Full wwPDB X-ray Structure Validation Report ⓘ

Mar 18, 2026 – 05:36 AM UTC

PDB ID	:	5DGF / pdb_00005dgf
Title	:	Complex of yeast 80S ribosome with hypusine-containing/non-modified eIF5A and/or a peptidyl-tRNA analog
Authors	:	Melnikov, S.; Mailliot, J.; Shin, B.-S.; Rigger, L.; Yusupova, G.; Micura, R.; Dever, T.E.; Yusupov, M.
Deposited on	:	2015-08-27
Resolution	:	3.30 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

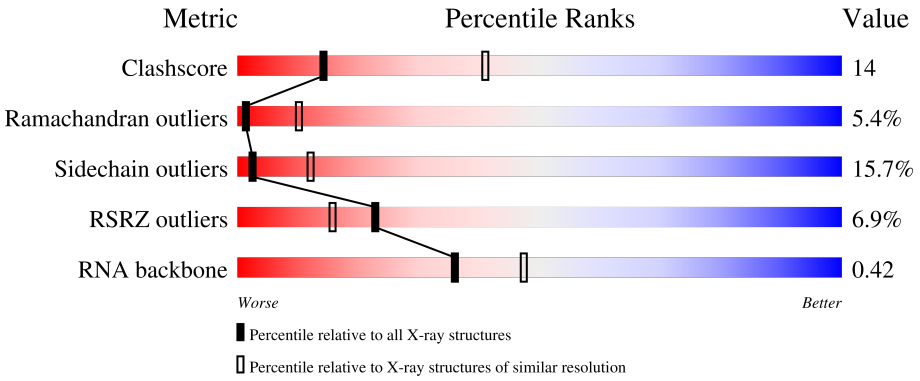
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)
RNA backbone	3983	1048 (3.60-3.00)

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

Mol	Chain	Length	Quality of chain
1	2	1800	3% 38% 47% 13%
1	6	1800	2% 41% 45% 14%
2	S0	251	12% 36% 35% 10% 18%
2	s0	251	6% 41% 31% 9% 18%

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Mol	Chain	Length	Quality of chain
3	S1	254	18% 39% 35% 9% 16%
3	s1	254	9% 41% 38% 6% 15%
4	S2	253	14% 40% 36% 10% 14%
4	s2	253	9% 45% 28% 11% 14%
5	S3	239	10% 54% 31% 7% 7%
5	s3	239	13% 48% 38% 8% 7%
6	S4	260	20% 50% 42% 8%
6	s4	260	8% 50% 38% 10%
7	S5	224	20% 56% 30% 5% 8%
7	s5	224	12% 46% 34% 11% 8%
8	S6	236	21% 60% 33%
8	s6	236	12% 50% 36% 7% 8%
9	S7	189	11% 46% 39% 11%
9	s7	189	7% 51% 39% 7%
10	S8	200	11% 49% 38% 7% 6%
10	s8	200	9% 56% 30% 8% 6%
11	S9	196	8% 44% 39% 10% 6%
11	s9	196	7% 40% 44% 10% 6%
12	C0	96	6% 52% 44%
12	c0	96	21% 56% 30% 14%
13	C1	155	7% 55% 38% 6%
13	c1	155	10% 52% 34% 8% 6%
14	C2	142	14% 47% 27% 13% 13%
14	c2	142	23% 54% 27% 5% 13%
15	C3	150	11% 58% 35% 6%

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Mol	Chain	Length	Quality of chain
15	c3	150	9% 53% 37% 9%
16	C4	136	20% 47% 37% 8% 7%
16	c4	136	10% 44% 33% 15% 6%
17	C5	141	9% 40% 38% 7% 12%
17	c5	141	15% 53% 33% 9%
18	C6	142	27% 53% 36% 10%
18	c6	142	28% 56% 35% 8%
19	C7	136	7% 39% 39% 7% 12%
19	c7	136	10% 43% 37% 6% 14%
20	C8	145	8% 45% 44% 10%
20	c8	145	12% 50% 41% 8%
21	C9	143	13% 51% 39% 9%
21	c9	143	12% 58% 34% 8%
22	D0	120	35% 41% 39% 8% 11%
22	d0	120	10% 44% 43% 8%
23	D1	87	11% 49% 38% 13%
23	d1	87	% 51% 43% 7%
24	D2	129	12% 49% 37% 13%
24	d2	129	2% 53% 36% 11%
25	D3	144	15% 46% 40% 14%
25	d3	144	8% 56% 37% 7%
26	D4	134	13% 54% 39% 6%
26	d4	134	10% 54% 34% 11%
27	D5	107	3% 27% 24% 12% 35%
27	d5	107	4% 30% 30% 5% 36%

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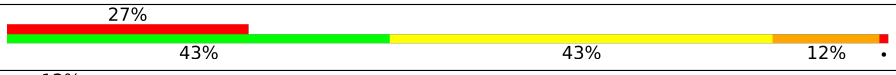
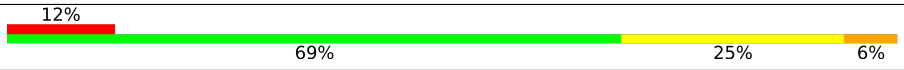
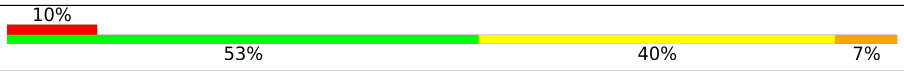
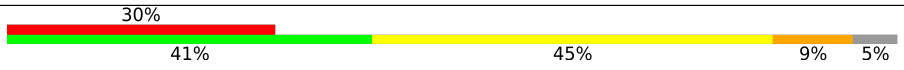
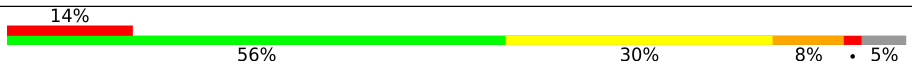
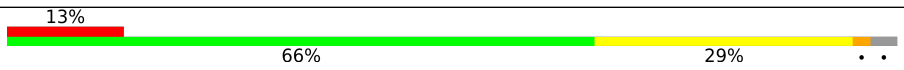
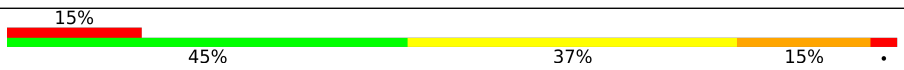
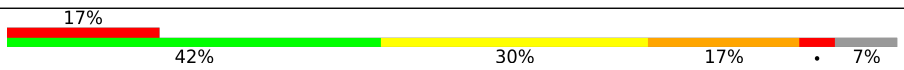
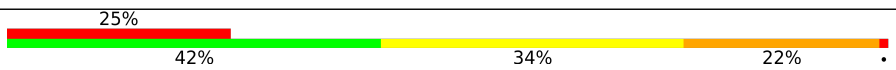
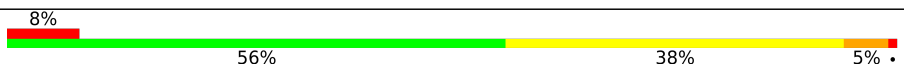
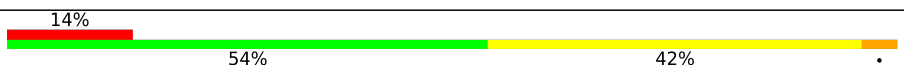
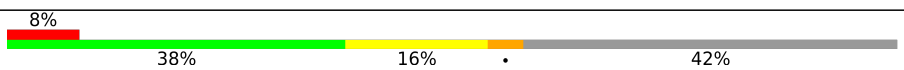
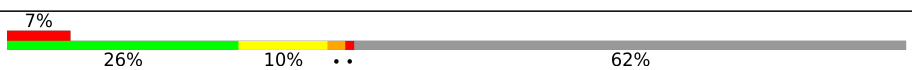
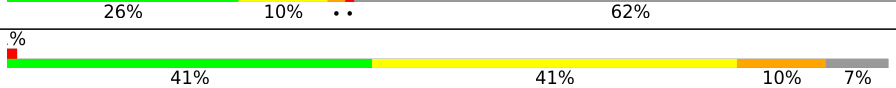
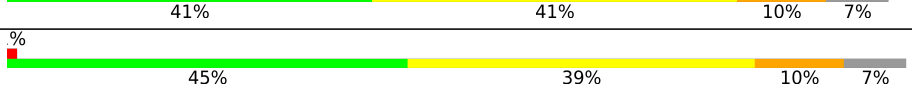
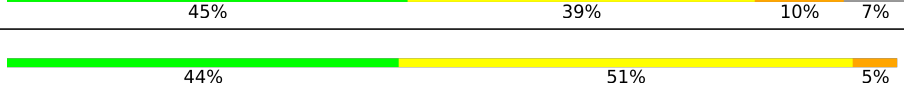
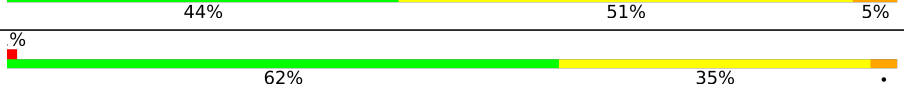
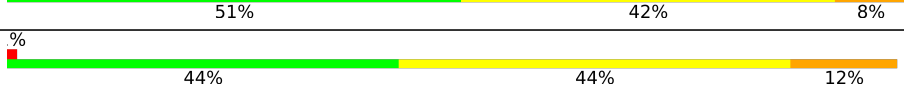
Mol	Chain	Length	Quality of chain
28	D6	97	
28	d6	97	
29	D7	81	
29	d7	81	
30	D8	66	
30	d8	66	
31	D9	55	
31	d9	55	
32	E0	62	
32	e0	62	
33	E1	76	
33	e1	76	
34	SR	318	
34	sR	318	
35	SM	273	
35	sM	273	
36	1	3396	
36	5	3396	
37	3	121	
37	7	121	
38	4	158	
38	8	158	
39	L2	253	
39	l2	253	
40	L3	386	

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Mol	Chain	Length	Quality of chain
40	l3	386	2% 52% 37% 9%
41	L4	361	3% 54% 37% 9%
41	l4	361	4% 48% 41% 9%
42	L5	296	7% 54% 36% 9%
42	l5	296	6% 54% 34% 10%
43	L6	175	3% 51% 31% 6% 11%
43	l6	175	2% 58% 23% 8% 10%
44	L7	243	4% 49% 35% 7% 9%
44	l7	243	% 51% 35% 6% 8%
45	L8	255	12% 52% 31% 8% 9%
45	l8	255	9% 54% 30% 7% 9%
46	L9	191	5% 41% 43% 15%
46	l9	191	% 58% 34% 9%
47	M0	220	6% 41% 46% 9%
47	m0	220	5% 46% 37% 13%
48	M1	173	5% 44% 45% 9%
48	m1	173	2% 57% 28% 13%
49	M3	198	4% 49% 39% 8%
49	m3	198	5% 46% 40% 11%
50	M4	137	4% 51% 40% 7%
50	m4	137	% 53% 39% 7%
51	M5	203	3% 53% 36% 10%
51	m5	203	5% 54% 38% 7%
52	M6	198	6% 51% 37% 11%
52	m6	198	7% 57% 36% 6%

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Mol	Chain	Length	Quality of chain
53	M7	183	10% 53% 38% 8%
53	m7	183	% 42% 34% 8% 15%
54	M8	185	5% 62% 29% 10%
54	m8	185	3% 50% 39% 10%
55	M9	188	6% 59% 36% 5%
55	m9	188	3% 58% 36% 6%
56	N0	172	5% 56% 37% 8%
56	n0	172	3% 55% 41%
57	N1	159	3% 56% 35% 9%
57	n1	159	3% 50% 42% 9%
58	N2	120	9% 51% 26% 6% 17%
58	n2	120	8% 54% 25% 18%
59	N3	136	7% 55% 36% 8%
59	n3	136	2% 50% 40% 10%
60	N4	155	15% 38% 22% 37%
60	n4	155	11% 52% 32% 13%
61	N5	141	7% 42% 35% 9% 14%
61	n5	141	5% 45% 33% 6% 15%
62	N6	126	2% 54% 36% 10%
62	n6	126	2% 52% 37% 11%
63	N7	135	4% 39% 50% 8%
63	n7	135	4% 48% 42% 8%
64	N8	148	% 53% 36% 11%
64	n8	148	2% 53% 36% 9%
65	N9	58	3% 60% 31% 9%

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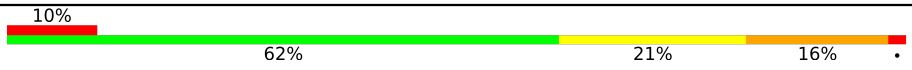
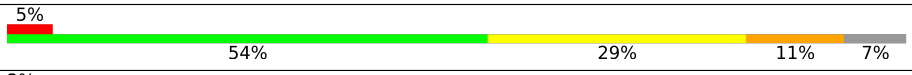
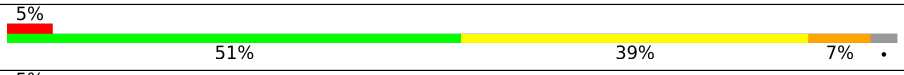
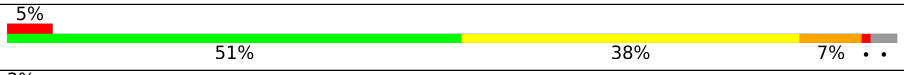
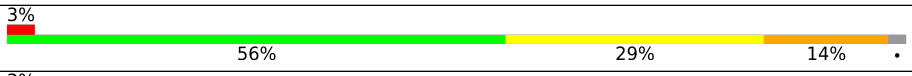
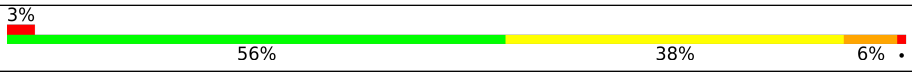
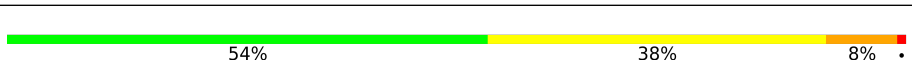
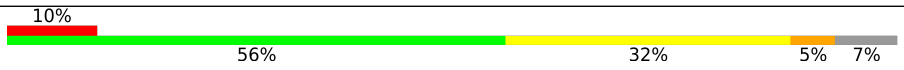
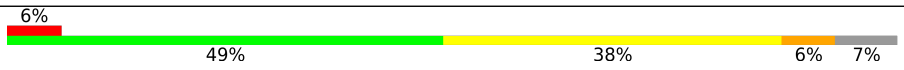
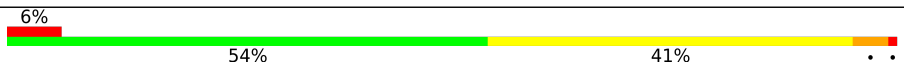
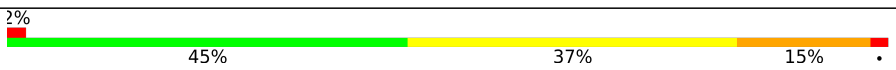
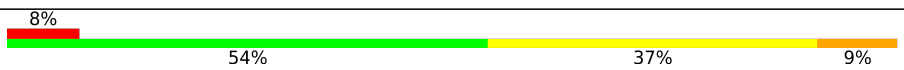
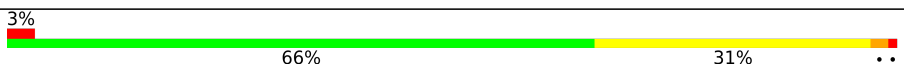
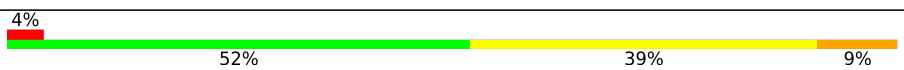
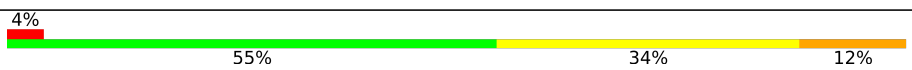
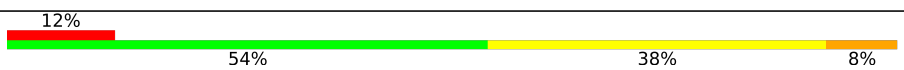
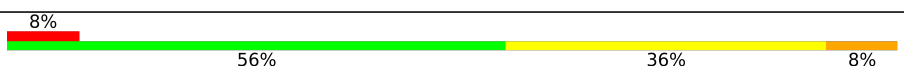
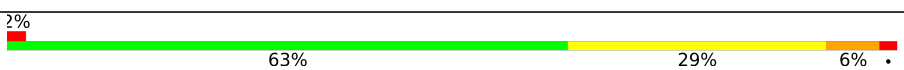
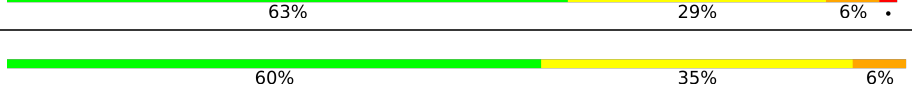
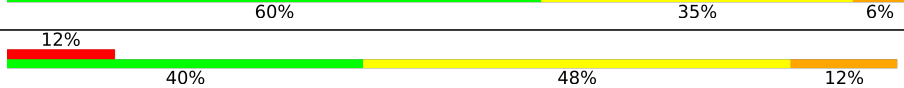
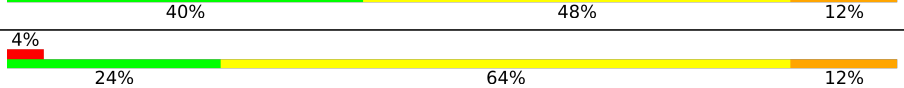
Mol	Chain	Length	Quality of chain
65	n9	58	
66	O0	104	
66	o0	104	
67	O1	112	
67	o1	112	
68	O2	129	
68	o2	129	
69	O3	106	
69	o3	106	
70	O4	120	
70	o4	120	
71	O5	119	
71	o5	119	
72	O6	99	
72	o6	99	
73	O7	87	
73	o7	87	
74	O8	77	
74	o8	77	
75	O9	50	
75	o9	50	
76	Q0	52	
76	q0	52	
77	Q1	25	
77	q1	25	

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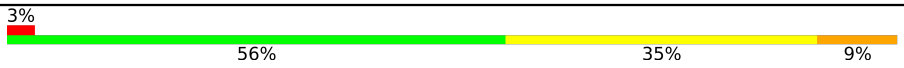
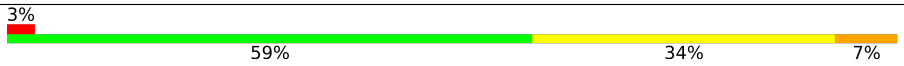
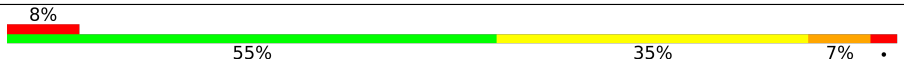
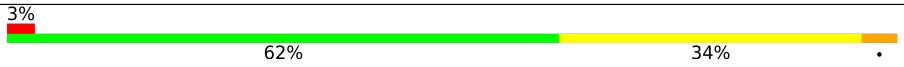
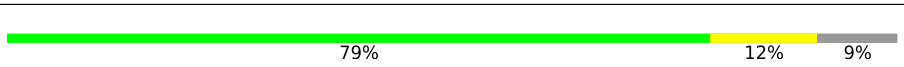
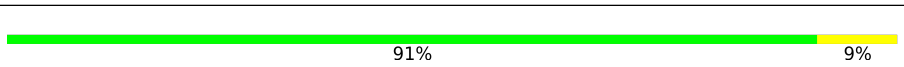
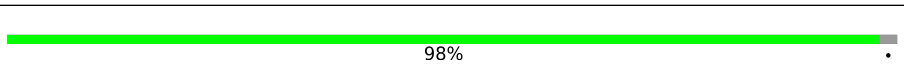
Mol	Chain	Length	Quality of chain
78	Q2	105	
78	q2	105	
79	Q3	91	
79	q3	91	
80	m2	165	
81	p0	311	
82	p1	47	
82	p2	47	
83	f	157	

2 Entry composition

There are 89 unique types of molecules in this entry. The entry contains 404292 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	2	1781	Total	C	N	O	P	0	1	0
			37970	16975	6720	12493	1782			
1	6	1795	Total	C	N	O	P	0	1	0
			38260	17105	6763	12596	1796			

- Molecule 2 is a protein called 40S ribosomal protein S0-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	S0	206	Total	C	N	O	S	0	0	0
			1577	1014	278	283	2			
2	s0	206	Total	C	N	O	S	0	0	0
			1583	1017	281	283	2			

- Molecule 3 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	S1	214	Total	C	N	O	S	0	0	0
			1709	1084	310	311	4			
3	s1	216	Total	C	N	O	S	0	0	0
			1722	1091	312	315	4			

- Molecule 4 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	S2	217	Total	C	N	O	S	0	0	0
			1635	1047	289	297	2			
4	s2	217	Total	C	N	O	S	0	0	0
			1635	1047	289	297	2			

- Molecule 5 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	S3	223	Total	C	N	O	S	0	0	0
			1734	1101	313	314	6			
5	s3	223	Total	C	N	O	S	0	0	0
			1734	1101	313	314	6			

- Molecule 6 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	S4	260	Total	C	N	O	S	0	0	0
			2068	1316	389	360	3			
6	s4	260	Total	C	N	O	S	0	0	0
			2068	1316	389	360	3			

- Molecule 7 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	S5	206	Total	C	N	O	S	0	0	0
			1609	1007	300	299	3			
7	s5	206	Total	C	N	O	S	0	0	0
			1609	1007	300	299	3			

- Molecule 8 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	S6	226	Total	C	N	O	S	0	0	0
			1799	1129	346	321	3			
8	s6	218	Total	C	N	O	S	0	0	0
			1755	1102	337	313	3			

- Molecule 9 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	S7	184	Total	C	N	O	0	0	0
			1481	951	265	265			
9	s7	186	Total	C	N	O	0	0	0
			1491	957	267	267			

- Molecule 10 is a protein called 40S ribosomal protein S8-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	S8	188	Total	C	N	O	S	0	0	0
			1489	925	298	264	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	s8	188	Total	C	N	O	S	0	0	0
			1489	925	298	264	2			

- Molecule 11 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	S9	185	Total	C	N	O	S	0	0	0
			1494	943	289	261	1			
11	s9	185	Total	C	N	O	S	0	0	0
			1494	943	289	261	1			

- Molecule 12 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	C0	96	Total	C	N	O	S	0	0	0
			773	500	126	145	2			
12	c0	96	Total	C	N	O	S	0	0	0
			762	491	125	144	2			

- Molecule 13 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	C1	155	Total	C	N	O	S	0	0	0
			1214	775	230	206	3			
13	c1	146	Total	C	N	O	S	0	0	0
			1168	747	221	197	3			

- Molecule 14 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	C2	124	Total	C	N	O	S	0	0	0
			892	562	156	172	2			
14	c2	124	Total	C	N	O	S	0	0	0
			892	562	156	172	2			

- Molecule 15 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	C3	150	Total	C	N	O	S	0	0	0
			1192	759	224	207	2			
15	c3	150	Total	C	N	O	S	0	0	0
			1192	759	224	207	2			

- Molecule 16 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	C4	127	Total	C	N	O	S	0	0	0
			891	545	182	163	1			
16	c4	128	Total	C	N	O	S	0	0	0
			949	582	188	176	3			

- Molecule 17 is a protein called 40S ribosomal protein S15 (uS19).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	C5	124	Total	C	N	O	S	0	0	0
			977	622	182	166	7			
17	c5	135	Total	C	N	O	S	0	0	0
			1039	658	196	178	7			

- Molecule 18 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	C6	141	Total	C	N	O	0	0	0
			1105	708	203	194			
18	c6	142	Total	C	N	O	0	0	0
			1111	711	204	196			

- Molecule 19 is a protein called 40S ribosomal protein S17-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	C7	120	Total	C	N	O	S	0	0	0
			926	577	177	170	2			
19	c7	117	Total	C	N	O	S	0	0	0
			906	563	174	167	2			

- Molecule 20 is a protein called 40S ribosomal protein S18-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	C8	145	Total	C	N	O	S	0	0	0
			1192	743	237	210	2			
20	c8	145	Total	C	N	O	S	0	0	0
			1192	743	237	210	2			

- Molecule 21 is a protein called 40S ribosomal protein S19-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	C9	143	Total	C	N	O	S	0	0	0
			1112	694	208	208	2			
21	c9	143	Total	C	N	O	S	0	0	0
			1112	694	208	208	2			

- Molecule 22 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	D0	107	Total	C	N	O	S	0	0	0
			855	539	156	159	1			
22	d0	110	Total	C	N	O	S	0	0	0
			882	554	161	166	1			

- Molecule 23 is a protein called 40S ribosomal protein S21-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	D1	87	Total	C	N	O	S	0	0	0
			684	420	125	137	2			
23	d1	87	Total	C	N	O	S	0	0	0
			684	420	125	137	2			

- Molecule 24 is a protein called 40S ribosomal protein S22-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	D2	129	Total	C	N	O	S	0	0	0
			1021	650	188	180	3			
24	d2	129	Total	C	N	O	S	0	0	0
			1021	650	188	180	3			

- Molecule 25 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	D3	144	Total	C	N	O	S	0	0	0
			1121	708	220	191	2			
25	d3	144	Total	C	N	O	S	0	0	0
			1121	708	220	191	2			

- Molecule 26 is a protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	D4	134	Total	C	N	O	0	0	0
			1073	676	208	189			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	d4	134	Total	C	N	O	0	0	0
			1073	676	208	189			

- Molecule 27 is a protein called 40S ribosomal protein S25-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
27	D5	70	Total	C	N	O	0	0	0
			563	360	104	99			
27	d5	69	Total	C	N	O	0	0	0
			558	357	103	98			

- Molecule 28 is a protein called 40S ribosomal protein S26-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	D6	97	Total	C	N	O	S	0	0	0
			769	475	160	129	5			
28	d6	97	Total	C	N	O	S	0	0	0
			769	475	160	129	5			

- Molecule 29 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	D7	81	Total	C	N	O	S	0	0	0
			610	382	110	113	5			
29	d7	81	Total	C	N	O	S	0	0	0
			610	382	110	113	5			

- Molecule 30 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	D8	63	Total	C	N	O	S	0	0	0
			497	306	99	91	1			
30	d8	63	Total	C	N	O	S	0	0	0
			497	306	99	91	1			

- Molecule 31 is a protein called 40S ribosomal protein S29-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	D9	53	Total	C	N	O	S	0	0	0
			442	274	92	72	4			
31	d9	53	Total	C	N	O	S	0	0	0
			442	274	92	72	4			

- Molecule 32 is a protein called 40S ribosomal protein S30-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	E0	60	Total	C	N	O	S	0	0	0
			475	299	98	77	1			
32	e0	62	Total	C	N	O	S	0	0	0
			491	309	101	80	1			

- Molecule 33 is a protein called Ubiquitin-40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	E1	71	Total	C	N	O	S	0	0	0
			566	362	106	94	4			
33	e1	76	Total	C	N	O	S	0	0	0
			608	388	117	99	4			

- Molecule 34 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	SR	318	Total	C	N	O	S	0	0	0
			2437	1541	418	470	8			
34	sR	318	Total	C	N	O	S	0	0	0
			2442	1544	418	472	8			

- Molecule 35 is a protein called Suppressor protein STM1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
35	SM	159	Total	C	N	O	0	0	0
			1105	653	221	231			
35	sM	104	Total	C	N	O	0	0	0
			680	403	140	137			

- Molecule 36 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	1	3149	Total	C	N	O	P	0	0	0
			67355	30086	12142	21978	3149			
36	5	3169	Total	C	N	O	P	0	0	0
			67780	30276	12216	22120	3168			

- Molecule 37 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	3	121	Total	C	N	O	P	0	0	0
			2579	1152	461	845	121			
37	7	121	Total	C	N	O	P	0	0	0
			2579	1152	461	845	121			

- Molecule 38 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	4	158	Total	C	N	O	P	0	0	0
			3353	1500	586	1109	158			
38	8	158	Total	C	N	O	P	0	0	0
			3353	1500	586	1109	158			

- Molecule 39 is a protein called 60S ribosomal protein L2-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	L2	252	Total	C	N	O	S	0	0	0
			1914	1191	388	334	1			
39	l2	252	Total	C	N	O	S	0	0	0
			1912	1190	388	333	1			

- Molecule 40 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	L3	386	Total	C	N	O	S	0	0	0
			3075	1950	584	533	8			
40	l3	386	Total	C	N	O	S	0	0	0
			3075	1950	584	533	8			

- Molecule 41 is a protein called 60S ribosomal protein L4-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	L4	361	Total	C	N	O	S	0	0	0
			2748	1729	522	494	3			
41	l4	361	Total	C	N	O	S	0	0	0
			2748	1729	522	494	3			

- Molecule 42 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	L5	296	Total	C	N	O	S	0	0	0
			2375	1501	414	458	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	l5	294	Total	C	N	O	S	0	0	0
			2359	1489	412	456	2			

- Molecule 43 is a protein called 60S ribosomal protein L6-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	L6	156	Total	C	N	O	S	0	0	0
			1239	800	222	216	1			
43	l6	157	Total	C	N	O	S	0	0	0
			1248	806	224	217	1			

- Molecule 44 is a protein called 60S ribosomal protein L7-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	L7	222	Total	C	N	O	S	0	0	0
			1784	1151	324	308	1			
44	l7	223	Total	C	N	O	S	0	0	0
			1791	1155	325	310	1			

- Molecule 45 is a protein called 60S ribosomal protein L8-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	L8	233	Total	C	N	O	S	0	0	0
			1804	1151	323	327	3			
45	l8	231	Total	C	N	O	S	0	0	0
			1764	1131	316	314	3			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L8	119	ALA	GLY	conflict	UNP P17076
l8	119	ALA	GLY	conflict	UNP P17076

- Molecule 46 is a protein called 60S ribosomal protein L9-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	L9	191	Total	C	N	O	S	0	0	0
			1518	963	274	277	4			
46	l9	191	Total	C	N	O	S	0	0	0
			1518	963	274	277	4			

- Molecule 47 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	M0	211	Total	C	N	O	S	0	0	0
			1705	1083	322	294	6			
47	m0	213	Total	C	N	O	S	0	0	0
			1722	1094	325	297	6			

- Molecule 48 is a protein called 60S ribosomal protein L11-B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	M1	169	Total	C	N	O	S	0	0	0
			1353	847	253	249	4			
48	m1	169	Total	C	N	O	S	0	0	0
			1353	847	253	249	4			

- Molecule 49 is a protein called 60S ribosomal protein L13-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	M3	193	Total	C	N	O	0	0	0
			1543	962	315	266			
49	m3	194	Total	C	N	O	0	0	0
			1548	965	316	267			

- Molecule 50 is a protein called 60S ribosomal protein L14-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	M4	136	Total	C	N	O	S	0	0	0
			1053	675	199	177	2			
50	m4	137	Total	C	N	O	S	0	0	0
			1059	678	200	179	2			

- Molecule 51 is a protein called 60S ribosomal protein L15-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	M5	203	Total	C	N	O	S	0	0	0
			1720	1077	361	281	1			
51	m5	203	Total	C	N	O	S	0	0	0
			1720	1077	361	281	1			

- Molecule 52 is a protein called 60S ribosomal protein L16-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	M6	197	Total	C	N	O	S	0	0	0
			1555	1003	289	262	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	m6	197	Total	C	N	O	S	0	0	0
			1555	1003	289	262	1			

- Molecule 53 is a protein called 60S ribosomal protein L17-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	M7	183	Total	C	N	O	0	0	0
			1420	882	281	257			
53	m7	155	Total	C	N	O	0	0	0
			1227	764	238	225			

- Molecule 54 is a protein called 60S ribosomal protein L18-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	M8	185	Total	C	N	O	S	0	0	0
			1441	908	290	241	2			
54	m8	185	Total	C	N	O	S	0	0	0
			1441	908	290	241	2			

- Molecule 55 is a protein called 60S ribosomal protein L19-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
55	M9	188	Total	C	N	O	0	0	0
			1521	935	326	260			
55	m9	188	Total	C	N	O	0	0	0
			1521	935	326	260			

- Molecule 56 is a protein called 60S ribosomal protein L20-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	N0	172	Total	C	N	O	S	0	0	0
			1445	930	267	244	4			
56	n0	172	Total	C	N	O	S	0	0	0
			1445	930	267	244	4			

- Molecule 57 is a protein called 60S ribosomal protein L21-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	N1	159	Total	C	N	O	S	0	0	0
			1276	805	246	221	4			
57	n1	159	Total	C	N	O	S	0	0	0
			1276	805	246	221	4			

- Molecule 58 is a protein called 60S ribosomal protein L22-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
58	N2	100	Total	C	N	O	0	0	0
			796	516	131	149			
58	n2	98	Total	C	N	O	0	0	0
			778	505	127	146			

- Molecule 59 is a protein called 60S ribosomal protein L23-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
59	N3	136	Total	C	N	O	S	0	0	0
			1003	628	189	179	7			
59	n3	136	Total	C	N	O	S	0	0	0
			1003	628	189	179	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
60	N4	98	Total	C	N	O	S	0	0	0
			699	443	137	118	1			
60	n4	135	Total	C	N	O	S	0	0	0
			1038	651	206	180	1			

- Molecule 61 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
61	N5	121	Total	C	N	O	S	0	0	0
			964	620	169	173	2			
61	n5	120	Total	C	N	O	S	0	0	0
			959	617	168	172	2			

- Molecule 62 is a protein called 60S ribosomal protein L26-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
62	N6	126	Total	C	N	O	0	0	0
			993	625	192	176			
62	n6	126	Total	C	N	O	0	0	0
			993	625	192	176			

- Molecule 63 is a protein called 60S ribosomal protein L27-A.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
63	N7	135	Total	C	N	O	0	0	0
			1092	710	202	180			
63	n7	135	Total	C	N	O	0	0	0
			1092	710	202	180			

- Molecule 64 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
64	N8	148	Total	C	N	O	S	0	0	0
			1173	749	231	190	3			
64	n8	148	Total	C	N	O	S	0	0	0
			1173	749	231	190	3			

- Molecule 65 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
65	N9	58	Total	C	N	O	0	0	0
			462	289	100	73			
65	n9	58	Total	C	N	O	0	0	0
			462	289	100	73			

- Molecule 66 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
66	O0	97	Total	C	N	O	S	0	0	0
			743	479	124	139	1			
66	o0	100	Total	C	N	O	S	0	0	0
			767	492	128	146	1			

- Molecule 67 is a protein called 60S ribosomal protein L31-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
67	O1	109	Total	C	N	O	S	0	0	0
			876	556	167	152	1			
67	o1	109	Total	C	N	O	S	0	0	0
			883	559	167	156	1			

- Molecule 68 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
68	O2	127	Total	C	N	O	S	0	0	0
			1020	647	205	167	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
68	o2	127	Total	C	N	O	S	0	0	0
			1020	647	205	167	1			

- Molecule 69 is a protein called 60S ribosomal protein L33-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
69	O3	106	Total	C	N	O	S	0	0	0
			850	540	165	144	1			
69	o3	106	Total	C	N	O	S	0	0	0
			850	540	165	144	1			

- Molecule 70 is a protein called 60S ribosomal protein L34-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
70	O4	112	Total	C	N	O	S	0	0	0
			880	545	179	152	4			
70	o4	112	Total	C	N	O	S	0	0	0
			880	545	179	152	4			

- Molecule 71 is a protein called 60S ribosomal protein L35-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
71	O5	119	Total	C	N	O	S	0	0	0
			969	615	186	167	1			
71	o5	119	Total	C	N	O	S	0	0	0
			965	612	185	167	1			

- Molecule 72 is a protein called 60S ribosomal protein L36-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
72	O6	99	Total	C	N	O	S	0	0	0
			771	481	156	132	2			
72	o6	99	Total	C	N	O	S	0	0	0
			770	481	156	131	2			

- Molecule 73 is a protein called 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
73	O7	87	Total	C	N	O	S	0	0	0
			681	414	148	114	5			
73	o7	87	Total	C	N	O	S	0	0	0
			681	414	148	114	5			

- Molecule 74 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
74	O8	77	Total	C	N	O	0	0	0
			612	391	115	106			
74	o8	77	Total	C	N	O	0	0	0
			608	388	114	106			

- Molecule 75 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
75	O9	50	Total	C	N	O	S	0	0	0
			436	272	97	65	2			
75	o9	50	Total	C	N	O	S	0	0	0
			436	272	97	65	2			

- Molecule 76 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
76	Q0	52	Total	C	N	O	S	0	0	0
			417	259	86	67	5			
76	q0	52	Total	C	N	O	S	0	0	0
			417	259	86	67	5			

- Molecule 77 is a protein called 60S ribosomal protein L41-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
77	Q1	25	Total	C	N	O	S	0	0	0
			233	142	63	27	1			
77	q1	25	Total	C	N	O	S	0	0	0
			233	142	63	27	1			

- Molecule 78 is a protein called 60S ribosomal protein L42-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
78	Q2	105	Total	C	N	O	S	0	0	0
			847	534	170	138	5			
78	q2	105	Total	C	N	O	S	0	0	0
			847	534	170	138	5			

- Molecule 79 is a protein called 60S ribosomal protein L43-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
79	Q3	91	Total 694	C 429	N 138	O 121	S 6	0	0	0
79	q3	91	Total 694	C 429	N 138	O 121	S 6	0	0	0

- Molecule 80 is a protein called 60S ribosomal protein L12-A (uL11).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
80	m2	150	Total 750	C 450	N 150	O 150	0	0	0

- Molecule 81 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
81	p0	143	Total 1077	C 687	N 192	O 195	S 3	0	0	0

- Molecule 82 is a protein called 60S ribosomal protein P1 alpha/P2 beta.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
82	p1	47	Total 235	C 141	N 47	O 47	0	0	0
82	p2	46	Total 230	C 138	N 46	O 46	0	0	0

- Molecule 83 is a protein called Eukaryotic translation initiation factor 5A-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
83	f	148	Total 1116	C 692	N 188	O 227	S 9	0	0	0

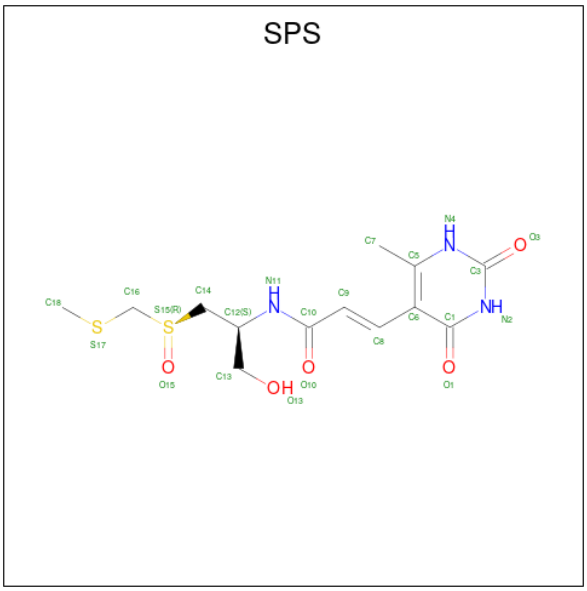
- Molecule 84 is an unknown type called CH-CH-8AN-PRO-PRO.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
84	B	5	Total 76	C 38	N 14	O 21	P 3	0	0
84	C	5	Total 73	C 38	N 14	O 19	P 2	0	0

- Molecule 85 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
85	D6	1	Total Zn 1 1	0	0
85	D7	1	Total Zn 1 1	0	0
85	D9	1	Total Zn 1 1	0	0
85	E1	1	Total Zn 1 1	0	0
85	O7	1	Total Zn 1 1	0	0
85	Q0	1	Total Zn 1 1	0	0
85	Q2	1	Total Zn 1 1	0	0
85	Q3	1	Total Zn 1 1	0	0
85	d6	1	Total Zn 1 1	0	0
85	d7	1	Total Zn 1 1	0	0
85	d9	1	Total Zn 1 1	0	0
85	e1	1	Total Zn 1 1	0	0
85	o7	1	Total Zn 1 1	0	0
85	q0	1	Total Zn 1 1	0	0
85	q2	1	Total Zn 1 1	0	0
85	q3	1	Total Zn 1 1	0	0

- Molecule 86 is SPARSOMYCIN (CCD ID: SPS) (formula: $C_{13}H_{19}N_3O_5S_2$).

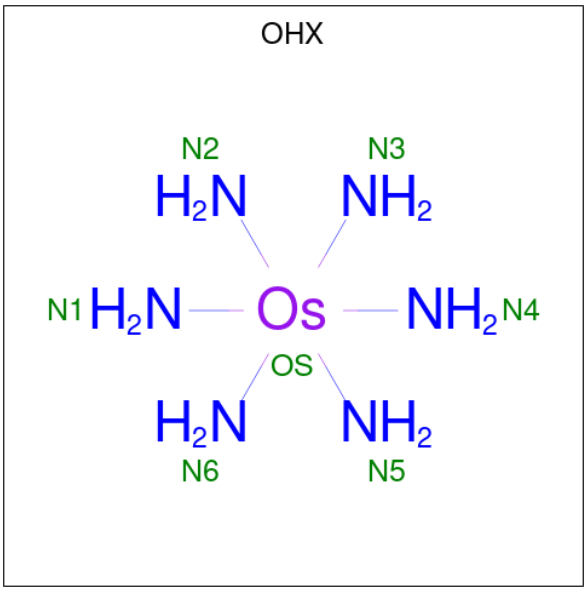


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
86	1	1	Total C N O S 23 13 3 5 2	0	0
86	B	1	Total C N O S 23 13 3 5 2	0	0

- Molecule 87 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
87	1	3	Total Mg 3 3	0	0
87	5	5	Total Mg 5 5	0	0
87	f	2	Total Mg 2 2	0	0
87	B	1	Total Mg 1 1	0	0
87	C	1	Total Mg 1 1	0	0

- Molecule 88 is osmium (III) hexammine (CCD ID: OHX) (formula: $H_{12}N_6Os$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
88	1	1	Total N Os 7 6 1	0	0
88	1	1	Total N Os 7 6 1	0	0
88	5	1	Total N Os 7 6 1	0	0

- Molecule 89 is water.

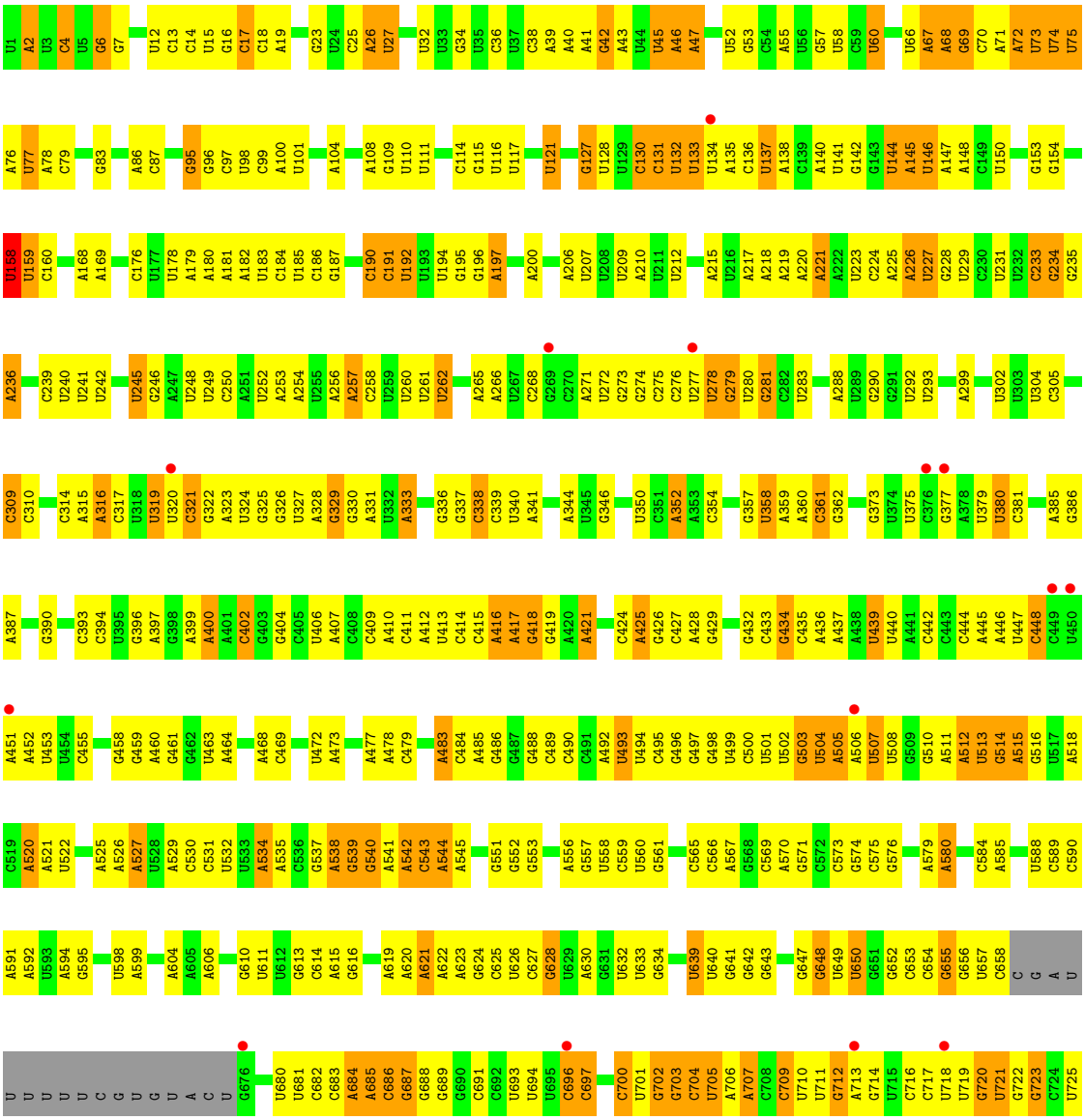
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
89	5	2	Total O 2 2	0	0
89	f	10	Total O 10 10	0	0

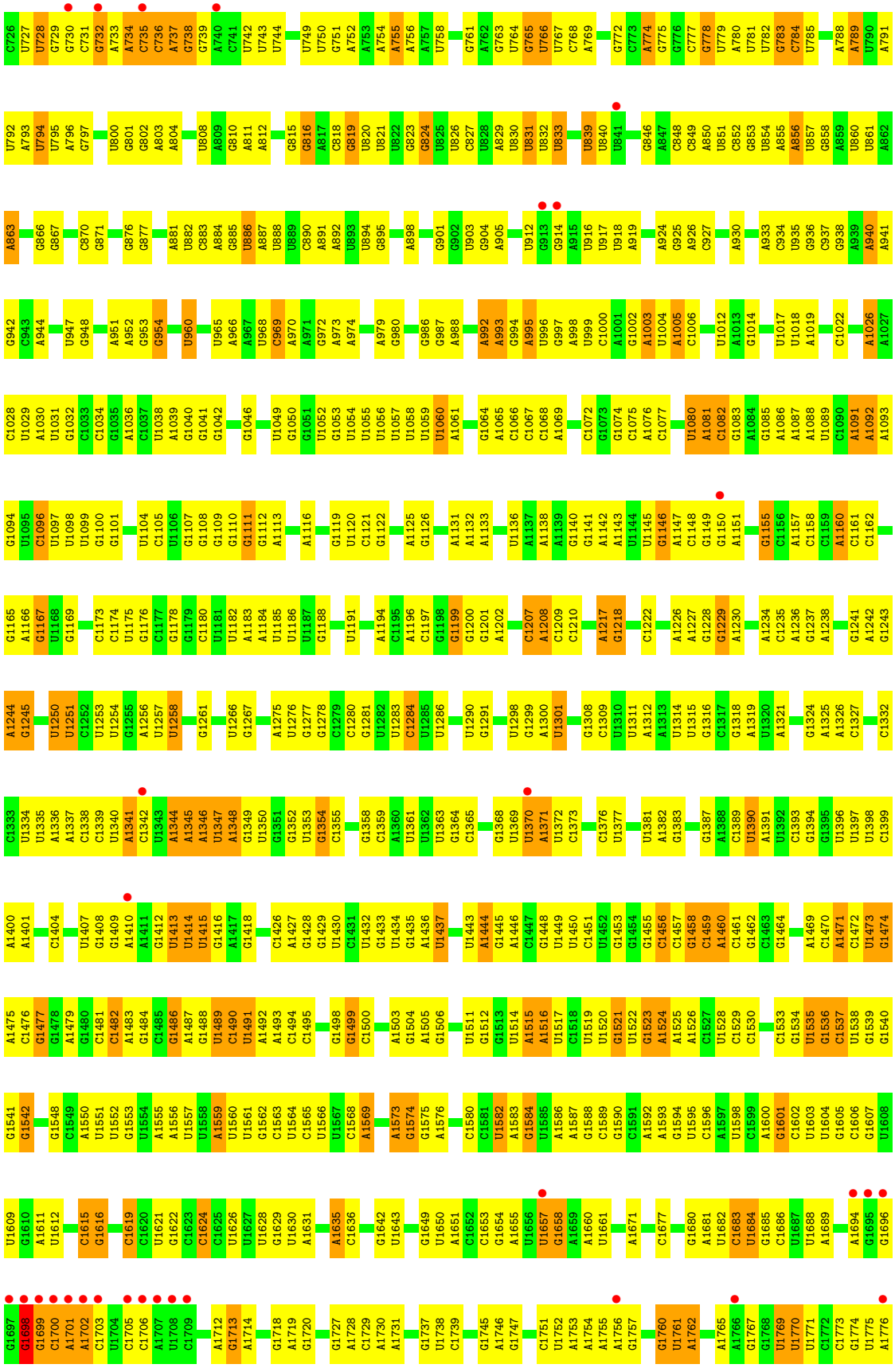
3 Residue-property plots (i)

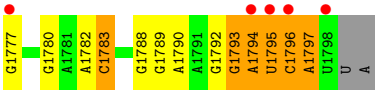
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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: 18S ribosomal RNA

Chain 2:

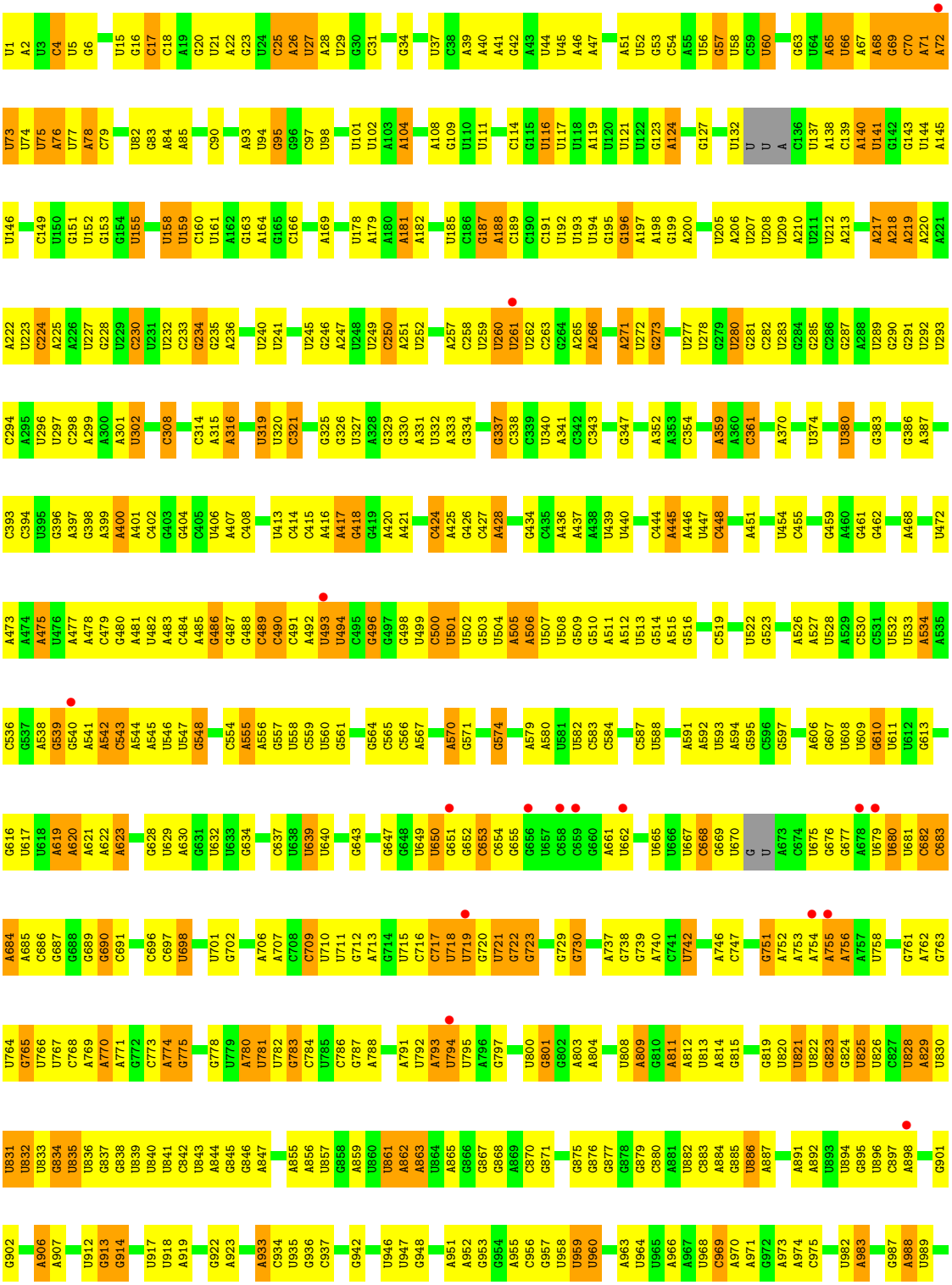


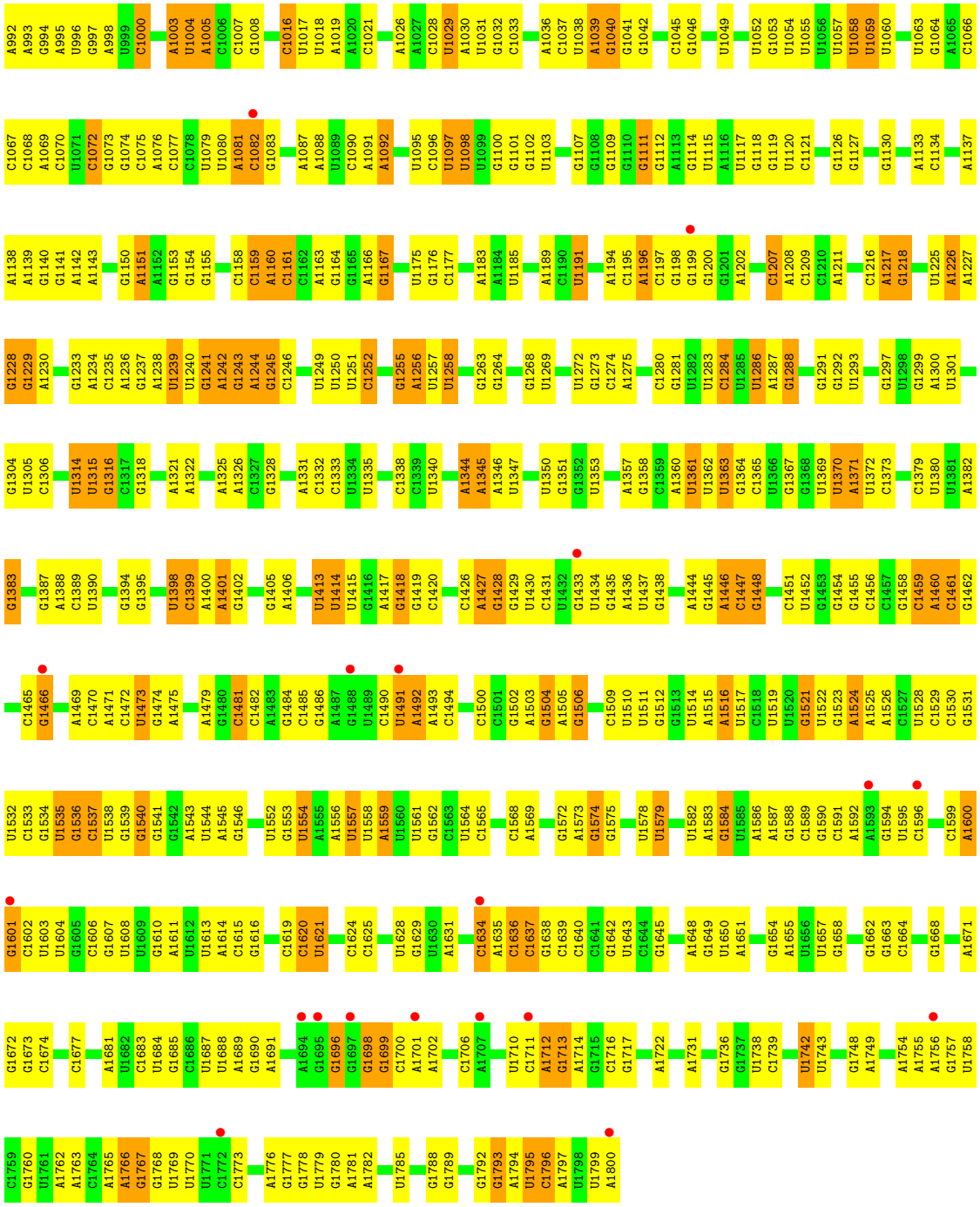




• Molecule 1: 18S ribosomal RNA

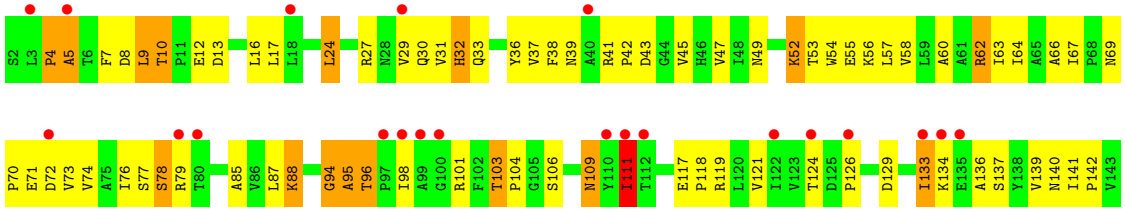
Chain 6:

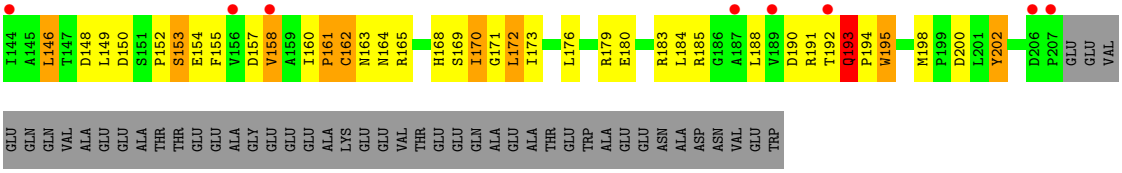




• Molecule 2: 40S ribosomal protein S0-A

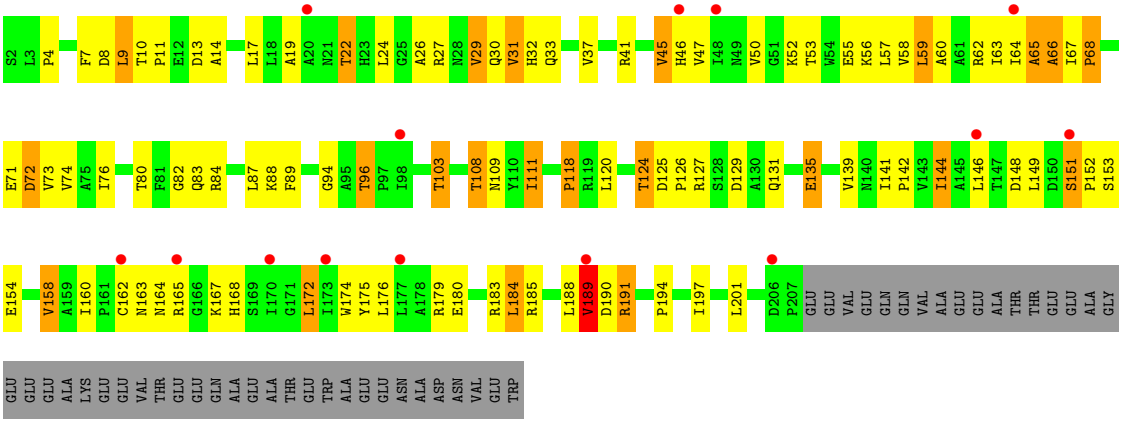
Chain S0:





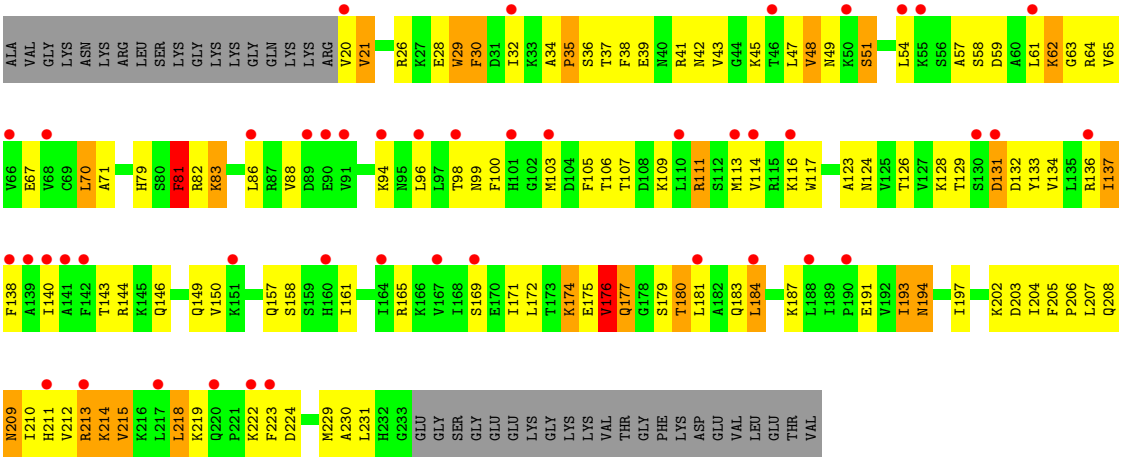
• Molecule 2: 40S ribosomal protein S0-A

Chain s0:



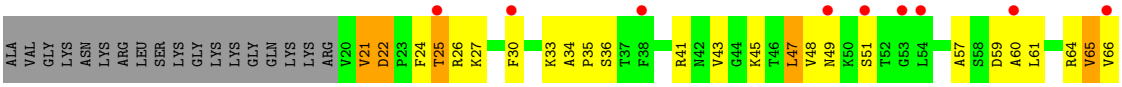
• Molecule 3: 40S ribosomal protein S1-A

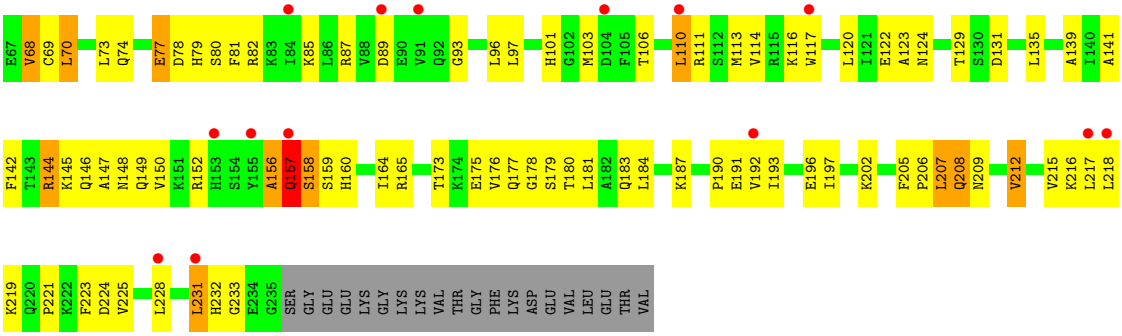
Chain S1:



• Molecule 3: 40S ribosomal protein S1-A

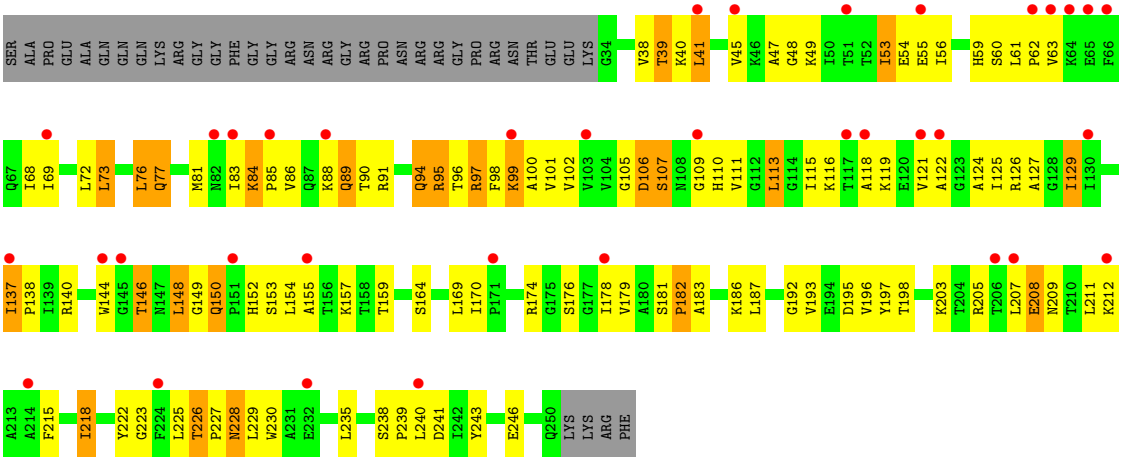
Chain s1:





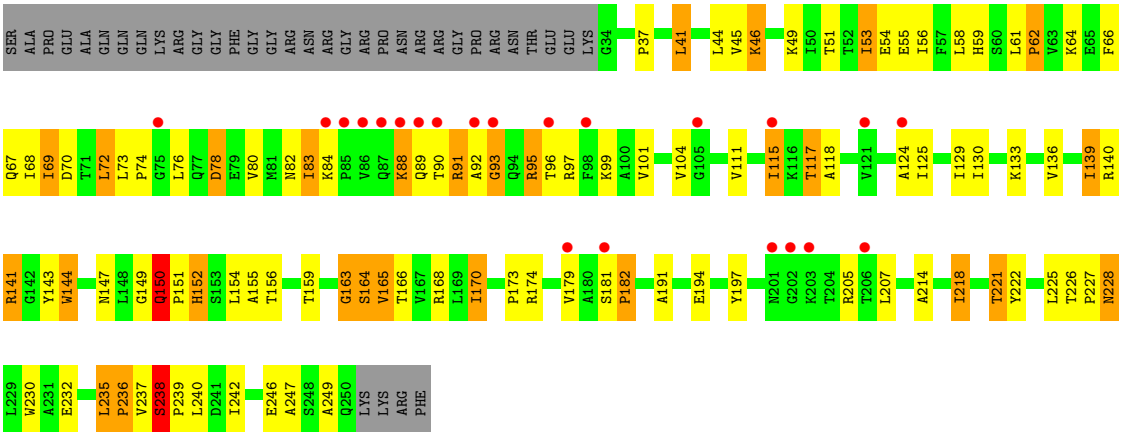
• Molecule 4: 40S ribosomal protein S2

Chain S2:



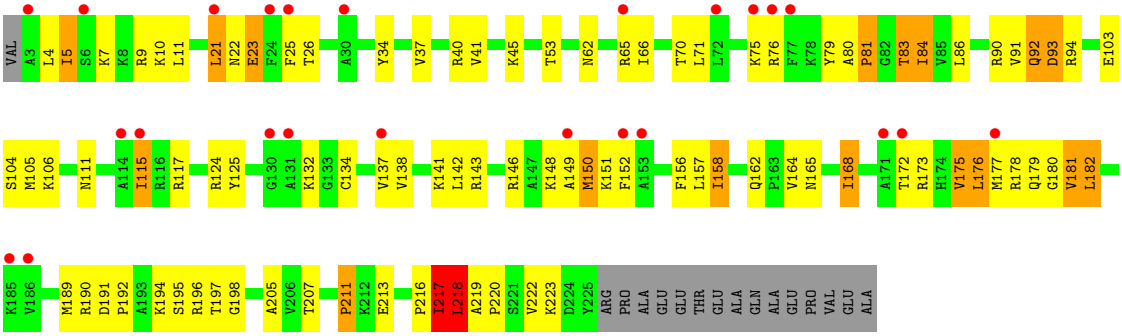
• Molecule 4: 40S ribosomal protein S2

Chain s2:



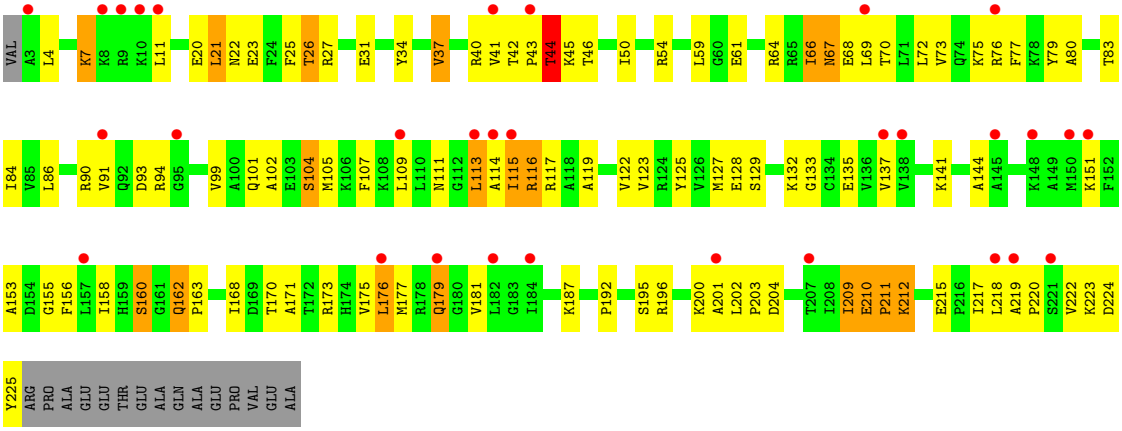
• Molecule 5: 40S ribosomal protein S3

Chain S3:



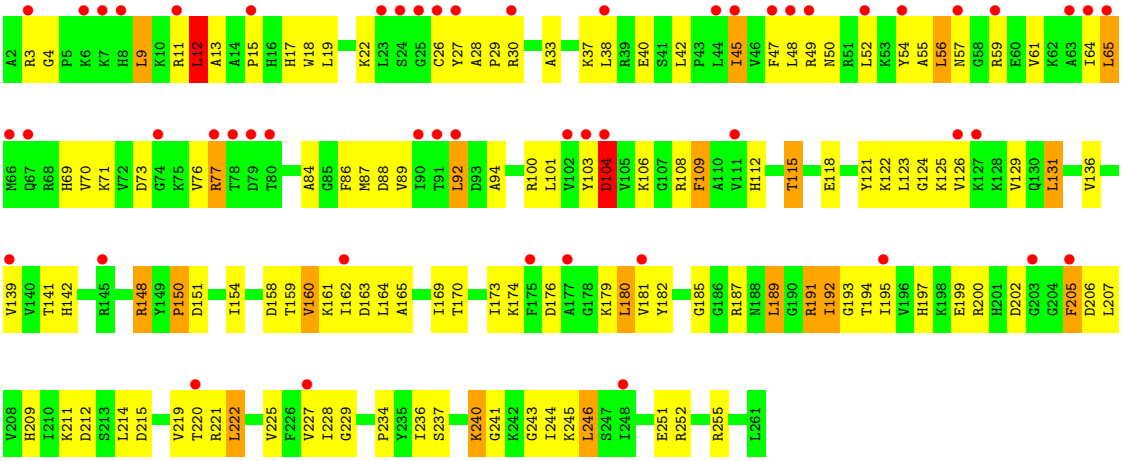
• Molecule 5: 40S ribosomal protein S3

Chain s3:



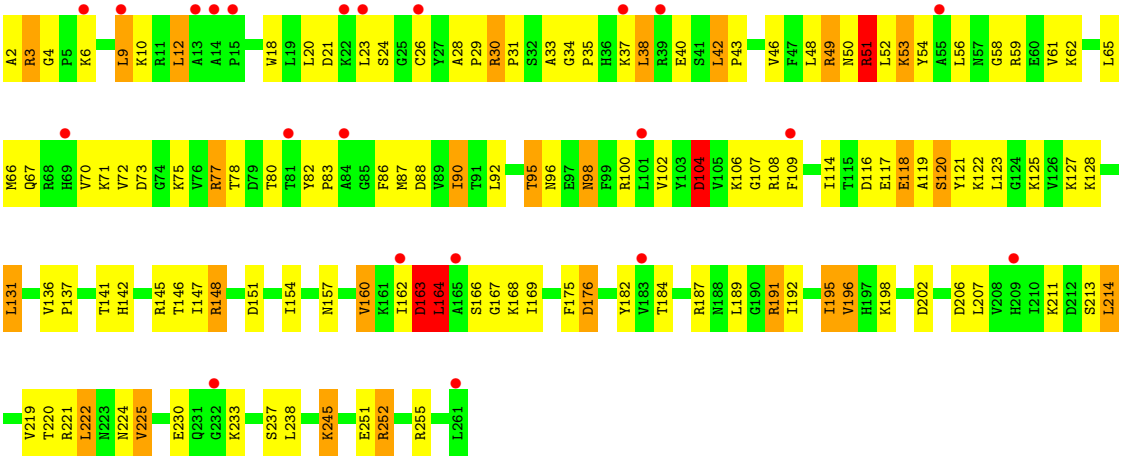
• Molecule 6: 40S ribosomal protein S4-A

Chain S4:



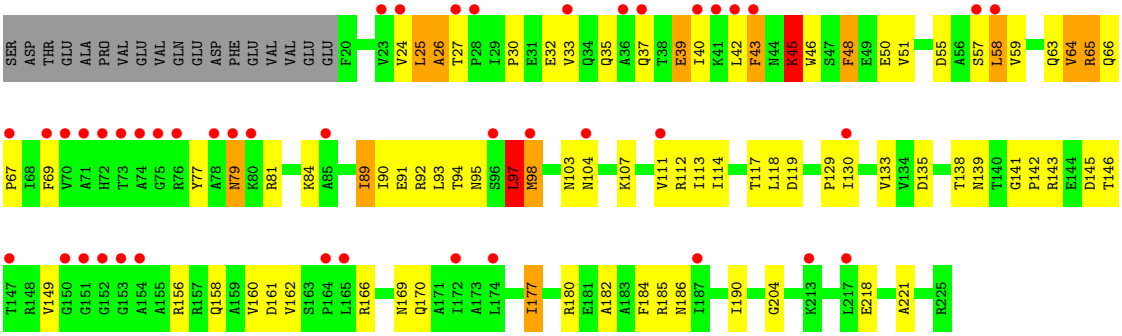
• Molecule 6: 40S ribosomal protein S4-A

Chain s4:



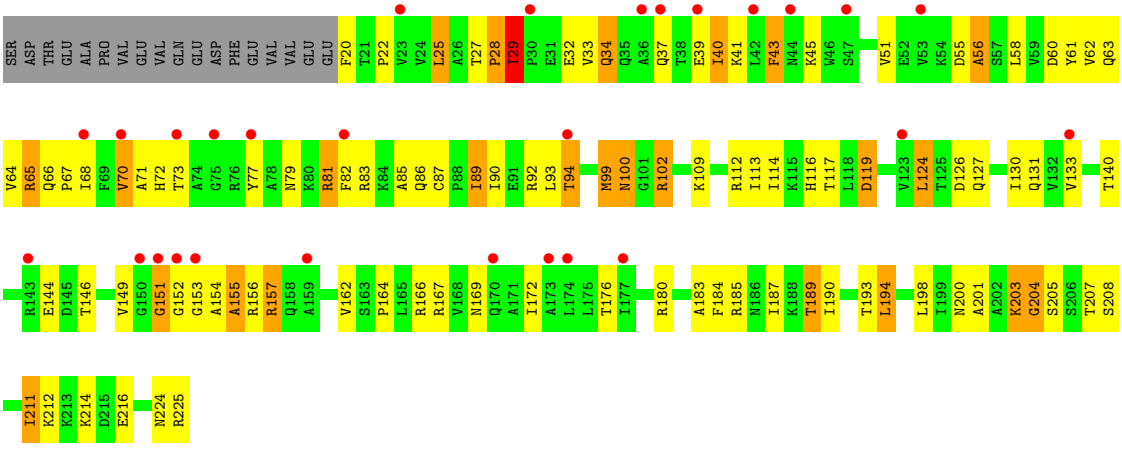
• Molecule 7: 40S ribosomal protein S5

Chain S5:



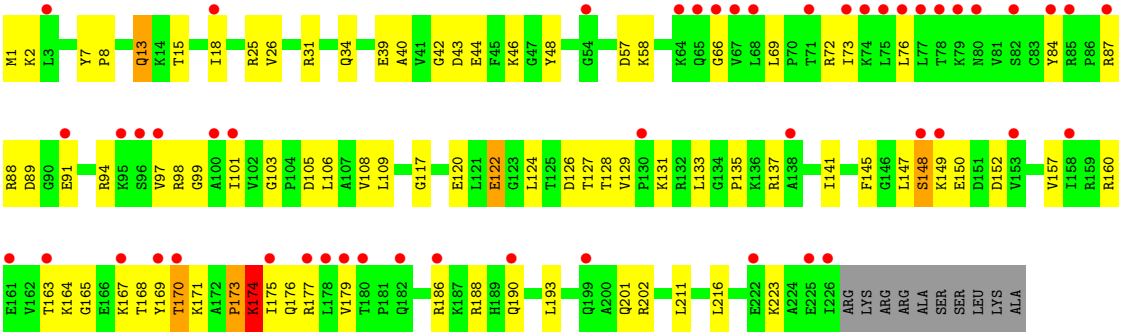
• Molecule 7: 40S ribosomal protein S5

Chain s5:



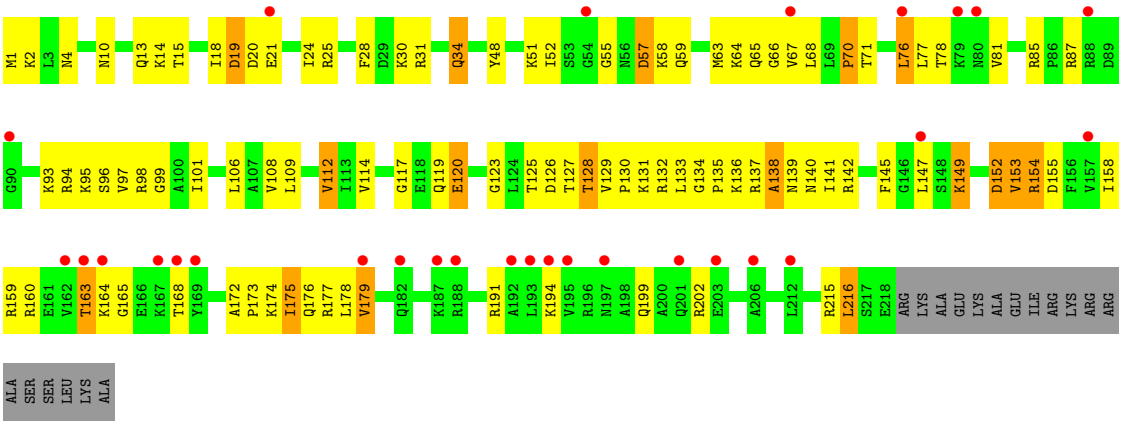
• Molecule 8: 40S ribosomal protein S6-A

Chain S6:



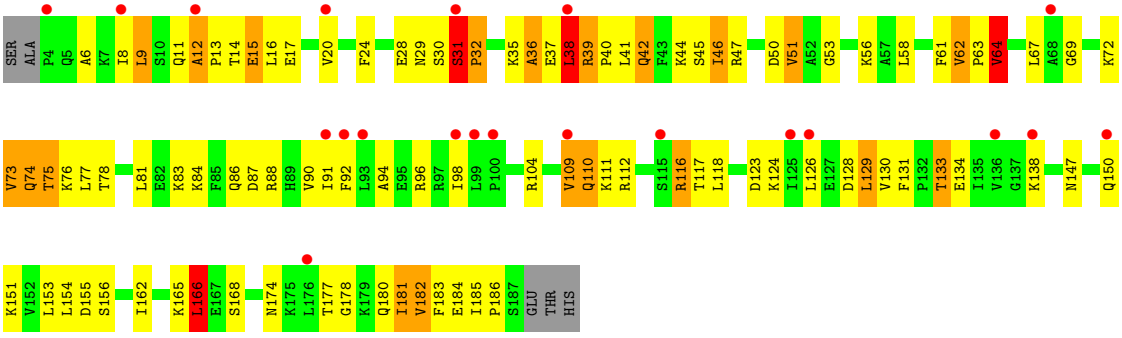
• Molecule 8: 40S ribosomal protein S6-A

Chain s6:



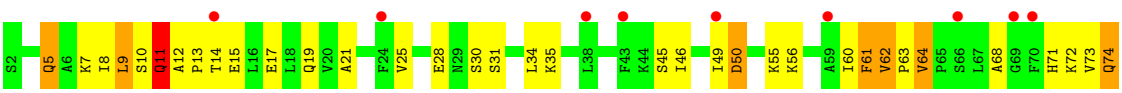
• Molecule 9: 40S ribosomal protein S7-A

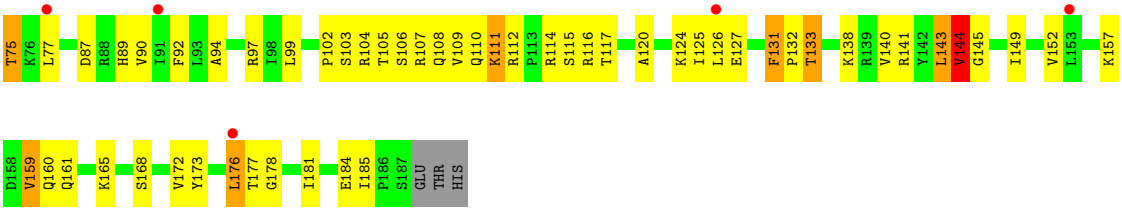
Chain S7:



• Molecule 9: 40S ribosomal protein S7-A

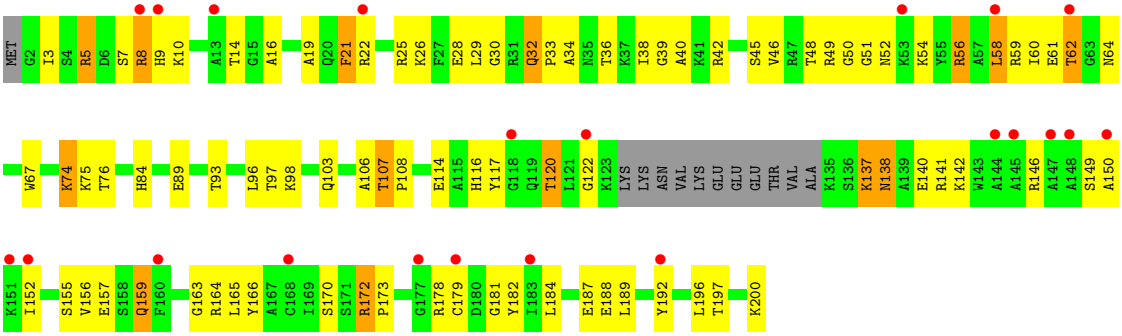
Chain s7:





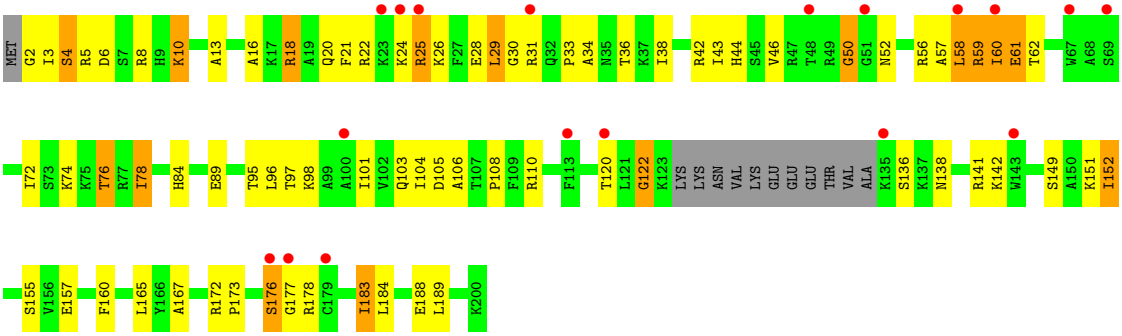
• Molecule 10: 40S ribosomal protein S8-A

Chain S8:



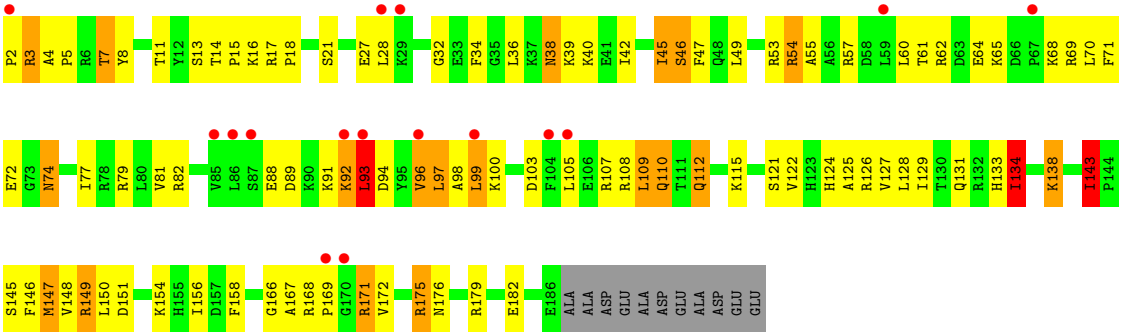
• Molecule 10: 40S ribosomal protein S8-A

Chain s8:



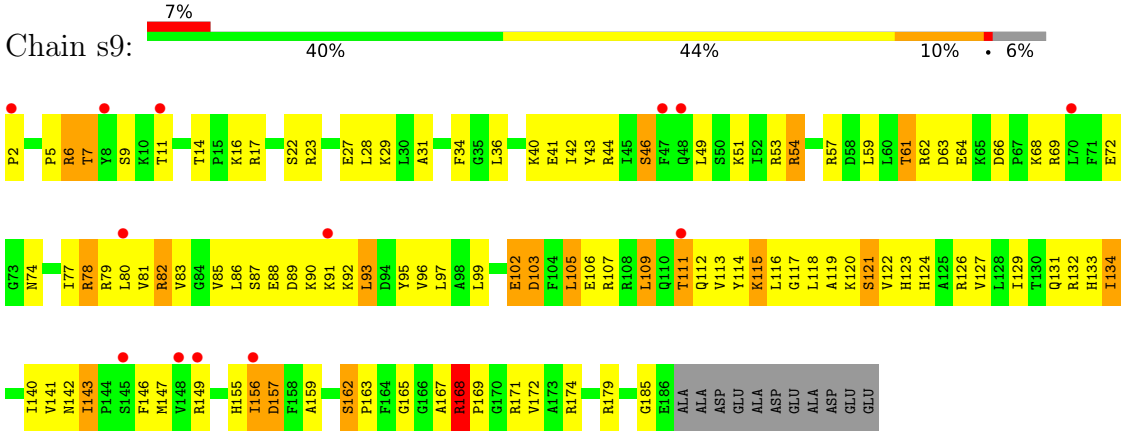
• Molecule 11: 40S ribosomal protein S9-A

Chain S9:



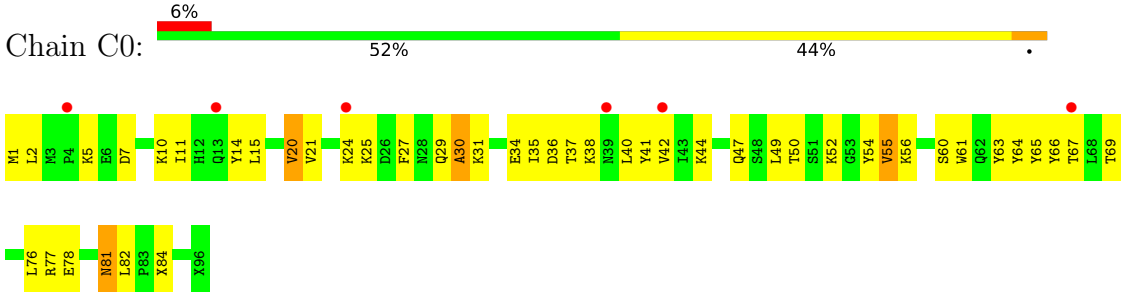
• Molecule 11: 40S ribosomal protein S9-A

Chain s9:



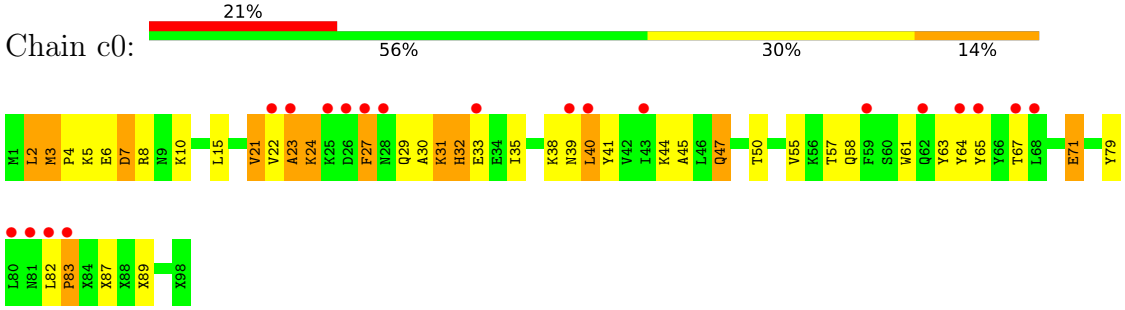
• Molecule 12: 40S ribosomal protein S10-A

Chain C0:



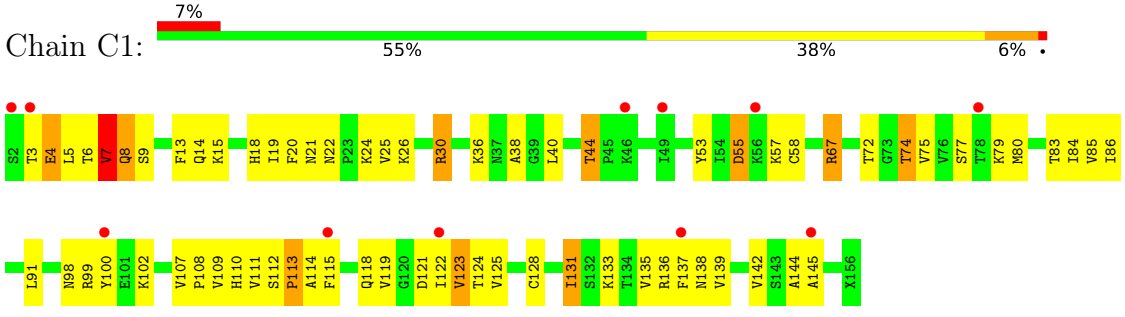
• Molecule 12: 40S ribosomal protein S10-A

Chain c0:



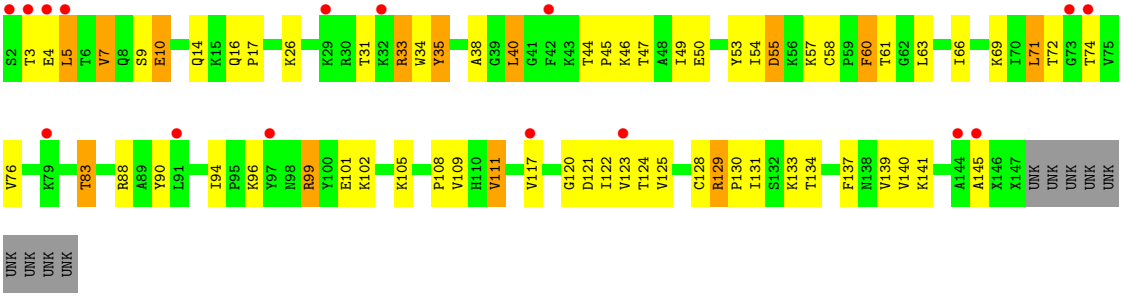
• Molecule 13: 40S ribosomal protein S11-A

Chain C1:

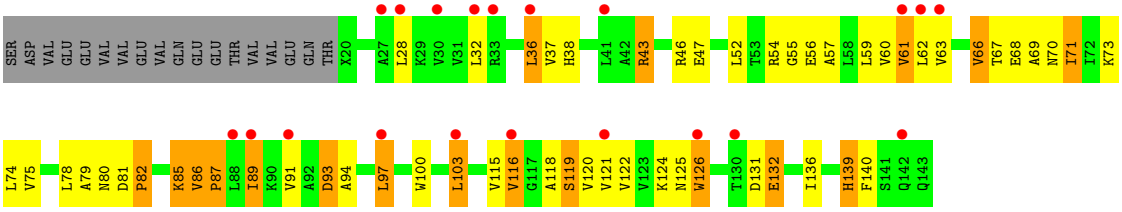


• Molecule 13: 40S ribosomal protein S11-A

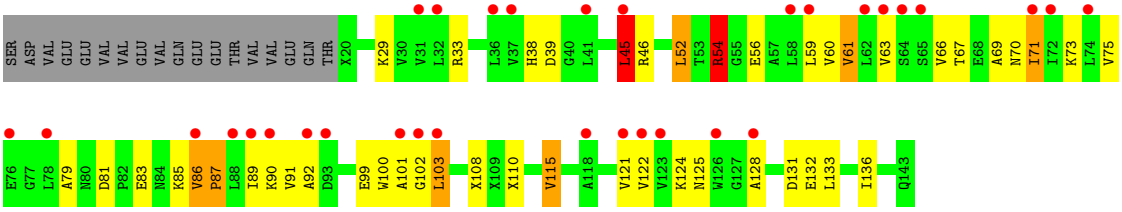
Chain c1:



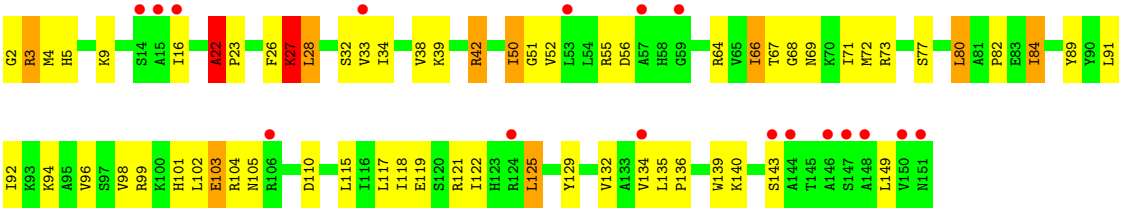
• Molecule 14: 40S ribosomal protein S12



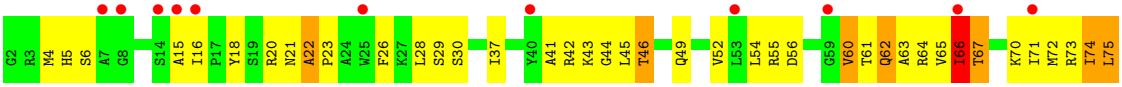
• Molecule 14: 40S ribosomal protein S12

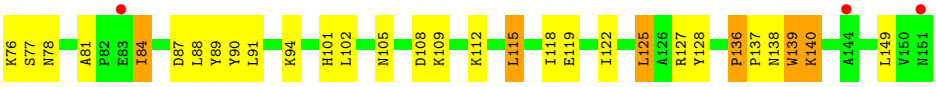


• Molecule 15: 40S ribosomal protein S13



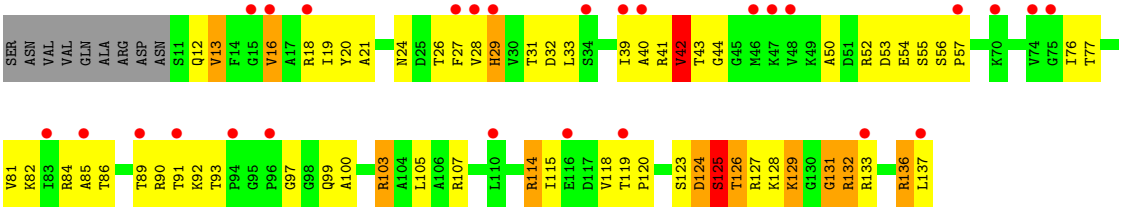
• Molecule 15: 40S ribosomal protein S13





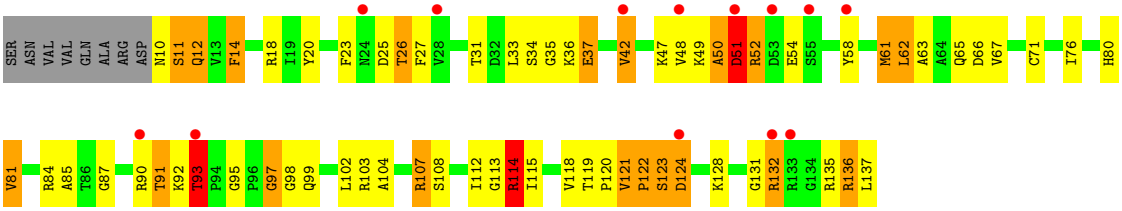
• Molecule 16: 40S ribosomal protein S14-A

Chain C4:



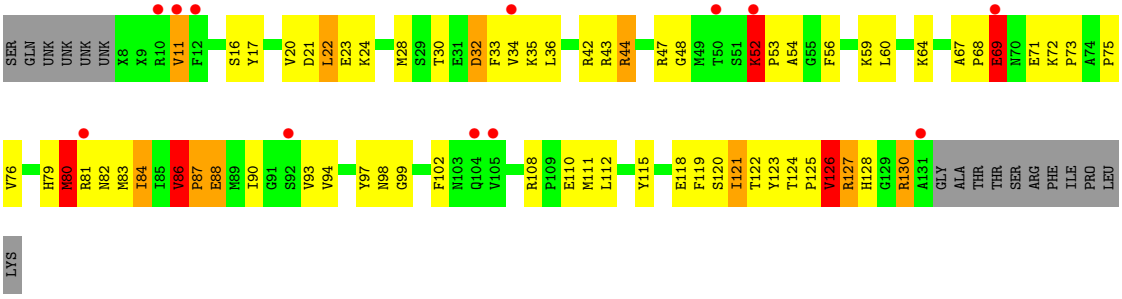
• Molecule 16: 40S ribosomal protein S14-A

Chain c4:



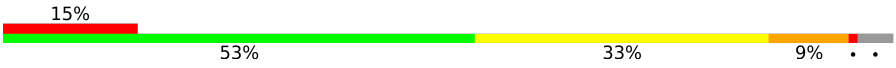
• Molecule 17: 40S ribosomal protein S15 (uS19)

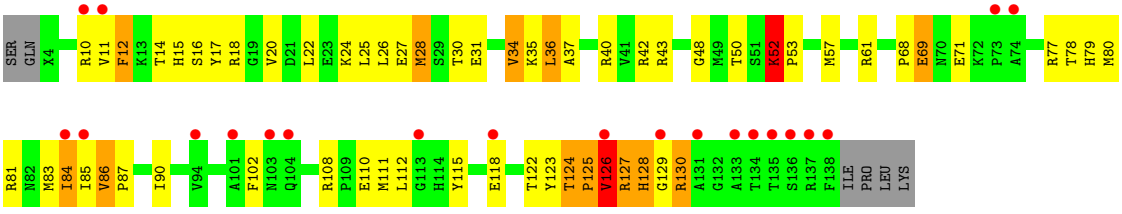
Chain C5:



• Molecule 17: 40S ribosomal protein S15 (uS19)

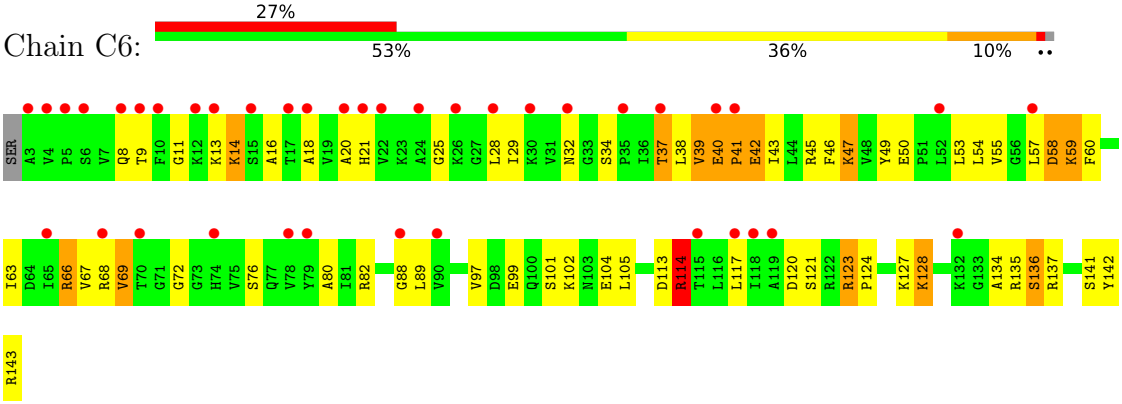
Chain c5:





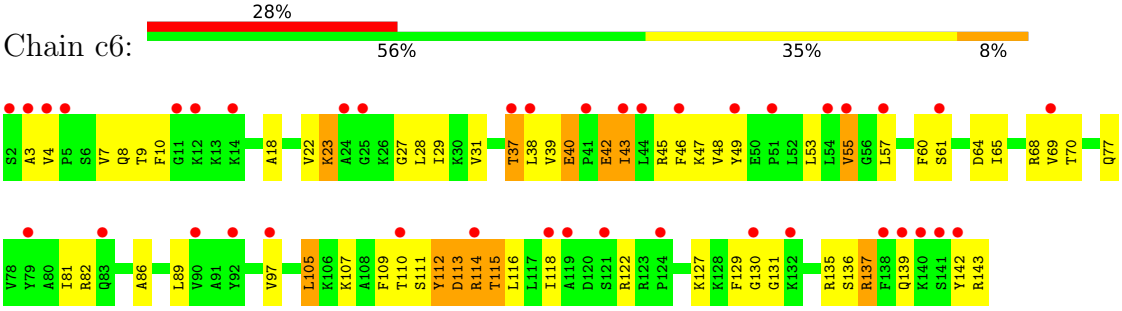
• Molecule 18: 40S ribosomal protein S16-A

Chain C6:



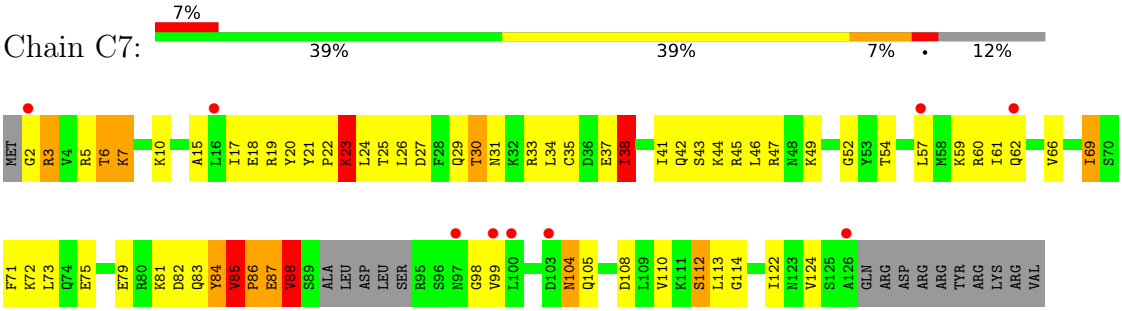
• Molecule 18: 40S ribosomal protein S16-A

Chain c6:



• Molecule 19: 40S ribosomal protein S17-A

Chain C7:



• Molecule 19: 40S ribosomal protein S17-A

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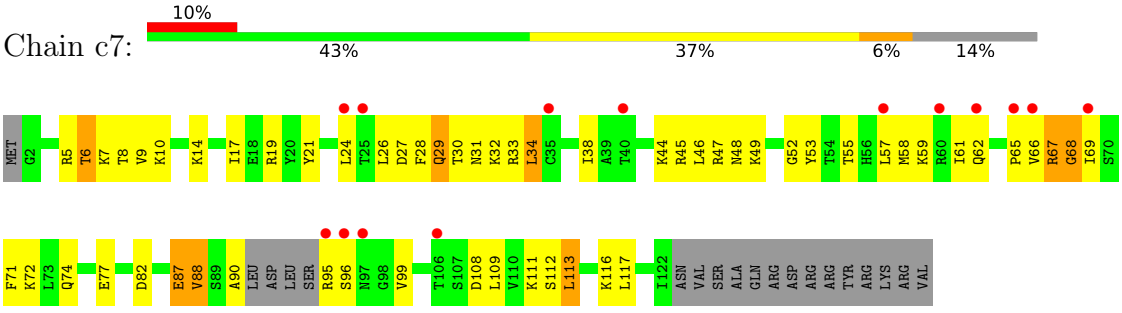
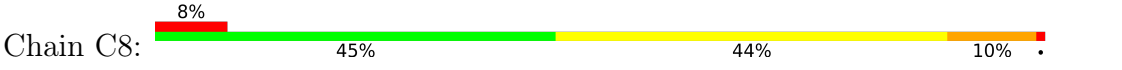
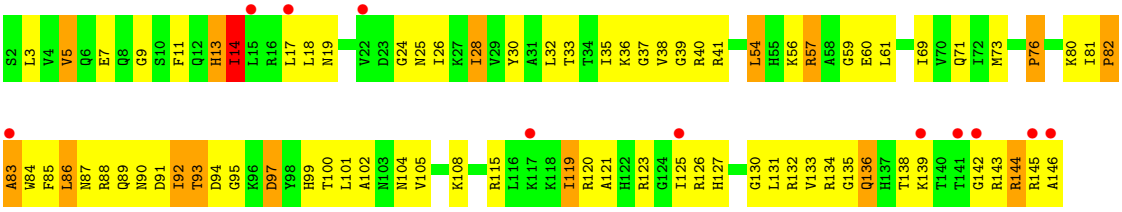


• Molecule 20: 40S ribosomal protein S18-A

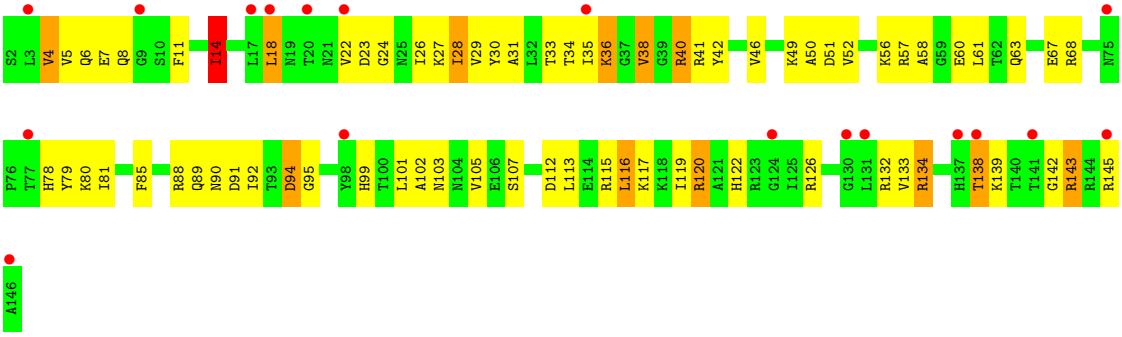
Chain C8:





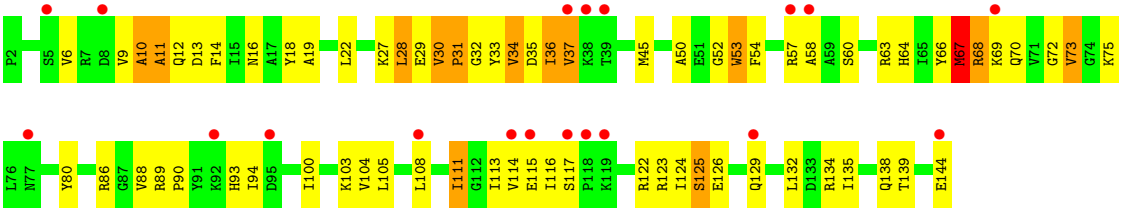
• Molecule 20: 40S ribosomal protein S18-A

Chain c8:



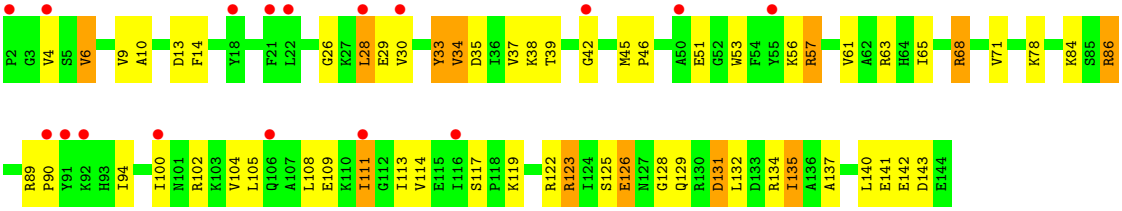
• Molecule 21: 40S ribosomal protein S19-A

Chain C9:



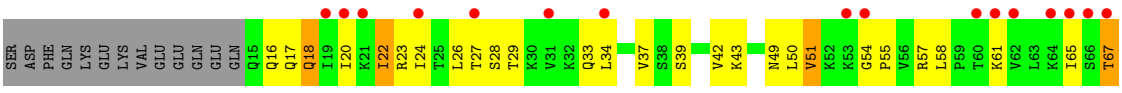
• Molecule 21: 40S ribosomal protein S19-A

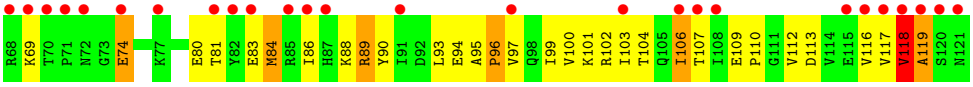
Chain c9:



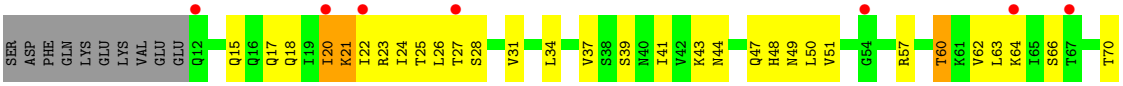
• Molecule 22: 40S ribosomal protein S20

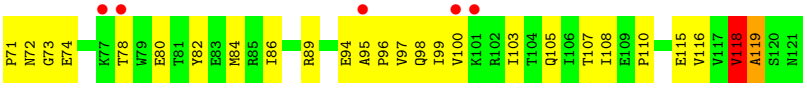
Chain D0:



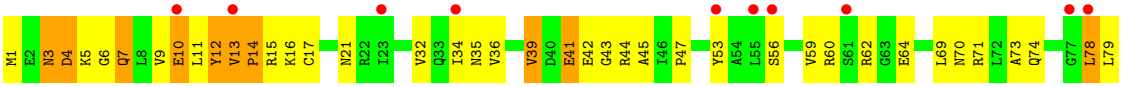


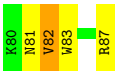
• Molecule 22: 40S ribosomal protein S20



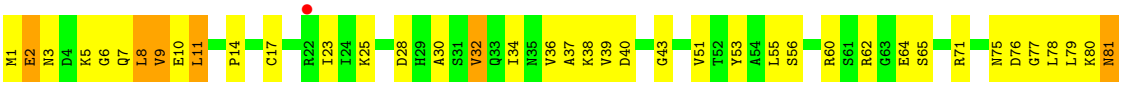


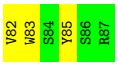
• Molecule 23: 40S ribosomal protein S21-A



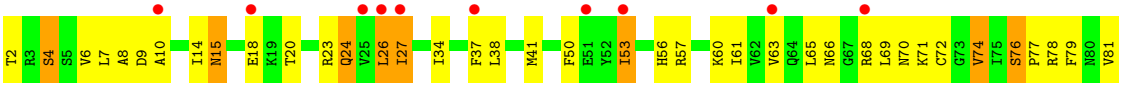


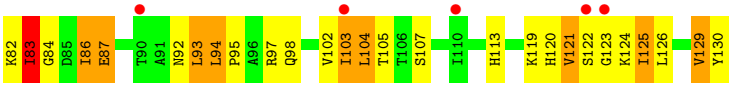
• Molecule 23: 40S ribosomal protein S21-A



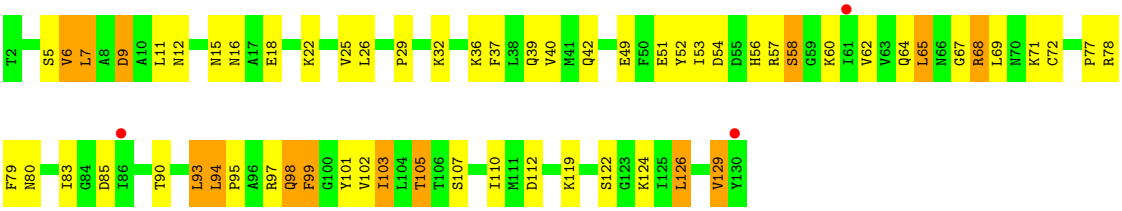


• Molecule 24: 40S ribosomal protein S22-A



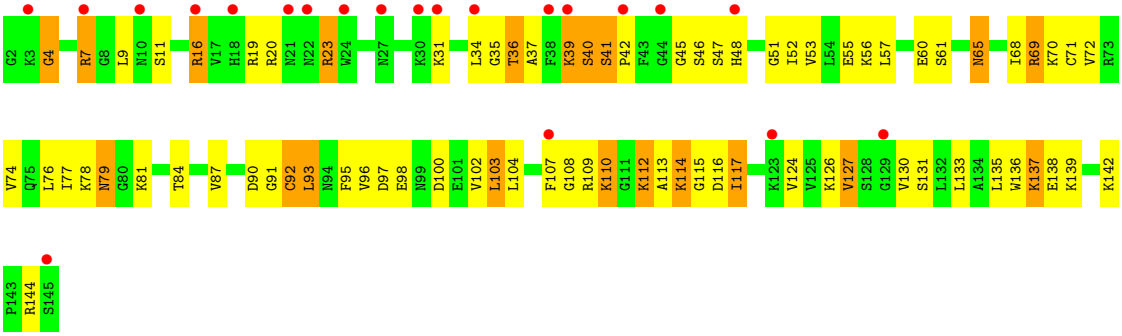


• Molecule 24: 40S ribosomal protein S22-A



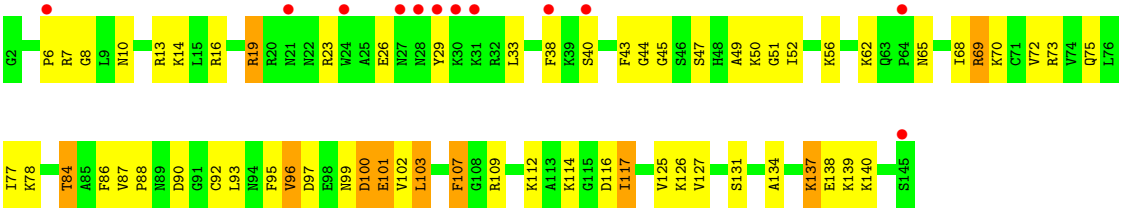
• Molecule 25: 40S ribosomal protein S23-A

Chain D3:



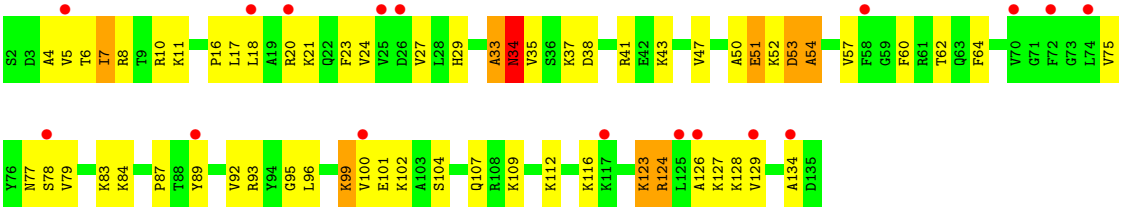
• Molecule 25: 40S ribosomal protein S23-A

Chain d3:



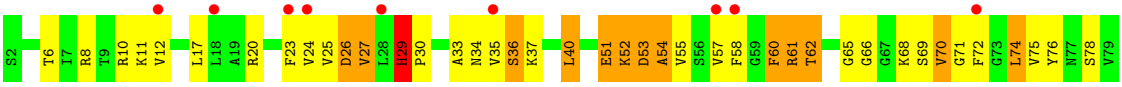
• Molecule 26: 40S ribosomal protein S24-A

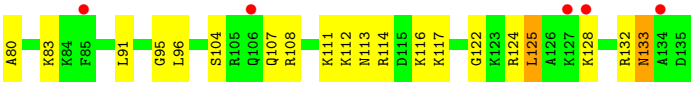
Chain D4:



• Molecule 26: 40S ribosomal protein S24-A

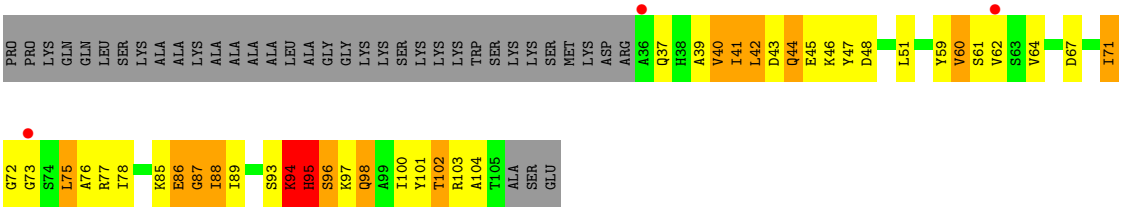
Chain d4:





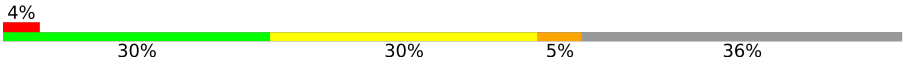
• Molecule 27: 40S ribosomal protein S25-A

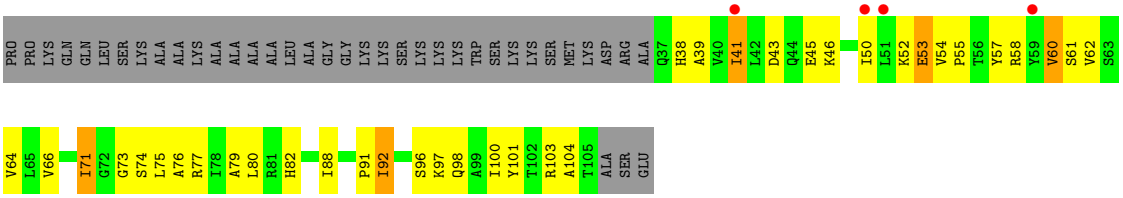
Chain D5:



• Molecule 27: 40S ribosomal protein S25-A

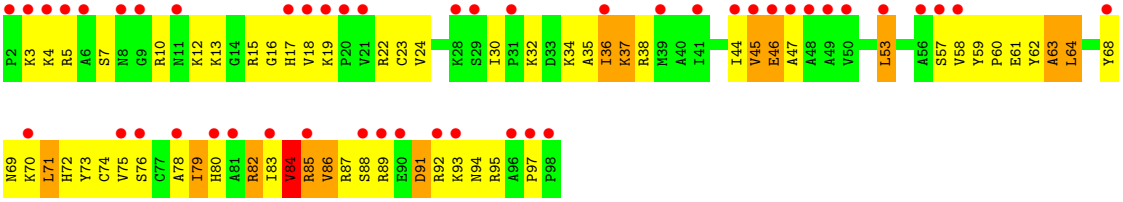
Chain d5:





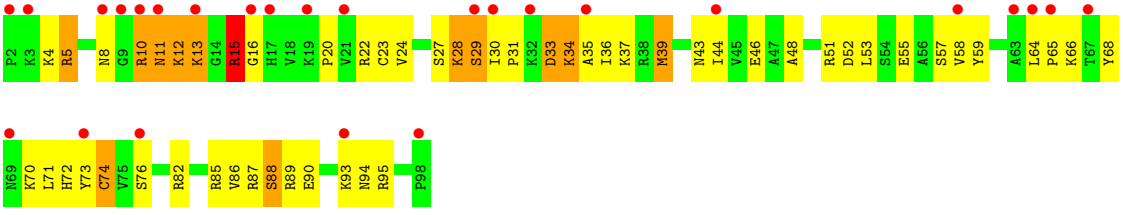
• Molecule 28: 40S ribosomal protein S26-B

Chain D6:



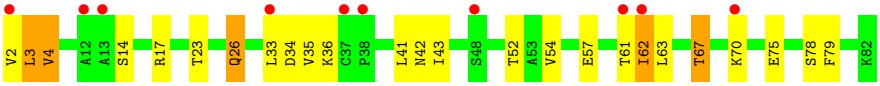
• Molecule 28: 40S ribosomal protein S26-B

Chain d6:



• Molecule 29: 40S ribosomal protein S27-A

Chain D7:

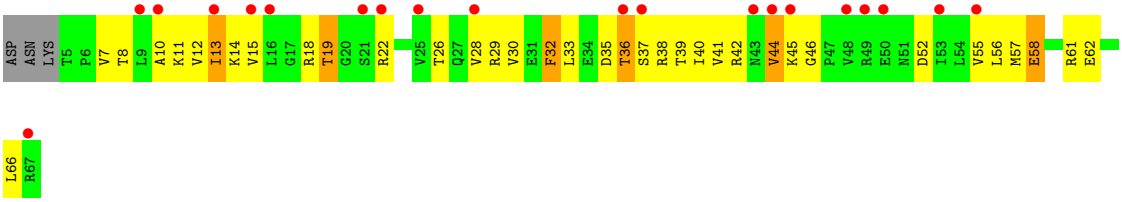


• Molecule 29: 40S ribosomal protein S27-A

Chain d7:

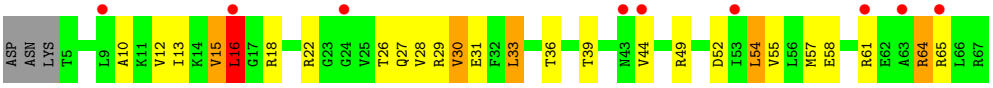
• Molecule 30: 40S ribosomal protein S28-A

Chain D8:



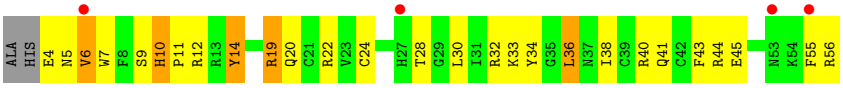
• Molecule 30: 40S ribosomal protein S28-A

Chain d8:



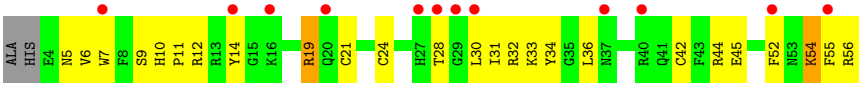
• Molecule 31: 40S ribosomal protein S29-A

Chain D9:



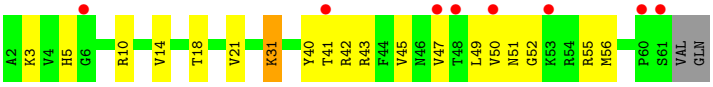
• Molecule 31: 40S ribosomal protein S29-A

Chain d9:

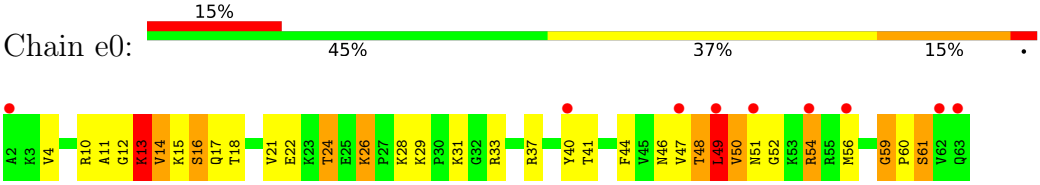


• Molecule 32: 40S ribosomal protein S30-A

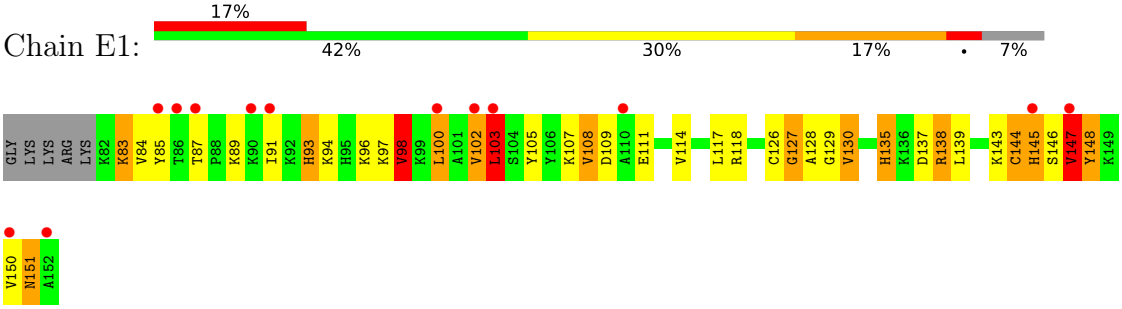
Chain E0:



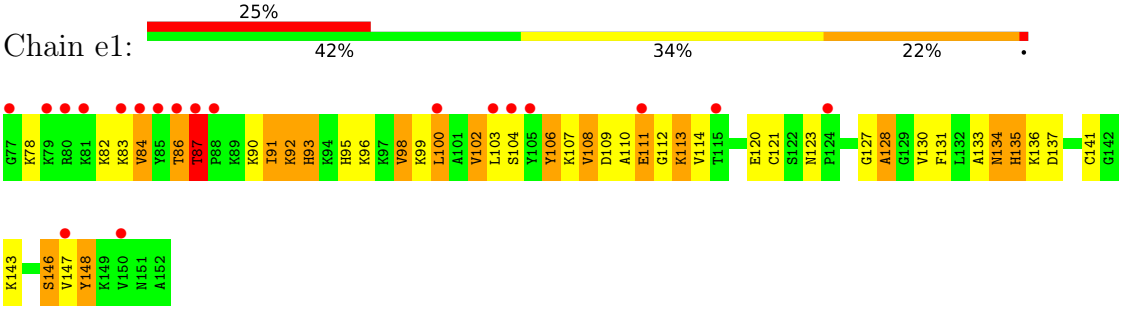
• Molecule 32: 40S ribosomal protein S30-A



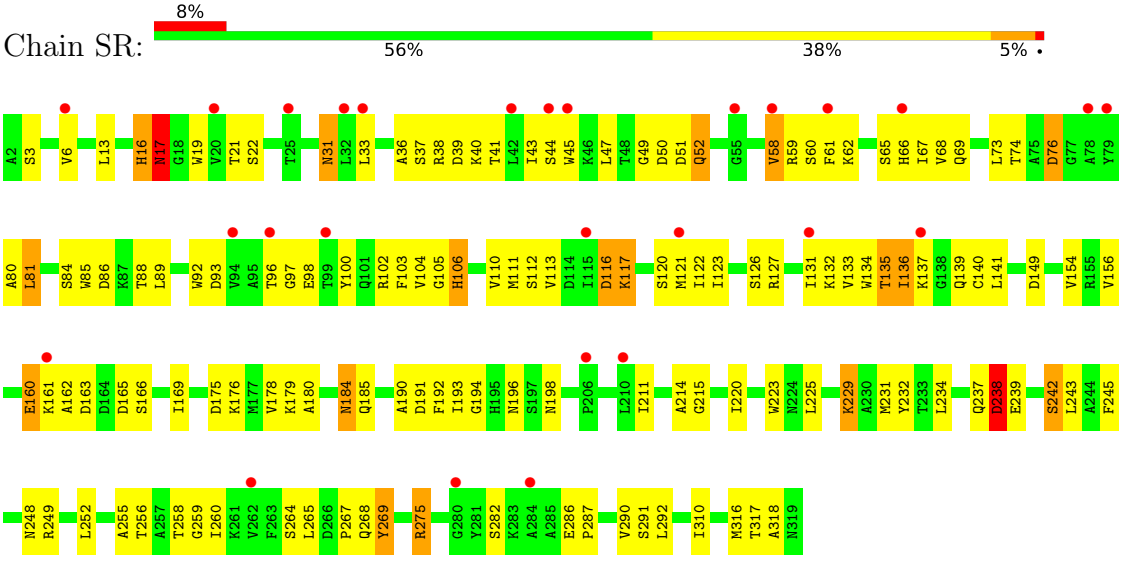
• Molecule 33: Ubiquitin-40S ribosomal protein S31



• Molecule 33: Ubiquitin-40S ribosomal protein S31

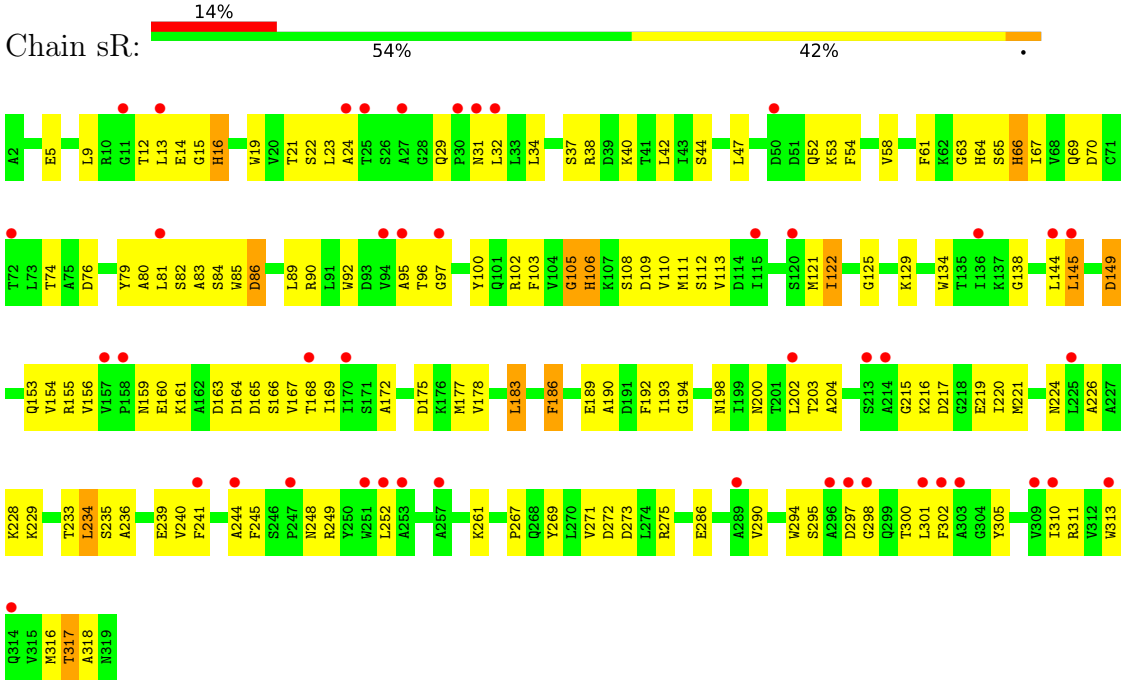


• Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein



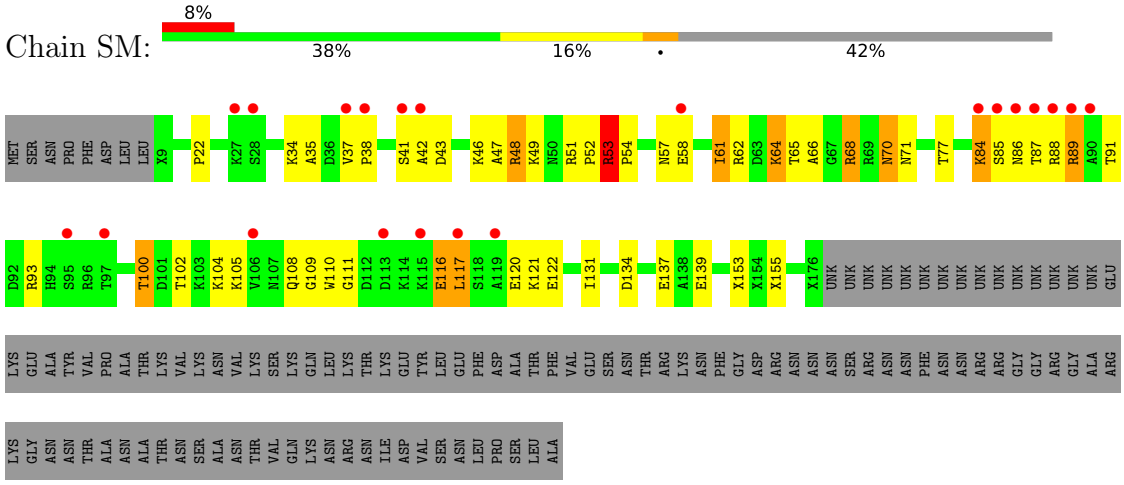
• Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein

Chain sR:



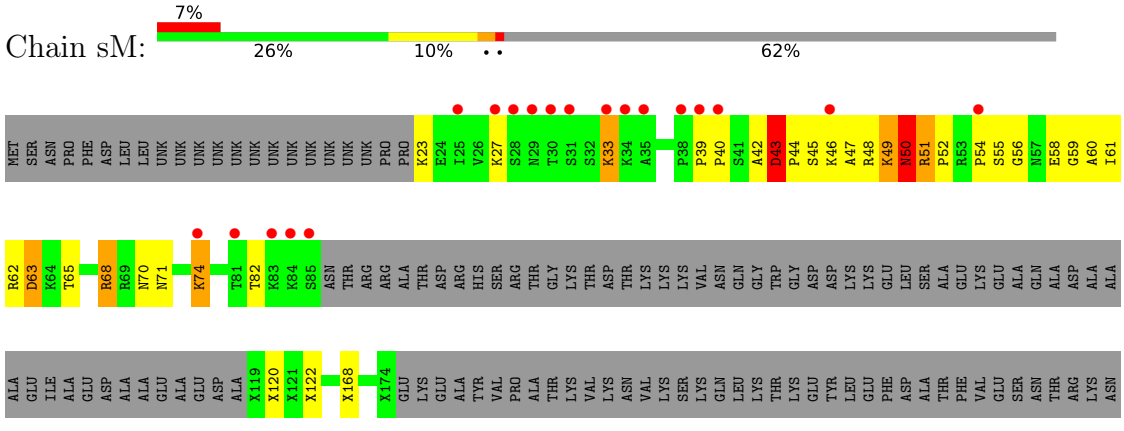
• Molecule 35: Suppressor protein STM1

Chain SM:



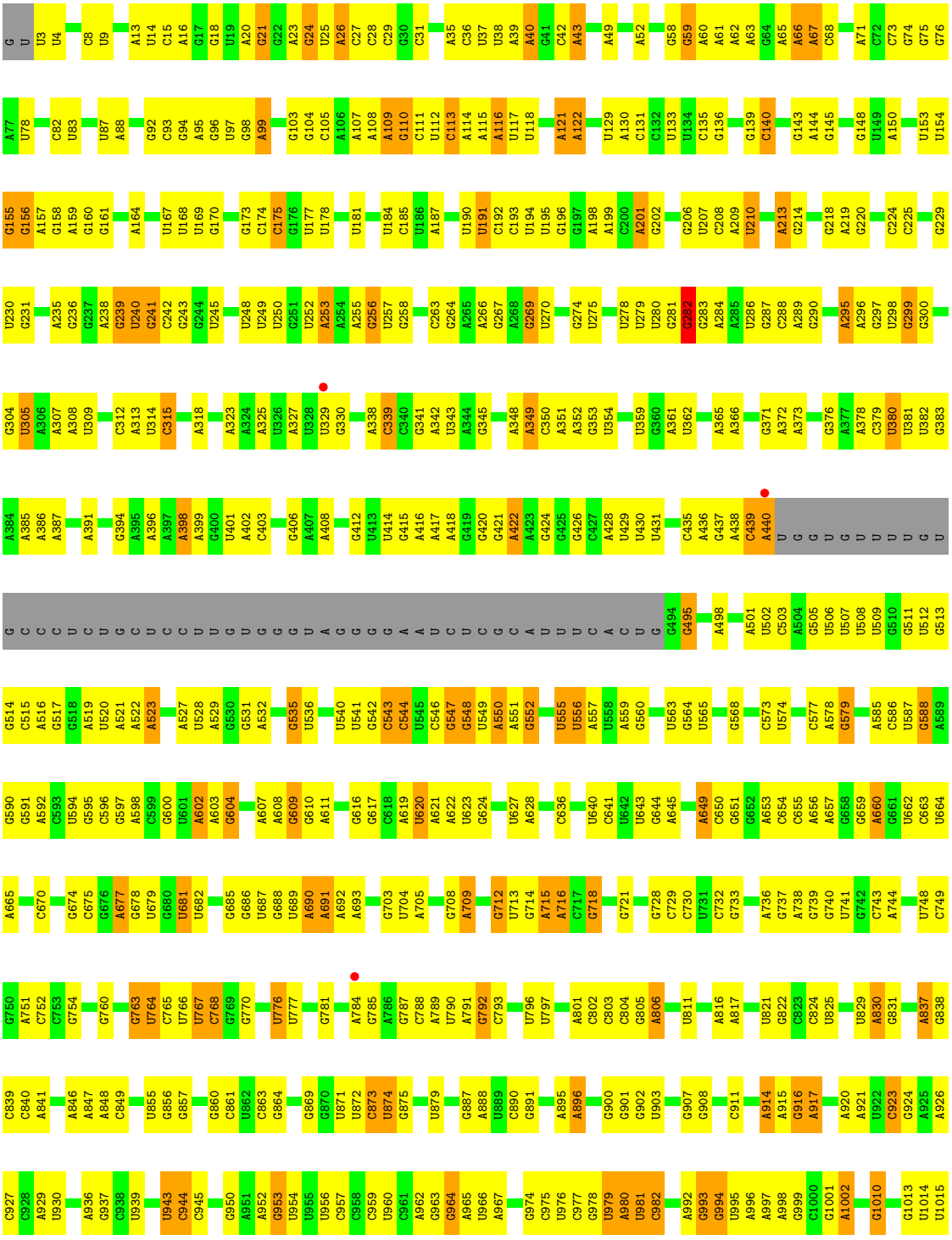
• Molecule 35: Suppressor protein STM1

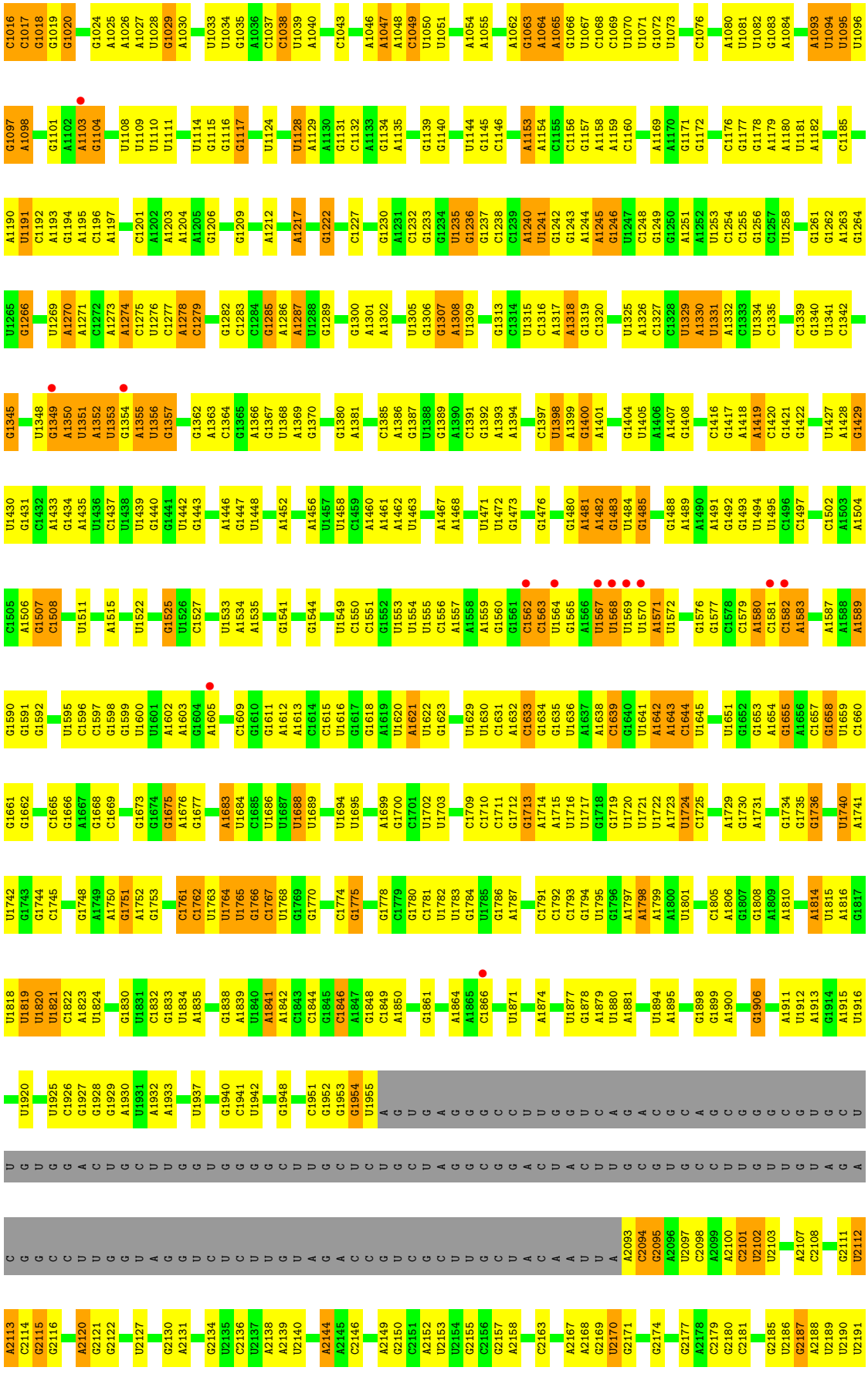
Chain sM:

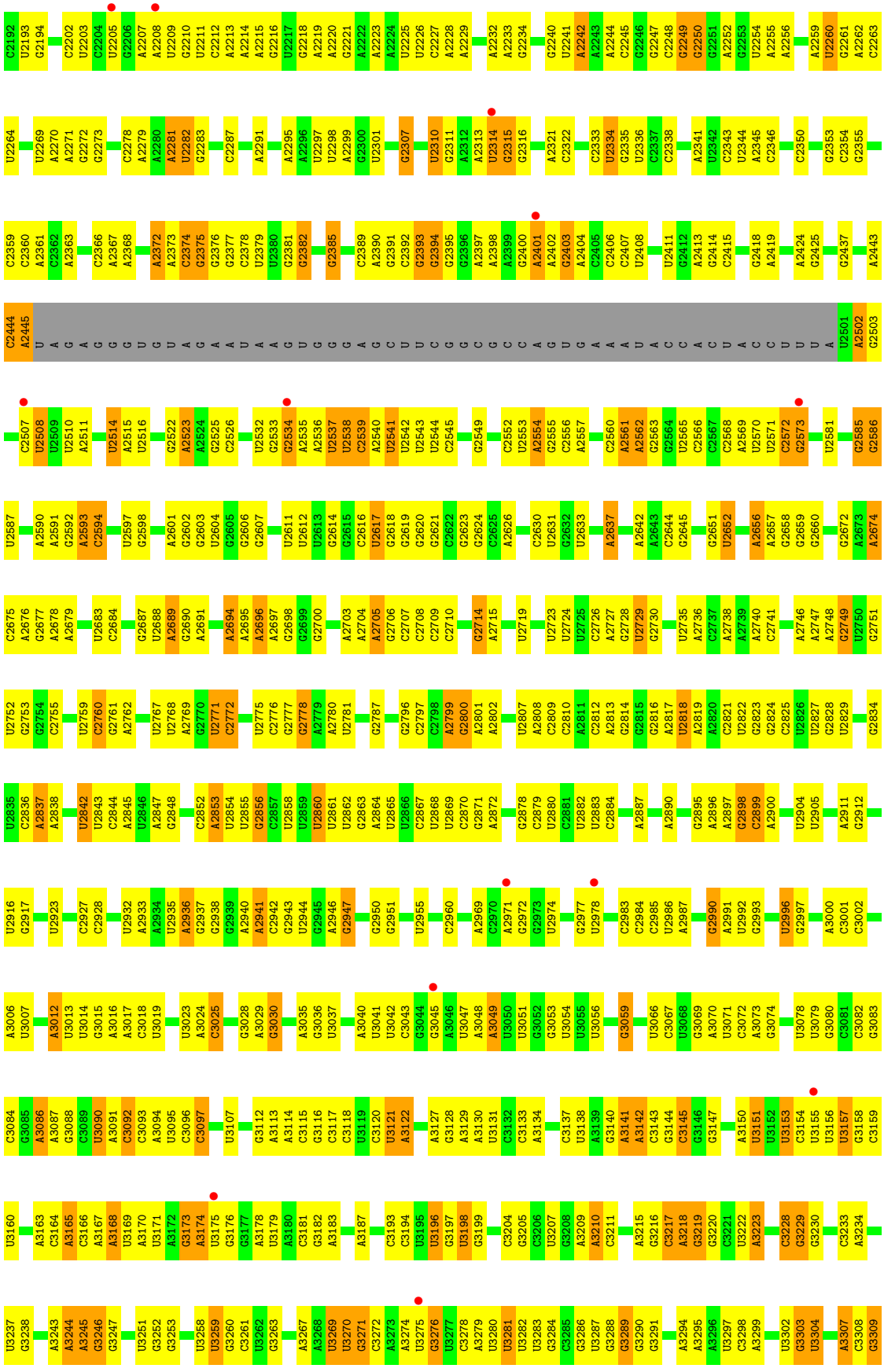


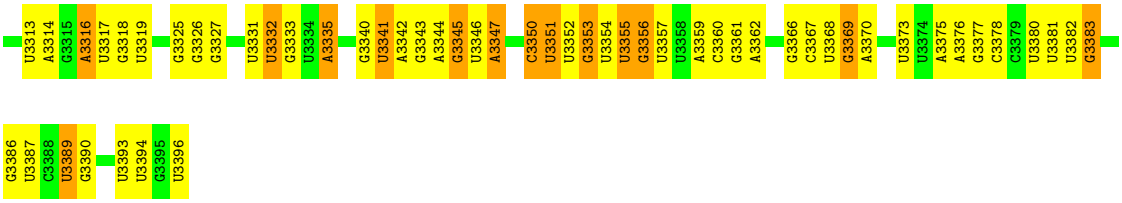
• Molecule 36: 25S ribosomal RNA

Chain 1:



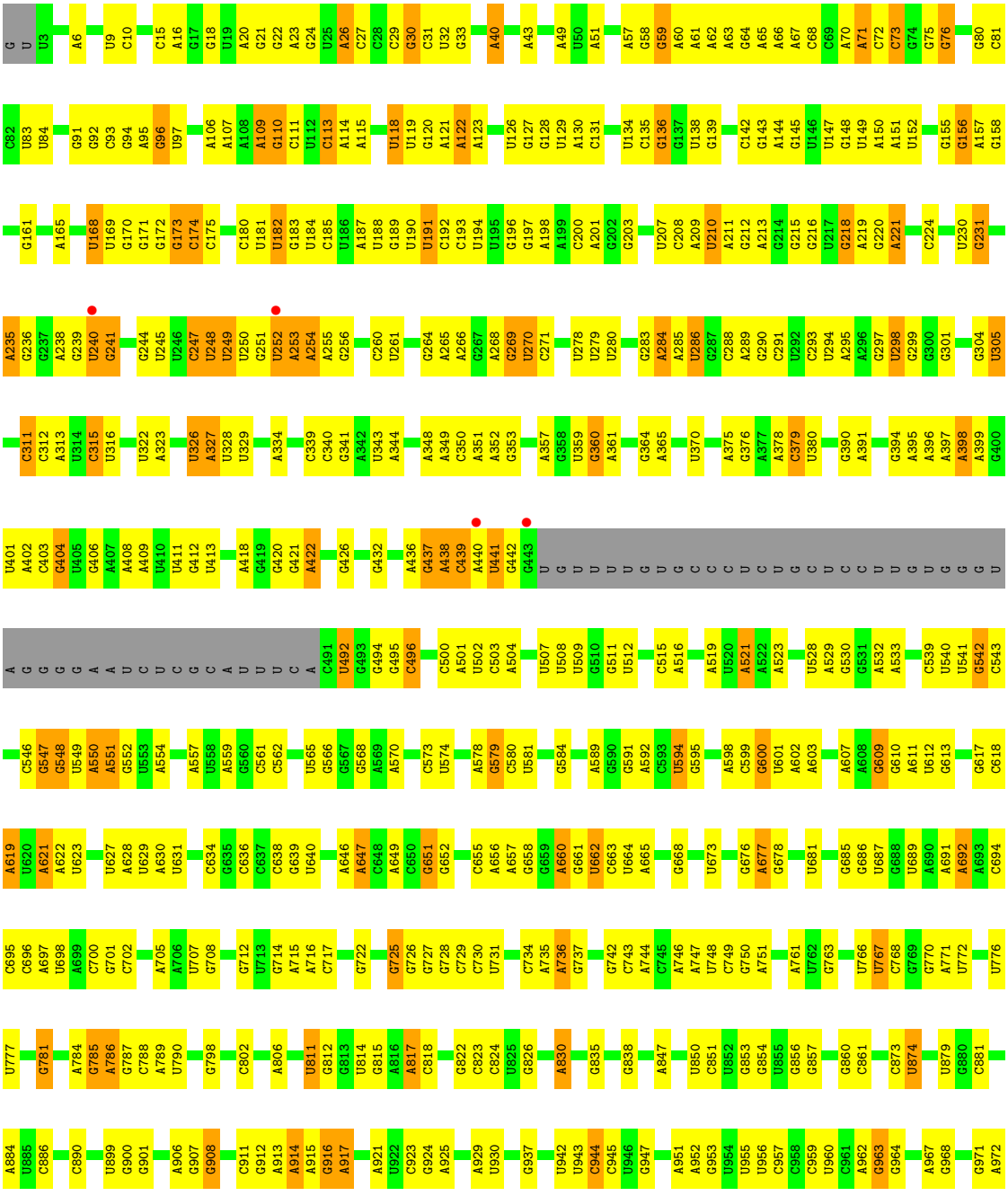


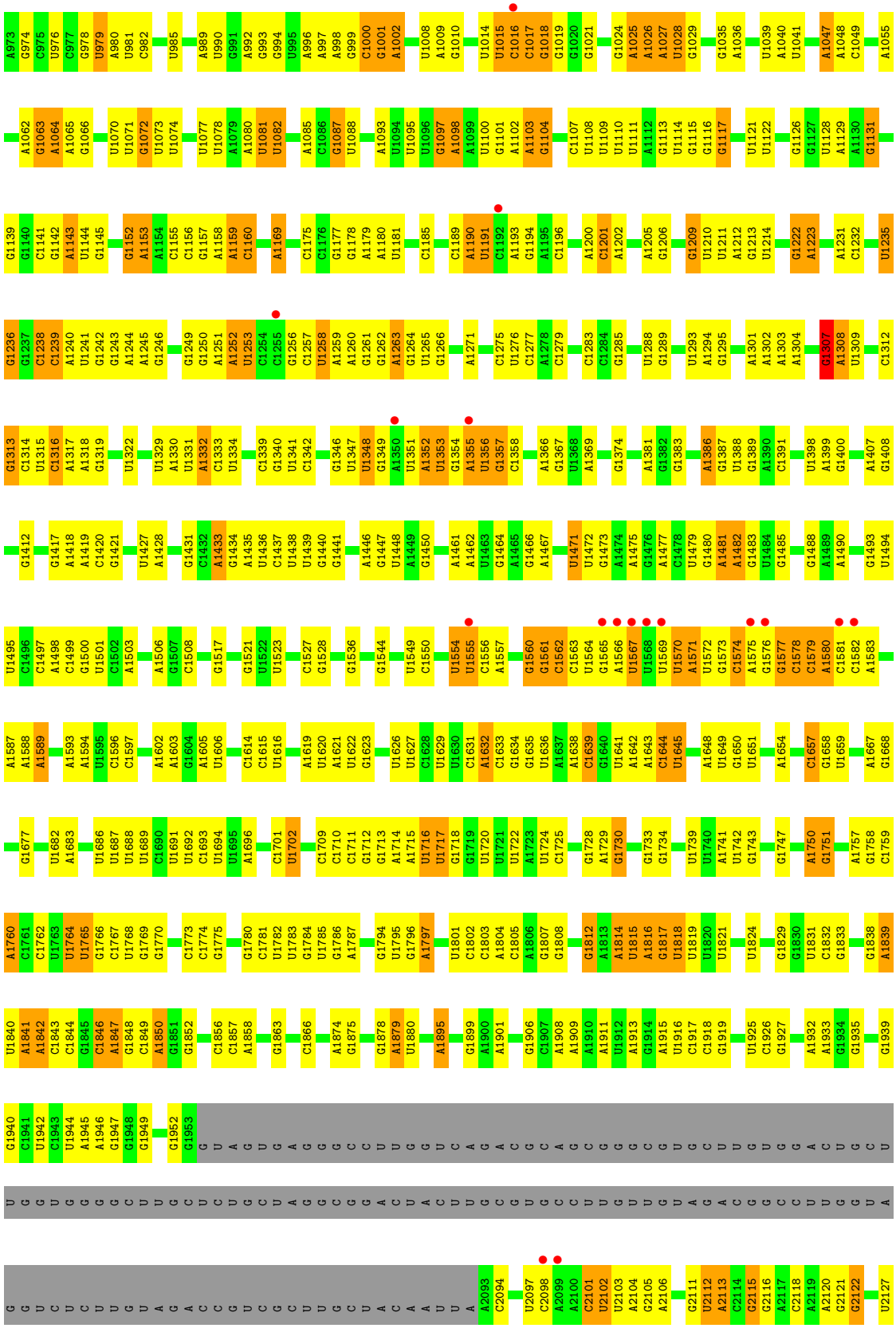




• Molecule 36: 25S ribosomal RNA

Chain 5:




A973 G974 C975 U976 G977 G978 U979 A980 U981 C982 U985 A989 U990 G991 A992 G993 G994 U995 A996 A997 A998 G999 C1000 G1001 A1002 U1008 A1009 G1010 U1014 U1015 C1016 C1017 G1018 G1019 G1020 G1021 G1024 A1025 A1026 A1027 U1028 G1029 G1035 A1036 U1039 A1040 U1041 A1047 A1048 C1049 A1055
A1062 G1063 A1064 A1065 G1066 U1070 U1071 G1072 U1073 U1074 U1077 U1078 A1079 A1080 U1081 U1082 A1085 C1086 G1087 U1088 A1093 U1094 U1095 U1096 G1097 A1098 A1099 U1100 G1101 A1102 A1103 G1104 C1107 U1108 U1109 U1110 U1111 A1112 G1113 U1114 G1115 G1116 G1117 U1121 U1122 G1126 G1127 U1128 A1129 A1130 G1131
G1139 G1140 C1141 G1142 A1143 U1144 G1145 G1152 A1153 A1154 C1155 C1156 G1157 A1158 A1159 C1160 A1169 C1175 C1176 G1177 G1178 A1179 A1180 U1181 C1185 C1189 A1190 U1191 C1192 A1193 G1194 A1195 C1196 A1200 C1201 A1202 A1205 G1206 G1209 U1210 U1211 A1212 G1213 U1214 G1222 A1223 A1231 C1232 U1235
G1236 G1237 C1238 C1239 A1240 U1241 G1242 G1243 A1244 A1245 G1246 G1249 G1250 A1251 A1252 U1253 C1254 C1255 G1256 C1257 U1258 A1259 A1260 G1261 G1262 A1263 G1264 U1265 G1266 A1271 C1275 U1276 C1277 A1278 C1279 C1283 C1284 G1285 U1288 G1289 U1293 A1294 G1295 A1301 A1302 A1303 A1304 G1307 A1308 U1309 C1312
G1313 C1314 U1315 C1316 A1317 A1318 G1319 U1322 U1329 A1330 U1331 A1332 C1333 U1334 C1339 G1340 U1341 C1342 G1346 U1347 U1348 G1349 A1350 U1351 A1352 U1353 G1354 A1355 U1356 G1357 C1358 A1366 G1367 U1368 A1369 G1374 A1381 G1382 G1383 A1386 G1387 U1388 G1389 A1390 C1391 U1398 A1399 G1400 A1407 G1408
G1412 G1417 A1418 A1419 C1420 G1421 U1427 A1428 G1431 C1432 A1433 G1434 A1435 U1436 C1437 U1438 U1439 G1440 G1441 A1446 G1447 U1448 A1449 G1450 A1461 A1462 U1463 G1464 A1465 G1466 A1467 U1471 U1472 G1473 A1474 A1475 G1476 A1477 C1478 U1479 G1480 A1481 A1482 G1483 U1484 G1485 G1488 A1489 A1490 G1493 U1494
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A1587 A1588 A1589 A1593 A1594 U1595 C1596 C1597 A1602 A1603 G1604 A1605 U1606 C1614 C1615 U1616 A1619 U1620 A1621 U1622 G1623 U1626 U1627 C1628 U1629 U1630 C1631 A1632 C1633 G1634 G1635 U1636 A1637 A1638 C1639 G1640 U1641 A1642 A1643 C1644 U1645 A1648 U1649 G1650 U1651 A1654 C1657 G1658 U1659 A1667 G1668
G1677 U1682 A1683 U1686 U1687 U1688 U1689 C1690 U1691 U1692 C1693 U1694 U1695 A1696 C1701 U1702 C1709 C1710 C1711 G1712 G1713 A1714 A1715 U1716 U1717 G1718 G1719 U1720 U1721 U1722 A1723 U1724 C1725 G1728 A1729 G1730 G1733 G1734 U1739 U1740 A1741 U1742 G1743 G1747 A1750 G1751 A1757 G1758 C1759
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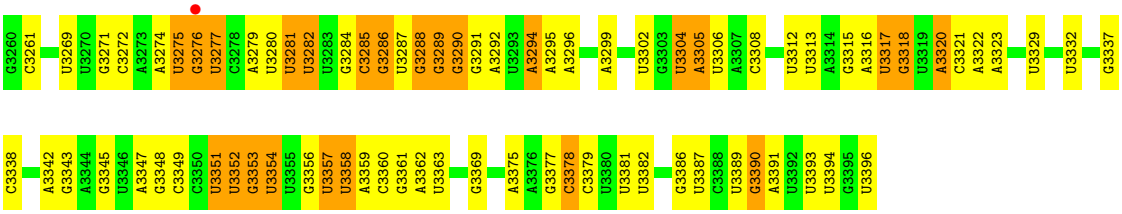
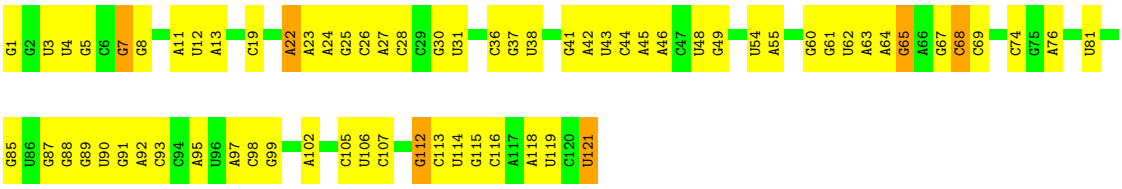
G1940 C1941 U1942 C1943 U1944 A1945 A1946 G1947 G1948 G1949 G1952 G1953
U G G U C U U C G G A C C U G U U U G C U A G C U C U U G G C C U A A C A G G G C G C A A G C C C C U U G G G C C U U A A C A G U U G C U U A C A U G U U G C U U A C A U G U U G C U U A C A U



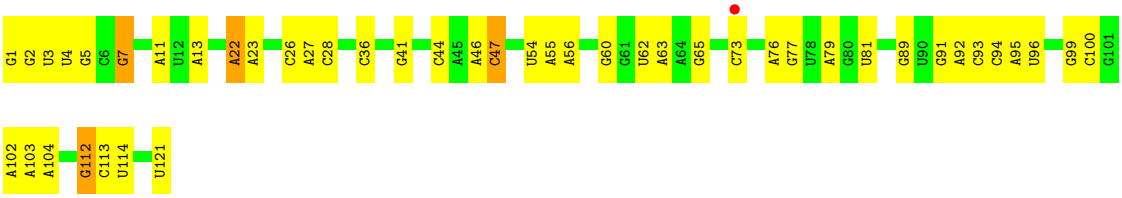
• Molecule 37: 5S ribosomal RNA

Chain 3:



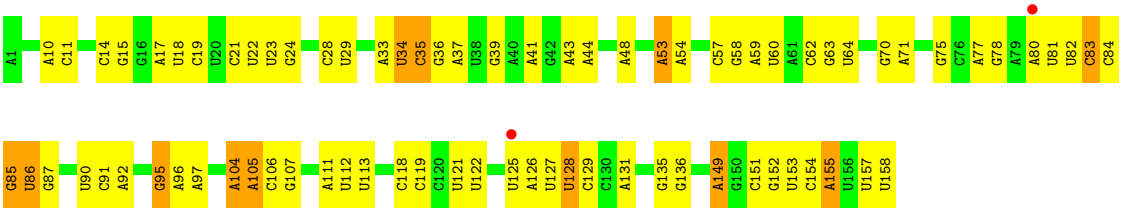
• Molecule 37: 5S ribosomal RNA

Chain 7:



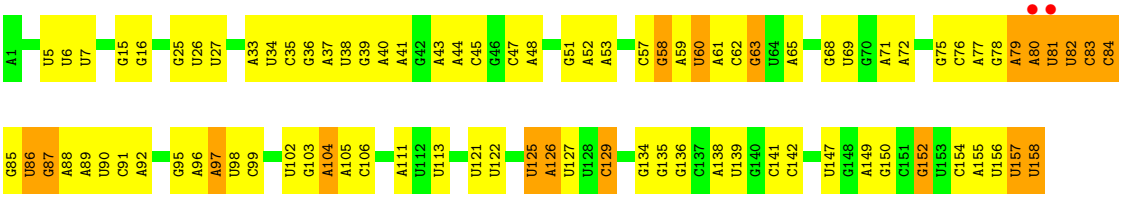
• Molecule 38: 5.8S ribosomal RNA

Chain 4:



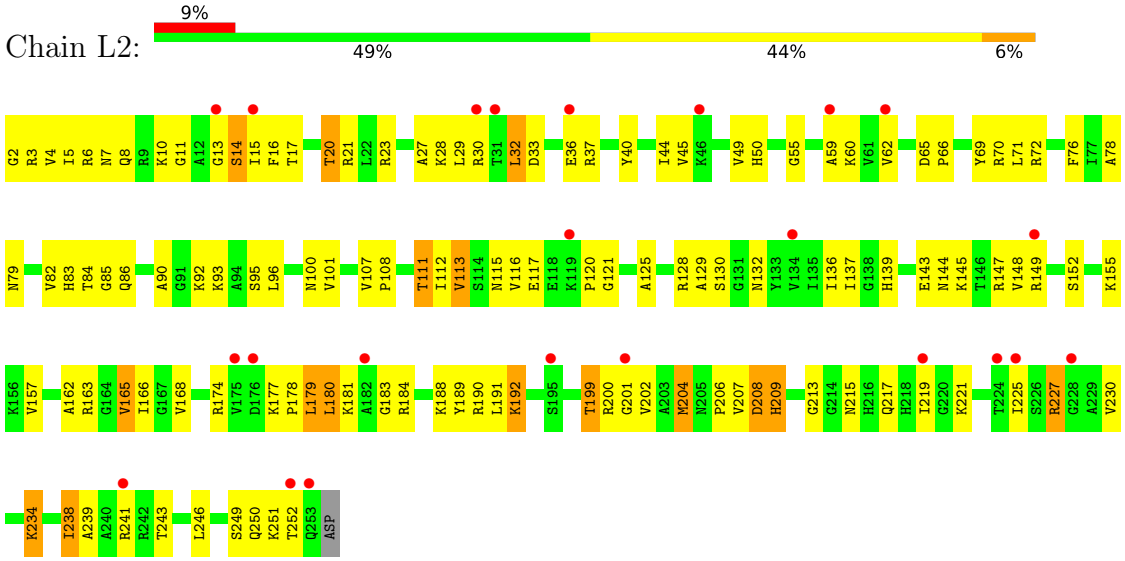
• Molecule 38: 5.8S ribosomal RNA

Chain 8:



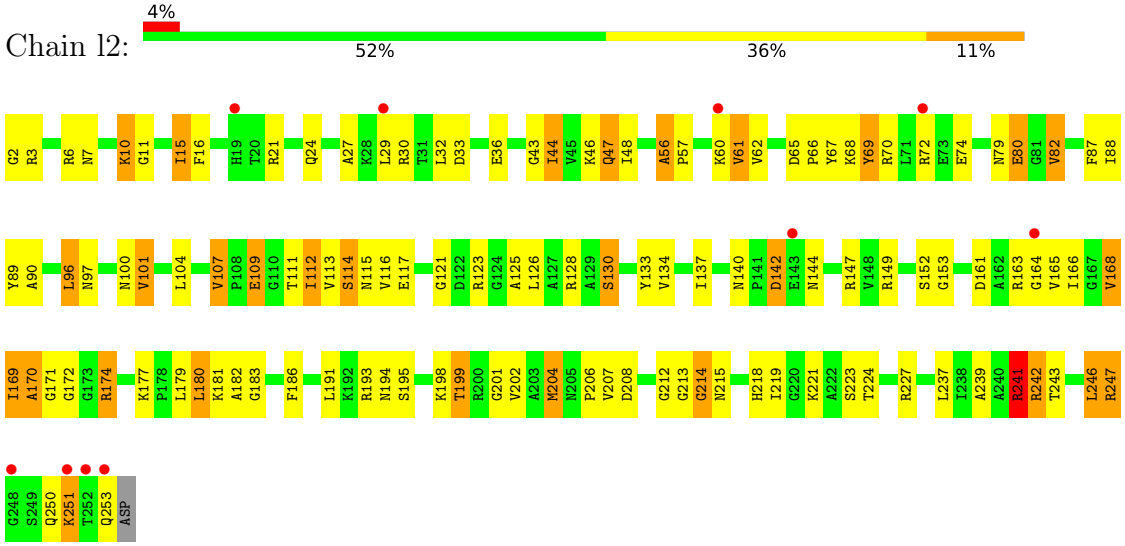
• Molecule 39: 60S ribosomal protein L2-A

Chain L2:



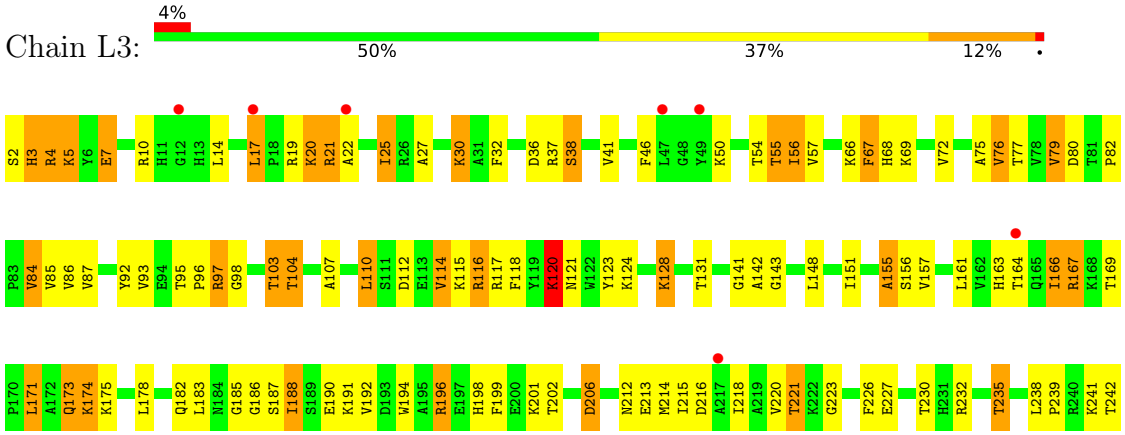
• Molecule 39: 60S ribosomal protein L2-A

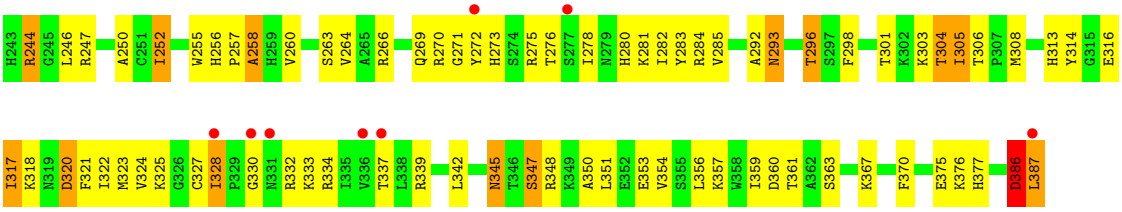
Chain l2:

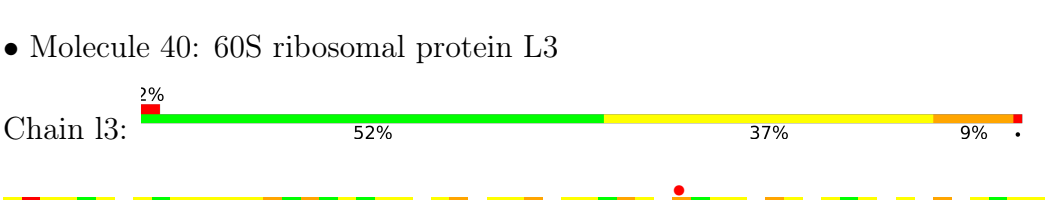


• Molecule 40: 60S ribosomal protein L3

Chain L3:

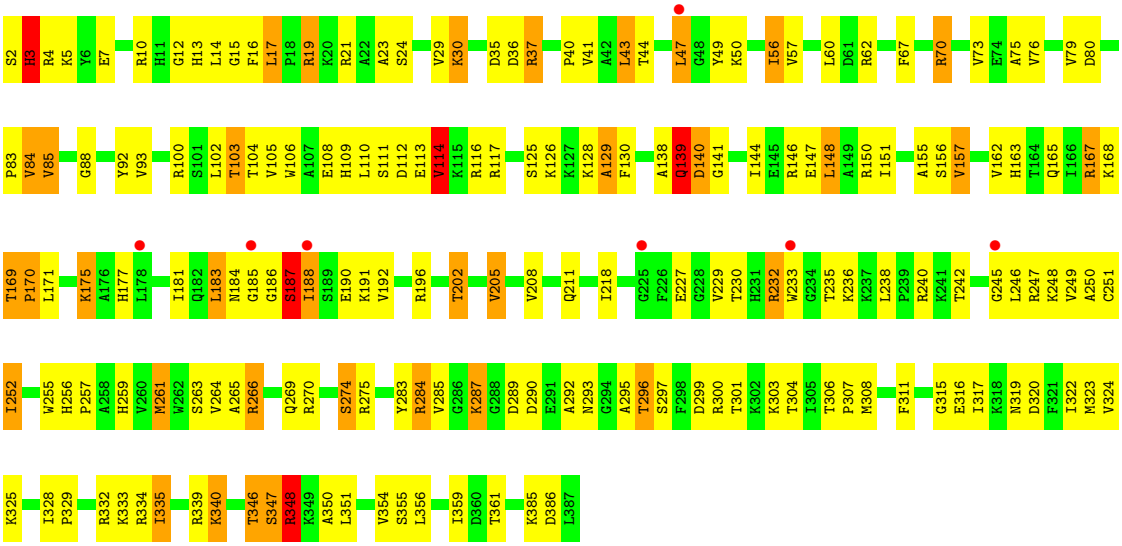






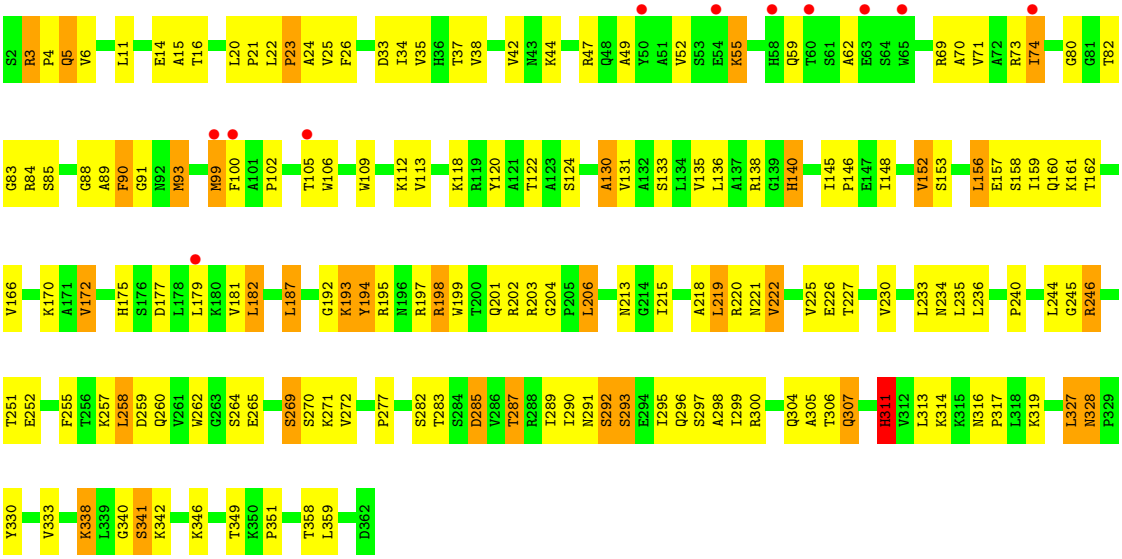
• Molecule 40: 60S ribosomal protein L3

Chain l3:



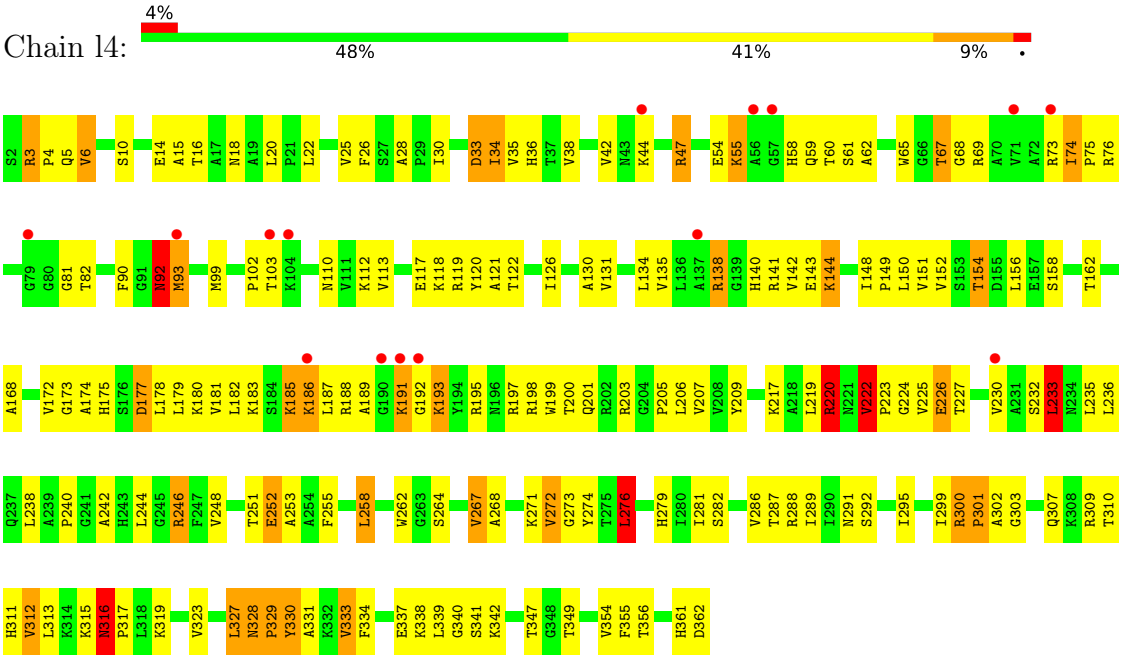
• Molecule 41: 60S ribosomal protein L4-A

Chain L4:



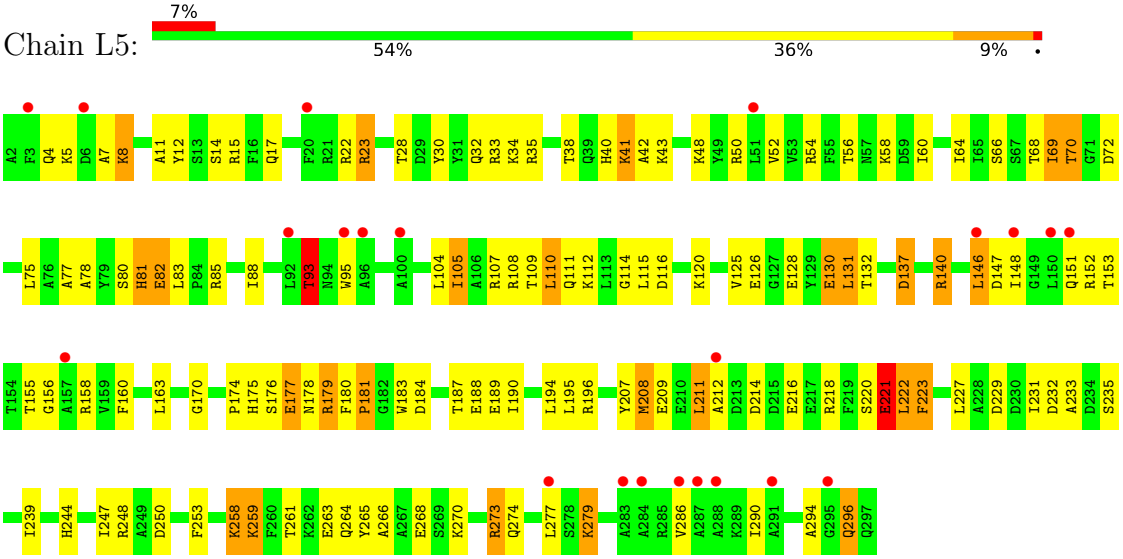
• Molecule 41: 60S ribosomal protein L4-A

Chain l4:



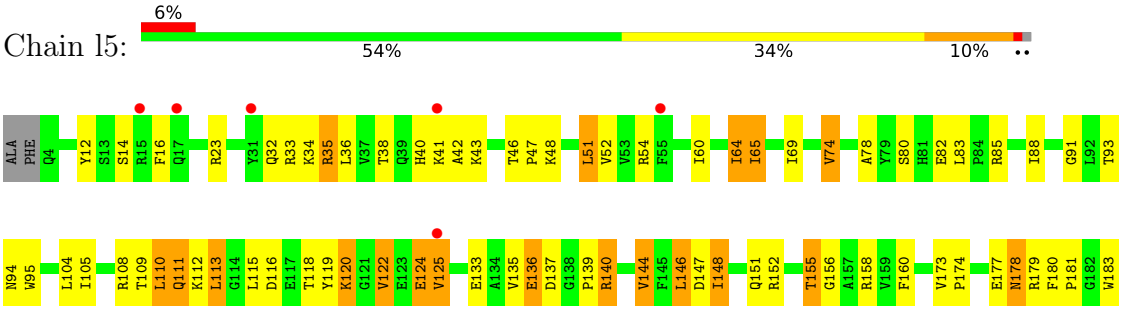
• Molecule 42: 60S ribosomal protein L5

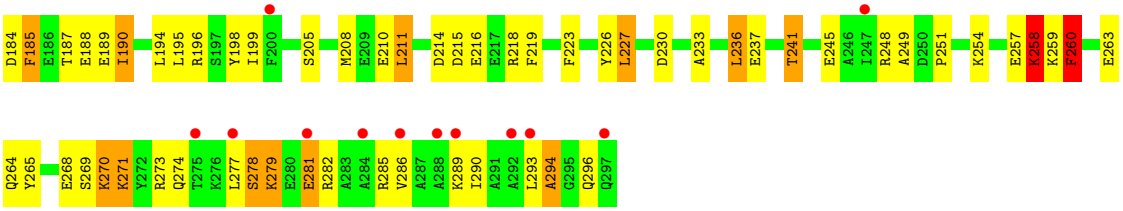
Chain L5:



• Molecule 42: 60S ribosomal protein L5

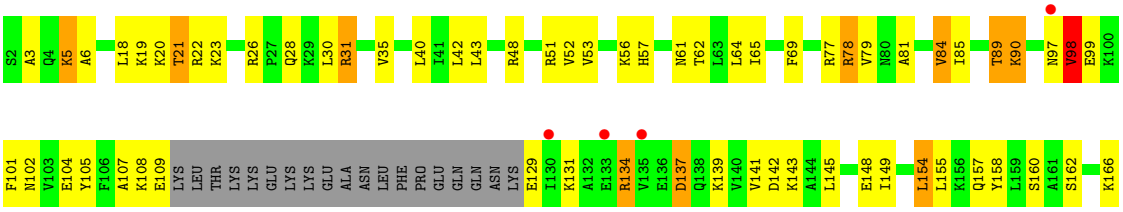
Chain l5:





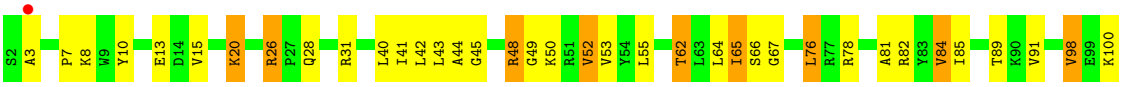
• Molecule 43: 60S ribosomal protein L6-A

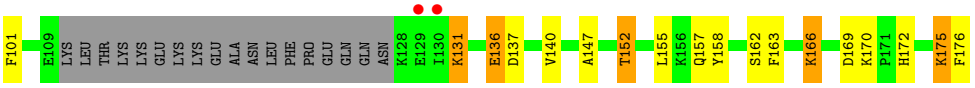
Chain L6:



• Molecule 43: 60S ribosomal protein L6-A

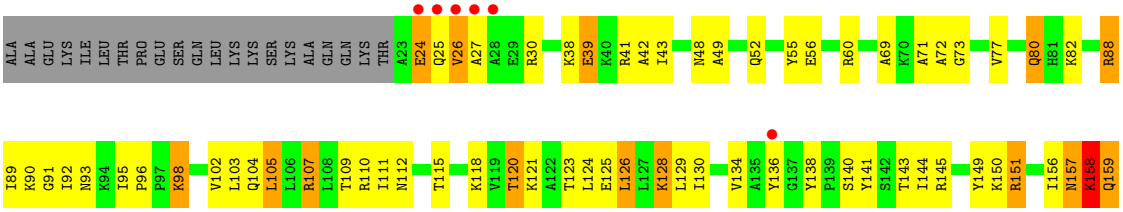
Chain l6:

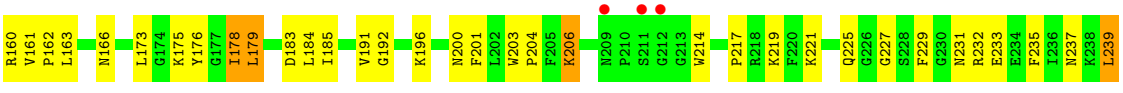




• Molecule 44: 60S ribosomal protein L7-A

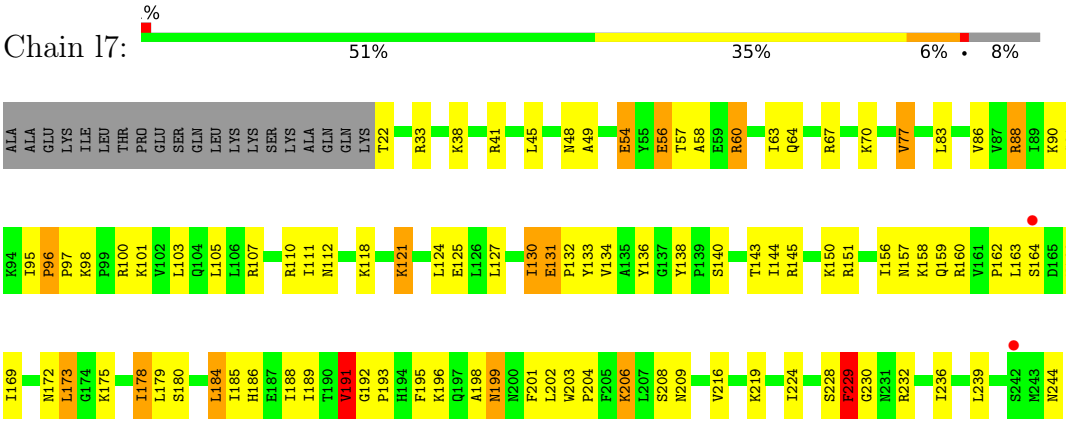
Chain L7:





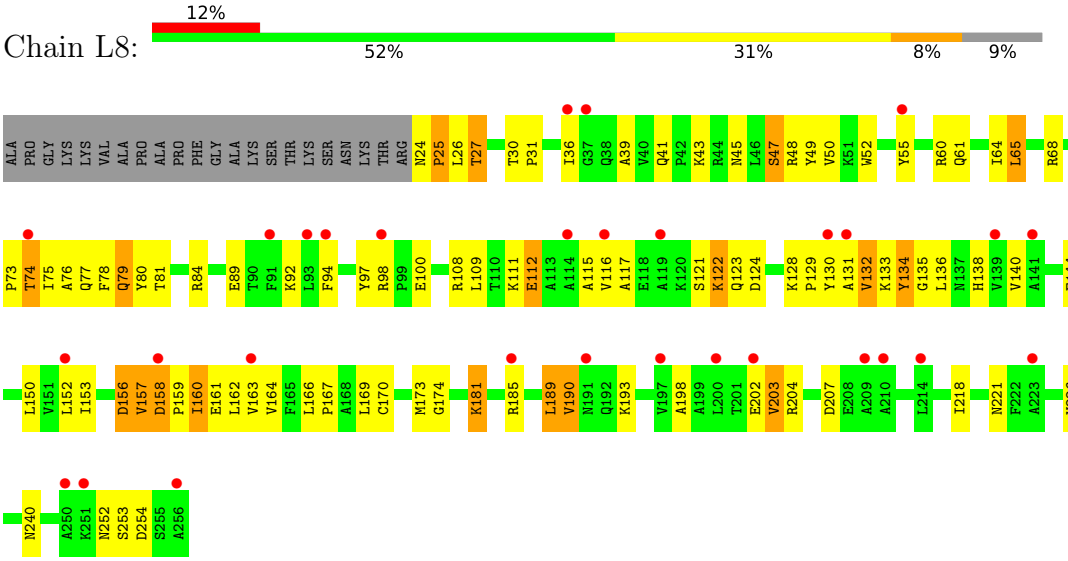
• Molecule 44: 60S ribosomal protein L7-A

Chain l7:



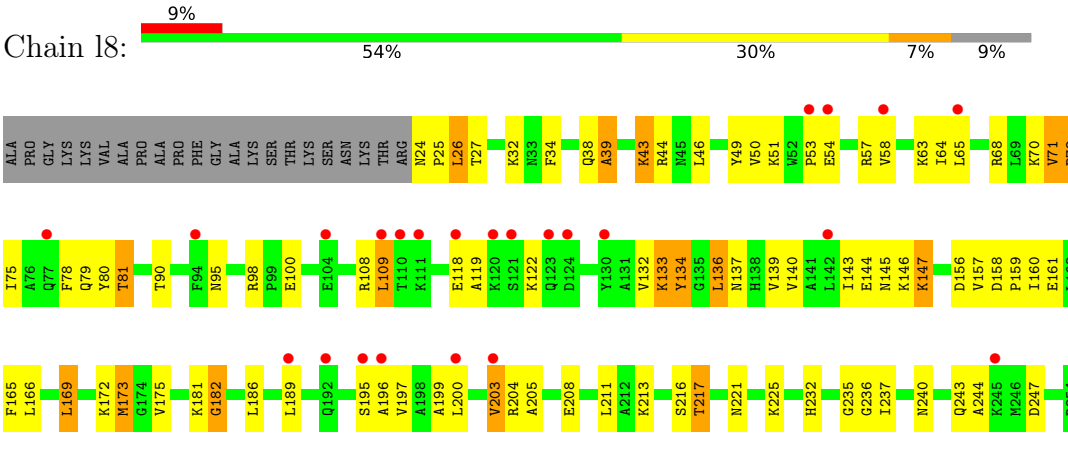
• Molecule 45: 60S ribosomal protein L8-A

Chain L8:



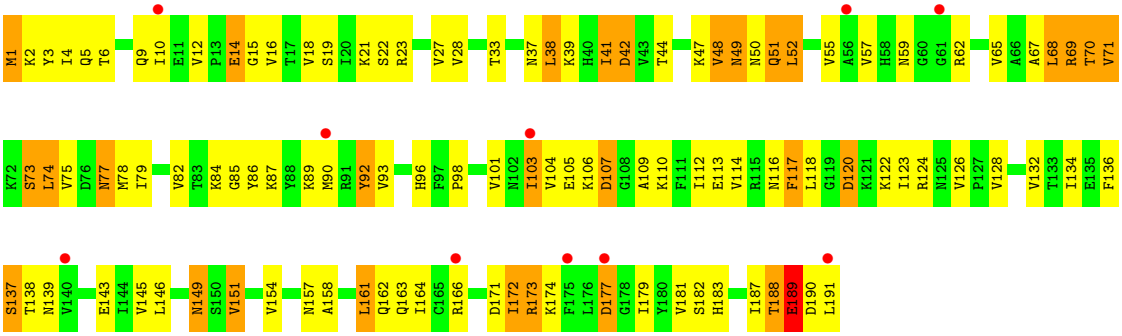
• Molecule 45: 60S ribosomal protein L8-A

Chain l8:



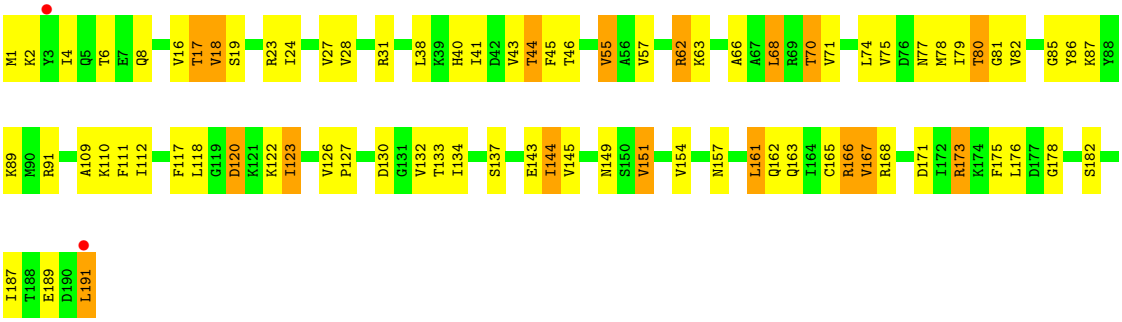
• Molecule 46: 60S ribosomal protein L9-A

Chain L9:



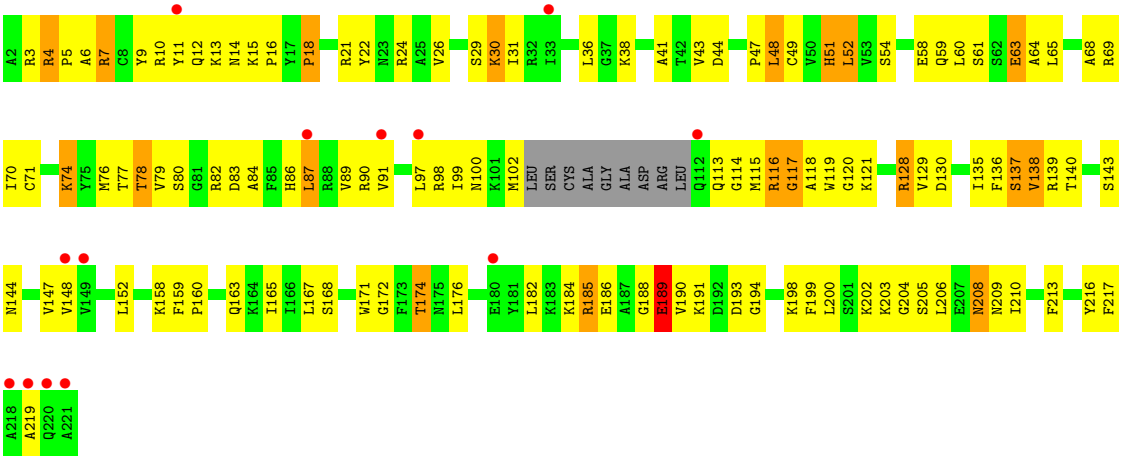
• Molecule 46: 60S ribosomal protein L9-A

Chain l9:



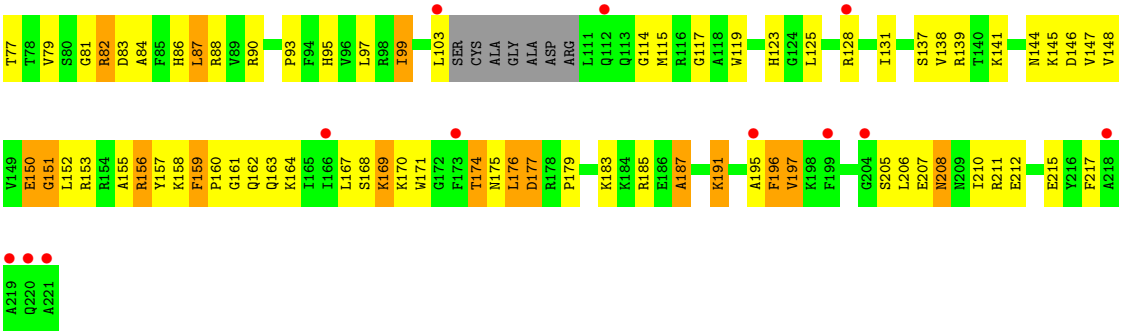
• Molecule 47: 60S ribosomal protein L10

Chain M0:



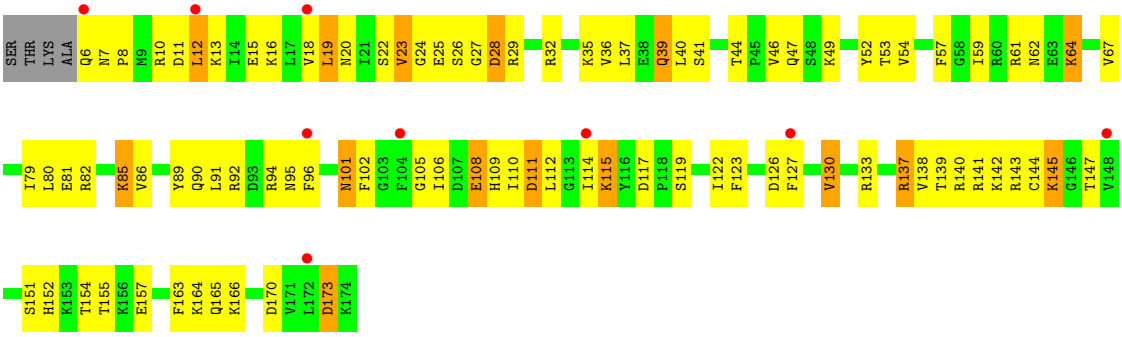
• Molecule 47: 60S ribosomal protein L10

Chain m0:



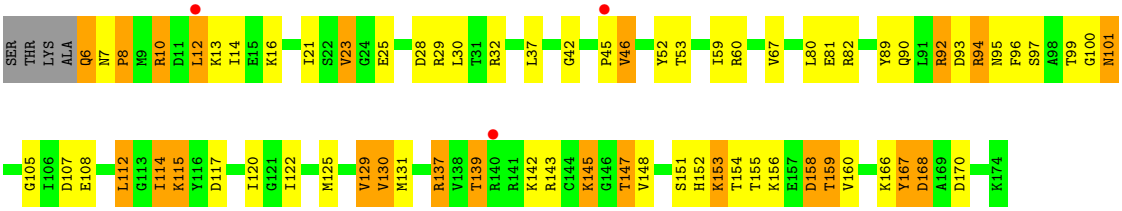
• Molecule 48: 60S ribosomal protein L11-B

Chain M1:



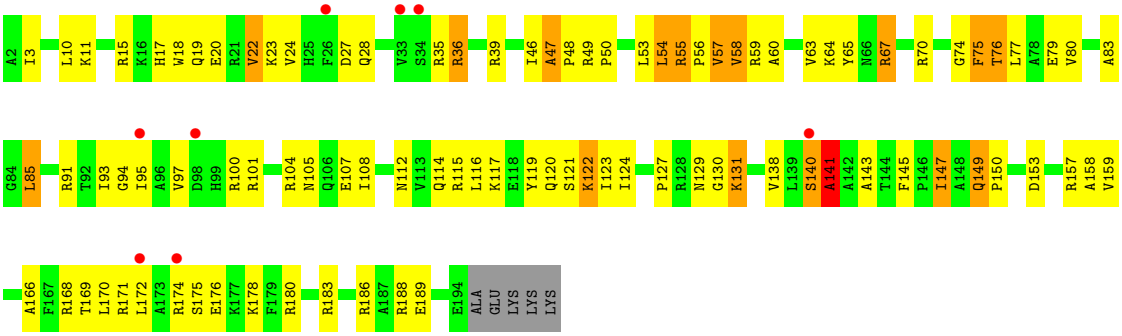
• Molecule 48: 60S ribosomal protein L11-B

Chain m1:



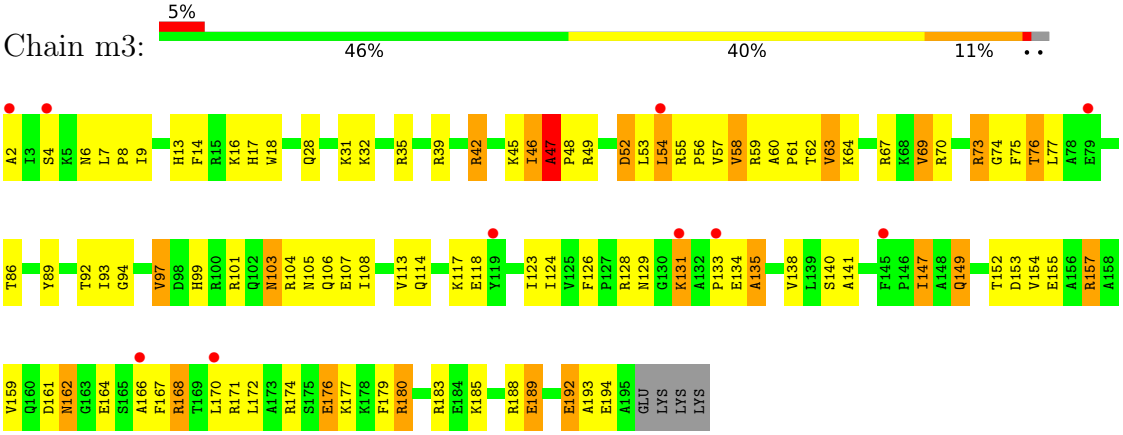
• Molecule 49: 60S ribosomal protein L13-A

Chain M3:



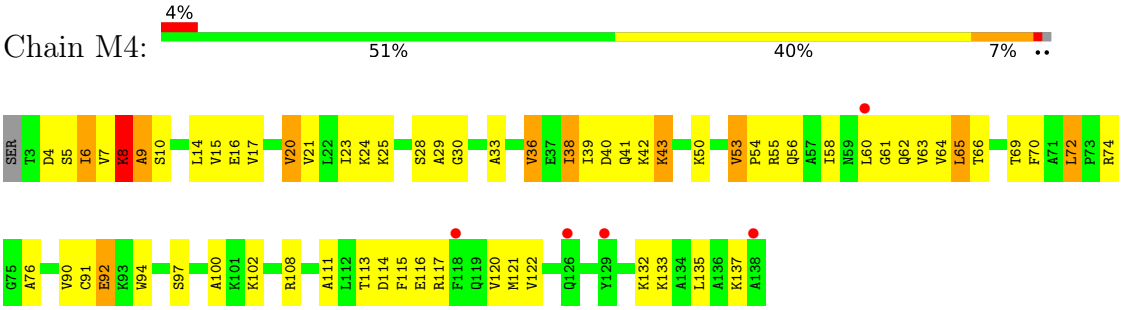
• Molecule 49: 60S ribosomal protein L13-A

Chain m3:



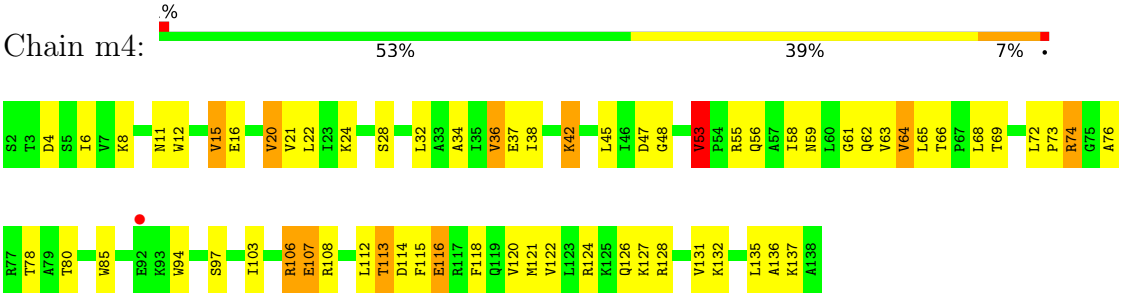
• Molecule 50: 60S ribosomal protein L14-A

Chain M4:



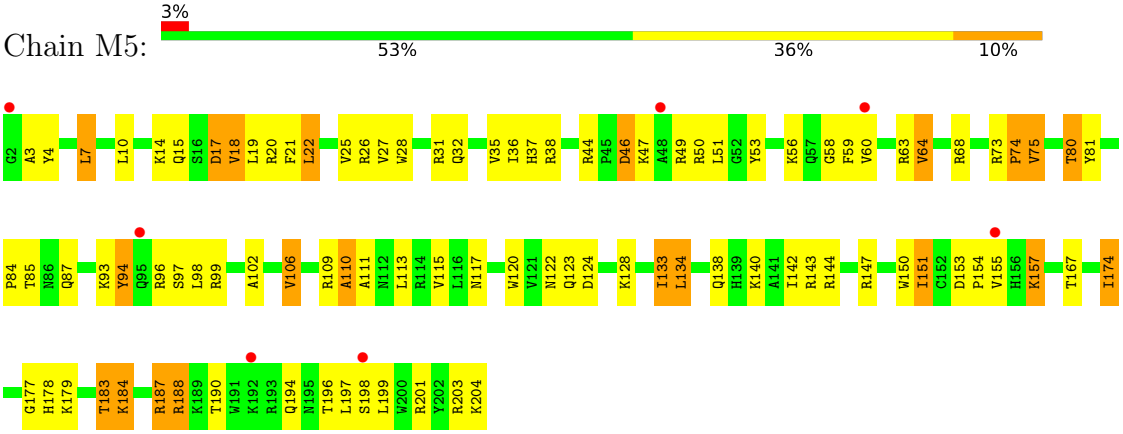
• Molecule 50: 60S ribosomal protein L14-A

Chain m4:



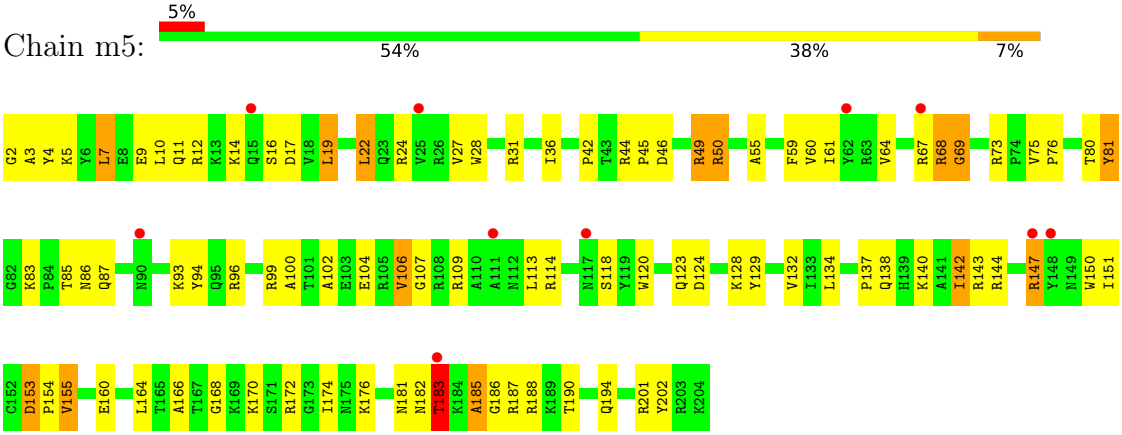
• Molecule 51: 60S ribosomal protein L15-A

Chain M5:



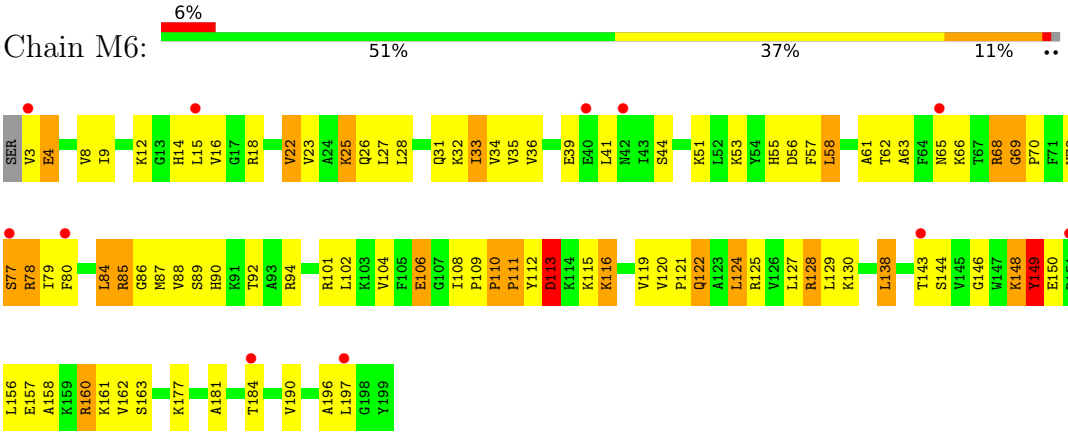
• Molecule 51: 60S ribosomal protein L15-A

Chain m5:



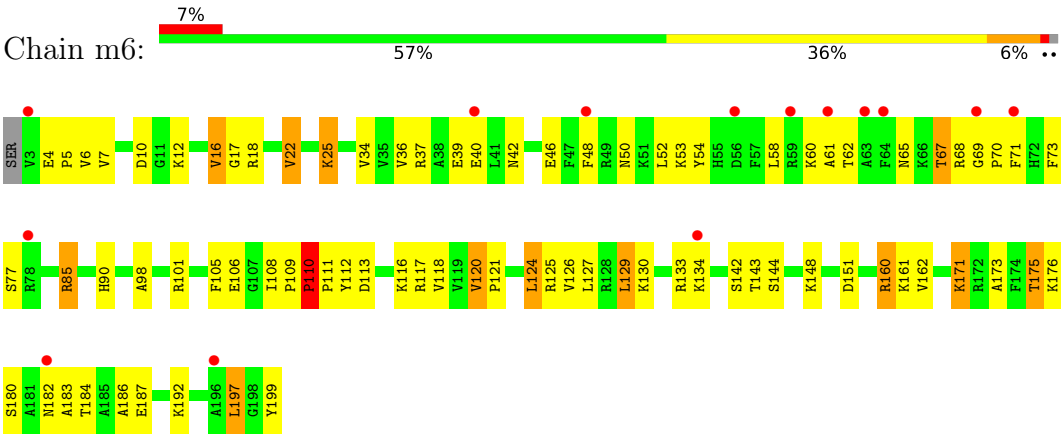
• Molecule 52: 60S ribosomal protein L16-A

Chain M6:



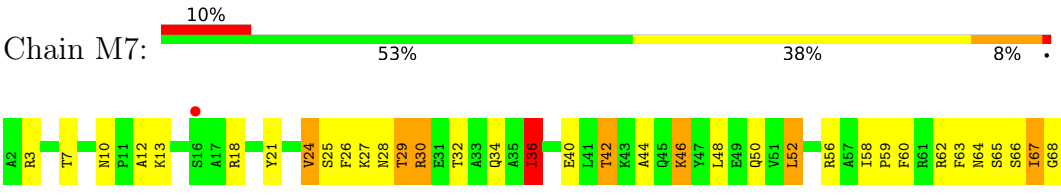
• Molecule 52: 60S ribosomal protein L16-A

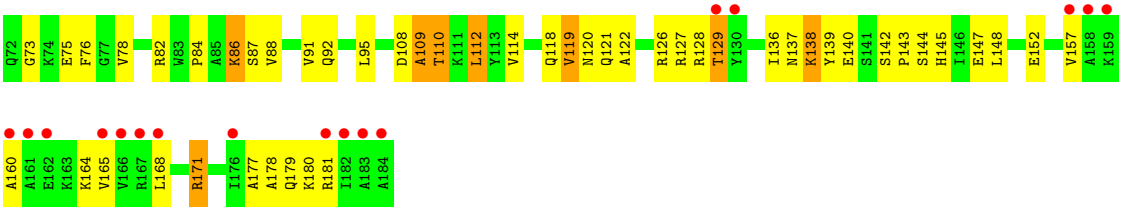
Chain m6:



• Molecule 53: 60S ribosomal protein L17-A

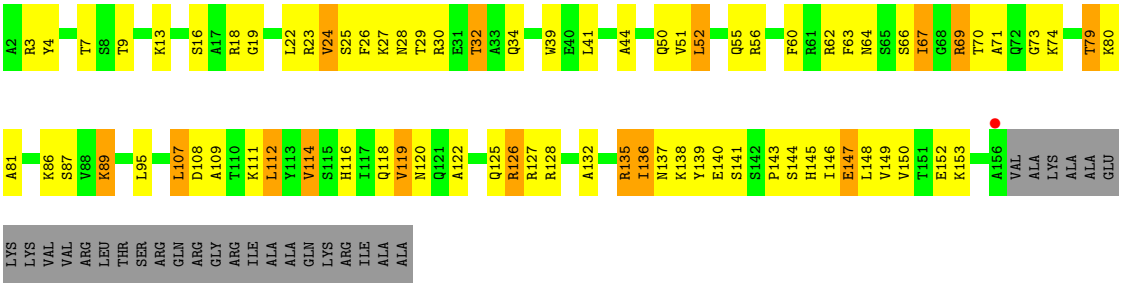
Chain M7:





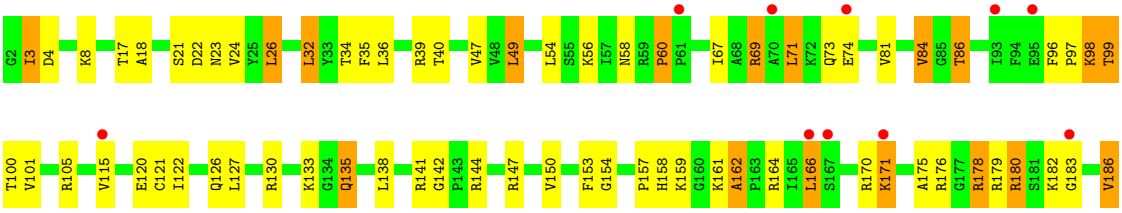
• Molecule 53: 60S ribosomal protein L17-A

Chain m7:



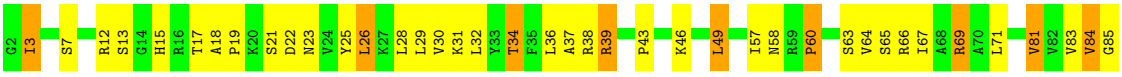
• Molecule 54: 60S ribosomal protein L18-A

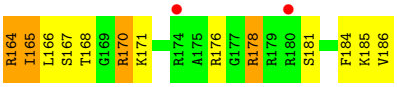
Chain M8:



• Molecule 54: 60S ribosomal protein L18-A

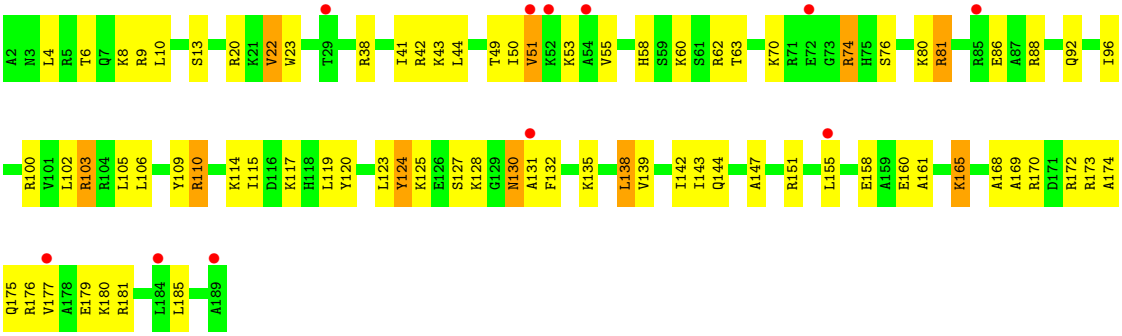
Chain m8:





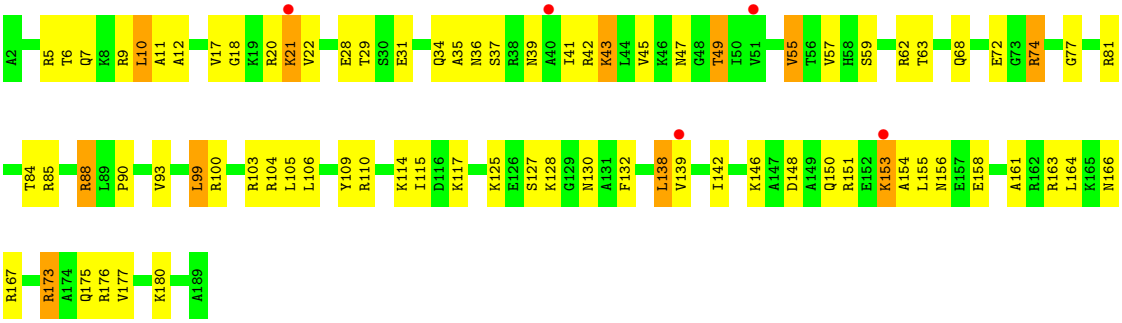
• Molecule 55: 60S ribosomal protein L19-A

Chain M9:



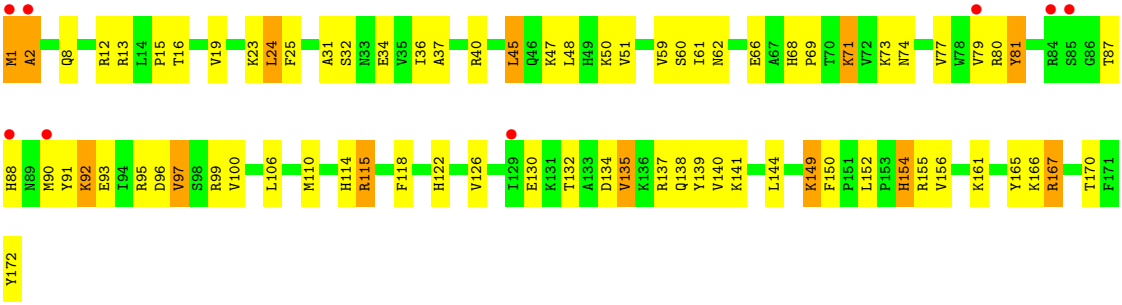
• Molecule 55: 60S ribosomal protein L19-A

Chain m9:



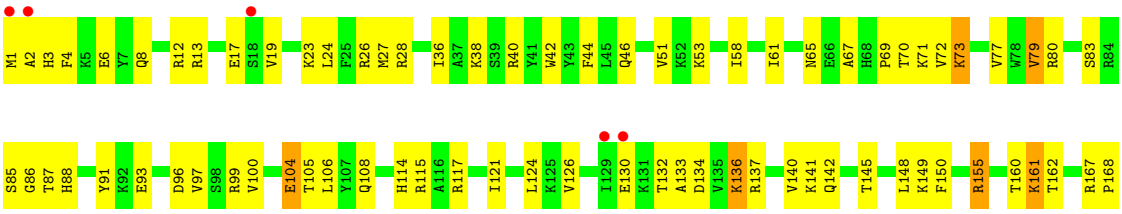
• Molecule 56: 60S ribosomal protein L20-A

Chain N0:



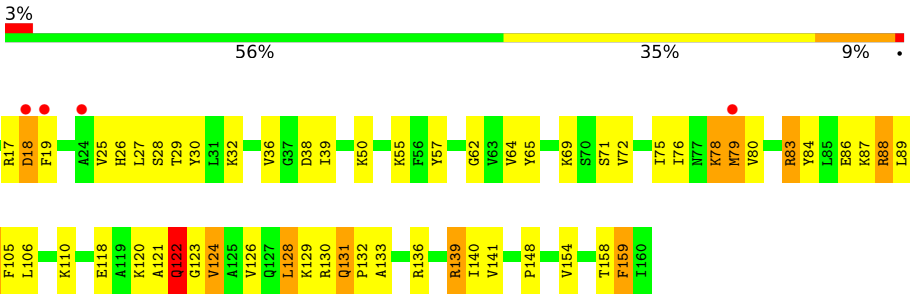
• Molecule 56: 60S ribosomal protein L20-A

Chain n0:



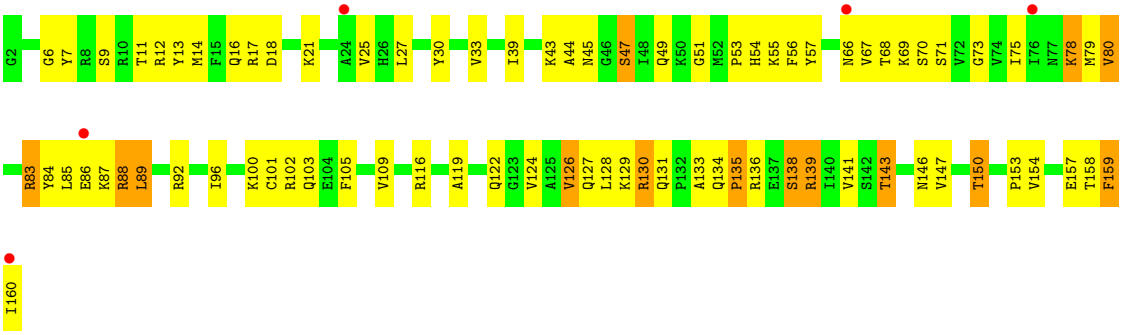
• Molecule 57: 60S ribosomal protein L21-A

Chain N1:



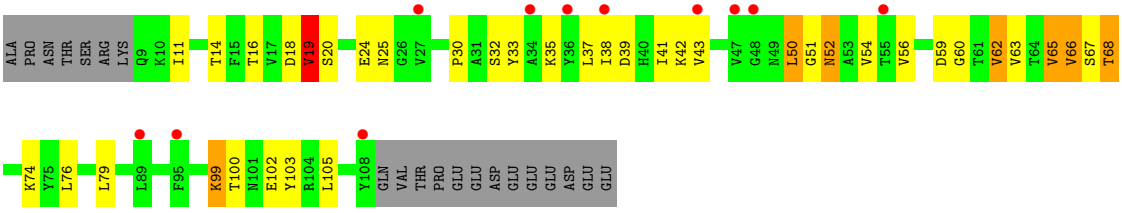
• Molecule 57: 60S ribosomal protein L21-A

Chain n1:



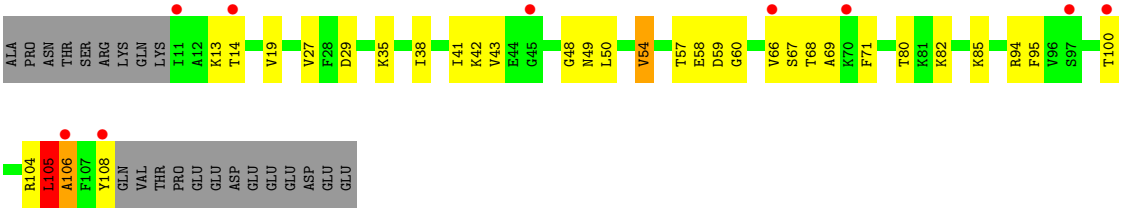
• Molecule 58: 60S ribosomal protein L22-A

Chain N2:



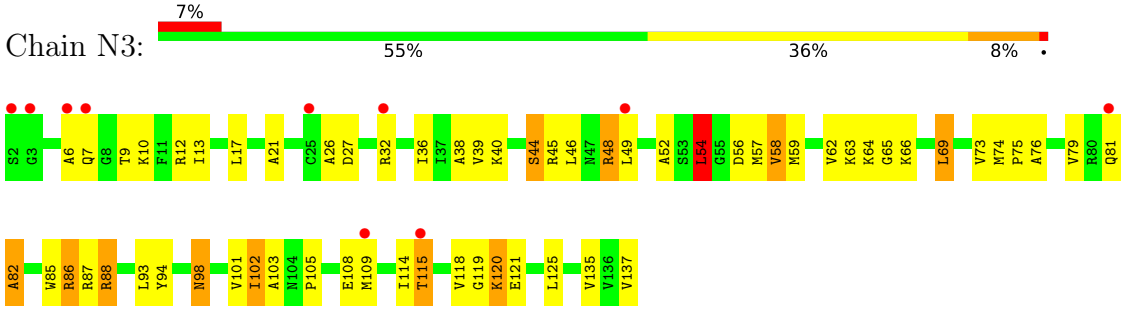
• Molecule 58: 60S ribosomal protein L22-A

Chain n2:



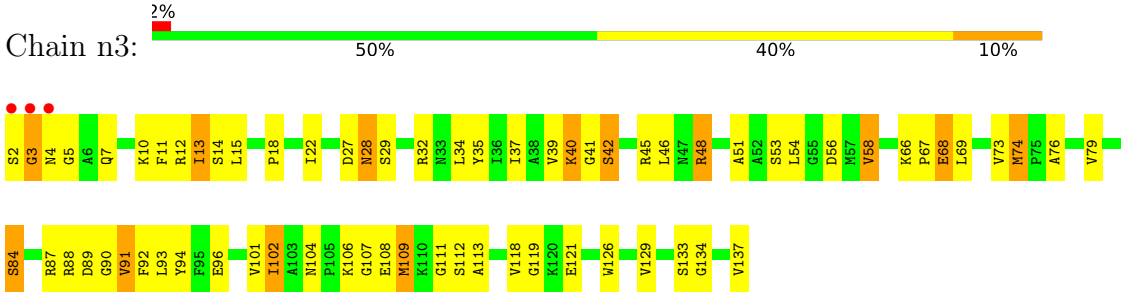
• Molecule 59: 60S ribosomal protein L23-A

Chain N3:



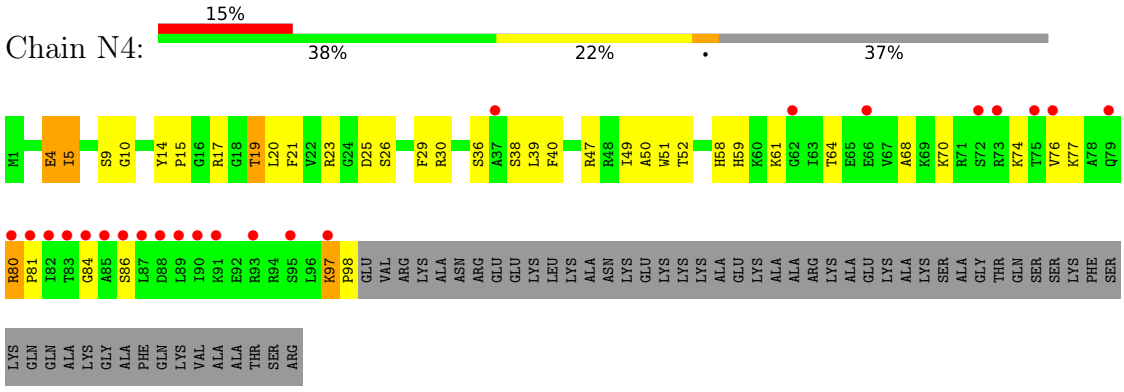
• Molecule 59: 60S ribosomal protein L23-A

Chain n3:



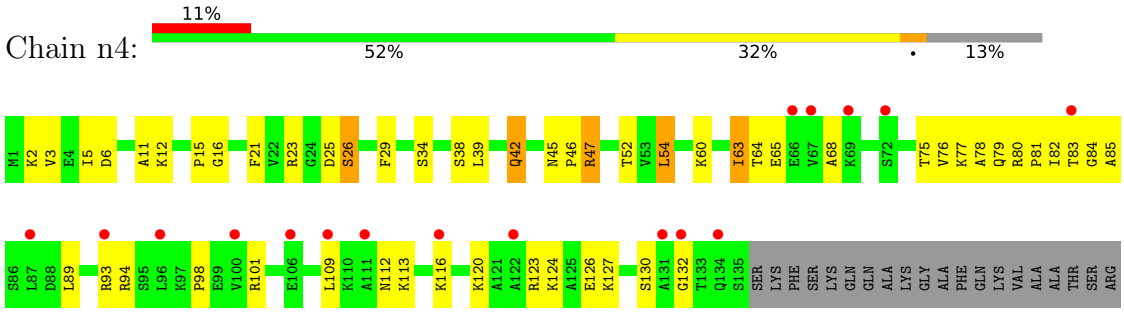
• Molecule 60: 60S ribosomal protein L24-A

Chain N4:



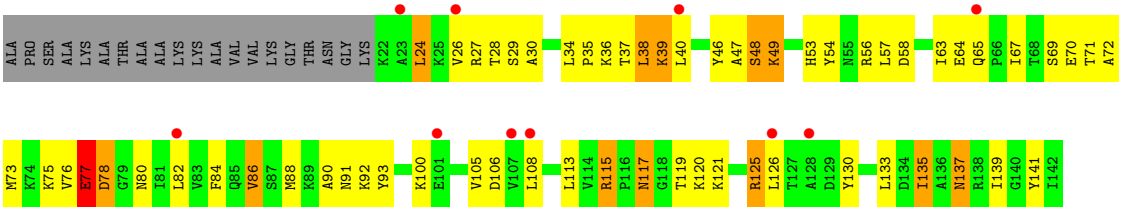
• Molecule 60: 60S ribosomal protein L24-A

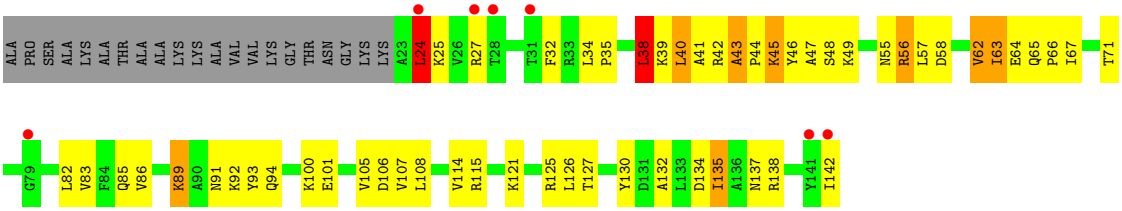
Chain n4:



• Molecule 61: 60S ribosomal protein L25

Chain N5:



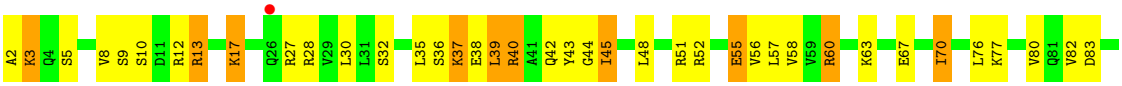


• Molecule 61: 60S ribosomal protein L25

Chain n5:

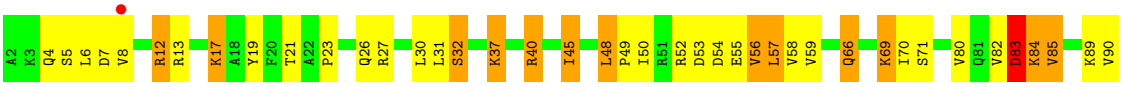
• Molecule 62: 60S ribosomal protein L26-A

Chain N6:



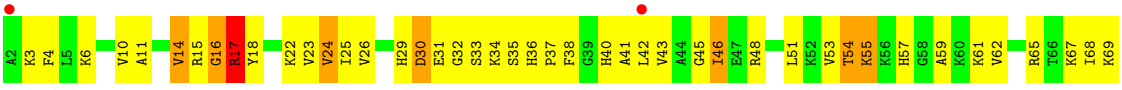
• Molecule 62: 60S ribosomal protein L26-A

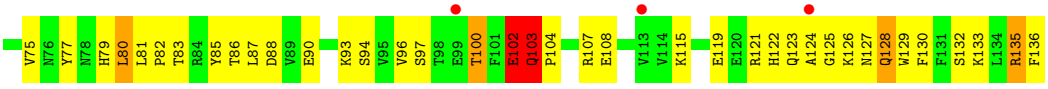
Chain n6:



• Molecule 63: 60S ribosomal protein L27-A

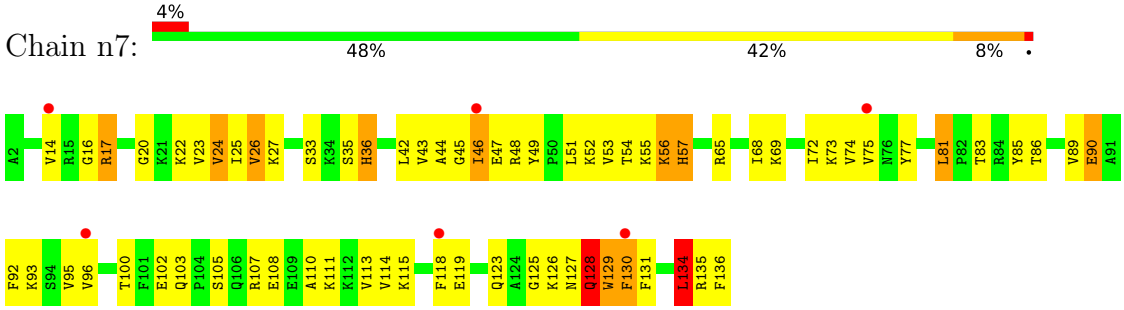
Chain N7:





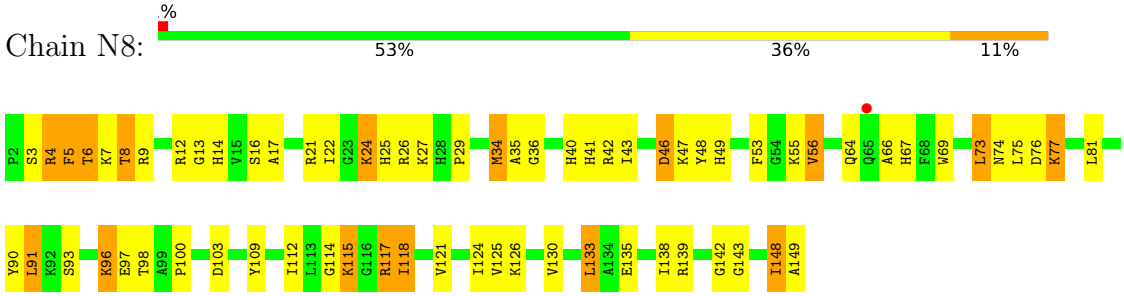
• Molecule 63: 60S ribosomal protein L27-A

Chain n7:



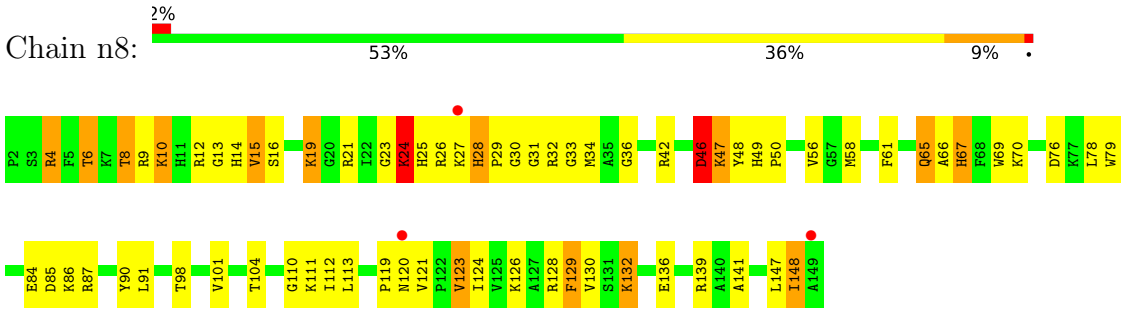
• Molecule 64: 60S ribosomal protein L28

Chain N8:



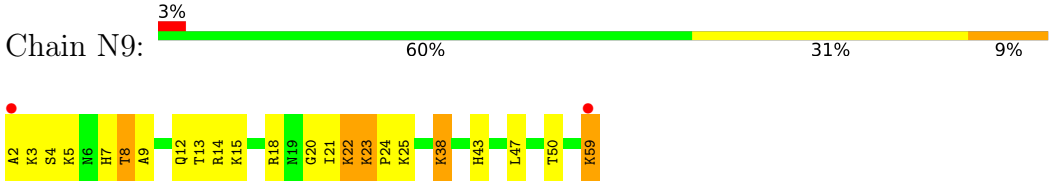
• Molecule 64: 60S ribosomal protein L28

Chain n8:



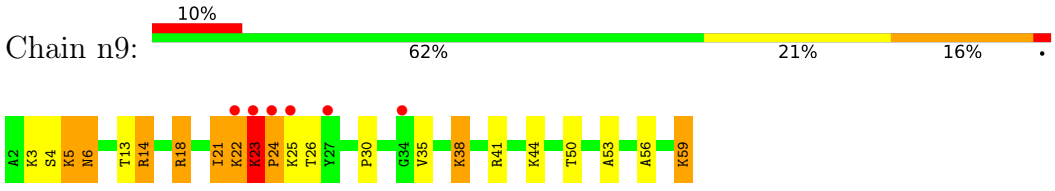
• Molecule 65: 60S ribosomal protein L29

Chain N9:



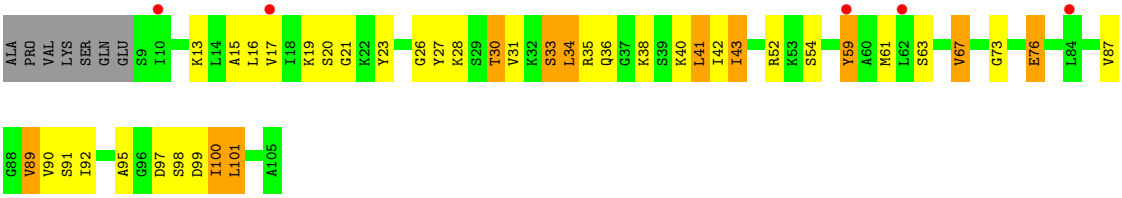
• Molecule 65: 60S ribosomal protein L29

Chain n9:



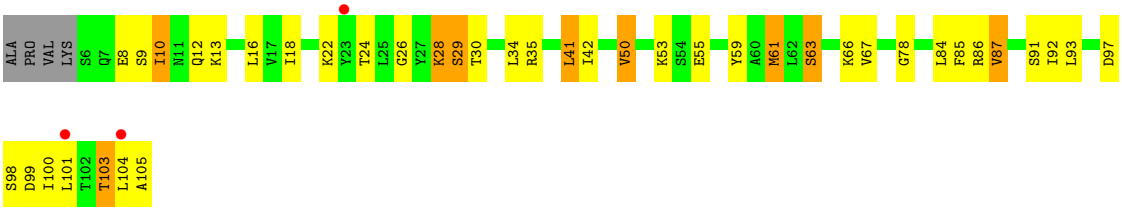
• Molecule 66: 60S ribosomal protein L30

Chain O0:



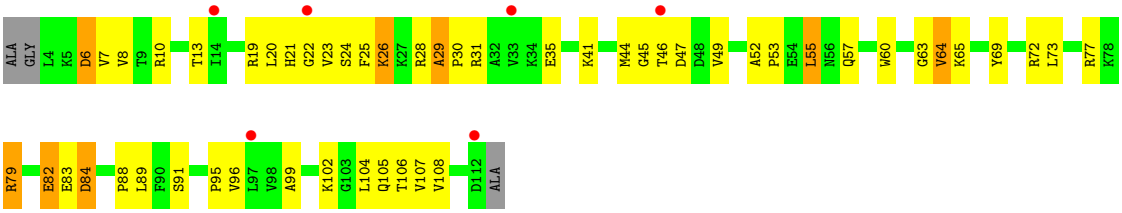
• Molecule 66: 60S ribosomal protein L30

Chain o0:



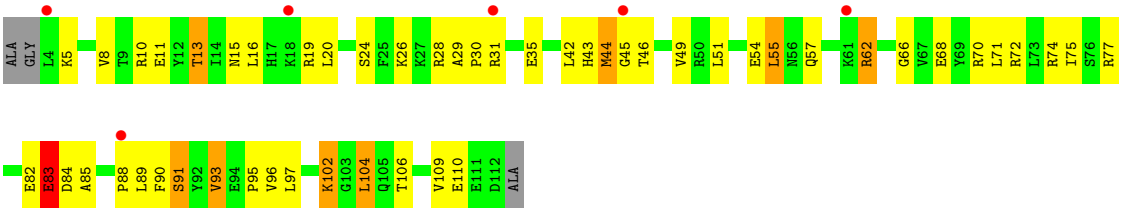
• Molecule 67: 60S ribosomal protein L31-A

Chain O1:



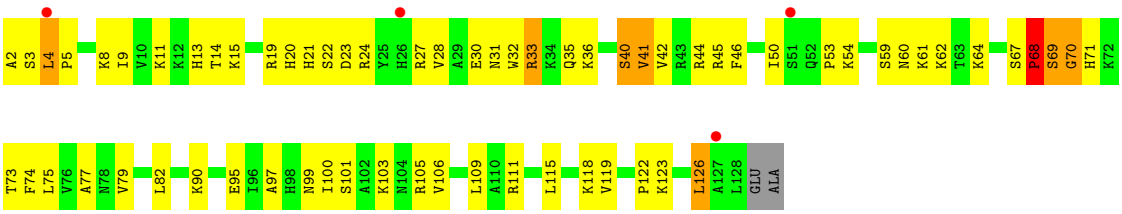
• Molecule 67: 60S ribosomal protein L31-A

Chain o1:



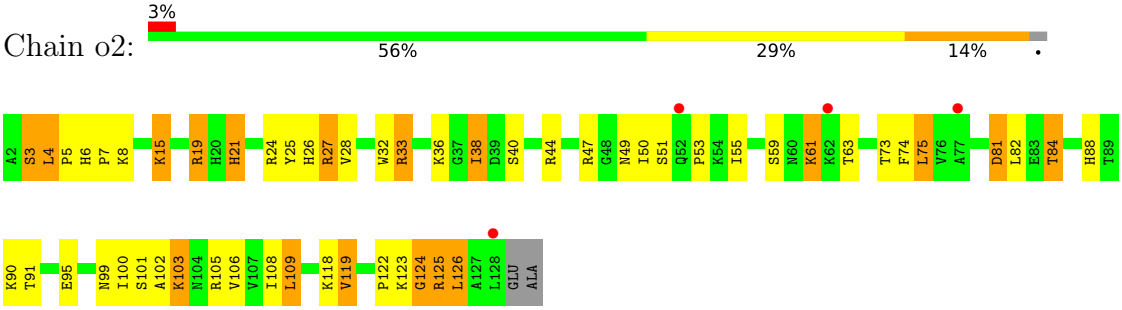
• Molecule 68: 60S ribosomal protein L32

Chain O2:



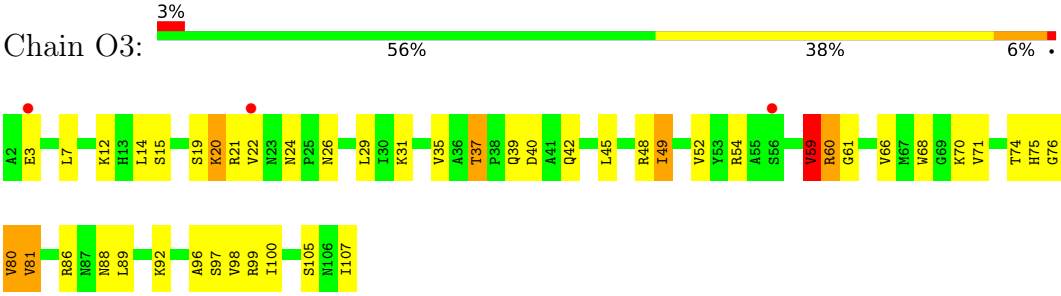
• Molecule 68: 60S ribosomal protein L32

Chain o2:



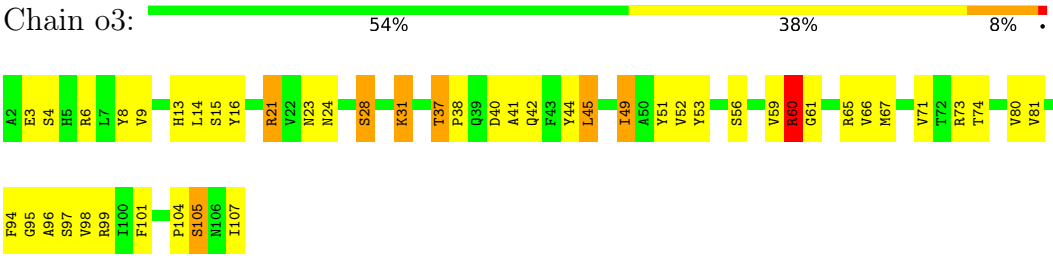
• Molecule 69: 60S ribosomal protein L33-A

Chain O3:



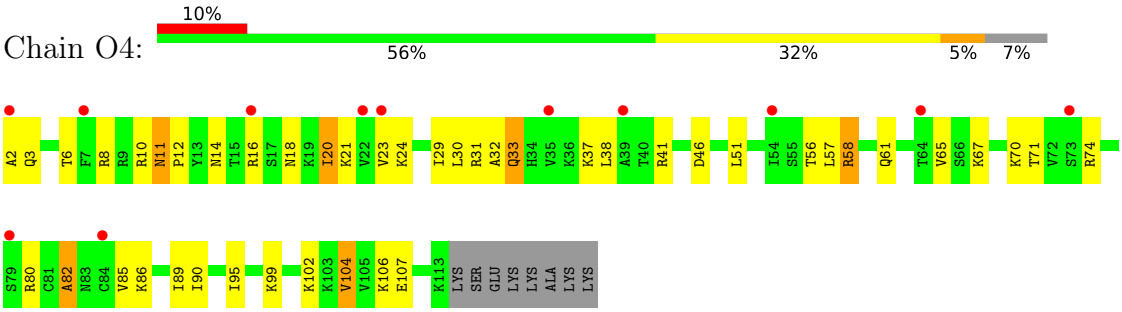
• Molecule 69: 60S ribosomal protein L33-A

Chain o3:



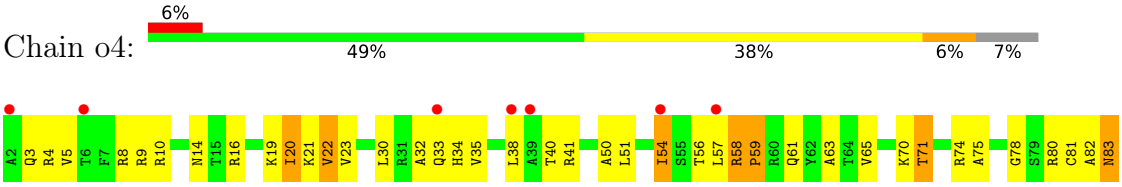
• Molecule 70: 60S ribosomal protein L34-A

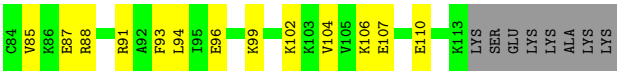
Chain O4:



• Molecule 70: 60S ribosomal protein L34-A

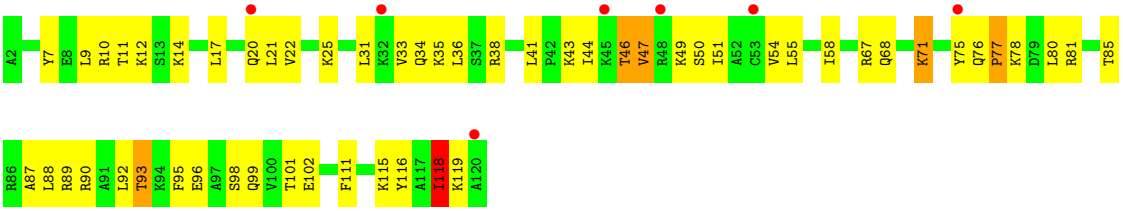
Chain o4:





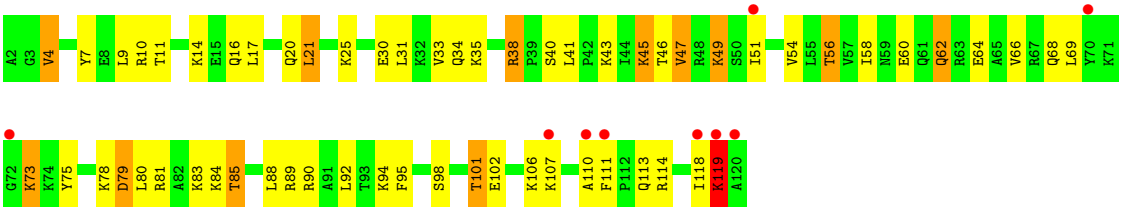
• Molecule 71: 60S ribosomal protein L35-A

Chain O5:



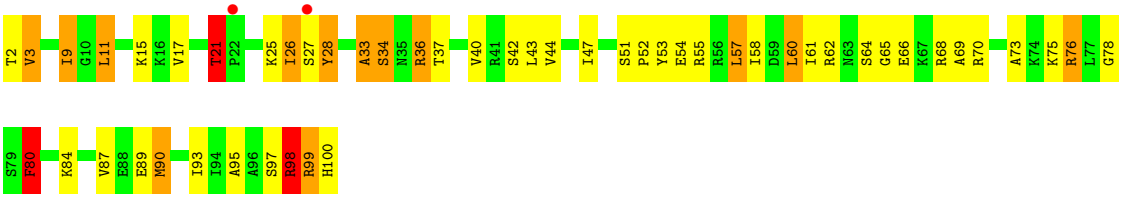
• Molecule 71: 60S ribosomal protein L35-A

Chain o5:



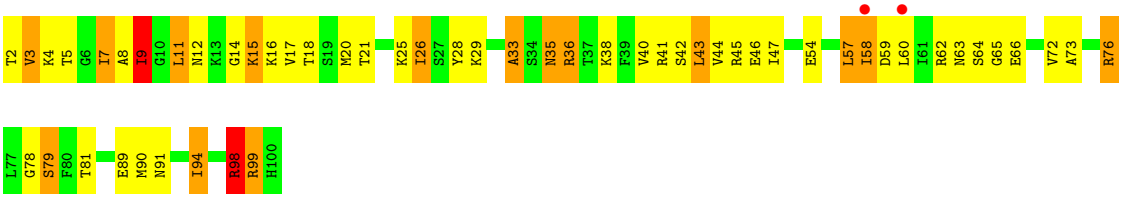
• Molecule 72: 60S ribosomal protein L36-A

Chain O6:



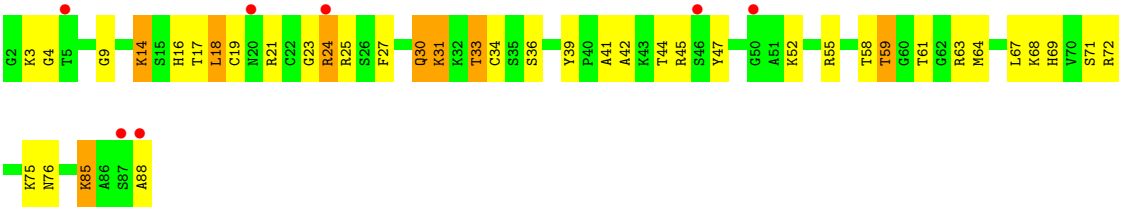
• Molecule 72: 60S ribosomal protein L36-A

Chain o6:

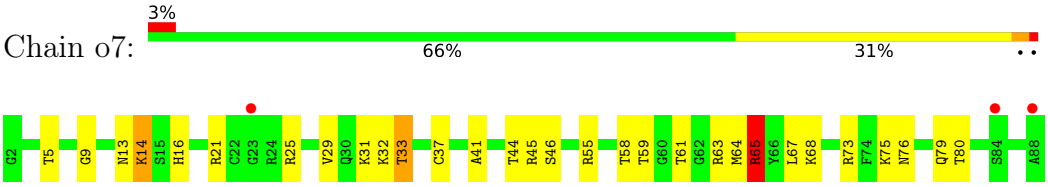


• Molecule 73: 60S ribosomal protein L37-A

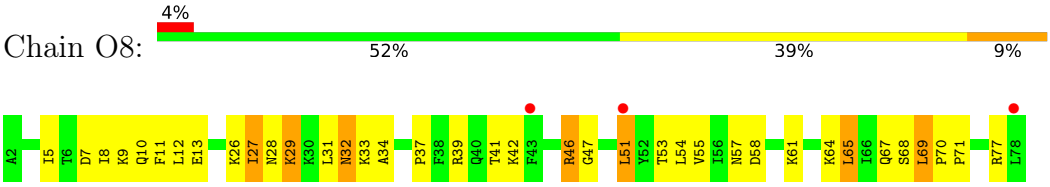
Chain O7:



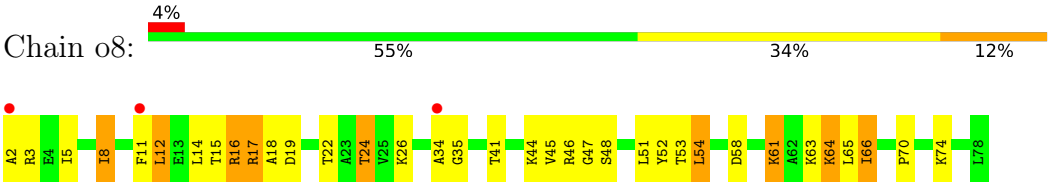
• Molecule 73: 60S ribosomal protein L37-A



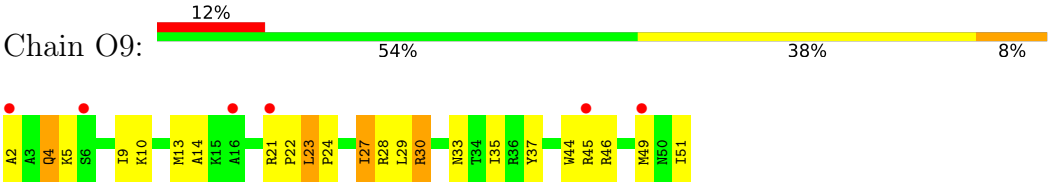
• Molecule 74: 60S ribosomal protein L38



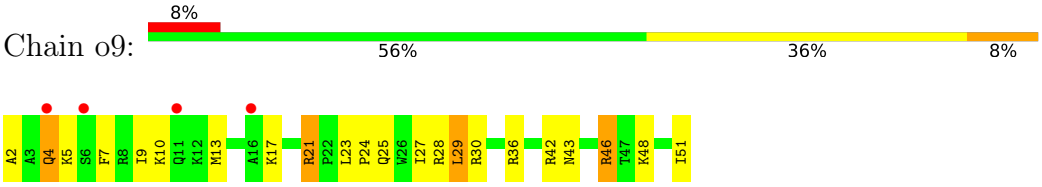
• Molecule 74: 60S ribosomal protein L38



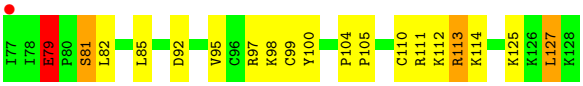
• Molecule 75: 60S ribosomal protein L39



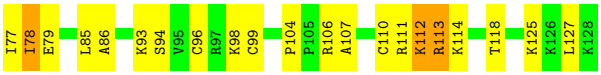
• Molecule 75: 60S ribosomal protein L39



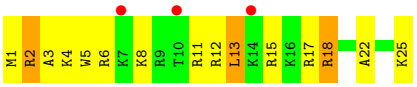
• Molecule 76: Ubiquitin-60S ribosomal protein L40



• Molecule 76: Ubiquitin-60S ribosomal protein L40

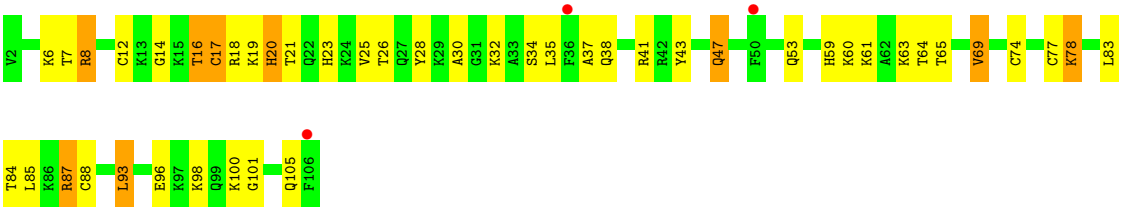


• Molecule 77: 60S ribosomal protein L41-A

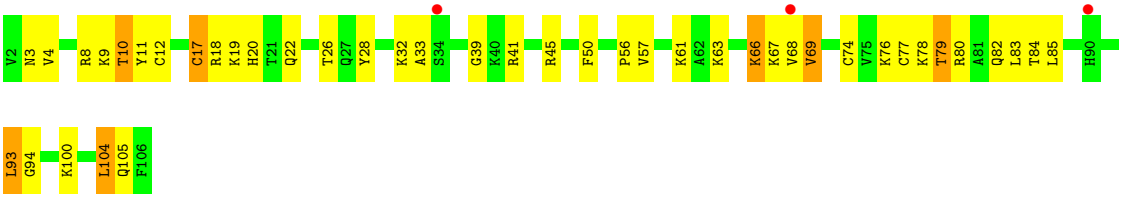


• Molecule 77: 60S ribosomal protein L41-A

• Molecule 78: 60S ribosomal protein L42-A

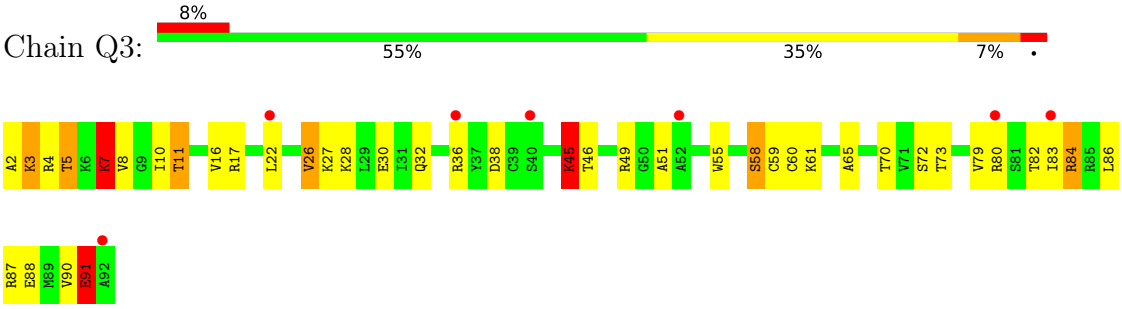


• Molecule 78: 60S ribosomal protein L42-A



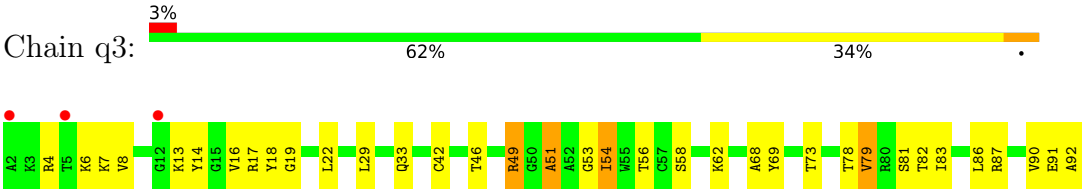
• Molecule 79: 60S ribosomal protein L43-A

Chain Q3:



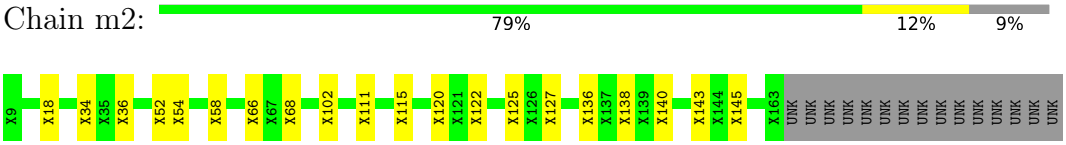
• Molecule 79: 60S ribosomal protein L43-A

Chain q3:



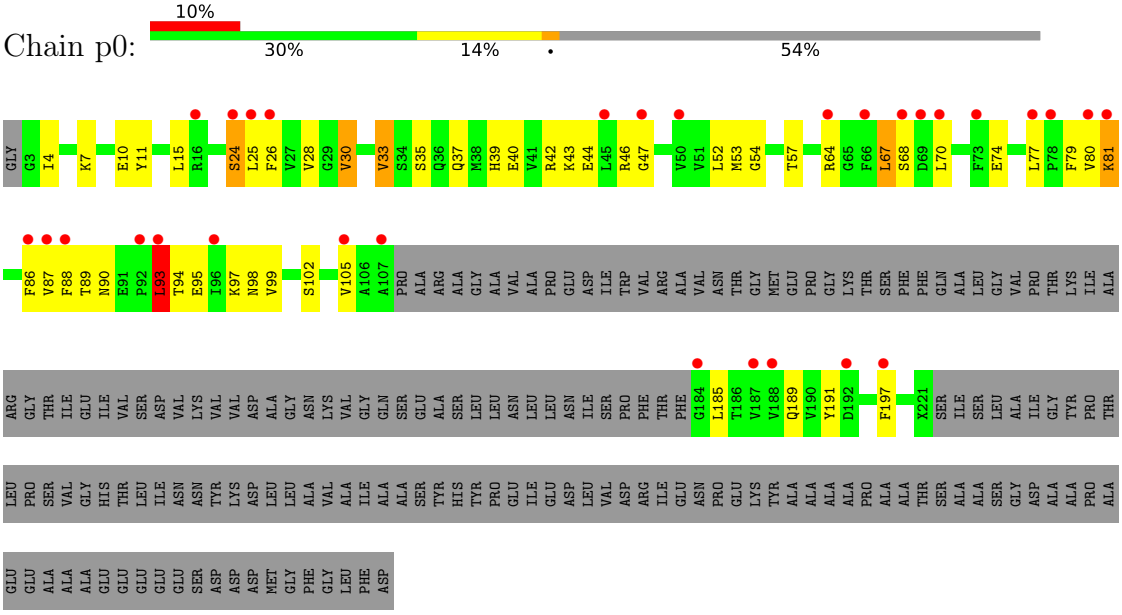
• Molecule 80: 60S ribosomal protein L12-A (uL11)

Chain m2:



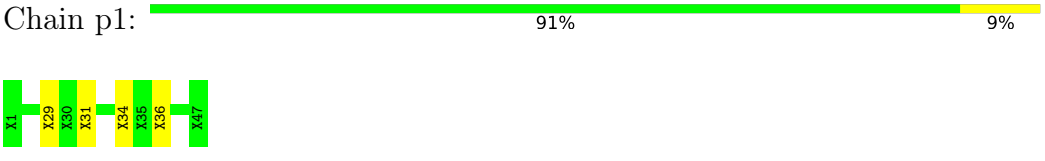
• Molecule 81: 60S acidic ribosomal protein P0

Chain p0:



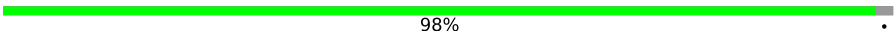
• Molecule 82: 60S ribosomal protein P1 alpha/P2 beta

Chain p1:



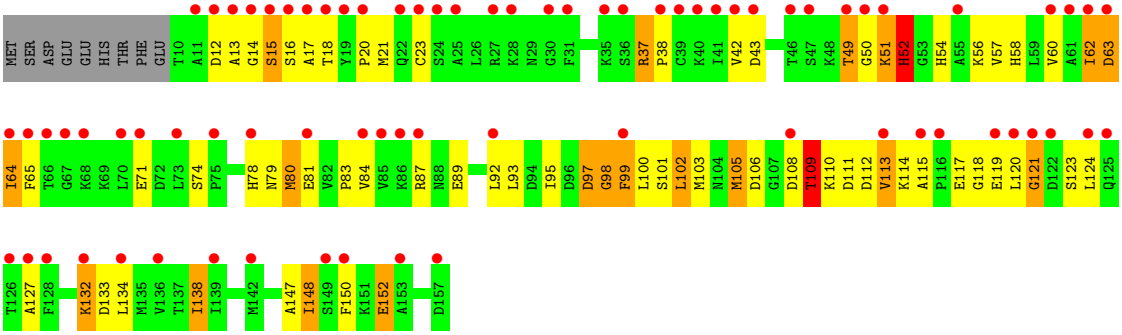
• Molecule 82: 60S ribosomal protein P1 alpha/P2 beta

Chain p2:



• Molecule 83: Eukaryotic translation initiation factor 5A-1

Chain f:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	435.58Å 287.33Å 303.82Å 90.00° 98.95° 90.00°	Depositor
Resolution (Å)	99.53 – 3.30 99.53 – 3.30	Depositor EDS
% Data completeness (in resolution range)	100.0 (99.53-3.30) 99.9 (99.53-3.30)	Depositor EDS
R_{merge}	0.59	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.34 (at 3.33Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.251 , 0.310 0.256 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	85.9	Xtriage
Anisotropy	0.176	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 61.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	404292	wwPDB-VP
Average B, all atoms (Å^2)	79.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.50% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: 8AN, MG, ZN, SPS, CH, OHX

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	2	0.21	0/42467	0.39	2/66169 (0.0%)
1	6	0.24	0/42790	0.42	0/66673
2	S0	0.39	0/1617	0.89	7/2215 (0.3%)
2	s0	0.40	0/1623	0.90	2/2222 (0.1%)
3	S1	0.32	0/1735	0.80	3/2335 (0.1%)
3	s1	0.41	0/1748	0.87	7/2352 (0.3%)
4	S2	0.42	0/1665	0.90	6/2263 (0.3%)
4	s2	0.45	0/1665	0.94	6/2263 (0.3%)
5	S3	0.38	0/1759	0.84	4/2368 (0.2%)
5	s3	0.36	0/1759	0.87	6/2368 (0.3%)
6	S4	0.37	0/2109	0.87	4/2839 (0.1%)
6	s4	0.43	0/2109	0.86	4/2839 (0.1%)
7	S5	0.35	0/1629	0.85	2/2202 (0.1%)
7	s5	0.36	0/1629	0.83	4/2202 (0.2%)
8	S6	0.35	0/1823	0.79	0/2439
8	s6	0.40	0/1779	0.83	0/2379
9	S7	0.36	0/1506	0.88	8/2028 (0.4%)
9	s7	0.39	0/1516	0.89	5/2043 (0.2%)
10	S8	0.38	0/1514	0.84	2/2021 (0.1%)
10	s8	0.45	0/1514	0.82	0/2021
11	S9	0.37	0/1519	0.85	5/2035 (0.2%)
11	s9	0.39	0/1519	0.86	4/2035 (0.2%)
12	C0	0.34	0/725	0.71	0/978
12	c0	0.33	0/713	0.82	1/961 (0.1%)
13	C1	0.41	0/1185	0.85	2/1598 (0.1%)
13	c1	0.49	0/1185	0.85	1/1598 (0.1%)
14	C2	0.35	0/819	0.77	0/1109
14	c2	0.31	0/819	0.77	0/1109
15	C3	0.39	0/1215	0.85	3/1638 (0.2%)
15	c3	0.44	0/1215	0.87	2/1638 (0.1%)
16	C4	0.39	0/901	0.89	2/1217 (0.2%)
16	c4	0.39	0/960	0.90	4/1290 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	C5	0.40	0/988	1.00	8/1327 (0.6%)
17	c5	0.39	0/1030	0.94	4/1384 (0.3%)
18	C6	0.37	0/1125	0.83	3/1510 (0.2%)
18	c6	0.39	0/1131	0.84	0/1518
19	C7	0.42	0/935	0.87	3/1254 (0.2%)
19	c7	0.36	0/914	0.84	0/1224
20	C8	0.37	0/1211	0.79	0/1628
20	c8	0.36	0/1211	0.80	0/1628
21	C9	0.38	0/1130	0.85	2/1517 (0.1%)
21	c9	0.38	0/1130	0.81	0/1517
22	D0	0.40	0/865	0.90	2/1169 (0.2%)
22	d0	0.37	0/892	0.81	0/1205
23	D1	0.38	0/693	0.86	2/935 (0.2%)
23	d1	0.38	0/693	0.84	0/935
24	D2	0.38	0/1038	0.93	4/1395 (0.3%)
24	d2	0.46	0/1038	0.89	2/1395 (0.1%)
25	D3	0.44	0/1139	0.88	4/1518 (0.3%)
25	d3	0.48	0/1139	0.87	1/1518 (0.1%)
26	D4	0.37	0/1087	0.82	0/1449
26	d4	0.40	0/1087	0.90	6/1449 (0.4%)
27	D5	0.39	0/571	0.90	1/768 (0.1%)
27	d5	0.39	0/566	0.89	1/761 (0.1%)
28	D6	0.42	0/782	0.89	3/1047 (0.3%)
28	d6	0.43	0/782	0.85	0/1047
29	D7	0.43	0/620	0.83	0/838
29	d7	0.38	0/620	0.85	0/838
30	D8	0.37	0/499	0.80	0/670
30	d8	0.39	0/499	0.79	0/670
31	D9	0.39	0/452	0.89	3/600 (0.5%)
31	d9	0.38	0/452	0.80	0/600
32	E0	0.39	0/483	0.86	0/643
32	e0	0.40	0/499	1.02	4/665 (0.6%)
33	E1	0.40	0/577	0.89	1/770 (0.1%)
33	e1	0.43	0/619	0.94	4/822 (0.5%)
34	SR	0.35	0/2490	0.78	1/3389 (0.0%)
34	sR	0.32	0/2495	0.73	0/3395
35	SM	0.45	0/925	0.95	4/1240 (0.3%)
35	sM	0.45	0/480	0.93	3/642 (0.5%)
36	1	0.31	0/75394	0.49	2/117545 (0.0%)
36	5	0.33	0/75865	0.50	1/118275 (0.0%)
37	3	0.25	0/2883	0.41	0/4491
37	7	0.31	0/2883	0.47	0/4491
38	4	0.30	0/3746	0.47	0/5832

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	8	0.29	0/3746	0.46	0/5832
39	L2	0.50	0/1948	0.91	2/2617 (0.1%)
39	l2	0.55	0/1946	0.95	2/2614 (0.1%)
40	L3	0.49	0/3146	0.87	3/4228 (0.1%)
40	l3	0.55	0/3146	0.91	6/4228 (0.1%)
41	L4	0.52	0/2800	0.96	9/3790 (0.2%)
41	l4	0.53	0/2800	1.01	16/3790 (0.4%)
42	L5	0.42	0/2425	0.83	2/3271 (0.1%)
42	l5	0.49	0/2408	0.87	1/3248 (0.0%)
43	L6	0.49	0/1260	0.89	2/1694 (0.1%)
43	l6	0.50	0/1269	0.90	3/1705 (0.2%)
44	L7	0.52	0/1821	0.93	4/2451 (0.2%)
44	l7	0.54	0/1828	0.99	13/2461 (0.5%)
45	L8	0.41	0/1836	0.92	8/2481 (0.3%)
45	l8	0.42	0/1796	0.90	6/2431 (0.2%)
46	L9	0.46	0/1539	0.85	0/2073
46	l9	0.52	0/1539	0.87	0/2073
47	M0	0.47	0/1741	0.88	2/2335 (0.1%)
47	m0	0.53	0/1758	0.95	6/2358 (0.3%)
48	M1	0.41	0/1374	0.85	3/1842 (0.2%)
48	m1	0.46	0/1374	0.90	2/1842 (0.1%)
49	M3	0.51	0/1568	0.90	4/2106 (0.2%)
49	m3	0.47	0/1573	0.97	9/2113 (0.4%)
50	M4	0.50	0/1068	0.96	3/1438 (0.2%)
50	m4	0.54	0/1074	0.94	2/1446 (0.1%)
51	M5	0.49	0/1757	0.88	4/2354 (0.2%)
51	m5	0.46	0/1757	0.89	5/2354 (0.2%)
52	M6	0.55	0/1585	0.97	8/2128 (0.4%)
52	m6	0.61	0/1585	1.00	8/2128 (0.4%)
53	M7	0.54	0/1443	0.94	3/1944 (0.2%)
53	m7	0.58	0/1250	0.91	1/1683 (0.1%)
54	M8	0.51	0/1465	1.02	4/1965 (0.2%)
54	m8	0.53	0/1465	0.99	3/1965 (0.2%)
55	M9	0.41	0/1538	0.86	1/2050 (0.0%)
55	m9	0.46	0/1538	0.87	1/2050 (0.0%)
56	N0	0.49	0/1481	0.91	5/1990 (0.3%)
56	n0	0.54	0/1481	0.95	8/1990 (0.4%)
57	N1	0.49	0/1300	0.83	1/1743 (0.1%)
57	n1	0.51	0/1300	0.92	4/1743 (0.2%)
58	N2	0.37	0/812	0.76	0/1099
58	n2	0.36	0/794	0.87	0/1076
59	N3	0.51	0/1018	0.92	1/1369 (0.1%)
59	n3	0.58	0/1018	1.02	3/1369 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
60	N4	0.42	0/712	1.13	3/958 (0.3%)
60	n4	0.45	0/1052	0.87	1/1398 (0.1%)
61	N5	0.41	0/979	0.81	0/1321
61	n5	0.44	0/974	0.85	2/1314 (0.2%)
62	N6	0.47	0/1004	0.93	1/1341 (0.1%)
62	n6	0.46	0/1004	0.88	1/1341 (0.1%)
63	N7	0.36	0/1118	0.87	4/1497 (0.3%)
63	n7	0.39	0/1118	0.79	0/1497
64	N8	0.51	0/1204	0.92	1/1612 (0.1%)
64	n8	0.51	0/1204	0.94	4/1612 (0.2%)
65	N9	0.50	0/473	0.93	2/629 (0.3%)
65	n9	0.54	0/473	1.07	1/629 (0.2%)
66	O0	0.38	0/751	0.75	0/1008
66	o0	0.39	0/775	0.83	0/1040
67	O1	0.41	0/890	0.84	2/1196 (0.2%)
67	o1	0.50	0/897	0.87	1/1205 (0.1%)
68	O2	0.54	0/1041	1.04	4/1394 (0.3%)
68	o2	0.55	0/1041	0.96	2/1394 (0.1%)
69	O3	0.57	0/868	0.89	0/1168
69	o3	0.59	0/868	0.88	0/1168
70	O4	0.45	0/890	0.90	2/1189 (0.2%)
70	o4	0.46	0/890	0.95	1/1189 (0.1%)
71	O5	0.46	0/978	0.92	0/1301
71	o5	0.40	0/974	0.86	0/1297
72	O6	0.50	0/778	0.93	2/1034 (0.2%)
72	o6	0.42	0/777	0.82	0/1033
73	O7	0.54	0/696	0.91	1/923 (0.1%)
73	o7	0.52	0/696	0.88	2/923 (0.2%)
74	O8	0.39	0/618	0.85	2/826 (0.2%)
74	o8	0.37	0/614	0.84	0/822
75	O9	0.50	0/443	0.85	0/588
75	o9	0.50	0/443	0.76	0/588
76	Q0	0.51	0/423	0.93	2/562 (0.4%)
76	q0	0.53	0/423	0.78	0/562
77	Q1	0.45	0/234	0.92	1/300 (0.3%)
77	q1	0.55	0/234	0.96	0/300
78	Q2	0.55	0/860	0.91	0/1136
78	q2	0.54	0/860	0.93	1/1136 (0.1%)
79	Q3	0.44	0/701	0.92	1/934 (0.1%)
79	q3	0.52	0/701	0.88	0/934
81	p0	0.32	0/977	0.81	0/1313
83	f	0.52	1/1131 (0.1%)	0.91	2/1522 (0.1%)
84	B	0.31	0/15	0.46	0/20

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
84	C	0.40	0/15	0.70	0/20
All	All	0.37	1/431576 (0.0%)	0.66	379/633602 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
18	c6	0	1
19	C7	0	1
27	D5	0	1
39	l2	0	1
44	L7	0	1
52	M6	0	1
64	n8	0	1
65	N9	0	1
65	n9	0	1
83	f	0	1
All	All	0	10

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	f	12	ASP	CA-C	5.52	1.55	1.52

All (379) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	N4	80	ARG	CA-C-N	15.66	139.41	119.84
60	N4	80	ARG	C-N-CA	15.66	139.41	119.84
65	n9	14	ARG	N-CA-C	-9.89	100.48	111.07
54	m8	18	ALA	CA-C-N	-9.52	110.05	120.14
54	m8	18	ALA	C-N-CA	-9.52	110.05	120.14
54	M8	18	ALA	CA-C-N	-9.30	111.28	120.21
54	M8	18	ALA	C-N-CA	-9.30	111.28	120.21
47	m0	159	PHE	CA-C-N	9.04	129.59	119.83
47	m0	159	PHE	C-N-CA	9.04	129.59	119.83
50	M4	53	VAL	CA-C-N	9.03	129.07	119.76
50	M4	53	VAL	C-N-CA	9.03	129.07	119.76
17	c5	52	LYS	CA-C-N	-8.64	112.02	120.83
17	c5	52	LYS	C-N-CA	-8.64	112.02	120.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	l5	271	LYS	N-CA-C	-8.64	102.45	113.16
21	C9	30	VAL	CA-C-N	8.58	130.57	119.84
21	C9	30	VAL	C-N-CA	8.58	130.57	119.84
41	L4	3	ARG	CA-C-N	8.49	130.46	119.84
41	L4	3	ARG	C-N-CA	8.49	130.46	119.84
15	c3	136	PRO	CA-C-N	8.35	130.28	119.84
15	c3	136	PRO	C-N-CA	8.35	130.28	119.84
64	n8	67	HIS	N-CA-C	-8.24	103.23	113.28
4	s2	150	GLN	CA-C-N	8.23	130.13	119.84
4	s2	150	GLN	C-N-CA	8.23	130.13	119.84
40	l3	169	THR	CA-C-N	8.20	130.09	119.84
40	l3	169	THR	C-N-CA	8.20	130.09	119.84
17	c5	124	THR	CA-C-N	7.97	129.80	119.84
17	c5	124	THR	C-N-CA	7.97	129.80	119.84
41	l4	300	ARG	CA-C-N	7.91	129.72	119.84
41	l4	300	ARG	C-N-CA	7.91	129.72	119.84
5	s3	219	ALA	CA-C-N	7.90	129.72	119.84
5	s3	219	ALA	C-N-CA	7.90	129.72	119.84
44	l7	192	GLY	CA-C-N	7.90	129.72	119.84
44	l7	192	GLY	C-N-CA	7.90	129.72	119.84
49	m3	104	ARG	N-CA-C	-7.85	104.59	114.56
32	e0	59	GLY	CA-C-N	7.78	129.56	119.84
32	e0	59	GLY	C-N-CA	7.78	129.56	119.84
6	S4	4	GLY	CA-C-N	7.74	128.22	119.93
6	S4	4	GLY	C-N-CA	7.74	128.22	119.93
45	l8	24	ASN	CA-C-N	7.74	129.52	119.84
45	l8	24	ASN	C-N-CA	7.74	129.52	119.84
52	m6	109	PRO	CA-C-N	7.73	128.34	120.38
52	m6	109	PRO	C-N-CA	7.73	128.34	120.38
60	n4	78	ALA	N-CA-C	7.69	116.13	108.75
17	C5	124	THR	CA-C-N	7.67	129.43	119.84
17	C5	124	THR	C-N-CA	7.67	129.43	119.84
17	C5	86	VAL	CA-C-N	7.64	129.39	119.84
17	C5	86	VAL	C-N-CA	7.64	129.39	119.84
24	D2	94	LEU	CA-C-N	7.63	128.32	119.47
24	D2	94	LEU	C-N-CA	7.63	128.32	119.47
68	O2	4	LEU	CA-C-N	7.56	127.61	119.90
68	O2	4	LEU	C-N-CA	7.56	127.61	119.90
48	m1	160	VAL	N-CA-C	-7.48	104.56	111.67
7	s5	27	THR	CA-C-N	7.46	129.16	119.84
7	s5	27	THR	C-N-CA	7.46	129.16	119.84
45	L8	71	VAL	CA-C-N	7.34	125.02	119.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	L8	71	VAL	C-N-CA	7.34	125.02	119.66
41	l4	316	ASN	CA-C-N	7.27	126.98	119.56
41	l4	316	ASN	C-N-CA	7.27	126.98	119.56
25	d3	45	GLY	N-CA-C	-7.27	105.81	113.58
45	L8	77	GLN	N-CA-C	-7.26	104.40	113.18
9	s7	131	PHE	CA-C-N	-7.21	110.83	119.84
9	s7	131	PHE	C-N-CA	-7.21	110.83	119.84
48	m1	42	GLY	N-CA-C	-7.21	106.50	115.08
39	L2	209	HIS	N-CA-C	7.20	114.61	108.13
41	L4	269	SER	N-CA-C	7.17	119.57	110.61
12	c0	83	PRO	N-CA-CB	7.04	110.75	103.00
5	S3	219	ALA	CA-C-N	7.02	128.62	119.84
5	S3	219	ALA	C-N-CA	7.02	128.62	119.84
53	m7	51	VAL	N-CA-C	-6.98	103.97	110.53
36	5	1307	G	C2'-C3'-O3'	6.94	119.91	109.50
24	d2	94	LEU	CA-C-N	6.88	127.17	119.32
24	d2	94	LEU	C-N-CA	6.88	127.17	119.32
51	M5	177	GLY	N-CA-C	6.87	119.04	112.04
9	S7	31	SER	CA-C-N	-6.85	111.27	119.84
9	S7	31	SER	C-N-CA	-6.85	111.27	119.84
49	m3	149	GLN	CA-C-N	6.83	128.38	119.84
49	m3	149	GLN	C-N-CA	6.83	128.38	119.84
33	e1	87	THR	CA-C-N	-6.83	113.62	120.31
33	e1	87	THR	C-N-CA	-6.83	113.62	120.31
31	D9	10	HIS	CA-C-N	6.82	128.36	119.84
31	D9	10	HIS	C-N-CA	6.82	128.36	119.84
6	S4	229	GLY	N-CA-C	6.81	119.18	110.20
62	n6	85	VAL	N-CA-C	6.79	113.47	106.21
68	O2	40	SER	N-CA-C	6.77	120.65	110.64
18	C6	40	GLU	CA-C-N	6.69	143.06	127.00
18	C6	40	GLU	C-N-CA	6.69	143.06	127.00
45	L8	158	ASP	CA-C-N	-6.69	111.48	119.84
45	L8	158	ASP	C-N-CA	-6.69	111.48	119.84
6	s4	34	GLY	CA-C-N	6.68	125.92	118.97
6	s4	34	GLY	C-N-CA	6.68	125.92	118.97
11	S9	14	THR	CA-C-N	6.67	128.18	119.84
11	S9	14	THR	C-N-CA	6.67	128.18	119.84
49	m3	76	THR	CB-CA-C	-6.66	107.87	115.79
44	l7	216	VAL	CA-C-N	6.63	126.14	119.24
44	l7	216	VAL	C-N-CA	6.63	126.14	119.24
47	M0	7	ARG	N-CA-C	-6.60	105.35	113.41
4	s2	181	SER	CA-C-N	6.60	128.09	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	s2	181	SER	C-N-CA	6.60	128.09	119.84
25	D3	45	GLY	N-CA-C	-6.60	106.63	115.21
3	S1	205	PHE	CA-C-N	6.58	128.07	119.84
3	S1	205	PHE	C-N-CA	6.58	128.07	119.84
23	D1	13	VAL	CA-C-N	6.58	128.06	119.84
23	D1	13	VAL	C-N-CA	6.58	128.06	119.84
35	SM	51	ARG	CA-C-N	6.55	128.03	119.84
35	SM	51	ARG	C-N-CA	6.55	128.03	119.84
57	n1	134	GLN	CA-C-N	6.55	128.03	119.84
57	n1	134	GLN	C-N-CA	6.55	128.03	119.84
41	l4	191	LYS	N-CA-C	-6.54	105.33	113.38
41	L4	192	GLY	N-CA-C	-6.54	107.14	114.40
53	M7	179	GLN	N-CA-C	-6.53	104.55	113.30
3	S1	180	THR	CB-CA-C	-6.51	108.05	115.79
68	o2	4	LEU	CA-C-N	6.48	127.94	119.84
68	o2	4	LEU	C-N-CA	6.48	127.94	119.84
41	L4	198	ARG	N-CA-C	6.47	119.16	111.71
56	N0	134	ASP	N-CA-C	-6.47	105.54	113.50
4	S2	181	SER	CA-C-N	6.46	127.92	119.84
4	S2	181	SER	C-N-CA	6.46	127.92	119.84
63	N7	103	GLN	CA-C-N	6.45	126.68	119.32
63	N7	103	GLN	C-N-CA	6.45	126.68	119.32
56	N0	68	HIS	CA-C-N	6.42	127.87	119.84
56	N0	68	HIS	C-N-CA	6.42	127.87	119.84
56	n0	134	ASP	N-CA-C	-6.41	104.71	113.30
48	M1	91	LEU	N-CA-C	6.41	114.03	108.78
22	D0	54	GLY	CA-C-N	6.39	127.83	119.84
22	D0	54	GLY	C-N-CA	6.39	127.83	119.84
39	l2	251	LYS	N-CA-C	6.37	118.25	108.12
45	l8	72	PRO	CA-C-N	6.36	125.85	119.24
45	l8	72	PRO	C-N-CA	6.36	125.85	119.24
59	n3	5	GLY	N-CA-C	-6.36	106.46	115.30
3	s1	156	ALA	N-CA-C	6.34	118.04	108.46
57	n1	147	VAL	CA-C-N	6.32	127.74	119.84
57	n1	147	VAL	C-N-CA	6.32	127.74	119.84
16	C4	93	THR	CA-C-N	6.30	127.72	119.84
16	C4	93	THR	C-N-CA	6.30	127.72	119.84
5	s3	215	GLU	CA-C-N	6.30	125.92	119.56
5	s3	215	GLU	C-N-CA	6.30	125.92	119.56
44	l7	138	TYR	CA-C-N	6.29	126.78	119.99
44	l7	138	TYR	C-N-CA	6.29	126.78	119.99
44	l7	131	GLU	CA-C-N	-6.27	113.26	120.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	l7	131	GLU	C-N-CA	-6.27	113.26	120.04
18	C6	40	GLU	C-N-CD	-6.26	106.83	120.60
5	s3	210	GLU	CA-C-N	6.25	127.66	119.84
5	s3	210	GLU	C-N-CA	6.25	127.66	119.84
32	e0	14	VAL	N-CA-C	6.25	116.73	110.23
39	L2	166	ILE	N-CA-C	6.23	117.34	108.93
76	Q0	79	GLU	CA-C-N	6.21	127.61	119.84
76	Q0	79	GLU	C-N-CA	6.21	127.61	119.84
50	M4	30	GLY	N-CA-C	-6.18	106.79	115.32
79	Q3	91	GLU	N-CA-C	-6.17	107.59	114.62
40	l3	245	GLY	N-CA-C	6.15	118.31	112.04
26	d4	29	HIS	CA-C-N	6.15	127.52	119.84
26	d4	29	HIS	C-N-CA	6.15	127.52	119.84
39	l2	214	GLY	N-CA-C	6.15	120.54	110.77
41	l4	3	ARG	CA-C-N	6.15	127.52	119.84
41	l4	3	ARG	C-N-CA	6.15	127.52	119.84
45	l8	71	VAL	CA-C-N	6.14	126.70	120.38
45	l8	71	VAL	C-N-CA	6.14	126.70	120.38
65	N9	23	LYS	CA-C-N	-6.13	113.42	120.04
65	N9	23	LYS	C-N-CA	-6.13	113.42	120.04
10	S8	172	ARG	CA-C-N	6.12	126.01	119.28
10	S8	172	ARG	C-N-CA	6.12	126.01	119.28
49	m3	47	ALA	CA-C-N	-6.11	112.20	119.84
49	m3	47	ALA	C-N-CA	-6.11	112.20	119.84
27	D5	95	HIS	N-CA-C	6.11	120.19	109.80
47	m0	58	GLU	N-CA-C	6.11	116.30	108.24
56	N0	167	ARG	CA-C-N	6.11	127.47	119.84
56	N0	167	ARG	C-N-CA	6.11	127.47	119.84
7	s5	29	ILE	CA-C-N	6.10	126.45	119.92
7	s5	29	ILE	C-N-CA	6.10	126.45	119.92
50	m4	53	VAL	CA-C-N	6.10	126.06	119.78
50	m4	53	VAL	C-N-CA	6.10	126.06	119.78
4	S2	150	GLN	CA-C-N	6.10	127.46	119.84
4	S2	150	GLN	C-N-CA	6.10	127.46	119.84
67	O1	29	ALA	CA-C-N	-6.05	113.45	119.56
67	O1	29	ALA	C-N-CA	-6.05	113.45	119.56
3	s1	34	ALA	CA-C-N	6.04	126.05	119.89
3	s1	34	ALA	C-N-CA	6.04	126.05	119.89
52	M6	69	GLY	CA-C-N	6.00	126.02	119.90
52	M6	69	GLY	C-N-CA	6.00	126.02	119.90
11	S9	138	LYS	N-CA-C	-6.00	105.72	113.16
45	L8	74	THR	N-CA-C	-6.00	106.12	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	c4	95	GLY	CA-C-N	5.97	125.85	119.28
16	c4	95	GLY	C-N-CA	5.97	125.85	119.28
72	O6	21	THR	CA-C-N	5.97	126.43	120.52
72	O6	21	THR	C-N-CA	5.97	126.43	120.52
2	S0	67	ILE	CA-C-N	5.95	125.43	119.24
2	S0	67	ILE	C-N-CA	5.95	125.43	119.24
83	f	99	PHE	CA-C-N	5.94	132.40	121.70
83	f	99	PHE	C-N-CA	5.94	132.40	121.70
52	M6	149	TYR	N-CA-C	5.92	123.42	110.80
26	d4	27	VAL	N-CA-C	5.91	117.04	109.30
5	S3	198	GLY	CA-C-N	5.88	127.19	119.84
5	S3	198	GLY	C-N-CA	5.88	127.19	119.84
9	S7	39	ARG	CA-C-N	-5.87	113.63	119.56
9	S7	39	ARG	C-N-CA	-5.87	113.63	119.56
61	n5	43	ALA	CA-C-N	5.85	127.15	119.84
61	n5	43	ALA	C-N-CA	5.85	127.15	119.84
56	n0	19	VAL	CA-C-N	-5.84	113.95	119.85
56	n0	19	VAL	C-N-CA	-5.84	113.95	119.85
33	E1	147	VAL	N-CA-C	5.83	116.41	110.05
41	L4	222	VAL	CA-C-N	5.82	127.12	119.84
41	L4	222	VAL	C-N-CA	5.82	127.12	119.84
64	N8	5	PHE	N-CA-C	-5.82	106.15	113.72
54	M8	71	LEU	N-CA-C	-5.82	106.31	113.41
52	m6	120	VAL	CA-C-N	5.80	127.09	119.84
52	m6	120	VAL	C-N-CA	5.80	127.09	119.84
49	M3	149	GLN	CA-C-N	5.79	127.08	119.84
49	M3	149	GLN	C-N-CA	5.79	127.08	119.84
17	C5	52	LYS	CA-C-N	-5.79	112.61	119.84
17	C5	52	LYS	C-N-CA	-5.79	112.61	119.84
42	L5	82	GLU	N-CA-C	-5.77	106.89	114.04
9	S7	64	VAL	CA-C-N	-5.76	113.82	119.64
9	S7	64	VAL	C-N-CA	-5.76	113.82	119.64
15	C3	22	ALA	CA-C-N	5.73	140.76	127.00
15	C3	22	ALA	C-N-CA	5.73	140.76	127.00
40	L3	386	ASP	CB-CA-C	-5.73	109.95	116.54
41	l4	340	GLY	N-CA-C	-5.71	99.64	113.18
40	l3	12	GLY	N-CA-C	5.71	119.39	112.48
44	L7	98	LYS	CA-C-N	-5.68	113.17	119.19
44	L7	98	LYS	C-N-CA	-5.68	113.17	119.19
43	l6	152	THR	CA-C-N	5.68	126.57	119.98
43	l6	152	THR	C-N-CA	5.68	126.57	119.98
13	C1	44	THR	CA-C-N	5.67	125.67	119.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	C1	44	THR	C-N-CA	5.67	125.67	119.89
64	n8	9	ARG	N-CA-C	-5.67	106.03	113.12
2	S0	193	GLN	CA-C-N	5.65	126.91	119.84
2	S0	193	GLN	C-N-CA	5.65	126.91	119.84
4	s2	238	SER	CA-C-N	5.64	126.89	119.84
4	s2	238	SER	C-N-CA	5.64	126.89	119.84
63	N7	59	ALA	CB-CA-C	-5.63	110.10	116.63
9	s7	64	VAL	CA-C-N	-5.62	113.88	119.56
9	s7	64	VAL	C-N-CA	-5.62	113.88	119.56
49	m3	42	ARG	N-CA-C	-5.62	105.53	112.90
9	s7	111	LYS	CB-CA-C	-5.61	109.11	115.79
40	L3	82	PRO	CA-C-N	5.61	126.85	119.84
40	L3	82	PRO	C-N-CA	5.61	126.85	119.84
48	M1	91	LEU	CB-CA-C	-5.60	109.00	117.07
45	L8	72	PRO	O-C-N	5.60	123.89	121.31
47	m0	4	ARG	CA-C-N	5.60	126.84	119.84
47	m0	4	ARG	C-N-CA	5.60	126.84	119.84
56	n0	140	VAL	N-CA-C	-5.60	107.36	111.90
51	m5	69	GLY	N-CA-C	5.60	117.21	111.56
57	N1	71	SER	N-CA-C	5.59	117.78	108.99
47	M0	4	ARG	N-CA-C	5.59	116.03	109.60
44	l7	95	ILE	CA-C-N	5.59	126.13	120.38
44	l7	95	ILE	C-N-CA	5.59	126.13	120.38
47	m0	114	GLY	N-CA-C	5.59	119.56	111.24
24	D2	76	SER	CA-C-N	-5.58	112.86	119.84
24	D2	76	SER	C-N-CA	-5.58	112.86	119.84
53	M7	30	ARG	N-CA-C	-5.57	106.15	113.12
44	L7	192	GLY	CA-C-N	5.57	125.66	119.32
44	L7	192	GLY	C-N-CA	5.57	125.66	119.32
70	o4	71	THR	N-CA-C	5.56	117.25	108.96
2	S0	10	THR	CA-C-N	5.55	126.78	119.84
2	S0	10	THR	C-N-CA	5.55	126.78	119.84
41	L4	328	ASN	CA-C-N	5.54	125.25	119.82
41	L4	328	ASN	C-N-CA	5.54	125.25	119.82
52	m6	130	LYS	CA-C-N	-5.53	114.55	120.03
52	m6	130	LYS	C-N-CA	-5.53	114.55	120.03
13	c1	120	GLY	N-CA-C	-5.53	107.66	113.58
51	m5	107	GLY	N-CA-C	-5.53	107.80	114.66
52	M6	109	PRO	CA-C-N	5.53	126.07	120.38
52	M6	109	PRO	C-N-CA	5.53	126.07	120.38
7	S5	27	THR	CA-C-N	5.52	125.28	119.76
7	S5	27	THR	C-N-CA	5.52	125.28	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	e0	52	GLY	N-CA-C	-5.51	107.50	115.27
63	N7	32	GLY	N-CA-C	5.51	118.99	112.33
49	m3	4	SER	N-CA-C	5.50	117.45	108.76
19	C7	85	VAL	CA-C-N	5.49	126.70	119.84
19	C7	85	VAL	C-N-CA	5.49	126.70	119.84
26	d4	95	GLY	N-CA-C	-5.49	107.45	115.63
25	D3	142	LYS	CA-C-N	5.49	125.75	119.83
25	D3	142	LYS	C-N-CA	5.49	125.75	119.83
33	e1	123	ASN	CA-C-N	5.47	126.68	119.84
33	e1	123	ASN	C-N-CA	5.47	126.68	119.84
77	Q1	18	ARG	N-CA-C	-5.46	105.02	110.97
3	s1	205	PHE	CA-C-N	5.44	126.65	119.84
3	s1	205	PHE	C-N-CA	5.44	126.65	119.84
59	N3	65	GLY	N-CA-C	5.41	118.36	110.63
41	l4	92	ASN	N-CA-C	5.40	117.17	111.28
9	S7	62	VAL	CA-C-N	5.40	125.73	119.47
9	S7	62	VAL	C-N-CA	5.40	125.73	119.47
70	O4	11	ASN	CA-C-N	5.40	126.59	119.84
70	O4	11	ASN	C-N-CA	5.40	126.59	119.84
6	s4	4	GLY	CA-C-N	5.38	125.69	119.93
6	s4	4	GLY	C-N-CA	5.38	125.69	119.93
25	D3	93	LEU	N-CA-C	-5.36	106.69	113.18
51	M5	73	ARG	CA-C-N	5.36	126.54	119.84
51	M5	73	ARG	C-N-CA	5.36	126.54	119.84
28	D6	97	PRO	N-CA-C	5.36	117.23	110.70
31	D9	9	SER	N-CA-C	5.35	115.60	108.38
55	m9	57	VAL	N-CA-C	5.35	115.95	108.89
44	l7	229	PHE	CA-CB-CG	5.34	119.14	113.80
52	M6	108	ILE	CA-C-N	5.33	125.87	120.38
52	M6	108	ILE	C-N-CA	5.33	125.87	120.38
35	sM	49	LYS	N-CA-C	-5.33	106.28	112.89
41	l4	276	LEU	CA-C-N	5.33	125.33	119.89
41	l4	276	LEU	C-N-CA	5.33	125.33	119.89
62	N6	67	GLU	N-CA-C	5.31	116.35	108.60
52	m6	75	ALA	CA-C-N	5.30	124.75	119.24
52	m6	75	ALA	C-N-CA	5.30	124.75	119.24
41	l4	117	GLU	N-CA-C	-5.30	106.32	112.89
41	l4	65	TRP	N-CA-C	-5.29	106.59	113.16
43	l6	53	VAL	N-CA-C	5.28	115.37	107.51
1	2	158	U	C2'-C3'-O3'	5.27	117.40	109.50
15	C3	22	ALA	C-N-CD	-5.27	109.02	120.60
51	m5	67	ARG	N-CA-C	5.26	119.80	113.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	S2	84	LYS	CA-C-N	5.26	125.16	119.85
4	S2	84	LYS	C-N-CA	5.26	125.16	119.85
48	M1	91	LEU	CA-C-O	5.26	120.99	117.94
73	o7	5	THR	CA-C-N	-5.26	113.61	119.19
73	o7	5	THR	C-N-CA	-5.26	113.61	119.19
3	s1	22	ASP	CA-C-N	5.25	125.06	119.28
3	s1	22	ASP	C-N-CA	5.25	125.06	119.28
28	D6	19	LYS	CA-C-N	5.25	125.26	119.90
28	D6	19	LYS	C-N-CA	5.25	125.26	119.90
41	l4	58	HIS	N-CA-C	-5.25	106.18	112.59
56	n0	121	ILE	N-CA-C	5.25	115.60	107.78
11	s9	143	ILE	CA-C-N	5.25	126.40	119.84
11	s9	143	ILE	C-N-CA	5.25	126.40	119.84
67	o1	49	VAL	N-CA-C	5.25	114.34	106.42
41	l4	222	VAL	CA-C-N	5.22	126.03	119.98
41	l4	222	VAL	C-N-CA	5.22	126.03	119.98
49	m3	189	GLU	N-CA-C	-5.21	106.98	113.55
68	O2	28	VAL	N-CA-C	5.21	114.80	106.88
27	d5	104	ALA	CB-CA-C	-5.21	109.60	115.79
35	sM	43	ASP	CA-C-N	5.20	125.00	119.28
35	sM	43	ASP	C-N-CA	5.20	125.00	119.28
44	l7	96	PRO	CA-C-N	5.20	125.00	119.28
44	l7	96	PRO	C-N-CA	5.20	125.00	119.28
64	n8	121	VAL	CA-C-N	5.20	126.34	119.84
64	n8	121	VAL	C-N-CA	5.20	126.34	119.84
78	q2	17	CYS	N-CA-C	-5.20	102.91	110.24
40	l3	88	GLY	N-CA-C	5.20	118.17	110.42
1	2	1698	G	P-O3'-C3'	5.20	127.99	120.20
6	S4	170	THR	CB-CA-C	-5.20	109.59	117.07
17	C5	108	ARG	CA-C-N	5.20	126.33	119.84
17	C5	108	ARG	C-N-CA	5.20	126.33	119.84
56	n0	171	PHE	N-CA-C	5.19	119.77	113.38
34	SR	37	SER	N-CA-C	5.18	115.37	108.38
51	m5	185	ALA	N-CA-C	-5.16	106.95	113.20
55	M9	160	GLU	N-CA-C	-5.15	107.12	113.41
74	O8	69	LEU	CA-C-N	5.15	125.69	120.38
74	O8	69	LEU	C-N-CA	5.15	125.69	120.38
42	L5	32	GLN	N-CA-C	-5.15	107.13	113.41
59	n3	126	TRP	CA-C-N	5.14	124.45	118.85
59	n3	126	TRP	C-N-CA	5.14	124.45	118.85
49	M3	75	PHE	N-CA-C	5.13	119.50	112.88
53	M7	36	ILE	N-CA-C	-5.12	108.51	113.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	s9	14	THR	CA-C-N	5.12	125.11	119.89
11	s9	14	THR	C-N-CA	5.12	125.11	119.89
35	SM	38	PRO	CA-C-N	5.10	125.63	120.38
35	SM	38	PRO	C-N-CA	5.10	125.63	120.38
43	L6	35	VAL	CA-C-N	5.10	126.21	119.84
43	L6	35	VAL	C-N-CA	5.10	126.21	119.84
36	1	406	G	O4'-C1'-N9	5.09	115.83	108.20
49	M3	141	ALA	N-CA-C	-5.08	99.97	110.80
73	O7	42	ALA	N-CA-C	-5.08	106.94	113.23
11	S9	143	ILE	CA-C-N	5.07	125.10	119.32
11	S9	143	ILE	C-N-CA	5.07	125.10	119.32
2	s0	103	THR	CA-C-N	5.07	125.31	119.83
2	s0	103	THR	C-N-CA	5.07	125.31	119.83
56	n0	167	ARG	CA-C-N	5.07	126.18	119.84
56	n0	167	ARG	C-N-CA	5.07	126.18	119.84
45	L8	240	ASN	N-CA-C	5.07	116.80	111.28
51	M5	174	ILE	N-CA-C	5.07	111.63	106.21
26	d4	60	PHE	N-CA-C	5.07	117.17	107.75
54	M8	60	PRO	O-C-N	5.06	123.64	121.31
26	d4	65	GLY	N-CA-C	-5.06	109.06	115.08
40	l3	114	VAL	CB-CA-C	-5.06	105.46	112.24
2	S0	27	ARG	CB-CA-C	-5.04	109.12	116.53
16	c4	93	THR	CA-C-N	5.03	125.30	119.92
16	c4	93	THR	C-N-CA	5.03	125.30	119.92
51	m5	147	ARG	N-CA-C	-5.03	108.41	114.75
60	N4	50	ALA	N-CA-C	5.03	116.45	111.07
19	C7	85	VAL	N-CA-C	5.02	119.72	108.88
36	1	282	G	C2'-C3'-O3'	5.02	121.22	113.70
54	m8	60	PRO	O-C-N	5.01	123.51	121.15
52	M6	146	GLY	N-CA-C	5.01	118.94	113.58

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
19	C7	85	VAL	Peptide
27	D5	94	LYS	Peptide
44	L7	157	ASN	Peptide
52	M6	110	PRO	Peptide
65	N9	20	GLY	Peptide
18	c6	40	GLU	Peptide
83	f	108	ASP	Peptide

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Mol	Chain	Res	Type	Group
39	l2	237	LEU	Peptide
64	n8	46	ASP	Peptide
65	n9	23	LYS	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	2	37970	0	19106	815	0
1	6	38260	0	19252	802	0
2	S0	1577	0	1567	82	0
2	s0	1583	0	1578	77	0
3	S1	1709	0	1784	66	0
3	s1	1722	0	1793	69	0
4	S2	1635	0	1723	78	0
4	s2	1635	0	1723	66	0
5	S3	1734	0	1817	59	0
5	s3	1734	0	1817	68	0
6	S4	2068	0	2154	94	0
6	s4	2068	0	2154	95	0
7	S5	1609	0	1675	63	0
7	s5	1609	0	1675	65	0
8	S6	1799	0	1879	49	0
8	s6	1755	0	1846	72	0
9	S7	1481	0	1572	65	0
9	s7	1491	0	1578	56	0
10	S8	1489	0	1525	64	0
10	s8	1489	0	1525	57	0
11	S9	1494	0	1573	69	0
11	s9	1494	0	1573	88	0
12	C0	773	0	714	34	0
12	c0	762	0	689	25	0
13	C1	1214	0	1237	43	0
13	c1	1168	0	1226	45	0
14	C2	892	0	872	36	0
14	c2	892	0	869	29	0
15	C3	1192	0	1255	43	0
15	c3	1192	0	1255	55	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	C4	891	0	883	43	0
16	c4	949	0	985	52	0
17	C5	977	0	1004	48	0
17	c5	1039	0	1041	40	0
18	C6	1105	0	1166	48	0
18	c6	1111	0	1171	43	0
19	C7	926	0	930	50	0
19	c7	906	0	909	43	0
20	C8	1192	0	1222	59	0
20	c8	1192	0	1222	50	0
21	C9	1112	0	1124	51	0
21	c9	1112	0	1124	44	0
22	D0	855	0	917	42	0
22	d0	882	0	939	33	0
23	D1	684	0	672	40	0
23	d1	684	0	672	37	0
24	D2	1021	0	1060	47	0
24	d2	1021	0	1060	56	0
25	D3	1121	0	1196	58	0
25	d3	1121	0	1196	42	0
26	D4	1073	0	1132	48	0
26	d4	1073	0	1132	45	0
27	D5	563	0	603	25	0
27	d5	558	0	598	29	0
28	D6	769	0	814	45	0
28	d6	769	0	814	40	0
29	D7	610	0	630	14	0
29	d7	610	0	631	27	0
30	D8	497	0	535	28	0
30	d8	497	0	535	16	0
31	D9	442	0	428	20	0
31	d9	442	0	428	13	0
32	E0	475	0	525	12	0
32	e0	491	0	542	19	0
33	E1	566	0	602	26	0
33	e1	608	0	657	24	0
34	SR	2437	0	2386	87	0
34	sR	2442	0	2392	85	1
35	SM	1105	0	959	44	0
35	sM	680	0	542	25	0
36	1	67355	0	33848	1255	1
36	5	67780	0	34065	1218	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
37	3	2579	0	1304	64	0
37	7	2579	0	1304	46	0
38	4	3353	0	1695	59	0
38	8	3353	0	1695	71	0
39	L2	1914	0	1981	85	0
39	l2	1912	0	1976	97	0
40	L3	3075	0	3142	140	0
40	l3	3075	0	3142	125	0
41	L4	2748	0	2859	104	0
41	l4	2748	0	2859	133	0
42	L5	2375	0	2325	104	0
42	l5	2359	0	2311	102	0
43	L6	1239	0	1326	49	0
43	l6	1248	0	1339	38	0
44	L7	1784	0	1862	73	0
44	l7	1791	0	1869	73	0
45	L8	1804	0	1875	70	0
45	l8	1764	0	1821	50	0
46	L9	1518	0	1587	78	0
46	l9	1518	0	1587	52	0
47	M0	1705	0	1736	85	0
47	m0	1722	0	1755	77	0
48	M1	1353	0	1383	45	0
48	m1	1353	0	1383	42	0
49	M3	1543	0	1608	76	0
49	m3	1548	0	1613	73	0
50	M4	1053	0	1149	45	0
50	m4	1059	0	1154	46	0
51	M5	1720	0	1779	73	0
51	m5	1720	0	1779	75	0
52	M6	1555	0	1659	64	0
52	m6	1555	0	1659	48	0
53	M7	1420	0	1437	56	0
53	m7	1227	0	1236	57	0
54	M8	1441	0	1543	51	0
54	m8	1441	0	1543	66	0
55	M9	1521	0	1617	62	0
55	m9	1521	0	1617	52	0
56	N0	1445	0	1487	50	0
56	n0	1445	0	1487	55	0
57	N1	1276	0	1323	46	0
57	n1	1276	0	1323	57	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	N2	796	0	812	26	0
58	n2	778	0	791	17	0
59	N3	1003	0	1048	41	0
59	n3	1003	0	1048	39	0
60	N4	699	0	640	24	0
60	n4	1038	0	1071	36	0
61	N5	964	0	1025	44	0
61	n5	959	0	1023	36	0
62	N6	993	0	1081	40	0
62	n6	993	0	1081	42	0
63	N7	1092	0	1155	58	0
63	n7	1092	0	1155	46	0
64	N8	1173	0	1215	66	0
64	n8	1173	0	1215	53	0
65	N9	462	0	491	19	0
65	n9	462	0	491	18	0
66	O0	743	0	797	26	0
66	o0	767	0	816	28	0
67	O1	876	0	912	35	0
67	o1	883	0	918	28	0
68	O2	1020	0	1090	43	0
68	o2	1020	0	1090	40	0
69	O3	850	0	880	36	0
69	o3	850	0	880	33	0
70	O4	880	0	945	32	0
70	o4	880	0	945	36	0
71	O5	969	0	1078	37	0
71	o5	965	0	1067	59	0
72	O6	771	0	849	39	0
72	o6	770	0	846	35	0
73	O7	681	0	683	35	0
73	o7	681	0	683	19	0
74	O8	612	0	682	20	0
74	o8	608	0	671	22	0
75	O9	436	0	475	18	0
75	o9	436	0	475	22	0
76	Q0	417	0	455	10	0
76	q0	417	0	455	14	0
77	Q1	233	0	284	14	0
77	q1	233	0	284	11	0
78	Q2	847	0	914	26	0
78	q2	847	0	914	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
79	Q3	694	0	734	29	0
79	q3	694	0	734	28	0
80	m2	750	0	185	10	0
81	p0	1077	0	1012	29	0
82	p1	235	0	53	2	0
82	p2	230	0	52	0	0
83	f	1116	0	1108	49	0
84	B	76	0	49	3	0
84	C	73	0	49	4	0
85	D6	1	0	0	0	0
85	D7	1	0	0	0	0
85	D9	1	0	0	0	0
85	E1	1	0	0	0	0
85	O7	1	0	0	0	0
85	Q0	1	0	0	0	0
85	Q2	1	0	0	0	0
85	Q3	1	0	0	0	0
85	d6	1	0	0	0	0
85	d7	1	0	0	0	0
85	d9	1	0	0	0	0
85	e1	1	0	0	0	0
85	o7	1	0	0	0	0
85	q0	1	0	0	0	0
85	q2	1	0	0	0	0
85	q3	1	0	0	0	0
86	1	23	0	18	3	0
86	B	23	0	18	2	0
87	1	3	0	0	0	0
87	5	5	0	0	0	0
87	B	1	0	0	0	0
87	C	1	0	0	0	0
87	f	2	0	0	0	0
88	1	14	0	0	0	0
88	5	7	0	0	0	0
89	5	2	0	0	0	0
89	f	10	0	0	0	0
All	All	404292	0	298868	9865	1

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 14.

All (9865) 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)
83:f:110:LYS:NZ	83:f:112:ASP:OD1	1.85	1.09
83:f:99:PHE:HA	83:f:100:LEU:HB2	1.45	0.98
1:6:514:G:HO2'	1:6:515:A:H8	1.13	0.97
1:6:104:A:H61	1:6:308:C:H5'	1.29	0.96
1:2:1456:C:H5"	1:2:1457:C:H5"	1.49	0.94
36:5:438:A:N1	36:5:621:A:N6	2.17	0.92
36:5:3274:A:H3'	36:5:3275:U:H5"	1.51	0.92
36:5:2620:G:H1	84:B:74:CH:HN3	1.18	0.92
36:1:768:C:OP1	49:M3:186:ARG:NH2	2.02	0.91
5:S3:94:ARG:NH2	35:SM:134:ASP:OD1	2.01	0.91
36:1:2392:C:O2'	40:L3:266:ARG:NH2	2.02	0.91
36:5:2940:A:N7	40:l3:2:SER:N	2.19	0.91
36:5:420:G:N2	36:5:2385:G:OP2	2.04	0.90
62:n6:45:ILE:HD11	62:n6:122:LYS:HB2	1.54	0.90
36:1:2656:A:H4'	78:Q2:98:LYS:HD2	1.50	0.90
36:5:640:U:OP1	64:n8:21:ARG:NH2	2.05	0.90
36:5:72:C:H5'	49:m3:63:VAL:HG22	1.54	0.89
36:5:283:G:OP2	78:q2:45:ARG:NH2	2.06	0.89
50:m4:55:ARG:NH2	50:m4:76:ALA:O	2.05	0.89
40:L3:232:ARG:NH1	40:L3:269:GLN:O	2.06	0.88
1:6:1636:C:H4'	1:6:1637:C:H5'	1.56	0.88
62:n6:5:SER:HB2	62:n6:8:VAL:HG22	1.56	0.87
11:S9:96:VAL:HA	11:S9:99:LEU:HD23	1.54	0.87
36:5:790:U:H5'	41:l4:112:LYS:HD2	1.54	0.87
2:S0:162:CYS:SG	2:S0:163:ASN:N	2.47	0.87
36:5:31:C:OP2	51:m5:188:ARG:NH2	2.08	0.87
36:5:824:C:H5"	39:l2:21:ARG:HD3	1.57	0.86
1:2:992:A:H2	1:2:1012:U:H3	1.23	0.86
36:1:640:U:OP1	64:N8:21:ARG:NH2	2.09	0.86
36:1:860:G:OP1	79:Q3:17:ARG:NH1	2.09	0.85
39:l2:153:GLY:HA3	39:l2:251:LYS:HD2	1.57	0.85
6:s4:9:LEU:HB2	6:s4:30:ARG:HB2	1.57	0.85
47:m0:42:THR:HG23	47:m0:45:GLU:HG3	1.57	0.85
52:m6:108:ILE:HD12	52:m6:113:ASP:HA	1.55	0.85
51:M5:14:LYS:HA	51:M5:19:LEU:HD23	1.59	0.85
41:l4:329:PRO:O	41:l4:331:ALA:N	2.09	0.85
57:n1:51:GLY:HA3	57:n1:92:ARG:HG3	1.59	0.84
36:1:687:U:OP2	49:M3:36:ARG:NH2	2.09	0.84
36:5:3299:A:H61	36:5:3315:G:H1	1.24	0.84
1:2:1267:G:HO2'	1:2:1448:G:HO2'	1.24	0.84
19:C7:66:VAL:HB	19:C7:69:ILE:HD11	1.60	0.84
8:s6:98:ARG:NH2	8:s6:101:ILE:O	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:c8:27:LYS:HA	20:c8:57:ARG:HA	1.59	0.84
40:l3:41:VAL:HA	40:l3:185:GLY:HA3	1.60	0.84
41:L4:300:ARG:O	54:M8:39:ARG:NH1	2.11	0.84
48:m1:94:ARG:O	48:m1:96:PHE:N	2.10	0.84
18:C6:9:THR:HG21	18:C6:88:GLY:HA2	1.59	0.83
10:s8:34:ALA:HB2	10:s8:56:ARG:HD3	1.59	0.83
18:C6:46:PHE:HA	18:C6:49:TYR:HB2	1.59	0.83
36:1:3042:U:OP2	36:1:3092:C:N4	2.11	0.83
3:s1:51:SER:HB3	3:s1:57:ALA:H	1.44	0.83
1:2:630:A:N6	1:2:969:C:O2	2.12	0.83
36:5:2177:G:OP2	39:l2:128:ARG:NH1	2.11	0.83
1:6:1558:U:H3	17:c5:122:THR:HG22	1.44	0.82
3:s1:144:ARG:HB3	3:s1:208:GLN:HG2	1.61	0.82
6:s4:206:ASP:HB2	6:s4:222:LEU:HD12	1.62	0.82
81:p0:26:PHE:HB2	81:p0:87:VAL:HB	1.61	0.82
51:M5:143:ARG:HH21	71:O5:92:LEU:HD23	1.42	0.82
36:5:2728:G:N7	57:n1:87:LYS:NZ	2.27	0.82
36:1:3182:G:OP1	52:M6:160:ARG:NH2	2.11	0.82
50:M4:108:ARG:NH2	52:M6:196:ALA:O	2.12	0.82
7:s5:112:ARG:HH11	18:c6:43:ILE:HG23	1.44	0.82
47:m0:43:VAL:HG21	47:m0:197:VAL:HB	1.61	0.82
36:1:837:A:OP2	79:Q3:4:ARG:NH1	2.13	0.82
36:1:2940:A:N7	40:L3:2:SER:N	2.27	0.82
11:s9:81:VAL:HG22	11:s9:86:LEU:HB3	1.61	0.82
40:l3:169:THR:O	40:l3:171:LEU:N	2.13	0.82
1:6:1462:G:N7	20:c8:143:ARG:NH2	2.28	0.82
10:s8:84:HIS:HE2	10:s8:97:THR:HG1	0.84	0.82
83:f:132:LYS:NZ	83:f:133:ASP:O	2.12	0.82
36:1:2771:U:OP2	36:1:2772:C:N4	2.13	0.81
1:2:1096:C:H4'	1:2:1099:U:H4'	1.62	0.81
36:5:1145:G:OP1	68:o2:44:ARG:NH1	2.14	0.81
36:5:1807:G:OP1	63:n7:135:ARG:NH2	2.13	0.81
44:l7:151:ARG:NH1	44:l7:244:ASN:O	2.14	0.81
36:1:1639:C:OP2	70:O4:74:ARG:NH2	2.13	0.81
17:c5:18:ARG:NH1	20:c8:91:ASP:O	2.13	0.81
1:2:1537:C:O2'	1:2:1540:G:O6	1.98	0.81
40:l3:232:ARG:NH1	40:l3:269:GLN:O	2.12	0.80
36:5:1235:U:H4'	36:5:1236:G:H5'	1.62	0.80
17:C5:123:TYR:OH	20:C8:126:ARG:NH1	2.14	0.80
23:D1:74:GLN:NE2	23:D1:81:ASN:O	2.14	0.80
1:6:647:G:H1	1:6:687:G:H22	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2836:C:H5	36:5:2852:C:H42	1.27	0.80
14:C2:103:LEU:HG	14:C2:116:VAL:HG22	1.63	0.80
36:5:155:G:H5"	36:5:156:G:C8	2.17	0.80
4:S2:77:GLN:NE2	4:S2:105:GLY:O	2.14	0.80
8:s6:14:LYS:HD2	8:s6:123:GLY:HA3	1.61	0.80
1:6:208:U:H4'	10:s8:176:SER:HB3	1.64	0.80
1:6:1552:U:OP2	17:c5:43:ARG:NH2	2.15	0.80
36:1:2619:G:H1	84:C:75:CH:HN3	1.29	0.80
39:L2:29:LEU:HA	39:L2:76:PHE:HE1	1.45	0.80
18:c6:110:THR:HA	18:c6:113:ASP:HB2	1.63	0.80
36:5:71:A:OP2	64:n8:67:HIS:NE2	2.15	0.80
62:n6:56:VAL:HG11	62:n6:104:LEU:HD13	1.64	0.80
1:2:1542:G:N2	1:2:1569:A:OP2	2.15	0.80
57:N1:39:ILE:HD12	57:N1:102:ARG:HG2	1.64	0.80
36:5:2157:G:N7	39:l2:152:SER:OG	2.14	0.80
42:L5:40:HIS:HD2	42:L5:42:ALA:H	1.30	0.80
6:s4:52:LEU:O	6:s4:54:TYR:N	2.15	0.80
15:c3:65:VAL:HG23	15:c3:66:ILE:HG23	1.63	0.80
1:6:219:A:N6	1:6:843:U:O2	2.14	0.80
36:5:2812:C:H2'	36:5:2813:A:H8	1.46	0.80
68:O2:4:LEU:HD12	68:O2:5:PRO:HD2	1.64	0.79
52:m6:62:THR:H	52:m6:69:GLY:HA3	1.47	0.79
3:S1:134:VAL:HB	3:S1:219:LYS:HB2	1.64	0.79
8:S6:26:VAL:HG21	8:S6:40:ALA:HB1	1.63	0.79
35:SM:53:ARG:HE	35:SM:54:PRO:HD2	1.48	0.79
40:L3:347:SER:OG	40:L3:348:ARG:N	2.13	0.79
71:o5:10:ARG:NH1	71:o5:60:GLU:OE1	2.16	0.79
38:4:95:G:OP2	73:O7:72:ARG:NH1	2.15	0.79
21:C9:52:GLY:O	21:C9:54:PHE:N	2.15	0.79
35:SM:48:ARG:HH21	36:1:1017:C:H5'	1.47	0.79
70:o4:9:ARG:HH21	70:o4:34:HIS:HB2	1.47	0.79
36:1:977:C:OP1	54:M8:141:ARG:NH2	2.15	0.79
83:f:92:LEU:HD12	83:f:134:LEU:H	1.48	0.79
34:sR:24:ALA:HB3	34:sR:34:LEU:HB3	1.65	0.79
41:l4:16:THR:HG23	41:l4:18:ASN:H	1.44	0.79
36:1:412:G:OP1	53:M7:62:ARG:NH1	2.15	0.79
41:l4:122:THR:HG22	41:l4:235:LEU:HB2	1.63	0.79
75:o9:5:LYS:HD3	75:o9:13:MET:HE1	1.65	0.78
36:1:994:G:H3'	57:N1:13:TYR:HD2	1.48	0.78
36:5:3194:C:O2	36:5:3197:G:N2	2.16	0.78
1:6:680:U:O2	1:6:682:C:N4	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:o5:78:LYS:HA	71:o5:81:ARG:HD2	1.64	0.78
25:D3:92:CYS:HA	25:D3:95:PHE:HD2	1.49	0.78
66:o0:16:LEU:HB2	66:o0:98:SER:HB2	1.65	0.78
63:N7:83:THR:HG23	63:N7:85:TYR:H	1.48	0.78
24:d2:103:ILE:HA	24:d2:112:ASP:HA	1.63	0.78
36:5:412:G:OP1	53:m7:62:ARG:NH1	2.16	0.78
83:f:119:GLU:H	83:f:123:SER:HB3	1.47	0.78
1:2:1793:G:N2	28:D6:76:SER:OG	2.16	0.78
65:N9:14:ARG:HH12	65:N9:18:ARG:HH11	1.31	0.78
36:5:3241:G:H2'	36:5:3245:A:C8	2.19	0.78
36:5:2569:A:H4'	36:5:2570:U:H5'	1.66	0.78
53:m7:111:LYS:HE2	53:m7:152:GLU:HB3	1.66	0.78
1:2:1188:G:O2'	1:2:1430:U:OP1	2.02	0.78
1:6:709:C:O2	1:6:730:G:N2	2.17	0.78
1:2:1595:U:H3	1:2:1600:A:H2	1.31	0.77
36:1:398:A:H5"	53:M7:3:ARG:HD2	1.66	0.77
36:5:1295:G:O2'	56:n0:115:ARG:NH1	2.17	0.77
52:m6:179:ALA:HA	52:m6:182:ASN:HB3	1.66	0.77
70:o4:80:ARG:HG3	70:o4:88:ARG:HH21	1.49	0.77
1:2:930:A:OP1	28:D6:32:LYS:NZ	2.17	0.77
36:1:542:G:H1	36:1:549:U:H3	1.29	0.77
41:L4:269:SER:O	41:L4:271:LYS:N	2.15	0.77
1:6:119:A:N6	1:6:298:C:O2	2.17	0.77
36:1:1553:U:H4'	36:1:1554:U:H5'	1.64	0.77
46:L9:49:ASN:O	46:L9:51:GLN:N	2.18	0.77
53:M7:50:GLN:OE1	53:M7:56:ARG:NH2	2.18	0.77
1:2:1067:C:H5"	3:S1:150:VAL:HG23	1.67	0.77
36:1:709:A:OP1	54:M8:179:ARG:NH2	2.17	0.77
75:o9:23:LEU:O	75:o9:25:GLN:NE2	2.18	0.77
64:N8:6:THR:HG23	64:N8:8:THR:HG23	1.66	0.77
64:n8:19:LYS:HD2	64:n8:25:HIS:HD2	1.50	0.77
40:L3:260:VAL:HG11	40:L3:266:ARG:NH1	2.00	0.77
47:M0:76:MET:HE3	47:M0:148:VAL:HA	1.66	0.77
36:5:1158:A:OP2	44:l7:90:LYS:NZ	2.17	0.77
36:5:2534:G:H1	36:5:2545:C:H42	1.32	0.77
42:L5:22:ARG:NH2	42:L5:28:THR:OG1	2.16	0.77
52:M6:12:LYS:O	56:N0:167:ARG:NH2	2.18	0.77
1:6:57:G:OP2	26:d4:116:LYS:NZ	2.15	0.77
36:1:3245:A:H5'	36:1:3246:G:H5"	1.66	0.77
36:5:2786:G:N2	64:n8:58:MET:SD	2.56	0.77
83:f:132:LYS:HZ2	83:f:134:LEU:HD23	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:23:CYS:SG	28:D6:74:CYS:HB3	2.24	0.76
4:s2:101:VAL:HG22	4:s2:115:ILE:HG22	1.67	0.76
36:1:824:C:H5"	39:L2:21:ARG:HD3	1.66	0.76
46:L9:28:VAL:HG13	46:L9:33:THR:HB	1.66	0.76
13:c1:99:ARG:NH1	25:d3:7:ARG:O	2.18	0.76
64:n8:6:THR:HG23	64:n8:8:THR:HG23	1.68	0.76
36:1:655:C:H2'	36:1:656:A:C8	2.19	0.76
36:1:1940:G:H21	36:1:3362:A:H8	1.32	0.76
13:c1:14:GLN:HB3	13:c1:54:ILE:HG13	1.67	0.76
49:m3:28:GLN:HB3	51:m5:201:ARG:HH11	1.51	0.76
64:n8:47:LYS:O	64:n8:49:HIS:N	2.15	0.76
36:1:939:U:OP2	64:N8:26:ARG:NH2	2.19	0.76
56:n0:4:PHE:HD2	56:n0:104:GLU:HG3	1.49	0.76
41:L4:219:LEU:O	41:L4:221:ASN:N	2.19	0.76
47:M0:174:THR:HG23	47:M0:176:LEU:H	1.49	0.76
1:2:1559:A:H5"	20:C8:135:GLY:HA3	1.68	0.76
36:1:2916:U:H1'	59:N3:44:SER:HB3	1.68	0.76
36:1:3275:U:H5'	69:O3:68:TRP:HZ2	1.49	0.76
39:L2:181:LYS:HE2	39:L2:184:ARG:HE	1.49	0.76
1:2:283:U:H5"	8:S6:188:ARG:HD3	1.68	0.75
8:S6:98:ARG:NH2	8:S6:101:ILE:O	2.18	0.75
48:M1:26:SER:OG	48:M1:27:GLY:N	2.18	0.75
46:L9:38:LEU:HD13	46:L9:71:VAL:HG22	1.67	0.75
36:5:2211:U:H5	36:5:2234:G:H1	1.34	0.75
49:m3:52:ASP:OD1	49:m3:52:ASP:N	2.19	0.75
67:o1:13:THR:HG22	67:o1:72:ARG:HH21	1.51	0.75
36:1:3386:G:OP1	67:O1:10:ARG:NH2	2.19	0.75
2:s0:84:ARG:HH21	2:s0:201:LEU:HA	1.50	0.75
4:s2:56:ILE:HG23	4:s2:61:LEU:HB2	1.67	0.75
67:o1:55:LEU:HB2	67:o1:95:PRO:HD3	1.68	0.75
51:M5:46:ASP:OD1	51:M5:50:ARG:NH2	2.20	0.75
36:1:1318:A:OP1	52:M6:128:ARG:NH1	2.19	0.75
1:6:828:U:H3	1:6:844:A:H61	1.35	0.75
27:d5:71:ILE:HG23	27:d5:73:GLY:H	1.51	0.75
36:5:1949:G:OP1	55:m9:104:ARG:NH1	2.20	0.75
83:f:132:LYS:NZ	83:f:134:LEU:HD23	2.02	0.75
47:m0:41:ALA:O	47:m0:139:ARG:NH2	2.20	0.75
15:C3:72:MET:HE1	15:C3:82:PRO:HD2	1.69	0.75
24:d2:15:ASN:ND2	24:d2:72:CYS:SG	2.60	0.75
36:1:14:U:O4	38:4:136:G:N2	2.19	0.74
36:1:1245:A:H3'	36:1:1246:G:H5"	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1601:G:OP1	21:C9:86:ARG:NH2	2.20	0.74
40:L3:92:TYR:HB2	40:L3:157:VAL:HG22	1.69	0.74
41:L4:82:THR:O	41:L4:84:ARG:N	2.20	0.74
61:N5:73:MET:HE1	61:N5:141:TYR:HD1	1.50	0.74
36:5:3206:C:O2	56:n0:155:ARG:NH1	2.20	0.74
1:2:1484:G:H21	1:2:1606:C:H1'	1.52	0.74
17:c5:123:TYR:OH	20:c8:126:ARG:NH1	2.19	0.74
61:n5:82:LEU:HD11	61:n5:135:ILE:HD11	1.69	0.74
36:1:514:G:N3	41:L4:341:SER:OG	2.20	0.74
37:3:97:A:O4'	44:L7:225:GLN:NE2	2.21	0.74
2:S0:41:ARG:NE	2:S0:42:PRO:O	2.21	0.74
36:1:2771:U:O2'	36:1:2772:C:O4'	2.04	0.74
36:5:283:G:OP2	36:5:285:A:O2'	2.05	0.74
63:n7:33:SER:OG	63:n7:35:SER:O	2.04	0.74
1:2:159:U:O2'	8:S6:87:ARG:NH1	2.21	0.74
11:S9:53:ARG:NH2	11:S9:97:LEU:O	2.21	0.74
12:C0:56:LYS:HB3	12:C0:67:THR:HB	1.70	0.74
36:1:1555:U:H5	36:1:1559:A:H61	1.35	0.74
41:L4:93:MET:H	41:L4:93:MET:HE2	1.52	0.74
42:L5:68:THR:HG22	42:L5:70:THR:H	1.51	0.74
42:L5:107:ARG:HH21	42:L5:110:LEU:HD23	1.52	0.74
1:2:803:A:N3	9:S7:104:ARG:NH2	2.36	0.74
36:1:103:G:OP1	49:M3:70:ARG:NH2	2.21	0.74
45:L8:81:THR:HG21	45:L8:181:LYS:HZ2	1.52	0.74
1:6:753:A:H5'	6:s4:221:ARG:HG3	1.68	0.74
10:s8:84:HIS:NE2	10:s8:97:THR:OG1	2.11	0.74
23:d1:3:ASN:ND2	23:d1:7:GLN:O	2.21	0.74
25:d3:137:LYS:O	25:d3:139:LYS:N	2.20	0.74
36:5:2568:C:N4	36:5:2574:G:O6	2.18	0.74
47:m0:169:LYS:HE3	57:n1:159:PHE:HA	1.68	0.74
6:S4:185:GLY:H	6:S4:189:LEU:HB2	1.51	0.74
1:6:918:U:H2'	1:6:919:A:H8	1.52	0.74
36:5:252:U:H4'	36:5:253:A:H5'	1.70	0.74
1:2:246:G:N2	13:C1:38:ALA:O	2.21	0.73
2:S0:24:LEU:O	2:S0:163:ASN:ND2	2.20	0.73
24:d2:80:ASN:OD1	24:d2:124:LYS:NZ	2.19	0.73
41:l4:26:PHE:HD1	41:l4:130:ALA:HB2	1.52	0.73
1:2:1773:C:OP2	77:Q1:2:ARG:NH1	2.21	0.73
53:M7:40:GLU:HG2	53:M7:42:THR:HG23	1.70	0.73
56:N0:2:ALA:HB3	56:N0:32:SER:HB3	1.70	0.73
6:s4:49:ARG:NH2	6:s4:50:ASN:OD1	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2201:G:H21	39:l2:224:THR:HG21	1.52	0.73
5:S3:190:ARG:HH22	5:S3:195:SER:HA	1.54	0.73
36:1:116:A:OP1	72:O6:36:ARG:NH1	2.21	0.73
36:1:1603:A:OP1	55:M9:38:ARG:NH1	2.21	0.73
40:L3:293:ASN:HB2	40:L3:304:THR:HA	1.68	0.73
47:M0:193:ASP:OD1	47:M0:198:LYS:NZ	2.20	0.73
1:6:224:C:H2'	1:6:225:A:H8	1.53	0.73
36:5:979:U:H1'	36:5:980:A:C4	2.24	0.73
63:n7:46:ILE:HD13	63:n7:68:ILE:HG23	1.68	0.73
1:2:478:A:O2'	11:S9:124:HIS:ND1	2.22	0.73
5:S3:150:MET:HE3	5:S3:152:PHE:HZ	1.52	0.73
7:S5:57:SER:O	7:S5:59:VAL:N	2.20	0.73
53:M7:25:SER:O	53:M7:29:THR:HG23	1.89	0.73
1:6:1502:G:N7	21:c9:102:ARG:NH2	2.37	0.73
1:6:448:C:OP2	6:s4:49:ARG:NH1	2.22	0.73
10:S8:76:THR:HG22	10:S8:108:PRO:HG2	1.69	0.73
67:O1:64:VAL:HG23	67:O1:65:LYS:HG3	1.69	0.73
36:5:1352:A:H4'	36:5:1353:U:OP1	1.88	0.73
41:l4:328:ASN:OD1	44:l7:48:ASN:ND2	2.21	0.73
47:m0:156:ARG:NH1	47:m0:163:GLN:O	2.22	0.73
1:2:761:G:OP1	11:S9:54:ARG:NH1	2.22	0.73
13:C1:91:LEU:HB3	13:C1:100:TYR:HB3	1.69	0.73
22:D0:61:LYS:HB2	22:D0:86:ILE:HB	1.70	0.73
36:1:361:A:O3'	73:O7:45:ARG:NH2	2.22	0.73
36:1:2213:A:H2'	36:1:2214:A:C8	2.24	0.73
38:4:83:C:O2	62:N6:51:ARG:NH2	2.21	0.73
40:L3:41:VAL:HA	40:L3:185:GLY:HA3	1.71	0.73
54:M8:158:HIS:H	54:M8:186:VAL:HG12	1.53	0.73
11:s9:23:ARG:NH1	11:s9:27:GLU:OE2	2.21	0.73
1:2:1777:G:O6	77:Q1:8:LYS:NZ	2.22	0.73
4:S2:179:VAL:O	4:S2:198:THR:OG1	2.06	0.73
18:C6:128:LYS:NZ	18:C6:134:ALA:O	2.22	0.73
36:1:718:G:C2	36:1:721:G:H1'	2.24	0.73
36:1:3366:G:OP1	60:N4:61:LYS:NZ	2.17	0.73
65:N9:47:LEU:HA	65:N9:50:THR:HG22	1.70	0.73
8:S6:163:THR:HG22	8:S6:168:THR:HG22	1.70	0.72
1:6:1595:U:H3	1:6:1600:A:H2	1.35	0.72
4:S2:229:LEU:O	23:D1:16:LYS:NZ	2.22	0.72
16:C4:131:GLY:O	16:C4:133:ARG:N	2.22	0.72
1:6:767:U:H5	11:s9:143:ILE:HD13	1.53	0.72
1:6:1677:C:OP1	10:s8:42:ARG:NH1	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:126:U:OP1	51:m5:144:ARG:NH1	2.21	0.72
36:5:2967:A:H5"	39:l2:213:GLY:HA3	1.71	0.72
39:l2:242:ARG:HD3	39:l2:246:LEU:HD12	1.69	0.72
41:L4:292:SER:OG	41:L4:293:SER:N	2.18	0.72
1:6:159:U:O2'	8:s6:87:ARG:NH1	2.21	0.72
59:n3:3:GLY:HA2	59:n3:40:LYS:HB3	1.70	0.72
1:2:652:G:H1	1:2:682:C:H42	1.35	0.72
56:N0:135:VAL:O	56:N0:141:LYS:NZ	2.22	0.72
62:N6:36:SER:HB3	62:N6:39:LEU:HB2	1.71	0.72
1:6:52:U:H2'	1:6:53:G:H8	1.54	0.72
1:6:472:U:O2'	1:6:769:A:N3	2.22	0.72
11:s9:66:ASP:HB3	11:s9:69:ARG:HB3	1.71	0.72
36:5:1863:G:N1	36:5:1866:C:OP2	2.18	0.72
71:o5:30:GLU:OE1	71:o5:34:GLN:NE2	2.20	0.72
1:2:901:G:OP2	1:2:901:G:N2	2.20	0.72
6:S4:251:GLU:HB3	6:S4:255:ARG:HH12	1.54	0.72
51:M5:144:ARG:HE	71:O5:95:PHE:HE2	1.35	0.72
3:S1:129:THR:HA	3:S1:177:GLN:HA	1.69	0.72
41:L4:25:VAL:HG22	41:L4:262:TRP:HB2	1.72	0.72
14:c2:61:VAL:HG13	14:c2:121:VAL:HG23	1.70	0.72
62:n6:23:PRO:HD2	62:n6:26:GLN:HB2	1.71	0.72
8:S6:164:LYS:HB3	8:S6:167:LYS:HB3	1.69	0.72
36:1:1043:C:O3'	47:M0:90:ARG:NH1	2.23	0.72
36:1:2736:A:OP1	57:N1:92:ARG:NH1	2.22	0.72
40:L3:3:HIS:ND1	40:L3:3:HIS:O	2.21	0.72
1:6:884:A:H2'	1:6:885:G:H8	1.54	0.72
36:5:1639:C:OP2	70:o4:74:ARG:NH2	2.23	0.72
4:S2:56:ILE:HA	4:S2:61:LEU:HD12	1.70	0.72
40:L3:166:ILE:HD13	40:L3:173:GLN:HG2	1.71	0.72
46:L9:112:ILE:HD11	46:L9:134:ILE:HD13	1.71	0.72
71:O5:85:THR:HG22	71:O5:87:ALA:H	1.53	0.72
1:6:4:C:O2'	11:s9:17:ARG:NH1	2.22	0.72
1:6:1000:C:N4	1:6:1003:A:OP2	2.17	0.72
4:s2:56:ILE:HA	4:s2:61:LEU:HD12	1.70	0.72
44:l7:140:SER:HB2	44:l7:143:THR:H	1.54	0.72
64:n8:29:PRO:O	64:n8:31:GLY:N	2.22	0.72
38:4:135:G:H5"	61:N5:49:LYS:HD2	1.72	0.72
42:L5:58:LYS:HD2	42:L5:93:THR:HG21	1.72	0.72
63:N7:127:ASN:O	63:N7:129:TRP:N	2.23	0.72
67:O1:10:ARG:HE	67:O1:108:VAL:HG22	1.52	0.72
36:1:40:A:H5"	64:N8:35:ALA:HB1	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1563:C:O2	36:1:1577:G:N2	2.23	0.72
43:l6:55:LEU:HD11	43:l6:66:SER:HB2	1.72	0.72
5:S3:164:VAL:HG13	5:S3:168:ILE:HD11	1.72	0.71
18:C6:50:GLU:OE2	18:C6:82:ARG:NH2	2.23	0.71
36:1:2345:A:OP1	67:O1:24:SER:OG	2.07	0.71
1:6:68:A:H5'	8:s6:160:ARG:HH12	1.55	0.71
8:s6:131:LYS:HB2	60:n4:82:ILE:HG12	1.71	0.71
36:5:618:C:O2'	36:5:621:A:N3	2.23	0.71
36:5:942:U:N3	64:n8:16:SER:HA	2.03	0.71
41:l4:141:ARG:C	41:l4:143:GLU:H	1.98	0.71
1:2:885:G:H21	16:C4:123:SER:HB2	1.53	0.71
36:1:224:C:O2	62:N6:103:LYS:NZ	2.23	0.71
42:L5:177:GLU:O	42:L5:179:ARG:N	2.22	0.71
46:L9:87:LYS:HD3	46:L9:89:LYS:HE3	1.72	0.71
47:M0:5:PRO:O	47:M0:7:ARG:N	2.22	0.71
55:M9:13:SER:OG	55:M9:38:ARG:NH2	2.22	0.71
2:s0:65:ALA:O	2:s0:67:ILE:N	2.22	0.71
16:c4:90:ARG:O	16:c4:92:LYS:N	2.21	0.71
25:d3:125:VAL:HG12	25:d3:126:LYS:HG3	1.72	0.71
36:5:3242:G:H5'	36:5:3245:A:H8	1.54	0.71
1:2:1459:C:OP1	20:C8:126:ARG:NH2	2.23	0.71
36:1:3194:C:O2	36:1:3197:G:N2	2.18	0.71
47:M0:140:THR:HG21	47:M0:144:ASN:HD22	1.56	0.71
49:M3:140:SER:OG	49:M3:143:ALA:N	2.21	0.71
43:L6:31:ARG:NH1	69:O3:107:ILE:O	2.23	0.71
33:e1:91:ILE:HG12	33:e1:92:LYS:HG2	1.72	0.71
7:S5:145:ASP:OD1	30:D8:45:LYS:NZ	2.22	0.71
21:C9:31:PRO:HG3	21:C9:103:LYS:HD3	1.71	0.71
35:SM:64:LYS:O	35:SM:66:ALA:N	2.21	0.71
48:M1:85:LYS:NZ	48:M1:89:TYR:OH	2.24	0.71
24:d2:9:ASP:N	24:d2:9:ASP:OD1	2.22	0.71
36:5:198:A:N3	36:5:218:G:O2'	2.23	0.71
36:5:1833:G:OP1	75:o9:10:LYS:NZ	2.23	0.71
50:m4:37:GLU:OE2	50:m4:74:ARG:NH2	2.23	0.71
36:1:2353:G:H5"	53:M7:86:LYS:HB2	1.72	0.71
51:m5:31:ARG:NH1	51:m5:124:ASP:OD1	2.23	0.71
1:2:1122:G:N2	1:2:1125:A:OP2	2.23	0.71
16:C4:86:THR:HG21	16:C4:90:ARG:HD2	1.72	0.71
44:L7:88:ARG:HG2	44:L7:111:ILE:HA	1.73	0.71
1:6:1252:C:H5'	33:e1:103:LEU:HD11	1.71	0.71
13:c1:101:GLU:OE2	25:d3:16:ARG:NH2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:f:20:PRO:HA	83:f:81:GLU:HA	1.70	0.71
36:5:496:C:O2	36:5:617:G:N2	2.18	0.71
36:5:3068:U:OP2	55:m9:62:ARG:NH2	2.23	0.71
11:S9:108:ARG:HH21	11:S9:145:SER:HB2	1.55	0.71
36:1:2203:U:H4'	39:L2:241:ARG:HA	1.71	0.71
36:1:2828:G:OP1	47:M0:7:ARG:NH1	2.23	0.71
1:6:475:A:OP2	11:s9:126:ARG:NH1	2.23	0.71
1:6:591:A:H2'	1:6:592:A:C8	2.26	0.71
1:6:1796:C:O2'	28:d6:95:ARG:NH1	2.23	0.71
36:5:2449:A:H2'	36:5:2450:G:H8	1.55	0.71
36:5:2880:U:H1'	40:l3:250:ALA:HB3	1.73	0.71
1:2:1473:U:O2'	7:S5:103:ASN:ND2	2.23	0.71
36:1:3343:G:H21	36:1:3362:A:H2	1.38	0.71
75:O9:10:LYS:HA	75:O9:13:MET:HE3	1.71	0.71
1:6:158:U:O2'	1:6:160:C:OP2	2.08	0.71
16:c4:97:GLY:O	16:c4:99:GLN:N	2.24	0.71
43:l6:31:ARG:NH1	69:o3:107:ILE:O	2.24	0.71
6:S4:103:TYR:O	6:S4:182:TYR:OH	2.08	0.70
36:1:3344:A:H2	36:1:3361:G:H21	1.37	0.70
5:s3:223:LYS:HD3	34:sR:193:ILE:HD13	1.72	0.70
7:s5:166:ARG:HA	7:s5:169:ASN:HB2	1.73	0.70
68:o2:19:ARG:HH11	68:o2:28:VAL:HG13	1.54	0.70
22:D0:106:ILE:HG23	22:D0:107:THR:HG23	1.73	0.70
36:1:2880:U:H1'	40:L3:250:ALA:HB3	1.72	0.70
4:s2:170:ILE:HB	4:s2:197:TYR:HB2	1.73	0.70
16:c4:20:TYR:HB3	16:c4:27:PHE:HB2	1.72	0.70
36:5:598:A:OP1	44:l7:41:ARG:NH1	2.24	0.70
36:5:1747:G:H21	74:o8:2:ALA:HA	1.56	0.70
40:l3:138:ALA:O	40:l3:140:ASP:N	2.24	0.70
7:S5:37:GLN:HB3	18:C6:53:LEU:HD22	1.73	0.70
46:L9:138:THR:O	46:L9:139:ASN:ND2	2.24	0.70
65:N9:59:LYS:H	65:N9:59:LYS:HD3	1.57	0.70
70:O4:46:ASP:OD1	70:O4:80:ARG:NH1	2.23	0.70
23:d1:60:ARG:HA	23:d1:65:SER:HB2	1.73	0.70
42:l5:40:HIS:HE1	42:l5:42:ALA:HB3	1.55	0.70
36:1:2177:G:OP2	39:L2:128:ARG:NH1	2.25	0.70
36:1:3272:C:OP2	43:L6:78:ARG:NH1	2.23	0.70
32:e0:13:LYS:HE2	32:e0:17:GLN:HE22	1.57	0.70
34:sR:178:VAL:HB	34:sR:192:PHE:HB2	1.73	0.70
42:l5:85:ARG:HH12	42:l5:254:LYS:H	1.39	0.70
58:n2:54:VAL:HG13	58:n2:67:SER:HB2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:o4:87:GLU:OE1	70:o4:91:ARG:NH1	2.24	0.70
23:D1:39:VAL:HA	23:D1:45:ALA:HA	1.73	0.70
48:M1:6:GLN:O	48:M1:7:ASN:ND2	2.25	0.70
3:S1:123:ALA:HB2	3:S1:165:ARG:HG2	1.74	0.70
36:1:2818:U:H6	36:1:2818:U:H5'	1.55	0.70
36:1:2898:G:N7	76:Q0:125:LYS:NZ	2.37	0.70
45:L8:50:VAL:HG12	61:N5:30:ALA:HA	1.73	0.70
79:Q3:72:SER:OG	79:Q3:80:ARG:NH2	2.23	0.70
1:6:687:G:H5"	24:d2:119:LYS:HG2	1.74	0.70
36:5:1141:C:O2'	36:5:1153:A:N3	2.25	0.70
4:S2:153:SER:OG	4:S2:154:LEU:N	2.19	0.70
44:L7:107:ARG:HH21	44:L7:200:ASN:HA	1.57	0.70
58:N2:50:LEU:HB3	58:N2:54:VAL:HG23	1.73	0.70
1:6:1795:U:OP2	28:d6:4:LYS:NZ	2.24	0.70
15:c3:76:LYS:HA	15:c3:81:ALA:HB2	1.74	0.70
36:5:3214:U:OP2	50:m4:128:ARG:NH2	2.24	0.70
11:S9:81:VAL:HG21	11:S9:91:LYS:HE3	1.73	0.70
17:C5:130:ARG:HH11	17:C5:130:ARG:H	1.40	0.70
27:D5:43:ASP:O	27:D5:46:LYS:N	2.24	0.70
36:1:2986:U:H2'	36:1:2987:A:C8	2.27	0.70
45:L8:140:VAL:HG22	45:L8:166:LEU:HD21	1.74	0.70
51:M5:47:LYS:HE3	51:M5:51:LEU:HD11	1.74	0.70
1:6:71:A:OP2	8:s6:164:LYS:NZ	2.18	0.70
1:6:868:G:H1	1:6:960:U:H3	1.37	0.70
59:n3:54:LEU:HD21	59:n3:119:GLY:HA3	1.74	0.70
59:n3:66:LYS:HD2	59:n3:68:GLU:HB2	1.74	0.70
9:S7:154:LEU:HD21	9:S7:183:PHE:HD1	1.56	0.70
13:C1:77:SER:HB3	13:C1:85:VAL:HB	1.72	0.70
36:1:1097:G:H5'	57:N1:129:LYS:HE3	1.73	0.70
1:6:151:G:H1	1:6:163:G:H1	1.39	0.70
11:s9:113:VAL:HG12	11:s9:119:ALA:HB2	1.71	0.70
13:c1:125:VAL:HG12	13:c1:139:VAL:HA	1.73	0.70
42:l5:64:ILE:HD13	42:l5:144:VAL:HG21	1.72	0.70
59:n3:87:ARG:HH22	59:n3:137:VAL:HG22	1.56	0.70
7:S5:64:VAL:HG12	7:S5:65:ARG:HD3	1.74	0.70
1:6:1398:U:O2'	19:c7:67:ARG:NH2	2.22	0.70
1:6:1588:G:H1	1:6:1608:U:H3	1.39	0.70
34:sR:159:ASN:O	34:sR:161:LYS:N	2.24	0.70
83:f:101:SER:HB3	83:f:102:LEU:HA	1.74	0.70
1:6:207:U:O2	10:s8:178:ARG:NH1	2.25	0.69
1:6:1553:G:O6	17:c5:43:ARG:NH1	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1952:G:H1	36:5:2094:C:H42	1.40	0.69
49:m3:46:ILE:HG22	49:m3:49:ARG:HB2	1.74	0.69
15:C3:55:ARG:NH1	15:C3:56:ASP:OD2	2.25	0.69
36:1:436:A:H2'	36:1:437:G:O4'	1.93	0.69
10:s8:5:ARG:NH1	10:s8:29:LEU:O	2.23	0.69
16:c4:50:ALA:O	16:c4:52:ARG:N	2.25	0.69
36:5:655:C:H2'	36:5:656:A:H8	1.58	0.69
54:m8:71:LEU:HD13	54:m8:99:THR:HG21	1.73	0.69
1:2:320:U:H2'	1:2:321:C:H2'	1.74	0.69
9:S7:78:THR:HA	9:S7:81:LEU:HB2	1.74	0.69
36:1:595:G:H1	36:1:609:G:H5"	1.56	0.69
36:1:1308:A:C8	36:1:1308:A:OP2	2.45	0.69
38:4:136:G:OP1	61:N5:48:SER:OG	2.06	0.69
43:L6:175:LYS:O	50:M4:117:ARG:NH2	2.25	0.69
1:6:1160:A:H2'	1:6:1161:C:C6	2.27	0.69
6:S4:199:GLU:OE2	6:S4:209:HIS:NE2	2.24	0.69
8:S6:57:ASP:HA	8:S6:106:LEU:HA	1.74	0.69
47:M0:102:MET:HE1	47:M0:114:GLY:HA2	1.74	0.69
54:M8:71:LEU:HD13	54:M8:99:THR:HG21	1.74	0.69
1:6:52:U:H2'	1:6:53:G:C8	2.28	0.69
1:6:1097:U:H4'	1:6:1098:U:H5'	1.75	0.69
1:6:1534:G:OP2	27:d5:74:SER:OG	2.07	0.69
1:6:1600:A:H4'	1:6:1601:G:OP1	1.92	0.69
6:S4:199:GLU:HB2	6:S4:207:LEU:HB2	1.73	0.69
42:L5:50:ARG:NH1	42:L5:72:ASP:OD2	2.25	0.69
65:N9:23:LYS:HD2	65:N9:24:PRO:HD3	1.72	0.69
67:O1:44:MET:HE3	67:O1:77:ARG:HB2	1.74	0.69
44:l7:134:VAL:O	44:l7:229:PHE:HA	1.92	0.69
15:C3:27:LYS:H	15:C3:27:LYS:HE3	1.57	0.69
20:C8:130:GLY:O	20:C8:145:ARG:NH1	2.25	0.69
55:M9:176:ARG:HA	55:M9:179:GLU:HB2	1.75	0.69
58:N2:56:VAL:HG13	58:N2:65:VAL:HG22	1.75	0.69
1:6:235:G:H2'	1:6:236:A:H8	1.57	0.69
56:n0:6:GLU:OE1	56:n0:99:ARG:NH2	2.20	0.69
5:S3:117:ARG:HE	35:SM:122:GLU:HB3	1.57	0.69
17:C5:30:THR:HG23	17:C5:86:VAL:HG21	1.73	0.69
47:M0:189:GLU:OE1	47:M0:202:LYS:NZ	2.21	0.69
1:6:479:C:O2	1:6:510:G:N2	2.26	0.69
1:6:761:G:O2'	11:s9:72:GLU:OE2	2.10	0.69
1:6:1067:C:H5"	3:s1:150:VAL:HG23	1.73	0.69
36:5:943:U:H3'	64:n8:13:GLY:HA2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2537:U:O2'	36:5:2538:U:O4'	2.10	0.69
73:o7:14:LYS:HD3	75:o9:51:ILE:HG13	1.75	0.69
81:p0:25:LEU:HB3	81:p0:191:TYR:HB3	1.74	0.69
1:2:1076:A:H4'	28:D6:13:LYS:HD3	1.74	0.69
18:C6:82:ARG:HH12	18:C6:114:ARG:HB3	1.56	0.69
30:D8:42:ARG:HH22	30:D8:58:GLU:HG3	1.55	0.69
46:L9:98:PRO:O	46:L9:116:ASN:ND2	2.25	0.69
46:L9:172:ILE:HD13	46:L9:172:ILE:H	1.58	0.69
1:6:374:U:OP1	13:c1:96:LYS:NZ	2.24	0.69
2:s0:30:GLN:HE22	2:s0:32:HIS:HB2	1.57	0.69
4:s2:41:LEU:HD23	4:s2:240:LEU:HD11	1.73	0.69
36:5:1231:A:H5"	36:5:1232:C:H5'	1.75	0.69
37:7:121:U:H5"	42:l5:265:TYR:HE1	1.58	0.69
41:l4:287:THR:O	41:l4:291:ASN:ND2	2.26	0.69
73:o7:21:ARG:NH2	73:o7:41:ALA:O	2.25	0.69
1:2:1387:G:N7	19:C7:44:LYS:NZ	2.40	0.69
1:2:1550:A:OP2	17:C5:42:ARG:NH2	2.25	0.69
6:S4:104:ASP:OD1	6:S4:104:ASP:N	2.26	0.69
36:1:691:A:N1	38:4:28:C:O2'	2.20	0.69
49:M3:153:ASP:OD1	49:M3:157:ARG:NH2	2.25	0.69
34:sR:156:VAL:HA	34:sR:169:ILE:HG22	1.74	0.69
36:5:209:A:H4'	36:5:211:A:C8	2.27	0.69
33:E1:139:LEU:HD13	33:E1:151:ASN:HA	1.75	0.69
36:1:113:C:OP1	51:M5:147:ARG:NE	2.21	0.69
46:L9:126:VAL:HG21	46:L9:161:LEU:HA	1.75	0.69
51:M5:31:ARG:NH1	51:M5:124:ASP:OD1	2.25	0.69
1:6:845:G:H2'	1:6:846:G:H8	1.56	0.69
47:m0:205:SER:OG	47:m0:208:ASN:OD1	2.10	0.69
15:C3:73:ARG:O	15:C3:77:SER:OG	2.11	0.68
36:1:595:G:N1	36:1:609:G:H5"	2.08	0.68
37:3:89:G:N2	37:3:92:A:OP2	2.26	0.68
38:4:84:C:O3'	62:N6:113:LYS:NZ	2.25	0.68
4:s2:78:ASP:HB3	4:s2:104:VAL:HG12	1.74	0.68
21:c9:33:TYR:O	21:c9:35:ASP:N	2.23	0.68
25:d3:51:GLY:HA2	25:d3:77:ILE:HG13	1.74	0.68
22:D0:69:LYS:HG2	22:D0:80:GLU:HB2	1.75	0.68
59:N3:40:LYS:HD3	59:N3:59:MET:HE2	1.75	0.68
36:5:2499:U:H2'	36:5:2500:A:H8	1.57	0.68
36:5:2812:C:H2'	36:5:2813:A:C8	2.27	0.68
41:l4:300:ARG:O	54:m8:39:ARG:NH1	2.25	0.68
36:1:2171:G:N2	39:L2:11:GLY:O	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:N2:54:VAL:HG12	58:N2:67:SER:HA	1.76	0.68
36:5:2714:G:N3	36:5:2714:G:H5"	2.08	0.68
1:2:58:U:O2'	1:2:451:A:N3	2.25	0.68
1:2:458:G:OP1	26:D4:109:LYS:NZ	2.27	0.68
1:2:535:A:OP2	11:S9:171:ARG:NH2	2.24	0.68
14:C2:67:THR:HG22	14:C2:68:GLU:HG3	1.74	0.68
71:O5:92:LEU:HB3	71:O5:96:GLU:HB2	1.75	0.68
36:5:1100:U:O2'	44:l7:105:LEU:O	2.10	0.68
36:5:1471:U:OP1	55:m9:5:ARG:NH1	2.24	0.68
49:m3:129:ASN:HB2	49:m3:131:LYS:HE3	1.75	0.68
56:n0:13:ARG:HE	56:n0:51:VAL:HG22	1.57	0.68
20:c8:50:ALA:O	20:c8:68:ARG:NH1	2.26	0.68
63:n7:47:GLU:HB2	63:n7:69:LYS:HG2	1.75	0.68
3:S1:171:ILE:HD12	3:S1:197:ILE:HD13	1.74	0.68
16:C4:85:ALA:H	16:C4:119:THR:HG22	1.59	0.68
36:1:1389:G:H5"	68:O2:101:SER:HB3	1.75	0.68
44:L7:102:VAL:HG13	44:L7:126:LEU:HD23	1.74	0.68
48:M1:49:LYS:HB3	48:M1:62:ASN:HA	1.74	0.68
79:Q3:46:THR:HB	79:Q3:58:SER:HB2	1.75	0.68
40:l3:37:ARG:HG2	40:l3:187:SER:H	1.57	0.68
1:2:1561:U:H2'	1:2:1562:G:H8	1.58	0.68
1:2:1767:G:OP2	1:2:1770:U:O2'	2.11	0.68
41:L4:158:SER:O	41:L4:160:GLN:NE2	2.27	0.68
1:6:75:U:O2'	1:6:76:A:O4'	2.12	0.68
1:6:393:C:OP2	10:s8:2:GLY:N	2.27	0.68
3:s1:85:LYS:HB3	3:s1:101:HIS:HB3	1.76	0.68
36:5:1722:U:H5"	55:m9:99:LEU:HD12	1.73	0.68
36:5:2213:A:H2'	36:5:2214:A:C8	2.29	0.68
40:l3:47:LEU:HG	40:l3:335:ILE:HD11	1.74	0.68
47:m0:150:GLU:O	47:m0:153:ARG:N	2.27	0.68
49:m3:126:PHE:O	71:o5:114:ARG:NH2	2.23	0.68
71:o5:79:ASP:OD1	71:o5:79:ASP:N	2.27	0.68
34:SR:180:ALA:HB3	34:SR:190:ALA:HB3	1.74	0.68
36:1:3166:C:H42	36:1:3284:G:H1	1.41	0.68
49:M3:56:PRO:HG3	49:M3:74:GLY:O	1.94	0.68
78:Q2:17:CYS:CB	78:Q2:77:CYS:SG	2.81	0.68
1:6:1305:U:OP2	1:6:1306:C:N4	2.27	0.68
1:6:1347:U:OP2	22:d0:23:ARG:NH2	2.26	0.68
6:s4:117:GLU:O	6:s4:119:ALA:N	2.25	0.68
36:5:607:A:OP1	43:l6:26:ARG:NH2	2.27	0.68
36:5:838:G:O6	79:q3:4:ARG:NH2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:339:C:OP2	10:S8:10:LYS:NZ	2.26	0.68
66:O0:42:ILE:HG13	66:O0:67:VAL:HG13	1.76	0.68
3:s1:157:GLN:O	3:s1:159:SER:N	2.27	0.68
8:s6:10:ASN:ND2	8:s6:127:THR:O	2.25	0.68
17:c5:15:HIS:H	17:c5:22:LEU:HD22	1.59	0.68
42:l5:83:LEU:HB3	42:l5:88:ILE:HB	1.74	0.68
50:m4:21:VAL:HG12	50:m4:65:LEU:HA	1.75	0.68
52:m6:36:VAL:HB	52:m6:108:ILE:HG22	1.76	0.68
45:L8:43:LYS:HD2	61:N5:28:THR:HB	1.75	0.68
1:6:884:A:H2'	1:6:885:G:C8	2.28	0.68
36:5:1348:U:OP2	54:m8:38:ARG:NH2	2.27	0.68
36:1:1786:G:H2'	36:1:1787:A:C8	2.29	0.67
64:N8:6:THR:HG22	64:N8:9:ARG:HG2	1.76	0.67
1:2:1251:U:H5'	33:E1:135:HIS:HD2	1.58	0.67
9:S7:17:GLU:HG2	9:S7:46:ILE:HG22	1.76	0.67
11:S9:27:GLU:HB3	11:S9:39:LYS:HD2	1.75	0.67
11:S9:110:GLN:HE22	11:S9:126:ARG:HG2	1.58	0.67
63:N7:16:GLY:O	63:N7:18:TYR:N	2.28	0.67
41:l4:60:THR:HG22	41:l4:62:ALA:H	1.59	0.67
47:m0:174:THR:OG1	47:m0:175:ASN:O	2.10	0.67
55:m9:11:ALA:HA	55:m9:41:ILE:HG21	1.76	0.67
70:o4:38:LEU:H	70:o4:38:LEU:HD12	1.59	0.67
25:D3:70:LYS:HB3	25:D3:93:LEU:HD22	1.76	0.67
36:1:284:A:OP2	78:Q2:41:ARG:NH1	2.27	0.67
1:6:79:C:OP1	8:s6:159:ARG:NH2	2.25	0.67
3:s1:48:VAL:HG21	3:s1:61:LEU:HD22	1.75	0.67
4:s2:37:PRO:HG3	4:s2:46:LYS:HD2	1.76	0.67
11:s9:61:THR:HA	24:d2:97:ARG:HH12	1.58	0.67
16:c4:25:ASP:OD1	16:c4:26:THR:N	2.27	0.67
34:sR:82:SER:OG	34:sR:92:TRP:NE1	2.23	0.67
6:S4:180:LEU:HA	6:S4:194:THR:HA	1.77	0.67
36:1:751:A:H2'	36:1:752:C:H6	1.60	0.67
36:1:1721:U:OP2	55:M9:124:TYR:OH	2.13	0.67
40:L3:50:LYS:HG2	40:L3:332:ARG:HA	1.76	0.67
41:L4:3:ARG:O	41:L4:5:GLN:N	2.28	0.67
57:N1:78:LYS:HB3	57:N1:87:LYS:HG3	1.77	0.67
1:6:629:U:OP1	15:c3:127:ARG:NH2	2.17	0.67
1:6:891:A:H2'	1:6:892:A:C8	2.29	0.67
1:6:1773:C:OP2	77:q1:2:ARG:NH1	2.28	0.67
36:5:1214:U:OP2	56:n0:137:ARG:NH2	2.27	0.67
50:m4:16:GLU:HB3	56:n0:149:LYS:HB3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:145:A:O2'	1:2:146:U:O5'	2.12	0.67
1:2:1253:U:H5"	33:E1:130:VAL:HB	1.76	0.67
20:C8:13:HIS:HA	20:C8:24:GLY:HA3	1.75	0.67
26:D4:124:ARG:HA	26:D4:127:LYS:HG2	1.76	0.67
36:1:542:G:H2'	36:1:543:C:C6	2.29	0.67
36:1:2759:U:H5"	36:1:2760:C:H5'	1.75	0.67
49:M3:108:ILE:O	49:M3:112:ASN:ND2	2.27	0.67
6:s4:18:TRP:O	6:s4:51:ARG:NH2	2.18	0.67
35:sM:43:ASP:OD1	35:sM:45:SER:OG	2.10	0.67
83:f:100:LEU:HD13	83:f:102:LEU:HD21	1.76	0.67
25:D3:109:ARG:HB3	25:D3:112:LYS:HB2	1.77	0.67
41:L4:338:LYS:O	41:L4:340:GLY:N	2.28	0.67
68:O2:69:SER:OG	68:O2:70:GLY:N	2.24	0.67
36:5:2174:G:OP2	39:l2:193:ARG:NH1	2.27	0.67
37:7:44:C:OP2	48:m1:137:ARG:NH2	2.27	0.67
41:l4:141:ARG:O	41:l4:143:GLU:N	2.28	0.67
2:S0:184:LEU:HD12	23:D1:45:ALA:HB2	1.77	0.67
49:M3:46:ILE:HG22	49:M3:49:ARG:HB3	1.77	0.67
50:M4:55:ARG:NH2	50:M4:76:ALA:O	2.28	0.67
75:O9:9:ILE:HG22	75:O9:13:MET:HE2	1.76	0.67
36:5:997:A:O2'	37:7:79:A:N3	2.28	0.67
36:5:1682:U:O2	58:n2:82:LYS:NZ	2.28	0.67
41:l4:354:VAL:HG11	57:n1:143:THR:HG21	1.77	0.67
53:m7:111:LYS:HA	53:m7:153:LYS:HE2	1.77	0.67
71:o5:85:THR:HG22	71:o5:88:LEU:H	1.58	0.67
26:D4:83:LYS:HE2	26:D4:96:LEU:HB3	1.76	0.67
36:1:3067:C:OP1	55:M9:58:HIS:NE2	2.19	0.67
16:c4:47:LYS:NZ	16:c4:66:ASP:OD1	2.28	0.67
44:l7:103:LEU:HA	44:l7:130:ILE:HD11	1.76	0.67
36:1:900:G:H1'	36:1:1589:A:N6	2.10	0.67
36:1:976:U:OP1	54:M8:144:ARG:NH2	2.27	0.67
36:1:3094:A:H2'	36:1:3095:U:C6	2.30	0.67
45:L8:115:ALA:O	45:L8:117:ALA:N	2.26	0.67
1:6:472:U:H5"	11:s9:11:THR:HG23	1.77	0.67
1:6:1234:A:H4'	33:e1:146:SER:HB3	1.75	0.67
11:s9:109:LEU:HB2	11:s9:146:PHE:HB3	1.75	0.67
36:5:900:G:H1'	36:5:1589:A:N6	2.10	0.67
1:2:1235:C:H5'	33:E1:146:SER:HB2	1.77	0.67
9:S7:73:VAL:O	9:S7:75:THR:N	2.28	0.67
18:C6:13:LYS:HD2	18:C6:76:SER:HA	1.77	0.67
36:1:655:C:H2'	36:1:656:A:H8	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:801:A:OP1	64:N8:27:LYS:NZ	2.27	0.67
63:N7:88:ASP:HB3	63:N7:121:ARG:HH22	1.60	0.67
64:N8:96:LYS:O	64:N8:98:THR:N	2.27	0.67
24:d2:94:LEU:HD11	24:d2:102:VAL:HG23	1.76	0.67
36:5:113:C:OP1	51:m5:147:ARG:NH2	2.28	0.67
36:5:985:U:H5"	44:l7:98:LYS:HD2	1.77	0.67
36:5:2988:C:OP1	52:m6:65:ASN:ND2	2.26	0.67
40:l3:147:GLU:OE2	40:l3:150:ARG:NH1	2.28	0.67
69:o3:67:MET:HE1	69:o3:87:ASN:HB2	1.76	0.67
1:2:853:G:N7	55:M9:173:ARG:NH2	2.43	0.66
3:S1:131:ASP:O	3:S1:133:TYR:N	2.28	0.66
25:D3:68:ILE:O	25:D3:70:LYS:NZ	2.28	0.66
36:1:994:G:H3'	57:N1:13:TYR:CD2	2.30	0.66
38:4:22:U:OP1	62:N6:12:ARG:NH2	2.26	0.66
61:N5:47:ALA:HB3	71:O5:77:PRO:HG3	1.78	0.66
1:6:67:A:O2'	1:6:69:G:OP1	2.09	0.66
1:6:800:U:H2'	1:6:801:G:C8	2.30	0.66
3:s1:129:THR:OG1	3:s1:131:ASP:O	2.10	0.66
32:e0:12:GLY:O	32:e0:16:SER:OG	2.12	0.66
36:5:149:U:OP2	51:m5:49:ARG:NH1	2.28	0.66
69:o3:13:HIS:NE2	69:o3:28:SER:OG	2.27	0.66
76:q0:77:ILE:HG23	76:q0:78:ILE:HG22	1.77	0.66
1:2:2:A:O2'	4:S2:198:THR:O	2.12	0.66
1:2:778:G:H2'	1:2:779:U:H2'	1.76	0.66
1:2:1018:U:H2'	1:2:1019:A:H8	1.60	0.66
36:1:2660:G:O3'	36:1:2749:G:N2	2.28	0.66
41:L4:35:VAL:HG21	41:L4:244:LEU:HD21	1.77	0.66
4:s2:164:SER:OG	4:s2:165:VAL:N	2.28	0.66
13:c1:124:THR:HB	13:c1:141:LYS:HB3	1.77	0.66
6:S4:124:GLY:HA2	6:S4:142:HIS:CE1	2.30	0.66
36:1:2193:U:H5'	36:1:2194:G:H5'	1.75	0.66
36:1:2687:G:OP1	42:L5:8:LYS:NZ	2.27	0.66
50:M4:21:VAL:HG12	50:M4:65:LEU:HA	1.77	0.66
52:M6:3:VAL:HG13	52:M6:4:GLU:HG3	1.77	0.66
1:6:478:A:OP1	32:e0:37:ARG:NH1	2.28	0.66
1:6:778:G:OP2	1:6:780:A:N6	2.28	0.66
22:d0:21:LYS:HB3	22:d0:94:GLU:HG2	1.78	0.66
36:5:115:A:OP1	51:m5:49:ARG:NH2	2.29	0.66
20:C8:120:ARG:NH2	35:SM:58:GLU:OE1	2.28	0.66
36:1:1598:G:OP2	70:O4:31:ARG:NH2	2.29	0.66
36:1:1613:A:OP2	74:O8:46:ARG:NH2	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:N5:100:LYS:HE3	61:N5:106:ASP:HA	1.76	0.66
1:6:800:U:H2'	1:6:801:G:H8	1.60	0.66
10:s8:61:GLU:HG2	10:s8:62:THR:HG23	1.77	0.66
44:l7:110:ARG:HD2	54:m8:3:ILE:HG23	1.77	0.66
2:S0:140:ASN:ND2	4:S2:60:SER:O	2.29	0.66
44:L7:125:GLU:OE2	44:L7:128:LYS:NZ	2.28	0.66
45:L8:162:LEU:HA	51:M5:7:LEU:HD11	1.77	0.66
1:6:778:G:N2	1:6:780:A:H5'	2.11	0.66
2:S0:134:LYS:O	2:S0:137:SER:OG	2.11	0.66
11:S9:3:ARG:H	11:S9:3:ARG:HH21	1.41	0.66
36:1:352:A:H61	36:1:365:A:H5"	1.60	0.66
64:N8:36:GLY:HA3	64:N8:40:HIS:CE1	2.30	0.66
36:5:2853:A:H5'	47:m0:63:GLU:HB2	1.76	0.66
4:S2:47:ALA:O	4:S2:49:LYS:N	2.29	0.66
15:C3:136:PRO:HG2	15:C3:139:TRP:HB2	1.77	0.66
23:D1:3:ASN:HD21	23:D1:7:GLN:HB3	1.61	0.66
36:1:528:U:H2'	36:1:529:A:C8	2.30	0.66
36:1:1665:C:H2'	36:1:1666:G:H8	1.59	0.66
1:6:907:A:N3	1:6:997:G:O2'	2.23	0.66
1:6:1039:A:O2'	1:6:1040:G:O5'	2.14	0.66
1:6:1431:C:O2'	1:6:1437:U:O4	2.08	0.66
1:2:1657:U:H4'	1:2:1658:G:O5'	1.96	0.66
5:S3:141:LYS:HE2	5:S3:180:GLY:HA3	1.78	0.66
9:S7:83:LYS:HE3	9:S7:84:LYS:HE2	1.77	0.66
23:D1:21:ASN:OD1	24:D2:23:ARG:NH2	2.27	0.66
40:L3:3:HIS:O	40:L3:5:LYS:N	2.28	0.66
46:L9:171:ASP:OD2	46:L9:173:ARG:NH1	2.28	0.66
59:N3:6:ALA:HB1	59:N3:125:LEU:HD11	1.76	0.66
59:N3:101:VAL:HG11	59:N3:114:ILE:HG12	1.78	0.66
63:N7:14:VAL:HG12	63:N7:15:ARG:HG3	1.76	0.66
1:6:354:C:H5"	10:s8:16:ALA:HB2	1.78	0.66
1:6:1711:C:H2'	1:6:1712:A:H5"	1.78	0.66
4:s2:163:GLY:O	4:s2:165:VAL:N	2.29	0.66
62:n6:27:ARG:HA	62:n6:30:LEU:HD12	1.78	0.66
34:SR:13:LEU:HB2	34:SR:310:ILE:HB	1.77	0.66
36:1:1230:G:H1	36:1:1279:C:H42	1.44	0.66
36:1:1355:A:H5"	36:1:1356:U:H5	1.61	0.66
36:1:2228:A:H2'	36:1:2229:A:C8	2.31	0.66
40:L3:56:ILE:HD13	40:L3:76:VAL:HG21	1.76	0.66
1:6:485:A:N6	1:6:486:G:N3	2.44	0.66
1:6:895:G:H1	1:6:917:U:H3	1.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:d0:41:ILE:HG13	22:d0:107:THR:HG21	1.78	0.66
36:5:1103:A:H5"	36:5:1104:G:OP2	1.95	0.66
39:l2:206:PRO:HG3	39:l2:213:GLY:HA2	1.77	0.66
47:m0:170:LYS:HA	47:m0:177:ASP:HA	1.77	0.66
83:f:21:MET:N	83:f:80:MET:O	2.25	0.66
1:2:7:G:N7	4:S2:205:ARG:NH1	2.43	0.66
1:2:115:G:OP1	13:C1:67:ARG:NH1	2.29	0.66
10:S8:192:TYR:O	10:S8:196:LEU:HB2	1.96	0.66
30:D8:15:VAL:HA	30:D8:28:VAL:HG22	1.76	0.66
36:1:2261:G:O2'	36:1:2263:C:N4	2.29	0.66
36:1:2895:G:O2'	76:Q0:100:TYR:O	2.13	0.66
49:M3:166:ALA:N	64:N8:135:GLU:OE1	2.27	0.66
53:M7:27:LYS:HD3	53:M7:63:PHE:HB3	1.78	0.66
63:N7:26:VAL:HG21	63:N7:96:VAL:HB	1.78	0.66
1:6:530:C:O2	26:d4:61:ARG:NH2	2.28	0.66
7:s5:124:LEU:O	27:d5:58:ARG:NH1	2.25	0.66
11:s9:54:ARG:HB2	11:s9:57:ARG:HH21	1.60	0.66
16:c4:26:THR:HG21	16:c4:97:GLY:HA3	1.77	0.66
19:c7:28:PHE:HA	19:c7:55:THR:HG21	1.78	0.66
69:o3:13:HIS:HE2	69:o3:28:SER:HG	1.44	0.66
36:1:911:C:H5"	39:L2:15:ILE:HD13	1.78	0.65
36:1:2688:U:OP1	42:L5:12:TYR:OH	2.12	0.65
41:L4:52:VAL:HG11	41:L4:99:MET:HE3	1.76	0.65
55:M9:175:GLN:HG2	55:M9:176:ARG:HH21	1.62	0.65
2:s0:108:THR:OG1	2:s0:135:GLU:OE1	2.14	0.65
12:c0:7:ASP:OD2	12:c0:10:LYS:NZ	2.28	0.65
35:sM:120:UNK:O	35:sM:122:UNK:N	2.29	0.65
36:5:2102:U:H2'	36:5:2103:U:H6	1.61	0.65
1:2:169:A:H5"	8:S6:176:GLN:HG2	1.79	0.65
1:2:1234:A:H4'	33:E1:146:SER:HB3	1.78	0.65
1:2:1266:U:H2'	1:2:1267:G:H8	1.61	0.65
10:S8:36:THR:HG21	10:S8:173:PRO:HB2	1.78	0.65
5:s3:70:THR:HG22	5:s3:86:LEU:HB2	1.78	0.65
15:c3:115:LEU:HD22	15:c3:119:GLU:HG3	1.77	0.65
25:d3:56:LYS:NZ	25:d3:96:VAL:O	2.24	0.65
53:m7:116:HIS:HB3	53:m7:149:VAL:HB	1.79	0.65
1:2:1145:U:O2'	4:S2:89:GLN:O	2.14	0.65
2:S0:200:ASP:HB2	19:C7:85:VAL:HG22	1.77	0.65
25:D3:90:ASP:O	25:D3:136:TRP:NE1	2.29	0.65
46:L9:101:VAL:HG22	46:L9:114:VAL:HG22	1.79	0.65
22:d0:31:VAL:HA	22:d0:34:LEU:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:d4:52:LYS:O	26:d4:54:ALA:N	2.29	0.65
36:5:1355:A:H5"	36:5:1357:G:H1'	1.79	0.65
43:l6:40:LEU:HD13	43:l6:84:VAL:HG11	1.78	0.65
58:n2:19:VAL:HG12	58:n2:105:LEU:HD22	1.79	0.65
62:n6:99:LEU:HD13	62:n6:104:LEU:HD21	1.78	0.65
68:o2:19:ARG:HE	68:o2:33:ARG:HB2	1.61	0.65
1:2:72:A:N7	8:S6:169:TYR:OH	2.25	0.65
1:2:1728:A:H1'	10:S8:32:GLN:NE2	2.12	0.65
1:2:1797:A:OP2	28:D6:10:ARG:NH2	2.30	0.65
9:S7:151:LYS:HA	9:S7:182:VAL:HG12	1.77	0.65
17:C5:86:VAL:O	17:C5:88:GLU:N	2.29	0.65
56:N0:13:ARG:HB3	56:N0:51:VAL:HG11	1.79	0.65
7:s5:90:ILE:HD11	7:s5:130:ILE:HG13	1.77	0.65
36:5:1717:U:H2'	36:5:1718:G:C8	2.32	0.65
36:5:1940:G:H21	36:5:3362:A:H8	1.44	0.65
42:l5:40:HIS:CE1	42:l5:42:ALA:HB3	2.30	0.65
20:C8:144:ARG:O	35:SM:68:ARG:NH2	2.30	0.65
43:L6:51:ARG:NH1	50:M4:114:ASP:OD2	2.30	0.65
45:L8:45:ASN:HD21	45:L8:47:SER:HB3	1.62	0.65
1:6:1087:A:H2'	1:6:1088:A:C8	2.32	0.65
3:s1:157:GLN:HB2	3:s1:160:HIS:CE1	2.31	0.65
34:sR:42:LEU:HD21	34:sR:82:SER:HB3	1.79	0.65
42:l5:136:GLU:H	42:l5:136:GLU:CD	2.05	0.65
11:S9:93:LEU:HA	11:S9:96:VAL:HG13	1.78	0.65
36:1:2093:A:N1	55:M9:114:LYS:NZ	2.45	0.65
37:3:46:A:OP2	42:L5:158:ARG:NH1	2.30	0.65
49:M3:91:ARG:NH2	49:M3:97:VAL:O	2.24	0.65
55:M9:23:TRP:HB3	55:M9:51:VAL:HG22	1.79	0.65
1:6:936:G:N7	28:d6:15:ARG:NH1	2.45	0.65
15:c3:66:ILE:HG13	15:c3:67:THR:HG22	1.78	0.65
61:n5:34:LEU:HD22	61:n5:35:PRO:HD2	1.78	0.65
75:o9:28:ARG:HH11	75:o9:36:ARG:HD3	1.61	0.65
75:o9:43:ASN:HB3	75:o9:46:ARG:HG3	1.79	0.65
1:2:551:G:H1	1:2:573:C:H42	1.45	0.65
1:2:1126:G:OP2	77:Q1:18:ARG:NH2	2.29	0.65
2:S0:157:ASP:OD2	23:D1:60:ARG:NH2	2.30	0.65
36:1:2557:A:OP1	39:L2:69:TYR:OH	2.14	0.65
49:M3:28:GLN:OE1	51:M5:201:ARG:NH1	2.28	0.65
51:M5:47:LYS:HA	51:M5:50:ARG:HE	1.61	0.65
8:s6:2:LYS:HB3	8:s6:108:VAL:HG12	1.79	0.65
27:d5:66:VAL:HA	27:d5:71:ILE:HG22	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3194:C:H2'	36:5:3195:U:H3'	1.79	0.65
41:l4:309:ARG:HH21	41:l4:312:VAL:HB	1.62	0.65
1:2:190:C:N4	1:2:196:G:O6	2.30	0.65
1:2:1258:U:H4'	12:C0:2:LEU:HD13	1.79	0.65
1:2:1344:A:N6	1:2:1377:U:O2'	2.29	0.65
36:1:239:G:O2'	36:1:240:U:OP1	2.15	0.65
36:1:685:G:OP2	49:M3:35:ARG:NH1	2.29	0.65
51:M5:115:VAL:HG22	51:M5:134:LEU:HD23	1.79	0.65
21:c9:39:THR:HA	21:c9:100:ILE:HD12	1.78	0.65
38:8:26:U:H2'	38:8:27:U:C6	2.32	0.65
40:l3:84:VAL:HG22	40:l3:162:VAL:HB	1.79	0.65
80:m2:120:UNK:O	80:m2:122:UNK:N	2.29	0.65
49:m3:47:ALA:HB1	49:m3:48:PRO:HD2	1.79	0.65
55:m9:106:LEU:HD13	55:m9:138:LEU:HD11	1.79	0.65
1:2:1081:A:O2'	1:2:1082:C:O5'	2.15	0.65
4:S2:227:PRO:HA	4:S2:230:TRP:CE2	2.32	0.65
24:D2:18:GLU:HG3	24:D2:69:LEU:HD23	1.79	0.65
36:1:2738:A:H5"	65:N9:38:LYS:HG3	1.79	0.65
45:L8:156:ASP:OD2	45:L8:156:ASP:N	2.28	0.65
46:L9:105:GLU:HG3	46:L9:109:ALA:HB3	1.78	0.65
48:M1:90:GLN:HG2	48:M1:170:ASP:HB2	1.79	0.65
63:N7:29:HIS:O	63:N7:31:GLU:N	2.30	0.65
63:N7:46:ILE:HD13	63:N7:68:ILE:HG23	1.78	0.65
1:6:138:A:H62	1:6:266:A:H61	1.43	0.65
5:s3:80:ALA:O	5:s3:83:THR:OG1	2.14	0.65
7:s5:94:THR:HG22	7:s5:114:ILE:HG13	1.79	0.65
16:c4:107:ARG:NH2	28:d6:52:ASP:OD2	2.30	0.65
36:5:815:G:OP2	73:o7:31:LYS:NZ	2.29	0.65
36:5:1506:A:H1'	36:5:1848:G:O6	1.97	0.65
39:l2:144:ASN:ND2	39:l2:161:ASP:OD2	2.30	0.65
40:l3:205:VAL:HG11	40:l3:322:ILE:HD11	1.78	0.65
53:m7:109:ALA:HA	53:m7:112:LEU:HD22	1.79	0.65
51:M5:110:ALA:HB1	51:M5:113:LEU:HD23	1.79	0.65
1:6:489:C:O2'	1:6:490:C:O4'	2.14	0.65
1:6:513:U:H2'	1:6:514:G:C8	2.32	0.65
5:s3:40:ARG:HG2	22:d0:110:PRO:HB3	1.79	0.65
6:s4:66:MET:SD	6:s4:78:THR:OG1	2.55	0.65
12:c0:4:PRO:HG2	12:c0:7:ASP:HB2	1.79	0.65
19:c7:66:VAL:O	19:c7:68:GLY:N	2.27	0.65
36:5:980:A:H2'	36:5:981:U:C2	2.32	0.65
36:5:2696:A:H2'	36:5:2697:A:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:l4:193:LYS:HB2	41:l4:198:ARG:HA	1.79	0.65
46:l9:75:VAL:HA	46:l9:78:MET:HE3	1.78	0.65
47:m0:14:ASN:O	47:m0:128:ARG:NH2	2.30	0.65
67:o1:75:ILE:HG12	67:o1:93:VAL:HG13	1.79	0.65
1:2:751:G:H2'	1:2:752:A:H8	1.62	0.64
34:SR:89:LEU:HB2	34:SR:103:PHE:HB2	1.78	0.64
36:1:2307:G:O2'	36:1:2310:U:OP2	2.15	0.64
41:L4:55:LYS:HE2	41:L4:59:GLN:HE22	1.62	0.64
49:M3:47:ALA:HB1	49:M3:48:PRO:HD2	1.79	0.64
57:N1:12:ARG:HD2	57:N1:13:TYR:CE1	2.32	0.64
71:O5:38:ARG:HH11	71:O5:41:LEU:HD13	1.61	0.64
1:6:445:A:OP2	6:s4:59:ARG:NH2	2.30	0.64
1:6:1793:G:N2	28:d6:76:SER:OG	2.29	0.64
7:s5:157:ARG:NH1	7:s5:224:ASN:OD1	2.29	0.64
34:sR:80:ALA:HB3	34:sR:92:TRP:HB2	1.79	0.64
36:5:1521:G:O6	75:o9:17:LYS:NZ	2.29	0.64
53:m7:52:LEU:HD21	53:m7:89:LYS:HD2	1.78	0.64
1:2:647:G:H2'	1:2:648:G:H8	1.62	0.64
1:2:1242:A:OP1	17:C5:59:LYS:NZ	2.28	0.64
14:C2:63:VAL:HG11	14:C2:94:ALA:HA	1.80	0.64
29:D7:67:THR:OG1	29:D7:70:LYS:O	2.15	0.64
36:1:2146:C:OP1	39:L2:200:ARG:NH1	2.30	0.64
40:L3:76:VAL:HG12	40:L3:325:LYS:HA	1.78	0.64
1:6:319:U:H5"	1:6:320:U:H5	1.62	0.64
1:6:1151:A:O2'	1:6:1766:A:N7	2.28	0.64
36:5:18:G:OP1	71:o5:81:ARG:NH2	2.30	0.64
4:S2:45:VAL:HG21	4:S2:68:ILE:HG23	1.79	0.64
42:L5:40:HIS:HB3	42:L5:43:LYS:HG3	1.79	0.64
50:M4:135:LEU:HD22	52:M6:177:LYS:HE2	1.79	0.64
51:M5:94:TYR:CE1	51:M5:96:ARG:HB2	2.31	0.64
62:N6:99:LEU:HD13	62:N6:104:LEU:HD21	1.78	0.64
72:O6:34:SER:HG	72:O6:37:THR:HG1	1.44	0.64
73:O7:21:ARG:NH2	73:O7:41:ALA:O	2.30	0.64
74:O8:9:LYS:NZ	74:O8:13:GLU:OE1	2.25	0.64
1:6:51:A:OP2	1:6:424:C:N4	2.27	0.64
1:6:653:C:H42	1:6:677:G:H1	1.46	0.64
1:6:1594:G:OP2	1:6:1596:C:N4	2.30	0.64
1:6:1603:U:H2'	1:6:1604:U:H6	1.62	0.64
6:s4:125:LYS:HZ3	6:s4:157:ASN:HA	1.63	0.64
23:d1:64:GLU:HG3	29:d7:3:LEU:HG	1.79	0.64
30:d8:13:ILE:HB	30:d8:29:ARG:HG2	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2586:G:OP1	45:l8:240:ASN:ND2	2.30	0.64
36:5:2852:C:N3	47:m0:158:LYS:NZ	2.45	0.64
61:n5:100:LYS:NZ	61:n5:106:ASP:OD2	2.30	0.64
1:2:738:G:H2'	1:2:739:G:H8	1.63	0.64
1:2:1696:G:H21	1:2:1705:C:H41	1.45	0.64
11:S9:74:ASN:HA	11:S9:77:ILE:HD12	1.78	0.64
36:1:873:C:H5"	36:1:874:U:O5'	1.98	0.64
1:6:538:A:N7	1:6:543:C:N4	2.40	0.64
20:c8:52:VAL:HG13	20:c8:61:LEU:HD21	1.80	0.64
24:d2:77:PRO:O	24:d2:79:PHE:N	2.30	0.64
26:d4:112:LYS:NZ	26:d4:113:ASN:OD1	2.26	0.64
36:5:503:C:H2'	36:5:504:A:C8	2.32	0.64
45:l8:221:ASN:HA	45:l8:225:LYS:HE3	1.79	0.64
1:2:654:C:H3'	1:2:655:G:H5"	1.78	0.64
33:E1:144:CYS:HB3	33:E1:147:VAL:HG22	1.79	0.64
11:s9:103:ASP:OD2	11:s9:103:ASP:N	2.30	0.64
36:5:437:G:H1	36:5:622:A:H61	1.44	0.64
36:5:2756:C:O4'	57:n1:49:GLN:HG2	1.98	0.64
62:n6:48:LEU:HD23	62:n6:49:PRO:HD2	1.77	0.64
72:o6:15:LYS:HA	72:o6:15:LYS:HZ3	1.62	0.64
1:2:1280:C:H2'	1:2:1281:G:H8	1.62	0.64
1:2:1794:A:H1'	28:D6:79:ILE:HD12	1.79	0.64
5:S3:11:LEU:HD12	22:D0:86:ILE:HG12	1.80	0.64
6:S4:126:VAL:HA	6:S4:141:THR:HA	1.80	0.64
16:C4:97:GLY:HA2	16:C4:100:ALA:HB3	1.79	0.64
36:1:598:A:OP1	44:L7:41:ARG:NH1	2.30	0.64
46:L9:27:VAL:HG11	46:L9:79:ILE:HA	1.80	0.64
48:M1:37:LEU:O	48:M1:41:SER:OG	2.09	0.64
53:M7:18:ARG:NH2	53:M7:147:GLU:OE1	2.30	0.64
1:6:27:U:H2'	1:6:28:A:H8	1.63	0.64
4:s2:45:VAL:HG21	4:s2:68:ILE:HG23	1.79	0.64
63:n7:36:HIS:HD2	63:n7:74:VAL:HG11	1.61	0.64
69:o3:42:GLN:HA	69:o3:45:LEU:HD23	1.79	0.64
22:D0:50:LEU:HD21	22:D0:95:ALA:HB2	1.78	0.64
40:L3:260:VAL:HG11	40:L3:266:ARG:HH11	1.62	0.64
55:M9:105:LEU:HD12	55:M9:135:LYS:HG3	1.78	0.64
59:N3:40:LYS:HG3	59:N3:57:MET:HE2	1.78	0.64
1:6:591:A:H2'	1:6:592:A:H8	1.61	0.64
17:c5:129:GLY:HA3	35:sM:74:LYS:HD2	1.79	0.64
34:sR:12:THR:OG1	34:sR:14:GLU:OE1	2.16	0.64
36:5:655:C:H2'	36:5:656:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:l2:70:ARG:HH21	39:l2:72:ARG:HH21	1.43	0.64
13:C1:6:THR:O	13:C1:8:GLN:N	2.31	0.64
23:D1:81:ASN:O	23:D1:83:TRP:N	2.31	0.64
54:M8:122:ILE:HG23	54:M8:126:GLN:HB2	1.80	0.64
78:Q2:17:CYS:SG	78:Q2:77:CYS:CB	2.86	0.64
1:6:574:G:O6	25:d3:65:ASN:ND2	2.28	0.64
1:6:1049:U:H5"	29:d7:70:LYS:HG3	1.77	0.64
43:l6:40:LEU:HD12	43:l6:65:ILE:HD11	1.80	0.64
49:m3:54:LEU:N	49:m3:94:GLY:O	2.27	0.64
72:o6:4:LYS:HD2	72:o6:14:GLY:HA3	1.78	0.64
81:p0:43:LYS:HA	81:p0:46:ARG:HG2	1.80	0.64
40:L3:10:ARG:NH2	40:L3:263:SER:O	2.31	0.64
50:M4:120:VAL:HG22	52:M6:197:LEU:HD13	1.80	0.64
52:M6:22:VAL:HG11	52:M6:120:VAL:HG11	1.80	0.64
60:N4:36:SER:O	60:N4:40:PHE:N	2.31	0.64
13:c1:109:VAL:HG12	13:c1:137:PHE:HB2	1.79	0.64
28:d6:88:SER:OG	28:d6:90:GLU:OE2	2.16	0.64
36:5:20:A:OP2	71:o5:90:ARG:NH1	2.31	0.64
36:5:1750:A:H4'	36:5:1751:G:H5'	1.79	0.64
51:m5:42:PRO:HG3	51:m5:61:ILE:HG13	1.79	0.64
58:n2:67:SER:OG	58:n2:69:ALA:O	2.16	0.64
1:2:576:G:O6	25:D3:65:ASN:ND2	2.31	0.64
14:C2:59:LEU:HA	14:C2:87:PRO:HB2	1.80	0.64
27:D5:41:ILE:HG13	27:D5:42:LEU:H	1.62	0.64
42:L5:216:GLU:O	42:L5:220:SER:OG	2.11	0.64
34:sR:295:SER:HB3	34:sR:302:PHE:HE2	1.63	0.64
36:5:251:G:N7	36:5:253:A:N6	2.46	0.64
43:l6:40:LEU:HB2	43:l6:52:VAL:HG12	1.79	0.64
50:m4:45:LEU:HD22	56:n0:72:VAL:HG23	1.80	0.64
1:2:1500:C:OP1	21:C9:122:ARG:NH2	2.27	0.63
4:S2:137:ILE:HG12	4:S2:138:PRO:HD2	1.80	0.63
11:S9:109:LEU:HB2	11:S9:146:PHE:HB3	1.79	0.63
36:1:541:U:H2'	36:1:542:G:C8	2.33	0.63
46:L9:116:ASN:O	46:L9:120:ASP:N	2.30	0.63
64:N8:74:ASN:HB2	64:N8:76:ASP:HB2	1.80	0.63
67:O1:72:ARG:NH1	67:O1:105:GLN:O	2.30	0.63
73:O7:19:CYS:SG	73:O7:34:CYS:HB2	2.37	0.63
61:n5:105:VAL:HG13	61:n5:130:TYR:CD2	2.33	0.63
20:C8:87:ASN:OD1	20:C8:88:ARG:N	2.30	0.63
36:1:1068:C:OP1	57:N1:110:LYS:NZ	2.31	0.63
36:1:1550:C:H2'	36:1:1551:C:H6	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s1:225:VAL:HA	3:s1:228:LEU:HB3	1.80	0.63
11:s9:163:PRO:HB3	11:s9:169:PRO:HA	1.81	0.63
36:5:3295:A:H2'	36:5:3296:A:C8	2.34	0.63
1:2:1280:C:H2'	1:2:1281:G:C8	2.33	0.63
1:2:1534:G:N7	27:D5:77:ARG:NH2	2.46	0.63
6:S4:69:HIS:HB3	26:D4:17:LEU:HD23	1.80	0.63
36:1:979:U:H1'	36:1:980:A:C5	2.34	0.63
36:1:1101:G:OP2	44:L7:196:LYS:NZ	2.27	0.63
36:1:1242:G:N2	36:1:1270:A:O2'	2.31	0.63
51:M5:59:PHE:HD1	51:M5:133:ILE:HD11	1.63	0.63
52:M6:77:SER:OG	52:M6:106:GLU:OE1	2.13	0.63
1:6:1479:A:OP1	21:c9:57:ARG:NH1	2.31	0.63
36:5:348:A:N3	36:5:352:A:O2'	2.31	0.63
42:l5:160:PHE:CD2	42:l5:179:ARG:HB3	2.34	0.63
1:2:229:U:H3	1:2:236:A:H61	1.47	0.63
1:2:1553:G:H4'	31:D9:14:TYR:HE1	1.62	0.63
5:S3:23:GLU:CD	12:C0:61:TRP:HE1	2.06	0.63
36:1:965:A:H2	64:N8:43:ILE:HD12	1.61	0.63
62:N6:37:LYS:H	62:N6:37:LYS:HD3	1.63	0.63
1:6:1163:A:N3	1:6:1613:U:O2'	2.26	0.63
2:s0:29:VAL:HG12	2:s0:149:LEU:HB3	1.81	0.63
8:s6:163:THR:HB	8:s6:168:THR:HG22	1.80	0.63
46:l9:91:ARG:HG2	46:l9:182:SER:HB3	1.79	0.63
23:D1:71:ARG:HG3	29:D7:4:VAL:HG11	1.80	0.63
36:1:1864:A:OP1	55:M9:88:ARG:NH1	2.31	0.63
46:L9:163:GLN:O	46:L9:166:ARG:HD3	1.98	0.63
21:c9:125:SER:O	21:c9:129:GLN:N	2.24	0.63
36:5:290:G:H4'	51:m5:69:GLY:O	1.98	0.63
46:l9:77:ASN:HA	46:l9:80:THR:HG23	1.81	0.63
55:m9:127:SER:HB3	55:m9:132:PHE:HD2	1.62	0.63
10:S8:39:GLY:HA2	10:S8:61:GLU:HB3	1.80	0.63
13:C1:22:ASN:HD21	13:C1:24:LYS:HB2	1.63	0.63
26:D4:33:ALA:O	26:D4:34:ASN:ND2	2.29	0.63
36:1:516:A:O3'	44:L7:60:ARG:NH2	2.25	0.63
36:1:2852:C:N3	47:M0:158:LYS:NZ	2.46	0.63
61:N5:80:ASN:ND2	61:N5:126:LEU:O	2.32	0.63
63:N7:25:ILE:HA	63:N7:43:VAL:HG12	1.79	0.63
1:6:329:G:H5"	10:s8:98:LYS:HB3	1.78	0.63
9:s7:75:THR:HG22	9:s7:161:GLN:HE22	1.64	0.63
48:m1:37:LEU:HD12	48:m1:67:VAL:HG13	1.79	0.63
2:S0:133:ILE:HG23	2:S0:155:PHE:HB2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C6:34:SER:HB3	18:C6:38:LEU:HD12	1.81	0.63
36:1:415:G:H2'	36:1:416:A:C8	2.34	0.63
52:M6:61:ALA:HA	52:M6:70:PRO:HD2	1.81	0.63
2:s0:126:PRO:HB2	2:s0:152:PRO:HG2	1.80	0.63
9:s7:144:VAL:HG22	24:d2:49:GLU:HB2	1.81	0.63
36:5:686:G:N7	49:m3:32:LYS:NZ	2.38	0.63
36:5:2242:A:H5'	39:l2:243:THR:HG23	1.81	0.63
43:l6:40:LEU:N	43:l6:52:VAL:O	2.20	0.63
71:o5:21:LEU:HD21	71:o5:51:ILE:HG23	1.80	0.63
2:S0:160:ILE:O	2:S0:162:CYS:N	2.31	0.63
16:C4:29:HIS:HB3	16:C4:41:ARG:HG3	1.80	0.63
34:SR:238:ASP:OD1	34:SR:238:ASP:N	2.32	0.63
36:1:715:A:HO2'	36:1:752:C:HO2'	1.45	0.63
36:1:903:U:OP2	73:O7:30:GLN:NE2	2.31	0.63
36:1:2623:G:H2'	36:1:2624:G:H8	1.63	0.63
62:N6:58:VAL:HA	62:N6:104:LEU:HD23	1.79	0.63
70:O4:67:LYS:HA	70:O4:70:LYS:HE3	1.81	0.63
36:5:1103:A:H3'	36:5:1104:G:H5'	1.79	0.63
36:5:2557:A:H2	45:l8:38:GLN:HB2	1.64	0.63
36:5:2592:G:H4'	36:5:2594:C:C2	2.34	0.63
36:5:3280:U:O2'	36:5:3281:U:H5"	1.98	0.63
41:l4:6:VAL:N	41:l4:20:LEU:O	2.21	0.63
47:m0:36:LEU:HD21	47:m0:69:ARG:HD3	1.79	0.63
75:o9:10:LYS:HA	75:o9:13:MET:HE3	1.79	0.63
30:D8:29:ARG:HA	30:D8:41:VAL:HA	1.81	0.63
39:L2:108:PRO:HG2	79:Q3:86:LEU:HD22	1.81	0.63
43:L6:3:ALA:HB2	68:O2:77:ALA:HB2	1.81	0.63
43:L6:56:LYS:HD2	43:L6:98:VAL:HG13	1.81	0.63
1:6:861:U:O2'	24:d2:56:HIS:O	2.13	0.63
4:s2:89:GLN:HG3	4:s2:93:GLY:HA2	1.81	0.63
16:c4:11:SER:OG	16:c4:12:GLN:N	2.28	0.63
28:d6:58:VAL:HG22	28:d6:59:TYR:H	1.64	0.63
29:d7:53:ALA:HB1	29:d7:62:ILE:HD11	1.80	0.63
36:5:1757:A:OP1	58:n2:94:ARG:NH2	2.21	0.63
44:l7:64:GLN:HA	44:l7:67:ARG:HD2	1.81	0.63
74:o8:22:THR:HG22	74:o8:74:LYS:HB3	1.81	0.63
1:2:720:G:H1'	1:2:721:U:H5"	1.80	0.62
1:2:1738:U:H2'	1:2:1739:C:C6	2.34	0.62
6:S4:125:LYS:NZ	6:S4:225:VAL:O	2.25	0.62
28:D6:79:ILE:HG23	28:D6:84:VAL:HG21	1.80	0.62
37:3:121:U:C2	42:L5:268:GLU:HB3	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M5:53:TYR:HD1	51:M5:133:ILE:HD13	1.64	0.62
1:6:1481:C:OP2	21:c9:63:ARG:NH1	2.31	0.62
36:5:1751:G:H5"	74:o8:26:LYS:HE2	1.81	0.62
1:2:858:G:OP1	9:S7:116:ARG:NH2	2.31	0.62
17:C5:79:HIS:O	17:C5:81:ARG:N	2.32	0.62
34:SR:76:ASP:N	34:SR:76:ASP:OD1	2.28	0.62
36:1:148:G:OP2	51:M5:4:TYR:OH	2.12	0.62
36:1:2724:U:OP1	57:N1:57:TYR:OH	2.10	0.62
39:L2:227:ARG:HG2	39:L2:239:ALA:HB2	1.81	0.62
41:L4:287:THR:O	41:L4:291:ASN:ND2	2.32	0.62
67:O1:13:THR:HG23	67:O1:72:ARG:HH11	1.65	0.62
1:6:1537:C:O2'	1:6:1540:G:O6	2.17	0.62
28:d6:23:CYS:CB	28:d6:74:CYS:SG	2.87	0.62
36:5:2746:A:H2	42:l5:146:LEU:HB3	1.64	0.62
55:m9:68:GLN:NE2	55:m9:72:GLU:OE2	2.31	0.62
63:n7:55:LYS:O	63:n7:57:HIS:N	2.33	0.62
13:C1:99:ARG:NH1	25:D3:7:ARG:O	2.31	0.62
17:C5:115:TYR:N	17:C5:118:GLU:OE1	2.32	0.62
40:L3:25:ILE:HD13	40:L3:25:ILE:H	1.64	0.62
42:L5:218:ARG:HH21	42:L5:222:LEU:HD11	1.64	0.62
63:N7:23:VAL:HG12	63:N7:45:GLY:HA3	1.81	0.62
73:O7:21:ARG:HD2	73:O7:39:TYR:HB2	1.80	0.62
1:6:141:U:OP1	8:s6:149:LYS:NZ	2.28	0.62
26:d4:55:VAL:HG12	26:d4:75:VAL:HG22	1.81	0.62
41:l4:38:VAL:HG13	41:l4:113:VAL:HG11	1.80	0.62
53:m7:26:PHE:HE1	53:m7:120:ASN:HA	1.64	0.62
72:o6:63:ASN:O	72:o6:65:GLY:N	2.32	0.62
74:o8:16:ARG:HH11	74:o8:70:PRO:HG3	1.64	0.62
6:S4:211:LYS:NZ	6:S4:212:ASP:O	2.32	0.62
7:S5:91:GLU:O	7:S5:95:ASN:ND2	2.32	0.62
34:SR:258:THR:O	34:SR:275:ARG:NH1	2.32	0.62
36:1:1615:C:H2'	36:1:1616:U:C6	2.35	0.62
39:L2:201:GLY:O	39:L2:204:MET:HG2	1.98	0.62
45:L8:26:LEU:HD21	63:N7:123:GLN:HG2	1.80	0.62
58:N2:50:LEU:O	58:N2:52:ASN:N	2.32	0.62
11:S9:65:LYS:HG2	11:S9:70:LEU:HD21	1.81	0.62
15:C3:5:HIS:HB3	15:C3:117:LEU:HD13	1.80	0.62
20:C8:5:VAL:HG23	27:D5:42:LEU:HD21	1.81	0.62
35:SM:104:LYS:O	35:SM:108:GLN:HG2	1.99	0.62
1:6:523:G:OP2	26:d4:37:LYS:NZ	2.22	0.62
8:s6:98:ARG:HD3	8:s6:99:GLY:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:c7:5:ARG:O	19:c7:10:LYS:NZ	2.33	0.62
36:5:3121:U:OP2	76:q0:111:ARG:NH2	2.31	0.62
41:l4:251:THR:O	41:l4:253:ALA:N	2.32	0.62
50:m4:73:PRO:HG2	50:m4:76:ALA:HB2	1.81	0.62
1:2:79:C:H1'	8:S6:174:LYS:HD3	1.81	0.62
30:D8:19:THR:HB	30:D8:66:LEU:HB2	1.80	0.62
36:1:686:G:OP2	49:M3:39:ARG:NH2	2.33	0.62
36:1:1591:G:O2'	36:1:1799:A:N1	2.30	0.62
38:4:57:C:OP2	73:O7:68:LYS:NZ	2.33	0.62
46:L9:149:ASN:N	46:L9:149:ASN:OD1	2.32	0.62
59:N3:17:LEU:HD11	59:N3:98:ASN:HB3	1.82	0.62
69:O3:75:HIS:HB3	69:O3:80:VAL:HG12	1.81	0.62
1:6:428:A:N3	1:6:440:U:O2'	2.25	0.62
1:6:861:U:OP1	15:c3:64:ARG:NH2	2.33	0.62
8:s6:10:ASN:HB3	8:s6:128:THR:HA	1.82	0.62
36:5:75:G:H5"	49:m3:58:VAL:HG13	1.82	0.62
36:5:1433:A:N3	68:o2:27:ARG:NH1	2.48	0.62
36:5:3294:A:OP2	40:l3:126:LYS:NZ	2.25	0.62
58:n2:14:THR:HG23	58:n2:66:VAL:HG22	1.82	0.62
69:o3:9:VAL:HG21	69:o3:44:TYR:HE1	1.64	0.62
1:2:584:C:H1'	32:E0:18:THR:HG21	1.80	0.62
2:S0:52:LYS:HB3	23:D1:82:VAL:HG22	1.81	0.62
36:1:1630:U:OP1	63:N7:67:LYS:NZ	2.29	0.62
36:1:1925:U:O2'	36:1:1927:G:N7	2.32	0.62
36:1:2216:G:OP1	72:O6:75:LYS:NZ	2.30	0.62
36:1:3122:A:N1	46:L9:70:THR:HG21	2.15	0.62
36:1:3215:A:O5'	50:M4:121:MET:HE1	1.99	0.62
36:1:3243:A:N6	52:M6:157:GLU:OE2	2.24	0.62
56:N0:1:MET:HE1	56:N0:32:SER:N	2.14	0.62
67:O1:26:LYS:HE2	67:O1:64:VAL:HG21	1.82	0.62
75:O9:21:ARG:HD3	75:O9:22:PRO:O	2.00	0.62
1:6:1280:C:H2'	1:6:1281:G:C8	2.35	0.62
2:s0:26:ALA:HB3	2:s0:149:LEU:HB2	1.82	0.62
5:s3:115:ILE:O	5:s3:119:ALA:N	2.30	0.62
22:d0:63:LEU:HD12	22:d0:84:MET:HB3	1.81	0.62
56:n0:91:TYR:O	56:n0:137:ARG:NH1	2.33	0.62
1:2:772:G:N2	1:2:774:A:O2'	2.32	0.62
10:S8:166:TYR:HB3	10:S8:184:LEU:HD22	1.81	0.62
12:C0:11:ILE:HD13	12:C0:35:ILE:HG21	1.82	0.62
21:C9:86:ARG:NH1	21:C9:90:PRO:O	2.32	0.62
34:SR:31:ASN:OD1	34:SR:31:ASN:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1256:G:O6	36:1:1261:G:N2	2.32	0.62
36:1:1480:G:H4'	36:1:1481:A:OP1	2.00	0.62
36:1:1740:U:H1'	36:1:1741:A:H2	1.64	0.62
36:1:2149:A:N6	36:1:2187:G:O2'	2.33	0.62
41:L4:234:ASN:OD1	41:L4:235:LEU:N	2.32	0.62
47:M0:84:ALA:O	47:M0:140:THR:HG22	2.00	0.62
62:N6:3:LYS:NZ	62:N6:8:VAL:O	2.26	0.62
1:6:1561:U:H4'	1:6:1599:C:H4'	1.81	0.62
47:m0:177:ASP:OD2	47:m0:177:ASP:N	2.22	0.62
49:m3:74:GLY:O	49:m3:101:ARG:NH1	2.33	0.62
54:m8:165:ILE:HD13	54:m8:167:SER:H	1.65	0.62
55:m9:28:GLU:HG3	55:m9:49:THR:HG22	1.81	0.62
74:o8:16:ARG:NH1	74:o8:70:PRO:HG3	2.15	0.62
1:2:100:A:H61	1:2:385:A:H1'	1.65	0.62
1:2:207:U:O2	10:S8:178:ARG:NH1	2.32	0.62
6:S4:19:LEU:HD11	6:S4:108:ARG:HD2	1.81	0.62
7:S5:50:GLU:O	7:S5:65:ARG:NH2	2.33	0.62
36:1:585:A:H5"	69:O3:70:LYS:HE2	1.82	0.62
36:1:1103:A:O2'	36:1:1104:G:OP1	2.15	0.62
2:s0:88:LYS:NZ	19:c7:82:ASP:OD1	2.32	0.62
2:s0:88:LYS:HE2	2:s0:201:LEU:HG	1.82	0.62
2:s0:162:CYS:SG	2:s0:163:ASN:N	2.73	0.62
19:c7:6:THR:OG1	19:c7:7:LYS:N	2.32	0.62
19:c7:21:TYR:OH	19:c7:62:GLN:OE1	2.18	0.62
36:5:1781:C:H2'	36:5:1782:U:C6	2.35	0.62
1:2:399:A:N3	6:S4:3:ARG:NH1	2.48	0.62
10:S8:8:ARG:NH2	10:S8:21:PHE:H	1.98	0.62
18:C6:120:ASP:OD1	18:C6:121:SER:N	2.33	0.62
36:1:1794:G:H4'	39:L2:191:LEU:HD13	1.80	0.62
36:1:2185:G:O2'	36:1:2314:U:OP2	2.17	0.62
36:1:2836:C:H5	36:1:2852:C:H42	1.48	0.62
41:L4:106:TRP:HB2	51:M5:199:LEU:HD12	1.81	0.62
46:L9:22:SER:OG	46:L9:39:LYS:NZ	2.32	0.62
79:Q3:38:ASP:HA	79:Q3:45:LYS:HA	1.82	0.62
1:6:1398:U:H3'	1:6:1399:C:H4'	1.82	0.62
1:6:1603:U:H2'	1:6:1604:U:C6	2.35	0.62
34:sR:216:LYS:HA	34:sR:239:GLU:HG3	1.81	0.62
36:5:1783:U:H2'	36:5:1784:G:H8	1.64	0.62
36:5:2267:C:H2'	36:5:2268:U:H6	1.64	0.62
37:7:1:G:N3	42:l5:269:SER:OG	2.32	0.62
44:l7:60:ARG:HA	44:l7:63:ILE:HD12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:l8:244:ALA:HA	45:l8:247:ASP:HB2	1.81	0.62
50:m4:22:LEU:HB3	50:m4:64:VAL:HG13	1.81	0.62
54:m8:64:VAL:HG11	54:m8:113:LYS:HD3	1.82	0.62
62:n6:32:SER:HA	62:n6:49:PRO:HA	1.81	0.62
78:q2:12:CYS:SG	78:q2:17:CYS:CB	2.87	0.62
36:1:999:G:N3	36:1:1002:A:N6	2.48	0.61
40:L3:41:VAL:HG22	40:L3:185:GLY:HA3	1.81	0.61
40:L3:296:THR:OG1	40:L3:357:LYS:O	2.18	0.61
1:6:1054:U:H2'	1:6:1055:U:H6	1.64	0.61
1:6:1459:C:H5'	17:c5:126:VAL:HB	1.80	0.61
21:c9:105:LEU:HD13	21:c9:122:ARG:HD3	1.81	0.61
35:sM:59:GLY:O	35:sM:63:ASP:N	2.28	0.61
36:5:2403:G:H5'	36:5:2872:A:N1	2.15	0.61
36:5:3039:C:OP1	40:l3:62:ARG:NH1	2.33	0.61
36:5:3122:A:N1	46:l9:70:THR:HG21	2.15	0.61
1:2:483:A:H61	1:2:505:A:H1'	1.65	0.61
1:2:904:G:H2'	1:2:905:A:H8	1.65	0.61
21:C9:37:VAL:HG11	21:C9:100:ILE:HD11	1.82	0.61
36:1:2115:G:H22	36:1:2120:A:H1'	1.63	0.61
36:1:3041:U:OP1	59:N3:12:ARG:NH1	2.32	0.61
1:6:1556:A:O2'	17:c5:40:ARG:NH1	2.32	0.61
11:s9:92:LYS:HB2	11:s9:95:TYR:HD2	1.63	0.61
36:5:2181:C:OP1	39:l2:193:ARG:NH2	2.31	0.61
36:5:2219:A:H2'	36:5:2220:A:C8	2.35	0.61
40:l3:227:GLU:HG3	40:l3:270:ARG:HE	1.65	0.61
44:l7:229:PHE:C	44:l7:229:PHE:HD1	2.08	0.61
46:l9:62:ARG:O	46:l9:66:ALA:N	2.32	0.61
58:n2:104:ARG:HH11	58:n2:106:ALA:HB2	1.66	0.61
67:o1:74:ARG:HH12	67:o1:109:VAL:HG11	1.64	0.61
1:2:75:U:H3'	1:2:76:A:O4'	2.00	0.61
1:2:789:A:O2'	6:S4:106:LYS:NZ	2.31	0.61
1:2:1616:G:O2'	30:D8:18:ARG:NH1	2.32	0.61
18:C6:50:GLU:OE1	18:C6:114:ARG:NH1	2.33	0.61
36:1:2592:G:H4'	36:1:2594:C:C2	2.34	0.61
46:L9:48:VAL:HG13	46:L9:52:LEU:HB3	1.81	0.61
49:M3:175:SER:O	49:M3:178:LYS:N	2.33	0.61
1:6:500:C:O2'	1:6:501:U:O4'	2.19	0.61
1:6:1226:A:O2'	1:6:1256:A:N6	2.33	0.61
2:s0:120:LEU:HD21	2:s0:144:ILE:HD11	1.82	0.61
17:c5:130:ARG:HH22	35:sM:70:ASN:HB3	1.65	0.61
19:c7:26:LEU:O	19:c7:59:LYS:NZ	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1316:C:OP2	52:m6:133:ARG:NE	2.33	0.61
36:5:1757:A:H2'	36:5:1758:G:H8	1.66	0.61
55:m9:105:LEU:HD21	55:m9:139:VAL:HG13	1.80	0.61
1:2:38:C:H2'	1:2:39:A:H5'	1.80	0.61
1:2:734:A:H5"	1:2:735:C:OP1	2.01	0.61
3:S1:212:VAL:O	3:S1:214:LYS:N	2.31	0.61
4:S2:55:GLU:O	4:S2:59:HIS:ND1	2.33	0.61
8:S6:164:LYS:N	8:S6:167:LYS:O	2.31	0.61
36:1:2155:G:O2'	39:L2:227:ARG:NH2	2.32	0.61
36:1:2986:U:H2'	36:1:2987:A:H8	1.64	0.61
41:L4:351:PRO:HA	44:L7:71:ALA:HA	1.82	0.61
42:L5:156:GLY:HA2	42:L5:181:PRO:HD3	1.82	0.61
50:M4:23:ILE:HA	50:M4:63:VAL:HG23	1.83	0.61
68:O2:123:LYS:HA	68:O2:126:LEU:HD12	1.82	0.61
1:6:1380:U:O2'	1:6:1516:A:N1	2.33	0.61
8:s6:120:GLU:HG3	8:s6:125:THR:HB	1.83	0.61
36:5:2269:U:H5"	83:f:62:ILE:HD11	1.82	0.61
36:5:3120:C:H3'	76:q0:111:ARG:NH2	2.15	0.61
38:8:79:A:H3'	38:8:80:A:C8	2.36	0.61
39:l2:172:GLY:HA3	79:q3:68:ALA:N	2.15	0.61
71:o5:119:LYS:NZ	71:o5:119:LYS:HA	2.14	0.61
72:o6:2:THR:OG1	72:o6:3:VAL:N	2.33	0.61
1:2:520:A:H2'	1:2:521:A:C8	2.35	0.61
36:1:787:G:H2'	36:1:788:C:C6	2.35	0.61
40:L3:173:GLN:O	40:L3:175:LYS:N	2.34	0.61
40:L3:282:ILE:HD13	40:L3:322:ILE:HD12	1.83	0.61
41:L4:304:GLN:O	41:L4:306:THR:N	2.33	0.61
74:O8:65:LEU:HD23	74:O8:68:SER:HB2	1.82	0.61
1:6:58:U:O2'	1:6:451:A:N3	2.31	0.61
16:c4:18:ARG:NH2	16:c4:31:THR:OG1	2.32	0.61
20:c8:4:VAL:HG11	27:d5:82:HIS:HB2	1.82	0.61
36:5:2254:U:H2'	36:5:2261:G:N2	2.16	0.61
53:m7:25:SER:HB3	53:m7:28:ASN:HB2	1.82	0.61
1:2:1236:A:H1'	33:E1:138:ARG:HH12	1.63	0.61
4:S2:41:LEU:HD12	4:S2:68:ILE:HD13	1.82	0.61
9:S7:96:ARG:NH2	9:S7:128:ASP:OD2	2.34	0.61
22:D0:39:SER:HA	22:D0:42:VAL:HG12	1.83	0.61
24:D2:104:LEU:HB2	24:D2:125:ILE:HA	1.82	0.61
33:E1:108:VAL:HB	33:E1:114:VAL:HG22	1.83	0.61
34:SR:165:ASP:O	34:SR:184:ASN:ND2	2.34	0.61
1:6:222:A:H62	1:6:833:U:H3	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:698:U:H3	1:6:740:A:H61	1.47	0.61
5:s3:222:VAL:HG11	34:sR:229:LYS:HA	1.82	0.61
18:c6:37:THR:O	18:c6:45:ARG:NH1	2.34	0.61
36:5:1366:A:C2	36:5:1367:G:C4	2.89	0.61
49:m3:166:ALA:HB1	64:n8:147:LEU:HD21	1.83	0.61
60:n4:124:LYS:HA	60:n4:127:LYS:HB2	1.81	0.61
62:n6:5:SER:C	62:n6:7:ASP:H	2.06	0.61
67:o1:62:ARG:HB2	67:o1:66:GLY:O	2.00	0.61
1:2:14:C:OP1	4:S2:164:SER:OG	2.18	0.61
1:2:304:U:H2'	1:2:305:C:C6	2.34	0.61
1:2:514:G:H1	1:2:543:C:N4	1.97	0.61
36:1:129:U:H2'	36:1:130:A:C8	2.35	0.61
36:1:796:U:H2'	36:1:797:U:H6	1.65	0.61
37:3:121:U:N3	42:L5:268:GLU:HB3	2.15	0.61
41:L4:11:LEU:HD13	41:L4:159:ILE:HD11	1.82	0.61
47:M0:191:LYS:HB3	47:M0:213:PHE:CE2	2.33	0.61
55:M9:41:ILE:HG23	55:M9:50:ILE:HD12	1.82	0.61
62:N6:45:ILE:HD12	62:N6:119:ILE:HG23	1.81	0.61
63:N7:36:HIS:O	63:N7:38:PHE:N	2.29	0.61
1:6:44:U:OP2	1:6:437:A:N6	2.33	0.61
1:6:792:U:H3'	1:6:793:A:C8	2.36	0.61
2:s0:7:PHE:CZ	23:d1:43:GLY:HA2	2.35	0.61
2:s0:148:ASP:OD1	2:s0:149:LEU:N	2.32	0.61
39:l2:172:GLY:HA3	79:q3:68:ALA:H	1.65	0.61
60:n4:23:ARG:NH2	60:n4:25:ASP:OD1	2.33	0.61
1:2:545:A:H2'	32:E0:31:LYS:HD2	1.81	0.61
1:2:755:A:H2	6:S4:13:ALA:HA	1.64	0.61
1:2:930:A:H4'	28:D6:70:LYS:HG3	1.83	0.61
1:2:1511:U:H2'	1:2:1512:G:C8	2.35	0.61
1:2:1551:U:H3'	17:C5:43:ARG:HH22	1.66	0.61
11:S9:92:LYS:O	11:S9:94:ASP:N	2.30	0.61
36:1:1095:U:H4'	36:1:1096:U:H5"	1.83	0.61
36:1:1926:C:H2'	79:Q3:7:LYS:HE2	1.81	0.61
45:L8:78:PHE:C	45:L8:80:TYR:H	2.09	0.61
56:N0:1:MET:HE1	56:N0:32:SER:H	1.64	0.61
1:6:151:G:H21	8:s6:13:GLN:CD	2.09	0.61
1:6:621:A:N3	1:6:1107:G:H1'	2.14	0.61
1:6:1045:C:H2'	1:6:1046:G:C8	2.36	0.61
5:s3:34:TYR:HE2	5:s3:37:VAL:HG13	1.66	0.61
18:c6:18:ALA:HB2	18:c6:69:VAL:HG13	1.82	0.61
23:d1:71:ARG:HG3	23:d1:83:TRP:CZ2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:d3:69:ARG:NH1	25:d3:116:ASP:OD2	2.34	0.61
36:5:1874:A:OP2	55:m9:20:ARG:HD2	2.01	0.61
58:n2:48:GLY:O	58:n2:50:LEU:N	2.28	0.61
66:o0:9:SER:OG	66:o0:10:ILE:N	2.34	0.61
1:2:121:U:H1'	6:S4:33:ALA:HB3	1.83	0.61
1:2:1583:A:OP1	18:C6:135:ARG:NH2	2.27	0.61
2:S0:103:THR:O	2:S0:106:SER:OG	2.18	0.61
12:C0:38:LYS:HD3	12:C0:41:TYR:CZ	2.36	0.61
16:C4:43:THR:OG1	16:C4:44:GLY:N	2.31	0.61
18:C6:40:GLU:HA	18:C6:42:GLU:N	2.16	0.61
28:D6:87:ARG:NH2	28:D6:94:ASN:O	2.34	0.61
36:1:824:C:O2'	36:1:1534:A:N3	2.34	0.61
36:1:2556:C:O2'	63:N7:135:ARG:NH2	2.33	0.61
42:L5:187:THR:HG22	42:L5:189:GLU:H	1.65	0.61
53:M7:59:PRO:HG3	53:M7:76:PHE:CD1	2.35	0.61
1:6:1218:G:H5"	1:6:1444:A:H61	1.66	0.61
34:sR:95:ALA:O	34:sR:97:GLY:N	2.29	0.61
36:5:2268:U:H2'	36:5:2269:U:H2'	1.82	0.61
36:5:2448:G:H1	36:5:2498:U:H3	1.49	0.61
41:l4:99:MET:HE2	41:l4:102:PRO:HA	1.83	0.61
44:l7:88:ARG:NH1	44:l7:91:GLY:O	2.33	0.61
47:m0:76:MET:HE1	47:m0:148:VAL:HG13	1.83	0.61
1:2:917:U:O2	16:C4:41:ARG:NH1	2.34	0.61
1:2:1000:C:N4	1:2:1003:A:OP2	2.32	0.61
11:S9:61:THR:HA	24:D2:97:ARG:HH12	1.64	0.61
14:C2:54:ARG:HH21	33:E1:127:GLY:H	1.46	0.61
24:D2:82:LYS:O	24:D2:84:GLY:N	2.31	0.61
27:D5:71:ILE:HD12	27:D5:76:ALA:HA	1.83	0.61
36:1:2676:A:N1	48:M1:22:SER:OG	2.29	0.61
42:L5:153:THR:HG22	42:L5:179:ARG:HH11	1.65	0.61
2:s0:74:VAL:HG23	2:s0:118:PRO:HB3	1.83	0.61
5:s3:113:LEU:HD12	5:s3:117:ARG:HD3	1.83	0.61
9:s7:50:ASP:HA	9:s7:56:LYS:HG2	1.81	0.61
9:s7:74:GLN:HE22	9:s7:92:PHE:HB2	1.66	0.61
36:5:2102:U:H2'	36:5:2103:U:C6	2.36	0.61
36:5:3287:U:H2'	36:5:3288:G:H5'	1.83	0.61
52:m6:183:ALA:HA	52:m6:186:ALA:HB2	1.83	0.61
68:o2:21:HIS:CE1	68:o2:24:ARG:HD2	2.35	0.61
75:o9:23:LEU:HD22	75:o9:24:PRO:HD2	1.83	0.61
79:q3:87:ARG:O	79:q3:91:GLU:HG2	2.01	0.61
83:f:92:LEU:HA	83:f:102:LEU:HD13	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1230:A:H2'	1:2:1258:U:H5	1.66	0.60
3:S1:107:THR:HB	3:S1:111:ARG:HH21	1.66	0.60
14:C2:87:PRO:HA	14:C2:140:PHE:HE1	1.66	0.60
20:C8:28:ILE:HD12	20:C8:61:LEU:HD11	1.83	0.60
36:1:2818:U:O5'	65:N9:2:ALA:HB2	2.01	0.60
40:L3:283:TYR:HB2	40:L3:323:MET:HE2	1.83	0.60
1:6:1473:U:O2'	7:s5:102:ARG:NH1	2.34	0.60
3:s1:22:ASP:O	3:s1:25:THR:OG1	2.18	0.60
17:c5:37:ALA:O	17:c5:42:ARG:NH1	2.34	0.60
18:c6:107:LYS:O	18:c6:111:SER:OG	2.15	0.60
36:5:2400:G:O2'	36:5:2401:A:OP1	2.18	0.60
49:m3:59:ARG:HD2	49:m3:69:VAL:HG23	1.83	0.60
59:n3:2:SER:HA	59:n3:56:ASP:HA	1.83	0.60
1:2:1553:G:N2	1:2:1555:A:H3'	2.16	0.60
3:S1:165:ARG:O	3:S1:169:SER:OG	2.16	0.60
14:C2:68:GLU:O	14:C2:70:ASN:ND2	2.35	0.60
29:D7:61:THR:HG23	29:D7:62:ILE:H	1.65	0.60
36:1:58:G:H4'	51:M5:155:VAL:HG12	1.83	0.60
36:1:743:C:N3	54:M8:141:ARG:NH1	2.49	0.60
1:6:1795:U:O2	28:d6:10:ARG:NE	2.34	0.60
33:e1:109:ASP:O	33:e1:111:GLU:N	2.35	0.60
34:sR:63:GLY:HA3	34:sR:92:TRP:HH2	1.65	0.60
36:5:3051:U:H1'	59:n3:92:PHE:CE1	2.35	0.60
63:n7:26:VAL:HG21	63:n7:96:VAL:HB	1.83	0.60
1:2:407:A:OP1	8:S6:94:ARG:NE	2.33	0.60
1:2:972:G:O2'	36:1:847:A:N1	2.32	0.60
36:1:1345:G:N2	41:L4:307:GLN:OE1	2.33	0.60
36:1:1603:A:H61	61:N5:71:THR:HG21	1.66	0.60
36:1:3355:U:O2'	36:1:3357:U:OP2	2.18	0.60
42:L5:4:GLN:OE1	42:L5:4:GLN:N	2.29	0.60
53:M7:26:PHE:HE1	53:M7:120:ASN:HA	1.65	0.60
59:N3:87:ARG:NE	59:N3:121:GLU:OE2	2.34	0.60
2:s0:13:ASP:OD1	2:s0:179:ARG:NH2	2.30	0.60
36:5:1213:G:OP1	56:n0:137:ARG:NH1	2.34	0.60
36:5:1952:G:H1	36:5:2094:C:N4	1.98	0.60
37:7:2:G:H4'	42:l5:270:LYS:HD3	1.84	0.60
55:m9:39:ASN:HA	55:m9:42:ARG:HH11	1.65	0.60
67:o1:31:ARG:HB3	67:o1:31:ARG:HH11	1.66	0.60
72:o6:66:GLU:OE2	72:o6:91:ASN:ND2	2.34	0.60
73:o7:64:MET:HB3	73:o7:68:LYS:HB3	1.82	0.60
1:2:1426:C:H5"	35:SM:93:ARG:NH1	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S2:77:GLN:HE21	4:S2:77:GLN:H	1.49	0.60
9:S7:35:LYS:O	9:S7:37:GLU:N	2.34	0.60
14:C2:57:ALA:HB3	14:C2:85:LYS:HZ1	1.65	0.60
36:1:2617:U:H5	36:1:2621:G:OP2	1.83	0.60
46:L9:49:ASN:C	46:L9:51:GLN:H	2.09	0.60
59:N3:87:ARG:HH22	59:N3:137:VAL:HG22	1.66	0.60
1:6:332:U:P	10:s8:56:ARG:HH22	2.24	0.60
8:s6:153:VAL:O	8:s6:155:ASP:N	2.34	0.60
15:c3:22:ALA:HB1	15:c3:23:PRO:HA	1.83	0.60
36:5:67:A:O2'	36:5:315:C:O2	2.18	0.60
36:5:3085:G:OP1	60:n4:34:SER:OG	2.16	0.60
38:8:86:U:H2'	71:o5:7:TYR:CE2	2.37	0.60
38:8:125:U:O2'	38:8:126:A:H5'	2.02	0.60
38:8:157:U:H2'	38:8:158:U:H6	1.66	0.60
41:l4:38:VAL:HG21	41:l4:121:ALA:HB2	1.84	0.60
41:l4:282:SER:HB3	54:m8:126:GLN:HE21	1.67	0.60
1:2:751:G:H2'	1:2:752:A:C8	2.36	0.60
6:S4:73:ASP:HB3	6:S4:164:LEU:HD22	1.84	0.60
7:S5:40:ILE:HG23	7:S5:42:LEU:HD22	1.81	0.60
7:S5:135:ASP:O	7:S5:139:ASN:ND2	2.31	0.60
12:C0:14:TYR:OH	12:C0:34:GLU:OE1	2.13	0.60
36:1:1308:A:OP2	36:1:1308:A:H8	1.85	0.60
40:L3:141:GLY:O	40:L3:143:GLY:N	2.35	0.60
61:N5:82:LEU:HD11	61:N5:135:ILE:HG21	1.82	0.60
74:O8:42:LYS:HG2	74:O8:55:VAL:HG22	1.82	0.60
3:s1:82:ARG:NH1	3:s1:191:GLU:OE2	2.34	0.60
4:s2:152:HIS:ND1	4:s2:174:ARG:HG2	2.16	0.60
36:5:2207:A:H2'	36:5:2208:A:O4'	2.01	0.60
40:l3:284:ARG:HH21	40:l3:293:ASN:C	2.09	0.60
41:l4:186:LYS:N	41:l4:200:THR:O	2.35	0.60
60:n4:63:ILE:O	60:n4:65:GLU:N	2.35	0.60
69:o3:45:LEU:HD11	69:o3:73:ARG:HA	1.83	0.60
71:o5:31:LEU:O	71:o5:35:LYS:N	2.33	0.60
74:o8:12:LEU:O	74:o8:15:THR:OG1	2.20	0.60
1:2:154:G:OP1	8:S6:2:LYS:NZ	2.34	0.60
23:D1:5:LYS:HD3	23:D1:5:LYS:H	1.67	0.60
25:D3:102:VAL:HG12	25:D3:127:VAL:HB	1.83	0.60
36:1:241:G:O6	36:1:242:C:N4	2.35	0.60
36:1:1286:A:O2'	36:1:1287:A:OP2	2.18	0.60
36:1:1820:U:O2	36:1:1822:C:N4	2.34	0.60
36:1:1841:A:N3	75:O9:45:ARG:NH2	2.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:3:97:A:H2'	37:3:98:C:H6	1.65	0.60
41:L4:158:SER:HA	41:L4:213:ASN:HB2	1.83	0.60
47:M0:49:CYS:HB2	47:M0:172:GLY:HA2	1.83	0.60
48:M1:28:ASP:HB3	48:M1:32:ARG:HH21	1.67	0.60
1:6:138:A:OP2	1:6:1706:C:O2'	2.18	0.60
1:6:273:G:OP1	60:n4:123:ARG:HD3	2.01	0.60
1:6:885:G:H2'	1:6:886:U:C6	2.37	0.60
1:6:1474:G:H2'	1:6:1475:A:C8	2.36	0.60
7:s5:140:THR:HA	7:s5:214:LYS:HD2	1.83	0.60
10:s8:152:ILE:H	10:s8:152:ILE:HD13	1.65	0.60
37:7:112:G:H2'	37:7:113:C:C6	2.35	0.60
42:l5:148:ILE:HG23	42:l5:151:GLN:HB3	1.84	0.60
56:n0:77:VAL:HG11	56:n0:106:LEU:HG	1.83	0.60
56:n0:155:ARG:HD3	56:n0:172:TYR:CG	2.37	0.60
66:o0:78:GLY:HA2	66:o0:87:VAL:HG13	1.83	0.60
72:o6:59:ASP:O	72:o6:63:ASN:ND2	2.27	0.60
1:2:121:U:O2'	6:S4:33:ALA:O	2.16	0.60
3:S1:109:LYS:HG3	3:S1:113:MET:HE3	1.84	0.60
9:S7:174:ASN:ND2	9:S7:180:GLN:OE1	2.30	0.60
36:1:1841:A:H1'	75:O9:45:ARG:HH12	1.66	0.60
36:1:2572:C:O2'	36:1:2573:G:O4'	2.19	0.60
78:Q2:17:CYS:HB2	78:Q2:77:CYS:SG	2.40	0.60
1:6:896:U:OP1	3:s1:27:LYS:NZ	2.27	0.60
4:s2:69:ILE:HG12	4:s2:133:LYS:HB3	1.83	0.60
5:s3:141:LYS:NZ	5:s3:179:GLN:OE1	2.28	0.60
36:5:515:C:O2'	41:l4:341:SER:O	2.19	0.60
36:5:673:U:OP1	54:m8:21:SER:OG	2.17	0.60
36:5:1596:C:H2'	36:5:1597:C:C6	2.37	0.60
40:l3:43:LEU:HG	40:l3:181:ILE:HG21	1.83	0.60
44:l7:121:LYS:HB2	57:n1:133:ALA:HB3	1.84	0.60
1:2:74:U:H1'	1:2:75:U:H4'	1.83	0.60
10:S8:159:GLN:OE1	10:S8:166:TYR:N	2.35	0.60
61:N5:46:TYR:HB3	71:O5:75:TYR:HB3	1.82	0.60
2:s0:167:LYS:HG2	2:s0:168:HIS:CD2	2.37	0.60
5:s3:31:GLU:O	5:s3:54:ARG:NH2	2.35	0.60
47:m0:150:GLU:O	47:m0:152:LEU:N	2.34	0.60
52:m6:54:TYR:HE2	52:m6:58:LEU:HD13	1.66	0.60
54:m8:165:ILE:HD13	54:m8:166:LEU:H	1.64	0.60
1:2:968:U:O3'	1:2:1032:G:N2	2.35	0.60
1:2:1615:C:O2'	1:2:1616:G:OP2	2.19	0.60
8:S6:148:SER:HB3	60:N4:98:PRO:HG3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C6:14:LYS:O	18:C6:123:ARG:NH1	2.28	0.60
34:SR:211:ILE:HD11	34:SR:225:LEU:HD13	1.84	0.60
36:1:114:A:N1	36:1:266:A:O2'	2.32	0.60
36:1:2163:C:H4'	39:L2:7:ASN:O	2.02	0.60
36:1:2703:A:OP2	42:L5:23:ARG:NH1	2.34	0.60
41:L4:193:LYS:HA	41:L4:198:ARG:HA	1.84	0.60
1:6:121:U:O2'	6:s4:33:ALA:O	2.17	0.60
1:6:1316:G:OP1	19:c7:7:LYS:N	2.35	0.60
1:6:1698:G:O2'	1:6:1699:G:O5'	2.19	0.60
5:s3:69:LEU:HA	5:s3:72:LEU:HD12	1.84	0.60
36:5:1152:G:N2	36:5:1200:A:H61	2.00	0.60
36:5:1818:U:H2'	36:5:1819:U:O4'	2.02	0.60
36:5:3120:C:H3'	76:q0:111:ARG:HH21	1.65	0.60
25:D3:56:LYS:HG3	25:D3:98:GLU:HG3	1.84	0.60
36:1:1677:G:N7	58:N2:74:LYS:NZ	2.50	0.60
36:1:2747:A:OP1	42:L5:176:SER:OG	2.18	0.60
9:s7:55:LYS:HE2	9:s7:87:ASP:HA	1.83	0.60
9:s7:105:THR:O	9:s7:107:ARG:N	2.35	0.60
25:d3:97:ASP:N	25:d3:100:ASP:OD2	2.34	0.60
36:5:999:G:N3	36:5:1002:A:N6	2.50	0.60
36:5:2105:G:H2'	36:5:2106:A:H8	1.65	0.60
42:l5:110:LEU:HA	42:l5:113:LEU:HB2	1.84	0.60
45:l8:165:PHE:HA	72:o6:47:ILE:HD13	1.84	0.60
51:m5:14:LYS:HA	51:m5:19:LEU:HD23	1.84	0.60
52:m6:10:ASP:CG	52:m6:37:ARG:HH21	2.10	0.60
1:2:319:U:H5'	1:2:320:U:H5	1.66	0.59
5:S3:177:MET:HE2	5:S3:178:ARG:HH12	1.67	0.59
10:S8:114:GLU:HG2	10:S8:120:THR:HA	1.84	0.59
17:C5:64:LYS:HA	17:C5:73:PRO:HB3	1.83	0.59
25:D3:35:GLY:O	25:D3:37:ALA:N	2.35	0.59
34:SR:116:ASP:HA	34:SR:156:VAL:HG11	1.84	0.59
36:1:305:U:C5	36:1:2776:C:H1'	2.37	0.59
36:1:2927:C:H2'	36:1:2928:C:C6	2.36	0.59
47:M0:9:TYR:O	47:M0:59:GLN:NE2	2.35	0.59
63:N7:102:GLU:H	63:N7:107:ARG:HH21	1.50	0.59
1:6:1797:A:N6	28:d6:85:ARG:O	2.34	0.59
20:c8:18:LEU:HD12	20:c8:102:ALA:HB2	1.84	0.59
21:c9:10:ALA:HB3	21:c9:13:ASP:HB2	1.83	0.59
33:e1:121:CYS:HB3	33:e1:130:VAL:HG11	1.83	0.59
36:5:161:G:N2	36:5:260:C:O2	2.26	0.59
36:5:353:G:N7	73:o7:55:ARG:NH1	2.45	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:l5:69:ILE:H	42:l5:69:ILE:HD12	1.67	0.59
1:2:522:U:O2'	26:D4:60:PHE:O	2.16	0.59
1:2:1034:C:HO2'	24:D2:2:THR:N	1.98	0.59
6:S4:252:ARG:HB2	11:S9:71:PHE:HE2	1.66	0.59
7:S5:166:ARG:NH1	7:S5:170:GLN:OE1	2.35	0.59
11:S9:38:ASN:HB2	11:S9:40:LYS:H	1.67	0.59
11:S9:110:GLN:NE2	11:S9:126:ARG:HG2	2.17	0.59
23:D1:1:MET:HE2	23:D1:13:VAL:HG22	1.85	0.59
34:SR:16:HIS:CE1	34:SR:43:ILE:HG12	2.37	0.59
34:SR:179:LYS:NZ	34:SR:191:ASP:OD1	2.30	0.59
36:1:210:U:HO2'	36:1:229:G:HO2'	1.49	0.59
36:1:975:C:H2'	36:1:976:U:C6	2.37	0.59
36:1:1064:A:H4'	36:1:1065:A:O5'	2.01	0.59
36:1:2107:A:H2	36:1:3344:A:H8	1.50	0.59
42:L5:85:ARG:NH2	42:L5:250:ASP:OD1	2.32	0.59
44:L7:102:VAL:HA	44:L7:105:LEU:HD12	1.84	0.59
66:O0:95:ALA:HB2	66:O0:101:LEU:HD23	1.84	0.59
71:O5:68:GLN:NE2	62:n6:127:GLU:O	2.35	0.59
75:O9:21:ARG:NH1	75:O9:22:PRO:O	2.30	0.59
1:6:1429:G:H1'	22:d0:74:GLU:HG2	1.83	0.59
35:sM:48:ARG:HH22	36:5:1017:C:H4'	1.66	0.59
36:5:156:G:OP2	72:o6:25:LYS:HB3	2.02	0.59
36:5:2714:G:OP2	78:q2:10:THR:OG1	2.18	0.59
67:o1:83:GLU:O	67:o1:85:ALA:N	2.34	0.59
9:S7:133:THR:OG1	9:S7:134:GLU:N	2.32	0.59
20:C8:99:HIS:CD2	20:C8:101:LEU:HD21	2.38	0.59
30:D8:26:THR:HB	30:D8:44:VAL:HG22	1.83	0.59
36:1:551:A:O2'	36:1:552:G:O5'	2.19	0.59
36:1:911:C:H42	39:L2:3:ARG:HD3	1.68	0.59
61:N5:137:ASN:OD1	61:N5:137:ASN:N	2.24	0.59
79:Q3:84:ARG:NH1	79:Q3:88:GLU:OE2	2.34	0.59
1:6:1120:U:H2'	1:6:1121:C:C6	2.36	0.59
2:s0:30:GLN:HE21	2:s0:33:GLN:HG2	1.67	0.59
13:c1:111:VAL:HG23	13:c1:139:VAL:HG21	1.84	0.59
36:5:1588:A:C2	75:o9:4:GLN:HG2	2.37	0.59
36:5:2600:C:OP1	51:m5:93:LYS:NZ	2.34	0.59
68:o2:3:SER:HA	68:o2:90:LYS:HB3	1.83	0.59
70:o4:81:CYS:O	70:o4:83:ASN:N	2.35	0.59
1:2:780:A:C8	26:D4:8:ARG:HB3	2.37	0.59
1:2:866:G:OP1	15:C3:2:GLY:N	2.34	0.59
1:2:1064:G:O2'	3:S1:204:ILE:O	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S1:179:SER:HB3	3:S1:183:GLN:HB2	1.84	0.59
5:S3:137:VAL:HG22	5:S3:151:LYS:HG3	1.84	0.59
36:1:3233:C:H2'	36:1:3234:A:C8	2.37	0.59
36:1:3234:A:H61	36:1:3253:G:H22	1.51	0.59
49:M3:50:PRO:HG3	71:O5:118:ILE:HD11	1.84	0.59
52:M6:127:LEU:HD22	56:N0:156:VAL:HG12	1.83	0.59
55:M9:10:LEU:HB3	55:M9:41:ILE:HD12	1.84	0.59
23:d1:9:VAL:HG22	23:d1:10:GLU:H	1.67	0.59
36:5:138:U:H2'	36:5:139:G:C8	2.38	0.59
36:5:1322:U:O2	56:n0:108:GLN:NE2	2.35	0.59
71:o5:78:LYS:HG2	71:o5:81:ARG:HD2	1.85	0.59
1:2:1533:C:H4'	1:2:1539:G:N1	2.17	0.59
7:S5:55:ASP:HB3	7:S5:58:LEU:HD12	1.83	0.59
18:C6:42:GLU:HB2	18:C6:45:ARG:HH21	1.67	0.59
36:1:1320:C:O2	56:N0:115:ARG:NH2	2.35	0.59
36:1:2403:G:N7	36:1:2870:C:H4'	2.18	0.59
38:4:155:A:H5'	45:L8:185:ARG:CZ	2.31	0.59
41:L4:204:GLY:O	41:L4:246:ARG:NH1	2.35	0.59
54:M8:100:THR:HG23	54:M8:120:GLU:HB3	1.83	0.59
59:N3:75:PRO:HG2	59:N3:105:PRO:HD3	1.83	0.59
1:6:1058:U:H4'	1:6:1059:U:OP1	2.01	0.59
21:c9:37:VAL:HG12	21:c9:39:THR:H	1.67	0.59
36:5:2499:U:H2'	36:5:2500:A:C8	2.37	0.59
40:l3:67:PHE:HA	40:l3:70:ARG:HG3	1.84	0.59
44:l7:121:LYS:HE2	44:l7:125:GLU:OE2	2.02	0.59
74:o8:8:ILE:HD12	74:o8:8:ILE:H	1.66	0.59
1:2:615:A:H2'	1:2:616:G:H8	1.68	0.59
1:2:903:U:OP2	16:C4:24:ASN:ND2	2.36	0.59
1:2:1347:U:O2	1:2:1516:A:H5"	2.01	0.59
1:2:1594:G:H5'	31:D9:33:LYS:HE3	1.85	0.59
2:S0:9:LEU:HD23	2:S0:54:TRP:CG	2.37	0.59
4:S2:38:VAL:HG13	4:S2:39:THR:HG23	1.84	0.59
13:C1:4:GLU:HG2	13:C1:5:LEU:HG	1.85	0.59
27:D5:60:VAL:HG13	27:D5:101:TYR:HB2	1.82	0.59
31:D9:5:ASN:HB3	31:D9:7:TRP:NE1	2.18	0.59
34:SR:81:LEU:HD11	34:SR:122:ILE:HD13	1.82	0.59
34:SR:112:SER:HB3	34:SR:154:VAL:HG22	1.83	0.59
44:L7:71:ALA:O	44:L7:73:GLY:N	2.35	0.59
46:L9:89:LYS:HG2	46:L9:145:VAL:HG22	1.85	0.59
46:L9:117:PHE:O	46:L9:120:ASP:HB2	2.03	0.59
1:6:482:U:H2'	1:6:483:A:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:818:C:O2'	36:5:2138:A:N1	2.32	0.59
36:5:2518:C:H2'	36:5:2519:A:C8	2.38	0.59
36:5:3343:G:O2'	36:5:3362:A:N6	2.30	0.59
70:o4:80:ARG:HG3	70:o4:88:ARG:NH2	2.16	0.59
1:2:1087:A:H2'	1:2:1088:A:C8	2.38	0.59
1:2:1381:U:O4	1:2:1382:A:N6	2.36	0.59
1:2:1473:U:H5	7:S5:98:MET:HA	1.68	0.59
2:S0:31:VAL:HG12	2:S0:33:GLN:H	1.67	0.59
11:S9:112:GLN:HG3	11:S9:148:VAL:HB	1.84	0.59
24:D2:102:VAL:O	24:D2:113:HIS:N	2.36	0.59
36:1:2768:U:H2'	36:1:2769:A:H8	1.66	0.59
39:L2:143:GLU:O	39:L2:145:LYS:N	2.33	0.59
40:L3:212:ASN:O	40:L3:281:LYS:NZ	2.36	0.59
49:M3:120:GLN:HA	49:M3:123:ILE:HG12	1.85	0.59
69:O3:59:VAL:O	69:O3:61:GLY:N	2.35	0.59
1:6:975:C:OP1	15:c3:112:LYS:NZ	2.35	0.59
1:6:1018:U:H2'	1:6:1019:A:C8	2.38	0.59
2:s0:52:LYS:NZ	23:d1:82:VAL:O	2.31	0.59
16:c4:47:LYS:HB3	16:c4:62:LEU:HD23	1.84	0.59
23:d1:1:MET:HE2	23:d1:10:GLU:HB2	1.84	0.59
44:l7:229:PHE:C	44:l7:229:PHE:CD1	2.81	0.59
54:m8:34:THR:HG22	54:m8:49:LEU:HD21	1.84	0.59
59:n3:2:SER:N	59:n3:56:ASP:OD1	2.35	0.59
36:1:1146:C:H4'	36:1:1331:U:C4	2.38	0.59
36:1:1634:G:N7	63:N7:17:ARG:NH2	2.37	0.59
36:1:1808:G:OP2	63:N7:133:LYS:NZ	2.36	0.59
36:1:2616:C:H3'	36:1:2617:U:O2	2.03	0.59
62:N6:40:ARG:HG2	62:N6:45:ILE:O	2.02	0.59
62:N6:51:ARG:HG3	62:N6:52:ARG:N	2.18	0.59
1:6:859:A:C6	15:c3:73:ARG:HD3	2.37	0.59
16:c4:85:ALA:N	16:c4:119:THR:HG22	2.18	0.59
16:c4:128:LYS:HD2	28:d6:22:ARG:HB3	1.85	0.59
25:d3:44:GLY:H	25:d3:78:LYS:NZ	2.01	0.59
34:sR:108:SER:OG	34:sR:109:ASP:N	2.35	0.59
42:l5:211:LEU:HB3	42:l5:219:PHE:HB2	1.83	0.59
47:m0:9:TYR:OH	47:m0:99:ILE:HG22	2.03	0.59
1:2:1684:U:O2	1:2:1718:G:N2	2.36	0.59
23:D1:41:GLU:CD	23:D1:41:GLU:H	2.11	0.59
36:1:829:U:H3	36:1:895:A:H62	1.50	0.59
36:1:1381:A:OP1	41:L4:197:ARG:NH1	2.36	0.59
38:4:53:A:H3'	38:4:54:A:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:N8:74:ASN:HB3	64:N8:115:LYS:H	1.68	0.59
1:6:230:C:H42	1:6:235:G:H1	1.51	0.59
16:c4:104:ALA:HA	16:c4:107:ARG:HB3	1.85	0.59
17:c5:118:GLU:O	20:c8:122:HIS:N	2.35	0.59
20:c8:30:TYR:HE2	20:c8:40:ARG:HH11	1.48	0.59
36:5:91:G:OP2	36:5:93:C:N4	2.30	0.59
36:5:1025:A:N7	36:5:1026:A:O2'	2.36	0.59
36:5:1369:A:H5"	64:n8:21:ARG:HD2	1.84	0.59
40:l3:92:TYR:HB2	40:l3:157:VAL:HG13	1.84	0.59
51:m5:46:ASP:OD1	51:m5:50:ARG:NH2	2.36	0.59
55:m9:21:LYS:HE3	55:m9:55:VAL:HA	1.84	0.59
63:n7:95:VAL:HG21	63:n7:113:VAL:HG11	1.83	0.59
1:2:918:U:H2'	1:2:919:A:C8	2.38	0.59
2:S0:69:ASN:HB3	2:S0:71:GLU:CD	2.28	0.59
9:S7:177:THR:OG1	9:S7:178:GLY:N	2.34	0.59
19:C7:27:ASP:O	19:C7:31:ASN:ND2	2.36	0.59
20:C8:82:PRO:O	20:C8:84:TRP:N	2.32	0.59
23:D1:74:GLN:HE22	23:D1:83:TRP:H	1.50	0.59
34:SR:58:VAL:HG23	34:SR:59:ARG:HG3	1.84	0.59
36:1:654:C:OP1	68:O2:27:ARG:NH2	2.36	0.59
36:1:975:C:H2'	36:1:976:U:H6	1.68	0.59
41:L4:89:ALA:O	41:L4:91:GLY:N	2.33	0.59
44:L7:160:ARG:HG3	44:L7:203:TRP:CD2	2.37	0.59
56:N0:74:ASN:HD21	56:N0:95:ARG:HH11	1.50	0.59
1:6:753:A:N7	6:s4:187:ARG:NH2	2.50	0.59
6:s4:160:VAL:HG13	6:s4:169:ILE:HG23	1.85	0.59
35:sM:48:ARG:HH12	36:5:1017:C:H5"	1.67	0.59
36:5:1635:G:N2	36:5:1638:A:OP2	2.33	0.59
36:5:2996:U:H4'	36:5:2996:U:OP1	2.02	0.59
36:5:3378:C:H2'	36:5:3379:C:H6	1.68	0.59
37:7:28:C:H5"	48:m1:137:ARG:HG2	1.85	0.59
41:l4:44:LYS:O	41:l4:47:ARG:HD2	2.03	0.59
68:o2:123:LYS:HA	68:o2:126:LEU:HD12	1.85	0.59
6:S4:52:LEU:HB3	6:S4:54:TYR:HD2	1.68	0.58
27:D5:88:ILE:HA	27:D5:104:ALA:HB2	1.85	0.58
34:SR:133:VAL:O	34:SR:141:LEU:N	2.34	0.58
36:1:31:C:OP2	51:M5:188:ARG:NH2	2.36	0.58
36:1:362:U:O4	73:O7:24:ARG:NH2	2.36	0.58
36:1:1080:A:OP2	42:L5:140:ARG:NH2	2.36	0.58
36:1:2112:U:H4'	36:1:2113:A:H5'	1.84	0.58
37:3:11:A:H4'	37:3:13:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:L2:59:ALA:HB2	39:L2:78:ALA:HB2	1.84	0.58
51:M5:122:ASN:OD1	51:M5:123:GLN:N	2.36	0.58
55:M9:102:LEU:HD22	55:M9:138:LEU:HD12	1.85	0.58
21:c9:128:GLY:HA2	21:c9:131:ASP:HB2	1.85	0.58
34:sR:198:ASN:O	34:sR:215:GLY:HA3	2.03	0.58
36:5:1603:A:H5'	55:m9:9:ARG:HH21	1.68	0.58
36:5:1634:G:N7	63:n7:17:ARG:NH2	2.36	0.58
36:5:2396:G:OP1	36:5:2397:A:H4'	2.03	0.58
36:5:2737:C:H4'	57:n1:68:THR:OG1	2.03	0.58
41:l4:255:PHE:HA	41:l4:258:LEU:HD22	1.85	0.58
67:o1:15:ASN:O	67:o1:19:ARG:NH1	2.36	0.58
3:S1:99:ASN:OD1	3:S1:100:PHE:N	2.36	0.58
4:S2:73:LEU:HG	4:S2:76:LEU:HD13	1.84	0.58
4:S2:170:ILE:HB	4:S2:197:TYR:HB2	1.84	0.58
36:1:1350:A:H2'	36:1:1351:U:H3'	1.85	0.58
42:L5:77:ALA:O	42:L5:108:ARG:NH1	2.36	0.58
45:L8:121:SER:O	45:L8:123:GLN:N	2.36	0.58
47:M0:5:PRO:C	47:M0:7:ARG:H	2.10	0.58
74:O8:32:ASN:O	74:O8:34:ALA:N	2.36	0.58
16:c4:84:ARG:HB3	16:c4:118:VAL:HG23	1.85	0.58
36:5:528:U:H2'	36:5:529:A:C8	2.37	0.58
36:5:1783:U:H2'	36:5:1784:G:C8	2.38	0.58
36:5:2836:C:H4'	47:m0:157:TYR:CD1	2.38	0.58
38:8:51:G:OP2	75:o9:21:ARG:NH2	2.27	0.58
41:l4:302:ALA:HB2	54:m8:39:ARG:NH2	2.17	0.58
64:n8:47:LYS:C	64:n8:49:HIS:H	2.07	0.58
81:p0:24:SER:HB2	81:p0:89:THR:HG23	1.85	0.58
1:2:1160:A:H2'	1:2:1161:C:C6	2.38	0.58
1:2:1208:A:N1	1:2:1455:G:N2	2.48	0.58
3:S1:67:GLU:OE1	16:C4:82:LYS:NZ	2.37	0.58
9:S7:162:ILE:HG22	9:S7:165:LYS:HD2	1.85	0.58
36:1:1315:U:OP2	52:M6:44:SER:OG	2.17	0.58
40:L3:4:ARG:HD3	40:L3:7:GLU:HA	1.85	0.58
63:N7:115:LYS:NZ	63:N7:119:GLU:OE2	2.37	0.58
1:6:151:G:N2	8:s6:13:GLN:OE1	2.36	0.58
34:sR:149:ASP:HB2	34:sR:175:ASP:HB3	1.84	0.58
36:5:1239:C:H42	36:5:1249:G:H1	1.51	0.58
36:5:2898:G:OP2	46:l9:173:ARG:NH2	2.37	0.58
36:5:2927:C:H2'	36:5:2928:C:C6	2.38	0.58
38:8:135:G:OP2	61:n5:56:ARG:NH2	2.36	0.58
38:8:149:A:H2'	38:8:150:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:l5:180:PHE:HB3	42:l5:195:LEU:HD13	1.84	0.58
50:m4:48:GLY:HA3	50:m4:53:VAL:HG13	1.84	0.58
36:1:519:A:OP1	56:N0:62:ASN:ND2	2.33	0.58
36:1:692:A:OP1	51:M5:201:ARG:NH2	2.35	0.58
36:1:1596:C:H2'	36:1:1597:C:C6	2.39	0.58
36:1:1722:U:OP1	55:M9:100:ARG:HD3	2.03	0.58
40:L3:214:MET:HE2	40:L3:350:ALA:HB2	1.82	0.58
42:L5:41:LYS:HD2	57:N1:93:VAL:HG11	1.85	0.58
43:L6:129:GLU:OE1	43:L6:129:GLU:N	2.37	0.58
78:Q2:63:LYS:HD2	78:Q2:87:ARG:NH1	2.19	0.58
7:s5:41:LYS:NZ	7:s5:67:PRO:O	2.36	0.58
16:c4:42:VAL:HG21	16:c4:66:ASP:HB2	1.86	0.58
35:sM:50:ASN:OD1	35:sM:50:ASN:N	2.36	0.58
36:5:2703:A:OP2	42:l5:23:ARG:NH2	2.30	0.58
36:5:3299:A:N6	36:5:3315:G:H1	1.99	0.58
47:m0:61:SER:OG	47:m0:63:GLU:HG2	2.03	0.58
59:n3:129:VAL:O	59:n3:133:SER:OG	2.18	0.58
1:2:473:A:H5'	1:2:769:A:H1'	1.85	0.58
13:C1:22:ASN:HD22	13:C1:25:VAL:HG23	1.68	0.58
41:L4:265:GLU:H	41:L4:265:GLU:CD	2.11	0.58
1:6:407:A:H5'	8:s6:94:ARG:HH21	1.69	0.58
9:s7:143:LEU:HD23	9:s7:149:ILE:HD13	1.85	0.58
33:e1:90:LYS:HB2	33:e1:93:HIS:CE1	2.39	0.58
33:e1:108:VAL:HG12	33:e1:114:VAL:HG13	1.85	0.58
36:5:59:G:H2'	38:8:33:A:O2'	2.04	0.58
36:5:63:A:OP1	51:m5:172:ARG:NH2	2.36	0.58
36:5:2709:C:H2'	36:5:2710:C:C6	2.38	0.58
38:8:83:C:H4'	38:8:85:G:N3	2.18	0.58
1:2:1257:U:H2'	12:C0:2:LEU:HD12	1.85	0.58
6:S4:191:ARG:HD3	6:S4:245:LYS:HB2	1.85	0.58
10:S8:122:GLY:N	10:S8:157:GLU:OE2	2.37	0.58
25:D3:126:LYS:HG3	25:D3:131:SER:HA	1.85	0.58
35:SM:34:LYS:NZ	36:1:2707:C:OP1	2.37	0.58
35:SM:49:LYS:N	36:1:1019:G:OP1	2.37	0.58
36:1:386:A:C5	36:1:387:A:H1'	2.39	0.58
36:1:1720:U:OP2	55:M9:120:TYR:OH	2.14	0.58
36:1:2700:G:O2'	36:1:2705:A:N1	2.33	0.58
69:O3:26:ASN:HA	69:O3:88:ASN:OD1	2.04	0.58
2:s0:13:ASP:CG	2:s0:179:ARG:HH22	2.12	0.58
4:s2:143:TYR:O	24:d2:98:GLN:NE2	2.37	0.58
7:s5:79:ASN:OD1	7:s5:83:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:22:G:H1'	38:8:104:A:N3	2.18	0.58
36:5:1686:U:OP1	58:n2:42:LYS:NZ	2.30	0.58
43:l6:100:LYS:NZ	43:l6:137:ASP:OD2	2.31	0.58
46:l9:163:GLN:OE1	46:l9:166:ARG:NH1	2.33	0.58
58:n2:50:LEU:HD22	58:n2:54:VAL:HB	1.85	0.58
67:o1:31:ARG:O	67:o1:35:GLU:HB2	2.03	0.58
1:2:14:C:H5"	4:S2:203:LYS:HD2	1.85	0.58
5:S3:142:LEU:HD13	5:S3:182:LEU:HD21	1.85	0.58
6:S4:246:LEU:HD12	6:S4:246:LEU:H	1.67	0.58
6:S4:251:GLU:HB3	6:S4:255:ARG:NH1	2.19	0.58
13:C1:98:ASN:O	13:C1:98:ASN:ND2	2.37	0.58
36:1:1761:C:O2'	36:1:1762:C:OP2	2.22	0.58
50:M4:17:VAL:HG21	50:M4:74:ARG:HB2	1.85	0.58
53:M7:177:ALA:HA	53:M7:180:LYS:HD2	1.84	0.58
64:N8:24:LYS:HD2	64:N8:26:ARG:HE	1.68	0.58
68:O2:71:HIS:CE1	68:O2:118:LYS:HD3	2.38	0.58
71:O5:78:LYS:HA	71:O5:81:ARG:HD2	1.84	0.58
79:Q3:59:CYS:O	79:Q3:61:LYS:N	2.36	0.58
1:6:260:U:H5	10:s8:43:ILE:H	1.52	0.58
4:s2:222:TYR:HE2	23:d1:11:LEU:HD12	1.69	0.58
9:s7:50:ASP:OD1	9:s7:50:ASP:N	2.36	0.58
22:d0:24:ILE:HA	22:d0:116:VAL:HG12	1.86	0.58
22:d0:71:PRO:O	22:d0:72:ASN:ND2	2.37	0.58
33:e1:90:LYS:HB2	33:e1:93:HIS:HE1	1.68	0.58
36:5:2861:U:H2'	36:5:2862:U:O4'	2.03	0.58
40:l3:168:LYS:O	40:l3:319:ASN:ND2	2.36	0.58
51:m5:73:ARG:HG2	51:m5:75:VAL:HG13	1.85	0.58
61:n5:135:ILE:HA	61:n5:138:ARG:HB3	1.84	0.58
1:2:323:A:OP2	10:S8:10:LYS:HG3	2.03	0.58
1:2:1266:U:H2'	1:2:1267:G:C8	2.39	0.58
2:S0:139:VAL:HG13	2:S0:141:ILE:HG13	1.86	0.58
30:D8:12:VAL:HA	30:D8:30:VAL:HG12	1.85	0.58
36:1:398:A:O2'	36:1:1416:C:OP1	2.18	0.58
36:1:1688:U:H2'	36:1:1689:U:C6	2.39	0.58
39:L2:238:ILE:H	39:L2:238:ILE:HD12	1.67	0.58
41:L4:23:PRO:O	41:L4:25:VAL:N	2.37	0.58
49:M3:170:LEU:HD22	72:O6:9:ILE:HD11	1.85	0.58
52:M6:27:LEU:HD22	52:M6:101:ARG:HB2	1.85	0.58
56:N0:60:SER:OG	56:N0:62:ASN:OD1	2.21	0.58
1:6:326:G:OP1	13:c1:57:LYS:NZ	2.36	0.58
1:6:753:A:H62	6:s4:187:ARG:HH22	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:s2:88:LYS:HB3	4:s2:95:ARG:HD2	1.84	0.58
7:s5:25:LEU:HB3	18:c6:27:GLY:HA3	1.85	0.58
31:d9:24:CYS:HB3	31:d9:42:CYS:SG	2.44	0.58
36:5:361:A:O3'	73:o7:45:ARG:NH2	2.36	0.58
36:5:1561:G:O6	36:5:1578:C:N4	2.37	0.58
42:l5:120:LYS:O	42:l5:248:ARG:NH2	2.33	0.58
44:l7:88:ARG:HD2	44:l7:90:LYS:O	2.04	0.58
73:o7:29:VAL:O	73:o7:32:LYS:NZ	2.34	0.58
1:2:375:U:OP1	25:D3:23:ARG:NH2	2.37	0.58
1:2:381:C:O2'	1:2:755:A:N1	2.36	0.58
2:S0:124:THR:HA	2:S0:146:LEU:HB2	1.84	0.58
7:S5:90:ILE:HD11	7:S5:130:ILE:HG13	1.84	0.58
15:C3:92:ILE:O	15:C3:96:VAL:HG23	2.03	0.58
36:1:1051:U:H4'	57:N1:19:PHE:CD2	2.38	0.58
36:1:2415:C:OP1	39:L2:2:GLY:N	2.36	0.58
36:1:2996:U:OP1	36:1:2996:U:H4'	2.02	0.58
49:M3:108:ILE:HG22	49:M3:112:ASN:HD21	1.68	0.58
13:c1:83:THR:HA	13:c1:111:VAL:H	1.69	0.58
35:sM:46:LYS:HA	36:5:1018:G:H4'	1.86	0.58
36:5:147:U:C4	45:l8:157:VAL:HG13	2.38	0.58
36:5:293:C:O2'	72:o6:76:ARG:O	2.17	0.58
36:5:379:C:H2'	36:5:380:U:H6	1.69	0.58
36:5:1355:A:H4'	36:5:1356:U:O5'	2.04	0.58
40:l3:139:GLN:C	40:l3:141:GLY:H	2.12	0.58
42:l5:257:GLU:N	42:l5:257:GLU:OE2	2.37	0.58
51:m5:73:ARG:O	51:m5:75:VAL:N	2.34	0.58
1:2:1445:G:H1	33:E1:89:LYS:HA	1.69	0.58
1:2:1535:U:O2'	1:2:1536:G:N3	2.36	0.58
15:C3:101:HIS:HA	15:C3:104:ARG:HE	1.69	0.58
25:D3:51:GLY:HA2	25:D3:77:ILE:HG13	1.86	0.58
35:SM:64:LYS:C	35:SM:66:ALA:H	2.11	0.58
36:1:3151:U:OP1	40:L3:128:LYS:NZ	2.36	0.58
40:L3:167:ARG:HB2	40:L3:167:ARG:HH11	1.68	0.58
41:L4:74:ILE:HD13	41:L4:88:GLY:HA2	1.86	0.58
49:M3:22:VAL:HG13	51:M5:197:LEU:HB3	1.85	0.58
1:6:213:A:H61	1:6:252:U:H3	1.52	0.58
1:6:340:U:H2'	1:6:341:A:C8	2.39	0.58
8:s6:55:GLY:HA3	8:s6:63:MET:HE3	1.86	0.58
20:c8:14:ILE:HD12	20:c8:23:ASP:HA	1.86	0.58
24:d2:83:ILE:HD12	24:d2:122:SER:HB2	1.84	0.58
36:5:3107:U:OP1	76:q0:114:LYS:NZ	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:l5:196:ARG:HA	42:l5:199:ILE:HD12	1.85	0.58
55:m9:43:LYS:O	55:m9:47:ASN:N	2.29	0.58
83:f:37:ARG:NH2	83:f:63:ASP:OD2	2.34	0.58
1:2:733:A:H4'	1:2:734:A:C5	2.39	0.57
10:S8:89:GLU:O	10:S8:93:THR:OG1	2.11	0.57
19:C7:75:GLU:O	19:C7:79:GLU:HG2	2.04	0.57
36:1:623:U:O3'	69:O3:86:ARG:NH2	2.36	0.57
36:1:1233:G:H22	36:1:1255:C:H42	1.52	0.57
36:1:3086:A:OP1	40:L3:367:LYS:NZ	2.22	0.57
37:3:65:G:OP1	47:M0:204:GLY:N	2.27	0.57
45:L8:45:ASN:ND2	45:L8:47:SER:HB3	2.18	0.57
46:L9:37:ASN:O	46:L9:39:LYS:N	2.36	0.57
50:M4:38:ILE:HD11	56:N0:150:PHE:CE2	2.39	0.57
1:6:560:U:H2'	1:6:561:G:C8	2.39	0.57
1:6:1098:U:OP2	4:s2:168:ARG:NE	2.37	0.57
1:6:1534:G:N7	27:d5:77:ARG:NH2	2.49	0.57
17:c5:30:THR:HG23	17:c5:86:VAL:HG11	1.86	0.57
36:5:260:C:H2'	36:5:261:U:C6	2.38	0.57
36:5:2245:C:H4'	39:l2:221:LYS:O	2.04	0.57
67:o1:44:MET:HB3	67:o1:77:ARG:NH1	2.18	0.57
1:2:1031:U:H4'	1:2:1032:G:OP2	2.04	0.57
17:C5:68:PRO:HG2	17:C5:71:GLU:HG3	1.85	0.57
28:D6:15:ARG:O	28:D6:17:HIS:N	2.37	0.57
36:1:63:A:H5"	51:M5:174:ILE:HG21	1.86	0.57
36:1:2355:G:H4'	53:M7:139:TYR:CE2	2.39	0.57
36:1:2623:G:H2'	36:1:2624:G:C8	2.38	0.57
67:O1:41:LYS:NZ	67:O1:47:ASP:OD1	2.36	0.57
4:s2:140:ARG:HG2	4:s2:155:ALA:HB2	1.85	0.57
7:s5:203:LYS:O	7:s5:205:SER:N	2.37	0.57
28:d6:39:MET:HE2	28:d6:70:LYS:HB2	1.86	0.57
34:sR:164:ASP:O	34:sR:166:SER:N	2.37	0.57
36:5:2899:C:O2'	36:5:2901:G:OP2	2.17	0.57
51:m5:190:THR:O	51:m5:194:GLN:HG2	2.03	0.57
57:n1:14:MET:HE1	57:n1:55:LYS:HB2	1.85	0.57
1:2:1222:C:H42	1:2:1261:G:H1	1.51	0.57
1:2:1335:U:H3	1:2:1416:G:H1	1.50	0.57
6:S4:59:ARG:HH12	26:D4:87:PRO:HG3	1.68	0.57
36:1:1805:C:H2'	36:1:1806:A:H8	1.68	0.57
36:1:2620:G:H1	84:C:74:CH:H41	1.52	0.57
36:1:2812:C:H2'	36:1:2813:A:C8	2.40	0.57
44:L7:121:LYS:HB2	57:N1:133:ALA:HB3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:N8:125:VAL:HG21	64:N8:138:ILE:HD13	1.87	0.57
1:6:1389:C:O2'	19:c7:52:GLY:HA3	2.05	0.57
3:s1:36:SER:HB3	3:s1:41:ARG:HH21	1.69	0.57
5:s3:59:LEU:HD23	5:s3:66:ILE:HG21	1.85	0.57
19:c7:108:ASP:HA	19:c7:111:LYS:HE3	1.85	0.57
36:5:327:A:H2'	36:5:328:U:C6	2.39	0.57
36:5:561:C:H2'	36:5:562:C:C6	2.38	0.57
36:5:2404:A:N7	36:5:2872:A:N6	2.52	0.57
38:8:38:U:C4	71:o5:89:ARG:HD2	2.39	0.57
39:l2:27:ALA:O	39:l2:128:ARG:NH2	2.36	0.57
40:l3:19:ARG:HB3	40:l3:232:ARG:NH1	2.19	0.57
40:l3:284:ARG:NH2	40:l3:295:ALA:O	2.33	0.57
41:l4:289:ILE:O	41:l4:292:SER:OG	2.22	0.57
46:l9:163:GLN:O	46:l9:166:ARG:HG3	2.04	0.57
47:m0:93:PRO:HB2	47:m0:125:LEU:HB2	1.86	0.57
78:q2:77:CYS:SG	78:q2:79:THR:OG1	2.56	0.57
83:f:110:LYS:O	83:f:112:ASP:N	2.38	0.57
1:2:1565:C:OP1	20:C8:41:ARG:HG3	2.04	0.57
30:D8:32:PHE:HE2	30:D8:38:ARG:HB3	1.69	0.57
34:SR:255:ALA:HA	34:SR:260:ILE:HG12	1.85	0.57
36:1:153:U:HO2'	36:1:158:G:HO2'	1.51	0.57
44:L7:27:ALA:HA	44:L7:30:ARG:HB3	1.86	0.57
46:L9:90:MET:HG2	46:L9:181:VAL:HG22	1.86	0.57
47:M0:29:SER:OG	47:M0:30:LYS:N	2.36	0.57
62:N6:35:LEU:HD21	62:N6:48:LEU:HD12	1.86	0.57
1:6:104:A:N6	1:6:308:C:H5'	2.10	0.57
1:6:751:G:H2'	1:6:752:A:C8	2.39	0.57
1:6:1041:G:H2'	1:6:1042:G:C8	2.39	0.57
6:s4:2:ALA:O	6:s4:3:ARG:HB2	2.04	0.57
8:s6:57:ASP:O	8:s6:59:GLN:N	2.37	0.57
25:d3:102:VAL:HG12	25:d3:127:VAL:HA	1.86	0.57
36:5:73:C:OP1	72:o6:14:GLY:HA2	2.03	0.57
36:5:1713:G:O6	66:o0:28:LYS:NZ	2.23	0.57
39:l2:114:SER:HB2	39:l2:169:ILE:HG12	1.86	0.57
42:l5:211:LEU:O	42:l5:215:ASP:N	2.37	0.57
1:2:1059:U:O2'	1:2:1060:U:N3	2.37	0.57
3:S1:26:ARG:NH1	3:S1:49:ASN:OD1	2.38	0.57
30:D8:38:ARG:HH11	30:D8:40:ILE:HD11	1.69	0.57
36:1:1874:A:N7	55:M9:20:ARG:NH1	2.53	0.57
65:N9:14:ARG:HH12	65:N9:18:ARG:HD2	1.70	0.57
67:O1:25:PHE:HB3	67:O1:65:LYS:HG2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:123:G:H21	6:s4:146:THR:HG21	1.69	0.57
1:6:485:A:C6	1:6:486:G:H1'	2.39	0.57
1:6:755:A:H2'	1:6:756:A:C8	2.38	0.57
3:s1:65:VAL:O	16:c4:34:SER:OG	2.19	0.57
29:d7:67:THR:OG1	29:d7:70:LYS:O	2.21	0.57
36:5:181:U:H4'	73:o7:75:LYS:HD3	1.86	0.57
36:5:3056:U:O2	67:o1:28:ARG:NH1	2.33	0.57
36:5:3272:C:OP2	43:l6:78:ARG:NH1	2.37	0.57
48:m1:155:THR:O	48:m1:159:THR:HG23	2.04	0.57
2:S0:17:LEU:HD23	2:S0:172:LEU:HD13	1.86	0.57
20:C8:91:ASP:C	20:C8:93:THR:H	2.12	0.57
34:SR:33:LEU:HB2	34:SR:47:LEU:HD11	1.85	0.57
36:1:422:A:C2	36:1:2363:A:H4'	2.40	0.57
36:1:2707:C:H2'	36:1:2708:C:C6	2.40	0.57
36:1:3001:C:OP1	40:L3:120:LYS:NZ	2.31	0.57
1:6:1619:C:O2	30:d8:22:ARG:NH1	2.38	0.57
25:d3:97:ASP:O	25:d3:100:ASP:HB2	2.04	0.57
36:5:70:A:N1	36:5:313:A:O2'	2.36	0.57
36:5:1244:A:H5"	36:5:1271:A:H4'	1.86	0.57
36:5:1493:G:OP2	36:5:1493:G:N2	2.36	0.57
53:m7:122:ALA:HB3	53:m7:143:PRO:HB2	1.87	0.57
1:2:26:A:O2'	1:2:27:U:O5'	2.23	0.57
3:S1:88:VAL:HG11	3:S1:96:LEU:HD12	1.86	0.57
12:C0:15:LEU:HD13	12:C0:21:VAL:HG23	1.87	0.57
36:1:1095:U:O2	57:N1:128:LEU:N	2.38	0.57
36:1:1942:U:OP2	55:M9:74:ARG:NH1	2.38	0.57
40:L3:308:MET:HB2	40:L3:363:SER:HB2	1.87	0.57
45:L8:94:PHE:HB3	45:L8:189:LEU:HD13	1.87	0.57
74:O8:29:LYS:O	74:O8:29:LYS:NZ	2.25	0.57
1:6:427:C:O2'	1:6:459:G:N3	2.28	0.57
1:6:691:C:P	1:6:696:C:H41	2.27	0.57
1:6:1209:C:H42	1:6:1454:G:H1	1.52	0.57
27:d5:38:HIS:ND1	27:d5:71:ILE:O	2.38	0.57
36:5:1110:U:H2'	36:5:1111:U:C6	2.40	0.57
36:5:2209:U:H4'	36:5:2210:G:OP1	2.04	0.57
41:l4:131:VAL:HG12	41:l4:134:LEU:H	1.69	0.57
44:l7:86:VAL:HG21	44:l7:127:LEU:HD21	1.85	0.57
65:n9:14:ARG:HH12	65:n9:18:ARG:HD2	1.69	0.57
71:o5:84:LYS:O	73:o7:73:ARG:NH2	2.38	0.57
3:S1:175:GLU:HG3	3:S1:193:ILE:HG23	1.86	0.57
22:D0:22:ILE:HD12	22:D0:118:VAL:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1877:U:H5”	36:1:1878:G:O4’	2.03	0.57
36:1:3316:A:H2	36:1:3389:U:H5’	1.70	0.57
40:L3:57:VAL:HG21	60:N4:15:PRO:HG2	1.87	0.57
43:L6:81:ALA:O	43:L6:84:VAL:HG12	2.04	0.57
44:L7:158:LYS:HG2	44:L7:203:TRP:HH2	1.69	0.57
1:6:856:A:N6	9:s7:115:SER:O	2.38	0.57
3:s1:36:SER:HA	3:s1:41:ARG:HE	1.70	0.57
6:s4:72:VAL:HB	6:s4:77:ARG:HG3	1.87	0.57
11:s9:119:ALA:HA	11:s9:124:HIS:HD2	1.70	0.57
36:5:992:A:H5”	57:n1:43:LYS:HD2	1.87	0.57
36:5:1596:C:O2’	36:5:1696:A:N3	2.35	0.57
72:o6:54:GLU:HG2	72:o6:90:MET:HE1	1.87	0.57
1:2:800:U:H2’	1:2:801:G:H8	1.70	0.57
1:2:926:A:C2	16:C4:125:SER:HB3	2.39	0.57
4:S2:41:LEU:HD11	4:S2:56:ILE:HG21	1.87	0.57
15:C3:91:LEU:HD12	15:C3:125:LEU:HD12	1.86	0.57
36:1:201:A:H2’	36:1:202:G:H8	1.69	0.57
36:1:1185:C:OP1	50:M4:42:LYS:HD3	2.05	0.57
36:1:3275:U:O4’	69:O3:66:VAL:HG21	2.05	0.57
42:L5:34:LYS:HD2	57:N1:30:TYR:CE2	2.40	0.57
64:N8:73:LEU:HD23	64:N8:112:ILE:HD12	1.87	0.57
1:6:879:G:O2’	15:c3:105:ASN:HB3	2.05	0.57
2:s0:146:LEU:HD23	2:s0:160:ILE:HB	1.87	0.57
3:s1:145:LYS:HG3	3:s1:149:GLN:HB3	1.87	0.57
5:s3:192:PRO:HB2	5:s3:201:ALA:HA	1.87	0.57
15:c3:67:THR:O	15:c3:67:THR:OG1	2.20	0.57
17:c5:22:LEU:HA	17:c5:25:LEU:HD12	1.86	0.57
36:5:2209:U:H1’	36:5:2210:G:H5”	1.87	0.57
47:m0:76:MET:HE3	47:m0:151:GLY:HA3	1.86	0.57
49:m3:124:ILE:HD12	49:m3:126:PHE:HE1	1.69	0.57
1:2:4:C:O2’	11:S9:17:ARG:NH1	2.38	0.57
1:2:816:G:N2	9:S7:110:GLN:OE1	2.31	0.57
3:S1:137:ILE:HD12	3:S1:172:LEU:HD22	1.87	0.57
3:S1:176:VAL:HG13	3:S1:184:LEU:HD21	1.87	0.57
18:C6:58:ASP:O	18:C6:60:PHE:N	2.38	0.57
19:C7:82:ASP:O	19:C7:83:GLN:NE2	2.37	0.57
21:C9:30:VAL:O	21:C9:32:GLY:N	2.38	0.57
24:D2:10:ALA:HB1	24:D2:27:ILE:HD12	1.87	0.57
36:1:417:A:H2’	36:1:418:A:C8	2.40	0.57
36:1:645:A:N6	36:1:2869:U:OP1	2.32	0.57
36:1:3094:A:H2’	36:1:3095:U:H6	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:4:151:C:O2'	38:4:153:U:OP2	2.21	0.57
68:O2:11:LYS:HB3	68:O2:14:THR:HG22	1.87	0.57
1:6:280:U:OP2	60:n4:113:LYS:NZ	2.38	0.57
1:6:1063:U:OP1	29:d7:72:LYS:NZ	2.37	0.57
33:e1:134:ASN:OD1	33:e1:134:ASN:N	2.38	0.57
36:5:107:A:OP1	49:m3:39:ARG:NH1	2.36	0.57
36:5:685:G:OP2	49:m3:35:ARG:NH1	2.38	0.57
36:5:689:U:O4	41:l4:209:TYR:OH	2.23	0.57
41:l4:329:PRO:HB2	44:l7:45:LEU:HD12	1.87	0.57
45:l8:78:PHE:C	45:l8:80:TYR:H	2.13	0.57
62:n6:106:ILE:HG21	62:n6:109:LEU:HD23	1.86	0.57
1:2:1085:G:N2	1:2:1088:A:OP2	2.38	0.56
3:S1:143:THR:HA	3:S1:207:LEU:HA	1.88	0.56
4:S2:238:SER:C	4:S2:240:LEU:H	2.11	0.56
36:1:2821:C:C2	86:1:3401:SPS:H181	2.40	0.56
36:1:3174:A:OP1	69:O3:97:SER:OG	2.22	0.56
46:L9:49:ASN:O	46:L9:49:ASN:ND2	2.37	0.56
53:M7:29:THR:O	53:M7:119:VAL:HG11	2.04	0.56
1:6:1388:A:H5"	19:c7:48:ASN:ND2	2.20	0.56
1:6:1413:U:H4'	1:6:1414:U:OP2	2.05	0.56
1:6:1533:C:OP2	27:d5:77:ARG:NH1	2.35	0.56
3:s1:164:ILE:HD13	3:s1:207:LEU:HD11	1.87	0.56
8:s6:152:ASP:OD1	8:s6:154:ARG:NH1	2.38	0.56
16:c4:112:ILE:H	28:d6:57:SER:HA	1.69	0.56
21:c9:28:LEU:HD23	21:c9:111:ILE:HD11	1.87	0.56
36:5:182:U:H2'	36:5:183:G:C8	2.40	0.56
36:5:2413:A:H2'	36:5:2414:G:H8	1.69	0.56
36:5:2712:U:H2'	36:5:2713:U:C6	2.39	0.56
36:5:3317:U:H4'	36:5:3318:G:O5'	2.05	0.56
38:8:44:A:H2'	38:8:45:C:C6	2.40	0.56
46:l9:117:PHE:CE1	46:l9:165:CYS:HB3	2.40	0.56
63:n7:25:ILE:HA	63:n7:43:VAL:HG12	1.87	0.56
6:S4:151:ASP:HB3	6:S4:154:ILE:HG13	1.87	0.56
14:C2:55:GLY:HA2	14:C2:85:LYS:HE3	1.85	0.56
15:C3:99:ARG:O	15:C3:103:GLU:HG2	2.05	0.56
36:1:732:C:H42	36:1:737:G:H1	1.53	0.56
38:4:131:A:H5"	61:N5:93:TYR:CE2	2.40	0.56
1:6:753:A:H62	6:s4:187:ARG:NH2	2.02	0.56
1:6:788:A:OP1	6:s4:106:LYS:NZ	2.39	0.56
1:6:973:A:H2'	1:6:974:A:H8	1.69	0.56
1:6:1280:C:H2'	1:6:1281:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:s0:55:GLU:OE2	23:d1:80:LYS:N	2.27	0.56
28:d6:64:LEU:HD23	28:d6:65:PRO:HD2	1.87	0.56
34:sR:219:GLU:HA	34:sR:235:SER:HA	1.86	0.56
36:5:1258:U:O5'	81:p0:42:ARG:NH2	2.37	0.56
36:5:2112:U:H4'	36:5:2113:A:O5'	2.05	0.56
36:5:2749:G:O2'	42:l5:35:ARG:HG2	2.04	0.56
45:l8:213:LYS:O	45:l8:216:SER:OG	2.22	0.56
52:m6:18:ARG:O	52:m6:22:VAL:HG12	2.03	0.56
1:2:1290:U:H2'	1:2:1291:G:C8	2.40	0.56
2:S0:64:ILE:HG23	2:S0:73:VAL:HG11	1.87	0.56
9:S7:8:ILE:HG23	9:S7:42:GLN:HA	1.85	0.56
9:S7:58:LEU:HB2	9:S7:90:VAL:HG22	1.87	0.56
13:C1:80:MET:HB2	13:C1:83:THR:HG23	1.88	0.56
23:D1:41:GLU:O	23:D1:44:ARG:NH2	2.38	0.56
24:D2:8:ALA:HA	24:D2:74:VAL:HG11	1.85	0.56
36:1:289:A:O2'	51:M5:93:LYS:O	2.23	0.56
36:1:763:G:H2'	36:1:764:U:O4'	2.05	0.56
36:1:805:G:H1'	41:L4:73:ARG:HH11	1.69	0.56
36:1:838:G:O6	79:Q3:4:ARG:NH2	2.38	0.56
36:1:1491:A:N7	75:O9:2:ALA:HB3	2.20	0.56
36:1:1642:A:N3	36:1:1822:C:O2'	2.37	0.56
36:1:3275:U:H5'	69:O3:68:TRP:CZ2	2.37	0.56
40:L3:128:LYS:O	40:L3:131:THR:OG1	2.21	0.56
43:L6:89:THR:HG21	50:M4:115:PHE:HB2	1.88	0.56
43:L6:175:LYS:HD3	50:M4:111:ALA:HA	1.85	0.56
50:M4:23:ILE:HG21	50:M4:28:SER:HB2	1.87	0.56
52:M6:89:SER:O	52:M6:92:THR:OG1	2.21	0.56
53:M7:178:ALA:HA	53:M7:181:ARG:HB3	1.87	0.56
61:N5:38:LEU:HD11	61:N5:40:LEU:HD13	1.86	0.56
1:6:26:A:H3'	1:6:26:A:OP2	2.04	0.56
1:6:60:U:H5'	1:6:455:C:H42	1.70	0.56
1:6:819:G:O2'	1:6:821:U:OP2	2.23	0.56
4:s2:140:ARG:HB3	4:s2:221:THR:HB	1.87	0.56
36:5:155:G:H1'	72:o6:26:ILE:HD13	1.88	0.56
36:5:394:G:N2	36:5:396:A:H3'	2.20	0.56
36:5:2518:C:H2'	36:5:2519:A:H8	1.70	0.56
37:7:91:G:H2'	37:7:92:A:H8	1.70	0.56
38:8:84:C:N3	62:n6:116:LYS:NZ	2.40	0.56
44:l7:140:SER:O	44:l7:144:ILE:HG13	2.05	0.56
49:m3:177:LYS:HA	72:o6:11:LEU:HD22	1.88	0.56
67:o1:70:ARG:HE	67:o1:102:LYS:NZ	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:o3:45:LEU:HD13	69:o3:71:VAL:HG12	1.87	0.56
1:2:1067:C:H2'	1:2:1068:C:C6	2.41	0.56
1:2:1796:C:O5'	28:D6:5:ARG:NH1	2.39	0.56
7:S5:90:ILE:O	7:S5:94:THR:HG23	2.05	0.56
8:S6:135:PRO:HB2	8:S6:141:ILE:HG12	1.87	0.56
19:C7:21:TYR:OH	19:C7:62:GLN:OE1	2.23	0.56
26:D4:7:ILE:HG23	26:D4:27:VAL:HG22	1.87	0.56
34:SR:50:ASP:O	34:SR:52:GLN:N	2.38	0.56
36:1:688:G:H2'	36:1:690:A:C8	2.40	0.56
36:1:914:A:C5	39:L2:199:THR:HG21	2.40	0.56
36:1:1330:A:OP2	69:O3:19:SER:HB3	2.05	0.56
36:1:1334:U:O2'	44:L7:151:ARG:NH2	2.39	0.56
39:L2:27:ALA:O	39:L2:128:ARG:NH2	2.38	0.56
41:L4:328:ASN:OD1	44:L7:48:ASN:ND2	2.31	0.56
43:L6:18:LEU:HD22	43:L6:18:LEU:H	1.70	0.56
46:L9:47:LYS:HZ2	50:M4:5:SER:HB2	1.69	0.56
47:M0:76:MET:HE1	47:M0:138:VAL:HG11	1.87	0.56
56:N0:137:ARG:HG2	56:N0:139:TYR:CZ	2.41	0.56
68:O2:97:ALA:HB3	68:O2:100:ILE:HG12	1.86	0.56
69:O3:45:LEU:HA	69:O3:71:VAL:HG12	1.86	0.56
15:c3:87:ASP:HB3	15:c3:125:LEU:HD11	1.87	0.56
34:sR:80:ALA:O	34:sR:92:TRP:N	2.36	0.56
36:5:1098:A:O2'	57:n1:130:ARG:O	2.17	0.56
36:5:1764:U:H3'	36:5:1765:U:H5"	1.86	0.56
36:5:1942:U:OP2	55:m9:74:ARG:NH1	2.32	0.56
36:5:2101:C:H2'	36:5:2102:U:C6	2.41	0.56
36:5:3323:A:H1'	67:o1:43:HIS:HE1	1.71	0.56
42:l5:52:VAL:HA	42:l5:147:ASP:HB3	1.87	0.56
61:n5:105:VAL:HG11	61:n5:126:LEU:HD13	1.86	0.56
2:S0:158:VAL:H	23:D1:69:LEU:HD12	1.71	0.56
3:S1:36:SER:O	3:S1:38:PHE:N	2.38	0.56
3:S1:171:ILE:HA	3:S1:174:LYS:HE3	1.87	0.56
16:C4:20:TYR:HB3	16:C4:27:PHE:HB2	1.85	0.56
26:D4:29:HIS:NE2	26:D4:34:ASN:HA	2.20	0.56
33:E1:96:LYS:O	33:E1:98:VAL:N	2.31	0.56
36:1:2854:U:O3'	47:M0:160:PRO:HB3	2.05	0.56
39:L2:14:SER:OG	39:L2:15:ILE:N	2.36	0.56
39:L2:206:PRO:HG3	39:L2:213:GLY:HA3	1.86	0.56
45:L8:161:GLU:OE2	51:M5:26:ARG:NH2	2.37	0.56
47:M0:51:HIS:HD1	47:M0:137:SER:HG	1.51	0.56
53:M7:13:LYS:HB3	53:M7:152:GLU:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:O0:13:LYS:HD2	66:O0:100:ILE:HG23	1.88	0.56
71:O5:85:THR:HG22	71:O5:87:ALA:N	2.20	0.56
1:6:919:A:H5'	16:c4:35:GLY:HA3	1.87	0.56
1:6:1229:G:O2'	1:6:1255:G:N2	2.39	0.56
30:d8:15:VAL:HA	30:d8:28:VAL:HA	1.88	0.56
32:e0:59:GLY:O	32:e0:61:SER:N	2.39	0.56
36:5:209:A:H1'	36:5:212:G:H22	1.69	0.56
36:5:2413:A:H2'	36:5:2414:G:C8	2.40	0.56
49:m3:8:PRO:HD3	54:m8:164:ARG:HB3	1.88	0.56
67:o1:10:ARG:HH12	67:o1:44:MET:HG2	1.71	0.56
1:2:1482:C:OP2	1:2:1521:G:N2	2.36	0.56
1:2:1487:A:H2'	1:2:1488:G:C8	2.40	0.56
1:2:1796:C:OP2	28:D6:5:ARG:NH2	2.38	0.56
15:C3:56:ASP:OD1	29:D7:52:THR:OG1	2.23	0.56
21:C9:57:ARG:HG2	21:C9:104:VAL:HG21	1.86	0.56
22:D0:51:VAL:HG13	22:D0:94:GLU:HB2	1.86	0.56
36:1:343:U:O2	36:1:1439:U:H1'	2.04	0.56
38:4:155:A:OP1	45:L8:185:ARG:NH2	2.38	0.56
58:N2:99:LYS:HG3	58:N2:102:GLU:HB2	1.88	0.56
1:6:886:U:O2'	16:c4:121:VAL:O	2.23	0.56
1:6:973:A:H2'	1:6:974:A:C8	2.40	0.56
6:s4:95:THR:O	6:s4:95:THR:OG1	2.22	0.56
36:5:2403:G:H5'	36:5:2872:A:C2	2.41	0.56
37:7:22:A:N6	42:l5:269:SER:O	2.38	0.56
45:l8:133:LYS:HB2	45:l8:199:ALA:O	2.06	0.56
46:l9:23:ARG:NH2	46:l9:41:ILE:O	2.37	0.56
46:l9:86:TYR:CE2	46:l9:151:VAL:HG22	2.40	0.56
1:2:304:U:H2'	1:2:305:C:H6	1.69	0.56
6:S4:65:LEU:HG	6:S4:70:VAL:HG11	1.87	0.56
7:S5:118:LEU:HD22	7:S5:129:PRO:HB2	1.88	0.56
13:C1:18:HIS:O	13:C1:20:PHE:N	2.37	0.56
25:D3:46:SER:OG	25:D3:48:HIS:O	2.21	0.56
36:1:112:U:O2'	36:1:113:C:O5'	2.21	0.56
36:1:385:A:H2'	36:1:386:A:H8	1.70	0.56
36:1:1110:U:H2'	36:1:1111:U:C6	2.40	0.56
36:1:1447:G:H3'	53:M7:67:ILE:HD11	1.87	0.56
54:M8:23:ASN:HB3	54:M8:26:LEU:HB2	1.86	0.56
1:6:37:U:O2'	1:6:770:A:N1	2.32	0.56
6:s4:163:ASP:HB2	6:s4:167:GLY:O	2.05	0.56
7:s5:204:GLY:HA2	7:s5:211:ILE:HD12	1.88	0.56
15:c3:42:ARG:C	15:c3:44:GLY:H	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:c7:47:ARG:NH1	19:c7:48:ASN:OD1	2.38	0.56
37:7:2:G:O2'	37:7:23:A:N1	2.37	0.56
45:l8:134:TYR:H	45:l8:134:TYR:HD2	1.52	0.56
59:n3:11:PHE:CG	59:n3:88:ARG:HD2	2.41	0.56
79:q3:81:SER:OG	79:q3:82:THR:N	2.39	0.56
1:2:625:C:H2'	1:2:626:U:C6	2.41	0.56
1:2:632:U:H4'	25:D3:11:SER:HB3	1.88	0.56
36:1:107:A:H1'	36:1:325:A:N3	2.20	0.56
36:1:181:U:H4'	73:O7:75:LYS:HD2	1.87	0.56
36:1:1405:U:OP2	68:O2:59:SER:OG	2.23	0.56
39:L2:225:ILE:HG21	39:L2:234:LYS:HA	1.88	0.56
67:O1:41:LYS:HE3	67:O1:45:GLY:HA2	1.88	0.56
5:s3:7:LYS:HE3	22:d0:27:THR:HG21	1.88	0.56
5:s3:192:PRO:O	5:s3:195:SER:OG	2.18	0.56
14:c2:85:LYS:HG3	14:c2:87:PRO:HD3	1.87	0.56
36:5:692:A:OP1	51:m5:201:ARG:NH2	2.38	0.56
36:5:1667:A:H2'	36:5:1668:G:C8	2.40	0.56
41:l4:99:MET:HE1	41:l4:103:THR:HG23	1.87	0.56
46:l9:31:ARG:HB3	46:l9:149:ASN:HD21	1.70	0.56
46:l9:89:LYS:HG2	46:l9:145:VAL:HG22	1.88	0.56
59:n3:84:SER:HA	59:n3:94:TYR:HB3	1.88	0.56
67:o1:31:ARG:HB3	67:o1:31:ARG:NH1	2.20	0.56
1:2:1175:U:H2'	1:2:1176:G:C8	2.41	0.56
1:2:1650:U:H2'	1:2:1651:A:C8	2.41	0.56
17:C5:81:ARG:NH1	17:C5:97:TYR:O	2.38	0.56
18:C6:47:LYS:NZ	18:C6:114:ARG:HG2	2.21	0.56
21:C9:10:ALA:O	21:C9:13:ASP:N	2.35	0.56
25:D3:31:LYS:HD2	25:D3:36:THR:HG21	1.88	0.56
36:1:2603:G:H2'	36:1:2604:U:O4'	2.06	0.56
37:3:45:A:H2'	37:3:46:A:C8	2.41	0.56
41:L4:44:LYS:HB3	41:L4:47:ARG:HH11	1.71	0.56
46:L9:10:ILE:HD13	46:L9:75:VAL:HG11	1.87	0.56
56:N0:77:VAL:HG11	56:N0:106:LEU:HD11	1.87	0.56
1:6:1241:G:H5"	17:c5:102:PHE:HZ	1.71	0.56
1:6:1369:U:OP1	21:c9:119:LYS:NZ	2.25	0.56
6:s4:118:GLU:HA	6:s4:121:TYR:CE1	2.41	0.56
9:s7:177:THR:OG1	9:s7:178:GLY:N	2.36	0.56
16:c4:103:ARG:NH2	28:d6:48:ALA:O	2.39	0.56
19:c7:14:LYS:HG3	19:c7:69:ILE:HG12	1.87	0.56
36:5:58:G:O2'	36:5:61:A:H5'	2.06	0.56
36:5:341:G:N7	41:l4:195:ARG:NH2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:7:4:U:H2'	37:7:5:G:C8	2.41	0.56
39:l2:6:ARG:HH12	39:l2:199:THR:H	1.53	0.56
41:l4:185:LYS:HA	41:l4:201:GLN:HB3	1.88	0.56
1:2:1042:G:H22	1:2:1076:A:H2	1.54	0.56
1:2:1426:C:H5"	35:SM:93:ARG:HH12	1.69	0.56
1:2:1655:A:N6	1:2:1745:G:O2'	2.38	0.56
9:S7:50:ASP:HA	9:S7:56:LYS:HA	1.87	0.56
11:S9:107:ARG:NH1	11:S9:112:GLN:OE1	2.38	0.56
15:C3:119:GLU:HA	15:C3:122:ILE:HD12	1.86	0.56
21:C9:10:ALA:O	21:C9:12:GLN:N	2.39	0.56
36:1:1352:A:H4'	36:1:1353:U:OP1	2.04	0.56
36:1:1654:A:H2'	36:1:1655:G:H5'	1.86	0.56
36:1:2694:A:C6	36:1:2695:A:C6	2.94	0.56
41:L4:181:VAL:O	41:L4:182:LEU:HB2	2.05	0.56
51:M5:38:ARG:CZ	51:M5:60:VAL:HG13	2.36	0.56
71:O5:47:VAL:O	71:O5:51:ILE:HG13	2.06	0.56
1:6:975:C:H5"	15:c3:109:LYS:HD2	1.88	0.56
3:s1:30:PHE:HB3	3:s1:96:LEU:HD22	1.87	0.56
3:s1:123:ALA:HB2	3:s1:165:ARG:HG2	1.88	0.56
14:c2:54:ARG:NH1	14:c2:56:GLU:OE2	2.38	0.56
16:c4:71:CYS:HB3	16:c4:76:ILE:HB	1.87	0.56
28:d6:23:CYS:HB3	28:d6:28:LYS:H	1.71	0.56
36:5:1097:G:N7	57:n1:116:ARG:NH2	2.55	0.56
36:5:1499:C:H42	36:5:1517:G:H1	1.53	0.56
44:l7:195:PHE:O	44:l7:199:ASN:HB3	2.06	0.56
58:n2:59:ASP:OD1	58:n2:60:GLY:N	2.39	0.56
66:o0:26:GLY:O	66:o0:30:THR:HG23	2.06	0.56
5:S3:217:ILE:HG22	5:S3:218:LEU:H	1.70	0.55
31:D9:19:ARG:HD2	31:D9:32:ARG:HD2	1.88	0.55
36:1:979:U:O2'	36:1:980:A:N7	2.28	0.55
36:1:1054:A:H5"	36:1:2637:A:N6	2.22	0.55
36:1:1095:U:O2	57:N1:129:LYS:N	2.39	0.55
36:1:1349:G:H2'	36:1:1350:A:N3	2.21	0.55
36:1:3095:U:H2'	36:1:3096:C:C6	2.41	0.55
47:M0:87:LEU:HA	47:M0:138:VAL:HG13	1.88	0.55
59:N3:38:ALA:HB3	59:N3:59:MET:HB2	1.87	0.55
60:N4:9:SER:OG	60:N4:10:GLY:N	2.37	0.55
4:s2:139:ILE:HG22	4:s2:141:ARG:HG2	1.88	0.55
10:s8:22:ARG:NE	10:s8:25:ARG:HD2	2.22	0.55
26:d4:53:ASP:HB3	26:d4:96:LEU:HD21	1.88	0.55
36:5:2503:G:H1'	36:5:2504:U:H5	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2700:G:H5”	57:n1:17:ARG:HG2	1.88	0.55
48:m1:90:GLN:HG2	48:m1:170:ASP:HB2	1.88	0.55
50:m4:120:VAL:HG11	52:m6:199:TYR:CD2	2.41	0.55
59:n3:10:LYS:NZ	59:n3:56:ASP:OD1	2.35	0.55
71:o5:119:LYS:HA	71:o5:119:LYS:HZ3	1.71	0.55
81:p0:94:THR:O	81:p0:98:ASN:ND2	2.39	0.55
1:2:1160:A:H2’	1:2:1161:C:H6	1.70	0.55
1:2:1795:U:H3’	28:D6:5:ARG:HH22	1.71	0.55
3:S1:59:ASP:HA	3:S1:62:LYS:HG3	1.88	0.55
9:S7:69:GLY:HA2	9:S7:72:LYS:HD2	1.87	0.55
13:C1:13:PHE:CE2	13:C1:15:LYS:HB3	2.41	0.55
24:D2:70:ASN:ND2	24:D2:130:TYR:O	2.30	0.55
36:1:3271:G:OP1	53:M7:171:ARG:HD3	2.06	0.55
40:L3:187:SER:HB3	40:L3:190:GLU:HG3	1.89	0.55
41:L4:122:THR:HG22	41:L4:235:LEU:HB2	1.88	0.55
42:L5:286:VAL:HG13	47:M0:206:LEU:HD22	1.89	0.55
44:L7:118:LYS:HG3	44:L7:191:VAL:HG11	1.87	0.55
50:M4:38:ILE:HD11	56:N0:150:PHE:HE2	1.69	0.55
56:N0:96:ASP:OD1	56:N0:97:VAL:N	2.36	0.55
63:N7:88:ASP:HB3	63:N7:121:ARG:HH12	1.70	0.55
1:6:79:C:H1’	8:s6:174:LYS:HG3	1.86	0.55
5:s3:75:LYS:HB3	12:c0:22:VAL:HG22	1.88	0.55
6:s4:175:PHE:HE1	6:s4:225:VAL:HG11	1.72	0.55
24:d2:5:SER:O	24:d2:7:LEU:N	2.31	0.55
41:l4:205:PRO:HG2	41:l4:225:VAL:HG22	1.87	0.55
49:m3:133:PRO:O	49:m3:135:ALA:N	2.39	0.55
54:m8:158:HIS:H	54:m8:186:VAL:HG22	1.70	0.55
69:o3:93:THR:O	69:o3:96:ALA:N	2.37	0.55
83:f:63:ASP:C	83:f:65:PHE:H	2.14	0.55
1:2:1169:G:N1	1:2:1575:G:OP2	2.40	0.55
1:2:1335:U:H2’	1:2:1336:A:H8	1.71	0.55
1:2:1564:U:H2’	1:2:1565:C:C6	2.41	0.55
29:D7:36:LYS:HE2	29:D7:78:SER:HB3	1.89	0.55
36:1:97:U:O4	49:M3:11:LYS:NZ	2.29	0.55
36:1:767:U:H1’	36:1:768:C:C6	2.42	0.55
36:1:1301:A:H4’	36:1:1302:A:O5’	2.06	0.55
66:O0:34:LEU:HD23	66:O0:59:TYR:HB3	1.88	0.55
1:6:1648:A:H2’	1:6:1649:G:C8	2.40	0.55
2:s0:118:PRO:HG2	2:s0:141:ILE:HD13	1.87	0.55
18:c6:77:GLN:O	18:c6:81:ILE:HG13	2.05	0.55
22:d0:118:VAL:HG13	22:d0:119:ALA:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:d3:70:LYS:HB3	25:d3:93:LEU:HD22	1.87	0.55
36:5:1098:A:O5'	57:n1:129:LYS:HB2	2.06	0.55
36:5:1472:U:H2'	36:5:1473:G:H8	1.71	0.55
36:5:1838:G:H5"	36:5:1839:A:H5'	1.89	0.55
36:5:2261:G:O2'	36:5:2263:C:N4	2.39	0.55
40:l3:303:LYS:HD2	40:l3:361:THR:HG21	1.88	0.55
48:m1:7:ASN:N	48:m1:8:PRO:HD3	2.21	0.55
51:m5:186:GLY:O	51:m5:190:THR:HG23	2.07	0.55
1:2:1147:A:H2'	1:2:1148:C:C6	2.42	0.55
20:C8:97:ASP:OD2	20:C8:97:ASP:N	2.38	0.55
30:D8:7:VAL:HG13	30:D8:55:VAL:HG13	1.87	0.55
36:1:3029:A:C5	36:1:3030:G:H1'	2.41	0.55
36:1:3276:G:H5'	43:L6:48:ARG:NH2	2.21	0.55
1:6:196:G:O6	10:s8:141:ARG:NH2	2.39	0.55
1:6:771:A:OP1	11:s9:9:SER:OG	2.20	0.55
1:6:846:G:H2'	1:6:847:A:C8	2.41	0.55
1:6:959:U:H5"	15:c3:15:ALA:O	2.06	0.55
1:6:1272:U:H3	1:6:1438:G:H1	1.54	0.55
2:s0:50:VAL:H	19:c7:109:LEU:HD21	1.71	0.55
7:s5:77:TYR:CZ	7:s5:87:CYS:HB2	2.42	0.55
11:s9:63:ASP:OD1	11:s9:64:GLU:N	2.39	0.55
36:5:174:C:H42	36:5:244:G:H1	1.53	0.55
36:5:1322:U:OP1	56:n0:117:ARG:NH2	2.39	0.55
36:5:1420:C:OP2	41:l4:193:LYS:NZ	2.38	0.55
36:5:2157:G:N1	36:5:2178:A:OP2	2.32	0.55
36:5:2355:G:H4'	53:m7:139:TYR:CE2	2.41	0.55
36:5:2451:G:N2	36:5:2496:C:O2	2.39	0.55
37:7:91:G:H2'	37:7:92:A:C8	2.42	0.55
39:l2:116:VAL:HG22	39:l2:126:LEU:HB2	1.87	0.55
40:l3:70:ARG:HH11	40:l3:70:ARG:HB3	1.72	0.55
40:l3:238:LEU:HB3	40:l3:242:THR:HG21	1.88	0.55
41:l4:138:ARG:NH1	41:l4:138:ARG:O	2.38	0.55
49:m3:49:ARG:NH2	71:o5:113:GLN:OE1	2.39	0.55
51:m5:185:ALA:HB3	51:m5:190:THR:HG22	1.88	0.55
59:n3:28:ASN:HD21	59:n3:112:SER:H	1.55	0.55
60:n4:3:VAL:HG11	60:n4:12:LYS:HD3	1.88	0.55
1:2:1677:C:OP1	10:S8:42:ARG:NH1	2.39	0.55
9:S7:51:VAL:HG23	9:S7:53:GLY:H	1.72	0.55
22:D0:118:VAL:HG13	22:D0:119:ALA:H	1.70	0.55
36:1:1665:C:H2'	36:1:1666:G:C8	2.40	0.55
36:1:2827:U:O2'	36:1:2829:U:O4	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:92:TYR:O	40:L3:156:SER:N	2.34	0.55
42:L5:183:TRP:CH2	42:L5:188:GLU:HA	2.41	0.55
49:M3:83:ALA:HA	49:M3:117:LYS:HE3	1.89	0.55
61:N5:105:VAL:HG12	61:N5:106:ASP:O	2.07	0.55
1:6:793:A:H5"	1:6:794:U:C5	2.41	0.55
1:6:1068:C:H2'	1:6:1069:A:H8	1.71	0.55
1:6:1455:G:OP1	17:c5:122:THR:HG21	2.06	0.55
28:d6:23:CYS:HB2	28:d6:74:CYS:SG	2.46	0.55
34:sR:200:ASN:H	34:sR:215:GLY:HA2	1.71	0.55
34:sR:248:ASN:OD1	34:sR:249:ARG:N	2.30	0.55
35:sM:33:LYS:HE2	36:5:2667:A:H5"	1.86	0.55
36:5:2722:U:H4'	57:n1:88:ARG:HB2	1.87	0.55
36:5:3207:U:OP1	50:m4:106:ARG:NH2	2.34	0.55
42:l5:95:TRP:CH2	42:l5:181:PRO:HD3	2.42	0.55
63:n7:51:LEU:HB3	63:n7:65:ARG:HH11	1.72	0.55
75:o9:9:ILE:HG22	75:o9:13:MET:HE2	1.89	0.55
1:2:1342:C:OP1	34:SR:102:ARG:NH2	2.39	0.55
1:2:1696:G:N2	1:2:1705:C:H41	2.05	0.55
14:C2:80:ASN:HA	14:C2:86:VAL:HG12	1.87	0.55
27:D5:43:ASP:O	27:D5:45:GLU:N	2.40	0.55
36:1:651:G:O2'	36:1:1435:A:OP1	2.19	0.55
36:1:1191:U:H3'	76:Q0:113:ARG:NH2	2.21	0.55
36:1:3159:C:H2'	36:1:3160:U:C6	2.42	0.55
36:1:3258:U:O2'	36:1:3260:G:OP1	2.17	0.55
36:1:3259:U:H6	36:1:3259:U:H5'	1.72	0.55
37:3:92:A:C5	37:3:93:C:H1'	2.41	0.55
40:L3:4:ARG:HD2	40:L3:7:GLU:HG3	1.87	0.55
46:L9:4:ILE:HD11	56:N0:150:PHE:CD2	2.41	0.55
1:6:65:A:H2	1:6:84:A:H62	1.55	0.55
1:6:1045:C:H2'	1:6:1046:G:H8	1.71	0.55
1:6:1553:G:O2'	31:d9:14:TYR:OH	2.22	0.55
7:s5:151:GLY:HA3	7:s5:155:ALA:HA	1.88	0.55
11:s9:34:PHE:HD1	11:s9:111:THR:HG21	1.70	0.55
36:5:1631:C:OP2	63:n7:48:ARG:NH2	2.40	0.55
36:5:2103:U:H2'	36:5:2104:A:H8	1.72	0.55
61:n5:91:ASN:O	61:n5:93:TYR:N	2.40	0.55
1:2:87:C:O2'	1:2:169:A:N1	2.30	0.55
1:2:778:G:H22	26:D4:10:ARG:NH1	2.04	0.55
1:2:1300:A:OP1	4:S2:99:LYS:NZ	2.36	0.55
1:2:1318:G:H2'	1:2:1319:A:C8	2.42	0.55
5:S3:211:PRO:HG3	19:C7:20:TYR:CZ	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S5:79:ASN:OD1	7:S5:79:ASN:N	2.40	0.55
10:S8:36:THR:OG1	10:S8:96:LEU:O	2.24	0.55
19:C7:57:LEU:HA	19:C7:60:ARG:HG2	1.88	0.55
21:C9:117:SER:HB3	21:C9:123:ARG:HB2	1.88	0.55
33:E1:144:CYS:O	33:E1:146:SER:N	2.39	0.55
36:1:210:U:C2	36:1:230:U:H4'	2.42	0.55
36:1:3326:G:H2'	36:1:3327:G:H8	1.71	0.55
47:M0:48:LEU:HD22	47:M0:49:CYS:H	1.72	0.55
1:6:75:U:O2'	1:6:76:A:O5'	2.23	0.55
1:6:152:U:C2	1:6:163:G:N2	2.75	0.55
15:c3:94:LYS:HG2	15:c3:118:ILE:HD13	1.88	0.55
20:c8:88:ARG:NH1	20:c8:112:ASP:OD2	2.40	0.55
25:d3:134:ALA:HB1	25:d3:140:LYS:HG3	1.89	0.55
36:5:900:G:H1'	36:5:1589:A:H61	1.72	0.55
36:5:1015:U:O3'	36:5:1016:C:H2'	2.07	0.55
36:5:1047:A:N3	36:5:2633:U:O2'	2.37	0.55
36:5:2619:G:H1	84:B:75:CH:HN3	1.55	0.55
48:m1:81:GLU:HB2	48:m1:167:TYR:HE2	1.72	0.55
49:m3:159:VAL:HA	64:n8:124:ILE:HD11	1.87	0.55
64:n8:19:LYS:HD2	64:n8:25:HIS:CD2	2.38	0.55
71:o5:14:LYS:NZ	71:o5:62:GLN:OE1	2.39	0.55
83:f:37:ARG:HH22	83:f:65:PHE:HB2	1.71	0.55
1:2:571:G:H5"	25:D3:114:LYS:HD3	1.88	0.55
1:2:1018:U:H2'	1:2:1019:A:C8	2.40	0.55
2:S0:172:LEU:O	2:S0:176:LEU:HG	2.07	0.55
20:C8:94:ASP:OD2	20:C8:95:GLY:N	2.40	0.55
24:D2:37:PHE:CD2	24:D2:103:ILE:HD12	2.42	0.55
36:1:27:C:O2'	36:1:327:A:N3	2.34	0.55
36:1:438:A:O2'	36:1:495:G:O2'	2.11	0.55
36:1:915:A:H8	36:1:2136:C:O2'	1.90	0.55
36:1:916:G:H5'	36:1:917:A:OP1	2.07	0.55
36:1:1488:G:C2	36:1:1489:A:C8	2.95	0.55
36:1:1683:A:H2'	36:1:1684:U:O4'	2.07	0.55
44:L7:69:ALA:HB2	57:N1:140:ILE:HD13	1.89	0.55
1:6:895:G:H22	1:6:917:U:H3	1.54	0.55
8:s6:18:ILE:O	8:s6:20:ASP:N	2.36	0.55
17:c5:85:ILE:HG22	17:c5:112:LEU:HD23	1.88	0.55
22:d0:37:VAL:HG13	22:d0:107:THR:HG22	1.89	0.55
36:5:1657:C:O2'	36:5:1797:A:OP2	2.14	0.55
36:5:2541:U:H4'	36:5:2542:U:OP1	2.07	0.55
49:m3:92:THR:HG21	71:o5:111:PHE:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:o7:31:LYS:O	73:o7:33:THR:HG22	2.07	0.55
1:2:435:C:H2'	1:2:436:A:C8	2.42	0.55
1:2:1275:A:N3	5:S3:141:LYS:NZ	2.48	0.55
1:2:1548:G:H5'	20:C8:89:GLN:O	2.07	0.55
14:C2:62:LEU:HD22	14:C2:75:VAL:HG11	1.89	0.55
36:1:269:G:H5'	51:M5:120:TRP:CE3	2.41	0.55
36:1:282:G:C8	36:1:282:G:H3'	2.42	0.55
36:1:351:A:N6	75:O9:37:TYR:O	2.37	0.55
36:1:964:G:O2'	64:N8:41:HIS:NE2	2.36	0.55
36:1:1277:C:HO2'	36:1:1278:A:H8	1.54	0.55
36:1:1397:C:H2'	36:1:1398:U:H6	1.72	0.55
36:1:1427:U:OP2	64:N8:4:ARG:NH2	2.36	0.55
36:1:1590:G:N2	36:1:1798:A:N1	2.53	0.55
63:N7:124:ALA:O	63:N7:126:LYS:N	2.37	0.55
68:O2:40:SER:O	68:O2:44:ARG:HG3	2.06	0.55
1:6:235:G:H2'	1:6:236:A:C8	2.40	0.55
1:6:717:C:O2'	1:6:721:U:O4	2.25	0.55
1:6:1521:G:O6	21:c9:68:ARG:NH1	2.39	0.55
6:s4:184:THR:OG1	6:s4:224:ASN:O	2.23	0.55
8:s6:126:ASP:OD2	8:s6:127:THR:N	2.40	0.55
18:c6:82:ARG:HH22	18:c6:114:ARG:HG3	1.72	0.55
36:5:1427:U:OP2	64:n8:4:ARG:NH2	2.34	0.55
38:8:157:U:H2'	38:8:158:U:C6	2.42	0.55
49:m3:47:ALA:HB3	49:m3:49:ARG:HG3	1.88	0.55
51:m5:96:ARG:NH2	51:m5:100:ALA:HB1	2.22	0.55
68:o2:102:ALA:HB2	68:o2:125:ARG:HG2	1.88	0.55
1:2:108:A:H2'	1:2:109:G:C8	2.42	0.55
1:2:138:A:OP2	1:2:1706:C:O2'	2.17	0.55
1:2:1104:U:C5	25:D3:4:GLY:HA2	2.42	0.55
1:2:1241:G:H5'	17:C5:102:PHE:CZ	2.41	0.55
1:2:1681:A:H2'	1:2:1682:U:H5'	1.89	0.55
2:S0:148:ASP:OD1	2:S0:149:LEU:N	2.40	0.55
4:S2:154:LEU:HD12	4:S2:155:ALA:H	1.71	0.55
19:C7:20:TYR:CE1	19:C7:38:ILE:HD11	2.42	0.55
22:D0:99:ILE:HD12	22:D0:102:ARG:HD3	1.89	0.55
28:D6:79:ILE:HA	28:D6:84:VAL:HG11	1.88	0.55
30:D8:42:ARG:NH2	30:D8:58:GLU:HG3	2.21	0.55
36:1:263:C:H2'	36:1:264:G:O4'	2.07	0.55
36:1:3037:U:H5"	40:L3:348:ARG:NH1	2.22	0.55
50:M4:40:ASP:OD1	50:M4:42:LYS:N	2.36	0.55
52:M6:157:GLU:O	52:M6:161:LYS:N	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:O0:16:LEU:HD13	66:O0:19:LYS:HE3	1.89	0.55
1:6:1175:U:H2'	1:6:1176:G:C8	2.42	0.55
1:6:1688:U:H3	1:6:1713:G:H1	1.55	0.55
17:c5:108:ARG:HB2	17:c5:111:MET:HE3	1.89	0.55
23:d1:17:CYS:HB2	23:d1:56:SER:HB3	1.88	0.55
27:d5:92:ILE:HD11	27:d5:100:ILE:HG22	1.88	0.55
42:l5:277:LEU:HD12	42:l5:282:ARG:HG3	1.89	0.55
46:l9:18:VAL:HB	46:l9:27:VAL:HG22	1.89	0.55
62:n6:119:ILE:HG22	62:n6:124:GLY:HA3	1.88	0.55
1:2:327:U:H2'	1:2:328:A:C8	2.43	0.54
1:2:639:U:OP1	9:S7:117:THR:OG1	2.18	0.54
2:S0:70:PRO:O	2:S0:95:ALA:N	2.30	0.54
17:C5:126:VAL:HG13	17:C5:127:ARG:H	1.71	0.54
22:D0:109:GLU:HB3	22:D0:112:VAL:HB	1.88	0.54
36:1:507:U:H2'	36:1:508:U:C6	2.42	0.54
36:1:744:A:H4'	54:M8:142:GLY:O	2.08	0.54
36:1:1238:C:N4	36:1:1245:A:OP2	2.40	0.54
40:L3:41:VAL:HA	40:L3:185:GLY:CA	2.37	0.54
48:M1:16:LYS:H	48:M1:130:VAL:HG13	1.72	0.54
49:M3:140:SER:OG	49:M3:141:ALA:N	2.40	0.54
52:M6:22:VAL:O	52:M6:26:GLN:HG2	2.07	0.54
57:N1:86:GLU:OE1	57:N1:88:ARG:NH1	2.40	0.54
4:s2:214:ALA:O	4:s2:218:ILE:HG13	2.07	0.54
34:sR:19:TRP:HB2	34:sR:38:ARG:HD2	1.90	0.54
34:sR:267:PRO:HD2	34:sR:269:TYR:HE1	1.71	0.54
36:5:668:G:H1'	49:m3:7:LEU:HD22	1.89	0.54
36:5:2836:C:H5	36:5:2852:C:N4	2.03	0.54
54:m8:30:VAL:O	54:m8:34:THR:HG23	2.06	0.54
54:m8:176:ARG:NH1	64:n8:46:ASP:OD2	2.40	0.54
63:n7:128:GLN:O	63:n7:130:PHE:N	2.40	0.54
1:2:45:U:O2'	1:2:46:A:H2'	2.07	0.54
1:2:1036:A:H1'	24:D2:9:ASP:OD1	2.08	0.54
36:1:1582:C:O2'	36:1:1583:A:O5'	2.21	0.54
36:1:2150:G:O2'	36:1:2189:U:OP1	2.19	0.54
36:1:2767:U:H2'	36:1:2768:U:C6	2.42	0.54
36:1:3117:C:H2'	36:1:3118:C:O4'	2.06	0.54
37:3:5:G:O3'	42:L5:54:ARG:HG3	2.07	0.54
44:L7:145:ARG:HA	44:L7:185:ILE:HD13	1.89	0.54
46:L9:86:TYR:CE2	46:L9:151:VAL:HG22	2.42	0.54
54:M8:158:HIS:H	54:M8:186:VAL:CG1	2.20	0.54
70:O4:37:LYS:HB2	70:O4:58:ARG:HH21	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:206:A:H1'	1:6:262:U:C2	2.42	0.54
1:6:846:G:H2'	1:6:847:A:H8	1.72	0.54
1:6:1553:G:HO2'	31:d9:14:TYR:HH	1.50	0.54
4:s2:227:PRO:HA	4:s2:230:TRP:CD1	2.42	0.54
17:c5:18:ARG:HG2	20:c8:92:ILE:HA	1.89	0.54
19:c7:27:ASP:OD2	19:c7:30:THR:N	2.31	0.54
37:7:4:U:H2'	37:7:5:G:H8	1.72	0.54
47:m0:210:ILE:HA	47:m0:217:PHE:CE2	2.42	0.54
51:m5:102:ALA:O	51:m5:106:VAL:HG13	2.06	0.54
62:n6:69:LYS:O	62:n6:83:ASP:N	2.36	0.54
1:2:427:C:O2'	1:2:459:G:N3	2.31	0.54
7:S5:42:LEU:HB2	7:S5:46:TRP:O	2.07	0.54
9:S7:74:GLN:NE2	9:S7:92:PHE:HB2	2.22	0.54
10:S8:197:THR:HA	10:S8:200:LYS:HZ3	1.71	0.54
11:S9:149:ARG:O	11:S9:151:ASP:N	2.39	0.54
36:1:1240:A:H3'	36:1:1241:U:H5'	1.89	0.54
36:1:1724:U:H1'	36:1:1725:C:C6	2.43	0.54
36:1:2378:C:H2'	36:1:2379:U:C6	2.42	0.54
36:1:2812:C:H2'	36:1:2813:A:H8	1.72	0.54
37:3:97:A:OP1	56:N0:40:ARG:NH1	2.41	0.54
42:L5:244:HIS:HA	42:L5:247:ILE:HD12	1.89	0.54
45:L8:84:ARG:HH22	45:L8:181:LYS:NZ	2.05	0.54
46:L9:104:VAL:HG22	46:L9:113:GLU:HB2	1.88	0.54
49:M3:28:GLN:HB3	51:M5:201:ARG:HD3	1.87	0.54
51:M5:47:LYS:O	51:M5:50:ARG:HG2	2.07	0.54
67:O1:49:VAL:HG22	67:O1:91:SER:HB2	1.87	0.54
1:6:1465:C:OP1	18:c6:139:GLN:NE2	2.40	0.54
6:s4:125:LYS:O	6:s4:142:HIS:N	2.40	0.54
13:c1:109:VAL:HG11	13:c1:125:VAL:HG21	1.88	0.54
36:5:230:U:H2'	36:5:231:G:O4'	2.08	0.54
36:5:990:U:H1'	57:n1:101:CYS:HB3	1.89	0.54
36:5:2378:C:H2'	36:5:2379:U:H6	1.72	0.54
37:7:44:C:H4'	42:l5:152:ARG:HG3	1.90	0.54
40:l3:346:THR:O	40:l3:348:ARG:N	2.41	0.54
41:l4:74:ILE:HD12	41:l4:75:PRO:HD2	1.89	0.54
41:l4:264:SER:OG	41:l4:267:VAL:N	2.30	0.54
46:l9:117:PHE:O	46:l9:120:ASP:HB2	2.08	0.54
47:m0:71:CYS:SG	47:m0:72:ALA:N	2.80	0.54
47:m0:144:ASN:O	47:m0:146:ASP:N	2.40	0.54
54:m8:170:ARG:O	54:m8:171:LYS:HB2	2.06	0.54
57:n1:78:LYS:N	57:n1:85:LEU:O	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:n8:28:HIS:CD2	64:n8:32:ARG:HG2	2.43	0.54
82:p1:34:UNK:O	82:p1:36:UNK:N	2.41	0.54
1:2:732:G:O2'	1:2:733:A:O4'	2.25	0.54
1:2:763:G:OP2	11:S9:79:ARG:NH1	2.38	0.54
1:2:1769:U:H1'	16:C4:136:ARG:HG3	1.88	0.54
2:S0:52:LYS:HD2	23:D1:82:VAL:HA	1.89	0.54
6:S4:206:ASP:HB2	6:S4:222:LEU:HB2	1.89	0.54
9:S7:86:GLN:HG2	9:S7:87:ASP:H	1.72	0.54
36:1:150:A:OP1	51:M5:56:LYS:NZ	2.35	0.54
36:1:274:G:H2'	36:1:275:U:O4'	2.07	0.54
36:1:309:U:OP1	72:O6:84:LYS:NZ	2.38	0.54
36:1:1103:A:H4'	36:1:1103:A:OP2	2.07	0.54
36:1:2102:U:H2'	36:1:2103:U:C6	2.43	0.54
36:1:2674:A:H5"	48:M1:105:GLY:HA3	1.90	0.54
37:3:26:C:H5"	42:L5:56:THR:HB	1.89	0.54
41:L4:170:LYS:HD3	41:L4:175:HIS:ND1	2.22	0.54
42:L5:153:THR:HG22	42:L5:179:ARG:HD2	1.89	0.54
45:L8:152:LEU:HB2	45:L8:198:ALA:HB3	1.89	0.54
55:M9:168:ALA:C	55:M9:170:ARG:H	2.16	0.54
66:O0:20:SER:OG	66:O0:21:GLY:N	2.40	0.54
1:6:27:U:H2'	1:6:28:A:C8	2.42	0.54
1:6:593:U:H5"	11:s9:40:LYS:HE2	1.89	0.54
1:6:619:A:N3	1:6:1141:G:H1'	2.23	0.54
5:s3:102:ALA:HB1	5:s3:173:ARG:HG3	1.89	0.54
6:s4:31:PRO:HB2	6:s4:38:LEU:HB2	1.89	0.54
6:s4:230:GLU:HB2	6:s4:233:LYS:NZ	2.23	0.54
11:s9:102:GLU:HA	11:s9:105:LEU:HD23	1.89	0.54
26:d4:11:LYS:HB2	26:d4:24:VAL:HG23	1.89	0.54
32:e0:46:ASN:HD21	32:e0:48:THR:HG23	1.73	0.54
34:sR:105:GLY:HA3	34:sR:134:TRP:HH2	1.72	0.54
36:5:811:U:H2'	36:5:812:G:C8	2.42	0.54
36:5:1101:G:OP2	44:l7:196:LYS:NZ	2.41	0.54
36:5:1239:C:H42	36:5:1249:G:H22	1.53	0.54
36:5:3112:G:O2'	46:l9:70:THR:HB	2.08	0.54
36:5:3161:C:H2'	36:5:3162:C:C6	2.42	0.54
36:5:3276:G:H2'	36:5:3276:G:OP2	2.07	0.54
40:l3:3:HIS:ND1	40:l3:3:HIS:O	2.41	0.54
40:l3:183:LEU:O	40:l3:191:LYS:NZ	2.37	0.54
45:l8:95:ASN:HA	45:l8:98:ARG:NH1	2.22	0.54
80:m2:18:UNK:HA	80:m2:58:UNK:HA	1.89	0.54
53:m7:141:SER:O	53:m7:143:PRO:HD3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:m8:100:THR:HG22	54:m8:120:GLU:HB3	1.88	0.54
64:n8:14:HIS:CE1	68:o2:36:LYS:HE2	2.42	0.54
1:2:46:A:N1	1:2:432:G:O2'	2.37	0.54
1:2:755:A:C2	6:S4:13:ALA:HA	2.42	0.54
1:2:803:A:C4	9:S7:104:ARG:HG3	2.42	0.54
2:S0:139:VAL:HA	4:S2:62:PRO:HG3	1.90	0.54
4:S2:106:ASP:OD2	4:S2:110:HIS:ND1	2.40	0.54
8:S6:84:TYR:OH	8:S6:91:GLU:OE1	2.24	0.54
19:C7:33:ARG:O	19:C7:37:GLU:HG2	2.08	0.54
34:SR:149:ASP:HB2	34:SR:175:ASP:HB3	1.89	0.54
36:1:860:G:C5	39:L2:181:LYS:HB2	2.41	0.54
36:1:2314:U:O2'	36:1:2315:G:OP1	2.20	0.54
69:O3:52:VAL:HG22	69:O3:66:VAL:HG22	1.88	0.54
71:O5:43:LYS:O	71:O5:46:THR:HG22	2.08	0.54
36:5:503:C:H2'	36:5:504:A:H8	1.72	0.54
36:5:1126:G:H5"	47:m0:119:TRP:HZ3	1.73	0.54
36:5:1692:U:O4	36:5:1693:C:N4	2.41	0.54
36:5:2255:A:OP2	36:5:2261:G:N1	2.30	0.54
55:m9:84:THR:O	55:m9:88:ARG:HG2	2.07	0.54
55:m9:138:LEU:O	55:m9:142:ILE:HG13	2.07	0.54
66:o0:99:ASP:O	66:o0:103:THR:OG1	2.22	0.54
68:o2:105:ARG:O	68:o2:109:LEU:HB2	2.08	0.54
71:o5:64:GLU:O	71:o5:68:GLN:N	2.38	0.54
1:2:158:U:O2'	1:2:159:U:H3'	2.07	0.54
1:2:711:U:H1'	1:2:712:G:H5'	1.90	0.54
6:S4:17:HIS:HB2	6:S4:108:ARG:HA	1.90	0.54
19:C7:23:LYS:HB3	19:C7:34:LEU:HD11	1.90	0.54
34:SR:17:ASN:O	34:SR:17:ASN:ND2	2.40	0.54
36:1:1097:G:H4'	36:1:1098:A:O5'	2.08	0.54
36:1:2601:A:H2'	36:1:2602:G:H8	1.73	0.54
36:1:2748:A:O3'	42:L5:48:LYS:NZ	2.37	0.54
41:L4:264:SER:OG	41:L4:265:GLU:N	2.40	0.54
53:M7:67:ILE:HG13	53:M7:82:ARG:CZ	2.38	0.54
1:6:25:C:OP2	1:6:25:C:H4'	2.06	0.54
1:6:1620:C:H2'	1:6:1621:U:C6	2.42	0.54
20:c8:99:HIS:HD2	20:c8:101:LEU:HD21	1.72	0.54
21:c9:33:TYR:HD1	21:c9:34:VAL:H	1.53	0.54
23:d1:2:GLU:HG3	23:d1:6:GLY:HA2	1.89	0.54
36:5:93:C:OP2	36:5:2764:C:O2'	2.24	0.54
36:5:411:U:H2'	36:5:412:G:H8	1.73	0.54
36:5:1497:C:H2'	36:5:1498:A:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1715:A:N7	66:o0:84:LEU:HD22	2.22	0.54
36:5:2773:C:H2'	36:5:2774:C:C6	2.43	0.54
1:2:1649:G:H2'	1:2:1650:U:C6	2.43	0.54
5:S3:94:ARG:HH21	35:SM:134:ASP:CG	2.07	0.54
7:S5:94:THR:HG22	7:S5:114:ILE:HG13	1.89	0.54
30:D8:11:LYS:HZ3	30:D8:33:LEU:HD11	1.73	0.54
33:E1:135:HIS:HB2	33:E1:138:ARG:HG3	1.90	0.54
36:1:59:G:H2'	38:4:33:A:O2'	2.06	0.54
36:1:2443:A:O2'	36:1:2444:C:H5'	2.07	0.54
36:1:2946:A:H5"	36:1:2947:G:H5'	1.89	0.54
40:L3:230:THR:HA	40:L3:235:THR:HG22	1.89	0.54
40:L3:280:HIS:HB3	40:L3:324:VAL:HG13	1.89	0.54
59:N3:45:ARG:HB3	59:N3:48:ARG:HG3	1.88	0.54
69:O3:35:VAL:HG13	69:O3:40:ASP:HB3	1.88	0.54
1:6:337:G:O2'	10:s8:10:LYS:NZ	2.41	0.54
9:s7:14:THR:OG1	9:s7:15:GLU:N	2.39	0.54
20:c8:63:GLN:O	20:c8:67:GLU:HB2	2.08	0.54
21:c9:14:PHE:HZ	21:c9:132:LEU:HD22	1.72	0.54
23:d1:71:ARG:HG3	23:d1:83:TRP:CE2	2.42	0.54
36:5:1528:G:H1	36:5:1832:C:H42	1.54	0.54
42:l5:290:ILE:HG12	47:m0:206:LEU:HD11	1.90	0.54
52:m6:22:VAL:HG11	52:m6:120:VAL:HG11	1.89	0.54
53:m7:26:PHE:CE1	53:m7:120:ASN:HA	2.42	0.54
53:m7:132:ALA:O	53:m7:135:ARG:NH2	2.41	0.54
54:m8:83:VAL:C	54:m8:85:GLY:H	2.16	0.54
61:n5:105:VAL:HA	61:n5:130:TYR:CE2	2.43	0.54
1:2:233:C:H4'	1:2:234:G:C2	2.42	0.54
1:2:589:C:H2'	1:2:590:C:H6	1.72	0.54
1:2:768:C:C2	11:S9:143:ILE:HD13	2.43	0.54
1:2:826:U:H2'	1:2:827:C:C6	2.43	0.54
1:2:1682:U:O2'	1:2:1683:C:H5'	2.06	0.54
4:S2:116:LYS:HG2	4:S2:127:ALA:HB3	1.90	0.54
8:S6:31:ARG:N	8:S6:34:GLN:OE1	2.36	0.54
28:D6:87:ARG:HB3	28:D6:91:ASP:HB3	1.89	0.54
36:1:348:A:H1'	36:1:352:A:O2'	2.08	0.54
36:1:385:A:H2'	36:1:386:A:C8	2.43	0.54
36:1:426:G:OP1	68:O2:15:LYS:NZ	2.39	0.54
36:1:1362:G:H2'	36:1:1363:A:C8	2.42	0.54
36:1:2093:A:H3'	36:1:2093:A:N3	2.22	0.54
38:4:53:A:C2	75:O9:35:ILE:HD11	2.43	0.54
58:N2:32:SER:HA	58:N2:35:LYS:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:729:G:O2'	1:6:730:G:O5'	2.25	0.54
18:c6:130:GLY:HA3	18:c6:137:ARG:HH12	1.72	0.54
28:d6:43:ASN:OD1	28:d6:66:LYS:NZ	2.41	0.54
34:sR:70:ASP:HB3	34:sR:113:VAL:HG12	1.89	0.54
36:5:761:A:C2	36:5:771:A:H1'	2.43	0.54
38:8:134:G:OP1	61:n5:56:ARG:HG2	2.08	0.54
41:l4:44:LYS:HB3	41:l4:47:ARG:NH1	2.22	0.54
42:l5:155:THR:HA	42:l5:179:ARG:HD3	1.88	0.54
45:l8:54:GLU:O	45:l8:58:VAL:HG23	2.07	0.54
56:n0:77:VAL:HG13	56:n0:126:VAL:HG22	1.89	0.54
69:o3:51:TYR:HB3	69:o3:67:MET:HB2	1.89	0.54
1:2:472:U:H5"	11:S9:11:THR:HG23	1.90	0.54
1:2:505:A:H61	1:2:507:U:H3	1.55	0.54
1:2:1487:A:OP1	31:D9:34:TYR:OH	2.14	0.54
14:C2:68:GLU:O	14:C2:70:ASN:N	2.40	0.54
18:C6:42:GLU:HA	18:C6:45:ARG:HB2	1.89	0.54
44:L7:71:ALA:C	44:L7:73:GLY:H	2.14	0.54
45:L8:75:ILE:HG22	45:L8:76:ALA:H	1.73	0.54
63:N7:54:THR:OG1	63:N7:55:LYS:N	2.40	0.54
72:O6:97:SER:HB3	72:O6:98:ARG:HE	1.73	0.54
73:O7:31:LYS:O	73:O7:33:THR:HG22	2.07	0.54
1:6:252:U:H4'	6:s4:131:LEU:HD12	1.89	0.54
1:6:654:C:H2'	1:6:655:G:C8	2.43	0.54
1:6:918:U:H2'	1:6:919:A:C8	2.38	0.54
1:6:1079:U:H2'	1:6:1080:U:C6	2.41	0.54
1:6:1583:A:OP1	18:c6:135:ARG:NH1	2.36	0.54
14:c2:70:ASN:HA	14:c2:73:LYS:HE2	1.90	0.54
14:c2:132:GLU:HG2	14:c2:133:LEU:HD12	1.90	0.54
26:d4:25:VAL:N	26:d4:71:GLY:O	2.39	0.54
36:5:2651:G:C4	36:5:2796:G:C2	2.96	0.54
36:5:2712:U:H2'	36:5:2713:U:H6	1.73	0.54
43:l6:3:ALA:HB1	68:o2:75:LEU:HD13	1.89	0.54
45:l8:195:SER:O	45:l8:197:VAL:N	2.40	0.54
46:l9:109:ALA:O	46:l9:110:LYS:HB2	2.08	0.54
51:m5:123:GLN:HB2	51:m5:128:LYS:HG2	1.90	0.54
51:m5:147:ARG:NH1	71:o5:101:THR:OG1	2.40	0.54
71:o5:7:TYR:HA	71:o5:10:ARG:HG3	1.90	0.54
1:2:1002:G:N2	1:2:1760:G:O3'	2.41	0.54
1:2:1761:U:O2'	1:2:1762:A:OP2	2.24	0.54
2:S0:70:PRO:HB2	2:S0:94:GLY:HA3	1.90	0.54
3:S1:126:THR:HG22	3:S1:136:ARG:HE	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:S7:50:ASP:HB3	9:S7:56:LYS:HG2	1.88	0.54
10:S8:197:THR:HG22	10:S8:200:LYS:HZ3	1.73	0.54
34:SR:160:GLU:O	34:SR:162:ALA:N	2.38	0.54
36:1:715:A:H8	64:N8:115:LYS:HG2	1.73	0.54
36:1:1751:G:H5'	74:O8:26:LYS:HZ1	1.73	0.54
36:1:2565:U:H2'	36:1:2566:C:C6	2.42	0.54
36:1:3147:G:O2'	40:L3:104:THR:OG1	2.20	0.54
43:L6:77:ARG:NH1	43:L6:78:ARG:O	2.40	0.54
45:L8:203:VAL:HG13	45:L8:207:ASP:HB2	1.90	0.54
46:L9:137:SER:HB3	46:L9:143:GLU:HB3	1.90	0.54
56:N0:90:MET:HE1	56:N0:114:HIS:CE1	2.43	0.54
58:N2:50:LEU:H	58:N2:50:LEU:HD12	1.72	0.54
78:Q2:17:CYS:SG	78:Q2:77:CYS:HB3	2.48	0.54
1:6:325:G:H4'	13:c1:83:THR:HG21	1.90	0.54
5:s3:66:ILE:O	5:s3:70:THR:N	2.41	0.54
5:s3:99:VAL:HG22	5:s3:171:ALA:HB2	1.90	0.54
6:s4:207:LEU:HD22	6:s4:221:ARG:HA	1.90	0.54
36:5:291:C:OP1	51:m5:68:ARG:HG3	2.08	0.54
36:5:1636:U:H5"	63:n7:73:LYS:HE2	1.90	0.54
40:l3:114:VAL:HG22	40:l3:163:HIS:CE1	2.43	0.54
45:l8:139:VAL:O	45:l8:143:ILE:HG13	2.08	0.54
59:n3:87:ARG:NE	59:n3:121:GLU:OE2	2.39	0.54
66:o0:8:GLU:HB3	66:o0:13:LYS:HE2	1.89	0.54
1:2:998:A:N1	1:2:1006:C:N4	2.57	0.53
12:C0:21:VAL:HB	12:C0:66:TYR:HB2	1.90	0.53
20:C8:101:LEU:O	20:C8:104:ASN:HB3	2.09	0.53
22:D0:29:THR:HG21	22:D0:84:MET:HE2	1.89	0.53
27:D5:61:SER:H	27:D5:64:VAL:HB	1.73	0.53
36:1:2534:G:HO2'	36:1:2535:A:H8	1.56	0.53
36:1:2900:A:N3	36:1:3025:C:O2'	2.37	0.53
37:3:60:G:H2'	37:3:61:G:H8	1.72	0.53
38:4:24:G:OP2	62:N6:13:ARG:NH1	2.29	0.53
45:L8:108:ARG:NE	45:L8:112:GLU:OE2	2.35	0.53
47:M0:90:ARG:HG3	47:M0:137:SER:HB2	1.89	0.53
1:6:1095:U:H1'	24:d2:16:ASN:HD21	1.73	0.53
1:6:1387:G:N7	19:c7:44:LYS:NZ	2.50	0.53
1:6:1738:U:H2'	1:6:1739:C:C6	2.44	0.53
4:s2:218:ILE:O	4:s2:221:THR:OG1	2.25	0.53
13:c1:17:PRO:HG3	13:c1:63:LEU:HD11	1.89	0.53
36:5:1317:A:O2'	36:5:1318:A:H3'	2.08	0.53
36:5:1334:U:H5"	44:l7:206:LYS:HB3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1913:A:N3	36:5:2120:A:H2'	2.23	0.53
40:l3:37:ARG:HA	40:l3:186:GLY:HA2	1.90	0.53
40:l3:108:GLU:HG2	40:l3:109:HIS:CE1	2.43	0.53
42:l5:184:ASP:OD2	42:l5:187:THR:OG1	2.27	0.53
44:l7:145:ARG:HA	44:l7:185:ILE:HD13	1.89	0.53
80:m2:111:UNK:O	80:m2:115:UNK:N	2.41	0.53
49:m3:32:LYS:HA	49:m3:35:ARG:NH1	2.23	0.53
49:m3:61:PRO:O	49:m3:62:THR:OG1	2.21	0.53
58:n2:104:ARG:NH1	58:n2:106:ALA:HB2	2.23	0.53
66:o0:100:ILE:HG13	66:o0:101:LEU:HD22	1.90	0.53
70:o4:107:GLU:HA	70:o4:110:GLU:CD	2.33	0.53
1:2:1520:U:OP2	21:C9:75:LYS:NZ	2.36	0.53
6:S4:49:ARG:HH11	6:S4:50:ASN:HD21	1.55	0.53
26:D4:38:ASP:HA	26:D4:41:ARG:HD3	1.89	0.53
36:1:13:A:H4'	61:N5:39:LYS:HG3	1.90	0.53
36:1:887:G:H2'	36:1:888:A:C8	2.43	0.53
41:L4:283:THR:HG22	41:L4:285:ASP:N	2.23	0.53
46:L9:73:SER:OG	46:L9:74:LEU:N	2.39	0.53
47:M0:44:ASP:CG	47:M0:185:ARG:HH11	2.16	0.53
55:M9:115:ILE:HG13	55:M9:119:LEU:HD23	1.90	0.53
56:N0:81:TYR:CE1	56:N0:90:MET:HE3	2.42	0.53
76:Q0:81:SER:OG	76:Q0:82:LEU:N	2.40	0.53
1:6:879:G:H2'	1:6:880:C:C6	2.43	0.53
3:s1:60:ALA:O	3:s1:64:ARG:NE	2.34	0.53
3:s1:97:LEU:HD22	3:s1:232:HIS:ND1	2.24	0.53
7:s5:32:GLU:HG3	7:s5:33:VAL:HG23	1.91	0.53
10:s8:184:LEU:HB3	10:s8:189:LEU:HB2	1.89	0.53
18:c6:38:LEU:O	18:c6:40:GLU:N	2.41	0.53
24:d2:6:VAL:HG13	24:d2:29:PRO:HD2	1.89	0.53
33:e1:82:LYS:C	33:e1:84:VAL:H	2.17	0.53
36:5:255:A:H2'	36:5:256:G:H8	1.74	0.53
36:5:1464:G:N2	36:5:1466:G:H3'	2.23	0.53
36:5:1563:C:H2'	36:5:1564:U:O4'	2.08	0.53
36:5:1899:G:N1	36:5:2335:G:OP2	2.39	0.53
36:5:2261:G:H21	36:5:2262:A:N6	2.05	0.53
36:5:3065:G:H2'	36:5:3066:U:O4'	2.08	0.53
42:l5:119:TYR:OH	42:l5:139:PRO:O	2.17	0.53
49:m3:157:ARG:HD3	64:n8:101:VAL:HG21	1.90	0.53
56:n0:79:VAL:HG21	56:n0:106:LEU:HD11	1.90	0.53
70:o4:80:ARG:HB2	70:o4:85:VAL:HG13	1.91	0.53
83:f:109:THR:HG23	83:f:110:LYS:HB2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:610:G:H2'	1:2:614:C:C6	2.43	0.53
1:2:744:U:N3	1:2:808:U:O2	2.41	0.53
1:2:1401:A:O3'	19:C7:10:LYS:NZ	2.41	0.53
10:S8:8:ARG:NE	10:S8:21:PHE:HD1	2.05	0.53
11:S9:93:LEU:O	11:S9:96:VAL:HG22	2.07	0.53
22:D0:23:ARG:HD2	22:D0:90:TYR:CD1	2.42	0.53
36:1:2179:C:O3'	39:L2:174:ARG:NH2	2.41	0.53
36:1:3015:G:N2	36:1:3040:A:H1'	2.24	0.53
40:L3:32:PHE:CD1	40:L3:182:GLN:HB3	2.43	0.53
44:L7:92:ILE:HD11	54:M8:4:ASP:HB2	1.90	0.53
47:M0:21:ARG:O	47:M0:24:ARG:NH1	2.34	0.53
59:N3:54:LEU:HD11	59:N3:119:GLY:HA3	1.90	0.53
67:O1:77:ARG:HD2	67:O1:89:LEU:HD23	1.90	0.53
69:O3:20:LYS:HG2	69:O3:21:ARG:HG3	1.89	0.53
1:6:230:C:N3	1:6:235:G:N2	2.44	0.53
19:c7:57:LEU:O	19:c7:61:ILE:N	2.42	0.53
26:d4:125:LEU:HG	26:d4:128:LYS:HD3	1.91	0.53
36:5:629:U:H2'	36:5:630:A:C8	2.42	0.53
36:5:1100:U:OP2	44:l7:196:LYS:HE2	2.08	0.53
36:5:1817:G:O2'	36:5:1818:U:OP2	2.20	0.53
39:l2:30:ARG:NH2	39:l2:33:ASP:OD2	2.35	0.53
40:l3:10:ARG:NH2	40:l3:263:SER:O	2.41	0.53
40:l3:19:ARG:HB3	40:l3:232:ARG:HH12	1.72	0.53
44:l7:121:LYS:O	44:l7:121:LYS:HD3	2.09	0.53
50:m4:21:VAL:HA	50:m4:66:THR:HG23	1.90	0.53
72:o6:33:ALA:HB1	72:o6:38:LYS:HD2	1.89	0.53
1:2:1400:A:H4'	19:C7:60:ARG:HH22	1.72	0.53
10:S8:58:LEU:O	10:S8:59:ARG:HB2	2.07	0.53
18:C6:16:ALA:HB2	18:C6:72:GLY:HA3	1.89	0.53
33:E1:147:VAL:HG23	33:E1:148:TYR:CG	2.42	0.53
38:4:53:A:H5'	38:4:54:A:OP2	2.07	0.53
39:L2:83:HIS:NE2	39:L2:86:GLN:HB2	2.24	0.53
42:L5:60:ILE:H	42:L5:80:SER:HB2	1.73	0.53
43:L6:62:THR:OG1	43:L6:78:ARG:HD3	2.08	0.53
50:M4:24:LYS:NZ	50:M4:61:GLY:O	2.24	0.53
52:M6:148:LYS:O	52:M6:150:GLU:N	2.34	0.53
1:6:20:G:H5'	1:6:571:G:C8	2.42	0.53
1:6:647:G:H22	1:6:687:G:N2	2.06	0.53
1:6:1042:G:H22	1:6:1076:A:H2	1.57	0.53
1:6:1564:U:H2'	1:6:1565:C:C6	2.44	0.53
1:6:1591:C:H2'	1:6:1592:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s1:35:PRO:HB3	3:s1:231:LEU:HD21	1.90	0.53
8:s6:136:LYS:HG3	8:s6:173:PRO:HB3	1.90	0.53
11:s9:6:ARG:HH11	11:s9:6:ARG:HB2	1.73	0.53
12:c0:87:UNK:O	12:c0:89:UNK:N	2.41	0.53
18:c6:29:ILE:HA	18:c6:65:ILE:HB	1.90	0.53
19:c7:29:GLN:HA	19:c7:32:LYS:HE2	1.90	0.53
27:d5:91:PRO:HB3	27:d5:101:TYR:CE1	2.44	0.53
36:5:409:A:H61	38:8:15:G:H1'	1.73	0.53
36:5:955:U:H2'	36:5:956:U:C6	2.43	0.53
36:5:1483:G:C8	36:5:1485:G:C8	2.96	0.53
36:5:1949:G:H5"	55:m9:104:ARG:NH1	2.23	0.53
36:5:3242:G:H5'	36:5:3245:A:C8	2.39	0.53
36:5:3251:U:H2'	36:5:3252:G:C8	2.44	0.53
42:l5:279:LYS:NZ	42:l5:282:ARG:HH12	2.06	0.53
43:l6:7:PRO:HD3	68:o2:74:PHE:HE1	1.72	0.53
56:n0:28:ARG:HH11	56:n0:99:ARG:NE	2.07	0.53
1:2:1046:G:OP1	3:S1:157:GLN:NE2	2.27	0.53
17:C5:87:PRO:HD3	17:C5:112:LEU:HD22	1.90	0.53
25:D3:69:ARG:NH1	25:D3:116:ASP:OD1	2.42	0.53
26:D4:92:VAL:HG21	26:D4:99:LYS:HE3	1.90	0.53
36:1:712:G:N2	36:1:754:G:O3'	2.41	0.53
36:1:2228:A:H2'	36:1:2229:A:H8	1.72	0.53
36:1:3006:A:H2'	36:1:3007:U:O4'	2.07	0.53
37:3:97:A:H2'	37:3:98:C:C6	2.43	0.53
38:4:83:C:H1'	38:4:85:G:H21	1.73	0.53
53:M7:48:LEU:HB3	53:M7:88:VAL:HG13	1.91	0.53
72:O6:43:LEU:O	72:O6:47:ILE:HG13	2.09	0.53
1:6:683:C:H3'	1:6:684:A:H5"	1.91	0.53
1:6:870:C:H2'	1:6:871:G:H8	1.73	0.53
1:6:1068:C:H2'	1:6:1069:A:C8	2.43	0.53
1:6:1500:C:OP1	21:c9:122:ARG:NH2	2.41	0.53
1:6:1544:U:H4'	20:c8:132:ARG:CZ	2.39	0.53
7:s5:225:ARG:HH22	30:d8:57:MET:HB2	1.73	0.53
9:s7:12:ALA:HB3	9:s7:13:PRO:HD3	1.90	0.53
9:s7:172:VAL:HG12	9:s7:176:LEU:HD12	1.89	0.53
21:c9:141:GLU:C	21:c9:143:ASP:H	2.17	0.53
36:5:1448:U:H5"	53:m7:66:SER:HB2	1.90	0.53
38:8:155:A:C2	38:8:156:U:H1'	2.43	0.53
39:l2:219:ILE:HG21	39:l2:223:SER:HB3	1.90	0.53
41:l4:217:LYS:HA	41:l4:220:ARG:HG2	1.90	0.53
47:m0:81:GLY:O	47:m0:83:ASP:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:278:U:OP1	1:2:279:G:N2	2.42	0.53
1:2:1191:U:H5'	18:C6:143:ARG:HH11	1.73	0.53
1:2:1394:G:H1	1:2:1404:C:H42	1.56	0.53
3:S1:116:LYS:HZ2	3:S1:117:TRP:HZ3	1.56	0.53
5:S3:21:LEU:HD22	5:S3:25:PHE:CE2	2.44	0.53
5:S3:79:TYR:CD2	5:S3:84:ILE:HG13	2.44	0.53
6:S4:205:PHE:HB3	6:S4:221:ARG:HD2	1.90	0.53
8:S6:137:ARG:NH2	8:S6:177:ARG:HE	2.07	0.53
11:S9:112:GLN:HA	11:S9:112:GLN:HE21	1.73	0.53
21:C9:108:LEU:HA	21:C9:111:ILE:HG22	1.90	0.53
36:1:821:U:H2'	36:1:822:G:C8	2.43	0.53
38:4:34:U:O2'	38:4:35:C:OP2	2.26	0.53
1:6:775:G:O6	26:d4:11:LYS:NZ	2.40	0.53
4:s2:118:ALA:HB3	4:s2:124:ALA:HB2	1.91	0.53
11:s9:96:VAL:HA	11:s9:99:LEU:HB2	1.89	0.53
13:c1:3:THR:HG22	13:c1:4:GLU:H	1.73	0.53
36:5:2180:G:H2'	36:5:2181:C:C6	2.44	0.53
36:5:2555:G:N1	70:o4:96:GLU:OE1	2.39	0.53
38:8:60:U:H3	71:o5:56:THR:HG23	1.74	0.53
54:m8:19:PRO:HD3	54:m8:30:VAL:HG21	1.91	0.53
64:n8:85:ASP:OD2	64:n8:86:LYS:N	2.40	0.53
1:2:1101:G:O2'	24:D2:4:SER:OG	2.14	0.53
1:2:1523:G:N7	21:C9:68:ARG:NH1	2.56	0.53
2:S0:13:ASP:HA	2:S0:16:LEU:HD12	1.91	0.53
2:S0:38:PHE:HB2	2:S0:49:ASN:HB2	1.91	0.53
5:S3:104:SER:OG	5:S3:105:MET:N	2.41	0.53
6:S4:92:LEU:HG	26:D4:17:LEU:HD21	1.90	0.53
8:S6:186:ARG:O	8:S6:190:GLN:HG2	2.09	0.53
21:C9:73:VAL:HG22	21:C9:105:LEU:HD12	1.90	0.53
36:1:3:U:H2'	36:1:4:U:C6	2.44	0.53
36:1:1783:U:H2'	36:1:1784:G:C8	2.44	0.53
36:1:2223:A:H4'	72:O6:80:PHE:HE2	1.74	0.53
36:1:3393:U:H2'	36:1:3394:U:C6	2.43	0.53
38:4:91:C:H2'	38:4:92:A:H8	1.73	0.53
45:L8:61:GLN:HA	45:L8:64:ILE:HD12	1.91	0.53
45:L8:100:GLU:OE2	45:L8:108:ARG:NH1	2.42	0.53
1:6:1429:G:H2'	1:6:1430:U:C6	2.44	0.53
1:6:1535:U:H4'	1:6:1535:U:OP1	2.08	0.53
8:s6:130:PRO:HB3	60:n4:81:PRO:HG2	1.90	0.53
36:5:109:A:H4'	36:5:110:G:OP1	2.08	0.53
36:5:982:C:H42	36:5:1101:G:H1	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2103:U:H2'	36:5:2104:A:C8	2.44	0.53
36:5:2695:A:HO2'	36:5:2696:A:H8	1.56	0.53
36:5:3163:A:N6	36:5:3288:G:O6	2.41	0.53
40:l3:144:ILE:HG22	40:l3:148:LEU:HD22	1.91	0.53
40:l3:289:ASP:OD2	40:l3:290:ASP:N	2.41	0.53
42:l5:82:GLU:OE2	42:l5:108:ARG:NH1	2.26	0.53
55:m9:81:ARG:HG2	55:m9:88:ARG:HH21	1.72	0.53
68:o2:32:TRP:CZ2	68:o2:53:PRO:HD2	2.43	0.53
1:2:704:C:O2	1:2:705:U:O2'	2.26	0.53
36:1:1522:U:OP2	61:N5:121:LYS:NZ	2.39	0.53
36:1:1661:G:H2'	36:1:1662:G:C8	2.44	0.53
36:1:2771:U:H2'	36:1:2772:C:C2	2.44	0.53
36:1:3023:U:H2'	36:1:3024:A:C8	2.42	0.53
37:3:106:U:H2'	37:3:107:C:C6	2.44	0.53
46:L9:163:GLN:HB3	46:L9:166:ARG:HH11	1.73	0.53
61:N5:115:ARG:HD2	61:N5:121:LYS:HB2	1.91	0.53
78:Q2:28:TYR:HB3	78:Q2:69:VAL:HB	1.89	0.53
1:6:1003:A:H4'	1:6:1004:U:O5'	2.08	0.53
1:6:1102:G:OP2	25:d3:7:ARG:HD2	2.08	0.53
24:d2:37:PHE:CZ	24:d2:103:ILE:HD12	2.43	0.53
34:sR:52:GLN:HG2	34:sR:53:LYS:HG2	1.91	0.53
36:5:662:U:OP1	64:n8:8:THR:HG21	2.09	0.53
36:5:2761:G:N7	78:q2:63:LYS:NZ	2.56	0.53
36:5:2898:G:N7	76:q0:125:LYS:NZ	2.51	0.53
42:l5:78:ALA:HB3	42:l5:105:ILE:HB	1.91	0.53
44:l7:103:LEU:HG	44:l7:130:ILE:HG12	1.91	0.53
49:m3:16:LYS:O	49:m3:18:TRP:N	2.42	0.53
52:m6:125:ARG:HG3	52:m6:129:LEU:HD22	1.90	0.53
55:m9:6:THR:HG22	55:m9:10:LEU:HD22	1.89	0.53
56:n0:155:ARG:HH21	56:n0:172:TYR:H	1.57	0.53
83:f:23:CYS:SG	83:f:74:SER:HB3	2.49	0.53
1:2:442:C:O2'	1:2:525:A:N1	2.41	0.53
1:2:683:C:H2'	1:2:684:A:C8	2.44	0.53
3:S1:34:ALA:HB3	3:S1:41:ARG:HA	1.89	0.53
7:S5:89:ILE:HD12	7:S5:90:ILE:HG12	1.91	0.53
20:C8:102:ALA:O	20:C8:105:VAL:HG12	2.08	0.53
30:D8:36:THR:OG1	30:D8:37:SER:N	2.36	0.53
33:E1:105:TYR:HB3	33:E1:117:LEU:HB2	1.91	0.53
36:1:590:G:C2	36:1:610:G:H2'	2.43	0.53
36:1:1397:C:H2'	36:1:1398:U:C6	2.44	0.53
49:M3:57:VAL:HG13	49:M3:147:ILE:HD13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M5:58:GLY:HA3	51:M5:142:ILE:HD11	1.90	0.53
52:M6:177:LYS:O	52:M6:181:ALA:N	2.40	0.53
70:O4:41:ARG:HG2	70:O4:56:THR:HG21	1.90	0.53
79:Q3:7:LYS:O	79:Q3:27:LYS:NZ	2.41	0.53
1:6:161:U:OP2	8:s6:87:ARG:NH2	2.42	0.53
1:6:1237:G:H2'	1:6:1238:A:H8	1.72	0.53
11:s9:54:ARG:HA	11:s9:57:ARG:HB3	1.90	0.53
14:c2:103:LEU:HD23	14:c2:115:VAL:HA	1.90	0.53
36:5:651:G:C6	36:5:652:G:C6	2.97	0.53
36:5:911:C:N4	39:l2:3:ARG:HD3	2.24	0.53
75:o9:28:ARG:NH1	75:o9:36:ARG:HH11	2.07	0.53
1:2:1186:U:OP1	1:2:1456:C:O2'	2.23	0.53
1:2:1681:A:H8	8:S6:66:GLY:HA3	1.74	0.53
7:S5:184:PHE:CD2	7:S5:185:ARG:HG2	2.44	0.53
8:S6:105:ASP:OD2	8:S6:105:ASP:N	2.40	0.53
12:C0:10:LYS:HD3	12:C0:36:ASP:HB3	1.91	0.53
13:C1:8:GLN:OE1	13:C1:14:GLN:N	2.33	0.53
14:C2:66:VAL:HG11	14:C2:71:ILE:HD12	1.91	0.53
21:C9:28:LEU:HD13	21:C9:30:VAL:HG22	1.90	0.53
22:D0:50:LEU:HD23	22:D0:93:LEU:HD22	1.91	0.53
36:1:2544:U:H2'	36:1:2545:C:C6	2.44	0.53
40:L3:112:ASP:O	40:L3:116:ARG:HB2	2.09	0.53
41:L4:282:SER:HB3	54:M8:126:GLN:HE21	1.74	0.53
53:M7:36:ILE:HG12	53:M7:44:ALA:HB1	1.91	0.53
1:6:1293:U:H1'	2:s0:111:ILE:HG21	1.91	0.53
1:6:1562:G:OP1	21:c9:89:ARG:NH2	2.41	0.53
2:s0:139:VAL:HG13	2:s0:141:ILE:HG13	1.91	0.53
17:c5:87:PRO:HA	17:c5:90:ILE:HG13	1.91	0.53
20:c8:103:ASN:O	20:c8:107:SER:OG	2.19	0.53
25:d3:68:ILE:O	25:d3:70:LYS:NZ	2.40	0.53
36:5:912:G:N1	39:l2:208:ASP:OD2	2.38	0.53
36:5:1073:U:H1'	65:n9:50:THR:HG23	1.91	0.53
36:5:2897:A:H5"	76:q0:125:LYS:HG3	1.89	0.53
36:5:3139:A:OP1	40:l3:274:SER:OG	2.27	0.53
39:l2:65:ASP:HB3	39:l2:68:LYS:O	2.09	0.53
39:l2:116:VAL:HA	39:l2:164:GLY:HA2	1.91	0.53
41:l4:181:VAL:HG11	41:l4:224:GLY:HA3	1.90	0.53
47:m0:55:ASN:HA	47:m0:131:ILE:HG23	1.90	0.53
68:o2:81:ASP:O	68:o2:84:THR:OG1	2.25	0.53
77:q1:2:ARG:HG3	77:q1:4:LYS:H	1.74	0.53
83:f:99:PHE:CA	83:f:100:LEU:HB2	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:86:A:O2'	1:2:147:A:N3	2.38	0.52
3:S1:81:PHE:HD2	3:S1:82:ARG:HG3	1.74	0.52
12:C0:77:ARG:HD3	12:C0:84:UNK:HA	1.91	0.52
35:SM:84:LYS:H	35:SM:84:LYS:HD3	1.74	0.52
36:1:837:A:OP1	79:Q3:5:THR:OG1	2.27	0.52
36:1:1055:A:N3	37:3:81:U:O2'	2.40	0.52
36:1:1169:A:H5"	44:L7:219:LYS:HD2	1.91	0.52
36:1:1612:A:H5"	74:O8:51:LEU:HD12	1.90	0.52
40:L3:220:VAL:O	40:L3:334:ARG:NH1	2.42	0.52
41:L4:156:LEU:HD23	41:L4:159:ILE:HD12	1.90	0.52
43:L6:105:TYR:HE1	43:L6:134:ARG:HD2	1.74	0.52
54:M8:96:PHE:CD2	54:M8:97:PRO:HD2	2.44	0.52
1:6:610:G:H21	25:d3:19:ARG:NH1	2.06	0.52
1:6:1081:A:H1'	1:6:1082:C:H5	1.73	0.52
4:s2:53:ILE:HD11	4:s2:73:LEU:HB2	1.91	0.52
5:s3:210:GLU:OE2	19:c7:19:ARG:NH1	2.42	0.52
9:s7:133:THR:HG21	9:s7:159:VAL:HG13	1.91	0.52
10:s8:76:THR:HG21	10:s8:104:ILE:HB	1.90	0.52
12:c0:31:LYS:H	12:c0:38:LYS:HA	1.74	0.52
13:c1:74:THR:HG22	13:c1:122:ILE:HG12	1.92	0.52
36:5:655:C:H5"	68:o2:26:HIS:HB2	1.89	0.52
36:5:1232:C:C5	36:5:1261:G:H2'	2.44	0.52
36:5:2546:C:H2'	36:5:2547:A:H8	1.75	0.52
36:5:3156:U:O2'	36:5:3157:U:O4'	2.27	0.52
47:m0:77:THR:HG22	47:m0:82:ARG:HA	1.90	0.52
48:m1:16:LYS:HG2	48:m1:130:VAL:HG13	1.89	0.52
54:m8:63:SER:OG	54:m8:64:VAL:N	2.41	0.52
74:o8:11:PHE:HE1	74:o8:65:LEU:HD21	1.74	0.52
1:2:396:G:O6	10:S8:26:LYS:NZ	2.39	0.52
1:2:926:A:H2	16:C4:125:SER:HB3	1.72	0.52
1:2:1339:C:O2'	1:2:1341:A:N7	2.27	0.52
8:S6:31:ARG:HD2	8:S6:34:GLN:HE22	1.74	0.52
9:S7:46:ILE:HD11	9:S7:58:LEU:HB3	1.90	0.52
23:D1:71:ARG:HG2	23:D1:83:TRP:CH2	2.45	0.52
36:1:300:G:H1	36:1:315:C:H42	1.57	0.52
36:1:501:A:H2'	36:1:502:U:C6	2.45	0.52
36:1:874:U:N3	36:1:2978:U:OP1	2.39	0.52
36:1:976:U:P	54:M8:144:ARG:HH22	2.31	0.52
36:1:2534:G:H22	36:1:2545:C:H42	1.58	0.52
36:1:2768:U:H2'	36:1:2769:A:C8	2.43	0.52
36:1:3116:G:OP1	36:1:3116:G:N2	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:22:ALA:H	40:L3:272:TYR:HD1	1.55	0.52
40:L3:66:LYS:NZ	40:L3:66:LYS:HB3	2.25	0.52
49:M3:75:PHE:O	49:M3:79:GLU:HB2	2.08	0.52
77:Q1:2:ARG:HB3	77:Q1:5:TRP:CD1	2.43	0.52
1:6:1533:C:H4'	1:6:1539:G:N1	2.24	0.52
2:s0:72:ASP:OD2	2:s0:72:ASP:N	2.38	0.52
2:s0:191:ARG:O	2:s0:191:ARG:NH1	2.41	0.52
19:c7:65:PRO:HB3	19:c7:74:GLN:NE2	2.23	0.52
36:5:1185:C:OP1	50:m4:42:LYS:HD3	2.09	0.52
36:5:1222:G:H1'	36:5:1285:G:H22	1.73	0.52
36:5:2561:A:N1	45:l8:32:LYS:HB2	2.24	0.52
39:l2:177:LYS:HD2	79:q3:69:TYR:CE1	2.43	0.52
40:l3:44:THR:HA	40:l3:340:LYS:HD3	1.90	0.52
52:m6:10:ASP:OD2	52:m6:37:ARG:NH2	2.41	0.52
57:n1:14:MET:CE	57:n1:55:LYS:HB2	2.39	0.52
9:S7:154:LEU:HD21	9:S7:183:PHE:CD1	2.41	0.52
24:D2:119:LYS:HB3	24:D2:121:VAL:HG23	1.89	0.52
34:SR:88:THR:HG22	34:SR:104:VAL:HG22	1.91	0.52
36:1:718:G:OP1	64:N8:117:ARG:NH2	2.42	0.52
36:1:2157:G:N7	39:L2:152:SER:OG	2.42	0.52
36:1:3072:C:H2'	36:1:3073:A:O4'	2.08	0.52
39:L2:49:VAL:HG22	39:L2:50:HIS:H	1.74	0.52
47:M0:43:VAL:HA	47:M0:139:ARG:HH22	1.74	0.52
74:O8:11:PHE:HD1	74:O8:12:LEU:HD22	1.74	0.52
1:6:292:U:H2'	1:6:293:U:C6	2.44	0.52
1:6:396:G:O6	10:s8:26:LYS:HE3	2.09	0.52
1:6:1301:U:H5'	4:s2:88:LYS:HE3	1.91	0.52
1:6:1350:U:H2'	1:6:1351:G:H8	1.75	0.52
5:s3:64:ARG:HA	5:s3:67:ASN:HB2	1.92	0.52
19:c7:29:GLN:OE1	19:c7:32:LYS:NZ	2.39	0.52
28:d6:44:ILE:HD13	28:d6:65:PRO:HB2	1.91	0.52
36:5:1025:A:H3'	36:5:1026:A:H4'	1.90	0.52
36:5:1488:G:O2'	70:o4:10:ARG:O	2.27	0.52
36:5:2156:C:P	39:l2:241:ARG:HH22	2.32	0.52
36:5:3343:G:H21	36:5:3362:A:H2	1.55	0.52
39:l2:174:ARG:HA	79:q3:69:TYR:CE2	2.43	0.52
41:l4:141:ARG:CZ	41:l4:180:LYS:HG3	2.38	0.52
49:m3:107:GLU:OE1	72:o6:18:THR:OG1	2.15	0.52
53:m7:127:ARG:O	53:m7:139:TYR:N	2.42	0.52
57:n1:56:PHE:CZ	57:n1:78:LYS:HD3	2.43	0.52
59:n3:90:GLY:O	60:n4:16:GLY:HA2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:206:A:H1'	1:2:262:U:C2	2.45	0.52
1:2:696:C:O3'	1:2:697:C:H2'	2.09	0.52
3:S1:62:LYS:O	3:S1:64:ARG:N	2.39	0.52
14:C2:124:LYS:O	14:C2:126:TRP:N	2.36	0.52
18:C6:47:LYS:HZ1	18:C6:114:ARG:HG2	1.75	0.52
29:D7:36:LYS:HB3	29:D7:43:ILE:HG22	1.91	0.52
36:1:42:C:O2'	36:1:43:A:H5'	2.08	0.52
36:1:950:G:N1	36:1:1368:U:OP2	2.31	0.52
36:1:1494:U:OP1	75:O9:44:TRP:HB3	2.10	0.52
36:1:1940:G:H2'	36:1:1941:C:O4'	2.10	0.52
41:L4:206:LEU:HD23	41:L4:226:GLU:HB2	1.91	0.52
44:L7:140:SER:N	44:L7:237:ASN:OD1	2.32	0.52
67:O1:44:MET:HB2	67:O1:46:THR:HG22	1.90	0.52
70:O4:21:LYS:HG2	70:O4:33:GLN:HB3	1.91	0.52
78:Q2:16:THR:C	78:Q2:18:ARG:H	2.17	0.52
78:Q2:35:LEU:C	78:Q2:37:ALA:H	2.17	0.52
1:6:1767:G:OP1	1:6:1770:U:H4'	2.10	0.52
1:6:1796:C:OP1	28:d6:87:ARG:HD3	2.09	0.52
2:s0:172:LEU:HD22	2:s0:176:LEU:HG	1.91	0.52
3:s1:141:ALA:HB1	3:s1:207:LEU:HD22	1.92	0.52
4:s2:74:PRO:C	4:s2:76:LEU:H	2.17	0.52
5:s3:132:LYS:HG3	5:s3:156:PHE:HB3	1.92	0.52
10:s8:36:THR:HG21	10:s8:173:PRO:HB2	1.92	0.52
10:s8:44:HIS:O	10:s8:56:ARG:N	2.43	0.52
15:c3:63:ALA:O	15:c3:67:THR:HG23	2.09	0.52
23:d1:8:LEU:HD13	23:d1:9:VAL:H	1.73	0.52
36:5:1080:A:OP1	42:l5:140:ARG:HD3	2.09	0.52
36:5:1773:C:H2'	36:5:1774:C:H6	1.73	0.52
36:5:2709:C:H2'	36:5:2710:C:H6	1.74	0.52
39:l2:201:GLY:HA2	39:l2:204:MET:SD	2.50	0.52
41:l4:295:ILE:O	41:l4:299:ILE:HG12	2.09	0.52
42:l5:210:GLU:O	42:l5:214:ASP:HB2	2.10	0.52
46:l9:87:LYS:HZ3	46:l9:191:LEU:HD11	1.75	0.52
46:l9:166:ARG:NH2	46:l9:168:ARG:HH12	2.07	0.52
66:o0:42:ILE:HG13	66:o0:67:VAL:HG13	1.91	0.52
66:o0:99:ASP:OD1	66:o0:103:THR:OG1	2.27	0.52
1:2:513:U:H2'	1:2:514:G:C8	2.45	0.52
1:2:778:G:H1	26:D4:10:ARG:HG2	1.74	0.52
1:2:1089:U:O2'	1:2:1093:A:N1	2.36	0.52
9:S7:151:LYS:HD2	9:S7:182:VAL:HG11	1.92	0.52
36:1:28:C:O2'	36:1:61:A:N3	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2376:G:H2'	36:1:2377:G:C8	2.44	0.52
36:1:2675:C:N4	48:M1:22:SER:HB3	2.24	0.52
36:1:2916:U:H2'	36:1:2917:G:H8	1.75	0.52
37:3:19:C:H42	37:3:60:G:H1	1.57	0.52
51:M5:27:VAL:HB	51:M5:122:ASN:ND2	2.24	0.52
51:M5:183:THR:HB	51:M5:187:ARG:HB2	1.91	0.52
63:N7:133:LYS:HE3	63:N7:135:ARG:HD3	1.90	0.52
64:N8:149:ALA:HB3	72:O6:15:LYS:HD2	1.91	0.52
66:O0:43:ILE:HD11	66:O0:92:ILE:HD11	1.91	0.52
70:O4:74:ARG:NH2	70:O4:82:ALA:HB2	2.25	0.52
1:6:2:A:H2'	4:s2:197:TYR:HD1	1.74	0.52
1:6:1776:A:H2'	1:6:1777:G:C8	2.45	0.52
6:s4:37:LYS:O	6:s4:40:GLU:N	2.40	0.52
6:s4:176:ASP:OD2	6:s4:176:ASP:N	2.43	0.52
6:s4:191:ARG:CZ	6:s4:245:LYS:HD3	2.40	0.52
20:c8:120:ARG:HE	35:sM:61:ILE:HG21	1.75	0.52
34:sR:236:ALA:O	34:sR:261:LYS:NZ	2.43	0.52
36:5:911:C:H42	39:l2:3:ARG:HD3	1.75	0.52
36:5:1580:A:OP1	39:l2:70:ARG:NH1	2.32	0.52
36:5:2244:A:H5"	39:l2:243:THR:OG1	2.10	0.52
36:5:2256:A:H2'	36:5:2256:A:OP2	2.09	0.52
36:5:2523:A:C5	45:l8:51:LYS:HG3	2.44	0.52
36:5:2716:U:C2'	36:5:2717:U:H5'	2.40	0.52
36:5:3182:G:H4'	52:m6:161:LYS:HD3	1.91	0.52
39:l2:89:TYR:N	39:l2:100:ASN:OD1	2.43	0.52
42:l5:122:VAL:C	42:l5:124:GLU:H	2.17	0.52
46:l9:8:GLN:HG2	46:l9:68:LEU:HD13	1.91	0.52
61:n5:45:LYS:HD3	71:o5:75:TYR:CE2	2.45	0.52
72:o6:78:GLY:O	72:o6:79:SER:HB3	2.08	0.52
1:2:70:C:H2'	1:2:71:A:O4'	2.10	0.52
1:2:324:U:OP1	13:C1:133:LYS:NZ	2.27	0.52
1:2:354:C:H5"	10:S8:16:ALA:HB2	1.90	0.52
1:2:716:C:H41	1:2:723:G:H21	1.56	0.52
1:2:1104:U:H5	25:D3:4:GLY:HA2	1.75	0.52
12:C0:44:LYS:NZ	12:C0:47:GLN:OE1	2.30	0.52
20:C8:131:LEU:HA	20:C8:145:ARG:HH12	1.74	0.52
21:C9:86:ARG:HB2	21:C9:89:ARG:HB2	1.90	0.52
36:1:118:U:H3	36:1:122:A:H5'	1.75	0.52
36:1:238:A:C2'	36:1:239:G:H5'	2.40	0.52
36:1:1222:G:O2'	36:1:1285:G:N1	2.43	0.52
36:1:1744:G:H2'	36:1:1745:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2969:A:N7	39:L2:215:ASN:ND2	2.57	0.52
36:1:3157:U:H4'	36:1:3158:G:H5'	1.91	0.52
37:3:60:G:H2'	37:3:61:G:C8	2.45	0.52
38:4:71:A:N1	38:4:82:U:O2'	2.37	0.52
42:L5:34:LYS:HD2	57:N1:30:TYR:CZ	2.45	0.52
44:L7:123:THR:HA	44:L7:126:LEU:HB2	1.91	0.52
47:M0:80:SER:HB3	47:M0:147:VAL:HG11	1.92	0.52
64:N8:126:LYS:HB3	64:N8:148:ILE:HG21	1.92	0.52
1:6:138:A:N3	1:6:138:A:H5"	2.24	0.52
1:6:913:G:H3'	1:6:914:G:H5'	1.92	0.52
1:6:1681:A:H1'	8:s6:66:GLY:HA3	1.92	0.52
5:s3:68:GLU:O	5:s3:72:LEU:N	2.41	0.52
11:s9:132:ARG:HB2	11:s9:140:ILE:HG21	1.91	0.52
13:c1:121:ASP:OD1	13:c1:145:ALA:HB2	2.09	0.52
19:c7:17:ILE:HG12	19:c7:58:MET:HE2	1.92	0.52
23:d1:32:VAL:HG12	23:d1:55:LEU:HB2	1.92	0.52
24:d2:99:PHE:HD1	24:d2:99:PHE:H	1.57	0.52
36:5:1564:U:H2'	36:5:1565:G:C8	2.44	0.52
36:5:1603:A:H5'	55:m9:9:ARG:NH2	2.25	0.52
36:5:2179:C:O3'	39:l2:174:ARG:NH2	2.43	0.52
36:5:2728:G:O6	57:n1:78:LYS:NZ	2.34	0.52
38:8:152:G:O2'	45:l8:63:LYS:NZ	2.38	0.52
46:l9:111:PHE:HD1	46:l9:127:PRO:HA	1.74	0.52
46:l9:137:SER:HB2	46:l9:143:GLU:HB3	1.92	0.52
68:o2:24:ARG:HG2	68:o2:25:TYR:CE1	2.45	0.52
1:2:256:A:H2'	1:2:257:A:O4'	2.09	0.52
1:2:615:A:O2'	1:2:621:A:N1	2.43	0.52
1:2:855:A:C2	1:2:857:U:H1'	2.44	0.52
1:2:1600:A:H4'	1:2:1601:G:OP1	2.10	0.52
11:S9:34:PHE:CD2	11:S9:105:LEU:HD23	2.45	0.52
15:C3:132:VAL:HG23	15:C3:134:VAL:HG22	1.91	0.52
24:D2:82:LYS:C	24:D2:84:GLY:H	2.18	0.52
36:1:29:C:H4'	36:1:62:A:H4'	1.90	0.52
36:1:75:G:H5"	49:M3:58:VAL:HG13	1.92	0.52
36:1:514:G:H21	41:L4:341:SER:HA	1.74	0.52
36:1:1427:U:H2'	36:1:1428:A:C8	2.44	0.52
36:1:1659:U:H2'	36:1:1660:C:C6	2.45	0.52
36:1:2281:A:N3	36:1:2974:U:O2'	2.40	0.52
38:4:91:C:H2'	38:4:92:A:C8	2.45	0.52
39:L2:83:HIS:CD2	39:L2:86:GLN:HB2	2.45	0.52
40:L3:76:VAL:HG11	40:L3:323:MET:HE3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:L5:40:HIS:CD2	42:L5:42:ALA:HB3	2.44	0.52
49:M3:75:PHE:H	49:M3:97:VAL:HA	1.75	0.52
62:N6:112:ASP:HB2	62:N6:115:ARG:HB2	1.92	0.52
79:Q3:59:CYS:C	79:Q3:61:LYS:H	2.17	0.52
1:6:209:U:H2'	1:6:210:A:C8	2.45	0.52
1:6:217:A:O2'	1:6:218:A:O5'	2.20	0.52
1:6:413:U:H2'	1:6:414:C:H6	1.75	0.52
1:6:1016:C:H2'	1:6:1017:U:H6	1.74	0.52
1:6:1559:A:C8	20:c8:134:ARG:HB3	2.45	0.52
5:s3:22:ASN:OD1	5:s3:34:TYR:OH	2.28	0.52
6:s4:104:ASP:HB3	6:s4:106:LYS:H	1.75	0.52
22:d0:17:GLN:HG3	22:d0:18:GLN:HG3	1.92	0.52
27:d5:80:LEU:HD13	27:d5:101:TYR:HE2	1.73	0.52
34:sR:177:MET:HE1	34:sR:193:ILE:HG13	1.91	0.52
36:5:127:G:H2'	36:5:128:G:C8	2.45	0.52
36:5:207:U:H2'	36:5:208:C:C6	2.45	0.52
36:5:305:U:O2	36:5:2784:G:N2	2.41	0.52
36:5:398:A:N6	53:m7:3:ARG:HH12	2.07	0.52
36:5:860:G:OP1	79:q3:17:ARG:NH1	2.43	0.52
36:5:1169:A:H4'	44:l7:219:LYS:HE2	1.92	0.52
36:5:1481:A:H2'	36:5:1858:A:N3	2.25	0.52
36:5:1494:U:P	75:o9:42:ARG:HH22	2.32	0.52
36:5:2660:G:H1'	36:5:2744:U:H1'	1.91	0.52
74:o8:63:LYS:HA	74:o8:66:ILE:HG13	1.92	0.52
1:2:1076:A:O3'	28:D6:13:LYS:NZ	2.42	0.52
1:2:1681:A:C8	8:S6:66:GLY:HA3	2.45	0.52
9:S7:45:SER:HB3	9:S7:61:PHE:CD2	2.44	0.52
18:C6:55:VAL:HG21	18:C6:89:LEU:HD21	1.90	0.52
24:D2:86:ILE:HD12	24:D2:87:GLU:HG2	1.90	0.52
36:1:1355:A:H4'	36:1:1356:U:O5'	2.07	0.52
36:1:1794:G:O2'	36:1:1795:U:H5'	2.10	0.52
36:1:2338:C:H1'	59:N3:49:LEU:HD12	1.91	0.52
36:1:2389:C:O2'	36:1:3307:A:N1	2.41	0.52
36:1:2525:G:OP2	39:L2:37:ARG:NH1	2.42	0.52
36:1:3114:A:O2'	46:L9:62:ARG:NH1	2.43	0.52
37:3:48:U:N3	37:3:49:G:N7	2.57	0.52
40:L3:114:VAL:O	40:L3:117:ARG:HB3	2.10	0.52
47:M0:14:ASN:O	47:M0:128:ARG:NH2	2.43	0.52
48:M1:39:GLN:HG3	48:M1:40:LEU:N	2.24	0.52
52:M6:84:LEU:HD13	52:M6:102:LEU:HD21	1.91	0.52
63:N7:41:ALA:HB2	63:N7:77:TYR:HE1	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1316:G:O2'	1:6:1401:A:O2'	2.28	0.52
1:6:1435:G:H4'	1:6:1436:A:H5'	1.91	0.52
3:s1:219:LYS:HD2	79:q3:92:ALA:HB3	1.91	0.52
8:s6:139:ASN:HA	8:s6:142:ARG:HD2	1.90	0.52
8:s6:199:GLN:HG2	8:s6:202:ARG:HH12	1.74	0.52
23:d1:14:PRO:HB2	23:d1:23:ILE:HG23	1.92	0.52
36:5:999:G:C6	36:5:1000:C:N4	2.78	0.52
36:5:2524:A:H1'	36:5:2525:G:C8	2.45	0.52
37:7:56:A:H4'	48:m1:152:HIS:HB2	1.92	0.52
37:7:92:A:C5	37:7:93:C:H1'	2.44	0.52
48:m1:8:PRO:HD2	48:m1:10:ARG:HG3	1.91	0.52
61:n5:63:ILE:HA	61:n5:86:VAL:HG23	1.90	0.52
2:S0:72:ASP:HB2	2:S0:118:PRO:HA	1.92	0.52
20:C8:131:LEU:HA	20:C8:145:ARG:NH1	2.25	0.52
20:C8:146:ALA:H	35:SM:68:ARG:HH21	1.57	0.52
34:SR:123:ILE:HG22	34:SR:133:VAL:HG22	1.91	0.52
36:1:1110:U:OP1	54:M8:164:ARG:NH2	2.33	0.52
36:1:2683:U:H2'	36:1:2684:C:C6	2.45	0.52
53:M7:122:ALA:HB3	53:M7:143:PRO:HB2	1.91	0.52
1:6:397:A:O3'	10:s8:50:GLY:HA2	2.10	0.52
1:6:542:A:C8	1:6:543:C:H2'	2.44	0.52
1:6:1325:A:H2'	1:6:1326:A:H8	1.74	0.52
2:s0:11:PRO:HA	2:s0:14:ALA:HB3	1.92	0.52
11:s9:117:GLY:O	11:s9:119:ALA:N	2.34	0.52
14:c2:56:GLU:OE1	14:c2:124:LYS:NZ	2.38	0.52
36:5:408:A:N6	38:8:15:G:H1'	2.25	0.52
36:5:638:C:H2'	36:5:639:G:H8	1.74	0.52
36:5:1374:G:O6	64:n8:10:LYS:NZ	2.40	0.52
39:l2:27:ALA:HB3	39:l2:128:ARG:HH22	1.75	0.52
52:m6:61:ALA:HA	52:m6:70:PRO:HD2	1.92	0.52
1:2:209:U:H2'	1:2:210:A:C8	2.45	0.52
1:2:248:U:H4'	13:C1:36:LYS:HD3	1.92	0.52
1:2:749:U:H5"	24:D2:83:ILE:HD12	1.91	0.52
1:2:999:U:O4	1:2:1000:C:N4	2.42	0.52
1:2:1312:A:N6	19:C7:2:GLY:O	2.43	0.52
1:2:1335:U:H2'	1:2:1336:A:C8	2.44	0.52
1:2:1525:A:H2'	1:2:1526:A:C8	2.44	0.52
1:2:1553:G:O6	17:C5:43:ARG:HD3	2.09	0.52
1:2:1602:C:H2'	1:2:1603:U:O4'	2.10	0.52
26:D4:50:ALA:O	26:D4:51:GLU:HB3	2.10	0.52
36:1:168:U:H2'	36:1:169:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1018:G:N7	36:1:1035:G:N2	2.58	0.52
36:1:1686:U:OP1	58:N2:42:LYS:NZ	2.27	0.52
36:1:2094:C:H2'	36:1:2095:G:C8	2.45	0.52
36:1:2538:U:O2'	36:1:2541:U:O4	2.19	0.52
36:1:2883:U:H2'	36:1:2884:C:C6	2.45	0.52
36:1:3280:U:O2'	36:1:3281:U:H5"	2.10	0.52
44:L7:221:LYS:HB2	44:L7:227:GLY:HA3	1.92	0.52
50:M4:54:PRO:O	50:M4:56:GLN:HG2	2.10	0.52
55:M9:92:GLN:O	55:M9:96:ILE:HG13	2.10	0.52
56:N0:154:HIS:CE1	56:N0:170:THR:HG21	2.45	0.52
64:N8:75:LEU:HB3	64:N8:118:ILE:HG23	1.92	0.52
69:O3:52:VAL:HG21	69:O3:99:ARG:NH1	2.25	0.52
72:O6:97:SER:O	72:O6:99:ARG:N	2.42	0.52
1:6:1032:G:H2'	1:6:1033:C:C6	2.45	0.52
1:6:1472:C:N4	1:6:1536:G:O6	2.42	0.52
16:c4:128:LYS:HD3	28:d6:27:SER:OG	2.10	0.52
23:d1:36:VAL:O	23:d1:51:VAL:N	2.24	0.52
24:d2:90:THR:HB	24:d2:94:LEU:HD12	1.92	0.52
24:d2:103:ILE:HD11	24:d2:126:LEU:HB3	1.92	0.52
27:d5:75:LEU:O	27:d5:79:ALA:N	2.43	0.52
29:d7:49:HIS:CE1	29:d7:70:LYS:HG2	2.45	0.52
36:5:1720:U:P	55:m9:110:ARG:HH12	2.33	0.52
36:5:2344:U:H2'	36:5:2345:A:C8	2.44	0.52
36:5:2724:U:H4'	57:n1:54:HIS:CD2	2.45	0.52
49:m3:42:ARG:O	49:m3:46:ILE:HG12	2.10	0.52
56:n0:28:ARG:HE	56:n0:99:ARG:NH2	2.07	0.52
59:n3:11:PHE:CD1	59:n3:88:ARG:HD2	2.45	0.52
1:2:15:U:H2'	1:2:16:G:O4'	2.10	0.51
1:2:1413:U:H4'	1:2:1414:U:OP2	2.10	0.51
14:C2:136:ILE:HA	14:C2:139:HIS:HB3	1.91	0.51
27:D5:39:ALA:O	27:D5:72:GLY:N	2.41	0.51
33:E1:105:TYR:HA	33:E1:117:LEU:HD12	1.92	0.51
36:1:653:A:H61	36:1:1442:U:H3	1.58	0.51
36:1:1073:U:H1'	65:N9:50:THR:HB	1.92	0.51
36:1:1129:A:OP1	47:M0:13:LYS:NZ	2.33	0.51
36:1:1915:A:H2'	36:1:1916:U:C6	2.45	0.51
36:1:3282:U:H2'	36:1:3283:U:C6	2.45	0.51
37:3:7:G:O3'	42:L5:33:ARG:NH2	2.42	0.51
40:L3:303:LYS:HD2	40:L3:361:THR:HG21	1.90	0.51
47:M0:77:THR:O	47:M0:79:VAL:N	2.34	0.51
50:M4:94:TRP:O	50:M4:97:SER:OG	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:N0:91:TYR:OH	56:N0:93:GLU:OE2	2.15	0.51
1:6:478:A:O2'	11:s9:124:HIS:ND1	2.34	0.51
1:6:482:U:H2'	1:6:483:A:H8	1.75	0.51
1:6:701:U:H2'	1:6:702:G:H8	1.75	0.51
1:6:765:G:H1	11:s9:146:PHE:HZ	1.58	0.51
6:s4:98:ASN:ND2	6:s4:116:ASP:OD1	2.35	0.51
8:s6:159:ARG:HG2	8:s6:172:ALA:HB2	1.92	0.51
15:c3:84:ILE:HD11	15:c3:89:TYR:HD2	1.75	0.51
20:c8:91:ASP:OD1	20:c8:92:ILE:N	2.33	0.51
34:sR:129:LYS:HG2	34:sR:149:ASP:O	2.09	0.51
36:5:1152:G:H22	36:5:1200:A:N6	2.08	0.51
36:5:1256:G:O6	36:5:1261:G:N2	2.44	0.51
38:8:84:C:H1'	62:n6:113:LYS:HB2	1.92	0.51
40:l3:49:TYR:OH	40:l3:177:HIS:ND1	2.32	0.51
47:m0:61:SER:HG	47:m0:63:GLU:HG2	1.74	0.51
49:m3:174:ARG:HG3	72:o6:9:ILE:HD11	1.92	0.51
78:q2:12:CYS:SG	78:q2:17:CYS:HB2	2.49	0.51
83:f:119:GLU:N	83:f:123:SER:HB3	2.23	0.51
1:2:895:G:H1	1:2:917:U:H3	1.57	0.51
1:2:1165:G:H1	1:2:1580:C:H42	1.58	0.51
1:2:1429:G:H1'	22:D0:74:GLU:HG2	1.91	0.51
2:S0:41:ARG:HB2	2:S0:47:VAL:HG23	1.91	0.51
6:S4:37:LYS:HB2	6:S4:40:GLU:HG2	1.92	0.51
36:1:741:U:O2'	54:M8:73:GLN:HG2	2.10	0.51
36:1:1488:G:H5"	36:1:1838:G:O6	2.10	0.51
36:1:1751:G:H5'	74:O8:26:LYS:NZ	2.25	0.51
36:1:2185:G:H5'	39:L2:219:ILE:HD11	1.92	0.51
36:1:2211:U:H2'	36:1:2212:C:O4'	2.10	0.51
37:3:45:A:H2'	37:3:46:A:H8	1.73	0.51
38:4:95:G:OP1	73:O7:76:ASN:ND2	2.42	0.51
40:L3:37:ARG:HH11	40:L3:191:LYS:HE3	1.75	0.51
49:M3:116:LEU:O	49:M3:120:GLN:NE2	2.42	0.51
60:N4:4:GLU:HG2	60:N4:30:ARG:HD2	1.92	0.51
65:N9:14:ARG:NH1	65:N9:18:ARG:HD2	2.25	0.51
1:6:263:C:H4'	1:6:292:U:H5'	1.92	0.51
1:6:1461:C:N4	20:c8:139:LYS:O	2.42	0.51
1:6:1650:U:H2'	1:6:1651:A:C8	2.45	0.51
1:6:1797:A:N1	28:d6:87:ARG:HD2	2.25	0.51
36:5:1879:A:OP1	36:5:1879:A:H4'	2.09	0.51
36:5:3112:G:O6	36:5:3120:C:H5"	2.10	0.51
36:5:3212:C:OP2	50:m4:124:ARG:NH2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3236:U:H2'	36:5:3237:U:H6	1.75	0.51
43:l6:85:ILE:HG23	69:o3:107:ILE:HG21	1.92	0.51
49:m3:105:ASN:OD1	49:m3:107:GLU:HG2	2.10	0.51
56:n0:38:LYS:HG3	56:n0:61:ILE:HD12	1.92	0.51
1:2:788:A:H2'	6:S4:19:LEU:HD22	1.91	0.51
1:2:980:G:H4'	1:2:1776:A:H4'	1.93	0.51
19:C7:104:ASN:OD1	19:C7:104:ASN:N	2.43	0.51
20:C8:131:LEU:HD23	20:C8:145:ARG:HH12	1.75	0.51
26:D4:27:VAL:HG11	26:D4:35:VAL:HG11	1.92	0.51
36:1:994:G:N2	36:1:995:U:O4	2.39	0.51
36:1:1492:G:N7	75:O9:2:ALA:HB1	2.26	0.51
36:1:1744:G:H2'	36:1:1745:C:H6	1.75	0.51
36:1:2611:U:H2'	36:1:2612:U:H6	1.76	0.51
36:1:2714:G:H4'	36:1:2715:A:O5'	2.10	0.51
36:1:2947:G:C2	40:L3:250:ALA:HB1	2.45	0.51
38:4:41:A:O2'	73:O7:59:THR:HG22	2.09	0.51
40:L3:227:GLU:OE2	40:L3:270:ARG:NE	2.40	0.51
46:L9:89:LYS:HB2	46:L9:183:HIS:HB3	1.91	0.51
56:N0:24:LEU:HD21	56:N0:59:VAL:HG21	1.92	0.51
1:6:794:U:H4'	1:6:795:U:OP2	2.09	0.51
1:6:1241:G:OP2	17:c5:77:ARG:NH1	2.43	0.51
8:s6:175:ILE:HG22	8:s6:178:LEU:HB2	1.92	0.51
34:sR:81:LEU:HD11	34:sR:122:ILE:HD13	1.93	0.51
36:5:665:A:H1'	49:m3:14:PHE:CE1	2.45	0.51
36:5:1014:U:H3	36:5:1036:A:H61	1.58	0.51
36:5:1102:A:H4'	36:5:1103:A:C6	2.45	0.51
36:5:1381:A:OP1	41:l4:197:ARG:NH1	2.41	0.51
36:5:1388:U:O4	41:l4:186:LYS:HE2	2.10	0.51
36:5:2378:C:H2'	36:5:2379:U:C6	2.45	0.51
36:5:2688:U:OP1	42:l5:12:TYR:OH	2.28	0.51
36:5:2830:G:H1	36:5:2858:U:H3	1.57	0.51
36:5:3121:U:H1'	36:5:3122:A:H5"	1.93	0.51
37:7:5:G:OP1	48:m1:143:ARG:NH2	2.44	0.51
47:m0:36:LEU:CD1	47:m0:87:LEU:HB3	2.40	0.51
51:m5:143:ARG:HH21	71:o5:92:LEU:HA	1.75	0.51
60:n4:25:ASP:OD2	60:n4:26:SER:N	2.38	0.51
63:n7:73:LYS:HG2	63:n7:74:VAL:O	2.11	0.51
71:o5:21:LEU:HD22	71:o5:25:LYS:HE2	1.92	0.51
83:f:93:LEU:HB2	83:f:102:LEU:HB3	1.91	0.51
1:2:542:A:C8	1:2:543:C:H5'	2.46	0.51
1:2:1409:G:N1	1:2:1412:G:OP2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:118:PRO:HG2	2:S0:141:ILE:HD13	1.92	0.51
6:S4:241:GLY:O	6:S4:244:ILE:HG12	2.10	0.51
28:D6:24:VAL:HG11	28:D6:71:LEU:HD13	1.93	0.51
34:SR:31:ASN:O	34:SR:47:LEU:N	2.37	0.51
34:SR:126:SER:OG	34:SR:127:ARG:N	2.42	0.51
36:1:532:A:H2	36:1:560:G:H22	1.58	0.51
36:1:944:C:H4'	68:O2:33:ARG:NH1	2.26	0.51
36:1:1355:A:C5'	36:1:1356:U:H5	2.23	0.51
36:1:2168:A:C6	36:1:2170:U:H1'	2.45	0.51
36:1:2174:G:H8	36:1:2174:G:OP1	1.93	0.51
40:L3:116:ARG:HB3	40:L3:175:LYS:HA	1.91	0.51
41:L4:33:ASP:OD1	41:L4:34:ILE:N	2.40	0.51
47:M0:3:ARG:CZ	47:M0:63:GLU:HG3	2.41	0.51
48:M1:47:GLN:HG2	48:M1:64:LYS:HE2	1.93	0.51
52:M6:15:LEU:HD21	52:M6:125:ARG:HG3	1.91	0.51
1:6:738:G:H2'	1:6:739:G:C8	2.45	0.51
1:6:1382:A:H5"	22:d0:60:THR:HG22	1.93	0.51
1:6:1689:A:H2'	1:6:1690:G:H8	1.74	0.51
1:6:1788:G:O5'	16:c4:132:ARG:NH1	2.43	0.51
11:s9:59:LEU:HD22	11:s9:69:ARG:HA	1.92	0.51
20:c8:116:LEU:HA	20:c8:119:ILE:HG12	1.92	0.51
24:d2:11:LEU:HD11	24:d2:37:PHE:CE2	2.45	0.51
34:sR:203:THR:OG1	34:sR:204:ALA:N	2.42	0.51
34:sR:224:ASN:O	34:sR:228:LYS:HA	2.10	0.51
36:5:123:A:C6	36:5:150:A:C5	2.98	0.51
40:l3:41:VAL:HA	40:l3:185:GLY:CA	2.36	0.51
40:l3:256:HIS:HA	40:l3:257:PRO:C	2.34	0.51
47:m0:72:ALA:HB2	47:m0:155:ALA:HB2	1.92	0.51
70:o4:3:GLN:NE2	70:o4:30:LEU:O	2.44	0.51
1:2:416:A:H4'	1:2:417:A:OP2	2.10	0.51
1:2:633:U:H2'	1:2:634:G:O4'	2.11	0.51
1:2:1473:U:H5"	7:S5:190:ILE:HG12	1.93	0.51
1:2:1550:A:P	17:C5:42:ARG:HH21	2.33	0.51
8:S6:160:ARG:HG3	60:N4:84:GLY:HA3	1.92	0.51
10:S8:34:ALA:HB2	10:S8:56:ARG:HG3	1.93	0.51
15:C3:34:ILE:O	15:C3:38:VAL:HG23	2.10	0.51
20:C8:25:ASN:HB2	27:D5:40:VAL:HB	1.92	0.51
26:D4:92:VAL:HG21	26:D4:99:LYS:HG2	1.92	0.51
34:SR:166:SER:HA	34:SR:184:ASN:HD21	1.75	0.51
36:1:378:A:N7	36:1:391:A:H2	2.09	0.51
36:1:2186:U:H2'	36:1:2187:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2707:C:H2'	36:1:2708:C:H6	1.75	0.51
36:1:3302:U:O2'	36:1:3303:G:H5'	2.10	0.51
37:3:91:G:H2'	37:3:92:A:C8	2.45	0.51
38:4:104:A:C8	38:4:105:A:C8	2.99	0.51
40:L3:107:ALA:HA	40:L3:199:PHE:CD2	2.46	0.51
52:M6:23:VAL:HG11	52:M6:84:LEU:HD11	1.93	0.51
52:M6:62:THR:H	52:M6:69:GLY:HA3	1.75	0.51
55:M9:127:SER:HA	55:M9:132:PHE:HD2	1.75	0.51
61:N5:105:VAL:HG13	61:N5:130:TYR:CD2	2.46	0.51
72:O6:40:VAL:O	72:O6:44:VAL:HG23	2.10	0.51
1:6:205:U:H2'	1:6:206:A:C8	2.46	0.51
1:6:332:U:H5'	10:s8:30:GLY:HA2	1.92	0.51
1:6:1691:A:H2	1:6:1710:U:H3	1.58	0.51
2:s0:124:THR:HB	2:s0:174:TRP:HE1	1.75	0.51
3:s1:139:ALA:HA	3:s1:212:VAL:HA	1.92	0.51
3:s1:146:GLN:O	3:s1:148:ASN:N	2.43	0.51
24:d2:5:SER:C	24:d2:7:LEU:H	2.15	0.51
24:d2:29:PRO:HB2	24:d2:58:SER:HB3	1.92	0.51
27:d5:60:VAL:HG13	27:d5:101:TYR:HB2	1.91	0.51
36:5:211:A:OP1	41:l4:220:ARG:NH1	2.36	0.51
36:5:541:U:H2'	36:5:542:G:C8	2.45	0.51
36:5:621:A:H2'	36:5:622:A:C8	2.46	0.51
43:l6:42:LEU:HD23	43:l6:84:VAL:HG13	1.93	0.51
46:l9:87:LYS:HD2	46:l9:191:LEU:HD11	1.92	0.51
69:o3:52:VAL:HG22	69:o3:66:VAL:HG22	1.93	0.51
1:2:325:G:H2'	1:2:326:G:H8	1.76	0.51
1:2:1184:A:HO2'	1:2:1209:C:HO2'	1.55	0.51
1:2:1498:G:H5"	21:C9:72:GLY:HA3	1.92	0.51
5:S3:148:LYS:HB2	35:SM:110:TRP:CZ2	2.45	0.51
6:S4:162:ILE:HG22	6:S4:164:LEU:H	1.75	0.51
7:S5:161:ASP:O	30:D8:44:VAL:HA	2.11	0.51
15:C3:26:PHE:HE2	15:C3:66:ILE:HD13	1.75	0.51
17:C5:98:ASN:ND2	17:C5:121:ILE:O	2.37	0.51
36:1:73:C:C2	49:M3:59:ARG:HD3	2.45	0.51
36:1:341:G:N7	41:L4:195:ARG:NH2	2.54	0.51
36:1:415:G:H2'	36:1:416:A:H8	1.74	0.51
36:1:2842:U:OP1	36:1:2844:C:N4	2.44	0.51
37:3:112:G:H2'	37:3:113:C:C6	2.44	0.51
42:L5:120:LYS:O	42:L5:248:ARG:NH2	2.42	0.51
42:L5:235:SER:O	42:L5:239:ILE:HG13	2.11	0.51
44:L7:141:TYR:HA	44:L7:144:ILE:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:191:LYS:HE3	47:M0:198:LYS:HD2	1.92	0.51
48:M1:15:GLU:HB3	48:M1:130:VAL:HG13	1.92	0.51
49:M3:174:ARG:CZ	72:O6:9:ILE:HD13	2.41	0.51
52:M6:31:GLN:HE21	52:M6:32:LYS:N	2.08	0.51
52:M6:85:ARG:C	52:M6:87:MET:H	2.19	0.51
58:N2:41:ILE:HG12	58:N2:79:LEU:HD13	1.91	0.51
66:O0:73:GLY:O	66:O0:76:GLU:HG2	2.11	0.51
1:6:399:A:H4'	6:s4:3:ARG:HG2	1.93	0.51
1:6:1557:U:O2'	1:6:1558:U:H2'	2.10	0.51
2:s0:14:ALA:HA	2:s0:17:LEU:HD12	1.92	0.51
2:s0:52:LYS:HG2	23:d1:82:VAL:HG22	1.92	0.51
5:s3:137:VAL:HG22	5:s3:151:LYS:HG3	1.92	0.51
8:s6:63:MET:HE2	8:s6:106:LEU:HD22	1.92	0.51
14:c2:75:VAL:O	14:c2:79:ALA:N	2.43	0.51
15:c3:55:ARG:O	29:d7:47:PHE:HB2	2.10	0.51
36:5:375:A:OP2	62:n6:89:LYS:NZ	2.28	0.51
36:5:979:U:H1'	36:5:980:A:N3	2.26	0.51
36:5:3045:G:O3'	40:l3:275:ARG:NH1	2.43	0.51
40:l3:57:VAL:HG21	60:n4:15:PRO:HG2	1.93	0.51
57:n1:69:LYS:HZ2	57:n1:70:SER:HB3	1.76	0.51
59:n3:27:ASP:C	59:n3:29:SER:H	2.18	0.51
63:n7:85:TYR:HE2	63:n7:129:TRP:CE2	2.29	0.51
83:f:62:ILE:HG22	83:f:64:ILE:H	1.76	0.51
1:2:1244:A:H3'	1:2:1244:A:N3	2.26	0.51
2:S0:109:ASN:HD21	2:S0:111:ILE:HG22	1.75	0.51
6:S4:240:LYS:H	6:S4:240:LYS:HE2	1.74	0.51
13:C1:5:LEU:O	13:C1:7:VAL:N	2.37	0.51
19:C7:57:LEU:O	19:C7:61:ILE:HG13	2.10	0.51
20:C8:54:LEU:H	20:C8:54:LEU:HD22	1.76	0.51
36:1:160:G:H2'	36:1:161:G:O4'	2.11	0.51
36:1:738:A:H2'	36:1:739:G:C8	2.46	0.51
36:1:3165:A:H2'	36:1:3166:C:C6	2.46	0.51
41:L4:338:LYS:HD2	41:L4:338:LYS:N	2.25	0.51
46:L9:49:ASN:C	46:L9:49:ASN:HD22	2.17	0.51
48:M1:23:VAL:O	48:M1:25:GLU:N	2.36	0.51
51:M5:109:ARG:O	51:M5:111:ALA:N	2.44	0.51
61:N5:53:HIS:ND1	61:N5:54:TYR:O	2.40	0.51
73:O7:71:SER:OG	73:O7:72:ARG:N	2.43	0.51
1:6:1003:A:H1'	1:6:1005:A:N7	2.26	0.51
5:s3:61:GLU:O	5:s3:64:ARG:HB2	2.09	0.51
7:s5:99:MET:HG3	7:s5:180:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:s9:114:TYR:HD2	11:s9:115:LYS:HD2	1.74	0.51
25:d3:6:PRO:HG3	25:d3:14:LYS:HG2	1.93	0.51
31:d9:5:ASN:HB3	31:d9:7:TRP:CZ2	2.46	0.51
36:5:437:G:H22	36:5:622:A:H61	1.57	0.51
36:5:763:G:H1	36:5:768:C:H42	1.58	0.51
36:5:1944:U:H2'	36:5:1945:A:H8	1.76	0.51
36:5:2226:U:H2'	36:5:2227:C:C6	2.46	0.51
36:5:2881:C:H2'	36:5:2882:U:H6	1.76	0.51
36:5:3115:C:O2'	36:5:3117:C:N4	2.38	0.51
39:l2:171:GLY:O	79:q3:68:ALA:HB2	2.10	0.51
39:l2:174:ARG:HA	79:q3:69:TYR:HE2	1.75	0.51
43:l6:166:LYS:N	43:l6:169:ASP:OD2	2.36	0.51
43:l6:176:PHE:HA	50:m4:114:ASP:HB2	1.91	0.51
53:m7:25:SER:O	53:m7:29:THR:HG23	2.10	0.51
56:n0:23:LYS:HD3	57:n1:146:ASN:OD1	2.11	0.51
56:n0:83:SER:OG	56:n0:86:GLY:O	2.27	0.51
61:n5:57:LEU:HD11	61:n5:89:LYS:HB2	1.93	0.51
66:o0:13:LYS:HZ1	66:o0:103:THR:HG21	1.76	0.51
68:o2:99:ASN:N	68:o2:99:ASN:OD1	2.39	0.51
69:o3:16:TYR:HB3	69:o3:24:ASN:O	2.10	0.51
1:2:220:A:H5"	1:2:832:U:H1'	1.93	0.51
1:2:649:U:O2'	1:2:650:U:O4'	2.24	0.51
1:2:1201:G:H22	1:2:1600:A:H5"	1.76	0.51
2:S0:163:ASN:HD21	2:S0:165:ARG:HG2	1.76	0.51
6:S4:115:THR:HG1	6:S4:118:GLU:H	1.52	0.51
9:S7:12:ALA:HB3	9:S7:13:PRO:HD3	1.92	0.51
12:C0:35:ILE:HG22	12:C0:37:THR:HG23	1.93	0.51
13:C1:22:ASN:ND2	13:C1:24:LYS:HB2	2.25	0.51
20:C8:76:PRO:HB2	20:C8:86:LEU:HD21	1.92	0.51
21:C9:9:VAL:O	21:C9:11:ALA:N	2.43	0.51
36:1:789:A:H2'	36:1:790:U:C6	2.46	0.51
36:1:1014:U:H2'	36:1:1015:U:H5"	1.93	0.51
36:1:1277:C:O2'	36:1:1278:A:H8	1.94	0.51
36:1:2378:C:H2'	36:1:2379:U:H6	1.76	0.51
41:L4:359:LEU:HD13	56:N0:8:GLN:NE2	2.26	0.51
47:M0:77:THR:C	47:M0:79:VAL:H	2.18	0.51
48:M1:108:GLU:HB3	48:M1:110:ILE:HG12	1.91	0.51
78:Q2:6:LYS:HG3	78:Q2:93:LEU:O	2.11	0.51
11:s9:106:GLU:O	11:s9:111:THR:OG1	2.28	0.51
12:c0:24:LYS:HG2	12:c0:29:GLN:HE22	1.76	0.51
34:sR:106:HIS:CD2	34:sR:110:VAL:HG22	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:174:C:H2'	36:5:175:C:H6	1.75	0.51
36:5:438:A:H2'	36:5:494:G:N2	2.26	0.51
36:5:1412:G:OP1	68:o2:105:ARG:NH2	2.44	0.51
36:5:3329:U:H5"	40:l3:308:MET:HE3	1.93	0.51
39:l2:10:LYS:HA	39:l2:16:PHE:CD2	2.45	0.51
49:m3:56:PRO:HG3	49:m3:74:GLY:O	2.10	0.51
52:m6:108:ILE:HG12	52:m6:160:ARG:HE	1.75	0.51
1:2:791:A:H2'	1:2:792:U:H6	1.76	0.51
2:S0:148:ASP:OD2	2:S0:165:ARG:NH2	2.44	0.51
5:S3:132:LYS:HE3	5:S3:192:PRO:HD2	1.93	0.51
17:C5:44:ARG:HG3	17:C5:84:ILE:HD11	1.92	0.51
36:1:770:G:OP2	49:M3:171:ARG:NH2	2.44	0.51
36:1:2242:A:H5'	39:L2:243:THR:O	2.11	0.51
36:1:2709:C:H2'	36:1:2710:C:H6	1.76	0.51
39:L2:95:SER:OG	39:L2:100:ASN:ND2	2.43	0.51
40:L3:320:ASP:OD2	40:L3:320:ASP:N	2.44	0.51
41:L4:80:GLY:HA2	41:L4:85:SER:CB	2.41	0.51
41:L4:257:LYS:HA	41:L4:260:GLN:HG2	1.92	0.51
42:L5:64:ILE:HG22	42:L5:75:LEU:HB3	1.92	0.51
43:L6:40:LEU:HD13	43:L6:84:VAL:HG21	1.93	0.51
49:M3:74:GLY:O	49:M3:101:ARG:NH1	2.44	0.51
56:N0:1:MET:HB2	56:N0:118:PHE:CD1	2.46	0.51
56:N0:12:ARG:HH12	56:N0:15:PRO:HG3	1.76	0.51
63:N7:81:LEU:HD11	70:O4:90:ILE:HG23	1.93	0.51
64:N8:6:THR:HG23	64:N8:8:THR:H	1.76	0.51
73:O7:17:THR:HG22	73:O7:18:LEU:H	1.75	0.51
1:6:523:G:H5'	26:d4:60:PHE:O	2.11	0.51
1:6:751:G:H2'	1:6:752:A:H8	1.76	0.51
1:6:1142:A:H2'	1:6:1143:A:O4'	2.10	0.51
16:c4:81:VAL:HG13	16:c4:115:ILE:HG23	1.92	0.51
18:c6:7:VAL:HG12	18:c6:8:GLN:H	1.74	0.51
36:5:252:U:H4'	36:5:253:A:C5'	2.40	0.51
36:5:722:G:C6	36:5:749:C:N3	2.78	0.51
36:5:1190:A:H4'	36:5:1191:U:OP1	2.10	0.51
36:5:1692:U:C4	36:5:1693:C:N4	2.79	0.51
39:l2:47:GLN:HG2	39:l2:60:LYS:HB2	1.93	0.51
46:l9:171:ASP:OD2	46:l9:173:ARG:NH1	2.44	0.51
53:m7:69:ARG:HG2	53:m7:79:THR:HB	1.93	0.51
54:m8:65:SER:OG	54:m8:90:ASP:OD2	2.18	0.51
63:n7:20:GLY:HA3	63:n7:136:PHE:HE1	1.76	0.51
68:o2:124:GLY:O	68:o2:126:LEU:N	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:q1:1:MET:HE2	77:q1:5:TRP:HB2	1.93	0.51
1:2:87:C:H1'	1:2:168:A:N1	2.26	0.51
1:2:252:U:H2'	1:2:253:A:H8	1.76	0.51
1:2:681:U:H2'	1:2:682:C:C6	2.46	0.51
1:2:688:G:H2'	1:2:689:G:H8	1.75	0.51
1:2:1563:C:H2'	1:2:1564:U:C6	2.46	0.51
2:S0:55:GLU:HB3	23:D1:79:LEU:HD11	1.92	0.51
2:S0:77:SER:OG	2:S0:78:SER:N	2.43	0.51
3:S1:143:THR:O	3:S1:208:GLN:NE2	2.44	0.51
10:S8:38:ILE:HG12	10:S8:96:LEU:HD11	1.92	0.51
11:S9:64:GLU:HG2	11:S9:69:ARG:NH1	2.26	0.51
17:C5:16:SER:HA	17:C5:21:ASP:HA	1.92	0.51
36:1:158:G:H2'	36:1:159:A:C8	2.46	0.51
36:1:289:A:H5"	51:M5:97:SER:HB3	1.93	0.51
36:1:540:U:H2'	36:1:541:U:O4'	2.11	0.51
36:1:616:G:H2'	36:1:617:G:H8	1.75	0.51
36:1:956:U:H2'	36:1:957:C:C6	2.46	0.51
36:1:1367:G:OP1	68:O2:45:ARG:NH2	2.44	0.51
44:L7:143:THR:HG22	44:L7:241:LYS:HE3	1.92	0.51
45:L8:133:LYS:HD2	45:L8:138:HIS:HE1	1.76	0.51
52:M6:85:ARG:O	52:M6:87:MET:N	2.44	0.51
61:N5:58:ASP:OD1	71:O5:25:LYS:NZ	2.37	0.51
62:N6:60:ARG:HB2	62:N6:103:LYS:HB3	1.92	0.51
68:O2:75:LEU:HD23	68:O2:95:GLU:HB3	1.92	0.51
70:O4:89:ILE:HG22	70:O4:90:ILE:HD13	1.93	0.51
72:O6:66:GLU:OE1	72:O6:70:ARG:NH2	2.44	0.51
1:6:493:U:H2'	1:6:494:U:H5"	1.92	0.51
1:6:768:C:H1'	11:s9:143:ILE:HG21	1.93	0.51
1:6:1793:G:H22	28:d6:76:SER:HG	1.58	0.51
2:s0:7:PHE:HZ	23:d1:43:GLY:HA2	1.73	0.51
4:s2:69:ILE:HD13	4:s2:136:VAL:HG21	1.93	0.51
25:d3:52:ILE:HA	25:d3:101:GLU:HA	1.92	0.51
34:sR:13:LEU:HB2	34:sR:310:ILE:HB	1.93	0.51
34:sR:267:PRO:HD2	34:sR:269:TYR:CE1	2.46	0.51
36:5:495:G:H2'	36:5:496:C:O4'	2.10	0.51
36:5:528:U:H2'	36:5:529:A:H8	1.76	0.51
36:5:601:U:O4	36:5:602:A:N6	2.44	0.51
36:5:2116:G:OP1	36:5:2118:C:N4	2.43	0.51
36:5:2651:G:H4'	36:5:2652:U:OP2	2.11	0.51
37:7:1:G:H21	42:l5:269:SER:HB2	1.75	0.51
38:8:86:U:H2'	71:o5:7:TYR:HE2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:l2:70:ARG:HH21	39:l2:72:ARG:NH2	2.07	0.51
54:m8:67:ILE:HG23	54:m8:81:VAL:HG11	1.93	0.51
60:n4:46:PRO:O	60:n4:52:THR:OG1	2.24	0.51
66:o0:55:GLU:HB2	70:o4:94:LEU:HD11	1.92	0.51
70:o4:58:ARG:HG3	70:o4:59:PRO:HD2	1.93	0.51
1:2:407:A:O2'	1:2:1671:A:N3	2.40	0.50
1:2:417:A:H4'	1:2:418:G:O5'	2.11	0.50
1:2:1535:U:H5	7:S5:185:ARG:C	2.19	0.50
1:2:1566:U:H4'	20:C8:37:GLY:O	2.11	0.50
1:2:1789:G:OP2	16:C4:132:ARG:NH2	2.42	0.50
2:S0:36:TYR:OH	23:D1:70:ASN:ND2	2.41	0.50
22:D0:24:ILE:HG12	22:D0:116:VAL:HG13	1.91	0.50
36:1:71:A:C2	36:1:2778:G:H1'	2.46	0.50
36:1:789:A:H2'	36:1:790:U:H6	1.76	0.50
36:1:1954:G:H5'	36:1:1955:U:OP2	2.10	0.50
36:1:3283:U:H2'	36:1:3284:G:H8	1.77	0.50
36:1:3325:G:H5'	67:O1:104:LEU:O	2.12	0.50
39:L2:107:VAL:HB	39:L2:111:THR:OG1	2.11	0.50
45:L8:130:TYR:CE1	45:L8:202:GLU:HB3	2.46	0.50
59:N3:120:LYS:HB2	59:N3:137:VAL:CG2	2.41	0.50
1:6:93:A:C6	1:6:398:G:C6	3.00	0.50
1:6:461:G:H5"	6:s4:26:CYS:SG	2.52	0.50
1:6:628:G:N1	1:6:970:A:OP2	2.44	0.50
4:s2:41:LEU:HD11	4:s2:56:ILE:HD13	1.93	0.50
6:s4:65:LEU:HD13	6:s4:80:THR:HA	1.92	0.50
17:c5:53:PRO:HB3	17:c5:83:MET:HE2	1.93	0.50
26:d4:12:VAL:HG22	26:d4:23:PHE:HB3	1.93	0.50
36:5:2389:C:H42	36:5:2990:G:H1	1.59	0.50
39:l2:57:PRO:HD3	79:q3:53:GLY:HA3	1.93	0.50
40:l3:56:ILE:HD11	40:l3:359:ILE:HG12	1.93	0.50
42:l5:155:THR:HA	42:l5:179:ARG:HA	1.93	0.50
49:m3:57:VAL:HG22	49:m3:147:ILE:HD13	1.93	0.50
53:m7:29:THR:O	53:m7:32:THR:HG23	2.10	0.50
61:n5:58:ASP:O	61:n5:62:VAL:HG23	2.11	0.50
67:o1:72:ARG:HD3	67:o1:104:LEU:HD12	1.93	0.50
71:o5:47:VAL:O	71:o5:51:ILE:HG13	2.11	0.50
1:2:415:C:O2'	1:2:418:G:O6	2.22	0.50
1:2:685:A:O2'	1:2:686:C:OP1	2.27	0.50
1:2:891:A:H2'	1:2:892:A:C8	2.46	0.50
1:2:904:G:H2'	1:2:905:A:C8	2.46	0.50
1:2:1433:G:C4	31:D9:41:GLN:HB3	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1660:A:H2'	1:2:1661:U:C6	2.47	0.50
7:S5:162:VAL:HG21	7:S5:166:ARG:HH11	1.76	0.50
28:D6:84:VAL:HG13	28:D6:85:ARG:H	1.77	0.50
36:1:1355:A:H5'	36:1:1357:G:H1'	1.92	0.50
36:1:1582:C:HO2'	36:1:1583:A:P	2.34	0.50
36:1:3228:C:H4'	36:1:3229:G:O5'	2.11	0.50
41:L4:138:ARG:HH21	41:L4:240:PRO:HB2	1.77	0.50
47:M0:54:SER:HB3	47:M0:135:ILE:HD11	1.92	0.50
49:M3:94:GLY:HA3	71:O5:116:TYR:OH	2.12	0.50
52:M6:158:ALA:O	52:M6:162:VAL:HG23	2.11	0.50
54:M8:175:ALA:HB2	64:N8:56:VAL:HG22	1.92	0.50
57:N1:158:THR:OG1	57:N1:159:PHE:N	2.43	0.50
64:N8:118:ILE:HD13	64:N8:118:ILE:H	1.75	0.50
67:O1:29:ALA:HB3	67:O1:30:PRO:HD3	1.93	0.50
69:O3:26:ASN:OD1	69:O3:88:ASN:ND2	2.42	0.50
72:O6:55:ARG:O	72:O6:58:ILE:HG12	2.11	0.50
1:6:188:A:H2'	1:6:189:C:O4'	2.10	0.50
1:6:448:C:H4'	6:s4:28:ALA:O	2.10	0.50
9:s7:124:LYS:HA	9:s7:127:GLU:HB2	1.93	0.50
21:c9:38:LYS:O	21:c9:39:THR:OG1	2.21	0.50
27:d5:71:ILE:HG21	27:d5:76:ALA:HB2	1.92	0.50
36:5:748:U:H2'	36:5:749:C:C6	2.46	0.50
36:5:899:U:H2'	36:5:900:G:H8	1.76	0.50
36:5:3153:U:H4'	36:5:3154:C:H5'	1.92	0.50
40:l3:186:GLY:O	40:l3:190:GLU:HB2	2.12	0.50
40:l3:346:THR:HG22	40:l3:351:LEU:HD11	1.93	0.50
56:n0:12:ARG:HB3	56:n0:24:LEU:HD23	1.92	0.50
60:n4:25:ASP:O	60:n4:26:SER:HB2	2.10	0.50
66:o0:24:THR:HG23	66:o0:30:THR:HG22	1.94	0.50
1:2:257:A:O2'	10:S8:64:ASN:OD1	2.26	0.50
1:2:924:A:H2'	1:2:925:G:C8	2.46	0.50
5:S3:125:TYR:HE1	35:SM:134:ASP:OD2	1.94	0.50
6:S4:64:ILE:HD11	26:D4:18:LEU:HG	1.94	0.50
20:C8:125:ILE:HD11	35:SM:57:ASN:HB3	1.93	0.50
28:D6:35:ALA:HB3	28:D6:37:LYS:HE3	1.92	0.50
33:E1:139:LEU:HB2	33:E1:150:VAL:O	2.11	0.50
36:1:158:G:H2'	36:1:159:A:H8	1.76	0.50
36:1:1103:A:N6	36:1:1363:A:H1'	2.26	0.50
36:1:1942:U:O2'	36:1:3345:G:O2'	2.22	0.50
36:1:2897:A:H2'	36:1:2899:C:H5"	1.93	0.50
36:1:2904:U:H2'	36:1:2905:U:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:3283:U:H2'	36:1:3284:G:C8	2.46	0.50
36:1:3350:C:HO2'	36:1:3351:U:C5'	2.24	0.50
39:L2:10:LYS:HA	39:L2:16:PHE:CD2	2.46	0.50
44:L7:52:GLN:O	44:L7:56:GLU:HG2	2.10	0.50
46:L9:47:LYS:HB2	50:M4:7:VAL:HB	1.94	0.50
47:M0:49:CYS:HB3	47:M0:168:SER:HB3	1.94	0.50
71:O5:31:LEU:HD13	71:O5:44:ILE:HA	1.92	0.50
1:6:1372:U:H2'	1:6:1373:C:C6	2.46	0.50
5:s3:170:THR:HG22	5:s3:187:LYS:HG3	1.94	0.50
7:s5:25:LEU:HD12	18:c6:61:SER:HA	1.93	0.50
10:s8:184:LEU:HD23	10:s8:188:GLU:HG2	1.94	0.50
20:c8:145:ARG:HG3	35:sM:68:ARG:NH1	2.26	0.50
23:d1:75:ASN:C	23:d1:77:GLY:H	2.19	0.50
36:5:916:G:H5'	36:5:917:A:OP1	2.10	0.50
36:5:1784:G:H2'	36:5:1785:U:O4'	2.11	0.50
36:5:2572:C:H2'	36:5:2572:C:OP2	2.12	0.50
36:5:2748:A:N3	42:l5:36:LEU:HD23	2.27	0.50
38:8:63:G:O3'	71:o5:49:LYS:HE2	2.11	0.50
41:l4:148:ILE:HA	41:l4:149:PRO:C	2.36	0.50
44:l7:173:LEU:HD21	44:l7:198:ALA:HA	1.93	0.50
44:l7:208:SER:OG	44:l7:209:ASN:N	2.44	0.50
44:l7:228:SER:HA	44:l7:232:ARG:HH21	1.75	0.50
46:l9:70:THR:O	46:l9:74:LEU:HG	2.12	0.50
47:m0:48:LEU:O	47:m0:139:ARG:HA	2.12	0.50
52:m6:12:LYS:HG3	52:m6:40:GLU:HB3	1.92	0.50
68:o2:24:ARG:HG2	68:o2:25:TYR:CZ	2.47	0.50
1:2:322:G:O2'	10:S8:10:LYS:NZ	2.42	0.50
1:2:1756[A]:A:H2'	1:2:1757:G:H8	1.77	0.50
5:S3:40:ARG:HG2	22:D0:110:PRO:HB3	1.93	0.50
6:S4:122:LYS:HE3	6:S4:164:LEU:HD21	1.92	0.50
9:S7:110:GLN:HA	9:S7:110:GLN:HE21	1.77	0.50
13:C1:75:VAL:HG12	13:C1:119:VAL:HA	1.91	0.50
15:C3:26:PHE:CE2	15:C3:66:ILE:HD13	2.46	0.50
18:C6:58:ASP:C	18:C6:60:PHE:H	2.19	0.50
21:C9:27:LYS:HB3	21:C9:111:ILE:HD11	1.93	0.50
24:D2:122:SER:OG	24:D2:123:GLY:N	2.44	0.50
36:1:670:C:OP1	54:M8:147:ARG:NH2	2.44	0.50
36:1:760:G:H1'	36:1:770:G:N2	2.26	0.50
36:1:952:A:N3	36:1:1114:U:O2'	2.37	0.50
36:1:1308:A:N1	36:1:2381:G:O2'	2.31	0.50
36:1:1638:A:N1	36:1:1736:G:O2'	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2445:A:N6	36:1:2502:A:N1	2.60	0.50
36:1:3096:C:H2'	36:1:3097:C:C6	2.46	0.50
41:L4:358:THR:HG21	57:N1:148:PRO:HD2	1.94	0.50
47:M0:89:VAL:HG13	47:M0:136:PHE:HE1	1.75	0.50
53:M7:29:THR:HG22	53:M7:87:SER:OG	2.10	0.50
62:N6:111:LEU:HD23	62:N6:116:LYS:HG2	1.93	0.50
63:N7:83:THR:HG23	63:N7:85:TYR:N	2.23	0.50
73:O7:64:MET:O	73:O7:68:LYS:HB2	2.12	0.50
1:6:94:U:H2'	1:6:95:G:O4'	2.12	0.50
1:6:901:G:H22	16:c4:54:GLU:CD	2.17	0.50
1:6:1159:C:H5"	1:6:1160:A:H5'	1.93	0.50
36:5:76:G:H3'	49:m3:73:ARG:HD2	1.94	0.50
36:5:789:A:H2'	36:5:790:U:C6	2.46	0.50
36:5:2254:U:H2'	36:5:2261:G:H22	1.76	0.50
36:5:2988:C:OP1	52:m6:68:ARG:NH1	2.44	0.50
36:5:3186:A:H1'	46:l9:44:THR:HG22	1.92	0.50
45:l8:68:ARG:HA	45:l8:236:GLY:O	2.11	0.50
46:l9:4:ILE:HG22	56:n0:142:GLN:OE1	2.10	0.50
49:m3:161:ASP:OD1	49:m3:162:ASN:N	2.44	0.50
51:m5:113:LEU:HB2	51:m5:134:LEU:HD23	1.92	0.50
72:o6:36:ARG:HE	72:o6:40:VAL:HG21	1.77	0.50
1:2:1096:C:OP2	24:D2:71:LYS:NZ	2.37	0.50
1:2:1514:U:O2'	5:S3:5:ILE:O	2.30	0.50
6:S4:101:LEU:HB3	6:S4:109:PHE:HE1	1.76	0.50
9:S7:155:ASP:OD2	9:S7:156:SER:N	2.35	0.50
14:C2:68:GLU:C	14:C2:70:ASN:H	2.18	0.50
16:C4:50:ALA:HB3	16:C4:53:ASP:HB2	1.92	0.50
17:C5:21:ASP:HB3	17:C5:24:LYS:NZ	2.27	0.50
17:C5:121:ILE:HG23	17:C5:123:TYR:H	1.77	0.50
24:D2:15:ASN:HD21	24:D2:71:LYS:HG3	1.77	0.50
34:SR:184:ASN:N	34:SR:184:ASN:OD1	2.43	0.50
36:1:177:U:H2'	36:1:178:U:O4'	2.12	0.50
36:1:679:U:H1'	36:1:788:C:H1'	1.92	0.50
36:1:943:U:H3'	64:N8:13:GLY:HA2	1.94	0.50
36:1:981:U:O2'	36:1:982:C:OP1	2.28	0.50
36:1:1658:G:H2'	36:1:1659:U:C6	2.47	0.50
36:1:2233:A:H2'	36:1:2234:G:O4'	2.12	0.50
41:L4:327:LEU:HA	44:L7:166:ASN:HD21	1.75	0.50
45:L8:89:GLU:HA	45:L8:92:LYS:HB2	1.94	0.50
45:L8:97:TYR:O	45:L8:132:VAL:HG12	2.12	0.50
46:L9:23:ARG:NH2	46:L9:42:ASP:OD2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M1:23:VAL:HG13	48:M1:29:ARG:HH11	1.76	0.50
49:M3:64:LYS:HG3	64:N8:69:TRP:CG	2.46	0.50
59:N3:10:LYS:HZ3	59:N3:56:ASP:CG	2.19	0.50
6:s4:18:TRP:HH2	6:s4:31:PRO:HD3	1.76	0.50
16:c4:61:MET:O	16:c4:65:GLN:HG2	2.10	0.50
18:c6:131:GLY:HA3	18:c6:136:SER:O	2.12	0.50
36:5:256:G:H4'	71:o5:111:PHE:HZ	1.75	0.50
36:5:736:A:C5	36:5:737:G:H1'	2.46	0.50
36:5:3349:C:H42	36:5:3356:G:H1	1.59	0.50
37:7:121:U:H5'	42:l5:260:PHE:HE2	1.76	0.50
38:8:58:G:O6	73:o7:63:ARG:NH2	2.45	0.50
53:m7:30:ARG:HA	53:m7:119:VAL:HG11	1.93	0.50
16:C4:50:ALA:O	16:C4:52:ARG:N	2.37	0.50
19:C7:108:ASP:O	19:C7:112:SER:OG	2.28	0.50
25:D3:69:ARG:HD3	25:D3:117:ILE:HG23	1.92	0.50
26:D4:112:LYS:HE3	26:D4:116:LYS:HD2	1.94	0.50
29:D7:14:SER:HB2	29:D7:17:ARG:HE	1.77	0.50
36:1:201:A:H2'	36:1:202:G:C8	2.46	0.50
36:1:379:C:H2'	36:1:380:U:H6	1.77	0.50
36:1:784:A:C8	54:M8:69:ARG:HG3	2.46	0.50
36:1:1076:C:O3'	65:N9:38:LYS:NZ	2.43	0.50
36:1:1393:A:N3	36:1:1419:A:O2'	2.42	0.50
36:1:3115:C:OP1	46:L9:62:ARG:NH2	2.44	0.50
36:1:3150:A:H2'	36:1:3151:U:O4'	2.12	0.50
39:L2:189:TYR:HA	39:L2:192:LYS:HB2	1.92	0.50
43:L6:28:GLN:OE1	43:L6:61:ASN:ND2	2.40	0.50
46:L9:12:VAL:HG13	46:L9:16:VAL:HG23	1.94	0.50
49:M3:64:LYS:HE3	64:N8:69:TRP:CD1	2.46	0.50
50:M4:116:GLU:O	50:M4:120:VAL:HG23	2.11	0.50
52:M6:55:HIS:HA	52:M6:58:LEU:HB2	1.93	0.50
68:O2:119:VAL:HG12	68:O2:122:PRO:HD3	1.93	0.50
74:O8:58:ASP:HB3	74:O8:61:LYS:HB2	1.93	0.50
1:6:968:U:OP1	1:6:1033:C:O2'	2.28	0.50
1:6:1304:G:H5'	1:6:1322:A:OP2	2.12	0.50
1:6:1578:U:H2'	1:6:1579:U:H6	1.76	0.50
1:6:1698:G:N2	1:6:1699:G:N3	2.59	0.50
6:s4:51:ARG:O	6:s4:52:LEU:HD23	2.12	0.50
14:c2:108:UNK:O	14:c2:110:UNK:N	2.44	0.50
36:5:658:G:N2	41:l4:93:MET:HB2	2.27	0.50
36:5:1152:G:H22	36:5:1200:A:H61	1.57	0.50
36:5:1899:G:H22	36:5:2335:G:H5'	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2948:C:O2'	40:l3:242:THR:HG22	2.11	0.50
41:l4:138:ARG:HD3	41:l4:140:HIS:CD2	2.46	0.50
43:l6:40:LEU:HB3	43:l6:84:VAL:CG1	2.42	0.50
69:o3:49:ILE:HA	69:o3:99:ARG:O	2.12	0.50
83:f:97:ASP:OD1	83:f:98:GLY:N	2.45	0.50
1:2:542:A:H8	1:2:543:C:H5'	1.76	0.50
1:2:926:A:H1'	1:2:988:A:C2	2.46	0.50
1:2:1091:A:C8	1:2:1092:A:C6	3.00	0.50
1:2:1583:A:N6	1:2:1612:U:OP2	2.39	0.50
34:SR:19:TRP:HB2	34:SR:38:ARG:HD2	1.92	0.50
35:SM:70:ASN:N	35:SM:70:ASN:OD1	2.43	0.50
36:1:304:G:C6	51:M5:178:HIS:HD2	2.29	0.50
36:1:739:G:H2'	36:1:740:G:H8	1.75	0.50
36:1:1622:U:H2'	36:1:1623:G:H8	1.77	0.50
36:1:1805:C:H2'	36:1:1806:A:C8	2.46	0.50
36:1:2916:U:C1'	59:N3:44:SER:HB3	2.41	0.50
36:1:3182:G:H2'	36:1:3183:A:O4'	2.11	0.50
50:M4:92:GLU:CD	50:M4:92:GLU:H	2.17	0.50
53:M7:24:VAL:HB	53:M7:29:THR:HG21	1.91	0.50
58:N2:14:THR:HG23	58:N2:66:VAL:HG13	1.94	0.50
68:O2:11:LYS:O	68:O2:13:HIS:N	2.34	0.50
73:O7:27:PHE:HA	73:O7:34:CYS:HA	1.92	0.50
1:6:570:A:H8	1:6:570:A:OP2	1.95	0.50
1:6:1524:A:H2'	1:6:1525:A:C8	2.47	0.50
1:6:1654:G:P	77:q1:21:ARG:HH11	2.34	0.50
3:s1:142:PHE:O	3:s1:207:LEU:HA	2.11	0.50
8:s6:30:LYS:HE3	8:s6:34:GLN:HG2	1.93	0.50
11:s9:74:ASN:O	11:s9:78:ARG:HB3	2.12	0.50
15:c3:18:TYR:HA	24:d2:56:HIS:CD2	2.47	0.50
15:c3:136:PRO:HD2	15:c3:139:TRP:HD1	1.77	0.50
22:d0:80:GLU:OE1	31:d9:44:ARG:NH1	2.45	0.50
25:d3:43:PHE:CD1	25:d3:49:ALA:HB3	2.46	0.50
34:sR:16:HIS:CD2	34:sR:37:SER:HB2	2.46	0.50
36:5:209:A:H1'	36:5:212:G:N2	2.27	0.50
36:5:412:G:H5'	53:m7:26:PHE:HZ	1.76	0.50
36:5:1039:U:H2'	36:5:1040:A:C8	2.47	0.50
80:m2:143:UNK:O	80:m2:145:UNK:N	2.42	0.50
49:m3:192:GLU:O	49:m3:194:GLU:N	2.44	0.50
53:m7:22:LEU:HD12	53:m7:146:ILE:HG13	1.94	0.50
54:m8:37:ALA:O	54:m8:46:LYS:HE3	2.11	0.50
57:n1:105:PHE:O	57:n1:109:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:n3:89:ASP:OD1	59:n3:91:VAL:HG12	2.11	0.50
70:o4:41:ARG:HD2	70:o4:56:THR:HG21	1.94	0.50
1:2:393:C:H2'	1:2:394:C:C6	2.46	0.50
1:2:1251:U:H5'	33:E1:135:HIS:CD2	2.43	0.50
1:2:1316:G:P	19:C7:7:LYS:HZ3	2.35	0.50
1:2:1489:U:OP2	5:S3:9:ARG:NH2	2.42	0.50
2:S0:179:ARG:HD3	2:S0:183:ARG:HH11	1.77	0.50
4:S2:101:VAL:HG13	4:S2:115:ILE:HG12	1.94	0.50
10:S8:3:ILE:O	10:S8:30:GLY:N	2.44	0.50
36:1:304:G:C5	51:M5:178:HIS:HD2	2.30	0.50
36:1:738:A:H2'	36:1:739:G:H8	1.76	0.50
36:1:1814:A:H1'	36:1:1815:U:C2	2.47	0.50
36:1:2152:A:H2'	36:1:2153:U:H6	1.76	0.50
36:1:2341:A:P	40:L3:247:ARG:HH22	2.35	0.50
45:L8:65:LEU:HD12	51:M5:25:VAL:HG13	1.94	0.50
1:6:766:U:H5'	1:6:767:U:H5"	1.93	0.50
1:6:1237:G:H2'	1:6:1238:A:C8	2.47	0.50
1:6:1357:A:H2'	1:6:1358:G:C8	2.47	0.50
2:s0:30:GLN:OE1	2:s0:31:VAL:N	2.44	0.50
5:s3:107:PHE:O	5:s3:111:ASN:N	2.45	0.50
10:s8:6:ASP:HB3	10:s8:28:GLU:OE2	2.12	0.50
36:5:216:G:H4'	62:n6:19:TYR:CZ	2.47	0.50
36:5:235:A:H2'	36:5:236:G:C8	2.47	0.50
36:5:269:G:P	51:m5:44:ARG:HH22	2.34	0.50
36:5:695:C:OP1	41:l4:271:LYS:NZ	2.43	0.50
36:5:874:U:H5"	36:5:2950:G:OP1	2.11	0.50
36:5:3170:A:OP2	69:o3:56:SER:OG	2.26	0.50
37:7:11:A:N6	42:l5:16:PHE:O	2.43	0.50
42:l5:279:LYS:HZ2	42:l5:282:ARG:HH12	1.60	0.50
45:l8:140:VAL:HG22	45:l8:166:LEU:HD21	1.94	0.50
52:m6:67:THR:O	52:m6:71:PHE:HE1	1.94	0.50
59:n3:74:MET:HG3	59:n3:102:ILE:HG23	1.93	0.50
65:n9:38:LYS:HB3	65:n9:41:ARG:NH1	2.27	0.50
1:2:12:U:O2'	1:2:1299:G:O2'	2.30	0.50
1:2:866:G:H5"	15:C3:3:ARG:H	1.75	0.50
1:2:894:U:H2'	1:2:895:G:C8	2.47	0.50
1:2:1049:U:H2'	1:2:1050:G:C8	2.46	0.50
6:S4:103:TYR:HE1	6:S4:109:PHE:CE2	2.29	0.50
9:S7:165:LYS:O	9:S7:168:SER:OG	2.27	0.50
16:C4:31:THR:OG1	16:C4:32:ASP:N	2.45	0.50
32:E0:50:VAL:O	32:E0:52:GLY:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:627:U:H2'	36:1:628:A:C8	2.47	0.50
36:1:2424:A:C2	39:L2:230:VAL:HG21	2.47	0.50
37:3:115:G:H2'	37:3:116:C:C6	2.47	0.50
39:L2:179:LEU:O	39:L2:181:LYS:N	2.44	0.50
40:L3:114:VAL:HG22	40:L3:163:HIS:CE1	2.46	0.50
52:M6:8:VAL:HG13	52:M6:34:VAL:HG23	1.93	0.50
58:N2:35:LYS:NZ	58:N2:39:ASP:OD1	2.25	0.50
1:6:296:U:H2'	1:6:297:U:O4'	2.11	0.50
3:s1:21:VAL:HG23	3:s1:22:ASP:H	1.77	0.50
11:s9:114:TYR:C	11:s9:116:LEU:H	2.20	0.50
18:c6:114:ARG:O	18:c6:115:THR:HB	2.11	0.50
22:d0:80:GLU:OE2	31:d9:54:LYS:NZ	2.27	0.50
25:d3:23:ARG:HD2	25:d3:26:GLU:OE1	2.12	0.50
34:sR:84:SER:OG	34:sR:85:TRP:N	2.45	0.50
36:5:549:U:H2'	36:5:550:A:C8	2.47	0.50
36:5:634:C:H5'	69:o3:21:ARG:O	2.11	0.50
36:5:2557:A:OP1	39:l2:69:TYR:OH	2.24	0.50
36:5:2608:G:OP1	39:l2:2:GLY:N	2.45	0.50
36:5:3288:G:C4	36:5:3289:G:C8	3.00	0.50
36:5:3294:A:H5"	40:l3:126:LYS:HD2	1.92	0.50
38:8:135:G:OP1	61:n5:49:LYS:NZ	2.42	0.50
47:m0:56:GLU:HB2	47:m0:58:GLU:OE1	2.11	0.50
49:m3:180:ARG:HD3	72:o6:11:LEU:HD11	1.94	0.50
53:m7:19:GLY:HA3	53:m7:22:LEU:HD11	1.94	0.50
57:n1:79:MET:HB2	57:n1:84:TYR:CE2	2.46	0.50
62:n6:45:ILE:HD13	62:n6:122:LYS:HE3	1.93	0.50
71:o5:83:LYS:O	71:o5:89:ARG:NE	2.44	0.50
1:2:97:C:H2'	1:2:98:U:C6	2.47	0.49
1:2:552:G:C6	1:2:553:G:C6	3.00	0.49
1:2:704:C:N4	1:2:734:A:O2'	2.30	0.49
1:2:980:G:OP2	1:2:1014:G:O2'	2.27	0.49
1:2:1483:A:H2'	1:2:1484:G:C8	2.47	0.49
1:2:1552:U:H2'	1:2:1553:G:O4'	2.13	0.49
7:S5:112:ARG:NH1	18:C6:43:ILE:HD11	2.27	0.49
12:C0:81:ASN:O	12:C0:81:ASN:ND2	2.45	0.49
13:C1:135:VAL:O	13:C1:136:ARG:NH1	2.42	0.49
28:D6:53:LEU:HD11	28:D6:62:TYR:CD2	2.47	0.49
36:1:821:U:H2'	36:1:822:G:H8	1.77	0.49
36:1:873:C:H2'	36:1:875:G:O4'	2.12	0.49
36:1:1313:G:O2'	36:1:1318:A:N1	2.42	0.49
36:1:2100:A:N7	36:1:2101:C:N4	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2882:U:H2'	36:1:2883:U:C6	2.47	0.49
39:L2:5:ILE:HG22	39:L2:208:ASP:O	2.12	0.49
40:L3:370:PHE:HD1	40:L3:375:GLU:HG2	1.76	0.49
57:N1:38:ASP:O	57:N1:64:VAL:HG23	2.12	0.49
62:N6:45:ILE:HD11	62:N6:122:LYS:HB2	1.94	0.49
69:O3:49:ILE:HG23	69:O3:100:ILE:HG13	1.92	0.49
75:O9:30:ARG:HB2	75:O9:33:ASN:HB2	1.93	0.49
1:6:675:U:H2'	1:6:676:G:C8	2.46	0.49
1:6:1211:A:OP1	33:e1:83:LYS:NZ	2.34	0.49
1:6:1382:A:O2'	1:6:1383:G:H5"	2.11	0.49
1:6:1466:G:O2'	1:6:1602:C:OP1	2.28	0.49
1:6:1511:U:H2'	1:6:1512:G:C8	2.47	0.49
1:6:1556:A:OP1	17:c5:115:TYR:OH	2.25	0.49
1:6:1672:G:H2'	1:6:1673:G:C8	2.47	0.49
2:s0:71:GLU:O	2:s0:96:THR:HG22	2.10	0.49
4:s2:99:LYS:HG3	4:s2:117:THR:HG22	1.93	0.49
8:s6:67:VAL:HG23	8:s6:68:LEU:O	2.12	0.49
10:s8:57:ALA:HB2	10:s8:177:GLY:HA2	1.94	0.49
10:s8:105:ASP:O	10:s8:108:PRO:HD2	2.11	0.49
13:c1:108:PRO:HG3	13:c1:134:THR:HB	1.94	0.49
24:d2:22:LYS:HZ3	29:d7:3:LEU:H	1.57	0.49
36:5:496:C:N3	36:5:617:G:N1	2.59	0.49
36:5:602:A:H2'	36:5:603:A:C8	2.47	0.49
36:5:947:G:H5'	68:o2:55:ILE:HB	1.94	0.49
36:5:1840:U:H4'	36:5:1841:A:H5'	1.93	0.49
42:l5:160:PHE:CE2	42:l5:179:ARG:HB3	2.47	0.49
43:l6:43:LEU:HD11	43:l6:85:ILE:HG13	1.94	0.49
46:l9:166:ARG:HD2	46:l9:168:ARG:HH11	1.77	0.49
48:m1:81:GLU:OE2	48:m1:89:TYR:OH	2.17	0.49
51:m5:31:ARG:HG3	51:m5:129:TYR:OH	2.12	0.49
64:n8:29:PRO:C	64:n8:31:GLY:H	2.19	0.49
73:o7:58:THR:O	73:o7:61:THR:OG1	2.26	0.49
76:q0:98:LYS:HG3	76:q0:118:THR:HG21	1.94	0.49
1:2:448:C:OP1	6:S4:29:PRO:HD3	2.12	0.49
1:2:852:C:OP1	55:M9:172:ARG:HB3	2.11	0.49
1:2:1218:G:N2	1:2:1444:A:OP2	2.35	0.49
1:2:1349:G:H2'	1:2:1350:U:C6	2.48	0.49
1:2:1390:U:C6	19:C7:3:ARG:HG2	2.48	0.49
1:2:1494:C:H2'	1:2:1495:C:H6	1.77	0.49
1:2:1553:G:H22	1:2:1555:A:H3'	1.76	0.49
1:2:1587:A:OP1	18:C6:136:SER:OG	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:185:ARG:HG3	23:D1:47:PRO:HD3	1.94	0.49
5:S3:22:ASN:O	5:S3:26:THR:OG1	2.21	0.49
22:D0:106:ILE:HG13	22:D0:107:THR:H	1.77	0.49
36:1:169:U:H3	36:1:253:A:H61	1.59	0.49
36:1:796:U:H2'	36:1:797:U:C6	2.44	0.49
36:1:1550:C:H2'	36:1:1551:C:C6	2.47	0.49
36:1:1562:C:O2'	36:1:1563:C:O5'	2.30	0.49
36:1:1764:U:C5	36:1:1765:U:H1'	2.47	0.49
36:1:3016:A:H2'	36:1:3017:A:C8	2.47	0.49
37:3:118:A:H2'	37:3:119:U:O4'	2.12	0.49
38:4:37:A:H5"	38:4:39:G:O4'	2.12	0.49
40:L3:14:LEU:O	40:L3:17:LEU:HD22	2.12	0.49
42:L5:270:LYS:HG3	42:L5:273:ARG:HD2	1.94	0.49
59:N3:85:TRP:CE2	59:N3:93:LEU:HD21	2.47	0.49
1:6:413:U:H2'	1:6:414:C:C6	2.47	0.49
1:6:1229:G:H22	1:6:1255:G:H2'	1.77	0.49
3:s1:202:LYS:O	3:s1:202:LYS:HD3	2.12	0.49
5:s3:22:ASN:O	5:s3:26:THR:OG1	2.28	0.49
5:s3:133:GLY:HA2	5:s3:155:GLY:HA3	1.94	0.49
9:s7:126:LEU:HD21	9:s7:152:VAL:HG21	1.95	0.49
18:c6:112:TYR:O	18:c6:114:ARG:HG2	2.12	0.49
20:c8:24:GLY:HA2	20:c8:58:ALA:HB3	1.94	0.49
36:5:781:G:OP1	54:m8:151:ARG:HD2	2.11	0.49
36:5:990:U:H4'	57:n1:100:LYS:HB3	1.93	0.49
37:7:36:C:H4'	42:l5:155:THR:HG23	1.95	0.49
39:l2:250:GLN:HG2	39:l2:251:LYS:H	1.78	0.49
44:l7:54:GLU:OE1	44:l7:186:HIS:NE2	2.36	0.49
44:l7:110:ARG:CZ	54:m8:3:ILE:HD12	2.41	0.49
47:m0:81:GLY:O	47:m0:84:ALA:N	2.36	0.49
60:n4:112:ASN:O	60:n4:116:LYS:N	2.44	0.49
78:q2:10:THR:HA	78:q2:20:HIS:HD2	1.77	0.49
1:2:870:C:H2'	1:2:871:G:H8	1.78	0.49
1:2:1551:U:H3'	17:C5:43:ARG:NH2	2.27	0.49
17:C5:98:ASN:HB2	17:C5:122:THR:HG22	1.95	0.49
19:C7:110:VAL:O	19:C7:114:GLY:N	2.46	0.49
28:D6:87:ARG:HD3	28:D6:92:ARG:HA	1.94	0.49
30:D8:8:THR:HB	30:D8:56:LEU:HB2	1.94	0.49
36:1:38:U:H2'	36:1:39:A:O4'	2.12	0.49
36:1:1233:G:H22	36:1:1255:C:N4	2.10	0.49
36:1:1782:U:H2'	36:1:1783:U:O4'	2.11	0.49
36:1:2601:A:H2'	36:1:2602:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2853:A:H4'	47:M0:63:GLU:O	2.11	0.49
36:1:3251:U:H2'	36:1:3252:G:O4'	2.12	0.49
36:1:3343:G:N2	36:1:3361:G:H2'	2.28	0.49
37:3:91:G:H2'	37:3:92:A:H8	1.77	0.49
37:3:113:C:C4	37:3:114:U:C4	3.00	0.49
42:L5:58:LYS:HA	42:L5:93:THR:HB	1.94	0.49
52:M6:62:THR:HG21	52:M6:68:ARG:HG3	1.94	0.49
1:6:406:U:H2'	1:6:407:A:C8	2.47	0.49
7:s5:172:ILE:O	7:s5:176:THR:HG23	2.12	0.49
13:c1:33:ARG:NH1	13:c1:53:TYR:O	2.45	0.49
19:c7:66:VAL:C	19:c7:68:GLY:H	2.18	0.49
36:5:1253:U:O2	36:5:1263:A:H5'	2.12	0.49
36:5:1831:U:H2'	36:5:1832:C:H6	1.77	0.49
36:5:2147:A:H2'	36:5:2148:U:O4'	2.11	0.49
36:5:2881:C:H2'	36:5:2882:U:C6	2.48	0.49
40:l3:283:TYR:HB3	40:l3:323:MET:CE	2.42	0.49
41:l4:334:PHE:HA	41:l4:339:LEU:HD11	1.93	0.49
45:l8:70:LYS:HA	45:l8:235:GLY:HA3	1.94	0.49
46:l9:79:ILE:O	46:l9:82:VAL:HG12	2.13	0.49
62:n6:30:LEU:C	62:n6:32:SER:H	2.20	0.49
62:n6:124:GLY:C	62:n6:126:LEU:H	2.19	0.49
1:2:641:G:H1	1:2:693:U:H3	1.61	0.49
1:2:1389:C:O2'	19:C7:52:GLY:HA3	2.11	0.49
6:S4:88:ASP:OD1	6:S4:122:LYS:NZ	2.38	0.49
8:S6:98:ARG:HD3	8:S6:99:GLY:N	2.28	0.49
24:D2:23:ARG:NH1	24:D2:66:ASN:O	2.45	0.49
24:D2:77:PRO:O	24:D2:79:PHE:N	2.44	0.49
36:1:2808:A:N7	36:1:2955:U:H4'	2.26	0.49
36:1:2864:A:O3'	47:M0:115:MET:HB2	2.11	0.49
36:1:3309:G:H1'	53:M7:69:ARG:HD3	1.94	0.49
40:L3:4:ARG:CD	40:L3:7:GLU:HA	2.41	0.49
41:L4:52:VAL:CG1	41:L4:99:MET:HE3	2.41	0.49
46:L9:48:VAL:HG11	46:L9:52:LEU:HD13	1.95	0.49
52:M6:32:LYS:O	52:M6:33:ILE:HD12	2.11	0.49
59:N3:13:ILE:HG23	59:N3:85:TRP:CD1	2.47	0.49
77:Q1:13:LEU:HD11	77:Q1:17:ARG:CZ	2.42	0.49
1:6:5:U:H2'	1:6:6:G:H8	1.77	0.49
1:6:1417:A:H2'	1:6:1418:G:O4'	2.12	0.49
7:s5:56:ALA:C	7:s5:58:LEU:H	2.19	0.49
8:s6:97:VAL:HG22	8:s6:98:ARG:H	1.77	0.49
19:c7:33:ARG:NH2	34:sR:109:ASP:OD1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:29:C:O3'	51:m5:172:ARG:NH1	2.45	0.49
36:5:142:C:H2'	36:5:143:G:O4'	2.12	0.49
36:5:508:U:H2'	36:5:509:U:C6	2.47	0.49
36:5:1073:U:H2'	36:5:1074:U:C6	2.47	0.49
36:5:1194:G:O2'	36:5:1319:G:O2'	2.27	0.49
36:5:1472:U:H2'	36:5:1473:G:C8	2.47	0.49
36:5:2101:C:O2'	36:5:2102:U:OP1	2.31	0.49
36:5:2347:U:H2'	36:5:2348:A:O4'	2.13	0.49
36:5:2515:A:H5"	51:m5:28:TRP:CD1	2.47	0.49
36:5:2689:A:H2'	36:5:2689:A:N3	2.27	0.49
36:5:3321:C:H2'	36:5:3322:A:C8	2.48	0.49
45:l8:145:ASN:C	45:l8:147:LYS:H	2.21	0.49
55:m9:158:GLU:HA	55:m9:161:ALA:HB3	1.93	0.49
1:2:709:C:N4	1:2:730:G:O2'	2.45	0.49
5:S3:75:LYS:HD2	12:C0:20:VAL:HG12	1.94	0.49
17:C5:56:PHE:O	17:C5:60:LEU:HB2	2.12	0.49
21:C9:115:GLU:O	21:C9:117:SER:N	2.45	0.49
27:D5:85:LYS:HG3	27:D5:86:GLU:N	2.27	0.49
34:SR:38:ARG:HG2	34:SR:67:ILE:HG23	1.95	0.49
36:1:1027:A:H2'	36:1:1029:G:H5"	1.94	0.49
36:1:1103:A:H2'	36:1:1103:A:N3	2.28	0.49
36:1:1476:G:O3'	67:O1:63:GLY:HA2	2.12	0.49
36:1:2565:U:H2'	36:1:2566:C:H6	1.77	0.49
36:1:3217:C:C5	36:1:3220:G:H1'	2.47	0.49
38:4:70:G:O6	73:O7:88:ALA:HB1	2.12	0.49
38:4:127:U:H2'	38:4:128:U:H5'	1.93	0.49
40:L3:79:VAL:HG13	40:L3:322:ILE:HB	1.95	0.49
46:L9:84:LYS:HZ3	46:L9:191:LEU:HD22	1.75	0.49
47:M0:189:GLU:HG3	47:M0:200:LEU:HD23	1.94	0.49
54:M8:150:VAL:HA	54:M8:153:PHE:CD1	2.47	0.49
70:O4:51:LEU:HD23	70:O4:51:LEU:H	1.77	0.49
1:6:1532:U:OP2	27:d5:77:ARG:HD2	2.12	0.49
1:6:1535:U:H5"	7:s5:187:ILE:HD11	1.94	0.49
3:s1:129:THR:HG22	3:s1:176:VAL:HG12	1.95	0.49
4:s2:139:ILE:HD12	4:s2:191:ALA:HB1	1.95	0.49
6:s4:9:LEU:HD12	6:s4:30:ARG:HA	1.94	0.49
7:s5:65:ARG:HA	7:s5:65:ARG:HE	1.76	0.49
7:s5:149:VAL:HG13	7:s5:151:GLY:H	1.76	0.49
13:c1:35:TYR:HA	13:c1:61:THR:HA	1.94	0.49
13:c1:46:LYS:HG3	13:c1:50:GLU:CD	2.37	0.49
13:c1:72:THR:H	13:c1:88:ARG:HH11	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:268:A:C4	51:m5:12:ARG:HG3	2.48	0.49
36:5:284:A:H4'	36:5:285:A:C2	2.47	0.49
36:5:1946:A:H2'	36:5:1947:G:C8	2.47	0.49
36:5:3305:A:OP1	40:l3:334:ARG:NH2	2.46	0.49
38:8:47:C:H1'	38:8:61:A:C4	2.47	0.49
38:8:82:U:O2	38:8:87:G:H4'	2.12	0.49
43:l6:82:ARG:O	69:o3:104:PRO:HA	2.12	0.49
48:m1:166:LYS:C	48:m1:168:ASP:H	2.20	0.49
57:n1:80:VAL:HG22	57:n1:83:ARG:HH21	1.77	0.49
1:2:66:U:C5	8:S6:173:PRO:HG3	2.48	0.49
1:2:767:U:C5	11:S9:143:ILE:HD12	2.48	0.49
1:2:1376:C:N4	1:2:1377:U:O4	2.46	0.49
1:2:1474:G:H2'	1:2:1475:A:C8	2.48	0.49
1:2:1528:U:H2'	1:2:1529:C:H6	1.78	0.49
3:S1:191:GLU:HB2	3:S1:194:ASN:CG	2.37	0.49
4:S2:176:SER:N	4:S2:195:ASP:OD1	2.46	0.49
6:S4:9:LEU:HD12	6:S4:30:ARG:HA	1.95	0.49
11:S9:175:ARG:NH2	11:S9:179:ARG:HH22	2.10	0.49
20:C8:99:HIS:O	20:C8:101:LEU:HG	2.12	0.49
23:D1:53:TYR:CE2	23:D1:73:ALA:HB2	2.48	0.49
36:1:67:A:N1	36:1:300:G:O2'	2.44	0.49
36:1:408:A:N6	38:4:15:G:H1'	2.28	0.49
36:1:1038:C:H4'	42:L5:5:LYS:HE3	1.94	0.49
42:L5:40:HIS:CD2	42:L5:42:ALA:H	2.21	0.49
45:L8:48:ARG:HH21	45:L8:49:TYR:HE2	1.60	0.49
47:M0:52:LEU:HG	47:M0:152:LEU:HB3	1.95	0.49
54:M8:153:PHE:O	54:M8:161:LYS:HD3	2.13	0.49
63:N7:14:VAL:HG13	70:O4:86:LYS:HG3	1.94	0.49
63:N7:14:VAL:N	63:N7:79:HIS:O	2.41	0.49
63:N7:22:LYS:NZ	63:N7:132:SER:O	2.43	0.49
1:6:60:U:H5'	1:6:455:C:N4	2.28	0.49
1:6:607:G:H5'	1:6:613:G:N2	2.27	0.49
1:6:894:U:H2'	1:6:895:G:C8	2.48	0.49
1:6:1243:G:H5"	1:6:1243:G:N3	2.27	0.49
1:6:1263:G:H2'	1:6:1264:G:O4'	2.13	0.49
1:6:1283:U:H2'	1:6:1284:C:C5	2.47	0.49
20:c8:91:ASP:CG	20:c8:94:ASP:HB3	2.37	0.49
26:d4:51:GLU:O	26:d4:53:ASP:N	2.43	0.49
29:d7:28:PRO:C	29:d7:30:SER:H	2.20	0.49
36:5:215:G:H5"	62:n6:12:ARG:HD3	1.94	0.49
36:5:394:G:N1	36:5:397:A:OP2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1098:A:OP2	57:n1:130:ARG:HD3	2.12	0.49
36:5:1932:A:H5'	36:5:1933:A:OP2	2.13	0.49
36:5:2192:C:H2'	36:5:2193:U:O4'	2.12	0.49
40:l3:14:LEU:HD22	40:l3:17:LEU:HD21	1.93	0.49
44:l7:132:PRO:HG2	44:l7:133:TYR:CE2	2.47	0.49
54:m8:60:PRO:HG2	54:m8:142:GLY:HA3	1.95	0.49
62:n6:37:LYS:HA	62:n6:40:ARG:HB3	1.95	0.49
62:n6:82:VAL:O	62:n6:84:LYS:N	2.42	0.49
1:2:12:U:H2'	1:2:13:C:C6	2.48	0.49
1:2:340:U:H2'	1:2:341:A:C8	2.47	0.49
1:2:839:U:H2'	1:2:840:U:H5'	1.95	0.49
1:2:927:C:O2'	16:C4:125:SER:HB2	2.12	0.49
1:2:995:A:H2'	1:2:996:U:O4'	2.13	0.49
1:2:1147:A:H2'	1:2:1148:C:H6	1.77	0.49
1:2:1755:A:H2	1:2:1756[A]:A:C4	2.31	0.49
20:C8:139:LYS:O	20:C8:143:ARG:NH1	2.45	0.49
23:D1:12:TYR:CE2	23:D1:14:PRO:HG3	2.48	0.49
36:1:685:G:P	49:M3:35:ARG:HH11	2.36	0.49
36:1:1203:A:N6	36:1:1300:G:H2'	2.28	0.49
36:1:2853:A:O3'	47:M0:64:ALA:HB2	2.13	0.49
36:1:2947:G:OP2	40:L3:244:ARG:HD2	2.13	0.49
36:1:3229:G:H1'	50:M4:133:LYS:HG2	1.93	0.49
37:3:121:U:OP2	42:L5:265:TYR:OH	2.22	0.49
46:L9:41:ILE:HD11	46:L9:67:ALA:HB1	1.94	0.49
46:L9:120:ASP:OD1	46:L9:124:ARG:NH2	2.45	0.49
48:M1:53:THR:HG23	48:M1:59:ILE:O	2.12	0.49
63:N7:10:VAL:O	63:N7:83:THR:HG22	2.12	0.49
71:O5:76:GLN:O	71:O5:81:ARG:NH1	2.45	0.49
1:6:16:G:H2'	1:6:17:C:C6	2.48	0.49
1:6:1535:U:O2'	1:6:1536:G:O5'	2.30	0.49
5:s3:114:ALA:O	5:s3:116:ARG:N	2.46	0.49
6:s4:184:THR:C	6:s4:189:LEU:HD13	2.37	0.49
15:c3:54:LEU:HB3	15:c3:60:VAL:HG13	1.94	0.49
15:c3:61:THR:HG22	29:d7:32:PHE:CZ	2.48	0.49
20:c8:89:GLN:C	20:c8:91:ASP:H	2.21	0.49
34:sR:220:ILE:HB	34:sR:234:LEU:HB2	1.95	0.49
36:5:1420:C:C5	41:l4:189:ALA:HA	2.48	0.49
36:5:3159:C:H2'	36:5:3160:U:C6	2.48	0.49
42:l5:115:LEU:HD12	42:l5:119:TYR:HD2	1.77	0.49
45:l8:161:GLU:HA	45:l8:164:VAL:HG22	1.95	0.49
52:m6:173:ALA:O	52:m6:176:LYS:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:o0:103:THR:HG22	66:o0:104:LEU:H	1.78	0.49
72:o6:57:LEU:HD11	72:o6:73:ALA:HB2	1.95	0.49
72:o6:76:ARG:HA	72:o6:76:ARG:HE	1.77	0.49
1:2:802:G:H21	24:D2:107:SER:HB3	1.78	0.49
1:2:1254:U:OP2	14:C2:46:ARG:NH2	2.44	0.49
1:2:1415:U:OP1	19:C7:45:ARG:NH2	2.40	0.49
3:S1:35:PRO:HD3	3:S1:98:THR:HG23	1.94	0.49
4:S2:148:LEU:HD13	4:S2:149:GLY:H	1.77	0.49
9:S7:58:LEU:HG	9:S7:88:ARG:HD2	1.94	0.49
11:S9:100:LYS:HE3	11:S9:103:ASP:OD2	2.12	0.49
15:C3:66:ILE:HG13	15:C3:67:THR:HG23	1.95	0.49
24:D2:81:VAL:HG11	24:D2:86:ILE:HG23	1.95	0.49
29:D7:2:VAL:C	29:D7:4:VAL:H	2.21	0.49
36:1:304:G:C6	51:M5:178:HIS:CD2	3.01	0.49
36:1:577:C:O2'	36:1:579:G:OP1	2.30	0.49
36:1:656:A:H2'	36:1:657:A:C8	2.48	0.49
42:L5:180:PHE:HB3	42:L5:195:LEU:HD13	1.94	0.49
46:L9:128:VAL:HG13	46:L9:134:ILE:HD12	1.94	0.49
56:N0:12:ARG:NH1	56:N0:15:PRO:HG3	2.28	0.49
59:N3:32:ARG:HB3	59:N3:64:LYS:O	2.12	0.49
1:6:196:G:N3	1:6:197:A:H1'	2.28	0.49
1:6:1394:G:H2'	1:6:1395:G:C8	2.48	0.49
2:s0:66:ALA:HB2	23:d1:37:ALA:HB2	1.95	0.49
4:s2:44:LEU:HD21	4:s2:247:ALA:HB2	1.94	0.49
10:s8:25:ARG:O	10:s8:28:GLU:HG2	2.13	0.49
14:c2:128:ALA:HB3	14:c2:133:LEU:HD22	1.95	0.49
24:d2:9:ASP:HA	24:d2:12:ASN:HB3	1.94	0.49
34:sR:47:LEU:HD22	34:sR:54:PHE:CE2	2.48	0.49
36:5:279:U:H2'	36:5:280:U:H6	1.78	0.49
36:5:438:A:H3'	36:5:439:C:C6	2.47	0.49
36:5:627:U:H2'	36:5:628:A:C8	2.47	0.49
36:5:1107:C:H5"	65:n9:25:LYS:HZ1	1.77	0.49
36:5:1577:G:H2'	36:5:1578:C:C6	2.48	0.49
36:5:1720:U:O4	55:m9:125:LYS:NZ	2.46	0.49
36:5:2599:U:H2'	36:5:2600:C:C6	2.48	0.49
36:5:3242:G:N2	36:5:3245:A:H5"	2.28	0.49
36:5:3279:A:N6	36:5:3280:U:O4	2.46	0.49
36:5:3359:A:H2'	36:5:3360:C:O4'	2.12	0.49
39:l2:109:GLU:H	39:l2:109:GLU:CD	2.21	0.49
43:l6:40:LEU:HB3	43:l6:84:VAL:HG11	1.95	0.49
47:m0:9:TYR:CG	47:m0:97:LEU:HD13	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:m3:76:THR:HG21	49:m3:103:ASN:OD1	2.12	0.49
49:m3:113:VAL:HG12	49:m3:117:LYS:HE3	1.95	0.49
59:n3:45:ARG:HD2	59:n3:46:LEU:H	1.76	0.49
61:n5:41:ALA:O	61:n5:43:ALA:N	2.45	0.49
83:f:110:LYS:NZ	83:f:113:VAL:HG23	2.28	0.49
1:2:386:G:OP2	10:S8:25:ARG:NH2	2.45	0.49
1:2:877:G:H5'	1:2:937:C:H1'	1.95	0.49
1:2:1488:G:N3	1:2:1495:C:H1'	2.28	0.49
2:S0:53:THR:HA	2:S0:161:PRO:HG2	1.95	0.49
10:S8:137:LYS:HG2	10:S8:138:ASN:H	1.77	0.49
11:S9:54:ARG:HH11	11:S9:55:ALA:HB2	1.78	0.49
34:SR:178:VAL:HB	34:SR:192:PHE:HB2	1.94	0.49
36:1:840:C:H4'	55:M9:128:LYS:HD3	1.94	0.49
36:1:1334:U:H5"	44:L7:206:LYS:HB3	1.95	0.49
36:1:1471:U:H2'	36:1:1472:U:C6	2.47	0.49
36:1:1564:U:O2'	36:1:1565:G:O4'	2.22	0.49
36:1:2359:C:H2'	36:1:2360:C:C6	2.47	0.49
36:1:2651:G:H4'	36:1:2652:U:OP2	2.13	0.49
40:L3:280:HIS:HB3	40:L3:324:VAL:CG1	2.42	0.49
40:L3:292:ALA:HA	40:L3:303:LYS:H	1.76	0.49
48:M1:143:ARG:HG2	48:M1:144:CYS:SG	2.53	0.49
53:M7:138:LYS:HG3	53:M7:140:GLU:HG3	1.94	0.49
57:N1:79:MET:HA	57:N1:84:TYR:HA	1.93	0.49
69:O3:37:THR:HG23	69:O3:40:ASP:HB2	1.95	0.49
72:O6:90:MET:N	72:O6:90:MET:SD	2.86	0.49
1:6:108:A:H2'	1:6:109:G:C8	2.47	0.49
1:6:721:U:O2'	1:6:722:G:O4'	2.29	0.49
1:6:1175:U:H2'	1:6:1176:G:H8	1.76	0.49
1:6:1628:U:H2'	1:6:1629:G:C8	2.48	0.49
1:6:1645:G:H1	1:6:1756[A]:A:H61	1.61	0.49
10:s8:103:GLN:HA	10:s8:165:LEU:O	2.13	0.49
10:s8:183:ILE:HG13	10:s8:183:ILE:O	2.13	0.49
34:sR:273:ASP:OD2	34:sR:275:ARG:NH1	2.46	0.49
36:5:247:C:N4	36:5:248:U:O2	2.45	0.49
36:5:501:A:O3'	43:l6:28:GLN:HG3	2.12	0.49
36:5:521:A:N3	56:n0:65:ASN:ND2	2.60	0.49
36:5:750:G:H2'	36:5:751:A:H8	1.77	0.49
36:5:3212:C:H2'	36:5:3213:A:O4'	2.12	0.49
45:l8:158:ASP:HA	45:l8:159:PRO:C	2.38	0.49
47:m0:168:SER:HB2	57:n1:160:ILE:C	2.38	0.49
49:m3:155:GLU:OE2	64:n8:90:TYR:OH	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:m4:47:ASP:HB2	50:m4:55:ARG:HG3	1.95	0.49
1:2:292:U:H2'	1:2:293:U:H6	1.78	0.49
1:2:1277:G:H2'	1:2:1278:G:O4'	2.12	0.49
1:2:1433:G:N1	31:D9:45:GLU:OE2	2.46	0.49
11:S9:166:GLY:O	11:S9:168:ARG:N	2.46	0.49
13:C1:57:LYS:HB2	13:C1:110:HIS:NE2	2.27	0.49
20:C8:56:LYS:HD3	20:C8:61:LEU:HD23	1.94	0.49
27:D5:96:SER:C	27:D5:98:GLN:H	2.21	0.49
34:SR:69:GLN:OE1	34:SR:85:TRP:NE1	2.40	0.49
34:SR:243:LEU:HD22	34:SR:252:LEU:HD11	1.95	0.49
35:SM:35:ALA:HB1	35:SM:37:VAL:HG23	1.94	0.49
36:1:424:G:O2'	68:O2:23:ASP:OD2	2.28	0.49
36:1:729:C:H2'	36:1:730:C:C6	2.48	0.49
36:1:1355:A:H5"	36:1:1356:U:C5	2.44	0.49
36:1:1723:A:OP1	55:M9:128:LYS:NZ	2.44	0.49
36:1:2180:G:H2'	36:1:2181:C:C6	2.48	0.49
36:1:2726:C:O2'	36:1:2727:A:H2'	2.13	0.49
36:1:3383:G:N2	67:O1:105:GLN:OE1	2.33	0.49
42:L5:83:LEU:HB3	42:L5:88:ILE:HB	1.95	0.49
48:M1:20:ASN:HB3	48:M1:126:ASP:HB2	1.95	0.49
52:M6:9:ILE:O	52:M6:36:VAL:HG22	2.13	0.49
53:M7:108:ASP:C	53:M7:110:THR:H	2.20	0.49
60:N4:97:LYS:H	60:N4:98:PRO:HD2	1.78	0.49
64:N8:46:ASP:OD1	64:N8:46:ASP:N	2.45	0.49
1:6:271:A:C2	1:6:285:G:C6	3.01	0.49
1:6:845:G:H2'	1:6:846:G:C8	2.41	0.49
1:6:1036:A:O2'	24:d2:9:ASP:HB3	2.12	0.49
1:6:1250:U:H2'	33:e1:135:HIS:HB3	1.94	0.49
1:6:1332:C:OP2	19:c7:45:ARG:HD3	2.13	0.49
2:s0:7:PHE:HE2	2:s0:191:ARG:HE	1.61	0.49
8:s6:135:PRO:HB2	8:s6:141:ILE:HD13	1.95	0.49
11:s9:114:TYR:HA	11:s9:119:ALA:HB3	1.95	0.49
17:c5:79:HIS:O	17:c5:81:ARG:N	2.45	0.49
20:c8:28:ILE:HG23	20:c8:58:ALA:HA	1.94	0.49
36:5:148:G:N7	45:l8:137:ASN:ND2	2.60	0.49
36:5:1239:C:N4	36:5:1249:G:H22	2.11	0.49
36:5:3160:U:H3	36:5:3290:G:H1	1.60	0.49
39:l2:80:GLU:N	39:l2:170:ALA:HB2	2.27	0.49
40:l3:103:THR:HG21	40:l3:147:GLU:OE2	2.13	0.49
41:l4:6:VAL:O	41:l4:20:LEU:N	2.38	0.49
45:l8:27:THR:HG22	63:n7:53:VAL:HG12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:m2:66:UNK:O	80:m2:68:UNK:N	2.44	0.49
62:n6:17:LYS:O	62:n6:21:THR:OG1	2.29	0.49
62:n6:57:LEU:HB3	62:n6:105:VAL:HG12	1.95	0.49
71:o5:107:LYS:HA	71:o5:110:ALA:HB3	1.95	0.49
1:2:711:U:H4'	1:2:712:G:OP1	2.13	0.48
1:2:1256:A:OP1	12:C0:5:LYS:NZ	2.29	0.48
1:2:1655:A:N1	36:1:2291:A:O2'	2.39	0.48
16:C4:29:HIS:ND1	16:C4:29:HIS:O	2.46	0.48
18:C6:37:THR:O	18:C6:45:ARG:NH1	2.46	0.48
20:C8:126:ARG:HG2	20:C8:133:VAL:HA	1.95	0.48
28:D6:89:ARG:HD2	28:D6:92:ARG:NH2	2.28	0.48
36:1:649:A:OP2	36:1:2868:U:O2'	2.22	0.48
36:1:1407:A:O3'	68:O2:33:ARG:NH2	2.46	0.48
41:L4:311:HIS:ND1	44:L7:162:PRO:HG2	2.28	0.48
44:L7:90:LYS:HD2	44:L7:91:GLY:H	1.77	0.48
48:M1:139:THR:HG22	48:M1:147:THR:HA	1.95	0.48
51:M5:102:ALA:O	51:M5:106:VAL:HG13	2.13	0.48
53:M7:52:LEU:HD11	53:M7:88:VAL:HB	1.95	0.48
60:N4:47:ARG:HD3	60:N4:58:HIS:CD2	2.48	0.48
63:N7:10:VAL:HG23	63:N7:86:THR:HA	1.95	0.48
1:6:298:C:H5"	6:s4:38:LEU:HB3	1.95	0.48
1:6:417:A:H4'	1:6:418:G:O5'	2.13	0.48
1:6:1370:U:H4'	1:6:1371:A:H4'	1.94	0.48
1:6:1624:C:H2'	1:6:1625:C:C6	2.48	0.48
1:6:1642:G:H2'	1:6:1643:U:H6	1.78	0.48
13:c1:5:LEU:HG	13:c1:9:SER:OG	2.12	0.48
13:c1:72:THR:H	13:c1:88:ARG:NH1	2.11	0.48
36:5:316:U:O4	72:o6:28:TYR:HA	2.13	0.48
36:5:1210:U:H5'	46:l9:63:LYS:NZ	2.27	0.48
36:5:1260:A:O2'	36:5:1279:C:O2	2.31	0.48
36:5:1497:C:H2'	36:5:1498:A:C8	2.48	0.48
36:5:2155:G:OP1	39:l2:241:ARG:HG2	2.14	0.48
40:l3:332:ARG:O	40:l3:333:LYS:HB2	2.13	0.48
47:m0:99:ILE:HD12	47:m0:123:HIS:ND1	2.28	0.48
48:m1:139:THR:HG22	48:m1:147:THR:HA	1.95	0.48
57:n1:39:ILE:HG13	57:n1:102:ARG:HD2	1.95	0.48
63:n7:23:VAL:HG12	63:n7:45:GLY:HA3	1.95	0.48
79:q3:86:LEU:O	79:q3:90:VAL:HG13	2.12	0.48
81:p0:7:LYS:HD3	81:p0:10:GLU:OE1	2.13	0.48
1:2:6:G:H2'	1:2:7:G:H8	1.78	0.48
1:2:1142:A:H2'	1:2:1143:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1202:A:H1'	1:2:1207:C:H42	1.77	0.48
1:2:1573:A:H4'	1:2:1574:G:OP2	2.12	0.48
1:2:1719:A:H2'	1:2:1720:G:O4'	2.13	0.48
6:S4:163:ASP:O	6:S4:165:ALA:N	2.44	0.48
9:S7:162:ILE:HA	9:S7:165:LYS:HD2	1.93	0.48
18:C6:40:GLU:HG3	18:C6:42:GLU:HB3	1.95	0.48
22:D0:104:THR:HG22	22:D0:116:VAL:HG21	1.95	0.48
25:D3:16:ARG:O	25:D3:19:ARG:HB3	2.13	0.48
26:D4:52:LYS:O	26:D4:54:ALA:N	2.37	0.48
36:1:776:U:H5	36:1:2719:U:O2	1.97	0.48
36:1:2107:A:H2	36:1:3344:A:C8	2.31	0.48
36:1:2620:G:H22	84:C:74:CH:HN3	1.59	0.48
36:1:3243:A:C8	52:M6:156:LEU:HD22	2.48	0.48
36:1:3244:A:OP1	40:L3:97:ARG:NH2	2.46	0.48
36:1:3274:A:H2'	53:M7:171:ARG:HH12	1.79	0.48
42:L5:148:ILE:HG23	42:L5:151:GLN:HB3	1.93	0.48
50:M4:94:TRP:CE2	50:M4:100:ALA:HB2	2.48	0.48
54:M8:154:GLY:O	54:M8:159:LYS:HE3	2.13	0.48
55:M9:161:ALA:O	55:M9:165:LYS:HG2	2.12	0.48
1:6:330:G:O2'	10:s8:33:PRO:HB3	2.13	0.48
1:6:691:C:OP1	1:6:696:C:N4	2.39	0.48
1:6:867:G:N2	15:c3:87:ASP:OD1	2.42	0.48
1:6:959:U:H5'	29:d7:28:PRO:HB3	1.95	0.48
4:s2:144:TRP:CE2	4:s2:173:PRO:HG3	2.47	0.48
7:s5:45:LYS:HD3	7:s5:45:LYS:HA	1.55	0.48
10:s8:122:GLY:N	10:s8:157:GLU:OE2	2.45	0.48
26:d4:68:LYS:HE2	26:d4:70:VAL:HG22	1.96	0.48
27:d5:61:SER:H	27:d5:64:VAL:HB	1.78	0.48
36:5:284:A:P	78:q2:41:ARG:HH12	2.35	0.48
36:5:406:G:H1'	38:8:16:G:N2	2.29	0.48
36:5:584:G:O2'	69:o3:45:LEU:HD12	2.12	0.48
36:5:638:C:H2'	36:5:639:G:C8	2.48	0.48
36:5:2584:G:H5'	36:5:2585:G:OP2	2.14	0.48
36:5:2818:U:H5'	36:5:2818:U:H6	1.77	0.48
36:5:3006:A:H2'	36:5:3007:U:O4'	2.12	0.48
36:5:3060:C:C2	36:5:3061:G:C8	3.01	0.48
38:8:121:U:H2'	38:8:122:U:C6	2.48	0.48
41:l4:193:LYS:O	41:l4:198:ARG:HG2	2.13	0.48
41:l4:271:LYS:HB2	41:l4:274:TYR:HB3	1.95	0.48
41:l4:281:ILE:HG13	54:m8:125:ASP:CG	2.38	0.48
45:l8:182:GLY:O	45:l8:186:LEU:HG	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:m3:9:ILE:HG12	64:n8:34:MET:HE1	1.95	0.48
50:m4:24:LYS:NZ	50:m4:61:GLY:O	2.37	0.48
51:m5:11:GLN:HG2	51:m5:44:ARG:HH21	1.77	0.48
53:m7:27:LYS:HD3	53:m7:63:PHE:HB3	1.95	0.48
57:n1:86:GLU:OE1	57:n1:88:ARG:NH1	2.45	0.48
63:n7:54:THR:OG1	63:n7:55:LYS:N	2.46	0.48
66:o0:66:LYS:N	66:o0:66:LYS:HD2	2.29	0.48
69:o3:14:LEU:HD11	69:o3:31:LYS:HB2	1.96	0.48
69:o3:59:VAL:O	69:o3:61:GLY:N	2.46	0.48
79:q3:13:LYS:HD2	79:q3:14:TYR:CZ	2.48	0.48
1:2:758:U:P	6:S4:22:LYS:HZ3	2.36	0.48
1:2:851:U:H2'	1:2:852:C:C6	2.48	0.48
1:2:867:G:OP2	15:C3:3:ARG:NH1	2.46	0.48
1:2:1199:G:C5	31:D9:40:ARG:HD3	2.48	0.48
1:2:1479:A:H5"	21:C9:60:SER:OG	2.13	0.48
7:S5:66:GLN:HG3	7:S5:67:PRO:HD2	1.94	0.48
12:C0:29:GLN:O	12:C0:31:LYS:N	2.43	0.48
14:C2:46:ARG:HG3	33:E1:103:LEU:HD12	1.94	0.48
17:C5:130:ARG:HH11	17:C5:130:ARG:N	2.07	0.48
23:D1:3:ASN:ND2	23:D1:6:GLY:O	2.45	0.48
25:D3:109:ARG:NH2	25:D3:113:ALA:O	2.46	0.48
36:1:543:C:H3'	36:1:544:C:C6	2.48	0.48
36:1:1117:G:OP1	65:N9:4:SER:HB2	2.14	0.48
36:1:2097:U:H2'	36:1:2098:C:C6	2.48	0.48
39:L2:30:ARG:NH2	39:L2:33:ASP:OD2	2.46	0.48
40:L3:221:THR:HB	40:L3:273:HIS:H	1.78	0.48
61:N5:88:MET:HA	61:N5:120:LYS:HG3	1.95	0.48
63:N7:11:ALA:HB1	63:N7:80:LEU:HB2	1.94	0.48
66:O0:99:ASP:OD2	66:O0:99:ASP:N	2.45	0.48
79:Q3:36:ARG:O	79:Q3:45:LYS:NZ	2.37	0.48
1:6:712:G:H2'	1:6:713:A:H8	1.79	0.48
1:6:1427:A:O2'	1:6:1428:G:OP1	2.30	0.48
1:6:1530:C:OP2	27:d5:96:SER:OG	2.18	0.48
15:c3:41:ALA:HB1	15:c3:75:LEU:HD21	1.96	0.48
19:c7:58:MET:O	19:c7:61:ILE:HG22	2.14	0.48
21:c9:61:VAL:O	21:c9:65:ILE:HG13	2.13	0.48
21:c9:108:LEU:HB3	21:c9:114:VAL:HG22	1.94	0.48
33:e1:78:LYS:O	33:e1:82:LYS:HG2	2.13	0.48
36:5:40:A:OP2	64:n8:36:GLY:N	2.46	0.48
36:5:646:A:C2	36:5:2375:G:C2	3.01	0.48
36:5:1131:G:C4	36:5:2373:A:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1312:C:H2'	36:5:1313:G:O4'	2.12	0.48
36:5:1658:G:H2'	36:5:1659:U:C6	2.48	0.48
36:5:1794:G:O2'	36:5:1795:U:H5'	2.14	0.48
36:5:1803:C:H5'	70:o4:63:ALA:HB2	1.95	0.48
36:5:2854:U:OP2	47:m0:3:ARG:NH2	2.46	0.48
36:5:2880:U:O2	40:l3:250:ALA:HB3	2.13	0.48
45:l8:136:LEU:HD22	51:m5:3:ALA:HB2	1.95	0.48
62:n6:57:LEU:HD22	62:n6:58:VAL:H	1.77	0.48
70:o4:83:ASN:N	70:o4:83:ASN:OD1	2.46	0.48
70:o4:102:LYS:O	70:o4:106:LYS:HD3	2.13	0.48
71:o5:17:LEU:HA	71:o5:20:GLN:HB2	1.95	0.48
72:o6:62:ARG:HH21	72:o6:94:ILE:HG13	1.78	0.48
1:2:522:U:H5"	26:D4:37:LYS:HG3	1.94	0.48
1:2:886:U:H2'	1:2:887:A:O4'	2.14	0.48
1:2:1041:G:H2'	1:2:1042:G:C8	2.48	0.48
3:S1:222:LYS:HG3	3:S1:223:PHE:H	1.78	0.48
6:S4:100:ARG:NH2	6:S4:121:TYR:O	2.46	0.48
12:C0:30:ALA:O	12:C0:38:LYS:HA	2.13	0.48
21:C9:105:LEU:HB3	21:C9:122:ARG:NE	2.29	0.48
36:1:359:U:HO2'	73:O7:16:HIS:HD1	1.58	0.48
36:1:515:C:O2'	41:L4:342:LYS:O	2.31	0.48
36:1:660:A:H5"	41:L4:100:PHE:CD1	2.47	0.48
36:1:1430:U:O4	64:N8:3:SER:OG	2.31	0.48
36:1:1767:C:H2'	36:1:1768:U:C6	2.48	0.48
36:1:1832:C:H2'	36:1:1833:G:H8	1.79	0.48
40:L3:169:THR:HG22	40:L3:171:LEU:HG	1.94	0.48
45:L8:252:ASN:C	45:L8:254:ASP:H	2.21	0.48
56:N0:77:VAL:N	56:N0:92:LYS:O	2.38	0.48
58:N2:67:SER:OG	58:N2:68:THR:N	2.46	0.48
60:N4:49:ILE:O	60:N4:52:THR:OG1	2.21	0.48
1:6:66:U:OP1	8:s6:136:LYS:NZ	2.37	0.48
1:6:414:C:H2'	1:6:415:C:O4'	2.14	0.48
1:6:855:A:C2	1:6:857:U:H1'	2.48	0.48
1:6:1333:C:H4'	5:s3:162:GLN:HG3	1.94	0.48
4:s2:88:LYS:HD2	4:s2:95:ARG:CZ	2.44	0.48
36:5:744:A:H4'	54:m8:142:GLY:O	2.13	0.48
36:5:1313:G:H2'	36:5:1314:C:H6	1.78	0.48
36:5:1739:U:H1'	70:o4:41:ARG:HD3	1.95	0.48
36:5:2370:G:H2'	36:5:2371:G:O4'	2.13	0.48
36:5:2524:A:C4	45:l8:46:LEU:HD21	2.49	0.48
36:5:2526:C:H1'	36:5:2588:U:H5"	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3242:G:N2	36:5:3245:A:OP2	2.44	0.48
36:5:3306:U:O2'	36:5:3308:C:OP2	2.21	0.48
36:5:3378:C:H2'	36:5:3379:C:C6	2.48	0.48
40:l3:283:TYR:HB3	40:l3:323:MET:HE2	1.95	0.48
41:l4:262:TRP:CZ3	41:l4:271:LYS:HE3	2.48	0.48
46:l9:19:SER:HA	50:m4:6:ILE:O	2.14	0.48
47:m0:47:PRO:HB3	47:m0:171:TRP:CE2	2.48	0.48
75:o9:27:ILE:HG23	75:o9:30:ARG:CZ	2.43	0.48
76:q0:106:ARG:NH1	76:q0:106:ARG:HB2	2.28	0.48
1:2:1459:C:N4	20:C8:139:LYS:HE2	2.29	0.48
9:S7:51:VAL:HG23	9:S7:53:GLY:N	2.28	0.48
20:C8:33:THR:C	20:C8:35:ILE:H	2.21	0.48
21:C9:125:SER:O	21:C9:129:GLN:HG3	2.13	0.48
25:D3:34:LEU:O	25:D3:39:LYS:NZ	2.47	0.48
34:SR:80:ALA:HB3	34:SR:92:TRP:HB2	1.95	0.48
36:1:345:G:OP1	36:1:1429:G:N1	2.37	0.48
36:1:644:G:H2'	36:1:2372:A:N7	2.28	0.48
36:1:896:A:H5'	39:L2:183:GLY:HA2	1.95	0.48
36:1:1467:A:N1	36:1:1511:U:O2'	2.41	0.48
36:1:1504:A:N1	36:1:1515:A:O2'	2.44	0.48
36:1:1752:A:H8	36:1:1752:A:O5'	1.96	0.48
36:1:3133:C:H2'	36:1:3134:A:O4'	2.14	0.48
37:3:43:U:H4'	48:M1:140:ARG:O	2.14	0.48
38:4:58:G:O6	73:O7:63:ARG:NH2	2.40	0.48
39:L2:62:VAL:HG21	39:L2:71:LEU:HD23	1.95	0.48
40:L3:283:TYR:HB3	40:L3:356:LEU:HD21	1.96	0.48
42:L5:52:VAL:HA	42:L5:147:ASP:HB3	1.95	0.48
52:M6:28:LEU:HD21	52:M6:88:VAL:HG13	1.93	0.48
52:M6:35:VAL:HB	52:M6:104:VAL:HG13	1.96	0.48
53:M7:109:ALA:HA	53:M7:112:LEU:HD22	1.94	0.48
70:O4:86:LYS:O	70:O4:90:ILE:HG12	2.13	0.48
72:O6:2:THR:OG1	72:O6:3:VAL:N	2.46	0.48
1:6:39:A:OP1	11:s9:6:ARG:NH1	2.46	0.48
1:6:498:G:N7	1:6:499:U:N3	2.62	0.48
1:6:716:C:H1'	1:6:723:G:H22	1.79	0.48
1:6:955:A:H4'	1:6:1073:G:O2'	2.13	0.48
14:c2:83:GLU:C	14:c2:85:LYS:H	2.22	0.48
23:d1:77:GLY:O	23:d1:78:LEU:HD12	2.14	0.48
34:sR:22:SER:OG	34:sR:69:GLN:O	2.30	0.48
36:5:1070:U:H2'	36:5:1071:U:O4'	2.12	0.48
36:5:1759:C:H2'	36:5:1760:A:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2988:C:P	52:m6:68:ARG:NH1	2.87	0.48
36:5:3068:U:OP1	55:m9:59:SER:N	2.41	0.48
36:5:3230:G:H4'	50:m4:132:LYS:HD3	1.96	0.48
40:l3:261:MET:HE3	40:l3:261:MET:HB3	1.66	0.48
41:l4:20:LEU:HD11	41:l4:252:GLU:HG3	1.95	0.48
44:l7:131:GLU:HG3	44:l7:230:GLY:HA2	1.95	0.48
53:m7:108:ASP:N	53:m7:152:GLU:OE2	2.47	0.48
61:n5:67:ILE:HD12	61:n5:83:VAL:HG12	1.95	0.48
68:o2:119:VAL:HG12	68:o2:122:PRO:HD3	1.95	0.48
1:2:446:A:H5'	6:S4:57:ASN:HB3	1.96	0.48
1:2:735:C:O2'	1:2:736:C:H5"	2.14	0.48
1:2:826:U:H2'	1:2:827:C:H6	1.78	0.48
1:2:1162:C:H1'	1:2:1616:G:N2	2.29	0.48
1:2:1553:G:H4'	31:D9:14:TYR:CE1	2.45	0.48
3:S1:51:SER:HA	3:S1:57:ALA:H	1.79	0.48
5:S3:34:TYR:OH	5:S3:37:VAL:HG13	2.14	0.48
9:S7:35:LYS:HZ2	9:S7:36:ALA:H	1.60	0.48
19:C7:26:LEU:HD13	19:C7:59:LYS:HG3	1.95	0.48
20:C8:83:ALA:HA	20:C8:86:LEU:HD22	1.94	0.48
29:D7:34:ASP:HB3	29:D7:43:ILE:HD12	1.96	0.48
36:1:563:U:H2'	36:1:564:G:H8	1.79	0.48
36:1:662:U:OP1	64:N8:8:THR:HG21	2.12	0.48
36:1:920:A:OP1	36:1:923:C:N4	2.43	0.48
36:1:1134:G:C2	36:1:1135:A:C8	3.01	0.48
36:1:1703:U:N3	36:1:1740:U:O2	2.47	0.48
36:1:2254:U:H2'	36:1:2261:G:H22	1.78	0.48
36:1:2597:U:H2'	36:1:2598:G:H8	1.77	0.48
36:1:2807:U:O2'	36:1:2809:C:OP1	2.30	0.48
36:1:2941:A:OP2	40:L3:256:HIS:HD2	1.97	0.48
37:3:49:G:N7	42:L5:58:LYS:HE2	2.28	0.48
38:4:24:G:OP2	62:N6:13:ARG:HD3	2.13	0.48
42:L5:211:LEU:HD22	42:L5:211:LEU:HA	1.72	0.48
44:L7:178:ILE:HA	44:L7:183:ASP:HB3	1.94	0.48
46:L9:86:TYR:CD2	46:L9:151:VAL:HG22	2.47	0.48
55:M9:8:LYS:HG3	55:M9:22:VAL:HG21	1.96	0.48
64:N8:14:HIS:CE1	68:O2:36:LYS:HE2	2.48	0.48
67:O1:79:ARG:H	67:O1:79:ARG:NE	2.10	0.48
78:Q2:43:TYR:OH	78:Q2:47:GLN:NE2	2.47	0.48
1:6:250:C:H2'	1:6:251:A:C8	2.49	0.48
2:s0:180:GLU:O	2:s0:184:LEU:HD22	2.13	0.48
6:s4:114:ILE:HD12	6:s4:118:GLU:HG2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:s7:49:ILE:HD11	9:s7:172:VAL:HG13	1.94	0.48
11:s9:40:LYS:HA	11:s9:43:TYR:HB2	1.95	0.48
26:d4:10:ARG:HG3	26:d4:26:ASP:OD2	2.14	0.48
26:d4:80:ALA:HA	26:d4:83:LYS:HE2	1.96	0.48
34:sR:106:HIS:HD2	34:sR:110:VAL:HG22	1.78	0.48
36:5:798:G:OP1	64:n8:33:GLY:N	2.44	0.48
36:5:1447:G:H3'	53:m7:67:ILE:HD11	1.95	0.48
36:5:1875:G:OP2	55:m9:20:ARG:HG2	2.13	0.48
36:5:2372:A:H4'	36:5:2373:A:OP2	2.13	0.48
36:5:2403:G:N7	36:5:2870:C:H4'	2.28	0.48
36:5:2533:G:H21	36:5:2546:C:H42	1.61	0.48
36:5:2572:C:O2'	36:5:2573:G:H5"	2.13	0.48
36:5:3356:G:C6	36:5:3357:U:C4	3.01	0.48
36:5:3386:G:H2'	36:5:3387:U:C6	2.49	0.48
39:l2:183:GLY:O	39:l2:186:PHE:HB3	2.13	0.48
41:l4:173:GLY:O	41:l4:175:HIS:N	2.40	0.48
49:m3:76:THR:OG1	49:m3:77:LEU:N	2.45	0.48
76:q0:110:CYS:SG	76:q0:112:LYS:HB2	2.53	0.48
1:2:16:G:H2'	1:2:17:C:C6	2.47	0.48
1:2:1083:G:O2'	1:2:1094:G:O2'	2.23	0.48
1:2:1146:G:C6	1:2:1147:A:C6	3.01	0.48
1:2:1453:G:H5'	17:C5:79:HIS:HB3	1.95	0.48
1:2:1788:G:P	16:C4:127:ARG:HH22	2.36	0.48
15:C3:139:TRP:HZ2	15:C3:149:LEU:HD21	1.78	0.48
18:C6:20:ALA:HB2	18:C6:67:VAL:HG13	1.96	0.48
36:1:379:C:H2'	36:1:380:U:C6	2.49	0.48
36:1:381:U:H2'	36:1:382:U:C6	2.49	0.48
36:1:437:G:H22	36:1:622:A:H61	1.62	0.48
36:1:685:G:OP1	49:M3:35:ARG:HD2	2.14	0.48
36:1:686:G:C6	36:1:687:U:C2	3.02	0.48
36:1:1362:G:O2'	44:L7:159:GLN:HA	2.13	0.48
36:1:1734:G:H2'	36:1:1735:G:O4'	2.14	0.48
36:1:2911:A:H4'	36:1:2912:G:C8	2.47	0.48
39:L2:201:GLY:HA2	39:L2:204:MET:SD	2.54	0.48
40:L3:116:ARG:NH2	40:L3:174:LYS:HD3	2.28	0.48
40:L3:148:LEU:HD21	40:L3:196:ARG:HB2	1.96	0.48
46:L9:77:ASN:OD1	46:L9:77:ASN:N	2.46	0.48
57:N1:36:VAL:HG13	57:N1:65:TYR:HA	1.95	0.48
64:N8:91:LEU:HD13	64:N8:121:VAL:HG21	1.94	0.48
1:6:522:U:H5"	26:d4:37:LYS:HG3	1.95	0.48
1:6:1382:A:HO2'	1:6:1383:G:H8	1.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s1:27:LYS:NZ	3:s1:49:ASN:OD1	2.44	0.48
3:s1:68:VAL:HG23	3:s1:73:LEU:HD21	1.95	0.48
6:s4:43:PRO:HA	6:s4:82:TYR:O	2.14	0.48
9:s7:109:VAL:HG22	9:s7:110:GLN:H	1.79	0.48
10:s8:42:ARG:O	10:s8:58:LEU:HB2	2.13	0.48
11:s9:31:ALA:O	11:s9:36:LEU:N	2.40	0.48
32:e0:49:LEU:H	32:e0:49:LEU:HD22	1.79	0.48
36:5:550:A:H2'	36:5:551:A:C8	2.48	0.48
36:5:609:G:C8	41:l4:310:THR:HG22	2.49	0.48
36:5:729:C:P	54:m8:43:PRO:HG2	2.53	0.48
36:5:1846:C:H3'	36:5:1847:A:H8	1.78	0.48
39:l2:140:ASN:HD21	39:l2:142:ASP:HB3	1.78	0.48
41:l4:60:THR:HG22	41:l4:62:ALA:N	2.28	0.48
42:l5:183:TRP:CZ3	42:l5:185:PHE:HA	2.49	0.48
43:l6:41:ILE:HB	43:l6:85:ILE:HB	1.95	0.48
45:l8:100:GLU:OE1	45:l8:108:ARG:HD3	2.13	0.48
1:2:749:U:H2'	1:2:750:U:C6	2.49	0.48
1:2:993:A:H2'	1:2:994:G:O4'	2.14	0.48
1:2:1338:C:H1'	1:2:1410:A:C4	2.48	0.48
6:S4:123:LEU:HD23	6:S4:228:ILE:HG22	1.94	0.48
9:S7:138:LYS:HB2	9:S7:138:LYS:HE3	1.67	0.48
10:S8:61:GLU:HG3	10:S8:62:THR:HG23	1.94	0.48
34:SR:106:HIS:CD2	34:SR:110:VAL:HG22	2.48	0.48
36:1:1571:A:H2'	36:1:1572:U:O4'	2.14	0.48
36:1:1791:C:H2'	36:1:1792:C:C6	2.49	0.48
36:1:2553:U:C4	70:O4:95:ILE:HG12	2.49	0.48
36:1:2723:U:H2'	36:1:2724:U:C6	2.49	0.48
36:1:3013:U:H2'	36:1:3014:U:C6	2.49	0.48
36:1:3204:C:O2'	36:1:3205:G:H5'	2.13	0.48
41:L4:316:ASN:HB3	41:L4:319:LYS:HG2	1.95	0.48
53:M7:32:THR:HG22	53:M7:58:ILE:HG21	1.94	0.48
68:O2:101:SER:O	68:O2:105:ARG:HG3	2.13	0.48
1:6:249:U:H3'	1:6:250:C:H5'	1.94	0.48
1:6:588:U:OP1	32:e0:26:LYS:NZ	2.46	0.48
1:6:885:G:H21	16:c4:123:SER:HB2	1.79	0.48
5:s3:105:MET:HG2	5:s3:122:VAL:HG21	1.96	0.48
9:s7:99:LEU:HD23	9:s7:116:ARG:HB3	1.96	0.48
11:s9:62:ARG:NH1	11:s9:68:LYS:HD3	2.29	0.48
16:c4:14:PHE:HB3	16:c4:33:LEU:HD11	1.96	0.48
22:d0:95:ALA:HB1	22:d0:99:ILE:HB	1.96	0.48
24:d2:37:PHE:CE1	24:d2:103:ILE:HD12	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:sR:31:ASN:HA	34:sR:47:LEU:HD12	1.96	0.48
36:5:1107:C:H5"	65:n9:25:LYS:NZ	2.29	0.48
36:5:1918:C:H2'	36:5:1919:G:O4'	2.14	0.48
36:5:2269:U:H5'	83:f:42:VAL:HG21	1.96	0.48
36:5:2568:C:N3	36:5:2574:G:N1	2.61	0.48
36:5:2993:G:C6	36:5:3142:A:C4	3.01	0.48
41:l4:300:ARG:HG2	54:m8:39:ARG:O	2.13	0.48
42:l5:34:LYS:HE2	42:l5:38:THR:OG1	2.13	0.48
47:m0:97:LEU:O	47:m0:123:HIS:N	2.42	0.48
52:m6:110:PRO:O	52:m6:111:PRO:C	2.56	0.48
52:m6:110:PRO:O	52:m6:112:TYR:N	2.46	0.48
54:m8:23:ASN:HB3	54:m8:26:LEU:HB2	1.95	0.48
1:2:336:G:H21	10:S8:7:SER:HB2	1.79	0.48
1:2:934:C:N3	1:2:1077:C:H4'	2.28	0.48
1:2:1250:U:O2'	1:2:1251:U:OP1	2.27	0.48
1:2:1396:U:H2'	1:2:1397:U:C6	2.48	0.48
1:2:1657:U:H1'	1:2:1658:G:OP2	2.14	0.48
13:C1:7:VAL:HG13	13:C1:8:GLN:H	1.79	0.48
13:C1:84:ILE:HG23	13:C1:111:VAL:HG11	1.96	0.48
14:C2:119:SER:OG	14:C2:120:VAL:N	2.47	0.48
25:D3:31:LYS:HZ2	25:D3:110:LYS:HE3	1.79	0.48
36:1:76:G:O2'	49:M3:100:ARG:NH1	2.46	0.48
36:1:1460:A:H2'	36:1:1461:A:C8	2.49	0.48
36:1:1525:G:H5'	36:1:1830:G:OP2	2.14	0.48
36:1:1711:C:H2'	36:1:1712:G:O4'	2.14	0.48
36:1:2144:A:H1'	36:1:2281:A:N6	2.28	0.48
36:1:2514:U:H5'	45:L8:68:ARG:HG3	1.96	0.48
37:3:61:G:H2'	37:3:62:U:C6	2.49	0.48
39:L2:5:ILE:HG12	39:L2:8:GLN:OE1	2.14	0.48
47:M0:16:PRO:O	47:M0:18:PRO:HD3	2.14	0.48
50:M4:20:VAL:HG22	50:M4:66:THR:OG1	2.13	0.48
1:6:28:A:H2'	1:6:29:U:C6	2.49	0.48
1:6:675:U:H2'	1:6:676:G:H8	1.79	0.48
1:6:778:G:N7	26:d4:10:ARG:NH1	2.61	0.48
1:6:882:U:H2'	1:6:883:C:C6	2.49	0.48
1:6:1032:G:H2'	1:6:1033:C:H6	1.77	0.48
1:6:1054:U:H2'	1:6:1055:U:C6	2.45	0.48
1:6:1673:G:H2'	1:6:1674:C:C6	2.48	0.48
7:s5:90:ILE:O	7:s5:94:THR:HG23	2.14	0.48
11:s9:159:ALA:HB3	11:s9:162:SER:OG	2.14	0.48
14:c2:67:THR:C	14:c2:69:ALA:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:c3:138:ASN:OD1	15:c3:139:TRP:N	2.41	0.48
18:c6:82:ARG:HH12	18:c6:114:ARG:HB2	1.78	0.48
21:c9:42:GLY:HA2	21:c9:84:LYS:HG3	1.96	0.48
21:c9:45:MET:HE3	21:c9:46:PRO:HD2	1.96	0.48
30:d8:12:VAL:HG22	30:d8:30:VAL:HG12	1.96	0.48
33:e1:95:HIS:CG	33:e1:96:LYS:H	2.32	0.48
36:5:122:A:H5"	36:5:123:A:C8	2.49	0.48
36:5:147:U:H5'	45:l8:136:LEU:HD12	1.96	0.48
36:5:3174:A:OP1	69:o3:97:SER:OG	2.23	0.48
55:m9:17:VAL:HG22	55:m9:18:GLY:H	1.78	0.48
56:n0:28:ARG:HE	56:n0:99:ARG:HH21	1.62	0.48
1:2:901:G:N2	16:C4:54:GLU:OE1	2.47	0.48
1:2:1365:C:H5"	18:C6:28:LEU:HD22	1.96	0.48
1:2:1683:C:O2'	1:2:1684:U:O5'	2.31	0.48
4:S2:169:LEU:HD22	4:S2:218:ILE:HG23	1.95	0.48
5:S3:143:ARG:HB3	35:SM:109:GLY:HA3	1.96	0.48
12:C0:49:LEU:HB3	12:C0:55:VAL:HG13	1.95	0.48
16:C4:124:ASP:O	16:C4:125:SER:HB2	2.12	0.48
19:C7:20:TYR:O	19:C7:24:LEU:HD13	2.14	0.48
28:D6:82:ARG:O	28:D6:84:VAL:HG12	2.13	0.48
28:D6:84:VAL:HG13	28:D6:85:ARG:N	2.29	0.48
36:1:121:A:C6	45:L8:129:PRO:HG3	2.48	0.48
36:1:1609:C:H5"	61:N5:125:ARG:HH11	1.79	0.48
36:1:1638:A:N3	36:1:1709:C:H1'	2.29	0.48
36:1:2269:U:O2'	36:1:2271:A:N7	2.32	0.48
37:3:62:U:O4	37:3:63:A:N6	2.47	0.48
38:4:21:C:OP1	41:L4:193:LYS:HD2	2.13	0.48
38:4:135:G:OP2	61:N5:56:ARG:NH2	2.39	0.48
40:L3:50:LYS:HD3	40:L3:330:GLY:O	2.13	0.48
40:L3:55:THR:O	40:L3:56:ILE:HD12	2.13	0.48
40:L3:370:PHE:CD1	40:L3:376:LYS:HA	2.49	0.48
42:L5:105:ILE:O	42:L5:109:THR:HG23	2.13	0.48
44:L7:39:GLU:O	44:L7:43:ILE:HG13	2.14	0.48
50:M4:25:LYS:HD2	50:M4:62:GLN:HG2	1.95	0.48
51:M5:143:ARG:NH2	71:O5:92:LEU:HD23	2.21	0.48
1:6:407:A:H2'	1:6:408:C:C6	2.48	0.48
1:6:1046:G:H1	1:6:1072:C:H42	1.60	0.48
1:6:1191:U:H5'	18:c6:143:ARG:NH1	2.28	0.48
1:6:1216:C:O2'	1:6:1444:A:N1	2.44	0.48
1:6:1696:G:O2'	1:6:1698:G:N7	2.47	0.48
4:s2:230:TRP:CE2	24:d2:68:ARG:HD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:s4:73:ASP:OD2	6:s4:122:LYS:NZ	2.41	0.48
9:s7:28:GLU:OE1	9:s7:35:LYS:HG2	2.14	0.48
9:s7:30:SER:HB2	9:s7:34:LEU:HB2	1.96	0.48
9:s7:173:TYR:CG	9:s7:181:ILE:HD11	2.49	0.48
21:c9:4:VAL:HG11	21:c9:137:ALA:HA	1.96	0.48
22:d0:39:SER:O	22:d0:43:LYS:HB2	2.14	0.48
26:d4:132:ARG:HG2	26:d4:133:ASN:OD1	2.13	0.48
28:d6:70:LYS:HG2	28:d6:72:HIS:CE1	2.49	0.48
30:d8:52:ASP:OD2	30:d8:52:ASP:N	2.45	0.48
33:e1:121:CYS:H	33:e1:130:VAL:HG11	1.78	0.48
36:5:359:U:H2'	36:5:360:G:O4'	2.13	0.48
36:5:519:A:O5'	44:l7:70:LYS:NZ	2.46	0.48
36:5:1594:A:O2'	36:5:1614:C:O2	2.31	0.48
36:5:2131:A:N6	79:q3:18:TYR:HA	2.29	0.48
36:5:2636:A:H5"	36:5:2637:A:H5'	1.96	0.48
36:5:2716:U:H2'	36:5:2717:U:H5'	1.96	0.48
36:5:3218:A:C8	36:5:3277:U:H5'	2.48	0.48
38:8:40:A:H2'	38:8:41:A:C8	2.49	0.48
38:8:102:U:H2'	38:8:103:G:C8	2.49	0.48
38:8:142:C:H4'	51:m5:60:VAL:HG21	1.96	0.48
47:m0:38:LYS:HD3	47:m0:41:ALA:HB2	1.96	0.48
50:m4:55:ARG:HD3	56:n0:70:THR:HB	1.95	0.48
61:n5:46:TYR:HB3	71:o5:75:TYR:HB3	1.96	0.48
68:o2:26:HIS:O	68:o2:28:VAL:N	2.47	0.48
83:f:109:THR:HA	83:f:110:LYS:HA	1.69	0.48
1:2:569:C:H2'	1:2:570:A:O4'	2.14	0.47
1:2:1487:A:H2'	1:2:1488:G:H8	1.79	0.47
1:2:1488:G:H3'	1:2:1515:A:H61	1.79	0.47
3:S1:81:PHE:HB2	3:S1:82:ARG:H	1.51	0.47
7:S5:77:TYR:HB3	7:S5:84:LYS:HA	1.96	0.47
18:C6:55:VAL:HG22	18:C6:59:LYS:HE3	1.95	0.47
34:SR:258:THR:HB	34:SR:275:ARG:HH12	1.79	0.47
35:SM:153:UNK:O	35:SM:155:UNK:N	2.47	0.47
36:1:230:U:H2'	36:1:231:G:O4'	2.14	0.47
36:1:1054:A:H5"	36:1:2637:A:H61	1.78	0.47
36:1:1654:A:C2'	36:1:1655:G:H5'	2.43	0.47
36:1:2254:U:H2'	36:1:2261:G:N2	2.29	0.47
36:1:2393:G:H4'	40:L3:252:ILE:HD13	1.95	0.47
36:1:2941:A:O5'	36:1:2943:G:H4'	2.14	0.47
36:1:3006:A:C2	36:1:3141:A:C4	3.02	0.47
36:1:3210:A:H2'	36:1:3211:C:C6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L4:62:ALA:HB3	41:L4:90:PHE:CE2	2.49	0.47
47:M0:80:SER:O	47:M0:84:ALA:HB2	2.14	0.47
47:M0:89:VAL:HG13	47:M0:136:PHE:CE1	2.49	0.47
53:M7:126:ARG:HH11	53:M7:138:LYS:HB2	1.78	0.47
55:M9:130:ASN:HB3	55:M9:131:ALA:H	1.42	0.47
67:O1:82:GLU:C	67:O1:84:ASP:H	2.22	0.47
68:O2:41:VAL:HA	68:O2:46:PHE:HD2	1.79	0.47
69:O3:31:LYS:NZ	69:O3:35:VAL:O	2.37	0.47
72:O6:70:ARG:HG2	72:O6:87:VAL:HG21	1.95	0.47
1:6:15:U:H2'	1:6:16:G:O4'	2.13	0.47
1:6:93:A:H1'	6:s4:3:ARG:HB3	1.95	0.47
1:6:333:A:C6	1:6:334:G:C6	3.02	0.47
1:6:396:G:N2	1:6:399:A:OP2	2.47	0.47
1:6:1316:G:HO2'	1:6:1401:A:HO2'	1.61	0.47
1:6:1451:C:OP1	31:d9:9:SER:HA	2.14	0.47
1:6:1509:C:H2'	1:6:1510:U:O4'	2.14	0.47
3:s1:157:GLN:O	3:s1:159:SER:OG	2.30	0.47
5:s3:101:GLN:HA	5:s3:104:SER:HB3	1.95	0.47
6:s4:252:ARG:NH2	6:s4:252:ARG:HB3	2.29	0.47
11:s9:77:ILE:O	11:s9:81:VAL:HG23	2.14	0.47
12:c0:29:GLN:OE1	12:c0:39:ASN:ND2	2.47	0.47
25:d3:86:PHE:CZ	25:d3:88:PRO:HA	2.49	0.47
36:5:730:C:H2'	36:5:731:U:H6	1.78	0.47
36:5:1080:A:OP2	42:l5:140:ARG:NH2	2.47	0.47
36:5:1223:A:OP2	36:5:1285:G:N2	2.43	0.47
36:5:1641:U:O2'	36:5:1642:A:H3'	2.14	0.47
36:5:1856:C:H2'	36:5:1857:C:C6	2.48	0.47
36:5:2890:A:N1	36:5:2913:C:N3	2.61	0.47
36:5:3379:C:H4'	40:l3:315:GLY:HA2	1.96	0.47
36:5:3386:G:H2'	36:5:3387:U:H6	1.79	0.47
49:m3:114:GLN:HA	49:m3:117:LYS:HD2	1.96	0.47
54:m8:143:PRO:HB2	54:m8:146:SER:OG	2.14	0.47
59:n3:39:VAL:O	59:n3:42:SER:OG	2.23	0.47
59:n3:74:MET:HE3	59:n3:74:MET:HB3	1.66	0.47
1:2:127:G:N7	8:S6:202:ARG:NH2	2.63	0.47
1:2:560:U:H2'	1:2:561:G:C8	2.49	0.47
1:2:973:A:H2'	1:2:974:A:C8	2.49	0.47
1:2:1113:A:H5"	77:Q1:6:ARG:HH21	1.79	0.47
1:2:1146:G:N3	1:2:1635:A:H2	2.12	0.47
1:2:1797:A:H5'	28:D6:95:ARG:CZ	2.44	0.47
2:S0:198:MET:SD	19:C7:85:VAL:HG11	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S8:96:LEU:HD13	10:S8:179:CYS:SG	2.54	0.47
12:C0:11:ILE:HD11	12:C0:42:VAL:HG22	1.94	0.47
22:D0:100:VAL:O	22:D0:103:ILE:HG22	2.14	0.47
23:D1:16:LYS:HE3	23:D1:16:LYS:HB2	1.68	0.47
36:1:208:C:H2'	36:1:209:A:O4'	2.14	0.47
36:1:438:A:C2	36:1:439:C:H1'	2.48	0.47
36:1:1266:G:H1	36:1:1275:C:H42	1.62	0.47
36:1:1766:G:H8	36:1:1766:G:OP2	1.97	0.47
36:1:2675:C:H41	48:M1:22:SER:HB3	1.79	0.47
36:1:2741:C:O2'	78:Q2:20:HIS:ND1	2.45	0.47
36:1:3047:U:O2'	36:1:3048:A:H5'	2.13	0.47
42:L5:232:ASP:OD2	42:L5:232:ASP:N	2.45	0.47
44:L7:158:LYS:HG2	44:L7:203:TRP:CH2	2.48	0.47
45:L8:170:CYS:O	45:L8:174:GLY:N	2.47	0.47
54:M8:126:GLN:O	54:M8:130:ARG:HG3	2.13	0.47
75:O9:23:LEU:HD22	75:O9:24:PRO:HD2	1.96	0.47
1:6:383:G:OP1	6:s4:6:LYS:NZ	2.43	0.47
1:6:758:U:OP1	11:s9:7:THR:HG21	2.13	0.47
1:6:1491:U:H5'	1:6:1492:A:OP1	2.14	0.47
5:s3:202:LEU:C	5:s3:204:ASP:H	2.22	0.47
5:s3:224:ASP:HA	34:sR:190:ALA:HB2	1.94	0.47
6:s4:35:PRO:HD2	6:s4:83:PRO:HG2	1.96	0.47
8:s6:138:ALA:HB1	8:s6:142:ARG:HH12	1.79	0.47
10:s8:10:LYS:HG2	13:c1:133:LYS:HE2	1.96	0.47
11:s9:41:GLU:OE2	11:s9:126:ARG:NH2	2.47	0.47
11:s9:103:ASP:O	11:s9:107:ARG:HG2	2.15	0.47
13:c1:38:ALA:HB2	13:c1:60:PHE:CD1	2.50	0.47
14:c2:29:LYS:HE2	14:c2:100:TRP:NE1	2.29	0.47
26:d4:10:ARG:HB2	26:d4:24:VAL:HB	1.95	0.47
30:d8:64:ARG:HB3	30:d8:65:ARG:H	1.51	0.47
36:5:156:G:C8	49:m3:99:HIS:CD2	3.02	0.47
36:5:352:A:H61	36:5:365:A:H5"	1.79	0.47
36:5:1339:C:OP1	68:o2:61:LYS:NZ	2.33	0.47
36:5:1565:G:N2	36:5:1574:C:N3	2.61	0.47
36:5:2663:G:H2'	36:5:2664:C:O4'	2.14	0.47
36:5:3215:A:O5'	50:m4:121:MET:HE1	2.13	0.47
37:7:89:G:N2	37:7:91:G:H3'	2.29	0.47
46:l9:71:VAL:O	46:l9:75:VAL:HG23	2.14	0.47
53:m7:70:THR:HG21	53:m7:81:ALA:HB3	1.96	0.47
56:n0:26:ARG:HH11	57:n1:150:THR:HG21	1.79	0.47
62:n6:5:SER:C	62:n6:7:ASP:N	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:q3:29:LEU:O	79:q3:33:GLN:HG2	2.15	0.47
84:B:76:8AN:H8	86:B:3401:SPS:H81	1.96	0.47
1:2:38:C:C2'	1:2:39:A:H5'	2.44	0.47
1:2:140:A:H61	1:2:281:G:H5"	1.79	0.47
1:2:576:G:OP2	35:SM:102:THR:HG21	2.14	0.47
1:2:883:C:H2'	1:2:884:A:H8	1.78	0.47
1:2:1390:U:OP1	19:C7:5:ARG:HD2	2.15	0.47
1:2:1609:U:OP2	18:C6:14:LYS:NZ	2.47	0.47
1:2:1621:U:H2'	1:2:1622:G:C8	2.49	0.47
1:2:1694:A:O2'	60:N4:98:PRO:O	2.32	0.47
4:S2:113:LEU:HB2	4:S2:215:PHE:CD1	2.50	0.47
36:1:114:A:H2'	36:1:115:A:O4'	2.14	0.47
36:1:381:U:H2'	36:1:382:U:H6	1.78	0.47
36:1:996:A:H2'	36:1:997:A:O4'	2.14	0.47
36:1:2221:G:N2	36:1:2223:A:H3'	2.29	0.47
36:1:2510:U:HO2'	36:1:2511:A:H8	1.62	0.47
39:L2:79:ASN:ND2	39:L2:165:VAL:HG22	2.30	0.47
40:L3:316:GLU:HG3	40:L3:318:LYS:HE3	1.95	0.47
52:M6:88:VAL:O	52:M6:90:HIS:N	2.48	0.47
61:N5:82:LEU:HD12	61:N5:126:LEU:HD21	1.96	0.47
1:6:143:G:N7	8:s6:177:ARG:NH2	2.62	0.47
1:6:380:U:C2	11:s9:5:PRO:HG3	2.50	0.47
1:6:765:G:N1	11:s9:146:PHE:HZ	2.13	0.47
1:6:1236:A:H61	1:6:1249:U:H3	1.61	0.47
1:6:1394:G:H2'	1:6:1395:G:H8	1.79	0.47
5:s3:11:LEU:HD12	22:d0:86:ILE:HG12	1.95	0.47
5:s3:25:PHE:HD2	5:s3:37:VAL:HG11	1.80	0.47
7:s5:62:VAL:HG13	7:s5:89:ILE:HG12	1.97	0.47
11:s9:93:LEU:HA	11:s9:96:VAL:HG12	1.96	0.47
15:c3:37:ILE:HG12	15:c3:54:LEU:HD11	1.96	0.47
16:c4:67:VAL:O	16:c4:71:CYS:N	2.29	0.47
17:c5:18:ARG:NH1	20:c8:90:ASN:OD1	2.47	0.47
21:c9:28:LEU:HA	21:c9:111:ILE:HD11	1.95	0.47
21:c9:132:LEU:HA	21:c9:135:ILE:HD11	1.96	0.47
23:d1:38:LYS:HG3	23:d1:51:VAL:HG23	1.96	0.47
24:d2:77:PRO:HD2	24:d2:79:PHE:CZ	2.49	0.47
36:5:193:C:H2'	36:5:194:U:H6	1.79	0.47
36:5:1481:A:O2'	36:5:1482:A:O5'	2.32	0.47
36:5:1493:G:O6	75:o9:2:ALA:N	2.47	0.47
36:5:1651:U:H3	36:5:1804:A:H61	1.62	0.47
36:5:2213:A:N1	36:5:2429:G:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2406:C:H2'	36:5:2407:C:C6	2.49	0.47
36:5:2987:A:H2'	36:5:2988:C:C6	2.49	0.47
41:l4:28:ALA:HB2	41:l4:276:LEU:HD22	1.95	0.47
46:l9:112:ILE:N	46:l9:126:VAL:O	2.34	0.47
47:m0:196:PHE:CG	47:m0:197:VAL:N	2.82	0.47
55:m9:41:ILE:O	55:m9:45:VAL:HG23	2.14	0.47
63:n7:110:ALA:O	63:n7:114:VAL:HG23	2.14	0.47
66:o0:66:LYS:HD2	66:o0:66:LYS:H	1.79	0.47
70:o4:74:ARG:HG2	70:o4:75:ALA:H	1.78	0.47
71:o5:34:GLN:HB3	71:o5:38:ARG:HH11	1.79	0.47
74:o8:24:THR:HG23	74:o8:44:LYS:HB2	1.95	0.47
1:2:67:A:O2'	1:2:69:G:OP1	2.21	0.47
1:2:702:G:O6	1:2:737:A:N6	2.47	0.47
1:2:1592:A:H2'	1:2:1593:A:C8	2.50	0.47
2:S0:71:GLU:O	2:S0:96:THR:HG22	2.14	0.47
2:S0:88:LYS:NZ	19:C7:82:ASP:OD2	2.38	0.47
13:C1:125:VAL:HG12	13:C1:139:VAL:HA	1.96	0.47
36:1:61:A:H2'	36:1:62:A:O4'	2.14	0.47
36:1:544:C:H1'	36:1:548:G:H22	1.78	0.47
36:1:748:U:H2'	36:1:749:C:C6	2.50	0.47
36:1:1033:U:H2'	36:1:1034:U:C6	2.49	0.47
36:1:1109:U:H2'	36:1:1110:U:C6	2.48	0.47
36:1:1562:C:HO2'	36:1:1563:C:C5'	2.27	0.47
36:1:1699:A:H2'	36:1:1700:G:C8	2.49	0.47
36:1:2218:G:H2'	36:1:2219:A:C8	2.49	0.47
36:1:2659:G:H4'	36:1:2751:G:O2'	2.13	0.47
36:1:2837:A:OP2	36:1:2837:A:H8	1.97	0.47
39:L2:149:ARG:HH22	39:L2:155:LYS:HE2	1.77	0.47
50:M4:36:VAL:HG11	50:M4:55:ARG:NH2	2.29	0.47
51:M5:17:ASP:OD2	51:M5:17:ASP:N	2.41	0.47
51:M5:58:GLY:HA3	51:M5:142:ILE:CD1	2.45	0.47
79:Q3:38:ASP:OD1	79:Q3:45:LYS:HB3	2.13	0.47
1:6:718:U:H5'	1:6:719:U:H5	1.80	0.47
1:6:1286:U:O4	1:6:1287:A:N6	2.46	0.47
1:6:1584:G:H22	1:6:1611:A:P	2.37	0.47
1:6:1645:G:H1	1:6:1756[A]:A:N6	2.12	0.47
4:s2:49:LYS:HE3	4:s2:246:GLU:OE1	2.15	0.47
7:s5:92:ARG:NH2	7:s5:169:ASN:OD1	2.48	0.47
15:c3:72:MET:HE2	15:c3:72:MET:HB3	1.84	0.47
15:c3:136:PRO:O	15:c3:138:ASN:N	2.47	0.47
23:d1:81:ASN:OD1	23:d1:81:ASN:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:d3:90:ASP:OD2	32:e0:12:GLY:HA2	2.14	0.47
29:d7:49:HIS:HE1	29:d7:70:LYS:HG2	1.79	0.47
36:5:771:A:H2'	36:5:772:U:O4'	2.15	0.47
36:5:798:G:O2'	49:m3:14:PHE:O	2.25	0.47
36:5:1114:U:C4	36:5:1115:G:N7	2.82	0.47
36:5:1307:G:C2	36:5:1308:A:C2	3.03	0.47
36:5:2367:A:H2'	36:5:2368:A:C8	2.49	0.47
36:5:2773:C:H2'	36:5:2774:C:H6	1.78	0.47
39:l2:149:ARG:HH12	39:l2:253:GLN:CB	2.27	0.47
40:l3:347:SER:HB2	40:l3:350:ALA:CB	2.45	0.47
53:m7:71:ALA:O	53:m7:74:LYS:HB2	2.13	0.47
54:m8:25:TYR:HA	54:m8:28:LEU:HD12	1.95	0.47
57:n1:122:GLN:HB2	57:n1:124:VAL:HG22	1.97	0.47
1:2:225:A:H2'	1:2:226:A:O4'	2.15	0.47
1:2:338:C:H1'	10:S8:5:ARG:HB3	1.96	0.47
1:2:777:C:N4	26:D4:10:ARG:HB3	2.30	0.47
1:2:973:A:H2'	1:2:974:A:H8	1.79	0.47
24:D2:53:ILE:HG12	24:D2:60:LYS:HB2	1.96	0.47
36:1:168:U:H2'	36:1:169:U:H6	1.78	0.47
36:1:563:U:H2'	36:1:564:G:C8	2.48	0.47
36:1:979:U:H1'	36:1:980:A:C4	2.49	0.47
36:1:1507:G:N7	53:M7:129:THR:HG23	2.29	0.47
36:1:1549:U:H2'	36:1:1550:C:C6	2.49	0.47
36:1:2593:A:H4'	36:1:2594:C:O5'	2.14	0.47
36:1:2611:U:H2'	36:1:2612:U:C6	2.50	0.47
37:3:54:U:H4'	37:3:55:A:O5'	2.14	0.47
45:L8:78:PHE:C	45:L8:80:TYR:N	2.72	0.47
49:M3:10:LEU:HD23	54:M8:166:LEU:HD11	1.97	0.47
53:M7:25:SER:HB3	53:M7:28:ASN:HB2	1.95	0.47
56:N0:77:VAL:HG11	56:N0:106:LEU:CD1	2.44	0.47
56:N0:106:LEU:HD23	56:N0:110:MET:HG2	1.96	0.47
59:N3:79:VAL:HB	59:N3:118:VAL:HG13	1.95	0.47
63:N7:38:PHE:O	63:N7:40:HIS:ND1	2.36	0.47
67:O1:23:VAL:HB	67:O1:28:ARG:HG2	1.97	0.47
1:6:546:U:H2'	1:6:547:U:C6	2.50	0.47
1:6:780:A:O2'	26:d4:8:ARG:HB3	2.15	0.47
1:6:1133:A:H2'	1:6:1134:C:O4'	2.14	0.47
1:6:1340:U:O4	18:c6:9:THR:HA	2.14	0.47
1:6:1459:C:OP2	20:c8:138:THR:OG1	2.26	0.47
1:6:1503:A:H2'	1:6:1504:G:O4'	2.14	0.47
3:s1:51:SER:HB3	3:s1:57:ALA:N	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:c1:105:LYS:HD3	13:c1:105:LYS:HA	1.68	0.47
15:c3:15:ALA:HB2	29:d7:20:LYS:HG3	1.96	0.47
26:d4:57:VAL:HB	26:d4:60:PHE:HE2	1.80	0.47
28:d6:10:ARG:HH22	28:d6:35:ALA:C	2.23	0.47
29:d7:37:CYS:HB2	29:d7:40:CYS:HB2	1.95	0.47
36:5:18:G:N2	38:8:142:C:C2	2.83	0.47
36:5:27:C:H1'	36:5:328:U:H1'	1.95	0.47
36:5:1528:G:H1	36:5:1832:C:N4	2.12	0.47
36:5:2943:G:H2'	36:5:2944:U:O4'	2.15	0.47
38:8:37:A:H5"	38:8:39:G:O4'	2.15	0.47
42:l5:208:MET:HE3	42:l5:223:PHE:CD2	2.50	0.47
43:l6:43:LEU:HD21	43:l6:85:ILE:HG13	1.96	0.47
51:m5:7:LEU:HD23	51:m5:46:ASP:HB3	1.97	0.47
53:m7:18:ARG:HG2	53:m7:147:GLU:HB3	1.97	0.47
65:n9:24:PRO:HB2	65:n9:26:THR:HG23	1.96	0.47
68:o2:19:ARG:HE	68:o2:33:ARG:CB	2.28	0.47
83:f:50:GLY:C	83:f:52:HIS:H	2.21	0.47
1:2:229:U:H3	1:2:236:A:N6	2.10	0.47
1:2:780:A:H8	26:D4:8:ARG:HB3	1.78	0.47
1:2:1066:C:H1'	3:S1:146:GLN:HG2	1.95	0.47
1:2:1525:A:OP1	21:C9:93:HIS:ND1	2.48	0.47
3:S1:140:ILE:HG22	3:S1:213:ARG:HB2	1.96	0.47
4:S2:121:VAL:O	4:S2:125:ILE:HG13	2.15	0.47
25:D3:74:VAL:HG11	25:D3:104:LEU:HD11	1.96	0.47
34:SR:73:LEU:HD23	34:SR:80:ALA:HA	1.96	0.47
34:SR:84:SER:OG	34:SR:85:TRP:N	2.48	0.47
36:1:63:A:N3	36:1:78:U:O2'	2.39	0.47
36:1:88:A:H61	36:1:98:G:H1'	1.80	0.47
36:1:549:U:H2'	36:1:550:A:C8	2.49	0.47
36:1:841:A:H5'	55:M9:125:LYS:O	2.15	0.47
36:1:911:C:N4	39:L2:3:ARG:HD3	2.29	0.47
36:1:1611:G:H2'	36:1:1612:A:H8	1.78	0.47
36:1:1615:C:H2'	36:1:1616:U:H6	1.80	0.47
36:1:2563:G:OP1	45:L8:27:THR:OG1	2.27	0.47
36:1:2878:G:H2'	36:1:2879:C:C6	2.50	0.47
40:L3:345:ASN:OD1	40:L3:347:SER:HB2	2.14	0.47
41:L4:82:THR:O	41:L4:82:THR:OG1	2.33	0.47
43:L6:102:ASN:ND2	43:L6:104:GLU:HB2	2.29	0.47
51:M5:21:PHE:O	51:M5:25:VAL:HG23	2.15	0.47
59:N3:93:LEU:HD23	59:N3:93:LEU:H	1.79	0.47
1:6:152:U:O2	8:s6:4:ASN:ND2	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:197:A:H2'	1:6:198:A:C8	2.50	0.47
1:6:291:G:H2'	1:6:292:U:C5	2.49	0.47
1:6:1112:G:O2'	1:6:1133:A:N6	2.39	0.47
1:6:1558:U:OP1	20:c8:122:HIS:ND1	2.44	0.47
4:s2:88:LYS:HD3	4:s2:89:GLN:H	1.80	0.47
5:s3:20:GLU:OE2	5:s3:76:ARG:NH2	2.48	0.47
5:s3:135:GLU:HG3	5:s3:153:ALA:HB2	1.96	0.47
7:s5:151:GLY:HA3	7:s5:156:ARG:H	1.80	0.47
13:c1:55:ASP:HB3	13:c1:58:CYS:HB2	1.96	0.47
15:c3:91:LEU:HB3	15:c3:122:ILE:HG12	1.97	0.47
36:5:129:U:H2'	36:5:130:A:C8	2.50	0.47
36:5:500:C:H5"	43:l6:82:ARG:HG3	1.97	0.47
36:5:1001:G:N3	36:5:1041:U:H5'	2.30	0.47
36:5:1627:U:H2'	36:5:1814:A:N6	2.29	0.47
36:5:1856:C:H2'	36:5:1857:C:H6	1.80	0.47
36:5:2726:C:C2	36:5:2728:G:C2	3.03	0.47
36:5:3060:C:H1'	36:5:3332:U:H1'	1.97	0.47
37:7:46:A:P	42:l5:158:ARG:HH21	2.38	0.47
40:l3:44:THR:O	40:l3:340:LYS:HG2	2.15	0.47
41:l4:36:HIS:HD2	41:l4:242:ALA:HB1	1.78	0.47
41:l4:120:TYR:O	41:l4:120:TYR:HD1	1.98	0.47
44:l7:232:ARG:HD2	44:l7:236:ILE:HA	1.96	0.47
50:m4:116:GLU:HG3	52:m6:197:LEU:HD23	1.96	0.47
55:m9:153:LYS:HA	55:m9:156:ASN:HB2	1.96	0.47
59:n3:58:VAL:HG22	59:n3:76:ALA:HB3	1.97	0.47
63:n7:27:LYS:HB3	63:n7:42:LEU:HD13	1.96	0.47
65:n9:21:ILE:O	65:n9:22:LYS:NZ	2.42	0.47
67:o1:20:LEU:O	67:o1:28:ARG:NH2	2.48	0.47
82:p1:29:UNK:O	82:p1:31:UNK:N	2.47	0.47
83:f:99:PHE:HB3	83:f:114:LYS:HB3	1.96	0.47
1:2:180:A:H2'	1:2:181:A:O4'	2.14	0.47
1:2:434:G:OP1	25:D3:78:LYS:HA	2.15	0.47
1:2:728:U:O2	1:2:728:U:H2'	2.13	0.47
1:2:1119:G:H2'	1:2:1120:U:C6	2.50	0.47
1:2:1140:G:H2'	1:2:1141:G:H8	1.79	0.47
1:2:1237:G:H2'	1:2:1238:A:H8	1.80	0.47
1:2:1352:G:H1	1:2:1373:C:H42	1.62	0.47
1:2:1429:G:C1'	22:D0:74:GLU:HG2	2.45	0.47
1:2:1458:G:H5"	1:2:1459:C:OP2	2.14	0.47
1:2:1469:A:H4'	1:2:1541:G:H4'	1.97	0.47
1:2:1653:C:N4	1:2:1654:G:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S3:191:ASP:HA	5:S3:192:PRO:HD2	1.81	0.47
8:S6:7:TYR:HD2	8:S6:8:PRO:HD2	1.80	0.47
9:S7:31:SER:HB2	9:S7:32:PRO:HD3	1.96	0.47
11:S9:32:GLY:HA3	32:E0:40:TYR:CG	2.50	0.47
12:C0:27:PHE:CD1	12:C0:40:LEU:HD23	2.50	0.47
17:C5:28:MET:O	17:C5:32:ASP:HB2	2.15	0.47
21:C9:34:VAL:HG23	21:C9:53:TRP:HE1	1.78	0.47
25:D3:53:VAL:HG13	25:D3:72:VAL:HB	1.95	0.47
26:D4:124:ARG:HB3	26:D4:124:ARG:HH11	1.80	0.47
29:D7:35:VAL:HG22	29:D7:79:PHE:HB3	1.96	0.47
30:D8:13:ILE:HG23	30:D8:30:VAL:HA	1.95	0.47
33:E1:126:CYS:O	33:E1:128:ALA:N	2.47	0.47
34:SR:60:SER:HB3	34:SR:62:LYS:HE3	1.97	0.47
36:1:25:U:H4'	36:1:26:A:N7	2.30	0.47
36:1:307:A:H2'	36:1:308:A:C8	2.49	0.47
36:1:308:A:H5'	36:1:2223:A:H1'	1.95	0.47
36:1:339:C:OP1	36:1:1380:G:O2'	2.27	0.47
36:1:1391:C:C2	68:O2:103:LYS:HD3	2.50	0.47
36:1:1482:A:N7	36:1:1866:C:O2'	2.45	0.47
36:1:1611:G:H2'	36:1:1612:A:C8	2.49	0.47
36:1:1621:A:H2'	36:1:1622:U:C6	2.50	0.47
36:1:2107:A:C2	36:1:3344:A:H8	2.32	0.47
36:1:2225:U:H2'	36:1:2226:U:C6	2.50	0.47
36:1:2270:A:H2'	36:1:2271:A:C8	2.50	0.47
36:1:2355:G:H5'	53:M7:139:TYR:CE1	2.50	0.47
36:1:2534:G:H22	36:1:2545:C:N4	2.12	0.47
36:1:2585:G:N7	45:L8:47:SER:OG	2.48	0.47
36:1:2616:C:H2'	36:1:2617:U:H5'	1.95	0.47
40:L3:188:ILE:O	40:L3:192:VAL:HG12	2.15	0.47
44:L7:121:LYS:CB	57:N1:133:ALA:HB3	2.45	0.47
47:M0:52:LEU:HB2	47:M0:152:LEU:HD22	1.96	0.47
50:M4:39:ILE:HB	50:M4:43:LYS:HB3	1.96	0.47
72:O6:89:GLU:O	72:O6:93:ILE:HG12	2.13	0.47
73:O7:17:THR:HG22	73:O7:18:LEU:N	2.29	0.47
78:Q2:59:HIS:O	78:Q2:61:LYS:N	2.41	0.47
79:Q3:88:GLU:HA	79:Q3:91:GLU:HG2	1.95	0.47
1:6:260:U:O2'	1:6:261:U:OP1	2.28	0.47
1:6:804:A:C8	24:d2:107:SER:HA	2.49	0.47
1:6:1091:A:H4'	1:6:1092:A:O5'	2.14	0.47
1:6:1258:U:H4'	12:c0:2:LEU:HD22	1.97	0.47
1:6:1288:G:N7	1:6:1314:U:O2'	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1532:U:H2'	1:6:1533:C:O4'	2.15	0.47
5:s3:225:TYR:N	34:sR:189:GLU:O	2.46	0.47
6:s4:86:PHE:HE2	6:s4:102:VAL:HG23	1.79	0.47
6:s4:136:VAL:HG21	6:s4:148:ARG:HH12	1.79	0.47
6:s4:151:ASP:HB3	6:s4:154:ILE:HG13	1.97	0.47
20:c8:35:ILE:HB	20:c8:38:VAL:CG1	2.45	0.47
22:d0:20:ILE:HD12	22:d0:100:VAL:HG21	1.96	0.47
27:d5:62:VAL:O	27:d5:66:VAL:HG23	2.14	0.47
36:5:91:G:N7	36:5:93:C:C2	2.82	0.47
36:5:191:U:H2'	36:5:192:C:C6	2.49	0.47
36:5:717:C:OP1	36:5:751:A:O2'	2.31	0.47
36:5:998:A:O2'	37:7:103:A:N3	2.45	0.47
36:5:1018:G:H2'	36:5:1019:G:O4'	2.15	0.47
36:5:1062:A:H4'	57:n1:105:PHE:CE2	2.50	0.47
36:5:1333:C:H1'	44:l7:209:ASN:HD22	1.79	0.47
36:5:1566:A:H2'	36:5:1567:U:H5'	1.95	0.47
36:5:1709:C:OP1	70:o4:83:ASN:ND2	2.45	0.47
36:5:1944:U:H2'	36:5:1945:A:C8	2.49	0.47
36:5:2144:A:H1'	36:5:2281:A:N6	2.30	0.47
36:5:2631:U:H4'	36:5:2697:A:C2	2.50	0.47
36:5:3147:G:H4'	40:l3:102:LEU:O	2.15	0.47
36:5:3259:U:H5"	36:5:3261:C:H5	1.80	0.47
37:7:121:U:H5'	42:l5:260:PHE:CE2	2.48	0.47
38:8:136:G:OP1	61:n5:48:SER:OG	2.20	0.47
41:l4:186:LYS:O	41:l4:200:THR:N	2.48	0.47
41:l4:207:VAL:HB	41:l4:227:THR:HG22	1.97	0.47
42:l5:290:ILE:O	42:l5:294:ALA:N	2.47	0.47
43:l6:82:ARG:NH1	69:o3:105:SER:O	2.48	0.47
45:l8:34:PHE:H	45:l8:39:ALA:HB3	1.79	0.47
47:m0:29:SER:HB2	47:m0:125:LEU:HD12	1.96	0.47
47:m0:99:ILE:HG23	47:m0:123:HIS:CG	2.50	0.47
54:m8:94:PHE:O	54:m8:96:PHE:N	2.47	0.47
54:m8:178:ARG:HD3	64:n8:50:PRO:O	2.15	0.47
57:n1:13:TYR:O	57:n1:16:GLN:HB2	2.15	0.47
59:n3:18:PRO:HA	59:n3:51:ALA:HA	1.96	0.47
59:n3:104:ASN:ND2	59:n3:108:GLU:HB2	2.30	0.47
60:n4:65:GLU:HA	60:n4:68:ALA:HB3	1.95	0.47
60:n4:79:GLN:HG3	60:n4:80:ARG:H	1.80	0.47
68:o2:40:SER:O	68:o2:44:ARG:HG3	2.15	0.47
75:o9:28:ARG:HD3	75:o9:36:ARG:O	2.15	0.47
79:q3:87:ARG:O	79:q3:90:VAL:HG22	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:68:A:OP2	8:S6:171:LYS:NZ	2.48	0.47
1:2:340:U:H2'	1:2:341:A:H8	1.79	0.47
1:2:1753:A:C6	1:2:1754:A:C6	3.03	0.47
2:S0:117:GLU:O	4:S2:40:LYS:NZ	2.48	0.47
16:C4:19:ILE:HG23	16:C4:28:VAL:HG22	1.96	0.47
16:C4:127:ARG:HD2	28:D6:22:ARG:HH12	1.78	0.47
25:D3:130:VAL:HG21	25:D3:135:LEU:HD21	1.97	0.47
34:SR:110:VAL:HA	34:SR:126:SER:HB2	1.96	0.47
36:1:2747:A:H5'	42:L5:175:HIS:HA	1.96	0.47
36:1:3112:G:O2'	46:L9:70:THR:HB	2.15	0.47
38:4:151:C:C5	61:N5:24:LEU:HD11	2.50	0.47
44:L7:39:GLU:O	44:L7:42:ALA:HB3	2.15	0.47
44:L7:156:ILE:O	44:L7:159:GLN:HB2	2.15	0.47
49:M3:18:TRP:O	49:M3:20:GLU:N	2.47	0.47
59:N3:93:LEU:HB2	60:N4:20:LEU:HD22	1.97	0.47
61:N5:71:THR:O	61:N5:75:LYS:HG2	2.15	0.47
72:O6:95:ALA:O	72:O6:100:HIS:ND1	2.32	0.47
1:6:1:U:O2'	1:6:370:A:H5'	2.15	0.47
1:6:359:A:C2	25:d3:38:PHE:HB3	2.50	0.47
1:6:481:A:H61	1:6:507:U:H3	1.63	0.47
1:6:718:U:H5'	1:6:719:U:C5	2.50	0.47
1:6:1315:U:H2'	1:6:1316:G:O4'	2.15	0.47
1:6:1776:A:H2'	1:6:1777:G:H8	1.80	0.47
6:s4:252:ARG:HB3	6:s4:252:ARG:HH21	1.79	0.47
7:s5:51:VAL:HG13	7:s5:131:GLN:HB2	1.96	0.47
7:s5:58:LEU:HD21	7:s5:167:ARG:NE	2.30	0.47
10:s8:20:GLN:NE2	10:s8:22:ARG:O	2.48	0.47
10:s8:172:ARG:O	10:s8:176:SER:N	2.48	0.47
24:d2:67:GLY:O	24:d2:69:LEU:N	2.48	0.47
36:5:188:U:H1'	36:5:208:C:H1'	1.97	0.47
36:5:856:G:C6	36:5:857:G:N1	2.83	0.47
36:5:913:A:H2	36:5:2134:G:N3	2.13	0.47
36:5:1108:U:H2'	36:5:1109:U:C6	2.50	0.47
36:5:1565:G:H2'	36:5:1566:A:O4'	2.15	0.47
36:5:2418:G:H4'	36:5:2419:A:OP2	2.12	0.47
36:5:2795:U:OP2	78:q2:63:LYS:HD3	2.15	0.47
37:7:3:U:H2'	37:7:4:U:C6	2.50	0.47
40:l3:41:VAL:HG22	40:l3:185:GLY:HA3	1.97	0.47
41:l4:299:ILE:HD12	54:m8:39:ARG:HB2	1.96	0.47
41:l4:330:TYR:CZ	44:l7:49:ALA:HA	2.50	0.47
47:m0:28:ASP:N	47:m0:28:ASP:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:m5:85:THR:HA	78:q2:50:PHE:O	2.14	0.47
64:n8:84:GLU:O	64:n8:87:ARG:HB2	2.15	0.47
64:n8:128:ARG:HB3	72:o6:8:ALA:CB	2.45	0.47
74:o8:5:ILE:HG23	74:o8:54:LEU:HB2	1.96	0.47
78:q2:9:LYS:HE3	78:q2:22:GLN:CD	2.40	0.47
1:2:292:U:H2'	1:2:293:U:C6	2.50	0.47
1:2:429:G:OP1	1:2:439:U:H5"	2.15	0.47
1:2:531:C:O2'	26:D4:64:PHE:HA	2.15	0.47
1:2:1003:A:H1'	1:2:1005:A:N7	2.30	0.47
1:2:1217:A:H5"	12:C0:44:LYS:HG3	1.96	0.47
1:2:1383:G:OP1	22:D0:89:ARG:NH1	2.45	0.47
2:S0:152:PRO:C	2:S0:154:GLU:H	2.22	0.47
5:S3:80:ALA:O	5:S3:83:THR:OG1	2.27	0.47
5:S3:141:LYS:HE3	5:S3:179:GLN:HG3	1.97	0.47
6:S4:42:LEU:N	6:S4:84:ALA:O	2.40	0.47
10:S8:184:LEU:HB3	10:S8:189:LEU:HB2	1.96	0.47
11:S9:122:VAL:O	11:S9:125:ALA:HB3	2.14	0.47
12:C0:7:ASP:O	12:C0:11:ILE:HG12	2.15	0.47
34:SR:106:HIS:CE1	34:SR:126:SER:HB3	2.49	0.47
36:1:1481:A:N1	70:O4:2:ALA:HA	2.30	0.47
36:1:2232:A:H2'	36:1:2233:A:C8	2.50	0.47
36:1:2539:C:H5'	36:1:2541:U:O4	2.15	0.47
36:1:2746:A:H2	42:L5:146:LEU:HB3	1.79	0.47
39:L2:40:TYR:HB3	39:L2:93:LYS:O	2.14	0.47
40:L3:206:ASP:N	40:L3:206:ASP:OD1	2.45	0.47
42:L5:60:ILE:HB	42:L5:80:SER:HB2	1.97	0.47
61:N5:135:ILE:O	61:N5:139:ILE:HG22	2.14	0.47
66:O0:30:THR:HA	66:O0:33:SER:HB3	1.96	0.47
66:O0:40:LYS:HB3	66:O0:101:LEU:HD11	1.97	0.47
67:O1:55:LEU:HD23	67:O1:95:PRO:HB3	1.95	0.47
1:6:834:G:H3'	1:6:835:U:C5	2.50	0.47
1:6:1383:G:OP1	22:d0:89:ARG:NH2	2.40	0.47
1:6:1474:G:H2'	1:6:1475:A:H8	1.79	0.47
2:s0:71:GLU:HA	2:s0:94:GLY:C	2.40	0.47
6:s4:49:ARG:HG3	6:s4:50:ASN:N	2.30	0.47
14:c2:54:ARG:HD3	14:c2:56:GLU:CD	2.39	0.47
25:d3:65:ASN:ND2	25:d3:116:ASP:OD1	2.46	0.47
36:5:269:G:H5'	51:m5:120:TRP:CE3	2.50	0.47
36:5:770:G:OP1	49:m3:171:ARG:HD3	2.15	0.47
36:5:850:U:H2'	36:5:851:C:C6	2.50	0.47
36:5:1899:G:O2'	36:5:2334:U:O4	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2570:U:O3'	36:5:2572:C:N4	2.48	0.47
36:5:2707:C:H2'	36:5:2708:C:H6	1.80	0.47
36:5:3288:G:H1'	36:5:3289:G:H5'	1.96	0.47
40:l3:84:VAL:HG23	40:l3:163:HIS:O	2.15	0.47
40:l3:169:THR:HA	40:l3:170:PRO:HD2	1.62	0.47
46:l9:166:ARG:HH21	46:l9:168:ARG:HH12	1.63	0.47
49:m3:123:ILE:HG22	71:o5:118:ILE:HG12	1.97	0.47
51:m5:36:ILE:HD13	51:m5:106:VAL:HG12	1.97	0.47
51:m5:45:PRO:O	51:m5:49:ARG:HB2	2.14	0.47
53:m7:70:THR:HG23	53:m7:73:GLY:H	1.79	0.47
61:n5:48:SER:OG	61:n5:49:LYS:N	2.48	0.47
63:n7:46:ILE:HD12	63:n7:69:LYS:O	2.14	0.47
1:2:1291:G:C2	1:2:1325:A:C2	3.03	0.47
2:S0:76:ILE:HD13	2:S0:98:ILE:HB	1.97	0.47
2:S0:180:GLU:HG3	2:S0:184:LEU:HD23	1.97	0.47
3:S1:28:GLU:OE2	3:S1:94:LYS:NZ	2.32	0.47
6:S4:148:ARG:HH11	8:S6:201:GLN:HG3	1.80	0.47
14:C2:97:LEU:HA	14:C2:100:TRP:CE3	2.50	0.47
36:1:194:U:H2'	36:1:195:U:H6	1.79	0.47
36:1:297:G:OP2	36:1:297:G:N2	2.45	0.47
36:1:790:U:H2'	36:1:791:A:O4'	2.16	0.47
36:1:838:G:H2'	36:1:839:C:O4'	2.15	0.47
36:1:1157:G:H2'	36:1:1158:A:O4'	2.15	0.47
36:1:1420:C:OP2	41:L4:193:LYS:NZ	2.30	0.47
36:1:1658:G:H2'	36:1:1659:U:H6	1.80	0.47
37:3:8:G:OP2	42:L5:30:TYR:OH	2.24	0.47
37:3:12:U:OP2	37:3:68:C:O2'	2.32	0.47
42:L5:131:LEU:HD13	42:L5:131:LEU:HA	1.81	0.47
45:L8:122:LYS:C	45:L8:124:ASP:H	2.21	0.47
47:M0:47:PRO:HB3	47:M0:171:TRP:CZ2	2.49	0.47
48:M1:101:ASN:HB3	48:M1:130:VAL:HA	1.97	0.47
51:M5:21:PHE:HD2	51:M5:22:LEU:HD13	1.80	0.47
55:M9:132:PHE:CD1	55:M9:138:LEU:HG	2.50	0.47
63:N7:4:PHE:CD2	66:O0:63:SER:HB3	2.50	0.47
63:N7:46:ILE:HD11	63:N7:48:ARG:C	2.40	0.47
65:N9:15:LYS:O	65:N9:18:ARG:HB2	2.15	0.47
74:O8:5:ILE:HD11	74:O8:10:GLN:CD	2.40	0.47
1:6:90:C:O2'	1:6:451:A:H5"	2.14	0.47
1:6:513:U:H5'	11:s9:133:HIS:NE2	2.30	0.47
1:6:737:A:H2'	1:6:738:G:O4'	2.15	0.47
1:6:831:U:O2'	1:6:832:U:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1126:G:OP1	77:q1:15:ARG:NH2	2.47	0.47
1:6:1251:U:H4'	33:e1:133:ALA:HB1	1.97	0.47
4:s2:238:SER:HA	4:s2:239:PRO:HD2	1.71	0.47
7:s5:51:VAL:HG11	7:s5:130:ILE:HG23	1.97	0.47
16:c4:85:ALA:H	16:c4:119:THR:HG22	1.80	0.47
18:c6:45:ARG:O	18:c6:48:VAL:HG12	2.15	0.47
21:c9:57:ARG:HB2	21:c9:57:ARG:HH11	1.78	0.47
24:d2:5:SER:C	24:d2:7:LEU:N	2.73	0.47
24:d2:7:LEU:HD11	24:d2:37:PHE:CD2	2.50	0.47
25:d3:62:LYS:HE3	25:d3:116:ASP:HA	1.96	0.47
26:d4:80:ALA:HA	26:d4:83:LYS:HB2	1.95	0.47
30:d8:54:LEU:HD12	30:d8:55:VAL:H	1.80	0.47
36:5:23:A:H2'	36:5:24:G:H8	1.80	0.47
36:5:1159:A:H5'	44:l7:92:ILE:HD11	1.96	0.47
36:5:1571:A:H1'	36:5:1572:U:C6	2.50	0.47
36:5:1786:G:H2'	36:5:1787:A:C8	2.50	0.47
36:5:2171:G:H2'	36:5:2172:A:H8	1.80	0.47
40:l3:105:VAL:HG21	40:l3:148:LEU:HD13	1.97	0.47
41:l4:22:LEU:HD11	41:l4:26:PHE:HB2	1.96	0.47
44:l7:166:ASN:HA	44:l7:169:ILE:HD12	1.96	0.47
44:l7:184:LEU:O	44:l7:188:ILE:HG12	2.14	0.47
47:m0:207:GLU:HB3	47:m0:211:ARG:HH22	1.80	0.47
54:m8:153:PHE:O	54:m8:161:LYS:HG2	2.15	0.47
70:o4:96:GLU:O	70:o4:99:LYS:HB2	2.15	0.47
71:o5:21:LEU:HD22	71:o5:25:LYS:HG3	1.96	0.47
1:2:1358:G:H2'	1:2:1359:C:C6	2.50	0.46
1:2:1433:G:H2'	1:2:1434:U:H6	1.80	0.46
1:2:1511:U:H2'	1:2:1512:G:H8	1.77	0.46
1:2:1528:U:H2'	1:2:1529:C:C6	2.50	0.46
5:S3:222:VAL:HG21	34:SR:229:LYS:HA	1.96	0.46
17:C5:119:PHE:HE1	20:C8:121:ALA:HB2	1.80	0.46
18:C6:89:LEU:HG	18:C6:105:LEU:HD23	1.97	0.46
21:C9:135:ILE:O	21:C9:139:THR:OG1	2.32	0.46
36:1:595:G:H2'	36:1:596:C:C6	2.50	0.46
36:1:1145:G:OP1	68:O2:44:ARG:NH1	2.47	0.46
36:1:1488:G:O2'	70:O4:10:ARG:O	2.33	0.46
36:1:2993:G:H2'	36:1:3142:A:N6	2.30	0.46
36:1:3069:G:H2'	36:1:3070:A:H8	1.80	0.46
36:1:3308:C:O2	53:M7:69:ARG:HD2	2.16	0.46
39:L2:65:ASP:HA	39:L2:66:PRO:HD3	1.81	0.46
40:L3:227:GLU:HG2	40:L3:270:ARG:HD3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L4:293:SER:O	41:L4:297:SER:OG	2.16	0.46
45:L8:64:ILE:O	45:L8:68:ARG:HG2	2.16	0.46
47:M0:193:ASP:OD2	47:M0:194:GLY:N	2.42	0.46
52:M6:27:LEU:HD21	52:M6:102:LEU:HB2	1.96	0.46
55:M9:81:ARG:HG3	55:M9:88:ARG:CZ	2.45	0.46
65:N9:7:HIS:CG	65:N9:8:THR:N	2.82	0.46
67:O1:19:ARG:HD3	67:O1:35:GLU:HG3	1.96	0.46
70:O4:95:ILE:O	70:O4:99:LYS:HB2	2.15	0.46
72:O6:57:LEU:HD11	72:O6:73:ALA:HB2	1.97	0.46
1:6:393:C:H4'	1:6:1673:G:O2'	2.15	0.46
1:6:820:U:O2'	1:6:821:U:O5'	2.30	0.46
1:6:862:A:C2	1:6:963:A:C4	3.03	0.46
7:s5:144:GLU:CD	30:d8:57:MET:HG3	2.40	0.46
8:s6:48:TYR:CD2	8:s6:117:GLY:HA3	2.50	0.46
12:c0:6:GLU:OE2	12:c0:6:GLU:N	2.46	0.46
15:c3:46:THR:OG1	15:c3:49:GLN:HG2	2.15	0.46
36:5:547:G:C5	36:5:548:G:H1'	2.50	0.46
36:5:1333:C:H1'	44:l7:209:ASN:ND2	2.31	0.46
36:5:1597:C:H5'	36:5:1696:A:H1'	1.96	0.46
36:5:1715:A:H4'	36:5:1716:U:H3'	1.97	0.46
36:5:2105:G:H2'	36:5:2106:A:C8	2.46	0.46
36:5:2318:U:C4	36:5:2319:U:C4	3.03	0.46
36:5:2350:C:H4'	36:5:3308:C:O2'	2.16	0.46
36:5:2741:C:O2	78:q2:20:HIS:HE1	1.98	0.46
39:l2:117:GLU:OE1	39:l2:163:ARG:NH2	2.48	0.46
56:n0:27:MET:HE1	56:n0:44:PHE:CD2	2.50	0.46
60:n4:89:LEU:HD21	60:n4:93:ARG:HE	1.80	0.46
63:n7:111:LYS:O	63:n7:115:LYS:N	2.43	0.46
1:2:18:C:H2'	1:2:19:A:H8	1.80	0.46
1:2:400:A:H5"	10:S8:25:ARG:HA	1.97	0.46
1:2:832:U:H2'	1:2:833:U:O4'	2.14	0.46
1:2:1178:G:C2	1:2:1462:G:C5	3.03	0.46
1:2:1276:U:OP1	5:S3:146:ARG:HD3	2.15	0.46
2:S0:101:ARG:HH12	2:S0:104:PRO:HD3	1.80	0.46
14:C2:81:ASP:HA	14:C2:82:PRO:HD3	1.80	0.46
18:C6:18:ALA:HB2	18:C6:69:VAL:HG13	1.97	0.46
30:D8:12:VAL:HB	30:D8:52:ASP:H	1.80	0.46
36:1:1029:G:H2'	36:1:1030:A:C8	2.50	0.46
36:1:1564:U:H2'	36:1:1565:G:C8	2.50	0.46
36:1:2180:G:P	39:L2:174:ARG:HH22	2.37	0.46
36:1:3067:C:H5"	55:M9:58:HIS:CD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:3:115:G:N2	42:L5:72:ASP:O	2.39	0.46
42:L5:34:LYS:O	42:L5:38:THR:HG23	2.15	0.46
46:L9:47:LYS:NZ	50:M4:5:SER:HB2	2.29	0.46
1:6:84:A:H2'	1:6:85:A:O4'	2.15	0.46
1:6:1063:U:H2'	1:6:1064:G:C8	2.50	0.46
1:6:1218:G:OP2	12:c0:44:LYS:NZ	2.30	0.46
1:6:1688:U:H2'	1:6:1689:A:C8	2.50	0.46
2:s0:41:ARG:HG2	2:s0:47:VAL:HG23	1.98	0.46
2:s0:109:ASN:H	4:s2:64:LYS:NZ	2.12	0.46
6:s4:251:GLU:O	6:s4:255:ARG:HG2	2.15	0.46
9:s7:126:LEU:HB2	9:s7:173:TYR:HE2	1.79	0.46
17:c5:48:GLY:O	17:c5:50:THR:N	2.44	0.46
36:5:62:A:H5"	51:m5:164:LEU:HD21	1.97	0.46
36:5:270:U:H2'	36:5:271:C:H6	1.80	0.46
36:5:561:C:H2'	36:5:562:C:H6	1.79	0.46
36:5:860:G:C6	39:l2:181:LYS:HB2	2.50	0.46
36:5:929:A:H2'	36:5:930:U:C6	2.51	0.46
36:5:1222:G:H1'	36:5:1285:G:N2	2.30	0.46
37:7:62:U:O4	37:7:63:A:N6	2.48	0.46
40:l3:139:GLN:O	40:l3:141:GLY:N	2.45	0.46
47:m0:87:LEU:HA	47:m0:138:VAL:HG22	1.98	0.46
51:m5:59:PHE:CD2	51:m5:142:ILE:HD11	2.51	0.46
64:n8:132:LYS:O	64:n8:136:GLU:HG3	2.14	0.46
71:o5:9:LEU:HB3	71:o5:17:LEU:HD21	1.97	0.46
71:o5:40:SER:OG	71:o5:41:LEU:N	2.48	0.46
74:o8:19:ASP:HB2	74:o8:48:SER:HB2	1.96	0.46
1:2:339:C:P	10:S8:10:LYS:HZ3	2.36	0.46
1:2:397:A:O3'	10:S8:50:GLY:HA2	2.15	0.46
1:2:1503:A:H2'	1:2:1504:G:O4'	2.14	0.46
1:2:1751:C:H2'	1:2:1752:U:O4'	2.16	0.46
10:S8:159:GLN:HB3	10:S8:165:LEU:HD23	1.98	0.46
13:C1:109:VAL:HG23	13:C1:137:PHE:C	2.40	0.46
24:D2:26:LEU:HD21	24:D2:60:LYS:HD3	1.98	0.46
36:1:1562:C:H2'	36:1:1563:C:C6	2.50	0.46
36:1:2406:C:H2'	36:1:2407:C:C6	2.51	0.46
36:1:3049:A:C2	40:L3:75:ALA:HB2	2.51	0.46
36:1:3278:C:H2'	36:1:3278:C:O2	2.15	0.46
41:L4:120:TYR:CE2	41:L4:277:PRO:HB3	2.50	0.46
41:L4:299:ILE:HG22	41:L4:300:ARG:O	2.15	0.46
42:L5:107:ARG:HH12	42:L5:120:LYS:HG2	1.80	0.46
42:L5:177:GLU:H	42:L5:177:GLU:HG3	1.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:L5:209:GLU:HG2	42:L5:233:ALA:HB2	1.97	0.46
44:L7:120:THR:OG1	57:N1:132:PRO:HB2	2.15	0.46
55:M9:147:ALA:HB1	55:M9:151:ARG:HH21	1.80	0.46
72:O6:58:ILE:HG22	72:O6:90:MET:HG3	1.98	0.46
1:6:6:G:OP2	4:s2:205:ARG:HD2	2.15	0.46
3:s1:157:GLN:H	3:s1:160:HIS:CE1	2.33	0.46
4:s2:59:HIS:CE1	4:s2:236:PRO:HB2	2.50	0.46
6:s4:206:ASP:O	6:s4:222:LEU:HB2	2.15	0.46
19:c7:27:ASP:O	19:c7:31:ASN:ND2	2.37	0.46
20:c8:139:LYS:O	20:c8:143:ARG:NH1	2.45	0.46
36:5:595:G:C8	36:5:609:G:C6	3.03	0.46
36:5:1494:U:H4'	36:5:1495:U:O5'	2.16	0.46
36:5:1554:U:H1'	36:5:1555:U:C6	2.51	0.46
36:5:1566:A:H62	36:5:1571:A:H2	1.63	0.46
36:5:2655:U:H2'	78:q2:3:ASN:O	2.16	0.46
36:5:2980:U:H2'	36:5:2981:U:C6	2.51	0.46
36:5:3321:C:H2'	36:5:3322:A:H8	1.79	0.46
38:8:72:A:N3	38:8:88:A:O2'	2.48	0.46
47:m0:206:LEU:O	47:m0:210:ILE:N	2.32	0.46
48:m1:92:ARG:HH12	48:m1:94:ARG:HH11	1.61	0.46
50:m4:45:LEU:HD12	50:m4:56:GLN:O	2.15	0.46
51:m5:153:ASP:OD2	51:m5:154:PRO:HD2	2.15	0.46
56:n0:42:TRP:CZ2	56:n0:58:ILE:HG12	2.51	0.46
64:n8:70:LYS:HE2	64:n8:129:PHE:CD2	2.51	0.46
69:o3:93:THR:O	69:o3:95:GLY:N	2.49	0.46
1:2:380:U:O3'	11:S9:2:PRO:HA	2.15	0.46
1:2:446:A:OP1	6:S4:59:ARG:NE	2.23	0.46
1:2:788:A:C5	6:S4:19:LEU:HD13	2.50	0.46
1:2:1087:A:H2'	1:2:1088:A:H8	1.80	0.46
1:2:1283:U:H2'	1:2:1284:C:C5	2.50	0.46
2:S0:79:ARG:HH12	2:S0:164:ASN:HB2	1.79	0.46
16:C4:16:VAL:HG22	16:C4:33:LEU:HA	1.97	0.46
36:1:586:C:H2'	36:1:587:U:O4'	2.16	0.46
36:1:656:A:C2	36:1:1440:G:C2	3.03	0.46
36:1:1677:G:OP2	58:N2:103:TYR:OH	2.24	0.46
36:1:1714:A:O4'	36:1:1731:A:N6	2.49	0.46
36:1:2138:A:C4	73:O7:3:LYS:HB3	2.51	0.46
36:1:2424:A:H2'	36:1:2425:G:O4'	2.15	0.46
36:1:2616:C:C2'	36:1:2617:U:H5'	2.46	0.46
36:1:3067:C:OP2	55:M9:62:ARG:NH1	2.48	0.46
36:1:3090:U:OP1	40:L3:270:ARG:NH2	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:3:3:U:H2'	37:3:4:U:C6	2.49	0.46
37:3:46:A:OP1	42:L5:158:ARG:N	2.47	0.46
40:L3:216:ASP:CG	40:L3:278:ILE:HG22	2.41	0.46
40:L3:280:HIS:HD2	40:L3:328:ILE:HG13	1.80	0.46
42:L5:294:ALA:C	42:L5:296:GLN:H	2.23	0.46
56:N0:45:LEU:HD22	56:N0:45:LEU:HA	1.70	0.46
62:N6:37:LYS:H	62:N6:37:LYS:CD	2.23	0.46
63:N7:4:PHE:HD2	66:O0:63:SER:HB3	1.79	0.46
69:O3:29:LEU:HD22	69:O3:75:HIS:CD2	2.51	0.46
74:O8:11:PHE:CG	74:O8:54:LEU:HD22	2.51	0.46
1:6:653:C:N4	1:6:677:G:H1	2.10	0.46
1:6:668:C:H3'	1:6:669:G:N2	2.29	0.46
1:6:686:C:H2'	1:6:687:G:C8	2.50	0.46
1:6:712:G:H2'	1:6:713:A:C8	2.50	0.46
1:6:746:A:H2'	1:6:747:C:O4'	2.15	0.46
1:6:895:G:H2'	1:6:896:U:C6	2.50	0.46
1:6:1114:G:O2'	1:6:1130:G:O6	2.31	0.46
1:6:1208:A:H8	1:6:1269:U:H6	1.64	0.46
1:6:1469:A:H4'	1:6:1541:G:H4'	1.98	0.46
4:s2:225:LEU:HD13	24:d2:68:ARG:HA	1.97	0.46
5:s3:90:ARG:HH12	5:s3:94:ARG:NH1	2.13	0.46
6:s4:88:ASP:O	6:s4:100:ARG:HA	2.16	0.46
9:s7:21:ALA:O	9:s7:25:VAL:HG23	2.15	0.46
19:c7:71:PHE:CZ	19:c7:74:GLN:HB2	2.51	0.46
36:5:23:A:H2'	36:5:24:G:C8	2.51	0.46
36:5:33:G:O2'	36:5:51:A:N6	2.46	0.46
36:5:173:G:HO2'	36:5:174:C:H6	1.61	0.46
36:5:438:A:H4'	36:5:439:C:OP2	2.16	0.46
36:5:543:C:H42	36:5:548:G:H1	1.64	0.46
36:5:1602:A:H5'	55:m9:37:SER:HA	1.98	0.46
36:5:2115:G:H22	36:5:2120:A:H1'	1.81	0.46
36:5:2289:U:H2'	36:5:2290:C:C6	2.50	0.46
36:5:3163:A:H2'	36:5:3164:C:H5'	1.97	0.46
37:7:113:C:H2'	37:7:114:U:O4'	2.16	0.46
39:l2:29:LEU:HD22	39:l2:101:VAL:HG21	1.97	0.46
39:l2:47:GLN:CD	39:l2:60:LYS:HD2	2.41	0.46
40:l3:106:TRP:CG	40:l3:130:PHE:HE1	2.33	0.46
40:l3:299:ASP:O	40:l3:301:THR:N	2.48	0.46
45:l8:205:ALA:HA	45:l8:208:GLU:HB2	1.98	0.46
49:m3:64:LYS:HE3	64:n8:69:TRP:CD1	2.50	0.46
49:m3:75:PHE:H	49:m3:97:VAL:HA	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:m3:167:PHE:HA	49:m3:170:LEU:HD12	1.97	0.46
71:o5:54:VAL:O	71:o5:58:ILE:HG13	2.15	0.46
1:2:591:A:H2'	1:2:592:A:C8	2.50	0.46
1:2:888:U:O2	1:2:988:A:O2'	2.31	0.46
1:2:1516:A:OP1	22:D0:88:LYS:NZ	2.32	0.46
1:2:1534:G:C8	27:D5:73:GLY:HA3	2.50	0.46
6:S4:22:LYS:HG2	11:S9:4:ALA:HB1	1.97	0.46
34:SR:41:THR:HG22	34:SR:62:LYS:HB3	1.96	0.46
34:SR:61:PHE:HB3	34:SR:92:TRP:CD2	2.51	0.46
34:SR:286:GLU:HA	34:SR:287:PRO:HD3	1.82	0.46
36:1:279:U:H2'	36:1:280:U:C6	2.50	0.46
36:1:653:A:C2	36:1:1443:G:C4	3.04	0.46
36:1:1472:U:H2'	36:1:1473:G:C8	2.51	0.46
36:1:2278:C:C2'	36:1:2279:A:H5"	2.45	0.46
36:1:2389:C:H42	36:1:2990:G:H1	1.63	0.46
36:1:3107:U:O4	36:1:3128:G:N2	2.48	0.46
36:1:3140:G:OP1	40:L3:20:LYS:NZ	2.48	0.46
40:L3:305:ILE:HG12	40:L3:321:PHE:CZ	2.50	0.46
41:L4:292:SER:O	41:L4:293:SER:OG	2.31	0.46
1:6:1080:U:O2'	1:6:1081:A:H5'	2.15	0.46
1:6:1332:C:H4'	5:s3:203:PRO:HB3	1.98	0.46
2:s0:189:VAL:HG22	2:s0:190:ASP:H	1.80	0.46
6:s4:10:LYS:NZ	11:s9:2:PRO:HB3	2.30	0.46
8:s6:145:PHE:HD1	60:n4:94:ARG:HG3	1.80	0.46
9:s7:111:LYS:HB3	9:s7:112:ARG:H	1.53	0.46
10:s8:8:ARG:NH2	10:s8:28:GLU:OE1	2.48	0.46
20:c8:22:VAL:HA	20:c8:34:THR:HG21	1.96	0.46
28:d6:87:ARG:NH2	28:d6:94:ASN:O	2.37	0.46
29:d7:74:SER:O	29:d7:76:GLY:N	2.49	0.46
36:5:106:A:H2'	36:5:107:A:O4'	2.14	0.46
36:5:413:U:H5"	53:m7:34:GLN:OE1	2.15	0.46
36:5:1126:G:H5"	47:m0:119:TRP:CZ3	2.51	0.46
36:5:1648:A:N6	36:5:1807:G:H1'	2.31	0.46
36:5:2888:U:C6	36:5:2911:A:N6	2.83	0.46
36:5:2968:G:N7	39:l2:215:ASN:HB2	2.30	0.46
36:5:3046:A:H2'	36:5:3047:U:O4'	2.15	0.46
36:5:3285:C:H3'	36:5:3286:G:H5"	1.98	0.46
37:7:26:C:H2'	37:7:27:A:O4'	2.15	0.46
48:m1:92:ARG:HH12	48:m1:94:ARG:NH1	2.13	0.46
52:m6:108:ILE:HG13	52:m6:108:ILE:O	2.15	0.46
52:m6:110:PRO:HB2	52:m6:111:PRO:CD	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:m8:94:PHE:CZ	64:n8:119:PRO:HD3	2.50	0.46
60:n4:98:PRO:HA	60:n4:101:ARG:HG3	1.97	0.46
62:n6:55:GLU:HB2	62:n6:108:LYS:HB3	1.98	0.46
62:n6:100:HIS:CD2	62:n6:101:PRO:HD2	2.49	0.46
71:o5:4:VAL:HG21	71:o5:9:LEU:HD11	1.97	0.46
75:o9:27:ILE:C	75:o9:29:LEU:H	2.22	0.46
1:2:60:U:O4'	1:2:453:U:H5"	2.16	0.46
1:2:328:A:H2'	1:2:329:G:O4'	2.16	0.46
1:2:1688:U:H3	1:2:1713:G:H22	1.64	0.46
10:S8:84:HIS:NE2	10:S8:97:THR:OG1	2.41	0.46
11:S9:176:ASN:OD1	11:S9:179:ARG:NH1	2.49	0.46
17:C5:67:ALA:O	17:C5:69:GLU:N	2.40	0.46
21:C9:66:TYR:HD2	21:C9:124:ILE:HG12	1.80	0.46
25:D3:55:GLU:HA	25:D3:98:GLU:HG2	1.96	0.46
25:D3:95:PHE:CE1	25:D3:135:LEU:HB3	2.50	0.46
36:1:192:C:H2'	36:1:193:C:C6	2.51	0.46
36:1:342:A:N1	36:1:349:A:O2'	2.48	0.46
36:1:677:A:H4'	36:1:678:G:O5'	2.15	0.46
36:1:715:A:H5"	64:N8:114:GLY:O	2.15	0.46
36:1:829:U:H3	36:1:895:A:N6	2.14	0.46
36:1:1048:A:H2'	47:M0:22:TYR:CZ	2.51	0.46
36:1:1507:G:H5'	36:1:1507:G:N3	2.30	0.46
36:1:1533:U:O2'	36:1:1798:A:N3	2.44	0.46
36:1:2343:C:H2'	36:1:2344:U:H6	1.81	0.46
41:L4:44:LYS:HB3	41:L4:47:ARG:NH1	2.30	0.46
43:L6:145:LEU:O	43:L6:149:ILE:N	2.46	0.46
54:M8:121:CYS:C	54:M8:122:ILE:HD12	2.41	0.46
54:M8:147:ARG:O	54:M8:150:VAL:HG22	2.16	0.46
56:N0:1:MET:HB3	56:N0:1:MET:HE2	1.66	0.46
67:O1:25:PHE:HD2	67:O1:28:ARG:HD2	1.81	0.46
79:Q3:10:ILE:HD13	79:Q3:30:GLU:HG2	1.98	0.46
79:Q3:84:ARG:HA	79:Q3:87:ARG:NH2	2.30	0.46
1:6:219:A:N6	1:6:843:U:C2	2.84	0.46
1:6:491:C:N4	1:6:496:G:O6	2.48	0.46
1:6:906:A:OP2	16:c4:52:ARG:HB3	2.15	0.46
1:6:907:A:N1	1:6:1008:G:H1'	2.31	0.46
1:6:1218:G:O4'	1:6:1444:A:N6	2.49	0.46
1:6:1238:A:H2'	1:6:1239:U:H5'	1.97	0.46
1:6:1293:U:H3	1:6:1322:A:H61	1.62	0.46
6:s4:148:ARG:H	6:s4:148:ARG:HG2	1.45	0.46
28:d6:15:ARG:HB3	28:d6:16:GLY:H	1.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:d9:19:ARG:HD2	31:d9:32:ARG:HD2	1.96	0.46
35:sM:40:PRO:C	35:sM:42:ALA:H	2.24	0.46
36:5:311:C:H42	36:5:2778:G:H1	1.63	0.46
36:5:1189:C:H42	36:5:1315:U:H1'	1.79	0.46
36:5:1211:U:P	46:l9:62:ARG:HD2	2.56	0.46
36:5:1313:G:N3	36:5:1318:A:H2	2.14	0.46
36:5:1824:U:H5"	74:o8:3:ARG:HH22	1.81	0.46
38:8:71:A:H4'	38:8:72:A:O5'	2.15	0.46
41:l4:178:LEU:O	41:l4:182:LEU:HD13	2.16	0.46
42:l5:270:LYS:HG3	42:l5:273:ARG:N	2.31	0.46
42:l5:296:GLN:OE1	42:l5:296:GLN:N	2.48	0.46
47:m0:52:LEU:HD23	47:m0:164:LYS:O	2.14	0.46
47:m0:56:GLU:HG3	47:m0:161:GLY:HA3	1.96	0.46
47:m0:147:VAL:O	47:m0:150:GLU:HB3	2.16	0.46
51:m5:140:LYS:HB3	51:m5:144:ARG:CZ	2.46	0.46
54:m8:124:LEU:HD23	54:m8:124:LEU:HA	1.79	0.46
69:o3:13:HIS:O	69:o3:95:GLY:N	2.48	0.46
70:o4:32:ALA:O	70:o4:33:GLN:HG3	2.15	0.46
83:f:18:THR:HA	83:f:83:PRO:HA	1.97	0.46
86:B:3401:SPS:O1	86:B:3401:SPS:H91	2.15	0.46
1:2:515:A:N6	1:2:537:G:O2'	2.48	0.46
1:2:947:U:H2'	1:2:948:G:H8	1.81	0.46
1:2:1318:G:H2'	1:2:1319:A:H8	1.81	0.46
1:2:1332:C:O2'	5:S3:162:GLN:HB3	2.16	0.46
7:S5:143:ARG:HD3	30:D8:55:VAL:HG11	1.98	0.46
16:C4:103:ARG:O	16:C4:107:ARG:HB2	2.14	0.46
22:D0:37:VAL:HG21	22:D0:109:GLU:HB2	1.96	0.46
25:D3:79:ASN:HD22	25:D3:79:ASN:H	1.64	0.46
36:1:1898:G:O2'	59:N3:21:ALA:HB2	2.15	0.46
36:1:2108:C:H1'	36:1:3344:A:C8	2.50	0.46
36:1:2321:A:H2'	36:1:2322:C:O4'	2.16	0.46
36:1:2883:U:H2'	36:1:2884:C:H6	1.81	0.46
36:1:2943:G:H2'	36:1:2944:U:O4'	2.15	0.46
36:1:3018:C:H2'	36:1:3019:U:O4'	2.16	0.46
36:1:3095:U:H2'	36:1:3096:C:H6	1.80	0.46
36:1:3314:A:H5"	40:L3:174:LYS:HD2	1.98	0.46
43:L6:42:LEU:HD23	43:L6:84:VAL:HG23	1.98	0.46
44:L7:104:GLN:HA	44:L7:109:THR:HG22	1.95	0.46
44:L7:232:ARG:O	44:L7:235:PHE:HB2	2.14	0.46
51:M5:150:TRP:CH2	51:M5:151:ILE:HG12	2.51	0.46
64:N8:73:LEU:HD13	64:N8:109:TYR:CE1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:187:G:N7	10:s8:142:LYS:NZ	2.62	0.46
1:6:584:C:H1'	32:e0:18:THR:HG21	1.96	0.46
1:6:649:U:H2'	1:6:650:U:C5	2.51	0.46
1:6:914:G:H8	1:6:914:G:OP2	1.99	0.46
1:6:1687:U:H2'	1:6:1688:U:C6	2.51	0.46
1:6:1689:A:H2'	1:6:1690:G:C8	2.50	0.46
6:s4:71:LYS:O	6:s4:90:ILE:HA	2.15	0.46
16:c4:80:HIS:ND1	16:c4:113:GLY:O	2.48	0.46
17:c5:18:ARG:HD2	17:c5:36:LEU:O	2.16	0.46
26:d4:62:THR:HA	26:d4:69:SER:HA	1.98	0.46
36:5:501:A:H2'	36:5:502:U:C6	2.51	0.46
36:5:730:C:H2'	36:5:731:U:C6	2.51	0.46
36:5:1573:G:C6	36:5:1574:C:H1'	2.50	0.46
36:5:2251:G:C4	36:5:2252:A:C8	3.03	0.46
36:5:3225:C:H2'	36:5:3226:A:C8	2.51	0.46
37:7:46:A:OP1	42:l5:158:ARG:HD3	2.16	0.46
40:l3:76:VAL:HG12	40:l3:325:LYS:HA	1.97	0.46
44:l7:86:VAL:HG22	44:l7:136:TYR:HB3	1.97	0.46
49:m3:106:GLN:HB3	72:o6:18:THR:OG1	2.15	0.46
52:m6:142:SER:C	52:m6:144:SER:H	2.24	0.46
56:n0:104:GLU:O	56:n0:108:GLN:HG2	2.16	0.46
61:n5:66:PRO:HG2	71:o5:33:VAL:HG13	1.98	0.46
61:n5:106:ASP:HB3	61:n5:127:THR:OG1	2.16	0.46
67:o1:29:ALA:HB3	67:o1:30:PRO:HD3	1.97	0.46
69:o3:37:THR:HG23	69:o3:40:ASP:HB2	1.96	0.46
72:o6:42:SER:O	72:o6:46:GLU:HG3	2.16	0.46
1:2:538:A:H8	1:2:543:C:H41	1.62	0.46
1:2:589:C:H2'	1:2:590:C:C6	2.50	0.46
1:2:598:U:H2'	1:2:599:A:C8	2.51	0.46
1:2:1291:G:N2	1:2:1324:G:H22	2.13	0.46
1:2:1459:C:OP2	1:2:1459:C:H6	1.99	0.46
1:2:1490:C:H1'	1:2:1491:U:O4'	2.16	0.46
1:2:1628:U:OP1	28:D6:88:SER:HA	2.16	0.46
2:S0:12:GLU:OE2	2:S0:12:GLU:N	2.46	0.46
3:S1:70:LEU:HD21	3:S1:79:HIS:CD2	2.51	0.46
9:S7:74:GLN:O	9:S7:78:THR:OG1	2.25	0.46
9:S7:94:ALA:O	9:S7:96:ARG:NH1	2.48	0.46
11:S9:62:ARG:CZ	11:S9:68:LYS:HD3	2.46	0.46
12:C0:52:LYS:HG3	12:C0:54:TYR:CD2	2.51	0.46
13:C1:128:CYS:SG	13:C1:131:ILE:HD11	2.56	0.46
21:C9:134:ARG:NH1	21:C9:138:GLN:OE1	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:57:ARG:NE	29:D7:26:GLN:OE1	2.46	0.46
25:D3:114:LYS:HB3	25:D3:117:ILE:HD11	1.97	0.46
29:D7:54:VAL:HG12	29:D7:63:LEU:HD12	1.97	0.46
31:D9:36:LEU:HD12	31:D9:38:ILE:HG13	1.98	0.46
36:1:96:G:H5'	49:M3:15:ARG:CZ	2.46	0.46
36:1:1039:U:H2'	36:1:1040:A:C8	2.51	0.46
36:1:2516:U:O2	36:1:2594:C:N4	2.48	0.46
36:1:2679:A:O2'	48:M1:52:TYR:OH	2.17	0.46
36:1:2775:U:H2'	36:1:2776:C:C6	2.51	0.46
41:L4:289:ILE:O	41:L4:295:ILE:HG13	2.16	0.46
46:L9:47:LYS:HZ2	50:M4:6:ILE:H	1.64	0.46
50:M4:102:LYS:HB2	50:M4:102:LYS:HE3	1.57	0.46
59:N3:58:VAL:HG22	59:N3:76:ALA:HB3	1.98	0.46
62:N6:112:ASP:H	62:N6:115:ARG:HB2	1.80	0.46
64:N8:139:ARG:HA	64:N8:143:GLY:O	2.15	0.46
68:O2:32:TRP:CZ2	68:O2:53:PRO:HD2	2.51	0.46
71:O5:34:GLN:O	71:O5:36:LEU:N	2.49	0.46
72:O6:60:LEU:HD13	72:O6:64:SER:HB2	1.98	0.46
74:O8:31:LEU:HA	74:O8:37:PRO:HA	1.96	0.46
1:6:506:A:OP1	1:6:506:A:H3'	2.16	0.46
1:6:1673:G:H5"	8:s6:76:LEU:HD12	1.97	0.46
2:s0:59:LEU:HD12	23:d1:79:LEU:HD21	1.98	0.46
6:s4:42:LEU:HD12	6:s4:109:PHE:CD2	2.51	0.46
8:s6:67:VAL:CG2	8:s6:99:GLY:HA2	2.46	0.46
9:s7:184:GLU:HG2	9:s7:185:ILE:H	1.80	0.46
10:s8:106:ALA:HB2	10:s8:165:LEU:HG	1.98	0.46
14:c2:67:THR:O	14:c2:69:ALA:N	2.41	0.46
18:c6:129:PHE:CE1	22:d0:78:THR:HA	2.51	0.46
22:d0:64:LYS:HE2	22:d0:66:SER:HB2	1.97	0.46
27:d5:91:PRO:HB3	27:d5:101:TYR:HE1	1.80	0.46
36:5:9:U:C4	36:5:10:C:C4	3.04	0.46
36:5:118:U:C5	36:5:119:U:C4	3.04	0.46
36:5:677:A:OP1	54:m8:89:ASP:HB3	2.15	0.46
36:5:956:U:H2'	36:5:957:C:C6	2.51	0.46
36:5:1627:U:H2'	36:5:1814:A:H62	1.81	0.46
36:5:1832:C:O2'	75:o9:7:PHE:HB2	2.16	0.46
36:5:1925:U:O2	79:q3:19:GLY:HA2	2.16	0.46
36:5:2267:C:O2'	36:5:2268:U:H5'	2.15	0.46
36:5:2660:G:H5"	36:5:2750:U:O2'	2.16	0.46
38:8:97:A:H2'	38:8:98:U:O4'	2.16	0.46
40:l3:113:GLU:OE2	40:l3:167:ARG:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:m0:68:ALA:HB1	47:m0:155:ALA:HB1	1.98	0.46
53:m7:125:GLN:HB2	53:m7:141:SER:OG	2.16	0.46
56:n0:124:LEU:HD23	57:n1:153:PRO:HB2	1.98	0.46
60:n4:120:LYS:HA	60:n4:123:ARG:HD2	1.97	0.46
63:n7:51:LEU:HB2	63:n7:65:ARG:HD2	1.97	0.46
81:p0:94:THR:HG22	81:p0:97:LYS:HE2	1.98	0.46
1:2:109:G:O2'	1:2:796:A:N1	2.42	0.46
1:2:245:U:N3	1:2:248:U:OP2	2.46	0.46
1:2:361:C:H2'	1:2:362:G:C8	2.51	0.46
1:2:1400:A:H4'	19:C7:60:ARG:NH2	2.30	0.46
9:S7:38:LEU:HD23	9:S7:41:LEU:HD12	1.98	0.46
13:C1:91:LEU:HD23	13:C1:102:LYS:HA	1.98	0.46
13:C1:115:PHE:HD2	13:C1:142:VAL:HG23	1.81	0.46
19:C7:6:THR:OG1	19:C7:7:LYS:N	2.47	0.46
20:C8:33:THR:HG21	20:C8:40:ARG:HG3	1.97	0.46
23:D1:64:GLU:OE1	29:D7:3:LEU:HB2	2.16	0.46
24:D2:27:ILE:HD11	24:D2:61:ILE:HD12	1.97	0.46
26:D4:20:ARG:C	26:D4:21:LYS:HD2	2.40	0.46
26:D4:104:SER:HB3	26:D4:107:GLN:HG3	1.98	0.46
28:D6:38:ARG:HH21	28:D6:83:ILE:HG21	1.80	0.46
36:1:113:C:H42	36:1:267:G:H1	1.62	0.46
36:1:196:G:N2	36:1:198:A:H3'	2.31	0.46
36:1:383:G:N2	36:1:386:A:OP2	2.42	0.46
36:1:551:A:O2'	36:1:552:G:H8	1.98	0.46
36:1:587:U:C2'	36:1:588:G:H5'	2.46	0.46
36:1:1385:C:OP2	41:L4:202:ARG:HD3	2.16	0.46
36:1:1462:A:H2'	36:1:1463:U:O4'	2.16	0.46
36:1:1472:U:H5'	55:M9:4:LEU:HB2	1.98	0.46
36:1:1635:G:O6	63:N7:17:ARG:HB2	2.16	0.46
36:1:1721:U:H3'	55:M9:103:ARG:NH2	2.31	0.46
36:1:1940:G:N2	36:1:3362:A:H8	2.07	0.46
36:1:3218:A:H5"	36:1:3219:G:C5	2.51	0.46
36:1:3335:A:N7	36:1:3370:A:O2'	2.43	0.46
40:L3:199:PHE:C	40:L3:201:LYS:H	2.24	0.46
41:L4:6:VAL:N	41:L4:20:LEU:O	2.43	0.46
42:L5:148:ILE:HD11	42:L5:160:PHE:CE1	2.50	0.46
44:L7:160:ARG:HG3	44:L7:203:TRP:CG	2.51	0.46
49:M3:55:ARG:O	49:M3:115:ARG:NH2	2.48	0.46
52:M6:57:PHE:CE2	52:M6:72:HIS:HD2	2.34	0.46
62:N6:125:LYS:HE2	62:N6:126:LEU:O	2.15	0.46
63:N7:136:PHE:HE2	70:O4:85:VAL:HG13	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:102:U:O4	1:6:361:C:H4'	2.16	0.46
1:6:347:G:O2'	10:s8:13:ALA:HB1	2.15	0.46
1:6:1066:C:H4'	3:s1:149:GLN:HB2	1.97	0.46
1:6:1572:G:H2'	1:6:1572:G:N3	2.31	0.46
1:6:1748:G:C6	1:6:1749:A:C6	3.04	0.46
9:s7:31:SER:HA	9:s7:35:LYS:HB3	1.97	0.46
11:s9:83:VAL:HG23	11:s9:85:VAL:HG23	1.97	0.46
11:s9:122:VAL:HG23	11:s9:123:HIS:CD2	2.51	0.46
21:c9:37:VAL:HG11	21:c9:100:ILE:HD11	1.98	0.46
36:5:136:G:H5'	71:o5:95:PHE:CG	2.50	0.46
36:5:539:C:H42	36:5:552:G:H1	1.62	0.46
36:5:784:A:N7	54:m8:69:ARG:HG3	2.31	0.46
36:5:967:A:OP1	64:n8:47:LYS:NZ	2.49	0.46
36:5:1101:G:H5"	44:l7:107:ARG:HD3	1.98	0.46
36:5:1729:A:H4'	36:5:1730:G:OP2	2.16	0.46
36:5:1807:G:O5'	36:5:1807:G:H8	1.98	0.46
36:5:2566:C:C4	36:5:2567:C:C4	3.04	0.46
36:5:2655:U:H4'	36:5:2656:A:O4'	2.16	0.46
36:5:3063:C:H42	36:5:3080:G:H1	1.64	0.46
38:8:38:U:C4	71:o5:81:ARG:HD3	2.50	0.46
39:l2:57:PRO:HB3	79:q3:54:ILE:HG22	1.98	0.46
39:l2:204:MET:HG2	39:l2:208:ASP:HB2	1.97	0.46
42:l5:78:ALA:HB1	42:l5:104:LEU:HD23	1.98	0.46
44:l7:173:LEU:HB3	44:l7:178:ILE:HB	1.98	0.46
47:m0:208:ASN:O	47:m0:212:GLU:HB2	2.15	0.46
48:m1:155:THR:OG1	48:m1:158:ASP:HB2	2.16	0.46
52:m6:127:LEU:HD21	56:n0:168:PRO:HB2	1.98	0.46
55:m9:88:ARG:HG2	55:m9:88:ARG:H	1.62	0.46
74:o8:44:LYS:HB3	74:o8:51:LEU:HD11	1.98	0.46
1:2:130:C:O2'	1:2:131:C:OP1	2.29	0.46
1:2:147:A:H2'	1:2:148:A:O4'	2.16	0.46
1:2:329:G:H5"	10:S8:98:LYS:HB3	1.97	0.46
1:2:804:A:N3	24:D2:105:THR:HG22	2.32	0.46
1:2:1068:C:H2'	1:2:1069:A:C8	2.50	0.46
1:2:1182:U:H2'	1:2:1184:A:OP2	2.15	0.46
1:2:1298:U:O2	4:S2:209:ASN:ND2	2.45	0.46
1:2:1504:G:H21	1:2:1563:C:H1'	1.81	0.46
6:S4:94:ALA:HB1	26:D4:16:PRO:HB2	1.98	0.46
7:S5:25:LEU:HB2	7:S5:26:ALA:H	1.60	0.46
10:S8:107:THR:H	10:S8:108:PRO:CD	2.29	0.46
17:C5:80:MET:HB3	17:C5:83:MET:HE3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:C8:30:TYR:HE2	20:C8:40:ARG:HH11	1.64	0.46
22:D0:18:GLN:O	22:D0:96:PRO:HA	2.16	0.46
35:SM:61:ILE:HD12	35:SM:62:ARG:HG2	1.97	0.46
36:1:713:U:H2'	36:1:714:G:O4'	2.16	0.46
36:1:953:G:O2'	36:1:1116:G:H5'	2.16	0.46
36:1:2333:C:H2'	36:1:2334:U:C6	2.51	0.46
36:1:2862:U:H2'	36:1:2863:G:O4'	2.15	0.46
41:L4:314:LYS:HE2	44:L7:150:LYS:O	2.16	0.46
42:L5:107:ARG:O	42:L5:111:GLN:HB2	2.16	0.46
42:L5:208:MET:HG3	42:L5:223:PHE:CE1	2.51	0.46
50:M4:60:LEU:HD13	56:N0:152:LEU:HD11	1.98	0.46
52:M6:157:GLU:OE1	52:M6:160:ARG:NH1	2.49	0.46
54:M8:182:LYS:HE2	64:N8:55:LYS:O	2.16	0.46
71:O5:89:ARG:HG2	71:O5:89:ARG:HH11	1.80	0.46
74:O8:26:LYS:O	74:O8:41:THR:HA	2.16	0.46
1:6:74:U:H5"	1:6:75:U:OP2	2.16	0.46
1:6:784:C:H42	26:d4:11:LYS:HD3	1.81	0.46
1:6:1419:G:H2'	1:6:1420:C:O4'	2.16	0.46
1:6:1531:G:H2'	1:6:1532:U:C6	2.50	0.46
1:6:1722:A:H1'	8:s6:67:VAL:HA	1.98	0.46
3:s1:101:HIS:HA	3:s1:217:LEU:HD22	1.98	0.46
4:s2:90:THR:HG23	4:s2:92:ALA:H	1.80	0.46
6:s4:92:LEU:HD13	26:d4:17:LEU:HD11	1.97	0.46
8:s6:126:ASP:OD2	8:s6:127:THR:HG22	2.16	0.46
8:s6:127:THR:OG1	8:s6:128:THR:N	2.48	0.46
8:s6:134:GLY:HA3	8:s6:158:ILE:HG13	1.97	0.46
13:c1:46:LYS:O	13:c1:50:GLU:HG2	2.15	0.46
17:c5:78:THR:OG1	17:c5:79:HIS:N	2.47	0.46
21:c9:57:ARG:O	21:c9:61:VAL:HG23	2.16	0.46
22:d0:28:SER:HB3	22:d0:34:LEU:HD13	1.98	0.46
34:sR:5:GLU:HG2	34:sR:317:THR:HG23	1.97	0.46
34:sR:64:HIS:ND1	34:sR:86:ASP:OD1	2.48	0.46
34:sR:83:ALA:HB1	34:sR:110:VAL:HG12	1.97	0.46
36:5:622:A:H2'	36:5:623:U:O4'	2.15	0.46
36:5:2567:C:N3	36:5:2568:C:N4	2.64	0.46
36:5:2704:A:O2'	36:5:2705:A:H5"	2.16	0.46
36:5:2805:G:N3	36:5:2967:A:H2	2.14	0.46
39:l2:97:ASN:HB2	39:l2:100:ASN:ND2	2.31	0.46
40:l3:49:TYR:O	40:l3:80:ASP:N	2.45	0.46
44:l7:198:ALA:O	44:l7:201:PHE:HB3	2.15	0.46
55:m9:10:LEU:HD12	55:m9:10:LEU:HA	1.82	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:n0:71:LYS:O	56:n0:73:LYS:HD3	2.15	0.46
69:o3:45:LEU:HD13	69:o3:45:LEU:HA	1.68	0.46
74:o8:14:LEU:HD21	74:o8:52:TYR:CD2	2.51	0.46
81:p0:77:LEU:HA	81:p0:80:VAL:HG12	1.99	0.46
1:2:997:G:H2'	1:2:998:A:O4'	2.17	0.45
1:2:1396:U:H2'	1:2:1397:U:H6	1.81	0.45
1:2:1606:C:H2'	1:2:1607:G:C8	2.51	0.45
4:S2:140:ARG:HD3	4:S2:222:TYR:CE1	2.51	0.45
4:S2:183:ALA:HB1	4:S2:211:LEU:HD21	1.98	0.45
10:S8:25:ARG:O	10:S8:28:GLU:HG2	2.15	0.45
22:D0:28:SER:OG	22:D0:29:THR:N	2.44	0.45
35:SM:47:ALA:HB2	36:1:2678:A:C8	2.52	0.45
36:1:139:G:H2'	36:1:140:C:O4'	2.16	0.45
36:1:703:G:O2'	36:1:787:G:H4'	2.15	0.45
36:1:1317:A:O2'	36:1:1318:A:H3'	2.16	0.45
36:1:1400:G:C2	36:1:1401:A:C8	3.05	0.45
36:1:1861:G:O2'	36:1:3066:U:H5"	2.15	0.45
36:1:1900:A:O2'	36:1:1906:G:N7	2.38	0.45
36:1:2572:C:O3'	63:N7:61:LYS:NZ	2.50	0.45
36:1:3393:U:H2'	36:1:3394:U:H6	1.81	0.45
38:4:14:C:C4	38:4:15:G:C6	3.04	0.45
40:L3:27:ALA:HB2	40:L3:220:VAL:HG23	1.98	0.45
40:L3:103:THR:HG22	40:L3:104:THR:H	1.81	0.45
41:L4:135:VAL:HA	41:L4:245:GLY:O	2.16	0.45
45:L8:157:VAL:O	45:L8:160:ILE:HD13	2.16	0.45
46:L9:106:LYS:O	46:L9:107:ASP:HB2	2.16	0.45
54:M8:32:LEU:O	54:M8:35:PHE:HB3	2.16	0.45
54:M8:36:LEU:O	54:M8:40:THR:OG1	2.17	0.45
60:N4:5:ILE:HD12	60:N4:10:GLY:HA2	1.97	0.45
68:O2:21:HIS:CE1	68:O2:24:ARG:HD2	2.51	0.45
1:6:116:U:H2'	1:6:117:U:C6	2.51	0.45
1:6:839:U:H2'	1:6:840:U:C6	2.51	0.45
1:6:1331:A:N3	5:s3:204:ASP:HB3	2.32	0.45
1:6:1773:C:OP2	77:q1:2:ARG:HD2	2.16	0.45
6:s4:120:SER:O	6:s4:164:LEU:HB2	2.16	0.45
11:s9:63:ASP:O	11:s9:66:ASP:HB2	2.15	0.45
11:s9:88:GLU:HA	11:s9:91:LYS:HE3	1.98	0.45
29:d7:20:LYS:HG2	29:d7:21:LEU:HG	1.98	0.45
30:d8:12:VAL:HA	30:d8:30:VAL:HA	1.98	0.45
36:5:1212:A:H1'	56:n0:114:HIS:CE1	2.51	0.45
36:5:1313:G:O3'	52:m6:17:GLY:HA3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1879:A:H2'	36:5:1879:A:N3	2.32	0.45
36:5:2643:A:H2'	36:5:2645:G:O5'	2.16	0.45
40:l3:296:THR:HG21	40:l3:356:LEU:C	2.41	0.45
41:l4:42:VAL:HG12	41:l4:236:LEU:HD21	1.98	0.45
41:l4:328:ASN:H	44:l7:166:ASN:HD21	1.64	0.45
80:m2:102:UNK:HA	80:m2:140:UNK:HA	1.99	0.45
54:m8:36:LEU:HD11	54:m8:128:ALA:HB1	1.97	0.45
55:m9:100:ARG:O	55:m9:104:ARG:HG3	2.15	0.45
63:n7:46:ILE:HD11	63:n7:49:TYR:HA	1.97	0.45
78:q2:4:VAL:HB	78:q2:93:LEU:HB3	1.97	0.45
78:q2:12:CYS:SG	78:q2:17:CYS:HB3	2.54	0.45
1:2:319:U:H1'	1:2:323:A:C4	2.51	0.45
1:2:1207:C:H42	1:2:1456:C:H41	1.63	0.45
2:S0:136:ALA:HB1	2:S0:141:ILE:HB	1.97	0.45
4:S2:121:VAL:HG11	35:SM:117:LEU:HB2	1.98	0.45
4:S2:178:ILE:HA	4:S2:196:VAL:HG12	1.98	0.45
4:S2:225:LEU:HD22	4:S2:230:TRP:HD1	1.81	0.45
4:S2:226:THR:HG23	4:S2:229:LEU:HD13	1.97	0.45
6:S4:100:ARG:HH11	6:S4:236:ILE:HB	1.80	0.45
9:S7:45:SER:HB3	9:S7:61:PHE:HD2	1.81	0.45
9:S7:75:THR:OG1	9:S7:76:LYS:N	2.49	0.45
14:C2:54:ARG:HD2	33:E1:129:GLY:HA3	1.98	0.45
14:C2:131:ASP:OD1	14:C2:132:GLU:N	2.48	0.45
17:C5:90:ILE:HD11	17:C5:112:LEU:HD21	1.98	0.45
19:C7:71:PHE:C	19:C7:73:LEU:H	2.23	0.45
20:C8:132:ARG:HB3	20:C8:136:GLN:HG3	1.98	0.45
21:C9:54:PHE:CE2	21:C9:104:VAL:HG22	2.51	0.45
21:C9:57:ARG:HH21	21:C9:80:TYR:HB3	1.81	0.45
22:D0:28:SER:HB2	22:D0:112:VAL:HA	1.98	0.45
24:D2:72:CYS:HB3	24:D2:129:VAL:HG13	1.98	0.45
34:SR:245:PHE:CE1	34:SR:252:LEU:HD13	2.51	0.45
34:SR:267:PRO:HG2	34:SR:269:TYR:CE1	2.51	0.45
35:SM:22:PRO:HD3	48:M1:35:LYS:HG3	1.98	0.45
36:1:279:U:H2'	36:1:280:U:H6	1.81	0.45
36:1:563:U:OP1	56:N0:71:LYS:NZ	2.49	0.45
36:1:1245:A:C3'	36:1:1246:G:H5"	2.43	0.45
36:1:2984:C:H2'	36:1:2985:C:C6	2.52	0.45
36:1:3092:C:O2'	36:1:3094:A:OP2	2.27	0.45
37:3:68:C:H2'	37:3:69:C:H6	1.80	0.45
40:L3:322:ILE:HG22	40:L3:324:VAL:HG23	1.98	0.45
42:L5:218:ARG:HA	42:L5:221:GLU:CD	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:L6:105:TYR:CE1	43:L6:134:ARG:HD2	2.51	0.45
45:L8:132:VAL:HG11	45:L8:189:LEU:HD12	1.97	0.45
47:M0:69:ARG:HD2	47:M0:70:ILE:HD12	1.97	0.45
48:M1:54:VAL:HB	48:M1:57:PHE:HB2	1.97	0.45
55:M9:181:ARG:O	55:M9:185:LEU:HG	2.17	0.45
56:N0:139:TYR:CD2	56:N0:140:VAL:HG23	2.51	0.45
63:N7:48:ARG:HB3	63:N7:69:LYS:HB3	1.97	0.45
68:O2:122:PRO:O	68:O2:123:LYS:HB2	2.17	0.45
71:O5:67:ARG:O	71:O5:71:LYS:HB2	2.17	0.45
1:6:119:A:H1'	1:6:397:A:C5	2.50	0.45
1:6:587:C:OP1	32:e0:24:THR:N	2.49	0.45
2:s0:22:THR:HG22	2:s0:162:CYS:HB2	1.98	0.45
2:s0:60:ALA:O	2:s0:64:ILE:HG13	2.16	0.45
2:s0:64:ILE:HG21	2:s0:89:PHE:HZ	1.81	0.45
3:s1:45:LYS:O	16:c4:33:LEU:HD23	2.16	0.45
7:s5:43:PHE:CZ	7:s5:90:ILE:HG21	2.51	0.45
8:s6:25:ARG:HA	8:s6:28:PHE:CD2	2.52	0.45
9:s7:103:SER:O	9:s7:107:ARG:HB3	2.17	0.45
18:c6:82:ARG:NH1	18:c6:114:ARG:HB2	2.30	0.45
26:d4:104:SER:OG	26:d4:107:GLN:HB2	2.16	0.45
34:sR:9:LEU:HA	34:sR:313:TRP:HA	1.98	0.45
34:sR:154:VAL:O	34:sR:155:ARG:HD3	2.16	0.45
36:5:283:G:H2'	64:n8:61:PHE:CZ	2.51	0.45
36:5:360:G:H4'	73:o7:16:HIS:CD2	2.51	0.45
36:5:504:A:H4'	41:l4:315:LYS:HZ3	1.81	0.45
36:5:652:G:OP1	36:5:1436:U:O2'	2.32	0.45
36:5:1191:U:OP1	76:q0:113:ARG:NH2	2.50	0.45
36:5:1560:G:HO2'	36:5:1561:G:P	2.39	0.45
36:5:2296:A:H2	36:5:2918:G:N3	2.15	0.45
36:5:2730:G:H4'	54:m8:184:PHE:CG	2.51	0.45
39:l2:242:ARG:HH11	39:l2:246:LEU:HD12	1.81	0.45
40:l3:35:ASP:OD1	40:l3:36:ASP:N	2.49	0.45
40:l3:187:SER:O	40:l3:191:LYS:HG3	2.16	0.45
45:l8:243:GLN:NE2	45:l8:247:ASP:OD1	2.49	0.45
59:n3:45:ARG:O	59:n3:48:ARG:HB2	2.17	0.45
70:o4:54:ILE:HD11	70:o4:78:GLY:HA3	1.99	0.45
5:S3:150:MET:HE3	5:S3:152:PHE:CZ	2.41	0.45
7:S5:89:ILE:H	7:S5:89:ILE:HG13	1.47	0.45
8:S6:88:ARG:HB3	8:S6:91:GLU:HB2	1.98	0.45
25:D3:61:SER:HB3	25:D3:69:ARG:HD2	1.98	0.45
34:SR:116:ASP:HB3	34:SR:121:MET:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:270:U:O2'	36:1:318:A:H1'	2.16	0.45
36:1:839:C:H4'	36:1:1724:U:H3'	1.98	0.45
36:1:1307:G:H1'	36:1:1308:A:C8	2.52	0.45
36:1:1364:C:H5"	54:M8:3:ILE:CD1	2.46	0.45
36:1:2218:G:H2'	36:1:2219:A:H8	1.81	0.45
36:1:2392:C:H1'	40:L3:266:ARG:HH21	1.81	0.45
36:1:3307:A:OP1	40:L3:226:PHE:HB2	2.16	0.45
53:M7:32:THR:HG21	53:M7:84:PRO:HG2	1.98	0.45
55:M9:23:TRP:O	55:M9:50:ILE:HA	2.16	0.45
56:N0:77:VAL:HG13	56:N0:126:VAL:HG22	1.97	0.45
61:N5:86:VAL:O	61:N5:120:LYS:HB2	2.16	0.45
64:N8:74:ASN:CB	64:N8:115:LYS:HB2	2.46	0.45
70:O4:16:ARG:HH11	70:O4:37:LYS:HD2	1.82	0.45
1:6:151:G:H21	8:s6:13:GLN:NE2	2.15	0.45
1:6:632:U:OP1	13:c1:102:LYS:HG3	2.16	0.45
1:6:906:A:OP2	16:c4:51:ASP:HB3	2.16	0.45
1:6:982:U:H2'	1:6:983:A:C8	2.51	0.45
1:6:1102:G:H2'	1:6:1103:U:O4'	2.16	0.45
1:6:1245:G:N1	1:6:1249:U:O4	2.49	0.45
1:6:1634:C:H4'	1:6:1635:A:OP2	2.17	0.45
1:6:1639:C:H2'	1:6:1640:C:O4'	2.15	0.45
1:6:1713:G:H2'	1:6:1714:A:C8	2.51	0.45
4:s2:152:HIS:CD2	4:s2:152:HIS:N	2.85	0.45
7:s5:39:GLU:HG2	7:s5:40:ILE:HG22	1.97	0.45
16:c4:61:MET:HG2	16:c4:62:LEU:N	2.31	0.45
16:c4:99:GLN:HE22	28:d6:46:GLU:H	1.64	0.45
18:c6:46:PHE:HA	18:c6:49:TYR:HB2	1.98	0.45
34:sR:194:GLY:C	34:sR:221:MET:HE1	2.41	0.45
36:5:26:A:H2'	36:5:27:C:C6	2.51	0.45
36:5:677:A:H4'	36:5:678:G:O5'	2.16	0.45
36:5:1773:C:H2'	36:5:1774:C:C6	2.51	0.45
36:5:2261:G:H21	36:5:2262:A:H61	1.63	0.45
38:8:44:A:H2'	38:8:45:C:H6	1.79	0.45
42:l5:177:GLU:O	42:l5:179:ARG:N	2.44	0.45
42:l5:278:SER:H	42:l5:281:GLU:CD	2.25	0.45
45:l8:173:MET:HB3	45:l8:175:VAL:HG23	1.98	0.45
48:m1:21:ILE:HG12	48:m1:125:MET:HB3	1.98	0.45
52:m6:110:PRO:O	52:m6:113:ASP:N	2.26	0.45
55:m9:109:TYR:HB3	55:m9:115:ILE:HG12	1.98	0.45
61:n5:64:GLU:HG2	61:n5:85:GLN:O	2.16	0.45
64:n8:111:LYS:HD3	64:n8:113:LEU:HD21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:n9:44:LYS:HB2	65:n9:44:LYS:HE3	1.80	0.45
66:o0:34:LEU:HD23	66:o0:59:TYR:HB3	1.98	0.45
1:2:110:U:O2'	1:2:797:G:H1'	2.17	0.45
1:2:190:C:O2'	1:2:191:C:H5'	2.15	0.45
1:2:191:C:O2'	1:2:192:U:O5'	2.34	0.45
1:2:252:U:H4'	6:S4:131:LEU:HD12	1.97	0.45
1:2:333:A:C8	10:S8:49:ARG:HD2	2.51	0.45
1:2:560:U:H2'	1:2:561:G:H8	1.81	0.45
1:2:610:G:HO2'	1:2:613:G:HO2'	1.64	0.45
1:2:647:G:N2	1:2:687:G:H22	2.13	0.45
1:2:992:A:H2'	1:2:993:A:H5'	1.97	0.45
1:2:1291:G:N2	1:2:1324:G:N2	2.64	0.45
4:S2:243:TYR:HB3	4:S2:246:GLU:HB2	1.97	0.45
5:S3:92:GLN:NE2	5:S3:92:GLN:O	2.49	0.45
9:S7:147:ASN:N	9:S7:147:ASN:OD1	2.48	0.45
13:C1:112:SER:C	13:C1:114:ALA:H	2.24	0.45
15:C3:129:TYR:HB2	15:C3:135:LEU:HD12	1.99	0.45
34:SR:86:ASP:O	34:SR:88:THR:HG23	2.17	0.45
36:1:67:A:O2'	36:1:315:C:O2	2.26	0.45
36:1:353:G:O2'	36:1:354:U:OP2	2.34	0.45
36:1:824:C:H2'	36:1:825:U:C6	2.51	0.45
36:1:1194:G:H2'	36:1:1195:A:C8	2.51	0.45
36:1:1818:U:H2'	36:1:1819:U:O4'	2.16	0.45
36:1:3035:A:C4	36:1:3036:G:C8	3.04	0.45
38:4:64:U:H3	38:4:96:A:H61	1.63	0.45
39:L2:29:LEU:HA	39:L2:76:PHE:CE1	2.37	0.45
40:L3:239:PRO:O	40:L3:242:THR:HG23	2.17	0.45
40:L3:282:ILE:HG21	40:L3:285:VAL:HG22	1.98	0.45
45:L8:111:LYS:HD3	45:L8:111:LYS:HA	1.77	0.45
48:M1:117:ASP:OD2	48:M1:119:SER:OG	2.18	0.45
50:M4:17:VAL:HG22	50:M4:36:VAL:O	2.16	0.45
53:M7:32:THR:HG22	53:M7:58:ILE:HG13	1.98	0.45
53:M7:65:SER:O	53:M7:66:SER:HB2	2.16	0.45
1:6:74:U:N3	1:6:76:A:H5"	2.31	0.45
1:6:149:C:OP2	26:d4:124:ARG:HD2	2.16	0.45
1:6:386:G:C6	1:6:387:A:N6	2.84	0.45
1:6:1233:G:H1	1:6:1252:C:H42	1.64	0.45
1:6:1584:G:H5"	18:c6:122:ARG:HG2	1.97	0.45
1:6:1642:G:H2'	1:6:1643:U:C6	2.51	0.45
8:s6:137:ARG:HB2	8:s6:140:ASN:HB2	1.98	0.45
11:s9:54:ARG:HE	11:s9:54:ARG:HB3	1.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:s9:168:ARG:CZ	11:s9:174:ARG:HH11	2.29	0.45
24:d2:36:LYS:O	24:d2:40:VAL:HG23	2.16	0.45
36:5:109:A:N1	36:5:322:U:O2'	2.44	0.45
36:5:630:A:H2'	36:5:631:U:C6	2.52	0.45
36:5:1258:U:H2'	36:5:1260:A:OP2	2.16	0.45
36:5:1389:G:H5"	68:o2:101:SER:HB3	1.99	0.45
36:5:2884:C:H2'	36:5:2885:C:H6	1.82	0.45
36:5:3124:G:H5'	46:l9:40:HIS:ND1	2.32	0.45
36:5:3218:A:H5"	36:5:3219:G:C8	2.51	0.45
36:5:3390:G:C2	36:5:3391:A:C8	3.04	0.45
40:l3:37:ARG:CA	40:l3:186:GLY:HA2	2.46	0.45
41:l4:110:ASN:HB3	51:m5:202:TYR:CE2	2.52	0.45
46:l9:166:ARG:HD2	46:l9:168:ARG:NH1	2.32	0.45
48:m1:114:ILE:HG22	48:m1:115:LYS:O	2.16	0.45
51:m5:11:GLN:HG2	51:m5:44:ARG:NH2	2.32	0.45
55:m9:90:PRO:HG2	55:m9:93:VAL:CG2	2.46	0.45
57:n1:44:ALA:HB2	57:n1:53:PRO:HG2	1.99	0.45
1:2:1471:A:C5	1:2:1472:C:H5	2.35	0.45
6:S4:158:ASP:OD2	6:S4:174:LYS:NZ	2.50	0.45
7:S5:113:ILE:O	7:S5:117:THR:OG1	2.32	0.45
9:S7:166:LEU:H	9:S7:166:LEU:HD22	1.81	0.45
17:C5:98:ASN:HB3	17:C5:120:SER:OG	2.17	0.45
34:SR:242:SER:HB3	34:SR:292:LEU:HD23	1.99	0.45
36:1:577:C:H1'	41:L4:340:GLY:O	2.17	0.45
36:1:816:A:H5"	36:1:920:A:H62	1.81	0.45
36:1:1063:G:H2'	36:1:1097:G:N2	2.32	0.45
36:1:2219:A:H2'	36:1:2220:A:C8	2.52	0.45
36:1:2818:U:P	65:N9:2:ALA:HB2	2.57	0.45
36:1:3095:U:OP1	59:N3:86:ARG:HD2	2.17	0.45
36:1:3193:C:H2'	36:1:3194:C:O4'	2.16	0.45
52:M6:116:LYS:NZ	56:N0:165:TYR:O	2.49	0.45
64:N8:133:LEU:HD23	64:N8:133:LEU:HA	1.81	0.45
1:6:289:U:H2'	1:6:290:G:O4'	2.15	0.45
1:6:393:C:H2'	1:6:394:C:C6	2.52	0.45
1:6:808:U:H2'	1:6:809:A:C8	2.52	0.45
1:6:1150:G:N2	1:6:1768:G:H2'	2.32	0.45
1:6:1273:G:N7	1:6:1430:U:H3'	2.32	0.45
1:6:1505:A:C5	1:6:1506:G:H1'	2.52	0.45
2:s0:30:GLN:NE2	2:s0:33:GLN:HG2	2.31	0.45
6:s4:163:ASP:HB3	6:s4:164:LEU:H	1.53	0.45
7:s5:73:THR:HG21	18:c6:114:ARG:HE	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:s6:70:PRO:O	8:s6:98:ARG:NH1	2.50	0.45
9:s7:15:GLU:O	9:s7:19:GLN:HG3	2.16	0.45
16:c4:42:VAL:HB	16:c4:63:ALA:HB1	1.98	0.45
24:d2:105:THR:HG23	24:d2:110:ILE:HG12	1.98	0.45
26:d4:23:PHE:CZ	26:d4:75:VAL:HG23	2.51	0.45
36:5:298:U:H5"	36:5:299:G:H5'	1.98	0.45
36:5:2338:C:OP1	40:l3:236:LYS:NZ	2.50	0.45
36:5:2672:G:H1'	48:m1:97:SER:HB3	1.98	0.45
36:5:3047:U:H5'	40:l3:329:PRO:HA	1.97	0.45
36:5:3149:G:H4'	40:l3:130:PHE:CZ	2.50	0.45
39:l2:15:ILE:HD12	39:l2:15:ILE:HA	1.82	0.45
39:l2:113:VAL:HG12	39:l2:166:ILE:HA	1.99	0.45
40:l3:70:ARG:HB3	40:l3:70:ARG:NH1	2.31	0.45
40:l3:85:VAL:HG12	40:l3:165:GLN:HE21	1.80	0.45
40:l3:117:ARG:CZ	40:l3:175:LYS:HG2	2.46	0.45
50:m4:20:VAL:HG13	50:m4:68:LEU:O	2.17	0.45
50:m4:135:LEU:C	50:m4:137:LYS:H	2.24	0.45
51:m5:16:SER:OG	51:m5:19:LEU:HB2	2.17	0.45
52:m6:171:LYS:O	52:m6:175:THR:HG22	2.16	0.45
54:m8:13:SER:C	54:m8:15:HIS:H	2.23	0.45
1:2:207:U:O4	1:2:257:A:N6	2.49	0.45
1:2:346:G:H5'	13:C1:79:LYS:HD2	1.97	0.45
1:2:1390:U:H6	19:C7:3:ARG:HG2	1.82	0.45
1:2:1619:C:H1'	30:D8:22:ARG:HE	1.81	0.45
1:2:1629:G:H2'	1:2:1630:U:C6	2.51	0.45
2:S0:179:ARG:HG2	2:S0:183:ARG:HD2	1.99	0.45
4:S2:38:VAL:O	4:S2:39:THR:OG1	2.27	0.45
10:S8:117:TYR:CD1	10:S8:150:ALA:HB2	2.52	0.45
15:C3:50:ILE:HG22	15:C3:71:ILE:HD13	1.99	0.45
22:D0:22:ILE:HG22	22:D0:93:LEU:HB2	1.99	0.45
25:D3:91:GLY:C	25:D3:93:LEU:H	2.25	0.45
34:SR:215:GLY:O	34:SR:239:GLU:HG3	2.16	0.45
34:SR:256:THR:N	34:SR:259:GLY:O	2.48	0.45
36:1:23:A:H2'	36:1:24:G:O4'	2.17	0.45
36:1:239:G:HO2'	36:1:240:U:P	2.38	0.45
36:1:860:G:OP2	39:L2:181:LYS:NZ	2.45	0.45
36:1:1047:A:N3	36:1:2633:U:O2'	2.46	0.45
36:1:2393:G:O2'	36:1:2394:G:OP2	2.27	0.45
36:1:2746:A:OP1	42:L5:179:ARG:NH1	2.50	0.45
37:3:22:A:C6	37:3:23:A:C6	3.05	0.45
39:L2:178:PRO:HD2	79:Q3:26:VAL:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:223:GLY:HA2	40:L3:271:GLY:HA3	1.98	0.45
42:L5:211:LEU:HD11	42:L5:218:ARG:HB2	1.99	0.45
47:M0:191:LYS:HG2	47:M0:198:LYS:HB2	1.99	0.45
55:M9:144:GLN:HA	55:M9:147:ALA:HB3	1.98	0.45
56:N0:99:ARG:NH1	56:N0:126:VAL:O	2.42	0.45
60:N4:23:ARG:NH2	60:N4:25:ASP:OD2	2.46	0.45
68:O2:75:LEU:HD23	68:O2:75:LEU:HA	1.75	0.45
70:O4:104:VAL:HA	70:O4:107:GLU:CD	2.42	0.45
77:Q1:22:ALA:HA	77:Q1:25:LYS:HB2	1.97	0.45
78:Q2:17:CYS:O	78:Q2:19:LYS:N	2.45	0.45
78:Q2:28:TYR:CB	78:Q2:69:VAL:HB	2.46	0.45
1:6:859:A:C5	15:c3:73:ARG:HD3	2.52	0.45
1:6:1616:G:H4'	30:d8:18:ARG:HD3	1.97	0.45
2:s0:64:ILE:HG23	2:s0:73:VAL:HG11	1.99	0.45
3:s1:24:PHE:HA	3:s1:27:LYS:HG2	1.99	0.45
6:s4:202:ASP:HB3	13:c1:40:LEU:HD12	1.99	0.45
7:s5:41:LYS:HB2	7:s5:67:PRO:HB2	1.99	0.45
7:s5:190:ILE:O	7:s5:194:LEU:HB2	2.17	0.45
9:s7:31:SER:HA	9:s7:35:LYS:CB	2.46	0.45
10:s8:138:ASN:HB3	10:s8:141:ARG:NH1	2.32	0.45
11:s9:155:HIS:O	11:s9:157:ASP:N	2.48	0.45
15:c3:46:THR:HG23	15:c3:49:GLN:OE1	2.16	0.45
15:c3:102:LEU:HD23	15:c3:102:LEU:HA	1.70	0.45
23:d1:8:LEU:HD22	23:d1:8:LEU:HA	1.80	0.45
24:d2:94:LEU:HA	24:d2:95:PRO:HD3	1.81	0.45
36:5:94:G:H2'	36:5:95:A:C8	2.52	0.45
36:5:193:C:C2	36:5:203:G:C2	3.05	0.45
36:5:289:A:C2	51:m5:93:LYS:HG3	2.51	0.45
36:5:1139:G:OP1	44:l7:97:PRO:HG3	2.16	0.45
36:5:1346:G:H1	36:5:1358:C:H42	1.65	0.45
36:5:1742:U:H2'	36:5:1743:G:C8	2.51	0.45
36:5:2148:U:O2'	39:l2:182:ALA:HB2	2.17	0.45
36:5:2933:A:OP1	36:5:3015:G:H4'	2.17	0.45
39:l2:96:LEU:HG	39:l2:107:VAL:HG12	1.98	0.45
40:l3:84:VAL:HG23	40:l3:163:HIS:C	2.41	0.45
41:l4:329:PRO:C	41:l4:331:ALA:N	2.73	0.45
56:n0:36:ILE:O	56:n0:40:ARG:HG3	2.17	0.45
74:o8:45:VAL:O	74:o8:47:GLY:N	2.50	0.45
81:p0:93:LEU:O	81:p0:95:GLU:N	2.45	0.45
83:f:37:ARG:HA	83:f:38:PRO:HD3	1.77	0.45
1:2:190:C:H1'	1:2:191:C:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:212:U:C2	1:2:254:A:C2	3.05	0.45
1:2:952:A:H5'	15:C3:98:VAL:HG22	1.98	0.45
1:2:953:G:H2'	1:2:954:G:C8	2.52	0.45
1:2:1530:C:P	27:D5:95:HIS:HB2	2.57	0.45
4:S2:102:VAL:HG11	4:S2:129:ILE:HG12	1.98	0.45
7:S5:182:ALA:O	7:S5:186:ASN:ND2	2.49	0.45
34:SR:69:GLN:HG2	34:SR:111:MET:SD	2.57	0.45
36:1:192:C:H2'	36:1:193:C:H6	1.82	0.45
36:1:650:C:O5'	36:1:650:C:H6	2.00	0.45
36:1:664:U:H2'	36:1:665:A:C8	2.52	0.45
36:1:1046:A:H2'	36:1:1049:C:C5	2.51	0.45
36:1:1266:G:H1	36:1:1275:C:N4	2.14	0.45
36:1:1278:A:O2'	36:1:1279:C:O5'	2.27	0.45
36:1:2631:U:OP2	57:N1:4:SER:OG	2.35	0.45
36:1:2645:G:P	47:M0:117:GLY:HA2	2.56	0.45
36:1:3194:C:N4	36:1:3196:U:O2	2.49	0.45
41:L4:201:GLN:HG3	41:L4:202:ARG:O	2.17	0.45
41:L4:330:TYR:CZ	44:L7:49:ALA:HA	2.51	0.45
43:L6:22:ARG:O	43:L6:23:LYS:HD3	2.17	0.45
43:L6:98:VAL:HA	43:L6:101:PHE:CD2	2.52	0.45
47:M0:38:LYS:HG2	47:M0:41:ALA:HB2	1.99	0.45
51:M5:15:GLN:HB3	72:O6:52:PRO:HD2	1.98	0.45
52:M6:14:HIS:HE1	52:M6:119:VAL:HG12	1.81	0.45
60:N4:21:PHE:HB3	60:N4:29:PHE:HB2	1.98	0.45
70:O4:57:LEU:HB3	70:O4:61:GLN:HB2	1.99	0.45
72:O6:53:TYR:HB2	72:O6:76:ARG:HD2	1.97	0.45
1:6:617:U:H5'	1:6:1031:U:O4'	2.17	0.45
1:6:870:C:H2'	1:6:871:G:C8	2.52	0.45
1:6:875:G:OP1	3:s1:158:SER:HB2	2.17	0.45
1:6:887:A:H1'	16:c4:122:PRO:HB3	1.99	0.45
1:6:896:U:H2'	1:6:897:C:C6	2.51	0.45
1:6:1785:U:OP1	16:c4:136:ARG:NH1	2.50	0.45
9:s7:141:ARG:HG2	24:d2:51:GLU:CD	2.42	0.45
11:s9:159:ALA:O	11:s9:165:GLY:HA3	2.17	0.45
12:c0:24:LYS:HD3	12:c0:63:TYR:CZ	2.51	0.45
16:c4:10:ASN:O	16:c4:12:GLN:HG2	2.17	0.45
20:c8:91:ASP:HB3	20:c8:95:GLY:H	1.82	0.45
26:d4:20:ARG:HB3	26:d4:76:TYR:CD2	2.51	0.45
27:d5:38:HIS:HB3	27:d5:39:ALA:H	1.61	0.45
36:5:886:C:H4'	36:5:1850:A:C2	2.52	0.45
36:5:1126:G:H21	47:m0:115:MET:HE2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1369:A:OP1	64:n8:21:ARG:NH1	2.49	0.45
36:5:1807:G:C6	36:5:1808:G:N1	2.85	0.45
42:l5:144:VAL:HG12	42:l5:173:VAL:HG22	1.97	0.45
43:l6:158:TYR:CE1	50:m4:115:PHE:HA	2.51	0.45
47:m0:82:ARG:O	47:m0:82:ARG:HG2	2.16	0.45
48:m1:23:VAL:HG12	48:m1:25:GLU:H	1.82	0.45
50:m4:36:VAL:HG11	50:m4:55:ARG:NH2	2.31	0.45
53:m7:4:TYR:CE1	53:m7:16:SER:HB2	2.52	0.45
1:2:226:A:H2'	1:2:227:U:H5'	1.99	0.45
1:2:542:A:H5"	1:2:544:A:C8	2.52	0.45
1:2:716:C:N4	1:2:723:G:H21	2.15	0.45
1:2:1174:C:H2'	1:2:1175:U:O4'	2.17	0.45
1:2:1353:U:H2'	1:2:1354:G:H5"	1.98	0.45
7:S5:30:PRO:HB2	7:S5:33:VAL:HB	1.98	0.45
20:C8:56:LYS:HG2	20:C8:60:GLU:CD	2.41	0.45
24:D2:76:SER:HB3	24:D2:77:PRO:HD3	1.98	0.45
26:D4:43:LYS:O	26:D4:47:VAL:HG23	2.17	0.45
26:D4:112:LYS:O	26:D4:116:LYS:HG3	2.17	0.45
36:1:194:U:H2'	36:1:195:U:C6	2.50	0.45
36:1:728:G:H4'	54:M8:47:VAL:HG21	1.99	0.45
36:1:950:G:OP1	54:M8:8:LYS:HE2	2.16	0.45
36:1:1506:A:H1'	36:1:1848:G:O6	2.17	0.45
36:1:3326:G:H2'	36:1:3327:G:C8	2.51	0.45
38:4:83:C:H1'	38:4:85:G:N2	2.32	0.45
44:L7:89:ILE:HD12	44:L7:214:TRP:CH2	2.51	0.45
46:L9:75:VAL:HA	46:L9:78:MET:HE3	1.97	0.45
47:M0:68:ALA:HB2	47:M0:158:LYS:HB2	1.99	0.45
49:M3:119:TYR:HD1	49:M3:145:PHE:CE2	2.35	0.45
56:N0:135:VAL:HG21	56:N0:144:LEU:HD11	1.99	0.45
70:O4:58:ARG:HH11	70:O4:58:ARG:HG3	1.81	0.45
71:O5:12:LYS:HB2	71:O5:17:LEU:HG	1.98	0.45
1:6:716:C:H1'	1:6:723:G:N2	2.32	0.45
1:6:778:G:C2	1:6:780:A:H5'	2.51	0.45
1:6:1209:C:N4	1:6:1454:G:H1	2.15	0.45
1:6:1511:U:H2'	1:6:1512:G:H8	1.81	0.45
3:s1:116:LYS:HG2	3:s1:117:TRP:H	1.82	0.45
3:s1:180:THR:HG23	3:s1:183:GLN:NE2	2.32	0.45
7:s5:112:ARG:HH12	18:c6:42:GLU:HG3	1.82	0.45
9:s7:90:VAL:O	9:s7:165:LYS:NZ	2.42	0.45
12:c0:27:PHE:CD1	12:c0:40:LEU:HD23	2.52	0.45
14:c2:52:LEU:HD13	14:c2:85:LYS:NZ	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:d0:50:LEU:HD22	22:d0:94:GLU:O	2.17	0.45
26:d4:91:LEU:O	26:d4:96:LEU:N	2.46	0.45
34:sR:144:LEU:HD21	34:sR:186:PHE:HB3	1.99	0.45
36:5:138:U:H2'	36:5:139:G:H8	1.78	0.45
36:5:1213:G:H5"	56:n0:137:ARG:HH12	1.82	0.45
36:5:3072:C:H2'	36:5:3073:A:O4'	2.17	0.45
38:8:147:U:O4'	61:n5:38:LEU:HD12	2.17	0.45
39:l2:43:GLY:O	39:l2:88:ILE:N	2.50	0.45
40:l3:37:ARG:HG2	40:l3:187:SER:N	2.30	0.45
41:l4:33:ASP:OD1	41:l4:33:ASP:N	2.49	0.45
41:l4:143:GLU:HB3	41:l4:144:LYS:NZ	2.31	0.45
41:l4:168:ALA:O	41:l4:172:VAL:HG23	2.17	0.45
42:l5:286:VAL:O	42:l5:290:ILE:HG13	2.16	0.45
61:n5:24:LEU:HB3	61:n5:25:LYS:H	1.57	0.45
77:q1:22:ALA:O	77:q1:25:LYS:N	2.49	0.45
1:2:448:C:OP1	6:S4:28:ALA:HA	2.16	0.45
1:2:765:G:O6	11:S9:82:ARG:NH1	2.49	0.45
1:2:823:G:H2'	1:2:824:G:C8	2.52	0.45
1:2:1157:A:H2'	1:2:1160:A:N7	2.31	0.45
1:2:1561:U:H2'	1:2:1562:G:C8	2.44	0.45
6:S4:49:ARG:HG3	6:S4:55:ALA:HB3	1.98	0.45
10:S8:170:SER:OG	10:S8:181:GLY:HA2	2.16	0.45
13:C1:13:PHE:CD2	13:C1:15:LYS:HB3	2.52	0.45
21:C9:28:LEU:HD12	21:C9:29:GLU:H	1.82	0.45
26:D4:23:PHE:HE2	26:D4:75:VAL:HG12	1.81	0.45
34:SR:38:ARG:HG2	34:SR:67:ILE:CG2	2.47	0.45
34:SR:156:VAL:HA	34:SR:169:ILE:HG22	1.98	0.45
36:1:860:G:C6	39:L2:181:LYS:HB2	2.52	0.45
36:1:1567:U:H2'	36:1:1568:U:H4'	1.99	0.45
36:1:3230:G:H4'	50:M4:132:LYS:HD3	1.98	0.45
41:L4:99:MET:SD	41:L4:102:PRO:HA	2.57	0.45
51:M5:18:VAL:O	51:M5:22:LEU:HD22	2.16	0.45
54:M8:81:VAL:HG22	54:M8:101:VAL:HG22	1.98	0.45
61:N5:82:LEU:HB3	61:N5:84:PHE:CE2	2.52	0.45
63:N7:53:VAL:HG21	63:N7:62:VAL:HG13	1.99	0.45
71:O5:31:LEU:O	71:O5:34:GLN:HB2	2.17	0.45
72:O6:34:SER:OG	72:O6:37:THR:OG1	2.23	0.45
1:6:246:G:C6	1:6:247:A:C6	3.04	0.45
1:6:567:A:N1	1:6:583:C:H1'	2.31	0.45
1:6:919:A:H1'	16:c4:36:LYS:HG3	1.99	0.45
1:6:1292:G:C5	1:6:1293:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:s1:156:ALA:HB1	3:s1:160:HIS:HB2	1.99	0.45
9:s7:133:THR:HG22	9:s7:157:LYS:O	2.17	0.45
11:s9:53:ARG:O	11:s9:57:ARG:N	2.41	0.45
36:5:151:A:H2'	36:5:152:U:O4'	2.17	0.45
36:5:540:U:H3	36:5:551:A:H61	1.64	0.45
36:5:996:A:C2	36:5:997:A:H1'	2.52	0.45
36:5:1495:U:H2'	36:5:1842:A:C2	2.51	0.45
36:5:1720:U:OP2	55:m9:110:ARG:NH1	2.46	0.45
36:5:2960:C:H2'	36:5:2961:G:C8	2.52	0.45
36:5:3225:C:H2'	36:5:3226:A:H8	1.82	0.45
40:l3:139:GLN:H	40:l3:139:GLN:HG3	1.57	0.45
41:l4:138:ARG:HE	41:l4:240:PRO:HD2	1.82	0.45
41:l4:233:LEU:HD13	41:l4:238:LEU:HD11	1.99	0.45
43:l6:52:VAL:HG22	43:l6:67:GLY:HA2	1.99	0.45
43:l6:65:ILE:HD13	43:l6:65:ILE:HA	1.74	0.45
46:l9:44:THR:HG21	50:m4:12:TRP:CH2	2.51	0.45
47:m0:19:LYS:HB2	47:m0:26:VAL:HG11	1.99	0.45
64:n8:126:LYS:HB3	64:n8:148:ILE:HG21	1.99	0.45
67:o1:70:ARG:O	67:o1:71:LEU:HD23	2.17	0.45
71:o5:31:LEU:HD22	71:o5:41:LEU:HD21	1.98	0.45
72:o6:91:ASN:O	72:o6:94:ILE:HG22	2.16	0.45
76:q0:94:SER:OG	76:q0:104:PRO:O	2.32	0.45
1:2:1086:A:C6	1:2:1087:A:C6	3.05	0.45
1:2:1165:G:O6	1:2:1166:A:N6	2.50	0.45
7:S5:145:ASP:CG	7:S5:146:THR:H	2.25	0.45
16:C4:19:ILE:HG22	16:C4:21:ALA:HB2	1.99	0.45
19:C7:84:TYR:O	19:C7:86:PRO:HD3	2.16	0.45
23:D1:74:GLN:HG3	23:D1:79:LEU:O	2.17	0.45
26:D4:123:LYS:H	26:D4:123:LYS:HG2	1.54	0.45
36:1:874:U:OP1	40:L3:241:LYS:HG2	2.17	0.45
36:1:965:A:C2	64:N8:43:ILE:HD12	2.47	0.45
36:1:1275:C:H2'	36:1:1276:U:O4'	2.16	0.45
36:1:1911:A:O5'	36:1:1911:A:H8	2.00	0.45
36:1:2295:A:OP1	59:N3:63:LYS:NZ	2.45	0.45
43:L6:137:ASP:O	43:L6:141:VAL:HG23	2.17	0.45
44:L7:92:ILE:HD12	44:L7:92:ILE:HA	1.76	0.45
46:L9:161:LEU:HD22	46:L9:179:ILE:HD12	1.99	0.45
47:M0:36:LEU:HD13	47:M0:87:LEU:HD13	1.99	0.45
47:M0:205:SER:HB3	47:M0:208:ASN:OD1	2.17	0.45
48:M1:101:ASN:H	48:M1:101:ASN:ND2	2.13	0.45
52:M6:3:VAL:C	52:M6:4:GLU:HG3	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:M7:30:ARG:CZ	53:M7:34:GLN:HG3	2.47	0.45
56:N0:137:ARG:HG2	56:N0:139:TYR:CE1	2.52	0.45
63:N7:10:VAL:HG22	63:N7:24:VAL:HG13	1.98	0.45
71:O5:49:LYS:HA	71:O5:49:LYS:HD3	1.76	0.45
78:Q2:93:LEU:HD23	78:Q2:93:LEU:H	1.82	0.45
1:6:53:G:H2'	1:6:54:C:C6	2.52	0.45
1:6:327:U:H1'	13:c1:10:GLU:HG2	1.99	0.45
1:6:547:U:H2'	1:6:548:G:O4'	2.17	0.45
1:6:771:A:O2'	11:s9:6:ARG:HD2	2.16	0.45
1:6:1765:A:H5'	1:6:1767:G:N7	2.32	0.45
2:s0:7:PHE:HE1	23:d1:39:VAL:HG21	1.82	0.45
5:s3:211:PRO:HG3	19:c7:19:ARG:HB3	1.99	0.45
22:d0:72:ASN:OD1	22:d0:73:GLY:N	2.50	0.45
34:sR:85:TRP:CD1	34:sR:109:ASP:HB3	2.52	0.45
35:sM:27:LYS:HB2	48:m1:46:VAL:HG21	1.98	0.45
36:5:516:A:O3'	44:l7:60:ARG:NH2	2.40	0.45
36:5:1304:A:N1	36:5:2938:G:O2'	2.47	0.45
36:5:1571:A:H1'	36:5:1572:U:C5	2.52	0.45
36:5:1781:C:H2'	36:5:1782:U:H6	1.81	0.45
36:5:2931:C:H2'	36:5:2932:U:O4'	2.17	0.45
37:7:11:A:H4'	37:7:13:A:C8	2.51	0.45
49:m3:64:LYS:HG3	64:n8:69:TRP:CG	2.52	0.45
53:m7:136:ILE:O	53:m7:137:ASN:ND2	2.49	0.45
60:n4:82:ILE:O	60:n4:85:ALA:N	2.50	0.45
63:n7:42:LEU:H	63:n7:42:LEU:HD12	1.82	0.45
68:o2:15:LYS:HE3	68:o2:15:LYS:HB3	1.68	0.45
68:o2:100:ILE:O	68:o2:105:ARG:NH1	2.50	0.45
1:2:890:C:H2'	1:2:891:A:H8	1.82	0.44
1:2:1066:C:O3'	3:S1:149:GLN:HG3	2.17	0.44
1:2:1116:A:P	77:Q1:17:ARG:HH21	2.39	0.44
1:2:1173:C:H2'	1:2:1174:C:C6	2.52	0.44
1:2:1393:C:H2'	1:2:1394:G:O4'	2.17	0.44
1:2:1470:C:OP1	1:2:1540:G:O2'	2.35	0.44
1:2:1774:G:N7	77:Q1:4:LYS:NZ	2.63	0.44
3:S1:30:PHE:CD1	3:S1:96:LEU:HD22	2.52	0.44
14:C2:61:VAL:HA	14:C2:89:ILE:HG22	1.99	0.44
21:C9:66:TYR:HA	21:C9:124:ILE:HB	1.99	0.44
21:C9:105:LEU:HD13	21:C9:122:ARG:HD3	1.99	0.44
26:D4:78:SER:OG	26:D4:79:VAL:N	2.51	0.44
34:SR:198:ASN:O	34:SR:215:GLY:HA3	2.17	0.44
34:SR:242:SER:O	34:SR:292:LEU:HD21	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:314:U:H2'	36:1:315:C:C6	2.53	0.44
36:1:729:C:H2'	36:1:730:C:H6	1.83	0.44
36:1:804:C:H5'	41:L4:93:MET:HE1	2.00	0.44
36:1:1002:A:H2	36:1:1050:U:HO2'	1.65	0.44
36:1:1069:C:H2'	36:1:1070:U:C6	2.53	0.44
36:1:1366:A:C2	36:1:1367:G:C4	3.06	0.44
36:1:1471:U:H2'	36:1:1472:U:H6	1.82	0.44
36:1:2278:C:H2'	36:1:2279:A:H5"	1.99	0.44
36:1:2780:A:H2'	36:1:2781:U:C6	2.52	0.44
36:1:3198:U:H1'	46:L9:21:LYS:HB2	2.00	0.44
38:4:23:U:H4'	62:N6:17:LYS:HG2	1.99	0.44
39:L2:96:LEU:O	79:Q3:87:ARG:HD3	2.17	0.44
40:L3:87:VAL:HB	40:L3:110:LEU:HD11	1.99	0.44
41:L4:157:GLU:OE2	41:L4:251:THR:OG1	2.30	0.44
44:L7:203:TRP:CD1	44:L7:204:PRO:HD2	2.52	0.44
45:L8:97:TYR:OH	45:L8:204:ARG:N	2.47	0.44
45:L8:97:TYR:HB3	45:L8:131:ALA:HA	1.98	0.44
46:L9:37:ASN:C	46:L9:39:LYS:H	2.21	0.44
52:M6:58:LEU:HD12	52:M6:58:LEU:HA	1.83	0.44
53:M7:108:ASP:O	53:M7:110:THR:N	2.47	0.44
55:M9:170:ARG:O	55:M9:174:ALA:N	2.47	0.44
61:N5:67:ILE:HD12	61:N5:121:LYS:HG3	1.99	0.44
76:Q0:92:ASP:O	76:Q0:105:PRO:HG3	2.17	0.44
1:6:151:G:N2	1:6:164:A:C4	2.85	0.44
1:6:1589:C:H2'	1:6:1590:G:C8	2.52	0.44
1:6:1779:U:H2'	1:6:1781:A:OP2	2.17	0.44
2:s0:74:VAL:HG22	2:s0:96:THR:HG23	1.99	0.44
2:s0:109:ASN:H	4:s2:64:LYS:HZ2	1.63	0.44
4:s2:144:TRP:CZ2	4:s2:173:PRO:HG3	2.52	0.44
6:s4:182:TYR:CZ	6:s4:192:ILE:HD11	2.52	0.44
11:s9:78:ARG:O	11:s9:82:ARG:HB2	2.16	0.44
12:c0:32:HIS:CD2	12:c0:33:GLU:H	2.35	0.44
21:c9:117:SER:HB3	21:c9:123:ARG:HB3	1.98	0.44
22:d0:26:LEU:HB2	22:d0:89:ARG:HB2	1.99	0.44
25:d3:69:ARG:HD2	25:d3:117:ILE:HG12	1.99	0.44
36:5:75:G:H5"	49:m3:58:VAL:CG1	2.47	0.44
36:5:114:A:N1	36:5:266:A:O2'	2.44	0.44
36:5:240:U:O2'	36:5:241:G:H8	2.00	0.44
36:5:365:A:H1'	41:l4:82:THR:OG1	2.18	0.44
36:5:1190:A:C5	36:5:1193:A:H1'	2.52	0.44
36:5:1386:A:N3	41:l4:180:LYS:HA	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1579:C:C5'	36:5:1649:U:H5"	2.47	0.44
36:5:1794:G:H4'	39:l2:191:LEU:HD23	1.99	0.44
36:5:2172:A:C6	36:5:2173:U:C4	3.05	0.44
36:5:2448:G:H22	36:5:2498:U:H3	1.64	0.44
41:l4:271:LYS:O	41:l4:273:GLY:N	2.49	0.44
41:l4:282:SER:CB	54:m8:126:GLN:HE21	2.29	0.44
43:l6:65:ILE:O	43:l6:76:LEU:HA	2.17	0.44
46:l9:176:LEU:HD13	76:q0:86:ALA:HB3	1.99	0.44
60:n4:82:ILE:O	60:n4:84:GLY:N	2.50	0.44
71:o5:102:GLU:HG3	71:o5:106:LYS:HE3	1.99	0.44
1:2:116:U:H2'	1:2:117:U:C6	2.53	0.44
1:2:144:U:C2	1:2:145:A:C8	3.05	0.44
1:2:350:U:H5"	1:2:352:A:H5'	1.98	0.44
1:2:413:U:H2'	1:2:414:C:C6	2.53	0.44
1:2:648:G:C2	1:2:687:G:N2	2.85	0.44
1:2:700:C:H42	1:2:738:G:H1	1.65	0.44
1:2:927:C:H4'	16:C4:125:SER:OG	2.18	0.44
1:2:1173:C:H2'	1:2:1174:C:H6	1.82	0.44
1:2:1408:G:H2'	1:2:1409:G:O4'	2.17	0.44
4:S2:187:LEU:HD21	4:S2:215:PHE:HB2	1.99	0.44
6:S4:136:VAL:HG11	6:S4:148:ARG:NH2	2.31	0.44
16:C4:84:ARG:HB2	16:C4:118:VAL:HG23	1.98	0.44
20:C8:57:ARG:HB2	20:C8:60:GLU:HG3	1.99	0.44
30:D8:32:PHE:CE2	30:D8:38:ARG:HD2	2.52	0.44
33:E1:93:HIS:CG	33:E1:94:LYS:H	2.34	0.44
34:SR:117:LYS:H	34:SR:117:LYS:HD2	1.82	0.44
35:SM:61:ILE:H	35:SM:61:ILE:HG13	1.61	0.44
36:1:564:G:H2'	36:1:565:U:C6	2.52	0.44
36:1:1325:U:H2'	36:1:1326:A:C8	2.52	0.44
36:1:2150:G:H4'	79:Q3:22:LEU:HD21	1.98	0.44
36:1:2273:G:H22	36:1:2311:G:H2'	1.82	0.44
36:1:2381:G:C2'	36:1:2382:G:H5'	2.47	0.44
36:1:3356:G:H2'	36:1:3357:U:O4'	2.17	0.44
86:1:3401:SPS:O1	86:1:3401:SPS:H91	2.18	0.44
41:L4:140:HIS:HA	41:L4:177:ASP:OD1	2.17	0.44
44:L7:239:LEU:O	44:L7:242:SER:OG	2.29	0.44
48:M1:36:VAL:HG21	48:M1:123:PHE:HD2	1.83	0.44
52:M6:31:GLN:HE21	52:M6:32:LYS:H	1.65	0.44
58:N2:19:VAL:HG12	58:N2:105:LEU:HD22	1.99	0.44
60:N4:4:GLU:HG2	60:N4:30:ARG:CD	2.47	0.44
61:N5:64:GLU:O	61:N5:65:GLN:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:N7:29:HIS:CE1	63:N7:42:LEU:HD13	2.52	0.44
66:O0:13:LYS:O	66:O0:17:VAL:HG23	2.17	0.44
73:O7:18:LEU:HD21	75:O9:51:ILE:HG22	1.99	0.44
75:O9:24:PRO:HB2	75:O9:27:ILE:HD13	2.00	0.44
1:6:53:G:C2	1:6:54:C:C2	3.05	0.44
1:6:486:G:H22	1:6:501:U:H3	1.66	0.44
1:6:538:A:H2	1:6:540:G:N2	2.15	0.44
1:6:639:U:P	9:s7:117:THR:HG23	2.58	0.44
4:s2:67:GLN:OE1	4:s2:67:GLN:N	2.40	0.44
13:c1:35:TYR:HD1	13:c1:49:ILE:HG12	1.81	0.44
14:c2:54:ARG:HB3	33:e1:128:ALA:HB1	1.99	0.44
24:d2:93:LEU:O	24:d2:94:LEU:HD23	2.17	0.44
36:5:901:G:H5"	73:o7:13:ASN:HD21	1.82	0.44
36:5:929:A:OP1	41:l4:61:SER:OG	2.34	0.44
36:5:943:U:H3'	64:n8:13:GLY:CA	2.45	0.44
36:5:1346:G:O2'	41:l4:307:GLN:OE1	2.21	0.44
36:5:1824:U:H4'	74:o8:17:ARG:NH2	2.31	0.44
36:5:2697:A:H2'	36:5:2698:G:C8	2.51	0.44
36:5:3041:U:H2'	36:5:3042:U:C6	2.52	0.44
38:8:81:U:OP1	38:8:81:U:H4'	2.16	0.44
39:l2:27:ALA:HB3	39:l2:128:ARG:NH2	2.31	0.44
40:l3:147:GLU:O	40:l3:151:ILE:HG13	2.16	0.44
47:m0:3:ARG:HD2	47:m0:3:ARG:HA	1.67	0.44
50:m4:24:LYS:HB3	50:m4:24:LYS:HE2	1.83	0.44
59:n3:27:ASP:O	59:n3:29:SER:N	2.51	0.44
71:o5:118:ILE:O	71:o5:119:LYS:HD2	2.17	0.44
83:f:138:ILE:HG22	83:f:147:ALA:HA	1.99	0.44
1:2:432:G:H2'	1:2:433:C:O4'	2.18	0.44
1:2:628:G:N1	1:2:970:A:OP2	2.37	0.44
1:2:1483:A:N3	1:2:1607:G:O2'	2.35	0.44
1:2:1584:G:N2	1:2:1611:A:OP2	2.20	0.44
1:2:1698:G:H1'	1:2:1699:G:OP1	2.17	0.44
1:2:1701:A:H3'	1:2:1702:A:H5"	1.99	0.44
1:2:1729:C:H2'	1:2:1730:A:O4'	2.17	0.44
2:S0:148:ASP:HB2	2:S0:164:ASN:ND2	2.33	0.44
3:S1:124:ASN:HB3	3:S1:138:PHE:HA	2.00	0.44
9:S7:129:LEU:HD23	9:S7:129:LEU:HA	1.75	0.44
22:D0:27:THR:HG23	22:D0:113:ASP:HB3	1.99	0.44
28:D6:37:LYS:HD3	28:D6:72:HIS:CD2	2.53	0.44
36:1:307:A:H2'	36:1:308:A:H8	1.83	0.44
36:1:957:C:H4'	36:1:2799:A:C5	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1282:G:H2'	36:1:1283:C:O4'	2.17	0.44
36:1:1369:A:H2'	36:1:1370:G:O4'	2.18	0.44
36:1:1764:U:H3'	36:1:1765:U:O4'	2.17	0.44
36:1:2273:G:N2	36:1:2311:G:H2'	2.32	0.44
38:4:128:U:OP1	38:4:129:C:N4	2.38	0.44
46:L9:87:LYS:HB2	46:L9:187:ILE:HG12	1.99	0.44
46:L9:187:ILE:HG22	46:L9:188:THR:H	1.81	0.44
48:M1:62:ASN:ND2	78:Q2:101:GLY:O	2.42	0.44
48:M1:141:ARG:O	48:M1:145:LYS:NZ	2.49	0.44
51:M5:59:PHE:CD1	51:M5:133:ILE:HD11	2.47	0.44
51:M5:178:HIS:CE1	51:M5:179:LYS:HG3	2.53	0.44
55:M9:8:LYS:HE3	55:M9:22:VAL:HG23	1.99	0.44
65:N9:22:LYS:H	65:N9:22:LYS:HG2	1.54	0.44
68:O2:111:ARG:NE	68:O2:115:LEU:HD11	2.33	0.44
69:O3:45:LEU:HD23	69:O3:71:VAL:HG12	2.00	0.44
70:O4:20:ILE:HD11	70:O4:32:ALA:HB1	1.99	0.44
73:O7:45:ARG:HH11	73:O7:47:TYR:HE2	1.66	0.44
1:6:296:U:C4	1:6:297:U:C4	3.06	0.44
1:6:912:U:H4'	1:6:913:G:H5'	1.99	0.44
1:6:1111:G:C2	1:6:1112:G:H1'	2.52	0.44
1:6:1244:A:N3	1:6:1244:A:H3'	2.32	0.44
1:6:1382:A:HO2'	1:6:1383:G:H5"	1.81	0.44
1:6:1528:U:H2'	1:6:1529:C:O4'	2.17	0.44
2:s0:63:ILE:O	2:s0:67:ILE:HD13	2.16	0.44
2:s0:175:TYR:OH	2:s0:197:ILE:O	2.30	0.44
3:s1:111:ARG:HB3	28:d6:68:TYR:CG	2.52	0.44
3:s1:113:MET:HE2	3:s1:142:PHE:CE2	2.52	0.44
5:s3:125:TYR:O	5:s3:129:SER:OG	2.26	0.44
6:s4:107:GLY:HA2	6:s4:189:LEU:HG	1.97	0.44
7:s5:201:ALA:HA	7:s5:211:ILE:HD11	1.99	0.44
11:s9:102:GLU:HA	11:s9:105:LEU:HB2	1.98	0.44
26:d4:61:ARG:HG3	26:d4:62:THR:N	2.32	0.44
28:d6:51:ARG:NH2	28:d6:55:GLU:OE1	2.51	0.44
34:sR:221:MET:HA	34:sR:233:THR:HG23	1.99	0.44
36:5:26:A:N3	36:5:328:U:O2'	2.42	0.44
36:5:348:A:H1'	36:5:352:A:O2'	2.18	0.44
36:5:1283:C:OP1	81:p0:81:LYS:HD3	2.17	0.44
36:5:1574:C:O5'	36:5:1574:C:H6	2.00	0.44
36:5:2133:U:O4	36:5:2147:A:H2	1.99	0.44
36:5:2442:G:H1	36:5:2505:U:H3	1.66	0.44
36:5:2771:U:N3	36:5:2773:C:N3	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:7:77:G:H5”	56:n0:46:GLN:O	2.16	0.44
38:8:43:A:N6	73:o7:65:ARG:HH22	2.16	0.44
40:l3:3:HIS:ND1	40:l3:3:HIS:C	2.75	0.44
42:l5:260:PHE:HB3	42:l5:264:GLN:HB3	1.99	0.44
43:l6:44:ALA:O	43:l6:48:ARG:HB3	2.17	0.44
50:m4:15:VAL:HG13	56:n0:150:PHE:O	2.17	0.44
53:m7:13:LYS:HE2	53:m7:152:GLU:HB2	1.99	0.44
56:n0:40:ARG:HG2	56:n0:40:ARG:HH11	1.83	0.44
57:n1:11:THR:CG2	57:n1:55:LYS:HD2	2.48	0.44
64:n8:65:GLN:O	64:n8:66:ALA:HB3	2.18	0.44
66:o0:24:THR:OG1	66:o0:29:SER:OG	2.20	0.44
66:o0:92:ILE:HG21	66:o0:100:ILE:HD11	1.99	0.44
79:q3:49:ARG:HD3	79:q3:51:ALA:O	2.18	0.44
81:p0:11:TYR:OH	81:p0:54:GLY:HA3	2.18	0.44
81:p0:89:THR:OG1	81:p0:90:ASN:N	2.50	0.44
1:2:47:A:N1	1:2:386:G:H1’	2.33	0.44
1:2:458:G:H5”	26:D4:109:LYS:HZ1	1.83	0.44
1:2:811:A:C2	1:2:858:G:H1’	2.52	0.44
1:2:1352:G:H2’	1:2:1353:U:O4’	2.17	0.44
1:2:1555:A:OP2	17:C5:47:ARG:NH2	2.50	0.44
1:2:1586:A:H5”	18:C6:136:SER:HB2	1.99	0.44
4:S2:225:LEU:HD13	24:D2:68:ARG:HA	1.98	0.44
5:S3:70:THR:HG22	5:S3:86:LEU:HD13	1.98	0.44
6:S4:88:ASP:HA	6:S4:122:LYS:HE2	1.99	0.44
7:S5:25:LEU:HD22	7:S5:25:LEU:H	1.82	0.44
9:S7:6:ALA:HB1	9:S7:9:LEU:HD12	1.97	0.44
11:S9:53:ARG:O	11:S9:57:ARG:HG2	2.17	0.44
25:D3:41:SER:HA	25:D3:42:PRO:HD3	1.77	0.44
25:D3:91:GLY:O	25:D3:93:LEU:N	2.47	0.44
25:D3:96:VAL:HG23	25:D3:97:ASP:H	1.82	0.44
28:D6:44:ILE:HD12	28:D6:45:VAL:HG13	2.00	0.44
32:E0:31:LYS:H	32:E0:31:LYS:HG2	1.59	0.44
36:1:643:U:O4	36:1:644:G:C6	2.70	0.44
36:1:954:U:O4	36:1:1115:G:H1’	2.18	0.44
36:1:1094:U:H1’	36:1:1096:U:H2’	2.00	0.44
36:1:2896:A:H4’	76:Q0:95:VAL:HG11	1.99	0.44
36:1:3197:G:H2’	36:1:3198:U:H5”	1.98	0.44
36:1:3290:G:C6	36:1:3291:G:C5	3.05	0.44
37:3:44:C:H4’	42:L5:152:ARG:HG3	1.97	0.44
39:L2:147:ARG:HH12	39:L2:155:LYS:HD2	1.81	0.44
40:L3:21:ARG:HG2	40:L3:269:GLN:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:67:PHE:CE1	59:N3:88:ARG:HB3	2.52	0.44
40:L3:77:THR:HG23	40:L3:327:CYS:HA	1.98	0.44
49:M3:50:PRO:HB3	49:M3:140:SER:O	2.17	0.44
55:M9:117:LYS:HA	55:M9:120:TYR:HB3	1.99	0.44
61:N5:72:ALA:O	61:N5:76:VAL:HG23	2.17	0.44
64:N8:47:LYS:HE2	64:N8:48:TYR:CE2	2.52	0.44
69:O3:71:VAL:HG13	69:O3:81:VAL:CG1	2.48	0.44
70:O4:37:LYS:HB2	70:O4:58:ARG:NH2	2.33	0.44
1:6:119:A:H1'	1:6:397:A:C4	2.52	0.44
1:6:151:G:H22	1:6:163:G:N2	2.14	0.44
1:6:291:G:H2'	1:6:292:U:C6	2.52	0.44
1:6:512:A:O3'	11:s9:133:HIS:NE2	2.47	0.44
1:6:542:A:H61	32:e0:28:LYS:HZ1	1.64	0.44
1:6:784:C:N4	26:d4:11:LYS:HD3	2.33	0.44
1:6:1484:G:H2'	1:6:1485:C:H6	1.82	0.44
1:6:1607:G:H2'	1:6:1608:U:H6	1.83	0.44
1:6:1742:U:H2'	1:6:1743:U:H6	1.82	0.44
1:6:1754:A:H4'	1:6:1755:A:O5'	2.16	0.44
2:s0:80:THR:HA	2:s0:83:GLN:HE21	1.83	0.44
3:s1:157:GLN:HB2	3:s1:160:HIS:NE2	2.32	0.44
4:s2:66:PHE:HB3	4:s2:130:ILE:HG23	1.98	0.44
8:s6:20:ASP:O	8:s6:24:ILE:HG13	2.17	0.44
10:s8:10:LYS:HG2	13:c1:133:LYS:CE	2.47	0.44
11:s9:129:ILE:HA	11:s9:134:ILE:CG1	2.48	0.44
13:c1:72:THR:HG22	13:c1:124:THR:HA	1.97	0.44
18:c6:109:PHE:O	18:c6:113:ASP:N	2.50	0.44
36:5:184:U:H2'	36:5:185:C:C6	2.52	0.44
36:5:1549:U:H2'	36:5:1550:C:C6	2.52	0.44
36:5:2246:G:OP1	39:l2:218:HIS:HD2	1.99	0.44
36:5:2339:C:P	59:n3:48:ARG:HG2	2.58	0.44
36:5:2628:A:H1'	36:5:2798:C:C2	2.53	0.44
36:5:3236:U:H2'	36:5:3237:U:C6	2.53	0.44
38:8:78:G:H2'	38:8:79:A:O4'	2.17	0.44
40:l3:185:GLY:O	40:l3:191:LYS:NZ	2.32	0.44
45:l8:143:ILE:HB	45:l8:169:LEU:HD13	2.00	0.44
48:m1:45:PRO:HB2	48:m1:67:VAL:HG22	1.99	0.44
51:m5:94:TYR:CE2	51:m5:96:ARG:HB2	2.52	0.44
53:m7:13:LYS:HE2	53:m7:13:LYS:HB3	1.68	0.44
57:n1:9:SER:O	57:n1:55:LYS:NZ	2.29	0.44
57:n1:84:TYR:HD1	65:n9:23:LYS:HA	1.82	0.44
72:o6:15:LYS:NZ	72:o6:16:LYS:H	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:q2:12:CYS:SG	78:q2:74:CYS:SG	3.16	0.44
1:2:223:U:H2'	1:2:224:C:C6	2.52	0.44
1:2:526:A:H2'	1:2:527:A:O4'	2.17	0.44
1:2:567:A:H4'	32:E0:10:ARG:O	2.17	0.44
1:2:824:G:N2	1:2:849:C:O2	2.51	0.44
1:2:1434:U:H4'	31:D9:24:CYS:HB2	2.00	0.44
1:2:1450:U:H2'	1:2:1451:C:C6	2.53	0.44
1:2:1460:A:OP2	35:SM:68:ARG:HD3	2.18	0.44
3:S1:32:ILE:O	3:S1:43:VAL:HB	2.18	0.44
6:S4:29:PRO:HG3	6:S4:45:ILE:HD13	1.99	0.44
6:S4:139:VAL:HG13	6:S4:150:PRO:HG3	1.99	0.44
7:S5:112:ARG:HH22	27:D5:94:LYS:HD3	1.83	0.44
11:S9:38:ASN:C	11:S9:40:LYS:H	2.25	0.44
14:C2:61:VAL:HG13	14:C2:121:VAL:HB	2.00	0.44
15:C3:2:GLY:O	15:C3:3:ARG:HB3	2.18	0.44
20:C8:142:GLY:O	20:C8:145:ARG:HD3	2.17	0.44
21:C9:126:GLU:H	21:C9:126:GLU:CD	2.26	0.44
25:D3:133:LEU:HD21	25:D3:137:LYS:HE3	1.98	0.44
26:D4:21:LYS:NZ	26:D4:77:ASN:OD1	2.49	0.44
34:SR:231:MET:HE2	34:SR:232:TYR:CE2	2.52	0.44
36:1:503:C:OP1	43:L6:26:ARG:NH1	2.51	0.44
36:1:531:G:H2'	36:1:532:A:C8	2.52	0.44
36:1:869:G:H1'	36:1:891:G:N2	2.32	0.44
36:1:874:U:H5"	36:1:2950:G:OP1	2.18	0.44
36:1:929:A:H2'	36:1:930:U:C6	2.53	0.44
36:1:2590:A:C4	36:1:2591:A:C8	3.06	0.44
36:1:2645:G:OP2	47:M0:117:GLY:HA2	2.18	0.44
36:1:2709:C:H2'	36:1:2710:C:C6	2.52	0.44
42:L5:184:ASP:OD1	42:L5:187:THR:N	2.50	0.44
43:L6:166:LYS:N	43:L6:169:ASP:OD2	2.39	0.44
44:L7:80:GLN:OE1	57:N1:136:ARG:N	2.41	0.44
48:M1:163:PHE:C	48:M1:165:GLN:H	2.26	0.44
52:M6:14:HIS:CD2	52:M6:124:LEU:HD13	2.52	0.44
52:M6:111:PRO:O	52:M6:113:ASP:N	2.50	0.44
53:M7:29:THR:O	53:M7:29:THR:OG1	2.30	0.44
58:N2:24:GLU:HG3	58:N2:25:ASN:OD1	2.17	0.44
59:N3:26:ALA:HB3	59:N3:101:VAL:HG13	1.99	0.44
1:6:446:A:N6	1:6:461:G:H21	2.15	0.44
1:6:481:A:H2'	1:6:482:U:O4'	2.17	0.44
1:6:560:U:H2'	1:6:561:G:H8	1.83	0.44
1:6:762:A:OP1	11:s9:79:ARG:NH1	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:842:C:H2'	1:6:843:U:O4'	2.17	0.44
1:6:1470:C:H42	1:6:1574:G:H1	1.66	0.44
4:s2:228:ASN:OD1	4:s2:228:ASN:N	2.48	0.44
7:s5:153:GLY:O	7:s5:155:ALA:N	2.50	0.44
11:s9:142:ASN:O	11:s9:143:ILE:HD12	2.17	0.44
17:c5:26:LEU:HD23	17:c5:87:PRO:HB2	1.99	0.44
20:c8:56:LYS:HZ3	20:c8:61:LEU:HD23	1.82	0.44
33:e1:86:THR:HG23	33:e1:87:THR:H	1.82	0.44
36:5:209:A:H4'	36:5:211:A:N7	2.32	0.44
36:5:952:A:OP1	65:n9:14:ARG:NH2	2.48	0.44
36:5:1626:U:O3'	36:5:1632:A:H4'	2.17	0.44
36:5:1915:A:H2'	36:5:1916:U:C6	2.51	0.44
36:5:2987:A:O2'	40:l3:259:HIS:HB3	2.17	0.44
36:5:3133:C:H2'	36:5:3134:A:O4'	2.17	0.44
38:8:52:A:OP1	75:o9:21:ARG:NH2	2.38	0.44
39:l2:36:GLU:HG2	39:l2:90:ALA:O	2.17	0.44
42:l5:277:LEU:HB3	42:l5:281:GLU:OE2	2.18	0.44
44:l7:77:VAL:HG22	57:n1:139:ARG:HB2	2.00	0.44
45:l8:137:ASN:HB3	51:m5:2:GLY:HA2	1.99	0.44
54:m8:58:ASN:C	54:m8:60:PRO:HD3	2.42	0.44
54:m8:165:ILE:HD13	54:m8:166:LEU:N	2.32	0.44
55:m9:154:ALA:O	55:m9:158:GLU:HG2	2.18	0.44
67:o1:51:LEU:HB3	67:o1:55:LEU:HD12	1.99	0.44
79:q3:6:LYS:HG2	79:q3:7:LYS:HG3	2.00	0.44
1:2:409:C:H2'	1:2:410:A:H8	1.83	0.44
1:2:737:A:OP2	1:2:737:A:H2'	2.17	0.44
1:2:766:U:H5'	1:2:767:U:H5"	2.00	0.44
1:2:1299:G:H2'	1:2:1300:A:C8	2.52	0.44
1:2:1582:U:OP1	18:C6:135:ARG:NH1	2.50	0.44
2:S0:119:ARG:NH1	4:S2:241:ASP:OD2	2.50	0.44
4:S2:152:HIS:CG	4:S2:174:ARG:HG2	2.52	0.44
6:S4:47:PHE:HD2	6:S4:48:LEU:HD12	1.82	0.44
7:S5:92:ARG:NH2	7:S5:169:ASN:OD1	2.50	0.44
11:S9:40:LYS:HB2	11:S9:40:LYS:HE3	1.65	0.44
12:C0:11:ILE:HD12	12:C0:42:VAL:HG13	1.99	0.44
27:D5:40:VAL:HA	27:D5:75:LEU:HD11	1.99	0.44
27:D5:93:SER:HB3	27:D5:100:ILE:HB	1.98	0.44
30:D8:41:VAL:O	30:D8:62:GLU:HB2	2.18	0.44
36:1:75:G:H5'	49:M3:59:ARG:O	2.18	0.44
36:1:295:A:H2'	36:1:296:A:O4'	2.17	0.44
36:1:420:G:N2	36:1:2385:G:OP2	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:426:G:H5'	68:O2:50:ILE:HG22	2.00	0.44
36:1:428:A:H2'	36:1:429:U:C6	2.52	0.44
36:1:543:C:N4	36:1:548:G:H1	2.16	0.44
36:1:2100:A:H5'	36:1:2101:C:OP1	2.18	0.44
36:1:2134:G:H1	36:1:2146:C:H42	1.64	0.44
36:1:2510:U:O2'	36:1:2511:A:H8	2.01	0.44
36:1:2848:G:OP1	76:Q0:100:TYR:OH	2.24	0.44
38:4:77:A:H2'	38:4:78:G:O4'	2.18	0.44
43:L6:43:LEU:HD21	43:L6:85:ILE:HG13	2.00	0.44
47:M0:9:TYR:CG	47:M0:97:LEU:HD13	2.52	0.44
48:M1:92:ARG:HB2	48:M1:95:ASN:ND2	2.32	0.44
49:M3:76:THR:HG22	49:M3:101:ARG:HB3	2.00	0.44
49:M3:157:ARG:HG2	49:M3:158:ALA:N	2.33	0.44
61:N5:117:ASN:HA	75:O9:14:ALA:HB1	2.00	0.44
63:N7:90:GLU:HA	63:N7:93:LYS:HB2	1.98	0.44
68:O2:60:ASN:O	68:O2:64:LYS:HB2	2.17	0.44
1:6:123:G:H2'	1:6:124:A:O4'	2.18	0.44
1:6:257:A:H2'	1:6:258:C:C6	2.53	0.44
1:6:763:G:C6	1:6:764:U:C4	3.06	0.44
2:s0:88:LYS:HG3	2:s0:201:LEU:O	2.18	0.44
6:s4:198:LYS:HB3	6:s4:198:LYS:HE2	1.83	0.44
8:s6:67:VAL:O	8:s6:68:LEU:HB2	2.18	0.44
13:c1:57:LYS:HD3	13:c1:131:ILE:HG23	2.00	0.44
15:c3:26:PHE:CE2	15:c3:28:LEU:HB2	2.52	0.44
36:5:326:U:O5'	36:5:326:U:H6	1.99	0.44
36:5:662:U:H2'	36:5:663:C:C6	2.52	0.44
36:5:746:A:H2'	36:5:747:A:C8	2.52	0.44
36:5:1288:U:H2'	36:5:1289:G:H8	1.83	0.44
36:5:1313:G:H2'	36:5:1314:C:C6	2.52	0.44
36:5:1440:G:H2'	36:5:1441:G:H8	1.83	0.44
36:5:1711:C:H2'	36:5:1712:G:O4'	2.18	0.44
37:7:121:U:OP2	42:l5:265:TYR:OH	2.29	0.44
38:8:63:G:OP1	38:8:90:U:H5'	2.18	0.44
39:l2:214:GLY:O	39:l2:215:ASN:HB2	2.17	0.44
41:l4:35:VAL:HG11	41:l4:244:LEU:HD21	2.00	0.44
41:l4:93:MET:H	41:l4:93:MET:HE2	1.83	0.44
41:l4:302:ALA:HB2	54:m8:39:ARG:HH22	1.81	0.44
42:l5:43:LYS:HB3	42:l5:46:THR:OG1	2.18	0.44
42:l5:60:ILE:HB	42:l5:80:SER:HB3	2.00	0.44
42:l5:111:GLN:HA	42:l5:116:ASP:CG	2.42	0.44
43:l6:62:THR:HG21	43:l6:78:ARG:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l7:96:PRO:O	44:l7:100:ARG:HB2	2.18	0.44
45:l8:81:THR:HB	45:l8:181:LYS:HB2	1.98	0.44
45:l8:163:VAL:HG22	45:l8:166:LEU:HD12	1.99	0.44
55:m9:173:ARG:O	55:m9:177:VAL:HG23	2.18	0.44
1:2:1132:A:H2'	1:2:1133:A:H8	1.81	0.44
1:2:1642:G:H2'	1:2:1643:U:H6	1.83	0.44
8:S6:176:GLN:HG3	8:S6:177:ARG:H	1.83	0.44
16:C4:41:ARG:O	16:C4:42:VAL:HG22	2.18	0.44
17:C5:79:HIS:O	17:C5:81:ARG:HG3	2.17	0.44
18:C6:101:SER:HA	18:C6:104:GLU:HB2	1.99	0.44
19:C7:18:GLU:OE1	19:C7:19:ARG:NH2	2.48	0.44
20:C8:11:PHE:HA	20:C8:59:GLY:O	2.18	0.44
25:D3:31:LYS:NZ	25:D3:110:LYS:HE3	2.33	0.44
34:SR:16:HIS:HB3	34:SR:17:ASN:H	1.71	0.44
36:1:109:A:H4'	36:1:110:G:OP1	2.17	0.44
36:1:352:A:N6	36:1:365:A:H5"	2.29	0.44
36:1:1160:C:N3	68:O2:45:ARG:NH1	2.65	0.44
36:1:1364:C:H5"	54:M8:3:ILE:HD13	1.99	0.44
36:1:1631:C:H5"	36:1:1632:A:H5"	2.00	0.44
36:1:1694:U:O2'	36:1:1695:U:H5'	2.18	0.44
36:1:1844:C:O2	73:O7:9:GLY:HA2	2.18	0.44
36:1:2190:U:C4	36:1:2191:U:C4	3.06	0.44
36:1:2413:A:H2'	36:1:2414:G:C8	2.53	0.44
36:1:2502:A:H2'	36:1:2502:A:N3	2.33	0.44
36:1:2656:A:C4	36:1:2658:G:N7	2.86	0.44
36:1:2759:U:H6	36:1:2759:U:O5'	2.01	0.44
36:1:2818:U:H5'	36:1:2818:U:C6	2.44	0.44
36:1:2854:U:OP2	47:M0:3:ARG:NH2	2.51	0.44
37:3:42:A:H2'	37:3:43:U:H6	1.83	0.44
38:4:149:A:N3	45:L8:55:TYR:OH	2.39	0.44
40:L3:68:HIS:CD2	40:L3:69:LYS:HG3	2.53	0.44
41:L4:44:LYS:HA	41:L4:47:ARG:HD2	2.00	0.44
42:L5:75:LEU:O	42:L5:112:LYS:NZ	2.37	0.44
44:L7:89:ILE:HD12	44:L7:214:TRP:CZ3	2.53	0.44
46:L9:86:TYR:CD1	46:L9:151:VAL:HG13	2.53	0.44
47:M0:91:VAL:HG23	47:M0:135:ILE:HA	2.00	0.44
47:M0:100:ASN:OD1	47:M0:118:ALA:HB1	2.17	0.44
47:M0:210:ILE:HG12	47:M0:217:PHE:CZ	2.53	0.44
61:N5:34:LEU:HD22	61:N5:35:PRO:HD2	1.99	0.44
61:N5:73:MET:HE1	61:N5:141:TYR:CD1	2.41	0.44
67:O1:30:PRO:HG3	67:O1:60:TRP:CZ2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:O2:69:SER:HG	68:O2:71:HIS:CG	2.35	0.44
70:O4:106:LYS:HD3	70:O4:106:LYS:HA	1.79	0.44
1:6:479:C:H2'	1:6:480:G:O4'	2.18	0.44
1:6:822:U:H2'	1:6:823:G:H5"	2.00	0.44
1:6:841:U:H2'	1:6:842:C:C6	2.53	0.44
1:6:957:G:C5	1:6:958:U:C4	3.05	0.44
1:6:1218:G:O6	1:6:1444:A:H2'	2.18	0.44
4:s2:66:PHE:CD2	4:s2:130:ILE:HG12	2.52	0.44
10:s8:4:SER:HB3	10:s8:6:ASP:OD2	2.17	0.44
10:s8:18:ARG:H	10:s8:18:ARG:HG2	1.49	0.44
12:c0:41:TYR:O	12:c0:45:ALA:N	2.36	0.44
14:c2:66:VAL:HG11	14:c2:71:ILE:HD13	2.00	0.44
16:c4:87:GLY:HA3	16:c4:120:PRO:HG2	2.00	0.44
18:c6:47:LYS:HE3	18:c6:82:ARG:NH1	2.33	0.44
21:c9:109:GLU:HG2	21:c9:114:VAL:O	2.18	0.44
34:sR:84:SER:OG	34:sR:86:ASP:OD2	2.19	0.44
34:sR:241:PHE:CG	34:sR:290:VAL:HG12	2.52	0.44
36:5:249:U:OP2	36:5:249:U:H6	2.01	0.44
36:5:437:G:H22	36:5:622:A:N6	2.16	0.44
36:5:989:A:H2'	36:5:990:U:O4'	2.17	0.44
36:5:1062:A:H5"	36:5:1063:G:H5'	1.99	0.44
36:5:1383:G:OP1	41:l4:203:ARG:HD2	2.18	0.44
36:5:1388:U:O2'	68:o2:99:ASN:HB2	2.18	0.44
36:5:1477:A:OP1	36:5:3075:G:O2'	2.33	0.44
36:5:1733:G:H2'	36:5:1734:G:C8	2.52	0.44
36:5:2315:G:C2	36:5:2316:G:N7	2.86	0.44
36:5:2781:U:C4	36:5:2782:U:C4	3.05	0.44
36:5:2941:A:O5'	36:5:2943:G:H4'	2.17	0.44
37:7:103:A:H2'	37:7:104:A:O4'	2.17	0.44
39:l2:246:LEU:C	39:l2:247:ARG:HD3	2.43	0.44
40:l3:306:THR:HG21	40:l3:316:GLU:HG2	1.98	0.44
41:l4:141:ARG:N	41:l4:177:ASP:OD1	2.45	0.44
42:l5:40:HIS:HB3	42:l5:43:LYS:HD2	1.99	0.44
44:l7:168:ILE:O	44:l7:172:ASN:ND2	2.48	0.44
51:m5:153:ASP:OD2	51:m5:155:VAL:HG23	2.17	0.44
57:n1:119:ALA:HB3	57:n1:126:VAL:HG13	1.99	0.44
63:n7:47:GLU:N	63:n7:69:LYS:O	2.48	0.44
64:n8:104:THR:HG21	64:n8:112:ILE:HD11	1.99	0.44
67:o1:54:GLU:H	67:o1:54:GLU:CD	2.26	0.44
71:o5:73:LYS:HA	71:o5:73:LYS:HD2	1.84	0.44
1:2:77:U:C4	8:S6:170:THR:HG21	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:576:G:H4'	1:2:580:A:C4	2.52	0.44
1:2:987:G:C2	39:L2:249:SER:HB2	2.53	0.44
1:2:1629:G:C5	1:2:1630:U:C4	3.06	0.44
3:S1:134:VAL:O	3:S1:218:LEU:HD22	2.18	0.44
4:S2:101:VAL:HG22	4:S2:115:ILE:HG12	1.99	0.44
7:S5:35:GLN:HG2	7:S5:39:GLU:OE1	2.18	0.44
10:S8:8:ARG:NH2	10:S8:19:ALA:O	2.49	0.44
11:S9:36:LEU:HA	11:S9:126:ARG:NH2	2.33	0.44
11:S9:115:LYS:HD2	11:S9:115:LYS:HA	1.87	0.44
11:S9:149:ARG:H	11:S9:149:ARG:HG2	1.53	0.44
13:C1:55:ASP:HB3	13:C1:58:CYS:HB2	1.99	0.44
16:C4:16:VAL:HG23	16:C4:31:THR:HG23	1.99	0.44
17:C5:82:ASN:HD22	17:C5:82:ASN:H	1.64	0.44
34:SR:282:SER:O	34:SR:286:GLU:HG3	2.18	0.44
35:SM:84:LYS:O	35:SM:85:SER:HB3	2.18	0.44
36:1:167:U:H2'	36:1:168:U:C6	2.52	0.44
36:1:213:A:H2'	36:1:214:G:O4'	2.18	0.44
36:1:1139:G:C6	36:1:1140:G:N7	2.86	0.44
36:1:1204:A:H2	36:1:2834:G:N3	2.16	0.44
36:1:1273:A:H2'	36:1:1274:A:H5'	1.99	0.44
36:1:1307:G:H4'	36:1:1308:A:O5'	2.18	0.44
36:1:1447:G:H3'	53:M7:67:ILE:CD1	2.47	0.44
36:1:1764:U:H5"	55:M9:43:LYS:HE2	2.00	0.44
36:1:1783:U:H2'	36:1:1784:G:H8	1.83	0.44
36:1:1932:A:H5'	36:1:1933:A:OP2	2.17	0.44
36:1:2261:G:H21	36:1:2262:A:N6	2.16	0.44
36:1:2401:A:H5'	41:L4:70:ALA:HB2	2.00	0.44
36:1:2554:A:H5"	39:L2:85:GLY:O	2.18	0.44
36:1:2729:U:H2'	36:1:2730:G:O4'	2.18	0.44
36:1:3199:G:H5"	50:M4:6:ILE:HG21	2.00	0.44
39:L2:113:VAL:HG12	39:L2:165:VAL:C	2.43	0.44
40:L3:2:SER:O	40:L3:3:HIS:HB3	2.18	0.44
40:L3:68:HIS:NE2	40:L3:69:LYS:HG3	2.33	0.44
40:L3:95:THR:OG1	40:L3:98:GLY:O	2.29	0.44
41:L4:6:VAL:HG21	41:L4:255:PHE:CZ	2.53	0.44
41:L4:215:ILE:HD12	41:L4:218:ALA:HB3	2.00	0.44
41:L4:296:GLN:C	41:L4:298:ALA:H	2.24	0.44
44:L7:163:LEU:HD21	44:L7:201:PHE:HE1	1.82	0.44
45:L8:163:VAL:HG23	45:L8:166:LEU:HD12	2.00	0.44
51:M5:37:HIS:NE2	51:M5:63:ARG:HB3	2.33	0.44
53:M7:48:LEU:O	53:M7:52:LEU:HD22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:M8:178:ARG:HD3	54:M8:178:ARG:HA	1.48	0.44
56:N0:80:ARG:HB3	56:N0:122:HIS:HB2	1.99	0.44
62:N6:43:TYR:CD1	62:N6:126:LEU:HA	2.53	0.44
66:O0:15:ALA:O	66:O0:19:LYS:HG2	2.18	0.44
67:O1:52:ALA:HA	67:O1:53:PRO:HD3	1.88	0.44
1:6:778:G:C6	1:6:783:G:C6	3.06	0.44
1:6:1526:A:N1	1:6:1608:U:O2'	2.29	0.44
2:s0:67:ILE:HA	2:s0:68:PRO:HD3	1.80	0.44
3:s1:175:GLU:HG3	3:s1:187:LYS:HD3	1.99	0.44
3:s1:190:PRO:HG2	3:s1:192:VAL:HG23	2.00	0.44
4:s2:156:THR:HB	24:d2:95:PRO:HB3	2.00	0.44
5:s3:23:GLU:OE2	12:c0:61:TRP:NE1	2.43	0.44
17:c5:125:PRO:HG2	17:c5:127:ARG:NH1	2.33	0.44
18:c6:69:VAL:HG21	18:c6:81:ILE:HG12	1.99	0.44
35:sM:33:LYS:HE3	35:sM:33:LYS:HB2	1.78	0.44
36:5:664:U:H2'	36:5:665:A:C8	2.53	0.44
36:5:971:G:H2'	36:5:972:A:O4'	2.18	0.44
36:5:1121:U:C4	36:5:1122:U:C4	3.05	0.44
36:5:1741:A:C6	36:5:1742:U:C2	3.06	0.44
36:5:1916:U:O3'	55:m9:85:ARG:NH2	2.49	0.44
36:5:2144:A:H1'	36:5:2281:A:H61	1.83	0.44
36:5:2258:U:H3'	36:5:2259:A:H8	1.82	0.44
36:5:2533:G:N2	36:5:2546:C:H42	2.16	0.44
36:5:2745:G:N2	36:5:2748:A:C8	2.85	0.44
36:5:3106:A:H2'	36:5:3107:U:O4'	2.18	0.44
40:l3:83:PRO:HB3	40:l3:202:THR:HG23	1.99	0.44
41:l4:188:ARG:NE	41:l4:197:ARG:HB3	2.33	0.44
42:l5:190:ILE:HD11	42:l5:195:LEU:HD22	2.00	0.44
43:l6:98:VAL:HA	43:l6:101:PHE:CD2	2.52	0.44
43:l6:131:LYS:HD3	43:l6:131:LYS:HA	1.74	0.44
52:m6:37:ARG:C	52:m6:39:GLU:H	2.26	0.44
53:m7:24:VAL:HG13	53:m7:86:LYS:HG2	2.00	0.44
56:n0:23:LYS:HA	57:n1:146:ASN:OD1	2.17	0.44
71:o5:66:VAL:HG12	71:o5:80:LEU:HD11	2.00	0.44
83:f:117:GLU:O	83:f:121:GLY:N	2.51	0.44
1:2:66:U:C4	8:S6:173:PRO:HG3	2.52	0.44
1:2:1029:U:O2'	1:2:1030:A:H5'	2.17	0.44
1:2:1524:A:C2	1:2:1590:G:H1'	2.53	0.44
3:S1:194:ASN:OD1	3:S1:194:ASN:N	2.49	0.44
5:S3:149:ALA:O	5:S3:150:MET:HG2	2.18	0.44
7:S5:94:THR:HG22	7:S5:114:ILE:HG21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S5:143:ARG:HD2	30:D8:57:MET:SD	2.58	0.44
9:S7:39:ARG:HG3	9:S7:40:PRO:HD3	1.99	0.44
13:C1:118:GLN:HG3	13:C1:121:ASP:OD2	2.18	0.44
17:C5:60:LEU:HA	17:C5:76:VAL:HG21	1.99	0.44
20:C8:38:VAL:HG11	20:C8:73:MET:SD	2.57	0.44
21:C9:63:ARG:HG3	21:C9:67:MET:HE1	1.99	0.44
22:D0:23:ARG:O	22:D0:117:VAL:HG12	2.18	0.44
35:SM:41:SER:O	35:SM:43:ASP:N	2.43	0.44
36:1:1720:U:OP2	55:M9:110:ARG:NH1	2.51	0.44
36:1:2947:G:OP2	36:1:2947:G:H4'	2.17	0.44
36:1:3331:U:H2'	36:1:3332:U:O4'	2.18	0.44
36:1:3386:G:H2'	36:1:3387:U:C6	2.53	0.44
42:L5:78:ALA:HB3	42:L5:105:ILE:HG12	2.00	0.44
44:L7:111:ILE:O	44:L7:112:ASN:HB2	2.17	0.44
46:L9:92:TYR:N	46:L9:92:TYR:CD1	2.83	0.44
50:M4:16:GLU:HB3	56:N0:149:LYS:HB3	1.99	0.44
58:N2:59:ASP:HB3	58:N2:62:VAL:HG12	2.00	0.44
62:N6:40:ARG:O	62:N6:44:GLY:N	2.51	0.44
63:N7:88:ASP:HB3	63:N7:121:ARG:NH2	2.31	0.44
1:6:40:A:H2'	1:6:41:A:O4'	2.18	0.44
1:6:504:U:O4	1:6:505:A:N6	2.50	0.44
1:6:832:U:H2'	1:6:833:U:O4'	2.18	0.44
1:6:1240:U:H3	1:6:1242:A:H5"	1.83	0.44
2:s0:125:ASP:O	2:s0:129:ASP:HB2	2.17	0.44
6:s4:42:LEU:HD12	6:s4:109:PHE:HD2	1.83	0.44
6:s4:221:ARG:O	6:s4:224:ASN:N	2.33	0.44
7:s5:56:ALA:O	7:s5:58:LEU:N	2.45	0.44
8:s6:142:ARG:O	8:s6:145:PHE:N	2.46	0.44
10:s8:38:ILE:HG12	10:s8:96:LEU:HD11	1.99	0.44
11:s9:29:LYS:HA	32:e0:40:TYR:CE2	2.53	0.44
25:d3:109:ARG:HB3	25:d3:112:LYS:HB2	2.00	0.44
26:d4:111:LYS:HD3	26:d4:114:ARG:NH2	2.33	0.44
34:sR:32:LEU:HD11	34:sR:44:SER:HB2	1.99	0.44
34:sR:145:LEU:HD23	34:sR:145:LEU:H	1.81	0.44
36:5:343:U:O2	36:5:1439:U:H1'	2.17	0.44
36:5:364:G:OP1	41:l4:60:THR:HG23	2.18	0.44
36:5:568:G:O5'	36:5:568:G:H8	2.01	0.44
36:5:2396:G:N2	36:5:2985:C:C2	2.86	0.44
38:8:76:C:H2'	38:8:77:A:O4'	2.17	0.44
39:l2:97:ASN:HB2	39:l2:100:ASN:HD22	1.82	0.44
39:l2:169:ILE:O	39:l2:171:GLY:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:l4:192:GLY:HA2	41:l4:195:ARG:HG3	2.00	0.44
42:l5:95:TRP:HZ3	42:l5:156:GLY:C	2.26	0.44
44:l7:157:ASN:C	44:l7:159:GLN:H	2.25	0.44
44:l7:162:PRO:O	44:l7:164:SER:N	2.51	0.44
45:l8:156:ASP:OD2	45:l8:156:ASP:N	2.48	0.44
48:m1:131:MET:HE3	48:m1:131:MET:HB3	1.78	0.44
48:m1:166:LYS:O	48:m1:168:ASP:N	2.51	0.44
49:m3:89:TYR:O	49:m3:92:THR:OG1	2.20	0.44
49:m3:172:LEU:O	49:m3:176:GLU:HB3	2.18	0.44
49:m3:185:LYS:HG3	49:m3:188:ARG:NH1	2.32	0.44
50:m4:112:LEU:HD22	50:m4:116:GLU:HG2	2.00	0.44
51:m5:104:GLU:HG2	51:m5:160:GLU:HG2	1.99	0.44
53:m7:107:LEU:HD12	53:m7:152:GLU:CD	2.42	0.44
59:n3:28:ASN:OD1	59:n3:111:GLY:HA3	2.17	0.44
59:n3:32:ARG:NH1	59:n3:32:ARG:O	2.51	0.44
63:n7:83:THR:HG23	70:o4:93:PHE:CE1	2.53	0.44
74:o8:11:PHE:CD1	74:o8:12:LEU:HD22	2.53	0.44
74:o8:58:ASP:HB3	74:o8:61:LYS:HG2	1.99	0.44
83:f:99:PHE:HA	83:f:100:LEU:CB	2.32	0.44
1:2:258:C:H5'	10:S8:75:LYS:HB2	1.99	0.43
1:2:387:A:H3'	1:2:402:C:H5	1.83	0.43
1:2:406:U:O3'	8:S6:94:ARG:NH2	2.35	0.43
1:2:411:C:H2'	1:2:412:A:O4'	2.17	0.43
1:2:525:A:H4'	26:D4:89:TYR:CG	2.53	0.43
1:2:700:C:H42	1:2:738:G:H22	1.65	0.43
1:2:700:C:N4	1:2:738:G:H22	2.16	0.43
1:2:1588:G:H2'	1:2:1589:C:H5'	2.00	0.43
2:S0:4:PRO:HB2	2:S0:5:ALA:H	1.63	0.43
2:S0:60:ALA:O	2:S0:64:ILE:HG13	2.18	0.43
2:S0:184:LEU:HD13	23:D1:43:GLY:O	2.18	0.43
14:C2:125:ASN:O	14:C2:126:TRP:HD1	2.01	0.43
17:C5:32:ASP:OD2	17:C5:32:ASP:N	2.51	0.43
19:C7:41:ILE:HD13	19:C7:47:ARG:HA	2.00	0.43
21:C9:34:VAL:HG23	21:C9:53:TRP:NE1	2.33	0.43
22:D0:65:ILE:HG21	31:D9:43:PHE:CE1	2.53	0.43
23:D1:36:VAL:HG11	23:D1:78:LEU:HD13	1.99	0.43
25:D3:76:LEU:HB2	25:D3:79:ASN:ND2	2.33	0.43
30:D8:26:THR:HG22	30:D8:28:VAL:HG23	1.99	0.43
33:E1:144:CYS:CB	33:E1:147:VAL:HG22	2.45	0.43
34:SR:21:THR:O	34:SR:291:SER:HB3	2.18	0.43
36:1:692:A:C4	36:1:693:A:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:802:C:H2'	36:1:803:C:H6	1.84	0.43
36:1:1307:G:C2	36:1:1308:A:C2	3.06	0.43
36:1:1699:A:H2'	36:1:1700:G:H8	1.83	0.43
40:L3:194:TRP:CE2	40:L3:198:HIS:CE1	3.06	0.43
42:L5:40:HIS:HD2	42:L5:42:ALA:N	2.09	0.43
43:L6:19:LYS:O	43:L6:21:THR:N	2.50	0.43
46:L9:23:ARG:HH21	46:L9:42:ASP:HA	1.83	0.43
51:M5:154:PRO:O	51:M5:157:LYS:HB2	2.18	0.43
52:M6:148:LYS:HB2	52:M6:149:TYR:H	1.54	0.43
53:M7:88:VAL:O	53:M7:92:GLN:HG2	2.18	0.43
62:N6:58:VAL:HB	62:N6:63:LYS:O	2.18	0.43
79:Q3:8:VAL:HB	79:Q3:11:THR:HG22	1.99	0.43
1:6:503:G:H2'	1:6:504:U:H6	1.83	0.43
1:6:988:A:C2	1:6:989:U:H1'	2.53	0.43
1:6:1274:C:O2	1:6:1274:C:H2'	2.18	0.43
4:s2:139:ILE:CD1	4:s2:191:ALA:HB1	2.48	0.43
4:s2:239:PRO:HA	4:s2:242:ILE:HB	1.99	0.43
10:s8:59:ARG:O	10:s8:60:ILE:HG13	2.18	0.43
12:c0:58:GLN:HB3	12:c0:65:TYR:HB2	2.00	0.43
12:c0:71:GLU:H	12:c0:71:GLU:HG2	1.39	0.43
21:c9:108:LEU:HD22	21:c9:113:ILE:HG13	2.00	0.43
27:d5:43:ASP:O	27:d5:45:GLU:N	2.43	0.43
34:sR:316:MET:C	34:sR:318:ALA:H	2.26	0.43
36:5:532:A:O2'	36:5:533:A:H5'	2.18	0.43
36:5:686:G:C6	36:5:687:U:C2	3.06	0.43
36:5:785:G:O6	54:m8:90:ASP:HA	2.18	0.43
36:5:1081:U:H1'	36:5:1082:U:OP2	2.18	0.43
36:5:1222:G:C8	81:p0:57:THR:HB	2.53	0.43
36:5:1348:U:O4'	36:5:1355:A:N6	2.51	0.43
36:5:2566:C:H42	36:5:2575:G:H1	1.67	0.43
38:8:65:A:O3'	71:o5:10:ARG:NH2	2.51	0.43
39:l2:112:ILE:HD11	79:q3:79:VAL:HG11	2.00	0.43
41:l4:141:ARG:NH1	41:l4:180:LYS:HE2	2.33	0.43
41:l4:233:LEU:HD23	41:l4:233:LEU:HA	1.60	0.43
47:m0:47:PRO:HB3	47:m0:171:TRP:CZ2	2.53	0.43
50:m4:22:LEU:HD12	50:m4:32:LEU:HG	1.99	0.43
51:m5:150:TRP:O	51:m5:153:ASP:HB2	2.18	0.43
52:m6:142:SER:C	52:m6:144:SER:N	2.76	0.43
67:o1:44:MET:O	67:o1:46:THR:N	2.51	0.43
81:p0:46:ARG:HD3	81:p0:46:ARG:HA	1.69	0.43
83:f:118:GLY:HA2	83:f:119:GLU:C	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:46:A:O2'	1:2:432:G:N2	2.50	0.43
1:2:686:C:H2'	1:2:687:G:C8	2.53	0.43
1:2:1344:A:H4'	1:2:1345:A:OP1	2.17	0.43
1:2:1559:A:H4'	1:2:1559:A:OP1	2.18	0.43
1:2:1628:U:H2'	1:2:1629:G:C8	2.53	0.43
4:S2:83:ILE:HG12	4:S2:100:ALA:HA	2.00	0.43
4:S2:225:LEU:HA	4:S2:225:LEU:HD23	1.76	0.43
6:S4:73:ASP:OD1	6:S4:89:VAL:N	2.35	0.43
6:S4:246:LEU:HB2	6:S4:251:GLU:HG3	2.00	0.43
7:S5:112:ARG:HH11	18:C6:43:ILE:HD11	1.83	0.43
7:S5:146:THR:HG23	7:S5:221:ALA:HA	1.99	0.43
8:S6:145:PHE:HB2	8:S6:147:LEU:HG	1.98	0.43
19:C7:21:TYR:N	19:C7:22:PRO:HD2	2.32	0.43
22:D0:80:GLU:OE1	31:D9:44:ARG:NH1	2.51	0.43
26:D4:53:ASP:OD2	26:D4:96:LEU:HD21	2.18	0.43
34:SR:135:THR:OG1	34:SR:136:ILE:N	2.49	0.43
34:SR:176:LYS:HE3	34:SR:196:ASN:C	2.43	0.43
36:1:508:U:H2'	36:1:509:U:H6	1.82	0.43
36:1:587:U:H2'	36:1:588:G:H5'	1.99	0.43
36:1:901:G:H2'	36:1:902:G:H8	1.83	0.43
36:1:997:A:H2'	36:1:998:A:O4'	2.18	0.43
36:1:1016:C:H2'	36:1:1017:C:H5'	2.00	0.43
36:1:1108:U:H2'	36:1:1109:U:C6	2.52	0.43
36:1:1306:G:C6	52:M6:62:THR:HA	2.53	0.43
36:1:1495:U:H5	36:1:1835:A:N1	2.15	0.43
36:1:1632:A:H2'	36:1:1633:C:C6	2.53	0.43
36:1:1658:G:C5	36:1:1659:U:C5	3.07	0.43
36:1:2860:U:C6	36:1:2938:G:H4'	2.52	0.43
36:1:3174:A:C5	36:1:3279:A:H1'	2.53	0.43
41:L4:89:ALA:C	41:L4:91:GLY:H	2.21	0.43
47:M0:119:TRP:CG	47:M0:120:GLY:N	2.86	0.43
49:M3:159:VAL:HG11	64:N8:142:GLY:O	2.17	0.43
64:N8:64:GLN:HB2	64:N8:67:HIS:CD2	2.52	0.43
71:O5:54:VAL:O	71:O5:58:ILE:HG13	2.18	0.43
73:O7:58:THR:O	73:O7:61:THR:HG23	2.18	0.43
74:O8:58:ASP:OD2	74:O8:61:LYS:N	2.29	0.43
1:6:69:G:H2'	1:6:70:C:O4'	2.18	0.43
1:6:197:A:H2'	1:6:198:A:H8	1.83	0.43
1:6:461:G:H2'	1:6:462:G:C8	2.53	0.43
1:6:753:A:N7	6:s4:187:ARG:NH1	2.66	0.43
1:6:863:A:O5'	24:d2:57:ARG:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1604:U:OP2	18:c6:127:LYS:NZ	2.52	0.43
1:6:1636:C:C4	1:6:1765:A:N1	2.87	0.43
3:s1:77:GLU:O	3:s1:80:SER:OG	2.25	0.43
4:s2:230:TRP:NE1	24:d2:68:ARG:HB2	2.33	0.43
5:s3:119:ALA:O	5:s3:123:VAL:HG23	2.18	0.43
8:s6:85:ARG:HB3	8:s6:87:ARG:HH21	1.83	0.43
10:s8:21:PHE:HD1	10:s8:22:ARG:HG2	1.83	0.43
11:s9:96:VAL:HG23	11:s9:99:LEU:HD22	2.00	0.43
18:c6:89:LEU:HG	18:c6:105:LEU:HD23	2.00	0.43
19:c7:24:LEU:HD23	19:c7:34:LEU:HD13	2.01	0.43
36:5:80:G:H2'	36:5:81:C:C6	2.53	0.43
36:5:884:A:C8	36:5:2139:A:C8	3.07	0.43
36:5:1301:A:H4'	36:5:1302:A:O5'	2.18	0.43
36:5:1606:U:C4	70:o4:8:ARG:HD3	2.53	0.43
36:5:1615:C:H2'	36:5:1616:U:C6	2.53	0.43
36:5:2737:C:OP1	57:n1:69:LYS:HB3	2.18	0.43
36:5:2992:U:H2'	36:5:2993:G:O4'	2.18	0.43
36:5:3131:U:H2'	36:5:3132:C:C6	2.52	0.43
36:5:3194:C:C2	36:5:3197:G:N2	2.84	0.43
36:5:3233:C:H2'	36:5:3234:A:C8	2.53	0.43
39:l2:180:LEU:HD23	39:l2:180:LEU:HA	1.71	0.43
42:l5:179:ARG:HD3	42:l5:179:ARG:HA	1.78	0.43
43:l6:31:ARG:NH2	43:l6:81:ALA:O	2.51	0.43
48:m1:82:ARG:HD2	48:m1:112:LEU:HB2	1.99	0.43
80:m2:34:UNK:O	80:m2:36:UNK:N	2.51	0.43
52:m6:98:ALA:HA	52:m6:101:ARG:NH1	2.34	0.43
70:o4:107:GLU:HG2	70:o4:110:GLU:OE2	2.18	0.43
78:q2:28:TYR:HB3	78:q2:69:VAL:HB	1.99	0.43
83:f:14:GLY:O	83:f:15:SER:HB3	2.17	0.43
1:2:357:G:H2'	1:2:358:U:O4'	2.17	0.43
1:2:512:A:H2'	1:2:513:U:C6	2.53	0.43
1:2:642:G:H2'	1:2:643:G:C8	2.53	0.43
1:2:1559:A:C6	20:C8:134:ARG:HD2	2.53	0.43
2:S0:10:THR:OG1	2:S0:13:ASP:OD2	2.36	0.43
2:S0:74:VAL:HG23	2:S0:118:PRO:HB3	2.00	0.43
3:S1:209:ASN:HB3	3:S1:211:HIS:NE2	2.34	0.43
4:S2:157:LYS:HD3	4:S2:170:ILE:HG23	2.00	0.43
6:S4:86:PHE:CE1	6:S4:87:MET:HG2	2.54	0.43
10:S8:21:PHE:CE1	10:S8:22:ARG:HD3	2.53	0.43
18:C6:66:ARG:NH2	18:C6:68:ARG:HD2	2.33	0.43
27:D5:87:GLY:O	27:D5:89:ILE:N	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:102:THR:HB	27:D5:103:ARG:H	1.59	0.43
32:E0:3:LYS:HE3	32:E0:3:LYS:HB3	1.89	0.43
32:E0:56:MET:HE3	32:E0:56:MET:HB2	1.83	0.43
36:1:505:G:C6	36:1:506:U:C4	3.07	0.43
36:1:686:G:P	49:M3:39:ARG:HH21	2.41	0.43
36:1:1103:A:H1'	36:1:1104:G:P	2.59	0.43
36:1:1369:A:OP1	64:N8:21:ARG:NH1	2.52	0.43
36:1:1658:G:C6	36:1:1659:U:C4	3.07	0.43
36:1:2413:A:H2'	36:1:2414:G:H8	1.83	0.43
37:3:22:A:H2'	37:3:23:A:C8	2.53	0.43
37:3:87:G:C2	37:3:88:G:C8	3.06	0.43
38:4:36:G:N2	38:4:37:A:N1	2.66	0.43
43:L6:5:LYS:HA	43:L6:5:LYS:HE3	2.00	0.43
43:L6:98:VAL:HA	43:L6:101:PHE:HD2	1.82	0.43
44:L7:179:LEU:H	44:L7:179:LEU:HD22	1.83	0.43
45:L8:160:ILE:H	45:L8:160:ILE:HG12	1.50	0.43
45:L8:160:ILE:HG22	45:L8:164:VAL:HG13	2.00	0.43
47:M0:16:PRO:HG3	47:M0:128:ARG:NH1	2.33	0.43
48:M1:109:HIS:HE1	48:M1:122:ILE:HA	1.82	0.43
49:M3:127:PRO:HG2	49:M3:131:LYS:HD2	2.00	0.43
57:N1:120:LYS:O	57:N1:122:GLN:N	2.51	0.43
59:N3:75:PRO:HB2	59:N3:103:ALA:O	2.18	0.43
61:N5:105:VAL:HG11	61:N5:126:LEU:HD13	2.01	0.43
76:Q0:110:CYS:SG	76:Q0:111:ARG:N	2.91	0.43
1:6:587:C:H2'	1:6:588:U:O4'	2.18	0.43
1:6:895:G:O2'	16:c4:37:GLU:HA	2.18	0.43
1:6:1029:U:O2'	1:6:1030:A:H5'	2.18	0.43
1:6:1561:U:H2'	1:6:1562:G:H8	1.84	0.43
1:6:1568:C:OP1	20:c8:36:LYS:NZ	2.51	0.43
1:6:1578:U:H2'	1:6:1579:U:C6	2.53	0.43
1:6:1584:G:C8	18:c6:122:ARG:HB3	2.53	0.43
1:6:1620:C:O2'	1:6:1621:U:OP1	2.33	0.43
2:s0:58:VAL:O	2:s0:62:ARG:HG2	2.19	0.43
9:s7:73:VAL:O	9:s7:75:THR:N	2.51	0.43
10:s8:3:ILE:HB	10:s8:30:GLY:O	2.18	0.43
12:c0:21:VAL:HG12	12:c0:22:VAL:H	1.82	0.43
13:c1:5:LEU:HD23	13:c1:7:VAL:N	2.33	0.43
17:c5:52:LYS:N	17:c5:53:PRO:HD2	2.33	0.43
31:d9:31:ILE:HD13	31:d9:31:ILE:HA	1.93	0.43
33:e1:148:TYR:HD1	33:e1:148:TYR:HA	1.72	0.43
36:5:80:G:H2'	36:5:81:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:278:U:H2'	36:5:279:U:C6	2.53	0.43
36:5:288:C:OP1	51:m5:170:LYS:NZ	2.43	0.43
36:5:293:C:H2'	36:5:294:U:O4'	2.18	0.43
36:5:523:A:N6	36:5:570:A:C2	2.86	0.43
36:5:656:A:H2'	36:5:657:A:C8	2.53	0.43
36:5:945:C:H1'	36:5:1407:A:H1'	2.00	0.43
36:5:953:G:O2'	36:5:1116:G:H5'	2.18	0.43
36:5:1275:C:H2'	36:5:1276:U:O4'	2.18	0.43
36:5:1485:G:N2	70:o4:4:ARG:HD2	2.33	0.43
36:5:1812:G:H4'	36:5:1812:G:OP1	2.18	0.43
36:5:2287:C:C2	36:5:2298:U:O4'	2.71	0.43
36:5:2665:U:H4'	36:5:2666:C:OP1	2.18	0.43
36:5:2948:C:H2'	36:5:2949:U:C6	2.53	0.43
36:5:2992:U:H1'	53:m7:69:ARG:NH2	2.33	0.43
40:l3:13:HIS:HB3	40:l3:16:PHE:HD1	1.82	0.43
41:l4:181:VAL:HG11	41:l4:224:GLY:CA	2.47	0.43
80:m2:52:UNK:O	80:m2:54:UNK:N	2.52	0.43
80:m2:136:UNK:O	80:m2:138:UNK:N	2.51	0.43
52:m6:16:VAL:HG23	52:m6:42:ASN:O	2.18	0.43
57:n1:17:ARG:HA	57:n1:17:ARG:HD2	1.87	0.43
57:n1:73:GLY:HA2	57:n1:89:LEU:O	2.18	0.43
59:n3:39:VAL:HG21	59:n3:51:ALA:C	2.43	0.43
61:n5:45:LYS:HB3	71:o5:75:TYR:HD2	1.83	0.43
68:o2:4:LEU:HD22	68:o2:4:LEU:H	1.84	0.43
83:f:50:GLY:O	83:f:52:HIS:N	2.48	0.43
1:2:566:C:H2'	1:2:567:A:O4'	2.19	0.43
1:2:763:G:C6	1:2:764:U:C4	3.06	0.43
1:2:927:C:O2'	16:C4:124:ASP:O	2.36	0.43
1:2:1002:G:H2'	1:2:1003:A:H5'	2.00	0.43
1:2:1105:C:H41	25:D3:4:GLY:HA3	1.84	0.43
1:2:1498:G:O2'	1:2:1499:G:H5'	2.18	0.43
1:2:1514:U:H5"	1:2:1515:A:O4'	2.19	0.43
4:S2:98:PHE:CZ	35:SM:116:GLU:HG3	2.54	0.43
7:S5:177:ILE:HA	7:S5:180:ARG:NH1	2.34	0.43
9:S7:153:LEU:HD22	9:S7:184:GLU:HB2	2.00	0.43
11:S9:13:SER:HB2	11:S9:47:PHE:CD1	2.53	0.43
16:C4:91:THR:O	16:C4:92:LYS:HG2	2.19	0.43
36:1:372:A:H2'	36:1:373:A:O4'	2.19	0.43
36:1:806:A:C4	36:1:936:A:C2	3.06	0.43
36:1:1329:U:H1'	36:1:1330:A:OP1	2.18	0.43
36:1:1483:G:C8	36:1:1485:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1823:A:H2'	36:1:1824:U:C6	2.54	0.43
36:1:2127:U:O2'	36:1:2301:U:OP1	2.36	0.43
36:1:2138:A:C5	73:O7:3:LYS:HB3	2.54	0.43
40:L3:37:ARG:O	40:L3:186:GLY:HA2	2.18	0.43
49:M3:93:ILE:O	49:M3:119:TYR:OH	2.21	0.43
52:M6:119:VAL:O	52:M6:121:PRO:HD3	2.17	0.43
53:M7:92:GLN:HA	53:M7:95:LEU:HB2	2.00	0.43
55:M9:8:LYS:HG3	55:M9:22:VAL:CG2	2.48	0.43
56:N0:23:LYS:HE3	56:N0:25:PHE:HZ	1.82	0.43
60:N4:59:HIS:HB3	60:N4:61:LYS:HE2	2.01	0.43
62:N6:55:GLU:HB3	62:N6:108:LYS:H	1.84	0.43
63:N7:97:SER:H	63:N7:100:THR:HB	1.83	0.43
78:Q2:38:GLN:O	78:Q2:38:GLN:NE2	2.46	0.43
1:6:567:A:C2	1:6:583:C:H1'	2.53	0.43
1:6:955:A:H2'	1:6:956:C:O4'	2.18	0.43
1:6:1405:G:H2'	1:6:1406:A:C8	2.54	0.43
1:6:1460:A:O4'	35:sM:71:ASN:HB3	2.18	0.43
1:6:1546:G:OP2	20:c8:134:ARG:NH1	2.51	0.43
2:s0:179:ARG:HD3	2:s0:183:ARG:CZ	2.48	0.43
4:s2:88:LYS:HB3	4:s2:95:ARG:HB3	1.99	0.43
5:s3:27:ARG:HB3	12:c0:58:GLN:NE2	2.33	0.43
5:s3:102:ALA:HB1	5:s3:173:ARG:CG	2.49	0.43
8:s6:70:PRO:HG3	60:n4:2:LYS:HE3	2.00	0.43
9:s7:45:SER:O	9:s7:61:PHE:N	2.51	0.43
9:s7:138:LYS:HB2	24:d2:54:ASP:HB3	2.00	0.43
11:s9:142:ASN:C	11:s9:143:ILE:HD12	2.43	0.43
28:d6:4:LYS:NZ	28:d6:5:ARG:HH22	2.16	0.43
30:d8:16:LEU:HD12	30:d8:27:GLN:OE1	2.18	0.43
34:sR:22:SER:OG	34:sR:70:ASP:HA	2.17	0.43
34:sR:175:ASP:OD1	34:sR:175:ASP:N	2.47	0.43
36:5:210:U:O2	41:l4:217:LYS:NZ	2.42	0.43
36:5:595:G:OP1	44:l7:33:ARG:NH2	2.52	0.43
36:5:728:G:H5"	54:m8:43:PRO:HB2	2.00	0.43
36:5:913:A:H5"	36:5:914:A:N7	2.34	0.43
36:5:1560:G:O2'	36:5:1561:G:OP1	2.31	0.43
39:l2:241:ARG:HG2	39:l2:241:ARG:H	1.51	0.43
40:l3:290:ASP:OD2	40:l3:292:ALA:N	2.37	0.43
42:l5:279:LYS:HD3	42:l5:279:LYS:HA	1.78	0.43
49:m3:6:ASN:O	49:m3:7:LEU:HD23	2.18	0.43
51:m5:9:GLU:HG3	72:o6:44:VAL:HG11	1.99	0.43
54:m8:96:PHE:CE1	54:m8:114:ILE:HA	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:n6:12:ARG:O	62:n6:12:ARG:HD2	2.18	0.43
63:n7:81:LEU:HD22	63:n7:81:LEU:HA	1.73	0.43
72:o6:54:GLU:O	72:o6:58:ILE:HG23	2.19	0.43
81:p0:44:GLU:CD	81:p0:99:VAL:HG13	2.44	0.43
1:2:260:U:O4	10:S8:42:ARG:HA	2.18	0.43
1:2:330:G:OP2	10:S8:172:ARG:NH1	2.48	0.43
1:2:712:G:H1	1:2:713:A:H62	1.66	0.43
1:2:729:G:C6	1:2:730:G:H1'	2.53	0.43
1:2:1017:U:H2'	1:2:1018:U:C6	2.53	0.43
1:2:1199:G:O6	22:D0:67:THR:HG23	2.19	0.43
2:S0:57:LEU:HD11	2:S0:176:LEU:HB2	2.01	0.43
5:S3:71:LEU:HD22	5:S3:75:LYS:HE2	2.00	0.43
5:S3:93:ASP:OD2	5:S3:93:ASP:N	2.51	0.43
6:S4:26:CYS:SG	11:S9:2:PRO:HB2	2.59	0.43
11:S9:99:LEU:CD1	11:S9:100:LYS:H	2.32	0.43
15:C3:27:LYS:HD2	15:C3:28:LEU:N	2.33	0.43
15:C3:94:LYS:HG2	15:C3:118:ILE:HD13	2.01	0.43
17:C5:33:PHE:O	17:C5:36:LEU:HD23	2.19	0.43
20:C8:127:HIS:NE2	20:C8:133:VAL:HG11	2.33	0.43
22:D0:58:LEU:HD12	22:D0:88:LYS:HD2	2.00	0.43
32:E0:41:THR:HA	32:E0:45:VAL:HB	2.01	0.43
36:1:207:U:H2'	36:1:208:C:C6	2.54	0.43
36:1:620:U:C4	36:1:622:A:C6	3.06	0.43
36:1:1724:U:H4'	36:1:1725:C:OP1	2.19	0.43
36:1:1920:U:N3	36:1:1930:A:C2	2.87	0.43
36:1:2113:A:N7	36:1:2114:C:C4	2.86	0.43
36:1:3028:G:H2'	36:1:3029:A:O4'	2.19	0.43
36:1:3163:A:N1	36:1:3164:C:N4	2.66	0.43
39:L2:36:GLU:HG2	39:L2:90:ALA:O	2.18	0.43
41:L4:22:LEU:HA	41:L4:23:PRO:HD3	1.81	0.43
48:M1:133:ARG:HH12	48:M1:154:THR:HA	1.83	0.43
48:M1:137:ARG:HE	48:M1:137:ARG:HB2	1.39	0.43
50:M4:113:THR:HG22	50:M4:115:PHE:H	1.83	0.43
52:M6:120:VAL:HG12	52:M6:122:GLN:HG3	1.99	0.43
54:M8:86:THR:HA	54:M8:105:ARG:O	2.19	0.43
59:N3:94:TYR:HE2	60:N4:19:THR:OG1	2.01	0.43
62:N6:70:ILE:HG12	62:N6:80:VAL:HG21	2.00	0.43
63:N7:17:ARG:HA	70:O4:74:ARG:HA	2.00	0.43
72:O6:33:ALA:O	72:O6:34:SER:OG	2.25	0.43
73:O7:19:CYS:O	73:O7:23:GLY:N	2.40	0.43
1:6:21:U:H2'	1:6:22:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:224:C:H2'	1:6:225:A:C8	2.43	0.43
1:6:791:A:H2'	1:6:792:U:O4'	2.18	0.43
1:6:1292:G:C6	1:6:1293:U:C4	3.07	0.43
1:6:1420:C:O2'	5:s3:160:SER:O	2.22	0.43
5:s3:162:GLN:N	5:s3:163:PRO:HD2	2.33	0.43
8:s6:176:GLN:HG3	8:s6:177:ARG:N	2.33	0.43
14:c2:91:VAL:HG22	14:c2:92:ALA:H	1.82	0.43
18:c6:31:VAL:HG11	18:c6:81:ILE:HD13	2.00	0.43
23:d1:71:ARG:HB2	23:d1:83:TRP:CD1	2.54	0.43
25:d3:23:ARG:HB3	25:d3:29:TYR:CE1	2.53	0.43
36:5:21:G:OP2	38:8:36:G:N1	2.51	0.43
36:5:853:G:H2'	36:5:854:G:O4'	2.18	0.43
36:5:1257:C:H2'	36:5:1258:U:O4'	2.18	0.43
36:5:1481:A:H2'	36:5:1481:A:N3	2.34	0.43
36:5:1765:U:H4'	36:5:1765:U:OP1	2.18	0.43
36:5:2394:G:H5'	40:l3:252:ILE:HG22	1.99	0.43
36:5:2426:U:H2'	36:5:2427:U:C6	2.54	0.43
36:5:2775:U:H2'	36:5:2776:C:H6	1.82	0.43
42:l5:65:ILE:HA	42:l5:74:VAL:HA	2.01	0.43
44:l7:160:ARG:HE	44:l7:203:TRP:CD1	2.37	0.43
44:l7:173:LEU:HD12	44:l7:173:LEU:HA	1.78	0.43
45:l8:109:LEU:HD13	45:l8:109:LEU:HA	1.86	0.43
49:m3:58:VAL:N	49:m3:70:ARG:O	2.52	0.43
49:m3:168:ARG:NH1	49:m3:172:LEU:HD11	2.34	0.43
51:m5:99:ARG:HH21	51:m5:166:ALA:HB3	1.82	0.43
52:m6:187:GLU:HB3	52:m6:192:LYS:NZ	2.34	0.43
54:m8:60:PRO:HG2	54:m8:142:GLY:CA	2.48	0.43
59:n3:13:ILE:HG12	59:n3:53:SER:HB2	2.00	0.43
63:n7:119:GLU:O	63:n7:123:GLN:HG3	2.17	0.43
70:o4:21:LYS:HG2	70:o4:22:VAL:N	2.33	0.43
1:2:526:A:P	26:D4:93:ARG:HH21	2.42	0.43
1:2:649:U:O2'	1:2:650:U:O5'	2.36	0.43
1:2:1352:G:H1	1:2:1373:C:N4	2.16	0.43
1:2:1746:A:H2'	1:2:1747:G:O4'	2.18	0.43
1:2:1762:A:H1'	1:2:1783:C:H5'	2.00	0.43
2:S0:163:ASN:ND2	2:S0:165:ARG:HG2	2.34	0.43
3:S1:103:MET:HB3	3:S1:215:VAL:HG13	2.01	0.43
6:S4:15:PRO:HG2	6:S4:18:TRP:CE2	2.52	0.43
6:S4:121:TYR:CG	6:S4:161:LYS:HE3	2.53	0.43
7:S5:69:PHE:CD2	18:C6:50:GLU:HG3	2.54	0.43
10:S8:103:GLN:HB3	10:S8:164:ARG:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:S9:133:HIS:O	11:S9:134:ILE:HG12	2.18	0.43
15:C3:52:VAL:HG22	15:C3:55:ARG:NH2	2.33	0.43
20:C8:136:GLN:H	20:C8:136:GLN:HG2	1.38	0.43
22:D0:106:ILE:HD12	22:D0:106:ILE:HA	1.86	0.43
24:D2:14:ILE:HD11	24:D2:38:LEU:HD21	2.00	0.43
24:D2:103:ILE:HD13	24:D2:126:LEU:HB2	2.00	0.43
28:D6:60:PRO:C	28:D6:62:TYR:H	2.26	0.43
36:1:595:G:H2'	36:1:596:C:H6	1.82	0.43
36:1:603:A:H2'	36:1:604:G:O4'	2.18	0.43
36:1:901:G:C4	36:1:902:G:C8	3.07	0.43
36:1:1235:U:H4'	36:1:1236:G:H5'	1.98	0.43
36:1:1456:A:N6	67:O1:64:VAL:HG22	2.33	0.43
36:1:1472:U:H2'	36:1:1473:G:H8	1.83	0.43
36:1:2139:A:H62	73:O7:4:GLY:HA3	1.84	0.43
36:1:2407:C:H2'	36:1:2408:U:C6	2.54	0.43
36:1:2946:A:C5'	36:1:2947:G:H5'	2.49	0.43
36:1:3298:C:H2'	36:1:3299:A:O4'	2.19	0.43
41:L4:26:PHE:CD1	41:L4:130:ALA:HB2	2.53	0.43
42:L5:104:LEU:HD11	42:L5:108:ARG:HH21	1.83	0.43
43:L6:31:ARG:NH2	43:L6:81:ALA:O	2.51	0.43
47:M0:43:VAL:HA	47:M0:139:ARG:NH2	2.32	0.43
51:M5:74:PRO:HB2	51:M5:75:VAL:H	1.61	0.43
53:M7:10:ASN:C	53:M7:12:ALA:H	2.27	0.43
55:M9:168:ALA:HB1	55:M9:172:ARG:HD2	1.99	0.43
61:N5:57:LEU:HD21	61:N5:90:ALA:HB2	2.01	0.43
62:N6:110:HIS:ND1	62:N6:110:HIS:O	2.51	0.43
65:N9:5:LYS:HD3	65:N9:8:THR:HG22	2.01	0.43
69:O3:12:LYS:HD3	69:O3:96:ALA:O	2.18	0.43
71:O5:21:LEU:HD11	71:O5:55:LEU:HG	2.00	0.43
1:6:546:U:H2'	1:6:547:U:H6	1.84	0.43
1:6:1058:U:H1'	1:6:1059:U:H5"	2.00	0.43
1:6:1070:C:H4'	29:d7:17:ARG:HD2	2.01	0.43
1:6:1098:U:O2'	24:d2:71:LYS:HD2	2.17	0.43
6:s4:104:ASP:HB2	6:s4:108:ARG:H	1.84	0.43
15:c3:20:ARG:HD3	24:d2:56:HIS:NE2	2.33	0.43
15:c3:61:THR:O	15:c3:62:GLN:HG3	2.19	0.43
21:c9:6:VAL:HB	21:c9:14:PHE:CE1	2.53	0.43
26:d4:27:VAL:HG12	26:d4:29:HIS:HD2	1.83	0.43
28:d6:12:LYS:HB3	28:d6:13:LYS:H	1.45	0.43
32:e0:10:ARG:O	32:e0:12:GLY:N	2.51	0.43
36:5:241:G:H4'	49:m3:45:LYS:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:612:U:H2'	36:5:613:G:H8	1.83	0.43
36:5:1047:A:C6	36:5:1048:A:C6	3.07	0.43
36:5:1141:C:H2'	36:5:1142:G:O4'	2.18	0.43
36:5:1479:U:H2'	36:5:1480:G:H5'	2.01	0.43
36:5:1658:G:C4	36:5:1796:G:C6	3.06	0.43
36:5:2155:G:O2'	39:l2:227:ARG:NH2	2.51	0.43
36:5:3153:U:H1'	36:5:3154:C:C2	2.54	0.43
38:8:68:G:C6	38:8:69:U:C4	3.06	0.43
42:l5:34:LYS:HE3	57:n1:30:TYR:CE1	2.54	0.43
44:l7:90:LYS:HB3	44:l7:133:TYR:HB3	2.01	0.43
48:m1:6:GLN:HB3	48:m1:7:ASN:H	1.52	0.43
48:m1:25:GLU:OE1	48:m1:29:ARG:HB3	2.19	0.43
48:m1:101:ASN:HB3	48:m1:130:VAL:HA	2.00	0.43
51:m5:73:ARG:O	51:m5:75:VAL:HG22	2.19	0.43
53:m7:60:PHE:HB3	53:m7:64:ASN:HB3	1.99	0.43
62:n6:124:GLY:O	62:n6:126:LEU:N	2.47	0.43
67:o1:8:VAL:HG22	67:o1:77:ARG:HH21	1.82	0.43
68:o2:103:LYS:O	68:o2:106:VAL:HG22	2.18	0.43
71:o5:94:LYS:O	71:o5:98:SER:N	2.52	0.43
1:2:489:C:H2'	1:2:490:C:C6	2.54	0.43
1:2:534:A:H5'	1:2:535:A:OP2	2.19	0.43
1:2:1174:C:C4	1:2:1175:U:C4	3.07	0.43
1:2:1180:C:H1'	1:2:1460:A:H61	1.83	0.43
1:2:1335:U:H1'	31:D9:56:ARG:HD2	2.01	0.43
1:2:1368:G:C6	1:2:1369:U:C4	3.07	0.43
1:2:1482:C:OP2	1:2:1521:G:N1	2.44	0.43
1:2:1488:G:C8	1:2:1515:A:N6	2.87	0.43
1:2:1504:G:C2	1:2:1505:A:C4	3.06	0.43
1:2:1737:G:H2'	1:2:1738:U:O4'	2.19	0.43
4:S2:144:TRP:NE1	24:D2:97:ARG:HD2	2.33	0.43
6:S4:192:ILE:HG13	6:S4:243:GLY:HA3	2.00	0.43
7:S5:113:ILE:HG21	7:S5:190:ILE:HB	2.00	0.43
9:S7:16:LEU:HD22	9:S7:46:ILE:HG21	2.01	0.43
14:C2:60:VAL:HG22	14:C2:122:VAL:HG22	2.00	0.43
20:C8:91:ASP:C	20:C8:93:THR:N	2.77	0.43
25:D3:60:GLU:CD	32:E0:3:LYS:HB2	2.44	0.43
28:D6:75:VAL:O	28:D6:79:ILE:N	2.52	0.43
28:D6:93:LYS:HB3	28:D6:93:LYS:HE2	1.68	0.43
34:SR:40:LYS:HD2	34:SR:65:SER:HA	2.01	0.43
36:1:82:C:O3'	51:M5:204:LYS:NZ	2.48	0.43
36:1:95:A:C5	36:1:96:G:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:213:A:O4'	62:N6:2:ALA:HB1	2.19	0.43
36:1:1544:G:O2'	36:1:2167:A:N3	2.44	0.43
36:1:1722:U:O4'	55:M9:96:ILE:HG23	2.18	0.43
36:1:1748:G:OP2	74:O8:42:LYS:NZ	2.42	0.43
36:1:2249:G:C2	36:1:2250:G:C8	3.06	0.43
36:1:2507:C:H2'	36:1:2508:U:C6	2.54	0.43
36:1:2746:A:H2'	36:1:2747:A:O4'	2.18	0.43
36:1:2984:C:H2'	36:1:2985:C:H6	1.83	0.43
37:3:67:G:H8	37:3:67:G:O5'	2.02	0.43
38:4:154:C:H5"	45:L8:181:LYS:HD2	2.01	0.43
40:L3:95:THR:C	40:L3:97:ARG:H	2.27	0.43
42:L5:126:GLU:HA	42:L5:196:ARG:HD2	2.01	0.43
45:L8:158:ASP:HB3	45:L8:159:PRO:HD3	2.01	0.43
48:M1:19:LEU:HD13	48:M1:40:LEU:HD12	2.00	0.43
49:M3:49:ARG:HE	49:M3:49:ARG:HB2	1.63	0.43
50:M4:8:LYS:HB3	50:M4:9:ALA:H	1.47	0.43
51:M5:68:ARG:HG2	51:M5:128:LYS:HG3	2.00	0.43
55:M9:123:LEU:O	55:M9:127:SER:N	2.47	0.43
61:N5:139:ILE:HD11	71:O5:33:VAL:HG21	1.99	0.43
1:6:301:A:H2'	1:6:302:U:O4'	2.19	0.43
1:6:473:A:H5'	1:6:769:A:H1'	1.99	0.43
1:6:780:A:N3	26:d4:10:ARG:HD3	2.33	0.43
1:6:1007:C:H5"	16:c4:135:ARG:HG3	2.00	0.43
1:6:1235:C:OP2	1:6:1245:G:H8	2.01	0.43
1:6:1268:G:H1'	1:6:1448:G:H5"	2.01	0.43
1:6:1663:G:C6	1:6:1664:C:C4	3.07	0.43
2:s0:144:ILE:HG23	2:s0:158:VAL:HG13	2.01	0.43
3:s1:156:ALA:C	3:s1:158:SER:N	2.77	0.43
4:s2:83:ILE:HA	4:s2:99:LYS:O	2.19	0.43
7:s5:99:MET:O	7:s5:100:ASN:HB2	2.19	0.43
7:s5:126:ASP:HB3	7:s5:127:GLN:H	1.72	0.43
10:s8:26:LYS:O	10:s8:29:LEU:HD22	2.19	0.43
11:s9:31:ALA:HA	11:s9:36:LEU:HB2	1.99	0.43
11:s9:141:VAL:HG11	11:s9:146:PHE:CG	2.54	0.43
15:c3:91:LEU:HD12	15:c3:125:LEU:HD12	2.00	0.43
19:c7:87:GLU:O	19:c7:88:VAL:HB	2.19	0.43
23:d1:30:ALA:O	23:d1:60:ARG:NH1	2.49	0.43
28:d6:87:ARG:NH2	28:d6:94:ASN:HB3	2.33	0.43
36:5:83:U:H2'	36:5:84:U:O4'	2.18	0.43
36:5:183:G:C2	36:5:184:U:C2	3.07	0.43
36:5:279:U:H2'	36:5:280:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:953:G:H2'	36:5:1117:G:H5"	2.00	0.43
36:5:1055:A:H5"	37:7:100:C:O2'	2.18	0.43
36:5:1152:G:N2	36:5:1200:A:N6	2.64	0.43
36:5:1238:C:O2'	36:5:1239:C:OP1	2.30	0.43
36:5:1259:A:H5'	81:p0:53:MET:O	2.19	0.43
36:5:1294:A:H5"	56:n0:85:SER:OG	2.19	0.43
36:5:1562:C:H42	36:5:1577:G:H1	1.65	0.43
36:5:1842:A:H4'	36:5:1843:C:OP2	2.19	0.43
36:5:2163:C:H4'	39:l2:7:ASN:O	2.18	0.43
36:5:2869:U:H1'	36:5:2873:U:H5	1.83	0.43
36:5:3347:A:H61	36:5:3358:U:H3	1.67	0.43
38:8:141:C:H2'	38:8:142:C:C6	2.53	0.43
41:l4:362:ASP:O	56:n0:28:ARG:HD3	2.19	0.43
42:l5:249:ALA:C	42:l5:251:PRO:HD3	2.43	0.43
45:l8:53:PRO:HD3	61:n5:32:PHE:CG	2.54	0.43
46:l9:89:LYS:NZ	46:l9:191:LEU:HD12	2.33	0.43
48:m1:152:HIS:O	48:m1:153:LYS:HG2	2.19	0.43
54:m8:150:VAL:HA	54:m8:153:PHE:CD1	2.54	0.43
60:n4:47:ARG:HG3	60:n4:54:LEU:HD23	2.00	0.43
63:n7:89:VAL:HG23	63:n7:92:PHE:HE2	1.84	0.43
68:o2:102:ALA:HA	68:o2:125:ARG:HB3	1.99	0.43
81:p0:40:GLU:HA	81:p0:43:LYS:HE3	2.00	0.43
83:f:124:LEU:HD21	83:f:150:PHE:CD2	2.53	0.43
1:2:78:A:H1'	8:S6:175:ILE:HG12	2.00	0.43
1:2:221:A:H3'	1:2:833:U:O2	2.18	0.43
1:2:575:C:H41	25:D3:65:ASN:ND2	2.17	0.43
1:2:702:G:O2'	1:2:703:G:H8	2.02	0.43
1:2:810:G:C5	9:S7:111:LYS:HE3	2.53	0.43
1:2:861:U:OP1	15:C3:64:ARG:NH2	2.45	0.43
1:2:870:C:H2'	1:2:871:G:C8	2.54	0.43
1:2:986:G:H2'	1:2:987:G:O4'	2.18	0.43
1:2:1026:A:N3	1:2:1790:A:H1'	2.33	0.43
1:2:1110:G:N2	1:2:1136:U:H1'	2.34	0.43
1:2:1605:G:OP2	18:C6:127:LYS:HE3	2.18	0.43
5:S3:223:LYS:HD3	34:SR:193:ILE:HD12	2.01	0.43
7:S5:94:THR:O	7:S5:97:LEU:HB2	2.17	0.43
11:S9:45:ILE:HD13	11:S9:45:ILE:HA	1.81	0.43
20:C8:14:ILE:H	20:C8:24:GLY:N	2.17	0.43
25:D3:108:GLY:O	25:D3:109:ARG:HG2	2.18	0.43
36:1:241:G:C6	36:1:242:C:C4	3.07	0.43
36:1:278:U:H2'	36:1:279:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:516:A:H2'	36:1:517:G:C8	2.54	0.43
36:1:703:G:C6	36:1:704:U:C4	3.07	0.43
36:1:784:A:C8	54:M8:69:ARG:CZ	3.02	0.43
36:1:1341:U:H2'	36:1:1342:C:C6	2.54	0.43
36:1:1497:C:O2'	36:1:1602:A:N3	2.49	0.43
36:1:2375:G:O2'	36:1:2377:G:OP2	2.33	0.43
36:1:2585:G:H8	45:L8:48:ARG:HG3	1.84	0.43
36:1:3037:U:H5"	40:L3:348:ARG:HH12	1.84	0.43
36:1:3174:A:H2'	36:1:3175:U:O4'	2.19	0.43
37:3:121:U:H3	42:L5:268:GLU:HB3	1.82	0.43
38:4:43:A:H2'	38:4:44:A:H8	1.83	0.43
39:L2:107:VAL:O	39:L2:139:HIS:NE2	2.52	0.43
44:L7:118:LYS:HG3	44:L7:191:VAL:CG1	2.49	0.43
48:M1:86:VAL:HG22	48:M1:111:ASP:HB2	2.01	0.43
49:M3:149:GLN:HA	49:M3:150:PRO:HD3	1.72	0.43
59:N3:27:ASP:OD2	59:N3:27:ASP:N	2.52	0.43
59:N3:120:LYS:HB2	59:N3:137:VAL:HG23	2.01	0.43
78:Q2:8:ARG:O	78:Q2:23:HIS:N	2.47	0.43
1:6:538:A:O2'	1:6:539:G:N7	2.50	0.43
1:6:570:A:N6	25:d3:116:ASP:OD2	2.48	0.43
1:6:654:C:H2'	1:6:655:G:H8	1.81	0.43
1:6:1139:A:C5	1:6:1140:G:C8	3.07	0.43
1:6:1379:C:H5'	18:c6:10:PHE:CE2	2.53	0.43
1:6:1446:A:O2'	1:6:1447:C:H5"	2.19	0.43
1:6:1606:C:H2'	1:6:1607:G:C8	2.54	0.43
1:6:1655:A:N1	36:5:2291:A:O2'	2.47	0.43
11:s9:131:GLN:O	11:s9:132:ARG:HG2	2.19	0.43
11:s9:168:ARG:NH2	11:s9:174:ARG:HD3	2.34	0.43
16:c4:47:LYS:HE2	16:c4:62:LEU:HB3	2.00	0.43
18:c6:55:VAL:HG21	18:c6:89:LEU:HD21	2.00	0.43
19:c7:6:THR:HG23	19:c7:9:VAL:HG23	2.00	0.43
26:d4:104:SER:O	26:d4:108:ARG:HG3	2.18	0.43
35:sM:52:PRO:O	35:sM:54:PRO:HD3	2.19	0.43
36:5:63:A:P	51:m5:172:ARG:HH22	2.40	0.43
36:5:148:G:OP2	51:m5:4:TYR:OH	2.26	0.43
36:5:174:C:N4	36:5:244:G:H1	2.15	0.43
36:5:283:G:O6	36:5:304:G:H1'	2.19	0.43
36:5:685:G:N2	36:5:696:C:C2	2.87	0.43
36:5:761:A:N1	36:5:771:A:H1'	2.34	0.43
36:5:2425:G:H2'	36:5:2426:U:O4'	2.19	0.43
36:5:2573:G:H5'	36:5:2574:G:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3353:G:H4'	36:5:3354:U:OP1	2.19	0.43
40:l3:56:ILE:HD12	40:l3:56:ILE:HA	1.81	0.43
47:m0:75:TYR:CE2	47:m0:79:VAL:HG21	2.53	0.43
55:m9:103:ARG:NH2	55:m9:128:LYS:HG3	2.34	0.43
56:n0:67:ALA:O	56:n0:69:PRO:HD3	2.19	0.43
61:n5:40:LEU:HB3	61:n5:41:ALA:H	1.57	0.43
62:n6:71:SER:HB3	62:n6:83:ASP:CG	2.43	0.43
66:o0:22:LYS:O	66:o0:93:LEU:HB2	2.19	0.43
1:2:52:U:H2'	1:2:53:G:C8	2.54	0.43
2:S0:29:VAL:HG22	2:S0:150:ASP:HB3	1.99	0.43
4:S2:81:MET:HE1	4:S2:186:LYS:HB3	2.00	0.43
7:S5:107:LYS:O	7:S5:111:VAL:HG23	2.18	0.43
9:S7:14:THR:OG1	9:S7:15:GLU:N	2.44	0.43
9:S7:39:ARG:HH22	55:M9:185:LEU:HD22	1.84	0.43
13:C1:13:PHE:HE2	13:C1:15:LYS:HB3	1.83	0.43
15:C3:118:ILE:O	15:C3:122:ILE:HG13	2.19	0.43
24:D2:94:LEU:HA	24:D2:95:PRO:HD3	1.86	0.43
24:D2:104:LEU:HB2	24:D2:124:LYS:O	2.18	0.43
26:D4:11:LYS:HB2	26:D4:24:VAL:HG23	2.01	0.43
27:D5:48:ASP:HA	27:D5:51:LEU:HB2	1.99	0.43
36:1:802:C:H5	64:N8:25:HIS:CD2	2.37	0.43
36:1:1019:G:H2'	36:1:1020:G:O4'	2.19	0.43
36:1:2514:U:OP1	45:L8:68:ARG:NH1	2.47	0.43
36:1:2534:G:N2	36:1:2545:C:H42	2.15	0.43
36:1:2936:A:H2'	36:1:2937:G:C8	2.54	0.43
36:1:2941:A:OP1	40:L3:255:TRP:HB3	2.18	0.43
36:1:3082:C:H2'	36:1:3083:G:C8	2.54	0.43
36:1:3375:A:N7	36:1:3376:A:N6	2.66	0.43
37:3:105:C:O5'	37:3:105:C:H6	2.01	0.43
40:L3:386:ASP:HB3	40:L3:387:LEU:H	1.56	0.43
41:L4:162:THR:O	41:L4:166:VAL:HG23	2.18	0.43
42:L5:111:GLN:HA	42:L5:116:ASP:HB2	2.01	0.43
42:L5:114:GLY:C	42:L5:116:ASP:H	2.27	0.43
45:L8:152:LEU:HD12	45:L8:198:ALA:HB3	2.00	0.43
46:L9:93:VAL:O	46:L9:177:ASP:HA	2.18	0.43
49:M3:91:ARG:NH1	49:M3:97:VAL:HB	2.33	0.43
49:M3:115:ARG:NH1	49:M3:147:ILE:HG12	2.34	0.43
51:M5:27:VAL:HB	51:M5:122:ASN:HD21	1.83	0.43
52:M6:53:LYS:O	52:M6:56:ASP:HB2	2.18	0.43
54:M8:176:ARG:NH1	64:N8:46:ASP:OD2	2.52	0.43
59:N3:32:ARG:HE	59:N3:64:LYS:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:N5:88:MET:HE2	61:N5:88:MET:HB3	1.85	0.43
72:O6:11:LEU:HD13	72:O6:11:LEU:HA	1.77	0.43
1:6:532:U:H4'	26:d4:66:GLY:HA2	2.00	0.43
1:6:774:A:C5	1:6:775:G:H1'	2.54	0.43
1:6:1045:C:C2	1:6:1074:G:C2	3.07	0.43
1:6:1080:U:H2'	1:6:1081:A:C8	2.54	0.43
9:s7:132:PRO:O	9:s7:133:THR:OG1	2.36	0.43
11:s9:41:GLU:HG2	11:s9:44:ARG:NH2	2.33	0.43
19:c7:10:LYS:HG2	19:c7:53:TYR:CE1	2.54	0.43
22:d0:51:VAL:HG21	22:d0:94:GLU:HG3	2.00	0.43
26:d4:36:SER:O	26:d4:40:LEU:HB2	2.19	0.43
30:d8:10:ALA:HB1	30:d8:30:VAL:HB	2.00	0.43
34:sR:40:LYS:HA	34:sR:66:HIS:O	2.19	0.43
36:5:210:U:C2	36:5:230:U:H4'	2.54	0.43
36:5:594:U:H2'	36:5:609:G:O6	2.19	0.43
36:5:599:C:H2'	36:5:600:G:O4'	2.19	0.43
36:5:790:U:H4'	41:l4:112:LYS:O	2.18	0.43
36:5:815:G:C6	36:5:906:A:C4	3.06	0.43
36:5:1080:A:P	42:l5:140:ARG:HH21	2.42	0.43
36:5:1386:A:N7	41:l4:183:LYS:HE3	2.34	0.43
36:5:2267:C:H2'	36:5:2268:U:C6	2.50	0.43
36:5:3287:U:C2'	36:5:3288:G:H5'	2.48	0.43
36:5:3320:A:N6	36:5:3386:G:O6	2.52	0.43
37:7:95:A:C2	37:7:96:U:C2	3.06	0.43
41:l4:288:ARG:O	41:l4:291:ASN:N	2.49	0.43
45:l8:213:LYS:O	45:l8:217:THR:HG22	2.19	0.43
48:m1:53:THR:HG23	48:m1:59:ILE:O	2.18	0.43
49:m3:105:ASN:ND2	49:m3:108:ILE:HG12	2.34	0.43
50:m4:103:ILE:O	50:m4:107:GLU:HB2	2.19	0.43
53:m7:30:ARG:HD3	53:m7:30:ARG:C	2.44	0.43
61:n5:132:ALA:O	61:n5:135:ILE:HD13	2.18	0.43
69:o3:53:TYR:CZ	69:o3:65:ARG:HB2	2.54	0.43
83:f:115:ALA:HB3	83:f:147:ALA:HB3	2.01	0.43
1:2:98:U:H1'	1:2:425:A:H1'	2.01	0.43
1:2:246:G:O4'	6:S4:202:ASP:HB3	2.18	0.43
1:2:784:C:H2'	1:2:785:U:O4'	2.19	0.43
1:2:819:G:N2	1:2:854:U:O4'	2.51	0.43
1:2:1209:C:H2'	1:2:1210:C:C6	2.54	0.43
1:2:1237:G:H2'	1:2:1238:A:C8	2.54	0.43
1:2:1326:A:H2'	1:2:1327:C:H6	1.83	0.43
1:2:1471:A:N3	1:2:1474:G:O2'	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1586:A:H2'	1:2:1587:A:O4'	2.19	0.43
2:S0:9:LEU:HD23	2:S0:54:TRP:CD2	2.54	0.43
2:S0:57:LEU:HD12	2:S0:173:ILE:HG23	2.00	0.43
3:S1:183:GLN:HG2	3:S1:187:LYS:HE3	2.00	0.43
4:S2:97:ARG:H	4:S2:97:ARG:HG2	1.52	0.43
5:S3:177:MET:SD	5:S3:182:LEU:HD11	2.59	0.43
6:S4:45:ILE:HA	6:S4:61:VAL:HG11	2.00	0.43
6:S4:59:ARG:NH1	26:D4:87:PRO:HG3	2.32	0.43
7:S5:45:LYS:HD3	7:S5:45:LYS:HA	1.81	0.43
9:S7:96:ARG:HE	9:S7:124:LYS:HB3	1.84	0.43
11:S9:129:ILE:HG12	11:S9:134:ILE:HD13	1.99	0.43
13:C1:123:VAL:HG23	13:C1:142:VAL:HA	2.01	0.43
18:C6:25:GLY:H	18:C6:63:ILE:HA	1.84	0.43
25:D3:133:LEU:HD11	25:D3:137:LYS:NZ	2.34	0.43
28:D6:44:ILE:H	28:D6:44:ILE:HG13	1.73	0.43
34:SR:40:LYS:HA	34:SR:68:VAL:HG23	2.01	0.43
36:1:871:U:H2'	36:1:872:U:C6	2.54	0.43
36:1:1010:G:H8	36:1:1010:G:OP2	2.02	0.43
36:1:1153:A:C6	36:1:1154:A:C6	3.07	0.43
36:1:1774:C:H2'	36:1:1775:G:O4'	2.19	0.43
36:1:1846:C:O2'	53:M7:128:ARG:NH1	2.52	0.43
36:1:2623:G:H1	36:1:2644:C:H42	1.66	0.43
38:4:23:U:H1'	62:N6:17:LYS:HE3	2.01	0.43
38:4:43:A:H2'	38:4:44:A:C8	2.54	0.43
39:L2:137:ILE:HG13	39:L2:147:ARG:HG2	2.01	0.43
40:L3:123:TYR:CE2	40:L3:124:LYS:HG3	2.54	0.43
40:L3:306:THR:OG1	40:L3:316:GLU:O	2.24	0.43
47:M0:10:ARG:HG2	47:M0:11:TYR:CD1	2.53	0.43
62:N6:82:VAL:HG12	62:N6:83:ASP:O	2.19	0.43
62:N6:125:LYS:O	62:N6:126:LEU:HG	2.18	0.43
63:N7:24:VAL:HG22	63:N7:130:PHE:CZ	2.54	0.43
64:N8:93:SER:O	64:N8:93:SER:OG	2.36	0.43
66:O0:43:ILE:HD12	66:O0:90:VAL:HB	1.99	0.43
69:O3:45:LEU:HD23	69:O3:71:VAL:CG1	2.49	0.43
1:6:212:U:H2'	1:6:213:A:H8	1.84	0.43
1:6:622:A:H4'	1:6:623:A:C5'	2.49	0.43
1:6:1046:G:H1	1:6:1072:C:N4	2.16	0.43
1:6:1584:G:O2'	1:6:1610:G:O6	2.33	0.43
1:6:1754:A:H5'	1:6:1755:A:C8	2.53	0.43
13:c1:5:LEU:HD23	13:c1:7:VAL:H	1.83	0.43
14:c2:85:LYS:HE2	14:c2:87:PRO:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:c3:91:LEU:HD23	15:c3:91:LEU:HA	1.92	0.43
26:d4:83:LYS:HE2	26:d4:83:LYS:HB2	1.86	0.43
28:d6:10:ARG:HH12	28:d6:36:ILE:HG13	1.84	0.43
29:d7:6:ASP:OD1	29:d7:9:HIS:ND1	2.46	0.43
32:e0:14:VAL:HA	32:e0:17:GLN:HG2	2.00	0.43
34:sR:90:ARG:HG2	34:sR:102:ARG:HG2	2.01	0.43
34:sR:103:PHE:CD1	34:sR:138:GLY:HA2	2.54	0.43
34:sR:294:TRP:CZ3	34:sR:301:LEU:HB2	2.53	0.43
36:5:115:A:C6	36:5:265:A:C6	3.07	0.43
36:5:168:U:H2'	36:5:169:U:C6	2.54	0.43
36:5:591:G:N2	36:5:612:U:OP1	2.48	0.43
36:5:944:C:H4'	68:o2:33:ARG:NH1	2.34	0.43
36:5:1073:U:H1'	65:n9:50:THR:CG2	2.48	0.43
36:5:1209:G:O3'	46:l9:63:LYS:NZ	2.52	0.43
36:5:1544:G:N2	36:5:1550:C:H1'	2.34	0.43
36:5:2188:A:H2'	36:5:2189:U:O4'	2.19	0.43
36:5:2534:G:H1	36:5:2545:C:N4	2.08	0.43
36:5:2880:U:H1'	40:l3:250:ALA:CB	2.46	0.43
36:5:2941:A:OP1	40:l3:255:TRP:HB3	2.18	0.43
38:8:71:A:O2'	62:n6:52:ARG:NH2	2.52	0.43
38:8:154:C:H5"	45:l8:181:LYS:HG2	2.01	0.43
39:l2:121:GLY:O	39:l2:123:ARG:HG3	2.19	0.43
39:l2:140:ASN:ND2	39:l2:142:ASP:HB3	2.33	0.43
39:l2:193:ARG:O	39:l2:195:SER:N	2.52	0.43
40:l3:218:ILE:HD11	40:l3:339:ARG:HD3	1.99	0.43
41:l4:92:ASN:OD1	41:l4:92:ASN:N	2.47	0.43
53:m7:32:THR:HG21	53:m7:87:SER:HB3	2.00	0.43
53:m7:138:LYS:NZ	53:m7:140:GLU:OE1	2.34	0.43
54:m8:67:ILE:HD13	54:m8:81:VAL:HG21	2.01	0.43
56:n0:53:LYS:HE3	56:n0:53:LYS:HB2	1.72	0.43
57:n1:45:ASN:OD1	57:n1:47:SER:OG	2.35	0.43
60:n4:79:GLN:HG3	60:n4:80:ARG:N	2.34	0.43
63:n7:102:GLU:H	63:n7:107:ARG:HH21	1.67	0.43
63:n7:128:GLN:NE2	63:n7:129:TRP:H	2.16	0.43
67:o1:10:ARG:HH12	67:o1:44:MET:CG	2.31	0.43
70:o4:41:ARG:NH2	70:o4:50:ALA:O	2.45	0.43
77:q1:16:LYS:O	77:q1:20:VAL:HG23	2.19	0.43
81:p0:67:LEU:HD11	81:p0:74:GLU:HB2	2.00	0.43
1:2:36:C:H5"	1:2:530:C:H5"	2.01	0.42
1:2:479:C:OP1	11:S9:121:SER:OG	2.28	0.42
1:2:1038:U:C2	1:2:1094:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1068:C:P	3:S1:150:VAL:HG21	2.59	0.42
1:2:1437:U:H5'	5:S3:176:LEU:HD23	2.01	0.42
2:S0:185:ARG:HE	23:D1:47:PRO:HG3	1.83	0.42
7:S5:64:VAL:HG22	7:S5:89:ILE:HD11	2.00	0.42
8:S6:43:ASP:O	8:S6:46:LYS:HB2	2.19	0.42
11:S9:3:ARG:H	11:S9:3:ARG:HD3	1.83	0.42
11:S9:4:ALA:HA	11:S9:5:PRO:HD3	1.85	0.42
15:C3:22:ALA:HB1	15:C3:23:PRO:CA	2.49	0.42
21:C9:33:TYR:O	21:C9:36:ILE:HG12	2.19	0.42
24:D2:50:PHE:HB3	24:D2:63:VAL:HG22	2.00	0.42
25:D3:79:ASN:HD22	25:D3:79:ASN:N	2.17	0.42
25:D3:81:LYS:HE2	25:D3:81:LYS:HB3	1.87	0.42
28:D6:53:LEU:O	28:D6:57:SER:N	2.52	0.42
28:D6:82:ARG:HB3	28:D6:83:ILE:H	1.70	0.42
34:SR:214:ALA:HB2	34:SR:220:ILE:HA	2.01	0.42
35:SM:48:ARG:NH2	36:1:1016:C:O2	2.52	0.42
36:1:99:A:OP1	51:M5:194:GLN:NE2	2.51	0.42
36:1:199:A:C4	36:1:201:A:C8	3.06	0.42
36:1:207:U:H2'	36:1:208:C:H6	1.84	0.42
36:1:371:G:H4'	36:1:396:A:N1	2.34	0.42
36:1:573:C:C4	36:1:574:U:C4	3.06	0.42
36:1:926:A:H2'	36:1:927:C:C6	2.54	0.42
36:1:978:G:H21	36:1:979:U:H3	1.66	0.42
36:1:1334:U:H2'	36:1:1335:C:C6	2.54	0.42
36:1:1448:U:OP1	53:M7:82:ARG:NH2	2.42	0.42
36:1:1632:A:C8	36:1:1644:C:H2'	2.54	0.42
36:1:2536:A:H2'	36:1:2537:U:C5	2.54	0.42
36:1:3259:U:H5"	36:1:3261:C:H5	1.84	0.42
41:L4:38:VAL:HG11	41:L4:118:LYS:HA	2.01	0.42
46:L9:103:ILE:HD11	46:L9:136:PHE:HE2	1.84	0.42
47:M0:205:SER:O	47:M0:209:ASN:HB2	2.19	0.42
49:M3:64:LYS:HG3	64:N8:69:TRP:CD2	2.54	0.42
49:M3:166:ALA:HB3	64:N8:135:GLU:HG3	2.01	0.42
49:M3:168:ARG:NH1	49:M3:172:LEU:HD11	2.34	0.42
51:M5:194:GLN:H	51:M5:194:GLN:HG2	1.58	0.42
57:N1:104:GLU:HG3	57:N1:105:PHE:N	2.33	0.42
64:N8:90:TYR:HB3	64:N8:100:PRO:HG3	2.01	0.42
68:O2:100:ILE:HG22	68:O2:105:ARG:HG2	2.00	0.42
1:6:320:U:H2'	1:6:321:C:C2	2.53	0.42
8:s6:142:ARG:HA	8:s6:147:LEU:HD12	2.00	0.42
9:s7:11:GLN:OE1	9:s7:13:PRO:HD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:s9:51:LYS:HE3	11:s9:51:LYS:HB2	1.72	0.42
12:c0:3:MET:HA	12:c0:4:PRO:HD2	1.91	0.42
13:c1:46:LYS:HD2	13:c1:46:LYS:HA	1.88	0.42
21:c9:14:PHE:CZ	21:c9:132:LEU:HD22	2.52	0.42
36:5:96:G:H2'	36:5:97:U:O4'	2.19	0.42
36:5:595:G:H1	36:5:609:G:H5"	1.83	0.42
36:5:686:G:C2	36:5:687:U:H1'	2.53	0.42
36:5:743:C:O2	54:m8:141:ARG:HD3	2.19	0.42
36:5:1213:G:C2	36:5:1293:U:C2	3.06	0.42
36:5:1562:C:H2'	36:5:1563:C:C6	2.54	0.42
36:5:1801:U:H2'	36:5:1802:C:C6	2.54	0.42
36:5:2213:A:H2	36:5:2601:A:N3	2.17	0.42
36:5:2694:A:C6	36:5:2695:A:C6	3.06	0.42
41:l4:355:PHE:HD2	41:l4:356:THR:HG23	1.84	0.42
42:l5:183:TRP:HD1	42:l5:190:ILE:HB	1.84	0.42
42:l5:271:LYS:HD3	42:l5:271:LYS:HA	1.65	0.42
44:l7:150:LYS:NZ	44:l7:244:ASN:O	2.38	0.42
80:m2:125:UNK:C	80:m2:127:UNK:N	2.81	0.42
58:n2:41:ILE:HG23	58:n2:71:PHE:HE2	1.84	0.42
60:n4:60:LYS:HB3	60:n4:63:ILE:HD11	2.01	0.42
62:n6:66:GLN:HG2	62:n6:85:VAL:HG22	2.00	0.42
70:o4:20:ILE:HD11	70:o4:34:HIS:NE2	2.34	0.42
81:p0:33:VAL:HA	81:p0:37:GLN:OE1	2.19	0.42
83:f:21:MET:HE3	83:f:21:MET:HB3	1.82	0.42
1:2:43:A:O2'	1:2:99:C:OP1	2.29	0.42
1:2:67:A:N6	1:2:83:G:O2'	2.52	0.42
1:2:132:U:H4'	1:2:133:U:H5'	2.01	0.42
1:2:144:U:H5	8:S6:137:ARG:HH11	1.66	0.42
1:2:492:A:H4'	1:2:493:U:C5	2.54	0.42
1:2:551:G:H1	1:2:573:C:N4	2.13	0.42
1:2:1080:U:H2'	1:2:1081:A:C8	2.53	0.42
1:2:1346:A:OP2	1:2:1348:A:N6	2.45	0.42
1:2:1443:U:O3'	1:2:1444:A:H8	2.01	0.42
2:S0:193:GLN:O	2:S0:195:TRP:N	2.52	0.42
3:S1:109:LYS:O	3:S1:113:MET:HG3	2.19	0.42
11:S9:7:THR:OG1	11:S9:8:TYR:N	2.52	0.42
14:C2:79:ALA:HB1	14:C2:87:PRO:O	2.19	0.42
15:C3:42:ARG:HB2	15:C3:42:ARG:HH11	1.84	0.42
22:D0:26:LEU:HB3	22:D0:34:LEU:HD21	2.00	0.42
27:D5:59:TYR:HE2	27:D5:100:ILE:HA	1.84	0.42
36:1:155:G:H5"	36:1:156:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:240:U:H4'	36:1:241:G:OP1	2.19	0.42
36:1:1049:C:H2'	36:1:1050:U:H6	1.84	0.42
36:1:1618:G:H4'	38:4:129:C:H1'	2.00	0.42
36:1:1940:G:OP1	55:M9:80:LYS:HE3	2.19	0.42
36:1:1951:C:N4	36:1:2095:G:H1	2.17	0.42
36:1:2227:C:OP1	78:Q2:32:LYS:NZ	2.44	0.42
36:1:2424:A:N1	39:L2:230:VAL:HG21	2.35	0.42
36:1:2514:U:OP2	36:1:2586:G:N2	2.51	0.42
36:1:2890:A:O2'	36:1:2933:A:N3	2.35	0.42
39:L2:117:GLU:CD	39:L2:121:GLY:H	2.27	0.42
40:L3:377:HIS:NE2	40:L3:387:LEU:HD11	2.34	0.42
41:L4:194:TYR:CD2	41:L4:194:TYR:N	2.87	0.42
42:L5:81:HIS:HD1	42:L5:81:HIS:C	2.27	0.42
43:L6:175:LYS:HE3	43:L6:175:LYS:HB3	1.79	0.42
52:M6:80:PHE:HD2	52:M6:104:VAL:HG11	1.84	0.42
55:M9:173:ARG:O	55:M9:177:VAL:HG23	2.19	0.42
56:N0:47:LYS:O	56:N0:48:LEU:HD23	2.18	0.42
59:N3:26:ALA:O	59:N3:115:THR:HG23	2.19	0.42
66:O0:23:TYR:HB2	66:O0:91:SER:O	2.19	0.42
67:O1:20:LEU:O	67:O1:22:GLY:N	2.52	0.42
67:O1:88:PRO:HG2	67:O1:89:LEU:HD13	2.00	0.42
73:O7:14:LYS:H	73:O7:14:LYS:HG2	1.45	0.42
1:6:485:A:H61	1:6:502:U:H3	1.67	0.42
1:6:922:G:H2'	1:6:923:A:H8	1.83	0.42
1:6:1066:C:O4'	3:s1:146:GLN:NE2	2.49	0.42
1:6:1076:A:H2'	1:6:1077:C:O4'	2.19	0.42
1:6:1217:A:H4'	12:c0:44:LYS:HE3	2.00	0.42
1:6:1360:A:H2'	1:6:1361:U:H4'	2.00	0.42
1:6:1388:A:H5"	19:c7:48:ASN:HD22	1.84	0.42
1:6:1418:G:N2	31:d9:55:PHE:O	2.52	0.42
1:6:1433:G:H2'	1:6:1434:U:O4'	2.20	0.42
1:6:1474:G:H5'	7:s5:102:ARG:HH12	1.84	0.42
1:6:1684:U:H2'	1:6:1685:G:C8	2.54	0.42
1:6:1757:G:H2'	1:6:1758:U:H6	1.83	0.42
2:s0:8:ASP:HB3	2:s0:9:LEU:H	1.69	0.42
5:s3:73:VAL:HG13	5:s3:77:PHE:HD2	1.85	0.42
9:s7:71:HIS:HA	9:s7:74:GLN:HB2	2.01	0.42
11:s9:126:ARG:HG3	32:e0:33:ARG:HD3	2.00	0.42
26:d4:122:GLY:HA2	26:d4:125:LEU:HB2	2.01	0.42
36:5:379:C:H2'	36:5:380:U:C6	2.51	0.42
36:5:565:U:C2	36:5:566:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:714:G:N7	64:n8:111:LYS:HE2	2.33	0.42
36:5:835:G:O2'	36:5:857:G:N2	2.29	0.42
36:5:951:A:H5"	36:5:1143:A:N1	2.34	0.42
36:5:976:U:H5'	54:m8:144:ARG:HH12	1.84	0.42
36:5:1028:U:O2	36:5:1028:U:H2'	2.19	0.42
36:5:1155:C:H2'	36:5:1156:C:C6	2.54	0.42
36:5:1159:A:O2'	36:5:1160:C:H5'	2.19	0.42
36:5:1566:A:C2'	36:5:1567:U:H5'	2.49	0.42
36:5:3280:U:O2'	36:5:3281:U:H6	2.01	0.42
37:7:94:C:H2'	37:7:95:A:H8	1.85	0.42
41:l4:309:ARG:HH21	41:l4:312:VAL:CB	2.31	0.42
41:l4:317:PRO:HA	41:l4:323:VAL:HG13	2.02	0.42
43:l6:49:GLY:O	43:l6:163:PHE:N	2.29	0.42
43:l6:175:LYS:HA	43:l6:175:LYS:HD2	1.77	0.42
49:m3:47:ALA:HB1	49:m3:48:PRO:CD	2.47	0.42
51:m5:168:GLY:O	51:m5:172:ARG:HB2	2.19	0.42
54:m8:122:ILE:HG12	54:m8:123:THR:O	2.18	0.42
57:n1:138:SER:C	57:n1:139:ARG:HG3	2.43	0.42
74:o8:12:LEU:HD13	74:o8:12:LEU:HA	1.78	0.42
1:2:42:G:O6	1:2:434:G:N1	2.52	0.42
1:2:268:C:H41	8:S6:186:ARG:HD3	1.84	0.42
1:2:361:C:H2'	1:2:362:G:H8	1.82	0.42
1:2:463:U:H2'	1:2:464:A:H8	1.84	0.42
1:2:503:G:O2'	1:2:504:U:OP1	2.29	0.42
1:2:1308:G:C2	1:2:1309:C:C2	3.07	0.42
3:S1:106:THR:O	3:S1:109:LYS:N	2.52	0.42
7:S5:166:ARG:HB2	30:D8:46:GLY:HA3	2.00	0.42
9:S7:16:LEU:O	9:S7:20:VAL:HG23	2.19	0.42
13:C1:53:TYR:CG	13:C1:113:PRO:HG2	2.53	0.42
16:C4:85:ALA:H	16:C4:119:THR:CG2	2.30	0.42
19:C7:35:CYS:HA	19:C7:38:ILE:HG22	2.02	0.42
22:D0:33:GLN:OE1	22:D0:33:GLN:N	2.51	0.42
36:1:8:C:H2'	36:1:9:U:C6	2.55	0.42
36:1:87:U:H2'	36:1:88:A:C8	2.55	0.42
36:1:99:A:H1'	36:1:281:G:N7	2.34	0.42
36:1:1821:U:C4	70:O4:67:LYS:HE2	2.53	0.42
36:1:2213:A:H2'	36:1:2214:A:H8	1.78	0.42
36:1:2523:A:O2'	45:L8:49:TYR:O	2.31	0.42
36:1:3070:A:C6	36:1:3071:U:C4	3.08	0.42
38:4:29:U:H5"	49:M3:27:ASP:HB3	2.01	0.42
39:L2:6:ARG:HH12	39:L2:199:THR:H	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:L2:112:ILE:HD12	79:Q3:79:VAL:HG22	2.00	0.42
40:L3:97:ARG:HE	40:L3:97:ARG:HB2	1.69	0.42
41:L4:20:LEU:HA	41:L4:21:PRO:HD3	1.93	0.42
41:L4:22:LEU:HD22	41:L4:23:PRO:CD	2.49	0.42
46:L9:89:LYS:HD2	46:L9:183:HIS:ND1	2.35	0.42
52:M6:85:ARG:C	52:M6:87:MET:N	2.77	0.42
57:N1:91:LEU:HD12	57:N1:96:ILE:HD11	2.00	0.42
61:N5:53:HIS:CE1	61:N5:56:ARG:HG2	2.55	0.42
64:N8:77:LYS:HA	64:N8:77:LYS:HD3	1.87	0.42
65:N9:14:ARG:NH1	65:N9:18:ARG:HH11	2.08	0.42
71:O5:9:LEU:C	71:O5:11:THR:H	2.27	0.42
72:O6:53:TYR:CD1	72:O6:76:ARG:HG2	2.54	0.42
1:6:56:U:O2	1:6:57:G:H1'	2.18	0.42
1:6:187:G:H8	1:6:187:G:O5'	2.03	0.42
1:6:742:U:H1'	9:s7:104:ARG:HG2	2.01	0.42
1:6:958:U:H5'	29:d7:49:HIS:HD2	1.85	0.42
3:s1:70:LEU:HA	3:s1:73:LEU:HB2	2.01	0.42
3:s1:70:LEU:HD13	3:s1:79:HIS:CD2	2.55	0.42
5:s3:46:THR:N	5:s3:83:THR:O	2.47	0.42
7:s5:198:LEU:HD23	7:s5:198:LEU:HA	1.88	0.42
8:s6:139:ASN:HA	8:s6:142:ARG:HB2	2.01	0.42
10:s8:167:ALA:HA	10:s8:183:ILE:HA	2.00	0.42
24:d2:53:ILE:HB	24:d2:60:LYS:HB2	2.01	0.42
26:d4:72:PHE:HE1	26:d4:74:LEU:HD23	1.84	0.42
31:d9:33:LYS:HE2	31:d9:34:TYR:CZ	2.54	0.42
32:e0:13:LYS:HB3	32:e0:17:GLN:NE2	2.34	0.42
34:sR:23:LEU:HD13	34:sR:302:PHE:HB3	1.99	0.42
36:5:29:C:H4'	36:5:62:A:H4'	2.02	0.42
36:5:136:G:H5'	71:o5:95:PHE:CD2	2.55	0.42
36:5:189:G:H3'	36:5:224:C:OP2	2.19	0.42
36:5:963:G:OP2	36:5:963:G:H8	2.02	0.42
36:5:1260:A:H61	81:p0:35:SER:HA	1.84	0.42
36:5:1579:C:H5"	36:5:1649:U:H5"	2.01	0.42
36:5:1939:G:OP1	55:m9:77:GLY:HA3	2.20	0.42
36:5:2197:C:N4	36:5:2241:U:H2'	2.35	0.42
36:5:2422:C:O2'	51:m5:87:GLN:NE2	2.52	0.42
36:5:2815:G:H5"	36:5:2816:G:OP2	2.18	0.42
36:5:2830:G:H1'	36:5:2861:U:C2	2.54	0.42
36:5:3198:U:H4'	36:5:3199:G:OP2	2.19	0.42
38:8:60:U:N3	71:o5:56:THR:HG23	2.34	0.42
38:8:126:A:O2'	38:8:129:C:N4	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:l8:134:TYR:N	45:l8:134:TYR:CD2	2.85	0.42
46:l9:86:TYR:CG	46:l9:151:VAL:HG13	2.55	0.42
51:m5:153:ASP:CG	51:m5:154:PRO:HD2	2.44	0.42
51:m5:172:ARG:CZ	51:m5:174:ILE:HD11	2.50	0.42
53:m7:3:ARG:HA	53:m7:3:ARG:HD2	1.82	0.42
54:m8:85:GLY:O	54:m8:104:LEU:HB2	2.19	0.42
55:m9:148:ASP:OD1	55:m9:151:ARG:NH2	2.52	0.42
56:n0:99:ARG:NH1	56:n0:126:VAL:O	2.52	0.42
61:n5:67:ILE:CD1	61:n5:121:LYS:HG3	2.49	0.42
62:n6:52:ARG:O	62:n6:53:ASP:HB2	2.18	0.42
66:o0:41:LEU:HD23	66:o0:66:LYS:O	2.19	0.42
83:f:92:LEU:HD23	83:f:102:LEU:HD13	2.01	0.42
1:2:150:U:P	26:D4:123:LYS:HZ3	2.41	0.42
1:2:409:C:H2'	1:2:410:A:C8	2.55	0.42
1:2:887:A:H5"	16:C4:120:PRO:HB2	2.00	0.42
1:2:938:G:N2	1:2:940:A:H3'	2.35	0.42
1:2:1183:A:C6	1:2:1184:A:N1	2.87	0.42
1:2:1460:A:H1'	35:SM:71:ASN:O	2.18	0.42
5:S3:106:LYS:HG3	5:S3:175:VAL:HB	2.01	0.42
11:S9:68:LYS:NZ	11:S9:72:GLU:OE1	2.45	0.42
18:C6:123:ARG:HG3	18:C6:124:PRO:HD2	2.00	0.42
19:C7:23:LYS:HG3	34:SR:198:ASN:HD21	1.84	0.42
24:D2:6:VAL:HG12	24:D2:34:ILE:HD11	2.00	0.42
36:1:597:G:C2	36:1:608:A:H1'	2.53	0.42
36:1:830:A:H2'	36:1:831:G:O4'	2.20	0.42
36:1:863:C:H2'	36:1:864:G:O4'	2.19	0.42
36:1:1062:A:N3	57:N1:130:ARG:NH2	2.66	0.42
36:1:1108:U:H2'	36:1:1109:U:H6	1.85	0.42
36:1:1128:U:O4'	47:M0:4:ARG:NH2	2.53	0.42
36:1:1157:G:O2'	36:1:1169:A:N3	2.48	0.42
36:1:1894:U:O2'	36:1:3054:U:OP1	2.36	0.42
36:1:2688:U:N3	42:L5:17:GLN:O	2.25	0.42
36:1:3216:G:O6	36:1:3259:U:H2'	2.20	0.42
42:L5:107:ARG:HH12	42:L5:120:LYS:HA	1.85	0.42
42:L5:130:GLU:O	42:L5:131:LEU:HD22	2.19	0.42
42:L5:160:PHE:CD2	42:L5:179:ARG:HB3	2.54	0.42
43:L6:154:LEU:HD23	43:L6:157:GLN:HB2	2.00	0.42
45:L8:43:LYS:HA	45:L8:43:LYS:HD3	1.78	0.42
46:L9:57:VAL:HG23	46:L9:68:LEU:HG	2.02	0.42
46:L9:69:ARG:HD2	46:L9:69:ARG:HA	1.60	0.42
47:M0:210:ILE:HG23	47:M0:217:PHE:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M1:96:PHE:CD1	48:M1:102:PHE:HB3	2.54	0.42
49:M3:3:ILE:CD1	64:N8:34:MET:HE2	2.49	0.42
52:M6:39:GLU:OE1	52:M6:39:GLU:N	2.35	0.42
63:N7:126:LYS:C	63:N7:128:GLN:H	2.26	0.42
68:O2:2:ALA:HB1	68:O2:90:LYS:HE3	2.01	0.42
72:O6:26:ILE:H	72:O6:26:ILE:HG13	1.49	0.42
79:Q3:49:ARG:HB2	79:Q3:55:TRP:CZ3	2.54	0.42
1:6:74:U:C2	1:6:76:A:H5"	2.55	0.42
1:6:151:G:N2	1:6:163:G:N2	2.67	0.42
1:6:155:U:H4'	8:s6:59:GLN:HA	2.02	0.42
1:6:797:G:O2'	13:c1:69:LYS:NZ	2.49	0.42
1:6:953:G:P	15:c3:94:LYS:HE2	2.59	0.42
1:6:958:U:H5'	29:d7:49:HIS:CD2	2.54	0.42
1:6:1196:A:O2'	1:6:1602:C:O3'	2.37	0.42
2:s0:126:PRO:HG3	2:s0:151:SER:HB3	2.02	0.42
5:s3:211:PRO:O	5:s3:212:LYS:HD3	2.18	0.42
7:s5:102:ARG:H	7:s5:102:ARG:HG3	1.63	0.42
7:s5:183:ALA:HB3	7:s5:190:ILE:HD13	2.01	0.42
9:s7:116:ARG:HA	9:s7:116:ARG:HD3	1.95	0.42
11:s9:123:HIS:CD2	32:e0:33:ARG:HD2	2.54	0.42
21:c9:33:TYR:HB2	21:c9:37:VAL:HG23	2.02	0.42
28:d6:11:ASN:O	28:d6:33:ASP:HB2	2.20	0.42
30:d8:26:THR:O	30:d8:44:VAL:HG22	2.20	0.42
33:e1:109:ASP:HB2	33:e1:113:LYS:HD2	2.01	0.42
36:5:676:G:N2	36:5:786:A:C4	2.87	0.42
36:5:1157:G:H2'	36:5:1158:A:O4'	2.19	0.42
36:5:1644:C:H5'	36:5:1645:U:O5'	2.20	0.42
36:5:2631:U:H4'	36:5:2697:A:H2	1.84	0.42
36:5:2749:G:P	42:l5:48:LYS:HZ3	2.42	0.42
36:5:3114:A:O2'	46:l9:62:ARG:NH1	2.51	0.42
36:5:3139:A:OP2	40:l3:30:LYS:NZ	2.52	0.42
36:5:3192:U:H2'	36:5:3193:C:C6	2.54	0.42
36:5:3269:U:H5'	36:5:3271:G:O4'	2.20	0.42
37:7:47:C:OP2	42:l5:158:ARG:HD2	2.19	0.42
37:7:62:U:H4'	42:l5:285:ARG:HH12	1.84	0.42
38:8:91:C:H2'	38:8:92:A:C8	2.54	0.42
40:l3:148:LEU:HD12	40:l3:148:LEU:HA	1.90	0.42
40:l3:255:TRP:CD1	40:l3:256:HIS:CE1	3.07	0.42
41:l4:10:SER:OG	41:l4:14:GLU:O	2.36	0.42
50:m4:47:ASP:OD1	50:m4:78:THR:HA	2.19	0.42
59:n3:15:LEU:HD23	59:n3:53:SER:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:n7:16:GLY:O	70:o4:74:ARG:HG3	2.19	0.42
74:o8:65:LEU:HD23	74:o8:65:LEU:O	2.20	0.42
75:o9:48:LYS:HA	75:o9:48:LYS:HD3	1.70	0.42
81:p0:86:PHE:HB3	81:p0:88:PHE:CE1	2.54	0.42
83:f:105:MET:N	83:f:105:MET:SD	2.93	0.42
1:2:137:U:OP1	1:2:1706:C:H5'	2.20	0.42
1:2:1064:G:H2'	1:2:1065:A:C8	2.54	0.42
1:2:1111:G:C6	1:2:1112:G:C4	3.07	0.42
1:2:1553:G:N1	1:2:1556:A:OP2	2.45	0.42
1:2:1559:A:N6	20:C8:134:ARG:HD2	2.34	0.42
1:2:1699:G:H2'	1:2:1700:C:H5"	2.02	0.42
3:S1:45:LYS:HB2	16:C4:13:VAL:HG23	2.01	0.42
6:S4:123:LEU:HA	6:S4:160:VAL:O	2.20	0.42
6:S4:159:THR:HG23	6:S4:173:ILE:HB	2.01	0.42
7:S5:143:ARG:NH1	7:S5:218:GLU:OE1	2.53	0.42
10:S8:155:SER:O	10:S8:159:GLN:HB2	2.19	0.42
14:C2:73:LYS:HE3	33:E1:108:VAL:HG13	2.02	0.42
36:1:225:C:H4'	62:N6:32:SER:O	2.20	0.42
36:1:241:G:C6	36:1:242:C:N4	2.88	0.42
36:1:373:A:N1	36:1:394:G:H4'	2.35	0.42
36:1:435:C:H2'	36:1:436:A:C8	2.55	0.42
36:1:1103:A:N9	44:L7:158:LYS:HD3	2.35	0.42
36:1:1115:G:OP1	64:N8:22:ILE:HG21	2.18	0.42
36:1:1458:U:H5'	67:O1:30:PRO:HB3	2.01	0.42
36:1:1930:A:H5'	36:1:1932:A:O2'	2.19	0.42
36:1:2093:A:H2'	36:1:2094:C:O4'	2.19	0.42
36:1:2395:G:H4'	40:L3:258:ALA:HB1	2.00	0.42
36:1:3168:A:H3'	36:1:3169:U:C6	2.55	0.42
36:1:3253:G:H8	36:1:3253:G:O5'	2.03	0.42
37:3:115:G:H2'	37:3:116:C:H6	1.84	0.42
39:L2:120:PRO:HB3	39:L2:162:ALA:HA	2.01	0.42
39:L2:177:LYS:NZ	79:Q3:26:VAL:HG13	2.34	0.42
45:L8:134:TYR:CG	45:L8:190:VAL:HG21	2.54	0.42
49:M3:18:TRP:C	49:M3:20:GLU:H	2.28	0.42
52:M6:18:ARG:NH1	52:M6:128:ARG:HD2	2.34	0.42
64:N8:47:LYS:C	64:N8:49:HIS:H	2.25	0.42
69:O3:42:GLN:OE1	69:O3:45:LEU:HD12	2.18	0.42
77:Q1:12:ARG:HG2	77:Q1:15:ARG:NH2	2.34	0.42
1:6:489:C:O2'	1:6:490:C:O5'	2.37	0.42
1:6:643:G:H1	1:6:691:C:H42	1.66	0.42
1:6:689:G:H2'	1:6:690:G:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:877:G:H5'	1:6:937:C:H1'	2.00	0.42
1:6:1037:C:H2'	1:6:1038:U:H6	1.85	0.42
1:6:1063:U:H2'	1:6:1064:G:H8	1.85	0.42
1:6:1083:G:H1	1:6:1090:C:H42	1.67	0.42
1:6:1115:U:H5"	77:q1:14:LYS:HD2	2.00	0.42
2:s0:56:LYS:HZ2	2:s0:158:VAL:HG23	1.85	0.42
2:s0:74:VAL:HG12	2:s0:76:ILE:HG12	2.01	0.42
2:s0:131:GLN:O	2:s0:135:GLU:HB2	2.20	0.42
7:s5:85:ALA:C	7:s5:87:CYS:H	2.28	0.42
11:s9:171:ARG:HH11	11:s9:174:ARG:HD3	1.84	0.42
14:c2:45:LEU:HB3	14:c2:46:ARG:H	1.66	0.42
16:c4:91:THR:O	16:c4:93:THR:N	2.49	0.42
22:d0:43:LYS:O	22:d0:47:GLN:HB2	2.20	0.42
22:d0:82:TYR:HB3	31:d9:52:PHE:HB3	2.02	0.42
25:d3:43:PHE:CE1	25:d3:49:ALA:HB3	2.55	0.42
25:d3:50:LYS:HB3	25:d3:103:LEU:HD23	2.01	0.42
25:d3:93:LEU:C	25:d3:95:PHE:H	2.27	0.42
32:e0:50:VAL:HA	32:e0:54:ARG:HA	2.00	0.42
36:5:247:C:C4	36:5:248:U:H1'	2.54	0.42
36:5:441:U:O2'	36:5:492:U:O2	2.30	0.42
36:5:1064:A:H5"	36:5:1066:G:O4'	2.19	0.42
36:5:2198:A:C8	36:5:2270:A:H1'	2.55	0.42
36:5:2607:G:C4	36:5:2608:G:C8	3.08	0.42
36:5:3231:U:H2'	36:5:3232:G:C8	2.54	0.42
36:5:3281:U:H5'	36:5:3282:U:OP2	2.19	0.42
36:5:3304:U:O2'	40:l3:334:ARG:NH2	2.43	0.42
37:7:62:U:O3'	42:l5:285:ARG:NH1	2.52	0.42
40:l3:37:ARG:CG	40:l3:187:SER:H	2.29	0.42
40:l3:306:THR:HA	40:l3:307:PRO:HD3	1.88	0.42
41:l4:22:LEU:CD1	41:l4:26:PHE:HB2	2.50	0.42
41:l4:222:VAL:HA	41:l4:223:PRO:HD3	1.75	0.42
44:l7:224:ILE:HG23	56:n0:36:ILE:HG12	2.01	0.42
46:l9:122:LYS:HG2	46:l9:123:ILE:N	2.34	0.42
47:m0:34:TYR:O	47:m0:88:ARG:HA	2.20	0.42
52:m6:25:LYS:O	52:m6:25:LYS:HD3	2.19	0.42
52:m6:105:PHE:HE2	52:m6:112:TYR:CE2	2.38	0.42
54:m8:26:LEU:HD23	54:m8:29:LEU:HD12	2.01	0.42
57:n1:12:ARG:HD3	57:n1:13:TYR:CZ	2.54	0.42
60:n4:45:ASN:HA	60:n4:46:PRO:HD3	1.92	0.42
73:o7:76:ASN:O	73:o7:79:GLN:HG3	2.20	0.42
77:q1:23:ARG:C	77:q1:25:LYS:H	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:q3:6:LYS:HZ2	79:q3:7:LYS:HG3	1.84	0.42
1:2:95:G:O2'	1:2:460:A:O2'	2.35	0.42
1:2:588:U:H2'	1:2:589:C:O4'	2.20	0.42
1:2:1054:U:C4	1:2:1055:U:C4	3.06	0.42
1:2:1183:A:N6	1:2:1184:A:N1	2.67	0.42
1:2:1183:A:N1	17:C5:99:GLY:HA3	2.35	0.42
1:2:1202:A:H3'	1:2:1202:A:N3	2.35	0.42
1:2:1250:U:HO2'	1:2:1251:U:P	2.43	0.42
1:2:1773:C:OP1	77:Q1:3:ALA:HB3	2.20	0.42
2:S0:121:VAL:HG23	2:S0:141:ILE:HG21	2.01	0.42
5:S3:7:LYS:HA	5:S3:10:LYS:HB3	2.01	0.42
5:S3:158:ILE:HD12	5:S3:189:MET:HE1	2.01	0.42
22:D0:83:GLU:OE2	31:D9:55:PHE:HB2	2.18	0.42
23:D1:3:ASN:HB2	23:D1:4:ASP:H	1.62	0.42
33:E1:143:LYS:O	33:E1:145:HIS:N	2.52	0.42
34:SR:36:ALA:HB1	34:SR:68:VAL:HG12	2.01	0.42
34:SR:132:LYS:HB2	34:SR:134:TRP:HE1	1.83	0.42
36:1:116:A:H62	36:1:153:U:H1'	1.84	0.42
36:1:145:G:OP2	45:L8:193:LYS:NZ	2.50	0.42
36:1:523:A:O2'	56:N0:69:PRO:HD2	2.20	0.42
36:1:528:U:H2'	36:1:529:A:H8	1.79	0.42
36:1:674:G:C5	36:1:675:C:C4	3.08	0.42
36:1:856:G:C6	36:1:857:G:N1	2.87	0.42
36:1:1028:U:O2'	48:M1:94:ARG:NH2	2.52	0.42
36:1:1404:G:N2	36:1:1407:A:OP2	2.49	0.42
36:1:1833:G:OP1	75:O9:10:LYS:NZ	2.42	0.42
36:1:3121:U:C2	36:1:3122:A:N7	2.87	0.42
36:1:3340:G:H5"	36:1:3341:U:OP1	2.19	0.42
37:3:28:C:H1'	37:3:55:A:H61	1.83	0.42
39:L2:180:LEU:HA	39:L2:180:LEU:HD23	1.71	0.42
40:L3:54:THR:OG1	40:L3:55:THR:N	2.51	0.42
40:L3:151:ILE:O	40:L3:155:ALA:HB3	2.20	0.42
42:L5:259:LYS:HE2	42:L5:259:LYS:HB3	1.89	0.42
44:L7:229:PHE:CD1	44:L7:229:PHE:C	2.97	0.42
45:L8:52:TRP:CD1	45:L8:60:ARG:HH12	2.38	0.42
46:L9:134:ILE:HG12	46:L9:146:LEU:HG	2.01	0.42
52:M6:106:GLU:H	52:M6:106:GLU:HG2	1.61	0.42
54:M8:34:THR:HG23	54:M8:49:LEU:HD21	2.02	0.42
59:N3:66:LYS:HB2	59:N3:69:LEU:HD22	2.02	0.42
1:6:448:C:P	6:s4:49:ARG:HH12	2.43	0.42
1:6:780:A:H5"	1:6:781:U:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:952:A:OP1	15:c3:94:LYS:NZ	2.53	0.42
1:6:1251:U:H5"	33:e1:134:ASN:O	2.20	0.42
1:6:1344:A:O2'	1:6:1345:A:OP1	2.29	0.42
1:6:1361:U:H5'	1:6:1362:U:OP2	2.19	0.42
1:6:1394:G:O2'	1:6:1395:G:H5'	2.20	0.42
1:6:1535:U:H5	7:s5:185:ARG:HA	1.84	0.42
1:6:1685:G:H8	1:6:1685:G:O5'	2.02	0.42
1:6:1757:G:H2'	1:6:1758:U:C6	2.55	0.42
2:s0:148:ASP:CG	2:s0:149:LEU:H	2.26	0.42
15:c3:73:ARG:O	15:c3:77:SER:OG	2.29	0.42
18:c6:7:VAL:N	18:c6:22:VAL:O	2.52	0.42
19:c7:90:ALA:HB3	19:c7:95:ARG:N	2.34	0.42
21:c9:84:LYS:HD2	21:c9:94:ILE:HG13	2.01	0.42
23:d1:36:VAL:HB	23:d1:51:VAL:HB	2.00	0.42
24:d2:18:GLU:HG2	24:d2:65:LEU:HG	2.02	0.42
34:sR:40:LYS:HD2	34:sR:65:SER:C	2.44	0.42
34:sR:295:SER:HB3	34:sR:302:PHE:CE2	2.50	0.42
36:5:32:U:H6	36:5:32:U:O5'	2.02	0.42
36:5:64:G:C5	36:5:322:U:C4	3.08	0.42
36:5:378:A:N7	36:5:391:A:H2	2.17	0.42
36:5:507:U:H2'	36:5:508:U:C6	2.55	0.42
36:5:734:C:H2'	36:5:735:A:O4'	2.20	0.42
36:5:1440:G:H2'	36:5:1441:G:C8	2.55	0.42
36:5:1712:G:C2	36:5:1713:G:N2	2.88	0.42
36:5:1908:A:H2'	36:5:1909:A:O4'	2.19	0.42
36:5:1927:G:OP1	79:q3:8:VAL:HG22	2.19	0.42
36:5:1946:A:C6	36:5:1947:G:C6	3.07	0.42
36:5:2991:A:OP1	40:l3:21:ARG:HG3	2.19	0.42
36:5:3060:C:H2'	36:5:3061:G:H8	1.85	0.42
36:5:3192:U:H2'	36:5:3193:C:H6	1.85	0.42
39:l2:166:ILE:H	39:l2:166:ILE:HG12	1.65	0.42
40:l3:205:VAL:HG11	40:l3:322:ILE:CD1	2.45	0.42
46:l9:81:GLY:O	46:l9:85:GLY:HA2	2.19	0.42
47:m0:207:GLU:HB3	47:m0:211:ARG:NH2	2.34	0.42
50:m4:118:PHE:O	50:m4:122:VAL:HG23	2.20	0.42
51:m5:114:ARG:HG2	51:m5:137:PRO:HG3	2.00	0.42
52:m6:180:SER:O	52:m6:184:THR:HG23	2.19	0.42
60:n4:126:GLU:O	60:n4:130:SER:N	2.45	0.42
67:o1:88:PRO:C	67:o1:89:LEU:HD12	2.45	0.42
70:o4:58:ARG:O	70:o4:61:GLN:HB2	2.19	0.42
72:o6:98:ARG:HB3	72:o6:99:ARG:H	1.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:q0:104:PRO:HB2	76:q0:107:ALA:HB2	2.01	0.42
77:q1:8:LYS:HD3	77:q1:12:ARG:NH2	2.35	0.42
1:2:831:U:O2	1:2:831:U:H2'	2.18	0.42
1:2:916:U:H3	16:C4:41:ARG:NH2	2.18	0.42
1:2:934:C:C4	1:2:1077:C:H4'	2.55	0.42
1:2:960:U:O2'	15:C3:51:GLY:HA3	2.20	0.42
1:2:1370:U:H4'	1:2:1371:A:O5'	2.17	0.42
1:2:1464:G:O3'	18:C6:141:SER:OG	2.27	0.42
1:2:1488:G:H5'	1:2:1489:U:OP1	2.20	0.42
5:S3:175:VAL:HG13	5:S3:182:LEU:HB2	2.01	0.42
9:S7:37:GLU:CD	9:S7:37:GLU:H	2.27	0.42
9:S7:44:LYS:HE3	9:S7:63:PRO:HA	2.01	0.42
9:S7:62:VAL:HG12	9:S7:64:VAL:H	1.85	0.42
12:C0:47:GLN:O	12:C0:50:THR:HG22	2.19	0.42
20:C8:81:ILE:O	20:C8:83:ALA:N	2.45	0.42
20:C8:108:LYS:N	20:C8:108:LYS:HD2	2.35	0.42
28:D6:35:ALA:O	28:D6:36:ILE:C	2.63	0.42
28:D6:88:SER:OG	28:D6:91:ASP:HB2	2.20	0.42
31:D9:14:TYR:N	31:D9:14:TYR:CD2	2.87	0.42
34:SR:59:ARG:NH2	34:SR:96:THR:O	2.52	0.42
36:1:143:G:C2	36:1:144:A:C8	3.07	0.42
36:1:153:U:O3'	36:1:158:G:H4'	2.20	0.42
36:1:184:U:H2'	36:1:185:C:H6	1.85	0.42
36:1:624:G:P	69:O3:86:ARG:HH22	2.43	0.42
36:1:641:C:OP1	64:N8:21:ARG:HB3	2.20	0.42
36:1:801:A:H4'	36:1:802:C:O5'	2.18	0.42
36:1:1010:G:N2	47:M0:193:ASP:OD2	2.52	0.42
36:1:1080:A:OP1	42:L5:140:ARG:HD3	2.19	0.42
36:1:1230:G:H1	36:1:1279:C:N4	2.13	0.42
36:1:1580:A:H1'	36:1:1581:C:C5	2.54	0.42
36:1:1730:G:C6	66:O0:26:GLY:HA3	2.55	0.42
36:1:2350:C:O3'	53:M7:68:GLY:HA3	2.20	0.42
36:1:2390:A:H2'	36:1:2391:G:O4'	2.20	0.42
36:1:3304:U:P	40:L3:332:ARG:HH22	2.42	0.42
36:1:3353:G:C5	36:1:3356:G:C8	3.07	0.42
38:4:17:A:H2'	38:4:18:U:O4'	2.19	0.42
39:L2:181:LYS:HG3	39:L2:184:ARG:HG3	2.01	0.42
40:L3:161:LEU:HD22	40:L3:178:LEU:HD11	2.02	0.42
42:L5:207:TYR:O	42:L5:211:LEU:N	2.53	0.42
44:L7:88:ARG:HD2	44:L7:90:LYS:O	2.20	0.42
44:L7:136:TYR:CE2	44:L7:231:ASN:HB2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:L8:108:ARG:O	45:L8:112:GLU:HG2	2.20	0.42
49:M3:18:TRP:C	49:M3:20:GLU:N	2.78	0.42
53:M7:60:PHE:HB3	53:M7:64:ASN:HB3	2.00	0.42
55:M9:6:THR:O	55:M9:10:LEU:HB2	2.20	0.42
55:M9:127:SER:HA	55:M9:132:PHE:CD2	2.53	0.42
1:6:72:A:H2'	1:6:73:U:C6	2.54	0.42
1:6:217:A:O2'	1:6:218:A:H8	2.03	0.42
1:6:1207:C:H42	1:6:1456:C:H5	1.66	0.42
1:6:1350:U:H2'	1:6:1351:G:C8	2.53	0.42
1:6:1451:C:H2'	1:6:1452:U:C6	2.54	0.42
1:6:1543:A:H1'	1:6:1569:A:C2	2.55	0.42
2:s0:29:VAL:HG11	2:s0:37:VAL:HG21	2.02	0.42
2:s0:84:ARG:HD2	19:c7:82:ASP:CG	2.44	0.42
2:s0:191:ARG:H	2:s0:191:ARG:HG3	1.62	0.42
3:s1:193:ILE:HG22	3:s1:197:ILE:HD13	2.02	0.42
5:s3:43:PRO:O	5:s3:44:THR:HB	2.20	0.42
5:s3:202:LEU:HA	5:s3:203:PRO:HD3	1.88	0.42
7:s5:205:SER:C	7:s5:207:THR:H	2.28	0.42
8:s6:134:GLY:HA2	60:n4:82:ILE:HD13	2.02	0.42
9:s7:5:GLN:C	9:s7:7:LYS:H	2.28	0.42
11:s9:87:SER:HB3	11:s9:90:LYS:HB2	2.01	0.42
12:c0:23:ALA:CB	12:c0:64:TYR:HB2	2.49	0.42
14:c2:60:VAL:HG22	14:c2:122:VAL:HG22	2.02	0.42
21:c9:135:ILE:H	21:c9:135:ILE:HG13	1.63	0.42
27:d5:58:ARG:HG2	27:d5:103:ARG:HH11	1.84	0.42
33:e1:113:LYS:HD2	33:e1:113:LYS:H	1.84	0.42
36:5:144:A:H2'	36:5:145:G:O4'	2.19	0.42
36:5:422:A:C2	36:5:2363:A:H4'	2.55	0.42
36:5:618:C:H2'	36:5:619:A:C8	2.54	0.42
36:5:660:A:C2	36:5:1435:A:C2	3.07	0.42
36:5:697:A:C2	36:5:698:U:C2	3.07	0.42
36:5:811:U:H2'	36:5:812:G:H8	1.83	0.42
36:5:1307:G:O2'	36:5:1308:A:N7	2.48	0.42
36:5:1567:U:H1'	36:5:1570:U:O4	2.20	0.42
36:5:1650:G:H5"	39:l2:70:ARG:HB3	2.02	0.42
36:5:1688:U:H2'	36:5:1689:U:C6	2.54	0.42
36:5:1728:G:H5"	36:5:1730:G:O4'	2.19	0.42
36:5:2594:C:H2'	36:5:2595:A:O4'	2.18	0.42
36:5:2724:U:OP1	57:n1:57:TYR:OH	2.25	0.42
36:5:2794:G:O2'	36:5:2795:U:OP2	2.33	0.42
36:5:3127:A:H2'	36:5:3128:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:8:5:U:H2'	38:8:6:U:C6	2.55	0.42
38:8:138:A:C2	38:8:139:U:C2	3.07	0.42
40:l3:311:PHE:HE2	40:l3:317:ILE:HG12	1.85	0.42
45:l8:75:ILE:HD11	51:m5:22:LEU:HD21	2.02	0.42
57:n1:7:TYR:OH	57:n1:54:HIS:HB2	2.20	0.42
59:n3:2:SER:CA	59:n3:56:ASP:HA	2.46	0.42
60:n4:42:GLN:HE21	60:n4:42:GLN:HB2	1.62	0.42
62:n6:48:LEU:HG	62:n6:122:LYS:NZ	2.35	0.42
66:o0:61:MET:C	66:o0:63:SER:H	2.28	0.42
67:o1:11:GLU:OE2	67:o1:74:ARG:NH2	2.53	0.42
81:p0:189:GLN:NE2	81:p0:197:PHE:O	2.53	0.42
1:2:77:U:H4'	1:2:78:A:O5'	2.19	0.42
1:2:158:U:HO2'	1:2:159:U:H3'	1.84	0.42
1:2:373:G:N2	1:2:604:A:OP1	2.49	0.42
1:2:397:A:H5"	10:S8:51:GLY:H	1.85	0.42
1:2:848:C:H2'	1:2:849:C:H6	1.85	0.42
1:2:947:U:OP1	3:S1:165:ARG:NE	2.44	0.42
1:2:1229:G:O6	14:C2:47:GLU:HG3	2.20	0.42
1:2:1280:C:H1'	1:2:1429:G:N2	2.35	0.42
2:S0:56:LYS:HD2	2:S0:158:VAL:HG23	2.01	0.42
2:S0:63:ILE:HG23	23:D1:35:ASN:O	2.19	0.42
4:S2:122:ALA:O	4:S2:126:ARG:HG3	2.20	0.42
5:S3:132:LYS:HG3	5:S3:156:PHE:HB3	2.02	0.42
6:S4:49:ARG:HD2	6:S4:56:LEU:O	2.19	0.42
6:S4:176:ASP:HB2	6:S4:179:LYS:HE2	2.02	0.42
7:S5:158:GLN:HG2	30:D8:66:LEU:HD11	2.02	0.42
9:S7:63:PRO:O	9:S7:64:VAL:HB	2.20	0.42
12:C0:38:LYS:HD3	12:C0:41:TYR:OH	2.19	0.42
13:C1:22:ASN:ND2	13:C1:25:VAL:HG23	2.34	0.42
16:C4:24:ASN:N	16:C4:55:SER:HB3	2.35	0.42
18:C6:8:GLN:HA	18:C6:21:HIS:HA	2.02	0.42
20:C8:127:HIS:CD2	20:C8:133:VAL:HG21	2.54	0.42
23:D1:12:TYR:O	23:D1:14:PRO:HD3	2.19	0.42
34:SR:81:LEU:HD22	34:SR:113:VAL:HG21	2.00	0.42
36:1:170:G:H1	36:1:248:U:H3	1.67	0.42
36:1:1316:C:C4	52:M6:130:LYS:HA	2.55	0.42
36:1:1653:G:H2'	36:1:1654:A:C8	2.54	0.42
36:1:2374:C:N4	36:1:2941:A:N3	2.67	0.42
36:1:2696:A:H2'	36:1:2697:A:C8	2.55	0.42
36:1:3001:C:H2'	36:1:3002:C:H6	1.85	0.42
36:1:3380:U:H2'	36:1:3381:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:3:64:A:N6	47:M0:200:LEU:HD11	2.34	0.42
38:4:155:A:H5'	45:L8:185:ARG:NH2	2.35	0.42
40:L3:215:ILE:HG12	40:L3:280:HIS:O	2.19	0.42
41:L4:33:ASP:O	41:L4:37:THR:HG23	2.19	0.42
44:L7:130:ILE:O	44:L7:134:VAL:HG22	2.20	0.42
45:L8:24:ASN:N	45:L8:25:PRO:HD2	2.34	0.42
47:M0:98:ARG:HB3	47:M0:120:GLY:HA3	2.02	0.42
50:M4:43:LYS:HB2	50:M4:43:LYS:NZ	2.34	0.42
56:N0:115:ARG:N	56:N0:115:ARG:HD2	2.35	0.42
62:N6:39:LEU:HD23	62:N6:39:LEU:HA	1.76	0.42
62:N6:80:VAL:HG12	62:N6:101:PRO:HD3	2.01	0.42
64:N8:24:LYS:HD2	64:N8:26:ARG:NE	2.33	0.42
67:O1:55:LEU:HB2	67:O1:95:PRO:HD3	2.02	0.42
72:O6:52:PRO:HA	72:O6:55:ARG:NH1	2.35	0.42
72:O6:66:GLU:O	72:O6:70:ARG:HG3	2.20	0.42
79:Q3:2:ALA:O	79:Q3:3:LYS:C	2.62	0.42
1:6:97:C:H2'	1:6:98:U:H6	1.85	0.42
1:6:775:G:N2	1:6:786:C:N3	2.68	0.42
1:6:813:U:OP2	15:c3:76:LYS:NZ	2.49	0.42
1:6:839:U:H2'	1:6:840:U:H6	1.84	0.42
1:6:947:U:H2'	1:6:948:G:H8	1.84	0.42
1:6:1227:A:H4'	1:6:1228:G:H5'	2.01	0.42
1:6:1297:G:N2	1:6:1300:A:OP2	2.48	0.42
1:6:1299:G:H2'	1:6:1300:A:C8	2.54	0.42
1:6:1325:A:H2'	1:6:1326:A:C8	2.54	0.42
3:s1:57:ALA:C	3:s1:59:ASP:H	2.28	0.42
5:s3:37:VAL:HG12	5:s3:50:ILE:HA	2.02	0.42
5:s3:42:THR:OG1	5:s3:44:THR:O	2.38	0.42
6:s4:122:LYS:HB2	6:s4:122:LYS:HE3	1.84	0.42
7:s5:109:LYS:O	7:s5:113:ILE:HG13	2.20	0.42
11:s9:42:ILE:O	11:s9:46:SER:OG	2.30	0.42
11:s9:66:ASP:OD2	11:s9:68:LYS:N	2.48	0.42
15:c3:56:ASP:OD2	29:d7:52:THR:OG1	2.38	0.42
20:c8:49:LYS:NZ	20:c8:80:LYS:HB2	2.35	0.42
23:d1:71:ARG:HB2	23:d1:83:TRP:NE1	2.35	0.42
34:sR:38:ARG:HG2	34:sR:67:ILE:HG23	2.01	0.42
36:5:254:A:H2'	36:5:255:A:C8	2.55	0.42
36:5:426:G:H5'	68:o2:50:ILE:HG22	2.00	0.42
36:5:787:G:H2'	36:5:788:C:C6	2.55	0.42
36:5:1369:A:C5'	64:n8:21:ARG:HD2	2.50	0.42
36:5:1461:A:H2'	36:5:1462:A:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1562:C:H2'	36:5:1563:C:H6	1.85	0.42
36:5:2255:A:HO2'	36:5:2256:A:P	2.43	0.42
36:5:2255:A:O2'	36:5:2256:A:OP2	2.35	0.42
36:5:2409:G:H4'	36:5:2410:U:OP2	2.20	0.42
39:l2:44:ILE:O	39:l2:61:VAL:HG23	2.20	0.42
39:l2:206:PRO:HG3	39:l2:213:GLY:CA	2.48	0.42
40:l3:232:ARG:HD2	40:l3:269:GLN:O	2.19	0.42
47:m0:175:ASN:CG	47:m0:176:LEU:H	2.27	0.42
49:m3:64:LYS:HD2	64:n8:66:ALA:HB1	2.01	0.42
55:m9:175:GLN:HG3	55:m9:176:ARG:HD3	2.01	0.42
56:n0:155:ARG:NH2	56:n0:172:TYR:H	2.18	0.42
60:n4:21:PHE:HB3	60:n4:29:PHE:HB2	2.01	0.42
62:n6:54:ASP:HB2	62:n6:70:ILE:HD13	2.02	0.42
63:n7:86:THR:O	63:n7:127:ASN:ND2	2.47	0.42
64:n8:120:ASN:OD1	64:n8:141:ALA:HA	2.19	0.42
74:o8:64:LYS:HG3	74:o8:65:LEU:N	2.34	0.42
83:f:152:GLU:CD	83:f:152:GLU:H	2.28	0.42
1:2:434:G:N2	1:2:436:A:H3'	2.35	0.42
1:2:539:G:OP2	1:2:539:G:H8	2.03	0.42
1:2:1120:U:H2'	1:2:1121:C:C6	2.55	0.42
1:2:1186:U:OP2	1:2:1456:C:H1'	2.19	0.42
1:2:1253:U:H4'	33:E1:143:LYS:N	2.35	0.42
1:2:1435:G:O6	12:C0:64:TYR:OH	2.31	0.42
1:2:1654:G:C6	1:2:1745:G:C6	3.08	0.42
2:S0:41:ARG:NH1	2:S0:45:VAL:HG23	2.35	0.42
2:S0:54:TRP:O	2:S0:58:VAL:HG23	2.20	0.42
2:S0:142:PRO:HB3	23:D1:34:ILE:CD1	2.50	0.42
3:S1:83:LYS:HB2	3:S1:83:LYS:HE3	1.77	0.42
5:S3:173:ARG:HD3	5:S3:173:ARG:HA	1.92	0.42
7:S5:112:ARG:HD2	18:C6:43:ILE:HD11	2.02	0.42
11:S9:128:LEU:O	11:S9:133:HIS:HB2	2.20	0.42
13:C1:74:THR:HG23	13:C1:122:ILE:HG13	2.02	0.42
20:C8:82:PRO:HD2	20:C8:85:PHE:HB2	2.02	0.42
21:C9:16:ASN:O	21:C9:19:ALA:HB3	2.20	0.42
26:D4:7:ILE:HD11	26:D4:43:LYS:HD2	2.01	0.42
36:1:256:G:H2'	36:1:257:U:C6	2.55	0.42
36:1:511:G:H2'	36:1:512:U:O4'	2.19	0.42
36:1:1132:C:H4'	36:1:2865:U:O2'	2.19	0.42
36:1:1176:C:OP1	52:M6:25:LYS:HE3	2.19	0.42
36:1:1422:G:H21	43:L6:5:LYS:HZ3	1.67	0.42
36:1:1599:G:C6	36:1:1600:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1722:U:H1'	55:M9:96:ILE:HG12	2.02	0.42
36:1:3267:A:H2'	43:L6:69:PHE:CE1	2.55	0.42
36:1:3289:G:C2	36:1:3290:G:C8	3.08	0.42
36:1:3333:G:N2	36:1:3369:G:O2'	2.53	0.42
37:3:7:G:H5"	42:L5:22:ARG:HD3	2.02	0.42
38:4:121:U:C2	38:4:122:U:C5	3.08	0.42
39:L2:32:LEU:HD23	39:L2:163:ARG:HD3	2.01	0.42
39:L2:188:LYS:O	39:L2:192:LYS:HD2	2.19	0.42
39:L2:204:MET:HE2	39:L2:209:HIS:CD2	2.55	0.42
42:L5:258:LYS:HD2	42:L5:265:TYR:HE2	1.85	0.42
43:L6:90:LYS:HB3	43:L6:90:LYS:HE2	1.77	0.42
46:L9:1:MET:HE2	46:L9:3:TYR:CD1	2.54	0.42
46:L9:174:LYS:HB2	76:Q0:127:LEU:HD11	2.02	0.42
47:M0:77:THR:OG1	47:M0:78:THR:N	2.51	0.42
47:M0:119:TRP:CG	47:M0:120:GLY:H	2.38	0.42
49:M3:105:ASN:C	49:M3:107:GLU:H	2.28	0.42
52:M6:129:LEU:HD12	52:M6:129:LEU:HA	1.78	0.42
54:M8:170:ARG:O	54:M8:171:LYS:HG2	2.20	0.42
55:M9:9:ARG:NH2	55:M9:10:LEU:HD13	2.35	0.42
55:M9:109:TYR:HB3	55:M9:115:ILE:HG22	2.01	0.42
63:N7:4:PHE:CE2	66:O0:35:ARG:HA	2.55	0.42
63:N7:51:LEU:HD12	63:N7:65:ARG:HD2	2.01	0.42
64:N8:7:LYS:HA	64:N8:7:LYS:HD3	1.89	0.42
68:O2:79:VAL:HG13	68:O2:111:ARG:HG2	2.01	0.42
71:O5:85:THR:HB	71:O5:88:LEU:HB2	2.00	0.42
74:O8:70:PRO:HA	74:O8:71:PRO:HD3	1.82	0.42
1:6:169:A:C5'	8:s6:176:GLN:HG2	2.50	0.42
1:6:526:A:N6	1:6:527:A:C6	2.88	0.42
1:6:583:C:H2'	1:6:584:C:H6	1.84	0.42
1:6:773:C:OP1	6:s4:21:ASP:HB2	2.19	0.42
1:6:836:U:H2'	1:6:837:G:C8	2.55	0.42
1:6:1153:G:H2'	1:6:1154:G:O4'	2.19	0.42
1:6:1358:G:H1	1:6:1365:C:H42	1.68	0.42
1:6:1756[A]:A:OP2	1:6:1756[A]:A:H8	2.03	0.42
5:s3:210:GLU:HA	5:s3:211:PRO:HD3	1.84	0.42
6:s4:166:SER:O	6:s4:168:LYS:HG2	2.20	0.42
7:s5:200:ASN:HB3	7:s5:208:SER:HB2	2.01	0.42
9:s7:173:TYR:CD1	9:s7:181:ILE:HD11	2.55	0.42
11:s9:54:ARG:HA	11:s9:57:ARG:HE	1.84	0.42
11:s9:156:ILE:H	11:s9:156:ILE:HG13	1.65	0.42
15:c3:42:ARG:O	15:c3:44:GLY:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:c3:74:ILE:H	15:c3:74:ILE:HG13	1.58	0.42
16:c4:20:TYR:HA	16:c4:84:ARG:HG2	2.01	0.42
17:c5:69:GLU:H	17:c5:69:GLU:CD	2.28	0.42
17:c5:127:ARG:O	17:c5:129:GLY:N	2.53	0.42
20:c8:29:VAL:HB	20:c8:30:TYR:CD1	2.55	0.42
28:d6:53:LEU:HD13	28:d6:53:LEU:HA	1.89	0.42
34:sR:61:PHE:HB3	34:sR:92:TRP:CZ3	2.55	0.42
34:sR:248:ASN:ND2	34:sR:298:GLY:HA3	2.35	0.42
36:5:119:U:H4'	36:5:120:G:H3'	2.01	0.42
36:5:149:U:H5'	51:m5:55:ALA:HB3	2.00	0.42
36:5:767:U:O2'	36:5:768:C:H5"	2.20	0.42
36:5:1113:G:O2'	36:5:1369:A:N3	2.47	0.42
36:5:1252:A:H2'	36:5:1253:U:H5'	2.02	0.42
36:5:1303:A:O4'	36:5:2885:C:O2'	2.38	0.42
36:5:1846:C:C2	53:m7:136:ILE:HD11	2.55	0.42
36:5:1940:G:N2	36:5:3362:A:H8	2.13	0.42
36:5:2163:C:O2'	39:l2:11:GLY:HA3	2.19	0.42
36:5:2309:A:H8	36:5:2309:A:OP1	2.03	0.42
36:5:2658:G:C6	36:5:2659:G:N7	2.88	0.42
36:5:2765:C:H2'	36:5:2766:U:C6	2.54	0.42
36:5:2946:A:H5"	36:5:2947:G:H5'	2.02	0.42
36:5:3018:C:C4	36:5:3019:U:C4	3.07	0.42
37:7:94:C:H2'	37:7:95:A:C8	2.55	0.42
38:8:79:A:H2'	38:8:80:A:O4'	2.19	0.42
39:l2:195:SER:O	39:l2:198:LYS:NZ	2.51	0.42
41:l4:30:ILE:N	54:m8:25:TYR:OH	2.44	0.42
41:l4:55:LYS:HG2	41:l4:59:GLN:NE2	2.35	0.42
45:l8:68:ARG:H	45:l8:68:ARG:HG2	1.68	0.42
47:m0:30:LYS:HA	47:m0:30:LYS:HD3	1.75	0.42
49:m3:179:PHE:HB2	49:m3:183:ARG:NH1	2.34	0.42
50:m4:94:TRP:O	50:m4:97:SER:OG	2.35	0.42
50:m4:122:VAL:O	50:m4:126:GLN:HG3	2.20	0.42
51:m5:73:ARG:C	51:m5:75:VAL:H	2.24	0.42
55:m9:88:ARG:HB3	55:m9:88:ARG:HH11	1.85	0.42
58:n2:80:THR:HG21	58:n2:95:PHE:HD2	1.85	0.42
59:n3:34:LEU:HD23	59:n3:34:LEU:HA	1.89	0.42
61:n5:67:ILE:HD12	61:n5:121:LYS:HG3	2.01	0.42
62:n6:118:LEU:HD13	62:n6:121:ARG:HH11	1.84	0.42
64:n8:47:LYS:C	64:n8:49:HIS:N	2.72	0.42
65:n9:59:LYS:HE3	65:n9:59:LYS:HB2	1.88	0.42
67:o1:74:ARG:NH1	67:o1:109:VAL:HG11	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:o6:43:LEU:O	72:o6:43:LEU:HD22	2.20	0.42
79:q3:79:VAL:O	79:q3:83:ILE:HG12	2.20	0.42
1:2:40:A:H2'	1:2:41:A:O4'	2.20	0.42
1:2:542:A:N7	1:2:543:C:H2'	2.35	0.42
1:2:1147:A:O2'	1:2:1635:A:H2'	2.20	0.42
1:2:1325:A:C2	1:2:1326:A:C5	3.08	0.42
1:2:1524:A:H2	1:2:1590:G:H1'	1.85	0.42
2:S0:85:ALA:HA	2:S0:202:TYR:HD1	1.84	0.42
3:S1:81:PHE:HB3	3:S1:106:THR:OG1	2.20	0.42
4:S2:77:GLN:HE21	4:S2:77:GLN:N	2.15	0.42
4:S2:89:GLN:HG3	4:S2:94:GLN:HG2	2.01	0.42
7:S5:42:LEU:HA	7:S5:48:PHE:HD2	1.85	0.42
8:S6:13:GLN:HE21	8:S6:13:GLN:HB3	1.55	0.42
9:S7:150:GLN:HB3	9:S7:181:ILE:HD12	2.02	0.42
13:C1:57:LYS:O	13:C1:138:ASN:ND2	2.50	0.42
17:C5:24:LYS:H	17:C5:24:LYS:HD2	1.85	0.42
19:C7:60:ARG:HG3	19:C7:66:VAL:HG21	2.02	0.42
34:SR:248:ASN:ND2	34:SR:249:ARG:HG3	2.35	0.42
34:SR:255:ALA:HB2	34:SR:292:LEU:HD22	2.02	0.42
36:1:104:G:H2'	36:1:105:C:O4'	2.20	0.42
36:1:394:G:N2	36:1:396:A:H3'	2.35	0.42
36:1:412:G:H5'	53:M7:26:PHE:HZ	1.84	0.42
36:1:585:A:H5"	69:O3:70:LYS:CE	2.49	0.42
36:1:1274:A:H2'	36:1:1275:C:C6	2.54	0.42
36:1:1394:A:N3	38:4:19:C:O2'	2.42	0.42
36:1:1651:U:C5'	39:L2:71:LEU:HD13	2.50	0.42
36:1:2202:C:H2'	36:1:2203:U:O4'	2.20	0.42
36:1:2561:A:O2'	36:1:2562:A:O5'	2.33	0.42
36:1:2947:G:N3	40:L3:250:ALA:HB1	2.35	0.42
36:1:3138:U:OP2	40:L3:30:LYS:HD3	2.20	0.42
37:3:112:G:H2'	37:3:113:C:H6	1.85	0.42
42:L5:218:ARG:HA	42:L5:221:GLU:OE2	2.20	0.42
44:L7:95:ILE:HA	44:L7:96:PRO:HD3	1.92	0.42
44:L7:163:LEU:HD21	44:L7:201:PHE:CE1	2.55	0.42
44:L7:214:TRP:CE2	44:L7:219:LYS:HE3	2.55	0.42
45:L8:98:ARG:HE	45:L8:189:LEU:HA	1.85	0.42
45:L8:128:LYS:HA	45:L8:129:PRO:HD3	1.82	0.42
46:L9:49:ASN:HD21	46:L9:52:LEU:HB2	1.85	0.42
47:M0:65:LEU:HD23	47:M0:159:PHE:CE1	2.55	0.42
47:M0:86:HIS:HB3	47:M0:139:ARG:HG2	2.02	0.42
50:M4:20:VAL:HA	50:M4:33:ALA:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:N2:56:VAL:HG22	58:N2:65:VAL:HG13	2.02	0.42
59:N3:39:VAL:HG22	59:N3:52:ALA:HB2	2.02	0.42
59:N3:74:MET:SD	59:N3:102:ILE:HD13	2.60	0.42
76:Q0:104:PRO:HA	76:Q0:105:PRO:HD3	1.79	0.42
1:6:116:U:O2	1:6:333:A:H2	2.03	0.42
1:6:329:G:H2'	1:6:330:G:C8	2.55	0.42
1:6:649:U:H2'	1:6:650:U:H5	1.85	0.42
1:6:1195:C:H5"	1:6:1197:C:C6	2.55	0.42
1:6:1516:A:O2'	1:6:1517:U:H5'	2.20	0.42
3:s1:36:SER:HB3	3:s1:41:ARG:NH2	2.35	0.42
4:s2:218:ILE:HG13	4:s2:218:ILE:H	1.56	0.42
9:s7:46:ILE:HG12	9:s7:60:ILE:HA	2.02	0.42
9:s7:102:PRO:HD3	9:s7:112:ARG:HD3	2.02	0.42
11:s9:114:TYR:O	11:s9:116:LEU:N	2.51	0.42
18:c6:86:ALA:HB1	18:c6:109:PHE:CE2	2.55	0.42
21:c9:86:ARG:NH1	21:c9:90:PRO:O	2.53	0.42
21:c9:141:GLU:O	21:c9:143:ASP:N	2.53	0.42
35:sM:50:ASN:HB2	35:sM:51:ARG:H	1.56	0.42
36:5:209:A:H4'	36:5:211:A:H8	1.82	0.42
36:5:676:G:H3'	54:m8:107:THR:HG21	2.02	0.42
36:5:747:A:C6	36:5:748:U:C4	3.08	0.42
36:5:850:U:H2'	36:5:851:C:H6	1.85	0.42
36:5:942:U:H3	64:n8:16:SER:HA	1.84	0.42
36:5:1027:A:H4'	36:5:1028:U:OP2	2.18	0.42
36:5:1087:G:C2	36:5:1088:U:C4	3.08	0.42
36:5:1108:U:H2'	36:5:1109:U:H6	1.83	0.42
36:5:1340:G:C6	36:5:1341:U:C4	3.08	0.42
36:5:2355:G:H4'	53:m7:139:TYR:CD2	2.54	0.42
36:5:2448:G:N2	36:5:2499:U:H3	2.18	0.42
38:8:6:U:H2'	38:8:7:U:C6	2.54	0.42
38:8:40:A:H2'	38:8:41:A:H8	1.85	0.42
39:l2:44:ILE:HG23	39:l2:87:PHE:CE1	2.54	0.42
40:l3:240:ARG:HA	40:l3:246:LEU:HD22	2.02	0.42
42:l5:41:LYS:HA	42:l5:41:LYS:HD3	1.66	0.42
42:l5:115:LEU:HD12	42:l5:119:TYR:CD2	2.55	0.42
48:m1:37:LEU:HA	48:m1:37:LEU:HD23	1.76	0.42
52:m6:121:PRO:HA	52:m6:124:LEU:HD22	2.02	0.42
53:m7:137:ASN:HD22	53:m7:137:ASN:HA	1.69	0.42
57:n1:18:ASP:HB2	57:n1:21:LYS:HB2	2.02	0.42
83:f:101:SER:CB	83:f:102:LEU:HA	2.48	0.42
1:2:144:U:O2'	1:2:145:A:H8	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:621:A:N3	1:2:1107:G:H1'	2.35	0.41
1:2:979:A:N3	1:2:1775:U:O2'	2.53	0.41
1:2:1477:G:H5"	21:C9:45:MET:O	2.19	0.41
1:2:1486:G:C6	1:2:1522:U:C5	3.07	0.41
1:2:1575:G:H2'	1:2:1576:A:C8	2.55	0.41
1:2:1615:C:C4	7:S5:81:ARG:HA	2.55	0.41
7:S5:141:GLY:HA2	7:S5:142:PRO:HD3	1.91	0.41
10:S8:48:THR:HG21	10:S8:54:LYS:HG3	2.01	0.41
13:C1:26:LYS:HA	13:C1:26:LYS:HD3	1.80	0.41
16:C4:56:SER:HA	16:C4:57:PRO:HD3	1.89	0.41
19:C7:71:PHE:O	19:C7:73:LEU:N	2.50	0.41
21:C9:58:ALA:HB1	21:C9:108:LEU:HD11	2.02	0.41
26:D4:126:ALA:HA	26:D4:129:VAL:HG12	2.03	0.41
36:1:40:A:N7	64:N8:29:PRO:O	2.53	0.41
36:1:115:A:P	51:M5:49:ARG:HE	2.43	0.41
36:1:437:G:N2	36:1:622:A:H61	2.18	0.41
36:1:681:U:O4	41:L4:118:LYS:NZ	2.38	0.41
36:1:1673:G:C4	36:1:1775:G:C2	3.08	0.41
37:3:37:G:C2	37:3:38:U:C2	3.08	0.41
38:4:97:A:OP1	71:O5:67:ARG:NH2	2.38	0.41
41:L4:311:HIS:CE1	44:L7:162:PRO:HG2	2.54	0.41
43:L6:97:ASN:C	43:L6:99:GLU:H	2.28	0.41
46:L9:18:VAL:HG12	46:L9:27:VAL:HG22	2.03	0.41
46:L9:154:VAL:O	46:L9:158:ALA:N	2.42	0.41
51:M5:19:LEU:HD12	51:M5:19:LEU:HA	1.78	0.41
51:M5:35:VAL:O	51:M5:64:VAL:HA	2.19	0.41
51:M5:199:LEU:HB3	51:M5:203:ARG:HE	1.85	0.41
52:M6:41:LEU:HB3	52:M6:138:LEU:HD22	2.01	0.41
56:N0:1:MET:SD	56:N0:36:ILE:HG21	2.59	0.41
58:N2:33:TYR:CE2	58:N2:63:VAL:HG21	2.55	0.41
58:N2:76:LEU:HA	58:N2:79:LEU:HD12	2.01	0.41
59:N3:135:VAL:HG11	60:N4:26:SER:HB3	2.01	0.41
64:N8:103:ASP:HA	64:N8:126:LYS:HB2	2.01	0.41
66:O0:26:GLY:O	66:O0:89:VAL:HG13	2.20	0.41
70:O4:11:ASN:HA	70:O4:12:PRO:HD3	1.74	0.41
73:O7:68:LYS:HD2	73:O7:69:HIS:NE2	2.35	0.41
1:6:66:U:C6	8:s6:173:PRO:HG3	2.54	0.41
1:6:420:A:OP1	8:s6:96:SER:OG	2.25	0.41
1:6:1198:G:O2'	22:d0:72:ASN:HA	2.20	0.41
1:6:1389:C:H4'	19:c7:49:LYS:HA	2.01	0.41
7:s5:28:PRO:HB2	7:s5:29:ILE:H	1.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:d2:32:LYS:HB2	24:d2:32:LYS:HE3	1.68	0.41
25:d3:92:CYS:O	25:d3:95:PHE:HB2	2.20	0.41
36:5:30:G:O5'	51:m5:172:ARG:HD2	2.20	0.41
36:5:241:G:O4'	49:m3:45:LYS:HE2	2.20	0.41
36:5:1158:A:P	44:l7:90:LYS:HZ3	2.39	0.41
36:5:1205:A:H4'	36:5:2835:U:O2'	2.19	0.41
36:5:1240:A:N3	36:5:1249:G:N2	2.68	0.41
36:5:1549:U:H2'	36:5:1550:C:H6	1.85	0.41
36:5:2266:U:O2'	36:5:2267:C:H5'	2.20	0.41
36:5:2674:A:H5"	48:m1:105:GLY:HA3	2.02	0.41
36:5:2772:C:H1'	36:5:2773:C:OP2	2.20	0.41
36:5:2849:C:H2'	36:5:2850:G:O4'	2.20	0.41
36:5:3009:G:N2	40:l3:15:GLY:O	2.51	0.41
36:5:3294:A:H5'	40:l3:128:LYS:HG3	2.02	0.41
37:7:5:G:O3'	42:l5:54:ARG:HG3	2.20	0.41
39:l2:66:PRO:HB2	39:l2:67:TYR:CE2	2.55	0.41
42:l5:173:VAL:HA	42:l5:174:PRO:HD2	1.92	0.41
49:m3:62:THR:C	49:m3:64:LYS:H	2.28	0.41
50:m4:135:LEU:O	50:m4:137:LYS:N	2.52	0.41
53:m7:3:ARG:O	53:m7:18:ARG:NH2	2.53	0.41
57:n1:116:ARG:HA	57:n1:126:VAL:HG11	2.02	0.41
61:n5:65:GLN:HE21	61:n5:65:GLN:HB2	1.60	0.41
61:n5:106:ASP:OD2	61:n5:107:VAL:N	2.53	0.41
62:n6:57:LEU:HB3	62:n6:105:VAL:CG1	2.50	0.41
65:n9:4:SER:O	65:n9:5:LYS:C	2.62	0.41
81:p0:185:LEU:HD23	81:p0:185:LEU:H	1.85	0.41
1:2:766:U:H3'	1:2:768:C:OP2	2.20	0.41
1:2:866:G:N2	1:2:965:U:C5	2.88	0.41
1:2:1486:G:C8	1:2:1487:A:C8	3.08	0.41
4:S2:53:ILE:HG23	4:S2:56:ILE:HD11	2.01	0.41
4:S2:84:LYS:HA	4:S2:85:PRO:HD3	1.83	0.41
4:S2:88:LYS:HE2	4:S2:90:THR:HB	2.01	0.41
4:S2:107:SER:O	4:S2:192:GLY:HA2	2.20	0.41
4:S2:118:ALA:HB3	4:S2:124:ALA:HB2	2.02	0.41
4:S2:140:ARG:HA	23:D1:10:GLU:OE1	2.20	0.41
6:S4:73:ASP:OD2	6:S4:122:LYS:NZ	2.24	0.41
6:S4:206:ASP:O	6:S4:222:LEU:N	2.47	0.41
7:S5:58:LEU:HD13	7:S5:138:THR:HG22	2.03	0.41
12:C0:24:LYS:HB2	12:C0:63:TYR:CE1	2.54	0.41
15:C3:34:ILE:HG13	15:C3:67:THR:HG21	2.00	0.41
18:C6:102:LYS:HE2	18:C6:102:LYS:HB3	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:C8:100:THR:HG21	20:C8:108:LYS:HG2	2.03	0.41
24:D2:24:GLN:OE1	29:D7:4:VAL:HA	2.20	0.41
25:D3:57:LEU:HA	25:D3:57:LEU:HD23	1.73	0.41
25:D3:69:ARG:HD3	25:D3:117:ILE:CG2	2.51	0.41
25:D3:103:LEU:HD12	25:D3:126:LYS:HE2	2.01	0.41
30:D8:10:ALA:HB1	30:D8:30:VAL:HB	2.03	0.41
34:SR:40:LYS:HG2	34:SR:66:HIS:C	2.46	0.41
36:1:66:A:N6	36:1:75:G:N2	2.69	0.41
36:1:522:A:O2'	56:N0:66:GLU:O	2.37	0.41
36:1:594:U:H2'	36:1:609:G:O6	2.19	0.41
36:1:674:G:O6	54:M8:56:LYS:NZ	2.50	0.41
36:1:1326:A:H2'	36:1:1327:C:O4'	2.20	0.41
36:1:2917:G:H4'	59:N3:48:ARG:O	2.19	0.41
86:1:3401:SPS:H81	86:1:3401:SPS:H73	1.80	0.41
37:3:25:G:H2'	37:3:26:C:O4'	2.20	0.41
38:4:86:U:H3'	71:O5:7:TYR:OH	2.19	0.41
44:L7:98:LYS:HE2	44:L7:129:LEU:HD21	2.01	0.41
44:L7:157:ASN:O	44:L7:158:LYS:C	2.64	0.41
45:L8:78:PHE:O	45:L8:80:TYR:N	2.43	0.41
47:M0:188:GLY:HA3	47:M0:216:TYR:HD1	1.85	0.41
51:M5:28:TRP:O	51:M5:32:GLN:HG2	2.21	0.41
54:M8:161:LYS:O	54:M8:162:ALA:HB3	2.19	0.41
58:N2:37:LEU:O	58:N2:41:ILE:HG13	2.20	0.41
60:N4:39:LEU:HD12	60:N4:39:LEU:HA	1.82	0.41
66:O0:27:TYR:O	66:O0:31:VAL:HG23	2.20	0.41
69:O3:37:THR:OG1	69:O3:39:GLN:OE1	2.37	0.41
69:O3:89:LEU:HD23	69:O3:89:LEU:HA	1.87	0.41
73:O7:19:CYS:SG	73:O7:34:CYS:CB	3.03	0.41
1:6:436:A:H8	1:6:436:A:O5'	2.03	0.41
1:6:1119:G:H2'	1:6:1120:U:O4'	2.20	0.41
1:6:1228:G:OP1	14:c2:45:LEU:HB2	2.20	0.41
1:6:1241:G:H2'	1:6:1242:A:O4'	2.20	0.41
1:6:1437:U:H2'	1:6:1438:G:C8	2.55	0.41
1:6:1640:C:H1'	1:6:1763:A:N1	2.34	0.41
2:s0:56:LYS:O	2:s0:60:ALA:N	2.48	0.41
3:s1:103:MET:HB3	3:s1:215:VAL:CG2	2.50	0.41
5:s3:21:LEU:HD23	5:s3:21:LEU:HA	1.90	0.41
5:s3:109:LEU:HB3	5:s3:177:MET:HE1	2.02	0.41
8:s6:1:MET:HE2	8:s6:1:MET:HB3	1.87	0.41
12:c0:50:THR:HG22	12:c0:55:VAL:HG13	2.02	0.41
15:c3:46:THR:HG21	15:c3:90:TYR:OH	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:c8:49:LYS:HG3	20:c8:81:ILE:HD11	2.02	0.41
20:c8:143:ARG:C	20:c8:145:ARG:H	2.28	0.41
22:d0:97:VAL:HG13	22:d0:98:GLN:H	1.85	0.41
26:d4:37:LYS:HD2	26:d4:57:VAL:HG23	2.02	0.41
29:d7:16:ALA:HA	29:d7:29:ARG:HH21	1.84	0.41
36:5:370:U:H4'	36:5:404:G:H5'	2.02	0.41
36:5:411:U:H2'	36:5:412:G:C8	2.54	0.41
36:5:915:A:H8	36:5:2136:C:O2'	2.03	0.41
36:5:1211:U:OP2	46:l9:62:ARG:HD2	2.20	0.41
36:5:2542:U:O2'	36:5:2543:U:O5'	2.34	0.41
36:5:3351:U:H5'	36:5:3352:U:OP2	2.20	0.41
39:l2:70:ARG:NH2	39:l2:72:ARG:HH21	2.13	0.41
39:l2:133:TYR:HB3	39:l2:168:VAL:HB	2.02	0.41
41:l4:118:LYS:O	41:l4:122:THR:HG23	2.20	0.41
42:l5:51:LEU:HB2	42:l5:144:VAL:HG13	2.01	0.41
42:l5:205:SER:HB3	42:l5:236:LEU:HD22	2.01	0.41
42:l5:211:LEU:HD23	42:l5:211:LEU:HA	1.75	0.41
46:l9:17:THR:HG23	46:l9:28:VAL:HB	2.01	0.41
46:l9:126:VAL:HG21	46:l9:161:LEU:HA	2.02	0.41
47:m0:95:HIS:HB2	47:m0:128:ARG:HD2	2.01	0.41
47:m0:159:PHE:HA	47:m0:160:PRO:HD2	1.79	0.41
49:m3:28:GLN:HB3	51:m5:201:ARG:NH1	2.25	0.41
52:m6:48:PHE:O	52:m6:52:LEU:HG	2.20	0.41
53:m7:126:ARG:HA	53:m7:140:GLU:HG2	2.01	0.41
54:m8:115:VAL:O	54:m8:118:GLY:N	2.39	0.41
57:n1:66:ASN:OD1	57:n1:67:VAL:N	2.54	0.41
57:n1:84:TYR:CD1	65:n9:23:LYS:HG3	2.55	0.41
59:n3:79:VAL:HB	59:n3:118:VAL:HG13	2.02	0.41
69:o3:8:TYR:HB3	69:o3:101:PHE:CE1	2.55	0.41
72:o6:57:LEU:HA	72:o6:57:LEU:HD22	1.81	0.41
73:o7:21:ARG:HD2	73:o7:37:CYS:SG	2.59	0.41
83:f:43:ASP:HB3	83:f:60:VAL:HB	2.02	0.41
83:f:93:LEU:H	83:f:102:LEU:HD22	1.85	0.41
1:2:736:C:OP1	6:S4:197:HIS:NE2	2.52	0.41
1:2:738:G:H2'	1:2:739:G:C8	2.48	0.41
1:2:1166:A:H2'	1:2:1167:G:O4'	2.21	0.41
1:2:1682:U:O4	1:2:1720:G:N2	2.53	0.41
1:2:1727:G:H2'	1:2:1728:A:C8	2.55	0.41
3:S1:157:GLN:O	3:S1:161:ILE:HG13	2.20	0.41
3:S1:158:SER:HA	3:S1:161:ILE:HD12	2.01	0.41
4:S2:53:ILE:HG12	4:S2:72:LEU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S2:225:LEU:HD22	4:S2:230:TRP:CD1	2.55	0.41
10:S8:138:ASN:O	10:S8:141:ARG:HB2	2.20	0.41
19:C7:5:ARG:HB2	19:C7:10:LYS:HE2	2.03	0.41
19:C7:17:ILE:HD11	19:C7:54:THR:O	2.20	0.41
19:C7:87:GLU:O	19:C7:88:VAL:HG12	2.21	0.41
21:C9:57:ARG:NH2	21:C9:80:TYR:HB3	2.35	0.41
21:C9:113:ILE:C	21:C9:125:SER:HB3	2.44	0.41
23:D1:44:ARG:HE	23:D1:44:ARG:HB2	1.72	0.41
35:SM:48:ARG:H	35:SM:48:ARG:HG3	1.69	0.41
36:1:66:A:O2'	36:1:315:C:O2'	2.32	0.41
36:1:290:G:H5"	51:M5:98:LEU:HD23	2.02	0.41
36:1:312:C:H2'	36:1:313:A:C8	2.55	0.41
36:1:439:C:H3'	36:1:440:A:H8	1.85	0.41
36:1:1124:U:O3'	47:M0:15:LYS:NZ	2.47	0.41
36:1:2310:U:H6	36:1:2310:U:O5'	2.03	0.41
36:1:2623:G:C4	36:1:2624:G:C8	3.09	0.41
36:1:2735:U:H2'	36:1:2736:A:C8	2.56	0.41
36:1:3333:G:C8	60:N4:51:TRP:CD1	3.08	0.41
41:L4:317:PRO:HB2	44:L7:149:TYR:HD1	1.84	0.41
43:L6:145:LEU:O	43:L6:148:GLU:N	2.52	0.41
46:L9:122:LYS:HG2	46:L9:123:ILE:N	2.35	0.41
49:M3:54:LEU:HD13	49:M3:75:PHE:CZ	2.56	0.41
49:M3:95:ILE:HD13	49:M3:116:LEU:HD22	2.03	0.41
49:M3:188:ARG:NH2	49:M3:189:GLU:HG3	2.35	0.41
54:M8:8:LYS:HB2	54:M8:8:LYS:HE3	1.65	0.41
55:M9:155:LEU:HA	55:M9:158:GLU:HG2	2.03	0.41
55:M9:180:LYS:HB3	55:M9:180:LYS:HE3	1.83	0.41
68:O2:20:HIS:CG	68:O2:42:VAL:HG21	2.55	0.41
74:O8:46:ARG:NH1	74:O8:47:GLY:O	2.54	0.41
1:6:533:U:H2'	1:6:534:A:H5"	2.01	0.41
1:6:994:G:H2'	1:6:995:A:H8	1.85	0.41
1:6:1239:U:H2'	1:6:1240:U:C6	2.54	0.41
1:6:1778:G:H2'	1:6:1779:U:H6	1.85	0.41
2:s0:41:ARG:HE	2:s0:45:VAL:HG21	1.85	0.41
3:s1:120:LEU:HD22	3:s1:122:GLU:HG3	2.02	0.41
3:s1:178:GLY:O	3:s1:179:SER:OG	2.36	0.41
5:s3:141:LYS:HB3	5:s3:144:ALA:HA	2.01	0.41
6:s4:58:GLY:HA2	6:s4:61:VAL:HG23	2.02	0.41
7:s5:116:HIS:CD2	27:d5:98:GLN:HB3	2.55	0.41
14:c2:125:ASN:OD1	35:sM:168:UNK:N	2.53	0.41
18:c6:60:PHE:CE2	18:c6:89:LEU:HD22	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:c8:78:HIS:O	20:c8:80:LYS:N	2.47	0.41
21:c9:126:GLU:H	21:c9:126:GLU:HG2	1.51	0.41
25:d3:13:ARG:HA	25:d3:16:ARG:NH2	2.35	0.41
34:sR:217:ASP:OD1	34:sR:217:ASP:N	2.53	0.41
35:sM:65:THR:HA	35:sM:70:ASN:ND2	2.36	0.41
36:5:174:C:H2'	36:5:175:C:C6	2.54	0.41
36:5:1128:U:H2'	36:5:1129:A:O4'	2.21	0.41
36:5:1200:A:H5'	36:5:1201:C:OP1	2.21	0.41
36:5:1222:G:H8	36:5:1222:G:OP2	2.03	0.41
36:5:1464:G:N1	36:5:1467:A:OP2	2.53	0.41
36:5:1654:A:O2'	70:o4:59:PRO:HD3	2.21	0.41
36:5:1733:G:H2'	36:5:1734:G:H8	1.85	0.41
36:5:1782:U:H2'	36:5:1783:U:O4'	2.21	0.41
36:5:2097:U:H2'	36:5:2098:C:H6	1.85	0.41
36:5:2180:G:P	39:l2:174:ARG:HH22	2.43	0.41
36:5:2402:A:H5"	41:l4:67:THR:OG1	2.20	0.41
36:5:2514:U:H6	36:5:2514:U:OP1	2.03	0.41
36:5:2630:C:OP1	57:n1:6:GLY:HA2	2.21	0.41
36:5:2980:U:H2'	36:5:2981:U:H6	1.84	0.41
36:5:3060:C:H2'	36:5:3061:G:C8	2.55	0.41
38:8:72:A:C2	38:8:89:A:H5'	2.55	0.41
40:l3:35:ASP:HA	40:l3:184:ASN:ND2	2.35	0.41
40:l3:60:LEU:HD11	40:l3:62:ARG:HB2	2.02	0.41
40:l3:287:LYS:HA	40:l3:320:ASP:OD1	2.19	0.41
41:l4:185:LYS:HE2	41:l4:199:TRP:HB3	2.03	0.41
41:l4:219:LEU:HD23	41:l4:222:VAL:HG11	2.01	0.41
42:l5:233:ALA:O	42:l5:236:LEU:HB2	2.20	0.41
46:l9:43:VAL:CG2	46:l9:55:VAL:HG12	2.50	0.41
47:m0:215:GLU:H	47:m0:215:GLU:CD	2.28	0.41
50:m4:113:THR:N	50:m4:116:GLU:HB3	2.35	0.41
51:m5:183:THR:O	51:m5:183:THR:OG1	2.32	0.41
61:n5:91:ASN:O	61:n5:94:GLN:N	2.54	0.41
63:n7:129:TRP:O	63:n7:131:PHE:N	2.53	0.41
64:n8:79:TRP:CZ2	64:n8:123:VAL:HG13	2.55	0.41
68:o2:119:VAL:O	68:o2:122:PRO:HD3	2.21	0.41
69:o3:23:ASN:OD1	69:o3:23:ASN:C	2.64	0.41
1:2:142:G:C5	1:2:266:A:C6	3.08	0.41
1:2:196:G:O2'	1:2:197:A:P	2.79	0.41
1:2:226:A:H2'	1:2:226:A:N3	2.35	0.41
1:2:281:G:OP2	1:2:281:G:H8	2.02	0.41
1:2:325:G:C6	1:2:344:A:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:522:U:OP1	26:D4:37:LYS:HB2	2.21	0.41
1:2:863:A:O5'	24:D2:57:ARG:HG2	2.21	0.41
2:S0:31:VAL:N	2:S0:149:LEU:O	2.43	0.41
2:S0:103:THR:HA	2:S0:104:PRO:HD3	1.75	0.41
4:S2:63:VAL:HG13	4:S2:68:ILE:HD12	2.03	0.41
4:S2:140:ARG:HH22	4:S2:228:ASN:HD21	1.68	0.41
6:S4:131:LEU:HD22	6:S4:131:LEU:HA	1.92	0.41
6:S4:206:ASP:OD1	6:S4:206:ASP:N	2.53	0.41
9:S7:46:ILE:HD13	9:S7:47:ARG:N	2.35	0.41
15:C3:99:ARG:CZ	15:C3:143:SER:HB3	2.50	0.41
17:C5:75:PRO:HG3	17:C5:93:VAL:HG11	2.01	0.41
19:C7:41:ILE:C	19:C7:43:SER:H	2.29	0.41
25:D3:52:ILE:HG23	25:D3:100:ASP:O	2.20	0.41
28:D6:45:VAL:HB	28:D6:46:GLU:H	1.63	0.41
34:SR:231:MET:HE2	34:SR:232:TYR:HE2	1.86	0.41
36:1:94:G:OP2	64:N8:53:PHE:HD2	2.03	0.41
36:1:174:C:H2'	36:1:175:C:C6	2.55	0.41
36:1:1066:G:H2'	36:1:1067:U:C6	2.55	0.41
36:1:1452:A:N3	36:1:2346:C:O2'	2.48	0.41
36:1:1468:A:N6	36:1:1508:C:O2	2.53	0.41
36:1:2991:A:N3	53:M7:69:ARG:NH2	2.63	0.41
36:1:3137:C:H2'	36:1:3138:U:C6	2.56	0.41
36:1:3222:U:O2'	36:1:3223:A:H5'	2.20	0.41
40:L3:115:LYS:HA	40:L3:118:PHE:HD1	1.86	0.41
41:L4:152:VAL:CG2	41:L4:172:VAL:HG21	2.50	0.41
43:L6:6:ALA:HA	68:O2:74:PHE:HE1	1.85	0.41
43:L6:51:ARG:HD3	43:L6:158:TYR:CZ	2.55	0.41
51:M5:140:LYS:O	51:M5:144:ARG:HG3	2.21	0.41
53:M7:71:ALA:C	53:M7:73:GLY:H	2.29	0.41
54:M8:58:ASN:C	54:M8:60:PRO:HD3	2.46	0.41
68:O2:22:SER:HB2	68:O2:30:GLU:HA	2.01	0.41
69:O3:59:VAL:HB	69:O3:60:ARG:H	1.57	0.41
72:O6:51:SER:H	72:O6:54:GLU:HB2	1.85	0.41
1:6:282:C:H2'	1:6:283:U:O4'	2.21	0.41
1:6:837:G:H2'	1:6:838:G:C8	2.55	0.41
1:6:1111:G:H2'	1:6:1112:G:O4'	2.20	0.41
1:6:1553:G:H2'	1:6:1554:U:H5"	2.01	0.41
2:s0:124:THR:O	2:s0:146:LEU:HB2	2.21	0.41
3:s1:232:HIS:HB3	3:s1:233:GLY:H	1.67	0.41
6:s4:73:ASP:CG	6:s4:122:LYS:HZ2	2.26	0.41
6:s4:141:THR:OG1	6:s4:145:ARG:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:s8:57:ALA:HB1	10:s8:60:ILE:HD12	2.02	0.41
10:s8:78:ILE:HA	10:s8:104:ILE:HG22	2.02	0.41
13:c1:5:LEU:HD13	13:c1:5:LEU:H	1.85	0.41
13:c1:16:GLN:NE2	13:c1:34:TRP:HB3	2.36	0.41
18:c6:7:VAL:HG23	18:c6:22:VAL:O	2.20	0.41
18:c6:23:LYS:HG2	18:c6:64:ASP:HB2	2.02	0.41
19:c7:29:GLN:CD	19:c7:32:LYS:HZ3	2.25	0.41
20:c8:115:ARG:O	20:c8:119:ILE:HG12	2.21	0.41
27:d5:71:ILE:HD12	27:d5:71:ILE:HA	1.78	0.41
33:e1:141:CYS:SG	33:e1:143:LYS:HB3	2.61	0.41
36:5:315:C:C4	36:5:316:U:C4	3.08	0.41
36:5:579:G:H2'	36:5:580:C:C6	2.55	0.41
36:5:742:G:H5'	36:5:743:C:OP1	2.20	0.41
36:5:944:C:H4'	68:o2:33:ARG:HH11	1.85	0.41
36:5:1926:C:H2'	79:q3:7:LYS:HE3	2.02	0.41
36:5:2249:G:H2'	36:5:2250:G:H8	1.84	0.41
36:5:2617:U:H3'	65:n9:3:LYS:HD3	2.02	0.41
36:5:3135:U:OP1	52:m6:148:LYS:HE2	2.20	0.41
36:5:3163:A:C6	36:5:3288:G:C6	3.08	0.41
37:7:3:U:H2'	37:7:4:U:H6	1.85	0.41
38:8:38:U:O4	71:o5:89:ARG:HD2	2.20	0.41
38:8:156:U:H5'	38:8:157:U:OP2	2.20	0.41
40:l3:230:THR:HB	40:l3:247:ARG:NH1	2.35	0.41
41:l4:327:LEU:HA	44:l7:166:ASN:HD21	1.86	0.41
42:l5:178:ASN:HA	42:l5:183:TRP:CG	2.55	0.41
44:l7:151:ARG:HD2	44:l7:244:ASN:OD1	2.20	0.41
46:l9:117:PHE:HE1	46:l9:178:GLY:HA2	1.85	0.41
47:m0:156:ARG:HG2	47:m0:163:GLN:HG2	2.02	0.41
50:m4:59:ASN:O	50:m4:62:GLN:HG2	2.21	0.41
53:m7:50:GLN:CD	53:m7:56:ARG:HD3	2.45	0.41
54:m8:63:SER:O	54:m8:67:ILE:HG13	2.20	0.41
60:n4:38:SER:O	60:n4:42:GLN:HB2	2.21	0.41
61:n5:45:LYS:HD3	71:o5:75:TYR:HE2	1.83	0.41
71:o5:85:THR:HB	71:o5:88:LEU:HD12	2.01	0.41
1:2:6:G:OP2	4:S2:205:ARG:HD2	2.21	0.41
1:2:18:C:H2'	1:2:19:A:C8	2.56	0.41
1:2:72:A:O2'	1:2:73:U:O4'	2.38	0.41
1:2:610:G:H2'	1:2:614:C:C5	2.56	0.41
1:2:782:U:H4'	1:2:783:G:OP2	2.19	0.41
1:2:881:A:H2'	1:2:882:U:O4'	2.21	0.41
1:2:1046:G:H1	1:2:1072:C:H42	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1184:A:O2'	1:2:1209:C:O2'	2.27	0.41
1:2:1418:G:O2'	31:D9:56:ARG:O	2.35	0.41
2:S0:170:ILE:HD12	2:S0:171:GLY:H	1.85	0.41
4:S2:115:ILE:HD12	4:S2:212:LYS:HD2	2.03	0.41
5:S3:125:TYR:CE1	35:SM:134:ASP:OD2	2.74	0.41
6:S4:49:ARG:HH11	6:S4:50:ASN:ND2	2.18	0.41
7:S5:90:ILE:HD13	7:S5:133:VAL:HG11	2.01	0.41
10:S8:60:ILE:HG21	10:S8:179:CYS:HB2	2.02	0.41
13:C1:72:THR:HG22	13:C1:124:THR:HG23	2.02	0.41
16:C4:125:SER:O	16:C4:126:THR:OG1	2.33	0.41
18:C6:11:GLY:O	18:C6:80:ALA:HB1	2.19	0.41
19:C7:27:ASP:CG	34:SR:38:ARG:HH12	2.28	0.41
19:C7:81:LYS:HB2	19:C7:81:LYS:HE3	1.81	0.41
22:D0:65:ILE:HG13	31:D9:43:PHE:CZ	2.55	0.41
24:D2:37:PHE:HD1	24:D2:41:MET:HE2	1.85	0.41
25:D3:114:LYS:HB3	25:D3:115:GLY:H	1.67	0.41
27:D5:44:GLN:O	27:D5:47:TYR:HB3	2.21	0.41
32:E0:49:LEU:HD21	32:E0:55:ARG:H	1.86	0.41
34:SR:92:TRP:HE3	34:SR:97:GLY:O	2.04	0.41
34:SR:116:ASP:OD2	34:SR:120:SER:N	2.48	0.41
36:1:18:G:OP1	71:O5:81:ARG:NH2	2.53	0.41
36:1:155:G:O2'	72:O6:27:SER:HB3	2.20	0.41
36:1:255:A:C2'	36:1:256:G:H5'	2.50	0.41
36:1:650:C:H2'	36:1:651:G:C8	2.55	0.41
36:1:1493:G:O5'	75:O9:49:MET:HE2	2.20	0.41
36:1:1642:A:O2'	36:1:1643:A:C8	2.73	0.41
36:1:1675:G:H2'	36:1:1676:A:C8	2.55	0.41
36:1:1912:U:C4	36:1:1913:A:C6	3.08	0.41
36:1:2213:A:C6	36:1:2214:A:C6	3.08	0.41
36:1:2263:C:H2'	36:1:2264:U:C6	2.56	0.41
36:1:2761:G:N2	36:1:2800:G:O4'	2.54	0.41
37:3:1:G:C4	42:L5:266:ALA:HA	2.55	0.41
37:3:26:C:H2'	37:3:27:A:O4'	2.20	0.41
37:3:85:G:O2'	37:3:87:G:OP1	2.36	0.41
40:L3:169:THR:CG2	40:L3:171:LEU:HG	2.50	0.41
41:L4:187:LEU:HD23	41:L4:187:LEU:HA	1.83	0.41
43:L6:69:PHE:N	43:L6:142:ASP:OD2	2.53	0.41
43:L6:107:ALA:HB3	43:L6:109:GLU:CD	2.46	0.41
44:L7:103:LEU:HA	44:L7:103:LEU:HD23	1.88	0.41
45:L8:144:GLU:O	45:L8:173:MET:HE2	2.20	0.41
47:M0:190:VAL:HG22	47:M0:199:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M1:92:ARG:HB3	48:M1:173:ASP:OD2	2.20	0.41
49:M3:180:ARG:HD3	72:O6:11:LEU:HD11	2.02	0.41
54:M8:54:LEU:HD22	54:M8:58:ASN:HB2	2.03	0.41
57:N1:50:LYS:HB3	57:N1:92:ARG:HH11	1.84	0.41
58:N2:35:LYS:O	58:N2:38:ILE:HG22	2.20	0.41
66:O0:36:GLN:NE2	66:O0:38:LYS:HE2	2.35	0.41
69:O3:71:VAL:HG13	69:O3:81:VAL:HG11	2.03	0.41
77:Q1:15:ARG:HA	77:Q1:18:ARG:HE	1.84	0.41
79:Q3:45:LYS:NZ	79:Q3:45:LYS:HB2	2.36	0.41
1:6:329:G:H2'	1:6:330:G:H8	1.86	0.41
1:6:417:A:H5'	1:6:418:G:C5	2.55	0.41
1:6:629:U:H2'	1:6:630:A:H8	1.85	0.41
1:6:722:G:H4'	1:6:723:G:OP1	2.21	0.41
1:6:765:G:C6	11:s9:149:ARG:CZ	3.04	0.41
1:6:1275:A:H8	1:6:1275:A:OP2	2.03	0.41
1:6:1586:A:H2'	1:6:1587:A:O4'	2.20	0.41
1:6:1713:G:C6	1:6:1714:A:C6	3.09	0.41
2:s0:19:ALA:HB1	19:c7:90:ALA:C	2.45	0.41
3:s1:110:LEU:O	3:s1:114:VAL:HG23	2.20	0.41
5:s3:64:ARG:O	5:s3:66:ILE:N	2.49	0.41
6:s4:191:ARG:HH11	6:s4:245:LYS:HB3	1.85	0.41
12:c0:44:LYS:HA	12:c0:47:GLN:HB3	2.02	0.41
17:c5:126:VAL:HG21	35:sM:71:ASN:HD21	1.84	0.41
20:c8:11:PHE:CD1	27:d5:41:ILE:HG21	2.56	0.41
20:c8:26:ILE:O	20:c8:31:ALA:HB2	2.20	0.41
24:d2:101:TYR:O	24:d2:129:VAL:N	2.38	0.41
24:d2:101:TYR:HB2	24:d2:129:VAL:HG23	2.02	0.41
29:d7:33:LEU:HD13	29:d7:73:LEU:HD21	2.02	0.41
36:5:340:C:O2'	36:5:344:A:N3	2.50	0.41
36:5:982:C:N3	36:5:1102:A:C2	2.88	0.41
36:5:1072:G:H2'	36:5:1073:U:C6	2.54	0.41
36:5:1500:G:H2'	36:5:1501:U:O4'	2.20	0.41
36:5:1815:U:O2'	36:5:1816:A:OP2	2.35	0.41
36:5:1852:G:H1'	73:o7:9:GLY:HA3	2.03	0.41
36:5:2553:U:O4'	66:o0:50:VAL:HB	2.20	0.41
36:5:2554:A:H62	79:q3:62:LYS:NZ	2.18	0.41
36:5:2766:U:OP1	78:q2:39:GLY:N	2.46	0.41
36:5:3049:A:C2	40:l3:75:ALA:HB2	2.56	0.41
39:l2:56:ALA:HB2	39:l2:130:SER:HA	2.02	0.41
41:l4:34:ILE:O	41:l4:38:VAL:HG23	2.20	0.41
42:l5:125:VAL:HG11	42:l5:199:ILE:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l7:130:ILE:HD13	44:l7:130:ILE:HG21	1.81	0.41
44:l7:184:LEU:HA	44:l7:184:LEU:HD23	1.87	0.41
48:m1:14:ILE:HG23	48:m1:129:VAL:HG23	2.03	0.41
48:m1:142:LYS:HA	48:m1:142:LYS:HD2	1.87	0.41
51:m5:120:TRP:HE1	51:m5:123:GLN:HB3	1.84	0.41
56:n0:93:GLU:CD	56:n0:136:LYS:H	2.27	0.41
69:o3:38:PRO:HA	69:o3:41:ALA:HB3	2.01	0.41
75:o9:28:ARG:HD2	75:o9:36:ARG:HD3	2.03	0.41
78:q2:11:TYR:N	78:q2:20:HIS:CD2	2.88	0.41
83:f:60:VAL:HG22	83:f:71:GLU:HG2	2.01	0.41
1:2:186:C:H5"	10:S8:142:LYS:HE2	2.03	0.41
1:2:336:G:N2	10:S8:7:SER:HB2	2.35	0.41
1:2:393:C:H41	1:2:400:A:H1'	1.86	0.41
1:2:994:G:C2'	1:2:995:A:H5'	2.50	0.41
1:2:1291:G:H5'	4:S2:119:LYS:NZ	2.36	0.41
3:S1:29:TRP:CD1	3:S1:47:LEU:HG	2.55	0.41
5:S3:195:SER:O	5:S3:197:THR:N	2.54	0.41
6:S4:71:LYS:HA	6:S4:76:VAL:O	2.21	0.41
17:C5:72:LYS:HA	17:C5:73:PRO:HD3	1.77	0.41
21:C9:31:PRO:CG	21:C9:103:LYS:HD3	2.47	0.41
24:D2:38:LEU:HD23	24:D2:41:MET:HE3	2.02	0.41
24:D2:93:LEU:H	24:D2:93:LEU:HD22	1.86	0.41
27:D5:41:ILE:HD12	27:D5:41:ILE:HA	1.96	0.41
31:D9:10:HIS:O	31:D9:12:ARG:N	2.53	0.41
35:SM:139:GLU:OE1	35:SM:139:GLU:N	2.54	0.41
36:1:115:A:OP1	51:M5:49:ARG:NE	2.54	0.41
36:1:715:A:H4'	36:1:716:A:OP1	2.20	0.41
36:1:1177:G:N7	69:O3:20:LYS:HD3	2.35	0.41
36:1:1928:G:C6	36:1:1929:G:C4	3.09	0.41
36:1:2353:G:C5	36:1:2354:C:C5	3.09	0.41
36:1:2689:A:H4'	36:1:2690:G:O5'	2.20	0.41
36:1:3113:A:C4	36:1:3114:A:C8	3.09	0.41
36:1:3127:A:H2'	36:1:3128:G:O4'	2.20	0.41
38:4:10:A:C5	38:4:11:C:C4	3.08	0.41
42:L5:11:ALA:O	42:L5:15:ARG:HG3	2.20	0.41
43:L6:30:LEU:HG	43:L6:57:HIS:CD2	2.56	0.41
49:M3:119:TYR:O	49:M3:123:ILE:HG23	2.20	0.41
51:M5:188:ARG:HE	51:M5:188:ARG:HB2	1.65	0.41
53:M7:48:LEU:HB3	53:M7:88:VAL:CG1	2.51	0.41
58:N2:18:ASP:C	58:N2:20:SER:H	2.28	0.41
61:N5:105:VAL:HA	61:N5:130:TYR:CE2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:N7:104:PRO:O	63:N7:108:GLU:HG3	2.20	0.41
1:6:2:A:H3'	4:s2:179:VAL:HG11	2.02	0.41
1:6:163:G:C6	1:6:164:A:N7	2.88	0.41
1:6:545:A:N1	1:6:593:U:O2'	2.50	0.41
1:6:619:A:H5'	1:6:620:A:OP2	2.20	0.41
1:6:1163:A:N6	1:6:1164:G:C6	2.89	0.41
1:6:1433:G:N1	31:d9:45:GLU:OE2	2.47	0.41
1:6:1524:A:H5'	21:c9:78:LYS:HE2	2.02	0.41
2:s0:163:ASN:O	2:s0:165:ARG:N	2.54	0.41
9:s7:140:VAL:HB	24:d2:52:TYR:HB3	2.02	0.41
11:s9:129:ILE:HA	11:s9:134:ILE:HG12	2.02	0.41
21:c9:38:LYS:HB2	21:c9:38:LYS:HE3	1.83	0.41
23:d1:25:LYS:HB2	23:d1:28:ASP:HB2	2.02	0.41
25:d3:96:VAL:HA	25:d3:127:VAL:HG21	2.03	0.41
33:e1:104:SER:C	33:e1:106:TYR:H	2.28	0.41
34:sR:79:TYR:CD1	34:sR:100:TYR:HE1	2.39	0.41
36:5:221:A:H61	62:n6:103:LYS:HE3	1.85	0.41
36:5:251:G:C5	36:5:253:A:C6	3.09	0.41
36:5:312:C:H1'	36:5:2778:G:N2	2.35	0.41
36:5:589:A:N6	36:5:610:G:H1'	2.35	0.41
36:5:665:A:H1'	49:m3:14:PHE:CZ	2.56	0.41
36:5:2726:C:O2	36:5:2728:G:N2	2.53	0.41
36:5:3110:C:H2'	36:5:3111:U:C6	2.56	0.41
36:5:3209:A:P	56:n0:161:LYS:HE3	2.61	0.41
40:l3:283:TYR:CE1	40:l3:354:VAL:HG11	2.56	0.41
42:l5:285:ARG:O	42:l5:289:LYS:HG3	2.19	0.41
43:l6:136:GLU:O	43:l6:140:VAL:HG23	2.21	0.41
45:l8:72:PRO:HA	45:l8:73:PRO:HD3	1.83	0.41
48:m1:28:ASP:O	48:m1:32:ARG:HG3	2.20	0.41
48:m1:60:ARG:NH1	78:q2:104:LEU:O	2.52	0.41
48:m1:93:ASP:OD2	48:m1:156:LYS:NZ	2.52	0.41
59:n3:101:VAL:HG21	59:n3:129:VAL:HG22	2.03	0.41
60:n4:6:ASP:HB3	60:n4:11:ALA:H	1.85	0.41
70:o4:16:ARG:HE	70:o4:16:ARG:HB3	1.53	0.41
71:o5:17:LEU:O	71:o5:20:GLN:HB2	2.20	0.41
71:o5:45:LYS:HD2	71:o5:49:LYS:HG3	2.02	0.41
72:o6:5:THR:C	72:o6:7:ILE:H	2.28	0.41
1:2:6:G:H2'	1:2:7:G:C8	2.55	0.41
1:2:336:G:N2	1:2:338:C:H5'	2.36	0.41
1:2:993:A:OP1	1:2:1777:G:N2	2.40	0.41
1:2:1795:U:O2	28:D6:10:ARG:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S1:172:LEU:HD23	3:S1:172:LEU:HA	1.88	0.41
8:S6:58:LYS:HG2	8:S6:105:ASP:O	2.21	0.41
9:S7:39:ARG:NH2	55:M9:185:LEU:HD22	2.36	0.41
10:S8:159:GLN:HG2	10:S8:165:LEU:HA	2.02	0.41
14:C2:118:ALA:O	14:C2:120:VAL:N	2.54	0.41
19:C7:15:ALA:HA	19:C7:19:ARG:HH21	1.86	0.41
19:C7:41:ILE:O	19:C7:43:SER:N	2.54	0.41
20:C8:69:ILE:HG22	20:C8:73:MET:HE2	2.02	0.41
22:D0:43:LYS:HA	22:D0:43:LYS:HD2	1.89	0.41
28:D6:10:ARG:HD3	28:D6:34:LYS:HA	2.02	0.41
34:SR:44:SER:OG	34:SR:59:ARG:HB2	2.21	0.41
36:1:35:A:O2'	36:1:36:C:H5'	2.21	0.41
36:1:52:A:N3	36:1:811:U:O2'	2.52	0.41
36:1:235:A:H2'	36:1:236:G:O4'	2.21	0.41
36:1:607:A:C4	43:L6:26:ARG:NH2	2.88	0.41
36:1:847:A:H2'	36:1:848:A:C8	2.54	0.41
36:1:1018:G:N2	36:1:1019:G:H1'	2.36	0.41
36:1:1541:G:H1'	36:1:1557:A:C5	2.56	0.41
36:1:1636:U:H3	36:1:1710:C:H4'	1.86	0.41
36:1:3000:A:H2'	36:1:3001:C:C6	2.56	0.41
36:1:3012:A:N1	36:1:3043:C:C2	2.89	0.41
36:1:3178:A:C2	52:M6:115:LYS:HG2	2.55	0.41
37:3:4:U:H2'	37:3:5:G:C8	2.55	0.41
40:L3:36:ASP:C	40:L3:38:SER:H	2.29	0.41
40:L3:56:ILE:HD11	40:L3:359:ILE:HG12	2.01	0.41
40:L3:218:ILE:HG12	40:L3:276:THR:HG23	2.03	0.41
42:L5:109:THR:OG1	42:L5:110:LEU:N	2.53	0.41
42:L5:227:LEU:C	42:L5:229:ASP:H	2.29	0.41
49:M3:174:ARG:HB2	72:O6:9:ILE:HD12	2.02	0.41
49:M3:188:ARG:CZ	49:M3:189:GLU:HG3	2.51	0.41
54:M8:180:ARG:HD2	54:M8:180:ARG:HA	1.79	0.41
55:M9:81:ARG:HG3	55:M9:88:ARG:NH1	2.36	0.41
57:N1:90:ASN:O	57:N1:91:LEU:HD23	2.21	0.41
57:N1:131:GLN:HA	57:N1:132:PRO:HD3	1.86	0.41
67:O1:53:PRO:O	67:O1:57:GLN:HG3	2.20	0.41
67:O1:84:ASP:OD1	67:O1:84:ASP:N	2.54	0.41
68:O2:8:LYS:HE3	68:O2:8:LYS:HB2	1.82	0.41
68:O2:99:ASN:OD1	68:O2:99:ASN:N	2.52	0.41
78:Q2:47:GLN:NE2	78:Q2:53:GLN:OE1	2.53	0.41
1:6:545:A:OP1	32:e0:31:LYS:HE3	2.21	0.41
1:6:620:A:N7	1:6:621:A:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:828:U:O2'	1:6:829:A:OP1	2.31	0.41
1:6:1615:C:OP1	7:s5:81:ARG:NH2	2.53	0.41
3:s1:33:LYS:HE2	3:s1:41:ARG:HH12	1.85	0.41
4:s2:91:ARG:NH1	4:s2:91:ARG:O	2.54	0.41
5:s3:200:LYS:HE2	5:s3:200:LYS:HB3	1.93	0.41
6:s4:195:ILE:O	6:s4:196:VAL:HB	2.20	0.41
13:c1:71:LEU:HB3	13:c1:88:ARG:NH1	2.35	0.41
14:c2:81:ASP:OD1	14:c2:85:LYS:HB3	2.20	0.41
17:c5:10:ARG:HD3	17:c5:10:ARG:HA	1.94	0.41
19:c7:95:ARG:N	19:c7:96:SER:HA	2.35	0.41
30:d8:15:VAL:HG23	30:d8:27:GLN:O	2.21	0.41
34:sR:112:SER:HB2	34:sR:153:GLN:HA	2.02	0.41
35:sM:43:ASP:HA	35:sM:44:PRO:HD3	1.82	0.41
36:5:413:U:O4'	53:m7:118:GLN:HG3	2.20	0.41
36:5:607:A:P	43:l6:26:ARG:NH2	2.94	0.41
36:5:647:A:C2	36:5:2372:A:H2'	2.56	0.41
36:5:725:G:H5'	36:5:726:G:OP2	2.21	0.41
36:5:1055:A:H1'	37:7:81:U:H1'	2.03	0.41
36:5:1250:G:H2'	36:5:1251:A:C8	2.56	0.41
36:5:1332:A:H2'	36:5:1333:C:C6	2.56	0.41
36:5:2179:C:O2'	39:l2:130:SER:OG	2.33	0.41
36:5:2193:U:H5"	36:5:2194:G:H5'	2.01	0.41
36:5:2232:A:N3	36:5:2428:U:O2'	2.48	0.41
36:5:2608:G:H2'	36:5:2609:A:H8	1.86	0.41
36:5:2961:G:H2'	36:5:2962:U:C6	2.56	0.41
36:5:3016:A:H2'	36:5:3017:A:C8	2.55	0.41
36:5:3051:U:C2	36:5:3052:G:C8	3.08	0.41
36:5:3291:G:H2'	36:5:3292:A:C8	2.55	0.41
40:l3:80:ASP:OD2	40:l3:169:THR:HG23	2.20	0.41
41:l4:126:ILE:HD11	41:l4:233:LEU:HD12	2.02	0.41
41:l4:246:ARG:O	41:l4:248:VAL:HG23	2.21	0.41
43:l6:170:LYS:HB3	43:l6:172:HIS:CE1	2.55	0.41
44:l7:57:THR:OG1	44:l7:58:ALA:N	2.54	0.41
45:l8:140:VAL:O	45:l8:144:GLU:HG3	2.21	0.41
47:m0:39:LYS:HA	47:m0:86:HIS:CE1	2.56	0.41
47:m0:39:LYS:HG3	47:m0:40:LYS:HG2	2.02	0.41
55:m9:12:ALA:HB2	55:m9:22:VAL:HG21	2.02	0.41
55:m9:43:LYS:HA	55:m9:43:LYS:HE3	2.03	0.41
55:m9:167:ARG:NH1	55:m9:167:ARG:HB3	2.36	0.41
56:n0:86:GLY:O	56:n0:88:HIS:NE2	2.54	0.41
61:n5:24:LEU:HD23	61:n5:24:LEU:HA	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:n7:48:ARG:HB3	63:n7:69:LYS:HB3	2.01	0.41
1:2:309:C:H2'	1:2:310:C:C6	2.55	0.41
1:2:540:G:H2'	1:2:540:G:OP2	2.20	0.41
1:2:627:C:H4'	15:C3:117:LEU:CD2	2.51	0.41
1:2:648:G:N1	1:2:649:U:C4	2.89	0.41
1:2:856:A:N6	9:S7:96:ARG:HB3	2.35	0.41
1:2:1519:U:H2'	1:2:1520:U:C5	2.55	0.41
1:2:1560:U:H5	1:2:1598:U:HO2'	1.67	0.41
1:2:1660:A:H8	1:2:1660:A:O5'	2.03	0.41
2:S0:62:ARG:HD3	23:D1:36:VAL:HG13	2.03	0.41
2:S0:160:ILE:HA	2:S0:161:PRO:HD2	1.90	0.41
3:S1:35:PRO:HG3	3:S1:98:THR:O	2.20	0.41
3:S1:128:LYS:HG2	3:S1:129:THR:O	2.21	0.41
3:S1:229:MET:O	3:S1:231:LEU:N	2.50	0.41
6:S4:11:ARG:HB2	6:S4:27:TYR:C	2.45	0.41
6:S4:12:LEU:HD13	6:S4:12:LEU:HA	1.89	0.41
11:S9:99:LEU:HD12	11:S9:100:LYS:H	1.85	0.41
14:C2:32:LEU:O	14:C2:36:LEU:HB2	2.21	0.41
15:C3:27:LYS:H	15:C3:27:LYS:CE	2.29	0.41
15:C3:80:LEU:HD22	15:C3:80:LEU:HA	1.93	0.41
18:C6:113:ASP:OD2	18:C6:114:ARG:N	2.53	0.41
21:C9:28:LEU:O	21:C9:29:GLU:HB2	2.19	0.41
21:C9:134:ARG:O	21:C9:138:GLN:HG3	2.21	0.41
22:D0:106:ILE:O	22:D0:107:THR:OG1	2.30	0.41
25:D3:65:ASN:HD22	25:D3:65:ASN:HA	1.56	0.41
34:SR:93:ASP:HB2	34:SR:100:TYR:CE1	2.56	0.41
35:SM:121:LYS:HD3	35:SM:121:LYS:HA	1.95	0.41
36:1:20:A:C6	36:1:21:G:C6	3.09	0.41
36:1:591:G:H1'	43:L6:19:LYS:HG3	2.03	0.41
36:1:846:A:H2'	36:1:847:A:O4'	2.20	0.41
36:1:1339:C:H2'	36:1:1340:G:O4'	2.20	0.41
36:1:1713:G:O6	66:O0:28:LYS:NZ	2.30	0.41
36:1:2698:G:O2'	57:N1:12:ARG:HG2	2.20	0.41
36:1:3173:G:C2	69:O3:96:ALA:HB2	2.56	0.41
36:1:3269:U:H4'	36:1:3270:U:O5'	2.19	0.41
42:L5:279:LYS:HD3	42:L5:279:LYS:O	2.21	0.41
44:L7:77:VAL:CG2	57:N1:139:ARG:HG2	2.51	0.41
47:M0:184:LYS:HE3	47:M0:189:GLU:OE1	2.21	0.41
47:M0:210:ILE:HG23	47:M0:217:PHE:CE2	2.56	0.41
50:M4:70:PHE:CE2	50:M4:72:LEU:HD23	2.56	0.41
52:M6:35:VAL:HG21	52:M6:80:PHE:HE2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:N1:102:ARG:HD3	57:N1:102:ARG:HA	1.75	0.41
58:N2:43:VAL:HG21	58:N2:50:LEU:HA	2.02	0.41
63:N7:3:LYS:O	63:N7:6:LYS:HG3	2.21	0.41
63:N7:53:VAL:HA	63:N7:57:HIS:CD2	2.56	0.41
64:N8:16:SER:O	64:N8:17:ALA:HB3	2.21	0.41
68:O2:67:SER:HB3	68:O2:68:PRO:HD2	2.02	0.41
72:O6:61:ILE:HA	72:O6:65:GLY:O	2.20	0.41
72:O6:69:ALA:O	72:O6:73:ALA:N	2.53	0.41
72:O6:97:SER:HB3	72:O6:98:ARG:H	1.65	0.41
73:O7:19:CYS:HB2	73:O7:27:PHE:HB2	2.02	0.41
73:O7:75:LYS:HE3	73:O7:75:LYS:HB3	1.91	0.41
78:Q2:14:GLY:O	78:Q2:18:ARG:HG3	2.20	0.41
1:6:82:U:H2'	1:6:83:G:O4'	2.21	0.41
1:6:234:G:H3'	1:6:234:G:N3	2.36	0.41
1:6:331:A:H4'	10:s8:31:ARG:O	2.20	0.41
1:6:616:G:C2	1:6:622:A:N7	2.89	0.41
1:6:780:A:OP1	1:6:781:U:H3'	2.21	0.41
1:6:836:U:H2'	1:6:837:G:H8	1.86	0.41
1:6:987:G:H5"	1:6:988:A:OP1	2.21	0.41
1:6:1235:C:OP2	1:6:1245:G:H5'	2.21	0.41
3:s1:180:THR:HG23	3:s1:183:GLN:HE21	1.86	0.41
4:s2:129:ILE:HG22	4:s2:133:LYS:HE3	2.03	0.41
6:s4:31:PRO:HD2	6:s4:38:LEU:HD13	2.02	0.41
6:s4:46:VAL:O	6:s4:50:ASN:HB2	2.21	0.41
9:s7:9:LEU:HD11	9:s7:17:GLU:HB3	2.02	0.41
9:s7:25:VAL:O	9:s7:28:GLU:HB2	2.21	0.41
10:s8:110:ARG:HH12	10:s8:160:PHE:HB3	1.85	0.41
14:c2:33:ARG:NH2	14:c2:99:GLU:O	2.54	0.41
14:c2:86:VAL:N	14:c2:87:PRO:HD3	2.35	0.41
15:c3:88:LEU:HD23	15:c3:125:LEU:HD13	2.02	0.41
16:c4:11:SER:HG	16:c4:12:GLN:H	1.64	0.41
17:c5:31:GLU:O	17:c5:35:LYS:HG2	2.21	0.41
20:c8:145:ARG:HG3	35:sM:68:ARG:CZ	2.50	0.41
23:d1:71:ARG:NE	29:d7:4:VAL:HG11	2.36	0.41
34:sR:121:MET:SD	34:sR:183:LEU:HD23	2.60	0.41
34:sR:172:ALA:HB2	34:sR:202:LEU:HD22	2.02	0.41
36:5:297:G:OP2	36:5:297:G:N2	2.47	0.41
36:5:357:A:O4'	41:l4:81:GLY:HA3	2.20	0.41
36:5:1560:G:O2'	36:5:1561:G:P	2.79	0.41
36:5:2552:C:H5'	36:5:2553:U:OP2	2.20	0.41
36:5:2738:A:H5"	65:n9:38:LYS:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2944:U:H1'	40:l3:251:CYS:SG	2.60	0.41
36:5:3112:G:C2	36:5:3121:U:C5	3.08	0.41
36:5:3244:A:OP2	40:l3:100:ARG:NH2	2.54	0.41
40:l3:287:LYS:HA	40:l3:287:LYS:HD2	1.92	0.41
41:l4:333:VAL:HG23	41:l4:337:GLU:HG3	2.02	0.41
42:l5:46:THR:HA	42:l5:47:PRO:HD3	1.91	0.41
44:l7:121:LYS:HD3	44:l7:121:LYS:C	2.45	0.41
47:m0:161:GLY:O	47:m0:163:GLN:NE2	2.54	0.41
49:m3:2:ALA:N	64:n8:31:GLY:O	2.54	0.41
50:m4:34:ALA:HB2	50:m4:85:TRP:HZ3	1.86	0.41
50:m4:113:THR:H	50:m4:116:GLU:HB3	1.86	0.41
52:m6:62:THR:HG22	52:m6:65:ASN:H	1.85	0.41
53:m7:119:VAL:HA	53:m7:145:HIS:O	2.20	0.41
53:m7:128:ARG:HG2	53:m7:136:ILE:HG21	2.02	0.41
63:n7:83:THR:C	63:n7:85:TYR:H	2.29	0.41
64:n8:23:GLY:C	64:n8:24:LYS:HG2	2.45	0.41
65:n9:53:ALA:O	65:n9:56:ALA:HB3	2.20	0.41
81:p0:28:VAL:HG21	81:p0:185:LEU:HD12	2.03	0.41
1:2:315:A:N3	1:2:316:A:H1'	2.36	0.41
1:2:380:U:H5	11:S9:5:PRO:HB3	1.86	0.41
1:2:461:G:OP1	11:S9:2:PRO:HG2	2.21	0.41
1:2:472:U:O2'	1:2:769:A:N3	2.50	0.41
1:2:936:G:OP1	1:2:1075:C:H1'	2.21	0.41
1:2:940:A:H2'	1:2:941:A:O4'	2.21	0.41
1:2:1116:A:H1'	1:2:1131:A:N6	2.35	0.41
1:2:1256:A:H4'	1:2:1257:U:O5'	2.20	0.41
1:2:1301:U:OP1	4:S2:88:LYS:HB2	2.21	0.41
1:2:1391:A:H61	1:2:1407:U:H3	1.69	0.41
1:2:1486:G:H1'	1:2:1592:A:O2'	2.21	0.41
1:2:1566:U:H5"	20:C8:39:GLY:N	2.36	0.41
1:2:1753:A:N1	1:2:1754:A:N6	2.68	0.41
1:2:1774:G:H2'	1:2:1775:U:O4'	2.21	0.41
2:S0:52:LYS:H	2:S0:52:LYS:HG2	1.47	0.41
5:S3:53:THR:O	5:S3:90:ARG:NH2	2.53	0.41
5:S3:115:ILE:HD11	5:S3:138:VAL:HG21	2.03	0.41
5:S3:134:CYS:N	5:S3:157:LEU:HD11	2.36	0.41
5:S3:194:LYS:O	5:S3:196:ARG:N	2.44	0.41
7:S5:113:ILE:HD13	7:S5:190:ILE:HB	2.03	0.41
8:S6:1:MET:HE1	8:S6:103:GLY:O	2.21	0.41
8:S6:48:TYR:CD2	8:S6:117:GLY:HA3	2.56	0.41
8:S6:173:PRO:HB2	8:S6:174:LYS:H	1.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S8:67:TRP:CZ2	10:S8:156:VAL:HG11	2.55	0.41
10:S8:182:TYR:OH	10:S8:188:GLU:OE1	2.29	0.41
11:S9:42:ILE:O	11:S9:46:SER:OG	2.35	0.41
11:S9:127:VAL:HG12	11:S9:131:GLN:OE1	2.21	0.41
12:C0:55:VAL:HB	12:C0:67:THR:O	2.21	0.41
14:C2:54:ARG:O	14:C2:56:GLU:N	2.54	0.41
15:C3:4:MET:HG3	15:C3:5:HIS:H	1.85	0.41
16:C4:13:VAL:HG13	16:C4:77:THR:H	1.86	0.41
19:C7:29:GLN:HB3	34:SR:85:TRP:HZ3	1.86	0.41
21:C9:14:PHE:CE1	21:C9:135:ILE:HD11	2.56	0.41
21:C9:14:PHE:CE2	21:C9:63:ARG:HB2	2.56	0.41
21:C9:30:VAL:HA	21:C9:31:PRO:HD2	1.80	0.41
24:D2:23:ARG:HH11	24:D2:66:ASN:HA	1.85	0.41
35:SM:64:LYS:C	35:SM:66:ALA:N	2.77	0.41
36:1:506:U:H2'	36:1:507:U:O4'	2.21	0.41
36:1:535:G:N1	36:1:555:U:C2	2.89	0.41
36:1:547:G:H4'	36:1:548:G:OP1	2.21	0.41
36:1:602:A:H2'	36:1:603:A:C8	2.56	0.41
36:1:733:G:N2	36:1:736:A:OP2	2.50	0.41
36:1:792:G:H2'	36:1:793:C:C6	2.56	0.41
36:1:945:C:H1'	36:1:1407:A:H1'	2.03	0.41
36:1:980:A:N7	36:1:981:U:C4	2.89	0.41
36:1:1217:A:C2	36:1:1289:G:C4	3.09	0.41
36:1:1286:A:N3	36:1:1287:A:H1'	2.36	0.41
36:1:1350:A:C2'	36:1:1351:U:H5'	2.51	0.41
36:1:1668:G:C5	36:1:1669:C:C5	3.09	0.41
36:1:1719:G:H5"	55:M9:110:ARG:HH22	1.86	0.41
36:1:1801:U:O5'	36:1:1801:U:H6	2.04	0.41
36:1:1830:G:O3'	61:N5:91:ASN:HB2	2.21	0.41
36:1:1940:G:N2	36:1:3362:A:C8	2.86	0.41
36:1:2245:C:H4'	39:L2:221:LYS:O	2.21	0.41
36:1:2367:A:H2'	36:1:2368:A:C8	2.56	0.41
36:1:2374:C:C4	36:1:2941:A:C4	3.09	0.41
36:1:2376:G:C6	36:1:2377:G:C6	3.08	0.41
36:1:2620:G:H1	84:C:74:CH:HN3	1.68	0.41
36:1:2651:G:H5"	36:1:2652:U:O4'	2.21	0.41
36:1:2855:U:H2'	36:1:2856:G:O4'	2.21	0.41
36:1:3051:U:OP1	60:N4:17:ARG:HD3	2.21	0.41
36:1:3059:G:OP2	67:O1:69:TYR:OH	2.37	0.41
36:1:3164:C:O2'	36:1:3165:A:H8	2.04	0.41
36:1:3229:G:O5'	50:M4:137:LYS:NZ	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:3279:A:N7	69:O3:54:ARG:NH2	2.68	0.41
36:1:3297:U:O4	40:L3:124:LYS:NZ	2.54	0.41
36:1:3373:U:OP2	67:O1:102:LYS:HE3	2.20	0.41
37:3:23:A:C6	37:3:24:A:C6	3.09	0.41
37:3:30:G:C6	37:3:31:U:C4	3.09	0.41
37:3:90:U:C4	37:3:91:G:C5	3.09	0.41
38:4:154:C:H2'	38:4:155:A:O4'	2.20	0.41
39:L2:129:ALA:HB3	39:L2:132:ASN:OD1	2.21	0.41
40:L3:313:HIS:O	40:L3:333:LYS:HD2	2.21	0.41
41:L4:38:VAL:HG13	41:L4:113:VAL:HG11	2.03	0.41
41:L4:166:VAL:O	41:L4:170:LYS:HG3	2.21	0.41
41:L4:181:VAL:HG13	41:L4:201:GLN:HB2	2.02	0.41
41:L4:198:ARG:HD3	41:L4:199:TRP:NE1	2.36	0.41
41:L4:258:LEU:HD12	41:L4:258:LEU:HA	1.87	0.41
44:L7:156:ILE:HD12	44:L7:161:VAL:HB	2.02	0.41
45:L8:72:PRO:HA	45:L8:73:PRO:HD3	1.92	0.41
46:L9:27:VAL:HG12	46:L9:82:VAL:HG11	2.03	0.41
46:L9:106:LYS:H	46:L9:109:ALA:CB	2.34	0.41
48:M1:79:ILE:HG22	48:M1:127:PHE:HE2	1.86	0.41
49:M3:60:ALA:HB3	49:M3:65:TYR:O	2.20	0.41
49:M3:67:ARG:H	49:M3:67:ARG:HG3	1.52	0.41
51:M5:21:PHE:CD2	51:M5:22:LEU:HD13	2.56	0.41
52:M6:73:PHE:HB3	52:M6:78:ARG:HB3	2.02	0.41
53:M7:21:TYR:H	53:M7:145:HIS:CE1	2.38	0.41
54:M8:157:PRO:HD3	64:N8:47:LYS:HB2	2.02	0.41
57:N1:62:GLY:HA3	57:N1:76:ILE:HD13	2.03	0.41
58:N2:30:PRO:HA	58:N2:33:TYR:HB3	2.03	0.41
63:N7:24:VAL:HG11	63:N7:87:LEU:HB3	2.03	0.41
63:N7:136:PHE:CD2	70:O4:89:ILE:HG13	2.55	0.41
64:N8:81:LEU:HD21	64:N8:109:TYR:HE1	1.85	0.41
66:O0:16:LEU:HD12	66:O0:97:ASP:HB3	2.03	0.41
70:O4:99:LYS:HB2	70:O4:99:LYS:HE3	1.73	0.41
71:O5:47:VAL:HA	71:O5:50:SER:HB3	2.03	0.41
71:O5:93:THR:H	71:O5:96:GLU:HG3	1.86	0.41
73:O7:52:LYS:O	73:O7:55:ARG:HB3	2.20	0.41
74:O8:27:ILE:HG22	74:O8:41:THR:HG22	2.03	0.41
77:Q1:1:MET:HE3	77:Q1:1:MET:HB2	1.89	0.41
78:Q2:25:VAL:HG12	78:Q2:93:LEU:HD12	2.02	0.41
79:Q3:22:LEU:HD23	79:Q3:22:LEU:HA	1.93	0.41
79:Q3:83:ILE:HD13	79:Q3:83:ILE:HA	1.86	0.41
1:6:31:C:OP1	25:d3:140:LYS:NZ	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:44:U:H2'	1:6:45:U:C5	2.56	0.41
1:6:139:C:H4'	1:6:140:A:H5'	2.03	0.41
1:6:315:A:H4'	1:6:316:A:H4'	2.01	0.41
1:6:632:U:H5"	25:d3:10:ASN:O	2.20	0.41
1:6:706:A:H2'	1:6:707:A:O4'	2.20	0.41
1:6:813:U:C2	55:m9:163:ARG:HD3	2.56	0.41
1:6:895:G:H4'	16:c4:37:GLU:CD	2.46	0.41
1:6:933:A:OP2	28:d6:37:LYS:NZ	2.44	0.41
1:6:1097:U:H6	4:s2:168:ARG:HD2	1.84	0.41
1:6:1120:U:H3	1:6:1127:G:H1	1.69	0.41
1:6:1255:G:H4'	1:6:1256:A:OP1	2.21	0.41
1:6:1614:A:O2'	1:6:1615:C:H5'	2.20	0.41
3:s1:47:LEU:HD12	3:s1:47:LEU:H	1.86	0.41
5:s3:209:ILE:HB	19:c7:38:ILE:O	2.21	0.41
6:s4:52:LEU:HB3	6:s4:54:TYR:CD2	2.56	0.41
6:s4:104:ASP:N	6:s4:108:ARG:O	2.48	0.41
7:s5:119:ASP:HB3	27:d5:100:ILE:HD13	2.03	0.41
7:s5:189:THR:HG21	27:d5:98:GLN:HE22	1.85	0.41
7:s5:203:LYS:HE2	7:s5:203:LYS:HB2	1.90	0.41
9:s7:9:LEU:HD23	9:s7:10:SER:H	1.86	0.41
11:s9:121:SER:HB3	11:s9:124:HIS:HB2	2.02	0.41
15:c3:20:ARG:HD3	24:d2:56:HIS:CD2	2.55	0.41
15:c3:42:ARG:C	15:c3:44:GLY:N	2.79	0.41
15:c3:45:LEU:HD23	15:c3:45:LEU:HA	1.90	0.41
19:c7:29:GLN:HB2	34:sR:38:ARG:HH12	1.86	0.41
20:c8:113:LEU:O	20:c8:117:LYS:HG3	2.21	0.41
23:d1:53:TYR:OH	23:d1:76:ASP:HB2	2.20	0.41
24:d2:26:LEU:HD23	24:d2:62:VAL:HG22	2.03	0.41
24:d2:49:GLU:O	24:d2:64:GLN:HG2	2.20	0.41
25:d3:72:VAL:O	25:d3:84:THR:HA	2.21	0.41
25:d3:107:PHE:CE1	25:d3:114:LYS:HD3	2.55	0.41
28:d6:31:PRO:O	28:d6:34:LYS:N	2.54	0.41
34:sR:42:LEU:HB2	34:sR:61:PHE:CD2	2.56	0.41
34:sR:67:ILE:HD12	34:sR:85:TRP:CZ3	2.56	0.41
34:sR:89:LEU:HB2	34:sR:103:PHE:HB2	2.02	0.41
35:sM:39:PRO:HD3	48:m1:52:TYR:CE1	2.56	0.41
36:5:260:C:H2'	36:5:261:U:H6	1.85	0.41
36:5:529:A:H2'	36:5:530:G:O4'	2.20	0.41
36:5:547:G:C6	36:5:548:G:H1'	2.56	0.41
36:5:860:G:C5	39:l2:181:LYS:HB2	2.56	0.41
36:5:908:G:H3'	51:m5:81:TYR:OH	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:952:A:O3'	36:5:968:G:N2	2.54	0.41
36:5:1078:U:H1'	36:5:1082:U:O2	2.21	0.41
36:5:1288:U:H2'	36:5:1289:G:C8	2.56	0.41
36:5:1475:A:H4'	67:o1:57:GLN:HG2	2.02	0.41
36:5:1635:G:O6	63:n7:17:ARG:HB2	2.21	0.41
36:5:1682:U:C6	58:n2:85:LYS:HG2	2.56	0.41
36:5:1701:C:H2'	36:5:1702:U:O4'	2.21	0.41
36:5:1767:C:H2'	36:5:1768:U:C6	2.56	0.41
36:5:1816:A:O2'	36:5:1817:G:OP1	2.36	0.41
36:5:1949:G:H5"	55:m9:104:ARG:HH12	1.85	0.41
36:5:2522:G:O6	39:l2:70:ARG:NH2	2.53	0.41
36:5:2523:A:H2'	45:l8:49:TYR:O	2.20	0.41
36:5:2833:A:C2	36:5:2834:G:C8	3.09	0.41
36:5:3180:A:O2'	52:m6:117:ARG:NH2	2.54	0.41
36:5:3274:A:O2'	36:5:3275:U:OP1	2.37	0.41
36:5:3275:U:H4'	36:5:3276:G:OP2	2.20	0.41
38:8:81:U:H1'	38:8:82:U:H6	1.85	0.41
39:l2:79:ASN:H	39:l2:82:VAL:HG11	1.86	0.41
41:l4:118:LYS:O	41:l4:121:ALA:HB3	2.20	0.41
41:l4:226:GLU:CD	41:l4:246:ARG:HH22	2.29	0.41
42:l5:95:TRP:CD1	42:l5:198:TYR:HB3	2.56	0.41
44:l7:118:LYS:HG3	44:l7:191:VAL:HG11	2.03	0.41
48:m1:100:GLY:HA3	48:m1:154:THR:HB	2.02	0.41
49:m3:31:LYS:O	49:m3:35:ARG:HG3	2.21	0.41
52:m6:85:ARG:HD3	52:m6:90:HIS:ND1	2.36	0.41
53:m7:39:TRP:O	53:m7:114:VAL:HG12	2.20	0.41
55:m9:155:LEU:C	55:m9:156:ASN:HD22	2.29	0.41
60:n4:127:LYS:HA	60:n4:127:LYS:HD2	1.82	0.41
63:n7:24:VAL:HG23	63:n7:44:ALA:O	2.21	0.41
63:n7:77:TYR:HB3	66:o0:35:ARG:CZ	2.51	0.41
63:n7:90:GLU:HA	63:n7:93:LYS:HB2	2.03	0.41
66:o0:30:THR:HB	66:o0:91:SER:HB2	2.02	0.41
78:q2:4:VAL:O	78:q2:94:GLY:N	2.35	0.41
81:p0:25:LEU:HD13	81:p0:88:PHE:CE2	2.56	0.41
1:2:55:A:OP1	26:D4:112:LYS:NZ	2.41	0.41
1:2:316:A:H2'	1:2:317:C:H6	1.86	0.41
1:2:452:A:H3'	1:2:453:U:C6	2.56	0.41
1:2:627:C:H2'	1:2:628:G:O4'	2.21	0.41
1:2:720:G:N3	1:2:720:G:H2'	2.36	0.41
1:2:1081:A:H2	1:2:1082:C:H41	1.68	0.41
1:2:1149:G:H1'	1:2:1765:A:C4	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1155:G:N2	1:2:1624:C:C2	2.88	0.41
1:2:1473:U:C5	7:S5:98:MET:HA	2.51	0.41
1:2:1603:U:H2'	1:2:1604:U:C6	2.56	0.41
3:S1:62:LYS:O	3:S1:88:VAL:HB	2.21	0.41
4:S2:101:VAL:HG22	4:S2:115:ILE:HG23	2.03	0.41
5:S3:115:ILE:HG21	35:SM:110:TRP:HA	2.02	0.41
6:S4:112:HIS:NE2	6:S4:237:SER:O	2.54	0.41
6:S4:160:VAL:HG13	6:S4:169:ILE:HG23	2.03	0.41
8:S6:39:GLU:HA	8:S6:42:GLY:O	2.21	0.41
10:S8:74:LYS:HG2	10:S8:108:PRO:HB2	2.03	0.41
19:C7:27:ASP:HB3	19:C7:30:THR:HG23	2.03	0.41
20:C8:28:ILE:HG22	20:C8:56:LYS:O	2.21	0.41
23:D1:17:CYS:HB2	23:D1:56:SER:HB3	2.02	0.41
26:D4:18:LEU:HD23	26:D4:18:LEU:HA	1.88	0.41
28:D6:62:TYR:CG	28:D6:63:ALA:N	2.87	0.41
36:1:855:U:H2'	36:1:856:G:O4'	2.21	0.41
36:1:966:U:C2	36:1:967:A:C8	3.09	0.41
36:1:1422:G:H21	43:L6:5:LYS:NZ	2.19	0.41
36:1:1562:C:H4'	36:1:1563:C:OP1	2.21	0.41
36:1:1595:U:C2	36:1:1596:C:C5	3.09	0.41
36:1:2822:U:H2'	36:1:2823:G:O4'	2.21	0.41
36:1:2824:G:H2'	36:1:2825:C:C6	2.55	0.41
36:1:3045:G:O3'	40:L3:275:ARG:NH1	2.54	0.41
36:1:3215:A:H62	50:M4:122:VAL:HG13	1.85	0.41
37:3:98:C:N3	37:3:99:G:C8	2.89	0.41
39:L2:20:THR:O	39:L2:23:ARG:HG3	2.20	0.41
40:L3:46:PHE:CZ	40:L3:84:VAL:HB	2.56	0.41
42:L5:69:ILE:HD13	57:N1:28:SER:HB2	2.03	0.41
42:L5:78:ALA:HB1	42:L5:104:LEU:HD23	2.03	0.41
42:L5:80:SER:C	42:L5:82:GLU:H	2.28	0.41
44:L7:88:ARG:CZ	44:L7:103:LEU:HD13	2.50	0.41
45:L8:140:VAL:HG21	51:M5:3:ALA:HB2	2.03	0.41
46:L9:22:SER:OG	46:L9:23:ARG:N	2.53	0.41
49:M3:80:VAL:HG22	49:M3:85:LEU:O	2.20	0.41
49:M3:176:GLU:HA	49:M3:183:ARG:HH12	1.86	0.41
53:M7:46:LYS:O	53:M7:50:GLN:HG3	2.20	0.41
57:N1:12:ARG:HD2	57:N1:13:TYR:HE1	1.81	0.41
62:N6:100:HIS:ND1	62:N6:102:SER:OG	2.46	0.41
63:N7:4:PHE:HE1	63:N7:82:PRO:HG3	1.85	0.41
65:N9:43:HIS:O	65:N9:47:LEU:HG	2.21	0.41
68:O2:71:HIS:ND1	68:O2:118:LYS:HD3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:78:A:H1'	8:s6:175:ILE:HG12	2.03	0.41
1:6:400:A:H5"	10:s8:24:LYS:O	2.21	0.41
1:6:447:U:C4	1:6:448:C:C4	3.09	0.41
1:6:825:U:OP2	1:6:825:U:H6	2.04	0.41
1:6:964:U:H5"	15:c3:128:TYR:CE1	2.55	0.41
1:6:1662:G:H2'	1:6:1663:G:H8	1.86	0.41
2:s0:55:GLU:HG2	23:d1:79:LEU:HD22	2.02	0.41
2:s0:142:PRO:HB3	23:d1:34:ILE:HD13	2.03	0.41
5:s3:64:ARG:NH1	5:s3:68:GLU:OE1	2.41	0.41
6:s4:29:PRO:O	6:s4:30:ARG:HB3	2.21	0.41
6:s4:87:MET:SD	6:s4:123:LEU:HB2	2.61	0.41
7:s5:22:PRO:HA	7:s5:34:GLN:OE1	2.21	0.41
9:s7:75:THR:HG22	9:s7:161:GLN:NE2	2.32	0.41
11:s9:112:GLN:O	11:s9:116:LEU:HB3	2.20	0.41
13:c1:99:ARG:HD3	25:d3:8:GLY:O	2.21	0.41
15:c3:4:MET:O	15:c3:5:HIS:ND1	2.54	0.41
18:c6:37:THR:HA	18:c6:49:TYR:OH	2.20	0.41
28:d6:71:LEU:HD13	28:d6:73:TYR:OH	2.21	0.41
30:d8:30:VAL:HB	30:d8:31:GLU:H	1.71	0.41
34:sR:244:ALA:O	34:sR:252:LEU:HD12	2.21	0.41
34:sR:305:TYR:CE2	34:sR:311:ARG:HD2	2.55	0.41
35:sM:58:GLU:O	35:sM:62:ARG:HB2	2.21	0.41
36:5:707:U:H2'	36:5:708:G:C8	2.56	0.41
36:5:830:A:H4'	36:5:1866:C:C4	2.55	0.41
36:5:1366:A:H2'	36:5:1366:A:N3	2.36	0.41
36:5:1560:G:H1	36:5:1579:C:H42	1.69	0.41
36:5:1622:U:H2'	36:5:1623:G:C8	2.56	0.41
36:5:1648:A:H2'	36:5:1649:U:O4'	2.20	0.41
36:5:1691:U:H2'	36:5:1692:U:C6	2.55	0.41
36:5:1916:U:H2'	36:5:1917:C:H6	1.86	0.41
36:5:2097:U:H2'	36:5:2098:C:C6	2.56	0.41
36:5:2258:U:H5"	36:5:2259:A:OP2	2.21	0.41
36:5:2769:A:O3'	78:q2:80:ARG:HB2	2.21	0.41
36:5:3014:U:H2'	36:5:3015:G:H8	1.85	0.41
36:5:3163:A:C6	36:5:3288:G:O6	2.74	0.41
36:5:3205:G:H2'	36:5:3206:C:C5	2.56	0.41
36:5:3287:U:N3	36:5:3288:G:N7	2.69	0.41
36:5:3302:U:H3	36:5:3312:U:H3	1.67	0.41
41:l4:131:VAL:O	41:l4:135:VAL:HG23	2.21	0.41
41:l4:349:THR:HG21	44:l7:64:GLN:HE21	1.86	0.41
42:l5:257:GLU:O	42:l5:258:LYS:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:l9:57:VAL:HG23	46:l9:68:LEU:HG	2.02	0.41
47:m0:10:ARG:HG2	47:m0:11:TYR:CD1	2.56	0.41
47:m0:191:LYS:HE3	47:m0:191:LYS:HB3	1.91	0.41
49:m3:153:ASP:OD2	64:n8:101:VAL:HG11	2.20	0.41
51:m5:118:SER:HB3	51:m5:132:VAL:HG13	2.02	0.41
53:m7:25:SER:CB	53:m7:28:ASN:HB2	2.48	0.41
53:m7:39:TRP:HB2	53:m7:44:ALA:HB2	2.02	0.41
55:m9:35:ALA:O	55:m9:37:SER:N	2.53	0.41
59:n3:67:PRO:C	59:n3:69:LEU:H	2.29	0.41
63:n7:22:LYS:HE3	63:n7:134:LEU:HB2	2.03	0.41
63:n7:105:SER:HA	63:n7:108:GLU:OE1	2.21	0.41
66:o0:104:LEU:HD12	66:o0:105:ALA:N	2.35	0.41
68:o2:7:PRO:HG2	68:o2:63:THR:HG23	2.01	0.41
72:o6:58:ILE:HG22	72:o6:90:MET:HG3	2.03	0.41
1:2:182:A:H2'	1:2:183:U:C6	2.56	0.40
1:2:331:A:H5'	10:S8:33:PRO:HA	2.02	0.40
1:2:377:G:H4'	1:2:379:U:O4	2.22	0.40
1:2:514:G:O2'	1:2:515:A:H5'	2.20	0.40
1:2:707:A:H61	1:2:730:G:H22	1.69	0.40
1:2:1107:G:C6	1:2:1108:G:C6	3.09	0.40
1:2:1180:C:O2'	17:C5:128:HIS:ND1	2.48	0.40
1:2:1796:C:H1'	28:D6:7:SER:OG	2.22	0.40
2:S0:76:ILE:O	2:S0:124:THR:HG23	2.21	0.40
3:S1:71:ALA:HB2	3:S1:79:HIS:O	2.20	0.40
4:S2:115:ILE:HD13	4:S2:208:GLU:HG2	2.03	0.40
5:S3:76:ARG:HG3	12:C0:65:TYR:HE1	1.86	0.40
6:S4:121:TYR:CD2	6:S4:161:LYS:HE3	2.57	0.40
7:S5:48:PHE:CG	7:S5:67:PRO:HB3	2.55	0.40
8:S6:122:GLU:O	8:S6:126:ASP:HB3	2.20	0.40
9:S7:91:ILE:HD12	9:S7:91:ILE:HA	1.88	0.40
12:C0:44:LYS:HD3	12:C0:44:LYS:HA	1.72	0.40
12:C0:61:TRP:HZ3	31:D9:22:ARG:HD3	1.86	0.40
14:C2:43:ARG:H	14:C2:43:ARG:HD3	1.86	0.40
15:C3:67:THR:C	15:C3:69:ASN:H	2.28	0.40
17:C5:130:ARG:HA	17:C5:130:ARG:HD3	1.71	0.40
21:C9:10:ALA:HB3	21:C9:13:ASP:HB2	2.04	0.40
23:D1:59:VAL:H	23:D1:59:VAL:HG23	1.65	0.40
36:1:36:C:H2'	36:1:37:U:H5'	2.03	0.40
36:1:139:G:H2'	36:1:140:C:C6	2.55	0.40
36:1:256:G:H4'	71:O5:111:PHE:HZ	1.86	0.40
36:1:776:U:C5	36:1:2719:U:O2	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1580:A:H1'	36:1:1581:C:H5	1.86	0.40
36:1:1793:C:O2	39:L2:188:LYS:HE3	2.21	0.40
36:1:1898:G:H2'	36:1:1899:G:O4'	2.20	0.40
36:1:2101:C:H1'	36:1:2102:U:O5'	2.22	0.40
36:1:2240:G:H2'	36:1:2241:U:O4'	2.21	0.40
36:1:2700:G:OP1	57:N1:17:ARG:HB2	2.21	0.40
36:1:2747:A:H4'	42:L5:174:PRO:O	2.21	0.40
36:1:2878:G:H2'	36:1:2879:C:H6	1.85	0.40
36:1:3271:G:C5	43:L6:108:LYS:HE3	2.56	0.40
40:L3:41:VAL:HG22	40:L3:186:GLY:H	1.86	0.40
40:L3:173:GLN:O	40:L3:173:GLN:HG3	2.13	0.40
40:L3:285:VAL:HG13	40:L3:322:ILE:CD1	2.52	0.40
40:L3:285:VAL:HG13	40:L3:322:ILE:HD13	2.02	0.40
42:L5:261:THR:H	42:L5:264:GLN:HG3	1.86	0.40
45:L8:147:LYS:HE2	45:L8:147:LYS:HB3	1.82	0.40
47:M0:74:LYS:HB2	47:M0:74:LYS:HE3	1.83	0.40
48:M1:16:LYS:HE3	48:M1:130:VAL:HG11	2.03	0.40
48:M1:52:TYR:HA	48:M1:61:ARG:HG3	2.02	0.40
52:M6:65:ASN:HB3	52:M6:68:ARG:CD	2.51	0.40
62:N6:27:ARG:HA	62:N6:30:LEU:HB2	2.03	0.40
62:N6:30:LEU:HD23	62:N6:30:LEU:HA	1.91	0.40
72:O6:36:ARG:O	72:O6:40:VAL:HG23	2.20	0.40
1:6:445:A:N1	1:6:462:G:O2'	2.46	0.40
1:6:473:A:H4'	1:6:768:C:O2	2.20	0.40
1:6:811:A:C5	9:s7:110:GLN:HG2	2.56	0.40
1:6:934:C:C4	1:6:1077:C:H4'	2.55	0.40
1:6:1177:C:H4'	1:6:1189:A:N1	2.36	0.40
1:6:1241:G:C4	1:6:1242:A:C8	3.10	0.40
1:6:1545:A:OP2	20:c8:134:ARG:HG3	2.21	0.40
2:s0:53:THR:O	2:s0:57:LEU:HB2	2.21	0.40
5:s3:176:LEU:HA	5:s3:181:VAL:HG12	2.02	0.40
6:s4:213:SER:O	6:s4:213:SER:OG	2.35	0.40
6:s4:251:GLU:HG2	6:s4:255:ARG:HH22	1.86	0.40
8:s6:34:GLN:HB3	8:s6:52:ILE:HD12	2.03	0.40
9:s7:62:VAL:O	9:s7:94:ALA:HA	2.21	0.40
9:s7:120:ALA:O	9:s7:124:LYS:HG2	2.21	0.40
13:c1:45:PRO:O	13:c1:49:ILE:HG13	2.20	0.40
14:c2:66:VAL:HG23	14:c2:69:ALA:HA	2.04	0.40
17:c5:53:PRO:O	17:c5:57:MET:HB2	2.20	0.40
36:5:359:U:H4'	36:5:817:A:N6	2.36	0.40
36:5:661:G:C5	36:5:802:C:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:696:C:OP2	41:l4:119:ARG:NH2	2.33	0.40
36:5:1008:U:H2'	36:5:1009:A:O4'	2.21	0.40
36:5:1077:U:H2'	36:5:1078:U:C6	2.57	0.40
36:5:1341:U:H2'	36:5:1342:C:C6	2.56	0.40
36:5:1347:U:H5"	41:l4:303:GLY:H	1.85	0.40
36:5:1911:A:H2	36:5:2122:G:C8	2.40	0.40
36:5:2423:U:H2'	36:5:2424:A:C8	2.56	0.40
36:5:2713:U:H3'	78:q2:9:LYS:O	2.20	0.40
36:5:3007:U:H5'	52:m6:73:PHE:CE1	2.57	0.40
36:5:3215:A:C5'	50:m4:121:MET:HE1	2.51	0.40
36:5:3241:G:H2'	36:5:3245:A:N7	2.37	0.40
36:5:3362:A:C2	36:5:3363:U:C2	3.09	0.40
37:7:113:C:C4	37:7:114:U:C4	3.09	0.40
38:8:25:G:C6	38:8:26:U:C2	3.08	0.40
38:8:68:G:C5	38:8:69:U:C5	3.09	0.40
40:l3:29:VAL:HG22	40:l3:218:ILE:HD13	2.02	0.40
41:l4:30:ILE:H	54:m8:25:TYR:HH	1.65	0.40
41:l4:93:MET:HE2	41:l4:93:MET:N	2.36	0.40
42:l5:219:PHE:HE1	42:l5:227:LEU:HD11	1.86	0.40
44:l7:203:TRP:CD1	44:l7:204:PRO:HD2	2.56	0.40
47:m0:185:ARG:C	47:m0:187:ALA:H	2.29	0.40
48:m1:166:LYS:HB2	48:m1:166:LYS:HE2	1.88	0.40
50:m4:12:TRP:HD1	56:n0:172:TYR:C	2.29	0.40
51:m5:59:PHE:CE2	51:m5:142:ILE:HD11	2.56	0.40
54:m8:148:GLU:OE1	54:m8:151:ARG:NE	2.51	0.40
58:n2:59:ASP:CG	58:n2:60:GLY:H	2.28	0.40
68:o2:38:ILE:H	68:o2:38:ILE:HG12	1.69	0.40
69:o3:6:ARG:HG3	69:o3:8:TYR:H	1.86	0.40
81:p0:64:ARG:HA	81:p0:67:LEU:HD23	2.02	0.40
81:p0:77:LEU:C	81:p0:79:PHE:H	2.28	0.40
83:f:110:LYS:HZ1	83:f:113:VAL:HG23	1.87	0.40
1:2:32:U:OP1	25:D3:139:LYS:NZ	2.44	0.40
1:2:793:A:H5"	1:2:794:U:H6	1.85	0.40
1:2:1038:U:H4'	24:D2:20:THR:HG21	2.03	0.40
1:2:1475:A:H2'	1:2:1476:C:O4'	2.21	0.40
1:2:1483:A:P	1:2:1521:G:H21	2.45	0.40
3:S1:144:ARG:NH2	3:S1:207:LEU:O	2.55	0.40
4:S2:41:LEU:HD21	4:S2:56:ILE:HG22	2.03	0.40
5:S3:176:LEU:HA	5:S3:181:VAL:HG12	2.03	0.40
8:S6:31:ARG:HD2	8:S6:34:GLN:NE2	2.36	0.40
15:C3:84:ILE:HD13	15:C3:89:TYR:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C5:111:MET:HG2	20:C8:119:ILE:HG23	2.04	0.40
26:D4:99:LYS:O	26:D4:101:GLU:N	2.55	0.40
27:D5:89:ILE:HA	27:D5:102:THR:O	2.20	0.40
28:D6:71:LEU:HD22	28:D6:71:LEU:HA	1.89	0.40
30:D8:66:LEU:HD23	30:D8:66:LEU:HA	1.85	0.40
32:E0:14:VAL:O	32:E0:18:THR:HG23	2.21	0.40
34:SR:248:ASN:HD21	34:SR:249:ARG:NH1	2.20	0.40
36:1:164:A:C6	36:1:258:G:C6	3.10	0.40
36:1:662:U:H2'	36:1:663:C:C6	2.56	0.40
36:1:1093:A:N3	36:1:1096:U:N3	2.68	0.40
36:1:1317:A:C4	36:1:1319:G:C8	3.09	0.40
36:1:2282:U:O2	36:1:2310:U:H4'	2.22	0.40
36:1:2618:G:OP1	47:M0:116:ARG:NE	2.54	0.40
36:1:3054:U:H3	36:1:3088:G:H1	1.70	0.40
36:1:3084:C:OP1	60:N4:38:SER:OG	2.25	0.40
36:1:3346:U:H2'	36:1:3347:A:C8	2.56	0.40
39:L2:202:VAL:HG13	39:L2:217:GLN:HG2	2.03	0.40
41:L4:24:ALA:HB2	41:L4:264:SER:HB2	2.03	0.40
42:L5:64:ILE:HD13	42:L5:105:ILE:HD12	2.03	0.40
47:M0:52:LEU:HD23	47:M0:52:LEU:HA	1.79	0.40
47:M0:182:LEU:HB3	47:M0:186:GLU:CD	2.46	0.40
51:M5:84:PRO:O	51:M5:87:GLN:HB2	2.21	0.40
57:N1:50:LYS:HB3	57:N1:92:ARG:NH1	2.36	0.40
58:N2:37:LEU:HD23	58:N2:41:ILE:HD11	2.03	0.40
65:N9:9:ALA:O	65:N9:12:GLN:HG2	2.22	0.40
70:O4:3:GLN:CD	70:O4:30:LEU:HB2	2.46	0.40
71:O5:88:LEU:HD23	71:O5:88:LEU:HA	1.75	0.40
1:6:140:A:H1'	8:s6:179:VAL:HG21	2.02	0.40
1:6:946:U:C4	1:6:947:U:C4	3.10	0.40
1:6:968:U:H2'	1:6:969:C:O4'	2.20	0.40
1:6:1166:A:H2'	1:6:1167:G:O4'	2.21	0.40
1:6:1671:A:H2'	1:6:1672:G:O4'	2.21	0.40
3:s1:61:LEU:HD11	3:s1:96:LEU:HD13	2.03	0.40
3:s1:69:CYS:HB3	16:c4:114:ARG:HH11	1.87	0.40
3:s1:70:LEU:HB3	3:s1:79:HIS:HB3	2.03	0.40
4:s2:61:LEU:HA	4:s2:62:PRO:HD2	1.86	0.40
4:s2:143:TYR:CD2	4:s2:147:ASN:HA	2.57	0.40
12:c0:8:ARG:HD3	12:c0:79:TYR:OH	2.21	0.40
13:c1:35:TYR:CD1	13:c1:49:ILE:HG12	2.56	0.40
22:d0:51:VAL:HG22	22:d0:94:GLU:H	1.86	0.40
27:d5:71:ILE:HG13	27:d5:75:LEU:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:68:C:P	36:5:301:G:H21	2.44	0.40
36:5:221:A:N6	62:n6:103:LYS:HE3	2.36	0.40
36:5:285:A:O2'	36:5:286:U:H5	2.05	0.40
36:5:511:G:H2'	36:5:512:U:O4'	2.22	0.40
36:5:1632:A:H2'	36:5:1633:C:C6	2.56	0.40
36:5:1803:C:O2'	70:o4:70:LYS:HD2	2.21	0.40
36:5:1844:C:O2	73:o7:9:GLY:HA2	2.21	0.40
36:5:1895:A:O2'	36:5:3053:G:H4'	2.21	0.40
36:5:2393:G:O2'	36:5:2982:A:N6	2.46	0.40
36:5:2765:C:O3'	78:q2:39:GLY:HA3	2.22	0.40
36:5:2964:G:O2'	83:f:56:LYS:NZ	2.44	0.40
36:5:3149:G:O2'	40:l3:129:ALA:O	2.34	0.40
36:5:3337:G:H2'	36:5:3338:C:O4'	2.21	0.40
37:7:7:G:OP1	42:l5:33:ARG:HD2	2.21	0.40
42:l5:226:TYR:O	42:l5:230:ASP:N	2.54	0.40
51:m5:24:ARG:HH11	51:m5:24:ARG:HG2	1.86	0.40
52:m6:50:ASN:HA	52:m6:53:LYS:HG3	2.02	0.40
59:n3:35:TYR:CE2	59:n3:37:ILE:HG22	2.56	0.40
65:n9:22:LYS:O	65:n9:23:LYS:HB2	2.21	0.40
1:2:412:A:H2	1:2:421:A:H61	1.69	0.40
1:2:463:U:H2'	1:2:464:A:C8	2.56	0.40
1:2:1241:G:H2'	1:2:1242:A:C8	2.55	0.40
2:S0:169:SER:O	2:S0:173:ILE:HG12	2.20	0.40
5:S3:80:ALA:HA	5:S3:81:PRO:HD3	1.94	0.40
11:S9:34:PHE:CE1	11:S9:105:LEU:HB3	2.55	0.40
11:S9:134:ILE:HA	11:S9:158:PHE:HA	2.03	0.40
17:C5:43:ARG:O	17:C5:47:ARG:HG3	2.20	0.40
21:C9:14:PHE:HZ	21:C9:132:LEU:HG	1.86	0.40
23:D1:3:ASN:OD1	23:D1:9:VAL:HB	2.21	0.40
34:SR:44:SER:O	34:SR:58:VAL:HG22	2.21	0.40
35:SM:64:LYS:H	35:SM:64:LYS:HD2	1.85	0.40
35:SM:102:THR:HG23	35:SM:105:LYS:H	1.86	0.40
36:1:135:C:H1'	71:O5:93:THR:HB	2.04	0.40
36:1:191:U:H2'	36:1:192:C:H6	1.87	0.40
36:1:536:U:N3	36:1:556:U:C4	2.89	0.40
36:1:793:C:H5'	64:N8:5:PHE:HB2	2.04	0.40
36:1:953:G:H2'	36:1:1117:G:H5"	2.04	0.40
36:1:992:A:N6	36:1:993:G:O6	2.55	0.40
36:1:1063:G:C6	36:1:1097:G:C5	3.10	0.40
36:1:1240:A:H61	36:1:1244:A:H5"	1.87	0.40
36:1:1269:U:O2	36:1:1269:U:H2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1282:G:C6	36:1:1283:C:C4	3.09	0.40
36:1:1327:C:O2'	69:O3:76:GLY:HA2	2.21	0.40
36:1:1895:A:O2'	36:1:3053:G:H4'	2.21	0.40
36:1:2163:C:O2'	39:L2:8:GLN:O	2.39	0.40
36:1:2392:C:H5"	36:1:2393:G:OP2	2.20	0.40
36:1:2525:G:H4'	45:L8:49:TYR:OH	2.21	0.40
36:1:3198:U:O2	46:L9:21:LYS:N	2.55	0.40
39:L2:136:ILE:HA	39:L2:148:VAL:HG12	2.03	0.40
39:L2:190:ARG:NH1	39:L2:191:LEU:HD11	2.37	0.40
41:L4:49:ALA:HA	41:L4:109:TRP:CZ2	2.56	0.40
42:L5:208:MET:HG3	42:L5:223:PHE:CZ	2.56	0.40
49:M3:122:LYS:NZ	49:M3:122:LYS:HB3	2.36	0.40
54:M8:98:LYS:HB3	54:M8:99:THR:H	1.70	0.40
54:M8:133:LYS:HB2	54:M8:135:GLN:NE2	2.36	0.40
55:M9:115:ILE:HD12	55:M9:142:ILE:HD13	2.02	0.40
56:N0:31:ALA:HB3	56:N0:37:ALA:HB2	2.03	0.40
57:N1:83:ARG:HG2	57:N1:84:TYR:N	2.32	0.40
64:N8:47:LYS:O	64:N8:49:HIS:N	2.45	0.40
1:6:181:A:H2'	1:6:182:A:O4'	2.21	0.40
1:6:397:A:H2'	1:6:398:G:O4'	2.21	0.40
1:6:555:A:C8	1:6:555:A:H3'	2.56	0.40
1:6:901:G:C6	1:6:902:G:C6	3.09	0.40
1:6:1263:G:C2	1:6:1264:G:H1'	2.56	0.40
1:6:1503:A:O2'	21:c9:37:VAL:HG13	2.22	0.40
1:6:1515:A:H4'	1:6:1517:U:H5	1.85	0.40
1:6:1619:C:H2'	1:6:1620:C:C6	2.56	0.40
4:s2:72:LEU:HD12	4:s2:72:LEU:HA	1.88	0.40
6:s4:49:ARG:O	6:s4:53:LYS:HD2	2.21	0.40
6:s4:62:LYS:HD2	6:s4:66:MET:HG2	2.03	0.40
7:s5:20:PHE:HE1	7:s5:34:GLN:CD	2.29	0.40
7:s5:61:TYR:HE2	7:s5:164:PRO:HG2	1.87	0.40
7:s5:70:VAL:O	7:s5:72:HIS:N	2.54	0.40
9:s7:68:ALA:O	9:s7:72:LYS:HG3	2.21	0.40
10:s8:110:ARG:NH1	10:s8:160:PHE:HB3	2.36	0.40
15:c3:15:ALA:HB2	29:d7:20:LYS:CG	2.50	0.40
17:c5:34:VAL:O	17:c5:42:ARG:HG2	2.21	0.40
20:c8:42:TYR:O	20:c8:46:VAL:HG23	2.21	0.40
20:c8:142:GLY:O	20:c8:145:ARG:HD2	2.21	0.40
21:c9:53:TRP:HA	21:c9:56:LYS:HB2	2.03	0.40
24:d2:36:LYS:HD3	24:d2:39:GLN:OE1	2.21	0.40
27:d5:55:PRO:O	27:d5:103:ARG:NH2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:d6:28:LYS:O	28:d6:29:SER:HB3	2.21	0.40
36:5:432:G:OP1	69:o3:65:ARG:NH2	2.55	0.40
36:5:694:C:H4'	41:l4:232:SER:O	2.21	0.40
36:5:727:G:O6	36:5:742:G:O2'	2.34	0.40
36:5:1152:G:N2	36:5:1200:A:C6	2.86	0.40
36:5:1573:G:C5	36:5:1574:C:H1'	2.57	0.40
36:5:1804:A:H2'	36:5:1805:C:O4'	2.21	0.40
36:5:2373:A:N7	36:5:2867:C:H1'	2.36	0.40
36:5:2533:G:OP2	36:5:2533:G:H8	2.04	0.40
40:l3:3:HIS:O	40:l3:3:HIS:CG	2.74	0.40
41:l4:193:LYS:HB3	41:l4:193:LYS:HE3	1.82	0.40
45:l8:64:ILE:O	45:l8:68:ARG:HG2	2.22	0.40
46:l9:45:PHE:CE1	46:l9:55:VAL:HG13	2.57	0.40
47:m0:206:LEU:O	47:m0:207:GLU:C	2.65	0.40
50:m4:38:ILE:HD13	56:n0:150:PHE:CE2	2.57	0.40
50:m4:127:LYS:O	50:m4:131:VAL:HG23	2.21	0.40
53:m7:95:LEU:HD23	53:m7:95:LEU:HA	1.80	0.40
56:n0:133:ALA:HA	56:n0:141:LYS:NZ	2.36	0.40
58:n2:35:LYS:O	58:n2:38:ILE:HG22	2.21	0.40
60:n4:23:ARG:HE	60:n4:23:ARG:HB3	1.68	0.40
69:o3:59:VAL:O	69:o3:60:ARG:C	2.64	0.40
1:2:100:A:H2'	1:2:101:U:O4'	2.22	0.40
1:2:121:U:HO2'	6:S4:33:ALA:C	2.23	0.40
1:2:144:U:HO2'	1:2:145:A:H8	1.70	0.40
1:2:325:G:H4'	13:C1:83:THR:HG21	2.04	0.40
1:2:850:A:C2	1:2:851:U:C2	3.10	0.40
1:2:1583:A:N1	1:2:1611:A:H5"	2.37	0.40
1:2:1596:C:O2'	1:2:1598:U:OP2	2.26	0.40
2:S0:32:HIS:ND1	2:S0:33:GLN:HG3	2.36	0.40
4:S2:121:VAL:HB	35:SM:120:GLU:OE1	2.21	0.40
7:S5:65:ARG:HA	7:S5:66:GLN:HA	1.85	0.40
8:S6:73:ILE:O	8:S6:97:VAL:HG12	2.20	0.40
10:S8:106:ALA:HB3	10:S8:163:GLY:C	2.46	0.40
11:S9:107:ARG:O	11:S9:147:MET:HA	2.21	0.40
11:S9:154:LYS:HB2	11:S9:154:LYS:HE3	1.86	0.40
12:C0:54:TYR:O	12:C0:69:THR:OG1	2.36	0.40
13:C1:107:VAL:HA	13:C1:108:PRO:HD3	1.84	0.40
15:C3:27:LYS:HB2	15:C3:28:LEU:H	1.55	0.40
15:C3:33:VAL:HG21	15:C3:66:ILE:HG12	2.04	0.40
16:C4:19:ILE:HD11	16:C4:105:LEU:HD21	2.03	0.40
24:D2:38:LEU:HB3	24:D2:50:PHE:CE1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D3:19:ARG:O	25:D3:20:ARG:C	2.64	0.40
28:D6:73:TYR:HB3	28:D6:78:ALA:HB2	2.03	0.40
36:1:269:G:P	51:M5:44:ARG:HH22	2.44	0.40
36:1:296:A:O2'	36:1:299:G:H4'	2.21	0.40
36:1:361:A:H4'	73:O7:45:ARG:NH2	2.36	0.40
36:1:437:G:H2'	36:1:438:A:C8	2.56	0.40
36:1:513:G:C2	36:1:579:G:C4	3.09	0.40
36:1:527:A:H2'	36:1:528:U:O4'	2.21	0.40
36:1:1193:A:H2'	36:1:1194:G:O4'	2.22	0.40
36:1:1549:U:H2'	36:1:1550:C:H6	1.87	0.40
36:1:2247:G:H2'	36:1:2248:C:O4'	2.21	0.40
36:1:2259:A:H2'	36:1:2260:U:O4'	2.21	0.40
36:1:2315:G:C2	36:1:2316:G:N7	2.89	0.40
36:1:2510:U:O2'	36:1:2511:A:H5"	2.22	0.40
36:1:2735:U:H2'	36:1:2736:A:H8	1.87	0.40
36:1:3237:U:H2'	36:1:3238:G:C8	2.57	0.40
36:1:3269:U:H3	43:L6:134:ARG:HH21	1.70	0.40
36:1:3350:C:O2'	36:1:3351:U:O5'	2.23	0.40
38:4:118:C:H2'	38:4:119:C:C6	2.57	0.40
38:4:121:U:H2'	38:4:122:U:C6	2.57	0.40
41:L4:42:VAL:HG12	41:L4:236:LEU:HD11	2.02	0.40
41:L4:194:TYR:HD2	41:L4:194:TYR:H	1.70	0.40
43:L6:139:LYS:O	43:L6:143:LYS:HG3	2.21	0.40
44:L7:138:TYR:CE2	44:L7:233:GLU:HG2	2.56	0.40
51:M5:36:ILE:HD12	51:M5:106:VAL:HG12	2.03	0.40
57:N1:14:MET:HE2	57:N1:14:MET:HB3	1.56	0.40
57:N1:103:GLN:HE21	57:N1:103:GLN:HB3	1.76	0.40
59:N3:81:GLN:O	59:N3:82:ALA:HB3	2.22	0.40
63:N7:4:PHE:CZ	66:O0:35:ARG:HA	2.57	0.40
64:N8:21:ARG:O	64:N8:24:LYS:NZ	2.53	0.40
78:Q2:12:CYS:O	78:Q2:18:ARG:HA	2.21	0.40
1:6:778:G:C5	1:6:780:A:C8	3.09	0.40
1:6:1017:U:H2'	1:6:1018:U:C6	2.57	0.40
1:6:1315:U:P	1:6:1328:G:H1	2.44	0.40
1:6:1363:U:H6	1:6:1363:U:H2'	1.64	0.40
1:6:1529:C:H2'	1:6:1530:C:C6	2.57	0.40
1:6:1584:G:N2	1:6:1610:G:H2'	2.36	0.40
3:s1:87:ARG:NH2	3:s1:89:ASP:OD1	2.55	0.40
4:s2:56:ILE:CG2	4:s2:61:LEU:HB2	2.46	0.40
6:s4:136:VAL:HG12	6:s4:137:PRO:O	2.21	0.40
7:s5:149:VAL:HG13	7:s5:151:GLY:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:s6:51:LYS:HB3	8:s6:112:VAL:HG13	2.03	0.40
8:s6:77:LEU:HD12	8:s6:95:LYS:HB2	2.03	0.40
29:d7:36:LYS:HB3	29:d7:42:ASN:O	2.20	0.40
36:5:161:G:H8	36:5:161:G:O5'	2.04	0.40
36:5:216:G:H4'	62:n6:19:TYR:CE2	2.57	0.40
36:5:573:C:H2'	36:5:574:U:C6	2.56	0.40
36:5:701:G:H2'	36:5:702:C:C6	2.56	0.40
36:5:1619:A:HO2'	38:8:125:U:H5	1.68	0.40
36:5:1636:U:H3	36:5:1710:C:H4'	1.85	0.40
36:5:2127:U:O2'	36:5:2301:U:OP1	2.37	0.40
36:5:2552:C:H5	66:o0:53:LYS:NZ	2.19	0.40
36:5:2724:U:H4'	57:n1:54:HIS:NE2	2.36	0.40
36:5:2777:G:H5'	36:5:2779:A:OP2	2.22	0.40
36:5:2802:A:C8	78:q2:56:PRO:HA	2.56	0.40
36:5:2843:U:H5"	36:5:2844:C:OP2	2.21	0.40
36:5:2905:U:H2'	36:5:2906:C:C6	2.56	0.40
36:5:3132:C:H2'	36:5:3133:C:C6	2.56	0.40
36:5:3194:C:C2'	36:5:3195:U:H3'	2.50	0.40
36:5:3222:U:O2'	36:5:3223:A:H5'	2.22	0.40
38:8:15:G:C6	38:8:16:G:C6	3.09	0.40
38:8:104:A:C8	38:8:105:A:C8	3.09	0.40
40:l3:232:ARG:HG2	40:l3:233:TRP:CD1	2.56	0.40
42:l5:94:ASN:OD1	42:l5:94:ASN:N	2.51	0.40
42:l5:237:GLU:O	42:l5:241:THR:HB	2.21	0.40
47:m0:99:ILE:H	47:m0:99:ILE:HD13	1.85	0.40
54:m8:86:THR:HB	54:m8:105:ARG:HB2	2.03	0.40
1:2:325:G:H2'	1:2:326:G:C8	2.57	0.40
1:2:1228:G:OP2	14:C2:119:SER:OG	2.39	0.40
1:2:1244:A:O2'	1:2:1245:G:OP1	2.37	0.40
1:2:1504:G:C6	1:2:1505:A:C6	3.09	0.40
1:2:1615:C:C5	7:S5:81:ARG:HA	2.57	0.40
3:S1:86:LEU:HB3	3:S1:98:THR:OG1	2.22	0.40
14:C2:78:LEU:HD23	14:C2:78:LEU:HA	1.92	0.40
17:C5:21:ASP:O	17:C5:23:GLU:N	2.54	0.40
18:C6:41:PRO:C	18:C6:43:ILE:H	2.28	0.40
22:D0:96:PRO:HB2	22:D0:97:VAL:H	1.65	0.40
25:D3:87:VAL:HG22	25:D3:124:VAL:HG21	2.03	0.40
25:D3:92:CYS:HG	25:D3:136:TRP:CD1	2.39	0.40
34:SR:22:SER:HB3	34:SR:36:ALA:HB3	2.03	0.40
36:1:214:G:H4'	62:N6:10:SER:O	2.21	0.40
36:1:430:U:H2'	36:1:431:U:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:439:C:O2	36:1:439:C:H2'	2.21	0.40
36:1:600:G:N2	36:1:604:G:C6	2.90	0.40
36:1:980:A:H2'	36:1:981:U:C1'	2.52	0.40
36:1:1026:A:H2'	36:1:1027:A:C8	2.57	0.40
36:1:1083:G:C2	36:1:1084:A:C4	3.10	0.40
36:1:1083:G:H2'	36:1:1084:A:C8	2.56	0.40
36:1:1171:G:H2'	36:1:1172:G:O4'	2.22	0.40
36:1:1238:C:H1'	36:1:1251:A:H61	1.86	0.40
36:1:1597:C:OP1	70:O4:31:ARG:HD2	2.22	0.40
36:1:1764:U:H3'	36:1:1765:U:C4'	2.51	0.40
36:1:2366:C:H2'	36:1:2367:A:C8	2.57	0.40
36:1:2630:C:C5	57:N1:4:SER:HB2	2.56	0.40
36:1:3144:G:N2	36:1:3145:C:H1'	2.36	0.40
37:3:36:C:O2'	37:3:37:G:H5'	2.22	0.40
40:L3:80:ASP:OD2	40:L3:314:TYR:OH	2.38	0.40
40:L3:255:TRP:CD1	40:L3:255:TRP:C	2.99	0.40
40:L3:339:ARG:NH1	40:L3:342:LEU:HD21	2.36	0.40
45:L8:75:ILE:HG22	45:L8:76:ALA:N	2.37	0.40
45:L8:153:ILE:HD13	45:L8:167:PRO:HD3	2.02	0.40
46:L9:85:GLY:C	46:L9:187:ILE:HG13	2.47	0.40
46:L9:189:GLU:O	46:L9:191:LEU:N	2.53	0.40
51:M5:80:THR:HG21	51:M5:87:GLN:HA	2.03	0.40
56:N0:71:LYS:O	56:N0:73:LYS:HG3	2.22	0.40
60:N4:14:TYR:O	60:N4:17:ARG:HB3	2.21	0.40
61:N5:77:GLU:HB3	61:N5:78:ASP:OD1	2.21	0.40
63:N7:126:LYS:O	63:N7:128:GLN:N	2.45	0.40
66:O0:41:LEU:HD22	66:O0:41:LEU:HA	1.94	0.40
77:Q1:8:LYS:HD3	77:Q1:12:ARG:HH21	1.85	0.40
78:Q2:74:CYS:O	78:Q2:78:LYS:N	2.55	0.40
1:6:18:C:O3'	25:d3:112:LYS:NZ	2.54	0.40
1:6:159:U:H5'	26:d4:117:LYS:HG2	2.03	0.40
1:6:717:C:O2'	1:6:718:U:OP1	2.39	0.40
1:6:1117:U:H2'	1:6:1118:G:H8	1.87	0.40
3:s1:179:SER:HB3	3:s1:183:GLN:HB2	2.03	0.40
6:s4:31:PRO:HG2	6:s4:38:LEU:O	2.22	0.40
7:s5:133:VAL:HG22	7:s5:198:LEU:HD13	2.03	0.40
9:s7:89:HIS:ND1	9:s7:168:SER:OG	2.35	0.40
11:s9:16:LYS:HB3	11:s9:16:LYS:HE3	1.86	0.40
14:c2:52:LEU:HD13	14:c2:85:LYS:HZ1	1.86	0.40
16:c4:48:VAL:HG22	16:c4:49:LYS:H	1.86	0.40
17:c5:25:LEU:O	17:c5:28:MET:HE2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:c5:84:ILE:H	17:c5:84:ILE:HD12	1.87	0.40
23:d1:64:GLU:CG	29:d7:3:LEU:HG	2.49	0.40
24:d2:7:LEU:HD11	24:d2:37:PHE:HD2	1.86	0.40
34:sR:111:MET:N	34:sR:125:GLY:O	2.28	0.40
36:5:158:G:N2	36:5:264:G:H1'	2.36	0.40
36:5:361:A:N3	36:5:814:U:H1'	2.37	0.40
36:5:540:U:H2'	36:5:541:U:O4'	2.21	0.40
36:5:822:G:H2'	36:5:823:C:O4'	2.21	0.40
36:5:1658:G:H2'	36:5:1659:U:H6	1.86	0.40
36:5:2401:A:H4'	41:l4:68:GLY:O	2.22	0.40
36:5:3028:G:H2'	36:5:3029:A:C8	2.56	0.40
36:5:3087:A:H4'	36:5:3375:A:H61	1.87	0.40
36:5:3234:A:N6	36:5:3235:C:C4	2.90	0.40
40:l3:106:TRP:CG	40:l3:130:PHE:CE1	3.10	0.40
40:l3:265:ALA:C	40:l3:266:ARG:HG2	2.46	0.40
41:l4:316:ASN:HA	41:l4:317:PRO:HD3	1.77	0.40
44:l7:111:ILE:O	44:l7:112:ASN:HB2	2.22	0.40
51:m5:183:THR:HB	51:m5:187:ARG:HB2	2.03	0.40
56:n0:155:ARG:HB2	56:n0:172:TYR:HB2	2.04	0.40
59:n3:27:ASP:HA	59:n3:113:ALA:O	2.21	0.40
63:n7:110:ALA:O	63:n7:113:VAL:HB	2.21	0.40
68:o2:118:LYS:HG2	68:o2:119:VAL:N	2.37	0.40
79:q3:49:ARG:HD3	79:q3:51:ALA:C	2.47	0.40
81:p0:79:PHE:CD1	81:p0:189:GLN:HG3	2.56	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:3153:U:O4	34:sR:79:TYR:OH[2_656]	2.12	0.08

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 X-ray entries followed by that with respect to entries of similar resolution.

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
2	S0	204/251 (81%)	151 (74%)	30 (15%)	23 (11%)	0 2
2	s0	204/251 (81%)	164 (80%)	25 (12%)	15 (7%)	1 6
3	S1	212/254 (84%)	152 (72%)	38 (18%)	22 (10%)	0 2
3	s1	214/254 (84%)	168 (78%)	33 (15%)	13 (6%)	1 9
4	S2	215/253 (85%)	168 (78%)	33 (15%)	14 (6%)	1 8
4	s2	215/253 (85%)	168 (78%)	33 (15%)	14 (6%)	1 8
5	S3	221/239 (92%)	187 (85%)	26 (12%)	8 (4%)	2 17
5	s3	221/239 (92%)	176 (80%)	35 (16%)	10 (4%)	2 13
6	S4	258/260 (99%)	202 (78%)	46 (18%)	10 (4%)	2 16
6	s4	258/260 (99%)	189 (73%)	53 (20%)	16 (6%)	1 9
7	S5	204/224 (91%)	155 (76%)	37 (18%)	12 (6%)	1 9
7	s5	204/224 (91%)	160 (78%)	29 (14%)	15 (7%)	1 6
8	S6	224/236 (95%)	193 (86%)	22 (10%)	9 (4%)	2 15
8	s6	216/236 (92%)	182 (84%)	22 (10%)	12 (6%)	1 9
9	S7	182/189 (96%)	134 (74%)	27 (15%)	21 (12%)	0 2
9	s7	184/189 (97%)	152 (83%)	20 (11%)	12 (6%)	1 8
10	S8	184/200 (92%)	151 (82%)	24 (13%)	9 (5%)	1 12
10	s8	184/200 (92%)	157 (85%)	20 (11%)	7 (4%)	2 16
11	S9	183/196 (93%)	149 (81%)	23 (13%)	11 (6%)	1 9
11	s9	183/196 (93%)	147 (80%)	27 (15%)	9 (5%)	1 12
12	C0	82/96 (85%)	71 (87%)	8 (10%)	3 (4%)	2 17
12	c0	82/96 (85%)	56 (68%)	16 (20%)	10 (12%)	0 1
13	C1	143/155 (92%)	116 (81%)	18 (13%)	9 (6%)	1 8
13	c1	143/155 (92%)	115 (80%)	21 (15%)	7 (5%)	1 12
14	C2	107/142 (75%)	70 (65%)	27 (25%)	10 (9%)	0 3
14	c2	107/142 (75%)	75 (70%)	22 (21%)	10 (9%)	0 3
15	C3	148/150 (99%)	124 (84%)	20 (14%)	4 (3%)	4 22
15	c3	148/150 (99%)	116 (78%)	23 (16%)	9 (6%)	1 9
16	C4	125/136 (92%)	81 (65%)	33 (26%)	11 (9%)	0 4
16	c4	126/136 (93%)	96 (76%)	15 (12%)	15 (12%)	0 1
17	C5	121/141 (86%)	95 (78%)	12 (10%)	14 (12%)	0 2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
17	c5	128/141 (91%)	98 (77%)	19 (15%)	11 (9%)	0 4
18	C6	139/142 (98%)	116 (84%)	14 (10%)	9 (6%)	1 8
18	c6	140/142 (99%)	118 (84%)	13 (9%)	9 (6%)	1 8
19	C7	116/136 (85%)	82 (71%)	23 (20%)	11 (10%)	0 3
19	c7	113/136 (83%)	93 (82%)	13 (12%)	7 (6%)	1 9
20	C8	143/145 (99%)	116 (81%)	17 (12%)	10 (7%)	1 7
20	c8	143/145 (99%)	120 (84%)	16 (11%)	7 (5%)	1 12
21	C9	141/143 (99%)	115 (82%)	18 (13%)	8 (6%)	1 9
21	c9	141/143 (99%)	120 (85%)	15 (11%)	6 (4%)	2 14
22	D0	105/120 (88%)	89 (85%)	9 (9%)	7 (7%)	1 7
22	d0	108/120 (90%)	89 (82%)	14 (13%)	5 (5%)	2 13
23	D1	85/87 (98%)	66 (78%)	11 (13%)	8 (9%)	0 3
23	d1	85/87 (98%)	63 (74%)	17 (20%)	5 (6%)	1 9
24	D2	127/129 (98%)	116 (91%)	8 (6%)	3 (2%)	4 24
24	d2	127/129 (98%)	107 (84%)	17 (13%)	3 (2%)	4 24
25	D3	142/144 (99%)	109 (77%)	21 (15%)	12 (8%)	0 4
25	d3	142/144 (99%)	117 (82%)	20 (14%)	5 (4%)	3 18
26	D4	132/134 (98%)	109 (83%)	13 (10%)	10 (8%)	1 6
26	d4	132/134 (98%)	110 (83%)	15 (11%)	7 (5%)	1 10
27	D5	68/107 (64%)	48 (71%)	13 (19%)	7 (10%)	0 2
27	d5	67/107 (63%)	51 (76%)	15 (22%)	1 (2%)	8 32
28	D6	95/97 (98%)	56 (59%)	21 (22%)	18 (19%)	0 0
28	d6	95/97 (98%)	66 (70%)	20 (21%)	9 (10%)	0 3
29	D7	79/81 (98%)	61 (77%)	15 (19%)	3 (4%)	2 16
29	d7	79/81 (98%)	61 (77%)	14 (18%)	4 (5%)	1 11
30	D8	61/66 (92%)	50 (82%)	9 (15%)	2 (3%)	3 19
30	d8	61/66 (92%)	47 (77%)	11 (18%)	3 (5%)	1 12
31	D9	51/55 (93%)	39 (76%)	9 (18%)	3 (6%)	1 9
31	d9	51/55 (93%)	41 (80%)	8 (16%)	2 (4%)	2 16
32	E0	58/62 (94%)	46 (79%)	10 (17%)	2 (3%)	3 18
32	e0	60/62 (97%)	40 (67%)	12 (20%)	8 (13%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
33	E1	69/76 (91%)	35 (51%)	17 (25%)	17 (25%)	0 0
33	e1	74/76 (97%)	36 (49%)	21 (28%)	17 (23%)	0 0
34	SR	316/318 (99%)	263 (83%)	36 (11%)	17 (5%)	1 10
34	sR	316/318 (99%)	252 (80%)	53 (17%)	11 (4%)	3 18
35	SM	120/273 (44%)	91 (76%)	18 (15%)	11 (9%)	0 3
35	sM	61/273 (22%)	42 (69%)	11 (18%)	8 (13%)	0 1
39	L2	250/253 (99%)	213 (85%)	27 (11%)	10 (4%)	2 15
39	l2	250/253 (99%)	205 (82%)	30 (12%)	15 (6%)	1 9
40	L3	384/386 (100%)	316 (82%)	49 (13%)	19 (5%)	1 12
40	l3	384/386 (100%)	330 (86%)	39 (10%)	15 (4%)	2 16
41	L4	359/361 (99%)	291 (81%)	46 (13%)	22 (6%)	1 9
41	l4	359/361 (99%)	296 (82%)	43 (12%)	20 (6%)	1 9
42	L5	294/296 (99%)	232 (79%)	44 (15%)	18 (6%)	1 9
42	l5	292/296 (99%)	248 (85%)	38 (13%)	6 (2%)	5 26
43	L6	152/175 (87%)	122 (80%)	27 (18%)	3 (2%)	6 27
43	l6	153/175 (87%)	125 (82%)	24 (16%)	4 (3%)	4 23
44	L7	220/243 (90%)	185 (84%)	24 (11%)	11 (5%)	1 11
44	l7	221/243 (91%)	192 (87%)	21 (10%)	8 (4%)	2 17
45	L8	231/255 (91%)	190 (82%)	30 (13%)	11 (5%)	2 12
45	l8	229/255 (90%)	174 (76%)	40 (18%)	15 (7%)	1 7
46	L9	189/191 (99%)	145 (77%)	29 (15%)	15 (8%)	1 5
46	l9	189/191 (99%)	158 (84%)	24 (13%)	7 (4%)	2 17
47	M0	207/220 (94%)	161 (78%)	37 (18%)	9 (4%)	2 14
47	m0	209/220 (95%)	169 (81%)	29 (14%)	11 (5%)	1 10
48	M1	167/173 (96%)	128 (77%)	27 (16%)	12 (7%)	1 6
48	m1	167/173 (96%)	145 (87%)	9 (5%)	13 (8%)	1 5
49	M3	191/198 (96%)	153 (80%)	30 (16%)	8 (4%)	2 14
49	m3	192/198 (97%)	152 (79%)	27 (14%)	13 (7%)	1 7
50	M4	134/137 (98%)	116 (87%)	12 (9%)	6 (4%)	2 13
50	m4	135/137 (98%)	117 (87%)	15 (11%)	3 (2%)	5 26
51	M5	201/203 (99%)	175 (87%)	20 (10%)	6 (3%)	3 20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
51	m5	201/203 (99%)	178 (89%)	18 (9%)	5 (2%)	4 23
52	M6	195/198 (98%)	174 (89%)	12 (6%)	9 (5%)	2 13
52	m6	195/198 (98%)	172 (88%)	20 (10%)	3 (2%)	8 32
53	M7	181/183 (99%)	151 (83%)	25 (14%)	5 (3%)	4 21
53	m7	153/183 (84%)	137 (90%)	14 (9%)	2 (1%)	9 35
54	M8	183/185 (99%)	156 (85%)	20 (11%)	7 (4%)	2 16
54	m8	183/185 (99%)	154 (84%)	21 (12%)	8 (4%)	2 13
55	M9	186/188 (99%)	164 (88%)	17 (9%)	5 (3%)	4 22
55	m9	186/188 (99%)	164 (88%)	20 (11%)	2 (1%)	11 39
56	N0	170/172 (99%)	151 (89%)	15 (9%)	4 (2%)	4 24
56	n0	170/172 (99%)	159 (94%)	9 (5%)	2 (1%)	10 37
57	N1	157/159 (99%)	131 (83%)	20 (13%)	6 (4%)	2 16
57	n1	157/159 (99%)	138 (88%)	16 (10%)	3 (2%)	6 28
58	N2	98/120 (82%)	73 (74%)	20 (20%)	5 (5%)	1 11
58	n2	96/120 (80%)	80 (83%)	13 (14%)	3 (3%)	3 20
59	N3	134/136 (98%)	117 (87%)	12 (9%)	5 (4%)	2 17
59	n3	134/136 (98%)	122 (91%)	4 (3%)	8 (6%)	1 9
60	N4	96/155 (62%)	66 (69%)	21 (22%)	9 (9%)	0 3
60	n4	133/155 (86%)	102 (77%)	23 (17%)	8 (6%)	1 9
61	N5	119/141 (84%)	103 (87%)	12 (10%)	4 (3%)	3 18
61	n5	118/141 (84%)	91 (77%)	17 (14%)	10 (8%)	0 4
62	N6	124/126 (98%)	104 (84%)	19 (15%)	1 (1%)	16 45
62	n6	124/126 (98%)	102 (82%)	17 (14%)	5 (4%)	2 15
63	N7	133/135 (98%)	112 (84%)	12 (9%)	9 (7%)	1 7
63	n7	133/135 (98%)	100 (75%)	26 (20%)	7 (5%)	1 10
64	N8	146/148 (99%)	113 (77%)	26 (18%)	7 (5%)	2 12
64	n8	146/148 (99%)	110 (75%)	25 (17%)	11 (8%)	1 6
65	N9	56/58 (97%)	46 (82%)	8 (14%)	2 (4%)	2 17
65	n9	56/58 (97%)	41 (73%)	9 (16%)	6 (11%)	0 2
66	O0	95/104 (91%)	83 (87%)	11 (12%)	1 (1%)	11 39
66	o0	98/104 (94%)	86 (88%)	10 (10%)	2 (2%)	6 27

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
67	O1	107/112 (96%)	96 (90%)	6 (6%)	5 (5%)	2 12
67	o1	107/112 (96%)	85 (79%)	15 (14%)	7 (6%)	1 8
68	O2	125/129 (97%)	110 (88%)	11 (9%)	4 (3%)	3 19
68	o2	125/129 (97%)	105 (84%)	16 (13%)	4 (3%)	3 19
69	O3	104/106 (98%)	96 (92%)	6 (6%)	2 (2%)	6 28
69	o3	104/106 (98%)	93 (89%)	9 (9%)	2 (2%)	6 28
70	O4	110/120 (92%)	96 (87%)	11 (10%)	3 (3%)	4 22
70	o4	110/120 (92%)	88 (80%)	18 (16%)	4 (4%)	2 17
71	O5	117/119 (98%)	95 (81%)	12 (10%)	10 (8%)	0 4
71	o5	117/119 (98%)	94 (80%)	21 (18%)	2 (2%)	7 30
72	O6	97/99 (98%)	76 (78%)	12 (12%)	9 (9%)	0 3
72	o6	97/99 (98%)	76 (78%)	11 (11%)	10 (10%)	0 2
73	O7	85/87 (98%)	69 (81%)	14 (16%)	2 (2%)	4 24
73	o7	85/87 (98%)	70 (82%)	14 (16%)	1 (1%)	10 37
74	O8	75/77 (97%)	66 (88%)	7 (9%)	2 (3%)	4 22
74	o8	75/77 (97%)	61 (81%)	9 (12%)	5 (7%)	1 7
75	O9	48/50 (96%)	35 (73%)	10 (21%)	3 (6%)	1 8
75	o9	48/50 (96%)	39 (81%)	9 (19%)	0	100 100
76	Q0	50/52 (96%)	43 (86%)	6 (12%)	1 (2%)	6 27
76	q0	50/52 (96%)	48 (96%)	1 (2%)	1 (2%)	6 27
77	Q1	23/25 (92%)	21 (91%)	2 (9%)	0	100 100
77	q1	23/25 (92%)	20 (87%)	2 (9%)	1 (4%)	2 14
78	Q2	103/105 (98%)	85 (82%)	13 (13%)	5 (5%)	1 12
78	q2	103/105 (98%)	88 (85%)	9 (9%)	6 (6%)	1 9
79	Q3	89/91 (98%)	70 (79%)	13 (15%)	6 (7%)	1 7
79	q3	89/91 (98%)	79 (89%)	9 (10%)	1 (1%)	11 39
81	p0	117/311 (38%)	97 (83%)	14 (12%)	6 (5%)	1 11
83	f	146/157 (93%)	91 (62%)	35 (24%)	20 (14%)	0 1
All	All	22316/24284 (92%)	18108 (81%)	2992 (13%)	1216 (5%)	1 10

All (1216) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	S0	95	ALA
2	S0	158	VAL
2	S0	190	ASP
2	S0	192	THR
3	S1	35	PRO
3	S1	37	THR
3	S1	132	ASP
3	S1	206	PRO
3	S1	213	ARG
4	S2	48	GLY
4	S2	106	ASP
5	S3	217	ILE
5	S3	220	PRO
6	S4	12	LEU
7	S5	63	GLN
7	S5	98	MET
8	S6	122	GLU
8	S6	173	PRO
9	S7	31	SER
9	S7	32	PRO
9	S7	64	VAL
9	S7	116	ARG
9	S7	186	PRO
11	S9	93	LEU
11	S9	98	ALA
11	S9	134	ILE
13	C1	7	VAL
13	C1	55	ASP
16	C4	42	VAL
17	C5	54	ALA
17	C5	69	GLU
17	C5	80	MET
17	C5	87	PRO
17	C5	125	PRO
18	C6	41	PRO
18	C6	58	ASP
18	C6	97	VAL
18	C6	114	ARG
19	C7	85	VAL
19	C7	86	PRO
19	C7	88	VAL
19	C7	99	VAL
19	C7	124	VAL

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Mol	Chain	Res	Type
20	C8	76	PRO
20	C8	92	ILE
21	C9	11	ALA
21	C9	31	PRO
21	C9	53	TRP
21	C9	67	MET
21	C9	69	LYS
23	D1	4	ASP
24	D2	83	ILE
25	D3	36	THR
25	D3	114	LYS
25	D3	144	ARG
27	D5	44	GLN
27	D5	71	ILE
27	D5	86	GLU
28	D6	45	VAL
28	D6	84	VAL
29	D7	57	GLU
31	D9	11	PRO
32	E0	47	VAL
33	E1	84	VAL
33	E1	98	VAL
33	E1	102	VAL
33	E1	103	LEU
34	SR	238	ASP
34	SR	318	ALA
35	SM	64	LYS
39	L2	144	ASN
40	L3	3	HIS
40	L3	5	LYS
41	L4	4	PRO
41	L4	130	ALA
41	L4	131	VAL
41	L4	220	ARG
41	L4	293	SER
41	L4	341	SER
42	L5	178	ASN
42	L5	223	PHE
42	L5	258	LYS
43	L6	98	VAL
44	L7	24	GLU
44	L7	72	ALA

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Mol	Chain	Res	Type
45	L8	25	PRO
45	L8	31	PRO
45	L8	122	LYS
45	L8	226	TYR
46	L9	50	ASN
46	L9	107	ASP
47	M0	6	ALA
47	M0	113	GLN
47	M0	130	ASP
47	M0	219	ALA
48	M1	11	ASP
49	M3	129	ASN
50	M4	10	SER
51	M5	74	PRO
51	M5	75	VAL
52	M6	110	PRO
52	M6	111	PRO
52	M6	149	TYR
53	M7	157	VAL
57	N1	159	PHE
58	N2	51	GLY
59	N3	54	LEU
60	N4	81	PRO
61	N5	48	SER
63	N7	17	ARG
63	N7	30	ASP
63	N7	125	GLY
63	N7	128	GLN
64	N8	66	ALA
64	N8	96	LYS
64	N8	97	GLU
67	O1	21	HIS
72	O6	28	TYR
72	O6	33	ALA
74	O8	33	LYS
75	O9	4	GLN
78	Q2	96	GLU
78	Q2	100	LYS
2	s0	29	VAL
2	s0	66	ALA
2	s0	68	PRO
2	s0	164	ASN

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Mol	Chain	Res	Type
2	s0	189	VAL
2	s0	194	PRO
3	s1	158	SER
3	s1	218	LEU
4	s2	164	SER
5	s3	217	ILE
5	s3	220	PRO
6	s4	53	LYS
6	s4	163	ASP
6	s4	196	VAL
7	s5	43	PHE
7	s5	184	PHE
7	s5	204	GLY
8	s6	152	ASP
8	s6	153	VAL
9	s7	5	GLN
9	s7	74	GLN
9	s7	106	SER
9	s7	131	PHE
12	c0	2	LEU
12	c0	32	HIS
12	c0	83	PRO
15	c3	66	ILE
16	c4	51	ASP
16	c4	91	THR
16	c4	98	GLY
17	c5	80	MET
17	c5	125	PRO
18	c6	39	VAL
18	c6	42	GLU
18	c6	97	VAL
18	c6	112	TYR
18	c6	113	ASP
18	c6	116	LEU
19	c7	67	ARG
19	c7	88	VAL
19	c7	99	VAL
20	c8	8	GLN
21	c9	33	TYR
24	d2	68	ARG
25	d3	47	SER
25	d3	138	GLU

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Mol	Chain	Res	Type
26	d4	33	ALA
26	d4	35	VAL
26	d4	53	ASP
28	d6	28	LYS
28	d6	29	SER
31	d9	6	VAL
32	e0	60	PRO
33	e1	87	THR
33	e1	92	LYS
33	e1	98	VAL
33	e1	107	LYS
33	e1	110	ALA
34	sR	160	GLU
34	sR	165	ASP
34	sR	226	ALA
35	sM	50	ASN
39	l2	24	GLN
39	l2	142	ASP
39	l2	194	ASN
40	l3	139	GLN
40	l3	170	PRO
40	l3	300	ARG
40	l3	347	SER
41	l4	142	VAL
41	l4	174	ALA
41	l4	252	GLU
41	l4	272	VAL
41	l4	301	PRO
41	l4	329	PRO
41	l4	342	LYS
41	l4	361	HIS
42	l5	178	ASN
44	l7	193	PRO
45	l8	25	PRO
45	l8	81	THR
46	l9	62	ARG
46	l9	167	VAL
47	m0	82	ARG
47	m0	145	LYS
48	m1	8	PRO
48	m1	108	GLU
49	m3	17	HIS

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Mol	Chain	Res	Type
49	m3	134	GLU
50	m4	63	VAL
51	m5	76	PRO
52	m6	5	PRO
52	m6	110	PRO
54	m8	95	GLU
54	m8	99	THR
57	n1	135	PRO
58	n2	49	ASN
58	n2	105	LEU
59	n3	42	SER
60	n4	26	SER
60	n4	63	ILE
60	n4	75	THR
60	n4	76	VAL
61	n5	42	ARG
61	n5	92	LYS
63	n7	56	LYS
64	n8	30	GLY
64	n8	47	LYS
64	n8	48	TYR
65	n9	21	ILE
65	n9	23	LYS
65	n9	24	PRO
67	o1	5	LYS
67	o1	45	GLY
67	o1	84	ASP
68	o2	6	HIS
69	o3	60	ARG
69	o3	94	PHE
72	o6	64	SER
72	o6	98	ARG
76	q0	78	ILE
78	q2	32	LYS
78	q2	33	ALA
83	f	52	HIS
83	f	54	HIS
83	f	64	ILE
83	f	109	THR
83	f	111	ASP
2	S0	4	PRO
2	S0	5	ALA

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Mol	Chain	Res	Type
2	S0	39	ASN
2	S0	111	ILE
2	S0	191	ARG
2	S0	202	TYR
3	S1	21	VAL
3	S1	62	LYS
3	S1	63	GLY
3	S1	177	GLN
4	S2	91	ARG
4	S2	107	SER
5	S3	81	PRO
5	S3	216	PRO
6	S4	104	ASP
6	S4	150	PRO
6	S4	195	ILE
7	S5	39	GLU
7	S5	43	PHE
7	S5	204	GLY
8	S6	149	LYS
8	S6	150	GLU
8	S6	174	LYS
9	S7	36	ALA
9	S7	74	GLN
9	S7	129	LEU
10	S8	52	ASN
10	S8	149	SER
11	S9	167	ALA
11	S9	169	PRO
13	C1	4	GLU
13	C1	19	ILE
13	C1	144	ALA
14	C2	69	ALA
14	C2	91	VAL
14	C2	93	ASP
14	C2	119	SER
14	C2	126	TRP
15	C3	22	ALA
16	C4	12	GLN
16	C4	124	ASP
16	C4	125	SER
16	C4	126	THR
17	C5	11	VAL

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Mol	Chain	Res	Type
17	C5	22	LEU
17	C5	48	GLY
19	C7	98	GLY
19	C7	122	ILE
20	C8	14	ILE
21	C9	10	ALA
21	C9	116	ILE
22	D0	16	GLN
22	D0	17	GLN
22	D0	49	ASN
22	D0	96	PRO
22	D0	119	ALA
25	D3	39	LYS
25	D3	112	LYS
25	D3	137	LYS
25	D3	138	GLU
26	D4	33	ALA
26	D4	54	ALA
26	D4	100	VAL
27	D5	41	ILE
28	D6	4	LYS
28	D6	16	GLY
28	D6	18	VAL
28	D6	36	ILE
28	D6	82	ARG
28	D6	86	VAL
29	D7	62	ILE
30	D8	36	THR
31	D9	20	GLN
32	E0	51	ASN
33	E1	87	THR
33	E1	118	ARG
33	E1	127	GLY
33	E1	144	CYS
33	E1	145	HIS
34	SR	51	ASP
34	SR	98	GLU
34	SR	135	THR
34	SR	160	GLU
34	SR	161	LYS
35	SM	52	PRO
35	SM	87	THR

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Mol	Chain	Res	Type
35	SM	89	ARG
39	L2	13	GLY
39	L2	250	GLN
40	L3	4	ARG
40	L3	120	LYS
40	L3	121	ASN
40	L3	142	ALA
40	L3	155	ALA
40	L3	171	LEU
40	L3	174	LYS
40	L3	221	THR
40	L3	347	SER
40	L3	360	ASP
41	L4	15	ALA
41	L4	83	GLY
41	L4	305	ALA
41	L4	311	HIS
42	L5	7	ALA
42	L5	212	ALA
42	L5	221	GLU
42	L5	253	PHE
44	L7	55	TYR
44	L7	80	GLN
44	L7	158	LYS
44	L7	159	GLN
45	L8	39	ALA
46	L9	38	LEU
46	L9	59	ASN
47	M0	78	THR
47	M0	117	GLY
48	M1	8	PRO
48	M1	114	ILE
48	M1	152	HIS
49	M3	47	ALA
49	M3	141	ALA
50	M4	8	LYS
50	M4	36	VAL
51	M5	81	TYR
51	M5	110	ALA
51	M5	184	LYS
52	M6	86	GLY
52	M6	112	TYR

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Mol	Chain	Res	Type
52	M6	113	ASP
53	M7	109	ALA
54	M8	74	GLU
54	M8	98	LYS
54	M8	166	LEU
55	M9	53	LYS
56	N0	24	LEU
56	N0	154	HIS
57	N1	122	GLN
59	N3	46	LEU
61	N5	24	LEU
61	N5	77	GLU
61	N5	117	ASN
63	N7	16	GLY
64	N8	117	ARG
67	O1	6	ASP
67	O1	99	ALA
69	O3	59	VAL
69	O3	60	ARG
70	O4	18	ASN
71	O5	35	LYS
71	O5	71	LYS
71	O5	118	ILE
72	O6	3	VAL
72	O6	78	GLY
72	O6	99	ARG
78	Q2	30	ALA
78	Q2	34	SER
78	Q2	60	LYS
79	Q3	3	LYS
79	Q3	58	SER
2	s0	4	PRO
2	s0	27	ARG
2	s0	65	ALA
3	s1	43	VAL
3	s1	206	PRO
3	s1	224	ASP
4	s2	93	GLY
4	s2	144	TRP
4	s2	149	GLY
4	s2	249	ALA
5	s3	115	ILE

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Mol	Chain	Res	Type
5	s3	211	PRO
6	s4	3	ARG
6	s4	104	ASP
6	s4	118	GLU
6	s4	195	ILE
7	s5	28	PRO
7	s5	81	ARG
7	s5	155	ALA
8	s6	19	ASP
8	s6	58	LYS
9	s7	63	PRO
9	s7	144	VAL
10	s8	52	ASN
10	s8	101	ILE
11	s9	115	LYS
11	s9	121	SER
12	c0	23	ALA
12	c0	82	LEU
13	c1	55	ASP
14	c2	131	ASP
15	c3	43	LYS
15	c3	137	PRO
15	c3	140	LYS
16	c4	14	PHE
17	c5	17	TYR
19	c7	116	LYS
20	c8	14	ILE
20	c8	60	GLU
21	c9	29	GLU
22	d0	15	GLN
22	d0	119	ALA
23	d1	11	LEU
23	d1	85	TYR
24	d2	78	ARG
25	d3	137	LYS
26	d4	52	LYS
26	d4	54	ALA
28	d6	5	ARG
28	d6	13	LYS
28	d6	34	LYS
29	d7	59	CYS
30	d8	33	LEU

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Mol	Chain	Res	Type
32	e0	47	VAL
32	e0	49	LEU
32	e0	50	VAL
33	e1	84	VAL
33	e1	102	VAL
34	sR	163	ASP
35	sM	47	ALA
35	sM	55	SER
39	l2	170	ALA
40	l3	129	ALA
40	l3	187	SER
40	l3	385	LYS
40	l3	386	ASP
41	l4	15	ALA
41	l4	90	PHE
41	l4	154	THR
41	l4	233	LEU
41	l4	268	ALA
41	l4	338	LYS
42	l5	260	PHE
44	l7	206	LYS
45	l8	26	LEU
45	l8	203	VAL
45	l8	237	ILE
46	l9	144	ILE
46	l9	175	PHE
47	m0	117	GLY
47	m0	151	GLY
47	m0	196	PHE
48	m1	94	ARG
48	m1	95	ASN
48	m1	114	ILE
48	m1	115	LYS
48	m1	145	LYS
48	m1	167	TYR
49	m3	13	HIS
49	m3	47	ALA
49	m3	141	ALA
49	m3	193	ALA
50	m4	74	ARG
54	m8	84	VAL
54	m8	98	LYS

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Mol	Chain	Res	Type
54	m8	116	LYS
54	m8	168	THR
55	m9	36	ASN
56	n0	17	GLU
57	n1	136	ARG
59	n3	28	ASN
59	n3	134	GLY
60	n4	83	THR
61	n5	24	LEU
61	n5	44	PRO
61	n5	55	ASN
62	n6	83	ASP
62	n6	84	LYS
63	n7	128	GLN
63	n7	129	TRP
63	n7	130	PHE
64	n8	76	ASP
64	n8	129	PHE
65	n9	5	LYS
66	o0	10	ILE
66	o0	85	PHE
67	o1	91	SER
68	o2	27	ARG
71	o5	43	LYS
71	o5	119	LYS
72	o6	12	ASN
72	o6	20	MET
72	o6	33	ALA
72	o6	35	ASN
72	o6	79	SER
73	o7	65	ARG
74	o8	18	ALA
74	o8	46	ARG
79	q3	51	ALA
81	p0	68	SER
81	p0	93	LEU
83	f	51	LYS
83	f	148	ILE
2	S0	30	GLN
2	S0	66	ALA
2	S0	78	SER
2	S0	161	PRO

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Mol	Chain	Res	Type
3	S1	48	VAL
3	S1	51	SER
3	S1	58	SER
3	S1	81	PHE
3	S1	209	ASN
4	S2	95	ARG
5	S3	62	ASN
5	S3	205	ALA
5	S3	218	LEU
6	S4	205	PHE
6	S4	214	LEU
6	S4	234	PRO
7	S5	26	ALA
7	S5	58	LEU
7	S5	64	VAL
7	S5	97	LEU
8	S6	148	SER
8	S6	152	ASP
9	S7	11	GLN
9	S7	12	ALA
9	S7	30	SER
10	S8	40	ALA
10	S8	116	HIS
10	S8	120	THR
10	S8	146	ARG
10	S8	152	ILE
11	S9	147	MET
11	S9	150	LEU
12	C0	30	ALA
12	C0	60	SER
13	C1	145	ALA
16	C4	18	ARG
16	C4	40	ALA
16	C4	129	LYS
16	C4	132	ARG
17	C5	127	ARG
17	C5	130	ARG
18	C6	32	ASN
18	C6	142	TYR
19	C7	42	GLN
19	C7	87	GLU
20	C8	7	GLU

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Mol	Chain	Res	Type
20	C8	90	ASN
21	C9	50	ALA
22	D0	55	PRO
22	D0	118	VAL
23	D1	7	GLN
23	D1	10	GLU
23	D1	42	GLU
23	D1	82	VAL
24	D2	92	ASN
25	D3	40	SER
25	D3	41	SER
25	D3	110	LYS
26	D4	4	ALA
26	D4	5	VAL
26	D4	6	THR
26	D4	34	ASN
26	D4	134	ALA
28	D6	63	ALA
28	D6	85	ARG
29	D7	75	GLU
33	E1	83	LYS
33	E1	93	HIS
33	E1	100	LEU
33	E1	111	GLU
34	SR	16	HIS
34	SR	185	GLN
34	SR	237	GLN
35	SM	65	THR
35	SM	100	THR
39	L2	17	THR
39	L2	115	ASN
39	L2	125	ALA
40	L3	298	PHE
40	L3	351	LEU
41	L4	146	PRO
41	L4	270	SER
41	L4	272	VAL
42	L5	132	THR
43	L6	20	LYS
44	L7	206	LYS
45	L8	253	SER
46	L9	2	LYS

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Mol	Chain	Res	Type
46	L9	15	GLY
46	L9	96	HIS
46	L9	137	SER
46	L9	190	ASP
48	M1	12	LEU
48	M1	24	GLY
48	M1	151	SER
49	M3	76	THR
50	M4	9	ALA
50	M4	29	ALA
52	M6	148	LYS
53	M7	160	ALA
53	M7	164	LYS
55	M9	169	ALA
56	N0	2	ALA
57	N1	124	VAL
60	N4	70	LYS
60	N4	76	VAL
60	N4	77	LYS
60	N4	80	ARG
60	N4	97	LYS
62	N6	126	LEU
63	N7	102	GLU
64	N8	24	LYS
70	O4	14	ASN
72	O6	80	PHE
75	O9	30	ARG
75	O9	46	ARG
2	s0	127	ARG
3	s1	93	GLY
3	s1	106	THR
3	s1	207	LEU
3	s1	223	PHE
4	s2	151	PRO
4	s2	182	PRO
5	s3	45	LYS
5	s3	179	GLN
5	s3	196	ARG
6	s4	20	LEU
6	s4	96	ASN
6	s4	164	LEU
6	s4	245	LYS

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Mol	Chain	Res	Type
7	s5	56	ALA
7	s5	154	ALA
9	s7	11	GLN
10	s8	122	GLY
10	s8	136	SER
10	s8	149	SER
11	s9	156	ILE
11	s9	167	ALA
12	c0	30	ALA
14	c2	39	ASP
14	c2	54	ARG
14	c2	63	VAL
14	c2	90	LYS
15	c3	108	ASP
15	c3	139	TRP
16	c4	12	GLN
16	c4	58	TYR
16	c4	97	GLY
16	c4	114	ARG
16	c4	124	ASP
16	c4	132	ARG
17	c5	12	PHE
17	c5	14	THR
18	c6	142	TYR
20	c8	7	GLU
20	c8	94	ASP
21	c9	142	GLU
23	d1	40	ASP
25	d3	131	SER
27	d5	53	GLU
29	d7	63	LEU
29	d7	75	GLU
31	d9	11	PRO
32	e0	11	ALA
32	e0	61	SER
33	e1	99	LYS
33	e1	100	LEU
33	e1	111	GLU
33	e1	128	ALA
33	e1	136	LYS
33	e1	146	SER
34	sR	96	THR

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Mol	Chain	Res	Type
39	l2	56	ALA
39	l2	69	TYR
39	l2	130	SER
39	l2	239	ALA
40	l3	155	ALA
41	l4	4	PRO
41	l4	220	ARG
41	l4	311	HIS
41	l4	330	TYR
42	l5	258	LYS
42	l5	294	ALA
43	l6	10	TYR
44	l7	163	LEU
44	l7	191	VAL
45	l8	39	ALA
45	l8	43	LYS
45	l8	119	ALA
45	l8	133	LYS
45	l8	147	LYS
45	l8	196	ALA
47	m0	187	ALA
48	m1	153	LYS
49	m3	135	ALA
49	m3	140	SER
49	m3	162	ASN
50	m4	136	ALA
51	m5	81	TYR
51	m5	183	THR
54	m8	164	ARG
56	n0	2	ALA
59	n3	107	GLY
60	n4	64	THR
60	n4	77	LYS
61	n5	47	ALA
62	n6	6	LEU
62	n6	31	LEU
62	n6	125	LYS
63	n7	103	GLN
63	n7	125	GLY
63	n7	134	LEU
64	n8	110	GLY
68	o2	5	PRO

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Mol	Chain	Res	Type
70	o4	51	LEU
70	o4	82	ALA
77	q1	23	ARG
81	p0	33	VAL
81	p0	47	GLY
83	f	17	ALA
83	f	49	THR
83	f	63	ASP
83	f	121	GLY
83	f	152	GLU
2	S0	24	LEU
2	S0	162	CYS
2	S0	193	GLN
2	S0	194	PRO
2	S0	195	TRP
3	S1	42	ASN
3	S1	54	LEU
3	S1	131	ASP
3	S1	176	VAL
3	S1	230	ALA
4	S2	109	GLY
4	S2	146	THR
5	S3	211	PRO
6	S4	200	ARG
7	S5	45	LYS
7	S5	65	ARG
8	S6	69	LEU
9	S7	29	ASN
9	S7	75	THR
9	S7	98	ILE
9	S7	133	THR
10	S8	9	HIS
13	C1	30	ARG
14	C2	85	LYS
14	C2	115	VAL
15	C3	28	LEU
16	C4	114	ARG
17	C5	17	TYR
17	C5	53	PRO
18	C6	39	VAL
18	C6	59	LYS
18	C6	136	SER

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Mol	Chain	Res	Type
20	C8	9	GLY
20	C8	83	ALA
20	C8	144	ARG
23	D1	15	ARG
24	D2	78	ARG
25	D3	92	CYS
26	D4	53	ASP
27	D5	88	ILE
28	D6	3	LYS
28	D6	46	GLU
28	D6	47	ALA
28	D6	53	LEU
30	D8	35	ASP
33	E1	85	TYR
33	E1	97	LYS
33	E1	148	TYR
34	SR	17	ASN
34	SR	163	ASP
34	SR	194	GLY
35	SM	42	ALA
35	SM	53	ARG
35	SM	86	ASN
39	L2	55	GLY
39	L2	246	LEU
39	L2	251	LYS
40	L3	258	ALA
41	L4	5	GLN
41	L4	14	GLU
41	L4	90	PHE
41	L4	219	LEU
41	L4	233	LEU
41	L4	292	SER
42	L5	214	ASP
42	L5	259	LYS
42	L5	274	GLN
43	L6	131	LYS
46	L9	110	LYS
46	L9	117	PHE
46	L9	188	THR
46	L9	189	GLU
47	M0	71	CYS
47	M0	189	GLU

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Mol	Chain	Res	Type
48	M1	23	VAL
48	M1	64	LYS
48	M1	115	LYS
49	M3	19	GLN
49	M3	140	SER
51	M5	94	TYR
52	M6	63	ALA
54	M8	99	THR
54	M8	162	ALA
54	M8	183	GLY
55	M9	130	ASN
57	N1	18	ASP
58	N2	11	ILE
58	N2	60	GLY
59	N3	82	ALA
60	N4	68	ALA
60	N4	86	SER
63	N7	33	SER
63	N7	37	PRO
64	N8	77	LYS
67	O1	83	GLU
68	O2	70	GLY
71	O5	10	ARG
71	O5	14	LYS
71	O5	80	LEU
71	O5	119	LYS
72	O6	21	THR
72	O6	98	ARG
73	O7	18	LEU
73	O7	85	LYS
74	O8	7	ASP
79	Q3	65	ALA
3	s1	157	GLN
4	s2	88	LYS
4	s2	235	LEU
4	s2	238	SER
5	s3	44	THR
5	s3	93	ASP
6	s4	12	LEU
6	s4	51	ARG
7	s5	29	ILE
7	s5	55	ASP

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Mol	Chain	Res	Type
7	s5	71	ALA
7	s5	100	ASN
8	s6	149	LYS
8	s6	154	ARG
8	s6	216	LEU
9	s7	64	VAL
9	s7	133	THR
10	s8	78	ILE
11	s9	118	LEU
11	s9	147	MET
12	c0	3	MET
12	c0	31	LYS
13	c1	128	CYS
14	c2	87	PRO
14	c2	101	ALA
16	c4	11	SER
16	c4	37	GLU
16	c4	50	ALA
17	c5	126	VAL
17	c5	128	HIS
19	c7	68	GLY
19	c7	117	LEU
20	c8	143	ARG
21	c9	51	GLU
23	d1	2	GLU
23	d1	9	VAL
28	d6	15	ARG
28	d6	82	ARG
29	d7	29	ARG
30	d8	16	LEU
32	e0	13	LYS
33	e1	131	PHE
33	e1	137	ASP
34	sR	149	ASP
34	sR	186	PHE
34	sR	271	VAL
35	sM	43	ASP
35	sM	60	ALA
35	sM	63	ASP
39	l2	80	GLU
39	l2	247	ARG
40	l3	3	HIS

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Mol	Chain	Res	Type
40	l3	175	LYS
40	l3	348	ARG
42	l5	274	GLN
43	l6	20	LYS
44	l7	202	LEU
44	l7	229	PHE
45	l8	118	GLU
46	l9	2	LYS
46	l9	38	LEU
47	m0	195	ALA
48	m1	12	LEU
49	m3	60	ALA
49	m3	93	ILE
49	m3	152	THR
51	m5	68	ARG
59	n3	106	LYS
59	n3	109	MET
60	n4	132	GLY
61	n5	38	LEU
61	n5	45	LYS
61	n5	62	VAL
64	n8	24	LYS
65	n9	6	ASN
67	o1	90	PHE
72	o6	99	ARG
74	o8	34	ALA
78	q2	104	LEU
81	p0	102	SER
83	f	13	ALA
83	f	113	VAL
83	f	132	LYS
2	S0	109	ASN
2	S0	126	PRO
3	S1	210	ILE
3	S1	224	ASP
4	S2	39	THR
4	S2	150	GLN
4	S2	223	GLY
4	S2	235	LEU
4	S2	239	PRO
9	S7	38	LEU
9	S7	166	LEU

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Mol	Chain	Res	Type
10	S8	107	THR
11	S9	16	LYS
12	C0	25	LYS
13	C1	3	THR
15	C3	27	LYS
15	C3	68	GLY
17	C5	52	LYS
17	C5	126	VAL
19	C7	23	LYS
20	C8	36	LYS
23	D1	12	TYR
26	D4	95	GLY
27	D5	94	LYS
28	D6	64	LEU
28	D6	80	HIS
34	SR	3	SER
34	SR	139	GLN
39	L2	234	LYS
41	L4	140	HIS
41	L4	182	LEU
42	L5	81	HIS
42	L5	93	THR
42	L5	125	VAL
42	L5	181	PRO
42	L5	273	ARG
44	L7	176	TYR
44	L7	178	ILE
45	L8	36	ILE
45	L8	79	GLN
46	L9	14	GLU
46	L9	74	LEU
47	M0	18	PRO
48	M1	108	GLU
48	M1	173	ASP
49	M3	77	LEU
52	M6	16	VAL
55	M9	55	VAL
57	N1	121	ALA
57	N1	123	GLY
59	N3	109	MET
63	N7	103	GLN
65	N9	25	LYS

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Mol	Chain	Res	Type
66	O0	98	SER
67	O1	7	VAL
68	O2	68	PRO
70	O4	82	ALA
71	O5	98	SER
71	O5	99	GLN
76	Q0	79	GLU
79	Q3	7	LYS
79	Q3	45	LYS
79	Q3	51	ALA
2	s0	10	THR
2	s0	103	THR
2	s0	185	ARG
3	s1	221	PRO
4	s2	62	PRO
4	s2	150	GLN
4	s2	163	GLY
5	s3	160	SER
6	s4	30	ARG
6	s4	90	ILE
6	s4	214	LEU
7	s5	37	GLN
8	s6	65	GLN
8	s6	70	PRO
8	s6	138	ALA
11	s9	168	ARG
12	c0	24	LYS
12	c0	35	ILE
14	c2	45	LEU
14	c2	115	VAL
15	c3	29	SER
17	c5	130	ARG
18	c6	3	ALA
19	c7	113	LEU
22	d0	49	ASN
25	d3	101	GLU
26	d4	58	PHE
28	d6	8	ASN
34	sR	234	LEU
39	l2	115	ASN
39	l2	125	ALA
39	l2	241	ARG

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Mol	Chain	Res	Type
40	l3	23	ALA
41	l4	328	ASN
43	l6	147	ALA
45	l8	122	LYS
45	l8	146	LYS
45	l8	182	GLY
46	l9	189	GLU
47	m0	6	ALA
47	m0	176	LEU
48	m1	168	ASP
49	m3	46	ILE
51	m5	181	ASN
53	m7	23	ARG
54	m8	91	ALA
55	m9	130	ASN
57	n1	127	GLN
58	n2	106	ALA
61	n5	39	LYS
64	n8	78	LEU
67	o1	82	GLU
67	o1	83	GLU
74	o8	17	ARG
78	q2	66	LYS
78	q2	76	LYS
81	p0	30	VAL
83	f	15	SER
83	f	16	SER
83	f	98	GLY
83	f	127	ALA
2	S0	94	GLY
2	S0	153	SER
4	S2	182	PRO
4	S2	228	ASN
6	S4	77	ARG
11	S9	156	ILE
14	C2	66	VAL
14	C2	82	PRO
31	D9	6	VAL
33	E1	109	ASP
35	SM	88	ARG
40	L3	345	ASN
42	L5	137	ASP

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Mol	Chain	Res	Type
44	L7	26	VAL
45	L8	116	VAL
49	M3	130	GLY
50	M4	6	ILE
55	M9	124	TYR
58	N2	68	THR
59	N3	7	GLN
60	N4	74	LYS
68	O2	62	LYS
68	O2	69	SER
72	O6	34	SER
2	s0	118	PRO
3	s1	147	ALA
3	s1	177	GLN
7	s5	151	GLY
9	s7	61	PHE
9	s7	145	GLY
11	s9	185	GLY
13	c1	7	VAL
15	c3	22	ALA
16	c4	131	GLY
17	c5	52	LYS
17	c5	68	PRO
20	c8	79	TYR
21	c9	34	VAL
22	d0	96	PRO
22	d0	118	VAL
32	e0	51	ASN
34	sR	15	GLY
34	sR	105	GLY
39	l2	174	ARG
40	l3	188	ILE
41	l4	5	GLN
44	l7	56	GLU
44	l7	178	ILE
47	m0	150	GLU
64	n8	15	VAL
70	o4	14	ASN
70	o4	59	PRO
78	q2	18	ARG
83	f	97	ASP
8	S6	165	GLY

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Mol	Chain	Res	Type
9	S7	73	VAL
11	S9	15	PRO
14	C2	87	PRO
16	C4	131	GLY
25	D3	4	GLY
44	L7	217	PRO
45	L8	135	GLY
54	M8	84	VAL
58	N2	19	VAL
71	O5	77	PRO
7	s5	152	GLY
13	c1	130	PRO
24	d2	6	VAL
33	e1	112	GLY
39	l2	212	GLY
40	l3	40	PRO
47	m0	179	PRO
48	m1	120	ILE
68	o2	124	GLY
74	o8	35	GLY
3	S1	114	VAL
9	S7	109	VAL
9	S7	131	PHE
23	D1	14	PRO
40	L3	317	ILE
8	s6	165	GLY
8	s6	175	ILE
10	s8	50	GLY
11	s9	162	SER
16	c4	122	PRO
17	c5	20	VAL
35	sM	51	ARG
42	l5	91	GLY
43	l6	45	GLY
53	m7	67	ILE
59	n3	3	GLY
59	n3	41	GLY
72	o6	9	ILE
6	S4	193	GLY
9	S7	112	ARG
20	C8	82	PRO
27	D5	87	GLY

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Mol	Chain	Res	Type
28	D6	58	VAL
28	D6	59	TYR
34	SR	49	GLY
34	SR	105	GLY
35	SM	111	GLY
45	L8	30	THR
53	M7	67	ILE
56	N0	135	VAL
65	N9	21	ILE
4	s2	236	PRO
13	c1	140	VAL
26	d4	30	PRO
30	d8	30	VAL
33	e1	127	GLY
35	sM	56	GLY
52	m6	16	VAL
64	n8	28	HIS
65	n9	30	PRO
72	o6	3	VAL
7	S5	51	VAL
11	S9	18	PRO
13	C1	113	PRO
40	L3	96	PRO
41	L4	23	PRO
42	L5	170	GLY
2	s0	82	GLY
9	s7	8	ILE
13	c1	76	VAL
48	m1	117	ASP
19	C7	38	ILE
64	N8	148	ILE
13	c1	129	ARG
14	c2	102	GLY
15	c3	71	ILE
18	c6	4	VAL
21	c9	26	GLY
28	d6	20	PRO
64	n8	148	ILE
40	L3	257	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 X-ray entries followed by that with respect to entries of similar resolution.

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
2	S0	164/209 (78%)	143 (87%)	21 (13%)	4 18
2	s0	165/209 (79%)	141 (86%)	24 (14%)	3 14
3	S1	191/223 (86%)	165 (86%)	26 (14%)	3 16
3	s1	192/223 (86%)	165 (86%)	27 (14%)	3 14
4	S2	176/204 (86%)	149 (85%)	27 (15%)	3 13
4	s2	176/204 (86%)	134 (76%)	42 (24%)	1 4
5	S3	182/194 (94%)	152 (84%)	30 (16%)	2 11
5	s3	182/194 (94%)	157 (86%)	25 (14%)	3 16
6	S4	221/221 (100%)	193 (87%)	28 (13%)	4 18
6	s4	221/221 (100%)	183 (83%)	38 (17%)	2 10
7	S5	173/190 (91%)	157 (91%)	16 (9%)	8 30
7	s5	173/190 (91%)	143 (83%)	30 (17%)	2 9
8	S6	188/201 (94%)	163 (87%)	25 (13%)	4 17
8	s6	187/201 (93%)	160 (86%)	27 (14%)	3 14
9	S7	165/169 (98%)	145 (88%)	20 (12%)	5 20
9	s7	165/169 (98%)	150 (91%)	15 (9%)	9 31
10	S8	150/161 (93%)	133 (89%)	17 (11%)	5 21
10	s8	150/161 (93%)	129 (86%)	21 (14%)	3 15
11	S9	158/165 (96%)	129 (82%)	29 (18%)	1 7
11	s9	158/165 (96%)	132 (84%)	26 (16%)	2 11
12	C0	77/77 (100%)	70 (91%)	7 (9%)	9 31
12	c0	73/77 (95%)	63 (86%)	10 (14%)	3 16
13	C1	129/129 (100%)	117 (91%)	12 (9%)	8 30
13	c1	129/129 (100%)	109 (84%)	20 (16%)	2 12
14	C2	88/106 (83%)	71 (81%)	17 (19%)	1 6
14	c2	88/106 (83%)	77 (88%)	11 (12%)	4 19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
15	C3	127/127 (100%)	108 (85%)	19 (15%)	3 13
15	c3	127/127 (100%)	107 (84%)	20 (16%)	2 12
16	C4	81/104 (78%)	63 (78%)	18 (22%)	1 5
16	c4	97/104 (93%)	79 (81%)	18 (19%)	1 7
17	C5	101/113 (89%)	84 (83%)	17 (17%)	2 11
17	c5	103/113 (91%)	85 (82%)	18 (18%)	2 9
18	C6	117/118 (99%)	101 (86%)	16 (14%)	3 16
18	c6	118/118 (100%)	104 (88%)	14 (12%)	5 20
19	C7	94/124 (76%)	77 (82%)	17 (18%)	2 8
19	c7	92/124 (74%)	82 (89%)	10 (11%)	6 23
20	C8	128/128 (100%)	105 (82%)	23 (18%)	2 8
20	c8	128/128 (100%)	109 (85%)	19 (15%)	3 13
21	C9	115/115 (100%)	96 (84%)	19 (16%)	2 11
21	c9	115/115 (100%)	99 (86%)	16 (14%)	3 15
22	D0	100/113 (88%)	87 (87%)	13 (13%)	4 17
22	d0	103/113 (91%)	88 (85%)	15 (15%)	3 14
23	D1	74/74 (100%)	66 (89%)	8 (11%)	6 23
23	d1	74/74 (100%)	69 (93%)	5 (7%)	14 42
24	D2	110/110 (100%)	89 (81%)	21 (19%)	1 7
24	d2	110/110 (100%)	96 (87%)	14 (13%)	4 18
25	D3	119/119 (100%)	104 (87%)	15 (13%)	4 18
25	d3	119/119 (100%)	105 (88%)	14 (12%)	5 20
26	D4	112/112 (100%)	101 (90%)	11 (10%)	7 28
26	d4	112/112 (100%)	98 (88%)	14 (12%)	4 19
27	D5	61/88 (69%)	48 (79%)	13 (21%)	1 5
27	d5	61/88 (69%)	49 (80%)	12 (20%)	1 6
28	D6	83/83 (100%)	71 (86%)	12 (14%)	3 14
28	d6	83/83 (100%)	70 (84%)	13 (16%)	2 12
29	D7	70/70 (100%)	62 (89%)	8 (11%)	5 21
29	d7	70/70 (100%)	58 (83%)	12 (17%)	2 10
30	D8	56/59 (95%)	48 (86%)	8 (14%)	3 14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	d8	56/59 (95%)	46 (82%)	10 (18%)	2 8
31	D9	47/48 (98%)	40 (85%)	7 (15%)	3 13
31	d9	47/48 (98%)	38 (81%)	9 (19%)	1 7
32	E0	51/53 (96%)	46 (90%)	5 (10%)	7 28
32	e0	53/53 (100%)	38 (72%)	15 (28%)	0 2
33	E1	62/66 (94%)	48 (77%)	14 (23%)	1 5
33	e1	66/66 (100%)	52 (79%)	14 (21%)	1 5
34	SR	259/261 (99%)	228 (88%)	31 (12%)	5 20
34	sR	260/261 (100%)	239 (92%)	21 (8%)	11 36
35	SM	97/183 (53%)	82 (84%)	15 (16%)	2 12
35	sM	54/183 (30%)	46 (85%)	8 (15%)	3 13
39	L2	193/195 (99%)	162 (84%)	31 (16%)	2 12
39	l2	192/195 (98%)	158 (82%)	34 (18%)	2 8
40	L3	319/322 (99%)	263 (82%)	56 (18%)	2 9
40	l3	319/322 (99%)	253 (79%)	66 (21%)	1 6
41	L4	288/288 (100%)	244 (85%)	44 (15%)	3 13
41	l4	288/288 (100%)	236 (82%)	52 (18%)	2 8
42	L5	244/244 (100%)	209 (86%)	35 (14%)	3 14
42	l5	243/244 (100%)	194 (80%)	49 (20%)	1 6
43	L6	134/152 (88%)	115 (86%)	19 (14%)	3 14
43	l6	135/152 (89%)	111 (82%)	24 (18%)	2 8
44	L7	186/204 (91%)	163 (88%)	23 (12%)	4 19
44	l7	187/204 (92%)	162 (87%)	25 (13%)	4 16
45	L8	187/207 (90%)	163 (87%)	24 (13%)	4 18
45	l8	177/207 (86%)	151 (85%)	26 (15%)	3 14
46	L9	171/171 (100%)	134 (78%)	37 (22%)	1 5
46	l9	171/171 (100%)	141 (82%)	30 (18%)	2 9
47	M0	177/186 (95%)	146 (82%)	31 (18%)	2 9
47	m0	179/186 (96%)	146 (82%)	33 (18%)	1 7
48	M1	147/150 (98%)	119 (81%)	28 (19%)	1 7
48	m1	147/150 (98%)	123 (84%)	24 (16%)	2 11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
49	M3	154/158 (98%)	132 (86%)	22 (14%)	3 14
49	m3	154/158 (98%)	128 (83%)	26 (17%)	2 10
50	M4	107/108 (99%)	89 (83%)	18 (17%)	2 11
50	m4	108/108 (100%)	89 (82%)	19 (18%)	2 9
51	M5	175/175 (100%)	148 (85%)	27 (15%)	2 12
51	m5	175/175 (100%)	152 (87%)	23 (13%)	4 17
52	M6	160/161 (99%)	132 (82%)	28 (18%)	2 9
52	m6	160/161 (99%)	132 (82%)	28 (18%)	2 9
53	M7	140/145 (97%)	112 (80%)	28 (20%)	1 6
53	m7	125/145 (86%)	103 (82%)	22 (18%)	2 9
54	M8	150/150 (100%)	130 (87%)	20 (13%)	4 17
54	m8	150/150 (100%)	120 (80%)	30 (20%)	1 6
55	M9	153/153 (100%)	134 (88%)	19 (12%)	4 19
55	m9	153/153 (100%)	130 (85%)	23 (15%)	3 13
56	N0	156/156 (100%)	132 (85%)	24 (15%)	2 12
56	n0	156/156 (100%)	134 (86%)	22 (14%)	3 14
57	N1	136/136 (100%)	105 (77%)	31 (23%)	1 4
57	n1	136/136 (100%)	109 (80%)	27 (20%)	1 6
58	N2	87/106 (82%)	78 (90%)	9 (10%)	7 25
58	n2	85/106 (80%)	74 (87%)	11 (13%)	4 17
59	N3	104/104 (100%)	88 (85%)	16 (15%)	2 12
59	n3	104/104 (100%)	86 (83%)	18 (17%)	2 9
60	N4	57/129 (44%)	53 (93%)	4 (7%)	14 41
60	n4	100/129 (78%)	94 (94%)	6 (6%)	17 46
61	N5	104/117 (89%)	81 (78%)	23 (22%)	1 5
61	n5	104/117 (89%)	87 (84%)	17 (16%)	2 11
62	N6	109/109 (100%)	86 (79%)	23 (21%)	1 5
62	n6	109/109 (100%)	89 (82%)	20 (18%)	2 7
63	N7	115/115 (100%)	98 (85%)	17 (15%)	3 13
63	n7	115/115 (100%)	97 (84%)	18 (16%)	2 12
64	N8	118/118 (100%)	103 (87%)	15 (13%)	4 18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
64	n8	118/118 (100%)	98 (83%)	20 (17%)	2 10
65	N9	46/46 (100%)	40 (87%)	6 (13%)	4 17
65	n9	46/46 (100%)	39 (85%)	7 (15%)	3 13
66	O0	81/87 (93%)	66 (82%)	15 (18%)	1 7
66	o0	84/87 (97%)	72 (86%)	12 (14%)	3 14
67	O1	92/96 (96%)	79 (86%)	13 (14%)	3 14
67	o1	94/96 (98%)	76 (81%)	18 (19%)	1 7
68	O2	109/110 (99%)	94 (86%)	15 (14%)	3 15
68	o2	109/110 (99%)	83 (76%)	26 (24%)	1 4
69	O3	90/90 (100%)	72 (80%)	18 (20%)	1 6
69	o3	90/90 (100%)	74 (82%)	16 (18%)	2 8
70	O4	95/102 (93%)	82 (86%)	13 (14%)	3 16
70	o4	95/102 (93%)	81 (85%)	14 (15%)	3 14
71	O5	104/104 (100%)	94 (90%)	10 (10%)	8 29
71	o5	103/104 (99%)	86 (84%)	17 (16%)	2 11
72	O6	81/81 (100%)	64 (79%)	17 (21%)	1 5
72	o6	80/81 (99%)	58 (72%)	22 (28%)	0 2
73	O7	70/70 (100%)	59 (84%)	11 (16%)	2 12
73	o7	70/70 (100%)	61 (87%)	9 (13%)	4 17
74	O8	68/68 (100%)	53 (78%)	15 (22%)	1 5
74	o8	67/68 (98%)	57 (85%)	10 (15%)	3 13
75	O9	45/45 (100%)	39 (87%)	6 (13%)	4 17
75	o9	45/45 (100%)	41 (91%)	4 (9%)	9 32
76	Q0	47/47 (100%)	37 (79%)	10 (21%)	1 5
76	q0	47/47 (100%)	39 (83%)	8 (17%)	2 10
77	Q1	23/23 (100%)	20 (87%)	3 (13%)	4 17
77	q1	23/23 (100%)	16 (70%)	7 (30%)	0 1
78	Q2	90/90 (100%)	71 (79%)	19 (21%)	1 5
78	q2	90/90 (100%)	71 (79%)	19 (21%)	1 5
79	Q3	71/71 (100%)	56 (79%)	15 (21%)	1 5
79	q3	71/71 (100%)	60 (84%)	11 (16%)	2 12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
81	p0	105/232 (45%)	94 (90%)	11 (10%)	6 25
83	f	124/133 (93%)	102 (82%)	22 (18%)	2 8
All	All	18849/20177 (93%)	15893 (84%)	2956 (16%)	2 12

All (2956) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	S0	7	PHE
2	S0	8	ASP
2	S0	9	LEU
2	S0	32	HIS
2	S0	37	VAL
2	S0	43	ASP
2	S0	52	LYS
2	S0	62	ARG
2	S0	87	LEU
2	S0	88	LYS
2	S0	96	THR
2	S0	103	THR
2	S0	111	ILE
2	S0	129	ASP
2	S0	133	ILE
2	S0	146	LEU
2	S0	153	SER
2	S0	168	HIS
2	S0	170	ILE
2	S0	172	LEU
2	S0	188	LEU
3	S1	20	VAL
3	S1	21	VAL
3	S1	29	TRP
3	S1	30	PHE
3	S1	39	GLU
3	S1	48	VAL
3	S1	61	LEU
3	S1	65	VAL
3	S1	70	LEU
3	S1	81	PHE
3	S1	83	LYS
3	S1	105	PHE
3	S1	111	ARG

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Mol	Chain	Res	Type
3	S1	137	ILE
3	S1	174	LYS
3	S1	176	VAL
3	S1	180	THR
3	S1	181	LEU
3	S1	184	LEU
3	S1	193	ILE
3	S1	194	ASN
3	S1	202	LYS
3	S1	203	ASP
3	S1	214	LYS
3	S1	215	VAL
3	S1	218	LEU
4	S2	41	LEU
4	S2	53	ILE
4	S2	54	GLU
4	S2	69	ILE
4	S2	73	LEU
4	S2	76	LEU
4	S2	77	GLN
4	S2	86	VAL
4	S2	89	GLN
4	S2	94	GLN
4	S2	95	ARG
4	S2	96	THR
4	S2	97	ARG
4	S2	99	LYS
4	S2	111	VAL
4	S2	113	LEU
4	S2	129	ILE
4	S2	137	ILE
4	S2	146	THR
4	S2	148	LEU
4	S2	159	THR
4	S2	182	PRO
4	S2	193	VAL
4	S2	207	LEU
4	S2	208	GLU
4	S2	218	ILE
4	S2	226	THR
5	S3	4	LEU
5	S3	5	ILE

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Mol	Chain	Res	Type
5	S3	21	LEU
5	S3	23	GLU
5	S3	41	VAL
5	S3	45	LYS
5	S3	65	ARG
5	S3	66	ILE
5	S3	83	THR
5	S3	84	ILE
5	S3	91	VAL
5	S3	92	GLN
5	S3	93	ASP
5	S3	103	GLU
5	S3	111	ASN
5	S3	115	ILE
5	S3	124	ARG
5	S3	150	MET
5	S3	158	ILE
5	S3	165	ASN
5	S3	168	ILE
5	S3	172	THR
5	S3	175	VAL
5	S3	176	LEU
5	S3	181	VAL
5	S3	182	LEU
5	S3	207	THR
5	S3	213	GLU
5	S3	217	ILE
5	S3	218	LEU
6	S4	9	LEU
6	S4	12	LEU
6	S4	38	LEU
6	S4	45	ILE
6	S4	56	LEU
6	S4	65	LEU
6	S4	77	ARG
6	S4	92	LEU
6	S4	104	ASP
6	S4	109	PHE
6	S4	115	THR
6	S4	129	VAL
6	S4	131	LEU
6	S4	148	ARG

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Mol	Chain	Res	Type
6	S4	160	VAL
6	S4	180	LEU
6	S4	181	VAL
6	S4	187	ARG
6	S4	189	LEU
6	S4	191	ARG
6	S4	192	ILE
6	S4	215	ASP
6	S4	219	VAL
6	S4	220	THR
6	S4	222	LEU
6	S4	227	VAL
6	S4	240	LYS
6	S4	246	LEU
7	S5	24	VAL
7	S5	25	LEU
7	S5	32	GLU
7	S5	43	PHE
7	S5	45	LYS
7	S5	48	PHE
7	S5	79	ASN
7	S5	89	ILE
7	S5	93	LEU
7	S5	97	LEU
7	S5	104	ASN
7	S5	119	ASP
7	S5	149	VAL
7	S5	156	ARG
7	S5	160	VAL
7	S5	177	ILE
8	S6	13	GLN
8	S6	15	THR
8	S6	18	ILE
8	S6	25	ARG
8	S6	44	GLU
8	S6	72	ARG
8	S6	76	LEU
8	S6	89	ASP
8	S6	108	VAL
8	S6	109	LEU
8	S6	120	GLU
8	S6	124	LEU

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Mol	Chain	Res	Type
8	S6	127	THR
8	S6	128	THR
8	S6	129	VAL
8	S6	131	LYS
8	S6	133	LEU
8	S6	157	VAL
8	S6	170	THR
8	S6	174	LYS
8	S6	179	VAL
8	S6	193	LEU
8	S6	211	LEU
8	S6	216	LEU
8	S6	223	LYS
9	S7	9	LEU
9	S7	15	GLU
9	S7	24	PHE
9	S7	28	GLU
9	S7	38	LEU
9	S7	42	GLN
9	S7	46	ILE
9	S7	51	VAL
9	S7	67	LEU
9	S7	77	LEU
9	S7	109	VAL
9	S7	110	GLN
9	S7	118	LEU
9	S7	123	ASP
9	S7	126	LEU
9	S7	130	VAL
9	S7	166	LEU
9	S7	181	ILE
9	S7	182	VAL
9	S7	185	ILE
10	S8	5	ARG
10	S8	8	ARG
10	S8	14	THR
10	S8	21	PHE
10	S8	29	LEU
10	S8	32	GLN
10	S8	45	SER
10	S8	46	VAL
10	S8	56	ARG

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Mol	Chain	Res	Type
10	S8	58	LEU
10	S8	62	THR
10	S8	74	LYS
10	S8	137	LYS
10	S8	138	ASN
10	S8	140	GLU
10	S8	159	GLN
10	S8	187	GLU
11	S9	3	ARG
11	S9	7	THR
11	S9	21	SER
11	S9	28	LEU
11	S9	38	ASN
11	S9	45	ILE
11	S9	46	SER
11	S9	49	LEU
11	S9	54	ARG
11	S9	60	LEU
11	S9	74	ASN
11	S9	88	GLU
11	S9	89	ASP
11	S9	92	LYS
11	S9	93	LEU
11	S9	96	VAL
11	S9	97	LEU
11	S9	99	LEU
11	S9	109	LEU
11	S9	110	GLN
11	S9	112	GLN
11	S9	134	ILE
11	S9	138	LYS
11	S9	143	ILE
11	S9	149	ARG
11	S9	171	ARG
11	S9	172	VAL
11	S9	175	ARG
11	S9	182	GLU
12	C0	1	MET
12	C0	20	VAL
12	C0	55	VAL
12	C0	76	LEU
12	C0	78	GLU

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Mol	Chain	Res	Type
12	C0	81	ASN
12	C0	82	LEU
13	C1	7	VAL
13	C1	8	GLN
13	C1	9	SER
13	C1	21	ASN
13	C1	30	ARG
13	C1	40	LEU
13	C1	44	THR
13	C1	67	ARG
13	C1	74	THR
13	C1	86	ILE
13	C1	123	VAL
13	C1	131	ILE
14	C2	28	LEU
14	C2	36	LEU
14	C2	37	VAL
14	C2	38	HIS
14	C2	43	ARG
14	C2	52	LEU
14	C2	61	VAL
14	C2	71	ILE
14	C2	74	LEU
14	C2	86	VAL
14	C2	89	ILE
14	C2	93	ASP
14	C2	97	LEU
14	C2	103	LEU
14	C2	116	VAL
14	C2	132	GLU
14	C2	139	HIS
15	C3	3	ARG
15	C3	9	LYS
15	C3	16	ILE
15	C3	27	LYS
15	C3	32	SER
15	C3	39	LYS
15	C3	42	ARG
15	C3	50	ILE
15	C3	66	ILE
15	C3	80	LEU
15	C3	84	ILE

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Mol	Chain	Res	Type
15	C3	102	LEU
15	C3	103	GLU
15	C3	105	ASN
15	C3	110	ASP
15	C3	115	LEU
15	C3	121	ARG
15	C3	125	LEU
15	C3	140	LYS
16	C4	13	VAL
16	C4	16	VAL
16	C4	26	THR
16	C4	29	HIS
16	C4	39	ILE
16	C4	42	VAL
16	C4	76	ILE
16	C4	81	VAL
16	C4	89	THR
16	C4	99	GLN
16	C4	103	ARG
16	C4	114	ARG
16	C4	115	ILE
16	C4	125	SER
16	C4	128	LYS
16	C4	129	LYS
16	C4	136	ARG
16	C4	137	LEU
17	C5	11	VAL
17	C5	20	VAL
17	C5	22	LEU
17	C5	32	ASP
17	C5	34	VAL
17	C5	35	LYS
17	C5	44	ARG
17	C5	52	LYS
17	C5	69	GLU
17	C5	80	MET
17	C5	84	ILE
17	C5	86	VAL
17	C5	88	GLU
17	C5	94	VAL
17	C5	110	GLU
17	C5	121	ILE

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Mol	Chain	Res	Type
17	C5	126	VAL
18	C6	14	LYS
18	C6	29	ILE
18	C6	37	THR
18	C6	39	VAL
18	C6	42	GLU
18	C6	47	LYS
18	C6	54	LEU
18	C6	57	LEU
18	C6	66	ARG
18	C6	69	VAL
18	C6	99	GLU
18	C6	114	ARG
18	C6	117	LEU
18	C6	123	ARG
18	C6	128	LYS
18	C6	137	ARG
19	C7	3	ARG
19	C7	6	THR
19	C7	7	LYS
19	C7	23	LYS
19	C7	25	THR
19	C7	30	THR
19	C7	38	ILE
19	C7	46	LEU
19	C7	49	LYS
19	C7	69	ILE
19	C7	72	LYS
19	C7	84	TYR
19	C7	88	VAL
19	C7	104	ASN
19	C7	105	GLN
19	C7	112	SER
19	C7	113	LEU
20	C8	3	LEU
20	C8	5	VAL
20	C8	13	HIS
20	C8	14	ILE
20	C8	17	LEU
20	C8	18	LEU
20	C8	19	ASN
20	C8	26	ILE

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Mol	Chain	Res	Type
20	C8	28	ILE
20	C8	32	LEU
20	C8	54	LEU
20	C8	57	ARG
20	C8	71	GLN
20	C8	80	LYS
20	C8	86	LEU
20	C8	92	ILE
20	C8	93	THR
20	C8	97	ASP
20	C8	115	ARG
20	C8	119	ILE
20	C8	123	ARG
20	C8	136	GLN
20	C8	138	THR
21	C9	6	VAL
21	C9	18	TYR
21	C9	22	LEU
21	C9	28	LEU
21	C9	34	VAL
21	C9	35	ASP
21	C9	36	ILE
21	C9	37	VAL
21	C9	64	HIS
21	C9	67	MET
21	C9	68	ARG
21	C9	70	GLN
21	C9	73	VAL
21	C9	88	VAL
21	C9	94	ILE
21	C9	111	ILE
21	C9	114	VAL
21	C9	125	SER
21	C9	144	GLU
22	D0	18	GLN
22	D0	20	ILE
22	D0	22	ILE
22	D0	51	VAL
22	D0	57	ARG
22	D0	67	THR
22	D0	74	GLU
22	D0	81	THR

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Mol	Chain	Res	Type
22	D0	84	MET
22	D0	89	ARG
22	D0	101	LYS
22	D0	106	ILE
22	D0	118	VAL
23	D1	3	ASN
23	D1	11	LEU
23	D1	32	VAL
23	D1	39	VAL
23	D1	41	GLU
23	D1	62	ARG
23	D1	78	LEU
23	D1	87	ARG
24	D2	4	SER
24	D2	7	LEU
24	D2	15	ASN
24	D2	24	GLN
24	D2	26	LEU
24	D2	27	ILE
24	D2	53	ILE
24	D2	56	HIS
24	D2	65	LEU
24	D2	74	VAL
24	D2	83	ILE
24	D2	86	ILE
24	D2	87	GLU
24	D2	93	LEU
24	D2	98	GLN
24	D2	103	ILE
24	D2	104	LEU
24	D2	120	HIS
24	D2	121	VAL
24	D2	125	ILE
24	D2	129	VAL
25	D3	7	ARG
25	D3	9	LEU
25	D3	16	ARG
25	D3	23	ARG
25	D3	40	SER
25	D3	47	SER
25	D3	65	ASN
25	D3	69	ARG

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Mol	Chain	Res	Type
25	D3	71	CYS
25	D3	79	ASN
25	D3	84	THR
25	D3	103	LEU
25	D3	107	PHE
25	D3	117	ILE
25	D3	127	VAL
26	D4	7	ILE
26	D4	34	ASN
26	D4	51	GLU
26	D4	57	VAL
26	D4	62	THR
26	D4	84	LYS
26	D4	99	LYS
26	D4	102	LYS
26	D4	123	LYS
26	D4	124	ARG
26	D4	128	LYS
27	D5	37	GLN
27	D5	40	VAL
27	D5	42	LEU
27	D5	60	VAL
27	D5	62	VAL
27	D5	67	ASP
27	D5	75	LEU
27	D5	78	ILE
27	D5	95	HIS
27	D5	96	SER
27	D5	97	LYS
27	D5	98	GLN
27	D5	102	THR
28	D6	12	LYS
28	D6	30	ILE
28	D6	37	LYS
28	D6	61	GLU
28	D6	64	LEU
28	D6	68	TYR
28	D6	69	ASN
28	D6	71	LEU
28	D6	79	ILE
28	D6	84	VAL
28	D6	86	VAL

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Mol	Chain	Res	Type
28	D6	91	ASP
29	D7	3	LEU
29	D7	4	VAL
29	D7	23	THR
29	D7	26	GLN
29	D7	33	LEU
29	D7	41	LEU
29	D7	42	ASN
29	D7	67	THR
30	D8	13	ILE
30	D8	14	LYS
30	D8	19	THR
30	D8	32	PHE
30	D8	39	THR
30	D8	44	VAL
30	D8	58	GLU
30	D8	61	ARG
31	D9	4	GLU
31	D9	6	VAL
31	D9	14	TYR
31	D9	19	ARG
31	D9	28	THR
31	D9	30	LEU
31	D9	36	LEU
32	E0	5	HIS
32	E0	21	VAL
32	E0	31	LYS
32	E0	42	ARG
32	E0	43	ARG
33	E1	83	LYS
33	E1	91	ILE
33	E1	98	VAL
33	E1	100	LEU
33	E1	102	VAL
33	E1	103	LEU
33	E1	107	LYS
33	E1	108	VAL
33	E1	130	VAL
33	E1	135	HIS
33	E1	137	ASP
33	E1	138	ARG
33	E1	147	VAL

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Mol	Chain	Res	Type
33	E1	151	ASN
34	SR	6	VAL
34	SR	17	ASN
34	SR	31	ASN
34	SR	39	ASP
34	SR	45	TRP
34	SR	52	GLN
34	SR	58	VAL
34	SR	74	THR
34	SR	76	ASP
34	SR	81	LEU
34	SR	106	HIS
34	SR	116	ASP
34	SR	117	LYS
34	SR	131	ILE
34	SR	136	ILE
34	SR	137	LYS
34	SR	140	CYS
34	SR	184	ASN
34	SR	223	TRP
34	SR	229	LYS
34	SR	234	LEU
34	SR	238	ASP
34	SR	242	SER
34	SR	264	SER
34	SR	265	LEU
34	SR	268	GLN
34	SR	269	TYR
34	SR	275	ARG
34	SR	290	VAL
34	SR	316	MET
34	SR	317	THR
35	SM	46	LYS
35	SM	48	ARG
35	SM	53	ARG
35	SM	61	ILE
35	SM	68	ARG
35	SM	70	ASN
35	SM	77	THR
35	SM	84	LYS
35	SM	89	ARG
35	SM	91	THR

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Mol	Chain	Res	Type
35	SM	100	THR
35	SM	116	GLU
35	SM	117	LEU
35	SM	131	ILE
35	SM	137	GLU
39	L2	4	VAL
39	L2	14	SER
39	L2	20	THR
39	L2	28	LYS
39	L2	32	LEU
39	L2	44	ILE
39	L2	45	VAL
39	L2	60	LYS
39	L2	70	ARG
39	L2	72	ARG
39	L2	82	VAL
39	L2	84	THR
39	L2	92	LYS
39	L2	101	VAL
39	L2	111	THR
39	L2	113	VAL
39	L2	116	VAL
39	L2	130	SER
39	L2	157	VAL
39	L2	165	VAL
39	L2	168	VAL
39	L2	179	LEU
39	L2	180	LEU
39	L2	192	LYS
39	L2	199	THR
39	L2	204	MET
39	L2	207	VAL
39	L2	208	ASP
39	L2	227	ARG
39	L2	238	ILE
39	L2	252	THR
40	L3	7	GLU
40	L3	17	LEU
40	L3	19	ARG
40	L3	20	LYS
40	L3	21	ARG
40	L3	25	ILE

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Mol	Chain	Res	Type
40	L3	30	LYS
40	L3	38	SER
40	L3	55	THR
40	L3	56	ILE
40	L3	67	PHE
40	L3	72	VAL
40	L3	76	VAL
40	L3	79	VAL
40	L3	84	VAL
40	L3	85	VAL
40	L3	86	VAL
40	L3	93	VAL
40	L3	97	ARG
40	L3	103	THR
40	L3	104	THR
40	L3	110	LEU
40	L3	114	VAL
40	L3	116	ARG
40	L3	120	LYS
40	L3	128	LYS
40	L3	164	THR
40	L3	166	ILE
40	L3	167	ARG
40	L3	173	GLN
40	L3	183	LEU
40	L3	188	ILE
40	L3	196	ARG
40	L3	202	THR
40	L3	206	ASP
40	L3	213	GLU
40	L3	235	THR
40	L3	238	LEU
40	L3	244	ARG
40	L3	246	LEU
40	L3	252	ILE
40	L3	264	VAL
40	L3	284	ARG
40	L3	293	ASN
40	L3	296	THR
40	L3	301	THR
40	L3	304	THR
40	L3	305	ILE

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Mol	Chain	Res	Type
40	L3	317	ILE
40	L3	320	ASP
40	L3	328	ILE
40	L3	337	THR
40	L3	353	GLU
40	L3	354	VAL
40	L3	386	ASP
40	L3	387	LEU
41	L4	16	THR
41	L4	55	LYS
41	L4	69	ARG
41	L4	71	VAL
41	L4	74	ILE
41	L4	93	MET
41	L4	99	MET
41	L4	105	THR
41	L4	112	LYS
41	L4	124	SER
41	L4	133	SER
41	L4	136	LEU
41	L4	145	ILE
41	L4	148	ILE
41	L4	152	VAL
41	L4	153	SER
41	L4	156	LEU
41	L4	161	LYS
41	L4	172	VAL
41	L4	179	LEU
41	L4	187	LEU
41	L4	193	LYS
41	L4	194	TYR
41	L4	203	ARG
41	L4	206	LEU
41	L4	222	VAL
41	L4	225	VAL
41	L4	227	THR
41	L4	230	VAL
41	L4	246	ARG
41	L4	252	GLU
41	L4	258	LEU
41	L4	259	ASP
41	L4	285	ASP

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Mol	Chain	Res	Type
41	L4	287	THR
41	L4	290	ILE
41	L4	307	GLN
41	L4	311	HIS
41	L4	313	LEU
41	L4	327	LEU
41	L4	333	VAL
41	L4	338	LYS
41	L4	346	LYS
41	L4	349	THR
42	L5	8	LYS
42	L5	14	SER
42	L5	23	ARG
42	L5	35	ARG
42	L5	41	LYS
42	L5	66	SER
42	L5	69	ILE
42	L5	70	THR
42	L5	93	THR
42	L5	95	TRP
42	L5	105	ILE
42	L5	110	LEU
42	L5	115	LEU
42	L5	128	GLU
42	L5	130	GLU
42	L5	131	LEU
42	L5	137	ASP
42	L5	140	ARG
42	L5	146	LEU
42	L5	155	THR
42	L5	163	LEU
42	L5	177	GLU
42	L5	179	ARG
42	L5	190	ILE
42	L5	194	LEU
42	L5	208	MET
42	L5	211	LEU
42	L5	221	GLU
42	L5	222	LEU
42	L5	231	ILE
42	L5	263	GLU
42	L5	277	LEU

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Mol	Chain	Res	Type
42	L5	279	LYS
42	L5	290	ILE
42	L5	296	GLN
43	L6	5	LYS
43	L6	21	THR
43	L6	31	ARG
43	L6	52	VAL
43	L6	53	VAL
43	L6	64	LEU
43	L6	65	ILE
43	L6	78	ARG
43	L6	79	VAL
43	L6	84	VAL
43	L6	89	THR
43	L6	90	LYS
43	L6	98	VAL
43	L6	134	ARG
43	L6	137	ASP
43	L6	154	LEU
43	L6	155	LEU
43	L6	160	SER
43	L6	162	SER
44	L7	24	GLU
44	L7	25	GLN
44	L7	26	VAL
44	L7	38	LYS
44	L7	39	GLU
44	L7	82	LYS
44	L7	88	ARG
44	L7	93	ASN
44	L7	105	LEU
44	L7	107	ARG
44	L7	110	ARG
44	L7	115	THR
44	L7	120	THR
44	L7	124	LEU
44	L7	126	LEU
44	L7	128	LYS
44	L7	151	ARG
44	L7	158	LYS
44	L7	173	LEU
44	L7	175	LYS

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Mol	Chain	Res	Type
44	L7	179	LEU
44	L7	184	LEU
44	L7	239	LEU
45	L8	27	THR
45	L8	41	GLN
45	L8	47	SER
45	L8	65	LEU
45	L8	71	VAL
45	L8	74	THR
45	L8	79	GLN
45	L8	109	LEU
45	L8	112	GLU
45	L8	132	VAL
45	L8	134	TYR
45	L8	136	LEU
45	L8	150	LEU
45	L8	156	ASP
45	L8	157	VAL
45	L8	160	ILE
45	L8	169	LEU
45	L8	181	LYS
45	L8	189	LEU
45	L8	190	VAL
45	L8	203	VAL
45	L8	218	ILE
45	L8	221	ASN
45	L8	230	LYS
46	L9	1	MET
46	L9	5	GLN
46	L9	6	THR
46	L9	9	GLN
46	L9	14	GLU
46	L9	19	SER
46	L9	41	ILE
46	L9	42	ASP
46	L9	44	THR
46	L9	48	VAL
46	L9	49	ASN
46	L9	51	GLN
46	L9	52	LEU
46	L9	55	VAL
46	L9	65	VAL

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Mol	Chain	Res	Type
46	L9	68	LEU
46	L9	69	ARG
46	L9	70	THR
46	L9	71	VAL
46	L9	73	SER
46	L9	77	ASN
46	L9	92	TYR
46	L9	103	ILE
46	L9	118	LEU
46	L9	120	ASP
46	L9	132	VAL
46	L9	149	ASN
46	L9	151	VAL
46	L9	157	ASN
46	L9	161	LEU
46	L9	162	GLN
46	L9	164	ILE
46	L9	172	ILE
46	L9	173	ARG
46	L9	177	ASP
46	L9	182	SER
46	L9	189	GLU
47	M0	12	GLN
47	M0	26	VAL
47	M0	30	LYS
47	M0	31	ILE
47	M0	48	LEU
47	M0	51	HIS
47	M0	52	LEU
47	M0	58	GLU
47	M0	60	LEU
47	M0	61	SER
47	M0	63	GLU
47	M0	74	LYS
47	M0	82	ARG
47	M0	83	ASP
47	M0	87	LEU
47	M0	99	ILE
47	M0	116	ARG
47	M0	121	LYS
47	M0	128	ARG
47	M0	129	VAL

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Mol	Chain	Res	Type
47	M0	137	SER
47	M0	138	VAL
47	M0	143	SER
47	M0	163	GLN
47	M0	165	ILE
47	M0	167	LEU
47	M0	174	THR
47	M0	185	ARG
47	M0	189	GLU
47	M0	203	LYS
47	M0	208	ASN
48	M1	10	ARG
48	M1	12	LEU
48	M1	13	LYS
48	M1	18	VAL
48	M1	19	LEU
48	M1	28	ASP
48	M1	39	GLN
48	M1	44	THR
48	M1	46	VAL
48	M1	67	VAL
48	M1	80	LEU
48	M1	81	GLU
48	M1	82	ARG
48	M1	85	LYS
48	M1	101	ASN
48	M1	106	ILE
48	M1	111	ASP
48	M1	112	LEU
48	M1	115	LYS
48	M1	130	VAL
48	M1	137	ARG
48	M1	138	VAL
48	M1	142	LYS
48	M1	145	LYS
48	M1	155	THR
48	M1	157	GLU
48	M1	164	LYS
48	M1	166	LYS
49	M3	17	HIS
49	M3	22	VAL
49	M3	23	LYS

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Mol	Chain	Res	Type
49	M3	24	VAL
49	M3	36	ARG
49	M3	53	LEU
49	M3	54	LEU
49	M3	55	ARG
49	M3	57	VAL
49	M3	58	VAL
49	M3	63	VAL
49	M3	67	ARG
49	M3	85	LEU
49	M3	104	ARG
49	M3	114	GLN
49	M3	121	SER
49	M3	122	LYS
49	M3	124	ILE
49	M3	131	LYS
49	M3	138	VAL
49	M3	147	ILE
49	M3	169	THR
50	M4	4	ASP
50	M4	8	LYS
50	M4	14	LEU
50	M4	15	VAL
50	M4	20	VAL
50	M4	38	ILE
50	M4	41	GLN
50	M4	43	LYS
50	M4	50	LYS
50	M4	53	VAL
50	M4	58	ILE
50	M4	64	VAL
50	M4	65	LEU
50	M4	69	THR
50	M4	72	LEU
50	M4	90	VAL
50	M4	91	CYS
50	M4	92	GLU
51	M5	7	LEU
51	M5	10	LEU
51	M5	17	ASP
51	M5	18	VAL
51	M5	20	ARG

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Mol	Chain	Res	Type
51	M5	22	LEU
51	M5	46	ASP
51	M5	64	VAL
51	M5	80	THR
51	M5	85	THR
51	M5	99	ARG
51	M5	106	VAL
51	M5	117	ASN
51	M5	133	ILE
51	M5	134	LEU
51	M5	138	GLN
51	M5	151	ILE
51	M5	153	ASP
51	M5	157	LYS
51	M5	167	THR
51	M5	183	THR
51	M5	184	LYS
51	M5	187	ARG
51	M5	188	ARG
51	M5	190	THR
51	M5	196	THR
51	M5	198	SER
52	M6	4	GLU
52	M6	22	VAL
52	M6	25	LYS
52	M6	33	ILE
52	M6	51	LYS
52	M6	58	LEU
52	M6	66	LYS
52	M6	68	ARG
52	M6	77	SER
52	M6	78	ARG
52	M6	79	ILE
52	M6	84	LEU
52	M6	85	ARG
52	M6	94	ARG
52	M6	106	GLU
52	M6	113	ASP
52	M6	116	LYS
52	M6	122	GLN
52	M6	124	LEU
52	M6	128	ARG

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Mol	Chain	Res	Type
52	M6	138	LEU
52	M6	143	THR
52	M6	144	SER
52	M6	155	LYS
52	M6	160	ARG
52	M6	163	SER
52	M6	184	THR
52	M6	190	VAL
53	M7	7	THR
53	M7	24	VAL
53	M7	29	THR
53	M7	36	ILE
53	M7	42	THR
53	M7	46	LYS
53	M7	52	LEU
53	M7	75	GLU
53	M7	78	VAL
53	M7	86	LYS
53	M7	91	VAL
53	M7	110	THR
53	M7	112	LEU
53	M7	114	VAL
53	M7	118	GLN
53	M7	119	VAL
53	M7	121	GLN
53	M7	127	ARG
53	M7	129	THR
53	M7	136	ILE
53	M7	137	ASN
53	M7	138	LYS
53	M7	142	SER
53	M7	144	SER
53	M7	148	LEU
53	M7	165	VAL
53	M7	168	LEU
53	M7	171	ARG
54	M8	3	ILE
54	M8	17	THR
54	M8	21	SER
54	M8	22	ASP
54	M8	24	VAL
54	M8	26	LEU

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Mol	Chain	Res	Type
54	M8	32	LEU
54	M8	49	LEU
54	M8	67	ILE
54	M8	69	ARG
54	M8	84	VAL
54	M8	86	THR
54	M8	115	VAL
54	M8	127	LEU
54	M8	135	GLN
54	M8	138	LEU
54	M8	171	LYS
54	M8	178	ARG
54	M8	180	ARG
54	M8	186	VAL
55	M9	22	VAL
55	M9	42	ARG
55	M9	44	LEU
55	M9	49	THR
55	M9	51	VAL
55	M9	60	LYS
55	M9	63	THR
55	M9	70	LYS
55	M9	74	ARG
55	M9	76	SER
55	M9	81	ARG
55	M9	86	GLU
55	M9	103	ARG
55	M9	106	LEU
55	M9	110	ARG
55	M9	138	LEU
55	M9	139	VAL
55	M9	143	ILE
55	M9	165	LYS
56	N0	1	MET
56	N0	16	THR
56	N0	19	VAL
56	N0	34	GLU
56	N0	45	LEU
56	N0	50	LYS
56	N0	61	ILE
56	N0	71	LYS
56	N0	79	VAL

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Mol	Chain	Res	Type
56	N0	81	TYR
56	N0	87	THR
56	N0	88	HIS
56	N0	92	LYS
56	N0	97	VAL
56	N0	100	VAL
56	N0	115	ARG
56	N0	130	GLU
56	N0	132	THR
56	N0	138	GLN
56	N0	149	LYS
56	N0	155	ARG
56	N0	161	LYS
56	N0	166	LYS
56	N0	172	TYR
57	N1	12	ARG
57	N1	18	ASP
57	N1	25	VAL
57	N1	26	HIS
57	N1	27	LEU
57	N1	29	THR
57	N1	32	LYS
57	N1	55	LYS
57	N1	69	LYS
57	N1	72	VAL
57	N1	75	ILE
57	N1	78	LYS
57	N1	79	MET
57	N1	80	VAL
57	N1	83	ARG
57	N1	88	ARG
57	N1	89	LEU
57	N1	93	VAL
57	N1	101	CYS
57	N1	103	GLN
57	N1	104	GLU
57	N1	106	LEU
57	N1	118	GLU
57	N1	122	GLN
57	N1	124	VAL
57	N1	126	VAL
57	N1	128	LEU

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Mol	Chain	Res	Type
57	N1	131	GLN
57	N1	139	ARG
57	N1	141	VAL
57	N1	154	VAL
58	N2	16	THR
58	N2	19	VAL
58	N2	50	LEU
58	N2	52	ASN
58	N2	62	VAL
58	N2	65	VAL
58	N2	66	VAL
58	N2	99	LYS
58	N2	100	THR
59	N3	9	THR
59	N3	36	ILE
59	N3	44	SER
59	N3	48	ARG
59	N3	54	LEU
59	N3	58	VAL
59	N3	62	VAL
59	N3	69	LEU
59	N3	73	VAL
59	N3	86	ARG
59	N3	88	ARG
59	N3	98	ASN
59	N3	102	ILE
59	N3	108	GLU
59	N3	115	THR
59	N3	120	LYS
60	N4	4	GLU
60	N4	5	ILE
60	N4	19	THR
60	N4	64	THR
61	N5	26	VAL
61	N5	27	ARG
61	N5	29	SER
61	N5	36	LYS
61	N5	37	THR
61	N5	38	LEU
61	N5	39	LYS
61	N5	49	LYS
61	N5	63	ILE

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Mol	Chain	Res	Type
61	N5	69	SER
61	N5	70	GLU
61	N5	77	GLU
61	N5	78	ASP
61	N5	86	VAL
61	N5	92	LYS
61	N5	108	LEU
61	N5	113	LEU
61	N5	115	ARG
61	N5	119	THR
61	N5	125	ARG
61	N5	133	LEU
61	N5	135	ILE
61	N5	137	ASN
62	N6	3	LYS
62	N6	5	SER
62	N6	9	SER
62	N6	13	ARG
62	N6	17	LYS
62	N6	28	ARG
62	N6	37	LYS
62	N6	38	GLU
62	N6	39	LEU
62	N6	40	ARG
62	N6	42	GLN
62	N6	45	ILE
62	N6	55	GLU
62	N6	56	VAL
62	N6	57	LEU
62	N6	60	ARG
62	N6	70	ILE
62	N6	76	LEU
62	N6	77	LYS
62	N6	88	GLU
62	N6	115	ARG
62	N6	122	LYS
62	N6	127	GLU
63	N7	14	VAL
63	N7	17	ARG
63	N7	24	VAL
63	N7	30	ASP
63	N7	34	LYS

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Mol	Chain	Res	Type
63	N7	35	SER
63	N7	46	ILE
63	N7	54	THR
63	N7	55	LYS
63	N7	75	VAL
63	N7	80	LEU
63	N7	94	SER
63	N7	100	THR
63	N7	102	GLU
63	N7	103	GLN
63	N7	122	HIS
63	N7	135	ARG
64	N8	4	ARG
64	N8	6	THR
64	N8	8	THR
64	N8	12	ARG
64	N8	34	MET
64	N8	42	ARG
64	N8	46	ASP
64	N8	56	VAL
64	N8	73	LEU
64	N8	91	LEU
64	N8	115	LYS
64	N8	118	ILE
64	N8	124	ILE
64	N8	130	VAL
64	N8	133	LEU
65	N9	3	LYS
65	N9	8	THR
65	N9	13	THR
65	N9	22	LYS
65	N9	38	LYS
65	N9	59	LYS
66	O0	30	THR
66	O0	33	SER
66	O0	34	LEU
66	O0	41	LEU
66	O0	43	ILE
66	O0	52	ARG
66	O0	54	SER
66	O0	59	TYR
66	O0	61	MET

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Mol	Chain	Res	Type
66	O0	67	VAL
66	O0	76	GLU
66	O0	87	VAL
66	O0	89	VAL
66	O0	100	ILE
66	O0	101	LEU
67	O1	6	ASP
67	O1	8	VAL
67	O1	26	LYS
67	O1	31	ARG
67	O1	55	LEU
67	O1	64	VAL
67	O1	73	LEU
67	O1	79	ARG
67	O1	82	GLU
67	O1	84	ASP
67	O1	96	VAL
67	O1	106	THR
67	O1	107	VAL
68	O2	3	SER
68	O2	9	ILE
68	O2	19	ARG
68	O2	31	ASN
68	O2	33	ARG
68	O2	35	GLN
68	O2	41	VAL
68	O2	54	LYS
68	O2	61	LYS
68	O2	68	PRO
68	O2	73	THR
68	O2	82	LEU
68	O2	106	VAL
68	O2	109	LEU
68	O2	126	LEU
69	O3	3	GLU
69	O3	7	LEU
69	O3	14	LEU
69	O3	15	SER
69	O3	20	LYS
69	O3	22	VAL
69	O3	24	ASN
69	O3	37	THR

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Mol	Chain	Res	Type
69	O3	48	ARG
69	O3	49	ILE
69	O3	59	VAL
69	O3	74	THR
69	O3	78	SER
69	O3	80	VAL
69	O3	81	VAL
69	O3	92	LYS
69	O3	98	VAL
69	O3	105	SER
70	O4	6	THR
70	O4	8	ARG
70	O4	20	ILE
70	O4	23	VAL
70	O4	24	LYS
70	O4	29	ILE
70	O4	33	GLN
70	O4	38	LEU
70	O4	58	ARG
70	O4	65	VAL
70	O4	71	THR
70	O4	102	LYS
70	O4	104	VAL
71	O5	20	GLN
71	O5	22	VAL
71	O5	46	THR
71	O5	47	VAL
71	O5	90	ARG
71	O5	93	THR
71	O5	101	THR
71	O5	102	GLU
71	O5	115	LYS
71	O5	118	ILE
72	O6	9	ILE
72	O6	11	LEU
72	O6	17	VAL
72	O6	21	THR
72	O6	25	LYS
72	O6	26	ILE
72	O6	28	TYR
72	O6	36	ARG
72	O6	42	SER

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Mol	Chain	Res	Type
72	O6	57	LEU
72	O6	60	LEU
72	O6	62	ARG
72	O6	68	ARG
72	O6	76	ARG
72	O6	80	PHE
72	O6	90	MET
72	O6	98	ARG
73	O7	14	LYS
73	O7	24	ARG
73	O7	25	ARG
73	O7	30	GLN
73	O7	31	LYS
73	O7	33	THR
73	O7	36	SER
73	O7	44	THR
73	O7	59	THR
73	O7	67	LEU
73	O7	85	LYS
74	O8	8	ILE
74	O8	27	ILE
74	O8	28	ASN
74	O8	29	LYS
74	O8	32	ASN
74	O8	39	ARG
74	O8	46	ARG
74	O8	51	LEU
74	O8	53	THR
74	O8	57	ASN
74	O8	64	LYS
74	O8	65	LEU
74	O8	67	GLN
74	O8	69	LEU
74	O8	77	ARG
75	O9	4	GLN
75	O9	5	LYS
75	O9	23	LEU
75	O9	27	ILE
75	O9	28	ARG
75	O9	29	LEU
76	Q0	79	GLU
76	Q0	81	SER

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Mol	Chain	Res	Type
76	Q0	85	LEU
76	Q0	97	ARG
76	Q0	98	LYS
76	Q0	99	CYS
76	Q0	112	LYS
76	Q0	113	ARG
76	Q0	114	LYS
76	Q0	127	LEU
77	Q1	2	ARG
77	Q1	11	ARG
77	Q1	13	LEU
78	Q2	7	THR
78	Q2	8	ARG
78	Q2	16	THR
78	Q2	17	CYS
78	Q2	20	HIS
78	Q2	21	THR
78	Q2	26	THR
78	Q2	47	GLN
78	Q2	64	THR
78	Q2	65	THR
78	Q2	69	VAL
78	Q2	78	LYS
78	Q2	83	LEU
78	Q2	84	THR
78	Q2	85	LEU
78	Q2	87	ARG
78	Q2	88	CYS
78	Q2	93	LEU
78	Q2	105	GLN
79	Q3	5	THR
79	Q3	7	LYS
79	Q3	11	THR
79	Q3	16	VAL
79	Q3	26	VAL
79	Q3	28	LYS
79	Q3	32	GLN
79	Q3	45	LYS
79	Q3	60	CYS
79	Q3	70	THR
79	Q3	73	THR
79	Q3	82	THR

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Mol	Chain	Res	Type
79	Q3	84	ARG
79	Q3	90	VAL
79	Q3	91	GLU
2	s0	9	LEU
2	s0	22	THR
2	s0	24	LEU
2	s0	31	VAL
2	s0	45	VAL
2	s0	46	HIS
2	s0	59	LEU
2	s0	72	ASP
2	s0	87	LEU
2	s0	96	THR
2	s0	108	THR
2	s0	111	ILE
2	s0	124	THR
2	s0	135	GLU
2	s0	144	ILE
2	s0	151	SER
2	s0	153	SER
2	s0	154	GLU
2	s0	158	VAL
2	s0	172	LEU
2	s0	184	LEU
2	s0	188	LEU
2	s0	189	VAL
2	s0	191	ARG
3	s1	21	VAL
3	s1	25	THR
3	s1	26	ARG
3	s1	47	LEU
3	s1	65	VAL
3	s1	66	VAL
3	s1	68	VAL
3	s1	70	LEU
3	s1	74	GLN
3	s1	77	GLU
3	s1	78	ASP
3	s1	81	PHE
3	s1	110	LEU
3	s1	124	ASN
3	s1	135	LEU

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Mol	Chain	Res	Type
3	s1	144	ARG
3	s1	152	ARG
3	s1	157	GLN
3	s1	173	THR
3	s1	181	LEU
3	s1	184	LEU
3	s1	196	GLU
3	s1	208	GLN
3	s1	209	ASN
3	s1	212	VAL
3	s1	216	LYS
3	s1	231	LEU
4	s2	41	LEU
4	s2	46	LYS
4	s2	51	THR
4	s2	53	ILE
4	s2	54	GLU
4	s2	55	GLU
4	s2	58	LEU
4	s2	69	ILE
4	s2	70	ASP
4	s2	72	LEU
4	s2	78	ASP
4	s2	80	VAL
4	s2	82	ASN
4	s2	83	ILE
4	s2	84	LYS
4	s2	91	ARG
4	s2	95	ARG
4	s2	96	THR
4	s2	97	ARG
4	s2	111	VAL
4	s2	115	ILE
4	s2	117	THR
4	s2	125	ILE
4	s2	139	ILE
4	s2	141	ARG
4	s2	150	GLN
4	s2	152	HIS
4	s2	154	LEU
4	s2	159	THR
4	s2	165	VAL

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Mol	Chain	Res	Type
4	s2	166	THR
4	s2	170	ILE
4	s2	182	PRO
4	s2	194	GLU
4	s2	207	LEU
4	s2	218	ILE
4	s2	221	THR
4	s2	226	THR
4	s2	228	ASN
4	s2	232	GLU
4	s2	235	LEU
4	s2	237	VAL
5	s3	4	LEU
5	s3	7	LYS
5	s3	21	LEU
5	s3	26	THR
5	s3	37	VAL
5	s3	41	VAL
5	s3	44	THR
5	s3	66	ILE
5	s3	67	ASN
5	s3	79	TYR
5	s3	84	ILE
5	s3	91	VAL
5	s3	104	SER
5	s3	113	LEU
5	s3	116	ARG
5	s3	127	MET
5	s3	128	GLU
5	s3	158	ILE
5	s3	162	GLN
5	s3	168	ILE
5	s3	175	VAL
5	s3	176	LEU
5	s3	209	ILE
5	s3	212	LYS
5	s3	218	LEU
6	s4	9	LEU
6	s4	12	LEU
6	s4	23	LEU
6	s4	24	SER
6	s4	38	LEU

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Mol	Chain	Res	Type
6	s4	42	LEU
6	s4	48	LEU
6	s4	49	ARG
6	s4	51	ARG
6	s4	56	LEU
6	s4	67	GLN
6	s4	70	VAL
6	s4	75	LYS
6	s4	77	ARG
6	s4	95	THR
6	s4	98	ASN
6	s4	104	ASP
6	s4	120	SER
6	s4	127	LYS
6	s4	128	LYS
6	s4	131	LEU
6	s4	147	ILE
6	s4	148	ARG
6	s4	160	VAL
6	s4	162	ILE
6	s4	163	ASP
6	s4	164	LEU
6	s4	176	ASP
6	s4	191	ARG
6	s4	211	LYS
6	s4	214	LEU
6	s4	219	VAL
6	s4	220	THR
6	s4	222	LEU
6	s4	225	VAL
6	s4	237	SER
6	s4	238	LEU
6	s4	252	ARG
7	s5	25	LEU
7	s5	34	GLN
7	s5	40	ILE
7	s5	60	ASP
7	s5	63	GLN
7	s5	64	VAL
7	s5	65	ARG
7	s5	66	GLN
7	s5	68	ILE

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Mol	Chain	Res	Type
7	s5	70	VAL
7	s5	82	PHE
7	s5	86	GLN
7	s5	89	ILE
7	s5	93	LEU
7	s5	94	THR
7	s5	99	MET
7	s5	102	ARG
7	s5	117	THR
7	s5	119	ASP
7	s5	124	LEU
7	s5	146	THR
7	s5	157	ARG
7	s5	162	VAL
7	s5	189	THR
7	s5	193	THR
7	s5	194	LEU
7	s5	203	LYS
7	s5	211	ILE
7	s5	212	LYS
7	s5	216	GLU
8	s6	15	THR
8	s6	19	ASP
8	s6	21	GLU
8	s6	31	ARG
8	s6	34	GLN
8	s6	57	ASP
8	s6	64	LYS
8	s6	71	THR
8	s6	76	LEU
8	s6	78	THR
8	s6	81	VAL
8	s6	93	LYS
8	s6	109	LEU
8	s6	112	VAL
8	s6	114	VAL
8	s6	119	GLN
8	s6	120	GLU
8	s6	128	THR
8	s6	129	VAL
8	s6	132	ARG
8	s6	133	LEU

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Mol	Chain	Res	Type
8	s6	163	THR
8	s6	179	VAL
8	s6	191	ARG
8	s6	194	LYS
8	s6	215	ARG
8	s6	216	LEU
9	s7	9	LEU
9	s7	11	GLN
9	s7	50	ASP
9	s7	62	VAL
9	s7	75	THR
9	s7	77	LEU
9	s7	97	ARG
9	s7	108	GLN
9	s7	114	ARG
9	s7	125	ILE
9	s7	143	LEU
9	s7	144	VAL
9	s7	159	VAL
9	s7	160	GLN
9	s7	176	LEU
10	s8	4	SER
10	s8	10	LYS
10	s8	18	ARG
10	s8	25	ARG
10	s8	29	LEU
10	s8	46	VAL
10	s8	58	LEU
10	s8	59	ARG
10	s8	60	ILE
10	s8	61	GLU
10	s8	72	ILE
10	s8	74	LYS
10	s8	76	THR
10	s8	89	GLU
10	s8	95	THR
10	s8	120	THR
10	s8	151	LYS
10	s8	152	ILE
10	s8	155	SER
10	s8	176	SER
10	s8	183	ILE

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Mol	Chain	Res	Type
11	s9	6	ARG
11	s9	7	THR
11	s9	22	SER
11	s9	28	LEU
11	s9	46	SER
11	s9	49	LEU
11	s9	54	ARG
11	s9	61	THR
11	s9	78	ARG
11	s9	80	LEU
11	s9	82	ARG
11	s9	89	ASP
11	s9	93	LEU
11	s9	97	LEU
11	s9	102	GLU
11	s9	103	ASP
11	s9	105	LEU
11	s9	109	LEU
11	s9	111	THR
11	s9	120	LYS
11	s9	127	VAL
11	s9	134	ILE
11	s9	157	ASP
11	s9	168	ARG
11	s9	172	VAL
11	s9	179	ARG
12	c0	5	LYS
12	c0	7	ASP
12	c0	15	LEU
12	c0	21	VAL
12	c0	27	PHE
12	c0	40	LEU
12	c0	47	GLN
12	c0	57	THR
12	c0	67	THR
12	c0	71	GLU
13	c1	5	LEU
13	c1	10	GLU
13	c1	26	LYS
13	c1	31	THR
13	c1	33	ARG
13	c1	35	TYR

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Mol	Chain	Res	Type
13	c1	40	LEU
13	c1	44	THR
13	c1	47	THR
13	c1	60	PHE
13	c1	66	ILE
13	c1	71	LEU
13	c1	83	THR
13	c1	90	TYR
13	c1	94	ILE
13	c1	99	ARG
13	c1	111	VAL
13	c1	117	VAL
13	c1	123	VAL
13	c1	129	ARG
14	c2	38	HIS
14	c2	45	LEU
14	c2	52	LEU
14	c2	54	ARG
14	c2	59	LEU
14	c2	61	VAL
14	c2	71	ILE
14	c2	86	VAL
14	c2	89	ILE
14	c2	103	LEU
14	c2	136	ILE
15	c3	6	SER
15	c3	16	ILE
15	c3	21	ASN
15	c3	30	SER
15	c3	46	THR
15	c3	52	VAL
15	c3	60	VAL
15	c3	62	GLN
15	c3	66	ILE
15	c3	67	THR
15	c3	70	LYS
15	c3	74	ILE
15	c3	75	LEU
15	c3	78	ASN
15	c3	84	ILE
15	c3	101	HIS
15	c3	115	LEU

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Mol	Chain	Res	Type
15	c3	125	LEU
15	c3	140	LYS
15	c3	149	LEU
16	c4	23	PHE
16	c4	26	THR
16	c4	42	VAL
16	c4	51	ASP
16	c4	52	ARG
16	c4	61	MET
16	c4	62	LEU
16	c4	81	VAL
16	c4	93	THR
16	c4	102	LEU
16	c4	107	ARG
16	c4	108	SER
16	c4	114	ARG
16	c4	121	VAL
16	c4	123	SER
16	c4	124	ASP
16	c4	136	ARG
16	c4	137	LEU
17	c5	11	VAL
17	c5	12	PHE
17	c5	16	SER
17	c5	24	LYS
17	c5	27	GLU
17	c5	28	MET
17	c5	34	VAL
17	c5	36	LEU
17	c5	61	ARG
17	c5	69	GLU
17	c5	71	GLU
17	c5	84	ILE
17	c5	86	VAL
17	c5	110	GLU
17	c5	124	THR
17	c5	126	VAL
17	c5	127	ARG
17	c5	128	HIS
18	c6	23	LYS
18	c6	28	LEU
18	c6	37	THR

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Mol	Chain	Res	Type
18	c6	43	ILE
18	c6	53	LEU
18	c6	55	VAL
18	c6	57	LEU
18	c6	68	ARG
18	c6	70	THR
18	c6	105	LEU
18	c6	114	ARG
18	c6	115	THR
18	c6	118	ILE
18	c6	137	ARG
19	c7	6	THR
19	c7	8	THR
19	c7	29	GLN
19	c7	34	LEU
19	c7	46	LEU
19	c7	72	LYS
19	c7	77	GLU
19	c7	87	GLU
19	c7	112	SER
19	c7	113	LEU
20	c8	4	VAL
20	c8	5	VAL
20	c8	6	GLN
20	c8	14	ILE
20	c8	18	LEU
20	c8	28	ILE
20	c8	33	THR
20	c8	36	LYS
20	c8	38	VAL
20	c8	40	ARG
20	c8	41	ARG
20	c8	51	ASP
20	c8	85	PHE
20	c8	105	VAL
20	c8	116	LEU
20	c8	120	ARG
20	c8	133	VAL
20	c8	134	ARG
20	c8	138	THR
21	c9	6	VAL
21	c9	9	VAL

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Mol	Chain	Res	Type
21	c9	28	LEU
21	c9	30	VAL
21	c9	57	ARG
21	c9	68	ARG
21	c9	71	VAL
21	c9	86	ARG
21	c9	104	VAL
21	c9	111	ILE
21	c9	123	ARG
21	c9	126	GLU
21	c9	131	ASP
21	c9	134	ARG
21	c9	135	ILE
21	c9	140	LEU
22	d0	20	ILE
22	d0	21	LYS
22	d0	22	ILE
22	d0	25	THR
22	d0	44	ASN
22	d0	48	HIS
22	d0	57	ARG
22	d0	60	THR
22	d0	62	VAL
22	d0	70	THR
22	d0	103	ILE
22	d0	105	GLN
22	d0	108	ILE
22	d0	115	GLU
22	d0	118	VAL
23	d1	5	LYS
23	d1	8	LEU
23	d1	32	VAL
23	d1	62	ARG
23	d1	81	ASN
24	d2	7	LEU
24	d2	9	ASP
24	d2	25	VAL
24	d2	42	GLN
24	d2	58	SER
24	d2	65	LEU
24	d2	85	ASP
24	d2	93	LEU

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Mol	Chain	Res	Type
24	d2	98	GLN
24	d2	99	PHE
24	d2	103	ILE
24	d2	105	THR
24	d2	126	LEU
24	d2	129	VAL
25	d3	19	ARG
25	d3	33	LEU
25	d3	40	SER
25	d3	69	ARG
25	d3	73	ARG
25	d3	75	GLN
25	d3	84	THR
25	d3	87	VAL
25	d3	96	VAL
25	d3	99	ASN
25	d3	100	ASP
25	d3	103	LEU
25	d3	107	PHE
25	d3	117	ILE
26	d4	6	THR
26	d4	26	ASP
26	d4	29	HIS
26	d4	34	ASN
26	d4	36	SER
26	d4	40	LEU
26	d4	51	GLU
26	d4	61	ARG
26	d4	62	THR
26	d4	70	VAL
26	d4	74	LEU
26	d4	78	SER
26	d4	125	LEU
26	d4	133	ASN
27	d5	41	ILE
27	d5	46	LYS
27	d5	50	ILE
27	d5	52	LYS
27	d5	53	GLU
27	d5	54	VAL
27	d5	57	TYR
27	d5	60	VAL

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Mol	Chain	Res	Type
27	d5	71	ILE
27	d5	88	ILE
27	d5	92	ILE
27	d5	97	LYS
28	d6	10	ARG
28	d6	11	ASN
28	d6	12	LYS
28	d6	15	ARG
28	d6	24	VAL
28	d6	30	ILE
28	d6	33	ASP
28	d6	39	MET
28	d6	74	CYS
28	d6	86	VAL
28	d6	88	SER
28	d6	89	ARG
28	d6	93	LYS
29	d7	3	LEU
29	d7	21	LEU
29	d7	34	ASP
29	d7	41	LEU
29	d7	42	ASN
29	d7	43	ILE
29	d7	46	VAL
29	d7	49	HIS
29	d7	54	VAL
29	d7	62	ILE
29	d7	77	THR
29	d7	82	LYS
30	d8	15	VAL
30	d8	16	LEU
30	d8	33	LEU
30	d8	36	THR
30	d8	39	THR
30	d8	49	ARG
30	d8	54	LEU
30	d8	58	GLU
30	d8	61	ARG
30	d8	64	ARG
31	d9	10	HIS
31	d9	12	ARG
31	d9	19	ARG

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Mol	Chain	Res	Type
31	d9	21	CYS
31	d9	28	THR
31	d9	30	LEU
31	d9	36	LEU
31	d9	54	LYS
31	d9	56	ARG
32	e0	4	VAL
32	e0	13	LYS
32	e0	15	LYS
32	e0	16	SER
32	e0	21	VAL
32	e0	22	GLU
32	e0	24	THR
32	e0	26	LYS
32	e0	29	LYS
32	e0	41	THR
32	e0	44	PHE
32	e0	48	THR
32	e0	49	LEU
32	e0	54	ARG
32	e0	56	MET
33	e1	86	THR
33	e1	91	ILE
33	e1	93	HIS
33	e1	98	VAL
33	e1	100	LEU
33	e1	102	VAL
33	e1	106	TYR
33	e1	108	VAL
33	e1	113	LYS
33	e1	120	GLU
33	e1	134	ASN
33	e1	135	HIS
33	e1	147	VAL
33	e1	148	TYR
34	sR	16	HIS
34	sR	21	THR
34	sR	29	GLN
34	sR	58	VAL
34	sR	66	HIS
34	sR	74	THR
34	sR	76	ASP

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Mol	Chain	Res	Type
34	sR	86	ASP
34	sR	106	HIS
34	sR	122	ILE
34	sR	145	LEU
34	sR	167	VAL
34	sR	168	THR
34	sR	183	LEU
34	sR	240	VAL
34	sR	245	PHE
34	sR	272	ASP
34	sR	286	GLU
34	sR	297	ASP
34	sR	300	THR
34	sR	317	THR
35	sM	23	LYS
35	sM	33	LYS
35	sM	43	ASP
35	sM	49	LYS
35	sM	50	ASN
35	sM	68	ARG
35	sM	74	LYS
35	sM	82	THR
39	l2	10	LYS
39	l2	15	ILE
39	l2	32	LEU
39	l2	44	ILE
39	l2	46	LYS
39	l2	47	GLN
39	l2	48	ILE
39	l2	61	VAL
39	l2	62	VAL
39	l2	74	GLU
39	l2	82	VAL
39	l2	96	LEU
39	l2	101	VAL
39	l2	104	LEU
39	l2	107	VAL
39	l2	109	GLU
39	l2	111	THR
39	l2	112	ILE
39	l2	114	SER
39	l2	134	VAL

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Mol	Chain	Res	Type
39	l2	137	ILE
39	l2	147	ARG
39	l2	165	VAL
39	l2	168	VAL
39	l2	169	ILE
39	l2	179	LEU
39	l2	180	LEU
39	l2	199	THR
39	l2	202	VAL
39	l2	204	MET
39	l2	207	VAL
39	l2	241	ARG
39	l2	242	ARG
39	l2	246	LEU
40	l3	3	HIS
40	l3	4	ARG
40	l3	5	LYS
40	l3	7	GLU
40	l3	17	LEU
40	l3	19	ARG
40	l3	24	SER
40	l3	30	LYS
40	l3	37	ARG
40	l3	43	LEU
40	l3	47	LEU
40	l3	50	LYS
40	l3	56	ILE
40	l3	70	ARG
40	l3	73	VAL
40	l3	79	VAL
40	l3	84	VAL
40	l3	85	VAL
40	l3	93	VAL
40	l3	103	THR
40	l3	104	THR
40	l3	110	LEU
40	l3	111	SER
40	l3	112	ASP
40	l3	114	VAL
40	l3	116	ARG
40	l3	125	SER
40	l3	139	GLN

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Mol	Chain	Res	Type
40	l3	140	ASP
40	l3	146	ARG
40	l3	148	LEU
40	l3	156	SER
40	l3	157	VAL
40	l3	167	ARG
40	l3	183	LEU
40	l3	187	SER
40	l3	188	ILE
40	l3	192	VAL
40	l3	196	ARG
40	l3	202	THR
40	l3	205	VAL
40	l3	208	VAL
40	l3	211	GLN
40	l3	229	VAL
40	l3	232	ARG
40	l3	235	THR
40	l3	248	LYS
40	l3	249	VAL
40	l3	252	ILE
40	l3	261	MET
40	l3	264	VAL
40	l3	266	ARG
40	l3	274	SER
40	l3	284	ARG
40	l3	285	VAL
40	l3	287	LYS
40	l3	296	THR
40	l3	297	SER
40	l3	304	THR
40	l3	324	VAL
40	l3	328	ILE
40	l3	335	ILE
40	l3	340	LYS
40	l3	346	THR
40	l3	348	ARG
40	l3	355	SER
41	l4	3	ARG
41	l4	6	VAL
41	l4	25	VAL
41	l4	33	ASP

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Mol	Chain	Res	Type
41	l4	34	ILE
41	l4	47	ARG
41	l4	54	GLU
41	l4	55	LYS
41	l4	67	THR
41	l4	69	ARG
41	l4	73	ARG
41	l4	74	ILE
41	l4	76	ARG
41	l4	92	ASN
41	l4	93	MET
41	l4	138	ARG
41	l4	144	LYS
41	l4	150	LEU
41	l4	151	VAL
41	l4	152	VAL
41	l4	154	THR
41	l4	156	LEU
41	l4	158	SER
41	l4	162	THR
41	l4	177	ASP
41	l4	179	LEU
41	l4	185	LYS
41	l4	186	LYS
41	l4	187	LEU
41	l4	191	LYS
41	l4	193	LYS
41	l4	206	LEU
41	l4	220	ARG
41	l4	222	VAL
41	l4	226	GLU
41	l4	230	VAL
41	l4	233	LEU
41	l4	246	ARG
41	l4	258	LEU
41	l4	267	VAL
41	l4	272	VAL
41	l4	276	LEU
41	l4	279	HIS
41	l4	286	VAL
41	l4	301	PRO
41	l4	312	VAL

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Mol	Chain	Res	Type
41	l4	313	LEU
41	l4	316	ASN
41	l4	319	LYS
41	l4	327	LEU
41	l4	333	VAL
41	l4	347	THR
42	l5	14	SER
42	l5	32	GLN
42	l5	35	ARG
42	l5	51	LEU
42	l5	64	ILE
42	l5	65	ILE
42	l5	74	VAL
42	l5	93	THR
42	l5	109	THR
42	l5	110	LEU
42	l5	111	GLN
42	l5	112	LYS
42	l5	113	LEU
42	l5	118	THR
42	l5	120	LYS
42	l5	122	VAL
42	l5	124	GLU
42	l5	125	VAL
42	l5	133	GLU
42	l5	135	VAL
42	l5	136	GLU
42	l5	137	ASP
42	l5	140	ARG
42	l5	144	VAL
42	l5	146	LEU
42	l5	148	ILE
42	l5	155	THR
42	l5	185	PHE
42	l5	188	GLU
42	l5	189	GLU
42	l5	190	ILE
42	l5	194	LEU
42	l5	211	LEU
42	l5	216	GLU
42	l5	218	ARG
42	l5	227	LEU

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Mol	Chain	Res	Type
42	l5	236	LEU
42	l5	241	THR
42	l5	245	GLU
42	l5	258	LYS
42	l5	259	LYS
42	l5	260	PHE
42	l5	263	GLU
42	l5	268	GLU
42	l5	270	LYS
42	l5	278	SER
42	l5	279	LYS
42	l5	281	GLU
42	l5	293	LEU
43	l6	8	LYS
43	l6	13	GLU
43	l6	15	VAL
43	l6	20	LYS
43	l6	26	ARG
43	l6	48	ARG
43	l6	50	LYS
43	l6	52	VAL
43	l6	62	THR
43	l6	64	LEU
43	l6	65	ILE
43	l6	76	LEU
43	l6	84	VAL
43	l6	89	THR
43	l6	91	VAL
43	l6	98	VAL
43	l6	131	LYS
43	l6	136	GLU
43	l6	152	THR
43	l6	155	LEU
43	l6	157	GLN
43	l6	162	SER
43	l6	166	LYS
43	l6	175	LYS
44	l7	22	THR
44	l7	38	LYS
44	l7	54	GLU
44	l7	56	GLU
44	l7	60	ARG

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Mol	Chain	Res	Type
44	l7	77	VAL
44	l7	83	LEU
44	l7	88	ARG
44	l7	93	ASN
44	l7	101	LYS
44	l7	121	LYS
44	l7	124	LEU
44	l7	130	ILE
44	l7	156	ILE
44	l7	158	LYS
44	l7	173	LEU
44	l7	175	LYS
44	l7	179	LEU
44	l7	180	SER
44	l7	184	LEU
44	l7	189	ILE
44	l7	191	VAL
44	l7	199	ASN
44	l7	229	PHE
44	l7	239	LEU
45	l8	26	LEU
45	l8	43	LYS
45	l8	44	ARG
45	l8	50	VAL
45	l8	57	ARG
45	l8	65	LEU
45	l8	71	VAL
45	l8	74	THR
45	l8	79	GLN
45	l8	90	THR
45	l8	109	LEU
45	l8	132	VAL
45	l8	134	TYR
45	l8	136	LEU
45	l8	160	ILE
45	l8	163	VAL
45	l8	169	LEU
45	l8	172	LYS
45	l8	173	MET
45	l8	189	LEU
45	l8	200	LEU
45	l8	203	VAL

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Mol	Chain	Res	Type
45	l8	204	ARG
45	l8	211	LEU
45	l8	217	THR
45	l8	232	HIS
46	l9	1	MET
46	l9	6	THR
46	l9	16	VAL
46	l9	17	THR
46	l9	18	VAL
46	l9	24	ILE
46	l9	44	THR
46	l9	46	THR
46	l9	55	VAL
46	l9	68	LEU
46	l9	70	THR
46	l9	80	THR
46	l9	118	LEU
46	l9	120	ASP
46	l9	123	ILE
46	l9	130	ASP
46	l9	132	VAL
46	l9	133	THR
46	l9	134	ILE
46	l9	144	ILE
46	l9	151	VAL
46	l9	154	VAL
46	l9	157	ASN
46	l9	161	LEU
46	l9	162	GLN
46	l9	166	ARG
46	l9	167	VAL
46	l9	173	ARG
46	l9	187	ILE
46	l9	191	LEU
47	m0	3	ARG
47	m0	24	ARG
47	m0	26	VAL
47	m0	28	ASP
47	m0	36	LEU
47	m0	42	THR
47	m0	44	ASP
47	m0	48	LEU

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Mol	Chain	Res	Type
47	m0	50	VAL
47	m0	52	LEU
47	m0	53	VAL
47	m0	56	GLU
47	m0	58	GLU
47	m0	61	SER
47	m0	63	GLU
47	m0	71	CYS
47	m0	76	MET
47	m0	87	LEU
47	m0	90	ARG
47	m0	99	ILE
47	m0	103	LEU
47	m0	137	SER
47	m0	141	LYS
47	m0	156	ARG
47	m0	162	GLN
47	m0	167	LEU
47	m0	169	LYS
47	m0	174	THR
47	m0	177	ASP
47	m0	183	LYS
47	m0	191	LYS
47	m0	197	VAL
47	m0	208	ASN
48	m1	6	GLN
48	m1	10	ARG
48	m1	12	LEU
48	m1	13	LYS
48	m1	23	VAL
48	m1	30	LEU
48	m1	46	VAL
48	m1	80	LEU
48	m1	92	ARG
48	m1	99	THR
48	m1	101	ASN
48	m1	107	ASP
48	m1	112	LEU
48	m1	122	ILE
48	m1	129	VAL
48	m1	130	VAL
48	m1	137	ARG

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Mol	Chain	Res	Type
48	m1	139	THR
48	m1	145	LYS
48	m1	147	THR
48	m1	148	VAL
48	m1	151	SER
48	m1	158	ASP
48	m1	159	THR
49	m3	52	ASP
49	m3	53	LEU
49	m3	54	LEU
49	m3	55	ARG
49	m3	58	VAL
49	m3	63	VAL
49	m3	67	ARG
49	m3	69	VAL
49	m3	73	ARG
49	m3	86	THR
49	m3	97	VAL
49	m3	103	ASN
49	m3	118	GLU
49	m3	128	ARG
49	m3	131	LYS
49	m3	138	VAL
49	m3	147	ILE
49	m3	149	GLN
49	m3	154	VAL
49	m3	157	ARG
49	m3	164	GLU
49	m3	168	ARG
49	m3	176	GLU
49	m3	180	ARG
49	m3	189	GLU
49	m3	192	GLU
50	m4	4	ASP
50	m4	8	LYS
50	m4	11	ASN
50	m4	15	VAL
50	m4	20	VAL
50	m4	28	SER
50	m4	36	VAL
50	m4	42	LYS
50	m4	53	VAL

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Mol	Chain	Res	Type
50	m4	58	ILE
50	m4	64	VAL
50	m4	69	THR
50	m4	72	LEU
50	m4	80	THR
50	m4	106	ARG
50	m4	107	GLU
50	m4	108	ARG
50	m4	113	THR
50	m4	116	GLU
51	m5	5	LYS
51	m5	7	LEU
51	m5	10	LEU
51	m5	17	ASP
51	m5	19	LEU
51	m5	22	LEU
51	m5	27	VAL
51	m5	49	ARG
51	m5	50	ARG
51	m5	64	VAL
51	m5	80	THR
51	m5	83	LYS
51	m5	86	ASN
51	m5	106	VAL
51	m5	109	ARG
51	m5	138	GLN
51	m5	142	ILE
51	m5	151	ILE
51	m5	153	ASP
51	m5	155	VAL
51	m5	176	LYS
51	m5	182	ASN
51	m5	183	THR
52	m6	4	GLU
52	m6	6	VAL
52	m6	7	VAL
52	m6	22	VAL
52	m6	25	LYS
52	m6	34	VAL
52	m6	46	GLU
52	m6	60	LYS
52	m6	67	THR

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Mol	Chain	Res	Type
52	m6	74	ARG
52	m6	77	SER
52	m6	85	ARG
52	m6	106	GLU
52	m6	110	PRO
52	m6	116	LYS
52	m6	118	VAL
52	m6	124	LEU
52	m6	126	VAL
52	m6	129	LEU
52	m6	134	LYS
52	m6	143	THR
52	m6	151	ASP
52	m6	160	ARG
52	m6	162	VAL
52	m6	171	LYS
52	m6	175	THR
52	m6	178	VAL
52	m6	197	LEU
53	m7	7	THR
53	m7	9	THR
53	m7	24	VAL
53	m7	32	THR
53	m7	41	LEU
53	m7	52	LEU
53	m7	55	GLN
53	m7	69	ARG
53	m7	79	THR
53	m7	80	LYS
53	m7	89	LYS
53	m7	107	LEU
53	m7	112	LEU
53	m7	114	VAL
53	m7	119	VAL
53	m7	126	ARG
53	m7	135	ARG
53	m7	136	ILE
53	m7	144	SER
53	m7	147	GLU
53	m7	148	LEU
53	m7	150	VAL
54	m8	3	ILE

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Mol	Chain	Res	Type
54	m8	7	SER
54	m8	12	ARG
54	m8	17	THR
54	m8	22	ASP
54	m8	26	LEU
54	m8	31	LYS
54	m8	32	LEU
54	m8	34	THR
54	m8	39	ARG
54	m8	49	LEU
54	m8	57	ILE
54	m8	66	ARG
54	m8	69	ARG
54	m8	81	VAL
54	m8	84	VAL
54	m8	86	THR
54	m8	98	LYS
54	m8	99	THR
54	m8	122	ILE
54	m8	127	LEU
54	m8	135	GLN
54	m8	138	LEU
54	m8	141	ARG
54	m8	161	LYS
54	m8	165	ILE
54	m8	170	ARG
54	m8	178	ARG
54	m8	181	SER
54	m8	185	LYS
55	m9	7	GLN
55	m9	10	LEU
55	m9	21	LYS
55	m9	29	THR
55	m9	31	GLU
55	m9	34	GLN
55	m9	43	LYS
55	m9	49	THR
55	m9	55	VAL
55	m9	63	THR
55	m9	74	ARG
55	m9	88	ARG
55	m9	99	LEU

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Mol	Chain	Res	Type
55	m9	114	LYS
55	m9	117	LYS
55	m9	138	LEU
55	m9	146	LYS
55	m9	150	GLN
55	m9	153	LYS
55	m9	164	LEU
55	m9	166	ASN
55	m9	173	ARG
55	m9	180	LYS
56	n0	1	MET
56	n0	3	HIS
56	n0	8	GLN
56	n0	73	LYS
56	n0	79	VAL
56	n0	80	ARG
56	n0	87	THR
56	n0	96	ASP
56	n0	97	VAL
56	n0	100	VAL
56	n0	104	GLU
56	n0	105	THR
56	n0	130	GLU
56	n0	132	THR
56	n0	136	LYS
56	n0	145	THR
56	n0	148	LEU
56	n0	155	ARG
56	n0	160	THR
56	n0	161	LYS
56	n0	162	THR
56	n0	172	TYR
57	n1	25	VAL
57	n1	27	LEU
57	n1	33	VAL
57	n1	47	SER
57	n1	71	SER
57	n1	75	ILE
57	n1	78	LYS
57	n1	80	VAL
57	n1	83	ARG
57	n1	88	ARG

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Mol	Chain	Res	Type
57	n1	89	LEU
57	n1	96	ILE
57	n1	103	GLN
57	n1	126	VAL
57	n1	128	LEU
57	n1	130	ARG
57	n1	131	GLN
57	n1	135	PRO
57	n1	138	SER
57	n1	139	ARG
57	n1	141	VAL
57	n1	143	THR
57	n1	150	THR
57	n1	154	VAL
57	n1	157	GLU
57	n1	158	THR
57	n1	159	PHE
58	n2	13	LYS
58	n2	27	VAL
58	n2	29	ASP
58	n2	43	VAL
58	n2	54	VAL
58	n2	57	THR
58	n2	58	GLU
58	n2	68	THR
58	n2	100	THR
58	n2	105	LEU
58	n2	108	TYR
59	n3	4	ASN
59	n3	7	GLN
59	n3	12	ARG
59	n3	13	ILE
59	n3	14	SER
59	n3	22	ILE
59	n3	40	LYS
59	n3	48	ARG
59	n3	58	VAL
59	n3	68	GLU
59	n3	73	VAL
59	n3	74	MET
59	n3	84	SER
59	n3	91	VAL

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Mol	Chain	Res	Type
59	n3	93	LEU
59	n3	96	GLU
59	n3	102	ILE
59	n3	109	MET
60	n4	5	ILE
60	n4	39	LEU
60	n4	42	GLN
60	n4	47	ARG
60	n4	54	LEU
60	n4	109	LEU
61	n5	24	LEU
61	n5	27	ARG
61	n5	38	LEU
61	n5	40	LEU
61	n5	56	ARG
61	n5	63	ILE
61	n5	71	THR
61	n5	89	LYS
61	n5	101	GLU
61	n5	108	LEU
61	n5	114	VAL
61	n5	115	ARG
61	n5	125	ARG
61	n5	134	ASP
61	n5	135	ILE
61	n5	137	ASN
61	n5	142	ILE
62	n6	4	GLN
62	n6	12	ARG
62	n6	13	ARG
62	n6	17	LYS
62	n6	32	SER
62	n6	37	LYS
62	n6	40	ARG
62	n6	45	ILE
62	n6	48	LEU
62	n6	50	ILE
62	n6	56	VAL
62	n6	57	LEU
62	n6	59	VAL
62	n6	66	GLN
62	n6	69	LYS

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Mol	Chain	Res	Type
62	n6	80	VAL
62	n6	83	ASP
62	n6	90	VAL
62	n6	99	LEU
62	n6	115	ARG
63	n7	14	VAL
63	n7	17	ARG
63	n7	24	VAL
63	n7	26	VAL
63	n7	36	HIS
63	n7	46	ILE
63	n7	52	LYS
63	n7	56	LYS
63	n7	57	HIS
63	n7	72	ILE
63	n7	75	VAL
63	n7	81	LEU
63	n7	90	GLU
63	n7	100	THR
63	n7	118	PHE
63	n7	126	LYS
63	n7	128	GLN
63	n7	134	LEU
64	n8	4	ARG
64	n8	6	THR
64	n8	8	THR
64	n8	10	LYS
64	n8	12	ARG
64	n8	15	VAL
64	n8	19	LYS
64	n8	24	LYS
64	n8	26	ARG
64	n8	27	LYS
64	n8	42	ARG
64	n8	46	ASP
64	n8	56	VAL
64	n8	65	GLN
64	n8	91	LEU
64	n8	98	THR
64	n8	123	VAL
64	n8	130	VAL
64	n8	132	LYS

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Mol	Chain	Res	Type
64	n8	139	ARG
65	n9	6	ASN
65	n9	13	THR
65	n9	18	ARG
65	n9	22	LYS
65	n9	35	VAL
65	n9	38	LYS
65	n9	59	LYS
66	o0	12	GLN
66	o0	18	ILE
66	o0	28	LYS
66	o0	29	SER
66	o0	41	LEU
66	o0	50	VAL
66	o0	61	MET
66	o0	63	SER
66	o0	86	ARG
66	o0	87	VAL
66	o0	97	ASP
66	o0	103	THR
67	o1	13	THR
67	o1	16	LEU
67	o1	24	SER
67	o1	26	LYS
67	o1	42	LEU
67	o1	44	MET
67	o1	55	LEU
67	o1	62	ARG
67	o1	68	GLU
67	o1	83	GLU
67	o1	91	SER
67	o1	93	VAL
67	o1	96	VAL
67	o1	97	LEU
67	o1	102	LYS
67	o1	104	LEU
67	o1	106	THR
67	o1	110	GLU
68	o2	3	SER
68	o2	8	LYS
68	o2	15	LYS
68	o2	19	ARG

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Mol	Chain	Res	Type
68	o2	21	HIS
68	o2	33	ARG
68	o2	38	ILE
68	o2	47	ARG
68	o2	49	ASN
68	o2	51	SER
68	o2	59	SER
68	o2	61	LYS
68	o2	73	THR
68	o2	75	LEU
68	o2	81	ASP
68	o2	82	LEU
68	o2	84	THR
68	o2	88	HIS
68	o2	91	THR
68	o2	95	GLU
68	o2	103	LYS
68	o2	108	ILE
68	o2	109	LEU
68	o2	119	VAL
68	o2	125	ARG
68	o2	126	LEU
69	o3	3	GLU
69	o3	4	SER
69	o3	15	SER
69	o3	21	ARG
69	o3	28	SER
69	o3	31	LYS
69	o3	37	THR
69	o3	45	LEU
69	o3	49	ILE
69	o3	60	ARG
69	o3	74	THR
69	o3	80	VAL
69	o3	81	VAL
69	o3	87	ASN
69	o3	98	VAL
69	o3	105	SER
70	o4	5	VAL
70	o4	19	LYS
70	o4	20	ILE
70	o4	22	VAL

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Mol	Chain	Res	Type
70	o4	23	VAL
70	o4	35	VAL
70	o4	40	THR
70	o4	54	ILE
70	o4	57	LEU
70	o4	58	ARG
70	o4	65	VAL
70	o4	71	THR
70	o4	83	ASN
70	o4	104	VAL
71	o5	4	VAL
71	o5	11	THR
71	o5	16	GLN
71	o5	21	LEU
71	o5	38	ARG
71	o5	45	LYS
71	o5	46	THR
71	o5	47	VAL
71	o5	49	LYS
71	o5	56	THR
71	o5	62	GLN
71	o5	69	LEU
71	o5	73	LYS
71	o5	79	ASP
71	o5	85	THR
71	o5	101	THR
71	o5	119	LYS
72	o6	7	ILE
72	o6	9	ILE
72	o6	11	LEU
72	o6	15	LYS
72	o6	17	VAL
72	o6	21	THR
72	o6	26	ILE
72	o6	29	LYS
72	o6	35	ASN
72	o6	36	ARG
72	o6	41	ARG
72	o6	43	LEU
72	o6	45	ARG
72	o6	57	LEU
72	o6	58	ILE

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Mol	Chain	Res	Type
72	o6	60	LEU
72	o6	72	VAL
72	o6	76	ARG
72	o6	81	THR
72	o6	89	GLU
72	o6	94	ILE
72	o6	98	ARG
73	o7	14	LYS
73	o7	25	ARG
73	o7	33	THR
73	o7	44	THR
73	o7	46	SER
73	o7	59	THR
73	o7	65	ARG
73	o7	67	LEU
73	o7	80	THR
74	o8	8	ILE
74	o8	12	LEU
74	o8	16	ARG
74	o8	24	THR
74	o8	41	THR
74	o8	53	THR
74	o8	54	LEU
74	o8	61	LYS
74	o8	64	LYS
74	o8	66	ILE
75	o9	4	GLN
75	o9	21	ARG
75	o9	29	LEU
75	o9	46	ARG
76	q0	79	GLU
76	q0	85	LEU
76	q0	93	LYS
76	q0	96	CYS
76	q0	99	CYS
76	q0	112	LYS
76	q0	113	ARG
76	q0	127	LEU
77	q1	2	ARG
77	q1	9	ARG
77	q1	10	THR
77	q1	13	LEU

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Mol	Chain	Res	Type
77	q1	17	ARG
77	q1	18	ARG
77	q1	21	ARG
78	q2	8	ARG
78	q2	10	THR
78	q2	19	LYS
78	q2	26	THR
78	q2	57	VAL
78	q2	61	LYS
78	q2	66	LYS
78	q2	67	LYS
78	q2	68	VAL
78	q2	69	VAL
78	q2	78	LYS
78	q2	79	THR
78	q2	82	GLN
78	q2	83	LEU
78	q2	84	THR
78	q2	85	LEU
78	q2	93	LEU
78	q2	100	LYS
78	q2	105	GLN
79	q3	16	VAL
79	q3	22	LEU
79	q3	42	CYS
79	q3	46	THR
79	q3	49	ARG
79	q3	54	ILE
79	q3	56	THR
79	q3	58	SER
79	q3	73	THR
79	q3	78	THR
79	q3	79	VAL
81	p0	4	ILE
81	p0	15	LEU
81	p0	24	SER
81	p0	30	VAL
81	p0	39	HIS
81	p0	52	LEU
81	p0	67	LEU
81	p0	70	LEU
81	p0	81	LYS

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Mol	Chain	Res	Type
81	p0	93	LEU
81	p0	105	VAL
83	f	37	ARG
83	f	49	THR
83	f	51	LYS
83	f	52	HIS
83	f	57	VAL
83	f	58	HIS
83	f	62	ILE
83	f	78	HIS
83	f	79	ASN
83	f	80	MET
83	f	84	VAL
83	f	87	ARG
83	f	89	GLU
83	f	95	ILE
83	f	102	LEU
83	f	103	MET
83	f	105	MET
83	f	106	ASP
83	f	109	THR
83	f	120	LEU
83	f	138	ILE
83	f	148	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (177) such sidechains are listed below:

Mol	Chain	Res	Type
2	S0	21	ASN
2	S0	83	GLN
2	S0	109	ASN
2	S0	131	GLN
2	S0	163	ASN
3	S1	74	GLN
3	S1	208	GLN
3	S1	209	ASN
4	S2	77	GLN
4	S2	94	GLN
4	S2	150	GLN
4	S2	199	GLN
6	S4	67	GLN
7	S5	103	ASN

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Mol	Chain	Res	Type
8	S6	10	ASN
9	S7	108	GLN
11	S9	74	ASN
13	C1	16	GLN
13	C1	106	ASN
15	C3	69	ASN
15	C3	78	ASN
17	C5	82	ASN
20	C8	19	ASN
20	C8	44	ASN
20	C8	99	HIS
21	C9	25	GLN
21	C9	129	GLN
23	D1	3	ASN
24	D2	64	GLN
25	D3	10	ASN
25	D3	27	ASN
25	D3	65	ASN
25	D3	79	ASN
25	D3	89	ASN
26	D4	110	GLN
28	D6	25	ASN
31	D9	37	ASN
34	SR	16	HIS
34	SR	101	GLN
34	SR	248	ASN
40	L3	280	HIS
40	L3	319	ASN
41	L4	87	GLN
41	L4	221	ASN
41	L4	311	HIS
42	L5	40	HIS
42	L5	274	GLN
43	L6	57	HIS
44	L7	25	GLN
45	L8	38	GLN
45	L8	41	GLN
45	L8	61	GLN
45	L8	232	HIS
46	L9	51	GLN
46	L9	116	ASN
46	L9	125	ASN

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Mol	Chain	Res	Type
47	M0	59	GLN
47	M0	133	GLN
47	M0	144	ASN
48	M1	95	ASN
48	M1	150	ASN
49	M3	37	ASN
49	M3	99	HIS
49	M3	102	GLN
49	M3	114	GLN
50	M4	11	ASN
51	M5	178	HIS
51	M5	194	GLN
52	M6	31	GLN
54	M8	45	ASN
54	M8	73	GLN
54	M8	126	GLN
55	M9	7	GLN
55	M9	47	ASN
55	M9	166	ASN
56	N0	46	GLN
57	N1	26	HIS
57	N1	98	HIS
64	N8	62	HIS
64	N8	67	HIS
65	N9	19	ASN
66	O0	36	GLN
68	O2	104	ASN
70	O4	83	ASN
71	O5	99	GLN
73	O7	57	HIS
74	O8	40	GLN
74	O8	67	GLN
75	O9	33	ASN
78	Q2	27	GLN
78	Q2	47	GLN
79	Q3	32	GLN
2	s0	39	ASN
2	s0	46	HIS
2	s0	83	GLN
3	s1	79	HIS
3	s1	101	HIS
3	s1	209	ASN

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Mol	Chain	Res	Type
4	s2	89	GLN
5	s3	92	GLN
6	s4	224	ASN
7	s5	34	GLN
8	s6	34	GLN
9	s7	71	HIS
9	s7	161	GLN
10	s8	88	ASN
12	c0	29	GLN
12	c0	32	HIS
12	c0	39	ASN
13	c1	21	ASN
13	c1	37	ASN
15	c3	62	GLN
16	c4	12	GLN
16	c4	99	GLN
18	c6	139	GLN
20	c8	25	ASN
21	c9	77	ASN
21	c9	101	ASN
24	d2	15	ASN
25	d3	22	ASN
25	d3	99	ASN
32	e0	17	GLN
32	e0	46	ASN
33	e1	93	HIS
34	sR	101	GLN
34	sR	268	GLN
35	sM	71	ASN
39	l2	140	ASN
39	l2	205	ASN
40	l3	165	GLN
40	l3	211	GLN
41	l4	114	ASN
41	l4	115	HIS
41	l4	116	ASN
41	l4	291	ASN
41	l4	320	ASN
42	l5	264	GLN
44	l7	166	ASN
44	l7	194	HIS
45	l8	59	GLN

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Mol	Chain	Res	Type
45	l8	77	GLN
45	l8	137	ASN
46	l9	5	GLN
46	l9	58	HIS
46	l9	169	ASN
48	m1	43	GLN
48	m1	90	GLN
49	m3	37	ASN
49	m3	99	HIS
49	m3	114	GLN
50	m4	59	ASN
51	m5	86	ASN
51	m5	87	GLN
52	m6	72	HIS
52	m6	122	GLN
53	m7	50	GLN
53	m7	137	ASN
54	m8	45	ASN
55	m9	36	ASN
58	n2	87	ASN
58	n2	101	ASN
60	n4	104	ASN
61	n5	91	ASN
61	n5	117	ASN
62	n6	81	GLN
62	n6	98	ASN
64	n8	25	HIS
65	n9	12	GLN
67	o1	15	ASN
68	o2	88	HIS
69	o3	5	HIS
73	o7	13	ASN
75	o9	25	GLN
78	q2	59	HIS
78	q2	82	GLN
81	p0	103	ASN
81	p0	195	GLN

5.3.3 RNA

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	1777/1800 (98%)	456 (25%)	40 (2%)
1	6	1791/1800 (99%)	447 (24%)	29 (1%)
36	1	3145/3396 (92%)	677 (21%)	53 (1%)
36	5	3163/3396 (93%)	651 (20%)	52 (1%)
37	3	120/121 (99%)	11 (9%)	0
37	7	120/121 (99%)	13 (10%)	0
38	4	157/158 (99%)	32 (20%)	3 (1%)
38	8	157/158 (99%)	34 (21%)	0
All	All	10430/10950 (95%)	2321 (22%)	177 (1%)

All (2321) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	2	A
1	2	4	C
1	2	6	G
1	2	17	C
1	2	23	G
1	2	25	C
1	2	26	A
1	2	27	U
1	2	34	G
1	2	42	G
1	2	45	U
1	2	46	A
1	2	47	A
1	2	57	G
1	2	60	U
1	2	67	A
1	2	68	A
1	2	69	G
1	2	72	A
1	2	73	U
1	2	74	U
1	2	75	U
1	2	77	U
1	2	95	G
1	2	96	G
1	2	104	A
1	2	111	U
1	2	114	C

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Mol	Chain	Res	Type
1	2	121	U
1	2	127	G
1	2	128	U
1	2	131	C
1	2	132	U
1	2	133	U
1	2	134	U
1	2	135	A
1	2	136	C
1	2	137	U
1	2	141	U
1	2	144	U
1	2	145	A
1	2	146	U
1	2	153	G
1	2	159	U
1	2	160	C
1	2	176	C
1	2	178	U
1	2	179	A
1	2	184	C
1	2	185	U
1	2	187	G
1	2	190	C
1	2	191	C
1	2	192	U
1	2	194	U
1	2	195	G
1	2	197	A
1	2	200	A
1	2	215	A
1	2	217	A
1	2	218	A
1	2	219	A
1	2	221	A
1	2	226	A
1	2	227	U
1	2	228	G
1	2	231	U
1	2	233	C
1	2	234	G
1	2	235	G

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Mol	Chain	Res	Type
1	2	236	A
1	2	239	C
1	2	240	U
1	2	241	U
1	2	242	U
1	2	245	U
1	2	249	U
1	2	250	C
1	2	257	A
1	2	261	U
1	2	262	U
1	2	265	A
1	2	271	A
1	2	272	U
1	2	273	G
1	2	274	G
1	2	275	C
1	2	276	C
1	2	277	U
1	2	278	U
1	2	279	G
1	2	280	U
1	2	281	G
1	2	288	A
1	2	290	G
1	2	299	A
1	2	302	U
1	2	309	C
1	2	314	C
1	2	316	A
1	2	319	U
1	2	321	C
1	2	329	G
1	2	333	A
1	2	337	G
1	2	338	C
1	2	352	A
1	2	358	U
1	2	359	A
1	2	360	A
1	2	361	C
1	2	380	U

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Mol	Chain	Res	Type
1	2	390	G
1	2	400	A
1	2	402	C
1	2	404	G
1	2	416	A
1	2	418	G
1	2	419	G
1	2	421	A
1	2	424	C
1	2	425	A
1	2	426	G
1	2	428	A
1	2	434	G
1	2	437	A
1	2	439	U
1	2	440	U
1	2	444	C
1	2	445	A
1	2	447	U
1	2	448	C
1	2	455	C
1	2	468	A
1	2	469	C
1	2	477	A
1	2	483	A
1	2	484	C
1	2	485	A
1	2	486	G
1	2	488	G
1	2	493	U
1	2	494	U
1	2	495	C
1	2	496	G
1	2	497	G
1	2	498	G
1	2	499	U
1	2	500	C
1	2	502	U
1	2	503	G
1	2	504	U
1	2	505	A
1	2	506	A

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Mol	Chain	Res	Type
1	2	507	U
1	2	508	U
1	2	510	G
1	2	511	A
1	2	513	U
1	2	514	G
1	2	515	A
1	2	516	G
1	2	518	A
1	2	520	A
1	2	527	A
1	2	529	A
1	2	532	U
1	2	534	A
1	2	538	A
1	2	539	G
1	2	540	G
1	2	541	A
1	2	542	A
1	2	543	C
1	2	544	A
1	2	556	A
1	2	557	G
1	2	558	U
1	2	559	C
1	2	565	C
1	2	574	G
1	2	579	A
1	2	580	A
1	2	585	A
1	2	594	A
1	2	595	G
1	2	606	A
1	2	611	U
1	2	619	A
1	2	620	A
1	2	621	A
1	2	622	A
1	2	623	A
1	2	624	G
1	2	628	G
1	2	639	U

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Mol	Chain	Res	Type
1	2	640	U
1	2	648	G
1	2	650	U
1	2	653	C
1	2	655	G
1	2	656	G
1	2	657	U
1	2	658	C
1	2	680	U
1	2	684	A
1	2	686	C
1	2	687	G
1	2	691	C
1	2	694	U
1	2	696	C
1	2	697	C
1	2	700	C
1	2	701	U
1	2	702	G
1	2	703	G
1	2	704	C
1	2	705	U
1	2	706	A
1	2	707	A
1	2	709	C
1	2	710	U
1	2	712	G
1	2	714	G
1	2	717	C
1	2	718	U
1	2	719	U
1	2	721	U
1	2	722	G
1	2	723	G
1	2	725	U
1	2	727	U
1	2	728	U
1	2	731	C
1	2	732	G
1	2	734	A
1	2	735	C
1	2	736	C

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Mol	Chain	Res	Type
1	2	737	A
1	2	738	G
1	2	742	U
1	2	743	U
1	2	754	A
1	2	755	A
1	2	756	A
1	2	765	G
1	2	766	U
1	2	774	A
1	2	775	G
1	2	778	G
1	2	781	U
1	2	783	G
1	2	784	C
1	2	789	A
1	2	794	U
1	2	795	U
1	2	812	A
1	2	815	G
1	2	816	G
1	2	818	C
1	2	819	G
1	2	820	U
1	2	821	U
1	2	824	G
1	2	829	A
1	2	830	U
1	2	831	U
1	2	833	U
1	2	839	U
1	2	846	G
1	2	856	A
1	2	860	U
1	2	863	A
1	2	876	G
1	2	886	U
1	2	898	A
1	2	912	U
1	2	914	G
1	2	933	A
1	2	935	U

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Mol	Chain	Res	Type
1	2	940	A
1	2	942	G
1	2	944	A
1	2	951	A
1	2	954	G
1	2	960	U
1	2	966	A
1	2	969	C
1	2	992	A
1	2	993	A
1	2	995	A
1	2	1003	A
1	2	1004	U
1	2	1005	A
1	2	1022	C
1	2	1026	A
1	2	1028	C
1	2	1039	A
1	2	1040	G
1	2	1052	U
1	2	1053	G
1	2	1056	U
1	2	1057	U
1	2	1058	U
1	2	1060	U
1	2	1061	A
1	2	1074	G
1	2	1080	U
1	2	1082	C
1	2	1091	A
1	2	1092	A
1	2	1096	C
1	2	1097	U
1	2	1098	U
1	2	1100	G
1	2	1109	G
1	2	1111	G
1	2	1138	A
1	2	1146	G
1	2	1150	G
1	2	1151	A
1	2	1155	G

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Mol	Chain	Res	Type
1	2	1158	C
1	2	1160	A
1	2	1167	G
1	2	1185	U
1	2	1194	A
1	2	1196	A
1	2	1197	C
1	2	1199	G
1	2	1200	G
1	2	1208	A
1	2	1217	A
1	2	1218	G
1	2	1227	A
1	2	1229	G
1	2	1243	G
1	2	1244	A
1	2	1245	G
1	2	1250	U
1	2	1251	U
1	2	1258	U
1	2	1284	C
1	2	1286	U
1	2	1301	U
1	2	1311	U
1	2	1314	U
1	2	1315	U
1	2	1321	A
1	2	1334	U
1	2	1337	A
1	2	1340	U
1	2	1341	A
1	2	1344	A
1	2	1345	A
1	2	1346	A
1	2	1347	U
1	2	1348	A
1	2	1354	G
1	2	1355	C
1	2	1361	U
1	2	1363	U
1	2	1364	G
1	2	1370	U

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Mol	Chain	Res	Type
1	2	1371	A
1	2	1372	U
1	2	1390	U
1	2	1398	U
1	2	1399	C
1	2	1413	U
1	2	1414	U
1	2	1415	U
1	2	1427	A
1	2	1428	G
1	2	1432	U
1	2	1436	A
1	2	1437	U
1	2	1444	A
1	2	1446	A
1	2	1449	U
1	2	1456	C
1	2	1458	G
1	2	1459	C
1	2	1460	A
1	2	1461	C
1	2	1471	A
1	2	1473	U
1	2	1474	G
1	2	1477	G
1	2	1481	C
1	2	1482	C
1	2	1486	G
1	2	1489	U
1	2	1490	C
1	2	1491	U
1	2	1492	A
1	2	1493	A
1	2	1499	G
1	2	1506	G
1	2	1515	A
1	2	1516	A
1	2	1517	U
1	2	1521	G
1	2	1523	G
1	2	1524	A
1	2	1535	U

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Mol	Chain	Res	Type
1	2	1536	G
1	2	1537	C
1	2	1538	U
1	2	1542	G
1	2	1557	U
1	2	1559	A
1	2	1569	A
1	2	1574	G
1	2	1582	U
1	2	1584	G
1	2	1601	G
1	2	1616	G
1	2	1619	C
1	2	1624	C
1	2	1626	U
1	2	1631	A
1	2	1635	A
1	2	1636	C
1	2	1657	U
1	2	1658	G
1	2	1680	G
1	2	1683	C
1	2	1684	U
1	2	1685	G
1	2	1686	C
1	2	1689	A
1	2	1698	G
1	2	1699	G
1	2	1700	C
1	2	1701	A
1	2	1702	A
1	2	1703	C
1	2	1712	A
1	2	1713	G
1	2	1714	A
1	2	1731	A
1	2	1760	G
1	2	1762	A
1	2	1769	U
1	2	1770	U
1	2	1771	U
1	2	1780	G

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Mol	Chain	Res	Type
1	2	1782	A
1	2	1783	C
1	2	1792	G
1	2	1793	G
1	2	1794	A
1	2	1795	U
1	2	1796	C
1	2	1797	A
36	1	15	C
36	1	16	A
36	1	21	G
36	1	24	G
36	1	26	A
36	1	40	A
36	1	43	A
36	1	49	A
36	1	59	G
36	1	60	A
36	1	65	A
36	1	66	A
36	1	67	A
36	1	68	C
36	1	74	G
36	1	83	U
36	1	92	G
36	1	93	C
36	1	99	A
36	1	108	A
36	1	109	A
36	1	110	G
36	1	111	C
36	1	113	C
36	1	116	A
36	1	117	U
36	1	121	A
36	1	122	A
36	1	131	C
36	1	133	U
36	1	136	G
36	1	140	C
36	1	154	U
36	1	155	G

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Mol	Chain	Res	Type
36	1	156	G
36	1	157	A
36	1	173	G
36	1	175	C
36	1	187	A
36	1	190	U
36	1	191	U
36	1	201	A
36	1	206	G
36	1	210	U
36	1	213	A
36	1	218	G
36	1	219	A
36	1	220	G
36	1	239	G
36	1	240	U
36	1	241	G
36	1	243	G
36	1	245	U
36	1	249	U
36	1	250	U
36	1	252	U
36	1	253	A
36	1	256	G
36	1	269	G
36	1	282	G
36	1	283	G
36	1	286	U
36	1	287	G
36	1	288	C
36	1	295	A
36	1	298	U
36	1	299	G
36	1	305	U
36	1	315	C
36	1	323	A
36	1	329	U
36	1	330	G
36	1	338	A
36	1	339	C
36	1	349	A
36	1	350	C

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Mol	Chain	Res	Type
36	1	366	A
36	1	376	G
36	1	380	U
36	1	398	A
36	1	399	A
36	1	401	U
36	1	402	A
36	1	403	C
36	1	414	U
36	1	421	G
36	1	422	A
36	1	439	C
36	1	440	A
36	1	495	G
36	1	498	A
36	1	520	U
36	1	521	A
36	1	523	A
36	1	535	G
36	1	543	C
36	1	544	C
36	1	546	C
36	1	547	G
36	1	548	G
36	1	550	A
36	1	552	G
36	1	555	U
36	1	556	U
36	1	557	A
36	1	559	A
36	1	568	G
36	1	578	A
36	1	579	G
36	1	588	G
36	1	592	A
36	1	602	A
36	1	604	G
36	1	609	G
36	1	611	A
36	1	619	A
36	1	620	U
36	1	621	A

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Mol	Chain	Res	Type
36	1	636	C
36	1	649	A
36	1	660	A
36	1	677	A
36	1	681	U
36	1	682	U
36	1	689	U
36	1	690	A
36	1	691	A
36	1	705	A
36	1	708	G
36	1	709	A
36	1	712	G
36	1	715	A
36	1	716	A
36	1	718	G
36	1	764	U
36	1	765	C
36	1	766	U
36	1	767	U
36	1	768	C
36	1	776	U
36	1	777	U
36	1	781	G
36	1	785	G
36	1	792	G
36	1	806	A
36	1	817	A
36	1	830	A
36	1	837	A
36	1	849	C
36	1	861	C
36	1	873	C
36	1	874	U
36	1	879	U
36	1	890	C
36	1	896	A
36	1	907	G
36	1	908	G
36	1	914	A
36	1	916	G
36	1	917	A

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Mol	Chain	Res	Type
36	1	921	A
36	1	923	C
36	1	924	G
36	1	937	G
36	1	943	U
36	1	944	C
36	1	953	G
36	1	959	C
36	1	960	U
36	1	962	A
36	1	963	G
36	1	964	G
36	1	974	G
36	1	979	U
36	1	980	A
36	1	981	U
36	1	982	C
36	1	993	G
36	1	994	G
36	1	1001	G
36	1	1002	A
36	1	1010	G
36	1	1013	G
36	1	1016	C
36	1	1017	C
36	1	1018	G
36	1	1020	G
36	1	1024	G
36	1	1025	A
36	1	1029	G
36	1	1037	C
36	1	1038	C
36	1	1047	A
36	1	1049	C
36	1	1063	G
36	1	1064	A
36	1	1065	A
36	1	1071	U
36	1	1072	G
36	1	1081	U
36	1	1082	U
36	1	1093	A

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Mol	Chain	Res	Type
36	1	1094	U
36	1	1095	U
36	1	1097	G
36	1	1098	A
36	1	1103	A
36	1	1104	G
36	1	1117	G
36	1	1128	U
36	1	1131	G
36	1	1144	U
36	1	1153	A
36	1	1156	C
36	1	1159	A
36	1	1178	G
36	1	1179	A
36	1	1180	A
36	1	1181	U
36	1	1182	A
36	1	1190	A
36	1	1191	U
36	1	1192	C
36	1	1196	C
36	1	1197	A
36	1	1201	C
36	1	1206	G
36	1	1209	G
36	1	1212	A
36	1	1217	A
36	1	1222	G
36	1	1227	C
36	1	1232	C
36	1	1235	U
36	1	1236	G
36	1	1237	G
36	1	1240	A
36	1	1241	U
36	1	1243	G
36	1	1245	A
36	1	1246	G
36	1	1248	C
36	1	1249	G
36	1	1253	U

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Mol	Chain	Res	Type
36	1	1254	C
36	1	1258	U
36	1	1262	G
36	1	1263	A
36	1	1264	G
36	1	1266	G
36	1	1270	A
36	1	1271	A
36	1	1274	A
36	1	1278	A
36	1	1279	C
36	1	1285	G
36	1	1287	A
36	1	1305	U
36	1	1307	G
36	1	1308	A
36	1	1309	U
36	1	1318	A
36	1	1330	A
36	1	1331	U
36	1	1332	A
36	1	1345	G
36	1	1348	U
36	1	1349	G
36	1	1350	A
36	1	1351	U
36	1	1352	A
36	1	1353	U
36	1	1354	G
36	1	1355	A
36	1	1356	U
36	1	1357	G
36	1	1386	A
36	1	1387	G
36	1	1392	G
36	1	1398	U
36	1	1399	A
36	1	1400	G
36	1	1408	G
36	1	1417	G
36	1	1418	A
36	1	1419	A

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Mol	Chain	Res	Type
36	1	1421	G
36	1	1429	G
36	1	1431	G
36	1	1433	A
36	1	1434	G
36	1	1437	C
36	1	1446	A
36	1	1481	A
36	1	1482	A
36	1	1483	G
36	1	1484	U
36	1	1485	G
36	1	1502	C
36	1	1508	C
36	1	1525	G
36	1	1527	C
36	1	1535	A
36	1	1556	C
36	1	1560	G
36	1	1562	C
36	1	1563	C
36	1	1567	U
36	1	1568	U
36	1	1569	U
36	1	1570	U
36	1	1571	A
36	1	1576	G
36	1	1579	C
36	1	1580	A
36	1	1582	C
36	1	1583	A
36	1	1587	A
36	1	1589	A
36	1	1592	G
36	1	1605	A
36	1	1620	U
36	1	1621	A
36	1	1629	U
36	1	1633	C
36	1	1639	C
36	1	1641	U
36	1	1642	A

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Mol	Chain	Res	Type
36	1	1643	A
36	1	1644	C
36	1	1645	U
36	1	1655	G
36	1	1657	C
36	1	1658	G
36	1	1675	G
36	1	1683	A
36	1	1688	U
36	1	1702	U
36	1	1713	G
36	1	1715	A
36	1	1716	U
36	1	1717	U
36	1	1724	U
36	1	1729	A
36	1	1736	G
36	1	1740	U
36	1	1742	U
36	1	1750	A
36	1	1751	G
36	1	1753	G
36	1	1761	C
36	1	1762	C
36	1	1763	U
36	1	1764	U
36	1	1765	U
36	1	1766	G
36	1	1767	C
36	1	1770	G
36	1	1775	G
36	1	1778	G
36	1	1780	G
36	1	1781	C
36	1	1797	A
36	1	1798	A
36	1	1810	A
36	1	1814	A
36	1	1816	A
36	1	1819	U
36	1	1820	U
36	1	1821	U

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Mol	Chain	Res	Type
36	1	1834	U
36	1	1839	A
36	1	1841	A
36	1	1842	A
36	1	1846	C
36	1	1849	C
36	1	1850	A
36	1	1871	U
36	1	1879	A
36	1	1880	U
36	1	1881	A
36	1	1906	G
36	1	1937	U
36	1	1948	G
36	1	1952	G
36	1	1953	G
36	1	1954	G
36	1	2094	C
36	1	2095	G
36	1	2101	C
36	1	2102	U
36	1	2111	G
36	1	2113	A
36	1	2115	G
36	1	2116	G
36	1	2120	A
36	1	2121	G
36	1	2122	G
36	1	2130	G
36	1	2131	A
36	1	2140	U
36	1	2144	A
36	1	2158	A
36	1	2169	G
36	1	2170	U
36	1	2187	G
36	1	2188	A
36	1	2205	U
36	1	2207	A
36	1	2208	A
36	1	2209	U
36	1	2210	G

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Mol	Chain	Res	Type
36	1	2215	A
36	1	2242	A
36	1	2244	A
36	1	2249	G
36	1	2250	G
36	1	2252	A
36	1	2255	A
36	1	2256	A
36	1	2260	U
36	1	2272	G
36	1	2281	A
36	1	2282	U
36	1	2283	G
36	1	2287	C
36	1	2298	U
36	1	2299	A
36	1	2307	G
36	1	2310	U
36	1	2313	A
36	1	2314	U
36	1	2315	G
36	1	2334	U
36	1	2335	G
36	1	2336	U
36	1	2361	A
36	1	2372	A
36	1	2373	A
36	1	2374	C
36	1	2375	G
36	1	2382	G
36	1	2385	G
36	1	2393	G
36	1	2394	G
36	1	2397	A
36	1	2398	A
36	1	2401	A
36	1	2402	A
36	1	2403	G
36	1	2404	A
36	1	2411	U
36	1	2418	G
36	1	2419	A

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Mol	Chain	Res	Type
36	1	2437	G
36	1	2444	C
36	1	2445	A
36	1	2502	A
36	1	2503	G
36	1	2508	U
36	1	2514	U
36	1	2515	A
36	1	2522	G
36	1	2523	A
36	1	2526	C
36	1	2532	U
36	1	2533	G
36	1	2534	G
36	1	2537	U
36	1	2538	U
36	1	2539	C
36	1	2540	A
36	1	2541	U
36	1	2542	U
36	1	2543	U
36	1	2549	G
36	1	2552	C
36	1	2554	A
36	1	2555	G
36	1	2560	C
36	1	2561	A
36	1	2562	A
36	1	2568	C
36	1	2569	A
36	1	2570	U
36	1	2571	U
36	1	2572	C
36	1	2573	G
36	1	2581	U
36	1	2585	G
36	1	2586	G
36	1	2587	U
36	1	2593	A
36	1	2594	C
36	1	2606	G
36	1	2607	G

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Mol	Chain	Res	Type
36	1	2614	G
36	1	2617	U
36	1	2626	A
36	1	2637	A
36	1	2642	A
36	1	2652	U
36	1	2656	A
36	1	2657	A
36	1	2672	G
36	1	2674	A
36	1	2677	G
36	1	2689	A
36	1	2691	A
36	1	2694	A
36	1	2696	A
36	1	2704	A
36	1	2705	A
36	1	2706	G
36	1	2714	G
36	1	2728	G
36	1	2729	U
36	1	2740	A
36	1	2749	G
36	1	2752	U
36	1	2753	G
36	1	2755	C
36	1	2760	C
36	1	2762	A
36	1	2771	U
36	1	2772	C
36	1	2777	G
36	1	2778	G
36	1	2787	G
36	1	2796	G
36	1	2797	C
36	1	2799	A
36	1	2800	G
36	1	2801	A
36	1	2802	A
36	1	2810	C
36	1	2814	G
36	1	2816	G

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Mol	Chain	Res	Type
36	1	2817	A
36	1	2818	U
36	1	2819	A
36	1	2837	A
36	1	2838	A
36	1	2842	U
36	1	2843	U
36	1	2845	A
36	1	2847	A
36	1	2853	A
36	1	2856	G
36	1	2858	U
36	1	2860	U
36	1	2861	U
36	1	2867	C
36	1	2871	G
36	1	2872	A
36	1	2887	A
36	1	2898	G
36	1	2899	C
36	1	2923	U
36	1	2932	U
36	1	2935	U
36	1	2936	A
36	1	2941	A
36	1	2942	C
36	1	2947	G
36	1	2951	G
36	1	2960	C
36	1	2971	A
36	1	2972	G
36	1	2977	G
36	1	2983	C
36	1	2990	G
36	1	2992	U
36	1	2996	U
36	1	2997	G
36	1	3012	A
36	1	3025	C
36	1	3030	G
36	1	3049	A
36	1	3056	U

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Mol	Chain	Res	Type
36	1	3059	G
36	1	3074	G
36	1	3078	U
36	1	3079	U
36	1	3080	G
36	1	3086	A
36	1	3087	A
36	1	3090	U
36	1	3091	A
36	1	3092	C
36	1	3093	C
36	1	3097	C
36	1	3120	C
36	1	3122	A
36	1	3129	A
36	1	3130	A
36	1	3131	U
36	1	3141	A
36	1	3142	A
36	1	3143	C
36	1	3145	C
36	1	3151	U
36	1	3153	U
36	1	3154	C
36	1	3155	U
36	1	3156	U
36	1	3157	U
36	1	3165	A
36	1	3167	A
36	1	3168	A
36	1	3170	A
36	1	3171	U
36	1	3173	G
36	1	3174	A
36	1	3176	G
36	1	3179	U
36	1	3181	C
36	1	3187	A
36	1	3196	U
36	1	3198	U
36	1	3207	U
36	1	3209	A

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Mol	Chain	Res	Type
36	1	3210	A
36	1	3217	C
36	1	3218	A
36	1	3219	G
36	1	3223	A
36	1	3228	C
36	1	3229	G
36	1	3244	A
36	1	3245	A
36	1	3246	G
36	1	3247	G
36	1	3259	U
36	1	3263	G
36	1	3269	U
36	1	3270	U
36	1	3271	G
36	1	3276	G
36	1	3281	U
36	1	3286	G
36	1	3287	U
36	1	3288	G
36	1	3289	G
36	1	3294	A
36	1	3295	A
36	1	3303	G
36	1	3304	U
36	1	3307	A
36	1	3309	G
36	1	3313	U
36	1	3316	A
36	1	3317	U
36	1	3318	G
36	1	3319	U
36	1	3332	U
36	1	3335	A
36	1	3341	U
36	1	3342	A
36	1	3345	G
36	1	3347	A
36	1	3351	U
36	1	3352	U
36	1	3354	U

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Mol	Chain	Res	Type
36	1	3355	U
36	1	3356	G
36	1	3359	A
36	1	3360	C
36	1	3367	C
36	1	3368	U
36	1	3369	G
36	1	3378	C
36	1	3382	U
36	1	3383	G
36	1	3389	U
36	1	3390	G
36	1	3396	U
37	3	7	G
37	3	22	A
37	3	41	G
37	3	65	G
37	3	68	C
37	3	74	C
37	3	76	A
37	3	95	A
37	3	102	A
37	3	112	G
37	3	121	U
38	4	34	U
38	4	35	C
38	4	48	A
38	4	53	A
38	4	59	A
38	4	60	U
38	4	62	C
38	4	63	G
38	4	75	G
38	4	80	A
38	4	81	U
38	4	83	C
38	4	85	G
38	4	86	U
38	4	87	G
38	4	90	U
38	4	95	G
38	4	104	A

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Mol	Chain	Res	Type
38	4	105	A
38	4	106	C
38	4	107	G
38	4	111	A
38	4	112	U
38	4	113	U
38	4	125	U
38	4	126	A
38	4	128	U
38	4	149	A
38	4	152	G
38	4	155	A
38	4	157	U
38	4	158	U
1	6	4	C
1	6	17	C
1	6	23	G
1	6	25	C
1	6	26	A
1	6	27	U
1	6	34	G
1	6	42	G
1	6	46	A
1	6	47	A
1	6	57	G
1	6	60	U
1	6	63	G
1	6	65	A
1	6	66	U
1	6	68	A
1	6	69	G
1	6	70	C
1	6	71	A
1	6	72	A
1	6	73	U
1	6	75	U
1	6	76	A
1	6	77	U
1	6	78	A
1	6	95	G
1	6	101	U
1	6	104	A

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Mol	Chain	Res	Type
1	6	111	U
1	6	114	C
1	6	116	U
1	6	124	A
1	6	127	G
1	6	132	U
1	6	137	U
1	6	140	A
1	6	141	U
1	6	144	U
1	6	145	A
1	6	146	U
1	6	153	G
1	6	155	U
1	6	158	U
1	6	159	U
1	6	166	C
1	6	178	U
1	6	179	A
1	6	181	A
1	6	185	U
1	6	188	A
1	6	191	C
1	6	192	U
1	6	193	U
1	6	194	U
1	6	195	G
1	6	196	G
1	6	199	G
1	6	200	A
1	6	217	A
1	6	218	A
1	6	219	A
1	6	220	A
1	6	223	U
1	6	224	C
1	6	227	U
1	6	228	G
1	6	230	C
1	6	232	U
1	6	233	C
1	6	234	G

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Mol	Chain	Res	Type
1	6	240	U
1	6	241	U
1	6	245	U
1	6	250	C
1	6	260	U
1	6	261	U
1	6	265	A
1	6	266	A
1	6	271	A
1	6	272	U
1	6	273	G
1	6	277	U
1	6	278	U
1	6	280	U
1	6	281	G
1	6	287	G
1	6	294	C
1	6	299	A
1	6	302	U
1	6	308	C
1	6	314	C
1	6	316	A
1	6	319	U
1	6	321	C
1	6	337	G
1	6	338	C
1	6	343	C
1	6	352	A
1	6	359	A
1	6	361	C
1	6	380	U
1	6	400	A
1	6	401	A
1	6	402	C
1	6	404	G
1	6	416	A
1	6	418	G
1	6	421	A
1	6	424	C
1	6	425	A
1	6	426	G
1	6	428	A

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Mol	Chain	Res	Type
1	6	434	G
1	6	439	U
1	6	444	C
1	6	445	A
1	6	448	C
1	6	468	A
1	6	475	A
1	6	477	A
1	6	484	C
1	6	486	G
1	6	487	G
1	6	488	G
1	6	489	C
1	6	490	C
1	6	492	A
1	6	493	U
1	6	494	U
1	6	496	G
1	6	500	C
1	6	501	U
1	6	505	A
1	6	506	A
1	6	508	U
1	6	509	G
1	6	511	A
1	6	516	G
1	6	519	C
1	6	528	U
1	6	534	A
1	6	536	C
1	6	539	G
1	6	541	A
1	6	542	A
1	6	543	C
1	6	544	A
1	6	548	G
1	6	554	C
1	6	555	A
1	6	556	A
1	6	557	G
1	6	558	U
1	6	559	C

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Mol	Chain	Res	Type
1	6	564	G
1	6	565	C
1	6	566	C
1	6	570	A
1	6	574	G
1	6	579	A
1	6	580	A
1	6	582	U
1	6	594	A
1	6	595	G
1	6	597	G
1	6	606	A
1	6	608	U
1	6	609	U
1	6	610	G
1	6	611	U
1	6	619	A
1	6	620	A
1	6	623	A
1	6	634	G
1	6	637	C
1	6	639	U
1	6	640	U
1	6	650	U
1	6	651	G
1	6	652	G
1	6	653	C
1	6	661	A
1	6	662	U
1	6	665	U
1	6	667	U
1	6	668	C
1	6	670	U
1	6	679	U
1	6	680	U
1	6	681	U
1	6	682	C
1	6	683	C
1	6	684	A
1	6	685	A
1	6	690	G
1	6	698	U

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Mol	Chain	Res	Type
1	6	709	C
1	6	710	U
1	6	711	U
1	6	715	U
1	6	718	U
1	6	719	U
1	6	720	G
1	6	721	U
1	6	722	G
1	6	723	G
1	6	730	G
1	6	742	U
1	6	751	G
1	6	754	A
1	6	755	A
1	6	756	A
1	6	765	G
1	6	770	A
1	6	774	A
1	6	775	G
1	6	780	A
1	6	781	U
1	6	782	U
1	6	783	G
1	6	787	G
1	6	793	A
1	6	794	U
1	6	801	G
1	6	803	A
1	6	809	A
1	6	811	A
1	6	812	A
1	6	814	A
1	6	815	G
1	6	821	U
1	6	823	G
1	6	824	G
1	6	825	U
1	6	826	U
1	6	829	A
1	6	830	U
1	6	831	U

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Mol	Chain	Res	Type
1	6	832	U
1	6	834	G
1	6	835	U
1	6	861	U
1	6	862	A
1	6	863	A
1	6	865	A
1	6	876	G
1	6	886	U
1	6	898	A
1	6	906	A
1	6	913	G
1	6	914	G
1	6	933	A
1	6	935	U
1	6	942	G
1	6	951	A
1	6	959	U
1	6	960	U
1	6	966	A
1	6	969	C
1	6	971	A
1	6	983	A
1	6	988	A
1	6	992	A
1	6	993	A
1	6	996	U
1	6	998	A
1	6	1000	C
1	6	1003	A
1	6	1004	U
1	6	1005	A
1	6	1016	C
1	6	1021	C
1	6	1026	A
1	6	1028	C
1	6	1029	U
1	6	1039	A
1	6	1040	G
1	6	1052	U
1	6	1053	G
1	6	1057	U

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Mol	Chain	Res	Type
1	6	1058	U
1	6	1059	U
1	6	1060	U
1	6	1072	C
1	6	1075	C
1	6	1081	A
1	6	1082	C
1	6	1092	A
1	6	1096	C
1	6	1097	U
1	6	1098	U
1	6	1100	G
1	6	1101	G
1	6	1109	G
1	6	1111	G
1	6	1137	A
1	6	1138	A
1	6	1151	A
1	6	1155	G
1	6	1158	C
1	6	1159	C
1	6	1160	A
1	6	1161	C
1	6	1167	G
1	6	1183	A
1	6	1185	U
1	6	1191	U
1	6	1194	A
1	6	1196	A
1	6	1199	G
1	6	1200	G
1	6	1202	A
1	6	1207	C
1	6	1217	A
1	6	1218	G
1	6	1225	U
1	6	1226	A
1	6	1228	G
1	6	1229	G
1	6	1230	A
1	6	1239	U
1	6	1241	G

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Mol	Chain	Res	Type
1	6	1242	A
1	6	1243	G
1	6	1245	G
1	6	1246	C
1	6	1252	C
1	6	1256	A
1	6	1257	U
1	6	1258	U
1	6	1284	C
1	6	1286	U
1	6	1288	G
1	6	1291	G
1	6	1314	U
1	6	1315	U
1	6	1316	G
1	6	1318	G
1	6	1321	A
1	6	1335	U
1	6	1338	C
1	6	1344	A
1	6	1345	A
1	6	1346	A
1	6	1353	U
1	6	1361	U
1	6	1363	U
1	6	1364	G
1	6	1367	G
1	6	1370	U
1	6	1371	A
1	6	1383	G
1	6	1390	U
1	6	1398	U
1	6	1399	C
1	6	1400	A
1	6	1401	A
1	6	1402	G
1	6	1413	U
1	6	1414	U
1	6	1415	U
1	6	1418	G
1	6	1426	C
1	6	1427	A

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Mol	Chain	Res	Type
1	6	1428	G
1	6	1445	G
1	6	1446	A
1	6	1447	C
1	6	1448	G
1	6	1458	G
1	6	1459	C
1	6	1460	A
1	6	1461	C
1	6	1466	G
1	6	1471	A
1	6	1473	U
1	6	1481	C
1	6	1482	C
1	6	1486	G
1	6	1490	C
1	6	1491	U
1	6	1492	A
1	6	1493	A
1	6	1494	C
1	6	1504	G
1	6	1506	G
1	6	1514	U
1	6	1516	A
1	6	1519	U
1	6	1521	G
1	6	1522	U
1	6	1523	G
1	6	1524	A
1	6	1535	U
1	6	1536	G
1	6	1537	C
1	6	1538	U
1	6	1540	G
1	6	1554	U
1	6	1557	U
1	6	1559	A
1	6	1573	A
1	6	1574	G
1	6	1575	G
1	6	1579	U
1	6	1582	U

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Mol	Chain	Res	Type
1	6	1584	G
1	6	1600	A
1	6	1601	G
1	6	1621	U
1	6	1631	A
1	6	1634	C
1	6	1636	C
1	6	1637	C
1	6	1638	G
1	6	1657	U
1	6	1658	G
1	6	1668	G
1	6	1683	C
1	6	1696	G
1	6	1698	G
1	6	1699	G
1	6	1700	C
1	6	1701	A
1	6	1702	A
1	6	1712	A
1	6	1713	G
1	6	1716	C
1	6	1717	G
1	6	1731	A
1	6	1736	G
1	6	1742	U
1	6	1760	G
1	6	1762	A
1	6	1766	A
1	6	1767	G
1	6	1769	U
1	6	1780	G
1	6	1782	A
1	6	1789	G
1	6	1792	G
1	6	1793	G
1	6	1794	A
1	6	1795	U
1	6	1796	C
1	6	1799	U
1	6	1800	A
36	5	6	A

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Mol	Chain	Res	Type
36	5	15	C
36	5	16	A
36	5	26	A
36	5	30	G
36	5	40	A
36	5	43	A
36	5	49	A
36	5	57	A
36	5	59	G
36	5	60	A
36	5	65	A
36	5	66	A
36	5	71	A
36	5	73	C
36	5	76	G
36	5	92	G
36	5	96	G
36	5	109	A
36	5	110	G
36	5	111	C
36	5	113	C
36	5	118	U
36	5	121	A
36	5	122	A
36	5	131	C
36	5	134	U
36	5	135	C
36	5	136	G
36	5	156	G
36	5	157	A
36	5	165	A
36	5	168	U
36	5	170	G
36	5	171	G
36	5	172	G
36	5	173	G
36	5	174	C
36	5	180	C
36	5	182	U
36	5	187	A
36	5	190	U
36	5	191	U

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Mol	Chain	Res	Type
36	5	196	G
36	5	197	G
36	5	200	C
36	5	201	A
36	5	210	U
36	5	213	A
36	5	218	G
36	5	219	A
36	5	220	G
36	5	221	A
36	5	231	G
36	5	235	A
36	5	239	G
36	5	240	U
36	5	241	G
36	5	245	U
36	5	247	C
36	5	248	U
36	5	249	U
36	5	250	U
36	5	252	U
36	5	253	A
36	5	254	A
36	5	269	G
36	5	270	U
36	5	284	A
36	5	286	U
36	5	295	A
36	5	298	U
36	5	305	U
36	5	311	C
36	5	315	C
36	5	323	A
36	5	326	U
36	5	327	A
36	5	329	U
36	5	334	A
36	5	339	C
36	5	349	A
36	5	350	C
36	5	351	A
36	5	360	G

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Mol	Chain	Res	Type
36	5	376	G
36	5	379	C
36	5	390	G
36	5	395	A
36	5	398	A
36	5	399	A
36	5	401	U
36	5	402	A
36	5	403	C
36	5	404	G
36	5	418	A
36	5	421	G
36	5	422	A
36	5	436	A
36	5	437	G
36	5	439	C
36	5	440	A
36	5	441	U
36	5	442	G
36	5	492	U
36	5	496	C
36	5	521	A
36	5	542	G
36	5	546	C
36	5	547	G
36	5	548	G
36	5	550	A
36	5	551	A
36	5	554	A
36	5	557	A
36	5	559	A
36	5	578	A
36	5	579	G
36	5	581	U
36	5	592	A
36	5	600	G
36	5	609	G
36	5	611	A
36	5	619	A
36	5	621	A
36	5	636	C
36	5	647	A

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Mol	Chain	Res	Type
36	5	649	A
36	5	651	G
36	5	660	A
36	5	662	U
36	5	677	A
36	5	681	U
36	5	691	A
36	5	692	A
36	5	700	C
36	5	705	A
36	5	712	G
36	5	715	A
36	5	716	A
36	5	725	G
36	5	736	A
36	5	766	U
36	5	767	U
36	5	776	U
36	5	777	U
36	5	781	G
36	5	785	G
36	5	786	A
36	5	806	A
36	5	811	U
36	5	817	A
36	5	826	G
36	5	830	A
36	5	847	A
36	5	861	C
36	5	874	U
36	5	879	U
36	5	881	C
36	5	890	C
36	5	907	G
36	5	908	G
36	5	914	A
36	5	916	G
36	5	917	A
36	5	921	A
36	5	923	C
36	5	924	G
36	5	925	A

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Mol	Chain	Res	Type
36	5	937	G
36	5	944	C
36	5	959	C
36	5	960	U
36	5	962	A
36	5	963	G
36	5	964	G
36	5	974	G
36	5	979	U
36	5	993	G
36	5	994	G
36	5	1000	C
36	5	1001	G
36	5	1002	A
36	5	1010	G
36	5	1015	U
36	5	1016	C
36	5	1017	C
36	5	1018	G
36	5	1021	G
36	5	1024	G
36	5	1025	A
36	5	1026	A
36	5	1028	U
36	5	1029	G
36	5	1035	G
36	5	1047	A
36	5	1049	C
36	5	1063	G
36	5	1064	A
36	5	1065	A
36	5	1072	G
36	5	1081	U
36	5	1082	U
36	5	1085	A
36	5	1087	G
36	5	1093	A
36	5	1095	U
36	5	1097	G
36	5	1098	A
36	5	1103	A
36	5	1104	G

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Mol	Chain	Res	Type
36	5	1117	G
36	5	1131	G
36	5	1143	A
36	5	1144	U
36	5	1152	G
36	5	1153	A
36	5	1159	A
36	5	1160	C
36	5	1169	A
36	5	1175	C
36	5	1177	G
36	5	1178	G
36	5	1179	A
36	5	1180	A
36	5	1181	U
36	5	1191	U
36	5	1196	C
36	5	1201	C
36	5	1202	A
36	5	1206	G
36	5	1209	G
36	5	1222	G
36	5	1223	A
36	5	1235	U
36	5	1236	G
36	5	1239	C
36	5	1241	U
36	5	1242	G
36	5	1243	G
36	5	1245	A
36	5	1246	G
36	5	1252	A
36	5	1253	U
36	5	1258	U
36	5	1262	G
36	5	1263	A
36	5	1264	G
36	5	1265	U
36	5	1266	G
36	5	1277	C
36	5	1307	G
36	5	1308	A

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Mol	Chain	Res	Type
36	5	1309	U
36	5	1313	G
36	5	1316	C
36	5	1330	A
36	5	1331	U
36	5	1332	A
36	5	1348	U
36	5	1349	G
36	5	1351	U
36	5	1353	U
36	5	1354	G
36	5	1355	A
36	5	1356	U
36	5	1357	G
36	5	1386	A
36	5	1387	G
36	5	1391	C
36	5	1398	U
36	5	1399	A
36	5	1400	G
36	5	1408	G
36	5	1417	G
36	5	1418	A
36	5	1419	A
36	5	1421	G
36	5	1428	A
36	5	1431	G
36	5	1433	A
36	5	1434	G
36	5	1437	C
36	5	1438	U
36	5	1446	A
36	5	1450	G
36	5	1471	U
36	5	1481	A
36	5	1482	A
36	5	1490	A
36	5	1503	A
36	5	1508	C
36	5	1523	U
36	5	1527	C
36	5	1536	G

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Mol	Chain	Res	Type
36	5	1554	U
36	5	1555	U
36	5	1556	C
36	5	1557	A
36	5	1560	G
36	5	1561	G
36	5	1562	C
36	5	1567	U
36	5	1569	U
36	5	1570	U
36	5	1571	A
36	5	1574	C
36	5	1575	A
36	5	1576	G
36	5	1577	G
36	5	1578	C
36	5	1579	C
36	5	1581	C
36	5	1582	C
36	5	1583	A
36	5	1587	A
36	5	1589	A
36	5	1593	A
36	5	1605	A
36	5	1620	U
36	5	1621	A
36	5	1629	U
36	5	1632	A
36	5	1639	C
36	5	1643	A
36	5	1644	C
36	5	1645	U
36	5	1657	C
36	5	1677	G
36	5	1683	A
36	5	1687	U
36	5	1694	U
36	5	1702	U
36	5	1714	A
36	5	1716	U
36	5	1717	U
36	5	1724	U

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Mol	Chain	Res	Type
36	5	1725	C
36	5	1730	G
36	5	1750	A
36	5	1751	G
36	5	1760	A
36	5	1762	C
36	5	1764	U
36	5	1765	U
36	5	1766	G
36	5	1769	G
36	5	1770	G
36	5	1775	G
36	5	1780	G
36	5	1797	A
36	5	1812	G
36	5	1814	A
36	5	1815	U
36	5	1816	A
36	5	1817	G
36	5	1818	U
36	5	1821	U
36	5	1829	G
36	5	1839	A
36	5	1841	A
36	5	1842	A
36	5	1846	C
36	5	1847	A
36	5	1849	C
36	5	1850	A
36	5	1878	G
36	5	1879	A
36	5	1880	U
36	5	1895	A
36	5	1901	A
36	5	1906	G
36	5	1935	G
36	5	2101	C
36	5	2102	U
36	5	2111	G
36	5	2112	U
36	5	2113	A
36	5	2115	G

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Mol	Chain	Res	Type
36	5	2121	G
36	5	2122	G
36	5	2131	A
36	5	2144	A
36	5	2149	A
36	5	2157	G
36	5	2158	A
36	5	2168	A
36	5	2169	G
36	5	2187	G
36	5	2188	A
36	5	2205	U
36	5	2206	G
36	5	2210	G
36	5	2215	A
36	5	2223	A
36	5	2225	U
36	5	2231	C
36	5	2244	A
36	5	2246	G
36	5	2250	G
36	5	2253	G
36	5	2255	A
36	5	2256	A
36	5	2258	U
36	5	2267	C
36	5	2269	U
36	5	2270	A
36	5	2272	G
36	5	2273	G
36	5	2276	G
36	5	2279	A
36	5	2281	A
36	5	2288	G
36	5	2298	U
36	5	2303	A
36	5	2307	G
36	5	2308	C
36	5	2310	U
36	5	2313	A
36	5	2315	G
36	5	2318	U

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Mol	Chain	Res	Type
36	5	2335	G
36	5	2336	U
36	5	2364	G
36	5	2367	A
36	5	2372	A
36	5	2373	A
36	5	2374	C
36	5	2375	G
36	5	2385	G
36	5	2393	G
36	5	2397	A
36	5	2401	A
36	5	2403	G
36	5	2404	A
36	5	2411	U
36	5	2418	G
36	5	2419	A
36	5	2435	G
36	5	2439	A
36	5	2446	U
36	5	2447	A
36	5	2452	G
36	5	2494	A
36	5	2497	U
36	5	2501	U
36	5	2502	A
36	5	2503	G
36	5	2504	U
36	5	2505	U
36	5	2514	U
36	5	2515	A
36	5	2518	C
36	5	2523	A
36	5	2529	A
36	5	2533	G
36	5	2536	A
36	5	2537	U
36	5	2538	U
36	5	2539	C
36	5	2540	A
36	5	2543	U
36	5	2549	G

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Mol	Chain	Res	Type
36	5	2552	C
36	5	2555	G
36	5	2560	C
36	5	2564	G
36	5	2565	U
36	5	2567	C
36	5	2568	C
36	5	2569	A
36	5	2570	U
36	5	2571	U
36	5	2572	C
36	5	2573	G
36	5	2574	G
36	5	2584	G
36	5	2585	G
36	5	2589	G
36	5	2593	A
36	5	2606	G
36	5	2607	G
36	5	2614	G
36	5	2617	U
36	5	2626	A
36	5	2637	A
36	5	2652	U
36	5	2656	A
36	5	2674	A
36	5	2676	A
36	5	2677	G
36	5	2678	A
36	5	2689	A
36	5	2691	A
36	5	2694	A
36	5	2696	A
36	5	2704	A
36	5	2705	A
36	5	2714	G
36	5	2717	U
36	5	2727	A
36	5	2728	G
36	5	2729	U
36	5	2737	C
36	5	2748	A

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Mol	Chain	Res	Type
36	5	2752	U
36	5	2753	G
36	5	2755	C
36	5	2762	A
36	5	2772	C
36	5	2773	C
36	5	2777	G
36	5	2778	G
36	5	2780	A
36	5	2796	G
36	5	2797	C
36	5	2799	A
36	5	2800	G
36	5	2801	A
36	5	2810	C
36	5	2814	G
36	5	2816	G
36	5	2817	A
36	5	2818	U
36	5	2819	A
36	5	2829	U
36	5	2838	A
36	5	2843	U
36	5	2845	A
36	5	2847	A
36	5	2853	A
36	5	2855	U
36	5	2861	U
36	5	2862	U
36	5	2863	G
36	5	2871	G
36	5	2886	U
36	5	2887	A
36	5	2898	G
36	5	2899	C
36	5	2904	U
36	5	2923	U
36	5	2935	U
36	5	2936	A
36	5	2942	C
36	5	2945	G
36	5	2947	G

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Mol	Chain	Res	Type
36	5	2954	U
36	5	2957	G
36	5	2965	U
36	5	2971	A
36	5	2977	G
36	5	2983	C
36	5	2990	G
36	5	2996	U
36	5	2997	G
36	5	3012	A
36	5	3018	C
36	5	3030	G
36	5	3056	U
36	5	3059	G
36	5	3078	U
36	5	3079	U
36	5	3086	A
36	5	3087	A
36	5	3091	A
36	5	3092	C
36	5	3102	G
36	5	3119	U
36	5	3122	A
36	5	3130	A
36	5	3131	U
36	5	3142	A
36	5	3143	C
36	5	3150	A
36	5	3152	U
36	5	3153	U
36	5	3155	U
36	5	3156	U
36	5	3157	U
36	5	3158	G
36	5	3164	C
36	5	3165	A
36	5	3168	A
36	5	3171	U
36	5	3172	A
36	5	3173	G
36	5	3174	A
36	5	3176	G

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Mol	Chain	Res	Type
36	5	3177	G
36	5	3179	U
36	5	3180	A
36	5	3181	C
36	5	3187	A
36	5	3195	U
36	5	3196	U
36	5	3197	G
36	5	3207	U
36	5	3217	C
36	5	3218	A
36	5	3219	G
36	5	3224	G
36	5	3229	G
36	5	3234	A
36	5	3238	G
36	5	3239	G
36	5	3243	A
36	5	3244	A
36	5	3245	A
36	5	3246	G
36	5	3247	G
36	5	3258	U
36	5	3259	U
36	5	3275	U
36	5	3276	G
36	5	3277	U
36	5	3281	U
36	5	3282	U
36	5	3284	G
36	5	3285	C
36	5	3286	G
36	5	3288	G
36	5	3289	G
36	5	3290	G
36	5	3294	A
36	5	3304	U
36	5	3305	A
36	5	3313	U
36	5	3316	A
36	5	3317	U
36	5	3318	G

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Mol	Chain	Res	Type
36	5	3320	A
36	5	3342	A
36	5	3345	G
36	5	3348	G
36	5	3351	U
36	5	3352	U
36	5	3353	G
36	5	3354	U
36	5	3358	U
36	5	3361	G
36	5	3369	G
36	5	3377	G
36	5	3378	C
36	5	3381	U
36	5	3382	U
36	5	3389	U
36	5	3390	G
36	5	3393	U
36	5	3394	U
36	5	3396	U
37	7	7	G
37	7	22	A
37	7	41	G
37	7	47	C
37	7	54	U
37	7	55	A
37	7	60	G
37	7	65	G
37	7	73	C
37	7	76	A
37	7	99	G
37	7	102	A
37	7	112	G
38	8	34	U
38	8	35	C
38	8	48	A
38	8	53	A
38	8	57	C
38	8	58	G
38	8	59	A
38	8	60	U
38	8	62	C

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Mol	Chain	Res	Type
38	8	63	G
38	8	75	G
38	8	79	A
38	8	80	A
38	8	81	U
38	8	82	U
38	8	83	C
38	8	84	C
38	8	86	U
38	8	87	G
38	8	95	G
38	8	96	A
38	8	97	A
38	8	99	C
38	8	104	A
38	8	106	C
38	8	111	A
38	8	113	U
38	8	125	U
38	8	126	A
38	8	127	U
38	8	129	C
38	8	152	G
38	8	157	U
38	8	158	U

All (177) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	2	25	C
1	2	114	C
1	2	130	C
1	2	131	C
1	2	158	U
1	2	218	A
1	2	240	U
1	2	278	U
1	2	280	U
1	2	417	A
1	2	497	G
1	2	499	U
1	2	501	U

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Mol	Chain	Res	Type
1	2	503	G
1	2	512	A
1	2	558	U
1	2	622	A
1	2	685	A
1	2	704	C
1	2	720	G
1	2	721	U
1	2	755	A
1	2	829	A
1	2	1081	A
1	2	1150	G
1	2	1196	A
1	2	1207	C
1	2	1226	A
1	2	1244	A
1	2	1250	U
1	2	1344	A
1	2	1370	U
1	2	1481	C
1	2	1489	U
1	2	1568	C
1	2	1573	A
1	2	1615	C
1	2	1657	U
1	2	1698	G
1	2	1761	U
36	1	65	A
36	1	210	U
36	1	239	G
36	1	282	G
36	1	547	G
36	1	659	G
36	1	715	A
36	1	763	G
36	1	873	C
36	1	916	G
36	1	981	U
36	1	993	G
36	1	1064	A
36	1	1094	U
36	1	1097	G

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Mol	Chain	Res	Type
36	1	1103	A
36	1	1181	U
36	1	1196	C
36	1	1307	G
36	1	1329	U
36	1	1331	U
36	1	1352	A
36	1	1355	A
36	1	1484	U
36	1	1507	G
36	1	1562	C
36	1	1582	C
36	1	1716	U
36	1	1820	U
36	1	2101	C
36	1	2112	U
36	1	2209	U
36	1	2249	G
36	1	2297	U
36	1	2372	A
36	1	2400	G
36	1	2418	G
36	1	2537	U
36	1	2541	U
36	1	2554	A
36	1	2585	G
36	1	2593	A
36	1	2817	A
36	1	2818	U
36	1	2971	A
36	1	3078	U
36	1	3121	U
36	1	3228	C
36	1	3269	U
36	1	3350	C
36	1	3351	U
36	1	3353	G
36	1	3377	G
38	4	80	A
38	4	85	G
38	4	125	U
1	6	25	C

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Mol	Chain	Res	Type
1	6	114	C
1	6	158	U
1	6	187	G
1	6	192	U
1	6	217	A
1	6	259	U
1	6	400	A
1	6	417	A
1	6	454	U
1	6	542	A
1	6	555	A
1	6	558	U
1	6	697	C
1	6	717	C
1	6	720	G
1	6	755	A
1	6	828	U
1	6	1058	U
1	6	1097	U
1	6	1244	A
1	6	1255	G
1	6	1344	A
1	6	1481	C
1	6	1491	U
1	6	1535	U
1	6	1573	A
1	6	1600	A
1	6	1620	C
36	5	210	U
36	5	238	A
36	5	438	A
36	5	594	U
36	5	873	C
36	5	916	G
36	5	978	G
36	5	993	G
36	5	1027	A
36	5	1064	A
36	5	1081	U
36	5	1152	G
36	5	1190	A
36	5	1222	G

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Mol	Chain	Res	Type
36	5	1238	C
36	5	1241	U
36	5	1307	G
36	5	1329	U
36	5	1331	U
36	5	1352	A
36	5	1355	A
36	5	1481	A
36	5	1560	G
36	5	1580	A
36	5	1716	U
36	5	1816	A
36	5	1841	A
36	5	1842	A
36	5	2101	C
36	5	2112	U
36	5	2209	U
36	5	2249	G
36	5	2255	A
36	5	2257	C
36	5	2372	A
36	5	2400	G
36	5	2418	G
36	5	2500	A
36	5	2513	U
36	5	2539	C
36	5	2772	C
36	5	2818	U
36	5	2872	A
36	5	3078	U
36	5	3121	U
36	5	3195	U
36	5	3207	U
36	5	3218	A
36	5	3275	U
36	5	3289	G
36	5	3317	U
36	5	3357	U

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 33 ligands modelled in this entry, 28 are monoatomic - leaving 5 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
86	SPS	B	3401	87	20,23,23	3.62	13 (65%)	23,30,30	2.48	11 (47%)
86	SPS	1	3401	-	20,23,23	3.62	15 (75%)	23,30,30	2.82	10 (43%)
88	OHX	5	3406	-	0,6,6	-	-	-		
88	OHX	1	3406	-	0,6,6	-	-	-		
88	OHX	1	3405	-	0,6,6	-	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
86	SPS	B	3401	87	-	3/15/18/18	0/1/1/1
86	SPS	1	3401	-	-	2/15/18/18	0/1/1/1

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	1	3401	SPS	C9-C10	-8.18	1.31	1.48
86	B	3401	SPS	C9-C10	-7.90	1.31	1.48
86	B	3401	SPS	C9-C8	6.78	1.53	1.33
86	1	3401	SPS	C9-C8	6.51	1.52	1.33
86	B	3401	SPS	O13-C13	-5.48	1.19	1.42
86	1	3401	SPS	O13-C13	-5.37	1.19	1.42
86	1	3401	SPS	C10-N11	5.06	1.45	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	B	3401	SPS	C5-N4	-4.76	1.32	1.38
86	B	3401	SPS	C10-N11	4.53	1.44	1.34
86	1	3401	SPS	O15-S15	4.31	1.65	1.50
86	1	3401	SPS	C5-N4	-4.20	1.33	1.38
86	B	3401	SPS	O15-S15	4.06	1.64	1.50
86	1	3401	SPS	C1-N2	-3.40	1.32	1.38
86	B	3401	SPS	C6-C1	-3.38	1.38	1.45
86	B	3401	SPS	C1-N2	-3.31	1.32	1.38
86	B	3401	SPS	O10-C10	-3.01	1.18	1.24
86	1	3401	SPS	C6-C1	-2.95	1.39	1.45
86	1	3401	SPS	O10-C10	-2.78	1.19	1.24
86	1	3401	SPS	C8-C6	2.70	1.54	1.46
86	B	3401	SPS	C3-N4	-2.52	1.33	1.37
86	B	3401	SPS	C8-C6	2.46	1.53	1.46
86	B	3401	SPS	C3-N2	-2.43	1.33	1.37
86	1	3401	SPS	O1-C1	-2.31	1.19	1.23
86	1	3401	SPS	C7-C5	2.23	1.53	1.49
86	B	3401	SPS	O1-C1	-2.18	1.19	1.23
86	1	3401	SPS	O3-C3	-2.18	1.18	1.23
86	1	3401	SPS	C3-N4	-2.15	1.33	1.37
86	1	3401	SPS	C3-N2	-2.03	1.34	1.37

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
86	1	3401	SPS	C7-C5-N4	6.32	120.77	113.42
86	1	3401	SPS	C7-C5-C6	-6.31	118.29	126.47
86	B	3401	SPS	C7-C5-C6	-4.80	120.25	126.47
86	1	3401	SPS	C5-N4-C3	-4.61	120.13	123.70
86	B	3401	SPS	C18-S17-C16	4.12	111.12	100.14
86	B	3401	SPS	C7-C5-N4	4.02	118.09	113.42
86	B	3401	SPS	C5-N4-C3	-3.61	120.91	123.70
86	1	3401	SPS	C1-N2-C3	-3.49	121.56	126.37
86	1	3401	SPS	O13-C13-C12	3.32	120.08	111.73
86	B	3401	SPS	C6-C1-N2	3.18	120.00	114.45
86	B	3401	SPS	C9-C10-N11	3.07	119.86	114.61
86	B	3401	SPS	C1-N2-C3	-3.06	122.15	126.37
86	B	3401	SPS	O13-C13-C12	2.97	119.20	111.73
86	1	3401	SPS	N4-C3-N2	2.96	120.39	115.74
86	1	3401	SPS	C18-S17-C16	2.95	108.02	100.14
86	1	3401	SPS	C6-C1-N2	2.87	119.47	114.45
86	B	3401	SPS	C6-C5-N4	2.56	121.66	118.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
86	1	3401	SPS	O15-S15-C16	2.34	109.25	106.47
86	B	3401	SPS	O10-C10-N11	-2.29	119.45	122.44
86	B	3401	SPS	N4-C3-N2	2.08	119.01	115.74
86	1	3401	SPS	C9-C10-N11	2.01	118.05	114.61

There are no chirality outliers.

All (5) torsion outliers are listed below:

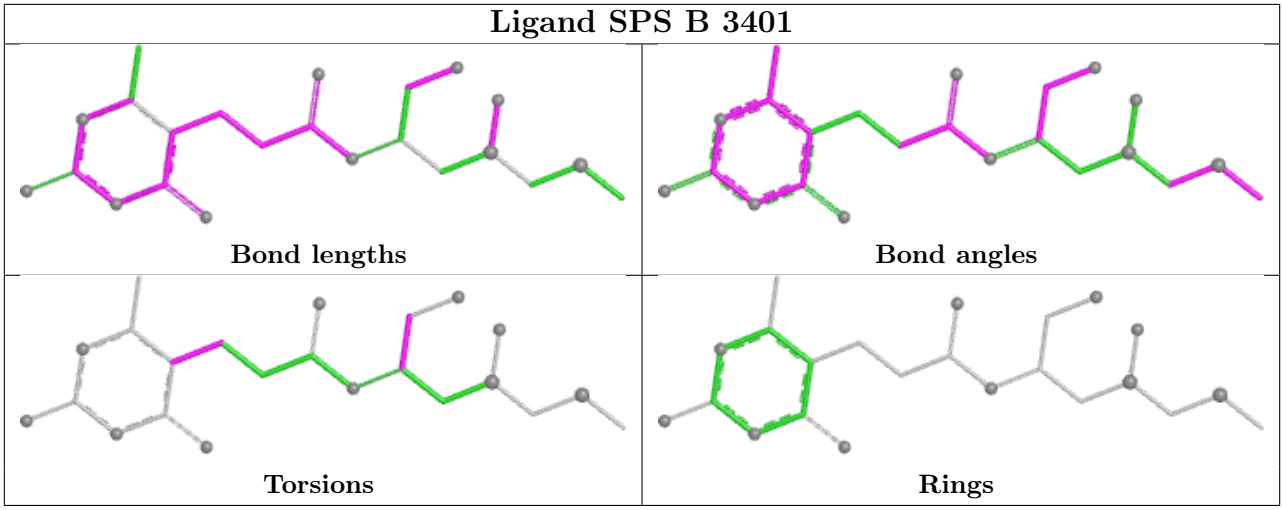
Mol	Chain	Res	Type	Atoms
86	1	3401	SPS	C14-C12-C13-O13
86	B	3401	SPS	N11-C12-C13-O13
86	B	3401	SPS	C14-C12-C13-O13
86	1	3401	SPS	N11-C12-C13-O13
86	B	3401	SPS	C5-C6-C8-C9

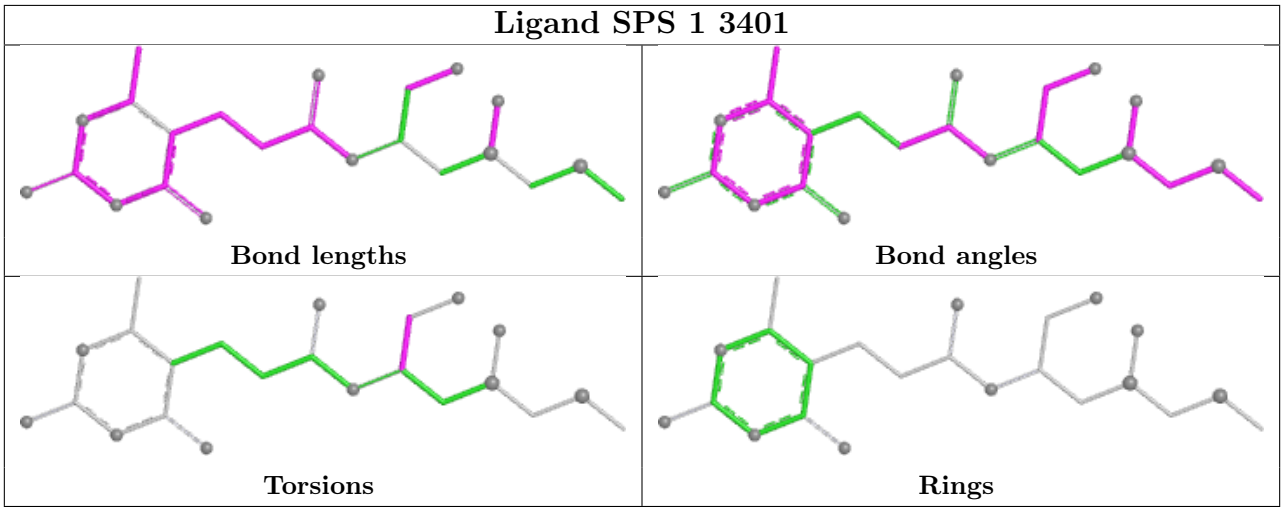
There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
86	B	3401	SPS	2	0
86	1	3401	SPS	3	0

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





5.7 Other polymers (i)

10 such residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
84	CH	B	75	84,87	16,21,22	0.74	0	19,30,33	1.96	2 (10%)
84	8AN	B	76	84,87	21,24,25	1.56	4 (19%)	26,35,38	2.26	9 (34%)
84	8AN	C	76	84,87	21,24,25	1.56	4 (19%)	26,35,38	2.25	9 (34%)
84	CH	B	74	84	16,21,22	1.03	1 (6%)	19,30,33	1.86	2 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
84	CH	C	75	84,87	16,21,22	0.97	2 (12%)	19,30,33	1.96	2 (10%)
84	CH	C	74	84	16,18,22	0.94	1 (6%)	20,26,33	1.76	2 (10%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
84	CH	B	75	84,87	-	0/5/25/26	0/2/2/2
84	8AN	B	76	84,87	-	3/7/25/26	0/3/3/3
84	8AN	C	76	84,87	-	3/7/25/26	0/3/3/3
84	CH	B	74	84	-	0/5/25/26	0/2/2/2
84	CH	C	75	84,87	-	1/5/25/26	0/2/2/2
84	CH	C	74	84	-	2/4/22/26	0/2/2/2

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	B	76	8AN	C5-C4	4.90	1.47	1.39
84	C	76	8AN	C5-C4	4.50	1.47	1.39
84	B	74	CH	C4-N3	-3.06	1.33	1.37
84	C	74	CH	C4-N3	-2.86	1.33	1.37
84	B	76	8AN	C5-C6	2.65	1.48	1.41
84	C	76	8AN	C5-C6	2.59	1.48	1.41
84	C	76	8AN	C5-N7	-2.54	1.34	1.39
84	C	75	CH	C5-C4	2.46	1.43	1.39
84	C	76	8AN	C8-N7	2.36	1.36	1.31
84	C	75	CH	C4-N3	-2.32	1.34	1.37
84	B	76	8AN	C8-N7	2.27	1.36	1.31
84	B	76	8AN	C5-N7	-2.07	1.35	1.39

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	B	74	CH	C5-C4-N3	7.27	122.18	118.04
84	C	75	CH	C5-C4-N3	7.25	122.17	118.04
84	B	75	CH	C5-C4-N3	6.07	121.50	118.04
84	C	76	8AN	C5-C4-N3	-5.97	118.50	126.72
84	C	74	CH	C5-C4-N3	5.87	121.38	118.04
84	B	76	8AN	C5-C4-N3	-5.84	118.67	126.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	B	75	CH	C5-C4-N4	-5.28	118.74	123.88
84	B	76	8AN	N3-C4-N9	4.98	135.63	127.17
84	C	74	CH	C5-C4-N4	-4.50	119.50	123.88
84	C	76	8AN	N3-C4-N9	4.40	134.64	127.17
84	C	76	8AN	C4-C5-N7	-4.01	106.00	110.58
84	C	75	CH	C5-C4-N4	-3.63	120.35	123.88
84	C	76	8AN	C2-N3-C4	3.51	120.41	111.83
84	B	76	8AN	C2-N3-C4	3.42	120.19	111.83
84	B	76	8AN	C4-C5-N7	-3.27	106.84	110.58
84	B	76	8AN	C4-N9-C8	3.21	109.10	105.74
84	C	76	8AN	C5-N7-C8	3.01	108.19	103.45
84	B	74	CH	C5-C4-N4	-2.93	121.03	123.88
84	C	76	8AN	N1-C2-N3	-2.83	124.30	128.58
84	B	76	8AN	N1-C2-N3	-2.77	124.39	128.58
84	B	76	8AN	C5-N7-C8	2.52	107.41	103.45
84	C	76	8AN	C4-N9-C8	2.49	108.36	105.74
84	C	76	8AN	N9-C8-N7	-2.35	110.60	113.94
84	B	76	8AN	N9-C8-N7	-2.11	110.95	113.94
84	B	76	8AN	C2'-C3'-C4'	2.08	105.55	102.70
84	C	76	8AN	C6-C5-N7	2.05	136.04	132.09

There are no chirality outliers.

All (9) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
84	C	74	CH	C3'-C4'-C5'-O5'
84	C	74	CH	O4'-C4'-C5'-O5'
84	C	76	8AN	C3'-C4'-C5'-O5'
84	B	76	8AN	C3'-C4'-C5'-O5'
84	C	76	8AN	O4'-C4'-C5'-O5'
84	B	76	8AN	O4'-C4'-C5'-O5'
84	B	76	8AN	C4'-C5'-O5'-P
84	C	76	8AN	C4'-C5'-O5'-P
84	C	75	CH	O4'-C4'-C5'-O5'

There are no ring outliers.

5 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	B	75	CH	1	0
84	B	76	8AN	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	B	74	CH	1	0
84	C	75	CH	1	0
84	C	74	CH	3	0

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	2	2
80	m2	2
35	sM	1
35	SM	1
12	c0	1
36	5	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	sM	139:UNK	C	155:UNK	N	38.68
1	SM	141:ALA	C	151:UNK	N	26.53
1	c0	84:UNK	C	87:UNK	N	8.84
1	2	1716:C	O3'	1717:G	P	5.83
1	5	2437:G	O3'	2438:A	P	4.00
1	m2	23:UNK	C	28:UNK	N	3.70
1	m2	52:UNK	C	54:UNK	N	3.66
1	2	1685:G	O3'	1686:C	P	3.03

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	2	1781/1800 (98%)	0.42	49 (2%) 55 36	41, 98, 170, 210	1 (0%)
1	6	1795/1800 (99%)	0.25	35 (1%) 66 48	34, 86, 157, 204	1 (0%)
2	S0	206/251 (82%)	1.09	29 (14%) 6 5	100, 112, 123, 128	0
2	s0	206/251 (82%)	0.78	14 (6%) 23 16	80, 97, 111, 117	0
3	S1	214/254 (84%)	1.24	45 (21%) 2 2	110, 145, 169, 175	0
3	s1	216/254 (85%)	0.94	23 (10%) 11 9	80, 96, 114, 123	0
4	S2	217/253 (85%)	1.24	36 (16%) 4 4	83, 96, 109, 113	0
4	s2	217/253 (85%)	0.88	22 (10%) 12 10	68, 79, 93, 108	0
5	S3	223/239 (93%)	1.07	24 (10%) 11 9	91, 100, 123, 128	0
5	s3	223/239 (93%)	1.11	31 (13%) 6 5	86, 112, 131, 137	0
6	S4	260/260 (100%)	1.35	53 (20%) 3 2	77, 99, 107, 124	0
6	s4	260/260 (100%)	0.95	22 (8%) 16 13	60, 82, 92, 119	0
7	S5	206/224 (91%)	1.43	44 (21%) 2 2	104, 124, 131, 134	0
7	s5	206/224 (91%)	1.13	28 (13%) 7 6	87, 108, 123, 130	0
8	S6	226/236 (95%)	1.40	50 (22%) 2 2	77, 105, 126, 132	0
8	s6	218/236 (92%)	1.05	29 (13%) 7 6	60, 89, 106, 114	0
9	S7	184/189 (97%)	1.07	21 (11%) 10 8	102, 121, 136, 142	0
9	s7	186/189 (98%)	0.81	14 (7%) 20 15	77, 104, 130, 134	0
10	S8	188/200 (94%)	0.94	22 (11%) 9 8	70, 86, 119, 129	0
10	s8	188/200 (94%)	0.83	18 (9%) 13 11	56, 73, 113, 130	0
11	S9	185/196 (94%)	1.03	16 (8%) 16 12	89, 106, 130, 141	0
11	s9	185/196 (94%)	0.79	13 (7%) 22 15	71, 88, 115, 126	0
12	C0	83/96 (86%)	0.81	6 (7%) 21 15	94, 112, 122, 126	0
12	c0	83/96 (86%)	1.50	20 (24%) 2 1	103, 131, 145, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	C1	144/155 (92%)	1.01	11 (7%) 20 14	73, 83, 101, 113	0
13	c1	144/155 (92%)	0.93	16 (11%) 10 9	59, 70, 91, 113	0
14	C2	108/142 (76%)	1.21	20 (18%) 3 3	137, 145, 150, 152	0
14	c2	108/142 (76%)	1.48	32 (29%) 1 1	167, 183, 196, 199	0
15	C3	150/150 (100%)	1.12	17 (11%) 10 8	82, 95, 111, 115	0
15	c3	150/150 (100%)	0.78	14 (9%) 14 11	66, 79, 95, 100	0
16	C4	127/136 (93%)	1.36	27 (21%) 2 2	84, 142, 156, 161	0
16	c4	128/136 (94%)	0.94	13 (10%) 12 10	67, 101, 113, 116	0
17	C5	122/141 (86%)	1.12	12 (9%) 13 10	88, 99, 111, 117	0
17	c5	129/141 (91%)	1.14	21 (16%) 4 4	86, 103, 113, 119	0
18	C6	141/142 (99%)	1.53	39 (27%) 1 1	91, 112, 117, 120	0
18	c6	142/142 (100%)	1.50	40 (28%) 1 1	83, 102, 115, 126	0
19	C7	120/136 (88%)	0.95	9 (7%) 20 15	97, 109, 125, 129	0
19	c7	117/136 (86%)	0.83	14 (11%) 9 7	88, 101, 115, 119	0
20	C8	145/145 (100%)	0.86	11 (7%) 20 14	85, 110, 131, 138	0
20	c8	145/145 (100%)	1.00	18 (12%) 8 6	86, 101, 116, 126	0
21	C9	143/143 (100%)	1.13	19 (13%) 7 6	96, 112, 122, 126	0
21	c9	143/143 (100%)	0.83	17 (11%) 9 7	85, 97, 112, 118	0
22	D0	107/120 (89%)	2.03	42 (39%) 1 1	86, 112, 123, 125	0
22	d0	110/120 (91%)	1.24	12 (10%) 10 9	84, 114, 138, 147	0
23	D1	87/87 (100%)	0.90	10 (11%) 9 8	96, 104, 119, 127	0
23	d1	87/87 (100%)	0.42	1 (1%) 78 60	76, 88, 104, 112	0
24	D2	129/129 (100%)	1.23	15 (11%) 9 8	83, 95, 101, 109	0
24	d2	129/129 (100%)	0.54	3 (2%) 61 42	64, 74, 81, 87	0
25	D3	144/144 (100%)	1.05	21 (14%) 6 5	69, 77, 86, 96	0
25	d3	144/144 (100%)	0.80	12 (8%) 17 13	56, 61, 71, 79	0
26	D4	134/134 (100%)	1.10	17 (12%) 8 6	86, 107, 118, 129	0
26	d4	134/134 (100%)	0.92	14 (10%) 11 9	68, 90, 105, 110	0
27	D5	70/107 (65%)	0.89	3 (4%) 40 25	119, 130, 139, 140	0
27	d5	69/107 (64%)	0.80	4 (5%) 29 19	99, 113, 123, 125	0
28	D6	97/97 (100%)	2.17	47 (48%) 0 0	88, 106, 154, 159	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	d6	97/97 (100%)	1.46	26 (26%) 1 1	70, 87, 116, 123	0
29	D7	81/81 (100%)	1.21	10 (12%) 8 7	98, 110, 135, 141	0
29	d7	81/81 (100%)	1.03	8 (9%) 13 10	80, 93, 121, 128	0
30	D8	63/66 (95%)	1.65	20 (31%) 1 1	111, 127, 139, 143	0
30	d8	63/66 (95%)	1.23	9 (14%) 6 5	104, 116, 127, 129	0
31	D9	53/55 (96%)	0.89	4 (7%) 20 15	84, 91, 107, 112	0
31	d9	53/55 (96%)	1.23	12 (22%) 2 2	82, 92, 128, 139	0
32	E0	60/62 (96%)	1.03	8 (13%) 7 6	78, 107, 129, 134	0
32	e0	62/62 (100%)	0.81	9 (14%) 6 5	63, 88, 109, 122	0
33	E1	71/76 (93%)	1.29	13 (18%) 3 3	107, 133, 145, 148	0
33	e1	76/76 (100%)	1.57	19 (25%) 2 1	112, 158, 170, 175	0
34	SR	318/318 (100%)	0.90	27 (8%) 16 13	109, 120, 132, 146	0
34	sR	318/318 (100%)	1.14	45 (14%) 6 5	110, 126, 140, 150	0
35	SM	121/273 (44%)	1.13	21 (17%) 4 4	59, 94, 111, 116	0
35	sM	63/273 (23%)	1.70	19 (30%) 1 1	55, 105, 111, 112	0
36	1	3149/3396 (92%)	-0.02	29 (0%) 81 65	35, 59, 123, 212	0
36	5	3169/3396 (93%)	-0.08	45 (1%) 73 55	35, 54, 124, 188	0
37	3	121/121 (100%)	-0.14	0 100 100	43, 76, 90, 96	0
37	7	121/121 (100%)	-0.28	1 (0%) 82 68	39, 59, 70, 75	0
38	4	158/158 (100%)	-0.04	2 (1%) 75 56	43, 61, 91, 130	0
38	8	158/158 (100%)	-0.01	2 (1%) 75 56	43, 63, 96, 120	0
39	L2	252/253 (99%)	0.80	23 (9%) 15 11	42, 61, 77, 82	0
39	l2	252/253 (99%)	0.44	10 (3%) 42 28	43, 59, 74, 83	0
40	L3	386/386 (100%)	0.42	15 (3%) 43 29	42, 63, 77, 85	0
40	l3	386/386 (100%)	0.15	7 (1%) 67 49	34, 49, 62, 77	0
41	L4	361/361 (100%)	0.35	11 (3%) 52 35	40, 54, 70, 71	0
41	l4	361/361 (100%)	0.45	15 (4%) 40 26	40, 57, 73, 88	0
42	L5	296/296 (100%)	0.73	22 (7%) 20 15	58, 81, 97, 111	0
42	l5	294/296 (99%)	0.45	18 (6%) 27 18	49, 60, 84, 93	0
43	L6	156/175 (89%)	0.34	5 (3%) 50 34	49, 57, 72, 79	0
43	l6	157/175 (89%)	0.35	3 (1%) 66 48	49, 57, 75, 85	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	L7	222/243 (91%)	0.21	9 (4%) 41 27	40, 49, 73, 106	0
44	l7	223/243 (91%)	0.21	2 (0%) 81 65	39, 49, 80, 107	0
45	L8	233/255 (91%)	0.94	30 (12%) 7 6	67, 81, 104, 112	0
45	l8	231/255 (90%)	0.86	24 (10%) 11 9	73, 84, 106, 114	0
46	L9	191/191 (100%)	0.72	10 (5%) 33 22	60, 70, 82, 93	0
46	l9	191/191 (100%)	0.21	2 (1%) 79 63	44, 55, 71, 81	0
47	M0	211/220 (95%)	0.57	13 (6%) 26 18	45, 63, 92, 106	0
47	m0	213/220 (96%)	0.52	12 (5%) 30 20	40, 55, 80, 90	0
48	M1	169/173 (97%)	0.62	9 (5%) 32 22	68, 84, 94, 98	0
48	m1	169/173 (97%)	0.37	3 (1%) 67 49	52, 67, 77, 82	0
49	M3	193/198 (97%)	0.41	8 (4%) 41 27	39, 64, 92, 113	0
49	m3	194/198 (97%)	0.62	10 (5%) 33 22	41, 69, 100, 111	0
50	M4	136/137 (99%)	0.34	5 (3%) 45 31	54, 61, 73, 83	0
50	m4	137/137 (100%)	0.25	1 (0%) 84 70	48, 54, 69, 82	0
51	M5	203/203 (100%)	0.49	7 (3%) 48 32	41, 56, 66, 69	0
51	m5	203/203 (100%)	0.58	10 (4%) 35 23	44, 60, 71, 76	0
52	M6	197/198 (99%)	0.53	12 (6%) 27 18	42, 49, 65, 68	0
52	m6	197/198 (99%)	0.40	14 (7%) 22 15	34, 42, 64, 66	0
53	M7	183/183 (100%)	0.63	18 (9%) 13 10	47, 55, 98, 116	0
53	m7	155/183 (84%)	0.10	1 (0%) 85 73	39, 46, 59, 77	0
54	M8	185/185 (100%)	0.47	10 (5%) 31 21	43, 55, 69, 88	0
54	m8	185/185 (100%)	0.43	5 (2%) 56 37	42, 57, 66, 70	0
55	M9	188/188 (100%)	0.78	11 (5%) 28 19	65, 77, 135, 140	0
55	m9	188/188 (100%)	0.51	5 (2%) 56 37	51, 65, 121, 134	0
56	N0	172/172 (100%)	0.42	8 (4%) 36 24	49, 57, 69, 74	0
56	n0	172/172 (100%)	0.18	5 (2%) 53 35	43, 49, 59, 66	0
57	N1	159/159 (100%)	0.41	4 (2%) 58 39	42, 56, 93, 101	0
57	n1	159/159 (100%)	0.47	5 (3%) 51 35	40, 49, 83, 87	0
58	N2	100/120 (83%)	0.90	11 (11%) 10 9	93, 104, 120, 122	0
58	n2	98/120 (81%)	0.79	9 (9%) 14 11	75, 88, 94, 97	0
59	N3	136/136 (100%)	0.54	10 (7%) 20 15	51, 60, 70, 74	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
59	n3	136/136 (100%)	0.21	3 (2%) 62 43	36, 45, 55, 58	0
60	N4	98/155 (63%)	1.35	23 (23%) 2 2	62, 72, 134, 147	0
60	n4	135/155 (87%)	0.89	17 (12%) 8 6	46, 91, 115, 116	0
61	N5	121/141 (85%)	0.66	10 (8%) 17 13	58, 69, 84, 95	0
61	n5	120/141 (85%)	0.75	7 (5%) 29 19	56, 68, 85, 93	0
62	N6	126/126 (100%)	0.35	3 (2%) 59 40	50, 62, 74, 79	0
62	n6	126/126 (100%)	0.44	3 (2%) 59 40	51, 64, 77, 83	0
63	N7	135/135 (100%)	0.58	5 (3%) 45 31	82, 94, 103, 109	0
63	n7	135/135 (100%)	0.51	6 (4%) 39 25	76, 91, 102, 105	0
64	N8	148/148 (100%)	0.35	1 (0%) 84 70	35, 56, 74, 82	0
64	n8	148/148 (100%)	0.39	3 (2%) 65 46	34, 59, 74, 77	0
65	N9	58/58 (100%)	0.46	2 (3%) 48 32	38, 61, 95, 106	0
65	n9	58/58 (100%)	0.65	6 (10%) 12 10	38, 58, 78, 85	0
66	O0	97/104 (93%)	0.69	5 (5%) 33 22	81, 89, 101, 102	0
66	o0	100/104 (96%)	0.63	3 (3%) 52 35	75, 82, 102, 108	0
67	O1	109/112 (97%)	0.77	6 (5%) 30 21	61, 72, 91, 103	0
67	o1	109/112 (97%)	0.46	6 (5%) 30 21	47, 58, 81, 90	0
68	O2	127/129 (98%)	0.26	4 (3%) 51 35	36, 49, 62, 68	0
68	o2	127/129 (98%)	0.34	4 (3%) 51 35	35, 52, 63, 71	0
69	O3	106/106 (100%)	0.35	3 (2%) 55 36	42, 47, 71, 78	0
69	o3	106/106 (100%)	0.31	0 100 100	40, 46, 69, 75	0
70	O4	112/120 (93%)	0.97	12 (10%) 11 9	57, 75, 101, 107	0
70	o4	112/120 (93%)	0.80	7 (6%) 26 17	50, 68, 99, 103	0
71	O5	119/119 (100%)	0.71	7 (5%) 28 19	55, 70, 78, 82	0
71	o5	119/119 (100%)	0.71	9 (7%) 20 14	59, 71, 87, 96	0
72	O6	99/99 (100%)	0.39	2 (2%) 65 46	60, 68, 91, 102	0
72	o6	99/99 (100%)	0.43	2 (2%) 65 46	64, 72, 88, 103	0
73	O7	87/87 (100%)	0.78	7 (8%) 18 14	43, 50, 65, 71	0
73	o7	87/87 (100%)	0.58	3 (3%) 48 32	41, 50, 73, 84	0
74	O8	77/77 (100%)	0.57	3 (3%) 43 29	83, 93, 108, 113	0
74	o8	77/77 (100%)	0.65	3 (3%) 43 29	77, 86, 94, 98	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
75	O9	50/50 (100%)	0.73	6 (12%) 9 7	52, 57, 59, 60	0
75	o9	50/50 (100%)	0.55	4 (8%) 18 14	50, 55, 63, 63	0
76	Q0	52/52 (100%)	0.25	1 (1%) 66 48	53, 59, 74, 79	0
76	q0	52/52 (100%)	-0.08	0 100 100	41, 45, 55, 58	0
77	Q1	25/25 (100%)	0.89	3 (12%) 9 7	62, 66, 73, 74	0
77	q1	25/25 (100%)	0.66	1 (4%) 42 28	50, 56, 58, 58	0
78	Q2	105/105 (100%)	0.33	3 (2%) 53 35	41, 56, 76, 91	0
78	q2	105/105 (100%)	0.29	3 (2%) 53 35	44, 56, 70, 93	0
79	Q3	91/91 (100%)	0.86	7 (7%) 19 14	54, 65, 80, 85	0
79	q3	91/91 (100%)	0.52	3 (3%) 49 33	46, 59, 72, 84	0
80	m2	0/165	-	-	-	-
81	p0	120/311 (38%)	1.33	30 (25%) 2 1	101, 124, 144, 152	0
82	p1	0/47	-	-	-	-
82	p2	0/47	-	-	-	-
83	f	148/157 (94%)	2.12	75 (50%) 0 0	44, 82, 144, 147	75 (50%)
All	All	33080/35493 (93%)	0.55	2267 (6%) 23 16	34, 74, 132, 212	77 (0%)

All (2267) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
22	d0	64	LYS	9.9
7	S5	152	GLY	9.6
60	N4	86	SER	8.6
47	m0	221	ALA	8.5
1	2	1756[A]	A	8.2
53	M7	160	ALA	8.2
22	D0	81	THR	8.0
8	S6	77	LEU	7.7
22	D0	82	TYR	7.6
60	N4	88	ASP	7.4
28	D6	20	PRO	7.3
3	s1	157	GLN	7.2
33	e1	77	GLY	7.2
56	N0	1	MET	6.9
83	f	49	THR	6.9
73	O7	88	ALA	6.7
28	D6	2	PRO	6.7
21	c9	55	TYR	6.5

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Mol	Chain	Res	Type	RSRZ
78	Q2	36	PHE	6.5
36	5	2442	G	6.4
6	S4	66	MET	6.4
4	S2	62	PRO	6.4
3	s1	54	LEU	6.3
34	sR	213	SER	6.3
22	d0	67	THR	6.2
8	S6	74	LYS	6.2
53	M7	182	ILE	6.2
47	M0	221	ALA	6.1
7	S5	71	ALA	6.1
8	S6	73	ILE	6.1
60	N4	89	LEU	6.0
27	d5	50	ILE	6.0
13	c1	2	SER	6.0
42	L5	6	ASP	5.9
33	e1	79	LYS	5.9
77	q1	25	LYS	5.9
29	d7	24	LEU	5.8
7	S5	96	SER	5.8
8	S6	75	LEU	5.8
71	o5	120	ALA	5.8
13	c1	3	THR	5.8
12	c0	23	ALA	5.7
8	S6	79	LYS	5.6
22	D0	71	PRO	5.6
4	S2	63	VAL	5.6
3	s1	89	ASP	5.6
6	S4	8	HIS	5.6
12	c0	25	LYS	5.5
18	C6	20	ALA	5.5
18	c6	124	PRO	5.5
83	f	22	GLN	5.5
13	c1	4	GLU	5.4
35	sM	28	SER	5.4
34	SR	32	LEU	5.4
7	S5	36	ALA	5.4
8	s6	79	LYS	5.4
33	E1	91	ILE	5.4
1	2	1699	G	5.3
35	sM	33	LYS	5.3
53	M7	184	ALA	5.3

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Mol	Chain	Res	Type	RSRZ
35	sM	40	PRO	5.2
34	sR	136	ILE	5.2
58	N2	89	LEU	5.2
36	5	2443	A	5.2
8	s6	201	GLN	5.2
3	S1	110	LEU	5.2
66	o0	104	LEU	5.1
83	f	42	VAL	5.1
22	D0	70	THR	5.1
60	N4	75	THR	5.1
9	S7	98	ILE	5.1
47	M0	218	ALA	5.1
22	D0	54	GLY	5.1
53	M7	161	ALA	5.1
12	c0	26	ASP	5.1
6	s4	13	ALA	5.0
6	S4	65	LEU	5.0
1	2	1794	A	4.9
18	C6	17	THR	4.9
28	D6	31	PRO	4.9
18	c6	132	LYS	4.8
6	S4	54	TYR	4.8
34	SR	44	SER	4.8
83	f	120	LEU	4.8
1	2	1697	G	4.8
52	m6	61	ALA	4.8
83	f	64	ILE	4.8
12	c0	22	VAL	4.7
18	c6	2	SER	4.7
19	c7	57	LEU	4.7
35	sM	35	ALA	4.7
45	l8	109	LEU	4.7
6	s4	15	PRO	4.7
42	L5	148	ILE	4.7
1	6	678	A	4.7
70	o4	38	LEU	4.7
70	o4	39	ALA	4.7
8	S6	67	VAL	4.7
6	S4	52	LEU	4.6
8	S6	148	SER	4.6
29	d7	58	SER	4.6
10	s8	176	SER	4.6

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Mol	Chain	Res	Type	RSRZ
60	N4	82	ILE	4.5
60	N4	81	PRO	4.5
14	c2	65	SER	4.5
4	s2	105	GLY	4.5
4	S2	145	GLY	4.5
19	c7	25	THR	4.5
39	L2	253	GLN	4.5
17	c5	134	THR	4.5
28	D6	18	VAL	4.5
8	s6	88	ARG	4.5
54	M8	167	SER	4.4
60	N4	87	LEU	4.4
35	sM	39	PRO	4.4
4	s2	92	ALA	4.4
45	l8	192	GLN	4.4
1	6	1199	G	4.4
30	D8	53	ILE	4.4
22	D0	107	THR	4.4
8	s6	90	GLY	4.4
42	l5	297	GLN	4.4
35	SM	87	THR	4.4
48	M1	127	PHE	4.4
5	S3	149	ALA	4.4
52	m6	40	GLU	4.4
28	D6	9	GLY	4.4
7	s5	37	GLN	4.4
36	5	2495	C	4.4
28	D6	76	SER	4.4
35	sM	85	SER	4.4
47	M0	219	ALA	4.3
1	2	1696	G	4.3
5	s3	69	LEU	4.3
33	e1	85	TYR	4.3
16	C4	133	ARG	4.3
83	f	86	LYS	4.3
1	6	1491	U	4.3
41	L4	63	GLU	4.3
9	s7	70	PHE	4.3
6	s4	14	ALA	4.3
8	S6	199	GLN	4.3
4	S2	232	GLU	4.3
50	M4	60	LEU	4.2

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Mol	Chain	Res	Type	RSRZ
14	c2	64	SER	4.2
22	D0	74	GLU	4.2
14	c2	71	ILE	4.2
53	M7	176	ILE	4.2
3	S1	46	THR	4.2
15	C3	151	ASN	4.2
28	D6	50	VAL	4.2
18	c6	57	LEU	4.2
8	S6	78	THR	4.2
29	d7	46	VAL	4.2
16	C4	39	ILE	4.2
52	M6	184	THR	4.2
26	D4	18	LEU	4.1
83	f	142	MET	4.1
52	m6	182	ASN	4.1
3	S1	32	ILE	4.1
1	2	506	A	4.1
52	M6	40	GLU	4.1
28	D6	6	ALA	4.1
1	2	1708	U	4.1
7	S5	70	VAL	4.1
83	f	134	LEU	4.1
45	l8	104	GLU	4.1
25	d3	38	PHE	4.1
16	C4	18	ARG	4.1
8	S6	226	ILE	4.1
8	s6	192	ALA	4.1
17	c5	135	THR	4.1
29	d7	59	CYS	4.1
41	L4	50	TYR	4.1
15	c3	7	ALA	4.1
47	m0	195	ALA	4.1
9	s7	43	PHE	4.0
14	c2	59	LEU	4.0
62	n6	126	LEU	4.0
6	S4	111	VAL	4.0
19	c7	66	VAL	4.0
22	D0	117	VAL	4.0
28	D6	80	HIS	4.0
6	S4	79	ASP	4.0
60	n4	72	SER	4.0
4	s2	96	THR	4.0

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Mol	Chain	Res	Type	RSRZ
10	S8	152	ILE	4.0
7	S5	153	GLY	4.0
17	c5	103	ASN	4.0
34	SR	131	ILE	4.0
15	C3	57	ALA	4.0
22	d0	54	GLY	4.0
53	M7	165	VAL	4.0
18	C6	21	HIS	4.0
5	S3	77	PHE	4.0
34	SR	61	PHE	4.0
15	C3	14	SER	4.0
31	d9	29	GLY	4.0
4	S2	178	ILE	4.0
28	D6	48	ALA	4.0
33	e1	86	THR	4.0
36	5	2444	C	4.0
8	S6	76	LEU	4.0
8	s6	167	LYS	4.0
42	L5	51	LEU	4.0
60	N4	76	VAL	3.9
7	S5	37	GLN	3.9
8	S6	66	GLY	3.9
17	C5	10	ARG	3.9
26	d4	72	PHE	3.9
81	p0	107	ALA	3.9
83	f	51	LYS	3.9
18	c6	141	SER	3.9
9	S7	150	GLN	3.9
2	S0	158	VAL	3.9
3	S1	190	PRO	3.9
2	s0	46	HIS	3.9
14	c2	123	VAL	3.9
70	O4	64	THR	3.9
35	SM	85	SER	3.9
28	d6	32	LYS	3.9
83	f	11	ALA	3.9
6	S4	49	ARG	3.9
83	f	71	GLU	3.9
7	S5	151	GLY	3.9
7	s5	82	PHE	3.9
6	S4	44	LEU	3.9
71	O5	120	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
8	S6	175	ILE	3.8
35	sM	34	LYS	3.8
8	s6	162	VAL	3.8
4	s2	88	LYS	3.8
7	S5	165	LEU	3.8
14	c2	92	ALA	3.8
6	S4	15	PRO	3.8
12	c0	81	ASN	3.8
34	sR	296	ALA	3.8
1	2	1702	A	3.8
18	C6	118	ILE	3.8
2	S0	207	PRO	3.8
65	n9	27	TYR	3.8
6	S4	26	CYS	3.8
10	S8	8	ARG	3.8
39	l2	252	THR	3.8
54	m8	146	SER	3.8
68	O2	51	SER	3.8
81	p0	69	ASP	3.8
16	C4	75	GLY	3.8
73	o7	23	GLY	3.8
83	f	18	THR	3.8
28	D6	3	LYS	3.7
16	C4	15	GLY	3.7
18	c6	44	LEU	3.7
83	f	150	PHE	3.7
20	c8	18	LEU	3.7
52	m6	69	GLY	3.7
18	C6	70	THR	3.7
20	C8	141	THR	3.7
40	L3	217	ALA	3.7
18	c6	139	GLN	3.7
47	m0	220	GLN	3.7
22	D0	64	LYS	3.7
45	L8	202	GLU	3.7
8	S6	180	THR	3.7
33	E1	147	VAL	3.7
28	D6	8	ASN	3.7
49	M3	26	PHE	3.7
13	c1	144	ALA	3.7
35	SM	37	VAL	3.7
35	sM	30	THR	3.7

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Mol	Chain	Res	Type	RSRZ
28	D6	92	ARG	3.7
83	f	139	ILE	3.7
8	s6	76	LEU	3.7
8	S6	80	ASN	3.7
39	L2	176	ASP	3.6
67	O1	33	VAL	3.6
67	O1	112	ASP	3.6
7	s5	73	THR	3.6
6	s4	162	ILE	3.6
22	D0	65	ILE	3.6
42	l5	293	LEU	3.6
18	C6	12	LYS	3.6
36	5	2496	C	3.6
22	D0	72	ASN	3.6
5	S3	153	ALA	3.6
28	D6	47	ALA	3.6
28	d6	29	SER	3.6
30	d8	44	VAL	3.6
55	M9	189	ALA	3.6
56	n0	2	ALA	3.6
22	D0	108	ILE	3.6
43	L6	130	ILE	3.6
13	c1	73	GLY	3.6
35	sM	38	PRO	3.6
10	S8	150	ALA	3.6
60	n4	66	GLU	3.6
15	c3	40	TYR	3.6
2	S0	98	ILE	3.6
4	s2	90	THR	3.6
22	d0	77	LYS	3.6
15	C3	15	ALA	3.6
15	c3	151	ASN	3.6
83	f	81	GLU	3.6
5	s3	179	GLN	3.6
3	S1	114	VAL	3.6
11	S9	2	PRO	3.6
10	S8	168	CYS	3.6
15	c3	83	GLU	3.6
20	c8	3	LEU	3.6
24	D2	26	LEU	3.6
25	D3	34	LEU	3.6
31	d9	14	TYR	3.6

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Mol	Chain	Res	Type	RSRZ
83	f	124	LEU	3.6
16	C4	74	VAL	3.5
28	D6	21	VAL	3.5
10	S8	145	ALA	3.5
20	C8	146	ALA	3.5
28	D6	96	ALA	3.5
34	SR	78	ALA	3.5
83	f	13	ALA	3.5
83	f	17	ALA	3.5
7	S5	41	LYS	3.5
8	s6	193	LEU	3.5
13	c1	97	TYR	3.5
49	m3	145	PHE	3.5
52	M6	80	PHE	3.5
73	O7	87	SER	3.5
5	S3	186	VAL	3.5
5	s3	8	LYS	3.5
83	f	85	VAL	3.5
70	O4	39	ALA	3.5
35	SM	117	LEU	3.5
36	5	443	G	3.5
6	S4	78	THR	3.5
22	D0	60	THR	3.5
28	D6	17	HIS	3.5
55	M9	52	LYS	3.5
2	S0	99	ALA	3.5
7	s5	36	ALA	3.5
28	D6	98	PRO	3.5
47	m0	166	ILE	3.5
30	D8	49	ARG	3.5
74	O8	43	PHE	3.5
8	s6	168	THR	3.5
17	C5	50	THR	3.5
4	s2	89	GLN	3.5
6	S4	102	VAL	3.5
13	c1	117	VAL	3.5
25	D3	48	HIS	3.5
34	sR	314	GLN	3.5
81	p0	187	VAL	3.5
60	N4	85	ALA	3.5
3	s1	217	LEU	3.5
18	C6	35	PRO	3.5

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Mol	Chain	Res	Type	RSRZ
81	p0	70	LEU	3.5
4	S2	88	LYS	3.5
25	d3	21	ASN	3.5
2	s0	162	CYS	3.5
7	s5	152	GLY	3.5
26	d4	24	VAL	3.5
44	L7	26	VAL	3.5
21	c9	2	PRO	3.5
6	s4	39	ARG	3.5
1	2	1370	U	3.5
39	l2	143	GLU	3.4
18	C6	10	PHE	3.4
34	SR	25	THR	3.4
83	f	14	GLY	3.4
11	S9	28	LEU	3.4
42	l5	288	ALA	3.4
53	M7	168	LEU	3.4
3	S1	130	SER	3.4
15	c3	16	ILE	3.4
49	M3	140	SER	3.4
54	M8	93	ILE	3.4
65	n9	22	LYS	3.4
34	SR	94	VAL	3.4
34	SR	262	VAL	3.4
39	l2	164	GLY	3.4
2	s0	20	ALA	3.4
8	s6	182	GLN	3.4
68	O2	127	ALA	3.4
19	c7	60	ARG	3.4
8	S6	149	LYS	3.4
35	SM	27	LYS	3.4
52	m6	56	ASP	3.4
35	SM	58	GLU	3.4
53	M7	162	GLU	3.4
30	D8	28	VAL	3.4
6	s4	9	LEU	3.4
37	7	73	C	3.4
8	S6	182	GLN	3.4
12	C0	39	ASN	3.4
25	D3	27	ASN	3.4
33	E1	145	HIS	3.4
47	M0	33	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
51	m5	15	GLN	3.4
2	S0	126	PRO	3.4
33	e1	81	LYS	3.4
81	p0	68	SER	3.4
3	s1	30	PHE	3.4
3	S1	61	LEU	3.4
9	s7	69	GLY	3.4
28	d6	63	ALA	3.4
34	sR	27	ALA	3.4
42	l5	284	ALA	3.4
25	D3	21	ASN	3.4
26	D4	117	LYS	3.4
33	e1	88	PRO	3.4
83	f	38	PRO	3.4
1	6	659	C	3.4
8	S6	82	SER	3.4
70	O4	73	SER	3.4
6	S4	23	LEU	3.4
20	c8	17	LEU	3.4
21	c9	18	TYR	3.4
34	sR	303	ALA	3.4
22	D0	86	ILE	3.4
3	s1	153	HIS	3.4
28	d6	98	PRO	3.4
47	m0	112	GLN	3.4
34	SR	6	VAL	3.3
38	8	81	U	3.3
34	SR	280	GLY	3.3
54	M8	183	GLY	3.3
55	M9	54	ALA	3.3
47	M0	112	GLN	3.3
45	L8	191	ASN	3.3
28	D6	45	VAL	3.3
8	S6	96	SER	3.3
4	s2	202	GLY	3.3
6	S4	63	ALA	3.3
28	d6	16	GLY	3.3
1	6	794	U	3.3
1	6	1082	C	3.3
11	S9	67	PRO	3.3
49	M3	172	LEU	3.3
9	S7	109	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
11	S9	96	VAL	3.3
30	D8	44	VAL	3.3
6	S4	25	GLY	3.3
9	S7	91	ILE	3.3
22	D0	119	ALA	3.3
75	O9	2	ALA	3.3
83	f	115	ALA	3.3
29	D7	37	CYS	3.3
36	1	1103	A	3.3
36	5	2441	A	3.3
36	5	2494	A	3.3
36	5	1567	U	3.3
14	C2	61	VAL	3.3
22	D0	116	VAL	3.3
18	c6	3	ALA	3.3
50	M4	138	ALA	3.3
12	c0	65	TYR	3.3
60	N4	95	SER	3.3
28	d6	2	PRO	3.3
1	2	1698	G	3.3
34	sR	72	THR	3.3
83	f	66	THR	3.3
16	C4	16	VAL	3.3
28	D6	4	LYS	3.3
29	D7	70	LYS	3.3
53	M7	157	VAL	3.3
15	c3	66	ILE	3.3
28	d6	35	ALA	3.3
60	N4	84	GLY	3.3
60	N4	93	ARG	3.2
40	l3	178	LEU	3.2
47	m0	103	LEU	3.2
26	d4	58	PHE	3.2
5	s3	184	ILE	3.2
35	SM	86	ASN	3.2
8	S6	186	ARG	3.2
4	S2	41	LEU	3.2
35	sM	84	LYS	3.2
81	p0	86	PHE	3.2
21	C9	114	VAL	3.2
75	o9	11	GLN	3.2
33	e1	87	THR	3.2

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Mol	Chain	Res	Type	RSRZ
28	D6	44	ILE	3.2
71	o5	118	ILE	3.2
70	O4	2	ALA	3.2
7	s5	39	GLU	3.2
18	c6	114	ARG	3.2
4	S2	240	LEU	3.2
6	S4	6	LYS	3.2
18	c6	79	TYR	3.2
45	l8	142	LEU	3.2
36	1	1570	U	3.2
36	1	3275	U	3.2
16	c4	55	SER	3.2
18	C6	15	SER	3.2
42	L5	151	GLN	3.2
51	M5	95	GLN	3.2
68	O2	26	HIS	3.2
71	O5	20	GLN	3.2
6	S4	80	THR	3.2
18	c6	37	THR	3.2
40	L3	337	THR	3.2
3	S1	140	ILE	3.2
17	c5	131	ALA	3.2
46	L9	166	ARG	3.2
75	O9	21	ARG	3.2
7	S5	150	GLY	3.2
20	C8	139	LYS	3.2
28	D6	28	LYS	3.2
3	S1	217	LEU	3.2
18	C6	79	TYR	3.2
32	E0	60	PRO	3.2
22	D0	120	SER	3.2
36	5	2506	U	3.2
40	L3	277	SER	3.2
72	O6	27	SER	3.2
33	E1	87	THR	3.2
1	2	1694	A	3.2
5	s3	114	ALA	3.2
17	c5	113	GLY	3.2
36	5	2440	G	3.2
83	f	30	GLY	3.2
23	D1	10	GLU	3.2
83	f	65	PHE	3.2

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Mol	Chain	Res	Type	RSRZ
3	S1	169	SER	3.2
28	D6	41	ILE	3.2
18	C6	37	THR	3.2
60	N4	83	THR	3.2
5	s3	151	LYS	3.1
4	s2	98	PHE	3.1
17	C5	34	VAL	3.1
42	L5	286	VAL	3.1
11	s9	2	PRO	3.1
1	2	1709	C	3.1
52	m6	59	ARG	3.1
10	s8	23	LYS	3.1
41	l4	186	LYS	3.1
14	C2	32	LEU	3.1
14	c2	103	LEU	3.1
20	C8	17	LEU	3.1
47	M0	87	LEU	3.1
28	d6	73	TYR	3.1
33	e1	80	ARG	3.1
60	N4	80	ARG	3.1
6	S4	195	ILE	3.1
39	L2	15	ILE	3.1
71	O5	45	LYS	3.1
34	sR	202	LEU	3.1
55	M9	184	LEU	3.1
73	O7	5	THR	3.1
7	S5	75	GLY	3.1
22	D0	66	SER	3.1
36	1	1349	G	3.1
36	1	3045	G	3.1
19	C7	103	ASP	3.1
81	p0	192	ASP	3.1
7	S5	69	PHE	3.1
34	sR	302	PHE	3.1
63	n7	118	PHE	3.1
54	M8	61	PRO	3.1
10	s8	24	LYS	3.1
52	M6	42	ASN	3.1
34	sR	24	ALA	3.1
42	L5	146	LEU	3.1
7	s5	153	GLY	3.1
39	L2	31	THR	3.1

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Mol	Chain	Res	Type	RSRZ
44	L7	211	SER	3.1
18	C6	22	VAL	3.1
21	C9	37	VAL	3.1
35	SM	89	ARG	3.1
55	M9	72	GLU	3.1
81	p0	66	PHE	3.1
18	c6	142	TYR	3.1
36	5	2533	G	3.1
52	m6	63	ALA	3.1
60	N4	79	GLN	3.1
68	o2	128	LEU	3.1
1	2	1410	A	3.1
4	S2	212	LYS	3.1
8	S6	222	GLU	3.1
8	S6	158	ILE	3.1
1	2	1695	G	3.0
28	D6	89	ARG	3.0
41	l4	79	GLY	3.0
28	d6	19	LYS	3.0
52	m6	48	PHE	3.0
78	Q2	50	PHE	3.0
3	s1	51	SER	3.0
25	D3	24	TRP	3.0
4	s2	85	PRO	3.0
12	c0	43	ILE	3.0
5	S3	21	LEU	3.0
8	S6	68	LEU	3.0
23	D1	78	LEU	3.0
42	L5	277	LEU	3.0
42	L5	287	ALA	3.0
61	n5	24	LEU	3.0
24	D2	68	ARG	3.0
7	s5	150	GLY	3.0
13	C1	3	THR	3.0
18	C6	13	LYS	3.0
45	L8	116	VAL	3.0
60	N4	97	LYS	3.0
81	p0	87	VAL	3.0
33	E1	110	ALA	3.0
53	m7	156	ALA	3.0
58	N2	34	ALA	3.0
6	S4	30	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
53	M7	167	ARG	3.0
21	C9	92	LYS	3.0
35	sM	46	LYS	3.0
53	M7	159	LYS	3.0
59	N3	81	GLN	3.0
18	C6	78	VAL	3.0
36	5	2445	A	3.0
83	f	84	VAL	3.0
8	S6	170	THR	3.0
12	c0	27	PHE	3.0
18	c6	138	PHE	3.0
25	d3	40	SER	3.0
51	M5	198	SER	3.0
59	N3	2	SER	3.0
27	d5	59	TYR	3.0
35	SM	42	ALA	3.0
70	o4	2	ALA	3.0
46	L9	177	ASP	3.0
2	S0	100	GLY	3.0
6	s4	26	CYS	3.0
15	C3	59	GLY	3.0
18	c6	97	VAL	3.0
20	c8	22	VAL	3.0
32	E0	50	VAL	3.0
4	S2	69	ILE	3.0
15	C3	16	ILE	3.0
2	s0	146	LEU	3.0
4	S2	171	PRO	3.0
7	S5	174	LEU	3.0
6	S4	11	ARG	3.0
9	S7	31	SER	3.0
18	c6	119	ALA	3.0
35	sM	31	SER	3.0
42	L5	291	ALA	3.0
8	S6	167	LYS	3.0
14	c2	93	ASP	3.0
4	S2	45	VAL	3.0
4	s2	121	VAL	3.0
7	S5	24	VAL	3.0
20	C8	142	GLY	3.0
26	d4	57	VAL	3.0
39	L2	201	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
56	N0	88	HIS	3.0
63	n7	75	VAL	3.0
78	q2	68	VAL	3.0
6	s4	81	THR	3.0
13	C1	49	ILE	3.0
29	D7	61	THR	3.0
35	sM	25	ILE	3.0
14	c2	58	LEU	2.9
15	c3	53	LEU	2.9
28	D6	53	LEU	2.9
5	S3	76	ARG	2.9
30	d8	65	ARG	2.9
1	2	913	G	2.9
3	S1	151	LYS	2.9
16	C4	85	ALA	2.9
61	N5	23	ALA	2.9
83	f	25	ALA	2.9
4	s2	181	SER	2.9
56	N0	85	SER	2.9
17	c5	94	VAL	2.9
22	d0	100	VAL	2.9
33	e1	84	VAL	2.9
36	5	1016	C	2.9
36	5	1582	C	2.9
5	s3	11	LEU	2.9
16	C4	89	THR	2.9
19	C7	100	LEU	2.9
41	l4	103	THR	2.9
59	N3	49	LEU	2.9
8	s6	187	LYS	2.9
17	C5	69	GLU	2.9
35	sM	27	LYS	2.9
19	C7	99	VAL	2.9
22	D0	118	VAL	2.9
58	N2	27	VAL	2.9
3	S1	89	ASP	2.9
12	c0	62	GLN	2.9
7	s5	174	LEU	2.9
18	c6	54	LEU	2.9
36	1	1605	A	2.9
45	L8	152	LEU	2.9
83	f	73	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
8	s6	163	THR	2.9
10	S8	179	CYS	2.9
77	Q1	14	LYS	2.9
1	6	1772	C	2.9
48	m1	45	PRO	2.9
6	S4	177	ALA	2.9
73	o7	88	ALA	2.9
36	1	2205	U	2.9
14	c2	121	VAL	2.9
16	C4	48	VAL	2.9
48	M1	18	VAL	2.9
32	E0	61	SER	2.9
74	o8	11	PHE	2.9
22	d0	22	ILE	2.9
40	L3	328	ILE	2.9
14	C2	97	LEU	2.9
49	m3	54	LEU	2.9
8	S6	95	LYS	2.9
25	D3	123	LYS	2.9
41	l4	191	LYS	2.9
25	D3	22	ASN	2.9
8	s6	203	GLU	2.9
17	c5	118	GLU	2.9
55	m9	40	ALA	2.9
79	q3	2	ALA	2.9
83	f	119	GLU	2.9
1	2	1707	A	2.9
2	S0	29	VAL	2.9
43	L6	135	VAL	2.9
36	1	1568	U	2.9
17	c5	137	ARG	2.9
20	C8	145	ARG	2.9
28	D6	29	SER	2.9
67	O1	14	ILE	2.9
34	SR	161	LYS	2.9
71	O5	32	LYS	2.9
3	s1	60	ALA	2.9
7	S5	147	THR	2.9
25	D3	42	PRO	2.9
32	e0	2	ALA	2.9
49	m3	166	ALA	2.9
51	m5	183	THR	2.9

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Mol	Chain	Res	Type	RSRZ
53	M7	129	THR	2.9
2	S0	135	GLU	2.9
57	n1	66	ASN	2.9
31	d9	7	TRP	2.9
18	c6	90	VAL	2.9
26	D4	25	VAL	2.9
45	L8	197	VAL	2.9
52	M6	3	VAL	2.9
61	N5	26	VAL	2.9
7	s5	151	GLY	2.9
10	s8	31	ARG	2.9
31	d9	52	PHE	2.9
2	s0	170	ILE	2.9
36	1	2208	A	2.9
9	S7	93	LEU	2.9
12	c0	80	LEU	2.9
15	C3	53	LEU	2.9
60	n4	96	LEU	2.9
64	n8	27	LYS	2.9
17	c5	104	GLN	2.8
19	C7	62	GLN	2.8
83	f	149	SER	2.8
5	S3	131	ALA	2.8
28	D6	56	ALA	2.8
18	C6	40	GLU	2.8
3	S1	66	VAL	2.8
18	C6	32	ASN	2.8
22	D0	62	VAL	2.8
35	SM	106	VAL	2.8
35	sM	29	ASN	2.8
45	l8	203	VAL	2.8
47	M0	148	VAL	2.8
51	M5	60	VAL	2.8
6	S4	59	ARG	2.8
21	C9	57	ARG	2.8
48	M1	104	PHE	2.8
79	Q3	83	ILE	2.8
83	f	70	LEU	2.8
17	C5	131	ALA	2.8
18	C6	119	ALA	2.8
53	M7	183	ALA	2.8
83	f	127	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
17	C5	11	VAL	2.8
33	e1	111	GLU	2.8
50	m4	92	GLU	2.8
3	S1	188	LEU	2.8
6	S4	162	ILE	2.8
10	S8	177	GLY	2.8
13	c1	5	LEU	2.8
15	c3	8	GLY	2.8
18	c6	130	GLY	2.8
22	D0	20	ILE	2.8
25	D3	38	PHE	2.8
30	D8	16	LEU	2.8
33	E1	103	LEU	2.8
34	SR	55	GLY	2.8
58	N2	95	PHE	2.8
81	p0	73	PHE	2.8
81	p0	88	PHE	2.8
18	c6	49	TYR	2.8
45	L8	130	TYR	2.8
49	m3	119	TYR	2.8
31	d9	20	GLN	2.8
44	L7	25	GLN	2.8
4	S2	118	ALA	2.8
4	S2	155	ALA	2.8
35	SM	90	ALA	2.8
39	L2	59	ALA	2.8
16	c4	133	ARG	2.8
83	f	116	PRO	2.8
3	s1	66	VAL	2.8
10	s8	48	THR	2.8
11	s9	111	THR	2.8
14	c2	122	VAL	2.8
30	D8	48	VAL	2.8
33	e1	150	VAL	2.8
41	l4	71	VAL	2.8
47	M0	91	VAL	2.8
70	O4	35	VAL	2.8
13	C1	46	LYS	2.8
14	c2	76	GLU	2.8
49	m3	131	LYS	2.8
1	2	713	A	2.8
1	6	1593	A	2.8

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Mol	Chain	Res	Type	RSRZ
5	S3	115	ILE	2.8
6	S4	47	PHE	2.8
26	d4	18	LEU	2.8
10	s8	177	GLY	2.8
18	C6	88	GLY	2.8
27	D5	73	GLY	2.8
29	D7	62	ILE	2.8
41	L4	58	HIS	2.8
7	S5	154	ALA	2.8
8	S6	190	GLN	2.8
13	c1	145	ALA	2.8
14	c2	101	ALA	2.8
34	SR	284	ALA	2.8
57	n1	24	ALA	2.8
79	Q3	92	ALA	2.8
56	N0	84	ARG	2.8
2	S0	189	VAL	2.8
4	S2	99	LYS	2.8
5	s3	43	PRO	2.8
11	S9	29	LYS	2.8
15	c3	14	SER	2.8
18	C6	6	SER	2.8
2	S0	18	LEU	2.8
3	S1	98	THR	2.8
4	S2	207	LEU	2.8
8	s6	147	LEU	2.8
18	C6	117	LEU	2.8
40	l3	47	LEU	2.8
42	L5	150	LEU	2.8
4	S2	66	PHE	2.8
22	D0	106	ILE	2.8
30	d8	53	ILE	2.8
41	L4	74	ILE	2.8
19	C7	97	ASN	2.8
34	sR	31	ASN	2.8
36	5	1350	A	2.8
22	D0	87	HIS	2.8
10	s8	179	CYS	2.8
28	d6	13	LYS	2.8
36	1	1581	C	2.8
47	m0	218	ALA	2.8
51	m5	111	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
13	c1	79	LYS	2.8
25	D3	39	LYS	2.8
51	M5	192	LYS	2.8
1	2	1777	G	2.8
1	6	1697	G	2.8
31	D9	6	VAL	2.8
56	N0	79	VAL	2.8
9	S7	115	SER	2.8
45	l8	200	LEU	2.8
5	S3	172	THR	2.8
6	S4	45	ILE	2.8
7	S5	27	THR	2.8
8	S6	91	GLU	2.8
22	D0	19	ILE	2.8
22	D0	67	THR	2.8
24	d2	86	ILE	2.8
58	n2	14	THR	2.8
56	N0	90	MET	2.7
3	s1	53	GLY	2.7
15	c3	59	GLY	2.7
17	c5	129	GLY	2.7
26	D4	26	ASP	2.7
29	d7	27	GLY	2.7
60	n4	132	GLY	2.7
81	p0	47	GLY	2.7
71	o5	70	TYR	2.7
16	c4	90	ARG	2.7
4	S2	122	ALA	2.7
22	D0	53	LYS	2.7
29	D7	12	ALA	2.7
41	l4	137	ALA	2.7
63	N7	2	ALA	2.7
68	o2	62	LYS	2.7
19	c7	35	CYS	2.7
1	2	1766	A	2.7
3	S1	91	VAL	2.7
60	n4	67	VAL	2.7
34	SR	206	PRO	2.7
35	sM	54	PRO	2.7
11	S9	105	LEU	2.7
18	c6	38	LEU	2.7
55	M9	155	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
1	2	1706	C	2.7
2	s0	173	ILE	2.7
17	c5	138	PHE	2.7
21	C9	39	THR	2.7
21	C9	144	GLU	2.7
26	d4	85	PHE	2.7
75	O9	6	SER	2.7
83	f	62	ILE	2.7
56	n0	1	MET	2.7
10	s8	51	GLY	2.7
1	6	1433	G	2.7
22	D0	121	ASN	2.7
20	c8	146	ALA	2.7
33	E1	152	ALA	2.7
4	s2	179	VAL	2.7
5	S3	137	VAL	2.7
26	d4	12	VAL	2.7
83	f	136	VAL	2.7
10	S8	183	ILE	2.7
11	S9	104	PHE	2.7
28	d6	30	ILE	2.7
45	L8	91	PHE	2.7
58	N2	38	ILE	2.7
1	6	1756[A]	A	2.7
7	s5	75	GLY	2.7
8	S6	163	THR	2.7
12	c0	67	THR	2.7
16	C4	119	THR	2.7
30	D8	21	SER	2.7
36	5	440	A	2.7
6	S4	3	ARG	2.7
6	S4	77	ARG	2.7
51	m5	147	ARG	2.7
45	l8	124	ASP	2.7
83	f	12	ASP	2.7
18	c6	92	TYR	2.7
3	S1	160	HIS	2.7
10	S8	144	ALA	2.7
18	C6	24	ALA	2.7
34	sR	257	ALA	2.7
42	L5	283	ALA	2.7
53	M7	158	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
14	c2	63	VAL	2.7
63	n7	14	VAL	2.7
28	d6	65	PRO	2.7
5	s3	115	ILE	2.7
28	D6	83	ILE	2.7
42	l5	55	PHE	2.7
43	l6	130	ILE	2.7
19	C7	2	GLY	2.7
41	l4	57	GLY	2.7
54	M8	74	GLU	2.7
54	m8	154	GLY	2.7
60	N4	62	GLY	2.7
79	q3	12	GLY	2.7
7	S5	73	THR	2.7
1	2	1795	U	2.7
1	6	261	U	2.7
4	S2	144	TRP	2.7
8	S6	64	LYS	2.7
14	C2	130	THR	2.7
18	c6	110	THR	2.7
22	d0	78	THR	2.7
17	c5	136	SER	2.7
33	e1	83	LYS	2.7
40	l3	233	TRP	2.7
83	f	36	SER	2.7
10	S8	148	ALA	2.7
57	N1	24	ALA	2.7
60	n4	122	ALA	2.7
7	S5	217	LEU	2.7
12	c0	82	LEU	2.7
26	D4	5	VAL	2.7
34	SR	42	LEU	2.7
46	l9	191	LEU	2.7
61	N5	107	VAL	2.7
2	S0	133	ILE	2.7
29	D7	38	PRO	2.7
34	sR	30	PRO	2.7
4	S2	224	PHE	2.7
7	S5	98	MET	2.7
81	p0	197	PHE	2.7
22	D0	85	ARG	2.7
20	c8	130	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
13	C1	78	THR	2.7
14	C2	126	TRP	2.7
9	s7	66	SER	2.7
83	f	24	SER	2.7
28	D6	81	ALA	2.7
42	L5	284	ALA	2.7
45	L8	250	ALA	2.7
55	M9	131	ALA	2.7
39	L2	175	VAL	2.7
45	l8	58	VAL	2.7
2	s0	206	ASP	2.7
3	s1	104	ASP	2.7
20	c8	137	HIS	2.7
4	S2	85	PRO	2.6
7	S5	130	ILE	2.6
10	s8	60	ILE	2.6
3	S1	138	PHE	2.6
6	s4	109	PHE	2.6
8	s6	194	LYS	2.6
54	M8	171	LYS	2.6
3	s1	117	TRP	2.6
5	S3	6	SER	2.6
5	s3	109	LEU	2.6
28	D6	78	ALA	2.6
34	sR	145	LEU	2.6
40	L3	47	LEU	2.6
42	L5	212	ALA	2.6
45	L8	223	ALA	2.6
49	M3	33	VAL	2.6
55	M9	51	VAL	2.6
23	D1	53	TYR	2.6
25	d3	29	TYR	2.6
34	SR	79	TYR	2.6
40	L3	49	TYR	2.6
16	C4	29	HIS	2.6
1	2	377	G	2.6
3	S1	131	ASP	2.6
22	D0	24	ILE	2.6
28	d6	44	ILE	2.6
6	S4	57	ASN	2.6
12	c0	83	PRO	2.6
12	C0	13	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
22	D0	77	LYS	2.6
22	d0	101	LYS	2.6
25	D3	3	LYS	2.6
25	D3	7	ARG	2.6
35	SM	84	LYS	2.6
75	O9	49	MET	2.6
36	5	2498	U	2.6
8	S6	3	LEU	2.6
10	s8	58	LEU	2.6
10	s8	67	TRP	2.6
83	f	23	CYS	2.6
14	c2	78	LEU	2.6
16	C4	110	LEU	2.6
17	c5	126	VAL	2.6
32	E0	47	VAL	2.6
61	N5	108	LEU	2.6
62	n6	8	VAL	2.6
63	N7	113	VAL	2.6
64	n8	149	ALA	2.6
1	2	449	C	2.6
3	s1	84	ILE	2.6
4	s2	203	LYS	2.6
14	c2	72	ILE	2.6
18	C6	65	ILE	2.6
20	C8	117	LYS	2.6
22	d0	20	ILE	2.6
28	D6	93	LYS	2.6
31	d9	27	HIS	2.6
32	e0	56	MET	2.6
65	n9	25	LYS	2.6
67	o1	18	LYS	2.6
2	S0	72	ASP	2.6
21	C9	129	GLN	2.6
25	D3	10	ASN	2.6
47	M0	220	GLN	2.6
59	n3	4	ASN	2.6
64	N8	65	GLN	2.6
36	5	1569	U	2.6
41	L4	54	GLU	2.6
11	S9	99	LEU	2.6
14	C2	36	LEU	2.6
34	SR	33	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
34	sR	168	THR	2.6
39	L2	224	THR	2.6
45	l8	65	LEU	2.6
8	s6	206	ALA	2.6
14	C2	30	VAL	2.6
42	l5	292	ALA	2.6
45	l8	110	THR	2.6
49	m3	2	ALA	2.6
71	o5	110	ALA	2.6
5	S3	75	LYS	2.6
28	D6	85	ARG	2.6
18	c6	43	ILE	2.6
18	C6	74	HIS	2.6
5	S3	24	PHE	2.6
24	D2	37	PHE	2.6
26	d4	23	PHE	2.6
46	L9	90	MET	2.6
47	m0	173	PHE	2.6
81	p0	26	PHE	2.6
1	2	1700	C	2.6
18	c6	83	GLN	2.6
52	M6	151	ASP	2.6
4	s2	93	GLY	2.6
8	s6	80	ASN	2.6
9	S7	99	LEU	2.6
5	s3	219	ALA	2.6
8	s6	157	VAL	2.6
10	S8	13	ALA	2.6
32	e0	62	VAL	2.6
6	S4	145	ARG	2.6
61	n5	31	THR	2.6
81	p0	16	ARG	2.6
6	S4	248	ILE	2.6
83	f	41	ILE	2.6
11	s9	47	PHE	2.6
4	S2	151	PRO	2.6
9	S7	4	PRO	2.6
15	C3	143	SER	2.6
49	m3	4	SER	2.6
1	6	1701	A	2.6
36	5	2872	A	2.6
70	o4	33	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
4	S2	82	ASN	2.6
31	d9	37	ASN	2.6
40	L3	331	ASN	2.6
6	S4	48	LEU	2.6
34	sR	13	LEU	2.6
60	n4	87	LEU	2.6
1	2	1796	C	2.6
2	S0	40	ALA	2.6
8	S6	97	VAL	2.6
14	c2	37	VAL	2.6
22	D0	21	LYS	2.6
25	D3	16	ARG	2.6
30	D8	67	ARG	2.6
53	M7	166	VAL	2.6
53	M7	181	ARG	2.6
63	n7	96	VAL	2.6
70	O4	23	VAL	2.6
41	l4	104	LYS	2.6
45	L8	251	LYS	2.6
83	f	27	ARG	2.6
7	s5	94	THR	2.6
8	S6	71	THR	2.6
34	SR	45	TRP	2.5
42	l5	247	ILE	2.5
5	s3	150	MET	2.5
12	c0	64	TYR	2.5
36	1	3155	U	2.5
18	c6	51	PRO	2.5
35	SM	28	SER	2.5
53	M7	16	SER	2.5
5	s3	95	GLY	2.5
39	L2	228	GLY	2.5
81	p0	184	GLY	2.5
5	s3	176	LEU	2.5
11	S9	86	LEU	2.5
21	c9	28	LEU	2.5
4	s2	86	VAL	2.5
14	C2	63	VAL	2.5
16	c4	24	ASN	2.5
18	c6	14	LYS	2.5
23	D1	13	VAL	2.5
24	D2	25	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
35	SM	115	LYS	2.5
52	m6	78	ARG	2.5
60	n4	100	VAL	2.5
70	O4	16	ARG	2.5
1	2	451	A	2.5
2	S0	5	ALA	2.5
5	s3	201	ALA	2.5
21	C9	58	ALA	2.5
52	m6	196	ALA	2.5
16	c4	93	THR	2.5
17	c5	84	ILE	2.5
18	c6	118	ILE	2.5
1	2	1705	C	2.5
10	S8	192	TYR	2.5
24	d2	130	TYR	2.5
34	sR	158	PRO	2.5
53	M7	130	TYR	2.5
66	o0	23	TYR	2.5
1	6	662	U	2.5
25	D3	44	GLY	2.5
39	l2	248	GLY	2.5
47	m0	204	GLY	2.5
10	s8	135	LYS	2.5
39	L2	241	ARG	2.5
42	l5	41	LYS	2.5
60	n4	93	ARG	2.5
83	f	35	LYS	2.5
7	S5	33	VAL	2.5
8	s6	67	VAL	2.5
14	C2	121	VAL	2.5
7	s5	44	ASN	2.5
8	s6	197	ASN	2.5
19	C7	126	ALA	2.5
19	c7	97	ASN	2.5
59	N3	6	ALA	2.5
4	S2	83	ILE	2.5
35	sM	81	THR	2.5
10	S8	160	PHE	2.5
36	5	2169	G	2.5
5	s3	218	LEU	2.5
9	s7	176	LEU	2.5
22	D0	34	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	6	1596	C	2.5
25	D3	31	LYS	2.5
27	d5	51	LEU	2.5
34	sR	81	LEU	2.5
42	L5	92	LEU	2.5
46	L9	61	GLY	2.5
55	m9	21	LYS	2.5
35	SM	41	SER	2.5
27	D5	62	VAL	2.5
29	D7	2	VAL	2.5
6	s4	165	ALA	2.5
42	L5	288	ALA	2.5
63	N7	124	ALA	2.5
8	S6	161	GLU	2.5
2	S0	206	ASP	2.5
72	o6	58	ILE	2.5
14	c2	126	TRP	2.5
22	D0	27	THR	2.5
58	N2	55	THR	2.5
3	S1	211	HIS	2.5
10	S8	22	ARG	2.5
12	C0	24	LYS	2.5
12	c0	68	LEU	2.5
17	C5	81	ARG	2.5
25	D3	18	HIS	2.5
34	sR	32	LEU	2.5
39	L2	30	ARG	2.5
39	L2	149	ARG	2.5
42	l5	277	LEU	2.5
48	M1	12	LEU	2.5
51	m5	148	TYR	2.5
65	N9	59	LYS	2.5
67	o1	4	LEU	2.5
71	O5	48	ARG	2.5
79	Q3	36	ARG	2.5
81	p0	25	LEU	2.5
25	D3	129	GLY	2.5
36	1	2401	A	2.5
40	l3	245	GLY	2.5
5	s3	91	VAL	2.5
6	S4	67	GLN	2.5
7	S5	23	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
8	S6	179	VAL	2.5
11	s9	148	VAL	2.5
16	c4	28	VAL	2.5
20	C8	22	VAL	2.5
21	c9	30	VAL	2.5
1	2	914	G	2.5
7	S5	78	ALA	2.5
19	c7	96	SER	2.5
35	SM	95	SER	2.5
83	f	39	CYS	2.5
36	5	2452	G	2.5
83	f	61	ALA	2.5
9	S7	8	ILE	2.5
1	2	696	C	2.5
1	6	1634	C	2.5
21	C9	115	GLU	2.5
27	d5	41	ILE	2.5
42	l5	281	GLU	2.5
60	N4	90	ILE	2.5
5	S3	25	PHE	2.5
78	Q2	106	PHE	2.5
11	s9	11	THR	2.5
32	E0	48	THR	2.5
36	1	1569	U	2.5
36	5	3155	U	2.5
3	S1	86	LEU	2.5
5	s3	9	ARG	2.5
5	s3	76	ARG	2.5
5	s3	148	LYS	2.5
13	C1	56	LYS	2.5
7	S5	42	LEU	2.5
7	S5	164	PRO	2.5
7	s5	30	PRO	2.5
41	L4	179	LEU	2.5
46	L9	191	LEU	2.5
32	e0	40	TYR	2.5
6	S4	203	GLY	2.5
40	l3	225	GLY	2.5
65	n9	34	GLY	2.5
32	e0	47	VAL	2.5
83	f	60	VAL	2.5
60	n4	131	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
65	N9	2	ALA	2.4
83	f	153	ALA	2.4
7	s5	177	ILE	2.4
15	c3	71	ILE	2.4
52	M6	77	SER	2.4
73	o7	84	SER	2.4
45	L8	94	PHE	2.4
8	S6	87	ARG	2.4
8	S6	177	ARG	2.4
28	d6	69	ASN	2.4
30	D8	45	LYS	2.4
65	n9	23	LYS	2.4
77	Q1	7	LYS	2.4
4	S2	117	THR	2.4
4	s2	206	THR	2.4
1	2	376	C	2.4
6	s4	261	LEU	2.4
13	c1	74	THR	2.4
22	d0	27	THR	2.4
33	E1	86	THR	2.4
34	sR	313	TRP	2.4
28	d6	64	LEU	2.4
42	l5	275	THR	2.4
66	O0	62	LEU	2.4
83	f	126	THR	2.4
7	S5	28	PRO	2.4
1	6	679	U	2.4
2	S0	110	TYR	2.4
20	c8	98	TYR	2.4
36	5	2509	U	2.4
17	c5	11	VAL	2.4
41	l4	190	GLY	2.4
59	N3	3	GLY	2.4
83	f	121	GLY	2.4
4	s2	87	GLN	2.4
17	c5	133	ALA	2.4
18	C6	8	GLN	2.4
26	D4	126	ALA	2.4
28	D6	49	ALA	2.4
7	S5	40	ILE	2.4
7	s5	68	ILE	2.4
24	D2	18	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
45	l8	121	SER	2.4
3	S1	116	LYS	2.4
25	D3	107	PHE	2.4
67	o1	61	LYS	2.4
70	O4	7	PHE	2.4
41	l4	73	ARG	2.4
5	s3	113	LEU	2.4
14	c2	62	LEU	2.4
20	c8	131	LEU	2.4
61	N5	82	LEU	2.4
1	6	72	A	2.4
1	6	1694	A	2.4
4	S2	206	THR	2.4
10	s8	143	TRP	2.4
12	c0	28	ASN	2.4
43	L6	97	ASN	2.4
36	5	1575	A	2.4
45	L8	158	ASP	2.4
83	f	46	THR	2.4
2	S0	97	PRO	2.4
49	m3	133	PRO	2.4
11	S9	85	VAL	2.4
15	C3	150	VAL	2.4
28	d6	17	HIS	2.4
31	D9	27	HIS	2.4
45	L8	37	GLY	2.4
48	M1	148	VAL	2.4
1	2	1703	C	2.4
7	s5	159	ALA	2.4
10	S8	147	ALA	2.4
24	D2	10	ALA	2.4
27	D5	36	ALA	2.4
36	5	1255	C	2.4
56	N0	2	ALA	2.4
1	2	320	U	2.4
50	M4	126	GLN	2.4
61	n5	142	ILE	2.4
21	c9	92	LYS	2.4
22	D0	61	LYS	2.4
26	d4	128	LYS	2.4
83	f	28	LYS	2.4
42	L5	3	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
63	n7	130	PHE	2.4
39	L2	195	SER	2.4
9	S7	126	LEU	2.4
11	S9	93	LEU	2.4
14	c2	45	LEU	2.4
31	d9	30	LEU	2.4
59	N3	25	CYS	2.4
81	p0	93	LEU	2.4
2	S0	112	THR	2.4
28	d6	11	ASN	2.4
55	M9	29	THR	2.4
77	Q1	10	THR	2.4
79	q3	5	THR	2.4
81	p0	78	PRO	2.4
16	c4	124	ASP	2.4
21	C9	8	ASP	2.4
26	D4	129	VAL	2.4
34	SR	20	VAL	2.4
83	f	157	ASP	2.4
8	s6	54	GLY	2.4
11	s9	8	TYR	2.4
46	l9	3	TYR	2.4
59	n3	3	GLY	2.4
62	N6	92	GLY	2.4
83	f	67	GLY	2.4
4	S2	214	ALA	2.4
4	s2	124	ALA	2.4
1	6	1707	A	2.4
2	s0	98	ILE	2.4
6	s4	84	ALA	2.4
9	S7	12	ALA	2.4
9	S7	68	ALA	2.4
40	L3	22	ALA	2.4
46	L9	10	ILE	2.4
71	o5	51	ILE	2.4
74	o8	2	ALA	2.4
75	O9	16	ALA	2.4
36	5	2404	A	2.4
2	S0	134	LYS	2.4
39	L2	46	LYS	2.4
59	N3	109	MET	2.4
54	m8	180	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
60	n4	116	LYS	2.4
6	S4	175	PHE	2.4
1	6	658	C	2.4
8	S6	225	GLU	2.4
12	c0	40	LEU	2.4
16	C4	116	GLU	2.4
28	D6	90	GLU	2.4
36	1	2314	U	2.4
56	n0	130	GLU	2.4
57	n1	86	GLU	2.4
6	S4	24	SER	2.4
13	C1	2	SER	2.4
16	C4	34	SER	2.4
18	c6	121	SER	2.4
2	S0	124	THR	2.4
6	S4	220	THR	2.4
9	S7	100	PRO	2.4
19	c7	106	THR	2.4
22	D0	97	VAL	2.4
34	SR	96	THR	2.4
45	L8	139	VAL	2.4
6	S4	74	GLY	2.4
11	S9	170	GLY	2.4
28	d6	9	GLY	2.4
44	L7	212	GLY	2.4
64	n8	120	ASN	2.4
6	S4	27	TYR	2.4
18	c6	24	ALA	2.4
20	C8	125	ILE	2.4
34	sR	170	ILE	2.4
34	sR	214	ALA	2.4
45	L8	36	ILE	2.4
18	C6	30	LYS	2.4
28	D6	70	LYS	2.4
32	E0	53	LYS	2.4
45	l8	111	LYS	2.4
81	p0	81	LYS	2.4
15	C3	124	ARG	2.4
23	d1	22	ARG	2.4
39	l2	72	ARG	2.4
22	d0	12	GLN	2.4
16	C4	27	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
29	d7	32	PHE	2.4
83	f	31	PHE	2.4
2	S0	3	LEU	2.4
40	L3	17	LEU	2.4
1	2	740	A	2.4
8	s6	21	GLU	2.4
47	M0	180	GLU	2.4
15	C3	147	SER	2.4
21	C9	117	SER	2.4
1	2	1657	U	2.4
6	s4	183	VAL	2.4
7	s5	23	VAL	2.4
8	s6	195	VAL	2.4
20	c8	77	THR	2.3
24	D2	90	THR	2.3
36	5	1192	C	2.3
40	l3	185	GLY	2.3
60	n4	83	THR	2.3
61	n5	28	THR	2.3
83	f	50	GLY	2.3
5	S3	30	ALA	2.3
13	C1	145	ALA	2.3
16	C4	83	ILE	2.3
18	c6	12	LYS	2.3
24	D2	103	ILE	2.3
28	D6	68	TYR	2.3
34	sR	310	ILE	2.3
45	L8	209	ALA	2.3
46	L9	56	ALA	2.3
75	o9	16	ALA	2.3
76	Q0	77	ILE	2.3
57	N1	18	ASP	2.3
3	S1	184	LEU	2.3
11	s9	80	LEU	2.3
21	C9	108	LEU	2.3
68	O2	4	LEU	2.3
71	o5	111	PHE	2.3
74	O8	51	LEU	2.3
79	Q3	22	LEU	2.3
83	f	125	GLN	2.3
12	c0	33	GLU	2.3
43	l6	129	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
2	s0	189	VAL	2.3
6	S4	126	VAL	2.3
17	C5	105	VAL	2.3
18	c6	69	VAL	2.3
26	D4	100	VAL	2.3
1	2	1776	A	2.3
28	D6	19	LYS	2.3
34	sR	251	TRP	2.3
79	Q3	40	SER	2.3
20	c8	9	GLY	2.3
21	C9	69	LYS	2.3
22	D0	69	LYS	2.3
28	D6	36	ILE	2.3
30	d8	61	ARG	2.3
41	L4	60	THR	2.3
45	l8	120	LYS	2.3
51	M5	2	GLY	2.3
52	M6	155	LYS	2.3
3	S1	164	ILE	2.3
4	s2	115	ILE	2.3
7	s5	143	ARG	2.3
58	N2	48	GLY	2.3
59	N3	115	THR	2.3
73	O7	50	GLY	2.3
14	c2	128	ALA	2.3
16	C4	40	ALA	2.3
18	C6	3	ALA	2.3
18	C6	18	ALA	2.3
19	c7	69	ILE	2.3
45	L8	119	ALA	2.3
1	6	719	U	2.3
12	c0	39	ASN	2.3
36	5	1568	U	2.3
6	S4	38	LEU	2.3
13	c1	42	PHE	2.3
33	E1	100	LEU	2.3
7	S5	111	VAL	2.3
54	M8	115	VAL	2.3
39	l2	251	LYS	2.3
43	L6	175	LYS	2.3
7	s5	47	SER	2.3
11	s9	156	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
18	c6	11	GLY	2.3
23	D1	34	ILE	2.3
24	D2	53	ILE	2.3
39	L2	219	ILE	2.3
41	L4	65	TRP	2.3
42	L5	95	TRP	2.3
15	c3	144	ALA	2.3
34	SR	99	THR	2.3
42	L5	100	ALA	2.3
45	l8	195	SER	2.3
60	n4	111	ALA	2.3
16	C4	46	MET	2.3
34	SR	66	HIS	2.3
8	S6	169	TYR	2.3
45	L8	55	TYR	2.3
45	l8	130	TYR	2.3
3	S1	96	LEU	2.3
3	s1	218	LEU	2.3
34	sR	301	LEU	2.3
52	M6	65	ASN	2.3
54	M8	166	LEU	2.3
61	N5	126	LEU	2.3
3	s1	38	PHE	2.3
6	S4	104	ASP	2.3
83	f	122	ASP	2.3
36	1	329	U	2.3
38	4	125	U	2.3
22	D0	115	GLU	2.3
14	c2	90	LYS	2.3
18	c6	4	VAL	2.3
34	sR	157	VAL	2.3
39	L2	119	LYS	2.3
81	p0	105	VAL	2.3
26	D4	20	ARG	2.3
31	d9	40	ARG	2.3
21	C9	118	PRO	2.3
21	c9	90	PRO	2.3
8	S6	54	GLY	2.3
14	c2	102	GLY	2.3
17	c5	85	ILE	2.3
83	f	20	PRO	2.3
42	L5	295	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
5	s3	145	ALA	2.3
7	S5	74	ALA	2.3
30	D8	10	ALA	2.3
45	l8	196	ALA	2.3
47	m0	219	ALA	2.3
54	M8	70	ALA	2.3
83	f	55	ALA	2.3
10	s8	69	SER	2.3
12	C0	67	THR	2.3
7	S5	72	HIS	2.3
21	C9	5	SER	2.3
70	o4	6	THR	2.3
30	d8	16	LEU	2.3
34	sR	144	LEU	2.3
45	L8	93	LEU	2.3
45	L8	200	LEU	2.3
48	m1	12	LEU	2.3
70	o4	57	LEU	2.3
1	2	732	G	2.3
33	E1	85	TYR	2.3
66	O0	59	TYR	2.3
18	c6	46	PHE	2.3
20	c8	75	ASN	2.3
11	s9	48	GLN	2.3
26	d4	106	GLN	2.3
28	d6	3	LYS	2.3
35	sM	83	LYS	2.3
58	n2	70	LYS	2.3
83	f	68	LYS	2.3
3	s1	91	VAL	2.3
7	s5	53	VAL	2.3
18	C6	4	VAL	2.3
20	c8	145	ARG	2.3
28	D6	75	VAL	2.3
30	D8	50	GLU	2.3
36	5	2969	A	2.3
42	l5	15	ARG	2.3
45	l8	54	GLU	2.3
54	M8	95	GLU	2.3
59	N3	32	ARG	2.3
1	2	718	U	2.3
21	c9	100	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
46	L9	103	ILE	2.3
5	s3	3	ALA	2.3
15	c3	15	ALA	2.3
26	D4	134	ALA	2.3
34	sR	95	ALA	2.3
68	o2	77	ALA	2.3
36	1	2507	C	2.3
36	5	2098	C	2.3
6	s4	101	LEU	2.3
14	c2	74	LEU	2.3
31	d9	28	THR	2.3
34	sR	225	LEU	2.3
63	N7	42	LEU	2.3
78	q2	90	HIS	2.3
5	s3	221	SER	2.3
8	S6	84	TYR	2.3
9	S7	92	PHE	2.3
11	s9	145	SER	2.3
75	o9	6	SER	2.3
83	f	16	SER	2.3
33	e1	105	TYR	2.3
83	f	99	PHE	2.3
9	S7	138	LYS	2.3
17	C5	52	LYS	2.3
31	D9	53	ASN	2.3
60	N4	91	LYS	2.3
60	n4	69	LYS	2.3
8	s6	188	ARG	2.3
15	C3	106	ARG	2.3
45	L8	185	ARG	2.3
3	S1	167	VAL	2.3
6	S4	139	VAL	2.3
7	s5	123	VAL	2.3
18	c6	55	VAL	2.3
46	L9	140	VAL	2.3
43	L6	133	GLU	2.2
44	L7	24	GLU	2.2
60	n4	106	GLU	2.2
1	2	676	G	2.2
1	2	730	G	2.2
1	6	1695	G	2.2
34	sR	115	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
12	C0	4	PRO	2.2
28	D6	97	PRO	2.2
45	l8	53	PRO	2.2
26	d4	134	ALA	2.2
29	D7	13	ALA	2.2
30	d8	24	GLY	2.2
34	sR	11	GLY	2.2
67	O1	22	GLY	2.2
1	2	1701	A	2.2
6	S4	92	LEU	2.2
9	S7	38	LEU	2.2
14	C2	41	LEU	2.2
23	D1	55	LEU	2.2
36	5	1355	A	2.2
61	N5	40	LEU	2.2
66	O0	84	LEU	2.2
3	S1	142	PHE	2.2
9	s7	14	THR	2.2
13	C1	115	PHE	2.2
17	C5	12	PHE	2.2
26	D4	58	PHE	2.2
31	D9	55	PHE	2.2
32	E0	41	THR	2.2
40	L3	164	THR	2.2
42	L5	20	PHE	2.2
50	M4	118	PHE	2.2
52	m6	71	PHE	2.2
7	s5	77	TYR	2.2
30	D8	37	SER	2.2
33	E1	90	LYS	2.2
73	O7	46	SER	2.2
83	f	132	LYS	2.2
8	S6	85	ARG	2.2
7	s5	170	GLN	2.2
14	C2	142	GLN	2.2
16	c4	48	VAL	2.2
25	d3	27	ASN	2.2
26	d4	35	VAL	2.2
51	m5	25	VAL	2.2
68	o2	52	GLN	2.2
71	O5	53	CYS	2.2
83	f	113	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
3	S1	90	GLU	2.2
21	C9	95	ASP	2.2
2	s0	64	ILE	2.2
4	S2	137	ILE	2.2
9	s7	91	ILE	2.2
22	D0	91	ILE	2.2
63	n7	46	ILE	2.2
10	s8	100	ALA	2.2
17	c5	74	ALA	2.2
19	C7	57	LEU	2.2
26	d4	28	LEU	2.2
40	L3	12	GLY	2.2
44	L7	28	ALA	2.2
52	M6	15	LEU	2.2
72	o6	60	LEU	2.2
81	p0	77	LEU	2.2
1	6	1466	G	2.2
6	s4	22	LYS	2.2
6	s4	69	HIS	2.2
8	s6	164	LYS	2.2
25	d3	31	LYS	2.2
34	sR	25	THR	2.2
35	sM	74	LYS	2.2
39	l2	60	LYS	2.2
41	L4	105	THR	2.2
83	f	78	HIS	2.2
1	2	277	U	2.2
1	2	841	U	2.2
21	c9	91	TYR	2.2
42	l5	31	TYR	2.2
50	M4	129	TYR	2.2
1	6	898	A	2.2
7	S5	57	SER	2.2
23	D1	56	SER	2.2
36	5	2401	A	2.2
2	S0	156	VAL	2.2
12	C0	42	VAL	2.2
16	C4	28	VAL	2.2
21	c9	4	VAL	2.2
26	D4	70	VAL	2.2
33	E1	102	VAL	2.2
34	sR	94	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
42	l5	125	VAL	2.2
58	N2	43	VAL	2.2
8	S6	65	GLN	2.2
7	S5	104	ASN	2.2
30	d8	43	ASN	2.2
51	m5	117	ASN	2.2
40	l3	188	ILE	2.2
1	2	735	C	2.2
2	s0	177	LEU	2.2
4	S2	109	GLY	2.2
8	S6	130	PRO	2.2
14	C2	88	LEU	2.2
33	e1	103	LEU	2.2
34	SR	121	MET	2.2
34	sR	297	ASP	2.2
16	C4	96	PRO	2.2
19	c7	65	PRO	2.2
30	d8	63	ALA	2.2
41	l4	56	ALA	2.2
45	L8	141	ALA	2.2
51	M5	48	ALA	2.2
83	f	75	PRO	2.2
4	S2	64	LYS	2.2
6	S4	127	LYS	2.2
18	c6	140	LYS	2.2
54	m8	159	LYS	2.2
2	s0	165	ARG	2.2
28	D6	5	ARG	2.2
60	N4	73	ARG	2.2
79	Q3	80	ARG	2.2
10	S8	9	HIS	2.2
30	D8	36	THR	2.2
35	SM	97	THR	2.2
39	L2	252	THR	2.2
13	C1	100	TYR	2.2
5	s3	41	VAL	2.2
14	C2	91	VAL	2.2
55	m9	139	VAL	2.2
81	p0	50	VAL	2.2
18	c6	61	SER	2.2
24	D2	122	SER	2.2
56	n0	18	SER	2.2

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Mol	Chain	Res	Type	RSRZ
58	n2	97	SER	2.2
78	q2	34	SER	2.2
81	p0	24	SER	2.2
83	f	15	SER	2.2
32	e0	63	GLN	2.2
36	1	1564	U	2.2
36	5	252	U	2.2
36	5	1555	U	2.2
36	5	2499	U	2.2
60	n4	134	GLN	2.2
4	S2	130	ILE	2.2
8	S6	18	ILE	2.2
21	c9	111	ILE	2.2
22	D0	103	ILE	2.2
23	D1	23	ILE	2.2
34	SR	115	ILE	2.2
66	O0	10	ILE	2.2
70	o4	54	ILE	2.2
1	6	540	G	2.2
3	s1	231	LEU	2.2
5	s3	182	LEU	2.2
8	s6	212	LEU	2.2
14	C2	103	LEU	2.2
18	C6	57	LEU	2.2
19	c7	24	LEU	2.2
24	D2	51	GLU	2.2
32	e0	51	ASN	2.2
29	D7	33	LEU	2.2
30	d8	9	LEU	2.2
36	1	2971	A	2.2
36	5	2099	A	2.2
36	5	3276	G	2.2
39	l2	29	LEU	2.2
60	n4	109	LEU	2.2
5	S3	130	GLY	2.2
34	sR	247	PRO	2.2
39	L2	13	GLY	2.2
72	O6	22	PRO	2.2
16	c4	51	ASP	2.2
21	C9	119	LYS	2.2
71	o5	119	LYS	2.2
17	c5	10	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
46	L9	175	PHE	2.2
2	S0	80	THR	2.2
16	C4	91	THR	2.2
18	C6	9	THR	2.2
58	n2	100	THR	2.2
16	c4	58	TYR	2.2
61	n5	141	TYR	2.2
81	p0	188	VAL	2.2
9	s7	49	ILE	2.2
17	C5	92	SER	2.2
17	C5	104	GLN	2.2
24	d2	61	ILE	2.2
29	D7	48	SER	2.2
39	l2	253	GLN	2.2
49	M3	95	ILE	2.2
56	n0	129	ILE	2.2
57	n1	76	ILE	2.2
14	c2	32	LEU	2.2
14	c2	36	LEU	2.2
18	C6	28	LEU	2.2
3	S1	103	MET	2.2
3	S1	113	MET	2.2
3	S1	141	ALA	2.2
4	s2	201	ASN	2.2
5	S3	114	ALA	2.2
7	S5	79	ASN	2.2
14	C2	27	ALA	2.2
15	C3	144	ALA	2.2
25	d3	28	ASN	2.2
60	N4	66	GLU	2.2
41	l4	44	LYS	2.2
1	2	134	U	2.2
7	S5	76	ARG	2.2
51	m5	67	ARG	2.2
55	M9	85	ARG	2.2
67	o1	31	ARG	2.2
34	sR	241	PHE	2.2
42	l5	200	PHE	2.2
47	m0	199	PHE	2.2
1	2	269	G	2.2
36	5	1576	G	2.2
3	S1	20	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
3	S1	68	VAL	2.1
3	s1	192	VAL	2.1
10	S8	62	THR	2.1
14	c2	31	VAL	2.1
14	c2	86	VAL	2.1
18	C6	90	VAL	2.1
19	c7	40	THR	2.1
24	D2	63	VAL	2.1
30	D8	15	VAL	2.1
39	L2	134	VAL	2.1
40	L3	336	VAL	2.1
67	O1	46	THR	2.1
70	O4	22	VAL	2.1
58	N2	36	TYR	2.1
83	f	19	TYR	2.1
6	S4	90	ILE	2.1
9	S7	125	ILE	2.1
21	c9	116	ILE	2.1
39	L2	225	ILE	2.1
14	c2	41	LEU	2.1
19	c7	62	GLN	2.1
26	D4	74	LEU	2.1
40	L3	387	LEU	2.1
48	M1	172	LEU	2.1
75	o9	4	GLN	2.1
81	p0	45	LEU	2.1
8	S6	138	ALA	2.1
26	D4	78	SER	2.1
28	D6	57	SER	2.1
39	L2	182	ALA	2.1
42	L5	96	ALA	2.1
43	l6	3	ALA	2.1
45	L8	114	ALA	2.1
70	O4	79	SER	2.1
3	S1	213	ARG	2.1
5	S3	65	ARG	2.1
16	C4	57	PRO	2.1
18	C6	41	PRO	2.1
25	d3	6	PRO	2.1
40	L3	330	GLY	2.1
45	L8	98	ARG	2.1
45	l8	94	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
57	N1	19	PHE	2.1
36	1	3175	U	2.1
36	5	2497	U	2.1
83	f	43	ASP	2.1
6	s4	209	HIS	2.1
41	l4	230	VAL	2.1
55	M9	177	VAL	2.1
3	s1	25	THR	2.1
20	c8	138	THR	2.1
33	e1	115	THR	2.1
3	s1	155	TYR	2.1
8	S6	101	ILE	2.1
36	1	440	A	2.1
38	8	80	A	2.1
71	O5	75	TYR	2.1
3	S1	181	LEU	2.1
6	S4	7	LYS	2.1
25	d3	30	LYS	2.1
29	d7	33	LEU	2.1
31	d9	16	LYS	2.1
32	e0	49	LEU	2.1
33	e1	100	LEU	2.1
34	SR	137	LYS	2.1
45	l8	245	LYS	2.1
29	d7	5	GLN	2.1
30	D8	22	ARG	2.1
36	1	2573	G	2.1
45	l8	123	GLN	2.1
59	N3	7	GLN	2.1
61	N5	65	GLN	2.1
2	S0	187	ALA	2.1
45	L8	210	ALA	2.1
79	Q3	52	ALA	2.1
2	s0	151	SER	2.1
6	s4	232	GLY	2.1
10	S8	122	GLY	2.1
25	d3	145	SER	2.1
33	e1	104	SER	2.1
41	l4	192	GLY	2.1
49	m3	79	GLU	2.1
59	n3	2	SER	2.1
60	N4	72	SER	2.1

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Mol	Chain	Res	Type	RSRZ
3	S1	223	PHE	2.1
44	L7	209	ASN	2.1
83	f	128	PHE	2.1
6	S4	181	VAL	2.1
6	S4	227	VAL	2.1
8	s6	179	VAL	2.1
25	d3	24	TRP	2.1
45	L8	163	VAL	2.1
51	M5	155	VAL	2.1
55	m9	51	VAL	2.1
58	n2	66	VAL	2.1
70	O4	84	CYS	2.1
1	2	1798	U	2.1
2	s0	48	ILE	2.1
3	S1	94	LYS	2.1
4	s2	84	LYS	2.1
6	S4	91	THR	2.1
7	s5	42	LEU	2.1
10	s8	120	THR	2.1
13	c1	91	LEU	2.1
20	c8	35	ILE	2.1
21	C9	38	LYS	2.1
30	D8	13	ILE	2.1
34	SR	210	LEU	2.1
36	1	1567	U	2.1
36	5	2875	U	2.1
45	l8	189	LEU	2.1
58	n2	11	ILE	2.1
44	L7	136	TYR	2.1
51	m5	62	TYR	2.1
52	M6	197	LEU	2.1
58	n2	108	TYR	2.1
74	O8	78	LEU	2.1
11	s9	149	ARG	2.1
14	C2	33	ARG	2.1
61	n5	27	ARG	2.1
14	c2	118	ALA	2.1
17	c5	101	ALA	2.1
21	c9	50	ALA	2.1
42	l5	17	GLN	2.1
45	L8	131	ALA	2.1
1	6	755	A	2.1

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Mol	Chain	Res	Type	RSRZ
4	S2	55	GLU	2.1
4	s2	75	GLY	2.1
18	C6	5	PRO	2.1
35	SM	38	PRO	2.1
36	5	1566	A	2.1
61	n5	79	GLY	2.1
67	o1	45	GLY	2.1
11	S9	87	SER	2.1
13	C1	137	PHE	2.1
28	d6	76	SER	2.1
44	l7	164	SER	2.1
52	m6	64	PHE	2.1
7	s5	70	VAL	2.1
28	D6	58	VAL	2.1
30	D8	25	VAL	2.1
33	e1	147	VAL	2.1
42	l5	286	VAL	2.1
1	2	1342	C	2.1
1	6	1711	C	2.1
36	5	1581	C	2.1
5	s3	10	LYS	2.1
6	s4	6	LYS	2.1
7	S5	80	LYS	2.1
13	c1	29	LYS	2.1
18	C6	132	LYS	2.1
26	d4	127	LYS	2.1
2	S0	122	ILE	2.1
5	S3	72	LEU	2.1
7	S5	58	LEU	2.1
13	C1	122	ILE	2.1
18	C6	52	LEU	2.1
26	D4	125	LEU	2.1
49	M3	98	ASP	2.1
49	m3	170	LEU	2.1
66	o0	101	LEU	2.1
67	O1	97	LEU	2.1
2	S0	79	ARG	2.1
2	S0	192	THR	2.1
3	S1	136	ARG	2.1
19	c7	95	ARG	2.1
8	s6	169	TYR	2.1
20	c8	20	THR	2.1

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Mol	Chain	Res	Type	RSRZ
35	SM	88	ARG	2.1
45	L8	74	THR	2.1
47	M0	11	TYR	2.1
52	M6	143	THR	2.1
75	O9	45	ARG	2.1
26	D4	89	TYR	2.1
28	D6	39	MET	2.1
41	L4	99	MET	2.1
41	l4	93	MET	2.1
5	S3	3	ALA	2.1
8	S6	100	ALA	2.1
9	s7	59	ALA	2.1
20	C8	83	ALA	2.1
34	sR	253	ALA	2.1
45	L8	256	ALA	2.1
61	N5	128	ALA	2.1
1	2	450	U	2.1
3	S1	220	GLN	2.1
36	5	240	U	2.1
48	M1	6	GLN	2.1
62	N6	26	GLN	2.1
23	D1	77	GLY	2.1
32	E0	6	GLY	2.1
16	C4	94	PRO	2.1
25	d3	64	PRO	2.1
39	L2	36	GLU	2.1
41	L4	100	PHE	2.1
63	N7	99	GLU	2.1
67	o1	88	PRO	2.1
25	D3	145	SER	2.1
4	S2	103	VAL	2.1
5	s3	138	VAL	2.1
13	c1	123	VAL	2.1
14	C2	116	VAL	2.1
15	C3	33	VAL	2.1
15	C3	134	VAL	2.1
30	D8	55	VAL	2.1
33	E1	150	VAL	2.1
34	SR	58	VAL	2.1
39	L2	62	VAL	2.1
58	N2	47	VAL	2.1
1	6	754	A	2.1

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Mol	Chain	Res	Type	RSRZ
3	S1	222	LYS	2.1
3	s1	49	ASN	2.1
6	s4	37	LYS	2.1
11	S9	92	LYS	2.1
11	s9	91	LYS	2.1
21	C9	77	ASN	2.1
30	D8	43	ASN	2.1
52	m6	134	LYS	2.1
55	m9	153	LYS	2.1
3	s1	110	LEU	2.1
3	s1	228	LEU	2.1
14	C2	62	LEU	2.1
19	C7	16	LEU	2.1
24	D2	110	ILE	2.1
47	M0	97	LEU	2.1
47	m0	128	ARG	2.1
54	m8	174	ARG	2.1
57	n1	160	ILE	2.1
3	S1	101	HIS	2.1
73	O7	24	ARG	2.1
81	p0	64	ARG	2.1
57	N1	79	MET	2.1
83	f	63	ASP	2.1
4	S2	51	THR	2.1
5	s3	207	THR	2.1
6	S4	103	TYR	2.1
1	6	656	G	2.1
1	6	1601	G	2.1
6	s4	55	ALA	2.1
7	S5	85	ALA	2.1
15	C3	148	ALA	2.1
36	1	1562	C	2.1
36	1	1582	C	2.1
36	1	2534	G	2.1
36	5	1565	G	2.1
42	L5	157	ALA	2.1
34	sR	298	GLY	2.1
71	o5	72	GLY	2.1
11	S9	169	PRO	2.1
18	c6	5	PRO	2.1
21	c9	21	PHE	2.1
48	M1	96	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
61	N5	101	GLU	2.1
81	p0	92	PRO	2.1
5	S3	185	LYS	2.0
8	S6	153	VAL	2.0
10	S8	151	LYS	2.0
16	C4	47	LYS	2.0
18	C6	26	LYS	2.0
25	D3	30	LYS	2.0
28	d6	93	LYS	2.0
36	1	2978	U	2.0
47	M0	149	VAL	2.0
23	D1	61	SER	2.0
34	sR	120	SER	2.0
49	M3	34	SER	2.0
69	O3	56	SER	2.0
83	f	47	SER	2.0
2	S0	144	ILE	2.0
6	S4	64	ILE	2.0
7	S5	172	ILE	2.0
9	s7	38	LEU	2.0
10	S8	58	LEU	2.0
14	C2	28	LEU	2.0
16	c4	132	ARG	2.0
28	d6	8	ASN	2.0
32	e0	54	ARG	2.0
45	L8	214	LEU	2.0
48	M1	114	ILE	2.0
39	l2	19	HIS	2.0
3	S1	139	ALA	2.0
5	S3	171	ALA	2.0
15	C3	146	ALA	2.0
20	c8	141	THR	2.0
22	d0	95	ALA	2.0
28	d6	67	THR	2.0
35	SM	119	ALA	2.0
36	1	784	A	2.0
40	L3	272	TYR	2.0
44	L7	27	ALA	2.0
58	N2	108	TYR	2.0
58	n2	106	ALA	2.0
83	f	108	ASP	2.0
6	S4	205	PHE	2.0

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Mol	Chain	Res	Type	RSRZ
10	S8	118	GLY	2.0
18	c6	25	GLY	2.0
20	c8	124	GLY	2.0
21	c9	42	GLY	2.0
24	D2	123	GLY	2.0
31	d9	55	PHE	2.0
45	l8	77	GLN	2.0
17	c5	73	PRO	2.0
18	c6	41	PRO	2.0
33	e1	124	PRO	2.0
3	S1	50	LYS	2.0
7	S5	213	LYS	2.0
13	c1	32	LYS	2.0
16	C4	70	LYS	2.0
28	D6	46	GLU	2.0
69	O3	3	GLU	2.0
5	s3	137	VAL	2.0
22	D0	31	VAL	2.0
28	d6	21	VAL	2.0
62	N6	95	VAL	2.0
66	O0	17	VAL	2.0
1	2	1150	G	2.0
1	6	651	G	2.0
1	6	1488	G	2.0
5	s3	157	LEU	2.0
6	s4	23	LEU	2.0
9	s7	77	LEU	2.0
9	s7	126	LEU	2.0
10	s8	25	ARG	2.0
11	S9	59	LEU	2.0
11	s9	70	LEU	2.0
14	c2	88	LEU	2.0
22	D0	68	ARG	2.0
30	D8	9	LEU	2.0
36	1	1354	G	2.0
48	m1	140	ARG	2.0
49	M3	174	ARG	2.0
83	f	87	ARG	2.0
83	f	92	LEU	2.0
2	S0	111	ILE	2.0
7	S5	187	ILE	2.0
14	c2	89	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
24	D2	27	ILE	2.0
28	D6	88	SER	2.0
44	l7	242	SER	2.0
56	N0	129	ILE	2.0
1	6	493	U	2.0
5	S3	177	MET	2.0
28	D6	11	ASN	2.0
51	m5	90	ASN	2.0
73	O7	20	ASN	2.0
15	c3	25	TRP	2.0
7	s5	173	ALA	2.0
18	C6	115	THR	2.0
34	sR	244	ALA	2.0
34	sR	289	ALA	2.0
60	N4	37	ALA	2.0
74	o8	34	ALA	2.0
16	c4	53	ASP	2.0
34	sR	50	ASP	2.0
35	SM	113	ASP	2.0
5	S3	152	PHE	2.0
7	S5	43	PHE	2.0
9	s7	24	PHE	2.0
10	s8	113	PHE	2.0
12	c0	59	PHE	2.0
26	D4	72	PHE	2.0
34	sR	97	GLY	2.0
58	n2	45	GLY	2.0
3	S1	55	LYS	2.0
7	S5	67	PRO	2.0
10	S8	53	LYS	2.0
21	c9	106	GLN	2.0
42	l5	289	LYS	2.0
65	n9	24	PRO	2.0
71	o5	107	LYS	2.0
83	f	40	LYS	2.0
1	6	1800	A	2.0
4	S2	65	GLU	2.0
4	S2	121	VAL	2.0
7	s5	133	VAL	2.0
9	S7	20	VAL	2.0
9	S7	136	VAL	2.0
16	c4	42	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
22	D0	83	GLU	2.0
38	4	80	A	2.0
45	l8	118	GLU	2.0
18	C6	68	ARG	2.0
28	d6	10	ARG	2.0
28	d6	58	VAL	2.0
34	sR	309	VAL	2.0
52	m6	3	VAL	2.0
69	O3	22	VAL	2.0
81	p0	80	VAL	2.0
3	S1	54	LEU	2.0
8	S6	178	LEU	2.0
9	S7	176	LEU	2.0
9	s7	153	LEU	2.0
16	C4	137	LEU	2.0
20	C8	15	LEU	2.0
21	c9	22	LEU	2.0
34	sR	252	LEU	2.0
62	n6	104	LEU	2.0
14	C2	89	ILE	2.0
70	O4	54	ILE	2.0
81	p0	96	ILE	2.0
36	1	1866	C	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
85	ZN	D7	101	1/1	0.84	0.11	141,141,141,141	0
85	ZN	d7	101	1/1	0.84	0.10	131,131,131,131	0
87	MG	5	3402	1/1	0.84	0.12	45,45,45,45	0
87	MG	5	3404	1/1	0.84	0.26	36,36,36,36	0
87	MG	C	101	1/1	0.85	0.26	49,49,49,49	0
87	MG	5	3405	1/1	0.86	0.32	42,42,42,42	0
87	MG	1	3402	1/1	0.88	0.45	21,21,21,21	0
87	MG	B	3402	1/1	0.90	0.25	40,40,40,40	0
87	MG	1	3404	1/1	0.91	0.26	29,29,29,29	0
85	ZN	E1	501	1/1	0.93	0.06	136,136,136,136	0
87	MG	5	3401	1/1	0.94	0.17	41,41,41,41	0
85	ZN	e1	501	1/1	0.94	0.09	164,164,164,164	0
87	MG	1	3403	1/1	0.95	0.18	45,45,45,45	0
86	SPS	1	3401	23/23	0.95	0.10	40,43,57,59	0
86	SPS	B	3401	23/23	0.96	0.11	37,40,54,56	0
85	ZN	d6	500	1/1	0.97	0.07	87,87,87,87	0
85	ZN	D6	500	1/1	0.97	0.10	105,105,105,105	0
88	OHX	1	3405	7/7	0.97	0.14	91,91,91,91	0
85	ZN	Q2	501	1/1	0.98	0.11	76,76,76,76	0
85	ZN	q2	501	1/1	0.98	0.10	77,77,77,77	0
88	OHX	5	3406	7/7	0.98	0.14	95,95,95,95	0
85	ZN	D9	101	1/1	0.99	0.06	88,88,88,88	0
87	MG	f	1002	1/1	0.99	0.04	66,66,66,66	0
85	ZN	d9	101	1/1	0.99	0.03	94,94,94,94	0
85	ZN	Q3	501	1/1	0.99	0.03	77,77,77,77	0
87	MG	5	3403	1/1	0.99	0.36	23,23,23,23	0
88	OHX	1	3406	7/7	0.99	0.06	73,73,73,73	0
85	ZN	Q0	500	1/1	0.99	0.03	57,57,57,57	0
85	ZN	q3	501	1/1	1.00	0.04	69,69,69,69	0
85	ZN	o7	501	1/1	1.00	0.02	51,51,51,51	0
85	ZN	q0	500	1/1	1.00	0.02	42,42,42,42	0
87	MG	f	1001	1/1	1.00	0.21	52,52,52,52	0
85	ZN	O7	100	1/1	1.00	0.03	52,52,52,52	0

6.5 Other polymers (i)

There are no such residues in this entry.