



## Full wwPDB EM Validation Report ⓘ

Feb 13, 2024 – 10:03 PM EST

PDB ID : 3J77  
EMDB ID : EMD-5976  
Title : Structures of yeast 80S ribosome-tRNA complexes in the rotated and non-rotated conformations (Class II - rotated ribosome with 1 tRNA)  
Authors : Svidritskiy, E.; Brilot, A.F.; Koh, C.S.; Grigorieff, N.; Korostelev, A.A.  
Deposited on : 2014-05-29  
Resolution : 6.20 Å (reported)  
Based on initial models : 3J3B, 3U5B, 3U5E, 4GD1, 3U5C, 3U5D

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

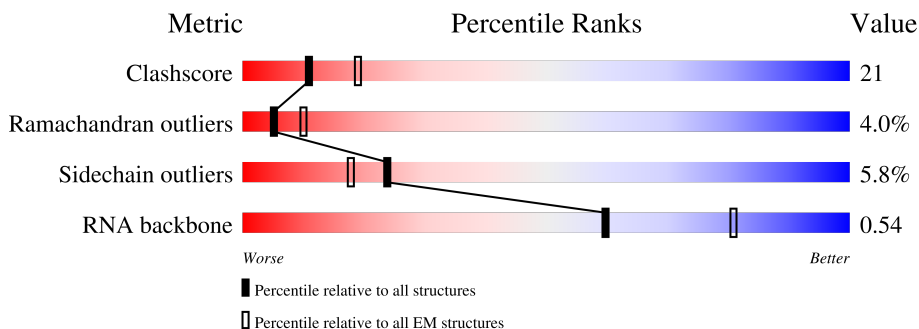
EMDB validation analysis : 0.0.1.dev70  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

# 1 Overall quality at a glance i

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

The reported resolution of this entry is 6.20 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	L1	217	63% (Poor fit) 48% (0 outliers), 38% (1 outlier), 8% (2 outliers), 6% (3+ outliers)
2	L2	254	12% (Poor fit) 41% (0 outliers), 54% (1 outlier), 2% (2 outliers), 2% (3+ outliers)
3	L3	387	13% (Poor fit) 49% (0 outliers), 45% (1 outlier), 6% (2 outliers), 2% (3+ outliers)
4	L4	362	6% (Poor fit) 43% (0 outliers), 52% (1 outlier), 5% (2 outliers), 2% (3+ outliers)
5	L5	297	20% (Poor fit) 60% (0 outliers), 36% (1 outlier), 2% (2 outliers), 2% (3+ outliers)
6	L6	176	10% (Poor fit) 49% (0 outliers), 32% (1 outlier), 7% (2 outliers), 11% (3+ outliers)
7	L7	244	2% (Poor fit) 52% (0 outliers), 36% (1 outlier), 2% (2 outliers), 9% (3+ outliers)

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Mol	Chain	Length	Quality of chain
8	L8	256	
9	L9	191	
10	60	221	
11	61	174	
12	62	165	
13	63	199	
14	64	138	
15	65	204	
16	66	199	
17	67	184	
18	68	186	
19	69	189	
20	70	172	
21	71	160	
22	72	121	
23	73	137	
24	74	155	
25	75	142	
26	76	127	
27	77	136	
28	78	149	
29	79	59	
30	80	105	
31	81	113	
32	82	130	

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Mol	Chain	Length	Quality of chain
33	83	107	42% 53% 5% 7%
34	84	121	51% 38% 5% 7%
35	85	120	48% 49% 5% 7%
36	86	100	44% 48% 11% 7%
37	87	88	51% 44% 8% 7%
38	88	78	51% 45% 14% 7%
39	89	51	49% 43% 6% 6%
40	90	128	25% 13% 59%
41	91	25	44% 52% 4% 4%
42	92	106	50% 46% 24% 7%
43	93	92	59% 38% 5% 7%
44	P0	312	21% 16% 61% 13%
45	RC	319	56% 41% 33% 7%
46	S0	252	36% 41% 15% 18%
47	S1	255	35% 38% 11% 16%
48	S2	254	46% 37% 10% 15%
49	S3	240	50% 36% 15% 8%
50	S4	261	43% 52% 23% 5%
51	S5	225	44% 42% 19% 6%
52	S6	236	48% 44% 33% 7%
53	S7	190	40% 47% 17% 8%
54	S8	200	46% 42% 29% 6%
55	S9	197	44% 46% 13% 6%
56	10	105	31% 50% 16% 10%
57	11	156	53% 44% 27% 9%


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Mol	Chain	Length	Quality of chain
58	12	143	41% 41% 37% 8% 13%
59	13	151	46% 50%
60	14	137	12% 45% 45% 7%
61	15	142	16% 39% 40% 8% 13%
62	16	143	27% 40% 56%
63	17	136	25% 41% 36% 11% 12%
64	18	146	23% 51% 42% 7%
65	19	144	21% 45% 47% 7%
66	20	121	15% 36% 47% 5% 12%
67	21	87	20% 55% 41%
68	22	130	15% 42% 51% 6%
69	23	145	14% 43% 48% 8%
70	24	135	14% 53% 39% 7%
71	25	108	19% 31% 30% 5% 35%
72	26	119	11% 33% 42% 7% 18%
73	27	82	15% 63% 34%
74	28	67	19% 37% 49% 6% 6%
75	29	56	14% 55% 38% 5%
76	30	63	24% 49% 40% 6% 5%
77	31	152	16% 26% 18% 53%
78	1S	1798	7% 35% 51% 12%
79	2S	3395	40% 47% 8%
80	8S	158	36% 54% 9%
81	5S	121	39% 55% 6%
82	MR	14	29% 29% 7% 36%

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Mol	Chain	Length	Quality of chain
83	PT	77	 <p>A horizontal bar chart representing the quality of chain. The bar is divided into three segments: a green segment on the left labeled '53%', a yellow segment in the middle labeled '39%', and a red segment on the right labeled '8%'. A small red dot is visible at the beginning of the bar.</p>

## 2 Entry composition [i](#)

There are 83 unique types of molecules in this entry. The entry contains 207751 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	Total	C	N	O	S	0	0
			1609	1031	279	290	9		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
12	62	150	737	437	150	150	0	0

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

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

- 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	S	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	S	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
			Total	C	N	O	S		
21	71	159	1277	805	246	222	4	0	0

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	74	135	1089	682	219	187	1	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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	121	Total	C	N	O	S	0	0
			967	621	170	173	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
			Total	C	N	O	S		
63	17	120	965	603	183	177	2	0	0

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

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

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

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

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

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

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

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

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

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

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

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

- 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	3287	Total	C	N	O	P	0	0
			70300	31399	12658	22956	3287		

- 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 messenger RNA.

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

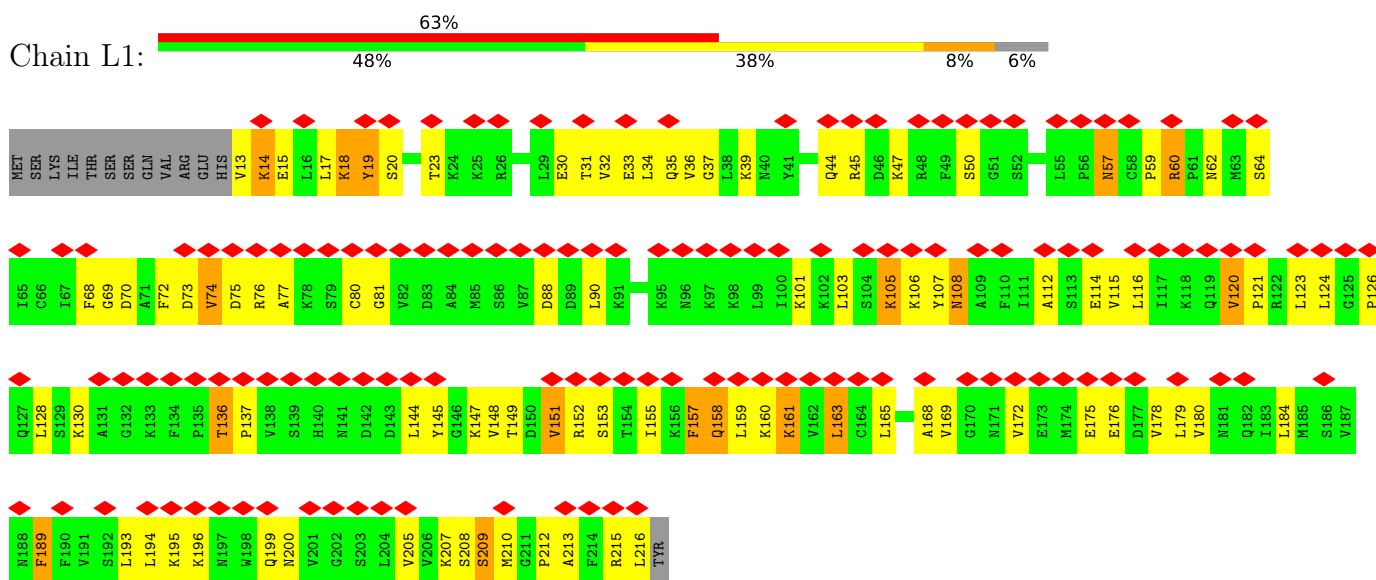
- Molecule 83 is a RNA chain called P/E-site initiator transfer RNA<sup>fMet</sup>.

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

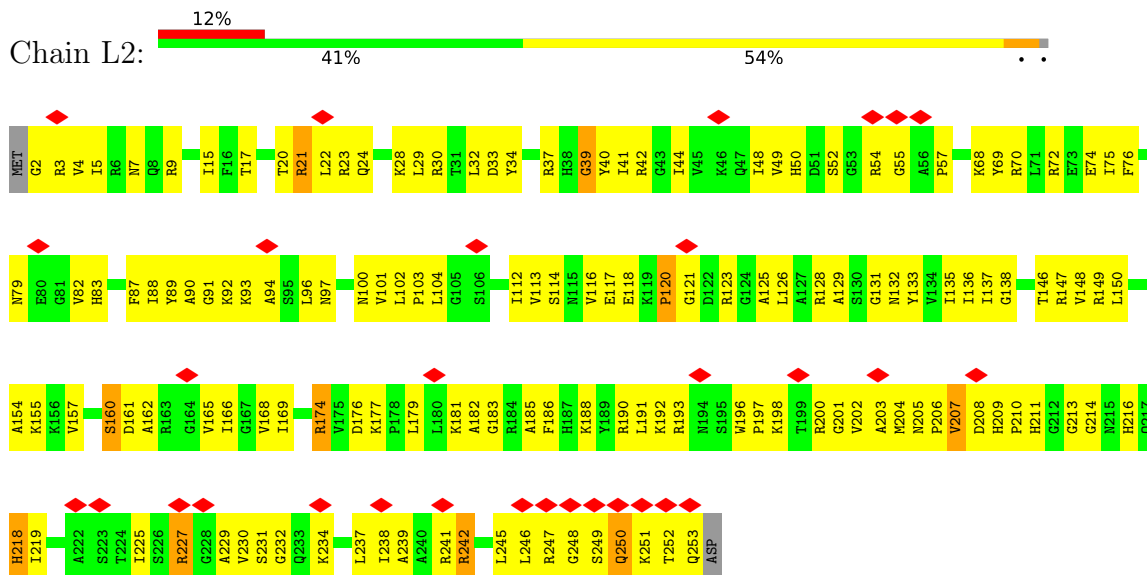
### 3 Residue-property plots

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

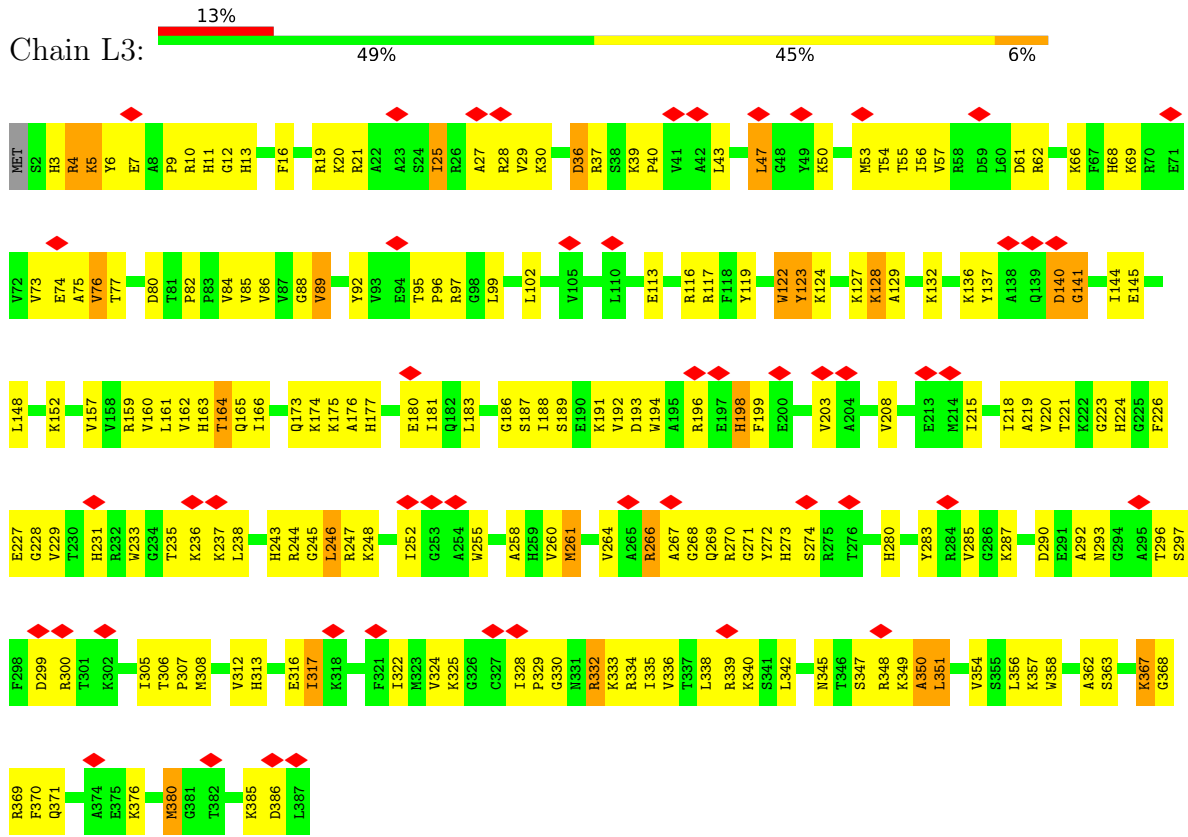
- Molecule 1: 60S ribosomal protein L1



- Molecule 2: 60S ribosomal protein L2



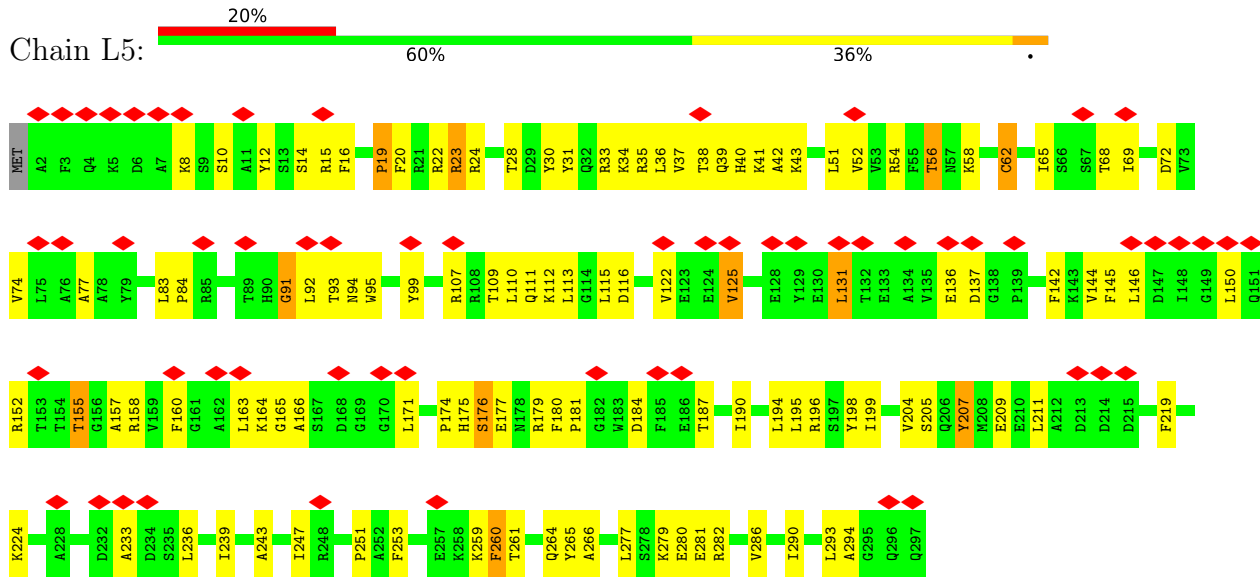
- Molecule 3: 60S ribosomal protein L3



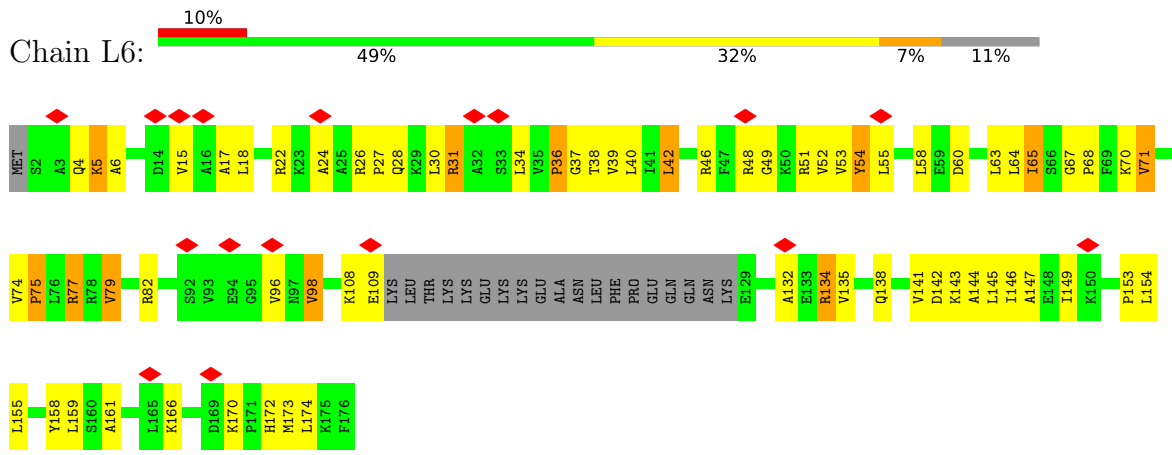
• Molecule 4: 60S ribosomal protein L4



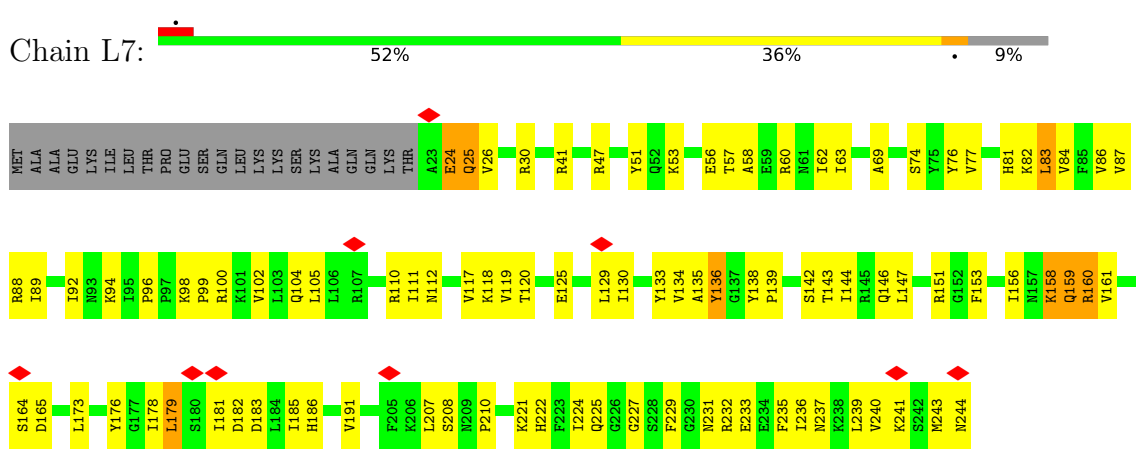
• Molecule 5: 60S ribosomal protein L5



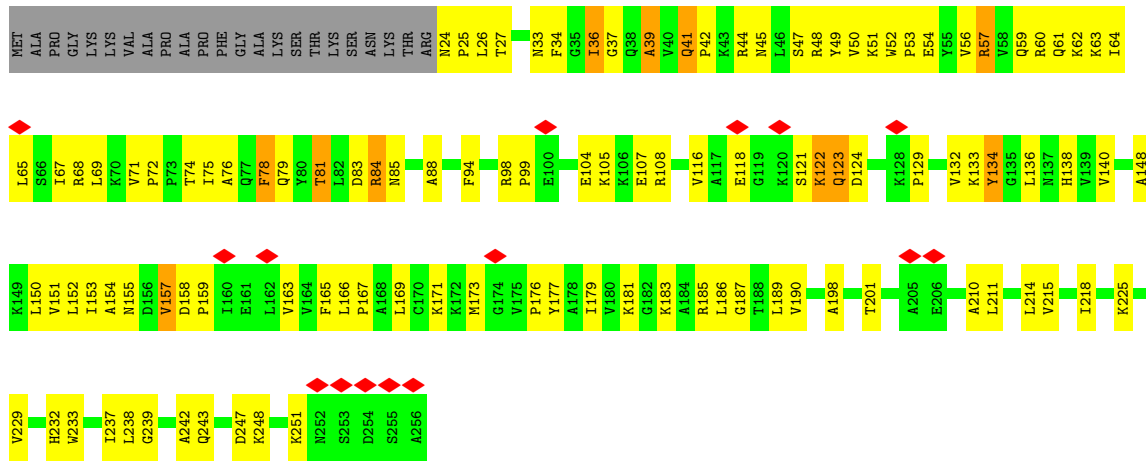
• Molecule 6: 60S ribosomal protein L6



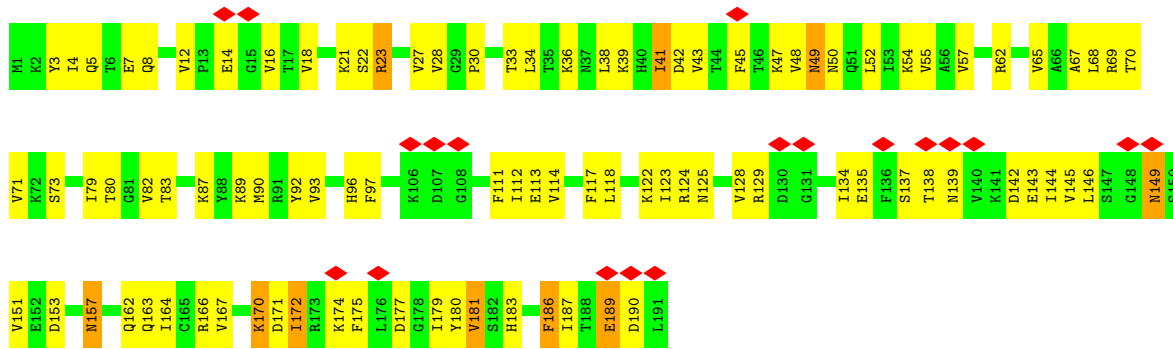
• Molecule 7: 60S ribosomal protein L7



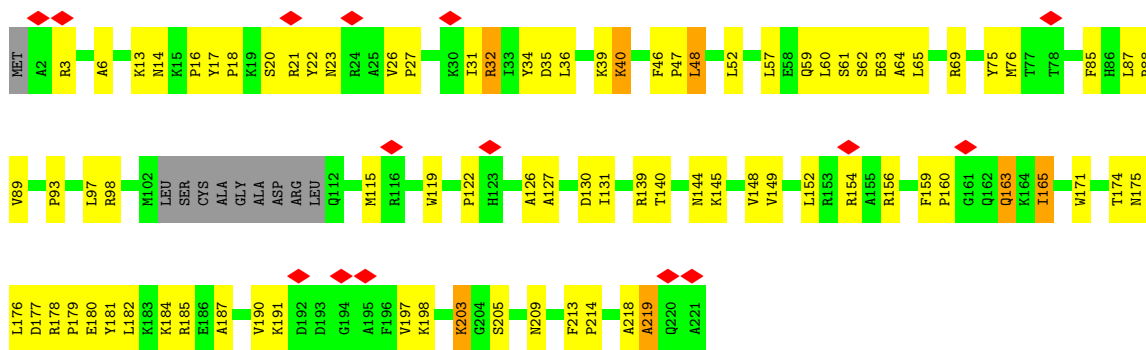
• Molecule 8: 60S ribosomal protein L8



• Molecule 9: 60S ribosomal protein L9

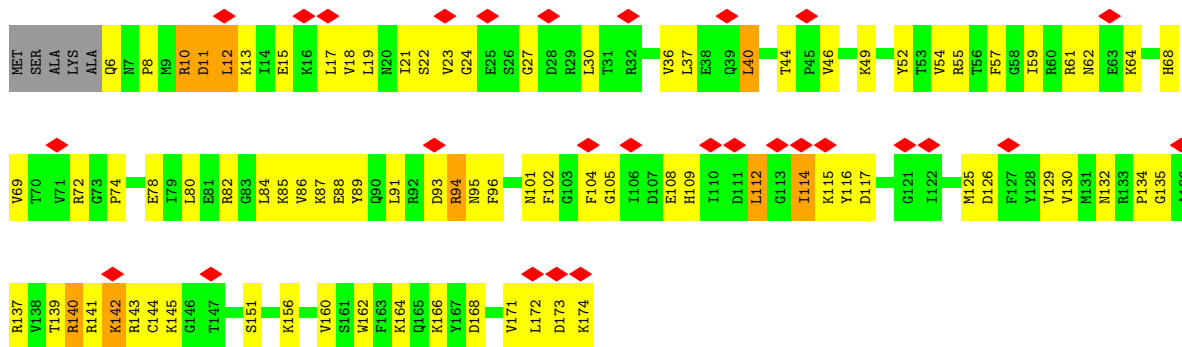


• Molecule 10: 60S ribosomal protein L10

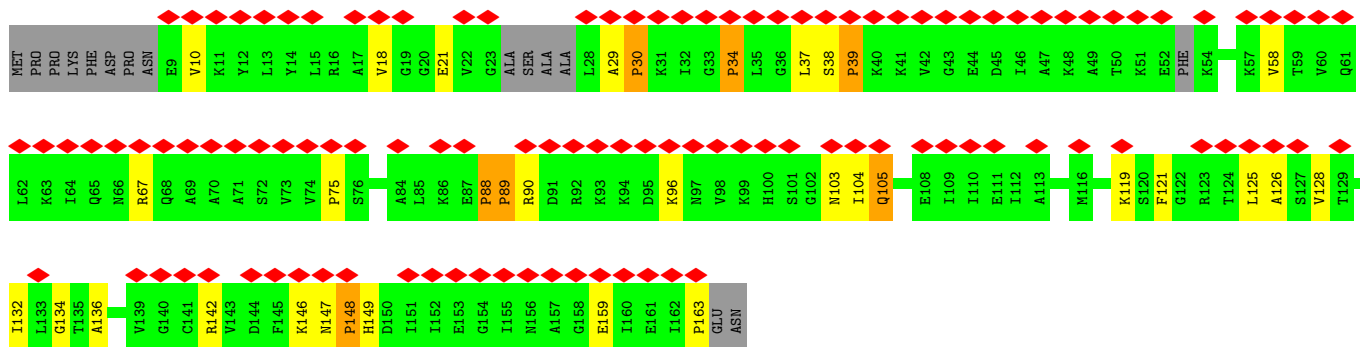
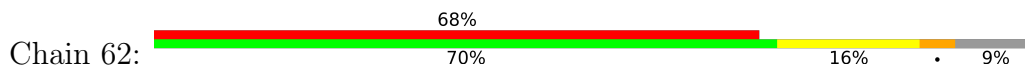


• Molecule 11: 60S ribosomal protein L11

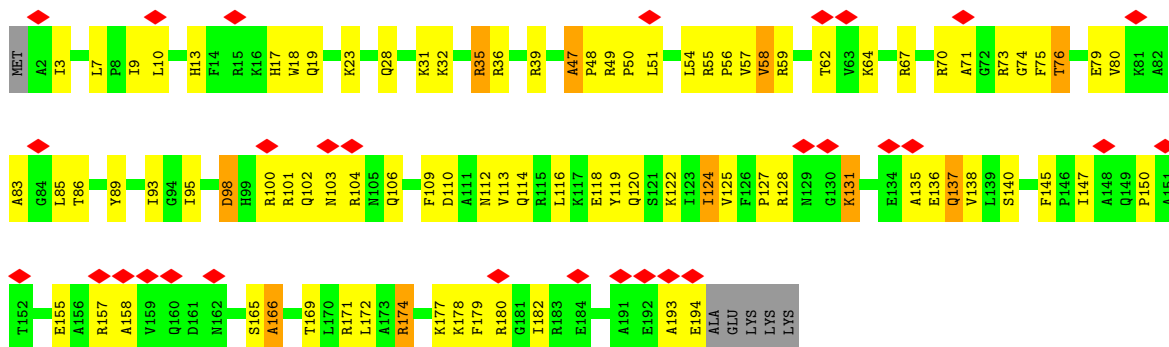




• Molecule 12: 60S ribosomal protein L12



• Molecule 13: 60S ribosomal protein L13

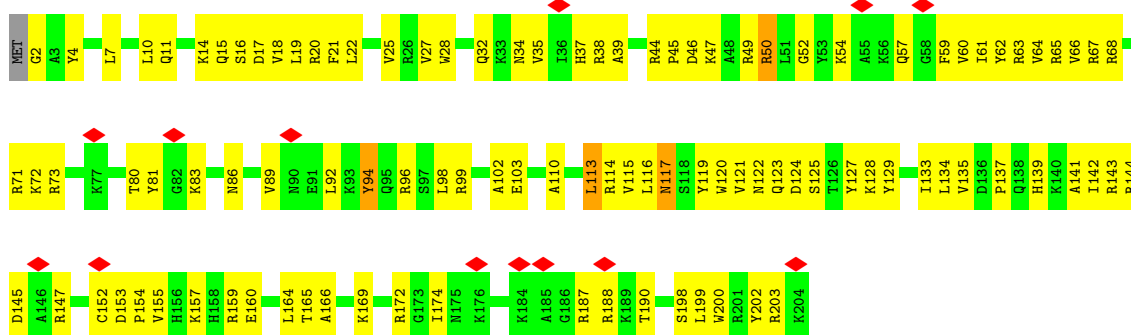


• Molecule 14: 60S ribosomal protein L14

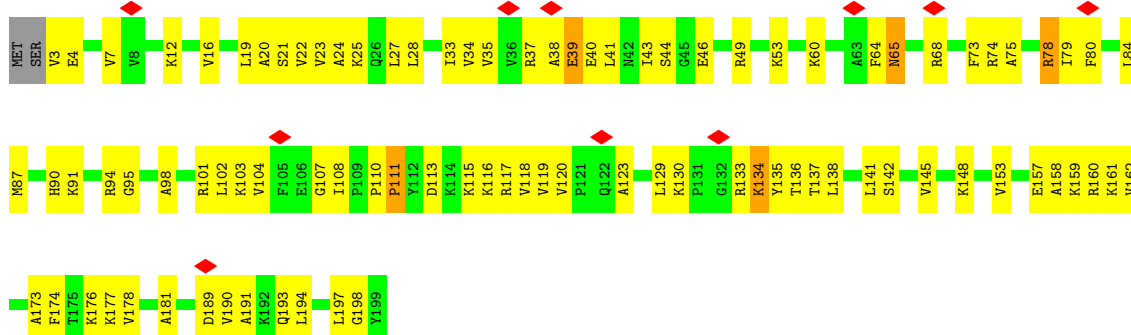




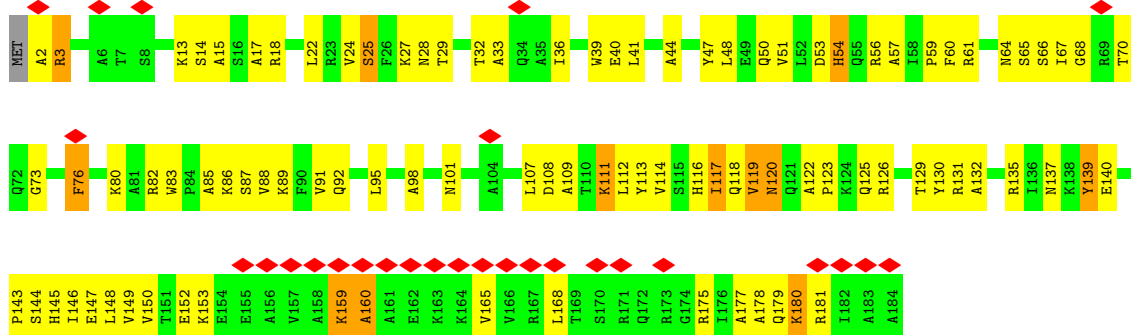
• Molecule 15: 60S ribosomal protein L15



• Molecule 16: 60S ribosomal protein L16

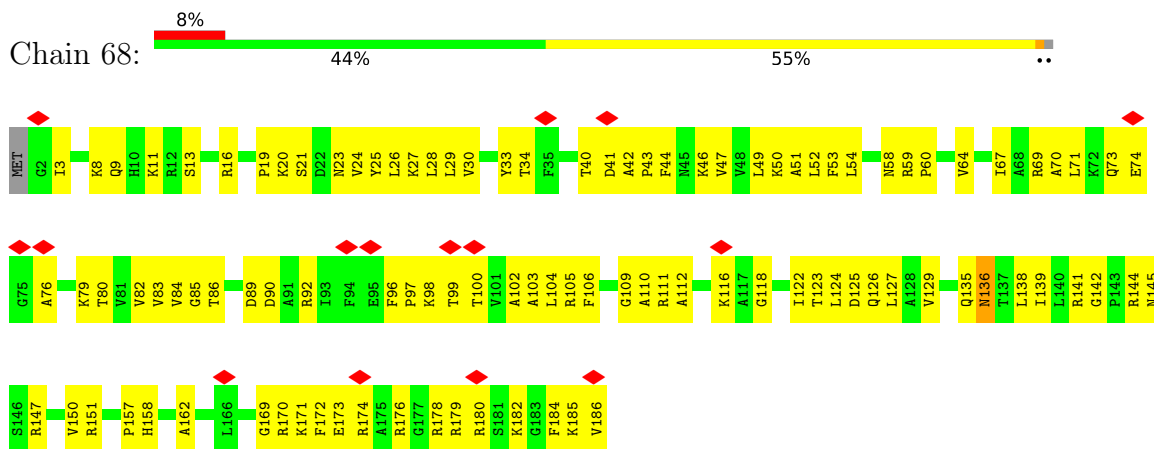


• Molecule 17: 60S ribosomal protein L17

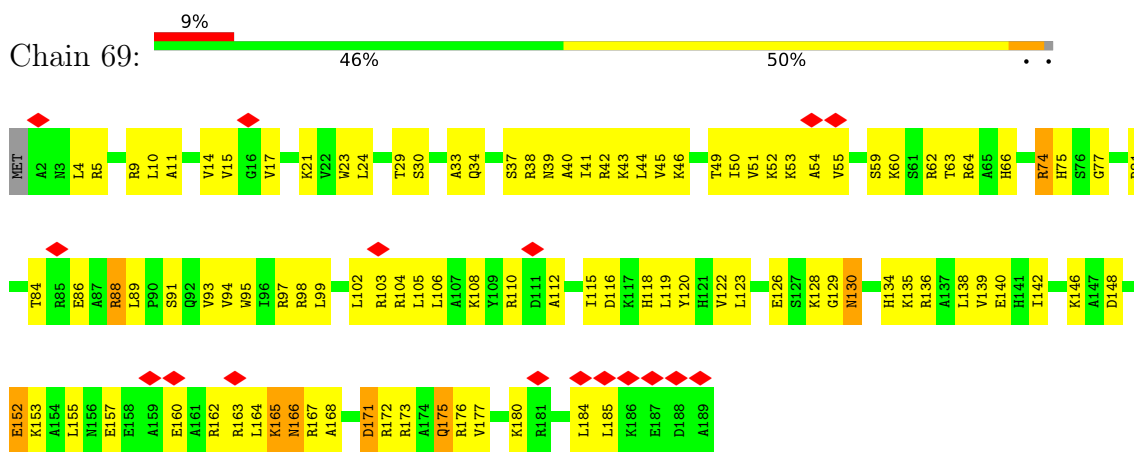


• Molecule 18: 60S ribosomal protein L18

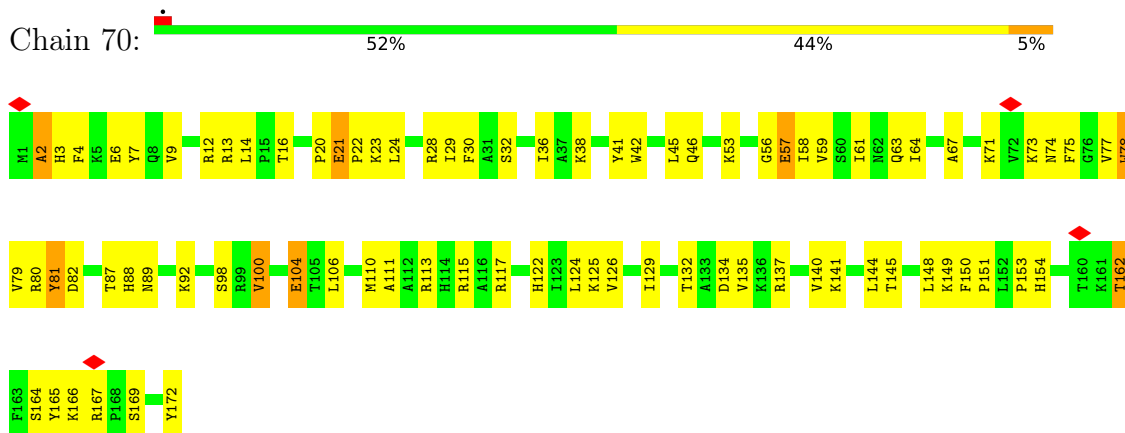




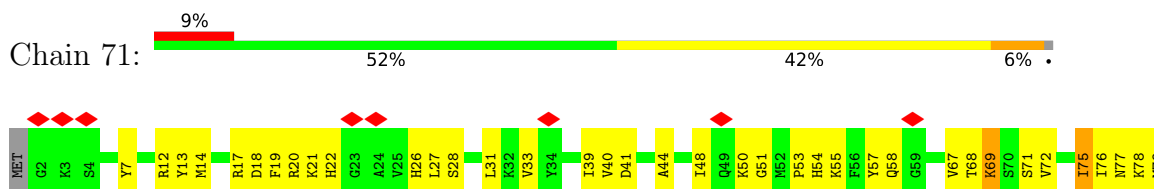
- Molecule 19: 60S ribosomal protein L19

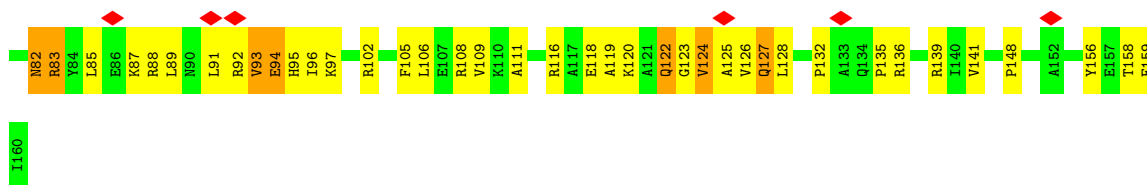


- Molecule 20: 60S ribosomal protein L20

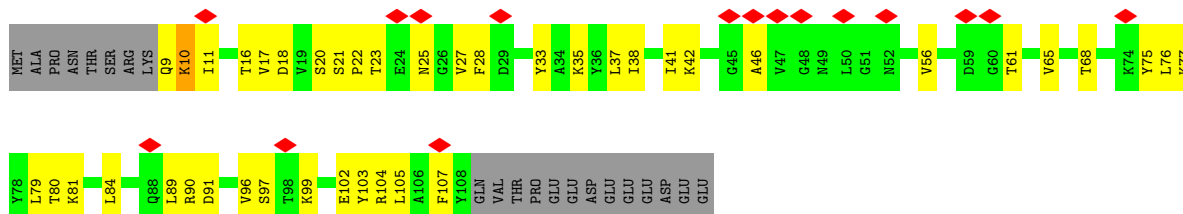


- Molecule 21: 60S ribosomal protein L21

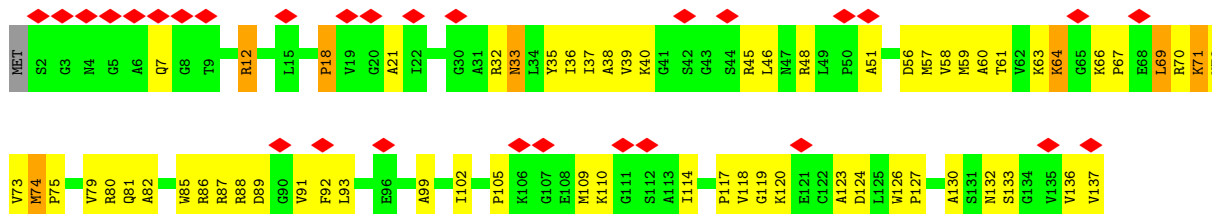




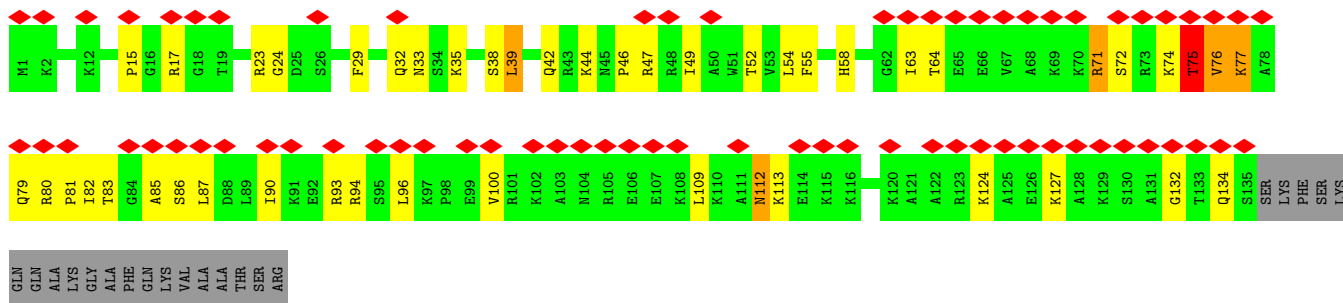
• Molecule 22: 60S ribosomal protein L22



• Molecule 23: 60S ribosomal protein L23

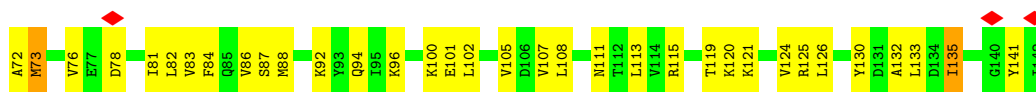


• Molecule 24: 60S ribosomal protein L24

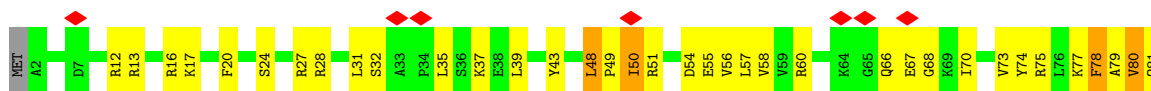


• Molecule 25: 60S ribosomal protein L25

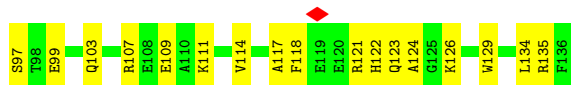
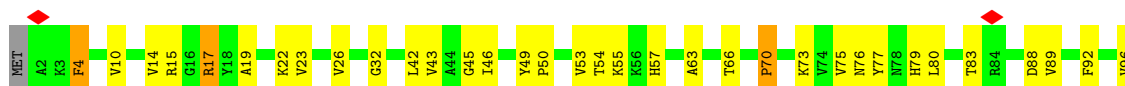




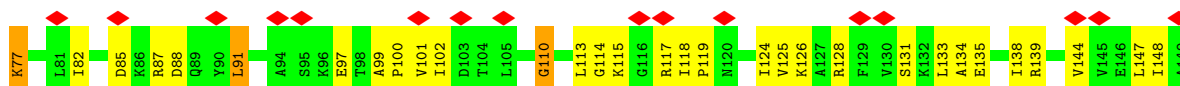
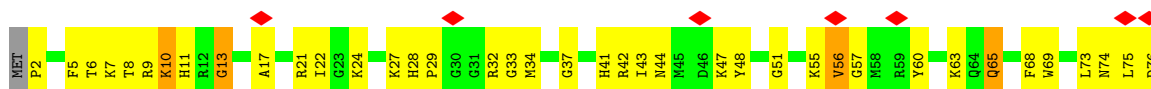
- Molecule 26: 60S ribosomal protein L26



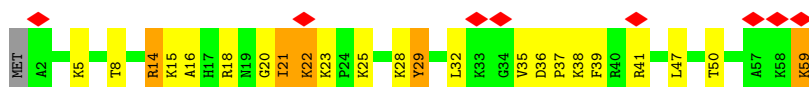
- Molecule 27: 60S ribosomal protein L27



- Molecule 28: 60S ribosomal protein L28

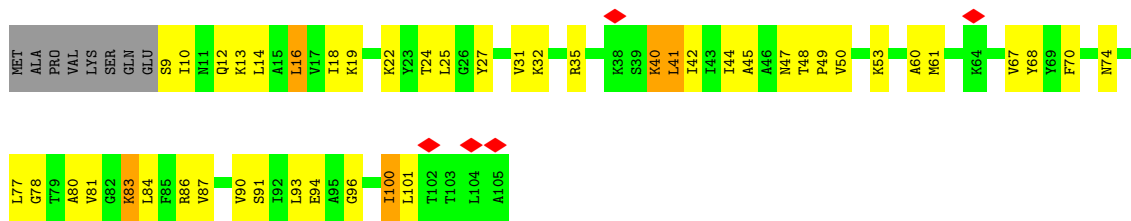


- Molecule 29: 60S ribosomal protein L29

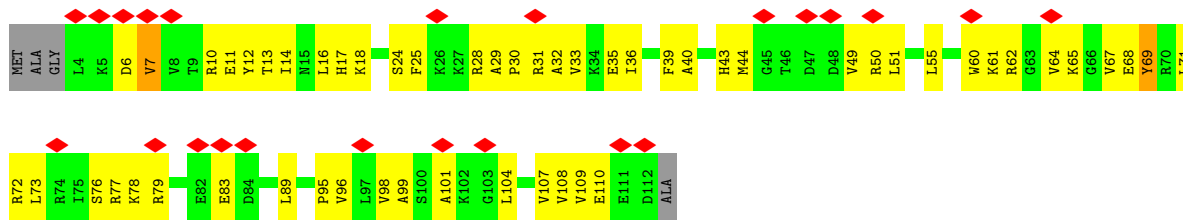


- Molecule 30: 60S ribosomal protein L30

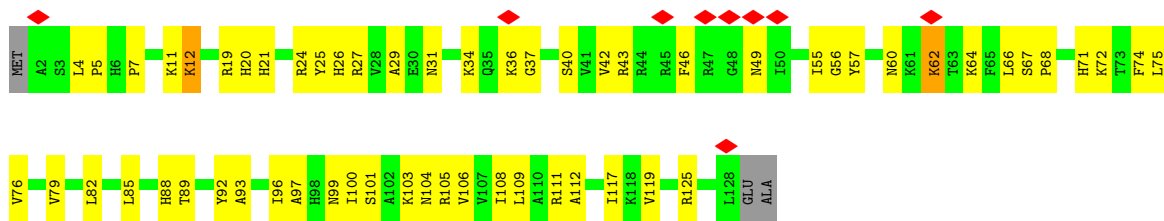




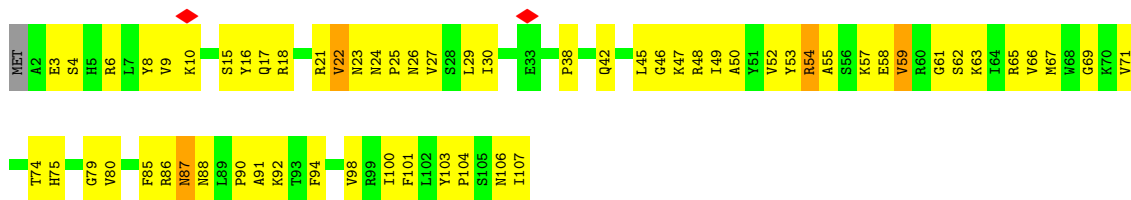
• Molecule 31: 60S ribosomal protein L31



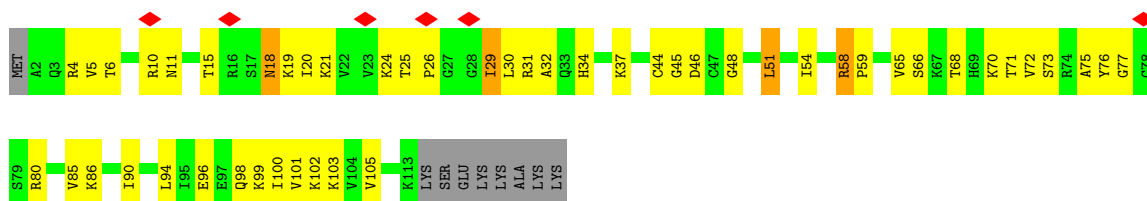
• Molecule 32: 60S ribosomal protein L32



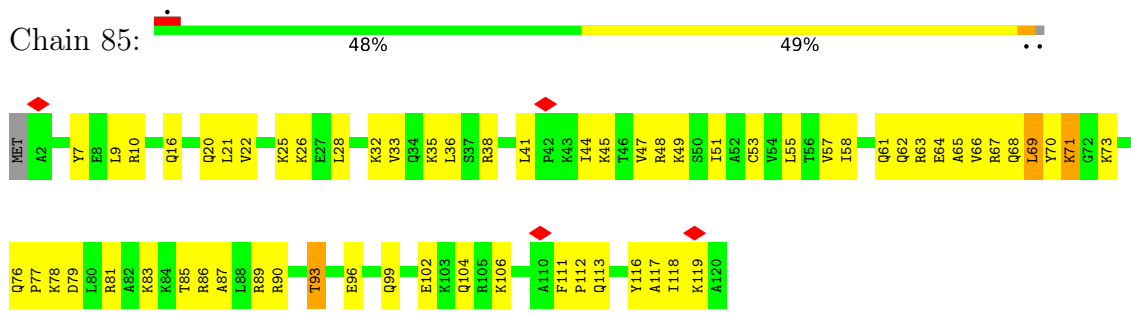
• Molecule 33: 60S ribosomal protein L33



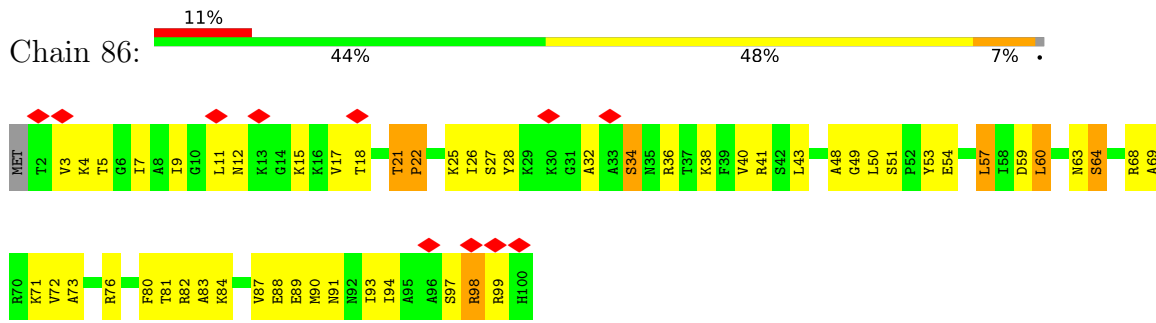
• Molecule 34: 60S ribosomal protein L34



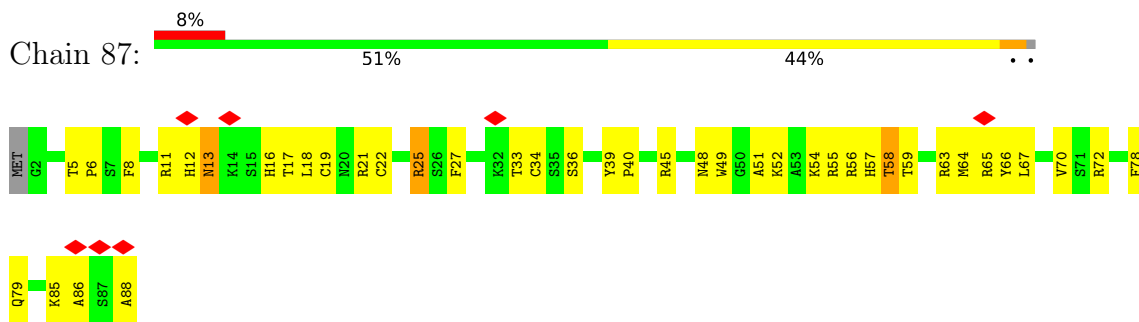
• Molecule 35: 60S ribosomal protein L35



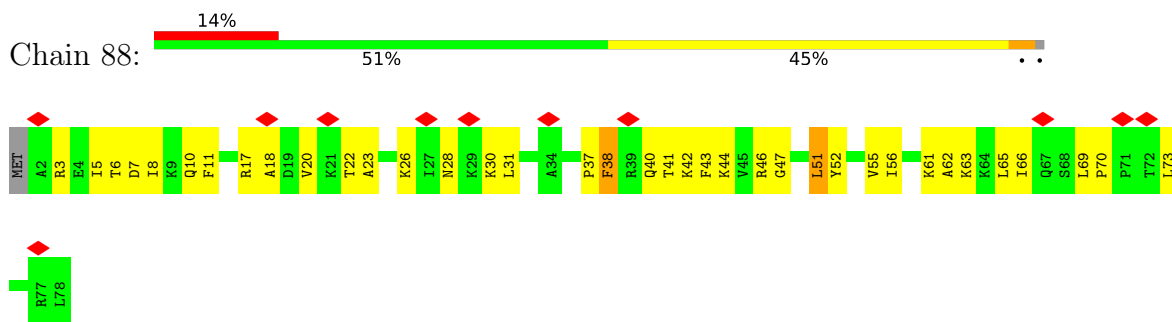
• Molecule 36: 60S ribosomal protein L36



• Molecule 37: 60S ribosomal protein L37

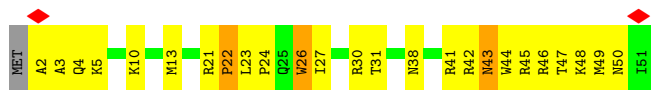


• Molecule 38: 60S ribosomal protein L38

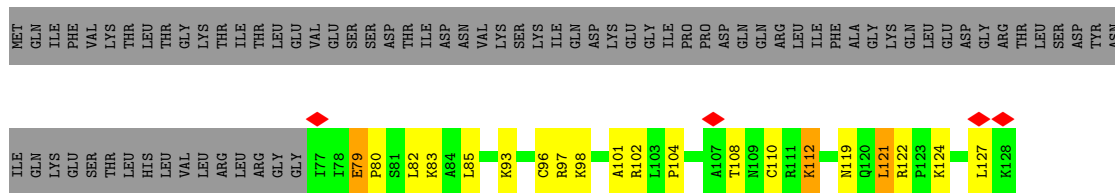


• Molecule 39: 60S ribosomal protein L39

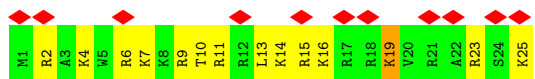




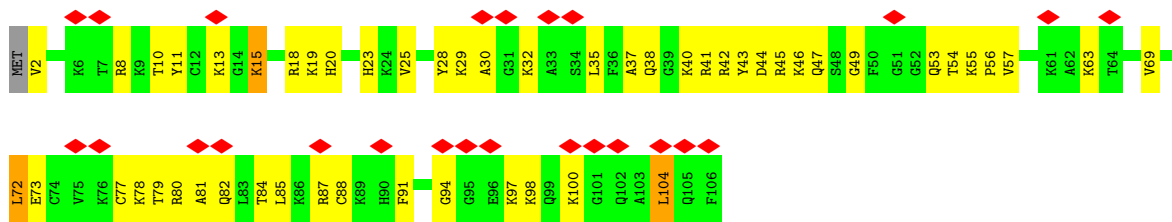
• Molecule 40: 60S ribosomal protein L40



• Molecule 41: 60S ribosomal protein L41



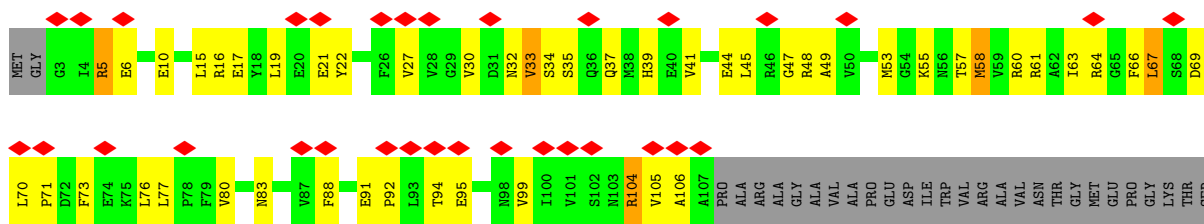
• Molecule 42: 60S ribosomal protein L42



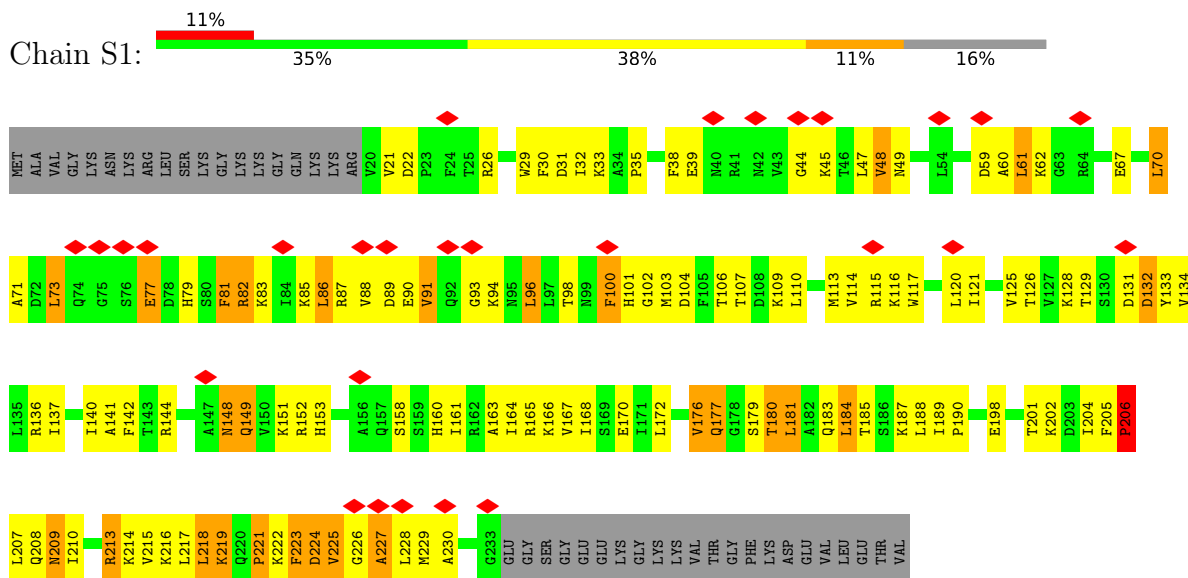
• Molecule 43: 60S ribosomal protein L43



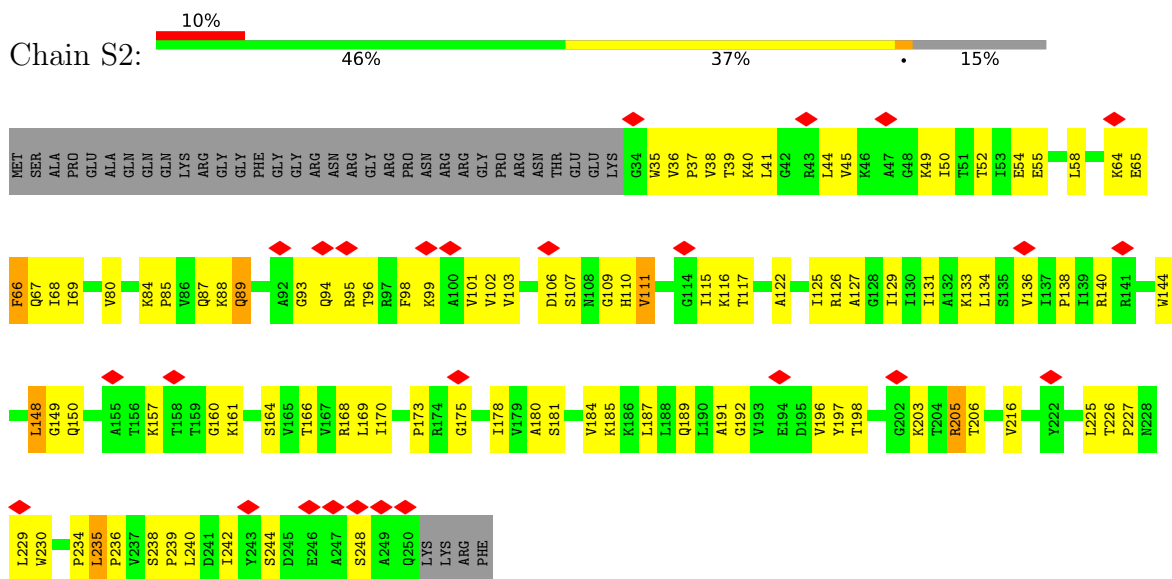
• Molecule 44: 60S acidic ribosomal protein P0



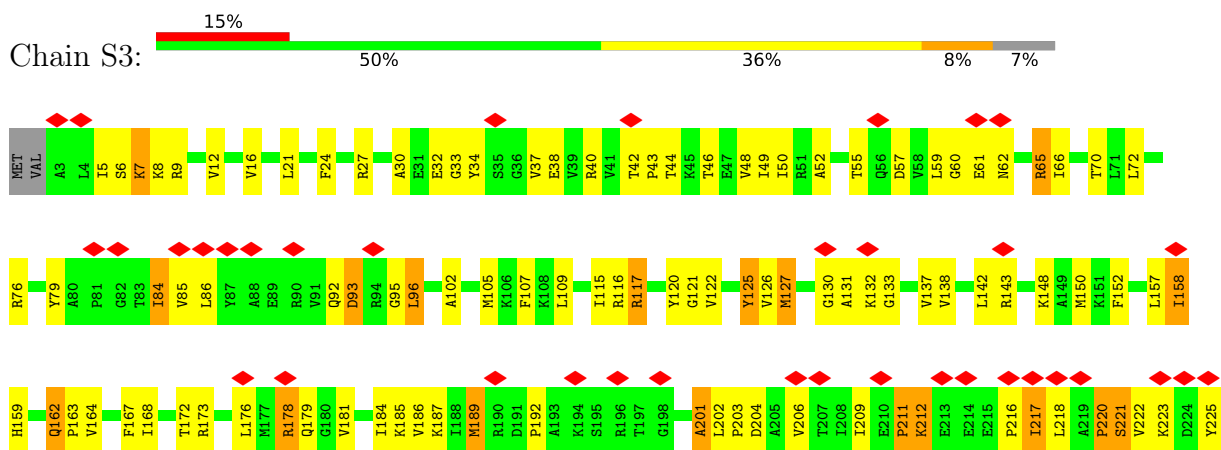




• Molecule 48: 40S ribosomal protein S2



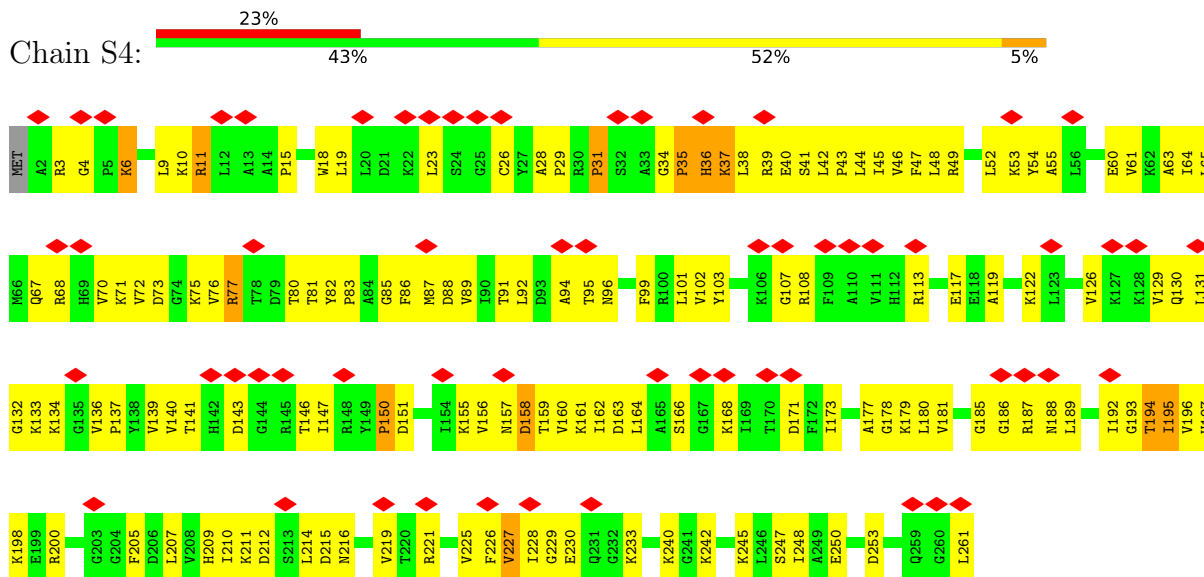
• Molecule 49: 40S ribosomal protein S3



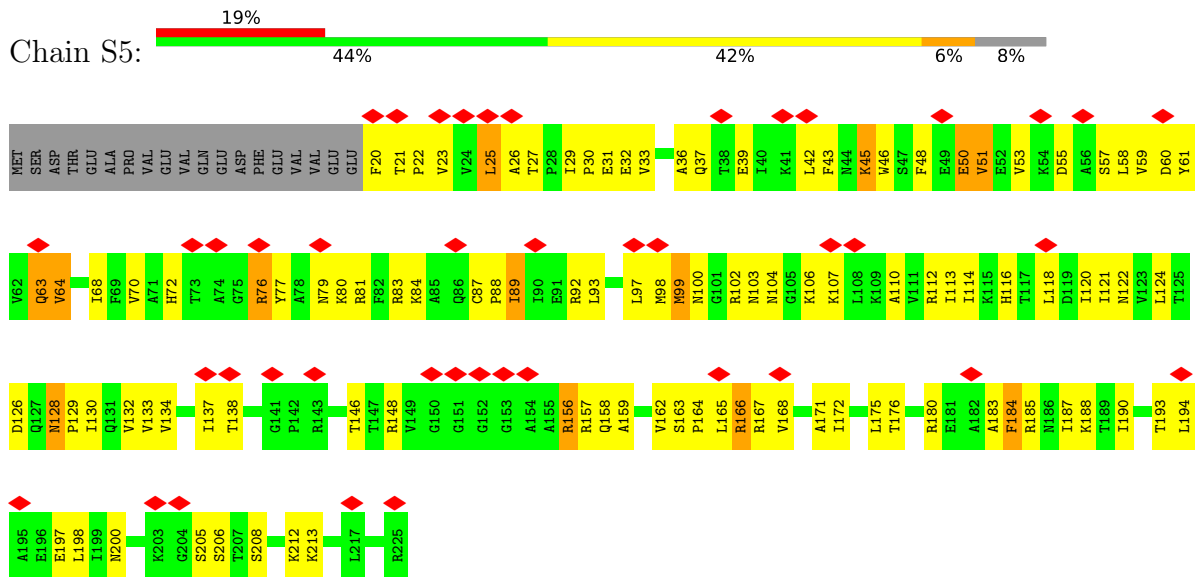


ARG  
PRO  
ALA  
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GLN  
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GLU  
PRO  
VAL  
GLU  
ALA

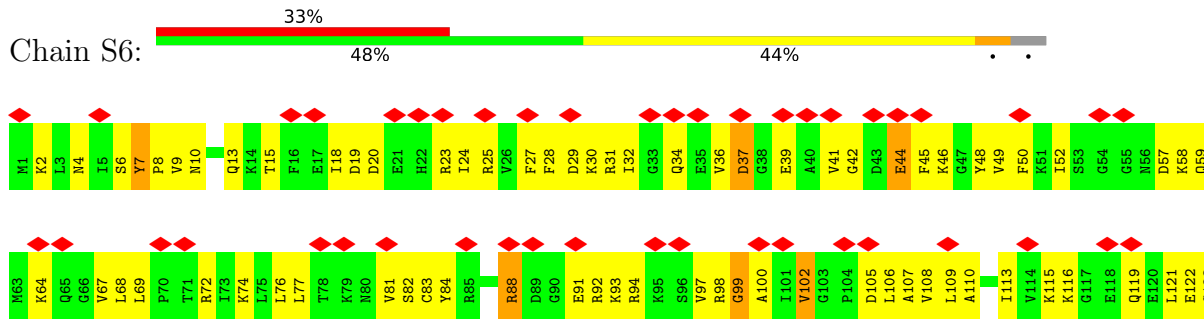
• Molecule 50: 40S ribosomal protein S4

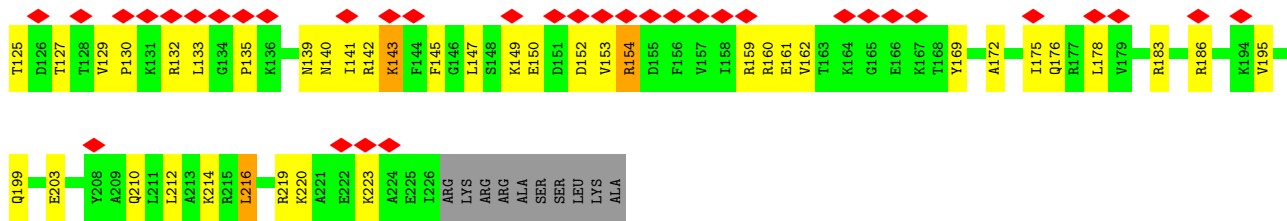


• Molecule 51: 40S ribosomal protein S5

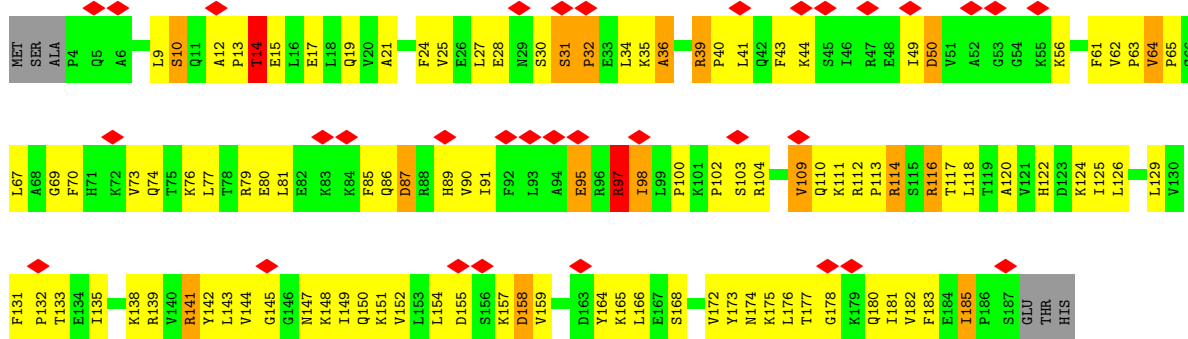


• Molecule 52: 40S ribosomal protein S6

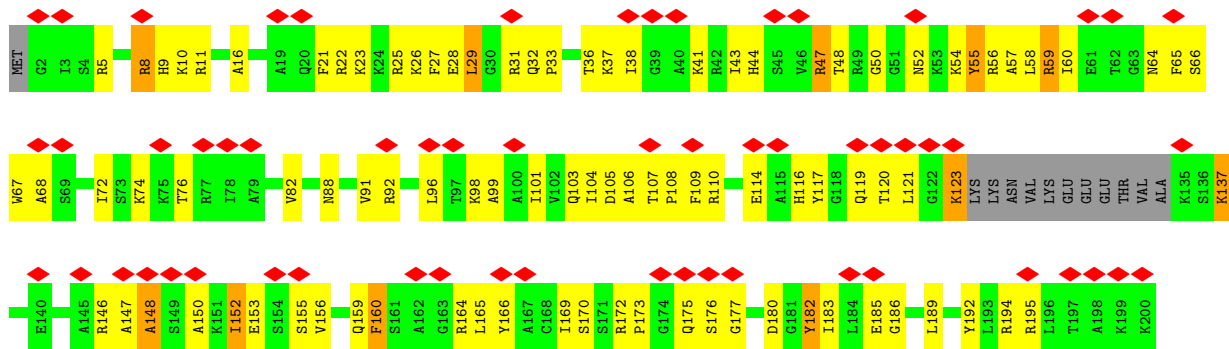




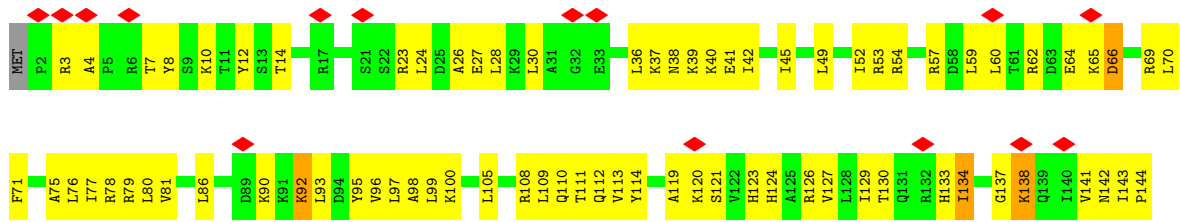
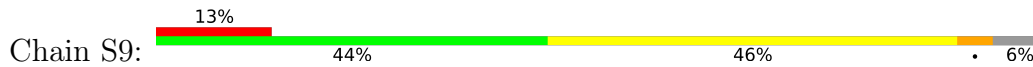
• Molecule 53: 40S ribosomal protein S7

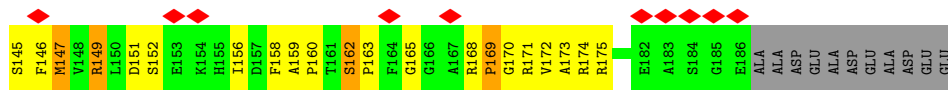


• Molecule 54: 40S ribosomal protein S8

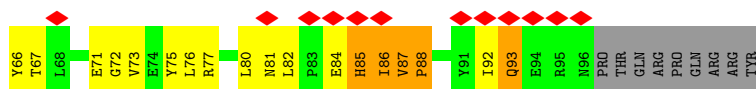
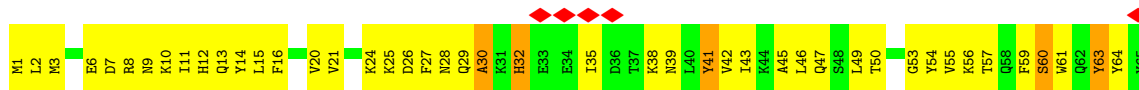
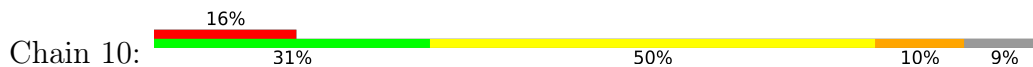


• Molecule 55: 40S ribosomal protein S9

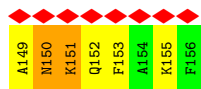
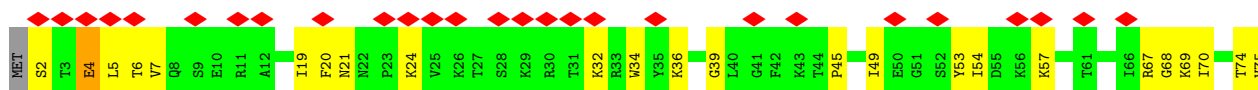




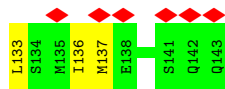
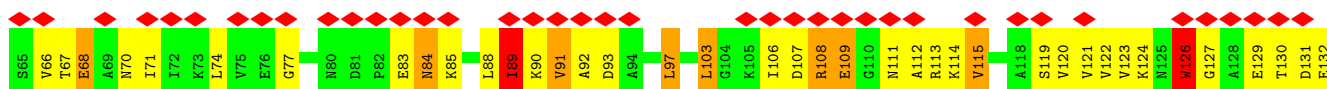
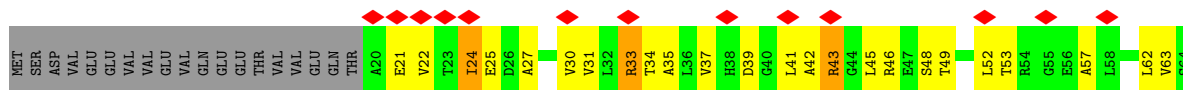
• Molecule 56: 40S ribosomal protein S10



• Molecule 57: 40S ribosomal protein S11

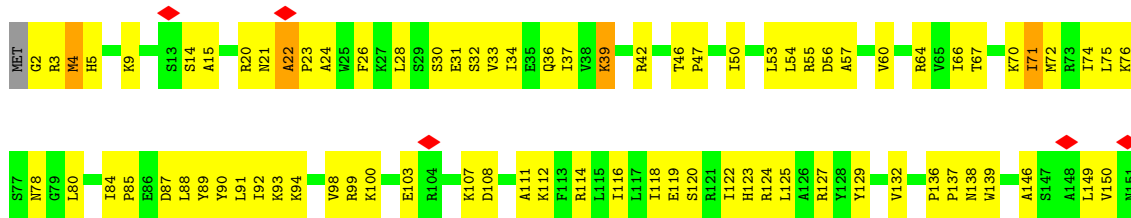


• Molecule 58: 40S ribosomal protein S12

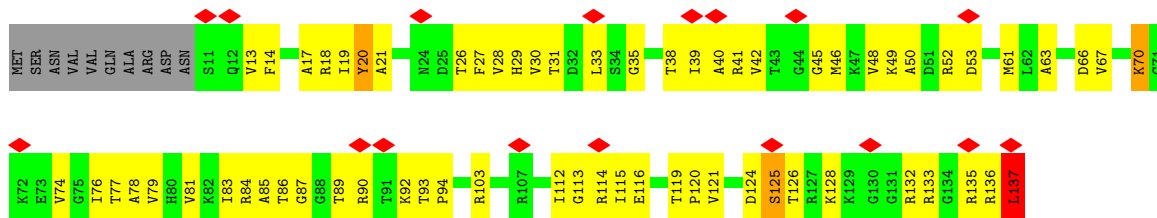


• Molecule 59: 40S ribosomal protein S13

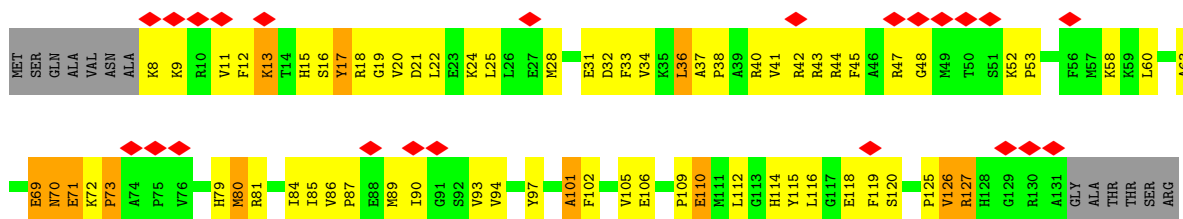




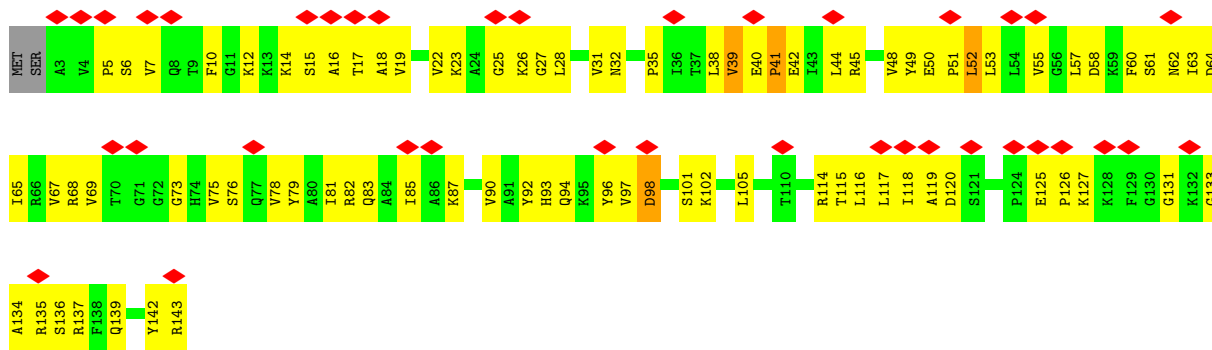
• Molecule 60: 40S ribosomal protein S14



• Molecule 61: 40S ribosomal protein S15

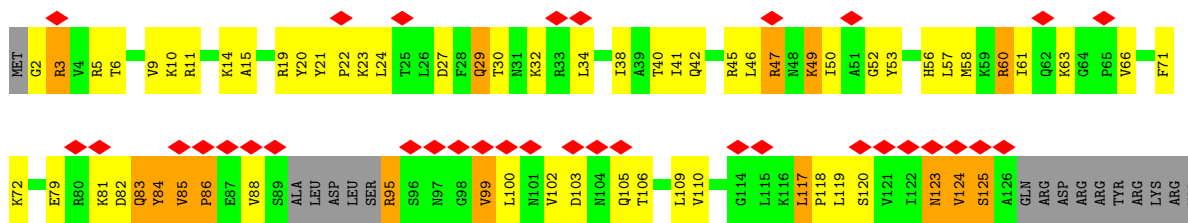


• Molecule 62: 40S ribosomal protein S16

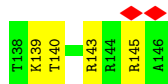
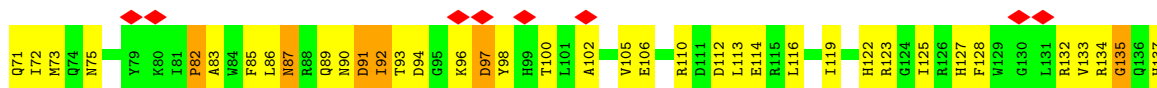
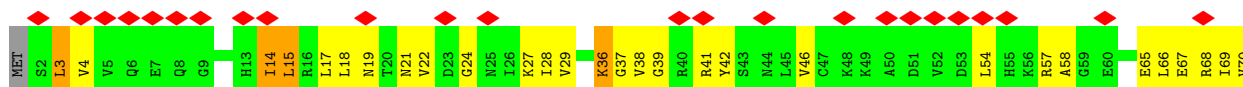


• Molecule 63: 40S ribosomal protein S17





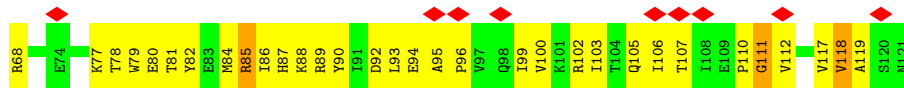
- Molecule 64: 40S ribosomal protein S18



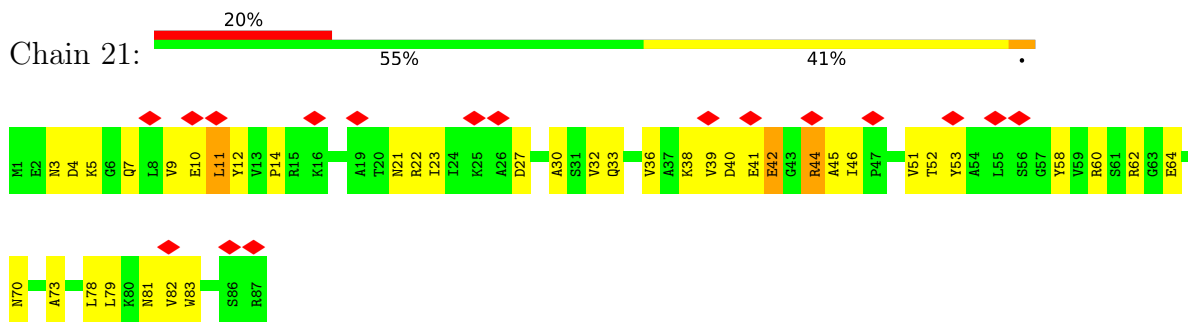
- Molecule 65: 40S ribosomal protein S19



- Molecule 66: 40S ribosomal protein S20



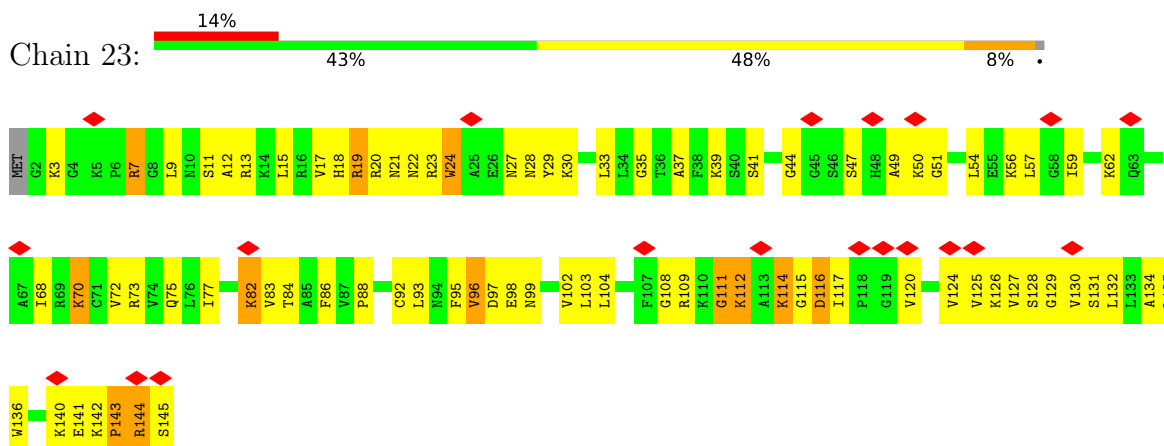
- Molecule 67: 40S ribosomal protein S21



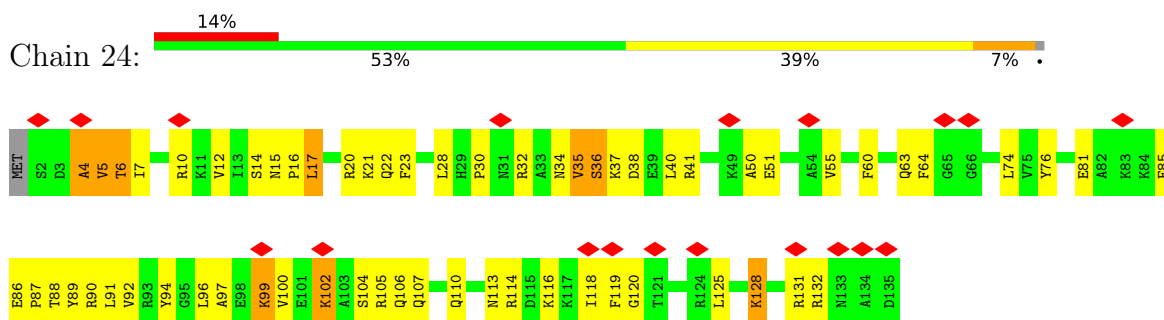
• Molecule 68: 40S ribosomal protein S22



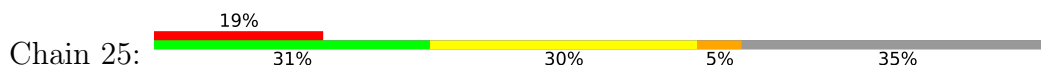
• Molecule 69: 40S ribosomal protein S23

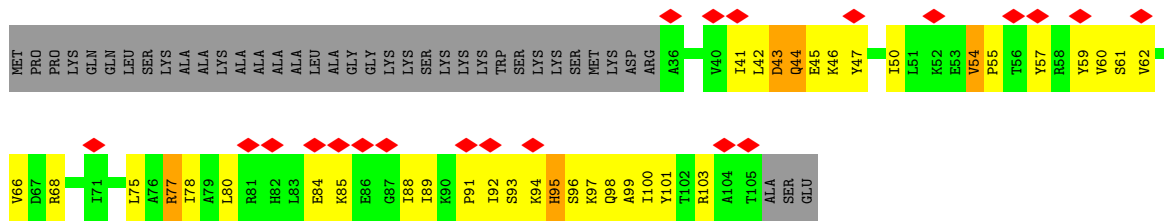


• Molecule 70: 40S ribosomal protein S24

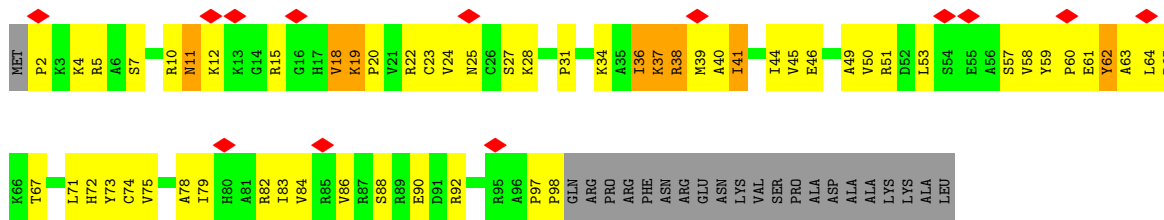


• Molecule 71: 40S ribosomal protein S25





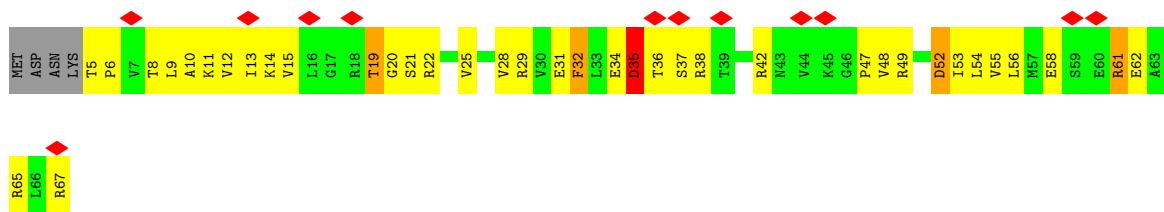
• Molecule 72: 40S ribosomal protein S26



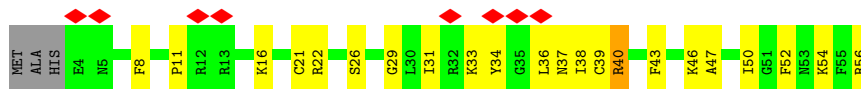
• Molecule 73: 40S ribosomal protein S27



• Molecule 74: 40S ribosomal protein S28

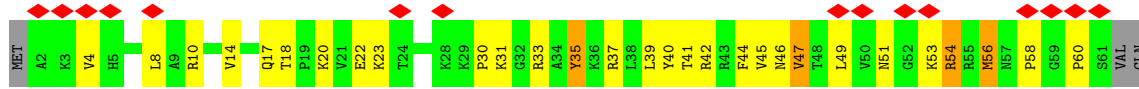


• Molecule 75: 40S ribosomal protein S29

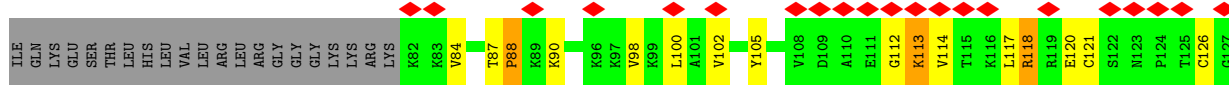


• Molecule 76: 40S ribosomal protein S30

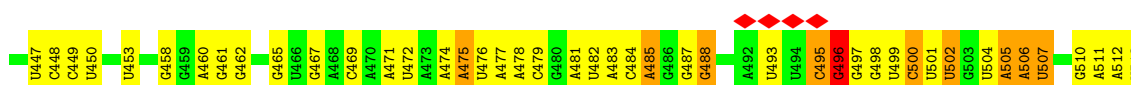
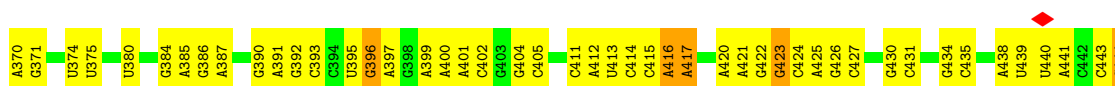
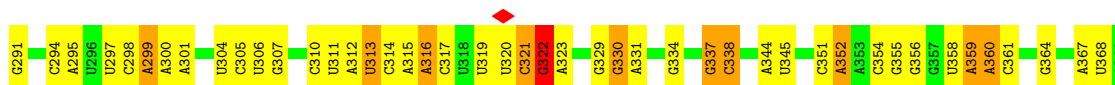
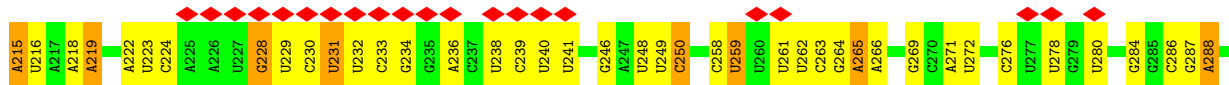
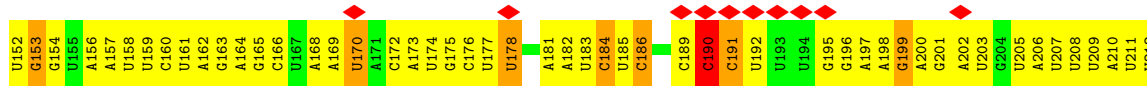
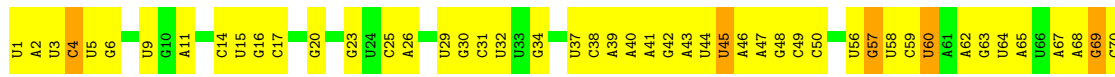




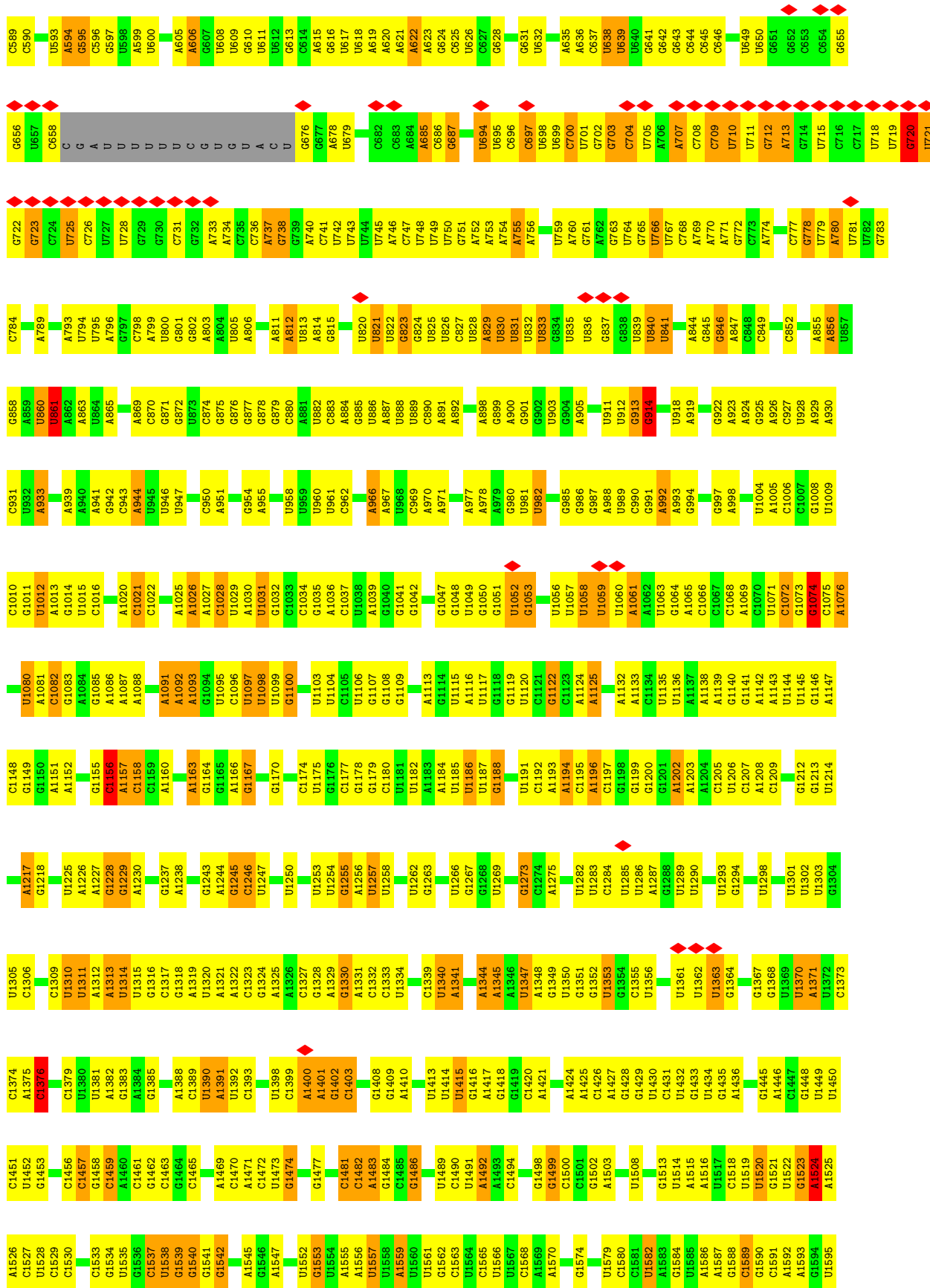
• Molecule 77: 40S ribosomal protein S31

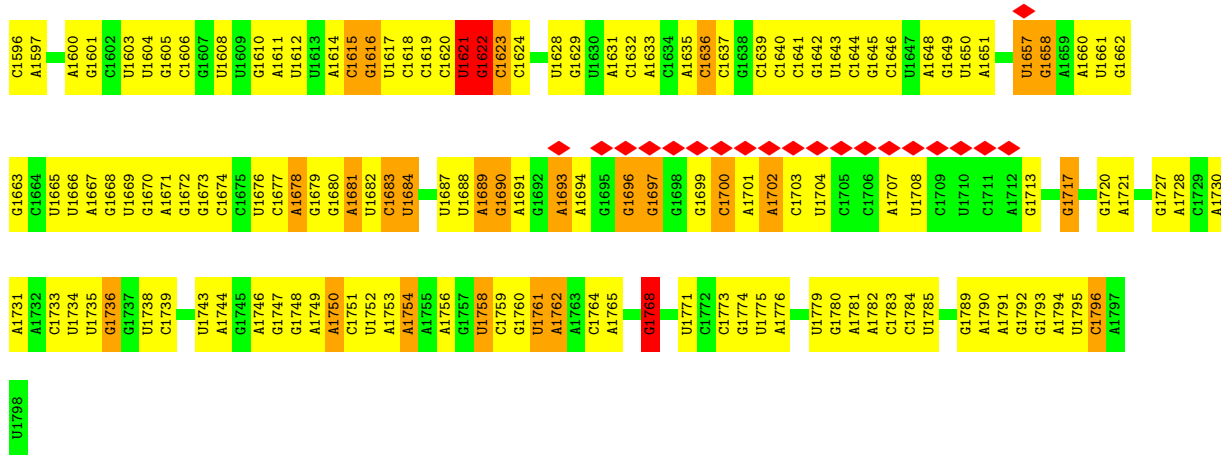


• Molecule 78: 18S ribosomal RNA

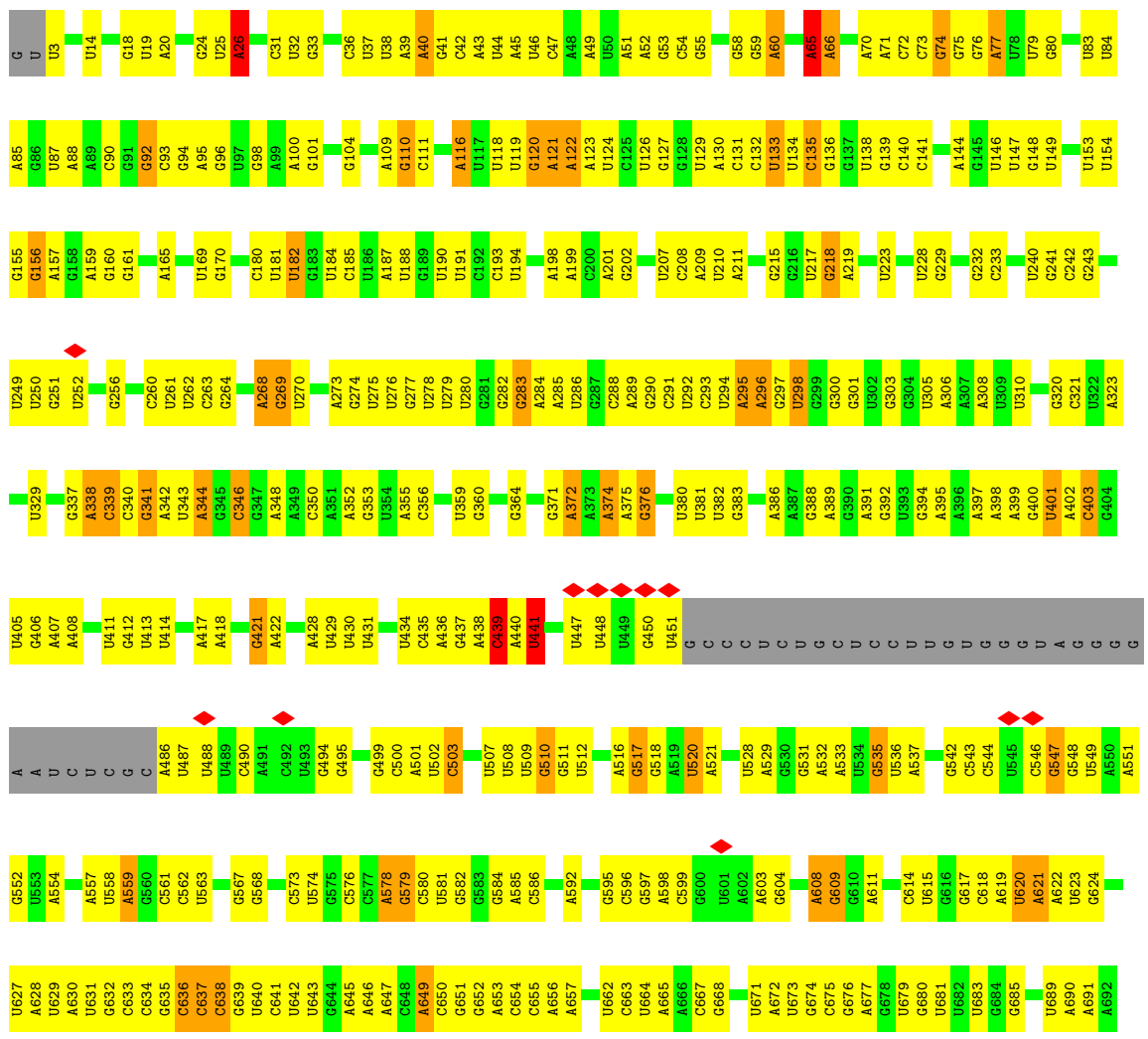


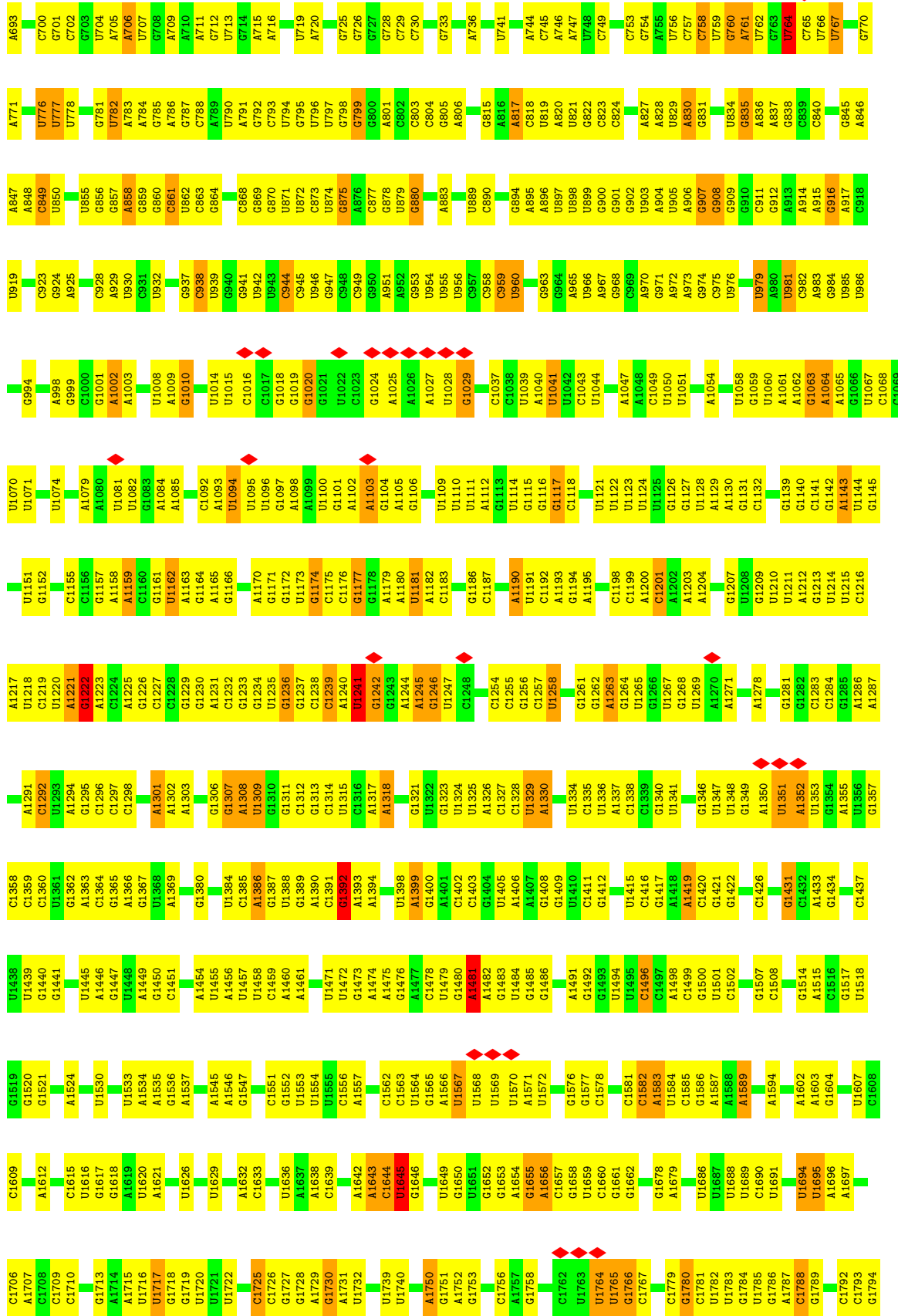




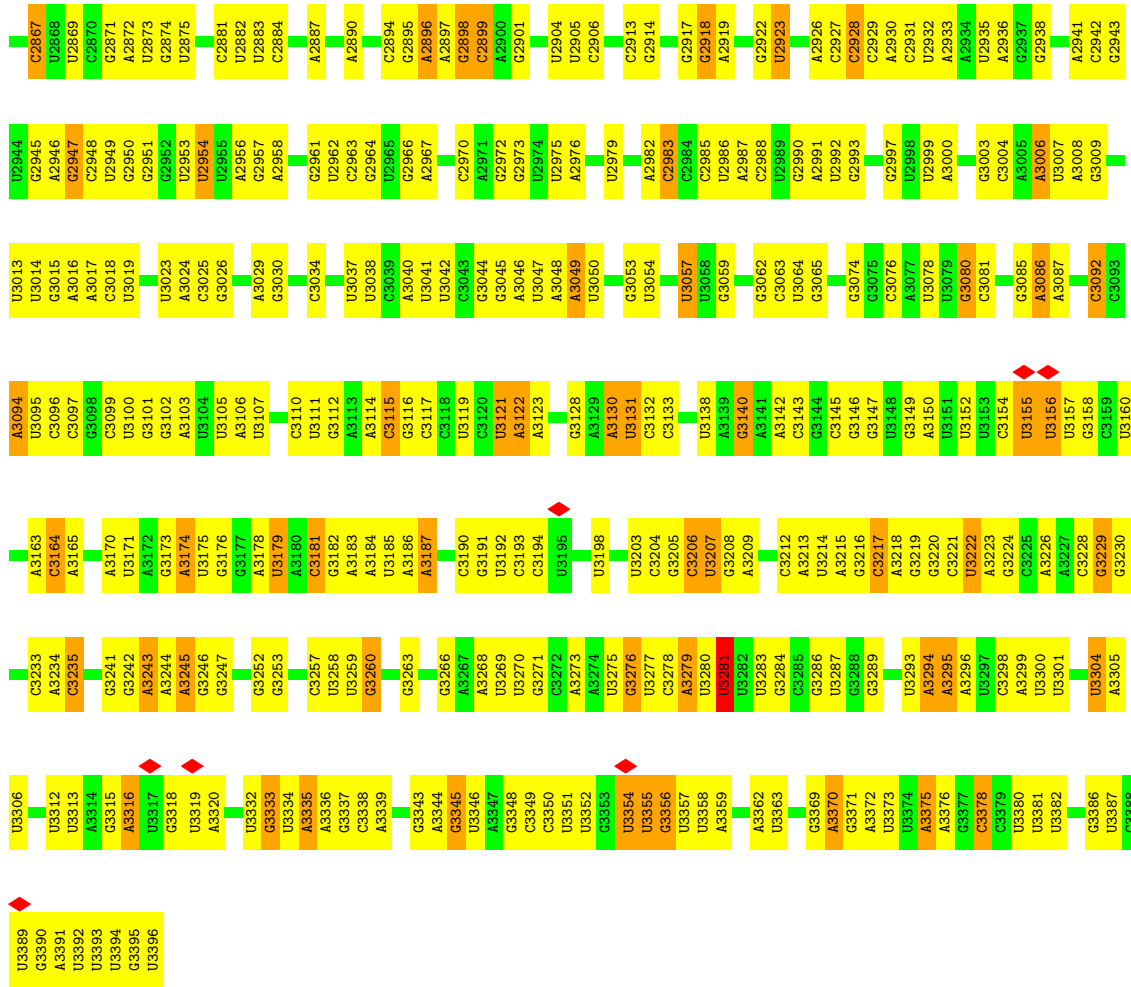


• Molecule 79: 25S ribosomal RNA

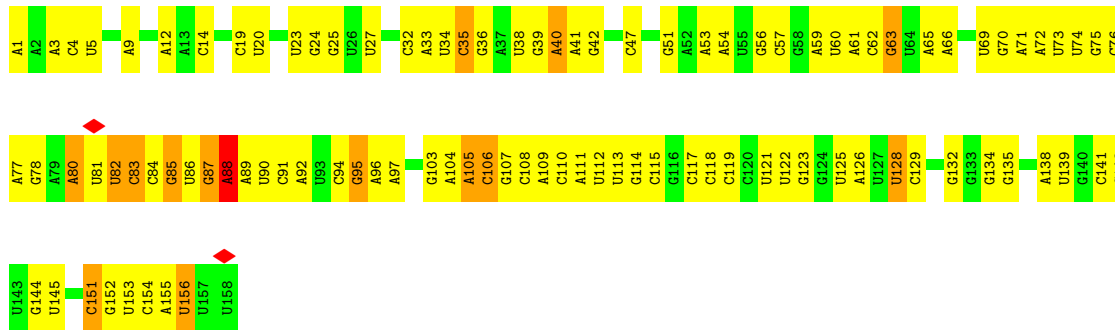






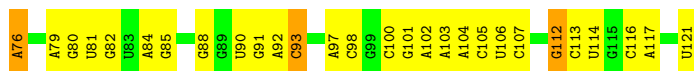


• Molecule 80: 5.8S ribosomal RNA

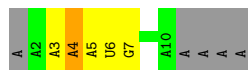
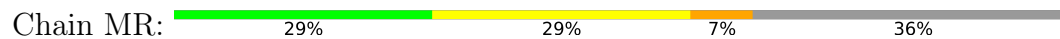


• Molecule 81: 5S ribosomal RNA

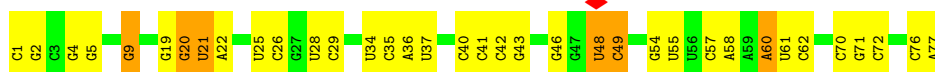




- Molecule 82: messenger RNA



- Molecule 83: P/E-site initiator transfer RNA<sup>fMet</sup>



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	25136	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 ( $e^-/\text{\AA}^2$ )	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	0.470	Depositor
Minimum map value	-0.182	Depositor
Average map value	0.006	Depositor
Map value standard deviation	0.048	Depositor
Recommended contour level	0.12	Depositor
Map size ( $\text{\AA}$ )	377.99997, 377.99997, 377.99997	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	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	0.59	0/1634	0.65	0/2195
2	L2	0.43	0/1952	0.56	0/2622
3	L3	0.48	0/3153	0.58	1/4239 (0.0%)
4	L4	0.46	0/2802	0.59	0/3792
5	L5	0.53	0/2426	0.58	0/3271
6	L6	0.51	0/1261	0.59	0/1694
7	L7	0.48	0/1822	0.58	0/2451
8	L8	0.49	0/1850	0.60	0/2495
9	L9	0.50	0/1540	0.59	0/2073
10	60	0.48	0/1754	0.56	0/2350
11	61	0.50	0/1375	0.55	0/1842
12	62	0.53	0/734	0.72	8/1015 (0.8%)
13	63	0.48	0/1568	0.58	0/2106
14	64	0.49	0/1069	0.58	0/1438
15	65	0.45	0/1758	0.54	0/2354
16	66	0.48	0/1586	0.56	0/2128
17	67	0.48	0/1466	0.60	0/1968
18	68	0.46	0/1466	0.61	0/1965
19	69	0.43	0/1539	0.58	0/2050
20	70	0.51	0/1482	0.53	0/1990
21	71	0.49	0/1301	0.56	0/1743
22	72	0.57	0/812	0.58	0/1099
23	73	0.47	0/1019	0.56	0/1369
24	74	0.54	0/1103	0.61	0/1458
25	75	0.49	0/984	0.63	0/1325
26	76	0.46	0/1005	0.58	0/1341
27	77	0.51	0/1119	0.53	0/1497
28	78	0.46	0/1205	0.62	0/1612
29	79	0.45	0/474	0.59	0/629
30	80	0.49	0/751	0.57	0/1008
31	81	0.48	0/904	0.59	0/1213
32	82	0.47	0/1041	0.58	0/1394
33	83	0.50	0/869	0.58	0/1168
34	84	0.46	0/891	0.56	0/1191



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
35	85	0.45	0/979	0.58	0/1301
36	86	0.47	0/779	0.60	0/1034
37	87	0.47	0/697	0.55	0/923
38	88	0.51	0/619	0.58	0/826
39	89	0.47	0/444	0.56	0/588
40	90	0.45	0/424	0.59	0/562
41	91	0.44	0/235	0.58	0/300
42	92	0.48	0/861	0.58	0/1136
43	93	0.45	0/702	0.56	0/934
44	P0	0.63	0/982	0.65	0/1320
45	RC	0.56	0/2498	0.62	0/3398
46	S0	0.54	0/1653	0.62	0/2261
47	S1	0.53	0/1735	0.62	0/2335
48	S2	0.49	0/1665	0.58	0/2263
49	S3	0.54	0/1759	0.59	0/2368
50	S4	0.50	0/2110	0.60	0/2839
51	S5	0.51	0/1630	0.61	0/2202
52	S6	0.51	0/1844	0.59	0/2464
53	S7	0.52	0/1506	0.60	0/2028
54	S8	0.51	0/1515	0.60	0/2021
55	S9	0.49	0/1519	0.63	0/2035
56	10	0.57	0/837	0.63	0/1131
57	11	0.53	0/1273	0.58	0/1712
58	12	0.59	0/943	0.70	0/1274
59	13	0.47	0/1216	0.61	0/1638
60	14	0.49	0/953	0.63	1/1279 (0.1%)
61	15	0.54	0/1012	0.64	0/1356
62	16	0.54	0/1126	0.63	0/1510
63	17	0.58	0/974	0.67	0/1304
64	18	0.51	0/1212	0.59	1/1628 (0.1%)
65	19	0.56	0/1131	0.62	0/1517
66	20	0.55	0/866	0.60	0/1169
67	21	0.50	0/694	0.59	0/935
68	22	0.49	0/1039	0.59	0/1395
69	23	0.45	0/1140	0.59	1/1518 (0.1%)
70	24	0.52	0/1088	0.58	0/1449
71	25	0.52	0/571	0.66	0/768
72	26	0.49	0/782	0.57	0/1047
73	27	0.51	0/621	0.58	0/838
74	28	0.50	0/500	0.61	0/670
75	29	0.55	0/454	0.60	0/602
76	30	0.51	0/483	0.60	0/643
77	31	0.57	0/505	0.69	1/682 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
78	1S	0.76	2/42445 (0.0%)	0.74	18/66138 (0.0%)
79	2S	0.71	6/78685 (0.0%)	0.72	23/122674 (0.0%)
80	8S	0.70	1/3747 (0.0%)	0.71	3/5832 (0.1%)
81	5S	0.70	2/2884 (0.1%)	0.69	0/4491
82	MR	0.86	0/219	0.82	0/339
83	PT	0.78	1/1836 (0.1%)	0.73	0/2859
All	All	0.64	12/223107 (0.0%)	0.68	57/327621 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
78	1S	1	35
79	2S	2	51
80	8S	0	4
81	5S	0	1
83	PT	0	1
All	All	3	92

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
78	1S	1	U	OP3-P	-6.85	1.52	1.61
83	PT	1	C	OP3-P	-6.77	1.53	1.61
80	8S	1	A	OP3-P	-6.77	1.53	1.61
81	5S	1	G	OP3-P	-6.76	1.53	1.61
79	2S	486	A	P-O5'	6.24	1.66	1.59
79	2S	448	U	N1-C2	6.19	1.44	1.38
79	2S	441	U	N1-C2	6.13	1.44	1.38
81	5S	1	G	P-O5'	5.28	1.65	1.59
79	2S	488	U	N1-C2	5.17	1.43	1.38
79	2S	2037	G	P-O5'	5.16	1.65	1.59
78	1S	676	G	P-O5'	5.14	1.64	1.59
79	2S	490	C	N1-C2	5.08	1.45	1.40

All (57) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
78	1S	1621	U	C2'-C3'-O3'	8.11	127.34	109.50
79	2S	65	A	C2'-C3'-O3'	7.44	125.86	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	8S	88	A	N9-C1'-C2'	7.40	123.62	114.00
79	2S	2545	C	N1-C1'-C2'	7.01	123.11	114.00
78	1S	720	G	N9-C1'-C2'	7.00	123.09	114.00
79	2S	2593	A	C2'-C3'-O3'	6.82	124.61	113.70
78	1S	1524	A	N9-C1'-C2'	6.69	122.70	114.00
78	1S	1257	U	N1-C1'-C2'	6.68	122.69	114.00
78	1S	861	U	N1-C1'-C2'	6.41	122.34	114.00
79	2S	2541	U	C2'-C3'-O3'	6.33	123.83	113.70
3	L3	350	ALA	N-CA-C	-6.23	94.18	111.00
78	1S	1156	C	N1-C1'-C2'	6.21	122.07	114.00
78	1S	1031	U	N1-C1'-C2'	6.12	121.95	114.00
79	2S	2571	U	N1-C1'-C2'	6.09	121.92	114.00
79	2S	1809	A	N9-C1'-C2'	6.05	121.86	114.00
78	1S	453	U	N1-C1'-C2'	5.99	121.79	114.00
79	2S	2537	U	O4'-C1'-N1	5.99	113.00	108.20
12	62	89	PRO	N-CA-CB	5.96	110.45	103.30
78	1S	496	G	N9-C1'-C2'	5.93	121.71	114.00
79	2S	764	U	C2'-C3'-O3'	5.88	123.11	113.70
60	14	137	LEU	CA-CB-CG	5.87	128.80	115.30
80	8S	85	G	C2'-C3'-O3'	5.79	122.96	113.70
12	62	75	PRO	N-CA-CB	5.78	110.23	103.30
79	2S	2544	U	N1-C1'-C2'	5.77	121.50	114.00
78	1S	190	C	N1-C1'-C2'	5.65	121.34	114.00
79	2S	486	A	OP1-P-OP2	-5.64	111.14	119.60
79	2S	439	C	N1-C1'-C2'	5.60	121.28	114.00
78	1S	1376	C	N1-C1'-C2'	5.57	121.24	114.00
78	1S	1768	G	N9-C1'-C2'	5.55	121.21	114.00
78	1S	501	U	N1-C1'-C2'	5.52	121.17	114.00
79	2S	1645	U	N1-C1'-C2'	5.48	121.13	114.00
12	62	34	PRO	N-CA-CB	5.44	109.83	103.30
12	62	163	PRO	N-CA-CB	5.40	109.78	103.30
79	2S	2037	G	OP1-P-OP2	-5.39	111.51	119.60
64	18	3	LEU	CA-CB-CG	5.36	127.63	115.30
77	31	88	PRO	N-CA-CB	5.36	109.73	103.30
12	62	88	PRO	N-CA-CB	5.36	109.73	103.30
79	2S	1241	U	C2'-C3'-O3'	5.36	122.27	113.70
79	2S	3354	U	N1-C1'-C2'	5.36	120.96	114.00
12	62	39	PRO	N-CA-CB	5.35	109.72	103.30
78	1S	1622	G	O4'-C1'-N9	5.35	112.48	108.20
12	62	30	PRO	N-CA-CB	5.33	109.70	103.30
12	62	148	PRO	N-CA-CB	5.31	109.67	103.30
78	1S	143	G	N9-C1'-C2'	5.30	120.89	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	2S	1103	A	N9-C1'-C2'	5.30	120.89	114.00
79	2S	1481	A	N9-C1'-C2'	5.22	120.78	114.00
79	2S	1494	U	N1-C1'-C2'	5.21	120.78	114.00
79	2S	1644	C	N1-C1'-C2'	5.21	120.78	114.00
78	1S	676	G	OP1-P-OP2	-5.20	111.79	119.60
78	1S	1621	U	C5'-C4'-O4'	5.19	115.32	109.10
69	23	111	GLY	N-CA-C	-5.10	100.35	113.10
79	2S	2093	A	OP1-P-OP2	-5.09	111.96	119.60
79	2S	2794	G	N9-C1'-C2'	5.08	120.60	114.00
79	2S	979	U	N1-C1'-C2'	5.04	120.55	114.00
80	8S	1	A	OP1-P-OP2	-5.03	112.06	119.60
78	1S	728	U	N1-C1'-C2'	5.02	120.53	114.00
79	2S	441	U	N1-C1'-C2'	5.00	120.51	114.00

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
78	1S	1621	U	C3'
79	2S	65	A	C3'
79	2S	2512	C	C3'

All (92) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
78	1S	1074	G	Sidechain
78	1S	1085	G	Sidechain
78	1S	1122	G	Sidechain
78	1S	1125	A	Sidechain
78	1S	1163	A	Sidechain
78	1S	121	U	Sidechain
78	1S	1255	G	Sidechain
78	1S	1353	U	Sidechain
78	1S	1376	C	Sidechain
78	1S	1402	G	Sidechain
78	1S	143	G	Sidechain
78	1S	1502	G	Sidechain
78	1S	1524	A	Sidechain
78	1S	1542	G	Sidechain
78	1S	1553	G	Sidechain
78	1S	1589	C	Sidechain
78	1S	1621	U	Sidechain
78	1S	1622	G	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
78	1S	1681	A	Sidechain
78	1S	1768	G	Sidechain
78	1S	196	G	Sidechain
78	1S	199	G	Sidechain
78	1S	313	U	Sidechain
78	1S	322	G	Sidechain
78	1S	330	G	Sidechain
78	1S	337	G	Sidechain
78	1S	396	G	Sidechain
78	1S	447	U	Sidechain
78	1S	50	C	Sidechain
78	1S	568	G	Sidechain
78	1S	737	A	Sidechain
78	1S	743	U	Sidechain
78	1S	82	U	Sidechain
78	1S	840	U	Sidechain
78	1S	914	G	Sidechain
79	2S	1190	A	Sidechain
79	2S	1222	G	Sidechain
79	2S	1392	G	Sidechain
79	2S	148	G	Sidechain
79	2S	1646	G	Sidechain
79	2S	1656	A	Sidechain
79	2S	1695	U	Sidechain
79	2S	1730	G	Sidechain
79	2S	1758	G	Sidechain
79	2S	1764	U	Sidechain
79	2S	1808	G	Sidechain
79	2S	1809	A	Sidechain
79	2S	1930	A	Sidechain
79	2S	1951	C	Sidechain
79	2S	2376	G	Sidechain
79	2S	2403	G	Sidechain
79	2S	2545	C	Sidechain
79	2S	26	A	Sidechain
79	2S	2626	A	Sidechain
79	2S	2635	A	Sidechain
79	2S	2642	A	Sidechain
79	2S	268	A	Sidechain
79	2S	2761	G	Sidechain
79	2S	2800	G	Sidechain
79	2S	2814	G	Sidechain

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Mol	Chain	Res	Type	Group
79	2S	2898	G	Sidechain
79	2S	2901	G	Sidechain
79	2S	296	A	Sidechain
79	2S	3006	A	Sidechain
79	2S	3026	G	Sidechain
79	2S	3140	G	Sidechain
79	2S	3281	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	400	G	Sidechain
79	2S	447	U	Sidechain
79	2S	65	A	Sidechain
79	2S	733	G	Sidechain
79	2S	760	G	Sidechain
79	2S	761	A	Sidechain
79	2S	770	G	Sidechain
79	2S	782	U	Sidechain
79	2S	835	G	Sidechain
79	2S	845	G	Sidechain
79	2S	857	G	Sidechain
79	2S	858	A	Sidechain
81	5S	62	U	Sidechain
80	8S	39	G	Sidechain
80	8S	40	A	Sidechain
80	8S	71	A	Sidechain
80	8S	88	A	Sidechain
83	PT	20	G	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	102	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	L2	1918	0	1987	149	0
3	L3	3082	0	3165	201	0
4	L4	2750	0	2863	193	0
5	L5	2376	0	2325	91	0
6	L6	1240	0	1326	74	0
7	L7	1785	0	1862	77	0
8	L8	1818	0	1908	115	0
9	L9	1519	0	1587	92	0
10	60	1718	0	1754	70	0
11	61	1354	0	1383	74	0
12	62	737	0	341	8	0
13	63	1543	0	1608	85	0
14	64	1054	0	1149	83	0
15	65	1721	0	1779	111	0
16	66	1556	0	1659	85	0
17	67	1443	0	1485	96	0
18	68	1442	0	1543	103	0
19	69	1522	0	1617	91	0
20	70	1446	0	1487	70	0
21	71	1277	0	1323	75	0
22	72	796	0	812	30	0
23	73	1004	0	1048	70	0
24	74	1089	0	1183	52	0
25	75	969	0	1036	57	0
26	76	994	0	1081	59	0
27	77	1093	0	1155	35	0
28	78	1174	0	1215	57	0
29	79	463	0	491	25	0
30	80	743	0	797	46	0
31	81	890	0	938	52	0
32	82	1020	0	1090	57	0
33	83	851	0	880	51	0
34	84	881	0	949	57	0
35	85	970	0	1078	55	0
36	86	772	0	849	45	0
37	87	682	0	687	43	0
38	88	613	0	682	30	0
39	89	437	0	475	21	0
40	90	418	0	459	17	0
41	91	234	0	284	10	0
42	92	848	0	918	55	0
43	93	695	0	738	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	P0	967	0	991	39	0
45	RC	2445	0	2401	108	0
46	S0	1612	0	1623	114	0
47	S1	1709	0	1784	152	0
48	S2	1635	0	1723	97	0
49	S3	1734	0	1817	96	0
50	S4	2069	0	2154	121	0
51	S5	1610	0	1675	128	0
52	S6	1820	0	1918	93	0
53	S7	1481	0	1572	113	0
54	S8	1490	0	1525	83	0
55	S9	1494	0	1573	108	0
56	10	817	0	804	62	0
57	11	1245	0	1314	62	0
58	12	935	0	975	57	0
59	13	1193	0	1255	66	0
60	14	942	0	979	69	0
61	15	991	0	1035	55	0
62	16	1106	0	1166	84	0
63	17	965	0	1026	75	0
64	18	1193	0	1222	62	0
65	19	1113	0	1124	66	0
66	20	856	0	917	56	0
67	21	685	0	672	36	0
68	22	1022	0	1060	67	0
69	23	1122	0	1196	85	0
70	24	1074	0	1132	56	0
71	25	563	0	603	38	0
72	26	769	0	818	51	0
73	27	611	0	633	19	0
74	28	498	0	535	35	0
75	29	444	0	436	26	0
76	30	475	0	525	36	0
77	31	498	0	441	23	0
78	1S	37949	0	19093	1032	0
79	2S	70300	0	35327	1725	0
80	8S	3354	0	1695	98	0
81	5S	2580	0	1304	68	0
82	MR	195	0	98	3	0
83	PT	1644	0	836	31	0
All	All	207751	0	153674	7427	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 (7427) 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)
60:14:87:GLY:HA3	60:14:120:PRO:HG2	1.29	1.15
78:1S:1621:U:H3	78:1S:1623:C:H5''	1.11	1.12
79:2S:1235:U:H4'	79:2S:1236:G:H5'	1.31	1.11
79:2S:1238:C:H3'	79:2S:1239:C:H5''	1.26	1.11
60:14:52:ARG:HD3	78:1S:905:A:H5''	1.30	1.10
79:2S:2493:U:H3'	79:2S:2494:A:H5''	1.29	1.10
49:S3:37:VAL:HG12	49:S3:50:ILE:HA	1.38	1.04
78:1S:218:A:H3'	78:1S:219:A:H5''	1.39	1.03
78:1S:845:G:H2'	78:1S:846:G:H5''	1.37	1.03
78:1S:1073:G:H2'	78:1S:1074:G:H5''	1.36	1.03
79:2S:1581:C:H2'	79:2S:1582:C:H5'	1.40	1.03
77:31:121:CYS:HB2	77:31:132:LEU:HD21	1.41	1.02
79:2S:2541:U:H1'	79:2S:2542:U:H4'	1.37	1.02
62:16:25:GLY:HA3	62:16:64:ASP:HB2	1.39	1.01
63:17:61:ILE:HG12	63:17:66:VAL:HG21	1.42	1.01
78:1S:138:A:N6	78:1S:266:A:H61	1.59	1.00
50:S4:6:LYS:HA	78:1S:94:U:H4'	1.43	0.99
48:S2:164:SER:HB3	78:1S:1086:A:H5'	1.44	0.99
79:2S:2476:C:H2'	79:2S:2477:G:H4'	1.43	0.99
53:S7:49:ILE:HG21	53:S7:175:LYS:HG2	1.46	0.98
79:2S:2356:A:H61	79:2S:2983:C:H41	1.01	0.98
2:L2:191:LEU:HD11	79:2S:1794:G:H4'	1.45	0.98
21:71:82:ASN:HA	29:79:21:ILE:HD13	1.44	0.97
53:S7:111:LYS:HG3	53:S7:112:ARG:H	1.27	0.97
13:63:74:GLY:HA3	13:63:98:ASP:HB2	1.42	0.97
78:1S:56:U:H4'	78:1S:57:G:H5'	1.46	0.97
59:13:71:ILE:H	59:13:71:ILE:HD12	1.25	0.97
1:L1:123:LEU:HD22	1:L1:128:LEU:HD12	1.47	0.97
6:L6:26:ARG:HB3	79:2S:502:U:H4'	1.47	0.97
79:2S:1844:C:H2'	79:2S:1845:G:H5''	1.45	0.97
62:16:52:LEU:HD12	62:16:57:LEU:HD23	1.46	0.96
18:68:171:LYS:H	28:78:56:VAL:HG11	1.28	0.96
72:26:18:VAL:HG23	72:26:19:LYS:H	1.28	0.96
79:2S:1818:U:H2'	79:2S:1819:U:H5''	1.44	0.96
18:68:179:ARG:HD2	18:68:182:LYS:HG2	1.47	0.95
78:1S:143:G:H2'	78:1S:144:U:H5''	1.46	0.95
78:1S:1621:U:N3	78:1S:1623:C:H5''	1.80	0.95
79:2S:2513:U:H3	79:2S:2593:A:H62	1.01	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:56:ALA:HA	4:L4:59:GLN:HE21	1.30	0.94
31:81:11:GLU:HG3	31:81:109:VAL:HG22	1.49	0.94
11:61:114:ILE:HG22	11:61:115:LYS:H	1.29	0.94
50:S4:31:PRO:HG3	50:S4:43:PRO:HG3	1.49	0.94
79:2S:109:A:H4'	79:2S:110:G:H5'	1.48	0.94
79:2S:2513:U:H3	79:2S:2593:A:N6	1.64	0.94
15:65:67:ARG:HH12	79:2S:2168:A:H5'	1.29	0.94
8:L8:50:VAL:HG12	25:75:30:ALA:HA	1.49	0.94
78:1S:1486:G:H8	78:1S:1593:A:H5'	1.32	0.94
49:S3:192:PRO:HB2	49:S3:201:ALA:HA	1.47	0.94
53:S7:151:LYS:HA	53:S7:182:VAL:HB	1.47	0.93
51:S5:122:ASN:HD22	51:S5:129:PRO:HD3	1.30	0.93
79:2S:1064:A:H62	79:2S:1096:U:H3	1.06	0.93
79:2S:2356:A:H61	79:2S:2983:C:N4	1.67	0.93
60:14:20:TYR:HB3	60:14:27:PHE:HB2	1.49	0.93
79:2S:2361:A:H61	79:2S:2377:G:H1	0.94	0.93
50:S4:137:PRO:HG2	50:S4:150:PRO:HD2	1.50	0.93
74:28:42:ARG:HD2	74:28:62:GLU:HG3	1.51	0.93
49:S3:42:THR:HB	49:S3:43:PRO:HD2	1.48	0.92
64:18:29:VAL:HG21	64:18:54:LEU:HD13	1.52	0.92
79:2S:1240:A:H3'	79:2S:1241:U:H5''	1.52	0.92
6:L6:146:ILE:HD13	6:L6:149:ILE:HD12	1.51	0.92
18:68:145:ASN:HD22	79:2S:745:C:H5''	1.34	0.92
71:25:54:VAL:H	71:25:55:PRO:HD2	1.35	0.92
19:69:165:LYS:HA	19:69:165:LYS:HE3	1.50	0.92
20:70:13:ARG:HG2	20:70:14:LEU:H	1.35	0.92
79:2S:1892:G:H3'	79:2S:1893:A:H5''	1.50	0.91
4:L4:154:THR:HG23	4:L4:252:GLU:HB3	1.50	0.91
77:31:130:VAL:HG11	77:31:143:LYS:HD3	1.49	0.91
79:2S:1352:A:H4'	79:2S:1353:U:H5'	1.48	0.91
39:89:22:PRO:HG3	79:2S:1517:G:H5''	1.49	0.91
79:2S:1943:C:H4'	79:2S:3346:U:H4'	1.53	0.91
56:10:15:LEU:HD13	56:10:21:VAL:HG23	1.51	0.91
14:64:21:VAL:HG12	14:64:65:LEU:HD23	1.53	0.91
49:S3:209:ILE:HG22	63:17:38:ILE:HG13	1.52	0.91
66:20:37:VAL:HG21	66:20:112:VAL:HG21	1.51	0.91
71:25:77:ARG:HH11	71:25:77:ARG:HB2	1.35	0.91
79:2S:2895:G:H2'	79:2S:2896:A:H5''	1.52	0.91
53:S7:143:LEU:HB2	53:S7:147:ASN:HB2	1.53	0.90
9:L9:137:SER:HB3	9:L9:143:GLU:HB3	1.53	0.90
2:L2:83:HIS:HB3	43:93:64:VAL:HG22	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:594:A:H4'	78:1S:595:G:H5'	1.52	0.90
6:L6:96:VAL:HG11	6:L6:141:VAL:HG13	1.50	0.90
78:1S:1157:A:N6	78:1S:1622:G:H1'	1.86	0.90
46:S0:80:THR:HA	46:S0:83:GLN:HG3	1.54	0.90
75:29:16:LYS:HE2	78:1S:1596:C:H5''	1.54	0.90
80:8S:110:C:H4'	80:8S:112:U:H5	1.37	0.90
53:S7:44:LYS:HE3	53:S7:63:PRO:HA	1.54	0.89
49:S3:126:VAL:HG12	49:S3:131:ALA:HB2	1.52	0.89
2:L2:133:TYR:HB3	2:L2:168:VAL:HG12	1.53	0.89
59:13:42:ARG:HH21	59:13:80:LEU:HD21	1.37	0.89
3:L3:88:GLY:HA3	3:L3:161:LEU:HD12	1.53	0.89
69:23:83:VAL:HG12	69:23:84:THR:H	1.38	0.89
14:64:58:ILE:HG12	14:64:59:ASN:H	1.36	0.89
79:2S:2533:G:H2'	79:2S:2534:G:H4'	1.53	0.89
81:5S:12:U:H5'	81:5S:69:C:H1'	1.55	0.88
1:L1:34:LEU:HD22	1:L1:209:SER:HB3	1.54	0.88
14:64:19:ARG:HA	14:64:69:THR:HG22	1.54	0.88
3:L3:86:VAL:HA	3:L3:162:VAL:HG12	1.56	0.88
23:73:102:ILE:HG23	23:73:110:LYS:HB3	1.55	0.88
63:17:3:ARG:HD2	78:1S:1414:U:H5''	1.56	0.88
3:L3:25:ILE:HD13	3:L3:25:ILE:H	1.39	0.87
51:S5:81:ARG:HH21	74:28:47:PRO:HA	1.39	0.87
79:2S:2778:G:H2'	79:2S:2779:A:H5''	1.52	0.87
78:1S:64:U:H2'	78:1S:65:A:H5''	1.56	0.87
79:2S:1002:A:H61	79:2S:1050:U:H1'	1.39	0.87
17:67:66:SER:HA	79:2S:2389:C:H5''	1.57	0.87
23:73:123:ALA:HB1	23:73:130:ALA:HB2	1.54	0.87
49:S3:60:GLY:HA3	49:S3:65:ARG:HG2	1.53	0.87
49:S3:176:LEU:HA	49:S3:181:VAL:HG12	1.54	0.87
74:28:8:THR:HB	74:28:56:LEU:HB2	1.55	0.87
79:2S:2530:G:H2'	79:2S:2531:C:H5''	1.56	0.87
69:23:144:ARG:HD2	69:23:145:SER:H	1.39	0.87
3:L3:296:THR:HG22	3:L3:297:SER:H	1.36	0.86
8:L8:150:LEU:HD23	8:L8:215:VAL:HG22	1.56	0.86
47:S1:125:VAL:HG22	47:S1:126:THR:H	1.38	0.86
79:2S:153:U:H2'	79:2S:154:U:H5''	1.55	0.86
67:21:39:VAL:HG12	67:21:45:ALA:HA	1.56	0.86
46:S0:106:SER:HA	46:S0:112:THR:HG21	1.57	0.86
78:1S:697:C:H3'	78:1S:698:U:H5''	1.56	0.86
71:25:41:ILE:HG13	71:25:42:LEU:H	1.41	0.86
78:1S:505:A:H3'	78:1S:506:A:H5''	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:134:TYR:H	8:L8:134:TYR:HD2	1.21	0.86
20:70:9:VAL:HG22	20:70:61:ILE:HD13	1.57	0.86
37:87:21:ARG:HH21	37:87:39:TYR:HD2	1.22	0.86
42:92:98:LYS:HD2	79:2S:2656:A:H4'	1.56	0.86
59:13:23:PRO:HB2	59:13:26:PHE:HB3	1.58	0.86
79:2S:2255:A:H62	79:2S:2260:U:H3	1.20	0.86
45:RC:129:LYS:HB3	45:RC:147:HIS:HB2	1.57	0.86
78:1S:1196:A:H4'	78:1S:1197:C:H5''	1.57	0.86
79:2S:2567:C:H3'	79:2S:2568:C:H5''	1.58	0.86
33:83:49:ILE:HD11	33:83:71:VAL:HG22	1.57	0.86
45:RC:136:ILE:HD13	45:RC:136:ILE:H	1.41	0.85
79:2S:1951:C:H6	79:2S:2095:G:H1	1.23	0.85
19:69:104:ARG:HB3	19:69:104:ARG:NH1	1.90	0.85
21:71:76:ILE:HG22	21:71:77:ASN:H	1.39	0.85
78:1S:504:U:H2'	78:1S:505:A:H4'	1.56	0.85
78:1S:364:G:H21	78:1S:756:A:H61	1.21	0.85
15:65:169:LYS:HG2	15:65:174:ILE:HD12	1.56	0.85
19:69:53:LYS:HG2	19:69:54:ALA:H	1.40	0.85
25:75:70:GLU:HA	25:75:73:MET:HB2	1.56	0.85
64:18:36:LYS:H	64:18:36:LYS:HD3	1.41	0.85
79:2S:641:C:H42	79:2S:645:A:H8	1.21	0.85
2:L2:219:ILE:HD12	79:2S:2245:C:H5''	1.59	0.85
14:64:8:LYS:HE2	79:2S:3187:A:H5''	1.58	0.85
45:RC:30:PRO:HB3	45:RC:296:ALA:HB3	1.57	0.85
79:2S:2493:U:H3'	79:2S:2494:A:C5'	2.05	0.85
55:S9:39:LYS:HD3	55:S9:42:ILE:HD12	1.57	0.85
11:61:10:ARG:HG2	81:5S:55:A:H1'	1.57	0.85
47:S1:219:LYS:HE2	47:S1:219:LYS:HA	1.58	0.85
70:24:35:VAL:HG13	70:24:36:SER:H	1.42	0.85
8:L8:54:GLU:HA	8:L8:57:ARG:HE	1.41	0.85
52:S6:132:ARG:HB3	52:S6:133:LEU:HD12	1.57	0.85
51:S5:187:ILE:H	51:S5:187:ILE:HD12	1.41	0.84
65:19:13:ASP:HA	65:19:16:ASN:HD22	1.42	0.84
1:L1:155:ILE:HG23	1:L1:163:LEU:HG	1.57	0.84
4:L4:281:ILE:HG12	4:L4:282:SER:H	1.40	0.84
36:86:15:LYS:HG3	36:86:17:VAL:HG23	1.58	0.84
46:S0:126:PRO:HG3	46:S0:147:THR:HG22	1.57	0.84
20:70:12:ARG:HD3	20:70:24:LEU:HG	1.57	0.84
69:23:134:ALA:HB1	69:23:140:LYS:H	1.41	0.84
78:1S:482:U:H2'	78:1S:483:A:H8	1.42	0.84
4:L4:23:PRO:HD2	4:L4:26:PHE:HE2	1.41	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:627:U:H4'	79:2S:1399:A:H1'	1.59	0.84
79:2S:2917:G:H2'	79:2S:2918:G:H5''	1.60	0.84
7:L7:232:ARG:HB2	7:L7:235:PHE:HB2	1.59	0.84
78:1S:1400:A:H2'	78:1S:1401:A:H5'	1.60	0.84
79:2S:1813:A:H2'	79:2S:1814:A:H5''	1.58	0.84
16:66:108:ILE:HD12	16:66:160:ARG:HH21	1.43	0.84
79:2S:3348:G:H1	79:2S:3357:U:H3	1.21	0.84
78:1S:886:U:H2'	78:1S:887:A:C8	2.13	0.84
45:RC:193:ILE:HG22	45:RC:194:GLY:H	1.43	0.84
55:S9:38:ASN:HB3	55:S9:41:GLU:HG3	1.57	0.83
61:15:126:VAL:HG13	61:15:127:ARG:H	1.43	0.83
70:24:17:LEU:HD23	70:24:17:LEU:H	1.42	0.83
78:1S:712:G:H2'	78:1S:713:A:H5''	1.59	0.83
3:L3:66:LYS:HB3	23:73:88:ARG:HH22	1.44	0.83
64:18:110:ARG:HA	64:18:113:LEU:HD12	1.59	0.83
77:31:105:TYR:HB3	77:31:117:LEU:HB2	1.59	0.83
79:2S:1221:A:H3'	79:2S:1222:G:H5''	1.61	0.83
4:L4:42:VAL:HA	4:L4:45:ASN:HD22	1.44	0.83
4:L4:339:LEU:HA	4:L4:342:LYS:HB2	1.61	0.83
28:78:7:LYS:HA	28:78:10:LYS:HD3	1.60	0.83
33:83:30:ILE:HD12	33:83:98:VAL:HG11	1.60	0.83
62:16:40:GLU:HA	62:16:42:GLU:N	1.93	0.83
76:30:14:VAL:HA	76:30:17:GLN:HG2	1.57	0.83
62:16:97:VAL:HG12	62:16:98:ASP:H	1.44	0.83
78:1S:1020:A:H3'	78:1S:1021:C:H5''	1.59	0.83
48:S2:52:THR:HB	48:S2:55:GLU:HG2	1.61	0.83
65:19:40:SER:HB3	65:19:43:ASN:HD22	1.43	0.83
18:68:80:THR:HG22	18:68:100:THR:HB	1.58	0.82
54:S8:152:ILE:HA	57:11:24:LYS:HE2	1.61	0.82
75:29:22:ARG:HG2	75:29:38:ILE:HD11	1.61	0.82
79:2S:2056:U:H2'	79:2S:2057:G:H5'	1.60	0.82
79:2S:2922:G:H3'	79:2S:2923:U:H5''	1.60	0.82
47:S1:48:VAL:HG12	47:S1:49:ASN:H	1.41	0.82
68:22:65:LEU:H	68:22:65:LEU:HD13	1.43	0.82
79:2S:20:A:H61	80:8S:139:U:H3	1.27	0.82
3:L3:50:LYS:HB3	3:L3:332:ARG:HA	1.60	0.82
72:26:23:CYS:HB2	72:26:74:CYS:HB3	1.61	0.82
78:1S:1058:U:H5	78:1S:1061:A:N1	1.78	0.82
13:63:57:VAL:HG22	13:63:147:ILE:HD12	1.61	0.82
15:65:20:ARG:HH12	79:2S:2435:G:H5'	1.43	0.82
3:L3:220:VAL:HB	3:L3:334:ARG:HD3	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:211:A:H5'	79:2S:229:G:H1'	1.61	0.82
8:L8:157:VAL:HG12	8:L8:158:ASP:H	1.43	0.82
70:24:105:ARG:HD2	78:1S:443:C:H3'	1.61	0.82
78:1S:190:C:O2'	78:1S:191:C:H5'	1.79	0.82
50:S4:48:LEU:HG	50:S4:52:LEU:HD12	1.62	0.82
27:77:49:TYR:HD1	27:77:50:PRO:HD2	1.44	0.82
59:13:23:PRO:HG2	59:13:26:PHE:HD2	1.45	0.82
78:1S:1157:A:H62	78:1S:1622:G:H1'	1.44	0.82
4:L4:51:ALA:HB2	4:L4:105:THR:HG23	1.61	0.82
54:S8:38:ILE:HD11	54:S8:96:LEU:HD21	1.60	0.82
78:1S:143:G:C2'	78:1S:144:U:H5''	2.08	0.82
78:1S:950:C:H2'	78:1S:951:A:O4'	1.79	0.82
31:81:17:HIS:HB2	31:81:69:TYR:HB3	1.62	0.81
79:2S:1218:U:H2'	79:2S:1219:C:H5'	1.61	0.81
46:S0:17:LEU:HD23	46:S0:172:LEU:HD21	1.62	0.81
47:S1:229:MET:HB2	79:2S:2537:U:H3'	1.62	0.81
56:10:86:ILE:HD12	56:10:88:PRO:HD3	1.60	0.81
79:2S:2356:A:N6	79:2S:2983:C:H41	1.76	0.81
7:L7:146:GLN:HE22	7:L7:241:LYS:HE2	1.44	0.81
48:S2:69:ILE:HD11	48:S2:133:LYS:HD2	1.61	0.81
73:27:64:CYS:HB3	73:27:73:LEU:HD23	1.59	0.81
79:2S:1951:C:H2'	79:2S:2095:G:N2	1.95	0.81
55:S9:134:ILE:HA	55:S9:158:PHE:HA	1.61	0.81
78:1S:1012:U:H5'	78:1S:1012:U:H6	1.44	0.81
54:S8:137:LYS:H	54:S8:137:LYS:HD3	1.46	0.81
78:1S:71:A:H2'	78:1S:72:A:H4'	1.61	0.81
17:67:51:VAL:HG22	17:67:56:ARG:HG3	1.61	0.81
71:25:96:SER:O	71:25:97:LYS:HG2	1.81	0.81
78:1S:138:A:H62	78:1S:266:A:H61	1.29	0.81
79:2S:3163:A:H2'	79:2S:3164:C:H4'	1.60	0.81
26:76:43:TYR:HD1	26:76:126:LEU:HA	1.46	0.80
27:77:42:LEU:HD23	27:77:96:VAL:HG12	1.61	0.80
36:86:5:THR:HG23	36:86:12:ASN:HB2	1.64	0.80
39:89:42:ARG:HG3	39:89:47:THR:HB	1.62	0.80
44:P0:37:GLN:O	44:P0:41:VAL:HG23	1.81	0.80
1:L1:62:ASN:HB3	1:L1:151:VAL:HB	1.63	0.80
11:61:52:TYR:HA	11:61:61:ARG:HG2	1.62	0.80
41:91:25:LYS:HD3	79:2S:1923:C:H5''	1.63	0.80
78:1S:615:A:H2'	78:1S:616:G:C8	2.17	0.80
79:2S:2198:A:H1'	79:2S:2270:A:OP1	1.81	0.80
52:S6:64:LYS:HE2	52:S6:82:SER:HB2	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:90:LEU:HD21	1:L1:112:ALA:HB2	1.62	0.80
26:76:58:VAL:HG22	26:76:104:LEU:HD21	1.63	0.80
79:2S:1787:A:H2'	79:2S:1788:C:H5''	1.62	0.80
54:S8:25:ARG:HH22	78:1S:385:A:H5''	1.46	0.80
4:L4:6:VAL:HG23	4:L4:22:LEU:HD21	1.64	0.80
7:L7:86:VAL:HG22	7:L7:136:TYR:HB3	1.61	0.80
8:L8:148:ALA:HA	8:L8:201:THR:HG22	1.63	0.80
9:L9:172:ILE:HD13	9:L9:172:ILE:H	1.44	0.80
51:S5:200:ASN:HB3	51:S5:205:SER:HB2	1.63	0.80
8:L8:183:LYS:HA	8:L8:186:LEU:HD12	1.63	0.79
13:63:49:ARG:HH22	35:85:113:GLN:HE21	1.28	0.79
28:78:55:LYS:HG3	79:2S:2764:C:H5''	1.65	0.79
28:78:102:ILE:HB	28:78:125:VAL:HG22	1.62	0.79
51:S5:118:LEU:HD22	51:S5:129:PRO:HB2	1.65	0.79
79:2S:791:A:H2'	79:2S:792:G:H8	1.48	0.79
79:2S:1764:U:H3'	79:2S:1765:U:H5''	1.63	0.79
8:L8:158:ASP:HB2	8:L8:159:PRO:HD3	1.64	0.79
2:L2:248:GLY:HA2	78:1S:1012:U:H5''	1.64	0.79
21:71:102:ARG:O	21:71:106:LEU:HD23	1.83	0.79
64:18:100:THR:HB	64:18:105:VAL:HA	1.63	0.79
78:1S:218:A:H3'	78:1S:219:A:C5'	2.11	0.79
78:1S:749:U:H3	78:1S:800:U:H3	1.28	0.79
78:1S:777:C:H2'	78:1S:778:G:H5''	1.64	0.79
15:65:110:ALA:HB1	15:65:113:LEU:HD23	1.64	0.79
17:67:15:ALA:HB3	17:67:150:VAL:HG23	1.63	0.79
55:S9:92:LYS:O	55:S9:93:LEU:HB3	1.81	0.79
66:20:82:TYR:HB3	75:29:52:PHE:HB3	1.62	0.79
78:1S:992:A:H2'	78:1S:993:A:H5'	1.65	0.79
79:2S:405:U:H2'	79:2S:406:G:H5'	1.65	0.79
17:67:24:VAL:HG12	17:67:25:SER:H	1.46	0.79
26:76:68:GLY:HA2	26:76:84:LYS:HD2	1.64	0.79
47:S1:229:MET:HB2	79:2S:2537:U:H5'	1.62	0.79
47:S1:229:MET:CB	79:2S:2537:U:H3'	2.13	0.79
80:8S:107:G:H4'	80:8S:138:A:H5'	1.63	0.79
48:S2:45:VAL:HG21	48:S2:68:ILE:HG23	1.65	0.79
62:16:101:SER:O	62:16:105:LEU:HD13	1.82	0.79
66:20:22:ILE:HG13	66:20:23:ARG:H	1.48	0.79
75:29:21:CYS:HB3	75:29:26:SER:H	1.47	0.79
78:1S:845:G:C2'	78:1S:846:G:H5''	2.13	0.79
66:20:106:ILE:HG13	66:20:107:THR:H	1.48	0.79
78:1S:75:U:H2'	78:1S:76:A:H5''	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:99:LEU:HD12	79:2S:1722:U:H5''	1.64	0.79
25:75:82:LEU:HB2	25:75:124:VAL:HB	1.63	0.79
52:S6:98:ARG:HD3	52:S6:99:GLY:N	1.98	0.79
61:15:63:ALA:O	61:15:73:PRO:HB3	1.83	0.79
6:L6:82:ARG:HD2	33:83:104:PRO:HB3	1.65	0.78
9:L9:34:LEU:HD21	9:L9:149:ASN:HB3	1.64	0.78
17:67:39:TRP:O	17:67:114:VAL:HG12	1.82	0.78
1:L1:14:LYS:HE2	1:L1:178:VAL:HG23	1.65	0.78
4:L4:23:PRO:HG2	4:L4:258:LEU:HD23	1.65	0.78
21:71:88:ARG:O	79:2S:2722:U:H4'	1.82	0.78
55:S9:162:SER:HB2	55:S9:163:PRO:HD2	1.63	0.78
9:L9:151:VAL:HG11	79:2S:3111:U:H4'	1.66	0.78
18:68:16:ARG:HB2	18:68:53:PHE:HB3	1.64	0.78
66:20:118:VAL:HG22	66:20:119:ALA:H	1.48	0.78
9:L9:162:GLN:HE22	9:L9:180:TYR:HD1	1.29	0.78
72:26:36:ILE:HD11	72:26:38:ARG:HD3	1.66	0.78
78:1S:1641:C:H2'	78:1S:1642:G:C8	2.19	0.78
79:2S:26:A:H61	79:2S:59:G:H1	1.31	0.78
79:2S:1844:C:C2'	79:2S:1845:G:H5''	2.13	0.78
10:60:57:LEU:HG	10:60:130:ASP:HA	1.63	0.78
16:66:43:ILE:HB	16:66:136:THR:HB	1.65	0.78
9:L9:28:VAL:HG22	9:L9:33:THR:HA	1.63	0.78
10:60:57:LEU:HB2	10:60:131:ILE:HG13	1.66	0.78
79:2S:2821:C:H42	79:2S:2869:U:H3	1.30	0.78
43:93:7:LYS:HD2	79:2S:1926:C:H2'	1.65	0.78
67:21:70:ASN:HD22	67:21:83:TRP:HB2	1.47	0.78
79:2S:1951:C:H2'	79:2S:2095:G:H22	1.48	0.78
19:69:89:LEU:HD22	79:2S:2102:U:H4'	1.65	0.78
79:2S:1951:C:H6	79:2S:2095:G:H22	1.32	0.78
50:S4:160:VAL:HG13	50:S4:171:ASP:O	1.84	0.78
81:5S:112:G:H2'	81:5S:113:C:C6	2.18	0.78
4:L4:184:SER:HB2	4:L4:202:ARG:HG2	1.66	0.77
12:62:126:ALA:HB3	12:62:159:GLU:HA	1.66	0.77
79:2S:1480:G:H21	79:2S:1872:C:H5	1.28	0.77
17:67:86:LYS:HA	17:67:89:LYS:HD3	1.64	0.77
26:76:56:VAL:HG21	26:76:104:LEU:HB3	1.67	0.77
30:80:50:VAL:HG13	30:80:53:LYS:HE2	1.64	0.77
56:10:54:TYR:HB3	56:10:72:GLY:HA2	1.65	0.77
79:2S:1100:U:H2'	79:2S:1101:G:C8	2.19	0.77
32:82:79:VAL:HG22	32:82:108:ILE:HG12	1.66	0.77
45:RC:209:THR:HG22	45:RC:226:ALA:HB2	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:70:THR:HG22	49:S3:86:LEU:HD13	1.65	0.77
51:S5:106:LYS:HE2	78:1S:1527:C:H5''	1.64	0.77
65:19:137:ALA:O	65:19:141:GLU:HG2	1.84	0.77
78:1S:1646:C:H42	78:1S:1754:A:H61	1.30	0.77
78:1S:1657:U:H4'	78:1S:1658:G:H5''	1.65	0.77
16:66:3:VAL:HG13	16:66:4:GLU:H	1.47	0.77
78:1S:126:A:C2	78:1S:264:G:H4'	2.19	0.77
79:2S:1838:G:H5''	79:2S:1839:A:H5'	1.64	0.77
79:2S:791:A:H2'	79:2S:792:G:C8	2.20	0.77
79:2S:1110:U:H2'	79:2S:1111:U:C6	2.19	0.77
47:S1:70:LEU:HD11	47:S1:79:HIS:HB3	1.66	0.77
79:2S:1951:C:C6	79:2S:2095:G:N1	2.49	0.77
18:68:145:ASN:ND2	79:2S:745:C:H5''	1.99	0.77
21:71:41:ASP:HB2	21:71:97:LYS:HG3	1.66	0.77
23:73:93:LEU:HD23	23:73:93:LEU:H	1.49	0.77
24:74:39:LEU:HD13	24:74:44:LYS:HG3	1.66	0.77
44:P0:57:THR:HB	79:2S:1222:G:H2'	1.66	0.77
51:S5:166:ARG:O	51:S5:166:ARG:HD3	1.85	0.77
71:25:42:LEU:HD12	71:25:43:ASP:N	2.00	0.77
78:1S:913:G:H3'	78:1S:914:G:H5''	1.67	0.77
78:1S:1603:U:H2'	78:1S:1604:U:C6	2.20	0.77
79:2S:1158:A:H2'	79:2S:1159:A:H4'	1.64	0.77
72:26:44:ILE:HA	72:26:67:THR:HG23	1.67	0.77
79:2S:2376:G:H2'	79:2S:2377:G:C8	2.19	0.77
35:85:85:THR:HG22	35:85:87:ALA:H	1.50	0.77
3:L3:226:PHE:HD2	79:2S:1887:A:H1'	1.51	0.76
24:74:23:ARG:HG2	24:74:24:GLY:H	1.49	0.76
38:88:51:LEU:HD22	79:2S:1612:A:H5''	1.67	0.76
59:13:136:PRO:HG2	59:13:139:TRP:HB2	1.67	0.76
78:1S:954:G:H2'	78:1S:955:A:C8	2.20	0.76
79:2S:3158:G:H21	79:2S:3395:G:H1	1.32	0.76
80:8S:82:U:H4'	80:8S:87:G:H4'	1.67	0.76
66:20:99:ILE:O	66:20:103:ILE:HG12	1.85	0.76
26:76:13:ARG:HG2	80:8S:23:U:H5''	1.65	0.76
78:1S:1484:G:H1'	78:1S:1606:C:O2'	1.86	0.76
3:L3:215:ILE:HD12	3:L3:338:LEU:HD12	1.66	0.76
55:S9:149:ARG:HG2	55:S9:152:SER:HB2	1.66	0.76
60:14:29:HIS:HB3	60:14:41:ARG:HG3	1.66	0.76
65:19:100:ILE:O	65:19:104:VAL:HG23	1.86	0.76
78:1S:487:G:H1	78:1S:500:C:H42	1.32	0.76
79:2S:1893:A:H2'	79:2S:1894:U:C6	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2372:A:H5''	79:2S:2373:A:H5'	1.66	0.76
11:61:37:LEU:HD21	11:61:125:MET:HE1	1.67	0.76
14:64:64:VAL:HG22	14:64:65:LEU:H	1.51	0.76
28:78:63:LYS:HE2	28:78:65:GLN:HE22	1.50	0.76
45:RC:74:THR:HG22	45:RC:115:ILE:HD13	1.66	0.76
59:13:71:ILE:CD1	78:1S:961:U:H5''	2.15	0.76
79:2S:760:G:H1'	79:2S:771:A:N6	2.00	0.76
9:L9:18:VAL:HG12	9:L9:27:VAL:HG22	1.66	0.76
46:S0:110:TYR:CD1	46:S0:111:ILE:HG12	2.19	0.76
3:L3:261:MET:O	3:L3:264:VAL:HG22	1.86	0.76
24:74:82:ILE:HB	24:74:85:ALA:O	1.86	0.76
57:11:78:THR:HA	57:11:84:ILE:HG22	1.67	0.76
58:12:31:VAL:HG21	58:12:136:ILE:HD13	1.67	0.76
79:2S:218:G:H1'	79:2S:372:A:H1'	1.67	0.76
52:S6:135:PRO:HB2	52:S6:141:ILE:HG12	1.68	0.75
78:1S:126:A:H62	78:1S:291:G:H21	1.34	0.75
78:1S:1229:G:H21	78:1S:1256:A:H62	1.32	0.75
78:1S:1486:G:C8	78:1S:1593:A:H5'	2.20	0.75
79:2S:1040:A:H3'	79:2S:1041:U:H5''	1.67	0.75
79:2S:1054:A:H5''	79:2S:2637:A:H61	1.51	0.75
5:L5:20:PHE:HB2	5:L5:23:ARG:HB2	1.68	0.75
69:23:11:SER:HB3	78:1S:632:U:H4'	1.68	0.75
79:2S:656:A:H2'	79:2S:657:A:C8	2.21	0.75
79:2S:2248:C:H2'	79:2S:2273:G:C8	2.20	0.75
83:PT:48:U:H3'	83:PT:49:C:H5''	1.68	0.75
1:L1:103:LEU:HD13	1:L1:106:LYS:HD2	1.68	0.75
11:61:94:ARG:HD3	11:61:94:ARG:H	1.52	0.75
23:73:70:ARG:HB3	23:73:70:ARG:HH11	1.50	0.75
35:85:71:LYS:HA	35:85:71:LYS:HE3	1.67	0.75
42:92:15:LYS:HD3	42:92:18:ARG:HH11	1.51	0.75
2:L2:135:ILE:HD12	2:L2:149:ARG:HD3	1.67	0.75
48:S2:88:LYS:HG2	48:S2:89:GLN:H	1.50	0.75
45:RC:24:ALA:HB3	45:RC:34:LEU:HB3	1.69	0.75
45:RC:172:ALA:HB2	45:RC:202:LEU:HD13	1.68	0.75
71:25:75:LEU:HA	71:25:78:ILE:HD13	1.68	0.75
79:2S:1028:U:H3'	79:2S:1029:G:H5''	1.69	0.75
79:2S:1818:U:C2'	79:2S:1819:U:H5''	2.17	0.75
2:L2:225:ILE:HB	2:L2:238:ILE:HG12	1.66	0.75
16:66:46:GLU:HG3	16:66:49:ARG:H	1.52	0.75
49:S3:34:TYR:HE2	49:S3:37:VAL:HG13	1.50	0.75
51:S5:48:PHE:HE1	51:S5:64:VAL:HA	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1480:G:H5'	79:2S:1483:G:O4'	1.86	0.75
2:L2:190:ARG:HB3	2:L2:190:ARG:HH21	1.49	0.75
3:L3:99:LEU:HD13	3:L3:157:VAL:HG21	1.68	0.75
4:L4:138:ARG:HH12	4:L4:240:PRO:HD2	1.51	0.75
13:63:47:ALA:HB1	13:63:48:PRO:HD2	1.68	0.75
1:L1:207:LYS:HB2	1:L1:213:ALA:HB2	1.69	0.75
48:S2:229:LEU:HD21	67:21:23:ILE:HD11	1.68	0.75
50:S4:129:VAL:HA	50:S4:139:VAL:HG12	1.69	0.75
52:S6:162:VAL:HG13	52:S6:169:TYR:HB2	1.67	0.75
55:S9:66:ASP:HB3	55:S9:69:ARG:HB3	1.68	0.75
79:2S:1084:A:H2'	79:2S:1085:A:C8	2.21	0.75
79:2S:1231:A:H5''	79:2S:1232:C:H5'	1.69	0.75
8:L8:59:GLN:HA	8:L8:62:LYS:HE2	1.68	0.75
21:71:28:SER:HA	21:71:31:LEU:HD12	1.69	0.75
40:90:97:ARG:HE	40:90:122:ARG:HB3	1.52	0.75
78:1S:351:C:H5	78:1S:631:G:H5''	1.52	0.75
79:2S:2133:U:H2'	79:2S:2134:G:H5'	1.68	0.75
2:L2:9:ARG:NH1	79:2S:911:C:H3'	2.01	0.74
25:75:58:ASP:O	25:75:62:VAL:HG23	1.87	0.74
55:S9:59:LEU:HD22	55:S9:69:ARG:HA	1.69	0.74
6:L6:154:LEU:HD13	14:64:119:GLN:HG2	1.69	0.74
7:L7:143:THR:O	7:L7:147:LEU:HG	1.87	0.74
42:92:40:LYS:HA	83:PT:76:C:H42	1.50	0.74
65:19:73:VAL:HG13	65:19:101:ASN:HB3	1.68	0.74
79:2S:3392:U:H2'	79:2S:3393:U:C6	2.22	0.74
1:L1:101:LYS:NZ	1:L1:126:PRO:HG3	2.02	0.74
16:66:49:ARG:HG2	16:66:53:LYS:HE3	1.69	0.74
16:66:90:HIS:HA	16:66:95:GLY:HA3	1.69	0.74
26:76:27:ARG:HD3	26:76:75:ARG:HB3	1.69	0.74
46:S0:84:ARG:HH21	63:17:79:GLU:HA	1.52	0.74
47:S1:225:VAL:HA	79:2S:2537:U:C5	2.22	0.74
55:S9:14:THR:HG21	78:1S:23:G:H5'	1.70	0.74
4:L4:152:VAL:HG12	4:L4:153:SER:H	1.50	0.74
8:L8:27:THR:HG22	79:2S:2563:G:H5''	1.69	0.74
15:65:83:LYS:HB2	15:65:86:ASN:HD22	1.50	0.74
25:75:52:PRO:HB3	80:8S:135:G:H5'	1.68	0.74
35:85:66:VAL:HA	35:85:69:LEU:HD23	1.70	0.74
52:S6:42:GLY:HA3	52:S6:45:PHE:HD2	1.52	0.74
54:S8:76:THR:HG22	54:S8:108:PRO:HG2	1.67	0.74
18:68:170:ARG:HA	18:68:174:ARG:HD2	1.69	0.74
24:74:77:LYS:HE2	24:74:77:LYS:HA	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:16:ALA:HB2	78:1S:354:C:H5''	1.69	0.74
59:13:4:MET:HG3	59:13:5:HIS:H	1.51	0.74
8:L8:150:LEU:HA	8:L8:176:PRO:HG2	1.70	0.74
46:S0:31:VAL:HG23	46:S0:150:ASP:HA	1.67	0.74
69:23:96:VAL:HG23	69:23:97:ASP:H	1.51	0.74
78:1S:1400:A:C2'	78:1S:1401:A:H5'	2.18	0.74
79:2S:627:U:H2'	79:2S:628:A:C8	2.22	0.74
79:2S:820:A:H2'	79:2S:821:U:C6	2.23	0.74
2:L2:9:ARG:HH12	79:2S:911:C:H3'	1.53	0.74
11:61:19:LEU:HB3	11:61:125:MET:SD	2.27	0.74
20:70:115:ARG:HG3	20:70:117:ARG:HH11	1.50	0.74
3:L3:39:LYS:HE2	3:L3:40:PRO:HD3	1.70	0.74
7:L7:60:ARG:HH21	7:L7:63:ILE:HD12	1.53	0.74
45:RC:59:ARG:HB2	45:RC:59:ARG:HH11	1.53	0.74
53:S7:149:ILE:HG22	53:S7:150:GLN:H	1.53	0.74
58:12:31:VAL:HG22	58:12:133:LEU:HG	1.70	0.74
60:14:19:ILE:HB	60:14:83:ILE:HD12	1.68	0.74
68:22:53:ILE:HD11	68:22:60:LYS:HB2	1.69	0.74
20:70:106:LEU:O	20:70:110:MET:HG2	1.88	0.74
30:80:48:THR:HA	79:2S:1729:A:N6	2.03	0.74
78:1S:390:G:H8	78:1S:1731:A:H4'	1.52	0.74
79:2S:58:G:H2'	79:2S:59:G:C8	2.22	0.74
79:2S:829:U:H3	79:2S:895:A:H62	1.35	0.74
3:L3:159:ARG:HD3	3:L3:180:GLU:HB3	1.70	0.74
7:L7:222:HIS:HB3	7:L7:225:GLN:HB2	1.68	0.74
8:L8:136:LEU:HG	79:2S:147:U:H5'	1.70	0.74
15:65:159:ARG:HB3	15:65:164:LEU:HB2	1.69	0.74
20:70:24:LEU:HD13	21:71:148:PRO:HG3	1.70	0.74
20:70:129:ILE:HG23	20:70:134:ASP:HB2	1.69	0.74
79:2S:250:U:H5'	79:2S:251:G:H5''	1.70	0.74
38:88:40:GLN:NE2	38:88:42:LYS:HE3	2.03	0.73
47:S1:225:VAL:HA	79:2S:2537:U:C6	2.22	0.73
63:17:124:VAL:HG13	63:17:125:SER:H	1.52	0.73
78:1S:703:G:H2'	78:1S:704:C:H2'	1.68	0.73
78:1S:1041:G:H2'	78:1S:1042:G:C8	2.23	0.73
15:65:114:ARG:HG2	15:65:137:PRO:HG3	1.68	0.73
44:P0:5:ARG:HA	44:P0:5:ARG:HE	1.53	0.73
46:S0:119:ARG:HB3	46:S0:119:ARG:HH11	1.50	0.73
67:21:73:ALA:HB3	67:21:79:LEU:HD12	1.70	0.73
79:2S:1813:A:C2'	79:2S:1814:A:H5''	2.17	0.73
51:S5:183:ALA:HB3	51:S5:190:ILE:HD13	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:23:102:VAL:HG12	69:23:127:VAL:HA	1.70	0.73
69:23:130:VAL:HG11	69:23:143:PRO:HD3	1.71	0.73
78:1S:1344:A:H2'	78:1S:1345:A:H8	1.52	0.73
81:5S:75:G:H1'	81:5S:104:A:N6	2.03	0.73
2:L2:207:VAL:HG13	79:2S:2415:C:H5''	1.70	0.73
15:65:59:PHE:HD1	15:65:133:ILE:HD11	1.52	0.73
52:S6:106:LEU:HD13	52:S6:109:LEU:HD21	1.71	0.73
78:1S:218:A:C3'	78:1S:219:A:H5''	2.16	0.73
79:2S:181:U:H3'	79:2S:182:U:H5''	1.69	0.73
78:1S:1351:G:H2'	78:1S:1352:G:O4'	1.89	0.73
79:2S:585:A:H2'	79:2S:586:C:C6	2.23	0.73
79:2S:1261:G:H4'	79:2S:1278:A:N1	2.02	0.73
45:RC:218:GLY:O	45:RC:236:ALA:HB3	1.88	0.73
51:S5:122:ASN:ND2	51:S5:129:PRO:HD3	2.02	0.73
62:16:127:LYS:HB2	78:1S:1605:G:H5''	1.71	0.73
33:83:9:VAL:HB	33:83:100:ILE:HB	1.70	0.73
46:S0:84:ARG:NH2	63:17:79:GLU:HA	2.04	0.73
70:24:113:ASN:HA	70:24:116:LYS:HD3	1.70	0.73
78:1S:588:U:H2'	78:1S:589:C:C6	2.24	0.73
79:2S:516:A:H2'	79:2S:517:G:H5''	1.69	0.73
79:2S:2533:G:H5'	79:2S:2533:G:H8	1.52	0.73
26:76:100:HIS:ND1	79:2S:217:U:H4'	2.02	0.73
34:84:29:ILE:HD13	34:84:29:ILE:H	1.54	0.73
56:10:21:VAL:HB	56:10:66:TYR:HB2	1.70	0.73
75:29:36:LEU:HD12	75:29:37:ASN:H	1.53	0.73
79:2S:2561:A:HO2'	79:2S:2562:A:H8	1.36	0.73
11:61:164:LYS:NZ	11:61:171:VAL:HB	2.04	0.73
55:S9:76:LEU:HD12	55:S9:79:ARG:HE	1.54	0.73
74:28:58:GLU:OE1	74:28:61:ARG:HB3	1.88	0.73
79:2S:827:A:H2'	79:2S:828:A:C8	2.23	0.73
2:L2:49:VAL:HG22	2:L2:50:HIS:H	1.53	0.72
3:L3:243:HIS:HB3	79:2S:2948:C:H5''	1.71	0.72
16:66:65:ASN:HB3	16:66:68:ARG:HG2	1.71	0.72
45:RC:60:SER:HB2	62:16:94:GLN:HE21	1.54	0.72
47:S1:225:VAL:C	47:S1:227:ALA:H	1.89	0.72
79:2S:1336:U:H2'	79:2S:1337:A:H8	1.54	0.72
49:S3:21:LEU:HA	49:S3:24:PHE:HB3	1.70	0.72
78:1S:1449:U:H2'	78:1S:1450:U:C6	2.24	0.72
79:2S:1157:G:H2'	79:2S:1158:A:O4'	1.89	0.72
1:L1:120:VAL:HG12	1:L1:124:LEU:HD13	1.70	0.72
2:L2:214:GLY:HA3	2:L2:218:HIS:HE1	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:245:GLY:HA3	3:L3:248:LYS:HD3	1.70	0.72
13:63:70:ARG:HG2	13:63:71:ALA:H	1.53	0.72
14:64:17:VAL:HG11	14:64:74:ARG:HA	1.70	0.72
63:17:21:TYR:N	63:17:22:PRO:HD2	2.04	0.72
78:1S:1073:G:C2'	78:1S:1074:G:H5''	2.16	0.72
79:2S:2094:C:H2'	79:2S:2095:G:H8	1.54	0.72
53:S7:9:LEU:HG	53:S7:17:GLU:HB3	1.71	0.72
60:14:13:VAL:HG13	60:14:77:THR:H	1.54	0.72
62:16:52:LEU:HD23	62:16:52:LEU:H	1.54	0.72
63:17:123:ASN:HD22	63:17:123:ASN:H	1.34	0.72
69:23:50:LYS:HE3	78:1S:435:C:H5''	1.71	0.72
78:1S:1344:A:H2'	78:1S:1345:A:C8	2.24	0.72
79:2S:2476:C:H2'	79:2S:2477:G:C4'	2.18	0.72
79:2S:2741:C:H3'	79:2S:2742:C:H5''	1.72	0.72
81:5S:75:G:H1'	81:5S:104:A:H61	1.52	0.72
8:L8:51:LYS:HD2	79:2S:2523:A:H5''	1.71	0.72
15:65:67:ARG:HH12	79:2S:2168:A:C5'	2.02	0.72
28:78:114:GLY:HA3	28:78:133:LEU:HD22	1.70	0.72
45:RC:116:ASP:HB3	45:RC:156:VAL:HG11	1.71	0.72
45:RC:117:LYS:H	45:RC:117:LYS:HD2	1.54	0.72
74:28:10:ALA:HA	74:28:32:PHE:HA	1.71	0.72
16:66:43:ILE:HG22	16:66:44:SER:H	1.53	0.72
36:86:50:LEU:HD22	36:86:54:GLU:HB3	1.70	0.72
48:S2:178:ILE:HG21	48:S2:185:LYS:HA	1.71	0.72
52:S6:57:ASP:HA	52:S6:107:ALA:H	1.54	0.72
59:13:32:SER:O	59:13:36:GLN:HG2	1.90	0.72
62:16:143:ARG:HD2	78:1S:1191:U:H5'	1.70	0.72
69:23:114:LYS:HD3	78:1S:571:G:H5''	1.71	0.72
77:31:138:ARG:HA	77:31:151:ASN:HB3	1.71	0.72
78:1S:157:A:H2'	78:1S:158:U:H5''	1.71	0.72
78:1S:1058:U:C5	78:1S:1061:A:N1	2.57	0.72
7:L7:82:LYS:HB3	21:71:135:PRO:HG3	1.71	0.72
21:71:78:LYS:HB3	21:71:85:LEU:HB2	1.71	0.72
22:72:42:LYS:HG2	22:72:46:ALA:HA	1.71	0.72
34:84:59:PRO:HB3	79:2S:1654:A:H2	1.55	0.72
53:S7:50:ASP:HB3	53:S7:56:LYS:HG2	1.72	0.72
72:26:40:ALA:HB2	72:26:71:LEU:HD21	1.72	0.72
78:1S:1738:U:H2'	78:1S:1739:C:C6	2.24	0.72
79:2S:2895:G:C2'	79:2S:2896:A:H5''	2.18	0.72
26:76:87:LYS:HE2	79:2S:375:A:H1'	1.72	0.72
49:S3:158:ILE:H	49:S3:158:ILE:HD13	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:25:LEU:HD11	62:16:57:LEU:O	1.89	0.72
51:S5:128:ASN:HD22	51:S5:129:PRO:HD2	1.54	0.72
78:1S:826:U:H2'	78:1S:827:C:C6	2.24	0.72
79:2S:2953:U:H2'	79:2S:2954:U:H2'	1.71	0.72
14:64:14:LEU:HD23	20:70:151:PRO:HB3	1.71	0.72
18:68:171:LYS:N	28:78:56:VAL:HG11	2.03	0.72
22:72:37:LEU:O	22:72:41:ILE:HG13	1.89	0.72
29:79:36:ASP:HB3	29:79:39:PHE:HB3	1.72	0.72
47:S1:29:TRP:HD1	47:S1:47:LEU:HG	1.55	0.72
78:1S:1311:U:O2	78:1S:1313:A:H2'	1.90	0.72
78:1S:1701:A:H3'	78:1S:1702:A:H5''	1.71	0.72
79:2S:2778:G:C2'	79:2S:2779:A:H5''	2.19	0.72
10:60:20:SER:H	10:60:23:ASN:HB3	1.55	0.71
47:S1:114:VAL:HG12	78:1S:931:C:H5'	1.71	0.71
47:S1:225:VAL:HG12	47:S1:227:ALA:H	1.55	0.71
79:2S:1571:A:H2'	79:2S:1572:U:H4'	1.72	0.71
79:2S:1828:A:H2'	79:2S:1829:G:C8	2.25	0.71
28:78:21:ARG:HG3	79:2S:1369:A:H4'	1.72	0.71
28:78:147:LEU:HB3	36:86:7:ILE:HG22	1.72	0.71
29:79:23:LYS:HG3	79:2S:982:C:H5''	1.72	0.71
32:82:100:ILE:HB	32:82:105:ARG:HD2	1.71	0.71
59:13:88:LEU:HD23	59:13:125:LEU:HD12	1.72	0.71
69:23:18:HIS:HA	69:23:21:ASN:HD22	1.53	0.71
79:2S:956:U:H4'	79:2S:2726:C:H5''	1.71	0.71
6:L6:75:PRO:HG3	79:2S:3268:A:H1'	1.70	0.71
10:60:165:ILE:HD13	10:60:165:ILE:H	1.53	0.71
23:73:12:ARG:HB2	79:2S:3040:A:H5''	1.71	0.71
34:84:76:TYR:HA	79:2S:1805:C:H4'	1.71	0.71
79:2S:310:U:H3	79:2S:2779:A:H61	1.38	0.71
15:65:81:TYR:OH	79:2S:908:G:H2'	1.90	0.71
36:86:83:ALA:O	36:86:87:VAL:HG23	1.89	0.71
46:S0:144:ILE:HG23	46:S0:158:VAL:HG13	1.72	0.71
79:2S:1498:A:H2'	79:2S:1499:C:C6	2.26	0.71
79:2S:3234:A:H2	79:2S:3253:G:H22	1.37	0.71
4:L4:157:GLU:HA	4:L4:215:ILE:HB	1.70	0.71
19:69:84:THR:HG22	79:2S:1915:A:H5''	1.72	0.71
28:78:43:ILE:H	28:78:43:ILE:HD12	1.54	0.71
79:2S:126:U:H2'	79:2S:127:G:C8	2.26	0.71
1:L1:213:ALA:HB3	79:2S:2491:A:H4'	1.72	0.71
4:L4:170:LYS:HE3	4:L4:178:LEU:HD12	1.73	0.71
5:L5:205:SER:HB2	5:L5:233:ALA:HB1	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:163:ASP:HB2	50:S4:168:LYS:HB2	1.72	0.71
51:S5:148:ARG:HG3	74:28:22:ARG:HH22	1.56	0.71
53:S7:154:LEU:HB2	53:S7:185:ILE:HG22	1.73	0.71
70:24:88:THR:O	70:24:92:VAL:HG23	1.91	0.71
73:27:81:ARG:HG2	73:27:82:LYS:HG3	1.71	0.71
2:L2:209:HIS:CD2	2:L2:211:HIS:HB2	2.25	0.71
22:72:96:VAL:HG12	22:72:97:SER:H	1.54	0.71
36:86:59:ASP:O	36:86:63:ASN:HB2	1.90	0.71
45:RC:89:LEU:HB2	45:RC:103:PHE:HB2	1.71	0.71
50:S4:140:VAL:HG22	50:S4:146:THR:HB	1.73	0.71
76:30:49:LEU:HD23	76:30:49:LEU:H	1.55	0.71
78:1S:344:A:H2'	78:1S:345:U:H5'	1.73	0.71
78:1S:832:U:H2'	78:1S:833:U:H5''	1.73	0.71
69:23:51:GLY:HA2	69:23:77:ILE:HG13	1.72	0.71
78:1S:1662:G:H2'	78:1S:1663:G:H8	1.55	0.71
79:2S:3013:U:H2'	79:2S:3014:U:C6	2.26	0.71
13:63:93:ILE:HD12	13:63:125:VAL:HG21	1.72	0.71
19:69:163:ARG:HD2	78:1S:813:U:C6	2.26	0.71
30:80:84:LEU:HB2	79:2S:1715:A:H62	1.55	0.71
45:RC:130:THR:HG22	45:RC:145:LEU:HD21	1.72	0.71
46:S0:42:PRO:HD3	63:17:105:GLN:HB2	1.71	0.71
46:S0:206:ASP:HB2	46:S0:207:PRO:HA	1.72	0.71
78:1S:1340:U:H3'	78:1S:1341:A:C5'	2.21	0.71
79:2S:551:A:HO2'	79:2S:552:G:H8	1.39	0.71
79:2S:916:G:H2'	79:2S:924:G:C8	2.25	0.71
4:L4:329:PRO:HB3	7:L7:41:ARG:HH12	1.55	0.70
18:68:20:LYS:HD3	79:2S:671:U:H4'	1.73	0.70
46:S0:84:ARG:NH2	63:17:79:GLU:HG2	2.06	0.70
46:S0:170:ILE:H	46:S0:170:ILE:HD12	1.56	0.70
64:18:15:LEU:HD23	64:18:15:LEU:H	1.56	0.70
79:2S:830:A:H2'	79:2S:831:G:O4'	1.91	0.70
79:2S:1220:U:H4'	79:2S:1222:G:O4'	1.89	0.70
79:2S:1312:C:H2'	79:2S:1313:G:O4'	1.91	0.70
79:2S:1553:U:H4'	79:2S:1554:U:H5'	1.72	0.70
83:PT:57:C:O2	83:PT:57:C:H2'	1.91	0.70
14:64:38:ILE:HG13	14:64:44:VAL:HG12	1.72	0.70
16:66:20:ALA:HB2	16:66:80:PHE:CE1	2.26	0.70
78:1S:835:U:H2'	78:1S:836:U:C6	2.26	0.70
79:2S:653:A:H5''	79:2S:2361:A:H5''	1.71	0.70
79:2S:709:A:H2	79:2S:2787:G:H21	1.37	0.70
79:2S:1238:C:H3'	79:2S:1239:C:C5'	2.15	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1896:A:H61	79:2S:2339:C:H42	1.39	0.70
1:L1:108:ASN:HB2	1:L1:130:LYS:HE2	1.72	0.70
1:L1:145:TYR:HA	1:L1:148:VAL:HG22	1.73	0.70
36:86:57:LEU:HD12	36:86:90:MET:HG3	1.72	0.70
45:RC:90:ARG:HD3	45:RC:92:TRP:HE1	1.56	0.70
62:16:92:TYR:O	62:16:96:TYR:HB2	1.89	0.70
62:16:115:THR:HA	62:16:118:ILE:HG22	1.73	0.70
71:25:95:HIS:HB3	78:1S:1530:C:OP1	1.90	0.70
79:2S:1566:A:H2'	79:2S:1567:U:H4'	1.73	0.70
79:2S:2611:U:H2'	79:2S:2612:U:C6	2.25	0.70
11:61:86:VAL:HG21	11:61:112:LEU:HD22	1.72	0.70
13:63:116:LEU:O	13:63:120:GLN:HG3	1.90	0.70
32:82:96:ILE:HG21	32:82:105:ARG:HG2	1.74	0.70
33:83:6:ARG:HG3	33:83:8:TYR:CE1	2.25	0.70
2:L2:5:ILE:O	2:L2:9:ARG:HG3	1.90	0.70
19:69:168:ALA:O	19:69:172:ARG:HG3	1.91	0.70
46:S0:45:VAL:HG12	46:S0:46:HIS:H	1.57	0.70
48:S2:87:GLN:HG2	48:S2:96:THR:HB	1.74	0.70
55:S9:130:THR:HA	55:S9:142:ASN:HB2	1.74	0.70
27:77:49:TYR:CD1	27:77:50:PRO:HD2	2.24	0.70
42:92:72:LEU:HD23	42:92:72:LEU:H	1.56	0.70
46:S0:110:TYR:HD1	46:S0:111:ILE:HG12	1.56	0.70
51:S5:122:ASN:O	51:S5:126:ASP:HA	1.91	0.70
63:17:102:VAL:HG22	63:17:106:THR:HB	1.72	0.70
2:L2:150:LEU:HD13	79:2S:2157:G:C8	2.27	0.70
3:L3:20:LYS:HB3	79:2S:2990:G:H5'	1.71	0.70
4:L4:140:HIS:HA	4:L4:180:LYS:HE2	1.74	0.70
23:73:37:ILE:HD11	23:73:73:VAL:HG23	1.74	0.70
51:S5:23:VAL:HG11	62:16:58:ASP:HB3	1.73	0.70
64:18:116:LEU:HD23	64:18:123:ARG:HB3	1.72	0.70
70:24:15:ASN:HB3	70:24:20:ARG:O	1.91	0.70
78:1S:138:A:H62	78:1S:266:A:N6	1.90	0.70
78:1S:1370:U:OP1	78:1S:1370:U:H3'	1.91	0.70
79:2S:753:C:H2'	79:2S:754:G:H8	1.57	0.70
79:2S:951:A:H3'	79:2S:1143:A:H61	1.56	0.70
79:2S:1439:U:H2'	79:2S:1440:G:C8	2.27	0.70
15:65:139:HIS:HE1	79:2S:126:U:H4'	1.56	0.70
25:75:65:GLN:HG2	35:85:32:LYS:HB3	1.74	0.70
46:S0:199:PRO:HA	46:S0:202:TYR:HD2	1.56	0.70
47:S1:104:ASP:HA	47:S1:214:LYS:HG2	1.73	0.70
49:S3:65:ARG:HB3	49:S3:65:ARG:HH21	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:26:88:SER:O	72:26:92:ARG:HG3	1.92	0.70
78:1S:778:G:H2'	78:1S:779:U:H5'	1.72	0.70
79:2S:603:A:H2'	79:2S:604:G:O4'	1.92	0.70
3:L3:129:ALA:HA	79:2S:3150:A:H5'	1.72	0.70
38:88:20:VAL:HG22	38:88:47:GLY:HA2	1.72	0.70
48:S2:107:SER:HA	48:S2:192:GLY:HA2	1.74	0.70
57:11:124:THR:O	57:11:140:VAL:HG12	1.92	0.70
78:1S:1203:A:H2	78:1S:1556:A:H5'	1.57	0.70
78:1S:1680:G:N2	78:1S:1720:G:H2'	2.06	0.70
79:2S:1336:U:H2'	79:2S:1337:A:C8	2.27	0.70
16:66:157:GLU:O	16:66:161:LYS:HG3	1.92	0.70
19:69:98:ARG:HD2	19:69:134:HIS:HA	1.74	0.70
21:71:116:ARG:O	21:71:120:LYS:HB2	1.91	0.70
37:87:55:ARG:HD2	79:2S:353:G:N7	2.07	0.70
61:15:28:MET:HG2	61:15:32:ASP:HB2	1.73	0.70
69:23:134:ALA:HB1	69:23:140:LYS:N	2.07	0.70
70:24:104:SER:HB3	70:24:107:GLN:CB	2.22	0.70
78:1S:1025:A:H5''	78:1S:1027:A:N7	2.06	0.70
3:L3:47:LEU:HD23	3:L3:84:VAL:HG21	1.74	0.69
5:L5:260:PHE:HB3	5:L5:264:GLN:HG3	1.74	0.69
6:L6:170:LYS:NZ	79:2S:3209:A:H5'	2.07	0.69
55:S9:7:THR:HG23	78:1S:771:A:H5'	1.74	0.69
59:13:129:TYR:HA	59:13:132:VAL:HG22	1.73	0.69
72:26:10:ARG:HB3	72:26:34:LYS:HA	1.72	0.69
79:2S:153:U:C2'	79:2S:154:U:H5''	2.22	0.69
3:L3:95:THR:HG22	79:2S:3243:A:H4'	1.75	0.69
4:L4:146:PRO:HG2	4:L4:150:LEU:HD11	1.71	0.69
8:L8:64:ILE:HG23	8:L8:68:ARG:HG3	1.73	0.69
58:12:43:ARG:HD3	58:12:43:ARG:H	1.56	0.69
71:25:62:VAL:HG23	71:25:99:ALA:HB3	1.74	0.69
79:2S:2860:U:H2'	79:2S:2861:U:H5'	1.72	0.69
8:L8:51:LYS:HD2	79:2S:2523:A:C5'	2.22	0.69
12:62:105:GLN:HA	12:62:142:ARG:O	1.92	0.69
27:77:17:ARG:HD3	34:84:73:SER:HB3	1.73	0.69
30:80:78:GLY:O	30:80:81:VAL:HG22	1.92	0.69
59:13:87:ASP:O	59:13:91:LEU:HG	1.92	0.69
61:15:17:TYR:O	64:18:92:ILE:HD12	1.92	0.69
64:18:135:GLY:HA3	78:1S:1559:A:H5''	1.73	0.69
76:30:53:LYS:HG3	76:30:54:ARG:H	1.57	0.69
79:2S:1472:U:H2'	79:2S:1473:G:C8	2.26	0.69
4:L4:300:ARG:HB2	4:L4:301:PRO:HD2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:54:ARG:HA	55:S9:57:ARG:HE	1.56	0.69
25:75:135:ILE:O	25:75:135:ILE:HD13	1.92	0.69
28:78:113:LEU:HD23	28:78:131:SER:HB3	1.74	0.69
34:84:68:THR:HG21	79:2S:1644:C:H5	1.57	0.69
37:87:67:LEU:HA	37:87:70:VAL:HG23	1.74	0.69
47:S1:106:THR:O	47:S1:110:LEU:HD13	1.91	0.69
3:L3:330:GLY:O	79:2S:3047:U:H5''	1.91	0.69
8:L8:50:VAL:HG23	8:L8:52:TRP:NE1	2.08	0.69
21:71:105:PHE:O	21:71:109:VAL:HG23	1.92	0.69
38:88:41:THR:HG23	38:88:56:ILE:HB	1.74	0.69
62:16:119:ALA:HB3	78:1S:1410:A:H4'	1.75	0.69
78:1S:484:C:H2'	78:1S:485:A:H5''	1.75	0.69
78:1S:499:U:H2'	78:1S:500:C:H5''	1.74	0.69
79:2S:1951:C:C5	79:2S:2095:G:N1	2.58	0.69
17:67:129:THR:HB	17:67:137:ASN:HB2	1.75	0.69
40:90:104:PRO:HG2	79:2S:3119:U:H4'	1.74	0.69
1:L1:213:ALA:CB	79:2S:2491:A:H4'	2.22	0.69
2:L2:42:ARG:HA	2:L2:88:ILE:O	1.93	0.69
8:L8:71:VAL:HG12	15:65:21:PHE:CZ	2.26	0.69
9:L9:113:GLU:HG3	9:L9:123:ILE:HG23	1.75	0.69
76:30:31:LYS:HB2	78:1S:476:U:H2'	1.72	0.69
79:2S:662:U:H2'	79:2S:663:C:C6	2.27	0.69
79:2S:2471:U:H2'	79:2S:2472:U:H5''	1.74	0.69
79:2S:2521:U:H2'	79:2S:2522:G:H5'	1.74	0.69
79:2S:3101:G:H2'	79:2S:3102:G:C8	2.28	0.69
79:2S:3275:U:H3'	79:2S:3276:G:C5'	2.22	0.69
79:2S:3348:G:H2'	79:2S:3349:C:C6	2.26	0.69
4:L4:233:LEU:HD22	4:L4:238:LEU:HD21	1.74	0.69
18:68:74:GLU:HB2	79:2S:741:U:H4'	1.73	0.69
19:69:93:VAL:O	19:69:97:ARG:HG3	1.91	0.69
20:70:71:LYS:HD2	79:2S:562:C:H5''	1.75	0.69
25:75:63:ILE:HD13	25:75:64:GLU:N	2.08	0.69
28:78:124:ILE:HG12	28:78:144:VAL:HG22	1.75	0.69
47:S1:176:VAL:HG12	47:S1:177:GLN:H	1.58	0.69
58:12:21:GLU:HG3	58:12:22:VAL:H	1.58	0.69
59:13:71:ILE:HD13	78:1S:961:U:H5''	1.73	0.69
72:26:86:VAL:HG23	78:1S:1795:U:H5''	1.73	0.69
79:2S:1421:G:H2'	79:2S:1422:G:H8	1.57	0.69
1:L1:193:LEU:HG	1:L1:194:LEU:H	1.58	0.69
8:L8:41:GLN:HB3	8:L8:44:ARG:HH12	1.58	0.69
9:L9:8:GLN:HG2	9:L9:68:LEU:CD1	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:106:LEU:HB3	19:69:120:TYR:CE1	2.28	0.69
24:74:87:LEU:HD23	24:74:87:LEU:H	1.58	0.69
37:87:21:ARG:HG3	80:8S:103:G:H4'	1.75	0.69
49:S3:132:LYS:HB3	49:S3:189:MET:HG3	1.75	0.69
61:15:38:PRO:HG2	61:15:41:VAL:HG23	1.74	0.69
79:2S:1534:A:H2'	79:2S:1535:A:C8	2.28	0.69
79:2S:2225:U:H2'	79:2S:2226:U:C6	2.28	0.69
79:2S:2742:C:H2'	79:2S:2743:A:C8	2.28	0.69
14:64:94:TRP:O	14:64:100:ALA:HB2	1.93	0.68
51:S5:197:GLU:HG3	51:S5:208:SER:HB2	1.74	0.68
53:S7:30:SER:O	53:S7:31:SER:HB2	1.92	0.68
56:10:50:THR:HG21	56:10:57:THR:OG1	1.93	0.68
79:2S:1951:C:H6	79:2S:2095:G:N1	1.89	0.68
10:60:61:SER:O	10:60:65:LEU:HG	1.93	0.68
32:82:55:ILE:HB	79:2S:947:G:H5'	1.76	0.68
34:84:6:THR:HG22	79:2S:1486:G:H21	1.58	0.68
71:25:93:SER:OG	71:25:99:ALA:HA	1.93	0.68
3:L3:235:THR:HG22	3:L3:236:LYS:H	1.56	0.68
19:69:21:LYS:HE3	19:69:55:VAL:HA	1.75	0.68
30:80:32:LYS:HE3	30:80:35:ARG:HH21	1.57	0.68
43:93:19:GLY:O	43:93:23:ARG:HG3	1.92	0.68
51:S5:104:ASN:ND2	78:1S:1587:A:H1'	2.08	0.68
80:8S:114:G:H2'	80:8S:115:C:C6	2.28	0.68
1:L1:45:ARG:HG3	1:L1:195:LYS:HE3	1.75	0.68
5:L5:205:SER:O	5:L5:209:GLU:HG2	1.93	0.68
14:64:19:ARG:CA	14:64:69:THR:HG22	2.23	0.68
34:84:65:VAL:HG12	34:84:66:SER:H	1.59	0.68
54:S8:110:ARG:O	54:S8:114:GLU:HG3	1.93	0.68
78:1S:918:U:H2'	78:1S:919:A:C8	2.28	0.68
79:2S:130:A:H2'	79:2S:131:C:C6	2.29	0.68
7:L7:82:LYS:HA	7:L7:119:VAL:HB	1.76	0.68
19:69:86:GLU:HG2	19:69:91:SER:H	1.58	0.68
19:69:185:LEU:HD21	53:S7:40:PRO:HD3	1.73	0.68
26:76:111:LEU:HD23	26:76:116:LYS:HG2	1.74	0.68
46:S0:125:ASP:HB3	46:S0:128:SER:HB2	1.75	0.68
51:S5:128:ASN:ND2	51:S5:129:PRO:HD2	2.09	0.68
53:S7:35:LYS:HG2	53:S7:36:ALA:H	1.58	0.68
79:2S:2942:C:OP1	79:2S:2943:G:H5''	1.94	0.68
80:8S:53:A:H2'	80:8S:54:A:H8	1.57	0.68
15:65:73:ARG:HB2	15:65:92:LEU:HD21	1.73	0.68
26:76:51:ARG:HG2	26:76:54:ASP:OD2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:114:VAL:HG11	78:1S:930:A:H2'	1.76	0.68
50:S4:221:ARG:O	50:S4:225:VAL:HG23	1.93	0.68
56:10:12:HIS:HB3	56:10:76:LEU:HD11	1.75	0.68
65:19:9:VAL:HG21	65:19:136:ALA:HB1	1.76	0.68
78:1S:1316:G:H2'	78:1S:1317:C:C6	2.29	0.68
78:1S:1519:U:H2'	78:1S:1520:U:C5	2.29	0.68
15:65:68:ARG:NH2	15:65:123:GLN:HB2	2.09	0.68
24:74:75:THR:HG23	24:74:76:VAL:HG23	1.75	0.68
78:1S:1682:U:O2'	78:1S:1683:C:H5'	1.93	0.68
79:2S:2501:U:H2'	79:2S:2502:A:H5'	1.74	0.68
8:L8:33:ASN:O	8:L8:39:ALA:HB3	1.92	0.68
20:70:80:ARG:HB3	20:70:122:HIS:HB2	1.75	0.68
26:76:100:HIS:CD2	26:76:101:PRO:HD2	2.29	0.68
52:S6:48:TYR:HB3	52:S6:50:PHE:CZ	2.29	0.68
61:15:40:ARG:HH22	61:15:43:ARG:HD3	1.57	0.68
64:18:65:GLU:O	64:18:69:ILE:HG13	1.93	0.68
75:29:22:ARG:CG	75:29:38:ILE:HD11	2.24	0.68
79:2S:2541:U:C1'	79:2S:2542:U:H4'	2.20	0.68
80:8S:53:A:H2'	80:8S:54:A:C8	2.29	0.68
3:L3:82:PRO:HB2	3:L3:165:GLN:HB3	1.75	0.68
4:L4:48:GLN:HG2	4:L4:49:ALA:H	1.59	0.68
7:L7:102:VAL:HG11	7:L7:130:ILE:HD13	1.74	0.68
15:65:117:ASN:HD21	15:65:166:ALA:H	1.39	0.68
24:74:79:GLN:HG3	24:74:80:ARG:N	2.09	0.68
50:S4:102:VAL:HG22	50:S4:103:TYR:H	1.58	0.68
53:S7:50:ASP:HA	53:S7:56:LYS:HA	1.76	0.68
79:2S:753:C:H2'	79:2S:754:G:C8	2.29	0.68
8:L8:65:LEU:HA	8:L8:69:LEU:HD13	1.76	0.68
45:RC:74:THR:HG22	45:RC:115:ILE:HG21	1.76	0.68
46:S0:126:PRO:HG2	46:S0:151:SER:HB3	1.76	0.68
78:1S:720:G:H4'	78:1S:721:U:OP1	1.92	0.68
78:1S:1621:U:H5	78:1S:1622:G:H2'	1.59	0.68
79:2S:2890:A:H61	79:2S:2913:C:H42	1.42	0.68
1:L1:69:GLY:HA3	1:L1:106:LYS:HE3	1.76	0.67
3:L3:80:ASP:HB2	3:L3:317:ILE:HD12	1.73	0.67
5:L5:12:TYR:O	5:L5:16:PHE:HB2	1.95	0.67
6:L6:54:TYR:HA	6:L6:65:ILE:HG22	1.77	0.67
21:71:13:TYR:HB2	79:2S:994:G:OP2	1.95	0.67
21:71:118:GLU:O	21:71:122:GLN:HB2	1.93	0.67
49:S3:95:GLY:C	49:S3:126:VAL:HG13	2.15	0.67
51:S5:25:LEU:HD12	62:16:61:SER:OG	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:25:41:ILE:HG13	71:25:42:LEU:N	2.08	0.67
72:26:18:VAL:HG23	72:26:19:LYS:N	2.07	0.67
79:2S:1210:U:H2'	79:2S:1211:U:C6	2.29	0.67
79:2S:1308:A:C2	79:2S:1311:G:H5''	2.30	0.67
79:2S:1913:A:N3	79:2S:2120:A:H2'	2.08	0.67
79:2S:2228:A:H2'	79:2S:2229:A:C8	2.28	0.67
13:63:39:ARG:O	13:63:51:LEU:HD21	1.95	0.67
32:82:96:ILE:HD13	32:82:105:ARG:HB3	1.75	0.67
34:84:98:GLN:O	34:84:102:LYS:HD3	1.94	0.67
42:92:44:ASP:HA	42:92:47:GLN:HB3	1.74	0.67
46:S0:134:LYS:HA	46:S0:134:LYS:HE3	1.76	0.67
49:S3:102:ALA:HA	49:S3:186:VAL:HG21	1.76	0.67
65:19:7:ARG:HH12	65:19:67:MET:HA	1.58	0.67
79:2S:1545:A:H2'	79:2S:1547:G:OP2	1.95	0.67
14:64:120:VAL:O	14:64:124:ARG:HG3	1.94	0.67
28:78:34:MET:HB2	79:2S:95:A:H5''	1.75	0.67
33:83:69:GLY:HA3	33:83:85:PHE:CD2	2.30	0.67
68:22:89:TRP:O	68:22:93:LEU:HD22	1.94	0.67
79:2S:1302:A:H2'	79:2S:1303:A:H5''	1.76	0.67
3:L3:141:GLY:HA2	3:L3:144:ILE:HD12	1.74	0.67
6:L6:77:ARG:HB3	6:L6:77:ARG:HH11	1.59	0.67
21:71:119:ALA:HB3	21:71:126:VAL:HG12	1.77	0.67
23:73:35:TYR:O	23:73:60:ALA:HB1	1.93	0.67
32:82:105:ARG:HH12	32:82:125:ARG:HD2	1.57	0.67
52:S6:162:VAL:CG1	52:S6:169:TYR:HB2	2.25	0.67
79:2S:1291:A:H2'	79:2S:1292:C:O4'	1.93	0.67
79:2S:3275:U:H3'	79:2S:3276:G:H5''	1.75	0.67
4:L4:53:SER:HB3	4:L4:56:ALA:HB2	1.76	0.67
5:L5:184:ASP:HB3	5:L5:187:THR:HG22	1.75	0.67
10:60:85:PHE:HA	10:60:140:THR:HG22	1.75	0.67
17:67:135:ARG:HB2	17:67:135:ARG:HH11	1.58	0.67
35:85:63:ARG:O	35:85:67:ARG:HG3	1.93	0.67
53:S7:39:ARG:H	53:S7:40:PRO:HD2	1.59	0.67
22:72:96:VAL:HG12	22:72:97:SER:N	2.10	0.67
54:S8:10:LYS:HG2	54:S8:11:ARG:H	1.58	0.67
69:23:132:LEU:HD13	69:23:135:LEU:HD12	1.77	0.67
79:2S:2768:U:H2'	79:2S:2769:A:C8	2.29	0.67
4:L4:209:TYR:O	4:L4:230:VAL:HG23	1.95	0.67
8:L8:157:VAL:HG12	8:L8:158:ASP:N	2.10	0.67
47:S1:160:HIS:O	47:S1:164:ILE:HG13	1.94	0.67
2:L2:227:ARG:HH22	79:2S:2161:G:H5''	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:81:32:ALA:O	31:81:36:ILE:HG13	1.95	0.67
69:23:37:ALA:O	69:23:44:GLY:HA2	1.95	0.67
79:2S:2426:U:H2'	79:2S:2427:U:C6	2.30	0.67
1:L1:120:VAL:H	1:L1:121:PRO:HD3	1.59	0.67
45:RC:219:GLU:HB3	45:RC:233:THR:CG2	2.25	0.67
59:13:23:PRO:CB	59:13:26:PHE:HB3	2.25	0.67
60:14:19:ILE:HG22	60:14:20:TYR:H	1.60	0.67
61:15:43:ARG:HG2	61:15:43:ARG:HH11	1.60	0.67
70:24:104:SER:HB3	70:24:107:GLN:HB2	1.75	0.67
81:5S:92:A:H2'	81:5S:93:C:O4'	1.95	0.67
4:L4:222:VAL:HG13	4:L4:225:VAL:HB	1.77	0.67
5:L5:95:TRP:CE3	5:L5:198:TYR:HB3	2.30	0.67
8:L8:133:LYS:HD2	8:L8:138:HIS:HE1	1.60	0.67
14:64:21:VAL:HG22	14:64:33:ALA:O	1.94	0.67
77:31:132:LEU:HB3	77:31:139:LEU:HB3	1.77	0.67
78:1S:769:A:H2'	78:1S:770:A:C8	2.30	0.67
79:2S:159:A:H2'	79:2S:160:G:C8	2.29	0.67
79:2S:627:U:H2'	79:2S:628:A:H8	1.59	0.67
79:2S:1002:A:N6	79:2S:1050:U:H1'	2.08	0.67
4:L4:325:LEU:HB3	79:2S:598:A:H4'	1.77	0.66
6:L6:135:VAL:HG22	79:2S:3268:A:N1	2.10	0.66
18:68:174:ARG:HA	18:68:178:ARG:HG3	1.76	0.66
19:69:119:LEU:O	19:69:123:LEU:HG	1.95	0.66
27:77:97:SER:HB2	27:77:99:GLU:HG2	1.77	0.66
42:92:80:ARG:HB2	79:2S:2769:A:H4'	1.76	0.66
54:S8:99:ALA:HB3	78:1S:329:G:H5'	1.76	0.66
63:17:60:ARG:HA	63:17:63:LYS:HG2	1.76	0.66
78:1S:177:U:H3'	78:1S:178:U:H5''	1.76	0.66
4:L4:89:ALA:O	4:L4:90:PHE:HB2	1.93	0.66
10:60:34:TYR:HD2	10:60:89:VAL:HB	1.58	0.66
13:63:112:ASN:O	13:63:116:LEU:HG	1.96	0.66
17:67:29:THR:HA	17:67:32:THR:HG22	1.77	0.66
26:76:100:HIS:HD2	26:76:101:PRO:HD2	1.61	0.66
45:RC:9:LEU:HD11	45:RC:311:ARG:HB3	1.76	0.66
45:RC:216:LYS:HA	45:RC:239:GLU:HG3	1.76	0.66
57:11:69:LYS:H	57:11:127:GLN:HB3	1.60	0.66
78:1S:1672:G:H2'	78:1S:1673:G:C8	2.29	0.66
79:2S:2356:A:N6	79:2S:2983:C:H5	1.93	0.66
2:L2:117:GLU:HA	2:L2:125:ALA:HB3	1.77	0.66
4:L4:181:VAL:O	4:L4:182:LEU:HB3	1.95	0.66
10:60:179:PRO:HA	10:60:182:LEU:HD12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:88:8:ILE:H	38:88:8:ILE:HD12	1.60	0.66
47:S1:158:SER:HA	47:S1:161:ILE:HD12	1.78	0.66
50:S4:19:LEU:HD21	50:S4:108:ARG:HD2	1.77	0.66
58:12:62:LEU:HD23	58:12:62:LEU:H	1.60	0.66
69:23:19:ARG:O	69:23:23:ARG:HG2	1.94	0.66
3:L3:376:LYS:O	3:L3:380:MET:HG2	1.95	0.66
4:L4:170:LYS:HG3	4:L4:175:HIS:HB2	1.77	0.66
8:L8:98:ARG:HE	8:L8:189:LEU:HA	1.58	0.66
16:66:129:LEU:HD11	16:66:133:ARG:HB2	1.78	0.66
17:67:139:TYR:OH	79:2S:1507:G:H1'	1.95	0.66
23:73:40:LYS:HD2	79:2S:2931:C:H5''	1.77	0.66
25:75:67:ILE:HD12	25:75:83:VAL:HG12	1.77	0.66
26:76:32:SER:HA	26:76:49:PRO:HA	1.77	0.66
32:82:57:TYR:O	79:2S:1405:U:H5'	1.94	0.66
47:S1:225:VAL:C	47:S1:227:ALA:N	2.49	0.66
54:S8:29:LEU:HD21	54:S8:31:ARG:HH12	1.60	0.66
74:28:21:SER:HA	78:1S:1618:C:H4'	1.75	0.66
78:1S:40:A:H62	78:1S:467:G:H21	1.44	0.66
78:1S:75:U:C3'	78:1S:76:A:H5''	2.25	0.66
78:1S:617:U:H4'	78:1S:1030:A:H2'	1.76	0.66
4:L4:32:PRO:HD2	18:68:24:VAL:HG21	1.77	0.66
4:L4:156:LEU:HD12	4:L4:251:THR:HG22	1.75	0.66
6:L6:75:PRO:HG3	79:2S:3268:A:C1'	2.25	0.66
37:87:51:ALA:HA	37:87:54:LYS:HE2	1.76	0.66
37:87:66:TYR:O	37:87:70:VAL:HG23	1.96	0.66
49:S3:211:PRO:HG3	63:17:20:TYR:CE1	2.30	0.66
50:S4:230:GLU:HB2	50:S4:233:LYS:HB2	1.76	0.66
66:20:52:LYS:HA	66:20:93:LEU:HD23	1.76	0.66
66:20:118:VAL:HG22	66:20:119:ALA:N	2.10	0.66
79:2S:2255:A:N6	79:2S:2260:U:H3	1.90	0.66
4:L4:3:ARG:HD3	4:L4:22:LEU:H	1.60	0.66
5:L5:33:ARG:O	5:L5:37:VAL:HG23	1.96	0.66
14:64:21:VAL:HG12	14:64:65:LEU:CD2	2.26	0.66
38:88:42:LYS:HE2	38:88:55:VAL:HG22	1.77	0.66
42:92:13:LYS:HA	42:92:18:ARG:HA	1.78	0.66
74:28:10:ALA:HB2	74:28:56:LEU:HD11	1.76	0.66
78:1S:344:A:C2'	78:1S:345:U:H5'	2.26	0.66
78:1S:840:U:HO2'	78:1S:841:U:H6	1.41	0.66
78:1S:924:A:H2'	78:1S:925:G:C8	2.30	0.66
2:L2:21:ARG:HD3	79:2S:824:C:H5''	1.76	0.66
4:L4:3:ARG:HD3	4:L4:21:PRO:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:51:VAL:CG2	17:67:56:ARG:HG3	2.25	0.66
20:70:41:TYR:O	20:70:45:LEU:HD23	1.95	0.66
28:78:13:GLY:O	32:82:36:LYS:HG3	1.95	0.66
46:S0:82:GLY:O	46:S0:86:VAL:HG13	1.96	0.66
47:S1:224:ASP:H	79:2S:2537:U:P	2.18	0.66
48:S2:101:VAL:HG22	48:S2:115:ILE:HG23	1.78	0.66
53:S7:73:VAL:HB	53:S7:77:LEU:HG	1.76	0.66
61:15:73:PRO:HD2	61:15:93:VAL:HG23	1.76	0.66
78:1S:62:A:H4'	78:1S:269:G:H4'	1.77	0.66
78:1S:75:U:C2'	78:1S:76:A:H5''	2.25	0.66
78:1S:258:C:H2'	78:1S:259:U:C6	2.30	0.66
12:62:121:PHE:HA	79:2S:1233:G:H1'	1.78	0.66
15:65:38:ARG:HH12	15:65:60:VAL:HG13	1.61	0.66
18:68:70:ALA:O	18:68:76:ALA:HB3	1.95	0.66
37:87:19:CYS:HB3	37:87:22:CYS:SG	2.36	0.66
55:S9:26:ALA:O	55:S9:30:LEU:HG	1.95	0.66
58:12:30:VAL:O	58:12:34:THR:HG23	1.95	0.66
77:31:117:LEU:O	77:31:118:ARG:HB2	1.95	0.66
78:1S:153:G:H2'	78:1S:154:G:C8	2.31	0.66
78:1S:1370:U:H4'	78:1S:1371:A:C5'	2.25	0.66
79:2S:2081:U:H2'	79:2S:2082:U:H4'	1.78	0.66
79:2S:2419:A:H2'	79:2S:2420:C:C6	2.31	0.66
79:2S:2567:C:C3'	79:2S:2568:C:H5''	2.26	0.66
1:L1:31:THR:HG22	79:2S:2469:G:H5'	1.77	0.66
2:L2:177:LYS:HD2	43:93:26:VAL:HG13	1.78	0.66
4:L4:209:TYR:HE1	4:L4:227:THR:HB	1.61	0.66
15:65:57:GLN:HE21	80:8S:144:G:H5'	1.61	0.66
23:73:70:ARG:HB3	23:73:70:ARG:NH1	2.11	0.66
24:74:64:THR:O	24:74:64:THR:HG22	1.96	0.66
43:93:18:TYR:HA	79:2S:2131:A:H61	1.60	0.66
67:21:36:VAL:HB	67:21:51:VAL:HB	1.77	0.66
78:1S:531:C:H2'	78:1S:532:U:H5''	1.77	0.66
79:2S:1951:C:H6	79:2S:2095:G:N2	1.93	0.66
3:L3:28:ARG:HD2	3:L3:30:LYS:HE2	1.78	0.66
3:L3:152:LYS:HG2	3:L3:192:VAL:HG11	1.78	0.66
4:L4:328:ASN:ND2	4:L4:331:ALA:HB2	2.10	0.66
4:L4:358:THR:HA	4:L4:361:HIS:HB2	1.78	0.66
13:63:39:ARG:HH12	79:2S:685:G:H5''	1.60	0.66
24:74:87:LEU:HA	24:74:90:ILE:HB	1.77	0.66
26:76:119:ILE:HG21	26:76:126:LEU:HB3	1.78	0.66
48:S2:185:LYS:O	48:S2:189:GLN:HG3	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:21:70:ASN:HB3	67:21:83:TRP:HB2	1.78	0.66
78:1S:56:U:H4'	78:1S:57:G:C5'	2.22	0.66
78:1S:1621:U:H5'	78:1S:1622:G:P	2.36	0.66
79:2S:159:A:H2'	79:2S:160:G:H8	1.61	0.66
79:2S:2963:C:H2'	79:2S:2964:G:C8	2.30	0.66
11:61:36:VAL:O	11:61:40:LEU:HB2	1.95	0.65
17:67:87:SER:O	17:67:91:VAL:HG23	1.97	0.65
55:S9:163:PRO:HG3	78:1S:512:A:H5''	1.77	0.65
60:14:112:ILE:HB	72:26:57:SER:OG	1.95	0.65
66:20:28:SER:HB3	66:20:34:LEU:HG	1.78	0.65
79:2S:291:C:H2'	79:2S:292:U:C6	2.31	0.65
79:2S:822:G:H2'	79:2S:823:C:C6	2.31	0.65
79:2S:1325:U:H2'	79:2S:1326:A:C8	2.30	0.65
3:L3:332:ARG:HD3	3:L3:332:ARG:H	1.60	0.65
15:65:188:ARG:HH22	79:2S:31:C:H5	1.44	0.65
47:S1:142:PHE:HD2	47:S1:209:ASN:HB2	1.60	0.65
60:14:85:ALA:H	60:14:119:THR:HG22	1.61	0.65
78:1S:229:U:H3	78:1S:236:A:H61	1.40	0.65
79:2S:2999:U:H2'	79:2S:3000:A:C8	2.31	0.65
9:L9:23:ARG:HB3	9:L9:39:LYS:HG2	1.76	0.65
16:66:41:LEU:HD23	16:66:138:LEU:HD22	1.78	0.65
22:72:21:SER:HB2	22:72:22:PRO:HD3	1.77	0.65
36:86:26:ILE:HD12	36:86:26:ILE:H	1.61	0.65
44:P0:61:ARG:HD2	44:P0:64:ARG:HD2	1.77	0.65
53:S7:89:HIS:HD2	53:S7:165:LYS:HG2	1.60	0.65
65:19:61:VAL:O	65:19:65:ILE:HG13	1.95	0.65
79:2S:1221:A:H3'	79:2S:1222:G:C5'	2.25	0.65
79:2S:1232:C:C5	79:2S:1261:G:H2'	2.31	0.65
79:2S:207:U:H2'	79:2S:208:C:C6	2.31	0.65
79:2S:673:U:H2'	79:2S:674:G:C8	2.31	0.65
79:2S:834:U:H2'	79:2S:835:G:H5'	1.78	0.65
79:2S:2361:A:N6	79:2S:2377:G:H1	1.80	0.65
3:L3:4:ARG:HD3	3:L3:7:GLU:HA	1.78	0.65
8:L8:74:THR:HG23	8:L8:75:ILE:HG13	1.78	0.65
22:72:84:LEU:HB3	22:72:90:ARG:HD2	1.78	0.65
28:78:118:ILE:HB	28:78:119:PRO:HD2	1.77	0.65
47:S1:180:THR:O	47:S1:184:LEU:HB2	1.96	0.65
47:S1:224:ASP:N	79:2S:2537:U:O5'	2.28	0.65
49:S3:32:GLU:HG3	49:S3:57:ASP:HB2	1.78	0.65
49:S3:59:LEU:HA	49:S3:66:ILE:HG12	1.79	0.65
49:S3:65:ARG:HB3	49:S3:65:ARG:NH2	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:129:PRO:O	51:S5:133:VAL:HG23	1.96	0.65
56:10:76:LEU:HD12	56:10:80:LEU:HG	1.76	0.65
78:1S:1144:U:H2'	78:1S:1145:U:C6	2.31	0.65
3:L3:128:LYS:O	79:2S:3150:A:H5''	1.96	0.65
18:68:19:PRO:HG3	18:68:26:LEU:HD21	1.79	0.65
19:69:10:LEU:HD21	79:2S:1602:A:H4'	1.79	0.65
29:79:32:LEU:HD12	79:2S:749:C:H5''	1.77	0.65
48:S2:39:THR:HG21	48:S2:64:LYS:HE3	1.78	0.65
51:S5:48:PHE:CE1	51:S5:64:VAL:HA	2.30	0.65
59:13:54:LEU:HB3	59:13:60:VAL:HB	1.78	0.65
59:13:55:ARG:HD3	73:27:47:PHE:CD1	2.32	0.65
79:2S:2356:A:N6	79:2S:2983:C:C5	2.64	0.65
13:63:128:ARG:CZ	35:85:112:PRO:HD2	2.27	0.65
19:69:98:ARG:O	19:69:102:LEU:HG	1.97	0.65
31:81:24:SER:O	31:81:28:ARG:HG3	1.97	0.65
49:S3:164:VAL:O	49:S3:168:ILE:HG13	1.97	0.65
53:S7:109:VAL:HG22	53:S7:110:GLN:H	1.61	0.65
58:12:48:SER:O	58:12:52:LEU:HD23	1.96	0.65
58:12:111:ASN:HD21	58:12:115:VAL:HG21	1.61	0.65
74:28:20:GLY:HA2	74:28:67:ARG:HA	1.79	0.65
78:1S:1282:U:H2'	78:1S:1283:U:C6	2.32	0.65
79:2S:1787:A:C2'	79:2S:1788:C:H5''	2.26	0.65
81:5S:9:C:H2'	81:5S:10:C:H5'	1.79	0.65
4:L4:334:PHE:HA	4:L4:339:LEU:HD12	1.77	0.65
15:65:10:LEU:O	15:65:19:LEU:HD21	1.96	0.65
17:67:17:ALA:O	17:67:147:GLU:HA	1.96	0.65
27:77:26:VAL:HG12	27:77:89:VAL:HG21	1.79	0.65
50:S4:31:PRO:HA	50:S4:81:THR:HB	1.77	0.65
51:S5:164:PRO:HD3	74:28:54:LEU:HD13	1.79	0.65
53:S7:27:LEU:HD21	53:S7:80:GLU:HG2	1.79	0.65
68:22:41:MET:HG2	68:22:46:TYR:HB2	1.79	0.65
69:23:109:ARG:HB2	69:23:111:GLY:O	1.97	0.65
78:1S:1542:G:N2	78:1S:1568:C:H1'	2.12	0.65
79:2S:184:U:H2'	79:2S:185:C:C6	2.32	0.65
79:2S:509:U:H2'	79:2S:510:G:O4'	1.97	0.65
8:L8:50:VAL:HG23	8:L8:52:TRP:HE1	1.62	0.65
11:61:94:ARG:O	11:61:95:ASN:HB2	1.95	0.65
11:61:142:LYS:O	11:61:142:LYS:HD3	1.97	0.65
13:63:100:ARG:HD2	79:2S:76:G:O2'	1.97	0.65
14:64:20:VAL:HA	14:64:34:ALA:HA	1.79	0.65
15:65:39:ALA:HB3	15:65:61:ILE:HG22	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:76:12:ARG:HG3	79:2S:215:G:H5''	1.77	0.65
26:76:56:VAL:HG12	26:76:70:ILE:HD11	1.79	0.65
57:11:88:ARG:HB2	57:11:105:LYS:O	1.96	0.65
79:2S:66:A:N1	79:2S:77:A:H5''	2.12	0.65
79:2S:1856:C:H2'	79:2S:1857:C:C6	2.31	0.65
79:2S:2843:U:H5''	79:2S:2844:C:H5	1.61	0.65
11:61:102:PHE:CE1	11:61:129:VAL:HB	2.32	0.65
13:63:157:ARG:HG2	13:63:158:ALA:H	1.61	0.65
15:65:199:LEU:HD22	15:65:203:ARG:HD2	1.78	0.65
42:92:43:TYR:HE2	42:92:55:LYS:HB2	1.61	0.65
42:92:49:GLY:HA2	79:2S:277:G:H5''	1.79	0.65
56:10:32:HIS:CE1	56:10:42:VAL:HG21	2.32	0.65
78:1S:871:G:H2'	78:1S:872:G:C8	2.32	0.65
78:1S:1329:A:H5''	78:1S:1330:G:C8	2.32	0.65
79:2S:438:A:H3'	79:2S:439:C:H5''	1.79	0.65
79:2S:1297:C:H2'	79:2S:1298:C:C6	2.31	0.65
2:L2:74:GLU:HB3	2:L2:76:PHE:HE1	1.62	0.64
4:L4:180:LYS:O	4:L4:184:SER:HB3	1.97	0.64
5:L5:22:ARG:HH11	81:5S:7:G:H8	1.46	0.64
8:L8:72:PRO:HD2	8:L8:75:ILE:HD12	1.79	0.64
17:67:25:SER:HB3	17:67:28:ASN:HD22	1.62	0.64
24:74:17:ARG:HG2	79:2S:3050:U:H4'	1.78	0.64
43:93:30:GLU:HA	43:93:33:GLN:HG2	1.78	0.64
51:S5:180:ARG:O	51:S5:184:PHE:HB2	1.97	0.64
53:S7:173:TYR:HD2	53:S7:176:LEU:HD12	1.61	0.64
57:11:85:VAL:HG22	57:11:108:PRO:HB3	1.79	0.64
68:22:93:LEU:HD23	68:22:94:LEU:H	1.61	0.64
78:1S:576:G:H4'	78:1S:580:A:C2	2.31	0.64
79:2S:834:U:C2'	79:2S:835:G:H5'	2.27	0.64
79:2S:1240:A:H3'	79:2S:1241:U:C5'	2.26	0.64
79:2S:2794:G:H1'	79:2S:2795:U:C6	2.32	0.64
79:2S:2927:C:H2'	79:2S:2928:C:C6	2.32	0.64
4:L4:188:ARG:HG3	4:L4:190:GLY:H	1.62	0.64
15:65:139:HIS:HB3	15:65:142:ILE:HD13	1.79	0.64
30:80:22:LYS:HD3	30:80:94:GLU:HG3	1.78	0.64
47:S1:225:VAL:CA	79:2S:2537:U:C6	2.80	0.64
50:S4:15:PRO:HG2	50:S4:18:TRP:CD1	2.31	0.64
54:S8:123:LYS:HA	54:S8:123:LYS:HE3	1.78	0.64
65:19:130:ARG:HD3	65:19:134:ARG:HH21	1.62	0.64
78:1S:564:G:H4'	78:1S:566:C:C2	2.33	0.64
78:1S:707:A:H2'	78:1S:708:C:H5''	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1429:G:H2'	78:1S:1430:U:C6	2.32	0.64
78:1S:1589:C:H2'	78:1S:1590:G:C8	2.32	0.64
79:2S:283:G:H21	79:2S:285:A:H5''	1.62	0.64
79:2S:288:C:H2'	79:2S:289:A:C8	2.32	0.64
3:L3:252:ILE:HB	79:2S:2394:G:H5'	1.79	0.64
7:L7:24:GLU:O	7:L7:25:GLN:HB3	1.97	0.64
10:60:144:ASN:O	10:60:148:VAL:HG23	1.98	0.64
26:76:57:LEU:HD23	26:76:67:GLU:HB3	1.78	0.64
31:81:76:SER:HB3	31:81:78:LYS:HE3	1.80	0.64
38:88:7:ASP:HB3	38:88:10:GLN:HB2	1.79	0.64
50:S4:196:VAL:HB	50:S4:209:HIS:HB3	1.79	0.64
55:S9:144:PRO:HD2	78:1S:474:A:H5''	1.80	0.64
64:18:105:VAL:HG13	64:18:106:GLU:H	1.61	0.64
71:25:54:VAL:H	71:25:55:PRO:CD	2.09	0.64
78:1S:766:U:H5'	78:1S:767:U:H5''	1.80	0.64
79:2S:295:A:H2'	79:2S:296:A:C8	2.32	0.64
79:2S:1645:U:O2	79:2S:1645:U:H2'	1.98	0.64
79:2S:1921:A:H2'	79:2S:1922:A:C8	2.32	0.64
79:2S:2405:C:H42	79:2S:2819:A:H61	1.43	0.64
79:2S:3206:C:H5''	79:2S:3207:U:O4'	1.97	0.64
80:8S:70:G:H1'	80:8S:88:A:N6	2.12	0.64
11:61:46:VAL:HG12	11:61:68:HIS:O	1.97	0.64
79:2S:1302:A:H62	79:2S:2857:C:H1'	1.62	0.64
79:2S:2393:G:O6	79:2S:2982:A:H2'	1.97	0.64
7:L7:233:GLU:O	7:L7:236:ILE:HG22	1.98	0.64
11:61:101:ASN:HD21	79:2S:2684:C:H1'	1.63	0.64
21:71:18:ASP:HB2	21:71:21:LYS:HD2	1.80	0.64
37:87:27:PHE:HA	37:87:34:CYS:HA	1.79	0.64
55:S9:149:ARG:HB3	78:1S:765:G:O6	1.98	0.64
58:12:42:ALA:HB3	58:12:122:VAL:HB	1.79	0.64
62:16:93:HIS:HB3	62:16:102:LYS:HB2	1.80	0.64
78:1S:844:A:H2'	78:1S:845:G:C8	2.33	0.64
79:2S:618:C:H2'	79:2S:619:A:H5'	1.78	0.64
79:2S:2683:U:H2'	79:2S:2684:C:C6	2.33	0.64
24:74:83:THR:HB	52:S6:130:PRO:HA	1.80	0.64
35:85:70:TYR:HD1	35:85:73:LYS:HD2	1.62	0.64
48:S2:169:LEU:HD22	48:S2:198:THR:HG22	1.80	0.64
60:14:63:ALA:O	60:14:67:VAL:HG23	1.98	0.64
63:17:57:LEU:O	63:17:61:ILE:HG13	1.98	0.64
76:30:42:ARG:NH1	76:30:42:ARG:HB3	2.12	0.64
78:1S:1226:A:H4'	78:1S:1230:A:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:308:A:H5'	79:2S:2223:A:O2'	1.97	0.64
4:L4:263:GLY:HA2	4:L4:267:VAL:HG23	1.79	0.64
8:L8:129:PRO:HG3	79:2S:120:G:H5'	1.78	0.64
50:S4:65:LEU:HD23	50:S4:70:VAL:HG11	1.79	0.64
58:12:67:THR:O	58:12:68:GLU:HB2	1.97	0.64
61:15:40:ARG:NH2	61:15:43:ARG:HB3	2.12	0.64
78:1S:1082:C:H2'	78:1S:1082:C:O2	1.96	0.64
78:1S:1727:G:H2'	78:1S:1728:A:C8	2.33	0.64
79:2S:915:A:H2'	79:2S:916:G:H5'	1.79	0.64
79:2S:2213:A:H2'	79:2S:2214:A:C8	2.33	0.64
79:2S:3190:C:H2'	79:2S:3191:G:C8	2.33	0.64
2:L2:207:VAL:CG1	79:2S:2415:C:H5'	2.28	0.64
4:L4:53:SER:HB3	4:L4:56:ALA:CB	2.28	0.64
4:L4:329:PRO:HB3	7:L7:41:ARG:NH1	2.12	0.64
28:78:102:ILE:O	28:78:125:VAL:HG13	1.98	0.64
31:81:98:VAL:HG22	31:81:99:ALA:H	1.63	0.64
33:83:46:GLY:H	33:83:71:VAL:HB	1.62	0.64
50:S4:48:LEU:HA	50:S4:52:LEU:HB2	1.80	0.64
51:S5:20:PHE:HB3	51:S5:39:GLU:HG3	1.79	0.64
51:S5:20:PHE:HD1	51:S5:22:PRO:HD3	1.62	0.64
52:S6:30:LYS:HE2	52:S6:36:VAL:HG22	1.80	0.64
52:S6:44:GLU:HA	52:S6:119:GLN:HG2	1.80	0.64
55:S9:109:LEU:HD21	55:S9:134:ILE:HD13	1.78	0.64
59:13:42:ARG:HH21	59:13:80:LEU:CD2	2.10	0.64
79:2S:2322:C:O2'	79:2S:2323:G:H5'	1.98	0.64
50:S4:194:THR:O	50:S4:195:ILE:HG13	1.98	0.64
78:1S:1524:A:H2'	78:1S:1525:A:C8	2.32	0.64
78:1S:1743:U:H2'	78:1S:1744:A:C8	2.33	0.64
79:2S:2406:C:H2'	79:2S:2407:C:C6	2.32	0.64
2:L2:120:PRO:HB3	2:L2:161:ASP:HB2	1.80	0.64
20:70:12:ARG:HB3	20:70:24:LEU:HA	1.80	0.64
26:76:43:TYR:CD1	26:76:126:LEU:HA	2.31	0.64
32:82:42:VAL:HG22	32:82:49:ASN:HB3	1.80	0.64
50:S4:31:PRO:CG	50:S4:43:PRO:HG3	2.27	0.64
52:S6:58:LYS:HG2	52:S6:105:ASP:O	1.98	0.64
62:16:12:LYS:HG2	62:16:17:THR:HG22	1.79	0.64
78:1S:519:C:H3'	78:1S:520:A:H8	1.62	0.64
78:1S:1151:A:H2'	78:1S:1152:A:C8	2.33	0.64
79:2S:374:A:H4'	79:2S:375:A:H5'	1.78	0.64
79:2S:764:U:H3	79:2S:767:U:H3	1.46	0.64
2:L2:245:LEU:HD23	2:L2:247:ARG:HH22	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:72:PRO:HA	8:L8:233:TRP:CE3	2.32	0.63
21:71:14:MET:HG2	21:71:58:GLN:HG2	1.80	0.63
25:75:72:ALA:HB1	25:75:83:VAL:HG21	1.81	0.63
45:RC:132:LYS:HB3	45:RC:140:CYS:SG	2.38	0.63
48:S2:98:PHE:O	48:S2:117:THR:HA	1.97	0.63
55:S9:36:LEU:HD21	55:S9:108:ARG:NH1	2.14	0.63
69:23:126:LYS:HE2	69:23:129:GLY:HA2	1.79	0.63
78:1S:386:G:H2'	78:1S:387:A:C8	2.33	0.63
78:1S:884:A:H2'	78:1S:885:G:C8	2.33	0.63
78:1S:970:A:H3'	78:1S:971:A:H8	1.63	0.63
78:1S:1186:U:H2'	78:1S:1187:U:H5'	1.79	0.63
79:2S:3278:C:H3'	79:2S:3279:A:H5''	1.79	0.63
13:63:109:PHE:O	13:63:113:VAL:HG23	1.99	0.63
15:65:187:ARG:O	15:65:190:THR:HG22	1.99	0.63
18:68:3:ILE:H	18:68:3:ILE:HD12	1.62	0.63
18:68:89:ASP:HB2	18:68:110:ALA:N	2.13	0.63
26:76:112:ASP:H	26:76:115:ARG:HB2	1.62	0.63
59:13:15:ALA:O	73:27:28:PRO:HD3	1.98	0.63
69:23:12:ALA:HA	69:23:15:LEU:HD12	1.80	0.63
78:1S:138:A:N6	78:1S:266:A:N6	2.39	0.63
79:2S:1577:G:H2'	79:2S:1578:C:O4'	1.98	0.63
79:2S:1662:G:H22	79:2S:1787:A:H2	1.45	0.63
7:L7:89:ILE:HB	7:L7:133:TYR:O	1.99	0.63
17:67:50:GLN:HE22	79:2S:3391:A:H4'	1.63	0.63
23:73:87:ARG:HH22	23:73:120:LYS:HB3	1.63	0.63
4:L4:32:PRO:HG3	4:L4:244:LEU:HD12	1.80	0.63
4:L4:328:ASN:HD22	4:L4:331:ALA:HB2	1.63	0.63
5:L5:194:LEU:HD23	5:L5:194:LEU:O	1.97	0.63
16:66:33:ILE:O	16:66:102:LEU:HA	1.98	0.63
26:76:73:VAL:HG22	26:76:80:VAL:HG23	1.81	0.63
47:S1:129:THR:HA	47:S1:177:GLN:HA	1.81	0.63
48:S2:175:GLY:HA3	55:S9:98:ALA:HA	1.80	0.63
79:2S:2559:U:H4'	79:2S:2560:C:H5''	1.80	0.63
79:2S:2611:U:H2'	79:2S:2612:U:H6	1.64	0.63
79:2S:3295:A:H2'	79:2S:3296:A:C8	2.34	0.63
9:L9:23:ARG:HD2	9:L9:39:LYS:HA	1.79	0.63
11:61:114:ILE:HG22	11:61:115:LYS:N	2.10	0.63
26:76:56:VAL:CG2	26:76:104:LEU:HB3	2.28	0.63
30:80:40:LYS:HB3	30:80:101:LEU:HD11	1.80	0.63
38:88:69:LEU:HD12	38:88:70:PRO:HD2	1.80	0.63
52:S6:135:PRO:HB3	52:S6:140:ASN:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:10:38:LYS:O	56:10:42:VAL:HG23	1.97	0.63
80:8S:19:C:H2'	80:8S:20:U:O4'	1.98	0.63
3:L3:226:PHE:CE1	3:L3:268:GLY:HA2	2.34	0.63
3:L3:287:LYS:HB2	3:L3:290:ASP:HB2	1.80	0.63
11:61:109:HIS:HB2	11:61:114:ILE:HD12	1.81	0.63
16:66:174:PHE:O	16:66:178:VAL:HG23	1.97	0.63
20:70:113:ARG:NH1	79:2S:1212:A:H5'	2.14	0.63
22:72:90:ARG:O	22:72:91:ASP:HB2	1.99	0.63
25:75:49:LYS:HD2	80:8S:135:G:H5''	1.80	0.63
37:87:5:THR:HA	37:87:8:PHE:CD2	2.34	0.63
47:S1:172:LEU:O	47:S1:176:VAL:HG23	1.99	0.63
54:S8:172:ARG:HD3	54:S8:175:GLN:HG3	1.80	0.63
60:14:70:LYS:O	60:14:74:VAL:HG23	1.97	0.63
66:20:50:LEU:HD21	66:20:95:ALA:HB2	1.81	0.63
78:1S:207:U:H2'	78:1S:208:U:C6	2.34	0.63
78:1S:518:A:H2'	78:1S:519:C:H5''	1.81	0.63
8:L8:71:VAL:HG21	8:L8:76:ALA:HB2	1.81	0.63
10:60:119:TRP:HZ3	79:2S:1126:G:H5''	1.64	0.63
23:73:87:ARG:NH2	23:73:120:LYS:HB3	2.14	0.63
78:1S:811:A:H2	78:1S:814:A:H62	1.47	0.63
78:1S:1481:C:H5''	78:1S:1482:C:OP1	1.99	0.63
79:2S:228:U:H2'	79:2S:229:G:C8	2.34	0.63
79:2S:300:G:H2'	79:2S:301:G:H8	1.62	0.63
79:2S:700:C:H2'	79:2S:701:G:C8	2.34	0.63
79:2S:949:C:O2'	79:2S:971:G:H5''	1.98	0.63
3:L3:57:VAL:O	3:L3:357:LYS:HB2	1.99	0.63
7:L7:77:VAL:HG12	20:70:59:VAL:HA	1.81	0.63
9:L9:124:ARG:HD3	9:L9:164:ILE:HG23	1.81	0.63
14:64:131:VAL:HG13	16:66:181:ALA:HB1	1.81	0.63
16:66:12:LYS:HA	16:66:40:GLU:HB3	1.81	0.63
24:74:35:LYS:O	24:74:39:LEU:HD23	1.99	0.63
25:75:113:LEU:O	25:75:120:LYS:HG3	1.99	0.63
26:76:79:ALA:HB1	26:76:98:ASN:HB3	1.81	0.63
26:76:89:LYS:HE3	26:76:93:ALA:HB3	1.81	0.63
78:1S:1340:U:H3'	78:1S:1341:A:H5''	1.80	0.63
79:2S:2615:G:H2'	79:2S:2616:C:C6	2.34	0.63
8:L8:169:LEU:O	8:L8:173:MET:HG2	1.99	0.63
9:L9:122:LYS:HD2	79:2S:3034:C:O2'	1.99	0.63
13:63:106:GLN:HB3	36:86:18:THR:HG23	1.80	0.63
32:82:105:ARG:O	32:82:109:LEU:HG	1.99	0.63
51:S5:76:ARG:HD3	51:S5:76:ARG:N	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:25:ARG:HG2	52:S6:28:PHE:CD1	2.34	0.63
69:23:135:LEU:HD23	69:23:141:GLU:HA	1.81	0.63
78:1S:1666:U:H2'	78:1S:1667:A:C8	2.34	0.63
79:2S:1484:U:O2'	79:2S:1485:G:H5'	1.98	0.63
79:2S:3029:A:H2'	79:2S:3030:G:O4'	1.97	0.63
9:L9:23:ARG:CB	9:L9:39:LYS:HG2	2.29	0.62
13:63:118:GLU:O	13:63:122:LYS:HG2	1.98	0.62
25:75:113:LEU:HD21	25:75:121:LYS:HD2	1.80	0.62
28:78:28:HIS:CD2	28:78:32:ARG:HG2	2.34	0.62
31:81:14:ILE:HG23	31:81:71:LEU:HB2	1.81	0.62
47:S1:110:LEU:O	47:S1:114:VAL:HG23	1.99	0.62
78:1S:230:C:H3'	78:1S:231:U:H5''	1.79	0.62
3:L3:84:VAL:HG13	3:L3:163:HIS:O	1.99	0.62
4:L4:328:ASN:HD21	79:2S:578:A:H2	1.46	0.62
17:67:13:LYS:O	17:67:107:LEU:HD21	1.98	0.62
17:67:41:LEU:HD23	17:67:150:VAL:HG11	1.82	0.62
34:84:71:THR:HG22	34:84:72:VAL:H	1.64	0.62
35:85:78:LYS:HA	35:85:81:ARG:HD3	1.81	0.62
52:S6:19:ASP:O	52:S6:20:ASP:HB2	1.99	0.62
78:1S:1179:G:H2'	78:1S:1180:C:C6	2.33	0.62
78:1S:1432:U:H4'	78:1S:1433:G:H5''	1.80	0.62
79:2S:268:A:O4'	79:2S:270:U:H1'	1.98	0.62
79:2S:700:C:H2'	79:2S:701:G:H8	1.64	0.62
79:2S:1028:U:H3'	79:2S:1029:G:C5'	2.28	0.62
79:2S:3280:U:O2'	79:2S:3281:U:H5'	2.00	0.62
4:L4:138:ARG:HH12	4:L4:246:ARG:HG2	1.63	0.62
4:L4:138:ARG:NH1	4:L4:240:PRO:HD2	2.14	0.62
16:66:142:SER:O	16:66:145:VAL:HG22	1.99	0.62
17:67:59:PRO:HG2	17:67:76:PHE:CD2	2.33	0.62
18:68:83:VAL:HB	18:68:103:ALA:CB	2.28	0.62
23:73:39:VAL:HG13	23:73:58:VAL:HG12	1.81	0.62
27:77:14:VAL:HG22	34:84:86:LYS:HG2	1.80	0.62
31:81:72:ARG:HB2	31:81:101:ALA:HB2	1.81	0.62
47:S1:125:VAL:HG22	47:S1:126:THR:N	2.11	0.62
56:10:55:VAL:HG23	56:10:67:THR:O	2.00	0.62
62:16:44:LEU:HG	62:16:78:VAL:HG21	1.80	0.62
68:22:68:ARG:HG2	68:22:68:ARG:HH11	1.63	0.62
72:26:44:ILE:HD13	72:26:65:PRO:HG2	1.80	0.62
5:L5:266:ALA:HA	81:5S:1:G:H1'	1.80	0.62
11:61:126:ASP:OD2	79:2S:2674:A:H5'	1.99	0.62
14:64:120:VAL:HG22	16:66:197:LEU:HD13	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:35:VAL:HG22	15:65:65:ARG:HH21	1.64	0.62
15:65:50:ARG:HB3	15:65:50:ARG:NH1	2.14	0.62
17:67:120:ASN:HD22	17:67:120:ASN:H	1.47	0.62
46:S0:194:PRO:O	46:S0:195:TRP:HB2	2.00	0.62
78:1S:230:C:H2'	78:1S:231:U:H4'	1.81	0.62
79:2S:1257:C:H3'	79:2S:1258:U:H5''	1.81	0.62
79:2S:2667:A:H2'	79:2S:2668:U:O4'	1.99	0.62
80:8S:155:A:H2'	80:8S:156:U:O4'	1.99	0.62
3:L3:223:GLY:HA2	3:L3:271:GLY:HA3	1.82	0.62
8:L8:53:PRO:O	8:L8:57:ARG:HD3	1.99	0.62
10:60:27:PRO:HD2	10:60:122:PRO:HB2	1.81	0.62
13:63:49:ARG:HH22	35:85:113:GLN:NE2	1.95	0.62
16:66:3:VAL:HG13	16:66:4:GLU:N	2.14	0.62
23:73:18:PRO:HA	23:73:51:ALA:HA	1.82	0.62
49:S3:42:THR:HB	49:S3:43:PRO:CD	2.24	0.62
52:S6:83:CYS:HA	78:1S:162:A:H5'	1.80	0.62
66:20:80:GLU:HG3	75:29:54:LYS:HD3	1.81	0.62
78:1S:168:A:H2'	78:1S:169:A:C8	2.34	0.62
79:2S:656:A:H2'	79:2S:657:A:H8	1.63	0.62
3:L3:62:ARG:HD3	79:2S:3038:U:H5''	1.81	0.62
3:L3:173:GLN:CB	79:2S:3313:U:H4'	2.30	0.62
4:L4:51:ALA:CB	4:L4:105:THR:HG23	2.29	0.62
20:70:77:VAL:HG22	20:70:126:VAL:HG13	1.80	0.62
20:70:78:TRP:HB3	20:70:124:LEU:HD12	1.81	0.62
26:76:50:ILE:HD13	26:76:51:ARG:N	2.14	0.62
39:89:43:ASN:HB3	39:89:46:ARG:HB2	1.81	0.62
46:S0:119:ARG:HB3	46:S0:119:ARG:NH1	2.14	0.62
62:16:10:PHE:HA	62:16:18:ALA:O	2.00	0.62
68:22:15:ASN:O	68:22:19:LYS:HG3	2.00	0.62
73:27:14:SER:HA	73:27:17:ARG:HG2	1.81	0.62
78:1S:518:A:C2'	78:1S:519:C:H5''	2.30	0.62
79:2S:1010:G:H22	79:2S:1040:A:H2	1.45	0.62
79:2S:1257:C:H2'	79:2S:1258:U:H4'	1.80	0.62
79:2S:1445:U:H2'	79:2S:1446:A:C8	2.34	0.62
79:2S:2260:U:H2'	79:2S:2261:G:H5'	1.80	0.62
79:2S:2820:A:H2'	79:2S:2821:C:H5'	1.82	0.62
9:L9:167:VAL:CG1	9:L9:170:LYS:HB2	2.30	0.62
11:61:27:GLY:H	11:61:30:LEU:HB2	1.64	0.62
24:74:38:SER:O	24:74:42:GLN:HG3	2.00	0.62
32:82:89:THR:HG22	32:82:117:ILE:HG12	1.81	0.62
34:84:46:ASP:HB2	34:84:80:ARG:HD2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:18:87:ASN:O	78:1S:1547:A:H1'	1.99	0.62
78:1S:1119:G:H2'	78:1S:1120:U:C6	2.34	0.62
79:2S:2812:C:H2'	79:2S:2813:A:C8	2.34	0.62
79:2S:2917:G:C2'	79:2S:2918:G:H5''	2.29	0.62
8:L8:24:ASN:N	8:L8:25:PRO:HD2	2.14	0.62
18:68:54:LEU:HD22	18:68:58:ASN:HB3	1.82	0.62
34:84:101:VAL:O	34:84:105:VAL:HB	1.99	0.62
48:S2:170:ILE:N	48:S2:170:ILE:HD12	2.15	0.62
49:S3:203:PRO:HA	63:17:42:GLN:HG3	1.82	0.62
53:S7:131:PHE:N	53:S7:132:PRO:HD2	2.14	0.62
63:17:52:GLY:HA3	78:1S:1389:C:O2'	2.00	0.62
73:27:2:VAL:HG22	73:27:3:LEU:HG	1.80	0.62
78:1S:538:A:H1'	78:1S:540:G:H1	1.65	0.62
79:2S:405:U:C2'	79:2S:406:G:H5'	2.30	0.62
79:2S:2881:C:H2'	79:2S:2882:U:C6	2.35	0.62
4:L4:112:LYS:HE3	15:65:202:TYR:HB3	1.80	0.62
15:65:141:ALA:HB2	79:2S:126:U:H5'	1.81	0.62
17:67:48:LEU:HB3	17:67:88:VAL:HG13	1.82	0.62
23:73:86:ARG:NH1	79:2S:3095:U:H5''	2.14	0.62
31:81:55:LEU:HB2	31:81:95:PRO:HD3	1.82	0.62
35:85:35:LYS:HD2	35:85:44:ILE:HD12	1.82	0.62
51:S5:97:LEU:HD11	51:S5:114:ILE:HD11	1.80	0.62
54:S8:57:ALA:HB2	54:S8:177:GLY:HA2	1.82	0.62
56:10:32:HIS:CD2	56:10:32:HIS:H	2.18	0.62
66:20:85:ARG:N	66:20:85:ARG:HD2	2.14	0.62
72:26:78:ALA:HB1	72:26:83:ILE:HB	1.82	0.62
79:2S:725:G:H2'	79:2S:726:G:O4'	1.99	0.62
79:2S:1421:G:H2'	79:2S:1422:G:C8	2.35	0.62
4:L4:42:VAL:HA	4:L4:45:ASN:ND2	2.15	0.62
32:82:40:SER:HB3	32:82:43:ARG:HB3	1.81	0.62
47:S1:224:ASP:HB3	79:2S:2536:A:H2'	1.82	0.62
49:S3:127:MET:HA	49:S3:127:MET:HE3	1.81	0.62
50:S4:155:LYS:HE2	50:S4:155:LYS:HA	1.81	0.62
54:S8:64:ASN:HB3	54:S8:180:ASP:OD1	2.00	0.62
64:18:14:ILE:HD11	64:18:21:ASN:HB3	1.81	0.62
2:L2:3:ARG:HG2	2:L2:4:VAL:H	1.65	0.61
4:L4:236:LEU:O	4:L4:240:PRO:HG3	2.00	0.61
7:L7:82:LYS:NZ	7:L7:191:VAL:HB	2.15	0.61
40:90:96:CYS:HB3	40:90:101:ALA:H	1.64	0.61
45:RC:12:THR:HG22	45:RC:311:ARG:HG2	1.82	0.61
47:S1:181:LEU:H	47:S1:181:LEU:HD13	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:213:ARG:HG2	47:S1:214:LYS:HE3	1.82	0.61
47:S1:226:GLY:O	47:S1:230:ALA:HB2	2.00	0.61
52:S6:199:GLN:O	52:S6:203:GLU:HG2	1.99	0.61
53:S7:27:LEU:O	53:S7:34:LEU:HB3	2.00	0.61
57:11:34:TRP:HH2	57:11:36:LYS:HD3	1.64	0.61
62:16:35:PRO:HG2	62:16:38:LEU:HG	1.82	0.61
63:17:9:VAL:HG13	63:17:50:ILE:HG12	1.82	0.61
64:18:36:LYS:HD3	64:18:36:LYS:N	2.15	0.61
74:28:34:GLU:O	74:28:35:ASP:HB2	1.99	0.61
78:1S:1620:C:H3'	78:1S:1622:G:OP1	2.00	0.61
79:2S:1226:G:H2'	79:2S:1227:C:C6	2.34	0.61
79:2S:2298:U:O2'	79:2S:2299:A:H5'	1.99	0.61
26:76:79:ALA:CB	26:76:98:ASN:HB3	2.30	0.61
28:78:65:GLN:HA	28:78:68:PHE:HD2	1.64	0.61
78:1S:760:A:H2'	78:1S:761:G:O4'	1.99	0.61
78:1S:1470:C:H5'	78:1S:1540:G:H21	1.65	0.61
79:2S:638:C:H2'	79:2S:639:G:C8	2.35	0.61
79:2S:649:A:H4'	79:2S:2869:U:C5'	2.30	0.61
79:2S:2946:A:H2'	79:2S:2982:A:N7	2.15	0.61
80:8S:40:A:H2'	80:8S:41:A:C8	2.35	0.61
6:L6:77:ARG:HH11	6:L6:77:ARG:CB	2.12	0.61
13:63:70:ARG:HG3	79:2S:104:G:OP1	2.00	0.61
16:66:153:VAL:O	16:66:157:GLU:HG2	2.00	0.61
31:81:11:GLU:HG3	31:81:109:VAL:CG2	2.25	0.61
47:S1:21:VAL:HG23	47:S1:22:ASP:H	1.65	0.61
55:S9:24:LEU:HD23	55:S9:27:GLU:OE1	2.00	0.61
56:10:11:ILE:HD12	56:10:42:VAL:HG22	1.82	0.61
78:1S:1662:G:H2'	78:1S:1663:G:C8	2.35	0.61
79:2S:1678:G:H2'	79:2S:1679:A:C8	2.35	0.61
3:L3:96:PRO:HD2	3:L3:97:ARG:HH21	1.65	0.61
7:L7:100:ARG:O	7:L7:104:GLN:HG3	2.00	0.61
16:66:37:ARG:HG2	16:66:107:GLY:HA2	1.82	0.61
18:68:34:THR:HG22	18:68:49:LEU:HD11	1.82	0.61
19:69:102:LEU:O	19:69:106:LEU:HD13	2.00	0.61
22:72:84:LEU:HD22	22:72:89:LEU:HB2	1.81	0.61
45:RC:198:ASN:HD21	63:17:23:LYS:HG2	1.64	0.61
70:24:7:ILE:N	70:24:7:ILE:HD12	2.15	0.61
73:27:50:ALA:O	73:27:51:GLN:HB2	2.01	0.61
78:1S:44:U:H2'	78:1S:45:U:C5	2.35	0.61
78:1S:1174:C:H2'	78:1S:1175:U:C6	2.35	0.61
78:1S:1621:U:C4	78:1S:1623:C:H5''	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:196:TRP:HD1	2:L2:198:LYS:HZ3	1.49	0.61
3:L3:123:TYR:HB2	79:2S:3316:A:H5'	1.83	0.61
7:L7:236:ILE:O	7:L7:240:VAL:HG23	1.99	0.61
11:61:162:TRP:O	11:61:166:LYS:HG2	2.00	0.61
14:64:49:PRO:HG3	14:64:82:SER:HB2	1.82	0.61
26:76:56:VAL:HG13	26:76:104:LEU:HD22	1.82	0.61
30:80:42:ILE:HD11	30:80:60:ALA:HB2	1.83	0.61
49:S3:148:LYS:NZ	49:S3:148:LYS:HB3	2.16	0.61
55:S9:77:ILE:O	55:S9:81:VAL:HG23	2.00	0.61
57:11:123:VAL:HG23	57:11:142:VAL:HA	1.82	0.61
58:12:91:VAL:HG12	58:12:92:ALA:N	2.16	0.61
59:13:53:LEU:O	59:13:57:ALA:HB3	1.99	0.61
68:22:119:LYS:HD3	78:1S:687:G:H5'	1.81	0.61
76:30:30:PRO:HG2	76:30:35:TYR:CD2	2.36	0.61
78:1S:1202:A:H1'	78:1S:1207:C:H42	1.65	0.61
78:1S:1556:A:H5''	78:1S:1557:U:C5	2.35	0.61
79:2S:726:G:H21	79:2S:744:A:H62	1.48	0.61
79:2S:1174:G:H2'	79:2S:1175:C:C6	2.34	0.61
79:2S:2743:A:H2'	79:2S:2744:U:C6	2.34	0.61
80:8S:83:C:H4'	80:8S:84:C:H5''	1.81	0.61
18:68:83:VAL:HB	18:68:103:ALA:HB2	1.82	0.61
58:12:70:ASN:O	58:12:74:LEU:HB2	2.00	0.61
78:1S:138:A:H61	78:1S:266:A:H61	1.46	0.61
78:1S:143:G:C3'	78:1S:144:U:H5''	2.30	0.61
78:1S:989:U:H2'	78:1S:990:C:C6	2.34	0.61
79:2S:2112:U:H4'	79:2S:2113:A:H5'	1.82	0.61
5:L5:52:VAL:HG13	5:L5:54:ARG:NH1	2.16	0.61
13:63:3:ILE:HD12	28:78:41:HIS:HB2	1.82	0.61
16:66:16:VAL:HA	16:66:41:LEU:HD21	1.82	0.61
18:68:69:ARG:NE	79:2S:784:A:H8	1.99	0.61
19:69:104:ARG:HB3	19:69:104:ARG:HH11	1.66	0.61
19:69:162:ARG:O	19:69:166:ASN:HB2	2.01	0.61
24:74:46:PRO:HB2	24:74:54:LEU:HD23	1.83	0.61
47:S1:168:ILE:O	47:S1:172:LEU:HG	2.00	0.61
50:S4:35:PRO:HB3	50:S4:143:ASP:HB2	1.82	0.61
51:S5:163:SER:O	51:S5:167:ARG:HG3	2.00	0.61
52:S6:88:ARG:HB3	52:S6:91:GLU:HB2	1.83	0.61
54:S8:98:LYS:HA	54:S8:169:ILE:HB	1.81	0.61
64:18:127:HIS:CE1	78:1S:1545:A:H5''	2.35	0.61
65:19:21:PHE:O	65:19:25:GLN:HG3	2.00	0.61
66:20:117:VAL:HG22	66:20:118:VAL:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:29:16:LYS:HE2	78:1S:1596:C:C5'	2.30	0.61
79:2S:537:A:N6	79:2S:554:A:H1'	2.16	0.61
9:L9:153:ASP:O	9:L9:157:ASN:HB2	2.01	0.61
34:84:6:THR:CG2	79:2S:1486:G:H21	2.13	0.61
37:87:18:LEU:HA	37:87:25:ARG:HA	1.81	0.61
44:P0:45:LEU:HD22	44:P0:49:ALA:HB3	1.83	0.61
45:RC:9:LEU:HB2	45:RC:313:TRP:NE1	2.15	0.61
45:RC:131:ILE:HB	45:RC:144:LEU:HB2	1.83	0.61
47:S1:142:PHE:CD2	47:S1:209:ASN:HB2	2.36	0.61
53:S7:131:PHE:H	53:S7:132:PRO:HD2	1.66	0.61
62:16:73:GLY:H	62:16:76:SER:HB3	1.64	0.61
66:20:117:VAL:HG22	66:20:118:VAL:N	2.16	0.61
79:2S:1067:U:H2'	79:2S:1068:C:C6	2.36	0.61
79:2S:2476:C:C2'	79:2S:2477:G:H4'	2.23	0.61
79:2S:3226:A:H1'	79:2S:3260:G:N2	2.15	0.61
80:8S:91:C:H2'	80:8S:92:A:H8	1.65	0.61
3:L3:39:LYS:HE2	3:L3:39:LYS:HA	1.83	0.61
5:L5:40:HIS:HB3	5:L5:43:LYS:HE2	1.82	0.61
6:L6:58:LEU:HD11	6:L6:64:LEU:HD23	1.82	0.61
9:L9:8:GLN:HE21	9:L9:68:LEU:HD12	1.64	0.61
13:63:95:ILE:HG12	13:63:119:TYR:HE2	1.66	0.61
14:64:19:ARG:NH2	14:64:67:PRO:HA	2.15	0.61
44:P0:45:LEU:HB3	44:P0:49:ALA:O	2.01	0.61
46:S0:81:PHE:HA	46:S0:204:TYR:HB2	1.83	0.61
54:S8:82:VAL:HG21	54:S8:166:TYR:HE1	1.66	0.61
62:16:90:VAL:HB	62:16:102:LYS:HE3	1.82	0.61
75:29:36:LEU:HD12	75:29:37:ASN:N	2.15	0.61
76:30:56:MET:HB2	78:1S:556:A:H5''	1.82	0.61
78:1S:765:G:H21	78:1S:768:C:H4'	1.65	0.61
79:2S:133:U:H5'	79:2S:134:U:H5	1.65	0.61
79:2S:2530:G:C2'	79:2S:2531:C:H5''	2.28	0.61
5:L5:56:THR:HB	81:5S:26:C:H5'	1.82	0.61
12:62:136:ALA:HB1	79:2S:1263:A:H61	1.65	0.61
13:63:49:ARG:NH2	35:85:113:GLN:HE21	1.99	0.61
18:68:60:PRO:HB2	18:68:142:GLY:HA3	1.83	0.61
21:71:76:ILE:HG22	21:71:77:ASN:N	2.14	0.61
36:86:26:ILE:HG21	79:2S:155:G:N3	2.15	0.61
47:S1:132:ASP:O	47:S1:219:LYS:HB3	2.00	0.61
52:S6:42:GLY:HA3	52:S6:45:PHE:CD2	2.35	0.61
55:S9:129:ILE:HG22	55:S9:142:ASN:HA	1.81	0.61
60:14:133:ARG:HB3	60:14:136:ARG:HH21	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:482:U:H2'	78:1S:483:A:C8	2.31	0.61
78:1S:941:A:H8	78:1S:941:A:O5'	1.83	0.61
78:1S:954:G:H2'	78:1S:955:A:H8	1.66	0.61
78:1S:1392:U:H2'	78:1S:1393:C:C6	2.35	0.61
79:2S:388:G:H2'	79:2S:389:A:C8	2.35	0.61
79:2S:2647:A:H3'	79:2S:2648:G:H5''	1.81	0.61
1:L1:35:GLN:HG3	1:L1:169:VAL:HG22	1.81	0.60
3:L3:77:THR:HG21	3:L3:328:ILE:HG13	1.83	0.60
24:74:96:LEU:HD12	24:74:96:LEU:O	2.01	0.60
24:74:109:LEU:O	24:74:113:LYS:HB2	2.01	0.60
45:RC:74:THR:CG2	45:RC:115:ILE:HD13	2.31	0.60
51:S5:163:SER:HB2	51:S5:164:PRO:HD2	1.82	0.60
57:11:99:ARG:HB2	69:23:12:ALA:HB2	1.83	0.60
69:23:19:ARG:HH12	78:1S:610:G:N2	1.97	0.60
78:1S:712:G:C2'	78:1S:713:A:H5''	2.30	0.60
79:2S:1581:C:C2'	79:2S:1582:C:H5'	2.24	0.60
79:2S:1690:C:H2'	79:2S:1691:U:C6	2.36	0.60
4:L4:77:VAL:HB	4:L4:86:GLY:H	1.67	0.60
7:L7:232:ARG:HD3	7:L7:235:PHE:C	2.21	0.60
11:61:91:LEU:HD13	11:61:96:PHE:CE1	2.36	0.60
15:65:47:LYS:O	15:65:50:ARG:HG2	2.01	0.60
15:65:71:ARG:HG3	79:2S:1546:A:OP1	2.01	0.60
29:79:16:ALA:O	29:79:21:ILE:HG12	2.01	0.60
42:92:38:GLN:HA	42:92:41:ARG:HH21	1.66	0.60
42:92:43:TYR:CE2	42:92:55:LYS:HB2	2.36	0.60
48:S2:58:LEU:HD11	48:S2:236:PRO:HG2	1.83	0.60
49:S3:172:THR:HG22	49:S3:185:LYS:HD3	1.82	0.60
50:S4:37:LYS:HG2	78:1S:297:U:H5''	1.83	0.60
51:S5:20:PHE:CD1	51:S5:22:PRO:HD3	2.36	0.60
53:S7:149:ILE:HG22	53:S7:150:GLN:N	2.16	0.60
55:S9:129:ILE:HA	55:S9:134:ILE:HD11	1.83	0.60
61:15:81:ARG:HA	61:15:116:LEU:HB2	1.83	0.60
76:30:40:TYR:O	76:30:44:PHE:HB2	2.02	0.60
78:1S:1315:U:H4'	78:1S:1329:A:C2	2.36	0.60
78:1S:1552:U:H2'	78:1S:1553:G:O4'	2.00	0.60
79:2S:2455:U:H2'	79:2S:2456:A:H5'	1.84	0.60
8:L8:67:ILE:HG22	8:L8:237:ILE:HB	1.84	0.60
17:67:123:PRO:HG3	80:8S:14:C:H5''	1.82	0.60
23:73:45:ARG:HB3	23:73:48:ARG:HE	1.65	0.60
27:77:121:ARG:O	27:77:126:LYS:HB2	2.01	0.60
32:82:4:LEU:HG	32:82:5:PRO:HD2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:92:77:CYS:SG	42:92:79:THR:HG22	2.42	0.60
56:10:43:ILE:O	56:10:47:GLN:HB2	2.01	0.60
79:2S:296:A:O2'	79:2S:297:G:H5'	2.00	0.60
79:2S:1214:U:H2'	79:2S:1215:U:C6	2.36	0.60
79:2S:2085:U:H2'	79:2S:2086:A:H5'	1.83	0.60
79:2S:2535:A:H61	79:2S:2544:U:H3	1.46	0.60
79:2S:2686:A:H2'	79:2S:2687:G:O4'	2.01	0.60
4:L4:185:LYS:HB2	4:L4:201:GLN:HB3	1.82	0.60
4:L4:219:LEU:HD12	4:L4:227:THR:HG23	1.83	0.60
21:71:67:VAL:HG13	21:71:72:VAL:HG12	1.82	0.60
29:79:16:ALA:HB1	29:79:21:ILE:HD11	1.82	0.60
36:86:36:ARG:O	36:86:40:VAL:HG23	2.01	0.60
44:P0:61:ARG:HB2	79:2S:1221:A:H5'	1.84	0.60
51:S5:112:ARG:HA	51:S5:112:ARG:HE	1.67	0.60
54:S8:121:LEU:HG	54:S8:160:PHE:HB3	1.83	0.60
68:22:94:LEU:HD11	68:22:102:VAL:HG23	1.83	0.60
78:1S:75:U:H3'	78:1S:76:A:H5''	1.83	0.60
79:2S:2394:G:H2'	79:2S:2395:G:O4'	2.01	0.60
79:2S:2428:U:H2'	79:2S:2429:G:C8	2.36	0.60
79:2S:2700:G:H2'	79:2S:2701:U:C6	2.37	0.60
8:L8:72:PRO:CB	15:65:17:ASP:HB3	2.31	0.60
13:63:98:ASP:OD2	13:63:101:ARG:HB2	2.01	0.60
15:65:18:VAL:HG13	15:65:19:LEU:HD12	1.83	0.60
16:66:28:LEU:HD22	16:66:94:ARG:HH12	1.67	0.60
16:66:28:LEU:HD22	16:66:94:ARG:NH1	2.16	0.60
18:68:122:ILE:HG23	18:68:126:GLN:HB2	1.84	0.60
45:RC:136:ILE:H	45:RC:136:ILE:CD1	2.14	0.60
53:S7:70:PHE:O	53:S7:74:GLN:HB2	2.02	0.60
53:S7:109:VAL:HG22	53:S7:110:GLN:N	2.17	0.60
63:17:20:TYR:O	63:17:24:LEU:HD12	2.01	0.60
78:1S:1329:A:H5'	78:1S:1330:G:OP2	2.01	0.60
79:2S:966:U:H2'	79:2S:967:A:C8	2.37	0.60
79:2S:1235:U:C4'	79:2S:1236:G:H5'	2.20	0.60
79:2S:1784:G:H2'	79:2S:1785:U:C6	2.36	0.60
2:L2:74:GLU:HB3	2:L2:76:PHE:CE1	2.37	0.60
4:L4:141:ARG:NH2	79:2S:1386:A:H5''	2.15	0.60
6:L6:108:LYS:O	6:L6:109:GLU:HG2	2.02	0.60
9:L9:36:LYS:HG2	9:L9:38:LEU:HG	1.84	0.60
13:63:86:THR:HG21	79:2S:256:G:O2'	2.01	0.60
15:65:39:ALA:HB2	15:65:63:ARG:HB2	1.84	0.60
17:67:135:ARG:HB2	17:67:135:ARG:NH1	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:77:GLY:O	19:69:81:ARG:HD3	2.02	0.60
26:76:115:ARG:HB3	26:76:115:ARG:HH11	1.67	0.60
46:S0:29:VAL:HG22	46:S0:30:GLN:H	1.66	0.60
57:11:99:ARG:HH11	69:23:9:LEU:HD22	1.66	0.60
58:12:123:VAL:HG11	58:12:126:TRP:HE3	1.66	0.60
78:1S:1374:C:H2'	78:1S:1375:A:C8	2.37	0.60
79:2S:1717:U:H2'	79:2S:1718:G:C8	2.37	0.60
79:2S:2468:A:H1'	79:2S:2477:G:N2	2.16	0.60
81:5S:84:A:H2'	81:5S:85:G:C8	2.37	0.60
1:L1:205:VAL:HG12	1:L1:213:ALA:HB1	1.83	0.60
9:L9:167:VAL:HG11	9:L9:170:LYS:HB2	1.84	0.60
13:63:128:ARG:NH2	35:85:112:PRO:HD2	2.16	0.60
15:65:45:PRO:O	15:65:49:ARG:HB2	2.01	0.60
19:69:60:LYS:O	19:69:64:ARG:HG3	2.01	0.60
63:17:10:LYS:HA	63:17:53:TYR:HE1	1.67	0.60
66:20:22:ILE:HD13	66:20:100:VAL:HG11	1.82	0.60
78:1S:874:C:H2'	78:1S:875:G:C8	2.37	0.60
78:1S:1562:G:H2'	78:1S:1563:C:C6	2.36	0.60
79:2S:507:U:H2'	79:2S:508:U:C6	2.37	0.60
79:2S:650:C:H2'	79:2S:651:G:C8	2.37	0.60
1:L1:175:GLU:HG3	1:L1:176:GLU:HG3	1.82	0.60
3:L3:227:GLU:HA	79:2S:1887:A:H4'	1.83	0.60
9:L9:48:VAL:HG13	9:L9:49:ASN:H	1.67	0.60
11:61:96:PHE:HB2	11:61:156:LYS:HE3	1.84	0.60
13:63:110:ASP:O	13:63:114:GLN:HG2	2.01	0.60
13:63:135:ALA:O	13:63:136:GLU:HG2	2.01	0.60
20:70:13:ARG:HA	20:70:56:GLY:HA2	1.83	0.60
55:S9:97:LEU:O	55:S9:97:LEU:HD23	2.01	0.60
58:12:114:LYS:HE2	78:1S:1226:A:H62	1.65	0.60
77:31:138:ARG:HB3	77:31:138:ARG:HH11	1.66	0.60
78:1S:1528:U:H2'	78:1S:1529:C:C6	2.37	0.60
78:1S:1592:A:H2'	78:1S:1593:A:C8	2.37	0.60
79:2S:581:U:H2'	79:2S:582:G:C8	2.37	0.60
79:2S:1040:A:C3'	79:2S:1041:U:H5''	2.31	0.60
79:2S:3370:A:H2'	79:2S:3371:G:O4'	2.01	0.60
1:L1:19:TYR:HB2	1:L1:216:LEU:HD13	1.84	0.60
2:L2:68:LYS:HG2	2:L2:69:TYR:H	1.67	0.60
15:65:115:VAL:HA	15:65:134:LEU:HG	1.84	0.60
17:67:24:VAL:HG12	17:67:25:SER:N	2.16	0.60
21:71:39:ILE:HD11	21:71:102:ARG:HH11	1.67	0.60
33:83:58:GLU:HG3	33:83:62:SER:HA	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:188:ASN:HD21	78:1S:752:A:H5''	1.65	0.60
51:S5:107:LYS:HD3	78:1S:1610:G:OP1	2.01	0.60
78:1S:1452:U:H2'	78:1S:1453:G:C8	2.37	0.60
78:1S:1650:U:H2'	78:1S:1651:A:C8	2.36	0.60
79:2S:118:U:O2	79:2S:121:A:H5'	2.01	0.60
79:2S:2544:U:O2	79:2S:2544:U:H2'	2.00	0.60
80:8S:91:C:H2'	80:8S:92:A:C8	2.36	0.60
4:L4:77:VAL:HB	4:L4:86:GLY:N	2.16	0.60
10:60:75:TYR:CD1	10:60:76:MET:HG3	2.37	0.60
13:63:48:PRO:HB2	13:63:137:GLN:HG2	1.84	0.60
17:67:139:TYR:CE2	79:2S:2355:G:H4'	2.37	0.60
18:68:82:VAL:HB	18:68:139:ILE:HG12	1.83	0.60
20:70:124:LEU:O	20:70:125:LYS:HB2	2.01	0.60
30:80:24:THR:HG22	30:80:93:LEU:HD11	1.83	0.60
31:81:28:ARG:HG2	31:81:28:ARG:HH11	1.67	0.60
45:RC:9:LEU:CD1	45:RC:311:ARG:HB3	2.32	0.60
47:S1:31:ASP:HA	47:S1:45:LYS:HA	1.84	0.60
48:S2:161:LYS:HB2	48:S2:166:THR:HG22	1.84	0.60
51:S5:102:ARG:HG3	51:S5:103:ASN:ND2	2.17	0.60
54:S8:10:LYS:HG2	54:S8:11:ARG:N	2.17	0.60
78:1S:5:U:H2'	78:1S:6:G:C8	2.36	0.60
79:2S:1340:G:H2'	79:2S:1341:U:C6	2.37	0.60
79:2S:1583:A:H3'	79:2S:1584:U:H6	1.66	0.60
79:2S:2731:U:H2'	79:2S:2732:G:C8	2.37	0.60
3:L3:229:VAL:HG23	3:L3:233:TRP:HD1	1.66	0.59
11:61:87:LYS:HE2	11:61:104:PHE:HB2	1.84	0.59
11:61:164:LYS:HZ3	11:61:171:VAL:HB	1.63	0.59
18:68:180:ARG:HD2	18:68:185:LYS:HB2	1.84	0.59
23:73:37:ILE:HG12	23:73:60:ALA:HA	1.83	0.59
46:S0:29:VAL:HG22	46:S0:30:GLN:N	2.17	0.59
46:S0:33:GLN:HG2	67:21:64:GLU:OE2	2.02	0.59
49:S3:116:ARG:HG2	49:S3:150:MET:HE1	1.84	0.59
53:S7:32:PRO:HG2	53:S7:34:LEU:CD1	2.32	0.59
56:10:73:VAL:HG13	56:10:88:PRO:HG2	1.83	0.59
58:12:89:ILE:HG23	58:12:90:LYS:N	2.17	0.59
72:26:82:ARG:HA	72:26:82:ARG:HE	1.66	0.59
78:1S:885:G:H2'	78:1S:886:U:C6	2.37	0.59
79:2S:1501:U:O2'	79:2S:1502:C:H5'	2.01	0.59
79:2S:1571:A:H2'	79:2S:1572:U:C4'	2.32	0.59
80:8S:65:A:H2'	80:8S:66:A:H8	1.67	0.59
17:67:66:SER:CA	79:2S:2389:C:H5''	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:104:ARG:HB3	19:69:104:ARG:CZ	2.32	0.59
29:79:14:ARG:O	29:79:18:ARG:HG2	2.02	0.59
35:85:64:GLU:HA	35:85:67:ARG:HD2	1.84	0.59
40:90:83:LYS:NZ	40:90:83:LYS:HB3	2.17	0.59
48:S2:196:VAL:HG22	48:S2:197:TYR:H	1.66	0.59
50:S4:205:PHE:HB3	50:S4:221:ARG:HD2	1.84	0.59
57:11:78:THR:HG22	57:11:84:ILE:HG21	1.83	0.59
59:13:22:ALA:HB1	59:13:23:PRO:HA	1.83	0.59
59:13:26:PHE:CZ	59:13:28:LEU:HD12	2.37	0.59
62:16:131:GLY:HA3	62:16:137:ARG:HA	1.83	0.59
64:18:41:ARG:HD3	65:19:46:PRO:HD3	1.83	0.59
73:27:17:ARG:O	78:1S:1071:U:H5'	2.02	0.59
78:1S:828:U:C3'	78:1S:829:A:H5''	2.32	0.59
78:1S:1452:U:H2'	78:1S:1453:G:H8	1.67	0.59
79:2S:66:A:H61	79:2S:76:G:H1'	1.66	0.59
79:2S:1786:G:H2'	79:2S:1787:A:C8	2.37	0.59
3:L3:25:ILE:H	3:L3:25:ILE:CD1	2.14	0.59
6:L6:145:LEU:O	6:L6:149:ILE:HG13	2.02	0.59
8:L8:136:LEU:O	8:L8:140:VAL:HG23	2.02	0.59
15:65:50:ARG:HB3	15:65:50:ARG:HH11	1.68	0.59
22:72:75:TYR:O	22:72:79:LEU:HG	2.02	0.59
60:14:85:ALA:N	60:14:119:THR:HG22	2.17	0.59
78:1S:737:A:HO2'	78:1S:738:G:H8	1.49	0.59
78:1S:1586:A:H1'	78:1S:1611:A:N6	2.16	0.59
79:2S:663:C:H2'	79:2S:664:U:C6	2.37	0.59
79:2S:1696:A:H2'	79:2S:1697:A:C8	2.38	0.59
3:L3:84:VAL:HG12	3:L3:162:VAL:HB	1.84	0.59
9:L9:89:LYS:HB2	9:L9:183:HIS:HB3	1.84	0.59
23:73:120:LYS:HB2	23:73:137:VAL:HG21	1.83	0.59
27:77:135:ARG:HH12	79:2S:1807:G:H5''	1.67	0.59
28:78:101:VAL:HA	28:78:124:ILE:O	2.03	0.59
34:84:65:VAL:HG12	34:84:66:SER:N	2.16	0.59
48:S2:116:LYS:HD3	48:S2:131:ILE:HD11	1.84	0.59
50:S4:29:PRO:O	50:S4:31:PRO:HD3	2.01	0.59
51:S5:104:ASN:HB3	78:1S:1587:A:N3	2.17	0.59
54:S8:72:ILE:HD12	54:S8:72:ILE:O	2.02	0.59
58:12:24:ILE:HD13	58:12:24:ILE:H	1.66	0.59
63:17:60:ARG:HA	63:17:63:LYS:CG	2.32	0.59
66:20:102:ARG:HA	66:20:105:GLN:HG2	1.84	0.59
78:1S:70:C:H2'	78:1S:71:A:C8	2.37	0.59
78:1S:364:G:N2	78:1S:756:A:H61	1.98	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:685:A:H2'	78:1S:686:C:C6	2.37	0.59
78:1S:1489:U:H5'	78:1S:1494:C:H1'	1.84	0.59
79:2S:760:G:H1'	79:2S:771:A:H61	1.65	0.59
79:2S:1787:A:C3'	79:2S:1788:C:H5''	2.32	0.59
79:2S:2294:U:H2'	79:2S:2296:A:OP2	2.02	0.59
18:68:179:ARG:HG3	18:68:182:LYS:H	1.67	0.59
45:RC:38:ARG:HA	45:RC:67:ILE:HG23	1.84	0.59
53:S7:114:ARG:HH11	53:S7:114:ARG:HB2	1.68	0.59
62:16:97:VAL:HG12	62:16:98:ASP:N	2.16	0.59
64:18:4:VAL:HG11	71:25:47:TYR:CE2	2.38	0.59
65:19:128:GLY:O	65:19:132:LEU:HD13	2.02	0.59
68:22:41:MET:SD	68:22:47:ILE:HG23	2.42	0.59
68:22:69:LEU:HD12	68:22:130:TYR:OXT	2.02	0.59
70:24:14:SER:O	70:24:16:PRO:HD3	2.02	0.59
72:26:2:PRO:HD3	78:1S:1142:A:H5''	1.83	0.59
45:RC:189:GLU:HA	49:S3:225:TYR:HB2	1.83	0.59
57:11:2:SER:HB2	57:11:82:ARG:H	1.68	0.59
60:14:50:ALA:HB3	60:14:53:ASP:HB2	1.85	0.59
64:18:145:ARG:HA	64:18:145:ARG:HE	1.65	0.59
78:1S:319:U:H4'	78:1S:323:A:C8	2.37	0.59
78:1S:927:C:H2'	78:1S:928:U:C6	2.38	0.59
79:2S:132:C:H2'	79:2S:133:U:H5''	1.84	0.59
79:2S:1116:G:H3'	79:2S:1117:G:H5''	1.84	0.59
79:2S:1658:G:H2'	79:2S:1659:U:C6	2.38	0.59
3:L3:50:LYS:CB	3:L3:332:ARG:HA	2.30	0.59
13:63:157:ARG:HG2	13:63:158:ALA:N	2.17	0.59
20:70:166:LYS:HG2	20:70:167:ARG:H	1.67	0.59
23:73:21:ALA:HB3	23:73:36:ILE:HD12	1.85	0.59
26:76:24:SER:HA	26:76:27:ARG:HD2	1.84	0.59
46:S0:50:VAL:HA	46:S0:53:THR:HB	1.85	0.59
53:S7:135:ILE:HG23	53:S7:152:VAL:HG13	1.85	0.59
59:13:56:ASP:HB2	73:27:46:VAL:HG13	1.83	0.59
64:18:105:VAL:HG13	64:18:106:GLU:N	2.18	0.59
78:1S:183:U:H2'	78:1S:184:C:C6	2.38	0.59
78:1S:315:A:O3'	78:1S:316:A:H4'	2.03	0.59
78:1S:835:U:H2'	78:1S:836:U:C5	2.37	0.59
79:2S:1661:G:H2'	79:2S:1662:G:C8	2.38	0.59
79:2S:2468:A:C6	79:2S:2478:C:H5''	2.38	0.59
79:2S:2526:C:H2'	79:2S:2527:G:C8	2.38	0.59
79:2S:2812:C:H2'	79:2S:2813:A:H8	1.68	0.59
15:65:64:VAL:HG11	15:65:102:ALA:HB1	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:135:LYS:HB2	79:2S:1948:G:OP1	2.03	0.59
20:70:7:TYR:HB3	20:70:61:ILE:HD11	1.84	0.59
32:82:46:PHE:CE1	79:2S:1145:G:H5'	2.38	0.59
55:S9:123:HIS:CD2	76:30:37:ARG:HD2	2.38	0.59
62:16:12:LYS:HA	62:16:16:ALA:O	2.02	0.59
62:16:40:GLU:HA	62:16:41:PRO:C	2.20	0.59
78:1S:5:U:H2'	78:1S:6:G:H8	1.68	0.59
79:2S:898:U:H2'	79:2S:899:U:O4'	2.02	0.59
79:2S:2593:A:N3	79:2S:2593:A:H2'	2.18	0.59
50:S4:45:ILE:HB	50:S4:80:THR:HG22	1.83	0.59
51:S5:148:ARG:HB3	74:28:22:ARG:HH12	1.67	0.59
63:17:45:ARG:HD3	78:1S:1332:C:OP2	2.03	0.59
67:21:73:ALA:HB1	67:21:78:LEU:CD1	2.33	0.59
78:1S:86:A:H2'	78:1S:87:C:C6	2.36	0.59
78:1S:1010:C:H2'	78:1S:1011:G:O4'	2.03	0.59
79:2S:1226:G:H5'	79:2S:3117:C:H1'	1.83	0.59
2:L2:34:TYR:CD1	79:2S:2525:G:H2'	2.38	0.59
2:L2:104:LEU:HB3	2:L2:160:SER:HA	1.84	0.59
5:L5:207:TYR:O	5:L5:211:LEU:HG	2.03	0.59
8:L8:27:THR:CG2	79:2S:2563:G:H5''	2.33	0.59
13:63:76:THR:HG22	13:63:101:ARG:HB3	1.85	0.59
15:65:27:VAL:HG21	15:65:124:ASP:HB3	1.84	0.59
33:83:15:SER:HA	33:83:94:PHE:CE1	2.38	0.59
34:84:80:ARG:HB2	34:84:85:VAL:CG2	2.33	0.59
35:85:38:ARG:HB2	35:85:38:ARG:NH1	2.18	0.59
37:87:54:LYS:O	37:87:58:THR:HG23	2.03	0.59
51:S5:116:HIS:O	51:S5:120:ILE:HG13	2.03	0.59
55:S9:114:TYR:HA	55:S9:119:ALA:HB3	1.85	0.59
64:18:122:HIS:CE1	64:18:133:VAL:HG23	2.37	0.59
69:23:18:HIS:HA	69:23:21:ASN:ND2	2.16	0.59
78:1S:746:A:H2'	78:1S:747:C:O4'	2.02	0.59
78:1S:855:A:H3'	78:1S:856:A:H5''	1.84	0.59
79:2S:450:G:H2'	79:2S:451:U:H5'	1.85	0.59
79:2S:1478:C:H2'	79:2S:1479:U:C6	2.38	0.59
79:2S:1818:U:H2'	79:2S:1819:U:C5'	2.27	0.59
79:2S:1951:C:H5	79:2S:2095:G:O6	1.86	0.59
79:2S:2795:U:H5'	79:2S:2796:G:H5'	1.85	0.59
19:69:30:SER:O	19:69:34:GLN:HG3	2.03	0.58
20:70:23:LYS:O	20:70:24:LEU:HB2	2.03	0.58
23:73:102:ILE:CG2	23:73:110:LYS:HB3	2.30	0.58
47:S1:96:LEU:HD23	47:S1:96:LEU:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:75:LYS:HB2	50:S4:77:ARG:HH21	1.68	0.58
50:S4:95:THR:HG22	70:24:16:PRO:HD2	1.85	0.58
59:13:39:LYS:HE2	59:13:39:LYS:HA	1.85	0.58
65:19:64:HIS:HA	65:19:67:MET:HE3	1.84	0.58
68:22:30:SER:HA	68:22:34:ILE:HD12	1.83	0.58
68:22:86:ILE:HG13	68:22:87:GLU:N	2.18	0.58
74:28:32:PHE:CZ	74:28:38:ARG:HB3	2.37	0.58
78:1S:1139:A:H2'	78:1S:1140:G:O4'	2.02	0.58
79:2S:1232:C:H5	79:2S:1261:G:H2'	1.67	0.58
79:2S:2616:C:H2'	79:2S:2617:U:H5'	1.84	0.58
81:5S:116:C:H2'	81:5S:117:A:C8	2.37	0.58
3:L3:84:VAL:CG1	3:L3:162:VAL:HB	2.33	0.58
19:69:10:LEU:O	19:69:14:VAL:HG23	2.04	0.58
25:75:24:LEU:HD11	80:8S:151:C:C5	2.39	0.58
30:80:50:VAL:HG13	30:80:53:LYS:CE	2.33	0.58
31:81:11:GLU:HB2	31:81:107:VAL:O	2.03	0.58
45:RC:43:ILE:HD13	45:RC:60:SER:OG	2.01	0.58
58:12:103:LEU:HD13	58:12:103:LEU:H	1.68	0.58
68:22:23:ARG:HB2	73:27:4:VAL:HB	1.84	0.58
70:24:4:ALA:HB3	70:24:30:PRO:HD2	1.85	0.58
78:1S:1141:G:H2'	78:1S:1142:A:C8	2.37	0.58
78:1S:1483:A:H2'	78:1S:1484:G:C8	2.38	0.58
78:1S:1765:A:H8	78:1S:1768:G:H22	1.50	0.58
79:2S:181:U:H2'	79:2S:182:U:H4'	1.85	0.58
79:2S:585:A:H2'	79:2S:586:C:H6	1.67	0.58
79:2S:1238:C:C3'	79:2S:1239:C:H5''	2.17	0.58
79:2S:2666:C:H1'	79:2S:2691:A:C2	2.38	0.58
79:2S:3334:U:H4'	79:2S:3335:A:H5''	1.85	0.58
2:L2:68:LYS:HG2	2:L2:69:TYR:N	2.18	0.58
2:L2:91:GLY:O	2:L2:102:LEU:HG	2.03	0.58
3:L3:53:MET:SD	3:L3:75:ALA:HB1	2.43	0.58
5:L5:99:TYR:CE1	5:L5:165:GLY:HA2	2.39	0.58
7:L7:142:SER:HB2	79:2S:576:C:H5''	1.83	0.58
8:L8:34:PHE:CZ	8:L8:42:PRO:HD3	2.38	0.58
10:60:3:ARG:NH2	79:2S:2853:A:H5'	2.18	0.58
11:61:85:LYS:HA	11:61:85:LYS:NZ	2.18	0.58
15:65:47:LYS:HG2	15:65:119:TYR:CD2	2.38	0.58
18:68:173:GLU:O	18:68:178:ARG:HG3	2.03	0.58
24:74:79:GLN:HG3	24:74:80:ARG:H	1.67	0.58
62:16:143:ARG:HD2	78:1S:1191:U:C5'	2.31	0.58
68:22:50:PHE:HB3	68:22:63:VAL:HG22	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:542:G:H1	79:2S:549:U:H3	1.50	0.58
6:L6:36:PRO:HB3	6:L6:55:LEU:O	2.02	0.58
6:L6:51:ARG:HD2	6:L6:159:LEU:HA	1.85	0.58
11:61:156:LYS:O	11:61:160:VAL:HG23	2.02	0.58
19:69:115:ILE:HD13	19:69:120:TYR:HD1	1.69	0.58
40:90:97:ARG:NE	40:90:122:ARG:HB3	2.18	0.58
42:92:29:LYS:HD3	42:92:30:ALA:N	2.18	0.58
46:S0:84:ARG:HG3	46:S0:205:ARG:HD2	1.85	0.58
51:S5:110:ALA:O	51:S5:114:ILE:HG12	2.03	0.58
52:S6:93:LYS:HE2	78:1S:405:C:H5''	1.83	0.58
57:11:74:THR:HG22	57:11:122:ILE:HG13	1.85	0.58
57:11:99:ARG:HD2	69:23:9:LEU:HA	1.85	0.58
70:24:5:VAL:O	70:24:6:THR:HB	2.03	0.58
78:1S:1071:U:H2'	78:1S:1072:C:C6	2.38	0.58
78:1S:1533:C:H4'	78:1S:1539:G:H1	1.67	0.58
79:2S:434:U:H2'	79:2S:435:C:C6	2.38	0.58
79:2S:1903:U:H2'	79:2S:1905:G:OP2	2.03	0.58
79:2S:3184:A:C2'	79:2S:3185:U:H5'	2.33	0.58
79:2S:3217:C:O2	79:2S:3217:C:H2'	2.01	0.58
4:L4:180:LYS:HA	79:2S:1386:A:H1'	1.85	0.58
9:L9:8:GLN:HG2	9:L9:68:LEU:HD13	1.84	0.58
9:L9:93:VAL:HG13	40:90:82:LEU:HB3	1.85	0.58
10:60:165:ILE:H	10:60:165:ILE:CD1	2.15	0.58
15:65:34:ASN:HB2	15:65:37:HIS:HB3	1.86	0.58
16:66:35:VAL:HG23	16:66:102:LEU:HD11	1.86	0.58
19:69:129:GLY:O	19:69:130:ASN:HB2	2.03	0.58
21:71:82:ASN:HA	29:79:21:ILE:CD1	2.26	0.58
23:73:71:LYS:NZ	23:73:71:LYS:HB3	2.18	0.58
23:73:87:ARG:HD2	23:73:91:VAL:CG2	2.33	0.58
27:77:75:VAL:HG22	27:77:76:ASN:N	2.18	0.58
33:83:17:GLN:HB2	33:83:27:VAL:HB	1.84	0.58
34:84:99:LYS:O	34:84:103:LYS:HG2	2.03	0.58
38:88:30:LYS:HB2	38:88:38:PHE:CE2	2.39	0.58
48:S2:54:GLU:HG3	67:21:11:LEU:HD13	1.85	0.58
49:S3:137:VAL:HB	49:S3:185:LYS:HB2	1.85	0.58
53:S7:86:GLN:O	53:S7:87:ASP:HB2	2.01	0.58
63:17:6:THR:O	63:17:10:LYS:HG3	2.03	0.58
69:23:13:ARG:O	69:23:17:VAL:HG23	2.03	0.58
69:23:68:ILE:HD12	76:30:10:ARG:HH21	1.68	0.58
78:1S:1060:U:H3'	78:1S:1061:A:H5''	1.85	0.58
79:2S:654:C:H2'	79:2S:655:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:985:U:H2'	79:2S:986:U:C6	2.38	0.58
79:2S:1616:U:H2'	79:2S:1617:G:C8	2.38	0.58
79:2S:2056:U:C2'	79:2S:2057:G:H5'	2.32	0.58
79:2S:3338:C:H2'	79:2S:3339:A:H8	1.68	0.58
81:5S:16:U:H2'	81:5S:17:A:C8	2.38	0.58
3:L3:19:ARG:HG3	3:L3:273:HIS:CE1	2.38	0.58
3:L3:57:VAL:HG22	3:L3:73:VAL:HG12	1.85	0.58
7:L7:142:SER:CB	79:2S:576:C:H5''	2.33	0.58
19:69:163:ARG:HD2	78:1S:813:U:H6	1.66	0.58
21:71:50:LYS:HG2	79:2S:2735:U:H5''	1.86	0.58
28:78:11:HIS:HB3	28:78:17:ALA:HA	1.85	0.58
31:81:30:PRO:HG3	31:81:60:TRP:HH2	1.68	0.58
68:22:2:THR:HB	78:1S:1035:G:H4'	1.85	0.58
78:1S:1561:U:H2'	78:1S:1562:G:C8	2.38	0.58
79:2S:1491:A:H2'	79:2S:1492:G:C8	2.39	0.58
79:2S:2396:G:OP1	79:2S:2397:A:H4'	2.04	0.58
3:L3:96:PRO:HD3	79:2S:3243:A:O4'	2.03	0.58
5:L5:34:LYS:O	5:L5:38:THR:HG23	2.04	0.58
9:L9:114:VAL:HB	9:L9:124:ARG:HB2	1.85	0.58
11:61:162:TRP:NE1	11:61:166:LYS:HD2	2.18	0.58
18:68:127:LEU:O	18:68:127:LEU:HD13	2.03	0.58
30:80:14:LEU:O	30:80:18:ILE:HD13	2.02	0.58
35:85:76:GLN:HG3	35:85:81:ARG:HD2	1.85	0.58
43:93:76:ALA:O	43:93:80:ARG:HB2	2.04	0.58
48:S2:180:ALA:HB1	48:S2:184:VAL:HB	1.84	0.58
55:S9:109:LEU:O	55:S9:113:VAL:HG23	2.04	0.58
66:20:80:GLU:CG	75:29:54:LYS:HD3	2.34	0.58
79:2S:341:G:H4'	79:2S:344:A:H1'	1.86	0.58
79:2S:822:G:H2'	79:2S:823:C:H6	1.67	0.58
79:2S:1517:G:H2'	79:2S:1518:U:C6	2.39	0.58
79:2S:1804:A:H2'	79:2S:1805:C:C6	2.39	0.58
79:2S:3008:A:H2'	79:2S:3009:G:H8	1.69	0.58
1:L1:45:ARG:HG3	1:L1:195:LYS:HG3	1.85	0.58
2:L2:33:ASP:O	2:L2:37:ARG:HG2	2.03	0.58
3:L3:6:TYR:HB3	23:73:46:LEU:HD11	1.86	0.58
3:L3:54:THR:O	3:L3:75:ALA:HA	2.04	0.58
3:L3:261:MET:HG2	16:66:64:PHE:HB3	1.86	0.58
3:L3:329:PRO:HA	79:2S:3046:A:O2'	2.04	0.58
4:L4:44:LYS:HA	4:L4:47:ARG:CD	2.34	0.58
4:L4:192:GLY:HA2	4:L4:195:ARG:HD2	1.85	0.58
4:L4:193:LYS:HA	4:L4:198:ARG:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:174:ARG:O	13:63:178:LYS:HB2	2.04	0.58
15:65:16:SER:O	15:65:20:ARG:HG2	2.04	0.58
26:76:73:VAL:HG22	26:76:80:VAL:CG2	2.34	0.58
34:84:80:ARG:HB2	34:84:85:VAL:HG22	1.85	0.58
37:87:67:LEU:HA	37:87:70:VAL:CG2	2.33	0.58
46:S0:3:LEU:HD11	46:S0:7:PHE:HB2	1.86	0.58
48:S2:111:VAL:HG13	48:S2:191:ALA:HA	1.85	0.58
51:S5:81:ARG:HA	78:1S:1615:C:C4	2.38	0.58
69:23:103:LEU:HD13	69:23:104:LEU:N	2.18	0.58
69:23:125:VAL:HG12	69:23:126:LYS:HG3	1.84	0.58
69:23:126:LYS:HA	69:23:131:SER:HA	1.85	0.58
78:1S:160:C:H2'	78:1S:161:U:O4'	2.03	0.58
78:1S:249:U:H3'	78:1S:250:C:H5'	1.85	0.58
78:1S:416:A:H5'	78:1S:417:A:C8	2.39	0.58
78:1S:1449:U:H2'	78:1S:1450:U:H6	1.65	0.58
78:1S:1616:G:H2'	78:1S:1617:U:C6	2.39	0.58
78:1S:1621:U:C5	78:1S:1622:G:H2'	2.39	0.58
78:1S:1689:A:H2'	78:1S:1690:G:O4'	2.04	0.58
79:2S:1346:G:H2'	79:2S:1347:U:C6	2.39	0.58
80:8S:41:A:H61	80:8S:103:G:H1'	1.68	0.58
81:5S:116:C:H2'	81:5S:117:A:H8	1.69	0.58
15:65:28:TRP:O	15:65:32:GLN:HG2	2.03	0.58
19:69:9:ARG:HH12	79:2S:1603:A:H5'	1.67	0.58
19:69:185:LEU:CD2	53:S7:40:PRO:HD3	2.32	0.58
21:71:82:ASN:O	29:79:21:ILE:HA	2.03	0.58
22:72:23:THR:HA	22:72:28:PHE:HB3	1.84	0.58
45:RC:9:LEU:HD21	45:RC:311:ARG:HD3	1.84	0.58
48:S2:225:LEU:HA	48:S2:229:LEU:HD23	1.86	0.58
55:S9:90:LYS:HE3	55:S9:95:TYR:HB2	1.85	0.58
63:17:21:TYR:N	63:17:22:PRO:CD	2.66	0.58
63:17:106:THR:O	63:17:109:LEU:HG	2.04	0.58
69:23:47:SER:HB3	78:1S:600:U:H1'	1.85	0.58
78:1S:374:U:H2'	78:1S:375:U:C6	2.39	0.58
78:1S:1063:U:H2'	78:1S:1064:G:C8	2.39	0.58
78:1S:1068:C:H2'	78:1S:1069:A:C8	2.39	0.58
79:2S:671:U:H2'	79:2S:672:A:C8	2.39	0.58
79:2S:1913:A:C2	79:2S:2120:A:H2'	2.39	0.58
4:L4:281:ILE:HG12	4:L4:282:SER:N	2.15	0.58
5:L5:109:THR:O	5:L5:113:LEU:HB2	2.03	0.58
5:L5:279:LYS:O	5:L5:279:LYS:HD3	2.04	0.58
16:66:136:THR:HG22	16:66:137:THR:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:23:ASN:HD22	18:68:26:LEU:HB2	1.68	0.58
30:80:41:LEU:HD11	30:80:68:TYR:HB2	1.86	0.58
42:92:49:GLY:HA2	79:2S:277:G:C5'	2.34	0.58
53:57:111:LYS:HG3	53:57:112:ARG:N	2.09	0.58
54:58:67:TRP:HA	54:58:183:ILE:HD12	1.86	0.58
68:22:118:ARG:HB2	68:22:118:ARG:HH11	1.68	0.58
78:1S:805:U:H2'	78:1S:806:A:C8	2.39	0.58
79:2S:818:C:H2'	79:2S:819:U:O4'	2.04	0.58
1:L1:101:LYS:HZ3	1:L1:126:PRO:HG3	1.69	0.57
3:L3:57:VAL:HG23	3:L3:358:TRP:HE3	1.68	0.57
17:67:17:ALA:HB2	17:67:98:ALA:HB2	1.85	0.57
19:69:98:ARG:HB3	19:69:98:ARG:NH1	2.19	0.57
40:90:112:LYS:HA	40:90:112:LYS:HE3	1.85	0.57
41:91:10:THR:O	41:91:14:LYS:HG3	2.04	0.57
47:S1:179:SER:HB3	47:S1:183:GLN:HB3	1.85	0.57
52:S6:98:ARG:HD3	52:S6:99:GLY:H	1.69	0.57
67:21:30:ALA:HA	67:21:60:ARG:HH11	1.69	0.57
68:22:102:VAL:HA	68:22:128:PHE:HA	1.85	0.57
68:22:104:LEU:CB	68:22:125:ILE:HA	2.34	0.57
78:1S:174:U:H2'	78:1S:175:G:O4'	2.04	0.57
79:2S:902:G:H2'	79:2S:903:U:O4'	2.03	0.57
79:2S:1892:G:C3'	79:2S:1893:A:H5''	2.29	0.57
79:2S:2610:G:H2'	79:2S:2611:U:C6	2.39	0.57
1:L1:14:LYS:HD3	1:L1:15:GLU:N	2.19	0.57
3:L3:27:ALA:HB1	3:L3:218:ILE:HG22	1.86	0.57
8:L8:155:ASN:HB3	8:L8:179:ILE:CG2	2.34	0.57
11:61:49:LYS:HE2	11:61:64:LYS:HE3	1.85	0.57
42:92:25:VAL:HG22	42:92:72:LEU:HB3	1.85	0.57
47:S1:86:LEU:HD12	47:S1:100:PHE:HA	1.86	0.57
69:23:96:VAL:O	69:23:97:ASP:HB2	2.04	0.57
75:29:43:PHE:CE2	75:29:47:ALA:HA	2.39	0.57
78:1S:1352:G:H2'	78:1S:1353:U:O4'	2.04	0.57
79:2S:2225:U:H2'	79:2S:2226:U:H6	1.69	0.57
2:L2:118:GLU:HG2	2:L2:126:LEU:HD11	1.86	0.57
4:L4:65:TRP:CZ3	4:L4:69:ARG:HD2	2.39	0.57
8:L8:78:PHE:O	8:L8:79:GLN:HG2	2.04	0.57
10:60:20:SER:H	10:60:23:ASN:CB	2.18	0.57
14:64:68:LEU:CD1	14:64:94:TRP:HB2	2.34	0.57
19:69:40:ALA:HA	19:69:43:LYS:HD2	1.86	0.57
34:84:75:ALA:O	34:84:76:TYR:HB2	2.04	0.57
51:S5:80:LYS:HB2	51:S5:83:ARG:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S7:49:ILE:HD11	53:S7:172:VAL:HG22	1.86	0.57
69:23:127:VAL:O	69:23:130:VAL:HG22	2.05	0.57
77:31:126:CYS:HB3	77:31:130:VAL:CG2	2.34	0.57
78:1S:1179:G:H2'	78:1S:1180:C:H6	1.69	0.57
79:2S:533:A:O2'	79:2S:535:G:H5''	2.04	0.57
79:2S:928:C:H2'	79:2S:929:A:C8	2.38	0.57
4:L4:234:ASN:O	4:L4:238:LEU:HG	2.04	0.57
11:61:10:ARG:O	11:61:10:ARG:HD3	2.04	0.57
20:70:111:ALA:HB1	79:2S:1321:G:O2'	2.04	0.57
24:74:80:ARG:HD3	52:S6:9:VAL:HG13	1.86	0.57
49:S3:65:ARG:HH21	49:S3:65:ARG:CB	2.17	0.57
49:S3:173:ARG:HG2	49:S3:173:ARG:HH11	1.70	0.57
50:S4:29:PRO:HG3	78:1S:448:C:H5'	1.86	0.57
50:S4:34:GLY:HA2	78:1S:121:U:O2	2.05	0.57
55:S9:108:ARG:O	55:S9:112:GLN:HG2	2.04	0.57
71:25:89:ILE:HB	71:25:101:TYR:HB3	1.85	0.57
72:26:46:GLU:HG3	72:26:49:ALA:H	1.68	0.57
78:1S:887:A:H2'	78:1S:888:U:C6	2.39	0.57
78:1S:1317:C:H2'	78:1S:1318:G:O4'	2.04	0.57
79:2S:119:U:H4'	79:2S:120:G:H3'	1.87	0.57
79:2S:2957:G:H2'	79:2S:2958:A:O4'	2.03	0.57
4:L4:55:LYS:O	4:L4:59:GLN:HG3	2.05	0.57
5:L5:41:LYS:HE2	21:71:33:VAL:HA	1.87	0.57
15:65:47:LYS:HD2	15:65:50:ARG:HE	1.68	0.57
20:70:20:PRO:O	20:70:21:GLU:HB2	2.05	0.57
24:74:23:ARG:CG	24:74:24:GLY:H	2.16	0.57
32:82:37:GLY:HA3	79:2S:639:G:OP1	2.05	0.57
32:82:79:VAL:CG2	32:82:108:ILE:HG12	2.34	0.57
45:RC:158:PRO:HG2	45:RC:206:PRO:HA	1.85	0.57
47:S1:142:PHE:HB2	47:S1:208:GLN:HG3	1.86	0.57
48:S2:88:LYS:HD3	78:1S:1301:U:H5'	1.85	0.57
51:S5:77:TYR:HB3	51:S5:84:LYS:HA	1.85	0.57
54:S8:155:SER:HB2	54:S8:189:LEU:HD21	1.85	0.57
57:11:125:VAL:HG12	57:11:139:VAL:HA	1.86	0.57
58:12:42:ALA:HB2	58:12:124:LYS:HD2	1.87	0.57
68:22:28:ARG:HD3	68:22:60:LYS:HE2	1.85	0.57
69:23:19:ARG:HH11	78:1S:609:U:H1'	1.69	0.57
78:1S:1058:U:H5	78:1S:1061:A:H61	1.52	0.57
79:2S:1975:C:H2'	79:2S:1976:G:H5'	1.86	0.57
79:2S:2836:C:H2'	79:2S:2837:A:H5'	1.85	0.57
79:2S:3216:G:H1	79:2S:3258:U:H5''	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:3294:A:H2'	79:2S:3295:A:O4'	2.05	0.57
4:L4:169:LEU:HD13	4:L4:178:LEU:HD11	1.87	0.57
6:L6:77:ARG:HB3	6:L6:77:ARG:NH1	2.18	0.57
15:65:113:LEU:HD21	80:8S:141:C:O2'	2.04	0.57
24:74:39:LEU:CD1	24:74:44:LYS:HG3	2.34	0.57
43:93:16:VAL:HG22	79:2S:1927:G:C8	2.40	0.57
48:S2:157:LYS:HE2	48:S2:170:ILE:HG23	1.86	0.57
57:11:123:VAL:HG22	57:11:124:THR:N	2.20	0.57
78:1S:420:A:H2'	78:1S:421:A:O4'	2.04	0.57
78:1S:1035:G:H2'	78:1S:1036:A:C8	2.39	0.57
78:1S:1637:C:H5'	82:MR:7:G:O6	2.04	0.57
79:2S:674:G:H2'	79:2S:675:C:C6	2.40	0.57
79:2S:1690:C:H2'	79:2S:1691:U:H6	1.68	0.57
1:L1:207:LYS:HG2	1:L1:208:SER:N	2.20	0.57
3:L3:219:ALA:HB2	3:L3:336:VAL:HG22	1.87	0.57
3:L3:324:VAL:HG22	3:L3:325:LYS:H	1.68	0.57
5:L5:19:PRO:HD2	5:L5:24:ARG:HG2	1.85	0.57
20:70:29:ILE:HG22	20:70:30:PHE:H	1.68	0.57
23:73:7:GLN:HG3	79:2S:3018:C:H5'	1.86	0.57
27:77:15:ARG:HH12	79:2S:1709:C:H5''	1.70	0.57
30:80:45:ALA:O	30:80:48:THR:HG22	2.04	0.57
42:92:2:VAL:HG22	79:2S:2654:C:OP2	2.05	0.57
53:S7:97:ARG:O	53:S7:98:ILE:HB	2.05	0.57
56:10:29:GLN:O	56:10:30:ALA:HB3	2.05	0.57
71:25:93:SER:HB2	71:25:100:ILE:N	2.20	0.57
78:1S:82:U:H2'	78:1S:83:G:C8	2.40	0.57
78:1S:542:A:O2'	78:1S:543:C:H3'	2.04	0.57
79:2S:1226:G:H4'	79:2S:3117:C:H4'	1.86	0.57
79:2S:1245:A:H3'	79:2S:1246:G:H5''	1.86	0.57
79:2S:1302:A:C2'	79:2S:1303:A:H5''	2.35	0.57
79:2S:2417:U:H1'	79:2S:2966:G:H21	1.70	0.57
79:2S:2666:C:H1'	79:2S:2691:A:H2	1.70	0.57
3:L3:53:MET:HB3	3:L3:77:THR:HA	1.87	0.57
8:L8:129:PRO:HG3	79:2S:120:G:C5'	2.35	0.57
9:L9:134:ILE:HA	9:L9:145:VAL:O	2.05	0.57
18:68:135:GLN:O	18:68:136:ASN:HB2	2.05	0.57
21:71:48:ILE:HB	21:71:95:HIS:CE1	2.40	0.57
21:71:88:ARG:HB2	79:2S:2722:U:H5''	1.85	0.57
24:74:112:ASN:HD22	24:74:112:ASN:C	2.07	0.57
28:78:56:VAL:HG23	28:78:57:GLY:H	1.68	0.57
30:80:74:ASN:OD1	30:80:86:ARG:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:85:57:VAL:O	35:85:61:GLN:HG3	2.04	0.57
45:RC:10:ARG:HB3	45:RC:312:VAL:CG2	2.35	0.57
45:RC:219:GLU:HB3	45:RC:233:THR:HG21	1.86	0.57
47:S1:225:VAL:HG12	47:S1:227:ALA:N	2.20	0.57
57:11:137:PHE:HZ	78:1S:304:U:H4'	1.69	0.57
65:19:102:ARG:CD	78:1S:1500:C:H5''	2.35	0.57
78:1S:740:A:C3'	78:1S:741:C:H5''	2.34	0.57
78:1S:879:G:H2'	78:1S:880:C:C6	2.40	0.57
79:2S:1566:A:H3'	79:2S:1567:U:H5''	1.87	0.57
79:2S:3064:U:H2'	79:2S:3065:G:C8	2.39	0.57
79:2S:3252:G:H2'	79:2S:3253:G:O4'	2.04	0.57
2:L2:138:GLY:O	2:L2:146:THR:HG23	2.05	0.57
4:L4:44:LYS:HA	4:L4:47:ARG:HD2	1.87	0.57
20:70:167:ARG:HG3	79:2S:3184:A:H61	1.70	0.57
45:RC:223:TRP:HZ3	49:S3:220:PRO:HB3	1.68	0.57
52:S6:25:ARG:HG2	52:S6:28:PHE:HD1	1.69	0.57
55:S9:141:VAL:HG12	55:S9:143:ILE:H	1.69	0.57
56:10:50:THR:HG22	56:10:55:VAL:HG13	1.87	0.57
68:22:29:PRO:HB2	68:22:58:SER:HB3	1.87	0.57
68:22:81:VAL:O	78:1S:748:U:H5''	2.05	0.57
79:2S:815:G:H2'	79:2S:906:A:N6	2.20	0.57
79:2S:1844:C:C3'	79:2S:1845:G:H5''	2.34	0.57
79:2S:2412:G:H2'	79:2S:2413:A:C8	2.40	0.57
8:L8:49:TYR:HB3	79:2S:2524:A:H5'	1.86	0.57
31:81:25:PHE:HB3	31:81:65:LYS:HD3	1.87	0.57
45:RC:229:LYS:HA	49:S3:222:VAL:HG11	1.86	0.57
47:S1:48:VAL:HG12	47:S1:49:ASN:N	2.17	0.57
47:S1:225:VAL:O	79:2S:2537:U:H5''	2.05	0.57
49:S3:162:GLN:N	49:S3:163:PRO:CD	2.68	0.57
51:S5:200:ASN:HB2	51:S5:208:SER:HB3	1.87	0.57
52:S6:76:LEU:HD11	52:S6:92:ARG:HD3	1.86	0.57
56:10:24:LYS:HD3	56:10:63:TYR:CE2	2.40	0.57
63:17:95:ARG:N	63:17:95:ARG:HD2	2.20	0.57
70:24:5:VAL:HG12	70:24:6:THR:N	2.19	0.57
79:2S:181:U:H2'	79:2S:182:U:C4'	2.34	0.57
79:2S:1115:G:H5''	79:2S:1116:G:C5'	2.35	0.57
79:2S:1929:G:H4'	79:2S:2321:A:H5''	1.86	0.57
4:L4:193:LYS:HG2	4:L4:198:ARG:HG3	1.86	0.56
15:65:121:VAL:HG23	15:65:122:ASN:H	1.70	0.56
16:66:68:ARG:HH12	79:2S:2987:A:H5''	1.70	0.56
22:72:56:VAL:HG13	22:72:65:VAL:HG22	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:74:94:ARG:HB2	52:S6:145:PHE:HD1	1.69	0.56
46:S0:53:THR:HG23	46:S0:160:ILE:CG2	2.35	0.56
61:15:114:HIS:HB2	61:15:119:PHE:HZ	1.70	0.56
69:23:24:TRP:HA	69:23:24:TRP:CE3	2.40	0.56
79:2S:1297:C:H2'	79:2S:1298:C:H6	1.70	0.56
81:5S:64:A:H5'	81:5S:65:G:H5''	1.87	0.56
4:L4:77:VAL:O	4:L4:86:GLY:HA2	2.05	0.56
4:L4:114:ASN:HD22	4:L4:114:ASN:N	2.03	0.56
5:L5:10:SER:O	5:L5:14:SER:HB2	2.04	0.56
5:L5:155:THR:HG23	81:5S:36:C:C5'	2.35	0.56
8:L8:65:LEU:HD13	8:L8:69:LEU:HD11	1.85	0.56
13:63:138:VAL:HG12	13:63:140:SER:H	1.70	0.56
18:68:86:THR:HG22	18:68:105:ARG:HE	1.69	0.56
20:70:12:ARG:NH2	21:71:141:VAL:HB	2.19	0.56
24:74:94:ARG:HB2	52:S6:145:PHE:CD1	2.40	0.56
30:80:42:ILE:HG13	30:80:67:VAL:HA	1.86	0.56
34:84:65:VAL:HB	34:84:70:LYS:HD3	1.87	0.56
35:85:58:ILE:O	35:85:62:GLN:HG3	2.05	0.56
46:S0:56:LYS:HB3	46:S0:160:ILE:HG12	1.86	0.56
48:S2:65:GLU:HB2	48:S2:68:ILE:HG13	1.87	0.56
55:S9:110:GLN:HB2	55:S9:144:PRO:HB3	1.86	0.56
57:11:99:ARG:HH12	68:22:77:PRO:HG3	1.69	0.56
60:14:84:ARG:HA	60:14:119:THR:HG22	1.86	0.56
68:22:101:TYR:HA	68:22:113:HIS:HE1	1.70	0.56
75:29:56:ARG:HA	78:1S:1418:G:H21	1.70	0.56
78:1S:740:A:H2'	78:1S:741:C:H5''	1.88	0.56
79:2S:2186:U:H5'	79:2S:2314:U:OP2	2.05	0.56
79:2S:2741:C:C3'	79:2S:2742:C:H5''	2.34	0.56
79:2S:3121:U:H4'	79:2S:3122:A:OP1	2.04	0.56
2:L2:54:ARG:HG2	2:L2:55:GLY:H	1.71	0.56
3:L3:122:TRP:CE3	3:L3:122:TRP:HA	2.41	0.56
3:L3:252:ILE:HD13	79:2S:2394:G:OP1	2.05	0.56
4:L4:152:VAL:HB	4:L4:156:LEU:HD11	1.87	0.56
5:L5:176:SER:O	5:L5:180:PHE:HE2	1.89	0.56
6:L6:46:ARG:HB3	6:L6:77:ARG:HH21	1.70	0.56
7:L7:111:ILE:O	7:L7:112:ASN:HB2	2.04	0.56
8:L8:72:PRO:HB3	15:65:17:ASP:HB3	1.86	0.56
10:60:115:MET:HB3	79:2S:2618:G:H2'	1.87	0.56
14:64:68:LEU:HD13	14:64:94:TRP:HB2	1.87	0.56
16:66:73:PHE:CG	16:66:78:ARG:HB3	2.40	0.56
19:69:52:LYS:HG2	19:69:52:LYS:O	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:102:LEU:HD22	19:69:138:LEU:HD13	1.85	0.56
19:69:148:ASP:O	19:69:152:GLU:HB2	2.05	0.56
23:73:66:LYS:HB2	23:73:69:LEU:HD13	1.88	0.56
28:78:10:LYS:N	28:78:10:LYS:HD2	2.19	0.56
31:81:16:LEU:HD22	31:81:71:LEU:HD11	1.88	0.56
37:87:67:LEU:HD11	80:8S:41:A:H5'	1.87	0.56
45:RC:60:SER:HB2	62:16:94:GLN:NE2	2.20	0.56
46:S0:25:GLY:HA2	46:S0:48:ILE:HG13	1.87	0.56
46:S0:73:VAL:O	46:S0:95:ALA:HB1	2.06	0.56
47:S1:107:THR:HA	47:S1:110:LEU:HD22	1.87	0.56
50:S4:37:LYS:HB2	50:S4:40:GLU:CD	2.26	0.56
51:S5:130:ILE:O	51:S5:134:VAL:HG23	2.05	0.56
65:19:40:SER:HB3	65:19:43:ASN:ND2	2.17	0.56
68:22:19:LYS:NZ	78:1S:1095:U:H4'	2.20	0.56
69:23:103:LEU:HD12	69:23:125:VAL:HB	1.86	0.56
73:27:35:VAL:HG11	73:27:63:LEU:HD22	1.88	0.56
74:28:32:PHE:CE2	74:28:38:ARG:HB3	2.41	0.56
78:1S:16:G:H2'	78:1S:17:C:C6	2.40	0.56
78:1S:65:A:H2	78:1S:84:A:H62	1.53	0.56
78:1S:933:A:H61	78:1S:944:A:H61	1.53	0.56
78:1S:1513:G:O2'	78:1S:1515:A:H1'	2.06	0.56
78:1S:1519:U:H2'	78:1S:1520:U:C6	2.41	0.56
78:1S:1648:A:H2'	78:1S:1649:G:C8	2.41	0.56
79:2S:818:C:H42	79:2S:919:U:H4'	1.70	0.56
79:2S:1019:G:H2'	79:2S:1020:G:H5''	1.86	0.56
79:2S:1618:G:H4'	80:8S:129:C:H1'	1.86	0.56
79:2S:1626:U:H4'	79:2S:1632:A:H4'	1.87	0.56
79:2S:1709:C:H2'	79:2S:1710:C:H6	1.70	0.56
79:2S:1887:A:H2'	79:2S:1888:U:H5'	1.87	0.56
79:2S:2149:A:C2	79:2S:2188:A:H4'	2.40	0.56
79:2S:3242:G:H5'	79:2S:3245:A:H1'	1.88	0.56
79:2S:3349:C:H2'	79:2S:3350:C:C6	2.40	0.56
4:L4:281:ILE:CG1	4:L4:282:SER:H	2.15	0.56
5:L5:146:LEU:HD22	5:L5:163:LEU:HD12	1.86	0.56
6:L6:52:VAL:HG22	6:L6:53:VAL:H	1.69	0.56
6:L6:149:ILE:HG12	6:L6:155:LEU:HD12	1.86	0.56
13:63:75:PHE:O	13:63:79:GLU:HB2	2.05	0.56
17:67:40:GLU:HA	17:67:113:TYR:HA	1.87	0.56
20:70:12:ARG:HB2	20:70:22:PRO:HB2	1.88	0.56
26:76:60:ARG:HG3	26:76:103:LYS:HD2	1.87	0.56
26:76:73:VAL:HA	26:76:80:VAL:HA	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:86:54:GLU:HA	36:86:57:LEU:HB2	1.88	0.56
39:89:24:PRO:HB2	39:89:27:ILE:HD12	1.88	0.56
45:RC:282:SER:HB3	45:RC:285:ALA:HB3	1.86	0.56
54:S8:22:ARG:HB2	54:S8:25:ARG:HH21	1.71	0.56
55:S9:37:LYS:NZ	78:1S:475:A:H5''	2.19	0.56
58:12:57:ALA:HB2	58:12:122:VAL:CG1	2.35	0.56
78:1S:822:U:H2'	78:1S:823:G:H4'	1.87	0.56
78:1S:889:U:H2'	78:1S:890:C:C6	2.40	0.56
79:2S:1809:A:H2'	79:2S:1810:A:O4'	2.06	0.56
1:L1:32:VAL:HG22	1:L1:33:GLU:N	2.21	0.56
3:L3:9:PRO:HG3	79:2S:2914:G:H5'	1.88	0.56
3:L3:221:THR:HB	3:L3:273:HIS:H	1.70	0.56
3:L3:308:MET:HB2	3:L3:363:SER:HB2	1.88	0.56
5:L5:111:GLN:HA	5:L5:116:ASP:HB2	1.88	0.56
10:60:26:VAL:HG12	10:60:122:PRO:HG2	1.86	0.56
11:61:27:GLY:H	11:61:30:LEU:CB	2.18	0.56
15:65:27:VAL:HG23	15:65:129:TYR:HE2	1.71	0.56
19:69:38:ARG:HG3	79:2S:1602:A:H5''	1.87	0.56
23:73:71:LYS:HA	79:2S:2295:A:H5''	1.86	0.56
25:75:24:LEU:HD11	80:8S:151:C:C4	2.40	0.56
51:S5:146:THR:HB	51:S5:157:ARG:HG3	1.87	0.56
78:1S:702:G:N2	78:1S:703:G:H1'	2.20	0.56
78:1S:812:A:H4'	78:1S:813:U:H3'	1.87	0.56
78:1S:1058:U:H5	78:1S:1061:A:C6	2.22	0.56
78:1S:1636:C:H4'	78:1S:1637:C:H3'	1.85	0.56
79:2S:502:U:C3'	79:2S:503:C:H5''	2.35	0.56
79:2S:649:A:H2'	79:2S:650:C:C6	2.41	0.56
79:2S:1019:G:C3'	79:2S:1020:G:H5''	2.35	0.56
79:2S:2428:U:H2'	79:2S:2429:G:H8	1.70	0.56
1:L1:62:ASN:CB	1:L1:151:VAL:HB	2.35	0.56
2:L2:42:ARG:HD2	2:L2:87:PHE:HB3	1.87	0.56
3:L3:348:ARG:HA	3:L3:351:LEU:HD13	1.87	0.56
8:L8:185:ARG:HD3	80:8S:155:A:H5'	1.88	0.56
31:81:40:ALA:HB3	31:81:49:VAL:HG21	1.87	0.56
44:P0:83:ASN:HD22	79:2S:1281:G:H21	1.52	0.56
45:RC:101:GLN:HG2	45:RC:138:GLY:N	2.21	0.56
46:S0:112:THR:HG23	46:S0:115:PHE:HB2	1.88	0.56
48:S2:240:LEU:O	48:S2:244:SER:HB2	2.05	0.56
51:S5:61:TYR:CE1	51:S5:165:LEU:HD13	2.41	0.56
53:S7:142:TYR:CE1	53:S7:148:LYS:HG2	2.40	0.56
57:11:86:ILE:HG12	57:11:107:VAL:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:20:45:ALA:HB3	66:20:52:LYS:HD3	1.87	0.56
69:23:83:VAL:HG12	69:23:84:THR:N	2.15	0.56
78:1S:740:A:H3'	78:1S:741:C:H5''	1.88	0.56
78:1S:1285:U:H5''	78:1S:1286:U:H5	1.69	0.56
78:1S:1371:A:H1'	78:1S:1373:C:OP2	2.06	0.56
78:1S:1687:U:H2'	78:1S:1688:U:H5'	1.87	0.56
79:2S:3101:G:H2'	79:2S:3102:G:H8	1.70	0.56
2:L2:137:ILE:HG12	2:L2:148:VAL:HA	1.87	0.56
3:L3:208:VAL:HG13	3:L3:340:LYS:HE3	1.88	0.56
5:L5:109:THR:HA	5:L5:112:LYS:HE3	1.87	0.56
17:67:175:ARG:O	17:67:179:GLN:HG3	2.05	0.56
18:68:8:LYS:HB3	18:68:11:LYS:HE3	1.86	0.56
19:69:180:LYS:O	19:69:184:LEU:HG	2.05	0.56
46:S0:23:HIS:H	46:S0:23:HIS:CD2	2.24	0.56
51:S5:53:VAL:HG11	51:S5:59:VAL:HG22	1.87	0.56
51:S5:112:ARG:HD3	71:25:95:HIS:CE1	2.41	0.56
53:S7:63:PRO:O	53:S7:64:VAL:HB	2.05	0.56
65:19:40:SER:CB	65:19:43:ASN:HD22	2.16	0.56
71:25:55:PRO:HB3	71:25:88:ILE:HG23	1.86	0.56
72:26:37:LYS:H	72:26:37:LYS:HD2	1.69	0.56
78:1S:144:U:O2'	78:1S:145:A:H5'	2.05	0.56
78:1S:946:U:H2'	78:1S:947:U:C6	2.40	0.56
79:2S:2602:G:H2'	79:2S:2603:G:O4'	2.05	0.56
79:2S:3221:C:H2'	79:2S:3222:U:O4'	2.05	0.56
1:L1:123:LEU:HB3	1:L1:128:LEU:HB2	1.87	0.56
6:L6:24:ALA:HB3	6:L6:26:ARG:HH22	1.71	0.56
7:L7:81:HIS:O	7:L7:119:VAL:HG21	2.06	0.56
8:L8:61:GLN:O	8:L8:65:LEU:HD23	2.05	0.56
10:60:16:PRO:C	10:60:18:PRO:HD3	2.26	0.56
10:60:205:SER:O	10:60:209:ASN:HB2	2.06	0.56
15:65:16:SER:CB	36:86:48:ALA:HB1	2.36	0.56
53:S7:81:LEU:HD13	53:S7:90:VAL:HG11	1.86	0.56
54:S8:10:LYS:HG3	78:1S:323:A:OP2	2.05	0.56
79:2S:300:G:H2'	79:2S:301:G:C8	2.40	0.56
79:2S:1062:A:H5''	79:2S:1063:G:H5'	1.88	0.56
80:8S:76:C:H2'	80:8S:77:A:O4'	2.06	0.56
2:L2:137:ILE:HG13	2:L2:138:GLY:N	2.21	0.56
2:L2:200:ARG:HH22	2:L2:203:ALA:HB2	1.71	0.56
14:64:13:ARG:HD3	14:64:65:LEU:HB2	1.86	0.56
16:66:190:VAL:O	16:66:194:LEU:HG	2.06	0.56
20:70:14:LEU:CD2	21:71:136:ARG:HH21	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S7:63:PRO:C	53:S7:65:PRO:HD2	2.26	0.56
57:11:54:ILE:N	57:11:54:ILE:HD12	2.21	0.56
58:12:132:GLU:O	58:12:136:ILE:HG23	2.05	0.56
59:13:94:LYS:O	59:13:98:VAL:HG23	2.05	0.56
59:13:120:SER:O	59:13:124:ARG:HG3	2.05	0.56
78:1S:587:C:H2'	78:1S:588:U:C6	2.41	0.56
78:1S:1611:A:H2'	78:1S:1612:U:O4'	2.06	0.56
78:1S:1678:A:H2'	78:1S:1679:G:O4'	2.06	0.56
79:2S:1043:C:H2'	79:2S:1044:U:C6	2.41	0.56
79:2S:1212:A:H2'	79:2S:1213:G:C8	2.41	0.56
79:2S:1215:U:H2'	79:2S:1216:C:C6	2.41	0.56
79:2S:1440:G:H2'	79:2S:1441:G:C8	2.41	0.56
5:L5:163:LEU:HD11	5:L5:175:HIS:HB3	1.89	0.56
16:66:116:LYS:HD2	79:2S:3179:U:O2'	2.05	0.56
17:67:131:ARG:HH22	79:2S:2356:A:H2	1.54	0.56
27:77:118:PHE:O	27:77:122:HIS:HB2	2.05	0.56
34:84:10:ARG:NH2	79:2S:1834:U:H4'	2.21	0.56
34:84:15:THR:OG1	34:84:18:ASN:HB2	2.06	0.56
34:84:73:SER:HB2	79:2S:1639:C:N4	2.21	0.56
37:87:16:HIS:O	37:87:25:ARG:HD3	2.06	0.56
42:92:77:CYS:O	42:92:78:LYS:HG2	2.05	0.56
44:P0:22:TYR:CD2	44:P0:88:PHE:HB3	2.41	0.56
46:S0:90:ALA:CB	46:S0:97:PRO:HD3	2.36	0.56
46:S0:126:PRO:CG	46:S0:151:SER:HB3	2.35	0.56
47:S1:71:ALA:HB2	47:S1:79:HIS:O	2.06	0.56
47:S1:77:GLU:HG3	60:14:114:ARG:HH22	1.71	0.56
66:20:27:THR:HA	66:20:87:HIS:O	2.05	0.56
68:22:10:ALA:O	68:22:14:ILE:HG13	2.05	0.56
68:22:56:HIS:O	68:22:57:ARG:HG3	2.04	0.56
78:1S:286:C:O2'	78:1S:287:G:H5'	2.06	0.56
78:1S:1667:A:H2'	78:1S:1668:G:O4'	2.04	0.56
79:2S:1659:U:H2'	79:2S:1660:C:C6	2.41	0.56
3:L3:92:TYR:HB2	3:L3:157:VAL:HG23	1.87	0.55
9:L9:48:VAL:HG11	9:L9:52:LEU:HD22	1.87	0.55
22:72:99:LYS:HB2	22:72:102:GLU:OE1	2.06	0.55
23:73:33:ASN:HD21	23:73:64:LYS:H	1.53	0.55
45:RC:31:ASN:HA	45:RC:47:LEU:HB2	1.87	0.55
48:S2:168:ARG:HH12	78:1S:1099:U:H5	1.53	0.55
51:S5:63:GLN:HG3	51:S5:88:PRO:HA	1.88	0.55
75:29:43:PHE:HZ	75:29:52:PHE:HB2	1.70	0.55
76:30:46:ASN:O	76:30:47:VAL:HG12	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:487:G:H2'	78:1S:488:G:H5''	1.88	0.55
79:2S:502:U:H2'	79:2S:503:C:H5''	1.88	0.55
79:2S:2248:C:H4'	79:2S:2272:G:C8	2.41	0.55
1:L1:123:LEU:CD2	1:L1:128:LEU:HD12	2.28	0.55
3:L3:20:LYS:HE2	79:2S:2991:A:OP2	2.07	0.55
3:L3:235:THR:HG22	3:L3:236:LYS:N	2.21	0.55
3:L3:261:MET:HG2	16:66:64:PHE:HA	1.88	0.55
4:L4:271:LYS:HD2	4:L4:274:TYR:CD1	2.41	0.55
11:61:91:LEU:O	11:61:172:LEU:HD12	2.06	0.55
11:61:94:ARG:HD3	11:61:94:ARG:N	2.21	0.55
17:67:44:ALA:O	17:67:48:LEU:HG	2.07	0.55
31:81:73:LEU:HD22	31:81:95:PRO:HA	1.89	0.55
37:87:39:TYR:CD2	37:87:40:PRO:HA	2.42	0.55
51:S5:87:CYS:HB3	51:S5:92:ARG:NH1	2.21	0.55
52:S6:19:ASP:O	52:S6:23:ARG:HD2	2.05	0.55
54:S8:41:LYS:HA	54:S8:59:ARG:O	2.06	0.55
55:S9:109:LEU:HD22	55:S9:129:ILE:HD13	1.89	0.55
55:S9:175:ARG:O	55:S9:175:ARG:HD2	2.06	0.55
56:10:32:HIS:H	56:10:32:HIS:HD2	1.53	0.55
78:1S:697:C:H3'	78:1S:698:U:C5'	2.32	0.55
79:2S:417:A:H2'	79:2S:418:A:C8	2.41	0.55
79:2S:1384:U:H2'	79:2S:1385:C:C6	2.41	0.55
79:2S:3155:U:H3'	79:2S:3156:U:H5'	1.88	0.55
80:8S:110:C:H4'	80:8S:112:U:C5	2.28	0.55
83:PT:54:G:H2'	83:PT:55:U:C6	2.42	0.55
3:L3:255:TRP:O	3:L3:258:ALA:HB2	2.06	0.55
11:61:21:ILE:HG12	11:61:125:MET:HG3	1.87	0.55
18:68:44:PHE:HE1	18:68:139:ILE:HD11	1.69	0.55
18:68:98:LYS:HG3	18:68:118:GLY:O	2.06	0.55
20:70:13:ARG:HG2	20:70:14:LEU:N	2.16	0.55
21:71:7:TYR:HB3	79:2S:2757:U:H4'	1.89	0.55
28:78:37:GLY:O	28:78:42:ARG:HB3	2.05	0.55
47:S1:229:MET:HB3	79:2S:2537:U:H3'	1.86	0.55
48:S2:169:LEU:CD2	48:S2:198:THR:HG22	2.36	0.55
53:S7:100:PRO:HA	78:1S:639:U:H3	1.72	0.55
57:11:57:LYS:HD3	57:11:131:ILE:HG23	1.87	0.55
59:13:9:LYS:NZ	78:1S:1034:C:H5''	2.22	0.55
66:20:95:ALA:HB1	66:20:96:PRO:HD2	1.88	0.55
73:27:20:LYS:HE3	78:1S:958:U:OP1	2.06	0.55
78:1S:17:C:H4'	78:1S:1109:G:C8	2.42	0.55
78:1S:351:C:C5	78:1S:631:G:H5''	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:565:C:H5	78:1S:576:G:H3'	1.71	0.55
78:1S:751:G:H2'	78:1S:752:A:O4'	2.06	0.55
78:1S:990:C:H2'	78:1S:991:G:O4'	2.06	0.55
78:1S:1639:C:H2'	78:1S:1640:C:O4'	2.05	0.55
79:2S:155:G:H5''	79:2S:156:G:H2'	1.88	0.55
79:2S:801:A:H5'	79:2S:803:C:P	2.45	0.55
79:2S:2143:A:H2'	79:2S:2145:A:N7	2.21	0.55
79:2S:2344:U:H2'	79:2S:2345:A:C8	2.41	0.55
1:L1:34:LEU:HD13	1:L1:210:MET:HB3	1.89	0.55
3:L3:362:ALA:HB1	3:L3:368:GLY:HA3	1.88	0.55
4:L4:353:ALA:O	4:L4:357:GLU:HG3	2.06	0.55
9:L9:30:PRO:HG2	9:L9:83:THR:HG22	1.88	0.55
11:61:116:TYR:OH	64:18:110:ARG:HD3	2.06	0.55
21:71:48:ILE:HG13	21:71:94:GLU:HB3	1.88	0.55
23:73:61:THR:HG22	23:73:72:LYS:O	2.07	0.55
23:73:86:ARG:HB2	23:73:92:PHE:CE1	2.41	0.55
25:75:88:MET:SD	25:75:120:LYS:HB2	2.46	0.55
27:77:23:VAL:HG12	27:77:45:GLY:HA3	1.89	0.55
38:88:63:LYS:O	38:88:63:LYS:HD3	2.06	0.55
49:S3:5:ILE:HG23	49:S3:9:ARG:CZ	2.36	0.55
52:S6:64:LYS:HB2	52:S6:97:VAL:HG11	1.88	0.55
52:S6:116:LYS:HD2	52:S6:125:THR:HG21	1.88	0.55
65:19:13:ASP:HA	65:19:16:ASN:ND2	2.16	0.55
78:1S:175:G:H21	78:1S:176:C:H5	1.55	0.55
78:1S:1170:G:H1'	78:1S:1574:G:H1'	1.88	0.55
79:2S:428:A:H2'	79:2S:429:U:C6	2.42	0.55
79:2S:637:C:H2'	79:2S:638:C:C6	2.40	0.55
79:2S:1058:U:H2'	79:2S:1059:G:C8	2.41	0.55
79:2S:1585:C:H2'	79:2S:1586:G:O4'	2.05	0.55
79:2S:1870:C:H2'	79:2S:1871:U:C6	2.42	0.55
79:2S:3099:C:O2'	79:2S:3100:U:H5'	2.05	0.55
2:L2:49:VAL:HG22	2:L2:50:HIS:N	2.20	0.55
2:L2:227:ARG:HG2	2:L2:239:ALA:HB2	1.88	0.55
5:L5:30:TYR:HA	5:L5:33:ARG:HB3	1.87	0.55
9:L9:4:ILE:HG23	9:L9:5:GLN:H	1.71	0.55
9:L9:172:ILE:H	9:L9:172:ILE:CD1	2.18	0.55
10:60:62:SER:HA	10:60:65:LEU:HD12	1.88	0.55
16:66:118:VAL:HG11	20:70:165:TYR:HD1	1.71	0.55
23:73:81:GLN:HG2	23:73:82:ALA:H	1.71	0.55
25:75:111:ASN:HD22	79:2S:1524:A:H5''	1.72	0.55
27:77:23:VAL:HB	27:77:43:VAL:HB	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:78:74:ASN:HB3	28:78:115:LYS:HB2	1.87	0.55
31:81:62:ARG:HD2	79:2S:3074:G:O2'	2.07	0.55
36:86:88:GLU:HA	36:86:91:ASN:HD22	1.71	0.55
42:92:72:LEU:HG	42:92:81:ALA:HB3	1.87	0.55
57:11:75:VAL:HG21	57:11:117:VAL:HG11	1.88	0.55
66:20:96:PRO:HG2	66:20:99:ILE:HG22	1.89	0.55
78:1S:519:C:H3'	78:1S:520:A:C8	2.42	0.55
78:1S:562:G:H2'	78:1S:563:U:C6	2.41	0.55
78:1S:617:U:H2'	78:1S:618:U:C6	2.42	0.55
78:1S:878:G:H2'	78:1S:879:G:C8	2.41	0.55
78:1S:1194:A:H2'	78:1S:1195:C:H5'	1.88	0.55
78:1S:1350:U:H2'	78:1S:1351:G:C8	2.42	0.55
79:2S:2569:A:H4'	79:2S:2571:U:O4	2.07	0.55
3:L3:19:ARG:O	3:L3:269:GLN:HB3	2.07	0.55
37:87:85:LYS:HG2	37:87:86:ALA:N	2.22	0.55
45:RC:36:ALA:HB1	45:RC:68:VAL:HB	1.88	0.55
55:S9:126:ARG:O	55:S9:130:THR:HG22	2.06	0.55
57:11:151:LYS:N	57:11:151:LYS:HD2	2.21	0.55
65:19:122:ARG:HG3	65:19:122:ARG:HH11	1.72	0.55
72:26:79:ILE:HG23	72:26:84:VAL:HG23	1.88	0.55
78:1S:564:G:H4'	78:1S:566:C:N3	2.21	0.55
78:1S:1333:C:H2'	78:1S:1334:U:C6	2.42	0.55
78:1S:1370:U:H4'	78:1S:1371:A:H5'	1.87	0.55
78:1S:1651:A:N1	78:1S:1749:A:H2	2.04	0.55
79:2S:2501:U:C2'	79:2S:2502:A:H5'	2.36	0.55
79:2S:2588:U:H2'	79:2S:2589:G:O4'	2.07	0.55
2:L2:79:ASN:O	2:L2:82:VAL:HG22	2.07	0.55
10:60:26:VAL:CG1	10:60:122:PRO:HG2	2.36	0.55
10:60:93:PRO:HB3	10:60:127:ALA:HB2	1.88	0.55
13:63:165:SER:O	13:63:166:ALA:HB3	2.07	0.55
15:65:172:ARG:CZ	15:65:174:ILE:HD11	2.37	0.55
22:72:17:VAL:HG13	22:72:103:TYR:HB2	1.87	0.55
30:80:48:THR:OG1	30:80:49:PRO:HD2	2.07	0.55
33:83:38:PRO:O	33:83:42:GLN:HG2	2.07	0.55
47:S1:228:LEU:HB3	79:2S:2537:U:P	2.47	0.55
50:S4:132:GLY:HA3	50:S4:136:VAL:O	2.06	0.55
54:S8:117:TYR:HE1	54:S8:146:ARG:HB3	1.70	0.55
57:11:117:VAL:HG12	57:11:118:GLN:H	1.71	0.55
59:13:26:PHE:HZ	59:13:28:LEU:HD12	1.72	0.55
65:19:6:VAL:HG21	65:19:132:LEU:HD23	1.87	0.55
68:22:78:ARG:HB3	68:22:124:LYS:HD3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:115:G:H1'	78:1S:334:G:O2'	2.07	0.55
78:1S:228:G:H5'	78:1S:228:G:H8	1.71	0.55
78:1S:351:C:H3'	78:1S:352:A:H5''	1.88	0.55
78:1S:1245:G:H1	78:1S:1250:U:H3	1.54	0.55
78:1S:1348:A:H2'	78:1S:1349:G:O4'	2.06	0.55
79:2S:900:G:H2'	79:2S:901:G:C8	2.41	0.55
79:2S:1019:G:H3'	79:2S:1020:G:H5''	1.88	0.55
79:2S:2207:A:H2'	79:2S:2208:A:O4'	2.07	0.55
79:2S:3380:U:H2'	79:2S:3381:U:C6	2.42	0.55
3:L3:188:ILE:HA	3:L3:191:LYS:HD2	1.88	0.55
4:L4:283:THR:HG21	4:L4:288:ARG:HD3	1.88	0.55
18:68:82:VAL:CB	18:68:139:ILE:HG12	2.37	0.55
25:75:141:TYR:HB3	35:85:33:VAL:CG1	2.36	0.55
26:76:58:VAL:HG22	26:76:104:LEU:CD2	2.36	0.55
31:81:10:ARG:HD2	31:81:12:TYR:OH	2.07	0.55
33:83:59:VAL:HG22	33:83:62:SER:O	2.07	0.55
34:84:59:PRO:HB3	79:2S:1654:A:C2	2.39	0.55
37:87:25:ARG:HH12	39:89:50:ASN:HB3	1.72	0.55
38:88:40:GLN:HE21	38:88:42:LYS:HE3	1.69	0.55
46:S0:45:VAL:HG12	46:S0:46:HIS:N	2.20	0.55
50:S4:88:ASP:HB2	50:S4:101:LEU:HD12	1.88	0.55
50:S4:92:LEU:O	50:S4:96:ASN:HA	2.06	0.55
52:S6:27:PHE:CZ	52:S6:41:VAL:HG21	2.41	0.55
57:11:39:GLY:HA3	78:1S:246:G:O2'	2.07	0.55
59:13:88:LEU:HD22	59:13:91:LEU:HD12	1.88	0.55
62:16:137:ARG:HB3	78:1S:1580:C:H4'	1.89	0.55
64:18:145:ARG:HA	64:18:145:ARG:NE	2.21	0.55
65:19:83:ALA:HB1	65:19:91:TYR:HB3	1.88	0.55
66:20:59:PRO:HG3	78:1S:1381:U:H4'	1.87	0.55
69:23:7:ARG:HH12	78:1S:1100:G:H1'	1.72	0.55
70:24:104:SER:HB3	70:24:107:GLN:HB3	1.89	0.55
79:2S:1594:A:H1'	79:2S:1615:C:H1'	1.88	0.55
79:2S:3096:C:H2'	79:2S:3097:C:C6	2.42	0.55
81:5S:81:U:H2'	81:5S:82:G:H8	1.72	0.55
2:L2:129:ALA:O	2:L2:169:ILE:HD12	2.07	0.55
2:L2:201:GLY:HA2	2:L2:204:MET:CE	2.37	0.55
3:L3:350:ALA:O	3:L3:351:LEU:HB2	2.06	0.55
26:76:115:ARG:O	26:76:119:ILE:HG13	2.07	0.55
35:85:47:VAL:O	35:85:51:ILE:HG13	2.07	0.55
44:P0:61:ARG:CB	79:2S:1221:A:H5'	2.37	0.55
48:S2:35:TRP:CZ3	48:S2:37:PRO:HB3	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:15:PRO:HG2	50:S4:18:TRP:NE1	2.22	0.55
51:S5:55:ASP:OD2	51:S5:58:LEU:HD12	2.07	0.55
55:S9:8:TYR:HB2	78:1S:471:A:O2'	2.07	0.55
55:S9:36:LEU:HD21	55:S9:108:ARG:HH12	1.72	0.55
60:14:89:THR:HB	60:14:128:LYS:HG3	1.88	0.55
64:18:83:ALA:HA	64:18:86:LEU:HD13	1.89	0.55
70:24:92:VAL:HG21	70:24:99:LYS:NZ	2.22	0.55
72:26:41:ILE:O	72:26:41:ILE:HG12	2.06	0.55
78:1S:513:U:H2'	78:1S:514:G:C8	2.42	0.55
78:1S:541:A:O2'	78:1S:542:A:H4'	2.07	0.55
78:1S:1285:U:H5''	78:1S:1286:U:C5	2.42	0.55
79:2S:1200:A:H4'	79:2S:1201:C:H4'	1.89	0.55
79:2S:1268:G:H2'	79:2S:1269:U:O4'	2.06	0.55
79:2S:1870:C:H2'	79:2S:1871:U:H6	1.71	0.55
80:8S:104:A:OP2	80:8S:105:A:H5''	2.07	0.55
4:L4:232:SER:O	4:L4:233:LEU:HB2	2.06	0.55
7:L7:136:TYR:N	7:L7:136:TYR:CD1	2.74	0.55
11:61:137:ARG:HD3	81:5S:28:C:OP1	2.07	0.55
13:63:32:LYS:HA	13:63:35:ARG:HE	1.72	0.55
14:64:17:VAL:HG21	14:64:74:ARG:HG3	1.88	0.55
18:68:26:LEU:O	18:68:30:VAL:HG23	2.06	0.55
19:69:41:ILE:O	19:69:45:VAL:HG23	2.07	0.55
19:69:153:LYS:O	19:69:157:GLU:HG3	2.07	0.55
22:72:35:LYS:O	22:72:38:ILE:HG22	2.07	0.55
37:87:52:LYS:O	37:87:56:ARG:HG3	2.07	0.55
37:87:85:LYS:HE3	37:87:88:ALA:O	2.07	0.55
38:88:65:LEU:HD23	38:88:65:LEU:O	2.07	0.55
41:91:13:LEU:HD13	41:91:16:LYS:HD3	1.87	0.55
42:92:23:HIS:HB2	42:92:72:LEU:HD12	1.87	0.55
51:S5:84:LYS:HB2	51:S5:84:LYS:NZ	2.22	0.55
52:S6:6:SER:HB3	52:S6:13:GLN:HB3	1.88	0.55
53:S7:91:ILE:HG12	53:S7:129:LEU:HD23	1.89	0.55
54:S8:25:ARG:NH2	78:1S:385:A:H5''	2.20	0.55
57:11:85:VAL:HA	57:11:108:PRO:HA	1.87	0.55
74:28:9:LEU:O	74:28:32:PHE:HA	2.07	0.55
78:1S:411:C:H2'	78:1S:412:A:O4'	2.07	0.55
78:1S:605:A:H2'	78:1S:606:A:C2	2.42	0.55
78:1S:993:A:H2'	78:1S:994:G:O4'	2.07	0.55
78:1S:1057:U:H4'	78:1S:1058:U:H5'	1.89	0.55
79:2S:24:G:H2'	79:2S:25:U:H5'	1.89	0.55
79:2S:1257:C:H2'	79:2S:1258:U:C4'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2041:U:H2'	79:2S:2042:G:C8	2.42	0.55
79:2S:2471:U:C2'	79:2S:2472:U:H5''	2.35	0.55
79:2S:2999:U:H2'	79:2S:3000:A:H8	1.70	0.55
3:L3:261:MET:HG2	16:66:64:PHE:CB	2.37	0.54
14:64:108:ARG:HG2	16:66:198:GLY:HA3	1.89	0.54
17:67:61:ARG:HD3	80:8S:3:A:H4'	1.89	0.54
18:68:147:ARG:O	18:68:150:VAL:HG22	2.06	0.54
20:70:9:VAL:HG22	20:70:61:ILE:CD1	2.33	0.54
23:73:118:VAL:HG12	23:73:119:GLY:N	2.22	0.54
37:87:18:LEU:HD23	37:87:25:ARG:N	2.22	0.54
50:S4:11:ARG:HA	50:S4:28:ALA:HB2	1.89	0.54
54:S8:106:ALA:HB2	54:S8:165:LEU:HG	1.87	0.54
59:13:23:PRO:HG2	59:13:26:PHE:CD2	2.35	0.54
69:23:82:LYS:HD3	69:23:82:LYS:H	1.72	0.54
69:23:144:ARG:HD2	69:23:145:SER:N	2.16	0.54
78:1S:16:G:H21	78:1S:1138:A:H62	1.55	0.54
78:1S:1193:A:H62	78:1S:1283:U:H5'	1.72	0.54
78:1S:1526:A:H2'	78:1S:1527:C:H5'	1.89	0.54
79:2S:129:U:H2'	79:2S:130:A:C8	2.41	0.54
79:2S:131:C:H2'	79:2S:132:C:O4'	2.07	0.54
79:2S:198:A:H2'	79:2S:199:A:H5'	1.89	0.54
3:L3:36:ASP:HB3	3:L3:39:LYS:HB2	1.87	0.54
5:L5:51:LEU:HB2	5:L5:144:VAL:CG2	2.37	0.54
6:L6:17:ALA:O	79:2S:592:A:H5'	2.07	0.54
14:64:81:VAL:O	14:64:85:TRP:HB2	2.08	0.54
18:68:147:ARG:HB2	18:68:150:VAL:HG13	1.88	0.54
29:79:21:ILE:O	29:79:21:ILE:HG22	2.07	0.54
38:88:56:ILE:HG21	38:88:62:ALA:HB2	1.89	0.54
46:S0:9:LEU:HD21	46:S0:13:ASP:HB2	1.88	0.54
47:S1:70:LEU:CD1	47:S1:79:HIS:HB3	2.36	0.54
50:S4:193:GLY:O	50:S4:210:ILE:HG23	2.06	0.54
66:20:60:THR:H	78:1S:1382:A:H5''	1.71	0.54
78:1S:115:G:O2'	78:1S:116:U:H5''	2.07	0.54
78:1S:413:U:H2'	78:1S:414:C:C6	2.42	0.54
78:1S:1058:U:H5	78:1S:1061:A:N6	2.06	0.54
78:1S:1327:C:H2'	78:1S:1328:G:O4'	2.07	0.54
78:1S:1525:A:H2'	78:1S:1526:A:O4'	2.07	0.54
79:2S:543:C:H2'	79:2S:544:C:H5'	1.89	0.54
79:2S:1231:A:H4'	79:2S:1261:G:H8	1.72	0.54
79:2S:2282:U:H6	79:2S:2282:U:H5'	1.72	0.54
79:2S:2457:G:H1	79:2S:2461:A:N6	2.04	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2512:C:H2'	79:2S:2513:U:OP2	2.06	0.54
79:2S:2533:G:H5'	79:2S:2533:G:C8	2.40	0.54
3:L3:238:LEU:HD22	3:L3:238:LEU:N	2.23	0.54
4:L4:166:VAL:HA	4:L4:169:LEU:HD12	1.89	0.54
4:L4:191:LYS:H	79:2S:1380:G:H5''	1.72	0.54
14:64:113:THR:HG22	14:64:115:PHE:H	1.72	0.54
45:RC:267:PRO:O	45:RC:269:TYR:HD1	1.91	0.54
46:S0:47:VAL:CG1	63:17:109:LEU:HD22	2.37	0.54
47:S1:164:ILE:O	47:S1:168:ILE:HG13	2.07	0.54
50:S4:173:ILE:HD12	50:S4:173:ILE:N	2.22	0.54
51:S5:133:VAL:O	51:S5:137:ILE:HG12	2.07	0.54
51:S5:187:ILE:H	51:S5:187:ILE:CD1	2.16	0.54
53:S7:141:ARG:HD2	53:S7:142:TYR:H	1.72	0.54
68:22:93:LEU:HD23	68:22:94:LEU:N	2.23	0.54
76:30:14:VAL:O	76:30:18:THR:HG23	2.06	0.54
79:2S:2094:C:H2'	79:2S:2095:G:C8	2.38	0.54
79:2S:3295:A:H2'	79:2S:3296:A:H8	1.71	0.54
80:8S:118:C:H2'	80:8S:119:C:C6	2.42	0.54
3:L3:332:ARG:HD3	3:L3:332:ARG:N	2.22	0.54
5:L5:290:ILE:HA	5:L5:294:ALA:HB3	1.88	0.54
9:L9:45:PHE:CD1	9:L9:55:VAL:HG12	2.42	0.54
9:L9:118:LEU:HD21	9:L9:177:ASP:CB	2.38	0.54
17:67:36:ILE:HD11	17:67:44:ALA:HB1	1.90	0.54
49:S3:157:LEU:HD22	49:S3:187:LYS:HD3	1.88	0.54
50:S4:159:THR:CG2	50:S4:227:VAL:HG23	2.37	0.54
58:12:91:VAL:HG12	58:12:92:ALA:H	1.72	0.54
61:15:43:ARG:HG2	61:15:43:ARG:NH1	2.23	0.54
67:21:9:VAL:O	67:21:10:GLU:HB3	2.08	0.54
71:25:46:LYS:O	71:25:50:ILE:HG13	2.07	0.54
78:1S:900:A:H3'	78:1S:901:G:H21	1.72	0.54
79:2S:293:C:H2'	79:2S:294:U:O4'	2.08	0.54
79:2S:500:C:H2'	79:2S:501:A:C8	2.42	0.54
79:2S:1225:A:H2'	79:2S:1226:G:C8	2.42	0.54
79:2S:1471:U:O5'	79:2S:1471:U:H6	1.91	0.54
79:2S:1654:A:H2'	79:2S:1655:G:H5''	1.88	0.54
79:2S:1709:C:H2'	79:2S:1710:C:C6	2.42	0.54
2:L2:190:ARG:HB3	2:L2:190:ARG:NH2	2.20	0.54
16:66:74:ARG:HD2	16:66:145:VAL:HG23	1.88	0.54
17:67:91:VAL:O	17:67:95:LEU:HG	2.08	0.54
18:68:51:ALA:HB1	18:68:84:VAL:HG11	1.90	0.54
26:76:77:LYS:O	26:76:78:PHE:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:80:10:ILE:O	30:80:14:LEU:HG	2.07	0.54
42:92:97:LYS:HB2	42:92:97:LYS:NZ	2.23	0.54
47:S1:85:LYS:O	47:S1:86:LEU:HD13	2.07	0.54
47:S1:109:LYS:O	47:S1:113:MET:HG3	2.07	0.54
52:S6:81:VAL:HG22	52:S6:82:SER:N	2.22	0.54
53:S7:21:ALA:O	53:S7:25:VAL:HG23	2.08	0.54
59:13:2:GLY:HA3	59:13:9:LYS:HD3	1.90	0.54
59:13:42:ARG:HH22	59:13:78:ASN:HB3	1.71	0.54
62:16:127:LYS:HE2	78:1S:1605:G:C8	2.43	0.54
78:1S:1701:A:H3'	78:1S:1702:A:C5'	2.37	0.54
79:2S:1117:G:H2'	79:2S:1118:C:C6	2.42	0.54
79:2S:1128:U:O2	79:2S:2827:U:H4'	2.07	0.54
79:2S:1385:C:H2'	79:2S:1387:G:H5'	1.90	0.54
79:2S:1653:G:H2'	79:2S:1654:A:C8	2.43	0.54
79:2S:2485:A:C2'	79:2S:2486:A:H5'	2.37	0.54
2:L2:94:ALA:HB3	2:L2:102:LEU:HD11	1.89	0.54
2:L2:136:ILE:HA	2:L2:148:VAL:HG12	1.90	0.54
6:L6:37:GLY:H	6:L6:54:TYR:HB3	1.72	0.54
13:63:10:LEU:HD12	79:2S:797:U:H1'	1.88	0.54
16:66:120:VAL:HB	16:66:123:ALA:HB3	1.89	0.54
19:69:116:ASP:O	19:69:120:TYR:HB2	2.07	0.54
30:80:27:TYR:O	30:80:31:VAL:HG23	2.07	0.54
34:84:20:ILE:HG21	34:84:32:ALA:HB1	1.90	0.54
37:87:21:ARG:NH2	37:87:39:TYR:HD2	1.99	0.54
39:89:22:PRO:CG	79:2S:1517:G:H5''	2.31	0.54
40:90:110:CYS:SG	40:90:112:LYS:HB2	2.48	0.54
42:92:73:GLU:HA	42:92:80:ARG:HA	1.90	0.54
49:S3:72:LEU:HD23	56:10:20:VAL:HG13	1.90	0.54
51:S5:51:VAL:CG1	51:S5:134:VAL:HG21	2.38	0.54
51:S5:81:ARG:HD2	78:1S:1615:C:H3'	1.90	0.54
57:11:137:PHE:CZ	78:1S:304:U:H4'	2.42	0.54
58:12:111:ASN:HD21	58:12:115:VAL:CG2	2.21	0.54
78:1S:108:A:H2'	78:1S:109:G:C8	2.43	0.54
78:1S:615:A:H2'	78:1S:616:G:H8	1.71	0.54
79:2S:2333:C:H2'	79:2S:2334:U:O4'	2.08	0.54
79:2S:3338:C:H2'	79:2S:3339:A:C8	2.42	0.54
2:L2:104:LEU:HD23	2:L2:160:SER:HA	1.89	0.54
4:L4:257:LYS:O	4:L4:257:LYS:HG2	2.07	0.54
15:65:117:ASN:O	15:65:133:ILE:HG22	2.07	0.54
17:67:15:ALA:HB3	17:67:150:VAL:CG2	2.37	0.54
17:67:119:VAL:HG23	17:67:146:ILE:HG12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:122:VAL:O	19:69:126:GLU:HG3	2.06	0.54
23:73:75:PRO:O	23:73:102:ILE:HD12	2.07	0.54
34:84:44:CYS:SG	34:84:80:ARG:HD3	2.48	0.54
35:85:96:GLU:HA	35:85:99:GLN:HG2	1.90	0.54
45:RC:122:ILE:HD11	45:RC:136:ILE:HG22	1.90	0.54
51:S5:51:VAL:HG21	51:S5:130:ILE:HG12	1.89	0.54
52:S6:68:LEU:HA	52:S6:100:ALA:HB3	1.89	0.54
52:S6:176:GLN:HE21	78:1S:169:A:H4'	1.72	0.54
53:S7:114:ARG:HB2	53:S7:114:ARG:NH1	2.23	0.54
55:S9:109:LEU:HB2	55:S9:146:PHE:HB3	1.90	0.54
59:13:90:TYR:HA	59:13:93:LYS:HB3	1.89	0.54
61:15:11:VAL:HG13	61:15:12:PHE:H	1.73	0.54
64:18:67:GLU:O	64:18:71:GLN:HG2	2.08	0.54
70:24:10:ARG:HG2	78:1S:778:G:H1	1.73	0.54
72:26:20:PRO:HA	72:26:31:PRO:HA	1.90	0.54
78:1S:37:U:H2'	78:1S:38:C:O4'	2.07	0.54
78:1S:557:G:H3'	78:1S:558:U:H4'	1.88	0.54
79:2S:1307:G:H1'	79:2S:1308:A:OP2	2.07	0.54
2:L2:129:ALA:HB3	2:L2:132:ASN:HD22	1.72	0.54
15:65:83:LYS:HB2	15:65:86:ASN:ND2	2.22	0.54
19:69:39:ASN:O	19:69:43:LYS:HG3	2.08	0.54
28:78:63:LYS:HE2	28:78:65:GLN:NE2	2.20	0.54
28:78:75:LEU:HG	28:78:114:GLY:HA2	1.90	0.54
39:89:38:ASN:HD22	39:89:41:ARG:HB2	1.73	0.54
51:S5:32:GLU:HG3	51:S5:33:VAL:HG23	1.89	0.54
51:S5:59:VAL:O	51:S5:60:ASP:HB2	2.07	0.54
53:S7:30:SER:HB2	53:S7:34:LEU:HB2	1.90	0.54
53:S7:30:SER:CB	53:S7:34:LEU:HD22	2.38	0.54
68:22:77:PRO:HD3	69:23:7:ARG:HB3	1.88	0.54
78:1S:29:U:H2'	78:1S:30:G:C8	2.43	0.54
78:1S:1420:C:H2'	78:1S:1421:A:H5'	1.89	0.54
78:1S:1533:C:H2'	78:1S:1534:G:C8	2.42	0.54
78:1S:1562:G:H2'	78:1S:1563:C:H6	1.72	0.54
79:2S:41:G:H3'	79:2S:42:C:C6	2.43	0.54
79:2S:713:U:O2'	79:2S:754:G:H5''	2.07	0.54
79:2S:761:A:H2'	79:2S:762:U:C6	2.42	0.54
79:2S:1151:U:H3'	79:2S:1152:G:H21	1.73	0.54
2:L2:113:VAL:HG12	2:L2:166:ILE:HA	1.89	0.54
4:L4:208:VAL:HG12	4:L4:230:VAL:HG22	1.90	0.54
5:L5:152:ARG:HG3	81:5S:44:C:H4'	1.90	0.54
8:L8:67:ILE:HG23	8:L8:237:ILE:HD12	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:130:LYS:O	16:66:133:ARG:HG2	2.07	0.54
36:86:88:GLU:HA	36:86:91:ASN:ND2	2.23	0.54
46:S0:139:VAL:O	46:S0:140:ASN:HB2	2.08	0.54
47:S1:115:ARG:HG3	47:S1:116:LYS:H	1.73	0.54
48:S2:125:ILE:O	48:S2:129:ILE:HG13	2.07	0.54
53:S7:125:ILE:HG21	53:S7:176:LEU:CD1	2.37	0.54
60:14:113:GLY:HA2	72:26:58:VAL:HG22	1.90	0.54
62:16:50:GLU:N	62:16:51:PRO:HD2	2.23	0.54
64:18:96:LYS:HG2	64:18:97:ASP:N	2.23	0.54
69:23:29:TYR:O	69:23:33:LEU:HD23	2.08	0.54
78:1S:1669:U:H2'	78:1S:1670:G:O4'	2.07	0.54
79:2S:500:C:H2'	79:2S:501:A:H8	1.72	0.54
79:2S:502:U:H3'	79:2S:503:C:H5''	1.90	0.54
79:2S:632:G:H2'	79:2S:633:C:C6	2.42	0.54
79:2S:2149:A:N1	79:2S:2188:A:H4'	2.23	0.54
79:2S:2896:A:H2'	79:2S:2897:A:O4'	2.07	0.54
81:5S:59:U:H2'	81:5S:60:G:O4'	2.07	0.54
2:L2:131:GLY:HA2	2:L2:169:ILE:O	2.08	0.54
3:L3:266:ARG:HA	3:L3:266:ARG:HE	1.72	0.54
4:L4:170:LYS:HE2	4:L4:175:HIS:HA	1.90	0.54
4:L4:234:ASN:ND2	4:L4:236:LEU:HB2	2.23	0.54
5:L5:122:VAL:HG12	5:L5:125:VAL:H	1.73	0.54
6:L6:30:LEU:HB3	6:L6:34:LEU:HD12	1.90	0.54
8:L8:153:ILE:HD11	8:L8:177:TYR:HB2	1.90	0.54
10:60:26:VAL:HB	10:60:27:PRO:HD2	1.89	0.54
17:67:17:ALA:HB3	17:67:148:LEU:HG	1.88	0.54
17:67:60:PHE:CZ	17:67:82:ARG:HB2	2.42	0.54
24:74:23:ARG:HB2	24:74:29:PHE:HE2	1.72	0.54
24:74:96:LEU:HB2	24:74:100:VAL:HB	1.89	0.54
34:84:20:ILE:HD12	34:84:34:HIS:HA	1.90	0.54
49:S3:95:GLY:HA2	49:S3:126:VAL:HG22	1.90	0.54
60:14:128:LYS:H	72:26:22:ARG:HH12	1.56	0.54
61:15:40:ARG:NH2	61:15:43:ARG:HD3	2.23	0.54
64:18:139:LYS:HA	78:1S:1459:C:C5	2.43	0.54
65:19:37:VAL:HG22	65:19:38:LYS:H	1.73	0.54
68:22:117:ARG:HA	68:22:117:ARG:HH11	1.72	0.54
78:1S:1087:A:H2'	78:1S:1088:A:C8	2.43	0.54
78:1S:1458:G:N3	78:1S:1458:G:H2'	2.23	0.54
79:2S:782:U:H2'	79:2S:783:A:O4'	2.08	0.54
79:2S:1398:U:H5''	80:8S:9:A:OP1	2.08	0.54
79:2S:2228:A:H2'	79:2S:2229:A:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:3017:A:H2'	79:2S:3018:C:C6	2.43	0.54
14:64:37:GLU:HB3	14:64:45:LEU:HD23	1.88	0.53
18:68:33:TYR:OH	18:68:124:LEU:HB3	2.08	0.53
19:69:62:ARG:HH21	19:69:62:ARG:HG3	1.73	0.53
24:74:83:THR:C	24:74:85:ALA:H	2.12	0.53
27:77:54:THR:HG22	27:77:57:HIS:CD2	2.44	0.53
34:84:51:LEU:HD23	34:84:51:LEU:H	1.72	0.53
47:S1:67:GLU:HG2	47:S1:83:LYS:HE3	1.89	0.53
48:S2:35:TRP:HE1	48:S2:67:GLN:HB3	1.72	0.53
51:S5:156:ARG:HG2	51:S5:156:ARG:HH11	1.74	0.53
58:12:24:ILE:HD13	58:12:24:ILE:N	2.23	0.53
76:30:60:PRO:HG3	78:1S:559:C:H4'	1.90	0.53
78:1S:778:G:C2'	78:1S:779:U:H5'	2.38	0.53
78:1S:1352:G:O2'	78:1S:1353:U:H5'	2.08	0.53
78:1S:1621:U:O4	78:1S:1622:G:O2'	2.13	0.53
79:2S:2102:U:H2'	79:2S:2103:U:C6	2.43	0.53
3:L3:229:VAL:HG23	3:L3:233:TRP:CD1	2.44	0.53
4:L4:114:ASN:HB2	4:L4:117:GLU:CB	2.39	0.53
10:60:218:ALA:O	10:60:219:ALA:HB3	2.08	0.53
18:68:180:ARG:NH1	18:68:185:LYS:HB3	2.24	0.53
19:69:135:LYS:O	19:69:139:VAL:HG23	2.08	0.53
25:75:57:LEU:HD12	25:75:61:LYS:HG2	1.91	0.53
28:78:6:THR:HG22	28:78:8:THR:H	1.74	0.53
30:80:48:THR:HA	79:2S:1729:A:H62	1.73	0.53
31:81:18:LYS:HB2	79:2S:3376:A:H1'	1.89	0.53
31:81:98:VAL:HG22	31:81:99:ALA:N	2.22	0.53
34:84:90:ILE:O	34:84:94:LEU:HG	2.08	0.53
35:85:28:LEU:HD23	35:85:47:VAL:HG13	1.89	0.53
48:S2:127:ALA:O	48:S2:131:ILE:HG13	2.09	0.53
57:11:53:TYR:OH	57:11:114:ALA:HB2	2.09	0.53
69:23:108:GLY:HA2	78:1S:600:U:OP2	2.08	0.53
78:1S:846:G:H2'	78:1S:847:A:O4'	2.08	0.53
79:2S:54:C:H2'	79:2S:55:G:C8	2.43	0.53
79:2S:1829:G:H5''	79:2S:1830:G:H5'	1.90	0.53
2:L2:201:GLY:HA3	2:L2:209:HIS:CD2	2.43	0.53
4:L4:219:LEU:HD12	4:L4:227:THR:CG2	2.38	0.53
6:L6:42:LEU:O	6:L6:49:GLY:HA2	2.08	0.53
9:L9:47:LYS:NZ	14:64:6:ILE:H	2.05	0.53
18:68:59:ARG:N	18:68:60:PRO:HD3	2.23	0.53
19:69:128:LYS:HD3	79:2S:840:C:H4'	1.88	0.53
25:75:92:LYS:HD2	79:2S:1830:G:H5''	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:76:24:SER:HA	26:76:27:ARG:HB2	1.91	0.53
29:79:59:LYS:HD3	29:79:59:LYS:N	2.23	0.53
46:S0:205:ARG:HA	46:S0:205:ARG:HE	1.73	0.53
47:S1:91:VAL:O	47:S1:91:VAL:HG22	2.08	0.53
49:S3:38:GLU:O	49:S3:48:VAL:HA	2.08	0.53
52:S6:7:TYR:HD2	52:S6:8:PRO:HD2	1.73	0.53
52:S6:176:GLN:HG2	78:1S:169:A:H5'	1.90	0.53
58:12:114:LYS:HE3	78:1S:1225:U:H5	1.74	0.53
70:24:91:LEU:HB2	70:24:97:ALA:HB3	1.90	0.53
78:1S:1561:U:H2'	78:1S:1562:G:H8	1.74	0.53
79:2S:1195:A:H2'	79:2S:1309:U:O2	2.07	0.53
79:2S:2133:U:C2'	79:2S:2134:G:H5'	2.38	0.53
79:2S:2260:U:H3'	79:2S:2261:G:C8	2.43	0.53
79:2S:2277:C:H5'	79:2S:2317:A:H4'	1.88	0.53
79:2S:2592:G:H4'	79:2S:2594:C:C2	2.43	0.53
3:L3:313:HIS:CD2	79:2S:3378:C:H4'	2.43	0.53
4:L4:325:LEU:HD13	79:2S:598:A:H4'	1.91	0.53
7:L7:158:LYS:NZ	79:2S:1362:G:H21	2.07	0.53
14:64:35:ILE:HD11	14:64:65:LEU:HD21	1.91	0.53
23:73:7:GLN:HE21	79:2S:3018:C:H5''	1.74	0.53
26:76:13:ARG:HD3	80:8S:24:G:OP2	2.09	0.53
37:87:36:SER:HA	37:87:45:ARG:HH21	1.74	0.53
42:92:37:ALA:HB3	42:92:40:LYS:HB2	1.89	0.53
45:RC:6:VAL:HG23	45:RC:318:ALA:HA	1.90	0.53
50:S4:82:TYR:CD1	50:S4:83:PRO:HD2	2.43	0.53
55:S9:108:ARG:HG2	55:S9:147:MET:CE	2.38	0.53
55:S9:133:HIS:C	55:S9:134:ILE:HG13	2.28	0.53
61:15:16:SER:HB3	61:15:20:VAL:HG23	1.90	0.53
63:17:102:VAL:HG22	63:17:103:ASP:H	1.72	0.53
67:21:22:ARG:HH12	67:21:58:TYR:CB	2.21	0.53
68:22:7:LEU:HD22	68:22:74:VAL:HG21	1.89	0.53
78:1S:1643:U:H4'	78:1S:1781:A:H4'	1.91	0.53
79:2S:58:G:H2'	79:2S:59:G:H8	1.69	0.53
79:2S:871:U:H2'	79:2S:872:U:C6	2.42	0.53
79:2S:2371:G:H2'	79:2S:2373:A:OP1	2.08	0.53
79:2S:2405:C:H2'	79:2S:2406:C:H5'	1.89	0.53
79:2S:2882:U:H2'	79:2S:2883:U:C6	2.44	0.53
1:L1:57:ASN:HD21	1:L1:147:LYS:HE2	1.74	0.53
5:L5:157:ALA:HB3	5:L5:160:PHE:HD2	1.73	0.53
5:L5:239:ILE:O	5:L5:243:ALA:HB2	2.09	0.53
9:L9:4:ILE:HG23	9:L9:5:GLN:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:165:ILE:HD13	10:60:165:ILE:N	2.21	0.53
15:65:20:ARG:HH22	79:2S:2435:G:H5''	1.73	0.53
18:68:86:THR:CG2	18:68:105:ARG:HE	2.22	0.53
19:69:118:HIS:O	19:69:122:VAL:HG23	2.09	0.53
23:73:7:GLN:HG3	79:2S:3018:C:C5'	2.39	0.53
28:78:110:GLY:O	28:78:128:ARG:HB2	2.09	0.53
32:82:19:ARG:HB2	32:82:31:ASN:O	2.09	0.53
33:83:17:GLN:HB3	33:83:24:ASN:HB3	1.89	0.53
37:87:5:THR:N	37:87:6:PRO:HD2	2.22	0.53
45:RC:87:LYS:HG2	45:RC:108:SER:O	2.08	0.53
47:S1:87:ARG:HG2	47:S1:88:VAL:H	1.74	0.53
49:S3:132:LYS:HB3	49:S3:189:MET:CG	2.38	0.53
53:S7:30:SER:OG	53:S7:34:LEU:HD22	2.07	0.53
53:S7:168:SER:O	53:S7:172:VAL:HG23	2.08	0.53
68:22:36:LYS:O	68:22:40:VAL:HG23	2.09	0.53
69:23:22:ASN:HB3	78:1S:609:U:H3	1.72	0.53
72:26:40:ALA:HB2	72:26:71:LEU:CD2	2.39	0.53
78:1S:413:U:H2'	78:1S:414:C:H6	1.74	0.53
78:1S:826:U:H2'	78:1S:827:C:C5	2.44	0.53
79:2S:619:A:H4'	79:2S:620:U:C5	2.43	0.53
79:2S:982:C:H2'	79:2S:983:A:C8	2.43	0.53
79:2S:1654:A:H2'	79:2S:1655:G:C5'	2.39	0.53
79:2S:2130:G:H21	79:2S:2132:C:H5''	1.74	0.53
79:2S:2416:U:H1'	79:2S:2967:A:N3	2.23	0.53
79:2S:2778:G:C3'	79:2S:2779:A:H5''	2.38	0.53
81:5S:12:U:H5'	81:5S:69:C:C1'	2.34	0.53
2:L2:112:ILE:HG23	2:L2:133:TYR:HB2	1.90	0.53
2:L2:206:PRO:HG3	2:L2:213:GLY:HA3	1.89	0.53
4:L4:138:ARG:NH1	4:L4:246:ARG:HG2	2.23	0.53
4:L4:152:VAL:HG12	4:L4:153:SER:N	2.21	0.53
4:L4:287:THR:O	4:L4:291:ASN:HB2	2.09	0.53
14:64:43:LYS:HG2	14:64:58:ILE:O	2.08	0.53
17:67:117:ILE:HA	17:67:148:LEU:HA	1.90	0.53
20:70:14:LEU:HD21	21:71:136:ARG:HH21	1.73	0.53
35:85:69:LEU:HD12	35:85:69:LEU:O	2.08	0.53
42:92:8:ARG:HD2	79:2S:2713:U:O2'	2.08	0.53
45:RC:90:ARG:HH11	45:RC:99:THR:HG21	1.74	0.53
47:S1:87:ARG:HG2	47:S1:88:VAL:N	2.24	0.53
52:S6:32:ILE:HA	52:S6:52:ILE:HB	1.91	0.53
55:S9:93:LEU:HA	55:S9:96:VAL:HG22	1.89	0.53
57:11:77:SER:O	57:11:84:ILE:HB	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:18:71:GLN:O	64:18:75:ASN:HB2	2.09	0.53
65:19:118:PRO:O	65:19:119:LYS:HB2	2.09	0.53
65:19:130:ARG:HG2	65:19:130:ARG:HH11	1.74	0.53
70:24:114:ARG:O	70:24:118:ILE:HG12	2.09	0.53
71:25:98:GLN:HE21	71:25:98:GLN:HA	1.73	0.53
72:26:28:LYS:HB3	72:26:74:CYS:HB2	1.90	0.53
78:1S:300:A:H2'	78:1S:301:A:C8	2.43	0.53
78:1S:877:G:H1	78:1S:951:A:H61	1.56	0.53
78:1S:1470:C:H4'	78:1S:1540:G:N2	2.23	0.53
79:2S:895:A:H5'	79:2S:896:A:OP1	2.09	0.53
79:2S:998:A:H2'	79:2S:999:G:C8	2.44	0.53
79:2S:1170:A:H2'	79:2S:1171:G:O4'	2.09	0.53
79:2S:1263:A:H2'	79:2S:1263:A:N3	2.24	0.53
79:2S:1364:C:O2'	79:2S:1365:G:H5'	2.08	0.53
79:2S:3234:A:H2'	79:2S:3235:C:O4'	2.08	0.53
81:5S:97:A:H2'	81:5S:98:C:C6	2.44	0.53
83:PT:36:A:H2'	83:PT:37:U:H6	1.74	0.53
1:L1:62:ASN:HB3	1:L1:151:VAL:CB	2.35	0.53
2:L2:196:TRP:CG	2:L2:197:PRO:HA	2.44	0.53
3:L3:99:LEU:HD13	3:L3:157:VAL:CG2	2.37	0.53
5:L5:158:ARG:HG2	5:L5:158:ARG:HH11	1.73	0.53
7:L7:60:ARG:HA	7:L7:60:ARG:HE	1.74	0.53
14:64:127:LYS:O	14:64:131:VAL:HG23	2.08	0.53
16:66:87:MET:HG2	79:2S:1311:G:N2	2.23	0.53
24:74:49:ILE:HG21	24:74:52:THR:HG23	1.91	0.53
24:74:112:ASN:HD22	24:74:113:LYS:N	2.07	0.53
26:76:81:GLN:HG3	26:76:98:ASN:OD1	2.09	0.53
28:78:133:LEU:HD11	79:2S:716:A:OP1	2.09	0.53
32:82:20:HIS:O	32:82:21:HIS:HB2	2.08	0.53
45:RC:198:ASN:ND2	63:17:23:LYS:HG2	2.23	0.53
47:S1:228:LEU:N	79:2S:2537:U:OP2	2.42	0.53
51:S5:51:VAL:HB	51:S5:64:VAL:HG11	1.91	0.53
54:S8:147:ALA:O	54:S8:148:ALA:HB3	2.08	0.53
55:S9:93:LEU:HA	55:S9:96:VAL:CG2	2.39	0.53
59:13:129:TYR:HA	59:13:132:VAL:CG2	2.38	0.53
62:16:55:VAL:HG23	62:16:105:LEU:HG	1.91	0.53
68:22:50:PHE:HB2	68:22:61:ILE:CG2	2.39	0.53
69:23:96:VAL:HG23	69:23:97:ASP:N	2.22	0.53
70:24:38:ASP:HA	70:24:41:ARG:NH1	2.24	0.53
78:1S:205:U:H2'	78:1S:206:A:H8	1.74	0.53
78:1S:1147:A:O2'	78:1S:1635:A:H2'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:32:U:H2'	79:2S:33:G:O4'	2.09	0.53
79:2S:346:C:H2'	79:2S:348:A:N7	2.23	0.53
79:2S:1472:U:H2'	79:2S:1473:G:H8	1.71	0.53
79:2S:2742:C:H2'	79:2S:2743:A:H8	1.73	0.53
4:L4:82:THR:HG23	4:L4:84:ARG:H	1.73	0.53
5:L5:184:ASP:HB3	5:L5:187:THR:CG2	2.39	0.53
7:L7:83:LEU:HD22	7:L7:117:VAL:O	2.09	0.53
10:60:97:LEU:HD21	10:60:126:ALA:HB2	1.91	0.53
18:68:23:ASN:HB3	18:68:26:LEU:HB3	1.90	0.53
18:68:86:THR:HG22	18:68:105:ARG:NE	2.24	0.53
21:71:17:ARG:O	21:71:21:LYS:HB2	2.08	0.53
29:79:28:LYS:HD3	29:79:29:TYR:H	1.72	0.53
36:86:89:GLU:O	36:86:93:ILE:HG12	2.09	0.53
37:87:48:ASN:HB3	79:2S:52:A:H5''	1.91	0.53
47:S1:224:ASP:HB3	79:2S:2536:A:C2'	2.38	0.53
53:S7:173:TYR:CD2	53:S7:176:LEU:HD12	2.42	0.53
55:S9:76:LEU:CD1	55:S9:79:ARG:HE	2.20	0.53
61:15:72:LYS:HE2	61:15:106:GLU:HB2	1.90	0.53
72:26:7:SER:HB2	72:26:11:ASN:H	1.73	0.53
72:26:23:CYS:HB3	72:26:27:SER:CA	2.39	0.53
77:31:113:LYS:N	77:31:113:LYS:HD2	2.24	0.53
78:1S:116:U:H2'	78:1S:117:U:C6	2.43	0.53
78:1S:832:U:C2'	78:1S:833:U:H5''	2.38	0.53
78:1S:1229:G:N2	78:1S:1256:A:H62	2.04	0.53
78:1S:1375:A:H2'	78:1S:1376:C:C6	2.44	0.53
79:2S:418:A:H61	80:8S:5:U:H3	1.57	0.53
79:2S:955:U:H2'	79:2S:956:U:C6	2.43	0.53
79:2S:1657:C:N4	79:2S:1797:A:H3'	2.24	0.53
79:2S:2729:U:H2'	79:2S:2730:G:C8	2.44	0.53
79:2S:2792:A:H2'	79:2S:2793:G:C8	2.43	0.53
5:L5:136:GLU:O	5:L5:137:ASP:HB2	2.09	0.53
9:L9:87:LYS:HB2	9:L9:187:ILE:HG12	1.90	0.53
15:65:60:VAL:HB	15:65:134:LEU:HB2	1.91	0.53
16:66:78:ARG:HH21	16:66:104:VAL:HB	1.74	0.53
31:81:28:ARG:HD3	31:81:65:LYS:HB3	1.91	0.53
32:82:104:ASN:O	32:82:108:ILE:HG13	2.09	0.53
33:83:88:ASN:HB2	79:2S:429:U:H5'	1.91	0.53
36:86:34:SER:HA	79:2S:264:G:OP1	2.08	0.53
40:90:93:LYS:HE2	40:90:102:ARG:HG2	1.91	0.53
43:93:81:SER:HA	43:93:84:ARG:HD3	1.91	0.53
45:RC:202:LEU:HA	45:RC:212:ALA:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:170:ILE:HD12	46:S0:170:ILE:N	2.23	0.53
47:S1:103:MET:HB3	47:S1:215:VAL:HG12	1.89	0.53
48:S2:110:HIS:NE2	48:S2:138:PRO:HB3	2.23	0.53
52:S6:64:LYS:O	52:S6:67:VAL:HG22	2.09	0.53
52:S6:67:VAL:HG23	52:S6:99:GLY:HA2	1.90	0.53
53:S7:125:ILE:HG21	53:S7:176:LEU:HD11	1.90	0.53
54:S8:106:ALA:HB1	54:S8:160:PHE:CE1	2.44	0.53
57:11:151:LYS:HD2	57:11:151:LYS:H	1.74	0.53
61:15:16:SER:OG	61:15:25:LEU:HD22	2.09	0.53
63:17:2:GLY:HA3	78:1S:1403:C:OP2	2.09	0.53
66:20:22:ILE:HG13	66:20:23:ARG:N	2.21	0.53
74:28:12:VAL:HG21	74:28:48:VAL:CG1	2.39	0.53
78:1S:1082:C:H2'	78:1S:1083:G:H5'	1.91	0.53
78:1S:1498:G:H2'	78:1S:1499:G:H5'	1.90	0.53
78:1S:1621:U:C5	78:1S:1622:G:C2'	2.92	0.53
79:2S:958:C:H5'	79:2S:2799:A:H2'	1.91	0.53
79:2S:1920:U:H2'	79:2S:1930:A:H61	1.73	0.53
79:2S:2843:U:H5''	79:2S:2844:C:C5	2.43	0.53
79:2S:3044:G:H2'	79:2S:3045:G:C8	2.44	0.53
79:2S:3355:U:H3'	79:2S:3356:G:H5''	1.91	0.53
18:68:64:VAL:HA	18:68:67:ILE:HD12	1.89	0.53
26:76:13:ARG:O	26:76:17:LYS:HB2	2.09	0.53
26:76:86:THR:HG22	26:76:96:PRO:HA	1.91	0.53
40:90:119:ASN:HD21	79:2S:1207:G:H5''	1.72	0.53
42:92:82:GLN:HE22	79:2S:2790:A:H2	1.57	0.53
45:RC:98:GLU:HG2	45:RC:99:THR:N	2.24	0.53
47:S1:32:ILE:HD12	60:14:33:LEU:HD22	1.90	0.53
59:13:124:ARG:NH2	78:1S:967:A:OP2	2.41	0.53
61:15:15:HIS:CD2	64:18:93:THR:HB	2.44	0.53
62:16:25:GLY:CA	62:16:64:ASP:HB2	2.27	0.53
66:20:22:ILE:HG22	66:20:93:LEU:HB2	1.91	0.53
78:1S:725:U:H2'	78:1S:726:C:H5'	1.91	0.53
79:2S:953:G:O2'	79:2S:1116:G:H5'	2.09	0.53
79:2S:1951:C:H1'	79:2S:2096:A:C2	2.44	0.53
79:2S:2484:A:H1'	83:PT:57:C:C6	2.44	0.53
1:L1:90:LEU:HD21	1:L1:112:ALA:CB	2.38	0.52
4:L4:8:VAL:HB	4:L4:16:THR:HB	1.91	0.52
6:L6:51:ARG:HG2	6:L6:51:ARG:HH11	1.74	0.52
13:63:56:PRO:HG3	13:63:74:GLY:O	2.09	0.52
31:81:76:SER:CB	31:81:78:LYS:HE3	2.39	0.52
47:S1:70:LEU:HD12	47:S1:82:ARG:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:7:LYS:HB2	78:1S:1515:A:OP2	2.09	0.52
64:18:140:THR:O	64:18:143:ARG:HD3	2.08	0.52
65:19:57:ARG:O	65:19:61:VAL:HG23	2.08	0.52
69:23:86:PHE:O	69:23:124:VAL:HG23	2.09	0.52
70:24:5:VAL:HG12	70:24:6:THR:H	1.73	0.52
71:25:41:ILE:CG1	71:25:42:LEU:H	2.17	0.52
78:1S:162:A:H3'	78:1S:163:G:H21	1.73	0.52
78:1S:822:U:H2'	78:1S:823:G:C4'	2.39	0.52
78:1S:1322:A:H2'	78:1S:1323:C:C6	2.44	0.52
78:1S:1632:C:H2'	78:1S:1633:A:C8	2.44	0.52
79:2S:1780:G:H2'	79:2S:1781:C:C6	2.44	0.52
79:2S:2949:U:O2'	79:2S:2950:G:H5'	2.09	0.52
79:2S:3008:A:H2'	79:2S:3009:G:C8	2.44	0.52
79:2S:3163:A:C2'	79:2S:3164:C:H4'	2.37	0.52
1:L1:31:THR:CG2	79:2S:2469:G:H5'	2.40	0.52
1:L1:120:VAL:H	1:L1:121:PRO:CD	2.23	0.52
1:L1:157:PHE:HD1	1:L1:157:PHE:H	1.57	0.52
2:L2:2:GLY:HA3	79:2S:2608:G:OP1	2.09	0.52
15:65:38:ARG:NH1	80:8S:142:C:H5''	2.24	0.52
15:65:115:VAL:HG22	15:65:134:LEU:CD2	2.40	0.52
19:69:44:LEU:HD12	19:69:49:THR:HG21	1.91	0.52
25:75:59:SER:HB3	25:75:102:LEU:HD11	1.91	0.52
32:82:101:SER:HB3	79:2S:1389:G:H5''	1.91	0.52
34:84:101:VAL:HG13	34:84:105:VAL:HG21	1.90	0.52
35:85:41:LEU:O	35:85:44:ILE:HG22	2.09	0.52
42:92:40:LYS:HD2	83:PT:76:C:N4	2.24	0.52
50:S4:4:GLY:HA3	78:1S:93:A:O2'	2.09	0.52
50:S4:19:LEU:HD21	50:S4:108:ARG:CD	2.38	0.52
56:10:87:VAL:O	56:10:88:PRO:O	2.27	0.52
60:14:86:THR:HG21	60:14:90:ARG:HG3	1.89	0.52
60:14:124:ASP:HB2	78:1S:929:A:O4'	2.09	0.52
65:19:66:TYR:CE1	78:1S:1367:G:H1'	2.44	0.52
68:22:104:LEU:HB2	68:22:125:ILE:HA	1.92	0.52
70:24:21:LYS:HD2	70:24:21:LYS:N	2.22	0.52
77:31:132:LEU:HD13	77:31:150:VAL:HB	1.91	0.52
78:1S:641:G:H2'	78:1S:642:G:H8	1.73	0.52
78:1S:1026:A:H4'	78:1S:1028:C:C4	2.44	0.52
78:1S:1262:U:H2'	78:1S:1263:G:C8	2.44	0.52
79:2S:289:A:H2'	79:2S:290:G:H8	1.74	0.52
79:2S:597:G:H2'	79:2S:598:A:C8	2.45	0.52
79:2S:3304:U:O2'	79:2S:3305:A:H5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:8S:144:G:O2'	80:8S:145:U:H5'	2.08	0.52
1:L1:120:VAL:N	1:L1:121:PRO:CD	2.72	0.52
3:L3:25:ILE:HD12	79:2S:3312:U:H5''	1.90	0.52
7:L7:179:LEU:HD13	7:L7:179:LEU:H	1.73	0.52
8:L8:239:GLY:O	8:L8:243:GLN:HG2	2.10	0.52
17:67:27:LYS:HB2	79:2S:1447:G:C8	2.43	0.52
17:67:113:TYR:CE2	17:67:153:LYS:HA	2.45	0.52
17:67:119:VAL:CG2	17:67:146:ILE:HG12	2.38	0.52
21:71:18:ASP:CB	21:71:21:LYS:HD2	2.40	0.52
24:74:74:LYS:O	24:74:75:THR:HG22	2.08	0.52
28:78:73:LEU:HD11	28:78:77:LYS:HB2	1.92	0.52
45:RC:169:ILE:HG13	45:RC:169:ILE:O	2.08	0.52
49:S3:133:GLY:HA3	49:S3:157:LEU:HG	1.92	0.52
50:S4:102:VAL:HG22	50:S4:103:TYR:N	2.22	0.52
51:S5:59:VAL:HG12	51:S5:60:ASP:N	2.25	0.52
51:S5:77:TYR:HB3	51:S5:84:LYS:CB	2.39	0.52
52:S6:57:ASP:HB3	52:S6:106:LEU:HD23	1.90	0.52
56:10:84:GLU:O	56:10:85:HIS:HB3	2.10	0.52
61:15:97:TYR:HB2	61:15:102:PHE:CE1	2.45	0.52
79:2S:132:C:C2'	79:2S:133:U:H5''	2.38	0.52
79:2S:528:U:H2'	79:2S:529:A:C8	2.45	0.52
79:2S:1460:A:H2'	79:2S:1461:A:C8	2.44	0.52
79:2S:2543:U:H2'	79:2S:2544:U:H4'	1.90	0.52
79:2S:2587:U:H2'	79:2S:2588:U:C6	2.44	0.52
79:2S:2715:A:H5'	79:2S:2753:G:O4'	2.10	0.52
80:8S:121:U:H2'	80:8S:122:U:C6	2.44	0.52
3:L3:88:GLY:N	3:L3:199:PHE:HE1	2.07	0.52
3:L3:89:VAL:HG23	3:L3:159:ARG:O	2.10	0.52
6:L6:31:ARG:HG2	6:L6:34:LEU:HG	1.92	0.52
9:L9:49:ASN:ND2	9:L9:52:LEU:HB3	2.25	0.52
10:60:3:ARG:HH21	79:2S:2853:A:H5'	1.74	0.52
12:62:132:ILE:HA	79:2S:1255:C:H1'	1.91	0.52
15:65:14:LYS:HE2	79:2S:269:G:C5'	2.39	0.52
20:70:145:THR:OG1	20:70:148:LEU:HD13	2.10	0.52
25:75:66:PRO:HA	25:75:84:PHE:CD1	2.44	0.52
30:80:24:THR:HG22	30:80:91:SER:HB3	1.91	0.52
33:83:92:LYS:HE2	79:2S:630:A:O2'	2.09	0.52
35:85:65:ALA:O	35:85:69:LEU:HB3	2.09	0.52
36:86:68:ARG:O	36:86:72:VAL:HG23	2.09	0.52
45:RC:282:SER:HB3	45:RC:285:ALA:CB	2.39	0.52
48:S2:99:LYS:HB2	48:S2:117:THR:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:16:VAL:HG11	75:29:22:ARG:NH1	2.24	0.52
65:19:49:ASP:O	65:19:50:ALA:HB3	2.09	0.52
78:1S:449:C:H2'	78:1S:450:U:C6	2.44	0.52
78:1S:1182:U:H2'	78:1S:1184:A:OP2	2.09	0.52
79:2S:2612:U:H2'	79:2S:2613:U:O4'	2.09	0.52
79:2S:3062:G:H2'	79:2S:3063:C:C6	2.44	0.52
79:2S:3393:U:H2'	79:2S:3394:U:C6	2.45	0.52
3:L3:3:HIS:HD2	79:2S:2938:G:H3'	1.75	0.52
3:L3:102:LEU:O	79:2S:3147:G:H4'	2.09	0.52
3:L3:226:PHE:CD2	79:2S:1887:A:H1'	2.39	0.52
4:L4:3:ARG:CD	4:L4:21:PRO:HB3	2.39	0.52
5:L5:277:LEU:HB3	5:L5:281:GLU:HB2	1.91	0.52
7:L7:88:ARG:HG2	7:L7:110:ARG:O	2.10	0.52
7:L7:96:PRO:HB2	7:L7:99:PRO:HD2	1.92	0.52
9:L9:171:ASP:HB3	9:L9:174:LYS:HB3	1.92	0.52
18:68:44:PHE:CE1	18:68:139:ILE:HD11	2.43	0.52
26:76:58:VAL:HG23	26:76:66:GLN:O	2.10	0.52
27:77:75:VAL:HG22	27:77:76:ASN:H	1.72	0.52
32:82:103:LYS:O	32:82:106:VAL:HG12	2.10	0.52
46:S0:195:TRP:CE3	46:S0:197:ILE:HD13	2.44	0.52
49:S3:60:GLY:CA	49:S3:65:ARG:HG2	2.35	0.52
53:S7:81:LEU:HB3	53:S7:90:VAL:HG21	1.91	0.52
55:S9:123:HIS:NE2	76:30:33:ARG:HG2	2.25	0.52
61:15:33:PHE:O	61:15:37:ALA:HB2	2.09	0.52
64:18:24:GLY:HA2	64:18:58:ALA:HB3	1.91	0.52
65:19:109:GLU:HB2	65:19:114:VAL:HG13	1.92	0.52
67:21:40:ASP:HB3	67:21:46:ILE:HD11	1.89	0.52
78:1S:487:G:H1	78:1S:500:C:N4	2.05	0.52
78:1S:753:A:H2'	78:1S:754:A:O4'	2.09	0.52
78:1S:1012:U:H5'	78:1S:1012:U:C6	2.36	0.52
78:1S:1289:U:O2'	78:1S:1290:U:H5'	2.09	0.52
79:2S:1231:A:C5'	79:2S:1232:C:H5'	2.39	0.52
79:2S:1843:C:H2'	79:2S:1844:C:C6	2.45	0.52
79:2S:1901:A:H5''	79:2S:2919:A:OP1	2.09	0.52
79:2S:2112:U:H1'	79:2S:2113:A:OP2	2.09	0.52
79:2S:2616:C:C2'	79:2S:2617:U:H5'	2.40	0.52
79:2S:3242:G:H21	79:2S:3244:A:H5''	1.75	0.52
1:L1:70:ASP:O	1:L1:88:ASP:HB2	2.08	0.52
4:L4:280:ILE:HD11	18:68:25:TYR:CB	2.39	0.52
6:L6:4:GLN:HB2	32:82:75:LEU:HB2	1.92	0.52
7:L7:98:LYS:HB3	7:L7:99:PRO:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:87:LEU:HD23	10:60:88:ARG:N	2.25	0.52
12:62:128:VAL:CB	79:2S:1256:G:H4'	2.38	0.52
23:73:40:LYS:CD	79:2S:2931:C:H5''	2.39	0.52
24:74:33:ASN:OD1	24:74:35:LYS:HB3	2.09	0.52
25:75:76:VAL:HG13	25:75:132:ALA:HB1	1.91	0.52
40:90:122:ARG:HH12	40:90:124:LYS:HA	1.73	0.52
41:91:15:ARG:O	41:91:19:LYS:HD3	2.10	0.52
48:S2:89:GLN:HA	48:S2:94:GLN:HA	1.92	0.52
53:S7:120:ALA:O	53:S7:124:LYS:HG2	2.10	0.52
62:16:65:ILE:HG22	62:16:67:VAL:HG23	1.90	0.52
63:17:32:LYS:HG2	63:17:47:ARG:HH11	1.75	0.52
65:19:14:PHE:HE1	65:19:136:ALA:HB2	1.75	0.52
65:19:58:ALA:HB1	65:19:108:LEU:HD21	1.91	0.52
65:19:102:ARG:HD3	78:1S:1500:C:H5''	1.91	0.52
78:1S:136:C:H4'	78:1S:137:U:C5'	2.39	0.52
78:1S:393:C:H4'	78:1S:1674:C:H5'	1.92	0.52
78:1S:624:G:H2'	78:1S:625:C:C6	2.44	0.52
79:2S:1784:G:H2'	79:2S:1785:U:H6	1.75	0.52
79:2S:1920:U:H2'	79:2S:1930:A:N6	2.25	0.52
79:2S:2372:A:H5''	79:2S:2373:A:C5'	2.36	0.52
79:2S:2874:G:H3'	79:2S:2945:G:H1	1.74	0.52
4:L4:280:ILE:HD11	18:68:25:TYR:HB2	1.92	0.52
9:L9:12:VAL:HG13	9:L9:16:VAL:HG23	1.92	0.52
9:L9:135:GLU:O	9:L9:144:ILE:HG13	2.09	0.52
10:60:60:LEU:CD2	10:60:160:PRO:HD2	2.40	0.52
14:64:19:ARG:CG	14:64:65:LEU:HD22	2.39	0.52
15:65:121:VAL:HG23	15:65:122:ASN:N	2.25	0.52
18:68:86:THR:HG22	18:68:105:ARG:HB2	1.90	0.52
24:74:46:PRO:HB2	24:74:54:LEU:CD2	2.39	0.52
27:77:46:ILE:HA	27:77:70:PRO:HA	1.90	0.52
35:85:62:GLN:O	35:85:66:VAL:HG23	2.10	0.52
40:90:119:ASN:ND2	79:2S:1207:G:H5''	2.25	0.52
46:S0:30:GLN:HE22	46:S0:149:LEU:HD13	1.74	0.52
46:S0:81:PHE:HA	46:S0:204:TYR:CB	2.39	0.52
47:S1:225:VAL:HG21	79:2S:2536:A:C6	2.45	0.52
52:S6:23:ARG:O	52:S6:41:VAL:HG13	2.10	0.52
52:S6:149:LYS:HG3	52:S6:150:GLU:OE2	2.09	0.52
55:S9:49:LEU:HD11	55:S9:100:LYS:HA	1.91	0.52
62:16:127:LYS:HA	62:16:134:ALA:HA	1.92	0.52
65:19:14:PHE:CE1	65:19:136:ALA:HB2	2.45	0.52
69:23:57:LEU:HD22	76:30:4:VAL:CG1	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:23:92:CYS:HA	69:23:95:PHE:CD2	2.44	0.52
78:1S:709:C:H3'	78:1S:710:U:H5''	1.92	0.52
78:1S:725:U:C2'	78:1S:726:C:H5'	2.39	0.52
78:1S:882:U:H2'	78:1S:883:C:C6	2.44	0.52
78:1S:926:A:OP1	78:1S:1016:C:H1'	2.08	0.52
78:1S:1013:A:H2'	78:1S:1014:G:O4'	2.10	0.52
78:1S:1537:C:H4'	78:1S:1538:U:C5	2.43	0.52
79:2S:209:A:H4'	79:2S:211:A:C8	2.45	0.52
79:2S:855:U:H2'	79:2S:856:G:O4'	2.10	0.52
79:2S:1652:G:H2'	79:2S:1653:G:C8	2.45	0.52
79:2S:1764:U:H3'	79:2S:1765:U:C5'	2.36	0.52
79:2S:1951:C:H6	79:2S:2095:G:C2	2.27	0.52
79:2S:3006:A:H2'	79:2S:3007:U:O4'	2.09	0.52
80:8S:70:G:H1'	80:8S:88:A:H62	1.73	0.52
3:L3:11:HIS:CD2	3:L3:235:THR:HG23	2.45	0.52
9:L9:73:SER:HB3	79:2S:3112:G:H5''	1.91	0.52
9:L9:79:ILE:O	9:L9:82:VAL:HG12	2.10	0.52
15:65:14:LYS:HE2	79:2S:269:G:H5''	1.91	0.52
16:66:176:LYS:HG3	79:2S:3191:G:H5''	1.90	0.52
19:69:5:ARG:HG2	19:69:5:ARG:HH11	1.75	0.52
25:75:53:HIS:O	80:8S:134:G:H5''	2.09	0.52
32:82:100:ILE:HG22	32:82:101:SER:H	1.74	0.52
52:S6:2:LYS:HG2	52:S6:15:THR:HB	1.92	0.52
53:S7:73:VAL:CG1	53:S7:77:LEU:HG	2.40	0.52
53:S7:76:LYS:HA	53:S7:79:ARG:HD2	1.91	0.52
53:S7:86:GLN:HG2	53:S7:87:ASP:N	2.25	0.52
55:S9:28:LEU:O	55:S9:28:LEU:HD23	2.10	0.52
56:10:3:MET:CE	56:10:45:ALA:HB2	2.40	0.52
69:23:24:TRP:HA	69:23:24:TRP:HE3	1.73	0.52
72:26:74:CYS:O	72:26:75:VAL:HB	2.10	0.52
78:1S:211:U:H2'	78:1S:212:U:C6	2.44	0.52
78:1S:985:G:H2'	78:1S:986:G:O4'	2.10	0.52
79:2S:795:G:H4'	79:2S:1111:U:O3'	2.10	0.52
79:2S:1887:A:H61	79:2S:2348:A:H1'	1.75	0.52
79:2S:1951:C:H5	79:2S:2095:G:C6	2.28	0.52
79:2S:2097:U:H2'	79:2S:2098:C:C6	2.45	0.52
79:2S:2538:U:HO2'	79:2S:2539:C:H6	1.58	0.52
79:2S:3306:U:H3'	79:2S:3306:U:O2	2.10	0.52
3:L3:80:ASP:OD1	3:L3:82:PRO:HD3	2.10	0.52
3:L3:159:ARG:CD	3:L3:180:GLU:HB3	2.39	0.52
6:L6:30:LEU:HD22	6:L6:34:LEU:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:5:ARG:HG2	19:69:5:ARG:NH1	2.24	0.52
33:83:21:ARG:HD2	79:2S:634:C:H5''	1.92	0.52
38:88:7:ASP:HB3	38:88:10:GLN:CB	2.40	0.52
47:S1:176:VAL:HG12	47:S1:177:GLN:N	2.24	0.52
50:S4:122:LYS:O	50:S4:161:LYS:HA	2.09	0.52
55:S9:36:LEU:HD23	55:S9:126:ARG:HH21	1.75	0.52
55:S9:109:LEU:O	55:S9:109:LEU:HD23	2.09	0.52
72:26:53:LEU:O	72:26:57:SER:HB2	2.10	0.52
74:28:32:PHE:CD2	74:28:32:PHE:N	2.77	0.52
78:1S:59:C:H1'	78:1S:60:U:C5	2.45	0.52
78:1S:1203:A:C2	78:1S:1555:A:H2'	2.44	0.52
78:1S:1680:G:H1'	78:1S:1721:A:N6	2.24	0.52
78:1S:1703:C:H2'	78:1S:1704:U:H5'	1.92	0.52
79:2S:201:A:H2'	79:2S:202:G:C8	2.45	0.52
79:2S:628:A:H2'	79:2S:629:U:C6	2.45	0.52
79:2S:1182:A:H2'	79:2S:1183:C:C6	2.44	0.52
79:2S:2582:C:H2'	79:2S:2583:C:C6	2.45	0.52
3:L3:188:ILE:HD12	3:L3:189:SER:N	2.25	0.52
3:L3:227:GLU:HG3	3:L3:228:GLY:N	2.25	0.52
4:L4:304:GLN:O	4:L4:305:ALA:HB3	2.10	0.52
5:L5:15:ARG:CZ	79:2S:1003:A:H1'	2.40	0.52
6:L6:5:LYS:HG3	6:L6:6:ALA:N	2.26	0.52
9:L9:34:LEU:HD12	9:L9:82:VAL:HB	1.91	0.52
11:61:17:LEU:HD13	11:61:129:VAL:HG22	1.92	0.52
15:65:54:LYS:HG3	79:2S:149:U:H5''	1.92	0.52
26:76:89:LYS:HE2	26:76:95:VAL:HG23	1.92	0.52
43:93:50:GLY:O	43:93:51:ALA:CB	2.58	0.52
44:P0:17:GLU:O	44:P0:21:GLU:HB2	2.10	0.52
44:P0:30:VAL:O	44:P0:30:VAL:HG23	2.09	0.52
45:RC:180:ALA:HB3	45:RC:190:ALA:HB3	1.91	0.52
46:S0:126:PRO:HB2	46:S0:152:PRO:O	2.10	0.52
52:S6:44:GLU:HB3	52:S6:121:LEU:HD21	1.91	0.52
66:20:62:VAL:HA	66:20:84:MET:O	2.10	0.52
78:1S:304:U:H2'	78:1S:305:C:C6	2.45	0.52
78:1S:540:G:H4'	78:1S:541:A:H2	1.75	0.52
78:1S:1533:C:H2'	78:1S:1534:G:H8	1.74	0.52
79:2S:880:G:O6	79:2S:883:A:H5'	2.10	0.52
9:L9:111:PHE:CB	9:L9:125:ASN:HD22	2.22	0.51
15:65:115:VAL:HG22	15:65:134:LEU:HD21	1.91	0.51
18:68:112:ALA:O	18:68:116:LYS:HB2	2.11	0.51
20:70:38:LYS:HD2	20:70:58:ILE:HD13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:80:22:LYS:HB2	30:80:94:GLU:HB2	1.91	0.51
33:83:48:ARG:HG3	33:83:103:TYR:O	2.10	0.51
39:89:42:ARG:HG2	39:89:43:ASN:N	2.25	0.51
41:91:7:LYS:O	41:91:11:ARG:HB2	2.10	0.51
45:RC:7:LEU:HB2	45:RC:274:LEU:HD21	1.91	0.51
47:S1:81:PHE:O	47:S1:82:ARG:HB2	2.10	0.51
47:S1:158:SER:HB2	78:1S:875:G:OP1	2.10	0.51
53:S7:41:LEU:HD21	53:S7:69:GLY:HA3	1.90	0.51
54:S8:22:ARG:HB2	54:S8:25:ARG:NH2	2.25	0.51
54:S8:153:GLU:HB3	54:S8:156:VAL:HG23	1.90	0.51
55:S9:54:ARG:HA	55:S9:57:ARG:NE	2.25	0.51
60:14:20:TYR:CB	60:14:27:PHE:HB2	2.32	0.51
60:14:31:THR:HG22	60:14:38:THR:HB	1.91	0.51
60:14:132:ARG:NH2	78:1S:1789:G:C8	2.76	0.51
68:22:45:GLY:O	68:22:68:ARG:HD2	2.09	0.51
78:1S:626:U:H5'	78:1S:939:A:H1'	1.92	0.51
78:1S:870:C:H2'	78:1S:871:G:C8	2.45	0.51
79:2S:340:C:O2'	79:2S:341:G:H5'	2.10	0.51
79:2S:985:U:H2'	79:2S:986:U:H6	1.75	0.51
79:2S:1115:G:H3'	79:2S:1115:G:N3	2.25	0.51
79:2S:1632:A:H2'	79:2S:1633:C:O4'	2.10	0.51
79:2S:1941:C:H2'	79:2S:1942:U:C6	2.45	0.51
79:2S:2635:A:N6	79:2S:2641:U:H2'	2.25	0.51
8:L8:75:ILE:HD11	15:65:18:VAL:HG23	1.91	0.51
17:67:47:TYR:O	17:67:51:VAL:HG23	2.10	0.51
17:67:51:VAL:HA	17:67:56:ARG:O	2.10	0.51
25:75:132:ALA:O	25:75:135:ILE:HG22	2.10	0.51
36:86:98:ARG:HD2	36:86:98:ARG:N	2.25	0.51
45:RC:183:LEU:HD22	45:RC:186:PHE:CE1	2.44	0.51
46:S0:58:VAL:O	46:S0:62:ARG:HG2	2.10	0.51
50:S4:177:ALA:HA	50:S4:195:ILE:HG21	1.91	0.51
52:S6:74:LYS:HB3	52:S6:94:ARG:HG3	1.91	0.51
58:12:62:LEU:HB3	58:12:120:VAL:HG13	1.92	0.51
78:1S:9:U:H2'	78:1S:11:A:OP2	2.09	0.51
78:1S:86:A:H2'	78:1S:87:C:H6	1.75	0.51
78:1S:157:A:C2'	78:1S:158:U:H5''	2.39	0.51
78:1S:395:U:H2'	78:1S:396:G:O4'	2.09	0.51
78:1S:396:G:H22	78:1S:399:A:H5'	1.75	0.51
78:1S:416:A:H5'	78:1S:417:A:H8	1.74	0.51
78:1S:1355:C:H2'	78:1S:1356:U:C6	2.45	0.51
79:2S:440:A:H3'	79:2S:441:U:H4'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:516:A:C2'	79:2S:517:G:H5''	2.38	0.51
79:2S:711:A:H2'	79:2S:712:G:H5'	1.92	0.51
79:2S:1530:U:O2'	80:8S:115:C:H5'	2.11	0.51
79:2S:2584:G:H2'	79:2S:2585:G:H4'	1.92	0.51
80:8S:109:A:H2'	80:8S:110:C:H5'	1.91	0.51
83:PT:42:C:H2'	83:PT:43:G:H8	1.75	0.51
4:L4:100:PHE:HE2	79:2S:803:C:H5'	1.75	0.51
5:L5:110:LEU:HG	5:L5:115:LEU:O	2.10	0.51
11:61:57:PHE:HE2	79:2S:2679:A:H2'	1.76	0.51
14:64:15:VAL:HG12	14:64:65:LEU:HD11	1.92	0.51
15:65:67:ARG:NH1	79:2S:2168:A:H5'	2.12	0.51
15:65:165:THR:O	15:65:169:LYS:HG3	2.09	0.51
16:66:119:VAL:HG23	20:70:164:SER:HB3	1.91	0.51
28:78:22:ILE:HD12	79:2S:1114:U:H5''	1.93	0.51
50:S4:3:ARG:HD3	78:1S:401:A:H4'	1.92	0.51
50:S4:39:ARG:HA	50:S4:39:ARG:HE	1.75	0.51
51:S5:32:GLU:HG3	51:S5:33:VAL:N	2.24	0.51
54:S8:44:HIS:O	54:S8:56:ARG:HB3	2.11	0.51
54:S8:82:VAL:HG21	54:S8:166:TYR:CE1	2.43	0.51
56:10:29:GLN:O	56:10:30:ALA:CB	2.58	0.51
59:13:114:ARG:HG2	59:13:114:ARG:HH11	1.74	0.51
63:17:23:LYS:O	63:17:24:LEU:HB2	2.10	0.51
65:19:37:VAL:HG22	65:19:38:LYS:N	2.25	0.51
65:19:77:ASN:HB3	65:19:96:ALA:H	1.75	0.51
69:23:86:PHE:O	69:23:88:PRO:HD3	2.10	0.51
78:1S:262:U:H2'	78:1S:263:C:C6	2.46	0.51
78:1S:297:U:H2'	78:1S:298:C:C6	2.46	0.51
78:1S:422:G:H2'	78:1S:423:G:C8	2.45	0.51
78:1S:565:C:C5	78:1S:576:G:H3'	2.46	0.51
78:1S:754:A:N1	78:1S:793:A:H2'	2.25	0.51
78:1S:1499:G:H5'	78:1S:1499:G:H8	1.75	0.51
79:2S:337:G:H3'	79:2S:338:A:H5''	1.91	0.51
79:2S:511:G:H2'	79:2S:512:U:O4'	2.10	0.51
79:2S:1500:G:H2'	79:2S:1501:U:O4'	2.10	0.51
79:2S:2130:G:N2	79:2S:2132:C:H5''	2.24	0.51
79:2S:2533:G:C2'	79:2S:2534:G:H4'	2.32	0.51
79:2S:2836:C:C2'	79:2S:2837:A:H5'	2.41	0.51
79:2S:3300:U:H2'	79:2S:3301:U:C6	2.45	0.51
79:2S:3372:A:H2'	79:2S:3373:U:C6	2.45	0.51
80:8S:73:U:H2'	80:8S:74:U:O4'	2.10	0.51
81:5S:28:C:H2'	81:5S:29:C:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5S:81:U:H2'	81:5S:82:G:C8	2.45	0.51
3:L3:347:SER:C	3:L3:349:LYS:H	2.14	0.51
10:60:40:LYS:N	10:60:40:LYS:HD2	2.25	0.51
10:60:152:LEU:O	10:60:156:ARG:HG3	2.09	0.51
15:65:96:ARG:HG2	15:65:96:ARG:HH11	1.75	0.51
16:66:24:ALA:O	16:66:28:LEU:HG	2.09	0.51
17:67:107:LEU:HD23	17:67:112:LEU:HD11	1.92	0.51
18:68:16:ARG:HG2	79:2S:974:G:H5'	1.93	0.51
26:76:28:ARG:O	26:76:49:PRO:HB3	2.10	0.51
27:77:10:VAL:O	27:77:83:THR:HG22	2.11	0.51
36:86:50:LEU:CD2	36:86:54:GLU:HB3	2.39	0.51
46:S0:42:PRO:O	46:S0:43:ASP:HB2	2.11	0.51
46:S0:198:MET:C	46:S0:200:ASP:H	2.14	0.51
49:S3:159:HIS:HB2	78:1S:1328:G:H5'	1.91	0.51
50:S4:197:HIS:HB2	78:1S:736:C:OP1	2.10	0.51
51:S5:79:ASN:HD22	51:S5:79:ASN:N	2.08	0.51
53:S7:143:LEU:HD21	53:S7:149:ILE:CD1	2.40	0.51
55:S9:10:LYS:NZ	55:S9:14:THR:HG22	2.26	0.51
67:21:58:TYR:O	67:21:62:ARG:HG2	2.11	0.51
68:22:82:LYS:O	68:22:83:ILE:HG22	2.10	0.51
69:23:131:SER:O	69:23:135:LEU:HG	2.11	0.51
78:1S:40:A:H62	78:1S:467:G:N2	2.07	0.51
78:1S:314:C:O2'	78:1S:315:A:H5'	2.11	0.51
79:2S:649:A:H4'	79:2S:2869:U:H5''	1.92	0.51
79:2S:858:A:O2'	79:2S:859:G:H5'	2.09	0.51
79:2S:1678:G:H2'	79:2S:1679:A:H8	1.72	0.51
79:2S:2422:C:H2'	79:2S:2423:U:C6	2.45	0.51
80:8S:96:A:H2'	80:8S:97:A:O4'	2.10	0.51
8:L8:104:GLU:O	8:L8:107:GLU:HB3	2.11	0.51
10:60:178:ARG:N	10:60:179:PRO:HD2	2.26	0.51
13:63:76:THR:CG2	13:63:101:ARG:HH11	2.22	0.51
17:67:109:ALA:HA	17:67:112:LEU:HB2	1.91	0.51
17:67:165:VAL:O	17:67:165:VAL:HG13	2.11	0.51
21:71:39:ILE:HD11	21:71:102:ARG:NH1	2.25	0.51
31:81:43:HIS:HB3	31:81:44:MET:HE1	1.92	0.51
32:82:74:PHE:CD2	32:82:85:LEU:HD11	2.46	0.51
34:84:4:ARG:NH1	79:2S:1481:A:H2'	2.25	0.51
42:92:85:LEU:HD12	42:92:85:LEU:N	2.26	0.51
49:S3:34:TYR:CE2	49:S3:37:VAL:HG13	2.39	0.51
53:S7:81:LEU:CD1	53:S7:90:VAL:HG11	2.41	0.51
61:15:12:PHE:O	61:15:13:LYS:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:15:28:MET:HG2	61:15:32:ASP:CB	2.39	0.51
69:23:84:THR:OG1	69:23:120:VAL:HG22	2.11	0.51
76:30:53:LYS:O	76:30:54:ARG:HB3	2.11	0.51
78:1S:150:U:H2'	78:1S:151:G:C8	2.45	0.51
78:1S:312:A:H4'	78:1S:313:U:H3'	1.93	0.51
78:1S:472:U:H4'	78:1S:770:A:H1'	1.92	0.51
78:1S:481:A:H2	78:1S:505:A:N6	2.09	0.51
78:1S:759:U:H2'	78:1S:760:A:C8	2.46	0.51
79:2S:85:A:H8	79:2S:85:A:OP1	1.94	0.51
79:2S:647:A:H8	79:2S:647:A:OP2	1.93	0.51
79:2S:1836:C:H2'	79:2S:1837:U:C6	2.46	0.51
79:2S:2196:C:O2	79:2S:2270:A:H2	1.93	0.51
79:2S:2386:A:H2'	79:2S:2387:A:O4'	2.10	0.51
79:2S:2531:C:N4	79:2S:2548:C:N3	2.58	0.51
79:2S:2544:U:H3'	79:2S:2545:C:C6	2.45	0.51
79:2S:3094:A:H2'	79:2S:3095:U:C6	2.45	0.51
79:2S:3152:U:H5''	79:2S:3293:U:H1'	1.92	0.51
83:PT:42:C:H2'	83:PT:43:G:C8	2.45	0.51
2:L2:246:LEU:HD13	2:L2:250:GLN:HE21	1.75	0.51
3:L3:148:LEU:O	3:L3:152:LYS:HG3	2.10	0.51
5:L5:52:VAL:HG21	5:L5:65:ILE:HD12	1.92	0.51
10:60:47:PRO:HB2	10:60:178:ARG:NH2	2.26	0.51
11:61:22:SER:HB2	79:2S:2675:C:H42	1.74	0.51
14:64:76:ALA:HB1	14:64:80:THR:HB	1.92	0.51
16:66:84:LEU:O	16:66:84:LEU:HD23	2.11	0.51
18:68:9:GLN:HB2	79:2S:949:C:H5''	1.93	0.51
30:80:14:LEU:HD13	30:80:80:ALA:HB1	1.93	0.51
33:83:46:GLY:HA3	79:2S:584:G:H5''	1.92	0.51
47:S1:131:ASP:C	47:S1:133:TYR:H	2.14	0.51
47:S1:225:VAL:O	47:S1:227:ALA:N	2.44	0.51
50:S4:92:LEU:HB3	50:S4:94:ALA:O	2.10	0.51
53:S7:24:PHE:O	53:S7:28:GLU:HG3	2.11	0.51
54:S8:32:GLN:NE2	78:1S:1727:G:H21	2.08	0.51
55:S9:129:ILE:HG23	55:S9:134:ILE:HD11	1.92	0.51
56:10:32:HIS:NE2	56:10:35:ILE:HB	2.25	0.51
68:22:53:ILE:HG13	68:22:53:ILE:O	2.11	0.51
78:1S:312:A:C2	78:1S:314:C:H2'	2.45	0.51
78:1S:779:U:H3'	78:1S:780:A:H5'	1.91	0.51
78:1S:1402:G:O2'	78:1S:1403:C:H6	1.93	0.51
79:2S:41:G:H3'	79:2S:42:C:H6	1.75	0.51
79:2S:975:C:H2'	79:2S:976:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1887:A:C2	79:2S:2391:G:H4'	2.46	0.51
83:PT:9:G:N3	83:PT:46:G:H2'	2.26	0.51
83:PT:36:A:H2'	83:PT:37:U:C6	2.45	0.51
4:L4:38:VAL:O	4:L4:42:VAL:HG23	2.10	0.51
22:72:17:VAL:HG22	22:72:103:TYR:HD2	1.76	0.51
39:89:48:LYS:HD2	39:89:48:LYS:N	2.25	0.51
49:S3:168:ILE:HG22	49:S3:189:MET:HB2	1.92	0.51
54:S8:50:GLY:HA2	78:1S:397:A:H4'	1.92	0.51
60:14:19:ILE:HG22	60:14:20:TYR:N	2.25	0.51
63:17:124:VAL:HG13	63:17:125:SER:N	2.23	0.51
68:22:52:TYR:HA	68:22:61:ILE:HG12	1.91	0.51
70:24:35:VAL:HG13	70:24:36:SER:N	2.21	0.51
72:26:23:CYS:HB3	72:26:27:SER:HA	1.93	0.51
78:1S:828:U:H3'	78:1S:829:A:H5''	1.92	0.51
79:2S:51:A:H2'	79:2S:52:A:O4'	2.11	0.51
79:2S:381:U:H2'	79:2S:382:U:C6	2.46	0.51
79:2S:2521:U:C2'	79:2S:2522:G:H5'	2.39	0.51
79:2S:2897:A:H2'	79:2S:2899:C:H5'	1.93	0.51
79:2S:2961:G:H2'	79:2S:2962:U:C6	2.46	0.51
79:2S:3278:C:H3'	79:2S:3279:A:C5'	2.39	0.51
3:L3:122:TRP:HA	3:L3:122:TRP:HE3	1.75	0.51
3:L3:157:VAL:HG23	3:L3:157:VAL:O	2.11	0.51
4:L4:219:LEU:HA	4:L4:222:VAL:HG12	1.92	0.51
8:L8:134:TYR:CD2	8:L8:134:TYR:N	2.72	0.51
11:61:112:LEU:N	11:61:112:LEU:HD23	2.26	0.51
13:63:73:ARG:HH21	13:63:73:ARG:HG3	1.76	0.51
14:64:128:ARG:HD2	14:64:128:ARG:C	2.30	0.51
15:65:133:ILE:C	15:65:134:LEU:HD12	2.31	0.51
23:73:114:ILE:HD12	23:73:133:SER:N	2.26	0.51
29:79:28:LYS:O	29:79:29:TYR:HB2	2.11	0.51
31:81:67:VAL:HG12	31:81:68:GLU:N	2.26	0.51
43:93:79:VAL:O	43:93:83:ILE:HG12	2.11	0.51
46:S0:139:VAL:HG13	46:S0:141:ILE:HG13	1.92	0.51
47:S1:117:TRP:HB3	47:S1:153:HIS:HA	1.93	0.51
50:S4:19:LEU:HD11	50:S4:108:ARG:HD2	1.91	0.51
56:10:77:ARG:HE	56:10:86:ILE:HD11	1.76	0.51
57:11:99:ARG:HH12	68:22:77:PRO:CG	2.24	0.51
59:13:71:ILE:H	59:13:71:ILE:CD1	2.04	0.51
78:1S:722:G:H3'	78:1S:723:G:H5''	1.92	0.51
79:2S:353:G:N2	79:2S:364:G:H2'	2.26	0.51
79:2S:1478:C:H2'	79:2S:1479:U:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:160:VAL:HG23	3:L3:183:LEU:HD11	1.93	0.51
6:L6:170:LYS:HZ1	79:2S:3209:A:H5'	1.75	0.51
12:62:136:ALA:HB1	79:2S:1263:A:N6	2.26	0.51
13:63:36:ARG:HA	13:63:39:ARG:HE	1.76	0.51
32:82:67:SER:HB2	32:82:68:PRO:CD	2.41	0.51
33:83:103:TYR:HA	33:83:104:PRO:C	2.31	0.51
35:85:16:GLN:O	35:85:20:GLN:HG2	2.11	0.51
42:92:11:TYR:HD2	79:2S:2741:C:H1'	1.76	0.51
44:P0:55:LYS:HB3	44:P0:58:MET:HB2	1.93	0.51
47:S1:125:VAL:CG2	47:S1:126:THR:H	2.18	0.51
49:S3:211:PRO:HG2	63:17:19:ARG:HB2	1.92	0.51
51:S5:72:HIS:NE2	62:16:75:VAL:HG11	2.26	0.51
51:S5:112:ARG:HA	51:S5:112:ARG:NE	2.26	0.51
52:S6:31:ARG:HB2	52:S6:34:GLN:NE2	2.26	0.51
53:S7:95:GLU:HG3	78:1S:694:U:C5	2.46	0.51
54:S8:8:ARG:HA	54:S8:8:ARG:HE	1.75	0.51
54:S8:194:ARG:HD2	54:S8:195:ARG:HH12	1.74	0.51
58:12:77:GLY:HA3	77:31:114:VAL:CG2	2.41	0.51
61:15:58:LYS:HB3	61:15:58:LYS:NZ	2.26	0.51
66:20:58:LEU:HD12	66:20:88:LYS:HG2	1.93	0.51
78:1S:512:A:H2'	78:1S:513:U:O4'	2.11	0.51
78:1S:594:A:H4'	78:1S:595:G:C5'	2.34	0.51
79:2S:499:G:H2'	79:2S:500:C:C6	2.46	0.51
79:2S:2677:G:H2'	79:2S:2677:G:N3	2.26	0.51
1:L1:74:VAL:HG12	1:L1:75:ASP:N	2.25	0.51
6:L6:170:LYS:HZ2	79:2S:3209:A:H5'	1.75	0.51
7:L7:144:ILE:HA	7:L7:147:LEU:HD12	1.93	0.51
9:L9:172:ILE:CD1	79:2S:2899:C:H41	2.24	0.51
13:63:104:ARG:HE	79:2S:74:G:H5''	1.75	0.51
14:64:19:ARG:HH21	14:64:67:PRO:HA	1.75	0.51
23:73:89:ASP:OD1	23:73:91:VAL:HG22	2.11	0.51
29:79:35:VAL:HG12	29:79:36:ASP:N	2.26	0.51
30:80:83:LYS:N	30:80:83:LYS:HD2	2.26	0.51
33:83:90:PRO:O	33:83:91:ALA:HB3	2.11	0.51
35:85:51:ILE:O	35:85:55:LEU:HG	2.10	0.51
43:93:49:ARG:HH22	79:2S:1793:C:H5''	1.77	0.51
44:P0:16:ARG:HB2	44:P0:66:PHE:CZ	2.46	0.51
46:S0:9:LEU:CD2	46:S0:13:ASP:HB2	2.40	0.51
48:S2:157:LYS:H	68:22:95:PRO:HB3	1.76	0.51
50:S4:103:TYR:CE2	50:S4:189:LEU:HD11	2.46	0.51
51:S5:185:ARG:HA	78:1S:1472:C:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:10:13:GLN:HA	56:10:80:LEU:HD11	1.93	0.51
64:18:36:LYS:H	64:18:36:LYS:CD	2.10	0.51
72:26:60:PRO:O	72:26:61:GLU:HG2	2.10	0.51
77:31:132:LEU:CB	77:31:139:LEU:HB3	2.40	0.51
78:1S:900:A:O2'	78:1S:901:G:H5'	2.10	0.51
78:1S:1059:U:H6	78:1S:1060:U:H3	1.59	0.51
78:1S:1286:U:O2'	78:1S:1287:A:H5'	2.10	0.51
78:1S:1782:A:H3'	78:1S:1783:C:C5'	2.42	0.51
79:2S:642:U:H6	79:2S:642:U:O5'	1.93	0.51
79:2S:664:U:H2'	79:2S:665:A:H8	1.76	0.51
1:L1:32:VAL:HG21	79:2S:2468:A:C5'	2.42	0.50
2:L2:29:LEU:HA	2:L2:76:PHE:CE2	2.46	0.50
7:L7:53:LYS:O	7:L7:57:THR:HG23	2.11	0.50
11:61:15:GLU:HB3	11:61:130:VAL:O	2.11	0.50
16:66:110:PRO:HB2	16:66:111:PRO:HD3	1.93	0.50
16:66:173:ALA:O	16:66:177:LYS:HG3	2.12	0.50
45:RC:136:ILE:HD13	45:RC:136:ILE:N	2.19	0.50
45:RC:211:ILE:HD11	45:RC:225:LEU:HB2	1.94	0.50
46:S0:4:PRO:HB3	67:21:40:ASP:O	2.10	0.50
46:S0:84:ARG:HH21	63:17:79:GLU:HG2	1.75	0.50
47:S1:96:LEU:HD23	47:S1:96:LEU:N	2.26	0.50
49:S3:52:ALA:HB3	49:S3:55:THR:HG22	1.93	0.50
51:S5:72:HIS:HA	51:S5:107:LYS:HE2	1.91	0.50
53:S7:166:LEU:HD11	53:S7:183:PHE:CB	2.41	0.50
56:10:11:ILE:CD1	56:10:42:VAL:HG22	2.42	0.50
58:12:21:GLU:HG3	58:12:22:VAL:N	2.24	0.50
70:24:89:TYR:CE1	78:1S:525:A:H5''	2.46	0.50
72:26:41:ILE:HD13	72:26:41:ILE:H	1.76	0.50
76:30:41:THR:HA	76:30:45:VAL:HG23	1.93	0.50
78:1S:165:G:H2'	78:1S:166:C:O4'	2.10	0.50
78:1S:636:A:H2'	78:1S:637:C:H5'	1.91	0.50
78:1S:878:G:H2'	78:1S:879:G:H8	1.75	0.50
78:1S:1373:C:H2'	78:1S:1374:C:C6	2.45	0.50
79:2S:1101:G:H2'	79:2S:1102:A:C8	2.46	0.50
79:2S:1294:A:HO2'	79:2S:1295:G:H8	1.57	0.50
79:2S:1822:C:H2'	79:2S:1823:A:C8	2.45	0.50
1:L1:32:VAL:HG21	79:2S:2468:A:H5''	1.93	0.50
2:L2:23:ARG:HH11	2:L2:23:ARG:HG3	1.77	0.50
3:L3:68:HIS:O	3:L3:69:LYS:HB2	2.12	0.50
6:L6:31:ARG:HD2	33:83:107:ILE:OXT	2.11	0.50
7:L7:87:VAL:HG12	7:L7:88:ARG:N	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:54:GLU:HA	8:L8:57:ARG:NE	2.17	0.50
10:60:213:PHE:N	10:60:214:PRO:HD3	2.26	0.50
19:69:105:LEU:HD23	19:69:105:LEU:C	2.32	0.50
22:72:96:VAL:CG1	22:72:97:SER:H	2.22	0.50
30:80:13:LYS:HB3	30:80:100:ILE:CG2	2.42	0.50
32:82:25:TYR:HB3	32:82:27:ARG:HG2	1.93	0.50
50:S4:70:VAL:O	50:S4:76:VAL:HG22	2.12	0.50
51:S5:42:LEU:HD23	51:S5:42:LEU:H	1.75	0.50
70:24:89:TYR:CE1	70:24:90:ARG:HG3	2.46	0.50
78:1S:249:U:H3'	78:1S:250:C:C5'	2.41	0.50
78:1S:316:A:H2'	78:1S:317:C:C6	2.46	0.50
79:2S:804:C:H2'	79:2S:805:G:C8	2.46	0.50
79:2S:1142:G:H3'	79:2S:1143:A:H2'	1.92	0.50
79:2S:1223:A:H8	79:2S:1223:A:O5'	1.94	0.50
79:2S:1838:G:H5''	79:2S:1839:A:C5'	2.40	0.50
79:2S:1951:C:C2'	79:2S:2095:G:H22	2.21	0.50
79:2S:2186:U:H2'	79:2S:2187:G:O4'	2.12	0.50
79:2S:2439:A:H2'	79:2S:2440:G:C8	2.46	0.50
79:2S:3146:G:H2'	79:2S:3147:G:C8	2.46	0.50
81:5S:9:C:C2'	81:5S:10:C:H5'	2.41	0.50
2:L2:24:GLN:O	2:L2:75:ILE:HD13	2.11	0.50
9:L9:163:GLN:HA	9:L9:166:ARG:HG3	1.94	0.50
10:60:35:ASP:HB3	10:60:39:LYS:HD3	1.94	0.50
15:65:172:ARG:NE	15:65:174:ILE:HD11	2.27	0.50
18:68:69:ARG:O	18:68:73:GLN:HG3	2.11	0.50
22:72:104:ARG:C	22:72:105:LEU:HD12	2.32	0.50
45:RC:169:ILE:HG12	45:RC:183:LEU:HD21	1.91	0.50
49:S3:138:VAL:HG13	49:S3:184:ILE:HD13	1.93	0.50
52:S6:62:PRO:O	52:S6:97:VAL:HG13	2.12	0.50
52:S6:72:ARG:HG2	52:S6:98:ARG:HG2	1.93	0.50
52:S6:176:GLN:NE2	78:1S:64:U:H5''	2.25	0.50
53:S7:185:ILE:H	53:S7:185:ILE:HD13	1.76	0.50
55:S9:36:LEU:CD2	55:S9:108:ARG:HH12	2.24	0.50
56:10:39:ASN:O	56:10:43:ILE:HG13	2.11	0.50
56:10:87:VAL:O	56:10:87:VAL:HG22	2.10	0.50
57:11:123:VAL:HG23	57:11:141:LYS:O	2.11	0.50
59:13:46:THR:O	59:13:50:ILE:HG13	2.11	0.50
61:15:22:LEU:HD13	61:15:109:PRO:HG3	1.93	0.50
61:15:34:VAL:O	61:15:42:ARG:HG2	2.11	0.50
62:16:5:PRO:O	62:16:23:LYS:HA	2.11	0.50
64:18:86:LEU:HD22	64:18:97:ASP:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:19:114:VAL:HG22	65:19:115:GLU:N	2.26	0.50
66:20:23:ARG:HH11	66:20:23:ARG:HG3	1.77	0.50
78:1S:485:A:H61	78:1S:502:U:H3	1.58	0.50
78:1S:821:U:H3	78:1S:852:C:H41	1.59	0.50
79:2S:561:C:H2'	79:2S:562:C:C6	2.46	0.50
79:2S:1302:A:N6	79:2S:2857:C:H1'	2.26	0.50
79:2S:1881:A:H2'	79:2S:1882:G:C8	2.46	0.50
79:2S:2591:A:H2'	79:2S:2592:G:O4'	2.11	0.50
79:2S:2822:U:H2'	79:2S:2823:G:O4'	2.12	0.50
79:2S:2860:U:C2'	79:2S:2861:U:H5'	2.41	0.50
79:2S:2926:A:H2'	79:2S:2927:C:O4'	2.10	0.50
1:L1:32:VAL:HG22	1:L1:33:GLU:H	1.75	0.50
1:L1:136:THR:OG1	1:L1:137:PRO:HD3	2.11	0.50
6:L6:96:VAL:HG22	6:L6:144:ALA:HB3	1.92	0.50
6:L6:155:LEU:O	6:L6:155:LEU:HD13	2.12	0.50
8:L8:36:ILE:HG22	8:L8:37:GLY:N	2.27	0.50
13:63:7:LEU:CD2	79:2S:668:G:H1'	2.41	0.50
15:65:15:GLN:HG3	36:86:51:SER:HB2	1.94	0.50
17:67:116:HIS:HB3	17:67:149:VAL:HB	1.93	0.50
19:69:173:ARG:O	19:69:177:VAL:HG23	2.11	0.50
19:69:176:ARG:HG3	78:1S:852:C:H4'	1.93	0.50
23:73:130:ALA:HA	23:73:133:SER:HB2	1.93	0.50
25:75:27:ARG:C	25:75:29:SER:H	2.13	0.50
28:78:134:ALA:O	28:78:138:ILE:HG13	2.11	0.50
31:81:43:HIS:HB3	31:81:44:MET:CE	2.40	0.50
34:84:31:ARG:HG3	34:84:32:ALA:H	1.77	0.50
37:87:72:ARG:HH12	80:8S:94:C:H3'	1.77	0.50
44:P0:27:VAL:HB	44:P0:189:GLN:HB2	1.93	0.50
47:S1:70:LEU:HD13	47:S1:71:ALA:N	2.26	0.50
48:S2:229:LEU:HD11	67:21:14:PRO:HB2	1.94	0.50
51:S5:187:ILE:HA	78:1S:1534:G:H21	1.75	0.50
60:14:45:GLY:HA3	78:1S:900:A:OP1	2.11	0.50
70:24:20:ARG:HA	70:24:76:TYR:HA	1.93	0.50
78:1S:216:U:H4'	78:1S:831:U:OP1	2.11	0.50
79:2S:20:A:N6	80:8S:139:U:H3	2.04	0.50
79:2S:939:U:H5''	79:2S:2815:G:OP1	2.11	0.50
79:2S:2697:A:H2'	79:2S:2698:G:C8	2.46	0.50
79:2S:3217:C:N3	79:2S:3220:G:H1'	2.27	0.50
81:5S:113:C:H2'	81:5S:114:U:C6	2.45	0.50
3:L3:102:LEU:HD23	3:L3:102:LEU:H	1.76	0.50
4:L4:234:ASN:OD1	79:2S:693:A:H4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:306:THR:HG23	4:L4:306:THR:O	2.12	0.50
5:L5:155:THR:HA	5:L5:179:ARG:HA	1.94	0.50
7:L7:94:LYS:HG2	79:2S:1139:G:O2'	2.12	0.50
7:L7:224:ILE:HG23	20:70:36:ILE:HG12	1.93	0.50
8:L8:37:GLY:HA3	79:2S:2550:U:C6	2.47	0.50
15:65:80:THR:O	15:65:81:TYR:HB2	2.11	0.50
20:70:29:ILE:HG22	20:70:30:PHE:N	2.26	0.50
28:78:114:GLY:HA3	28:78:133:LEU:CD2	2.39	0.50
32:82:34:LYS:HB3	32:82:36:LYS:NZ	2.27	0.50
33:83:45:LEU:HD21	33:83:74:THR:HG23	1.94	0.50
37:87:21:ARG:NH2	37:87:39:TYR:HA	2.27	0.50
42:92:28:TYR:HB3	42:92:69:VAL:HB	1.92	0.50
45:RC:176:LYS:HE3	45:RC:197:SER:HA	1.94	0.50
46:S0:2:SER:O	46:S0:3:LEU:HB2	2.10	0.50
48:S2:205:ARG:NH1	78:1S:6:G:C8	2.80	0.50
50:S4:126:VAL:HG22	50:S4:158:ASP:O	2.10	0.50
51:S5:46:TRP:CG	51:S5:129:PRO:HG3	2.47	0.50
54:S8:170:SER:HB3	54:S8:182:TYR:HE1	1.76	0.50
56:10:2:LEU:HB2	78:1S:1258:U:H4'	1.93	0.50
62:16:83:GLN:O	62:16:87:LYS:HG3	2.12	0.50
72:26:36:ILE:CG2	72:26:73:TYR:HB2	2.41	0.50
78:1S:38:C:H2'	78:1S:39:A:H5'	1.94	0.50
78:1S:209:U:H2'	78:1S:210:A:C8	2.45	0.50
78:1S:495:C:H3'	78:1S:496:G:C4'	2.41	0.50
78:1S:1146:G:H21	78:1S:1635:A:H1'	1.76	0.50
78:1S:1266:U:H2'	78:1S:1267:G:C8	2.46	0.50
79:2S:340:C:H2'	79:2S:341:G:O4'	2.12	0.50
79:2S:1315:U:H4'	79:2S:1317:A:O4'	2.11	0.50
79:2S:1393:A:H62	79:2S:1417:G:H1'	1.76	0.50
79:2S:2344:U:H2'	79:2S:2345:A:H8	1.76	0.50
79:2S:2922:G:H2'	79:2S:2923:U:H4'	1.93	0.50
83:PT:40:C:H2'	83:PT:41:C:C6	2.46	0.50
83:PT:48:U:H3'	83:PT:49:C:C5'	2.41	0.50
1:L1:17:LEU:HG	1:L1:18:LYS:H	1.77	0.50
3:L3:88:GLY:HA3	3:L3:161:LEU:HB2	1.93	0.50
4:L4:185:LYS:HG2	4:L4:199:TRP:HE3	1.77	0.50
7:L7:86:VAL:HG22	7:L7:136:TYR:CB	2.35	0.50
8:L8:75:ILE:O	8:L8:76:ALA:HB3	2.12	0.50
9:L9:97:PHE:CD2	9:L9:118:LEU:HA	2.46	0.50
10:60:145:LYS:O	10:60:149:VAL:HG23	2.12	0.50
10:60:197:VAL:HG22	10:60:198:LYS:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:61:18:VAL:HG13	11:61:68:HIS:CD2	2.47	0.50
11:61:74:PRO:O	11:61:78:GLU:HG3	2.12	0.50
19:69:53:LYS:HG2	19:69:54:ALA:N	2.19	0.50
24:74:54:LEU:O	24:74:58:HIS:HB2	2.12	0.50
26:76:55:GLU:HB2	26:76:108:LYS:HB2	1.94	0.50
35:85:102:GLU:O	35:85:106:LYS:HG3	2.11	0.50
40:90:108:THR:O	40:90:121:LEU:HD21	2.11	0.50
44:P0:30:VAL:HG12	44:P0:185:LEU:HA	1.93	0.50
47:S1:90:GLU:O	47:S1:96:LEU:HA	2.12	0.50
47:S1:228:LEU:HB3	79:2S:2537:U:OP2	2.12	0.50
48:S2:69:ILE:C	48:S2:69:ILE:HD12	2.32	0.50
53:S7:166:LEU:HD11	53:S7:183:PHE:HB3	1.92	0.50
62:16:44:LEU:HD12	62:16:78:VAL:HG11	1.94	0.50
78:1S:461:G:H2'	78:1S:462:G:H8	1.76	0.50
78:1S:636:A:C2'	78:1S:637:C:H5'	2.41	0.50
78:1S:759:U:H2'	78:1S:760:A:H8	1.76	0.50
78:1S:887:A:H2	78:1S:925:G:H22	1.60	0.50
78:1S:918:U:H2'	78:1S:919:A:H8	1.73	0.50
78:1S:1086:A:H2'	78:1S:1087:A:C8	2.46	0.50
79:2S:706:A:C2'	79:2S:707:U:H5'	2.42	0.50
79:2S:911:C:H2'	79:2S:912:G:C8	2.47	0.50
79:2S:1203:A:H2'	79:2S:1204:A:C8	2.46	0.50
79:2S:1245:A:H3'	79:2S:1246:G:C5'	2.41	0.50
79:2S:1363:A:H2'	79:2S:1364:C:C6	2.47	0.50
79:2S:1564:U:H2'	79:2S:1565:G:O4'	2.12	0.50
79:2S:1783:U:H2'	79:2S:1784:G:C8	2.47	0.50
79:2S:3006:A:N6	79:2S:3140:G:H1'	2.27	0.50
1:L1:101:LYS:CE	1:L1:126:PRO:HG3	2.41	0.50
2:L2:201:GLY:HA3	2:L2:209:HIS:HD2	1.76	0.50
9:L9:41:ILE:HD12	9:L9:43:VAL:HG13	1.93	0.50
10:60:46:PHE:H	10:60:139:ARG:NH2	2.09	0.50
14:64:122:VAL:HA	14:64:125:LYS:NZ	2.26	0.50
15:65:169:LYS:CG	15:65:174:ILE:HD12	2.36	0.50
17:67:119:VAL:HG23	17:67:144:SER:HB3	1.94	0.50
19:69:37:SER:O	19:69:41:ILE:HD13	2.12	0.50
19:69:74:ARG:HG2	79:2S:1941:C:OP2	2.11	0.50
20:70:169:SER:HA	79:2S:3185:U:O2	2.12	0.50
25:75:86:VAL:HG22	25:75:87:SER:N	2.26	0.50
32:82:60:ASN:ND2	32:82:62:LYS:HB2	2.26	0.50
45:RC:83:ALA:HB2	45:RC:113:VAL:HB	1.94	0.50
47:S1:29:TRP:CD1	47:S1:47:LEU:HG	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:223:PHE:HA	79:2S:2536:A:O3'	2.11	0.50
48:S2:160:GLY:HA3	48:S2:216:VAL:HB	1.94	0.50
48:S2:206:THR:HG23	48:S2:206:THR:O	2.12	0.50
49:S3:121:GLY:O	49:S3:125:TYR:HB2	2.11	0.50
51:S5:97:LEU:HD23	51:S5:176:THR:HG22	1.94	0.50
54:S8:5:ARG:HB3	78:1S:338:C:H1'	1.94	0.50
60:14:13:VAL:HG13	60:14:77:THR:N	2.23	0.50
64:18:112:ASP:O	64:18:116:LEU:HD13	2.11	0.50
66:20:22:ILE:HB	66:20:100:VAL:HG21	1.93	0.50
78:1S:822:U:H3'	78:1S:823:G:H5''	1.93	0.50
78:1S:977:A:H2'	78:1S:978:A:O4'	2.12	0.50
79:2S:138:U:H2'	79:2S:139:G:C8	2.47	0.50
79:2S:636:C:O4'	79:2S:2378:C:H5'	2.12	0.50
79:2S:1851:G:H2'	79:2S:1852:G:C8	2.47	0.50
79:2S:3047:U:O2'	79:2S:3048:A:H5'	2.12	0.50
79:2S:3299:A:H61	79:2S:3315:G:H1	1.60	0.50
3:L3:66:LYS:HB3	23:73:88:ARG:NH2	2.19	0.50
8:L8:27:THR:HG23	79:2S:2563:G:OP1	2.12	0.50
18:68:43:PRO:HB2	79:2S:728:G:H5''	1.94	0.50
46:S0:3:LEU:HD21	46:S0:7:PHE:N	2.27	0.50
47:S1:81:PHE:HD1	47:S1:81:PHE:H	1.60	0.50
51:S5:20:PHE:CD1	51:S5:21:THR:N	2.80	0.50
52:S6:10:ASN:O	52:S6:129:VAL:HG12	2.11	0.50
53:S7:109:VAL:HG13	53:S7:110:GLN:N	2.26	0.50
57:11:94:ILE:HD12	57:11:94:ILE:N	2.26	0.50
60:14:92:LYS:HE3	60:14:121:VAL:HG22	1.94	0.50
61:15:52:LYS:HB2	61:15:53:PRO:HD3	1.94	0.50
63:17:34:LEU:O	63:17:38:ILE:HG22	2.11	0.50
65:19:63:ARG:O	65:19:67:MET:HG3	2.11	0.50
68:22:29:PRO:O	68:22:30:SER:HB3	2.12	0.50
69:23:56:LYS:HA	69:23:72:VAL:HG12	1.94	0.50
78:1S:156:A:H2'	78:1S:157:A:O4'	2.12	0.50
78:1S:211:U:H2'	78:1S:212:U:H6	1.77	0.50
78:1S:1735:U:H2'	78:1S:1736:G:C8	2.47	0.50
79:2S:277:G:H2'	79:2S:278:U:C6	2.47	0.50
79:2S:944:C:H2'	79:2S:945:C:C6	2.46	0.50
79:2S:1111:U:H2'	79:2S:1112:A:C8	2.47	0.50
79:2S:2648:G:H2'	79:2S:2649:A:O4'	2.11	0.50
1:L1:50:SER:CB	1:L1:195:LYS:HG2	2.42	0.50
1:L1:103:LEU:HD13	1:L1:106:LYS:CD	2.41	0.50
1:L1:205:VAL:HG22	1:L1:215:ARG:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:177:GLU:O	5:L5:190:ILE:HD13	2.12	0.50
8:L8:163:VAL:O	8:L8:167:PRO:HD3	2.12	0.50
20:70:132:THR:HG22	20:70:144:LEU:HD22	1.94	0.50
32:82:27:ARG:HB2	79:2S:1433:A:H5'	1.93	0.50
32:82:67:SER:HB2	32:82:68:PRO:HD2	1.93	0.50
33:83:54:ARG:HG2	33:83:54:ARG:HH11	1.77	0.50
42:92:104:LEU:N	42:92:104:LEU:HD12	2.27	0.50
43:93:17:ARG:NH1	79:2S:861:C:H5'	2.27	0.50
45:RC:10:ARG:HG3	45:RC:11:GLY:N	2.27	0.50
49:S3:178:ARG:HE	49:S3:178:ARG:H	1.58	0.50
51:S5:26:ALA:CB	62:16:28:LEU:HB3	2.41	0.50
56:10:7:ASP:O	56:10:11:ILE:HG12	2.11	0.50
58:12:41:LEU:HB3	58:12:43:ARG:HD2	1.94	0.50
78:1S:186:C:H6	78:1S:186:C:H5'	1.76	0.50
78:1S:202:A:H2'	78:1S:203:U:C6	2.47	0.50
78:1S:358:U:H4'	78:1S:359:A:N7	2.26	0.50
78:1S:390:G:C8	78:1S:1731:A:H4'	2.40	0.50
78:1S:699:U:H2'	78:1S:700:C:C6	2.46	0.50
78:1S:986:G:H2'	78:1S:987:G:O4'	2.12	0.50
78:1S:1064:G:H2'	78:1S:1065:A:C8	2.47	0.50
78:1S:1462:G:H2'	78:1S:1463:C:C6	2.47	0.50
79:2S:531:G:H2'	79:2S:532:A:C8	2.47	0.50
79:2S:1781:C:H2'	79:2S:1782:U:C6	2.47	0.50
79:2S:1887:A:N6	79:2S:2348:A:H1'	2.27	0.50
79:2S:2284:C:H2'	79:2S:2285:C:O4'	2.12	0.50
79:2S:2322:C:C2'	79:2S:2323:G:H5'	2.42	0.50
79:2S:2933:A:H5'	79:2S:3015:G:H4'	1.93	0.50
79:2S:3386:G:H2'	79:2S:3387:U:C6	2.47	0.50
81:5S:13:A:H5'	81:5S:14:U:C5	2.47	0.50
4:L4:112:LYS:HE3	15:65:202:TYR:CB	2.42	0.49
6:L6:52:VAL:HG22	6:L6:53:VAL:N	2.27	0.49
7:L7:53:LYS:HA	7:L7:56:GLU:OE1	2.11	0.49
8:L8:49:TYR:CD2	79:2S:2524:A:H4'	2.47	0.49
9:L9:48:VAL:HG13	9:L9:49:ASN:N	2.27	0.49
10:60:184:LYS:HB3	10:60:190:VAL:HG23	1.94	0.49
13:63:102:GLN:HE22	36:86:25:LYS:HD3	1.77	0.49
17:67:114:VAL:HG13	17:67:114:VAL:O	2.12	0.49
20:70:92:LYS:NZ	79:2S:1212:A:H4'	2.27	0.49
27:77:15:ARG:NH1	79:2S:1709:C:H5''	2.27	0.49
30:80:84:LEU:HD13	79:2S:1715:A:N7	2.26	0.49
38:88:8:ILE:HD12	38:88:8:ILE:N	2.24	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:P0:34:SER:HA	79:2S:1230:G:H4'	1.93	0.49
47:S1:21:VAL:HG23	47:S1:22:ASP:N	2.25	0.49
51:S5:187:ILE:HG23	78:1S:1534:G:N2	2.26	0.49
54:S8:22:ARG:HG3	54:S8:23:LYS:N	2.27	0.49
54:S8:74:LYS:HB2	54:S8:109:PHE:CZ	2.47	0.49
54:S8:76:THR:HG22	54:S8:108:PRO:CG	2.38	0.49
54:S8:110:ARG:HG3	54:S8:121:LEU:HD23	1.93	0.49
55:S9:121:SER:HB3	55:S9:124:HIS:CB	2.42	0.49
57:11:20:PHE:HB3	78:1S:211:U:H5''	1.94	0.49
63:17:106:THR:HA	63:17:109:LEU:HD23	1.92	0.49
72:26:92:ARG:HB3	78:1S:1796:C:O2	2.12	0.49
76:30:22:GLU:HG3	76:30:23:LYS:H	1.76	0.49
77:31:136:LYS:O	77:31:137:ASP:HB2	2.10	0.49
78:1S:140:A:H4'	78:1S:141:U:H5'	1.92	0.49
78:1S:1340:U:C3'	78:1S:1341:A:C5'	2.89	0.49
78:1S:1553:G:H1'	78:1S:1597:A:H2	1.76	0.49
79:2S:122:A:H2'	79:2S:146:U:O4	2.12	0.49
79:2S:1643:A:H2'	79:2S:1644:C:C2	2.47	0.49
79:2S:1804:A:H2'	79:2S:1805:C:H6	1.76	0.49
79:2S:3160:U:H5''	79:2S:3396:U:H2'	1.93	0.49
79:2S:3382:U:H2'	79:2S:3382:U:O2	2.12	0.49
83:PT:60:A:H2'	83:PT:61:U:H5'	1.94	0.49
1:L1:155:ILE:HG23	1:L1:163:LEU:CG	2.36	0.49
2:L2:5:ILE:HG22	2:L2:208:ASP:O	2.12	0.49
2:L2:201:GLY:HA2	2:L2:204:MET:HE3	1.93	0.49
3:L3:30:LYS:HD3	79:2S:3138:U:OP2	2.11	0.49
3:L3:148:LEU:HG	3:L3:152:LYS:HE3	1.94	0.49
16:66:158:ALA:O	16:66:162:VAL:HG23	2.12	0.49
21:71:51:GLY:HA3	21:71:92:ARG:HG3	1.94	0.49
22:72:10:LYS:HD2	22:72:10:LYS:N	2.27	0.49
22:72:20:SER:HA	22:72:23:THR:HB	1.94	0.49
27:77:117:ALA:O	27:77:121:ARG:HD3	2.12	0.49
29:79:5:LYS:HE2	29:79:8:THR:HB	1.93	0.49
34:84:71:THR:CG2	34:84:77:GLY:HA3	2.42	0.49
42:92:2:VAL:N	42:92:91:PHE:HA	2.27	0.49
46:S0:29:VAL:CG2	78:1S:1041:G:H4'	2.42	0.49
47:S1:161:ILE:HG22	47:S1:165:ARG:NE	2.27	0.49
54:S8:48:THR:CG2	54:S8:54:LYS:HB2	2.43	0.49
57:11:99:ARG:NH1	69:23:9:LEU:HD22	2.27	0.49
58:12:31:VAL:HG13	58:12:133:LEU:HG	1.94	0.49
60:14:76:ILE:H	60:14:76:ILE:HD12	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:14:76:ILE:HD12	60:14:76:ILE:N	2.27	0.49
63:17:49:LYS:HE2	78:1S:1390:U:OP1	2.11	0.49
65:19:89:ARG:HB3	65:19:90:PRO:HD2	1.93	0.49
74:28:49:ARG:O	74:28:52:ASP:HB2	2.11	0.49
79:2S:144:A:H4'	80:8S:144:G:OP1	2.12	0.49
79:2S:706:A:O2'	79:2S:707:U:H5'	2.12	0.49
79:2S:1604:G:H3'	79:2S:1604:G:N3	2.28	0.49
79:2S:1975:C:C2'	79:2S:1976:G:H5'	2.42	0.49
79:2S:2426:U:H2'	79:2S:2427:U:H6	1.77	0.49
79:2S:2481:G:H2'	79:2S:2482:U:C5	2.47	0.49
79:2S:2485:A:O2'	79:2S:2486:A:H5'	2.12	0.49
79:2S:2768:U:H2'	79:2S:2769:A:H8	1.73	0.49
1:L1:64:SER:HB3	1:L1:151:VAL:HG21	1.94	0.49
2:L2:57:PRO:HB3	43:93:54:ILE:HD11	1.93	0.49
5:L5:107:ARG:HA	5:L5:107:ARG:HE	1.77	0.49
6:L6:26:ARG:HG3	6:L6:27:PRO:HD2	1.93	0.49
7:L7:69:ALA:HB2	7:L7:76:TYR:HB2	1.94	0.49
8:L8:248:LYS:HA	8:L8:251:LYS:HE3	1.95	0.49
11:61:49:LYS:HB3	11:61:62:ASN:HA	1.94	0.49
15:65:21:PHE:O	15:65:25:VAL:HG23	2.13	0.49
18:68:19:PRO:C	18:68:21:SER:H	2.16	0.49
18:68:79:LYS:HE3	18:68:136:ASN:HA	1.95	0.49
25:75:107:VAL:HG12	25:75:108:LEU:N	2.27	0.49
25:75:113:LEU:HG	25:75:121:LYS:HB3	1.93	0.49
32:82:64:LYS:O	32:82:72:LYS:HE2	2.12	0.49
42:92:2:VAL:HB	42:92:91:PHE:CD1	2.47	0.49
42:92:45:ARG:HH22	79:2S:285:A:H1'	1.77	0.49
45:RC:29:GLN:HG3	45:RC:32:LEU:HB2	1.93	0.49
48:S2:157:LYS:HG2	48:S2:170:ILE:HA	1.93	0.49
48:S2:227:PRO:HA	48:S2:230:TRP:CE3	2.48	0.49
49:S3:5:ILE:HG22	49:S3:6:SER:N	2.27	0.49
49:S3:8:LYS:O	49:S3:12:VAL:HG23	2.12	0.49
49:S3:126:VAL:HG12	49:S3:131:ALA:CB	2.35	0.49
50:S4:49:ARG:O	50:S4:53:LYS:HA	2.13	0.49
50:S4:52:LEU:HD13	50:S4:54:TYR:CE2	2.48	0.49
51:S5:107:LYS:HB2	78:1S:1610:G:H5''	1.93	0.49
53:S7:142:TYR:CD1	53:S7:148:LYS:HG2	2.48	0.49
55:S9:109:LEU:HD22	55:S9:129:ILE:CD1	2.42	0.49
57:11:36:LYS:HD2	78:1S:248:U:H5'	1.94	0.49
57:11:149:ALA:O	57:11:152:GLN:HG2	2.12	0.49
59:13:33:VAL:O	59:13:37:ILE:HG13	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:22:VAL:HG22	62:16:65:ILE:CD1	2.43	0.49
63:17:102:VAL:CG2	63:17:106:THR:HB	2.41	0.49
64:18:85:PHE:C	64:18:86:LEU:HD12	2.33	0.49
68:22:80:ASN:HB3	78:1S:748:U:OP1	2.13	0.49
78:1S:306:U:H2'	78:1S:307:G:C8	2.47	0.49
78:1S:1157:A:N6	78:1S:1622:G:C1'	2.68	0.49
78:1S:1158:C:H5	78:1S:1582:U:H5	1.60	0.49
79:2S:359:U:H4'	79:2S:817:A:N6	2.26	0.49
79:2S:631:U:H2'	79:2S:632:G:C8	2.47	0.49
79:2S:1200:A:C5'	79:2S:1201:C:H4'	2.41	0.49
79:2S:1533:U:H5'	79:2S:1799:A:O2'	2.12	0.49
79:2S:1781:C:H6	79:2S:1781:C:O5'	1.94	0.49
79:2S:1799:A:H2'	79:2S:1800:A:C8	2.47	0.49
79:2S:1841:A:O2'	79:2S:1842:A:H5''	2.12	0.49
79:2S:2931:C:H2'	79:2S:2932:U:O4'	2.12	0.49
3:L3:88:GLY:CA	3:L3:161:LEU:HB2	2.42	0.49
3:L3:227:GLU:HG3	3:L3:228:GLY:O	2.11	0.49
4:L4:23:PRO:O	4:L4:24:ALA:HB3	2.12	0.49
4:L4:235:LEU:HA	4:L4:238:LEU:HB2	1.93	0.49
6:L6:15:VAL:HG12	32:82:5:PRO:HG2	1.95	0.49
6:L6:40:LEU:HB2	6:L6:52:VAL:CG1	2.41	0.49
6:L6:67:GLY:HA2	6:L6:74:VAL:HB	1.95	0.49
9:L9:41:ILE:O	9:L9:41:ILE:HD13	2.10	0.49
13:63:31:LYS:O	13:63:35:ARG:HB2	2.11	0.49
15:65:116:LEU:HB3	15:65:133:ILE:HG23	1.93	0.49
17:67:2:ALA:O	17:67:3:ARG:HB2	2.12	0.49
28:78:47:LYS:O	28:78:48:TYR:HB2	2.12	0.49
31:81:55:LEU:HD21	31:81:73:LEU:HD13	1.94	0.49
33:83:49:ILE:HG23	33:83:100:ILE:HG13	1.95	0.49
33:83:54:ARG:N	33:83:54:ARG:HD2	2.26	0.49
45:RC:193:ILE:HG22	45:RC:194:GLY:N	2.21	0.49
46:S0:26:ALA:HB3	46:S0:46:HIS:ND1	2.28	0.49
46:S0:53:THR:HG23	46:S0:160:ILE:HG21	1.93	0.49
47:S1:120:LEU:HD11	47:S1:140:ILE:HD11	1.94	0.49
51:S5:84:LYS:NZ	78:1S:1615:C:H42	2.10	0.49
61:15:11:VAL:HG13	61:15:12:PHE:N	2.27	0.49
62:16:14:LYS:HB3	62:16:76:SER:OG	2.13	0.49
62:16:90:VAL:HB	62:16:102:LYS:CE	2.43	0.49
65:19:130:ARG:HD3	65:19:134:ARG:NH2	2.26	0.49
66:20:20:ILE:HD12	66:20:21:LYS:N	2.27	0.49
67:21:38:LYS:O	67:21:46:ILE:HD12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:586:G:H2'	78:1S:587:C:O4'	2.12	0.49
78:1S:635:A:H2'	78:1S:636:A:C8	2.46	0.49
79:2S:65:A:H1'	79:2S:77:A:H1'	1.94	0.49
79:2S:907:G:O5'	79:2S:909:G:H1'	2.12	0.49
79:2S:2917:G:H2'	79:2S:2918:G:C5'	2.38	0.49
79:2S:2990:G:H2'	79:2S:2991:A:H5'	1.94	0.49
79:2S:2992:U:H2'	79:2S:2993:G:O4'	2.12	0.49
79:2S:3163:A:H3'	79:2S:3164:C:H5''	1.94	0.49
80:8S:4:C:O5'	80:8S:4:C:H6	1.95	0.49
5:L5:204:VAL:HB	5:L5:236:LEU:HD21	1.94	0.49
9:L9:92:TYR:HB2	9:L9:142:ASP:HB3	1.95	0.49
11:61:91:LEU:HD13	11:61:96:PHE:HE1	1.76	0.49
13:63:70:ARG:HG2	13:63:71:ALA:N	2.23	0.49
13:63:127:PRO:HB2	13:63:131:LYS:HD2	1.94	0.49
16:66:60:LYS:HE3	79:2S:1307:G:H5''	1.95	0.49
19:69:89:LEU:CD2	79:2S:2102:U:H4'	2.39	0.49
21:71:19:PHE:CG	79:2S:1051:U:H4'	2.48	0.49
45:RC:230:ALA:HB1	49:S3:220:PRO:HB3	1.94	0.49
46:S0:142:PRO:HG3	67:21:32:VAL:CG1	2.41	0.49
46:S0:189:VAL:HG11	46:S0:193:GLN:HB3	1.93	0.49
50:S4:156:VAL:O	50:S4:157:ASN:HB2	2.13	0.49
53:S7:9:LEU:O	53:S7:9:LEU:HD23	2.13	0.49
54:S8:5:ARG:HG2	78:1S:338:C:H1'	1.95	0.49
54:S8:9:HIS:O	54:S8:10:LYS:HB3	2.12	0.49
57:11:152:GLN:HB2	59:13:137:PRO:HD3	1.95	0.49
58:12:88:LEU:HG	58:12:89:ILE:H	1.77	0.49
78:1S:1147:A:H2'	78:1S:1148:C:C6	2.48	0.49
78:1S:1760:G:O2'	78:1S:1761:U:H5'	2.13	0.49
79:2S:2181:C:H2'	79:2S:2182:A:C8	2.48	0.49
79:2S:2367:A:H2'	79:2S:2368:A:C8	2.47	0.49
79:2S:2469:G:H2'	79:2S:2470:C:H6	1.78	0.49
79:2S:3106:A:H2'	79:2S:3107:U:H5'	1.93	0.49
1:L1:62:ASN:HA	1:L1:168:ALA:HA	1.95	0.49
4:L4:322:GLN:CB	79:2S:608:A:H5'	2.42	0.49
8:L8:238:LEU:HB3	8:L8:242:ALA:HB3	1.93	0.49
9:L9:49:ASN:HD21	9:L9:52:LEU:HB3	1.77	0.49
10:60:36:LEU:HD13	10:60:87:LEU:HD22	1.94	0.49
18:68:122:ILE:CG2	18:68:126:GLN:HB2	2.43	0.49
20:70:98:SER:HB2	20:70:100:VAL:HG13	1.95	0.49
21:71:17:ARG:HB3	21:71:22:HIS:CD2	2.47	0.49
28:78:126:LYS:HB3	28:78:148:ILE:HG21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:81:78:LYS:O	31:81:89:LEU:HB3	2.12	0.49
32:82:88:HIS:HB3	32:82:92:TYR:HD2	1.78	0.49
33:83:3:GLU:HG3	33:83:4:SER:N	2.27	0.49
35:85:67:ARG:O	35:85:71:LYS:HG2	2.12	0.49
42:92:88:CYS:HA	79:2S:2653:C:OP2	2.13	0.49
47:S1:219:LYS:HA	47:S1:219:LYS:CE	2.39	0.49
49:S3:30:ALA:HB1	49:S3:107:PHE:HZ	1.77	0.49
49:S3:115:ILE:HG23	49:S3:116:ARG:HG3	1.93	0.49
51:S5:163:SER:HB3	74:28:48:VAL:HG22	1.95	0.49
52:S6:49:VAL:HB	52:S6:115:LYS:HB2	1.94	0.49
55:S9:170:GLY:HA3	78:1S:512:A:P	2.52	0.49
57:11:122:ILE:HD12	57:11:122:ILE:N	2.27	0.49
58:12:106:ILE:O	58:12:108:ARG:N	2.37	0.49
60:14:89:THR:O	60:14:128:LYS:HE2	2.12	0.49
60:14:114:ARG:HA	72:26:62:TYR:CE1	2.48	0.49
63:17:84:TYR:C	63:17:86:PRO:HD3	2.33	0.49
65:19:106:GLN:O	65:19:110:LYS:HB2	2.13	0.49
78:1S:215:A:H2'	78:1S:216:U:H5'	1.94	0.49
78:1S:430:G:H2'	78:1S:431:C:C6	2.47	0.49
78:1S:1591:C:H2'	78:1S:1592:A:C8	2.47	0.49
78:1S:1690:G:N1	78:1S:1691:A:N6	2.60	0.49
79:2S:66:A:N6	79:2S:76:G:H1'	2.28	0.49
1:L1:108:ASN:HB2	1:L1:130:LYS:CE	2.41	0.49
1:L1:120:VAL:N	1:L1:121:PRO:HD3	2.28	0.49
2:L2:92:LYS:HA	2:L2:103:PRO:HD2	1.94	0.49
2:L2:241:ARG:O	2:L2:242:ARG:HB3	2.12	0.49
4:L4:114:ASN:HB2	4:L4:117:GLU:HB3	1.95	0.49
6:L6:18:LEU:N	6:L6:18:LEU:HD22	2.27	0.49
13:63:3:ILE:HD12	28:78:41:HIS:CB	2.43	0.49
17:67:27:LYS:HB2	79:2S:1447:G:N7	2.28	0.49
24:74:82:ILE:CG2	24:74:85:ALA:HB3	2.42	0.49
30:80:42:ILE:CD1	30:80:67:VAL:HG22	2.43	0.49
32:82:99:ASN:HB3	79:2S:1394:A:OP1	2.13	0.49
49:S3:27:ARG:HD2	56:10:60:SER:HB2	1.93	0.49
49:S3:116:ARG:CG	49:S3:150:MET:HE1	2.43	0.49
49:S3:202:LEU:C	49:S3:204:ASP:H	2.15	0.49
51:S5:107:LYS:HD2	78:1S:1610:G:H5''	1.93	0.49
57:11:4:GLU:O	57:11:5:LEU:HB2	2.13	0.49
59:13:108:ASP:HB3	59:13:111:ALA:HB3	1.94	0.49
60:14:103:ARG:NH2	72:26:49:ALA:HA	2.28	0.49
62:16:7:VAL:CG2	62:16:22:VAL:HB	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:495:C:H3'	78:1S:496:G:O4'	2.13	0.49
78:1S:1166:A:H3'	78:1S:1167:G:H5''	1.93	0.49
78:1S:1684:U:H3	78:1S:1717:G:H1	1.58	0.49
78:1S:1707:A:H2'	78:1S:1708:U:O4'	2.13	0.49
79:2S:52:A:H2'	79:2S:53:G:H8	1.76	0.49
79:2S:279:U:H2'	79:2S:280:U:O4'	2.13	0.49
79:2S:675:C:H2'	79:2S:676:G:O4'	2.12	0.49
79:2S:795:G:H5''	79:2S:1112:A:H5'	1.95	0.49
79:2S:796:U:H2'	79:2S:797:U:C6	2.48	0.49
79:2S:877:C:H2'	79:2S:878:G:O4'	2.12	0.49
79:2S:878:G:H1	79:2S:2979:U:H5''	1.77	0.49
79:2S:944:C:H2'	79:2S:945:C:H6	1.76	0.49
80:8S:32:C:H2'	80:8S:33:A:H8	1.76	0.49
2:L2:126:LEU:N	2:L2:126:LEU:HD12	2.26	0.49
3:L3:50:LYS:CG	3:L3:332:ARG:HA	2.43	0.49
4:L4:95:ARG:HG3	79:2S:343:U:H1'	1.94	0.49
4:L4:271:LYS:HB2	4:L4:274:TYR:HB3	1.94	0.49
5:L5:35:ARG:N	5:L5:35:ARG:HD2	2.28	0.49
6:L6:67:GLY:CA	6:L6:74:VAL:HB	2.42	0.49
8:L8:116:VAL:HA	8:L8:121:SER:HB2	1.94	0.49
13:63:155:GLU:O	28:78:100:PRO:HA	2.12	0.49
19:69:4:LEU:HD21	19:69:33:ALA:HB2	1.95	0.49
20:70:153:PRO:O	20:70:154:HIS:HB3	2.13	0.49
21:71:19:PHE:CD1	79:2S:1051:U:H4'	2.47	0.49
22:72:27:VAL:HG21	22:72:107:PHE:CE1	2.47	0.49
29:79:32:LEU:CD1	79:2S:749:C:H5''	2.43	0.49
31:81:55:LEU:CA	31:81:95:PRO:HD3	2.42	0.49
38:88:3:ARG:HB3	38:88:52:TYR:HD1	1.78	0.49
47:S1:120:LEU:HD23	47:S1:121:ILE:N	2.27	0.49
48:S2:80:VAL:HA	48:S2:102:VAL:HG22	1.94	0.49
50:S4:3:ARG:NH1	78:1S:401:A:H1'	2.28	0.49
51:S5:64:VAL:O	51:S5:64:VAL:HG12	2.13	0.49
51:S5:102:ARG:NH1	78:1S:1474:G:H5'	2.27	0.49
59:13:30:SER:O	59:13:34:ILE:HG13	2.13	0.49
62:16:73:GLY:HA3	78:1S:1608:U:H4'	1.95	0.49
64:18:139:LYS:HE2	78:1S:1177:C:H41	1.77	0.49
78:1S:96:G:H22	78:1S:387:A:H2	1.58	0.49
78:1S:271:A:H2	78:1S:284:G:H22	1.61	0.49
78:1S:872:G:H21	78:1S:1047:G:H4'	1.78	0.49
78:1S:1456:C:H3'	78:1S:1457:C:C5'	2.43	0.49
78:1S:1699:G:H2'	78:1S:1700:C:H5''	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:849:C:H2'	79:2S:850:U:C6	2.48	0.49
79:2S:1016:C:H4'	79:2S:1028:U:C4'	2.43	0.49
79:2S:1419:A:H2'	79:2S:1420:C:O4'	2.12	0.49
79:2S:1451:C:H2'	79:2S:1880:U:C5	2.48	0.49
79:2S:2375:G:H1'	79:2S:2377:G:OP2	2.13	0.49
79:2S:2636:A:OP2	79:2S:2637:A:H5''	2.12	0.49
79:2S:2799:A:H4'	79:2S:2800:G:C8	2.48	0.49
79:2S:3184:A:O2'	79:2S:3185:U:H5'	2.13	0.49
79:2S:3244:A:H3'	79:2S:3245:A:H5''	1.95	0.49
79:2S:3278:C:O2	79:2S:3278:C:H2'	2.12	0.49
2:L2:133:TYR:HB3	2:L2:168:VAL:CG1	2.35	0.49
2:L2:183:GLY:O	2:L2:186:PHE:HB3	2.13	0.49
3:L3:53:MET:HB3	3:L3:77:THR:CG2	2.43	0.49
3:L3:86:VAL:HB	3:L3:198:HIS:O	2.13	0.49
3:L3:246:LEU:HD23	3:L3:246:LEU:H	1.77	0.49
4:L4:23:PRO:HD2	4:L4:26:PHE:CE2	2.33	0.49
5:L5:22:ARG:HD3	5:L5:28:THR:OG1	2.13	0.49
7:L7:222:HIS:HB3	7:L7:225:GLN:CB	2.40	0.49
8:L8:157:VAL:HA	8:L8:183:LYS:HD3	1.95	0.49
15:65:2:GLY:HA3	79:2S:116:A:OP2	2.13	0.49
15:65:39:ALA:HB1	15:65:63:ARG:NH2	2.27	0.49
22:72:27:VAL:HG21	22:72:107:PHE:HE1	1.78	0.49
25:75:69:SER:C	25:75:71:THR:H	2.16	0.49
29:79:22:LYS:H	29:79:22:LYS:HD2	1.78	0.49
31:81:35:GLU:O	31:81:39:PHE:HB2	2.13	0.49
34:84:96:GLU:O	34:84:100:ILE:HD13	2.11	0.49
35:85:111:PHE:N	35:85:112:PRO:HD3	2.28	0.49
44:P0:196:VAL:HG23	44:P0:196:VAL:O	2.13	0.49
47:S1:61:LEU:HD13	47:S1:61:LEU:N	2.28	0.49
48:S2:116:LYS:HG2	48:S2:127:ALA:CB	2.43	0.49
50:S4:35:PRO:HD2	50:S4:83:PRO:HG2	1.95	0.49
53:S7:9:LEU:O	53:S7:10:SER:HB3	2.13	0.49
60:14:66:ASP:O	60:14:70:LYS:HB2	2.12	0.49
60:14:136:ARG:HD2	78:1S:1006:C:H4'	1.94	0.49
63:17:58:MET:HA	63:17:61:ILE:HB	1.95	0.49
64:18:125:ILE:O	64:18:128:PHE:HB3	2.13	0.49
65:19:38:LYS:HG3	78:1S:1503:A:O2'	2.13	0.49
69:23:13:ARG:NH1	69:23:13:ARG:HB2	2.27	0.49
69:23:59:ILE:HD13	76:30:4:VAL:HA	1.95	0.49
78:1S:152:U:H2'	78:1S:153:G:H5''	1.95	0.49
78:1S:487:G:H3'	78:1S:488:G:H5''	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:707:A:C2'	78:1S:708:C:H5''	2.43	0.49
78:1S:748:U:H2'	78:1S:749:U:C6	2.48	0.49
78:1S:1191:U:C6	83:PT:35:C:H5'	2.48	0.49
79:2S:284:A:H2'	79:2S:306:A:H4'	1.93	0.49
79:2S:863:C:H2'	79:2S:864:G:O4'	2.13	0.49
79:2S:1067:U:H2'	79:2S:1068:C:H6	1.77	0.49
79:2S:2160:G:H2'	79:2S:2161:G:H8	1.78	0.49
83:PT:57:C:O2	83:PT:57:C:C2'	2.61	0.49
1:L1:13:VAL:HG22	1:L1:14:LYS:H	1.78	0.49
5:L5:265:TYR:HB3	81:5S:1:G:C2	2.48	0.49
7:L7:86:VAL:HG23	7:L7:117:VAL:HG21	1.95	0.49
9:L9:67:ALA:O	9:L9:71:VAL:HG23	2.12	0.49
10:60:154:ARG:NH1	79:2S:2837:A:H5''	2.28	0.49
13:63:39:ARG:NH1	79:2S:685:G:H5''	2.26	0.49
18:68:51:ALA:HB1	18:68:84:VAL:CG1	2.41	0.49
26:76:118:LEU:O	26:76:122:LYS:HG3	2.12	0.49
34:84:4:ARG:HH12	79:2S:1481:A:H2'	1.78	0.49
44:P0:48:ARG:HG2	44:P0:91:GLU:HG3	1.95	0.49
44:P0:190:VAL:HG21	44:P0:199:SER:CB	2.43	0.49
50:S4:187:ARG:HA	50:S4:187:ARG:HE	1.77	0.49
51:S5:57:SER:C	51:S5:59:VAL:H	2.16	0.49
51:S5:77:TYR:HB3	51:S5:84:LYS:CA	2.43	0.49
53:S7:109:VAL:HG13	53:S7:110:GLN:H	1.77	0.49
54:S8:5:ARG:HH11	54:S8:5:ARG:HG3	1.78	0.49
57:11:123:VAL:HG22	57:11:124:THR:H	1.77	0.49
58:12:77:GLY:HA3	77:31:114:VAL:HG23	1.94	0.49
60:14:137:LEU:OXT	60:14:137:LEU:HD22	2.13	0.49
62:16:127:LYS:HB2	78:1S:1605:G:C5'	2.40	0.49
72:26:23:CYS:HB3	72:26:27:SER:N	2.28	0.49
76:30:53:LYS:HG3	76:30:54:ARG:N	2.27	0.49
77:31:132:LEU:CD2	77:31:141:CYS:HB2	2.43	0.49
78:1S:62:A:N6	78:1S:288:A:H5'	2.27	0.49
78:1S:560:U:H2'	78:1S:561:G:C8	2.47	0.49
79:2S:193:C:H2'	79:2S:194:U:C6	2.47	0.49
79:2S:640:U:H2'	79:2S:641:C:C6	2.48	0.49
79:2S:795:G:O2'	79:2S:796:U:H5'	2.13	0.49
79:2S:2772:C:H1'	79:2S:2773:C:H5	1.77	0.49
79:2S:2783:U:H2'	79:2S:2784:G:O4'	2.13	0.49
80:8S:41:A:N6	80:8S:103:G:H1'	2.28	0.49
80:8S:114:G:H2'	80:8S:115:C:H6	1.72	0.49
81:5S:100:C:H2'	81:5S:101:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:17:HIS:C	13:63:19:GLN:H	2.17	0.48
17:67:101:ASN:HD21	79:2S:388:G:H21	1.59	0.48
20:70:24:LEU:HB3	21:71:148:PRO:HG3	1.93	0.48
24:74:71:ARG:HG2	24:74:72:SER:H	1.78	0.48
33:83:6:ARG:HG3	33:83:8:TYR:CD1	2.48	0.48
33:83:50:ALA:O	33:83:98:VAL:HG23	2.12	0.48
38:88:22:THR:OG1	38:88:46:ARG:HB3	2.12	0.48
38:88:28:ASN:HB2	38:88:40:GLN:HB3	1.94	0.48
39:89:44:TRP:CE3	39:89:45:ARG:HG3	2.48	0.48
42:92:8:ARG:HH21	42:92:10:THR:HG21	1.78	0.48
42:92:63:LYS:HG2	79:2S:2795:U:OP2	2.13	0.48
45:RC:13:LEU:HD21	45:RC:55:GLY:N	2.28	0.48
45:RC:49:GLY:HA2	45:RC:54:PHE:HA	1.94	0.48
45:RC:129:LYS:HG2	45:RC:149:ASP:O	2.13	0.48
46:S0:85:ALA:HA	46:S0:202:TYR:HD1	1.78	0.48
46:S0:182:LEU:HB3	46:S0:188:LEU:HD23	1.95	0.48
48:S2:93:GLY:O	48:S2:94:GLN:HG3	2.13	0.48
48:S2:122:ALA:O	48:S2:126:ARG:HG2	2.13	0.48
49:S3:59:LEU:HD12	49:S3:66:ILE:HG13	1.93	0.48
49:S3:92:GLN:O	49:S3:93:ASP:O	2.30	0.48
51:S5:121:ILE:CG2	51:S5:132:VAL:HB	2.43	0.48
65:19:18:TYR:O	65:19:22:LEU:HD23	2.13	0.48
67:21:41:GLU:O	67:21:42:GLU:HB3	2.13	0.48
78:1S:628:G:H21	78:1S:971:A:H62	1.61	0.48
78:1S:678:A:H2'	78:1S:679:U:O4'	2.13	0.48
79:2S:59:G:H4'	79:2S:60:A:H4'	1.94	0.48
79:2S:126:U:H2'	79:2S:127:G:H8	1.77	0.48
79:2S:2895:G:C3'	79:2S:2896:A:H5''	2.43	0.48
79:2S:3095:U:H2'	79:2S:3096:C:C6	2.48	0.48
1:L1:17:LEU:HG	1:L1:18:LYS:N	2.28	0.48
2:L2:88:ILE:HD12	2:L2:88:ILE:N	2.28	0.48
3:L3:313:HIS:HD2	79:2S:3378:C:H4'	1.78	0.48
4:L4:157:GLU:O	4:L4:213:ASN:HB2	2.14	0.48
5:L5:196:ARG:HA	5:L5:199:ILE:HD12	1.95	0.48
8:L8:150:LEU:HD21	8:L8:218:ILE:HD12	1.94	0.48
13:63:23:LYS:HB3	15:65:198:SER:HA	1.95	0.48
15:65:50:ARG:HH11	15:65:50:ARG:CB	2.25	0.48
18:68:25:TYR:HA	18:68:28:LEU:HD12	1.95	0.48
18:68:147:ARG:O	18:68:151:ARG:HG3	2.13	0.48
18:68:157:PRO:O	18:68:158:HIS:HB2	2.13	0.48
30:80:87:VAL:HG23	79:2S:1728:G:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:11:ASN:ND2	79:2S:1589:A:H4'	2.27	0.48
47:S1:70:LEU:O	47:S1:73:LEU:HD12	2.13	0.48
49:S3:167:PHE:CE1	49:S3:192:PRO:HA	2.48	0.48
50:S4:52:LEU:HD13	50:S4:54:TYR:HE2	1.78	0.48
50:S4:247:SER:OG	50:S4:250:GLU:HG3	2.13	0.48
52:S6:50:PHE:HD1	52:S6:113:ILE:HA	1.78	0.48
54:S8:104:ILE:HD11	54:S8:165:LEU:HB2	1.94	0.48
55:S9:66:ASP:O	55:S9:70:LEU:HG	2.13	0.48
55:S9:121:SER:HB3	55:S9:124:HIS:HB3	1.93	0.48
62:16:93:HIS:HA	62:16:97:VAL:HB	1.95	0.48
68:22:25:VAL:O	68:22:62:VAL:HG13	2.13	0.48
69:23:57:LEU:HD22	76:30:4:VAL:HG12	1.93	0.48
73:27:68:GLY:HA3	78:1S:1048:G:OP1	2.13	0.48
78:1S:1193:A:N6	78:1S:1283:U:H5'	2.27	0.48
78:1S:1214:U:OP1	78:1S:1246:C:H1'	2.13	0.48
78:1S:1371:A:N3	78:1S:1373:C:H5''	2.28	0.48
78:1S:1696:G:H4'	78:1S:1697:G:OP1	2.12	0.48
79:2S:263:C:H2'	79:2S:264:G:C8	2.49	0.48
79:2S:279:U:O2'	79:2S:280:U:H5'	2.13	0.48
79:2S:401:U:H4'	79:2S:403:C:C2	2.48	0.48
79:2S:967:A:C2'	79:2S:968:G:H5'	2.43	0.48
79:2S:1016:C:H5'	79:2S:1028:U:H4'	1.95	0.48
79:2S:1661:G:H2'	79:2S:1662:G:H8	1.78	0.48
79:2S:2408:U:O2'	79:2S:2409:G:H5'	2.13	0.48
79:2S:2515:A:C5	79:2S:2593:A:H1'	2.48	0.48
79:2S:2542:U:H1'	79:2S:2543:U:H5	1.78	0.48
4:L4:317:PRO:HB3	4:L4:324:LEU:HD13	1.95	0.48
5:L5:282:ARG:O	5:L5:286:VAL:HG23	2.14	0.48
10:60:52:LEU:HD12	10:60:152:LEU:HD22	1.96	0.48
14:64:49:PRO:CG	14:64:82:SER:HB2	2.43	0.48
18:68:92:ARG:HD2	28:78:76:ASP:OD2	2.12	0.48
21:71:44:ALA:HA	21:71:95:HIS:ND1	2.28	0.48
23:73:114:ILE:CD1	23:73:132:ASN:HB2	2.44	0.48
36:86:60:LEU:HD12	36:86:69:ALA:HA	1.95	0.48
41:91:23:ARG:HD3	79:2S:2303:A:OP1	2.13	0.48
50:S4:71:LYS:HA	50:S4:76:VAL:HA	1.95	0.48
51:S5:188:LYS:HD3	51:S5:193:THR:HG22	1.96	0.48
62:16:69:VAL:HG11	62:16:81:ILE:HG23	1.95	0.48
62:16:139:GLN:HB3	78:1S:1465:C:H5''	1.96	0.48
65:19:77:ASN:HB3	65:19:95:ASP:HB3	1.94	0.48
70:24:100:VAL:O	70:24:100:VAL:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:548:G:H2'	78:1S:549:G:C8	2.49	0.48
79:2S:904:A:H2'	79:2S:905:U:C6	2.48	0.48
79:2S:928:C:H2'	79:2S:929:A:H8	1.79	0.48
79:2S:3208:G:H4'	79:2S:3209:A:H3'	1.96	0.48
80:8S:24:G:H2'	80:8S:25:G:O4'	2.13	0.48
80:8S:121:U:H2'	80:8S:122:U:C5	2.48	0.48
2:L2:32:LEU:HD21	2:L2:37:ARG:HB3	1.96	0.48
2:L2:40:TYR:HA	2:L2:90:ALA:O	2.13	0.48
8:L8:51:LYS:HD2	79:2S:2523:A:H5'	1.93	0.48
8:L8:65:LEU:HA	8:L8:69:LEU:CD1	2.43	0.48
13:63:64:LYS:HE3	28:78:69:TRP:CD1	2.48	0.48
14:64:64:VAL:HG22	14:64:65:LEU:N	2.24	0.48
14:64:103:ILE:O	14:64:106:ARG:HG2	2.13	0.48
14:64:132:LYS:O	14:64:136:ALA:HB2	2.13	0.48
18:68:176:ARG:O	28:78:51:GLY:HA2	2.13	0.48
19:69:108:LYS:O	19:69:112:ALA:HB2	2.13	0.48
19:69:138:LEU:O	19:69:142:ILE:HG13	2.14	0.48
19:69:160:GLU:O	19:69:164:LEU:HD23	2.13	0.48
24:74:87:LEU:H	24:74:87:LEU:CD2	2.26	0.48
25:75:52:PRO:CB	80:8S:135:G:H5'	2.42	0.48
34:84:19:LYS:O	34:84:20:ILE:HD13	2.14	0.48
44:P0:6:GLU:O	44:P0:10:GLU:HB2	2.13	0.48
50:S4:242:LYS:HD2	50:S4:242:LYS:N	2.28	0.48
51:S5:26:ALA:HB3	62:16:28:LEU:HB3	1.95	0.48
55:S9:60:LEU:O	55:S9:60:LEU:HD13	2.13	0.48
56:10:86:ILE:HD12	56:10:88:PRO:CD	2.40	0.48
59:13:47:PRO:HG2	59:13:72:MET:SD	2.54	0.48
59:13:123:HIS:O	59:13:127:ARG:HB2	2.13	0.48
67:21:73:ALA:HB1	67:21:78:LEU:HD11	1.96	0.48
69:23:115:GLY:C	69:23:117:ILE:H	2.16	0.48
76:30:33:ARG:HH21	78:1S:478:A:H5'	1.77	0.48
78:1S:329:G:H2'	78:1S:330:G:C8	2.49	0.48
78:1S:370:A:H2'	78:1S:371:G:O4'	2.13	0.48
79:2S:407:A:H2'	79:2S:408:A:C8	2.48	0.48
79:2S:635:G:H2'	79:2S:636:C:H5''	1.96	0.48
79:2S:777:U:H2'	79:2S:778:U:C6	2.49	0.48
79:2S:1750:A:H1'	79:2S:1752:A:N7	2.28	0.48
79:2S:2076:G:H2'	79:2S:2077:U:H5''	1.94	0.48
3:L3:10:ARG:HE	79:2S:2882:U:H5''	1.78	0.48
4:L4:212:ASP:OD1	4:L4:216:VAL:HG22	2.12	0.48
8:L8:247:ASP:O	8:L8:251:LYS:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:48:VAL:HB	9:L9:54:LYS:HE2	1.96	0.48
11:61:171:VAL:HG13	11:61:172:LEU:N	2.29	0.48
17:67:159:LYS:O	17:67:160:ALA:HB3	2.13	0.48
18:68:25:TYR:O	18:68:29:LEU:HG	2.12	0.48
18:68:58:ASN:C	18:68:60:PRO:HD3	2.34	0.48
26:76:17:LYS:HG2	80:8S:23:U:H4'	1.95	0.48
30:80:41:LEU:HD13	30:80:42:ILE:N	2.27	0.48
34:84:19:LYS:C	34:84:20:ILE:HD13	2.33	0.48
34:84:46:ASP:HB2	34:84:80:ARG:CD	2.43	0.48
42:92:35:LEU:C	42:92:37:ALA:H	2.17	0.48
42:92:46:LYS:HG2	42:92:54:THR:HG21	1.95	0.48
46:S0:3:LEU:HD21	46:S0:7:PHE:H	1.78	0.48
46:S0:47:VAL:HG11	63:17:109:LEU:HD22	1.95	0.48
47:S1:44:GLY:HA3	60:14:33:LEU:HD21	1.95	0.48
47:S1:164:ILE:HG22	47:S1:168:ILE:HD11	1.95	0.48
50:S4:54:TYR:HA	70:24:22:GLN:HE22	1.78	0.48
54:S8:36:THR:OG1	54:S8:60:ILE:HD12	2.13	0.48
58:12:57:ALA:HA	58:12:123:VAL:O	2.14	0.48
78:1S:79:C:H2'	78:1S:80:A:H5'	1.95	0.48
79:2S:92:G:OP2	79:2S:93:C:H5''	2.13	0.48
79:2S:421:G:H3'	79:2S:421:G:N3	2.28	0.48
79:2S:941:G:H2'	79:2S:942:U:O4'	2.13	0.48
79:2S:1655:G:H2'	79:2S:1656:A:C8	2.47	0.48
79:2S:1678:G:H5'	79:2S:1756:C:H4'	1.95	0.48
79:2S:1731:A:H2'	79:2S:1732:U:O4'	2.13	0.48
79:2S:1870:C:H5''	79:2S:3076:C:O2'	2.14	0.48
79:2S:2561:A:O2'	79:2S:2562:A:H8	1.94	0.48
79:2S:2946:A:H5''	79:2S:2947:G:H5'	1.96	0.48
79:2S:3204:C:H2'	79:2S:3205:G:C8	2.49	0.48
79:2S:3392:U:H2'	79:2S:3393:U:H6	1.76	0.48
81:5S:113:C:H2'	81:5S:114:U:H6	1.79	0.48
2:L2:246:LEU:HD13	2:L2:250:GLN:NE2	2.29	0.48
3:L3:53:MET:CB	3:L3:77:THR:HA	2.44	0.48
3:L3:299:ASP:O	3:L3:300:ARG:HB2	2.13	0.48
4:L4:175:HIS:O	4:L4:179:LEU:HG	2.13	0.48
8:L8:157:VAL:HG12	8:L8:159:PRO:HD2	1.94	0.48
8:L8:165:PHE:H	8:L8:165:PHE:HD1	1.61	0.48
17:67:14:SER:HB3	17:67:149:VAL:CG1	2.44	0.48
23:73:123:ALA:HB1	23:73:130:ALA:CB	2.35	0.48
35:85:64:GLU:HA	35:85:67:ARG:CD	2.44	0.48
46:S0:74:VAL:HA	46:S0:96:THR:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:201:THR:HG22	47:S1:201:THR:O	2.13	0.48
48:S2:234:PRO:O	48:S2:235:LEU:HB2	2.12	0.48
52:S6:30:LYS:O	52:S6:102:VAL:HG23	2.13	0.48
54:S8:22:ARG:HD2	54:S8:25:ARG:NH2	2.28	0.48
60:14:31:THR:HB	60:14:35:GLY:HA2	1.95	0.48
71:25:42:LEU:HD12	71:25:43:ASP:H	1.73	0.48
72:26:44:ILE:HA	72:26:67:THR:CG2	2.39	0.48
78:1S:4:C:H2'	78:1S:5:U:C6	2.48	0.48
78:1S:421:A:O2'	78:1S:422:G:H5'	2.14	0.48
78:1S:1784:C:H2'	78:1S:1785:U:C6	2.49	0.48
79:2S:776:U:H2'	79:2S:2720:G:H1'	1.95	0.48
79:2S:1060:U:H2'	79:2S:1061:A:C8	2.48	0.48
79:2S:1216:C:H2'	79:2S:1217:A:C8	2.49	0.48
79:2S:1286:A:H4'	79:2S:1287:A:H4'	1.96	0.48
79:2S:2638:C:H3'	79:2S:2639:G:H8	1.79	0.48
79:2S:2766:U:H2'	79:2S:2767:U:C6	2.49	0.48
79:2S:3023:U:H2'	79:2S:3024:A:H8	1.78	0.48
79:2S:3149:G:O2'	79:2S:3150:A:H5'	2.14	0.48
79:2S:3223:A:H2'	79:2S:3224:G:C8	2.49	0.48
81:5S:62:U:H2'	81:5S:63:A:C8	2.48	0.48
3:L3:261:MET:HG2	16:66:64:PHE:CA	2.43	0.48
4:L4:98:ARG:HG2	4:L4:99:MET:H	1.77	0.48
5:L5:40:HIS:HD2	5:L5:42:ALA:HB3	1.79	0.48
9:L9:62:ARG:HD3	79:2S:1210:U:H5''	1.96	0.48
9:L9:90:MET:HB3	9:L9:179:ILE:HG22	1.94	0.48
10:60:174:THR:HG22	10:60:175:ASN:N	2.29	0.48
23:73:33:ASN:ND2	23:73:64:LYS:H	2.11	0.48
23:73:45:ARG:CB	23:73:48:ARG:HE	2.24	0.48
31:81:60:TRP:O	79:2S:1476:G:H5'	2.14	0.48
32:82:24:ARG:HG2	32:82:24:ARG:HH11	1.79	0.48
32:82:26:HIS:HB2	79:2S:655:C:C5'	2.44	0.48
33:83:52:VAL:HG22	33:83:66:VAL:HG22	1.96	0.48
46:S0:111:ILE:HG22	46:S0:111:ILE:O	2.13	0.48
47:S1:93:GLY:O	47:S1:94:LYS:HB2	2.14	0.48
48:S2:44:LEU:HB3	48:S2:50:ILE:HG13	1.96	0.48
51:S5:77:TYR:HB3	51:S5:84:LYS:HG3	1.94	0.48
51:S5:118:LEU:HD23	51:S5:121:ILE:HD12	1.96	0.48
51:S5:164:PRO:O	51:S5:168:VAL:HG23	2.13	0.48
60:14:81:VAL:HG22	60:14:115:ILE:HG21	1.95	0.48
60:14:85:ALA:CB	60:14:92:LYS:HA	2.44	0.48
61:15:40:ARG:HG3	61:15:115:TYR:OH	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:23:49:ALA:O	69:23:103:LEU:HD22	2.14	0.48
78:1S:980:G:H4'	78:1S:1776:A:H4'	1.94	0.48
78:1S:1157:A:H61	78:1S:1622:G:C2'	2.26	0.48
78:1S:1435:G:H4'	78:1S:1436:A:H5'	1.94	0.48
78:1S:1590:G:H2'	78:1S:1591:C:C6	2.49	0.48
79:2S:275:U:H2'	79:2S:276:U:C6	2.48	0.48
79:2S:411:U:H2'	79:2S:412:G:H8	1.79	0.48
79:2S:757:C:H3'	79:2S:758:C:H5''	1.95	0.48
79:2S:1474:A:H2'	79:2S:1475:A:O4'	2.12	0.48
79:2S:1892:G:H3'	79:2S:1893:A:C5'	2.35	0.48
79:2S:2369:G:H2'	79:2S:2370:G:C8	2.48	0.48
79:2S:2647:A:C3'	79:2S:2648:G:H5''	2.43	0.48
1:L1:18:LYS:O	1:L1:19:TYR:HB3	2.13	0.48
2:L2:196:TRP:CD1	2:L2:197:PRO:HA	2.49	0.48
7:L7:151:ARG:NE	7:L7:207:LEU:HD23	2.29	0.48
9:L9:80:THR:HB	9:L9:186:PHE:HE2	1.79	0.48
18:68:43:PRO:O	18:68:47:VAL:HG23	2.14	0.48
35:85:85:THR:O	35:85:89:ARG:HB2	2.14	0.48
44:P0:83:ASN:ND2	79:2S:1281:G:N3	2.61	0.48
45:RC:304:GLY:HA2	45:RC:310:ILE:HG12	1.96	0.48
46:S0:183:ARG:HG3	46:S0:183:ARG:HH11	1.78	0.48
49:S3:168:ILE:C	49:S3:168:ILE:HD12	2.34	0.48
50:S4:55:ALA:HB3	50:S4:61:VAL:HG22	1.96	0.48
52:S6:20:ASP:O	52:S6:24:ILE:HG13	2.14	0.48
54:S8:27:PHE:CD2	78:1S:301:A:H4'	2.48	0.48
54:S8:137:LYS:HG3	78:1S:191:C:N4	2.29	0.48
70:24:50:ALA:O	70:24:51:GLU:HB3	2.13	0.48
72:26:24:VAL:HG13	72:26:25:ASN:OD1	2.14	0.48
73:27:32:PHE:HD1	73:27:45:THR:HG22	1.79	0.48
78:1S:63:G:H4'	78:1S:170:U:H5	1.79	0.48
78:1S:222:A:H2'	78:1S:223:U:C6	2.49	0.48
78:1S:384:G:H2'	78:1S:385:A:C8	2.49	0.48
78:1S:641:G:H2'	78:1S:642:G:C8	2.48	0.48
78:1S:798:C:H2'	78:1S:799:A:C8	2.49	0.48
78:1S:1149:G:H1'	78:1S:1765:A:C4	2.49	0.48
79:2S:823:C:H2'	79:2S:824:C:C6	2.49	0.48
79:2S:938:C:O2'	79:2S:2814:G:H4'	2.13	0.48
79:2S:1109:U:H2'	79:2S:1110:U:C6	2.48	0.48
79:2S:1215:U:H2'	79:2S:1216:C:H6	1.75	0.48
79:2S:1649:U:H2'	79:2S:1650:G:C8	2.49	0.48
79:2S:2076:G:C2'	79:2S:2077:U:H5''	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2922:G:H3'	79:2S:2923:U:C5'	2.38	0.48
79:2S:3015:G:O2'	79:2S:3016:A:H5'	2.13	0.48
83:PT:19:G:N2	83:PT:58:A:H2'	2.29	0.48
83:PT:70:C:H2'	83:PT:71:G:H8	1.78	0.48
1:L1:163:LEU:HD22	1:L1:163:LEU:N	2.29	0.48
4:L4:30:ILE:HG12	4:L4:127:ALA:HB3	1.96	0.48
4:L4:84:ARG:CZ	4:L4:87:GLN:HB2	2.43	0.48
4:L4:310:THR:O	4:L4:311:HIS:HB3	2.14	0.48
8:L8:68:ARG:HD3	8:L8:237:ILE:O	2.14	0.48
11:61:93:ASP:HB2	11:61:173:ASP:HB2	1.96	0.48
23:73:38:ALA:O	23:73:58:VAL:HB	2.13	0.48
23:73:66:LYS:O	23:73:70:ARG:HG3	2.14	0.48
33:83:75:HIS:CE1	79:2S:1328:C:H5''	2.49	0.48
35:85:55:LEU:HD12	80:8S:60:U:O4'	2.14	0.48
35:85:93:THR:HB	79:2S:135:C:O2	2.14	0.48
47:S1:35:PRO:HD2	47:S1:38:PHE:HE2	1.79	0.48
47:S1:141:ALA:CB	47:S1:210:ILE:HG12	2.44	0.48
47:S1:151:LYS:HD2	47:S1:153:HIS:CE1	2.49	0.48
47:S1:224:ASP:C	79:2S:2536:A:H2'	2.33	0.48
63:17:85:VAL:O	63:17:85:VAL:HG12	2.13	0.48
67:21:73:ALA:HB1	67:21:78:LEU:HD12	1.95	0.48
68:22:104:LEU:HB3	68:22:125:ILE:HA	1.96	0.48
70:24:81:GLU:HG3	70:24:85:PHE:HE2	1.78	0.48
78:1S:1075:C:H2'	78:1S:1076:A:C4'	2.43	0.48
78:1S:1187:U:H2'	78:1S:1188:G:C8	2.49	0.48
78:1S:1758:U:H2'	78:1S:1759:C:C6	2.48	0.48
79:2S:139:G:H2'	79:2S:140:C:C6	2.49	0.48
79:2S:573:C:H2'	79:2S:574:U:C6	2.48	0.48
79:2S:1002:A:H61	79:2S:1050:U:C1'	2.20	0.48
79:2S:1130:A:H2'	79:2S:1132:C:C6	2.48	0.48
79:2S:2180:G:H2'	79:2S:2181:C:C6	2.49	0.48
79:2S:3085:G:H5'	79:2S:3332:U:OP1	2.13	0.48
79:2S:3110:C:H2'	79:2S:3111:U:C6	2.49	0.48
2:L2:39:GLY:HA2	2:L2:93:LYS:HB2	1.96	0.48
8:L8:94:PHE:HE2	8:L8:198:ALA:HB1	1.78	0.48
9:L9:47:LYS:HZ2	14:64:6:ILE:H	1.60	0.48
10:60:203:LYS:HB2	81:5S:65:G:OP1	2.14	0.48
14:64:19:ARG:HG3	14:64:65:LEU:HD22	1.96	0.48
14:64:20:VAL:HG13	14:64:66:THR:OG1	2.14	0.48
17:67:177:ALA:O	17:67:181:ARG:HB2	2.14	0.48
18:68:184:PHE:CD2	79:2S:2730:G:H4'	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:172:ARG:O	19:69:176:ARG:HG2	2.14	0.48
33:83:42:GLN:HA	33:83:42:GLN:HE21	1.79	0.48
34:84:54:ILE:HD12	34:84:70:LYS:O	2.13	0.48
53:S7:133:THR:HG21	53:S7:159:VAL:HG12	1.96	0.48
53:S7:143:LEU:HD21	53:S7:149:ILE:HD11	1.96	0.48
54:S8:29:LEU:HD21	54:S8:31:ARG:NH1	2.26	0.48
57:11:112:SER:C	57:11:114:ALA:H	2.16	0.48
61:15:19:GLY:HA2	64:18:93:THR:C	2.34	0.48
61:15:90:ILE:HD11	61:15:112:LEU:HD11	1.96	0.48
64:18:96:LYS:HB3	64:18:98:TYR:CE2	2.49	0.48
66:20:81:THR:O	75:29:54:LYS:HD2	2.14	0.48
67:21:70:ASN:ND2	67:21:83:TRP:HB2	2.24	0.48
69:23:20:ARG:HA	69:23:23:ARG:HG2	1.96	0.48
72:26:18:VAL:CG2	72:26:19:LYS:H	2.06	0.48
78:1S:286:C:C2'	78:1S:287:G:H5'	2.44	0.48
78:1S:1057:U:O3'	78:1S:1058:U:H3'	2.14	0.48
78:1S:1080:U:H3	78:1S:1091:A:H2	1.58	0.48
78:1S:1143:A:H2'	78:1S:1144:U:C6	2.49	0.48
79:2S:374:A:N3	79:2S:376:G:H5''	2.29	0.48
79:2S:728:G:H2'	79:2S:729:C:C6	2.48	0.48
79:2S:836:A:H2'	79:2S:837:A:C8	2.49	0.48
79:2S:1231:A:H4'	79:2S:1261:G:C8	2.49	0.48
79:2S:1501:U:H3	79:2S:1515:A:H61	1.62	0.48
79:2S:1808:G:H4'	79:2S:2559:U:O4	2.14	0.48
79:2S:1818:U:C3'	79:2S:1819:U:H5''	2.43	0.48
79:2S:2526:C:H2'	79:2S:2527:G:H8	1.77	0.48
79:2S:2632:G:H2'	79:2S:2633:U:O4'	2.14	0.48
79:2S:3184:A:H2'	79:2S:3185:U:H5'	1.96	0.48
1:L1:147:LYS:HD3	1:L1:152:ARG:HH11	1.79	0.47
2:L2:129:ALA:HB3	2:L2:132:ASN:ND2	2.28	0.47
4:L4:205:PRO:CG	4:L4:225:VAL:HG22	2.44	0.47
8:L8:187:GLY:O	8:L8:190:VAL:HG12	2.14	0.47
8:L8:210:ALA:O	8:L8:214:LEU:HD13	2.14	0.47
13:63:83:ALA:HB2	13:63:116:LEU:HD13	1.96	0.47
19:69:74:ARG:O	19:69:75:HIS:HB2	2.12	0.47
25:75:101:GLU:O	25:75:101:GLU:HG2	2.13	0.47
47:S1:128:LYS:HG3	47:S1:134:VAL:HG22	1.96	0.47
50:S4:261:LEU:HB3	78:1S:777:C:H4'	1.96	0.47
51:S5:158:GLN:HG3	51:S5:159:ALA:N	2.29	0.47
52:S6:57:ASP:HB3	52:S6:106:LEU:HA	1.95	0.47
53:S7:164:TYR:CE1	53:S7:165:LYS:HG3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:66:SER:O	54:S8:183:ILE:HG13	2.14	0.47
62:16:19:VAL:HG22	78:1S:1379:C:H1'	1.96	0.47
66:20:106:ILE:HG13	66:20:107:THR:N	2.21	0.47
69:23:47:SER:HB2	78:1S:599:A:N3	2.29	0.47
71:25:61:SER:HA	71:25:99:ALA:O	2.13	0.47
78:1S:779:U:C3'	78:1S:780:A:H5'	2.44	0.47
78:1S:832:U:C3'	78:1S:833:U:H5''	2.44	0.47
78:1S:1156:C:C2'	78:1S:1157:A:H5''	2.44	0.47
79:2S:567:G:H2'	79:2S:568:G:C8	2.49	0.47
79:2S:1164:G:H2'	79:2S:1165:A:C8	2.49	0.47
79:2S:1313:G:H2'	79:2S:1314:C:C6	2.49	0.47
2:L2:113:VAL:HB	2:L2:165:VAL:O	2.14	0.47
2:L2:126:LEU:HA	79:2S:2177:G:O2'	2.14	0.47
4:L4:91:GLY:HA3	4:L4:93:MET:CE	2.44	0.47
6:L6:63:LEU:HB2	6:L6:79:VAL:HG23	1.96	0.47
7:L7:139:PRO:HA	7:L7:237:ASN:OD1	2.14	0.47
10:60:97:LEU:O	10:60:122:PRO:HA	2.14	0.47
13:63:193:ALA:O	13:63:194:GLU:HB2	2.14	0.47
16:66:19:LEU:O	16:66:23:VAL:HG23	2.14	0.47
16:66:75:ALA:O	16:66:79:ILE:HG13	2.14	0.47
20:70:82:ASP:HA	20:70:87:THR:HA	1.96	0.47
26:76:106:ILE:HG21	26:76:109:LEU:CD2	2.44	0.47
33:83:16:TYR:CD1	33:83:25:PRO:HA	2.49	0.47
45:RC:222:LEU:O	45:RC:231:MET:HB2	2.14	0.47
45:RC:223:TRP:CZ3	49:S3:220:PRO:HB3	2.48	0.47
47:S1:120:LEU:HD21	47:S1:140:ILE:HG13	1.96	0.47
47:S1:121:ILE:HD13	47:S1:161:ILE:HG23	1.96	0.47
51:S5:88:PRO:O	51:S5:92:ARG:HG3	2.14	0.47
55:S9:114:TYR:CA	55:S9:119:ALA:HB3	2.44	0.47
55:S9:129:ILE:HG22	55:S9:142:ASN:CA	2.44	0.47
62:16:39:VAL:HB	62:16:45:ARG:HE	1.79	0.47
64:18:70:VAL:HA	64:18:73:MET:CE	2.44	0.47
78:1S:505:A:C3'	78:1S:506:A:H5''	2.37	0.47
78:1S:1309:C:O2'	78:1S:1310:U:H5'	2.14	0.47
79:2S:858:A:H2'	79:2S:859:G:C8	2.50	0.47
79:2S:1496:C:OP1	79:2S:1514:G:H5''	2.14	0.47
79:2S:2248:C:H4'	79:2S:2272:G:H8	1.78	0.47
79:2S:2904:U:H2'	79:2S:2905:U:C6	2.50	0.47
79:2S:3233:C:H2'	79:2S:3234:A:C8	2.50	0.47
3:L3:29:VAL:HG22	3:L3:218:ILE:CD1	2.43	0.47
4:L4:309:ARG:HG2	79:2S:1360:C:H4'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:68:ARG:HH12	79:2S:2514:U:H5'	1.78	0.47
15:65:11:GLN:HG3	15:65:11:GLN:O	2.14	0.47
15:65:153:ASP:OD2	15:65:155:VAL:HG22	2.15	0.47
18:68:79:LYS:HG2	18:68:136:ASN:O	2.15	0.47
19:69:162:ARG:HB2	19:69:162:ARG:NH1	2.29	0.47
22:72:42:LYS:CG	22:72:46:ALA:HA	2.43	0.47
28:78:2:PRO:HG2	28:78:5:PHE:CD2	2.49	0.47
28:78:32:ARG:CZ	79:2S:38:U:H5''	2.43	0.47
31:81:28:ARG:HB2	31:81:64:VAL:O	2.13	0.47
36:86:4:LYS:HD2	36:86:12:ASN:O	2.13	0.47
36:86:76:ARG:O	79:2S:294:U:H5'	2.15	0.47
49:S3:7:LYS:HA	49:S3:7:LYS:HE3	1.96	0.47
51:S5:93:LEU:O	51:S5:97:LEU:HG	2.15	0.47
53:S7:139:ARG:HD2	68:22:53:ILE:HG22	1.95	0.47
54:S8:22:ARG:HD2	54:S8:25:ARG:HH22	1.79	0.47
55:S9:123:HIS:CD2	76:30:33:ARG:HG2	2.49	0.47
58:12:33:ARG:O	58:12:37:VAL:HG23	2.14	0.47
59:13:50:ILE:O	59:13:54:LEU:HG	2.14	0.47
59:13:136:PRO:C	59:13:138:ASN:H	2.17	0.47
62:16:19:VAL:O	62:16:68:ARG:HG2	2.15	0.47
63:17:102:VAL:HG12	63:17:120:SER:H	1.79	0.47
71:25:62:VAL:O	71:25:66:VAL:HG23	2.14	0.47
76:30:14:VAL:HA	76:30:17:GLN:CG	2.38	0.47
78:1S:400:A:H4'	78:1S:401:A:H5'	1.96	0.47
78:1S:942:G:O2'	78:1S:943:C:H5'	2.14	0.47
78:1S:1116:A:H2'	78:1S:1117:U:C6	2.49	0.47
78:1S:1163:A:H2'	78:1S:1164:G:O4'	2.14	0.47
78:1S:1329:A:H2'	78:1S:1329:A:N3	2.30	0.47
78:1S:1579:U:H2'	78:1S:1580:C:C6	2.50	0.47
78:1S:1733:C:H2'	78:1S:1734:U:C6	2.50	0.47
79:2S:1217:A:H2'	79:2S:1218:U:O4'	2.13	0.47
79:2S:1914:G:H2'	79:2S:1915:A:C8	2.49	0.47
79:2S:1949:G:H2'	79:2S:1950:U:C6	2.49	0.47
79:2S:2042:G:H2'	79:2S:2043:U:H5'	1.95	0.47
80:8S:40:A:H2'	80:8S:41:A:H8	1.77	0.47
81:5S:8:G:H2'	81:5S:9:C:C6	2.48	0.47
83:PT:70:C:H2'	83:PT:71:G:C8	2.48	0.47
2:L2:214:GLY:HA3	2:L2:218:HIS:CE1	2.43	0.47
3:L3:166:ILE:O	3:L3:166:ILE:HG13	2.14	0.47
4:L4:90:PHE:O	4:L4:98:ARG:HB3	2.14	0.47
4:L4:295:ILE:O	4:L4:299:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:77:17:ARG:C	27:77:19:ALA:H	2.18	0.47
28:78:110:GLY:HA2	28:78:128:ARG:HD2	1.96	0.47
29:79:47:LEU:HA	29:79:50:THR:HG22	1.96	0.47
30:80:27:TYR:HB2	79:2S:1729:A:H5'	1.96	0.47
39:89:10:LYS:HA	39:89:13:MET:HE2	1.95	0.47
46:S0:118:PRO:HG2	46:S0:141:ILE:HD13	1.96	0.47
47:S1:221:PRO:C	47:S1:222:LYS:HD2	2.35	0.47
47:S1:224:ASP:O	47:S1:225:VAL:O	2.33	0.47
49:S3:95:GLY:O	49:S3:96:LEU:HG	2.14	0.47
49:S3:211:PRO:O	49:S3:212:LYS:HB2	2.13	0.47
55:S9:119:ALA:O	55:S9:120:LYS:HB2	2.14	0.47
68:22:107:SER:CB	78:1S:802:G:H21	2.27	0.47
69:23:35:GLY:O	69:23:39:LYS:HG3	2.13	0.47
72:26:97:PRO:HB2	72:26:98:PRO:HD3	1.96	0.47
78:1S:886:U:H2'	78:1S:887:A:H8	1.75	0.47
79:2S:437:G:H1	79:2S:622:A:N6	2.12	0.47
79:2S:502:U:C2'	79:2S:503:C:H5''	2.44	0.47
79:2S:537:A:H61	79:2S:554:A:H1'	1.79	0.47
79:2S:1186:G:H2'	79:2S:1187:C:C6	2.48	0.47
79:2S:2403:G:P	79:2S:2403:G:H3'	2.54	0.47
79:2S:3003:G:H2'	79:2S:3004:C:C6	2.49	0.47
79:2S:3318:G:H1'	79:2S:3320:A:C8	2.49	0.47
81:5S:5:G:H2'	81:5S:6:C:C6	2.50	0.47
1:L1:36:VAL:HG13	1:L1:37:GLY:N	2.29	0.47
4:L4:91:GLY:HA3	4:L4:93:MET:HE1	1.96	0.47
4:L4:263:GLY:HA3	4:L4:269:SER:HA	1.97	0.47
6:L6:166:LYS:NZ	79:2S:3214:U:H6	2.13	0.47
7:L7:232:ARG:NH1	7:L7:235:PHE:HB3	2.29	0.47
10:60:52:LEU:HB2	10:60:152:LEU:HD22	1.95	0.47
13:63:19:GLN:HA	13:63:19:GLN:OE1	2.15	0.47
13:63:171:ARG:HH12	79:2S:713:U:H5'	1.80	0.47
16:66:191:ALA:HA	16:66:194:LEU:HD12	1.96	0.47
18:68:82:VAL:HB	18:68:139:ILE:HA	1.97	0.47
19:69:115:ILE:HD11	19:69:120:TYR:HA	1.95	0.47
34:84:72:VAL:HG22	34:84:77:GLY:HA2	1.95	0.47
44:P0:63:ILE:HD12	44:P0:77:LEU:CD2	2.45	0.47
45:RC:36:ALA:HA	45:RC:42:LEU:HG	1.97	0.47
47:S1:102:GLY:N	47:S1:217:LEU:HD13	2.29	0.47
49:S3:211:PRO:HG3	63:17:20:TYR:CD1	2.50	0.47
49:S3:211:PRO:CG	63:17:19:ARG:HB2	2.43	0.47
50:S4:133:LYS:O	50:S4:134:LYS:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:212:LEU:O	52:S6:216:LEU:HB2	2.14	0.47
57:11:19:ILE:HD12	57:11:34:TRP:HB2	1.97	0.47
58:12:89:ILE:CD1	58:12:90:LYS:H	2.26	0.47
60:14:17:ALA:HB2	60:14:79:VAL:CG2	2.45	0.47
66:20:51:VAL:HG13	66:20:51:VAL:O	2.15	0.47
66:20:118:VAL:CG2	66:20:119:ALA:H	2.21	0.47
67:21:70:ASN:HB3	67:21:83:TRP:CB	2.43	0.47
69:23:96:VAL:CG2	69:23:97:ASP:H	2.20	0.47
74:28:13:ILE:HD11	74:28:29:ARG:HG2	1.95	0.47
75:29:43:PHE:HE2	75:29:50:ILE:HB	1.79	0.47
78:1S:710:U:H2'	78:1S:711:U:O4'	2.14	0.47
78:1S:879:G:H2'	78:1S:880:C:H6	1.78	0.47
78:1S:1515:A:O2'	78:1S:1518:C:N4	2.48	0.47
78:1S:1680:G:H1'	78:1S:1721:A:H61	1.80	0.47
79:2S:46:U:H2'	79:2S:47:C:O4'	2.14	0.47
79:2S:598:A:H2'	79:2S:599:C:C6	2.50	0.47
79:2S:900:G:H1'	79:2S:1589:A:N6	2.29	0.47
79:2S:1652:G:H2'	79:2S:1653:G:H8	1.80	0.47
79:2S:1788:C:H2'	79:2S:1789:G:C8	2.50	0.47
79:2S:1826:C:H2'	79:2S:1827:C:C6	2.49	0.47
79:2S:2271:A:H2'	79:2S:2272:G:H5''	1.96	0.47
79:2S:2286:U:H4'	79:2S:2287:C:H2'	1.96	0.47
79:2S:2412:G:H2'	79:2S:2413:A:O4'	2.15	0.47
79:2S:3358:U:H2'	79:2S:3359:A:O4'	2.14	0.47
80:8S:35:C:H2'	80:8S:36:G:C8	2.49	0.47
83:PT:4:G:H2'	83:PT:5:G:C8	2.50	0.47
83:PT:71:G:H2'	83:PT:72:C:C6	2.49	0.47
1:L1:189:PHE:CE1	1:L1:200:ASN:HB2	2.50	0.47
2:L2:147:ARG:HA	2:L2:157:VAL:HA	1.95	0.47
3:L3:283:TYR:CD2	3:L3:354:VAL:HG21	2.50	0.47
4:L4:338:LYS:C	4:L4:340:GLY:H	2.18	0.47
9:L9:189:GLU:O	9:L9:190:ASP:HB2	2.14	0.47
11:61:94:ARG:H	11:61:94:ARG:CD	2.23	0.47
15:65:73:ARG:HB2	15:65:92:LEU:CD2	2.41	0.47
17:67:168:LEU:N	17:67:168:LEU:HD12	2.30	0.47
19:69:42:ARG:O	19:69:46:LYS:HG2	2.15	0.47
21:71:39:ILE:CD1	21:71:102:ARG:HH11	2.26	0.47
22:72:77:LYS:HG2	22:72:81:LYS:HE2	1.96	0.47
23:73:114:ILE:HD12	23:73:132:ASN:HB2	1.96	0.47
24:74:47:ARG:HG2	24:74:54:LEU:HG	1.95	0.47
30:80:100:ILE:HG13	30:80:101:LEU:HD22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:87:18:LEU:HD23	37:87:25:ARG:HB2	1.96	0.47
45:RC:59:ARG:HH11	45:RC:59:ARG:CB	2.24	0.47
46:S0:3:LEU:HD23	46:S0:6:THR:HA	1.96	0.47
47:S1:133:TYR:HA	47:S1:219:LYS:O	2.14	0.47
48:S2:226:THR:O	48:S2:229:LEU:HB3	2.15	0.47
52:S6:7:TYR:HB2	52:S6:113:ILE:HD12	1.97	0.47
52:S6:57:ASP:HB2	52:S6:105:ASP:O	2.15	0.47
53:S7:89:HIS:CD2	53:S7:165:LYS:HG2	2.46	0.47
53:S7:133:THR:HB	53:S7:155:ASP:HB2	1.96	0.47
55:S9:53:ARG:O	55:S9:57:ARG:HG3	2.14	0.47
55:S9:146:PHE:HZ	55:S9:149:ARG:NH1	2.13	0.47
59:13:20:ARG:NH2	78:1S:861:U:H4'	2.29	0.47
61:15:69:GLU:O	61:15:70:ASN:HB2	2.14	0.47
62:16:116:LEU:HB3	62:16:117:LEU:HD22	1.97	0.47
63:17:29:GLN:HE21	63:17:29:GLN:H	1.62	0.47
70:24:37:LYS:O	70:24:41:ARG:HG3	2.14	0.47
74:28:47:PRO:HG3	78:1S:1615:C:OP2	2.14	0.47
77:31:132:LEU:HD23	77:31:141:CYS:HB2	1.96	0.47
78:1S:156:A:C2	78:1S:415:C:H1'	2.49	0.47
78:1S:218:A:H62	78:1S:830:U:H5	1.62	0.47
78:1S:645:C:H2'	78:1S:646:C:O4'	2.15	0.47
78:1S:800:U:H2'	78:1S:801:G:C8	2.50	0.47
78:1S:1522:U:H3'	78:1S:1523:G:C5'	2.45	0.47
78:1S:1591:C:H2'	78:1S:1592:A:O4'	2.15	0.47
78:1S:1743:U:H2'	78:1S:1744:A:H8	1.78	0.47
79:2S:211:A:H5'	79:2S:229:G:C1'	2.40	0.47
79:2S:260:C:H2'	79:2S:261:U:C6	2.49	0.47
79:2S:374:A:C4'	79:2S:375:A:H5'	2.44	0.47
79:2S:2917:G:C3'	79:2S:2918:G:H5''	2.45	0.47
80:8S:77:A:H2'	80:8S:78:G:O4'	2.14	0.47
2:L2:17:THR:HG22	79:2S:2172:A:O3'	2.14	0.47
2:L2:21:ARG:CD	79:2S:824:C:H5''	2.44	0.47
2:L2:72:ARG:NH1	2:L2:72:ARG:HB2	2.29	0.47
2:L2:150:LEU:HD13	79:2S:2157:G:N7	2.30	0.47
2:L2:230:VAL:O	2:L2:234:LYS:HG3	2.14	0.47
4:L4:74:ILE:HB	4:L4:75:PRO:HD2	1.97	0.47
5:L5:62:CYS:O	5:L5:77:ALA:HA	2.15	0.47
8:L8:171:LYS:HG3	8:L8:171:LYS:O	2.15	0.47
11:61:164:LYS:HZ1	11:61:171:VAL:HB	1.76	0.47
13:63:9:ILE:HG23	28:78:34:MET:SD	2.54	0.47
14:64:58:ILE:HG12	14:64:59:ASN:N	2.16	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:60:VAL:HG22	80:8S:142:C:H4'	1.96	0.47
16:66:64:PHE:HE1	16:66:68:ARG:HD3	1.79	0.47
19:69:23:TRP:CE3	19:69:51:VAL:HG22	2.50	0.47
19:69:63:THR:HA	19:69:66:HIS:HB3	1.96	0.47
20:70:42:TRP:O	20:70:46:GLN:HG3	2.15	0.47
21:71:67:VAL:HG13	21:71:72:VAL:CG1	2.44	0.47
21:71:83:ARG:H	21:71:83:ARG:HD3	1.79	0.47
31:81:18:LYS:HD3	79:2S:3375:A:H4'	1.96	0.47
33:83:8:TYR:HB3	33:83:101:PHE:CE1	2.49	0.47
43:93:20:SER:HA	43:93:23:ARG:HD2	1.97	0.47
44:P0:15:LEU:O	44:P0:19:LEU:HG	2.14	0.47
46:S0:90:ALA:HB1	46:S0:95:ALA:O	2.15	0.47
46:S0:170:ILE:O	46:S0:174:TRP:HD1	1.98	0.47
47:S1:185:THR:O	47:S1:189:ILE:HG13	2.15	0.47
48:S2:116:LYS:HG2	48:S2:127:ALA:HB1	1.96	0.47
48:S2:181:SER:HB3	78:1S:4:C:H4'	1.96	0.47
48:S2:242:ILE:HD12	48:S2:242:ILE:N	2.30	0.47
49:S3:76:ARG:HD3	49:S3:76:ARG:C	2.35	0.47
50:S4:147:ILE:N	50:S4:147:ILE:HD12	2.30	0.47
50:S4:207:LEU:HD22	50:S4:219:VAL:HG12	1.97	0.47
51:S5:93:LEU:HG	51:S5:172:ILE:HG23	1.97	0.47
53:S7:30:SER:C	53:S7:32:PRO:HD2	2.34	0.47
53:S7:139:ARG:HH11	53:S7:139:ARG:HG3	1.79	0.47
53:S7:150:GLN:O	53:S7:181:ILE:HD12	2.14	0.47
54:S8:38:ILE:HG12	54:S8:96:LEU:HD11	1.96	0.47
55:S9:86:LEU:HD11	55:S9:96:VAL:HG12	1.96	0.47
55:S9:126:ARG:HG3	76:30:33:ARG:HD2	1.95	0.47
56:10:15:LEU:HD13	56:10:21:VAL:CG2	2.35	0.47
56:10:92:ILE:HG13	56:10:92:ILE:O	2.15	0.47
58:12:114:LYS:HE2	78:1S:1226:A:N6	2.30	0.47
59:13:88:LEU:HA	59:13:91:LEU:HD12	1.96	0.47
59:13:112:LYS:O	59:13:116:ILE:HG13	2.15	0.47
63:17:124:VAL:HG22	63:17:125:SER:N	2.30	0.47
65:19:62:ALA:HB1	65:19:132:LEU:HD11	1.96	0.47
68:22:65:LEU:H	68:22:65:LEU:CD1	2.20	0.47
78:1S:139:C:H1'	78:1S:140:A:OP2	2.14	0.47
78:1S:298:C:H5''	78:1S:299:A:OP2	2.13	0.47
78:1S:740:A:C2'	78:1S:741:C:H5''	2.45	0.47
78:1S:768:C:H2'	78:1S:769:A:O4'	2.14	0.47
78:1S:1620:C:C5	78:1S:1622:G:H5'	2.49	0.47
78:1S:1676:U:O2'	78:1S:1677:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:532:A:O2'	79:2S:533:A:H5'	2.15	0.47
79:2S:643:U:H5''	79:2S:953:G:H1	1.80	0.47
79:2S:1694:U:O2'	79:2S:1695:U:H5'	2.15	0.47
79:2S:2541:U:O2'	79:2S:2542:U:OP2	2.25	0.47
79:2S:2809:C:H5''	79:2S:2956:A:H5''	1.96	0.47
79:2S:2867:C:H5'	79:2S:2867:C:H6	1.79	0.47
79:2S:3023:U:H2'	79:2S:3024:A:C8	2.49	0.47
79:2S:3049:A:H2'	79:2S:3050:U:O4'	2.15	0.47
79:2S:3105:U:H2'	79:2S:3106:A:C8	2.50	0.47
79:2S:3145:C:H2'	79:2S:3146:G:H8	1.79	0.47
79:2S:3181:C:H2'	79:2S:3182:G:O4'	2.14	0.47
79:2S:3191:G:H2'	79:2S:3192:U:O4'	2.14	0.47
79:2S:3244:A:H3'	79:2S:3245:A:C5'	2.45	0.47
2:L2:70:ARG:CZ	2:L2:72:ARG:HD3	2.44	0.47
2:L2:112:ILE:CG2	2:L2:133:TYR:HB2	2.45	0.47
3:L3:82:PRO:CB	3:L3:165:GLN:HB3	2.44	0.47
3:L3:85:VAL:HG13	3:L3:163:HIS:CE1	2.50	0.47
4:L4:58:HIS:C	4:L4:60:THR:H	2.16	0.47
4:L4:162:THR:O	4:L4:166:VAL:HG23	2.14	0.47
5:L5:142:PHE:HA	79:2S:1079:A:H5'	1.97	0.47
6:L6:108:LYS:HE2	79:2S:617:G:OP1	2.15	0.47
13:63:36:ARG:CG	13:63:39:ARG:HH21	2.27	0.47
17:67:64:ASN:HD22	17:67:80:LYS:HE3	1.80	0.47
17:67:122:ALA:HB1	17:67:123:PRO:CD	2.45	0.47
18:68:60:PRO:HG2	18:68:144:ARG:HG2	1.96	0.47
20:70:82:ASP:OD1	20:70:87:THR:HG22	2.15	0.47
25:75:72:ALA:HB1	25:75:83:VAL:HG11	1.95	0.47
28:78:65:GLN:HA	28:78:68:PHE:CD2	2.46	0.47
31:81:7:VAL:HG13	31:81:77:ARG:O	2.15	0.47
38:88:31:LEU:HA	38:88:37:PRO:HA	1.95	0.47
42:92:84:THR:C	42:92:85:LEU:HD12	2.35	0.47
51:S5:64:VAL:HG23	51:S5:89:ILE:HD11	1.97	0.47
52:S6:50:PHE:CE1	52:S6:113:ILE:HG12	2.50	0.47
53:S7:43:PHE:HB2	53:S7:61:PHE:O	2.14	0.47
54:S8:155:SER:O	54:S8:159:GLN:HB2	2.14	0.47
55:S9:93:LEU:O	55:S9:97:LEU:HB2	2.15	0.47
61:15:126:VAL:HG22	61:15:127:ARG:N	2.30	0.47
70:24:91:LEU:HB3	70:24:96:LEU:HB2	1.95	0.47
78:1S:4:C:H2'	78:1S:5:U:H6	1.80	0.47
78:1S:872:G:N2	78:1S:1047:G:H4'	2.30	0.47
78:1S:1014:G:O2'	78:1S:1015:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1375:A:H2'	78:1S:1376:C:O4'	2.15	0.47
79:2S:1173:U:H5'	79:2S:1179:A:N6	2.29	0.47
79:2S:2733:A:H2'	79:2S:2734:A:C8	2.50	0.47
79:2S:2798:C:H5'	79:2S:2800:G:H5'	1.95	0.47
79:2S:3275:U:H3'	79:2S:3276:G:C4'	2.44	0.47
81:5S:79:A:H62	81:5S:101:G:H21	1.63	0.47
3:L3:117:ARG:HH21	3:L3:177:HIS:HA	1.80	0.47
4:L4:8:VAL:HG23	4:L4:18:ASN:O	2.15	0.47
4:L4:219:LEU:HD22	4:L4:225:VAL:HG11	1.97	0.47
7:L7:102:VAL:CG1	7:L7:130:ILE:HD13	2.44	0.47
7:L7:153:PHE:HB3	7:L7:160:ARG:HG2	1.96	0.47
8:L8:68:ARG:NH1	79:2S:2514:U:H5'	2.30	0.47
8:L8:116:VAL:HG13	8:L8:121:SER:O	2.14	0.47
9:L9:113:GLU:HG3	9:L9:123:ILE:CG2	2.45	0.47
14:64:22:LEU:C	14:64:63:VAL:HG23	2.35	0.47
15:65:142:ILE:HD12	15:65:142:ILE:N	2.30	0.47
18:68:71:LEU:HD11	18:68:96:PHE:CZ	2.50	0.47
19:69:106:LEU:HB3	19:69:120:TYR:HE1	1.76	0.47
20:70:117:ARG:HH22	81:5S:88:G:H5'	1.80	0.47
24:74:75:THR:HG23	24:74:76:VAL:N	2.29	0.47
27:77:121:ARG:NH1	27:77:126:LYS:HE2	2.30	0.47
30:80:32:LYS:CE	30:80:35:ARG:HH21	2.23	0.47
43:93:50:GLY:O	43:93:51:ALA:HB3	2.14	0.47
43:93:59:CYS:C	43:93:61:LYS:H	2.18	0.47
44:P0:33:VAL:HG12	44:P0:34:SER:N	2.29	0.47
52:S6:57:ASP:CB	52:S6:106:LEU:HA	2.44	0.47
55:S9:54:ARG:CB	55:S9:57:ARG:HH21	2.28	0.47
60:14:39:ILE:O	60:14:40:ALA:HB3	2.15	0.47
60:14:112:ILE:HG21	60:14:115:ILE:HD13	1.96	0.47
61:15:28:MET:HE3	61:15:36:LEU:HD11	1.96	0.47
61:15:60:LEU:HD11	61:15:89:MET:HB2	1.96	0.47
62:16:82:ARG:HG3	62:16:82:ARG:HH11	1.80	0.47
64:18:134:ARG:HH11	64:18:134:ARG:HG3	1.80	0.47
66:20:33:GLN:NE2	66:20:111:GLY:HA3	2.30	0.47
68:22:68:ARG:HG2	68:22:68:ARG:NH1	2.28	0.47
71:25:44:GLN:HB3	71:25:45:GLU:OE1	2.15	0.47
72:26:86:VAL:HG23	78:1S:1795:U:C5'	2.44	0.47
78:1S:40:A:H2'	78:1S:41:A:O4'	2.14	0.47
78:1S:391:A:O2'	78:1S:1730:A:H4'	2.14	0.47
78:1S:1088:A:H8	78:1S:1088:A:O5'	1.98	0.47
79:2S:848:A:C8	79:2S:849:C:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1779:C:H3'	79:2S:1780:G:C5'	2.45	0.47
79:2S:2197:C:N4	79:2S:2241:U:H2'	2.29	0.47
79:2S:2841:G:H2'	79:2S:2898:G:N2	2.30	0.47
80:8S:106:C:H5''	80:8S:108:C:OP2	2.14	0.47
81:5S:3:U:H2'	81:5S:4:U:C6	2.50	0.47
2:L2:20:THR:HA	2:L2:23:ARG:NH1	2.29	0.47
2:L2:34:TYR:CE1	79:2S:2525:G:H2'	2.49	0.47
3:L3:123:TYR:CE2	3:L3:124:LYS:HG3	2.50	0.47
3:L3:305:ILE:HD12	3:L3:306:THR:N	2.30	0.47
6:L6:38:THR:HG22	6:L6:39:VAL:N	2.29	0.47
9:L9:36:LYS:HD3	9:L9:38:LEU:HD21	1.96	0.47
11:61:22:SER:H	79:2S:2674:A:H62	1.63	0.47
14:64:28:SER:HB3	14:64:31:LYS:HB2	1.96	0.47
28:78:6:THR:HG22	28:78:8:THR:HG23	1.97	0.47
43:93:5:THR:OG1	43:93:9:GLY:HA2	2.15	0.47
44:P0:70:LEU:HD13	44:P0:73:PHE:HE2	1.79	0.47
45:RC:201:THR:CB	45:RC:242:SER:HA	2.46	0.47
46:S0:185:ARG:H	67:21:44:ARG:HA	1.79	0.47
49:S3:6:SER:HB3	49:S3:9:ARG:HD3	1.97	0.47
53:S7:73:VAL:CB	53:S7:77:LEU:HG	2.42	0.47
57:11:34:TRP:CH2	57:11:36:LYS:HD3	2.48	0.47
58:12:27:ALA:O	58:12:31:VAL:HG23	2.15	0.47
78:1S:48:G:H2'	78:1S:49:C:C6	2.50	0.47
78:1S:751:G:O2'	78:1S:752:A:H5'	2.15	0.47
78:1S:778:G:N3	78:1S:778:G:H5'	2.30	0.47
78:1S:840:U:O2'	78:1S:841:U:H6	1.94	0.47
78:1S:1266:U:H2'	78:1S:1267:G:H8	1.79	0.47
78:1S:1588:G:H1	78:1S:1608:U:H3	1.63	0.47
79:2S:181:U:H3'	79:2S:182:U:C5'	2.41	0.47
79:2S:650:C:H2'	79:2S:651:G:H8	1.77	0.47
79:2S:2260:U:C2'	79:2S:2261:G:H5'	2.45	0.47
79:2S:2478:C:H2'	79:2S:2479:C:C5	2.50	0.47
80:8S:41:A:H2'	80:8S:42:G:O4'	2.15	0.47
80:8S:104:A:OP2	80:8S:105:A:H2'	2.13	0.47
81:5S:106:U:H2'	81:5S:107:C:H6	1.80	0.47
1:L1:130:LYS:HG3	1:L1:136:THR:OG1	2.16	0.46
1:L1:130:LYS:N	1:L1:130:LYS:HD2	2.30	0.46
3:L3:37:ARG:HA	3:L3:186:GLY:HA2	1.98	0.46
9:L9:67:ALA:O	9:L9:70:THR:HG22	2.14	0.46
9:L9:93:VAL:HG22	40:90:82:LEU:HD22	1.96	0.46
15:65:4:TYR:CE2	15:65:49:ARG:HD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:18:VAL:O	15:65:22:LEU:HG	2.14	0.46
27:77:55:LYS:HB2	27:77:55:LYS:NZ	2.30	0.46
47:S1:33:LYS:O	47:S1:98:THR:HG22	2.15	0.46
47:S1:198:GLU:OE1	47:S1:210:ILE:HD12	2.15	0.46
53:S7:13:PRO:O	53:S7:14:THR:HG22	2.15	0.46
54:S8:47:ARG:HH12	78:1S:397:A:H5'	1.79	0.46
55:S9:64:GLU:O	55:S9:65:LYS:HB2	2.15	0.46
55:S9:162:SER:HB2	55:S9:163:PRO:CD	2.39	0.46
58:12:25:GLU:C	58:12:27:ALA:H	2.18	0.46
66:20:43:LYS:O	66:20:47:GLN:HB2	2.14	0.46
78:1S:201:G:H2'	78:1S:202:A:C8	2.50	0.46
78:1S:310:C:H2'	78:1S:311:U:O4'	2.15	0.46
78:1S:540:G:H4'	78:1S:541:A:C2	2.50	0.46
78:1S:649:U:HO2'	78:1S:650:U:H6	1.61	0.46
78:1S:1080:U:H2'	78:1S:1081:A:H5'	1.97	0.46
78:1S:1753:A:H3'	78:1S:1754:A:C8	2.49	0.46
79:2S:320:G:H2'	79:2S:321:C:H6	1.79	0.46
79:2S:1190:A:H5'	79:2S:1191:U:OP1	2.14	0.46
79:2S:3337:G:H2'	79:2S:3338:C:C6	2.50	0.46
2:L2:128:ARG:HB2	79:2S:2177:G:H2'	1.97	0.46
2:L2:207:VAL:HG23	2:L2:208:ASP:OD2	2.15	0.46
4:L4:52:VAL:HG22	4:L4:53:SER:N	2.31	0.46
4:L4:65:TRP:CH2	4:L4:76:ARG:HD3	2.50	0.46
7:L7:118:LYS:HD3	7:L7:120:THR:HG23	1.96	0.46
14:64:15:VAL:CG1	14:64:65:LEU:HD11	2.45	0.46
15:65:120:TRP:HZ2	15:65:123:GLN:HG2	1.80	0.46
17:67:70:THR:HG23	17:67:73:GLY:H	1.80	0.46
18:68:16:ARG:HB2	18:68:53:PHE:CB	2.42	0.46
31:81:13:THR:HG22	31:81:14:ILE:N	2.30	0.46
37:87:49:TRP:CE3	79:2S:929:A:H1'	2.50	0.46
51:S5:124:LEU:HD11	71:25:59:TYR:HB2	1.97	0.46
52:S6:72:ARG:HH11	52:S6:72:ARG:HG3	1.80	0.46
55:S9:53:ARG:HG3	55:S9:97:LEU:O	2.14	0.46
56:10:87:VAL:H	56:10:88:PRO:HD3	1.79	0.46
57:11:102:LYS:HG3	78:1S:632:U:OP1	2.16	0.46
61:15:19:GLY:HA2	64:18:93:THR:O	2.15	0.46
63:17:110:VAL:HG21	63:17:117:LEU:HD23	1.96	0.46
70:24:91:LEU:HB2	70:24:97:ALA:CB	2.45	0.46
76:30:35:TYR:O	76:30:39:LEU:HD23	2.16	0.46
78:1S:223:U:H2'	78:1S:224:C:C6	2.51	0.46
79:2S:759:U:C2'	79:2S:760:G:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:787:G:H2'	79:2S:788:C:C6	2.50	0.46
79:2S:1039:U:H2'	79:2S:1040:A:C8	2.51	0.46
79:2S:1158:A:H2'	79:2S:1159:A:C4'	2.40	0.46
79:2S:1200:A:H5'	79:2S:1201:C:H4'	1.96	0.46
79:2S:1323:G:H2'	79:2S:1324:U:C6	2.50	0.46
79:2S:2455:U:C2'	79:2S:2456:A:H5'	2.46	0.46
2:L2:138:GLY:HA3	2:L2:147:ARG:HB3	1.97	0.46
2:L2:200:ARG:O	2:L2:204:MET:HG3	2.16	0.46
3:L3:92:TYR:HB3	3:L3:99:LEU:HB3	1.97	0.46
4:L4:159:ILE:HG23	4:L4:164:GLU:HB3	1.96	0.46
8:L8:84:ARG:O	8:L8:88:ALA:HB2	2.14	0.46
10:60:13:LYS:C	10:60:14:ASN:HD22	2.18	0.46
22:72:20:SER:HB3	22:72:61:THR:HB	1.96	0.46
36:86:73:ALA:HB3	36:86:83:ALA:HB1	1.97	0.46
37:87:21:ARG:HH21	37:87:39:TYR:HA	1.81	0.46
42:92:87:ARG:HG2	42:92:87:ARG:HH11	1.79	0.46
49:S3:211:PRO:CD	63:17:19:ARG:HB2	2.45	0.46
50:S4:44:LEU:CD1	50:S4:82:TYR:HB3	2.45	0.46
51:S5:43:PHE:HA	51:S5:68:ILE:O	2.16	0.46
53:S7:15:GLU:O	53:S7:19:GLN:HG2	2.15	0.46
55:S9:143:ILE:N	55:S9:143:ILE:HD12	2.31	0.46
63:17:24:LEU:HD21	63:17:34:LEU:HD22	1.98	0.46
67:21:14:PRO:HB3	67:21:23:ILE:HG23	1.96	0.46
71:25:41:ILE:CG1	71:25:42:LEU:N	2.78	0.46
76:30:30:PRO:HG2	76:30:35:TYR:HD2	1.78	0.46
78:1S:45:U:O2'	78:1S:46:A:H3'	2.14	0.46
78:1S:102:U:H3'	78:1S:360:A:H61	1.80	0.46
78:1S:175:G:N2	78:1S:176:C:H5	2.12	0.46
78:1S:520:A:H2'	78:1S:521:A:C8	2.49	0.46
78:1S:584:C:H6	78:1S:584:C:O5'	1.97	0.46
78:1S:1202:A:H1'	78:1S:1207:C:N4	2.29	0.46
78:1S:1524:A:C2	78:1S:1590:G:H1'	2.49	0.46
79:2S:873:C:H2'	79:2S:875:G:O4'	2.15	0.46
79:2S:915:A:C5	79:2S:917:A:H1'	2.50	0.46
79:2S:960:U:H4'	79:2S:963:G:C2	2.50	0.46
79:2S:1130:A:H8	79:2S:1130:A:O5'	1.98	0.46
79:2S:2439:A:H2'	79:2S:2440:G:H8	1.80	0.46
1:L1:148:VAL:HG23	1:L1:149:THR:N	2.30	0.46
3:L3:260:VAL:HG21	79:2S:2987:A:C2	2.51	0.46
5:L5:51:LEU:HB2	5:L5:144:VAL:HG22	1.98	0.46
5:L5:157:ALA:HB3	5:L5:160:PHE:CD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L6:5:LYS:O	6:L6:6:ALA:HB2	2.15	0.46
9:L9:39:LYS:NZ	79:2S:3184:A:H4'	2.31	0.46
15:65:134:LEU:HD12	15:65:134:LEU:N	2.30	0.46
16:66:87:MET:HA	79:2S:1311:G:H21	1.81	0.46
18:68:64:VAL:HG22	18:68:64:VAL:O	2.14	0.46
18:68:170:ARG:O	18:68:171:LYS:HB3	2.16	0.46
20:70:4:PHE:CE2	20:70:104:GLU:HA	2.50	0.46
23:73:69:LEU:HD12	23:73:69:LEU:N	2.30	0.46
31:81:101:ALA:HA	31:81:104:LEU:HD12	1.98	0.46
32:82:79:VAL:HG13	32:82:111:ARG:HG2	1.97	0.46
41:91:9:ARG:O	41:91:13:LEU:HD23	2.14	0.46
49:S3:157:LEU:O	78:1S:1327:C:H5''	2.15	0.46
49:S3:202:LEU:O	63:17:42:GLN:HG3	2.15	0.46
52:S6:4:ASN:O	52:S6:110:ALA:HA	2.15	0.46
54:S8:57:ALA:HB1	54:S8:60:ILE:HD11	1.97	0.46
57:11:143:SER:O	57:11:144:ALA:HB2	2.15	0.46
60:14:85:ALA:HB3	60:14:92:LYS:HA	1.98	0.46
62:16:45:ARG:O	62:16:48:VAL:HG12	2.16	0.46
63:17:100:LEU:HB3	63:17:118:PRO:HG2	1.96	0.46
74:28:15:VAL:HG23	74:28:28:VAL:HG22	1.98	0.46
78:1S:1764:C:OP1	78:1S:1771:U:H4'	2.16	0.46
79:2S:595:G:H1	79:2S:609:G:H5''	1.79	0.46
79:2S:1019:G:C2'	79:2S:1020:G:H5''	2.45	0.46
79:2S:1325:U:H2'	79:2S:1326:A:H8	1.75	0.46
79:2S:1326:A:H2'	79:2S:1327:C:O4'	2.15	0.46
79:2S:1655:G:H1'	79:2S:1800:A:H61	1.80	0.46
79:2S:1814:A:H4'	79:2S:1815:U:H5'	1.97	0.46
79:2S:1943:C:H4'	79:2S:3346:U:C4'	2.36	0.46
79:2S:2664:C:H2'	79:2S:2665:U:C6	2.50	0.46
79:2S:3146:G:H2'	79:2S:3147:G:H8	1.79	0.46
1:L1:50:SER:HB3	1:L1:195:LYS:HG2	1.97	0.46
3:L3:238:LEU:HD21	3:L3:248:LYS:O	2.16	0.46
3:L3:280:HIS:HB3	3:L3:324:VAL:HG22	1.97	0.46
3:L3:296:THR:HG22	3:L3:297:SER:N	2.16	0.46
4:L4:133:SER:O	4:L4:137:ALA:HB2	2.15	0.46
4:L4:233:LEU:HD12	4:L4:262:TRP:CZ2	2.50	0.46
6:L6:68:PRO:HB2	6:L6:71:VAL:HG23	1.97	0.46
7:L7:58:ALA:O	7:L7:62:ILE:HG13	2.15	0.46
9:L9:23:ARG:HB3	9:L9:39:LYS:HA	1.97	0.46
9:L9:45:PHE:HB3	14:64:7:VAL:HG11	1.97	0.46
9:L9:87:LYS:HB2	9:L9:187:ILE:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:134:ILE:CG1	9:L9:146:LEU:HG	2.46	0.46
14:64:95:ALA:HA	14:64:100:ALA:CB	2.46	0.46
18:68:23:ASN:O	18:68:27:LYS:HG3	2.15	0.46
18:68:106:PHE:HB2	18:68:111:ARG:HE	1.81	0.46
26:76:13:ARG:CG	80:8S:23:U:H5''	2.42	0.46
26:76:17:LYS:O	26:76:17:LYS:HD3	2.15	0.46
38:88:5:ILE:HG23	38:88:10:GLN:NE2	2.30	0.46
42:92:35:LEU:HD23	42:92:40:LYS:HE2	1.97	0.46
42:92:56:PRO:HG3	79:2S:2802:A:N7	2.30	0.46
45:RC:51:ASP:HB3	45:RC:52:GLN:H	1.48	0.46
46:S0:23:HIS:H	46:S0:23:HIS:HD2	1.62	0.46
46:S0:199:PRO:HB2	46:S0:203:PHE:CZ	2.50	0.46
48:S2:44:LEU:HD22	48:S2:49:LYS:HB2	1.96	0.46
50:S4:9:LEU:HD23	50:S4:10:LYS:O	2.15	0.46
50:S4:38:LEU:HD23	78:1S:298:C:H5'	1.97	0.46
50:S4:179:LYS:HB3	50:S4:229:GLY:O	2.16	0.46
56:10:24:LYS:HE3	56:10:26:ASP:HB2	1.97	0.46
60:14:21:ALA:HA	60:14:26:THR:HG22	1.98	0.46
66:20:24:ILE:O	66:20:90:TYR:HA	2.15	0.46
72:26:58:VAL:HG23	72:26:59:TYR:CD2	2.50	0.46
77:31:118:ARG:HG2	77:31:134:ASN:HB2	1.97	0.46
78:1S:1253:U:H2'	78:1S:1254:U:C6	2.51	0.46
78:1S:1371:A:H2	78:1S:1373:C:H3'	1.80	0.46
79:2S:397:A:H4'	79:2S:399:A:OP1	2.16	0.46
79:2S:2707:C:H2'	79:2S:2708:C:C6	2.50	0.46
79:2S:3041:U:H2'	79:2S:3042:U:C6	2.51	0.46
80:8S:72:A:H1'	80:8S:88:A:N3	2.31	0.46
83:PT:28:U:H2'	83:PT:29:C:C6	2.51	0.46
1:L1:47:LYS:N	1:L1:47:LYS:HD2	2.30	0.46
2:L2:113:VAL:HG11	2:L2:166:ILE:HD13	1.96	0.46
3:L3:260:VAL:HG21	79:2S:2987:A:H2	1.81	0.46
4:L4:321:LYS:O	4:L4:325:LEU:HG	2.16	0.46
5:L5:243:ALA:O	5:L5:247:ILE:HG13	2.16	0.46
9:L9:47:LYS:HB2	14:64:7:VAL:HB	1.97	0.46
9:L9:57:VAL:HA	79:2S:3186:A:H2	1.81	0.46
11:61:109:HIS:HB2	11:61:114:ILE:CD1	2.46	0.46
17:67:126:ARG:HA	17:67:140:GLU:HG2	1.98	0.46
23:73:40:LYS:HB2	23:73:57:MET:O	2.16	0.46
27:77:107:ARG:O	27:77:111:LYS:HG3	2.16	0.46
30:80:42:ILE:HD11	30:80:67:VAL:HG22	1.98	0.46
31:81:62:ARG:HH11	31:81:62:ARG:HG3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:82:85:LEU:HA	32:82:88:HIS:HD2	1.80	0.46
33:83:30:ILE:O	33:83:80:VAL:HA	2.16	0.46
36:86:76:ARG:HH21	79:2S:293:C:H4'	1.81	0.46
46:S0:163:ASN:HB3	46:S0:169:SER:CB	2.46	0.46
48:S2:170:ILE:HD12	48:S2:170:ILE:H	1.81	0.46
57:11:140:VAL:HG13	57:11:141:LYS:N	2.31	0.46
59:13:99:ARG:O	59:13:103:GLU:HG2	2.16	0.46
62:16:6:SER:HB3	62:16:23:LYS:HB3	1.97	0.46
62:16:139:GLN:HG3	78:1S:1579:U:H1'	1.98	0.46
65:19:65:ILE:CG2	65:19:124:ILE:HB	2.46	0.46
70:24:5:VAL:O	70:24:6:THR:CB	2.64	0.46
72:26:23:CYS:HA	72:26:72:HIS:O	2.16	0.46
78:1S:1041:G:H2'	78:1S:1042:G:H8	1.74	0.46
78:1S:1082:C:O2	78:1S:1082:C:C2'	2.61	0.46
78:1S:1311:U:C2	78:1S:1313:A:H2'	2.51	0.46
78:1S:1432:U:H4'	78:1S:1433:G:C5'	2.44	0.46
79:2S:87:U:H2'	79:2S:88:A:C8	2.50	0.46
79:2S:339:C:H6	79:2S:339:C:H5'	1.80	0.46
79:2S:793:C:H2'	79:2S:794:U:O4'	2.15	0.46
79:2S:1391:C:H5''	79:2S:1392:G:C8	2.51	0.46
79:2S:1657:C:C4	79:2S:1797:A:H5''	2.51	0.46
79:2S:2258:U:H2'	79:2S:2259:A:O4'	2.16	0.46
79:2S:2471:U:C3'	79:2S:2472:U:H5''	2.45	0.46
80:8S:32:C:H2'	80:8S:33:A:C8	2.50	0.46
4:L4:146:PRO:CG	4:L4:150:LEU:HD11	2.43	0.46
4:L4:233:LEU:HD12	4:L4:262:TRP:HZ2	1.80	0.46
5:L5:58:LYS:HE2	81:5S:48:U:O4	2.15	0.46
7:L7:135:ALA:HB2	7:L7:229:PHE:HA	1.97	0.46
9:L9:186:PHE:N	9:L9:186:PHE:CD1	2.84	0.46
13:63:50:PRO:HG3	35:85:118:ILE:HD12	1.97	0.46
13:63:171:ARG:NH1	79:2S:713:U:H5'	2.30	0.46
15:65:66:VAL:O	15:65:127:TYR:HA	2.16	0.46
17:67:53:ASP:O	17:67:54:HIS:HB2	2.15	0.46
19:69:24:LEU:N	19:69:24:LEU:HD12	2.31	0.46
21:71:27:LEU:O	21:71:31:LEU:HG	2.16	0.46
24:74:47:ARG:HG2	24:74:47:ARG:HH11	1.80	0.46
32:82:66:LEU:HD23	32:82:72:LYS:HG3	1.97	0.46
35:85:86:ARG:HD3	80:8S:36:G:C8	2.50	0.46
50:S4:45:ILE:HG23	50:S4:46:VAL:HG23	1.96	0.46
51:S5:98:MET:HE1	78:1S:1610:G:H4'	1.97	0.46
51:S5:205:SER:O	51:S5:206:SER:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:37:LYS:HB2	54:S8:59:ARG:HG2	1.98	0.46
56:10:14:TYR:HE2	56:10:21:VAL:HG13	1.79	0.46
60:14:19:ILE:HB	60:14:83:ILE:CD1	2.43	0.46
61:15:60:LEU:CD1	61:15:89:MET:HB2	2.45	0.46
69:23:29:TYR:CE1	69:23:33:LEU:HG	2.51	0.46
75:29:29:GLY:HA3	75:29:40:ARG:HD3	1.97	0.46
78:1S:777:C:C2'	78:1S:778:G:H5''	2.38	0.46
78:1S:1310:U:H3	78:1S:1315:U:H3	1.64	0.46
79:2S:638:C:H2'	79:2S:639:G:H8	1.79	0.46
79:2S:1191:U:H4'	79:2S:1192:C:H5''	1.98	0.46
79:2S:1620:U:H2'	79:2S:1621:A:C8	2.51	0.46
79:2S:1706:C:H2'	79:2S:1707:A:O4'	2.16	0.46
79:2S:1813:A:C3'	79:2S:1814:A:H5''	2.45	0.46
79:2S:1915:A:H2'	79:2S:1916:U:C6	2.51	0.46
79:2S:1960:A:H61	79:2S:2077:U:H3	1.63	0.46
79:2S:3057:U:O2	79:2S:3057:U:H2'	2.15	0.46
1:L1:176:GLU:O	1:L1:180:VAL:HG23	2.15	0.46
2:L2:200:ARG:NH1	79:2S:2146:C:H5''	2.31	0.46
3:L3:55:THR:C	3:L3:56:ILE:HD12	2.36	0.46
10:60:65:LEU:HD23	10:60:159:PHE:CE1	2.51	0.46
10:60:98:ARG:HH11	10:60:98:ARG:HG3	1.81	0.46
13:63:50:PRO:HD2	35:85:116:TYR:CE1	2.51	0.46
24:74:49:ILE:CG2	24:74:52:THR:HG23	2.45	0.46
25:75:44:PRO:HB2	25:75:46:TYR:O	2.15	0.46
26:76:35:LEU:HB3	26:76:39:LEU:HB2	1.98	0.46
32:82:11:LYS:O	32:82:12:LYS:HB2	2.16	0.46
32:82:88:HIS:HB3	32:82:92:TYR:CD2	2.51	0.46
32:82:109:LEU:CD2	32:82:119:VAL:HG11	2.45	0.46
40:90:85:LEU:O	40:90:85:LEU:HD13	2.15	0.46
45:RC:232:TYR:HE1	45:RC:234:LEU:HD11	1.80	0.46
46:S0:31:VAL:HB	46:S0:34:GLU:CG	2.46	0.46
48:S2:144:TRP:CD2	48:S2:173:PRO:HG3	2.51	0.46
50:S4:86:PHE:CD1	50:S4:87:MET:HG2	2.50	0.46
50:S4:192:ILE:HG23	50:S4:228:ILE:HD11	1.97	0.46
51:S5:59:VAL:C	51:S5:61:TYR:H	2.17	0.46
51:S5:187:ILE:HA	78:1S:1534:G:N2	2.31	0.46
52:S6:83:CYS:HA	78:1S:162:A:C5'	2.45	0.46
52:S6:176:GLN:HG2	78:1S:169:A:C5'	2.46	0.46
57:11:21:ASN:ND2	57:11:32:LYS:H	2.12	0.46
58:12:43:ARG:CB	58:12:121:VAL:HG12	2.46	0.46
59:13:125:LEU:O	59:13:125:LEU:HD13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:31:VAL:HA	62:16:67:VAL:HB	1.98	0.46
62:16:49:TYR:O	62:16:53:LEU:HG	2.15	0.46
64:18:89:GLN:O	64:18:90:ASN:HB2	2.16	0.46
78:1S:64:U:C2'	78:1S:65:A:H5''	2.36	0.46
78:1S:1057:U:H1'	78:1S:1058:U:H2'	1.98	0.46
78:1S:1324:G:H2'	78:1S:1325:A:O4'	2.15	0.46
78:1S:1415:U:O2	78:1S:1415:U:H2'	2.15	0.46
78:1S:1671:A:N6	78:1S:1730:A:O2'	2.49	0.46
79:2S:970:A:H2'	79:2S:971:G:C8	2.50	0.46
79:2S:1128:U:H2'	79:2S:1129:A:O4'	2.16	0.46
79:2S:1241:U:H1'	79:2S:1242:G:OP1	2.16	0.46
79:2S:1317:A:O2'	79:2S:1318:A:H3'	2.16	0.46
79:2S:1454:A:N6	79:2S:1879:A:H1'	2.30	0.46
79:2S:2767:U:H2'	79:2S:2768:U:C6	2.51	0.46
79:2S:2946:A:H2'	79:2S:2982:A:C5	2.51	0.46
79:2S:2985:C:H2'	79:2S:2986:U:C6	2.51	0.46
81:5S:106:U:H2'	81:5S:107:C:C6	2.51	0.46
1:L1:147:LYS:HB3	1:L1:152:ARG:CB	2.46	0.46
3:L3:348:ARG:HD3	79:2S:3037:U:H5''	1.98	0.46
4:L4:95:ARG:HD2	79:2S:1439:U:H4'	1.98	0.46
4:L4:100:PHE:CE2	79:2S:803:C:H5'	2.51	0.46
4:L4:107:ARG:HA	79:2S:664:U:H5'	1.98	0.46
4:L4:170:LYS:HG3	4:L4:175:HIS:CB	2.44	0.46
5:L5:174:PRO:HG2	79:2S:2747:A:H4'	1.96	0.46
9:L9:111:PHE:HB3	9:L9:125:ASN:HD22	1.81	0.46
9:L9:128:VAL:HG12	9:L9:129:ARG:N	2.31	0.46
10:60:6:ALA:HB2	79:2S:2854:U:OP1	2.15	0.46
15:65:159:ARG:HA	15:65:164:LEU:HD12	1.96	0.46
26:76:16:ARG:HG2	26:76:16:ARG:HH11	1.81	0.46
26:76:37:LYS:H	26:76:37:LYS:HG2	1.48	0.46
27:77:114:VAL:HG12	27:77:118:PHE:CE2	2.50	0.46
47:S1:141:ALA:HB1	47:S1:210:ILE:HG12	1.97	0.46
53:S7:95:GLU:HG3	78:1S:694:U:H5	1.81	0.46
55:S9:133:HIS:O	55:S9:134:ILE:HG13	2.16	0.46
55:S9:152:SER:O	55:S9:156:ILE:HG13	2.16	0.46
71:25:57:TYR:HB2	71:25:60:VAL:CG2	2.46	0.46
78:1S:228:G:H2'	78:1S:229:U:O4'	2.16	0.46
78:1S:798:C:H2'	78:1S:799:A:H8	1.81	0.46
78:1S:1425:A:H2'	78:1S:1426:C:C6	2.50	0.46
78:1S:1641:C:H2'	78:1S:1642:G:H8	1.76	0.46
79:2S:1254:C:O2'	79:2S:1255:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1795:U:H5'	79:2S:1796:G:C2	2.51	0.46
79:2S:1877:U:H4'	79:2S:1878:G:C5	2.50	0.46
79:2S:1887:A:H2	79:2S:2391:G:H4'	1.79	0.46
79:2S:2238:G:H2'	79:2S:2239:G:H8	1.80	0.46
79:2S:2416:U:H2'	79:2S:2417:U:O4'	2.14	0.46
79:2S:3080:G:H2'	79:2S:3081:C:C6	2.51	0.46
3:L3:132:LYS:O	3:L3:136:LYS:HG3	2.16	0.46
4:L4:3:ARG:CG	4:L4:21:PRO:HB3	2.46	0.46
4:L4:112:LYS:O	79:2S:790:U:H4'	2.16	0.46
5:L5:28:THR:O	79:2S:2703:A:N6	2.49	0.46
5:L5:31:TYR:O	5:L5:35:ARG:HD3	2.16	0.46
6:L6:5:LYS:HG3	6:L6:6:ALA:H	1.79	0.46
8:L8:157:VAL:CG1	8:L8:158:ASP:H	2.22	0.46
8:L8:225:LYS:O	8:L8:229:VAL:HG23	2.16	0.46
11:61:6:GLN:HG3	11:61:8:PRO:HD3	1.98	0.46
20:70:71:LYS:NZ	79:2S:562:C:H4'	2.31	0.46
21:71:76:ILE:HB	21:71:87:LYS:HG3	1.98	0.46
21:71:76:ILE:CG2	21:71:77:ASN:H	2.21	0.46
21:71:126:VAL:HG23	21:71:127:GLN:H	1.81	0.46
25:75:96:LYS:HG2	25:75:100:LYS:HZ3	1.80	0.46
45:RC:314:GLN:HB3	45:RC:316:MET:CE	2.45	0.46
48:S2:88:LYS:CD	78:1S:1301:U:H5'	2.46	0.46
50:S4:187:ARG:HA	50:S4:187:ARG:NE	2.31	0.46
51:S5:76:ARG:HD3	51:S5:76:ARG:H	1.80	0.46
56:10:11:ILE:HD13	56:10:35:ILE:HG21	1.98	0.46
56:10:38:LYS:HB2	56:10:41:TYR:HB2	1.96	0.46
58:12:63:VAL:HG23	58:12:66:VAL:CG2	2.45	0.46
63:17:41:ILE:HG22	63:17:42:GLN:N	2.31	0.46
73:27:37:CYS:HB3	73:27:63:LEU:HD21	1.98	0.46
78:1S:460:A:H3'	78:1S:461:G:H8	1.81	0.46
78:1S:515:A:H2'	78:1S:516:G:O4'	2.16	0.46
78:1S:572:C:H2'	78:1S:573:C:C6	2.51	0.46
78:1S:884:A:H2'	78:1S:885:G:H8	1.76	0.46
78:1S:1049:U:H2'	78:1S:1050:G:C8	2.51	0.46
78:1S:1081:A:H2'	78:1S:1083:G:N7	2.31	0.46
78:1S:1166:A:H2'	78:1S:1167:G:C4'	2.46	0.46
78:1S:1319:A:H2'	78:1S:1320:U:O4'	2.15	0.46
78:1S:1617:U:H2'	78:1S:1618:C:H6	1.81	0.46
79:2S:130:A:H2'	79:2S:131:C:H6	1.80	0.46
79:2S:188:U:N3	79:2S:223:U:H4'	2.31	0.46
79:2S:263:C:H2'	79:2S:264:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1306:G:O2'	79:2S:1307:G:H2'	2.16	0.46
79:2S:1391:C:H3'	79:2S:1392:G:H5'	1.98	0.46
79:2S:1719:G:H4'	79:2S:1732:U:H4'	1.98	0.46
79:2S:2155:G:H2'	79:2S:2156:C:C6	2.51	0.46
79:2S:2316:G:H2'	79:2S:2317:A:C8	2.51	0.46
3:L3:194:TRP:O	3:L3:198:HIS:HB2	2.16	0.45
3:L3:283:TYR:HE1	3:L3:325:LYS:HB2	1.82	0.45
5:L5:259:LYS:HB2	5:L5:259:LYS:HE3	1.74	0.45
9:L9:27:VAL:O	9:L9:34:LEU:HB2	2.15	0.45
10:60:48:LEU:HD21	10:60:145:LYS:NZ	2.30	0.45
13:63:103:ASN:ND2	13:63:109:PHE:HD2	2.14	0.45
19:69:43:LYS:HA	19:69:46:LYS:NZ	2.31	0.45
19:69:163:ARG:HH11	19:69:167:ARG:NH2	2.14	0.45
20:70:81:TYR:CE1	20:70:88:HIS:HB2	2.50	0.45
23:73:70:ARG:HH11	23:73:70:ARG:CB	2.24	0.45
25:75:105:VAL:HG13	25:75:130:TYR:CD2	2.51	0.45
26:76:16:ARG:O	26:76:20:PHE:HD2	1.98	0.45
26:76:70:ILE:HD12	26:76:70:ILE:N	2.30	0.45
27:77:76:ASN:HB3	27:77:79:HIS:ND1	2.31	0.45
34:84:24:LYS:HA	34:84:30:LEU:HD23	1.98	0.45
39:89:24:PRO:HB3	39:89:26:TRP:CE2	2.51	0.45
43:93:59:CYS:O	43:93:60:CYS:HB3	2.16	0.45
45:RC:115:ILE:HD11	45:RC:119:ALA:HA	1.97	0.45
51:S5:98:MET:O	51:S5:99:MET:HB3	2.15	0.45
52:S6:139:ASN:O	52:S6:143:LYS:HD2	2.15	0.45
53:S7:172:VAL:O	53:S7:176:LEU:HG	2.16	0.45
53:S7:185:ILE:HD13	53:S7:185:ILE:N	2.32	0.45
58:12:108:ARG:O	58:12:109:GLU:HB2	2.16	0.45
64:18:66:LEU:O	64:18:70:VAL:HG23	2.16	0.45
65:19:45:MET:HB2	78:1S:1477:G:H5'	1.98	0.45
74:28:19:THR:O	74:28:25:VAL:HB	2.16	0.45
78:1S:91:G:H2'	78:1S:92:A:O4'	2.16	0.45
78:1S:294:C:H2'	78:1S:295:A:C8	2.51	0.45
78:1S:321:C:H3'	78:1S:322:G:C5'	2.45	0.45
78:1S:390:G:O2'	78:1S:1731:A:H5''	2.17	0.45
78:1S:1273:G:N7	78:1S:1431:C:H5''	2.32	0.45
78:1S:1283:U:H2'	78:1S:1284:C:C5	2.51	0.45
79:2S:84:U:OP1	79:2S:701:G:H4'	2.15	0.45
79:2S:380:U:H2'	79:2S:381:U:C6	2.51	0.45
79:2S:860:G:H3'	79:2S:860:G:N3	2.31	0.45
79:2S:894:G:H4'	79:2S:895:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1064:A:N6	79:2S:1096:U:H3	1.91	0.45
79:2S:1949:G:H2'	79:2S:1950:U:H6	1.81	0.45
79:2S:2149:A:P	79:2S:2149:A:H8	2.40	0.45
81:5S:10:C:H4'	81:5S:13:A:N6	2.31	0.45
4:L4:44:LYS:HB3	4:L4:109:TRP:O	2.16	0.45
6:L6:65:ILE:HD13	6:L6:65:ILE:N	2.31	0.45
7:L7:159:GLN:O	7:L7:160:ARG:C	2.53	0.45
8:L8:99:PRO:HG2	8:L8:190:VAL:HG23	1.98	0.45
11:61:85:LYS:HA	11:61:85:LYS:HZ2	1.81	0.45
15:65:27:VAL:HG13	15:65:28:TRP:N	2.31	0.45
16:66:25:LYS:HA	16:66:28:LEU:HD12	1.98	0.45
17:67:51:VAL:HG13	17:67:57:ALA:HA	1.98	0.45
27:77:26:VAL:HG12	27:77:89:VAL:CG2	2.45	0.45
34:84:37:LYS:HE3	34:84:58:ARG:HH12	1.81	0.45
34:84:44:CYS:HB3	34:84:48:GLY:H	1.80	0.45
42:92:35:LEU:HA	42:92:40:LYS:HG2	1.96	0.45
49:S3:49:ILE:HD12	49:S3:49:ILE:N	2.31	0.45
52:S6:159:ARG:NH1	52:S6:172:ALA:HB2	2.32	0.45
54:S8:32:GLN:HE22	78:1S:1727:G:N2	2.14	0.45
58:12:103:LEU:HD21	58:12:115:VAL:HG13	1.98	0.45
59:13:92:ILE:CG2	59:13:146:ALA:HB1	2.45	0.45
62:16:31:VAL:HG23	62:16:31:VAL:O	2.16	0.45
62:16:127:LYS:HE3	78:1S:1605:G:OP2	2.16	0.45
68:22:28:ARG:HD3	68:22:60:LYS:CE	2.46	0.45
68:22:48:GLY:H	68:22:65:LEU:HA	1.82	0.45
71:25:54:VAL:N	71:25:55:PRO:HD2	2.16	0.45
78:1S:223:U:H2'	78:1S:224:C:H6	1.80	0.45
78:1S:551:G:H2'	78:1S:552:G:O4'	2.17	0.45
78:1S:844:A:H2'	78:1S:845:G:H8	1.80	0.45
78:1S:1514:U:H4'	78:1S:1515:A:O4'	2.15	0.45
78:1S:1533:C:H4'	78:1S:1539:G:N1	2.31	0.45
78:1S:1621:U:O4	78:1S:1623:C:C5'	2.64	0.45
79:2S:510:G:H2'	79:2S:511:G:O4'	2.16	0.45
79:2S:664:U:H2'	79:2S:665:A:C8	2.51	0.45
79:2S:954:U:OP1	79:2S:1117:G:H5'	2.17	0.45
79:2S:1350:A:C2'	79:2S:1351:U:H5'	2.46	0.45
79:2S:2389:C:H2'	79:2S:2390:A:C8	2.51	0.45
81:5S:68:C:H2'	81:5S:69:C:C6	2.51	0.45
3:L3:332:ARG:O	3:L3:333:LYS:HB2	2.17	0.45
13:63:13:HIS:NE2	79:2S:98:G:N7	2.64	0.45
13:63:169:THR:HA	13:63:172:LEU:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:34:VAL:HG12	16:66:103:LYS:HB2	1.99	0.45
16:66:37:ARG:HA	16:66:39:GLU:OE2	2.16	0.45
18:68:30:VAL:HA	18:68:52:LEU:HD13	1.99	0.45
19:69:77:GLY:HA3	79:2S:1939:G:OP1	2.15	0.45
30:80:24:THR:CG2	30:80:93:LEU:HD11	2.45	0.45
38:88:3:ARG:HD2	38:88:52:TYR:HE1	1.81	0.45
45:RC:26:SER:HB2	45:RC:73:LEU:HD13	1.98	0.45
49:S3:40:ARG:HG2	66:20:110:PRO:HB2	1.98	0.45
53:S7:149:ILE:O	53:S7:150:GLN:HG3	2.17	0.45
55:S9:10:LYS:HG3	55:S9:10:LYS:O	2.15	0.45
55:S9:76:LEU:HD13	55:S9:79:ARG:HH21	1.81	0.45
59:13:4:MET:HG3	59:13:5:HIS:N	2.27	0.45
64:18:14:ILE:HG23	64:18:14:ILE:O	2.17	0.45
66:20:31:VAL:O	66:20:35:GLU:HB2	2.15	0.45
78:1S:1108:G:H4'	78:1S:1109:G:H5''	1.98	0.45
78:1S:1227:A:H4'	78:1S:1228:G:H5'	1.98	0.45
78:1S:1371:A:C2	78:1S:1373:C:H5''	2.51	0.45
78:1S:1389:C:H2'	78:1S:1390:U:H5'	1.97	0.45
78:1S:1414:U:H3'	78:1S:1415:U:H5''	1.98	0.45
78:1S:1681:A:C2'	78:1S:1682:U:H5'	2.46	0.45
79:2S:79:U:H2'	79:2S:80:G:C8	2.51	0.45
79:2S:636:C:OP2	79:2S:2378:C:H4'	2.15	0.45
79:2S:794:U:H2'	79:2S:795:G:C8	2.51	0.45
79:2S:1536:G:H2'	79:2S:1537:A:C8	2.51	0.45
79:2S:2469:G:H1'	79:2S:2488:A:N1	2.31	0.45
79:2S:2533:G:C4	79:2S:2534:G:H1'	2.51	0.45
79:2S:3086:A:H2'	79:2S:3087:A:O4'	2.17	0.45
2:L2:174:ARG:C	2:L2:176:ASP:H	2.17	0.45
3:L3:285:VAL:HG13	3:L3:322:ILE:CD1	2.46	0.45
4:L4:92:ASN:HA	4:L4:98:ARG:O	2.16	0.45
5:L5:145:PHE:CE1	79:2S:2748:A:H4'	2.51	0.45
7:L7:151:ARG:HH11	7:L7:151:ARG:HG3	1.81	0.45
8:L8:60:ARG:HG2	80:8S:152:G:H5'	1.97	0.45
16:66:193:GLN:O	16:66:197:LEU:HG	2.16	0.45
20:70:3:HIS:O	20:70:32:SER:HA	2.17	0.45
24:74:124:LYS:HA	24:74:127:LYS:HE3	1.99	0.45
33:83:55:ALA:O	33:83:63:LYS:HB3	2.16	0.45
45:RC:10:ARG:HB3	45:RC:312:VAL:HG23	1.98	0.45
49:S3:52:ALA:HB3	49:S3:55:THR:CG2	2.46	0.45
50:S4:181:VAL:HG13	50:S4:226:PHE:H	1.81	0.45
52:S6:31:ARG:HD3	52:S6:68:LEU:HD11	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:62:ARG:HD3	55:S9:69:ARG:HB2	1.98	0.45
57:11:45:PRO:O	57:11:49:ILE:HG13	2.16	0.45
60:14:14:PHE:HA	60:14:78:ALA:HB3	1.97	0.45
63:17:10:LYS:HG2	63:17:53:TYR:CE1	2.51	0.45
64:18:145:ARG:HE	64:18:145:ARG:CA	2.28	0.45
78:1S:310:C:H2'	78:1S:311:U:C6	2.51	0.45
78:1S:1080:U:C2'	78:1S:1081:A:H5'	2.47	0.45
78:1S:1314:U:H4'	78:1S:1315:U:C5	2.51	0.45
78:1S:1388:A:H4'	78:1S:1389:C:O4'	2.15	0.45
79:2S:1334:U:H2'	79:2S:1335:C:C6	2.52	0.45
79:2S:1439:U:H2'	79:2S:1440:G:H8	1.79	0.45
79:2S:1900:A:H2	79:2S:1907:C:H41	1.64	0.45
79:2S:2438:A:H2'	79:2S:2439:A:C8	2.51	0.45
1:L1:207:LYS:HD3	79:2S:2491:A:O4'	2.17	0.45
2:L2:200:ARG:NH2	2:L2:203:ALA:HB2	2.29	0.45
3:L3:228:GLY:HA2	3:L3:267:ALA:HB1	1.98	0.45
3:L3:246:LEU:HD23	3:L3:246:LEU:N	2.31	0.45
4:L4:170:LYS:HE3	4:L4:178:LEU:CD1	2.45	0.45
4:L4:181:VAL:HG12	4:L4:182:LEU:N	2.30	0.45
8:L8:153:ILE:HG22	8:L8:154:ALA:N	2.31	0.45
11:61:143:ARG:HG3	11:61:143:ARG:HH11	1.80	0.45
11:61:173:ASP:HB3	11:61:174:LYS:H	1.69	0.45
15:65:7:LEU:HA	15:65:10:LEU:HB2	1.97	0.45
15:65:83:LYS:H	15:65:83:LYS:HD2	1.82	0.45
19:69:4:LEU:HD11	19:69:29:THR:OG1	2.15	0.45
19:69:136:ARG:O	19:69:140:GLU:HG3	2.16	0.45
20:70:73:LYS:HE2	20:70:75:PHE:CZ	2.51	0.45
21:71:126:VAL:HG23	21:71:127:GLN:N	2.32	0.45
22:72:84:LEU:CD2	22:72:89:LEU:HB2	2.45	0.45
24:74:86:SER:O	24:74:90:ILE:HG12	2.15	0.45
27:77:63:ALA:HA	27:77:66:THR:OG1	2.17	0.45
45:RC:7:LEU:HD12	45:RC:7:LEU:H	1.81	0.45
46:S0:57:LEU:O	46:S0:57:LEU:HD23	2.16	0.45
46:S0:80:THR:HA	46:S0:83:GLN:CG	2.36	0.45
46:S0:206:ASP:CB	46:S0:207:PRO:HA	2.45	0.45
47:S1:142:PHE:HB2	47:S1:208:GLN:CG	2.47	0.45
47:S1:207:LEU:HB3	47:S1:210:ILE:HD11	1.97	0.45
48:S2:203:LYS:HB2	78:1S:15:U:OP2	2.16	0.45
49:S3:220:PRO:O	49:S3:221:SER:O	2.35	0.45
50:S4:23:LEU:HD13	55:S9:4:ALA:HB3	1.98	0.45
50:S4:36:HIS:CD2	50:S4:85:GLY:HA3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:180:LEU:HD22	50:S4:192:ILE:HG22	1.99	0.45
51:S5:134:VAL:O	51:S5:138:THR:HG23	2.17	0.45
54:S8:25:ARG:HH11	54:S8:25:ARG:HG3	1.81	0.45
54:S8:105:ASP:O	54:S8:106:ALA:HB3	2.16	0.45
58:12:91:VAL:CG1	58:12:92:ALA:N	2.80	0.45
58:12:122:VAL:HG12	58:12:123:VAL:N	2.31	0.45
59:13:149:LEU:O	59:13:149:LEU:HD23	2.17	0.45
68:22:19:LYS:HZ1	78:1S:1095:U:H4'	1.81	0.45
70:24:35:VAL:HG21	70:24:40:LEU:HD21	1.98	0.45
71:25:77:ARG:HH11	71:25:77:ARG:CB	2.16	0.45
75:29:43:PHE:CZ	75:29:52:PHE:HB2	2.51	0.45
78:1S:1553:G:N2	78:1S:1555:A:H3'	2.31	0.45
78:1S:1614:A:H2'	78:1S:1615:C:H5'	1.97	0.45
79:2S:94:G:H2'	79:2S:95:A:C8	2.51	0.45
79:2S:109:A:H4'	79:2S:110:G:C5'	2.34	0.45
79:2S:2941:A:H8	79:2S:2941:A:OP2	2.00	0.45
79:2S:3062:G:H2'	79:2S:3063:C:H6	1.81	0.45
81:5S:5:G:H2'	81:5S:6:C:H6	1.82	0.45
1:L1:39:LYS:HE3	79:2S:2491:A:N3	2.31	0.45
10:60:177:ASP:HB3	10:60:179:PRO:HD2	1.98	0.45
19:69:51:VAL:HG23	19:69:53:LYS:H	1.80	0.45
25:75:66:PRO:HA	25:75:84:PHE:HD1	1.81	0.45
25:75:113:LEU:CD1	25:75:121:LYS:HB3	2.46	0.45
32:82:26:HIS:HB2	79:2S:655:C:H5''	1.99	0.45
32:82:55:ILE:HB	79:2S:947:G:C5'	2.45	0.45
45:RC:157:VAL:HA	45:RC:158:PRO:HD3	1.82	0.45
45:RC:191:ASP:HB3	49:S3:223:LYS:HB2	1.99	0.45
46:S0:96:THR:O	46:S0:96:THR:HG23	2.17	0.45
48:S2:52:THR:HB	48:S2:55:GLU:CG	2.41	0.45
48:S2:66:PHE:CD1	48:S2:66:PHE:N	2.82	0.45
48:S2:101:VAL:HG22	48:S2:115:ILE:CG2	2.44	0.45
50:S4:72:VAL:O	50:S4:73:ASP:HB2	2.16	0.45
52:S6:195:VAL:O	52:S6:199:GLN:HG3	2.17	0.45
53:S7:149:ILE:HA	53:S7:180:GLN:HB2	1.98	0.45
56:10:27:PHE:O	56:10:28:ASN:HB2	2.17	0.45
57:11:92:HIS:O	57:11:100:TYR:HA	2.16	0.45
65:19:65:ILE:HG21	65:19:124:ILE:HB	1.97	0.45
66:20:23:ARG:NH2	78:1S:1347:U:H5	2.15	0.45
69:23:56:LYS:NZ	69:23:96:VAL:HG23	2.32	0.45
70:24:105:ARG:HH21	78:1S:444:C:H6	1.65	0.45
78:1S:440:U:H5'	78:1S:441:A:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:593:U:H4'	78:1S:595:G:H4'	1.98	0.45
78:1S:1489:U:H6	78:1S:1492:A:H2	1.64	0.45
79:2S:85:A:OP1	79:2S:87:U:H1'	2.16	0.45
79:2S:201:A:O5'	79:2S:201:A:H8	1.99	0.45
79:2S:518:G:H2'	79:2S:520:U:H5'	1.98	0.45
79:2S:551:A:O2'	79:2S:552:G:H8	1.97	0.45
79:2S:953:G:O2'	79:2S:1115:G:H5''	2.16	0.45
79:2S:1176:C:H2'	79:2S:1177:G:C2	2.52	0.45
79:2S:1234:G:H2'	79:2S:1235:U:C5	2.52	0.45
79:2S:2543:U:H2'	79:2S:2544:U:C4'	2.47	0.45
1:L1:108:ASN:HB2	1:L1:130:LYS:HG2	1.98	0.45
2:L2:196:TRP:HD1	2:L2:198:LYS:NZ	2.14	0.45
3:L3:123:TYR:HD1	79:2S:3316:A:H5''	1.81	0.45
4:L4:116:ASN:HA	4:L4:119:ARG:HD2	1.98	0.45
4:L4:194:TYR:N	4:L4:194:TYR:CD1	2.85	0.45
4:L4:234:ASN:HD21	4:L4:236:LEU:HD12	1.82	0.45
4:L4:328:ASN:ND2	79:2S:578:A:C2	2.82	0.45
8:L8:72:PRO:HG2	8:L8:74:THR:HG22	1.98	0.45
8:L8:133:LYS:HD2	8:L8:138:HIS:CE1	2.47	0.45
11:61:54:VAL:HG11	11:61:57:PHE:CD2	2.52	0.45
14:64:58:ILE:CG1	14:64:59:ASN:H	2.18	0.45
15:65:44:ARG:HD3	15:65:119:TYR:HE2	1.82	0.45
21:71:53:PRO:HB3	21:71:91:LEU:HD13	1.99	0.45
36:86:26:ILE:HD12	36:86:26:ILE:N	2.31	0.45
45:RC:101:GLN:HG2	45:RC:137:LYS:C	2.37	0.45
46:S0:101:ARG:HD3	46:S0:103:THR:OG1	2.17	0.45
50:S4:140:VAL:HG12	50:S4:141:THR:N	2.32	0.45
50:S4:248:ILE:HD12	55:S9:71:PHE:CD1	2.52	0.45
51:S5:72:HIS:HE1	62:16:79:TYR:HE2	1.65	0.45
53:S7:173:TYR:HA	53:S7:176:LEU:HD12	1.98	0.45
53:S7:182:VAL:HG12	53:S7:183:PHE:N	2.32	0.45
54:S8:159:GLN:HG2	54:S8:165:LEU:HD23	1.97	0.45
65:19:74:GLY:O	65:19:77:ASN:HB2	2.17	0.45
66:20:22:ILE:CG2	66:20:93:LEU:HB2	2.45	0.45
74:28:36:THR:O	74:28:36:THR:HG23	2.17	0.45
75:29:43:PHE:CD2	75:29:50:ILE:HD12	2.52	0.45
78:1S:1008:G:H2'	78:1S:1009:U:C6	2.51	0.45
78:1S:1622:G:O2'	78:1S:1623:C:C5	2.69	0.45
79:2S:904:A:H5''	79:2S:1537:A:H5'	1.98	0.45
79:2S:1126:G:H2'	79:2S:1127:G:O4'	2.17	0.45
79:2S:1203:A:H2'	79:2S:1204:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1618:G:H4'	80:8S:129:C:C1'	2.46	0.45
79:2S:2844:C:O2'	79:2S:2845:A:H5'	2.16	0.45
1:L1:44:GLN:HG2	1:L1:196:LYS:HG2	1.99	0.45
1:L1:136:THR:H	1:L1:137:PRO:HD2	1.81	0.45
3:L3:43:LEU:HD23	3:L3:181:ILE:HG21	1.98	0.45
6:L6:4:GLN:CB	32:82:75:LEU:HB2	2.46	0.45
14:64:16:GLU:HB3	20:70:149:LYS:HG2	1.98	0.45
15:65:144:ARG:O	15:65:145:ASP:HB3	2.17	0.45
23:73:66:LYS:HA	23:73:67:PRO:HD3	1.85	0.45
23:73:80:ARG:HD3	23:73:117:PRO:O	2.16	0.45
25:75:46:TYR:HD1	25:75:47:ALA:O	2.00	0.45
31:81:29:ALA:O	31:81:33:VAL:HG23	2.16	0.45
34:84:5:VAL:O	79:2S:1857:C:H1'	2.17	0.45
47:S1:30:PHE:HD2	47:S1:48:VAL:HG23	1.82	0.45
47:S1:148:ASN:H	47:S1:148:ASN:HD22	1.64	0.45
47:S1:148:ASN:H	47:S1:148:ASN:ND2	2.15	0.45
48:S2:133:LYS:O	48:S2:136:VAL:HG23	2.17	0.45
50:S4:99:PHE:CE1	50:S4:113:ARG:HG2	2.51	0.45
50:S4:163:ASP:HB3	50:S4:166:SER:O	2.17	0.45
56:10:46:LEU:O	56:10:50:THR:HG23	2.17	0.45
57:11:83:THR:HA	57:11:111:VAL:HG12	1.99	0.45
59:13:118:ILE:O	59:13:122:ILE:HG13	2.16	0.45
63:17:119:LEU:HD12	63:17:119:LEU:N	2.32	0.45
65:19:28:LEU:HB2	65:19:30:VAL:HG13	1.99	0.45
65:19:115:GLU:O	65:19:122:ARG:HG2	2.16	0.45
75:29:29:GLY:O	75:29:39:CYS:HA	2.16	0.45
75:29:56:ARG:HB2	78:1S:1334:U:H1'	1.98	0.45
78:1S:1382:A:HO2'	78:1S:1383:G:H8	1.61	0.45
79:2S:536:U:H1'	79:2S:559:A:N7	2.32	0.45
79:2S:614:C:H2'	79:2S:615:U:C6	2.52	0.45
79:2S:1151:U:H3'	79:2S:1152:G:N2	2.31	0.45
79:2S:1269:U:H2'	79:2S:1271:A:OP2	2.16	0.45
79:2S:1752:A:H3'	79:2S:1753:G:H8	1.82	0.45
79:2S:3018:C:H2'	79:2S:3019:U:O4'	2.17	0.45
2:L2:150:LEU:HD12	2:L2:154:ALA:C	2.37	0.45
3:L3:47:LEU:HG	3:L3:164:THR:CG2	2.47	0.45
3:L3:55:THR:O	3:L3:56:ILE:HD12	2.17	0.45
3:L3:198:HIS:CD2	3:L3:203:VAL:HG22	2.52	0.45
3:L3:296:THR:HG21	3:L3:356:LEU:HB2	1.99	0.45
4:L4:108:LYS:HB2	79:2S:664:U:H5''	1.99	0.45
14:64:53:VAL:HA	14:64:54:PRO:HD3	1.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:159:LYS:O	16:66:162:VAL:HB	2.16	0.45
18:68:19:PRO:CG	18:68:26:LEU:HD21	2.46	0.45
18:68:102:ALA:HB2	18:68:127:LEU:HG	1.99	0.45
21:71:53:PRO:HB3	21:71:91:LEU:CD1	2.47	0.45
22:72:76:LEU:O	22:72:80:THR:HG23	2.16	0.45
25:75:115:ARG:HG3	25:75:119:THR:OG1	2.17	0.45
29:79:38:LYS:O	29:79:38:LYS:HG2	2.15	0.45
30:80:44:ILE:HG12	30:80:68:TYR:O	2.16	0.45
36:86:41:ARG:HH12	79:2S:297:G:C2'	2.29	0.45
37:87:11:ARG:HG2	79:2S:818:C:H5'	1.98	0.45
41:91:2:ARG:HG2	41:91:4:LYS:H	1.81	0.45
45:RC:89:LEU:HD11	45:RC:124:SER:CB	2.47	0.45
45:RC:305:TYR:HB3	45:RC:307:ASP:OD1	2.17	0.45
47:S1:136:ARG:HD3	78:1S:884:A:H5''	1.98	0.45
54:S8:25:ARG:O	54:S8:28:GLU:HG3	2.17	0.45
56:10:54:TYR:HA	56:10:71:GLU:HG3	1.99	0.45
57:11:69:LYS:C	57:11:70:ILE:HD12	2.37	0.45
58:12:31:VAL:HG22	58:12:133:LEU:CG	2.44	0.45
65:19:44:GLU:H	65:19:44:GLU:HG3	1.58	0.45
65:19:102:ARG:HB3	65:19:102:ARG:HH11	1.81	0.45
74:28:11:LYS:HA	74:28:53:ILE:HA	1.98	0.45
78:1S:385:A:H2'	78:1S:386:G:C8	2.52	0.45
78:1S:579:A:H5'	78:1S:580:A:OP2	2.16	0.45
78:1S:992:A:H2	78:1S:1012:U:H3	1.55	0.45
78:1S:1135:U:H2'	78:1S:1136:U:C6	2.52	0.45
79:2S:217:U:H5''	79:2S:218:G:OP2	2.17	0.45
79:2S:1350:A:H2'	79:2S:1351:U:H5'	1.99	0.45
79:2S:1686:U:O2	79:2S:1688:U:H1'	2.17	0.45
79:2S:1694:U:H2'	79:2S:1695:U:O4'	2.17	0.45
81:5S:90:U:H2'	81:5S:91:G:O4'	2.17	0.45
3:L3:350:ALA:O	3:L3:351:LEU:CB	2.64	0.45
4:L4:6:VAL:CG2	4:L4:22:LEU:HD21	2.41	0.45
4:L4:111:VAL:HG12	4:L4:112:LYS:N	2.32	0.45
4:L4:181:VAL:HG12	4:L4:182:LEU:H	1.82	0.45
5:L5:52:VAL:CG2	5:L5:65:ILE:HD12	2.46	0.45
7:L7:74:SER:HB3	21:71:141:VAL:O	2.18	0.45
9:L9:138:THR:HG22	9:L9:139:ASN:N	2.32	0.45
11:61:23:VAL:HG12	11:61:24:GLY:N	2.32	0.45
11:61:105:GLY:HA3	11:61:126:ASP:OD2	2.17	0.45
11:61:141:ARG:O	11:61:145:LYS:HB2	2.17	0.45
13:63:103:ASN:HD22	13:63:109:PHE:HD2	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:67:ILE:HG22	17:67:68:GLY:O	2.17	0.45
19:69:45:VAL:HG22	19:69:50:ILE:HB	1.98	0.45
24:74:47:ARG:NH1	24:74:58:HIS:HD2	2.15	0.45
53:S7:32:PRO:HG2	53:S7:34:LEU:HD13	1.98	0.45
55:S9:45:ILE:HG13	55:S9:105:LEU:HD11	1.99	0.45
57:11:6:THR:O	57:11:7:VAL:HB	2.17	0.45
60:14:83:ILE:HG22	60:14:116:GLU:O	2.16	0.45
62:16:39:VAL:CB	62:16:45:ARG:HE	2.29	0.45
70:24:17:LEU:H	70:24:17:LEU:CD2	2.19	0.45
73:27:32:PHE:CD1	73:27:45:THR:HG22	2.52	0.45
78:1S:1293:U:H2'	78:1S:1294:G:C8	2.52	0.45
78:1S:1425:A:O2'	78:1S:1426:C:H5'	2.17	0.45
78:1S:1450:U:H2'	78:1S:1451:C:C6	2.52	0.45
79:2S:1247:U:O2	79:2S:1267:U:O4	2.35	0.45
79:2S:2691:A:N7	79:2S:2692:A:C5	2.85	0.45
79:2S:2729:U:H2'	79:2S:2730:G:H8	1.82	0.45
81:5S:24:A:H2'	81:5S:25:G:O4'	2.17	0.45
1:L1:101:LYS:NZ	1:L1:101:LYS:HB3	2.32	0.44
4:L4:185:LYS:HG2	4:L4:199:TRP:CE3	2.52	0.44
15:65:154:PRO:O	15:65:157:LYS:HG3	2.17	0.44
17:67:83:TRP:O	79:2S:2352:A:H5''	2.17	0.44
17:67:119:VAL:HA	17:67:145:HIS:O	2.17	0.44
20:70:63:GLN:HG2	20:70:64:ILE:N	2.32	0.44
21:71:26:HIS:HB2	81:5S:9:C:OP1	2.17	0.44
23:73:70:ARG:O	23:73:71:LYS:HB2	2.17	0.44
24:74:49:ILE:O	24:74:55:PHE:HB3	2.17	0.44
25:75:51:VAL:HG11	35:85:62:GLN:HB3	1.99	0.44
25:75:125:ARG:HE	79:2S:1609:C:H5''	1.81	0.44
26:76:87:LYS:HB2	26:76:97:ILE:HD11	1.99	0.44
29:79:36:ASP:HB3	29:79:39:PHE:CB	2.44	0.44
34:84:71:THR:HG22	34:84:72:VAL:N	2.31	0.44
36:86:25:LYS:HB2	36:86:28:TYR:CE2	2.52	0.44
42:92:2:VAL:HB	42:92:91:PHE:HD1	1.82	0.44
43:93:4:ARG:HD3	79:2S:836:A:P	2.57	0.44
53:S7:62:VAL:HG21	53:S7:70:PHE:CE2	2.52	0.44
53:S7:122:HIS:O	53:S7:126:LEU:HD23	2.17	0.44
55:S9:90:LYS:HG3	55:S9:95:TYR:CB	2.47	0.44
57:11:92:HIS:CE1	78:1S:307:G:H5''	2.52	0.44
59:13:85:PRO:HG2	59:13:129:TYR:CZ	2.52	0.44
61:15:45:PHE:HE2	61:15:84:ILE:HG21	1.82	0.44
63:17:27:ASP:HB3	63:17:30:THR:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:31:144:CYS:HB3	77:31:147:VAL:CG1	2.47	0.44
78:1S:460:A:H2'	78:1S:460:A:N3	2.32	0.44
78:1S:617:U:H5'	78:1S:1031:U:O4'	2.17	0.44
78:1S:617:U:O5'	78:1S:617:U:H6	1.99	0.44
78:1S:870:C:H2'	78:1S:871:G:H8	1.82	0.44
78:1S:1052:U:OP1	78:1S:1053:G:H5''	2.17	0.44
78:1S:1087:A:H5'	78:1S:1298:U:O4	2.17	0.44
78:1S:1651:A:H8	78:1S:1651:A:O5'	2.00	0.44
78:1S:1672:G:H2'	78:1S:1673:G:H8	1.78	0.44
79:2S:1094:U:O2'	79:2S:1096:U:H3'	2.17	0.44
79:2S:1816:A:H2'	79:2S:1817:G:H8	1.81	0.44
79:2S:3362:A:H3'	79:2S:3363:U:H6	1.82	0.44
3:L3:316:GLU:O	3:L3:317:ILE:HB	2.17	0.44
4:L4:320:ASN:O	4:L4:323:VAL:HG12	2.18	0.44
8:L8:50:VAL:CG2	8:L8:52:TRP:NE1	2.79	0.44
8:L8:157:VAL:CG1	8:L8:158:ASP:N	2.80	0.44
16:66:90:HIS:NE2	16:66:91:LYS:HE3	2.33	0.44
18:68:71:LEU:HD22	18:68:99:THR:HG21	1.99	0.44
23:73:12:ARG:NH2	79:2S:3092:C:H2'	2.32	0.44
23:73:126:TRP:HA	23:73:127:PRO:HD3	1.77	0.44
35:85:86:ARG:HG3	35:85:90:ARG:HH22	1.82	0.44
37:87:17:THR:HG22	37:87:18:LEU:N	2.32	0.44
48:S2:168:ARG:NH1	78:1S:1099:U:C5	2.85	0.44
52:S6:32:ILE:HG12	52:S6:52:ILE:CG2	2.47	0.44
53:S7:86:GLN:HG2	53:S7:87:ASP:H	1.83	0.44
53:S7:97:ARG:HH21	78:1S:694:U:H6	1.63	0.44
55:S9:23:ARG:O	55:S9:27:GLU:HG3	2.17	0.44
57:11:117:VAL:HG12	57:11:118:GLN:N	2.31	0.44
60:14:124:ASP:HB3	78:1S:928:U:H4'	1.99	0.44
62:16:45:ARG:HD2	62:16:49:TYR:HE2	1.81	0.44
68:22:81:VAL:HG13	68:22:85:ASP:HB2	1.99	0.44
78:1S:628:G:H22	78:1S:970:A:H5''	1.82	0.44
79:2S:1121:U:H2'	79:2S:1122:U:C6	2.52	0.44
79:2S:1140:G:H2'	79:2S:1141:C:C6	2.52	0.44
79:2S:2039:C:H2'	79:2S:2040:U:H5'	1.98	0.44
79:2S:2692:A:H2'	79:2S:2693:C:O4'	2.18	0.44
79:2S:2798:C:C5'	79:2S:2800:G:H5'	2.46	0.44
79:2S:3174:A:H2'	79:2S:3175:U:H5'	1.98	0.44
83:PT:28:U:H2'	83:PT:29:C:H6	1.83	0.44
5:L5:39:GLN:HG3	5:L5:40:HIS:N	2.32	0.44
8:L8:211:LEU:O	8:L8:215:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:117:PHE:O	9:L9:118:LEU:HB2	2.17	0.44
11:61:69:VAL:HA	81:5S:39:C:O2	2.17	0.44
11:61:139:THR:O	11:61:140:ARG:HD2	2.17	0.44
12:62:126:ALA:CB	12:62:159:GLU:HA	2.43	0.44
14:64:127:LYS:HD2	16:66:194:LEU:HD11	1.98	0.44
17:67:108:ASP:O	17:67:112:LEU:HB2	2.18	0.44
17:67:130:TYR:O	17:67:131:ARG:HD2	2.16	0.44
18:68:179:ARG:CD	18:68:182:LYS:HG2	2.32	0.44
20:70:137:ARG:O	20:70:141:LYS:HG3	2.16	0.44
22:72:25:ASN:HB2	22:72:27:VAL:HG22	2.00	0.44
28:78:55:LYS:HG3	79:2S:2764:C:C5'	2.43	0.44
31:81:79:ARG:HG3	31:81:79:ARG:HH11	1.81	0.44
38:88:17:ARG:O	38:88:18:ALA:HB3	2.16	0.44
42:92:19:LYS:HB2	79:2S:2741:C:O3'	2.17	0.44
45:RC:42:LEU:HD11	45:RC:68:VAL:HG21	1.98	0.44
50:S4:103:TYR:CD2	50:S4:189:LEU:HD11	2.53	0.44
51:S5:36:ALA:O	51:S5:37:GLN:HG2	2.17	0.44
53:S7:63:PRO:O	53:S7:64:VAL:CB	2.65	0.44
59:13:23:PRO:O	59:13:24:ALA:HB3	2.16	0.44
59:13:100:LYS:HA	59:13:103:GLU:HG2	1.99	0.44
65:19:73:VAL:CG1	65:19:101:ASN:HB3	2.41	0.44
72:26:12:LYS:HA	72:26:15:ARG:NH2	2.32	0.44
77:31:132:LEU:CD1	77:31:150:VAL:HB	2.46	0.44
78:1S:497:G:H2'	78:1S:498:G:O4'	2.18	0.44
78:1S:1518:C:H2'	78:1S:1519:U:C6	2.53	0.44
79:2S:241:G:H2'	79:2S:242:C:H5'	1.99	0.44
79:2S:561:C:H2'	79:2S:562:C:H6	1.82	0.44
79:2S:667:C:H2'	79:2S:668:G:H8	1.83	0.44
79:2S:868:C:H4'	79:2S:898:U:H4'	1.99	0.44
79:2S:1739:U:OP2	79:2S:1740:U:H5	2.00	0.44
79:2S:3193:C:H2'	79:2S:3194:C:O4'	2.17	0.44
79:2S:3241:G:N3	79:2S:3245:A:H2'	2.33	0.44
2:L2:234:LYS:HB3	2:L2:238:ILE:HD11	2.00	0.44
3:L3:43:LEU:HD12	3:L3:43:LEU:N	2.33	0.44
4:L4:208:VAL:CG1	4:L4:230:VAL:HG22	2.48	0.44
5:L5:184:ASP:CB	5:L5:187:THR:HG22	2.43	0.44
7:L7:173:LEU:HB3	7:L7:178:ILE:HB	1.99	0.44
13:63:89:TYR:O	13:63:93:ILE:HG12	2.17	0.44
14:64:89:ALA:HB1	14:64:92:GLU:HG2	1.99	0.44
17:67:18:ARG:HB2	79:2S:388:G:H4'	1.99	0.44
17:67:113:TYR:HE2	17:67:153:LYS:HA	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:42:ALA:HA	18:68:43:PRO:HD3	1.86	0.44
18:68:102:ALA:HA	18:68:122:ILE:O	2.18	0.44
19:69:98:ARG:HB3	19:69:98:ARG:CZ	2.46	0.44
20:70:13:ARG:O	20:70:57:GLU:HG2	2.17	0.44
23:73:85:TRP:O	23:73:92:PHE:HA	2.16	0.44
36:86:80:PHE:O	36:86:84:LYS:HG3	2.17	0.44
42:92:11:TYR:CD2	79:2S:2741:C:H1'	2.52	0.44
43:93:36:ARG:HE	43:93:48:LYS:HB2	1.82	0.44
47:S1:86:LEU:HD22	47:S1:86:LEU:N	2.32	0.44
48:S2:148:LEU:CD1	48:S2:149:GLY:H	2.30	0.44
48:S2:227:PRO:HG3	48:S2:230:TRP:CH2	2.52	0.44
50:S4:89:VAL:HG11	50:S4:119:ALA:HB1	1.99	0.44
50:S4:95:THR:CG2	70:24:17:LEU:HD22	2.48	0.44
55:S9:40:LYS:HB2	78:1S:593:U:OP1	2.18	0.44
55:S9:52:ILE:HG23	55:S9:76:LEU:HD21	1.99	0.44
56:10:60:SER:O	56:10:61:TRP:HB2	2.18	0.44
57:11:75:VAL:HG21	57:11:117:VAL:CG1	2.47	0.44
60:14:76:ILE:H	60:14:76:ILE:CD1	2.29	0.44
61:15:18:ARG:HB3	64:18:90:ASN:HB3	1.98	0.44
61:15:126:VAL:O	61:15:127:ARG:HB2	2.17	0.44
64:18:27:LYS:HA	64:18:57:ARG:HA	1.99	0.44
65:19:11:ALA:O	65:19:15:ILE:HG13	2.17	0.44
66:20:117:VAL:CG2	66:20:118:VAL:H	2.29	0.44
68:22:31:SER:O	68:22:35:ILE:HG12	2.18	0.44
69:23:7:ARG:HH22	78:1S:1100:G:C1'	2.31	0.44
70:24:118:ILE:HG22	70:24:120:GLY:H	1.81	0.44
72:26:28:LYS:HB3	72:26:74:CYS:CB	2.46	0.44
78:1S:56:U:OP2	78:1S:458:G:H4'	2.17	0.44
78:1S:94:U:C2'	78:1S:95:G:H5'	2.48	0.44
78:1S:487:G:C3'	78:1S:488:G:H5''	2.47	0.44
78:1S:685:A:H2'	78:1S:686:C:H6	1.80	0.44
78:1S:1196:A:H4'	78:1S:1197:C:C5'	2.36	0.44
79:2S:292:U:H4'	79:2S:2431:C:O2'	2.17	0.44
79:2S:1402:C:H2'	79:2S:1403:C:C6	2.52	0.44
79:2S:1415:U:O2'	79:2S:1416:C:H5'	2.17	0.44
79:2S:2149:A:H2'	79:2S:2150:G:O4'	2.18	0.44
79:2S:2288:G:H2'	79:2S:2289:U:C6	2.52	0.44
79:2S:2440:G:H2'	79:2S:2441:A:C8	2.52	0.44
79:2S:2689:A:H2'	79:2S:2689:A:N3	2.32	0.44
79:2S:2949:U:C2'	79:2S:2950:G:H5'	2.48	0.44
80:8S:83:C:H4'	80:8S:84:C:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:8S:122:U:H2'	80:8S:123:G:C8	2.53	0.44
1:L1:158:GLN:HB3	1:L1:159:LEU:H	1.59	0.44
2:L2:209:HIS:ND1	2:L2:210:PRO:HD2	2.33	0.44
3:L3:55:THR:CG2	3:L3:73:VAL:HB	2.48	0.44
3:L3:55:THR:HA	3:L3:74:GLU:O	2.16	0.44
3:L3:260:VAL:HG11	79:2S:2988:C:H1'	1.98	0.44
3:L3:367:LYS:HD3	24:74:32:GLN:HE21	1.82	0.44
4:L4:230:VAL:HG21	4:L4:254:ALA:HA	1.99	0.44
4:L4:322:GLN:HB3	79:2S:608:A:H5'	1.99	0.44
5:L5:107:ARG:HH21	5:L5:110:LEU:HD23	1.82	0.44
16:66:119:VAL:CG2	20:70:164:SER:HB3	2.48	0.44
23:73:118:VAL:HG12	23:73:119:GLY:H	1.81	0.44
32:82:19:ARG:NH2	32:82:29:ALA:HB3	2.32	0.44
32:82:82:LEU:HD21	32:82:112:ALA:HB2	2.00	0.44
45:RC:211:ILE:HB	45:RC:223:TRP:HB2	1.98	0.44
49:S3:122:VAL:O	49:S3:126:VAL:HG23	2.17	0.44
50:S4:37:LYS:HB2	50:S4:40:GLU:OE1	2.17	0.44
51:S5:58:LEU:HD22	51:S5:168:VAL:HG22	2.00	0.44
62:16:12:LYS:CG	62:16:17:THR:HG22	2.48	0.44
64:18:123:ARG:HA	64:18:133:VAL:HG21	1.98	0.44
64:18:133:VAL:O	64:18:133:VAL:HG22	2.17	0.44
65:19:102:ARG:HD2	78:1S:1500:C:H5''	1.98	0.44
68:22:79:PHE:O	68:22:124:LYS:HA	2.18	0.44
78:1S:1226:A:C4'	78:1S:1230:A:H5'	2.45	0.44
78:1S:1528:U:H2'	78:1S:1529:C:O4'	2.17	0.44
78:1S:1589:C:H2'	78:1S:1590:G:H8	1.79	0.44
78:1S:1621:U:OP2	78:1S:1621:U:H3'	2.17	0.44
78:1S:1746:A:H2'	78:1S:1747:G:O4'	2.17	0.44
79:2S:250:U:C5'	79:2S:251:G:H5''	2.44	0.44
79:2S:437:G:O2'	79:2S:438:A:H5'	2.17	0.44
79:2S:603:A:O5'	79:2S:603:A:H8	2.01	0.44
79:2S:701:G:H2'	79:2S:702:C:C6	2.53	0.44
79:2S:2163:C:O2'	79:2S:2164:A:H5'	2.17	0.44
79:2S:2255:A:N6	79:2S:2260:U:N3	2.62	0.44
79:2S:3017:A:H2'	79:2S:3018:C:H6	1.82	0.44
80:8S:40:A:H2'	80:8S:41:A:O4'	2.17	0.44
80:8S:107:G:H2'	80:8S:108:C:C6	2.53	0.44
1:L1:18:LYS:O	1:L1:19:TYR:CB	2.65	0.44
3:L3:334:ARG:HG3	3:L3:335:ILE:N	2.32	0.44
4:L4:48:GLN:CG	4:L4:49:ALA:H	2.29	0.44
4:L4:289:ILE:O	4:L4:295:ILE:HD12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:8:LYS:N	5:L5:8:LYS:HD2	2.32	0.44
7:L7:51:TYR:HE2	7:L7:183:ASP:OD1	2.01	0.44
22:72:33:TYR:O	22:72:37:LEU:HD13	2.17	0.44
23:73:118:VAL:HB	23:73:136:VAL:HA	1.99	0.44
25:75:72:ALA:O	25:75:76:VAL:HG23	2.18	0.44
30:80:12:GLN:O	30:80:16:LEU:HB2	2.18	0.44
45:RC:90:ARG:HH12	45:RC:102:ARG:HD2	1.82	0.44
48:S2:203:LYS:HD3	78:1S:14:C:H5''	1.99	0.44
49:S3:72:LEU:CD2	56:10:20:VAL:HG13	2.47	0.44
50:S4:71:LYS:HG3	50:S4:91:THR:HB	2.00	0.44
50:S4:159:THR:HG22	50:S4:227:VAL:HG23	2.00	0.44
52:S6:76:LEU:HD12	52:S6:93:LYS:O	2.18	0.44
58:12:57:ALA:HB2	58:12:122:VAL:HG11	1.98	0.44
58:12:129:GLU:HA	58:12:133:LEU:HD22	2.00	0.44
65:19:69:LYS:HA	78:1S:1368:G:H5''	1.99	0.44
68:22:105:THR:HG22	68:22:110:ILE:HG12	1.99	0.44
70:24:94:TYR:HB2	70:24:96:LEU:HD13	1.99	0.44
78:1S:1212:G:H2'	78:1S:1213:G:C8	2.52	0.44
79:2S:869:G:O2'	79:2S:870:G:H5'	2.17	0.44
79:2S:1471:U:H2'	79:2S:1472:U:O4'	2.18	0.44
79:2S:1782:U:O2'	79:2S:1783:U:H5'	2.18	0.44
79:2S:2083:G:H2'	79:2S:2083:G:N3	2.31	0.44
79:2S:3163:A:H3'	79:2S:3164:C:C5'	2.48	0.44
79:2S:3372:A:H2'	79:2S:3373:U:H6	1.81	0.44
1:L1:57:ASN:ND2	1:L1:147:LYS:HE2	2.31	0.44
1:L1:105:LYS:NZ	1:L1:105:LYS:HB2	2.32	0.44
3:L3:116:ARG:O	3:L3:175:LYS:HE2	2.16	0.44
3:L3:324:VAL:HG22	3:L3:325:LYS:N	2.33	0.44
4:L4:350:LYS:HB3	4:L4:351:PRO:HD2	1.99	0.44
5:L5:36:LEU:HG	79:2S:2748:A:C2	2.52	0.44
5:L5:92:LEU:HD12	5:L5:92:LEU:N	2.33	0.44
5:L5:131:LEU:HD13	5:L5:131:LEU:N	2.32	0.44
7:L7:84:VAL:HG12	7:L7:138:TYR:HD1	1.83	0.44
10:60:119:TRP:CZ3	79:2S:1126:G:H5''	2.49	0.44
14:64:5:SER:O	14:64:6:ILE:HB	2.18	0.44
18:68:23:ASN:ND2	18:68:26:LEU:HB2	2.33	0.44
19:69:59:SER:OG	79:2S:1689:U:H4'	2.17	0.44
19:69:146:LYS:HE2	79:2S:2093:A:OP1	2.18	0.44
21:71:116:ARG:HD3	79:2S:1092:C:O2'	2.18	0.44
26:76:50:ILE:HD13	26:76:50:ILE:C	2.38	0.44
34:84:66:SER:O	34:84:70:LYS:HE2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:87:18:LEU:HA	37:87:25:ARG:CA	2.47	0.44
43:93:38:ASP:HA	43:93:44:LYS:O	2.17	0.44
46:S0:9:LEU:HD23	46:S0:54:TRP:CZ3	2.53	0.44
47:S1:184:LEU:O	47:S1:188:LEU:HG	2.18	0.44
48:S2:35:TRP:HZ3	48:S2:37:PRO:HB3	1.80	0.44
48:S2:38:VAL:HG22	48:S2:39:THR:HG23	2.00	0.44
48:S2:87:GLN:HG2	48:S2:96:THR:CB	2.44	0.44
50:S4:163:ASP:O	50:S4:164:LEU:HB3	2.18	0.44
51:S5:22:PRO:HB2	51:S5:31:GLU:OE2	2.16	0.44
52:S6:18:ILE:CG2	52:S6:23:ARG:HD3	2.47	0.44
52:S6:160:ARG:HG2	52:S6:161:GLU:H	1.82	0.44
53:S7:117:THR:HG22	53:S7:118:LEU:N	2.32	0.44
56:10:2:LEU:HD12	78:1S:1257:U:H2'	2.00	0.44
69:23:56:LYS:HZ1	69:23:96:VAL:HG23	1.83	0.44
74:28:12:VAL:HG21	74:28:48:VAL:HG13	1.99	0.44
74:28:14:LYS:HG3	74:28:15:VAL:H	1.83	0.44
78:1S:230:C:H2'	78:1S:231:U:C4'	2.48	0.44
78:1S:344:A:O2'	78:1S:345:U:H5'	2.18	0.44
78:1S:1489:U:C6	78:1S:1492:A:H2	2.35	0.44
78:1S:1541:G:H21	78:1S:1570:A:H62	1.64	0.44
79:2S:18:G:H2'	79:2S:19:U:O4'	2.18	0.44
79:2S:54:C:H2'	79:2S:55:G:H8	1.80	0.44
79:2S:532:A:H2'	79:2S:533:A:C8	2.52	0.44
79:2S:849:C:H2'	79:2S:850:U:H6	1.82	0.44
79:2S:959:C:H41	79:2S:2801:A:H5''	1.83	0.44
79:2S:1008:U:H2'	79:2S:1009:A:C8	2.53	0.44
79:2S:1192:C:H41	79:2S:1302:A:H5'	1.83	0.44
79:2S:1229:G:H2'	79:2S:1230:G:C8	2.52	0.44
79:2S:2214:A:H2'	79:2S:2215:A:O4'	2.18	0.44
79:2S:2970:C:H2'	79:2S:2972:G:C8	2.52	0.44
79:2S:3229:G:H2'	79:2S:3230:G:C8	2.52	0.44
81:5S:10:C:H4'	81:5S:13:A:H61	1.83	0.44
2:L2:237:LEU:HD22	79:2S:2154:U:C1'	2.48	0.44
3:L3:123:TYR:HB2	79:2S:3316:A:C5'	2.48	0.44
3:L3:237:LYS:HE3	3:L3:247:ARG:HG2	2.00	0.44
3:L3:332:ARG:H	3:L3:332:ARG:CD	2.29	0.44
9:L9:48:VAL:CG1	9:L9:52:LEU:HD22	2.48	0.44
9:L9:175:PHE:HE1	79:2S:3025:C:H4'	1.83	0.44
10:60:32:ARG:N	10:60:32:ARG:HD2	2.33	0.44
11:61:18:VAL:HG13	11:61:68:HIS:HD2	1.83	0.44
15:65:153:ASP:OD1	15:65:154:PRO:HD2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:120:ASN:HD22	17:67:120:ASN:N	2.09	0.44
20:70:2:ALA:HB3	20:70:32:SER:HB3	1.99	0.44
26:76:77:LYS:HE2	39:89:31:THR:OG1	2.18	0.44
31:81:28:ARG:HG2	31:81:28:ARG:NH1	2.32	0.44
39:89:30:ARG:HG2	80:8S:75:G:C8	2.53	0.44
39:89:38:ASN:ND2	39:89:41:ARG:HB2	2.33	0.44
45:RC:218:GLY:HA2	45:RC:238:ASP:O	2.16	0.44
47:S1:60:ALA:HB3	47:S1:61:LEU:HD13	2.00	0.44
50:S4:60:GLU:O	50:S4:64:ILE:HG13	2.17	0.44
52:S6:83:CYS:H	78:1S:162:A:H5''	1.82	0.44
59:13:66:ILE:HG23	59:13:67:THR:N	2.32	0.44
61:15:110:GLU:HG3	64:18:119:ILE:HD11	1.99	0.44
62:16:67:VAL:HG12	62:16:68:ARG:N	2.33	0.44
62:16:81:ILE:O	62:16:85:ILE:HG13	2.17	0.44
64:18:68:ARG:O	64:18:72:ILE:HG13	2.18	0.44
66:20:50:LEU:HD21	66:20:95:ALA:CB	2.47	0.44
66:20:67:THR:O	66:20:79:TRP:HA	2.18	0.44
69:23:19:ARG:NH1	78:1S:610:G:N2	2.65	0.44
69:23:54:LEU:HD12	69:23:73:ARG:HG2	1.99	0.44
78:1S:130:C:H2'	78:1S:131:C:H5'	1.99	0.44
78:1S:305:C:H2'	78:1S:306:U:C6	2.52	0.44
78:1S:872:G:H22	78:1S:955:A:H2	1.64	0.44
78:1S:1036:A:H2'	78:1S:1037:C:C6	2.53	0.44
78:1S:1748:G:H2'	78:1S:1749:A:C8	2.53	0.44
79:2S:38:U:H2'	79:2S:39:A:O4'	2.17	0.44
79:2S:759:U:H2'	79:2S:760:G:H5'	2.00	0.44
79:2S:951:A:H5''	79:2S:1143:A:N1	2.33	0.44
79:2S:1174:G:H2'	79:2S:1175:C:H6	1.79	0.44
79:2S:1449:A:H2'	79:2S:1450:G:O4'	2.17	0.44
79:2S:1658:G:H2'	79:2S:1659:U:O4'	2.18	0.44
79:2S:1944:U:H2'	79:2S:1945:A:C8	2.53	0.44
79:2S:2122:G:H2'	79:2S:2123:G:O4'	2.17	0.44
79:2S:2462:A:C5	79:2S:2463:G:H1'	2.53	0.44
79:2S:2734:A:H2'	79:2S:2735:U:C6	2.53	0.44
79:2S:3257:C:H2'	79:2S:3258:U:O4'	2.18	0.44
80:8S:56:G:H2'	80:8S:57:C:C6	2.52	0.44
1:L1:35:GLN:HE21	1:L1:62:ASN:HD21	1.65	0.44
1:L1:184:LEU:O	1:L1:184:LEU:HD23	2.18	0.44
2:L2:41:ILE:O	2:L2:89:TYR:HA	2.18	0.44
4:L4:269:SER:C	4:L4:271:LYS:H	2.21	0.44
4:L4:280:ILE:HD12	18:68:29:LEU:HD11	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:96:PRO:HB2	7:L7:99:PRO:CD	2.48	0.44
10:60:69:ARG:C	10:60:69:ARG:HD2	2.38	0.44
13:63:28:GLN:NE2	15:65:200:TRP:CE3	2.86	0.44
13:63:76:THR:HG23	13:63:101:ARG:HH11	1.82	0.44
13:63:177:LYS:HG3	36:86:11:LEU:HD13	2.00	0.44
16:66:43:ILE:HG22	16:66:44:SER:N	2.29	0.44
18:68:185:LYS:HD3	18:68:186:VAL:HG23	2.00	0.44
23:73:91:VAL:HG23	23:73:93:LEU:HD22	2.00	0.44
32:82:100:ILE:HG22	32:82:101:SER:N	2.33	0.44
35:85:38:ARG:HB2	35:85:38:ARG:CZ	2.47	0.44
42:92:23:HIS:HB3	42:92:72:LEU:HB2	1.99	0.44
45:RC:117:LYS:HZ1	45:RC:158:PRO:HG3	1.83	0.44
46:S0:144:ILE:HG23	46:S0:158:VAL:CG1	2.44	0.44
47:S1:70:LEU:HD21	47:S1:79:HIS:CG	2.53	0.44
47:S1:101:HIS:HA	47:S1:217:LEU:HD22	1.99	0.44
47:S1:229:MET:HB2	79:2S:2537:U:C5'	2.41	0.44
48:S2:93:GLY:H	78:1S:1635:A:H61	1.66	0.44
48:S2:103:VAL:HG11	48:S2:187:LEU:HD12	2.00	0.44
48:S2:238:SER:HA	48:S2:239:PRO:HD3	1.80	0.44
50:S4:55:ALA:HB1	50:S4:60:GLU:HB2	2.00	0.44
51:S5:42:LEU:HD23	51:S5:42:LEU:N	2.32	0.44
51:S5:162:VAL:CG2	51:S5:166:ARG:HB3	2.48	0.44
52:S6:106:LEU:HD13	52:S6:109:LEU:HD11	1.99	0.44
52:S6:219:ARG:O	52:S6:223:LYS:HB2	2.17	0.44
58:12:91:VAL:CG1	58:12:92:ALA:H	2.31	0.44
60:14:93:THR:HG23	60:14:94:PRO:HD2	2.00	0.44
63:17:21:TYR:H	63:17:22:PRO:HD2	1.79	0.44
65:19:37:VAL:HG13	65:19:39:THR:HG23	2.00	0.44
69:23:98:GLU:O	69:23:99:ASN:HB2	2.18	0.44
78:1S:321:C:H3'	78:1S:322:G:H5'	2.00	0.44
78:1S:351:C:H3'	78:1S:352:A:C5'	2.48	0.44
78:1S:562:G:H2'	78:1S:563:U:H6	1.81	0.44
78:1S:707:A:C3'	78:1S:708:C:H5''	2.47	0.44
78:1S:709:C:H3'	78:1S:710:U:C5'	2.48	0.44
78:1S:1141:G:H2'	78:1S:1142:A:H8	1.79	0.44
78:1S:1435:G:H5''	78:1S:1436:A:H5''	1.99	0.44
79:2S:827:A:H2'	79:2S:828:A:H8	1.79	0.44
79:2S:1719:G:H2'	79:2S:1720:U:O4'	2.18	0.44
79:2S:2541:U:H1'	79:2S:2542:U:C4'	2.25	0.44
79:2S:3102:G:H2'	79:2S:3103:A:C8	2.53	0.44
79:2S:3277:U:O2	79:2S:3277:U:H2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5S:44:C:H2'	81:5S:45:A:H8	1.81	0.44
1:L1:34:LEU:HD13	1:L1:210:MET:CB	2.48	0.43
1:L1:76:ARG:O	1:L1:80:CYS:HB2	2.17	0.43
3:L3:53:MET:HB3	3:L3:77:THR:HG22	2.00	0.43
8:L8:41:GLN:NE2	8:L8:41:GLN:H	2.16	0.43
8:L8:63:LYS:HE2	80:8S:153:U:OP1	2.18	0.43
8:L8:132:VAL:HG13	8:L8:190:VAL:HG23	2.00	0.43
9:L9:96:HIS:CD2	79:2S:3024:A:H5''	2.53	0.43
11:61:54:VAL:CG2	11:61:59:ILE:HD11	2.48	0.43
11:61:91:LEU:HD13	11:61:96:PHE:CZ	2.53	0.43
16:66:115:LYS:HG3	79:2S:3178:A:H2'	1.99	0.43
16:66:116:LYS:HE2	16:66:118:VAL:CG1	2.47	0.43
18:68:46:LYS:O	18:68:50:LYS:HG3	2.18	0.43
18:68:76:ALA:HA	18:68:79:LYS:HB2	2.00	0.43
18:68:89:ASP:HB2	18:68:109:GLY:C	2.38	0.43
21:71:79:MET:SD	29:79:21:ILE:HG23	2.58	0.43
30:80:16:LEU:HA	30:80:19:LYS:HE2	1.99	0.43
35:85:76:GLN:HB2	35:85:77:PRO:CD	2.47	0.43
36:86:90:MET:O	36:86:94:ILE:HG13	2.17	0.43
47:S1:61:LEU:HD23	47:S1:62:LYS:H	1.82	0.43
47:S1:202:LYS:HA	47:S1:202:LYS:HE3	2.00	0.43
47:S1:229:MET:HB2	79:2S:2537:U:C3'	2.42	0.43
49:S3:43:PRO:O	49:S3:44:THR:HB	2.18	0.43
50:S4:248:ILE:HB	55:S9:71:PHE:CE1	2.53	0.43
51:S5:194:LEU:O	51:S5:198:LEU:HG	2.18	0.43
52:S6:2:LYS:CG	52:S6:15:THR:HB	2.48	0.43
56:10:14:TYR:CE2	56:10:21:VAL:HG13	2.52	0.43
62:16:7:VAL:HG23	62:16:22:VAL:HB	2.00	0.43
63:17:11:ARG:HH11	63:17:11:ARG:HG3	1.83	0.43
63:17:53:TYR:O	63:17:56:HIS:HB3	2.18	0.43
64:18:38:VAL:HG12	64:18:42:TYR:HD2	1.83	0.43
68:22:106:THR:HG21	68:22:121:VAL:HG23	2.00	0.43
69:23:62:LYS:H	69:23:116:ASP:HB2	1.81	0.43
71:25:68:ARG:NE	71:25:68:ARG:HA	2.33	0.43
71:25:92:ILE:HG13	71:25:100:ILE:O	2.18	0.43
74:28:49:ARG:HG3	74:28:52:ASP:OD1	2.17	0.43
78:1S:126:A:H62	78:1S:291:G:N2	2.09	0.43
78:1S:637:C:H2'	78:1S:638:U:H5''	2.00	0.43
78:1S:1262:U:H2'	78:1S:1263:G:H8	1.83	0.43
79:2S:1391:C:H3'	79:2S:1392:G:C5'	2.48	0.43
79:2S:1718:G:H2'	79:2S:1719:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1725:C:H2'	79:2S:1726:C:C6	2.52	0.43
79:2S:1851:G:H2'	79:2S:1852:G:O4'	2.18	0.43
79:2S:1896:A:H61	79:2S:2339:C:N4	2.13	0.43
79:2S:2430:A:H2'	79:2S:2431:C:C6	2.53	0.43
1:L1:18:LYS:CG	1:L1:23:THR:HB	2.48	0.43
4:L4:3:ARG:HG3	4:L4:21:PRO:HB3	2.00	0.43
4:L4:114:ASN:N	4:L4:114:ASN:ND2	2.66	0.43
4:L4:114:ASN:HB2	4:L4:117:GLU:HB2	2.00	0.43
7:L7:105:LEU:CD2	79:2S:1101:G:H1'	2.48	0.43
8:L8:53:PRO:HD2	8:L8:56:VAL:HG21	2.00	0.43
11:61:109:HIS:O	11:61:114:ILE:HD12	2.17	0.43
13:63:59:ARG:HH22	13:63:150:PRO:HG2	1.83	0.43
17:67:112:LEU:HD12	17:67:152:GLU:HA	2.00	0.43
20:70:6:GLU:HA	20:70:29:ILE:O	2.19	0.43
21:71:124:VAL:HG12	21:71:125:ALA:N	2.33	0.43
45:RC:144:LEU:HD21	45:RC:186:PHE:HD1	1.83	0.43
46:S0:133:ILE:HG23	46:S0:155:PHE:HB2	2.00	0.43
47:S1:141:ALA:HA	47:S1:210:ILE:HA	2.00	0.43
47:S1:144:ARG:HG2	47:S1:206:PRO:HB3	2.01	0.43
48:S2:99:LYS:CB	48:S2:117:THR:HB	2.48	0.43
51:S5:165:LEU:HD23	74:28:47:PRO:HB2	1.99	0.43
62:16:39:VAL:HG12	62:16:40:GLU:N	2.33	0.43
68:22:90:THR:O	68:22:94:LEU:HB2	2.18	0.43
71:25:93:SER:HB2	71:25:100:ILE:H	1.84	0.43
78:1S:198:A:H2'	78:1S:199:G:H5'	2.00	0.43
78:1S:438:A:H1'	78:1S:465:G:H22	1.81	0.43
78:1S:530:C:H2'	78:1S:531:C:C6	2.54	0.43
78:1S:821:U:H3	78:1S:852:C:N4	2.15	0.43
78:1S:997:G:H2'	78:1S:998:A:O4'	2.18	0.43
79:2S:19:U:H2'	79:2S:20:A:C8	2.53	0.43
79:2S:729:C:H2'	79:2S:730:C:C6	2.53	0.43
79:2S:998:A:H4'	81:5S:103:A:C2	2.53	0.43
79:2S:1070:U:H2'	79:2S:1071:U:O4'	2.18	0.43
79:2S:1301:A:H4'	79:2S:1302:A:H5''	2.00	0.43
79:2S:2217:U:H2'	79:2S:2218:G:C8	2.53	0.43
79:2S:2894:C:H2'	79:2S:2895:G:C8	2.53	0.43
79:2S:2972:G:H2'	79:2S:2973:G:C8	2.53	0.43
83:PT:71:G:H2'	83:PT:72:C:H6	1.82	0.43
1:L1:123:LEU:HD22	1:L1:128:LEU:CD1	2.35	0.43
2:L2:137:ILE:HG13	2:L2:138:GLY:H	1.83	0.43
4:L4:286:VAL:HG21	18:68:28:LEU:HD22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L6:170:LYS:O	6:L6:174:LEU:HG	2.19	0.43
7:L7:208:SER:O	7:L7:243:MET:HE2	2.18	0.43
11:61:88:GLU:O	11:61:89:TYR:HB2	2.17	0.43
14:64:128:ARG:O	14:64:132:LYS:HG2	2.18	0.43
15:65:68:ARG:HE	15:65:128:LYS:HG2	1.84	0.43
18:68:8:LYS:HB2	18:68:8:LYS:HE3	1.82	0.43
19:69:95:TRP:O	19:69:99:LEU:HB2	2.18	0.43
23:73:87:ARG:NH2	23:73:120:LYS:HD2	2.33	0.43
30:80:42:ILE:HD11	30:80:60:ALA:CB	2.47	0.43
30:80:50:VAL:HG11	79:2S:2552:C:O2'	2.18	0.43
32:82:71:HIS:HB2	32:82:93:ALA:HB2	2.00	0.43
33:83:49:ILE:HB	33:83:85:PHE:CE2	2.53	0.43
43:93:46:THR:HG22	79:2S:1726:C:OP1	2.19	0.43
46:S0:13:ASP:O	46:S0:17:LEU:HG	2.18	0.43
51:S5:76:ARG:HB3	51:S5:79:ASN:OD1	2.19	0.43
51:S5:128:ASN:HD22	51:S5:128:ASN:HA	1.68	0.43
59:13:119:GLU:HA	59:13:122:ILE:HD12	2.01	0.43
62:16:133:GLY:HA3	62:16:136:SER:HB3	2.00	0.43
63:17:84:TYR:O	63:17:85:VAL:HB	2.18	0.43
63:17:99:VAL:HB	63:17:118:PRO:HB2	2.00	0.43
76:30:33:ARG:NH2	78:1S:478:A:H5'	2.33	0.43
78:1S:38:C:C2'	78:1S:39:A:H5'	2.48	0.43
78:1S:839:U:H2'	78:1S:840:U:H5''	2.00	0.43
78:1S:1340:U:H5''	78:1S:1341:A:H5'	1.99	0.43
79:2S:261:U:H2'	79:2S:262:U:C6	2.53	0.43
79:2S:1329:U:H1'	79:2S:1330:A:OP1	2.18	0.43
79:2S:3132:C:H2'	79:2S:3133:C:C6	2.52	0.43
79:2S:3343:G:H21	79:2S:3362:A:H2	1.67	0.43
81:5S:104:A:H2'	81:5S:105:C:H5'	2.00	0.43
2:L2:114:SER:OG	2:L2:165:VAL:HG13	2.18	0.43
2:L2:125:ALA:HB1	2:L2:126:LEU:HD12	2.00	0.43
2:L2:202:VAL:HG23	79:2S:2185:G:OP1	2.17	0.43
2:L2:230:VAL:HG12	2:L2:232:GLY:H	1.83	0.43
2:L2:252:THR:OG1	2:L2:253:GLN:N	2.50	0.43
4:L4:286:VAL:CG2	18:68:28:LEU:HD22	2.48	0.43
5:L5:40:HIS:CE1	21:71:69:LYS:HB2	2.54	0.43
5:L5:51:LEU:HB2	5:L5:144:VAL:HG21	2.00	0.43
5:L5:181:PRO:HB2	5:L5:198:TYR:CZ	2.53	0.43
7:L7:181:ILE:O	7:L7:185:ILE:HG13	2.18	0.43
8:L8:48:ARG:HH11	8:L8:48:ARG:HG3	1.82	0.43
9:L9:12:VAL:CG1	9:L9:16:VAL:HG23	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:47:PRO:HB3	10:60:171:TRP:CZ2	2.54	0.43
17:67:180:LYS:HB3	17:67:180:LYS:NZ	2.33	0.43
18:68:40:THR:O	18:68:41:ASP:HB3	2.17	0.43
21:71:156:TYR:CZ	21:71:158:THR:HG22	2.54	0.43
24:74:47:ARG:HG2	24:74:47:ARG:NH1	2.33	0.43
37:87:18:LEU:CA	37:87:25:ARG:HA	2.48	0.43
39:89:2:ALA:O	39:89:4:GLN:N	2.51	0.43
39:89:49:MET:O	39:89:50:ASN:HB2	2.18	0.43
41:91:2:ARG:HH22	78:1S:1773:C:H5	1.65	0.43
46:S0:14:ALA:HA	46:S0:17:LEU:HD12	2.00	0.43
46:S0:199:PRO:HA	46:S0:202:TYR:CD2	2.44	0.43
48:S2:84:LYS:HA	48:S2:85:PRO:HD3	1.73	0.43
50:S4:185:GLY:N	50:S4:189:LEU:HD13	2.34	0.43
50:S4:211:LYS:HG3	50:S4:211:LYS:O	2.18	0.43
52:S6:68:LEU:HB3	52:S6:69:LEU:H	1.69	0.43
54:S8:26:LYS:O	54:S8:29:LEU:HB3	2.18	0.43
55:S9:92:LYS:HA	55:S9:92:LYS:HE3	1.99	0.43
56:10:87:VAL:N	56:10:88:PRO:CD	2.81	0.43
60:14:28:VAL:O	60:14:41:ARG:HG2	2.18	0.43
63:17:102:VAL:HG22	63:17:103:ASP:N	2.33	0.43
70:24:106:GLN:O	70:24:110:GLN:HG3	2.18	0.43
75:29:46:LYS:O	75:29:50:ILE:HG13	2.19	0.43
78:1S:20:G:H5'	78:1S:571:G:C8	2.53	0.43
78:1S:41:A:H2'	78:1S:438:A:N7	2.32	0.43
78:1S:367:A:H2'	78:1S:368:U:O4'	2.18	0.43
78:1S:596:C:H2'	78:1S:597:G:H8	1.83	0.43
78:1S:609:U:H4'	78:1S:610:G:O5'	2.18	0.43
78:1S:923:A:H2'	78:1S:924:A:C8	2.54	0.43
78:1S:1157:A:N1	78:1S:1623:C:O5'	2.51	0.43
78:1S:1311:U:H5'	78:1S:1403:C:OP1	2.18	0.43
78:1S:1469:A:H4'	78:1S:1541:G:H4'	1.99	0.43
78:1S:1618:C:H1'	78:1S:1619:C:H5	1.83	0.43
79:2S:95:A:H8	79:2S:95:A:O5'	2.01	0.43
79:2S:799:G:H2'	79:2S:801:A:N6	2.33	0.43
79:2S:821:U:O2'	79:2S:822:G:H5'	2.18	0.43
79:2S:861:C:H2'	79:2S:862:U:C6	2.54	0.43
79:2S:967:A:H2'	79:2S:968:G:H5'	2.00	0.43
79:2S:1016:C:H4'	79:2S:1028:U:H4'	2.00	0.43
79:2S:1040:A:H2'	79:2S:1041:U:C4'	2.48	0.43
79:2S:1058:U:H2'	79:2S:1059:G:H8	1.83	0.43
79:2S:3332:U:H2'	79:2S:3333:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:PT:25:U:H2'	83:PT:26:C:C6	2.52	0.43
83:PT:25:U:H2'	83:PT:26:C:H6	1.83	0.43
3:L3:43:LEU:HB3	3:L3:181:ILE:HG21	2.00	0.43
4:L4:29:PRO:HA	18:68:25:TYR:OH	2.17	0.43
4:L4:320:ASN:HB3	4:L4:323:VAL:HG12	2.00	0.43
5:L5:163:LEU:HD23	5:L5:163:LEU:C	2.38	0.43
6:L6:22:ARG:NH1	79:2S:608:A:H2'	2.34	0.43
7:L7:156:ILE:HD12	7:L7:161:VAL:HG21	2.00	0.43
10:60:31:ILE:C	10:60:32:ARG:HD2	2.38	0.43
13:63:85:LEU:HB2	13:63:89:TYR:CD1	2.53	0.43
14:64:127:LYS:HE3	16:66:191:ALA:HB2	2.01	0.43
16:66:7:VAL:HB	16:66:33:ILE:HG12	2.01	0.43
16:66:136:THR:HG22	16:66:137:THR:N	2.31	0.43
29:79:20:GLY:O	29:79:21:ILE:HB	2.18	0.43
31:81:72:ARG:O	31:81:96:VAL:HG22	2.19	0.43
35:85:22:VAL:O	35:85:26:LYS:HG3	2.18	0.43
36:86:34:SER:O	36:86:38:LYS:HG3	2.18	0.43
37:87:56:ARG:HB2	37:87:57:HIS:ND1	2.33	0.43
46:S0:26:ALA:O	46:S0:45:VAL:HG13	2.18	0.43
48:S2:229:LEU:HD21	67:21:23:ILE:CD1	2.42	0.43
56:10:1:MET:HB2	78:1S:1217:A:H5''	2.00	0.43
56:10:8:ARG:HG2	56:10:8:ARG:HH11	1.84	0.43
60:14:17:ALA:HB3	60:14:81:VAL:HG12	2.01	0.43
60:14:84:ARG:HG3	60:14:119:THR:HA	2.00	0.43
60:14:135:ARG:NH2	78:1S:903:U:H5''	2.34	0.43
67:21:51:VAL:HG12	67:21:52:THR:N	2.33	0.43
69:23:109:ARG:HB3	69:23:112:LYS:HB2	2.00	0.43
70:24:102:LYS:N	70:24:102:LYS:HD2	2.34	0.43
78:1S:613:G:H5'	78:1S:1099:U:C2	2.54	0.43
78:1S:966:A:H2'	78:1S:967:A:C8	2.54	0.43
78:1S:1097:U:H4'	78:1S:1099:U:H5'	2.00	0.43
79:2S:36:C:H2'	79:2S:37:U:O4'	2.18	0.43
79:2S:44:U:H2'	79:2S:45:A:O4'	2.18	0.43
79:2S:848:A:H8	79:2S:848:A:O5'	2.01	0.43
79:2S:1609:C:O5'	79:2S:1609:C:H6	2.01	0.43
79:2S:1892:G:H2'	79:2S:1893:A:C4'	2.49	0.43
79:2S:2108:C:H1'	79:2S:3344:A:H8	1.83	0.43
79:2S:3190:C:H2'	79:2S:3191:G:H8	1.83	0.43
79:2S:3344:A:C2	79:2S:3345:G:H1'	2.54	0.43
81:5S:75:G:H2'	81:5S:76:A:C8	2.54	0.43
1:L1:147:LYS:HB3	1:L1:152:ARG:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:2:GLY:HA2	2:L2:207:VAL:HG12	2.01	0.43
3:L3:21:ARG:HG3	3:L3:269:GLN:OE1	2.19	0.43
3:L3:55:THR:HG23	3:L3:73:VAL:HB	2.01	0.43
7:L7:84:VAL:HG12	7:L7:138:TYR:CD1	2.54	0.43
9:L9:134:ILE:HG13	9:L9:146:LEU:HG	2.00	0.43
10:60:69:ARG:HD2	10:60:69:ARG:O	2.18	0.43
10:60:154:ARG:HH12	79:2S:2837:A:H5''	1.83	0.43
16:66:37:ARG:HB3	16:66:40:GLU:CG	2.48	0.43
17:67:47:TYR:HE1	17:67:56:ARG:NE	2.16	0.43
21:71:12:ARG:HG2	21:71:12:ARG:HH11	1.84	0.43
22:72:9:GLN:C	22:72:10:LYS:HD2	2.39	0.43
23:73:33:ASN:H	23:73:33:ASN:HD22	1.67	0.43
37:87:39:TYR:OH	80:8S:103:G:H5''	2.17	0.43
46:S0:56:LYS:HB3	46:S0:160:ILE:CG1	2.47	0.43
47:S1:44:GLY:C	47:S1:45:LYS:HG2	2.39	0.43
47:S1:164:ILE:HG22	47:S1:168:ILE:CD1	2.49	0.43
47:S1:204:ILE:O	47:S1:205:PHE:HB2	2.19	0.43
48:S2:196:VAL:HG22	48:S2:197:TYR:N	2.31	0.43
49:S3:84:ILE:HG23	49:S3:84:ILE:O	2.19	0.43
50:S4:68:ARG:HA	50:S4:76:VAL:HG11	2.01	0.43
50:S4:137:PRO:O	50:S4:150:PRO:HD3	2.18	0.43
50:S4:214:LEU:HD23	50:S4:216:ASN:HD21	1.84	0.43
52:S6:4:ASN:HB2	52:S6:108:VAL:CG1	2.48	0.43
53:S7:135:ILE:HG23	53:S7:152:VAL:CG1	2.47	0.43
54:S8:101:ILE:HD11	54:S8:192:TYR:CE2	2.53	0.43
55:S9:173:ALA:HB2	78:1S:511:A:H5'	2.01	0.43
56:10:24:LYS:HG2	56:10:25:LYS:N	2.33	0.43
60:14:103:ARG:NH1	74:28:38:ARG:HD3	2.34	0.43
63:17:32:LYS:CG	63:17:47:ARG:HH11	2.32	0.43
64:18:70:VAL:HA	64:18:73:MET:HE2	1.99	0.43
65:19:33:TYR:HA	65:19:36:ILE:CG1	2.47	0.43
66:20:56:VAL:HG13	78:1S:1345:A:H1'	2.01	0.43
68:22:33:VAL:O	68:22:37:PHE:HB2	2.19	0.43
70:24:5:VAL:HA	70:24:28:LEU:O	2.17	0.43
71:25:95:HIS:NE2	71:25:98:GLN:HB2	2.33	0.43
72:26:82:ARG:HA	72:26:82:ARG:NE	2.31	0.43
74:28:65:ARG:HH21	74:28:65:ARG:HG3	1.84	0.43
76:30:42:ARG:HB3	76:30:42:ARG:CZ	2.49	0.43
78:1S:142:G:H1	78:1S:173:A:H2	1.64	0.43
78:1S:164:A:O2'	78:1S:165:G:H5'	2.18	0.43
78:1S:461:G:H2'	78:1S:462:G:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:722:G:C3'	78:1S:723:G:H5''	2.49	0.43
78:1S:814:A:H2'	78:1S:814:A:N3	2.34	0.43
78:1S:1293:U:H2'	78:1S:1294:G:H8	1.83	0.43
79:2S:289:A:H2'	79:2S:290:G:C8	2.53	0.43
79:2S:946:U:H2'	79:2S:947:G:C8	2.54	0.43
79:2S:982:C:O2'	79:2S:983:A:H5'	2.18	0.43
79:2S:2316:G:H2'	79:2S:2317:A:H8	1.83	0.43
79:2S:2849:C:OP1	79:2S:2906:C:H4'	2.19	0.43
79:2S:3170:A:O2'	79:2S:3171:U:H5'	2.19	0.43
81:5S:48:U:O2'	81:5S:49:G:H5'	2.18	0.43
83:PT:34:U:O5'	83:PT:34:U:H6	2.02	0.43
1:L1:160:LYS:HB3	1:L1:161:LYS:HD3	1.99	0.43
2:L2:97:ASN:O	2:L2:166:ILE:HB	2.19	0.43
14:64:25:LYS:HE3	14:64:62:GLN:HA	2.00	0.43
15:65:96:ARG:HG2	15:65:96:ARG:NH1	2.34	0.43
16:66:38:ALA:O	16:66:138:LEU:HD23	2.18	0.43
25:75:94:GLN:HG2	80:8S:132:G:H4'	2.01	0.43
30:80:9:SER:HB3	30:80:12:GLN:NE2	2.34	0.43
31:81:16:LEU:HB2	31:81:71:LEU:HD11	2.00	0.43
33:83:6:ARG:HD3	33:83:10:LYS:HE3	2.00	0.43
37:87:65:ARG:HH11	37:87:65:ARG:HG3	1.83	0.43
39:89:22:PRO:O	39:89:23:LEU:HB2	2.17	0.43
44:P0:105:VAL:HG22	44:P0:106:ALA:H	1.83	0.43
45:RC:19:TRP:CD1	45:RC:19:TRP:N	2.87	0.43
47:S1:152:ARG:HG2	47:S1:152:ARG:O	2.19	0.43
47:S1:228:LEU:HB3	79:2S:2537:U:OP1	2.19	0.43
48:S2:93:GLY:C	48:S2:94:GLN:HG3	2.39	0.43
51:S5:208:SER:O	51:S5:212:LYS:HG3	2.18	0.43
53:S7:100:PRO:O	53:S7:102:PRO:HD3	2.18	0.43
56:10:49:LEU:O	56:10:53:GLY:O	2.37	0.43
57:11:93:TYR:HB3	78:1S:795:U:H4'	2.01	0.43
59:13:64:ARG:O	59:13:64:ARG:HG2	2.18	0.43
62:16:125:GLU:HA	62:16:126:PRO:HD3	1.90	0.43
65:19:28:LEU:HD22	65:19:28:LEU:N	2.33	0.43
67:21:21:ASN:HB2	68:22:67:GLY:HA3	2.00	0.43
68:22:93:LEU:HD21	68:22:102:VAL:HG21	2.01	0.43
69:23:20:ARG:HA	69:23:23:ARG:CG	2.48	0.43
69:23:127:VAL:O	69:23:128:SER:HB2	2.18	0.43
73:27:19:HIS:O	73:27:23:THR:HG23	2.19	0.43
77:31:118:ARG:HH11	77:31:118:ARG:HG3	1.83	0.43
78:1S:57:G:O2'	78:1S:58:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:181:A:H2'	78:1S:182:A:C8	2.54	0.43
78:1S:287:G:HO2'	78:1S:288:A:H8	1.60	0.43
78:1S:355:G:H2'	78:1S:356:G:H8	1.83	0.43
78:1S:643:G:O2'	78:1S:644:C:H5'	2.19	0.43
78:1S:970:A:H3'	78:1S:971:A:C8	2.48	0.43
78:1S:1470:C:C5'	78:1S:1540:G:H21	2.29	0.43
79:2S:359:U:H2'	79:2S:360:G:O4'	2.18	0.43
79:2S:421:G:H5''	79:2S:2384:A:O2'	2.19	0.43
79:2S:507:U:H2'	79:2S:508:U:H6	1.82	0.43
79:2S:579:G:H2'	79:2S:580:C:C6	2.54	0.43
79:2S:1162:U:H2'	79:2S:1163:A:O4'	2.18	0.43
79:2S:1827:C:H2'	79:2S:1828:A:C8	2.54	0.43
79:2S:1911:A:H2'	79:2S:1912:U:C6	2.53	0.43
79:2S:2469:G:H2'	79:2S:2470:C:C6	2.54	0.43
79:2S:3192:U:H2'	79:2S:3193:C:C5	2.54	0.43
3:L3:84:VAL:HG13	3:L3:163:HIS:C	2.39	0.43
4:L4:312:VAL:HG22	79:2S:609:G:O2'	2.18	0.43
5:L5:158:ARG:HG2	5:L5:158:ARG:NH1	2.34	0.43
14:64:19:ARG:O	14:64:35:ILE:HG13	2.19	0.43
14:64:122:VAL:HA	14:64:125:LYS:HZ3	1.83	0.43
17:67:122:ALA:HB3	17:67:143:PRO:HB2	2.00	0.43
24:74:49:ILE:HB	24:74:52:THR:OG1	2.19	0.43
25:75:125:ARG:HH21	25:75:125:ARG:HG2	1.83	0.43
32:82:74:PHE:CE2	32:82:76:VAL:HG22	2.54	0.43
35:85:28:LEU:O	35:85:28:LEU:HD13	2.19	0.43
36:86:93:ILE:O	36:86:97:SER:HB3	2.19	0.43
37:87:13:ASN:ND2	79:2S:901:G:H5''	2.34	0.43
38:88:43:PHE:HE2	38:88:56:ILE:HG13	1.84	0.43
44:P0:44:GLU:O	44:P0:44:GLU:HG2	2.19	0.43
44:P0:77:LEU:HA	44:P0:80:VAL:HG12	2.01	0.43
45:RC:289:ALA:HB2	45:RC:305:TYR:CE2	2.53	0.43
46:S0:90:ALA:HB3	46:S0:97:PRO:HD3	2.01	0.43
47:S1:224:ASP:HA	79:2S:2537:U:O4'	2.19	0.43
48:S2:44:LEU:HD22	48:S2:49:LYS:CB	2.49	0.43
48:S2:88:LYS:HG2	48:S2:89:GLN:N	2.27	0.43
49:S3:115:ILE:HG21	49:S3:142:LEU:HD21	2.00	0.43
50:S4:37:LYS:HE2	50:S4:37:LYS:HB3	1.87	0.43
50:S4:49:ARG:O	50:S4:53:LYS:HD3	2.19	0.43
53:S7:30:SER:O	53:S7:32:PRO:HD2	2.19	0.43
55:S9:37:LYS:HB3	76:30:33:ARG:HA	2.00	0.43
56:10:92:ILE:O	56:10:93:GLN:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:13:56:ASP:HB2	73:27:46:VAL:CG1	2.48	0.43
59:13:107:LYS:HG2	78:1S:879:G:O3'	2.19	0.43
60:14:125:SER:OG	78:1S:926:A:N3	2.45	0.43
64:18:42:TYR:O	64:18:46:VAL:HG23	2.18	0.43
69:23:24:TRP:CE3	69:23:30:LYS:HG3	2.53	0.43
70:24:63:GLN:HG3	70:24:64:PHE:H	1.84	0.43
78:1S:44:U:H2'	78:1S:45:U:C6	2.53	0.43
78:1S:210:A:H2'	78:1S:211:U:C6	2.54	0.43
78:1S:587:C:H2'	78:1S:588:U:H6	1.84	0.43
78:1S:771:A:C2	78:1S:772:G:H1'	2.54	0.43
78:1S:903:U:H2'	78:1S:905:A:OP2	2.19	0.43
78:1S:1184:A:H3'	78:1S:1185:U:H5''	2.01	0.43
78:1S:1212:G:H2'	78:1S:1213:G:H8	1.83	0.43
78:1S:1302:U:H2'	78:1S:1303:U:C6	2.54	0.43
79:2S:138:U:H2'	79:2S:139:G:H8	1.83	0.43
79:2S:391:A:H2'	79:2S:392:G:O4'	2.19	0.43
79:2S:1165:A:H2'	79:2S:1166:G:C8	2.54	0.43
79:2S:1291:A:C2	79:2S:1292:C:H1'	2.54	0.43
79:2S:2709:C:H2'	79:2S:2710:C:H6	1.84	0.43
80:8S:88:A:H2'	80:8S:89:A:C8	2.53	0.43
1:L1:60:ARG:HB2	1:L1:180:VAL:HG22	1.99	0.43
2:L2:182:ALA:HB2	79:2S:2148:U:H4'	1.99	0.43
2:L2:237:LEU:HD22	79:2S:2154:U:O4'	2.18	0.43
3:L3:88:GLY:CA	3:L3:199:PHE:HE1	2.32	0.43
6:L6:98:VAL:O	6:L6:98:VAL:HG12	2.17	0.43
17:67:41:LEU:HD21	17:67:95:LEU:HD22	2.01	0.43
23:73:74:MET:HB2	23:73:102:ILE:HD11	2.00	0.43
24:74:93:ARG:HH11	24:74:93:ARG:HG3	1.84	0.43
25:75:66:PRO:CD	35:85:33:VAL:HG22	2.48	0.43
33:83:42:GLN:HE22	33:83:45:LEU:CD1	2.31	0.43
42:92:11:TYR:HE1	42:92:13:LYS:HB3	1.84	0.43
45:RC:30:PRO:CB	45:RC:296:ALA:HB3	2.38	0.43
53:S7:97:ARG:HB3	53:S7:98:ILE:H	1.71	0.43
53:S7:113:PRO:HG2	53:S7:116:ARG:HB2	2.00	0.43
57:11:150:ASN:HD22	57:11:150:ASN:HA	1.64	0.43
58:12:24:ILE:O	58:12:25:GLU:HB2	2.19	0.43
60:14:48:VAL:HG22	60:14:49:LYS:N	2.34	0.43
61:15:86:VAL:O	61:15:89:MET:HG2	2.19	0.43
78:1S:72:A:H3'	78:1S:73:U:H5''	2.01	0.43
78:1S:811:A:C2	78:1S:858:G:H1'	2.54	0.43
78:1S:824:G:H2'	78:1S:825:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:877:G:H1	78:1S:951:A:N6	2.16	0.43
78:1S:981:U:C2'	78:1S:982:U:H5'	2.49	0.43
78:1S:1020:A:H3'	78:1S:1021:C:C5'	2.40	0.43
79:2S:547:G:H2'	79:2S:548:G:O4'	2.19	0.43
79:2S:627:U:H4'	79:2S:1399:A:C1'	2.40	0.43
79:2S:799:G:H3'	79:2S:801:A:N7	2.34	0.43
79:2S:1295:G:H2'	79:2S:1296:C:C6	2.53	0.43
79:2S:1638:A:H2'	79:2S:1639:C:H5'	2.00	0.43
79:2S:2340:U:H2'	79:2S:2341:A:H8	1.83	0.43
83:PT:19:G:H21	83:PT:58:A:H2'	1.84	0.43
1:L1:103:LEU:HD12	1:L1:128:LEU:HD13	2.01	0.43
1:L1:153:SER:HB2	1:L1:165:LEU:HB2	2.01	0.43
2:L2:15:ILE:HG22	79:2S:822:G:H1'	2.01	0.43
2:L2:179:LEU:HD21	2:L2:185:ALA:HA	2.01	0.43
2:L2:186:PHE:CE2	79:2S:896:A:H4'	2.53	0.43
3:L3:75:ALA:HB2	79:2S:3049:A:C5	2.54	0.43
3:L3:116:ARG:C	3:L3:175:LYS:HE2	2.39	0.43
5:L5:166:ALA:HB1	5:L5:171:LEU:HD12	2.01	0.43
6:L6:172:HIS:CD2	6:L6:173:MET:HG2	2.53	0.43
8:L8:83:ASP:C	8:L8:85:ASN:H	2.22	0.43
9:L9:16:VAL:HG21	9:L9:79:ILE:HG23	2.00	0.43
9:L9:55:VAL:HG23	9:L9:55:VAL:O	2.19	0.43
13:63:58:VAL:HG23	13:63:101:ARG:HH21	1.83	0.43
13:63:178:LYS:HE3	79:2S:2774:C:OP1	2.18	0.43
15:65:17:ASP:O	15:65:21:PHE:HB2	2.19	0.43
15:65:99:ARG:O	15:65:103:GLU:HG3	2.19	0.43
16:66:20:ALA:HB2	16:66:80:PHE:HE1	1.78	0.43
16:66:116:LYS:HE3	16:66:116:LYS:HB2	1.85	0.43
17:67:65:SER:HA	17:67:80:LYS:HZ2	1.84	0.43
17:67:101:ASN:ND2	79:2S:388:G:H21	2.17	0.43
28:78:33:GLY:HA3	79:2S:96:G:OP1	2.19	0.43
33:83:87:ASN:HD22	33:83:87:ASN:HA	1.50	0.43
36:86:17:VAL:HG21	79:2S:73:C:O2	2.19	0.43
45:RC:169:ILE:CG2	45:RC:183:LEU:HD11	2.49	0.43
47:S1:61:LEU:O	47:S1:62:LYS:HB2	2.18	0.43
48:S2:181:SER:OG	48:S2:184:VAL:HG23	2.18	0.43
48:S2:240:LEU:C	48:S2:244:SER:HB2	2.39	0.43
50:S4:177:ALA:HA	50:S4:195:ILE:CG2	2.48	0.43
51:S5:167:ARG:HH12	74:28:55:VAL:HB	1.83	0.43
55:S9:10:LYS:HB2	55:S9:12:TYR:CE1	2.54	0.43
55:S9:37:LYS:HZ2	78:1S:475:A:H5''	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:110:GLN:HA	55:S9:129:ILE:HD11	2.00	0.43
55:S9:146:PHE:O	55:S9:147:MET:HB2	2.19	0.43
55:S9:170:GLY:O	55:S9:174:ARG:HG2	2.18	0.43
56:10:49:LEU:HD11	56:10:75:TYR:CD2	2.53	0.43
57:11:85:VAL:HG12	57:11:86:ILE:N	2.34	0.43
59:13:88:LEU:O	59:13:88:LEU:HD13	2.19	0.43
64:18:137:HIS:C	64:18:139:LYS:H	2.21	0.43
66:20:61:LYS:HB2	66:20:86:ILE:HB	2.01	0.43
67:21:33:GLN:HA	67:21:53:TYR:O	2.19	0.43
70:24:76:TYR:HE2	70:24:85:PHE:HD2	1.66	0.43
70:24:132:ARG:O	70:24:132:ARG:HD3	2.19	0.43
75:29:36:LEU:O	75:29:37:ASN:HB2	2.19	0.43
78:1S:588:U:H2'	78:1S:589:C:H6	1.78	0.43
78:1S:922:G:H2'	78:1S:923:A:C8	2.54	0.43
78:1S:1025:A:H3'	78:1S:1027:A:C8	2.54	0.43
78:1S:1144:U:H2'	78:1S:1145:U:H6	1.80	0.43
78:1S:1254:U:C2'	78:1S:1255:G:H5'	2.49	0.43
79:2S:278:U:H2'	79:2S:279:U:C6	2.54	0.43
79:2S:342:A:H5'	79:2S:344:A:C4	2.53	0.43
79:2S:355:A:H2'	79:2S:356:C:O4'	2.19	0.43
79:2S:438:A:H2'	79:2S:439:C:C4'	2.49	0.43
79:2S:440:A:H3'	79:2S:441:U:C5'	2.49	0.43
79:2S:1713:G:H1'	79:2S:1731:A:H62	1.84	0.43
79:2S:1726:C:H2'	79:2S:1727:G:H8	1.84	0.43
79:2S:2990:G:C2'	79:2S:2991:A:H5'	2.49	0.43
79:2S:3114:A:H2'	79:2S:3115:C:C5	2.54	0.43
80:8S:56:G:H2'	80:8S:57:C:H6	1.84	0.43
3:L3:339:ARG:CZ	3:L3:342:LEU:HD11	2.49	0.42
5:L5:83:LEU:N	5:L5:84:PRO:CD	2.82	0.42
8:L8:243:GLN:O	8:L8:247:ASP:HB2	2.19	0.42
9:L9:21:LYS:HA	14:64:8:LYS:HG3	2.01	0.42
16:66:12:LYS:HA	16:66:40:GLU:CB	2.48	0.42
17:67:125:GLN:O	17:67:140:GLU:HA	2.20	0.42
25:75:49:LYS:HD2	25:75:52:PRO:HA	2.01	0.42
27:77:73:LYS:NZ	79:2S:1636:U:H5''	2.33	0.42
33:83:47:LYS:HD2	33:83:103:TYR:N	2.34	0.42
33:83:53:TYR:HE1	33:83:67:MET:HG3	1.84	0.42
42:92:46:LYS:O	42:92:54:THR:HG21	2.19	0.42
43:93:20:SER:HA	43:93:23:ARG:CD	2.49	0.42
43:93:37:TYR:C	43:93:45:LYS:HA	2.40	0.42
45:RC:46:LYS:HB2	45:RC:46:LYS:NZ	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:50:VAL:O	46:S0:50:VAL:HG12	2.18	0.42
46:S0:112:THR:CG2	46:S0:115:PHE:HB2	2.49	0.42
48:S2:198:THR:O	78:1S:3:U:H5''	2.18	0.42
51:S5:162:VAL:HG22	51:S5:166:ARG:HB3	2.00	0.42
53:S7:30:SER:O	53:S7:31:SER:CB	2.66	0.42
53:S7:131:PHE:N	53:S7:132:PRO:CD	2.81	0.42
55:S9:119:ALA:O	55:S9:124:HIS:HD2	2.02	0.42
58:12:49:THR:O	58:12:53:THR:HG23	2.18	0.42
59:13:84:ILE:HD12	59:13:89:TYR:HA	2.01	0.42
63:17:85:VAL:N	63:17:86:PRO:CD	2.82	0.42
69:23:7:ARG:HH22	78:1S:1100:G:H1'	1.84	0.42
70:24:41:ARG:HD2	70:24:55:VAL:HB	2.01	0.42
72:26:79:ILE:HA	72:26:84:VAL:HA	1.99	0.42
78:1S:44:U:H2'	78:1S:45:U:H5	1.84	0.42
78:1S:564:G:C4'	78:1S:566:C:N3	2.81	0.42
78:1S:589:C:H2'	78:1S:590:C:C6	2.54	0.42
78:1S:891:A:H2'	78:1S:892:A:C8	2.54	0.42
78:1S:989:U:H2'	78:1S:990:C:H6	1.82	0.42
78:1S:1208:A:H2	78:1S:1209:C:C6	2.37	0.42
78:1S:1225:U:H2'	78:1S:1226:A:H5'	2.01	0.42
79:2S:562:C:H2'	79:2S:563:U:C6	2.54	0.42
79:2S:761:A:H2'	79:2S:762:U:H6	1.84	0.42
79:2S:837:A:H3'	79:2S:838:G:H8	1.84	0.42
79:2S:1054:A:H5''	79:2S:2637:A:N6	2.28	0.42
79:2S:1813:A:H2'	79:2S:1814:A:C5'	2.39	0.42
79:2S:1914:G:H2'	79:2S:1915:A:H8	1.84	0.42
79:2S:3212:C:H2'	79:2S:3213:A:H5'	2.00	0.42
83:PT:4:G:H2'	83:PT:5:G:H8	1.83	0.42
6:L6:26:ARG:NH1	6:L6:26:ARG:HB2	2.34	0.42
8:L8:37:GLY:HA3	79:2S:2550:U:H6	1.84	0.42
9:L9:39:LYS:HZ3	79:2S:3184:A:H4'	1.83	0.42
10:60:17:TYR:N	10:60:18:PRO:HD3	2.34	0.42
10:60:64:ALA:HA	79:2S:2853:A:H4'	2.00	0.42
13:63:106:GLN:HB3	36:86:18:THR:CG2	2.47	0.42
15:65:72:LYS:HA	15:65:89:VAL:O	2.19	0.42
15:65:94:TYR:CE2	15:65:96:ARG:HB2	2.54	0.42
16:66:73:PHE:CD2	16:66:78:ARG:HB3	2.54	0.42
17:67:139:TYR:CE1	79:2S:1507:G:H1'	2.54	0.42
17:67:159:LYS:HD3	17:67:159:LYS:N	2.34	0.42
18:68:122:ILE:HG22	18:68:123:THR:O	2.19	0.42
21:71:39:ILE:HD12	21:71:102:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:65:GLN:HA	25:75:66:PRO:HD3	1.76	0.42
35:85:45:LYS:HE2	35:85:49:LYS:NZ	2.35	0.42
36:86:21:THR:HA	36:86:22:PRO:HD2	1.94	0.42
42:92:10:THR:O	42:92:20:HIS:HA	2.20	0.42
46:S0:170:ILE:H	46:S0:170:ILE:CD1	2.29	0.42
50:S4:9:LEU:CD2	50:S4:28:ALA:HB3	2.50	0.42
52:S6:123:GLY:HA2	52:S6:127:THR:HG22	2.01	0.42
54:S8:21:PHE:O	54:S8:22:ARG:HG2	2.19	0.42
54:S8:119:GLN:HG3	54:S8:150:ALA:HB1	2.01	0.42
55:S9:105:LEU:HA	55:S9:108:ARG:HG3	2.01	0.42
58:12:113:ARG:HD3	58:12:114:LYS:H	1.83	0.42
65:19:73:VAL:CG2	65:19:105:LEU:HD11	2.49	0.42
66:20:53:LYS:O	66:20:54:GLY:O	2.37	0.42
76:30:49:LEU:HD21	76:30:58:PRO:HG3	2.01	0.42
78:1S:1075:C:H2'	78:1S:1076:A:H4'	2.01	0.42
79:2S:83:U:H2'	79:2S:84:U:O4'	2.20	0.42
79:2S:411:U:H2'	79:2S:412:G:C8	2.54	0.42
79:2S:790:U:H2'	79:2S:791:A:C8	2.54	0.42
79:2S:2697:A:H2'	79:2S:2698:G:H8	1.83	0.42
80:8S:69:U:C2'	80:8S:70:G:H5'	2.49	0.42
4:L4:122:THR:O	4:L4:126:ILE:HG13	2.19	0.42
4:L4:151:VAL:HA	4:L4:250:TRP:HB2	2.00	0.42
5:L5:107:ARG:HA	5:L5:107:ARG:NE	2.34	0.42
6:L6:108:LYS:HB2	79:2S:3271:G:O2'	2.18	0.42
8:L8:50:VAL:CG2	8:L8:52:TRP:HE1	2.29	0.42
9:L9:112:ILE:O	9:L9:125:ASN:HA	2.19	0.42
9:L9:135:GLU:HG3	9:L9:145:VAL:HB	2.01	0.42
13:63:124:ILE:CG1	35:85:117:ALA:HB3	2.50	0.42
15:65:139:HIS:CE1	79:2S:126:U:H4'	2.45	0.42
23:73:12:ARG:HH11	23:73:12:ARG:HG3	1.84	0.42
27:77:123:GLN:O	27:77:124:ALA:HB3	2.18	0.42
30:80:70:PHE:CD2	30:80:77:LEU:HD13	2.54	0.42
36:86:81:THR:HG23	36:86:82:ARG:HG3	2.02	0.42
42:92:49:GLY:HA2	79:2S:277:G:O5'	2.19	0.42
46:S0:167:LYS:HB3	46:S0:168:HIS:H	1.49	0.42
50:S4:163:ASP:OD1	50:S4:166:SER:HB2	2.19	0.42
51:S5:26:ALA:HB3	62:16:28:LEU:CA	2.48	0.42
52:S6:39:GLU:HA	52:S6:46:LYS:HA	2.00	0.42
60:14:21:ALA:HB3	60:14:83:ILE:HD11	2.01	0.42
61:15:87:PRO:O	61:15:90:ILE:HG13	2.18	0.42
63:17:45:ARG:HE	78:1S:1331:A:H5''	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:17:100:LEU:CB	63:17:118:PRO:HG2	2.49	0.42
64:18:18:LEU:O	64:18:19:ASN:HB2	2.20	0.42
66:20:57:ARG:NH1	78:1S:1344:A:H1'	2.35	0.42
66:20:117:VAL:CG2	66:20:118:VAL:N	2.81	0.42
74:28:5:THR:HB	74:28:6:PRO:HD2	2.01	0.42
78:1S:29:U:H2'	78:1S:30:G:H8	1.84	0.42
78:1S:94:U:H2'	78:1S:95:G:O4'	2.18	0.42
78:1S:1750:A:H2'	78:1S:1751:C:C6	2.54	0.42
79:2S:140:C:H2'	79:2S:141:C:C6	2.55	0.42
79:2S:623:U:H2'	79:2S:624:G:O4'	2.19	0.42
79:2S:1393:A:N6	79:2S:1417:G:H1'	2.34	0.42
79:2S:1938:U:O2'	79:2S:2114:C:H2'	2.19	0.42
79:2S:2329:C:H2'	79:2S:2330:C:C6	2.55	0.42
79:2S:2332:A:H2'	79:2S:2333:C:O4'	2.19	0.42
3:L3:183:LEU:H	3:L3:183:LEU:HD12	1.84	0.42
4:L4:311:HIS:NE2	4:L4:314:LYS:HB2	2.34	0.42
6:L6:70:LYS:HE2	79:2S:3266:G:OP2	2.18	0.42
8:L8:64:ILE:O	8:L8:68:ARG:HB2	2.19	0.42
10:60:163:GLN:HE21	10:60:163:GLN:HB3	1.72	0.42
10:60:177:ASP:HB2	10:60:180:GLU:HB2	2.02	0.42
14:64:9:ALA:O	14:64:10:SER:HB2	2.19	0.42
15:65:66:VAL:HG22	15:65:128:LYS:O	2.20	0.42
17:67:88:VAL:O	17:67:92:GLN:HG2	2.19	0.42
19:69:81:ARG:HG2	19:69:88:ARG:CZ	2.49	0.42
24:74:132:GLY:O	24:74:134:GLN:HG2	2.18	0.42
27:77:4:PHE:HE1	30:80:35:ARG:HG2	1.84	0.42
31:81:30:PRO:HG3	31:81:60:TRP:CH2	2.51	0.42
31:81:78:LYS:O	31:81:89:LEU:HD22	2.19	0.42
39:89:10:LYS:HA	39:89:13:MET:CE	2.49	0.42
44:P0:76:LEU:O	44:P0:76:LEU:HD13	2.19	0.42
46:S0:29:VAL:HG13	46:S0:150:ASP:HB2	2.01	0.42
48:S2:66:PHE:O	48:S2:69:ILE:HG13	2.19	0.42
59:13:84:ILE:CD1	59:13:150:VAL:HG23	2.49	0.42
60:14:124:ASP:O	60:14:125:SER:HB2	2.19	0.42
62:16:31:VAL:O	62:16:32:ASN:HB2	2.19	0.42
68:22:103:ILE:HD13	68:22:104:LEU:N	2.35	0.42
70:24:12:VAL:HA	70:24:23:PHE:HB3	2.01	0.42
70:24:50:ALA:O	70:24:51:GLU:CB	2.67	0.42
75:29:31:ILE:CG2	75:29:33:LYS:HB2	2.49	0.42
78:1S:1113:A:H8	78:1S:1113:A:OP1	2.02	0.42
78:1S:1461:C:H2'	78:1S:1462:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1660:A:H2'	78:1S:1661:U:C6	2.54	0.42
79:2S:70:A:H2	79:2S:72:C:H42	1.68	0.42
79:2S:337:G:H3'	79:2S:338:A:C5'	2.48	0.42
79:2S:543:C:C2'	79:2S:544:C:H5'	2.49	0.42
79:2S:639:G:H2'	79:2S:640:U:O4'	2.18	0.42
79:2S:897:U:H2'	79:2S:898:U:C6	2.54	0.42
79:2S:915:A:H3'	79:2S:915:A:N3	2.35	0.42
79:2S:924:G:H3'	79:2S:925:A:H5'	2.01	0.42
79:2S:972:A:H2'	79:2S:973:A:C8	2.54	0.42
79:2S:1018:G:H2'	79:2S:1019:G:C8	2.54	0.42
79:2S:1155:C:O2	79:2S:1155:C:H2'	2.19	0.42
79:2S:1171:G:H2'	79:2S:1172:G:O4'	2.20	0.42
79:2S:2412:G:H2'	79:2S:2413:A:H8	1.84	0.42
79:2S:2489:C:H41	79:2S:2490:C:N4	2.18	0.42
79:2S:2897:A:H2'	79:2S:2899:C:C5'	2.49	0.42
79:2S:3187:A:H2	79:2S:3205:G:H22	1.64	0.42
80:8S:5:U:H6	80:8S:5:U:O5'	2.02	0.42
80:8S:154:C:H2'	80:8S:155:A:H8	1.85	0.42
2:L2:30:ARG:NH1	2:L2:72:ARG:HH22	2.16	0.42
2:L2:117:GLU:HB2	2:L2:162:ALA:HB1	2.02	0.42
3:L3:193:ASP:HA	3:L3:196:ARG:HB3	2.01	0.42
6:L6:28:GLN:HG3	79:2S:501:A:H4'	2.02	0.42
6:L6:132:ALA:HA	6:L6:135:VAL:CG2	2.49	0.42
8:L8:152:LEU:HB2	8:L8:198:ALA:HB3	2.01	0.42
10:60:181:TYR:O	10:60:185:ARG:HB2	2.20	0.42
13:63:165:SER:O	13:63:166:ALA:CB	2.67	0.42
14:64:13:ARG:HD3	14:64:65:LEU:CB	2.49	0.42
14:64:68:LEU:HB3	14:64:90:VAL:CG2	2.50	0.42
14:64:129:TYR:O	14:64:133:LYS:HG3	2.19	0.42
25:75:113:LEU:C	25:75:113:LEU:HD12	2.40	0.42
28:78:135:GLU:O	28:78:139:ARG:HG2	2.19	0.42
31:81:61:LYS:HD2	31:81:61:LYS:HA	1.91	0.42
36:86:81:THR:HG23	36:86:82:ARG:N	2.34	0.42
47:S1:133:TYR:CD2	47:S1:180:THR:HG21	2.54	0.42
48:S2:148:LEU:O	67:21:3:ASN:HB2	2.19	0.42
53:S7:114:ARG:HG2	78:1S:860:U:O4'	2.19	0.42
54:S8:43:ILE:HG12	54:S8:57:ALA:HA	2.01	0.42
54:S8:103:GLN:CD	54:S8:164:ARG:HD2	2.39	0.42
55:S9:172:VAL:HG11	78:1S:512:A:N7	2.35	0.42
57:11:130:PRO:HA	57:11:136:ARG:HG2	2.01	0.42
62:16:40:GLU:CA	62:16:42:GLU:H	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:24:125:LEU:HA	70:24:128:LYS:HB2	2.01	0.42
78:1S:205:U:H2'	78:1S:206:A:C8	2.54	0.42
78:1S:712:G:C3'	78:1S:713:A:H5''	2.49	0.42
78:1S:1132:A:H2'	78:1S:1133:A:C8	2.54	0.42
78:1S:1779:U:H2'	78:1S:1781:A:OP2	2.19	0.42
79:2S:71:A:N6	79:2S:303:G:H1'	2.35	0.42
79:2S:551:A:O2'	79:2S:552:G:H5''	2.19	0.42
79:2S:900:G:H2'	79:2S:901:G:H8	1.83	0.42
79:2S:1358:C:H2'	79:2S:1359:C:C6	2.55	0.42
79:2S:1405:U:H2'	79:2S:1406:A:O4'	2.20	0.42
79:2S:1520:G:H2'	79:2S:1521:G:O4'	2.20	0.42
79:2S:2082:U:H2'	79:2S:2085:U:H3	1.85	0.42
79:2S:2160:G:H2'	79:2S:2161:G:C8	2.55	0.42
79:2S:2417:U:H1'	79:2S:2966:G:N2	2.33	0.42
79:2S:2583:C:H2'	79:2S:2584:G:C8	2.54	0.42
79:2S:2635:A:H4'	79:2S:2636:A:N3	2.35	0.42
79:2S:2711:C:O2'	79:2S:2744:U:H5''	2.19	0.42
79:2S:3121:U:H1'	79:2S:3122:A:H5''	2.01	0.42
1:L1:75:ASP:HB2	1:L1:76:ARG:NH1	2.35	0.42
1:L1:147:LYS:HD3	1:L1:152:ARG:NH1	2.35	0.42
2:L2:229:ALA:O	2:L2:234:LYS:HE3	2.19	0.42
3:L3:12:GLY:HA3	3:L3:233:TRP:CE3	2.55	0.42
4:L4:28:ALA:HB1	4:L4:29:PRO:CD	2.49	0.42
5:L5:68:THR:HG22	5:L5:69:ILE:H	1.85	0.42
8:L8:78:PHE:C	8:L8:79:GLN:HG2	2.40	0.42
8:L8:151:VAL:O	8:L8:177:TYR:HA	2.19	0.42
8:L8:185:ARG:HD3	80:8S:155:A:C5'	2.48	0.42
11:61:80:LEU:O	11:61:84:LEU:HG	2.19	0.42
15:65:98:LEU:HD22	15:65:98:LEU:N	2.35	0.42
15:65:115:VAL:HB	15:65:160:GLU:OE1	2.18	0.42
17:67:139:TYR:CZ	79:2S:1507:G:H1'	2.55	0.42
24:74:83:THR:CB	52:S6:130:PRO:HA	2.48	0.42
30:80:78:GLY:HA2	30:80:87:VAL:HG12	2.02	0.42
32:82:71:HIS:CB	32:82:93:ALA:HB2	2.50	0.42
33:83:24:ASN:ND2	33:83:26:ASN:HB2	2.35	0.42
34:84:10:ARG:HH22	79:2S:1834:U:H4'	1.84	0.42
42:92:38:GLN:O	42:92:42:ARG:HB2	2.19	0.42
46:S0:3:LEU:CD2	46:S0:7:PHE:H	2.33	0.42
47:S1:216:LYS:C	47:S1:217:LEU:HD12	2.40	0.42
48:S2:58:LEU:HA	67:21:12:TYR:HE1	1.84	0.42
48:S2:116:LYS:HB2	48:S2:131:ILE:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:105:MET:O	49:S3:109:LEU:HG	2.19	0.42
49:S3:117:ARG:HA	49:S3:120:TYR:HD2	1.84	0.42
51:S5:84:LYS:NZ	78:1S:1615:C:N4	2.68	0.42
51:S5:171:ALA:O	51:S5:175:LEU:HG	2.20	0.42
52:S6:175:ILE:HG22	52:S6:178:LEU:HB2	2.01	0.42
61:15:47:ARG:HG2	61:15:47:ARG:HH21	1.84	0.42
61:15:80:MET:O	61:15:116:LEU:HD12	2.20	0.42
62:16:135:ARG:NH2	78:1S:1417:A:H5''	2.34	0.42
67:21:58:TYR:CE2	78:1S:1082:C:H1'	2.55	0.42
78:1S:621:A:O2'	78:1S:1106:U:H1'	2.20	0.42
78:1S:926:A:H2'	78:1S:927:C:C6	2.55	0.42
78:1S:1025:A:H2'	78:1S:1025:A:N3	2.35	0.42
78:1S:1595:U:O2	78:1S:1600:A:N1	2.52	0.42
78:1S:1621:U:H5'	78:1S:1622:G:OP1	2.19	0.42
79:2S:1123:U:H2'	79:2S:1124:U:H5'	2.02	0.42
79:2S:1408:G:H2'	79:2S:1409:G:H8	1.85	0.42
79:2S:2364:G:H1	79:2S:2396:G:H21	1.67	0.42
79:2S:2571:U:O2	79:2S:2571:U:H2'	2.19	0.42
79:2S:2635:A:H4'	79:2S:2636:A:O5'	2.19	0.42
79:2S:2857:C:H2'	79:2S:2858:U:C6	2.54	0.42
1:L1:30:GLU:HB2	1:L1:34:LEU:HD11	2.01	0.42
1:L1:60:ARG:HH21	1:L1:179:LEU:HD12	1.84	0.42
2:L2:196:TRP:HZ2	79:2S:2148:U:H5''	1.85	0.42
3:L3:141:GLY:O	3:L3:145:GLU:HG2	2.20	0.42
4:L4:51:ALA:HB3	80:8S:27:U:H4'	2.02	0.42
5:L5:265:TYR:HB3	81:5S:1:G:N2	2.35	0.42
6:L6:161:ALA:CB	14:64:118:PHE:HE2	2.33	0.42
8:L8:81:THR:HG21	8:L8:181:LYS:HD3	2.02	0.42
14:64:12:TRP:HZ2	79:2S:3186:A:H4'	1.85	0.42
14:64:73:PRO:HD3	14:64:84:LYS:HE3	2.02	0.42
17:67:118:GLN:HG3	79:2S:412:G:O2'	2.19	0.42
19:69:162:ARG:CB	19:69:162:ARG:HH11	2.32	0.42
32:82:19:ARG:HG2	32:82:20:HIS:H	1.85	0.42
35:85:68:GLN:HA	35:85:71:LYS:HB2	2.01	0.42
35:85:70:TYR:HA	35:85:73:LYS:HD2	2.02	0.42
36:86:32:ALA:HA	79:2S:298:U:H5'	2.02	0.42
46:S0:160:ILE:N	46:S0:160:ILE:HD12	2.34	0.42
47:S1:38:PHE:CG	47:S1:73:LEU:HD13	2.54	0.42
47:S1:136:ARG:NH1	47:S1:136:ARG:HB2	2.34	0.42
47:S1:176:VAL:C	47:S1:177:GLN:HG2	2.40	0.42
51:S5:61:TYR:CD1	51:S5:165:LEU:HD13	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:55:TYR:HB2	54:S8:176:SER:O	2.20	0.42
54:S8:106:ALA:HB2	54:S8:165:LEU:CG	2.50	0.42
64:18:39:GLY:H	78:1S:1566:U:H5''	1.85	0.42
71:25:80:LEU:O	71:25:84:GLU:HB2	2.20	0.42
78:1S:62:A:C4'	78:1S:269:G:H4'	2.47	0.42
78:1S:506:A:O2'	78:1S:507:U:H5'	2.20	0.42
78:1S:1693:A:H2'	78:1S:1694:A:O4'	2.20	0.42
79:2S:709:A:C4	79:2S:2788:C:H5'	2.54	0.42
79:2S:836:A:H2'	79:2S:837:A:H8	1.83	0.42
79:2S:1115:G:H5''	79:2S:1116:G:H5''	2.01	0.42
79:2S:1194:G:H2'	79:2S:1195:A:C8	2.55	0.42
79:2S:1446:A:H4'	79:2S:1447:G:H4'	2.01	0.42
79:2S:1713:G:H1'	79:2S:1731:A:N6	2.34	0.42
79:2S:1822:C:H2'	79:2S:1823:A:H8	1.84	0.42
79:2S:1944:U:H2'	79:2S:1945:A:H8	1.84	0.42
79:2S:2310:U:H2'	79:2S:2311:G:C8	2.55	0.42
79:2S:2595:A:H2'	79:2S:2596:U:H5'	2.01	0.42
79:2S:3130:A:C2	79:2S:3131:U:H5'	2.55	0.42
79:2S:3246:G:H4'	79:2S:3247:G:C8	2.54	0.42
1:L1:18:LYS:HE2	1:L1:18:LYS:HA	2.00	0.42
3:L3:29:VAL:HG22	3:L3:218:ILE:HD13	2.00	0.42
6:L6:75:PRO:HD2	6:L6:77:ARG:HD2	2.02	0.42
6:L6:153:PRO:O	6:L6:154:LEU:HB2	2.20	0.42
7:L7:105:LEU:HD22	79:2S:1101:G:H1'	2.02	0.42
14:64:72:LEU:HD22	14:64:84:LYS:HG3	2.01	0.42
16:66:120:VAL:HG13	20:70:162:THR:O	2.20	0.42
17:67:111:LYS:O	17:67:153:LYS:HB2	2.20	0.42
17:67:119:VAL:O	17:67:119:VAL:HG13	2.19	0.42
21:71:51:GLY:H	79:2S:2735:U:H4'	1.85	0.42
21:71:75:ILE:O	21:71:76:ILE:HD13	2.20	0.42
23:73:38:ALA:HB3	23:73:59:MET:HB2	2.02	0.42
38:88:3:ARG:HB3	38:88:52:TYR:CD1	2.54	0.42
38:88:8:ILE:H	38:88:8:ILE:CD1	2.31	0.42
45:RC:266:ASP:HA	45:RC:267:PRO:HA	1.84	0.42
46:S0:62:ARG:HH11	46:S0:62:ARG:HG3	1.84	0.42
52:S6:142:ARG:HA	52:S6:147:LEU:HD12	2.02	0.42
61:15:70:ASN:O	61:15:71:GLU:HB2	2.19	0.42
62:16:35:PRO:CD	65:19:8:ASP:HA	2.49	0.42
68:22:53:ILE:CD1	68:22:60:LYS:HB2	2.43	0.42
68:22:89:TRP:HA	68:22:92:ASN:HD22	1.83	0.42
72:26:4:LYS:HE3	72:26:5:ARG:NH2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:587:C:H2'	78:1S:588:U:O4'	2.19	0.42
78:1S:755:A:H2'	78:1S:756:A:O4'	2.20	0.42
78:1S:779:U:C3'	78:1S:780:A:C5'	2.98	0.42
78:1S:1192:C:H2'	78:1S:1193:A:C8	2.55	0.42
78:1S:1208:A:C2	78:1S:1209:C:C6	3.08	0.42
78:1S:1246:C:H2'	78:1S:1247:U:H6	1.85	0.42
78:1S:1628:U:H2'	78:1S:1629:G:C8	2.54	0.42
79:2S:1074:U:O5'	79:2S:1074:U:H6	2.02	0.42
79:2S:1198:C:H5	79:2S:1199:C:HO2'	1.65	0.42
79:2S:2226:U:H2'	79:2S:2227:C:C6	2.55	0.42
79:2S:2329:C:H2'	79:2S:2330:C:H6	1.84	0.42
79:2S:3044:G:H2'	79:2S:3045:G:H8	1.84	0.42
83:PT:19:G:HO2'	83:PT:58:A:H2	1.64	0.42
1:L1:59:PRO:HG2	1:L1:60:ARG:HD2	2.02	0.42
1:L1:73:ASP:HA	1:L1:77:ALA:HB2	2.02	0.42
2:L2:136:ILE:HD12	2:L2:136:ILE:N	2.35	0.42
3:L3:362:ALA:HB2	3:L3:371:GLN:NE2	2.35	0.42
5:L5:164:LYS:HE2	5:L5:180:PHE:CZ	2.54	0.42
5:L5:224:LYS:HD2	81:5S:50:U:H4'	2.02	0.42
8:L8:72:PRO:HG2	8:L8:74:THR:CG2	2.50	0.42
9:L9:90:MET:HE3	9:L9:181:VAL:HG22	2.01	0.42
11:61:49:LYS:HG2	11:61:64:LYS:HG2	2.01	0.42
14:64:89:ALA:CB	14:64:92:GLU:HG2	2.50	0.42
16:66:74:ARG:HG2	16:66:74:ARG:HH11	1.85	0.42
17:67:3:ARG:HB3	80:8S:12:A:H5''	2.02	0.42
17:67:67:ILE:CG2	17:67:68:GLY:N	2.83	0.42
18:68:169:GLY:O	18:68:172:PHE:HB2	2.19	0.42
19:69:91:SER:HA	19:69:94:VAL:CG2	2.50	0.42
20:70:89:ASN:O	79:2S:1214:U:H5'	2.20	0.42
22:72:77:LYS:O	22:72:81:LYS:HE2	2.19	0.42
31:81:29:ALA:HB3	31:81:30:PRO:HD3	2.01	0.42
41:91:6:ARG:HG3	41:91:6:ARG:HH11	1.85	0.42
46:S0:31:VAL:HB	46:S0:34:GLU:HG3	2.01	0.42
46:S0:38:PHE:O	46:S0:39:ASN:HB2	2.19	0.42
47:S1:163:ALA:HA	47:S1:166:LYS:HE3	2.02	0.42
48:S2:140:ARG:NH1	67:21:10:GLU:HG2	2.35	0.42
53:S7:157:LYS:O	53:S7:158:ASP:HB2	2.20	0.42
54:S8:99:ALA:CB	78:1S:329:G:H5'	2.48	0.42
55:S9:143:ILE:HG22	55:S9:145:SER:H	1.84	0.42
55:S9:168:ARG:HA	55:S9:169:PRO:HD3	1.90	0.42
61:15:126:VAL:HG13	61:15:127:ARG:N	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:27:GLY:HA2	62:16:63:ILE:O	2.20	0.42
78:1S:71:A:C6	78:1S:72:A:H1'	2.55	0.42
78:1S:81:G:H2'	78:1S:82:U:O4'	2.19	0.42
78:1S:606:A:C8	78:1S:608:U:H2'	2.55	0.42
78:1S:836:U:H2'	78:1S:837:G:C8	2.54	0.42
78:1S:1565:C:H2'	78:1S:1566:U:C6	2.54	0.42
79:2S:188:U:H2'	79:2S:223:U:O2'	2.20	0.42
79:2S:413:U:H2'	79:2S:414:U:C6	2.54	0.42
79:2S:437:G:H2'	79:2S:438:A:O4'	2.20	0.42
79:2S:655:C:H2'	79:2S:656:A:C8	2.55	0.42
79:2S:704:U:O5'	79:2S:704:U:H6	2.03	0.42
79:2S:846:A:H2'	79:2S:847:A:O4'	2.20	0.42
79:2S:1844:C:O5'	79:2S:1844:C:H6	2.02	0.42
79:2S:2109:U:O2'	79:2S:2110:G:H5'	2.19	0.42
79:2S:2112:U:H4'	79:2S:2113:A:C5'	2.49	0.42
79:2S:2422:C:H2'	79:2S:2423:U:H6	1.84	0.42
79:2S:2629:U:H2'	79:2S:2630:C:C6	2.55	0.42
79:2S:2663:G:H2'	79:2S:2664:C:O4'	2.20	0.42
79:2S:3105:U:C5	79:2S:3128:G:N2	2.88	0.42
80:8S:47:C:H1'	80:8S:61:A:H2'	2.02	0.42
81:5S:80:G:H2'	81:5S:81:U:C6	2.54	0.42
1:L1:207:LYS:HG2	1:L1:208:SER:H	1.85	0.42
2:L2:5:ILE:HD12	2:L2:7:ASN:HD21	1.85	0.42
2:L2:87:PHE:C	2:L2:88:ILE:HD12	2.40	0.42
3:L3:56:ILE:HD13	3:L3:76:VAL:CG2	2.50	0.42
3:L3:290:ASP:HB3	3:L3:293:ASN:OD1	2.20	0.42
4:L4:11:LEU:HD21	4:L4:155:ASP:HB2	2.01	0.42
5:L5:91:GLY:HA3	5:L5:94:ASN:ND2	2.35	0.42
7:L7:240:VAL:O	7:L7:244:ASN:HB3	2.20	0.42
8:L8:166:LEU:HB2	8:L8:167:PRO:HD3	2.02	0.42
13:63:57:VAL:HG22	13:63:147:ILE:CD1	2.43	0.42
14:64:125:LYS:O	14:64:129:TYR:HB2	2.19	0.42
15:65:38:ARG:NH1	15:65:60:VAL:HG13	2.33	0.42
16:66:37:ARG:HG2	16:66:107:GLY:CA	2.48	0.42
17:67:85:ALA:O	17:67:89:LYS:HG3	2.19	0.42
19:69:115:ILE:HG12	19:69:116:ASP:N	2.34	0.42
20:70:135:VAL:HG13	20:70:140:VAL:HB	2.02	0.42
31:81:55:LEU:HD21	31:81:73:LEU:CD1	2.50	0.42
32:82:74:PHE:HD2	32:82:85:LEU:HD11	1.84	0.42
33:83:53:TYR:CZ	33:83:65:ARG:HB2	2.55	0.42
38:88:62:ALA:O	38:88:66:ILE:HG13	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:93:39:CYS:O	43:93:43:GLY:HA2	2.20	0.42
47:S1:165:ARG:HA	47:S1:168:ILE:HD12	2.02	0.42
48:S2:52:THR:HG22	48:S2:54:GLU:H	1.85	0.42
49:S3:172:THR:HA	49:S3:184:ILE:O	2.20	0.42
50:S4:63:ALA:O	50:S4:67:GLN:HG3	2.20	0.42
56:10:87:VAL:N	56:10:88:PRO:HD3	2.35	0.42
57:11:99:ARG:CB	69:23:12:ALA:HB2	2.48	0.42
60:14:46:MET:HG2	78:1S:899:G:H4'	2.01	0.42
64:18:17:LEU:O	64:18:18:LEU:HB2	2.20	0.42
73:27:31:TYR:CD2	73:27:81:ARG:HG3	2.54	0.42
78:1S:769:A:H2'	78:1S:770:A:H8	1.79	0.42
79:2S:627:U:C4'	79:2S:1399:A:H1'	2.38	0.42
79:2S:757:C:H2'	79:2S:758:C:H4'	2.02	0.42
79:2S:998:A:H2'	79:2S:999:G:H8	1.84	0.42
79:2S:1105:A:H2'	79:2S:1106:G:C8	2.55	0.42
79:2S:1283:C:H2'	79:2S:1284:C:H5'	2.02	0.42
79:2S:1457:U:H2'	79:2S:1458:U:C6	2.55	0.42
79:2S:1787:A:H3'	79:2S:1788:C:H5''	2.02	0.42
79:2S:2101:C:O2'	79:2S:2102:U:H5''	2.20	0.42
79:2S:2226:U:H2'	79:2S:2227:C:H6	1.85	0.42
79:2S:2897:A:N3	79:2S:2899:C:H5''	2.35	0.42
79:2S:2975:U:H2'	79:2S:2976:A:C8	2.54	0.42
81:5S:19:C:H2'	81:5S:20:A:C8	2.54	0.42
1:L1:13:VAL:HG22	1:L1:14:LYS:N	2.33	0.41
2:L2:193:ARG:NH1	79:2S:2181:C:H5''	2.35	0.41
6:L6:158:TYR:CE1	14:64:115:PHE:HA	2.55	0.41
9:L9:134:ILE:N	9:L9:134:ILE:HD12	2.34	0.41
11:61:11:ASP:O	11:61:12:LEU:HB2	2.19	0.41
16:66:21:SER:HB3	79:2S:1181:U:O4	2.20	0.41
16:66:27:LEU:HD22	16:66:101:ARG:HB2	2.02	0.41
16:66:141:LEU:O	16:66:145:VAL:HG13	2.20	0.41
18:68:141:ARG:HD3	79:2S:744:A:H1'	2.02	0.41
25:75:22:LYS:HE2	79:2S:3:U:C6	2.55	0.41
25:75:82:LEU:HD11	25:75:126:LEU:HD21	2.02	0.41
29:79:15:LYS:HA	29:79:18:ARG:CG	2.50	0.41
31:81:51:LEU:HD12	79:2S:1459:C:H4'	2.01	0.41
31:81:55:LEU:CB	31:81:95:PRO:HD3	2.48	0.41
33:83:42:GLN:NE2	33:83:45:LEU:CD1	2.83	0.41
34:84:65:VAL:CG1	34:84:66:SER:H	2.31	0.41
42:92:15:LYS:HD3	42:92:18:ARG:NH1	2.27	0.41
47:S1:183:GLN:O	47:S1:187:LYS:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S2:41:LEU:O	48:S2:41:LEU:HD13	2.20	0.41
51:S5:110:ALA:HA	51:S5:113:ILE:HD12	2.02	0.41
56:10:15:LEU:CD1	56:10:21:VAL:HG23	2.37	0.41
59:13:70:LYS:O	59:13:74:ILE:HG13	2.18	0.41
60:14:30:VAL:HG12	60:14:40:ALA:O	2.20	0.41
62:16:40:GLU:CA	62:16:42:GLU:N	2.74	0.41
64:18:139:LYS:HG3	78:1S:1459:C:N4	2.34	0.41
65:19:66:TYR:HD1	65:19:66:TYR:O	2.02	0.41
67:21:36:VAL:O	67:21:51:VAL:HG23	2.20	0.41
71:25:98:GLN:HA	71:25:98:GLN:NE2	2.34	0.41
78:1S:487:G:H3'	78:1S:488:G:C5'	2.49	0.41
78:1S:766:U:H5''	78:1S:768:C:P	2.60	0.41
78:1S:1113:A:OP1	78:1S:1115:U:H1'	2.21	0.41
78:1S:1146:G:N2	78:1S:1635:A:H1'	2.35	0.41
79:2S:757:C:H2'	79:2S:758:C:C4'	2.50	0.41
79:2S:3203:U:H2'	79:2S:3204:C:C6	2.55	0.41
80:8S:63:G:N3	80:8S:63:G:H2'	2.34	0.41
80:8S:80:A:O2'	80:8S:81:U:H5'	2.19	0.41
80:8S:117:C:O2'	80:8S:118:C:H5'	2.20	0.41
81:5S:27:A:H2'	81:5S:28:C:C6	2.55	0.41
2:L2:34:TYR:HB2	79:2S:2525:G:C8	2.56	0.41
3:L3:224:HIS:HB3	3:L3:270:ARG:NH2	2.35	0.41
3:L3:328:ILE:O	79:2S:3047:U:H4'	2.20	0.41
4:L4:13:GLY:O	4:L4:14:GLU:O	2.39	0.41
4:L4:205:PRO:HG2	4:L4:225:VAL:HG13	2.01	0.41
4:L4:240:PRO:HG2	4:L4:246:ARG:HE	1.85	0.41
6:L6:143:LYS:O	6:L6:147:ALA:HB2	2.20	0.41
7:L7:26:VAL:O	7:L7:30:ARG:HD3	2.20	0.41
8:L8:69:LEU:N	8:L8:69:LEU:HD12	2.36	0.41
8:L8:105:LYS:HE3	8:L8:108:ARG:HH22	1.85	0.41
11:61:72:ARG:HD2	81:5S:40:C:O2'	2.19	0.41
17:67:71:ALA:HB1	79:2S:3298:C:H5''	2.01	0.41
20:70:28:ARG:HH11	20:70:64:ILE:HG21	1.85	0.41
23:73:79:VAL:HG22	23:73:99:ALA:O	2.20	0.41
28:78:9:ARG:NH2	79:2S:1431:G:N7	2.66	0.41
31:81:14:ILE:CG2	31:81:71:LEU:HB2	2.47	0.41
36:86:26:ILE:HG21	79:2S:155:G:H21	1.84	0.41
47:S1:103:MET:HE2	47:S1:213:ARG:O	2.20	0.41
47:S1:213:ARG:CG	47:S1:214:LYS:HE3	2.48	0.41
48:S2:129:ILE:O	48:S2:133:LYS:HG2	2.20	0.41
48:S2:157:LYS:HA	48:S2:169:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:207:LEU:HD23	50:S4:221:ARG:HG2	2.02	0.41
62:16:51:PRO:O	62:16:55:VAL:HG12	2.20	0.41
63:17:71:PHE:O	63:17:72:LYS:HB3	2.20	0.41
64:18:4:VAL:HG11	71:25:47:TYR:HE2	1.83	0.41
68:22:71:LYS:HB2	78:1S:1098:U:O2	2.20	0.41
77:31:147:VAL:O	77:31:148:TYR:HB2	2.20	0.41
78:1S:622:A:H2	78:1S:1104:U:O2	2.01	0.41
78:1S:796:A:H8	78:1S:796:A:O5'	2.02	0.41
78:1S:823:G:H1	78:1S:849:C:H42	1.68	0.41
78:1S:1103:U:H2'	78:1S:1104:U:H6	1.85	0.41
78:1S:1269:U:H5'	78:1S:1432:U:OP2	2.20	0.41
78:1S:1349:G:O2'	78:1S:1350:U:H5'	2.20	0.41
79:2S:250:U:C5	79:2S:251:G:N7	2.88	0.41
79:2S:517:G:C2'	79:2S:518:G:H5'	2.50	0.41
79:2S:581:U:H2'	79:2S:582:G:H8	1.83	0.41
79:2S:956:U:C4'	79:2S:2726:C:H5''	2.48	0.41
79:2S:981:U:H2'	79:2S:982:C:C6	2.55	0.41
79:2S:1109:U:H2'	79:2S:1110:U:O4'	2.20	0.41
79:2S:1283:C:C2'	79:2S:1284:C:H5'	2.49	0.41
79:2S:1358:C:H2'	79:2S:1359:C:H6	1.85	0.41
79:2S:2883:U:H2'	79:2S:2884:C:C6	2.54	0.41
79:2S:3183:A:H2'	79:2S:3184:A:O4'	2.19	0.41
1:L1:72:PHE:HB3	1:L1:76:ARG:O	2.21	0.41
2:L2:44:ILE:N	2:L2:44:ILE:HD12	2.36	0.41
3:L3:246:LEU:HD23	79:2S:1889:G:H5'	2.01	0.41
4:L4:196:ASN:C	4:L4:197:ARG:HG3	2.41	0.41
6:L6:141:VAL:O	6:L6:145:LEU:HG	2.20	0.41
7:L7:89:ILE:HG12	7:L7:134:VAL:HA	2.02	0.41
14:64:13:ARG:HB3	14:64:65:LEU:HD13	2.01	0.41
16:66:3:VAL:CG1	16:66:4:GLU:H	2.24	0.41
16:66:134:LYS:NZ	79:2S:3123:A:H5''	2.35	0.41
21:71:75:ILE:HD13	21:71:76:ILE:N	2.36	0.41
25:75:24:LEU:HD21	80:8S:151:C:C6	2.54	0.41
37:87:63:ARG:O	37:87:64:MET:HB2	2.20	0.41
44:P0:67:LEU:O	44:P0:71:PRO:HB3	2.21	0.41
45:RC:223:TRP:HZ3	45:RC:230:ALA:HB1	1.86	0.41
46:S0:129:ASP:O	46:S0:133:ILE:HD13	2.20	0.41
50:S4:140:VAL:HG11	78:1S:295:A:O2'	2.20	0.41
52:S6:36:VAL:HG12	52:S6:37:ASP:H	1.84	0.41
53:S7:97:ARG:O	53:S7:98:ILE:CB	2.67	0.41
53:S7:97:ARG:NE	53:S7:97:ARG:HA	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:75:ALA:O	55:S9:79:ARG:HB2	2.20	0.41
61:15:94:VAL:O	61:15:105:VAL:HG22	2.20	0.41
64:18:134:ARG:HG3	64:18:134:ARG:NH1	2.36	0.41
69:23:103:LEU:HB3	69:23:126:LYS:H	1.86	0.41
78:1S:140:A:H5'	78:1S:141:U:C5	2.55	0.41
78:1S:950:C:H2'	78:1S:951:A:C1'	2.50	0.41
78:1S:988:A:H2'	78:1S:989:U:O4'	2.19	0.41
78:1S:1177:C:H2'	78:1S:1178:G:C8	2.55	0.41
78:1S:1774:G:H2'	78:1S:1775:U:C6	2.54	0.41
79:2S:40:A:N6	79:2S:963:G:H1'	2.35	0.41
79:2S:74:G:H2'	79:2S:75:G:C8	2.54	0.41
79:2S:273:A:H2'	79:2S:274:G:C8	2.55	0.41
79:2S:679:U:H2'	79:2S:680:G:C8	2.54	0.41
79:2S:803:C:O5'	79:2S:803:C:H6	2.03	0.41
79:2S:929:A:H2'	79:2S:930:U:C6	2.56	0.41
79:2S:1016:C:H4'	79:2S:1028:U:H5'	2.02	0.41
79:2S:1551:C:H2'	79:2S:1552:G:C8	2.55	0.41
79:2S:1571:A:C2'	79:2S:1572:U:H4'	2.48	0.41
79:2S:2356:A:H62	79:2S:2983:C:H5	1.67	0.41
79:2S:2638:C:H3'	79:2S:2639:G:C8	2.55	0.41
79:2S:3130:A:H3'	79:2S:3130:A:N3	2.35	0.41
2:L2:23:ARG:HG3	2:L2:23:ARG:NH1	2.34	0.41
2:L2:116:VAL:HG22	2:L2:117:GLU:N	2.34	0.41
2:L2:200:ARG:HH21	2:L2:200:ARG:HB3	1.84	0.41
3:L3:369:ARG:CZ	3:L3:369:ARG:HB3	2.49	0.41
4:L4:326:ARG:NH1	79:2S:608:A:H4'	2.35	0.41
5:L5:36:LEU:HG	79:2S:2748:A:N3	2.35	0.41
7:L7:60:ARG:HA	7:L7:60:ARG:NE	2.35	0.41
11:61:151:SER:HB2	81:5S:56:A:H5'	2.02	0.41
13:63:73:ARG:HG3	13:63:73:ARG:NH2	2.35	0.41
13:63:137:GLN:HE21	13:63:137:GLN:HB2	1.61	0.41
19:69:60:LYS:HD3	19:69:60:LYS:N	2.35	0.41
21:71:93:VAL:HA	21:71:96:ILE:HD13	2.03	0.41
28:78:2:PRO:CD	79:2S:792:G:H5''	2.50	0.41
30:80:42:ILE:CD1	30:80:60:ALA:HB2	2.50	0.41
33:83:23:ASN:ND2	79:2S:633:C:H1'	2.34	0.41
35:85:86:ARG:HD3	80:8S:36:G:N7	2.35	0.41
39:89:21:ARG:HB2	39:89:22:PRO:CD	2.50	0.41
44:P0:60:ARG:O	44:P0:64:ARG:HG3	2.21	0.41
45:RC:16:HIS:HB2	45:RC:308:ASN:HB3	2.03	0.41
46:S0:29:VAL:CG2	46:S0:30:GLN:H	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:29:VAL:HG23	78:1S:1041:G:H4'	2.02	0.41
47:S1:218:LEU:HD13	47:S1:218:LEU:N	2.35	0.41
50:S4:162:ILE:HG22	50:S4:163:ASP:N	2.36	0.41
54:S8:172:ARG:HA	54:S8:173:PRO:HD3	1.90	0.41
60:14:39:ILE:O	60:14:39:ILE:HG13	2.20	0.41
61:15:28:MET:CE	61:15:36:LEU:HD11	2.50	0.41
63:17:14:LYS:HG2	63:17:15:ALA:N	2.34	0.41
66:20:106:ILE:CG1	66:20:107:THR:H	2.25	0.41
72:26:18:VAL:O	72:26:19:LYS:HB2	2.20	0.41
78:1S:1147:A:H2'	78:1S:1148:C:O4'	2.21	0.41
78:1S:1752:U:H2'	78:1S:1753:A:C8	2.56	0.41
79:2S:374:A:H1'	79:2S:376:G:C5'	2.51	0.41
79:2S:517:G:H2'	79:2S:518:G:H5'	2.02	0.41
79:2S:689:U:H3'	79:2S:690:A:H8	1.85	0.41
79:2S:889:U:O2'	79:2S:890:C:H5'	2.20	0.41
79:2S:1200:A:C4'	79:2S:1201:C:H4'	2.51	0.41
79:2S:2547:A:H2'	79:2S:2548:C:H5'	2.02	0.41
79:2S:2922:G:H2'	79:2S:2923:U:C4'	2.50	0.41
79:2S:3158:G:N2	79:2S:3395:G:H1	2.09	0.41
2:L2:118:GLU:HG3	2:L2:125:ALA:HB1	2.03	0.41
2:L2:205:ASN:HB3	2:L2:206:PRO:CD	2.51	0.41
3:L3:119:TYR:CE2	3:L3:127:LYS:HA	2.55	0.41
6:L6:18:LEU:HD22	6:L6:18:LEU:H	1.85	0.41
7:L7:88:ARG:HG3	7:L7:111:ILE:HA	2.02	0.41
7:L7:130:ILE:O	7:L7:134:VAL:HG22	2.21	0.41
8:L8:94:PHE:HB3	8:L8:189:LEU:HD22	2.02	0.41
8:L8:132:VAL:CG1	8:L8:190:VAL:HG23	2.50	0.41
11:61:49:LYS:HE2	11:61:64:LYS:CE	2.50	0.41
13:63:56:PRO:HG3	13:63:74:GLY:C	2.40	0.41
13:63:93:ILE:O	13:63:93:ILE:HG22	2.21	0.41
14:64:46:ILE:O	14:64:55:ARG:HA	2.21	0.41
15:65:83:LYS:HD3	15:65:86:ASN:ND2	2.36	0.41
16:66:19:LEU:O	16:66:22:VAL:HG22	2.21	0.41
18:68:184:PHE:CG	79:2S:2730:G:H4'	2.56	0.41
19:69:11:ALA:O	19:69:15:VAL:HG23	2.21	0.41
19:69:110:ARG:HA	19:69:115:ILE:CG2	2.51	0.41
21:71:69:LYS:HE3	79:2S:2737:C:OP1	2.21	0.41
21:71:77:ASN:HA	21:71:85:LEU:O	2.20	0.41
26:76:51:ARG:HD3	26:76:110:HIS:HB3	2.03	0.41
28:78:32:ARG:HB3	79:2S:798:G:OP1	2.21	0.41
30:80:50:VAL:O	30:80:50:VAL:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:51:LEU:HD23	34:84:51:LEU:N	2.36	0.41
42:92:32:LYS:O	79:2S:2767:U:H5'	2.20	0.41
44:P0:69:ASP:O	44:P0:70:LEU:HB2	2.20	0.41
44:P0:105:VAL:HG22	44:P0:106:ALA:N	2.36	0.41
45:RC:236:ALA:O	45:RC:237:GLN:HB2	2.20	0.41
47:S1:134:VAL:HB	47:S1:218:LEU:HD22	2.01	0.41
49:S3:150:MET:HE3	49:S3:152:PHE:HZ	1.85	0.41
50:S4:150:PRO:HB2	50:S4:151:ASP:H	1.72	0.41
54:S8:172:ARG:NH2	78:1S:331:A:N7	2.69	0.41
55:S9:76:LEU:O	55:S9:80:LEU:HG	2.20	0.41
56:10:12:HIS:CB	56:10:76:LEU:HD11	2.47	0.41
58:12:84:ASN:HD22	58:12:84:ASN:HA	1.62	0.41
60:14:84:ARG:HA	60:14:119:THR:CG2	2.49	0.41
61:15:31:GLU:HG3	61:15:32:ASP:N	2.35	0.41
65:19:19:ALA:HA	65:19:55:TYR:CB	2.51	0.41
65:19:33:TYR:HA	65:19:36:ILE:HG12	2.02	0.41
70:24:131:ARG:HH21	70:24:131:ARG:HG3	1.86	0.41
74:28:31:GLU:HG3	74:28:38:ARG:O	2.20	0.41
78:1S:48:G:H2'	78:1S:49:C:O4'	2.21	0.41
78:1S:67:A:O2'	78:1S:69:G:H5'	2.21	0.41
78:1S:701:U:O5'	78:1S:701:U:H6	2.03	0.41
78:1S:969:C:H4'	78:1S:1104:U:H4'	2.01	0.41
78:1S:1363:U:O2'	78:1S:1364:G:H5'	2.21	0.41
78:1S:1733:C:H2'	78:1S:1734:U:H6	1.86	0.41
78:1S:1753:A:H3'	78:1S:1754:A:H8	1.85	0.41
79:2S:728:G:H2'	79:2S:729:C:H6	1.84	0.41
79:2S:1766:G:H2'	79:2S:1767:C:C6	2.56	0.41
79:2S:1861:G:H2'	79:2S:1862:U:C6	2.55	0.41
79:2S:1978:A:H2'	79:2S:1979:G:O4'	2.20	0.41
79:2S:3283:U:H2'	79:2S:3284:G:C8	2.55	0.41
81:5S:13:A:H5'	81:5S:14:U:H5	1.84	0.41
2:L2:230:VAL:HG12	2:L2:231:SER:N	2.36	0.41
2:L2:250:GLN:CG	2:L2:251:LYS:H	2.34	0.41
5:L5:33:ARG:HG3	5:L5:33:ARG:HH11	1.86	0.41
9:L9:90:MET:CE	9:L9:181:VAL:HG22	2.50	0.41
11:61:82:ARG:HG2	11:61:112:LEU:HB2	2.02	0.41
13:63:76:THR:O	13:63:80:VAL:HG23	2.20	0.41
13:63:158:ALA:HA	28:78:97:GLU:HA	2.03	0.41
14:64:82:SER:HA	14:64:85:TRP:HB2	2.02	0.41
17:67:65:SER:O	17:67:66:SER:HB2	2.21	0.41
20:70:117:ARG:HH21	20:70:117:ARG:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:31:ARG:HG3	34:84:32:ALA:N	2.35	0.41
35:85:68:GLN:HA	35:85:71:LYS:CG	2.51	0.41
38:88:26:LYS:HB3	38:88:44:LYS:HZ2	1.85	0.41
46:S0:42:PRO:CD	63:17:105:GLN:HB2	2.46	0.41
48:S2:40:LYS:O	48:S2:44:LEU:HG	2.20	0.41
53:S7:150:GLN:HB2	53:S7:181:ILE:HD12	2.03	0.41
53:S7:180:GLN:HE21	53:S7:180:GLN:HA	1.85	0.41
54:S8:185:GLU:HG2	54:S8:186:GLY:N	2.35	0.41
55:S9:54:ARG:HA	55:S9:57:ARG:HH21	1.84	0.41
60:14:19:ILE:O	60:14:84:ARG:HB3	2.20	0.41
61:15:97:TYR:HA	61:15:101:ALA:O	2.21	0.41
66:20:43:LYS:O	66:20:43:LYS:HG3	2.21	0.41
71:25:91:PRO:HA	71:25:101:TYR:HD1	1.86	0.41
72:26:50:VAL:HG13	72:26:51:ARG:N	2.35	0.41
78:1S:248:U:C4	78:1S:250:C:H1'	2.55	0.41
78:1S:869:A:H2'	78:1S:870:C:C6	2.56	0.41
78:1S:1340:U:C3'	78:1S:1341:A:H5'	2.49	0.41
79:2S:652:G:C2	79:2S:2361:A:H1'	2.55	0.41
79:2S:736:A:H8	79:2S:736:A:O5'	2.04	0.41
79:2S:834:U:H2'	79:2S:835:G:C5'	2.48	0.41
79:2S:3275:U:H3'	79:2S:3276:G:H4'	2.03	0.41
79:2S:3344:A:H5''	79:2S:3345:G:OP2	2.21	0.41
3:L3:4:ARG:HB3	3:L3:5:LYS:H	1.57	0.41
3:L3:227:GLU:CG	3:L3:228:GLY:N	2.84	0.41
3:L3:227:GLU:HG2	3:L3:231:HIS:HB3	2.02	0.41
3:L3:238:LEU:HD22	3:L3:238:LEU:H	1.83	0.41
3:L3:370:PHE:CD1	3:L3:376:LYS:HA	2.55	0.41
5:L5:74:VAL:HB	81:5S:117:A:O4'	2.20	0.41
5:L5:150:LEU:HB2	11:61:143:ARG:HD3	2.03	0.41
14:64:15:VAL:HG22	20:70:150:PHE:O	2.21	0.41
17:67:178:ALA:HA	17:67:181:ARG:HB3	2.02	0.41
19:69:155:LEU:HD23	19:69:155:LEU:O	2.20	0.41
21:71:108:ARG:HA	21:71:111:ALA:HB3	2.01	0.41
25:75:113:LEU:CG	25:75:121:LYS:HB3	2.51	0.41
25:75:113:LEU:HD11	25:75:121:LYS:HB3	2.02	0.41
32:82:60:ASN:O	32:82:64:LYS:HB2	2.21	0.41
37:87:51:ALA:HA	37:87:54:LYS:CE	2.46	0.41
38:88:23:ALA:CB	38:88:73:LEU:HD21	2.50	0.41
42:92:38:GLN:HG3	42:92:42:ARG:HH21	1.85	0.41
43:93:37:TYR:O	43:93:45:LYS:HA	2.20	0.41
44:P0:33:VAL:HG22	44:P0:184:GLY:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:109:ASN:HB2	78:1S:1294:G:C5'	2.51	0.41
47:S1:222:LYS:HD2	47:S1:222:LYS:N	2.36	0.41
50:S4:67:GLN:O	50:S4:68:ARG:HB2	2.21	0.41
50:S4:130:GLN:HE22	78:1S:295:A:H5'	1.85	0.41
50:S4:197:HIS:CE1	50:S4:209:HIS:HD2	2.39	0.41
51:S5:33:VAL:O	51:S5:37:GLN:HG3	2.21	0.41
52:S6:2:LYS:O	52:S6:108:VAL:HA	2.20	0.41
52:S6:67:VAL:CG2	52:S6:99:GLY:HA2	2.51	0.41
53:S7:28:GLU:HA	53:S7:34:LEU:O	2.20	0.41
54:S8:103:GLN:NE2	54:S8:164:ARG:HD2	2.35	0.41
55:S9:159:ALA:HA	55:S9:160:PRO:HD3	1.94	0.41
62:16:40:GLU:HA	62:16:42:GLU:H	1.76	0.41
64:18:86:LEU:HD12	64:18:86:LEU:N	2.36	0.41
68:22:80:ASN:HD22	68:22:124:LYS:HG2	1.85	0.41
69:23:59:ILE:HD11	76:30:4:VAL:HG13	2.01	0.41
76:30:49:LEU:HD23	76:30:49:LEU:N	2.30	0.41
78:1S:392:G:H2'	78:1S:393:C:C6	2.56	0.41
78:1S:1107:G:O2'	78:1S:1108:G:H5'	2.19	0.41
78:1S:1205:C:H2'	78:1S:1206:U:H5'	2.03	0.41
78:1S:1254:U:H2'	78:1S:1255:G:O4'	2.20	0.41
78:1S:1542:G:H22	78:1S:1568:C:H1'	1.81	0.41
78:1S:1665:U:H2'	78:1S:1666:U:C6	2.56	0.41
78:1S:1761:U:H1'	78:1S:1762:A:OP2	2.20	0.41
79:2S:180:C:H2'	79:2S:181:U:C6	2.55	0.41
79:2S:436:A:N6	79:2S:621:A:C8	2.84	0.41
79:2S:906:A:H2	79:2S:919:U:HO2'	1.69	0.41
79:2S:1363:A:H2'	79:2S:1364:C:H6	1.85	0.41
79:2S:1943:C:C4'	79:2S:3346:U:H4'	2.38	0.41
79:2S:2457:G:H1	79:2S:2461:A:H62	1.68	0.41
79:2S:2709:C:H2'	79:2S:2710:C:C6	2.55	0.41
1:L1:64:SER:CB	1:L1:151:VAL:HG21	2.51	0.41
2:L2:100:ASN:O	2:L2:166:ILE:HG12	2.21	0.41
5:L5:95:TRP:CZ3	5:L5:198:TYR:HB3	2.56	0.41
7:L7:47:ARG:HB3	7:L7:51:TYR:CE2	2.55	0.41
7:L7:136:TYR:CE2	7:L7:231:ASN:HB2	2.56	0.41
9:L9:111:PHE:HB3	9:L9:125:ASN:HB3	2.02	0.41
15:65:143:ARG:HA	15:65:152:CYS:SG	2.61	0.41
17:67:47:TYR:CE1	17:67:56:ARG:NE	2.88	0.41
17:67:67:ILE:HG23	79:2S:2351:U:OP1	2.21	0.41
20:70:42:TRP:CD1	20:70:53:LYS:HG3	2.56	0.41
21:71:54:HIS:CD2	21:71:55:LYS:H	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:82:96:ILE:HG22	32:82:97:ALA:N	2.35	0.41
44:P0:45:LEU:C	44:P0:47:GLY:H	2.24	0.41
45:RC:30:PRO:O	45:RC:47:LEU:HD12	2.21	0.41
46:S0:171:GLY:O	46:S0:175:TYR:HB2	2.20	0.41
47:S1:38:PHE:CD1	47:S1:73:LEU:HD13	2.56	0.41
50:S4:186:GLY:HA3	78:1S:753:A:OP1	2.21	0.41
51:S5:213:LYS:HD3	51:S5:213:LYS:HA	1.84	0.41
52:S6:25:ARG:HA	52:S6:28:PHE:CD1	2.55	0.41
52:S6:210:GLN:O	52:S6:214:LYS:HG3	2.20	0.41
54:S8:65:PHE:HD2	54:S8:76:THR:HG1	1.67	0.41
55:S9:92:LYS:O	55:S9:93:LEU:CB	2.59	0.41
55:S9:105:LEU:O	55:S9:111:THR:HG21	2.21	0.41
58:12:35:ALA:O	58:12:41:LEU:HG	2.21	0.41
58:12:48:SER:HA	58:12:122:VAL:HG21	2.02	0.41
61:15:22:LEU:HD22	61:15:109:PRO:HG2	2.02	0.41
62:16:19:VAL:HB	62:16:68:ARG:HH11	1.86	0.41
62:16:27:GLY:HA3	62:16:60:PHE:O	2.21	0.41
66:20:21:LYS:HA	66:20:94:GLU:HA	2.01	0.41
69:23:93:LEU:O	69:23:96:VAL:HG22	2.21	0.41
70:24:35:VAL:HG22	70:24:36:SER:N	2.35	0.41
71:25:68:ARG:HA	71:25:68:ARG:CZ	2.51	0.41
78:1S:79:C:C2'	78:1S:80:A:H5'	2.51	0.41
78:1S:294:C:H2'	78:1S:295:A:H8	1.86	0.41
78:1S:487:G:C2'	78:1S:488:G:H5''	2.49	0.41
78:1S:763:G:H2'	78:1S:764:U:O4'	2.21	0.41
78:1S:1124:A:H2'	78:1S:1125:A:O4'	2.19	0.41
78:1S:1392:U:H2'	78:1S:1393:C:C5	2.56	0.41
78:1S:1424:A:H2'	78:1S:1425:A:O4'	2.21	0.41
78:1S:1553:G:C1'	78:1S:1597:A:H2	2.33	0.41
79:2S:595:G:H2'	79:2S:596:C:O4'	2.20	0.41
79:2S:628:A:H2'	79:2S:629:U:O4'	2.21	0.41
79:2S:652:G:N2	79:2S:2361:A:H1'	2.35	0.41
79:2S:2128:C:H2'	79:2S:2129:U:O4'	2.20	0.41
79:2S:3155:U:H3'	79:2S:3156:U:C5'	2.50	0.41
2:L2:42:ARG:HD2	2:L2:87:PHE:CD1	2.55	0.41
2:L2:188:LYS:HE2	2:L2:192:LYS:HE3	2.03	0.41
3:L3:43:LEU:HD23	3:L3:181:ILE:CG2	2.50	0.41
3:L3:62:ARG:NH2	3:L3:349:LYS:HG3	2.36	0.41
3:L3:385:LYS:O	3:L3:386:ASP:HB2	2.21	0.41
4:L4:40:THR:CG2	79:2S:1426:C:H4'	2.51	0.41
4:L4:107:ARG:HG2	4:L4:108:LYS:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:120:TYR:CZ	4:L4:277:PRO:HB3	2.56	0.41
4:L4:291:ASN:O	4:L4:296:GLN:HG2	2.21	0.41
6:L6:51:ARG:HG2	6:L6:51:ARG:NH1	2.36	0.41
6:L6:65:ILE:HD13	6:L6:65:ILE:H	1.85	0.41
7:L7:221:LYS:HB3	7:L7:227:GLY:HA3	2.02	0.41
7:L7:232:ARG:NH1	7:L7:239:LEU:HG	2.35	0.41
13:63:7:LEU:HD22	79:2S:668:G:H1'	2.03	0.41
13:63:58:VAL:CG2	79:2S:75:G:H5''	2.51	0.41
15:65:113:LEU:HD22	15:65:113:LEU:N	2.35	0.41
19:69:171:ASP:O	19:69:175:GLN:HB2	2.21	0.41
20:70:74:ASN:HB2	20:70:129:ILE:HB	2.03	0.41
21:71:40:VAL:HB	21:71:97:LYS:O	2.21	0.41
21:71:75:ILE:HD13	21:71:75:ILE:C	2.40	0.41
21:71:124:VAL:O	21:71:125:ALA:HB3	2.21	0.41
23:73:87:ARG:HB2	23:73:91:VAL:O	2.21	0.41
24:74:82:ILE:HG21	24:74:85:ALA:HB3	2.02	0.41
27:77:22:LYS:NZ	27:77:129:TRP:O	2.54	0.41
28:78:44:ASN:HB2	79:2S:965:A:O2'	2.21	0.41
28:78:87:ARG:O	28:78:91:LEU:HB2	2.21	0.41
29:79:28:LYS:HD3	29:79:29:TYR:N	2.35	0.41
31:81:10:ARG:HG2	31:81:108:VAL:HG13	2.03	0.41
33:83:18:ARG:HB3	33:83:23:ASN:CB	2.51	0.41
33:83:29:LEU:O	33:83:30:ILE:HD13	2.21	0.41
33:83:58:GLU:HG3	33:83:62:SER:CA	2.49	0.41
34:84:4:ARG:NH1	79:2S:1858:A:N3	2.69	0.41
34:84:25:THR:HA	34:84:26:PRO:HD3	1.81	0.41
34:84:29:ILE:HD13	34:84:29:ILE:N	2.29	0.41
34:84:45:GLY:HA3	79:2S:1652:G:H4'	2.03	0.41
35:85:7:TYR:HA	35:85:10:ARG:NE	2.35	0.41
35:85:9:LEU:HB2	35:85:57:VAL:HG21	2.03	0.41
35:85:21:LEU:O	35:85:25:LYS:HG3	2.21	0.41
35:85:83:LYS:HE2	80:8S:38:U:O2'	2.21	0.41
37:87:33:THR:HA	37:87:39:TYR:O	2.21	0.41
37:87:52:LYS:HG2	37:87:55:ARG:NH2	2.36	0.41
37:87:79:GLN:HB2	80:8S:95:G:O4'	2.20	0.41
38:88:40:GLN:HE22	38:88:42:LYS:HE3	1.84	0.41
40:90:98:LYS:HE2	40:90:98:LYS:HB3	1.85	0.41
44:P0:95:GLU:O	44:P0:99:VAL:HG23	2.21	0.41
47:S1:149:GLN:HE22	78:1S:1066:C:H4'	1.85	0.41
47:S1:224:ASP:CA	79:2S:2536:A:H2'	2.51	0.41
49:S3:115:ILE:HG23	49:S3:116:ARG:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:217:ILE:O	49:S3:218:LEU:HB2	2.21	0.41
50:S4:45:ILE:HG23	50:S4:46:VAL:N	2.36	0.41
52:S6:183:ARG:HA	52:S6:186:ARG:HD2	2.02	0.41
53:S7:104:ARG:HG3	78:1S:803:A:C6	2.55	0.41
56:10:14:TYR:CD2	56:10:35:ILE:HD11	2.56	0.41
56:10:16:PHE:CD1	56:10:80:LEU:HD12	2.56	0.41
56:10:82:LEU:HB3	56:10:86:ILE:HG21	2.03	0.41
58:12:46:ARG:HD3	78:1S:1254:U:OP2	2.21	0.41
58:12:62:LEU:HB2	58:12:120:VAL:HG22	2.03	0.41
59:13:14:SER:OG	78:1S:960:U:H5	2.04	0.41
60:14:31:THR:CG2	60:14:38:THR:HB	2.50	0.41
61:15:84:ILE:CG2	61:15:85:ILE:N	2.83	0.41
62:16:114:ARG:HD3	62:16:114:ARG:HA	1.93	0.41
65:19:76:LEU:HD23	65:19:79:LEU:HD22	2.03	0.41
65:19:135:ILE:O	65:19:135:ILE:HD12	2.21	0.41
66:20:84:MET:HG2	66:20:85:ARG:N	2.35	0.41
69:23:23:ARG:HB3	69:23:29:TYR:CD1	2.56	0.41
69:23:70:LYS:HD2	76:30:8:LEU:HD23	2.03	0.41
69:23:75:GLN:HG3	69:23:82:LYS:HG3	2.03	0.41
71:25:95:HIS:CD2	71:25:98:GLN:HB2	2.56	0.41
72:26:39:MET:HB3	72:26:41:ILE:HG23	2.01	0.41
74:28:8:THR:CG2	74:28:56:LEU:HD12	2.50	0.41
78:1S:31:C:H2'	78:1S:32:U:O4'	2.21	0.41
78:1S:172:C:H2'	78:1S:173:A:C8	2.56	0.41
78:1S:1022:C:H5''	78:1S:1122:G:H4'	2.03	0.41
78:1S:1194:A:C2'	78:1S:1195:C:H5'	2.51	0.41
78:1S:1391:A:H2'	78:1S:1392:U:O4'	2.20	0.41
79:2S:618:C:O2'	79:2S:620:U:N3	2.52	0.41
79:2S:649:A:H4'	79:2S:2869:U:H5'	2.03	0.41
79:2S:1390:A:H4'	79:2S:1392:G:O4'	2.21	0.41
79:2S:1411:C:H2'	79:2S:1412:G:H8	1.85	0.41
79:2S:1645:U:O2	79:2S:1645:U:C2'	2.69	0.41
79:2S:1795:U:H4'	79:2S:1796:G:C4	2.55	0.41
79:2S:1902:G:H2'	79:2S:1903:U:O4'	2.21	0.41
79:2S:2457:G:H22	79:2S:2483:G:H21	1.68	0.41
79:2S:2468:A:H1'	79:2S:2477:G:H21	1.86	0.41
79:2S:2469:G:H1'	79:2S:2488:A:C2	2.56	0.41
79:2S:2511:A:H2'	79:2S:2512:C:H6	1.85	0.41
79:2S:2516:U:H1'	79:2S:2595:A:N6	2.35	0.41
79:2S:2716:U:O2'	79:2S:2717:U:H5'	2.21	0.41
79:2S:2784:G:H2'	79:2S:2785:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2828:G:H3'	79:2S:2829:U:H6	1.86	0.41
79:2S:2972:G:H2'	79:2S:2973:G:H8	1.86	0.41
80:8S:65:A:H2'	80:8S:66:A:C8	2.53	0.41
81:5S:19:C:H2'	81:5S:20:A:H8	1.86	0.41
83:PT:21:U:H3'	83:PT:22:A:H5'	2.02	0.41
2:L2:48:ILE:HD11	43:93:63:THR:O	2.20	0.41
2:L2:137:ILE:HG12	2:L2:148:VAL:CA	2.50	0.41
3:L3:163:HIS:HA	3:L3:177:HIS:O	2.21	0.41
4:L4:147:GLU:O	4:L4:150:LEU:HD13	2.21	0.41
4:L4:294:GLU:OE1	18:68:129:VAL:HG12	2.20	0.41
6:L6:138:GLN:O	6:L6:142:ASP:HB2	2.21	0.41
7:L7:125:GLU:O	7:L7:129:LEU:HG	2.21	0.41
10:60:20:SER:HB2	10:60:21:ARG:H	1.72	0.41
10:60:59:GLN:HA	10:60:127:ALA:O	2.21	0.41
10:60:176:LEU:HD13	10:60:184:LYS:HD2	2.02	0.41
14:64:22:LEU:O	14:64:63:VAL:HG23	2.21	0.41
17:67:22:LEU:O	17:67:24:VAL:HG23	2.21	0.41
21:71:20:ARG:NH1	81:5S:11:A:H62	2.18	0.41
21:71:68:THR:HG22	21:71:71:SER:O	2.20	0.41
30:80:40:LYS:HD2	30:80:40:LYS:N	2.36	0.41
33:83:18:ARG:HB2	33:83:22:VAL:O	2.21	0.41
46:S0:185:ARG:HB2	67:21:45:ALA:HB3	2.03	0.41
48:S2:88:LYS:HD3	78:1S:1301:U:C5'	2.50	0.41
50:S4:36:HIS:HB3	50:S4:41:SER:HB3	2.03	0.41
50:S4:42:LEU:HA	50:S4:43:PRO:HD3	1.91	0.41
50:S4:194:THR:O	50:S4:195:ILE:CG1	2.68	0.41
52:S6:77:LEU:HD13	52:S6:84:TYR:HB2	2.03	0.41
55:S9:37:LYS:HZ3	78:1S:475:A:H5''	1.84	0.41
57:11:118:GLN:HG2	57:11:119:VAL:H	1.86	0.41
61:15:8:LYS:NZ	61:15:9:LYS:HE3	2.36	0.41
72:26:92:ARG:HA	78:1S:1796:C:OP1	2.20	0.41
78:1S:176:C:C2'	78:1S:177:U:H5'	2.51	0.41
78:1S:222:A:H2'	78:1S:223:U:O4'	2.21	0.41
78:1S:478:A:H2'	78:1S:479:C:C6	2.56	0.41
78:1S:749:U:H2'	78:1S:750:U:C6	2.56	0.41
79:2S:637:C:H4'	79:2S:638:C:OP1	2.21	0.41
79:2S:746:A:H2'	79:2S:747:A:C8	2.56	0.41
79:2S:756:U:H2'	79:2S:757:C:C6	2.56	0.41
79:2S:869:G:H2'	79:2S:870:G:O4'	2.21	0.41
79:2S:1313:G:N3	79:2S:1318:A:H2	2.18	0.41
79:2S:1366:A:H2'	79:2S:1367:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2148:U:O5'	79:2S:2148:U:H6	2.03	0.41
79:2S:2405:C:H42	79:2S:2819:A:N6	2.15	0.41
80:8S:128:U:H3'	80:8S:129:C:H6	1.86	0.41
2:L2:22:LEU:HB2	2:L2:52:SER:HB2	2.03	0.40
2:L2:181:LYS:HB2	79:2S:860:G:N7	2.36	0.40
4:L4:307:GLN:NE2	79:2S:1346:G:O2'	2.54	0.40
7:L7:98:LYS:CB	7:L7:99:PRO:HD3	2.51	0.40
8:L8:36:ILE:HG22	8:L8:37:GLY:H	1.86	0.40
9:L9:7:GLU:OE2	9:L9:54:LYS:HB3	2.20	0.40
10:60:65:LEU:HD23	10:60:159:PHE:HE1	1.86	0.40
11:61:10:ARG:CG	81:5S:55:A:H1'	2.41	0.40
11:61:15:GLU:HB2	11:61:132:ASN:OD1	2.21	0.40
14:64:8:LYS:HB3	14:64:9:ALA:H	1.50	0.40
14:64:44:VAL:HG23	14:64:58:ILE:HG22	2.03	0.40
14:64:118:PHE:O	14:64:121:MET:HB3	2.21	0.40
16:66:73:PHE:HA	79:2S:3007:U:OP1	2.21	0.40
18:68:9:GLN:NE2	79:2S:1364:C:O2'	2.54	0.40
18:68:26:LEU:C	18:68:26:LEU:HD23	2.41	0.40
20:70:92:LYS:HZ3	79:2S:1212:A:H4'	1.86	0.40
21:71:17:ARG:HB2	79:2S:2700:G:H5''	2.03	0.40
23:73:87:ARG:HD2	23:73:91:VAL:HG23	2.02	0.40
26:76:31:LEU:HD11	26:76:78:PHE:HA	2.04	0.40
27:77:83:THR:HG21	27:77:129:TRP:CH2	2.56	0.40
29:79:37:PRO:O	29:79:41:ARG:HB2	2.21	0.40
31:81:29:ALA:HB2	31:81:64:VAL:HA	2.02	0.40
32:82:62:LYS:N	32:82:62:LYS:HD2	2.36	0.40
37:87:55:ARG:HD2	79:2S:353:G:C8	2.56	0.40
42:92:97:LYS:HB2	42:92:97:LYS:HZ2	1.85	0.40
45:RC:10:ARG:HG3	45:RC:11:GLY:H	1.86	0.40
45:RC:219:GLU:OE1	45:RC:235:SER:HA	2.21	0.40
49:S3:33:GLY:O	49:S3:52:ALA:HA	2.20	0.40
49:S3:40:ARG:O	49:S3:46:THR:HA	2.21	0.40
60:14:52:ARG:HD3	78:1S:905:A:C5'	2.23	0.40
64:18:14:ILE:HD12	64:18:22:VAL:O	2.21	0.40
66:20:63:LEU:HG	66:20:86:ILE:HD11	2.03	0.40
68:22:86:ILE:O	68:22:90:THR:HG23	2.21	0.40
69:23:59:ILE:CD1	76:30:4:VAL:HG13	2.51	0.40
70:24:92:VAL:HG21	70:24:99:LYS:HZ2	1.85	0.40
77:31:105:TYR:HA	77:31:117:LEU:HD12	2.02	0.40
78:1S:67:A:C2'	78:1S:69:G:H5''	2.51	0.40
78:1S:158:U:O2'	78:1S:160:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1433:G:O2'	78:1S:1434:U:H5'	2.20	0.40
78:1S:1760:G:H1'	78:1S:1781:A:H2	1.86	0.40
78:1S:1781:A:H2'	78:1S:1782:A:C8	2.55	0.40
79:2S:100:A:H2'	79:2S:101:G:N3	2.36	0.40
79:2S:232:G:O2'	79:2S:233:C:H5'	2.21	0.40
79:2S:1115:G:H5''	79:2S:1116:G:H5'	2.02	0.40
79:2S:1482:A:H5''	79:2S:1858:A:C2	2.55	0.40
79:2S:1797:A:H2'	79:2S:1798:A:O4'	2.21	0.40
79:2S:2137:U:OP2	79:2S:2142:A:N6	2.53	0.40
79:2S:2638:C:H2'	79:2S:2639:G:O4'	2.20	0.40
79:2S:2652:U:H5	79:2S:2759:U:H2'	1.85	0.40
2:L2:101:VAL:O	2:L2:101:VAL:HG13	2.21	0.40
2:L2:249:SER:O	2:L2:251:LYS:HG2	2.21	0.40
3:L3:274:SER:O	79:2S:3138:U:H5''	2.22	0.40
5:L5:155:THR:HG23	81:5S:36:C:H5''	2.03	0.40
6:L6:134:ARG:HD3	6:L6:134:ARG:N	2.36	0.40
7:L7:183:ASP:O	7:L7:186:HIS:HB3	2.21	0.40
8:L8:98:ARG:HD3	8:L8:189:LEU:O	2.22	0.40
9:L9:3:TYR:HD2	9:L9:65:VAL:HG21	1.86	0.40
14:64:40:ASP:HB2	14:64:41:GLN:H	1.68	0.40
15:65:68:ARG:HE	15:65:128:LYS:CG	2.34	0.40
17:67:33:ALA:O	17:67:36:ILE:HG22	2.21	0.40
17:67:118:GLN:O	17:67:146:ILE:HA	2.21	0.40
23:73:32:ARG:HD2	23:73:32:ARG:N	2.36	0.40
28:78:99:ALA:CB	28:78:124:ILE:HG13	2.52	0.40
33:83:42:GLN:HE22	33:83:45:LEU:HD11	1.86	0.40
34:84:20:ILE:HG22	34:84:21:LYS:H	1.86	0.40
38:88:69:LEU:HD12	38:88:70:PRO:CD	2.48	0.40
39:89:22:PRO:O	39:89:38:ASN:HB2	2.21	0.40
44:P0:83:ASN:ND2	79:2S:1281:G:H21	2.15	0.40
47:S1:71:ALA:HB3	60:14:114:ARG:NH1	2.36	0.40
47:S1:167:VAL:HA	47:S1:170:GLU:HB2	2.04	0.40
48:S2:65:GLU:HB2	48:S2:68:ILE:CG1	2.51	0.40
49:S3:60:GLY:O	49:S3:62:ASN:N	2.54	0.40
49:S3:206:VAL:HA	63:17:40:THR:O	2.21	0.40
50:S4:47:PHE:HD2	50:S4:48:LEU:HD12	1.85	0.40
51:S5:33:VAL:O	51:S5:37:GLN:HB2	2.21	0.40
51:S5:93:LEU:O	51:S5:93:LEU:HD23	2.22	0.40
53:S7:74:GLN:HA	53:S7:77:LEU:HD12	2.03	0.40
53:S7:138:LYS:O	53:S7:139:ARG:HD3	2.21	0.40
55:S9:127:VAL:HG21	78:1S:478:A:C4'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:20:22:ILE:HG12	66:20:100:VAL:HG13	2.02	0.40
66:20:68:ARG:HD2	66:20:78:THR:O	2.21	0.40
78:1S:265:A:H4'	78:1S:266:A:OP2	2.21	0.40
78:1S:355:G:H2'	78:1S:356:G:C8	2.57	0.40
78:1S:1092:A:O2'	78:1S:1093:A:H3'	2.20	0.40
79:2S:430:U:H2'	79:2S:431:U:O4'	2.22	0.40
79:2S:715:A:H5'	79:2S:753:C:H4'	2.04	0.40
79:2S:759:U:H2'	79:2S:760:G:O4'	2.21	0.40
79:2S:799:G:H2'	79:2S:801:A:H62	1.87	0.40
79:2S:1583:A:H3'	79:2S:1584:U:C6	2.51	0.40
79:2S:2215:A:H2'	79:2S:2216:G:O4'	2.21	0.40
79:2S:2712:U:O2'	79:2S:2713:U:H5'	2.21	0.40
79:2S:3053:G:H2'	79:2S:3054:U:C6	2.56	0.40
79:2S:3080:G:H2'	79:2S:3081:C:H6	1.86	0.40
80:8S:57:C:H4'	80:8S:63:G:N7	2.36	0.40
81:5S:4:U:H2'	81:5S:5:G:C8	2.56	0.40
82:MR:3:A:H2'	82:MR:4:A:H8	1.86	0.40
82:MR:6:U:H2'	82:MR:7:G:C8	2.56	0.40
2:L2:94:ALA:HB3	2:L2:102:LEU:HD21	2.02	0.40
2:L2:148:VAL:O	2:L2:155:LYS:HA	2.20	0.40
2:L2:216:HIS:HB2	2:L2:218:HIS:CD2	2.57	0.40
3:L3:69:LYS:HA	3:L3:69:LYS:HD3	1.87	0.40
3:L3:188:ILE:HD12	3:L3:189:SER:H	1.87	0.40
4:L4:26:PHE:CE1	4:L4:126:ILE:HG22	2.56	0.40
4:L4:35:VAL:O	4:L4:39:PHE:HB2	2.22	0.40
4:L4:317:PRO:O	4:L4:318:LEU:HB2	2.21	0.40
7:L7:210:PRO:HD3	7:L7:243:MET:HE3	2.02	0.40
8:L8:45:ASN:ND2	8:L8:47:SER:HB2	2.37	0.40
15:65:153:ASP:CG	15:65:154:PRO:HD2	2.41	0.40
19:69:138:LEU:HD23	19:69:142:ILE:HD11	2.02	0.40
21:71:54:HIS:CE1	79:2S:2724:U:H5''	2.57	0.40
24:74:23:ARG:HG2	24:74:24:GLY:N	2.26	0.40
24:74:90:ILE:O	24:74:94:ARG:HB3	2.21	0.40
25:75:22:LYS:N	25:75:22:LYS:HD2	2.36	0.40
26:76:73:VAL:HG13	26:76:80:VAL:HB	2.04	0.40
32:82:100:ILE:HD12	79:2S:1388:U:H4'	2.04	0.40
40:90:79:GLU:HA	40:90:80:PRO:HD3	1.94	0.40
44:P0:35:SER:O	44:P0:39:HIS:HB2	2.21	0.40
45:RC:7:LEU:HD12	45:RC:7:LEU:N	2.35	0.40
45:RC:86:ASP:O	45:RC:87:LYS:HB2	2.21	0.40
45:RC:172:ALA:HB3	45:RC:202:LEU:HD22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:71:GLU:HG2	46:S0:72:ASP:N	2.36	0.40
46:S0:205:ARG:NH1	63:17:82:ASP:HB3	2.36	0.40
47:S1:225:VAL:N	79:2S:2537:U:C6	2.89	0.40
50:S4:126:VAL:HA	50:S4:141:THR:HA	2.04	0.40
53:S7:111:LYS:CG	53:S7:112:ARG:H	2.09	0.40
56:10:76:LEU:O	56:10:80:LEU:HB2	2.21	0.40
61:15:72:LYS:HA	61:15:73:PRO:HD3	1.89	0.40
61:15:79:HIS:HB3	78:1S:1453:G:O4'	2.22	0.40
65:19:130:ARG:HG2	65:19:130:ARG:NH1	2.36	0.40
70:24:20:ARG:NH2	70:24:74:LEU:HD13	2.37	0.40
70:24:81:GLU:HG3	70:24:85:PHE:CE2	2.55	0.40
75:29:43:PHE:CE2	75:29:50:ILE:HD12	2.55	0.40
78:1S:189:C:H3'	78:1S:190:C:C5'	2.51	0.40
78:1S:390:G:H2'	78:1S:391:A:O4'	2.21	0.40
78:1S:961:U:H2'	78:1S:962:C:C6	2.56	0.40
78:1S:1056:U:O5'	78:1S:1056:U:H6	2.04	0.40
78:1S:1408:G:H2'	78:1S:1409:G:O4'	2.22	0.40
78:1S:1526:A:C2'	78:1S:1527:C:H5'	2.50	0.40
79:2S:155:G:H4'	79:2S:156:G:H2'	2.03	0.40
79:2S:386:A:O5'	79:2S:386:A:H8	2.04	0.40
79:2S:1014:U:H2'	79:2S:1015:U:H5'	2.03	0.40
79:2S:1792:C:O2'	79:2S:1794:G:H2'	2.21	0.40
79:2S:1854:C:O2'	79:2S:1855:U:H5'	2.21	0.40
79:2S:2188:A:H2'	79:2S:2189:U:H6	1.85	0.40
79:2S:2435:G:C6	79:2S:2593:A:H3'	2.56	0.40
79:2S:2714:G:N2	79:2S:2752:U:H5	2.20	0.40
79:2S:2929:C:H2'	79:2S:2930:A:C8	2.56	0.40
79:2S:3335:A:H2'	79:2S:3336:A:O4'	2.21	0.40
1:L1:114:GLU:H	1:L1:114:GLU:HG2	1.68	0.40
3:L3:13:HIS:HB3	3:L3:16:PHE:HD1	1.86	0.40
3:L3:163:HIS:HB2	3:L3:176:ALA:HB1	2.03	0.40
3:L3:246:LEU:CD2	79:2S:1889:G:H5'	2.52	0.40
3:L3:312:VAL:HG12	3:L3:313:HIS:CD2	2.57	0.40
4:L4:32:PRO:HG3	4:L4:244:LEU:CD1	2.48	0.40
4:L4:339:LEU:HD22	4:L4:342:LYS:HD2	2.03	0.40
6:L6:17:ALA:HB3	79:2S:592:A:C4'	2.51	0.40
8:L8:26:LEU:O	27:77:53:VAL:HG11	2.21	0.40
8:L8:122:LYS:O	8:L8:123:GLN:HB2	2.21	0.40
8:L8:238:LEU:HB2	8:L8:243:GLN:HE21	1.86	0.40
10:60:36:LEU:HB3	10:60:85:PHE:HE1	1.86	0.40
10:60:191:LYS:HE3	10:60:198:LYS:HD2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:179:PHE:HA	13:63:182:ILE:HD12	2.04	0.40
15:65:200:TRP:O	15:65:203:ARG:NE	2.52	0.40
20:70:61:ILE:HG23	20:70:61:ILE:O	2.20	0.40
21:71:54:HIS:HB3	21:71:57:TYR:CD2	2.55	0.40
21:71:87:LYS:HB3	21:71:89:LEU:CD1	2.52	0.40
23:73:33:ASN:HD21	23:73:64:LYS:N	2.18	0.40
23:73:33:ASN:HD21	23:73:63:LYS:HB3	1.87	0.40
23:73:93:LEU:HD23	23:73:93:LEU:N	2.26	0.40
25:75:76:VAL:HG22	25:75:81:ILE:O	2.22	0.40
30:80:25:LEU:HD22	30:80:90:VAL:HG22	2.03	0.40
36:86:71:LYS:O	36:86:71:LYS:HG2	2.22	0.40
36:86:80:PHE:CE2	79:2S:2223:A:H4'	2.57	0.40
45:RC:176:LYS:HG2	45:RC:197:SER:O	2.21	0.40
46:S0:4:PRO:HG3	67:21:39:VAL:HG23	2.03	0.40
46:S0:188:LEU:HB3	46:S0:189:VAL:H	1.76	0.40
47:S1:86:LEU:CD1	47:S1:100:PHE:HA	2.50	0.40
47:S1:185:THR:HA	47:S1:188:LEU:HD12	2.02	0.40
48:S2:160:GLY:O	48:S2:166:THR:HA	2.22	0.40
51:S5:77:TYR:HB3	51:S5:84:LYS:CG	2.52	0.40
51:S5:104:ASN:HD22	78:1S:1587:A:H1'	1.84	0.40
51:S5:200:ASN:CB	51:S5:205:SER:HB2	2.42	0.40
53:S7:9:LEU:O	53:S7:10:SER:CB	2.69	0.40
54:S8:29:LEU:HD23	54:S8:29:LEU:C	2.42	0.40
54:S8:88:ASN:O	54:S8:91:VAL:HB	2.21	0.40
54:S8:194:ARG:HD2	54:S8:195:ARG:NH1	2.37	0.40
55:S9:49:LEU:O	55:S9:49:LEU:HD23	2.22	0.40
58:12:97:LEU:HD11	58:12:121:VAL:HG22	2.03	0.40
63:17:60:ARG:HH12	63:17:66:VAL:HG13	1.87	0.40
69:23:142:LYS:HA	69:23:143:PRO:HD3	1.88	0.40
75:29:56:ARG:HB2	78:1S:1334:U:O2	2.21	0.40
76:30:56:MET:HB2	78:1S:556:A:C5'	2.49	0.40
77:31:118:ARG:HG3	77:31:118:ARG:NH1	2.36	0.40
78:1S:517:U:H2'	78:1S:518:A:O4'	2.21	0.40
78:1S:581:U:H3'	78:1S:581:U:O2	2.21	0.40
78:1S:695:U:O5'	78:1S:695:U:H6	2.03	0.40
78:1S:1057:U:C1'	78:1S:1058:U:H2'	2.52	0.40
78:1S:1203:A:C2	78:1S:1556:A:H5'	2.47	0.40
78:1S:1237:G:H2'	78:1S:1238:A:H8	1.87	0.40
78:1S:1499:G:H1	78:1S:1508:U:H3	1.68	0.40
78:1S:1620:C:H6	78:1S:1620:C:O5'	2.04	0.40
78:1S:1623:C:H2'	78:1S:1624:C:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1790:A:O2'	78:1S:1791:A:H5'	2.21	0.40
79:2S:41:G:H4'	79:2S:2411:U:OP2	2.22	0.40
79:2S:630:A:H2'	79:2S:631:U:C6	2.56	0.40
79:2S:1127:G:H2'	79:2S:1129:A:OP2	2.20	0.40
79:2S:1193:A:N7	79:2S:1194:G:C6	2.90	0.40
79:2S:1932:A:H2'	79:2S:1933:A:H5'	2.03	0.40
79:2S:2408:U:H2'	79:2S:2409:G:C8	2.57	0.40
79:2S:2840:C:H2'	79:2S:2841:G:O4'	2.21	0.40
2:L2:74:GLU:CB	2:L2:76:PHE:HE1	2.33	0.40
2:L2:230:VAL:HG11	79:2S:2607:G:H1'	2.04	0.40
3:L3:88:GLY:HA3	3:L3:161:LEU:CD1	2.38	0.40
3:L3:189:SER:O	3:L3:192:VAL:HG12	2.21	0.40
5:L5:195:LEU:O	5:L5:199:ILE:HG13	2.22	0.40
6:L6:40:LEU:HB2	6:L6:52:VAL:HG13	2.02	0.40
7:L7:173:LEU:HD12	7:L7:173:LEU:N	2.37	0.40
8:L8:166:LEU:N	8:L8:167:PRO:CD	2.85	0.40
9:L9:49:ASN:N	9:L9:49:ASN:HD22	2.18	0.40
16:66:27:LEU:HD13	16:66:98:ALA:O	2.21	0.40
18:68:85:GLY:O	18:68:104:LEU:HB3	2.22	0.40
20:70:28:ARG:HE	20:70:64:ILE:HD13	1.87	0.40
25:75:69:SER:C	25:75:71:THR:N	2.75	0.40
27:77:77:TYR:HA	27:77:80:LEU:HD12	2.04	0.40
33:83:49:ILE:HB	33:83:85:PHE:CZ	2.57	0.40
34:84:20:ILE:HG22	34:84:21:LYS:N	2.37	0.40
34:84:20:ILE:CD1	34:84:34:HIS:ND1	2.85	0.40
36:86:41:ARG:NH1	79:2S:297:G:H2'	2.36	0.40
45:RC:93:ASP:HB3	45:RC:96:THR:HG22	2.03	0.40
46:S0:121:VAL:HG12	46:S0:122:ILE:N	2.37	0.40
47:S1:189:ILE:HB	47:S1:190:PRO:HD3	2.03	0.40
47:S1:223:PHE:HA	79:2S:2537:U:P	2.62	0.40
49:S3:85:VAL:HG12	49:S3:86:LEU:N	2.36	0.40
51:S5:29:ILE:HA	51:S5:30:PRO:HD3	1.97	0.40
52:S6:49:VAL:HG21	52:S6:115:LYS:HD3	2.02	0.40
54:S8:58:LEU:O	54:S8:59:ARG:C	2.60	0.40
56:10:6:GLU:O	56:10:10:LYS:HG3	2.21	0.40
63:17:5:ARG:HG2	63:17:53:TYR:HB2	2.02	0.40
63:17:9:VAL:HG22	63:17:50:ILE:HG12	2.02	0.40
65:19:39:THR:O	65:19:40:SER:HB2	2.21	0.40
69:23:95:PHE:O	69:23:127:VAL:HG11	2.21	0.40
70:24:86:GLU:HA	70:24:87:PRO:HD3	1.94	0.40
78:1S:427:C:H5'	78:1S:460:A:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:836:U:H2'	78:1S:837:G:H8	1.86	0.40
78:1S:1191:U:H2'	78:1S:1192:C:O4'	2.21	0.40
78:1S:1462:G:H2'	78:1S:1463:C:H6	1.85	0.40
79:2S:90:C:H4'	79:2S:282:G:H5'	2.04	0.40
79:2S:1337:A:H2'	79:2S:1338:C:C6	2.57	0.40
79:2S:1728:G:N3	79:2S:1728:G:H5'	2.37	0.40
79:2S:1927:G:N3	79:2S:1927:G:H3'	2.37	0.40
79:2S:3355:U:H3'	79:2S:3356:G:C5'	2.51	0.40
81:5S:64:A:C5'	81:5S:65:G:H5''	2.50	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%)	136 (67%)	54 (27%)	12 (6%)	1	17
2	L2	250/254 (98%)	198 (79%)	43 (17%)	9 (4%)	3	25
3	L3	384/387 (99%)	311 (81%)	58 (15%)	15 (4%)	3	23
4	L4	359/362 (99%)	293 (82%)	48 (13%)	18 (5%)	2	20
5	L5	294/297 (99%)	249 (85%)	38 (13%)	7 (2%)	6	33
6	L6	152/176 (86%)	131 (86%)	14 (9%)	7 (5%)	2	21
7	L7	220/244 (90%)	193 (88%)	21 (10%)	6 (3%)	5	31
8	L8	231/256 (90%)	191 (83%)	36 (16%)	4 (2%)	9	42
9	L9	189/191 (99%)	160 (85%)	25 (13%)	4 (2%)	7	36
10	60	207/221 (94%)	184 (89%)	21 (10%)	2 (1%)	15	54
11	61	167/174 (96%)	131 (78%)	29 (17%)	7 (4%)	3	22
12	62	144/165 (87%)	85 (59%)	34 (24%)	25 (17%)	0	2
13	63	191/199 (96%)	158 (83%)	27 (14%)	6 (3%)	4	27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	64	134/138 (97%)	106 (79%)	21 (16%)	7 (5%)	2	19
15	65	201/204 (98%)	169 (84%)	29 (14%)	3 (2%)	10	45
16	66	195/199 (98%)	175 (90%)	18 (9%)	2 (1%)	15	54
17	67	181/184 (98%)	145 (80%)	31 (17%)	5 (3%)	5	30
18	68	183/186 (98%)	154 (84%)	25 (14%)	4 (2%)	6	35
19	69	186/189 (98%)	166 (89%)	17 (9%)	3 (2%)	9	44
20	70	170/172 (99%)	142 (84%)	25 (15%)	3 (2%)	8	40
21	71	157/160 (98%)	134 (85%)	16 (10%)	7 (4%)	2	21
22	72	98/121 (81%)	81 (83%)	15 (15%)	2 (2%)	7	38
23	73	134/137 (98%)	104 (78%)	26 (19%)	4 (3%)	4	28
24	74	133/155 (86%)	106 (80%)	21 (16%)	6 (4%)	2	21
25	75	119/142 (84%)	99 (83%)	17 (14%)	3 (2%)	5	32
26	76	124/127 (98%)	110 (89%)	10 (8%)	4 (3%)	4	26
27	77	133/136 (98%)	112 (84%)	17 (13%)	4 (3%)	4	28
28	78	146/149 (98%)	120 (82%)	17 (12%)	9 (6%)	1	16
29	79	56/59 (95%)	50 (89%)	4 (7%)	2 (4%)	3	25
30	80	95/105 (90%)	85 (90%)	8 (8%)	2 (2%)	7	36
31	81	107/113 (95%)	89 (83%)	16 (15%)	2 (2%)	8	38
32	82	125/130 (96%)	112 (90%)	10 (8%)	3 (2%)	6	33
33	83	104/107 (97%)	84 (81%)	17 (16%)	3 (3%)	4	29
34	84	110/121 (91%)	95 (86%)	15 (14%)	0	100	100
35	85	117/120 (98%)	106 (91%)	10 (8%)	1 (1%)	17	56
36	86	97/100 (97%)	79 (81%)	10 (10%)	8 (8%)	1	12
37	87	85/88 (97%)	74 (87%)	10 (12%)	1 (1%)	13	50
38	88	75/78 (96%)	66 (88%)	9 (12%)	0	100	100
39	89	48/51 (94%)	37 (77%)	9 (19%)	2 (4%)	3	22
40	90	50/128 (39%)	41 (82%)	8 (16%)	1 (2%)	7	38
41	91	23/25 (92%)	23 (100%)	0	0	100	100
42	92	103/106 (97%)	80 (78%)	20 (19%)	3 (3%)	4	29
43	93	89/92 (97%)	76 (85%)	11 (12%)	2 (2%)	6	35
44	P0	117/312 (38%)	102 (87%)	9 (8%)	6 (5%)	2	19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	RC	316/319 (99%)	258 (82%)	51 (16%)	7 (2%)	6	35
46	S0	204/252 (81%)	152 (74%)	47 (23%)	5 (2%)	5	32
47	S1	212/255 (83%)	155 (73%)	41 (19%)	16 (8%)	1	13
48	S2	215/254 (85%)	186 (86%)	23 (11%)	6 (3%)	5	30
49	S3	221/240 (92%)	181 (82%)	29 (13%)	11 (5%)	2	20
50	S4	258/261 (99%)	201 (78%)	47 (18%)	10 (4%)	3	23
51	S5	204/225 (91%)	168 (82%)	29 (14%)	7 (3%)	3	25
52	S6	224/236 (95%)	194 (87%)	24 (11%)	6 (3%)	5	31
53	S7	182/190 (96%)	133 (73%)	34 (19%)	15 (8%)	1	12
54	S8	184/200 (92%)	146 (79%)	30 (16%)	8 (4%)	2	22
55	S9	183/197 (93%)	153 (84%)	22 (12%)	8 (4%)	2	22
56	10	94/105 (90%)	75 (80%)	11 (12%)	8 (8%)	1	11
57	11	153/156 (98%)	118 (77%)	27 (18%)	8 (5%)	2	19
58	12	122/143 (85%)	81 (66%)	25 (20%)	16 (13%)	0	4
59	13	148/151 (98%)	129 (87%)	16 (11%)	3 (2%)	7	38
60	14	125/137 (91%)	92 (74%)	29 (23%)	4 (3%)	4	26
61	15	122/142 (86%)	88 (72%)	22 (18%)	12 (10%)	0	9
62	16	139/143 (97%)	113 (81%)	22 (16%)	4 (3%)	4	29
63	17	116/136 (85%)	93 (80%)	15 (13%)	8 (7%)	1	14
64	18	143/146 (98%)	117 (82%)	19 (13%)	7 (5%)	2	20
65	19	141/144 (98%)	119 (84%)	18 (13%)	4 (3%)	5	30
66	20	105/121 (87%)	82 (78%)	20 (19%)	3 (3%)	4	29
67	21	85/87 (98%)	71 (84%)	8 (9%)	6 (7%)	1	14
68	22	127/130 (98%)	110 (87%)	14 (11%)	3 (2%)	6	33
69	23	142/145 (98%)	107 (75%)	28 (20%)	7 (5%)	2	20
70	24	132/135 (98%)	109 (83%)	16 (12%)	7 (5%)	2	19
71	25	68/108 (63%)	44 (65%)	20 (29%)	4 (6%)	1	17
72	26	95/119 (80%)	69 (73%)	19 (20%)	7 (7%)	1	13
73	27	79/82 (96%)	59 (75%)	16 (20%)	4 (5%)	2	19
74	28	61/67 (91%)	52 (85%)	6 (10%)	3 (5%)	2	20
75	29	51/56 (91%)	40 (78%)	9 (18%)	2 (4%)	3	23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
76	30	58/63 (92%)	47 (81%)	9 (16%)	2 (3%)	3	25
77	31	69/152 (45%)	42 (61%)	15 (22%)	12 (17%)	0	2
All	All	11463/12574 (91%)	9326 (81%)	1680 (15%)	457 (4%)	5	23

All (457) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L1	20	SER
1	L1	74	VAL
1	L1	151	VAL
3	L3	4	ARG
3	L3	5	LYS
3	L3	140	ASP
3	L3	187	SER
3	L3	351	LEU
4	L4	14	GLU
4	L4	232	SER
4	L4	268	ALA
4	L4	269	SER
5	L5	93	THR
6	L6	5	LYS
6	L6	98	VAL
7	L7	92	ILE
7	L7	159	GLN
7	L7	160	ARG
8	L8	36	ILE
8	L8	157	VAL
9	L9	14	GLU
11	61	114	ILE
11	61	168	ASP
12	62	30	PRO
12	62	38	SER
12	62	39	PRO
12	62	88	PRO
12	62	89	PRO
12	62	104	ILE
12	62	147	ASN
12	62	148	PRO
13	63	47	ALA
13	63	76	THR
14	64	9	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	65	125	SER
17	67	119	VAL
18	68	162	ALA
19	69	130	ASN
20	70	2	ALA
21	71	124	VAL
23	73	109	MET
24	74	63	ILE
24	74	75	THR
28	78	27	LYS
36	86	3	VAL
39	89	22	PRO
43	93	51	ALA
44	P0	33	VAL
44	P0	92	PRO
46	S0	95	ALA
46	S0	192	THR
47	S1	206	PRO
47	S1	225	VAL
47	S1	227	ALA
49	S3	61	GLU
49	S3	93	ASP
49	S3	211	PRO
49	S3	221	SER
50	S4	194	THR
50	S4	195	ILE
50	S4	200	ARG
51	S5	51	VAL
51	S5	63	GLN
52	S6	102	VAL
52	S6	122	GLU
53	S7	12	ALA
53	S7	31	SER
53	S7	32	PRO
53	S7	64	VAL
54	S8	52	ASN
54	S8	68	ALA
54	S8	120	THR
55	S9	134	ILE
55	S9	138	LYS
56	10	30	ALA
56	10	60	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
56	10	64	TYR
56	10	88	PRO
57	11	144	ALA
58	12	83	GLU
58	12	91	VAL
58	12	107	ASP
58	12	109	GLU
58	12	126	TRP
58	12	131	ASP
59	13	4	MET
60	14	42	VAL
60	14	125	SER
61	15	71	GLU
61	15	73	PRO
61	15	80	MET
61	15	125	PRO
61	15	126	VAL
62	16	15	SER
63	17	85	VAL
64	18	14	ILE
64	18	82	PRO
64	18	91	ASP
64	18	102	ALA
66	20	54	GLY
67	21	4	ASP
67	21	44	ARG
70	24	35	VAL
70	24	60	PHE
71	25	43	ASP
71	25	44	GLN
71	25	54	VAL
76	30	47	VAL
77	31	84	VAL
77	31	88	PRO
77	31	98	VAL
1	L1	19	TYR
1	L1	158	GLN
2	L2	28	LYS
3	L3	164	THR
3	L3	244	ARG
3	L3	292	ALA
3	L3	317	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	L4	72	ALA
4	L4	80	GLY
4	L4	317	PRO
5	L5	91	GLY
7	L7	158	LYS
7	L7	164	SER
8	L8	39	ALA
9	L9	50	ASN
10	60	187	ALA
10	60	219	ALA
11	61	108	GLU
11	61	135	GLY
12	62	105	GLN
12	62	146	LYS
12	62	149	HIS
13	63	62	THR
14	64	89	ALA
17	67	160	ALA
18	68	13	SER
18	68	97	PRO
21	71	132	PRO
21	71	159	PHE
26	76	80	VAL
26	76	126	LEU
27	77	17	ARG
28	78	110	GLY
28	78	117	ARG
33	83	59	VAL
36	86	21	THR
44	P0	94	THR
45	RC	136	ILE
45	RC	318	ALA
47	S1	26	ARG
47	S1	39	GLU
47	S1	176	VAL
47	S1	209	ASN
47	S1	221	PRO
48	S2	205	ARG
48	S2	248	SER
49	S3	96	LEU
49	S3	216	PRO
49	S3	217	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	S5	64	VAL
51	S5	99	MET
51	S5	100	ASN
52	S6	99	GLY
53	S7	14	THR
53	S7	97	ARG
53	S7	98	ILE
53	S7	109	VAL
54	S8	152	ILE
55	S9	99	LEU
56	10	81	ASN
57	11	146	ALA
58	12	85	LYS
58	12	89	ILE
58	12	115	VAL
58	12	127	GLY
61	15	101	ALA
61	15	118	GLU
63	17	124	VAL
64	18	92	ILE
65	19	53	TRP
65	19	87	GLY
65	19	90	PRO
67	21	7	GLN
67	21	81	ASN
69	23	41	SER
69	23	112	LYS
70	24	5	VAL
70	24	6	THR
72	26	63	ALA
73	27	10	PRO
74	28	37	SER
76	30	54	ARG
77	31	118	ARG
2	L2	21	ARG
2	L2	120	PRO
2	L2	242	ARG
3	L3	174	LYS
4	L4	140	HIS
5	L5	19	PRO
5	L5	253	PHE
6	L6	75	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	L8	81	THR
11	61	12	LEU
11	61	134	PRO
12	62	67	ARG
12	62	90	ARG
12	62	103	ASN
12	62	125	LEU
13	63	166	ALA
14	64	8	LYS
17	67	132	ALA
19	69	17	VAL
20	70	67	ALA
21	71	69	LYS
21	71	123	GLY
24	74	15	PRO
24	74	71	ARG
25	75	54	TYR
28	78	24	LYS
28	78	56	VAL
30	80	100	ILE
36	86	34	SER
36	86	64	SER
39	89	3	ALA
45	RC	98	GLU
45	RC	105	GLY
46	S0	33	GLN
47	S1	100	PHE
47	S1	177	GLN
48	S2	109	GLY
49	S3	201	ALA
50	S4	31	PRO
50	S4	107	GLY
50	S4	178	GLY
51	S5	45	LYS
51	S5	50	GLU
52	S6	152	ASP
53	S7	10	SER
53	S7	36	ALA
53	S7	103	SER
54	S8	59	ARG
55	S9	147	MET
55	S9	162	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
55	S9	169	PRO
56	10	85	HIS
56	10	93	GLN
57	11	151	LYS
58	12	39	ASP
58	12	68	GLU
58	12	119	SER
62	16	142	TYR
63	17	86	PRO
67	21	42	GLU
70	24	34	ASN
70	24	36	SER
73	27	26	GLN
75	29	34	TYR
77	31	148	TYR
1	L1	199	GLN
1	L1	209	SER
2	L2	160	SER
3	L3	128	LYS
4	L4	90	PHE
4	L4	245	GLY
4	L4	264	SER
4	L4	339	LEU
6	L6	48	ARG
6	L6	79	VAL
9	L9	22	SER
12	62	34	PRO
12	62	134	GLY
13	63	18	TRP
13	63	180	ARG
15	65	94	TYR
17	67	117	ILE
18	68	136	ASN
20	70	21	GLU
21	71	93	VAL
23	73	18	PRO
23	73	71	LYS
27	77	70	PRO
27	77	103	GLN
28	78	77	LYS
29	79	29	TYR
32	82	12	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	90	79	GLU
42	92	15	LYS
43	93	49	ARG
44	P0	32	ASN
44	P0	53	MET
47	S1	213	ARG
48	S2	150	GLN
49	S3	212	LYS
50	S4	77	ARG
50	S4	150	PRO
52	S6	154	ARG
54	S8	55	TYR
54	S8	148	ALA
57	11	68	GLY
57	11	148	LYS
57	11	153	PHE
57	11	155	LYS
58	12	112	ALA
60	14	18	ARG
61	15	13	LYS
61	15	69	GLU
62	16	39	VAL
63	17	88	VAL
63	17	125	SER
65	19	40	SER
67	21	82	VAL
68	22	58	SER
68	22	83	ILE
69	23	3	LYS
69	23	70	LYS
70	24	4	ALA
72	26	11	ASN
72	26	64	LEU
74	28	61	ARG
77	31	87	THR
77	31	90	LYS
77	31	100	LEU
77	31	146	SER
1	L1	172	VAL
2	L2	123	ARG
2	L2	174	ARG
4	L4	131	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	L4	233	LEU
4	L4	292	SER
4	L4	328	ASN
5	L5	125	VAL
7	L7	25	GLN
11	61	117	ASP
12	62	21	GLU
12	62	29	ALA
12	62	37	LEU
12	62	119	LYS
14	64	6	ILE
14	64	30	GLY
14	64	39	ILE
16	66	65	ASN
17	67	3	ARG
19	69	88	ARG
21	71	82	ASN
22	72	11	ILE
22	72	68	THR
24	74	76	VAL
24	74	81	PRO
25	75	23	ALA
26	76	78	PHE
28	78	29	PRO
31	81	7	VAL
31	81	83	GLU
32	82	7	PRO
32	82	56	GLY
33	83	79	GLY
35	85	93	THR
37	87	78	PHE
42	92	57	VAL
44	P0	104	ARG
45	RC	146	GLY
46	S0	94	GLY
46	S0	149	LEU
47	S1	48	VAL
47	S1	82	ARG
47	S1	224	ASP
48	S2	36	VAL
48	S2	235	LEU
50	S4	245	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	S7	39	ARG
54	S8	33	PRO
57	11	4	GLU
58	12	130	THR
59	13	21	ASN
60	14	126	THR
61	15	70	ASN
61	15	127	ARG
63	17	83	GLN
63	17	99	VAL
66	20	111	GLY
69	23	116	ASP
69	23	143	PRO
72	26	62	TYR
73	27	3	LEU
74	28	35	ASP
77	31	102	VAL
1	L1	136	THR
3	L3	141	GLY
3	L3	380	MET
5	L5	251	PRO
5	L5	260	PHE
6	L6	71	VAL
9	L9	149	ASN
12	62	96	LYS
14	64	10	SER
25	75	70	GLU
27	77	32	GLY
28	78	65	GLN
36	86	27	SER
45	RC	163	ASP
45	RC	174	ASN
47	S1	132	ASP
49	S3	130	GLY
58	12	93	ASP
71	25	94	LYS
72	26	45	VAL
73	27	75	GLU
75	29	11	PRO
2	L2	121	GLY
3	L3	307	PRO
4	L4	152	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	L4	173	GLY
12	62	58	VAL
49	S3	220	PRO
50	S4	35	PRO
55	S9	165	GLY
59	13	22	ALA
66	20	118	VAL
68	22	21	GLY
69	23	96	VAL
77	31	129	GLY
6	L6	36	PRO
12	62	10	VAL
23	73	105	PRO
28	78	13	GLY
42	92	94	GLY
47	S1	91	VAL
55	S9	137	GLY
64	18	37	GLY
1	L1	81	GLY
3	L3	89	VAL
16	66	111	PRO
26	76	48	LEU
29	79	21	ILE
36	86	9	ILE
53	S7	145	GLY
53	S7	178	GLY
56	10	87	VAL
72	26	19	LYS
1	L1	120	VAL
1	L1	212	PRO
2	L2	39	GLY
30	80	96	GLY
36	86	49	GLY
53	S7	144	VAL
61	15	48	GLY
63	17	117	LEU
64	18	135	GLY
72	26	18	VAL
77	31	112	GLY
12	62	18	VAL
15	65	52	GLY
33	83	61	GLY

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Mol	Chain	Res	Type
36	86	22	PRO
52	S6	153	VAL
62	16	41	PRO

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	L1	185/198 (93%)	170 (92%)	15 (8%)	11	35
2	L2	194/196 (99%)	189 (97%)	5 (3%)	46	66
3	L3	322/323 (100%)	304 (94%)	18 (6%)	21	46
4	L4	288/289 (100%)	276 (96%)	12 (4%)	30	54
5	L5	244/245 (100%)	232 (95%)	12 (5%)	25	50
6	L6	134/153 (88%)	127 (95%)	7 (5%)	23	48
7	L7	186/205 (91%)	179 (96%)	7 (4%)	33	57
8	L8	191/208 (92%)	181 (95%)	10 (5%)	23	48
9	L9	171/171 (100%)	160 (94%)	11 (6%)	17	42
10	60	180/187 (96%)	172 (96%)	8 (4%)	28	53
11	61	147/150 (98%)	136 (92%)	11 (8%)	13	38
13	63	154/159 (97%)	143 (93%)	11 (7%)	14	39
14	64	107/109 (98%)	100 (94%)	7 (6%)	17	42
15	65	175/176 (99%)	168 (96%)	7 (4%)	31	55
16	66	160/162 (99%)	152 (95%)	8 (5%)	24	49
17	67	145/146 (99%)	137 (94%)	8 (6%)	21	47
18	68	150/151 (99%)	147 (98%)	3 (2%)	55	74
19	69	153/154 (99%)	146 (95%)	7 (5%)	27	52
20	70	156/156 (100%)	147 (94%)	9 (6%)	20	45
21	71	136/137 (99%)	129 (95%)	7 (5%)	24	48
22	72	87/107 (81%)	84 (97%)	3 (3%)	37	60

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	73	104/105 (99%)	97 (93%)	7 (7%)	16	41
24	74	114/129 (88%)	110 (96%)	4 (4%)	36	59
25	75	105/118 (89%)	97 (92%)	8 (8%)	13	37
26	76	109/110 (99%)	103 (94%)	6 (6%)	21	47
27	77	115/116 (99%)	110 (96%)	5 (4%)	29	53
28	78	118/119 (99%)	112 (95%)	6 (5%)	24	48
29	79	46/47 (98%)	42 (91%)	4 (9%)	10	31
30	80	81/88 (92%)	75 (93%)	6 (7%)	13	38
31	81	96/97 (99%)	91 (95%)	5 (5%)	23	48
32	82	109/111 (98%)	108 (99%)	1 (1%)	78	88
33	83	90/91 (99%)	84 (93%)	6 (7%)	16	41
34	84	95/103 (92%)	91 (96%)	4 (4%)	30	54
35	85	104/105 (99%)	96 (92%)	8 (8%)	13	37
36	86	81/82 (99%)	74 (91%)	7 (9%)	10	32
37	87	70/71 (99%)	65 (93%)	5 (7%)	14	39
38	88	68/69 (99%)	63 (93%)	5 (7%)	13	38
39	89	45/46 (98%)	42 (93%)	3 (7%)	16	41
40	90	47/116 (40%)	44 (94%)	3 (6%)	17	42
41	91	23/23 (100%)	22 (96%)	1 (4%)	29	53
42	92	90/91 (99%)	86 (96%)	4 (4%)	28	53
43	93	71/72 (99%)	71 (100%)	0	100	100
44	P0	105/254 (41%)	101 (96%)	4 (4%)	33	57
45	RC	261/262 (100%)	247 (95%)	14 (5%)	22	47
46	S0	173/210 (82%)	156 (90%)	17 (10%)	8	27
47	S1	191/224 (85%)	172 (90%)	19 (10%)	8	26
48	S2	176/205 (86%)	169 (96%)	7 (4%)	31	55
49	S3	182/195 (93%)	169 (93%)	13 (7%)	14	39
50	S4	221/222 (100%)	207 (94%)	14 (6%)	18	43
51	S5	173/191 (91%)	162 (94%)	11 (6%)	17	42
52	S6	193/201 (96%)	183 (95%)	10 (5%)	23	48
53	S7	165/170 (97%)	151 (92%)	14 (8%)	10	33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	S8	150/161 (93%)	140 (93%)	10 (7%)	16	41
55	S9	158/166 (95%)	150 (95%)	8 (5%)	24	48
56	10	89/98 (91%)	82 (92%)	7 (8%)	12	36
57	11	136/137 (99%)	132 (97%)	4 (3%)	42	64
58	12	100/119 (84%)	88 (88%)	12 (12%)	5	20
59	13	127/128 (99%)	121 (95%)	6 (5%)	26	51
60	14	96/105 (91%)	92 (96%)	4 (4%)	30	54
61	15	104/118 (88%)	97 (93%)	7 (7%)	16	41
62	16	117/119 (98%)	112 (96%)	5 (4%)	29	53
63	17	109/124 (88%)	98 (90%)	11 (10%)	7	25
64	18	128/129 (99%)	117 (91%)	11 (9%)	10	32
65	19	115/116 (99%)	104 (90%)	11 (10%)	8	27
66	20	100/114 (88%)	92 (92%)	8 (8%)	12	35
67	21	74/74 (100%)	71 (96%)	3 (4%)	30	55
68	22	110/111 (99%)	103 (94%)	7 (6%)	17	42
69	23	119/120 (99%)	110 (92%)	9 (8%)	13	37
70	24	112/113 (99%)	106 (95%)	6 (5%)	22	47
71	25	61/89 (68%)	57 (93%)	4 (7%)	16	41
72	26	83/101 (82%)	78 (94%)	5 (6%)	19	44
73	27	70/71 (99%)	68 (97%)	2 (3%)	42	64
74	28	56/60 (93%)	52 (93%)	4 (7%)	14	39
75	29	47/49 (96%)	45 (96%)	2 (4%)	29	53
76	30	51/54 (94%)	47 (92%)	4 (8%)	12	36
77	31	43/135 (32%)	40 (93%)	3 (7%)	15	40
All	All	9641/10436 (92%)	9081 (94%)	560 (6%)	24	45

All (560) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	L1	14	LYS
1	L1	18	LYS
1	L1	57	ASN
1	L1	60	ARG
1	L1	68	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	L1	105	LYS
1	L1	107	TYR
1	L1	108	ASN
1	L1	115	VAL
1	L1	116	LEU
1	L1	144	LEU
1	L1	157	PHE
1	L1	161	LYS
1	L1	163	LEU
1	L1	189	PHE
2	L2	96	LEU
2	L2	207	VAL
2	L2	218	HIS
2	L2	227	ARG
2	L2	250	GLN
3	L3	25	ILE
3	L3	36	ASP
3	L3	47	LEU
3	L3	61	ASP
3	L3	76	VAL
3	L3	113	GLU
3	L3	122	TRP
3	L3	123	TYR
3	L3	137	TYR
3	L3	140	ASP
3	L3	198	HIS
3	L3	246	LEU
3	L3	261	MET
3	L3	266	ARG
3	L3	272	TYR
3	L3	332	ARG
3	L3	345	ASN
3	L3	367	LYS
4	L4	54	GLU
4	L4	65	TRP
4	L4	93	MET
4	L4	99	MET
4	L4	170	LYS
4	L4	194	TYR
4	L4	206	LEU
4	L4	246	ARG
4	L4	279	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	L4	313	LEU
4	L4	316	ASN
4	L4	320	ASN
5	L5	23	ARG
5	L5	56	THR
5	L5	62	CYS
5	L5	72	ASP
5	L5	131	LEU
5	L5	155	THR
5	L5	176	SER
5	L5	207	TYR
5	L5	219	PHE
5	L5	261	THR
5	L5	280	GLU
5	L5	293	LEU
6	L6	31	ARG
6	L6	42	LEU
6	L6	54	TYR
6	L6	60	ASP
6	L6	65	ILE
6	L6	77	ARG
6	L6	134	ARG
7	L7	24	GLU
7	L7	83	LEU
7	L7	136	TYR
7	L7	165	ASP
7	L7	176	TYR
7	L7	179	LEU
7	L7	182	ASP
8	L8	41	GLN
8	L8	57	ARG
8	L8	78	PHE
8	L8	84	ARG
8	L8	118	GLU
8	L8	122	LYS
8	L8	123	GLN
8	L8	124	ASP
8	L8	134	TYR
8	L8	232	HIS
9	L9	23	ARG
9	L9	41	ILE
9	L9	42	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	L9	49	ASN
9	L9	69	ARG
9	L9	157	ASN
9	L9	170	LYS
9	L9	172	ILE
9	L9	181	VAL
9	L9	186	PHE
9	L9	189	GLU
10	60	22	TYR
10	60	32	ARG
10	60	40	LYS
10	60	48	LEU
10	60	63	GLU
10	60	163	GLN
10	60	165	ILE
10	60	203	LYS
11	61	10	ARG
11	61	11	ASP
11	61	13	LYS
11	61	40	LEU
11	61	44	THR
11	61	55	ARG
11	61	94	ARG
11	61	112	LEU
11	61	140	ARG
11	61	142	LYS
11	61	144	CYS
13	63	35	ARG
13	63	54	LEU
13	63	55	ARG
13	63	58	VAL
13	63	67	ARG
13	63	98	ASP
13	63	124	ILE
13	63	131	LYS
13	63	137	GLN
13	63	145	PHE
13	63	174	ARG
14	64	8	LYS
14	64	40	ASP
14	64	59	ASN
14	64	70	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	64	72	LEU
14	64	77	ARG
14	64	112	LEU
15	65	46	ASP
15	65	50	ARG
15	65	62	TYR
15	65	113	LEU
15	65	117	ASN
15	65	135	VAL
15	65	147	ARG
16	66	39	GLU
16	66	78	ARG
16	66	113	ASP
16	66	117	ARG
16	66	134	LYS
16	66	135	TYR
16	66	148	LYS
16	66	189	ASP
17	67	25	SER
17	67	54	HIS
17	67	76	PHE
17	67	111	LYS
17	67	120	ASN
17	67	139	TYR
17	67	159	LYS
17	67	180	LYS
18	68	90	ASP
18	68	125	ASP
18	68	138	LEU
19	69	74	ARG
19	69	103	ARG
19	69	152	GLU
19	69	165	LYS
19	69	166	ASN
19	69	171	ASP
19	69	175	GLN
20	70	16	THR
20	70	57	GLU
20	70	78	TRP
20	70	79	VAL
20	70	81	TYR
20	70	100	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	70	104	GLU
20	70	162	THR
20	70	172	TYR
21	71	75	ILE
21	71	83	ARG
21	71	94	GLU
21	71	122	GLN
21	71	127	GLN
21	71	128	LEU
21	71	139	ARG
22	72	10	LYS
22	72	16	THR
22	72	18	ASP
23	73	12	ARG
23	73	33	ASN
23	73	56	ASP
23	73	64	LYS
23	73	69	LEU
23	73	74	MET
23	73	124	ASP
24	74	39	LEU
24	74	75	THR
24	74	77	LYS
24	74	112	ASN
25	75	27	ARG
25	75	54	TYR
25	75	55	ASN
25	75	63	ILE
25	75	73	MET
25	75	78	ASP
25	75	133	LEU
25	75	135	ILE
26	76	48	LEU
26	76	50	ILE
26	76	74	TYR
26	76	83	ASP
26	76	114	ASP
26	76	115	ARG
27	77	4	PHE
27	77	88	ASP
27	77	92	PHE
27	77	109	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	77	134	LEU
28	78	10	LYS
28	78	60	TYR
28	78	82	ILE
28	78	85	ASP
28	78	88	ASP
28	78	91	LEU
29	79	14	ARG
29	79	22	LYS
29	79	25	LYS
29	79	59	LYS
30	80	16	LEU
30	80	40	LYS
30	80	41	LEU
30	80	47	ASN
30	80	61	MET
30	80	83	LYS
31	81	6	ASP
31	81	31	ARG
31	81	50	ARG
31	81	69	TYR
31	81	110	GLU
32	82	62	LYS
33	83	22	VAL
33	83	54	ARG
33	83	57	LYS
33	83	86	ARG
33	83	87	ASN
33	83	106	ASN
34	84	18	ASN
34	84	29	ILE
34	84	51	LEU
34	84	58	ARG
35	85	36	LEU
35	85	48	ARG
35	85	53	CYS
35	85	69	LEU
35	85	71	LYS
35	85	79	ASP
35	85	104	GLN
35	85	119	LYS
36	86	43	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	86	53	TYR
36	86	57	LEU
36	86	60	LEU
36	86	64	SER
36	86	98	ARG
36	86	99	ARG
37	87	12	HIS
37	87	13	ASN
37	87	25	ARG
37	87	58	THR
37	87	59	THR
38	88	6	THR
38	88	11	PHE
38	88	38	PHE
38	88	51	LEU
38	88	61	LYS
39	89	5	LYS
39	89	26	TRP
39	89	43	ASN
40	90	112	LYS
40	90	121	LEU
40	90	127	LEU
41	91	19	LYS
42	92	53	GLN
42	92	72	LEU
42	92	100	LYS
42	92	104	LEU
44	P0	5	ARG
44	P0	58	MET
44	P0	67	LEU
44	P0	104	ARG
45	RC	50	ASP
45	RC	51	ASP
45	RC	59	ARG
45	RC	70	ASP
45	RC	117	LYS
45	RC	136	ILE
45	RC	150	TRP
45	RC	163	ASP
45	RC	175	ASP
45	RC	182	ASN
45	RC	207	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	RC	217	ASP
45	RC	245	PHE
45	RC	268	GLN
46	S0	8	ASP
46	S0	23	HIS
46	S0	38	PHE
46	S0	43	ASP
46	S0	59	LEU
46	S0	79	ARG
46	S0	84	ARG
46	S0	88	LYS
46	S0	107	PHE
46	S0	110	TYR
46	S0	113	ARG
46	S0	134	LYS
46	S0	185	ARG
46	S0	188	LEU
46	S0	190	ASP
46	S0	191	ARG
46	S0	205	ARG
47	S1	59	ASP
47	S1	61	LEU
47	S1	70	LEU
47	S1	73	LEU
47	S1	77	GLU
47	S1	81	PHE
47	S1	86	LEU
47	S1	89	ASP
47	S1	96	LEU
47	S1	137	ILE
47	S1	148	ASN
47	S1	149	GLN
47	S1	180	THR
47	S1	181	LEU
47	S1	184	LEU
47	S1	206	PRO
47	S1	218	LEU
47	S1	219	LYS
47	S1	223	PHE
48	S2	66	PHE
48	S2	89	GLN
48	S2	95	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	S2	106	ASP
48	S2	111	VAL
48	S2	134	LEU
48	S2	148	LEU
49	S3	7	LYS
49	S3	65	ARG
49	S3	79	TYR
49	S3	84	ILE
49	S3	117	ARG
49	S3	125	TYR
49	S3	127	MET
49	S3	143	ARG
49	S3	158	ILE
49	S3	162	GLN
49	S3	178	ARG
49	S3	179	GLN
49	S3	189	MET
50	S4	6	LYS
50	S4	11	ARG
50	S4	26	CYS
50	S4	36	HIS
50	S4	37	LYS
50	S4	117	GLU
50	S4	131	LEU
50	S4	158	ASP
50	S4	198	LYS
50	S4	212	ASP
50	S4	215	ASP
50	S4	227	VAL
50	S4	240	LYS
50	S4	253	ASP
51	S5	25	LEU
51	S5	27	THR
51	S5	45	LYS
51	S5	50	GLU
51	S5	70	VAL
51	S5	76	ARG
51	S5	89	ILE
51	S5	128	ASN
51	S5	156	ARG
51	S5	166	ARG
51	S5	184	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	S6	7	TYR
52	S6	29	ASP
52	S6	37	ASP
52	S6	44	GLU
52	S6	59	GLN
52	S6	88	ARG
52	S6	143	LYS
52	S6	154	ARG
52	S6	216	LEU
52	S6	220	LYS
53	S7	14	THR
53	S7	50	ASP
53	S7	67	LEU
53	S7	85	PHE
53	S7	87	ASP
53	S7	95	GLU
53	S7	97	ARG
53	S7	114	ARG
53	S7	116	ARG
53	S7	141	ARG
53	S7	158	ASP
53	S7	174	ASN
53	S7	177	THR
53	S7	185	ILE
54	S8	8	ARG
54	S8	29	LEU
54	S8	47	ARG
54	S8	92	ARG
54	S8	107	THR
54	S8	116	HIS
54	S8	123	LYS
54	S8	137	LYS
54	S8	160	PHE
54	S8	182	TYR
55	S9	3	ARG
55	S9	66	ASP
55	S9	78	ARG
55	S9	92	LYS
55	S9	138	LYS
55	S9	149	ARG
55	S9	151	ASP
55	S9	171	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
56	10	9	ASN
56	10	32	HIS
56	10	41	TYR
56	10	56	LYS
56	10	59	PHE
56	10	63	TYR
56	10	86	ILE
57	11	67	ARG
57	11	121	ASP
57	11	138	ASN
57	11	150	ASN
58	12	24	ILE
58	12	33	ARG
58	12	43	ARG
58	12	45	LEU
58	12	71	ILE
58	12	84	ASN
58	12	89	ILE
58	12	97	LEU
58	12	103	LEU
58	12	108	ARG
58	12	126	TRP
58	12	137	MET
59	13	3	ARG
59	13	31	GLU
59	13	39	LYS
59	13	71	ILE
59	13	75	LEU
59	13	76	LYS
60	14	20	TYR
60	14	61	MET
60	14	70	LYS
60	14	137	LEU
61	15	17	TYR
61	15	21	ASP
61	15	24	LYS
61	15	36	LEU
61	15	44	ARG
61	15	110	GLU
61	15	120	SER
62	16	26	LYS
62	16	52	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
62	16	62	ASN
62	16	98	ASP
62	16	120	ASP
63	17	3	ARG
63	17	29	GLN
63	17	46	LEU
63	17	47	ARG
63	17	49	LYS
63	17	60	ARG
63	17	81	LYS
63	17	83	GLN
63	17	84	TYR
63	17	95	ARG
63	17	123	ASN
64	18	3	LEU
64	18	15	LEU
64	18	28	ILE
64	18	36	LYS
64	18	82	PRO
64	18	87	ASN
64	18	91	ASP
64	18	94	ASP
64	18	97	ASP
64	18	114	GLU
64	18	132	ARG
65	19	13	ASP
65	19	28	LEU
65	19	44	GLU
65	19	64	HIS
65	19	66	TYR
65	19	95	ASP
65	19	126	GLU
65	19	130	ARG
65	19	131	ASP
65	19	135	ILE
65	19	143	ASP
66	20	18	GLN
66	20	43	LYS
66	20	46	GLU
66	20	57	ARG
66	20	77	LYS
66	20	85	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
66	20	89	ARG
66	20	92	ASP
67	21	5	LYS
67	21	11	LEU
67	21	27	ASP
68	22	23	ARG
68	22	24	GLN
68	22	65	LEU
68	22	93	LEU
68	22	103	ILE
68	22	104	LEU
68	22	118	ARG
69	23	7	ARG
69	23	19	ARG
69	23	24	TRP
69	23	27	ASN
69	23	28	ASN
69	23	82	LYS
69	23	114	LYS
69	23	136	TRP
69	23	144	ARG
70	24	17	LEU
70	24	32	ARG
70	24	99	LYS
70	24	102	LYS
70	24	119	PHE
70	24	128	LYS
71	25	77	ARG
71	25	85	LYS
71	25	95	HIS
71	25	103	ARG
72	26	36	ILE
72	26	37	LYS
72	26	38	ARG
72	26	41	ILE
72	26	90	GLU
73	27	34	ASP
73	27	65	THR
74	28	19	THR
74	28	32	PHE
74	28	35	ASP
74	28	52	ASP

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Mol	Chain	Res	Type
75	29	8	PHE
75	29	40	ARG
76	30	20	LYS
76	30	35	TYR
76	30	51	ASN
76	30	56	MET
77	31	113	LYS
77	31	120	GLU
77	31	138	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (224) such sidechains are listed below:

Mol	Chain	Res	Type
1	L1	35	GLN
1	L1	44	GLN
1	L1	57	ASN
1	L1	94	ASN
1	L1	108	ASN
1	L1	127	GLN
1	L1	158	GLN
1	L1	181	ASN
2	L2	38	HIS
2	L2	79	ASN
2	L2	132	ASN
2	L2	205	ASN
2	L2	250	GLN
2	L2	253	GLN
3	L3	3	HIS
3	L3	11	HIS
3	L3	121	ASN
3	L3	198	HIS
3	L3	211	GLN
3	L3	243	HIS
3	L3	313	HIS
3	L3	345	ASN
4	L4	45	ASN
4	L4	59	GLN
4	L4	114	ASN
4	L4	221	ASN
4	L4	234	ASN
4	L4	260	GLN
4	L4	307	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	L4	316	ASN
4	L4	320	ASN
4	L4	328	ASN
4	L4	361	HIS
5	L5	40	HIS
5	L5	63	GLN
5	L5	90	HIS
5	L5	264	GLN
6	L6	4	GLN
6	L6	28	GLN
7	L7	146	GLN
7	L7	172	ASN
8	L8	41	GLN
8	L8	59	GLN
8	L8	138	HIS
8	L8	243	GLN
9	L9	8	GLN
9	L9	49	ASN
9	L9	50	ASN
9	L9	125	ASN
9	L9	157	ASN
10	60	14	ASN
10	60	59	GLN
10	60	163	GLN
10	60	209	ASN
10	60	220	GLN
11	61	68	HIS
11	61	101	ASN
13	63	28	GLN
13	63	37	ASN
13	63	102	GLN
13	63	103	ASN
13	63	137	GLN
15	65	57	GLN
15	65	86	ASN
15	65	87	GLN
15	65	117	ASN
15	65	122	ASN
15	65	123	GLN
16	66	122	GLN
17	67	28	ASN
17	67	50	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	67	96	GLN
17	67	101	ASN
17	67	120	ASN
17	67	121	GLN
18	68	5	HIS
18	68	9	GLN
18	68	145	ASN
19	69	34	GLN
19	69	68	GLN
19	69	166	ASN
19	69	175	GLN
20	70	3	HIS
20	70	63	GLN
20	70	89	ASN
20	70	108	GLN
20	70	142	GLN
21	71	22	HIS
21	71	49	GLN
21	71	54	HIS
21	71	58	GLN
21	71	131	GLN
21	71	134	GLN
21	71	146	ASN
23	73	7	GLN
23	73	33	ASN
24	74	32	GLN
24	74	112	ASN
25	75	91	ASN
25	75	111	ASN
26	76	81	GLN
27	77	57	HIS
27	77	106	GLN
28	78	44	ASN
28	78	65	GLN
30	80	36	GLN
32	82	35	GLN
32	82	49	ASN
32	82	52	GLN
32	82	60	ASN
32	82	88	HIS
32	82	104	ASN
33	83	13	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	83	24	ASN
33	83	26	ASN
33	83	42	GLN
33	83	75	HIS
33	83	87	ASN
33	83	106	ASN
35	85	62	GLN
35	85	68	GLN
35	85	113	GLN
37	87	13	ASN
37	87	76	ASN
38	88	10	GLN
38	88	40	GLN
39	89	32	ASN
39	89	38	ASN
39	89	43	ASN
39	89	50	ASN
40	90	119	ASN
42	92	47	GLN
42	92	53	GLN
42	92	82	GLN
42	92	99	GLN
44	P0	36	GLN
44	P0	39	HIS
44	P0	83	ASN
45	RC	29	GLN
45	RC	52	GLN
45	RC	182	ASN
45	RC	308	ASN
46	S0	23	HIS
46	S0	30	GLN
46	S0	32	HIS
46	S0	33	GLN
46	S0	193	GLN
47	S1	146	GLN
47	S1	148	ASN
47	S1	149	GLN
47	S1	177	GLN
47	S1	232	HIS
49	S3	74	GLN
49	S3	92	GLN
50	S4	16	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
50	S4	50	ASN
50	S4	67	GLN
50	S4	69	HIS
50	S4	130	GLN
50	S4	188	ASN
50	S4	201	HIS
50	S4	209	HIS
50	S4	216	ASN
50	S4	258	GLN
50	S4	259	GLN
51	S5	44	ASN
51	S5	79	ASN
51	S5	103	ASN
51	S5	122	ASN
51	S5	128	ASN
52	S6	13	GLN
52	S6	34	GLN
52	S6	59	GLN
52	S6	176	GLN
53	S7	22	GLN
53	S7	89	HIS
53	S7	180	GLN
54	S8	32	GLN
54	S8	64	ASN
55	S9	131	GLN
56	10	12	HIS
56	10	32	HIS
56	10	62	GLN
57	11	21	ASN
57	11	150	ASN
58	12	84	ASN
58	12	111	ASN
61	15	15	HIS
61	15	103	ASN
62	16	94	GLN
63	17	29	GLN
63	17	83	GLN
63	17	97	ASN
63	17	105	GLN
63	17	123	ASN
64	18	44	ASN
64	18	74	GLN

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Mol	Chain	Res	Type
64	18	75	ASN
64	18	127	HIS
65	19	16	ASN
65	19	43	ASN
65	19	129	GLN
65	19	138	GLN
66	20	33	GLN
66	20	40	ASN
66	20	87	HIS
66	20	98	GLN
67	21	21	ASN
67	21	70	ASN
67	21	74	GLN
68	22	15	ASN
68	22	42	GLN
68	22	44	HIS
68	22	64	GLN
68	22	80	ASN
68	22	92	ASN
69	23	21	ASN
69	23	22	ASN
69	23	75	GLN
70	24	22	GLN
70	24	63	GLN
70	24	113	ASN
71	25	82	HIS
71	25	98	GLN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
78	1S	1779/1798 (98%)	336 (18%)	15 (0%)
79	2S	3282/3395 (96%)	472 (14%)	21 (0%)
80	8S	157/158 (99%)	22 (14%)	1 (0%)
81	5S	120/121 (99%)	11 (9%)	0
82	MR	8/14 (57%)	2 (25%)	0
83	PT	76/77 (98%)	9 (11%)	0
All	All	5422/5563 (97%)	852 (15%)	37 (0%)

All (852) 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	42	G
78	1S	43	A
78	1S	45	U
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	78	A
78	1S	81	G
78	1S	104	A
78	1S	114	C
78	1S	116	U
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
78	1S	141	U
78	1S	145	A
78	1S	153	G
78	1S	159	U
78	1S	170	U
78	1S	178	U
78	1S	184	C
78	1S	185	U
78	1S	186	C
78	1S	190	C
78	1S	191	C
78	1S	192	U
78	1S	195	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
78	1S	197	A
78	1S	200	A
78	1S	215	A
78	1S	219	A
78	1S	228	G
78	1S	231	U
78	1S	232	U
78	1S	233	C
78	1S	234	G
78	1S	238	U
78	1S	239	C
78	1S	240	U
78	1S	241	U
78	1S	250	C
78	1S	259	U
78	1S	261	U
78	1S	265	A
78	1S	272	U
78	1S	276	C
78	1S	278	U
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	337	G
78	1S	338	C
78	1S	352	A
78	1S	359	A
78	1S	360	A
78	1S	361	C
78	1S	380	U
78	1S	402	C
78	1S	404	G
78	1S	416	A
78	1S	417	A
78	1S	423	G
78	1S	424	C
78	1S	425	A
78	1S	426	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
78	1S	434	G
78	1S	439	U
78	1S	444	C
78	1S	469	C
78	1S	475	A
78	1S	477	A
78	1S	485	A
78	1S	488	G
78	1S	493	U
78	1S	495	C
78	1S	496	G
78	1S	500	C
78	1S	502	U
78	1S	505	A
78	1S	506	A
78	1S	507	U
78	1S	510	G
78	1S	515	A
78	1S	519	C
78	1S	532	U
78	1S	538	A
78	1S	539	G
78	1S	541	A
78	1S	545	A
78	1S	555	A
78	1S	556	A
78	1S	557	G
78	1S	558	U
78	1S	559	C
78	1S	565	C
78	1S	571	G
78	1S	579	A
78	1S	580	A
78	1S	594	A
78	1S	595	G
78	1S	606	A
78	1S	611	U
78	1S	619	A
78	1S	620	A
78	1S	622	A
78	1S	623	A
78	1S	638	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
78	1S	639	U
78	1S	655	G
78	1S	656	G
78	1S	658	C
78	1S	685	A
78	1S	687	G
78	1S	694	U
78	1S	696	C
78	1S	697	C
78	1S	700	C
78	1S	703	G
78	1S	704	C
78	1S	705	U
78	1S	707	A
78	1S	709	C
78	1S	710	U
78	1S	712	G
78	1S	713	A
78	1S	715	U
78	1S	718	U
78	1S	719	U
78	1S	721	U
78	1S	723	G
78	1S	725	U
78	1S	731	C
78	1S	733	A
78	1S	734	A
78	1S	738	G
78	1S	742	U
78	1S	745	U
78	1S	755	A
78	1S	766	U
78	1S	774	A
78	1S	778	G
78	1S	780	A
78	1S	781	U
78	1S	783	G
78	1S	784	C
78	1S	789	A
78	1S	794	U
78	1S	812	A
78	1S	815	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	841	U
78	1S	846	G
78	1S	856	A
78	1S	860	U
78	1S	861	U
78	1S	863	A
78	1S	865	A
78	1S	876	G
78	1S	898	A
78	1S	911	U
78	1S	912	U
78	1S	913	G
78	1S	914	G
78	1S	933	A
78	1S	944	A
78	1S	966	A
78	1S	982	U
78	1S	992	A
78	1S	1004	U
78	1S	1005	A
78	1S	1012	U
78	1S	1021	C
78	1S	1026	A
78	1S	1028	C
78	1S	1029	U
78	1S	1032	G
78	1S	1039	A
78	1S	1052	U
78	1S	1053	G
78	1S	1058	U
78	1S	1059	U
78	1S	1061	A
78	1S	1072	C
78	1S	1074	G
78	1S	1076	A
78	1S	1080	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
78	1S	1082	C
78	1S	1091	A
78	1S	1092	A
78	1S	1093	A
78	1S	1096	C
78	1S	1097	U
78	1S	1098	U
78	1S	1100	G
78	1S	1155	G
78	1S	1156	C
78	1S	1157	A
78	1S	1158	C
78	1S	1160	A
78	1S	1167	G
78	1S	1186	U
78	1S	1188	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	1228	G
78	1S	1229	G
78	1S	1243	G
78	1S	1244	A
78	1S	1245	G
78	1S	1246	C
78	1S	1273	G
78	1S	1275	A
78	1S	1305	U
78	1S	1306	C
78	1S	1310	U
78	1S	1311	U
78	1S	1312	A
78	1S	1313	A
78	1S	1314	U
78	1S	1321	A
78	1S	1330	G
78	1S	1340	U
78	1S	1341	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
78	1S	1344	A
78	1S	1345	A
78	1S	1347	U
78	1S	1361	U
78	1S	1362	U
78	1S	1363	U
78	1S	1370	U
78	1S	1371	A
78	1S	1385	G
78	1S	1390	U
78	1S	1391	A
78	1S	1398	U
78	1S	1399	C
78	1S	1400	A
78	1S	1401	A
78	1S	1403	C
78	1S	1413	U
78	1S	1415	U
78	1S	1416	G
78	1S	1427	A
78	1S	1428	G
78	1S	1445	G
78	1S	1446	A
78	1S	1448	G
78	1S	1457	C
78	1S	1459	C
78	1S	1471	A
78	1S	1473	U
78	1S	1474	G
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	1516	A
78	1S	1520	U
78	1S	1521	G
78	1S	1523	G
78	1S	1524	A
78	1S	1535	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	1582	U
78	1S	1584	G
78	1S	1601	G
78	1S	1616	G
78	1S	1621	U
78	1S	1622	G
78	1S	1623	C
78	1S	1631	A
78	1S	1636	C
78	1S	1644	C
78	1S	1645	G
78	1S	1657	U
78	1S	1658	G
78	1S	1678	A
78	1S	1683	C
78	1S	1684	U
78	1S	1689	A
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	1717	G
78	1S	1736	G
78	1S	1750	A
78	1S	1754	A
78	1S	1756	A
78	1S	1758	U
78	1S	1762	A
78	1S	1780	G
78	1S	1792	G
78	1S	1793	G
78	1S	1794	A
78	1S	1796	C
79	2S	14	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	74	G
79	2S	77	A
79	2S	92	G
79	2S	110	G
79	2S	111	C
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	156	G
79	2S	157	A
79	2S	161	G
79	2S	165	A
79	2S	170	G
79	2S	182	U
79	2S	187	A
79	2S	190	U
79	2S	191	U
79	2S	210	U
79	2S	218	G
79	2S	219	A
79	2S	240	U
79	2S	243	G
79	2S	249	U
79	2S	252	U
79	2S	269	G
79	2S	283	G
79	2S	286	U
79	2S	295	A
79	2S	298	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	305	U
79	2S	323	A
79	2S	329	U
79	2S	338	A
79	2S	339	C
79	2S	344	A
79	2S	346	C
79	2S	350	C
79	2S	352	A
79	2S	374	A
79	2S	376	G
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	441	U
79	2S	487	U
79	2S	494	G
79	2S	495	G
79	2S	503	C
79	2S	510	G
79	2S	517	G
79	2S	520	U
79	2S	521	A
79	2S	535	G
79	2S	546	C
79	2S	547	G
79	2S	557	A
79	2S	558	U
79	2S	559	A
79	2S	578	A
79	2S	579	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	638	C
79	2S	646	A
79	2S	649	A
79	2S	677	A
79	2S	681	U
79	2S	683	U
79	2S	691	A
79	2S	705	A
79	2S	706	A
79	2S	719	U
79	2S	720	A
79	2S	758	C
79	2S	765	C
79	2S	766	U
79	2S	767	U
79	2S	776	U
79	2S	777	U
79	2S	781	G
79	2S	785	G
79	2S	786	A
79	2S	799	G
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
79	2S	879	U
79	2S	880	G
79	2S	907	G
79	2S	908	G
79	2S	914	A
79	2S	916	G
79	2S	923	C
79	2S	932	U
79	2S	937	G
79	2S	938	C
79	2S	944	C
79	2S	959	C
79	2S	960	U
79	2S	979	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	981	U
79	2S	984	G
79	2S	1001	G
79	2S	1002	A
79	2S	1010	G
79	2S	1020	G
79	2S	1024	G
79	2S	1025	A
79	2S	1027	A
79	2S	1029	G
79	2S	1037	C
79	2S	1041	U
79	2S	1047	A
79	2S	1049	C
79	2S	1063	G
79	2S	1064	A
79	2S	1065	A
79	2S	1081	U
79	2S	1082	U
79	2S	1093	A
79	2S	1094	U
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	1143	A
79	2S	1144	U
79	2S	1159	A
79	2S	1161	G
79	2S	1162	U
79	2S	1174	G
79	2S	1177	G
79	2S	1180	A
79	2S	1181	U
79	2S	1201	C
79	2S	1209	G
79	2S	1221	A
79	2S	1222	G
79	2S	1236	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	1237	G
79	2S	1239	C
79	2S	1241	U
79	2S	1242	G
79	2S	1244	A
79	2S	1245	A
79	2S	1246	G
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	1301	A
79	2S	1307	G
79	2S	1308	A
79	2S	1309	U
79	2S	1318	A
79	2S	1330	A
79	2S	1348	U
79	2S	1349	G
79	2S	1351	U
79	2S	1352	A
79	2S	1355	A
79	2S	1357	G
79	2S	1386	A
79	2S	1392	G
79	2S	1399	A
79	2S	1400	G
79	2S	1419	A
79	2S	1431	G
79	2S	1434	G
79	2S	1437	C
79	2S	1455	U
79	2S	1456	A
79	2S	1481	A
79	2S	1496	C
79	2S	1508	C
79	2S	1556	C
79	2S	1557	A
79	2S	1562	C
79	2S	1563	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	1567	U
79	2S	1568	U
79	2S	1569	U
79	2S	1570	U
79	2S	1576	G
79	2S	1582	C
79	2S	1583	A
79	2S	1587	A
79	2S	1589	A
79	2S	1607	U
79	2S	1629	U
79	2S	1642	A
79	2S	1643	A
79	2S	1645	U
79	2S	1655	G
79	2S	1694	U
79	2S	1716	U
79	2S	1717	U
79	2S	1725	C
79	2S	1730	G
79	2S	1750	A
79	2S	1751	G
79	2S	1765	U
79	2S	1766	G
79	2S	1780	G
79	2S	1788	C
79	2S	1797	A
79	2S	1808	G
79	2S	1816	A
79	2S	1817	G
79	2S	1819	U
79	2S	1820	U
79	2S	1821	U
79	2S	1839	A
79	2S	1841	A
79	2S	1842	A
79	2S	1843	C
79	2S	1845	G
79	2S	1849	C
79	2S	1850	A
79	2S	1879	A
79	2S	1893	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	1906	G
79	2S	1927	G
79	2S	1931	U
79	2S	1948	G
79	2S	1954	G
79	2S	1962	G
79	2S	1969	G
79	2S	1980	C
79	2S	2082	U
79	2S	2083	G
79	2S	2085	U
79	2S	2094	C
79	2S	2101	C
79	2S	2102	U
79	2S	2111	G
79	2S	2113	A
79	2S	2121	G
79	2S	2122	G
79	2S	2131	A
79	2S	2140	U
79	2S	2142	A
79	2S	2144	A
79	2S	2158	A
79	2S	2169	G
79	2S	2188	A
79	2S	2205	U
79	2S	2244	A
79	2S	2255	A
79	2S	2256	A
79	2S	2260	U
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	2310	U
79	2S	2313	A
79	2S	2314	U
79	2S	2315	G
79	2S	2319	U
79	2S	2336	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	2373	A
79	2S	2374	C
79	2S	2375	G
79	2S	2397	A
79	2S	2402	A
79	2S	2403	G
79	2S	2411	U
79	2S	2418	G
79	2S	2434	U
79	2S	2453	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	2475	G
79	2S	2485	A
79	2S	2487	U
79	2S	2488	A
79	2S	2490	C
79	2S	2494	A
79	2S	2512	C
79	2S	2513	U
79	2S	2514	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	2534	G
79	2S	2535	A
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	2552	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	2561	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	2587	U
79	2S	2589	G
79	2S	2594	C
79	2S	2596	U
79	2S	2606	G
79	2S	2607	G
79	2S	2614	G
79	2S	2626	A
79	2S	2635	A
79	2S	2637	A
79	2S	2645	G
79	2S	2648	G
79	2S	2652	U
79	2S	2655	U
79	2S	2656	A
79	2S	2674	A
79	2S	2677	G
79	2S	2689	A
79	2S	2691	A
79	2S	2694	A
79	2S	2696	A
79	2S	2714	G
79	2S	2728	G
79	2S	2729	U
79	2S	2742	C
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	2799	A
79	2S	2800	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	2801	A
79	2S	2803	A
79	2S	2810	C
79	2S	2816	G
79	2S	2817	A
79	2S	2818	U
79	2S	2844	C
79	2S	2845	A
79	2S	2867	C
79	2S	2871	G
79	2S	2872	A
79	2S	2873	U
79	2S	2875	U
79	2S	2887	A
79	2S	2896	A
79	2S	2899	C
79	2S	2918	G
79	2S	2923	U
79	2S	2928	C
79	2S	2935	U
79	2S	2936	A
79	2S	2947	G
79	2S	2951	G
79	2S	2954	U
79	2S	2983	C
79	2S	2997	G
79	2S	3049	A
79	2S	3057	U
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	3115	C
79	2S	3116	G
79	2S	3122	A
79	2S	3130	A
79	2S	3131	U
79	2S	3142	A
79	2S	3143	C
79	2S	3154	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	3155	U
79	2S	3156	U
79	2S	3157	U
79	2S	3164	C
79	2S	3165	A
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	3206	C
79	2S	3207	U
79	2S	3215	A
79	2S	3217	C
79	2S	3218	A
79	2S	3219	G
79	2S	3222	U
79	2S	3229	G
79	2S	3235	C
79	2S	3243	A
79	2S	3245	A
79	2S	3259	U
79	2S	3260	G
79	2S	3263	G
79	2S	3270	U
79	2S	3273	A
79	2S	3276	G
79	2S	3279	A
79	2S	3281	U
79	2S	3286	G
79	2S	3287	U
79	2S	3289	G
79	2S	3294	A
79	2S	3295	A
79	2S	3304	U
79	2S	3316	A
79	2S	3319	U
79	2S	3335	A
79	2S	3345	G
79	2S	3352	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
79	2S	3354	U
79	2S	3355	U
79	2S	3356	G
79	2S	3369	G
79	2S	3370	A
79	2S	3375	A
79	2S	3378	C
79	2S	3389	U
79	2S	3390	G
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	82	U
80	8S	83	C
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	125	U
80	8S	126	A
80	8S	128	U
80	8S	151	C
80	8S	156	U
81	5S	13	A
81	5S	22	A
81	5S	51	A
81	5S	52	G
81	5S	54	U
81	5S	65	G
81	5S	76	A
81	5S	93	C
81	5S	102	A
81	5S	112	G
81	5S	121	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
82	MR	4	A
82	MR	5	A
83	PT	2	G
83	PT	9	G
83	PT	20	G
83	PT	21	U
83	PT	48	U
83	PT	49	C
83	PT	60	A
83	PT	62	C
83	PT	77	A

All (37) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
78	1S	25	C
78	1S	68	A
78	1S	139	C
78	1S	555	A
78	1S	720	G
78	1S	829	A
78	1S	1051	G
78	1S	1339	C
78	1S	1344	A
78	1S	1370	U
78	1S	1481	C
78	1S	1615	C
78	1S	1621	U
78	1S	1696	G
78	1S	1761	U
79	2S	65	A
79	2S	169	U
79	2S	637	C
79	2S	764	U
79	2S	1103	A
79	2S	1241	U
79	2S	1307	G
79	2S	1329	U
79	2S	1556	C
79	2S	1816	A
79	2S	2101	C
79	2S	2112	U

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Mol	Chain	Res	Type
79	2S	2512	C
79	2S	2525	G
79	2S	2534	G
79	2S	2541	U
79	2S	2593	A
79	2S	3121	U
79	2S	3228	C
79	2S	3269	U
79	2S	3351	U
80	8S	85	G

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

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

#### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

#### 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

#### 5.7 Other polymers [i](#)

There are no such residues in this entry.

#### 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

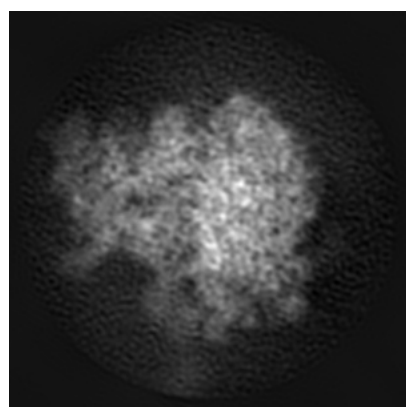
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5976. These allow visual inspection of the internal detail of the map and identification of artifacts.

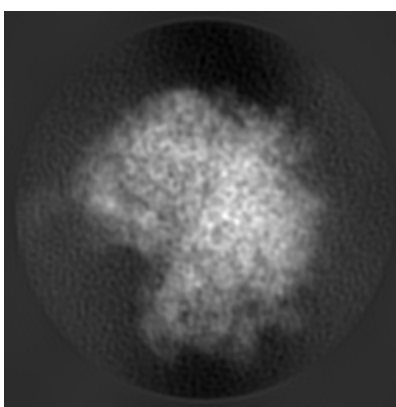
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

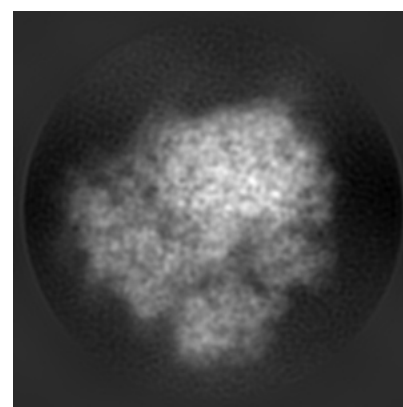
#### 6.1.1 Primary map



X



Y

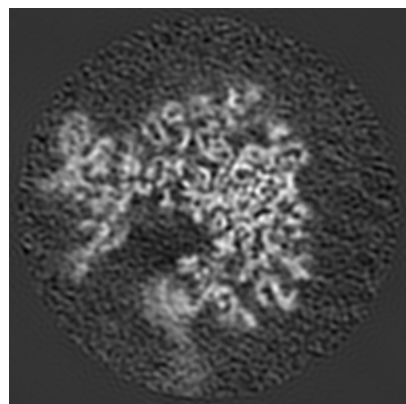


Z

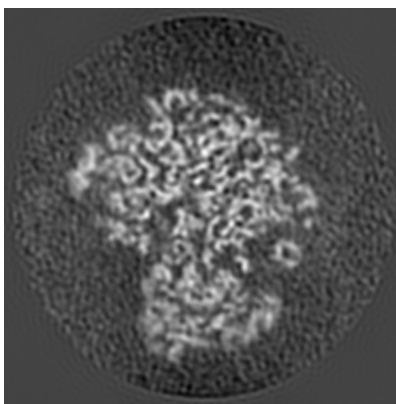
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

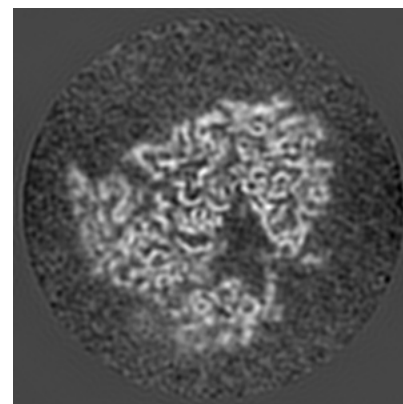
#### 6.2.1 Primary map



X Index: 180



Y Index: 180

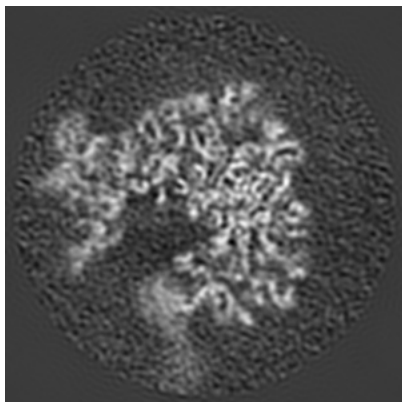


Z Index: 180

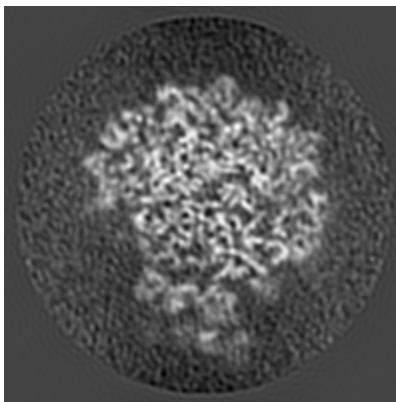
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [\(i\)](#)

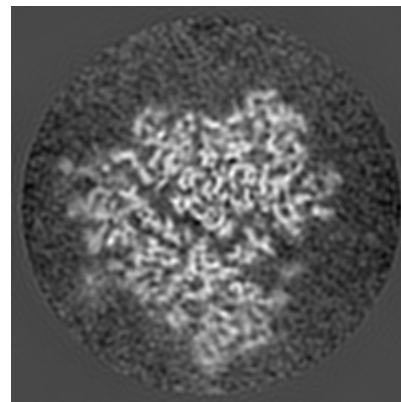
### 6.3.1 Primary map



X Index: 182



Y Index: 205

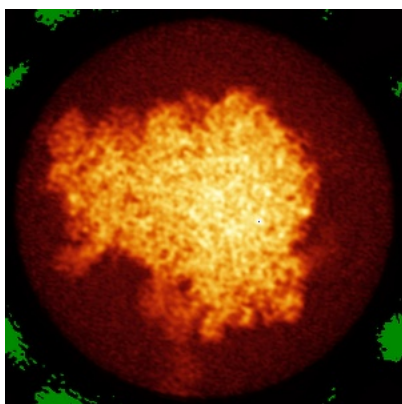


Z Index: 199

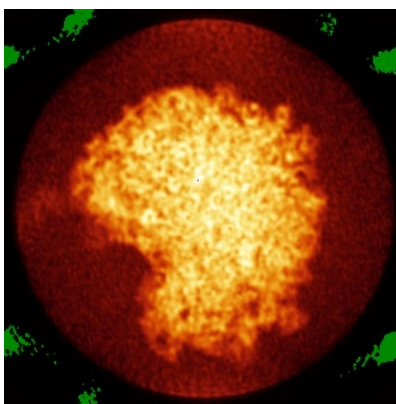
The images above show the largest variance slices of the map in three orthogonal directions.

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

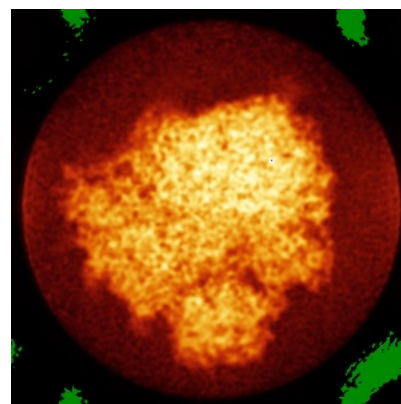
### 6.4.1 Primary map



X



Y



Z

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

## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

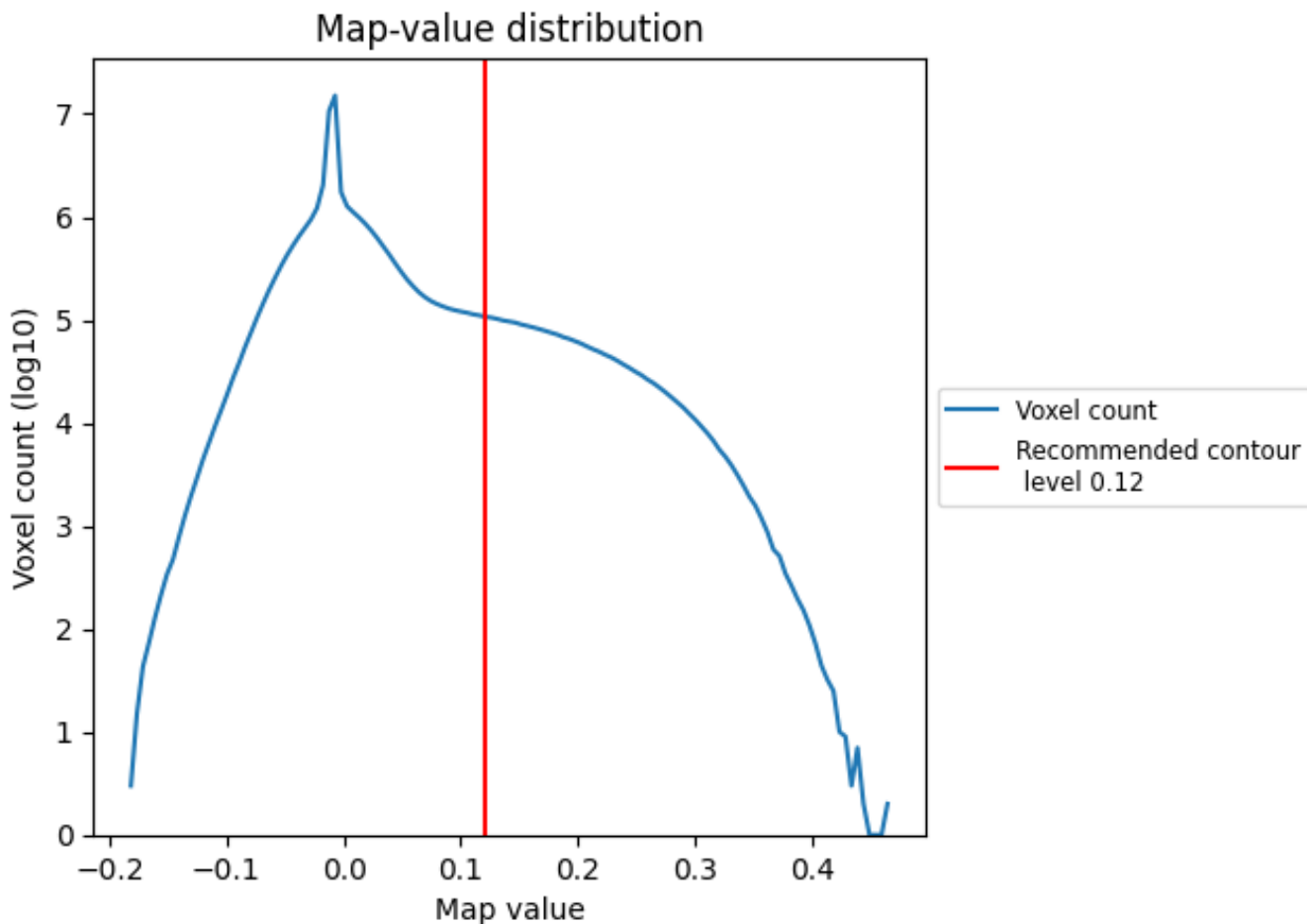
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

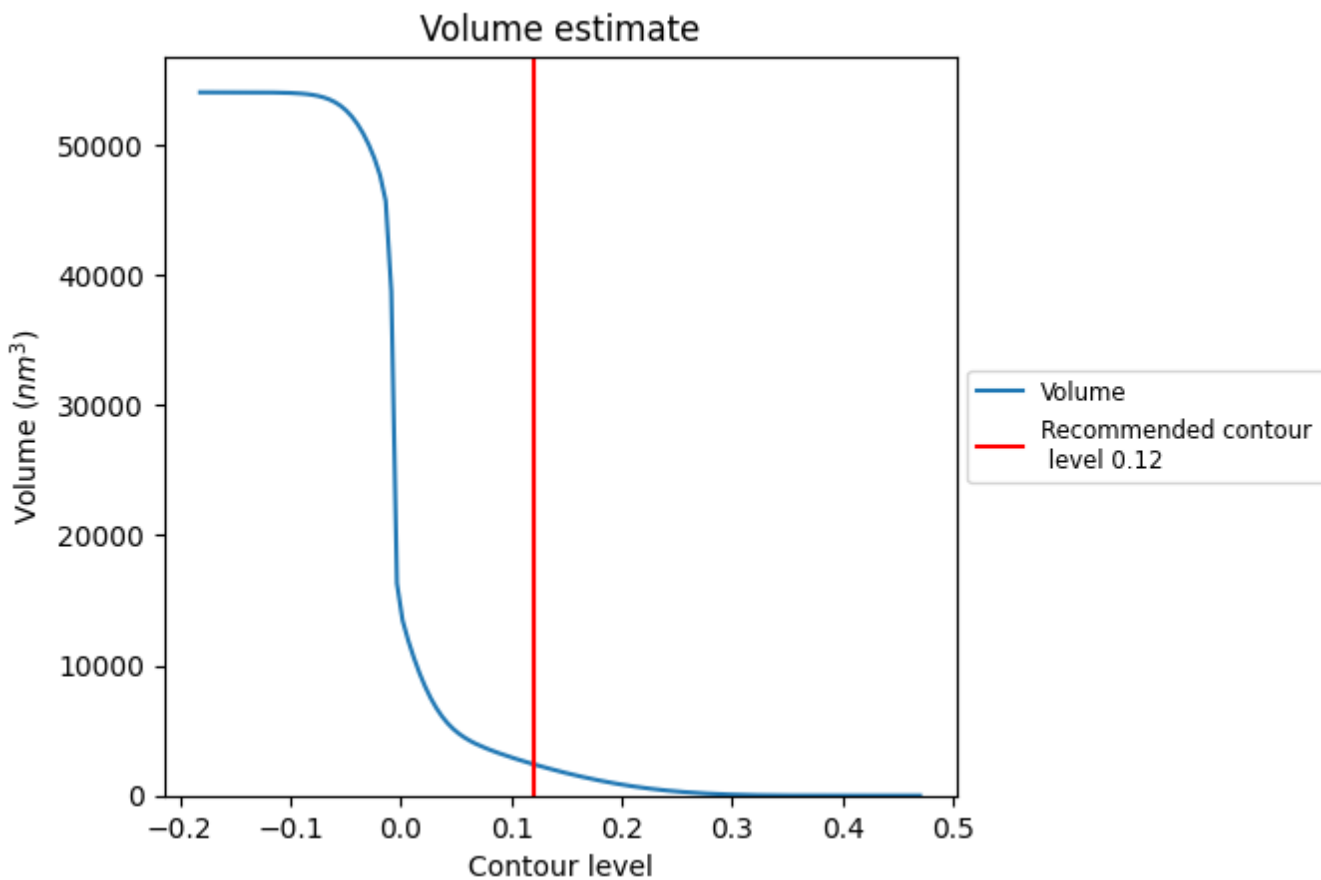
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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

## 7.2 Volume estimate [i](#)

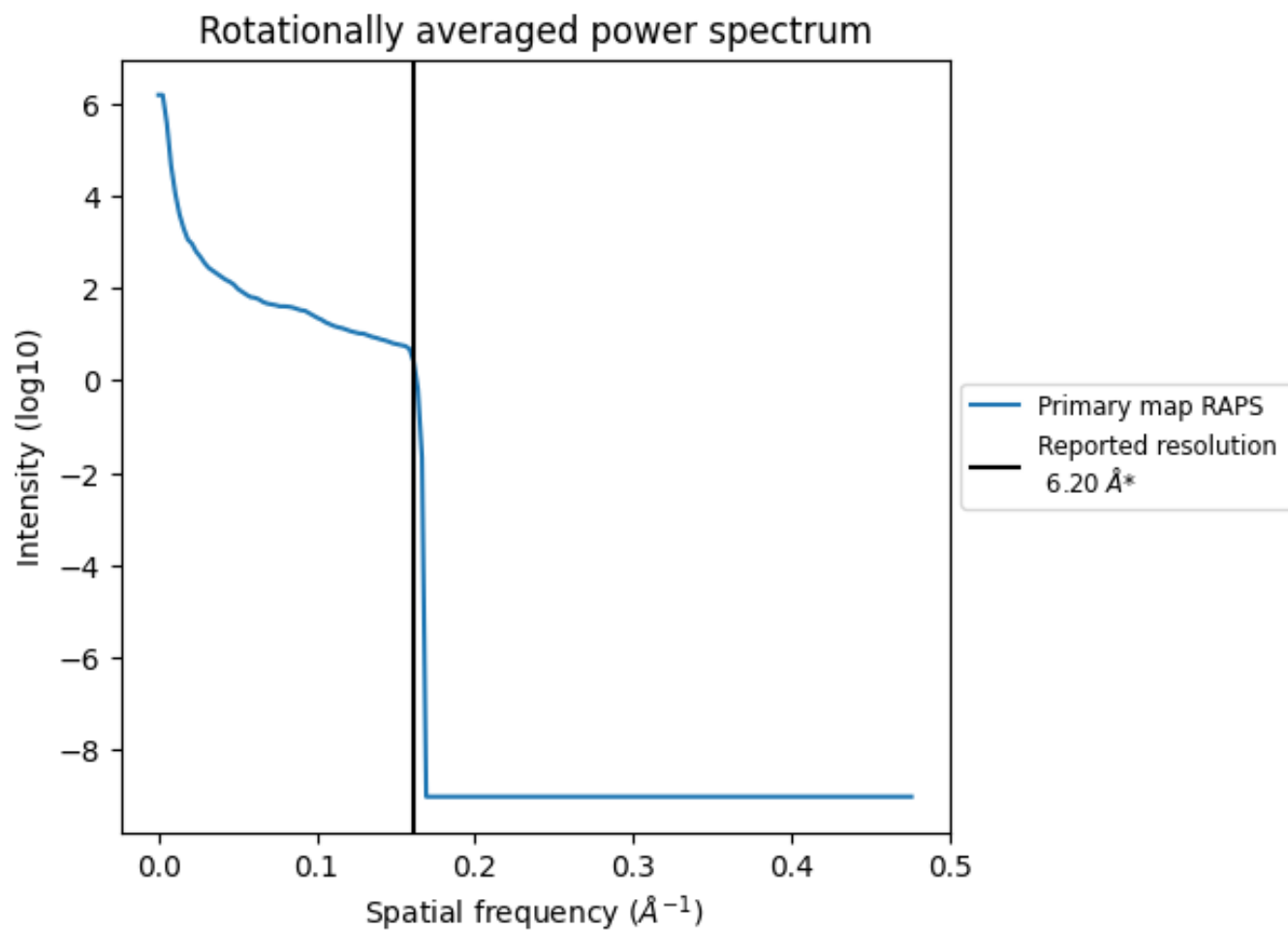


The volume at the recommended contour level is 2412  $\text{nm}^3$ ; this corresponds to an approximate mass of 2179 kDa.

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 0.161 Å<sup>-1</sup>

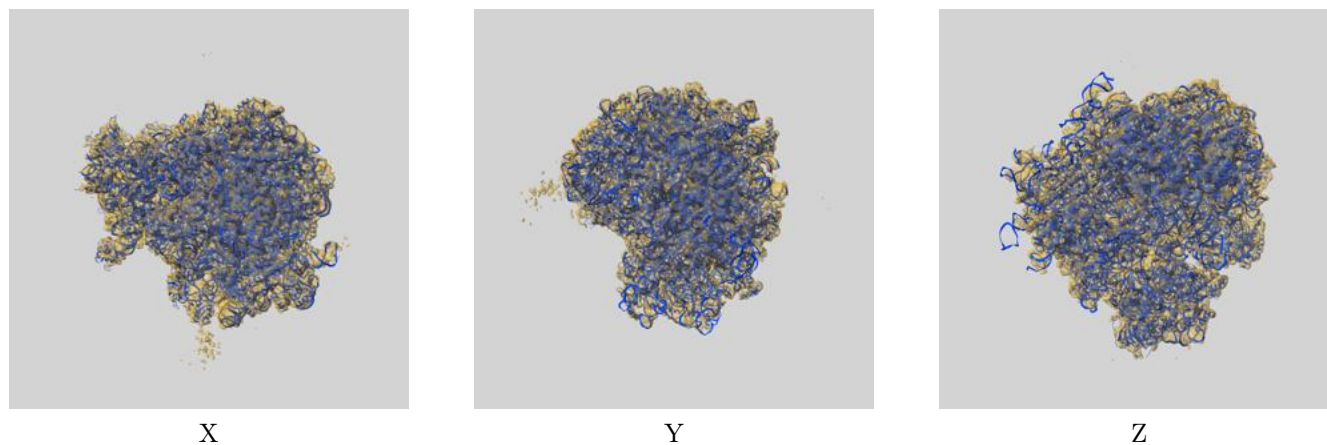
## 8 Fourier-Shell correlation

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

## 9 Map-model fit [i](#)

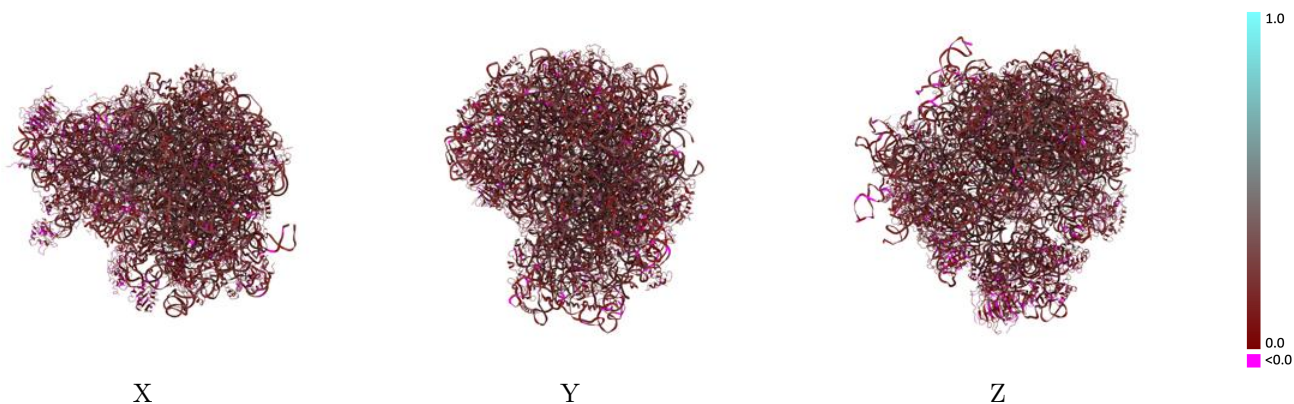
This section contains information regarding the fit between EMDB map EMD-5976 and PDB model 3J77. Per-residue inclusion information can be found in section 3 on page 19.

### 9.1 Map-model overlay [i](#)



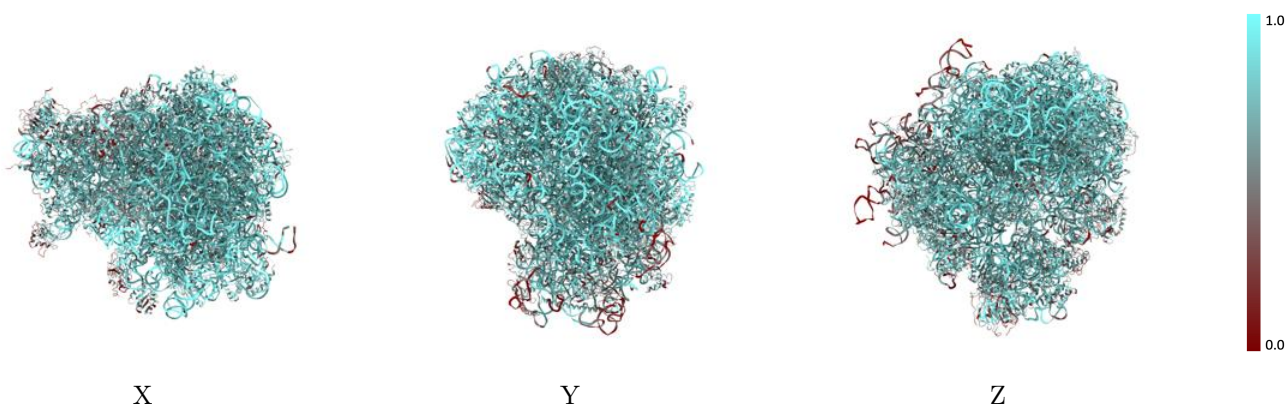
The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



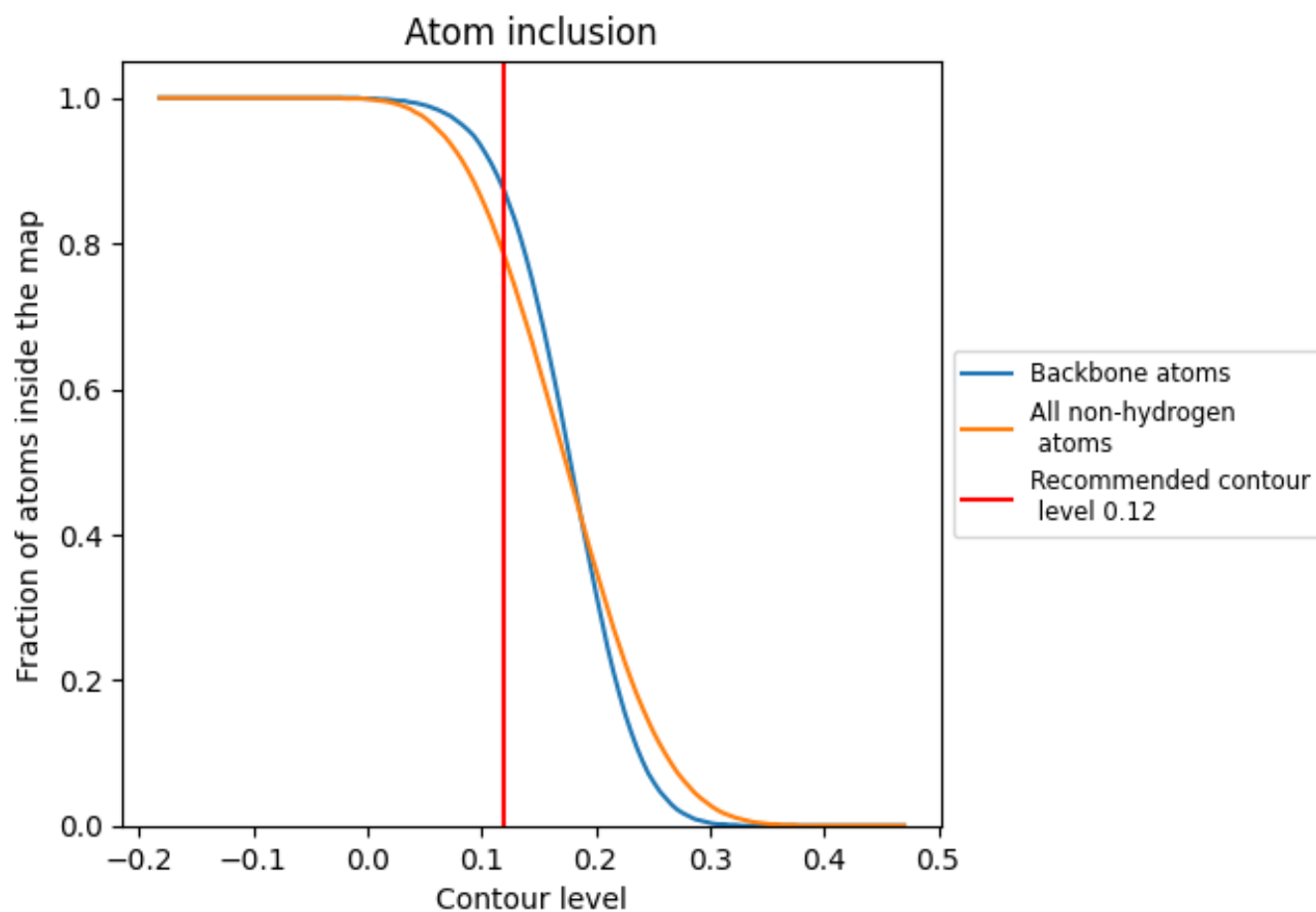
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.12).







































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 87% of all backbone atoms, 78% 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	 0.7830	 0.1910
10	 0.6750	 0.1370
11	 0.5250	 0.1720
12	 0.4140	 0.1440
13	 0.6960	 0.1710
14	 0.6580	 0.1690
15	 0.6610	 0.1590
16	 0.6220	 0.1210
17	 0.5500	 0.1440
18	 0.5820	 0.1520
19	 0.6060	 0.1260
1S	 0.8480	 0.2040
20	 0.6430	 0.1460
21	 0.6480	 0.1630
22	 0.6200	 0.1640
23	 0.5960	 0.1820
24	 0.6490	 0.1650
25	 0.5080	 0.1530
26	 0.6940	 0.1760
27	 0.6980	 0.1790
28	 0.5940	 0.1570
29	 0.7080	 0.1310
2S	 0.9110	 0.2210
30	 0.5900	 0.1880
31	 0.5330	 0.1380
5S	 0.9520	 0.2210
60	 0.7100	 0.1810
61	 0.6250	 0.1500
62	 0.2740	 0.1110
63	 0.6310	 0.1730
64	 0.7880	 0.1560
65	 0.6950	 0.1420
66	 0.7390	 0.1620
67	 0.6840	 0.1600
68	 0.6680	 0.1630

















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Chain	Atom inclusion	Q-score
69	 0.6860	 0.1700
70	 0.7930	 0.1610
71	 0.6740	 0.1750
72	 0.6190	 0.1800
73	 0.5770	 0.1800
74	 0.4110	 0.1570
75	 0.7180	 0.1760
76	 0.7160	 0.1450
77	 0.7590	 0.1760
78	 0.6350	 0.1670
79	 0.6250	 0.1750
80	 0.7100	 0.1860
81	 0.6160	 0.1610
82	 0.7500	 0.1780
83	 0.7750	 0.1480
84	 0.7110	 0.1440
85	 0.7380	 0.1590
86	 0.6720	 0.1790
87	 0.7500	 0.1480
88	 0.6420	 0.1580
89	 0.7790	 0.1830
8S	 0.9430	 0.2260
90	 0.6880	 0.1540
91	 0.4370	 0.1200
92	 0.5610	 0.1820
93	 0.7130	 0.1730
L1	 0.2970	 0.1190
L2	 0.6670	 0.1650
L3	 0.6500	 0.1650
L4	 0.7260	 0.1720
L5	 0.6010	 0.1570
L6	 0.7020	 0.1600
L7	 0.7270	 0.1650
L8	 0.7230	 0.1740
L9	 0.7140	 0.1650
MR	 0.8560	 0.2450
P0	 0.5570	 0.1190
PT	 0.8740	 0.2160
RC	 0.5910	 0.1190
S0	 0.6540	 0.1710
S1	 0.6900	 0.1690
S2	 0.6680	 0.1760

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Chain	Atom inclusion	Q-score
S3	 0.6570	 0.1560
S4	 0.5840	 0.1530
S5	 0.6320	 0.1540
S6	 0.4970	 0.1500
S7	 0.5850	 0.1590
S8	 0.5550	 0.1580
S9	 0.6620	 0.1550