	0.49
16:66:15:LEU:HG	16:66:125:ARG:HA	1.94	0.49
16:66:119:VAL:O	20:70:163:PHE:HD1	1.95	0.49
16:66:170:LYS:NZ	16:66:170:LYS:HB3	2.28	0.49
18:68:14:GLY:O	79:2S:974:G:H5"	2.13	0.49
18:68:184:PHE:N	18:68:184:PHE:CD1	2.80	0.49
19:69:93:VAL:O	19:69:97:ARG:HG3	2.13	0.49
20:70:72:VAL:HG13	20:70:96:ASP:C	2.38	0.49
37:87:18:LEU:CD2	37:87:25:ARG:HB2	2.43	0.49
45:RC:10:ARG:HA	45:RC:10:ARG:NE	2.27	0.49
45:RC:29:GLN:C	45:RC:31:ASN:H	2.20	0.49
46:S0:30:GLN:NE2	46:S0:149:LEU:HD22	2.28	0.49
47:S1:151:LYS:HE3	47:S1:154:SER:HA	1.94	0.49
50:S4:127:LYS:O	50:S4:156:VAL:HG13	2.13	0.49
55:S9:11:THR:CG2	78:1S:472:U:H5"	2.42	0.49
57:11:36:LYS:HG2	57:11:60:PHE:O	2.13	0.49
58:12:43:ARG:HB3	58:12:121:VAL:HG12	1.95	0.49
59:13:54:LEU:O	59:13:58:HIS:HB2	2.13	0.49
66:20:62:VAL:CG1	66:20:83:GLU:HB2	2.41	0.49
67:21:37:ALA:CB	67:21:45:ALA:HB1	2.43	0.49
78:1S:19:A:O2'	78:1S:571:G:H8	1.96	0.49
78:1S:915:A:H3'	78:1S:916:U:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1525:A:H3'	78:1S:1526:A:C8	2.48	0.49
79:2S:138:U:H2'	79:2S:139:G:C8	2.48	0.49
79:2S:395:A:H2'	79:2S:396:A:C8	2.48	0.49
79:2S:631:U:H4'	79:2S:3172:A:N6	2.28	0.49
79:2S:807:A:N7	79:2S:2412:G:H1'	2.27	0.49
79:2S:1195:A:H2'	79:2S:1309:U:O2	2.13	0.49
79:2S:1567:U:H2'	79:2S:1568:U:H5"	1.95	0.49
79:2S:1729:A:H3'	79:2S:1730:G:C5'	2.41	0.49
79:2S:1748:G:H2'	79:2S:1749:A:C8	2.47	0.49
79:2S:1941:C:H2'	79:2S:1942:U:C6	2.48	0.49
79:2S:2208:A:H4'	79:2S:2209:U:H5'	1.94	0.49
79:2S:3211:C:H2'	79:2S:3212:C:C6	2.48	0.49
1:L1:191:VAL:O	1:L1:191:VAL:HG12	2.12	0.48
3:L3:17:LEU:HG	3:L3:18:PRO:HA	1.95	0.48
6:L6:176:PHE:O	14:64:113:THR:HG23	2.13	0.48
7:L7:51:TYR:CE2	7:L7:183:ASP:HA	2.47	0.48
7:L7:77:VAL:HG12	20:70:59:VAL:HA	1.93	0.48
7:L7:214:TRP:CE3	7:L7:219:LYS:HD2	2.47	0.48
8:L8:126:SER:HB2	79:2S:121:A:N6	2.28	0.48
9:L9:90:MET:HB3	9:L9:179:ILE:HG22	1.94	0.48
12:62:124:THR:O	12:62:125:LEU:CB	2.60	0.48
16:66:35:VAL:HB	16:66:104:VAL:HG13	1.95	0.48
19:69:63:THR:HG21	79:2S:1861:G:H4'	1.95	0.48
19:69:99:LEU:O	19:69:103:ARG:HB2	2.13	0.48
21:71:44:ALA:HA	21:71:95:HIS:ND1	2.28	0.48
21:71:70:SER:O	21:71:92:ARG:HG2	2.12	0.48
30:80:67:VAL:HG12	30:80:68:TYR:N	2.27	0.48
32:82:40:SER:HB2	79:2S:639:G:OP1	2.13	0.48
34:84:71:THR:HG22	34:84:72:VAL:H	1.77	0.48
38:88:7:ASP:HB3	38:88:10:GLN:HB2	1.95	0.48
45:RC:150:TRP:CZ2	63:17:37:GLU:HG3	2.48	0.48
48:S2:141:ARG:HB2	48:S2:154:LEU:HA	1.94	0.48
51:S5:58:LEU:CD1	51:S5:138:THR:HG22	2.42	0.48
51:S5:220:VAL:C	51:S5:222:LYS:H	2.21	0.48
52:S6:13:GLN:HE22	78:1S:151:G:H21	1.60	0.48
54:S8:37:LYS:HB2	54:S8:59:ARG:HE	1.78	0.48
57:11:54:ILE:N	57:11:54:ILE:HD12	2.27	0.48
66:20:25:THR:HB	66:20:115:GLU:HB2	1.95	0.48
67:21:36:VAL:O	67:21:51:VAL:HG23	2.13	0.48
75:29:21:CYS:C	75:29:23:VAL:H	2.21	0.48
78:1S:1139:A:H2'	78:1S:1140:G:H5'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1595:U:H5	78:1S:1596:C:C4	2.31	0.48
78:1S:1665:U:H2'	78:1S:1666:U:C5	2.49	0.48
78:1S:1693:A:H2'	78:1S:1694:A:O4'	2.13	0.48
79:2S:1118:C:H2'	79:2S:1119:C:H6	1.78	0.48
79:2S:1153:A:O2'	79:2S:1154:A:H5'	2.13	0.48
79:2S:1357:G:H2'	79:2S:1358:C:C6	2.48	0.48
79:2S:1563:C:H42	79:2S:1577:G:H1	1.61	0.48
79:2S:2419:A:H2'	79:2S:2420:C:C6	2.47	0.48
79:2S:2615:G:H2'	79:2S:2616:C:O4'	2.13	0.48
79:2S:3380:U:O2'	79:2S:3381:U:H5'	2.13	0.48
82:ET:16:C:H5'	82:ET:60:A:C2	2.48	0.48
9:L9:26:LYS:HB2	79:2S:3198:U:O4	2.13	0.48
9:L9:34:LEU:HD13	9:L9:78:MET:HA	1.95	0.48
9:L9:71:VAL:O	9:L9:75:VAL:HG23	2.13	0.48
15:65:73:ARG:HB2	15:65:92:LEU:CD2	2.43	0.48
19:69:19:LYS:O	19:69:22:VAL:HG22	2.12	0.48
21:71:12:ARG:HG2	21:71:12:ARG:HH11	1.77	0.48
45:RC:150:TRP:HZ2	63:17:37:GLU:HG3	1.78	0.48
48:S2:104:VAL:HG23	48:S2:112:GLY:HA3	1.94	0.48
53:S7:111:LYS:CG	53:S7:112:ARG:N	2.75	0.48
55:S9:29:LYS:HD3	76:30:40:TYR:CE2	2.47	0.48
60:14:78:ALA:HB1	60:14:111:ARG:O	2.13	0.48
61:15:99:GLY:O	78:1S:1211:A:H1'	2.13	0.48
65:19:57:ARG:O	65:19:61:VAL:HG23	2.13	0.48
69:23:62:LYS:H	69:23:116:ASP:HB2	1.77	0.48
78:1S:55:A:N1	78:1S:403:G:H1'	2.27	0.48
78:1S:237:C:H4'	78:1S:238:U:C6	2.48	0.48
78:1S:832:U:H2'	78:1S:833:U:C4'	2.43	0.48
78:1S:1435:G:H4'	78:1S:1436:A:H5'	1.94	0.48
78:1S:1519:U:H2'	78:1S:1520:U:C6	2.47	0.48
79:2S:27:C:H4'	79:2S:328:U:H4'	1.95	0.48
79:2S:1261:G:H5'	79:2S:1279:C:O2'	2.13	0.48
79:2S:1356:U:H3'	79:2S:1357:G:H5'	1.94	0.48
79:2S:2970:C:H2'	79:2S:2972:G:C8	2.48	0.48
79:2S:3228:C:H4'	79:2S:3229:G:O5'	2.14	0.48
82:ET:44:A:H2'	82:ET:45:A:C8	2.48	0.48
1:L1:55:LEU:HD11	1:L1:153:SER:O	2.13	0.48
1:L1:90:LEU:HD11	1:L1:112:ALA:CB	2.42	0.48
2:L2:7:ASN:HB3	79:2S:2183:A:H5"	1.95	0.48
24:74:13:ILE:HA	24:74:32:GLN:NE2	2.23	0.48
25:75:74:LYS:HA	25:75:74:LYS:CE	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:78:28:HIS:CG	28:78:32:ARG:HG2	2.49	0.48
30:80:32:LYS:HD3	30:80:35:ARG:HH21	1.78	0.48
34:84:39:ALA:HB1	34:84:57:LEU:O	2.14	0.48
48:S2:83:ILE:HG12	48:S2:100:ALA:CA	2.43	0.48
50:S4:64:ILE:HD11	70:24:18:LEU:HD21	1.95	0.48
50:S4:163:ASP:O	50:S4:164:LEU:HB2	2.13	0.48
66:20:41:ILE:O	66:20:41:ILE:HG22	2.13	0.48
71:25:95:HIS:HB3	78:1S:1530:C:P	2.53	0.48
79:2S:495:G:H2'	79:2S:496:C:H6	1.78	0.48
79:2S:1150:A:H3'	79:2S:1151:U:C6	2.48	0.48
79:2S:1891:A:O2'	79:2S:1892:G:H5'	2.14	0.48
79:2S:1951:C:O2	79:2S:1951:C:O4'	2.31	0.48
79:2S:2591:A:H2'	79:2S:2592:G:H5'	1.95	0.48
79:2S:2748:A:C5	79:2S:2749:G:H1'	2.48	0.48
79:2S:3047:U:O2'	79:2S:3048:A:H5'	2.14	0.48
80:8S:118:C:H2'	80:8S:119:C:C6	2.48	0.48
1:L1:30:GLU:CB	1:L1:34:LEU:HD11	2.24	0.48
8:L8:143:ILE:O	8:L8:173:MET:HE2	2.13	0.48
8:L8:225:LYS:O	8:L8:229:VAL:HG23	2.13	0.48
13:63:159:VAL:HG22	28:78:99:ALA:HB2	1.96	0.48
14:64:120:VAL:HG22	16:66:197:LEU:HD13	1.95	0.48
15:65:85:THR:HA	42:92:50:PHE:HB3	1.95	0.48
21:71:102:ARG:O	21:71:106:LEU:HD23	2.13	0.48
22:72:48:GLY:O	22:72:50:LEU:HG	2.13	0.48
25:75:53:HIS:O	80:8S:134:G:H5"	2.12	0.48
33:83:18:ARG:CB	33:83:23:ASN:HA	2.42	0.48
37:87:17:THR:C	37:87:25:ARG:HA	2.38	0.48
45:RC:201:THR:CG2	45:RC:243:LEU:HG	2.43	0.48
51:S5:128:ASN:ND2	51:S5:129:PRO:HD2	2.27	0.48
52:S6:160:ARG:HD2	78:1S:68:A:C2	2.48	0.48
54:S8:110:ARG:O	54:S8:114:GLU:HB2	2.13	0.48
55:S9:12:TYR:HA	55:S9:44:ARG:HA	1.94	0.48
57:11:109:VAL:HA	57:11:135:VAL:HG13	1.95	0.48
65:19:34:VAL:HG22	65:19:34:VAL:O	2.13	0.48
66:20:61:LYS:HB3	66:20:61:LYS:HZ3	1.78	0.48
72:26:78:ALA:CA	72:26:82:ARG:HB3	2.38	0.48
74:28:13:ILE:HD11	74:28:29:ARG:HG2	1.94	0.48
78:1S:393:C:H2'	78:1S:394:C:H6	1.78	0.48
78:1S:1618:C:H1'	78:1S:1619:C:H5	1.79	0.48
79:2S:186:U:H3	79:2S:230:U:H3	1.62	0.48
79:2S:201:A:H2'	79:2S:202:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:241:G:H2'	79:2S:242:C:H5'	1.96	0.48
79:2S:1263:A:H2'	79:2S:1263:A:N3	2.28	0.48
79:2S:3326:G:H2'	79:2S:3327:G:H8	1.77	0.48
2:L2:11:GLY:HA3	79:2S:2163:C:O2'	2.13	0.48
2:L2:245:LEU:O	2:L2:247:ARG:NH1	2.46	0.48
3:L3:283:TYR:HB3	3:L3:356:LEU:HD21	1.95	0.48
3:L3:332:ARG:O	3:L3:333:LYS:CB	2.61	0.48
5:L5:44:TYR:HD2	79:2S:1084:A:H4'	1.79	0.48
5:L5:181:PRO:HG2	5:L5:195:LEU:HA	1.95	0.48
10:60:57:LEU:N	10:60:131:ILE:HG12	2.28	0.48
23:73:6:ALA:HB2	23:73:126:TRP:CE2	2.48	0.48
38:88:69:LEU:HD11	38:88:73:LEU:HD13	1.95	0.48
39:89:44:TRP:CE3	39:89:45:ARG:HB2	2.49	0.48
43:93:82:THR:HG22	43:93:86:LEU:HD12	1.95	0.48
44:P0:48:ARG:NE	44:P0:90:ASN:HB3	2.28	0.48
47:S1:206:PRO:O	47:S1:207:LEU:HB2	2.14	0.48
48:S2:208:GLU:O	48:S2:212:LYS:HB2	2.13	0.48
49:S3:62:ASN:O	56:10:92:ILE:HB	2.12	0.48
49:S3:208:ILE:HA	63:17:39:ALA:HB2	1.96	0.48
51:S5:25:LEU:HD22	51:S5:25:LEU:H	1.78	0.48
56:10:15:LEU:HD13	56:10:21:VAL:CG2	2.43	0.48
68:22:105:THR:HB	78:1S:804:A:N3	2.29	0.48
71:25:70:LYS:HG3	71:25:71:ILE:N	2.25	0.48
78:1S:315:A:O3'	78:1S:316:A:H4'	2.14	0.48
78:1S:636:A:C2'	78:1S:637:C:H5'	2.43	0.48
79:2S:603:A:H2'	79:2S:604:G:C4'	2.43	0.48
79:2S:849:C:H2'	79:2S:850:U:C6	2.48	0.48
79:2S:2143:A:H2'	79:2S:2145:A:N7	2.28	0.48
79:2S:2258:U:H2'	79:2S:2259:A:O4'	2.12	0.48
79:2S:2495:C:H3'	79:2S:2496:C:H5"	1.96	0.48
79:2S:2664:C:O2'	79:2S:2665:U:H5'	2.13	0.48
79:2S:2768:U:H2'	79:2S:2769:A:H8	1.77	0.48
79:2S:3320:A:H2'	79:2S:3321:C:C6	2.49	0.48
2:L2:41:ILE:O	2:L2:89:TYR:HA	2.14	0.48
3:L3:261:MET:HG2	16:66:64:PHE:HA	1.96	0.48
5:L5:19:PRO:HB2	5:L5:24:ARG:CG	2.43	0.48
5:L5:41:LYS:HB2	21:71:69:LYS:O	2.13	0.48
7:L7:58:ALA:O	7:L7:62:ILE:HG13	2.13	0.48
9:L9:67:ALA:O	9:L9:70:THR:HG22	2.13	0.48
13:63:55:ARG:HG3	13:63:72:GLY:O	2.13	0.48
15:65:47:LYS:HD2	15:65:50:ARG:HE	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:93:26:VAL:O	43:93:30:GLU:HG3	2.14	0.48
44:P0:89:THR:HG21	44:P0:96:ILE:HG21	1.94	0.48
47:S1:65:VAL:HB	47:S1:85:LYS:HE2	1.95	0.48
47:S1:103:MET:HE1	47:S1:212:VAL:HG23	1.94	0.48
47:S1:159:SER:HA	47:S1:162:ARG:HD2	1.96	0.48
51:S5:57:SER:HB3	74:28:53:ILE:HD12	1.95	0.48
54:S8:191:PHE:O	54:S8:195:ARG:HG2	2.13	0.48
58:12:48:SER:O	58:12:52:LEU:HD23	2.13	0.48
61:15:28:MET:HG2	61:15:32:ASP:HB2	1.95	0.48
70:24:20:ARG:HA	70:24:76:TYR:HA	1.95	0.48
78:1S:752:A:H2'	78:1S:753:A:O4'	2.13	0.48
78:1S:1157:A:H5'	78:1S:1157:A:H8	1.77	0.48
78:1S:1199:G:OP1	78:1S:1200:G:H8	1.96	0.48
78:1S:1530:C:O5'	78:1S:1530:C:H6	1.97	0.48
79:2S:891:G:H2'	79:2S:892:U:O4'	2.13	0.48
79:2S:1178:G:O2'	79:2S:1328:C:H4'	2.14	0.48
79:2S:1237:G:H1	79:2S:1251:A:H61	1.61	0.48
79:2S:1329:U:H1'	79:2S:1330:A:OP1	2.13	0.48
79:2S:1907:C:H3'	79:2S:1908:A:C8	2.49	0.48
79:2S:1964:C:H2'	79:2S:1965:C:O4'	2.12	0.48
79:2S:3138:U:H2'	79:2S:3139:A:H5"	1.94	0.48
13:63:113:VAL:O	13:63:117:LYS:HD3	2.13	0.48
13:63:186:ARG:HG3	13:63:186:ARG:HH11	1.78	0.48
14:64:128:ARG:O	14:64:128:ARG:HG2	2.13	0.48
15:65:174:ILE:HG21	79:2S:63:A:H5"	1.94	0.48
16:66:35:VAL:CG2	16:66:104:VAL:HG22	2.44	0.48
18:68:12:ARG:H	18:68:12:ARG:NE	1.94	0.48
18:68:59:ARG:HD2	18:68:84:VAL:HG12	1.95	0.48
20:70:15:PRO:HG3	20:70:22:PRO:HD3	1.96	0.48
28:78:71:PRO:HB2	28:78:109:TYR:HA	1.96	0.48
31:81:18:LYS:HG3	31:81:19:ARG:HD2	1.94	0.48
34:84:15:THR:H	34:84:18:ASN:HB2	1.78	0.48
34:84:29:ILE:HD13	34:84:29:ILE:N	2.27	0.48
46:S0:41:ARG:NH1	46:S0:45:VAL:HG21	2.28	0.48
47:S1:153:HIS:ND1	47:S1:154:SER:N	2.55	0.48
54:S8:170:SER:O	78:1S:209:U:H5"	2.13	0.48
65:19:37:VAL:HG22	65:19:39:THR:H	1.78	0.48
68:22:7:LEU:HD23	68:22:34:ILE:HG12	1.96	0.48
68:22:86:ILE:O	68:22:90:THR:HG23	2.13	0.48
73:27:33:LEU:HD13	73:27:79:PHE:HB3	1.96	0.48
78:1S:476:U:H5"	78:1S:477:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:740:A:C3'	78:1S:741:C:H5"	2.31	0.48
78:1S:1201:G:H21	78:1S:1600:A:H5'	1.79	0.48
78:1S:1345:A:H2'	78:1S:1348:A:N7	2.28	0.48
78:1S:1486:G:H2'	78:1S:1487:A:O4'	2.14	0.48
78:1S:1677:C:H2'	78:1S:1678:A:O4'	2.13	0.48
79:2S:32:U:H2'	79:2S:33:G:O4'	2.14	0.48
79:2S:1002:A:H61	79:2S:1050:U:H1'	1.78	0.48
79:2S:1108:U:H2'	79:2S:1109:U:C6	2.48	0.48
79:2S:1259:A:H2	79:2S:1281:G:H1'	1.78	0.48
79:2S:2346:C:H3'	79:2S:2347:U:H5"	1.95	0.48
79:2S:3252:G:H2'	79:2S:3253:G:O4'	2.13	0.48
82:ET:34:U:H5'	82:ET:35:C:OP2	2.14	0.48
2:L2:11:GLY:HA3	79:2S:2163:C:H1'	1.96	0.48
3:L3:169:THR:HG23	3:L3:170:PRO:HD2	1.95	0.48
4:L4:39:PHE:CZ	4:L4:240:PRO:HA	2.49	0.48
5:L5:131:LEU:HD13	5:L5:131:LEU:H	1.78	0.48
8:L8:64:ILE:HG23	8:L8:68:ARG:CZ	2.44	0.48
10:60:178:ARG:N	10:60:179:PRO:HD2	2.29	0.48
13:63:64:LYS:HG3	28:78:69:TRP:CG	2.48	0.48
15:65:70:ASN:HD22	79:2S:2599:U:H5"	1.75	0.48
18:68:170:ARG:HA	18:68:174:ARG:HD2	1.95	0.48
23:73:33:ASN:ND2	23:73:64:LYS:HB2	2.27	0.48
28:78:74:ASN:C	28:78:76:ASP:N	2.72	0.48
31:81:4:LEU:HD23	31:81:4:LEU:N	2.29	0.48
37:87:9:GLY:HA2	79:2S:1852:G:H21	1.79	0.48
37:87:58:THR:C	37:87:60:GLY:H	2.21	0.48
47:S1:71:ALA:CB	60:14:114:ARG:HH12	2.24	0.48
47:S1:174:LYS:HB2	47:S1:174:LYS:NZ	2.28	0.48
49:S3:76:ARG:O	49:S3:76:ARG:HD3	2.12	0.48
49:S3:105:MET:HE1	49:S3:118:ALA:HB1	1.95	0.48
58:12:71:ILE:O	58:12:75:VAL:HG23	2.14	0.48
62:16:135:ARG:NE	78:1S:1582:U:H5"	2.29	0.48
65:19:75:LYS:HD2	65:19:75:LYS:N	2.28	0.48
69:23:139:LYS:HE3	78:1S:31:C:H4'	1.95	0.48
78:1S:1655:A:H2'	78:1S:1656:U:H5'	1.94	0.48
79:2S:1366:A:H2'	79:2S:1367:G:O4'	2.14	0.48
79:2S:1526:U:H5'	79:2S:1594:A:C2	2.48	0.48
79:2S:2265:C:H2'	79:2S:2266:U:H6	1.78	0.48
79:2S:2942:C:OP1	79:2S:2943:G:H5"	2.13	0.48
79:2S:3066:U:H2'	79:2S:3067:C:C6	2.49	0.48
82:ET:14:A:H2'	82:ET:15:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:329:PRO:HB3	7:L7:41:ARG:NH1	2.29	0.48
5:L5:65:ILE:CG2	5:L5:72:ASP:HB3	2.44	0.48
8:L8:48:ARG:HG3	79:2S:2585:G:H1'	1.96	0.48
9:L9:102:ASN:O	9:L9:113:GLU:HB3	2.14	0.48
16:66:162:VAL:HG12	16:66:166:GLU:OE2	2.14	0.48
20:70:135:VAL:O	20:70:141:LYS:HE3	2.14	0.48
21:71:119:ALA:HB1	21:71:125:ALA:HB3	1.95	0.48
23:73:89:ASP:OD1	23:73:91:VAL:HG22	2.13	0.48
28:78:40:HIS:HB3	79:2S:958:C:H1'	1.95	0.48
31:81:29:ALA:HB3	31:81:30:PRO:HD3	1.94	0.48
37:87:60:GLY:HA2	37:87:64:MET:SD	2.54	0.48
43:93:17:ARG:NH1	79:2S:861:C:H5'	2.28	0.48
44:P0:190:VAL:HG12	44:P0:191:TYR:H	1.79	0.48
46:S0:64:ILE:HA	46:S0:120:LEU:HD22	1.95	0.48
47:S1:32:ILE:CD1	60:14:33:LEU:HD22	2.43	0.48
52:S6:88:ARG:HB3	52:S6:91:GLU:HB2	1.96	0.48
54:S8:139:ALA:HB2	78:1S:187:G:OP1	2.14	0.48
55:S9:90:LYS:HB3	55:S9:95:TYR:CB	2.36	0.48
55:S9:140:ILE:HG12	55:S9:159:ALA:CB	2.44	0.48
61:15:9:LYS:NZ	61:15:9:LYS:HB3	2.29	0.48
61:15:13:LYS:HG3	61:15:14:THR:H	1.79	0.48
61:15:85:ILE:HD12	61:15:111:MET:O	2.13	0.48
62:16:18:ALA:HB2	62:16:69:VAL:HG22	1.94	0.48
65:19:49:ASP:HB3	65:19:53:TRP:CD1	2.40	0.48
66:20:108:ILE:HD12	66:20:108:ILE:O	2.14	0.48
70:24:51:GLU:O	70:24:55:VAL:HG23	2.14	0.48
73:27:36:LYS:HG2	73:27:43:ILE:CG2	2.44	0.48
78:1S:387:A:H2'	78:1S:402:C:H5'	1.96	0.48
78:1S:887:A:H2	78:1S:925:G:H22	1.61	0.48
79:2S:603:A:H2'	79:2S:604:G:O4'	2.14	0.48
79:2S:996:A:H2'	79:2S:997:A:O4'	2.14	0.48
79:2S:1932:A:H2'	79:2S:1933:A:H5'	1.95	0.48
79:2S:2263:C:H2'	79:2S:2264:U:C6	2.48	0.48
79:2S:3281:U:H2'	79:2S:3282:U:C6	2.48	0.48
1:L1:102:LYS:HG2	79:2S:2480:A:OP1	2.13	0.48
1:L1:103:LEU:HD13	1:L1:106:LYS:HG3	1.95	0.48
3:L3:205:VAL:HG21	3:L3:322:ILE:HD11	1.95	0.48
3:L3:354:VAL:O	3:L3:354:VAL:HG23	2.14	0.48
5:L5:64:ILE:CD1	5:L5:76:ALA:HB3	2.37	0.48
6:L6:98:VAL:O	6:L6:98:VAL:HG12	2.14	0.48
7:L7:224:ILE:HG23	20:70:36:ILE:HG23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:112:ASN:HB3	79:2S:19:U:O2'	2.13	0.48
25:75:113:LEU:O	25:75:120:LYS:HG3	2.14	0.48
27:77:61:LYS:O	27:77:65:ARG:HG2	2.13	0.48
30:80:83:LYS:HB3	30:80:85:PHE:CE2	2.49	0.48
32:82:13:HIS:CE1	32:82:15:LYS:HB3	2.49	0.48
35:85:10:ARG:HG2	35:85:10:ARG:HH11	1.79	0.48
35:85:58:ILE:O	35:85:62:GLN:HG3	2.13	0.48
36:86:98:ARG:HD2	36:86:98:ARG:N	2.29	0.48
46:S0:182:LEU:O	46:S0:188:LEU:HB2	2.14	0.48
61:15:34:VAL:HG12	61:15:41:VAL:HG12	1.95	0.48
64:18:32:LEU:O	64:18:38:VAL:HG23	2.13	0.48
65:19:15:ILE:O	65:19:19:ALA:HB2	2.14	0.48
66:20:106:ILE:HG23	66:20:107:THR:HG23	1.95	0.48
69:23:70:LYS:NZ	78:1S:567:A:H5"	2.29	0.48
78:1S:357:G:H2'	78:1S:358:U:O4'	2.14	0.48
78:1S:374:U:H2'	78:1S:375:U:C6	2.49	0.48
78:1S:879:G:H2'	78:1S:880:C:C6	2.49	0.48
78:1S:1695:G:H21	78:1S:1706:C:N4	2.12	0.48
79:2S:1218:U:C2'	79:2S:1219:C:H5'	2.44	0.48
79:2S:1666:G:H2'	79:2S:1667:A:H8	1.78	0.48
79:2S:1906:G:H1'	79:2S:1908:A:N6	2.29	0.48
79:2S:2500:A:H3'	79:2S:2500:A:N3	2.29	0.48
79:2S:2563:G:H2'	79:2S:2564:G:H8	1.78	0.48
79:2S:2822:U:H2'	79:2S:2823:G:O4'	2.13	0.48
79:2S:2945:G:H5'	79:2S:2947:G:N7	2.29	0.48
4:L4:29:PRO:HB3	18:68:25:TYR:CE2	2.49	0.47
4:L4:122:THR:HG22	4:L4:235:LEU:HD13	1.96	0.47
5:L5:83:LEU:HB2	5:L5:84:PRO:HD3	1.96	0.47
9:L9:134:ILE:N	9:L9:134:ILE:HD12	2.29	0.47
12:62:77:ALA:HB1	79:2S:1235:U:OP1	2.13	0.47
13:63:64:LYS:HE3	28:78:69:TRP:CD1	2.48	0.47
15:65:60:VAL:HG21	80:8S:142:C:H4'	1.95	0.47
16:66:61:ALA:HA	16:66:70:PRO:HD2	1.96	0.47
17:67:4:TYR:CE1	17:67:147:GLU:HB2	2.49	0.47
19:69:8:LYS:HG3	19:69:19:LYS:HE3	1.95	0.47
19:69:20:ARG:HD2	79:2S:1875:G:OP2	2.14	0.47
35:85:70:TYR:HD1	35:85:73:LYS:HD2	1.79	0.47
44:P0:43:LYS:HA	44:P0:46:ARG:HG2	1.96	0.47
45:RC:147:HIS:CD2	45:RC:151:VAL:HG22	2.49	0.47
47:S1:176:VAL:CG1	47:S1:177:GLN:N	2.75	0.47
51:S5:25:LEU:HG	62:16:60:PHE:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:10:3:MET:HB2	56:10:4:PRO:HD2	1.96	0.47
66:20:27:THR:CG2	66:20:113:ASP:HB3	2.40	0.47
68:22:65:LEU:CD1	68:22:65:LEU:H	2.27	0.47
78:1S:249:U:H3'	78:1S:250:C:C5'	2.43	0.47
78:1S:1414:U:H3'	78:1S:1415:U:H5"	1.96	0.47
79:2S:2288:G:H2'	79:2S:2289:U:C6	2.49	0.47
79:2S:2860:U:O2'	79:2S:2861:U:H5'	2.14	0.47
79:2S:3355:U:O2'	79:2S:3356:G:H5"	2.14	0.47
82:PT:38:A:H2'	82:PT:39:A:O4'	2.14	0.47
1:L1:126:PRO:HG2	1:L1:128:LEU:HG	1.96	0.47
4:L4:343:LYS:HD3	4:L4:343:LYS:H	1.78	0.47
5:L5:20:PHE:HB2	5:L5:23:ARG:HB2	1.96	0.47
6:L6:100:LYS:HG2	6:L6:100:LYS:O	2.14	0.47
7:L7:174:GLY:HA2	7:L7:178:ILE:O	2.13	0.47
9:L9:41:ILE:C	9:L9:41:ILE:HD13	2.38	0.47
17:67:119:VAL:HA	17:67:145:HIS:O	2.14	0.47
18:68:16:ARG:NH2	79:2S:671:U:H5"	2.24	0.47
20:70:75:PHE:HA	20:70:128:GLU:HA	1.95	0.47
21:71:60:LYS:HZ2	79:2S:1059:G:H4'	1.79	0.47
23:73:17:LEU:HD21	23:73:81:GLN:HG3	1.95	0.47
26:76:57:LEU:HD23	26:76:67:GLU:HB3	1.94	0.47
48:S2:116:LYS:HE2	48:S2:127:ALA:HB3	1.96	0.47
49:S3:37:VAL:HG12	49:S3:50:ILE:HD13	1.96	0.47
49:S3:43:PRO:HD3	66:20:108:ILE:HG21	1.96	0.47
50:S4:138:TYR:HB2	50:S4:146:THR:OG1	2.14	0.47
52:S6:85:ARG:HH21	52:S6:87:ARG:HG2	1.80	0.47
55:S9:93:LEU:C	55:S9:96:VAL:HG22	2.39	0.47
55:S9:127:VAL:O	55:S9:131:GLN:HB2	2.14	0.47
60:14:70:LYS:HA	60:14:70:LYS:CE	2.41	0.47
64:18:57:ARG:NH1	71:25:75:LEU:HD21	2.29	0.47
64:18:76:PRO:CB	64:18:81:ILE:HB	2.44	0.47
64:18:134:ARG:HG3	64:18:134:ARG:NH1	2.28	0.47
70:24:5:VAL:HG12	70:24:6:THR:N	2.29	0.47
79:2S:757:C:H2'	79:2S:758:C:H5"	1.95	0.47
79:2S:834:U:C2'	79:2S:835:G:H5'	2.44	0.47
79:2S:1052:U:O2	81:5S:103:A:H4'	2.14	0.47
79:2S:1525:G:H1'	79:2S:1829:G:H2'	1.96	0.47
82:ET:36:A:H2'	82:ET:37:U:C5	2.49	0.47
2:L2:6:ARG:O	2:L2:10:LYS:HG2	2.14	0.47
7:L7:121:LYS:O	7:L7:125:GLU:HG2	2.14	0.47
7:L7:232:ARG:O	7:L7:235:PHE:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:149:LYS:HB2	8:L8:200:LEU:O	2.13	0.47
13:63:46:ILE:HG22	13:63:46:ILE:O	2.15	0.47
14:64:20:VAL:HG23	14:64:33:ALA:O	2.15	0.47
15:65:103:GLU:O	15:65:106:VAL:HG22	2.13	0.47
18:68:154:GLY:C	18:68:161:LYS:HG3	2.38	0.47
18:68:156:GLY:HA2	28:78:47:LYS:HG3	1.95	0.47
18:68:170:ARG:C	18:68:172:PHE:H	2.21	0.47
28:78:74:ASN:C	28:78:76:ASP:H	2.21	0.47
32:82:121:ASN:C	32:82:123:LYS:H	2.22	0.47
39:89:44:TRP:CD1	39:89:44:TRP:H	2.32	0.47
41:91:25:LYS:HD2	79:2S:1923:C:H5"	1.96	0.47
47:S1:124:ASN:HA	47:S1:137:ILE:O	2.14	0.47
47:S1:149:GLN:HE22	78:1S:1066:C:H4'	1.79	0.47
47:S1:210:ILE:O	47:S1:210:ILE:HG22	2.13	0.47
48:S2:91:ARG:NH2	78:1S:1624:C:H5'	2.30	0.47
49:S3:120:TYR:O	49:S3:124:ARG:HG3	2.14	0.47
51:S5:23:VAL:O	51:S5:23:VAL:HG13	2.14	0.47
51:S5:166:ARG:HD2	74:28:46:GLY:HA3	1.97	0.47
55:S9:41:GLU:O	55:S9:45:ILE:HG12	2.14	0.47
55:S9:93:LEU:CD1	55:S9:96:VAL:HG21	2.33	0.47
61:15:121:ILE:HG23	61:15:123:TYR:CE1	2.49	0.47
65:19:6:VAL:HG13	65:19:7:ARG:HG3	1.96	0.47
73:27:46:VAL:HG12	73:27:47:PHE:N	2.30	0.47
78:1S:488:G:H4'	78:1S:488:G:OP1	2.14	0.47
78:1S:749:U:H2'	78:1S:750:U:C6	2.50	0.47
79:2S:1040:A:H2'	79:2S:1041:U:C4'	2.44	0.47
79:2S:1165:A:H2'	79:2S:1166:G:C8	2.49	0.47
79:2S:1638:A:H2'	79:2S:1639:C:H5'	1.95	0.47
79:2S:2886:U:H4'	79:2S:2887:A:C2	2.50	0.47
79:2S:3217:C:O2	79:2S:3217:C:H2'	2.14	0.47
81:5S:112:G:H2'	81:5S:113:C:C6	2.49	0.47
82:ET:17:C:H2'	82:ET:18(A):U:H5	1.78	0.47
82:PT:58:A:C2'	82:PT:59:A:H5'	2.42	0.47
2:L2:127:ALA:O	2:L2:169:ILE:HD11	2.14	0.47
7:L7:81:HIS:HB2	7:L7:138:TYR:CE1	2.48	0.47
7:L7:218:ARG:NH1	79:2S:1170:A:H5"	2.29	0.47
7:L7:223:PHE:HD1	7:L7:228:SER:HA	1.80	0.47
10:60:135:ILE:HG22	10:60:136:PHE:CD1	2.49	0.47
15:65:39:ALA:HB3	15:65:61:ILE:HG21	1.95	0.47
19:69:151:ARG:HD3	57:11:116:ARG:NH2	2.29	0.47
20:70:110:MET:HE3	20:70:116:ALA:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:73:12:ARG:HH11	23:73:12:ARG:HG3	1.79	0.47
26:76:59:VAL:O	26:76:64:LYS:HD3	2.14	0.47
27:77:75:VAL:HA	79:2S:1636:U:H4'	1.96	0.47
42:92:93:LEU:N	42:92:93:LEU:HD23	2.29	0.47
47:S1:218:LEU:HD23	47:S1:219:LYS:HG2	1.96	0.47
48:S2:170:ILE:HG21	78:1S:2:A:N1	2.29	0.47
50:S4:31:PRO:HG3	50:S4:43:PRO:CG	2.31	0.47
51:S5:113:ILE:HG23	51:S5:191:ALA:HB2	1.96	0.47
51:S5:148:ARG:NH1	51:S5:155:ALA:HB3	2.30	0.47
53:S7:98:ILE:CD1	53:S7:121:VAL:HG21	2.43	0.47
63:17:123:ASN:O	63:17:124:VAL:HG12	2.14	0.47
68:22:36:LYS:O	68:22:40:VAL:HG23	2.14	0.47
73:27:54:VAL:O	73:27:62:ILE:HA	2.15	0.47
77:31:133:ALA:HB2	78:1S:1252:C:O4'	2.14	0.47
78:1S:46:A:H4'	78:1S:48:G:OP1	2.13	0.47
78:1S:425:A:H2'	78:1S:425:A:N3	2.29	0.47
78:1S:778:G:N3	78:1S:778:G:H5'	2.29	0.47
79:2S:1193:A:H3'	79:2S:1194:G:C8	2.49	0.47
79:2S:3337:G:H2'	79:2S:3338:C:C6	2.49	0.47
82:ET:60:A:H3'	82:ET:61:U:H6	1.80	0.47
2:L2:83:HIS:HB3	43:93:64:VAL:HG22	1.97	0.47
3:L3:58:ARG:NH1	3:L3:59:ASP:O	2.48	0.47
3:L3:311:PHE:HB3	3:L3:314:TYR:HB3	1.95	0.47
4:L4:82:THR:C	4:L4:84:ARG:N	2.70	0.47
4:L4:315:LYS:HG2	79:2S:505:G:H5'	1.96	0.47
6:L6:10:TYR:HB3	32:82:88:HIS:CE1	2.49	0.47
7:L7:181:ILE:O	7:L7:185:ILE:HG13	2.15	0.47
8:L8:27:THR:HG23	79:2S:2563:G:H5"	1.95	0.47
9:L9:174:LYS:HD3	40:90:127:LEU:HD11	1.96	0.47
10:60:148:VAL:O	10:60:152:LEU:HG	2.15	0.47
18:68:3:ILE:HD12	18:68:3:ILE:N	2.29	0.47
20:70:38:LYS:HG3	20:70:61:ILE:HD13	1.95	0.47
20:70:93:GLU:HB3	20:70:129:ILE:HD11	1.97	0.47
32:82:97:ALA:HB1	32:82:99:ASN:OD1	2.15	0.47
34:84:68:THR:HG21	79:2S:1644:C:N4	2.24	0.47
37:87:3:LYS:HG2	79:2S:2138:A:O2'	2.13	0.47
45:RC:269:TYR:CZ	45:RC:271:VAL:HG22	2.49	0.47
46:S0:30:GLN:NE2	46:S0:34:GLU:HB2	2.30	0.47
46:S0:80:THR:HA	46:S0:83:GLN:HG3	1.96	0.47
46:S0:173:ILE:O	46:S0:177:LEU:HG	2.15	0.47
49:S3:133:GLY:HA3	49:S3:157:LEU:HG	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:159:THR:HG23	50:S4:173:ILE:HB	1.96	0.47
54:S8:37:LYS:HB2	54:S8:59:ARG:CG	2.42	0.47
62:16:143:ARG:CZ	78:1S:1191:U:H5'	2.44	0.47
68:22:89:TRP:CA	68:22:92:ASN:HB2	2.39	0.47
68:22:105:THR:HG22	68:22:110:ILE:HG12	1.97	0.47
75:29:33:LYS:C	75:29:35:GLY:H	2.22	0.47
78:1S:176:C:C2'	78:1S:177:U:H5'	2.44	0.47
78:1S:990:C:H2'	78:1S:991:G:O4'	2.14	0.47
78:1S:1179:G:H2'	78:1S:1180:C:C6	2.50	0.47
78:1S:1483:A:H2	78:1S:1607:G:H1'	1.79	0.47
79:2S:127:G:H2'	79:2S:128:G:H8	1.79	0.47
79:2S:268:A:O4'	79:2S:270:U:H1'	2.13	0.47
79:2S:1203:A:H2'	79:2S:1204:A:H8	1.79	0.47
79:2S:1223:A:H2'	79:2S:1224:C:O4'	2.14	0.47
79:2S:2610:G:H2'	79:2S:2611:U:O4'	2.15	0.47
79:2S:3375:A:H5"	79:2S:3378:C:C5	2.45	0.47
79:2S:3384:U:H2'	79:2S:3385:U:C6	2.49	0.47
1:L1:97:LYS:O	1:L1:97:LYS:HG2	2.13	0.47
2:L2:48:ILE:HG13	2:L2:48:ILE:O	2.13	0.47
8:L8:190:VAL:O	8:L8:190:VAL:HG22	2.14	0.47
16:66:93:ALA:HB3	79:2S:631:U:H5"	1.95	0.47
24:74:49:ILE:CG2	24:74:52:THR:HG23	2.44	0.47
34:84:71:THR:HG22	34:84:72:VAL:N	2.30	0.47
42:92:6:LYS:HE2	42:92:94:GLY:HA2	1.96	0.47
42:92:8:ARG:HH12	42:92:10:THR:HB	1.80	0.47
45:RC:68:VAL:HA	45:RC:84:SER:HA	1.97	0.47
45:RC:201:THR:HG23	45:RC:243:LEU:HG	1.97	0.47
47:S1:86:LEU:HB3	47:S1:98:THR:OG1	2.15	0.47
49:S3:40:ARG:HA	66:20:110:PRO:CB	2.45	0.47
49:S3:63:GLY:HA3	56:10:92:ILE:HD13	1.96	0.47
50:S4:12:LEU:HD13	78:1S:381:C:H5'	1.97	0.47
51:S5:57:SER:C	51:S5:59:VAL:H	2.23	0.47
62:16:110:THR:O	62:16:110:THR:HG22	2.15	0.47
64:18:82:PRO:O	64:18:83:ALA:HB2	2.15	0.47
65:19:38:LYS:HA	65:19:46:PRO:HA	1.96	0.47
66:20:23:ARG:HA	66:20:91:ILE:O	2.14	0.47
70:24:125:LEU:HA	70:24:128:LYS:HB2	1.96	0.47
71:25:88:ILE:HD12	71:25:88:ILE:H	1.79	0.47
72:26:2:PRO:HG3	78:1S:1142:A:H5"	1.97	0.47
78:1S:872:G:H21	78:1S:1047:G:H4'	1.80	0.47
78:1S:1243:G:N3	78:1S:1243:G:H2'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:311:C:H2'	79:2S:312:C:H6	1.76	0.47
79:2S:768:C:H2'	79:2S:769:G:O4'	2.14	0.47
79:2S:1731:A:H2'	79:2S:1732:U:C6	2.49	0.47
79:2S:2346:C:H2'	79:2S:2347:U:C5'	2.36	0.47
79:2S:2547:A:H2'	79:2S:2548:C:H5'	1.95	0.47
79:2S:3174:A:H2'	79:2S:3175:U:C5'	2.41	0.47
81:5S:32:U:H3	81:5S:45:A:H61	1.63	0.47
3:L3:188:ILE:HD12	3:L3:189:SER:N	2.30	0.47
3:L3:347:SER:C	3:L3:349:LYS:H	2.22	0.47
4:L4:107:ARG:NE	79:2S:663:C:H4'	2.29	0.47
4:L4:145:ILE:HD11	4:L4:148:ILE:HG12	1.97	0.47
7:L7:45:LEU:O	7:L7:45:LEU:HD23	2.15	0.47
7:L7:85:PHE:CE1	7:L7:87:VAL:HG22	2.49	0.47
7:L7:106:LEU:O	7:L7:107:ARG:HB2	2.14	0.47
7:L7:127:LEU:C	7:L7:129:LEU:H	2.22	0.47
8:L8:128:LYS:CG	8:L8:129:PRO:HD2	2.45	0.47
11:61:13:LYS:O	11:61:131:MET:HE3	2.15	0.47
11:61:111:ASP:HB2	11:61:112:LEU:HD23	1.97	0.47
14:64:38:ILE:HA	14:64:44:VAL:HG12	1.96	0.47
15:65:11:GLN:HG2	15:65:44:ARG:CZ	2.45	0.47
16:66:93:ALA:CB	79:2S:631:U:H5"	2.44	0.47
17:67:112:LEU:HD12	17:67:152:GLU:N	2.29	0.47
18:68:155:MET:HG2	28:78:48:TYR:HA	1.96	0.47
20:70:1:MET:O	79:2S:1323:G:H5"	2.14	0.47
20:70:9:VAL:HG22	20:70:61:ILE:HD12	1.96	0.47
20:70:68:HIS:N	20:70:69:PRO:HD3	2.29	0.47
20:70:73:LYS:HE2	20:70:75:PHE:CE1	2.50	0.47
21:71:58:GLN:HG3	79:2S:992:A:O2'	2.15	0.47
25:75:115:ARG:HG3	25:75:115:ARG:HH11	1.78	0.47
30:80:32:LYS:HG3	30:80:36:GLN:NE2	2.28	0.47
33:83:11:GLY:O	33:83:98:VAL:HG12	2.15	0.47
36:86:25:LYS:HB3	79:2S:156:G:OP2	2.13	0.47
36:86:31:GLY:HA2	79:2S:297:G:H8	1.79	0.47
42:92:44:ASP:HA	42:92:47:GLN:CB	2.42	0.47
43:93:51:ALA:CB	43:93:54:ILE:HD12	2.42	0.47
45:RC:89:LEU:CD2	45:RC:110:VAL:HG11	2.45	0.47
45:RC:224:ASN:HB3	45:RC:229:LYS:H	1.79	0.47
47:S1:113:MET:CE	47:S1:209:ASN:HD22	2.26	0.47
50:S4:180:LEU:HD23	50:S4:194:THR:HG23	1.97	0.47
51:S5:92:ARG:HG2	51:S5:92:ARG:HH11	1.80	0.47
52:S6:74:LYS:HB3	52:S6:94:ARG:HD2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:122:GLU:O	52:S6:126:ASP:HB3	2.14	0.47
53:S7:49:ILE:CG2	53:S7:175:LYS:HG2	2.44	0.47
54:S8:10:LYS:HG2	54:S8:11:ARG:N	2.29	0.47
54:S8:187:GLU:HA	54:S8:190:ALA:HB3	1.96	0.47
55:S9:112:GLN:NE2	55:S9:112:GLN:HA	2.30	0.47
58:12:105:LYS:HB3	58:12:107:ASP:OD1	2.15	0.47
58:12:125:ASN:O	58:12:126:TRP:CD1	2.67	0.47
61:15:38:PRO:O	61:15:42:ARG:HG3	2.14	0.47
62:16:125:GLU:OE1	62:16:134:ALA:HB1	2.15	0.47
63:17:61:ILE:HA	63:17:66:VAL:HG22	1.97	0.47
65:19:102:ARG:HD2	78:1S:1501:C:OP2	2.14	0.47
66:20:28:SER:HB2	66:20:112:VAL:HG22	1.95	0.47
66:20:50:LEU:HD11	66:20:93:LEU:HD22	1.96	0.47
71:25:77:ARG:O	71:25:81:ARG:HG3	2.14	0.47
74:28:36:THR:HG23	74:28:37:SER:N	2.30	0.47
76:30:14:VAL:CG2	78:1S:567:A:H1'	2.45	0.47
78:1S:144:U:O2'	78:1S:145:A:H8	1.97	0.47
78:1S:217:A:H61	78:1S:844:A:H2	1.61	0.47
78:1S:1038:U:H2'	78:1S:1039:A:H5"	1.97	0.47
78:1S:1120:U:H2'	78:1S:1121:C:C6	2.49	0.47
78:1S:1262:U:H2'	78:1S:1263:G:C8	2.50	0.47
78:1S:1344:A:H2'	78:1S:1345:A:C8	2.49	0.47
78:1S:1507:G:H2'	78:1S:1508:U:O4'	2.15	0.47
78:1S:1611:A:H2'	78:1S:1612:U:H5'	1.96	0.47
78:1S:1651:A:H2'	78:1S:1652:C:H6	1.79	0.47
78:1S:1781:A:H2'	78:1S:1782:A:C8	2.50	0.47
79:2S:66:A:N1	79:2S:77:A:H5"	2.30	0.47
79:2S:90:C:H2'	79:2S:91:G:C8	2.49	0.47
79:2S:97:U:H2'	79:2S:98:G:O4'	2.14	0.47
79:2S:440:A:H5'	79:2S:493:U:O4	2.15	0.47
79:2S:834:U:H2'	79:2S:835:G:H5'	1.97	0.47
79:2S:936:A:H2'	79:2S:938:C:C5	2.49	0.47
79:2S:1116:G:H3'	79:2S:1117:G:H5"	1.96	0.47
79:2S:1361:U:H2'	79:2S:1362:G:C8	2.49	0.47
79:2S:1377:G:H2'	79:2S:1378:U:H6	1.79	0.47
79:2S:1610:G:H2'	79:2S:1611:G:O4'	2.14	0.47
79:2S:1646:G:H1'	79:2S:1809:A:H61	1.80	0.47
79:2S:1655:G:H1'	79:2S:1800:A:N6	2.28	0.47
79:2S:1797:A:H2'	79:2S:1798:A:O4'	2.15	0.47
79:2S:2309:A:H1'	79:2S:2962:U:H5'	1.95	0.47
79:2S:2388:U:H2'	79:2S:2389:C:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2874:G:H3'	79:2S:2945:G:H1	1.79	0.47
79:2S:2894:C:O2'	79:2S:3107:U:H4'	2.14	0.47
79:2S:2902:A:H2'	79:2S:2903:A:O4'	2.14	0.47
79:2S:3174:A:C2'	79:2S:3175:U:H5'	2.41	0.47
81:5S:8:G:H2'	81:5S:9:C:O4'	2.15	0.47
4:L4:310:THR:O	4:L4:311:HIS:HB3	2.15	0.47
4:L4:334:PHE:HB3	79:2S:578:A:H2'	1.97	0.47
5:L5:21:ARG:HD3	81:5S:112:G:O6	2.14	0.47
6:L6:77:ARG:HB3	6:L6:77:ARG:HH11	1.78	0.47
7:L7:123:THR:O	7:L7:127:LEU:HG	2.15	0.47
7:L7:141:TYR:HB2	7:L7:189:ILE:CD1	2.44	0.47
8:L8:240:ASN:ND2	79:2S:2584:G:O2'	2.48	0.47
13:63:56:PRO:O	13:63:71:ALA:HA	2.15	0.47
16:66:27:LEU:HD21	16:66:33:ILE:HB	1.96	0.47
16:66:76:PRO:HA	16:66:79:ILE:HD12	1.97	0.47
23:73:22:ILE:HA	23:73:34:LEU:O	2.15	0.47
25:75:49:LYS:HD2	25:75:52:PRO:HA	1.97	0.47
25:75:54:TYR:HB2	25:75:55:ASN:H	1.61	0.47
33:83:64:ILE:HD12	33:83:64:ILE:N	2.30	0.47
45:RC:5:GLU:HA	45:RC:316:MET:O	2.14	0.47
47:S1:67:GLU:HA	47:S1:84:ILE:O	2.15	0.47
47:S1:204:ILE:HD13	47:S1:204:ILE:N	2.28	0.47
49:S3:158:ILE:HG22	78:1S:1327:C:H5"	1.97	0.47
52:S6:25:ARG:HB3	52:S6:25:ARG:NH1	2.28	0.47
52:S6:25:ARG:O	52:S6:25:ARG:HG2	2.15	0.47
54:S8:36:THR:HB	54:S8:57:ALA:O	2.14	0.47
64:18:16:ARG:HH12	64:18:19:ASN:CA	2.28	0.47
67:21:38:LYS:HE3	67:21:51:VAL:HG22	1.97	0.47
72:26:71:LEU:HD22	72:26:71:LEU:N	2.29	0.47
74:28:12:VAL:HG21	74:28:48:VAL:CG1	2.45	0.47
74:28:33:LEU:CD2	74:28:53:ILE:HG23	2.41	0.47
78:1S:95:G:H2'	78:1S:96:G:C8	2.50	0.47
78:1S:1060:U:H2'	78:1S:1061:A:H4'	1.95	0.47
78:1S:1290:U:H2'	78:1S:1291:G:C8	2.50	0.47
78:1S:1353:U:H2'	78:1S:1354:G:H8	1.80	0.47
78:1S:1367:G:H2'	78:1S:1368:G:C8	2.50	0.47
79:2S:156:G:O2'	79:2S:157:A:H4'	2.15	0.47
79:2S:1015:U:H4'	79:2S:1017:C:C5	2.50	0.47
79:2S:1815:U:O3'	79:2S:1816:A:H4'	2.14	0.47
79:2S:2684:C:H2'	79:2S:2685:C:C6	2.49	0.47
80:8S:41:A:H2'	80:8S:42:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:23:ARG:HG3	2:L2:23:ARG:NH1	2.30	0.47
2:L2:52:SER:HB3	79:2S:1795:U:OP1	2.14	0.47
3:L3:217:ALA:O	3:L3:276:THR:HA	2.15	0.47
8:L8:165:PHE:HA	36:86:47:ILE:HD13	1.96	0.47
9:L9:93:VAL:HG22	40:90:82:LEU:HD22	1.96	0.47
10:60:193:ASP:HB3	10:60:196:PHE:C	2.40	0.47
11:61:36:VAL:CG2	11:61:120:ILE:HG21	2.45	0.47
11:61:36:VAL:HG22	11:61:120:ILE:HG21	1.96	0.47
15:65:71:ARG:HB2	15:65:94:TYR:HB2	1.97	0.47
16:66:110:PRO:HB2	16:66:111:PRO:HD3	1.97	0.47
18:68:65:SER:HB3	18:68:90:ASP:CG	2.40	0.47
19:69:69:SER:O	19:69:74:ARG:HB2	2.15	0.47
19:69:105:LEU:HD23	19:69:105:LEU:C	2.39	0.47
22:72:94:ARG:HG2	22:72:106:ALA:HB3	1.95	0.47
30:80:104:LEU:HD12	30:80:105:ALA:N	2.30	0.47
35:85:101:THR:HG23	35:85:104:GLN:H	1.79	0.47
37:87:49:TRP:CE3	79:2S:929:A:H1'	2.50	0.47
40:90:83:LYS:NZ	40:90:83:LYS:HB3	2.29	0.47
44:P0:80:VAL:HG22	44:P0:80:VAL:O	2.15	0.47
47:S1:86:LEU:C	47:S1:101:HIS:HB2	2.39	0.47
47:S1:167:VAL:O	47:S1:171:ILE:HG13	2.15	0.47
53:S7:11:GLN:HG3	53:S7:12:ALA:H	1.79	0.47
53:S7:30:SER:C	53:S7:32:PRO:HD2	2.40	0.47
53:S7:100:PRO:HA	78:1S:639:U:N3	2.30	0.47
57:11:85:VAL:HA	57:11:108:PRO:HA	1.96	0.47
62:16:82:ARG:NH2	62:16:116:LEU:HD11	2.29	0.47
67:21:74:GLN:HA	67:21:79:LEU:HB2	1.95	0.47
69:23:42:PRO:HG2	69:23:122:PHE:CZ	2.50	0.47
69:23:140:LYS:HG3	69:23:141:GLU:H	1.80	0.47
78:1S:262:U:H2'	78:1S:263:C:C6	2.49	0.47
78:1S:1227:A:H4'	78:1S:1228:G:C5'	2.45	0.47
78:1S:1715:G:H2'	78:1S:1716:C:H5'	1.97	0.47
79:2S:312:C:H2'	79:2S:313:A:C8	2.49	0.47
79:2S:771:A:H2'	79:2S:772:U:O4'	2.14	0.47
79:2S:939:U:H2'	79:2S:940:G:C8	2.50	0.47
79:2S:1128:U:H1'	79:2S:2828:G:H5'	1.97	0.47
79:2S:1184:A:H2'	79:2S:1185:C:C6	2.50	0.47
79:2S:2160:G:H2'	79:2S:2161:G:C8	2.49	0.47
79:2S:2426:U:H2'	79:2S:2427:U:C6	2.49	0.47
79:2S:2951:G:O2'	79:2S:2952:G:H5'	2.14	0.47
1:L1:68:PHE:HA	1:L1:105:LYS:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:5:ILE:HG22	2:L2:208:ASP:O	2.15	0.47
2:L2:220:GLY:HA3	79:2S:2966:G:H5"	1.97	0.47
5:L5:155:THR:HG23	81:5S:36:C:H4'	1.96	0.47
9:L9:4:ILE:CD1	20:70:148:LEU:HD21	2.44	0.47
9:L9:4:ILE:HG23	9:L9:5:GLN:N	2.30	0.47
9:L9:44:THR:O	9:L9:55:VAL:HA	2.15	0.47
15:65:51:LEU:HD13	15:65:117:ASN:HB3	1.96	0.47
15:65:68:ARG:HB3	15:65:68:ARG:HH11	1.80	0.47
16:66:13:GLY:O	16:66:125:ARG:HB3	2.15	0.47
18:68:63:SER:O	18:68:67:ILE:HG13	2.15	0.47
38:88:17:ARG:O	38:88:18:ALA:HB3	2.15	0.47
45:RC:7:LEU:HG	45:RC:315:VAL:HG22	1.97	0.47
46:S0:139:VAL:O	46:S0:139:VAL:HG22	2.15	0.47
49:S3:151:LYS:HE3	78:1S:1423:U:H5"	1.98	0.47
50:S4:199:GLU:HB2	50:S4:207:LEU:O	2.15	0.47
59:13:132:VAL:HG23	59:13:134:VAL:HG13	1.97	0.47
60:14:70:LYS:O	60:14:74:VAL:HG23	2.15	0.47
61:15:86:VAL:HG12	61:15:89:MET:HE3	1.97	0.47
63:17:81:LYS:O	63:17:81:LYS:HG2	2.15	0.47
70:24:37:LYS:O	70:24:41:ARG:HG3	2.14	0.47
74:28:32:PHE:N	74:28:32:PHE:CD2	2.83	0.47
78:1S:604:A:H2'	78:1S:605:A:O4'	2.14	0.47
78:1S:1682:U:O2'	78:1S:1683:C:H5'	2.15	0.47
79:2S:209:A:H4'	79:2S:211:A:N7	2.30	0.47
79:2S:517:G:H8	79:2S:517:G:H5'	1.80	0.47
79:2S:711:A:H2'	79:2S:712:G:H5'	1.97	0.47
79:2S:1047:A:O2'	79:2S:2633:U:H4'	2.15	0.47
79:2S:2707:C:H2'	79:2S:2708:C:C6	2.50	0.47
1:L1:123:LEU:HD22	1:L1:128:LEU:HB2	1.97	0.46
2:L2:71:LEU:HD22	79:2S:1651:U:C5'	2.45	0.46
7:L7:173:LEU:HD13	7:L7:184:LEU:HD12	1.96	0.46
8:L8:143:ILE:HG22	8:L8:173:MET:CG	2.38	0.46
9:L9:146:LEU:N	9:L9:146:LEU:HD12	2.30	0.46
11:61:125:MET:HG2	11:61:126:ASP:H	1.80	0.46
13:63:71:ALA:HB2	13:63:147:ILE:HG13	1.96	0.46
18:68:184:PHE:CD2	79:2S:2730:G:H4'	2.50	0.46
20:70:152:LEU:HB2	20:70:172:TYR:HD2	1.80	0.46
21:71:60:LYS:NZ	79:2S:1059:G:H4'	2.29	0.46
23:73:46:LEU:HD12	79:2S:2917:G:OP1	2.15	0.46
26:76:23:PRO:HB2	80:8S:91:C:O2'	2.14	0.46
26:76:88:GLU:HA	26:76:93:ALA:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:77:109:GLU:HA	27:77:112:LYS:HD2	1.96	0.46
41:91:12:ARG:HG2	41:91:15:ARG:HH21	1.81	0.46
46:S0:188:LEU:HD21	46:S0:195:TRP:HE1	1.80	0.46
46:S0:193:GLN:HA	46:S0:193:GLN:HE21	1.80	0.46
49:S3:122:VAL:O	49:S3:126:VAL:HG23	2.15	0.46
50:S4:194:THR:HG21	50:S4:231:GLN:OE1	2.15	0.46
51:S5:93:LEU:O	51:S5:97:LEU:HG	2.15	0.46
51:S5:117:THR:O	51:S5:121:ILE:HG13	2.15	0.46
54:S8:60:ILE:HG22	54:S8:62:THR:H	1.80	0.46
59:13:10:GLY:HA3	78:1S:955:A:H5"	1.97	0.46
63:17:102:VAL:HG23	63:17:120:SER:O	2.14	0.46
66:20:87:HIS:HB3	66:20:89:ARG:NH1	2.30	0.46
69:23:127:VAL:HG23	69:23:130:VAL:HG23	1.97	0.46
78:1S:36:C:H2'	78:1S:37:U:C6	2.50	0.46
78:1S:712:G:C2'	78:1S:713:A:H5"	2.25	0.46
78:1S:1163:A:H8	78:1S:1163:A:O5'	1.98	0.46
78:1S:1573:A:H1'	78:1S:1574:G:OP2	2.14	0.46
78:1S:1637:C:H5'	83:MR:7:G:O6	2.15	0.46
79:2S:871:U:H2'	79:2S:872:U:C6	2.49	0.46
79:2S:1121:U:H2'	79:2S:1122:U:C6	2.51	0.46
79:2S:2812:C:H2'	79:2S:2813:A:H8	1.79	0.46
79:2S:3275:U:H3'	79:2S:3276:G:H5"	1.96	0.46
82:PT:23:G:H2'	82:PT:24:C:H6	1.81	0.46
3:L3:284:ARG:HB2	3:L3:356:LEU:HD11	1.97	0.46
5:L5:110:LEU:HB3	5:L5:115:LEU:O	2.15	0.46
11:61:93:ASP:HB3	11:61:94:ARG:NH1	2.31	0.46
13:63:119:TYR:O	13:63:123:ILE:HG23	2.14	0.46
15:65:141:ALA:HB2	79:2S:126:U:H5'	1.97	0.46
22:72:94:ARG:CG	22:72:106:ALA:HB3	2.45	0.46
23:73:22:ILE:CG2	23:73:33:ASN:HB2	2.45	0.46
26:76:71:SER:HB3	26:76:83:ASP:OD2	2.15	0.46
27:77:23:VAL:HA	27:77:45:GLY:HA3	1.97	0.46
47:S1:115:ARG:HG3	47:S1:116:LYS:H	1.79	0.46
48:S2:111:VAL:HG12	48:S2:190:LEU:O	2.15	0.46
50:S4:31:PRO:HB2	50:S4:38:LEU:HD21	1.97	0.46
59:13:139:TRP:CH2	59:13:141:TYR:HB2	2.50	0.46
60:14:37:GLU:HA	78:1S:895:G:H1'	1.98	0.46
60:14:112:ILE:HB	72:26:57:SER:OG	2.15	0.46
65:19:28:LEU:HD22	65:19:29:GLU:N	2.30	0.46
78:1S:94:U:H2'	78:1S:95:G:H5'	1.97	0.46
78:1S:730:G:N3	78:1S:730:G:H2'	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:916:U:H2'	78:1S:917:U:O4'	2.15	0.46
78:1S:1107:G:C2'	78:1S:1108:G:H5'	2.46	0.46
79:2S:116:A:H62	79:2S:153:U:H1'	1.80	0.46
79:2S:517:G:O2'	79:2S:518:G:H5'	2.15	0.46
79:2S:642:U:H2'	79:2S:644:G:OP2	2.16	0.46
79:2S:989:A:H2'	79:2S:990:U:H6	1.80	0.46
79:2S:1916:U:H2'	79:2S:1917:C:C6	2.51	0.46
79:2S:2403:G:H4'	79:2S:2403:G:OP1	2.15	0.46
82:PT:23:G:H2'	82:PT:24:C:C6	2.50	0.46
4:L4:121:ALA:CB	4:L4:235:LEU:HD21	2.45	0.46
4:L4:302:ALA:HA	18:68:39:ARG:HH11	1.80	0.46
8:L8:152:LEU:HD12	8:L8:198:ALA:HB3	1.98	0.46
17:67:111:LYS:O	17:67:153:LYS:HB2	2.15	0.46
18:68:147:ARG:HB3	18:68:147:ARG:NH1	2.30	0.46
21:71:4:SER:HA	79:2S:2630:C:OP2	2.15	0.46
21:71:76:ILE:HG22	21:71:77:ASN:N	2.29	0.46
27:77:75:VAL:HG11	27:77:80:LEU:HD21	1.97	0.46
31:81:62:ARG:HG3	31:81:66:GLY:O	2.15	0.46
50:S4:4:GLY:HA3	78:1S:93:A:O2'	2.16	0.46
55:S9:113:VAL:HB	55:S9:125:ALA:HB1	1.97	0.46
59:13:23:PRO:O	59:13:24:ALA:CB	2.63	0.46
62:16:41:PRO:O	62:16:42:GLU:HB3	2.15	0.46
68:22:74:VAL:HG22	68:22:75:ILE:N	2.31	0.46
69:23:141:GLU:HG2	69:23:142:LYS:H	1.81	0.46
72:26:36:ILE:HD11	72:26:38:ARG:HD3	1.96	0.46
74:28:17:GLY:O	74:28:18:ARG:HD3	2.15	0.46
77:31:119:ARG:NE	77:31:139:LEU:HD21	2.30	0.46
78:1S:487:G:C3'	78:1S:488:G:H5"	2.43	0.46
81:5S:66:A:H2'	81:5S:67:G:O4'	2.16	0.46
2:L2:58:LEU:HD13	2:L2:75:ILE:CG2	2.46	0.46
2:L2:180:LEU:HA	79:2S:2149:A:O2'	2.16	0.46
3:L3:48:GLY:O	3:L3:335:ILE:HD12	2.16	0.46
4:L4:138:ARG:HD3	4:L4:245:GLY:C	2.41	0.46
4:L4:235:LEU:CD1	4:L4:238:LEU:HD12	2.46	0.46
5:L5:128:GLU:HG3	5:L5:129:TYR:N	2.30	0.46
7:L7:66:LYS:O	7:L7:70:LYS:HG3	2.16	0.46
8:L8:238:LEU:HB2	8:L8:243:GLN:HG2	1.98	0.46
11:61:26:SER:HB3	11:61:64:LYS:O	2.15	0.46
13:63:165:SER:O	13:63:166:ALA:HB3	2.16	0.46
14:64:73:PRO:HG3	79:2S:559:A:O2'	2.16	0.46
15:65:96:ARG:HH11	79:2S:31:C:H5'	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:84:LEU:O	16:66:84:LEU:HD23	2.15	0.46
16:66:142:SER:O	16:66:145:VAL:HG22	2.16	0.46
18:68:110:ALA:O	18:68:114:ILE:HG13	2.15	0.46
20:70:1:MET:C	79:2S:1323:G:H5"	2.39	0.46
20:70:167:ARG:HD2	20:70:168:PRO:HD2	1.97	0.46
35:85:12:LYS:HG2	35:85:16:GLN:NE2	2.31	0.46
44:P0:16:ARG:O	44:P0:16:ARG:HG2	2.15	0.46
49:S3:72:LEU:HG	56:10:20:VAL:HG11	1.97	0.46
51:S5:114:ILE:O	51:S5:118:LEU:HG	2.15	0.46
70:24:63:GLN:HB2	70:24:68:LYS:HB3	1.98	0.46
75:29:53:ASN:HB2	75:29:55:PHE:CE2	2.50	0.46
76:30:55:ARG:HG3	76:30:55:ARG:HH11	1.78	0.46
78:1S:182:A:H2'	78:1S:183:U:C6	2.50	0.46
78:1S:1106:U:H2'	78:1S:1107:G:C8	2.51	0.46
78:1S:1679:G:H2'	78:1S:1680:G:O4'	2.15	0.46
79:2S:129:U:H2'	79:2S:130:A:H8	1.79	0.46
79:2S:577:C:H2'	79:2S:579:G:H5"	1.97	0.46
79:2S:848:A:C8	79:2S:849:C:H1'	2.51	0.46
79:2S:1000:C:H42	79:2S:1046:A:H62	1.64	0.46
79:2S:1887:A:H2'	79:2S:1888:U:H5'	1.98	0.46
80:8S:17:A:H2'	80:8S:18:U:O4'	2.15	0.46
82:PT:6:G:O2'	82:PT:7:G:H5'	2.16	0.46
2:L2:199:THR:HA	79:2S:2147:A:H5"	1.98	0.46
3:L3:3:HIS:CD2	79:2S:2938:G:H3'	2.47	0.46
3:L3:17:LEU:HA	3:L3:18:PRO:C	2.41	0.46
3:L3:227:GLU:OE1	79:2S:1887:A:H5"	2.16	0.46
4:L4:145:ILE:CD1	4:L4:148:ILE:HG12	2.45	0.46
5:L5:218:ARG:HG2	5:L5:218:ARG:HH11	1.81	0.46
8:L8:163:VAL:HA	8:L8:166:LEU:HG	1.97	0.46
9:L9:150:SER:O	9:L9:154:VAL:HG23	2.15	0.46
14:64:77:ARG:O	14:64:81:VAL:HG23	2.15	0.46
19:69:121:HIS:HE1	79:2S:1719:G:N7	2.14	0.46
31:81:23:VAL:O	31:81:28:ARG:NH1	2.48	0.46
42:92:55:LYS:HA	42:92:56:PRO:HD3	1.81	0.46
47:S1:35:PRO:HD2	47:S1:38:PHE:HE2	1.80	0.46
52:S6:23:ARG:HB3	52:S6:41:VAL:HA	1.98	0.46
53:S7:143:LEU:HD13	53:S7:144:VAL:HG22	1.98	0.46
57:11:34:TRP:CH2	57:11:36:LYS:HD3	2.51	0.46
59:13:86:GLU:HG3	59:13:87:ASP:H	1.80	0.46
64:18:88:ARG:HG3	78:1S:1547:A:H4'	1.96	0.46
69:23:60:GLU:HA	69:23:68:ILE:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:25:41:ILE:HG13	71:25:42:LEU:N	2.29	0.46
74:28:53:ILE:HG22	74:28:54:LEU:N	2.30	0.46
78:1S:93:A:C8	78:1S:398:G:H2'	2.49	0.46
78:1S:379:U:C2'	78:1S:380:U:H5"	2.45	0.46
78:1S:1317:C:H2'	78:1S:1318:G:O4'	2.16	0.46
78:1S:1686:C:H2'	78:1S:1687:U:C5'	2.44	0.46
79:2S:154:U:OP1	79:2S:158:G:H5'	2.16	0.46
79:2S:932:U:H4'	79:2S:933:A:H2'	1.96	0.46
79:2S:1330:A:C6	79:2S:1332:A:H1'	2.50	0.46
79:2S:2684:C:H2'	79:2S:2685:C:H6	1.80	0.46
7:L7:88:ARG:CG	7:L7:111:ILE:HA	2.45	0.46
8:L8:99:PRO:CG	8:L8:190:VAL:HG23	2.46	0.46
11:61:23:VAL:HG11	11:61:29:ARG:HD3	1.97	0.46
15:65:50:ARG:CB	15:65:50:ARG:HH11	2.28	0.46
15:65:176:LYS:HZ1	79:2S:65:A:H5'	1.79	0.46
16:66:21:SER:HA	16:66:87:MET:SD	2.56	0.46
17:67:117:ILE:CG1	17:67:148:LEU:HB3	2.46	0.46
21:71:54:HIS:HB3	21:71:57:TYR:CD2	2.51	0.46
21:71:56:PHE:HD1	21:71:57:TYR:CE1	2.34	0.46
21:71:64:VAL:HA	21:71:73:GLY:O	2.16	0.46
26:76:6:LEU:HD23	26:76:6:LEU:N	2.30	0.46
34:84:91:ARG:HA	34:84:95:ILE:HD13	1.97	0.46
46:S0:31:VAL:HG23	46:S0:149:LEU:O	2.14	0.46
46:S0:170:ILE:HD12	46:S0:170:ILE:N	2.25	0.46
46:S0:177:LEU:O	46:S0:181:VAL:HG13	2.16	0.46
47:S1:87:ARG:HB2	47:S1:101:HIS:CD2	2.50	0.46
47:S1:117:TRP:N	78:1S:932:U:OP2	2.48	0.46
50:S4:10:LYS:HG2	50:S4:27:TYR:CD1	2.51	0.46
53:S7:70:PHE:O	53:S7:74:GLN:HB2	2.15	0.46
62:16:97:VAL:HG12	62:16:98:ASP:N	2.20	0.46
66:20:22:ILE:HD11	66:20:116:VAL:HG13	1.97	0.46
66:20:52:LYS:O	66:20:52:LYS:HG3	2.15	0.46
67:21:80:LYS:NZ	67:21:80:LYS:HB3	2.30	0.46
69:23:109:ARG:NH2	69:23:112:LYS:HG3	2.31	0.46
70:24:35:VAL:HG22	70:24:36:SER:N	2.30	0.46
70:24:43:LYS:O	70:24:46:GLU:HG2	2.15	0.46
78:1S:200:A:H2'	78:1S:201:G:O4'	2.16	0.46
78:1S:1448:G:C8	78:1S:1448:G:H5'	2.51	0.46
78:1S:1659:A:H2'	78:1S:1660:A:C8	2.50	0.46
79:2S:127:G:H2'	79:2S:128:G:C8	2.50	0.46
79:2S:980:A:H2'	79:2S:981:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1338:C:H2'	79:2S:1339:C:H6	1.79	0.46
79:2S:1522:U:H5'	79:2S:1604:G:H1'	1.98	0.46
79:2S:1818:U:H2'	79:2S:1819:U:C5'	2.45	0.46
79:2S:1930:A:O4'	79:2S:1932:A:H4'	2.16	0.46
79:2S:2809:C:H2'	79:2S:2810:C:H4'	1.96	0.46
79:2S:2941:A:H8	79:2S:2941:A:OP2	1.97	0.46
79:2S:2948:C:H2'	79:2S:2949:U:C6	2.51	0.46
80:8S:70:G:H1'	80:8S:88:A:H61	1.79	0.46
2:L2:65:ASP:HB3	2:L2:68:LYS:O	2.16	0.46
2:L2:92:LYS:HA	2:L2:103:PRO:HD2	1.98	0.46
2:L2:184:ARG:HA	2:L2:187:HIS:CD2	2.50	0.46
3:L3:43:LEU:HB3	3:L3:181:ILE:HG21	1.97	0.46
5:L5:285:ARG:NH1	81:5S:62:U:H4'	2.30	0.46
6:L6:67:GLY:HA3	6:L6:74:VAL:HB	1.97	0.46
10:60:212:GLU:C	10:60:214:PRO:HD3	2.40	0.46
17:67:65:SER:O	17:67:66:SER:HB2	2.16	0.46
19:69:69:SER:HB2	19:69:74:ARG:CB	2.46	0.46
20:70:111:ALA:HA	20:70:115:ARG:HA	1.98	0.46
24:74:48:ARG:HH22	79:2S:2110:G:H2'	1.81	0.46
25:75:142:ILE:OXT	25:75:142:ILE:HD13	2.15	0.46
27:77:87:LEU:HG	27:77:88:ASP:N	2.31	0.46
28:78:124:ILE:HG12	28:78:144:VAL:CG2	2.45	0.46
28:78:132:LYS:O	28:78:136:GLU:HG3	2.16	0.46
30:80:81:VAL:HG23	30:80:83:LYS:H	1.80	0.46
48:S2:144:TRP:CD2	48:S2:173:PRO:HG3	2.51	0.46
51:S5:59:VAL:HG13	51:S5:65:ARG:HH11	1.79	0.46
54:S8:82:VAL:HB	54:S8:101:ILE:HG22	1.97	0.46
55:S9:50:SER:HB3	78:1S:1:U:C5	2.49	0.46
56:10:25:LYS:HD3	56:10:62:GLN:HE22	1.79	0.46
58:12:24:ILE:HD13	58:12:24:ILE:N	2.26	0.46
60:14:31:THR:HG22	60:14:38:THR:HA	1.98	0.46
61:15:45:PHE:HA	61:15:49:MET:SD	2.56	0.46
65:19:105:LEU:HB3	65:19:122:ARG:NH1	2.31	0.46
65:19:125:SER:O	65:19:129:GLN:HG3	2.16	0.46
66:20:81:THR:O	75:29:54:LYS:HD2	2.16	0.46
69:23:19:ARG:HH12	78:1S:610:G:N2	2.14	0.46
78:1S:1050:G:O2'	78:1S:1051:G:H5'	2.16	0.46
78:1S:1143:A:H2'	78:1S:1144:U:C6	2.51	0.46
78:1S:1600:A:O2'	78:1S:1601:G:H5"	2.15	0.46
79:2S:757:C:H2'	79:2S:758:C:C5'	2.45	0.46
79:2S:1464:G:H21	79:2S:1511:U:H3	1.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1779:C:H2'	79:2S:1780:G:H5"	1.98	0.46
82:ET:24:C:H2'	82:ET:25:U:C6	2.51	0.46
1:L1:57:ASN:ND2	1:L1:147:LYS:HB3	2.31	0.46
2:L2:229:ALA:HB3	2:L2:234:LYS:CG	2.46	0.46
4:L4:205:PRO:CG	4:L4:225:VAL:HG22	2.41	0.46
5:L5:95:TRP:CE3	5:L5:198:TYR:HB3	2.51	0.46
6:L6:171:PRO:HD2	33:83:44:TYR:OH	2.16	0.46
7:L7:141:TYR:HA	7:L7:144:ILE:HD12	1.96	0.46
7:L7:235:PHE:HE2	20:70:35:VAL:HG23	1.81	0.46
8:L8:109:LEU:HD23	8:L8:109:LEU:O	2.15	0.46
11:61:10:ARG:HG2	81:5S:55:A:H1'	1.98	0.46
11:61:54:VAL:HG11	11:61:57:PHE:CE2	2.50	0.46
13:63:172:LEU:HD23	13:63:172:LEU:C	2.40	0.46
15:65:39:ALA:O	15:65:61:ILE:HB	2.16	0.46
18:68:83:VAL:HB	18:68:103:ALA:CB	2.45	0.46
20:70:23:LYS:O	20:70:24:LEU:HB2	2.16	0.46
20:70:82:ASP:HA	20:70:87:THR:HA	1.97	0.46
23:73:33:ASN:O	23:73:34:LEU:HD23	2.15	0.46
23:73:80:ARG:HA	23:73:95:PHE:CD2	2.51	0.46
42:92:29:LYS:HD2	42:92:31:GLY:H	1.80	0.46
45:RC:176:LYS:HE3	45:RC:196:ASN:O	2.15	0.46
51:S5:72:HIS:HB3	62:16:47:LYS:HE2	1.96	0.46
52:S6:82:SER:O	52:S6:83:CYS:HB2	2.16	0.46
53:S7:85:PHE:HD2	53:S7:85:PHE:HA	1.70	0.46
57:11:45:PRO:HG2	57:11:48:ALA:HB2	1.97	0.46
58:12:67:THR:HG22	58:12:68:GLU:N	2.31	0.46
59:13:22:ALA:HB1	59:13:23:PRO:CA	2.43	0.46
61:15:25:LEU:HD13	61:15:112:LEU:HD11	1.97	0.46
62:16:118:ILE:HG23	62:16:119:ALA:N	2.31	0.46
62:16:135:ARG:HE	78:1S:1582:U:H5"	1.81	0.46
63:17:116:LYS:HB2	63:17:116:LYS:NZ	2.31	0.46
66:20:85:ARG:N	66:20:85:ARG:HD2	2.29	0.46
72:26:87:ARG:HD3	72:26:92:ARG:HA	1.98	0.46
78:1S:1013:A:H2'	78:1S:1014:G:H5'	1.98	0.46
79:2S:189:G:H5'	79:2S:223:U:O2'	2.16	0.46
79:2S:282:G:O2'	79:2S:283:G:OP2	2.21	0.46
79:2S:647:A:H8	79:2S:647:A:OP2	1.99	0.46
79:2S:1102:A:O3'	79:2S:1103:A:H3'	2.16	0.46
79:2S:1449:A:H2'	79:2S:1450:G:O4'	2.16	0.46
79:2S:1867:A:H2'	79:2S:1868:G:C8	2.51	0.46
79:2S:2336:U:H2'	79:2S:2337:C:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2426:U:H2'	79:2S:2427:U:H6	1.81	0.46
79:2S:2563:G:H2'	79:2S:2564:G:C8	2.50	0.46
79:2S:2819:A:H2'	79:2S:2820:A:H5'	1.98	0.46
6:L6:58:LEU:HD21	6:L6:102:ASN:HA	1.98	0.46
15:65:68:ARG:HD2	15:65:127:TYR:C	2.40	0.46
17:67:120:ASN:ND2	17:67:145:HIS:HB2	2.31	0.46
18:68:170:ARG:O	18:68:171:LYS:HB2	2.15	0.46
23:73:13:ILE:HD11	23:73:53:SER:HB2	1.98	0.46
31:81:68:GLU:HG3	31:81:69:TYR:H	1.81	0.46
36:86:94:ILE:HG12	36:86:98:ARG:NH1	2.31	0.46
44:P0:76:LEU:O	44:P0:76:LEU:HD13	2.15	0.46
46:S0:7:PHE:CD2	46:S0:7:PHE:N	2.84	0.46
46:S0:59:LEU:HD22	67:21:79:LEU:HD21	1.98	0.46
46:S0:77:SER:HB2	46:S0:86:VAL:HG11	1.97	0.46
47:S1:67:GLU:HG3	47:S1:84:ILE:O	2.16	0.46
49:S3:168:ILE:C	49:S3:168:ILE:HD12	2.41	0.46
53:S7:39:ARG:N	53:S7:40:PRO:HD2	2.31	0.46
54:S8:150:ALA:HB1	54:S8:152:ILE:HG12	1.97	0.46
55:S9:77:ILE:HG23	55:S9:86:LEU:HD21	1.98	0.46
59:13:16:ILE:HA	78:1S:959:U:H5'	1.98	0.46
61:15:16:SER:HB3	61:15:21:ASP:OD1	2.16	0.46
66:20:69:LYS:HB3	78:1S:1280:C:H4'	1.98	0.46
67:21:70:ASN:HA	67:21:79:LEU:CD1	2.46	0.46
72:26:41:ILE:HD13	72:26:41:ILE:N	2.30	0.46
77:31:119:ARG:HE	77:31:139:LEU:CD2	2.29	0.46
78:1S:101:U:H2'	78:1S:102:U:O4'	2.16	0.46
78:1S:878:G:H2'	78:1S:879:G:H8	1.74	0.46
78:1S:1082:C:O2	78:1S:1082:C:C2'	2.63	0.46
78:1S:1263:G:H2'	78:1S:1264:G:O4'	2.16	0.46
78:1S:1336:A:C3'	78:1S:1337:A:H5"	2.44	0.46
79:2S:105:C:H2'	79:2S:106:A:H8	1.79	0.46
79:2S:157:A:H2'	79:2S:158:G:O4'	2.16	0.46
79:2S:204:A:H2'	79:2S:205:C:O4'	2.15	0.46
79:2S:338:A:H3'	79:2S:339:C:C5'	2.46	0.46
79:2S:1328:C:O2'	79:2S:1329:U:H5'	2.16	0.46
79:2S:1658:G:H2'	79:2S:1659:U:H6	1.79	0.46
79:2S:2289:U:H2'	79:2S:2290:C:C6	2.50	0.46
79:2S:2832:C:H2'	79:2S:2833:A:H8	1.80	0.46
79:2S:3169:U:H2'	79:2S:3170:A:C4'	2.45	0.46
1:L1:108:ASN:HB2	1:L1:130:LYS:HE2	1.98	0.46
2:L2:200:ARG:HD2	79:2S:2186:U:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:52:VAL:HG21	81:5S:6:C:H4'	1.97	0.46
5:L5:287:ALA:O	5:L5:290:ILE:HG12	2.16	0.46
8:L8:63:LYS:HA	8:L8:63:LYS:NZ	2.31	0.46
8:L8:92:LYS:HB3	8:L8:92:LYS:NZ	2.30	0.46
17:67:15:ALA:HB3	17:67:150:VAL:CG2	2.45	0.46
17:67:29:THR:C	17:67:32:THR:HG22	2.41	0.46
19:69:109:TYR:HB3	19:69:115:ILE:HG22	1.97	0.46
23:73:33:ASN:N	23:73:33:ASN:HD22	2.14	0.46
30:80:84:LEU:N	30:80:84:LEU:HD12	2.31	0.46
32:82:42:VAL:HG12	32:82:52:GLN:NE2	2.31	0.46
32:82:46:PHE:CE1	79:2S:1145:G:H5'	2.51	0.46
42:92:7:THR:O	42:92:8:ARG:HB2	2.15	0.46
47:S1:148:ASN:HB2	63:17:126:ALA:HB3	1.97	0.46
50:S4:194:THR:O	50:S4:195:ILE:CB	2.64	0.46
52:S6:186:ARG:O	52:S6:190:GLN:HG2	2.15	0.46
54:S8:158:SER:HB3	79:2S:2067:U:C5	2.51	0.46
55:S9:128:LEU:O	55:S9:133:HIS:HB2	2.16	0.46
55:S9:149:ARG:HA	78:1S:765:G:O6	2.16	0.46
56:10:86:ILE:HB	56:10:88:PRO:HD2	1.97	0.46
57:11:70:ILE:HD12	57:11:70:ILE:H	1.81	0.46
59:13:107:LYS:HG3	59:13:107:LYS:O	2.15	0.46
60:14:91:THR:O	60:14:92:LYS:HG2	2.16	0.46
63:17:102:VAL:HB	63:17:106:THR:HB	1.97	0.46
64:18:39:GLY:H	78:1S:1566:U:H5"	1.81	0.46
64:18:54:LEU:H	64:18:54:LEU:CD2	2.25	0.46
69:23:137:LYS:CD	69:23:139:LYS:HE2	2.46	0.46
74:28:32:PHE:N	74:28:32:PHE:HD2	2.13	0.46
78:1S:38:C:C2'	78:1S:39:A:H5'	2.46	0.46
78:1S:330:G:H2'	78:1S:331:A:O4'	2.15	0.46
78:1S:429:G:OP1	78:1S:439:U:H5"	2.16	0.46
79:2S:407:A:C2	80:8S:17:A:H1'	2.51	0.46
79:2S:1292:C:H2'	79:2S:1293:U:O4'	2.16	0.46
79:2S:1398:U:H5"	80:8S:9:A:OP1	2.16	0.46
79:2S:1780:G:H2'	79:2S:1781:C:C6	2.51	0.46
79:2S:1804:A:H2'	79:2S:1805:C:C6	2.51	0.46
79:2S:1827:C:H2'	79:2S:1828:A:C8	2.51	0.46
79:2S:1869:C:H2'	79:2S:1870:C:H6	1.79	0.46
79:2S:2539:C:H4'	79:2S:2540:A:O4'	2.16	0.46
79:2S:3183:A:H2	79:2S:3188:G:H4'	1.81	0.46
79:2S:3237:U:H2'	79:2S:3238:G:O4'	2.16	0.46
2:L2:83:HIS:HB3	43:93:64:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:116:ARG:HG2	3:L3:175:LYS:HA	1.98	0.45
3:L3:128:LYS:O	3:L3:131:THR:HG23	2.17	0.45
4:L4:125:ALA:HB1	4:L4:238:LEU:HB3	1.97	0.45
5:L5:104:LEU:HA	5:L5:247:ILE:HG23	1.97	0.45
5:L5:115:LEU:H	5:L5:115:LEU:HD22	1.81	0.45
5:L5:180:PHE:HB3	5:L5:181:PRO:HD2	1.98	0.45
8:L8:150:LEU:HD21	8:L8:218:ILE:CD1	2.46	0.45
10:60:144:ASN:HA	10:60:147:VAL:HG23	1.98	0.45
13:63:101:ARG:HA	79:2S:76:G:C6	2.51	0.45
15:65:133:ILE:C	15:65:134:LEU:HD12	2.41	0.45
16:66:22:VAL:HG11	16:66:122:GLN:HG3	1.97	0.45
17:67:67:ILE:CG2	17:67:68:GLY:N	2.78	0.45
17:67:69:ARG:HD3	79:2S:3309:G:H1’	1.98	0.45
25:75:56:ARG:O	25:75:57:LEU:HB2	2.15	0.45
28:78:104:THR:OG1	28:78:127:ALA:HB2	2.16	0.45
35:85:76:GLN:HB2	35:85:77:PRO:HD2	1.98	0.45
42:92:9:LYS:HA	42:92:21:THR:O	2.16	0.45
47:S1:150:VAL:HB	78:1S:1067:C:H5”	1.97	0.45
49:S3:41:VAL:HG12	66:20:111:GLY:H	1.81	0.45
50:S4:90:ILE:HB	50:S4:99:PHE:HB2	1.98	0.45
52:S6:182:GLN:O	52:S6:185:GLN:HB3	2.15	0.45
53:S7:112:ARG:HG2	53:S7:112:ARG:HH11	1.81	0.45
54:S8:102:VAL:HG23	54:S8:167:ALA:HB3	1.98	0.45
55:S9:123:HIS:CE1	76:30:37:ARG:HB2	2.47	0.45
61:15:98:ASN:HB2	61:15:122:THR:CG2	2.43	0.45
68:22:39:GLN:O	68:22:43:LYS:HB2	2.16	0.45
73:27:74:SER:O	73:27:75:GLU:CB	2.65	0.45
78:1S:1043:A:H3’	78:1S:1044:U:C6	2.51	0.45
78:1S:1163:A:H2’	78:1S:1164:G:O4’	2.16	0.45
79:2S:638:C:H2’	79:2S:639:G:H8	1.81	0.45
79:2S:793:C:H2’	79:2S:794:U:O4’	2.16	0.45
79:2S:904:A:H5’	79:2S:1536:G:O2’	2.16	0.45
79:2S:1818:U:H2’	79:2S:1819:U:H5”	1.98	0.45
79:2S:1904:C:C2	79:2S:2951:G:H5’	2.51	0.45
79:2S:2916:U:H2’	79:2S:2917:G:H8	1.81	0.45
79:2S:3277:U:O2	79:2S:3277:U:H2’	2.15	0.45
80:8S:40:A:H2’	80:8S:41:A:H8	1.79	0.45
82:ET:25:U:H2’	82:ET:26:C:C6	2.51	0.45
2:L2:13:GLY:HA2	2:L2:16:PHE:HB2	1.98	0.45
4:L4:51:ALA:HB3	80:8S:27:U:H4’	1.99	0.45
9:L9:41:ILE:HG23	9:L9:42:ASP:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:97:LEU:HD21	10:60:126:ALA:CB	2.45	0.45
11:61:40:LEU:CD2	11:61:114:ILE:HG12	2.44	0.45
14:64:70:PHE:HE2	14:64:72:LEU:HD23	1.81	0.45
17:67:122:ALA:HB1	17:67:123:PRO:CD	2.46	0.45
18:68:42:ALA:HB3	18:68:45:ASN:HD22	1.79	0.45
19:69:80:LYS:HE3	79:2S:1940:G:OP1	2.17	0.45
19:69:143:ILE:HG23	19:69:146:LYS:HE3	1.98	0.45
21:71:27:LEU:H	21:71:27:LEU:CD2	2.28	0.45
27:77:23:VAL:HG21	27:77:43:VAL:HG21	1.97	0.45
31:81:9:THR:HG22	31:81:10:ARG:N	2.31	0.45
37:87:34:CYS:HB3	37:87:39:TYR:H	1.81	0.45
48:S2:240:LEU:HD12	48:S2:240:LEU:N	2.32	0.45
54:S8:172:ARG:CB	54:S8:175:GLN:HB2	2.46	0.45
58:12:74:LEU:HD11	77:31:106:TYR:HB3	1.98	0.45
60:14:132:ARG:O	72:26:28:LYS:HG3	2.16	0.45
62:16:141:SER:O	62:16:143:ARG:N	2.46	0.45
64:18:48:LYS:HE2	65:19:50:ALA:HB2	1.98	0.45
78:1S:63:G:H4’	78:1S:170:U:H5	1.81	0.45
78:1S:647:G:H2’	78:1S:648:G:H8	1.82	0.45
78:1S:1358:G:H2’	78:1S:1359:C:C6	2.50	0.45
79:2S:208:C:H2’	79:2S:209:A:O4’	2.17	0.45
79:2S:273:A:H2’	79:2S:274:G:C8	2.51	0.45
79:2S:686:G:H2’	79:2S:687:U:O4’	2.17	0.45
79:2S:1002:A:H2’	79:2S:1003:A:C8	2.52	0.45
79:2S:1257:C:H3’	79:2S:1258:U:C5’	2.39	0.45
79:2S:1947:G:H1	79:2S:2101:C:H42	1.63	0.45
79:2S:2772:C:H1’	79:2S:2773:C:H5	1.81	0.45
79:2S:3326:G:H2’	79:2S:3327:G:C8	2.51	0.45
2:L2:223:SER:O	2:L2:225:ILE:HD12	2.17	0.45
3:L3:261:MET:HB2	3:L3:264:VAL:HG13	1.99	0.45
3:L3:308:MET:HE2	3:L3:370:PHE:HB2	1.98	0.45
4:L4:181:VAL:O	4:L4:182:LEU:HB3	2.16	0.45
7:L7:98:LYS:O	7:L7:102:VAL:HG23	2.16	0.45
10:60:89:VAL:HG22	10:60:136:PHE:CE2	2.51	0.45
11:61:108:GLU:HG3	11:61:122:ILE:HG21	1.98	0.45
13:63:179:PHE:HD1	13:63:182:ILE:HD12	1.81	0.45
17:67:101:ASN:OD1	79:2S:389:A:H1’	2.15	0.45
17:67:111:LYS:NZ	17:67:111:LYS:HB3	2.30	0.45
18:68:179:ARG:HD2	18:68:182:LYS:HG2	1.98	0.45
18:68:182:LYS:HE3	79:2S:2764:C:OP1	2.16	0.45
20:70:119:ARG:HB2	81:5S:96:U:C4’	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:53:HIS:ND1	25:75:56:ARG:HG2	2.31	0.45
26:76:112:ASP:O	26:76:116:LYS:HG3	2.16	0.45
26:76:119:ILE:HG22	26:76:124:GLY:HA3	1.98	0.45
38:88:45:VAL:HG23	38:88:45:VAL:O	2.15	0.45
45:RC:236:ALA:C	45:RC:238:ASP:H	2.24	0.45
46:S0:143:VAL:HG12	46:S0:156:VAL:HG12	1.98	0.45
49:S3:123:VAL:HG13	49:S3:134:CYS:SG	2.57	0.45
50:S4:222:LEU:HA	50:S4:225:VAL:CG2	2.46	0.45
55:S9:163:PRO:CG	78:1S:512:A:H5"	2.40	0.45
57:11:75:VAL:HG21	57:11:117:VAL:CG1	2.46	0.45
57:11:129:ARG:HG2	57:11:129:ARG:HH11	1.81	0.45
65:19:10:ALA:HB3	65:19:13:ASP:OD2	2.16	0.45
65:19:52:GLY:C	65:19:54:PHE:H	2.24	0.45
66:20:46:GLU:OE1	66:20:46:GLU:HA	2.17	0.45
72:26:87:ARG:HB2	72:26:92:ARG:HG2	1.98	0.45
78:1S:312:A:N3	78:1S:314:C:H2'	2.31	0.45
78:1S:386:G:H21	78:1S:425:A:H2	1.65	0.45
78:1S:422:G:H2'	78:1S:423:G:N7	2.32	0.45
78:1S:586:G:H2'	78:1S:587:C:H6	1.81	0.45
78:1S:1074:G:H2'	78:1S:1075:C:C6	2.51	0.45
78:1S:1407:U:H2'	78:1S:1408:G:O4'	2.15	0.45
79:2S:856:G:O2'	79:2S:857:G:H5'	2.16	0.45
79:2S:1049:C:H2'	79:2S:1050:U:C6	2.51	0.45
79:2S:1235:U:H4'	79:2S:1236:G:H5"	1.97	0.45
79:2S:1240:A:H3'	79:2S:1241:U:H5"	1.98	0.45
79:2S:1516:C:H2'	79:2S:1517:G:C8	2.52	0.45
79:2S:1605:A:O2'	79:2S:1607:U:H6	1.99	0.45
79:2S:1689:U:H2'	79:2S:1690:C:H6	1.80	0.45
79:2S:2117:A:H2'	79:2S:2118:C:O4'	2.16	0.45
79:2S:2155:G:H2'	79:2S:2156:C:O4'	2.16	0.45
79:2S:2697:A:H2'	79:2S:2698:G:C8	2.51	0.45
79:2S:2836:C:H2'	79:2S:2837:A:H5'	1.97	0.45
79:2S:2945:G:H4'	79:2S:2947:G:C8	2.51	0.45
79:2S:3349:C:H2'	79:2S:3350:C:C6	2.52	0.45
81:5S:64:A:H5'	81:5S:65:G:H5"	1.97	0.45
2:L2:113:VAL:HG12	2:L2:166:ILE:HA	1.98	0.45
2:L2:245:LEU:HD12	79:2S:2152:A:O3'	2.16	0.45
3:L3:160:VAL:O	3:L3:180:GLU:HA	2.16	0.45
4:L4:23:PRO:O	4:L4:24:ALA:HB3	2.16	0.45
4:L4:60:THR:HG22	4:L4:61:SER:N	2.31	0.45
8:L8:157:VAL:CG1	8:L8:159:PRO:HD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:180:TYR:HB2	40:90:85:LEU:CD1	2.47	0.45
11:61:162:TRP:CZ2	11:61:166:LYS:HD2	2.51	0.45
14:64:108:ARG:O	14:64:112:LEU:HG	2.17	0.45
17:67:112:LEU:HD12	17:67:152:GLU:HA	1.98	0.45
30:80:13:LYS:HD3	30:80:100:ILE:HG23	1.99	0.45
42:92:29:LYS:HD3	42:92:30:ALA:N	2.31	0.45
44:P0:18:TYR:HD1	44:P0:22:TYR:HE2	1.65	0.45
44:P0:99:VAL:O	44:P0:99:VAL:HG12	2.16	0.45
46:S0:119:ARG:HA	46:S0:119:ARG:NE	2.31	0.45
47:S1:53:GLY:O	47:S1:54:LEU:HB2	2.16	0.45
47:S1:88:VAL:HG12	47:S1:89:ASP:N	2.32	0.45
52:S6:167:LYS:HD3	52:S6:169:TYR:HE2	1.81	0.45
67:21:19:ALA:HA	67:21:71:ARG:NH1	2.30	0.45
68:22:37:PHE:CZ	68:22:103:ILE:HG21	2.52	0.45
78:1S:19:A:H2'	78:1S:20:G:O4'	2.16	0.45
78:1S:71:A:H2'	78:1S:72:A:C4'	2.45	0.45
78:1S:144:U:O2'	78:1S:145:A:H5'	2.16	0.45
78:1S:840:U:HO2'	78:1S:841:U:H6	1.62	0.45
79:2S:1741:A:H2'	79:2S:1742:U:O4'	2.17	0.45
79:2S:1813:A:C2'	79:2S:1814:A:H5'	2.47	0.45
79:2S:1818:U:O5'	79:2S:1818:U:H6	2.00	0.45
79:2S:1946:A:H2'	79:2S:1947:G:C8	2.52	0.45
79:2S:2124:G:H2'	79:2S:2125:A:H8	1.82	0.45
79:2S:2581:U:H2'	79:2S:2582:C:H6	1.81	0.45
80:8S:18:U:H2'	80:8S:19:C:C6	2.51	0.45
80:8S:60:U:O2'	80:8S:61:A:H5'	2.16	0.45
80:8S:79:A:H2'	80:8S:80:A:C4'	2.47	0.45
6:L6:80:ASN:HB3	6:L6:83:TYR:CD2	2.50	0.45
7:L7:184:LEU:O	7:L7:188:ILE:HG12	2.16	0.45
8:L8:78:PHE:O	8:L8:80:TYR:N	2.50	0.45
11:61:134:PRO:HB2	81:5S:55:A:C2	2.52	0.45
11:61:149:GLY:O	11:61:153:LYS:HG3	2.16	0.45
14:64:46:ILE:O	14:64:46:ILE:HG13	2.15	0.45
17:67:108:ASP:HB3	17:67:111:LYS:HG2	1.97	0.45
18:68:135:GLN:HA	79:2S:730:C:OP1	2.16	0.45
23:73:62:VAL:HG21	23:73:69:LEU:HB3	1.99	0.45
27:77:14:VAL:O	27:77:19:ALA:HB1	2.16	0.45
27:77:14:VAL:HG12	27:77:79:HIS:C	2.42	0.45
28:78:64:GLN:HB2	28:78:67:HIS:HE1	1.82	0.45
31:81:10:ARG:HH21	79:2S:3386:G:H5"	1.78	0.45
38:88:26:LYS:NZ	79:2S:1751:G:H5'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:37:VAL:HG12	46:S0:38:PHE:N	2.32	0.45
47:S1:199:ASN:O	47:S1:202:LYS:HG2	2.16	0.45
49:S3:175:VAL:HG13	49:S3:182:LEU:HB2	1.99	0.45
51:S5:76:ARG:HH21	62:16:122:ARG:HG3	1.81	0.45
52:S6:20:ASP:O	52:S6:24:ILE:HG13	2.17	0.45
56:10:82:LEU:HD12	56:10:82:LEU:O	2.16	0.45
62:16:83:GLN:O	62:16:87:LYS:HG3	2.16	0.45
64:18:16:ARG:HG3	64:18:16:ARG:NH1	2.31	0.45
66:20:48:HIS:O	66:20:49:ASN:HB2	2.17	0.45
70:24:102:LYS:HD2	70:24:102:LYS:H	1.80	0.45
71:25:78:ILE:HD12	71:25:78:ILE:N	2.32	0.45
73:27:22:LYS:HD3	78:1S:864:U:H5	1.80	0.45
74:28:29:ARG:HA	74:28:41:VAL:HA	1.98	0.45
78:1S:237:C:C5’	78:1S:238:U:H5’	2.33	0.45
78:1S:777:C:C2’	78:1S:778:G:H5”	2.37	0.45
78:1S:954:G:H2’	78:1S:955:A:C8	2.51	0.45
79:2S:683:U:O5’	79:2S:683:U:H6	2.00	0.45
79:2S:823:C:H2’	79:2S:824:C:C6	2.52	0.45
79:2S:1301:A:H4’	79:2S:1302:A:H5”	1.97	0.45
79:2S:1307:G:H1’	79:2S:1308:A:C8	2.52	0.45
79:2S:2405:C:C5	79:2S:2406:C:C5	3.05	0.45
79:2S:2819:A:C2’	79:2S:2820:A:H5’	2.46	0.45
79:2S:2860:U:C2’	79:2S:2861:U:H5’	2.47	0.45
79:2S:2876:C:O5’	79:2S:2876:C:H6	2.00	0.45
2:L2:41:ILE:HG23	2:L2:42:ARG:N	2.30	0.45
2:L2:196:TRP:CD1	2:L2:197:PRO:HA	2.52	0.45
3:L3:31:ALA:CB	79:2S:3136:G:H5”	2.46	0.45
3:L3:46:PHE:CE1	3:L3:208:VAL:HG21	2.52	0.45
4:L4:187:LEU:CD2	4:L4:198:ARG:HG2	2.47	0.45
4:L4:205:PRO:HB3	4:L4:247:PHE:CD2	2.51	0.45
6:L6:28:GLN:HB2	79:2S:501:A:H4’	1.99	0.45
7:L7:141:TYR:HB2	7:L7:189:ILE:HD12	1.99	0.45
9:L9:41:ILE:O	9:L9:41:ILE:HD13	2.17	0.45
13:63:57:VAL:HG12	13:63:69:VAL:CG2	2.47	0.45
16:66:27:LEU:HG	16:66:33:ILE:HD12	1.98	0.45
17:67:171:ARG:H	17:67:171:ARG:HG2	1.51	0.45
23:73:45:ARG:HB3	23:73:48:ARG:HD2	1.98	0.45
23:73:104:ASN:OD1	23:73:108:GLU:HB2	2.17	0.45
27:77:23:VAL:HA	27:77:45:GLY:CA	2.46	0.45
34:84:38:LEU:HD12	34:84:38:LEU:H	1.81	0.45
42:92:33:ALA:HA	79:2S:2767:U:H5’	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:P0:42:ARG:NH1	44:P0:51:VAL:HG13	2.31	0.45
45:RC:86:ASP:O	45:RC:87:LYS:HB2	2.17	0.45
45:RC:135:THR:HG23	45:RC:141:LEU:HD21	1.99	0.45
45:RC:176:LYS:HB3	45:RC:195:HIS:HB2	1.99	0.45
45:RC:202:LEU:HA	45:RC:243:LEU:HD12	1.98	0.45
46:S0:148:ASP:HB2	46:S0:164:ASN:HD21	1.82	0.45
47:S1:148:ASN:HB3	63:17:126:ALA:HB3	1.98	0.45
47:S1:218:LEU:HD22	47:S1:219:LYS:H	1.80	0.45
48:S2:89:GLN:HE21	48:S2:89:GLN:N	2.14	0.45
49:S3:68:GLU:HA	49:S3:71:LEU:HD12	1.98	0.45
51:S5:117:THR:HG23	51:S5:195:ALA:HB2	1.99	0.45
53:S7:41:LEU:HB3	53:S7:70:PHE:CE1	2.51	0.45
54:S8:8:ARG:HD3	54:S8:21:PHE:HD1	1.82	0.45
54:S8:189:LEU:HA	54:S8:192:TYR:HB2	1.99	0.45
57:11:2:SER:CA	57:11:113:PRO:HA	2.46	0.45
62:16:106:LYS:HB2	62:16:106:LYS:NZ	2.31	0.45
64:18:13:HIS:H	64:18:13:HIS:HD1	1.65	0.45
68:22:27:ILE:HD11	68:22:61:ILE:HD12	1.98	0.45
68:22:28:ARG:HD3	68:22:60:LYS:HE2	1.99	0.45
68:22:62:VAL:HB	73:27:8:LEU:HD21	1.98	0.45
70:24:105:ARG:HD2	78:1S:443:C:H3’	1.99	0.45
71:25:65:LEU:HB3	71:25:71:ILE:CD1	2.46	0.45
74:28:9:LEU:O	74:28:32:PHE:HB2	2.15	0.45
78:1S:102:U:H3’	78:1S:360:A:H61	1.81	0.45
78:1S:1114:G:H1’	78:1S:1115:U:H5	1.82	0.45
78:1S:1184:A:H3’	78:1S:1185:U:H5”	1.98	0.45
78:1S:1609:U:H2’	78:1S:1610:G:O4’	2.17	0.45
78:1S:1681:A:H2’	78:1S:1682:U:H5’	1.99	0.45
78:1S:1685:G:H2’	78:1S:1686:C:H5’	1.98	0.45
79:2S:531:G:H2’	79:2S:532:A:C8	2.52	0.45
79:2S:632:G:H2’	79:2S:633:C:C6	2.52	0.45
79:2S:909:G:H2’	79:2S:910:G:O4’	2.17	0.45
79:2S:2248:C:H3’	79:2S:2273:G:C8	2.51	0.45
79:2S:2440:G:H2’	79:2S:2441:A:C8	2.52	0.45
79:2S:2895:G:H2’	79:2S:2896:A:C5’	2.38	0.45
79:2S:2912:G:H1’	79:2S:3131:U:OP1	2.16	0.45
79:2S:3191:G:H2’	79:2S:3192:U:O4’	2.17	0.45
1:L1:30:GLU:HG3	1:L1:210:MET:SD	2.56	0.45
3:L3:45:SER:O	3:L3:181:ILE:HD13	2.17	0.45
4:L4:3:ARG:HD3	4:L4:22:LEU:N	2.32	0.45
13:63:4:SER:HA	28:78:44:ASN:HD21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:106:GLN:HB3	36:86:18:THR:CG2	2.42	0.45
17:67:22:LEU:C	17:67:24:VAL:N	2.75	0.45
20:70:13:ARG:HA	20:70:56:GLY:HA2	1.97	0.45
37:87:21:ARG:HD2	37:87:37:CYS:SG	2.57	0.45
45:RC:81:LEU:HD11	45:RC:115:ILE:HB	1.98	0.45
49:S3:65:ARG:O	49:S3:69:LEU:HG	2.16	0.45
51:S5:220:VAL:O	51:S5:224:ASN:HB2	2.16	0.45
56:10:59:PHE:HZ	56:10:62:GLN:NE2	2.15	0.45
61:15:75:PRO:HB3	61:15:104:GLN:HG2	1.97	0.45
65:19:13:ASP:HA	65:19:16:ASN:HB2	1.99	0.45
69:23:82:LYS:HD3	69:23:82:LYS:H	1.82	0.45
71:25:61:SER:O	71:25:65:LEU:HG	2.17	0.45
72:26:41:ILE:O	72:26:41:ILE:HG12	2.17	0.45
73:27:19:HIS:HB3	73:27:22:LYS:HG2	1.99	0.45
76:30:14:VAL:HA	76:30:17:GLN:CG	2.42	0.45
78:1S:908:U:H2'	78:1S:909:U:O4'	2.16	0.45
78:1S:1000:C:C5	78:1S:1003:A:H2'	2.52	0.45
78:1S:1062:A:H2'	78:1S:1063:U:O4'	2.16	0.45
78:1S:1404:C:H2'	78:1S:1405:G:C8	2.52	0.45
78:1S:1522:U:H3'	78:1S:1523:G:H5"	1.96	0.45
79:2S:312:C:H2'	79:2S:313:A:H8	1.81	0.45
79:2S:1408:G:H2'	79:2S:1409:G:C8	2.52	0.45
79:2S:2380:U:H2'	79:2S:2381:G:C8	2.52	0.45
79:2S:2549:G:O2'	79:2S:2550:U:H5'	2.17	0.45
79:2S:2951:G:H2'	79:2S:2952:G:O4'	2.17	0.45
1:L1:103:LEU:HD13	1:L1:106:LYS:CG	2.47	0.45
1:L1:180:VAL:O	1:L1:180:VAL:HG12	2.16	0.45
2:L2:186:PHE:O	2:L2:190:ARG:HB3	2.17	0.45
2:L2:240:ALA:HB1	79:2S:2154:U:H4'	1.98	0.45
4:L4:257:LYS:O	4:L4:261:VAL:HG23	2.17	0.45
4:L4:325:LEU:HG	4:L4:331:ALA:HB3	1.99	0.45
5:L5:146:LEU:HD21	5:L5:173:VAL:HG11	1.99	0.45
5:L5:205:SER:HA	5:L5:208:MET:HB2	1.99	0.45
15:65:65:ARG:HG3	15:65:127:TYR:HB3	1.97	0.45
15:65:166:ALA:O	15:65:170:LYS:HG2	2.17	0.45
18:68:69:ARG:NE	79:2S:784:A:H8	2.15	0.45
23:73:93:LEU:CB	24:74:20:LEU:HB3	2.47	0.45
25:75:62:VAL:HA	25:75:87:SER:HB2	1.99	0.45
26:76:86:THR:HG22	26:76:96:PRO:HG3	1.98	0.45
29:79:37:PRO:HB3	79:2S:776:U:H5"	1.99	0.45
33:83:59:VAL:HG22	33:83:62:SER:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:85:50:SER:O	35:85:54:VAL:HG23	2.16	0.45
39:89:38:ASN:HD22	39:89:41:ARG:HD3	1.82	0.45
42:92:100:LYS:HA	42:92:100:LYS:HE3	1.97	0.45
44:P0:69:ASP:O	44:P0:70:LEU:HB2	2.15	0.45
45:RC:117:LYS:H	45:RC:117:LYS:HD2	1.82	0.45
46:S0:74:VAL:HG12	46:S0:76:ILE:HG12	1.98	0.45
50:S4:207:LEU:HB3	50:S4:219:VAL:HG12	1.98	0.45
52:S6:5:ILE:HG22	52:S6:124:LEU:HD21	1.97	0.45
53:S7:30:SER:HB3	53:S7:34:LEU:HD12	1.98	0.45
53:S7:91:ILE:CG1	53:S7:92:PHE:H	2.26	0.45
55:S9:54:ARG:HA	55:S9:57:ARG:HE	1.82	0.45
59:13:71:ILE:H	59:13:71:ILE:CD1	2.06	0.45
59:13:110:ASP:CG	78:1S:878:G:H4'	2.42	0.45
60:14:84:ARG:HA	60:14:119:THR:HG22	1.98	0.45
62:16:72:GLY:HA2	78:1S:1608:U:OP1	2.16	0.45
68:22:27:ILE:HG12	68:22:61:ILE:HB	1.99	0.45
68:22:34:ILE:O	68:22:38:LEU:HG	2.16	0.45
71:25:92:ILE:HG13	71:25:100:ILE:CG2	2.46	0.45
78:1S:128:U:H5'	78:1S:178:U:O2'	2.17	0.45
78:1S:142:G:O2'	78:1S:143:G:H5'	2.16	0.45
78:1S:342:C:H2'	78:1S:343:C:C6	2.51	0.45
78:1S:495:C:H5'	78:1S:496:G:C4'	2.45	0.45
78:1S:640:U:H2'	78:1S:641:G:H8	1.82	0.45
78:1S:822:U:H3'	78:1S:823:G:C5'	2.45	0.45
78:1S:868:G:O2'	78:1S:869:A:H5'	2.17	0.45
78:1S:1054:U:H2'	78:1S:1055:U:C6	2.52	0.45
78:1S:1353:U:H2'	78:1S:1354:G:C8	2.52	0.45
78:1S:1396:U:H2'	78:1S:1397:U:C6	2.52	0.45
79:2S:1932:A:H3'	79:2S:1933:A:H8	1.81	0.45
79:2S:2618:G:N3	79:2S:2618:G:H5"	2.32	0.45
79:2S:3204:C:H2'	79:2S:3205:G:C8	2.52	0.45
79:2S:3375:A:H2'	79:2S:3378:C:C6	2.51	0.45
2:L2:129:ALA:HB3	2:L2:132:ASN:ND2	2.32	0.45
3:L3:246:LEU:CD1	3:L3:247:ARG:HG3	2.47	0.45
4:L4:308:LYS:HG2	4:L4:309:ARG:N	2.32	0.45
11:61:142:LYS:O	11:61:142:LYS:HD3	2.16	0.45
11:61:171:VAL:HG13	11:61:172:LEU:N	2.32	0.45
14:64:14:LEU:HD23	20:70:151:PRO:HB3	1.99	0.45
15:65:38:ARG:HB2	15:65:62:TYR:CE2	2.51	0.45
16:66:12:LYS:HA	16:66:40:GLU:CB	2.41	0.45
17:67:167:ARG:O	33:83:60:ARG:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:102:LEU:O	19:69:106:LEU:HD13	2.17	0.45
20:70:8:GLN:O	20:70:61:ILE:HA	2.17	0.45
22:72:98:THR:OG1	22:72:104:ARG:HG2	2.17	0.45
25:75:91:ASN:O	25:75:95:ILE:HG13	2.17	0.45
35:85:109:ILE:HG23	79:2S:170:G:H5"	1.99	0.45
37:87:59:THR:HA	80:8S:41:A:O2'	2.16	0.45
43:93:64:VAL:HG12	43:93:65:ALA:N	2.32	0.45
45:RC:278:PHE:HE2	45:RC:287:PRO:HB2	1.81	0.45
46:S0:139:VAL:HA	48:S2:62:PRO:HG3	1.98	0.45
46:S0:188:LEU:HD21	46:S0:195:TRP:NE1	2.31	0.45
48:S2:108:ASN:HD22	48:S2:110:HIS:CE1	2.35	0.45
48:S2:129:ILE:O	48:S2:133:LYS:HG3	2.17	0.45
48:S2:157:LYS:HD3	48:S2:168:ARG:NH2	2.31	0.45
49:S3:84:ILE:HG23	49:S3:84:ILE:O	2.17	0.45
50:S4:222:LEU:HA	50:S4:225:VAL:HG23	1.99	0.45
52:S6:69:LEU:HA	52:S6:70:PRO:HD3	1.79	0.45
58:12:84:ASN:HB3	58:12:85:LYS:H	1.49	0.45
61:15:72:LYS:H	61:15:72:LYS:CD	2.29	0.45
63:17:21:TYR:N	63:17:22:PRO:CD	2.77	0.45
65:19:86:ARG:HH11	65:19:86:ARG:HG3	1.82	0.45
66:20:20:ILE:HD13	66:20:22:ILE:HB	1.98	0.45
70:24:100:VAL:O	70:24:100:VAL:HG13	2.17	0.45
78:1S:643:G:H2'	78:1S:644:C:H6	1.82	0.45
79:2S:16:A:H2'	79:2S:17:G:C8	2.52	0.45
79:2S:576:C:H2'	79:2S:577:C:C6	2.52	0.45
79:2S:835:G:H1'	79:2S:858:A:H61	1.82	0.45
79:2S:876:A:H4'	79:2S:1890:U:H4'	1.99	0.45
79:2S:938:C:O2'	79:2S:939:U:H5'	2.17	0.45
79:2S:1583:A:H3'	79:2S:1584:U:C6	2.52	0.45
79:2S:1643:A:H2'	79:2S:1644:C:C2	2.52	0.45
79:2S:2904:U:H2'	79:2S:2905:U:H6	1.82	0.45
1:L1:169:VAL:HB	1:L1:172:VAL:CG2	2.40	0.45
4:L4:68:GLY:HA2	79:2S:2401:A:O3'	2.17	0.45
4:L4:170:LYS:HE3	4:L4:178:LEU:CD1	2.46	0.45
5:L5:289:LYS:NZ	81:5S:63:A:H4'	2.32	0.45
6:L6:22:ARG:HH12	79:2S:608:A:H2'	1.82	0.45
7:L7:85:PHE:HE1	7:L7:87:VAL:HG22	1.81	0.45
9:L9:168:ARG:HH12	79:2S:3034:C:C4'	2.28	0.45
10:60:77:THR:HG22	10:60:82:ARG:HA	1.99	0.45
15:65:50:ARG:HD2	79:2S:319:A:OP1	2.16	0.45
16:66:16:VAL:HG13	16:66:80:PHE:HE1	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:91:ASN:HD22	25:75:93:TYR:HD2	1.63	0.45
26:76:56:VAL:HG22	26:76:57:LEU:N	2.32	0.45
32:82:61:LYS:HA	32:82:64:LYS:HD2	1.99	0.45
40:90:104:PRO:HG2	79:2S:3119:U:H4'	1.99	0.45
41:91:11:ARG:HE	78:1S:1126:G:H5'	1.81	0.45
45:RC:31:ASN:O	45:RC:46:LYS:HA	2.16	0.45
47:S1:44:GLY:HA3	60:14:33:LEU:HD21	1.98	0.45
47:S1:141:ALA:HB2	47:S1:210:ILE:HA	1.98	0.45
47:S1:181:LEU:H	47:S1:181:LEU:HD13	1.81	0.45
48:S2:35:TRP:CZ3	48:S2:46:LYS:HG3	2.51	0.45
50:S4:103:TYR:CE1	50:S4:189:LEU:HD11	2.52	0.45
61:15:31:GLU:O	61:15:35:LYS:HD3	2.17	0.45
64:18:38:VAL:HG23	64:18:38:VAL:O	2.17	0.45
71:25:65:LEU:HD12	71:25:76:ALA:HB1	1.99	0.45
73:27:72:LYS:HD3	73:27:73:LEU:H	1.82	0.45
78:1S:321:C:H3'	78:1S:322:G:C5'	2.47	0.45
78:1S:866:G:H2'	78:1S:867:G:H8	1.82	0.45
78:1S:1073:G:H3'	78:1S:1074:G:H5"	1.98	0.45
78:1S:1112:G:H1'	78:1S:1133:A:H61	1.81	0.45
78:1S:1313:A:H2'	78:1S:1315:U:OP1	2.17	0.45
78:1S:1405:G:H2'	78:1S:1406:A:C8	2.52	0.45
78:1S:1533:C:H4'	78:1S:1539:G:N1	2.32	0.45
79:2S:149:U:O5'	79:2S:149:U:H6	2.00	0.45
79:2S:642:U:H6	79:2S:642:U:O5'	2.00	0.45
79:2S:713:U:H2'	79:2S:714:G:O4'	2.16	0.45
79:2S:1064:A:N7	79:2S:1096:U:O2	2.49	0.45
79:2S:1535:A:H2'	79:2S:1536:G:O4'	2.17	0.45
79:2S:2516:U:H2'	79:2S:2517:U:O4'	2.18	0.45
79:2S:2974:U:H2'	79:2S:2975:U:C6	2.52	0.45
79:2S:3322:A:H2'	79:2S:3323:A:C8	2.52	0.45
79:2S:3334:U:O4'	79:2S:3370:A:N1	2.50	0.45
1:L1:14:LYS:HD2	1:L1:19:TYR:CD2	2.52	0.44
2:L2:181:LYS:NZ	2:L2:184:ARG:HG3	2.33	0.44
2:L2:196:TRP:HZ2	79:2S:2148:U:H5"	1.82	0.44
2:L2:244:GLY:O	79:2S:2153:U:H5"	2.17	0.44
5:L5:129:TYR:HE1	5:L5:175:HIS:CD2	2.35	0.44
8:L8:105:LYS:HE3	8:L8:108:ARG:HH22	1.81	0.44
11:61:143:ARG:HG3	11:61:143:ARG:NH1	2.33	0.44
15:65:93:LYS:HE2	79:2S:276:U:O2	2.17	0.44
23:73:45:ARG:HH11	23:73:45:ARG:HG3	1.82	0.44
24:74:60:LYS:HD2	24:74:63:ILE:HD11	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:115:ARG:HB3	25:75:117:ASN:OD1	2.16	0.44
27:77:17:ARG:HH12	79:2S:1633:C:H5	1.65	0.44
32:82:11:LYS:O	32:82:12:LYS:HB2	2.16	0.44
38:88:42:LYS:HE2	38:88:55:VAL:HG13	1.97	0.44
45:RC:23:LEU:HD21	45:RC:310:ILE:HD13	1.98	0.44
45:RC:136:ILE:H	45:RC:136:ILE:CD1	2.27	0.44
45:RC:214:ALA:HB1	45:RC:240:VAL:HG21	1.99	0.44
47:S1:171:ILE:HA	47:S1:174:LYS:HE3	1.99	0.44
48:S2:181:SER:HB3	78:1S:4:C:H4'	1.98	0.44
50:S4:242:LYS:HD2	50:S4:242:LYS:N	2.33	0.44
51:S5:37:GLN:HB3	62:16:53:LEU:HD13	1.98	0.44
51:S5:70:VAL:HG11	62:16:46:PHE:CD2	2.52	0.44
51:S5:100:ASN:OD1	51:S5:180:ARG:HD3	2.17	0.44
63:17:30:THR:O	63:17:34:LEU:HB2	2.16	0.44
69:23:74:VAL:HG12	69:23:75:GLN:N	2.26	0.44
69:23:97:ASP:O	69:23:100:ASP:HB2	2.18	0.44
70:24:14:SER:HA	70:24:21:LYS:HD2	1.99	0.44
72:26:86:VAL:O	72:26:87:ARG:HG3	2.17	0.44
77:31:117:LEU:O	77:31:118:ARG:HB2	2.17	0.44
78:1S:460:A:H2'	78:1S:460:A:N3	2.32	0.44
79:2S:201:A:H2'	79:2S:202:G:H8	1.81	0.44
79:2S:638:C:H2'	79:2S:639:G:C8	2.52	0.44
79:2S:772:U:H2'	79:2S:773:G:O4'	2.16	0.44
79:2S:1498:A:H2'	79:2S:1499:C:C6	2.52	0.44
79:2S:1939:G:H2'	79:2S:1940:G:O4'	2.18	0.44
79:2S:2562:A:H2'	79:2S:2563:G:O4'	2.17	0.44
79:2S:2841:G:H2'	79:2S:2898:G:N2	2.32	0.44
79:2S:3057:U:O2	79:2S:3057:U:H2'	2.15	0.44
80:8S:106:C:H5"	80:8S:108:C:OP2	2.17	0.44
1:L1:60:ARG:HD3	1:L1:60:ARG:HA	1.84	0.44
1:L1:165:LEU:HD13	1:L1:184:LEU:HD11	1.99	0.44
4:L4:58:HIS:HA	4:L4:90:PHE:CE1	2.53	0.44
5:L5:180:PHE:HB2	5:L5:190:ILE:HD11	1.99	0.44
5:L5:211:LEU:HD22	5:L5:215:ASP:HB3	1.98	0.44
6:L6:102:ASN:HB2	6:L6:103:VAL:H	1.59	0.44
7:L7:138:TYR:HB2	7:L7:234:GLU:HG2	1.98	0.44
10:60:15:LYS:HE3	79:2S:1047:A:C5'	2.34	0.44
14:64:42:LYS:HD3	14:64:42:LYS:N	2.31	0.44
15:65:117:ASN:O	15:65:118:SER:HB3	2.17	0.44
17:67:119:VAL:CG2	17:67:144:SER:HB3	2.47	0.44
19:69:104:ARG:HD3	19:69:105:LEU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:73:40:LYS:HB2	23:73:57:MET:O	2.17	0.44
23:73:102:ILE:HG23	23:73:110:LYS:HB3	1.99	0.44
31:81:107:VAL:HG12	31:81:108:VAL:N	2.25	0.44
32:82:26:HIS:CD2	79:2S:655:C:H5'	2.52	0.44
36:86:80:PHE:O	36:86:84:LYS:HG3	2.17	0.44
38:88:43:PHE:HB2	38:88:54:LEU:HB3	1.98	0.44
45:RC:105:GLY:C	45:RC:132:LYS:HE3	2.42	0.44
45:RC:278:PHE:CE2	45:RC:287:PRO:HB2	2.52	0.44
47:S1:33:LYS:HB3	47:S1:97:LEU:HD13	1.99	0.44
47:S1:58:SER:O	47:S1:61:LEU:HD22	2.17	0.44
49:S3:23:GLU:O	49:S3:27:ARG:HB2	2.17	0.44
49:S3:84:ILE:C	49:S3:84:ILE:HD13	2.42	0.44
50:S4:42:LEU:HD23	50:S4:101:LEU:CD1	2.47	0.44
53:S7:185:ILE:H	53:S7:185:ILE:CD1	2.23	0.44
57:11:80:MET:HB3	57:11:83:THR:CG2	2.46	0.44
57:11:117:VAL:HG12	57:11:118:GLN:N	2.32	0.44
57:11:123:VAL:HG22	57:11:124:THR:N	2.32	0.44
62:16:81:ILE:HG13	62:16:82:ARG:N	2.32	0.44
62:16:131:GLY:HA3	62:16:136:SER:O	2.17	0.44
67:21:9:VAL:HG22	67:21:10:GLU:H	1.82	0.44
71:25:54:VAL:N	71:25:55:PRO:HD2	2.32	0.44
78:1S:17:C:H4'	78:1S:1109:G:C8	2.52	0.44
78:1S:52:U:H2'	78:1S:53:G:H8	1.81	0.44
78:1S:66:U:O2'	78:1S:67:A:H5'	2.18	0.44
78:1S:120:U:H2'	78:1S:121:U:C6	2.53	0.44
78:1S:851:U:H2'	78:1S:852:C:O4'	2.17	0.44
78:1S:1269:U:H4'	78:1S:1270:G:C5'	2.46	0.44
79:2S:35:A:O2'	79:2S:809:G:N3	2.50	0.44
79:2S:840:C:H2'	79:2S:841:A:C8	2.51	0.44
79:2S:1393:A:H2'	79:2S:1394:A:O4'	2.16	0.44
2:L2:92:LYS:HA	2:L2:103:PRO:CD	2.47	0.44
2:L2:225:ILE:HB	2:L2:238:ILE:HA	1.99	0.44
2:L2:225:ILE:HG12	2:L2:234:LYS:HA	1.99	0.44
3:L3:16:PHE:CE2	79:2S:3045:G:H4'	2.52	0.44
3:L3:196:ARG:HD2	3:L3:199:PHE:CD2	2.52	0.44
6:L6:52:VAL:HG21	6:L6:65:ILE:HB	1.99	0.44
6:L6:54:TYR:HE2	6:L6:56:LYS:O	1.99	0.44
6:L6:98:VAL:HA	6:L6:101:PHE:CE2	2.53	0.44
7:L7:117:VAL:HG12	7:L7:118:LYS:H	1.82	0.44
8:L8:56:VAL:HA	8:L8:59:GLN:HG2	2.00	0.44
8:L8:80:TYR:HD2	8:L8:80:TYR:HA	1.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:61:8:PRO:HD2	11:61:10:ARG:HG3	1.98	0.44
13:63:59:ARG:HA	13:63:69:VAL:HA	1.97	0.44
16:66:124:LEU:HG	16:66:126:VAL:CG1	2.45	0.44
18:68:122:ILE:HG22	18:68:123:THR:O	2.17	0.44
19:69:77:GLY:H	19:69:80:LYS:HB2	1.82	0.44
22:72:18:ASP:O	22:72:104:ARG:HA	2.17	0.44
32:82:82:LEU:O	32:82:82:LEU:HD13	2.17	0.44
34:84:102:LYS:N	34:84:102:LYS:HD2	2.31	0.44
42:92:28:TYR:HE1	79:2S:2768:U:H4'	1.83	0.44
43:93:75:ALA:O	43:93:79:VAL:HG23	2.17	0.44
45:RC:201:THR:HG21	45:RC:240:VAL:HG12	1.99	0.44
46:S0:143:VAL:CG1	46:S0:156:VAL:HG12	2.47	0.44
46:S0:206:ASP:HA	46:S0:207:PRO:C	2.42	0.44
48:S2:159:THR:HG23	48:S2:167:VAL:C	2.43	0.44
52:S6:64:LYS:HD3	52:S6:67:VAL:CG1	2.48	0.44
62:16:128:LYS:HB2	62:16:137:ARG:HH22	1.83	0.44
63:17:87:GLU:O	63:17:88:VAL:HG12	2.18	0.44
65:19:31:PRO:HD2	65:19:34:VAL:CG1	2.48	0.44
66:20:23:ARG:HG3	66:20:91:ILE:O	2.18	0.44
72:26:87:ARG:HD2	78:1S:1796:C:OP1	2.17	0.44
74:28:53:ILE:HG22	74:28:54:LEU:H	1.82	0.44
78:1S:176:C:H2'	78:1S:177:U:H5'	1.98	0.44
78:1S:430:G:H2'	78:1S:431:C:C6	2.53	0.44
78:1S:1313:A:C2	78:1S:1315:U:H5'	2.53	0.44
79:2S:517:G:H8	79:2S:517:G:C5'	2.31	0.44
79:2S:639:G:H2'	79:2S:640:U:O4'	2.18	0.44
79:2S:1151:U:H3'	79:2S:1152:G:H21	1.82	0.44
79:2S:1156:C:H2'	79:2S:1157:G:O4'	2.17	0.44
79:2S:1334:U:H2'	79:2S:1335:C:H6	1.81	0.44
79:2S:2946:A:H2'	79:2S:2982:A:N7	2.33	0.44
80:8S:76:C:O2'	80:8S:77:A:H5'	2.18	0.44
1:L1:123:LEU:HD23	1:L1:128:LEU:HD12	1.99	0.44
1:L1:138:VAL:HG12	1:L1:139:SER:N	2.32	0.44
4:L4:34:ILE:O	4:L4:38:VAL:HG23	2.18	0.44
4:L4:240:PRO:HB2	79:2S:1383:G:H4'	2.00	0.44
5:L5:142:PHE:HB3	5:L5:171:LEU:HD23	2.00	0.44
6:L6:161:ALA:HB2	79:2S:3215:A:H1'	1.99	0.44
7:L7:39:GLU:O	7:L7:43:ILE:HG13	2.17	0.44
8:L8:159:PRO:HB2	8:L8:162:LEU:HD12	1.99	0.44
8:L8:241:LYS:HB3	8:L8:241:LYS:HZ2	1.82	0.44
8:L8:241:LYS:HB2	79:2S:2586:G:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:14:LYS:HE2	79:2S:269:G:C5'	2.47	0.44
17:67:83:TRP:O	79:2S:2352:A:H5"	2.17	0.44
18:68:54:LEU:HB3	18:68:58:ASN:HB2	2.00	0.44
23:73:23:MET:CB	23:73:98:ASN:HB3	2.48	0.44
23:73:74:MET:HA	23:73:75:PRO:HD3	1.79	0.44
28:78:43:ILE:O	28:78:46:ASP:HB2	2.17	0.44
32:82:19:ARG:HG2	32:82:20:HIS:H	1.82	0.44
37:87:49:TRP:CD1	37:87:49:TRP:H	2.34	0.44
45:RC:259:GLY:HA3	45:RC:275:ARG:HG2	1.99	0.44
50:S4:10:LYS:NZ	55:S9:2:PRO:HB3	2.33	0.44
51:S5:26:ALA:HB3	62:16:28:LEU:HA	1.99	0.44
52:S6:91:GLU:HG2	52:S6:92:ARG:H	1.83	0.44
53:S7:49:ILE:HD11	53:S7:172:VAL:HG22	1.98	0.44
60:14:33:LEU:H	60:14:33:LEU:HD12	1.81	0.44
62:16:109:PHE:CD1	62:16:116:LEU:HG	2.51	0.44
65:19:28:LEU:HD22	65:19:28:LEU:C	2.42	0.44
66:20:53:LYS:CB	66:20:92:ASP:HB2	2.46	0.44
68:22:97:ARG:HB3	68:22:97:ARG:HH11	1.80	0.44
75:29:10:HIS:O	75:29:12:ARG:HD3	2.17	0.44
78:1S:872:G:N2	78:1S:1047:G:H4'	2.31	0.44
78:1S:1125:A:O5'	78:1S:1125:A:H8	2.01	0.44
78:1S:1375:A:O2'	78:1S:1376:C:H5'	2.17	0.44
79:2S:28:C:H4'	79:2S:60:A:N1	2.31	0.44
79:2S:126:U:H2'	79:2S:127:G:C8	2.53	0.44
79:2S:649:A:H4'	79:2S:2869:U:H5'	2.00	0.44
79:2S:863:C:H2'	79:2S:864:G:O4'	2.17	0.44
79:2S:1650:G:H2'	79:2S:1651:U:C6	2.52	0.44
79:2S:1719:G:H4'	79:2S:1732:U:H4'	1.99	0.44
79:2S:1844:C:C3'	79:2S:1845:G:H5"	2.48	0.44
79:2S:1953:G:H2'	79:2S:2088:A:H61	1.83	0.44
79:2S:1959:G:C2'	79:2S:1960:A:H5'	2.44	0.44
79:2S:2251:G:H2'	79:2S:2252:A:O4'	2.16	0.44
79:2S:2427:U:H2'	79:2S:2428:U:C6	2.53	0.44
79:2S:2708:C:H2'	79:2S:2709:C:C6	2.52	0.44
80:8S:57:C:H2'	80:8S:58:G:C8	2.52	0.44
2:L2:3:ARG:HH11	2:L2:3:ARG:HG3	1.82	0.44
2:L2:225:ILE:HG22	2:L2:226:SER:N	2.31	0.44
3:L3:43:LEU:HD12	3:L3:43:LEU:N	2.32	0.44
3:L3:45:SER:H	3:L3:181:ILE:CG2	2.31	0.44
3:L3:96:PRO:HD3	79:2S:3243:A:O4'	2.17	0.44
4:L4:327:LEU:O	4:L4:328:ASN:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:99:TYR:HE1	5:L5:103:LEU:HD22	1.82	0.44
9:L9:120:ASP:OD2	79:2S:3033:A:H2	2.01	0.44
11:61:118:PRO:HD3	64:18:13:HIS:NE2	2.33	0.44
15:65:117:ASN:HB3	15:65:118:SER:H	1.56	0.44
18:68:69:ARG:HE	79:2S:784:A:H2'	1.83	0.44
19:69:23:TRP:C	19:69:24:LEU:HD12	2.43	0.44
30:80:77:LEU:O	30:80:81:VAL:HG13	2.18	0.44
33:83:23:ASN:HD21	79:2S:633:C:C1'	2.29	0.44
33:83:54:ARG:N	33:83:54:ARG:HD2	2.33	0.44
33:83:77:ASN:HD22	79:2S:1180:A:H5"	1.83	0.44
48:S2:89:GLN:HB2	78:1S:1145:U:O2	2.18	0.44
49:S3:32:GLU:HB3	49:S3:54:ARG:HB3	2.00	0.44
50:S4:45:ILE:CG1	50:S4:49:ARG:HD3	2.47	0.44
50:S4:195:ILE:HA	50:S4:210:ILE:CD1	2.47	0.44
52:S6:193:LEU:HD23	52:S6:193:LEU:C	2.42	0.44
53:S7:62:VAL:HG12	53:S7:64:VAL:H	1.82	0.44
55:S9:90:LYS:O	55:S9:95:TYR:HB3	2.18	0.44
56:10:11:ILE:HD12	56:10:42:VAL:HG22	2.00	0.44
56:10:27:PHE:HB3	56:10:40:LEU:HD23	1.99	0.44
59:13:78:ASN:HB2	59:13:80:LEU:HD23	1.99	0.44
66:20:59:PRO:HG2	78:1S:1516:A:O4'	2.18	0.44
66:20:85:ARG:HD2	66:20:85:ARG:H	1.82	0.44
68:22:65:LEU:H	68:22:65:LEU:HD13	1.81	0.44
71:25:93:SER:CB	71:25:100:ILE:H	2.31	0.44
72:26:8:ASN:HD22	78:1S:1791:A:H3'	1.82	0.44
76:30:14:VAL:O	76:30:18:THR:HG23	2.17	0.44
78:1S:344:A:H2'	78:1S:345:U:H5'	1.99	0.44
78:1S:344:A:C2'	78:1S:345:U:H5'	2.48	0.44
78:1S:400:A:H4'	78:1S:401:A:H5'	1.98	0.44
78:1S:475:A:H2'	78:1S:476:U:O4'	2.18	0.44
78:1S:482:U:H2'	78:1S:483:A:C8	2.53	0.44
78:1S:487:G:N2	78:1S:500:C:H42	2.15	0.44
78:1S:900:A:O2'	78:1S:901:G:H5'	2.17	0.44
78:1S:900:A:H1'	78:1S:915:A:H2	1.83	0.44
79:2S:898:U:H2'	79:2S:899:U:O4'	2.17	0.44
79:2S:1054:A:H5"	79:2S:2637:A:N6	2.29	0.44
79:2S:1499:C:H2'	79:2S:1500:G:C8	2.52	0.44
79:2S:1528:G:C2	79:2S:1529:A:H1'	2.52	0.44
79:2S:1550:C:H2'	79:2S:1551:C:C6	2.52	0.44
79:2S:1597:C:H2'	79:2S:1598:G:C8	2.53	0.44
79:2S:1779:C:H3'	79:2S:1780:G:C5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1807:G:H2'	79:2S:1808:G:O4'	2.16	0.44
79:2S:2206:G:O2'	79:2S:2207:A:H5'	2.17	0.44
3:L3:21:ARG:HH12	79:2S:2991:A:H5'	1.81	0.44
3:L3:32:PHE:HE2	3:L3:159:ARG:NH2	2.11	0.44
3:L3:146:ARG:HE	3:L3:146:ARG:CA	2.29	0.44
6:L6:51:ARG:HG2	6:L6:51:ARG:HH11	1.82	0.44
8:L8:71:VAL:HB	8:L8:75:ILE:HB	1.99	0.44
9:L9:63:LYS:CE	79:2S:1210:U:H5'	2.44	0.44
9:L9:105:GLU:HG3	9:L9:108:GLY:HA2	1.97	0.44
13:63:24:VAL:HB	13:63:26:PHE:CE2	2.52	0.44
15:65:191:TRP:O	15:65:195:ASN:ND2	2.51	0.44
18:68:107:THR:H	18:68:110:ALA:HB3	1.83	0.44
19:69:138:LEU:O	19:69:138:LEU:HD23	2.18	0.44
19:69:158:GLU:H	19:69:158:GLU:HG2	1.66	0.44
20:70:8:GLN:HB2	20:70:64:ILE:HD11	1.99	0.44
22:72:43:VAL:O	22:72:44:GLU:C	2.60	0.44
23:73:81:GLN:H	23:73:95:PHE:HD2	1.66	0.44
27:77:121:ARG:HH11	27:77:126:LYS:HD3	1.83	0.44
28:78:77:LYS:HD2	28:78:80:THR:HG21	1.99	0.44
35:85:111:PHE:N	35:85:112:PRO:HD3	2.33	0.44
37:87:28:HIS:HD2	79:2S:815:G:H5'	1.83	0.44
39:89:24:PRO:HB2	39:89:27:ILE:HD12	2.00	0.44
41:91:4:LYS:HE3	78:1S:1774:G:C8	2.53	0.44
44:P0:59:VAL:HA	44:P0:62:ALA:HB3	2.00	0.44
45:RC:23:LEU:O	45:RC:293:ALA:HB2	2.17	0.44
47:S1:121:ILE:HG23	47:S1:161:ILE:HG23	2.00	0.44
47:S1:129:THR:OG1	47:S1:133:TYR:HB2	2.18	0.44
48:S2:38:VAL:HG13	48:S2:39:THR:HG23	1.99	0.44
49:S3:126:VAL:HG12	49:S3:131:ALA:CB	2.48	0.44
50:S4:192:ILE:HG22	50:S4:193:GLY:H	1.82	0.44
51:S5:37:GLN:HB3	62:16:53:LEU:CD2	2.46	0.44
51:S5:59:VAL:HG12	51:S5:60:ASP:N	2.33	0.44
56:10:55:VAL:HB	56:10:68:LEU:CD1	2.48	0.44
57:11:118:GLN:HG2	57:11:119:VAL:N	2.33	0.44
61:15:16:SER:HA	61:15:20:VAL:O	2.17	0.44
61:15:32:ASP:O	61:15:35:LYS:HB2	2.17	0.44
64:18:33:THR:HA	64:18:38:VAL:O	2.17	0.44
65:19:4:VAL:HG22	65:19:5:SER:N	2.32	0.44
69:23:98:GLU:O	69:23:99:ASN:HB2	2.18	0.44
70:24:12:VAL:HG12	70:24:21:LYS:HE3	1.98	0.44
78:1S:697:C:O2'	78:1S:698:U:H5"	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:801:G:H2'	78:1S:802:G:O4'	2.17	0.44
78:1S:939:A:H2'	78:1S:940:A:C8	2.52	0.44
79:2S:496:C:H1'	79:2S:622:A:H2	1.82	0.44
79:2S:886:C:H2'	79:2S:887:G:C8	2.52	0.44
79:2S:949:C:H2'	79:2S:950:G:O4'	2.18	0.44
79:2S:1011:A:H2'	79:2S:1012:G:C8	2.52	0.44
79:2S:1052:U:O2'	81:5S:103:A:H5"	2.18	0.44
79:2S:1132:C:H2'	79:2S:1133:A:C8	2.53	0.44
79:2S:1860:G:H2'	79:2S:1861:G:C8	2.52	0.44
79:2S:1887:A:C2'	79:2S:1888:U:H5'	2.47	0.44
79:2S:2592:G:H4'	79:2S:2594:C:N3	2.32	0.44
3:L3:2:SER:HA	79:2S:2939:G:OP2	2.18	0.44
3:L3:283:TYR:CB	3:L3:323:MET:HE2	2.45	0.44
4:L4:98:ARG:HD2	4:L4:99:MET:O	2.17	0.44
4:L4:317:PRO:HG3	4:L4:323:VAL:HG22	2.00	0.44
7:L7:94:LYS:HA	79:2S:1139:G:O3'	2.18	0.44
8:L8:166:LEU:HB2	8:L8:167:PRO:HD3	2.00	0.44
10:60:3:ARG:HG2	10:60:123:HIS:CE1	2.52	0.44
14:64:42:LYS:C	14:64:60:LEU:HG	2.42	0.44
14:64:42:LYS:O	14:64:60:LEU:HG	2.17	0.44
16:66:130:LYS:HB2	79:2S:1316:C:C5	2.53	0.44
19:69:6:THR:HG23	79:2S:1498:A:OP1	2.17	0.44
32:82:72:LYS:HB2	32:82:92:TYR:CD1	2.52	0.44
34:84:6:THR:HG21	79:2S:1487:G:H1'	2.00	0.44
38:88:9:LYS:O	38:88:13:GLU:HG3	2.17	0.44
40:90:79:GLU:HB3	40:90:82:LEU:HB2	2.00	0.44
46:S0:74:VAL:HG23	46:S0:118:PRO:HB3	2.00	0.44
47:S1:36:SER:HB2	47:S1:41:ARG:NH2	2.33	0.44
47:S1:168:ILE:O	47:S1:172:LEU:HG	2.17	0.44
49:S3:162:GLN:HB3	49:S3:163:PRO:HD3	1.99	0.44
50:S4:95:THR:O	50:S4:96:ASN:HB2	2.17	0.44
50:S4:192:ILE:HG22	50:S4:193:GLY:N	2.32	0.44
51:S5:29:ILE:HA	62:16:37:THR:CG2	2.41	0.44
54:S8:29:LEU:HD23	54:S8:29:LEU:C	2.43	0.44
57:11:129:ARG:HG2	57:11:129:ARG:NH1	2.33	0.44
66:20:34:LEU:O	66:20:34:LEU:HD13	2.18	0.44
66:20:72:ASN:HB2	66:20:73:GLY:H	1.51	0.44
68:22:41:MET:CB	68:22:47:ILE:HG12	2.47	0.44
70:24:21:LYS:HB3	70:24:75:VAL:CG1	2.48	0.44
70:24:112:LYS:O	70:24:116:LYS:HG3	2.17	0.44
78:1S:103:A:O2'	78:1S:104:A:OP2	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1315:U:H2'	78:1S:1316:G:C8	2.53	0.44
79:2S:928:C:H2'	79:2S:929:A:C8	2.52	0.44
79:2S:1128:U:H2'	79:2S:1129:A:O4'	2.17	0.44
79:2S:1371:G:H2'	79:2S:1372:C:C6	2.53	0.44
79:2S:1926:C:H4'	79:2S:1927:G:C4	2.53	0.44
2:L2:184:ARG:HA	2:L2:187:HIS:HD2	1.82	0.44
2:L2:200:ARG:NH2	2:L2:200:ARG:HB2	2.32	0.44
4:L4:89:ALA:O	4:L4:90:PHE:HB2	2.18	0.44
5:L5:115:LEU:HD22	5:L5:115:LEU:N	2.33	0.44
8:L8:221:ASN:HA	8:L8:225:LYS:HE2	2.00	0.44
9:L9:8:GLN:HG2	9:L9:68:LEU:HD13	1.99	0.44
9:L9:101:VAL:HG13	9:L9:113:GLU:O	2.17	0.44
10:60:3:ARG:HD2	10:60:4:ARG:O	2.16	0.44
11:61:28:ASP:O	11:61:32:ARG:HG3	2.17	0.44
18:68:163:PRO:HB2	18:68:173:GLU:OE1	2.17	0.44
20:70:12:ARG:HB3	20:70:24:LEU:HD23	2.00	0.44
25:75:92:LYS:HG2	79:2S:1830:G:H5"	2.00	0.44
29:79:37:PRO:O	29:79:41:ARG:HB2	2.18	0.44
30:80:50:VAL:HG11	79:2S:2552:C:O2'	2.18	0.44
31:81:5:LYS:O	31:81:7:VAL:N	2.41	0.44
31:81:79:ARG:HA	31:81:89:LEU:HA	2.00	0.44
32:82:25:TYR:HD2	32:82:28:VAL:HG21	1.83	0.44
32:82:68:PRO:HD3	79:2S:1403:C:OP1	2.18	0.44
36:86:54:GLU:HA	36:86:57:LEU:HB2	2.00	0.44
37:87:17:THR:HG22	37:87:18:LEU:N	2.32	0.44
44:P0:11:TYR:HE1	44:P0:15:LEU:HD11	1.82	0.44
46:S0:102:PHE:O	46:S0:103:THR:HB	2.18	0.44
48:S2:53:ILE:CG2	48:S2:56:ILE:HD12	2.47	0.44
50:S4:57:ASN:HB2	50:S4:60:GLU:HG3	2.00	0.44
50:S4:151:ASP:OD1	50:S4:152:PRO:HD2	2.17	0.44
51:S5:80:LYS:HD2	51:S5:83:ARG:HD3	1.99	0.44
53:S7:39:ARG:N	53:S7:40:PRO:CD	2.81	0.44
55:S9:126:ARG:HH11	55:S9:144:PRO:HG2	1.82	0.44
55:S9:134:ILE:HA	55:S9:157:ASP:O	2.18	0.44
56:10:72:GLY:O	56:10:76:LEU:HD13	2.18	0.44
59:13:146:ALA:O	59:13:150:VAL:HG12	2.18	0.44
61:15:28:MET:HE1	61:15:33:PHE:CD1	2.53	0.44
62:16:31:VAL:O	62:16:32:ASN:HB2	2.16	0.44
78:1S:34:G:H2'	78:1S:35:U:H6	1.83	0.44
78:1S:444:C:N4	78:1S:458:G:H2'	2.33	0.44
78:1S:920:U:H3'	78:1S:921:U:H5"	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:921:U:H2'	78:1S:922:G:O4'	2.18	0.44
78:1S:1387:G:H8	78:1S:1387:G:O5'	2.01	0.44
78:1S:1542:G:N2	78:1S:1568:C:H1'	2.33	0.44
79:2S:95:A:H2'	79:2S:96:G:O4'	2.18	0.44
79:2S:371:G:N2	79:2S:373:A:H3'	2.32	0.44
79:2S:641:C:H2'	79:2S:642:U:O4'	2.17	0.44
79:2S:653:A:H2'	79:2S:654:C:H6	1.82	0.44
79:2S:787:G:H2'	79:2S:788:C:C6	2.53	0.44
79:2S:1414:G:H2'	79:2S:1415:U:O4'	2.17	0.44
79:2S:1533:U:H5'	79:2S:1799:A:O2'	2.18	0.44
79:2S:1799:A:H2'	79:2S:1800:A:C8	2.52	0.44
79:2S:2457:G:H1	79:2S:2461:A:N6	2.16	0.44
79:2S:2598:G:H2'	79:2S:2599:U:C6	2.52	0.44
2:L2:190:ARG:HH21	2:L2:190:ARG:HG2	1.83	0.44
3:L3:112:ASP:O	3:L3:116:ARG:HB2	2.18	0.44
4:L4:188:ARG:HB2	4:L4:198:ARG:O	2.18	0.44
5:L5:177:GLU:O	5:L5:190:ILE:HD13	2.18	0.44
6:L6:26:ARG:HB3	79:2S:502:U:H4'	1.99	0.44
6:L6:161:ALA:HB3	14:64:118:PHE:CE2	2.53	0.44
7:L7:105:LEU:CD2	79:2S:1101:G:H1'	2.48	0.44
13:63:153:ASP:CG	13:63:154:VAL:H	2.26	0.44
13:63:165:SER:C	13:63:167:PHE:H	2.26	0.44
15:65:142:ILE:HA	15:65:145:ASP:HB2	2.00	0.44
16:66:143:THR:HG21	16:66:150:GLU:OE2	2.17	0.44
18:68:176:ARG:C	28:78:51:GLY:HA2	2.43	0.44
24:74:17:ARG:NH1	79:2S:3050:U:H5"	2.33	0.44
31:81:15:ASN:O	31:81:19:ARG:HD3	2.18	0.44
32:82:19:ARG:NH1	32:82:28:VAL:HG13	2.33	0.44
36:86:43:LEU:O	36:86:47:ILE:HG13	2.18	0.44
45:RC:203:THR:HB	45:RC:243:LEU:HB2	1.98	0.44
46:S0:49:ASN:CB	46:S0:52:LYS:HE2	2.47	0.44
48:S2:67:GLN:O	48:S2:71:THR:HG23	2.18	0.44
48:S2:141:ARG:O	48:S2:151:PRO:HB3	2.18	0.44
49:S3:37:VAL:HG12	49:S3:50:ILE:HD12	1.99	0.44
50:S4:247:SER:O	50:S4:251:GLU:HG3	2.18	0.44
52:S6:28:PHE:O	52:S6:29:ASP:HB2	2.16	0.44
52:S6:45:PHE:HD1	52:S6:121:LEU:HD21	1.82	0.44
57:11:129:ARG:HD2	78:1S:335:U:O2'	2.18	0.44
60:14:135:ARG:O	72:26:26:CYS:HB2	2.17	0.44
61:15:25:LEU:HB3	61:15:87:PRO:HB3	1.99	0.44
61:15:32:ASP:O	61:15:36:LEU:HD23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:131:GLY:HA3	62:16:137:ARG:HA	1.98	0.44
63:17:29:GLN:NE2	63:17:29:GLN:H	2.15	0.44
63:17:118:PRO:C	63:17:119:LEU:HD12	2.43	0.44
67:21:39:VAL:HG12	67:21:45:ALA:HA	1.98	0.44
68:22:19:LYS:NZ	78:1S:1095:U:H4'	2.33	0.44
68:22:85:ASP:O	68:22:89:TRP:CD1	2.71	0.44
69:23:30:LYS:HG3	69:23:34:LEU:HD12	2.00	0.44
73:27:37:CYS:HA	73:27:38:PRO:HD3	1.80	0.44
78:1S:24:U:H2'	78:1S:26:A:C8	2.52	0.44
78:1S:172:C:H2'	78:1S:173:A:C8	2.53	0.44
78:1S:416:A:H5'	78:1S:417:A:H8	1.82	0.44
78:1S:880:C:H2'	78:1S:881:A:C8	2.53	0.44
78:1S:1238:A:H2'	78:1S:1239:U:H5'	2.00	0.44
78:1S:1254:U:H2'	78:1S:1255:G:O4'	2.18	0.44
79:2S:594:U:H2'	79:2S:609:G:O6	2.17	0.44
79:2S:619:A:H4'	79:2S:620:U:C5	2.53	0.44
79:2S:764:U:H3	79:2S:767:U:H3	1.65	0.44
79:2S:1112:A:O2'	79:2S:1370:G:H4'	2.17	0.44
79:2S:1927:G:H3'	79:2S:1927:G:N3	2.33	0.44
79:2S:2554:A:H1'	79:2S:2555:G:OP1	2.18	0.44
79:2S:2667:A:H2'	79:2S:2668:U:O4'	2.18	0.44
79:2S:3078:U:O2	79:2S:3078:U:H2'	2.17	0.44
79:2S:3193:C:H2'	79:2S:3194:C:H6	1.83	0.44
2:L2:47:GLN:O	2:L2:60:LYS:HB2	2.18	0.43
6:L6:69:PHE:O	6:L6:73:GLY:HA2	2.18	0.43
9:L9:41:ILE:CD1	9:L9:43:VAL:HG13	2.47	0.43
11:61:92:ARG:HH21	11:61:94:ARG:HH21	1.66	0.43
12:62:129:THR:C	12:62:131:GLU:H	2.24	0.43
13:63:32:LYS:HE3	79:2S:685:G:OP2	2.17	0.43
13:63:95:ILE:HG22	13:63:96:ALA:N	2.33	0.43
15:65:13:LYS:O	15:65:19:LEU:HB2	2.17	0.43
15:65:24:ARG:HH12	79:2S:2435:G:H4'	1.82	0.43
17:67:36:ILE:O	17:67:36:ILE:HG12	2.18	0.43
19:69:62:ARG:HG3	19:69:62:ARG:NH2	2.32	0.43
20:70:89:ASN:HD21	21:71:156:TYR:HB3	1.83	0.43
23:73:136:VAL:HG12	23:73:137:VAL:N	2.33	0.43
26:76:13:ARG:O	26:76:17:LYS:HB2	2.18	0.43
41:91:5:TRP:HD1	78:1S:1783:C:OP2	2.01	0.43
45:RC:21:THR:HG21	45:RC:38:ARG:NE	2.31	0.43
46:S0:139:VAL:HG13	46:S0:141:ILE:HG13	1.99	0.43
50:S4:70:VAL:HG13	50:S4:70:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:229:GLY:HA2	50:S4:235:TYR:CD2	2.53	0.43
52:S6:32:ILE:HG13	52:S6:100:ALA:O	2.17	0.43
52:S6:124:LEU:HD12	52:S6:124:LEU:N	2.33	0.43
52:S6:137:ARG:HG3	52:S6:137:ARG:NH2	2.33	0.43
61:15:72:LYS:HB3	61:15:93:VAL:HG21	2.00	0.43
61:15:80:MET:O	61:15:116:LEU:HD12	2.18	0.43
66:20:67:THR:CG2	75:29:40:ARG:HB2	2.45	0.43
75:29:20:GLN:HB2	75:29:25:SER:HA	2.00	0.43
78:1S:90:C:O2'	78:1S:451:A:H5"	2.18	0.43
78:1S:513:U:H2'	78:1S:514:G:C8	2.53	0.43
78:1S:635:A:H2'	78:1S:636:A:C8	2.53	0.43
78:1S:1433:G:H2'	78:1S:1434:U:O4'	2.18	0.43
78:1S:1485:C:H2'	78:1S:1486:G:H4'	2.00	0.43
78:1S:1533:C:H2'	78:1S:1534:G:C8	2.52	0.43
79:2S:652:G:C2	79:2S:2361:A:H1'	2.54	0.43
79:2S:895:A:H2'	79:2S:897:U:C6	2.53	0.43
79:2S:1526:U:H4'	79:2S:1594:A:C4	2.53	0.43
79:2S:2069:G:OP1	79:2S:3351:U:H4'	2.18	0.43
79:2S:2516:U:H2'	79:2S:2517:U:H6	1.82	0.43
79:2S:2607:G:H2'	79:2S:2608:G:O4'	2.18	0.43
81:5S:29:C:H2'	81:5S:30:G:C8	2.39	0.43
82:ET:21:U:H6	82:ET:22:A:H5'	1.82	0.43
2:L2:204:MET:HB2	2:L2:208:ASP:CB	2.48	0.43
3:L3:57:VAL:HG22	3:L3:73:VAL:HG12	2.00	0.43
3:L3:242:THR:HB	79:2S:2948:C:H4'	2.00	0.43
4:L4:185:LYS:HA	4:L4:201:GLN:HB3	2.00	0.43
5:L5:26:GLY:O	5:L5:150:LEU:HD12	2.18	0.43
5:L5:44:TYR:CD2	79:2S:1084:A:H4'	2.53	0.43
5:L5:270:LYS:HA	5:L5:273:ARG:HB3	2.00	0.43
13:63:16:LYS:HB2	13:63:21:ARG:HH22	1.83	0.43
15:65:74:PRO:O	15:65:75:VAL:C	2.62	0.43
18:68:8:LYS:HG2	18:68:9:GLN:H	1.83	0.43
19:69:122:VAL:O	19:69:126:GLU:HG3	2.17	0.43
22:72:17:VAL:HG22	22:72:103:TYR:CD2	2.41	0.43
22:72:84:LEU:CB	22:72:90:ARG:HG2	2.35	0.43
26:76:40:ARG:NH2	26:76:46:LYS:HG3	2.32	0.43
37:87:63:ARG:O	37:87:64:MET:HB2	2.17	0.43
53:S7:140:VAL:HB	68:22:52:TYR:HB3	1.99	0.43
55:S9:53:ARG:O	55:S9:57:ARG:HG3	2.17	0.43
56:10:59:PHE:HA	56:10:64:TYR:HA	2.00	0.43
63:17:69:ILE:HD13	63:17:69:ILE:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:18:89:GLN:O	64:18:90:ASN:HB2	2.17	0.43
75:29:19:ARG:HG3	75:29:19:ARG:NH1	2.32	0.43
75:29:44:ARG:NH2	78:1S:1279:C:H5"	2.33	0.43
77:31:144:CYS:HB3	77:31:147:VAL:CG1	2.33	0.43
78:1S:153:G:H2'	78:1S:154:G:C8	2.53	0.43
78:1S:218:A:H3'	78:1S:219:A:C5'	2.43	0.43
78:1S:509:G:H2'	78:1S:510:G:C8	2.53	0.43
78:1S:869:A:H2'	78:1S:870:C:C6	2.51	0.43
78:1S:962:C:C2'	78:1S:963:A:H5'	2.48	0.43
78:1S:1318:G:H2'	78:1S:1319:A:O4'	2.18	0.43
78:1S:1562:G:H2'	78:1S:1563:C:H6	1.81	0.43
79:2S:435:C:H2'	79:2S:436:A:H8	1.83	0.43
79:2S:761:A:H2'	79:2S:762:U:C6	2.54	0.43
79:2S:791:A:H2'	79:2S:792:G:H8	1.83	0.43
79:2S:1146:C:H4'	79:2S:1331:U:C5	2.53	0.43
79:2S:1325:U:H2'	79:2S:1326:A:C8	2.52	0.43
79:2S:1832:C:H2'	79:2S:1833:G:H8	1.83	0.43
79:2S:3389:U:H5'	79:2S:3389:U:C6	2.44	0.43
82:ET:72:C:H2'	82:ET:73:A:C8	2.53	0.43
3:L3:260:VAL:HG21	79:2S:2987:A:H2	1.80	0.43
6:L6:52:VAL:HG22	6:L6:65:ILE:HB	1.99	0.43
7:L7:158:LYS:O	7:L7:159:GLN:C	2.60	0.43
8:L8:95:ASN:O	8:L8:98:ARG:HG2	2.18	0.43
8:L8:150:LEU:O	8:L8:199:ALA:HA	2.18	0.43
15:65:50:ARG:HB2	79:2S:267:G:H21	1.83	0.43
16:66:19:LEU:HA	16:66:123:ALA:HB1	2.01	0.43
18:68:106:PHE:CE2	18:68:121:CYS:HB3	2.53	0.43
19:69:44:LEU:O	19:69:49:THR:HB	2.18	0.43
19:69:160:GLU:O	19:69:160:GLU:HG2	2.17	0.43
20:70:117:ARG:HG3	20:70:117:ARG:HH21	1.83	0.43
30:80:48:THR:HG23	30:80:49:PRO:HD2	1.99	0.43
35:85:21:LEU:CD2	35:85:55:LEU:HD21	2.49	0.43
36:86:58:ILE:HD12	36:86:98:ARG:NH2	2.33	0.43
43:93:57:CYS:HB3	43:93:62:LYS:N	2.30	0.43
46:S0:41:ARG:HB3	46:S0:45:VAL:HB	1.99	0.43
47:S1:133:TYR:CD1	47:S1:217:LEU:HD23	2.53	0.43
50:S4:35:PRO:HB3	50:S4:143:ASP:HB2	2.00	0.43
50:S4:85:GLY:O	50:S4:101:LEU:HD12	2.19	0.43
52:S6:30:LYS:HE2	52:S6:36:VAL:CG2	2.48	0.43
53:S7:78:THR:O	53:S7:82:GLU:HG3	2.18	0.43
54:S8:92:ARG:HG3	79:2S:3345:G:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:11:66:ILE:HG12	57:11:128:CYS:SG	2.57	0.43
59:13:98:VAL:HA	59:13:101:HIS:HB3	2.00	0.43
61:15:67:ALA:CB	61:15:73:PRO:HG3	2.49	0.43
61:15:123:TYR:HD1	61:15:123:TYR:H	1.66	0.43
64:18:46:VAL:HA	64:18:49:LYS:HB2	2.01	0.43
68:22:80:ASN:HB3	78:1S:748:U:OP1	2.18	0.43
76:30:29:LYS:HE3	76:30:35:TYR:HE2	1.83	0.43
78:1S:564:G:C2	78:1S:578:U:H4'	2.54	0.43
78:1S:607:G:H5'	78:1S:613:G:N2	2.33	0.43
78:1S:1008:G:H2'	78:1S:1009:U:C6	2.52	0.43
78:1S:1184:A:H2'	78:1S:1185:U:H4'	1.99	0.43
78:1S:1405:G:H2'	78:1S:1406:A:H8	1.83	0.43
79:2S:806:A:H8	79:2S:935:U:H3	1.63	0.43
79:2S:920:A:H4'	79:2S:921:A:C5'	2.46	0.43
79:2S:1150:A:H3'	79:2S:1151:U:H6	1.83	0.43
79:2S:1223:A:H2	79:2S:1287:A:HO2'	1.65	0.43
79:2S:2130:G:H2'	79:2S:2131:A:H5'	2.00	0.43
79:2S:2531:C:H5'	79:2S:2532:U:H5	1.84	0.43
79:2S:3021:A:H61	79:2S:3032:A:H3'	1.83	0.43
79:2S:3064:U:H2'	79:2S:3065:G:H8	1.81	0.43
3:L3:124:LYS:HG2	79:2S:3316:A:N1	2.34	0.43
3:L3:136:LYS:HA	3:L3:139:GLN:HE21	1.83	0.43
3:L3:307:PRO:HG2	3:L3:311:PHE:CE1	2.53	0.43
4:L4:71:VAL:HG22	4:L4:72:ALA:N	2.32	0.43
4:L4:146:PRO:HG2	4:L4:147:GLU:H	1.82	0.43
5:L5:134:ALA:CB	5:L5:141:PRO:HD3	2.48	0.43
8:L8:29:SER:HB2	79:2S:2563:G:H4'	2.01	0.43
8:L8:54:GLU:HA	8:L8:57:ARG:HD3	2.01	0.43
8:L8:77:GLN:NE2	8:L8:167:PRO:HG2	2.33	0.43
8:L8:151:VAL:HG23	8:L8:175:VAL:HG11	2.00	0.43
10:60:129:VAL:HG12	10:60:130:ASP:N	2.33	0.43
18:68:76:ALA:HA	18:68:79:LYS:HB2	2.00	0.43
26:76:35:LEU:HD23	26:76:106:ILE:HB	2.00	0.43
32:82:20:HIS:O	32:82:21:HIS:HB2	2.18	0.43
34:84:24:LYS:O	79:2S:1695:U:H4'	2.18	0.43
34:84:66:SER:O	34:84:70:LYS:HG3	2.18	0.43
44:P0:14:LYS:O	44:P0:17:GLU:HB3	2.19	0.43
48:S2:160:GLY:O	48:S2:213:ALA:HB1	2.18	0.43
50:S4:209:HIS:O	50:S4:210:ILE:HD13	2.18	0.43
51:S5:80:LYS:HB2	51:S5:83:ARG:HB2	2.00	0.43
51:S5:119:ASP:O	51:S5:123:VAL:HG23	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:48:GLN:HA	55:S9:51:LYS:CE	2.48	0.43
62:16:41:PRO:HD2	62:16:44:LEU:HD23	2.00	0.43
62:16:55:VAL:HG13	62:16:56:GLY:N	2.33	0.43
65:19:130:ARG:CA	78:1S:1358:G:H4'	2.41	0.43
76:30:10:ARG:HB3	76:30:13:LYS:HB2	2.00	0.43
78:1S:415:C:H2'	78:1S:417:A:C8	2.51	0.43
78:1S:792:U:H2'	78:1S:793:A:O4'	2.18	0.43
78:1S:912:U:H5'	78:1S:913:G:C8	2.54	0.43
78:1S:1274:C:O2	78:1S:1274:C:H2'	2.19	0.43
78:1S:1505:A:H8	78:1S:1505:A:O5'	2.02	0.43
78:1S:1679:G:H1'	78:1S:1722:A:H61	1.83	0.43
79:2S:41:G:H3'	79:2S:42:C:C6	2.53	0.43
79:2S:184:U:H2'	79:2S:185:C:C6	2.54	0.43
79:2S:628:A:H5'	79:2S:1399:A:C2	2.53	0.43
79:2S:958:C:H5"	79:2S:2800:G:OP1	2.19	0.43
79:2S:1226:G:H5'	79:2S:3117:C:H1'	2.00	0.43
79:2S:1528:G:H2'	79:2S:1529:A:O4'	2.18	0.43
79:2S:1732:U:H3'	79:2S:1733:G:H8	1.84	0.43
79:2S:1881:A:H2'	79:2S:1882:G:C8	2.54	0.43
79:2S:2357:A:H2'	79:2S:2358:A:C8	2.54	0.43
2:L2:193:ARG:HG2	2:L2:193:ARG:HH21	1.83	0.43
4:L4:351:PRO:HB3	7:L7:70:LYS:HB3	1.99	0.43
8:L8:157:VAL:HG13	79:2S:147:U:N3	2.34	0.43
11:61:69:VAL:HA	81:5S:39:C:O2	2.19	0.43
13:63:59:ARG:NH2	13:63:150:PRO:HG2	2.24	0.43
15:65:71:ARG:HD3	15:65:94:TYR:HB2	1.99	0.43
16:66:35:VAL:HB	16:66:104:VAL:HG22	2.00	0.43
18:68:67:ILE:HG23	18:68:81:VAL:HG11	1.99	0.43
21:71:78:LYS:HE2	21:71:87:LYS:HE3	2.00	0.43
22:72:42:LYS:HB3	79:2S:1687:U:C2	2.53	0.43
25:75:134:ASP:O	25:75:138:ARG:HB2	2.18	0.43
34:84:29:ILE:HD11	79:2S:1598:G:OP1	2.18	0.43
36:86:60:LEU:HD11	36:86:68:ARG:HB2	2.01	0.43
46:S0:127:ARG:HG3	46:S0:127:ARG:NH1	2.34	0.43
47:S1:225:VAL:O	47:S1:229:MET:HB2	2.18	0.43
48:S2:60:SER:HA	67:21:26:ALA:HA	2.01	0.43
48:S2:116:LYS:HB2	48:S2:128:GLY:HA2	2.00	0.43
48:S2:141:ARG:HH22	48:S2:151:PRO:HB2	1.84	0.43
49:S3:35:SER:HB3	49:S3:51:ARG:O	2.19	0.43
49:S3:158:ILE:H	49:S3:158:ILE:CD1	2.29	0.43
53:S7:131:PHE:N	53:S7:132:PRO:CD	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:10:42:VAL:O	56:10:46:LEU:HB2	2.18	0.43
57:11:123:VAL:CG2	57:11:139:VAL:HG13	2.49	0.43
64:18:139:LYS:HE2	78:1S:1459:C:N4	2.33	0.43
67:21:40:ASP:OD2	67:21:46:ILE:HD11	2.18	0.43
68:22:50:PHE:CB	68:22:63:VAL:HG22	2.48	0.43
78:1S:64:U:H3'	78:1S:65:A:H5"	1.99	0.43
78:1S:689:G:H3'	78:1S:690:G:H5"	1.99	0.43
78:1S:1408:G:H2'	78:1S:1409:G:O4'	2.19	0.43
79:2S:172:G:H2'	79:2S:172:G:N3	2.34	0.43
79:2S:286:U:H2'	79:2S:287:G:C8	2.54	0.43
79:2S:876:A:H5"	79:2S:1890:U:H5"	2.01	0.43
79:2S:1440:G:H2'	79:2S:1441:G:C8	2.54	0.43
79:2S:1670:C:H4'	79:2S:1860:G:H5'	2.00	0.43
79:2S:1715:A:O4'	79:2S:1717:U:H4'	2.18	0.43
79:2S:1862:U:H2'	79:2S:1863:G:O4'	2.19	0.43
79:2S:2413:A:H2'	79:2S:2414:G:H8	1.83	0.43
79:2S:2880:U:H2'	79:2S:2881:C:C6	2.53	0.43
79:2S:2982:A:O3'	79:2S:2983:C:H2'	2.18	0.43
82:PT:64:G:H2'	82:PT:65:G:H8	1.84	0.43
3:L3:8:ALA:HA	79:2S:2915:U:OP1	2.18	0.43
3:L3:75:ALA:HB2	79:2S:3049:A:C6	2.53	0.43
3:L3:227:GLU:HG3	3:L3:228:GLY:H	1.83	0.43
4:L4:198:ARG:HD3	4:L4:199:TRP:CD1	2.54	0.43
4:L4:316:ASN:HA	4:L4:317:PRO:HD3	1.93	0.43
5:L5:118:THR:O	5:L5:119:TYR:HB2	2.18	0.43
8:L8:97:TYR:OH	8:L8:203:VAL:HA	2.19	0.43
9:L9:8:GLN:HG2	9:L9:68:LEU:HD11	2.00	0.43
9:L9:134:ILE:HD12	9:L9:134:ILE:H	1.83	0.43
11:61:8:PRO:HB2	81:5S:53:U:O2'	2.18	0.43
15:65:50:ARG:NH1	15:65:50:ARG:CB	2.82	0.43
15:65:93:LYS:HD2	79:2S:289:A:H2	1.82	0.43
18:68:59:ARG:NH1	18:68:59:ARG:HB2	2.34	0.43
19:69:88:ARG:HH21	79:2S:2102:U:H5'	1.84	0.43
20:70:69:PRO:HG2	79:2S:523:A:H4'	2.01	0.43
21:71:9:SER:O	21:71:10:ARG:HB2	2.19	0.43
26:76:16:ARG:O	26:76:20:PHE:CD2	2.71	0.43
29:79:14:ARG:HD3	29:79:18:ARG:HD3	2.00	0.43
33:83:53:TYR:CZ	33:83:65:ARG:HB2	2.54	0.43
39:89:50:ASN:HD22	39:89:50:ASN:HA	1.54	0.43
45:RC:33:LEU:HD22	45:RC:47:LEU:HD21	2.00	0.43
45:RC:214:ALA:CB	45:RC:220:ILE:HG12	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:109:ASN:OD1	78:1S:1294:G:H1'	2.17	0.43
48:S2:113:LEU:O	48:S2:132:ALA:HA	2.18	0.43
48:S2:162:CYS:SG	48:S2:212:LYS:HB3	2.59	0.43
49:S3:105:MET:HE2	49:S3:108:LYS:HB2	1.99	0.43
50:S4:46:VAL:O	50:S4:50:ASN:HB2	2.19	0.43
61:15:86:VAL:H	61:15:89:MET:HE3	1.84	0.43
61:15:86:VAL:O	61:15:89:MET:HG2	2.18	0.43
62:16:77:GLN:O	62:16:81:ILE:HG23	2.18	0.43
63:17:61:ILE:HG12	63:17:66:VAL:CG2	2.46	0.43
64:18:17:LEU:O	64:18:18:LEU:HB2	2.19	0.43
66:20:23:ARG:HB3	66:20:117:VAL:CG1	2.46	0.43
76:30:14:VAL:HG23	78:1S:567:A:H1'	1.99	0.43
78:1S:839:U:H2'	78:1S:840:U:C4'	2.49	0.43
78:1S:1116:A:H1'	78:1S:1131:A:C6	2.54	0.43
79:2S:652:G:H2'	79:2S:2361:A:H4'	2.01	0.43
79:2S:683:U:H2'	79:2S:684:G:O4'	2.18	0.43
79:2S:1357:G:H2'	79:2S:1358:C:H6	1.83	0.43
81:5S:16:U:H2'	81:5S:17:A:C8	2.53	0.43
82:ET:19:G:N2	82:ET:58:A:H2'	2.33	0.43
1:L1:169:VAL:CG1	1:L1:170:GLY:N	2.79	0.43
4:L4:4:PRO:O	4:L4:5:GLN:HB2	2.19	0.43
4:L4:52:VAL:CG2	4:L4:53:SER:H	2.26	0.43
4:L4:53:SER:HB3	4:L4:56:ALA:CB	2.49	0.43
4:L4:355:PHE:O	4:L4:359:LEU:HB2	2.18	0.43
5:L5:93:THR:HG23	81:5S:48:U:OP2	2.19	0.43
7:L7:67:ARG:HA	7:L7:70:LYS:HE2	2.00	0.43
9:L9:8:GLN:HE21	9:L9:68:LEU:CD1	2.31	0.43
10:60:17:TYR:N	10:60:18:PRO:HD3	2.33	0.43
10:60:182:LEU:HD23	10:60:185:ARG:HH11	1.82	0.43
11:61:10:ARG:O	11:61:10:ARG:HD3	2.18	0.43
15:65:17:ASP:O	15:65:21:PHE:HB2	2.19	0.43
15:65:87:GLN:HE22	79:2S:2609:A:H1'	1.84	0.43
18:68:83:VAL:HG11	18:68:87:VAL:HG22	2.00	0.43
18:68:163:PRO:HG2	79:2S:780:A:C2	2.53	0.43
21:71:96:ILE:HD12	21:71:96:ILE:H	1.84	0.43
24:74:45:ASN:HA	24:74:46:PRO:HD3	1.78	0.43
32:82:32:TRP:CH2	32:82:52:GLN:HG2	2.53	0.43
43:93:56:THR:HG22	43:93:63:THR:HG23	2.00	0.43
43:93:59:CYS:C	43:93:61:LYS:H	2.27	0.43
48:S2:89:GLN:HG2	78:1S:1633:A:H2	1.82	0.43
51:S5:126:ASP:O	51:S5:127:GLN:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:52:ILE:HA	52:S6:111:LEU:HD23	2.01	0.43
55:S9:81:VAL:CG2	55:S9:86:LEU:HD23	2.48	0.43
62:16:41:PRO:C	62:16:43:ILE:H	2.26	0.43
68:22:79:PHE:O	68:22:124:LYS:HA	2.19	0.43
69:23:62:LYS:HE3	78:1S:1754:A:H5'	2.00	0.43
72:26:60:PRO:O	72:26:61:GLU:HG2	2.18	0.43
76:30:39:LEU:HB3	76:30:43:ARG:HH21	1.83	0.43
78:1S:762:A:H2'	78:1S:763:G:O4'	2.18	0.43
78:1S:1557:U:O2'	78:1S:1558:U:H2'	2.19	0.43
79:2S:278:U:H2'	79:2S:279:U:C6	2.54	0.43
79:2S:634:C:H2'	79:2S:635:G:H8	1.80	0.43
79:2S:744:A:C2'	79:2S:745:C:H5'	2.46	0.43
79:2S:915:A:C5	79:2S:917:A:H1'	2.54	0.43
79:2S:1459:C:H2'	79:2S:1460:A:C8	2.53	0.43
79:2S:2832:C:H2'	79:2S:2833:A:C8	2.54	0.43
79:2S:2849:C:OP1	79:2S:2906:C:H4'	2.18	0.43
79:2S:2943:G:H2'	79:2S:2944:U:O4'	2.19	0.43
79:2S:3205:G:H2'	79:2S:3206:C:C5	2.54	0.43
79:2S:3287:U:H6	79:2S:3287:U:H5'	1.83	0.43
79:2S:3336:A:H3'	79:2S:3337:G:C8	2.54	0.43
3:L3:280:HIS:HB3	3:L3:324:VAL:HG22	2.01	0.43
7:L7:116:PHE:HZ	7:L7:144:ILE:HG12	1.83	0.43
8:L8:71:VAL:HG22	8:L8:234:GLY:C	2.44	0.43
10:60:94:PHE:CE2	79:2S:1045:C:H1'	2.54	0.43
11:61:35:LYS:O	11:61:39:GLN:HG2	2.19	0.43
11:61:141:ARG:HH12	81:5S:27:A:H5"	1.83	0.43
13:63:154:VAL:HG23	13:63:155:GLU:H	1.83	0.43
15:65:99:ARG:O	15:65:103:GLU:HG3	2.18	0.43
15:65:138:GLN:HA	15:65:143:ARG:HD2	2.01	0.43
16:66:75:ALA:O	16:66:79:ILE:HG13	2.19	0.43
18:68:141:ARG:HH12	79:2S:976:U:H5"	1.84	0.43
20:70:137:ARG:HB3	20:70:140:VAL:HG23	2.00	0.43
25:75:62:VAL:HG12	25:75:86:VAL:CG2	2.49	0.43
27:77:22:LYS:CE	27:77:134:LEU:HD23	2.44	0.43
27:77:49:TYR:CB	27:77:133:LYS:HD3	2.49	0.43
27:77:73:LYS:HD3	27:77:74:VAL:H	1.83	0.43
31:81:18:LYS:HA	79:2S:3376:A:H1'	2.01	0.43
33:83:20:LYS:HB3	33:83:20:LYS:HZ3	1.83	0.43
35:85:109:ILE:HG23	79:2S:170:G:C5'	2.48	0.43
36:86:53:TYR:HA	36:86:56:ARG:NH1	2.33	0.43
37:87:28:HIS:O	37:87:32:LYS:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:92:73:GLU:HA	42:92:80:ARG:HA	2.01	0.43
46:S0:58:VAL:O	46:S0:62:ARG:HG2	2.19	0.43
48:S2:141:ARG:HG3	48:S2:193:VAL:HG13	2.01	0.43
48:S2:163:GLY:O	78:1S:1086:A:H5"	2.18	0.43
51:S5:143:ARG:HH11	51:S5:143:ARG:HG3	1.82	0.43
52:S6:39:GLU:HB2	52:S6:46:LYS:HG3	2.00	0.43
59:13:66:ILE:HG23	59:13:67:THR:N	2.34	0.43
61:15:44:ARG:HG2	61:15:44:ARG:HH11	1.84	0.43
62:16:28:LEU:CD2	78:1S:1365:C:H5"	2.49	0.43
64:18:116:LEU:HD21	64:18:123:ARG:CB	2.37	0.43
66:20:55:PRO:HB3	66:20:91:ILE:CG1	2.46	0.43
72:26:42:ARG:HB2	72:26:42:ARG:CZ	2.49	0.43
78:1S:15:U:H2'	78:1S:16:G:O4'	2.18	0.43
78:1S:189:C:C3'	78:1S:190:C:H5"	2.43	0.43
78:1S:460:A:H3'	78:1S:461:G:H8	1.84	0.43
78:1S:1194:A:C2'	78:1S:1195:C:H5'	2.48	0.43
78:1S:1483:A:C2	78:1S:1607:G:H1'	2.53	0.43
78:1S:1611:A:C2'	78:1S:1612:U:H5'	2.49	0.43
78:1S:1768:G:H5"	78:1S:1769:U:H2'	2.01	0.43
79:2S:44:U:H2'	79:2S:45:A:O4'	2.18	0.43
79:2S:757:C:C2'	79:2S:758:C:H5"	2.49	0.43
79:2S:1117:G:H2'	79:2S:1118:C:H6	1.83	0.43
79:2S:2128:C:H2'	79:2S:2129:U:C6	2.52	0.43
79:2S:2595:A:H2'	79:2S:2596:U:H5'	2.00	0.43
79:2S:2775:U:H2'	79:2S:2776:C:H6	1.79	0.43
79:2S:3029:A:H8	79:2S:3029:A:O5'	2.01	0.43
79:2S:3060:C:H2'	79:2S:3061:G:C8	2.54	0.43
1:L1:34:LEU:O	1:L1:169:VAL:HG13	2.19	0.43
1:L1:62:ASN:HB3	1:L1:151:VAL:HG11	1.98	0.43
2:L2:229:ALA:HB3	2:L2:234:LYS:HG3	2.01	0.43
2:L2:245:LEU:HB3	2:L2:247:ARG:CZ	2.48	0.43
3:L3:62:ARG:CG	3:L3:348:ARG:HH21	2.31	0.43
3:L3:123:TYR:CD2	3:L3:124:LYS:HG3	2.53	0.43
4:L4:281:ILE:HG12	4:L4:283:THR:O	2.18	0.43
4:L4:300:ARG:HH11	4:L4:300:ARG:HG3	1.84	0.43
11:61:75:LYS:HE3	11:61:79:ILE:HD11	2.01	0.43
14:64:15:VAL:O	14:64:15:VAL:HG23	2.19	0.43
14:64:50:LYS:HZ1	14:64:86:ALA:HB2	1.83	0.43
15:65:28:TRP:O	15:65:32:GLN:HG2	2.18	0.43
15:65:42:PRO:HG3	15:65:61:ILE:CD1	2.48	0.43
16:66:37:ARG:HA	16:66:107:GLY:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:56:ASP:O	16:66:60:LYS:HG3	2.18	0.43
16:66:92:THR:HB	79:2S:632:G:OP1	2.19	0.43
23:73:32:ARG:HD2	23:73:32:ARG:N	2.33	0.43
27:77:25:ILE:HG22	27:77:28:PRO:HD3	2.01	0.43
28:78:6:THR:CG2	28:78:8:THR:HG23	2.47	0.43
28:78:25:HIS:HB3	79:2S:802:C:H41	1.83	0.43
28:78:41:HIS:C	28:78:43:ILE:H	2.26	0.43
32:82:27:ARG:HD2	79:2S:1433:A:H4'	1.99	0.43
34:84:8:ARG:HB3	79:2S:1606:U:C5	2.53	0.43
34:84:51:LEU:HD23	34:84:51:LEU:H	1.84	0.43
45:RC:5:GLU:HB2	45:RC:315:VAL:HG12	2.01	0.43
45:RC:264:SER:HB2	45:RC:271:VAL:CG2	2.48	0.43
47:S1:46:THR:HG22	60:14:32:ASP:HB2	2.01	0.43
50:S4:207:LEU:HA	50:S4:220:THR:O	2.18	0.43
51:S5:82:PHE:CE1	51:S5:165:LEU:HD22	2.54	0.43
51:S5:140:THR:O	51:S5:174:LEU:HD12	2.18	0.43
52:S6:14:LYS:HG2	52:S6:15:THR:N	2.33	0.43
55:S9:57:ARG:O	55:S9:61:THR:HG23	2.19	0.43
57:11:92:HIS:O	57:11:100:TYR:HA	2.19	0.43
57:11:109:VAL:HG23	57:11:137:PHE:O	2.19	0.43
61:15:11:VAL:O	61:15:12:PHE:CB	2.65	0.43
63:17:66:VAL:HG12	63:17:69:ILE:HD11	2.00	0.43
64:18:46:VAL:O	64:18:46:VAL:HG12	2.17	0.43
67:21:69:LEU:HD23	67:21:69:LEU:C	2.44	0.43
72:26:85:ARG:HD2	78:1S:1153:G:H5'	2.01	0.43
78:1S:310:C:H2'	78:1S:311:U:H6	1.80	0.43
78:1S:367:A:H2'	78:1S:368:U:O4'	2.18	0.43
78:1S:1734:U:H2'	78:1S:1735:U:O4'	2.18	0.43
79:2S:531:G:H2'	79:2S:532:A:H8	1.84	0.43
79:2S:785:G:H2'	79:2S:786:A:C8	2.53	0.43
79:2S:1066:G:H2'	79:2S:1067:U:H6	1.82	0.43
79:2S:1859:A:H8	79:2S:1859:A:O5'	2.01	0.43
79:2S:2186:U:H2'	79:2S:2187:G:O4'	2.18	0.43
79:2S:2356:A:C2'	79:2S:2357:A:H5'	2.49	0.43
79:2S:3084:C:H2'	79:2S:3085:G:O4'	2.19	0.43
79:2S:3348:G:H2'	79:2S:3349:C:C6	2.54	0.43
80:8S:77:A:H2'	80:8S:78:G:O4'	2.19	0.43
3:L3:37:ARG:HA	3:L3:186:GLY:HA2	2.01	0.43
4:L4:57:GLY:HA3	4:L4:98:ARG:HB2	2.01	0.43
5:L5:72:ASP:O	81:5S:116:C:H1'	2.18	0.43
6:L6:54:TYR:HD2	6:L6:55:LEU:N	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:102:VAL:O	7:L7:106:LEU:HG	2.19	0.43
7:L7:178:ILE:H	7:L7:178:ILE:HG13	1.67	0.43
9:L9:53:ILE:HG22	9:L9:54:LYS:N	2.34	0.43
10:60:87:LEU:HD23	10:60:87:LEU:C	2.44	0.43
15:65:134:LEU:HD12	15:65:134:LEU:N	2.33	0.43
17:67:130:TYR:CD2	17:67:136:ILE:HD12	2.53	0.43
19:69:177:VAL:O	19:69:177:VAL:HG12	2.19	0.43
19:69:182:ASP:O	19:69:186:LYS:HB3	2.19	0.43
21:71:41:ASP:HB2	21:71:97:LYS:HG3	2.00	0.43
22:72:22:PRO:HG3	22:72:105:LEU:HD22	2.01	0.43
27:77:81:LEU:C	27:77:81:LEU:HD23	2.43	0.43
28:78:46:ASP:O	28:78:47:LYS:CB	2.67	0.43
29:79:22:LYS:H	29:79:22:LYS:HD2	1.83	0.43
35:85:70:TYR:CD1	35:85:73:LYS:HD2	2.53	0.43
46:S0:27:ARG:HB3	46:S0:28:ASN:H	1.55	0.43
47:S1:64:ARG:H	47:S1:88:VAL:HB	1.84	0.43
47:S1:127:VAL:HG11	47:S1:176:VAL:HG21	2.01	0.43
47:S1:208:GLN:HG3	47:S1:209:ASN:OD1	2.19	0.43
48:S2:179:VAL:HG12	78:1S:3:U:O4'	2.19	0.43
49:S3:207:THR:O	63:17:39:ALA:HB1	2.19	0.43
50:S4:156:VAL:O	50:S4:157:ASN:HB2	2.17	0.43
51:S5:59:VAL:C	51:S5:61:TYR:H	2.25	0.43
52:S6:123:GLY:C	52:S6:124:LEU:HD12	2.44	0.43
53:S7:31:SER:N	53:S7:32:PRO:HD2	2.33	0.43
55:S9:73:GLY:O	55:S9:77:ILE:HG13	2.19	0.43
56:10:87:VAL:N	56:10:88:PRO:CD	2.65	0.43
59:13:118:ILE:HA	59:13:121:ARG:HH12	1.84	0.43
62:16:45:ARG:O	62:16:48:VAL:HG12	2.17	0.43
63:17:116:LYS:C	63:17:117:LEU:HD12	2.44	0.43
64:18:81:ILE:HG23	64:18:82:PRO:HD2	2.00	0.43
65:19:15:ILE:O	65:19:15:ILE:HG22	2.18	0.43
65:19:69:LYS:HB2	65:19:70:GLN:H	1.61	0.43
66:20:30:LYS:HB2	66:20:33:GLN:HB2	2.01	0.43
69:23:54:LEU:HD21	69:23:75:GLN:NE2	2.34	0.43
70:24:8:ARG:HB3	78:1S:780:A:C8	2.54	0.43
76:30:39:LEU:HD12	76:30:43:ARG:NH2	2.34	0.43
77:31:119:ARG:HH21	77:31:119:ARG:HG3	1.84	0.43
78:1S:27:U:H2'	78:1S:28:A:C8	2.54	0.43
78:1S:94:U:C2'	78:1S:95:G:H5'	2.49	0.43
78:1S:390:G:C8	78:1S:1731:A:H4'	2.43	0.43
78:1S:585:A:H2'	78:1S:586:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1020:A:C3'	78:1S:1021:C:H5"	2.48	0.43
78:1S:1119:G:H2'	78:1S:1120:U:C6	2.54	0.43
79:2S:341:G:H21	79:2S:349:A:H61	1.66	0.43
79:2S:540:U:H2'	79:2S:541:U:C6	2.53	0.43
79:2S:904:A:H2'	79:2S:905:U:C6	2.54	0.43
79:2S:1214:U:H2'	79:2S:1215:U:C6	2.54	0.43
79:2S:1361:U:H2'	79:2S:1362:G:H8	1.83	0.43
79:2S:2366:C:H2'	79:2S:2367:A:C8	2.53	0.43
79:2S:3001:C:O2'	79:2S:3002:C:H5'	2.18	0.43
1:L1:38:LEU:O	1:L1:165:LEU:HG	2.19	0.42
3:L3:316:GLU:O	3:L3:317:ILE:HB	2.18	0.42
4:L4:300:ARG:HG2	18:68:39:ARG:O	2.18	0.42
6:L6:68:PRO:HB3	6:L6:142:ASP:OD1	2.19	0.42
16:66:49:ARG:HG2	16:66:53:LYS:HE3	2.01	0.42
16:66:115:LYS:CG	79:2S:3178:A:H2'	2.48	0.42
18:68:85:GLY:H	18:68:104:LEU:HD12	1.83	0.42
18:68:130:ARG:O	18:68:132:PRO:HD3	2.19	0.42
19:69:105:LEU:HD22	19:69:106:LEU:HD12	1.99	0.42
28:78:34:MET:O	79:2S:95:A:H4'	2.19	0.42
33:83:48:ARG:HG2	33:83:48:ARG:HH11	1.83	0.42
34:84:58:ARG:HB3	34:84:61:GLN:NE2	2.34	0.42
42:92:29:LYS:CD	42:92:31:GLY:H	2.31	0.42
50:S4:12:LEU:CD1	78:1S:381:C:H5'	2.49	0.42
50:S4:57:ASN:O	50:S4:61:VAL:HG23	2.18	0.42
50:S4:185:GLY:N	50:S4:189:LEU:HD13	2.33	0.42
51:S5:25:LEU:HD13	51:S5:25:LEU:N	2.34	0.42
51:S5:133:VAL:HG22	51:S5:198:LEU:HD13	2.00	0.42
52:S6:81:VAL:HG22	52:S6:82:SER:N	2.34	0.42
52:S6:194:LYS:HD3	78:1S:127:G:H5'	2.01	0.42
54:S8:172:ARG:HH11	54:S8:172:ARG:HG3	1.83	0.42
58:12:74:LEU:HD11	77:31:114:VAL:HG13	2.01	0.42
60:14:110:LEU:O	72:26:56:ALA:HB1	2.19	0.42
61:15:72:LYS:HA	61:15:73:PRO:HD3	1.77	0.42
62:16:36:ILE:O	62:16:36:ILE:HG12	2.19	0.42
65:19:91:TYR:HB2	78:1S:1590:G:OP1	2.19	0.42
66:20:67:THR:HG22	66:20:68:ARG:N	2.34	0.42
68:22:37:PHE:O	68:22:37:PHE:HD1	2.02	0.42
69:23:13:ARG:NH1	69:23:13:ARG:HB2	2.34	0.42
69:23:63:GLN:HA	69:23:65:ASN:N	2.34	0.42
72:26:5:ARG:C	72:26:7:SER:H	2.26	0.42
78:1S:400:A:H4'	78:1S:401:A:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:449:C:H2'	78:1S:450:U:C6	2.54	0.42
78:1S:628:G:H2'	78:1S:629:U:C5	2.54	0.42
78:1S:874:C:H4'	78:1S:1046:G:H4'	2.01	0.42
78:1S:1303:U:H2'	78:1S:1304:G:O4'	2.19	0.42
78:1S:1476:C:H2'	78:1S:1477:G:H8	1.84	0.42
79:2S:649:A:H4'	79:2S:2869:U:C5'	2.49	0.42
79:2S:848:A:H2'	79:2S:849:C:H4'	2.01	0.42
79:2S:1886:A:H2'	79:2S:1887:A:C8	2.53	0.42
79:2S:2208:A:OP2	79:2S:2208:A:H3'	2.18	0.42
79:2S:2820:A:H4'	82:PT:77:A:C8	2.54	0.42
79:2S:3157:U:H4'	79:2S:3158:G:H8	1.83	0.42
79:2S:3190:C:H2'	79:2S:3191:G:C8	2.54	0.42
1:L1:199:GLN:C	1:L1:201:VAL:N	2.77	0.42
2:L2:208:ASP:OD2	2:L2:208:ASP:N	2.52	0.42
3:L3:59:ASP:CG	3:L3:71:GLU:HG2	2.44	0.42
3:L3:106:TRP:HB2	3:L3:133:TYR:CE2	2.54	0.42
3:L3:229:VAL:HG23	3:L3:233:TRP:HD1	1.84	0.42
4:L4:216:VAL:HA	4:L4:227:THR:HG21	2.01	0.42
6:L6:78:ARG:HB2	79:2S:3272:C:H5'	2.00	0.42
7:L7:105:LEU:HD22	79:2S:1101:G:H1'	2.01	0.42
7:L7:218:ARG:HD2	7:L7:218:ARG:HA	1.86	0.42
8:L8:122:LYS:C	8:L8:124:ASP:H	2.26	0.42
9:L9:25:VAL:HG12	9:L9:26:LYS:N	2.32	0.42
9:L9:151:VAL:HG11	79:2S:3111:U:H4'	2.00	0.42
10:60:75:TYR:O	10:60:79:VAL:HG23	2.19	0.42
10:60:191:LYS:O	10:60:197:VAL:HG23	2.19	0.42
11:61:171:VAL:HG13	11:61:172:LEU:H	1.83	0.42
13:63:76:THR:HG21	13:63:101:ARG:HH11	1.83	0.42
16:66:65:ASN:HD22	79:2S:2988:C:H5"	1.83	0.42
17:67:109:ALA:HA	17:67:112:LEU:HB2	2.02	0.42
22:72:81:LYS:HD2	79:2S:1681:U:O4	2.19	0.42
25:75:24:LEU:C	25:75:25:LYS:HD2	2.44	0.42
26:76:12:ARG:HA	79:2S:215:G:H5'	2.01	0.42
26:76:56:VAL:HG21	26:76:104:LEU:HB3	2.02	0.42
27:77:17:ARG:HD3	34:84:73:SER:HB3	2.01	0.42
32:82:6:HIS:HA	32:82:7:PRO:HD3	1.80	0.42
42:92:37:ALA:CB	79:2S:2766:U:H5"	2.47	0.42
45:RC:10:ARG:HE	45:RC:10:ARG:CA	2.30	0.42
47:S1:125:VAL:HG12	47:S1:172:LEU:HD12	2.01	0.42
48:S2:116:LYS:HE2	48:S2:127:ALA:CB	2.49	0.42
53:S7:143:LEU:HB2	53:S7:147:ASN:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:49:LEU:CD2	55:S9:99:LEU:HD23	2.49	0.42
55:S9:49:LEU:HD21	55:S9:99:LEU:HD23	2.01	0.42
55:S9:163:PRO:HG3	78:1S:512:A:C5'	2.45	0.42
61:15:40:ARG:HA	61:15:40:ARG:HE	1.82	0.42
70:24:79:VAL:HG12	70:24:83:LYS:HE3	1.99	0.42
72:26:86:VAL:HG22	72:26:87:ARG:N	2.21	0.42
78:1S:212:U:H2'	78:1S:213:A:H8	1.84	0.42
78:1S:1164:G:H2'	78:1S:1165:G:H8	1.83	0.42
79:2S:763:G:N1	79:2S:764:U:H1'	2.34	0.42
79:2S:2916:U:H2'	79:2S:2917:G:C8	2.54	0.42
79:2S:3346:U:H3	79:2S:3359:A:N6	2.15	0.42
81:5S:61:G:H2'	81:5S:62:U:C6	2.54	0.42
2:L2:158:ILE:HG13	2:L2:159:SER:N	2.34	0.42
2:L2:174:ARG:NH1	2:L2:175:VAL:HG13	2.34	0.42
2:L2:180:LEU:HD13	43:93:18:TYR:CE1	2.54	0.42
7:L7:31:ALA:O	7:L7:35:ALA:HB3	2.19	0.42
20:70:132:THR:O	20:70:133:ALA:CB	2.66	0.42
23:73:87:ARG:HH12	23:73:120:LYS:HD3	1.84	0.42
27:77:121:ARG:HH11	27:77:121:ARG:HG3	1.85	0.42
31:81:10:ARG:HB2	31:81:12:TYR:CE2	2.54	0.42
32:82:21:HIS:C	32:82:23:ASP:H	2.27	0.42
32:82:32:TRP:HH2	32:82:52:GLN:HG2	1.84	0.42
32:82:64:LYS:C	32:82:66:LEU:H	2.27	0.42
37:87:15:SER:O	37:87:28:HIS:HA	2.20	0.42
44:P0:61:ARG:HB2	79:2S:1221:A:OP2	2.19	0.42
46:S0:56:LYS:CB	46:S0:160:ILE:HG23	2.45	0.42
47:S1:202:LYS:HB2	47:S1:202:LYS:NZ	2.34	0.42
50:S4:102:VAL:HG11	50:S4:239:PRO:HB3	2.00	0.42
50:S4:160:VAL:HG22	50:S4:172:PHE:HB2	2.01	0.42
50:S4:179:LYS:O	50:S4:181:VAL:HG23	2.19	0.42
58:12:24:ILE:O	58:12:24:ILE:HG12	2.20	0.42
59:13:48:SER:O	59:13:52:VAL:HG23	2.20	0.42
59:13:76:LYS:HE3	59:13:76:LYS:HB3	1.91	0.42
62:16:5:PRO:HG2	62:16:24:ALA:HB2	2.01	0.42
64:18:134:ARG:HD2	78:1S:1559:A:C8	2.54	0.42
66:20:96:PRO:HB2	66:20:97:VAL:H	1.70	0.42
68:22:105:THR:CG2	68:22:110:ILE:HG12	2.48	0.42
70:24:47:VAL:HG23	70:24:48:TYR:CD2	2.54	0.42
78:1S:523:G:H1'	78:1S:529:A:N6	2.34	0.42
78:1S:940:A:H2'	78:1S:941:A:C8	2.55	0.42
79:2S:161:G:H2'	79:2S:162:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:283:G:N2	79:2S:285:A:H5”	2.30	0.42
79:2S:338:A:H3’	79:2S:339:C:H5”	2.00	0.42
79:2S:674:G:H2’	79:2S:675:C:O4’	2.19	0.42
79:2S:957:C:H5”	79:2S:2799:A:N7	2.34	0.42
79:2S:2547:A:C2’	79:2S:2548:C:H5’	2.49	0.42
79:2S:2799:A:H5”	79:2S:2800:G:O5’	2.19	0.42
79:2S:2820:A:H5”	82:PT:77:A:C5	2.54	0.42
79:2S:3163:A:H3’	79:2S:3164:C:C5’	2.46	0.42
82:ET:60:A:H2’	82:ET:60:A:N3	2.34	0.42
2:L2:230:VAL:HG11	79:2S:2424:A:C2	2.51	0.42
3:L3:2:SER:HB3	79:2S:2943:G:C8	2.55	0.42
3:L3:203:VAL:HG12	3:L3:204:ALA:N	2.34	0.42
3:L3:203:VAL:HG12	3:L3:204:ALA:H	1.84	0.42
8:L8:74:THR:HG23	8:L8:75:ILE:HG13	2.01	0.42
8:L8:76:ALA:H	8:L8:78:PHE:HE1	1.68	0.42
8:L8:105:LYS:HG3	8:L8:108:ARG:CZ	2.50	0.42
11:61:8:PRO:HG2	11:61:9:MET:H	1.84	0.42
11:61:81:GLU:HA	11:61:84:LEU:HD12	2.00	0.42
13:63:58:VAL:HG12	79:2S:75:G:H5”	2.01	0.42
13:63:193:ALA:O	13:63:194:GLU:HB3	2.19	0.42
14:64:108:ARG:HG2	14:64:108:ARG:NH2	2.34	0.42
16:66:151:ASP:OD2	16:66:151:ASP:N	2.51	0.42
16:66:153:VAL:HG12	16:66:157:GLU:HG2	2.00	0.42
21:71:147:VAL:HA	21:71:148:PRO:HD3	1.88	0.42
28:78:72:VAL:HG12	28:78:111:LYS:CG	2.50	0.42
43:93:57:CYS:SG	43:93:59:CYS:O	2.67	0.42
44:P0:74:GLU:HA	44:P0:77:LEU:HB2	2.00	0.42
46:S0:154:GLU:O	46:S0:155:PHE:HB2	2.20	0.42
47:S1:35:PRO:HA	47:S1:232:HIS:HE2	1.81	0.42
50:S4:66:MET:HE2	78:1S:454:U:H5’	2.02	0.42
50:S4:104:ASP:HB3	50:S4:105:VAL:H	1.57	0.42
51:S5:45:LYS:HA	51:S5:45:LYS:HE3	2.00	0.42
54:S8:152:ILE:HB	79:2S:2066:C:O2	2.20	0.42
55:S9:45:ILE:HG23	55:S9:104:PHE:CD1	2.55	0.42
61:15:44:ARG:HH21	61:15:82:ASN:HD22	1.67	0.42
62:16:73:GLY:O	62:16:77:GLN:HG3	2.19	0.42
66:20:20:ILE:HD11	66:20:100:VAL:HG21	2.01	0.42
70:24:13:ILE:N	70:24:13:ILE:HD12	2.34	0.42
70:24:90:ARG:HA	70:24:93:ARG:HD2	2.01	0.42
78:1S:175:G:N2	78:1S:176:C:H41	2.17	0.42
78:1S:728:U:H2’	78:1S:729:G:H5’	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:814:A:H2'	78:1S:814:A:N3	2.35	0.42
78:1S:832:U:C2'	78:1S:833:U:H5"	2.48	0.42
78:1S:1087:A:H2'	78:1S:1088:A:C8	2.53	0.42
78:1S:1160:A:H2'	78:1S:1161:C:H6	1.82	0.42
79:2S:426:G:H2'	79:2S:427:C:C6	2.54	0.42
79:2S:728:G:H2'	79:2S:729:C:C6	2.54	0.42
79:2S:858:A:H2'	79:2S:859:G:O4'	2.20	0.42
79:2S:1227:C:H2'	79:2S:1228:C:C6	2.55	0.42
79:2S:2533:G:H2'	79:2S:2534:G:O4'	2.20	0.42
80:8S:155:A:H2'	80:8S:156:U:O4'	2.19	0.42
81:5S:77:G:H1'	81:5S:78:U:H5	1.85	0.42
1:L1:92:LYS:HB3	1:L1:95:LYS:CE	2.49	0.42
2:L2:137:ILE:HG13	2:L2:138:GLY:H	1.84	0.42
2:L2:138:GLY:N	2:L2:147:ARG:HB3	2.35	0.42
3:L3:79:VAL:CG1	3:L3:322:ILE:HB	2.50	0.42
3:L3:216:ASP:HA	3:L3:277:SER:O	2.20	0.42
4:L4:135:VAL:CG1	4:L4:142:VAL:HG11	2.48	0.42
8:L8:58:VAL:O	8:L8:62:LYS:N	2.52	0.42
9:L9:27:VAL:HG21	9:L9:78:MET:CB	2.42	0.42
9:L9:92:TYR:OH	9:L9:136:PHE:HD1	2.02	0.42
10:60:43:VAL:HA	10:60:139:ARG:NH2	2.33	0.42
11:61:112:LEU:HD23	11:61:112:LEU:N	2.34	0.42
11:61:134:PRO:HB2	81:5S:55:A:N1	2.34	0.42
14:64:32:LEU:HB3	14:64:85:TRP:CZ2	2.54	0.42
15:65:71:ARG:CD	15:65:94:TYR:HB2	2.49	0.42
16:66:58:LEU:HA	16:66:72:HIS:NE2	2.34	0.42
16:66:147:TRP:CE2	16:66:149:TYR:HB2	2.54	0.42
17:67:3:ARG:HG3	79:2S:398:A:H5'	2.02	0.42
19:69:118:HIS:O	19:69:122:VAL:HG23	2.19	0.42
21:71:62:GLY:HA3	21:71:74:VAL:CG1	2.50	0.42
21:71:112:ASN:O	21:71:116:ARG:HB2	2.19	0.42
24:74:42:GLN:O	24:74:43:ARG:HB2	2.20	0.42
31:81:29:ALA:O	31:81:33:VAL:HG23	2.19	0.42
37:87:21:ARG:HD2	37:87:37:CYS:HB2	2.01	0.42
44:P0:96:ILE:O	44:P0:100:ILE:HG13	2.19	0.42
46:S0:54:TRP:HH2	46:S0:191:ARG:HH22	1.66	0.42
46:S0:102:PHE:CZ	46:S0:135:GLU:HG3	2.47	0.42
47:S1:22:ASP:N	47:S1:23:PRO:HD3	2.33	0.42
47:S1:27:LYS:HD2	47:S1:47:LEU:HD13	2.02	0.42
49:S3:159:HIS:O	49:S3:160:SER:CB	2.67	0.42
50:S4:99:PHE:CE1	50:S4:113:ARG:HG2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:39:GLU:O	52:S6:39:GLU:HG2	2.19	0.42
54:S8:181:GLY:O	54:S8:182:TYR:HB3	2.20	0.42
55:S9:48:GLN:O	55:S9:52:ILE:HG13	2.20	0.42
57:11:6:THR:O	57:11:7:VAL:HB	2.18	0.42
58:12:57:ALA:HA	58:12:123:VAL:O	2.19	0.42
61:15:90:ILE:HA	61:15:107:ILE:HB	2.01	0.42
62:16:5:PRO:HD2	62:16:24:ALA:HB2	2.02	0.42
66:20:28:SER:HB2	66:20:34:LEU:HD23	2.01	0.42
74:28:60:GLU:O	74:28:61:ARG:HB2	2.20	0.42
78:1S:58:U:H4'	78:1S:456:A:C2	2.55	0.42
78:1S:162:A:H3'	78:1S:163:G:N2	2.34	0.42
78:1S:1001:A:H2'	78:1S:1002:G:C8	2.55	0.42
78:1S:1133:A:H2'	78:1S:1134:C:O4'	2.18	0.42
79:2S:32:U:H3	79:2S:52:A:N6	2.17	0.42
79:2S:88:A:H2'	79:2S:89:A:O4'	2.19	0.42
79:2S:698:U:H2'	79:2S:699:A:C1'	2.50	0.42
79:2S:1256:G:H2'	79:2S:1257:C:C6	2.54	0.42
79:2S:1336:U:H2'	79:2S:1337:A:C8	2.54	0.42
79:2S:1658:G:H2'	79:2S:1659:U:O4'	2.19	0.42
79:2S:1682:U:H1'	79:2S:1685:C:N4	2.34	0.42
79:2S:1909:A:H2'	79:2S:1910:A:O4'	2.19	0.42
79:2S:2084:C:H5	79:2S:2085:U:O2	2.02	0.42
79:2S:2118:C:H2'	79:2S:2119:A:O4'	2.18	0.42
79:2S:2451:G:N2	79:2S:2495:C:H42	2.18	0.42
79:2S:2655:U:H4'	79:2S:2656:A:O4'	2.19	0.42
82:PT:34:U:H2'	82:PT:36:A:OP2	2.20	0.42
2:L2:42:ARG:HG2	2:L2:43:GLY:N	2.35	0.42
4:L4:269:SER:C	4:L4:271:LYS:H	2.28	0.42
9:L9:19:SER:HB2	9:L9:26:LYS:HB3	2.01	0.42
10:60:156:ARG:HD2	10:60:163:GLN:O	2.19	0.42
10:60:158:LYS:HD3	10:60:158:LYS:HA	1.92	0.42
15:65:93:LYS:HD2	79:2S:289:A:C2	2.55	0.42
18:68:8:LYS:O	18:68:9:GLN:HG2	2.20	0.42
18:68:57:ILE:HD12	79:2S:671:U:OP2	2.19	0.42
20:70:77:VAL:HG13	20:70:125:LYS:O	2.19	0.42
21:71:128:LEU:HD11	79:2S:1096:U:C5'	2.36	0.42
23:73:32:ARG:HB2	23:73:64:LYS:HB3	2.01	0.42
23:73:114:ILE:HG13	23:73:132:ASN:HB3	2.01	0.42
32:82:26:HIS:HB2	79:2S:655:C:C5'	2.47	0.42
34:84:4:ARG:HB3	79:2S:1857:C:O2	2.19	0.42
35:85:5:LYS:HD2	35:85:7:TYR:OH	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:69:ASN:HA	46:S0:70:PRO:HD2	1.96	0.42
46:S0:126:PRO:HG3	46:S0:147:THR:CG2	2.47	0.42
47:S1:85:LYS:HB3	47:S1:102:GLY:O	2.20	0.42
49:S3:126:VAL:HG12	49:S3:131:ALA:HB2	2.01	0.42
50:S4:68:ARG:CB	50:S4:76:VAL:HG21	2.50	0.42
50:S4:177:ALA:HA	50:S4:195:ILE:HB	2.01	0.42
53:S7:87:ASP:HB3	53:S7:88:ARG:NH1	2.34	0.42
55:S9:93:LEU:HA	55:S9:96:VAL:HG22	2.02	0.42
56:10:59:PHE:CE2	56:10:62:GLN:HA	2.54	0.42
57:11:39:GLY:C	57:11:41:GLY:H	2.27	0.42
63:17:25:THR:OG1	63:17:30:THR:HG21	2.19	0.42
66:20:41:ILE:O	66:20:41:ILE:CG2	2.67	0.42
69:23:68:ILE:HG22	69:23:70:LYS:H	1.83	0.42
69:23:92:CYS:HA	69:23:95:PHE:CD2	2.54	0.42
77:31:88:PRO:O	77:31:89:LYS:CB	2.66	0.42
78:1S:343:C:H2'	78:1S:344:A:C8	2.55	0.42
78:1S:855:A:H3'	78:1S:856:A:H3'	2.02	0.42
78:1S:1388:A:H61	78:1S:1409:G:H1'	1.84	0.42
78:1S:1490:C:H2'	78:1S:1514:U:O4	2.18	0.42
79:2S:53:G:H4'	79:2S:812:G:H4'	2.02	0.42
79:2S:801:A:H4'	79:2S:802:C:C5'	2.50	0.42
79:2S:941:G:H2'	79:2S:942:U:O4'	2.20	0.42
79:2S:1275:C:H2'	79:2S:1276:U:O4'	2.19	0.42
79:2S:1953:G:O6	79:2S:2094:C:O2	2.37	0.42
79:2S:2449:A:C2'	79:2S:2450:G:H5'	2.50	0.42
79:2S:2742:C:H2'	79:2S:2743:A:H8	1.85	0.42
79:2S:2742:C:H2'	79:2S:2743:A:C8	2.53	0.42
79:2S:2875:U:O2	79:2S:2875:U:H2'	2.20	0.42
79:2S:3063:C:H2'	79:2S:3064:U:C6	2.55	0.42
1:L1:43:PRO:HA	1:L1:161:LYS:HD2	2.00	0.42
2:L2:45:VAL:HG13	2:L2:45:VAL:O	2.19	0.42
2:L2:135:ILE:HG22	2:L2:136:ILE:N	2.35	0.42
3:L3:17:LEU:HD12	3:L3:19:ARG:N	2.34	0.42
3:L3:54:THR:HG23	3:L3:76:VAL:HG23	2.02	0.42
3:L3:369:ARG:HG2	3:L3:369:ARG:HH21	1.83	0.42
4:L4:38:VAL:O	4:L4:42:VAL:HG23	2.19	0.42
4:L4:114:ASN:HB2	4:L4:117:GLU:HB2	2.00	0.42
4:L4:130:ALA:O	4:L4:131:VAL:HB	2.19	0.42
5:L5:223:PHE:O	5:L5:227:LEU:HD13	2.19	0.42
7:L7:69:ALA:HB2	7:L7:76:TYR:HB2	2.01	0.42
7:L7:86:VAL:HG22	7:L7:136:TYR:CB	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:186:LEU:O	8:L8:189:LEU:HG	2.20	0.42
14:64:129:TYR:HE1	79:2S:3229:G:N3	2.17	0.42
15:65:35:VAL:HG13	15:65:65:ARG:O	2.19	0.42
15:65:179:LYS:HD3	79:2S:287:G:OP1	2.19	0.42
17:67:29:THR:HA	17:67:32:THR:CG2	2.45	0.42
17:67:114:VAL:HG13	17:67:114:VAL:O	2.20	0.42
23:73:70:ARG:HB2	23:73:70:ARG:NH1	2.33	0.42
29:79:6:ASN:HB2	79:2S:1135:A:OP1	2.19	0.42
38:88:63:LYS:CE	38:88:66:ILE:HD12	2.46	0.42
43:93:30:GLU:HA	43:93:33:GLN:HG2	2.00	0.42
45:RC:168:THR:HG23	45:RC:181:TRP:O	2.20	0.42
47:S1:68:VAL:HG22	47:S1:72:ASP:CB	2.48	0.42
47:S1:170:GLU:O	47:S1:174:LYS:HG3	2.20	0.42
47:S1:179:SER:HB3	47:S1:183:GLN:CB	2.49	0.42
50:S4:4:GLY:HA2	50:S4:5:PRO:HD3	1.89	0.42
51:S5:219:ARG:O	51:S5:222:LYS:HB3	2.20	0.42
52:S6:161:GLU:HG2	52:S6:170:THR:HB	2.02	0.42
54:S8:114:GLU:HA	54:S8:120:THR:HA	2.01	0.42
54:S8:123:LYS:HD2	54:S8:123:LYS:C	2.45	0.42
55:S9:124:HIS:O	55:S9:128:LEU:HG	2.19	0.42
60:14:133:ARG:NH2	78:1S:1786:G:OP2	2.52	0.42
64:18:127:HIS:HE1	78:1S:1545:A:H5"	1.84	0.42
65:19:22:LEU:HD13	65:19:25:GLN:OE1	2.20	0.42
78:1S:137:U:O2'	78:1S:138:A:H5'	2.19	0.42
78:1S:463:U:H2'	78:1S:464:A:O4'	2.19	0.42
78:1S:560:U:H2'	78:1S:561:G:H8	1.85	0.42
78:1S:950:C:H2'	78:1S:951:A:O4'	2.20	0.42
78:1S:1169:G:H21	78:1S:1576:A:N6	1.95	0.42
78:1S:1511:U:H2'	78:1S:1512:G:H8	1.82	0.42
78:1S:1681:A:H2'	78:1S:1682:U:C4'	2.49	0.42
79:2S:113:C:H3'	79:2S:154:U:O4	2.19	0.42
79:2S:268:A:H61	79:2S:295:A:H3'	1.85	0.42
79:2S:562:C:H2'	79:2S:563:U:C6	2.55	0.42
79:2S:971:G:O2'	79:2S:1371:G:H1'	2.20	0.42
79:2S:2603:G:H2'	79:2S:2604:U:C6	2.54	0.42
79:2S:2817:A:H3'	79:2S:2818:U:H5'	2.02	0.42
80:8S:130:C:H2'	80:8S:131:A:C8	2.55	0.42
3:L3:218:ILE:HB	3:L3:337:THR:HB	2.02	0.42
6:L6:170:LYS:O	6:L6:174:LEU:HG	2.19	0.42
7:L7:37:ASN:O	7:L7:41:ARG:HG3	2.20	0.42
8:L8:36:ILE:HG22	8:L8:37:GLY:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:48:ARG:HA	79:2S:2585:G:C8	2.55	0.42
8:L8:169:LEU:HD23	8:L8:173:MET:HG2	2.01	0.42
10:60:55:ASN:OD1	10:60:163:GLN:HA	2.19	0.42
14:64:48:GLY:H	14:64:53:VAL:HG13	1.85	0.42
21:71:20:ARG:HH11	21:71:20:ARG:CB	2.32	0.42
23:73:81:GLN:HE21	23:73:83:LYS:HB3	1.84	0.42
25:75:100:LYS:HZ1	25:75:107:VAL:H	1.67	0.42
25:75:109:LYS:HG2	25:75:125:ARG:HB3	2.01	0.42
28:78:12:ARG:HA	28:78:12:ARG:HD3	1.88	0.42
30:80:25:LEU:HD23	30:80:90:VAL:HG13	2.01	0.42
30:80:78:GLY:HA2	30:80:87:VAL:HG12	2.02	0.42
33:83:103:TYR:HA	33:83:105:SER:N	2.35	0.42
37:87:14:LYS:HE2	79:2S:1491:A:H5"	2.02	0.42
37:87:18:LEU:HD23	37:87:25:ARG:CA	2.48	0.42
37:87:69:HIS:O	37:87:73:ARG:HG3	2.20	0.42
42:92:60:LYS:HD3	79:2S:2803:A:OP1	2.19	0.42
43:93:39:CYS:HB3	43:93:42:CYS:SG	2.60	0.42
44:P0:61:ARG:HB2	79:2S:1221:A:H5'	2.01	0.42
45:RC:173:GLY:O	45:RC:199:ILE:HB	2.20	0.42
48:S2:140:ARG:HB3	48:S2:221:THR:CB	2.41	0.42
48:S2:141:ARG:NH2	48:S2:151:PRO:HB2	2.33	0.42
48:S2:145:GLY:CA	68:22:97:ARG:HB2	2.50	0.42
48:S2:204:THR:C	48:S2:206:THR:H	2.27	0.42
49:S3:115:ILE:HG21	49:S3:142:LEU:CD2	2.49	0.42
51:S5:99:MET:HG3	51:S5:100:ASN:N	2.35	0.42
51:S5:140:THR:CG2	51:S5:201:ALA:HB1	2.50	0.42
58:12:23:THR:HG23	58:12:23:THR:O	2.20	0.42
61:15:109:PRO:O	61:15:112:LEU:HG	2.19	0.42
69:23:24:TRP:HE1	78:1S:311:U:H5'	1.85	0.42
69:23:127:VAL:HG13	69:23:132:LEU:HD21	2.01	0.42
72:26:60:PRO:C	72:26:62:TYR:H	2.28	0.42
74:28:21:SER:HA	78:1S:1618:C:H4'	2.01	0.42
76:30:23:LYS:HG3	78:1S:586:G:H5"	2.02	0.42
78:1S:126:A:N1	78:1S:264:G:H4'	2.34	0.42
78:1S:179:A:H2'	78:1S:180:A:O4'	2.20	0.42
78:1S:598:U:H2'	78:1S:599:A:H8	1.84	0.42
78:1S:612:U:H2'	78:1S:613:G:C8	2.54	0.42
78:1S:962:C:H2'	78:1S:963:A:O4'	2.19	0.42
78:1S:1645:G:H2'	78:1S:1646:C:C6	2.55	0.42
78:1S:1711:C:C2'	78:1S:1712:A:H4'	2.45	0.42
79:2S:718:G:C2	79:2S:721:G:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:752:C:H2'	79:2S:753:C:H6	1.85	0.42
79:2S:1024:G:H2'	79:2S:1024:G:N3	2.35	0.42
79:2S:1787:A:H2'	79:2S:1788:C:C5'	2.48	0.42
79:2S:2333:C:H2'	79:2S:2334:U:C6	2.54	0.42
79:2S:3210:A:H2'	79:2S:3211:C:H6	1.84	0.42
79:2S:3335:A:C4	79:2S:3371:G:H4'	2.54	0.42
80:8S:71:A:C2	80:8S:88:A:H1'	2.55	0.42
82:ET:22:A:H2'	82:ET:47:G:C6	2.54	0.42
1:L1:103:LEU:HG	1:L1:128:LEU:HD13	2.01	0.42
1:L1:189:PHE:HE1	1:L1:201:VAL:HG23	1.85	0.42
3:L3:46:PHE:HZ	3:L3:204:ALA:HA	1.85	0.42
3:L3:226:PHE:HA	3:L3:269:GLN:HA	2.02	0.42
4:L4:175:HIS:O	4:L4:179:LEU:HG	2.20	0.42
5:L5:258:LYS:O	5:L5:259:LYS:HB3	2.20	0.42
6:L6:65:ILE:HD13	6:L6:65:ILE:N	2.34	0.42
6:L6:70:LYS:NZ	6:L6:139:LYS:HE2	2.35	0.42
7:L7:179:LEU:HD13	7:L7:179:LEU:H	1.83	0.42
8:L8:165:PHE:H	8:L8:165:PHE:HD1	1.67	0.42
8:L8:170:CYS:HB3	8:L8:175:VAL:O	2.19	0.42
13:63:131:LYS:HB3	13:63:131:LYS:HZ2	1.84	0.42
15:65:15:GLN:CG	36:86:51:SER:HB2	2.50	0.42
18:68:147:ARG:NH1	18:68:150:VAL:CG1	2.83	0.42
20:70:128:GLU:HG2	20:70:129:ILE:N	2.34	0.42
23:73:39:VAL:HA	23:73:58:VAL:CB	2.49	0.42
23:73:87:ARG:NH1	23:73:120:LYS:HD3	2.35	0.42
23:73:93:LEU:HB2	24:74:20:LEU:HD22	2.02	0.42
27:77:41:ALA:HB2	27:77:77:TYR:CE1	2.55	0.42
27:77:72:ILE:O	27:77:72:ILE:HG13	2.19	0.42
30:80:16:LEU:CD1	30:80:98:SER:HB2	2.47	0.42
37:87:18:LEU:HD23	37:87:25:ARG:CB	2.47	0.42
48:S2:158:THR:HG21	48:S2:221:THR:HA	2.01	0.42
49:S3:105:MET:HE2	49:S3:105:MET:HA	2.01	0.42
49:S3:210:GLU:HA	49:S3:211:PRO:HD3	1.90	0.42
50:S4:181:VAL:O	50:S4:192:ILE:HA	2.20	0.42
54:S8:59:ARG:C	54:S8:60:ILE:HG13	2.45	0.42
54:S8:114:GLU:CG	54:S8:120:THR:HG22	2.49	0.42
55:S9:93:LEU:HA	55:S9:96:VAL:CG2	2.50	0.42
67:21:78:LEU:HD23	67:21:78:LEU:H	1.84	0.42
70:24:104:SER:HB3	70:24:107:GLN:HB2	2.01	0.42
72:26:19:LYS:HA	72:26:19:LYS:HE3	2.02	0.42
78:1S:119:A:H2'	78:1S:120:U:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:505:A:N1	78:1S:507:U:N3	2.67	0.42
78:1S:534:A:H2'	78:1S:534:A:N3	2.35	0.42
78:1S:1758:U:H2'	78:1S:1759:C:C6	2.55	0.42
79:2S:160:G:H3'	79:2S:161:G:C5'	2.41	0.42
79:2S:841:A:H2'	79:2S:842:G:C8	2.55	0.42
79:2S:1904:C:H2'	79:2S:1905:G:C8	2.55	0.42
79:2S:2318:U:H2'	79:2S:2319:U:O4'	2.20	0.42
79:2S:2675:C:H2'	79:2S:2676:A:C8	2.55	0.42
79:2S:3096:C:H2'	79:2S:3097:C:H6	1.84	0.42
80:8S:66:A:H2'	80:8S:67:U:C6	2.55	0.42
81:5S:70:U:H2'	81:5S:71:G:C8	2.55	0.42
82:ET:49:C:H2'	82:ET:60:A:C4'	2.49	0.42
2:L2:118:GLU:HG3	2:L2:125:ALA:CB	2.49	0.42
2:L2:196:TRP:HD1	2:L2:198:LYS:NZ	2.18	0.42
5:L5:99:TYR:HA	5:L5:162:ALA:HA	2.01	0.42
5:L5:134:ALA:CA	5:L5:141:PRO:HD3	2.50	0.42
5:L5:232:ASP:OD2	5:L5:232:ASP:N	2.51	0.42
6:L6:146:ILE:O	6:L6:150:LYS:HG3	2.19	0.42
7:L7:25:GLN:O	7:L7:25:GLN:OE1	2.37	0.42
8:L8:147:LYS:HD2	79:2S:117:U:O4	2.20	0.42
8:L8:153:ILE:HD11	8:L8:177:TYR:HB2	2.02	0.42
12:62:66:ASN:N	12:62:69:ALA:HB3	2.34	0.42
13:63:181:GLY:HA3	79:2S:2780:A:O2'	2.19	0.42
15:65:150:TRP:O	15:65:153:ASP:HB2	2.20	0.42
16:66:78:ARG:HA	16:66:81:TYR:HB2	2.02	0.42
16:66:95:GLY:O	16:66:99:LEU:HG	2.20	0.42
19:69:162:ARG:HB2	19:69:162:ARG:NH1	2.35	0.42
21:71:116:ARG:HG3	21:71:116:ARG:NH1	2.35	0.42
24:74:6:ASP:HA	24:74:13:ILE:HD11	2.01	0.42
31:81:20:LEU:HD11	31:81:32:ALA:HB2	2.01	0.42
32:82:122:PRO:O	32:82:126:LEU:HD11	2.20	0.42
36:86:26:ILE:HG22	79:2S:155:G:N2	2.28	0.42
37:87:49:TRP:HE3	79:2S:929:A:H1'	1.85	0.42
43:93:39:CYS:O	43:93:43:GLY:HA2	2.20	0.42
45:RC:216:LYS:HA	45:RC:239:GLU:HG3	2.02	0.42
48:S2:159:THR:HG22	48:S2:160:GLY:N	2.35	0.42
48:S2:203:LYS:HB2	78:1S:15:U:OP2	2.20	0.42
49:S3:29:LEU:HD13	49:S3:58:VAL:HG13	2.01	0.42
49:S3:175:VAL:CG1	49:S3:182:LEU:HB2	2.50	0.42
52:S6:14:LYS:HD3	52:S6:16:PHE:CZ	2.55	0.42
54:S8:141:ARG:HD3	78:1S:195:G:O6	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:45:ILE:HG21	55:S9:105:LEU:CD1	2.50	0.42
55:S9:149:ARG:HD2	78:1S:765:G:C5	2.54	0.42
57:11:85:VAL:HG22	57:11:108:PRO:HB3	2.01	0.42
57:11:101:GLU:HB3	69:23:12:ALA:HB3	2.01	0.42
58:12:40:GLY:HA3	58:12:124:LYS:O	2.19	0.42
59:13:39:LYS:HE2	59:13:39:LYS:N	2.35	0.42
59:13:53:LEU:O	59:13:57:ALA:HB3	2.19	0.42
65:19:83:ALA:HB1	65:19:91:TYR:HB3	2.02	0.42
74:28:9:LEU:HB3	74:28:33:LEU:HD23	2.02	0.42
78:1S:1076:A:O2'	78:1S:1077:C:H5'	2.20	0.42
78:1S:1642:G:O2'	78:1S:1643:U:H5'	2.20	0.42
79:2S:207:U:H2'	79:2S:208:C:H6	1.84	0.42
79:2S:412:G:H2'	79:2S:413:U:C6	2.54	0.42
79:2S:439:C:O2	79:2S:439:C:H2'	2.19	0.42
79:2S:496:C:H1'	79:2S:622:A:C2	2.55	0.42
79:2S:1125:U:H2'	79:2S:1126:G:O4'	2.19	0.42
79:2S:1479:U:H2'	79:2S:1480:G:H5'	2.00	0.42
79:2S:1520:G:H2'	79:2S:1521:G:O4'	2.19	0.42
79:2S:1623:G:H2'	79:2S:1624:G:O4'	2.20	0.42
79:2S:1753:G:H2'	79:2S:1754:G:O4'	2.20	0.42
79:2S:2633:U:C2'	79:2S:2634:U:H5'	2.50	0.42
79:2S:2788:C:H2'	79:2S:2789:U:C6	2.54	0.42
79:2S:3382:U:O2	79:2S:3382:U:H2'	2.20	0.42
3:L3:93:VAL:HG22	3:L3:94:GLU:N	2.35	0.41
3:L3:238:LEU:HD22	3:L3:238:LEU:N	2.35	0.41
4:L4:151:VAL:HG21	4:L4:255:PHE:CD2	2.55	0.41
5:L5:20:PHE:HB2	5:L5:23:ARG:CB	2.50	0.41
8:L8:178:ALA:HB2	8:L8:218:ILE:CG2	2.49	0.41
9:L9:12:VAL:HB	9:L9:51:GLN:HA	2.02	0.41
10:60:213:PHE:C	10:60:215:GLU:N	2.77	0.41
14:64:66:THR:HG22	14:64:99:TRP:CZ3	2.55	0.41
17:67:67:ILE:HG22	17:67:68:GLY:N	2.34	0.41
17:67:122:ALA:HB2	17:67:145:HIS:CD2	2.54	0.41
18:68:26:LEU:C	18:68:26:LEU:HD23	2.45	0.41
20:70:1:MET:HA	79:2S:1323:G:C5'	2.49	0.41
20:70:73:LYS:HE2	20:70:75:PHE:HE1	1.85	0.41
20:70:73:LYS:HB2	20:70:75:PHE:CE1	2.56	0.41
25:75:82:LEU:HB3	25:75:84:PHE:CZ	2.55	0.41
34:84:19:LYS:HZ3	34:84:38:LEU:HD12	1.84	0.41
37:87:26:SER:HB2	37:87:34:CYS:SG	2.60	0.41
44:P0:31:ASP:O	44:P0:32:ASN:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RC:211:ILE:HD11	45:RC:225:LEU:HA	2.02	0.41
47:S1:29:TRP:CH2	47:S1:45:LYS:HB3	2.55	0.41
47:S1:126:THR:CG2	47:S1:136:ARG:HG3	2.48	0.41
48:S2:35:TRP:O	48:S2:36:VAL:C	2.62	0.41
48:S2:66:PHE:CD1	48:S2:66:PHE:N	2.83	0.41
50:S4:245:LYS:C	50:S4:246:LEU:HD12	2.45	0.41
51:S5:25:LEU:HB2	51:S5:26:ALA:H	1.52	0.41
53:S7:44:LYS:CG	53:S7:63:PRO:HG3	2.50	0.41
55:S9:125:ALA:O	55:S9:129:ILE:HG13	2.19	0.41
55:S9:146:PHE:O	55:S9:147:MET:HB2	2.19	0.41
55:S9:175:ARG:HH11	55:S9:175:ARG:HG3	1.85	0.41
59:13:96:VAL:HA	59:13:99:ARG:CB	2.43	0.41
65:19:31:PRO:HD2	65:19:34:VAL:CB	2.49	0.41
66:20:51:VAL:HG13	66:20:51:VAL:O	2.19	0.41
67:21:34:ILE:O	67:21:52:THR:HA	2.19	0.41
76:30:46:ASN:O	76:30:47:VAL:HG12	2.20	0.41
78:1S:966:A:H2'	78:1S:967:A:C8	2.54	0.41
78:1S:1170:G:H2'	78:1S:1170:G:N3	2.34	0.41
78:1S:1596:C:HO2'	78:1S:1598:U:H5	1.66	0.41
79:2S:167:U:H2'	79:2S:168:U:O4'	2.20	0.41
79:2S:866:A:H3'	79:2S:867:G:C8	2.54	0.41
79:2S:1448:U:H2'	79:2S:1449:A:H8	1.85	0.41
79:2S:1596:C:O2'	79:2S:1696:A:N3	2.51	0.41
79:2S:1743:G:H2'	79:2S:1744:G:O4'	2.20	0.41
79:2S:1851:G:H2'	79:2S:1852:G:C8	2.55	0.41
79:2S:2272:G:N3	79:2S:2272:G:H5'	2.35	0.41
79:2S:2700:G:H2'	79:2S:2701:U:H6	1.76	0.41
79:2S:3250:U:H2'	79:2S:3251:U:H6	1.85	0.41
79:2S:3372:A:H2'	79:2S:3373:U:C6	2.55	0.41
1:L1:117:ILE:O	1:L1:117:ILE:HG12	2.20	0.41
1:L1:120:VAL:H	1:L1:121:PRO:HD3	1.84	0.41
2:L2:23:ARG:HD3	79:2S:2175:U:O2'	2.21	0.41
2:L2:96:LEU:HD23	43:93:83:ILE:HG23	2.02	0.41
2:L2:205:ASN:ND2	2:L2:205:ASN:N	2.65	0.41
5:L5:296:GLN:O	5:L5:297:GLN:HB2	2.20	0.41
6:L6:153:PRO:O	6:L6:154:LEU:HB2	2.20	0.41
7:L7:41:ARG:NH1	7:L7:41:ARG:HB3	2.35	0.41
7:L7:82:LYS:HA	7:L7:119:VAL:CG2	2.50	0.41
7:L7:232:ARG:O	7:L7:235:PHE:HD2	2.02	0.41
8:L8:69:LEU:HD13	15:65:21:PHE:CZ	2.55	0.41
10:60:55:ASN:O	10:60:56:GLU:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:61:50:ALA:HB3	11:61:60:ARG:O	2.20	0.41
13:63:74:GLY:HA3	13:63:98:ASP:HB2	2.01	0.41
13:63:79:GLU:HG3	13:63:103:ASN:HD21	1.85	0.41
15:65:38:ARG:HG2	15:65:61:ILE:O	2.20	0.41
17:67:124:LYS:HB3	17:67:140:GLU:HB3	2.02	0.41
17:67:141:SER:C	17:67:143:PRO:HD3	2.45	0.41
17:67:175:ARG:HH21	17:67:175:ARG:HG3	1.86	0.41
22:72:90:ARG:C	22:72:92:TRP:H	2.28	0.41
23:73:57:MET:HA	23:73:77:ILE:HA	2.02	0.41
23:73:84:SER:CA	23:73:94:TYR:HB3	2.46	0.41
27:77:83:THR:HG23	27:77:85:TYR:H	1.85	0.41
33:83:35:VAL:HG11	33:83:41:ALA:HB2	2.01	0.41
36:86:70:ARG:CZ	36:86:84:LYS:HG2	2.49	0.41
37:87:3:LYS:HE3	79:2S:2138:A:C8	2.55	0.41
40:90:108:THR:O	40:90:119:ASN:HA	2.20	0.41
42:92:2:VAL:HG22	42:92:90:HIS:O	2.21	0.41
43:93:15:GLY:HA3	43:93:17:ARG:NH2	2.35	0.41
44:P0:77:LEU:HD23	44:P0:77:LEU:O	2.20	0.41
46:S0:125:ASP:HA	46:S0:126:PRO:HD2	1.92	0.41
47:S1:20:VAL:O	47:S1:20:VAL:HG12	2.20	0.41
47:S1:148:ASN:HB3	63:17:125:SER:O	2.20	0.41
50:S4:156:VAL:HG12	50:S4:157:ASN:ND2	2.35	0.41
51:S5:88:PRO:O	51:S5:92:ARG:HG3	2.20	0.41
55:S9:65:LYS:HA	55:S9:70:LEU:CD1	2.49	0.41
56:10:82:LEU:HD22	56:10:86:ILE:HG21	2.01	0.41
58:12:61:VAL:HG13	58:12:121:VAL:HG23	2.02	0.41
67:21:73:ALA:HB3	67:21:79:LEU:CD1	2.50	0.41
71:25:83:LEU:HB2	71:25:89:ILE:HD11	2.02	0.41
74:28:42:ARG:HD3	74:28:61:ARG:O	2.20	0.41
78:1S:705:U:H2'	78:1S:706:A:C8	2.53	0.41
78:1S:1106:U:H2'	78:1S:1107:G:H8	1.86	0.41
78:1S:1762:A:O2'	78:1S:1783:C:H5"	2.20	0.41
79:2S:198:A:H2'	79:2S:199:A:H5'	2.02	0.41
79:2S:1465:A:H2'	79:2S:1466:G:O4'	2.19	0.41
79:2S:1596:C:H42	79:2S:1611:G:H1	1.67	0.41
79:2S:2512:C:H2'	79:2S:2513:U:OP2	2.20	0.41
79:2S:2732:G:H5'	79:2S:2761:G:H5"	2.01	0.41
79:2S:3190:C:H2'	79:2S:3191:G:H8	1.85	0.41
79:2S:3287:U:H2'	79:2S:3288:G:H5'	2.02	0.41
2:L2:57:PRO:CB	43:93:54:ILE:HD11	2.48	0.41
3:L3:46:PHE:CZ	3:L3:204:ALA:HA	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:157:GLU:O	4:L4:213:ASN:HB2	2.20	0.41
5:L5:35:ARG:HB2	79:2S:2748:A:C2	2.55	0.41
5:L5:206:GLN:O	5:L5:210:GLU:HG3	2.20	0.41
6:L6:176:PHE:HE2	33:83:107:ILE:HD13	1.84	0.41
8:L8:48:ARG:HA	79:2S:2585:G:H8	1.85	0.41
8:L8:72:PRO:HB2	8:L8:74:THR:HG22	2.02	0.41
8:L8:145:ASN:O	8:L8:146:LYS:HB2	2.20	0.41
9:L9:75:VAL:HA	9:L9:78:MET:HE3	2.02	0.41
9:L9:117:PHE:O	9:L9:118:LEU:HB2	2.20	0.41
10:60:40:LYS:HE2	79:2S:1010:G:H4'	2.01	0.41
15:65:14:LYS:HE2	79:2S:269:G:H5"	2.01	0.41
16:66:178:VAL:O	16:66:182:ASN:HB2	2.20	0.41
17:67:119:VAL:HG23	17:67:144:SER:HB3	2.02	0.41
19:69:35:ALA:HB1	19:69:41:ILE:HD12	2.01	0.41
22:72:33:TYR:CZ	22:72:37:LEU:HD11	2.55	0.41
25:75:33:ARG:HB2	25:75:34:LEU:H	1.62	0.41
31:81:88:PRO:HG2	31:81:89:LEU:CD1	2.47	0.41
33:83:75:HIS:HB3	33:83:80:VAL:HG12	2.01	0.41
34:84:42:PRO:HB3	79:2S:1653:G:O2'	2.20	0.41
37:87:28:HIS:CE1	37:87:30:GLN:HB2	2.56	0.41
45:RC:127:ARG:HA	45:RC:150:TRP:HB3	2.03	0.41
46:S0:148:ASP:HB3	46:S0:149:LEU:H	1.70	0.41
46:S0:188:LEU:CD2	46:S0:195:TRP:HE1	2.33	0.41
47:S1:51:SER:HA	47:S1:56:SER:HA	2.01	0.41
47:S1:179:SER:O	47:S1:182:ALA:HB3	2.20	0.41
48:S2:143:TYR:CD1	48:S2:143:TYR:N	2.87	0.41
48:S2:145:GLY:HA3	68:22:97:ARG:NH1	2.29	0.41
54:S8:8:ARG:HD3	54:S8:21:PHE:CD1	2.56	0.41
54:S8:194:ARG:C	54:S8:196:LEU:H	2.28	0.41
56:10:30:ALA:C	56:10:38:LYS:HA	2.44	0.41
57:11:155:LYS:HG3	57:11:156:PHE:H	1.85	0.41
64:18:46:VAL:HG13	64:18:72:ILE:HB	2.02	0.41
65:19:69:LYS:O	65:19:123:ARG:HG3	2.20	0.41
70:24:87:PRO:O	70:24:91:LEU:HG	2.20	0.41
73:27:54:VAL:HG21	73:27:64:CYS:SG	2.60	0.41
78:1S:1031:U:H3'	78:1S:1032:G:C5'	2.50	0.41
78:1S:1304:G:H2'	78:1S:1305:U:O2	2.20	0.41
78:1S:1537:C:H4'	78:1S:1538:U:H5	1.85	0.41
78:1S:1784:C:H2'	78:1S:1785:U:C6	2.54	0.41
78:1S:1790:A:O2'	78:1S:1791:A:H5'	2.20	0.41
79:2S:164:A:C2	79:2S:165:A:N6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:374:A:C4'	79:2S:375:A:H5'	2.49	0.41
79:2S:422:A:C2	79:2S:2363:A:H4'	2.54	0.41
79:2S:422:A:N1	79:2S:2363:A:H4'	2.36	0.41
79:2S:740:G:H2'	79:2S:741:U:O4'	2.21	0.41
79:2S:804:C:H2'	79:2S:805:G:C8	2.56	0.41
79:2S:1046:A:H2'	79:2S:1049:C:C5	2.55	0.41
79:2S:1449:A:H2'	79:2S:1450:G:H5'	2.03	0.41
79:2S:1739:U:C2'	79:2S:1740:U:H5'	2.51	0.41
79:2S:1828:A:H2'	79:2S:1829:G:H8	1.84	0.41
79:2S:1978:A:H61	79:2S:2041:U:H3	1.69	0.41
79:2S:2174:G:H4'	79:2S:2175:U:H5"	2.03	0.41
79:2S:2477:G:H2'	79:2S:2478:C:H5'	2.01	0.41
79:2S:3089:C:H2'	79:2S:3090:U:C6	2.56	0.41
81:5S:35:C:H2'	81:5S:36:C:H5'	2.02	0.41
1:L1:36:VAL:HG12	1:L1:168:ALA:O	2.21	0.41
1:L1:162:VAL:HG22	1:L1:163:LEU:N	2.34	0.41
1:L1:201:VAL:CG1	1:L1:204:LEU:HD11	2.45	0.41
3:L3:311:PHE:HB2	3:L3:315:GLY:H	1.86	0.41
4:L4:209:TYR:O	4:L4:230:VAL:HG23	2.21	0.41
7:L7:235:PHE:CE2	20:70:35:VAL:HG23	2.56	0.41
8:L8:93:LEU:HD22	8:L8:214:LEU:HD22	2.03	0.41
9:L9:47:LYS:HZ3	14:64:6:ILE:H	1.68	0.41
11:61:23:VAL:HG12	11:61:24:GLY:N	2.35	0.41
15:65:50:ARG:HD3	79:2S:267:G:H1'	2.01	0.41
15:65:59:PHE:HD1	15:65:133:ILE:HD11	1.85	0.41
17:67:68:GLY:HA3	79:2S:2350:C:H5"	2.03	0.41
21:71:105:PHE:CE2	79:2S:1062:A:H4'	2.55	0.41
23:73:67:PRO:CA	23:73:70:ARG:HD3	2.45	0.41
25:75:72:ALA:O	25:75:76:VAL:HG23	2.20	0.41
26:76:70:ILE:H	26:76:70:ILE:CD1	2.32	0.41
33:83:18:ARG:HB2	33:83:22:VAL:O	2.19	0.41
34:84:95:ILE:O	34:84:95:ILE:HG22	2.20	0.41
40:90:93:LYS:O	40:90:124:LYS:HB3	2.20	0.41
40:90:104:PRO:HD2	40:90:107:ALA:HB2	2.01	0.41
45:RC:304:GLY:C	45:RC:305:TYR:HD2	2.28	0.41
50:S4:68:ARG:HH11	50:S4:68:ARG:HG2	1.85	0.41
52:S6:174:LYS:HD2	78:1S:78:A:H2	1.86	0.41
53:S7:30:SER:O	53:S7:34:LEU:HB2	2.19	0.41
55:S9:140:ILE:HG12	55:S9:159:ALA:HB2	2.03	0.41
58:12:130:THR:HG22	58:12:131:ASP:N	2.34	0.41
59:13:64:ARG:HD2	59:13:64:ARG:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:19:102:ARG:HH22	78:1S:1501:C:N4	2.02	0.41
67:21:19:ALA:HA	67:21:71:ARG:HH12	1.86	0.41
68:22:47:ILE:CG2	68:22:69:LEU:HD22	2.49	0.41
78:1S:855:A:H3'	78:1S:856:A:C5'	2.50	0.41
78:1S:1086:A:H2'	78:1S:1087:A:C8	2.55	0.41
78:1S:1196:A:H4'	78:1S:1197:C:C5'	2.51	0.41
78:1S:1208:A:H4'	78:1S:1269:U:O3'	2.19	0.41
78:1S:1387:G:H1'	78:1S:1410:A:N6	2.35	0.41
79:2S:504:A:H2'	79:2S:505:G:C8	2.56	0.41
79:2S:1556:C:H3'	79:2S:2169:G:H22	1.84	0.41
79:2S:2931:C:H2'	79:2S:2932:U:O4'	2.20	0.41
79:2S:3255:U:H2'	79:2S:3256:G:C8	2.56	0.41
79:2S:3343:G:H21	79:2S:3362:A:H2	1.64	0.41
1:L1:92:LYS:N	1:L1:92:LYS:HD2	2.35	0.41
1:L1:183:ILE:O	1:L1:187:VAL:HG23	2.19	0.41
2:L2:136:ILE:N	2:L2:136:ILE:HD12	2.35	0.41
2:L2:229:ALA:C	2:L2:234:LYS:HE3	2.45	0.41
4:L4:74:ILE:HD13	4:L4:88:GLY:HA2	2.01	0.41
4:L4:122:THR:O	4:L4:126:ILE:HG13	2.21	0.41
5:L5:68:THR:HG22	5:L5:70:THR:H	1.86	0.41
7:L7:88:ARG:NH2	7:L7:92:ILE:HA	2.34	0.41
8:L8:64:ILE:O	8:L8:68:ARG:HG2	2.20	0.41
8:L8:116:VAL:HG23	8:L8:125:ALA:CB	2.50	0.41
13:63:16:LYS:CB	13:63:21:ARG:HH22	2.34	0.41
13:63:53:LEU:HD12	13:63:55:ARG:HH12	1.83	0.41
14:64:116:GLU:O	14:64:120:VAL:HG23	2.19	0.41
14:64:131:VAL:HG13	16:66:181:ALA:HB1	2.02	0.41
16:66:185:ALA:O	16:66:191:ALA:HB2	2.21	0.41
18:68:147:ARG:HG2	18:68:148:GLU:N	2.32	0.41
19:69:66:HIS:O	19:69:70:LYS:HG2	2.19	0.41
19:69:151:ARG:O	19:69:155:LEU:HB2	2.21	0.41
20:70:38:LYS:HD3	20:70:58:ILE:HG21	2.01	0.41
20:70:76:GLY:HA2	20:70:93:GLU:HG2	2.03	0.41
20:70:154:HIS:HA	20:70:170:THR:HB	2.03	0.41
21:71:68:THR:HG23	21:71:69:LYS:N	2.27	0.41
27:77:108:GLU:O	27:77:112:LYS:HG3	2.20	0.41
31:81:35:GLU:O	31:81:39:PHE:HB2	2.20	0.41
35:85:53:CYS:HA	80:8S:64:U:O2'	2.20	0.41
46:S0:134:LYS:HA	46:S0:137:SER:OG	2.20	0.41
46:S0:203:PHE:N	46:S0:203:PHE:CD2	2.88	0.41
48:S2:159:THR:HG23	48:S2:167:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:122:GLU:O	52:S6:126:ASP:CB	2.68	0.41
55:S9:87:SER:OG	55:S9:90:LYS:HB2	2.19	0.41
57:11:76:VAL:HG12	57:11:85:VAL:O	2.20	0.41
57:11:93:TYR:HB2	57:11:100:TYR:CE1	2.55	0.41
58:12:56:GLU:HB3	58:12:124:LYS:HG2	2.02	0.41
63:17:99:VAL:HG23	63:17:100:LEU:H	1.85	0.41
65:19:13:ASP:HA	65:19:16:ASN:CB	2.50	0.41
72:26:53:LEU:C	72:26:55:GLU:H	2.28	0.41
75:29:36:LEU:HD12	75:29:37:ASN:H	1.85	0.41
77:31:143:LYS:HA	78:1S:1253:U:H4'	2.02	0.41
78:1S:320:U:C3'	78:1S:321:C:H5"	2.51	0.41
78:1S:1639:C:H2'	78:1S:1640:C:O4'	2.21	0.41
78:1S:1696:G:H4'	78:1S:1697:G:OP1	2.20	0.41
79:2S:67:A:H61	79:2S:271:C:H4'	1.86	0.41
79:2S:927:C:O2'	79:2S:928:C:H5'	2.21	0.41
79:2S:1978:A:C2'	79:2S:1979:G:H5'	2.50	0.41
79:2S:2162:U:H2'	79:2S:2163:C:C6	2.55	0.41
79:2S:2516:U:H3	79:2S:2591:A:H2	1.67	0.41
79:2S:3163:A:H2'	79:2S:3164:C:H5"	2.02	0.41
80:8S:71:A:H4'	80:8S:72:A:O5'	2.20	0.41
1:L1:198:TRP:HA	1:L1:198:TRP:CE3	2.56	0.41
2:L2:35:ALA:HA	8:L8:36:ILE:CD1	2.49	0.41
5:L5:11:ALA:HB1	79:2S:1003:A:C5'	2.49	0.41
5:L5:222:LEU:O	5:L5:223:PHE:HB2	2.21	0.41
7:L7:81:HIS:O	7:L7:119:VAL:HG21	2.20	0.41
7:L7:125:GLU:O	7:L7:129:LEU:HG	2.21	0.41
9:L9:4:ILE:HD13	20:70:148:LEU:HD11	2.02	0.41
9:L9:49:ASN:HD21	9:L9:52:LEU:HD13	1.86	0.41
9:L9:113:GLU:HG2	9:L9:114:VAL:N	2.35	0.41
10:60:7:ARG:HA	10:60:10:ARG:HB2	2.03	0.41
10:60:77:THR:HG22	10:60:82:ARG:HB3	2.02	0.41
10:60:169:LYS:N	10:60:169:LYS:HD2	2.35	0.41
15:65:9:GLU:OE2	15:65:12:ARG:HD2	2.21	0.41
17:67:157:VAL:O	17:67:157:VAL:HG12	2.20	0.41
19:69:173:ARG:HG2	78:1S:852:C:OP2	2.20	0.41
20:70:1:MET:HA	79:2S:1323:G:H5'	2.02	0.41
31:81:14:ILE:HG23	31:81:14:ILE:O	2.21	0.41
34:84:22:VAL:CG1	34:84:30:LEU:HD22	2.48	0.41
38:88:5:ILE:HD12	38:88:11:PHE:HD2	1.83	0.41
39:89:38:ASN:HD22	39:89:41:ARG:CD	2.34	0.41
40:90:122:ARG:HH12	40:90:125:LYS:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:P0:48:ARG:HE	44:P0:90:ASN:HB3	1.85	0.41
46:S0:191:ARG:C	46:S0:193:GLN:H	2.29	0.41
47:S1:122:GLU:HG2	47:S1:123:ALA:N	2.35	0.41
48:S2:239:PRO:C	48:S2:241:ASP:H	2.27	0.41
49:S3:79:TYR:HB3	49:S3:80:ALA:H	1.66	0.41
49:S3:134:CYS:O	49:S3:153:ALA:HA	2.21	0.41
51:S5:117:THR:OG1	51:S5:191:ALA:HB1	2.21	0.41
52:S6:7:TYR:HB2	52:S6:124:LEU:HD23	2.02	0.41
54:S8:137:LYS:H	54:S8:137:LYS:CD	2.20	0.41
54:S8:173:PRO:O	54:S8:177:GLY:HA2	2.20	0.41
55:S9:7:THR:HG23	78:1S:771:A:H5'	2.03	0.41
55:S9:112:GLN:HA	55:S9:112:GLN:HE21	1.85	0.41
55:S9:172:VAL:O	55:S9:176:ASN:ND2	2.53	0.41
64:18:46:VAL:CG1	64:18:72:ILE:HB	2.51	0.41
69:23:95:PHE:HB3	69:23:135:LEU:HD13	2.02	0.41
69:23:96:VAL:CG2	69:23:97:ASP:H	2.23	0.41
70:24:75:VAL:O	70:24:75:VAL:HG13	2.20	0.41
75:29:21:CYS:HB3	75:29:26:SER:H	1.85	0.41
78:1S:123:G:H2'	78:1S:124:A:O4'	2.20	0.41
78:1S:485:A:H2'	78:1S:486:G:O4'	2.20	0.41
78:1S:492:A:H5"	78:1S:493:U:C5'	2.45	0.41
78:1S:646:C:C2'	78:1S:647:G:H5'	2.50	0.41
78:1S:1079:U:H2'	78:1S:1080:U:O4'	2.21	0.41
78:1S:1247:U:H2'	78:1S:1248:C:O4'	2.21	0.41
78:1S:1688:U:H2'	78:1S:1689:A:O4'	2.20	0.41
79:2S:170:G:H2'	79:2S:171:G:H8	1.86	0.41
79:2S:291:C:H2'	79:2S:292:U:C6	2.56	0.41
79:2S:379:C:H2'	79:2S:380:U:C6	2.55	0.41
79:2S:687:U:H2'	79:2S:688:G:C8	2.56	0.41
79:2S:837:A:H3'	79:2S:838:G:H8	1.86	0.41
79:2S:1218:U:H2'	79:2S:1219:C:C5'	2.47	0.41
79:2S:1964:C:C2'	79:2S:1965:C:H5'	2.50	0.41
79:2S:2078:C:O5'	79:2S:2078:C:H6	2.03	0.41
79:2S:2247:G:H2'	79:2S:2248:C:O4'	2.19	0.41
79:2S:2608:G:O2'	79:2S:2609:A:H5'	2.21	0.41
79:2S:2659:G:H2'	79:2S:2660:G:C8	2.55	0.41
79:2S:3003:G:H2'	79:2S:3004:C:H6	1.86	0.41
79:2S:3353:G:C8	79:2S:3356:G:H1'	2.55	0.41
81:5S:106:U:H2'	81:5S:107:C:C6	2.56	0.41
82:PT:32:G:H2'	82:PT:33:C:C6	2.55	0.41
1:L1:134:PHE:HZ	1:L1:156:LYS:HD3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:225:ILE:HG21	2:L2:234:LYS:HG2	2.03	0.41
3:L3:183:LEU:HD12	3:L3:183:LEU:N	2.34	0.41
5:L5:134:ALA:HA	5:L5:141:PRO:HD3	2.03	0.41
6:L6:82:ARG:HB3	33:83:104:PRO:CA	2.45	0.41
7:L7:84:VAL:HG12	7:L7:138:TYR:CD1	2.56	0.41
7:L7:179:LEU:HD13	7:L7:183:ASP:OD2	2.20	0.41
7:L7:218:ARG:HH11	79:2S:1170:A:H5"	1.85	0.41
9:L9:137:SER:CB	9:L9:143:GLU:HB3	2.51	0.41
17:67:127:ARG:HB3	17:67:139:TYR:O	2.21	0.41
22:72:99:LYS:HB3	22:72:100:THR:H	1.78	0.41
23:73:80:ARG:CD	23:73:117:PRO:HG2	2.46	0.41
28:78:115:LYS:HG2	79:2S:715:A:N7	2.35	0.41
45:RC:239:GLU:O	45:RC:256:THR:HA	2.20	0.41
46:S0:20:ALA:O	46:S0:21:ASN:HB2	2.20	0.41
46:S0:56:LYS:CB	46:S0:160:ILE:HG12	2.49	0.41
46:S0:104:PRO:HB2	78:1S:1321:A:N3	2.35	0.41
47:S1:140:ILE:O	47:S1:211:HIS:HB2	2.20	0.41
53:S7:101:LYS:HA	53:S7:102:PRO:HD3	1.90	0.41
55:S9:85:VAL:O	55:S9:85:VAL:HG12	2.20	0.41
57:11:3:THR:HG22	57:11:4:GLU:N	2.35	0.41
64:18:50:ALA:HB2	64:18:72:ILE:HD12	2.03	0.41
69:23:103:LEU:HB2	69:23:126:LYS:HB2	2.02	0.41
78:1S:342:C:H2'	78:1S:343:C:H6	1.85	0.41
78:1S:463:U:O5'	78:1S:463:U:H6	2.02	0.41
79:2S:296:A:H2'	79:2S:297:G:N3	2.36	0.41
79:2S:360:G:H2'	79:2S:361:A:O4'	2.21	0.41
79:2S:710:A:H2'	79:2S:711:A:C8	2.56	0.41
79:2S:969:C:H2'	79:2S:970:A:H8	1.86	0.41
79:2S:999:G:H21	79:2S:1002:A:H62	1.69	0.41
79:2S:1058:U:H2'	79:2S:1059:G:H8	1.86	0.41
79:2S:1137:C:H2'	79:2S:1138:U:C6	2.56	0.41
79:2S:1362:G:H2'	79:2S:1363:A:C8	2.56	0.41
79:2S:1398:U:H4'	80:8S:9:A:H5"	2.03	0.41
79:2S:1645:U:H3'	79:2S:1646:G:H8	1.86	0.41
1:L1:18:LYS:HZ3	1:L1:24:LYS:CE	2.33	0.41
1:L1:108:ASN:HB2	1:L1:130:LYS:HG2	2.01	0.41
2:L2:187:HIS:HB3	2:L2:190:ARG:NH2	2.36	0.41
2:L2:206:PRO:HG3	2:L2:213:GLY:CA	2.43	0.41
4:L4:300:ARG:HB2	4:L4:301:PRO:CD	2.36	0.41
5:L5:49:TYR:CD1	5:L5:66:SER:HB3	2.56	0.41
7:L7:92:ILE:HD13	7:L7:109:THR:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:221:LYS:HB2	7:L7:227:GLY:CA	2.50	0.41
8:L8:34:PHE:HE2	8:L8:42:PRO:HD3	1.85	0.41
8:L8:122:LYS:H	8:L8:122:LYS:HD3	1.85	0.41
8:L8:247:ASP:O	8:L8:251:LYS:HB2	2.20	0.41
10:60:5:PRO:HB2	10:60:7:ARG:HG2	2.02	0.41
16:66:97:ALA:O	16:66:101:ARG:HG3	2.21	0.41
18:68:185:LYS:HD3	18:68:186:VAL:HG23	2.02	0.41
19:69:21:LYS:HD2	19:69:55:VAL:HA	2.03	0.41
20:70:117:ARG:HG3	20:70:119:ARG:NH1	2.36	0.41
20:70:123:ILE:O	21:71:153:PRO:HG3	2.20	0.41
22:72:75:TYR:O	22:72:79:LEU:HG	2.20	0.41
22:72:104:ARG:HD2	22:72:105:LEU:N	2.35	0.41
35:85:44:ILE:HA	35:85:47:VAL:HG12	2.03	0.41
39:89:36:ARG:HG2	39:89:36:ARG:NH1	2.35	0.41
47:S1:35:PRO:HD2	47:S1:38:PHE:CE2	2.55	0.41
50:S4:129:VAL:HG12	50:S4:156:VAL:HG22	2.03	0.41
50:S4:131:LEU:N	50:S4:131:LEU:HD22	2.35	0.41
51:S5:81:ARG:HE	74:28:47:PRO:HB3	1.86	0.41
53:S7:126:LEU:H	53:S7:126:LEU:HD22	1.86	0.41
54:S8:45:SER:HB3	54:S8:55:TYR:HA	2.02	0.41
55:S9:83:VAL:HG23	55:S9:84:GLY:N	2.35	0.41
60:14:25:ASP:OD1	60:14:54:GLU:HB3	2.21	0.41
67:21:45:ALA:O	67:21:46:ILE:HB	2.21	0.41
78:1S:139:C:H1'	78:1S:140:A:OP2	2.21	0.41
78:1S:293:U:H2'	78:1S:294:C:C6	2.56	0.41
78:1S:782:U:H3'	78:1S:783:G:C5'	2.51	0.41
78:1S:1728:A:H2'	78:1S:1729:C:C6	2.55	0.41
79:2S:386:A:H8	79:2S:386:A:O5'	2.03	0.41
79:2S:629:U:H2'	79:2S:630:A:C8	2.55	0.41
79:2S:1403:C:H2'	79:2S:1404:G:C8	2.55	0.41
79:2S:1604:G:N3	79:2S:1604:G:H3'	2.36	0.41
79:2S:2286:U:H4'	79:2S:2287:C:H2'	2.03	0.41
79:2S:2722:U:H2'	79:2S:2723:U:H6	1.85	0.41
82:PT:10:G:C2	82:PT:27:G:H1'	2.56	0.41
1:L1:55:LEU:HD22	1:L1:134:PHE:HB3	2.01	0.41
2:L2:94:ALA:HB3	2:L2:102:LEU:HD21	2.03	0.41
2:L2:175:VAL:CG2	79:2S:2179:C:H1'	2.50	0.41
3:L3:31:ALA:HB2	79:2S:3136:G:H5"	2.03	0.41
3:L3:150:ARG:HD2	3:L3:154:TYR:HE2	1.86	0.41
5:L5:36:LEU:CD2	79:2S:2748:A:H1'	2.50	0.41
5:L5:190:ILE:HD12	5:L5:190:ILE:HA	1.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:221:GLU:O	5:L5:224:LYS:HB2	2.20	0.41
6:L6:56:LYS:HD2	6:L6:98:VAL:O	2.20	0.41
7:L7:144:ILE:O	7:L7:148:VAL:HG23	2.21	0.41
8:L8:72:PRO:HG2	8:L8:75:ILE:HG13	2.02	0.41
8:L8:122:LYS:O	8:L8:123:GLN:HB3	2.21	0.41
10:60:55:ASN:O	10:60:131:ILE:HG23	2.21	0.41
10:60:191:LYS:HB2	10:60:191:LYS:NZ	2.36	0.41
11:61:166:LYS:O	11:61:167:TYR:CB	2.68	0.41
13:63:23:LYS:NZ	13:63:23:LYS:HB2	2.36	0.41
13:63:79:GLU:HG2	13:63:109:PHE:CE2	2.56	0.41
13:63:132:ALA:HA	13:63:133:PRO:HD2	2.01	0.41
15:65:13:LYS:NZ	36:86:45:ARG:HA	2.35	0.41
15:65:81:TYR:OH	79:2S:908:G:H3'	2.21	0.41
15:65:89:VAL:CG2	79:2S:2424:A:H5'	2.51	0.41
17:67:83:TRP:N	17:67:84:PRO:HD3	2.36	0.41
20:70:11:GLY:HA3	20:70:42:TRP:CH2	2.56	0.41
21:71:109:VAL:HG13	79:2S:1063:G:N1	2.36	0.41
21:71:126:VAL:HG23	21:71:127:GLN:H	1.85	0.41
22:72:37:LEU:HD12	22:72:37:LEU:N	2.36	0.41
23:73:39:VAL:HA	23:73:58:VAL:HG12	2.02	0.41
23:73:93:LEU:HB3	24:74:20:LEU:HB3	2.03	0.41
24:74:23:ARG:HB3	24:74:25:ASP:OD2	2.21	0.41
26:76:16:ARG:HG2	26:76:16:ARG:HH11	1.86	0.41
28:78:96:LYS:O	28:78:97:GLU:HB2	2.21	0.41
31:81:62:ARG:HD2	79:2S:3074:G:O2'	2.21	0.41
33:83:77:ASN:HB2	79:2S:1180:A:H5"	2.02	0.41
40:90:78:ILE:O	40:90:79:GLU:HB3	2.20	0.41
42:92:46:LYS:HD3	79:2S:44:U:O2'	2.21	0.41
43:93:4:ARG:HD3	79:2S:836:A:P	2.61	0.41
45:RC:203:THR:HG22	45:RC:212:ALA:HB3	2.02	0.41
45:RC:252:LEU:HB3	45:RC:263:PHE:O	2.20	0.41
46:S0:7:PHE:N	46:S0:7:PHE:HD2	2.18	0.41
46:S0:41:ARG:HG3	46:S0:41:ARG:NH2	2.35	0.41
46:S0:190:ASP:HB2	46:S0:191:ARG:H	1.64	0.41
47:S1:166:LYS:HB2	47:S1:166:LYS:HE3	1.88	0.41
48:S2:53:ILE:HD11	48:S2:73:LEU:HB2	2.02	0.41
49:S3:29:LEU:O	49:S3:34:TYR:HB2	2.20	0.41
51:S5:218:GLU:O	51:S5:222:LYS:HB2	2.21	0.41
52:S6:179:VAL:HG13	52:S6:179:VAL:O	2.21	0.41
53:S7:139:ARG:HH11	53:S7:139:ARG:HG3	1.85	0.41
54:S8:43:ILE:HG21	54:S8:55:TYR:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:119:ALA:C	55:S9:121:SER:H	2.29	0.41
57:11:83:THR:N	57:11:111:VAL:HG12	2.34	0.41
58:12:59:LEU:HD23	58:12:60:VAL:N	2.35	0.41
59:13:129:TYR:CD1	59:13:134:VAL:HG21	2.56	0.41
60:14:22:SER:HA	60:14:95:GLY:HA3	2.02	0.41
60:14:36:LYS:HG3	78:1S:894:U:O2'	2.20	0.41
60:14:81:VAL:C	60:14:82:LYS:HG3	2.46	0.41
61:15:97:TYR:HB2	61:15:102:PHE:CD1	2.56	0.41
64:18:86:LEU:HD12	64:18:86:LEU:N	2.36	0.41
64:18:112:ASP:O	64:18:115:ARG:NH2	2.54	0.41
65:19:30:VAL:HA	65:19:31:PRO:HD3	1.83	0.41
67:21:86:SER:HA	73:27:6:ASP:HB2	2.03	0.41
70:24:83:LYS:HG2	70:24:96:LEU:HD23	2.03	0.41
71:25:46:LYS:O	71:25:50:ILE:HG13	2.21	0.41
72:26:21:VAL:O	72:26:29:SER:HA	2.21	0.41
73:27:20:LYS:H	73:27:20:LYS:CD	2.32	0.41
76:30:10:ARG:CD	76:30:13:LYS:HD2	2.51	0.41
77:31:136:LYS:C	77:31:138:ARG:N	2.78	0.41
78:1S:140:A:C4'	78:1S:141:U:H5'	2.47	0.41
78:1S:750:U:H2'	78:1S:751:G:C8	2.56	0.41
78:1S:1058:U:H5	78:1S:1061:A:H61	1.67	0.41
78:1S:1058:U:H5	78:1S:1061:A:N6	2.19	0.41
78:1S:1282:U:H2'	78:1S:1283:U:C6	2.56	0.41
78:1S:1333:C:H2'	78:1S:1334:U:C6	2.56	0.41
78:1S:1414:U:H3'	78:1S:1415:U:C5'	2.50	0.41
78:1S:1721:A:H2'	78:1S:1722:A:O4'	2.21	0.41
78:1S:1731:A:H2'	78:1S:1732:A:O4'	2.20	0.41
78:1S:1759:C:H2'	78:1S:1760:G:O4'	2.21	0.41
78:1S:1765:A:H5'	78:1S:1767:G:N7	2.35	0.41
79:2S:86:G:N2	79:2S:98:G:H2'	2.36	0.41
79:2S:439:C:O2	79:2S:439:C:C2'	2.68	0.41
79:2S:611:A:H1'	79:2S:612:U:C6	2.55	0.41
79:2S:646:A:H2'	79:2S:647:A:O4'	2.21	0.41
79:2S:1214:U:H2'	79:2S:1215:U:H6	1.86	0.41
79:2S:1502:C:C5	79:2S:1511:U:H5"	2.55	0.41
79:2S:1670:C:O2'	79:2S:1860:G:H5"	2.21	0.41
79:2S:1933:A:H4'	79:2S:2124:G:H5'	2.03	0.41
79:2S:2192:C:H2'	79:2S:2193:U:O4'	2.21	0.41
82:PT:15:G:OP2	82:PT:16:C:H5	2.04	0.41
2:L2:8:GLN:HA	79:2S:2163:C:H4'	2.03	0.41
2:L2:59:ALA:HB1	2:L2:61:VAL:HG23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:200:ARG:CB	2:L2:200:ARG:HH21	2.33	0.41
3:L3:103:THR:HG22	3:L3:104:THR:N	2.36	0.41
4:L4:113:VAL:HG13	4:L4:117:GLU:OE1	2.21	0.41
4:L4:122:THR:OG1	4:L4:262:TRP:HH2	2.04	0.41
5:L5:157:ALA:HB3	5:L5:160:PHE:CE2	2.56	0.41
7:L7:238:LYS:C	7:L7:238:LYS:HD3	2.46	0.41
8:L8:140:VAL:HG21	15:65:3:ALA:HB2	2.02	0.41
8:L8:150:LEU:HA	8:L8:176:PRO:HG2	2.02	0.41
9:L9:112:ILE:O	9:L9:125:ASN:HA	2.21	0.41
10:60:20:SER:OG	10:60:22:TYR:HD1	2.03	0.41
10:60:30:LYS:HD2	10:60:30:LYS:H	1.86	0.41
11:61:94:ARG:HB2	11:61:95:ASN:H	1.68	0.41
13:63:76:THR:HG22	13:63:101:ARG:HB3	2.03	0.41
14:64:76:ALA:HA	79:2S:561:C:OP1	2.21	0.41
15:65:109:ARG:HD2	80:8S:140:G:O2'	2.21	0.41
20:70:77:VAL:HG22	20:70:126:VAL:HG13	2.03	0.41
21:71:109:VAL:HG22	79:2S:1063:G:C6	2.56	0.41
26:76:17:LYS:HA	80:8S:23:U:O4'	2.21	0.41
27:77:17:ARG:C	27:77:19:ALA:N	2.78	0.41
27:77:87:LEU:HG	27:77:88:ASP:H	1.86	0.41
34:84:31:ARG:HG2	34:84:31:ARG:HH11	1.86	0.41
37:87:37:CYS:O	37:87:44:THR:HA	2.21	0.41
45:RC:229:LYS:HB3	45:RC:230:ALA:H	1.69	0.41
47:S1:176:VAL:C	47:S1:177:GLN:HG2	2.45	0.41
48:S2:198:THR:O	78:1S:3:U:H5"	2.21	0.41
49:S3:51:ARG:HB3	49:S3:91:VAL:HB	2.01	0.41
50:S4:103:TYR:CZ	50:S4:189:LEU:HD11	2.56	0.41
51:S5:59:VAL:HG12	51:S5:60:ASP:H	1.86	0.41
52:S6:211:LEU:HD22	52:S6:215:ARG:HH21	1.86	0.41
54:S8:194:ARG:HB3	54:S8:195:ARG:NH1	2.35	0.41
56:10:68:LEU:CD1	56:10:72:GLY:HA3	2.49	0.41
56:10:81:ASN:O	56:10:82:LEU:O	2.38	0.41
63:17:103:ASP:HA	63:17:122:ILE:HG22	2.02	0.41
66:20:61:LYS:H	66:20:61:LYS:HG2	1.68	0.41
67:21:80:LYS:O	67:21:82:VAL:HG23	2.21	0.41
70:24:21:LYS:HB3	70:24:75:VAL:HG12	2.03	0.41
78:1S:396:G:H22	78:1S:399:A:H5'	1.86	0.41
78:1S:632:U:H2'	78:1S:633:U:C6	2.56	0.41
78:1S:730:G:N3	78:1S:730:G:C2'	2.84	0.41
78:1S:941:A:H2'	78:1S:942:G:C5'	2.50	0.41
78:1S:1222:C:H2'	78:1S:1223:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1723:U:H2'	78:1S:1724:U:H6	1.87	0.41
79:2S:181:U:H2'	79:2S:182:U:O4'	2.21	0.41
79:2S:314:U:H2'	79:2S:315:C:C6	2.55	0.41
79:2S:363:G:H2'	79:2S:364:G:O4'	2.20	0.41
79:2S:507:U:H2'	79:2S:508:U:C6	2.56	0.41
79:2S:578:A:OP2	79:2S:579:G:H5'	2.20	0.41
79:2S:829:U:H3	79:2S:895:A:N6	1.93	0.41
79:2S:929:A:H2'	79:2S:930:U:C6	2.56	0.41
79:2S:986:U:H2'	79:2S:987:U:C6	2.56	0.41
79:2S:1324:U:O5'	79:2S:1324:U:H6	2.04	0.41
79:2S:1581:C:C3'	79:2S:1582:C:H5'	2.51	0.41
79:2S:2449:A:H2'	79:2S:2450:G:H5'	2.03	0.41
79:2S:2755:C:H2'	79:2S:2756:C:C6	2.55	0.41
79:2S:2985:C:H2'	79:2S:2986:U:H6	1.85	0.41
79:2S:3000:A:H2'	79:2S:3001:C:C6	2.56	0.41
79:2S:3005:A:C2	79:2S:3141:A:N7	2.89	0.41
80:8S:104:A:O5'	80:8S:105:A:H8	2.03	0.41
80:8S:125:U:H3'	80:8S:125:U:O2	2.21	0.41
81:5S:62:U:H2'	81:5S:63:A:C8	2.56	0.41
82:ET:53:G:H2'	82:ET:54:G:O4'	2.21	0.41
3:L3:2:SER:N	79:2S:2940:A:H8	2.20	0.40
4:L4:73:ARG:O	79:2S:805:G:H4'	2.21	0.40
4:L4:269:SER:O	4:L4:270:SER:HB3	2.21	0.40
9:L9:160:ASP:O	9:L9:164:ILE:HG12	2.21	0.40
10:60:102:MET:HE3	10:60:112:GLN:HB3	2.03	0.40
11:61:9:MET:O	11:61:134:PRO:HG2	2.21	0.40
13:63:31:LYS:HG2	80:8S:30:C:OP1	2.21	0.40
13:63:76:THR:CG2	13:63:101:ARG:HH11	2.34	0.40
15:65:169:LYS:HG2	15:65:174:ILE:HD12	2.02	0.40
17:67:69:ARG:CD	79:2S:3309:G:H1'	2.50	0.40
18:68:44:PHE:O	18:68:48:VAL:HG23	2.21	0.40
19:69:75:HIS:HA	79:2S:1940:G:OP1	2.20	0.40
20:70:12:ARG:O	20:70:22:PRO:HB2	2.20	0.40
27:77:71:PHE:HA	27:77:111:LYS:HD3	2.02	0.40
29:79:28:LYS:HG2	79:2S:1065:A:N3	2.36	0.40
47:S1:121:ILE:CD1	47:S1:207:LEU:HD21	2.49	0.40
49:S3:11:LEU:HA	49:S3:14:ASP:HB2	2.02	0.40
50:S4:7:LYS:CB	78:1S:94:U:H1'	2.51	0.40
51:S5:33:VAL:HG12	51:S5:37:GLN:CD	2.46	0.40
52:S6:220:LYS:HD2	52:S6:220:LYS:C	2.46	0.40
58:12:66:VAL:HB	58:12:72:ILE:HD11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:33:GLY:HA2	78:1S:1366:U:H5"	2.02	0.40
66:20:20:ILE:H	66:20:20:ILE:HG13	1.68	0.40
66:20:57:ARG:HG2	78:1S:1382:A:O4'	2.20	0.40
66:20:106:ILE:HG13	66:20:107:THR:N	2.23	0.40
70:24:111:LYS:C	70:24:111:LYS:HD3	2.46	0.40
78:1S:152:U:H2'	78:1S:153:G:H5"	2.03	0.40
78:1S:421:A:C2'	78:1S:422:G:H5'	2.52	0.40
78:1S:614:C:H2'	78:1S:615:A:C8	2.55	0.40
78:1S:977:A:H2'	78:1S:978:A:O4'	2.21	0.40
78:1S:1231:U:O2'	78:1S:1258:U:H1'	2.21	0.40
78:1S:1404:C:H2'	78:1S:1405:G:H8	1.86	0.40
79:2S:888:A:H2'	79:2S:889:U:C6	2.55	0.40
79:2S:1200:A:C6	79:2S:2370:G:H5"	2.56	0.40
79:2S:1389:G:O3'	79:2S:1392:G:H4'	2.21	0.40
79:2S:2271:A:C3'	79:2S:2272:G:H5"	2.51	0.40
79:2S:2585:G:O2'	79:2S:2586:G:H5"	2.21	0.40
79:2S:3390:G:H2'	79:2S:3391:A:C8	2.56	0.40
1:L1:18:LYS:C	1:L1:20:SER:H	2.29	0.40
1:L1:136:THR:H	1:L1:137:PRO:HD2	1.87	0.40
3:L3:130:PHE:H	79:2S:3150:A:H5'	1.85	0.40
5:L5:40:HIS:HD2	5:L5:42:ALA:HB3	1.85	0.40
6:L6:135:VAL:HG22	79:2S:3268:A:C2	2.57	0.40
8:L8:59:GLN:HA	8:L8:62:LYS:HE2	2.03	0.40
8:L8:81:THR:OG1	8:L8:181:LYS:HB2	2.21	0.40
11:61:37:LEU:HD13	11:61:45:PRO:HB3	2.02	0.40
11:61:89:TYR:O	11:61:169:ALA:HA	2.21	0.40
13:63:103:ASN:ND2	13:63:109:PHE:HD2	2.20	0.40
13:63:164:GLU:O	13:63:165:SER:HB3	2.21	0.40
15:65:187:ARG:O	15:65:190:THR:HG22	2.21	0.40
18:68:147:ARG:HH12	18:68:150:VAL:HG12	1.85	0.40
20:70:110:MET:HE1	20:70:114:HIS:HB2	2.02	0.40
21:71:80:VAL:HG13	21:71:80:VAL:O	2.22	0.40
26:76:28:ARG:HA	26:76:31:LEU:HD12	2.04	0.40
32:82:12:LYS:HD2	32:82:57:TYR:C	2.47	0.40
32:82:27:ARG:HD2	79:2S:1433:A:C4'	2.51	0.40
33:83:60:ARG:HH11	79:2S:622:A:C5'	2.34	0.40
36:86:53:TYR:CD1	36:86:53:TYR:C	2.99	0.40
37:87:52:LYS:O	37:87:56:ARG:HG3	2.20	0.40
43:93:51:ALA:HB3	43:93:54:ILE:HB	2.02	0.40
44:P0:61:ARG:CB	79:2S:1221:A:H5'	2.51	0.40
45:RC:135:THR:CG2	45:RC:141:LEU:HD21	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:30:GLN:HA	46:S0:149:LEU:HB3	2.03	0.40
47:S1:29:TRP:HA	47:S1:47:LEU:HB3	2.03	0.40
47:S1:136:ARG:HH11	78:1S:884:A:H5"	1.87	0.40
50:S4:23:LEU:CD1	55:S9:4:ALA:HB3	2.49	0.40
50:S4:92:LEU:N	50:S4:92:LEU:HD12	2.35	0.40
52:S6:98:ARG:HD3	52:S6:99:GLY:N	2.27	0.40
54:S8:42:ARG:O	54:S8:58:LEU:HB2	2.22	0.40
54:S8:48:THR:HB	54:S8:49:ARG:H	1.69	0.40
55:S9:132:ARG:HB2	78:1S:513:U:OP1	2.21	0.40
58:12:33:ARG:O	58:12:37:VAL:HG23	2.21	0.40
59:13:40:TYR:O	59:13:45:LEU:HD23	2.21	0.40
64:18:11:PHE:CE1	64:18:59:GLY:HA3	2.55	0.40
70:24:4:ALA:HB3	70:24:30:PRO:HD2	2.03	0.40
72:26:23:CYS:HB3	72:26:27:SER:CA	2.51	0.40
74:28:43:ASN:HD21	74:28:63:ALA:HB3	1.86	0.40
78:1S:64:U:C3'	78:1S:65:A:H5"	2.51	0.40
78:1S:85:A:H2'	78:1S:86:A:O4'	2.21	0.40
78:1S:588:U:H2'	78:1S:589:C:H6	1.83	0.40
78:1S:1269:U:O2	78:1S:1269:U:H2'	2.21	0.40
78:1S:1734:U:O2'	78:1S:1735:U:H5'	2.21	0.40
79:2S:27:C:H4'	79:2S:328:U:C4'	2.51	0.40
79:2S:153:U:C3'	79:2S:154:U:H5"	2.51	0.40
79:2S:233:C:H2'	79:2S:234:G:O4'	2.22	0.40
79:2S:769:G:H2'	79:2S:770:G:H5'	2.03	0.40
79:2S:951:A:H2'	79:2S:952:A:C8	2.56	0.40
79:2S:1649:U:H2'	79:2S:1650:G:C8	2.56	0.40
79:2S:2104:A:H2'	79:2S:2105:G:C8	2.57	0.40
79:2S:2820:A:H5"	82:PT:77:A:C6	2.56	0.40
79:2S:3138:U:C2'	79:2S:3139:A:H5"	2.50	0.40
79:2S:3325:G:O2'	79:2S:3326:G:H5'	2.21	0.40
80:8S:58:G:O2'	80:8S:99:C:H4'	2.21	0.40
1:L1:207:LYS:CG	1:L1:208:SER:N	2.84	0.40
2:L2:182:ALA:HB2	79:2S:2148:U:H4'	2.02	0.40
3:L3:13:HIS:NE2	79:2S:3010:U:O2'	2.52	0.40
5:L5:178:ASN:HA	5:L5:183:TRP:CD2	2.57	0.40
7:L7:101:LYS:HG3	79:2S:984:G:O2'	2.22	0.40
9:L9:129:ARG:HH21	79:2S:3126:C:H4'	1.87	0.40
11:61:43:GLN:HB3	81:5S:39:C:O2'	2.21	0.40
11:61:133:ARG:O	11:61:135:GLY:N	2.54	0.40
14:64:53:VAL:HA	14:64:54:PRO:HD3	1.94	0.40
15:65:188:ARG:HG2	79:2S:50:U:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:49:ARG:HB2	79:2S:1191:U:H5'	2.03	0.40
17:67:112:LEU:HD12	17:67:152:GLU:CA	2.51	0.40
19:69:163:ARG:CG	78:1S:815:G:H5"	2.38	0.40
20:70:78:TRP:HE3	20:70:125:LYS:HE3	1.83	0.40
21:71:89:LEU:HD21	79:2S:2723:U:H4'	2.02	0.40
25:75:92:LYS:HE3	25:75:110:VAL:O	2.21	0.40
25:75:108:LEU:HD22	25:75:125:ARG:HD3	2.02	0.40
29:79:28:LYS:HD3	29:79:28:LYS:HA	1.91	0.40
31:81:5:LYS:HG2	31:81:89:LEU:HD11	2.04	0.40
36:86:4:LYS:HD2	36:86:14:GLY:HA3	2.03	0.40
42:92:55:LYS:CB	82:ET:76:C:H1'	2.52	0.40
43:93:85:ARG:HH11	43:93:85:ARG:HG2	1.86	0.40
43:93:85:ARG:O	43:93:89:MET:HG3	2.21	0.40
45:RC:7:LEU:HD11	45:RC:251:TRP:HZ3	1.86	0.40
45:RC:217:ASP:HB2	45:RC:219:GLU:HG2	2.03	0.40
46:S0:179:ARG:HG2	46:S0:183:ARG:NH1	2.37	0.40
48:S2:103:VAL:HG12	48:S2:104:VAL:N	2.35	0.40
49:S3:41:VAL:HG13	49:S3:41:VAL:O	2.22	0.40
51:S5:89:ILE:H	51:S5:89:ILE:HG13	1.56	0.40
51:S5:133:VAL:O	51:S5:137:ILE:HG12	2.21	0.40
60:14:128:LYS:HB3	72:26:22:ARG:NH1	2.37	0.40
63:17:41:ILE:HD13	63:17:47:ARG:HB2	2.04	0.40
63:17:71:PHE:O	63:17:72:LYS:HB3	2.21	0.40
67:21:17:CYS:HB3	67:21:22:ARG:H	1.86	0.40
69:23:127:VAL:HG22	69:23:132:LEU:HD22	2.03	0.40
78:1S:1262:U:H2'	78:1S:1263:G:H8	1.85	0.40
78:1S:1336:A:H2'	78:1S:1337:A:H4'	2.03	0.40
78:1S:1388:A:H4'	78:1S:1389:C:O4'	2.22	0.40
78:1S:1783:C:H2'	78:1S:1784:C:C6	2.56	0.40
79:2S:818:C:H42	79:2S:919:U:H4'	1.86	0.40
79:2S:1245:A:H3'	79:2S:1246:G:H5"	2.02	0.40
79:2S:2224:A:H2'	79:2S:2225:U:H5'	2.04	0.40
79:2S:2527:G:H2'	79:2S:2528:G:H8	1.86	0.40
79:2S:3160:U:H2'	79:2S:3161:C:C5	2.56	0.40
79:2S:3392:U:H2'	79:2S:3393:U:H6	1.85	0.40
81:5S:24:A:H4'	81:5S:120:C:H4'	2.03	0.40
81:5S:104:A:C2'	81:5S:105:C:H5'	2.48	0.40
4:L4:313:LEU:HD13	4:L4:314:LYS:N	2.36	0.40
7:L7:126:LEU:HD21	79:2S:986:U:O4'	2.20	0.40
8:L8:69:LEU:HB3	79:2S:2514:U:O4	2.22	0.40
9:L9:112:ILE:HD13	9:L9:161:LEU:HD21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:119:TRP:HZ3	79:2S:1126:G:H5”	1.86	0.40
13:63:46:ILE:O	13:63:49:ARG:HB2	2.21	0.40
13:63:155:GLU:O	28:78:100:PRO:HA	2.21	0.40
14:64:8:LYS:HE2	79:2S:3187:A:H5”	2.03	0.40
14:64:85:TRP:CD1	14:64:91:CYS:HB3	2.55	0.40
15:65:104:GLU:HG2	15:65:160:GLU:CG	2.44	0.40
16:66:27:LEU:HD23	16:66:31:GLN:O	2.21	0.40
16:66:115:LYS:HG3	79:2S:3178:A:H2’	2.03	0.40
17:67:122:ALA:HB1	17:67:123:PRO:HD2	2.04	0.40
17:67:127:ARG:HG2	17:67:128:ARG:H	1.85	0.40
17:67:167:ARG:HD3	79:2S:619:A:OP1	2.22	0.40
18:68:71:LEU:HD13	18:68:97:PRO:HG2	2.03	0.40
23:73:33:ASN:HD22	23:73:33:ASN:H	1.68	0.40
23:73:38:ALA:HB3	23:73:59:MET:CB	2.36	0.40
23:73:86:ARG:HD2	23:73:92:PHE:CE2	2.57	0.40
27:77:17:ARG:NH1	79:2S:1633:C:C5	2.89	0.40
32:82:40:SER:HB3	32:82:43:ARG:HB2	2.03	0.40
34:84:86:LYS:HE2	34:84:86:LYS:HB3	1.98	0.40
45:RC:2:ALA:O	45:RC:3:SER:HB3	2.22	0.40
45:RC:13:LEU:HB2	45:RC:310:ILE:HB	2.04	0.40
45:RC:174:ASN:HA	45:RC:199:ILE:H	1.87	0.40
45:RC:193:ILE:HD12	49:S3:218:LEU:HD13	2.03	0.40
46:S0:101:ARG:HD3	78:1S:1320:U:C5	2.56	0.40
47:S1:33:LYS:O	47:S1:98:THR:HG22	2.22	0.40
52:S6:217:SER:O	52:S6:220:LYS:HE3	2.21	0.40
54:S8:67:TRP:CD1	54:S8:183:ILE:HD11	2.57	0.40
54:S8:197:THR:HG22	54:S8:200:LYS:HD2	2.03	0.40
65:19:99:SER:HB2	78:1S:1504:G:OP1	2.21	0.40
71:25:38:HIS:O	71:25:39:ALA:HB3	2.21	0.40
75:29:21:CYS:HB2	75:29:26:SER:HB3	2.02	0.40
78:1S:103:A:H4’	78:1S:105:A:N7	2.36	0.40
78:1S:445:A:H2’	78:1S:446:A:H8	1.87	0.40
78:1S:689:G:H2’	78:1S:690:G:C5’	2.45	0.40
78:1S:743:U:H2’	78:1S:744:U:O4’	2.21	0.40
78:1S:1202:A:H1’	78:1S:1207:C:N4	2.36	0.40
78:1S:1270:G:H2’	78:1S:1271:G:C8	2.56	0.40
79:2S:109:A:C4’	79:2S:110:G:H5’	2.36	0.40
79:2S:211:A:H5’	79:2S:229:G:C1’	2.52	0.40
79:2S:603:A:H2’	79:2S:604:G:H4’	2.03	0.40
79:2S:636:C:O2’	79:2S:637:C:H5”	2.22	0.40
79:2S:726:G:H5’	79:2S:726:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:912:G:H2'	79:2S:914:A:C8	2.56	0.40
79:2S:1123:U:H2'	79:2S:1124:U:C5'	2.52	0.40
79:2S:1326:A:H2'	79:2S:1327:C:O4'	2.22	0.40
79:2S:1626:U:H4'	79:2S:1632:A:C4'	2.28	0.40
79:2S:2249:G:O2'	79:2S:2250:G:H5'	2.22	0.40
79:2S:2356:A:H2'	79:2S:2357:A:H5'	2.03	0.40
79:2S:2969:A:H2'	79:2S:2970:C:C6	2.56	0.40
79:2S:3003:G:H2'	79:2S:3004:C:C6	2.57	0.40
2:L2:45:VAL:HB	2:L2:61:VAL:HG22	2.04	0.40
3:L3:174:LYS:HD2	79:2S:3314:A:H5"	2.04	0.40
3:L3:199:PHE:O	3:L3:200:GLU:HB2	2.22	0.40
4:L4:170:LYS:HG3	4:L4:175:HIS:ND1	2.37	0.40
5:L5:58:LYS:HG3	81:5S:49:G:N7	2.36	0.40
5:L5:146:LEU:HD21	5:L5:173:VAL:CG1	2.51	0.40
7:L7:45:LEU:HD23	7:L7:45:LEU:C	2.46	0.40
7:L7:78:GLU:HA	21:71:138:SER:HB3	2.02	0.40
7:L7:218:ARG:NH2	7:L7:220:PHE:HB2	2.37	0.40
8:L8:38:GLN:HB2	79:2S:2557:A:H2	1.87	0.40
8:L8:103:ALA:O	8:L8:107:GLU:HB3	2.21	0.40
10:60:174:THR:HG22	10:60:175:ASN:N	2.37	0.40
11:61:91:LEU:HB3	11:61:92:ARG:H	1.49	0.40
16:66:25:LYS:HE3	79:2S:1176:C:OP1	2.21	0.40
16:66:120:VAL:HA	16:66:121:PRO:HD3	1.82	0.40
17:67:47:TYR:HD1	17:67:56:ARG:NE	2.20	0.40
19:69:67:ALA:O	19:69:71:ARG:HG3	2.22	0.40
21:71:40:VAL:HG12	21:71:98:HIS:HD2	1.87	0.40
23:73:132:ASN:N	23:73:132:ASN:HD22	2.20	0.40
26:76:76:LEU:HD13	26:76:76:LEU:C	2.47	0.40
30:80:42:ILE:HG13	30:80:67:VAL:HG13	2.03	0.40
33:83:6:ARG:HG3	33:83:8:TYR:CE1	2.56	0.40
34:84:86:LYS:HA	34:84:89:ILE:HD12	2.03	0.40
39:89:16:ALA:O	39:89:20:ASN:ND2	2.54	0.40
39:89:37:TYR:HB2	39:89:38:ASN:H	1.72	0.40
40:90:112:LYS:HB3	40:90:114:LYS:CG	2.52	0.40
43:93:27:LYS:HA	43:93:30:GLU:OE2	2.21	0.40
45:RC:26:SER:OG	45:RC:77:GLY:HA3	2.22	0.40
45:RC:169:ILE:CD1	45:RC:183:LEU:HD21	2.52	0.40
50:S4:71:LYS:O	50:S4:71:LYS:HG3	2.22	0.40
51:S5:208:SER:OG	51:S5:211:ILE:HG12	2.22	0.40
55:S9:24:LEU:HA	55:S9:27:GLU:OE1	2.20	0.40
55:S9:126:ARG:NH1	55:S9:144:PRO:HG2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:134:ILE:HG22	55:S9:157:ASP:O	2.20	0.40
58:12:113:ARG:HG3	58:12:114:LYS:N	2.37	0.40
59:13:3:ARG:HB2	59:13:3:ARG:NH1	2.37	0.40
63:17:29:GLN:H	63:17:29:GLN:HE21	1.70	0.40
63:17:125:SER:O	63:17:126:ALA:HB3	2.22	0.40
71:25:62:VAL:O	71:25:66:VAL:HG23	2.21	0.40
76:30:29:LYS:HE3	76:30:35:TYR:CE2	2.57	0.40
77:31:97:LYS:O	77:31:98:VAL:CB	2.69	0.40
78:1S:1311:U:H2'	78:1S:1313:A:OP2	2.22	0.40
78:1S:1545:A:H2'	78:1S:1546:G:C8	2.56	0.40
79:2S:1115:G:H5"	79:2S:1116:G:H5"	2.03	0.40
79:2S:2686:A:H2'	79:2S:2687:G:O4'	2.21	0.40
79:2S:3331:U:H2'	79:2S:3332:U:O4'	2.21	0.40
81:5S:105:C:H2'	81:5S:106:U:H6	1.86	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	L1	202/217 (93%)	140 (69%)	50 (25%)	12 (6%)	1 13
2	L2	250/254 (98%)	205 (82%)	34 (14%)	11 (4%)	2 17
3	L3	384/387 (99%)	328 (85%)	47 (12%)	9 (2%)	5 28
4	L4	359/362 (99%)	290 (81%)	53 (15%)	16 (4%)	2 16
5	L5	294/297 (99%)	251 (85%)	32 (11%)	11 (4%)	2 19
6	L6	152/176 (86%)	131 (86%)	19 (12%)	2 (1%)	9 42
7	L7	220/244 (90%)	182 (83%)	32 (14%)	6 (3%)	4 25
8	L8	231/256 (90%)	191 (83%)	30 (13%)	10 (4%)	2 17
9	L9	189/191 (99%)	163 (86%)	22 (12%)	4 (2%)	5 29

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
10	60	207/221 (94%)	183 (88%)	21 (10%)	3 (1%)	9 40
11	61	167/174 (96%)	131 (78%)	23 (14%)	13 (8%)	1 9
12	62	137/165 (83%)	79 (58%)	37 (27%)	21 (15%)	0 3
13	63	191/199 (96%)	158 (83%)	20 (10%)	13 (7%)	1 11
14	64	134/138 (97%)	110 (82%)	21 (16%)	3 (2%)	5 29
15	65	201/204 (98%)	160 (80%)	33 (16%)	8 (4%)	2 18
16	66	195/199 (98%)	173 (89%)	17 (9%)	5 (3%)	4 25
17	67	181/184 (98%)	153 (84%)	23 (13%)	5 (3%)	4 24
18	68	183/186 (98%)	155 (85%)	21 (12%)	7 (4%)	2 19
19	69	186/189 (98%)	169 (91%)	16 (9%)	1 (0%)	24 63
20	70	170/172 (99%)	142 (84%)	21 (12%)	7 (4%)	2 17
21	71	157/160 (98%)	137 (87%)	15 (10%)	5 (3%)	3 21
22	72	98/121 (81%)	81 (83%)	14 (14%)	3 (3%)	3 22
23	73	134/137 (98%)	118 (88%)	14 (10%)	2 (2%)	8 39
24	74	62/155 (40%)	50 (81%)	10 (16%)	2 (3%)	3 21
25	75	119/142 (84%)	99 (83%)	14 (12%)	6 (5%)	1 15
26	76	124/127 (98%)	116 (94%)	8 (6%)	0	100 100
27	77	133/136 (98%)	102 (77%)	25 (19%)	6 (4%)	2 16
28	78	146/149 (98%)	119 (82%)	22 (15%)	5 (3%)	3 20
29	79	56/59 (95%)	50 (89%)	4 (7%)	2 (4%)	2 20
30	80	95/105 (90%)	82 (86%)	11 (12%)	2 (2%)	5 29
31	81	107/113 (95%)	93 (87%)	11 (10%)	3 (3%)	4 24
32	82	125/130 (96%)	111 (89%)	13 (10%)	1 (1%)	16 54
33	83	104/107 (97%)	82 (79%)	14 (14%)	8 (8%)	1 9
34	84	110/121 (91%)	87 (79%)	18 (16%)	5 (4%)	2 16
35	85	117/120 (98%)	108 (92%)	7 (6%)	2 (2%)	7 36
36	86	97/100 (97%)	83 (86%)	8 (8%)	6 (6%)	1 12
37	87	85/88 (97%)	70 (82%)	14 (16%)	1 (1%)	10 43
38	88	75/78 (96%)	66 (88%)	8 (11%)	1 (1%)	9 42
39	89	48/51 (94%)	40 (83%)	7 (15%)	1 (2%)	5 29
40	90	50/128 (39%)	41 (82%)	7 (14%)	2 (4%)	2 18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
41	91	23/25 (92%)	23 (100%)	0	0	100 100
42	92	103/106 (97%)	83 (81%)	18 (18%)	2 (2%)	6 32
43	93	89/92 (97%)	77 (86%)	11 (12%)	1 (1%)	11 46
44	P0	121/312 (39%)	107 (88%)	13 (11%)	1 (1%)	16 54
45	RC	316/319 (99%)	262 (83%)	44 (14%)	10 (3%)	3 21
46	S0	204/252 (81%)	161 (79%)	37 (18%)	6 (3%)	3 23
47	S1	212/255 (83%)	162 (76%)	39 (18%)	11 (5%)	1 14
48	S2	215/254 (85%)	177 (82%)	30 (14%)	8 (4%)	2 19
49	S3	221/240 (92%)	188 (85%)	25 (11%)	8 (4%)	2 20
50	S4	258/261 (99%)	202 (78%)	45 (17%)	11 (4%)	2 17
51	S5	204/225 (91%)	170 (83%)	25 (12%)	9 (4%)	2 17
52	S6	224/236 (95%)	196 (88%)	24 (11%)	4 (2%)	6 34
53	S7	182/190 (96%)	145 (80%)	27 (15%)	10 (6%)	1 14
54	S8	184/200 (92%)	141 (77%)	34 (18%)	9 (5%)	1 15
55	S9	183/197 (93%)	151 (82%)	20 (11%)	12 (7%)	1 11
56	10	94/105 (90%)	69 (73%)	17 (18%)	8 (8%)	0 9
57	11	153/156 (98%)	122 (80%)	23 (15%)	8 (5%)	1 14
58	12	122/143 (85%)	81 (66%)	26 (21%)	15 (12%)	0 4
59	13	148/151 (98%)	133 (90%)	11 (7%)	4 (3%)	4 25
60	14	125/137 (91%)	95 (76%)	25 (20%)	5 (4%)	2 18
61	15	122/142 (86%)	97 (80%)	18 (15%)	7 (6%)	1 13
62	16	139/143 (97%)	118 (85%)	17 (12%)	4 (3%)	3 23
63	17	116/136 (85%)	90 (78%)	18 (16%)	8 (7%)	1 11
64	18	143/146 (98%)	114 (80%)	20 (14%)	9 (6%)	1 12
65	19	141/144 (98%)	118 (84%)	16 (11%)	7 (5%)	1 15
66	20	105/121 (87%)	83 (79%)	16 (15%)	6 (6%)	1 13
67	21	85/87 (98%)	68 (80%)	11 (13%)	6 (7%)	1 10
68	22	127/130 (98%)	112 (88%)	11 (9%)	4 (3%)	3 22
69	23	142/145 (98%)	107 (75%)	30 (21%)	5 (4%)	3 20
70	24	132/135 (98%)	106 (80%)	18 (14%)	8 (6%)	1 12
71	25	68/108 (63%)	51 (75%)	14 (21%)	3 (4%)	2 17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
72	26	95/119 (80%)	64 (67%)	20 (21%)	11 (12%)	0 5
73	27	79/82 (96%)	61 (77%)	18 (23%)	0	100 100
74	28	61/67 (91%)	46 (75%)	13 (21%)	2 (3%)	3 21
75	29	51/56 (91%)	43 (84%)	7 (14%)	1 (2%)	6 31
76	30	58/63 (92%)	44 (76%)	8 (14%)	6 (10%)	0 6
77	31	69/152 (45%)	44 (64%)	14 (20%)	11 (16%)	0 2
All	All	11389/12574 (91%)	9340 (82%)	1579 (14%)	470 (4%)	4 17

All (470) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L1	20	SER
1	L1	151	VAL
2	L2	41	ILE
2	L2	115	ASN
2	L2	192	LYS
3	L3	4	ARG
4	L4	268	ALA
4	L4	317	PRO
5	L5	19	PRO
7	L7	92	ILE
7	L7	163	LEU
8	L8	36	ILE
11	61	12	LEU
11	61	114	ILE
11	61	152	HIS
12	62	30	PRO
12	62	34	PRO
12	62	39	PRO
12	62	68	GLN
12	62	87	GLU
12	62	89	PRO
12	62	106	LEU
12	62	147	ASN
12	62	148	PRO
13	63	62	THR
13	63	136	GLU
16	66	16	VAL
18	68	41	ASP
18	68	97	PRO

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Mol	Chain	Res	Type
18	68	162	ALA
19	69	130	ASN
20	70	23	LYS
20	70	61	ILE
30	80	97	ASP
33	83	75	HIS
36	86	3	VAL
42	92	34	SER
45	RC	94	VAL
49	S3	93	ASP
50	S4	70	VAL
50	S4	194	THR
50	S4	195	ILE
51	S5	204	GLY
53	S7	12	ALA
53	S7	32	PRO
53	S7	64	VAL
53	S7	74	GLN
54	S8	40	ALA
54	S8	154	SER
55	S9	134	ILE
55	S9	138	LYS
55	S9	157	ASP
56	10	64	TYR
56	10	81	ASN
56	10	82	LEU
56	10	87	VAL
56	10	88	PRO
58	12	85	LYS
58	12	106	ILE
60	14	42	VAL
61	15	12	PHE
61	15	69	GLU
61	15	101	ALA
61	15	125	PRO
63	17	85	VAL
63	17	86	PRO
63	17	124	VAL
64	18	14	ILE
64	18	61	LEU
64	18	82	PRO
64	18	83	ALA

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Mol	Chain	Res	Type
64	18	92	ILE
64	18	102	ALA
65	19	53	TRP
66	20	96	PRO
67	21	44	ARG
70	24	35	VAL
71	25	44	GLN
71	25	71	ILE
72	26	12	LYS
72	26	81	ALA
72	26	84	VAL
72	26	86	VAL
74	28	36	THR
76	30	43	ARG
76	30	45	VAL
76	30	47	VAL
77	31	98	VAL
77	31	102	VAL
1	L1	74	VAL
1	L1	199	GLN
3	L3	5	LYS
3	L3	187	SER
3	L3	298	PHE
3	L3	317	ILE
4	L4	91	GLY
4	L4	232	SER
4	L4	264	SER
4	L4	293	SER
5	L5	6	ASP
5	L5	188	GLU
6	L6	98	VAL
7	L7	158	LYS
7	L7	159	GLN
8	L8	43	LYS
8	L8	79	GLN
9	L9	14	GLU
9	L9	22	SER
9	L9	50	ASN
9	L9	110	LYS
11	61	108	GLU
11	61	134	PRO
12	62	37	LEU

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Mol	Chain	Res	Type
12	62	58	VAL
12	62	125	LEU
12	62	128	VAL
13	63	47	ALA
13	63	76	THR
17	67	156	ALA
18	68	13	SER
18	68	175	ALA
20	70	147	ASP
21	71	124	VAL
21	71	125	ALA
22	72	44	GLU
25	75	54	TYR
25	75	57	LEU
27	77	19	ALA
27	77	32	GLY
28	78	65	GLN
29	79	25	LYS
30	80	47	ASN
32	82	5	PRO
33	83	15	SER
33	83	59	VAL
35	85	119	LYS
36	86	34	SER
36	86	97	SER
39	89	22	PRO
46	S0	4	PRO
47	S1	153	HIS
47	S1	221	PRO
48	S2	176	SER
49	S3	160	SER
50	S4	35	PRO
50	S4	150	PRO
51	S5	21	THR
51	S5	43	PHE
51	S5	63	GLN
51	S5	64	VAL
51	S5	101	GLY
52	S6	153	VAL
53	S7	8	ILE
53	S7	98	ILE
53	S7	109	VAL

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Mol	Chain	Res	Type
53	S7	111	LYS
54	S8	186	GLY
55	S9	21	SER
55	S9	98	ALA
56	10	54	TYR
56	10	60	SER
57	11	6	THR
57	11	24	LYS
57	11	54	ILE
58	12	91	VAL
60	14	52	ARG
62	16	40	GLU
63	17	88	VAL
64	18	145	ARG
65	19	119	LYS
66	20	17	GLN
66	20	54	GLY
66	20	118	VAL
68	22	30	SER
69	23	112	LYS
70	24	60	PHE
71	25	97	LYS
77	31	84	VAL
1	L1	132	GLY
1	L1	136	THR
2	L2	29	LEU
2	L2	120	PRO
2	L2	174	ARG
2	L2	195	SER
3	L3	234	GLY
3	L3	333	LYS
4	L4	72	ALA
4	L4	196	ASN
4	L4	269	SER
5	L5	125	VAL
5	L5	296	GLN
7	L7	191	VAL
8	L8	157	VAL
8	L8	174	GLY
10	60	24	ARG
11	61	91	LEU
11	61	135	GLY

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Mol	Chain	Res	Type
11	61	173	ASP
12	62	88	PRO
12	62	142	ARG
13	63	61	PRO
15	65	75	VAL
16	66	87	MET
16	66	149	TYR
17	67	23	ARG
20	70	91	TYR
21	71	159	PHE
22	72	11	ILE
22	72	90	ARG
23	73	24	ASN
23	73	47	ASN
25	75	23	ALA
27	77	17	ARG
27	77	51	LEU
28	78	110	GLY
28	78	119	PRO
33	83	88	ASN
35	85	93	THR
36	86	13	LYS
36	86	78	GLY
37	87	14	LYS
43	93	18	TYR
44	P0	92	PRO
45	RC	63	GLY
45	RC	105	GLY
47	S1	82	ARG
47	S1	206	PRO
47	S1	213	ARG
47	S1	222	LYS
48	S2	39	THR
48	S2	108	ASN
49	S3	44	THR
49	S3	82	GLY
49	S3	217	ILE
50	S4	3	ARG
50	S4	79	ASP
51	S5	99	MET
53	S7	13	PRO
54	S8	120	THR

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Mol	Chain	Res	Type
54	S8	155	SER
55	S9	18	PRO
56	10	86	ILE
58	12	68	GLU
58	12	102	GLY
58	12	108	ARG
58	12	110	GLY
58	12	119	SER
59	13	3	ARG
59	13	28	LEU
60	14	22	SER
62	16	39	VAL
63	17	87	GLU
64	18	8	GLN
65	19	69	LYS
65	19	90	PRO
67	21	7	GLN
67	21	56	SER
68	22	93	LEU
69	23	41	SER
70	24	34	ASN
72	26	17	HIS
72	26	61	GLU
72	26	83	ILE
76	30	13	LYS
77	31	87	THR
77	31	118	ARG
77	31	129	GLY
1	L1	45	ARG
1	L1	120	VAL
1	L1	200	ASN
1	L1	209	SER
2	L2	158	ILE
2	L2	235	ALA
4	L4	131	VAL
4	L4	292	SER
4	L4	328	ASN
5	L5	21	ARG
5	L5	44	TYR
5	L5	259	LYS
8	L8	136	LEU
10	60	122	PRO

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Mol	Chain	Res	Type
11	61	8	PRO
11	61	167	TYR
12	62	29	ALA
12	62	93	LYS
13	63	51	LEU
13	63	56	PRO
13	63	154	VAL
14	64	6	ILE
14	64	10	SER
15	65	52	GLY
15	65	74	PRO
15	65	118	SER
15	65	185	ALA
17	67	119	VAL
17	67	161	ALA
20	70	24	LEU
20	70	154	HIS
21	71	123	GLY
24	74	23	ARG
25	75	50	ALA
27	77	103	GLN
28	78	56	VAL
31	81	66	GLY
34	84	26	PRO
45	RC	146	GLY
45	RC	276	PRO
46	S0	39	ASN
46	S0	103	THR
46	S0	195	TRP
47	S1	88	VAL
48	S2	109	GLY
48	S2	150	GLN
49	S3	84	ILE
50	S4	193	GLY
54	S8	52	ASN
57	11	3	THR
57	11	7	VAL
57	11	30	ARG
59	13	24	ALA
62	16	14	LYS
65	19	35	ASP
67	21	12	TYR

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Mol	Chain	Res	Type
67	21	46	ILE
69	23	144	ARG
70	24	5	VAL
70	24	6	THR
70	24	75	VAL
72	26	63	ALA
76	30	58	PRO
77	31	89	LYS
77	31	90	LYS
77	31	148	TYR
1	L1	32	VAL
2	L2	40	TYR
3	L3	174	LYS
4	L4	245	GLY
4	L4	304	GLN
5	L5	41	LYS
5	L5	185	PHE
8	L8	39	ALA
11	61	117	ASP
11	61	172	LEU
12	62	38	SER
12	62	136	ALA
12	62	154	GLY
13	63	59	ARG
13	63	127	PRO
13	63	132	ALA
14	64	5	SER
15	65	95	GLN
15	65	123	GLN
15	65	187	ARG
16	66	62	THR
18	68	76	ALA
21	71	132	PRO
24	74	7	SER
28	78	27	LYS
33	83	94	PHE
34	84	76	TYR
38	88	34	ALA
40	90	127	LEU
42	92	96	GLU
45	RC	3	SER
45	RC	98	GLU

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Mol	Chain	Res	Type
45	RC	163	ASP
48	S2	145	GLY
48	S2	236	PRO
49	S3	33	GLY
49	S3	154	ASP
50	S4	96	ASN
52	S6	20	ASP
52	S6	173	PRO
54	S8	33	PRO
54	S8	59	ARG
55	S9	62	ARG
55	S9	162	SER
58	12	101	ALA
58	12	111	ASN
58	12	125	ASN
58	12	130	THR
60	14	24	ASN
61	15	73	PRO
68	22	67	GLY
69	23	70	LYS
69	23	127	VAL
70	24	11	LYS
70	24	121	THR
72	26	11	ASN
72	26	64	LEU
74	28	61	ARG
77	31	99	LYS
1	L1	168	ALA
4	L4	351	PRO
7	L7	25	GLN
8	L8	25	PRO
10	60	132	GLY
18	68	165	ILE
25	75	66	PRO
33	83	3	GLU
36	86	21	THR
40	90	79	GLU
45	RC	197	SER
46	S0	32	HIS
47	S1	210	ILE
50	S4	32	SER
50	S4	171	ASP

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Mol	Chain	Res	Type
51	S5	68	ILE
57	11	130	PRO
58	12	82	PRO
58	12	116	VAL
60	14	124	ASP
61	15	52	LYS
64	18	135	GLY
65	19	3	GLY
66	20	55	PRO
66	20	119	ALA
68	22	83	ILE
75	29	22	ARG
77	31	85	TYR
4	L4	146	PRO
31	81	107	VAL
47	S1	48	VAL
47	S1	75	GLY
51	S5	22	PRO
57	11	41	GLY
58	12	115	VAL
65	19	34	VAL
72	26	41	ILE
76	30	50	VAL
3	L3	33	PRO
5	L5	26	GLY
12	62	22	VAL
31	81	7	VAL
46	S0	68	PRO
55	S9	35	GLY
55	S9	129	ILE
55	S9	169	PRO
63	17	22	PRO
63	17	122	ILE
67	21	48	GLY
17	67	36	ILE
25	75	118	GLY
34	84	28	GLY
34	84	59	PRO
45	RC	49	GLY
53	S7	31	SER
61	15	99	GLY
2	L2	137	ILE

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Mol	Chain	Res	Type
8	L8	163	VAL
11	61	67	VAL
13	63	72	GLY
16	66	111	PRO
29	79	21	ILE
34	84	27	GLY
47	S1	35	PRO
54	S8	39	GLY
55	S9	136	VAL
59	13	22	ALA
6	L6	91	VAL
8	L8	182	GLY
13	63	50	PRO
20	70	21	GLU
27	77	75	VAL
33	83	25	PRO
48	S2	36	VAL
52	S6	69	LEU
63	17	99	VAL
62	16	41	PRO
33	83	104	PRO

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
1	L1	185/198 (93%)	172 (93%)	13 (7%)	14 35
2	L2	194/196 (99%)	187 (96%)	7 (4%)	31 52
3	L3	322/323 (100%)	315 (98%)	7 (2%)	45 64
4	L4	288/289 (100%)	278 (96%)	10 (4%)	32 53
5	L5	244/245 (100%)	237 (97%)	7 (3%)	37 58
6	L6	134/153 (88%)	129 (96%)	5 (4%)	30 51
7	L7	186/205 (91%)	178 (96%)	8 (4%)	26 47
8	L8	191/208 (92%)	179 (94%)	12 (6%)	16 37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
9	L9	171/171 (100%)	159 (93%)	12 (7%)	14 35
10	60	180/187 (96%)	170 (94%)	10 (6%)	19 40
11	61	147/150 (98%)	133 (90%)	14 (10%)	8 25
13	63	154/159 (97%)	148 (96%)	6 (4%)	28 49
14	64	107/109 (98%)	104 (97%)	3 (3%)	38 59
15	65	175/176 (99%)	170 (97%)	5 (3%)	37 58
16	66	160/162 (99%)	152 (95%)	8 (5%)	22 43
17	67	145/146 (99%)	138 (95%)	7 (5%)	23 44
18	68	150/151 (99%)	143 (95%)	7 (5%)	23 44
19	69	153/154 (99%)	145 (95%)	8 (5%)	21 42
20	70	156/156 (100%)	144 (92%)	12 (8%)	12 32
21	71	136/137 (99%)	131 (96%)	5 (4%)	30 51
22	72	87/107 (81%)	82 (94%)	5 (6%)	18 40
23	73	104/105 (99%)	99 (95%)	5 (5%)	23 44
24	74	56/129 (43%)	55 (98%)	1 (2%)	51 68
25	75	105/118 (89%)	92 (88%)	13 (12%)	4 16
26	76	109/110 (99%)	102 (94%)	7 (6%)	16 37
27	77	115/116 (99%)	109 (95%)	6 (5%)	21 42
28	78	118/119 (99%)	113 (96%)	5 (4%)	26 48
29	79	46/47 (98%)	41 (89%)	5 (11%)	6 20
30	80	81/88 (92%)	74 (91%)	7 (9%)	10 29
31	81	96/97 (99%)	90 (94%)	6 (6%)	16 37
32	82	109/111 (98%)	104 (95%)	5 (5%)	24 45
33	83	90/91 (99%)	88 (98%)	2 (2%)	45 64
34	84	95/103 (92%)	88 (93%)	7 (7%)	13 33
35	85	104/105 (99%)	101 (97%)	3 (3%)	37 58
36	86	81/82 (99%)	78 (96%)	3 (4%)	30 51
37	87	70/71 (99%)	69 (99%)	1 (1%)	59 72
38	88	68/69 (99%)	62 (91%)	6 (9%)	9 28
39	89	45/46 (98%)	41 (91%)	4 (9%)	9 28
40	90	47/116 (40%)	45 (96%)	2 (4%)	26 47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	91	23/23 (100%)	20 (87%)	3 (13%)	4 15
42	92	90/91 (99%)	85 (94%)	5 (6%)	19 40
43	93	71/72 (99%)	70 (99%)	1 (1%)	59 72
44	P0	105/254 (41%)	99 (94%)	6 (6%)	18 40
45	RC	261/262 (100%)	240 (92%)	21 (8%)	11 31
46	S0	173/210 (82%)	160 (92%)	13 (8%)	12 33
47	S1	191/224 (85%)	174 (91%)	17 (9%)	9 28
48	S2	176/205 (86%)	167 (95%)	9 (5%)	21 42
49	S3	182/195 (93%)	171 (94%)	11 (6%)	17 39
50	S4	221/222 (100%)	212 (96%)	9 (4%)	27 48
51	S5	173/191 (91%)	166 (96%)	7 (4%)	28 49
52	S6	193/201 (96%)	188 (97%)	5 (3%)	40 61
53	S7	165/170 (97%)	157 (95%)	8 (5%)	23 44
54	S8	150/161 (93%)	142 (95%)	8 (5%)	20 41
55	S9	158/166 (95%)	151 (96%)	7 (4%)	25 47
56	10	89/98 (91%)	81 (91%)	8 (9%)	9 27
57	11	136/137 (99%)	131 (96%)	5 (4%)	30 51
58	12	100/119 (84%)	89 (89%)	11 (11%)	6 20
59	13	127/128 (99%)	121 (95%)	6 (5%)	23 44
60	14	96/105 (91%)	90 (94%)	6 (6%)	16 37
61	15	104/118 (88%)	95 (91%)	9 (9%)	9 29
62	16	117/119 (98%)	111 (95%)	6 (5%)	21 42
63	17	109/124 (88%)	96 (88%)	13 (12%)	5 17
64	18	128/129 (99%)	117 (91%)	11 (9%)	10 29
65	19	115/116 (99%)	110 (96%)	5 (4%)	26 47
66	20	100/114 (88%)	90 (90%)	10 (10%)	7 24
67	21	74/74 (100%)	69 (93%)	5 (7%)	14 36
68	22	110/111 (99%)	103 (94%)	7 (6%)	16 37
69	23	119/120 (99%)	111 (93%)	8 (7%)	15 36
70	24	112/113 (99%)	105 (94%)	7 (6%)	16 37
71	25	61/89 (68%)	54 (88%)	7 (12%)	5 18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
72	26	83/101 (82%)	76 (92%)	7 (8%)	10 30
73	27	70/71 (99%)	67 (96%)	3 (4%)	26 47
74	28	56/60 (93%)	53 (95%)	3 (5%)	20 41
75	29	47/49 (96%)	47 (100%)	0	100 100
76	30	51/54 (94%)	47 (92%)	4 (8%)	11 32
77	31	43/135 (32%)	39 (91%)	4 (9%)	8 26
All	All	9583/10436 (92%)	9049 (94%)	534 (6%)	21 40

All (534) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	L1	26	ARG
1	L1	35	GLN
1	L1	58	CYS
1	L1	83	ASP
1	L1	92	LYS
1	L1	101	LYS
1	L1	103	LEU
1	L1	108	ASN
1	L1	120	VAL
1	L1	134	PHE
1	L1	140	HIS
1	L1	151	VAL
1	L1	198	TRP
2	L2	126	LEU
2	L2	204	MET
2	L2	207	VAL
2	L2	208	ASP
2	L2	218	HIS
2	L2	227	ARG
2	L2	241	ARG
3	L3	25	ILE
3	L3	30	LYS
3	L3	148	LEU
3	L3	188	ILE
3	L3	198	HIS
3	L3	240	ARG
3	L3	246	LEU
4	L4	43	ASN
4	L4	93	MET

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Mol	Chain	Res	Type
4	L4	99	MET
4	L4	105	THR
4	L4	148	ILE
4	L4	193	LYS
4	L4	194	TYR
4	L4	279	HIS
4	L4	319	LYS
4	L4	345	GLU
5	L5	22	ARG
5	L5	23	ARG
5	L5	92	LEU
5	L5	95	TRP
5	L5	115	LEU
5	L5	131	LEU
5	L5	194	LEU
6	L6	64	LEU
6	L6	65	ILE
6	L6	77	ARG
6	L6	91	VAL
6	L6	96	VAL
7	L7	24	GLU
7	L7	25	GLN
7	L7	48	ASN
7	L7	117	VAL
7	L7	136	TYR
7	L7	175	LYS
7	L7	179	LEU
7	L7	181	ILE
8	L8	27	THR
8	L8	41	GLN
8	L8	63	LYS
8	L8	65	LEU
8	L8	69	LEU
8	L8	78	PHE
8	L8	80	TYR
8	L8	92	LYS
8	L8	107	GLU
8	L8	122	LYS
8	L8	134	TYR
8	L8	238	LEU
9	L9	36	LYS
9	L9	41	ILE

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Mol	Chain	Res	Type
9	L9	92	TYR
9	L9	102	ASN
9	L9	106	LYS
9	L9	113	GLU
9	L9	130	ASP
9	L9	134	ILE
9	L9	146	LEU
9	L9	162	GLN
9	L9	170	LYS
9	L9	172	ILE
10	60	9	TYR
10	60	16	PRO
10	60	39	LYS
10	60	63	GLU
10	60	122	PRO
10	60	163	GLN
10	60	165	ILE
10	60	180	GLU
10	60	191	LYS
10	60	212	GLU
11	61	6	GLN
11	61	10	ARG
11	61	12	LEU
11	61	13	LYS
11	61	25	GLU
11	61	30	LEU
11	61	40	LEU
11	61	52	TYR
11	61	94	ARG
11	61	99	THR
11	61	112	LEU
11	61	115	LYS
11	61	142	LYS
11	61	172	LEU
13	63	13	HIS
13	63	23	LYS
13	63	124	ILE
13	63	131	LYS
13	63	136	GLU
13	63	160	GLN
14	64	42	LYS
14	64	59	ASN

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Mol	Chain	Res	Type
14	64	124	ARG
15	65	10	LEU
15	65	62	TYR
15	65	117	ASN
15	65	138	GLN
15	65	153	ASP
16	66	25	LYS
16	66	94	ARG
16	66	113	ASP
16	66	122	GLN
16	66	134	LYS
16	66	151	ASP
16	66	167	TYR
16	66	182	ASN
17	67	61	ARG
17	67	111	LYS
17	67	120	ASN
17	67	128	ARG
17	67	159	LYS
17	67	168	LEU
17	67	180	LYS
18	68	3	ILE
18	68	9	GLN
18	68	12	ARG
18	68	41	ASP
18	68	105	ARG
18	68	138	LEU
18	68	184	PHE
19	69	5	ARG
19	69	39	ASN
19	69	74	ARG
19	69	104	ARG
19	69	148	ASP
19	69	152	GLU
19	69	164	LEU
19	69	188	ASP
20	70	43	TYR
20	70	44	PHE
20	70	50	LYS
20	70	68	HIS
20	70	78	TRP
20	70	96	ASP

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Mol	Chain	Res	Type
20	70	99	ARG
20	70	108	GLN
20	70	137	ARG
20	70	139	TYR
20	70	147	ASP
20	70	166	LYS
21	71	27	LEU
21	71	83	ARG
21	71	94	GLU
21	71	126	VAL
21	71	139	ARG
22	72	14	THR
22	72	38	ILE
22	72	58	GLU
22	72	59	ASP
22	72	88	GLN
23	73	12	ARG
23	73	33	ASN
23	73	74	MET
23	73	89	ASP
23	73	124	ASP
24	74	32	GLN
25	75	27	ARG
25	75	33	ARG
25	75	34	LEU
25	75	40	LEU
25	75	45	LYS
25	75	49	LYS
25	75	54	TYR
25	75	63	ILE
25	75	74	LYS
25	75	108	LEU
25	75	135	ILE
25	75	141	TYR
25	75	142	ILE
26	76	6	LEU
26	76	17	LYS
26	76	37	LYS
26	76	50	ILE
26	76	54	ASP
26	76	100	HIS
26	76	126	LEU

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Mol	Chain	Res	Type
27	77	24	VAL
27	77	46	ILE
27	77	49	TYR
27	77	92	PHE
27	77	121	ARG
27	77	134	LEU
28	78	46	ASP
28	78	67	HIS
28	78	85	ASP
28	78	91	LEU
28	78	115	LYS
29	79	21	ILE
29	79	28	LYS
29	79	43	HIS
29	79	52	LYS
29	79	59	LYS
30	80	18	ILE
30	80	41	LEU
30	80	61	MET
30	80	69	TYR
30	80	97	ASP
30	80	100	ILE
30	80	101	LEU
31	81	31	ARG
31	81	55	LEU
31	81	67	VAL
31	81	79	ARG
31	81	90	PHE
31	81	107	VAL
32	82	5	PRO
32	82	30	GLU
32	82	33	ARG
32	82	73	THR
32	82	75	LEU
33	83	20	LYS
33	83	60	ARG
34	84	8	ARG
34	84	18	ASN
34	84	29	ILE
34	84	46	ASP
34	84	51	LEU
34	84	58	ARG

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Mol	Chain	Res	Type
34	84	61	GLN
35	85	71	LYS
35	85	90	ARG
35	85	119	LYS
36	86	26	ILE
36	86	57	LEU
36	86	60	LEU
37	87	49	TRP
38	88	4	GLU
38	88	31	LEU
38	88	38	PHE
38	88	58	ASP
38	88	63	LYS
38	88	66	ILE
39	89	5	LYS
39	89	21	ARG
39	89	23	LEU
39	89	50	ASN
40	90	83	LYS
40	90	127	LEU
41	91	4	LYS
41	91	11	ARG
41	91	13	LEU
42	92	29	LYS
42	92	61	LYS
42	92	93	LEU
42	92	100	LYS
42	92	105	GLN
43	93	45	LYS
44	P0	4	ILE
44	P0	53	MET
44	P0	58	MET
44	P0	67	LEU
44	P0	93	LEU
44	P0	185	LEU
45	RC	46	LYS
45	RC	70	ASP
45	RC	93	ASP
45	RC	94	VAL
45	RC	117	LYS
45	RC	136	ILE
45	RC	137	LYS

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Mol	Chain	Res	Type
45	RC	141	LEU
45	RC	160	GLU
45	RC	161	LYS
45	RC	175	ASP
45	RC	182	ASN
45	RC	202	LEU
45	RC	207	ASP
45	RC	209	THR
45	RC	217	ASP
45	RC	245	PHE
45	RC	266	ASP
45	RC	268	GLN
45	RC	273	ASP
45	RC	307	ASP
46	S0	7	PHE
46	S0	41	ARG
46	S0	54	TRP
46	S0	56	LYS
46	S0	88	LYS
46	S0	172	LEU
46	S0	180	GLU
46	S0	183	ARG
46	S0	188	LEU
46	S0	190	ASP
46	S0	191	ARG
46	S0	193	GLN
46	S0	195	TRP
47	S1	29	TRP
47	S1	61	LEU
47	S1	70	LEU
47	S1	96	LEU
47	S1	99	ASN
47	S1	104	ASP
47	S1	111	ARG
47	S1	131	ASP
47	S1	133	TYR
47	S1	148	ASN
47	S1	174	LYS
47	S1	180	THR
47	S1	181	LEU
47	S1	202	LYS
47	S1	204	ILE

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Mol	Chain	Res	Type
47	S1	206	PRO
47	S1	218	LEU
48	S2	54	GLU
48	S2	66	PHE
48	S2	69	ILE
48	S2	82	ASN
48	S2	89	GLN
48	S2	99	LYS
48	S2	140	ARG
48	S2	193	VAL
48	S2	206	THR
49	S3	4	LEU
49	S3	14	ASP
49	S3	57	ASP
49	S3	84	ILE
49	S3	92	GLN
49	S3	105	MET
49	S3	120	TYR
49	S3	141	LYS
49	S3	156	PHE
49	S3	158	ILE
49	S3	212	LYS
50	S4	18	TRP
50	S4	24	SER
50	S4	38	LEU
50	S4	77	ARG
50	S4	105	VAL
50	S4	182	TYR
50	S4	219	VAL
50	S4	222	LEU
50	S4	259	GLN
51	S5	25	LEU
51	S5	45	LYS
51	S5	89	ILE
51	S5	104	ASN
51	S5	108	LEU
51	S5	128	ASN
51	S5	203	LYS
52	S6	19	ASP
52	S6	21	GLU
52	S6	36	VAL
52	S6	45	PHE

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Mol	Chain	Res	Type
52	S6	97	VAL
53	S7	14	THR
53	S7	85	PHE
53	S7	87	ASP
53	S7	90	VAL
53	S7	114	ARG
53	S7	128	ASP
53	S7	143	LEU
53	S7	185	ILE
54	S8	8	ARG
54	S8	10	LYS
54	S8	29	LEU
54	S8	137	LYS
54	S8	157	GLU
54	S8	159	GLN
54	S8	182	TYR
54	S8	191	PHE
55	S9	3	ARG
55	S9	60	LEU
55	S9	66	ASP
55	S9	96	VAL
55	S9	101	VAL
55	S9	138	LYS
55	S9	171	ARG
56	10	1	MET
56	10	16	PHE
56	10	36	ASP
56	10	56	LYS
56	10	78	GLU
56	10	86	ILE
56	10	88	PRO
56	10	91	TYR
57	11	21	ASN
57	11	54	ILE
57	11	67	ARG
57	11	121	ASP
57	11	151	LYS
58	12	24	ILE
58	12	50	LYS
58	12	61	VAL
58	12	71	ILE
58	12	89	ILE

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Mol	Chain	Res	Type
58	12	97	LEU
58	12	103	LEU
58	12	114	LYS
58	12	116	VAL
58	12	125	ASN
58	12	126	TRP
59	13	39	LYS
59	13	64	ARG
59	13	71	ILE
59	13	88	LEU
59	13	99	ARG
59	13	129	TYR
60	14	39	ILE
60	14	70	LYS
60	14	76	ILE
60	14	102	LEU
60	14	118	VAL
60	14	137	LEU
61	15	8	LYS
61	15	9	LYS
61	15	12	PHE
61	15	21	ASP
61	15	22	LEU
61	15	36	LEU
61	15	69	GLU
61	15	97	TYR
61	15	104	GLN
62	16	26	LYS
62	16	52	LEU
62	16	106	LYS
62	16	109	PHE
62	16	137	ARG
62	16	140	LYS
63	17	29	GLN
63	17	49	LYS
63	17	66	VAL
63	17	69	ILE
63	17	72	LYS
63	17	75	GLU
63	17	83	GLN
63	17	86	PRO
63	17	88	VAL

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Mol	Chain	Res	Type
63	17	97	ASN
63	17	100	LEU
63	17	113	LEU
63	17	116	LYS
64	18	3	LEU
64	18	15	LEU
64	18	28	ILE
64	18	41	ARG
64	18	54	LEU
64	18	82	PRO
64	18	85	PHE
64	18	92	ILE
64	18	106	GLU
64	18	115	ARG
64	18	138	THR
65	19	13	ASP
65	19	28	LEU
65	19	64	HIS
65	19	70	GLN
65	19	99	SER
66	20	27	THR
66	20	33	GLN
66	20	46	GLU
66	20	50	LEU
66	20	60	THR
66	20	61	LYS
66	20	72	ASN
66	20	77	LYS
66	20	89	ARG
66	20	108	ILE
67	21	5	LYS
67	21	40	ASP
67	21	62	ARG
67	21	78	LEU
67	21	80	LYS
68	22	65	LEU
68	22	66	ASN
68	22	92	ASN
68	22	98	GLN
68	22	103	ILE
68	22	104	LEU
68	22	105	THR

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Mol	Chain	Res	Type
69	23	74	VAL
69	23	82	LYS
69	23	83	VAL
69	23	100	ASP
69	23	110	LYS
69	23	127	VAL
69	23	140	LYS
69	23	144	ARG
70	24	32	ARG
70	24	34	ASN
70	24	38	ASP
70	24	70	VAL
70	24	99	LYS
70	24	102	LYS
70	24	128	LYS
71	25	38	HIS
71	25	42	LEU
71	25	43	ASP
71	25	47	TYR
71	25	60	VAL
71	25	71	ILE
71	25	100	ILE
72	26	19	LYS
72	26	36	ILE
72	26	37	LYS
72	26	41	ILE
72	26	46	GLU
72	26	64	LEU
72	26	71	LEU
73	27	15	GLU
73	27	20	LYS
73	27	37	CYS
74	28	32	PHE
74	28	34	GLU
74	28	35	ASP
76	30	20	LYS
76	30	28	LYS
76	30	36	LYS
76	30	48	THR
77	31	113	LYS
77	31	116	LYS
77	31	120	GLU

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Mol	Chain	Res	Type
77	31	138	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (326) such sidechains are listed below:

Mol	Chain	Res	Type
1	L1	21	ASN
1	L1	27	ASN
1	L1	57	ASN
1	L1	62	ASN
1	L1	94	ASN
1	L1	108	ASN
1	L1	200	ASN
2	L2	47	GLN
2	L2	79	ASN
2	L2	86	GLN
2	L2	132	ASN
2	L2	139	HIS
2	L2	187	HIS
2	L2	205	ASN
2	L2	215	ASN
2	L2	233	GLN
2	L2	250	GLN
2	L2	253	GLN
3	L3	68	HIS
3	L3	139	GLN
3	L3	165	GLN
3	L3	182	GLN
3	L3	184	ASN
3	L3	211	GLN
3	L3	243	HIS
3	L3	345	ASN
3	L3	377	HIS
4	L4	45	ASN
4	L4	48	GLN
4	L4	59	GLN
4	L4	87	GLN
4	L4	114	ASN
4	L4	260	GLN
4	L4	316	ASN
4	L4	328	ASN
5	L5	17	GLN
5	L5	57	ASN

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Mol	Chain	Res	Type
5	L5	94	ASN
5	L5	244	HIS
5	L5	264	GLN
5	L5	296	GLN
6	L6	28	GLN
6	L6	61	ASN
6	L6	102	ASN
6	L6	167	ASN
7	L7	48	ASN
7	L7	146	GLN
7	L7	197	GLN
7	L7	199	ASN
7	L7	200	ASN
8	L8	41	GLN
8	L8	240	ASN
9	L9	8	GLN
9	L9	49	ASN
9	L9	50	ASN
9	L9	96	HIS
9	L9	125	ASN
9	L9	156	GLN
10	60	12	GLN
10	60	14	ASN
10	60	23	ASN
10	60	73	ASN
10	60	113	GLN
10	60	123	HIS
10	60	163	GLN
10	60	209	ASN
10	60	220	GLN
11	61	43	GLN
11	61	62	ASN
11	61	95	ASN
11	61	101	ASN
11	61	132	ASN
11	61	152	HIS
13	63	103	ASN
13	63	112	ASN
13	63	120	GLN
13	63	137	GLN
13	63	149	GLN
15	65	15	GLN

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Mol	Chain	Res	Type
15	65	70	ASN
15	65	87	GLN
15	65	117	ASN
16	66	50	ASN
16	66	55	HIS
16	66	65	ASN
17	67	10	ASN
17	67	28	ASN
17	67	96	GLN
17	67	116	HIS
17	67	120	ASN
17	67	137	ASN
18	68	5	HIS
18	68	45	ASN
18	68	126	GLN
18	68	145	ASN
19	69	34	GLN
19	69	39	ASN
19	69	144	GLN
19	69	166	ASN
20	70	3	HIS
20	70	8	GLN
20	70	46	GLN
20	70	49	HIS
20	70	63	GLN
20	70	88	HIS
20	70	108	GLN
21	71	45	ASN
21	71	49	GLN
21	71	58	GLN
21	71	66	ASN
21	71	77	ASN
21	71	146	ASN
22	72	49	ASN
22	72	87	ASN
22	72	88	GLN
23	73	33	ASN
23	73	81	GLN
24	74	32	GLN
24	74	58	HIS
25	75	80	ASN
27	77	29	HIS

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Mol	Chain	Res	Type
27	77	57	HIS
27	77	106	GLN
28	78	39	HIS
28	78	44	ASN
28	78	74	ASN
28	78	120	ASN
29	79	11	ASN
29	79	48	HIS
30	80	36	GLN
31	81	15	ASN
31	81	43	HIS
31	81	56	ASN
31	81	57	GLN
32	82	13	HIS
32	82	20	HIS
32	82	26	HIS
32	82	31	ASN
32	82	35	GLN
32	82	49	ASN
32	82	71	HIS
32	82	88	HIS
32	82	104	ASN
33	83	5	HIS
33	83	13	HIS
33	83	23	ASN
33	83	24	ASN
33	83	39	GLN
33	83	42	GLN
33	83	77	ASN
33	83	87	ASN
33	83	106	ASN
34	84	52	GLN
34	84	61	GLN
34	84	83	ASN
35	85	16	GLN
35	85	59	ASN
35	85	61	GLN
35	85	62	GLN
35	85	68	GLN
35	85	76	GLN
36	86	12	ASN
36	86	92	ASN

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Mol	Chain	Res	Type
37	87	12	HIS
37	87	28	HIS
37	87	30	GLN
37	87	69	HIS
37	87	79	GLN
38	88	40	GLN
38	88	57	ASN
38	88	76	ASN
39	89	4	GLN
39	89	32	ASN
39	89	38	ASN
39	89	50	ASN
40	90	109	ASN
40	90	117	HIS
40	90	119	ASN
42	92	3	ASN
42	92	22	GLN
42	92	47	GLN
42	92	82	GLN
42	92	99	GLN
43	93	33	GLN
44	P0	36	GLN
44	P0	37	GLN
44	P0	56	ASN
44	P0	103	ASN
45	RC	29	GLN
45	RC	31	ASN
45	RC	64	HIS
45	RC	174	ASN
45	RC	182	ASN
45	RC	196	ASN
45	RC	237	GLN
45	RC	248	ASN
45	RC	314	GLN
46	S0	30	GLN
46	S0	32	HIS
46	S0	33	GLN
46	S0	46	HIS
46	S0	69	ASN
46	S0	163	ASN
46	S0	164	ASN
46	S0	193	GLN

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Mol	Chain	Res	Type
47	S1	79	HIS
47	S1	148	ASN
47	S1	177	GLN
47	S1	209	ASN
47	S1	220	GLN
48	S2	59	HIS
48	S2	82	ASN
48	S2	89	GLN
48	S2	108	ASN
48	S2	220	ASN
48	S2	228	ASN
49	S3	92	GLN
50	S4	8	HIS
50	S4	36	HIS
50	S4	50	ASN
50	S4	98	ASN
50	S4	188	ASN
50	S4	201	HIS
50	S4	216	ASN
50	S4	258	GLN
50	S4	259	GLN
51	S5	86	GLN
51	S5	95	ASN
51	S5	122	ASN
51	S5	127	GLN
51	S5	128	ASN
51	S5	131	GLN
51	S5	139	ASN
51	S5	224	ASN
52	S6	10	ASN
52	S6	13	GLN
52	S6	34	GLN
52	S6	56	ASN
52	S6	59	GLN
52	S6	140	ASN
52	S6	199	GLN
52	S6	201	GLN
53	S7	22	GLN
53	S7	180	GLN
54	S8	64	ASN
54	S8	87	ASN
54	S8	94	ASN

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Mol	Chain	Res	Type
54	S8	103	GLN
54	S8	111	GLN
54	S8	119	GLN
54	S8	175	GLN
55	S9	38	ASN
55	S9	48	GLN
55	S9	74	ASN
55	S9	110	GLN
55	S9	112	GLN
55	S9	123	HIS
55	S9	131	GLN
56	10	12	HIS
56	10	29	GLN
56	10	32	HIS
56	10	39	ASN
56	10	58	GLN
56	10	62	GLN
56	10	85	HIS
57	11	16	GLN
57	11	22	ASN
57	11	150	ASN
57	11	152	GLN
58	12	38	HIS
58	12	70	ASN
58	12	125	ASN
59	13	36	GLN
60	14	24	ASN
60	14	99	GLN
61	15	98	ASN
61	15	104	GLN
62	16	32	ASN
62	16	62	ASN
62	16	139	GLN
63	17	29	GLN
63	17	83	GLN
63	17	97	ASN
63	17	104	ASN
63	17	105	GLN
63	17	123	ASN
64	18	12	GLN
64	18	21	ASN
64	18	74	GLN

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Mol	Chain	Res	Type
64	18	75	ASN
64	18	78	HIS
64	18	99	HIS
64	18	103	ASN
64	18	127	HIS
65	19	77	ASN
65	19	127	ASN
65	19	138	GLN
66	20	40	ASN
66	20	98	GLN
67	21	7	GLN
67	21	21	ASN
67	21	74	GLN
68	22	15	ASN
68	22	42	GLN
68	22	64	GLN
68	22	70	ASN
68	22	80	ASN
68	22	92	ASN
68	22	98	GLN
69	23	10	ASN
69	23	75	GLN
69	23	79	ASN
70	24	22	GLN
70	24	31	ASN
70	24	106	GLN
72	26	8	ASN
72	26	72	HIS
72	26	80	HIS
73	27	5	GLN
73	27	51	GLN
74	28	43	ASN
74	28	51	ASN
75	29	5	ASN
76	30	17	GLN
76	30	51	ASN
77	31	123	ASN

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
78	1S	1780/1798 (98%)	329 (18%)	16 (0%)
79	2S	3298/3395 (97%)	475 (14%)	23 (0%)
80	8S	157/158 (99%)	22 (14%)	1 (0%)
81	5S	120/121 (99%)	8 (6%)	0
82	ET	76/77 (98%)	11 (14%)	1 (1%)
82	PT	76/77 (98%)	7 (9%)	0
83	MR	8/14 (57%)	1 (12%)	0
All	All	5515/5640 (97%)	853 (15%)	41 (0%)

All (853) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
78	1S	2	A
78	1S	4	C
78	1S	25	C
78	1S	26	A
78	1S	34	G
78	1S	40	A
78	1S	42	G
78	1S	43	A
78	1S	47	A
78	1S	57	G
78	1S	60	U
78	1S	68	A
78	1S	69	G
78	1S	72	A
78	1S	73	U
78	1S	74	U
78	1S	76	A
78	1S	77	U
78	1S	104	A
78	1S	114	C
78	1S	116	U
78	1S	124	A
78	1S	132	U
78	1S	133	U
78	1S	134	U
78	1S	135	A
78	1S	136	C
78	1S	137	U
78	1S	140	A

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Mol	Chain	Res	Type
78	1S	141	U
78	1S	145	A
78	1S	153	G
78	1S	159	U
78	1S	166	C
78	1S	178	U
78	1S	191	C
78	1S	192	U
78	1S	195	G
78	1S	197	A
78	1S	200	A
78	1S	215	A
78	1S	219	A
78	1S	231	U
78	1S	232	U
78	1S	233	C
78	1S	235	G
78	1S	238	U
78	1S	240	U
78	1S	241	U
78	1S	250	C
78	1S	261	U
78	1S	265	A
78	1S	276	C
78	1S	278	U
78	1S	279	G
78	1S	280	U
78	1S	288	A
78	1S	299	A
78	1S	316	A
78	1S	320	U
78	1S	321	C
78	1S	322	G
78	1S	323	A
78	1S	337	G
78	1S	352	A
78	1S	359	A
78	1S	360	A
78	1S	361	C
78	1S	380	U
78	1S	401	A
78	1S	402	C

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Mol	Chain	Res	Type
78	1S	404	G
78	1S	416	A
78	1S	417	A
78	1S	418	G
78	1S	423	G
78	1S	424	C
78	1S	425	A
78	1S	426	G
78	1S	434	G
78	1S	439	U
78	1S	444	C
78	1S	477	A
78	1S	485	A
78	1S	488	G
78	1S	489	C
78	1S	493	U
78	1S	495	C
78	1S	496	G
78	1S	497	G
78	1S	499	U
78	1S	502	U
78	1S	505	A
78	1S	506	A
78	1S	510	G
78	1S	515	A
78	1S	532	U
78	1S	539	G
78	1S	540	G
78	1S	541	A
78	1S	544	A
78	1S	545	A
78	1S	556	A
78	1S	557	G
78	1S	558	U
78	1S	559	C
78	1S	565	C
78	1S	579	A
78	1S	580	A
78	1S	581	U
78	1S	582	U
78	1S	594	A
78	1S	606	A

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Mol	Chain	Res	Type
78	1S	619	A
78	1S	620	A
78	1S	622	A
78	1S	623	A
78	1S	624	G
78	1S	639	U
78	1S	647	G
78	1S	650	U
78	1S	654	C
78	1S	655	G
78	1S	656	G
78	1S	657	U
78	1S	677	G
78	1S	683	C
78	1S	684	A
78	1S	685	A
78	1S	687	G
78	1S	688	G
78	1S	690	G
78	1S	694	U
78	1S	696	C
78	1S	697	C
78	1S	700	C
78	1S	702	G
78	1S	705	U
78	1S	707	A
78	1S	708	C
78	1S	709	C
78	1S	710	U
78	1S	711	U
78	1S	712	G
78	1S	713	A
78	1S	715	U
78	1S	718	U
78	1S	721	U
78	1S	733	A
78	1S	734	A
78	1S	738	G
78	1S	741	C
78	1S	742	U
78	1S	754	A
78	1S	755	A

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Mol	Chain	Res	Type
78	1S	765	G
78	1S	766	U
78	1S	774	A
78	1S	775	G
78	1S	778	G
78	1S	781	U
78	1S	783	G
78	1S	784	C
78	1S	789	A
78	1S	794	U
78	1S	806	A
78	1S	812	A
78	1S	815	G
78	1S	820	U
78	1S	821	U
78	1S	823	G
78	1S	830	U
78	1S	831	U
78	1S	833	U
78	1S	850	A
78	1S	855	A
78	1S	856	A
78	1S	863	A
78	1S	865	A
78	1S	876	G
78	1S	898	A
78	1S	912	U
78	1S	913	G
78	1S	914	G
78	1S	915	A
78	1S	921	U
78	1S	933	A
78	1S	935	U
78	1S	944	A
78	1S	966	A
78	1S	970	A
78	1S	982	U
78	1S	992	A
78	1S	993	A
78	1S	1004	U
78	1S	1005	A
78	1S	1012	U

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Mol	Chain	Res	Type
78	1S	1021	C
78	1S	1026	A
78	1S	1028	C
78	1S	1029	U
78	1S	1032	G
78	1S	1052	U
78	1S	1053	G
78	1S	1058	U
78	1S	1061	A
78	1S	1072	C
78	1S	1074	G
78	1S	1082	C
78	1S	1091	A
78	1S	1092	A
78	1S	1096	C
78	1S	1097	U
78	1S	1100	G
78	1S	1109	G
78	1S	1150	G
78	1S	1151	A
78	1S	1155	G
78	1S	1157	A
78	1S	1158	C
78	1S	1160	A
78	1S	1163	A
78	1S	1167	G
78	1S	1194	A
78	1S	1196	A
78	1S	1199	G
78	1S	1200	G
78	1S	1202	A
78	1S	1217	A
78	1S	1218	G
78	1S	1227	A
78	1S	1228	G
78	1S	1229	G
78	1S	1243	G
78	1S	1244	A
78	1S	1245	G
78	1S	1246	C
78	1S	1260	U
78	1S	1284	C

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Mol	Chain	Res	Type
78	1S	1288	G
78	1S	1305	U
78	1S	1314	U
78	1S	1316	G
78	1S	1321	A
78	1S	1337	A
78	1S	1340	U
78	1S	1341	A
78	1S	1344	A
78	1S	1345	A
78	1S	1347	U
78	1S	1354	G
78	1S	1361	U
78	1S	1363	U
78	1S	1364	G
78	1S	1370	U
78	1S	1371	A
78	1S	1378	U
78	1S	1390	U
78	1S	1391	A
78	1S	1398	U
78	1S	1399	C
78	1S	1413	U
78	1S	1414	U
78	1S	1415	U
78	1S	1427	A
78	1S	1428	G
78	1S	1432	U
78	1S	1448	G
78	1S	1457	C
78	1S	1459	C
78	1S	1460	A
78	1S	1471	A
78	1S	1473	U
78	1S	1482	C
78	1S	1483	A
78	1S	1486	G
78	1S	1490	C
78	1S	1491	U
78	1S	1492	A
78	1S	1499	G
78	1S	1514	U

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Mol	Chain	Res	Type
78	1S	1516	A
78	1S	1520	U
78	1S	1521	G
78	1S	1523	G
78	1S	1524	A
78	1S	1535	U
78	1S	1537	C
78	1S	1538	U
78	1S	1539	G
78	1S	1540	G
78	1S	1557	U
78	1S	1559	A
78	1S	1573	A
78	1S	1574	G
78	1S	1584	G
78	1S	1597	A
78	1S	1601	G
78	1S	1616	G
78	1S	1619	C
78	1S	1622	G
78	1S	1631	A
78	1S	1657	U
78	1S	1658	G
78	1S	1664	C
78	1S	1682	U
78	1S	1683	C
78	1S	1684	U
78	1S	1686	C
78	1S	1690	G
78	1S	1693	A
78	1S	1697	G
78	1S	1700	C
78	1S	1702	A
78	1S	1713	G
78	1S	1715	G
78	1S	1716	C
78	1S	1717	G
78	1S	1736	G
78	1S	1757	G
78	1S	1762	A
78	1S	1765	A
78	1S	1769	U

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Mol	Chain	Res	Type
78	1S	1770	U
78	1S	1780	G
78	1S	1792	G
78	1S	1794	A
78	1S	1796	C
78	1S	1797	A
79	2S	14	U
79	2S	26	A
79	2S	40	A
79	2S	43	A
79	2S	49	A
79	2S	60	A
79	2S	65	A
79	2S	66	A
79	2S	73	C
79	2S	92	G
79	2S	110	G
79	2S	116	A
79	2S	120	G
79	2S	121	A
79	2S	122	A
79	2S	123	A
79	2S	124	U
79	2S	133	U
79	2S	135	C
79	2S	136	G
79	2S	148	G
79	2S	149	U
79	2S	150	A
79	2S	156	G
79	2S	157	A
79	2S	161	G
79	2S	165	A
79	2S	166	C
79	2S	170	G
79	2S	187	A
79	2S	190	U
79	2S	191	U
79	2S	200	C
79	2S	210	U
79	2S	218	G
79	2S	219	A

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Mol	Chain	Res	Type
79	2S	240	U
79	2S	241	G
79	2S	243	G
79	2S	252	U
79	2S	269	G
79	2S	283	G
79	2S	286	U
79	2S	295	A
79	2S	305	U
79	2S	323	A
79	2S	329	U
79	2S	338	A
79	2S	339	C
79	2S	346	C
79	2S	350	C
79	2S	352	A
79	2S	370	U
79	2S	372	A
79	2S	376	G
79	2S	397	A
79	2S	398	A
79	2S	401	U
79	2S	402	A
79	2S	403	C
79	2S	421	G
79	2S	422	A
79	2S	439	C
79	2S	440	A
79	2S	441	U
79	2S	442	G
79	2S	450	G
79	2S	487	U
79	2S	494	G
79	2S	495	G
79	2S	517	G
79	2S	518	G
79	2S	520	U
79	2S	521	A
79	2S	523	A
79	2S	535	G
79	2S	536	U
79	2S	546	C

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Mol	Chain	Res	Type
79	2S	547	G
79	2S	557	A
79	2S	559	A
79	2S	578	A
79	2S	579	G
79	2S	600	G
79	2S	604	G
79	2S	608	A
79	2S	609	G
79	2S	611	A
79	2S	620	U
79	2S	621	A
79	2S	636	C
79	2S	637	C
79	2S	638	C
79	2S	646	A
79	2S	647	A
79	2S	648	C
79	2S	649	A
79	2S	677	A
79	2S	681	U
79	2S	690	A
79	2S	699	A
79	2S	705	A
79	2S	726	G
79	2S	742	G
79	2S	758	C
79	2S	765	C
79	2S	766	U
79	2S	767	U
79	2S	776	U
79	2S	781	G
79	2S	784	A
79	2S	785	G
79	2S	786	A
79	2S	806	A
79	2S	817	A
79	2S	830	A
79	2S	849	C
79	2S	861	C
79	2S	874	U
79	2S	875	G

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Mol	Chain	Res	Type
79	2S	879	U
79	2S	880	G
79	2S	896	A
79	2S	907	G
79	2S	908	G
79	2S	914	A
79	2S	916	G
79	2S	920	A
79	2S	921	A
79	2S	923	C
79	2S	932	U
79	2S	933	A
79	2S	937	G
79	2S	944	C
79	2S	959	C
79	2S	960	U
79	2S	979	U
79	2S	981	U
79	2S	1002	A
79	2S	1010	G
79	2S	1024	G
79	2S	1025	A
79	2S	1041	U
79	2S	1047	A
79	2S	1049	C
79	2S	1063	G
79	2S	1064	A
79	2S	1081	U
79	2S	1093	A
79	2S	1095	U
79	2S	1097	G
79	2S	1098	A
79	2S	1103	A
79	2S	1104	G
79	2S	1117	G
79	2S	1131	G
79	2S	1159	A
79	2S	1177	G
79	2S	1180	A
79	2S	1181	U
79	2S	1186	G
79	2S	1193	A

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Mol	Chain	Res	Type
79	2S	1201	C
79	2S	1209	G
79	2S	1220	U
79	2S	1222	G
79	2S	1236	G
79	2S	1237	G
79	2S	1239	C
79	2S	1241	U
79	2S	1242	G
79	2S	1245	A
79	2S	1246	G
79	2S	1247	U
79	2S	1258	U
79	2S	1262	G
79	2S	1263	A
79	2S	1264	G
79	2S	1265	U
79	2S	1292	C
79	2S	1305	U
79	2S	1308	A
79	2S	1309	U
79	2S	1330	A
79	2S	1348	U
79	2S	1349	G
79	2S	1351	U
79	2S	1352	A
79	2S	1353	U
79	2S	1355	A
79	2S	1357	G
79	2S	1386	A
79	2S	1387	G
79	2S	1399	A
79	2S	1400	G
79	2S	1419	A
79	2S	1434	G
79	2S	1437	C
79	2S	1446	A
79	2S	1452	A
79	2S	1455	U
79	2S	1481	A
79	2S	1482	A
79	2S	1508	C

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Mol	Chain	Res	Type
79	2S	1519	G
79	2S	1522	U
79	2S	1556	C
79	2S	1557	A
79	2S	1562	C
79	2S	1563	C
79	2S	1569	U
79	2S	1570	U
79	2S	1572	U
79	2S	1573	G
79	2S	1581	C
79	2S	1582	C
79	2S	1583	A
79	2S	1589	A
79	2S	1607	U
79	2S	1608	C
79	2S	1629	U
79	2S	1642	A
79	2S	1643	A
79	2S	1645	U
79	2S	1655	G
79	2S	1687	U
79	2S	1694	U
79	2S	1717	U
79	2S	1725	C
79	2S	1730	G
79	2S	1750	A
79	2S	1751	G
79	2S	1761	C
79	2S	1765	U
79	2S	1766	G
79	2S	1780	G
79	2S	1788	C
79	2S	1797	A
79	2S	1814	A
79	2S	1815	U
79	2S	1816	A
79	2S	1819	U
79	2S	1821	U
79	2S	1841	A
79	2S	1842	A
79	2S	1845	G

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Mol	Chain	Res	Type
79	2S	1849	C
79	2S	1850	A
79	2S	1859	A
79	2S	1866	C
79	2S	1879	A
79	2S	1886	A
79	2S	1906	G
79	2S	1948	G
79	2S	1952	G
79	2S	1953	G
79	2S	1954	G
79	2S	1968	G
79	2S	1973	G
79	2S	1978	A
79	2S	1980	C
79	2S	2045	G
79	2S	2059	U
79	2S	2064	C
79	2S	2065	U
79	2S	2066	C
79	2S	2067	U
79	2S	2068	U
79	2S	2069	G
79	2S	2071	A
79	2S	2082	U
79	2S	2085	U
79	2S	2087	C
79	2S	2094	C
79	2S	2101	C
79	2S	2102	U
79	2S	2107	A
79	2S	2111	G
79	2S	2112	U
79	2S	2116	G
79	2S	2121	G
79	2S	2122	G
79	2S	2131	A
79	2S	2142	A
79	2S	2144	A
79	2S	2158	A
79	2S	2169	G
79	2S	2188	A

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Mol	Chain	Res	Type
79	2S	2205	U
79	2S	2208	A
79	2S	2223	A
79	2S	2244	A
79	2S	2249	G
79	2S	2252	A
79	2S	2255	A
79	2S	2256	A
79	2S	2273	G
79	2S	2281	A
79	2S	2282	U
79	2S	2298	U
79	2S	2307	G
79	2S	2308	C
79	2S	2313	A
79	2S	2314	U
79	2S	2315	G
79	2S	2336	U
79	2S	2339	C
79	2S	2347	U
79	2S	2373	A
79	2S	2374	C
79	2S	2375	G
79	2S	2388	U
79	2S	2397	A
79	2S	2401	A
79	2S	2402	A
79	2S	2403	G
79	2S	2411	U
79	2S	2418	G
79	2S	2434	U
79	2S	2454	G
79	2S	2458	A
79	2S	2459	A
79	2S	2462	A
79	2S	2463	G
79	2S	2468	A
79	2S	2472	U
79	2S	2474	G
79	2S	2485	A
79	2S	2488	A
79	2S	2490	C

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Mol	Chain	Res	Type
79	2S	2494	A
79	2S	2496	C
79	2S	2512	C
79	2S	2513	U
79	2S	2515	A
79	2S	2522	G
79	2S	2523	A
79	2S	2526	C
79	2S	2531	C
79	2S	2533	G
79	2S	2537	U
79	2S	2538	U
79	2S	2540	A
79	2S	2541	U
79	2S	2542	U
79	2S	2549	G
79	2S	2554	A
79	2S	2555	G
79	2S	2561	A
79	2S	2562	A
79	2S	2569	A
79	2S	2570	U
79	2S	2571	U
79	2S	2572	C
79	2S	2573	G
79	2S	2585	G
79	2S	2586	G
79	2S	2587	U
79	2S	2594	C
79	2S	2596	U
79	2S	2606	G
79	2S	2607	G
79	2S	2614	G
79	2S	2619	G
79	2S	2635	A
79	2S	2637	A
79	2S	2638	C
79	2S	2645	G
79	2S	2652	U
79	2S	2656	A
79	2S	2657	A
79	2S	2674	A

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Mol	Chain	Res	Type
79	2S	2677	G
79	2S	2680	A
79	2S	2689	A
79	2S	2691	A
79	2S	2694	A
79	2S	2696	A
79	2S	2720	G
79	2S	2728	G
79	2S	2729	U
79	2S	2753	G
79	2S	2755	C
79	2S	2762	A
79	2S	2777	G
79	2S	2778	G
79	2S	2779	A
79	2S	2788	C
79	2S	2796	G
79	2S	2800	G
79	2S	2801	A
79	2S	2804	A
79	2S	2810	C
79	2S	2814	G
79	2S	2816	G
79	2S	2817	A
79	2S	2818	U
79	2S	2842	U
79	2S	2845	A
79	2S	2861	U
79	2S	2867	C
79	2S	2871	G
79	2S	2872	A
79	2S	2873	U
79	2S	2887	A
79	2S	2896	A
79	2S	2899	C
79	2S	2923	U
79	2S	2928	C
79	2S	2935	U
79	2S	2936	A
79	2S	2951	G
79	2S	2972	G
79	2S	2983	C

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Mol	Chain	Res	Type
79	2S	2992	U
79	2S	2997	G
79	2S	3012	A
79	2S	3021	A
79	2S	3059	G
79	2S	3078	U
79	2S	3080	G
79	2S	3086	A
79	2S	3092	C
79	2S	3094	A
79	2S	3116	G
79	2S	3122	A
79	2S	3130	A
79	2S	3131	U
79	2S	3139	A
79	2S	3142	A
79	2S	3143	C
79	2S	3154	C
79	2S	3155	U
79	2S	3156	U
79	2S	3158	G
79	2S	3164	C
79	2S	3173	G
79	2S	3174	A
79	2S	3176	G
79	2S	3179	U
79	2S	3181	C
79	2S	3187	A
79	2S	3198	U
79	2S	3207	U
79	2S	3217	C
79	2S	3218	A
79	2S	3219	G
79	2S	3229	G
79	2S	3245	A
79	2S	3246	G
79	2S	3259	U
79	2S	3270	U
79	2S	3276	G
79	2S	3279	A
79	2S	3281	U
79	2S	3286	G

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Mol	Chain	Res	Type
79	2S	3287	U
79	2S	3289	G
79	2S	3294	A
79	2S	3304	U
79	2S	3307	A
79	2S	3316	A
79	2S	3317	U
79	2S	3318	G
79	2S	3319	U
79	2S	3335	A
79	2S	3341	U
79	2S	3345	G
79	2S	3352	U
79	2S	3354	U
79	2S	3355	U
79	2S	3369	G
79	2S	3375	A
79	2S	3378	C
79	2S	3389	U
80	8S	23	U
80	8S	34	U
80	8S	35	C
80	8S	51	G
80	8S	59	A
80	8S	62	C
80	8S	63	G
80	8S	80	A
80	8S	86	U
80	8S	87	G
80	8S	90	U
80	8S	95	G
80	8S	105	A
80	8S	106	C
80	8S	111	A
80	8S	113	U
80	8S	114	G
80	8S	125	U
80	8S	126	A
80	8S	138	A
80	8S	151	C
80	8S	157	U
81	5S	13	A

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Mol	Chain	Res	Type
81	5S	22	A
81	5S	38	U
81	5S	65	G
81	5S	76	A
81	5S	95	A
81	5S	102	A
81	5S	112	G
82	ET	6	G
82	ET	16	C
82	ET	18(A)	U
82	ET	19	G
82	ET	20	G
82	ET	22	A
82	ET	34	U
82	ET	48	U
82	ET	49	C
82	ET	60	A
82	ET	77	A
83	MR	5	A
82	PT	9	G
82	PT	20	G
82	PT	21	U
82	PT	48	U
82	PT	49	C
82	PT	75	C
82	PT	77	A

All (41) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
78	1S	25	C
78	1S	103	A
78	1S	139	C
78	1S	240	U
78	1S	501	U
78	1S	555	A
78	1S	676	G
78	1S	829	A
78	1S	1051	G
78	1S	1339	C
78	1S	1344	A
78	1S	1481	C

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Mol	Chain	Res	Type
78	1S	1573	A
78	1S	1615	C
78	1S	1696	G
78	1S	1761	U
79	2S	65	A
79	2S	169	U
79	2S	282	G
79	2S	517	G
79	2S	637	C
79	2S	959	C
79	2S	1103	A
79	2S	1241	U
79	2S	1307	G
79	2S	1329	U
79	2S	1352	A
79	2S	1556	C
79	2S	2065	U
79	2S	2101	C
79	2S	2512	C
79	2S	2525	G
79	2S	2541	U
79	2S	2554	A
79	2S	3121	U
79	2S	3218	A
79	2S	3228	C
79	2S	3269	U
79	2S	3317	U
80	8S	85	G
82	ET	18(A)	U

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

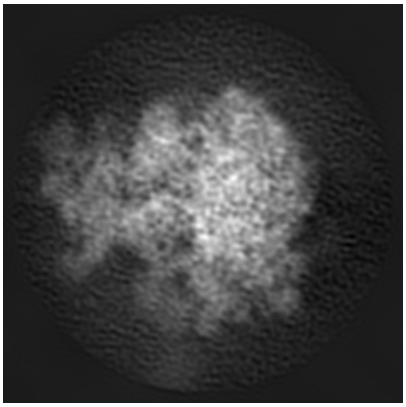
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-5977. These allow visual inspection of the internal detail of the map and identification of artifacts.

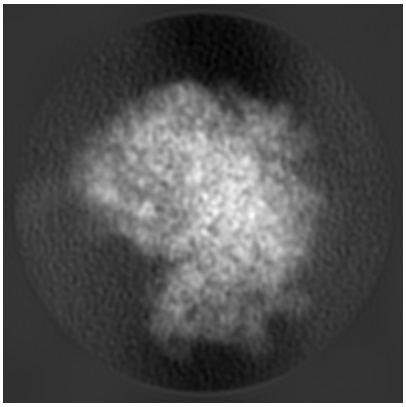
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

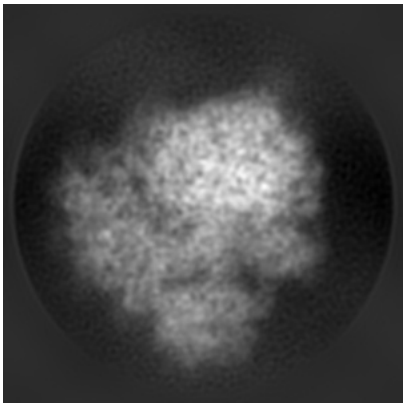
6.1.1 Primary map



X



Y

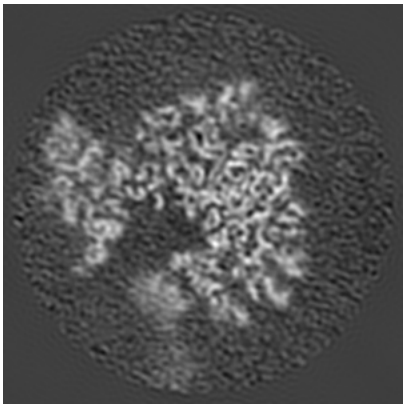


Z

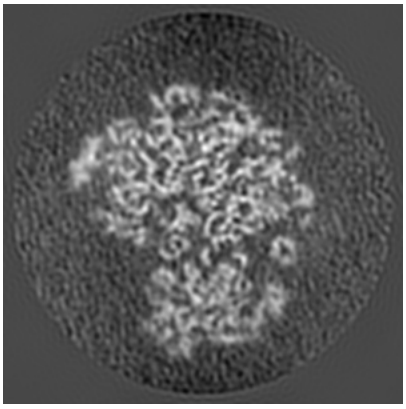
The images above show the map projected in three orthogonal directions.

6.2 Central slices

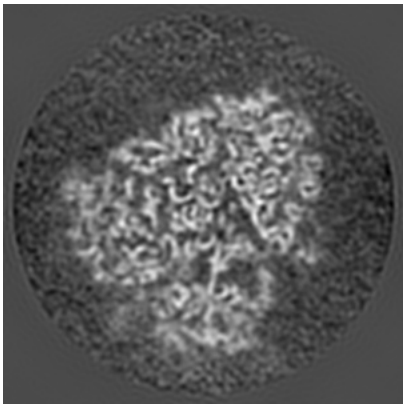
6.2.1 Primary map



X Index: 180



Y Index: 180

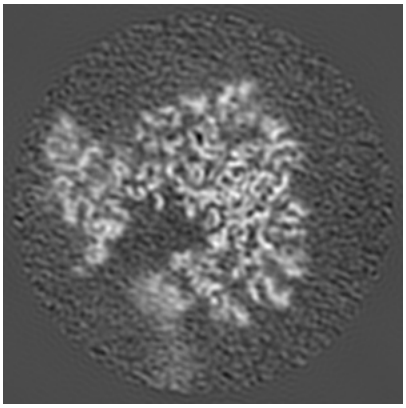


Z Index: 180

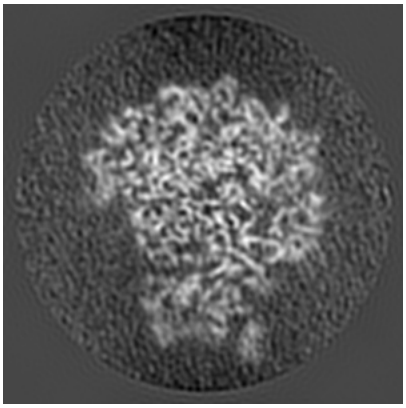
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

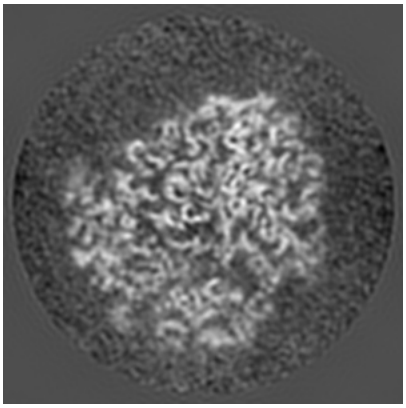
6.3.1 Primary map



X Index: 181



Y Index: 205

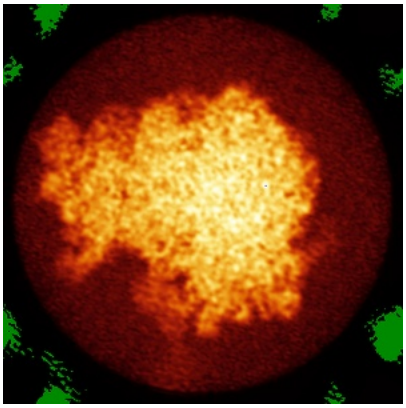


Z Index: 175

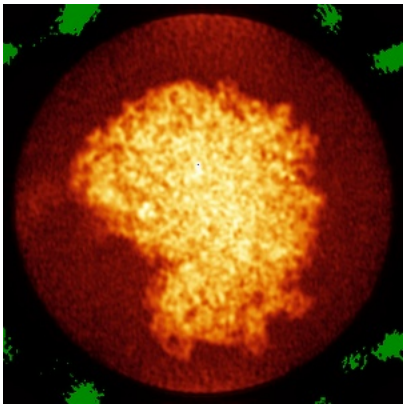
The images above show the largest variance slices of the map in three orthogonal directions.

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

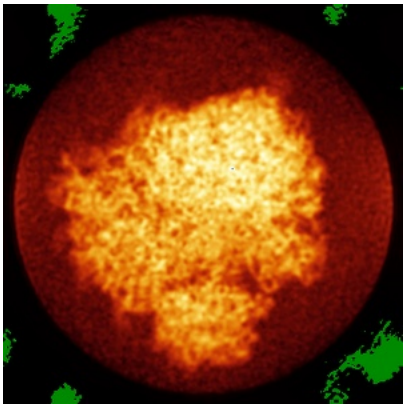
6.4.1 Primary map



X



Y

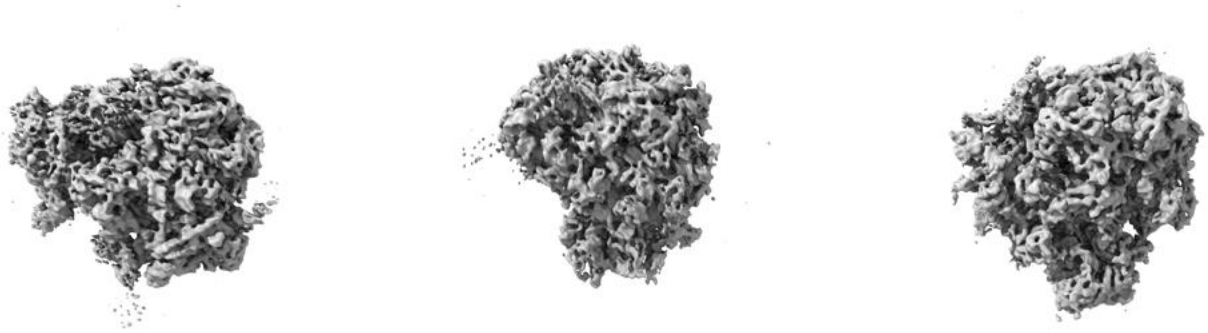


Z

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 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

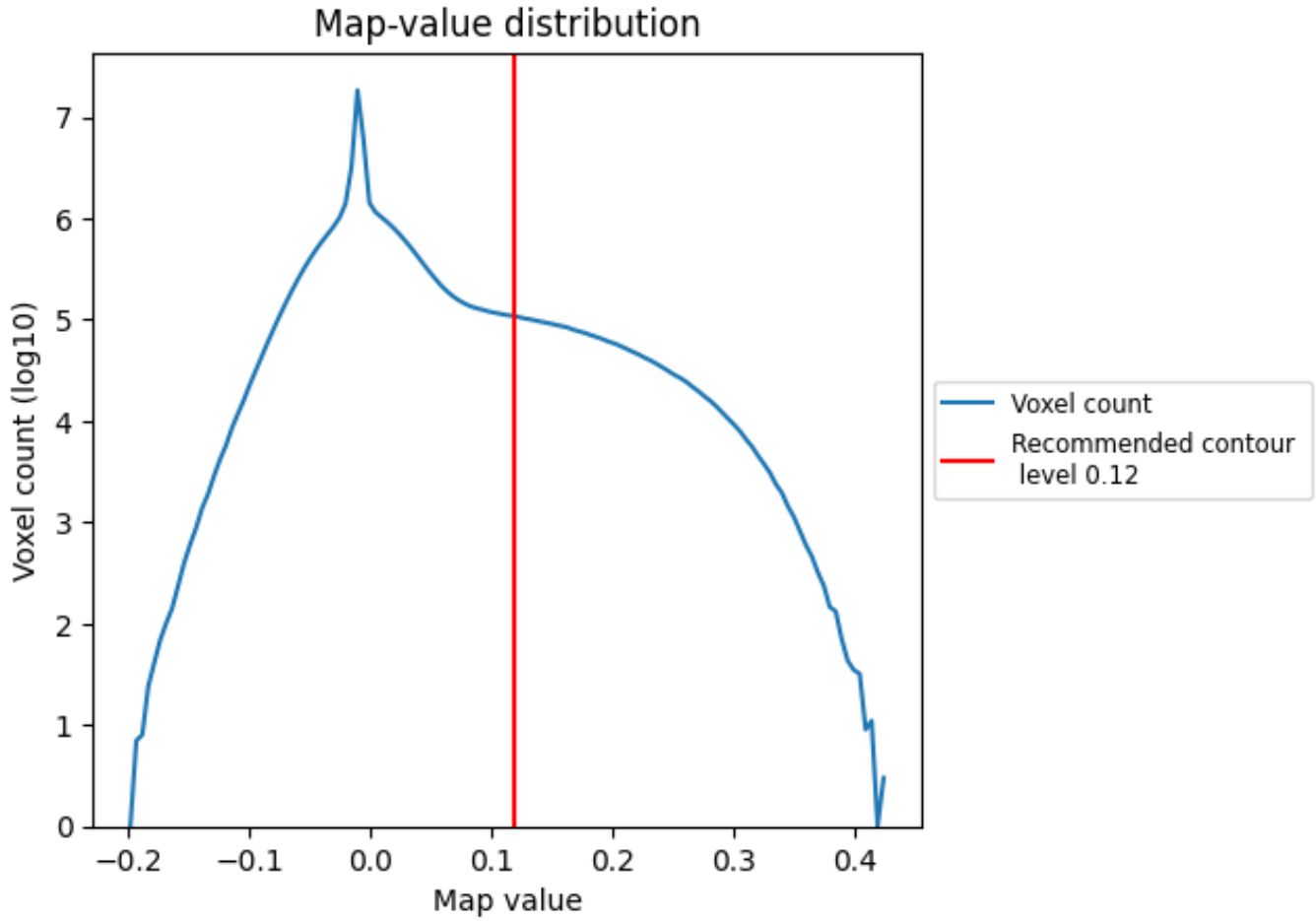
6.6 Mask visualisation (i)

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

7 Map analysis

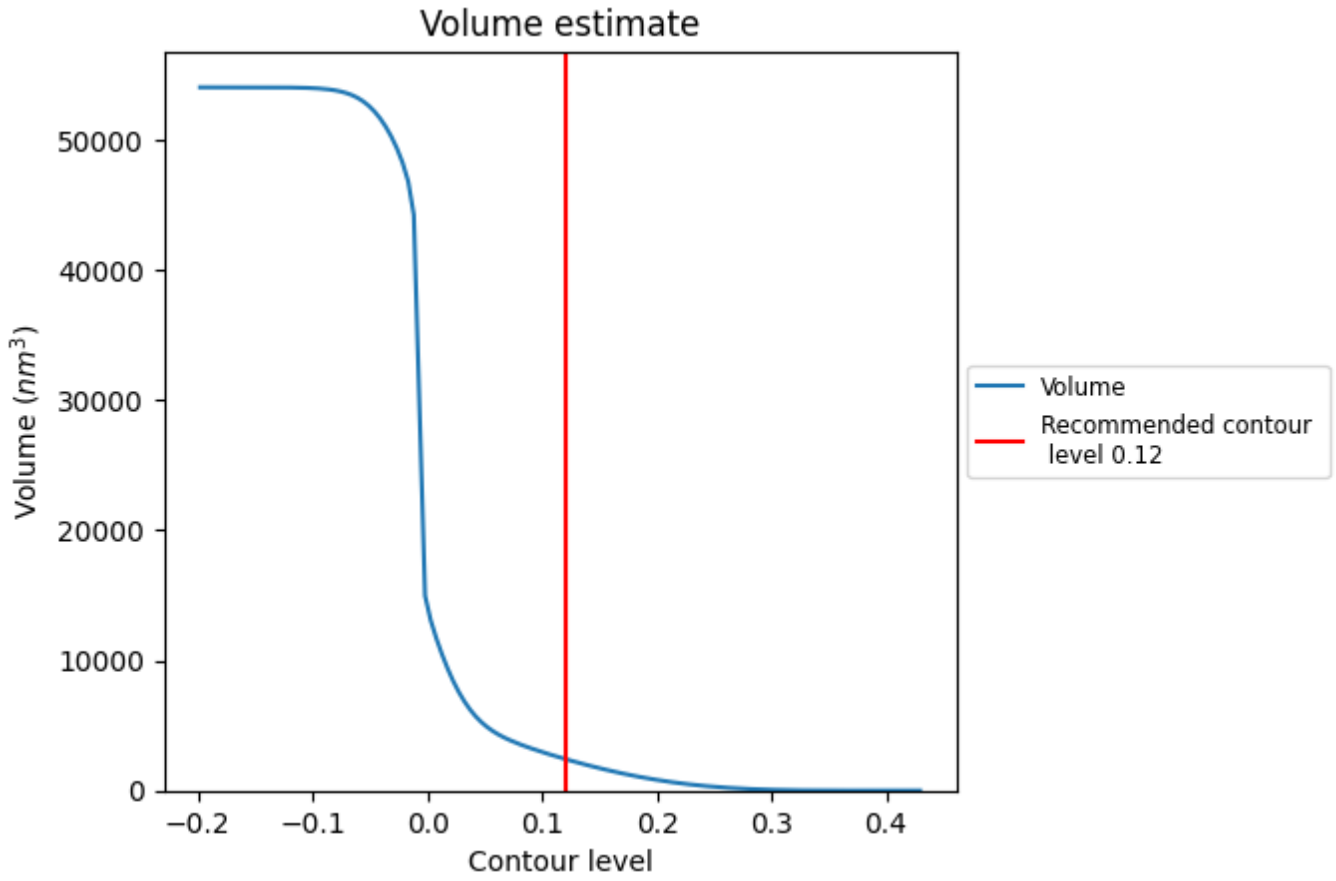
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

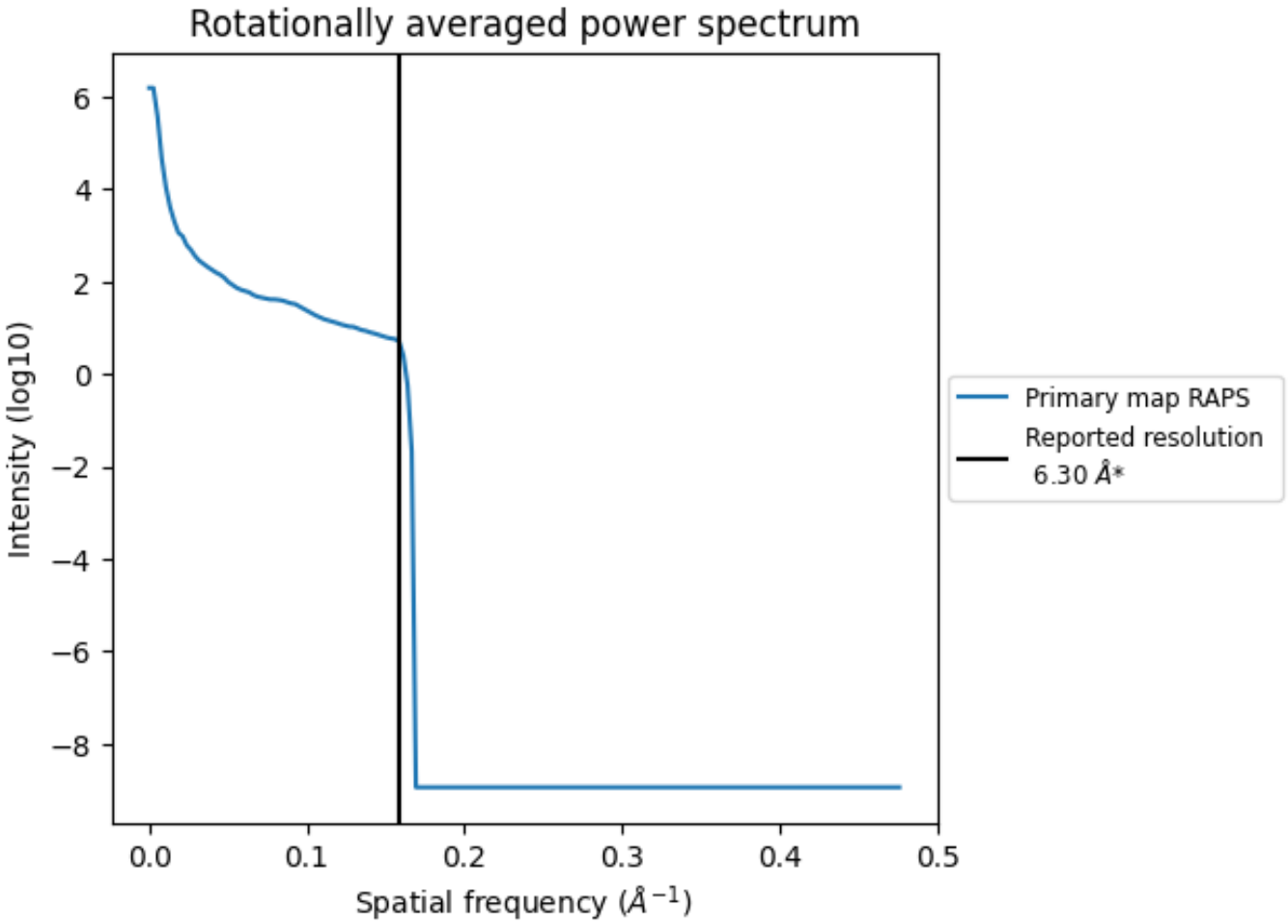
7.2 Volume estimate



The volume at the recommended contour level is 2429 nm^3; this corresponds to an approximate mass of 2194 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.159 $Å^{-1}$

8 Fourier-Shell correlation (i)

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

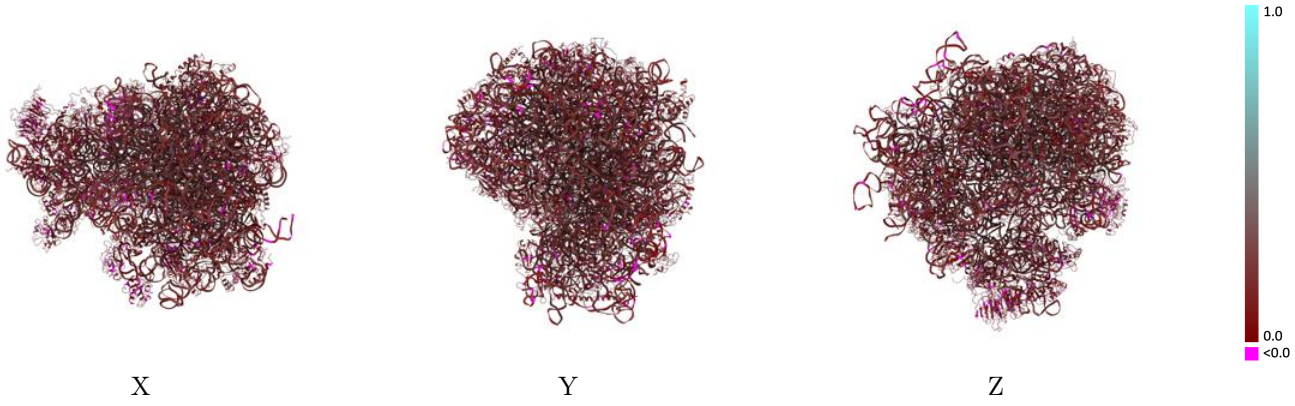
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-5977 and PDB model 3J78. Per-residue inclusion information can be found in section 3 on page 19.

9.1 Map-model overlay

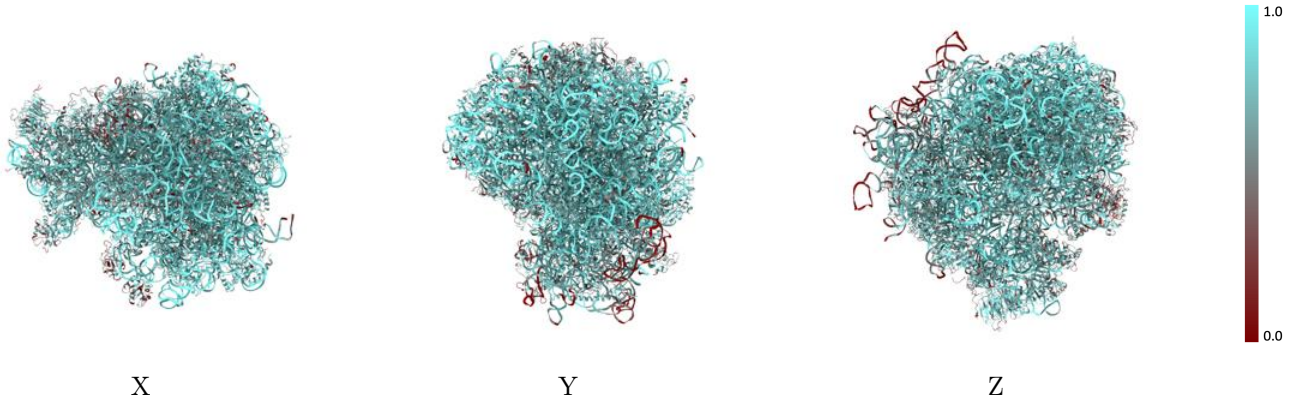
This section was not generated.

9.2 Q-score mapped to coordinate model



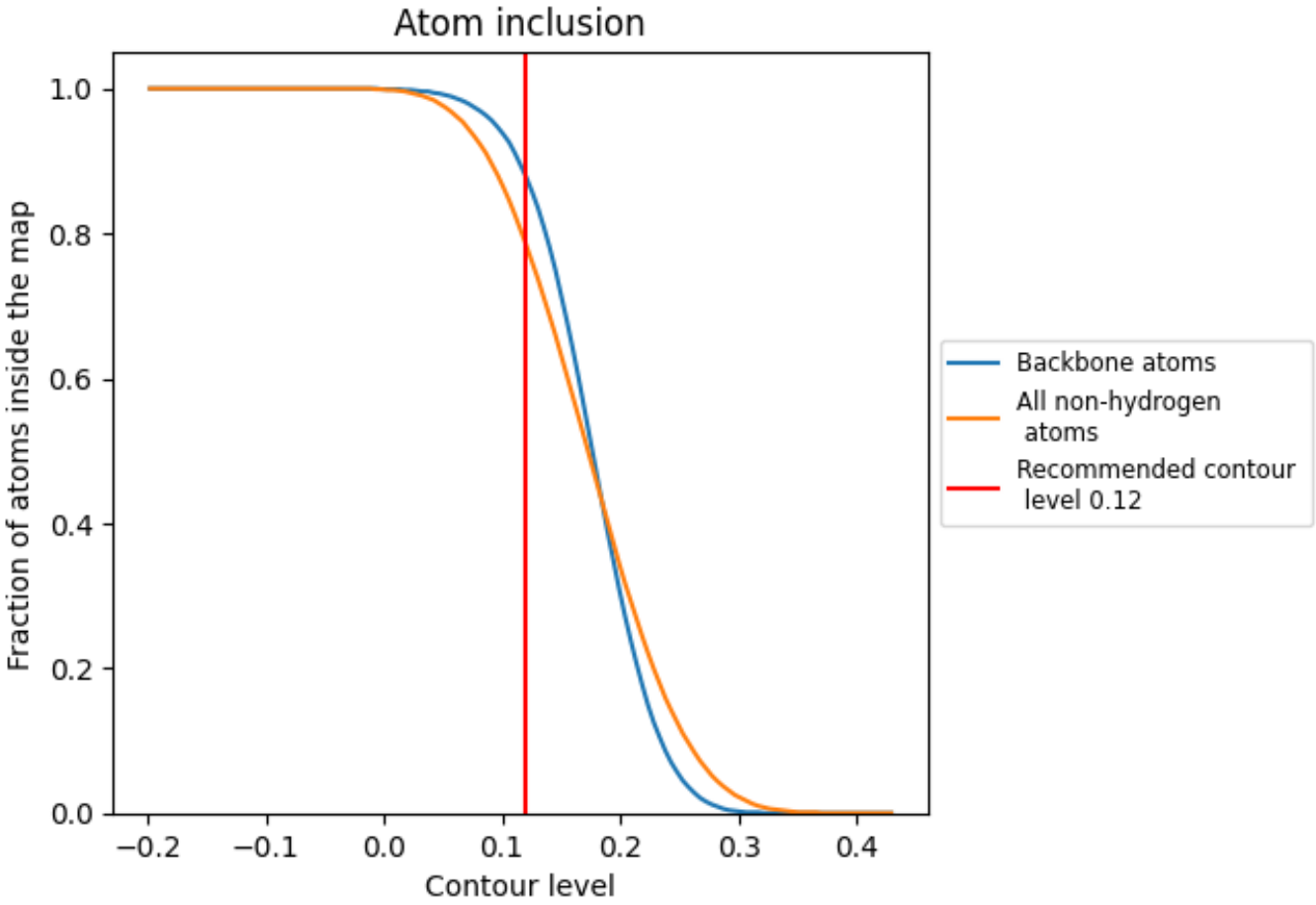
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model



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 (0.12).

9.4 Atom inclusion (i)



At the recommended contour level, 88% of all backbone atoms, 79% 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 (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7860	0.1940
10	0.7590	0.1590
11	0.5310	0.1750
12	0.4390	0.1490
13	0.6820	0.1710
14	0.6320	0.1620
15	0.6560	0.1700
16	0.6830	0.1470
17	0.5680	0.1490
18	0.6220	0.1700
19	0.6420	0.1380
1S	0.8550	0.2100
20	0.6440	0.1340
21	0.6590	0.1750
22	0.6340	0.1650
23	0.5260	0.1700
24	0.5850	0.1460
25	0.5670	0.1490
26	0.7250	0.1870
27	0.7160	0.2000
28	0.6110	0.1770
29	0.7390	0.1500
2S	0.9050	0.2190
30	0.5840	0.1850
31	0.6500	0.1730
5S	0.9530	0.2160
60	0.7440	0.1820
61	0.6400	0.1590
62	0.3440	0.1490
63	0.6580	0.1850
64	0.7880	0.1660
65	0.7160	0.1430
66	0.7890	0.1720
67	0.7120	0.1590
68	0.6190	0.1620

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Chain	Atom inclusion	Q-score
69	0.6810	0.1640
70	0.7900	0.1600
71	0.6570	0.1810
72	0.6090	0.1840
73	0.5300	0.1780
74	0.5600	0.1860
75	0.7030	0.1850
76	0.7390	0.1670
77	0.7560	0.1820
78	0.6160	0.1530
79	0.6230	0.1780
80	0.7390	0.1800
81	0.6520	0.1620
82	0.7600	0.1870
83	0.7690	0.1340
84	0.6840	0.1510
85	0.7290	0.1670
86	0.6800	0.1780
87	0.7450	0.1500
88	0.6650	0.1830
89	0.7430	0.1780
8S	0.9480	0.2310
90	0.7200	0.1700
91	0.4180	0.0950
92	0.6210	0.1710
93	0.7000	0.1740
ET	0.8290	0.2000
L1	0.1550	0.1110
L2	0.6870	0.1700
L3	0.6540	0.1700
L4	0.6830	0.1680
L5	0.5690	0.1600
L6	0.7060	0.1620
L7	0.7150	0.1600
L8	0.7350	0.1780
L9	0.7340	0.1670
MR	0.8770	0.2750
P0	0.4760	0.0970
PT	0.8440	0.2340
RC	0.6930	0.1390
S0	0.6940	0.1780
S1	0.6950	0.1780

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Chain	Atom inclusion	Q-score
S2	0.6880	0.1760
S3	0.6800	0.1820
S4	0.5750	0.1590
S5	0.6080	0.1620
S6	0.4890	0.1690
S7	0.6370	0.1740
S8	0.5610	0.1520
S9	0.6300	0.1550