



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 5, 2016 – 09:46 PM EDT

PDB ID : 5DC3  
Title : Complex of yeast 80S ribosome with non-modified eIF5A  
Authors : Melnikov, S.; Mailliot, J.; Shin, B.-S.; Rigger, L.; Yusupova, G.; Micura, R.;  
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Deposited on : 2015-08-23  
Resolution : 3.25 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity	:	4.02b-467
Mogul	:	unknown
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20027939
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	rb-20027939

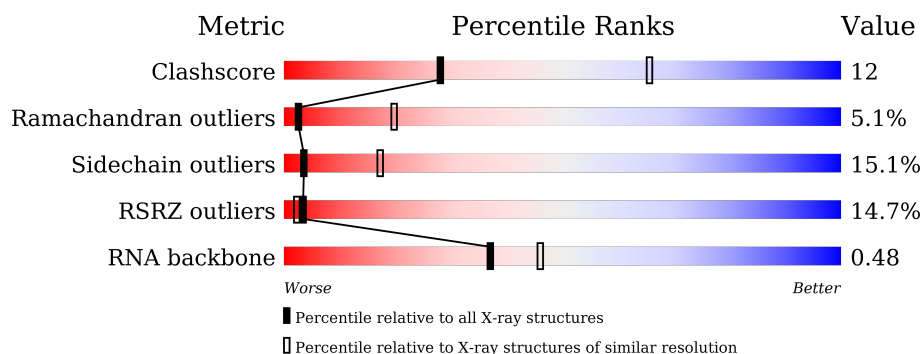
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.25 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	102246	1806 (3.32-3.20)
Ramachandran outliers	100387	1773 (3.32-3.20)
Sidechain outliers	100360	1771 (3.32-3.20)
RSRZ outliers	91569	1632 (3.32-3.20)
RNA backbone	2183	1001 (3.76-2.76)

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 on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	2	1800	<div> <div>12%</div> <div> <div>43%</div> <div>42%</div> <div>13%</div> <div>..</div> </div> </div>
1	6	1800	<div> <div>5%</div> <div> <div>45%</div> <div>41%</div> <div>12%</div> <div>.</div> </div> </div>
2	S0	251	<div> <div>48%</div> <div> <div>30%</div> <div>41%</div> <div>11%</div> <div>18%</div> </div> </div>
2	s0	251	<div> <div>31%</div> <div> <div>68%</div> <div>14%</div> <div>18%</div> </div> </div>
3	S1	254	<div> <div>13%</div> <div> <div>24%</div> <div>47%</div> <div>13%</div> <div>16%</div> </div> </div>
3	s1	254	<div> <div>12%</div> <div> <div>67%</div> <div>17%</div> <div>15%</div> </div> </div>

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Mol	Chain	Length	Quality of chain
4	S2	253	
4	s2	253	
5	S3	239	
5	s3	239	
6	S4	260	
6	s4	260	
7	S5	224	
7	s5	224	
8	S6	236	
8	s6	236	
9	S7	189	
9	s7	189	
10	S8	200	
10	s8	200	
11	S9	196	
11	s9	196	
12	C0	105	
13	C1	155	
13	c1	155	
14	C2	142	
14	c2	142	
15	C3	150	
15	c3	150	
16	C4	136	
16	c4	136	

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Mol	Chain	Length	Quality of chain
17	C5	141	
17	c5	141	
18	C6	142	
18	c6	142	
19	C7	136	
19	c7	136	
20	C8	145	
20	c8	145	
21	C9	143	
21	c9	143	
22	D0	120	
22	d0	120	
23	D1	87	
23	d1	87	
24	D2	129	
24	d2	129	
25	D3	144	
25	d3	144	
26	D4	134	
26	d4	134	
27	D5	107	
27	d5	107	
28	D6	97	
28	d6	97	
29	D7	81	

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Mol	Chain	Length	Quality of chain
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	
40	l3	386	
41	L4	361	
41	l4	361	

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Mol	Chain	Length	Quality of chain
42	L5	296	
42	l5	296	
43	L6	175	
43	l6	175	
44	L7	243	
44	l7	243	
45	L8	255	
45	l8	255	
46	L9	191	
46	l9	191	
47	M0	220	
47	m0	220	
48	M1	173	
48	m1	173	
49	M3	198	
49	m3	198	
50	M4	137	
50	m4	137	
51	M5	203	
51	m5	203	
52	M6	198	
52	m6	198	
53	M7	183	
53	m7	183	
54	M8	185	

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Mol	Chain	Length	Quality of chain
54	m8	185	
55	M9	188	
55	m9	188	
56	N0	172	
56	n0	172	
57	N1	159	
57	n1	159	
58	N2	120	
58	n2	120	
59	N3	136	
59	n3	136	
60	N4	155	
60	n4	155	
61	N5	141	
61	n5	141	
62	N6	126	
62	n6	126	
63	N7	135	
63	n7	135	
64	N8	148	
64	n8	148	
65	N9	58	
65	n9	58	
66	O0	104	
66	o0	104	

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Mol	Chain	Length	Quality of chain
67	O1	112	
67	o1	112	
68	O2	129	
68	o2	129	
69	O3	106	
69	o3	106	
70	O4	119	
70	o4	119	
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	
78	Q2	105	
78	q2	105	
79	Q3	91	

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Mol	Chain	Length	Quality of chain
79	q3	91	
80	c0	105	
81	m2	150	
82	p0	311	
83	p1	47	
84	p2	46	
85	f	157	

## 2 Entry composition

There are 86 unique types of molecules in this entry. The entry contains 404042 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
			772	499	126	145	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
			1213	774	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
			890	560	156	172	2			
14	c2	124	Total	C	N	O	S	0	0	0
			890	560	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.

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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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			
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			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E1	77	ALA	GLY	conflict	UNP P05759
e1	77	ALA	GLY	conflict	UNP P05759

- 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
			1104	652	221	231				
35	sM	104	Total	C	N	O		0	0	0
			679	402	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	12	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	13	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	14	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			
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
			1763	1130	316	314	3			

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	S	0	0	0
			1543	962	315	266				
49	m3	194	Total	C	N	O	S	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			
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			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
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			
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			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O4	?	-	LYS	deletion	UNP P87262
o4	?	-	LYS	deletion	UNP P87262

- 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			

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

- Molecule 80 is a protein called 40S ribosomal protein S10-A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
80	c0	96	Total	C	N	O	S	0	0	0
			762	491	125	144	2			

- Molecule 81 is a protein called 60S ribosomal protein L12-A (uL11).

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

- Molecule 82 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
82	p0	143	Total	C	N	O	S	0	0	0
			1076	686	192	195	3			

- Molecule 83 is a protein called 60S ribosomal protein P1 alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
83	p1	47	Total	C	N	O	S	0	0	0
			235	141	47	47				

- Molecule 84 is a protein called 60S ribosomal P2 beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
84	p2	46	Total	C	N	O	S	0	0	0
			230	138	46	46				

- Molecule 85 is a protein called Eukaryotic translation initiation factor 5A-1.

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

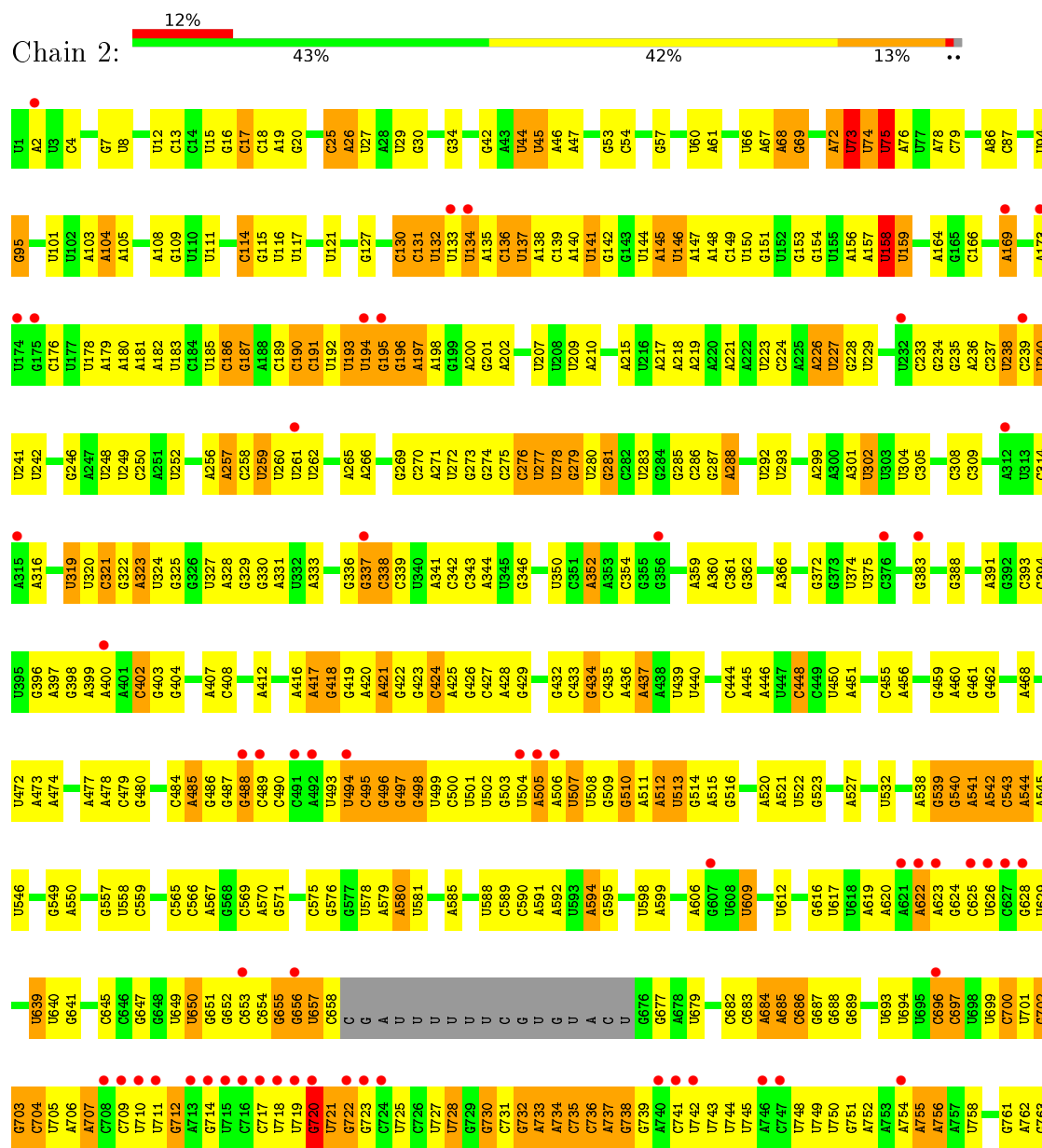
- Molecule 86 is ZINC ION (three-letter code: ZN) (formula: Zn).

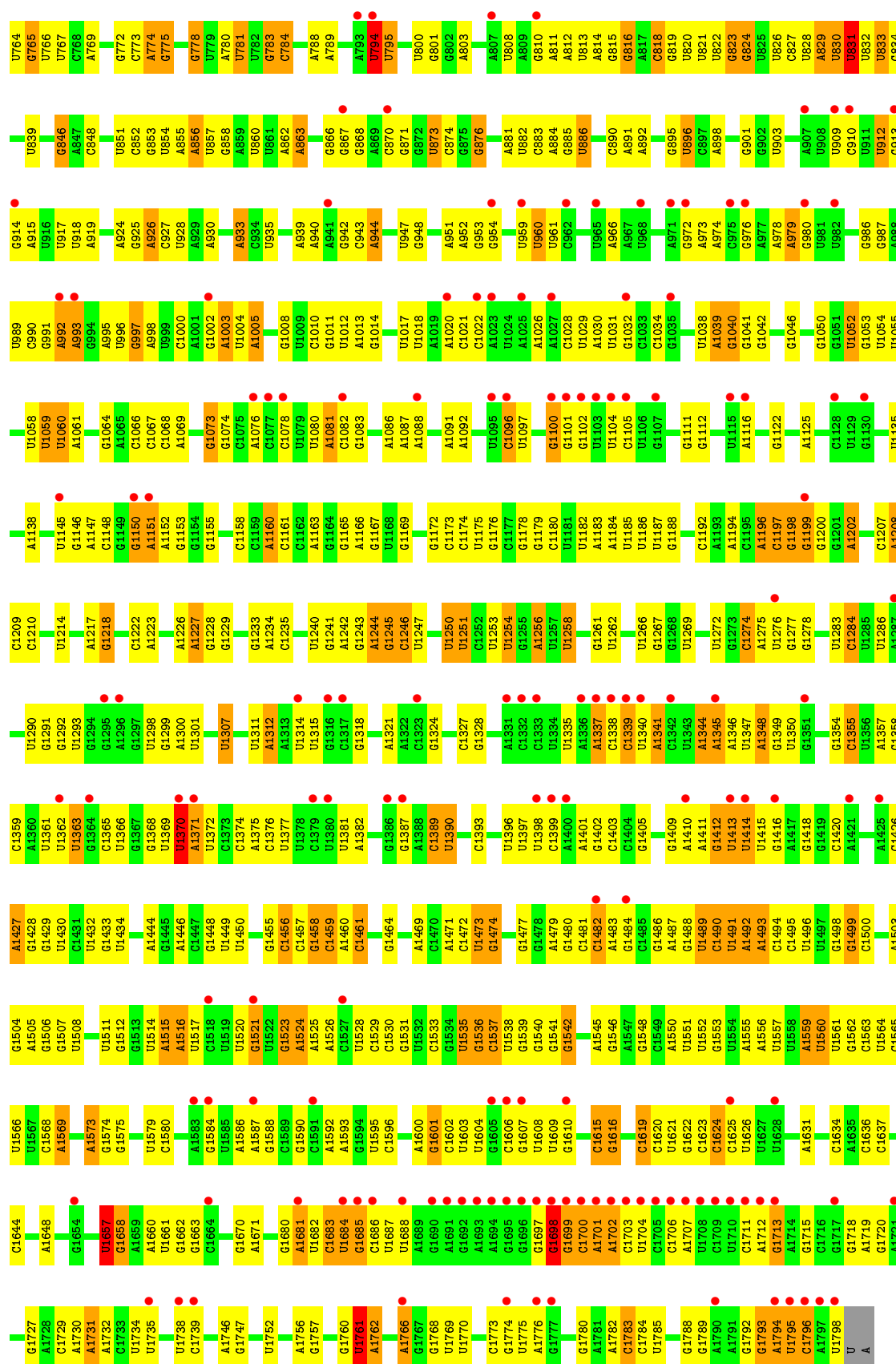
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
86	q0	1	Total 1	Zn 1	0	0
86	D6	1	Total 1	Zn 1	0	0
86	Q2	1	Total 1	Zn 1	0	0
86	e1	1	Total 1	Zn 1	0	0
86	Q3	1	Total 1	Zn 1	0	0
86	D9	1	Total 1	Zn 1	0	0
86	E1	1	Total 1	Zn 1	0	0
86	Q0	1	Total 1	Zn 1	0	0
86	d7	1	Total 1	Zn 1	0	0
86	q3	1	Total 1	Zn 1	0	0
86	d9	1	Total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

### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

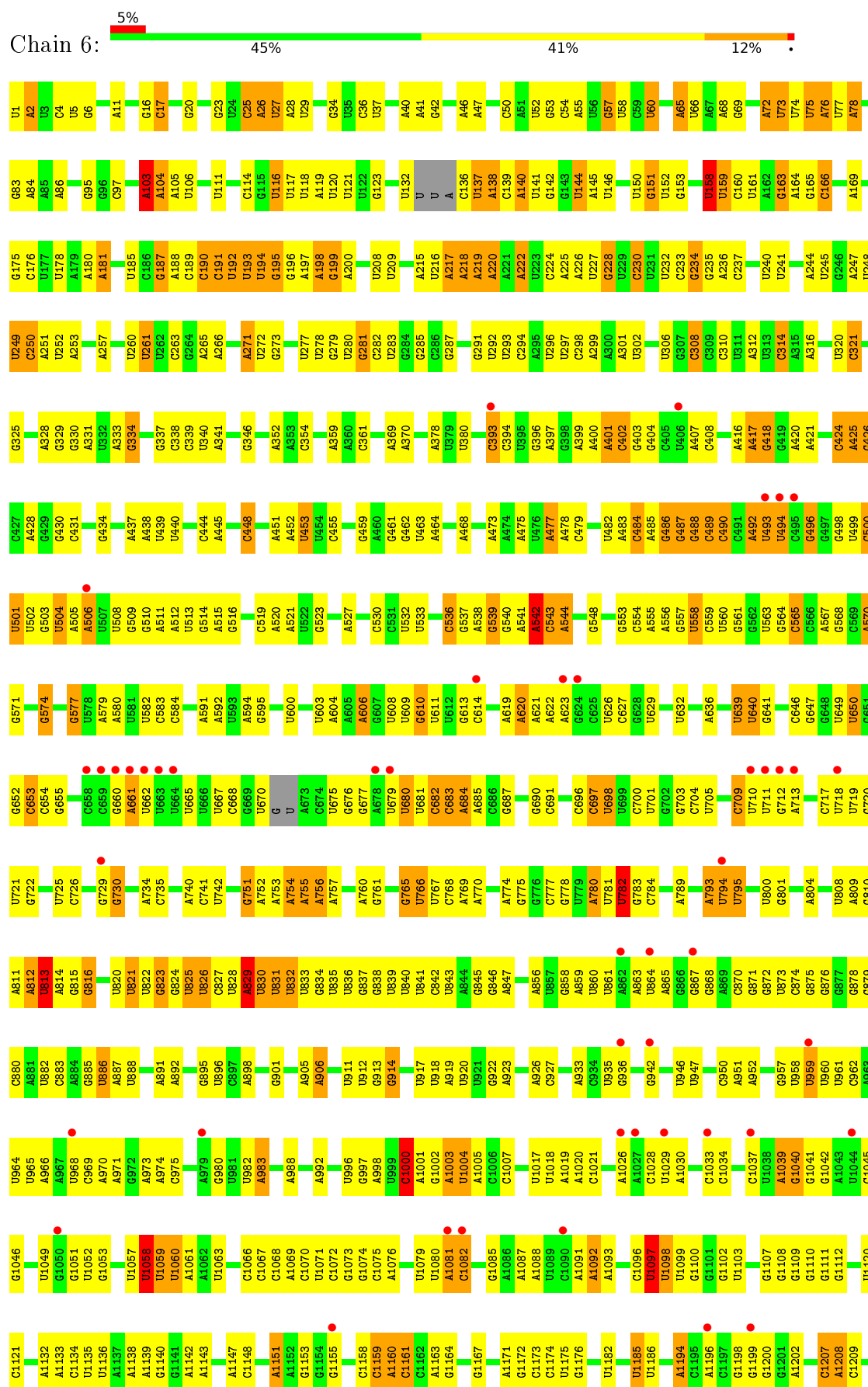
- Molecule 1: 18S ribosomal RNA





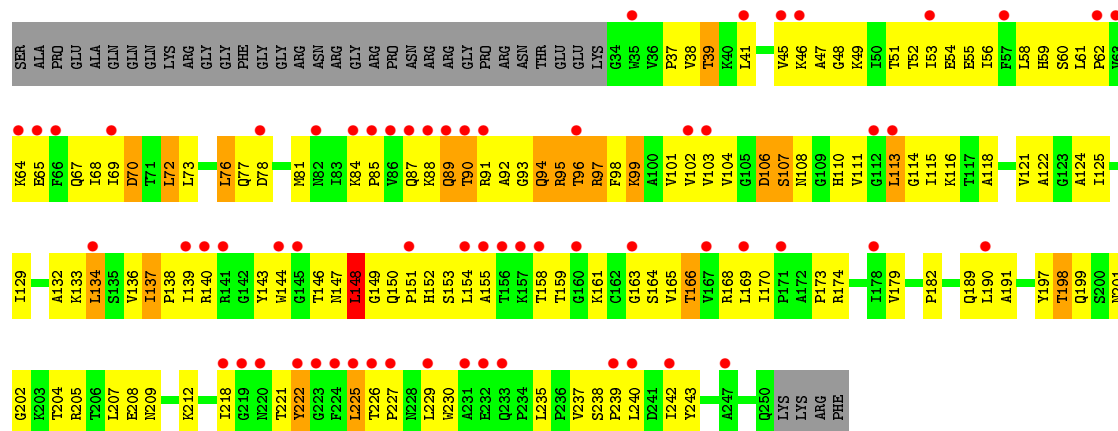
- Molecule 1: 18S ribosomal RNA



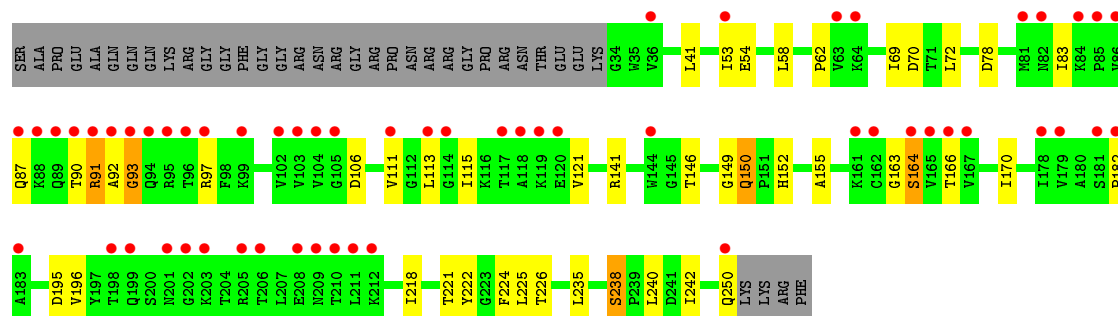




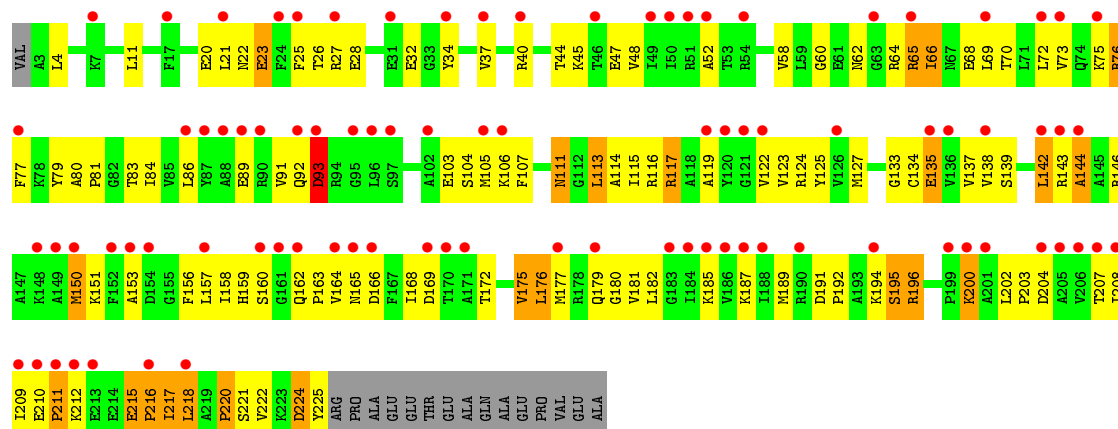
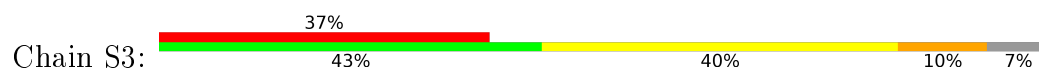




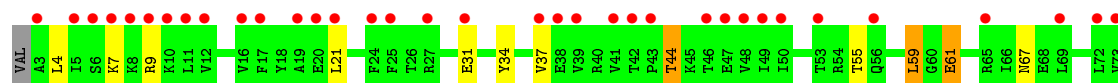
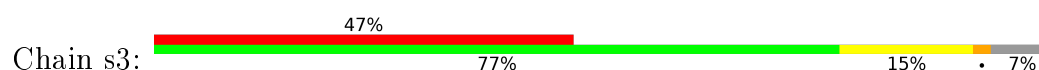
• Molecule 4: 40S ribosomal protein S2

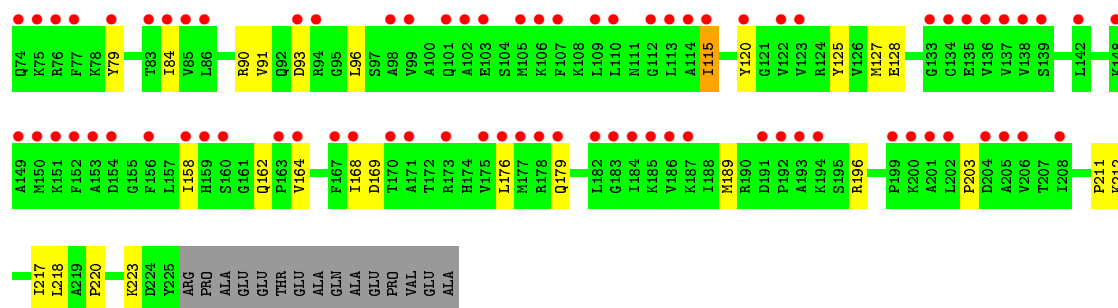


• Molecule 5: 40S ribosomal protein S3

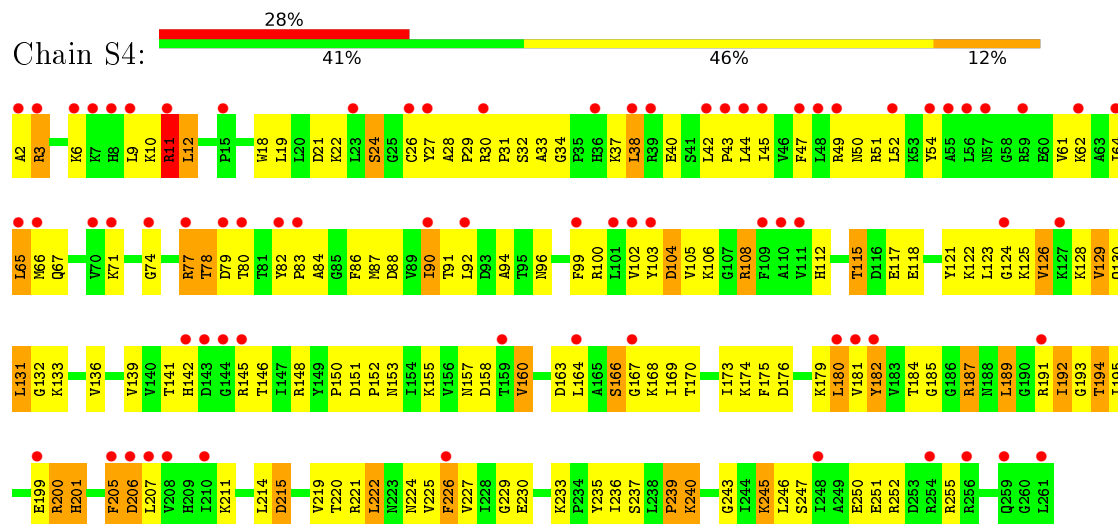


• Molecule 5: 40S ribosomal protein S3

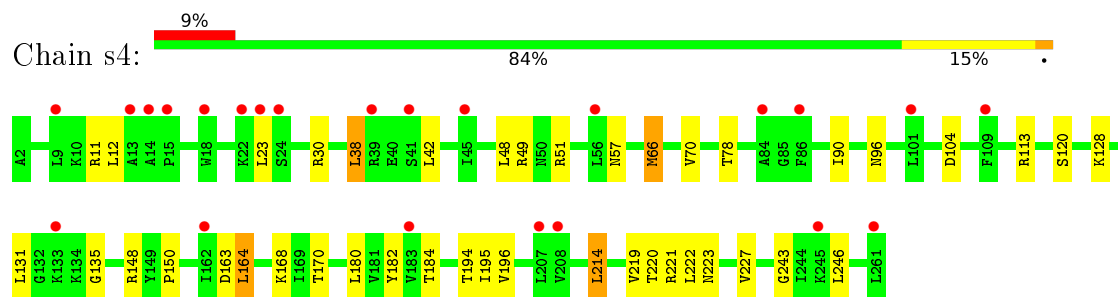




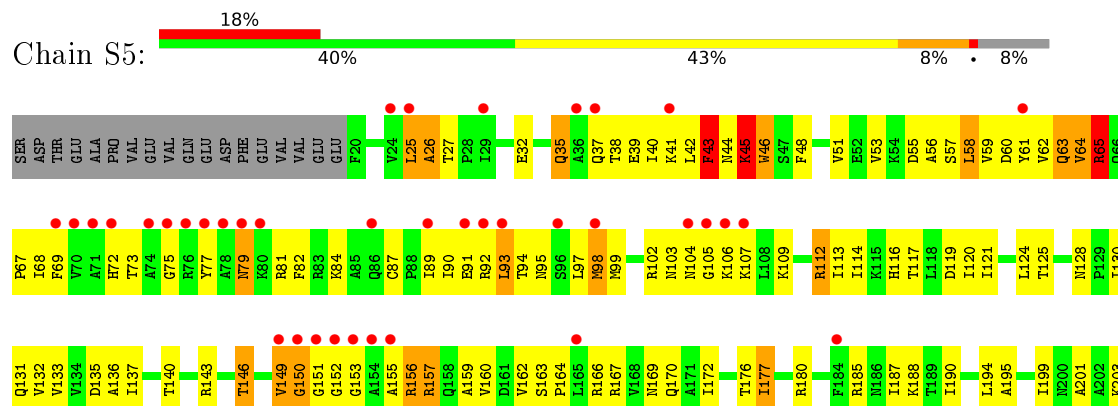
• Molecule 6: 40S ribosomal protein S4-A

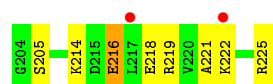


• Molecule 6: 40S ribosomal protein S4-A

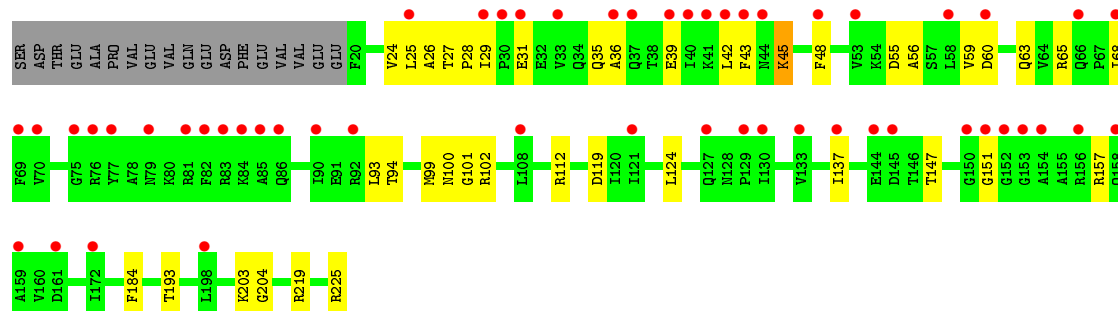
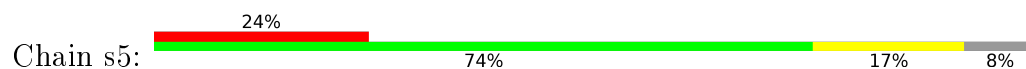


• Molecule 7: 40S ribosomal protein S5

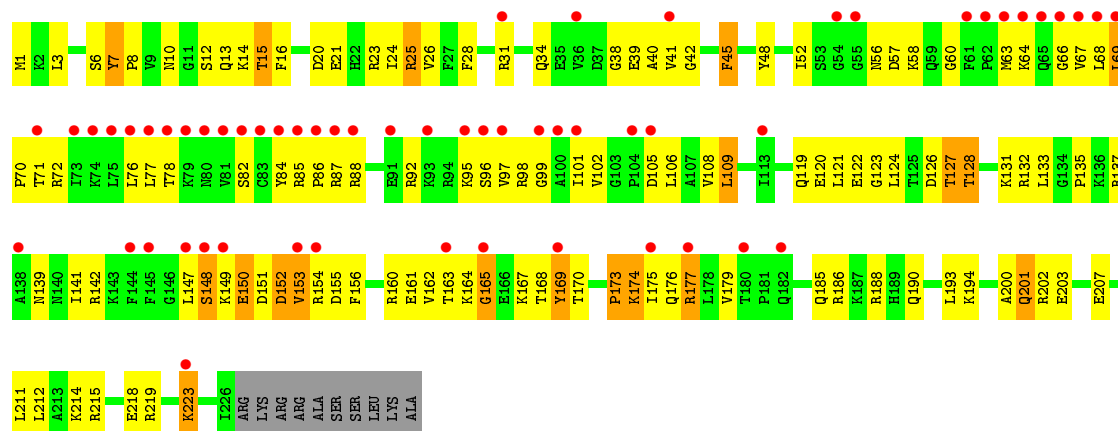
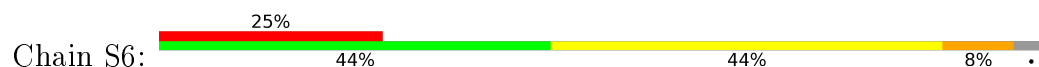




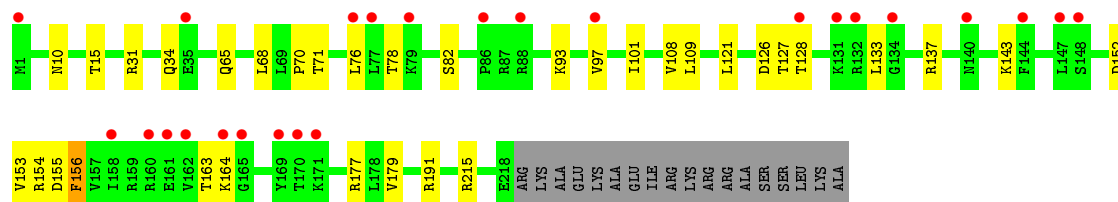
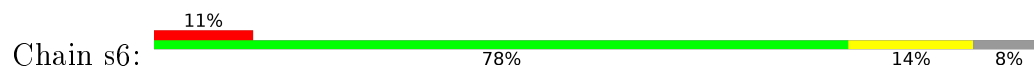
- Molecule 7: 40S ribosomal protein S5



- Molecule 8: 40S ribosomal protein S6-A

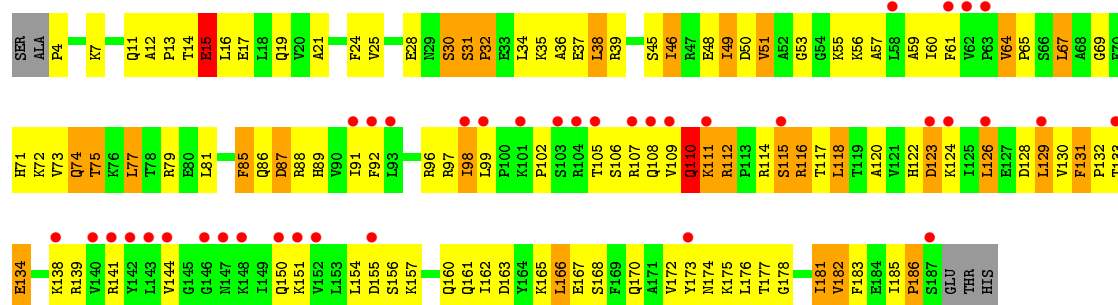


- Molecule 8: 40S ribosomal protein S6-A

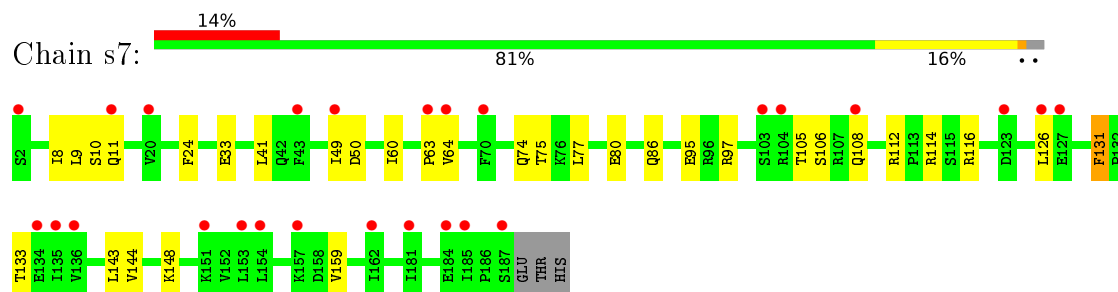


- Molecule 9: 40S ribosomal protein S7-A

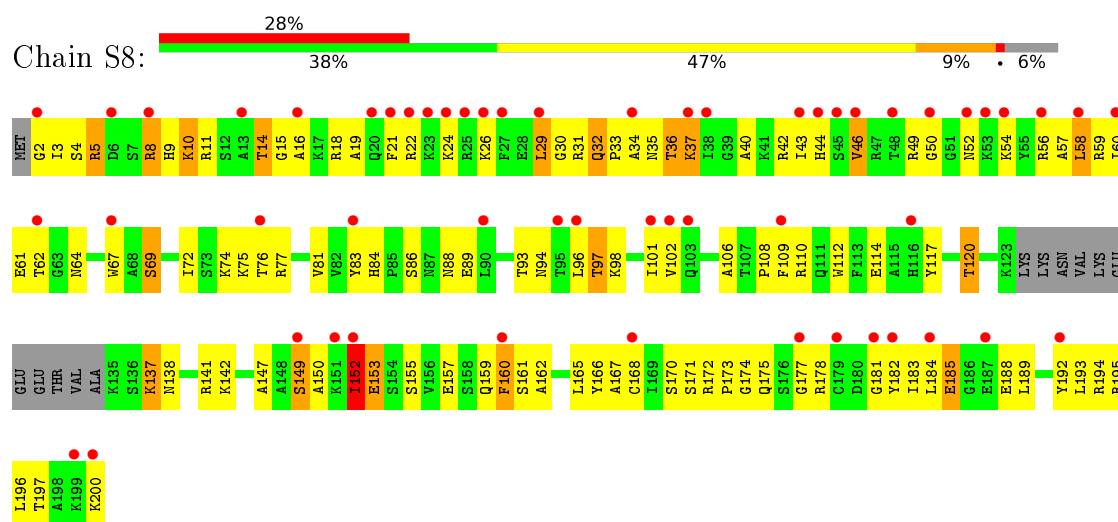




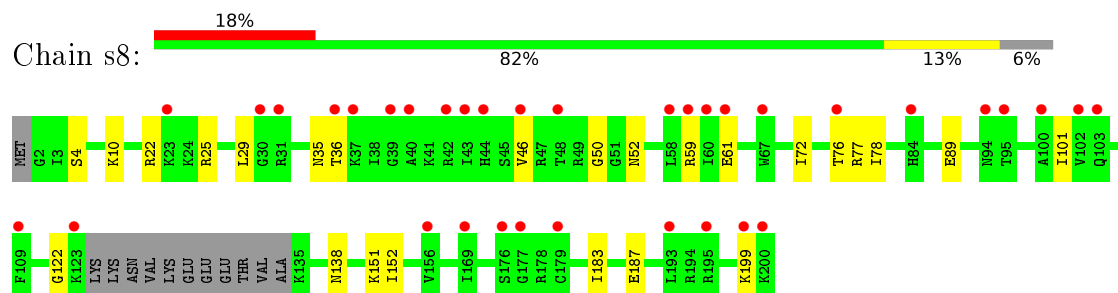
• Molecule 9: 40S ribosomal protein S7-A



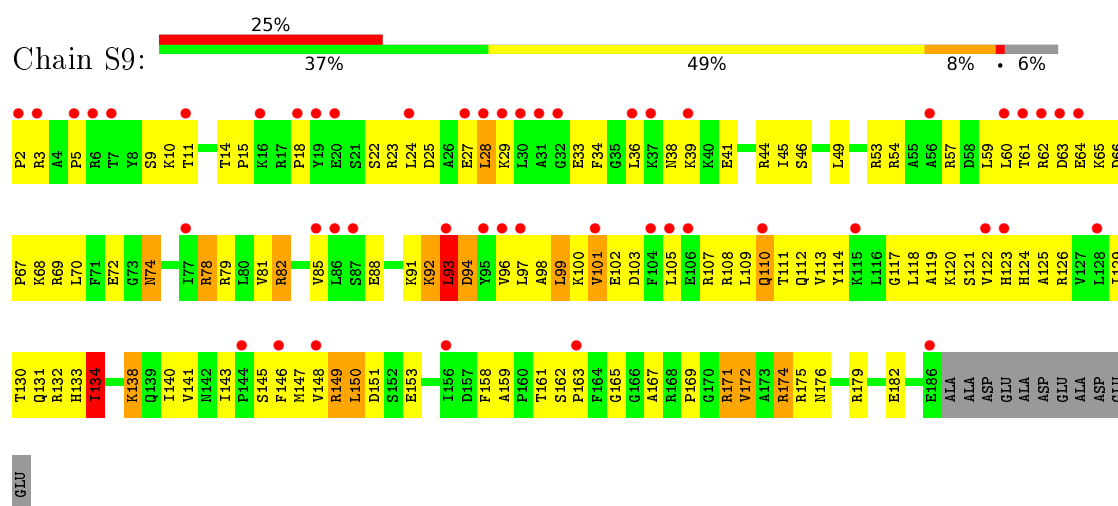
• Molecule 10: 40S ribosomal protein S8-A



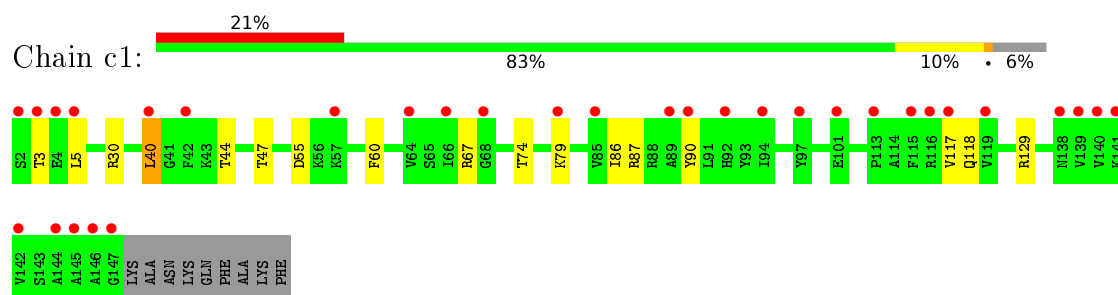
• Molecule 10: 40S ribosomal protein S8-A



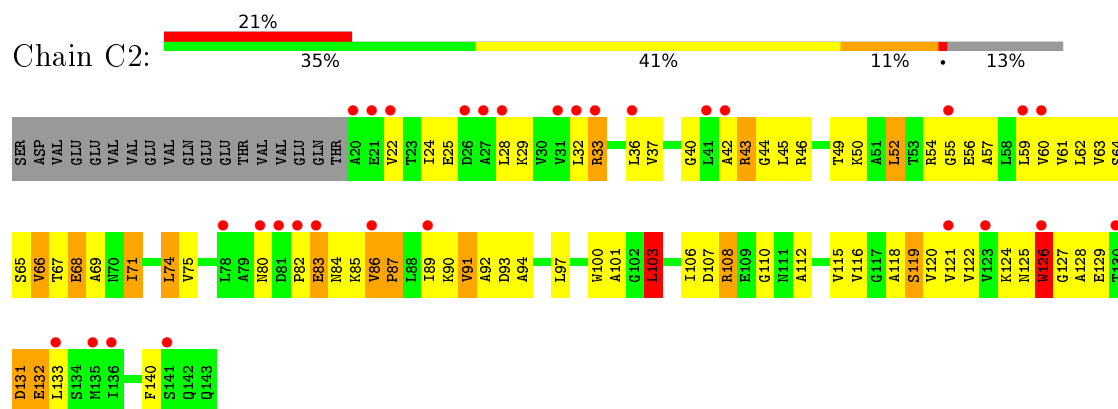
• Molecule 11: 40S ribosomal protein S9-A



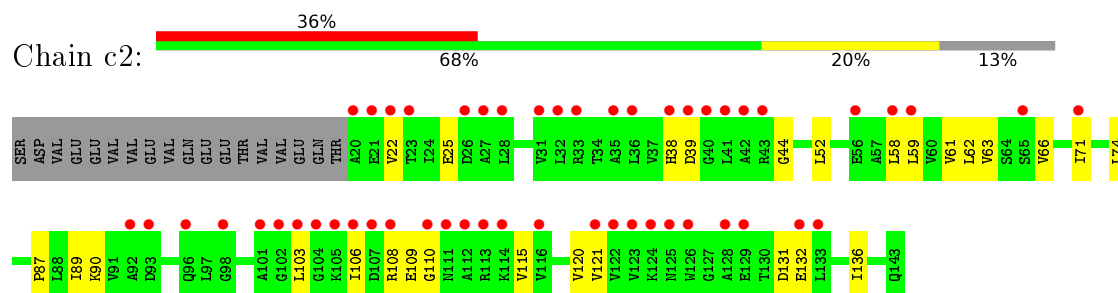




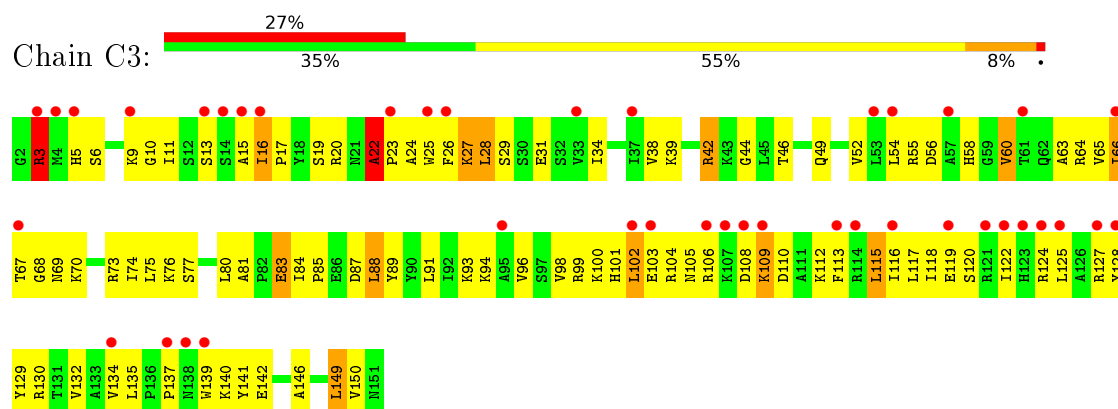
- Molecule 14: 40S ribosomal protein S12



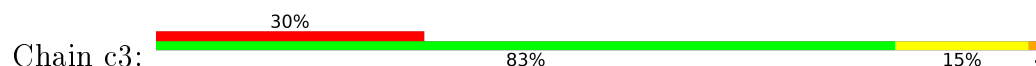
- Molecule 14: 40S ribosomal protein S12

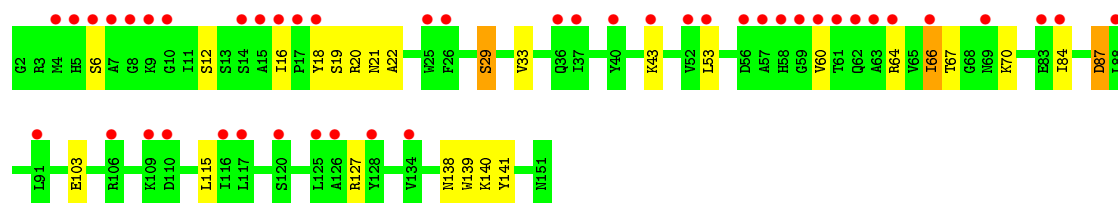


- Molecule 15: 40S ribosomal protein S13

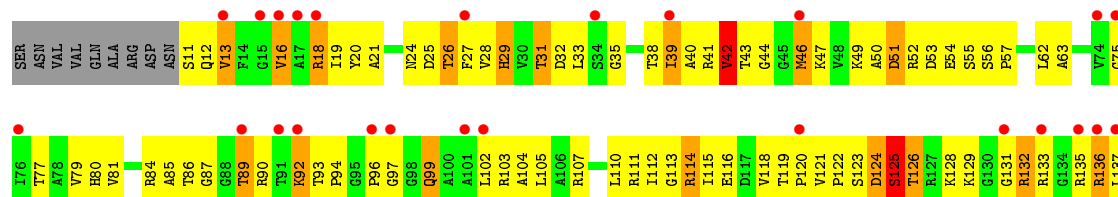


- Molecule 15: 40S ribosomal protein S13

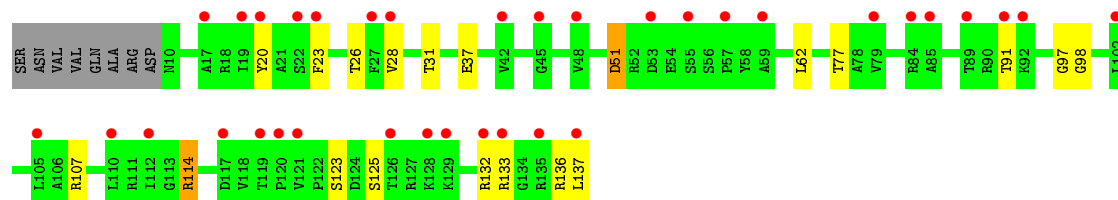
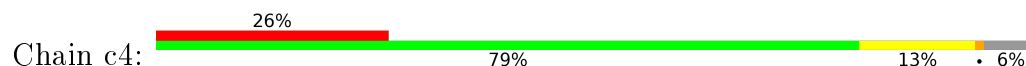




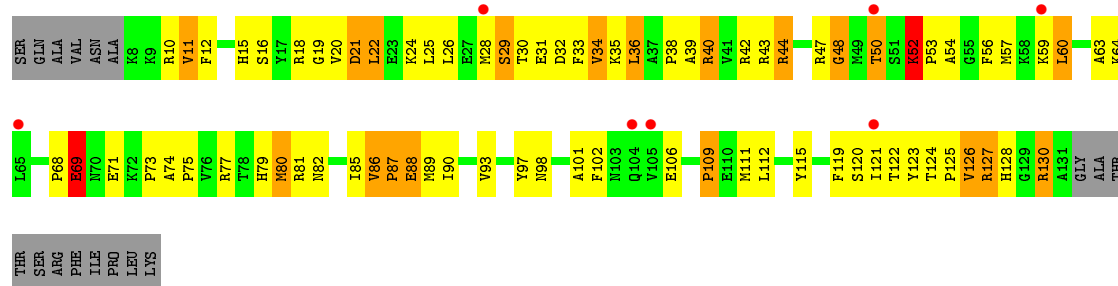
• Molecule 16: 40S ribosomal protein S14-A



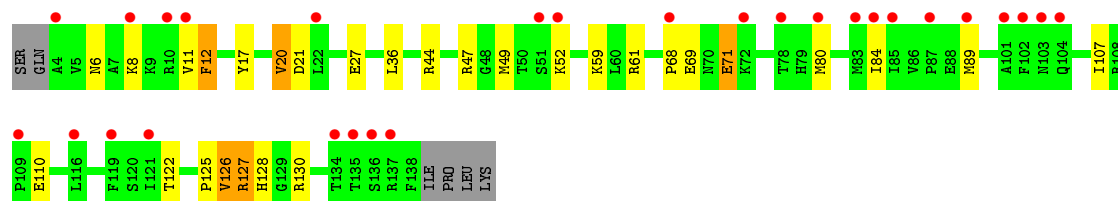
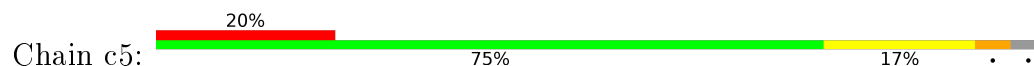
• Molecule 16: 40S ribosomal protein S14-A



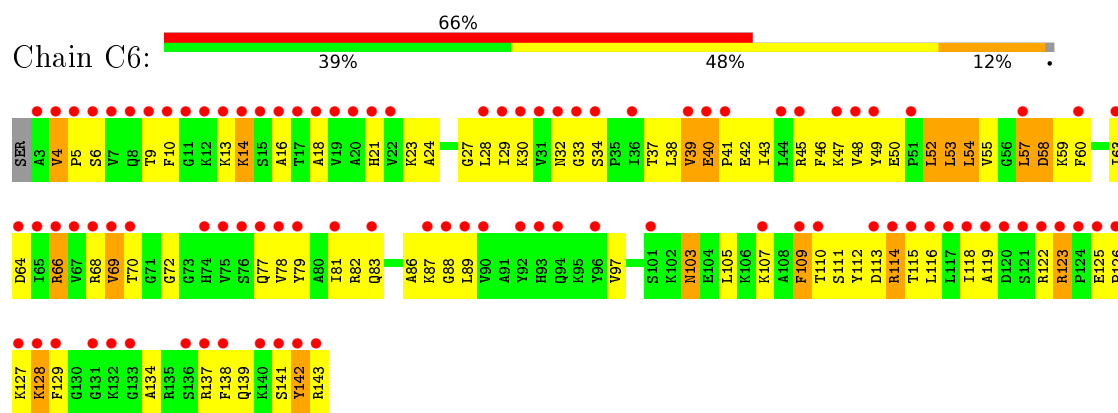
• Molecule 17: 40S ribosomal protein S15



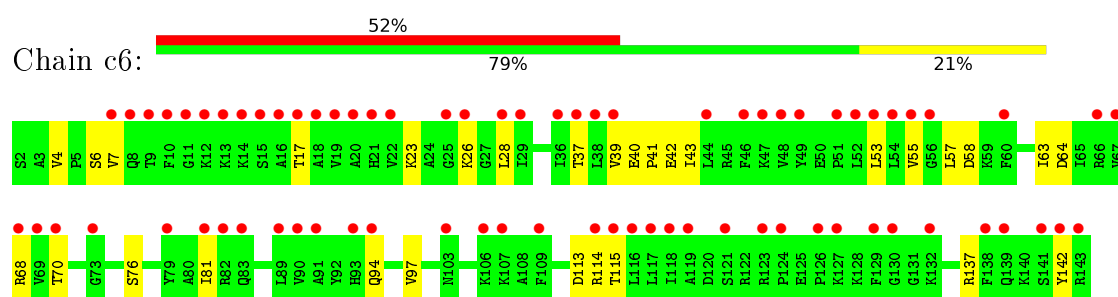
• Molecule 17: 40S ribosomal protein S15



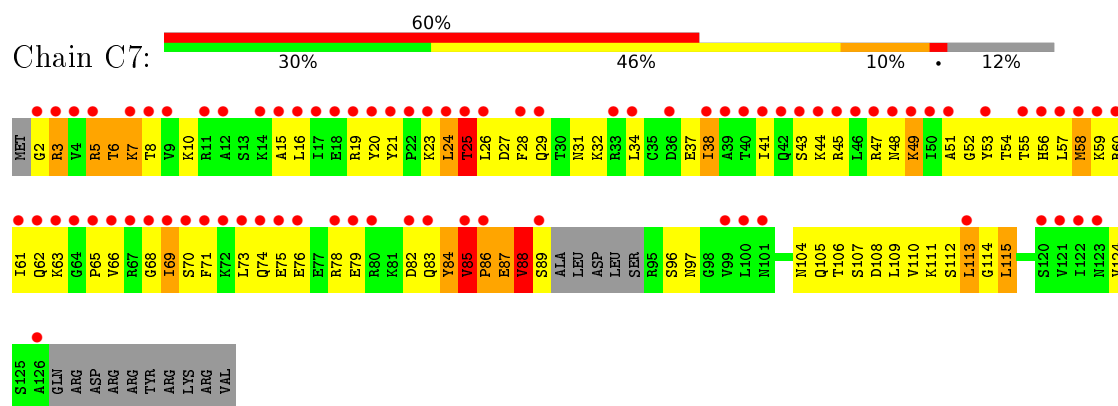
- Molecule 18: 40S ribosomal protein S16-A



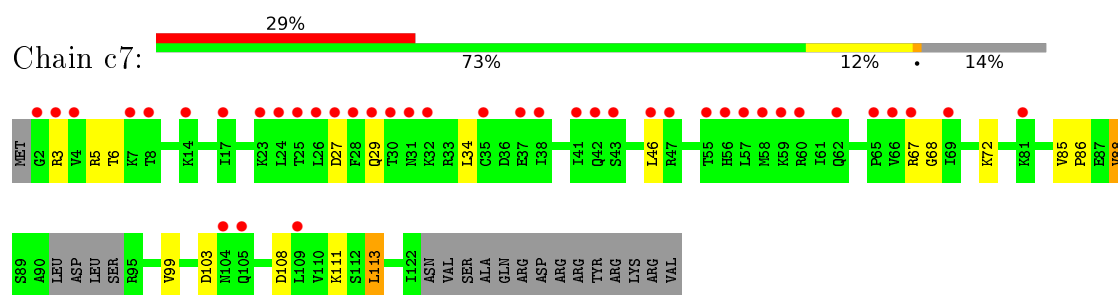
- Molecule 18: 40S ribosomal protein S16-A



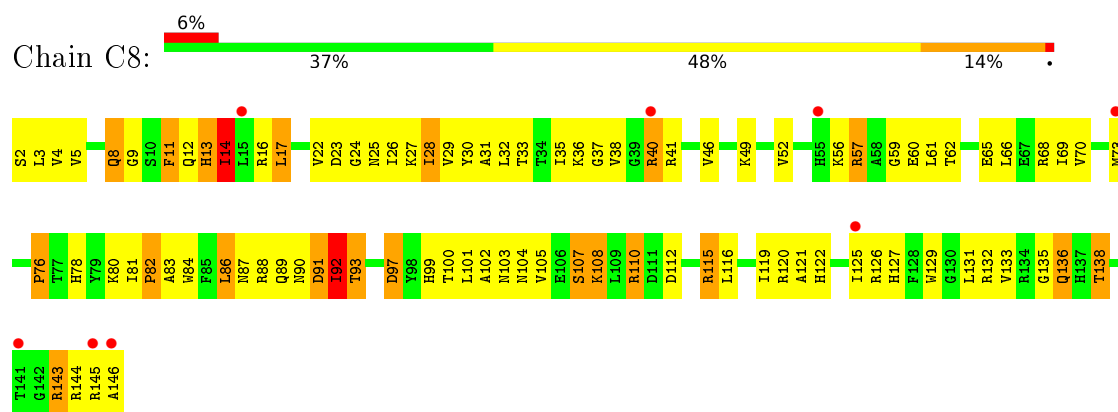
- Molecule 19: 40S ribosomal protein S17-A



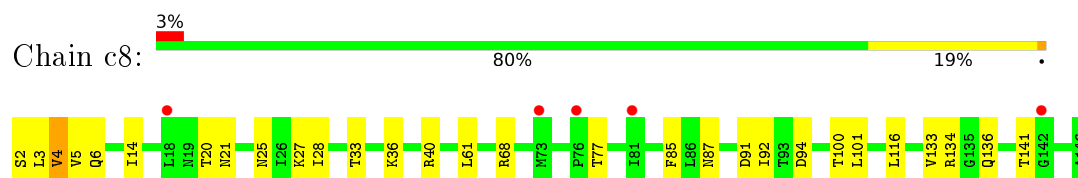
- Molecule 19: 40S ribosomal protein S17-A



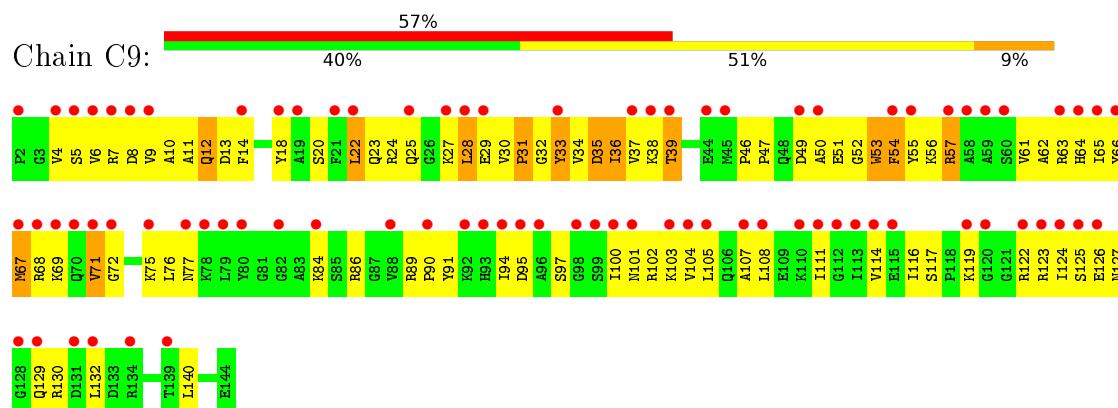
- Molecule 20: 40S ribosomal protein S18-A



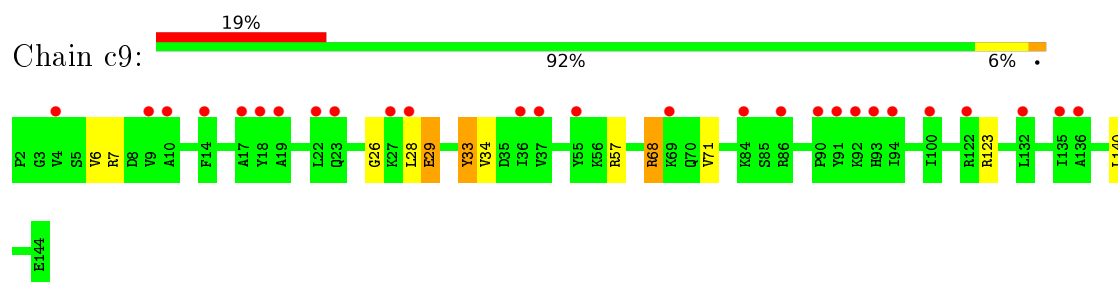
- Molecule 20: 40S ribosomal protein S18-A



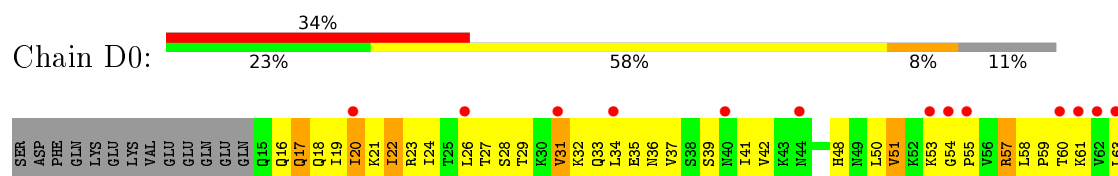
- Molecule 21: 40S ribosomal protein S19-A

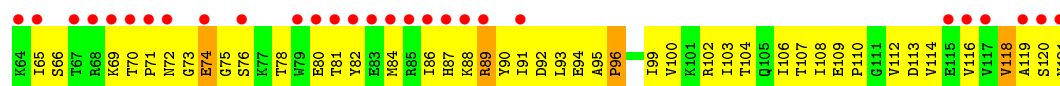


- Molecule 21: 40S ribosomal protein S19-A

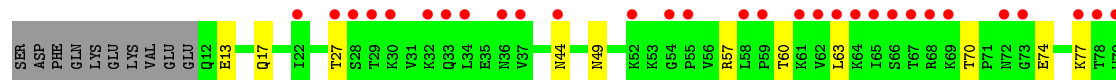
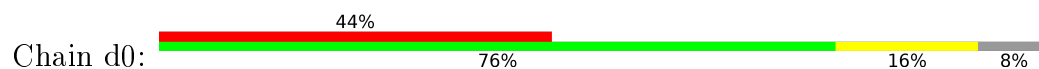


- Molecule 22: 40S ribosomal protein S20

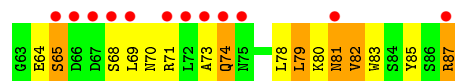




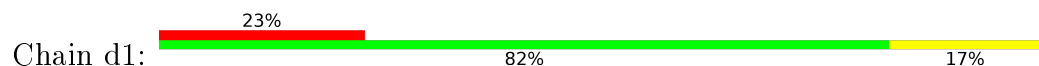
• Molecule 22: 40S ribosomal protein S20



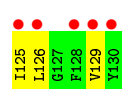
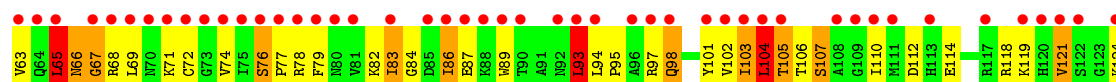
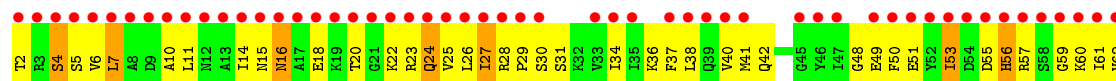
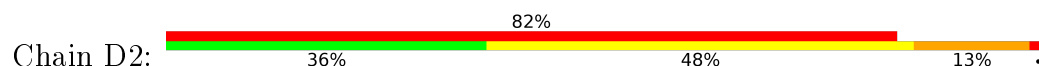
• Molecule 23: 40S ribosomal protein S21-A



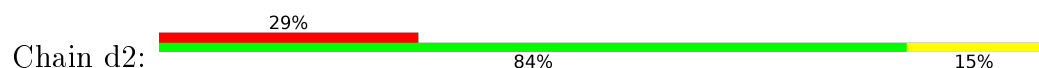
• Molecule 23: 40S ribosomal protein S21-A

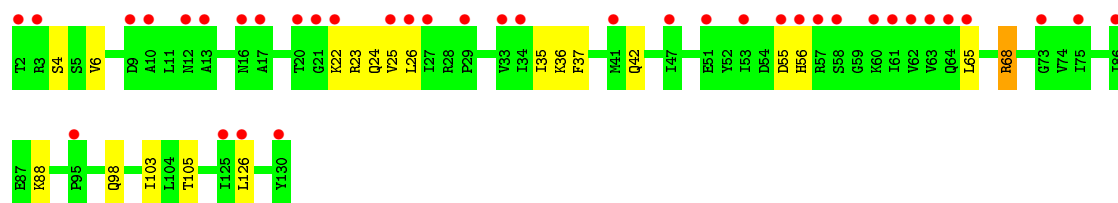


• Molecule 24: 40S ribosomal protein S22-A

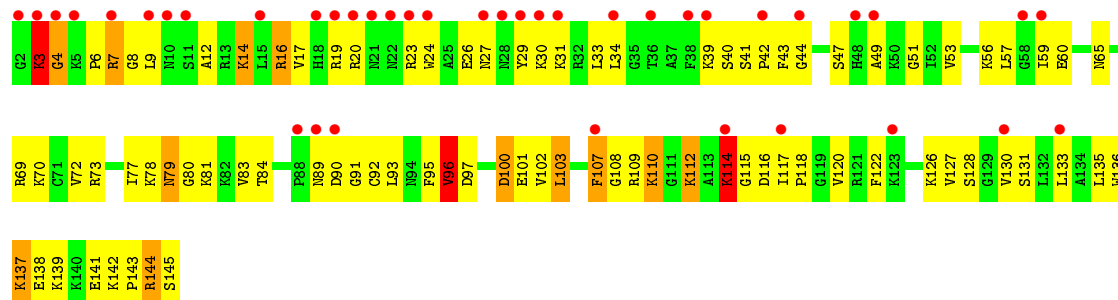


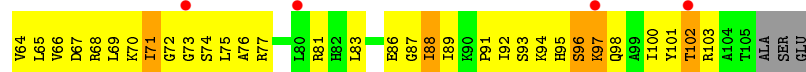
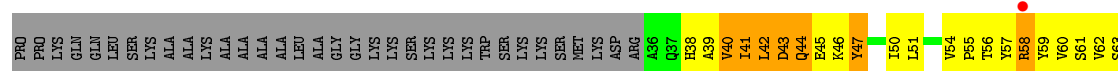
• Molecule 24: 40S ribosomal protein S22-A



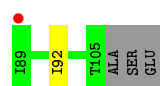
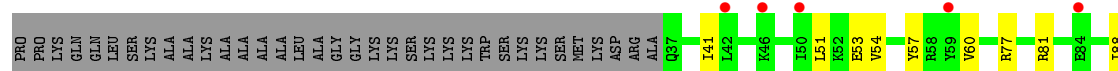


• Molecule 25: 40S ribosomal protein S23-A

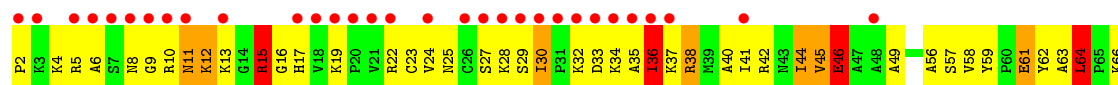




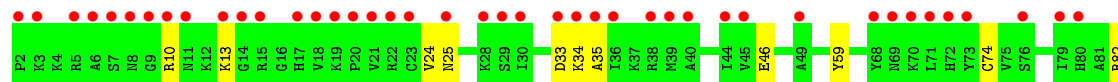
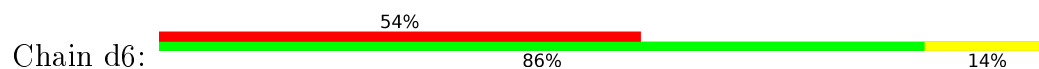
• Molecule 27: 40S ribosomal protein S25-A



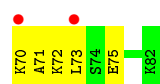
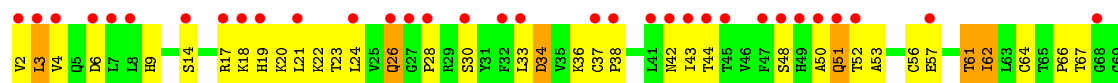
• Molecule 28: 40S ribosomal protein S26-B



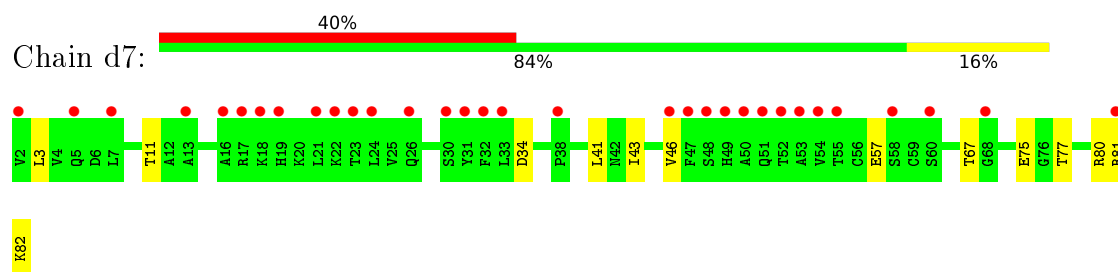
• Molecule 28: 40S ribosomal protein S26-B



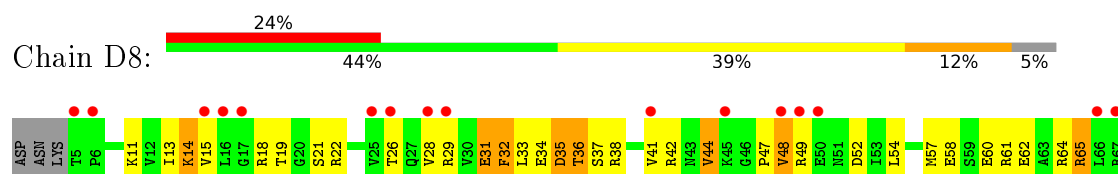
• Molecule 29: 40S ribosomal protein S27-A



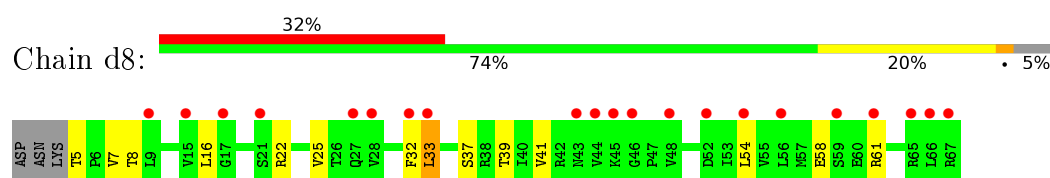
• Molecule 29: 40S ribosomal protein S27-A



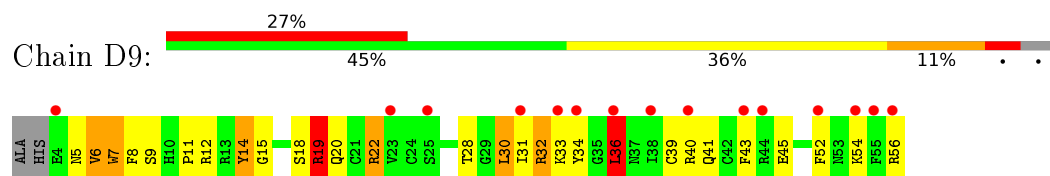
- Molecule 30: 40S ribosomal protein S28-A



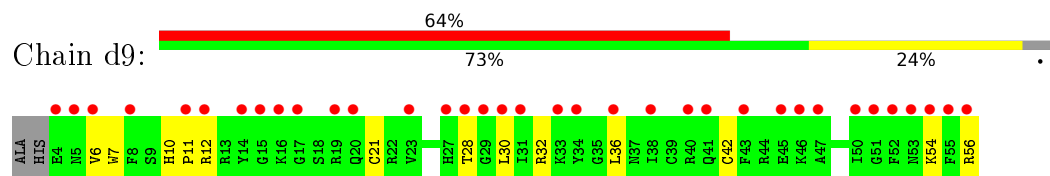
- Molecule 30: 40S ribosomal protein S28-A



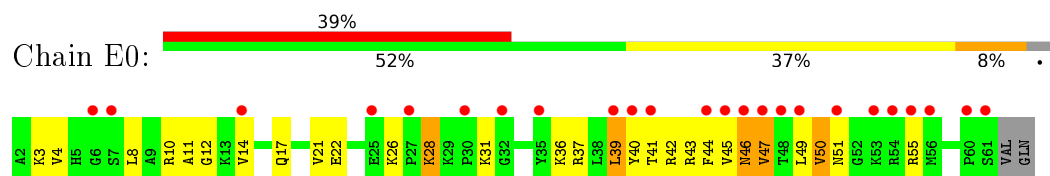
- Molecule 31: 40S ribosomal protein S29-A



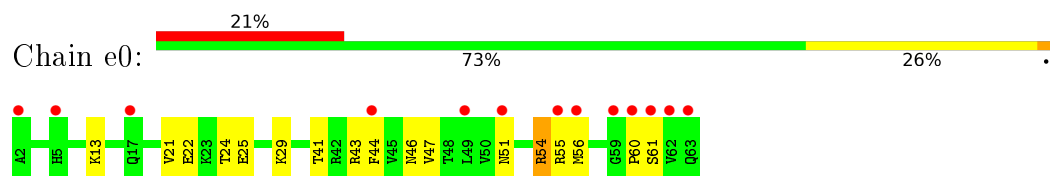
- Molecule 31: 40S ribosomal protein S29-A



- Molecule 32: 40S ribosomal protein S30-A

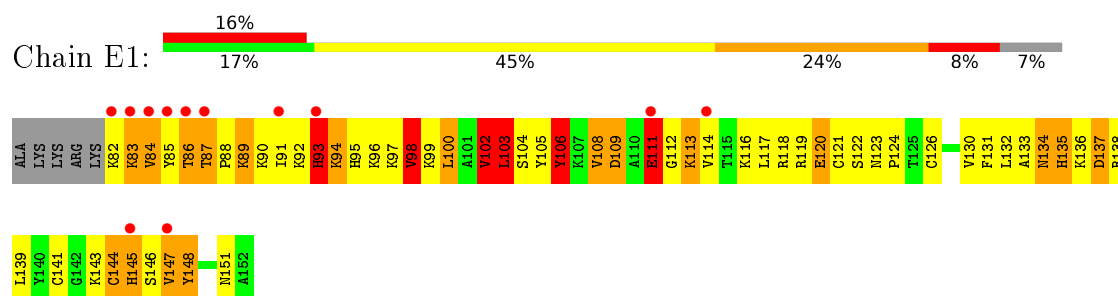


- Molecule 32: 40S ribosomal protein S30-A

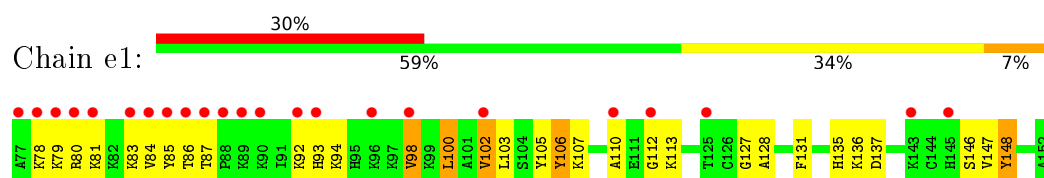




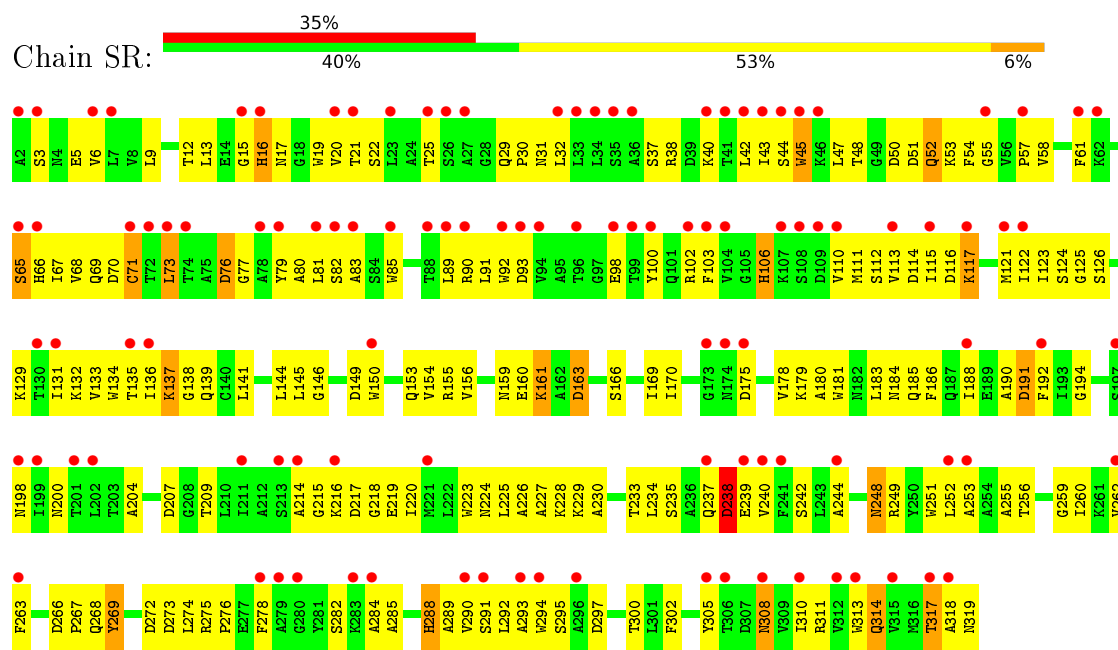
- Molecule 33: Ubiquitin-40S ribosomal protein S31



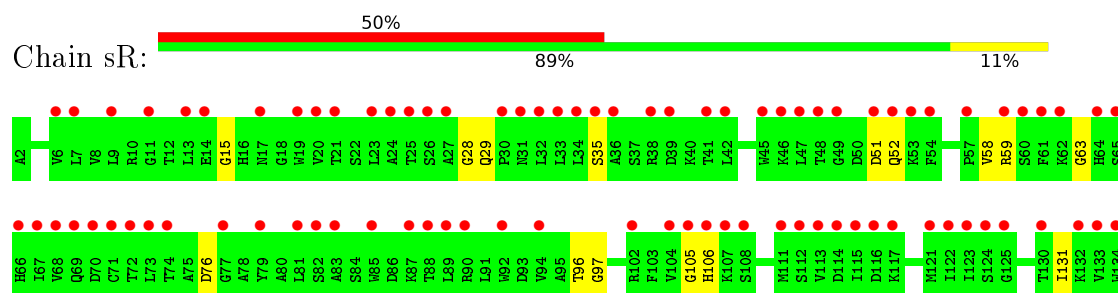
- Molecule 33: Ubiquitin-40S ribosomal protein S31

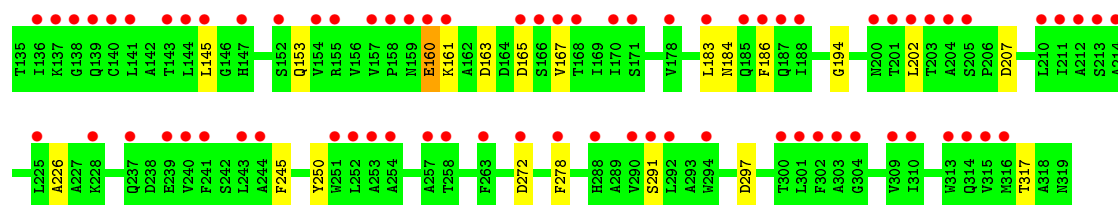


- Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein

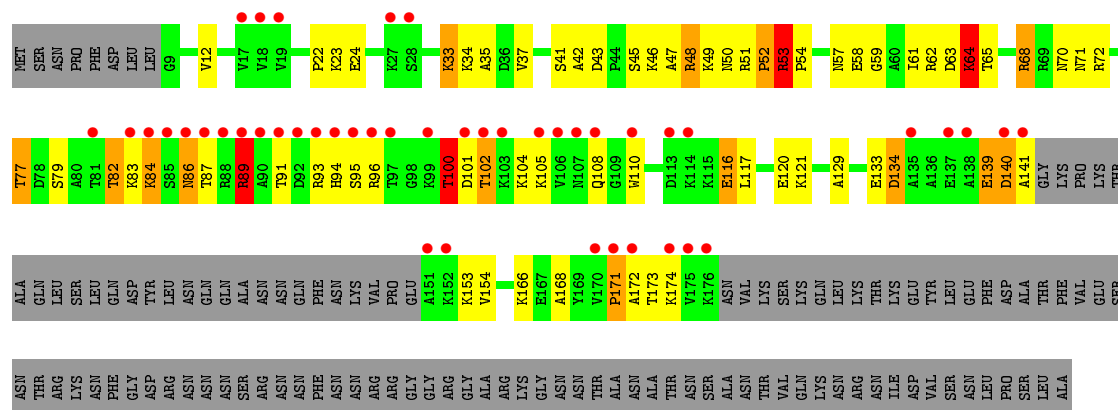
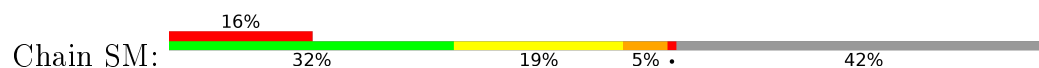


- Molecule 34: Guanine nucleotide-binding protein subunit beta-like protein

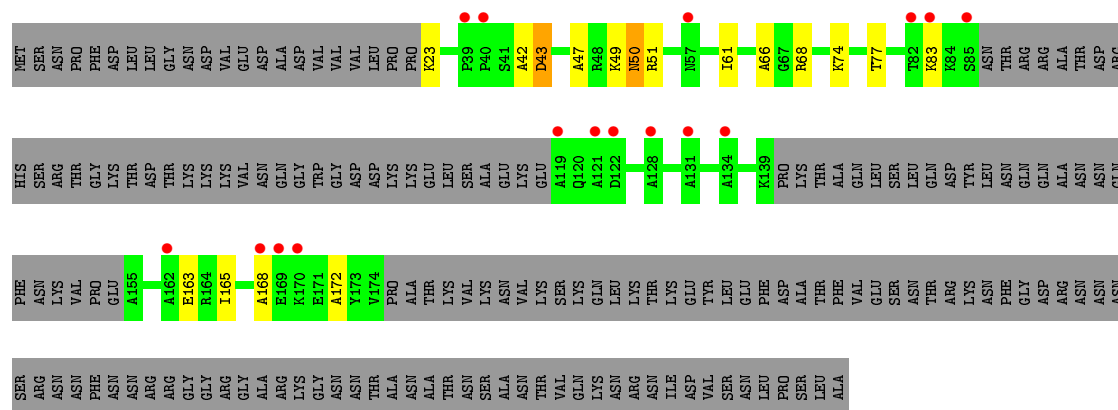




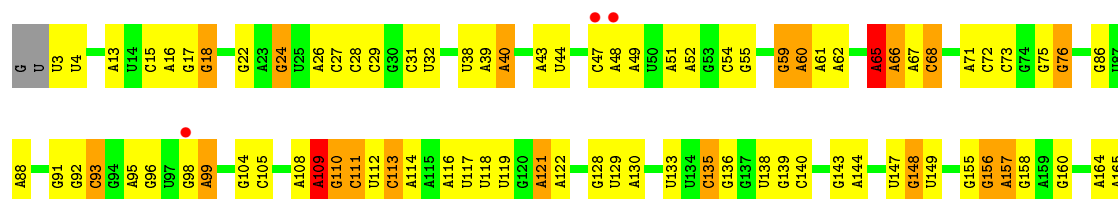
• Molecule 35: Suppressor protein STM1



• Molecule 35: Suppressor protein STM1

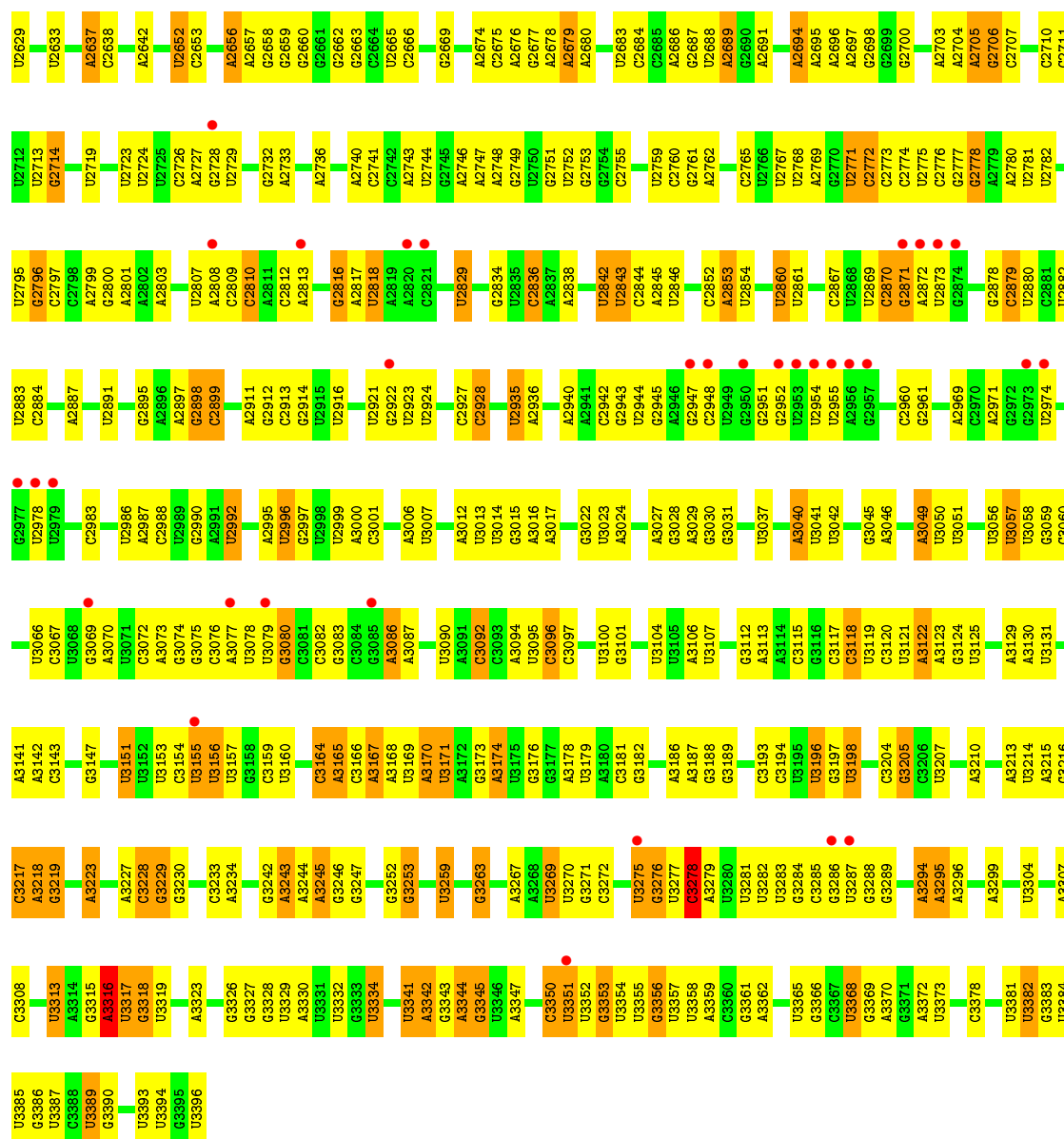


• Molecule 36: 25S ribosomal RNA

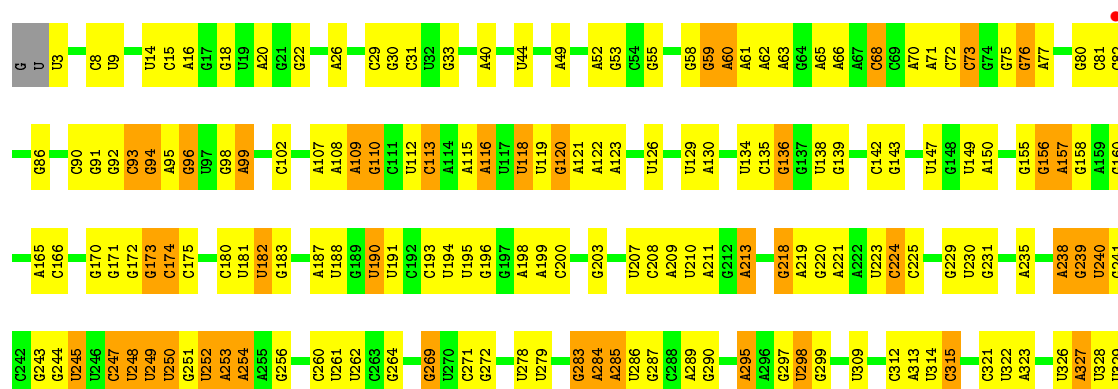


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G1349	C1257	G1178	U1082	A1092	A837	G749	U662	G584	C	A423	G345	U263	C175
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A1352	G1260	U1181	G1090	G924	C840	G754	A665	U587	G494	G426	C349	A266	U178
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G1354	A1262	C1185	U1015	A926	A846	G760	U671	G588	A498	G437	G353	A268	G180
A1355	G1263	U1094	G1016	A929	A847	G760	A672	G591	A501	A438	U354	G269	U181
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G1357	U1265	U1096	G1018	G931	C849	U764	G674	G595	C503	A440	U359	G274	U190
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G1362	A1270	A1098	U1023	U938	G857	C767	U679	A598	U508	U	U362	U279	U191
A1363	A1271	G1101	C1023	U939	G857	G768	G680	C599	U508	U	G363	U280	C208
C1364	C1272	A1102	G1024	U943	C860	G769	U681	C599	U508	U	G364	U281	A209
U1365	A1273	A1103	A1025	U944	C861	G770	U682	U601	A516	U	U370	G282	C200
A1366	A1274	A1104	A1026	G945	C861	G770	U682	A602	U520	U	G371	G283	A201
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G1422	G1322	C1155	G1063	C982	G900	A816	A720	U643	A559	A	A403	U329	U245
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	U1341	U1247	G1072	A914	A828		G737	C655	A559	A	A412	U249	

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G2545	A2397	A2223	A2324	G2151	C	G	C1855	U1781	C1627	U1436
G2549	A2398	A2224	A2325	U2154	U	G	C1856	U1782	U1533	U1437
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G2567	A2419	A2256		U2176	G2095	C	A1898	C1725		
A2568		C2257		G2177	A2100	G	U1903	G1726		
A2569	C2422	U2258		A2178	C2101	C	C1904	G1727		
U2570	U2423			G2179	U2102	C	G1905	G1728		
U2571	A2424			G2180	U2103	C	G1906	A1729		
G2572	G2425			C2181		C	G1907	G1730		
G2573				C2182	A2107	G	A1910	G1731		
G2575	G2437			U2185	C2108	U	A1911	U1739		
G2576				U2186	G2111	U	A1915	U1740		
	G2442			G2187	U2112	A	U1916	A1815		
U2581	A2443			U2188	C2113	C	A1922	A1816		
G2585	A2444			U2189	G2114	G	C1923	A1817		
G2586	A2445			U2190	C2115	C	U1924	U1818		
U2587				U2191		C	U1925	U1819		
U2588				C2192	A2120	G	U1926	U1820		
G2589				U2193	G2121	C	G1927	U1821		
A2590				G2194	G2122	C	A1932	U1831		
G2591				C2195		C	U1933	G1832		
G2592					A2126	U	U1934	U1833		
A2593				A2198	G2130	G	A1935	A1750		
G2594				C2202	U2131	C	G1676	G1751		
				U2297	C2132	U	A1677	A1752		
G2606				U2298	G2133	A	U1677	G1761		
G2607				A2300	C2134	G	U1682	U1762		
				G2302	U2137	C	U1683	U1763		
G2614				A2303	U2209	U	U1684	U1764		
G2615				G2306	G2210	C	C1685	U1765		
G2616				C2307	U2211	U	U1686	G1766		
U2617				G2308	C2212	C	G1687	C1767		
G2618				U2309	A2213	U	U1688	U1768		
				G2310	A2214	C	U1689	U1769		
G2621				U2338	A2215	U	C1690	G1770		
G2622				C2339	A2216	C	U1691	C1771		
G2623				G2391	U2217	A	G1692	G1772		
G2624				C2392	A2218	C	G1693	U1692		
A2625				U2314	G2219	G	G1515	A1602		
G2626				G2316	A2220	C	G1516	A1603		
							G1517			

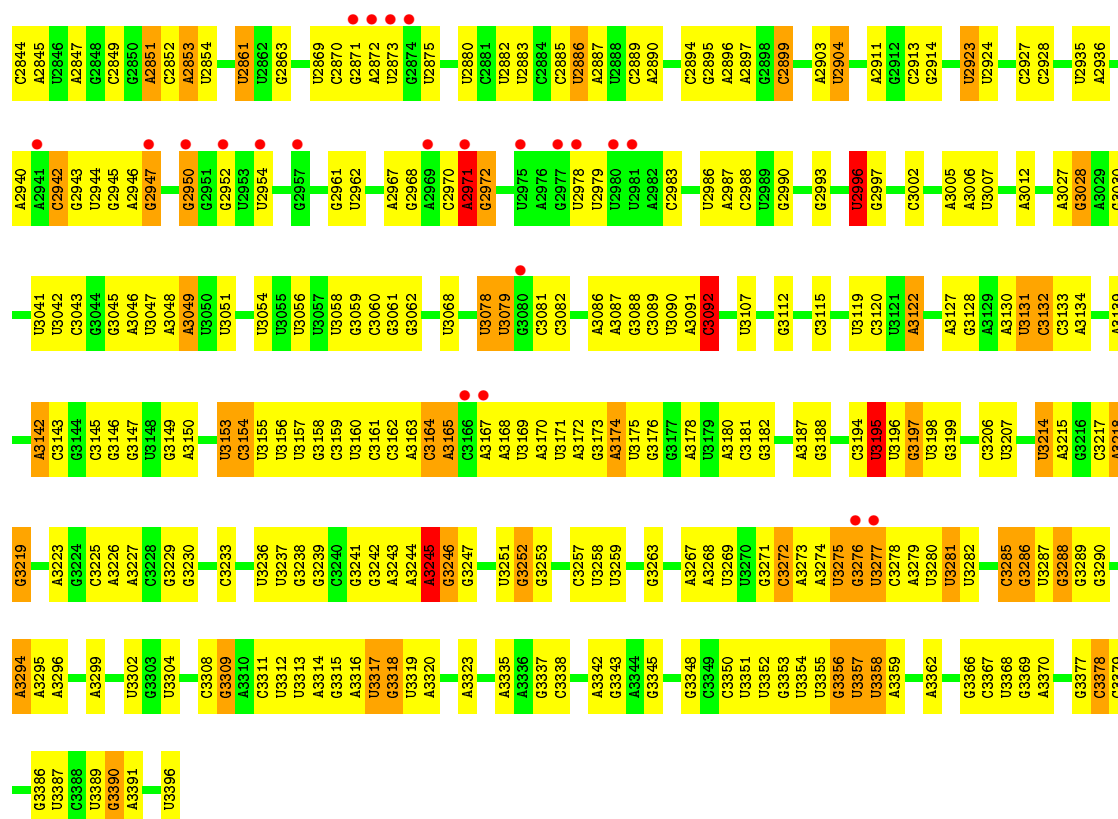


# • Molecule 36: 25S ribosomal RNA

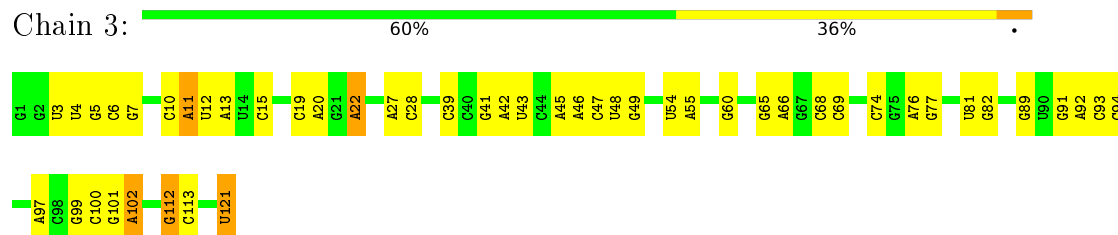




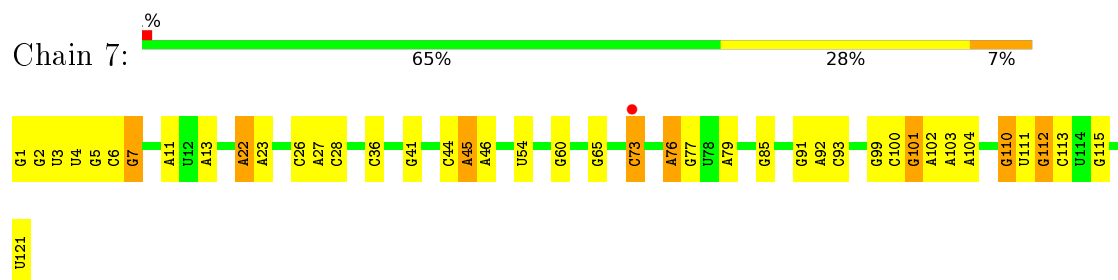
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G2755	A2674	U2501	G2441	G2355	A2262	A2183	A2103	G	A1804	A1715	G1623	G1624
A2761	G2675	G2502	G2442	G2356	U2184	U2184	G2105	C	U1903	C1805	U1716	A1625
A2762	A2676	U2503	C2443	A2357	U2264	G2187	A2106	G	G1906	A1806	U1717	G1628
U2763	G2677	A2504	A2445	A2358	G2265	U2188	G	U	G1907	G1807	G1718	U1629
G2764	U2683	G2507	U2446	G2359	U2266	U2189	A	U	A1908	G1812	U1719	U1630
G2765	C2684	U2508	A2447	C2360	C2267	U2192	U2112	C	G	A1813	U1720	A1631
U2766	U2686	U2509	G2448	G2361	G2272	U2193	A2113	U	A1913	A1814	U1721	G1632
U2771	U2687	U2510	G2450	G2364	A2271	C2197	C2114	C	A1914	U1815	U1722	G1633
G2772	U2688	U2513	G2451	G2370	G2272	A2198	G2115	U	A1915	U1816	U1723	G1634
G2773	A2690	U2514	G2452	G2371	G2273	A2199	G2116	C	U1916	G1817	C1725	G1635
G2774	U2691	A2515	U	A2372	G2276	A2198	A2117	C	U1925	U1818	G1728	C1639
G2777	A2694	U2516	G2452	A2373	G2277	G2201	C2118	A	C1926	A1819	G1729	G1640
G2778	C2600	U2517	G2453	G2374	C2278	C2202	A2119	C	U1944	U1820	G1730	U1641
A2779	A2601	G2518	U	G2375	G2278	U2203	G2121	U	U1821	U1821	A1642	A1643
A2780	G2602	A2519	G	G2376	A2279	G2204	G2122	C	A1932	U1824	G1738	C1644
A2786	A2696	A2520	A	G2377	A2280	U2205	G	U	A1933	G	G	A1645
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G2800	G	G2525	U	G2387	G2288	G2210	U2140	C	G1947	U1837	C1756	G1656
A2801	U2612	G2530	G	G2394	A2291	A2213	A2139	G	G1948	C1838	A1757	A1656
A2802	U2613	C2531	G	G2395	A2292	A2214	U2141	G	G1949	U1839	G1758	C1657
G2808	G2614	G2534	G	G2396	U2298	G2218	A2143	C	G1950	U1841	G1759	G1658
A2809	U2617	A2535	C	A2397	A2303	A2219	A2144	U	C1951	A1842	U1760	U1659
G2810	G2618	A2536	U	G2398	C2304	A2220	A2145	A	G1952	G	C1761	C1660
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G2812	G2624	C2538	C	A2401	G2306	A2224	U2148	C	G	A1847	U1764	G1662
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G2815	G2632	U2542	G	A2404	G2311	A2229	C2151	C	U	A1850	C1767	G1668
G2816	U2633	U2543	C	C2405	A2312	A2230	U2153	C	U	C1856	U1768	G1675
A2817	G2636	G2544	C	C2406	A2313	G2231	G2155	A	G	C1857	G1770	A1676
U2818	A2637	C2545	U	U2411	G2315	G2236	C2156	C	G	A1858	G1773	G1677
U2822	G2645	A2546	G	C2415	A2324	U2241	A2158	C	G	G1863	C1774	U1682
G2823	U2648	U2547	A	G2418	A2332	A2242	U2159	C	C	A1864	G1778	A1683
U2827	A2649	U2550	A	A2419	C2333	A2243	G2165	A	U	A1865	C1779	U1686
U2828	U2652	U2551	U	U2425	U2334	A2244	A2166	C	U	C1866	G1780	U1687
U2829	U2653	C2552	A	G2426	G2335	C2245	A2167	A	G	U1871	C1781	U1688
A2833	U2656	G2555	C	U2427	U2336	G2249	A2168	U	U	G1875	U1782	U1689
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A2837	G2657	U2558	G	G2429	U2340	G2251	U2170	A	A	U1877	G1784	C1693
A2838	U2658	C2560	U2493	U2433	A2341	A2252	G2171	G	G	G1878	U1785	U1694
G2749	G2659	G2563	A2494	U2433	U2342	G2253	U2173	C	A	A1879	G1786	U1695
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G2751	U2664	C2566	C2496	U2437	A2344	A2255	C2098	C	A	A1886	G1792	A1699
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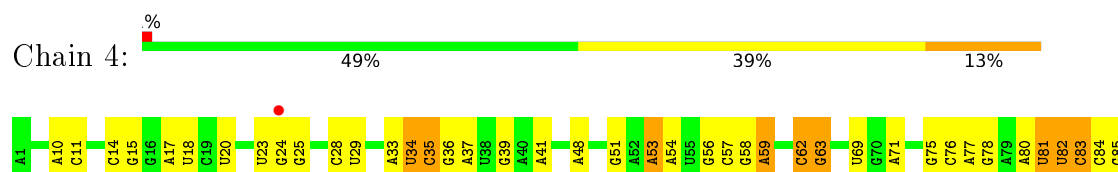
• Molecule 37: 5S ribosomal RNA



• Molecule 37: 5S ribosomal RNA



• Molecule 38: 5.8S ribosomal RNA



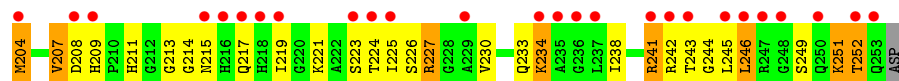
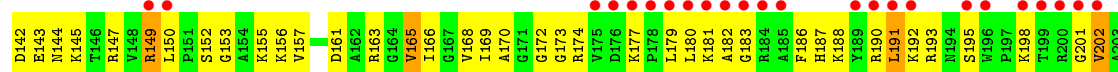
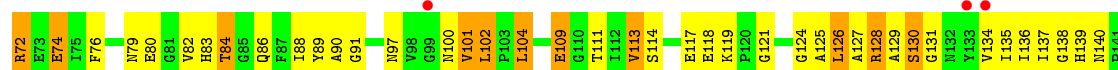
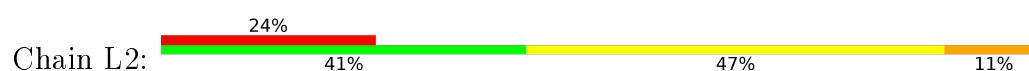




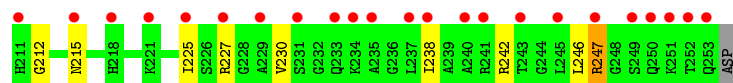
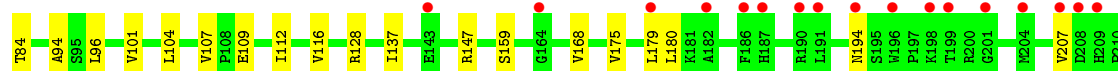
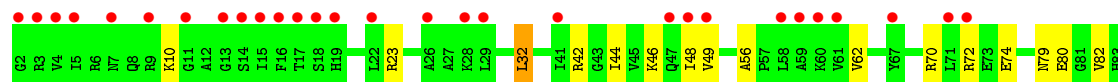
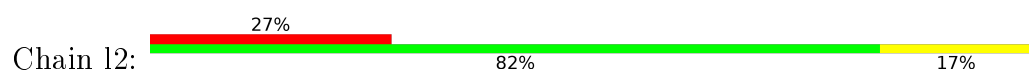
• Molecule 38: 5.8S ribosomal RNA



• Molecule 39: 60S ribosomal protein L2-A

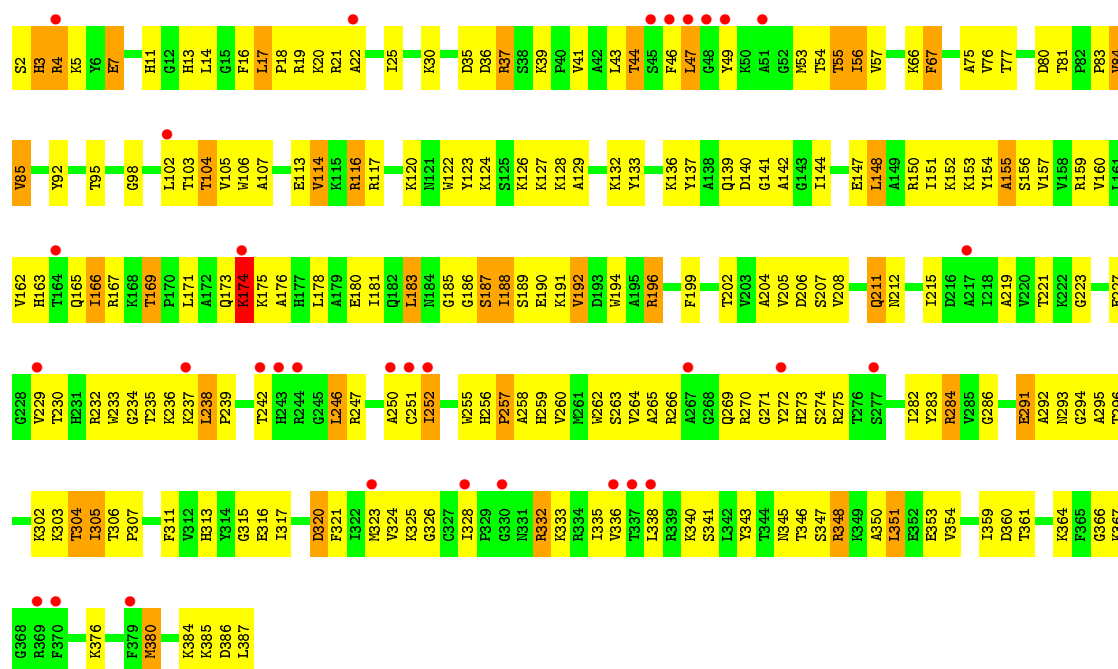


• Molecule 39: 60S ribosomal protein L2-A

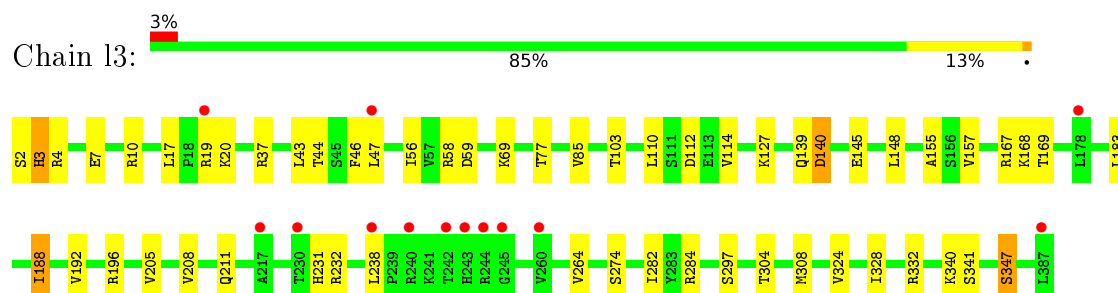


• Molecule 40: 60S ribosomal protein L3

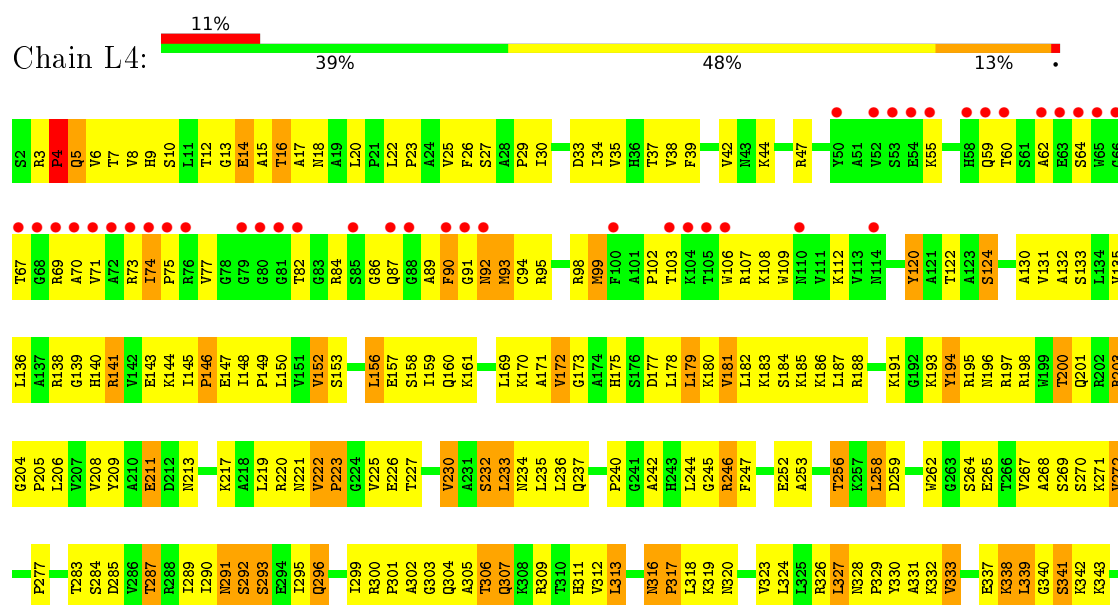




• Molecule 40: 60S ribosomal protein L3



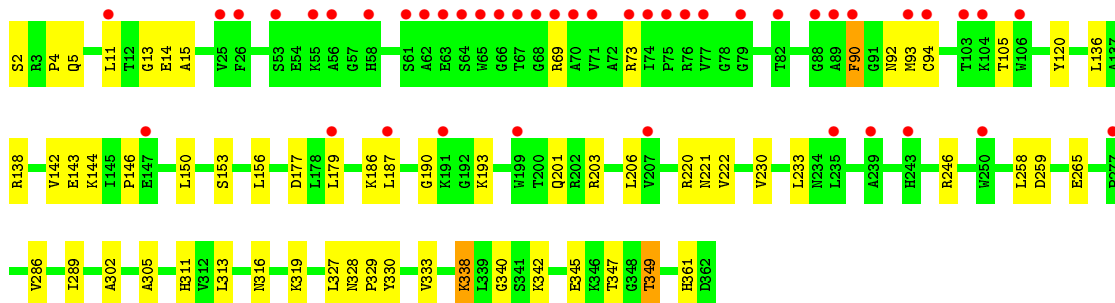
• Molecule 41: 60S ribosomal protein L4-A





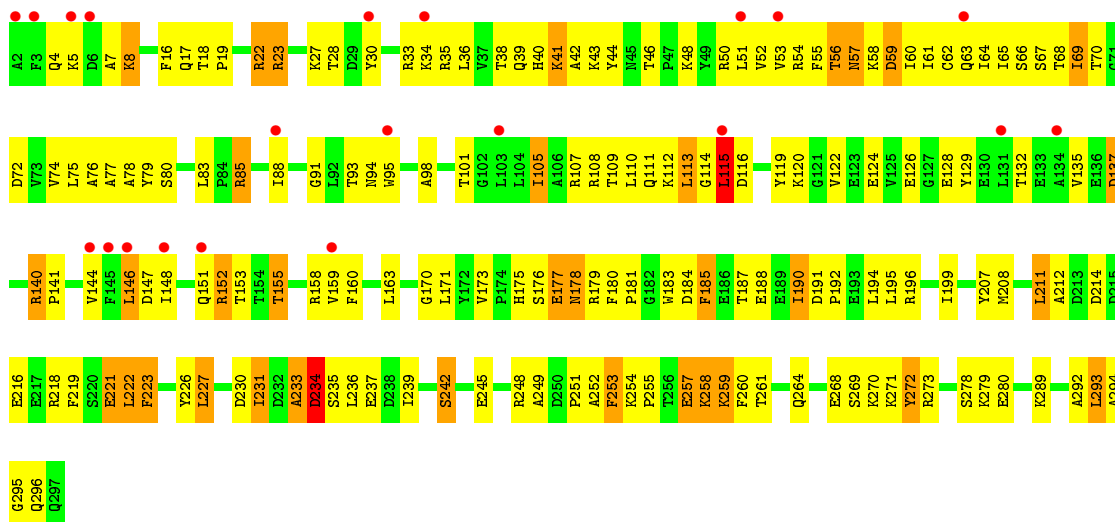
• Molecule 41: 60S ribosomal protein L4-A

Chain L4: 12% 83% 16% .



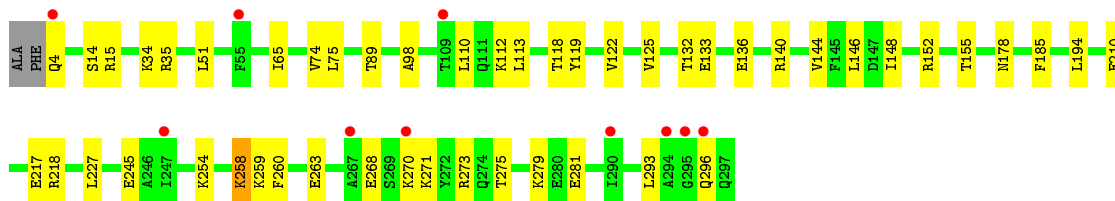
• Molecule 42: 60S ribosomal protein L5

Chain L5: 7% 42% 46% 11% .



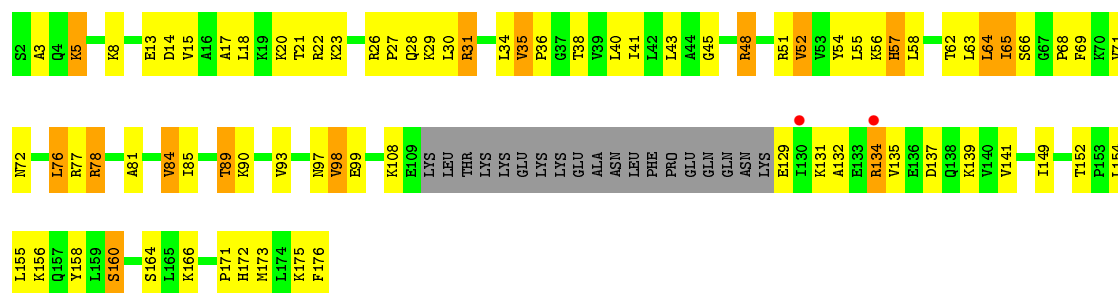
• Molecule 42: 60S ribosomal protein L5

Chain L5: 3% 83% 16% .

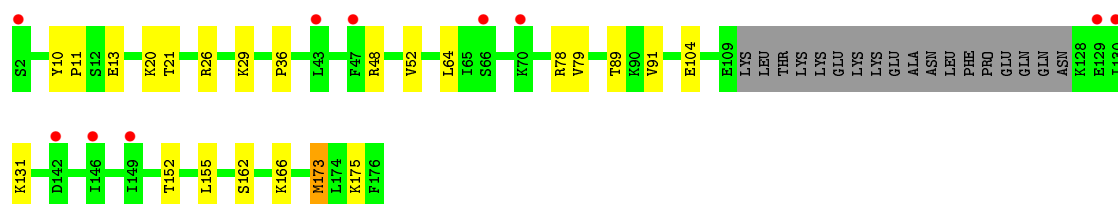
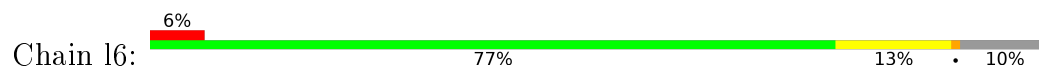


• Molecule 43: 60S ribosomal protein L6-A

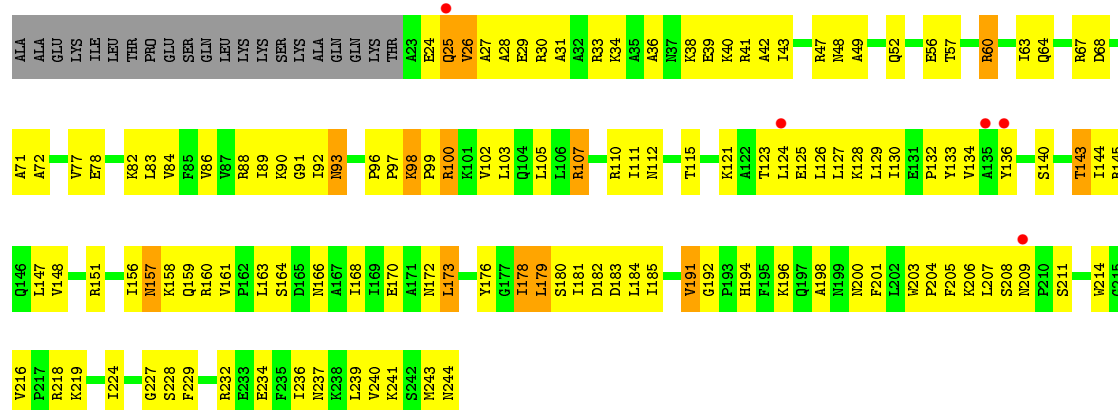
Chain L6: % 45% 36% 9% 11%



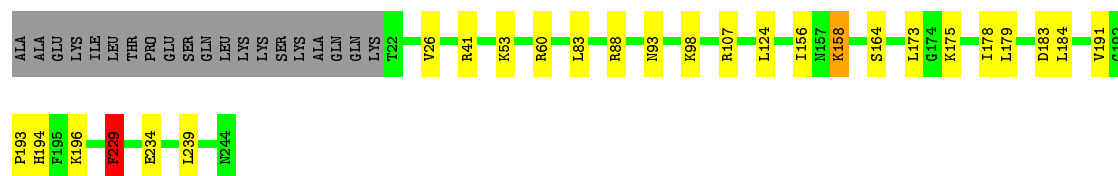
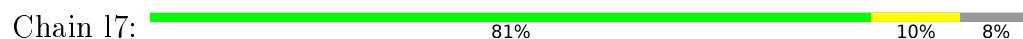
- Molecule 43: 60S ribosomal protein L6-A



- Molecule 44: 60S ribosomal protein L7-A

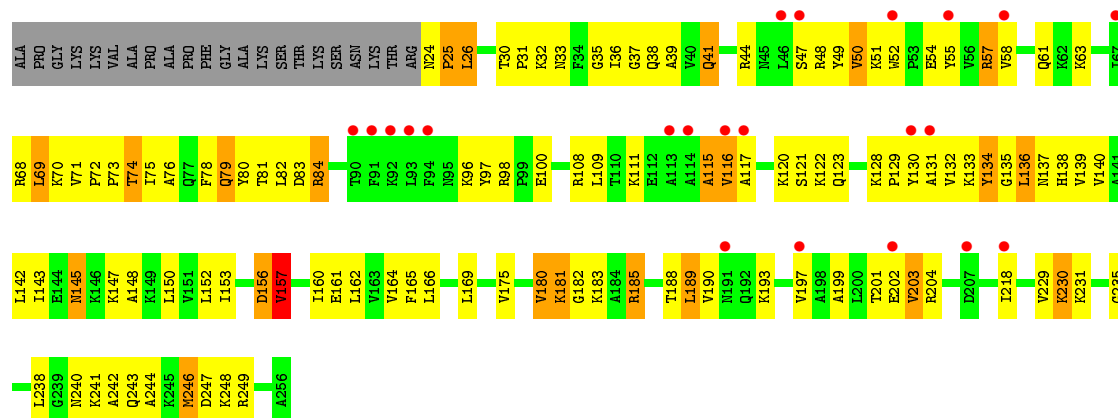


- Molecule 44: 60S ribosomal protein L7-A

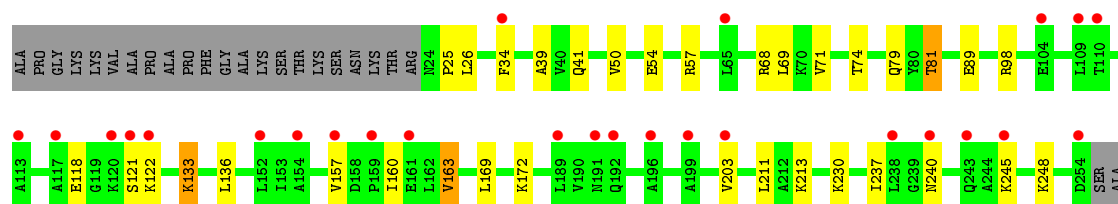
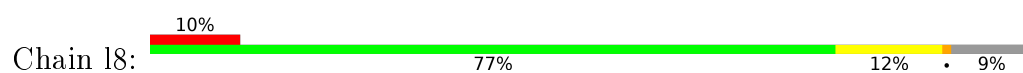


- Molecule 45: 60S ribosomal protein L8-A

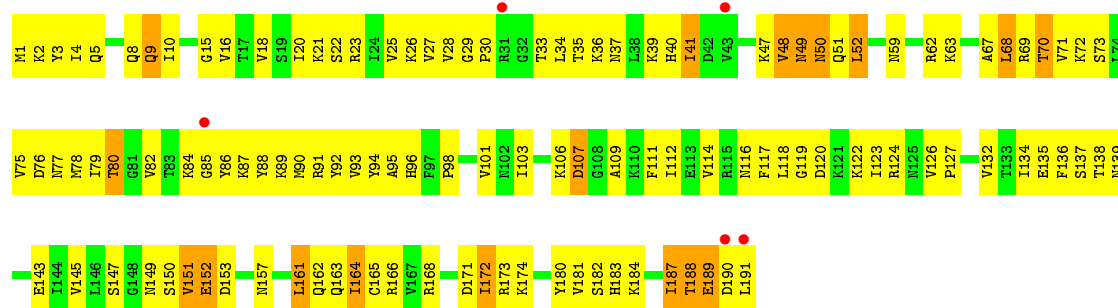




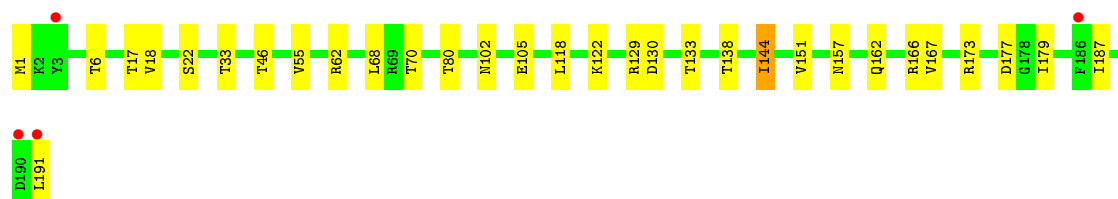
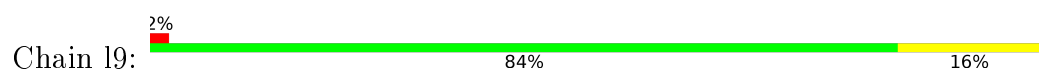
• Molecule 45: 60S ribosomal protein L8-A



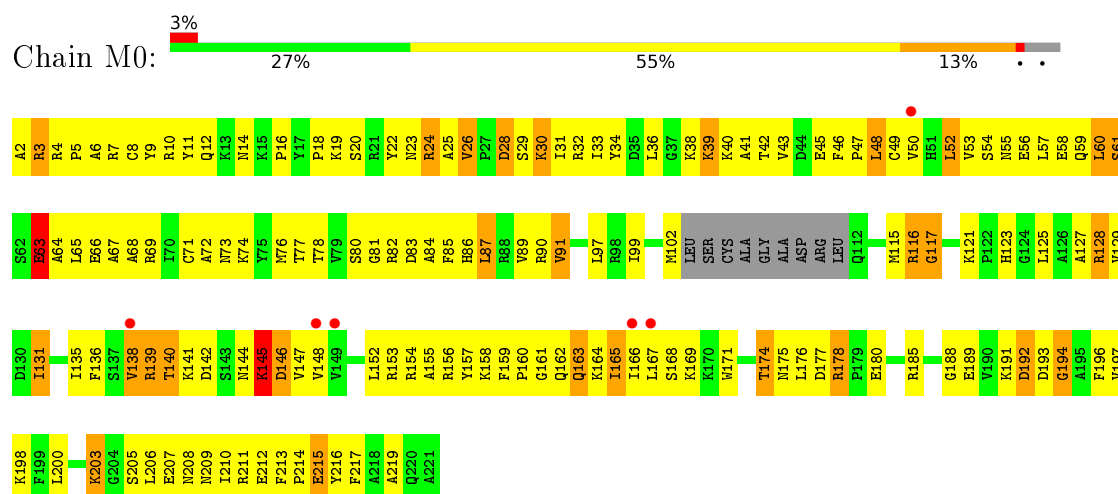
• Molecule 46: 60S ribosomal protein L9-A



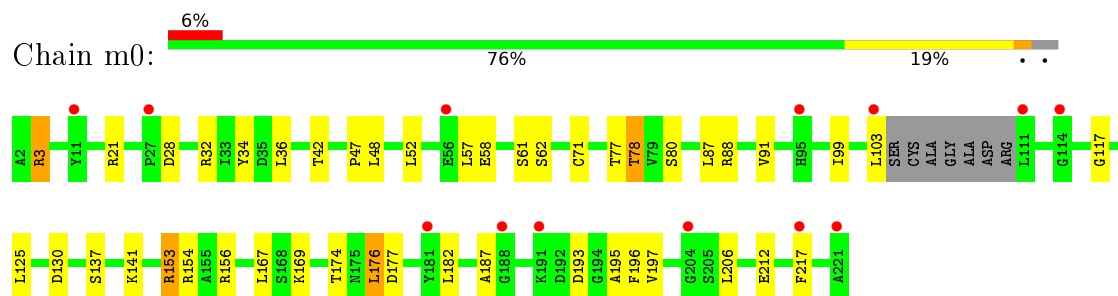
• Molecule 46: 60S ribosomal protein L9-A



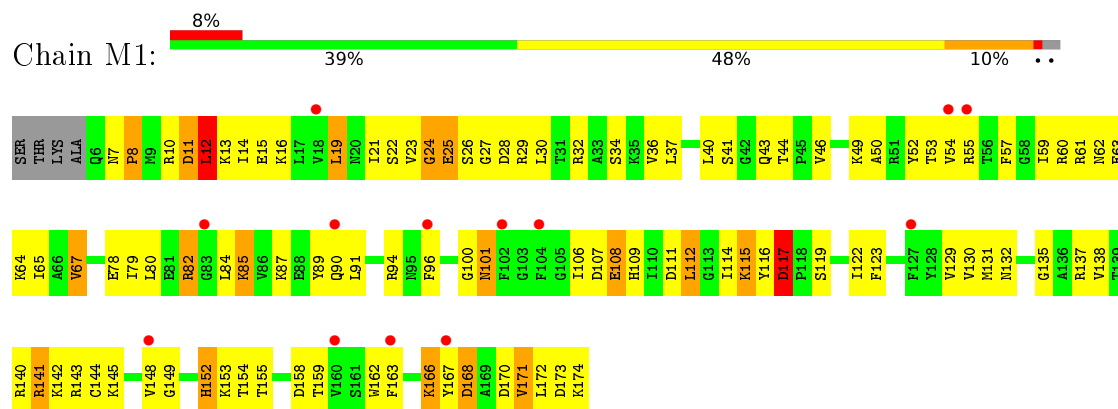
• Molecule 47: 60S ribosomal protein L10



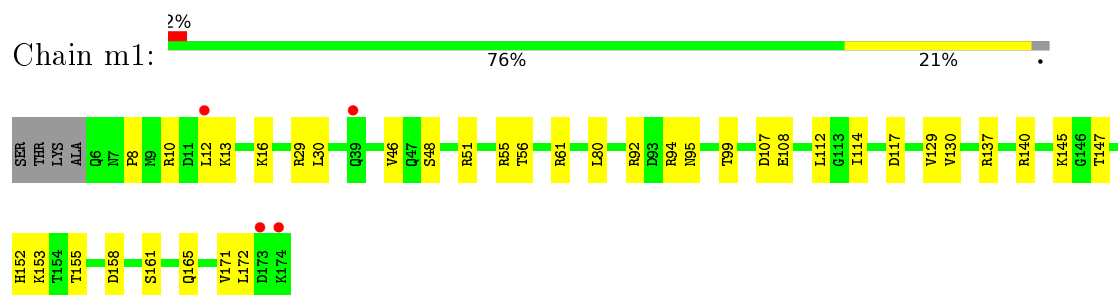
- Molecule 47: 60S ribosomal protein L10



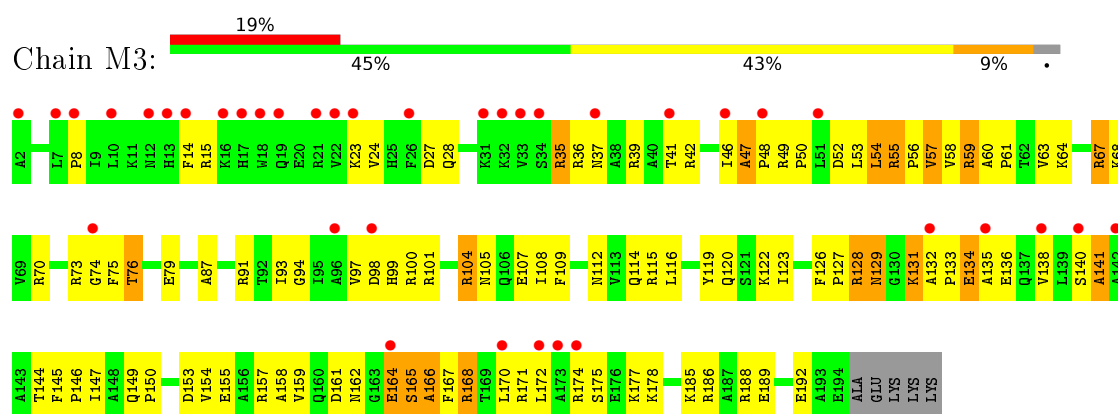
- Molecule 48: 60S ribosomal protein L11-B



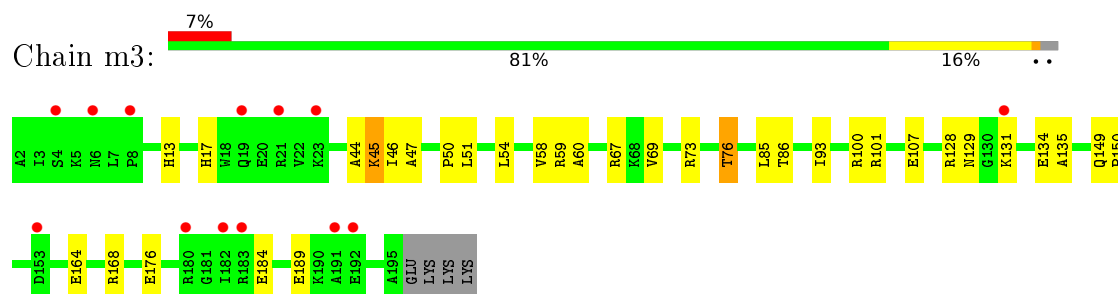
- Molecule 48: 60S ribosomal protein L11-B



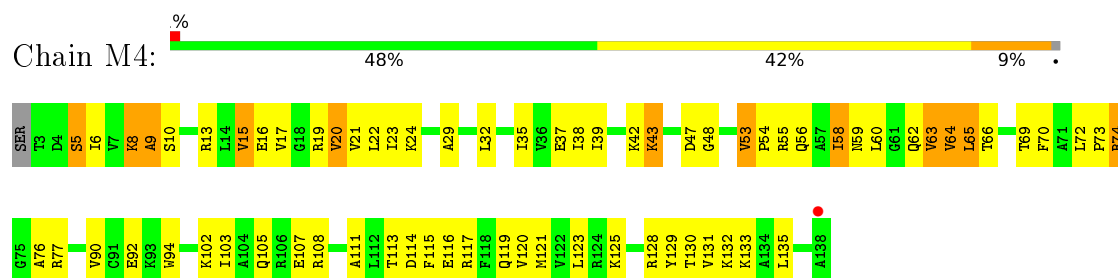
- Molecule 49: 60S ribosomal protein L13-A



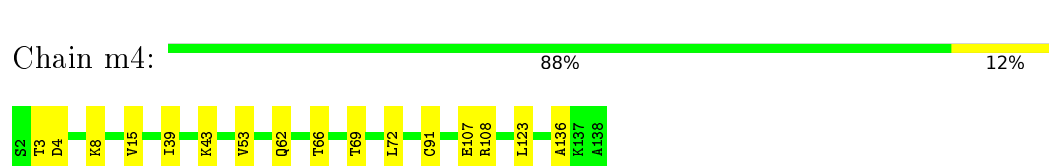
• Molecule 49: 60S ribosomal protein L13-A



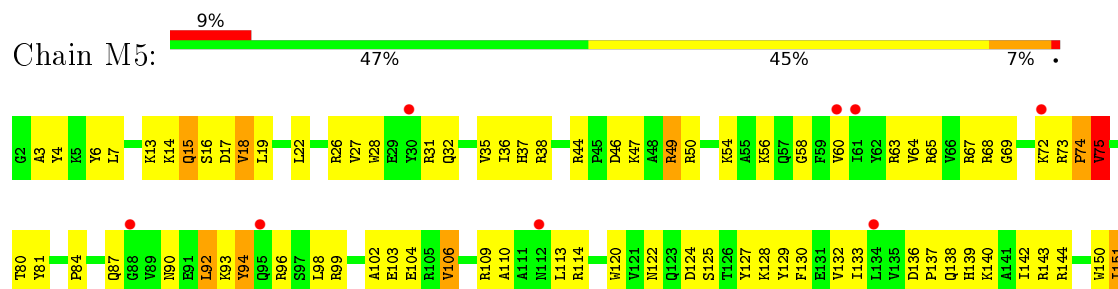
• Molecule 50: 60S ribosomal protein L14-A

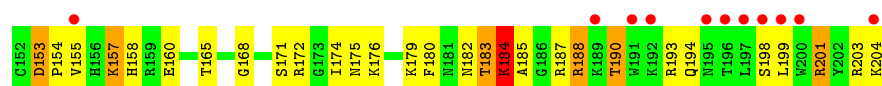


• Molecule 50: 60S ribosomal protein L14-A

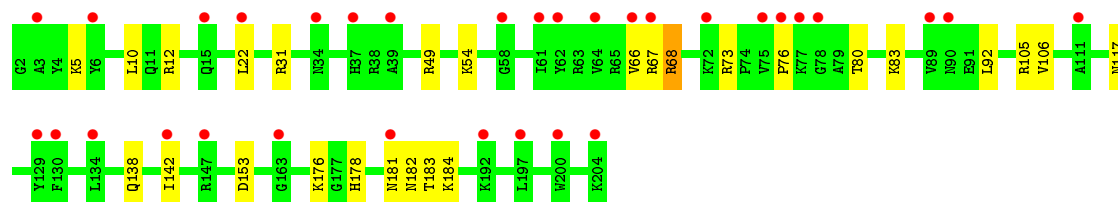
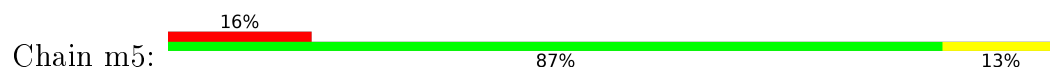


• Molecule 51: 60S ribosomal protein L15-A

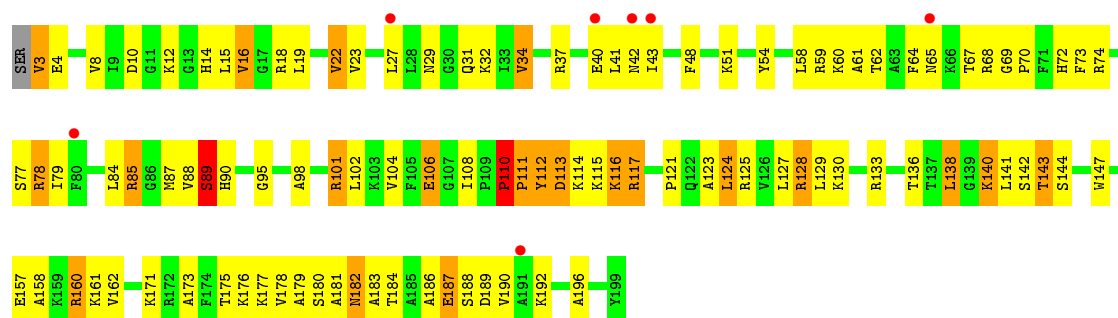




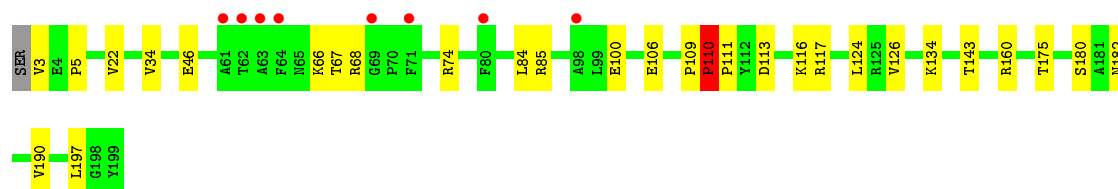
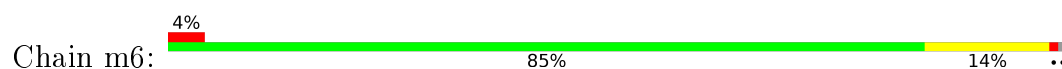
- Molecule 51: 60S ribosomal protein L15-A



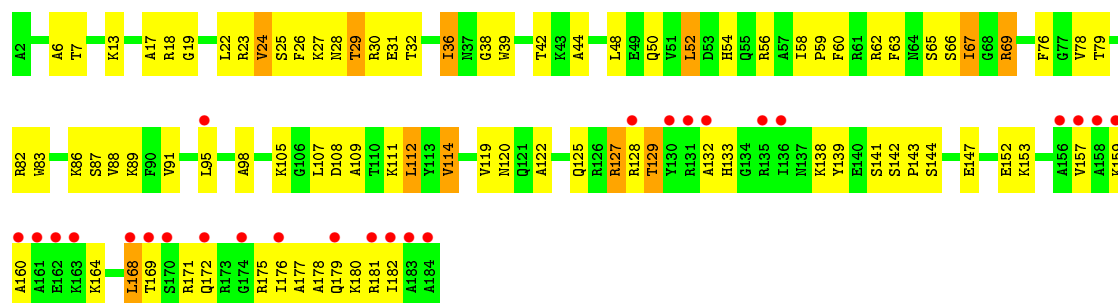
- Molecule 52: 60S ribosomal protein L16-A



- Molecule 52: 60S ribosomal protein L16-A

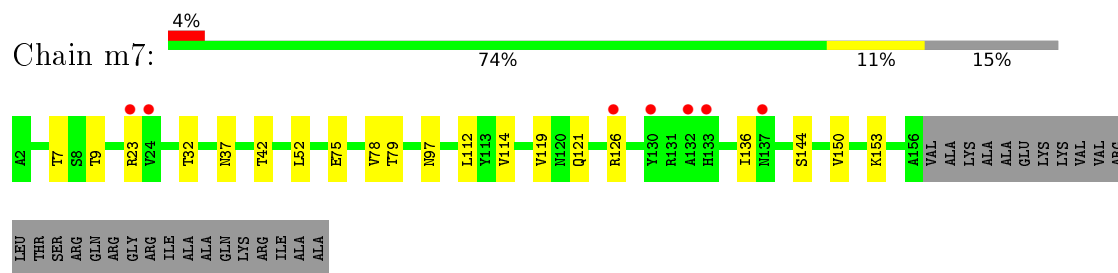


- Molecule 53: 60S ribosomal protein L17-A

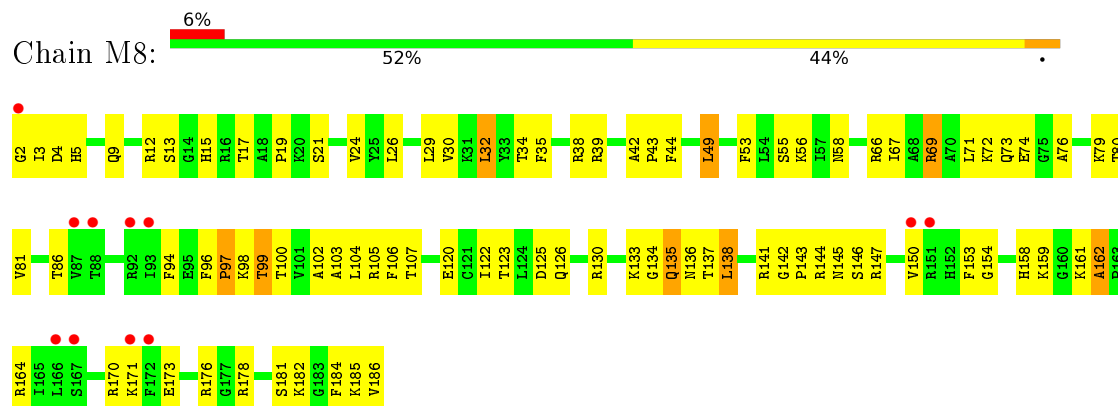




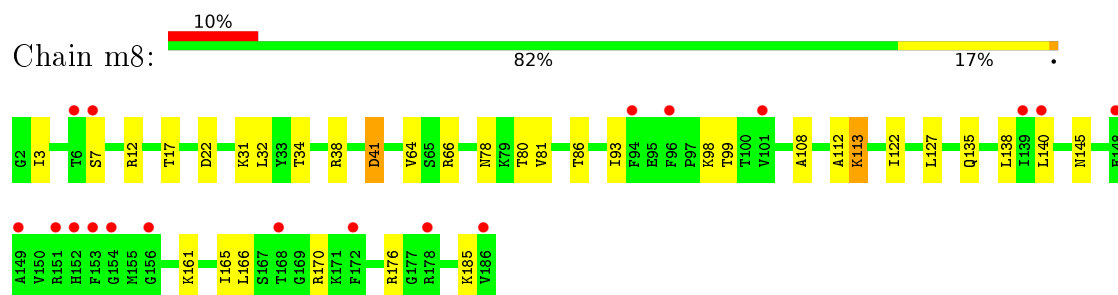
- Molecule 53: 60S ribosomal protein L17-A



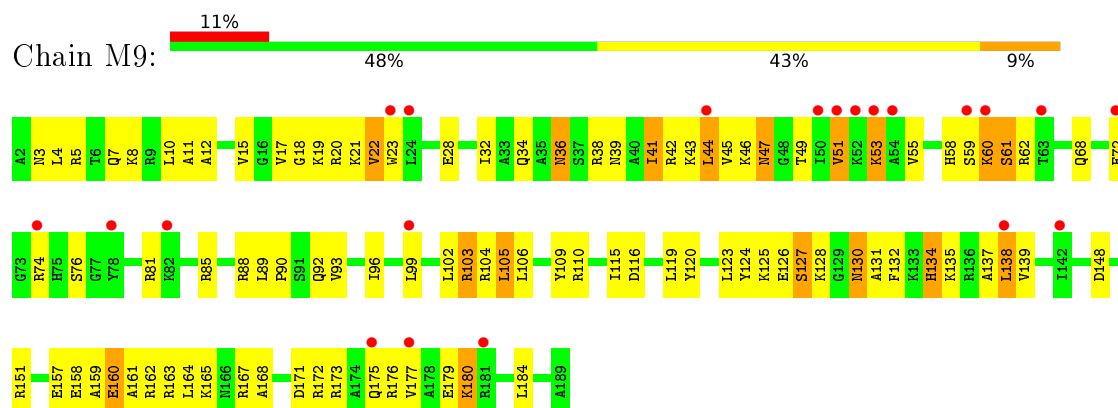
- Molecule 54: 60S ribosomal protein L18-A



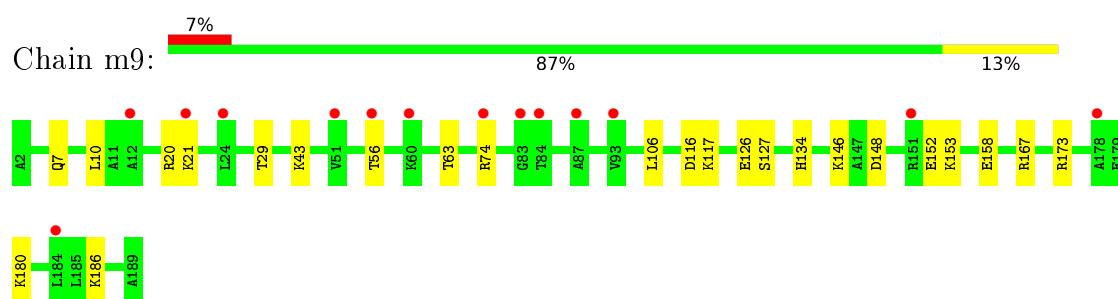
- Molecule 54: 60S ribosomal protein L18-A



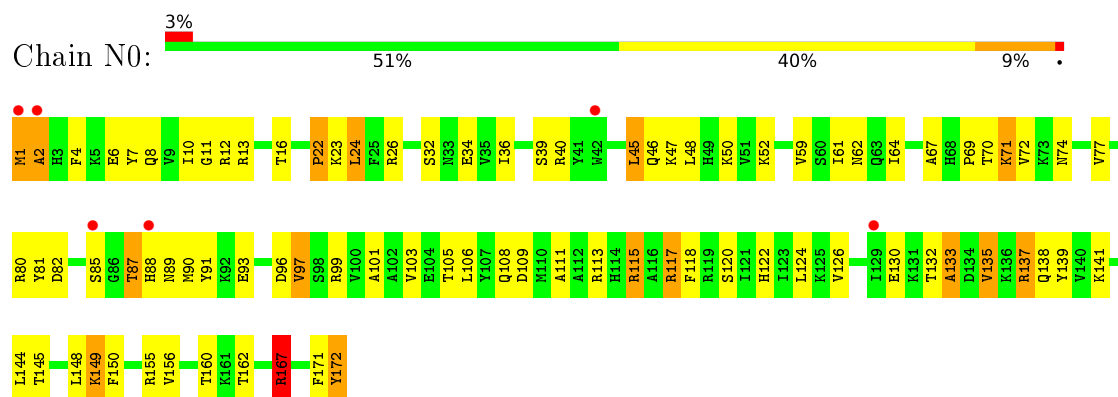
- Molecule 55: 60S ribosomal protein L19-A



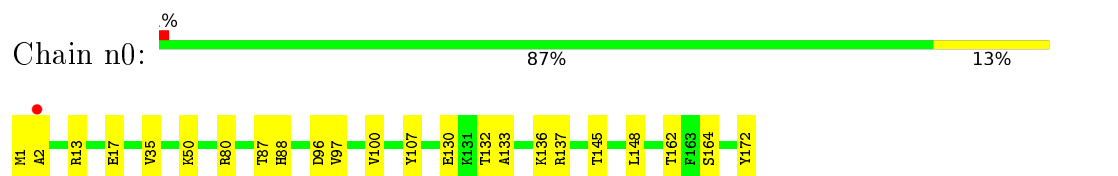
- Molecule 55: 60S ribosomal protein L19-A



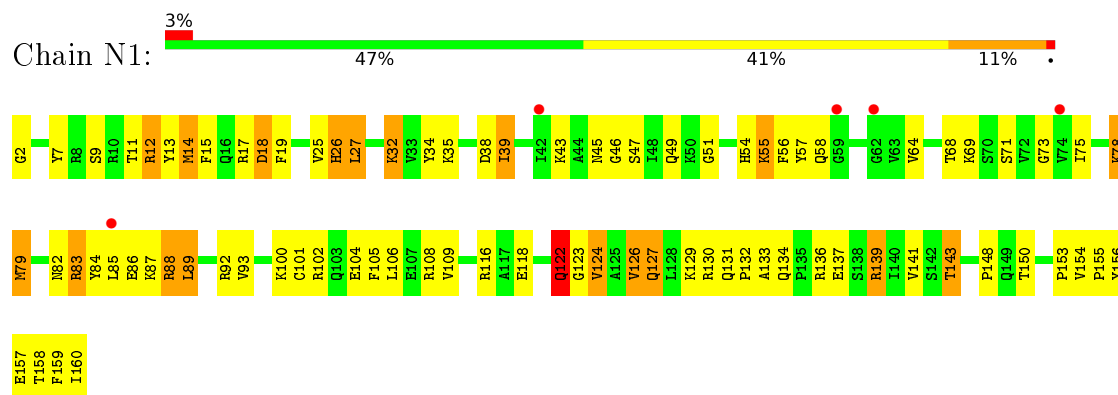
- Molecule 56: 60S ribosomal protein L20-A



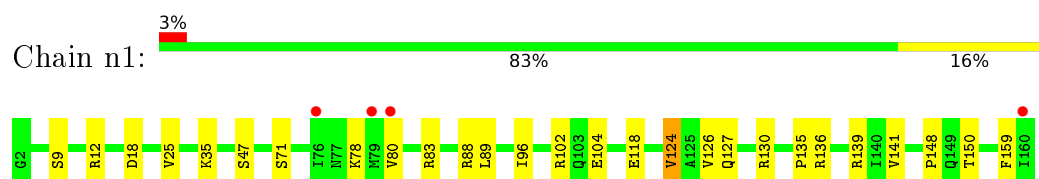
- Molecule 56: 60S ribosomal protein L20-A



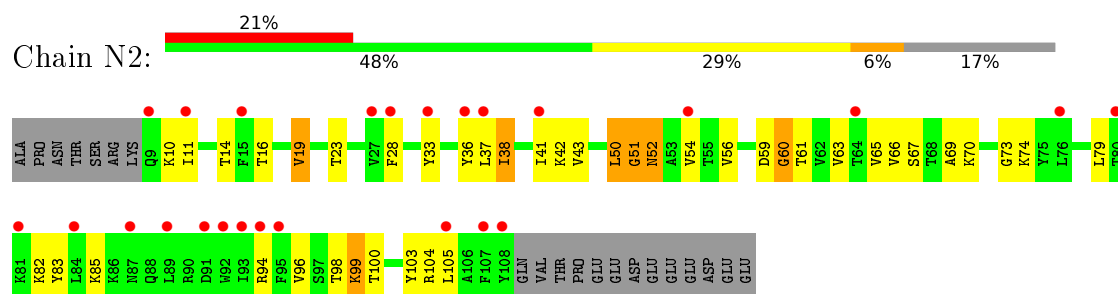
- Molecule 57: 60S ribosomal protein L21-A



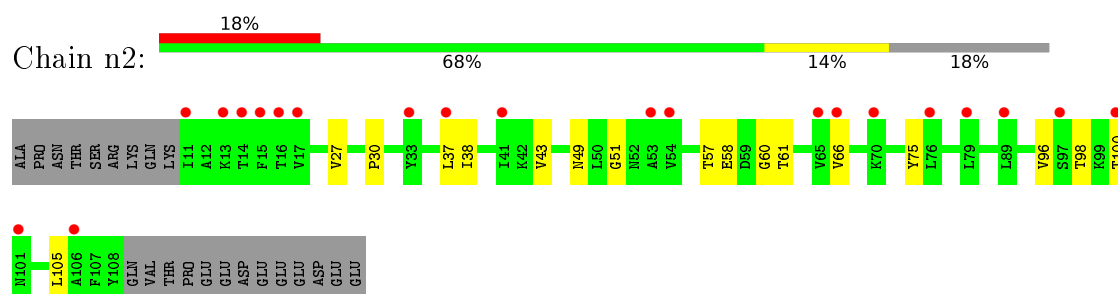
- Molecule 57: 60S ribosomal protein L21-A



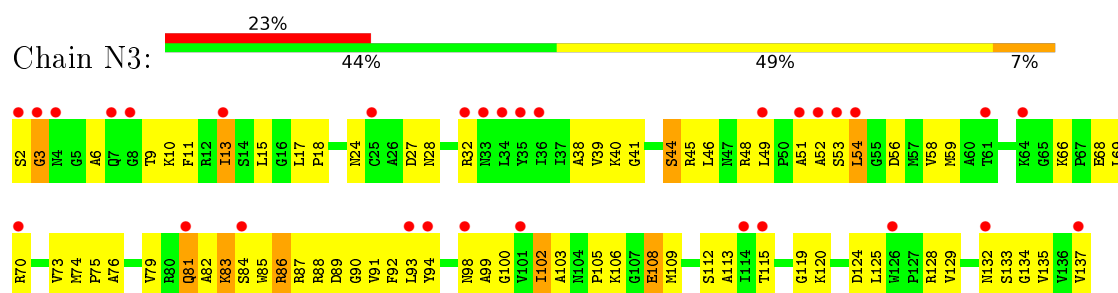
- Molecule 58: 60S ribosomal protein L22-A



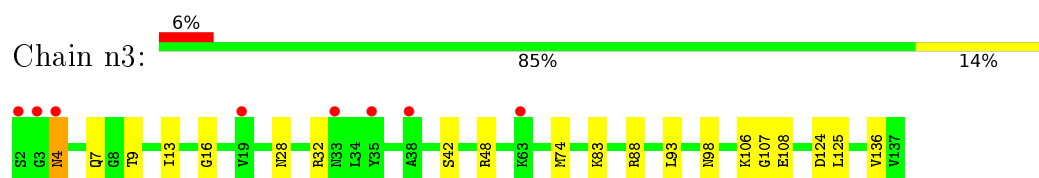
- Molecule 58: 60S ribosomal protein L22-A



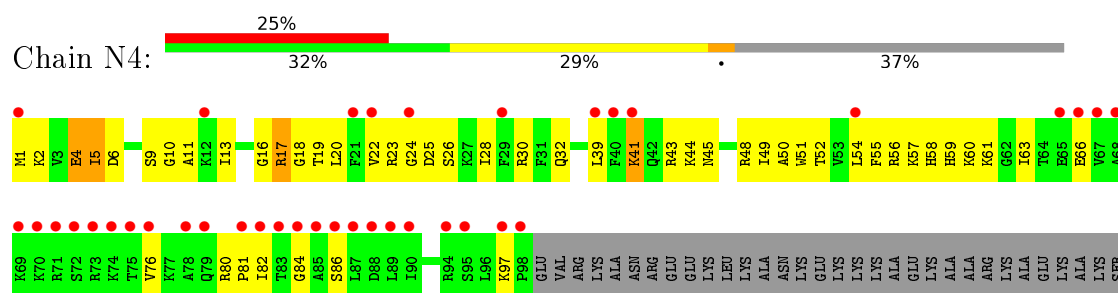
- Molecule 59: 60S ribosomal protein L23-A



- Molecule 59: 60S ribosomal protein L23-A



- Molecule 60: 60S ribosomal protein L24-A



ALA  
GLY  
THR  
GLN  
SER  
SER  
LYS  
PHE  
SER  
SER  
GLN  
GLN  
ALA  
LYS  
GLY  
ALA  
PHE  
GLN  
LYS  
VAL  
ALA  
ALA  
THR  
SER  
ARG

- Molecule 60: 60S ribosomal protein L24-A

Chain n4: 12% 75% 12% 13%

M1 I5 K12 T19 D25 S26 K27 L39 F59 I63 T64 P65 E66 V67 A68 K69 R70 K71 S72 R73 K74 T75 V76 Q79 T83 G84 A85 S86 L87 D88 L89 I90 R94 S95 L96 E99 E107 K127 G132 T133 Q134 S135 SER LYS PHE SER

LYS  
GLN  
GLN  
ALA  
LYS  
GLY  
ALA  
PHE  
GLN  
VAL  
ALA  
ALA  
THR  
SER  
ARG

- Molecule 61: 60S ribosomal protein L25

Chain N5: 9% 38% 39% 9% 14%

ALA PRO SER ALA LYS ALA THR ALA ALA LYS LYS VAL VAL LYS GLY THR ASN GLY LYS K22 A23 L24 K25 Y26 R27 T28 F32 R33 L34 P35 K36 T37 L38 K39 L40 A41 R42 K45 A47 Y46 A48 S48 K49 A50 P52 P53 H53 R56 L57 D58 S59 Y60 K61 V62 I63 I67

T71 A72 M73 K74 K75 V76 N80 I81 L82 V86 K82 Y83 Q84 I85 A88 V89 K100 Y103 E104 V105 D106 V107 L108 K109 V110 N111 V114 R115 P116 M117 G118 T119 K120 K121 A122 Y123 V124 R125 L126 T127 A128 D129 Y130 D131 A132 L133 D134 I135 A136 N137 R138 I139

I142

- Molecule 61: 60S ribosomal protein L25

Chain n5: 6% 74% 11% 15%

ALA PRO SER ALA LYS ALA THR ALA ALA LYS LYS VAL VAL LYS GLY THR ASN GLY LYS A23 R27 P44 K45 R55 R56 L57 V62 E63 E64 Q65 S69 A90 R91 R92 L108 T112 L113 V114 R115 T119 K120 Y123 V124 R125 I135 A136 N137

I142

- Molecule 62: 60S ribosomal protein L26-A

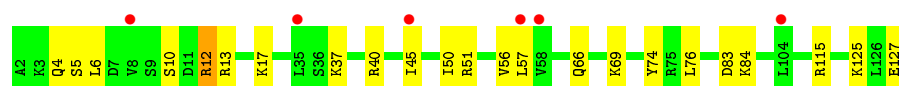
Chain N6: 2% 44% 46% 7%

A2 K3 Q4 S5 L6 D7 V8 S9 S10 R13 K14 A15 R16 Y19 S24 K37 E38 L39 R40 R41 Q42 Y43 Y44 R45 I50 R51 R52 D53 E55 V56 L57 V58 V59 R60 K63 Q66 K69 I70 S71 S72 V73 Y74 R75 L76 K77 F78 A79 V80 D83 K84

V85 T86 K87 E88 K89 A93 S94 V95 P96 P97 N98 L99 H100 P101 S102 K103 L104 K108 L109 H110 L111 D112 K113 D114 K115 R116 I119 Q120 R121 K122 G124 K125 L126 E127

- Molecule 62: 60S ribosomal protein L26-A

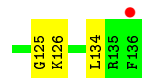
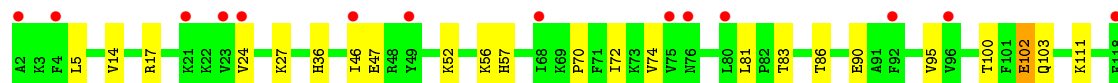
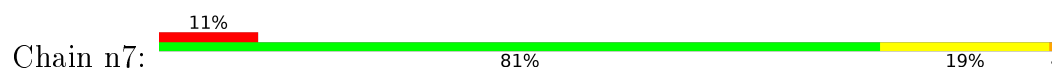
Chain n6: 5% 82% 17%



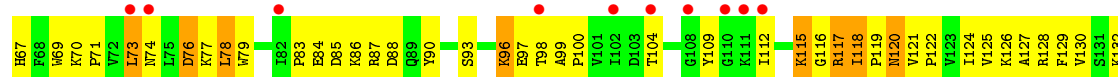
- Molecule 63: 60S ribosomal protein L27-A



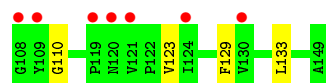
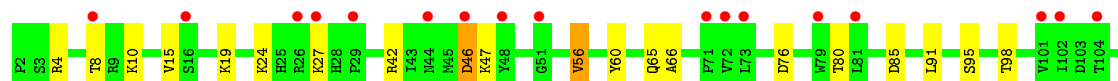
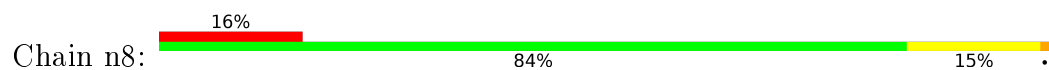
- Molecule 63: 60S ribosomal protein L27-A



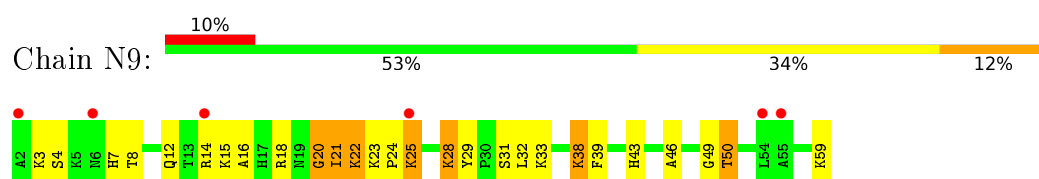
- Molecule 64: 60S ribosomal protein L28



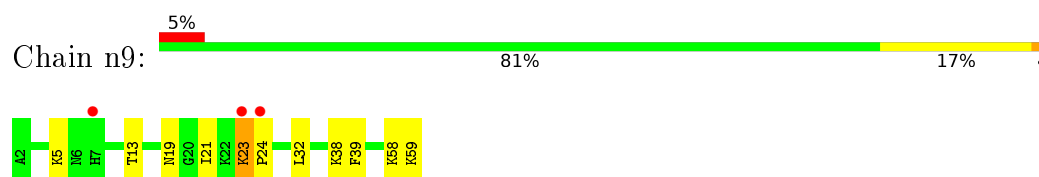
- Molecule 64: 60S ribosomal protein L28



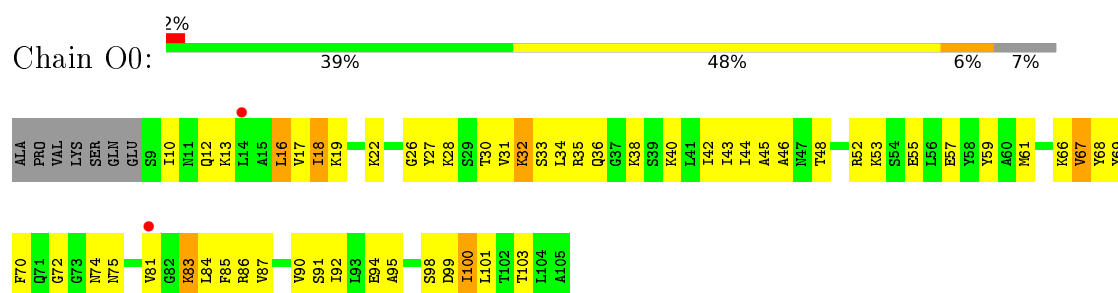
- Molecule 65: 60S ribosomal protein L29



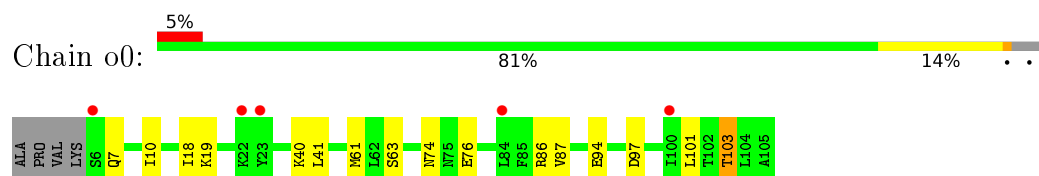
- Molecule 65: 60S ribosomal protein L29



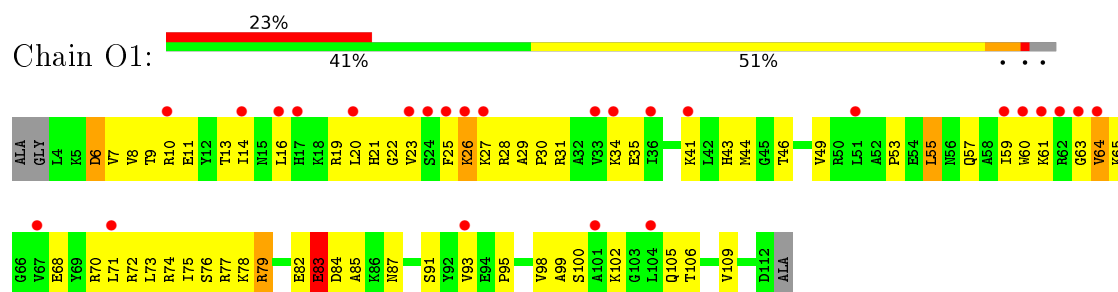
- Molecule 66: 60S ribosomal protein L30



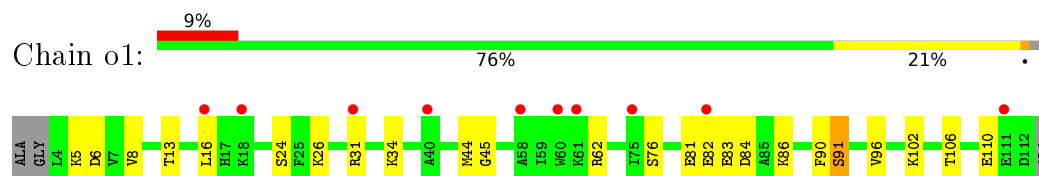
- Molecule 66: 60S ribosomal protein L30



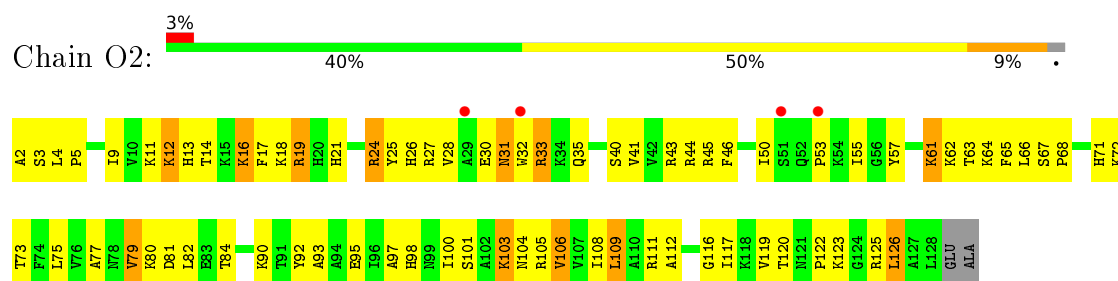
- Molecule 67: 60S ribosomal protein L31-A



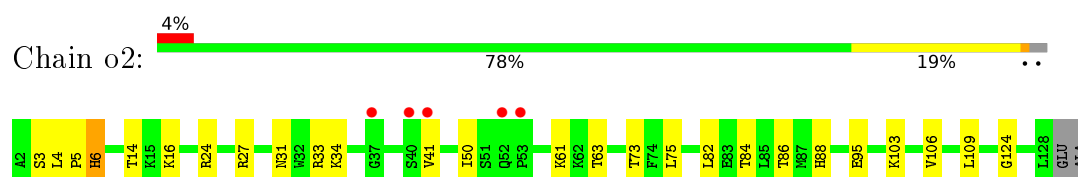
- Molecule 67: 60S ribosomal protein L31-A



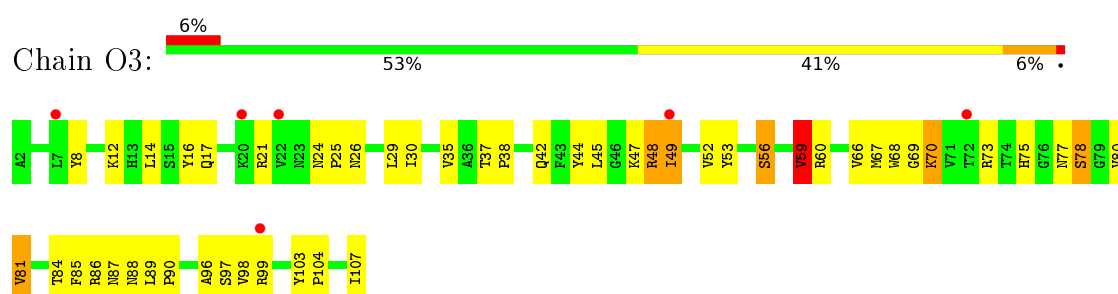
- Molecule 68: 60S ribosomal protein L32



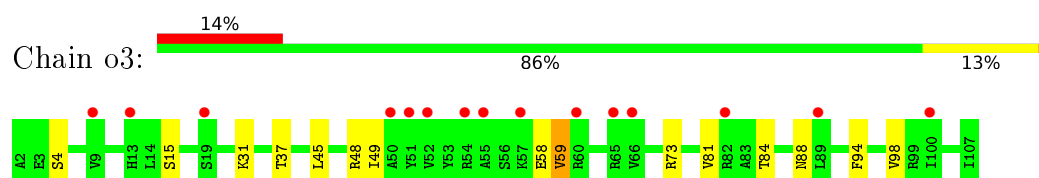
- Molecule 68: 60S ribosomal protein L32



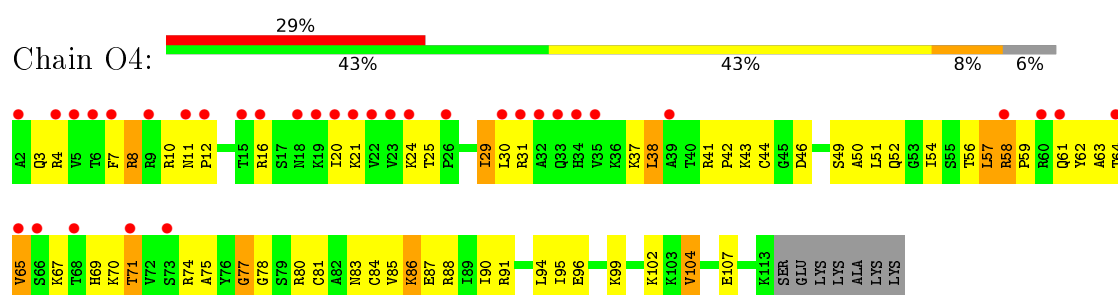
- Molecule 69: 60S ribosomal protein L33-A



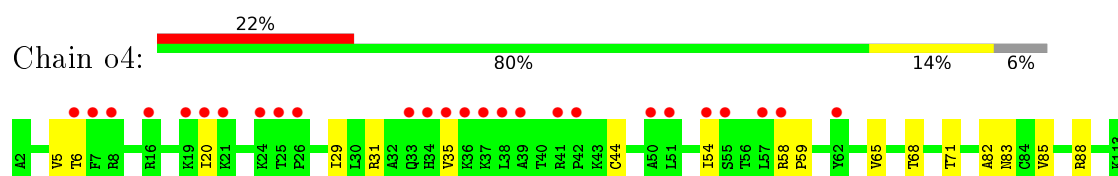
- Molecule 69: 60S ribosomal protein L33-A



- Molecule 70: 60S ribosomal protein L34-A

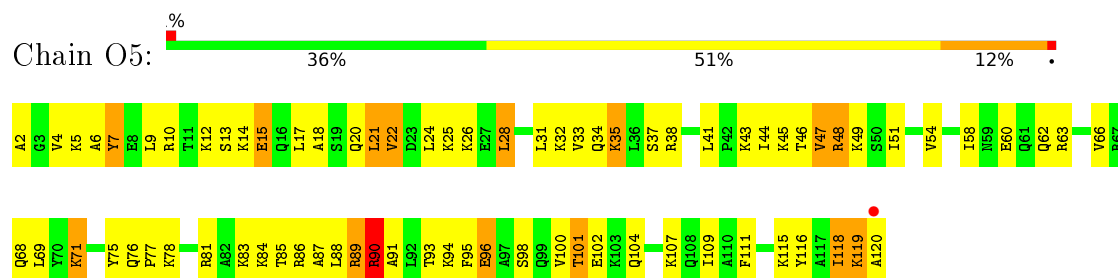


- Molecule 70: 60S ribosomal protein L34-A

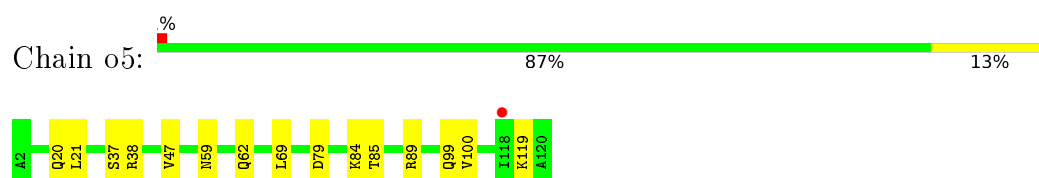


SER  
GLU  
LYS  
LYS  
LYS  
ALA  
LYS  
LYS

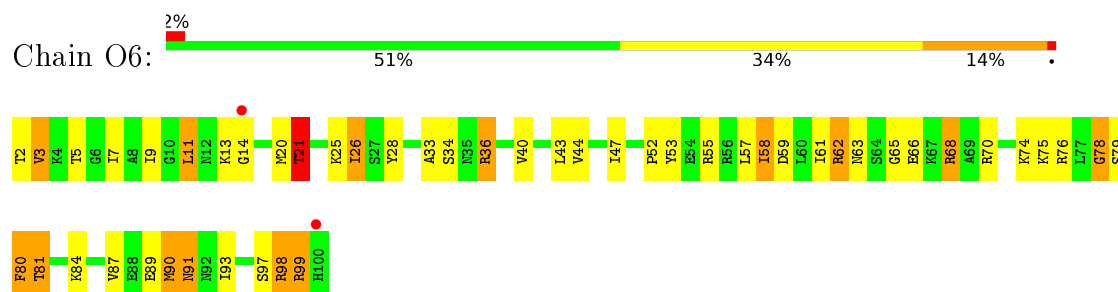
- Molecule 71: 60S ribosomal protein L35-A



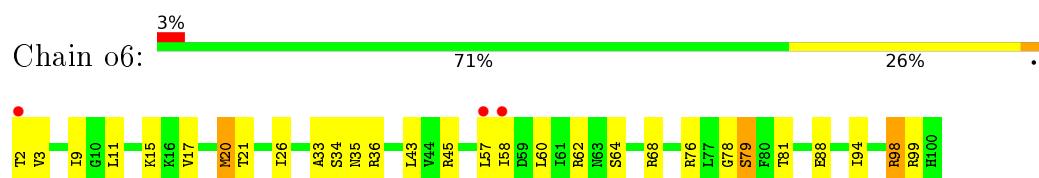
- Molecule 71: 60S ribosomal protein L35-A



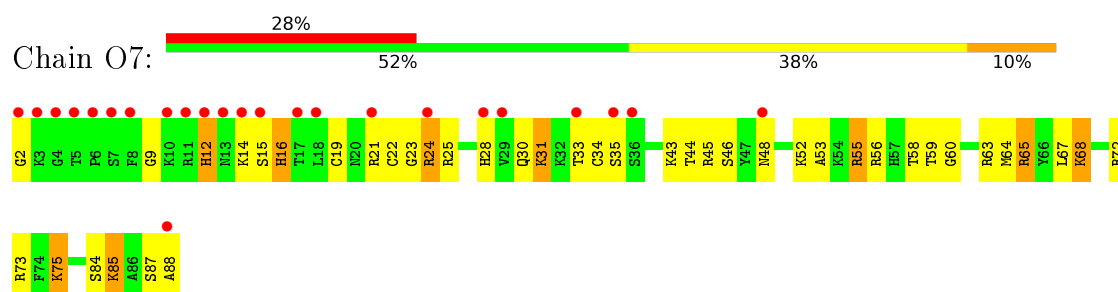
- Molecule 72: 60S ribosomal protein L36-A



- Molecule 72: 60S ribosomal protein L36-A

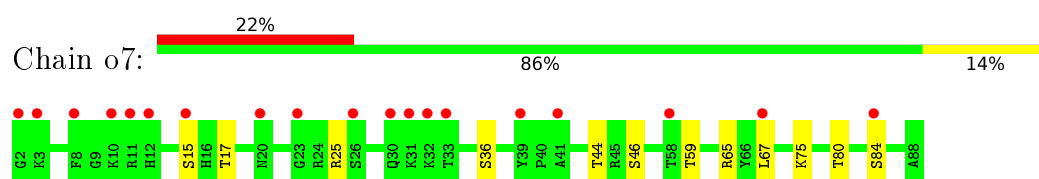


- Molecule 73: 60S ribosomal protein L37-A

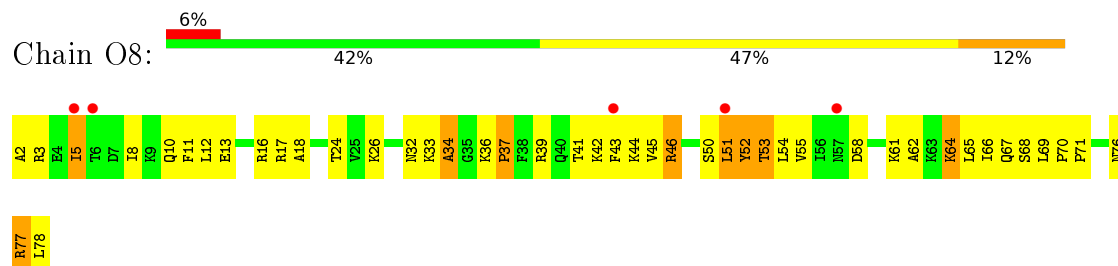


- Molecule 73: 60S ribosomal protein L37-A

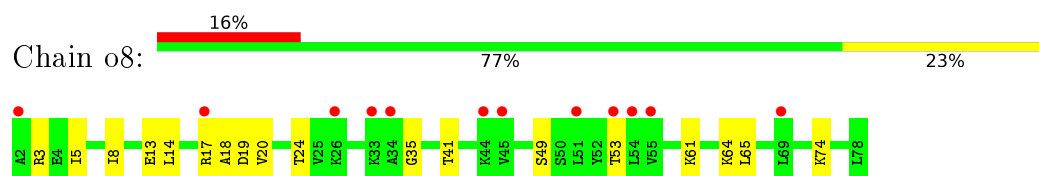




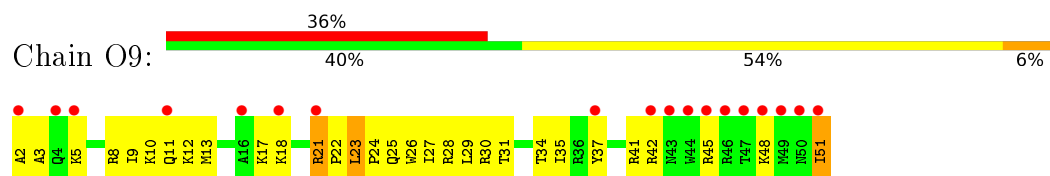
- Molecule 74: 60S ribosomal protein L38



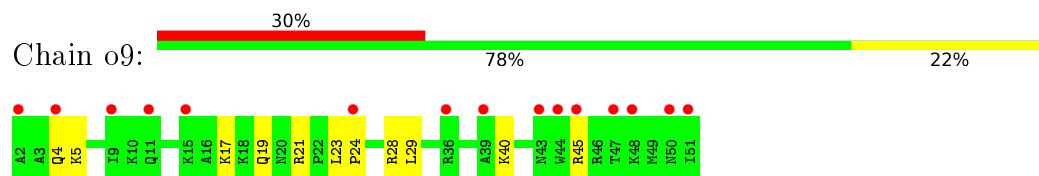
- Molecule 74: 60S ribosomal protein L38



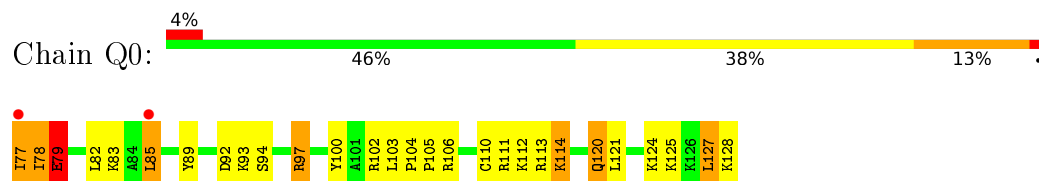
- Molecule 75: 60S ribosomal protein L39



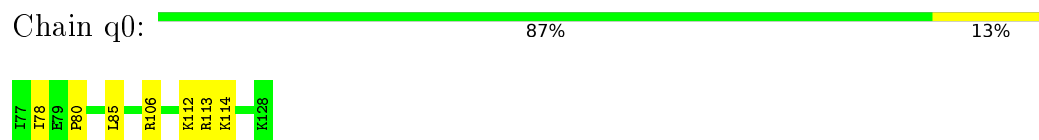
- Molecule 75: 60S ribosomal protein L39



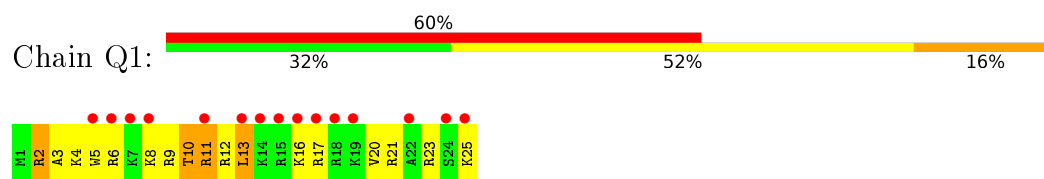
- Molecule 76: Ubiquitin-60S ribosomal protein L40



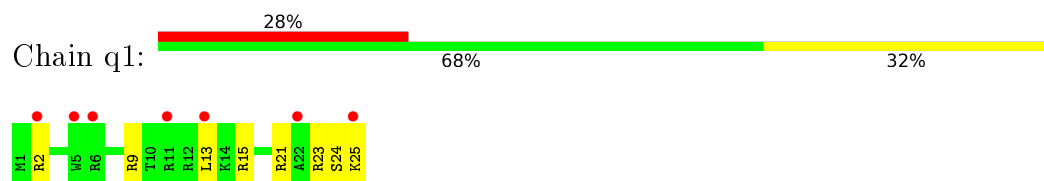
- Molecule 76: Ubiquitin-60S ribosomal protein L40



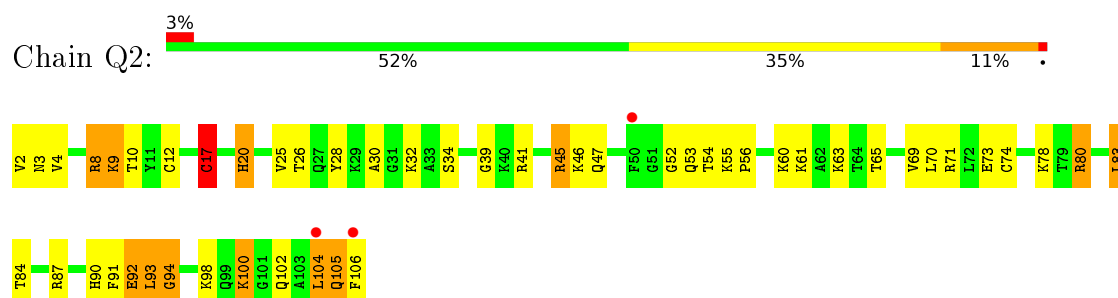
- Molecule 77: 60S ribosomal protein L41-A



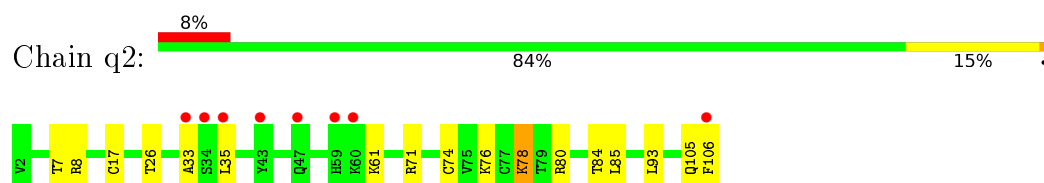
- Molecule 77: 60S ribosomal protein L41-A



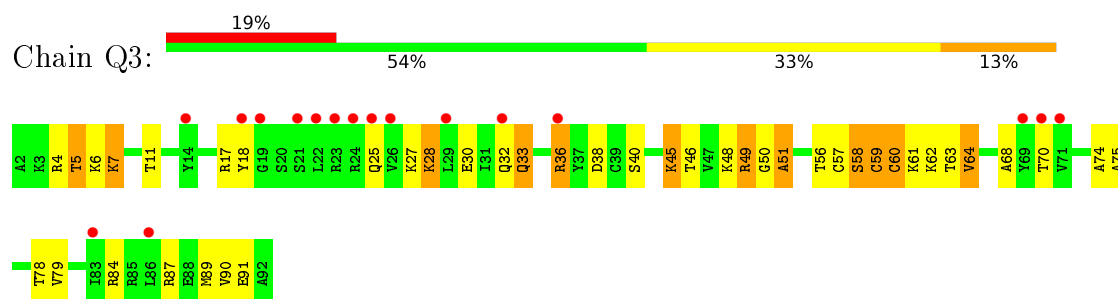
- Molecule 78: 60S ribosomal protein L42-A



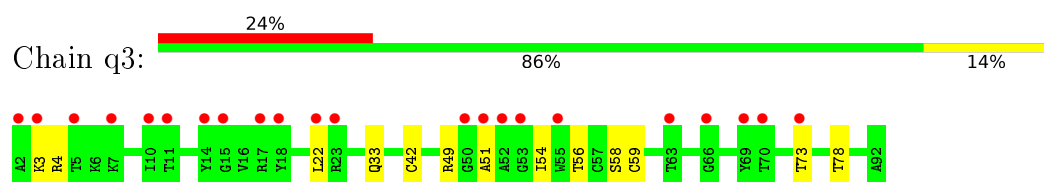
- Molecule 78: 60S ribosomal protein L42-A



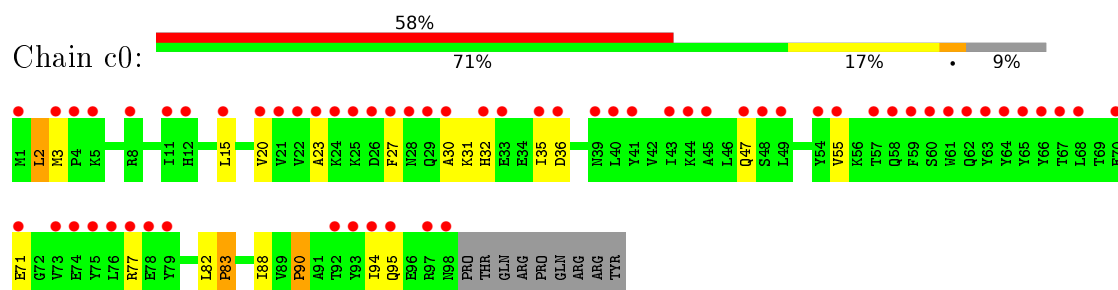
- Molecule 79: 60S ribosomal protein L43-A



- Molecule 79: 60S ribosomal protein L43-A



- Molecule 80: 40S ribosomal protein S10-A

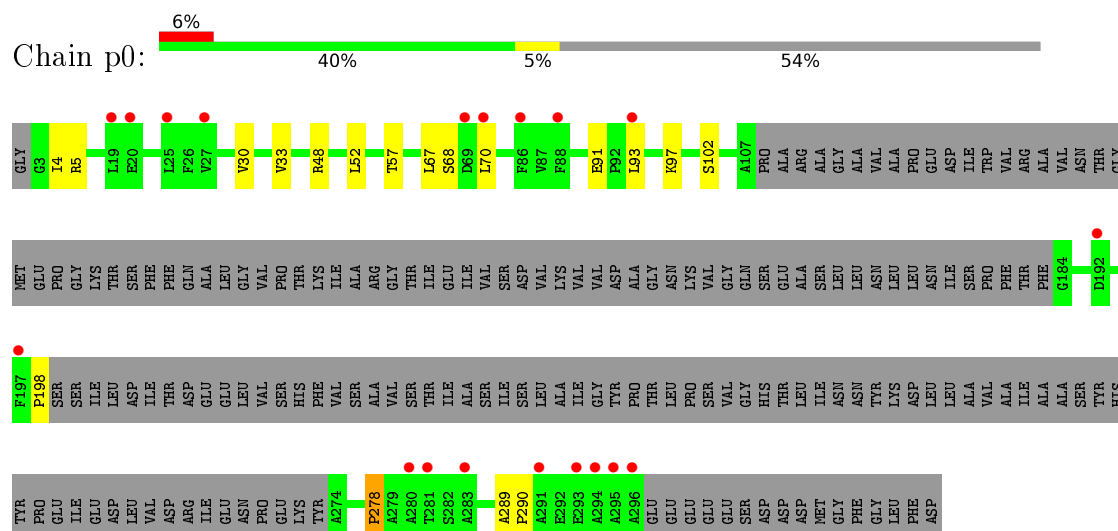


- Molecule 81: 60S ribosomal protein L12-A (uL11)



There are no outlier residues recorded for this chain.

- Molecule 82: 60S acidic ribosomal protein P0



- Molecule 83: 60S ribosomal protein P1 alpha



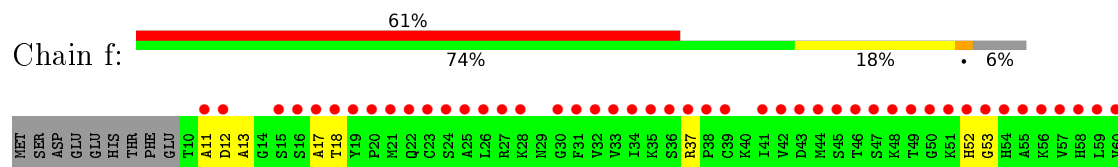
There are no outlier residues recorded for this chain.

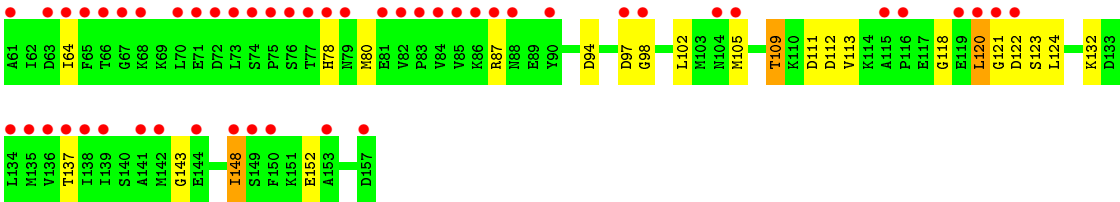
- Molecule 84: 60S ribosomal P2 beta



There are no outlier residues recorded for this chain.

- Molecule 85: Eukaryotic translation initiation factor 5A-1





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	438.23 Å   289.33 Å   305.47 Å 90.00°   98.95°   90.00°	Depositor
Resolution (Å)	190.48 – 3.25 196.56 – 3.25	Depositor EDS
% Data completeness (in resolution range)	100.0 (190.48-3.25) 99.9 (196.56-3.25)	Depositor EDS
$R_{merge}$	0.41	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.37 (at 3.26 Å)	Xtriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.252   ,   0.301 0.260   ,   (Not available)	Depositor DCC
$R_{free}$ test set	No test flags present.	DCC
Wilson B-factor (Å <sup>2</sup> )	86.7	Xtriage
Anisotropy	0.117	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.33   ,   78.2	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.84	EDS
Total number of atoms	404042	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	80.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.52% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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	0.37	0/42467	0.89	53/66169 (0.1%)
1	6	0.43	0/42790	0.93	47/66673 (0.1%)
2	S0	0.28	0/1617	0.51	0/2215
2	s0	0.30	0/1623	0.52	0/2222
3	S1	0.27	0/1735	0.53	0/2335
3	s1	0.29	0/1748	0.52	0/2352
4	S2	0.30	0/1665	0.52	0/2263
4	s2	0.33	0/1665	0.57	1/2263 (0.0%)
5	S3	0.31	0/1759	0.49	0/2368
5	s3	0.29	0/1759	0.47	0/2368
6	S4	0.29	0/2109	0.53	0/2839
6	s4	0.34	0/2109	0.57	1/2839 (0.0%)
7	S5	0.27	0/1629	0.49	0/2202
7	s5	0.28	0/1629	0.50	0/2202
8	S6	0.29	0/1823	0.48	0/2439
8	s6	0.33	0/1779	0.52	0/2379
9	S7	0.29	0/1506	0.54	0/2028
9	s7	0.29	0/1516	0.53	1/2043 (0.0%)
10	S8	0.32	0/1514	0.51	0/2021
10	s8	0.35	0/1514	0.51	0/2021
11	S9	0.29	0/1519	0.49	0/2035
11	s9	0.31	0/1519	0.51	0/2035
12	C0	0.29	0/789	0.48	1/1067 (0.1%)
13	C1	0.32	0/1239	0.51	0/1673
13	c1	0.36	0/1194	0.52	0/1610
14	C2	0.28	0/898	0.52	1/1220 (0.1%)
14	c2	0.24	0/898	0.49	0/1220
15	C3	0.31	0/1215	0.51	1/1638 (0.1%)
15	c3	0.33	0/1215	0.53	0/1638
16	C4	0.28	0/901	0.54	0/1217
16	c4	0.30	0/960	0.55	0/1290
17	C5	0.31	0/998	0.55	1/1341 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	c5	0.31	0/1060	0.50	0/1426
18	C6	0.29	0/1125	0.56	2/1510 (0.1%)
18	c6	0.29	0/1131	0.51	0/1518
19	C7	0.31	0/935	0.54	0/1254
19	c7	0.29	0/914	0.52	0/1224
20	C8	0.30	0/1211	0.52	0/1628
20	c8	0.29	0/1211	0.51	0/1628
21	C9	0.28	0/1130	0.48	0/1517
21	c9	0.29	0/1130	0.47	0/1517
22	D0	0.30	0/865	0.55	0/1169
22	d0	0.28	0/892	0.52	0/1205
23	D1	0.28	0/693	0.51	0/935
23	d1	0.30	0/693	0.49	0/935
24	D2	0.31	0/1038	0.58	3/1395 (0.2%)
24	d2	0.34	0/1038	0.56	0/1395
25	D3	0.34	0/1139	0.54	0/1518
25	d3	0.38	0/1139	0.59	0/1518
26	D4	0.29	0/1087	0.46	0/1449
26	d4	0.31	0/1087	0.52	0/1449
27	D5	0.28	0/571	0.57	0/768
27	d5	0.27	0/566	0.47	0/761
28	D6	0.30	0/782	0.53	0/1047
28	d6	0.35	0/782	0.52	0/1047
29	D7	0.28	0/620	0.51	0/838
29	d7	0.28	0/620	0.50	0/838
30	D8	0.28	0/499	0.48	0/670
30	d8	0.28	0/499	0.54	0/670
31	D9	0.30	0/452	0.53	1/600 (0.2%)
31	d9	0.32	0/452	0.51	0/600
32	E0	0.28	0/483	0.47	0/643
32	e0	0.32	0/499	0.54	0/665
33	E1	0.30	0/577	0.60	0/770
33	e1	0.30	0/619	0.64	0/822
34	SR	0.26	0/2490	0.49	0/3389
34	sR	0.26	0/2495	0.45	0/3395
35	SM	0.32	0/1113	0.55	2/1502 (0.1%)
35	sM	0.32	0/682	0.50	0/921
36	1	0.55	0/75394	1.02	101/117545 (0.1%)
36	5	0.58	2/75865 (0.0%)	1.04	122/118275 (0.1%)
37	3	0.47	0/2883	0.88	0/4491
37	7	0.55	0/2883	1.03	4/4491 (0.1%)
38	4	0.51	0/3746	0.99	5/5832 (0.1%)
38	8	0.50	0/3746	0.95	4/5832 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
39	L2	0.37	0/1948	0.58	0/2617
39	l2	0.39	0/1946	0.60	0/2614
40	L3	0.39	0/3146	0.57	0/4228
40	l3	0.43	0/3146	0.58	0/4228
41	L4	0.41	0/2800	0.60	0/3790
41	l4	0.40	1/2800 (0.0%)	0.62	1/3790 (0.0%)
42	L5	0.34	0/2425	0.53	0/3271
42	l5	0.40	0/2408	0.56	0/3248
43	L6	0.38	0/1260	0.56	0/1694
43	l6	0.41	0/1269	0.58	0/1705
44	L7	0.42	0/1821	0.59	0/2451
44	l7	0.44	0/1828	0.63	2/2461 (0.1%)
45	L8	0.31	0/1836	0.52	1/2481 (0.0%)
45	l8	0.33	0/1795	0.52	0/2429
46	L9	0.37	0/1539	0.55	0/2073
46	l9	0.40	0/1539	0.56	0/2073
47	M0	0.41	0/1741	0.55	0/2335
47	m0	0.43	0/1758	0.61	0/2358
48	M1	0.31	0/1374	0.50	0/1842
48	m1	0.34	0/1374	0.56	0/1842
49	M3	0.40	0/1568	0.59	0/2106
49	m3	0.40	0/1573	0.57	0/2113
50	M4	0.40	0/1068	0.54	0/1438
50	m4	0.41	0/1074	0.57	0/1446
51	M5	0.38	0/1757	0.57	0/2354
51	m5	0.37	0/1757	0.56	0/2354
52	M6	0.43	0/1585	0.58	0/2128
52	m6	0.50	0/1585	0.61	0/2128
53	M7	0.42	0/1443	0.55	0/1944
53	m7	0.44	0/1250	0.61	0/1683
54	M8	0.39	0/1465	0.60	0/1965
54	m8	0.40	0/1465	0.62	0/1965
55	M9	0.30	0/1538	0.48	0/2050
55	m9	0.34	0/1538	0.51	0/2050
56	N0	0.39	0/1481	0.59	0/1990
56	n0	0.43	0/1481	0.57	0/1990
57	N1	0.41	0/1300	0.56	0/1743
57	n1	0.44	0/1300	0.55	0/1743
58	N2	0.29	0/812	0.48	0/1099
58	n2	0.32	0/794	0.54	0/1076
59	N3	0.38	0/1018	0.56	0/1369
59	n3	0.45	0/1018	0.64	0/1369
60	N4	0.31	0/712	0.47	0/958



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
60	n4	0.36	0/1052	0.53	0/1398
61	N5	0.34	0/979	0.57	1/1321 (0.1%)
61	n5	0.34	0/974	0.56	0/1314
62	N6	0.37	0/1004	0.63	2/1341 (0.1%)
62	n6	0.34	0/1004	0.56	0/1341
63	N7	0.31	0/1118	0.51	0/1497
63	n7	0.31	0/1118	0.51	0/1497
64	N8	0.41	0/1204	0.64	0/1612
64	n8	0.42	0/1204	0.63	0/1612
65	N9	0.38	0/473	0.57	0/629
65	n9	0.45	0/473	0.71	1/629 (0.2%)
66	O0	0.30	0/751	0.46	0/1008
66	o0	0.32	0/775	0.51	0/1040
67	O1	0.36	0/890	0.53	0/1196
67	o1	0.43	0/897	0.59	0/1205
68	O2	0.42	0/1041	0.61	0/1394
68	o2	0.42	0/1041	0.59	0/1394
69	O3	0.44	0/868	0.52	0/1168
69	o3	0.47	0/868	0.58	0/1168
70	O4	0.33	0/890	0.53	1/1189 (0.1%)
70	o4	0.35	0/890	0.56	0/1189
71	O5	0.38	0/978	0.56	0/1301
71	o5	0.33	0/974	0.53	0/1297
72	O6	0.35	0/778	0.57	0/1034
72	o6	0.34	0/777	0.53	0/1033
73	O7	0.41	0/696	0.62	0/923
73	o7	0.39	0/696	0.61	0/923
74	O8	0.31	0/618	0.51	0/826
74	o8	0.32	0/614	0.51	0/822
75	O9	0.38	0/443	0.60	0/588
75	o9	0.37	0/443	0.56	0/588
76	Q0	0.44	0/423	0.60	0/562
76	q0	0.46	0/423	0.62	0/562
77	Q1	0.35	0/234	0.61	0/300
77	q1	0.43	0/234	0.58	0/300
78	Q2	0.51	1/860 (0.1%)	0.64	0/1136
78	q2	0.52	1/860 (0.1%)	0.64	1/1136 (0.1%)
79	Q3	0.38	0/701	0.58	0/934
79	q3	0.42	0/701	0.60	0/934
80	c0	0.28	0/777	0.53	2/1049 (0.2%)
82	p0	0.27	0/1091	0.53	2/1472 (0.1%)
85	f	0.31	0/1131	0.59	1/1522 (0.1%)
All	All	0.45	5/432438 (0.0%)	0.84	366/634802 (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
7	s5	0	1
18	c6	0	2
19	C7	0	1
27	D5	0	1
52	M6	0	1
52	m6	0	1
56	n0	0	1
64	n8	0	2
65	N9	0	1
All	All	0	11

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
78	q2	17	CYS	CB-SG	8.72	1.97	1.82
78	Q2	17	CYS	CB-SG	8.11	1.96	1.82
36	5	1152	G	N9-C4	-7.24	1.32	1.38
36	5	2971	A	N9-C4	6.37	1.41	1.37
41	l4	94	CYS	CB-SG	-5.72	1.72	1.81

All (366) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	1152	G	N3-C4-C5	13.24	135.22	128.60
36	5	1152	G	N3-C4-N9	-12.64	118.41	126.00
36	5	1152	G	C2-N3-C4	-10.83	106.48	111.90
36	5	2726	C	C6-N1-C2	-9.83	116.37	120.30
36	1	3217	C	N1-C2-O2	8.77	124.16	118.90
36	1	3217	C	C2-N1-C1'	8.69	128.36	118.80
36	5	2572	C	N1-C2-O2	8.67	124.10	118.90
36	1	1307	G	P-O3'-C3'	8.61	130.03	119.70
36	1	3217	C	N3-C2-O2	-8.04	116.27	121.90
36	1	406	G	O4'-C1'-N9	8.04	114.63	108.20
36	1	2572	C	N1-C2-O2	7.91	123.64	118.90
1	2	1096	C	N1-C2-O2	7.86	123.61	118.90
36	1	1269	U	C2-N1-C1'	7.83	127.10	117.70
36	5	1152	G	N3-C2-N2	-7.79	114.45	119.90
36	5	3245	A	N7-C8-N9	7.79	117.69	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1367	G	C5-C6-N1	-7.71	107.64	111.50
36	1	2306	C	C2-N1-C1'	7.68	127.25	118.80
36	1	2572	C	N3-C2-O2	-7.68	116.53	121.90
1	2	959	U	C2-N1-C1'	7.66	126.90	117.70
37	7	101	G	N1-C6-O6	7.64	124.49	119.90
38	4	125	U	C2-N1-C1'	7.58	126.80	117.70
1	2	1096	C	C2-N1-C1'	7.55	127.11	118.80
1	6	1473	U	C2-N1-C1'	7.55	126.76	117.70
36	1	637	C	C6-N1-C2	7.53	123.31	120.30
1	6	1274	C	N1-C2-O2	7.53	123.42	118.90
36	5	2572	C	C2-N1-C1'	7.51	127.06	118.80
36	5	1903	U	C5-C6-N1	7.45	126.42	122.70
36	5	3197	G	N3-C4-N9	-7.43	121.54	126.00
36	1	2714	G	N3-C4-C5	7.42	132.31	128.60
36	5	1152	G	N1-C6-O6	7.41	124.35	119.90
1	6	1185	U	N1-C2-O2	7.37	127.96	122.80
36	5	3154	C	C2-N1-C1'	7.31	126.84	118.80
1	6	1000	C	C2-N1-C1'	7.25	126.77	118.80
36	5	2278	C	N1-C2-O2	7.19	123.22	118.90
1	2	959	U	N3-C2-O2	-7.19	117.17	122.20
36	1	343	U	O5'-P-OP2	-7.19	99.23	105.70
36	1	1556	C	N3-C2-O2	-7.18	116.87	121.90
36	1	2572	C	C2-N1-C1'	7.17	126.69	118.80
1	2	728	U	C2-N1-C1'	7.17	126.30	117.70
36	1	3278	C	N1-C2-O2	7.16	123.20	118.90
36	1	2617	U	C5-C4-O4	7.16	130.19	125.90
36	5	3154	C	N1-C2-O2	7.15	123.19	118.90
36	5	2283	G	N1-C6-O6	7.14	124.19	119.90
1	2	1274	C	N1-C2-O2	7.13	123.18	118.90
36	5	1152	G	C8-N9-C1'	7.12	136.26	127.00
36	1	2278	C	N1-C2-O2	7.12	123.17	118.90
44	17	229	PHE	CB-CG-CD1	7.12	125.78	120.80
36	1	1269	U	N1-C2-O2	7.11	127.78	122.80
1	2	959	U	N1-C2-O2	7.10	127.77	122.80
36	1	2572	C	C6-N1-C2	-7.07	117.47	120.30
38	4	125	U	N1-C2-O2	7.06	127.74	122.80
36	1	24	G	O5'-P-OP2	-7.04	99.36	105.70
36	5	1903	U	N3-C4-O4	6.98	124.29	119.40
36	1	2306	C	N1-C2-O2	6.98	123.09	118.90
1	2	1370	U	P-O3'-C3'	6.96	128.05	119.70
36	1	1367	G	N1-C6-O6	6.95	124.07	119.90
1	2	728	U	N1-C2-O2	6.93	127.65	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	5	2572	C	N3-C2-O2	-6.92	117.06	121.90
36	5	1152	G	C4-N9-C1'	-6.92	117.51	126.50
1	6	1473	U	N3-C2-O2	-6.91	117.36	122.20
1	6	813	U	C2-N1-C1'	6.88	125.96	117.70
36	1	439	C	C2-N1-C1'	6.88	126.37	118.80
36	5	1307	G	P-O3'-C3'	6.83	127.89	119.70
36	5	1200	A	N1-C6-N6	6.82	122.69	118.60
36	5	2283	G	C5-C6-O6	-6.81	124.51	128.60
36	1	439	C	N1-C2-O2	6.74	122.94	118.90
36	1	583	G	O5'-P-OP1	-6.73	99.64	105.70
36	5	3245	A	C8-N9-C4	-6.73	103.11	105.80
1	2	507	U	C2-N1-C1'	6.72	125.77	117.70
1	2	1698	G	P-O3'-C3'	6.69	127.73	119.70
1	6	453	U	C2-N1-C1'	6.69	125.72	117.70
36	1	2714	G	N3-C4-N9	-6.68	121.99	126.00
36	1	1201	C	C6-N1-C2	-6.68	117.63	120.30
36	1	3278	C	N3-C2-O2	-6.66	117.24	121.90
62	N6	57	LEU	CA-CB-CG	6.66	130.61	115.30
36	1	1269	U	N3-C2-O2	-6.66	117.54	122.20
1	6	1473	U	N1-C2-O2	6.66	127.46	122.80
36	1	3057	U	N3-C2-O2	-6.64	117.55	122.20
36	5	3197	G	N3-C4-C5	6.62	131.91	128.60
36	1	3217	C	C6-N1-C1'	-6.60	112.88	120.80
38	8	80	A	N7-C8-N9	6.59	117.09	113.80
36	1	2283	G	N1-C6-O6	6.58	123.85	119.90
36	5	2526	C	N1-C2-O2	6.51	122.81	118.90
36	5	2524	A	O4'-C1'-N9	6.50	113.40	108.20
36	5	2376	G	O5'-P-OP2	-6.46	99.89	105.70
36	5	1192	C	N1-C2-O2	6.45	122.77	118.90
1	2	507	U	N1-C2-O2	6.43	127.30	122.80
36	5	2272	G	O4'-C1'-N9	6.43	113.34	108.20
1	2	728	U	N3-C2-O2	-6.40	117.72	122.20
36	1	1604	G	C4-N9-C1'	6.40	134.82	126.50
37	7	101	G	C5-C6-O6	-6.40	124.76	128.60
1	2	73	U	O4'-C1'-N1	6.39	113.31	108.20
36	5	2231	C	C2-N1-C1'	6.39	125.83	118.80
38	8	80	A	C8-N9-C4	-6.39	103.25	105.80
36	5	3049	A	C8-N9-C4	6.36	108.34	105.80
36	1	917	A	O5'-P-OP2	-6.36	99.98	105.70
36	1	1556	C	N1-C2-O2	6.33	122.70	118.90
1	2	831	U	C2-N1-C1'	6.32	125.28	117.70
36	5	922	U	N3-C2-O2	-6.31	117.78	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	813	U	N1-C2-O2	6.30	127.21	122.80
12	C0	88	PRO	N-CA-CB	6.29	110.85	103.30
36	1	922	U	C2-N1-C1'	6.29	125.25	117.70
36	5	3245	A	C5-N7-C8	-6.29	100.76	103.90
1	2	1039	A	O4'-C1'-N9	6.27	113.22	108.20
36	1	1903	U	N3-C4-O4	6.27	123.79	119.40
36	1	2829	U	N3-C4-O4	6.26	123.78	119.40
36	5	2273	G	C8-N9-C4	6.26	108.91	106.40
1	6	36	C	C5-C4-N4	-6.26	115.82	120.20
18	C6	40	GLU	C-N-CD	-6.25	106.85	120.60
36	5	3309	G	N3-C4-C5	-6.25	125.47	128.60
1	2	794	U	P-O3'-C3'	6.24	127.19	119.70
1	2	1274	C	N3-C2-O2	-6.22	117.55	121.90
1	2	639	U	N3-C2-O2	-6.22	117.84	122.20
36	5	1495	U	C2-N1-C1'	6.22	125.16	117.70
1	2	1052	U	C2-N1-C1'	6.22	125.16	117.70
36	5	718	G	O4'-C1'-N9	6.21	113.16	108.20
36	5	1903	U	N3-C4-C5	-6.20	110.88	114.60
36	5	968	G	O5'-P-OP1	-6.19	100.13	105.70
82	p0	290	PRO	N-CA-CB	6.18	110.72	103.30
36	1	2617	U	N1-C2-N3	6.18	118.61	114.90
80	c0	83	PRO	N-CA-CB	6.16	110.69	103.30
36	1	2355	G	N1-C6-O6	6.15	123.59	119.90
36	5	1849	C	C6-N1-C2	6.15	122.76	120.30
36	5	2728	G	C8-N9-C4	-6.15	103.94	106.40
1	6	1274	C	N3-C2-O2	-6.13	117.61	121.90
6	s4	38	LEU	CA-CB-CG	6.11	129.36	115.30
82	p0	278	PRO	N-CA-CB	6.09	110.61	103.30
36	1	2617	U	N3-C2-O2	-6.08	117.94	122.20
37	7	73	C	C2-N1-C1'	6.08	125.49	118.80
36	5	776	U	C5-C6-N1	-6.07	119.66	122.70
36	5	2971	A	C2-N3-C4	6.04	113.62	110.60
1	6	542	A	P-O3'-C3'	6.04	126.95	119.70
36	5	2996	U	C2-N1-C1'	6.04	124.95	117.70
36	5	1878	G	C4-N9-C1'	6.04	134.35	126.50
1	2	1389	C	N1-C2-O2	6.01	122.50	118.90
36	1	1581	C	N1-C2-O2	6.00	122.50	118.90
36	1	2419	A	O5'-P-OP1	-5.99	100.31	105.70
36	5	2726	C	N3-C2-O2	-5.99	117.70	121.90
36	5	406	G	O4'-C1'-N9	5.99	112.99	108.20
36	1	2846	U	N3-C2-O2	-5.97	118.02	122.20
36	5	1481	A	P-O3'-C3'	5.97	126.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1604	G	N3-C4-C5	-5.96	125.62	128.60
36	1	2273	G	C8-N9-C4	5.96	108.78	106.40
1	2	158	U	P-O3'-C3'	5.94	126.83	119.70
1	2	1657	U	C6-N1-C1'	5.94	129.52	121.20
36	5	1903	U	C6-N1-C2	-5.93	117.44	121.00
36	5	1879	A	O5'-P-OP1	5.93	117.82	110.70
65	n9	23	LYS	C-N-CD	5.93	140.85	128.40
1	6	163	G	C8-N9-C4	-5.93	104.03	106.40
36	5	1367	G	N1-C6-O6	5.92	123.45	119.90
36	1	1820	U	OP2-P-O3'	5.91	118.20	105.20
36	5	2205	U	O4'-C1'-N1	5.89	112.91	108.20
1	6	1097	U	P-O3'-C3'	5.87	126.75	119.70
36	5	2996	U	N1-C2-O2	5.85	126.90	122.80
35	SM	171	PRO	N-CA-CB	5.85	110.32	103.30
36	5	3309	G	C4-N9-C1'	5.85	134.10	126.50
1	2	1269	U	C2-N1-C1'	5.84	124.70	117.70
36	1	952	A	N1-C6-N6	5.84	122.10	118.60
36	1	3344	A	O4'-C1'-N9	5.84	112.87	108.20
1	2	1389	C	C2-N1-C1'	5.83	125.21	118.80
36	1	1556	C	C6-N1-C2	-5.79	117.98	120.30
36	5	3309	G	N3-C4-N9	5.78	129.47	126.00
1	6	1600	A	OP1-P-O3'	5.76	117.88	105.20
36	1	1903	U	C5-C6-N1	5.76	125.58	122.70
1	6	558	U	C2-N1-C1'	5.76	124.61	117.70
36	1	2273	G	C4-N9-C1'	-5.75	119.02	126.50
17	C5	52	LYS	C-N-CD	5.75	140.48	128.40
36	5	942	U	N3-C4-O4	5.74	123.42	119.40
80	c0	90	PRO	N-CA-CB	5.72	110.17	103.30
1	2	720	G	OP1-P-O3'	5.72	117.78	105.20
1	6	795	U	N3-C2-O2	-5.72	118.20	122.20
36	5	2617	U	N1-C2-O2	-5.70	118.81	122.80
36	5	3195	U	P-O3'-C3'	5.70	126.54	119.70
9	s7	131	PHE	C-N-CD	5.69	140.35	128.40
1	6	1274	C	C2-N1-C1'	5.69	125.06	118.80
36	1	1484	U	P-O3'-C3'	5.68	126.52	119.70
36	5	1308	A	C8-N9-C4	-5.67	103.53	105.80
36	5	1308	A	N7-C8-N9	5.66	116.63	113.80
1	6	158	U	P-O3'-C3'	5.66	126.49	119.70
1	2	1274	C	C2-N1-C1'	5.66	125.03	118.80
36	1	2870	C	O4'-C1'-N1	5.66	112.73	108.20
36	1	3057	U	N1-C2-O2	5.66	126.76	122.80
38	4	125	U	N3-C2-O2	-5.65	118.25	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2	1096	C	C6-N1-C1'	-5.65	114.02	120.80
36	5	2552	C	C2-N1-C1'	5.65	125.01	118.80
1	6	1698	G	P-O3'-C3'	5.64	126.47	119.70
36	5	1152	G	C5-N7-C8	-5.64	101.48	104.30
15	C3	22	ALA	C-N-CD	-5.63	108.21	120.60
36	5	869	G	N1-C6-O6	-5.63	116.52	119.90
36	1	910	G	C8-N9-C4	-5.63	104.15	106.40
36	5	1303	A	C8-N9-C4	5.60	108.04	105.80
1	6	795	U	C2-N1-C1'	5.60	124.42	117.70
36	5	1222	G	P-O3'-C3'	5.59	126.41	119.70
36	5	943	U	N1-C2-O2	-5.59	118.89	122.80
36	1	65	A	P-O3'-C3'	5.58	126.40	119.70
36	5	2943	G	C6-C5-N7	-5.58	127.05	130.40
31	D9	36	LEU	CA-CB-CG	5.57	128.11	115.30
1	2	1657	U	C5-C4-O4	5.57	129.24	125.90
36	5	1655	G	N7-C8-N9	5.56	115.88	113.10
36	1	1333	C	C6-N1-C2	-5.55	118.08	120.30
36	5	2374	C	C2-N1-C1'	5.55	124.91	118.80
36	5	3154	C	N3-C2-O2	-5.55	118.01	121.90
61	N5	34	LEU	CA-CB-CG	5.55	128.06	115.30
36	5	3092	C	O4'-C1'-N1	5.54	112.64	108.20
36	5	880	G	O4'-C1'-N9	5.54	112.63	108.20
78	q2	17	CYS	CA-CB-SG	5.54	123.97	114.00
1	2	639	U	N1-C2-O2	5.53	126.67	122.80
1	6	453	U	N1-C2-O2	5.53	126.67	122.80
36	5	3169	U	N1-C2-O2	5.53	126.67	122.80
36	1	1604	G	N3-C4-N9	5.52	129.31	126.00
1	6	965	U	C2-N1-C1'	5.52	124.32	117.70
1	6	402	C	O5'-P-OP2	-5.51	100.74	105.70
1	6	1745	G	N3-C4-N9	5.51	129.30	126.00
1	2	617	U	C2-N1-C1'	5.50	124.30	117.70
1	2	1000	C	C2-N1-C1'	5.50	124.85	118.80
36	1	2679	A	O4'-C1'-N9	5.50	112.60	108.20
24	D2	104	LEU	CA-CB-CG	5.50	127.94	115.30
36	5	2146	C	N1-C2-O2	5.48	122.19	118.90
36	5	2833	A	C8-N9-C4	5.48	107.99	105.80
1	2	1246	C	C2-N1-C1'	5.47	124.82	118.80
36	1	835	G	O4'-C1'-N9	5.47	112.57	108.20
36	1	718	G	C4-C5-N7	5.46	112.98	110.80
36	1	1556	C	C2-N1-C1'	5.45	124.79	118.80
36	5	1655	G	C8-N9-C4	-5.45	104.22	106.40
1	2	720	G	P-O3'-C3'	5.44	126.23	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	2	830	U	N1-C2-O2	5.44	126.61	122.80
36	5	2572	C	C6-N1-C1'	-5.44	114.28	120.80
36	1	2373	A	O5'-P-OP1	-5.43	100.82	105.70
1	6	144	U	C2-N1-C1'	5.43	124.21	117.70
1	2	1657	U	C2-N1-C1'	-5.42	111.19	117.70
36	1	1368	U	C5-C4-O4	-5.42	122.65	125.90
36	5	1316	C	C6-N1-C2	-5.42	118.13	120.30
1	2	581	U	C2-N1-C1'	5.42	124.20	117.70
36	1	3344	A	N7-C8-N9	5.41	116.51	113.80
1	2	507	U	N3-C2-O2	-5.40	118.42	122.20
38	8	95	G	C4-N9-C1'	-5.40	119.48	126.50
36	1	1604	G	C8-N9-C1'	-5.40	119.98	127.00
24	D2	65	LEU	CA-CB-CG	5.39	127.71	115.30
36	1	2571	U	N3-C2-O2	-5.39	118.43	122.20
36	5	833	G	N1-C6-O6	-5.39	116.67	119.90
1	2	1560	U	N3-C2-O2	-5.39	118.43	122.20
36	1	1716	U	P-O3'-C3'	5.38	126.16	119.70
24	D2	93	LEU	CA-CB-CG	5.38	127.66	115.30
44	17	229	PHE	CB-CG-CD2	-5.36	117.05	120.80
36	1	2836	C	N3-C2-O2	-5.36	118.15	121.90
36	5	891	G	N1-C6-O6	-5.35	116.69	119.90
36	1	2541	U	P-O3'-C3'	5.35	126.12	119.70
36	1	1434	G	C5-C6-N1	5.34	114.17	111.50
36	1	2306	C	N3-C2-O2	-5.34	118.16	121.90
1	6	558	U	P-O3'-C3'	5.34	126.11	119.70
1	6	1000	C	N3-C2-O2	-5.34	118.16	121.90
36	5	922	U	C5-C6-N1	-5.34	120.03	122.70
1	6	813	U	N3-C2-O2	-5.34	118.46	122.20
36	5	3311	C	C6-N1-C2	-5.33	118.17	120.30
1	2	1761	U	P-O3'-C3'	5.33	126.10	119.70
36	5	1481	A	C8-N9-C4	-5.33	103.67	105.80
36	5	2943	G	N1-C6-O6	5.33	123.10	119.90
1	2	831	U	N1-C2-O2	5.33	126.53	122.80
1	2	1096	C	N3-C2-O2	-5.33	118.17	121.90
36	1	2306	C	C6-N1-C1'	-5.33	114.41	120.80
1	2	1657	U	N1-C2-N3	5.32	118.09	114.90
1	6	1745	G	C5-C6-O6	-5.30	125.42	128.60
1	2	1370	U	OP2-P-O3'	5.29	116.85	105.20
36	5	1367	G	C5-C6-N1	-5.29	108.86	111.50
36	5	3214	U	N3-C2-O2	-5.29	118.50	122.20
1	6	858	G	O4'-C1'-N9	5.28	112.42	108.20
1	2	75	U	N1-C2-O2	5.28	126.49	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1820	U	P-O3'-C3'	5.28	126.03	119.70
1	6	864	U	C2-N1-C1'	5.28	124.03	117.70
1	6	453	U	C5-C6-N1	5.27	125.34	122.70
1	2	1573	A	OP2-P-O3'	5.27	116.79	105.20
36	5	2376	G	C8-N9-C1'	-5.26	120.16	127.00
36	1	2371	G	N3-C2-N2	5.26	123.58	119.90
36	1	283	G	C4-C5-N7	5.26	112.90	110.80
36	5	1604	G	C4-N9-C1'	5.25	133.33	126.50
36	5	3197	G	N3-C2-N2	-5.25	116.22	119.90
36	1	3318	G	C4-N9-C1'	5.25	133.32	126.50
1	2	831	U	C5-C6-N1	5.24	125.32	122.70
35	SM	134	ASP	CB-CG-OD2	5.24	123.02	118.30
36	1	857	G	N1-C6-O6	5.23	123.04	119.90
36	1	959	C	O5'-P-OP2	-5.23	100.99	105.70
36	5	2400	G	N1-C6-O6	5.23	123.04	119.90
38	4	125	U	C6-N1-C1'	-5.23	113.88	121.20
36	5	776	U	C4-C5-C6	5.23	122.84	119.70
36	1	3096	C	C6-N1-C2	-5.23	118.21	120.30
1	6	1361	U	C2-N1-C1'	5.22	123.97	117.70
36	1	1349	G	O4'-C1'-N9	5.22	112.37	108.20
36	5	2584	G	C4-N9-C1'	5.22	133.28	126.50
36	5	3197	G	C4-N9-C1'	-5.22	119.72	126.50
36	5	835	G	O4'-C1'-N9	5.21	112.37	108.20
36	5	3195	U	OP1-P-O3'	5.21	116.66	105.20
36	5	1200	A	C6-C5-N7	-5.21	128.65	132.30
38	8	125	U	C2-N1-C1'	5.21	123.95	117.70
36	1	2550	U	N1-C2-O2	5.21	126.44	122.80
36	5	1716	U	P-O3'-C3'	5.20	125.94	119.70
1	2	1573	A	P-O3'-C3'	5.20	125.94	119.70
1	6	1246	C	C2-N1-C1'	5.20	124.52	118.80
1	2	1489	U	N3-C2-O2	-5.19	118.57	122.20
36	5	2942	C	N1-C2-O2	-5.19	115.78	118.90
36	5	2531	C	C2-N1-C1'	5.19	124.51	118.80
36	1	776	U	C4-C5-C6	5.18	122.81	119.70
1	6	1537	C	C6-N1-C2	-5.18	118.23	120.30
1	6	829	A	OP1-P-O3'	5.17	116.56	105.20
36	5	1154	A	N1-C6-N6	-5.17	115.50	118.60
1	6	1058	U	OP1-P-O3'	5.16	116.54	105.20
36	5	283	G	C4-C5-N7	5.14	112.86	110.80
14	C2	103	LEU	CA-CB-CG	5.14	127.13	115.30
36	1	2371	G	N1-C2-N2	-5.14	111.57	116.20
36	1	2314	U	C2-N1-C1'	5.14	123.87	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	1	1444	G	C4-C5-N7	5.13	112.85	110.80
1	6	194	U	C2-N1-C1'	5.13	123.86	117.70
36	1	1858	A	C2-N3-C4	5.13	113.16	110.60
36	5	1203	A	N1-C6-N6	5.13	121.68	118.60
36	5	915	A	C2-N3-C4	5.12	113.16	110.60
36	5	2726	C	C5-C4-N4	5.12	123.79	120.20
36	5	776	U	N1-C2-N3	5.12	117.97	114.90
36	5	2231	C	C6-N1-C1'	-5.12	114.66	120.80
36	5	1858	A	O4'-C1'-N9	5.12	112.29	108.20
36	5	2843	U	N1-C2-O2	5.12	126.38	122.80
1	6	151	G	N3-C4-N9	-5.11	122.93	126.00
36	5	915	A	N3-C4-C5	-5.11	123.22	126.80
36	1	3316	A	OP2-P-O3'	5.11	116.44	105.20
36	5	2288	G	N1-C6-O6	5.11	122.96	119.90
36	1	2829	U	C5-C4-O4	-5.10	122.84	125.90
38	4	103	G	N3-C4-C5	-5.10	126.05	128.60
36	5	2411	U	C5-C4-O4	5.10	128.96	125.90
36	5	966	U	N3-C2-O2	-5.09	118.63	122.20
1	6	1000	C	C6-N1-C1'	-5.09	114.69	120.80
36	1	1201	C	C5-C6-N1	5.09	123.55	121.00
36	1	2706	G	N3-C4-N9	5.09	129.05	126.00
36	1	3196	U	N3-C2-O2	-5.09	118.64	122.20
85	f	53	GLY	N-CA-C	5.09	125.82	113.10
36	5	2950	G	O4'-C1'-N9	5.09	112.27	108.20
1	6	782	U	N3-C2-O2	-5.09	118.64	122.20
36	5	3377	G	C5-C6-O6	-5.09	125.55	128.60
18	C6	40	GLU	C-N-CA	5.08	143.35	122.00
36	1	1581	C	N3-C2-O2	-5.08	118.34	121.90
62	N6	126	LEU	CA-CB-CG	5.08	126.99	115.30
1	6	453	U	N3-C2-O2	-5.08	118.64	122.20
36	5	2552	C	N1-C2-O2	5.08	121.95	118.90
36	5	1628	C	C6-N1-C2	-5.08	118.27	120.30
70	O4	51	LEU	CA-CB-CG	5.08	126.98	115.30
41	14	340	GLY	N-CA-C	-5.08	100.40	113.10
36	5	419	G	N7-C8-N9	-5.07	110.56	113.10
45	L8	189	LEU	CA-CB-CG	5.07	126.96	115.30
4	s2	93	GLY	N-CA-C	5.07	125.78	113.10
36	5	2772	C	P-O3'-C3'	5.07	125.78	119.70
1	2	959	U	C6-N1-C1'	-5.07	114.10	121.20
36	1	2132	C	N1-C2-O2	5.07	121.94	118.90
36	5	2725	U	O5'-P-OP2	-5.07	101.14	105.70
37	7	115	G	N3-C4-C5	-5.06	126.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	6	1640	C	C2-N1-C1'	5.04	124.35	118.80
36	1	1351	U	N1-C2-O2	5.04	126.33	122.80
1	2	1389	C	N3-C2-O2	-5.03	118.38	121.90
36	1	1367	G	C4-C5-C6	5.02	121.81	118.80
1	6	103	A	P-O3'-C3'	5.02	125.73	119.70
1	2	1052	U	N1-C2-O2	5.02	126.31	122.80
36	1	2112	U	P-O3'-C3'	5.02	125.72	119.70
36	5	1429	G	C6-C5-N7	-5.02	127.39	130.40
1	2	829	A	P-O3'-C3'	5.02	125.72	119.70
36	1	776	U	N3-C2-O2	-5.01	118.69	122.20
1	6	610	G	C4-N9-C1'	5.01	133.02	126.50
1	6	1058	U	P-O3'-C3'	5.01	125.72	119.70
36	1	109	A	OP1-P-O3'	5.01	116.22	105.20
36	5	2345	A	N1-C6-N6	5.00	121.60	118.60
36	5	3154	C	C6-N1-C2	-5.00	118.30	120.30

There are no chirality outliers.

All (11) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
19	C7	85	VAL	Peptide
27	D5	94	LYS	Peptide
52	M6	110	PRO	Peptide
65	N9	20	GLY	Peptide
18	c6	40	GLU	Peptide
18	c6	41	PRO	Peptide
52	m6	110	PRO	Peptide
56	n0	133	ALA	Peptide
64	n8	46	ASP	Peptide
64	n8	66	ALA	Peptide
7	s5	99	MET	Peptide

## 5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	2	37970	0	19106	689	1

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	6	38260	0	19252	679	0
2	S0	1577	0	1567	133	0
2	s0	1583	0	1578	0	0
3	S1	1709	0	1784	131	0
3	s1	1722	0	1793	0	0
4	S2	1635	0	1723	111	0
4	s2	1635	0	1723	0	0
5	S3	1734	0	1816	104	0
5	s3	1734	0	1817	0	0
6	S4	2068	0	2154	134	0
6	s4	2068	0	2154	0	0
7	S5	1609	0	1675	113	0
7	s5	1609	0	1675	0	0
8	S6	1799	0	1879	107	0
8	s6	1755	0	1846	0	0
9	S7	1481	0	1572	93	0
9	s7	1491	0	1578	0	0
10	S8	1489	0	1525	107	0
10	s8	1489	0	1525	0	0
11	S9	1494	0	1573	115	0
11	s9	1494	0	1573	0	0
12	C0	772	0	727	47	0
13	C1	1213	0	1257	73	0
13	c1	1168	0	1233	0	0
14	C2	890	0	887	57	0
14	c2	890	0	887	0	0
15	C3	1192	0	1255	82	0
15	c3	1192	0	1255	0	0
16	C4	891	0	883	72	0
16	c4	949	0	985	0	0
17	C5	977	0	1002	82	0
17	c5	1039	0	1050	0	0
18	C6	1105	0	1166	78	0
18	c6	1111	0	1171	0	0
19	C7	926	0	930	80	0
19	c7	906	0	909	0	0
20	C8	1192	0	1222	91	0
20	c8	1192	0	1222	0	0
21	C9	1112	0	1124	78	0
21	c9	1112	0	1124	0	0
22	D0	855	0	917	75	0
22	d0	882	0	939	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	D1	684	0	672	61	0
23	d1	684	0	672	0	0
24	D2	1021	0	1060	80	0
24	d2	1021	0	1060	0	0
25	D3	1121	0	1196	81	0
25	d3	1121	0	1196	0	0
26	D4	1073	0	1132	75	0
26	d4	1073	0	1132	0	0
27	D5	563	0	603	50	0
27	d5	558	0	598	0	0
28	D6	769	0	814	78	0
28	d6	769	0	814	0	0
29	D7	610	0	630	38	0
29	d7	610	0	631	0	0
30	D8	497	0	535	28	0
30	d8	497	0	535	0	0
31	D9	442	0	428	28	0
31	d9	442	0	428	0	0
32	E0	475	0	525	30	0
32	e0	491	0	542	0	0
33	E1	566	0	602	56	0
33	e1	608	0	655	0	0
34	SR	2437	0	2386	135	0
34	sR	2442	0	2392	0	0
35	SM	1104	0	1002	74	0
35	sM	679	0	615	0	0
36	1	67355	0	33848	1049	0
36	5	67780	0	34065	1005	0
37	3	2579	0	1304	45	0
37	7	2579	0	1304	36	0
38	4	3353	0	1695	61	1
38	8	3353	0	1695	61	0
39	L2	1914	0	1981	138	0
39	l2	1912	0	1976	0	0
40	L3	3075	0	3142	185	0
40	l3	3075	0	3142	0	0
41	L4	2748	0	2859	198	0
41	l4	2748	0	2859	0	0
42	L5	2375	0	2325	165	0
42	l5	2359	0	2311	0	0
43	L6	1239	0	1326	74	0
43	l6	1248	0	1339	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	L7	1784	0	1862	122	0
44	l7	1791	0	1869	0	0
45	L8	1804	0	1877	93	0
45	l8	1763	0	1819	0	0
46	L9	1518	0	1587	112	0
46	l9	1518	0	1587	0	0
47	M0	1705	0	1736	151	0
47	m0	1722	0	1755	0	0
48	M1	1353	0	1383	81	0
48	m1	1353	0	1383	0	0
49	M3	1543	0	1608	111	0
49	m3	1548	0	1613	0	0
50	M4	1053	0	1149	69	0
50	m4	1059	0	1154	0	0
51	M5	1720	0	1779	121	0
51	m5	1720	0	1779	0	0
52	M6	1555	0	1659	96	0
52	m6	1555	0	1659	0	0
53	M7	1420	0	1437	79	0
53	m7	1227	0	1236	0	0
54	M8	1441	0	1543	94	0
54	m8	1441	0	1543	0	0
55	M9	1521	0	1617	92	0
55	m9	1521	0	1617	0	0
56	N0	1445	0	1487	76	0
56	n0	1445	0	1487	0	0
57	N1	1276	0	1323	81	0
57	n1	1276	0	1323	0	0
58	N2	796	0	812	34	0
58	n2	778	0	791	0	0
59	N3	1003	0	1048	64	0
59	n3	1003	0	1048	0	0
60	N4	699	0	640	34	0
60	n4	1038	0	1071	0	0
61	N5	964	0	1025	69	0
61	n5	959	0	1023	0	0
62	N6	993	0	1081	61	0
62	n6	993	0	1081	0	0
63	N7	1092	0	1155	87	0
63	n7	1092	0	1155	0	0
64	N8	1173	0	1215	99	0
64	n8	1173	0	1215	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
65	N9	462	0	491	38	0
65	n9	462	0	491	0	0
66	O0	743	0	797	46	0
66	o0	767	0	816	0	0
67	O1	876	0	912	46	0
67	o1	883	0	918	0	0
68	O2	1020	0	1090	74	0
68	o2	1020	0	1090	0	0
69	O3	850	0	880	47	0
69	o3	850	0	880	0	0
70	O4	880	0	945	55	0
70	o4	880	0	945	0	0
71	O5	969	0	1078	92	0
71	o5	965	0	1067	0	0
72	O6	771	0	849	48	0
72	o6	770	0	846	0	0
73	O7	681	0	683	43	0
73	o7	681	0	683	0	0
74	O8	612	0	682	37	0
74	o8	608	0	671	0	0
75	O9	436	0	475	27	0
75	o9	436	0	475	0	0
76	Q0	417	0	455	29	0
76	q0	417	0	455	0	0
77	Q1	233	0	284	17	0
77	q1	233	0	284	0	0
78	Q2	847	0	914	43	0
78	q2	847	0	914	0	0
79	Q3	694	0	734	33	0
79	q3	694	0	734	0	0
80	c0	762	0	700	0	0
81	m2	750	0	180	0	0
82	p0	1076	0	1076	0	0
83	p1	235	0	53	0	0
84	p2	230	0	49	0	0
85	f	1116	0	1108	0	0
86	D6	1	0	0	0	0
86	D7	1	0	0	0	0
86	D9	1	0	0	0	0
86	E1	1	0	0	0	0
86	O7	1	0	0	0	0
86	Q0	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
86	Q2	1	0	0	0	0
86	Q3	1	0	0	0	0
86	d6	1	0	0	0	0
86	d7	1	0	0	0	0
86	d9	1	0	0	0	0
86	e1	1	0	0	0	0
86	o7	1	0	0	0	0
86	q0	1	0	0	0	0
86	q2	1	0	0	0	0
86	q3	1	0	0	0	0
All	All	404042	0	298994	8056	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 12.

All (8056) 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)
47:M0:174:THR:HG23	47:M0:176:LEU:H	1.29	0.96
40:L3:41:VAL:HA	40:L3:185:GLY:HA3	1.49	0.95
5:S3:125:TYR:OH	35:SM:134:ASP:OD2	1.87	0.93
79:Q3:57:CYS:SG	79:Q3:60:CYS:HB3	2.10	0.92
50:M4:55:ARG:NH2	50:M4:76:ALA:O	2.18	0.92
36:1:2392:C:O2'	40:L3:266:ARG:NH2	2.04	0.91
41:L4:122:THR:HG22	41:L4:235:LEU:HB2	1.53	0.90
15:C3:65:VAL:HG23	15:C3:66:ILE:HG23	5.38	0.89
2:S0:162:CYS:SG	2:S0:163:ASN:N	2.46	0.89
47:M0:76:MET:HE1	47:M0:148:VAL:HA	2.32	0.89
1:2:1426:C:H5''	35:SM:93:ARG:HH12	1.38	0.89
1:2:74:U:H1'	1:2:75:U:H5'	1.54	0.89
24:D2:2:THR:N	1:6:1034:C:HO2'	340.40	0.88
36:5:1655:G:H8	36:5:1655:G:H5'	1.38	0.88
36:1:31:C:OP2	51:M5:188:ARG:NH2	2.07	0.87
1:2:1429:G:H1'	22:D0:74:GLU:HG2	1.56	0.87
36:1:687:U:OP2	49:M3:36:ARG:NH2	2.08	0.87
36:1:3182:G:OP1	52:M6:160:ARG:NH2	2.07	0.87
36:5:3299:A:H61	36:5:3315:G:H1	1.21	0.87
16:C4:85:ALA:H	16:C4:119:THR:HG22	1.40	0.87
36:1:1481:A:O2'	36:1:1858:A:N3	2.07	0.86
36:1:860:G:OP1	79:Q3:17:ARG:NH1	2.07	0.86
54:M8:158:HIS:H	54:M8:186:VAL:HG12	1.41	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L4:269:SER:O	41:L4:271:LYS:N	2.09	0.85
1:2:702:G:O6	1:2:736:C:N4	2.09	0.85
3:S1:129:THR:HA	3:S1:177:GLN:HA	1.59	0.85
17:C5:123:TYR:OH	20:C8:126:ARG:NH1	2.26	0.85
41:L4:300:ARG:O	54:M8:39:ARG:NH1	2.15	0.85
47:M0:38:LYS:HD3	47:M0:83:ASP:HB3	4.07	0.85
51:M5:31:ARG:NH1	51:M5:124:ASP:OD1	2.57	0.85
36:1:1639:C:OP2	70:O4:74:ARG:NH2	2.10	0.84
41:L4:329:PRO:O	41:L4:331:ALA:N	2.97	0.84
1:2:1542:G:N2	1:2:1569:A:OP2	2.09	0.84
70:O4:41:ARG:HD2	70:O4:56:THR:HG21	3.57	0.84
70:O4:41:ARG:HG2	70:O4:56:THR:HG21	1.60	0.84
41:L4:161:LYS:NZ	36:5:209:A:OP1	74.24	0.84
36:5:2537:U:O2'	36:5:2538:U:O4'	1.94	0.84
21:C9:37:VAL:HG12	21:C9:39:THR:H	4.35	0.84
40:L3:232:ARG:NH1	40:L3:269:GLN:O	2.10	0.84
36:1:695:C:OP1	41:L4:271:LYS:NZ	2.11	0.84
21:C9:119:LYS:NZ	1:6:1369:U:OP1	443.60	0.83
1:2:104:A:OP2	1:2:308:C:N4	2.11	0.83
42:L5:177:GLU:O	42:L5:179:ARG:N	2.10	0.83
40:L3:3:HIS:O	40:L3:5:LYS:N	2.11	0.83
36:5:1654:A:H2'	36:5:1655:G:H5''	1.58	0.83
1:6:1595:U:H3	1:6:1600:A:H2	1.25	0.83
51:M5:96:ARG:NH2	51:M5:104:GLU:OE1	2.51	0.83
36:1:640:U:OP1	64:N8:21:ARG:NH2	2.12	0.83
1:2:1559:A:H5''	20:C8:135:GLY:HA3	1.58	0.83
1:2:1766:A:N1	28:D6:80:HIS:ND1	2.27	0.83
64:N8:21:ARG:NH2	36:5:640:U:OP1	183.38	0.83
36:1:1565:G:N2	36:1:1574:C:O2	2.12	0.82
36:5:252:U:H4'	36:5:253:A:H5'	1.59	0.82
38:4:136:G:OP1	61:N5:48:SER:OG	1.96	0.82
2:S0:140:ASN:ND2	4:S2:60:SER:O	3.41	0.82
36:1:1592:G:OP2	70:O4:37:LYS:NZ	2.11	0.82
41:L4:16:THR:HG22	41:L4:18:ASN:H	1.45	0.82
1:2:1235:C:H5'	33:E1:146:SER:HB2	1.60	0.82
8:S6:14:LYS:HD2	8:S6:123:GLY:HA3	2.68	0.82
70:O4:74:ARG:NH2	36:5:1639:C:OP2	201.11	0.82
38:8:79:A:H3'	38:8:80:A:C8	2.15	0.82
35:SM:34:LYS:NZ	36:1:2707:C:OP1	2.12	0.81
41:L4:99:MET:HE3	41:L4:103:THR:H	2.43	0.81
51:M5:188:ARG:NH2	36:5:31:C:OP2	122.22	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Q3:59:CYS:O	79:Q3:61:LYS:N	2.13	0.81
11:S9:110:GLN:HE22	11:S9:126:ARG:HG2	1.44	0.81
40:L3:227:GLU:HG3	40:L3:270:ARG:HE	3.87	0.81
43:L6:3:ALA:HB1	68:O2:75:LEU:HD13	2.83	0.81
36:1:148:G:OP2	51:M5:4:TYR:OH	1.98	0.81
1:6:1699:G:H22	1:6:1702:A:H5''	1.46	0.81
1:6:65:A:H2	1:6:84:A:H62	1.27	0.81
66:O0:40:LYS:HB3	66:O0:101:LEU:HD11	1.63	0.81
36:5:1231:A:H5''	36:5:1232:C:H5'	1.63	0.81
8:S6:163:THR:HA	8:S6:168:THR:HA	1.62	0.81
41:L4:20:LEU:HD11	41:L4:252:GLU:HG3	1.61	0.81
1:6:1695:G:H21	1:6:1706:C:H41	1.29	0.80
1:2:1234:A:H4'	33:E1:146:SER:HB3	1.63	0.80
57:N1:51:GLY:HA3	57:N1:92:ARG:HG3	3.64	0.80
36:1:1015:U:O2'	36:1:1017:C:OP2	2.00	0.80
36:1:1362:G:H4'	44:L7:159:GLN:O	1.80	0.80
47:M0:43:VAL:HG21	47:M0:197:VAL:HB	1.93	0.80
1:6:235:G:H2'	1:6:236:A:H8	1.46	0.80
1:2:1459:C:OP1	20:C8:126:ARG:NH2	2.15	0.80
41:L4:342:LYS:NZ	44:L7:56:GLU:OE2	2.15	0.80
1:2:339:C:OP2	10:S8:10:LYS:NZ	2.13	0.80
50:M4:128:ARG:NH2	36:5:3214:U:OP2	282.17	0.80
23:D1:21:ASN:OD1	24:D2:23:ARG:NH2	2.15	0.79
36:1:2736:A:OP1	57:N1:92:ARG:NH1	2.15	0.79
18:C6:46:PHE:HA	18:C6:49:TYR:HB2	1.65	0.79
1:2:1727:G:H21	10:S8:32:GLN:HE22	1.29	0.79
65:N9:50:THR:HG23	36:5:1073:U:H1'	205.48	0.79
36:1:2401:A:H5'	41:L4:70:ALA:HB2	1.65	0.79
3:S1:134:VAL:HB	3:S1:219:LYS:HB2	1.64	0.79
7:S5:77:TYR:HB3	7:S5:84:LYS:HA	1.65	0.79
48:M1:137:ARG:NH1	37:7:28:C:OP1	303.26	0.79
44:L7:143:THR:HG22	44:L7:241:LYS:HE3	1.63	0.79
1:6:1636:C:H4'	1:6:1637:C:H5'	1.64	0.78
1:6:228:G:H1	1:6:236:A:H61	1.29	0.78
16:C4:52:ARG:HD3	1:6:905:A:H5''	301.67	0.78
26:D4:61:ARG:NH2	1:6:530:C:O2	411.94	0.78
36:5:2568:C:N4	36:5:2574:G:O6	2.15	0.78
21:C9:31:PRO:HG3	21:C9:103:LYS:HD3	1.64	0.78
6:S4:9:LEU:HB2	6:S4:30:ARG:HB2	1.97	0.78
41:L4:158:SER:O	41:L4:160:GLN:NE2	2.16	0.78
5:S3:75:LYS:HB3	12:C0:22:VAL:HG22	3.29	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:14:ASN:O	47:M0:128:ARG:NH2	2.33	0.78
53:M7:105:LYS:HB3	53:M7:107:LEU:HD13	4.48	0.78
57:N1:86:GLU:OE1	57:N1:88:ARG:NH1	2.15	0.78
61:N5:115:ARG:HD3	61:N5:121:LYS:HB2	1.64	0.78
36:5:3194:C:O2	36:5:3197:G:N2	2.16	0.78
13:C1:14:GLN:HB3	13:C1:54:ILE:HG13	3.68	0.78
21:C9:52:GLY:O	21:C9:54:PHE:N	2.17	0.78
49:M3:74:GLY:O	49:M3:101:ARG:NH1	2.16	0.78
36:1:2940:A:N7	40:L3:2:SER:N	2.32	0.78
5:S3:40:ARG:HG2	22:D0:110:PRO:HB3	1.66	0.78
36:1:655:C:H2'	36:1:656:A:C8	2.19	0.77
51:M5:49:ARG:NH1	36:5:149:U:OP2	101.88	0.77
4:S2:56:ILE:HG23	4:S2:61:LEU:HB2	2.04	0.77
61:N5:47:ALA:HB3	71:O5:77:PRO:HG3	1.66	0.77
36:1:837:A:OP2	79:Q3:4:ARG:NH1	2.16	0.77
60:N4:13:ILE:HG12	60:N4:32:GLN:HB2	2.86	0.77
33:E1:91:ILE:HG12	33:E1:92:LYS:HG2	6.58	0.77
42:L5:64:ILE:HG13	42:L5:109:THR:HG21	3.99	0.77
64:N8:6:THR:HG23	64:N8:8:THR:HG23	1.67	0.77
47:M0:86:HIS:HB3	47:M0:139:ARG:HG2	2.06	0.77
74:O8:24:THR:HG22	74:O8:76:ASN:HB3	1.64	0.77
36:1:2842:U:OP1	36:1:2844:C:N4	2.18	0.77
47:M0:42:THR:HG23	47:M0:45:GLU:HG3	4.49	0.77
48:M1:49:LYS:HB3	48:M1:62:ASN:HA	1.66	0.77
36:1:1353:U:O2'	43:L6:8:LYS:O	2.02	0.77
36:1:3214:U:OP2	50:M4:128:ARG:NH2	2.18	0.77
41:L4:317:PRO:O	41:L4:319:LYS:N	2.17	0.77
3:S1:164:ILE:HD13	3:S1:207:LEU:HD11	3.91	0.77
17:C5:43:ARG:NH2	1:6:1552:U:OP2	404.89	0.77
53:M7:69:ARG:HG2	53:M7:79:THR:HG23	5.35	0.77
36:1:1634:G:N7	63:N7:17:ARG:NH2	2.33	0.77
36:1:655:C:H2'	36:1:656:A:H8	1.49	0.76
1:2:700:C:H42	1:2:738:G:H1	1.33	0.76
1:6:1799:U:H4'	1:6:1800:A:H2'	1.67	0.76
36:1:22:G:N2	38:4:35:C:O2	2.14	0.76
1:2:575:C:N4	25:D3:65:ASN:OD1	2.18	0.76
3:S1:181:LEU:O	3:S1:184:LEU:N	2.19	0.76
10:S8:57:ALA:HB2	10:S8:177:GLY:HA2	2.22	0.76
34:SR:80:ALA:HB3	34:SR:92:TRP:HB2	2.14	0.76
36:1:2355:G:H4'	53:M7:139:TYR:CE2	2.19	0.76
13:C1:6:THR:O	13:C1:8:GLN:N	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:S9:81:VAL:HG21	11:S9:91:LYS:HE3	1.67	0.76
20:C8:144:ARG:O	35:SM:68:ARG:NH2	2.18	0.76
36:1:768:C:OP1	49:M3:186:ARG:NH2	2.19	0.76
36:5:1239:C:H42	36:5:1249:G:H1	1.30	0.76
75:O9:23:LEU:O	75:O9:25:GLN:NE2	2.23	0.76
36:1:2771:U:O2'	36:1:2772:C:O4'	2.04	0.76
6:S4:108:ARG:NH2	1:6:789:A:OP1	392.88	0.76
36:1:1553:U:H4'	36:1:1554:U:H5'	1.68	0.76
1:2:1254:U:OP2	14:C2:46:ARG:NH1	2.19	0.76
36:1:3272:C:OP2	43:L6:78:ARG:NH1	2.19	0.76
61:N5:82:LEU:HD11	61:N5:135:ILE:HD11	4.28	0.76
72:O6:28:TYR:OH	36:5:315:C:OP2	97.96	0.76
42:L5:91:GLY:O	42:L5:94:ASN:ND2	3.97	0.76
1:2:1595:U:H3	1:2:1600:A:H2	1.32	0.76
44:L7:107:ARG:HH21	44:L7:200:ASN:HA	1.51	0.76
34:SR:13:LEU:HB2	34:SR:310:ILE:HB	1.67	0.76
36:1:1563:C:O2	36:1:1577:G:N2	2.19	0.75
36:1:3344:A:H2	36:1:3361:G:H21	1.32	0.75
44:L7:151:ARG:NH1	44:L7:244:ASN:O	3.87	0.75
2:S0:65:ALA:O	2:S0:67:ILE:N	4.69	0.75
7:S5:177:ILE:HG12	7:S5:180:ARG:HH12	1.50	0.75
1:6:1600:A:H4'	1:6:1601:G:OP1	1.87	0.75
45:L8:81:THR:OG1	45:L8:82:LEU:N	3.23	0.75
36:1:1126:G:OP2	47:M0:14:ASN:ND2	2.19	0.75
49:M3:63:VAL:HG22	36:5:72:C:H5'	113.81	0.75
27:D5:71:ILE:HG23	27:D5:73:GLY:H	6.80	0.75
1:2:1793:G:N2	28:D6:76:SER:OG	2.19	0.75
40:L3:219:ALA:HB2	40:L3:336:VAL:HG13	1.68	0.75
36:1:2768:U:H2'	36:1:2769:A:H8	1.52	0.75
1:2:1046:G:OP1	3:S1:157:GLN:NE2	2.14	0.75
36:5:155:G:H5''	36:5:156:G:C8	2.21	0.75
14:C2:59:LEU:HA	14:C2:87:PRO:HB2	1.68	0.75
4:S2:179:VAL:O	4:S2:198:THR:OG1	2.05	0.75
53:M7:50:GLN:OE1	53:M7:56:ARG:NH2	2.20	0.75
10:S8:114:GLU:HG2	10:S8:120:THR:HA	1.67	0.75
36:1:1748:G:OP2	74:O8:42:LYS:NZ	2.19	0.75
52:M6:160:ARG:NH2	36:5:3182:G:OP1	281.72	0.75
27:D5:74:SER:OG	1:6:1534:G:OP2	346.12	0.75
49:M3:165:SER:O	49:M3:167:PHE:N	2.19	0.75
43:L6:31:ARG:NH1	69:O3:107:ILE:O	2.20	0.75
3:S1:128:LYS:HE2	3:S1:132:ASP:HB3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:283:G:OP2	36:5:285:A:O2'	2.06	0.74
10:S8:2:GLY:N	1:6:393:C:OP2	293.77	0.74
36:1:2307:G:O2'	36:1:2310:U:OP2	2.05	0.74
40:L3:291:GLU:OE1	40:L3:302:LYS:NZ	3.85	0.74
68:O2:19:ARG:HH11	68:O2:28:VAL:HG13	3.03	0.74
3:S1:33:LYS:HE2	3:S1:41:ARG:HH12	4.60	0.74
51:M5:49:ARG:NH2	36:5:115:A:OP1	102.13	0.74
33:E1:144:CYS:HB3	33:E1:147:VAL:HG22	1.68	0.74
36:5:3280:U:O2'	36:5:3281:U:H5''	1.88	0.74
1:6:158:U:O2'	1:6:160:C:OP2	2.03	0.74
18:C6:16:ALA:HB2	18:C6:72:GLY:HA3	1.70	0.74
4:S2:137:ILE:HG12	4:S2:138:PRO:HD2	1.69	0.74
1:2:330:G:OP2	10:S8:172:ARG:NH1	2.21	0.74
41:L4:204:GLY:O	41:L4:246:ARG:NH1	2.31	0.74
53:M7:25:SER:O	53:M7:29:THR:HG23	1.87	0.74
36:1:586:C:OP1	69:O3:70:LYS:NZ	2.21	0.74
10:S8:16:ALA:HB2	1:6:354:C:H5''	299.66	0.74
36:1:1233:G:N2	36:1:1255:C:N3	2.36	0.74
15:C3:55:ARG:NH1	15:C3:56:ASP:OD2	2.21	0.74
19:C7:47:ARG:NH1	19:C7:48:ASN:OD1	2.20	0.74
36:1:3086:A:OP1	40:L3:367:LYS:NZ	2.21	0.73
78:Q2:45:ARG:NH2	36:5:283:G:OP2	147.93	0.73
57:N1:130:ARG:NH1	36:5:1098:A:OP2	254.59	0.73
40:L3:139:GLN:O	40:L3:141:GLY:N	2.26	0.73
54:M8:100:THR:HG22	54:M8:120:GLU:HB3	4.66	0.73
57:N1:43:LYS:HD2	36:5:992:A:H5''	257.14	0.73
22:D0:89:ARG:NH2	1:6:1383:G:OP1	447.97	0.73
38:4:11:C:H1'	53:M7:6:ALA:HB2	1.70	0.73
7:S5:81:ARG:HD3	1:6:1615:C:H2'	375.61	0.73
1:2:1520:U:OP2	21:C9:75:LYS:NZ	2.21	0.73
1:2:650:U:O4	1:2:684:A:N6	2.18	0.73
36:5:2836:C:H5	36:5:2852:C:H42	1.36	0.73
28:D6:87:ARG:HB3	28:D6:91:ASP:HB3	2.03	0.73
53:M7:62:ARG:NH1	36:5:412:G:OP1	160.40	0.73
54:M8:170:ARG:NH1	64:N8:56:VAL:O	2.21	0.73
22:D0:41:ILE:HG13	22:D0:107:THR:HG21	4.52	0.73
25:D3:30:LYS:NZ	1:6:1132:A:OP1	323.51	0.73
54:M8:176:ARG:NH1	64:N8:46:ASP:OD2	2.66	0.73
2:S0:52:LYS:NZ	23:D1:82:VAL:O	3.15	0.73
6:S4:49:ARG:NH1	1:6:448:C:OP2	380.66	0.73
22:D0:51:VAL:HG13	22:D0:94:GLU:HB2	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:L2:224:THR:HG21	36:5:2201:G:H21	223.85	0.73
9:S7:45:SER:HB3	9:S7:61:PHE:HD2	1.54	0.73
1:2:29:U:H2'	1:2:30:G:H8	1.54	0.73
25:D3:109:ARG:HB3	25:D3:112:LYS:HB2	1.71	0.73
33:E1:146:SER:HB3	1:6:1234:A:H4'	435.97	0.73
9:S7:131:PHE:O	9:S7:133:THR:N	2.21	0.73
11:S9:126:ARG:NH1	1:6:475:A:OP2	426.22	0.73
36:1:1786:G:H2'	36:1:1787:A:C8	2.24	0.73
1:2:1484:G:H21	1:2:1606:C:H1'	1.52	0.73
57:N1:130:ARG:O	36:5:1098:A:O2'	257.52	0.73
63:N7:46:ILE:HD13	63:N7:68:ILE:HG23	1.99	0.73
1:2:1101:G:HO2'	24:D2:4:SER:HG	1.35	0.73
39:L2:21:ARG:HD3	36:5:824:C:H5''	171.68	0.73
42:L5:40:HIS:HD2	42:L5:42:ALA:H	1.37	0.73
36:1:2150:G:O2'	36:1:2189:U:OP1	2.06	0.72
36:5:3241:G:H2'	36:5:3245:A:C8	2.24	0.72
26:D4:33:ALA:O	26:D4:34:ASN:ND2	2.17	0.72
55:M9:68:GLN:NE2	55:M9:72:GLU:OE1	2.21	0.72
53:M7:25:SER:HB3	53:M7:28:ASN:HB2	1.99	0.72
42:L5:270:LYS:HB3	37:7:1:G:O2'	323.65	0.72
36:1:503:C:OP1	43:L6:26:ARG:NH1	2.22	0.72
72:O6:58:ILE:HG22	72:O6:90:MET:HG3	1.71	0.72
1:2:1067:C:H5''	3:S1:150:VAL:HG23	1.72	0.72
4:S2:168:ARG:NE	1:6:1098:U:OP2	385.60	0.72
1:2:591:A:H2'	1:2:592:A:C8	2.24	0.72
36:5:3274:A:H3'	36:5:3275:U:H5''	1.70	0.72
9:S7:50:ASP:N	9:S7:50:ASP:OD1	2.56	0.72
36:1:385:A:H2'	36:1:386:A:C8	2.24	0.72
1:2:1242:A:OP1	17:C5:59:LYS:NZ	2.22	0.72
5:S3:208:ILE:HG21	19:C7:19:ARG:HD2	1.72	0.72
1:2:588:U:OP2	32:E0:26:LYS:NZ	2.21	0.72
17:C5:44:ARG:NH2	17:C5:82:ASN:O	2.78	0.72
39:L2:128:ARG:NH1	36:5:2177:G:OP2	199.57	0.72
36:1:1492:G:O3'	75:O9:48:LYS:NZ	2.23	0.72
36:1:3315:G:OP1	40:L3:174:LYS:NZ	2.23	0.72
16:C4:90:ARG:O	16:C4:92:LYS:N	3.02	0.72
7:S5:151:GLY:HA3	7:S5:155:ALA:HA	4.64	0.72
36:1:3095:U:H2'	36:1:3096:C:H6	1.54	0.72
14:C2:67:THR:HG22	14:C2:68:GLU:HG3	1.71	0.72
46:L9:87:LYS:HD3	46:L9:89:LYS:HE3	1.72	0.72
7:S5:73:THR:HG21	18:C6:114:ARG:HE	6.00	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S8:61:GLU:HG3	10:S8:62:THR:HG23	1.72	0.72
79:Q3:4:ARG:NH2	36:5:838:G:O6	238.10	0.72
12:C0:21:VAL:HB	12:C0:66:TYR:HB2	2.20	0.72
17:C5:81:ARG:NH1	17:C5:97:TYR:O	2.21	0.72
45:L8:115:ALA:O	45:L8:117:ALA:N	2.23	0.72
3:S1:183:GLN:HG2	3:S1:187:LYS:HE3	1.72	0.72
3:S1:34:ALA:HB3	3:S1:41:ARG:HA	1.72	0.72
36:5:2364:G:H22	36:5:2396:G:H1'	1.55	0.71
67:O1:25:PHE:HA	67:O1:28:ARG:HG3	1.69	0.71
35:SM:48:ARG:HG2	36:1:1017:C:H4'	1.70	0.71
12:C0:25:LYS:NZ	1:6:1435:G:N7	421.04	0.71
1:2:478:A:O2'	11:S9:124:HIS:ND1	2.22	0.71
16:C4:20:TYR:HB3	16:C4:27:PHE:HB2	1.96	0.71
18:C6:128:LYS:NZ	18:C6:134:ALA:O	2.24	0.71
71:O5:101:THR:HG22	71:O5:104:GLN:HB2	1.92	0.71
1:6:1698:G:O2'	1:6:1699:G:O5'	2.09	0.71
30:D8:15:VAL:HA	30:D8:28:VAL:HG22	1.72	0.71
52:M6:112:TYR:HA	52:M6:115:LYS:HB2	2.93	0.71
9:S7:154:LEU:HD21	9:S7:183:PHE:HD1	1.54	0.71
1:6:75:U:O2'	1:6:76:A:O4'	2.08	0.71
47:M0:61:SER:HB2	47:M0:63:GLU:HG2	1.71	0.71
3:S1:85:LYS:HB3	3:S1:101:HIS:HB3	2.51	0.71
1:2:79:C:H1'	8:S6:174:LYS:HD3	1.71	0.71
34:SR:156:VAL:HA	34:SR:169:ILE:HG22	1.86	0.71
40:L3:306:THR:OG1	40:L3:316:GLU:O	2.09	0.71
36:1:1320:C:O2	56:N0:115:ARG:NH2	2.23	0.71
47:M0:42:THR:O	47:M0:139:ARG:NH2	3.42	0.71
58:N2:94:ARG:HG2	58:N2:96:VAL:HG22	5.01	0.71
5:S3:72:LEU:HD22	12:C0:65:TYR:HD1	2.49	0.71
6:S4:187:ARG:NH2	1:6:753:A:N7	376.28	0.71
8:S6:137:ARG:HH12	1:6:144:U:H5	313.87	0.71
36:1:2513:U:HO2'	36:1:2592:G:H1	1.37	0.71
38:4:149:A:N3	45:L8:55:TYR:OH	2.20	0.71
39:L2:152:SER:OG	36:5:2157:G:N7	218.33	0.71
20:C8:30:TYR:HE2	20:C8:40:ARG:HH11	1.85	0.71
20:C8:27:LYS:HG3	20:C8:57:ARG:HH21	1.55	0.71
28:D6:38:ARG:NH2	1:6:1798:U:OP2	335.28	0.71
42:L5:76:ALA:HB3	42:L5:109:THR:HG22	1.90	0.71
52:M6:65:ASN:ND2	36:5:2988:C:OP1	222.00	0.71
35:SM:59:GLY:O	35:SM:63:ASP:N	2.47	0.71
1:2:1169:G:N1	1:2:1575:G:OP2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:C2:61:VAL:HG13	14:C2:121:VAL:HG23	3.74	0.71
59:N3:94:TYR:OH	60:N4:41:LYS:NZ	6.66	0.71
72:O6:70:ARG:HD3	72:O6:84:LYS:HG2	4.42	0.71
2:S0:103:THR:O	2:S0:106:SER:OG	2.08	0.71
18:C6:82:ARG:HH12	18:C6:114:ARG:HB3	1.55	0.70
36:1:618:C:H5'	53:M7:169:THR:HG22	1.72	0.70
63:N7:17:ARG:NH2	36:5:1634:G:N7	198.79	0.70
70:O4:46:ASP:OD1	70:O4:80:ARG:NH1	2.24	0.70
1:2:1300:A:OP1	4:S2:99:LYS:NZ	2.24	0.70
36:1:1720:U:OP2	55:M9:110:ARG:NH1	2.24	0.70
41:L4:327:LEU:HA	44:L7:166:ASN:HD21	1.56	0.70
53:M7:125:GLN:HB2	53:M7:141:SER:HB2	2.04	0.70
1:2:513:U:OP1	11:S9:133:HIS:NE2	2.24	0.70
58:N2:19:VAL:HG12	58:N2:105:LEU:HD22	2.49	0.70
63:N7:124:ALA:O	63:N7:126:LYS:N	2.24	0.70
3:S1:36:SER:HA	3:S1:41:ARG:HE	3.58	0.70
5:S3:20:GLU:OE2	5:S3:76:ARG:NH2	3.58	0.70
1:2:1738:U:H2'	1:2:1739:C:C6	2.26	0.70
66:O0:42:ILE:HG13	66:O0:67:VAL:HG13	1.74	0.70
36:1:283:G:OP1	78:Q2:45:ARG:NH2	2.25	0.70
36:1:3042:U:OP2	36:1:3092:C:N4	2.19	0.70
59:N3:6:ALA:HB1	59:N3:125:LEU:HD11	1.73	0.70
62:N6:99:LEU:HD13	62:N6:104:LEU:HD21	1.73	0.70
41:L4:44:LYS:HB3	41:L4:47:ARG:HH11	1.57	0.70
54:M8:134:GLY:O	54:M8:137:THR:OG1	2.98	0.70
69:O3:17:GLN:OE1	69:O3:24:ASN:ND2	2.24	0.70
5:S3:70:THR:HG22	5:S3:86:LEU:HB2	2.02	0.70
47:M0:158:LYS:NZ	36:5:2852:C:N3	309.70	0.70
39:L2:242:ARG:HD3	39:L2:246:LEU:HD12	6.35	0.70
72:O6:59:ASP:O	72:O6:63:ASN:ND2	4.75	0.70
3:S1:48:VAL:HG21	3:S1:61:LEU:HD22	5.01	0.70
1:2:901:G:OP2	1:2:901:G:N2	2.19	0.70
1:6:230:C:N3	1:6:235:G:N2	2.32	0.70
1:6:1711:C:H2'	1:6:1712:A:H5''	1.73	0.70
18:C6:112:TYR:OH	18:C6:114:ARG:NH1	2.23	0.70
24:D2:105:THR:HG23	24:D2:110:ILE:HG12	1.72	0.70
42:L5:40:HIS:HB3	42:L5:43:LYS:HG3	1.74	0.70
56:N0:77:VAL:HG13	56:N0:126:VAL:HG22	1.73	0.70
63:N7:16:GLY:O	63:N7:18:TYR:N	2.24	0.70
71:O5:10:ARG:NH1	71:O5:60:GLU:OE1	2.34	0.70
11:S9:176:ASN:HA	11:S9:179:ARG:HG2	4.45	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:S9:34:PHE:HD1	11:S9:111:THR:HG21	2.33	0.70
1:2:885:G:H21	16:C4:123:SER:HB2	1.57	0.70
36:1:1677:G:N7	58:N2:74:LYS:NZ	2.40	0.69
63:N7:127:ASN:O	63:N7:129:TRP:N	2.25	0.69
71:O5:85:THR:HG22	71:O5:88:LEU:H	1.85	0.69
72:O6:36:ARG:NH1	36:5:116:A:OP1	107.70	0.69
7:S5:57:SER:O	7:S5:59:VAL:N	2.24	0.69
11:S9:114:TYR:HD1	11:S9:121:SER:H	2.67	0.69
37:3:77:G:N2	37:3:102:A:OP2	2.22	0.69
36:5:1863:G:N1	36:5:1866:C:OP2	2.23	0.69
24:D2:18:GLU:HG3	24:D2:69:LEU:HD23	1.74	0.69
70:O4:29:ILE:HD11	70:O4:31:ARG:HH21	1.57	0.69
5:S3:210:GLU:OE2	19:C7:19:ARG:NH1	3.90	0.69
9:S7:112:ARG:NH2	9:S7:117:THR:OG1	2.25	0.69
1:2:741:C:O2	9:S7:107:ARG:NH1	2.25	0.69
20:C8:28:ILE:HD12	20:C8:61:LEU:HD11	1.74	0.69
39:L2:70:ARG:HH21	39:L2:72:ARG:HH21	8.29	0.69
53:M7:18:ARG:NH2	53:M7:147:GLU:OE1	2.25	0.69
4:S2:69:ILE:HG12	4:S2:133:LYS:HB3	2.97	0.69
1:2:1339:C:O2'	1:2:1341:A:N7	2.22	0.69
54:M8:43:PRO:HB2	36:5:728:G:H5''	191.09	0.69
1:6:1097:U:H4'	1:6:1098:U:H5'	1.75	0.69
41:L4:193:LYS:HA	41:L4:198:ARG:HA	1.73	0.69
43:L6:56:LYS:HD2	43:L6:98:VAL:HG13	1.73	0.69
74:O8:26:LYS:HE2	36:5:1751:G:H5''	128.72	0.69
1:2:732:G:O2'	1:2:733:A:O4'	2.10	0.69
10:S8:31:ARG:NH2	1:6:333:A:OP1	300.23	0.69
33:E1:82:LYS:O	33:E1:84:VAL:N	4.95	0.69
36:1:824:C:H5''	39:L2:21:ARG:HD3	1.75	0.69
5:S3:195:SER:HB3	5:S3:200:LYS:HE2	1.74	0.69
36:1:1245:A:H3'	36:1:1246:G:H5''	1.73	0.69
1:2:647:G:H22	1:2:687:G:H1	1.37	0.69
1:2:778:G:H1	26:D4:10:ARG:HG2	1.56	0.69
47:M0:207:GLU:HB3	47:M0:211:ARG:HH22	5.97	0.69
25:D3:27:ASN:OD1	25:D3:31:LYS:NZ	2.25	0.69
43:L6:55:LEU:HD11	43:L6:66:SER:HB2	2.36	0.69
36:1:2852:C:N3	47:M0:158:LYS:NZ	2.39	0.69
55:M9:68:GLN:NE2	55:M9:72:GLU:OE2	4.29	0.69
2:S0:24:LEU:O	2:S0:163:ASN:ND2	2.25	0.69
49:M3:39:ARG:NH1	36:5:107:A:OP1	74.24	0.69
46:L9:9:GLN:O	46:L9:72:LYS:NZ	2.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:142:ASP:OD2	47:M0:178:ARG:NH2	2.62	0.69
1:2:1535:U:O2'	1:2:1536:G:N3	2.25	0.69
38:4:95:G:OP2	73:O7:72:ARG:NH1	2.26	0.69
47:M0:116:ARG:NH2	36:5:2617:U:O3'	229.33	0.69
36:5:618:C:O2'	36:5:621:A:N3	2.23	0.69
16:C4:29:HIS:HB3	16:C4:41:ARG:HG3	1.75	0.69
30:D8:22:ARG:NH1	1:6:1619:C:O2	341.49	0.69
48:M1:94:ARG:O	48:M1:96:PHE:N	3.03	0.69
46:L9:62:ARG:NH2	36:5:3115:C:OP1	331.86	0.69
1:6:647:G:H1	1:6:687:G:H22	1.39	0.69
21:C9:84:LYS:HD2	21:C9:94:ILE:HG13	5.41	0.69
25:D3:90:ASP:O	25:D3:136:TRP:NE1	2.26	0.69
1:2:1218:G:N2	1:2:1444:A:OP2	2.20	0.68
56:N0:108:GLN:NE2	36:5:1322:U:O2	294.41	0.68
2:S0:200:ASP:HB2	19:C7:85:VAL:HG22	1.74	0.68
47:M0:205:SER:OG	47:M0:208:ASN:OD1	2.69	0.68
11:S9:108:ARG:HH21	11:S9:145:SER:HB2	1.58	0.68
20:C8:88:ARG:NH2	20:C8:91:ASP:OD1	2.26	0.68
49:M3:75:PHE:H	49:M3:97:VAL:HA	1.56	0.68
51:M5:84:PRO:HA	51:M5:87:GLN:HB2	1.74	0.68
64:N8:96:LYS:O	64:N8:98:THR:N	2.26	0.68
8:S6:176:GLN:HG2	1:6:169:A:H5'	330.56	0.68
11:S9:117:GLY:O	11:S9:119:ALA:N	2.76	0.68
36:1:1349:G:O2'	36:1:1350:A:O4'	2.12	0.68
25:D3:30:LYS:HE2	25:D3:34:LEU:HD11	2.37	0.68
26:D4:51:GLU:O	26:D4:53:ASP:N	3.44	0.68
51:M5:14:LYS:HA	51:M5:19:LEU:HD23	1.75	0.68
65:N9:14:ARG:NH2	65:N9:18:ARG:HD2	2.08	0.68
70:O4:67:LYS:HA	70:O4:70:LYS:HE3	1.75	0.68
10:S8:182:TYR:OH	10:S8:188:GLU:OE1	2.10	0.68
1:2:1034:C:HO2'	24:D2:2:THR:N	1.92	0.68
67:O1:28:ARG:NH2	36:5:3058:U:OP1	186.36	0.68
18:C6:58:ASP:O	18:C6:60:PHE:N	2.25	0.68
20:C8:83:ALA:HA	20:C8:86:LEU:HD22	1.76	0.68
28:D6:25:ASN:ND2	28:D6:77:CYS:SG	2.67	0.68
39:L2:104:LEU:HD12	39:L2:136:ILE:HD11	1.76	0.68
49:M3:153:ASP:OD2	49:M3:154:VAL:N	2.57	0.68
2:S0:134:LYS:O	2:S0:137:SER:OG	2.11	0.68
11:S9:53:ARG:NH2	11:S9:97:LEU:O	2.27	0.68
35:SM:35:ALA:HB1	35:SM:37:VAL:HG23	1.75	0.68
1:2:169:A:H5''	8:S6:176:GLN:HG2	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1631:C:H5''	36:5:1632:A:H5''	1.75	0.68
22:D0:74:GLU:HG2	1:6:1429:G:H1'	380.16	0.68
20:C8:126:ARG:HB3	20:C8:133:VAL:HG23	1.76	0.68
23:D1:39:VAL:HA	23:D1:45:ALA:HA	1.76	0.68
46:L9:1:MET:SD	56:N0:138:GLN:NE2	4.83	0.68
46:L9:28:VAL:HG22	46:L9:33:THR:HB	2.37	0.68
36:1:1318:A:OP1	52:M6:128:ARG:NH1	2.25	0.68
36:5:1152:G:H22	36:5:1200:A:H61	1.42	0.68
36:5:2518:C:H2'	36:5:2519:A:H8	1.59	0.68
25:D3:70:LYS:HB3	25:D3:93:LEU:HD22	1.85	0.68
55:M9:62:ARG:NH2	36:5:3068:U:OP2	173.66	0.68
34:SR:244:ALA:HB3	34:SR:253:ALA:HB3	3.06	0.68
1:2:144:U:HO2'	1:2:145:A:H8	1.41	0.68
13:C1:21:ASN:N	13:C1:21:ASN:OD1	2.26	0.68
40:L3:185:GLY:O	40:L3:191:LYS:NZ	3.42	0.68
45:L8:128:LYS:NZ	45:L8:129:PRO:O	6.15	0.68
47:M0:174:THR:OG1	47:M0:175:ASN:N	3.21	0.68
9:S7:49:ILE:HG22	9:S7:175:LYS:HD3	4.97	0.68
36:1:2818:U:H6	36:1:2818:U:H5'	1.59	0.68
1:6:1160:A:H2'	1:6:1161:C:C6	2.29	0.68
1:6:591:A:H2'	1:6:592:A:C8	2.29	0.68
42:L5:50:ARG:HG2	42:L5:147:ASP:HB2	3.47	0.68
46:L9:171:ASP:OD2	46:L9:173:ARG:NH1	2.79	0.68
55:M9:148:ASP:OD1	55:M9:151:ARG:NH2	2.52	0.68
34:SR:20:VAL:O	34:SR:291:SER:OG	2.09	0.68
49:M3:50:PRO:O	49:M3:52:ASP:N	3.43	0.68
63:N7:51:LEU:HB2	63:N7:65:ARG:HD2	2.05	0.68
67:O1:55:LEU:HB2	67:O1:95:PRO:HD3	2.05	0.68
71:O5:78:LYS:HA	71:O5:81:ARG:HD2	1.76	0.68
73:O7:75:LYS:HD3	36:5:181:U:H4'	49.52	0.68
36:1:2836:C:H5	36:1:2852:C:H42	1.42	0.68
16:C4:97:GLY:O	16:C4:99:GLN:N	4.23	0.68
25:D3:102:VAL:HG12	25:D3:127:VAL:HG12	1.76	0.68
39:L2:195:SER:O	39:L2:198:LYS:NZ	2.54	0.68
56:N0:6:GLU:OE1	56:N0:99:ARG:NH2	3.48	0.68
1:2:1355:C:O2	1:2:1368:G:N2	2.25	0.67
1:2:1657:U:H4'	1:2:1658:G:O5'	1.94	0.67
64:N8:55:LYS:NZ	36:5:2765:C:OP1	167.66	0.67
15:C3:67:THR:O	15:C3:69:ASN:N	2.26	0.67
52:M6:77:SER:OG	52:M6:106:GLU:OE1	2.12	0.67
36:1:976:U:H5'	54:M8:144:ARG:HH12	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:N7:33:SER:OG	63:N7:35:SER:O	5.75	0.67
36:1:3092:C:O2'	36:1:3094:A:OP2	2.07	0.67
1:2:1456:C:H5''	1:2:1457:C:H5''	1.74	0.67
1:2:142:G:H22	1:2:173:A:H2	1.41	0.67
36:5:269:G:N2	36:5:295:A:OP2	2.26	0.67
41:L4:197:ARG:NH1	36:5:1381:A:OP1	109.50	0.67
41:L4:302:ALA:HB2	54:M8:39:ARG:CZ	2.98	0.67
63:N7:135:ARG:NH2	36:5:2556:C:O2'	201.57	0.67
43:L6:3:ALA:HB2	68:O2:77:ALA:HB2	2.06	0.67
36:1:1564:U:H2'	36:1:1565:G:C8	2.30	0.67
36:1:787:G:H2'	36:1:788:C:C6	2.29	0.67
12:C0:16:PHE:HD2	12:C0:76:LEU:HB3	1.58	0.67
17:C5:126:VAL:HG13	17:C5:127:ARG:H	1.59	0.67
41:L4:317:PRO:O	41:L4:320:ASN:N	2.27	0.67
63:N7:83:THR:HG23	63:N7:85:TYR:H	1.77	0.67
36:1:385:A:H2'	36:1:386:A:H8	1.60	0.67
36:5:2448:G:H1	36:5:2498:U:H3	1.43	0.67
40:L3:126:LYS:NZ	36:5:3294:A:OP2	190.92	0.67
36:5:900:G:H1'	36:5:1589:A:N6	2.09	0.67
1:6:489:C:O2'	1:6:490:C:O4'	2.12	0.67
28:D6:79:ILE:HG23	28:D6:84:VAL:HG21	1.76	0.67
68:O2:75:LEU:HD23	68:O2:95:GLU:HB3	2.49	0.67
6:S4:125:LYS:NZ	6:S4:225:VAL:O	2.17	0.67
47:M0:73:ASN:HA	47:M0:76:MET:HB2	3.18	0.67
50:M4:21:VAL:HG12	50:M4:65:LEU:HA	1.76	0.67
1:2:816:G:N2	9:S7:110:GLN:OE1	2.25	0.67
1:2:16:G:H2'	1:2:17:C:C6	2.28	0.67
46:L9:49:ASN:O	46:L9:51:GLN:N	2.26	0.67
53:M7:178:ALA:HA	53:M7:181:ARG:HB3	1.76	0.67
1:2:1550:A:OP2	17:C5:42:ARG:NH2	2.27	0.67
48:M1:85:LYS:NZ	48:M1:89:TYR:OH	2.21	0.67
51:M5:35:VAL:HG13	51:M5:65:ARG:HB3	4.47	0.67
11:S9:96:VAL:HA	11:S9:99:LEU:HD23	1.76	0.67
1:6:1561:U:H2'	1:6:1562:G:H8	1.59	0.67
16:C4:43:THR:OG1	16:C4:44:GLY:N	2.27	0.67
23:D1:41:GLU:O	23:D1:44:ARG:NH1	2.28	0.67
8:S6:13:GLN:OE1	1:6:151:G:N2	312.81	0.67
36:5:2818:U:H6	36:5:2818:U:H5'	1.58	0.67
19:C7:26:LEU:HD21	19:C7:62:GLN:HG3	4.33	0.67
13:C1:101:GLU:OE2	25:D3:16:ARG:NH2	2.96	0.67
40:L3:169:THR:HG23	40:L3:171:LEU:H	1.91	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S4:185:GLY:H	6:S4:189:LEU:HB2	1.60	0.67
26:D4:11:LYS:HB2	26:D4:24:VAL:HG23	1.99	0.67
29:D7:72:LYS:NZ	1:6:1063:U:OP1	342.83	0.67
59:N3:24:ASN:OD1	59:N3:32:ARG:NH1	10.06	0.67
59:N3:89:ASP:OD1	59:N3:91:VAL:HG12	5.48	0.67
1:2:7:G:N7	4:S2:205:ARG:NH1	2.43	0.67
20:C8:146:ALA:H	35:SM:68:ARG:HH21	1.41	0.67
36:1:1080:A:OP2	42:L5:140:ARG:NH2	2.28	0.66
36:5:1025:A:H3'	36:5:1026:A:H4'	1.76	0.66
20:C8:138:THR:OG1	1:6:1459:C:OP2	352.47	0.66
62:N6:13:ARG:NH1	38:8:24:G:OP2	88.46	0.66
41:L4:220:ARG:NH1	36:5:211:A:OP1	75.46	0.66
60:N4:56:ARG:HB3	60:N4:61:LYS:HB2	1.77	0.66
79:Q3:6:LYS:HG2	79:Q3:7:LYS:HG3	4.83	0.66
7:S5:64:VAL:HG12	7:S5:65:ARG:HD3	1.75	0.66
11:S9:113:VAL:HG12	11:S9:119:ALA:HB2	4.55	0.66
36:1:619:A:H4'	36:1:620:U:O4'	1.96	0.66
47:M0:4:ARG:NH1	36:5:2828:G:O2'	265.09	0.66
1:6:1280:C:H2'	1:6:1281:G:H8	1.59	0.66
44:L7:107:ARG:HD2	36:5:1101:G:H5''	237.85	0.66
78:Q2:12:CYS:SG	78:Q2:17:CYS:CB	2.87	0.66
78:Q2:53:GLN:NE2	78:Q2:55:LYS:O	2.54	0.66
3:S1:129:THR:OG1	3:S1:131:ASP:O	3.18	0.66
11:S9:108:ARG:HB2	11:S9:111:THR:HG23	2.52	0.66
34:SR:133:VAL:O	34:SR:141:LEU:N	2.27	0.66
1:2:930:A:OP1	28:D6:32:LYS:NZ	2.28	0.66
36:5:1152:G:H22	36:5:1200:A:N6	1.93	0.66
12:C0:50:THR:HG22	12:C0:55:VAL:HG22	3.34	0.66
28:D6:87:ARG:NH2	28:D6:94:ASN:O	2.26	0.66
40:L3:137:TYR:HE1	40:L3:196:ARG:HH12	1.43	0.66
45:L8:68:ARG:O	45:L8:69:LEU:HB2	4.56	0.66
46:L9:138:THR:O	46:L9:139:ASN:ND2	2.29	0.66
47:M0:65:LEU:HD11	47:M0:91:VAL:HG12	1.78	0.66
52:M6:111:PRO:O	52:M6:113:ASP:N	2.26	0.66
36:1:361:A:O3'	73:O7:45:ARG:NH2	2.27	0.66
74:O8:32:ASN:O	74:O8:34:ALA:N	2.28	0.66
3:S1:175:GLU:HG3	3:S1:193:ILE:HG23	1.77	0.66
1:2:522:U:H5''	26:D4:37:LYS:HG3	1.78	0.66
40:L3:3:HIS:ND1	40:L3:3:HIS:O	2.29	0.66
41:L4:16:THR:HG23	41:L4:18:ASN:H	2.52	0.66
63:N7:26:VAL:HG21	63:N7:96:VAL:HB	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S3:137:VAL:HG22	5:S3:151:LYS:HG3	1.78	0.66
7:S5:35:GLN:O	7:S5:37:GLN:N	2.78	0.66
10:S8:98:LYS:HB3	1:6:329:G:H5''	275.91	0.66
36:1:239:G:O2'	36:1:240:U:OP1	2.13	0.66
36:1:3151:U:OP2	40:L3:132:LYS:NZ	2.23	0.66
1:2:1796:C:O5'	28:D6:5:ARG:NH1	2.29	0.66
36:5:2335:G:N2	36:5:2339:C:O2	2.22	0.66
40:L3:76:VAL:HG12	40:L3:325:LYS:HA	1.77	0.66
44:L7:134:VAL:O	44:L7:229:PHE:HA	2.77	0.66
49:M3:46:ILE:HG22	49:M3:49:ARG:HB2	1.81	0.66
44:L7:121:LYS:HB2	57:N1:133:ALA:HB3	1.84	0.66
9:S7:35:LYS:O	9:S7:37:GLU:N	2.27	0.66
36:1:3067:C:OP1	55:M9:58:HIS:NE2	2.24	0.66
71:O5:90:ARG:NH1	36:5:20:A:OP2	86.59	0.66
1:6:1431:C:O2'	1:6:1437:U:O4	2.10	0.66
1:6:653:C:H42	1:6:677:G:H1	1.43	0.66
46:L9:117:PHE:HB3	46:L9:124:ARG:HH21	1.60	0.66
57:N1:45:ASN:OD1	57:N1:47:SER:OG	2.28	0.66
72:O6:66:GLU:OE2	72:O6:91:ASN:ND2	3.64	0.66
1:2:1601:G:OP1	21:C9:86:ARG:NH2	2.28	0.66
49:M3:153:ASP:OD1	49:M3:157:ARG:NH2	2.77	0.66
50:M4:23:ILE:HA	50:M4:63:VAL:HG23	1.77	0.66
61:N5:139:ILE:HD11	71:O5:33:VAL:HG21	1.78	0.66
71:O5:28:LEU:HG	71:O5:32:LYS:HE3	6.42	0.66
4:S2:88:LYS:HB3	4:S2:95:ARG:HB3	3.05	0.66
36:1:2216:G:OP1	72:O6:75:LYS:NZ	2.26	0.66
36:1:439:C:H3'	36:1:440:A:C8	2.30	0.66
1:6:709:C:O2	1:6:730:G:N2	2.29	0.66
21:C9:102:ARG:NH2	1:6:1502:G:N7	407.86	0.66
26:D4:55:VAL:HG12	26:D4:75:VAL:HG22	7.10	0.66
43:L6:40:LEU:HD12	43:L6:65:ILE:HD11	6.44	0.66
43:L6:89:THR:HG21	50:M4:115:PHE:HB2	1.77	0.66
53:M7:52:LEU:HD21	53:M7:89:LYS:HD2	5.04	0.66
76:Q0:106:ARG:HH11	76:Q0:106:ARG:HB2	4.77	0.66
36:5:2105:G:H2'	36:5:2106:A:H8	1.60	0.66
48:M1:23:VAL:O	48:M1:25:GLU:N	2.27	0.66
52:M6:3:VAL:HG22	52:M6:4:GLU:HG3	1.77	0.66
34:SR:89:LEU:HB2	34:SR:103:PHE:HB2	1.77	0.66
1:2:1267:G:HO2'	1:2:1448:G:HO2'	1.44	0.66
1:2:654:C:H3'	1:2:655:G:H5''	1.78	0.66
48:M1:82:ARG:HD2	48:M1:112:LEU:HB2	3.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1615:C:O2'	1:2:1616:G:OP2	2.14	0.65
36:5:278:U:H2'	36:5:279:U:C6	2.31	0.65
40:L3:284:ARG:NH2	40:L3:295:ALA:O	2.29	0.65
40:L3:4:ARG:HD3	40:L3:7:GLU:HA	1.77	0.65
45:L8:156:ASP:OD2	45:L8:156:ASP:N	2.26	0.65
64:N8:3:SER:O	64:N8:6:THR:HG22	3.30	0.65
70:O4:58:ARG:HG3	70:O4:59:PRO:HD2	1.86	0.65
19:C7:63:LYS:HE2	34:SR:284:ALA:HB2	1.76	0.65
1:2:29:U:H2'	1:2:30:G:C8	2.30	0.65
36:5:2971:A:H3'	36:5:2971:A:N3	2.12	0.65
1:6:104:A:H61	1:6:308:C:H5'	1.60	0.65
39:L2:113:VAL:HG12	39:L2:166:ILE:HA	2.09	0.65
41:L4:292:SER:OG	41:L4:293:SER:N	2.27	0.65
41:L4:338:LYS:O	41:L4:340:GLY:N	2.27	0.65
58:N2:59:ASP:OD1	58:N2:60:GLY:N	4.53	0.65
68:O2:97:ALA:HB3	68:O2:100:ILE:HG12	1.78	0.65
74:O8:24:THR:HG23	74:O8:44:LYS:HB2	4.72	0.65
36:1:129:U:H2'	36:1:130:A:C8	2.31	0.65
1:2:734:A:H5''	1:2:735:C:OP1	1.97	0.65
20:C8:41:ARG:HD3	1:6:1565:C:OP1	370.86	0.65
25:D3:126:LYS:HG2	25:D3:131:SER:HA	1.78	0.65
67:O1:79:ARG:NE	67:O1:79:ARG:H	1.93	0.65
70:O4:3:GLN:HB3	70:O4:30:LEU:HD12	1.77	0.65
35:SM:84:LYS:HG2	35:SM:86:ASN:H	1.61	0.65
1:6:1696:G:O2'	1:6:1698:G:N7	2.24	0.65
10:S8:50:GLY:HA2	1:6:397:A:O3'	316.91	0.65
19:C7:82:ASP:O	19:C7:83:GLN:NE2	2.29	0.65
52:M6:179:ALA:HA	52:M6:182:ASN:HB3	4.74	0.65
67:O1:11:GLU:OE2	67:O1:74:ARG:NH2	2.29	0.65
79:Q3:7:LYS:O	79:Q3:27:LYS:NZ	2.30	0.65
4:S2:90:THR:O	4:S2:92:ALA:N	2.66	0.65
9:S7:105:THR:O	9:S7:107:ARG:N	4.07	0.65
10:S8:34:ALA:HB2	10:S8:56:ARG:HD3	2.25	0.65
8:S6:87:ARG:NH2	1:6:161:U:OP2	317.23	0.65
17:C5:43:ARG:NH1	1:6:1553:G:O6	400.91	0.65
17:C5:18:ARG:NH1	20:C8:90:ASN:O	2.71	0.65
22:D0:58:LEU:HD13	22:D0:88:LYS:HE3	2.79	0.65
24:D2:94:LEU:HD11	24:D2:102:VAL:HG23	2.16	0.65
42:L5:236:LEU:HA	42:L5:239:ILE:HD12	1.77	0.65
42:L5:56:THR:O	42:L5:58:LYS:N	2.29	0.65
36:1:181:U:H4'	73:O7:75:LYS:HD3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:70:PRO:HB2	2:S0:94:GLY:HA3	1.79	0.65
5:S3:194:LYS:O	5:S3:196:ARG:N	2.28	0.65
18:C6:50:GLU:OE2	18:C6:82:ARG:NH2	2.28	0.65
27:D5:60:VAL:HG22	27:D5:101:TYR:HB2	1.77	0.65
2:S0:126:PRO:HB2	2:S0:152:PRO:HG2	1.97	0.65
9:S7:73:VAL:O	9:S7:75:THR:N	2.29	0.65
1:2:1488:G:N2	1:2:1495:C:O2	2.22	0.65
78:Q2:41:ARG:NH1	36:5:284:A:OP2	157.32	0.65
16:C4:50:ALA:O	16:C4:52:ARG:N	2.34	0.65
21:C9:97:SER:O	21:C9:101:ASN:ND2	2.30	0.65
42:L5:233:ALA:O	42:L5:235:SER:N	2.30	0.65
48:M1:85:LYS:HZ2	48:M1:85:LYS:HB2	1.60	0.65
66:O0:34:LEU:HD23	66:O0:59:TYR:HB3	1.79	0.65
11:S9:171:ARG:HH11	11:S9:174:ARG:HB3	5.25	0.65
37:3:19:C:H2'	37:3:20:A:H8	1.61	0.65
36:5:2261:G:H21	36:5:2262:A:N6	1.95	0.65
36:5:1940:G:H21	36:5:3362:A:H8	1.45	0.65
41:L4:3:ARG:HH11	41:L4:22:LEU:HD12	1.61	0.65
42:L5:52:VAL:HA	42:L5:147:ASP:HB3	2.11	0.65
62:N6:73:VAL:HA	62:N6:80:VAL:HG23	1.79	0.65
4:S2:153:SER:OG	4:S2:154:LEU:N	2.27	0.65
4:S2:41:LEU:HD12	4:S2:68:ILE:HD13	1.79	0.65
6:S4:118:GLU:HA	6:S4:121:TYR:CE1	2.91	0.65
6:S4:66:MET:SD	6:S4:78:THR:OG1	2.92	0.65
7:S5:59:VAL:O	7:S5:61:TYR:N	2.93	0.65
34:SR:216:LYS:HA	34:SR:239:GLU:HG3	1.79	0.65
1:6:691:C:OP1	1:6:696:C:N4	2.21	0.65
1:6:845:G:H2'	1:6:846:G:H8	1.62	0.65
6:S4:146:THR:HG21	1:6:123:G:H21	342.92	0.65
36:1:838:G:O6	79:Q3:4:ARG:NH2	2.30	0.65
75:O9:10:LYS:NZ	36:5:1833:G:OP1	105.26	0.65
1:2:1369:U:OP1	21:C9:119:LYS:NZ	2.29	0.65
1:2:1500:C:OP1	21:C9:122:ARG:NH2	2.26	0.65
22:D0:61:LYS:HB2	22:D0:86:ILE:HB	1.79	0.65
27:D5:71:ILE:HG21	27:D5:76:ALA:HB2	3.04	0.65
44:L7:157:ASN:O	44:L7:159:GLN:HG2	2.04	0.65
44:L7:60:ARG:HA	44:L7:63:ILE:HD12	1.79	0.65
36:1:1069:C:H2'	36:1:1070:U:H6	1.62	0.64
36:1:2960:C:H2'	36:1:2961:G:H8	1.62	0.64
18:C6:82:ARG:HH12	18:C6:114:ARG:HB2	3.00	0.64
22:D0:106:ILE:HG23	22:D0:107:THR:HG23	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M1:28:ASP:OD2	48:M1:32:ARG:NH2	5.10	0.64
52:M6:27:LEU:HD11	52:M6:102:LEU:HB2	1.77	0.64
10:S8:8:ARG:NH2	10:S8:21:PHE:H	1.95	0.64
1:2:1345:A:H5'	22:D0:53:LYS:HD2	1.80	0.64
1:2:1794:A:OP2	28:D6:4:LYS:NZ	2.24	0.64
40:L3:128:LYS:NZ	36:5:3294:A:OP1	198.62	0.64
24:D2:15:ASN:ND2	24:D2:72:CYS:SG	2.70	0.64
28:D6:58:VAL:HG22	28:D6:59:TYR:H	4.35	0.64
40:L3:284:ARG:HB3	40:L3:323:MET:HB3	2.40	0.64
45:L8:97:TYR:HB3	45:L8:131:ALA:HA	1.78	0.64
43:L6:175:LYS:HD3	50:M4:111:ALA:HA	1.77	0.64
52:M6:10:ASP:OD2	52:M6:37:ARG:NH2	2.66	0.64
57:N1:82:ASN:HA	65:N9:21:ILE:HD13	1.80	0.64
78:Q2:4:VAL:O	78:Q2:94:GLY:N	4.63	0.64
9:S7:28:GLU:HG2	9:S7:35:LYS:HG3	1.79	0.64
35:SM:23:LYS:NZ	35:SM:24:GLU:H	7.67	0.64
36:1:3122:A:N1	46:L9:70:THR:HG21	2.13	0.64
33:E1:103:LEU:HD11	1:6:1252:C:H5'	456.06	0.64
48:M1:137:ARG:HG2	37:7:28:C:H5''	309.86	0.64
23:D1:60:ARG:HA	23:D1:65:SER:HB2	2.47	0.64
9:S7:144:VAL:HG22	24:D2:49:GLU:HB2	4.99	0.64
46:L9:28:VAL:HG13	46:L9:33:THR:HB	1.78	0.64
1:2:858:G:OP1	9:S7:116:ARG:NH2	2.31	0.64
36:1:733:G:N2	36:1:736:A:OP2	2.30	0.64
38:4:83:C:O2	62:N6:51:ARG:NH2	2.25	0.64
36:5:1190:A:C8	36:5:1193:A:H1'	2.32	0.64
36:5:1556:C:H2'	36:5:2169:G:H1	1.61	0.64
71:O5:49:LYS:NZ	38:8:63:G:O2'	53.56	0.64
41:L4:6:VAL:N	41:L4:20:LEU:O	2.46	0.64
43:L6:40:LEU:HD13	43:L6:84:VAL:HG11	2.52	0.64
64:N8:21:ARG:NH1	36:5:1369:A:OP1	184.48	0.64
36:1:1238:C:N4	36:1:1245:A:OP2	2.31	0.64
36:5:2513:U:HO2'	36:5:2592:G:H1	1.46	0.64
19:C7:66:VAL:HB	19:C7:69:ILE:HD11	1.80	0.64
20:C8:100:THR:HG21	20:C8:108:LYS:HG2	1.80	0.64
55:M9:5:ARG:NH1	36:5:1471:U:OP1	119.26	0.64
57:N1:127:GLN:HG3	36:5:1095:U:H3	263.71	0.64
57:N1:78:LYS:HB3	57:N1:87:LYS:HG3	1.79	0.64
6:S4:199:GLU:HB2	6:S4:207:LEU:HB2	1.80	0.64
9:S7:165:LYS:O	9:S7:168:SER:OG	2.14	0.64
37:3:4:U:H2'	37:3:5:G:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1256:G:O6	36:5:1261:G:N2	2.30	0.64
36:5:3343:G:H21	36:5:3362:A:H2	1.46	0.64
13:C1:67:ARG:NH2	13:C1:128:CYS:O	2.31	0.64
1:2:781:U:O2	26:D4:49:LYS:NZ	2.30	0.64
41:L4:60:THR:HG23	36:5:364:G:OP1	130.51	0.64
46:L9:101:VAL:HG22	46:L9:114:VAL:HG22	1.78	0.64
53:M7:177:ALA:HA	53:M7:180:LYS:HE2	1.78	0.64
67:O1:72:ARG:NH1	67:O1:105:GLN:O	2.23	0.64
17:C5:130:ARG:HH22	35:SM:70:ASN:HB3	3.02	0.64
1:2:105:A:OP1	10:S8:18:ARG:NH1	2.31	0.64
36:5:1952:G:H1	36:5:2094:C:H42	1.46	0.64
36:5:2386:A:N6	36:5:2993:G:O2'	2.30	0.64
41:L4:195:ARG:NH2	36:5:341:G:N7	110.77	0.64
24:D2:5:SER:O	24:D2:7:LEU:N	3.34	0.64
28:D6:10:ARG:HB2	28:D6:34:LYS:HA	1.80	0.64
40:L3:129:ALA:O	36:5:3149:G:O2'	214.78	0.64
46:L9:48:VAL:HG13	46:L9:52:LEU:HB3	1.78	0.64
53:M7:26:PHE:HE1	53:M7:120:ASN:HA	1.68	0.64
64:N8:135:GLU:HG2	64:N8:145:VAL:HG21	1.79	0.64
1:2:393:C:OP2	10:S8:2:GLY:N	2.30	0.64
40:L3:252:ILE:HG12	40:L3:266:ARG:HH21	3.27	0.64
40:L3:221:THR:HB	40:L3:273:HIS:H	1.62	0.64
41:L4:35:VAL:HG21	41:L4:244:LEU:HD21	1.78	0.64
70:O4:87:GLU:OE1	70:O4:91:ARG:NH1	3.30	0.64
74:O8:42:LYS:HG2	74:O8:55:VAL:HG22	1.80	0.64
3:S1:88:VAL:HG11	3:S1:96:LEU:HD12	1.78	0.64
4:S2:78:ASP:HB3	4:S2:104:VAL:HG12	3.84	0.64
5:S3:164:VAL:HG13	5:S3:168:ILE:HD11	1.79	0.64
6:S4:90:ILE:HB	6:S4:99:PHE:HB2	1.78	0.64
36:1:1256:G:O6	36:1:1261:G:N2	2.29	0.64
33:E1:97:LYS:NZ	1:6:1253:U:O4	441.15	0.64
67:O1:85:ALA:O	67:O1:87:ASN:N	2.98	0.64
2:S0:26:ALA:HB3	2:S0:149:LEU:HB2	2.57	0.64
34:SR:69:GLN:OE1	34:SR:85:TRP:NE1	2.28	0.64
1:2:45:U:O2'	1:2:46:A:H2'	1.98	0.64
1:2:520:A:H2'	1:2:521:A:C8	2.33	0.64
4:S2:149:GLY:H	23:D1:4:ASP:HB2	4.78	0.64
29:D7:67:THR:OG1	29:D7:70:LYS:O	2.15	0.64
40:L3:21:ARG:NH2	36:5:3309:G:O6	200.38	0.64
41:L4:141:ARG:O	41:L4:144:LYS:NZ	6.50	0.64
46:L9:163:GLN:O	46:L9:166:ARG:HD3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:M8:34:THR:HG22	54:M8:49:LEU:HD21	2.29	0.64
4:S2:96:THR:OG1	4:S2:96:THR:O	2.16	0.64
6:S4:44:LEU:HG	6:S4:82:TYR:HB3	1.80	0.64
1:2:1592:A:H2'	1:2:1593:A:C8	2.32	0.63
1:2:749:U:H2'	1:2:750:U:C6	2.33	0.63
36:5:1060:U:H2'	36:5:1061:A:H8	1.61	0.63
36:5:1944:U:H2'	36:5:1945:A:C8	2.32	0.63
36:5:298:U:H5''	36:5:299:G:H5'	1.80	0.63
7:S5:185:ARG:NH1	1:6:1471:A:OP1	333.60	0.63
21:C9:52:GLY:HA2	21:C9:55:TYR:HD2	1.95	0.63
41:L4:141:ARG:CZ	41:L4:180:LYS:HG3	3.00	0.63
42:L5:180:PHE:HB3	42:L5:195:LEU:HD13	2.25	0.63
6:S4:88:ASP:OD1	6:S4:122:LYS:NZ	2.31	0.63
1:6:1087:A:H2'	1:6:1088:A:C8	2.33	0.63
27:D5:93:SER:HB3	27:D5:100:ILE:HB	1.79	0.63
48:M1:60:ARG:NH1	78:Q2:104:LEU:O	3.51	0.63
4:S2:225:LEU:HD13	24:D2:68:ARG:HA	2.55	0.63
35:SM:51:ARG:CZ	35:SM:52:PRO:HD2	6.23	0.63
36:1:2572:C:O2'	36:1:2573:G:O4'	2.16	0.63
1:2:1670:G:HO2'	1:2:1671:A:H8	1.47	0.63
37:3:10:C:OP2	57:N1:26:HIS:ND1	2.30	0.63
38:4:37:A:H5''	38:4:39:G:O4'	1.98	0.63
71:O5:63:ARG:HH21	38:8:97:A:P	55.40	0.63
39:L2:125:ALA:O	39:L2:128:ARG:HD2	1.97	0.63
39:L2:137:ILE:HD11	39:L2:147:ARG:HG2	1.80	0.63
49:M3:56:PRO:HG3	49:M3:74:GLY:O	2.01	0.63
51:M5:49:ARG:HH11	51:M5:49:ARG:HB2	1.63	0.63
62:N6:45:ILE:HD11	62:N6:122:LYS:HB2	2.16	0.63
70:O4:96:GLU:OE1	36:5:2555:G:N1	215.30	0.63
1:2:109:G:H1	1:2:305:C:H42	1.46	0.63
1:2:324:U:OP1	13:C1:133:LYS:NZ	2.25	0.63
36:5:2667:A:O2'	36:5:2691:A:OP1	2.13	0.63
36:5:3241:G:H2'	36:5:3245:A:H8	1.64	0.63
54:M8:66:ARG:NH1	36:5:785:G:OP2	157.91	0.63
28:D6:41:ILE:HG22	28:D6:66:LYS:HE3	5.52	0.63
31:D9:19:ARG:HD2	31:D9:32:ARG:HD2	1.81	0.63
40:L3:293:ASN:HB2	40:L3:304:THR:HA	1.79	0.63
47:M0:80:SER:HB3	47:M0:147:VAL:HG11	1.79	0.63
51:M5:73:ARG:O	51:M5:75:VAL:N	3.89	0.63
57:N1:35:LYS:N	57:N1:38:ASP:OD2	2.35	0.63
59:N3:54:LEU:HD21	59:N3:119:GLY:HA3	2.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:N6:40:ARG:HG2	62:N6:45:ILE:O	1.99	0.63
1:2:762:A:OP1	11:S9:79:ARG:NH2	2.30	0.63
64:N8:58:MET:SD	36:5:2786:G:N2	156.45	0.63
40:L3:187:SER:HB3	40:L3:190:GLU:HG3	1.79	0.63
47:M0:175:ASN:OD1	47:M0:176:LEU:N	5.19	0.63
53:M7:30:ARG:HA	53:M7:119:VAL:HG11	2.21	0.63
59:N3:120:LYS:H	59:N3:137:VAL:HG23	1.63	0.63
61:N5:34:LEU:HD22	61:N5:35:PRO:HD2	2.11	0.63
2:S0:150:ASP:OD1	2:S0:165:ARG:NH2	2.31	0.63
4:S2:122:ALA:HA	4:S2:125:ILE:HD12	2.04	0.63
1:2:783:G:HO2'	1:2:784:C:H6	1.47	0.63
36:5:2518:C:H2'	36:5:2519:A:C8	2.33	0.63
36:5:3242:G:H5'	36:5:3245:A:H8	1.64	0.63
69:O3:88:ASN:HB2	36:5:429:U:H5'	215.65	0.63
1:6:1533:C:H4'	1:6:1539:G:N1	2.14	0.63
41:L4:26:PHE:HD1	41:L4:130:ALA:HB2	2.33	0.63
44:L7:27:ALA:HA	44:L7:30:ARG:HB3	1.79	0.63
46:L9:139:ASN:N	46:L9:139:ASN:OD1	4.22	0.63
47:M0:68:ALA:HB1	47:M0:155:ALA:HB1	2.83	0.63
36:1:114:A:N1	36:1:266:A:O2'	2.31	0.63
36:5:2569:A:H4'	36:5:2570:U:H5'	1.81	0.63
36:5:602:A:H2'	36:5:603:A:C8	2.33	0.63
61:N5:56:ARG:NH2	38:8:135:G:OP2	82.61	0.63
19:C7:48:ASN:HD22	1:6:1388:A:H5''	431.32	0.63
71:O5:89:ARG:HB2	71:O5:89:ARG:HH11	1.63	0.63
11:S9:109:LEU:HB2	11:S9:146:PHE:HB3	1.90	0.63
36:1:1028:U:O2	48:M1:94:ARG:NH1	2.32	0.63
1:2:1533:C:H4'	1:2:1539:G:N1	2.14	0.63
36:5:2927:C:H2'	36:5:2928:C:C6	2.34	0.63
20:C8:135:GLY:HA3	1:6:1559:A:H5''	367.85	0.63
56:N0:50:LYS:NZ	37:7:76:A:O2'	302.90	0.63
1:2:903:U:OP2	16:C4:24:ASN:ND2	2.32	0.63
18:C6:109:PHE:O	18:C6:113:ASP:N	2.93	0.63
2:S0:52:LYS:HD2	23:D1:82:VAL:HA	1.81	0.63
28:D6:79:ILE:HA	28:D6:84:VAL:HG11	1.80	0.63
41:L4:304:GLN:O	41:L4:306:THR:N	2.62	0.63
74:O8:3:ARG:NH2	36:5:1824:U:OP1	149.90	0.63
6:S4:151:ASP:OD1	8:S6:215:ARG:NH1	3.13	0.63
34:SR:70:ASP:HB3	34:SR:113:VAL:HG12	2.10	0.63
36:1:2255:A:H5'	36:1:2261:G:H22	1.62	0.63
4:S2:143:TYR:O	24:D2:98:GLN:NE2	3.09	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2514:U:H5'	45:L8:68:ARG:HG3	1.79	0.63
36:1:716:A:N7	64:N8:117:ARG:HG3	2.13	0.63
36:1:72:C:OP2	72:O6:13:LYS:NZ	2.32	0.62
1:2:478:A:OP1	32:E0:37:ARG:NH1	2.32	0.62
36:1:1719:G:H5''	55:M9:110:ARG:HH22	1.64	0.62
59:N3:2:SER:N	59:N3:56:ASP:OD1	4.99	0.62
66:O0:57:GLU:OE1	66:O0:69:TYR:OH	2.98	0.62
71:O5:5:LYS:O	71:O5:9:LEU:HG	2.68	0.62
36:1:305:U:C5	36:1:2776:C:H1'	2.34	0.62
36:1:835:G:HO2'	36:1:857:G:H22	1.47	0.62
42:L5:211:LEU:HB3	42:L5:219:PHE:HB2	3.09	0.62
50:M4:108:ARG:NH2	52:M6:196:ALA:O	2.32	0.62
50:M4:38:ILE:HD11	56:N0:150:PHE:HE2	1.64	0.62
59:N3:79:VAL:HG22	59:N3:100:GLY:HA2	1.81	0.62
64:N8:70:LYS:HE2	64:N8:129:PHE:CD2	2.58	0.62
72:O6:78:GLY:O	72:O6:79:SER:HB3	4.00	0.62
3:S1:30:PHE:HB3	3:S1:96:LEU:HD22	3.34	0.62
13:C1:99:ARG:NH1	25:D3:7:ARG:O	2.31	0.62
28:D6:38:ARG:HE	28:D6:83:ILE:HG13	1.64	0.62
41:L4:354:VAL:HG11	57:N1:143:THR:HG21	2.88	0.62
50:M4:135:LEU:HD11	52:M6:178:VAL:HG22	1.80	0.62
68:O2:81:ASP:O	68:O2:84:THR:OG1	2.14	0.62
8:S6:98:ARG:NH2	8:S6:101:ILE:O	2.35	0.62
1:2:1511:U:H2'	1:2:1512:G:C8	2.34	0.62
39:L2:83:HIS:HB3	79:Q3:64:VAL:HG13	1.80	0.62
40:L3:152:LYS:HG2	40:L3:192:VAL:HG11	1.82	0.62
48:M1:117:ASP:OD2	48:M1:119:SER:OG	2.14	0.62
71:O5:76:GLN:O	71:O5:81:ARG:NH1	2.56	0.62
6:S4:9:LEU:HD22	6:S4:28:ALA:HB3	2.70	0.62
1:2:127:G:N7	8:S6:202:ARG:NH2	2.47	0.62
10:S8:76:THR:HG22	10:S8:108:PRO:HG2	1.81	0.62
36:1:2108:C:H1'	36:1:3344:A:C8	2.35	0.62
26:D4:37:LYS:NZ	1:6:523:G:OP2	416.02	0.62
2:S0:50:VAL:HG23	19:C7:109:LEU:HD21	3.10	0.62
45:L8:74:THR:HB	45:L8:230:LYS:HZ2	3.52	0.62
49:M3:166:ALA:HB1	64:N8:147:LEU:HD21	1.80	0.62
51:M5:47:LYS:HA	51:M5:50:ARG:HE	1.65	0.62
7:S5:94:THR:HG22	7:S5:114:ILE:HG13	1.88	0.62
36:1:1488:G:H5''	36:1:1838:G:O6	1.99	0.62
28:D6:95:ARG:NH1	1:6:1796:C:O2'	343.21	0.62
22:D0:31:VAL:HA	22:D0:34:LEU:HB3	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:77:THR:HG23	40:L3:326:GLY:O	2.00	0.62
42:L5:40:HIS:CE1	42:L5:42:ALA:HB3	3.93	0.62
54:M8:102:ALA:HA	54:M8:122:ILE:HG22	2.95	0.62
54:M8:58:ASN:HB3	54:M8:144:ARG:HH21	1.75	0.62
63:N7:41:ALA:HB2	63:N7:77:TYR:HE2	6.17	0.62
1:2:1488:G:H3'	1:2:1515:A:H61	1.65	0.62
39:L2:69:TYR:OH	36:5:2557:A:OP1	192.67	0.62
57:N1:92:ARG:NH1	36:5:2736:A:OP1	236.50	0.62
1:6:1297:G:N2	1:6:1300:A:OP2	2.33	0.62
47:M0:77:THR:HG22	47:M0:82:ARG:HA	1.95	0.62
36:1:1864:A:OP1	55:M9:88:ARG:NH1	2.32	0.62
56:N0:46:GLN:O	37:7:77:G:H5''	302.41	0.62
11:S9:38:ASN:HB2	11:S9:41:GLU:HG3	1.82	0.62
36:1:2418:G:H4'	36:1:2419:A:OP1	1.98	0.62
45:L8:121:SER:O	45:L8:123:GLN:N	2.32	0.62
52:M6:41:LEU:HB3	52:M6:138:LEU:HD22	1.81	0.62
61:N5:80:ASN:HD21	61:N5:126:LEU:HB2	1.63	0.62
3:S1:62:LYS:HD3	3:S1:91:VAL:HG23	6.45	0.62
11:S9:102:GLU:HA	11:S9:105:LEU:HB2	2.39	0.62
56:N0:90:MET:HG2	36:5:1213:G:H4'	320.30	0.62
36:5:2209:U:H1'	36:5:2210:G:H5''	1.81	0.62
28:D6:5:ARG:NH2	1:6:1793:G:O2'	337.45	0.62
58:N2:67:SER:OG	58:N2:69:ALA:O	3.84	0.62
62:N6:89:LYS:N	62:N6:93:ALA:O	2.22	0.62
68:O2:105:ARG:O	68:O2:109:LEU:HB2	2.62	0.62
72:O6:66:GLU:OE1	72:O6:70:ARG:NH2	2.31	0.62
2:S0:185:ARG:H	23:D1:44:ARG:HA	1.65	0.62
3:S1:109:LYS:HG3	3:S1:113:MET:HE3	1.82	0.62
36:1:2897:A:OP2	76:Q0:124:LYS:NZ	2.32	0.62
1:2:372:G:N2	1:2:612:U:O4	2.24	0.62
36:5:1655:G:C8	36:5:1655:G:H5'	2.28	0.62
16:C4:86:THR:HG21	16:C4:90:ARG:HD2	1.80	0.62
28:D6:87:ARG:NH2	28:D6:91:ASP:O	2.89	0.62
46:L9:137:SER:HB2	46:L9:143:GLU:HB3	3.60	0.62
3:S1:190:PRO:HG2	3:S1:192:VAL:HG23	2.19	0.62
4:S2:67:GLN:HA	4:S2:70:ASP:HB2	1.82	0.62
34:SR:220:ILE:HB	34:SR:234:LEU:HB2	2.46	0.62
34:SR:69:GLN:N	34:SR:83:ALA:O	2.80	0.62
1:2:656:G:O2'	1:2:657:U:O4'	2.18	0.61
38:4:58:G:O6	73:O7:63:ARG:NH2	2.31	0.61
39:L2:193:ARG:NH1	36:5:2174:G:OP2	191.87	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M5:54:LYS:HB3	51:M5:56:LYS:HG2	1.81	0.61
63:N7:14:VAL:HG13	70:O4:86:LYS:HG2	1.80	0.61
46:L9:95:ALA:O	76:Q0:77:ILE:HG12	8.26	0.61
6:S4:100:ARG:NH2	6:S4:121:TYR:O	2.33	0.61
34:SR:29:GLN:O	34:SR:31:ASN:N	2.28	0.61
36:1:2660:G:O3'	36:1:2749:G:N2	2.32	0.61
36:1:439:C:H3'	36:1:440:A:H8	1.64	0.61
36:5:1502:C:O2'	36:5:1511:U:OP2	2.16	0.61
36:5:2696:A:H2'	36:5:2697:A:C8	2.35	0.61
1:6:1535:U:H4'	1:6:1535:U:OP1	2.00	0.61
28:D6:15:ARG:NH1	1:6:936:G:N7	320.83	0.61
15:C3:99:ARG:O	15:C3:103:GLU:HG2	2.00	0.61
22:D0:103:ILE:HA	22:D0:106:ILE:HG22	2.94	0.61
41:L4:22:LEU:HD11	41:L4:26:PHE:HB2	1.90	0.61
44:L7:88:ARG:NH1	44:L7:91:GLY:O	2.59	0.61
47:M0:42:THR:OG1	47:M0:43:VAL:N	2.75	0.61
6:S4:18:TRP:O	6:S4:51:ARG:NH1	2.69	0.61
1:2:1472:C:OP1	7:S5:102:ARG:NH2	2.32	0.61
1:2:1418:G:O2'	31:D9:56:ARG:O	2.17	0.61
16:C4:115:ILE:HG21	28:D6:44:ILE:HG21	6.62	0.61
17:C5:64:LYS:HA	17:C5:73:PRO:HB3	1.81	0.61
3:S1:150:VAL:HG23	1:6:1067:C:H5''	355.31	0.61
5:S3:106:LYS:HG3	5:S3:175:VAL:HB	1.82	0.61
36:1:3233:C:H2'	36:1:3234:A:C8	2.35	0.61
20:C8:28:ILE:HD11	20:C8:56:LYS:H	7.43	0.61
21:C9:37:VAL:HG11	21:C9:100:ILE:HD11	1.81	0.61
28:D6:36:ILE:HD12	28:D6:78:ALA:HB1	1.82	0.61
36:1:3115:C:OP1	46:L9:62:ARG:NH2	2.33	0.61
58:N2:51:GLY:O	58:N2:52:ASN:ND2	2.33	0.61
2:S0:83:GLN:HG2	2:S0:99:ALA:HB1	2.40	0.61
7:S5:113:ILE:O	7:S5:117:THR:OG1	2.15	0.61
7:S5:91:GLU:HG2	7:S5:95:ASN:HD21	1.78	0.61
69:O3:97:SER:OG	36:5:3174:A:OP1	242.94	0.61
1:6:52:U:H2'	1:6:53:G:C8	2.35	0.61
15:C3:66:ILE:HG13	15:C3:67:THR:HG22	3.89	0.61
65:N9:23:LYS:HB3	65:N9:24:PRO:HD3	4.27	0.61
68:O2:11:LYS:HB3	68:O2:14:THR:HG22	1.82	0.61
9:S7:155:ASP:OD2	9:S7:156:SER:N	2.31	0.61
68:O2:44:ARG:NH1	36:5:1145:G:OP1	208.31	0.61
41:L4:283:THR:HG22	41:L4:285:ASP:H	1.64	0.61
37:3:27:A:OP2	42:L5:57:ASN:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:38:LYS:HG2	47:M0:41:ALA:HB2	2.07	0.61
51:M5:201:ARG:NH2	36:5:692:A:OP1	96.83	0.61
52:M6:121:PRO:HA	52:M6:124:LEU:HD22	2.99	0.61
36:1:1632:A:OP1	63:N7:69:LYS:NZ	2.34	0.61
36:1:2338:C:H1'	59:N3:49:LEU:HD12	1.83	0.61
1:2:1059:U:O2'	1:2:1060:U:N3	2.34	0.61
36:5:1657:C:O2'	36:5:1797:A:OP2	2.13	0.61
24:D2:27:ILE:HG12	24:D2:61:ILE:HB	1.82	0.61
39:L2:27:ALA:HB3	39:L2:128:ARG:HH22	3.02	0.61
41:L4:44:LYS:HB3	41:L4:47:ARG:NH1	2.29	0.61
45:L8:161:GLU:OE2	51:M5:26:ARG:NH2	2.30	0.61
37:3:28:C:OP1	48:M1:137:ARG:NH1	2.33	0.61
55:M9:8:LYS:HE3	55:M9:22:VAL:HG23	1.83	0.61
11:S9:163:PRO:HB3	11:S9:169:PRO:HA	3.23	0.61
36:1:1244:A:N6	36:1:1271:A:OP2	2.33	0.61
36:1:2768:U:H2'	36:1:2769:A:C8	2.35	0.61
1:2:1592:A:H2'	1:2:1593:A:H8	1.66	0.61
36:1:1831:U:O2'	38:4:114:G:OP1	2.16	0.61
18:C6:66:ARG:NH1	1:6:1351:G:OP1	436.30	0.61
32:E0:37:ARG:NH1	1:6:478:A:OP1	442.28	0.61
18:C6:18:ALA:HB2	18:C6:69:VAL:HG13	1.99	0.61
24:D2:31:SER:HB3	24:D2:34:ILE:HG13	3.12	0.61
25:D3:141:GLU:OE1	25:D3:144:ARG:NH1	15.09	0.61
42:L5:22:ARG:NH2	42:L5:28:THR:OG1	2.25	0.61
59:N3:129:VAL:O	59:N3:133:SER:OG	2.84	0.61
3:S1:158:SER:HA	3:S1:161:ILE:HD12	2.05	0.61
4:S2:37:PRO:HG3	4:S2:46:LYS:HD2	3.93	0.61
9:S7:69:GLY:HA2	9:S7:72:LYS:HD2	1.81	0.61
1:6:482:U:H2'	1:6:483:A:C8	2.36	0.61
1:6:52:U:H2'	1:6:53:G:H8	1.66	0.61
1:6:777:C:H2'	1:6:778:G:H8	1.66	0.61
40:L3:113:GLU:HB3	40:L3:176:ALA:HB2	1.81	0.61
41:L4:170:LYS:HG3	41:L4:175:HIS:HB2	3.98	0.61
46:L9:150:SER:HB3	46:L9:153:ASP:HB2	1.82	0.61
50:M4:16:GLU:HB3	56:N0:149:LYS:HB3	1.83	0.61
52:M6:60:LYS:NZ	36:5:1307:G:H5''	253.44	0.61
53:M7:172:GLN:NE2	69:O3:60:ARG:O	2.32	0.61
3:S1:111:ARG:HB3	28:D6:68:TYR:CD2	2.36	0.61
6:S4:11:ARG:NH1	6:S4:21:ASP:OD2	2.29	0.61
9:S7:123:ASP:OD1	9:S7:138:LYS:NZ	2.50	0.61
10:S8:159:GLN:OE1	10:S8:166:TYR:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1717:U:H2'	36:1:1718:G:C8	2.35	0.61
36:1:28:C:O2'	36:1:61:A:N3	2.28	0.61
1:2:703:G:H2'	1:2:704:C:H5'	1.81	0.61
75:O9:45:ARG:NH2	36:5:1841:A:N3	129.17	0.61
47:M0:154:ARG:NH2	36:5:2838:A:OP1	330.21	0.61
36:5:2986:U:H2'	36:5:2987:A:C8	2.35	0.61
16:C4:80:HIS:ND1	16:C4:113:GLY:O	3.47	0.61
18:C6:110:THR:HA	18:C6:113:ASP:HB2	2.51	0.61
25:D3:7:ARG:HH11	25:D3:7:ARG:HB2	1.66	0.61
41:L4:141:ARG:O	41:L4:143:GLU:N	4.41	0.61
44:L7:157:ASN:O	44:L7:159:GLN:N	3.02	0.61
49:M3:174:ARG:HG3	72:O6:9:ILE:HD11	5.48	0.61
56:N0:80:ARG:HB3	56:N0:122:HIS:HB2	1.83	0.61
63:N7:22:LYS:NZ	63:N7:132:SER:OG	2.34	0.61
71:O5:85:THR:HB	71:O5:88:LEU:HB2	1.83	0.61
1:2:259:U:OP1	10:S8:75:LYS:NZ	2.21	0.60
12:C0:91:TYR:O	12:C0:93:GLN:N	2.34	0.60
17:C5:15:HIS:H	17:C5:22:LEU:HD22	3.20	0.60
26:D4:3:ASP:O	26:D4:5:VAL:N	2.34	0.60
42:L5:218:ARG:NH2	42:L5:221:GLU:OE1	3.48	0.60
43:L6:164:SER:OG	43:L6:166:LYS:NZ	2.34	0.60
63:N7:101:PHE:HA	63:N7:107:ARG:HE	1.70	0.60
78:Q2:2:VAL:N	78:Q2:90:HIS:O	2.34	0.60
2:S0:31:VAL:HG12	2:S0:33:GLN:H	1.66	0.60
1:2:138:A:OP2	1:2:1706:C:O2'	2.19	0.60
1:2:487:G:H3'	1:2:488:G:H5''	1.82	0.60
16:C4:13:VAL:HG23	16:C4:77:THR:H	5.21	0.60
33:E1:105:TYR:HB3	33:E1:117:LEU:HB2	1.81	0.60
47:M0:66:GLU:OE1	47:M0:69:ARG:NH2	2.68	0.60
49:M3:161:ASP:OD1	49:M3:162:ASN:N	3.63	0.60
54:M8:158:HIS:H	54:M8:186:VAL:HG22	4.91	0.60
56:N0:99:ARG:NH1	56:N0:126:VAL:O	2.52	0.60
8:S6:148:SER:O	8:S6:150:GLU:N	2.34	0.60
36:1:1230:G:H1	36:1:1279:C:H42	1.48	0.60
36:5:129:U:H2'	36:5:130:A:C8	2.36	0.60
36:5:1620:U:H2'	36:5:1621:A:C8	2.37	0.60
36:5:1764:U:H3'	36:5:1765:U:H5''	1.83	0.60
36:5:312:C:H1'	36:5:2778:G:N2	2.15	0.60
13:C1:109:VAL:HG12	13:C1:137:PHE:HB2	4.65	0.60
48:M1:24:GLY:HA2	48:M1:65:ILE:HG23	4.09	0.60
36:1:353:G:N7	73:O7:55:ARG:HD3	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:9:LEU:HD23	2:S0:54:TRP:CD2	2.36	0.60
3:S1:181:LEU:O	3:S1:183:GLN:N	2.34	0.60
5:S3:137:VAL:HB	5:S3:185:LYS:HB2	1.82	0.60
36:5:1564:U:H2'	36:5:1565:G:C8	2.35	0.60
36:5:209:A:H4'	36:5:211:A:C8	2.37	0.60
36:5:970:A:H1'	36:5:1112:A:N1	2.17	0.60
1:6:680:U:H2'	1:6:682:C:H41	1.66	0.60
41:L4:232:SER:O	41:L4:233:LEU:HB2	2.01	0.60
44:L7:64:GLN:HA	44:L7:67:ARG:HB2	2.72	0.60
63:N7:103:GLN:HB3	63:N7:106:GLN:HG3	4.69	0.60
69:O3:42:GLN:HA	69:O3:45:LEU:HG	1.84	0.60
8:S6:70:PRO:O	8:S6:98:ARG:NH1	2.86	0.60
9:S7:46:ILE:HG12	9:S7:60:ILE:HA	3.40	0.60
10:S8:36:THR:HB	10:S8:57:ALA:O	2.01	0.60
34:SR:9:LEU:HA	34:SR:313:TRP:HA	2.50	0.60
36:1:2407:C:H2'	36:1:2408:U:H6	1.67	0.60
36:1:439:C:HO2'	36:1:619:A:H2	1.49	0.60
1:2:145:A:O2'	1:2:146:U:O5'	2.19	0.60
1:2:1564:U:H2'	1:2:1565:C:C6	2.36	0.60
1:2:1606:C:H2'	1:2:1607:G:C8	2.36	0.60
36:5:1717:U:H2'	36:5:1718:G:C8	2.36	0.60
36:5:3302:U:H3	36:5:3312:U:H3	1.47	0.60
1:6:606:A:H8	1:6:608:U:H2'	1.66	0.60
17:C5:86:VAL:O	17:C5:88:GLU:N	2.34	0.60
42:L5:50:ARG:NH2	37:7:6:C:O2'	271.90	0.60
49:M3:52:ASP:N	49:M3:52:ASP:OD1	2.60	0.60
53:M7:168:LEU:HB2	53:M7:172:GLN:HB3	1.83	0.60
53:M7:26:PHE:HZ	36:5:412:G:H5'	151.01	0.60
66:O0:22:LYS:HD3	66:O0:94:GLU:HG3	2.35	0.60
69:O3:86:ARG:HH22	36:5:498:A:H5'	216.66	0.60
39:L2:172:GLY:HA3	79:Q3:68:ALA:H	4.27	0.60
6:S4:176:ASP:HB2	6:S4:179:LYS:HZ3	1.66	0.60
8:S6:142:ARG:HG2	8:S6:147:LEU:HD12	3.36	0.60
36:1:3094:A:H2'	36:1:3095:U:C6	2.36	0.60
36:1:409:A:H61	38:4:15:G:H1'	1.66	0.60
36:5:1621:A:H2'	36:5:1622:U:C6	2.36	0.60
36:5:92:G:H5''	36:5:94:G:N7	2.17	0.60
1:6:895:G:H1	1:6:917:U:H3	1.48	0.60
16:C4:11:SER:OG	16:C4:12:GLN:N	4.09	0.60
27:D5:61:SER:H	27:D5:64:VAL:HB	1.83	0.60
40:L3:43:LEU:HG	40:L3:181:ILE:HG21	2.09	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:L7:125:GLU:OE2	44:L7:128:LYS:NZ	2.34	0.60
54:M8:12:ARG:NH2	36:5:972:A:OP1	183.75	0.60
2:S0:74:VAL:HG23	2:S0:118:PRO:HB3	1.86	0.60
7:S5:40:ILE:HG23	7:S5:42:LEU:HD22	1.81	0.60
8:S6:56:ASN:ND2	8:S6:60:GLY:O	2.34	0.60
34:SR:82:SER:OG	34:SR:92:TRP:NE1	3.24	0.60
36:1:2213:A:H2'	36:1:2214:A:C8	2.37	0.60
36:1:860:G:OP2	39:L2:181:LYS:NZ	2.34	0.60
1:2:1291:G:N2	1:2:1324:G:H22	1.98	0.60
1:2:591:A:H2'	1:2:592:A:H8	1.66	0.60
10:S8:142:LYS:NZ	1:6:187:G:N7	277.59	0.60
23:D1:81:ASN:O	23:D1:83:TRP:N	2.34	0.60
39:L2:243:THR:OG1	36:5:2244:A:H5''	229.34	0.60
49:M3:64:LYS:HE3	64:N8:69:TRP:CD1	2.36	0.60
4:S2:218:ILE:O	4:S2:221:THR:OG1	2.81	0.60
11:S9:110:GLN:NE2	11:S9:126:ARG:HG2	2.14	0.60
36:1:2193:U:H5'	36:1:2194:G:H5'	1.83	0.60
36:5:2112:U:H4'	36:5:2113:A:O5'	2.02	0.60
1:6:712:G:H2'	1:6:713:A:C8	2.37	0.60
18:C6:37:THR:O	18:C6:45:ARG:NH1	3.16	0.60
55:M9:23:TRP:HB3	55:M9:51:VAL:HG22	1.82	0.60
68:O2:24:ARG:NH1	68:O2:25:TYR:OH	2.77	0.60
3:S1:128:LYS:HG3	3:S1:134:VAL:HG22	1.82	0.60
10:S8:32:GLN:NE2	1:6:1727:G:H21	275.71	0.60
34:SR:200:ASN:H	34:SR:215:GLY:HA2	2.26	0.60
36:1:1307:G:H1'	36:1:1308:A:C8	2.37	0.60
36:1:2986:U:H2'	36:1:2987:A:C8	2.37	0.60
41:L4:299:ILE:HG23	54:M8:39:ARG:HB3	1.82	0.60
48:M1:59:ILE:HG21	48:M1:65:ILE:HD11	1.83	0.60
55:M9:90:PRO:HB2	55:M9:93:VAL:HG23	1.84	0.60
59:N3:87:ARG:HH22	59:N3:137:VAL:HG22	1.98	0.60
68:O2:40:SER:O	68:O2:44:ARG:HG3	2.27	0.60
6:S4:79:ASP:HB3	6:S4:82:TYR:HB2	1.84	0.60
36:1:1456:A:N7	67:O1:26:LYS:NZ	2.40	0.60
36:1:1793:C:N4	39:L2:177:LYS:O	2.34	0.60
1:2:1774:G:N7	77:Q1:4:LYS:NZ	2.48	0.60
36:5:2534:G:H1	36:5:2545:C:H42	1.49	0.60
13:C1:21:ASN:ND2	13:C1:32:LYS:H	2.00	0.60
40:L3:252:ILE:HG22	36:5:2394:G:H5'	217.43	0.60
40:L3:320:ASP:N	40:L3:320:ASP:OD2	2.35	0.60
47:M0:140:THR:HG21	47:M0:144:ASN:HD22	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:M7:59:PRO:HG3	53:M7:76:PHE:CD1	2.37	0.60
11:S9:61:THR:HG22	24:D2:97:ARG:HH12	1.67	0.60
1:2:1290:U:H2'	1:2:1291:G:C8	2.37	0.59
1:2:883:C:H2'	1:2:884:A:H8	1.67	0.59
36:5:2116:G:OP1	36:5:2118:C:N4	2.35	0.59
1:6:417:A:H4'	1:6:418:G:O5'	2.02	0.59
1:6:424:C:O2'	1:6:426:G:OP1	2.20	0.59
1:6:654:C:H2'	1:6:655:G:C8	2.37	0.59
42:L5:279:LYS:NZ	37:7:110:G:OP2	327.67	0.59
42:L5:50:ARG:NH1	42:L5:72:ASP:OD2	2.35	0.59
43:L6:40:LEU:HD13	43:L6:84:VAL:HG21	1.84	0.59
36:1:1723:A:OP2	55:M9:103:ARG:NH2	2.34	0.59
49:M3:64:LYS:HG3	64:N8:69:TRP:CG	2.59	0.59
69:O3:45:LEU:HD11	69:O3:73:ARG:HA	3.00	0.59
3:S1:34:ALA:HB2	3:S1:43:VAL:HG23	1.84	0.59
7:S5:91:GLU:HG2	7:S5:95:ASN:ND2	2.38	0.59
1:2:1100:G:O2'	24:D2:76:SER:N	2.36	0.59
57:N1:17:ARG:HG2	36:5:2700:G:H5''	266.74	0.59
19:C7:45:ARG:NH2	1:6:1331:A:OP1	414.37	0.59
17:C5:21:ASP:O	17:C5:25:LEU:N	3.84	0.59
20:C8:88:ARG:NH1	20:C8:112:ASP:OD2	2.93	0.59
40:L3:347:SER:HB3	40:L3:350:ALA:H	2.91	0.59
41:L4:138:ARG:HE	41:L4:240:PRO:HD2	1.66	0.59
44:L7:232:ARG:HD2	44:L7:236:ILE:HA	2.36	0.59
46:L9:77:ASN:HA	46:L9:80:THR:HG23	2.54	0.59
68:O2:82:LEU:HD11	68:O2:112:ALA:HB2	3.82	0.59
73:O7:65:ARG:HG3	73:O7:65:ARG:HH11	1.71	0.59
3:S1:184:LEU:HD12	3:S1:188:LEU:HG	4.21	0.59
1:2:331:A:H5'	10:S8:33:PRO:HA	1.84	0.59
10:S8:61:GLU:HG2	10:S8:62:THR:HG23	2.91	0.59
1:2:237:C:H5''	1:2:238:U:H5'	1.83	0.59
37:3:49:G:N7	42:L5:58:LYS:HG3	2.18	0.59
1:6:228:G:N2	1:6:237:C:N3	2.50	0.59
1:6:219:A:C6	1:6:843:U:H1'	2.37	0.59
22:D0:28:SER:HB2	22:D0:112:VAL:HA	1.84	0.59
29:D7:61:THR:HG23	29:D7:62:ILE:H	1.67	0.59
40:L3:315:GLY:HA2	36:5:3379:C:H4'	215.68	0.59
58:N2:54:VAL:HG12	58:N2:67:SER:HA	1.84	0.59
62:N6:5:SER:C	62:N6:7:ASP:H	2.65	0.59
74:O8:64:LYS:O	74:O8:68:SER:OG	2.17	0.59
10:S8:194:ARG:HH11	10:S8:195:ARG:NH2	6.59	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:270:C:H42	1:2:285:G:H1	1.50	0.59
1:2:320:U:H2'	1:2:321:C:H2'	1.85	0.59
36:5:1220:U:O2	36:5:1222:G:N1	2.36	0.59
16:C4:50:ALA:HB3	16:C4:53:ASP:HB2	1.87	0.59
2:S0:66:ALA:HB2	23:D1:37:ALA:HB2	2.27	0.59
40:L3:187:SER:O	40:L3:189:SER:N	3.32	0.59
41:L4:339:LEU:HA	41:L4:342:LYS:HB3	4.84	0.59
41:L4:89:ALA:O	41:L4:91:GLY:N	2.35	0.59
42:L5:115:LEU:HD22	42:L5:115:LEU:H	1.68	0.59
52:M6:182:ASN:O	52:M6:186:ALA:N	3.02	0.59
52:M6:188:SER:O	52:M6:192:LYS:HG2	2.03	0.59
73:O7:28:HIS:CG	73:O7:31:LYS:HG3	2.58	0.59
7:S5:120:ILE:HG12	27:D5:100:ILE:HD11	1.84	0.59
11:S9:120:LYS:O	11:S9:121:SER:HB3	2.67	0.59
36:1:2107:A:H2	36:1:3344:A:H8	1.50	0.59
36:5:2996:U:OP1	36:5:2996:U:H4'	2.01	0.59
69:O3:56:SER:OG	36:5:3170:A:OP2	204.71	0.59
12:C0:80:LEU:O	12:C0:81:ASN:ND2	2.34	0.59
15:C3:55:ARG:NH1	15:C3:56:ASP:OD1	3.53	0.59
27:D5:39:ALA:O	27:D5:72:GLY:N	2.36	0.59
33:E1:108:VAL:HG12	33:E1:114:VAL:HG13	3.50	0.59
41:L4:330:TYR:HA	41:L4:333:VAL:HG13	2.43	0.59
43:L6:35:VAL:O	43:L6:38:THR:OG1	2.28	0.59
51:M5:13:LYS:O	51:M5:16:SER:OG	2.14	0.59
2:S0:126:PRO:HG3	2:S0:151:SER:HB3	2.87	0.59
4:S2:148:LEU:HD13	4:S2:149:GLY:H	1.67	0.59
36:1:3159:C:H2'	36:1:3160:U:C6	2.38	0.59
36:5:1192:C:N4	36:5:1301:A:O2'	2.32	0.59
36:5:563:U:H2'	36:5:564:G:H8	1.67	0.59
36:5:955:U:H2'	36:5:956:U:C6	2.37	0.59
1:6:104:A:OP2	1:6:308:C:N4	2.34	0.59
1:6:1280:C:H2'	1:6:1281:G:C8	2.37	0.59
18:C6:40:GLU:HA	18:C6:42:GLU:N	2.17	0.59
21:C9:54:PHE:CE2	21:C9:104:VAL:HG22	2.37	0.59
23:D1:58:TYR:O	23:D1:61:SER:OG	2.17	0.59
31:D9:14:TYR:OH	1:6:1553:G:O2'	405.12	0.59
40:L3:252:ILE:HG12	40:L3:266:ARG:NH2	3.56	0.59
42:L5:270:LYS:HG3	42:L5:273:ARG:HB2	4.70	0.59
46:L9:16:VAL:HG12	46:L9:29:GLY:HA3	1.83	0.59
47:M0:63:GLU:O	47:M0:66:GLU:N	2.36	0.59
63:N7:83:THR:HG23	63:N7:85:TYR:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:84:ARG:NH1	2:S0:203:PHE:O	3.44	0.59
3:S1:51:SER:HB3	3:S1:57:ALA:H	4.04	0.59
34:SR:238:ASP:N	34:SR:238:ASP:OD1	2.34	0.59
36:1:1411:C:P	68:O2:98:HIS:HD1	2.25	0.59
36:1:1750:A:H4'	36:1:1751:G:H5'	1.85	0.59
36:1:2107:A:H2	36:1:3344:A:C8	2.21	0.59
1:2:1150:G:O2'	1:2:1151:A:OP1	2.18	0.59
36:5:1060:U:H2'	36:5:1061:A:C8	2.38	0.59
36:5:2592:G:H4'	36:5:2594:C:C2	2.37	0.59
22:D0:69:LYS:HE2	22:D0:80:GLU:HG3	2.95	0.59
24:D2:38:LEU:HD23	24:D2:41:MET:HE3	1.84	0.59
40:L3:169:THR:HG21	40:L3:171:LEU:HD12	2.27	0.59
41:L4:152:VAL:HG23	41:L4:172:VAL:HG21	1.82	0.59
42:L5:95:TRP:CH2	42:L5:181:PRO:HD3	4.55	0.59
44:L7:41:ARG:NH1	36:5:598:A:OP1	261.73	0.59
49:M3:159:VAL:HA	64:N8:124:ILE:HD11	3.08	0.59
10:S8:42:ARG:NH1	1:6:1677:C:OP1	265.11	0.59
1:2:1041:G:H2'	1:2:1042:G:C8	2.38	0.59
1:2:780:A:C8	26:D4:8:ARG:HB3	2.38	0.59
36:5:1765:U:H4'	36:5:1765:U:OP1	2.03	0.59
55:M9:104:ARG:NH1	36:5:1949:G:OP1	219.21	0.59
36:5:2499:U:H2'	36:5:2500:A:C8	2.37	0.59
36:5:441:U:H2'	36:5:442:G:C8	2.37	0.59
24:D2:67:GLY:O	24:D2:69:LEU:N	3.66	0.59
25:D3:91:GLY:O	25:D3:93:LEU:N	2.34	0.59
26:D4:25:VAL:HG12	26:D4:27:VAL:HG23	2.06	0.59
41:L4:60:THR:HG22	41:L4:62:ALA:H	2.06	0.59
43:L6:131:LYS:HD3	43:L6:132:ALA:H	5.19	0.59
55:M9:158:GLU:HA	55:M9:161:ALA:HB3	2.97	0.59
63:N7:48:ARG:HB3	63:N7:69:LYS:HB3	1.85	0.59
36:1:641:C:OP1	64:N8:21:ARG:HB3	2.03	0.59
74:O8:46:ARG:NH2	74:O8:51:LEU:HB2	2.17	0.59
6:S4:211:LYS:NZ	6:S4:215:ASP:OD1	2.36	0.59
9:S7:150:GLN:HB3	9:S7:181:ILE:HD12	1.85	0.59
11:S9:36:LEU:HA	11:S9:126:ARG:HH21	1.66	0.59
34:SR:180:ALA:HB3	34:SR:190:ALA:HB3	1.85	0.59
36:1:1093:A:O2'	36:1:1094:U:O5'	2.21	0.59
36:1:95:A:OP1	64:N8:52:TYR:OH	2.16	0.59
36:5:198:A:N3	36:5:218:G:O2'	2.35	0.59
36:5:249:U:O2'	36:5:250:U:H5''	2.02	0.59
36:5:92:G:OP2	36:5:93:C:H5''	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1000:C:N4	1:6:1003:A:OP2	2.22	0.59
37:7:112:G:H2'	37:7:113:C:C6	2.38	0.59
18:C6:6:SER:HB2	18:C6:23:LYS:HB3	2.66	0.59
29:D7:19:HIS:HB3	29:D7:22:LYS:HD2	3.08	0.59
47:M0:54:SER:HB2	47:M0:135:ILE:HD11	1.84	0.59
49:M3:133:PRO:O	49:M3:135:ALA:N	3.25	0.59
59:N3:28:ASN:HD21	59:N3:112:SER:H	1.49	0.59
4:S2:133:LYS:HA	4:S2:136:VAL:HG23	2.40	0.59
4:S2:170:ILE:HB	4:S2:197:TYR:HB2	1.84	0.59
36:1:3013:U:H2'	36:1:3014:U:C6	2.37	0.59
36:1:370:U:H4'	36:1:404:G:H5'	1.85	0.59
1:2:1727:G:N2	10:S8:32:GLN:HE22	2.00	0.59
1:2:947:U:H2'	1:2:948:G:H8	1.68	0.59
39:L2:243:THR:HG23	36:5:2242:A:H5'	234.32	0.59
36:5:253:A:HO2'	36:5:254:A:H8	1.49	0.59
52:M6:68:ARG:HH12	36:5:2987:A:H5''	214.93	0.59
41:L4:196:ASN:ND2	36:5:337:G:OP2	92.07	0.59
49:M3:59:ARG:NH1	36:5:73:C:O2	94.17	0.59
1:6:1237:G:H2'	1:6:1238:A:C8	2.37	0.59
1:6:1695:G:N2	1:6:1706:C:H41	2.01	0.59
1:2:866:G:H5''	15:C3:3:ARG:H	1.67	0.59
19:C7:66:VAL:O	19:C7:68:GLY:N	3.57	0.59
41:L4:327:LEU:HA	44:L7:166:ASN:ND2	2.17	0.59
46:L9:21:LYS:HG3	50:M4:8:LYS:HD2	6.98	0.59
55:M9:173:ARG:HH21	55:M9:177:VAL:HG21	10.02	0.59
60:N4:23:ARG:NH2	60:N4:25:ASP:OD1	3.30	0.59
67:O1:30:PRO:O	67:O1:34:LYS:NZ	5.52	0.59
6:S4:21:ASP:OD1	6:S4:24:SER:OG	2.62	0.59
11:S9:133:HIS:HD2	11:S9:162:SER:HB2	3.05	0.59
1:2:1479:A:H2'	1:2:1480:G:H8	1.66	0.58
36:5:297:G:N2	36:5:297:G:OP2	2.35	0.58
69:O3:68:TRP:NE1	36:5:3275:U:OP2	228.83	0.58
36:5:956:U:H2'	36:5:957:C:H6	1.68	0.58
49:M3:15:ARG:NH2	36:5:96:G:OP1	153.09	0.58
24:D2:103:ILE:HA	24:D2:112:ASP:HA	2.14	0.58
40:L3:260:VAL:HG11	40:L3:266:ARG:NH1	2.18	0.58
47:M0:161:GLY:O	47:M0:163:GLN:NE2	2.75	0.58
48:M1:12:LEU:HD12	48:M1:162:TRP:CD1	4.32	0.58
36:1:744:A:H1'	54:M8:141:ARG:HD2	1.85	0.58
70:O4:96:GLU:OE1	70:O4:99:LYS:NZ	2.31	0.58
72:O6:74:LYS:HG3	72:O6:80:PHE:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Q1:6:ARG:NH2	1:6:1112:G:OP1	316.06	0.58
6:S4:205:PHE:HB3	6:S4:221:ARG:HD2	1.85	0.58
7:S5:92:ARG:NH2	7:S5:169:ASN:OD1	2.36	0.58
36:1:1101:G:OP2	44:L7:196:LYS:HE2	2.03	0.58
36:1:2960:C:H2'	36:1:2961:G:C8	2.38	0.58
36:1:3252:G:H2'	36:1:3253:G:C8	2.38	0.58
36:1:715:A:H8	64:N8:115:LYS:HG2	1.67	0.58
1:2:657:U:O2	1:2:677:G:N2	2.32	0.58
36:5:1944:U:H2'	36:5:1945:A:H8	1.66	0.58
1:6:235:G:H2'	1:6:236:A:C8	2.34	0.58
1:2:325:G:H4'	13:C1:83:THR:HG21	1.84	0.58
3:S1:83:LYS:NZ	16:C4:116:GLU:OE2	2.34	0.58
18:C6:32:ASN:O	18:C6:66:ARG:NH1	2.36	0.58
18:C6:68:ARG:NH2	18:C6:70:THR:OG1	5.37	0.58
53:M7:67:ILE:HD12	53:M7:82:ARG:CZ	3.73	0.58
54:M8:154:GLY:O	54:M8:159:LYS:HE3	2.03	0.58
5:S3:21:LEU:HD22	5:S3:25:PHE:HE2	1.67	0.58
5:S3:80:ALA:O	5:S3:83:THR:OG1	2.21	0.58
36:1:2687:G:OP1	42:L5:8:LYS:NZ	2.35	0.58
36:1:359:U:O2'	73:O7:16:HIS:ND1	2.36	0.58
36:5:1554:U:O2'	36:5:1581:C:H2'	2.03	0.58
1:2:246:G:N2	13:C1:38:ALA:O	2.33	0.58
16:C4:25:ASP:OD1	16:C4:26:THR:N	3.23	0.58
22:D0:27:THR:HG23	22:D0:113:ASP:HB3	1.86	0.58
23:D1:9:VAL:HG22	23:D1:10:GLU:H	2.06	0.58
40:L3:92:TYR:O	40:L3:156:SER:N	2.33	0.58
42:L5:234:ASP:OD2	42:L5:234:ASP:N	2.36	0.58
47:M0:19:LYS:HE3	47:M0:26:VAL:HG22	1.84	0.58
47:M0:9:TYR:CG	47:M0:97:LEU:HD13	2.39	0.58
54:M8:100:THR:HG23	54:M8:122:ILE:HD13	1.86	0.58
58:N2:54:VAL:HG13	58:N2:67:SER:HB2	3.89	0.58
63:N7:14:VAL:HG12	63:N7:15:ARG:HG3	1.85	0.58
74:O8:36:LYS:HG2	74:O8:37:PRO:HD2	1.85	0.58
75:O9:21:ARG:HD3	75:O9:22:PRO:O	2.03	0.58
8:S6:77:LEU:HD13	8:S6:84:TYR:HB2	2.30	0.58
36:1:900:G:H1'	36:1:1589:A:N6	2.17	0.58
56:N0:115:ARG:NH2	36:5:1320:C:O2	290.40	0.58
1:6:1588:G:H1	1:6:1608:U:H3	1.51	0.58
1:6:640:U:H2'	1:6:641:G:O4'	2.03	0.58
17:C5:102:PHE:HZ	1:6:1241:G:H5"	387.45	0.58
16:C4:112:ILE:H	28:D6:57:SER:HA	2.76	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:87:ARG:NE	28:D6:91:ASP:O	2.37	0.58
29:D7:36:LYS:HB3	29:D7:43:ILE:HG22	1.85	0.58
36:1:2177:G:OP2	39:L2:128:ARG:NH1	2.35	0.58
51:M5:93:LYS:HG3	36:5:289:A:C2	147.29	0.58
36:1:2629:U:O4	57:N1:2:GLY:N	2.37	0.58
59:N3:75:PRO:HG2	59:N3:105:PRO:HD3	1.84	0.58
70:O4:80:ARG:HG3	70:O4:88:ARG:HH21	3.68	0.58
36:1:1109:U:H2'	36:1:1110:U:C6	2.39	0.58
36:1:1477:A:OP1	36:1:3075:G:O2'	2.20	0.58
36:1:2945:G:O2'	36:1:2948:C:OP2	2.12	0.58
68:O2:105:ARG:NH2	36:5:1412:G:OP1	148.04	0.58
36:5:2710:C:H2'	36:5:2711:C:H6	1.68	0.58
38:8:9:A:H2'	38:8:10:A:C8	2.39	0.58
22:D0:95:ALA:HB1	22:D0:99:ILE:HG13	4.59	0.58
25:D3:97:ASP:N	25:D3:100:ASP:OD2	4.17	0.58
40:L3:30:LYS:NZ	36:5:3139:A:OP2	236.98	0.58
41:L4:23:PRO:O	41:L4:25:VAL:N	2.36	0.58
55:M9:102:LEU:HD22	55:M9:138:LEU:HD12	1.84	0.58
36:1:1875:G:O6	55:M9:20:ARG:NH2	2.34	0.58
36:1:2592:G:H4'	36:1:2594:C:C2	2.38	0.58
36:1:528:U:H2'	36:1:529:A:C8	2.38	0.58
1:2:953:G:OP2	15:C3:94:LYS:NZ	2.37	0.58
37:7:2:G:O2'	37:7:23:A:N1	2.35	0.58
41:L4:217:LYS:HA	41:L4:220:ARG:HG2	5.27	0.58
44:L7:176:TYR:HB3	44:L7:194:HIS:ND1	2.19	0.58
46:L9:111:PHE:HD1	46:L9:127:PRO:HA	2.80	0.58
48:M1:90:GLN:NE2	48:M1:170:ASP:OD1	2.37	0.58
49:M3:47:ALA:HB1	49:M3:48:PRO:HD2	1.86	0.58
62:N6:120:GLN:HG2	62:N6:126:LEU:HA	6.77	0.58
36:1:1651:U:H2'	36:1:1652:G:H8	1.67	0.58
1:2:1401:A:O3'	19:C7:10:LYS:NZ	2.37	0.58
1:2:979:A:N3	1:2:1775:U:O2'	2.36	0.58
36:5:1913:A:N3	36:5:2120:A:H2'	2.19	0.58
36:5:3251:U:H2'	36:5:3252:G:C8	2.39	0.58
1:6:1081:A:H1'	1:6:1082:C:H5	1.69	0.58
1:6:486:G:O6	1:6:488:G:N2	2.37	0.58
17:C5:128:HIS:O	17:C5:130:ARG:NH1	2.36	0.58
2:S0:35:PRO:HB3	23:D1:87:ARG:HH21	1.68	0.58
27:D5:66:VAL:HA	27:D5:71:ILE:HG22	5.80	0.58
27:D5:92:ILE:HD11	27:D5:100:ILE:HG22	3.25	0.58
39:L2:149:ARG:HH22	39:L2:155:LYS:HE2	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:46:PHE:CD2	40:L3:205:VAL:HG13	3.45	0.58
44:L7:25:GLN:HG2	44:L7:29:GLU:HB2	1.86	0.58
52:M6:110:PRO:O	52:M6:112:TYR:N	2.74	0.58
52:M6:108:ILE:HG12	52:M6:160:ARG:HD2	4.98	0.58
56:N0:77:VAL:HG11	56:N0:106:LEU:HD12	1.83	0.58
61:N5:105:VAL:HG13	61:N5:130:TYR:CD2	2.38	0.58
70:O4:8:ARG:HH21	70:O4:31:ARG:HD2	2.59	0.58
4:S2:45:VAL:HG21	4:S2:68:ILE:HG23	1.85	0.58
9:S7:168:SER:O	9:S7:172:VAL:HG23	2.36	0.58
36:1:224:C:O2	62:N6:103:LYS:NZ	2.35	0.58
1:2:1409:G:N1	1:2:1412:G:OP2	2.36	0.58
1:2:304:U:H2'	1:2:305:C:H6	1.67	0.58
57:N1:68:THR:OG1	36:5:2737:C:H4'	225.75	0.58
1:6:1087:A:H2'	1:6:1088:A:H8	1.67	0.58
13:C1:118:GLN:HE21	13:C1:146:ALA:HA	1.68	0.58
21:C9:14:PHE:CE2	21:C9:63:ARG:HB2	2.38	0.58
22:D0:23:ARG:HD2	22:D0:90:TYR:CD1	2.39	0.58
30:D8:60:GLU:O	30:D8:62:GLU:N	5.19	0.58
40:L3:35:ASP:OD2	40:L3:37:ARG:NH1	2.35	0.58
45:L8:48:ARG:HH21	45:L8:49:TYR:HE2	1.50	0.58
47:M0:84:ALA:O	47:M0:140:THR:HG22	2.04	0.58
48:M1:90:GLN:HG2	48:M1:170:ASP:HB2	1.85	0.58
55:M9:167:ARG:HH11	55:M9:167:ARG:HB3	4.48	0.58
56:N0:155:ARG:NH1	36:5:3206:C:O2	312.16	0.58
66:O0:17:VAL:HG11	66:O0:92:ILE:HD12	1.85	0.58
78:Q2:28:TYR:HB3	78:Q2:69:VAL:HB	2.07	0.58
5:S3:28:GLU:HG2	5:S3:69:LEU:HD11	3.87	0.58
10:S8:185:GLU:HG2	13:C1:23:PRO:HG2	1.86	0.58
11:S9:100:LYS:HE3	11:S9:102:GLU:HB2	1.86	0.58
36:1:1110:U:H2'	36:1:1111:U:C6	2.38	0.58
1:2:327:U:H2'	1:2:328:A:C8	2.39	0.58
68:O2:80:LYS:NZ	36:5:1386:A:OP2	139.32	0.58
1:6:1163:A:N3	1:6:1613:U:O2'	2.32	0.58
13:C1:56:LYS:HB2	13:C1:63:LEU:HD12	1.86	0.58
15:C3:63:ALA:O	15:C3:67:THR:HG23	4.41	0.58
1:2:1429:G:H21	22:D0:72:ASN:HD21	1.51	0.58
25:D3:103:LEU:HD12	25:D3:126:LYS:HD3	1.86	0.58
32:E0:41:THR:HA	32:E0:45:VAL:HB	1.84	0.58
33:E1:120:GLU:HA	33:E1:131:PHE:HA	1.86	0.58
40:L3:180:GLU:OE2	36:5:3002:C:O2'	235.77	0.58
44:L7:216:VAL:HG11	44:L7:227:GLY:HA3	4.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:L8:148:ALA:HA	45:L8:201:THR:HG22	1.86	0.58
49:M3:75:PHE:O	49:M3:79:GLU:HB2	2.03	0.58
50:M4:123:LEU:HD23	52:M6:190:VAL:HG12	6.52	0.58
50:M4:48:GLY:HA3	50:M4:53:VAL:HG13	2.09	0.58
51:M5:68:ARG:HA	51:M5:98:LEU:HD21	4.18	0.58
55:M9:109:TYR:HB3	55:M9:115:ILE:HG12	4.91	0.58
65:N9:28:LYS:HG3	65:N9:29:TYR:CD1	2.38	0.58
2:S0:118:PRO:HG2	2:S0:141:ILE:HD13	1.96	0.58
2:S0:200:ASP:HA	2:S0:203:PHE:CD1	2.55	0.58
6:S4:124:GLY:HA2	6:S4:142:HIS:CE1	2.39	0.58
6:S4:31:PRO:HB2	6:S4:38:LEU:HB2	4.56	0.58
36:1:18:G:OP1	71:O5:81:ARG:NH2	2.36	0.58
36:5:1072:G:H2'	36:5:1073:U:C6	2.39	0.58
57:N1:35:LYS:HD2	36:5:1085:A:OP1	232.27	0.58
56:N0:137:ARG:NH2	36:5:1214:U:OP2	331.77	0.58
36:5:1308:A:C8	36:5:1308:A:OP2	2.57	0.58
36:5:2449:A:H2'	36:5:2450:G:H8	1.69	0.58
36:5:1054:A:H5''	36:5:2637:A:H61	1.69	0.58
36:5:776:U:H5	36:5:2719:U:O2	1.86	0.58
1:6:1402:G:H2'	1:6:1403:C:C6	2.39	0.58
10:S8:32:GLN:NE2	1:6:1675:C:H1'	276.12	0.58
17:C5:63:ALA:HB1	17:C5:74:ALA:HB3	2.11	0.58
22:D0:24:ILE:HG12	22:D0:116:VAL:HG12	3.58	0.58
27:D5:54:VAL:HA	27:D5:57:TYR:CD1	2.38	0.58
45:L8:73:PRO:HA	45:L8:76:ALA:HB3	3.46	0.58
36:1:3308:C:O2	53:M7:69:ARG:HD3	2.03	0.58
66:O0:43:ILE:HG22	66:O0:70:PHE:HB2	1.85	0.58
49:M3:128:ARG:NH2	71:O5:109:ILE:O	2.34	0.58
4:S2:227:PRO:HA	4:S2:230:TRP:CE2	2.37	0.58
5:S3:220:PRO:O	5:S3:221:SER:OG	2.39	0.58
11:S9:171:ARG:NH2	1:6:536:C:OP2	451.79	0.58
36:1:1103:A:OP2	36:1:1103:A:H4'	2.04	0.57
36:1:2397:A:O5'	36:1:2398:A:H5'	2.04	0.57
1:2:523:G:OP2	26:D4:37:LYS:NZ	2.27	0.57
36:5:2712:U:H2'	36:5:2713:U:C6	2.39	0.57
51:M5:69:GLY:O	36:5:290:G:H4'	146.26	0.57
11:S9:133:HIS:HE1	1:6:512:A:O2'	450.75	0.57
18:C6:49:TYR:HB3	18:C6:53:LEU:HD11	1.85	0.57
41:L4:141:ARG:C	41:L4:143:GLU:H	3.53	0.57
44:L7:140:SER:OG	44:L7:143:THR:HG23	2.04	0.57
44:L7:229:PHE:CD1	44:L7:229:PHE:C	2.98	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:72:ALA:O	47:M0:76:MET:HG3	2.29	0.57
36:1:2679:A:O2'	48:M1:52:TYR:OH	2.13	0.57
61:N5:134:ASP:O	61:N5:137:ASN:ND2	4.85	0.57
7:S5:93:LEU:HD22	7:S5:172:ILE:HG23	1.86	0.57
8:S6:186:ARG:O	8:S6:190:GLN:HG2	2.04	0.57
1:2:992:A:H2'	1:2:993:A:H5'	1.86	0.57
38:4:127:U:H2'	38:4:128:U:H5'	1.85	0.57
14:C2:103:LEU:HD23	14:C2:115:VAL:HA	2.53	0.57
24:D2:82:LYS:O	24:D2:84:GLY:N	2.34	0.57
39:L2:153:GLY:HA3	39:L2:252:THR:HG21	1.85	0.57
42:L5:226:TYR:HA	42:L5:231:ILE:HD12	1.86	0.57
57:N1:7:TYR:OH	57:N1:54:HIS:HB2	2.51	0.57
3:S1:36:SER:O	3:S1:38:PHE:N	2.37	0.57
1:2:151:G:H21	8:S6:13:GLN:HE22	1.52	0.57
10:S8:35:ASN:HB3	10:S8:37:LYS:HZ3	1.86	0.57
35:SM:102:THR:HG23	35:SM:105:LYS:HB2	1.87	0.57
36:1:2585:G:C8	45:L8:48:ARG:HG3	2.39	0.57
36:1:2986:U:H2'	36:1:2987:A:H8	1.67	0.57
1:2:1266:U:H2'	1:2:1267:G:C8	2.40	0.57
56:N0:71:LYS:HD2	36:5:562:C:H5''	341.79	0.57
1:6:1041:G:H2'	1:6:1042:G:C8	2.39	0.57
1:6:1237:G:H2'	1:6:1238:A:H8	1.68	0.57
12:C0:58:GLN:O	12:C0:65:TYR:N	2.88	0.57
23:D1:36:VAL:HG12	23:D1:51:VAL:HB	1.86	0.57
43:L6:129:GLU:N	43:L6:129:GLU:OE1	2.37	0.57
45:L8:246:MET:HB2	45:L8:249:ARG:HH21	1.69	0.57
63:N7:25:ILE:HA	63:N7:43:VAL:HG12	1.99	0.57
66:O0:75:ASN:HA	66:O0:86:ARG:HB2	3.37	0.57
2:S0:168:HIS:HA	2:S0:203:PHE:HE2	4.14	0.57
3:S1:117:TRP:HB3	3:S1:153:HIS:HA	2.62	0.57
3:S1:127:VAL:HG11	3:S1:176:VAL:HG21	1.87	0.57
8:S6:7:TYR:HB3	8:S6:12:SER:HB2	1.86	0.57
36:1:2538:U:O2'	36:1:2541:U:O4	2.17	0.57
36:1:256:G:H2'	36:1:257:U:H6	1.70	0.57
1:2:142:G:O6	8:S6:177:ARG:NH1	2.30	0.57
1:2:1473:U:H5	7:S5:98:MET:HA	1.67	0.57
1:2:1523:G:N7	21:C9:68:ARG:NH1	2.53	0.57
36:5:2710:C:H2'	36:5:2711:C:C6	2.39	0.57
1:6:1058:U:H4'	1:6:1059:U:OP1	2.03	0.57
39:L2:30:ARG:NH2	39:L2:33:ASP:OD2	2.36	0.57
39:L2:70:ARG:NH2	36:5:2522:G:O6	177.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:L9:70:THR:HG21	36:5:3122:A:N1	326.27	0.57
50:M4:113:THR:HB	50:M4:116:GLU:HG3	1.86	0.57
53:M7:28:ASN:O	53:M7:32:THR:HG23	2.04	0.57
36:1:1721:U:H3'	55:M9:103:ARG:HH21	1.69	0.57
54:M8:94:PHE:CZ	64:N8:119:PRO:HD3	2.67	0.57
6:S4:206:ASP:HB2	6:S4:222:LEU:HD12	1.85	0.57
7:S5:42:LEU:HB2	7:S5:46:TRP:O	2.04	0.57
36:1:1047:A:N3	36:1:2633:U:O2'	2.38	0.57
1:2:1491:U:H4'	1:2:1491:U:OP1	2.04	0.57
1:2:1511:U:H2'	1:2:1512:G:H8	1.69	0.57
36:5:309:U:H3	36:5:2780:A:H61	1.52	0.57
36:5:999:G:C6	36:5:1000:C:N4	2.72	0.57
13:C1:4:GLU:HG2	13:C1:5:LEU:HG	1.86	0.57
16:C4:26:THR:HG21	16:C4:97:GLY:HA3	3.21	0.57
23:D1:74:GLN:NE2	23:D1:81:ASN:O	2.34	0.57
40:L3:117:ARG:HA	40:L3:175:LYS:HD2	4.53	0.57
63:N7:95:VAL:HG21	63:N7:113:VAL:HG11	1.87	0.57
36:1:1117:G:OP1	65:N9:4:SER:HB2	2.04	0.57
5:S3:127:MET:HE1	5:S3:133:GLY:HA2	1.86	0.57
36:1:1362:G:H2'	36:1:1363:A:C8	2.39	0.57
36:1:2242:A:H5'	39:L2:243:THR:HG23	1.87	0.57
36:1:2565:U:H2'	36:1:2566:C:C6	2.40	0.57
1:2:1188:G:O2'	1:2:1430:U:OP1	2.15	0.57
33:E1:87:THR:O	1:6:1445:G:N1	379.33	0.57
26:D4:116:LYS:NZ	1:6:57:G:OP2	340.58	0.57
13:C1:124:THR:HB	13:C1:141:LYS:HB3	2.26	0.57
18:C6:24:ALA:HA	18:C6:63:ILE:HA	1.86	0.57
25:D3:24:TRP:CE3	25:D3:30:LYS:HG3	3.54	0.57
30:D8:36:THR:OG1	30:D8:37:SER:N	2.37	0.57
39:L2:117:GLU:OE2	39:L2:121:GLY:N	2.25	0.57
40:L3:274:SER:OG	36:5:3139:A:OP1	229.18	0.57
51:M5:190:THR:HG22	51:M5:193:ARG:NH2	4.71	0.57
59:N3:45:ARG:HB3	59:N3:48:ARG:HG3	1.87	0.57
64:N8:73:LEU:HD23	64:N8:112:ILE:HD12	1.87	0.57
68:O2:109:LEU:HD21	68:O2:122:PRO:HB3	1.87	0.57
34:SR:93:ASP:HB2	34:SR:100:TYR:CE1	2.39	0.57
36:1:1240:A:H3'	36:1:1241:U:H5'	1.85	0.57
36:1:2422:C:O2	51:M5:87:GLN:NE2	2.34	0.57
36:1:2403:G:H2'	36:1:2870:C:O2'	2.05	0.57
36:1:2898:G:N7	76:Q0:125:LYS:NZ	2.50	0.57
36:1:289:A:O2'	51:M5:93:LYS:O	2.23	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1796:C:OP1	28:D6:87:ARG:NH1	2.38	0.57
36:5:2266:U:H2'	36:5:2267:C:H6	1.69	0.57
1:2:337:G:H3'	13:C1:133:LYS:HB2	1.86	0.57
15:C3:5:HIS:HB3	15:C3:117:LEU:HD13	1.87	0.57
17:C5:79:HIS:O	17:C5:81:ARG:N	2.38	0.57
45:L8:238:LEU:HB3	45:L8:242:ALA:HB3	3.10	0.57
46:L9:166:ARG:NH2	46:L9:168:ARG:HH12	12.25	0.57
6:S4:3:ARG:HG2	1:6:399:A:H4'	322.04	0.57
36:1:1094:U:H1'	36:1:1096:U:H2'	1.86	0.57
36:1:1580:A:H5'	36:1:2522:G:C5	2.39	0.57
36:1:835:G:O2'	36:1:857:G:N2	2.26	0.57
36:5:2406:C:H2'	36:5:2407:C:C6	2.40	0.57
18:C6:34:SER:HB3	18:C6:38:LEU:HD12	1.86	0.57
22:D0:118:VAL:HG13	22:D0:119:ALA:H	1.76	0.57
41:L4:299:ILE:HG22	41:L4:300:ARG:O	2.04	0.57
36:1:1334:U:O2'	44:L7:151:ARG:NH2	2.37	0.57
51:M5:98:LEU:HD23	51:M5:128:LYS:HD2	4.72	0.57
5:S3:73:VAL:HG13	5:S3:77:PHE:HD2	2.39	0.57
36:1:2683:U:H2'	36:1:2684:C:C6	2.39	0.57
36:1:436:A:H2'	36:1:437:G:O4'	2.04	0.57
1:2:1794:A:H1'	28:D6:79:ILE:HD12	1.86	0.57
36:5:997:A:O2'	37:7:79:A:N3	2.37	0.57
1:6:1511:U:H2'	1:6:1512:G:C8	2.40	0.57
1:6:703:G:N2	1:6:735:C:O2	2.34	0.57
15:C3:17:PRO:HB3	29:D7:28:PRO:HG3	3.75	0.57
15:C3:23:PRO:O	15:C3:25:TRP:N	2.38	0.57
36:1:2895:G:O2'	76:Q0:100:TYR:O	2.18	0.57
3:S1:35:PRO:HB3	3:S1:231:LEU:HD11	3.62	0.57
36:1:3174:A:C5	36:1:3279:A:H1'	2.40	0.57
36:5:1152:G:N2	36:5:1200:A:H61	2.02	0.57
62:N6:103:LYS:NZ	36:5:224:C:O2	76.49	0.57
15:C3:112:LYS:NZ	1:6:975:C:OP1	280.90	0.57
14:C2:55:GLY:HA2	14:C2:85:LYS:HE3	1.87	0.57
18:C6:47:LYS:HZ1	18:C6:114:ARG:NE	2.03	0.57
20:C8:132:ARG:HB3	20:C8:136:GLN:HG3	1.87	0.57
21:C9:63:ARG:NH1	21:C9:67:MET:SD	2.77	0.57
2:S0:52:LYS:HB3	23:D1:82:VAL:HG22	1.86	0.57
40:L3:56:ILE:HD11	40:L3:359:ILE:HG12	1.87	0.57
40:L3:44:THR:HA	40:L3:340:LYS:HD3	4.79	0.57
42:L5:68:THR:HG22	42:L5:70:THR:H	1.70	0.57
49:M3:120:GLN:HA	49:M3:123:ILE:HG12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:M8:38:ARG:NH2	36:5:1348:U:OP2	187.77	0.57
57:N1:100:LYS:HB3	36:5:990:U:H4'	259.96	0.57
77:Q1:2:ARG:HB3	77:Q1:5:TRP:CD1	2.39	0.57
79:Q3:36:ARG:HG3	79:Q3:48:LYS:HG3	1.86	0.57
4:S2:47:ALA:O	4:S2:49:LYS:N	2.38	0.57
9:S7:162:ILE:HG22	9:S7:165:LYS:HD2	1.87	0.57
34:SR:209:THR:O	34:SR:225:LEU:N	2.37	0.57
36:1:2616:C:H3'	36:1:2617:U:O2	2.04	0.56
36:1:3095:U:H2'	36:1:3096:C:C6	2.39	0.56
38:4:81:U:H1'	38:4:82:U:H5'	1.87	0.56
36:5:1667:A:H2'	36:5:1668:G:C8	2.40	0.56
24:D2:36:LYS:O	24:D2:40:VAL:HG23	2.14	0.56
32:E0:28:LYS:HD2	32:E0:31:LYS:HE2	5.23	0.56
52:M6:10:ASP:CG	52:M6:37:ARG:HH21	2.33	0.56
77:Q1:13:LEU:HD11	77:Q1:17:ARG:CZ	2.34	0.56
36:1:2713:U:O2'	78:Q2:8:ARG:NH1	2.38	0.56
7:S5:124:LEU:HD23	7:S5:199:ILE:HD12	6.05	0.56
34:SR:12:THR:HG22	34:SR:311:ARG:HG2	2.76	0.56
36:1:1767:C:H2'	36:1:1768:U:C6	2.41	0.56
36:1:541:U:H2'	36:1:542:G:C8	2.40	0.56
1:2:108:A:H2'	1:2:109:G:C8	2.40	0.56
1:2:1227:A:N6	1:2:1256:A:O2'	2.38	0.56
36:5:1039:U:H2'	36:5:1040:A:C8	2.40	0.56
65:N9:38:LYS:NZ	36:5:1076:C:O3'	218.41	0.56
36:5:2204:C:O2'	36:5:2205:U:O5'	2.19	0.56
36:5:2636:A:H5''	36:5:2637:A:H5'	1.87	0.56
36:5:591:G:N2	36:5:612:U:OP1	2.38	0.56
1:6:621:A:N3	1:6:1107:G:H1'	2.20	0.56
20:C8:2:SER:HB3	20:C8:4:VAL:HG22	9.31	0.56
24:D2:104:LEU:HB2	24:D2:124:LYS:O	2.05	0.56
36:1:860:G:C6	39:L2:181:LYS:HB2	2.40	0.56
36:1:912:G:OP2	39:L2:9:ARG:NH1	2.38	0.56
40:L3:284:ARG:NH2	40:L3:293:ASN:O	2.36	0.56
41:L4:138:ARG:HH21	41:L4:240:PRO:HB2	1.77	0.56
42:L5:77:ALA:O	42:L5:108:ARG:NH1	2.38	0.56
43:L6:175:LYS:O	50:M4:117:ARG:NH2	2.38	0.56
47:M0:192:ASP:HA	47:M0:197:VAL:HG23	2.02	0.56
62:N6:5:SER:HB3	62:N6:8:VAL:HG13	3.51	0.56
66:O0:99:ASP:O	66:O0:103:THR:OG1	3.58	0.56
72:O6:97:SER:HB3	72:O6:98:ARG:HE	1.70	0.56
3:S1:171:ILE:HD12	3:S1:197:ILE:HD13	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:144:A:OP1	45:L8:193:LYS:NZ	2.31	0.56
36:1:1460:A:H2'	36:1:1461:A:H8	1.70	0.56
36:1:2221:G:N2	36:1:2223:A:H3'	2.20	0.56
36:1:2314:U:O2'	36:1:2315:G:OP1	2.23	0.56
1:2:1102:G:OP1	24:D2:76:SER:OG	2.18	0.56
1:2:539:G:OP2	1:2:539:G:H8	1.89	0.56
1:2:960:U:H1'	15:C3:52:VAL:HG23	1.86	0.56
36:5:2209:U:H4'	36:5:2210:G:OP1	2.03	0.56
36:5:22:G:H1'	38:8:104:A:N3	2.20	0.56
36:5:339:C:OP1	36:5:1380:G:O2'	2.21	0.56
1:6:1427:A:O2'	1:6:1428:G:OP1	2.20	0.56
1:6:1638:G:C2	1:6:1639:C:H1'	2.41	0.56
1:6:891:A:H2'	1:6:892:A:C8	2.39	0.56
36:5:3:U:H3	38:8:156:U:H3	1.51	0.56
19:C7:71:PHE:HE1	19:C7:73:LEU:HB2	4.26	0.56
20:C8:65:GLU:HG2	20:C8:68:ARG:HH12	4.10	0.56
42:L5:41:LYS:HD2	57:N1:93:VAL:HG11	1.87	0.56
45:L8:54:GLU:O	45:L8:58:VAL:HG23	2.37	0.56
47:M0:176:LEU:HB3	47:M0:180:GLU:HG3	3.88	0.56
51:M5:172:ARG:HD2	36:5:30:G:O5'	111.72	0.56
54:M8:3:ILE:HG13	54:M8:5:HIS:CE1	4.74	0.56
64:N8:46:ASP:O	64:N8:47:LYS:HB3	2.49	0.56
3:S1:212:VAL:O	3:S1:214:LYS:N	2.39	0.56
7:S5:151:GLY:HA3	7:S5:156:ARG:H	4.97	0.56
34:SR:159:ASN:O	34:SR:161:LYS:N	4.09	0.56
36:1:1686:U:OP1	58:N2:42:LYS:NZ	2.27	0.56
36:1:17:G:H1	38:4:142:C:H42	1.54	0.56
1:2:116:U:H2'	1:2:117:U:C6	2.41	0.56
1:2:1487:A:H2'	1:2:1488:G:H8	1.69	0.56
1:2:15:U:H2'	1:2:16:G:O4'	2.05	0.56
36:5:1389:G:N2	36:5:1390:A:N1	2.53	0.56
12:C0:16:PHE:CD2	12:C0:76:LEU:HB3	2.38	0.56
16:C4:85:ALA:N	16:C4:119:THR:HG22	2.23	0.56
59:N3:17:LEU:O	59:N3:52:ALA:N	2.36	0.56
63:N7:50:PRO:HG3	63:N7:131:PHE:HB3	1.87	0.56
3:S1:69:CYS:SG	3:S1:70:LEU:N	3.37	0.56
34:SR:111:MET:N	34:SR:125:GLY:O	2.90	0.56
36:1:2254:U:H2'	36:1:2261:G:N2	2.19	0.56
36:1:2343:C:H2'	36:1:2344:U:H6	1.70	0.56
10:S8:162:ALA:HA	36:1:3353:G:H5''	1.88	0.56
1:2:1784:C:H2'	1:2:1785:U:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1592:A:H2'	1:6:1593:A:H8	1.70	0.56
19:C7:21:TYR:OH	19:C7:62:GLN:OE1	3.20	0.56
9:S7:139:ARG:HD3	24:D2:53:ILE:HA	1.87	0.56
25:D3:24:TRP:HE3	25:D3:30:LYS:HG3	2.99	0.56
48:M1:37:LEU:O	48:M1:41:SER:OG	2.18	0.56
52:M6:157:GLU:HB3	52:M6:161:LYS:HE2	1.86	0.56
36:1:841:A:H5'	55:M9:125:LYS:O	2.04	0.56
3:S1:109:LYS:O	3:S1:112:SER:OG	2.63	0.56
7:S5:62:VAL:HG13	7:S5:89:ILE:HG21	1.87	0.56
36:1:1064:A:H4'	36:1:1065:A:O5'	2.04	0.56
36:1:3230:G:H4'	50:M4:132:LYS:HD3	1.87	0.56
1:2:1531:G:H5'	27:D5:81:ARG:HH22	1.70	0.56
1:2:366:A:OP1	1:2:758:U:O2'	2.20	0.56
37:3:93:C:O2'	37:3:94:C:H5'	2.05	0.56
36:5:1340:G:H2'	36:5:1341:U:C6	2.41	0.56
10:S8:141:ARG:NH2	1:6:196:G:N7	281.62	0.56
26:D4:65:GLY:N	1:6:532:U:OP1	430.96	0.56
9:S7:115:SER:O	1:6:856:A:N6	361.84	0.56
15:C3:11:ILE:O	15:C3:13:SER:N	4.77	0.56
27:D5:40:VAL:HG12	27:D5:72:GLY:HA3	5.29	0.56
40:L3:250:ALA:HB3	36:5:2880:U:H1'	225.18	0.56
40:L3:47:LEU:HG	40:L3:335:ILE:HD11	2.42	0.56
47:M0:38:LYS:HB3	47:M0:46:PHE:HE2	2.60	0.56
66:O0:44:ILE:HD13	66:O0:53:LYS:HG3	2.31	0.56
68:O2:31:ASN:N	68:O2:31:ASN:OD1	2.30	0.56
49:M3:177:LYS:HA	72:O6:11:LEU:HD22	2.93	0.56
79:Q3:38:ASP:OD1	79:Q3:45:LYS:HB3	2.05	0.56
2:S0:83:GLN:HG2	2:S0:100:GLY:H	1.70	0.56
3:S1:154:SER:OG	3:S1:154:SER:O	2.29	0.56
9:S7:151:LYS:HA	9:S7:182:VAL:HG12	1.88	0.56
35:SM:68:ARG:HH22	35:SM:72:ARG:HD3	3.23	0.56
1:2:924:A:H2'	1:2:925:G:C8	2.39	0.56
1:2:973:A:H2'	1:2:974:A:H8	1.71	0.56
36:5:1624:G:H2'	36:5:1625:A:H8	1.69	0.56
36:5:655:C:H2'	36:5:656:A:C8	2.41	0.56
15:C3:84:ILE:HG22	15:C3:135:LEU:HD21	1.86	0.56
3:S1:72:ASP:OD1	16:C4:114:ARG:NH1	4.53	0.56
42:L5:270:LYS:HE2	42:L5:273:ARG:HB2	5.63	0.56
62:N6:45:ILE:HD12	62:N6:119:ILE:HG23	1.86	0.56
72:O6:25:LYS:HB2	72:O6:28:TYR:HD2	1.70	0.56
2:S0:193:GLN:O	2:S0:195:TRP:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:300:G:H1	36:1:315:C:H42	1.54	0.56
1:2:158:U:O2'	1:2:159:U:H3'	2.06	0.56
1:2:78:A:H1'	8:S6:175:ILE:HG12	1.88	0.56
42:L5:140:ARG:NH2	36:5:1080:A:OP 2	231.17	0.56
36:5:1239:C:N4	36:5:1249:G:H1	2.02	0.56
1:6:683:C:H3'	1:6:684:A:H5''	1.88	0.56
20:C8:57:ARG:HB2	20:C8:60:GLU:HG3	1.88	0.56
44:L7:158:LYS:O	44:L7:160:ARG:N	2.35	0.56
51:M5:37:HIS:CD2	51:M5:63:ARG:HB3	2.40	0.56
4:S2:98:PHE:CZ	35:SM:116:GLU:HG3	2.40	0.56
34:SR:267:PRO:HD2	34:SR:269:TYR:HE1	3.07	0.56
36:1:3353:G:O2'	36:1:3356:G:OP 2	2.24	0.56
14:C2:54:ARG:NH1	14:C2:56:GLU:OE2	2.37	0.56
22:D0:58:LEU:HD12	22:D0:88:LYS:HD2	1.87	0.56
28:D6:38:ARG:NH2	28:D6:83:ILE:HG21	2.20	0.56
45:L8:70:LYS:HA	45:L8:235:GLY:HA3	3.35	0.56
52:M6:15:LEU:HD21	52:M6:125:ARG:HG3	1.87	0.56
56:N0:8:GLN:HB3	56:N0:64:ILE:HD11	1.87	0.56
57:N1:46:GLY:O	57:N1:49:GLN:NE2	2.39	0.56
58:N2:43:VAL:HG21	58:N2:50:LEU:HA	1.88	0.56
61:N5:38:LEU:HD11	61:N5:40:LEU:HD13	1.88	0.56
72:O6:21:THR:O	72:O6:21:THR:OG1	2.24	0.56
78:Q2:12:CYS:SG	78:Q2:17:CYS:HB3	2.45	0.56
11:S9:143:ILE:HD13	1:6:767:U:H5	424.65	0.56
36:1:2115:G:H22	36:1:2120:A:H1'	1.71	0.56
36:1:3164:C:H1'	36:1:3165:A:H5'	1.88	0.56
1:2:1682:U:O2'	1:2:1683:C:H5'	2.06	0.56
36:5:673:U:H2'	36:5:674:G:C8	2.41	0.56
1:6:1793:G:H1'	1:6:1794:A:H2'	1.88	0.56
1:6:918:U:H2'	1:6:919:A:H8	1.70	0.56
17:C5:56:PHE:O	17:C5:60:LEU:HB2	2.06	0.56
44:L7:31:ALA:HA	44:L7:34:LYS:HB2	3.12	0.56
45:L8:152:LEU:HB3	45:L8:180:VAL:HG11	1.88	0.56
50:M4:54:PRO:O	50:M4:56:GLN:HG2	2.05	0.56
51:M5:72:LYS:NZ	36:5:2167:A:OP 1	163.23	0.56
52:M6:187:GLU:HA	52:M6:192:LYS:HD3	1.88	0.56
52:M6:18:ARG:O	52:M6:22:VAL:HG12	3.09	0.56
53:M7:24:VAL:HG12	53:M7:86:LYS:HG2	2.45	0.56
54:M8:150:VAL:HA	54:M8:153:PHE:CD1	2.41	0.56
59:N3:10:LYS:NZ	59:N3:53:SER:OG	2.39	0.56
64:N8:125:VAL:HG12	64:N8:145:VAL:HG13	3.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:O1:49:VAL:HG22	67:O1:91:SER:HB2	1.88	0.56
70:O4:85:VAL:HA	70:O4:88:ARG:HB2	1.88	0.56
78:Q2:12:CYS:SG	78:Q2:17:CYS:HB2	2.63	0.56
3:S1:92:GLN:HE21	3:S1:95:ASN:HD22	1.54	0.56
5:S3:105:MET:HB2	5:S3:122:VAL:HG21	1.86	0.56
11:S9:134:ILE:HD13	11:S9:141:VAL:O	3.32	0.56
36:1:1278:A:O2'	36:1:1279:C:O5'	2.24	0.56
36:1:2922:G:N3	36:1:2951:G:N2	2.53	0.56
1:2:539:G:N2	1:2:540:G:O6	2.37	0.56
36:5:1094:U:O2'	36:5:1095:U:H3'	2.05	0.56
36:5:1308:A:OP2	36:5:1308:A:H8	1.87	0.56
36:5:2101:C:O2'	36:5:2102:U:OP1	2.22	0.56
5:S3:27:ARG:HD2	12:C0:60:SER:HB2	1.86	0.56
13:C1:75:VAL:HG12	13:C1:119:VAL:HA	1.87	0.56
14:C2:87:PRO:HA	14:C2:140:PHE:HE1	1.70	0.56
15:C3:67:THR:O	15:C3:67:THR:OG1	2.96	0.56
24:D2:15:ASN:ND2	24:D2:72:CYS:O	2.92	0.56
7:S5:81:ARG:HH21	30:D8:47:PRO:HB3	3.16	0.56
39:L2:118:GLU:HG3	39:L2:126:LEU:HD21	3.15	0.56
42:L5:60:ILE:H	42:L5:80:SER:HB3	1.70	0.56
44:L7:64:GLN:O	44:L7:68:ASP:N	2.81	0.56
47:M0:43:VAL:O	47:M0:171:TRP:NE1	3.00	0.56
49:M3:105:ASN:OD1	49:M3:107:GLU:HG2	2.31	0.56
57:N1:68:THR:HG22	57:N1:71:SER:O	5.54	0.56
49:M3:157:ARG:NH1	64:N8:146:GLU:OE2	2.39	0.56
8:S6:87:ARG:NH1	1:6:159:U:O2'	323.54	0.56
9:S7:74:GLN:HE22	9:S7:92:PHE:HB2	1.97	0.56
74:O8:2:ALA:HA	36:5:1747:G:H21	145.70	0.55
36:5:956:U:H2'	36:5:957:C:C6	2.41	0.55
4:S2:168:ARG:HE	1:6:1098:U:P	386.99	0.55
71:O5:63:ARG:NH2	38:8:97:A:OP1	56.86	0.55
13:C1:125:VAL:HG12	13:C1:139:VAL:HA	2.18	0.55
1:2:628:G:OP1	15:C3:124:ARG:NH1	2.40	0.55
15:C3:17:PRO:HG3	29:D7:28:PRO:HG3	1.88	0.55
15:C3:94:LYS:HG2	15:C3:118:ILE:HD13	2.04	0.55
46:L9:18:VAL:HB	46:L9:27:VAL:HG22	3.48	0.55
48:M1:34:SER:HA	48:M1:67:VAL:HG21	1.88	0.55
36:1:2916:U:H1'	59:N3:44:SER:HB3	1.87	0.55
36:1:1160:C:N3	68:O2:45:ARG:NH1	2.54	0.55
71:O5:43:LYS:O	71:O5:46:THR:HG22	2.06	0.55
74:O8:58:ASP:HB3	74:O8:61:LYS:HB2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S5:116:HIS:O	7:S5:120:ILE:HG13	2.06	0.55
34:SR:76:ASP:OD1	34:SR:76:ASP:N	2.34	0.55
1:2:1396:U:H2'	1:2:1397:U:H6	1.71	0.55
1:2:354:C:OP1	10:S8:14:THR:OG1	2.12	0.55
1:2:819:G:N2	1:2:854:U:O4'	2.40	0.55
69:O3:53:TYR:OH	36:5:431:U:OP1	213.25	0.55
36:5:549:U:H2'	36:5:550:A:C8	2.41	0.55
36:5:59:G:H2'	38:8:33:A:O2'	2.06	0.55
1:6:1491:U:H5'	1:6:1492:A:OP1	2.06	0.55
51:M5:109:ARG:HD2	38:8:141:C:H5'	117.69	0.55
12:C0:6:GLU:HG2	12:C0:10:LYS:HE3	1.86	0.55
16:C4:29:HIS:HB2	16:C4:41:ARG:HG3	2.94	0.55
22:D0:35:GLU:OE1	22:D0:89:ARG:NH1	6.23	0.55
28:D6:30:ILE:HD12	28:D6:74:CYS:HA	1.87	0.55
41:L4:193:LYS:O	41:L4:198:ARG:HG2	3.76	0.55
42:L5:83:LEU:HB3	42:L5:88:ILE:HB	2.08	0.55
45:L8:140:VAL:HG22	45:L8:166:LEU:HD21	2.26	0.55
50:M4:39:ILE:HB	50:M4:43:LYS:HB3	1.88	0.55
64:N8:90:TYR:CD1	64:N8:100:PRO:HG3	2.40	0.55
49:M3:174:ARG:HB2	72:O6:9:ILE:HD12	1.88	0.55
2:S0:163:ASN:O	2:S0:165:ARG:N	2.98	0.55
3:S1:34:ALA:N	3:S1:41:ARG:O	2.27	0.55
3:S1:86:LEU:HB3	3:S1:98:THR:OG1	2.07	0.55
4:S2:139:ILE:HD12	4:S2:191:ALA:HB1	2.01	0.55
5:S3:22:ASN:O	5:S3:26:THR:OG1	2.18	0.55
34:SR:70:ASP:OD1	34:SR:71:CYS:N	2.37	0.55
36:1:1094:U:O2	36:1:1096:U:O2'	2.20	0.55
36:1:407:A:C2	38:4:17:A:H1'	2.41	0.55
1:2:702:G:O6	1:2:737:A:N6	2.39	0.55
1:6:25:C:OP2	1:6:25:C:H4'	2.06	0.55
16:C4:126:THR:HG21	1:6:888:U:H1'	276.30	0.55
17:C5:22:LEU:HD21	17:C5:109:PRO:HB3	1.87	0.55
19:C7:41:ILE:HG22	19:C7:43:SER:H	1.71	0.55
40:L3:283:TYR:CE1	40:L3:354:VAL:HG11	2.73	0.55
42:L5:107:ARG:HH21	42:L5:110:LEU:HD23	1.70	0.55
47:M0:28:ASP:N	47:M0:28:ASP:OD1	3.81	0.55
67:O1:98:VAL:HG22	67:O1:100:SER:H	3.44	0.55
75:O9:23:LEU:HD22	75:O9:24:PRO:HD2	1.86	0.55
78:Q2:2:VAL:HG23	78:Q2:91:PHE:HD1	2.19	0.55
6:S4:62:LYS:O	6:S4:66:MET:HG2	2.06	0.55
5:S3:125:TYR:CZ	35:SM:134:ASP:OD2	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:SR:178:VAL:HB	34:SR:192:PHE:HB2	1.95	0.55
1:2:1338:C:H1'	1:2:1410:A:C4	2.42	0.55
38:4:91:C:H2'	38:4:92:A:C8	2.41	0.55
36:5:595:G:N1	36:5:609:G:H5''	2.22	0.55
16:C4:136:ARG:NH1	1:6:1769:U:O2	301.95	0.55
36:1:2663:G:H5'	42:L5:152:ARG:HD3	1.87	0.55
43:L6:31:ARG:NH2	43:L6:81:ALA:O	2.40	0.55
46:L9:174:LYS:HB2	76:Q0:127:LEU:HD11	1.87	0.55
55:M9:4:LEU:HA	55:M9:7:GLN:HE21	5.46	0.55
62:N6:69:LYS:O	62:N6:83:ASP:N	3.40	0.55
63:N7:9:LYS:HB3	63:N7:25:ILE:HD12	1.88	0.55
71:O5:81:ARG:NH2	36:5:18:G:OP1	77.28	0.55
73:O7:24:ARG:NH1	36:5:361:A:OP1	121.39	0.55
79:Q3:46:THR:HB	79:Q3:58:SER:HB2	1.89	0.55
34:SR:260:ILE:HB	34:SR:274:LEU:HB2	1.88	0.55
36:1:1560:G:H2'	36:1:1561:G:H5'	1.89	0.55
36:1:601:U:H2'	36:1:602:A:O4'	2.06	0.55
1:2:278:U:OP1	1:2:279:G:N2	2.39	0.55
1:2:336:G:N2	1:2:338:C:H5'	2.21	0.55
36:5:109:A:H4'	36:5:110:G:OP1	2.05	0.55
71:O5:95:PHE:CG	36:5:136:G:H5'	62.74	0.55
36:5:1519:G:H2'	36:5:1520:G:H8	1.72	0.55
36:5:1932:A:H5'	36:5:1933:A:OP2	2.06	0.55
40:L3:247:ARG:NH2	36:5:2341:A:OP2	219.58	0.55
36:5:2546:C:H2'	36:5:2547:A:H8	1.72	0.55
36:5:620:U:H5''	36:5:621:A:H8	1.72	0.55
21:C9:68:ARG:NH1	1:6:1521:G:O6	415.87	0.55
33:E1:98:VAL:HG12	33:E1:99:LYS:H	3.67	0.55
39:L2:10:LYS:HA	39:L2:16:PHE:CD2	2.41	0.55
46:L9:126:VAL:HG21	46:L9:161:LEU:HA	1.89	0.55
36:1:1507:G:N7	53:M7:129:THR:HB	2.21	0.55
53:M7:39:TRP:H	53:M7:114:VAL:HG13	1.70	0.55
60:N4:5:ILE:HD12	60:N4:10:GLY:HA2	1.89	0.55
76:Q0:110:CYS:SG	76:Q0:111:ARG:N	3.01	0.55
3:S1:76:SER:OG	3:S1:77:GLU:N	3.16	0.55
5:S3:176:LEU:HA	5:S3:181:VAL:HG12	2.75	0.55
7:S5:37:GLN:HG2	18:C6:53:LEU:HD13	1.87	0.55
10:S8:168:CYS:HB2	10:S8:184:LEU:HD11	2.02	0.55
11:S9:54:ARG:HB2	11:S9:57:ARG:HH21	3.42	0.55
36:1:13:A:H4'	61:N5:39:LYS:HG3	1.88	0.55
36:1:39:A:H5''	64:N8:35:ALA:HB2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1654:A:C2'	36:5:1655:G:H5''	2.33	0.55
36:5:1750:A:H4'	36:5:1751:G:H5'	1.88	0.55
1:6:1742:U:H2'	1:6:1743:U:H6	1.72	0.55
1:6:836:U:H2'	1:6:837:G:H8	1.72	0.55
1:2:1228:G:H22	14:C2:67:THR:HB	1.72	0.55
15:C3:15:ALA:HB2	29:D7:20:LYS:HD3	4.48	0.55
36:1:2878:G:H5''	40:L3:5:LYS:HE2	1.87	0.55
42:L5:110:LEU:HA	42:L5:113:LEU:HB2	3.08	0.55
46:L9:9:GLN:HG3	46:L9:52:LEU:HD21	1.87	0.55
50:M4:20:VAL:O	50:M4:66:THR:OG1	2.16	0.55
50:M4:38:ILE:HD11	56:N0:150:PHE:CE2	2.40	0.55
53:M7:109:ALA:HA	53:M7:112:LEU:HD22	1.87	0.55
64:N8:73:LEU:HD21	64:N8:78:LEU:HA	1.88	0.55
71:O5:6:ALA:O	71:O5:10:ARG:HG3	4.00	0.55
73:O7:14:LYS:HE2	75:O9:51:ILE:CG1	3.12	0.55
3:S1:70:LEU:HD21	3:S1:79:HIS:CD2	2.41	0.55
34:SR:217:ASP:OD1	34:SR:218:GLY:N	2.39	0.55
36:1:1277:C:O2'	36:1:1278:A:H8	1.90	0.55
36:1:1103:A:N6	36:1:1363:A:O2'	2.40	0.55
36:1:3057:U:H5'	36:1:3086:A:H61	1.72	0.55
36:1:3155:U:H3'	36:1:3156:U:H4'	1.87	0.55
36:1:956:U:H2'	36:1:957:C:C6	2.42	0.55
1:2:737:A:HO2'	1:2:738:G:H8	1.52	0.55
1:2:772:G:N2	1:2:774:A:O2'	2.40	0.55
1:6:1394:G:H1	1:6:1404:C:H42	1.54	0.55
1:6:918:U:H2'	1:6:919:A:C8	2.41	0.55
12:C0:44:LYS:HA	12:C0:47:GLN:HB3	2.49	0.55
20:C8:41:ARG:NH2	21:C9:36:ILE:O	3.55	0.55
33:E1:90:LYS:HB2	33:E1:93:HIS:NE2	11.85	0.55
57:N1:87:LYS:NZ	36:5:2728:G:N7	213.58	0.55
64:N8:3:SER:OG	36:5:1430:U:O4	141.01	0.55
4:S2:102:VAL:HG11	4:S2:129:ILE:HG12	1.96	0.55
36:1:2261:G:O2'	36:1:2263:C:N4	2.40	0.55
36:1:2588:U:H2'	36:1:2589:G:O4'	2.07	0.55
36:1:2796:G:N7	78:Q2:63:LYS:NZ	2.55	0.55
1:2:1251:U:H5'	33:E1:135:HIS:HD2	1.72	0.55
1:2:149:C:O2'	8:S6:132:ARG:NH1	2.39	0.55
38:4:104:A:C8	38:4:105:A:C8	2.95	0.55
54:M8:141:ARG:HD3	36:5:743:C:O2	175.46	0.55
1:6:104:A:N6	1:6:308:C:H5'	2.21	0.55
16:C4:121:VAL:O	1:6:886:U:O2'	288.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:C9:30:VAL:O	21:C9:32:GLY:N	2.40	0.55
21:C9:65:ILE:HG23	21:C9:71:VAL:HG13	5.01	0.55
29:D7:6:ASP:OD2	29:D7:9:HIS:N	3.08	0.55
36:1:1028:U:H1'	48:M1:94:ARG:HH12	1.69	0.55
36:1:770:G:OP2	49:M3:171:ARG:NH2	2.40	0.55
36:1:73:C:N3	49:M3:59:ARG:NH1	2.54	0.55
52:M6:19:LEU:O	52:M6:23:VAL:HG23	2.06	0.55
63:N7:110:ALA:O	63:N7:114:VAL:HG23	2.12	0.55
63:N7:2:ALA:O	63:N7:4:PHE:N	2.40	0.55
70:O4:86:LYS:O	70:O4:90:ILE:HG12	2.06	0.55
11:S9:108:ARG:HH21	11:S9:145:SER:HB3	3.02	0.55
36:1:1095:U:H4'	36:1:1096:U:H5''	1.88	0.55
36:1:591:G:C2	43:L6:18:LEU:HD12	2.42	0.55
36:1:916:G:H5'	36:1:917:A:OP1	2.07	0.55
1:2:1105:C:H41	25:D3:4:GLY:HA3	1.72	0.55
1:2:1516:A:OP1	22:D0:88:LYS:NZ	2.27	0.55
78:Q2:63:LYS:NZ	36:5:2761:G:N7	213.32	0.55
32:E0:28:LYS:NZ	1:6:477:A:OP1	429.71	0.55
38:8:72:A:N3	38:8:88:A:O2'	2.40	0.55
13:C1:21:ASN:HD22	13:C1:31:THR:HA	1.71	0.55
44:L7:229:PHE:HD1	44:L7:229:PHE:C	2.55	0.55
45:L8:100:GLU:OE1	45:L8:108:ARG:NH1	3.40	0.55
47:M0:29:SER:HB2	47:M0:125:LEU:HD12	5.14	0.55
49:M3:47:ALA:HB3	49:M3:49:ARG:HG3	2.69	0.55
49:M3:8:PRO:HD3	54:M8:164:ARG:HB3	2.41	0.55
58:N2:50:LEU:O	58:N2:52:ASN:N	2.40	0.55
63:N7:17:ARG:HB2	36:5:1635:G:O6	203.49	0.55
66:O0:10:ILE:HG12	66:O0:68:TYR:HE2	1.72	0.55
67:O1:20:LEU:O	67:O1:28:ARG:NH2	2.40	0.55
9:S7:96:ARG:CZ	9:S7:124:LYS:HB3	2.37	0.55
34:SR:69:GLN:HG2	34:SR:111:MET:SD	2.47	0.55
36:1:274:G:H2'	36:1:275:U:O4'	2.06	0.55
36:1:3282:U:H2'	36:1:3283:U:C6	2.42	0.55
4:S2:161:LYS:NZ	1:6:1085:G:OP1	374.76	0.55
1:6:1672:G:H2'	1:6:1673:G:C8	2.42	0.55
1:6:777:C:H2'	1:6:778:G:C8	2.42	0.55
19:C7:5:ARG:HD3	19:C7:5:ARG:H	2.24	0.55
1:2:1601:G:P	21:C9:86:ARG:HH22	2.30	0.55
39:L2:45:VAL:HG22	39:L2:84:THR:HA	1.88	0.55
41:L4:188:ARG:NE	41:L4:197:ARG:HB3	3.31	0.55
41:L4:293:SER:HA	41:L4:296:GLN:HB2	3.58	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:L7:236:ILE:O	44:L7:240:VAL:HG23	2.07	0.55
54:M8:67:ILE:HG23	54:M8:81:VAL:HG11	2.19	0.55
55:M9:106:LEU:HD13	55:M9:138:LEU:HD11	2.43	0.55
56:N0:117:ARG:NH2	36:5:1322:U:OP1	282.51	0.55
56:N0:137:ARG:HG2	56:N0:139:TYR:CE1	2.43	0.55
49:M3:166:ALA:N	64:N8:135:GLU:OE1	3.36	0.55
73:O7:19:CYS:O	73:O7:23:GLY:N	2.38	0.55
3:S1:104:ASP:HA	3:S1:214:LYS:HG3	1.89	0.55
6:S4:251:GLU:O	6:S4:255:ARG:HG2	4.27	0.55
7:S5:166:ARG:NH1	7:S5:170:GLN:OE1	2.40	0.55
10:S8:64:ASN:OD1	1:6:257:A:O2'	277.68	0.55
35:SM:43:ASP:O	36:1:2678:A:H1'	2.07	0.55
36:1:1103:A:N3	36:1:1103:A:H2'	2.22	0.54
36:1:1352:A:H4'	36:1:1353:U:OP1	2.06	0.54
36:1:1596:C:H2'	36:1:1597:C:C6	2.42	0.54
1:2:1274:C:N4	35:SM:94:HIS:O	2.40	0.54
1:2:1563:C:H2'	1:2:1564:U:C6	2.42	0.54
1:2:939:A:H2'	1:2:940:A:C8	2.42	0.54
36:5:1659:U:H2'	36:5:1660:C:C6	2.42	0.54
36:5:1724:U:H1'	36:5:1725:C:C6	2.42	0.54
36:5:158:G:N2	36:5:264:G:H1'	2.22	0.54
1:6:1573:A:H4'	1:6:1574:G:H5'	1.90	0.54
1:6:500:C:O2'	1:6:501:U:O4'	2.24	0.54
1:6:513:U:H2'	1:6:514:G:C8	2.42	0.54
1:6:827:C:H2'	1:6:828:U:C6	2.42	0.54
16:C4:13:VAL:HG13	16:C4:77:THR:H	1.72	0.54
20:C8:120:ARG:NH2	35:SM:58:GLU:OE2	2.41	0.54
41:L4:7:THR:OG1	41:L4:147:GLU:OE2	2.24	0.54
51:M5:114:ARG:HG2	51:M5:137:PRO:HG3	2.24	0.54
41:L4:106:TRP:HB2	51:M5:199:LEU:HD12	1.88	0.54
3:S1:36:SER:HB3	3:S1:231:LEU:HD22	1.89	0.54
6:S4:65:LEU:C	6:S4:67:GLN:H	2.65	0.54
7:S5:90:ILE:O	7:S5:94:THR:HG23	2.07	0.54
11:S9:28:LEU:HB3	32:E0:44:PHE:HZ	4.70	0.54
36:1:837:A:OP1	79:Q3:5:THR:OG1	2.25	0.54
1:2:134:U:OP1	1:2:136:C:N4	2.39	0.54
1:2:992:A:H2	1:2:1012:U:H3	1.52	0.54
36:5:2445:A:O2'	36:5:2446:U:OP1	2.18	0.54
64:N8:21:ARG:HB3	36:5:641:C:OP1	184.48	0.54
1:6:1738:U:H2'	1:6:1739:C:C6	2.42	0.54
12:C0:31:LYS:H	12:C0:38:LYS:HA	4.62	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:C4:81:VAL:HG22	16:C4:115:ILE:HB	1.88	0.54
22:D0:87:HIS:ND1	1:6:1383:G:OP1	443.34	0.54
27:D5:42:LEU:HD22	27:D5:47:TYR:HB2	6.39	0.54
27:D5:59:TYR:HE2	27:D5:100:ILE:HA	1.72	0.54
39:L2:27:ALA:O	39:L2:128:ARG:NH2	2.42	0.54
39:L2:226:SER:HA	36:5:2202:C:H5"	210.25	0.54
42:L5:60:ILE:HB	42:L5:80:SER:HB2	1.89	0.54
36:1:2585:G:O6	45:L8:47:SER:OG	2.24	0.54
47:M0:87:LEU:HA	47:M0:138:VAL:HG13	1.89	0.54
49:M3:61:PRO:HD3	49:M3:70:ARG:HH21	1.71	0.54
61:N5:71:THR:HG21	36:5:1603:A:H61	90.72	0.54
66:O0:32:LYS:HG3	66:O0:35:ARG:HH21	1.72	0.54
4:S2:101:VAL:HG22	4:S2:115:ILE:HG22	3.60	0.54
6:S4:45:ILE:HA	6:S4:61:VAL:HG11	1.89	0.54
36:1:3384:U:H2'	36:1:3385:U:H6	1.72	0.54
1:2:647:G:N2	1:2:687:G:H1	2.05	0.54
36:5:1307:G:C2	36:5:1308:A:C2	2.95	0.54
36:5:2213:A:H2'	36:5:2214:A:C8	2.43	0.54
1:6:220:A:OP2	1:6:832:U:H5"	2.07	0.54
16:C4:43:THR:H	16:C4:46:MET:HB2	1.72	0.54
26:D4:104:SER:HB3	26:D4:107:GLN:HB2	1.88	0.54
26:D4:53:ASP:HB3	26:D4:96:LEU:HD21	4.19	0.54
40:L3:147:GLU:OE1	40:L3:150:ARG:NH1	2.75	0.54
36:1:598:A:OP1	44:L7:41:ARG:NH1	2.40	0.54
48:M1:16:LYS:HE3	48:M1:130:VAL:HG11	1.89	0.54
49:M3:127:PRO:HG2	49:M3:131:LYS:HD2	1.90	0.54
36:1:965:A:H2	64:N8:43:ILE:HD12	1.72	0.54
67:O1:19:ARG:HD3	67:O1:35:GLU:HG3	1.98	0.54
36:1:1802:C:O2'	70:O4:59:PRO:O	2.15	0.54
2:S0:49:ASN:HB3	2:S0:52:LYS:HG3	2.40	0.54
6:S4:49:ARG:HG3	6:S4:50:ASN:N	4.30	0.54
34:SR:293:ALA:HB3	34:SR:302:PHE:HB2	3.04	0.54
36:1:1631:C:H5"	36:1:1632:A:H5"	1.90	0.54
36:1:3275:U:H5'	69:O3:68:TRP:HZ2	1.72	0.54
1:2:44:U:OP2	1:2:437:A:N6	2.39	0.54
1:2:686:C:H2'	1:2:687:G:C8	2.43	0.54
36:5:2103:U:H2'	36:5:2104:A:C8	2.43	0.54
36:5:2438:A:H2'	36:5:2439:A:O4'	2.08	0.54
36:5:3317:U:H4'	36:5:3318:G:O5'	2.08	0.54
1:6:1060:U:H4'	1:6:1061:A:H5"	1.89	0.54
22:D0:60:THR:HG22	1:6:1382:A:H5"	437.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:249:U:H3'	1:6:250:C:H5'	1.89	0.54
15:C3:16:ILE:HG22	24:D2:57:ARG:HH12	1.72	0.54
1:2:1553:G:O6	17:C5:43:ARG:HD3	2.08	0.54
22:D0:96:PRO:HG2	22:D0:99:ILE:HD11	7.22	0.54
24:D2:27:ILE:HD11	24:D2:61:ILE:HD12	1.90	0.54
24:D2:24:GLN:HE22	29:D7:4:VAL:HG23	5.52	0.54
1:2:545:A:H2'	32:E0:31:LYS:HD2	1.89	0.54
40:L3:230:THR:HB	40:L3:247:ARG:HH11	1.72	0.54
41:L4:9:HIS:NE2	41:L4:146:PRO:HB3	2.22	0.54
47:M0:36:LEU:HD21	47:M0:69:ARG:HD3	1.89	0.54
52:M6:64:PHE:HE1	52:M6:68:ARG:HH11	3.41	0.54
54:M8:176:ARG:HG3	36:5:2763:U:H5'	183.00	0.54
55:M9:28:GLU:HG3	55:M9:49:THR:HG22	4.35	0.54
63:N7:46:ILE:HD11	63:N7:49:TYR:HA	1.89	0.54
67:O1:74:ARG:HH21	67:O1:109:VAL:HG21	2.64	0.54
36:1:1591:G:OP1	70:O4:16:ARG:NH1	2.39	0.54
2:S0:172:LEU:HD22	2:S0:176:LEU:HG	2.25	0.54
1:2:788:A:C4	6:S4:19:LEU:HD13	2.42	0.54
10:S8:8:ARG:NH2	10:S8:19:ALA:O	2.41	0.54
36:1:2812:C:H2'	36:1:2813:A:C8	2.42	0.54
1:2:947:U:H2'	1:2:948:G:C8	2.43	0.54
42:L5:140:ARG:HD3	36:5:1080:A:OP1	228.59	0.54
72:O6:25:LYS:HB3	36:5:156:G:OP2	89.17	0.54
36:5:2961:G:H2'	36:5:2962:U:C6	2.43	0.54
36:5:3194:C:H2'	36:5:3195:U:H3'	1.90	0.54
36:5:622:A:H2'	36:5:623:U:O4'	2.08	0.54
1:6:1470:C:H42	1:6:1574:G:H1	1.55	0.54
1:6:1660:A:H2'	1:6:1661:U:C6	2.43	0.54
1:6:606:A:C8	1:6:608:U:H2'	2.43	0.54
42:L5:16:PHE:O	37:7:11:A:N6	295.93	0.54
16:C4:92:LYS:HD2	16:C4:121:VAL:HG22	6.42	0.54
30:D8:15:VAL:HA	30:D8:28:VAL:HG23	2.88	0.54
44:L7:96:PRO:O	44:L7:100:ARG:HB2	2.23	0.54
56:N0:101:ALA:O	56:N0:105:THR:HG23	2.08	0.54
62:N6:66:GLN:HG2	62:N6:85:VAL:HG22	4.86	0.54
63:N7:29:HIS:O	63:N7:31:GLU:N	2.41	0.54
78:Q2:45:ARG:HH22	36:5:283:G:P	146.75	0.54
4:S2:140:ARG:HH21	4:S2:229:LEU:HD13	1.72	0.54
7:S5:61:TYR:HE2	7:S5:164:PRO:HG2	2.32	0.54
9:S7:133:THR:OG1	9:S7:134:GLU:N	2.40	0.54
11:S9:54:ARG:HA	11:S9:57:ARG:HE	2.31	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1222:G:O2'	36:1:1285:G:N1	2.41	0.54
36:1:1951:C:H42	36:1:2095:G:H1	1.55	0.54
36:1:2249:G:H2'	36:1:2250:G:H8	1.72	0.54
38:4:76:C:H2'	38:4:77:A:O4'	2.08	0.54
36:5:1804:A:H2'	36:5:1805:C:C6	2.43	0.54
36:5:2140:U:O2'	36:5:2978:U:H5'	2.08	0.54
59:N3:48:ARG:NH2	36:5:3043:C:OP2	253.25	0.54
36:5:3299:A:N6	36:5:3315:G:H1	2.01	0.54
19:C7:7:LYS:NZ	1:6:1316:G:OP2	407.87	0.54
1:6:1630:U:HO2'	1:6:1764:C:HO2'	1.55	0.54
1:6:163:G:H8	1:6:163:G:O5'	1.91	0.54
1:6:822:U:H2'	1:6:823:G:H5''	1.88	0.54
16:C4:35:GLY:HA3	1:6:919:A:H5'	270.75	0.54
19:C7:65:PRO:HG3	19:C7:78:ARG:HH21	1.72	0.54
21:C9:66:TYR:HD2	21:C9:124:ILE:HG12	1.72	0.54
26:D4:52:LYS:O	26:D4:54:ALA:N	2.49	0.54
49:M3:75:PHE:HA	49:M3:101:ARG:HH12	1.73	0.54
55:M9:123:LEU:O	55:M9:127:SER:OG	2.25	0.54
59:N3:11:PHE:CD1	59:N3:88:ARG:HD2	3.10	0.54
68:O2:112:ALA:O	68:O2:116:GLY:N	2.88	0.54
2:S0:24:LEU:HD11	2:S0:41:ARG:HH12	5.77	0.54
5:S3:113:LEU:HD11	5:S3:117:ARG:HH11	1.72	0.54
5:S3:179:GLN:OE1	5:S3:180:GLY:N	5.17	0.54
6:S4:163:ASP:OD1	6:S4:166:SER:N	2.41	0.54
7:S5:162:VAL:HG21	7:S5:166:ARG:HH11	1.72	0.54
11:S9:133:HIS:CD2	11:S9:162:SER:HB2	2.79	0.54
36:1:1352:A:H1'	36:1:1353:U:O5'	2.08	0.54
36:1:1651:U:H2'	36:1:1652:G:C8	2.43	0.54
36:1:2407:C:H2'	36:1:2408:U:C6	2.42	0.54
36:1:3334:U:O2'	36:1:3368:U:O2	2.23	0.54
1:2:794:U:O2'	1:2:795:U:O5'	2.26	0.54
1:2:818:C:N4	1:2:819:G:O6	2.40	0.54
38:4:23:U:OP1	62:N6:16:ARG:NH2	2.32	0.54
36:5:2102:U:H2'	36:5:2103:U:C6	2.42	0.54
36:5:3242:G:H21	36:5:3245:A:H5''	1.73	0.54
36:5:3242:G:H5'	36:5:3245:A:C8	2.42	0.54
1:6:1413:U:H4'	1:6:1414:U:OP2	2.08	0.54
12:C0:11:ILE:HD11	12:C0:42:VAL:HG22	1.90	0.54
23:D1:12:TYR:CE2	23:D1:14:PRO:HG3	2.42	0.54
23:D1:3:ASN:ND2	23:D1:7:GLN:O	3.02	0.54
41:L4:295:ILE:O	41:L4:299:ILE:HG12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L4:82:THR:HG23	41:L4:84:ARG:H	1.72	0.54
41:L4:84:ARG:O	41:L4:87:GLN:HG3	2.08	0.54
36:1:660:A:OP1	41:L4:92:ASN:ND2	2.41	0.54
50:M4:72:LEU:HD22	50:M4:73:PRO:HD2	2.44	0.54
63:N7:23:VAL:HG12	63:N7:45:GLY:HA3	2.17	0.54
69:O3:52:VAL:HG22	69:O3:66:VAL:HG22	1.90	0.54
3:S1:137:ILE:HD12	3:S1:172:LEU:HD22	1.89	0.54
6:S4:52:LEU:HB3	6:S4:54:TYR:HD2	1.73	0.54
36:1:1043:C:O3'	47:M0:90:ARG:NH1	2.40	0.54
36:1:1286:A:O2'	36:1:1287:A:OP2	2.22	0.54
36:1:1658:G:H2'	36:1:1659:U:C6	2.42	0.54
36:1:192:C:H2'	36:1:193:C:H6	1.73	0.54
1:2:1208:A:N1	1:2:1455:G:N2	2.50	0.54
36:5:2256:A:OP2	36:5:2256:A:H2'	2.07	0.54
36:5:2761:G:H1'	36:5:2800:G:N2	2.22	0.54
1:6:647:G:H22	1:6:687:G:N2	2.05	0.54
15:C3:76:LYS:HA	15:C3:81:ALA:HB2	2.45	0.54
17:C5:48:GLY:O	17:C5:50:THR:N	3.37	0.54
23:D1:3:ASN:HD21	23:D1:7:GLN:HB3	2.03	0.54
41:L4:307:GLN:HE22	36:5:1345:G:H21	204.85	0.54
43:L6:40:LEU:HB2	43:L6:52:VAL:HG12	2.27	0.54
44:L7:191:VAL:HG12	44:L7:192:GLY:H	3.81	0.54
75:O9:24:PRO:HG2	75:O9:27:ILE:HD12	3.83	0.54
73:O7:14:LYS:HE2	75:O9:51:ILE:HG12	3.70	0.54
2:S0:69:ASN:HB3	2:S0:71:GLU:CD	2.28	0.54
5:S3:28:GLU:OE1	5:S3:65:ARG:NH1	2.41	0.54
36:1:1460:A:H2'	36:1:1461:A:C8	2.43	0.54
36:1:155:G:H5''	36:1:156:G:C8	2.42	0.54
36:1:1818:U:H2'	36:1:1819:U:O4'	2.07	0.54
36:1:59:G:H2'	38:4:33:A:O2'	2.07	0.54
36:1:679:U:O2'	36:1:788:C:O2	2.22	0.54
1:2:1773:C:OP1	77:Q1:3:ALA:HB3	2.06	0.54
36:5:2567:C:N3	36:5:2568:C:N4	2.55	0.54
41:L4:112:LYS:HD2	36:5:790:U:H5'	121.66	0.54
36:5:833:G:H2'	36:5:834:U:O4'	2.07	0.54
1:6:1474:G:H2'	1:6:1475:A:C8	2.43	0.54
1:6:675:U:H2'	1:6:676:G:C8	2.42	0.54
13:C1:111:VAL:HG23	13:C1:139:VAL:HG21	3.25	0.54
14:C2:119:SER:OG	14:C2:120:VAL:N	2.40	0.54
21:C9:57:ARG:O	21:C9:61:VAL:HG23	2.19	0.54
52:M6:85:ARG:HD3	52:M6:90:HIS:ND1	2.98	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:N0:77:VAL:HG11	56:N0:106:LEU:CD1	2.37	0.54
68:O2:11:LYS:O	68:O2:13:HIS:N	2.41	0.54
75:O9:17:LYS:HG3	75:O9:18:LYS:N	3.78	0.54
4:S2:52:THR:HB	4:S2:54:GLU:HG2	2.22	0.54
6:S4:19:LEU:HD11	6:S4:108:ARG:HD3	2.47	0.54
9:S7:110:GLN:OE1	1:6:816:G:N2	340.31	0.54
36:1:3188:G:H2'	36:1:3189:G:H8	1.72	0.54
1:2:1347:U:O2	1:2:1516:A:H5''	2.07	0.54
36:5:1563:C:H2'	36:5:1564:U:O4'	2.09	0.54
36:5:2166:A:N6	36:5:2167:A:N1	2.56	0.54
36:5:3287:U:H2'	36:5:3288:G:H5'	1.90	0.54
8:S6:179:VAL:HG21	1:6:140:A:H1'	329.62	0.54
32:E0:28:LYS:HZ1	1:6:542:A:H61	430.91	0.54
1:6:660:G:H2'	1:6:661:A:H4'	1.89	0.54
8:S6:175:ILE:HG12	1:6:78:A:H1'	340.27	0.54
15:C3:22:ALA:HB1	15:C3:23:PRO:HA	1.92	0.54
20:C8:14:ILE:HD12	20:C8:23:ASP:HA	6.07	0.54
21:C9:86:ARG:NH1	21:C9:90:PRO:O	2.77	0.54
41:L4:8:VAL:HB	41:L4:16:THR:HG21	3.69	0.54
43:L6:68:PRO:HB2	43:L6:71:VAL:HG23	1.89	0.54
45:L8:51:LYS:HG3	36:5:2523:A:C5	164.94	0.54
50:M4:22:LEU:HB3	50:M4:64:VAL:HG13	2.59	0.54
51:M5:136:ASP:OD2	51:M5:138:GLN:HG2	2.12	0.54
51:M5:37:HIS:NE2	51:M5:63:ARG:HB3	2.23	0.54
52:M6:73:PHE:CD1	52:M6:78:ARG:HG2	2.42	0.54
53:M7:31:GLU:CG	53:M7:60:PHE:HA	3.10	0.54
54:M8:72:LYS:HB3	54:M8:72:LYS:NZ	2.53	0.54
54:M8:96:PHE:CD2	54:M8:97:PRO:HD2	2.42	0.54
57:N1:56:PHE:CE1	57:N1:78:LYS:HD3	2.74	0.54
59:N3:45:ARG:HD2	59:N3:46:LEU:H	2.55	0.54
66:O0:46:ALA:HB2	66:O0:72:GLY:H	1.73	0.54
72:O6:2:THR:OG1	72:O6:3:VAL:N	2.40	0.54
8:S6:139:ASN:HA	8:S6:142:ARG:HB2	1.89	0.54
10:S8:32:GLN:HE21	1:6:1675:C:H1'	275.46	0.54
36:1:65:A:H4'	36:1:66:A:O5'	2.08	0.53
1:2:1381:U:O4	1:2:1382:A:N6	2.41	0.53
1:2:1487:A:H2'	1:2:1488:G:C8	2.42	0.53
1:2:1561:U:H2'	1:2:1562:G:H8	1.73	0.53
1:2:1681:A:H2'	1:2:1682:U:H5'	1.89	0.53
1:2:513:U:H2'	1:2:514:G:C8	2.43	0.53
57:N1:127:GLN:HA	36:5:1095:U:O2	258.85	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3153:U:H4'	36:5:3154:C:H5'	1.89	0.53
49:M3:58:VAL:HG13	36:5:75:G:H5''	88.61	0.53
64:N8:34:MET:HB2	36:5:95:A:H5''	163.17	0.53
1:6:1:U:O2'	1:6:370:A:OP2	2.26	0.53
15:C3:56:ASP:OD2	29:D7:51:GLN:N	4.96	0.53
20:C8:49:LYS:HG3	20:C8:81:ILE:HD11	3.46	0.53
21:C9:27:LYS:HE2	21:C9:111:ILE:HD11	1.89	0.53
28:D6:10:ARG:NE	1:6:1795:U:O2	330.21	0.53
36:1:1347:U:OP1	41:L4:303:GLY:N	2.39	0.53
44:L7:33:ARG:O	44:L7:36:ALA:N	2.42	0.53
45:L8:83:ASP:HA	45:L8:84:ARG:HH21	1.73	0.53
50:M4:37:GLU:HG3	50:M4:74:ARG:HG3	2.33	0.53
61:N5:58:ASP:OD1	71:O5:25:LYS:NZ	2.41	0.53
36:1:654:C:OP1	68:O2:27:ARG:NH2	2.41	0.53
73:O7:85:LYS:HB2	38:8:67:U:H5''	20.21	0.53
4:S2:164:SER:OG	4:S2:165:VAL:N	2.99	0.53
6:S4:170:THR:OG1	6:S4:170:THR:O	3.98	0.53
7:S5:222:LYS:HE3	7:S5:225:ARG:HH12	1.73	0.53
35:SM:68:ARG:NH2	35:SM:72:ARG:HB2	5.16	0.53
36:1:1508:C:C6	36:1:1880:U:H1'	2.44	0.53
36:1:1631:C:OP2	63:N7:48:ARG:NH2	2.41	0.53
36:1:2404:A:N3	36:1:2404:A:H2'	2.23	0.53
36:1:847:A:H2'	36:1:848:A:C8	2.43	0.53
1:2:1537:C:O2'	1:2:1540:G:O6	2.26	0.53
36:5:1699:A:H2'	36:5:1700:G:H8	1.71	0.53
36:5:1728:G:H5''	36:5:1730:G:O4'	2.09	0.53
36:5:438:A:H2'	36:5:494:G:N2	2.24	0.53
19:C7:56:HIS:O	19:C7:60:ARG:HG2	2.49	0.53
20:C8:52:VAL:HG13	20:C8:61:LEU:HD21	3.21	0.53
33:E1:102:VAL:O	33:E1:104:SER:N	2.41	0.53
41:L4:237:GLN:O	41:L4:246:ARG:HG3	2.08	0.53
42:L5:120:LYS:O	42:L5:248:ARG:NH2	3.03	0.53
54:M8:55:SER:O	54:M8:58:ASN:N	2.38	0.53
68:O2:82:LEU:HD22	68:O2:117:ILE:HD12	2.58	0.53
79:Q3:49:ARG:HD2	79:Q3:50:GLY:H	3.01	0.53
35:SM:129:ALA:O	35:SM:133:GLU:HG3	2.07	0.53
34:SR:21:THR:OG1	34:SR:68:VAL:O	2.19	0.53
1:2:1393:C:H42	1:2:1405:G:H1	1.55	0.53
1:2:1494:C:H2'	1:2:1495:C:C6	2.43	0.53
45:L8:38:GLN:HB2	36:5:2557:A:H2	208.41	0.53
76:Q0:102:ARG:NE	36:5:2896:A:OP1	322.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:507:U:H2'	36:5:508:U:C6	2.44	0.53
61:N5:48:SER:OG	38:8:136:G:OP1	84.51	0.53
29:D7:50:ALA:HB3	29:D7:66:PRO:HB3	1.91	0.53
36:1:2424:A:H61	39:L2:230:VAL:HG21	1.73	0.53
40:L3:360:ASP:OD2	40:L3:364:LYS:NZ	2.80	0.53
42:L5:33:ARG:NH2	37:7:7:G:O3'	271.74	0.53
45:L8:84:ARG:HH22	45:L8:181:LYS:HZ1	1.57	0.53
52:M6:58:LEU:HA	52:M6:72:HIS:CD2	2.55	0.53
79:Q3:49:ARG:HD3	79:Q3:51:ALA:O	2.61	0.53
5:S3:104:SER:OG	5:S3:105:MET:N	2.41	0.53
5:S3:134:CYS:SG	5:S3:135:GLU:N	2.81	0.53
9:S7:89:HIS:ND1	9:S7:168:SER:OG	3.20	0.53
9:S7:74:GLN:NE2	9:S7:92:PHE:HB2	2.23	0.53
10:S8:89:GLU:O	10:S8:93:THR:OG1	2.14	0.53
11:S9:65:LYS:HA	11:S9:70:LEU:HD21	1.90	0.53
14:C2:55:GLY:N	35:SM:172:ALA:O	2.38	0.53
36:5:508:U:H2'	36:5:509:U:C6	2.43	0.53
36:5:673:U:H2'	36:5:674:G:H8	1.73	0.53
15:C3:73:ARG:O	15:C3:77:SER:OG	2.14	0.53
29:D7:53:ALA:HB1	29:D7:62:ILE:HD11	3.11	0.53
1:2:1253:U:H4'	33:E1:143:LYS:N	2.23	0.53
41:L4:219:LEU:HD22	41:L4:225:VAL:HG11	2.82	0.53
41:L4:283:THR:HG22	41:L4:285:ASP:N	2.23	0.53
46:L9:22:SER:OG	46:L9:23:ARG:N	2.41	0.53
47:M0:16:PRO:C	47:M0:18:PRO:HD3	2.29	0.53
36:1:76:G:O2'	49:M3:100:ARG:NH1	2.40	0.53
56:N0:11:GLY:HA2	56:N0:59:VAL:HG23	2.02	0.53
66:O0:16:LEU:HB2	66:O0:98:SER:HB2	2.73	0.53
2:S0:120:LEU:HD11	2:S0:144:ILE:HG13	1.89	0.53
3:S1:110:LEU:HD11	3:S1:213:ARG:HD2	2.93	0.53
3:S1:219:LYS:NZ	79:Q3:89:MET:O	9.10	0.53
6:S4:103:TYR:O	6:S4:182:TYR:OH	2.26	0.53
9:S7:126:LEU:HD13	9:S7:173:TYR:CD2	2.78	0.53
1:2:1291:G:H22	1:2:1324:G:H1	1.56	0.53
1:2:649:U:O2'	1:2:650:U:O5'	2.25	0.53
36:5:2659:G:H4'	36:5:2751:G:O2'	2.08	0.53
36:5:2822:U:H2'	36:5:2823:G:O4'	2.09	0.53
1:6:1402:G:H2'	1:6:1403:C:H6	1.73	0.53
1:6:1592:A:H2'	1:6:1593:A:C8	2.42	0.53
1:6:895:G:H22	1:6:917:U:H3	1.56	0.53
13:C1:109:VAL:HG11	13:C1:125:VAL:HG11	2.53	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C5:10:ARG:O	17:C5:12:PHE:N	2.42	0.53
18:C6:82:ARG:NH1	18:C6:114:ARG:HB2	3.68	0.53
22:D0:65:ILE:HD12	31:D9:43:PHE:CZ	2.44	0.53
25:D3:69:ARG:NH1	25:D3:116:ASP:OD2	2.70	0.53
33:E1:119:ARG:HH11	33:E1:139:LEU:HD21	1.74	0.53
40:L3:114:VAL:HG22	40:L3:163:HIS:CE1	2.54	0.53
41:L4:25:VAL:HG22	41:L4:262:TRP:HB2	1.90	0.53
36:1:520:U:O4	41:L4:349:THR:HG23	2.09	0.53
47:M0:61:SER:OG	47:M0:63:GLU:HG2	3.36	0.53
71:O5:34:GLN:O	71:O5:37:SER:N	2.34	0.53
6:S4:100:ARG:O	6:S4:102:VAL:HG12	4.03	0.53
36:1:1585:C:H2'	36:1:1586:G:H8	1.73	0.53
36:1:2353:G:H5''	53:M7:86:LYS:HB2	1.91	0.53
36:1:2659:G:H4'	36:1:2751:G:O2'	2.09	0.53
1:2:1299:G:H2'	1:2:1300:A:C8	2.44	0.53
1:2:851:U:H2'	1:2:852:C:C6	2.44	0.53
47:M0:160:PRO:HD3	36:5:2854:U:H4'	295.79	0.53
59:N3:32:ARG:NH2	1:6:1734:U:O3'	273.15	0.53
1:6:340:U:H2'	1:6:341:A:C8	2.43	0.53
33:E1:108:VAL:HB	33:E1:114:VAL:HG22	1.90	0.53
42:L5:122:VAL:C	42:L5:124:GLU:H	2.98	0.53
46:L9:117:PHE:CE1	46:L9:165:CYS:HB3	2.69	0.53
47:M0:52:LEU:HD23	47:M0:164:LYS:O	3.54	0.53
47:M0:210:ILE:HG12	47:M0:217:PHE:CZ	2.44	0.53
47:M0:2:ALA:O	47:M0:3:ARG:HB2	4.51	0.53
50:M4:132:LYS:HD3	36:5:3230:G:H4'	287.81	0.53
55:M9:160:GLU:HA	55:M9:163:ARG:HB2	1.90	0.53
56:N0:133:ALA:HA	56:N0:141:LYS:HZ1	3.58	0.53
60:N4:22:VAL:HG22	60:N4:28:ILE:HG12	1.90	0.53
10:S8:61:GLU:O	10:S8:62:THR:OG1	5.02	0.53
10:S8:84:HIS:NE2	10:S8:97:THR:OG1	3.44	0.53
36:1:595:G:N1	36:1:609:G:H5''	2.23	0.53
36:5:2115:G:H22	36:5:2120:A:H1'	1.74	0.53
1:6:138:A:H62	1:6:266:A:H61	1.54	0.53
13:C1:82:ARG:HG2	13:C1:110:HIS:CE1	5.16	0.53
5:S3:211:PRO:HG3	19:C7:20:TYR:CZ	2.44	0.53
42:L5:78:ALA:HB3	42:L5:105:ILE:HG12	1.91	0.53
42:L5:257:GLU:N	42:L5:257:GLU:OE2	4.19	0.53
44:L7:88:ARG:HA	44:L7:134:VAL:HG12	2.39	0.53
46:L9:75:VAL:HA	46:L9:78:MET:HE3	1.91	0.53
47:M0:53:VAL:HG21	47:M0:166:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:M3:144:THR:C	49:M3:146:PRO:HD3	2.81	0.53
63:N7:88:ASP:HB3	63:N7:121:ARG:HH12	1.73	0.53
72:O6:63:ASN:O	72:O6:65:GLY:N	4.74	0.53
46:L9:180:TYR:HB2	76:Q0:85:LEU:HD13	2.03	0.53
10:S8:44:HIS:O	10:S8:56:ARG:N	2.87	0.53
19:C7:37:GLU:HG3	34:SR:150:TRP:HE1	1.73	0.53
36:1:1040:A:N3	47:M0:198:LYS:NZ	2.39	0.53
36:1:109:A:H4'	36:1:110:G:OP1	2.07	0.53
36:1:121:A:C6	45:L8:129:PRO:HG3	2.44	0.53
36:1:2397:A:OP1	36:1:2398:A:H4'	2.09	0.53
1:2:323:A:OP2	10:S8:10:LYS:HG3	2.09	0.53
36:5:2513:U:O2'	36:5:2592:G:N1	2.35	0.53
36:5:2841:G:H2'	36:5:2844:C:H42	1.74	0.53
36:5:2971:A:H4'	36:5:2972:G:OP2	2.07	0.53
36:5:495:G:H2'	36:5:496:C:O4'	2.08	0.53
36:5:547:G:C5	36:5:548:G:H1'	2.44	0.53
3:S1:157:GLN:NE2	1:6:1046:G:OP1	329.12	0.53
18:C6:115:THR:OG1	18:C6:118:ILE:O	4.02	0.53
20:C8:46:VAL:HG11	20:C8:73:MET:HG3	2.20	0.53
26:D4:10:ARG:HD2	1:6:778:G:O6	431.60	0.53
26:D4:41:ARG:HG2	26:D4:55:VAL:HG23	5.62	0.53
43:L6:137:ASP:O	43:L6:141:VAL:HG23	2.09	0.53
46:L9:109:ALA:HB1	46:L9:111:PHE:CD2	2.44	0.53
46:L9:8:GLN:HG2	46:L9:68:LEU:HD13	1.91	0.53
47:M0:55:ASN:ND2	47:M0:162:GLN:OE1	2.36	0.53
55:M9:99:LEU:HD12	36:5:1722:U:H5''	225.36	0.53
64:N8:16:SER:HA	36:5:942:U:N3	170.43	0.53
65:N9:14:ARG:NH1	65:N9:18:ARG:HD2	2.83	0.53
65:N9:14:ARG:HH22	65:N9:18:ARG:HD2	1.72	0.53
76:Q0:79:GLU:O	76:Q0:82:LEU:N	2.89	0.53
78:Q2:8:ARG:HH21	78:Q2:83:LEU:HD13	4.70	0.53
6:S4:124:GLY:HA2	6:S4:142:HIS:HE1	1.73	0.53
36:1:240:U:OP2	71:O5:94:LYS:NZ	2.36	0.53
36:1:279:U:H2'	36:1:280:U:H6	1.73	0.53
1:6:151:G:H1	1:6:163:G:H1	1.56	0.53
1:6:1561:U:H2'	1:6:1562:G:C8	2.43	0.53
8:S6:95:LYS:NZ	1:6:160:C:O3'	310.16	0.53
12:C0:29:GLN:O	12:C0:31:LYS:N	2.40	0.53
21:C9:14:PHE:HZ	21:C9:132:LEU:HG	1.74	0.53
21:C9:23:GLN:HG3	21:C9:55:TYR:CE2	4.24	0.53
21:C9:77:ASN:HB3	21:C9:95:ASP:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:63:ILE:HG12	23:D1:36:VAL:HG22	3.32	0.53
42:L5:51:LEU:HB2	42:L5:144:VAL:HG13	3.13	0.53
59:N3:15:LEU:HD13	59:N3:51:ALA:HB3	2.09	0.53
60:N4:23:ARG:HG2	60:N4:24:GLY:H	1.74	0.53
63:N7:18:TYR:HE1	63:N7:47:GLU:HG3	3.72	0.53
65:N9:16:ALA:O	65:N9:20:GLY:HA3	4.51	0.53
68:O2:122:PRO:O	68:O2:123:LYS:HB2	2.09	0.53
2:S0:119:ARG:NH1	4:S2:240:LEU:HB3	4.45	0.53
8:S6:52:ILE:HG23	8:S6:109:LEU:HD21	2.39	0.53
8:S6:56:ASN:H	8:S6:108:VAL:HG23	5.12	0.53
9:S7:14:THR:OG1	9:S7:15:GLU:N	2.36	0.53
36:1:1688:U:H2'	36:1:1689:U:C6	2.44	0.53
36:1:2102:U:H2'	36:1:2103:U:C6	2.44	0.53
36:1:2218:G:H2'	36:1:2219:A:C8	2.43	0.53
1:2:827:C:H2'	1:2:828:U:C6	2.44	0.53
36:5:1018:G:H2'	36:5:1019:G:O4'	2.09	0.53
36:5:1313:G:H2'	36:5:1314:C:H6	1.73	0.53
57:N1:68:THR:HG21	36:5:2736:A:O2'	224.31	0.53
1:6:1537:C:O2'	1:6:1540:G:O6	2.27	0.53
15:C3:91:LEU:HB3	15:C3:122:ILE:HG12	1.91	0.53
18:C6:42:GLU:HB2	18:C6:45:ARG:HH21	1.73	0.53
1:2:1389:C:O2'	19:C7:52:GLY:HA3	2.08	0.53
27:D5:41:ILE:HG23	27:D5:42:LEU:H	1.73	0.53
41:L4:181:VAL:O	41:L4:182:LEU:HB2	2.09	0.53
41:L4:35:VAL:HG13	41:L4:235:LEU:HD11	2.40	0.53
42:L5:107:ARG:HH22	42:L5:120:LYS:HA	1.74	0.53
47:M0:71:CYS:SG	47:M0:72:ALA:N	3.60	0.53
38:4:131:A:H5'	61:N5:93:TYR:CE2	2.43	0.53
63:N7:53:VAL:HA	63:N7:57:HIS:CD2	2.44	0.53
64:N8:26:ARG:HH12	36:5:939:U:H5	177.51	0.53
68:O2:61:LYS:HD3	36:5:1339:C:OP1	193.45	0.53
36:1:156:G:H5'	72:O6:25:LYS:HD3	1.91	0.53
6:S4:141:THR:OG1	6:S4:145:ARG:HB2	2.31	0.53
11:S9:93:LEU:HA	11:S9:96:VAL:HG13	1.94	0.53
36:1:776:U:H5	36:1:2719:U:O2	1.92	0.52
36:1:828:A:H2'	36:1:829:U:C6	2.44	0.52
1:2:460:A:H3'	1:2:461:G:H8	1.74	0.52
36:5:1856:C:H2'	36:5:1857:C:H6	1.74	0.52
36:5:2572:C:H2'	36:5:2572:C:OP2	2.09	0.52
69:O3:86:ARG:NH2	36:5:497:C:O2'	214.67	0.52
19:C7:6:THR:OG1	19:C7:7:LYS:N	2.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:123:TYR:CZ	40:L3:124:LYS:HG3	2.44	0.52
40:L3:166:ILE:O	40:L3:169:THR:HG22	2.42	0.52
44:L7:88:ARG:HG2	44:L7:111:ILE:HA	1.91	0.52
47:M0:210:ILE:HD13	47:M0:217:PHE:CD2	4.30	0.52
47:M0:38:LYS:CG	47:M0:41:ALA:HB2	2.69	0.52
58:N2:50:LEU:HD22	58:N2:54:VAL:HB	5.24	0.52
74:O8:46:ARG:HH21	74:O8:51:LEU:HB2	2.13	0.52
2:S0:36:TYR:OH	23:D1:70:ASN:ND2	2.34	0.52
3:S1:51:SER:HA	3:S1:57:ALA:H	1.73	0.52
2:S0:119:ARG:HH11	4:S2:240:LEU:HB3	4.81	0.52
5:S3:125:TYR:CE1	35:SM:134:ASP:OD2	2.62	0.52
6:S4:45:ILE:HG13	6:S4:61:VAL:HG21	2.43	0.52
7:S5:61:TYR:OH	30:D8:49:ARG:HD3	3.22	0.52
8:S6:20:ASP:O	8:S6:24:ILE:HG13	2.32	0.52
9:S7:11:GLN:HG3	9:S7:12:ALA:H	1.73	0.52
9:S7:144:VAL:HG13	24:D2:49:GLU:HB3	1.91	0.52
10:S8:8:ARG:CZ	10:S8:21:PHE:HB3	2.38	0.52
36:1:1240:A:H61	36:1:1244:A:H5''	1.74	0.52
36:1:279:U:H2'	36:1:280:U:C6	2.44	0.52
36:1:2808:A:O2'	36:1:2969:A:OP1	2.16	0.52
36:1:3215:A:O5'	50:M4:121:MET:HE1	2.09	0.52
1:2:1165:G:O6	1:2:1166:A:N6	2.42	0.52
1:2:1362:U:H1'	1:2:1363:U:C5	2.45	0.52
36:5:1155:C:H2'	36:5:1156:C:H6	1.74	0.52
1:6:1230:A:H8	1:6:1258:U:C4	2.27	0.52
21:C9:7:ARG:HD2	1:6:1366:U:O2'	426.64	0.52
17:C5:122:THR:OG1	1:6:1454:G:O3'	370.98	0.52
1:6:396:G:N2	1:6:399:A:OP2	2.43	0.52
19:C7:15:ALA:O	19:C7:19:ARG:HG2	2.24	0.52
21:C9:20:SER:OG	21:C9:24:ARG:NH2	7.63	0.52
24:D2:50:PHE:HB3	24:D2:63:VAL:HG13	2.24	0.52
28:D6:23:CYS:HB2	28:D6:74:CYS:SG	3.93	0.52
40:L3:56:ILE:HD13	40:L3:76:VAL:HG21	1.91	0.52
47:M0:12:GLN:HA	47:M0:59:GLN:OE1	4.05	0.52
48:M1:50:ALA:HB2	48:M1:65:ILE:HD12	1.89	0.52
49:M3:57:VAL:HG23	49:M3:112:ASN:ND2	2.23	0.52
54:M8:144:ARG:HH12	36:5:976:U:H5''	178.58	0.52
58:N2:59:ASP:O	58:N2:61:THR:N	2.40	0.52
59:N3:3:GLY:HA3	59:N3:40:LYS:HB3	4.13	0.52
64:N8:77:LYS:O	64:N8:79:TRP:N	2.42	0.52
66:O0:26:GLY:O	66:O0:30:THR:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:O2:4:LEU:HD12	68:O2:5:PRO:HD2	2.95	0.52
79:Q3:74:ALA:O	79:Q3:78:THR:OG1	3.92	0.52
1:2:1145:U:O2'	4:S2:89:GLN:O	2.16	0.52
1:2:881:A:H2'	1:2:882:U:O4'	2.08	0.52
36:1:143:G:H4'	38:4:145:U:OP1	2.10	0.52
55:M9:128:LYS:HE3	36:5:1721:U:O4	235.36	0.52
36:5:2105:G:H2'	36:5:2106:A:C8	2.44	0.52
36:5:59:G:H4'	36:5:60:A:H4'	1.90	0.52
14:C2:24:ILE:O	14:C2:25:GLU:HG2	2.10	0.52
20:C8:52:VAL:HG21	20:C8:69:ILE:HD11	2.94	0.52
25:D3:137:LYS:O	25:D3:139:LYS:N	4.75	0.52
27:D5:57:TYR:CE2	27:D5:68:ARG:HD3	5.41	0.52
39:L2:221:LYS:O	36:5:2245:C:H4'	220.26	0.52
40:L3:139:GLN:C	40:L3:141:GLY:H	2.44	0.52
42:L5:132:THR:O	42:L5:132:THR:OG1	3.07	0.52
42:L5:83:LEU:HD22	42:L5:88:ILE:HD12	1.91	0.52
44:L7:160:ARG:HG3	44:L7:203:TRP:CG	2.44	0.52
38:4:155:A:H5'	45:L8:185:ARG:CZ	2.38	0.52
56:N0:10:ILE:HG12	56:N0:26:ARG:HB2	4.57	0.52
78:Q2:73:GLU:OE1	78:Q2:80:ARG:NH2	2.32	0.52
5:S3:157:LEU:HD22	5:S3:189:MET:HB3	4.59	0.52
8:S6:173:PRO:HA	1:6:66:U:H5'	342.38	0.52
1:2:856:A:N6	9:S7:96:ARG:HB3	2.25	0.52
36:1:1517:G:P	75:O9:41:ARG:HH22	2.31	0.52
36:1:1585:C:H2'	36:1:1586:G:C8	2.44	0.52
36:1:1762:C:C4	36:1:1763:U:H1'	2.44	0.52
36:1:2218:G:H2'	36:1:2219:A:H8	1.75	0.52
36:1:2615:G:H2'	36:1:2616:C:C6	2.45	0.52
1:2:1637:C:O2'	35:SM:94:HIS:HE1	1.92	0.52
37:3:12:U:OP2	37:3:68:C:O2'	2.27	0.52
58:N2:94:ARG:NH2	36:5:1757:A:OP1	129.19	0.52
36:5:1781:C:H2'	36:5:1782:U:C6	2.44	0.52
1:6:1003:A:H4'	1:6:1004:U:O5'	2.10	0.52
1:6:626:U:H2'	1:6:627:C:H6	1.74	0.52
22:D0:21:LYS:H	22:D0:21:LYS:HD2	1.74	0.52
1:2:1381:U:H4'	22:D0:59:PRO:HG3	1.91	0.52
24:D2:105:THR:OG1	24:D2:126:LEU:HG	2.36	0.52
55:M9:105:LEU:HD23	55:M9:138:LEU:HD12	4.42	0.52
56:N0:141:LYS:HA	56:N0:144:LEU:HD12	2.27	0.52
72:O6:25:LYS:HB2	72:O6:28:TYR:CD2	2.43	0.52
7:S5:166:ARG:HA	7:S5:169:ASN:HB2	2.53	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S5:55:ASP:HB3	7:S5:58:LEU:HD12	1.91	0.52
11:S9:122:VAL:HG23	11:S9:123:HIS:CD2	3.82	0.52
34:SR:117:LYS:H	34:SR:117:LYS:HD2	1.75	0.52
36:1:1724:U:H1'	36:1:1725:C:C6	2.45	0.52
36:1:3045:G:H2'	36:1:3046:A:O4'	2.09	0.52
36:1:415:G:H2'	36:1:416:A:C8	2.44	0.52
36:1:817:A:H8	73:O7:15:SER:HG	1.56	0.52
1:2:190:C:H1'	1:2:191:C:H5'	1.91	0.52
1:6:119:A:H1'	1:6:397:A:C5	2.44	0.52
19:C7:108:ASP:O	19:C7:112:SER:OG	2.20	0.52
30:D8:32:PHE:HE2	30:D8:38:ARG:HB3	1.74	0.52
31:D9:33:LYS:O	31:D9:36:LEU:HD23	2.09	0.52
42:L5:251:PRO:O	42:L5:253:PHE:N	2.42	0.52
43:L6:56:LYS:HD3	43:L6:98:VAL:HG12	4.68	0.52
36:1:3267:A:H2'	43:L6:69:PHE:CZ	2.44	0.52
46:L9:168:ARG:NH2	36:5:2894:C:OP1	305.64	0.52
55:M9:12:ALA:HB1	55:M9:17:VAL:O	2.10	0.52
77:Q1:20:VAL:O	77:Q1:23:ARG:HB2	2.68	0.52
4:S2:103:VAL:HG22	4:S2:113:LEU:HD23	2.99	0.52
9:S7:172:VAL:HG12	9:S7:176:LEU:HD12	2.69	0.52
9:S7:51:VAL:HG22	9:S7:53:GLY:H	1.73	0.52
10:S8:184:LEU:HD23	10:S8:189:LEU:HA	2.63	0.52
36:1:112:U:O2'	36:1:113:C:H5''	2.09	0.52
36:1:1146:C:H4'	36:1:1331:U:C4	2.44	0.52
36:1:1355:A:H4'	36:1:1356:U:O5'	2.09	0.52
36:1:3389:U:O2'	36:1:3390:G:OP2	2.28	0.52
36:1:61:A:H2'	36:1:62:A:O4'	2.09	0.52
1:2:700:C:N4	1:2:738:G:H1	2.04	0.52
1:2:876:G:H1'	1:2:944:A:O4'	2.10	0.52
38:4:24:G:OP2	62:N6:13:ARG:HD3	2.10	0.52
36:5:1234:G:OP2	36:5:1235:U:H3'	2.09	0.52
36:5:1549:U:H2'	36:5:1550:C:C6	2.45	0.52
36:5:1556:C:H2'	36:5:2169:G:N1	2.23	0.52
36:5:916:G:H5'	36:5:917:A:OP1	2.08	0.52
1:6:1268:G:H1'	1:6:1448:G:H5''	1.91	0.52
1:6:1692:G:H2'	1:6:1693:A:H8	1.73	0.52
13:C1:4:GLU:OE1	13:C1:82:ARG:NH2	11.19	0.52
17:C5:122:THR:HG21	1:6:1455:G:OP1	372.12	0.52
17:C5:18:ARG:HD3	20:C8:90:ASN:OD1	3.98	0.52
17:C5:32:ASP:HA	17:C5:35:LYS:HG3	4.49	0.52
18:C6:77:GLN:O	18:C6:81:ILE:HG12	2.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:C8:146:ALA:N	35:SM:68:ARG:HH21	2.06	0.52
21:C9:62:ALA:HB1	21:C9:132:LEU:HD11	2.66	0.52
22:D0:63:LEU:HB2	22:D0:84:MET:HB3	2.95	0.52
40:L3:84:VAL:HG13	40:L3:162:VAL:HB	1.92	0.52
45:L8:78:PHE:C	45:L8:80:TYR:H	2.12	0.52
47:M0:160:PRO:HB3	36:5:2854:U:O3'	291.43	0.52
47:M0:210:ILE:HA	47:M0:217:PHE:CE2	2.53	0.52
48:M1:109:HIS:HE1	48:M1:122:ILE:HA	1.75	0.52
56:N0:91:TYR:OH	56:N0:93:GLU:OE2	2.23	0.52
61:N5:100:LYS:NZ	61:N5:107:VAL:H	2.07	0.52
69:O3:26:ASN:HA	69:O3:88:ASN:OD1	2.09	0.52
76:Q0:78:ILE:HG21	76:Q0:83:LYS:HD2	1.92	0.52
2:S0:120:LEU:HD12	2:S0:121:VAL:H	1.97	0.52
9:S7:49:ILE:HG13	9:S7:57:ALA:HB3	3.30	0.52
10:S8:83:TYR:HB3	10:S8:101:ILE:HB	1.90	0.52
11:S9:60:LEU:HD11	11:S9:93:LEU:HB3	6.11	0.52
36:1:992:A:H5'	57:N1:43:LYS:HD3	1.91	0.52
1:2:1076:A:H4'	28:D6:13:LYS:HD3	1.91	0.52
1:2:1402:G:P	19:C7:10:LYS:HZ1	2.33	0.52
38:4:83:C:H42	62:N6:52:ARG:NH2	2.08	0.52
68:O2:46:PHE:CE1	36:5:1145:G:H5'	211.55	0.52
36:5:1783:U:H2'	36:5:1784:G:H8	1.74	0.52
36:5:2426:U:H2'	36:5:2427:U:C6	2.45	0.52
40:L3:174:LYS:N	36:5:3314:A:OP1	205.55	0.52
73:O7:43:LYS:NZ	36:5:55:G:OP1	114.80	0.52
19:C7:7:LYS:N	1:6:1316:G:OP1	412.21	0.52
1:6:1339:C:O2'	1:6:1341:A:N7	2.40	0.52
1:6:560:U:H2'	1:6:561:G:H8	1.75	0.52
25:D3:108:GLY:HA2	1:6:600:U:OP2	359.31	0.52
20:C8:13:HIS:HA	20:C8:24:GLY:HA3	1.92	0.52
30:D8:31:GLU:O	30:D8:33:LEU:N	3.87	0.52
40:L3:117:ARG:NH2	40:L3:175:LYS:HG2	2.79	0.52
40:L3:122:TRP:CE2	40:L3:127:LYS:HE2	2.44	0.52
45:L8:156:ASP:HB2	45:L8:183:LYS:HE3	1.91	0.52
49:M3:140:SER:OG	49:M3:141:ALA:N	2.37	0.52
61:N5:86:VAL:O	61:N5:120:LYS:HB2	2.09	0.52
71:O5:118:ILE:O	71:O5:120:ALA:N	2.43	0.52
2:S0:195:TRP:NE1	2:S0:197:ILE:HD13	5.20	0.52
4:S2:118:ALA:HB3	4:S2:124:ALA:HB2	1.92	0.52
6:S4:148:ARG:NH1	8:S6:201:GLN:OE1	2.42	0.52
6:S4:32:SER:HB2	6:S4:83:PRO:HD3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:S6:78:THR:HG23	8:S6:92:ARG:HG2	3.55	0.52
35:SM:47:ALA:HB2	36:1:2678:A:C8	2.44	0.52
36:1:516:A:O3'	44:L7:60:ARG:NH2	2.37	0.52
1:2:741:C:OP1	1:2:846:G:O2'	2.28	0.52
36:5:2403:G:N7	36:5:2870:C:H4'	2.25	0.52
65:N9:3:LYS:HD3	36:5:2617:U:H3'	225.85	0.52
36:5:2987:A:H2'	36:5:2988:C:C6	2.45	0.52
20:C8:145:ARG:NH2	1:6:1460:A:OP2	339.67	0.52
37:7:91:G:H2'	37:7:92:A:C8	2.45	0.52
36:5:409:A:H61	38:8:15:G:H1'	1.75	0.52
14:C2:125:ASN:OD1	35:SM:168:ALA:N	4.47	0.52
14:C2:64:SER:OG	14:C2:65:SER:N	2.43	0.52
17:C5:77:ARG:NH2	1:6:1241:G:OP1	385.53	0.52
19:C7:20:TYR:CZ	19:C7:38:ILE:HG13	2.44	0.52
21:C9:105:LEU:HD13	21:C9:122:ARG:HD3	2.02	0.52
44:L7:102:VAL:HG12	44:L7:130:ILE:HD12	4.00	0.52
46:L9:18:VAL:HG12	46:L9:27:VAL:HG22	1.91	0.52
47:M0:49:CYS:HB3	47:M0:168:SER:HB3	1.92	0.52
53:M7:27:LYS:HD3	53:M7:63:PHE:HB3	2.08	0.52
63:N7:27:LYS:HB3	63:N7:42:LEU:HB2	2.68	0.52
64:N8:20:GLY:HA2	36:5:1369:A:O3'	181.66	0.52
71:O5:49:LYS:HZ3	38:8:63:G:HO2'	53.69	0.52
3:S1:82:ARG:HH12	3:S1:191:GLU:HG2	3.49	0.52
1:2:1064:G:O2'	3:S1:204:ILE:O	2.27	0.52
5:S3:160:SER:O	1:6:1420:C:O2'	416.39	0.52
5:S3:162:GLN:OE1	5:S3:165:ASN:ND2	2.31	0.52
5:S3:209:ILE:O	19:C7:20:TYR:OH	3.04	0.52
6:S4:179:LYS:N	6:S4:194:THR:O	2.43	0.52
8:S6:63:MET:HE1	8:S6:106:LEU:HD13	2.40	0.52
5:S3:222:VAL:HG21	34:SR:229:LYS:HA	1.91	0.52
36:1:2403:G:H1'	36:1:2404:A:C8	2.45	0.52
36:1:3166:C:H2'	36:1:3167:A:O4'	2.10	0.52
52:M6:60:LYS:HZ2	36:5:1307:G:H5''	252.78	0.52
40:L3:174:LYS:NZ	36:5:3315:G:OP1	195.54	0.52
16:C4:124:ASP:O	16:C4:125:SER:HB2	2.10	0.52
16:C4:131:GLY:O	16:C4:133:ARG:N	3.22	0.52
20:C8:97:ASP:N	20:C8:97:ASP:OD2	2.43	0.52
21:C9:108:LEU:HA	21:C9:111:ILE:HG22	1.91	0.52
40:L3:49:TYR:CZ	40:L3:166:ILE:HD12	2.45	0.52
40:L3:263:SER:O	36:5:2882:U:H4'	233.61	0.52
42:L5:294:ALA:O	42:L5:296:GLN:N	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:L8:137:ASN:OD1	51:M5:3:ALA:N	2.91	0.52
53:M7:108:ASP:N	53:M7:152:GLU:OE2	2.55	0.52
53:M7:24:VAL:HG12	53:M7:86:LYS:HD3	1.92	0.52
54:M8:30:VAL:O	54:M8:34:THR:HG23	2.10	0.52
3:S1:101:HIS:HA	3:S1:217:LEU:HD22	2.22	0.52
3:S1:62:LYS:O	3:S1:64:ARG:N	2.34	0.52
5:S3:162:GLN:N	5:S3:163:PRO:HD2	2.49	0.52
8:S6:13:GLN:CD	1:6:151:G:H21	313.06	0.52
11:S9:109:LEU:CB	11:S9:146:PHE:HB3	2.66	0.52
11:S9:65:LYS:HA	11:S9:70:LEU:HD11	2.55	0.52
34:SR:288:HIS:H	34:SR:288:HIS:CD2	2.28	0.52
34:SR:48:THR:HG22	34:SR:55:GLY:HA2	5.66	0.52
36:1:1780:G:H2'	36:1:1781:C:H6	1.75	0.52
36:1:208:C:H2'	36:1:209:A:O4'	2.10	0.52
36:1:3060:C:H42	36:1:3083:G:H1	1.57	0.52
36:1:437:G:H2'	36:1:438:A:H8	1.74	0.52
36:1:763:G:H2'	36:1:764:U:O4'	2.10	0.52
1:2:720:G:H1'	1:2:721:U:H5''	1.91	0.52
38:4:53:A:H5'	38:4:54:A:OP2	2.09	0.52
1:6:1293:U:H3	1:6:1322:A:H61	1.58	0.52
1:6:407:A:H2'	1:6:408:C:C6	2.45	0.52
61:N5:56:ARG:HG2	38:8:134:G:OP1	79.45	0.52
40:L3:206:ASP:OD1	40:L3:207:SER:N	2.43	0.52
40:L3:2:SER:O	40:L3:3:HIS:HB3	2.09	0.52
42:L5:30:TYR:HA	42:L5:33:ARG:HB3	1.91	0.52
57:N1:38:ASP:O	57:N1:64:VAL:HG23	2.10	0.52
61:N5:137:ASN:HB3	61:N5:142:ILE:HG12	1.91	0.52
64:N8:85:ASP:OD1	64:N8:86:LYS:N	2.41	0.52
68:O2:33:ARG:NH1	36:5:944:C:H4'	162.40	0.52
3:S1:145:LYS:HG2	3:S1:146:GLN:H	4.81	0.52
5:S3:11:LEU:HD13	22:D0:29:THR:HG23	2.61	0.52
7:S5:149:VAL:HG13	7:S5:151:GLY:H	6.15	0.52
35:SM:79:SER:HA	35:SM:82:THR:HG23	1.92	0.52
1:2:1274:C:H41	35:SM:95:SER:HA	1.74	0.52
34:SR:217:ASP:OD1	34:SR:217:ASP:N	3.18	0.52
36:1:1128:U:H2'	36:1:1129:A:O4'	2.10	0.51
36:1:1770:G:H5'	36:1:1771:C:OP2	2.10	0.51
36:1:1940:G:H2'	36:1:1941:C:O4'	2.10	0.51
1:2:1483:A:N6	1:2:1484:G:O6	2.43	0.51
1:2:1559:A:OP1	1:2:1559:A:H4'	2.10	0.51
1:2:1588:G:H1	1:2:1608:U:H3	1.56	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:388:G:OP1	1:2:402:C:H5	1.92	0.51
36:5:1069:C:H2'	36:5:1070:U:H6	1.75	0.51
36:5:1621:A:H2'	36:5:1622:U:H6	1.74	0.51
36:5:1556:C:O5'	36:5:2169:G:N2	2.44	0.51
36:5:2712:U:H2'	36:5:2713:U:C5	2.45	0.51
11:S9:176:ASN:ND2	1:6:511:A:OP2	467.59	0.51
1:6:712:G:H2'	1:6:713:A:H8	1.74	0.51
25:D3:93:LEU:HD21	32:E0:8:LEU:HD13	1.92	0.51
39:L2:225:ILE:HG21	39:L2:234:LYS:HA	1.92	0.51
40:L3:346:THR:O	40:L3:348:ARG:N	3.55	0.51
40:L3:4:ARG:O	40:L3:5:LYS:HB3	2.09	0.51
42:L5:211:LEU:HD11	42:L5:218:ARG:HB2	1.91	0.51
43:L6:54:TYR:OH	43:L6:57:HIS:HB2	2.55	0.51
43:L6:51:ARG:NH1	50:M4:114:ASP:OD2	2.43	0.51
52:M6:61:ALA:HA	52:M6:70:PRO:HD2	1.91	0.51
6:S4:115:THR:OG1	6:S4:117:GLU:N	2.42	0.51
6:S4:125:LYS:H	6:S4:142:HIS:HD2	5.23	0.51
35:SM:48:ARG:HA	36:5:1019:G:OP1	335.17	0.51
34:SR:289:ALA:HA	34:SR:305:TYR:HA	1.92	0.51
36:1:2358:A:H2'	36:1:2359:C:O4'	2.11	0.51
36:1:2512:C:N4	36:1:2513:U:O4	2.42	0.51
36:1:494:G:OP1	36:1:494:G:H3'	2.10	0.51
1:2:1374:C:H2'	1:2:1375:A:H8	1.74	0.51
1:2:17:C:H2'	1:2:18:C:C6	2.46	0.51
38:4:126:A:O2'	38:4:128:U:OP1	2.28	0.51
36:5:2816:G:C8	36:5:2869:U:H3'	2.45	0.51
36:5:547:G:C6	36:5:548:G:H1'	2.45	0.51
1:6:1068:C:H2'	1:6:1069:A:H8	1.75	0.51
12:C0:7:ASP:OD2	12:C0:10:LYS:NZ	4.10	0.51
14:C2:29:LYS:HE2	14:C2:100:TRP:NE1	2.62	0.51
19:C7:108:ASP:HA	19:C7:111:LYS:HE3	4.68	0.51
22:D0:106:ILE:HG13	22:D0:107:THR:H	1.75	0.51
4:S2:229:LEU:HD12	23:D1:13:VAL:HG13	4.17	0.51
26:D4:78:SER:HB3	26:D4:81:GLU:HB2	1.93	0.51
28:D6:70:LYS:HG2	28:D6:72:HIS:CE1	5.65	0.51
44:L7:178:ILE:HA	44:L7:183:ASP:HB3	2.16	0.51
46:L9:116:ASN:OD1	46:L9:119:GLY:HA2	2.09	0.51
36:1:3186:A:O2'	46:L9:23:ARG:NH2	2.43	0.51
47:M0:50:VAL:HG22	47:M0:167:LEU:HD23	1.92	0.51
54:M8:73:GLN:HB2	54:M8:76:ALA:HB2	2.96	0.51
57:N1:57:TYR:CD1	57:N1:89:LEU:HD21	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:N8:24:LYS:HD2	64:N8:26:ARG:HH21	1.76	0.51
71:O5:83:LYS:HG2	73:O7:73:ARG:HH12	4.11	0.51
71:O5:85:THR:O	71:O5:89:ARG:HD3	2.10	0.51
2:S0:37:VAL:HG22	2:S0:149:LEU:HD13	3.36	0.51
2:S0:57:LEU:HD11	2:S0:173:ILE:HG23	1.91	0.51
2:S0:140:ASN:HD22	4:S2:62:PRO:HD3	3.33	0.51
5:S3:72:LEU:HG	12:C0:20:VAL:HG21	2.48	0.51
36:1:139:G:H2'	36:1:140:C:O4'	2.11	0.51
36:1:1566:A:H61	36:1:1571:A:H61	1.58	0.51
36:1:2168:A:C6	36:1:2170:U:H1'	2.44	0.51
36:1:507:U:H2'	36:1:508:U:C6	2.44	0.51
1:2:542:A:H5''	1:2:544:A:C8	2.45	0.51
36:5:1110:U:H2'	36:5:1111:U:C6	2.45	0.51
36:5:3276:G:OP2	36:5:3276:G:H2'	2.10	0.51
64:N8:67:HIS:NE2	36:5:71:A:OP2	119.77	0.51
36:5:887:G:H2'	36:5:888:A:C8	2.45	0.51
21:C9:89:ARG:NH2	1:6:1562:G:OP1	376.81	0.51
13:C1:83:THR:HG21	1:6:325:G:H4'	290.59	0.51
12:C0:44:LYS:HE3	1:6:1217:A:H4'	427.72	0.51
12:C0:46:LEU:O	12:C0:50:THR:HG22	2.09	0.51
14:C2:52:LEU:O	14:C2:85:LYS:NZ	2.34	0.51
1:2:919:A:H5'	16:C4:18:ARG:HH12	1.75	0.51
16:C4:21:ALA:HA	16:C4:26:THR:HG22	2.22	0.51
16:C4:89:THR:O	16:C4:89:THR:OG1	2.22	0.51
18:C6:14:LYS:O	18:C6:123:ARG:NH1	2.43	0.51
18:C6:58:ASP:C	18:C6:60:PHE:H	2.14	0.51
22:D0:71:PRO:O	22:D0:72:ASN:ND2	4.97	0.51
25:D3:6:PRO:HG3	25:D3:14:LYS:HG2	1.92	0.51
1:2:1796:C:P	28:D6:5:ARG:HH12	2.33	0.51
1:2:1433:G:N1	31:D9:45:GLU:OE2	2.42	0.51
40:L3:37:ARG:HG2	40:L3:187:SER:H	4.62	0.51
40:L3:238:LEU:HB3	40:L3:242:THR:HG21	2.11	0.51
42:L5:107:ARG:O	42:L5:111:GLN:HB2	2.41	0.51
42:L5:155:THR:HA	42:L5:179:ARG:HA	1.92	0.51
42:L5:40:HIS:HE1	42:L5:42:ALA:HB3	4.53	0.51
43:L6:41:ILE:HB	43:L6:85:ILE:HB	2.20	0.51
44:L7:39:GLU:O	44:L7:43:ILE:HG13	2.10	0.51
47:M0:99:ILE:HD12	47:M0:123:HIS:ND1	3.43	0.51
49:M3:141:ALA:O	49:M3:145:PHE:N	2.47	0.51
51:M5:175:ASN:HB2	51:M5:180:PHE:CE1	2.46	0.51
61:N5:135:ILE:HD11	61:N5:138:ARG:HH11	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:N9:23:LYS:HB3	65:N9:24:PRO:CD	3.78	0.51
67:O1:13:THR:HG22	67:O1:72:ARG:HH21	6.23	0.51
74:O8:43:PHE:HB2	74:O8:54:LEU:HB3	1.91	0.51
78:Q2:105:GLN:HB2	78:Q2:106:PHE:CE1	3.88	0.51
36:1:1110:U:OP1	54:M8:164:ARG:NH2	2.39	0.51
36:1:1488:G:C2	36:1:1489:A:C8	2.99	0.51
36:1:47:C:OP2	36:1:48:A:O2'	2.29	0.51
36:1:846:A:H2'	36:1:847:A:O4'	2.11	0.51
1:2:1504:G:H21	1:2:1563:C:H1'	1.75	0.51
1:2:997:G:H2'	1:2:998:A:O4'	2.10	0.51
57:N1:130:ARG:HD3	36:5:1098:A:OP2	255.61	0.51
36:5:1493:G:OP2	36:5:1493:G:N2	2.41	0.51
1:6:1767:G:OP1	1:6:1770:U:H4'	2.11	0.51
1:6:560:U:H2'	1:6:561:G:C8	2.45	0.51
38:8:26:U:H2'	38:8:27:U:C6	2.45	0.51
17:C5:64:LYS:NZ	17:C5:90:ILE:O	2.43	0.51
19:C7:27:ASP:O	19:C7:31:ASN:ND2	2.66	0.51
19:C7:3:ARG:O	19:C7:5:ARG:NH1	2.43	0.51
20:C8:29:VAL:HG23	20:C8:30:TYR:CD1	5.19	0.51
24:D2:77:PRO:O	24:D2:79:PHE:N	2.43	0.51
28:D6:23:CYS:HB3	28:D6:28:LYS:H	1.75	0.51
40:L3:173:GLN:O	40:L3:175:LYS:N	2.40	0.51
36:1:3243:A:H4'	40:L3:95:THR:HG22	1.92	0.51
41:L4:33:ASP:O	41:L4:37:THR:HG23	2.12	0.51
42:L5:34:LYS:HA	57:N1:27:LEU:HD11	2.78	0.51
36:1:2585:G:H8	45:L8:48:ARG:HG3	1.75	0.51
46:L9:171:ASP:OD1	46:L9:173:ARG:HD3	2.13	0.51
48:M1:7:ASN:N	48:M1:8:PRO:HD3	2.61	0.51
51:M5:16:SER:OG	51:M5:19:LEU:HB2	2.47	0.51
36:1:674:G:O6	54:M8:56:LYS:NZ	2.41	0.51
61:N5:58:ASP:OD2	61:N5:60:TYR:N	2.40	0.51
72:O6:55:ARG:O	72:O6:58:ILE:HD13	2.11	0.51
78:Q2:8:ARG:HH22	78:Q2:70:LEU:HD12	5.97	0.51
7:S5:97:LEU:O	7:S5:99:MET:N	2.43	0.51
10:S8:42:ARG:HB3	10:S8:58:LEU:O	2.10	0.51
36:1:1471:U:H2'	36:1:1472:U:C6	2.44	0.51
36:1:2539:C:H5'	36:1:2541:U:O4	2.10	0.51
36:1:2882:U:H2'	36:1:2883:U:C6	2.46	0.51
36:1:3016:A:H2'	36:1:3017:A:C8	2.46	0.51
36:1:718:G:C2	36:1:721:G:H1'	2.44	0.51
74:O8:42:LYS:NZ	36:5:1748:G:OP2	143.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3295:A:H2'	36:5:3296:A:C8	2.46	0.51
36:5:348:A:N3	36:5:352:A:O2'	2.42	0.51
36:5:352:A:H61	36:5:365:A:H5''	1.74	0.51
51:M5:172:ARG:NH2	36:5:63:A:OP1	104.23	0.51
1:6:1370:U:H4'	1:6:1371:A:H4'	1.91	0.51
1:6:1564:U:H2'	1:6:1565:C:C6	2.46	0.51
1:6:482:U:H2'	1:6:483:A:H8	1.74	0.51
42:L5:33:ARG:HD2	37:7:7:G:OP1	272.49	0.51
21:C9:28:LEU:HD12	21:C9:29:GLU:H	1.76	0.51
45:L8:157:VAL:HG12	36:5:147:U:C4	127.98	0.51
46:L9:49:ASN:HD21	46:L9:52:LEU:HB2	1.76	0.51
56:N0:74:ASN:HD22	56:N0:135:VAL:HG21	1.76	0.51
57:N1:39:ILE:HD11	57:N1:102:ARG:HD3	1.91	0.51
64:N8:47:LYS:HE2	64:N8:48:TYR:CE2	2.44	0.51
68:O2:79:VAL:HG13	68:O2:111:ARG:HG2	3.04	0.51
38:4:87:G:OP2	71:O5:7:TYR:OH	2.28	0.51
72:O6:80:PHE:O	72:O6:84:LYS:N	2.30	0.51
78:Q2:63:LYS:HD2	78:Q2:87:ARG:CZ	2.40	0.51
2:S0:60:ALA:O	2:S0:64:ILE:HG13	2.40	0.51
3:S1:113:MET:HE3	3:S1:211:HIS:CD2	4.72	0.51
3:S1:171:ILE:HA	3:S1:174:LYS:HZ2	1.74	0.51
4:S2:225:LEU:HD22	4:S2:230:TRP:HD1	1.75	0.51
5:S3:222:VAL:HG11	34:SR:229:LYS:HA	3.17	0.51
7:S5:59:VAL:HG12	7:S5:60:ASP:H	2.24	0.51
8:S6:98:ARG:HD3	8:S6:99:GLY:N	2.32	0.51
34:SR:244:ALA:HB2	34:SR:292:LEU:HB3	5.88	0.51
36:1:532:A:H2	36:1:560:G:H22	1.58	0.51
36:1:619:A:H5'	36:1:620:U:OP1	2.11	0.51
37:3:11:A:H4'	37:3:13:A:C8	2.46	0.51
36:5:1093:A:N3	36:5:1096:U:N3	2.58	0.51
36:5:2218:G:H2'	36:5:2219:A:H8	1.75	0.51
36:5:3242:G:N2	36:5:3245:A:H5''	2.26	0.51
1:6:1218:G:O4'	1:6:1444:A:N6	2.42	0.51
21:C9:72:GLY:HA3	1:6:1498:G:H5''	423.12	0.51
27:D5:77:ARG:HD2	1:6:1532:U:OP2	358.92	0.51
13:C1:123:VAL:HG22	13:C1:142:VAL:HG22	3.86	0.51
16:C4:87:GLY:HA3	16:C4:120:PRO:HG2	2.79	0.51
22:D0:109:GLU:HB3	22:D0:112:VAL:HB	1.93	0.51
41:L4:141:ARG:N	41:L4:177:ASP:OD1	3.14	0.51
45:L8:57:ARG:HG2	45:L8:61:GLN:NE2	2.26	0.51
49:M3:76:THR:HG23	49:M3:101:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:N2:33:TYR:CE2	58:N2:63:VAL:HG21	2.46	0.51
62:N6:79:ALA:HB1	62:N6:98:ASN:HB3	1.92	0.51
74:O8:11:PHE:HD1	74:O8:12:LEU:HD22	1.78	0.51
75:O9:8:ARG:O	75:O9:12:LYS:HG3	2.11	0.51
75:O9:9:ILE:HG22	75:O9:13:MET:HE2	1.93	0.51
2:S0:157:ASP:OD2	23:D1:60:ARG:NH2	2.44	0.51
9:S7:50:ASP:HA	9:S7:56:LYS:HA	1.92	0.51
36:1:1747:G:O2'	74:O8:3:ARG:O	2.28	0.51
36:1:3117:C:H2'	36:1:3118:C:O4'	2.11	0.51
1:2:1529:C:OP1	7:S5:112:ARG:NH1	2.34	0.51
1:2:886:U:O2'	16:C4:121:VAL:O	2.27	0.51
36:5:1464:G:N2	36:5:1466:G:H3'	2.26	0.51
39:L2:241:ARG:HG3	36:5:2155:G:OP1	223.21	0.51
36:5:2827:U:H1'	36:5:2828:G:N7	2.25	0.51
36:5:3159:C:H2'	36:5:3160:U:C6	2.45	0.51
36:5:90:C:H2'	36:5:91:G:H5'	1.91	0.51
37:7:27:A:H2'	37:7:28:C:C6	2.45	0.51
26:D4:42:GLU:HG3	26:D4:52:LYS:HD3	1.93	0.51
28:D6:82:ARG:NH1	1:6:1153:G:OP1	333.46	0.51
39:L2:140:ASN:ND2	39:L2:142:ASP:HB3	6.21	0.51
48:M1:16:LYS:HG2	48:M1:130:VAL:HG13	2.85	0.51
61:N5:86:VAL:HG21	61:N5:95:ILE:HG12	2.65	0.51
69:O3:30:ILE:HB	69:O3:81:VAL:HG12	1.93	0.51
69:O3:44:TYR:HA	69:O3:47:LYS:HG3	2.10	0.51
38:4:41:A:O2'	73:O7:59:THR:HG22	2.10	0.51
2:S0:148:ASP:HB2	2:S0:164:ASN:ND2	2.25	0.51
4:S2:106:ASP:OD1	4:S2:108:ASN:N	2.55	0.51
4:S2:106:ASP:OD2	4:S2:110:HIS:ND1	2.43	0.51
2:S0:109:ASN:H	4:S2:64:LYS:NZ	3.91	0.51
5:S3:164:VAL:O	5:S3:168:ILE:HG12	3.52	0.51
11:S9:131:GLN:O	11:S9:132:ARG:HG2	3.61	0.51
36:1:1235:U:H4'	36:1:1236:G:H5'	1.93	0.51
36:1:1636:U:H3	36:1:1710:C:H4'	1.75	0.51
36:1:2403:G:O2'	36:1:2404:A:H5''	2.10	0.51
36:1:2891:U:O2'	36:1:3014:U:OP1	2.26	0.51
1:2:1087:A:H2'	1:2:1088:A:C8	2.45	0.51
1:2:1621:U:H2'	1:2:1622:G:C8	2.46	0.51
36:5:1024:G:N2	36:5:1026:A:OP2	2.43	0.51
36:5:1070:U:C4	36:5:1071:U:C4	2.99	0.51
36:5:1560:G:H2'	36:5:1561:G:C8	2.46	0.51
1:6:103:A:H4'	1:6:104:A:O5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:452:A:H3'	1:6:453:U:C5	2.45	0.51
38:8:83:C:H4'	38:8:85:G:N3	2.25	0.51
1:2:1795:U:H3'	28:D6:5:ARG:HH12	1.74	0.51
40:L3:304:THR:OG1	40:L3:305:ILE:N	2.44	0.51
43:L6:156:LYS:O	43:L6:160:SER:OG	2.26	0.51
63:N7:78:ASN:OD1	66:O0:35:ARG:NH2	2.69	0.51
36:1:1846:C:OP1	36:1:1849:C:N4	2.35	0.51
36:1:1953:G:N2	36:1:2093:A:N7	2.54	0.51
36:1:2507:C:H2'	36:1:2508:U:C6	2.46	0.51
1:2:765:G:O6	11:S9:82:ARG:NH1	2.44	0.51
1:2:895:G:H1	1:2:917:U:H3	1.57	0.51
37:3:19:C:H2'	37:3:20:A:C8	2.45	0.51
36:5:1468:A:N1	36:5:1880:U:O2'	2.43	0.51
36:5:3112:G:O6	36:5:3120:C:H5''	2.10	0.51
53:M7:69:ARG:HD3	36:5:3308:C:O2	186.31	0.51
1:6:16:G:H2'	1:6:17:C:C6	2.46	0.51
12:C0:1:MET:HG2	12:C0:2:LEU:H	1.76	0.51
17:C5:119:PHE:HE1	20:C8:119:ILE:HG22	2.27	0.51
20:C8:90:ASN:O	20:C8:92:ILE:N	2.43	0.51
25:D3:56:LYS:NZ	25:D3:96:VAL:O	5.69	0.51
39:L2:70:ARG:HH21	39:L2:72:ARG:NH2	8.51	0.51
42:L5:261:THR:H	42:L5:264:GLN:HB2	1.75	0.51
36:1:1334:U:H5''	44:L7:206:LYS:HB3	1.93	0.51
45:L8:145:ASN:HB3	45:L8:147:LYS:HD3	1.93	0.51
52:M6:180:SER:OG	52:M6:181:ALA:N	3.65	0.51
53:M7:67:ILE:HG13	53:M7:82:ARG:CZ	2.40	0.51
54:M8:133:LYS:HB2	54:M8:135:GLN:HE22	1.76	0.51
55:M9:168:ALA:HB1	55:M9:172:ARG:NH1	2.25	0.51
61:N5:114:VAL:HB	75:O9:10:LYS:HZ3	2.15	0.51
2:S0:179:ARG:HD3	2:S0:183:ARG:HH11	1.76	0.51
7:S5:81:ARG:HG2	7:S5:82:PHE:CE2	3.70	0.51
10:S8:138:ASN:HA	10:S8:141:ARG:HB2	2.95	0.51
10:S8:117:TYR:CD1	10:S8:150:ALA:HB2	2.46	0.51
35:SM:57:ASN:O	35:SM:61:ILE:HG22	5.22	0.51
36:1:1204:A:N6	36:1:1300:G:O2'	2.41	0.51
36:1:2724:U:OP1	57:N1:57:TYR:OH	2.18	0.51
36:1:3197:G:H2'	36:1:3198:U:H5''	1.93	0.51
36:1:96:G:H5'	49:M3:15:ARG:CZ	2.41	0.51
1:2:1160:A:H2'	1:2:1161:C:C6	2.46	0.51
1:2:1600:A:H4'	1:2:1601:G:OP1	2.10	0.51
36:5:1699:A:H2'	36:5:1700:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1773:C:H2'	36:5:1774:C:H6	1.75	0.51
36:5:382:U:H3	36:5:387:A:H61	1.58	0.51
36:5:8:C:H2'	36:5:9:U:O4'	2.11	0.51
1:6:1553:G:N2	1:6:1555:A:H3'	2.25	0.51
15:C3:127:ARG:NH2	1:6:629:U:OP1	309.26	0.51
15:C3:109:LYS:HD2	1:6:975:C:H5''	284.05	0.51
24:D2:37:PHE:CD2	24:D2:103:ILE:HD12	2.46	0.51
33:E1:121:CYS:HB2	33:E1:132:LEU:HD21	1.93	0.51
41:L4:324:LEU:HG	41:L4:324:LEU:O	2.11	0.51
45:L8:100:GLU:OE2	45:L8:108:ARG:NH1	2.44	0.51
47:M0:86:HIS:O	47:M0:138:VAL:HA	2.33	0.51
51:M5:139:HIS:HB3	51:M5:142:ILE:HD13	1.92	0.51
62:N6:24:SER:OG	62:N6:75:ARG:NH1	3.24	0.51
5:S3:176:LEU:HB3	5:S3:181:VAL:HG12	1.93	0.51
34:SR:198:ASN:O	34:SR:215:GLY:HA3	2.11	0.51
1:2:166:C:OP1	8:S6:131:LYS:NZ	2.39	0.50
1:2:337:G:H1'	10:S8:10:LYS:HZ3	1.76	0.50
1:2:445:A:H61	1:2:462:G:H1'	1.76	0.50
36:5:2812:C:H2'	36:5:2813:A:C8	2.47	0.50
1:6:1695:G:H21	1:6:1706:C:N4	2.02	0.50
1:6:1699:G:N2	1:6:1702:A:H5''	2.21	0.50
25:D3:133:LEU:HD21	25:D3:137:LYS:HE3	1.92	0.50
28:D6:23:CYS:CB	28:D6:74:CYS:SG	4.37	0.50
40:L3:22:ALA:H	40:L3:272:TYR:HD1	1.59	0.50
41:L4:180:LYS:O	41:L4:184:SER:HB3	2.90	0.50
42:L5:60:ILE:HB	42:L5:80:SER:HB3	2.83	0.50
42:L5:65:ILE:HD13	42:L5:74:VAL:HB	5.76	0.50
46:L9:89:LYS:HG2	46:L9:145:VAL:HG22	2.47	0.50
51:M5:150:TRP:CH2	51:M5:151:ILE:HG12	2.46	0.50
51:M5:190:THR:HG22	51:M5:193:ARG:HH21	4.75	0.50
58:N2:41:ILE:HG12	58:N2:79:LEU:HD13	1.93	0.50
62:N6:42:GLN:O	62:N6:125:LYS:HG3	2.68	0.50
67:O1:25:PHE:HD2	67:O1:28:ARG:HD2	1.75	0.50
4:S2:144:TRP:CE2	4:S2:173:PRO:HG3	2.73	0.50
5:S3:21:LEU:HD22	5:S3:25:PHE:CE2	2.45	0.50
36:1:1128:U:OP1	47:M0:4:ARG:NH2	2.39	0.50
1:2:1241:G:H5'	17:C5:102:PHE:CZ	2.46	0.50
1:2:1244:A:O2'	1:2:1245:G:OP1	2.26	0.50
1:2:1548:G:OP1	17:C5:18:ARG:NH2	2.44	0.50
1:2:1609:U:OP2	18:C6:14:LYS:NZ	2.45	0.50
1:2:186:C:H3'	1:2:187:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:O4:10:ARG:O	36:5:1488:G:O2'	140.15	0.50
36:5:1624:G:H2'	36:5:1625:A:C8	2.47	0.50
3:S1:65:VAL:HG12	1:6:920:U:H5''	265.45	0.50
38:8:145:U:H2'	38:8:146:U:C6	2.47	0.50
15:C3:101:HIS:HA	15:C3:104:ARG:HE	1.76	0.50
18:C6:122:ARG:O	18:C6:123:ARG:NE	3.01	0.50
1:2:1498:G:H5''	21:C9:72:GLY:HA3	1.94	0.50
22:D0:18:GLN:O	22:D0:96:PRO:HA	2.10	0.50
25:D3:17:VAL:HG23	25:D3:20:ARG:NH2	4.26	0.50
25:D3:92:CYS:HA	25:D3:95:PHE:HD2	1.77	0.50
39:L2:83:HIS:NE2	39:L2:86:GLN:HB2	2.26	0.50
42:L5:160:PHE:CD2	42:L5:179:ARG:HB3	2.68	0.50
43:L6:13:GLU:OE1	68:O2:90:LYS:N	3.57	0.50
44:L7:96:PRO:HB2	44:L7:99:PRO:HD2	1.94	0.50
46:L9:122:LYS:HD3	46:L9:123:ILE:N	4.83	0.50
55:M9:11:ALA:O	55:M9:15:VAL:HG23	2.11	0.50
57:N1:56:PHE:CZ	57:N1:78:LYS:HD3	2.66	0.50
62:N6:87:LYS:HB2	62:N6:97:ILE:HG13	2.86	0.50
63:N7:38:PHE:O	63:N7:40:HIS:ND1	2.33	0.50
65:N9:14:ARG:HH12	65:N9:18:ARG:CZ	2.24	0.50
75:O9:21:ARG:NH1	75:O9:22:PRO:O	2.34	0.50
3:S1:195:LYS:O	3:S1:199:ASN:ND2	2.91	0.50
7:S5:65:ARG:HE	7:S5:65:ARG:HA	4.86	0.50
8:S6:173:PRO:HG3	1:6:66:U:C6	336.89	0.50
9:S7:12:ALA:HB3	9:S7:13:PRO:HD3	1.93	0.50
11:S9:5:PRO:HG3	1:6:380:U:C2	370.25	0.50
36:1:2567:C:H2'	36:1:2568:C:H5'	1.92	0.50
36:1:2726:C:O2'	36:1:2727:A:H2'	2.10	0.50
36:1:2760:C:N4	36:1:2796:G:O6	2.43	0.50
36:1:3060:C:O2	36:1:3332:U:O2'	2.15	0.50
1:2:1253:U:H5''	33:E1:130:VAL:HB	1.93	0.50
1:2:1307:U:O4	1:2:1318:G:N2	2.42	0.50
1:2:131:C:O2'	1:2:132:U:OP1	2.29	0.50
1:2:485:A:H2'	1:2:486:G:O4'	2.11	0.50
54:M8:164:ARG:NH2	36:5:1110:U:OP1	169.09	0.50
36:5:1838:G:H5''	36:5:1839:A:H5'	1.94	0.50
36:5:2251:G:H2'	36:5:2252:A:H5''	1.91	0.50
36:5:2655:U:H4'	36:5:2656:A:O4'	2.10	0.50
26:D4:11:LYS:HD3	1:6:784:C:H42	419.58	0.50
18:C6:125:GLU:HG2	18:C6:126:PRO:HD2	1.93	0.50
27:D5:46:LYS:HD3	27:D5:70:LYS:HD2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D6:88:SER:OG	28:D6:91:ASP:HB2	2.11	0.50
40:L3:233:TRP:CD1	40:L3:265:ALA:HB1	2.46	0.50
41:L4:145:ILE:HB	41:L4:150:LEU:HD12	1.93	0.50
41:L4:30:ILE:HA	41:L4:124:SER:HB3	3.16	0.50
41:L4:337:GLU:O	41:L4:339:LEU:N	2.45	0.50
42:L5:119:TYR:OH	42:L5:141:PRO:HD3	2.12	0.50
44:L7:214:TRP:O	44:L7:216:VAL:HG22	3.28	0.50
46:L9:20:ILE:HG12	46:L9:25:VAL:HG13	3.19	0.50
47:M0:191:LYS:HB3	47:M0:213:PHE:CE2	2.46	0.50
47:M0:65:LEU:HD23	47:M0:159:PHE:HZ	2.32	0.50
49:M3:126:PHE:CE2	49:M3:132:ALA:HB1	3.40	0.50
50:M4:70:PHE:HE2	50:M4:72:LEU:HD23	1.76	0.50
51:M5:93:LYS:NZ	36:5:2600:C:OP1	157.02	0.50
62:N6:37:LYS:H	62:N6:37:LYS:HD3	1.76	0.50
78:Q2:10:THR:HA	78:Q2:20:HIS:HD2	3.49	0.50
2:S0:144:ILE:HG23	2:S0:158:VAL:HG13	2.29	0.50
3:S1:149:GLN:HE21	3:S1:151:LYS:HG3	1.77	0.50
5:S3:150:MET:HE2	35:SM:110:TRP:HB3	1.93	0.50
10:S8:81:VAL:HB	10:S8:94:ASN:HA	1.93	0.50
34:SR:209:THR:HG22	34:SR:226:ALA:HB2	1.93	0.50
36:1:3384:U:H2'	36:1:3385:U:C6	2.47	0.50
36:1:422:A:C2	36:1:2363:A:H4'	2.47	0.50
36:1:944:C:O2'	68:O2:33:ARG:NH2	2.44	0.50
1:2:1686:C:H2'	1:2:1687:U:C6	2.47	0.50
1:2:412:A:H2	1:2:421:A:H61	1.59	0.50
36:5:1223:A:OP2	36:5:1223:A:H8	1.94	0.50
75:O9:2:ALA:N	36:5:1493:G:O6	122.58	0.50
36:5:1903:U:O5'	36:5:1903:U:H6	1.94	0.50
64:N8:27:LYS:NZ	36:5:801:A:OP1	155.06	0.50
1:6:1255:G:H4'	1:6:1256:A:OP1	2.11	0.50
1:6:20:G:H5'	1:6:571:G:C5	2.47	0.50
1:6:37:U:O2'	1:6:770:A:N1	2.34	0.50
1:6:982:U:O4	1:6:983:A:N6	2.44	0.50
17:C5:87:PRO:HD3	17:C5:112:LEU:HD22	1.93	0.50
23:D1:81:ASN:N	23:D1:81:ASN:OD1	2.72	0.50
26:D4:57:VAL:HG13	26:D4:60:PHE:HE2	1.76	0.50
31:D9:5:ASN:OD1	31:D9:7:TRP:NE1	2.37	0.50
14:C2:74:LEU:HD21	33:E1:106:TYR:HB3	2.32	0.50
39:L2:190:ARG:HH11	39:L2:191:LEU:HD11	1.75	0.50
40:L3:13:HIS:HB3	40:L3:16:PHE:HD1	1.93	0.50
44:L7:180:SER:OG	44:L7:183:ASP:N	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:76:MET:HB3	47:M0:85:PHE:CZ	3.55	0.50
48:M1:152:HIS:HD2	48:M1:153:LYS:H	4.80	0.50
49:M3:189:GLU:O	49:M3:192:GLU:HG2	2.11	0.50
41:L4:302:ALA:HB2	54:M8:39:ARG:NH1	3.29	0.50
36:1:1364:C:H5"	54:M8:3:ILE:CD1	2.41	0.50
61:N5:58:ASP:O	61:N5:62:VAL:HG23	2.27	0.50
74:O8:32:ASN:OD1	74:O8:36:LYS:N	2.88	0.50
36:1:2656:A:H4'	78:Q2:98:LYS:HD2	1.92	0.50
34:SR:42:LEU:HD21	34:SR:82:SER:HB3	1.93	0.50
36:1:2107:A:C2	36:1:3344:A:H8	2.29	0.50
1:2:1788:G:OP2	16:C4:132:ARG:NH1	2.43	0.50
36:5:119:U:H4'	36:5:120:G:H3'	1.92	0.50
36:5:1566:A:H2'	36:5:1567:U:H5'	1.93	0.50
36:5:2228:A:H2'	36:5:2229:A:C8	2.46	0.50
36:5:2584:G:H5'	36:5:2585:G:OP2	2.11	0.50
40:L3:251:CYS:SG	36:5:2944:U:H1'	225.57	0.50
1:6:263:C:H4'	1:6:292:U:H5'	1.93	0.50
1:6:492:A:H1'	1:6:496:G:H1	1.76	0.50
37:7:4:U:H2'	37:7:5:G:H8	1.77	0.50
38:8:81:U:H1'	38:8:82:U:H5"	1.93	0.50
1:2:896:U:H1'	16:C4:38:THR:HG21	1.93	0.50
24:D2:23:ARG:NH1	24:D2:66:ASN:HA	2.26	0.50
41:L4:358:THR:HG21	57:N1:148:PRO:HD2	1.92	0.50
45:L8:33:ASN:O	45:L8:35:GLY:N	3.14	0.50
46:L9:49:ASN:C	46:L9:51:GLN:H	2.15	0.50
47:M0:56:GLU:O	47:M0:58:GLU:HG3	4.08	0.50
36:1:2425:G:OP2	51:M5:90:ASN:ND2	2.45	0.50
55:M9:176:ARG:NE	55:M9:179:GLU:OE2	2.30	0.50
67:O1:75:ILE:HG12	67:O1:93:VAL:HG13	2.66	0.50
71:O5:54:VAL:HG12	71:O5:58:ILE:HD11	2.50	0.50
2:S0:38:PHE:HB2	2:S0:49:ASN:HB2	1.93	0.50
6:S4:31:PRO:HB2	6:S4:38:LEU:HD22	1.94	0.50
7:S5:124:LEU:O	27:D5:58:ARG:NH1	4.87	0.50
36:1:1240:A:H1'	36:1:1249:G:N2	2.25	0.50
36:1:1394:A:H2'	36:1:1395:G:O4'	2.11	0.50
36:1:2137:U:OP2	36:1:2142:A:N6	2.36	0.50
36:1:2219:A:H2'	36:1:2220:A:C8	2.47	0.50
36:1:2443:A:O2'	36:1:2444:C:H5'	2.11	0.50
1:2:1298:U:O2	4:S2:209:ASN:ND2	2.41	0.50
1:2:1688:U:H3	1:2:1713:G:H22	1.60	0.50
1:2:25:C:H4'	1:2:26:A:O5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:30:G:H5'	25:D3:126:LYS:HD2	1.93	0.50
36:5:2250:G:C2	36:5:2267:C:C2	3.00	0.50
36:5:2254:U:H2'	36:5:2261:G:N2	2.26	0.50
36:5:2493:U:H4'	36:5:2494:A:OP1	2.11	0.50
36:5:327:A:H2'	36:5:328:U:C6	2.47	0.50
72:O6:14:GLY:HA2	36:5:73:C:OP1	108.18	0.50
1:6:1159:C:H5''	1:6:1160:A:H5'	1.93	0.50
1:6:197:A:H2'	1:6:198:A:H8	1.76	0.50
13:C1:53:TYR:CG	13:C1:113:PRO:HG2	2.47	0.50
16:C4:28:VAL:HG23	16:C4:42:VAL:O	5.29	0.50
17:C5:127:ARG:O	35:SM:71:ASN:ND2	4.99	0.50
22:D0:22:ILE:HD12	22:D0:118:VAL:HA	1.94	0.50
24:D2:112:ASP:OD1	24:D2:114:GLU:HB3	2.81	0.50
1:2:1135:U:O4	25:D3:112:LYS:NZ	2.44	0.50
45:L8:134:TYR:CG	45:L8:190:VAL:HG21	2.47	0.50
45:L8:244:ALA:HA	45:L8:247:ASP:HB2	1.94	0.50
51:M5:35:VAL:HG13	51:M5:65:ARG:HG3	1.94	0.50
55:M9:11:ALA:HA	55:M9:41:ILE:HG21	2.13	0.50
67:O1:29:ALA:HB3	67:O1:30:PRO:HD3	1.94	0.50
36:1:315:C:OP2	72:O6:28:TYR:OH	2.30	0.50
2:S0:160:ILE:O	2:S0:162:CYS:N	2.45	0.50
4:S2:242:ILE:HG22	4:S2:243:TYR:CD2	2.83	0.50
8:S6:21:GLU:O	8:S6:25:ARG:HG3	4.53	0.50
36:1:230:U:H2'	36:1:231:G:O4'	2.12	0.50
36:1:2557:A:OP1	39:L2:69:TYR:OH	2.24	0.50
36:1:3159:C:H2'	36:1:3160:U:H6	1.74	0.50
36:1:796:U:H2'	36:1:797:U:C6	2.47	0.50
36:1:871:U:H2'	36:1:872:U:C6	2.47	0.50
36:1:873:C:H5''	36:1:874:U:O5'	2.12	0.50
36:1:979:U:H1'	36:1:980:A:C4	2.47	0.50
1:2:1503:A:H2'	1:2:1504:G:O4'	2.10	0.50
1:2:330:G:H2'	1:2:331:A:C8	2.47	0.50
1:2:683:C:H2'	1:2:684:A:C8	2.46	0.50
1:2:891:A:H2'	1:2:892:A:C8	2.46	0.50
36:5:2167:A:H2'	36:5:2168:A:C8	2.46	0.50
36:5:2869:U:H1'	36:5:2873:U:H5	1.77	0.50
36:5:501:A:H2'	36:5:502:U:C6	2.47	0.50
36:5:563:U:H2'	36:5:564:G:C8	2.46	0.50
36:5:595:G:H1	36:5:609:G:H5''	1.77	0.50
1:6:428:A:N3	1:6:440:U:O2'	2.41	0.50
1:6:542:A:C8	1:6:543:C:H2'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:646:C:H2'	1:6:647:G:C8	2.47	0.50
37:7:3:U:H2'	37:7:4:U:H6	1.77	0.50
12:C0:32:HIS:CG	12:C0:33:GLU:H	3.11	0.50
13:C1:93:TYR:HB2	13:C1:100:TYR:CE1	2.68	0.50
21:C9:49:ASP:O	21:C9:51:GLU:N	2.44	0.50
22:D0:37:VAL:HG21	22:D0:109:GLU:HB2	1.92	0.50
41:L4:89:ALA:C	41:L4:91:GLY:H	2.15	0.50
42:L5:257:GLU:O	42:L5:258:LYS:HB2	2.12	0.50
36:1:501:A:H5'	43:L6:28:GLN:NE2	2.27	0.50
36:1:3112:G:O2'	46:L9:70:THR:HB	2.12	0.50
47:M0:177:ASP:OD2	47:M0:177:ASP:N	3.30	0.50
47:M0:3:ARG:CZ	47:M0:63:GLU:HG3	2.41	0.50
51:M5:110:ALA:HB1	51:M5:113:LEU:HB2	1.92	0.50
52:M6:23:VAL:HG11	52:M6:84:LEU:HD11	2.23	0.50
57:N1:43:LYS:HG3	57:N1:58:GLN:HE22	1.77	0.50
61:N5:50:ALA:HB1	71:O5:66:VAL:HG11	2.35	0.50
38:4:83:C:H42	62:N6:52:ARG:HH22	1.58	0.50
68:O2:19:ARG:HE	68:O2:33:ARG:HB2	2.38	0.50
76:Q0:94:SER:N	76:Q0:103:LEU:O	2.42	0.50
79:Q3:75:ALA:O	79:Q3:79:VAL:HG23	2.12	0.50
2:S0:195:TRP:CZ2	2:S0:197:ILE:HD12	2.47	0.50
35:SM:43:ASP:OD1	35:SM:45:SER:OG	3.78	0.50
34:SR:114:ASP:OD1	34:SR:115:ILE:N	3.10	0.50
34:SR:5:GLU:HA	34:SR:317:THR:HA	2.59	0.50
36:1:1393:A:N3	36:1:1419:A:O2'	2.41	0.50
36:1:2162:U:OP1	39:L2:234:LYS:NZ	2.42	0.50
36:1:2617:U:H5	36:1:2621:G:OP2	1.94	0.50
36:1:3276:G:H5'	43:L6:48:ARG:NH2	2.26	0.50
36:1:437:G:O2'	36:1:438:A:H5'	2.11	0.50
36:1:587:U:C2'	36:1:588:G:H5'	2.42	0.50
38:4:127:U:C2'	38:4:128:U:H5'	2.41	0.50
36:5:3145:C:H2'	36:5:3146:G:H8	1.77	0.50
19:C7:2:GLY:N	1:6:1312:A:N7	397.01	0.50
1:6:1294:G:O2'	1:6:1321:A:N1	2.33	0.50
1:6:1524:A:H2'	1:6:1525:A:C8	2.47	0.50
1:6:192:U:H1'	1:6:193:U:C4	2.47	0.50
15:C3:101:HIS:ND1	1:6:950:C:O2'	283.31	0.50
18:C6:57:LEU:H	18:C6:57:LEU:HD12	4.16	0.50
17:C5:18:ARG:NH1	20:C8:90:ASN:HB3	2.26	0.50
33:E1:144:CYS:O	33:E1:146:SER:N	2.45	0.50
43:L6:30:LEU:HD13	43:L6:34:LEU:HD13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:L8:142:LEU:HD13	45:L8:201:THR:HG21	2.50	0.50
37:3:97:A:OP1	56:N0:40:ARG:NH1	2.44	0.50
62:N6:56:VAL:HG11	62:N6:104:LEU:HD13	2.01	0.50
66:O0:66:LYS:H	66:O0:66:LYS:HD2	4.02	0.50
46:L9:162:GLN:HE22	76:Q0:89:TYR:HD1	1.58	0.50
4:S2:94:GLN:HE22	4:S2:96:THR:HB	5.27	0.50
9:S7:99:LEU:HD23	9:S7:116:ARG:HB3	6.52	0.50
9:S7:117:THR:HB	9:S7:120:ALA:HB3	4.46	0.50
9:S7:21:ALA:O	9:S7:25:VAL:HG23	2.22	0.50
11:S9:149:ARG:HD2	1:6:765:G:C6	431.81	0.50
36:1:1238:C:H41	36:1:1245:A:P	2.35	0.50
36:1:1711:C:H2'	36:1:1712:G:O4'	2.12	0.50
36:1:1874:A:OP2	55:M9:21:LYS:NZ	2.45	0.50
36:1:2771:U:H2'	36:1:2772:C:C2	2.47	0.50
1:2:114:C:H6	1:2:114:C:H5'	1.76	0.50
1:2:72:A:O2'	1:2:73:U:H5''	2.11	0.50
38:4:71:A:N1	38:4:82:U:O2'	2.31	0.50
36:5:112:U:O2'	36:5:113:C:OP2	2.28	0.50
36:5:1222:G:OP2	36:5:1222:G:H8	1.95	0.50
36:5:1786:G:H2'	36:5:1787:A:C8	2.47	0.50
36:5:2298:U:O4	36:5:2923:U:H5	1.94	0.50
19:C7:48:ASN:ND2	1:6:1388:A:H5''	432.13	0.50
26:D4:109:LYS:NZ	1:6:459:G:OP1	359.69	0.50
1:6:800:U:H2'	1:6:801:G:H8	1.77	0.50
19:C7:29:GLN:HA	19:C7:32:LYS:HE2	2.35	0.50
20:C8:110:ARG:HB3	20:C8:110:ARG:HH11	1.77	0.50
22:D0:27:THR:HB	22:D0:88:LYS:HG2	2.38	0.50
26:D4:62:THR:HA	26:D4:69:SER:HA	2.08	0.50
27:D5:56:THR:H	27:D5:103:ARG:HH11	1.59	0.50
30:D8:13:ILE:HB	30:D8:29:ARG:HG2	5.44	0.50
39:L2:137:ILE:HD11	39:L2:147:ARG:HH11	3.17	0.50
41:L4:287:THR:O	41:L4:291:ASN:ND2	3.72	0.50
47:M0:38:LYS:HB3	47:M0:46:PHE:CE2	3.41	0.50
51:M5:124:ASP:OD2	51:M5:127:TYR:N	2.54	0.50
51:M5:47:LYS:O	51:M5:50:ARG:HG2	2.12	0.50
54:M8:185:LYS:HD3	54:M8:186:VAL:HG12	7.25	0.50
50:M4:38:ILE:HD12	56:N0:148:LEU:HD13	6.29	0.50
59:N3:17:LEU:HB2	59:N3:52:ALA:HB3	1.94	0.50
61:N5:129:ASP:HB2	61:N5:130:TYR:CD1	2.47	0.50
74:O8:50:SER:HB2	74:O8:52:TYR:CZ	2.46	0.50
36:1:2554:A:H62	79:Q3:62:LYS:NZ	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S4:43:PRO:HA	6:S4:82:TYR:O	2.12	0.50
1:2:159:U:O2'	8:S6:87:ARG:NH1	2.45	0.50
1:2:329:G:H5''	10:S8:98:LYS:HB3	1.94	0.50
11:S9:174:ARG:HE	11:S9:174:ARG:HA	1.76	0.50
36:1:1039:U:H2'	36:1:1040:A:C8	2.47	0.49
36:1:911:C:N4	39:L2:3:ARG:HD3	2.27	0.49
36:5:2103:U:H2'	36:5:2104:A:H8	1.77	0.49
1:6:1345:A:H2'	1:6:1348:A:H62	1.77	0.49
1:6:151:G:H22	1:6:163:G:N2	2.10	0.49
1:6:831:U:HO2'	1:6:832:U:H6	1.60	0.49
16:C4:114:ARG:HA	28:D6:62:TYR:CZ	2.47	0.49
22:D0:39:SER:HA	22:D0:42:VAL:HB	4.42	0.49
25:D3:109:ARG:O	25:D3:112:LYS:NZ	6.38	0.49
28:D6:40:ALA:HB1	28:D6:42:ARG:HH22	5.39	0.49
28:D6:9:GLY:HA3	28:D6:34:LYS:HE2	3.71	0.49
29:D7:42:ASN:HB2	29:D7:56:CYS:SG	6.26	0.49
1:2:1616:G:O2'	30:D8:18:ARG:NH1	2.44	0.49
44:L7:170:GLU:HG3	44:L7:179:LEU:HB3	1.93	0.49
46:L9:85:GLY:C	46:L9:187:ILE:HG13	2.32	0.49
48:M1:36:VAL:HG21	48:M1:123:PHE:HD2	1.76	0.49
48:M1:82:ARG:CG	48:M1:112:LEU:HB2	2.42	0.49
53:M7:138:LYS:NZ	36:5:2356:A:OP1	148.55	0.49
66:O0:100:ILE:HG13	66:O0:101:LEU:HD22	5.25	0.49
67:O1:11:GLU:HG2	67:O1:74:ARG:HB2	1.94	0.49
2:S0:79:ARG:NH1	2:S0:164:ASN:O	3.65	0.49
2:S0:59:LEU:HD12	23:D1:79:LEU:HD21	7.31	0.49
3:S1:170:GLU:HG3	3:S1:174:LYS:HE3	1.94	0.49
4:S2:154:LEU:HD12	4:S2:155:ALA:H	1.77	0.49
6:S4:129:VAL:HB	6:S4:139:VAL:HG12	1.93	0.49
6:S4:34:GLY:HA3	6:S4:83:PRO:HG3	2.05	0.49
35:SM:34:LYS:HA	35:SM:34:LYS:HE2	4.49	0.49
34:SR:248:ASN:ND2	34:SR:297:ASP:O	4.24	0.49
36:1:128:G:H2'	36:1:129:U:O4'	2.11	0.49
36:1:1567:U:O2	36:1:1571:A:N6	2.44	0.49
36:1:1734:G:H2'	36:1:1735:G:O4'	2.13	0.49
36:1:2309:A:H8	36:1:2309:A:OP1	1.95	0.49
36:1:29:C:H42	36:1:55:G:H1	1.58	0.49
1:2:248:U:H4'	13:C1:36:LYS:HD3	1.94	0.49
1:2:686:C:H2'	1:2:687:G:H8	1.76	0.49
36:5:224:C:H2'	36:5:225:C:H6	1.76	0.49
36:5:240:U:O2'	36:5:241:G:H8	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3280:U:HO2'	36:5:3281:U:H5''	1.76	0.49
28:D6:2:PRO:HB3	1:6:1142:A:H5''	351.67	0.49
26:D4:66:GLY:H	1:6:532:U:H5''	432.96	0.49
1:6:653:C:N4	1:6:677:G:H1	2.09	0.49
12:C0:27:PHE:CD1	12:C0:40:LEU:HD23	2.46	0.49
18:C6:114:ARG:O	18:C6:115:THR:HG22	4.42	0.49
2:S0:185:ARG:HG3	23:D1:47:PRO:HD3	1.93	0.49
39:L2:181:LYS:NZ	36:5:860:G:O5'	214.94	0.49
40:L3:227:GLU:HG3	40:L3:270:ARG:NE	4.43	0.49
46:L9:90:MET:HG2	46:L9:181:VAL:HG22	1.94	0.49
47:M0:47:PRO:HB3	47:M0:171:TRP:CZ2	2.47	0.49
49:M3:119:TYR:O	49:M3:123:ILE:HG23	2.12	0.49
54:M8:185:LYS:HG2	54:M8:186:VAL:HG23	1.93	0.49
61:N5:53:HIS:CE1	61:N5:56:ARG:HG2	2.47	0.49
66:O0:99:ASP:N	66:O0:99:ASP:OD2	2.45	0.49
36:1:1389:G:H5''	68:O2:101:SER:HB3	1.92	0.49
2:S0:71:GLU:O	2:S0:96:THR:HG22	2.13	0.49
3:S1:143:THR:HG21	3:S1:156:ALA:HB2	2.65	0.49
6:S4:153:ASN:OD1	8:S6:215:ARG:NH1	3.98	0.49
6:S4:192:ILE:HG13	6:S4:243:GLY:HA3	1.94	0.49
6:S4:47:PHE:CE2	6:S4:90:ILE:HD12	2.48	0.49
10:S8:67:TRP:HB3	10:S8:72:ILE:HD12	3.34	0.49
11:S9:132:ARG:HB2	11:S9:140:ILE:HG21	4.69	0.49
11:S9:150:LEU:O	11:S9:153:GLU:HB2	2.12	0.49
34:SR:319:ASN:N	34:SR:319:ASN:OD1	3.14	0.49
36:1:1635:G:N2	36:1:1638:A:OP2	2.32	0.49
36:1:216:G:H4'	62:N6:19:TYR:CZ	2.47	0.49
1:2:273:G:H1	1:2:283:U:H3	1.60	0.49
1:2:397:A:O3'	10:S8:50:GLY:HA2	2.12	0.49
1:2:762:A:P	11:S9:79:ARG:HH22	2.35	0.49
36:5:828:A:H2'	36:5:829:U:C6	2.47	0.49
36:5:926:A:H2'	36:5:927:C:C6	2.47	0.49
1:6:539:G:OP2	1:6:539:G:H8	1.96	0.49
38:8:149:A:H2'	38:8:150:G:C8	2.47	0.49
15:C3:132:VAL:HG23	15:C3:134:VAL:HG13	2.15	0.49
28:D6:41:ILE:HA	28:D6:67:THR:O	2.12	0.49
41:L4:206:LEU:HB2	41:L4:246:ARG:NE	2.27	0.49
42:L5:22:ARG:NH1	42:L5:28:THR:OG1	4.49	0.49
46:L9:112:ILE:HD11	46:L9:134:ILE:HD13	1.95	0.49
46:L9:163:GLN:HB3	46:L9:166:ARG:HH11	1.77	0.49
49:M3:100:ARG:O	49:M3:101:ARG:HB3	4.54	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M4:17:VAL:HG21	50:M4:74:ARG:HB2	1.94	0.49
51:M5:58:GLY:HA3	51:M5:142:ILE:HD11	1.93	0.49
57:N1:71:SER:HB3	57:N1:92:ARG:HA	3.32	0.49
65:N9:14:ARG:CZ	65:N9:18:ARG:HD2	2.62	0.49
68:O2:32:TRP:CZ2	68:O2:53:PRO:HD2	2.61	0.49
43:L6:172:HIS:CE1	69:O3:35:VAL:HG22	2.47	0.49
71:O5:14:LYS:NZ	71:O5:62:GLN:OE1	8.35	0.49
2:S0:57:LEU:HA	2:S0:160:ILE:HG12	3.84	0.49
11:S9:118:LEU:HD23	11:S9:158:PHE:CE1	3.20	0.49
34:SR:103:PHE:CD1	34:SR:138:GLY:HA2	3.07	0.49
36:1:1103:A:H2	54:M8:9:GLN:HE22	1.61	0.49
36:1:1306:G:C6	52:M6:62:THR:HA	2.47	0.49
36:1:1488:G:O2'	70:O4:10:ARG:O	2.29	0.49
36:1:1618:G:H4'	38:4:129:C:H1'	1.94	0.49
36:1:2662:G:H2'	36:1:2663:G:H8	1.77	0.49
36:1:546:C:H5'	36:1:547:G:O4'	2.12	0.49
1:2:1278:G:H5''	5:S3:185:LYS:HZ1	1.76	0.49
1:2:1464:G:O3'	18:C6:141:SER:OG	2.25	0.49
1:2:890:C:H2'	1:2:891:A:H8	1.77	0.49
36:5:746:A:H2'	36:5:747:A:C8	2.47	0.49
1:6:1469:A:H2'	1:6:1470:C:C6	2.47	0.49
28:D6:5:ARG:NH2	1:6:1795:U:OP2	339.37	0.49
1:6:766:U:H5'	1:6:767:U:H5''	1.95	0.49
1:6:827:C:H2'	1:6:828:U:H6	1.76	0.49
1:6:906:A:H2	1:6:998:A:HO2'	1.58	0.49
14:C2:57:ALA:HB3	14:C2:85:LYS:HZ1	1.77	0.49
21:C9:126:GLU:H	21:C9:126:GLU:CD	2.15	0.49
40:L3:123:TYR:CE2	40:L3:124:LYS:HG3	2.48	0.49
41:L4:9:HIS:HE1	41:L4:147:GLU:OE2	1.94	0.49
42:L5:114:GLY:O	42:L5:116:ASP:N	2.42	0.49
45:L8:130:TYR:CE1	45:L8:202:GLU:HB3	2.47	0.49
45:L8:41:GLN:HG3	45:L8:44:ARG:NH1	2.28	0.49
51:M5:106:VAL:HG11	51:M5:132:VAL:HG21	1.93	0.49
52:M6:51:LYS:HE2	52:M6:144:SER:OG	2.11	0.49
53:M7:29:THR:HG22	53:M7:87:SER:OG	2.12	0.49
54:M8:58:ASN:HB3	54:M8:144:ARG:NH2	2.27	0.49
61:N5:115:ARG:HG3	61:N5:119:THR:OG1	2.12	0.49
62:N6:58:VAL:HB	62:N6:63:LYS:O	2.30	0.49
36:1:1114:U:H5''	64:N8:22:ILE:HD13	1.93	0.49
68:O2:16:LYS:HE2	68:O2:18:LYS:NZ	4.13	0.49
2:S0:185:ARG:H	23:D1:45:ALA:H	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:41:ARG:HG2	2:S0:42:PRO:HD2	3.19	0.49
4:S2:69:ILE:HD11	4:S2:133:LYS:HB3	1.95	0.49
5:S3:40:ARG:HB2	5:S3:47:GLU:HB2	2.32	0.49
20:C8:145:ARG:HB2	35:SM:68:ARG:NH2	2.27	0.49
36:1:1080:A:OP1	42:L5:140:ARG:HD3	2.11	0.49
36:1:1354:G:O4'	43:L6:8:LYS:HD3	2.12	0.49
36:1:1692:U:O4	36:1:1693:C:N4	2.45	0.49
36:1:2662:G:H2'	36:1:2663:G:C8	2.48	0.49
36:1:2710:C:H2'	36:1:2711:C:C6	2.48	0.49
36:1:3006:A:H2'	36:1:3007:U:O4'	2.11	0.49
36:1:3308:C:N3	53:M7:69:ARG:NH1	2.60	0.49
36:1:3358:U:H2'	36:1:3359:A:O4'	2.13	0.49
1:2:1031:U:H4'	1:2:1032:G:OP2	2.12	0.49
1:2:1250:U:O2'	1:2:1251:U:OP1	2.24	0.49
1:2:12:U:H2'	1:2:13:C:C6	2.48	0.49
1:2:67:A:C2	1:2:69:G:H1'	2.46	0.49
36:5:1506:A:H1'	36:5:1848:G:O6	2.13	0.49
36:5:2541:U:H4'	36:5:2542:U:OP1	2.12	0.49
42:L5:48:LYS:NZ	36:5:2748:A:O3'	245.08	0.49
36:5:3218:A:H5''	36:5:3219:G:C5	2.47	0.49
36:5:595:G:C8	36:5:609:G:C6	3.01	0.49
54:M8:142:GLY:O	36:5:744:A:H4'	168.63	0.49
12:C0:23:ALA:O	12:C0:24:LYS:HB3	4.58	0.49
18:C6:89:LEU:HG	18:C6:105:LEU:HD23	2.19	0.49
30:D8:29:ARG:HA	30:D8:41:VAL:HA	1.94	0.49
42:L5:40:HIS:CD2	42:L5:42:ALA:H	2.24	0.49
45:L8:161:GLU:OE1	51:M5:26:ARG:NH1	2.78	0.49
51:M5:31:ARG:HG3	51:M5:129:TYR:OH	4.14	0.49
52:M6:12:LYS:HD3	52:M6:37:ARG:NH2	2.26	0.49
52:M6:171:LYS:O	52:M6:175:THR:HG22	2.45	0.49
59:N3:38:ALA:HB3	59:N3:59:MET:HB2	2.19	0.49
64:N8:116:GLY:HA2	64:N8:137:LYS:NZ	2.27	0.49
74:O8:62:ALA:O	74:O8:66:ILE:HG13	2.21	0.49
62:N6:77:LYS:NZ	75:O9:31:THR:OG1	4.50	0.49
2:S0:21:ASN:HB3	2:S0:24:LEU:HD13	1.93	0.49
5:S3:225:TYR:HE2	34:SR:191:ASP:HB2	1.78	0.49
10:S8:137:LYS:HD3	10:S8:137:LYS:H	1.78	0.49
36:1:1369:A:H5''	64:N8:21:ARG:HD2	1.95	0.49
36:1:1767:C:H2'	36:1:1768:U:H6	1.76	0.49
36:1:287:G:H5'	51:M5:179:LYS:O	2.12	0.49
36:1:290:G:H2'	36:1:291:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1942:U:O2'	36:1:3345:G:O2'	2.23	0.49
1:2:1182:U:H2'	1:2:1184:A:OP2	2.13	0.49
1:2:1487:A:OP1	31:D9:34:TYR:OH	2.22	0.49
1:2:372:G:H1'	1:2:612:U:O2	2.12	0.49
1:2:417:A:H4'	1:2:418:G:O5'	2.12	0.49
1:2:735:C:O2'	1:2:736:C:H5''	2.13	0.49
36:5:1483:G:C8	36:5:1485:G:C8	3.01	0.49
36:5:3154:C:O2'	36:5:3155:U:H3'	2.12	0.49
36:5:3245:A:H2	36:5:3246:G:N1	2.10	0.49
51:M5:84:PRO:HD2	36:5:44:U:OP1	167.10	0.49
41:L4:232:SER:O	36:5:694:C:H4'	100.77	0.49
1:6:50:C:N4	1:6:425:A:OP2	2.39	0.49
1:6:680:U:H2'	1:6:682:C:N4	2.27	0.49
1:2:1531:G:C5'	27:D5:81:ARG:HH22	2.26	0.49
40:L3:11:HIS:ND1	40:L3:234:GLY:O	2.45	0.49
41:L4:169:LEU:O	41:L4:172:VAL:N	3.03	0.49
41:L4:64:SER:OG	41:L4:73:ARG:O	2.99	0.49
36:1:1048:A:H2'	47:M0:22:TYR:CZ	2.46	0.49
47:M0:39:LYS:HA	47:M0:86:HIS:CD2	3.01	0.49
51:M5:204:LYS:HE3	36:5:82:C:H4'	109.70	0.49
52:M6:62:THR:H	52:M6:69:GLY:HA3	2.22	0.49
55:M9:164:LEU:HD13	55:M9:167:ARG:HD2	1.93	0.49
57:N1:14:MET:CE	57:N1:55:LYS:HB2	2.99	0.49
62:N6:38:GLU:HG3	62:N6:39:LEU:N	2.27	0.49
64:N8:6:THR:HG23	64:N8:8:THR:H	1.77	0.49
70:O4:44:CYS:HB2	70:O4:81:CYS:HB3	1.94	0.49
71:O5:24:LEU:HB3	71:O5:51:ILE:HG12	2.48	0.49
3:S1:137:ILE:HD13	3:S1:172:LEU:HB3	3.62	0.49
6:S4:125:LYS:HZ3	6:S4:157:ASN:HA	4.77	0.49
6:S4:96:ASN:N	6:S4:96:ASN:OD1	4.22	0.49
7:S5:77:TYR:CZ	7:S5:87:CYS:HB2	2.57	0.49
8:S6:135:PRO:HB2	8:S6:141:ILE:HD13	4.29	0.49
11:S9:23:ARG:NH1	11:S9:27:GLU:OE2	2.92	0.49
11:S9:85:VAL:HG12	11:S9:99:LEU:HD11	1.94	0.49
35:SM:48:ARG:HB3	35:SM:50:ASN:H	7.08	0.49
35:SM:49:LYS:N	36:1:1019:G:OP1	2.46	0.49
36:1:1632:A:C8	36:1:1644:C:H2'	2.47	0.49
1:2:1183:A:N6	1:2:1184:A:N1	2.60	0.49
1:2:283:U:H5''	8:S6:188:ARG:HD3	1.94	0.49
70:O4:4:ARG:HD2	36:5:1485:G:N2	153.45	0.49
36:5:1519:G:H2'	36:5:1520:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1042:G:H22	1:6:1076:A:H2	1.60	0.49
1:6:187:G:H8	1:6:187:G:O5'	1.96	0.49
1:6:218:A:H2'	1:6:219:A:H5''	1.94	0.49
14:C2:124:LYS:O	14:C2:126:TRP:N	2.41	0.49
17:C5:98:ASN:HB3	17:C5:120:SER:OG	2.12	0.49
19:C7:104:ASN:O	19:C7:106:THR:N	3.04	0.49
24:D2:77:PRO:HG2	24:D2:79:PHE:CZ	2.47	0.49
45:L8:161:GLU:HA	45:L8:164:VAL:HG22	2.09	0.49
36:1:267:G:N2	51:M5:50:ARG:O	2.45	0.49
55:M9:167:ARG:NH1	55:M9:167:ARG:HB3	5.08	0.49
56:N0:8:GLN:HE21	56:N0:62:ASN:HB2	2.79	0.49
68:O2:16:LYS:O	68:O2:17:PHE:HB2	4.64	0.49
76:Q0:77:ILE:HG13	76:Q0:78:ILE:N	4.72	0.49
2:S0:124:THR:HG22	2:S0:174:TRP:HE1	1.78	0.49
6:S4:160:VAL:HG13	6:S4:169:ILE:HG23	2.24	0.49
1:2:1587:A:O2'	7:S5:104:ASN:OD1	2.28	0.49
1:2:66:U:C5	8:S6:173:PRO:HG3	2.47	0.49
35:SM:64:LYS:HG3	35:SM:65:THR:HG23	5.81	0.49
36:1:999:G:N3	36:1:1002:A:N6	2.61	0.49
36:1:65:A:H3'	36:1:111:C:N4	2.27	0.49
36:1:1204:A:H2	36:1:2834:G:N3	2.10	0.49
36:1:1658:G:H2'	36:1:1659:U:H6	1.77	0.49
36:1:29:C:H4'	36:1:62:A:H4'	1.94	0.49
36:1:688:G:H2'	36:1:690:A:C8	2.47	0.49
1:2:1173:C:H2'	1:2:1174:C:H6	1.77	0.49
1:2:1179:G:H4'	35:SM:79:SER:O	2.13	0.49
1:2:343:C:H2'	1:2:344:A:H8	1.78	0.49
1:2:733:A:H4'	1:2:734:A:C5	2.47	0.49
36:5:1818:U:H2'	36:5:1819:U:O4'	2.12	0.49
36:5:3390:G:C2	36:5:3391:A:C8	3.01	0.49
36:5:586:C:H4'	36:5:1165:A:H5'	1.94	0.49
1:6:1208:A:H5''	1:6:1209:C:OP2	2.13	0.49
3:S1:152:ARG:NH2	1:6:1799:U:O2'	345.81	0.49
1:6:333:A:C6	1:6:334:G:C6	3.01	0.49
10:S8:54:LYS:NZ	1:6:334:G:OP2	296.53	0.49
1:6:729:G:O2'	1:6:730:G:O5'	2.25	0.49
15:C3:73:ARG:HD3	1:6:859:A:C6	331.47	0.49
13:C1:118:GLN:HG3	13:C1:121:ASP:OD2	2.12	0.49
13:C1:46:LYS:HG3	13:C1:50:GLU:CD	5.41	0.49
19:C7:109:LEU:O	19:C7:113:LEU:HB2	4.79	0.49
30:D8:42:ARG:HH12	30:D8:61:ARG:NH2	9.03	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L4:180:LYS:HA	36:5:1386:A:N3	119.19	0.49
42:L5:258:LYS:HE2	42:L5:260:PHE:O	6.17	0.49
42:L5:294:ALA:HB1	47:M0:217:PHE:HB3	1.94	0.49
44:L7:198:ALA:O	44:L7:201:PHE:HB3	2.34	0.49
36:1:1168:U:H1'	44:L7:209:ASN:ND2	2.28	0.49
46:L9:120:ASP:OD1	46:L9:124:ARG:NH2	2.47	0.49
46:L9:91:ARG:HG2	46:L9:182:SER:HB3	4.84	0.49
54:M8:13:SER:O	54:M8:15:HIS:N	3.68	0.49
55:M9:180:LYS:HB3	55:M9:180:LYS:HE3	1.55	0.49
60:N4:56:ARG:O	60:N4:60:LYS:N	2.46	0.49
61:N5:135:ILE:O	61:N5:139:ILE:HG22	2.13	0.49
71:O5:85:THR:HG22	71:O5:87:ALA:H	1.78	0.49
4:S2:103:VAL:HG12	4:S2:190:LEU:HD12	1.95	0.49
9:S7:86:GLN:HG2	9:S7:87:ASP:H	1.78	0.49
10:S8:167:ALA:HA	10:S8:183:ILE:HA	2.57	0.49
36:1:1722:U:H5''	55:M9:99:LEU:HD12	1.95	0.49
1:2:1344:A:H2'	1:2:1345:A:C8	2.48	0.49
1:2:1727:G:H21	10:S8:32:GLN:NE2	2.04	0.49
1:2:269:G:N7	8:S6:186:ARG:NH2	2.55	0.49
36:5:123:A:C6	36:5:150:A:C5	3.01	0.49
36:5:2255:A:O2'	36:5:2256:A:OP2	2.30	0.49
51:M5:179:LYS:O	36:5:287:G:H5'	125.40	0.49
36:5:3308:C:OP2	36:5:3309:G:N2	2.46	0.49
33:E1:134:ASN:O	1:6:1251:U:H5''	440.47	0.49
1:6:198:A:H2'	1:6:199:G:H5'	1.95	0.49
15:C3:120:SER:O	15:C3:124:ARG:HG3	2.18	0.49
18:C6:113:ASP:OD2	18:C6:116:LEU:N	2.78	0.49
25:D3:44:GLY:H	25:D3:78:LYS:NZ	2.74	0.49
33:E1:121:CYS:H	33:E1:130:VAL:HG11	6.71	0.49
39:L2:70:ARG:HH21	39:L2:72:ARG:HE	6.30	0.49
42:L5:22:ARG:HH21	42:L5:28:THR:HG1	1.58	0.49
44:L7:207:LEU:HB3	44:L7:243:MET:HB3	1.95	0.49
46:L9:10:ILE:HD13	46:L9:75:VAL:HG11	2.05	0.49
49:M3:126:PHE:HE2	49:M3:132:ALA:HB1	2.89	0.49
49:M3:165:SER:HB3	49:M3:168:ARG:HB3	2.39	0.49
52:M6:77:SER:HB2	52:M6:104:VAL:HG12	2.95	0.49
53:M7:65:SER:O	53:M7:66:SER:HB2	2.11	0.49
57:N1:14:MET:HE1	57:N1:55:LYS:HB2	2.85	0.49
36:1:40:A:H5''	64:N8:35:ALA:HB1	1.95	0.49
64:N8:83:PRO:HG2	64:N8:86:LYS:HD2	6.01	0.49
72:O6:5:THR:OG1	72:O6:7:ILE:HG12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:169:SER:O	2:S0:173:ILE:HG12	2.12	0.49
4:S2:69:ILE:HA	4:S2:72:LEU:HB2	1.95	0.49
5:S3:64:ARG:O	5:S3:68:GLU:HG3	2.11	0.49
6:S4:175:PHE:HE1	6:S4:225:VAL:HG11	2.21	0.49
8:S6:20:ASP:OD2	8:S6:23:ARG:N	6.26	0.49
8:S6:67:VAL:O	8:S6:68:LEU:HB2	2.37	0.49
34:SR:45:TRP:HA	34:SR:57:PRO:HA	1.95	0.49
36:1:1010:G:N2	47:M0:193:ASP:OD2	2.46	0.49
36:1:192:C:H2'	36:1:193:C:C6	2.47	0.49
36:1:3216:G:O6	36:1:3259:U:H2'	2.13	0.49
36:1:677:A:H4'	36:1:678:G:O5'	2.13	0.49
1:2:1483:A:C6	1:2:1484:G:C6	3.00	0.49
1:2:1556:A:OP1	17:C5:115:TYR:OH	2.26	0.49
36:5:1081:U:O2'	36:5:1082:U:OP2	2.26	0.49
36:5:3358:U:H2'	36:5:3359:A:H8	1.77	0.49
1:6:832:U:H2'	1:6:833:U:O4'	2.13	0.49
12:C0:58:GLN:HB3	12:C0:65:TYR:HB2	3.14	0.49
17:C5:47:ARG:NH2	1:6:1554:U:H5'	407.77	0.49
21:C9:28:LEU:HD13	21:C9:30:VAL:HG22	1.94	0.49
2:S0:184:LEU:HD12	23:D1:45:ALA:HB2	1.95	0.49
26:D4:29:HIS:NE2	26:D4:34:ASN:HA	2.28	0.49
26:D4:99:LYS:O	26:D4:101:GLU:N	2.46	0.49
42:L5:75:LEU:O	42:L5:112:LYS:NZ	2.28	0.49
47:M0:171:TRP:HE3	47:M0:178:ARG:HB3	1.78	0.49
47:M0:23:ASN:O	47:M0:25:ALA:N	2.45	0.49
49:M3:99:HIS:CD2	36:5:156:G:C8	81.17	0.49
36:1:388:G:H4'	53:M7:18:ARG:O	2.13	0.49
72:O6:61:ILE:HD11	72:O6:87:VAL:HG13	2.23	0.49
78:Q2:53:GLN:HE21	78:Q2:55:LYS:H	1.94	0.49
78:Q2:71:ARG:HH22	78:Q2:80:ARG:CZ	2.25	0.49
3:S1:126:THR:HG22	3:S1:136:ARG:HE	1.77	0.49
1:2:1681:A:H1'	8:S6:66:GLY:HA2	1.95	0.49
9:S7:131:PHE:HB3	9:S7:132:PRO:HD3	1.95	0.49
10:S8:84:HIS:CE1	10:S8:86:SER:HB2	2.48	0.49
34:SR:106:HIS:HD2	34:SR:110:VAL:HG22	2.20	0.49
36:1:2683:U:H2'	36:1:2684:C:H6	1.78	0.48
1:2:1068:C:H2'	1:2:1069:A:C8	2.48	0.48
1:2:196:G:C2	1:2:197:A:H1'	2.48	0.48
1:2:226:A:H2'	1:2:227:U:H5'	1.95	0.48
1:2:479:C:O2	1:2:510:G:N2	2.40	0.48
1:2:688:G:H2'	1:2:689:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:3:77:G:OP2	56:N0:50:LYS:HG2	2.13	0.48
36:5:1307:G:H1'	36:5:1308:A:C8	2.48	0.48
36:5:3198:U:H4'	36:5:3199:G:OP2	2.12	0.48
1:6:483:A:H61	1:6:504:U:H3	1.61	0.48
1:6:839:U:H2'	1:6:840:U:C6	2.48	0.48
38:8:78:G:H2'	38:8:79:A:O4'	2.12	0.48
13:C1:39:GLY:C	13:C1:41:GLY:H	2.17	0.48
14:C2:66:VAL:HG11	14:C2:71:ILE:HD13	1.95	0.48
15:C3:63:ALA:O	15:C3:67:THR:OG1	2.25	0.48
39:L2:140:ASN:HD21	39:L2:142:ASP:HB3	5.70	0.48
39:L2:213:GLY:HA2	36:5:2967:A:H5''	206.35	0.48
40:L3:232:ARG:HG2	40:L3:233:TRP:CD1	2.73	0.48
36:1:2395:G:H5''	40:L3:255:TRP:CD1	2.48	0.48
41:L4:346:LYS:HD2	41:L4:347:THR:H	6.59	0.48
41:L4:4:PRO:O	41:L4:5:GLN:HB2	2.13	0.48
45:L8:240:ASN:HA	45:L8:243:GLN:HB2	1.93	0.48
51:M5:120:TRP:CE3	36:5:269:G:H5'	133.29	0.48
51:M5:153:ASP:OD2	51:M5:154:PRO:HD2	2.12	0.48
45:L8:136:LEU:HD22	51:M5:3:ALA:HB2	2.15	0.48
57:N1:102:ARG:O	57:N1:105:PHE:HB3	2.13	0.48
62:N6:112:ASP:HB2	62:N6:115:ARG:HB2	1.94	0.48
64:N8:28:HIS:CD2	64:N8:32:ARG:HG2	2.86	0.48
74:O8:5:ILE:HG22	74:O8:54:LEU:HB2	1.94	0.48
6:S4:94:ALA:C	6:S4:96:ASN:H	2.15	0.48
7:S5:156:ARG:HA	7:S5:157:ARG:NH2	5.33	0.48
36:1:1495:U:H5	36:1:1835:A:N1	2.10	0.48
1:2:86:A:N3	1:2:147:A:H2	2.11	0.48
1:2:1623:C:H2'	1:2:1624:C:C6	2.49	0.48
37:3:68:C:H2'	37:3:69:C:H6	1.79	0.48
36:5:2397:A:OP1	36:5:2398:A:H4'	2.13	0.48
49:M3:35:ARG:NH1	36:5:685:G:OP1	82.65	0.48
1:6:5:U:H2'	1:6:6:G:H8	1.78	0.48
9:S7:177:THR:O	1:6:641:G:N2	393.22	0.48
13:C1:5:LEU:O	13:C1:7:VAL:N	2.46	0.48
15:C3:3:ARG:CZ	15:C3:3:ARG:HB2	2.42	0.48
17:C5:19:GLY:N	20:C8:93:THR:O	2.46	0.48
27:D5:43:ASP:O	27:D5:45:GLU:N	2.46	0.48
28:D6:24:VAL:HG11	28:D6:71:LEU:HD22	5.45	0.48
33:E1:93:HIS:HB3	33:E1:94:LYS:H	1.50	0.48
39:L2:182:ALA:HB2	36:5:2148:U:O2'	212.71	0.48
36:1:2688:U:N3	42:L5:17:GLN:O	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:L8:153:ILE:HA	45:L8:197:VAL:HG12	1.95	0.48
46:L9:77:ASN:HB3	46:L9:151:VAL:HG21	1.95	0.48
47:M0:208:ASN:O	47:M0:212:GLU:HB2	3.53	0.48
53:M7:26:PHE:CE1	53:M7:120:ASN:HA	2.48	0.48
53:M7:48:LEU:HB3	53:M7:88:VAL:HG13	2.12	0.48
57:N1:14:MET:HE2	57:N1:15:PHE:CE2	2.69	0.48
59:N3:120:LYS:N	59:N3:137:VAL:HG23	2.28	0.48
59:N3:15:LEU:O	59:N3:83:LYS:HG2	2.52	0.48
40:L3:57:VAL:HG11	60:N4:1:MET:HB3	4.84	0.48
64:N8:13:GLY:HA2	36:5:943:U:H3'	164.53	0.48
64:N8:73:LEU:HD11	64:N8:78:LEU:H	1.78	0.48
65:N9:14:ARG:HH12	65:N9:18:ARG:NH1	2.51	0.48
65:N9:23:LYS:HG3	65:N9:24:PRO:HD2	1.94	0.48
75:O9:11:GLN:NE2	38:8:45:C:O3'	92.43	0.48
2:S0:12:GLU:OE2	2:S0:12:GLU:N	2.45	0.48
2:S0:139:VAL:HG13	2:S0:141:ILE:HG13	1.94	0.48
3:S1:115:ARG:HH11	3:S1:115:ARG:HB3	5.66	0.48
3:S1:131:ASP:O	3:S1:133:TYR:N	2.45	0.48
6:S4:31:PRO:HD2	6:S4:38:LEU:HD13	2.74	0.48
8:S6:12:SER:HB3	8:S6:124:LEU:HD12	2.30	0.48
9:S7:28:GLU:OE1	9:S7:35:LYS:HG2	4.49	0.48
9:S7:50:ASP:HB3	9:S7:56:LYS:HG2	1.96	0.48
11:S9:114:TYR:HD1	11:S9:119:ALA:HB3	1.78	0.48
1:2:1427:A:OP2	35:SM:93:ARG:NH1	2.45	0.48
36:1:2403:G:N7	36:1:2870:C:H4'	2.28	0.48
36:1:2700:G:O2'	36:1:2705:A:N1	2.41	0.48
1:2:121:U:H1'	6:S4:33:ALA:HB3	1.95	0.48
1:2:918:U:H2'	1:2:919:A:C8	2.48	0.48
37:3:5:G:OP2	42:L5:27:LYS:NZ	2.40	0.48
44:L7:206:LYS:HB3	36:5:1334:U:H5''	237.88	0.48
1:6:1273:G:N7	1:6:1430:U:H3'	2.28	0.48
1:6:1509:C:H2'	1:6:1510:U:O4'	2.14	0.48
1:6:1:U:H1'	1:6:369:A:C8	2.48	0.48
1:6:328:A:H2'	1:6:329:G:O4'	2.13	0.48
1:6:654:C:H2'	1:6:655:G:H8	1.76	0.48
38:8:77:A:H2'	38:8:78:G:O4'	2.13	0.48
38:8:72:A:C2	38:8:89:A:H5'	2.48	0.48
14:C2:97:LEU:HA	14:C2:100:TRP:CE3	2.48	0.48
18:C6:4:VAL:HG12	18:C6:5:PRO:HD2	1.94	0.48
23:D1:83:TRP:CZ2	23:D1:85:TYR:HD2	3.46	0.48
29:D7:36:LYS:HE2	29:D7:43:ILE:HG22	4.98	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D0:82:TYR:CE1	31:D9:54:LYS:HD2	4.96	0.48
42:L5:34:LYS:O	42:L5:38:THR:HG23	2.14	0.48
51:M5:46:ASP:OD1	51:M5:50:ARG:NH2	2.58	0.48
52:M6:43:ILE:HB	52:M6:136:THR:HB	2.17	0.48
40:L3:262:TRP:N	52:M6:64:PHE:O	2.83	0.48
53:M7:39:TRP:H	53:M7:114:VAL:CG1	2.26	0.48
41:L4:290:ILE:HG23	54:M8:35:PHE:CE2	2.56	0.48
61:N5:56:ARG:O	61:N5:61:LYS:HD2	2.14	0.48
63:N7:22:LYS:HE2	63:N7:129:TRP:CH2	2.59	0.48
67:O1:78:LYS:HG2	67:O1:79:ARG:HH21	1.77	0.48
68:O2:21:HIS:CE1	68:O2:24:ARG:HD2	2.69	0.48
71:O5:96:GLU:HG2	71:O5:96:GLU:H	1.41	0.48
73:O7:31:LYS:O	73:O7:33:THR:HG22	2.13	0.48
1:2:1066:C:H1'	3:S1:146:GLN:HG2	1.95	0.48
5:S3:215:GLU:OE2	5:S3:215:GLU:N	3.20	0.48
6:S4:158:ASP:OD2	6:S4:174:LYS:NZ	2.46	0.48
6:S4:86:PHE:CD1	6:S4:87:MET:HG2	2.48	0.48
11:S9:159:ALA:O	11:S9:165:GLY:HA3	3.02	0.48
17:C5:120:SER:N	35:SM:57:ASN:HD21	2.11	0.48
34:SR:248:ASN:OD1	34:SR:249:ARG:N	4.66	0.48
36:1:2378:C:H2'	36:1:2379:U:C6	2.49	0.48
36:1:3343:G:N2	36:1:3361:G:H2'	2.28	0.48
36:1:789:A:H2'	36:1:790:U:H6	1.78	0.48
1:2:1151:A:H4'	1:2:1766:A:N7	2.28	0.48
1:2:25:C:OP2	1:2:26:A:H2'	2.14	0.48
1:2:711:U:H1'	1:2:712:G:H5'	1.94	0.48
36:5:188:U:H1'	36:5:208:C:H1'	1.96	0.48
36:5:2207:A:H2'	36:5:2208:A:O4'	2.14	0.48
36:5:2332:A:H2'	36:5:2333:C:O4'	2.13	0.48
36:5:3274:A:C3'	36:5:3275:U:H5''	2.42	0.48
1:6:1591:C:H2'	1:6:1592:A:C8	2.48	0.48
28:D6:86:VAL:HG12	1:6:1795:U:OP1	345.27	0.48
1:6:224:C:H2'	1:6:225:A:H8	1.78	0.48
44:L7:218:ARG:NH2	37:7:85:G:O3'	259.66	0.48
38:8:157:U:H3'	38:8:158:U:H3'	1.95	0.48
38:8:79:A:H2'	38:8:80:A:O4'	2.13	0.48
14:C2:125:ASN:HA	35:SM:168:ALA:HB3	6.31	0.48
15:C3:85:PRO:HG2	15:C3:129:TYR:CE2	2.69	0.48
16:C4:16:VAL:HG22	16:C4:33:LEU:HA	1.95	0.48
20:C8:127:HIS:ND1	20:C8:133:VAL:HG21	2.28	0.48
21:C9:61:VAL:HG21	21:C9:104:VAL:HG11	2.51	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:36:LYS:HB2	24:D2:110:ILE:HD12	1.94	0.48
24:D2:66:ASN:ND2	24:D2:66:ASN:H	2.12	0.48
26:D4:104:SER:OG	26:D4:107:GLN:HB2	3.46	0.48
27:D5:55:PRO:O	27:D5:56:THR:OG1	2.28	0.48
41:L4:186:LYS:O	41:L4:200:THR:N	2.96	0.48
41:L4:135:VAL:HA	41:L4:245:GLY:O	2.13	0.48
46:L9:49:ASN:O	46:L9:49:ASN:ND2	2.42	0.48
52:M6:177:LYS:O	52:M6:180:SER:N	2.47	0.48
53:M7:30:ARG:HA	53:M7:119:VAL:CG1	2.68	0.48
53:M7:32:THR:HA	53:M7:58:ILE:HG21	1.95	0.48
56:N0:80:ARG:HE	57:N1:156:TYR:HB2	1.77	0.48
64:N8:24:LYS:HD2	64:N8:26:ARG:NH2	2.28	0.48
64:N8:84:GLU:O	64:N8:87:ARG:HB2	2.71	0.48
66:O0:98:SER:OG	66:O0:99:ASP:N	2.47	0.48
67:O1:55:LEU:HD23	67:O1:95:PRO:HB3	1.94	0.48
71:O5:31:LEU:CD1	71:O5:47:VAL:HG11	2.44	0.48
2:S0:148:ASP:HB2	2:S0:164:ASN:HD21	1.79	0.48
3:S1:30:PHE:CZ	3:S1:94:LYS:HA	2.49	0.48
6:S4:191:ARG:HD3	6:S4:245:LYS:HB2	1.94	0.48
10:S8:59:ARG:NH2	1:6:1678:A:OP1	255.85	0.48
34:SR:106:HIS:CD2	34:SR:126:SER:HB2	2.73	0.48
36:1:2219:A:H2'	36:1:2220:A:H8	1.77	0.48
36:1:3341:U:O2'	36:1:3342:A:H5'	2.14	0.48
1:2:1198:G:O3'	31:D9:40:ARG:NH2	2.46	0.48
1:2:138:A:N6	1:2:266:A:H61	2.11	0.48
1:2:541:A:O2'	1:2:542:A:H4'	2.12	0.48
36:5:173:G:H1'	36:5:174:C:H5'	1.95	0.48
36:5:2499:U:H2'	36:5:2500:A:H8	1.78	0.48
36:5:2663:G:H2'	36:5:2664:C:O4'	2.13	0.48
36:5:2894:C:H2'	36:5:2895:G:C8	2.48	0.48
3:S1:146:GLN:NE2	1:6:1066:C:O4'	344.07	0.48
1:6:282:C:H2'	1:6:283:U:O4'	2.13	0.48
1:6:219:A:N6	1:6:843:U:C2	2.82	0.48
1:6:973:A:H2'	1:6:974:A:H8	1.77	0.48
14:C2:60:VAL:HG22	14:C2:122:VAL:HG22	2.07	0.48
17:C5:18:ARG:HD2	17:C5:36:LEU:O	2.68	0.48
20:C8:70:VAL:HA	20:C8:73:MET:HE2	1.94	0.48
24:D2:107:SER:HA	1:6:804:A:C8	369.38	0.48
1:2:687:G:H5'	24:D2:119:LYS:HG2	1.96	0.48
25:D3:59:ILE:HG21	25:D3:118:PRO:HD2	2.51	0.48
25:D3:130:VAL:HG21	25:D3:135:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:L5:146:LEU:HB3	36:5:2746:A:H2	260.76	0.48
43:L6:38:THR:HG23	43:L6:90:LYS:HE2	4.47	0.48
44:L7:132:PRO:HG2	44:L7:133:TYR:CE2	3.58	0.48
45:L8:84:ARG:N	45:L8:84:ARG:HE	2.12	0.48
46:L9:36:LYS:NZ	46:L9:152:GLU:OE1	3.97	0.48
47:M0:77:THR:O	47:M0:81:GLY:N	2.60	0.48
49:M3:57:VAL:HG13	49:M3:147:ILE:HD13	1.94	0.48
50:M4:115:PHE:O	50:M4:119:GLN:HG3	2.13	0.48
52:M6:181:ALA:O	52:M6:184:THR:HG22	2.13	0.48
54:M8:44:PHE:CD2	54:M8:134:GLY:HA3	2.49	0.48
44:L7:92:ILE:HD11	54:M8:4:ASP:N	2.27	0.48
54:M8:182:LYS:HE2	64:N8:55:LYS:O	2.13	0.48
68:O2:104:ASN:O	68:O2:108:ILE:HG13	2.16	0.48
68:O2:24:ARG:HG2	68:O2:25:TYR:CZ	2.77	0.48
72:O6:89:GLU:O	72:O6:93:ILE:HG12	2.14	0.48
76:Q0:97:ARG:HB2	76:Q0:120:GLN:O	2.14	0.48
4:S2:163:GLY:O	4:S2:165:VAL:N	4.06	0.48
5:S3:79:TYR:CD2	5:S3:84:ILE:HG13	2.49	0.48
8:S6:25:ARG:HA	8:S6:28:PHE:CD2	3.28	0.48
34:SR:93:ASP:HB2	34:SR:100:TYR:HE1	1.79	0.48
36:1:2403:G:H1'	36:1:2404:A:H8	1.79	0.48
36:1:3107:U:OP1	76:Q0:114:LYS:NZ	2.43	0.48
36:1:691:A:N1	38:4:28:C:O2'	2.38	0.48
1:2:1396:U:H2'	1:2:1397:U:C6	2.48	0.48
1:2:1492:A:O2'	1:2:1493:A:H8	1.96	0.48
36:5:1157:G:H2'	36:5:1158:A:O4'	2.14	0.48
36:5:1560:G:O2'	36:5:1561:G:OP1	2.32	0.48
36:5:1573:G:C6	36:5:1574:C:H1'	2.48	0.48
36:5:1856:C:H2'	36:5:1857:C:C6	2.49	0.48
36:5:2359:C:H6	36:5:2359:C:O5'	1.96	0.48
36:5:2812:C:H2'	36:5:2813:A:H8	1.79	0.48
36:5:2407:C:H1'	36:5:2818:U:O2	2.13	0.48
36:5:996:A:H2'	36:5:997:A:O4'	2.14	0.48
1:6:1091:A:H4'	1:6:1092:A:O5'	2.13	0.48
1:6:1533:C:H4'	1:6:1539:G:C6	2.49	0.48
1:6:27:U:H2'	1:6:28:A:H8	1.79	0.48
17:C5:121:ILE:HG22	17:C5:123:TYR:H	1.78	0.48
17:C5:22:LEU:HA	17:C5:25:LEU:HB2	3.78	0.48
18:C6:83:GLN:HE22	18:C6:119:ALA:HB2	1.79	0.48
19:C7:66:VAL:O	19:C7:69:ILE:HG12	2.13	0.48
21:C9:66:TYR:HA	21:C9:124:ILE:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D8:26:THR:O	30:D8:44:VAL:HG22	2.40	0.48
42:L5:132:THR:HG21	42:L5:170:GLY:HA2	1.95	0.48
47:M0:67:ALA:O	47:M0:71:CYS:HB3	3.19	0.48
49:M3:138:VAL:HG21	71:O5:119:LYS:H	1.77	0.48
51:M5:183:THR:O	51:M5:184:LYS:HB3	3.24	0.48
52:M6:12:LYS:HA	52:M6:40:GLU:O	2.14	0.48
61:N5:74:LYS:HE2	61:N5:74:LYS:HB3	4.49	0.48
67:O1:44:MET:O	67:O1:46:THR:N	2.76	0.48
70:O4:57:LEU:HB2	70:O4:61:GLN:HB2	1.95	0.48
2:S0:85:ALA:HA	2:S0:202:TYR:HD1	1.79	0.48
8:S6:173:PRO:HG3	1:6:66:U:C5	335.74	0.48
9:S7:4:PRO:N	9:S7:7:LYS:HE2	2.29	0.48
35:SM:41:SER:O	35:SM:43:ASP:N	2.35	0.48
34:SR:52:GLN:HG2	34:SR:53:LYS:HG2	2.79	0.48
36:1:1166:G:OP1	69:O3:73:ARG:NH1	2.46	0.48
36:1:1364:C:H5"	54:M8:3:ILE:HD13	1.96	0.48
36:1:1471:U:H2'	36:1:1472:U:H6	1.78	0.48
36:1:156:G:OP2	72:O6:25:LYS:HB3	2.14	0.48
1:2:1644:C:O2'	36:1:2255:A:N1	2.39	0.48
36:1:2665:U:H4'	36:1:2666:C:OP1	2.13	0.48
36:1:379:C:H2'	36:1:380:U:H6	1.77	0.48
36:1:541:U:H2'	36:1:542:G:H8	1.79	0.48
1:2:883:C:H2'	1:2:884:A:C8	2.48	0.48
1:2:884:A:H2'	1:2:885:G:C8	2.49	0.48
63:N7:48:ARG:NH2	36:5:1631:C:OP2	193.22	0.48
55:M9:124:TYR:OH	36:5:1721:U:OP2	229.83	0.48
36:5:1925:U:H5"	36:5:1926:C:H5	1.78	0.48
36:5:2667:A:N6	36:5:2687:G:H1'	2.29	0.48
41:L4:93:MET:HB2	36:5:658:G:N2	146.41	0.48
2:S0:31:VAL:HG11	1:6:1040:G:H5"	386.68	0.48
25:D3:7:ARG:HD2	1:6:1102:G:OP2	354.66	0.48
1:6:165:G:H2'	1:6:166:C:H5"	1.96	0.48
1:6:675:U:H2'	1:6:676:G:H8	1.77	0.48
38:8:102:U:H2'	38:8:103:G:C8	2.49	0.48
14:C2:54:ARG:O	14:C2:56:GLU:N	2.43	0.48
33:E1:109:ASP:O	33:E1:111:GLU:N	2.80	0.48
39:L2:56:ALA:HB2	39:L2:130:SER:HB3	2.45	0.48
39:L2:59:ALA:HB3	39:L2:76:PHE:HB2	2.68	0.48
41:L4:98:ARG:HG2	41:L4:99:MET:N	2.46	0.48
42:L5:107:ARG:HA	42:L5:107:ARG:HE	1.78	0.48
42:L5:144:VAL:HG12	42:L5:173:VAL:HG22	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:L5:233:ALA:O	42:L5:236:LEU:N	2.39	0.48
43:L6:26:ARG:HG2	43:L6:27:PRO:HD2	1.95	0.48
46:L9:86:TYR:CE2	46:L9:151:VAL:HG22	2.48	0.48
49:M3:131:LYS:HG3	49:M3:132:ALA:H	1.79	0.48
49:M3:54:LEU:N	49:M3:94:GLY:O	2.62	0.48
36:1:3227:A:O3'	50:M4:133:LYS:NZ	2.47	0.48
55:M9:81:ARG:HG3	55:M9:88:ARG:CZ	2.43	0.48
36:1:1898:G:OP1	59:N3:98:ASN:ND2	2.47	0.48
64:N8:126:LYS:HB3	64:N8:148:ILE:HD13	1.96	0.48
38:4:86:U:H2'	71:O5:7:TYR:HE2	1.78	0.48
73:O7:45:ARG:NH2	36:5:361:A:O3'	125.02	0.48
75:O9:21:ARG:CZ	75:O9:24:PRO:HG3	2.44	0.48
36:1:1094:U:O2'	36:1:1095:U:O5'	2.31	0.48
1:2:1528:U:OP1	7:S5:109:LYS:HG2	2.14	0.48
1:2:1701:A:H3'	1:2:1702:A:H5''	1.96	0.48
53:M7:138:LYS:NZ	36:5:2356:A:H5'	150.54	0.48
36:5:2451:G:N2	36:5:2496:C:O2	2.46	0.48
36:5:2885:C:N4	36:5:2886:U:O4	2.46	0.48
43:L6:69:PHE:CZ	36:5:3267:A:H2'	260.63	0.48
1:6:1515:A:H4'	1:6:1517:U:H5	1.78	0.48
10:S8:10:LYS:HE3	1:6:339:C:P	285.41	0.48
38:8:62:C:H4'	38:8:63:G:O5'	2.14	0.48
21:C9:61:VAL:O	21:C9:65:ILE:HG13	2.19	0.48
25:D3:107:PHE:CD2	25:D3:114:LYS:HB2	2.48	0.48
27:D5:50:ILE:HD11	27:D5:71:ILE:HD11	1.94	0.48
28:D6:23:CYS:O	28:D6:27:SER:HA	2.14	0.48
42:L5:207:TYR:O	42:L5:211:LEU:HB2	2.14	0.48
46:L9:94:TYR:CE2	46:L9:98:PRO:HA	2.48	0.48
47:M0:144:ASN:O	47:M0:147:VAL:N	2.31	0.48
49:M3:186:ARG:NH1	36:5:767:U:H4'	153.96	0.48
49:M3:42:ARG:O	49:M3:46:ILE:HG12	2.36	0.48
53:M7:138:LYS:HZ2	36:5:2356:A:H5'	150.34	0.48
54:M8:133:LYS:N	54:M8:135:GLN:OE1	2.99	0.48
63:N7:36:HIS:ND1	63:N7:74:VAL:HG21	2.28	0.48
70:O4:41:ARG:HA	70:O4:56:THR:HG22	2.56	0.48
74:O8:64:LYS:HA	74:O8:64:LYS:NZ	2.28	0.48
4:S2:140:ARG:HB3	4:S2:221:THR:HB	2.24	0.48
4:S2:93:GLY:HA2	1:6:1635:A:H61	380.62	0.48
7:S5:90:ILE:HD11	7:S5:130:ILE:HG13	2.30	0.48
9:S7:14:THR:H	9:S7:17:GLU:HB2	1.77	0.48
9:S7:31:SER:HA	9:S7:35:LYS:HB3	3.74	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1445:U:H5''	36:1:1446:A:OP2	2.14	0.48
36:1:1559:A:H4'	36:1:1560:G:OP2	2.14	0.48
36:1:602:A:H2'	36:1:603:A:C8	2.49	0.48
1:2:1490:C:H4'	1:2:1491:U:OP1	2.12	0.48
1:2:890:C:H2'	1:2:891:A:C8	2.49	0.48
38:4:152:G:H2'	38:4:153:U:O4'	2.14	0.48
36:5:2869:U:O2'	36:5:2873:U:OP1	2.31	0.48
1:6:463:U:H2'	1:6:464:A:C8	2.48	0.48
1:6:6:G:H5'	1:6:553:G:H4'	1.94	0.48
37:7:11:A:H4'	37:7:13:A:C8	2.49	0.48
21:C9:25:GLN:O	21:C9:27:LYS:N	4.21	0.48
24:D2:106:THR:HG21	24:D2:121:VAL:HG23	5.48	0.48
26:D4:48:TYR:HD1	1:6:782:U:C4	429.52	0.48
26:D4:81:GLU:HA	26:D4:84:LYS:HG2	1.96	0.48
27:D5:91:PRO:HB3	27:D5:101:TYR:CE1	3.15	0.48
46:L9:92:TYR:CD1	46:L9:92:TYR:N	2.82	0.48
51:M5:144:ARG:HE	71:O5:95:PHE:HE2	1.62	0.48
51:M5:190:THR:O	51:M5:194:GLN:HG2	2.14	0.48
57:N1:9:SER:O	57:N1:55:LYS:NZ	3.49	0.48
58:N2:37:LEU:HD12	58:N2:41:ILE:HD11	5.09	0.48
58:N2:50:LEU:HB3	58:N2:54:VAL:HG23	1.95	0.48
61:N5:92:LYS:HG2	61:N5:110:VAL:HG12	4.44	0.48
63:N7:52:LYS:H	63:N7:52:LYS:HD3	2.86	0.48
64:N8:125:VAL:O	64:N8:146:GLU:N	2.87	0.48
64:N8:46:ASP:N	64:N8:46:ASP:OD1	2.47	0.48
70:O4:38:LEU:HD12	70:O4:38:LEU:H	3.31	0.48
71:O5:54:VAL:O	71:O5:58:ILE:HG13	2.23	0.48
72:O6:43:LEU:O	72:O6:47:ILE:HG13	2.13	0.48
3:S1:70:LEU:HA	3:S1:73:LEU:HB2	4.69	0.48
6:S4:132:GLY:N	6:S4:136:VAL:O	2.93	0.48
9:S7:98:ILE:HD13	9:S7:118:LEU:HD22	1.95	0.48
34:SR:73:LEU:HD22	34:SR:77:GLY:HA2	1.95	0.48
36:1:1643:A:H3'	36:1:1644:C:C6	2.49	0.48
36:1:314:U:H2'	36:1:315:C:C6	2.49	0.48
37:3:89:G:N2	37:3:92:A:OP2	2.47	0.48
38:4:29:U:H5''	49:M3:27:ASP:HB3	1.96	0.48
36:5:1463:U:H2'	36:5:1464:G:O4'	2.14	0.48
70:O4:52:GLN:HG3	36:5:1738:C:H1'	195.54	0.48
36:5:406:G:H1'	38:8:16:G:N2	2.28	0.48
36:5:979:U:H1'	36:5:980:A:C4	2.49	0.48
1:6:1080:U:H2'	1:6:1081:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:C2:45:LEU:HB2	1:6:1228:G:OP1	464.27	0.48
1:6:1688:U:H2'	1:6:1689:A:C8	2.49	0.48
11:S9:143:ILE:HG21	1:6:768:C:H1'	422.33	0.48
1:6:957:G:C5	1:6:958:U:C4	3.02	0.48
24:D2:24:GLN:OE1	29:D7:4:VAL:HA	2.14	0.48
29:D7:34:ASP:HB3	29:D7:43:ILE:HD12	1.96	0.48
39:L2:114:SER:HB2	39:L2:169:ILE:HD11	1.95	0.48
39:L2:42:ARG:HB2	39:L2:89:TYR:CD1	3.27	0.48
45:L8:133:LYS:HB2	45:L8:199:ALA:O	2.91	0.48
45:L8:134:TYR:CG	45:L8:190:VAL:HG11	3.37	0.48
47:M0:152:LEU:O	47:M0:154:ARG:N	3.18	0.48
50:M4:131:VAL:HG13	52:M6:181:ALA:HB1	1.95	0.48
56:N0:13:ARG:NH2	56:N0:50:LYS:O	3.98	0.48
57:N1:12:ARG:HD3	57:N1:13:TYR:CE1	2.51	0.48
63:N7:15:ARG:HB2	63:N7:79:HIS:HB3	3.00	0.48
63:N7:54:THR:OG1	63:N7:55:LYS:N	2.47	0.48
36:1:718:G:OP1	64:N8:117:ARG:NH2	2.47	0.48
64:N8:138:ILE:HD12	64:N8:145:VAL:HG22	1.95	0.48
66:O0:13:LYS:HD2	66:O0:100:ILE:HG23	1.96	0.48
67:O1:29:ALA:HB2	67:O1:64:VAL:HA	2.78	0.48
70:O4:71:THR:HG22	70:O4:77:GLY:HA3	1.96	0.48
71:O5:31:LEU:HD22	71:O5:41:LEU:HD11	3.67	0.48
79:Q3:38:ASP:HA	79:Q3:45:LYS:HA	1.96	0.48
3:S1:179:SER:O	3:S1:179:SER:OG	2.24	0.48
5:S3:34:TYR:CE2	5:S3:37:VAL:HG13	2.59	0.48
9:S7:59:ALA:HA	9:S7:91:ILE:HG22	1.96	0.48
10:S8:36:THR:HG21	10:S8:173:PRO:HB2	1.96	0.48
11:S9:92:LYS:HA	11:S9:92:LYS:HE3	1.95	0.48
34:SR:184:ASN:HD22	34:SR:185:GLN:H	5.29	0.48
36:1:1083:G:H2'	36:1:1084:A:C8	2.48	0.47
36:1:1093:A:N3	36:1:1096:U:N3	2.62	0.47
36:1:1169:A:H5''	44:L7:219:LYS:HD2	1.96	0.47
36:1:1440:G:H2'	36:1:1441:G:H8	1.79	0.47
36:1:1574:C:H42	36:1:1575:A:H62	1.62	0.47
36:1:1556:C:O5'	36:1:2169:G:N2	2.46	0.47
36:1:2854:U:OP1	47:M0:61:SER:OG	2.25	0.47
1:2:1073:G:H4'	15:C3:10:GLY:HA2	1.96	0.47
1:2:319:U:H1'	1:2:323:A:C4	2.49	0.47
1:2:609:U:O2	25:D3:19:ARG:NH1	2.45	0.47
36:5:309:U:H3	36:5:2780:A:N6	2.12	0.47
36:5:618:C:H2'	36:5:619:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:651:G:C6	36:5:652:G:C6	3.02	0.47
6:S4:33:ALA:HB3	1:6:121:U:H1'	350.39	0.47
1:6:565:C:OP2	1:6:577:G:O2'	2.28	0.47
38:8:16:G:O2'	38:8:17:A:OP2	2.30	0.47
12:C0:55:VAL:HA	12:C0:69:THR:HG23	1.95	0.47
21:C9:14:PHE:HE2	21:C9:63:ARG:HB2	1.76	0.47
25:D3:12:ALA:O	25:D3:16:ARG:HG3	2.14	0.47
25:D3:43:PHE:CE1	25:D3:49:ALA:HB3	2.59	0.47
26:D4:67:GLY:O	26:D4:68:LYS:HB2	2.63	0.47
40:L3:114:VAL:HG13	40:L3:163:HIS:CG	2.71	0.47
40:L3:255:TRP:O	40:L3:255:TRP:HD1	1.96	0.47
45:L8:162:LEU:HA	51:M5:7:LEU:HD11	1.95	0.47
50:M4:15:VAL:HG13	56:N0:150:PHE:O	2.28	0.47
36:1:44:U:OP1	51:M5:84:PRO:HG2	2.13	0.47
52:M6:183:ALA:HA	52:M6:186:ALA:HB2	3.41	0.47
55:M9:110:ARG:HH12	36:5:1720:U:P	233.59	0.47
63:N7:22:LYS:HE3	63:N7:134:LEU:HB2	2.84	0.47
36:1:1407:A:O3'	68:O2:33:ARG:NH2	2.47	0.47
69:O3:69:GLY:HA3	69:O3:85:PHE:HA	1.95	0.47
75:O9:27:ILE:HD13	38:8:52:A:H62	78.50	0.47
4:S2:114:GLY:HA3	4:S2:132:ALA:HB2	1.94	0.47
4:S2:73:LEU:HG	4:S2:76:LEU:HD13	1.95	0.47
6:S4:47:PHE:HA	6:S4:51:ARG:HB2	1.96	0.47
7:S5:143:ARG:HD2	30:D8:57:MET:SD	2.54	0.47
9:S7:48:GLU:HG2	9:S7:56:LYS:HD3	2.99	0.47
10:S8:34:ALA:O	10:S8:36:THR:HG22	4.59	0.47
35:SM:64:LYS:CD	35:SM:64:LYS:H	2.27	0.47
20:C8:129:TRP:O	35:SM:68:ARG:HB2	2.66	0.47
36:1:2652:U:OP1	78:Q2:65:THR:OG1	2.30	0.47
36:1:2747:A:H5'	42:L5:175:HIS:HA	1.96	0.47
36:1:2807:U:O3'	36:1:2808:A:H3'	2.15	0.47
36:1:327:A:H2'	36:1:328:U:C6	2.48	0.47
36:1:3386:G:H2'	36:1:3387:U:C6	2.49	0.47
36:1:426:G:H5'	68:O2:50:ILE:HG22	1.95	0.47
36:1:599:C:OP1	41:L4:332:LYS:NZ	2.47	0.47
1:2:1298:U:O3'	4:S2:212:LYS:NZ	2.47	0.47
1:2:1312:A:N7	19:C7:2:GLY:N	2.62	0.47
1:2:1433:G:H2'	1:2:1434:U:H6	1.79	0.47
36:5:2514:U:OP1	36:5:2514:U:H6	1.95	0.47
36:5:2514:U:OP2	36:5:2586:G:N2	2.48	0.47
36:5:271:C:H2'	36:5:272:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1624:C:H2'	1:6:1625:C:C6	2.49	0.47
1:6:1716:C:O2'	1:6:1717:G:H5''	2.14	0.47
7:S5:72:HIS:CE1	18:C6:79:TYR:HH	2.24	0.47
28:D6:12:LYS:HB2	28:D6:33:ASP:OD2	2.13	0.47
29:D7:56:CYS:SG	29:D7:57:GLU:N	2.87	0.47
40:L3:107:ALA:HA	40:L3:199:PHE:CD2	2.50	0.47
42:L5:48:LYS:HZ3	36:5:2749:G:P	243.86	0.47
44:L7:39:GLU:O	44:L7:42:ALA:HB3	2.15	0.47
45:L8:48:ARG:NH2	45:L8:49:TYR:HE2	2.11	0.47
46:L9:48:VAL:HG11	46:L9:52:LEU:HD13	1.96	0.47
47:M0:205:SER:O	47:M0:209:ASN:HB2	2.14	0.47
48:M1:14:ILE:HG12	48:M1:131:MET:SD	2.54	0.47
54:M8:19:PRO:HD3	54:M8:53:PHE:CD1	2.50	0.47
54:M8:79:LYS:HE2	36:5:729:C:O2'	182.78	0.47
36:1:2700:G:OP1	57:N1:17:ARG:HB2	2.14	0.47
71:O5:6:ALA:HB1	71:O5:10:ARG:NH2	2.51	0.47
71:O5:118:ILE:O	71:O5:119:LYS:HB2	3.91	0.47
71:O5:4:VAL:HG21	71:O5:9:LEU:HD11	2.14	0.47
8:S6:10:ASN:HB3	8:S6:128:THR:HB	3.39	0.47
36:1:1805:C:H2'	36:1:1806:A:H8	1.79	0.47
36:1:2680:A:C2	48:M1:24:GLY:HA3	2.49	0.47
1:2:1413:U:H4'	1:2:1414:U:OP2	2.14	0.47
1:2:1449:U:H2'	1:2:1450:U:C6	2.50	0.47
1:2:616:G:C2	1:2:622:A:N7	2.81	0.47
38:4:91:C:H2'	38:4:92:A:H8	1.80	0.47
36:5:1951:C:H42	36:5:2095:G:H1	1.61	0.47
43:L6:78:ARG:NH1	36:5:3272:C:OP2	248.20	0.47
1:6:60:U:H5'	1:6:455:C:N4	2.28	0.47
42:L5:269:SER:OG	37:7:1:G:N3	317.35	0.47
15:C3:83:GLU:HG3	15:C3:84:ILE:HD13	5.34	0.47
17:C5:20:VAL:HG13	17:C5:24:LYS:HD2	1.96	0.47
18:C6:21:HIS:HB2	18:C6:66:ARG:HB3	3.60	0.47
21:C9:10:ALA:HB3	21:C9:13:ASP:HB2	3.03	0.47
21:C9:9:VAL:HG22	21:C9:140:LEU:HD23	3.05	0.47
22:D0:28:SER:OG	22:D0:29:THR:N	2.47	0.47
23:D1:14:PRO:HB2	23:D1:23:ILE:HG23	2.41	0.47
23:D1:35:ASN:OD1	23:D1:52:THR:HB	2.42	0.47
25:D3:92:CYS:HA	25:D3:95:PHE:CD2	2.49	0.47
28:D6:84:VAL:HG13	28:D6:85:ARG:N	2.28	0.47
30:D8:18:ARG:HH11	1:6:1616:G:H4'	363.42	0.47
31:D9:15:GLY:O	31:D9:18:SER:OG	3.04	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D3:60:GLU:CD	32:E0:3:LYS:HB3	3.89	0.47
39:L2:118:GLU:HG2	39:L2:156:LYS:NZ	4.24	0.47
41:L4:62:ALA:HB3	41:L4:90:PHE:HE2	1.79	0.47
42:L5:280:GLU:OE2	42:L5:280:GLU:N	4.21	0.47
44:L7:88:ARG:HD2	44:L7:90:LYS:O	2.14	0.47
45:L8:157:VAL:O	45:L8:160:ILE:HD13	2.14	0.47
48:M1:101:ASN:HB3	48:M1:130:VAL:HA	1.95	0.47
48:M1:152:HIS:CD2	48:M1:153:LYS:H	5.16	0.47
48:M1:40:LEU:HD13	48:M1:79:ILE:HD13	1.96	0.47
36:1:99:A:H5'	51:M5:194:GLN:OE1	2.14	0.47
36:1:1603:A:OP1	55:M9:38:ARG:NH1	2.47	0.47
58:N2:98:THR:CG2	58:N2:104:ARG:HE	5.31	0.47
36:1:216:G:H4'	62:N6:19:TYR:CE1	2.49	0.47
69:O3:26:ASN:O	69:O3:84:THR:HG22	2.15	0.47
72:O6:26:ILE:HD13	36:5:155:G:H1'	88.39	0.47
2:S0:123:VAL:HG11	2:S0:133:ILE:HD11	1.95	0.47
2:S0:172:LEU:O	2:S0:176:LEU:HG	2.14	0.47
2:S0:70:PRO:O	2:S0:95:ALA:N	2.26	0.47
3:S1:120:LEU:HD23	3:S1:121:ILE:N	2.29	0.47
4:S2:53:ILE:HG23	4:S2:56:ILE:HD12	1.94	0.47
5:S3:44:THR:HG23	5:S3:45:LYS:HD3	5.28	0.47
6:S4:184:THR:OG1	6:S4:224:ASN:O	2.49	0.47
6:S4:52:LEU:HB3	6:S4:54:TYR:CD2	2.58	0.47
11:S9:70:LEU:O	11:S9:74:ASN:HB2	2.13	0.47
36:1:118:U:O2	36:1:121:A:H5'	2.15	0.47
36:1:343:U:O2	36:1:1439:U:H1'	2.14	0.47
36:1:1805:C:H2'	36:1:1806:A:C8	2.49	0.47
36:1:1910:A:H8	36:1:1910:A:O5'	1.98	0.47
36:1:2943:G:H2'	36:1:2944:U:O4'	2.13	0.47
36:1:3278:C:H2'	36:1:3278:C:O2	2.13	0.47
1:2:109:G:H1	1:2:305:C:N4	2.09	0.47
1:2:53:G:H2'	1:2:54:C:O4'	2.14	0.47
1:2:696:C:O3'	1:2:697:C:H2'	2.15	0.47
36:5:999:G:N3	36:5:1002:A:N6	2.63	0.47
36:5:1073:U:H2'	36:5:1074:U:C6	2.50	0.47
36:5:194:U:H2'	36:5:195:U:H6	1.78	0.47
36:5:247:C:C2	36:5:248:U:H1'	2.49	0.47
63:N7:55:LYS:N	36:5:2563:G:OP1	201.51	0.47
1:6:1067:C:H2'	1:6:1068:C:C6	2.50	0.47
26:D4:11:LYS:HD3	1:6:784:C:N4	419.76	0.47
13:C1:3:THR:HG21	13:C1:82:ARG:HH21	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:C9:37:VAL:O	21:C9:47:PRO:HD2	3.05	0.47
23:D1:17:CYS:HB2	23:D1:56:SER:HB3	2.16	0.47
29:D7:61:THR:OG1	29:D7:62:ILE:N	2.85	0.47
33:E1:123:ASN:OD1	33:E1:124:PRO:HD2	2.15	0.47
39:L2:15:ILE:HD12	39:L2:15:ILE:HA	4.70	0.47
40:L3:98:GLY:HA3	36:5:3005:A:C5'	250.63	0.47
42:L5:108:ARG:CZ	42:L5:253:PHE:HB2	2.45	0.47
43:L6:51:ARG:HD3	43:L6:158:TYR:CZ	2.49	0.47
48:M1:23:VAL:HB	48:M1:30:LEU:HD23	1.94	0.47
48:M1:82:ARG:HG3	48:M1:112:LEU:HB2	1.96	0.47
50:M4:103:ILE:O	50:M4:107:GLU:HG3	2.13	0.47
55:M9:28:GLU:O	55:M9:32:ILE:HG13	2.38	0.47
36:1:3050:U:O2'	60:N4:16:GLY:O	2.30	0.47
61:N5:111:ASN:O	61:N5:123:TYR:N	2.73	0.47
62:N6:87:LYS:HG3	62:N6:97:ILE:HD11	1.95	0.47
70:O4:83:ASN:OD1	70:O4:83:ASN:N	3.00	0.47
74:O8:12:LEU:O	74:O8:16:ARG:HG3	2.14	0.47
36:1:1613:A:OP1	74:O8:2:ALA:N	2.47	0.47
2:S0:13:ASP:HA	2:S0:16:LEU:HD12	1.97	0.47
2:S0:162:CYS:SG	2:S0:173:ILE:HG13	3.30	0.47
5:S3:115:ILE:HD11	5:S3:138:VAL:HG11	1.96	0.47
6:S4:112:HIS:NE2	6:S4:237:SER:O	2.66	0.47
1:2:1473:U:O2'	7:S5:103:ASN:OD1	2.31	0.47
7:S5:91:GLU:OE2	7:S5:107:LYS:NZ	2.41	0.47
10:S8:4:SER:HB2	10:S8:24:LYS:HE2	1.96	0.47
36:1:1027:A:H2'	36:1:1029:G:H5''	1.95	0.47
36:1:3027:A:H2'	36:1:3028:G:O4'	2.14	0.47
36:1:3165:A:H61	36:1:3285:C:H42	1.62	0.47
36:5:1666:G:H2'	36:5:1667:A:C8	2.49	0.47
60:N4:44:LYS:HD2	36:5:2111:G:H1'	230.05	0.47
1:6:1079:U:H2'	1:6:1080:U:C6	2.50	0.47
1:6:1545:A:H2'	1:6:1546:G:C8	2.49	0.47
1:6:1684:U:H2'	1:6:1685:G:C8	2.50	0.47
1:6:808:U:H2'	1:6:809:A:C8	2.50	0.47
1:6:885:G:H2'	1:6:886:U:C6	2.48	0.47
13:C1:57:LYS:HD3	13:C1:131:ILE:HG23	1.96	0.47
13:C1:46:LYS:HA	13:C1:46:LYS:HD2	2.21	0.47
13:C1:82:ARG:HG2	13:C1:110:HIS:HE1	4.71	0.47
15:C3:135:LEU:HA	15:C3:135:LEU:HD23	1.76	0.47
17:C5:52:LYS:N	17:C5:53:PRO:HD2	3.71	0.47
20:C8:8:GLN:HB3	20:C8:9:GLY:H	3.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:C9:4:VAL:HG22	21:C9:5:SER:O	2.14	0.47
24:D2:101:TYR:N	24:D2:129:VAL:O	2.98	0.47
39:L2:90:ALA:HB2	39:L2:101:VAL:HG13	2.31	0.47
39:L2:129:ALA:O	39:L2:131:GLY:N	2.47	0.47
40:L3:92:TYR:HB2	40:L3:157:VAL:HG22	1.97	0.47
40:L3:345:ASN:CG	40:L3:347:SER:HB2	2.35	0.47
41:L4:148:ILE:HA	41:L4:149:PRO:C	2.38	0.47
44:L7:145:ARG:HA	44:L7:185:ILE:HD13	2.04	0.47
47:M0:16:PRO:HG3	47:M0:128:ARG:NH1	2.42	0.47
48:M1:143:ARG:NH2	37:7:5:G:OP1	293.21	0.47
48:M1:21:ILE:HG13	48:M1:37:LEU:HD11	1.97	0.47
49:M3:67:ARG:HD3	49:M3:68:LYS:HG2	1.96	0.47
52:M6:116:LYS:HG3	52:M6:117:ARG:N	2.57	0.47
52:M6:125:ARG:HG3	52:M6:129:LEU:HD22	2.63	0.47
52:M6:88:VAL:O	52:M6:90:HIS:N	2.45	0.47
53:M7:132:ALA:O	53:M7:133:HIS:HB2	2.58	0.47
36:1:2111:G:H5''	60:N4:48:ARG:CZ	2.44	0.47
61:N5:142:ILE:HD13	61:N5:142:ILE:HA	1.71	0.47
63:N7:88:ASP:HB3	63:N7:121:ARG:HH22	1.80	0.47
69:O3:8:TYR:CE1	69:O3:99:ARG:HD3	2.73	0.47
71:O5:41:LEU:O	71:O5:44:ILE:HG22	2.64	0.47
73:O7:35:SER:OG	36:5:361:A:H5'	127.55	0.47
75:O9:27:ILE:HG23	75:O9:30:ARG:CZ	2.93	0.47
2:S0:9:LEU:HD23	2:S0:54:TRP:CG	2.49	0.47
4:S2:166:THR:HG23	4:S2:201:ASN:HB3	2.65	0.47
6:S4:200:ARG:HG2	6:S4:201:HIS:N	3.12	0.47
7:S5:68:ILE:HD13	7:S5:69:PHE:H	4.93	0.47
7:S5:91:GLU:O	7:S5:95:ASN:ND2	2.48	0.47
9:S7:102:PRO:HD3	9:S7:112:ARG:HD3	2.72	0.47
36:1:1317:A:C4	36:1:1319:G:C8	3.03	0.47
36:1:3228:C:H4'	36:1:3229:G:O5'	2.13	0.47
36:1:592:A:H5'	43:L6:17:ALA:O	2.15	0.47
1:2:1609:U:H2'	1:2:1610:G:O4'	2.15	0.47
1:2:833:U:H5'	1:2:834:G:H5''	1.96	0.47
37:3:81:U:H2'	37:3:82:G:C8	2.49	0.47
36:5:1103:A:H3'	36:5:1104:G:H5'	1.95	0.47
36:5:1596:C:H2'	36:5:1597:C:C6	2.50	0.47
36:5:1879:A:N3	36:5:1879:A:H2'	2.29	0.47
36:5:2272:G:OP2	36:5:2272:G:N2	2.38	0.47
36:5:2761:G:H1'	36:5:2800:G:H21	1.79	0.47
36:5:423:A:H2'	36:5:424:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:N8:26:ARG:NH1	36:5:939:U:H5	176.79	0.47
36:5:980:A:H2'	36:5:981:U:C2	2.50	0.47
24:D2:119:LYS:HG2	1:6:687:G:H5"	395.48	0.47
1:6:754:A:N6	1:6:793:A:N7	2.52	0.47
1:6:840:U:H2'	1:6:841:U:H6	1.79	0.47
16:C4:122:PRO:HB3	1:6:887:A:H1'	284.79	0.47
73:O7:63:ARG:NH2	38:8:58:G:O6	79.53	0.47
13:C1:74:THR:HG23	13:C1:122:ILE:HG13	1.97	0.47
14:C2:33:ARG:HG2	14:C2:36:LEU:HD12	4.41	0.47
20:C8:35:ILE:HB	20:C8:38:VAL:HG13	4.26	0.47
22:D0:33:GLN:HB3	22:D0:109:GLU:HG2	1.95	0.47
25:D3:57:LEU:HD13	32:E0:4:VAL:HG13	2.79	0.47
23:D1:85:TYR:CD1	29:D7:6:ASP:HB2	3.06	0.47
33:E1:86:THR:O	33:E1:87:THR:OG1	2.49	0.47
39:L2:153:GLY:HA3	39:L2:251:LYS:HD3	7.69	0.47
43:L6:135:VAL:HG12	43:L6:139:LYS:HE3	2.61	0.47
44:L7:89:ILE:HD12	44:L7:214:TRP:CH2	2.50	0.47
45:L8:50:VAL:HG22	45:L8:52:TRP:CE2	2.50	0.47
46:L9:89:LYS:HB2	46:L9:183:HIS:HB3	1.95	0.47
49:M3:74:GLY:HA3	49:M3:98:ASP:HB2	2.40	0.47
36:1:149:U:OP2	51:M5:49:ARG:NH2	2.48	0.47
53:M7:50:GLN:HG3	53:M7:56:ARG:HG3	4.25	0.47
36:1:1844:C:O2	73:O7:9:GLY:HA2	2.15	0.47
77:Q1:8:LYS:HD3	77:Q1:12:ARG:NH2	2.29	0.47
2:S0:41:ARG:HE	2:S0:45:VAL:HG21	3.52	0.47
2:S0:87:LEU:HB3	2:S0:88:LYS:HE2	1.97	0.47
4:S2:140:ARG:NH1	4:S2:229:LEU:HD21	6.00	0.47
7:S5:113:ILE:HG12	27:D5:97:LYS:HZ1	1.80	0.47
34:SR:272:ASP:OD1	34:SR:273:ASP:N	2.42	0.47
36:1:2100:A:N7	36:1:2101:C:N4	2.63	0.47
36:1:2314:U:HO2'	36:1:2315:G:P	2.38	0.47
36:1:2561:A:O2'	36:1:2562:A:O5'	2.30	0.47
36:1:693:A:H2'	36:1:694:C:H6	1.79	0.47
1:2:1483:A:H2'	1:2:1484:G:C8	2.50	0.47
1:2:1524:A:H2'	1:2:1525:A:C8	2.49	0.47
1:2:1535:U:H5	7:S5:185:ARG:C	2.18	0.47
1:2:1756[A]:A:OP2	1:2:1756[A]:A:H8	1.98	0.47
36:5:1783:U:H2'	36:5:1784:G:C8	2.50	0.47
36:5:2219:A:H2'	36:5:2220:A:C8	2.49	0.47
36:5:385:A:H2'	36:5:386:A:C8	2.50	0.47
36:5:523:A:N6	36:5:570:A:C2	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1133:A:H2'	1:6:1134:C:O4'	2.14	0.47
1:6:1655:A:N1	36:5:2291:A:O2'	2.45	0.47
1:6:968:U:H5''	1:6:1033:C:O2'	2.14	0.47
15:C3:146:ALA:HA	15:C3:149:LEU:HB3	1.95	0.47
20:C8:99:HIS:HD2	20:C8:101:LEU:HD21	1.80	0.47
40:L3:250:ALA:HB3	36:5:2880:U:O2	225.07	0.47
45:L8:143:ILE:HG23	45:L8:175:VAL:HG21	3.22	0.47
50:M4:116:GLU:O	50:M4:120:VAL:HG23	2.23	0.47
53:M7:120:ASN:HB3	36:5:412:G:H1'	145.57	0.47
55:M9:44:LEU:HD12	55:M9:49:THR:OG1	2.15	0.47
71:O5:111:PHE:HZ	36:5:256:G:H4'	53.19	0.47
71:O5:119:LYS:HA	71:O5:119:LYS:HD2	1.74	0.47
73:O7:28:HIS:ND1	73:O7:31:LYS:HG3	2.60	0.47
77:Q1:8:LYS:HD3	77:Q1:12:ARG:HH21	1.80	0.47
5:S3:163:PRO:HA	5:S3:166:ASP:HB2	1.97	0.47
6:S4:163:ASP:O	6:S4:164:LEU:HB2	2.14	0.47
7:S5:203:LYS:O	7:S5:205:SER:N	3.48	0.47
7:S5:62:VAL:HG13	7:S5:89:ILE:HG12	2.32	0.47
8:S6:38:GLY:O	8:S6:41:VAL:N	2.45	0.47
10:S8:33:PRO:HB3	1:6:330:G:O2'	275.09	0.47
1:2:399:A:OP1	10:S8:49:ARG:NH2	2.47	0.47
35:SM:48:ARG:HD3	35:SM:50:ASN:HB2	7.57	0.47
34:SR:31:ASN:O	34:SR:47:LEU:N	2.25	0.47
36:1:1108:U:H2'	36:1:1109:U:C6	2.48	0.47
36:1:1420:C:OP2	41:L4:193:LYS:NZ	2.39	0.47
36:1:2922:G:C2	36:1:2952:G:H1'	2.50	0.47
36:1:679:U:H1'	36:1:788:C:H1'	1.95	0.47
36:1:789:A:H2'	36:1:790:U:C6	2.50	0.47
1:2:1761:U:O2'	1:2:1762:A:OP2	2.24	0.47
1:2:730:G:N3	1:2:730:G:H2'	2.30	0.47
36:5:22:G:O4'	38:8:104:A:H1'	2.14	0.47
1:6:1017:U:H2'	1:6:1018:U:C6	2.50	0.47
1:6:1529:C:H2'	1:6:1530:C:C6	2.50	0.47
1:6:291:G:H2'	1:6:292:U:C5	2.49	0.47
1:6:800:U:H2'	1:6:801:G:C8	2.50	0.47
14:C2:40:GLY:O	14:C2:124:LYS:N	3.26	0.47
19:C7:28:PHE:HA	19:C7:55:THR:HG21	3.42	0.47
20:C8:127:HIS:CE1	20:C8:133:VAL:HG11	2.50	0.47
20:C8:87:ASN:HB3	20:C8:99:HIS:CE1	3.41	0.47
22:D0:26:LEU:HD21	22:D0:114:VAL:HG13	2.51	0.47
28:D6:96:ALA:HA	28:D6:97:PRO:HD3	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:116:ARG:NH1	40:L3:122:TRP:CD1	2.83	0.47
43:L6:45:GLY:O	43:L6:48:ARG:HG2	3.14	0.47
46:L9:152:GLU:H	46:L9:152:GLU:HG3	1.52	0.47
46:L9:15:GLY:O	46:L9:30:PRO:HD3	2.15	0.47
46:L9:33:THR:O	46:L9:34:LEU:HD23	3.01	0.47
47:M0:3:ARG:NH2	36:5:2854:U:OP2	292.26	0.47
47:M0:4:ARG:HH21	47:M0:99:ILE:HG22	6.43	0.47
49:M3:164:GLU:O	49:M3:166:ALA:N	2.48	0.47
49:M3:60:ALA:HA	49:M3:61:PRO:HD3	1.86	0.47
52:M6:141:LEU:O	52:M6:144:SER:HB3	4.15	0.47
59:N3:128:ARG:HB3	59:N3:128:ARG:NH2	4.67	0.47
59:N3:86:ARG:HB2	59:N3:92:PHE:CD1	2.50	0.47
62:N6:55:GLU:HB2	62:N6:108:LYS:HB3	3.40	0.47
62:N6:51:ARG:HG3	62:N6:52:ARG:N	2.30	0.47
66:O0:34:LEU:HD12	66:O0:34:LEU:HA	1.94	0.47
70:O4:71:THR:HG23	70:O4:78:GLY:H	1.78	0.47
71:O5:10:ARG:NH2	38:8:65:A:O3'	33.52	0.47
45:L8:165:PHE:HA	72:O6:47:ILE:HD13	2.24	0.47
77:Q1:21:ARG:HD2	1:6:1653:C:O3'	285.52	0.47
2:S0:193:GLN:C	2:S0:195:TRP:H	2.16	0.47
2:S0:3:LEU:HA	2:S0:4:PRO:HD2	2.29	0.47
6:S4:87:MET:SD	6:S4:123:LEU:HB2	3.44	0.47
8:S6:152:ASP:OD1	8:S6:154:ARG:HB2	2.55	0.47
36:1:1067:U:H2'	36:1:1068:C:C6	2.49	0.47
36:1:1344:G:H1	36:1:1360:C:H42	1.63	0.47
36:1:1667:A:H2'	36:1:1668:G:C8	2.50	0.47
36:1:1761:C:H1'	36:1:1763:U:OP2	2.15	0.47
36:1:1783:U:H2'	36:1:1784:G:C8	2.50	0.47
36:1:3316:A:O2'	36:1:3317:U:OP2	2.29	0.47
36:1:551:A:O2'	36:1:552:G:O5'	2.28	0.47
36:1:603:A:C5	36:1:604:G:H1'	2.49	0.47
36:1:712:G:N2	36:1:754:G:O3'	2.47	0.47
1:2:1247:U:H5''	33:E1:94:LYS:O	2.15	0.47
1:2:1684:U:H2'	1:2:1685:G:O4'	2.14	0.47
1:2:209:U:H2'	1:2:210:A:C8	2.50	0.47
36:5:1070:U:H2'	36:5:1071:U:O4'	2.15	0.47
36:5:850:U:H2'	36:5:851:C:C6	2.50	0.47
1:6:846:G:H2'	1:6:847:A:C8	2.50	0.47
1:6:882:U:H2'	1:6:883:C:C6	2.50	0.47
15:C3:15:ALA:O	1:6:959:U:H5''	353.21	0.47
13:C1:83:THR:HA	13:C1:111:VAL:H	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:C4:104:ALA:HA	16:C4:107:ARG:HB3	2.92	0.47
1:2:1551:U:H3'	17:C5:43:ARG:NH2	2.30	0.47
24:D2:67:GLY:O	24:D2:68:ARG:HG2	4.63	0.47
25:D3:44:GLY:H	25:D3:78:LYS:HZ2	2.17	0.47
26:D4:35:VAL:O	26:D4:36:SER:HB3	4.43	0.47
27:D5:41:ILE:HG13	27:D5:42:LEU:HD12	1.97	0.47
30:D8:11:LYS:O	30:D8:31:GLU:N	2.90	0.47
42:L5:190:ILE:HD11	42:L5:195:LEU:HD22	2.65	0.47
42:L5:268:GLU:HG3	42:L5:269:SER:N	3.49	0.47
51:M5:144:ARG:NH1	36:5:126:U:OP1	77.80	0.47
52:M6:54:TYR:CE2	52:M6:58:LEU:HD13	2.50	0.47
53:M7:31:GLU:HG2	53:M7:60:PHE:HA	4.05	0.47
59:N3:2:SER:HA	59:N3:56:ASP:HA	4.79	0.47
61:N5:73:MET:HA	61:N5:73:MET:HE3	1.97	0.47
62:N6:73:VAL:HA	62:N6:80:VAL:HG22	3.13	0.47
64:N8:3:SER:O	64:N8:6:THR:HB	2.14	0.47
69:O3:67:MET:HE1	69:O3:90:PRO:HG3	1.96	0.47
76:Q0:104:PRO:HA	76:Q0:105:PRO:HD3	1.79	0.47
78:Q2:12:CYS:SG	78:Q2:74:CYS:SG	3.22	0.47
2:S0:17:LEU:HD23	2:S0:172:LEU:HD13	1.96	0.47
34:SR:149:ASP:HB2	34:SR:175:ASP:HB3	1.96	0.47
34:SR:274:LEU:HD13	34:SR:313:TRP:CD2	2.59	0.47
36:1:1782:U:H2'	36:1:1783:U:O4'	2.14	0.47
36:1:2703:A:OP2	42:L5:23:ARG:NH1	2.47	0.47
36:1:2773:C:H2'	36:1:2774:C:C6	2.50	0.47
36:1:2775:U:H2'	36:1:2776:C:C6	2.50	0.47
36:1:3022:G:N2	36:1:3023:U:O4	2.43	0.47
38:4:69:U:OP2	73:O7:88:ALA:HB3	2.15	0.47
68:O2:43:ARG:NH1	36:5:1368:U:H5'	194.61	0.47
36:5:2396:G:OP1	36:5:2397:A:H4'	2.14	0.47
36:5:2851:A:H2'	36:5:2852:C:H6	1.80	0.47
1:6:1545:A:H2'	1:6:1546:G:H8	1.79	0.47
1:6:320:U:H2'	1:6:321:C:C2	2.50	0.47
12:C0:44:LYS:HD3	12:C0:44:LYS:HA	1.74	0.47
19:C7:51:ALA:HA	19:C7:54:THR:HG22	1.97	0.47
23:D1:38:LYS:HE3	23:D1:49:GLU:HB3	4.76	0.47
39:L2:32:LEU:HD13	39:L2:37:ARG:HD3	1.96	0.47
40:L3:46:PHE:CD1	40:L3:208:VAL:HG21	2.74	0.47
41:L4:29:PRO:HG2	41:L4:277:PRO:HB2	2.02	0.47
47:M0:20:SER:H	47:M0:23:ASN:HB3	1.79	0.47
47:M0:48:LEU:HD22	47:M0:49:CYS:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M5:103:GLU:O	51:M5:106:VAL:HG13	2.14	0.47
36:1:3007:U:OP1	52:M6:73:PHE:HA	2.15	0.47
56:N0:91:TYR:O	56:N0:137:ARG:NH1	2.56	0.47
63:N7:25:ILE:HG23	63:N7:41:ALA:HB1	1.97	0.47
66:O0:45:ALA:HB3	66:O0:48:THR:HG23	5.34	0.47
74:O8:70:PRO:HA	74:O8:71:PRO:HD3	1.68	0.47
5:S3:66:ILE:O	5:S3:70:THR:HG23	2.36	0.47
8:S6:57:ASP:HA	8:S6:106:LEU:HA	1.97	0.47
10:S8:36:THR:O	10:S8:96:LEU:N	2.35	0.47
34:SR:278:PHE:HE2	34:SR:311:ARG:NH2	3.44	0.47
36:1:1134:G:O2'	36:1:2642:A:N3	2.45	0.47
36:1:3242:G:H21	36:1:3245:A:H5''	1.79	0.47
36:1:760:G:H1'	36:1:770:G:N2	2.29	0.47
1:2:1545:A:H2'	1:2:1546:G:C8	2.50	0.47
1:2:393:C:H2'	1:2:394:C:C6	2.49	0.47
1:2:980:G:H4'	1:2:1776:A:H4'	1.97	0.47
36:5:1189:C:H42	36:5:1315:U:H1'	1.79	0.47
36:5:1355:A:H1'	36:5:1356:U:OP2	2.14	0.47
36:5:2516:U:O2'	36:5:2595:A:N1	2.45	0.47
43:L6:45:GLY:H	36:5:3273:A:H4'	245.19	0.47
22:D0:57:ARG:HH11	1:6:1382:A:H2	454.33	0.47
1:6:196:G:N3	1:6:197:A:H1'	2.30	0.47
1:6:812:A:H4'	1:6:813:U:O5'	2.14	0.47
38:8:156:U:H5'	38:8:157:U:OP2	2.15	0.47
12:C0:77:ARG:HD3	12:C0:84:GLU:HA	1.96	0.47
15:C3:119:GLU:OE1	15:C3:141:TYR:OH	2.23	0.47
25:D3:23:ARG:HD2	25:D3:26:GLU:OE1	2.15	0.47
26:D4:57:VAL:HB	26:D4:60:PHE:HE2	4.02	0.47
40:L3:18:PRO:HG2	40:L3:20:LYS:HD2	2.89	0.47
41:L4:98:ARG:HG2	41:L4:99:MET:O	2.15	0.47
42:L5:177:GLU:HG3	42:L5:177:GLU:H	1.59	0.47
44:L7:176:TYR:HD2	44:L7:194:HIS:CD2	3.25	0.47
45:L8:75:ILE:HG22	45:L8:76:ALA:N	2.30	0.47
52:M6:89:SER:O	52:M6:95:GLY:HA3	2.58	0.47
54:M8:103:ALA:HB3	54:M8:106:PHE:CE2	2.50	0.47
55:M9:168:ALA:HB1	55:M9:172:ARG:CZ	2.45	0.47
59:N3:27:ASP:OD2	59:N3:27:ASP:N	2.48	0.47
63:N7:36:HIS:O	63:N7:38:PHE:N	2.41	0.47
68:O2:67:SER:HB2	68:O2:68:PRO:HD2	1.96	0.47
2:S0:88:LYS:HE2	2:S0:201:LEU:HG	5.94	0.47
4:S2:204:THR:OG1	1:6:5:U:OP2	383.00	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S4:42:LEU:N	6:S4:84:ALA:O	2.47	0.47
7:S5:188:LYS:HG2	27:D5:63:SER:HB3	1.97	0.47
8:S6:164:LYS:HB3	8:S6:165:GLY:H	4.42	0.47
11:S9:149:ARG:HD2	1:6:765:G:O6	432.69	0.47
36:1:1210:U:H5'	46:L9:63:LYS:HZ2	1.81	0.46
36:1:1903:U:O5'	36:1:1903:U:H6	1.98	0.46
36:1:3106:A:H2'	36:1:3107:U:O4'	2.15	0.46
36:1:38:U:H2'	36:1:39:A:O4'	2.15	0.46
1:2:1175:U:H2'	1:2:1176:G:C8	2.50	0.46
1:2:1222:C:H42	1:2:1261:G:H1	1.63	0.46
1:2:180:A:H2'	1:2:181:A:O4'	2.15	0.46
1:2:542:A:C8	1:2:543:C:H5'	2.50	0.46
1:2:591:A:H5''	11:S9:24:LEU:HD22	1.96	0.46
37:3:19:C:H42	37:3:60:G:H1	1.62	0.46
36:5:1235:U:H4'	36:5:1236:G:H5'	1.96	0.46
36:5:129:U:H2'	36:5:130:A:H8	1.75	0.46
36:5:2403:G:N2	36:5:2404:A:H62	2.13	0.46
36:5:3145:C:H2'	36:5:3146:G:C8	2.50	0.46
36:5:3386:G:H2'	36:5:3387:U:H6	1.79	0.46
14:C2:62:LEU:HD22	14:C2:75:VAL:HG11	1.96	0.46
22:D0:37:VAL:HG13	22:D0:107:THR:HG22	4.77	0.46
33:E1:141:CYS:SG	33:E1:144:CYS:HB2	2.54	0.46
40:L3:286:GLY:HA3	40:L3:321:PHE:CZ	2.50	0.46
41:L4:269:SER:C	41:L4:271:LYS:H	2.33	0.46
42:L5:184:ASP:OD1	42:L5:187:THR:HG22	2.15	0.46
43:L6:55:LEU:HB2	43:L6:64:LEU:HB3	2.25	0.46
44:L7:158:LYS:HG3	44:L7:203:TRP:HH2	1.80	0.46
47:M0:121:LYS:HA	47:M0:121:LYS:HE2	1.97	0.46
48:M1:14:ILE:HG23	48:M1:129:VAL:HG23	5.85	0.46
51:M5:38:ARG:CZ	51:M5:60:VAL:HG13	2.45	0.46
55:M9:20:ARG:HG2	36:5:1875:G:OP2	138.03	0.46
62:N6:52:ARG:O	62:N6:53:ASP:HB2	4.37	0.46
63:N7:55:LYS:O	63:N7:57:HIS:N	3.26	0.46
70:O4:74:ARG:HG2	70:O4:75:ALA:H	2.85	0.46
61:N5:46:TYR:HD2	71:O5:75:TYR:HB3	1.87	0.46
2:S0:195:TRP:CD2	2:S0:197:ILE:HB	3.23	0.46
4:S2:121:VAL:HG11	35:SM:117:LEU:HB2	1.96	0.46
4:S2:59:HIS:CD2	4:S2:238:SER:HA	2.50	0.46
8:S6:161:GLU:HA	8:S6:169:TYR:O	2.15	0.46
10:S8:56:ARG:NE	10:S8:174:GLY:O	2.48	0.46
11:S9:41:GLU:OE2	11:S9:126:ARG:NH2	2.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1076:C:O3'	65:N9:38:LYS:NZ	2.46	0.46
36:1:1788:C:H2'	36:1:1789:G:O4'	2.15	0.46
36:1:2211:U:H2'	36:1:2212:C:O4'	2.15	0.46
36:1:2315:G:C2	36:1:2316:G:N7	2.83	0.46
36:1:3382:U:O2	36:1:3382:U:H2'	2.15	0.46
36:1:547:G:H4'	36:1:548:G:OP1	2.15	0.46
36:1:801:A:H4'	36:1:802:C:O5'	2.14	0.46
1:2:1042:G:H22	1:2:1076:A:H2	1.62	0.46
1:2:1366:U:O2'	21:C9:7:ARG:HD2	2.15	0.46
1:2:761:G:OP1	11:S9:54:ARG:NH1	2.48	0.46
36:5:1549:U:H2'	36:5:1550:C:H6	1.81	0.46
36:5:2279:A:O5'	36:5:2280:A:H5'	2.15	0.46
36:5:2508:U:H2'	36:5:2509:U:C6	2.51	0.46
36:5:2970:C:H4'	36:5:2971:A:N1	2.30	0.46
36:5:553:U:H2'	36:5:554:A:O4'	2.14	0.46
36:5:629:U:H2'	36:5:630:A:C8	2.49	0.46
36:5:845:G:N2	36:5:848:A:OP2	2.48	0.46
36:5:871:U:H2'	36:5:872:U:O4'	2.15	0.46
1:6:1227:A:H4'	1:6:1228:G:H5'	1.96	0.46
1:6:1514:U:H5'	1:6:1515:A:N3	2.29	0.46
38:8:66:A:H2'	38:8:67:U:H6	1.80	0.46
13:C1:73:GLY:HA3	13:C1:86:ILE:HD12	1.96	0.46
26:D4:60:PHE:CD1	26:D4:71:GLY:HA3	2.95	0.46
26:D4:8:ARG:CZ	26:D4:28:LEU:HD11	3.34	0.46
1:2:567:A:H4'	32:E0:10:ARG:O	2.14	0.46
39:L2:134:VAL:HB	39:L2:150:LEU:HD23	2.89	0.46
40:L3:17:LEU:HD11	40:L3:233:TRP:HH2	2.56	0.46
40:L3:303:LYS:HD2	40:L3:361:THR:HG21	1.96	0.46
40:L3:41:VAL:HA	40:L3:185:GLY:CA	2.34	0.46
41:L4:23:PRO:HD2	41:L4:26:PHE:HD2	1.81	0.46
42:L5:153:THR:HG22	42:L5:179:ARG:HD2	1.97	0.46
51:M5:199:LEU:HD13	51:M5:203:ARG:NH1	2.31	0.46
52:M6:117:ARG:HG2	52:M6:117:ARG:H	1.57	0.46
56:N0:137:ARG:HG2	56:N0:139:TYR:CZ	2.50	0.46
56:N0:155:ARG:HH21	56:N0:172:TYR:N	5.02	0.46
75:O9:26:TRP:HA	75:O9:29:LEU:HD22	3.30	0.46
2:S0:184:LEU:HD13	23:D1:43:GLY:O	2.15	0.46
3:S1:183:GLN:HA	3:S1:186:SER:HB2	2.36	0.46
4:S2:168:ARG:HB3	4:S2:199:GLN:HB2	2.87	0.46
2:S0:139:VAL:HG23	4:S2:62:PRO:HG3	1.97	0.46
5:S3:25:PHE:HD2	5:S3:37:VAL:HG11	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S8:171:SER:O	10:S8:173:PRO:HD3	2.16	0.46
11:S9:131:GLN:HB3	1:6:513:U:H4'	441.95	0.46
34:SR:253:ALA:HA	34:SR:262:VAL:HA	2.85	0.46
36:1:164:A:H2'	36:1:165:A:O4'	2.16	0.46
36:1:170:G:H1	36:1:248:U:H3	1.62	0.46
36:1:263:C:H2'	36:1:264:G:O4'	2.15	0.46
36:1:685:G:P	49:M3:35:ARG:HH11	2.38	0.46
36:1:692:A:C4	36:1:693:A:C8	3.03	0.46
1:2:1066:C:O3'	3:S1:149:GLN:HG3	2.15	0.46
1:2:1402:G:H2'	1:2:1403:C:C6	2.51	0.46
1:2:1706:C:H2'	1:2:1707:A:C8	2.50	0.46
1:2:201:G:H2'	1:2:202:A:C8	2.51	0.46
36:5:118:U:C5	36:5:119:U:C4	3.03	0.46
36:5:243:G:H2'	36:5:244:G:C8	2.50	0.46
68:O2:27:ARG:HB3	36:5:655:C:OP1	162.92	0.46
36:5:738:A:H2'	36:5:739:G:H8	1.80	0.46
1:6:180:A:H2'	1:6:181:A:O4'	2.14	0.46
13:C1:39:GLY:O	13:C1:41:GLY:N	2.48	0.46
19:C7:23:LYS:HB3	19:C7:34:LEU:HD11	1.97	0.46
1:2:1590:G:OP1	21:C9:91:TYR:HB2	2.16	0.46
25:D3:118:PRO:O	25:D3:120:VAL:HG23	3.00	0.46
25:D3:65:ASN:ND2	25:D3:116:ASP:OD1	4.37	0.46
26:D4:127:LYS:O	26:D4:131:ARG:HG2	2.14	0.46
27:D5:57:TYR:O	27:D5:103:ARG:HB2	5.14	0.46
40:L3:148:LEU:O	40:L3:152:LYS:HG3	2.14	0.46
41:L4:10:SER:OG	41:L4:14:GLU:O	3.80	0.46
42:L5:76:ALA:CB	42:L5:109:THR:HG22	2.46	0.46
42:L5:158:ARG:HD3	37:7:46:A:OP1	282.67	0.46
42:L5:4:GLN:CD	42:L5:4:GLN:H	2.19	0.46
36:1:2853:A:O3'	47:M0:64:ALA:HB2	2.15	0.46
49:M3:79:GLU:HG2	49:M3:109:PHE:CD2	2.66	0.46
51:M5:28:TRP:O	51:M5:32:GLN:HG2	2.25	0.46
63:N7:21:LYS:NZ	63:N7:47:GLU:O	3.47	0.46
64:N8:120:ASN:HA	64:N8:141:ALA:HB1	2.78	0.46
69:O3:49:ILE:HG13	69:O3:70:LYS:HA	1.98	0.46
70:O4:24:LYS:HB3	36:5:1695:U:H5''	152.99	0.46
71:O5:83:LYS:O	71:O5:89:ARG:NE	2.49	0.46
74:O8:44:LYS:HG2	74:O8:53:THR:HB	2.94	0.46
74:O8:16:ARG:NH1	74:O8:70:PRO:HG3	4.37	0.46
3:S1:143:THR:HA	3:S1:207:LEU:HD12	1.97	0.46
11:S9:97:LEU:HD23	11:S9:97:LEU:HA	1.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:SR:54:PHE:HZ	34:SR:314:GLN:HE22	1.62	0.46
36:1:2812:C:H2'	36:1:2813:A:H8	1.80	0.46
36:1:290:G:H5''	51:M5:98:LEU:HD23	1.97	0.46
36:1:3151:U:H4'	36:1:3294:A:H1'	1.97	0.46
36:1:3386:G:H2'	36:1:3387:U:H6	1.81	0.46
1:2:193:U:H2'	1:2:194:U:H2'	1.98	0.46
36:5:1355:A:H4'	36:5:1356:U:O5'	2.14	0.46
36:5:1615:C:H2'	36:5:1616:U:H6	1.79	0.46
36:5:1817:G:O2'	36:5:1818:U:OP2	2.25	0.46
36:5:908:G:H4'	36:5:909:G:O5'	2.15	0.46
1:6:191:C:O2'	1:6:192:U:O5'	2.27	0.46
1:6:197:A:H5'	1:6:198:A:OP2	2.16	0.46
38:8:155:A:H2'	38:8:156:U:O4'	2.15	0.46
13:C1:5:LEU:HD23	13:C1:7:VAL:H	6.07	0.46
20:C8:41:ARG:NE	21:C9:46:PRO:HD3	2.30	0.46
1:2:150:U:P	26:D4:123:LYS:HZ3	2.37	0.46
25:D3:90:ASP:OD2	32:E0:12:GLY:HA2	2.28	0.46
32:E0:46:ASN:OD1	32:E0:47:VAL:N	2.71	0.46
39:L2:113:VAL:HG23	39:L2:134:VAL:HG22	1.98	0.46
40:L3:305:ILE:HG12	40:L3:321:PHE:CZ	2.51	0.46
40:L3:346:THR:HG23	40:L3:351:LEU:HD11	3.33	0.46
41:L4:39:PHE:CD2	41:L4:242:ALA:HB2	2.80	0.46
42:L5:61:ILE:HG23	42:L5:79:TYR:CE1	2.79	0.46
44:L7:157:ASN:C	44:L7:159:GLN:H	3.61	0.46
46:L9:124:ARG:NH1	46:L9:164:ILE:O	4.29	0.46
47:M0:65:LEU:HD23	47:M0:159:PHE:CZ	2.86	0.46
49:M3:28:GLN:OE1	51:M5:201:ARG:NH1	2.84	0.46
59:N3:74:MET:HG3	59:N3:102:ILE:HG23	5.78	0.46
62:N6:103:LYS:HD3	62:N6:103:LYS:HA	1.79	0.46
70:O4:104:VAL:HA	70:O4:107:GLU:OE2	2.16	0.46
70:O4:25:THR:OG1	70:O4:29:ILE:HD13	2.15	0.46
75:O9:23:LEU:HD11	75:O9:35:ILE:HG22	4.00	0.46
36:1:2554:A:H62	79:Q3:62:LYS:HZ2	1.61	0.46
6:S4:173:ILE:HD13	6:S4:229:GLY:HA2	4.06	0.46
36:1:1054:A:H5''	36:1:2637:A:H61	1.80	0.46
36:1:1422:G:H21	43:L6:5:LYS:NZ	2.13	0.46
36:1:1621:A:H2'	36:1:1622:U:C6	2.50	0.46
36:1:2343:C:H2'	36:1:2344:U:C6	2.49	0.46
36:1:3041:U:H2'	36:1:3042:U:C6	2.50	0.46
36:1:343:U:O2	41:L4:95:ARG:HD2	2.15	0.46
1:2:1335:U:H3	1:2:1416:G:H1	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1474:G:OP1	7:S5:109:LYS:NZ	2.43	0.46
1:2:1757:G:H4'	36:1:2256:A:N7	2.31	0.46
1:2:800:U:H2'	1:2:801:G:H8	1.81	0.46
1:2:813:U:C2	55:M9:163:ARG:HD2	2.50	0.46
1:2:909:U:H2'	1:2:910:C:C6	2.51	0.46
38:4:10:A:H2'	38:4:11:C:C6	2.50	0.46
44:L7:90:LYS:NZ	36:5:1158:A:OP2	243.01	0.46
36:5:207:U:H2'	36:5:208:C:C6	2.50	0.46
36:5:278:U:H2'	36:5:279:U:H6	1.77	0.46
36:5:722:G:C6	36:5:749:C:N3	2.84	0.46
49:M3:58:VAL:HG22	36:5:75:G:OP1	85.64	0.46
36:5:771:A:H2'	36:5:772:U:O4'	2.16	0.46
39:L2:181:LYS:HB2	36:5:860:G:C6	214.68	0.46
36:5:873:C:H4'	36:5:1908:A:H5'	1.97	0.46
1:6:1650:U:H2'	1:6:1651:A:C8	2.50	0.46
1:6:292:U:H2'	1:6:293:U:C6	2.50	0.46
15:C3:27:LYS:HE3	15:C3:27:LYS:H	1.81	0.46
17:C5:122:THR:HG22	17:C5:123:TYR:HD1	5.47	0.46
20:C8:62:THR:O	20:C8:66:LEU:HG	2.20	0.46
23:D1:53:TYR:CE2	23:D1:73:ALA:HB2	2.50	0.46
24:D2:10:ALA:HB1	24:D2:27:ILE:HD12	1.97	0.46
1:2:1101:G:O2'	24:D2:4:SER:OG	2.19	0.46
33:E1:94:LYS:HB3	33:E1:95:HIS:H	1.54	0.46
40:L3:166:ILE:HD13	40:L3:173:GLN:HG2	2.14	0.46
40:L3:292:ALA:HB2	40:L3:302:LYS:HG3	1.97	0.46
44:L7:105:LEU:HA	44:L7:105:LEU:HD23	1.81	0.46
45:L8:229:VAL:C	45:L8:231:LYS:H	2.45	0.46
48:M1:53:THR:HG23	48:M1:59:ILE:O	2.16	0.46
51:M5:68:ARG:HD3	51:M5:128:LYS:HG3	4.49	0.46
54:M8:98:LYS:HB3	54:M8:99:THR:H	1.57	0.46
59:N3:93:LEU:HB2	60:N4:20:LEU:HD22	1.98	0.46
68:O2:64:LYS:O	68:O2:65:PHE:HB2	2.18	0.46
73:O7:53:ALA:HA	73:O7:56:ARG:NH1	2.65	0.46
7:S5:190:ILE:O	7:S5:194:LEU:HB2	2.15	0.46
8:S6:137:ARG:NH2	8:S6:177:ARG:HE	2.12	0.46
9:S7:73:VAL:HG12	9:S7:77:LEU:HB2	1.97	0.46
10:S8:155:SER:O	10:S8:159:GLN:HB2	2.16	0.46
10:S8:36:THR:HG23	10:S8:96:LEU:O	2.14	0.46
36:1:1107:C:OP1	65:N9:25:LYS:NZ	2.30	0.46
36:1:1176:C:H2'	36:1:1177:G:N2	2.30	0.46
36:1:1744:G:H2'	36:1:1745:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2444:C:OP2	36:1:2445:A:H2'	2.16	0.46
36:5:1831:U:H2'	36:5:1832:C:C6	2.51	0.46
36:5:1481:A:H2'	36:5:1858:A:N3	2.30	0.46
36:5:874:U:OP1	36:5:875:G:H5'	2.16	0.46
1:6:1531:G:H2'	1:6:1532:U:C6	2.51	0.46
1:6:1584:G:N2	1:6:1610:G:H2'	2.30	0.46
13:C1:105:LYS:HD2	1:6:306:U:P	323.17	0.46
1:2:346:G:H5'	13:C1:79:LYS:HE2	1.97	0.46
7:S5:25:LEU:HB2	18:C6:27:GLY:HA3	2.18	0.46
22:D0:20:ILE:HD12	22:D0:100:VAL:HG21	3.56	0.46
24:D2:86:ILE:H	24:D2:86:ILE:HG13	1.47	0.46
6:S4:54:TYR:O	26:D4:15:ASN:ND2	2.99	0.46
26:D4:23:PHE:CE2	26:D4:75:VAL:HG23	6.53	0.46
28:D6:11:ASN:O	28:D6:33:ASP:HB2	2.51	0.46
31:D9:5:ASN:HB3	31:D9:7:TRP:CH2	5.48	0.46
40:L3:294:GLY:O	40:L3:303:LYS:HE3	2.98	0.46
47:M0:196:PHE:CG	47:M0:197:VAL:N	2.98	0.46
47:M0:99:ILE:HG23	47:M0:123:HIS:CG	4.48	0.46
36:1:670:C:OP1	54:M8:147:ARG:NH2	2.49	0.46
55:M9:180:LYS:HD3	55:M9:184:LEU:HD12	3.36	0.46
60:N4:6:ASP:HB3	60:N4:11:ALA:H	2.20	0.46
63:N7:4:PHE:CZ	66:O0:35:ARG:HG2	2.51	0.46
76:Q0:127:LEU:HD22	76:Q0:128:LYS:HG3	3.50	0.46
78:Q2:71:ARG:HH12	78:Q2:80:ARG:NH1	2.14	0.46
79:Q3:18:TYR:H	36:5:2131:A:H61	228.75	0.46
2:S0:120:LEU:HD21	2:S0:144:ILE:HD11	2.74	0.46
2:S0:185:ARG:HG2	23:D1:45:ALA:O	3.56	0.46
4:S2:139:ILE:HD11	4:S2:218:ILE:HD13	1.98	0.46
6:S4:62:LYS:NZ	6:S4:78:THR:O	8.67	0.46
7:S5:41:LYS:NZ	7:S5:67:PRO:HG2	5.04	0.46
36:1:1029:G:H2'	36:1:1030:A:C8	2.51	0.46
36:1:1483:G:C8	36:1:1485:G:C8	3.04	0.46
36:1:1778:G:O2'	36:1:1780:G:OP2	2.34	0.46
36:1:2767:U:H2'	36:1:2768:U:C6	2.51	0.46
1:2:1244:A:N3	1:2:1244:A:H3'	2.31	0.46
1:2:1559:A:N3	1:2:1559:A:H3'	2.31	0.46
1:2:1698:G:H1'	1:2:1699:G:OP1	2.16	0.46
1:2:811:A:H5'	1:2:816:G:O2'	2.15	0.46
36:5:1155:C:H2'	36:5:1156:C:C6	2.50	0.46
36:5:2446:U:H3'	36:5:2447:A:C8	2.50	0.46
36:5:252:U:H4'	36:5:253:A:C5'	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:851:C:H2'	36:5:852:U:H6	1.80	0.46
1:6:1079:U:H2'	1:6:1080:U:H6	1.80	0.46
14:C2:128:ALA:HB3	14:C2:133:LEU:HD22	3.57	0.46
15:C3:108:ASP:OD2	15:C3:110:ASP:HB3	2.15	0.46
1:2:629:U:OP1	15:C3:127:ARG:NH2	2.49	0.46
16:C4:42:VAL:HB	16:C4:46:MET:HG2	1.98	0.46
17:C5:30:THR:O	17:C5:34:VAL:HG13	2.15	0.46
22:D0:17:GLN:HG3	22:D0:18:GLN:HG3	9.13	0.46
22:D0:65:ILE:HD12	31:D9:43:PHE:CE2	2.51	0.46
13:C1:99:ARG:HD3	25:D3:8:GLY:O	2.45	0.46
25:D3:89:ASN:HB2	25:D3:92:CYS:SG	2.68	0.46
26:D4:23:PHE:HE2	26:D4:75:VAL:HG23	5.71	0.46
39:L2:104:LEU:HD12	39:L2:104:LEU:HA	2.13	0.46
40:L3:14:LEU:HD13	40:L3:262:TRP:CH2	2.84	0.46
40:L3:54:THR:OG1	40:L3:55:THR:N	2.47	0.46
42:L5:140:ARG:HH21	36:5:1080:A:P	231.18	0.46
42:L5:148:ILE:HD11	42:L5:160:PHE:CE1	2.51	0.46
37:3:22:A:H1'	42:L5:272:TYR:CZ	2.50	0.46
47:M0:56:GLU:HG3	47:M0:162:GLN:H	3.01	0.46
49:M3:155:GLU:OE2	64:N8:86:LYS:HD3	5.72	0.46
51:M5:140:LYS:O	51:M5:144:ARG:HG3	2.16	0.46
36:1:1072:G:H21	65:N9:50:THR:HB	1.81	0.46
36:1:17:G:H4'	71:O5:75:TYR:CZ	2.51	0.46
3:S1:171:ILE:HD12	3:S1:197:ILE:HG13	4.62	0.46
5:S3:64:ARG:O	5:S3:66:ILE:N	3.69	0.46
7:S5:156:ARG:HA	7:S5:157:ARG:CZ	4.58	0.46
1:2:260:U:O4	10:S8:42:ARG:HA	2.16	0.46
34:SR:154:VAL:O	34:SR:155:ARG:HD3	3.34	0.46
36:1:1659:U:H2'	36:1:1660:C:C6	2.51	0.46
36:1:167:U:H2'	36:1:168:U:C6	2.51	0.46
36:1:715:A:H4'	36:1:716:A:OP1	2.16	0.46
1:2:1292:G:H2'	1:2:1293:U:C6	2.51	0.46
1:2:1531:G:OP1	27:D5:81:ARG:NH2	2.49	0.46
1:2:1619:C:H2'	1:2:1620:C:H6	1.81	0.46
1:2:190:C:O2'	1:2:191:C:H5'	2.15	0.46
1:2:25:C:H1'	1:2:26:A:OP2	2.16	0.46
1:2:688:G:H2'	1:2:689:G:C8	2.51	0.46
36:5:2378:C:H2'	36:5:2379:U:C6	2.51	0.46
36:5:3006:A:H2'	36:5:3007:U:O4'	2.15	0.46
36:5:3386:G:H2'	36:5:3387:U:C6	2.51	0.46
36:5:541:U:H2'	36:5:542:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Q3:17:ARG:NH1	36:5:860:G:OP1	221.31	0.46
24:D2:16:ASN:ND2	1:6:1037:C:O2'	373.00	0.46
1:6:1474:G:H2'	1:6:1475:A:H8	1.81	0.46
1:6:1484:G:N2	1:6:1606:C:O2	2.47	0.46
1:6:1787:C:H2'	1:6:1788:G:C8	2.50	0.46
15:C3:42:ARG:C	15:C3:44:GLY:H	2.85	0.46
17:C5:50:THR:O	17:C5:50:THR:OG1	2.34	0.46
19:C7:71:PHE:HE1	19:C7:73:LEU:HD22	1.79	0.46
19:C7:96:SER:HA	19:C7:97:ASN:HA	1.51	0.46
39:L2:109:GLU:HA	39:L2:136:ILE:HG22	2.73	0.46
39:L2:211:HIS:CD2	39:L2:219:ILE:HG23	3.14	0.46
39:L2:33:ASP:O	39:L2:37:ARG:HG3	2.16	0.46
42:L5:105:ILE:O	42:L5:109:THR:HG23	2.16	0.46
46:L9:135:GLU:C	46:L9:136:PHE:HD2	4.54	0.46
47:M0:55:ASN:C	47:M0:131:ILE:HG12	2.80	0.46
48:M1:108:GLU:HB2	48:M1:111:ASP:OD2	2.16	0.46
49:M3:94:GLY:HA3	71:O5:116:TYR:OH	2.15	0.46
36:1:1318:A:P	52:M6:128:ARG:HH12	2.39	0.46
54:M8:153:PHE:O	54:M8:161:LYS:HG2	4.11	0.46
59:N3:18:PRO:HA	59:N3:51:ALA:HA	1.99	0.46
62:N6:60:ARG:NH2	36:5:190:U:H2'	84.27	0.46
73:O7:65:ARG:HG3	73:O7:65:ARG:NH1	2.30	0.46
4:S2:38:VAL:O	4:S2:39:THR:OG1	2.28	0.46
5:S3:224:ASP:OD2	5:S3:225:TYR:N	4.95	0.46
6:S4:11:ARG:HA	6:S4:28:ALA:HB2	2.48	0.46
6:S4:142:HIS:CD2	6:S4:226:PHE:HE2	3.45	0.46
36:1:1063:G:C6	36:1:1097:G:C5	3.04	0.46
36:1:1073:U:O2'	65:N9:49:GLY:HA3	2.16	0.46
36:1:1932:A:H5'	36:1:1933:A:OP2	2.16	0.46
36:1:2261:G:H21	36:1:2262:A:N6	2.14	0.46
36:1:2186:U:H5'	36:1:2314:U:OP2	2.16	0.46
36:1:2676:A:N1	48:M1:22:SER:OG	2.35	0.46
36:1:345:G:O2'	38:4:25:G:N3	2.48	0.46
1:2:144:U:O2'	1:2:145:A:H8	1.95	0.46
1:2:1687:U:H1'	1:2:1715:G:N2	2.31	0.46
1:2:270:C:N4	1:2:285:G:H1	2.13	0.46
36:5:953:G:O2'	36:5:1116:G:H5'	2.16	0.46
36:5:2631:U:H4'	36:5:2697:A:C2	2.51	0.46
78:Q2:9:LYS:O	36:5:2713:U:H3'	225.19	0.46
36:5:3041:U:H2'	36:5:3042:U:C6	2.51	0.46
36:5:3161:C:H2'	36:5:3162:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:80:G:H2'	36:5:81:C:H6	1.81	0.46
1:6:1584:G:N2	1:6:1611:A:OP2	2.34	0.46
1:6:1628:U:H2'	1:6:1629:G:C8	2.51	0.46
1:6:703:G:H2'	1:6:704:C:C6	2.51	0.46
14:C2:56:GLU:HB3	14:C2:124:LYS:HE3	1.97	0.46
14:C2:50:LYS:O	14:C2:54:ARG:HG2	4.12	0.46
18:C6:9:THR:HG21	18:C6:88:GLY:HA2	1.96	0.46
23:D1:9:VAL:O	23:D1:10:GLU:HB3	2.51	0.46
33:E1:121:CYS:HB3	33:E1:130:VAL:HG11	5.84	0.46
39:L2:183:GLY:O	39:L2:186:PHE:HB3	2.20	0.46
36:1:2606:G:OP1	39:L2:233:GLN:NE2	2.49	0.46
39:L2:54:ARG:HG2	39:L2:55:GLY:O	4.86	0.46
40:L3:20:LYS:HE3	40:L3:20:LYS:HB2	1.75	0.46
41:L4:309:ARG:NH2	41:L4:312:VAL:HB	2.30	0.46
46:L9:103:ILE:HG12	46:L9:136:PHE:HE2	1.81	0.46
46:L9:47:LYS:HE3	46:L9:50:ASN:H	1.81	0.46
48:M1:122:ILE:HA	48:M1:122:ILE:HD13	2.38	0.46
49:M3:73:ARG:HD2	36:5:76:G:H3'	83.52	0.46
49:M3:91:ARG:NH1	49:M3:97:VAL:HB	2.31	0.46
54:M8:147:ARG:O	54:M8:150:VAL:HG22	2.16	0.46
54:M8:19:PRO:HD3	54:M8:53:PHE:HD1	1.81	0.46
56:N0:1:MET:HA	56:N0:4:PHE:CE1	5.74	0.46
62:N6:111:LEU:HB3	62:N6:116:LYS:HG3	3.03	0.46
63:N7:4:PHE:CZ	66:O0:35:ARG:HA	2.51	0.46
63:N7:53:VAL:HG23	63:N7:57:HIS:HD2	1.81	0.46
64:N8:19:LYS:HD2	64:N8:25:HIS:ND1	2.31	0.46
68:O2:33:ARG:HH11	36:5:944:C:H4'	162.49	0.46
72:O6:40:VAL:O	72:O6:44:VAL:HG23	2.28	0.46
78:Q2:52:GLY:O	78:Q2:54:THR:HG23	2.15	0.46
2:S0:157:ASP:OD2	23:D1:65:SER:OG	3.50	0.46
2:S0:66:ALA:HB1	23:D1:50:TYR:HE1	1.81	0.46
3:S1:70:LEU:HB3	3:S1:79:HIS:HB3	5.03	0.46
6:S4:125:LYS:HB2	6:S4:226:PHE:CE2	3.30	0.46
6:S4:34:GLY:HA3	6:S4:83:PRO:CG	2.54	0.46
8:S6:135:PRO:HB2	8:S6:141:ILE:HG12	1.98	0.46
1:2:78:A:C8	8:S6:154:ARG:HG2	2.51	0.46
8:S6:194:LYS:HB2	8:S6:194:LYS:HE3	3.77	0.46
11:S9:103:ASP:N	11:S9:103:ASP:OD2	2.75	0.46
11:S9:33:GLU:HG2	11:S9:33:GLU:H	4.13	0.46
34:SR:19:TRP:HB2	34:SR:38:ARG:HG3	2.02	0.46
36:1:839:C:O2'	36:1:1724:U:OP1	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:174:C:H2'	36:1:175:C:C6	2.51	0.46
36:1:355:A:N1	41:L4:82:THR:OG1	2.43	0.46
1:2:164:A:N3	8:S6:13:GLN:NE2	2.64	0.46
1:2:256:A:H2'	1:2:257:A:O4'	2.16	0.46
1:2:258:C:H2'	1:2:259:U:H5'	1.98	0.46
1:2:505:A:N3	1:2:505:A:H2'	2.31	0.46
38:4:122:U:H2'	38:4:123:G:H8	1.79	0.46
36:5:1120:A:H2'	36:5:1121:U:C6	2.51	0.46
36:5:1141:C:O2'	36:5:1153:A:N3	2.39	0.46
36:5:1778:G:O2'	36:5:1780:G:OP2	2.26	0.46
36:5:2197:C:N4	36:5:2241:U:H2'	2.31	0.46
36:5:2658:G:C6	36:5:2659:G:N7	2.84	0.46
36:5:664:U:H2'	36:5:665:A:C8	2.51	0.46
36:5:810:A:H2'	36:5:811:U:H6	1.81	0.46
36:5:945:C:H2'	36:5:946:U:C6	2.51	0.46
17:C5:40:ARG:NH2	1:6:1552:U:O4	394.00	0.46
1:6:73:U:H2'	1:6:74:U:C6	2.51	0.46
12:C0:12:HIS:CE1	12:C0:49:LEU:HD21	2.51	0.46
12:C0:52:LYS:HG3	12:C0:54:TYR:CD2	2.51	0.46
13:C1:13:PHE:CE2	13:C1:15:LYS:HB3	2.51	0.46
14:C2:97:LEU:HD12	14:C2:118:ALA:HB3	2.84	0.46
18:C6:103:ASN:O	18:C6:107:LYS:HB2	2.52	0.46
22:D0:33:GLN:OE1	22:D0:33:GLN:N	2.45	0.46
23:D1:13:VAL:HA	23:D1:14:PRO:HD3	1.89	0.46
26:D4:111:LYS:HE3	26:D4:111:LYS:HB2	1.64	0.46
28:D6:12:LYS:HD2	28:D6:16:GLY:H	1.91	0.46
11:S9:29:LYS:HA	32:E0:40:TYR:CE2	3.05	0.46
33:E1:136:LYS:HG2	33:E1:137:ASP:OD1	2.16	0.46
33:E1:98:VAL:HG22	33:E1:99:LYS:H	1.81	0.46
36:1:2180:G:P	39:L2:174:ARG:HH22	2.39	0.46
40:L3:49:TYR:O	40:L3:80:ASP:N	2.74	0.46
43:L6:28:GLN:HG2	43:L6:29:LYS:O	2.16	0.46
47:M0:56:GLU:HG3	47:M0:162:GLN:N	3.27	0.46
47:M0:30:LYS:HD2	47:M0:63:GLU:OE1	2.16	0.46
47:M0:71:CYS:C	47:M0:73:ASN:H	3.30	0.46
37:3:39:C:O2'	48:M1:43:GLN:HB3	2.16	0.46
49:M3:93:ILE:HG22	49:M3:93:ILE:O	2.16	0.46
52:M6:124:LEU:HB2	52:M6:127:LEU:HD12	3.82	0.46
52:M6:29:ASN:ND2	69:O3:14:LEU:HD22	2.85	0.46
53:M7:29:THR:HA	53:M7:32:THR:HG23	2.46	0.46
56:N0:7:TYR:CE1	56:N0:34:GLU:HG2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:N5:50:ALA:O	71:O5:66:VAL:HG21	3.57	0.46
2:S0:84:ARG:HD3	2:S0:203:PHE:O	3.97	0.46
3:S1:129:THR:HB	3:S1:130:SER:H	1.64	0.46
3:S1:35:PRO:HD3	3:S1:98:THR:OG1	4.37	0.46
3:S1:35:PRO:HG3	3:S1:98:THR:O	2.14	0.46
7:S5:159:ALA:HB3	7:S5:225:ARG:HB3	4.07	0.46
7:S5:63:GLN:H	7:S5:89:ILE:HG23	1.81	0.46
9:S7:30:SER:HB2	9:S7:34:LEU:HB2	2.81	0.46
11:S9:133:HIS:CE1	1:6:513:U:H5'	448.57	0.46
11:S9:66:ASP:HB3	11:S9:69:ARG:HB3	2.54	0.46
34:SR:274:LEU:HD13	34:SR:313:TRP:CE2	2.82	0.46
36:1:2680:A:C2	48:M1:57:PHE:HB3	2.51	0.45
36:1:2697:A:H2'	36:1:2698:G:C8	2.51	0.45
36:1:3166:C:H42	36:1:3284:G:H1	1.64	0.45
36:1:3326:G:H2'	36:1:3327:G:H8	1.80	0.45
1:2:1648:A:H4'	32:E0:4:VAL:HG21	1.98	0.45
1:2:1789:G:OP2	16:C4:132:ARG:NH2	2.37	0.45
1:2:352:A:OP2	1:2:352:A:H8	2.00	0.45
1:2:480:G:N2	1:2:509:G:H1'	2.31	0.45
37:3:47:C:H2'	37:3:48:U:H6	1.81	0.45
36:5:2192:C:H2'	36:5:2193:U:O4'	2.16	0.45
36:5:2986:U:H2'	36:5:2987:A:H8	1.82	0.45
76:Q0:114:LYS:HE3	36:5:3107:U:OP1	300.92	0.45
36:5:3133:C:H2'	36:5:3134:A:O4'	2.16	0.45
29:D7:70:LYS:HD2	1:6:1049:U:H5''	350.56	0.45
30:D8:21:SER:O	1:6:1617:U:O2'	351.32	0.45
1:6:626:U:H2'	1:6:627:C:C6	2.50	0.45
1:6:794:U:H4'	1:6:795:U:OP2	2.15	0.45
12:C0:59:PHE:CZ	12:C0:62:GLN:HA	2.56	0.45
18:C6:115:THR:HA	18:C6:118:ILE:HG23	1.98	0.45
22:D0:96:PRO:O	22:D0:100:VAL:HG23	3.09	0.45
39:L2:190:ARG:NH1	39:L2:191:LEU:HD11	2.31	0.45
39:L2:47:GLN:HG3	39:L2:60:LYS:HB2	5.35	0.45
42:L5:271:LYS:HD3	42:L5:271:LYS:HA	4.40	0.45
42:L5:41:LYS:HA	42:L5:41:LYS:HD3	3.85	0.45
47:M0:4:ARG:HG3	47:M0:8:CYS:SG	5.83	0.45
36:1:744:A:H4'	54:M8:142:GLY:O	2.15	0.45
36:1:2723:U:OP1	57:N1:87:LYS:HD3	2.15	0.45
60:N4:57:LYS:HE3	60:N4:57:LYS:HB2	2.08	0.45
61:N5:100:LYS:HZ2	61:N5:107:VAL:H	1.62	0.45
64:N8:104:THR:OG1	64:N8:126:LYS:O	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:O0:55:GLU:HB2	70:O4:94:LEU:HD11	2.68	0.45
66:O0:81:VAL:HG23	66:O0:83:LYS:HD2	1.97	0.45
67:O1:71:LEU:HA	67:O1:71:LEU:HD23	1.97	0.45
72:O6:11:LEU:HA	72:O6:11:LEU:HD13	1.75	0.45
77:Q1:8:LYS:HA	77:Q1:11:ARG:HB2	1.98	0.45
6:S4:252:ARG:NH2	6:S4:252:ARG:HB3	4.57	0.45
8:S6:137:ARG:HH21	8:S6:177:ARG:HE	1.63	0.45
9:S7:141:ARG:HG2	24:D2:51:GLU:CD	2.64	0.45
10:S8:26:LYS:O	10:S8:29:LEU:HD22	3.57	0.45
11:S9:112:GLN:HG3	11:S9:148:VAL:HB	1.99	0.45
34:SR:106:HIS:CD2	34:SR:110:VAL:HG22	2.72	0.45
34:SR:269:TYR:H	34:SR:269:TYR:HD1	1.63	0.45
34:SR:16:HIS:CE1	34:SR:43:ILE:HG12	2.51	0.45
36:1:1927:G:OP2	79:Q3:6:LYS:N	2.49	0.45
36:1:2264:U:H2'	36:1:2265:C:C6	2.52	0.45
36:1:2616:C:C2'	36:1:2617:U:H5'	2.46	0.45
36:1:3350:C:O2'	36:1:3351:U:O5'	2.24	0.45
36:1:3393:U:H2'	36:1:3394:U:H6	1.81	0.45
36:1:381:U:H2'	36:1:382:U:C6	2.51	0.45
36:1:67:A:N1	36:1:300:G:O2'	2.42	0.45
1:2:699:U:OP2	1:2:733:A:N6	2.49	0.45
37:3:28:C:H5''	48:M1:137:ARG:HG2	1.98	0.45
36:5:1688:U:H2'	36:5:1689:U:C6	2.51	0.45
36:5:1831:U:H2'	36:5:1832:C:H6	1.80	0.45
36:5:2152:A:H2'	36:5:2153:U:C6	2.51	0.45
36:5:223:U:OP1	36:5:225:C:N4	2.46	0.45
36:5:2261:G:H21	36:5:2262:A:H61	1.63	0.45
40:L3:102:LEU:O	36:5:3147:G:H4'	242.21	0.45
36:5:371:G:H4'	36:5:396:A:N1	2.30	0.45
15:C3:54:LEU:HD23	15:C3:54:LEU:HA	2.13	0.45
1:2:1180:C:O2'	17:C5:128:HIS:ND1	2.42	0.45
20:C8:102:ALA:O	20:C8:105:VAL:HG12	2.16	0.45
20:C8:82:PRO:O	20:C8:84:TRP:N	2.42	0.45
24:D2:86:ILE:HD12	24:D2:87:GLU:N	2.31	0.45
25:D3:142:LYS:NZ	25:D3:145:SER:OG	7.01	0.45
28:D6:97:PRO:HA	28:D6:98:PRO:HD3	4.40	0.45
1:2:1199:G:C5	31:D9:40:ARG:HD3	2.51	0.45
39:L2:70:ARG:NH2	39:L2:72:ARG:HE	5.87	0.45
40:L3:133:TYR:HA	40:L3:136:LYS:HD2	1.98	0.45
41:L4:191:LYS:HG2	41:L4:194:TYR:HE2	1.80	0.45
47:M0:194:GLY:O	47:M0:196:PHE:N	4.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:213:PHE:N	47:M0:214:PRO:HD3	2.31	0.45
48:M1:90:GLN:OE1	48:M1:172:LEU:HD21	3.11	0.45
49:M3:140:SER:O	49:M3:141:ALA:HB3	3.57	0.45
50:M4:129:TYR:O	50:M4:133:LYS:HG3	2.48	0.45
52:M6:54:TYR:HE2	52:M6:58:LEU:HD13	1.88	0.45
54:M8:178:ARG:HD3	64:N8:50:PRO:HB2	3.24	0.45
55:M9:46:LYS:HZ1	36:5:1766:G:H8	100.33	0.45
56:N0:1:MET:HB3	56:N0:1:MET:HE2	1.65	0.45
59:N3:90:GLY:O	60:N4:16:GLY:HA2	2.16	0.45
66:O0:83:LYS:HG2	66:O0:85:PHE:CE2	2.51	0.45
68:O2:12:LYS:HD3	68:O2:57:TYR:HA	2.14	0.45
71:O5:85:THR:O	71:O5:89:ARG:HB2	3.26	0.45
76:Q0:93:LYS:HG3	76:Q0:102:ARG:HD3	2.48	0.45
77:Q1:16:LYS:O	77:Q1:20:VAL:HG23	2.69	0.45
2:S0:109:ASN:HD21	2:S0:111:ILE:HG22	1.81	0.45
6:S4:37:LYS:HB2	6:S4:40:GLU:HG2	1.97	0.45
8:S6:121:LEU:HD12	8:S6:121:LEU:HA	4.57	0.45
8:S6:214:LYS:HB3	8:S6:218:GLU:OE1	6.32	0.45
11:S9:92:LYS:O	11:S9:93:LEU:HD23	2.17	0.45
36:1:1155:C:O2'	36:1:1197:A:N1	2.40	0.45
36:1:1381:A:OP1	41:L4:197:ARG:NH1	2.48	0.45
36:1:2111:G:H5''	60:N4:48:ARG:NH2	2.31	0.45
36:1:2748:A:H1'	42:L5:36:LEU:HD23	1.99	0.45
36:1:2781:U:H2'	36:1:2782:U:C6	2.51	0.45
36:1:3096:C:H2'	36:1:3097:C:C6	2.51	0.45
36:1:585:A:H5''	69:O3:70:LYS:HE2	1.97	0.45
36:1:596:C:OP1	44:L7:33:ARG:NH1	2.50	0.45
36:1:685:G:OP2	49:M3:35:ARG:NH1	2.50	0.45
1:2:130:C:O2'	1:2:131:C:OP1	2.31	0.45
1:2:1458:G:OP1	20:C8:138:THR:N	2.37	0.45
1:2:182:A:H2'	1:2:183:U:C6	2.51	0.45
1:2:489:C:H2'	1:2:490:C:C6	2.51	0.45
1:2:549:G:H2'	1:2:550:A:H8	1.81	0.45
1:2:855:A:C2	1:2:857:U:H1'	2.50	0.45
1:2:987:G:C2	39:L2:249:SER:HB2	2.51	0.45
1:2:990:C:H2'	1:2:991:G:O4'	2.17	0.45
36:5:1184:A:H2'	36:5:1185:C:H6	1.81	0.45
36:5:1594:A:H1'	36:5:1615:C:H1'	1.99	0.45
36:5:1915:A:H2'	36:5:1916:U:C6	2.51	0.45
36:5:2507:C:H2'	36:5:2508:U:C6	2.50	0.45
36:5:3127:A:H2'	36:5:3128:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M4:77:ARG:NH2	36:5:525:C:OP2	344.19	0.45
36:5:655:C:H2'	36:5:656:A:H8	1.82	0.45
1:6:1151:A:H4'	1:6:1766:A:C5	2.50	0.45
1:6:1175:U:H2'	1:6:1176:G:H8	1.81	0.45
16:C4:25:ASP:N	16:C4:55:SER:HB3	2.59	0.45
18:C6:113:ASP:HA	18:C6:116:LEU:HD23	1.98	0.45
18:C6:32:ASN:OD1	18:C6:69:VAL:HG23	2.16	0.45
21:C9:28:LEU:HA	21:C9:111:ILE:HD11	5.29	0.45
23:D1:24:ILE:HD12	23:D1:31:SER:HB2	4.37	0.45
24:D2:20:THR:OG1	24:D2:22:LYS:HD3	2.16	0.45
24:D2:6:VAL:HG13	24:D2:29:PRO:HD2	1.97	0.45
28:D6:82:ARG:O	28:D6:84:VAL:HG12	2.16	0.45
39:L2:187:HIS:ND1	39:L2:190:ARG:NH1	4.46	0.45
39:L2:40:TYR:HA	39:L2:91:GLY:HA3	2.38	0.45
36:1:2366:C:H5'	40:L3:259:HIS:NE2	2.31	0.45
45:L8:162:LEU:HD23	51:M5:7:LEU:HD21	1.97	0.45
51:M5:125:SER:OG	36:5:2433:U:H1'	162.07	0.45
59:N3:86:ARG:HB2	59:N3:92:PHE:CE1	2.51	0.45
59:N3:93:LEU:H	59:N3:93:LEU:HD23	1.96	0.45
49:M3:104:ARG:HA	72:O6:20:MET:HB2	1.98	0.45
73:O7:55:ARG:NH1	36:5:353:G:O6	113.59	0.45
74:O8:3:ARG:NH1	74:O8:52:TYR:HE1	3.35	0.45
5:S3:216:PRO:HB2	5:S3:217:ILE:H	1.61	0.45
10:S8:152:ILE:HD13	10:S8:157:GLU:OE1	2.16	0.45
10:S8:21:PHE:O	10:S8:22:ARG:HG2	2.16	0.45
11:S9:129:ILE:HA	11:S9:134:ILE:HG12	4.63	0.45
35:SM:83:LYS:HB3	35:SM:84:LYS:H	2.19	0.45
36:1:1721:U:O4	55:M9:128:LYS:NZ	2.32	0.45
36:1:3242:G:N2	36:1:3245:A:H5''	2.32	0.45
36:1:3299:A:H61	36:1:3315:G:H1	1.65	0.45
36:1:86:G:O2'	36:1:98:G:O6	2.27	0.45
37:3:4:U:H2'	37:3:5:G:H8	1.80	0.45
36:5:711:A:N7	36:5:712:G:H1'	2.31	0.45
1:6:198:A:H2'	1:6:198:A:N3	2.30	0.45
10:S8:33:PRO:HA	1:6:331:A:H5'	278.53	0.45
15:C3:94:LYS:NZ	1:6:952:A:OP1	301.28	0.45
13:C1:29:LYS:HE2	13:C1:32:LYS:HA	1.98	0.45
13:C1:77:SER:HB3	13:C1:85:VAL:HB	1.99	0.45
14:C2:44:GLY:HA3	1:6:1227:A:O2'	463.95	0.45
19:C7:27:ASP:OD1	34:SR:38:ARG:NH1	2.78	0.45
19:C7:34:LEU:O	19:C7:38:ILE:HG22	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:C7:26:LEU:O	19:C7:59:LYS:NZ	4.18	0.45
19:C7:70:SER:HA	19:C7:74:GLN:OE1	2.16	0.45
22:D0:69:LYS:HG2	22:D0:80:GLU:HB2	1.97	0.45
46:L9:90:MET:HG2	46:L9:181:VAL:HA	1.99	0.45
47:M0:153:ARG:N	47:M0:165:ILE:HD11	7.68	0.45
47:M0:193:ASP:OD2	47:M0:198:LYS:NZ	5.42	0.45
49:M3:157:ARG:O	64:N8:99:ALA:N	2.37	0.45
49:M3:46:ILE:HD12	49:M3:49:ARG:NH1	2.95	0.45
36:1:3229:G:H1'	50:M4:133:LYS:HG2	1.98	0.45
51:M5:102:ALA:O	51:M5:106:VAL:HG12	2.16	0.45
52:M6:14:HIS:NE2	52:M6:124:LEU:HD13	2.32	0.45
53:M7:36:ILE:HG12	53:M7:44:ALA:HB1	1.98	0.45
70:O4:61:GLN:O	70:O4:64:THR:OG1	2.44	0.45
2:S0:121:VAL:HG23	2:S0:141:ILE:HG21	1.98	0.45
2:S0:185:ARG:HH21	23:D1:47:PRO:HG3	2.79	0.45
5:S3:224:ASP:OD1	34:SR:228:LYS:HD2	2.42	0.45
6:S4:104:ASP:OD1	6:S4:105:VAL:N	4.08	0.45
6:S4:71:LYS:HG3	6:S4:91:THR:HB	1.97	0.45
11:S9:107:ARG:NH2	11:S9:148:VAL:O	2.45	0.45
34:SR:90:ARG:NH2	34:SR:102:ARG:HE	2.96	0.45
36:1:1838:G:H4'	36:1:1839:A:N3	2.31	0.45
36:1:2339:C:OP2	59:N3:48:ARG:HG2	2.16	0.45
36:1:3365:U:H2'	36:1:3366:G:C8	2.51	0.45
36:1:627:U:H2'	36:1:628:A:C8	2.52	0.45
36:1:895:A:C6	36:1:897:U:C4	3.04	0.45
1:2:1029:U:O2'	1:2:1030:A:H5'	2.17	0.45
1:2:472:U:H5''	11:S9:11:THR:HG23	1.98	0.45
1:2:576:G:H4'	1:2:580:A:C4	2.51	0.45
1:2:647:G:N2	1:2:687:G:H22	2.14	0.45
38:4:62:C:OP1	71:O5:49:LYS:NZ	2.48	0.45
54:M8:2:GLY:N	36:5:1160:C:OP1	224.63	0.45
36:5:1448:U:H2'	36:5:1449:A:C8	2.51	0.45
36:5:1615:C:H2'	36:5:1616:U:C6	2.51	0.45
36:5:2198:A:C8	36:5:2270:A:H1'	2.51	0.45
36:5:230:U:H2'	36:5:231:G:O4'	2.17	0.45
36:5:1447:G:O2'	36:5:2355:G:O6	2.23	0.45
36:5:260:C:H2'	36:5:261:U:C6	2.51	0.45
36:5:2726:C:O2'	36:5:2727:A:H2'	2.17	0.45
36:5:710:A:N3	36:5:2774:C:O2'	2.39	0.45
1:6:1274:C:O2	1:6:1274:C:H2'	2.16	0.45
1:6:151:G:N2	1:6:163:G:N2	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1557:U:O2'	1:6:1558:U:H2'	2.16	0.45
1:6:751:G:H2'	1:6:752:A:C8	2.51	0.45
1:6:793:A:H5''	1:6:794:U:C5	2.52	0.45
19:C7:84:TYR:OH	19:C7:86:PRO:HB3	9.85	0.45
24:D2:104:LEU:HB3	24:D2:125:ILE:HA	1.99	0.45
25:D3:51:GLY:HA2	25:D3:77:ILE:HG13	1.99	0.45
26:D4:18:LEU:HD13	26:D4:20:ARG:CZ	2.46	0.45
26:D4:91:LEU:HD22	26:D4:96:LEU:HD12	1.98	0.45
39:L2:65:ASP:HB3	39:L2:68:LYS:O	2.44	0.45
40:L3:106:TRP:HB2	40:L3:133:TYR:CE2	2.58	0.45
40:L3:313:HIS:O	40:L3:333:LYS:HE3	2.17	0.45
41:L4:13:GLY:H	41:L4:171:ALA:HB1	3.46	0.45
41:L4:253:ALA:O	41:L4:256:THR:OG1	2.99	0.45
41:L4:265:GLU:CD	41:L4:265:GLU:H	2.20	0.45
41:L4:44:LYS:O	41:L4:47:ARG:HD3	2.28	0.45
44:L7:147:LEU:HD22	44:L7:205:PHE:CD1	2.79	0.45
44:L7:93:ASN:N	44:L7:93:ASN:OD1	2.50	0.45
46:L9:22:SER:OG	46:L9:39:LYS:NZ	2.49	0.45
47:M0:115:MET:O	47:M0:115:MET:HG3	2.17	0.45
49:M3:14:PHE:CE1	36:5:665:A:H1'	134.54	0.45
50:M4:38:ILE:HD13	56:N0:150:PHE:CE2	3.85	0.45
53:M7:141:SER:O	53:M7:143:PRO:HD3	3.15	0.45
55:M9:34:GLN:O	55:M9:36:ASN:ND2	2.47	0.45
62:N6:5:SER:C	62:N6:7:ASP:N	3.13	0.45
63:N7:136:PHE:O	70:O4:88:ARG:NH1	2.48	0.45
68:O2:18:LYS:HD3	68:O2:30:GLU:HG2	1.99	0.45
69:O3:103:TYR:HA	69:O3:104:PRO:C	2.37	0.45
72:O6:26:ILE:HG12	36:5:157:A:C8	84.84	0.45
2:S0:41:ARG:HD2	2:S0:42:PRO:O	2.15	0.45
3:S1:197:ILE:HG22	3:S1:210:ILE:HD13	2.75	0.45
4:S2:129:ILE:HG22	4:S2:133:LYS:HE3	2.83	0.45
8:S6:58:LYS:HG2	8:S6:105:ASP:O	2.17	0.45
11:S9:45:ILE:HG22	11:S9:101:VAL:HG12	1.98	0.45
36:1:1069:C:H2'	36:1:1070:U:C6	2.46	0.45
36:1:2575:G:H2'	36:1:2576:G:H8	1.80	0.45
36:1:2618:G:OP1	47:M0:116:ARG:NE	2.50	0.45
36:1:3082:C:H2'	36:1:3083:G:C8	2.52	0.45
1:2:1122:G:N2	1:2:1125:A:OP2	2.48	0.45
1:2:1729:C:H2'	1:2:1730:A:O4'	2.17	0.45
1:2:992:A:O2'	1:2:1785:U:O2	2.35	0.45
1:2:354:C:H5''	10:S8:16:ALA:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:743:U:OP1	9:S7:108:GLN:N	2.50	0.45
37:3:49:G:C5	42:L5:58:LYS:HG3	2.52	0.45
36:5:1471:U:H2'	36:5:1472:U:C6	2.52	0.45
36:5:1758:G:H2'	36:5:1759:C:O4'	2.17	0.45
36:5:1767:C:H2'	36:5:1768:U:C6	2.50	0.45
36:5:1948:G:H2'	36:5:1949:G:H8	1.82	0.45
36:5:194:U:H2'	36:5:195:U:C6	2.51	0.45
36:5:2549:G:C8	36:5:2549:G:H5'	2.51	0.45
36:5:2689:A:N3	36:5:2689:A:H2'	2.31	0.45
36:5:2830:G:H1'	36:5:2861:U:C2	2.50	0.45
40:L3:98:GLY:HA3	36:5:3005:A:H5'	250.31	0.45
10:S8:161:SER:OG	36:5:3353:G:OP1	234.33	0.45
36:5:561:C:H2'	36:5:562:C:C6	2.52	0.45
36:5:816:A:C8	36:5:906:A:C6	3.05	0.45
1:6:105:A:H2'	1:6:106:U:O4'	2.16	0.45
1:6:1563:C:H2'	1:6:1564:U:C6	2.51	0.45
1:6:1679:G:C6	1:6:1680:G:C6	3.05	0.45
1:6:193:U:C2	1:6:195:G:H1'	2.52	0.45
1:6:58:U:O2'	1:6:451:A:N3	2.47	0.45
1:6:478:A:H2	1:6:510:G:H22	1.64	0.45
1:6:649:U:H2'	1:6:650:U:C5	2.50	0.45
36:5:1055:A:H5''	37:7:100:C:O2'	2.16	0.45
12:C0:32:HIS:ND1	12:C0:34:GLU:O	7.08	0.45
15:C3:87:ASP:HB3	15:C3:88:LEU:H	4.00	0.45
17:C5:112:LEU:HA	17:C5:112:LEU:HD23	1.84	0.45
18:C6:27:GLY:HA2	18:C6:63:ILE:O	2.56	0.45
24:D2:86:ILE:HD12	24:D2:87:GLU:H	1.82	0.45
26:D4:35:VAL:HG22	26:D4:36:SER:H	1.81	0.45
30:D8:18:ARG:NH1	1:6:1616:G:H4'	364.11	0.45
36:1:2880:U:H1'	40:L3:250:ALA:HB3	1.98	0.45
42:L5:270:LYS:HG3	42:L5:273:ARG:CB	5.25	0.45
42:L5:50:ARG:NH2	42:L5:72:ASP:OD2	4.38	0.45
44:L7:57:THR:O	44:L7:60:ARG:N	3.67	0.45
46:L9:191:LEU:HA	46:L9:191:LEU:HD13	4.37	0.45
49:M3:116:LEU:O	49:M3:120:GLN:HG3	2.17	0.45
52:M6:127:LEU:HD22	56:N0:156:VAL:HG12	1.99	0.45
53:M7:23:ARG:O	53:M7:86:LYS:HE2	2.17	0.45
58:N2:36:TYR:CD2	58:N2:83:TYR:HB2	2.51	0.45
36:1:716:A:C5	64:N8:117:ARG:HG3	2.51	0.45
70:O4:11:ASN:HA	70:O4:12:PRO:HD3	1.67	0.45
3:S1:126:THR:HG22	3:S1:136:ARG:NE	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S2:150:GLN:HA	4:S2:151:PRO:HD3	2.04	0.45
4:S2:41:LEU:HD13	4:S2:68:ILE:HD13	2.97	0.45
4:S2:55:GLU:OE2	4:S2:239:PRO:HG3	4.70	0.45
6:S4:104:ASP:HB3	6:S4:105:VAL:H	1.41	0.45
6:S4:139:VAL:HG13	6:S4:150:PRO:HG3	1.99	0.45
6:S4:166:SER:O	6:S4:168:LYS:HG2	5.58	0.45
7:S5:140:THR:HA	7:S5:214:LYS:HD2	2.55	0.45
7:S5:25:LEU:HB2	7:S5:26:ALA:H	1.61	0.45
34:SR:123:ILE:HG21	34:SR:169:ILE:HG21	2.45	0.45
34:SR:227:ALA:O	34:SR:229:LYS:HD2	2.15	0.45
36:1:1210:U:H2'	36:1:1211:U:H6	1.81	0.45
36:1:1642:A:O2'	36:1:1643:A:C8	2.70	0.45
36:1:213:A:N6	36:1:227:G:O2'	2.45	0.45
36:1:650:C:H2'	36:1:651:G:C8	2.52	0.45
1:2:1040:G:N2	1:2:1078:C:O2	2.48	0.45
1:2:1150:G:H2'	1:2:1768:G:N2	2.31	0.45
1:2:434:G:OP1	25:D3:78:LYS:HA	2.16	0.45
1:2:427:C:O2'	1:2:459:G:N3	2.38	0.45
41:L4:307:GLN:NE2	36:5:1345:G:H21	205.48	0.45
36:5:1529:A:P	36:5:1592:G:H22	2.39	0.45
51:M5:90:ASN:ND2	36:5:2425:G:OP2	168.59	0.45
47:M0:157:TYR:CD1	36:5:2836:C:H4'	313.51	0.45
36:5:2894:C:H2'	36:5:2895:G:H8	1.81	0.45
1:6:1478:G:C4	1:6:1479:A:C8	3.05	0.45
1:6:152:U:C2	1:6:163:G:N2	2.85	0.45
1:6:870:C:H2'	1:6:871:G:H8	1.81	0.45
13:C1:11:ARG:HE	13:C1:11:ARG:HB3	2.04	0.45
13:C1:21:ASN:HD21	13:C1:31:THR:HG23	1.81	0.45
14:C2:29:LYS:HE2	14:C2:100:TRP:CD1	2.52	0.45
16:C4:31:THR:OG1	16:C4:32:ASP:N	2.49	0.45
17:C5:127:ARG:O	17:C5:130:ARG:NH1	5.56	0.45
7:S5:112:ARG:NH1	18:C6:43:ILE:HD11	2.32	0.45
20:C8:127:HIS:CE1	20:C8:133:VAL:HG21	2.52	0.45
25:D3:100:ASP:O	25:D3:101:GLU:HB3	4.50	0.45
26:D4:14:SER:HA	26:D4:21:LYS:HG3	2.56	0.45
26:D4:57:VAL:HB	26:D4:60:PHE:CE2	4.82	0.45
27:D5:54:VAL:N	27:D5:55:PRO:HD2	2.31	0.45
39:L2:192:LYS:HB3	39:L2:193:ARG:HG2	2.60	0.45
41:L4:139:GLY:O	41:L4:141:ARG:NH1	4.37	0.45
41:L4:74:ILE:HG21	41:L4:94:CYS:SG	2.56	0.45
41:L4:60:THR:HG21	41:L4:77:VAL:HG22	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:L9:118:LEU:HA	46:L9:118:LEU:HD23	1.88	0.45
49:M3:185:LYS:HG3	49:M3:188:ARG:HH12	5.02	0.45
52:M6:158:ALA:O	52:M6:162:VAL:HG23	2.27	0.45
55:M9:23:TRP:HE3	55:M9:51:VAL:HG13	1.82	0.45
55:M9:61:SER:OG	55:M9:62:ARG:N	2.77	0.45
64:N8:118:ILE:HD13	64:N8:118:ILE:H	1.81	0.45
71:O5:32:LYS:HG2	71:O5:44:ILE:HD11	1.98	0.45
6:S4:64:ILE:HD11	26:D4:18:LEU:HG	2.24	0.45
7:S5:143:ARG:NH1	7:S5:218:GLU:OE1	2.50	0.45
8:S6:185:GLN:HA	8:S6:188:ARG:NH1	2.31	0.45
8:S6:39:GLU:HA	8:S6:42:GLY:O	2.17	0.45
9:S7:15:GLU:O	9:S7:19:GLN:HG3	2.41	0.45
9:S7:50:ASP:HA	9:S7:56:LYS:HG2	3.12	0.45
11:S9:78:ARG:HG3	11:S9:79:ARG:N	2.30	0.45
35:SM:77:THR:OG1	35:SM:79:SER:OG	2.88	0.45
36:1:1065:A:C5	65:N9:28:LYS:HB2	2.51	0.45
36:1:1350:A:H2'	36:1:1351:U:H3'	1.99	0.45
36:1:1853:U:H5''	36:1:1854:C:OP1	2.16	0.45
36:1:2593:A:H4'	36:1:2594:C:O5'	2.16	0.45
36:1:1304:A:N6	36:1:2860:U:OP1	2.48	0.45
36:1:3269:U:H3	43:L6:134:ARG:HH21	1.64	0.45
36:1:776:U:C5	36:1:2719:U:O2	2.70	0.45
1:2:1376:C:N4	1:2:1377:U:O4	2.50	0.45
1:2:139:C:O4'	1:2:141:U:H5'	2.17	0.45
1:2:1546:G:OP1	20:C8:127:HIS:HE1	1.99	0.45
1:2:87:C:O2'	1:2:169:A:N1	2.43	0.45
1:2:304:U:H2'	1:2:305:C:C6	2.49	0.45
1:2:488:G:OP1	1:2:488:G:H4'	2.16	0.45
1:2:748:U:H2'	1:2:749:U:H6	1.82	0.45
1:2:826:U:H2'	1:2:827:C:C6	2.51	0.45
36:5:1448:U:H2'	36:5:1449:A:H8	1.82	0.45
78:Q2:39:GLY:N	36:5:2766:U:OP1	172.02	0.45
36:5:3366:G:H2'	36:5:3367:C:C6	2.52	0.45
36:5:3378:C:H2'	36:5:3379:C:H6	1.81	0.45
36:5:663:C:H2'	36:5:664:U:C6	2.52	0.45
36:5:721:G:N2	36:5:750:G:H1'	2.31	0.45
1:6:1543:A:H1'	1:6:1569:A:C2	2.52	0.45
1:6:1783:C:H2'	1:6:1784:C:H6	1.82	0.45
1:6:473:A:H5'	1:6:769:A:H1'	1.99	0.45
71:O5:2:ALA:HB2	38:8:80:A:H4'	25.45	0.45
62:N6:116:LYS:NZ	38:8:84:C:N3	29.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:C1:118:GLN:NE2	13:C1:146:ALA:HA	2.31	0.45
14:C2:42:ALA:HB2	14:C2:124:LYS:HD2	3.27	0.45
18:C6:86:ALA:HB1	18:C6:109:PHE:CE2	2.69	0.45
19:C7:57:LEU:HA	19:C7:60:ARG:HG2	1.98	0.45
19:C7:71:PHE:CE1	19:C7:73:LEU:HB2	4.62	0.45
25:D3:53:VAL:HG23	25:D3:100:ASP:O	2.17	0.45
30:D8:44:VAL:HG21	30:D8:48:VAL:HG21	1.99	0.45
33:E1:88:PRO:HB2	33:E1:89:LYS:HG2	7.27	0.45
39:L2:117:GLU:HG2	39:L2:124:GLY:H	1.81	0.45
41:L4:144:LYS:HB3	41:L4:144:LYS:HE3	4.55	0.45
41:L4:178:LEU:HD23	41:L4:178:LEU:HA	1.94	0.45
42:L5:111:GLN:HA	42:L5:116:ASP:HB2	1.98	0.45
44:L7:151:ARG:NH1	44:L7:244:ASN:HA	2.32	0.45
50:M4:129:TYR:CE2	50:M4:133:LYS:HD3	3.78	0.45
50:M4:21:VAL:HA	50:M4:66:THR:HG23	2.59	0.45
53:M7:29:THR:HG22	53:M7:87:SER:CB	2.60	0.45
56:N0:13:ARG:HE	56:N0:13:ARG:HB3	1.61	0.45
56:N0:89:ASN:HD21	57:N1:156:TYR:H	1.64	0.45
64:N8:63:LYS:HD3	64:N8:65:GLN:OE1	2.17	0.45
2:S0:41:ARG:HB3	2:S0:45:VAL:HG23	4.74	0.45
4:S2:139:ILE:CD1	4:S2:191:ALA:HB1	2.60	0.45
4:S2:158:THR:HG23	4:S2:169:LEU:HD12	1.98	0.45
6:S4:239:PRO:HB2	6:S4:240:LYS:HE2	1.99	0.45
6:S4:62:LYS:HD3	6:S4:80:THR:OG1	2.79	0.45
7:S5:146:THR:HG23	7:S5:221:ALA:HA	1.98	0.45
36:1:180:C:H2'	36:1:181:U:H6	1.80	0.45
36:1:2689:A:H2'	36:1:2689:A:N3	2.31	0.45
1:2:1458:G:H5''	1:2:1459:C:OP2	2.17	0.45
1:2:1469:A:H4'	1:2:1541:G:H4'	1.98	0.45
1:2:1504:G:C6	1:2:1505:A:C6	3.04	0.45
1:2:589:C:H2'	1:2:590:C:C6	2.52	0.45
1:2:867:G:C4	1:2:868:G:C8	3.05	0.45
36:5:1267:U:H2'	36:5:1268:G:O4'	2.17	0.45
36:5:1317:A:O2'	36:5:1318:A:H3'	2.17	0.45
36:5:2507:C:H2'	36:5:2508:U:H6	1.81	0.45
36:5:2961:G:H2'	36:5:2962:U:H6	1.80	0.45
1:6:1175:U:H2'	1:6:1176:G:C8	2.52	0.45
8:S6:132:ARG:HD2	1:6:150:U:H1'	328.71	0.45
1:6:493:U:H2'	1:6:494:U:H5''	1.97	0.45
1:6:831:U:O2'	1:6:832:U:H5'	2.17	0.45
29:D7:64:CYS:HB2	29:D7:71:ALA:HB1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:E1:119:ARG:HE	33:E1:139:LEU:HD21	1.82	0.45
39:L2:109:GLU:OE1	39:L2:138:GLY:HA2	2.17	0.45
39:L2:144:ASN:ND2	39:L2:161:ASP:OD2	3.32	0.45
39:L2:201:GLY:HA2	39:L2:204:MET:SD	2.57	0.45
40:L3:275:ARG:NH1	36:5:3045:G:O3'	235.61	0.45
36:1:3037:U:H5''	40:L3:348:ARG:NH1	2.31	0.45
41:L4:179:LEU:HD22	41:L4:183:LYS:HG3	3.19	0.45
46:L9:26:LYS:HG3	46:L9:35:THR:HG22	2.56	0.45
48:M1:26:SER:OG	48:M1:27:GLY:N	2.50	0.45
48:M1:23:VAL:HG11	48:M1:29:ARG:HG2	1.97	0.45
52:M6:138:LEU:HA	52:M6:138:LEU:HD12	1.80	0.45
54:M8:184:PHE:CG	36:5:2730:G:H4'	191.65	0.45
61:N5:81:ILE:HA	61:N5:125:ARG:HA	2.65	0.45
62:N6:13:ARG:NH2	38:8:25:G:N7	96.13	0.45
65:N9:31:SER:C	65:N9:33:LYS:H	2.27	0.45
66:O0:84:LEU:HD22	36:5:1715:A:N7	261.66	0.45
74:O8:16:ARG:O	74:O8:18:ALA:N	4.13	0.45
79:Q3:56:THR:HG22	79:Q3:63:THR:HG23	1.99	0.45
2:S0:64:ILE:HG23	2:S0:73:VAL:HG11	1.99	0.45
3:S1:142:PHE:O	3:S1:208:GLN:N	2.42	0.45
3:S1:140:ILE:HG22	3:S1:213:ARG:HB2	1.98	0.45
3:S1:61:LEU:HA	3:S1:64:ARG:HE	4.40	0.45
3:S1:71:ALA:O	3:S1:75:GLY:N	2.81	0.45
5:S3:114:ALA:HB1	5:S3:115:ILE:HD12	7.18	0.45
5:S3:133:GLY:HA3	5:S3:156:PHE:O	2.17	0.45
5:S3:44:THR:HB	5:S3:45:LYS:HG3	1.99	0.45
9:S7:132:PRO:O	9:S7:133:THR:OG1	4.85	0.45
10:S8:106:ALA:HB2	10:S8:165:LEU:HG	1.99	0.45
1:2:1460:A:O2'	35:SM:72:ARG:NH2	2.50	0.45
34:SR:169:ILE:HG13	34:SR:181:TRP:HB2	2.62	0.45
36:1:2883:U:H2'	36:1:2884:C:C6	2.52	0.45
36:1:68:C:H4'	51:M5:176:LYS:HB2	1.98	0.45
36:1:796:U:H2'	36:1:797:U:H6	1.81	0.45
1:2:1553:G:N2	1:2:1555:A:H3'	2.32	0.45
1:2:823:G:H2'	1:2:824:G:C8	2.52	0.45
36:5:1554:U:H4'	36:5:1555:U:OP1	2.16	0.45
55:M9:85:ARG:NH2	36:5:1916:U:O3'	232.44	0.45
36:5:1950:U:H2'	36:5:1951:C:C6	2.52	0.45
59:N3:92:PHE:CE1	36:5:3051:U:H1'	247.37	0.45
36:5:800:G:OP1	36:5:801:A:N6	2.39	0.45
36:5:913:A:H2	36:5:2134:G:N3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:960:U:H4'	36:5:963:G:N1	2.32	0.45
1:6:1208:A:H4'	1:6:1270:G:P	2.57	0.45
19:C7:52:GLY:HA3	1:6:1389:C:O2'	424.82	0.45
20:C8:143:ARG:NH2	1:6:1462:G:N7	340.53	0.45
1:6:570:A:H8	1:6:570:A:OP2	2.00	0.45
1:2:1258:U:H4'	12:C0:2:LEU:HD13	1.98	0.45
18:C6:111:SER:O	18:C6:111:SER:OG	2.32	0.45
7:S5:38:THR:HG21	18:C6:57:LEU:HD11	6.69	0.45
20:C8:49:LYS:NZ	20:C8:80:LYS:O	2.50	0.45
20:C8:91:ASP:C	20:C8:93:THR:H	2.20	0.45
21:C9:123:ARG:HG2	21:C9:124:ILE:N	2.42	0.45
21:C9:23:GLN:HG2	21:C9:55:TYR:CG	2.52	0.45
27:D5:60:VAL:HG13	27:D5:101:TYR:HB2	2.74	0.45
33:E1:88:PRO:HA	33:E1:89:LYS:HA	4.76	0.45
40:L3:186:GLY:O	40:L3:190:GLU:HB2	4.29	0.45
40:L3:252:ILE:HD12	40:L3:252:ILE:HA	1.69	0.45
40:L3:324:VAL:HG11	40:L3:328:ILE:HD12	1.99	0.45
41:L4:98:ARG:HB3	41:L4:98:ARG:CZ	3.10	0.45
45:L8:181:LYS:HZ2	45:L8:181:LYS:HB2	1.82	0.45
48:M1:15:GLU:HB2	48:M1:132:ASN:CG	2.37	0.45
50:M4:58:ILE:HA	50:M4:58:ILE:HD12	4.46	0.45
52:M6:14:HIS:O	52:M6:41:LEU:HD12	2.39	0.45
52:M6:8:VAL:HG22	52:M6:34:VAL:HG13	4.17	0.45
52:M6:72:HIS:O	52:M6:74:ARG:HD3	2.22	0.45
56:N0:1:MET:HB3	56:N0:118:PHE:CE1	3.04	0.45
56:N0:124:LEU:HD23	57:N1:153:PRO:HB2	2.65	0.45
36:1:2698:G:O2'	57:N1:12:ARG:HG3	2.17	0.45
61:N5:38:LEU:O	61:N5:39:LYS:HB2	4.51	0.45
61:N5:80:ASN:ND2	61:N5:126:LEU:HB2	2.29	0.45
63:N7:36:HIS:CD2	63:N7:74:VAL:HG11	4.58	0.45
71:O5:35:LYS:HB2	71:O5:41:LEU:HD23	2.89	0.45
36:1:155:G:H1'	72:O6:26:ILE:HD13	1.99	0.45
2:S0:63:ILE:HD12	2:S0:158:VAL:HG11	2.92	0.45
3:S1:180:THR:HG22	3:S1:181:LEU:H	1.82	0.45
3:S1:35:PRO:HD3	3:S1:98:THR:HG23	1.99	0.45
6:S4:62:LYS:HG3	6:S4:66:MET:HG2	2.94	0.45
9:S7:55:LYS:HE2	9:S7:55:LYS:HB3	2.08	0.45
10:S8:138:ASN:O	10:S8:142:LYS:HG3	2.17	0.45
1:2:1274:C:C5	35:SM:95:SER:HA	2.53	0.45
36:1:1727:G:H2'	36:1:1728:G:N2	2.31	0.44
36:1:1815:U:O3'	36:1:1816:A:H4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2413:A:H2'	36:1:2414:G:C8	2.52	0.44
36:1:3218:A:H5''	36:1:3219:G:C4	2.52	0.44
36:1:542:G:H2'	36:1:543:C:C6	2.52	0.44
36:1:736:A:H2'	36:1:737:G:O4'	2.17	0.44
36:1:785:G:OP2	54:M8:66:ARG:NH1	2.50	0.44
36:1:979:U:O3'	36:1:980:A:C8	2.70	0.44
1:2:1277:G:H2'	1:2:1278:G:O4'	2.18	0.44
1:2:473:A:H5'	1:2:769:A:H1'	1.99	0.44
37:3:91:G:H2'	37:3:92:A:C8	2.52	0.44
38:4:36:G:N2	38:4:37:A:N1	2.65	0.44
36:5:1262:G:H5''	36:5:1263:A:OP2	2.16	0.44
36:5:2851:A:H2'	36:5:2852:C:C6	2.52	0.44
46:L9:168:ARG:HD2	36:5:2894:C:OP1	307.55	0.44
1:6:1081:A:H8	1:6:1081:A:OP2	1.99	0.44
1:6:1420:C:H2'	1:6:1421:A:O4'	2.16	0.44
1:6:27:U:H2'	1:6:28:A:C8	2.52	0.44
1:6:725:U:H2'	1:6:726:C:C6	2.52	0.44
1:6:830:U:H2'	1:6:831:U:H5'	1.99	0.44
21:C9:18:TYR:O	21:C9:22:LEU:HD22	2.16	0.44
1:2:1479:A:OP1	21:C9:57:ARG:NH1	2.50	0.44
21:C9:5:SER:OG	21:C9:66:TYR:OH	2.23	0.44
13:C1:94:ILE:HD12	25:D3:12:ALA:HB1	1.98	0.44
25:D3:16:ARG:H	25:D3:16:ARG:HG3	1.50	0.44
26:D4:43:LYS:O	26:D4:47:VAL:HG23	2.17	0.44
33:E1:102:VAL:HB	33:E1:103:LEU:H	1.43	0.44
39:L2:117:GLU:HB3	39:L2:119:LYS:O	2.17	0.44
40:L3:21:ARG:HG2	40:L3:269:GLN:HG2	1.99	0.44
36:1:3122:A:O2'	46:L9:63:LYS:HD3	2.18	0.44
47:M0:141:LYS:HD3	47:M0:142:ASP:H	5.16	0.44
48:M1:166:LYS:C	48:M1:168:ASP:H	2.20	0.44
45:L8:72:PRO:HG2	51:M5:18:VAL:HA	2.88	0.44
36:1:994:G:H3'	57:N1:13:TYR:CD2	2.51	0.44
57:N1:79:MET:HB2	57:N1:84:TYR:CE2	3.37	0.44
62:N6:52:ARG:HA	62:N6:70:ILE:CG2	2.78	0.44
63:N7:23:VAL:HB	63:N7:43:VAL:HB	1.99	0.44
63:N7:78:ASN:OD1	66:O0:35:ARG:NH1	2.45	0.44
49:M3:63:VAL:HG12	64:N8:128:ARG:NH1	2.42	0.44
66:O0:13:LYS:O	66:O0:17:VAL:HG23	2.17	0.44
67:O1:44:MET:HB3	67:O1:77:ARG:HD3	1.99	0.44
4:S2:49:LYS:HD2	4:S2:243:TYR:CE1	2.83	0.44
6:S4:106:LYS:HG3	6:S4:108:ARG:NH1	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:S7:166:LEU:O	9:S7:170:GLN:HG3	2.17	0.44
10:S8:101:ILE:HA	10:S8:167:ALA:O	2.57	0.44
11:S9:122:VAL:O	11:S9:125:ALA:HB3	2.17	0.44
6:S4:10:LYS:NZ	11:S9:2:PRO:HB3	4.28	0.44
34:SR:274:LEU:O	34:SR:276:PRO:HD3	4.46	0.44
36:1:2140:U:O2'	36:1:2978:U:H5'	2.17	0.44
36:1:415:G:H2'	36:1:416:A:H8	1.82	0.44
1:2:1337:A:N6	1:2:1387:G:H22	2.15	0.44
1:2:1553:G:N1	1:2:1556:A:OP2	2.50	0.44
1:2:1671:A:C4	1:2:1731:A:C2	3.06	0.44
1:2:1738:U:H2'	1:2:1739:C:H6	1.79	0.44
36:5:1340:G:H2'	36:5:1341:U:H6	1.80	0.44
58:N2:103:TYR:OH	36:5:1677:G:OP2	148.01	0.44
36:5:2777:G:H5''	36:5:2778:G:OP1	2.17	0.44
47:M0:63:GLU:HB2	36:5:2853:A:OP1	299.03	0.44
36:5:2923:U:H2'	36:5:2924:U:C6	2.51	0.44
36:5:29:C:H4'	36:5:62:A:H4'	1.99	0.44
64:N8:59:ARG:NH1	36:5:90:C:OP1	153.04	0.44
1:6:1263:G:C2	1:6:1264:G:H1'	2.53	0.44
1:6:1473:U:H4'	1:6:1474:G:OP2	2.18	0.44
1:6:1640:C:H1'	1:6:1763:A:N1	2.31	0.44
1:6:1688:U:H3	1:6:1713:G:H1	1.65	0.44
12:C0:24:LYS:HD3	12:C0:63:TYR:CZ	2.95	0.44
15:C3:20:ARG:HD3	24:D2:56:HIS:CD2	5.45	0.44
18:C6:129:PHE:CE1	22:D0:78:THR:HA	2.54	0.44
25:D3:114:LYS:HB3	25:D3:115:GLY:H	1.63	0.44
27:D5:47:TYR:CZ	27:D5:51:LEU:HD11	4.14	0.44
31:D9:19:ARG:HG2	31:D9:19:ARG:H	1.44	0.44
31:D9:45:GLU:OE1	1:6:1433:G:N2	413.18	0.44
25:D3:60:GLU:CD	32:E0:3:LYS:HB2	2.38	0.44
39:L2:204:MET:HE2	39:L2:209:HIS:HB2	1.99	0.44
36:1:2154:U:OP1	39:L2:242:ARG:NH1	2.49	0.44
40:L3:183:LEU:HA	40:L3:183:LEU:HD12	1.80	0.44
40:L3:223:GLY:HA2	40:L3:271:GLY:HA3	2.00	0.44
42:L5:119:TYR:CE1	42:L5:135:VAL:HG23	6.10	0.44
43:L6:131:LYS:HD3	43:L6:132:ALA:N	5.37	0.44
43:L6:171:PRO:C	43:L6:173:MET:H	2.37	0.44
46:L9:124:ARG:HB3	46:L9:164:ILE:HD12	1.98	0.44
48:M1:143:ARG:HG2	48:M1:144:CYS:SG	2.58	0.44
49:M3:47:ALA:HB1	49:M3:48:PRO:CD	2.47	0.44
54:M8:123:THR:O	54:M8:125:ASP:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:N0:50:LYS:HG2	37:7:77:G:O5'	305.42	0.44
57:N1:105:PHE:O	57:N1:109:VAL:HG23	2.28	0.44
58:N2:14:THR:HG23	58:N2:66:VAL:HG13	2.44	0.44
62:N6:10:SER:HB3	36:5:213:A:N3	78.44	0.44
67:O1:79:ARG:H	67:O1:79:ARG:HE	1.65	0.44
71:O5:12:LYS:HB2	71:O5:17:LEU:HG	1.99	0.44
71:O5:84:LYS:HB2	71:O5:89:ARG:HD2	1.99	0.44
71:O5:85:THR:HG22	71:O5:87:ALA:N	2.32	0.44
76:Q0:77:ILE:O	76:Q0:78:ILE:HG13	2.17	0.44
4:S2:90:THR:HG22	4:S2:94:GLN:O	7.52	0.44
6:S4:136:VAL:HG21	6:S4:148:ARG:HH12	4.32	0.44
6:S4:87:MET:O	6:S4:122:LYS:HE3	2.38	0.44
7:S5:42:LEU:HB3	7:S5:46:TRP:C	4.21	0.44
8:S6:102:VAL:HG13	8:S6:106:LEU:HD12	1.99	0.44
8:S6:20:ASP:HB3	8:S6:23:ARG:HB2	2.69	0.44
8:S6:72:ARG:HG2	8:S6:98:ARG:HG2	2.79	0.44
8:S6:85:ARG:HA	8:S6:86:PRO:HD3	1.79	0.44
9:S7:177:THR:OG1	9:S7:178:GLY:N	2.50	0.44
1:2:767:U:C6	11:S9:141:VAL:HA	2.53	0.44
1:2:512:A:OP2	11:S9:172:VAL:HG13	2.17	0.44
35:SM:84:LYS:HG2	35:SM:86:ASN:N	2.28	0.44
34:SR:256:THR:N	34:SR:259:GLY:O	2.55	0.44
36:1:1105:A:H2'	36:1:1106:G:H8	1.82	0.44
36:1:2254:U:H2'	36:1:2261:G:H22	1.81	0.44
36:1:662:U:H2'	36:1:663:C:C6	2.52	0.44
1:2:1186:U:OP2	1:2:1456:C:H1'	2.17	0.44
1:2:1374:C:H2'	1:2:1375:A:C8	2.52	0.44
1:2:136:C:H4'	1:2:137:U:OP1	2.18	0.44
1:2:285:G:H2'	1:2:286:C:C6	2.53	0.44
1:2:450:U:H2'	1:2:451:A:C8	2.52	0.44
37:3:3:U:H2'	37:3:4:U:C6	2.52	0.44
36:5:2213:A:N1	36:5:2429:G:H1'	2.32	0.44
36:5:2882:U:H2'	36:5:2883:U:O4'	2.18	0.44
51:M5:93:LYS:HD2	36:5:290:G:H1'	149.53	0.44
36:5:3060:C:C2	36:5:3061:G:C8	3.06	0.44
37:7:3:U:H2'	37:7:4:U:C6	2.51	0.44
37:7:91:G:H2'	37:7:92:A:H8	1.82	0.44
15:C3:15:ALA:HB2	29:D7:20:LYS:CD	4.15	0.44
17:C5:20:VAL:HG12	17:C5:24:LYS:HB3	3.56	0.44
7:S5:112:ARG:HD2	18:C6:43:ILE:HD12	3.53	0.44
18:C6:64:ASP:N	18:C6:64:ASP:OD2	3.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D4:20:ARG:C	26:D4:21:LYS:HD2	2.37	0.44
1:2:1795:U:OP2	28:D6:5:ARG:NH2	2.50	0.44
29:D7:18:LYS:HD3	29:D7:22:LYS:O	3.49	0.44
39:L2:79:ASN:ND2	39:L2:165:VAL:HG22	2.32	0.44
39:L2:5:ILE:HG22	39:L2:208:ASP:O	2.17	0.44
40:L3:147:GLU:HA	40:L3:150:ARG:HG2	5.28	0.44
40:L3:187:SER:OG	40:L3:187:SER:O	3.35	0.44
42:L5:105:ILE:HD13	42:L5:105:ILE:HA	1.85	0.44
44:L7:159:GLN:HG2	44:L7:159:GLN:H	2.84	0.44
45:L8:68:ARG:HG2	45:L8:68:ARG:H	2.53	0.44
47:M0:10:ARG:HG2	47:M0:11:TYR:CD1	2.56	0.44
47:M0:57:LEU:H	47:M0:131:ILE:HD11	3.15	0.44
47:M0:171:TRP:CE3	47:M0:178:ARG:HB3	2.53	0.44
61:N5:103:TYR:O	61:N5:105:VAL:HG23	2.17	0.44
63:N7:54:THR:H	63:N7:57:HIS:CD2	2.36	0.44
63:N7:52:LYS:O	63:N7:65:ARG:NH1	2.62	0.44
64:N8:121:VAL:HA	64:N8:122:PRO:HD3	2.08	0.44
68:O2:26:HIS:O	68:O2:28:VAL:N	2.92	0.44
62:N6:127:GLU:C	71:O5:68:GLN:HE21	46.98	0.44
72:O6:68:ARG:HD2	72:O6:68:ARG:O	2.50	0.44
2:S0:167:LYS:HE3	2:S0:168:HIS:NE2	3.53	0.44
2:S0:59:LEU:O	2:S0:63:ILE:HG13	2.39	0.44
3:S1:61:LEU:O	3:S1:63:GLY:N	2.51	0.44
5:S3:48:VAL:HB	5:S3:86:LEU:HG	1.98	0.44
1:2:461:G:H5'	6:S4:27:TYR:OH	2.17	0.44
7:S5:64:VAL:HG22	7:S5:89:ILE:HD11	2.02	0.44
36:1:1065:A:N3	65:N9:28:LYS:HD3	2.32	0.44
36:1:1190:A:H5'	36:1:1191:U:OP1	2.17	0.44
36:1:1421:G:H2'	36:1:1422:G:H8	1.83	0.44
36:1:147:U:OP2	45:L8:136:LEU:N	2.42	0.44
36:1:2186:U:H2'	36:1:2187:G:O4'	2.18	0.44
36:1:2190:U:C4	36:1:2191:U:C4	3.06	0.44
36:1:2402:A:OP1	41:L4:70:ALA:N	2.42	0.44
36:1:2590:A:C4	36:1:2591:A:C8	3.05	0.44
36:1:3069:G:H2'	36:1:3070:A:H8	1.82	0.44
36:1:3275:U:H5'	69:O3:68:TRP:CZ2	2.51	0.44
36:1:75:G:H5'	49:M3:59:ARG:O	2.18	0.44
36:1:790:U:H2'	36:1:791:A:O4'	2.16	0.44
1:2:1050:G:OP1	29:D7:70:LYS:NZ	2.36	0.44
1:2:1291:G:N2	1:2:1324:G:N2	2.64	0.44
1:2:207:U:O2	10:S8:178:ARG:NH1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:240:U:OP1	1:2:240:U:H4'	2.18	0.44
1:2:598:U:H2'	1:2:599:A:C8	2.52	0.44
38:4:121:U:H2'	38:4:122:U:C6	2.53	0.44
36:5:2207:A:H62	36:5:2236:G:H1	1.66	0.44
36:5:2252:A:H61	36:5:2264:U:H3	1.65	0.44
36:5:2520:A:H2'	36:5:2521:U:C6	2.52	0.44
36:5:528:U:H2'	36:5:529:A:C8	2.51	0.44
36:5:701:G:H2'	36:5:702:C:C6	2.52	0.44
1:6:1393:C:H2'	1:6:1394:G:H8	1.83	0.44
6:S4:22:LYS:NZ	1:6:757:A:O3'	382.81	0.44
1:6:778:G:N2	1:6:780:A:H5'	2.32	0.44
1:2:1390:U:OP1	19:C7:5:ARG:HD2	2.17	0.44
19:C7:75:GLU:O	19:C7:79:GLU:HG3	3.20	0.44
20:C8:76:PRO:C	20:C8:78:HIS:H	2.69	0.44
22:D0:24:ILE:HD13	22:D0:41:ILE:HD13	6.73	0.44
29:D7:19:HIS:HE1	29:D7:21:LEU:HD12	6.10	0.44
29:D7:37:CYS:HA	29:D7:38:PRO:HD3	1.85	0.44
29:D7:44:THR:OG1	29:D7:56:CYS:SG	5.04	0.44
30:D8:35:ASP:OD1	30:D8:37:SER:HB3	7.25	0.44
7:S5:82:PHE:CZ	30:D8:49:ARG:HB3	3.10	0.44
33:E1:111:GLU:HA	33:E1:112:GLY:HA2	1.67	0.44
39:L2:102:LEU:HD23	39:L2:166:ILE:HD11	1.98	0.44
36:1:2202:C:H5''	39:L2:226:SER:HA	1.99	0.44
41:L4:42:VAL:C	41:L4:44:LYS:H	2.42	0.44
49:M3:46:ILE:HG23	49:M3:49:ARG:NH1	2.56	0.44
52:M6:14:HIS:CD2	52:M6:124:LEU:HD13	2.52	0.44
54:M8:71:LEU:HD13	54:M8:99:THR:HG21	1.99	0.44
60:N4:2:LYS:HG3	60:N4:4:GLU:OE1	2.17	0.44
63:N7:122:HIS:HB2	63:N7:131:PHE:CE2	2.80	0.44
63:N7:54:THR:O	63:N7:57:HIS:HB2	2.37	0.44
66:O0:74:ASN:OD1	66:O0:74:ASN:N	2.76	0.44
71:O5:17:LEU:HA	71:O5:20:GLN:HB2	2.51	0.44
71:O5:4:VAL:CG2	71:O5:9:LEU:HD11	2.70	0.44
72:O6:58:ILE:HG13	72:O6:62:ARG:HH21	3.23	0.44
72:O6:74:LYS:HG3	72:O6:80:PHE:HD2	2.78	0.44
76:Q0:106:ARG:NH1	76:Q0:106:ARG:HB2	4.73	0.44
77:Q1:2:ARG:HG3	77:Q1:4:LYS:H	2.46	0.44
3:S1:168:ILE:O	3:S1:172:LEU:HG	2.64	0.44
5:S3:192:PRO:O	5:S3:195:SER:HB2	2.18	0.44
7:S5:133:VAL:O	7:S5:137:ILE:HG12	2.17	0.44
7:S5:58:LEU:O	7:S5:62:VAL:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:S6:176:GLN:HG3	8:S6:177:ARG:H	1.83	0.44
9:S7:133:THR:HG21	9:S7:162:ILE:HD11	1.99	0.44
9:S7:31:SER:HB2	9:S7:32:PRO:HD3	1.99	0.44
34:SR:83:ALA:HB1	34:SR:110:VAL:HG12	1.99	0.44
34:SR:219:GLU:OE1	34:SR:235:SER:OG	2.26	0.44
36:1:51:A:H2'	36:1:52:A:O4'	2.17	0.44
36:1:91:G:N7	36:1:93:C:C2	2.85	0.44
1:2:276:C:H1'	1:2:277:U:C5	2.52	0.44
36:5:1107:C:H2'	36:5:1108:U:H6	1.82	0.44
36:5:1595:U:C2	36:5:1596:C:C5	3.06	0.44
36:5:1764:U:H3'	36:5:1765:U:C5'	2.47	0.44
61:N5:46:TYR:OH	36:5:18:G:OP2	83.95	0.44
36:5:2927:C:H2'	36:5:2928:C:H6	1.80	0.44
36:5:3164:C:H1'	36:5:3165:A:H5'	1.98	0.44
56:N0:71:LYS:NZ	36:5:563:U:OP1	342.25	0.44
1:6:1691:A:H2'	1:6:1692:G:C8	2.52	0.44
1:6:1692:G:H2'	1:6:1693:A:C8	2.53	0.44
38:8:145:U:H2'	38:8:146:U:H6	1.83	0.44
13:C1:3:THR:OG1	13:C1:82:ARG:NE	2.40	0.44
16:C4:19:ILE:HG23	16:C4:28:VAL:HG22	2.00	0.44
17:C5:111:MET:HG2	20:C8:119:ILE:HG23	2.06	0.44
28:D6:45:VAL:O	28:D6:49:ALA:HB3	4.86	0.44
30:D8:32:PHE:O	30:D8:34:GLU:N	4.53	0.44
39:L2:104:LEU:O	39:L2:139:HIS:HE1	4.28	0.44
39:L2:242:ARG:HG3	39:L2:243:THR:N	2.87	0.44
44:L7:111:ILE:O	44:L7:112:ASN:HB2	2.25	0.44
44:L7:203:TRP:CD1	44:L7:204:PRO:HD2	2.69	0.44
47:M0:145:LYS:HD3	47:M0:146:ASP:OD1	5.10	0.44
50:M4:121:MET:HE1	36:5:3215:A:O5'	276.79	0.44
51:M5:114:ARG:HA	51:M5:114:ARG:HD3	2.41	0.44
53:M7:59:PRO:HB3	53:M7:78:VAL:HG11	1.99	0.44
54:M8:12:ARG:HH12	36:5:973:A:P	179.73	0.44
56:N0:82:ASP:OD1	56:N0:87:THR:HB	2.16	0.44
57:N1:116:ARG:NH2	36:5:1097:G:N7	248.53	0.44
58:N2:19:VAL:O	58:N2:23:THR:OG1	2.44	0.44
59:N3:10:LYS:HB3	59:N3:10:LYS:HE2	2.59	0.44
59:N3:66:LYS:O	59:N3:70:ARG:HG3	2.71	0.44
61:N5:60:TYR:OH	71:O5:26:LYS:HG3	2.78	0.44
63:N7:22:LYS:NZ	63:N7:132:SER:O	2.32	0.44
63:N7:36:HIS:HD2	63:N7:74:VAL:HG11	5.36	0.44
63:N7:92:PHE:O	63:N7:96:VAL:HG23	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:O5:86:ARG:O	71:O5:90:ARG:HG2	2.17	0.44
76:Q0:93:LYS:HB2	76:Q0:124:LYS:HD3	2.49	0.44
78:Q2:74:CYS:O	78:Q2:78:LYS:N	2.49	0.44
7:S5:63:GLN:HB3	7:S5:64:VAL:H	1.63	0.44
11:S9:138:LYS:HB2	11:S9:138:LYS:NZ	2.32	0.44
35:SM:50:ASN:N	35:SM:50:ASN:OD1	3.20	0.44
34:SR:70:ASP:HB2	34:SR:112:SER:HA	1.98	0.44
34:SR:131:ILE:HG21	34:SR:154:VAL:HG11	2.47	0.44
34:SR:17:ASN:O	34:SR:308:ASN:ND2	4.63	0.44
5:S3:222:VAL:HG13	34:SR:230:ALA:HB2	1.98	0.44
36:1:1180:A:OP1	69:O3:78:SER:OG	2.27	0.44
36:1:1427:U:OP2	64:N8:4:ARG:NH2	2.45	0.44
36:1:1786:G:H2'	36:1:1787:A:H8	1.80	0.44
36:1:210:U:C2	36:1:230:U:H4'	2.53	0.44
36:1:2759:U:H5''	36:1:2760:C:H5'	1.99	0.44
36:1:3323:A:H8	36:1:3323:A:O5'	1.99	0.44
36:1:398:A:C2	36:1:1415:U:H4'	2.52	0.44
36:1:508:U:OP1	44:L7:211:SER:OG	2.31	0.44
36:1:561:C:H2'	36:1:562:C:C6	2.53	0.44
36:1:896:A:H5'	39:L2:183:GLY:HA2	1.98	0.44
1:2:329:G:H2'	1:2:330:G:H8	1.83	0.44
1:2:46:A:N6	1:2:433:C:H4'	2.33	0.44
1:2:773:C:OP1	6:S4:22:LYS:N	2.50	0.44
74:O8:17:ARG:NH1	36:5:1824:U:H4'	143.36	0.44
1:6:1433:G:H2'	1:6:1434:U:O4'	2.18	0.44
32:E0:28:LYS:HZ1	1:6:542:A:N6	430.83	0.44
14:C2:131:ASP:OD1	14:C2:132:GLU:N	2.51	0.44
15:C3:22:ALA:HB1	15:C3:23:PRO:CA	2.48	0.44
16:C4:25:ASP:HA	16:C4:54:GLU:O	2.18	0.44
21:C9:125:SER:O	21:C9:129:GLN:HG3	2.17	0.44
22:D0:41:ILE:HG12	22:D0:103:ILE:HD12	6.36	0.44
22:D0:70:THR:HG23	1:6:1280:C:O2'	390.92	0.44
32:E0:14:VAL:HA	32:E0:17:GLN:HG2	2.13	0.44
39:L2:211:HIS:O	39:L2:213:GLY:N	3.80	0.44
39:L2:202:VAL:HG13	39:L2:217:GLN:HB3	1.99	0.44
40:L3:165:GLN:OE1	40:L3:167:ARG:NH2	3.44	0.44
41:L4:47:ARG:NH1	41:L4:109:TRP:O	3.01	0.44
43:L6:64:LEU:HA	43:L6:64:LEU:HD23	2.30	0.44
43:L6:90:LYS:HB2	43:L6:90:LYS:HE3	3.31	0.44
46:L9:4:ILE:HD11	56:N0:150:PHE:CD2	2.52	0.44
46:L9:76:ASP:O	46:L9:80:THR:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:560:G:H4'	50:M4:73:PRO:HG2	2.00	0.44
36:1:1719:G:OP1	55:M9:110:ARG:NH2	2.50	0.44
57:N1:132:PRO:O	57:N1:134:GLN:NE2	2.51	0.44
62:N6:52:ARG:HA	62:N6:70:ILE:HG22	2.40	0.44
67:O1:8:VAL:HG12	67:O1:9:THR:H	2.22	0.44
69:O3:75:HIS:HB3	69:O3:80:VAL:HG12	1.98	0.44
71:O5:47:VAL:O	71:O5:51:ILE:HG13	2.49	0.44
71:O5:94:LYS:O	71:O5:98:SER:OG	2.53	0.44
73:O7:28:HIS:HE1	73:O7:30:GLN:HB2	1.83	0.44
2:S0:101:ARG:HG3	2:S0:102:PHE:O	2.18	0.44
3:S1:103:MET:H	3:S1:215:VAL:HG23	5.87	0.44
5:S3:159:HIS:HD2	5:S3:187:LYS:NZ	2.15	0.44
6:S4:166:SER:OG	6:S4:167:GLY:N	2.51	0.44
7:S5:89:ILE:HG13	7:S5:89:ILE:H	1.53	0.44
8:S6:163:THR:O	8:S6:163:THR:OG1	2.33	0.44
8:S6:200:ALA:O	8:S6:203:GLU:HB2	2.88	0.44
10:S8:46:VAL:HG11	10:S8:56:ARG:NH1	2.32	0.44
34:SR:240:VAL:HG22	34:SR:256:THR:HG22	1.98	0.44
36:1:2376:G:H2'	36:1:2377:G:C8	2.53	0.44
36:1:805:G:H1'	41:L4:73:ARG:NH1	2.33	0.44
1:2:435:C:OP1	25:D3:49:ALA:HA	2.17	0.44
1:2:474:A:N1	1:2:594:A:H3'	2.33	0.44
37:3:82:G:C6	37:3:99:G:C6	3.06	0.44
36:5:1008:U:H2'	36:5:1009:A:O4'	2.18	0.44
36:5:1366:A:C2	36:5:1367:G:C4	3.06	0.44
36:5:2287:C:C2	36:5:2298:U:O4'	2.70	0.44
36:5:2623:G:H2'	36:5:2624:G:H8	1.82	0.44
36:5:2890:A:N1	36:5:2913:C:N3	2.66	0.44
36:5:3277:U:H2'	36:5:3278:C:O4'	2.18	0.44
36:5:419:G:N2	38:8:5:U:C2	2.86	0.44
1:6:1120:U:H2'	1:6:1121:C:C6	2.52	0.44
1:6:1173:C:H2'	1:6:1174:C:H6	1.81	0.44
1:6:485:A:N6	1:6:486:G:N3	2.66	0.44
71:O5:7:TYR:CE2	38:8:86:U:H2'	20.06	0.44
13:C1:46:LYS:O	13:C1:50:GLU:HG2	3.93	0.44
14:C2:97:LEU:HD11	14:C2:121:VAL:HG22	4.03	0.44
15:C3:113:PHE:HA	15:C3:116:ILE:HD12	2.00	0.44
15:C3:75:LEU:O	15:C3:80:LEU:N	2.49	0.44
22:D0:21:LYS:N	22:D0:21:LYS:HD2	2.33	0.44
24:D2:114:GLU:O	24:D2:118:ARG:HG3	2.18	0.44
32:E0:49:LEU:HD21	32:E0:55:ARG:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:162:VAL:O	40:L3:178:LEU:HD12	2.29	0.44
41:L4:217:LYS:HD3	41:L4:220:ARG:HH21	1.82	0.44
41:L4:206:LEU:HD23	41:L4:226:GLU:HB2	2.18	0.44
45:L8:37:GLY:HA3	36:5:2550:U:C6	213.10	0.44
37:3:55:A:N3	48:M1:152:HIS:HE1	2.16	0.44
50:M4:53:VAL:HA	50:M4:54:PRO:HD3	1.81	0.44
51:M5:74:PRO:O	51:M5:75:VAL:HG22	2.18	0.44
51:M5:74:PRO:HB2	51:M5:75:VAL:H	1.64	0.44
55:M9:92:GLN:O	55:M9:96:ILE:HG13	2.30	0.44
61:N5:105:VAL:HG11	61:N5:126:LEU:HD13	2.00	0.44
64:N8:93:SER:OG	64:N8:93:SER:O	2.34	0.44
65:N9:3:LYS:HE2	36:5:2618:G:O4'	229.83	0.44
69:O3:29:LEU:HD22	69:O3:75:HIS:CD2	2.53	0.44
71:O5:115:LYS:HB2	71:O5:115:LYS:HE2	2.80	0.44
78:Q2:25:VAL:HG12	78:Q2:93:LEU:HD12	2.00	0.44
4:S2:65:GLU:HB2	4:S2:68:ILE:HG13	2.47	0.44
6:S4:47:PHE:CE2	6:S4:90:ILE:HG21	2.53	0.44
7:S5:37:GLN:HG2	7:S5:69:PHE:CE1	4.40	0.44
8:S6:160:ARG:HG3	60:N4:84:GLY:O	2.18	0.44
10:S8:5:ARG:NH1	10:S8:29:LEU:O	2.55	0.44
11:S9:149:ARG:O	11:S9:151:ASP:N	2.50	0.44
34:SR:282:SER:N	1:6:1394:G:OP1	418.92	0.44
36:1:1108:U:H2'	36:1:1109:U:H6	1.83	0.44
36:1:1341:U:H2'	36:1:1342:C:C6	2.52	0.44
36:1:2616:C:H2'	36:1:2617:U:H5'	2.00	0.44
36:1:2921:U:O5'	36:1:2921:U:H6	2.01	0.44
36:1:3343:G:H21	36:1:3362:A:H2	1.66	0.44
36:1:437:G:H2'	36:1:438:A:C8	2.52	0.44
36:1:686:G:P	49:M3:39:ARG:HH21	2.40	0.44
36:1:748:U:H2'	36:1:749:C:C6	2.53	0.44
1:2:1250:U:HO2'	1:2:1251:U:P	2.39	0.44
1:2:1498:G:C2'	1:2:1499:G:H5'	2.48	0.44
1:2:460:A:H5'	1:2:461:G:OP2	2.17	0.44
1:2:497:G:O2'	1:2:498:G:C8	2.71	0.44
1:2:749:U:H5''	24:D2:83:ILE:HD12	1.98	0.44
36:5:1054:A:H5''	36:5:2637:A:N6	2.33	0.44
36:5:1103:A:H3'	36:5:1104:G:C5'	2.48	0.44
36:5:2903:A:H2'	36:5:2904:U:O4'	2.18	0.44
36:5:3132:C:H2'	36:5:3133:C:C6	2.53	0.44
36:5:3269:U:H5'	36:5:3271:G:O4'	2.16	0.44
30:D8:18:ARG:HD3	1:6:1616:G:O3'	361.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1700:C:O2'	1:6:1701:A:OP1	2.28	0.44
1:6:228:G:H1	1:6:236:A:N6	2.05	0.44
1:6:820:U:O2'	1:6:821:U:O5'	2.26	0.44
1:6:837:G:H2'	1:6:838:G:C8	2.53	0.44
13:C1:20:PHE:CZ	13:C1:22:ASN:HA	3.27	0.44
13:C1:93:TYR:O	13:C1:95:PRO:HD3	2.68	0.44
13:C1:98:ASN:O	13:C1:98:ASN:ND2	2.49	0.44
14:C2:66:VAL:HB	14:C2:67:THR:H	1.68	0.44
17:C5:34:VAL:O	17:C5:42:ARG:HG2	2.17	0.44
19:C7:3:ARG:O	1:6:1402:G:H5''	405.46	0.44
24:D2:55:ASP:C	24:D2:57:ARG:H	2.29	0.44
24:D2:30:SER:HB3	24:D2:59:GLY:HA3	2.25	0.44
41:L4:157:GLU:HB3	41:L4:211:GLU:O	2.18	0.44
42:L5:219:PHE:C	42:L5:221:GLU:H	2.85	0.44
44:L7:173:LEU:HB3	44:L7:178:ILE:HB	2.88	0.44
44:L7:148:VAL:HG12	44:L7:181:ILE:HD11	2.63	0.44
44:L7:25:GLN:OE1	44:L7:29:GLU:HB2	2.17	0.44
44:L7:98:LYS:HG2	44:L7:129:LEU:HD22	2.49	0.44
46:L9:18:VAL:HG12	46:L9:27:VAL:HA	1.99	0.44
36:1:1010:G:H5'	47:M0:40:LYS:HE3	1.99	0.44
49:M3:126:PHE:HZ	49:M3:135:ALA:HB3	1.83	0.44
49:M3:53:LEU:HD22	49:M3:94:GLY:HA2	2.00	0.44
52:M6:79:ILE:HG21	52:M6:138:LEU:HD11	2.16	0.44
36:1:1722:U:O4'	55:M9:96:ILE:HG23	2.17	0.44
41:L4:361:HIS:HB3	56:N0:26:ARG:NH1	2.40	0.44
59:N3:108:GLU:H	59:N3:108:GLU:HG3	1.64	0.44
59:N3:13:ILE:HD11	59:N3:81:GLN:OE1	6.93	0.44
60:N4:9:SER:HB2	60:N4:51:TRP:CZ3	2.53	0.44
63:N7:115:LYS:O	63:N7:119:GLU:HG3	2.52	0.44
71:O5:89:ARG:HD2	38:8:38:U:O4	68.16	0.44
2:S0:109:ASN:O	2:S0:112:THR:HG22	2.18	0.44
3:S1:118:GLN:OE1	3:S1:142:PHE:HB3	2.18	0.44
4:S2:110:HIS:HA	4:S2:137:ILE:O	2.86	0.44
5:S3:105:MET:HG2	5:S3:122:VAL:HG21	4.31	0.44
7:S5:103:ASN:HA	7:S5:106:LYS:HD2	2.12	0.44
7:S5:113:ILE:HG12	27:D5:97:LYS:NZ	2.33	0.44
8:S6:1:MET:HG2	8:S6:24:ILE:HD13	2.00	0.44
8:S6:67:VAL:HG21	8:S6:99:GLY:HA2	2.03	0.44
36:1:1026:A:H2'	36:1:1027:A:C8	2.52	0.44
36:1:1350:A:O2'	36:1:1351:U:H5'	2.17	0.44
36:1:1483:G:O3'	36:1:1484:U:H3'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1591:G:H4'	36:1:1656:A:OP1	2.18	0.44
36:1:1949:G:OP2	55:M9:135:LYS:NZ	2.50	0.44
36:1:2398:A:OP1	36:1:2873:U:H4'	2.18	0.44
36:1:261:U:H2'	36:1:262:U:C6	2.53	0.44
36:1:3170:A:C6	36:1:3171:U:C4	3.06	0.44
36:1:3:U:H2'	36:1:4:U:O4'	2.16	0.44
1:2:1199:G:N7	31:D9:40:ARG:HD3	2.33	0.44
1:2:1365:C:O3'	18:C6:30:LYS:NZ	2.50	0.44
1:2:420:A:OP1	8:S6:96:SER:OG	2.19	0.44
1:2:424:C:H42	1:2:429:G:N2	2.15	0.44
1:2:778:G:H3'	1:2:780:A:H2	1.82	0.44
37:3:121:U:H5''	42:L5:260:PHE:HE2	1.83	0.44
36:5:1190:A:H5'	36:5:1191:U:OP1	2.18	0.44
36:5:2180:G:H2'	36:5:2181:C:C6	2.51	0.44
36:5:2585:G:N3	36:5:2585:G:H2'	2.33	0.44
36:5:2611:U:H2'	36:5:2612:U:C6	2.52	0.44
36:5:3358:U:H2'	36:5:3359:A:C8	2.53	0.44
68:O2:50:ILE:HG22	36:5:426:G:H5'	193.65	0.44
36:5:511:G:H2'	36:5:512:U:O4'	2.17	0.44
36:5:652:G:OP1	36:5:1436:U:O2'	2.31	0.44
36:5:907:G:C4	36:5:926:A:C8	3.06	0.44
1:6:1547:A:H2'	1:6:1548:G:H8	1.82	0.44
1:6:1561:U:H4'	1:6:1599:C:H4'	2.00	0.44
1:6:1756[A]:A:H8	1:6:1756[A]:A:OP2	2.01	0.44
1:6:301:A:O5'	1:6:301:A:H8	2.00	0.44
11:S9:143:ILE:HG12	1:6:768:C:C2	420.50	0.44
1:6:878:G:H2'	1:6:879:G:H8	1.82	0.44
14:C2:75:VAL:HG21	14:C2:120:VAL:HG21	2.00	0.44
14:C2:63:VAL:HG11	14:C2:94:ALA:HA	1.99	0.44
17:C5:57:MET:O	17:C5:60:LEU:HB2	3.31	0.44
20:C8:14:ILE:HA	20:C8:22:VAL:O	2.55	0.44
21:C9:57:ARG:HH11	21:C9:57:ARG:HB2	1.83	0.44
11:S9:61:THR:HG22	24:D2:97:ARG:NH1	2.34	0.44
25:D3:53:VAL:HG13	25:D3:72:VAL:HB	1.98	0.44
28:D6:10:ARG:HB2	28:D6:34:LYS:HG3	1.99	0.44
36:1:911:C:H42	39:L2:3:ARG:HD3	1.83	0.44
36:1:2550:U:C5	39:L2:40:TYR:CZ	3.06	0.44
41:L4:99:MET:SD	41:L4:102:PRO:HA	2.57	0.44
41:L4:203:ARG:HE	41:L4:240:PRO:HB3	3.28	0.44
42:L5:155:THR:HA	42:L5:179:ARG:HD3	2.00	0.44
42:L5:230:ASP:C	42:L5:231:ILE:HG13	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:L6:172:HIS:HB3	69:O3:44:TYR:CE2	2.92	0.44
43:L6:176:PHE:H	50:M4:117:ARG:HH22	4.65	0.44
43:L6:41:ILE:HG12	43:L6:51:ARG:HG2	2.54	0.44
44:L7:123:THR:O	44:L7:126:LEU:HB2	2.18	0.44
44:L7:140:SER:O	44:L7:144:ILE:HG13	2.40	0.44
46:L9:47:LYS:NZ	50:M4:5:SER:H	2.16	0.44
48:M1:84:LEU:HD11	48:M1:163:PHE:HE1	1.83	0.44
53:M7:13:LYS:HE2	53:M7:152:GLU:HB2	3.34	0.44
36:1:2992:U:H1'	53:M7:69:ARG:NH2	2.32	0.44
63:N7:12:VAL:HG11	63:N7:134:LEU:HD12	2.00	0.44
65:N9:12:GLN:NE2	65:N9:15:LYS:HD3	4.33	0.44
65:N9:46:ALA:O	65:N9:50:THR:HG22	2.18	0.44
66:O0:18:ILE:HG22	66:O0:19:LYS:HG2	3.70	0.44
67:O1:10:ARG:HH12	67:O1:44:MET:CG	4.58	0.44
71:O5:4:VAL:HB	71:O5:9:LEU:HD21	3.21	0.44
61:N5:46:TYR:CD2	71:O5:75:TYR:HB3	2.53	0.44
51:M5:15:GLN:HB3	72:O6:52:PRO:HD2	1.99	0.44
78:Q2:3:ASN:O	36:5:2655:U:H2'	239.48	0.44
78:Q2:56:PRO:HA	36:5:2802:A:C8	184.55	0.44
3:S1:146:GLN:O	3:S1:148:ASN:N	2.73	0.44
5:S3:115:ILE:HG23	5:S3:116:ARG:H	1.82	0.44
7:S5:121:ILE:HG13	7:S5:195:ALA:HB1	3.12	0.44
7:S5:89:ILE:HD12	7:S5:90:ILE:N	2.33	0.44
10:S8:147:ALA:C	10:S8:149:SER:H	2.85	0.44
10:S8:152:ILE:O	10:S8:153:GLU:HB2	2.18	0.44
11:S9:72:GLU:OE2	1:6:761:G:O2'	399.75	0.44
35:SM:48:ARG:H	35:SM:48:ARG:HG3	1.46	0.44
36:1:1105:A:H2'	36:1:1106:G:C8	2.53	0.43
36:1:1223:A:C6	36:1:1224:C:C4	3.05	0.43
36:1:1911:A:H8	36:1:1911:A:O5'	2.00	0.43
36:1:2927:C:H2'	36:1:2928:C:C6	2.53	0.43
36:1:3001:C:OP1	40:L3:120:LYS:NZ	2.43	0.43
36:1:3328:G:C2	36:1:3329:U:H1'	2.53	0.43
1:2:1507:G:H2'	1:2:1508:U:O4'	2.18	0.43
1:2:685:A:O2'	1:2:686:C:OP1	2.31	0.43
1:2:86:A:H5''	26:D4:119:PHE:CE2	2.53	0.43
38:4:151:C:H4'	38:4:153:U:O4	2.18	0.43
57:N1:54:HIS:CD2	36:5:2724:U:H4'	229.97	0.43
79:Q3:5:THR:OG1	36:5:837:A:OP1	244.50	0.43
1:6:1171:A:N6	1:6:1467:C:H42	2.16	0.43
1:6:136:C:H4'	1:6:137:U:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1515:A:H4'	1:6:1517:U:C5	2.52	0.43
1:6:138:A:N6	1:6:266:A:H61	2.15	0.43
1:6:591:A:H2'	1:6:592:A:H8	1.81	0.43
1:6:872:G:H2'	1:6:873:U:O4'	2.18	0.43
1:6:946:U:H2'	1:6:947:U:C6	2.53	0.43
1:2:919:A:H5'	16:C4:18:ARG:NH1	2.33	0.43
16:C4:93:THR:HA	16:C4:94:PRO:HD2	2.16	0.43
18:C6:87:LYS:HE2	18:C6:87:LYS:HB3	1.72	0.43
5:S3:208:ILE:HD12	19:C7:16:LEU:HD21	2.25	0.43
25:D3:96:VAL:HG23	25:D3:97:ASP:H	1.82	0.43
26:D4:44:LEU:HA	26:D4:47:VAL:HG22	4.26	0.43
26:D4:84:LYS:HD2	26:D4:85:PHE:CE2	2.53	0.43
26:D4:94:TYR:HD2	26:D4:96:LEU:HD12	3.15	0.43
27:D5:96:SER:C	27:D5:98:GLN:H	2.20	0.43
41:L4:55:LYS:HB3	41:L4:55:LYS:HZ3	4.59	0.43
48:M1:109:HIS:CE1	48:M1:122:ILE:HA	2.53	0.43
52:M6:133:ARG:NE	36:5:1316:C:OP2	295.53	0.43
53:M7:13:LYS:HB3	53:M7:152:GLU:HB2	1.99	0.43
55:M9:10:LEU:HD12	55:M9:10:LEU:HA	2.00	0.43
1:2:852:C:OP1	55:M9:172:ARG:HD3	2.17	0.43
59:N3:2:SER:HB3	59:N3:125:LEU:HD21	3.98	0.43
59:N3:58:VAL:HG22	59:N3:76:ALA:O	2.18	0.43
62:N6:102:SER:OG	62:N6:103:LYS:HE2	2.18	0.43
62:N6:37:LYS:HA	62:N6:40:ARG:HB3	4.33	0.43
64:N8:12:ARG:NH1	36:5:1431:G:OP2	149.00	0.43
64:N8:132:LYS:O	64:N8:136:GLU:HG3	2.18	0.43
64:N8:60:TYR:CD2	64:N8:63:LYS:HE3	2.52	0.43
68:O2:123:LYS:HG2	68:O2:126:LEU:HD12	2.00	0.43
36:1:2138:A:HO2'	73:O7:2:GLY:N	2.15	0.43
73:O7:19:CYS:SG	73:O7:34:CYS:HB2	2.57	0.43
2:S0:109:ASN:H	4:S2:64:LYS:HZ3	4.78	0.43
2:S0:27:ARG:HB3	2:S0:28:ASN:H	1.45	0.43
7:S5:125:THR:H	27:D5:58:ARG:HH11	1.66	0.43
7:S5:164:PRO:HA	7:S5:167:ARG:HB2	2.31	0.43
7:S5:43:PHE:CG	7:S5:44:ASN:N	3.05	0.43
10:S8:152:ILE:H	10:S8:152:ILE:HD13	4.56	0.43
10:S8:81:VAL:HA	10:S8:102:VAL:HG12	1.99	0.43
11:S9:125:ALA:O	11:S9:129:ILE:HG13	2.18	0.43
11:S9:92:LYS:O	11:S9:94:ASP:N	2.51	0.43
36:1:1033:U:H2'	36:1:1034:U:C6	2.53	0.43
36:1:149:U:P	51:M5:49:ARG:HH22	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1582:C:P	36:1:1582:C:H3'	2.58	0.43
36:1:1762:C:H2'	36:1:1763:U:H4'	1.99	0.43
36:1:1533:U:O2'	36:1:1798:A:N3	2.44	0.43
36:1:2283:G:HO2'	36:1:2284:C:P	2.42	0.43
36:1:2389:C:H2'	36:1:2390:A:C8	2.53	0.43
36:1:2567:C:C2'	36:1:2568:C:H5'	2.48	0.43
36:1:336:A:C2	36:1:337:G:C5	3.06	0.43
1:2:1032:G:C6	1:2:1104:U:C4	3.06	0.43
1:2:281:G:H8	1:2:281:G:P	2.41	0.43
1:2:702:G:O2'	1:2:703:G:H8	2.00	0.43
1:2:704:C:OP2	1:2:704:C:H3'	2.18	0.43
1:2:763:G:C6	1:2:764:U:C4	3.07	0.43
58:N2:104:ARG:NH1	36:5:1758:G:OP1	122.09	0.43
76:Q0:102:ARG:HH21	36:5:2896:A:P	319.96	0.43
36:5:2993:G:H2'	36:5:3142:A:N6	2.33	0.43
1:6:116:U:H2'	1:6:117:U:H6	1.83	0.43
8:S6:13:GLN:NE2	1:6:151:G:H21	313.35	0.43
1:6:1535:U:O2'	1:6:1536:G:O5'	2.36	0.43
15:C3:128:TYR:CE1	1:6:964:U:H5''	324.24	0.43
12:C0:54:TYR:CD2	12:C0:72:GLY:HA2	4.14	0.43
14:C2:67:THR:C	14:C2:69:ALA:H	2.21	0.43
17:C5:18:ARG:HH21	17:C5:38:PRO:HG3	1.83	0.43
22:D0:108:ILE:H	22:D0:108:ILE:HG13	1.54	0.43
22:D0:50:LEU:HD23	22:D0:95:ALA:HB2	1.99	0.43
24:D2:11:LEU:HD11	24:D2:37:PHE:CZ	3.75	0.43
1:2:780:A:H8	26:D4:8:ARG:HB3	1.82	0.43
7:S5:163:SER:HB2	30:D8:48:VAL:HG22	2.01	0.43
41:L4:107:ARG:HG2	41:L4:108:LYS:N	2.36	0.43
41:L4:181:VAL:HG12	41:L4:182:LEU:H	1.84	0.43
41:L4:185:LYS:HA	41:L4:200:THR:O	2.18	0.43
42:L5:129:TYR:CG	42:L5:177:GLU:HG2	2.53	0.43
42:L5:211:LEU:HA	42:L5:211:LEU:HD22	1.73	0.43
36:1:1084:A:H4'	42:L5:44:TYR:CZ	2.53	0.43
44:L7:216:VAL:HG11	44:L7:227:GLY:O	2.18	0.43
47:M0:176:LEU:HD22	47:M0:180:GLU:HG3	1.99	0.43
49:M3:58:VAL:CG1	36:5:75:G:H5''	88.14	0.43
55:M9:17:VAL:HG12	55:M9:18:GLY:H	1.83	0.43
55:M9:21:LYS:O	55:M9:53:LYS:HB2	2.18	0.43
57:N1:160:ILE:HA	57:N1:160:ILE:HD12	1.85	0.43
61:N5:115:ARG:HB2	61:N5:117:ASN:OD1	2.19	0.43
63:N7:136:PHE:HB2	70:O4:88:ARG:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:O0:27:TYR:O	66:O0:31:VAL:HG23	2.19	0.43
70:O4:46:ASP:HB2	70:O4:84:CYS:SG	2.58	0.43
2:S0:69:ASN:N	2:S0:69:ASN:OD1	3.64	0.43
3:S1:30:PHE:HD1	3:S1:96:LEU:HD22	1.82	0.43
3:S1:36:SER:CA	3:S1:41:ARG:HE	4.31	0.43
4:S2:116:LYS:HA	4:S2:116:LYS:HD2	1.82	0.43
4:S2:72:LEU:HD13	4:S2:72:LEU:HA	2.68	0.43
5:S3:169:ASP:O	5:S3:187:LYS:HA	2.18	0.43
6:S4:18:TRP:CZ2	6:S4:43:PRO:HD3	2.53	0.43
11:S9:143:ILE:HD13	1:6:767:U:C5	424.52	0.43
11:S9:78:ARG:NH2	11:S9:82:ARG:HE	2.16	0.43
34:SR:305:TYR:CE2	34:SR:311:ARG:HD2	2.58	0.43
36:1:1185:C:OP1	50:M4:42:LYS:HD3	2.18	0.43
36:1:1343:A:H2'	36:1:1344:G:C8	2.53	0.43
36:1:1482:A:N7	36:1:1866:C:O2'	2.40	0.43
36:1:1699:A:H2'	36:1:1700:G:H8	1.84	0.43
36:1:1766:G:H8	36:1:1766:G:OP2	2.02	0.43
36:1:1792:C:H2'	36:1:1795:U:C5	2.53	0.43
36:1:265:A:H5''	36:1:266:A:OP2	2.18	0.43
36:1:2675:C:N4	48:M1:22:SER:HB3	2.33	0.43
36:1:3178:A:C2	52:M6:115:LYS:HG2	2.53	0.43
1:2:1105:C:N4	25:D3:4:GLY:HA3	2.33	0.43
1:2:1240:U:H1'	1:2:1244:A:N1	2.33	0.43
1:2:1277:G:H5''	5:S3:139:SER:O	2.17	0.43
1:2:1358:G:H2'	1:2:1359:C:C6	2.52	0.43
1:2:374:U:H2'	1:2:375:U:O4'	2.19	0.43
1:2:94:U:H2'	1:2:95:G:O4'	2.17	0.43
1:2:989:U:H2'	1:2:990:C:C6	2.52	0.43
36:5:1121:U:C4	36:5:1122:U:C4	3.06	0.43
36:5:1255:C:H2'	36:5:1256:G:H8	1.83	0.43
36:5:1565:G:H2'	36:5:1566:A:O4'	2.18	0.43
36:5:2343:C:H2'	36:5:2344:U:H6	1.83	0.43
36:5:3287:U:N3	36:5:3288:G:N7	2.66	0.43
36:5:3163:A:C6	36:5:3288:G:O6	2.71	0.43
1:6:1102:G:H2'	1:6:1103:U:O4'	2.19	0.43
21:C9:122:ARG:NH2	1:6:1500:C:OP1	421.34	0.43
1:6:189:C:O2'	1:6:190:C:H5'	2.18	0.43
1:6:500:C:O2'	1:6:501:U:O5'	2.36	0.43
13:C1:131:ILE:HA	13:C1:131:ILE:HD13	1.74	0.43
18:C6:45:ARG:O	18:C6:48:VAL:HG12	2.47	0.43
22:D0:63:LEU:HB3	31:D9:34:TYR:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:D5:93:SER:CB	27:D5:100:ILE:HB	2.48	0.43
7:S5:187:ILE:HD13	27:D5:66:VAL:HG11	4.21	0.43
33:E1:141:CYS:SG	33:E1:143:LYS:HB3	4.31	0.43
40:L3:303:LYS:NZ	40:L3:359:ILE:O	3.30	0.43
40:L3:66:LYS:HD3	40:L3:67:PHE:CD2	5.05	0.43
42:L5:259:LYS:HB3	42:L5:259:LYS:HE2	1.84	0.43
43:L6:68:PRO:HD2	43:L6:71:VAL:HG21	2.25	0.43
45:L8:182:GLY:HA3	45:L8:185:ARG:HB2	1.99	0.43
45:L8:75:ILE:HG22	45:L8:76:ALA:H	1.83	0.43
45:L8:98:ARG:NH1	45:L8:188:THR:O	4.58	0.43
46:L9:166:ARG:HH21	46:L9:168:ARG:HH12	11.72	0.43
47:M0:5:PRO:C	47:M0:7:ARG:H	2.21	0.43
48:M1:52:TYR:HA	48:M1:61:ARG:HG3	1.99	0.43
53:M7:176:ILE:HA	53:M7:179:GLN:OE1	2.18	0.43
54:M8:161:LYS:O	54:M8:162:ALA:HB3	2.17	0.43
55:M9:106:LEU:HB3	55:M9:120:TYR:CE1	2.80	0.43
59:N3:81:GLN:HG2	59:N3:83:LYS:O	2.18	0.43
59:N3:92:PHE:CZ	36:5:3051:U:H1'	247.29	0.43
66:O0:13:LYS:HB3	66:O0:100:ILE:CG2	3.47	0.43
66:O0:95:ALA:HB2	66:O0:101:LEU:HD23	2.00	0.43
67:O1:61:LYS:HB3	67:O1:61:LYS:HE2	4.71	0.43
68:O2:119:VAL:O	68:O2:122:PRO:HD3	2.30	0.43
68:O2:123:LYS:HA	68:O2:126:LEU:HD12	2.00	0.43
68:O2:77:ALA:HB3	68:O2:81:ASP:OD2	2.79	0.43
69:O3:12:LYS:HD3	69:O3:96:ALA:O	2.17	0.43
5:S3:27:ARG:NH1	12:C0:59:PHE:O	8.13	0.43
34:SR:260:ILE:HD12	34:SR:274:LEU:HD12	3.37	0.43
34:SR:242:SER:O	34:SR:292:LEU:HD21	2.18	0.43
36:1:1060:U:H2'	36:1:1061:A:C8	2.52	0.43
36:1:1177:G:H1'	36:1:1178:G:N7	2.34	0.43
36:1:945:C:H1'	36:1:1407:A:H1'	2.00	0.43
36:1:1608:C:H2'	36:1:1609:C:C6	2.54	0.43
36:1:420:G:N2	36:1:2385:G:OP2	2.38	0.43
36:1:283:G:O6	36:1:304:G:H1'	2.18	0.43
36:1:3113:A:OP1	46:L9:73:SER:OG	2.32	0.43
36:1:3193:C:H2'	36:1:3194:C:O4'	2.18	0.43
36:1:3393:U:H2'	36:1:3394:U:C6	2.54	0.43
36:1:568:G:H2'	36:1:569:A:O4'	2.19	0.43
1:2:1172:G:H4'	1:2:1569:A:H2	1.83	0.43
1:2:1494:C:H2'	1:2:1495:C:H6	1.82	0.43
1:2:252:U:H4'	6:S4:131:LEU:HD12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:711:U:H4'	1:2:712:G:OP1	2.18	0.43
1:2:927:C:H2'	1:2:928:U:C6	2.52	0.43
37:3:6:C:OP2	42:L5:22:ARG:NH1	2.45	0.43
38:4:59:A:N1	38:4:100:U:H1'	2.33	0.43
36:5:1661:G:H2'	36:5:1662:G:C8	2.53	0.43
36:5:2444:C:O2'	36:5:2445:A:H5'	2.19	0.43
36:5:3225:C:H2'	36:5:3226:A:C8	2.53	0.43
67:O1:43:HIS:HE1	36:5:3323:A:H1'	170.42	0.43
1:6:224:C:H2'	1:6:225:A:C8	2.53	0.43
1:6:339:C:H2'	1:6:340:U:C6	2.54	0.43
1:6:778:G:C4	1:6:780:A:C8	3.06	0.43
42:L5:269:SER:CB	37:7:1:G:H21	318.82	0.43
15:C3:93:LYS:HA	15:C3:150:VAL:HG21	2.19	0.43
17:C5:22:LEU:O	17:C5:26:LEU:HD13	2.18	0.43
17:C5:75:PRO:HG3	17:C5:93:VAL:HG11	2.00	0.43
27:D5:42:LEU:O	27:D5:44:GLN:N	2.51	0.43
36:1:2243:A:C8	39:L2:245:LEU:HB2	2.53	0.43
40:L3:239:PRO:O	40:L3:242:THR:HG23	2.94	0.43
36:1:3086:A:H4'	40:L3:366:GLY:HA2	2.00	0.43
40:L3:37:ARG:HA	40:L3:185:GLY:O	2.18	0.43
41:L4:203:ARG:HH21	41:L4:240:PRO:HB3	2.56	0.43
43:L6:108:LYS:HB3	43:L6:108:LYS:HE2	4.37	0.43
43:L6:166:LYS:HA	43:L6:166:LYS:HD3	2.11	0.43
44:L7:121:LYS:HE2	44:L7:125:GLU:OE2	3.06	0.43
44:L7:25:GLN:HA	44:L7:28:ALA:HB3	2.24	0.43
46:L9:187:ILE:HG22	46:L9:188:THR:H	1.84	0.43
49:M3:157:ARG:HG2	49:M3:158:ALA:N	2.33	0.43
50:M4:47:ASP:CG	50:M4:55:ARG:HB2	2.63	0.43
55:M9:104:ARG:NH1	36:5:1949:G:H5''	216.59	0.43
56:N0:109:ASP:OD1	56:N0:113:ARG:HD2	2.77	0.43
61:N5:82:LEU:HD11	61:N5:135:ILE:HG21	2.00	0.43
63:N7:123:GLN:HG2	63:N7:123:GLN:H	1.64	0.43
64:N8:126:LYS:HB3	64:N8:148:ILE:HG21	2.01	0.43
36:1:943:U:H3'	64:N8:13:GLY:HA2	2.00	0.43
64:N8:44:ASN:HD22	64:N8:45:MET:HE3	4.75	0.43
68:O2:66:LEU:HD23	68:O2:72:LYS:HG2	3.19	0.43
70:O4:42:PRO:HD3	70:O4:56:THR:HG22	2.63	0.43
3:S1:145:LYS:HG3	3:S1:149:GLN:CD	5.99	0.43
3:S1:41:ARG:HH22	3:S1:232:HIS:HA	3.89	0.43
4:S2:41:LEU:HD23	4:S2:240:LEU:HD11	2.01	0.43
5:S3:113:LEU:HD23	5:S3:113:LEU:HA	1.74	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:S6:3:LEU:O	8:S6:15:THR:HA	2.43	0.43
8:S6:98:ARG:HD3	8:S6:99:GLY:H	2.25	0.43
11:S9:66:ASP:HA	11:S9:67:PRO:HD2	1.99	0.43
34:SR:252:LEU:O	34:SR:263:PHE:N	2.87	0.43
36:1:1134:G:C2	36:1:1135:A:C8	3.07	0.43
36:1:1272:C:H2'	36:1:1273:A:O4'	2.18	0.43
36:1:1683:A:H2'	36:1:1684:U:O4'	2.18	0.43
36:1:2740:A:H2'	36:1:2741:C:O4'	2.18	0.43
36:1:3066:U:H2'	36:1:3067:C:C6	2.53	0.43
36:1:374:A:N3	36:1:376:G:H5''	2.33	0.43
36:1:501:A:H2'	36:1:502:U:C6	2.53	0.43
36:1:549:U:H2'	36:1:550:A:C8	2.53	0.43
36:1:563:U:H2'	36:1:564:G:C8	2.53	0.43
36:1:672:A:OP2	54:M8:55:SER:HB2	2.17	0.43
36:1:715:A:C6	36:1:782:U:H5'	2.54	0.43
1:2:1003:A:H1'	1:2:1005:A:N7	2.33	0.43
1:2:1178:G:H2'	1:2:1179:G:O4'	2.19	0.43
1:2:1243:G:N3	1:2:1243:G:H2'	2.34	0.43
1:2:1460:A:OP2	35:SM:68:ARG:HD3	2.18	0.43
1:2:494:U:O2'	1:2:495:C:O5'	2.36	0.43
37:3:3:U:H2'	37:3:4:U:H6	1.83	0.43
36:5:1017:C:H2'	36:5:1017:C:OP1	2.19	0.43
36:5:1001:G:N3	36:5:1041:U:H5'	2.33	0.43
36:5:1308:A:O2'	36:5:1311:G:OP1	2.24	0.43
36:5:1573:G:C5	36:5:1574:C:H1'	2.53	0.43
51:M5:44:ARG:NH2	36:5:269:G:OP1	124.41	0.43
50:M4:125:LYS:NZ	36:5:3215:A:OP2	278.96	0.43
1:6:1639:C:H2'	1:6:1640:C:O4'	2.19	0.43
1:6:296:U:C4	1:6:297:U:C4	3.06	0.43
38:8:56:G:H2'	38:8:57:C:C6	2.53	0.43
14:C2:108:ARG:O	14:C2:110:GLY:N	2.94	0.43
7:S5:37:GLN:HB3	18:C6:53:LEU:HB3	2.01	0.43
22:D0:48:HIS:CE1	22:D0:50:LEU:HD11	2.54	0.43
22:D0:53:LYS:HB2	22:D0:92:ASP:HB2	2.21	0.43
23:D1:71:ARG:HG3	23:D1:83:TRP:CZ2	2.52	0.43
40:L3:227:GLU:CG	40:L3:232:ARG:HB2	2.49	0.43
40:L3:242:THR:OG1	40:L3:246:LEU:HB3	2.18	0.43
40:L3:250:ALA:HB1	36:5:2947:G:C2	221.12	0.43
41:L4:362:ASP:C	57:N1:150:THR:HG21	2.39	0.43
42:L5:53:VAL:O	42:L5:54:ARG:NH1	2.46	0.43
44:L7:214:TRP:CD2	44:L7:219:LYS:HD2	3.90	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:L7:43:ILE:O	44:L7:47:ARG:HG3	4.84	0.43
44:L7:92:ILE:HD11	54:M8:4:ASP:H	1.82	0.43
49:M3:185:LYS:HG3	49:M3:188:ARG:HH22	2.95	0.43
53:M7:52:LEU:HD12	53:M7:52:LEU:HA	2.09	0.43
55:M9:134:HIS:CD2	36:5:1947:G:H5'	236.53	0.43
57:N1:39:ILE:CD1	57:N1:102:ARG:HD3	2.48	0.43
59:N3:39:VAL:HG12	59:N3:41:GLY:H	4.63	0.43
59:N3:85:TRP:O	59:N3:92:PHE:HA	2.43	0.43
65:N9:23:LYS:HD2	65:N9:24:PRO:HD3	2.63	0.43
68:O2:9:ILE:HG12	68:O2:63:THR:HB	2.00	0.43
70:O4:81:CYS:H	70:O4:84:CYS:HB2	2.41	0.43
70:O4:95:ILE:O	70:O4:99:LYS:HB2	2.19	0.43
2:S0:158:VAL:H	23:D1:69:LEU:HD12	1.84	0.43
3:S1:40:ASN:O	3:S1:42:ASN:N	3.52	0.43
4:S2:58:LEU:O	23:D1:15:ARG:NE	2.47	0.43
7:S5:112:ARG:HD3	1:6:1529:C:OP1	375.62	0.43
11:S9:41:GLU:HG2	11:S9:44:ARG:NH2	3.62	0.43
11:S9:63:ASP:OD1	11:S9:64:GLU:N	3.22	0.43
34:SR:137:LYS:HE3	34:SR:137:LYS:HA	2.00	0.43
34:SR:207:ASP:N	34:SR:207:ASP:OD2	2.81	0.43
34:SR:249:ARG:O	34:SR:251:TRP:N	3.61	0.43
34:SR:38:ARG:HG2	34:SR:67:ILE:HG23	2.01	0.43
36:1:109:A:H8	36:1:109:A:O5'	2.01	0.43
36:1:1657:C:C5	36:1:1797:A:H5''	2.53	0.43
36:1:180:C:H2'	36:1:181:U:C6	2.54	0.43
36:1:2829:U:O5'	36:1:2829:U:H6	2.01	0.43
36:1:3313:U:H4'	40:L3:173:GLN:OE1	2.19	0.43
36:1:3350:C:H2'	36:1:3351:U:H3'	2.01	0.43
36:1:790:U:H4'	41:L4:112:LYS:O	2.19	0.43
1:2:625:C:H2'	1:2:626:U:C6	2.54	0.43
1:2:737:A:O2'	1:2:738:G:H8	2.01	0.43
1:2:978:A:H2'	1:2:979:A:O4'	2.18	0.43
36:5:1220:U:H1'	36:5:1222:G:C6	2.53	0.43
36:5:2171:G:H2'	36:5:2172:A:H8	1.84	0.43
36:5:2351:U:H2'	36:5:2352:A:H8	1.83	0.43
36:5:313:A:H2'	36:5:314:U:C6	2.54	0.43
36:5:3294:A:H2'	36:5:3295:A:O4'	2.17	0.43
1:6:1305:U:OP2	1:6:1306:C:N4	2.44	0.43
1:6:1731:A:H5''	1:6:1732:A:OP2	2.19	0.43
1:6:973:A:H2'	1:6:974:A:C8	2.53	0.43
38:8:15:G:O2'	38:8:16:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:8:37:A:H5''	38:8:39:G:O4'	2.17	0.43
73:O7:60:GLY:N	38:8:42:G:OP1	88.60	0.43
13:C1:129:ARG:HG2	13:C1:130:PRO:N	3.99	0.43
15:C3:69:ASN:HB3	15:C3:74:ILE:CD1	2.48	0.43
1:2:1579:U:O2'	18:C6:139:GLN:HG3	2.18	0.43
19:C7:10:LYS:HG2	19:C7:53:TYR:CE1	2.80	0.43
19:C7:58:MET:O	19:C7:61:ILE:HG22	4.92	0.43
20:C8:26:ILE:HD11	20:C8:31:ALA:HA	3.10	0.43
20:C8:84:TRP:HA	20:C8:89:GLN:OE1	2.18	0.43
21:C9:57:ARG:NH1	1:6:1479:A:OP1	393.46	0.43
22:D0:100:VAL:O	22:D0:103:ILE:HG22	2.18	0.43
22:D0:72:ASN:HA	1:6:1198:G:O2'	388.52	0.43
23:D1:41:GLU:H	23:D1:41:GLU:CD	2.21	0.43
23:D1:56:SER:OG	23:D1:59:VAL:HG23	2.32	0.43
24:D2:94:LEU:HA	24:D2:95:PRO:HD3	1.86	0.43
26:D4:34:ASN:HB3	26:D4:35:VAL:H	3.72	0.43
32:E0:39:LEU:HG	32:E0:43:ARG:HH21	5.44	0.43
33:E1:95:HIS:CG	33:E1:96:LYS:H	3.62	0.43
40:L3:332:ARG:O	40:L3:333:LYS:HB2	2.36	0.43
41:L4:26:PHE:CD1	41:L4:130:ALA:HB2	2.60	0.43
41:L4:156:LEU:HD23	41:L4:159:ILE:HD12	1.99	0.43
36:1:696:C:OP1	41:L4:272:VAL:HG23	2.19	0.43
42:L5:268:GLU:HA	42:L5:271:LYS:HG2	4.39	0.43
42:L5:269:SER:O	37:7:22:A:N6	324.74	0.43
42:L5:22:ARG:HD3	42:L5:28:THR:OG1	2.18	0.43
44:L7:140:SER:HB3	44:L7:237:ASN:ND2	2.32	0.43
47:M0:89:VAL:HG13	47:M0:136:PHE:HE1	1.84	0.43
48:M1:155:THR:O	48:M1:159:THR:HG23	5.13	0.43
43:L6:41:ILE:HD11	50:M4:114:ASP:OD2	2.19	0.43
51:M5:102:ALA:O	51:M5:106:VAL:HG13	3.14	0.43
53:M7:25:SER:CB	53:M7:28:ASN:HB2	2.58	0.43
54:M8:29:LEU:HA	54:M8:29:LEU:HD23	2.54	0.43
55:M9:105:LEU:HD21	55:M9:139:VAL:HG13	6.03	0.43
55:M9:157:GLU:O	55:M9:161:ALA:N	3.04	0.43
57:N1:32:LYS:HB3	57:N1:34:TYR:CE2	2.52	0.43
69:O3:16:TYR:CD1	69:O3:25:PRO:HA	3.14	0.43
74:O8:10:GLN:HA	74:O8:13:GLU:CD	3.17	0.43
6:S4:247:SER:N	6:S4:250:GLU:OE1	2.36	0.43
1:2:399:A:N3	6:S4:3:ARG:NH1	2.65	0.43
7:S5:79:ASN:OD1	7:S5:79:ASN:N	2.52	0.43
8:S6:176:GLN:HG2	1:6:169:A:C5'	330.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S8:192:TYR:O	10:S8:196:LEU:HB2	2.19	0.43
11:S9:171:ARG:HH11	11:S9:174:ARG:HD3	4.71	0.43
34:SR:37:SER:OG	34:SR:38:ARG:N	2.65	0.43
36:1:1307:G:H1'	36:1:1308:A:N7	2.33	0.43
36:1:1922:A:H2'	36:1:1923:C:O4'	2.18	0.43
36:1:2181:C:C2	36:1:2182:A:C8	3.06	0.43
36:1:665:A:H1'	49:M3:14:PHE:CZ	2.53	0.43
36:1:871:U:H2'	36:1:872:U:H6	1.84	0.43
36:1:985:U:H2'	36:1:986:U:H6	1.83	0.43
1:2:1579:U:H2'	1:2:1580:C:H6	1.83	0.43
1:2:545:A:H4'	1:2:546:U:OP1	2.17	0.43
1:2:652:G:H1	1:2:682:C:H42	1.65	0.43
36:5:107:A:H2'	36:5:108:A:O4'	2.18	0.43
36:5:138:U:H2'	36:5:139:G:C8	2.54	0.43
36:5:193:C:C2	36:5:203:G:C2	3.06	0.43
36:5:2100:A:H2'	36:5:2101:C:O4'	2.18	0.43
36:5:209:A:H4'	36:5:211:A:N7	2.33	0.43
36:5:677:A:H4'	36:5:678:G:O5'	2.19	0.43
31:D9:34:TYR:OH	1:6:1487:A:OP1	421.97	0.43
1:6:613:G:OP2	1:6:1099:U:O2'	2.23	0.43
1:6:83:G:H8	1:6:83:G:O5'	2.01	0.43
42:L5:155:THR:HG23	37:7:36:C:H4'	271.33	0.43
12:C0:47:GLN:O	12:C0:51:SER:OG	2.35	0.43
13:C1:102:LYS:HE3	1:6:632:U:OP1	329.37	0.43
14:C2:63:VAL:HB	14:C2:64:SER:H	1.77	0.43
1:2:901:G:N2	16:C4:54:GLU:OE1	2.51	0.43
20:C8:121:ALA:O	20:C8:125:ILE:HG13	2.38	0.43
24:D2:11:LEU:HD12	24:D2:74:VAL:HB	2.00	0.43
25:D3:97:ASP:O	25:D3:100:ASP:HB2	2.46	0.43
1:2:1433:G:C5	31:D9:41:GLN:HB3	2.54	0.43
33:E1:100:LEU:HB3	33:E1:102:VAL:HG22	2.01	0.43
39:L2:188:LYS:O	39:L2:192:LYS:HD2	2.19	0.43
39:L2:219:ILE:HG21	39:L2:223:SER:HB3	2.01	0.43
39:L2:5:ILE:HG12	39:L2:8:GLN:OE1	2.18	0.43
40:L3:113:GLU:OE2	40:L3:167:ARG:HG2	2.17	0.43
41:L4:138:ARG:NH2	41:L4:240:PRO:HG2	2.34	0.43
48:M1:107:ASP:O	48:M1:108:GLU:HG2	4.48	0.43
48:M1:141:ARG:O	48:M1:145:LYS:HE2	2.35	0.43
48:M1:148:VAL:HG12	48:M1:149:GLY:O	2.19	0.43
51:M5:187:ARG:O	51:M5:190:THR:HG23	2.19	0.43
54:M8:69:ARG:O	54:M8:72:LYS:N	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:M9:44:LEU:HA	55:M9:47:ASN:HB2	5.59	0.43
56:N0:103:VAL:O	56:N0:106:LEU:HB3	2.46	0.43
56:N0:13:ARG:O	56:N0:22:PRO:HG2	2.19	0.43
57:N1:64:VAL:HA	57:N1:73:GLY:O	2.18	0.43
58:N2:28:PHE:HE1	58:N2:83:TYR:HE2	1.87	0.43
61:N5:73:MET:HA	61:N5:73:MET:CE	2.48	0.43
63:N7:135:ARG:HH11	36:5:1807:G:C5'	195.06	0.43
67:O1:31:ARG:O	67:O1:35:GLU:HB2	2.38	0.43
67:O1:53:PRO:O	67:O1:57:GLN:HG3	2.19	0.43
68:O2:119:VAL:HG12	68:O2:122:PRO:HD3	2.00	0.43
70:O4:7:PHE:HD1	70:O4:20:ILE:HD12	3.80	0.43
73:O7:22:CYS:SG	73:O7:24:ARG:HG3	3.53	0.43
2:S0:52:LYS:HD3	23:D1:82:VAL:HA	3.15	0.43
4:S2:134:LEU:HD23	4:S2:134:LEU:N	3.93	0.43
6:S4:184:THR:C	6:S4:189:LEU:HD13	3.72	0.43
10:S8:166:TYR:O	10:S8:183:ILE:HD12	6.44	0.43
11:S9:175:ARG:NE	11:S9:179:ARG:HH21	4.08	0.43
35:SM:23:LYS:HZ2	35:SM:24:GLU:H	7.75	0.43
35:SM:52:PRO:O	35:SM:54:PRO:HD3	5.18	0.43
35:SM:89:ARG:C	35:SM:91:THR:H	2.22	0.43
34:SR:90:ARG:CZ	34:SR:102:ARG:HE	3.78	0.43
34:SR:124:SER:HG	34:SR:134:TRP:HE1	2.76	0.43
36:1:1700:G:H2'	36:1:1701:C:C6	2.54	0.43
36:1:1727:G:H2'	36:1:1728:G:H21	1.83	0.43
36:1:2242:A:H5''	39:L2:244:GLY:HA3	2.00	0.43
36:1:2257:C:H2'	36:1:2258:U:O4'	2.19	0.43
36:1:1896:A:H61	36:1:2339:C:H42	1.67	0.43
36:1:2623:G:C4	36:1:2624:G:C8	3.07	0.43
36:1:353:G:O2'	36:1:364:G:O6	2.26	0.43
36:1:867:G:H1	36:1:892:U:H3	1.66	0.43
1:2:1433:G:H2'	1:2:1434:U:C6	2.53	0.43
1:2:1762:A:H1'	1:2:1783:C:H5'	2.01	0.43
1:2:221:A:OP2	1:2:832:U:O2'	2.31	0.43
1:2:685:A:HO2'	1:2:686:C:P	2.41	0.43
1:2:720:G:H2'	1:2:720:G:N3	2.34	0.43
38:4:146:U:H2'	38:4:147:U:C6	2.54	0.43
36:5:1648:A:H2'	36:5:1649:U:O4'	2.19	0.43
36:5:2147:A:H2'	36:5:2148:U:O4'	2.18	0.43
45:L8:33:ASN:HD21	36:5:2549:G:H1'	218.59	0.43
36:5:2818:U:C6	36:5:2818:U:H5'	2.46	0.43
36:5:754:G:H2'	36:5:755:A:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:973:A:H2'	36:5:974:G:O4'	2.19	0.43
1:6:1045:C:C2	1:6:1074:G:C2	3.07	0.43
1:6:139:C:O2'	1:6:176:C:O2	2.26	0.43
1:6:479:C:O2	1:6:510:G:N2	2.52	0.43
24:D2:31:SER:HB2	1:6:636:A:H5''	362.28	0.43
5:S3:23:GLU:CD	12:C0:61:TRP:HE1	2.22	0.43
14:C2:103:LEU:HG	14:C2:116:VAL:HG22	2.01	0.43
14:C2:57:ALA:O	14:C2:85:LYS:HE3	3.82	0.43
15:C3:102:LEU:HA	15:C3:102:LEU:HD23	2.02	0.43
17:C5:20:VAL:HB	17:C5:25:LEU:HD21	1.99	0.43
19:C7:15:ALA:HB1	19:C7:19:ARG:CZ	2.48	0.43
1:2:1545:A:OP1	20:C8:133:VAL:HG12	2.19	0.43
20:C8:12:GLN:NE2	20:C8:14:ILE:O	4.11	0.43
23:D1:11:LEU:HG	23:D1:11:LEU:H	1.60	0.43
24:D2:119:LYS:HB3	24:D2:121:VAL:HG23	2.00	0.43
25:D3:79:ASN:O	25:D3:81:LYS:N	2.51	0.43
28:D6:35:ALA:HB3	28:D6:37:LYS:HZ2	1.84	0.43
28:D6:45:VAL:HB	28:D6:46:GLU:H	1.65	0.43
24:D2:60:LYS:NZ	29:D7:24:LEU:O	2.35	0.43
39:L2:47:GLN:OE1	39:L2:60:LYS:HD2	5.57	0.43
39:L2:70:ARG:NH2	39:L2:72:ARG:HH21	7.91	0.43
40:L3:159:ARG:HD2	40:L3:180:GLU:OE1	2.19	0.43
40:L3:211:GLN:HB3	40:L3:212:ASN:ND2	2.34	0.43
40:L3:36:ASP:OD2	40:L3:39:LYS:HG3	3.44	0.43
41:L4:209:TYR:O	41:L4:230:VAL:HG22	2.19	0.43
41:L4:234:ASN:OD1	41:L4:235:LEU:N	2.52	0.43
41:L4:77:VAL:HB	41:L4:86:GLY:H	1.84	0.43
42:L5:261:THR:OG1	42:L5:264:GLN:HG3	2.18	0.43
42:L5:43:LYS:HB3	42:L5:46:THR:OG1	3.13	0.43
42:L5:95:TRP:O	42:L5:98:ALA:HB3	2.34	0.43
44:L7:125:GLU:HA	44:L7:128:LYS:HG3	2.01	0.43
44:L7:219:LYS:O	44:L7:228:SER:HB2	2.84	0.43
44:L7:27:ALA:CA	44:L7:30:ARG:HB3	2.49	0.43
46:L9:34:LEU:HD21	46:L9:149:ASN:HB3	2.00	0.43
47:M0:117:GLY:HA2	36:5:2645:G:OP2	244.27	0.43
51:M5:185:ALA:HB3	51:M5:190:THR:CG2	3.44	0.43
51:M5:28:TRP:CD1	36:5:2515:A:H5''	160.98	0.43
51:M5:73:ARG:NH1	51:M5:92:LEU:HD21	2.33	0.43
52:M6:157:GLU:O	52:M6:161:LYS:HG3	2.19	0.43
52:M6:62:THR:HG23	52:M6:64:PHE:CE2	2.97	0.43
36:1:2988:C:P	52:M6:68:ARG:HH11	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:M7:127:ARG:O	53:M7:139:TYR:N	2.79	0.43
53:M7:95:LEU:HD23	53:M7:95:LEU:HA	2.21	0.43
53:M7:17:ALA:HB2	53:M7:98:ALA:HB2	2.65	0.43
60:N4:39:LEU:HA	60:N4:39:LEU:HD12	1.90	0.43
62:N6:43:TYR:CD1	62:N6:126:LEU:HA	2.54	0.43
63:N7:24:VAL:HG23	63:N7:44:ALA:O	2.92	0.43
65:N9:22:LYS:HG2	65:N9:22:LYS:H	1.50	0.43
67:O1:23:VAL:O	67:O1:28:ARG:NH1	2.95	0.43
67:O1:70:ARG:HD2	67:O1:102:LYS:HE2	5.26	0.43
69:O3:89:LEU:HA	69:O3:90:PRO:HD3	2.07	0.43
73:O7:48:ASN:HB2	36:5:53:G:P	123.55	0.43
73:O7:52:LYS:HA	73:O7:55:ARG:HD2	2.01	0.43
2:S0:31:VAL:HG21	2:S0:151:SER:O	2.18	0.43
5:S3:134:CYS:N	5:S3:157:LEU:HD11	2.33	0.43
6:S4:173:ILE:HD11	6:S4:235:TYR:CE1	2.53	0.43
7:S5:105:GLY:O	1:6:1609:U:O2'	377.80	0.43
7:S5:45:LYS:HD3	7:S5:45:LYS:HA	1.79	0.43
9:S7:117:THR:HG23	1:6:639:U:P	366.36	0.43
9:S7:77:LEU:O	9:S7:81:LEU:HG	2.22	0.43
11:S9:129:ILE:HA	11:S9:134:ILE:CG1	4.24	0.43
34:SR:224:ASN:O	34:SR:228:LYS:HA	2.84	0.43
36:1:953:G:O2'	36:1:1116:G:H5'	2.19	0.43
36:1:1317:A:C2	36:1:1319:G:C5	3.07	0.43
36:1:1833:G:OP1	75:O9:10:LYS:NZ	2.43	0.43
36:1:2378:C:H2'	36:1:2379:U:H6	1.83	0.43
36:1:2394:G:N3	40:L3:259:HIS:HA	2.33	0.43
36:1:3072:C:H2'	36:1:3073:A:O4'	2.19	0.43
36:1:3112:G:O6	36:1:3120:C:H5''	2.19	0.43
36:1:3215:A:C5'	50:M4:121:MET:HE1	2.49	0.43
36:1:3223:A:C5	36:1:3263:G:C6	3.07	0.43
36:1:3223:A:C6	36:1:3263:G:C6	3.06	0.43
1:2:1266:U:H2'	1:2:1267:G:H8	1.81	0.43
1:2:1587:A:H2'	1:2:1588:G:H8	1.84	0.43
1:2:1734:U:H2'	1:2:1735:U:O4'	2.19	0.43
1:2:195:G:H2'	1:2:196:G:H5'	2.00	0.43
1:2:350:U:O2	1:2:352:A:C6	2.71	0.43
36:5:1686:U:O2	36:5:1688:U:H1'	2.19	0.43
36:5:2202:C:H2'	36:5:2203:U:O4'	2.19	0.43
36:5:2255:A:OP2	36:5:2261:G:N1	2.43	0.43
36:5:244:G:H2'	36:5:245:U:O4'	2.18	0.43
36:5:2683:U:H2'	36:5:2684:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3245:A:H2	36:5:3246:G:C2	2.37	0.43
36:5:567:G:H2'	36:5:568:G:C8	2.54	0.43
36:5:668:G:C5	36:5:795:G:C2	3.07	0.43
36:5:856:G:C6	36:5:857:G:N1	2.87	0.43
1:6:1107:G:O2'	1:6:1108:G:H5'	2.18	0.43
1:6:1139:A:C5	1:6:1140:G:C8	3.07	0.43
1:6:1458:G:H5''	1:6:1459:C:OP2	2.19	0.43
1:6:1649:G:H2'	1:6:1650:U:C6	2.54	0.43
1:6:197:A:H2'	1:6:198:A:C8	2.53	0.43
1:6:26:A:OP2	1:6:26:A:H3'	2.19	0.43
1:6:72:A:H2'	1:6:73:U:O4'	2.18	0.43
14:C2:125:ASN:O	14:C2:126:TRP:HD1	2.02	0.43
16:C4:56:SER:HA	16:C4:57:PRO:HD3	1.94	0.43
19:C7:65:PRO:HG3	19:C7:78:ARG:NH2	2.33	0.43
2:S0:88:LYS:NZ	19:C7:82:ASP:OD1	3.96	0.43
20:C8:110:ARG:NH1	20:C8:110:ARG:HB3	2.33	0.43
20:C8:35:ILE:HB	20:C8:38:VAL:HG22	2.01	0.43
22:D0:72:ASN:OD1	22:D0:73:GLY:N	3.23	0.43
28:D6:28:LYS:HG2	28:D6:29:SER:H	3.13	0.43
32:E0:49:LEU:H	32:E0:49:LEU:HD22	2.88	0.43
33:E1:113:LYS:HB3	33:E1:113:LYS:HE3	2.02	0.43
39:L2:113:VAL:HG12	39:L2:165:VAL:C	2.39	0.43
41:L4:158:SER:HA	41:L4:213:ASN:HB2	2.01	0.43
43:L6:65:ILE:O	43:L6:76:LEU:HA	2.18	0.43
44:L7:103:LEU:HD23	44:L7:103:LEU:HA	1.89	0.43
45:L8:97:TYR:OH	45:L8:204:ARG:N	2.50	0.43
46:L9:49:ASN:ND2	46:L9:52:LEU:HB2	2.33	0.43
47:M0:188:GLY:HA3	47:M0:216:TYR:HD1	1.84	0.43
47:M0:203:LYS:HA	47:M0:203:LYS:HD2	3.92	0.43
52:M6:98:ALA:HA	52:M6:101:ARG:NH1	3.41	0.43
52:M6:188:SER:O	52:M6:192:LYS:HG3	3.17	0.43
54:M8:144:ARG:C	54:M8:146:SER:H	2.50	0.43
59:N3:24:ASN:HB2	59:N3:99:ALA:HB2	1.99	0.43
64:N8:36:GLY:O	64:N8:41:HIS:HB2	2.31	0.43
64:N8:74:ASN:CG	64:N8:115:LYS:HB3	3.76	0.43
74:O8:12:LEU:HA	74:O8:12:LEU:HD13	2.08	0.43
2:S0:84:ARG:NH1	2:S0:202:TYR:O	2.52	0.43
2:S0:76:ILE:HD13	2:S0:98:ILE:HB	2.01	0.43
5:S3:164:VAL:HG22	5:S3:168:ILE:HD13	4.51	0.43
1:2:1473:U:C5	7:S5:98:MET:HA	2.51	0.43
36:1:1386:A:N3	41:L4:180:LYS:HA	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1608:C:H2'	36:1:1609:C:H6	1.83	0.43
36:1:2180:G:H2'	36:1:2181:C:C6	2.54	0.43
36:1:2373:A:N7	36:1:2867:C:H1'	2.34	0.43
36:1:3023:U:H2'	36:1:3024:A:C8	2.54	0.43
36:1:735:A:H2'	36:1:736:A:C8	2.54	0.43
1:2:144:U:C2	1:2:145:A:C8	3.07	0.43
1:2:229:U:H3	1:2:236:A:H61	1.65	0.43
1:2:328:A:H2'	1:2:329:G:O4'	2.19	0.43
1:2:434:G:N2	1:2:436:A:H3'	2.34	0.43
37:3:15:C:C2	37:3:66:A:C2	3.07	0.43
36:5:1064:A:H4'	36:5:1065:A:H3'	2.01	0.43
52:M6:59:ARG:NH1	36:5:1307:G:OP1	255.96	0.43
36:5:3285:C:H3'	36:5:3286:G:H5''	2.00	0.43
1:6:1293:U:H3	1:6:1322:A:N6	2.16	0.43
1:6:1371:A:H5'	1:6:1372:U:OP2	2.19	0.43
1:6:1586:A:H2'	1:6:1587:A:O4'	2.19	0.43
1:6:1642:G:N3	1:6:1781:A:O2'	2.46	0.43
1:6:55:A:H3'	1:6:403:G:H22	1.84	0.43
1:6:919:A:H2'	1:6:920:U:C6	2.54	0.43
15:C3:96:VAL:O	15:C3:100:LYS:HG2	5.72	0.43
25:D3:144:ARG:H	25:D3:144:ARG:HG2	1.56	0.43
26:D4:18:LEU:HD23	26:D4:18:LEU:HA	1.90	0.43
26:D4:78:SER:OG	26:D4:79:VAL:N	2.52	0.43
26:D4:84:LYS:HG3	26:D4:85:PHE:N	2.34	0.43
27:D5:83:LEU:HD22	27:D5:88:ILE:HG21	5.95	0.43
28:D6:6:ALA:H	1:6:1796:C:H5	346.75	0.43
29:D7:30:SER:HB2	29:D7:48:SER:OG	2.64	0.43
31:D9:30:LEU:HA	31:D9:39:CYS:HA	2.39	0.43
25:D3:70:LYS:HE2	32:E0:11:ALA:HB2	2.01	0.43
39:L2:111:THR:HB	39:L2:136:ILE:HD13	3.09	0.43
43:L6:62:THR:OG1	43:L6:78:ARG:HD3	2.22	0.43
43:L6:43:LEU:HD21	43:L6:85:ILE:HG13	2.07	0.43
45:L8:32:LYS:HD3	45:L8:32:LYS:HA	4.37	0.43
46:L9:86:TYR:CG	46:L9:151:VAL:HG13	2.82	0.43
46:L9:87:LYS:HG3	46:L9:147:SER:HB3	3.03	0.43
47:M0:211:ARG:O	47:M0:214:PRO:HG3	2.19	0.43
47:M0:36:LEU:CD1	47:M0:87:LEU:HB3	3.40	0.43
47:M0:36:LEU:HD22	47:M0:73:ASN:ND2	3.63	0.43
54:M8:143:PRO:HB2	54:M8:146:SER:OG	2.70	0.43
55:M9:134:HIS:CE1	55:M9:137:ALA:HB2	2.70	0.43
56:N0:23:LYS:HD3	56:N0:23:LYS:HA	4.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:N5:71:THR:O	61:N5:75:LYS:HG2	2.19	0.43
62:N6:5:SER:O	62:N6:7:ASP:N	3.27	0.43
65:N9:23:LYS:HA	65:N9:23:LYS:HD2	1.86	0.43
68:O2:24:ARG:HD3	68:O2:25:TYR:CZ	2.54	0.43
78:Q2:63:LYS:HD3	36:5:2795:U:OP2	214.77	0.43
3:S1:133:TYR:CZ	3:S1:221:PRO:HD2	2.54	0.43
3:S1:82:ARG:NH1	3:S1:191:GLU:OE2	4.20	0.43
5:S3:34:TYR:HE2	5:S3:37:VAL:HG13	1.95	0.43
6:S4:179:LYS:O	6:S4:194:THR:HA	2.52	0.43
7:S5:112:ARG:CZ	18:C6:43:ILE:HD11	2.49	0.43
36:1:104:G:H2'	36:1:105:C:O4'	2.19	0.42
36:1:1063:G:N7	36:1:1097:G:H2'	2.34	0.42
36:1:1334:U:H1'	44:L7:208:SER:HB2	2.00	0.42
36:1:1870:C:H4'	36:1:3076:C:O2	2.19	0.42
36:1:2314:U:H2'	36:1:2314:U:H6	1.48	0.42
36:1:71:A:C2	36:1:2778:G:H1'	2.54	0.42
36:1:564:G:H2'	36:1:565:U:C6	2.55	0.42
36:1:603:A:H2'	36:1:604:G:O4'	2.19	0.42
36:1:620:U:H2'	36:1:622:A:N7	2.33	0.42
36:1:664:U:H5'	41:L4:107:ARG:HA	2.01	0.42
1:2:986:G:H2'	1:2:987:G:O4'	2.19	0.42
38:4:14:C:C4	38:4:15:G:C6	3.07	0.42
36:5:1077:U:H2'	36:5:1078:U:C6	2.54	0.42
36:5:1566:A:C2'	36:5:1567:U:H5'	2.49	0.42
58:N2:104:ARG:NH2	36:5:1758:G:H5'	120.73	0.42
36:5:174:C:H2'	36:5:175:C:C6	2.54	0.42
36:5:1781:C:H2'	36:5:1782:U:H6	1.82	0.42
36:5:2772:C:H1'	36:5:2773:C:OP2	2.19	0.42
36:5:3042:U:OP2	36:5:3092:C:N4	2.45	0.42
36:5:321:C:H2'	36:5:322:U:O4'	2.19	0.42
36:5:738:A:H2'	36:5:739:G:C8	2.54	0.42
1:6:1171:A:H2'	1:6:1172:G:C8	2.54	0.42
1:6:1350:U:H2'	1:6:1351:G:C8	2.53	0.42
21:C9:38:LYS:NZ	1:6:1564:U:OP1	379.06	0.42
1:6:1:U:O2'	1:6:370:A:H5'	2.18	0.42
1:6:760:A:H2'	1:6:761:G:O4'	2.19	0.42
1:6:895:G:C5	1:6:896:U:C4	3.06	0.42
38:8:76:C:H2'	38:8:77:A:O4'	2.19	0.42
15:C3:27:LYS:HB2	15:C3:28:LEU:H	1.43	0.42
21:C9:14:PHE:HZ	21:C9:132:LEU:HD22	3.84	0.42
21:C9:33:TYR:C	21:C9:35:ASP:H	4.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D4:27:VAL:HG11	26:D4:35:VAL:HG21	2.67	0.42
26:D4:36:SER:O	26:D4:40:LEU:HG	2.19	0.42
27:D5:58:ARG:HG2	27:D5:103:ARG:NH1	6.01	0.42
33:E1:119:ARG:O	33:E1:132:LEU:HG	2.46	0.42
40:L3:105:VAL:HG21	40:L3:148:LEU:HD13	2.17	0.42
40:L3:215:ILE:HD13	40:L3:282:ILE:HD11	2.01	0.42
41:L4:22:LEU:HA	41:L4:23:PRO:HD3	1.70	0.42
41:L4:120:TYR:CE2	41:L4:277:PRO:HB3	2.53	0.42
42:L5:178:ASN:HA	42:L5:183:TRP:CG	2.54	0.42
49:M3:119:TYR:HD1	49:M3:145:PHE:CE2	2.37	0.42
49:M3:64:LYS:HG3	64:N8:69:TRP:CD1	3.04	0.42
50:M4:59:ASN:O	50:M4:62:GLN:HG2	4.63	0.42
50:M4:21:VAL:HB	50:M4:63:VAL:HG22	2.27	0.42
51:M5:27:VAL:HB	51:M5:122:ASN:ND2	2.34	0.42
55:M9:171:ASP:O	55:M9:175:GLN:HB2	2.19	0.42
55:M9:19:LYS:C	55:M9:21:LYS:H	2.22	0.42
50:M4:38:ILE:HD13	56:N0:150:PHE:HE2	3.12	0.42
44:L7:77:VAL:CG2	57:N1:139:ARG:HG2	2.48	0.42
63:N7:135:ARG:HH11	36:5:1807:G:H5'	195.25	0.42
67:O1:20:LEU:O	67:O1:22:GLY:N	2.52	0.42
3:S1:143:THR:HA	3:S1:207:LEU:HA	2.01	0.42
4:S2:163:GLY:HA3	4:S2:209:ASN:HD22	1.84	0.42
4:S2:53:ILE:HD11	4:S2:73:LEU:HD22	3.28	0.42
5:S3:72:LEU:HD22	12:C0:65:TYR:HB3	2.00	0.42
7:S5:25:LEU:O	7:S5:27:THR:N	4.05	0.42
8:S6:219:ARG:O	8:S6:223:LYS:HB2	2.19	0.42
10:S8:170:SER:OG	10:S8:181:GLY:HA2	2.19	0.42
35:SM:33:LYS:HA	35:SM:33:LYS:HD2	1.75	0.42
34:SR:123:ILE:HD12	34:SR:154:VAL:HB	2.01	0.42
34:SR:61:PHE:HB3	34:SR:92:TRP:CE2	2.54	0.42
36:1:2444:C:H3'	36:1:2445:A:H5''	2.00	0.42
36:1:2911:A:H4'	36:1:2912:G:C8	2.53	0.42
36:1:2995:A:H2'	36:1:2996:U:H5''	2.01	0.42
1:2:783:G:O2'	1:2:784:C:H6	2.02	0.42
1:2:873:U:H2'	1:2:874:C:H6	1.84	0.42
1:2:952:A:H5'	15:C3:98:VAL:HG22	2.02	0.42
36:5:1815:U:HO2'	36:5:1816:A:P	2.42	0.42
36:5:2266:U:H2'	36:5:2267:C:C6	2.51	0.42
36:5:3226:A:C5	36:5:3227:A:C2	3.07	0.42
50:M4:77:ARG:NH2	36:5:524:U:OP1	342.51	0.42
36:5:960:U:H4'	36:5:963:G:C2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:D1:62:ARG:NH2	1:6:1039:A:H5''	382.55	0.42
1:6:1294:G:C2	1:6:1295:G:C8	3.07	0.42
1:6:139:C:C2	1:6:176:C:C2	3.07	0.42
1:6:158:U:O2'	1:6:159:U:H3'	2.19	0.42
1:6:192:U:H1'	1:6:193:U:N3	2.34	0.42
1:6:542:A:H1'	1:6:543:C:OP1	2.18	0.42
38:8:66:A:H2'	38:8:67:U:C6	2.54	0.42
12:C0:61:TRP:HZ3	31:D9:22:ARG:HD2	1.97	0.42
15:C3:106:ARG:NH1	1:6:1020:A:OP1	263.12	0.42
15:C3:115:LEU:HD22	15:C3:119:GLU:HG3	2.35	0.42
15:C3:130:ARG:HG2	15:C3:137:PRO:HA	2.00	0.42
17:C5:53:PRO:O	17:C5:57:MET:N	3.97	0.42
20:C8:28:ILE:HG22	20:C8:56:LYS:O	2.18	0.42
22:D0:23:ARG:HD3	22:D0:92:ASP:OD1	2.19	0.42
23:D1:74:GLN:HB2	23:D1:79:LEU:HB3	2.00	0.42
25:D3:23:ARG:HA	25:D3:23:ARG:HD2	1.81	0.42
31:D9:31:ILE:HA	31:D9:31:ILE:HD13	1.93	0.42
40:L3:55:THR:O	40:L3:56:ILE:HD12	2.20	0.42
41:L4:23:PRO:O	41:L4:25:VAL:HG23	2.23	0.42
41:L4:302:ALA:HB2	54:M8:39:ARG:NH2	2.34	0.42
41:L4:328:ASN:OD1	44:L7:48:ASN:ND2	2.77	0.42
42:L5:85:ARG:HB2	42:L5:254:LYS:HZ2	1.84	0.42
44:L7:86:VAL:HG22	44:L7:136:TYR:HB3	2.64	0.42
44:L7:160:ARG:HG3	44:L7:203:TRP:CD2	2.54	0.42
44:L7:83:LEU:HD22	44:L7:84:VAL:N	2.73	0.42
45:L8:72:PRO:HA	45:L8:73:PRO:HD3	1.73	0.42
46:L9:163:GLN:OE1	46:L9:166:ARG:NH1	2.83	0.42
46:L9:88:TYR:CE2	46:L9:184:LYS:HG2	2.54	0.42
47:M0:210:ILE:HG23	47:M0:217:PHE:CE2	2.53	0.42
51:M5:138:GLN:HA	51:M5:143:ARG:HH11	1.84	0.42
52:M6:124:LEU:HD11	56:N0:167:ARG:NH2	2.34	0.42
59:N3:74:MET:HG3	59:N3:102:ILE:HD13	2.00	0.42
60:N4:54:LEU:H	60:N4:54:LEU:HD12	1.84	0.42
60:N4:63:ILE:HG22	60:N4:66:GLU:CB	6.98	0.42
61:N5:115:ARG:H	61:N5:115:ARG:HG2	1.61	0.42
61:N5:135:ILE:HG12	61:N5:135:ILE:O	3.71	0.42
65:N9:22:LYS:HE2	65:N9:22:LYS:HB2	4.76	0.42
72:O6:7:ILE:HG23	72:O6:9:ILE:H	6.22	0.42
73:O7:28:HIS:CE1	73:O7:31:LYS:HG3	2.67	0.42
61:N5:114:VAL:HB	75:O9:10:LYS:NZ	2.61	0.42
3:S1:87:ARG:HB2	3:S1:101:HIS:ND1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S2:101:VAL:HG22	4:S2:115:ILE:HG12	2.01	0.42
7:S5:98:MET:HB2	7:S5:105:GLY:O	2.19	0.42
8:S6:164:LYS:HB2	8:S6:167:LYS:O	3.48	0.42
8:S6:88:ARG:NH2	1:6:401:A:N1	323.17	0.42
9:S7:64:VAL:H	9:S7:65:PRO:HD2	3.10	0.42
34:SR:131:ILE:HD11	34:SR:181:TRP:CE2	3.92	0.42
34:SR:52:GLN:H	34:SR:52:GLN:CD	2.22	0.42
36:1:138:U:H2'	36:1:139:G:H8	1.85	0.42
36:1:1498:A:H2'	36:1:1499:C:C6	2.54	0.42
36:1:1562:C:H2'	36:1:1563:C:C6	2.54	0.42
36:1:2761:G:C4	36:1:2795:U:C5	3.07	0.42
36:1:59:G:H4'	36:1:60:A:H4'	2.01	0.42
1:2:130:C:H2'	1:2:131:C:C6	2.54	0.42
1:2:147:A:H2'	1:2:148:A:O4'	2.19	0.42
1:2:702:G:C6	1:2:737:A:N6	2.87	0.42
1:2:995:A:H2'	1:2:996:U:O4'	2.20	0.42
36:5:1258:U:O2'	36:5:1260:A:N7	2.38	0.42
53:M7:139:TYR:CE2	36:5:2355:G:H4'	148.19	0.42
51:M5:157:LYS:NZ	36:5:58:G:OP1	85.70	0.42
1:6:116:U:H2'	1:6:117:U:C6	2.55	0.42
1:6:1241:G:C6	1:6:1242:A:C5	3.07	0.42
12:C0:49:LEU:HB3	12:C0:55:VAL:HG13	2.01	0.42
13:C1:90:TYR:CE1	13:C1:103:ARG:HB2	2.55	0.42
14:C2:62:LEU:HB3	14:C2:120:VAL:HG13	2.69	0.42
15:C3:103:GLU:HA	15:C3:106:ARG:HH22	1.84	0.42
15:C3:54:LEU:HB3	15:C3:60:VAL:CG1	4.46	0.42
15:C3:83:GLU:HG3	15:C3:84:ILE:H	2.83	0.42
16:C4:47:LYS:HE3	16:C4:62:LEU:O	2.19	0.42
17:C5:32:ASP:O	17:C5:36:LEU:HD23	2.19	0.42
18:C6:13:LYS:HG2	18:C6:14:LYS:HG3	6.61	0.42
20:C8:81:ILE:HA	20:C8:82:PRO:HD3	1.90	0.42
21:C9:94:ILE:HD13	21:C9:94:ILE:HA	3.26	0.42
24:D2:26:LEU:HD21	24:D2:60:LYS:HD3	2.01	0.42
33:E1:97:LYS:O	33:E1:98:VAL:HG12	2.19	0.42
36:1:1794:G:H4'	39:L2:191:LEU:HD13	2.00	0.42
36:1:212:G:H2'	41:L4:221:ASN:ND2	2.35	0.42
41:L4:42:VAL:HG12	41:L4:236:LEU:HD21	2.53	0.42
44:L7:144:ILE:O	44:L7:148:VAL:HG23	2.35	0.42
45:L8:139:VAL:O	45:L8:143:ILE:HG13	2.19	0.42
45:L8:82:LEU:HD12	45:L8:83:ASP:H	1.82	0.42
46:L9:103:ILE:HG12	46:L9:136:PHE:CE2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:L9:91:ARG:HD2	46:L9:91:ARG:HA	3.23	0.42
48:M1:108:GLU:HG2	48:M1:122:ILE:HG21	2.00	0.42
48:M1:100:GLY:HA3	48:M1:154:THR:OG1	2.19	0.42
51:M5:185:ALA:HB3	51:M5:190:THR:HG23	4.39	0.42
66:O0:22:LYS:HB2	66:O0:94:GLU:HB2	2.01	0.42
68:O2:2:ALA:O	68:O2:90:LYS:HA	4.11	0.42
49:M3:128:ARG:NH1	71:O5:109:ILE:O	2.80	0.42
3:S1:166:LYS:HG2	3:S1:170:GLU:OE1	6.70	0.42
3:S1:137:ILE:HG22	3:S1:215:VAL:HB	2.02	0.42
6:S4:252:ARG:HB3	6:S4:252:ARG:HH21	4.51	0.42
1:2:448:C:OP1	6:S4:29:PRO:HD3	2.18	0.42
6:S4:71:LYS:HB3	6:S4:74:GLY:O	4.81	0.42
8:S6:31:ARG:HD2	8:S6:34:GLN:NE2	2.35	0.42
10:S8:56:ARG:HH21	10:S8:175:GLN:NE2	2.16	0.42
36:1:1083:G:C6	36:1:1084:A:C6	3.07	0.42
36:1:1103:A:H62	36:1:1363:A:H1'	1.85	0.42
36:1:1632:A:H2'	36:1:1633:C:C6	2.54	0.42
36:1:2606:G:H2'	36:1:2606:G:N3	2.33	0.42
36:1:591:G:H4'	36:1:592:A:OP1	2.19	0.42
36:1:608:A:H5''	36:1:609:G:OP2	2.19	0.42
36:1:975:C:H2'	36:1:976:U:H6	1.84	0.42
1:2:1202:A:H3'	1:2:1202:A:N3	2.35	0.42
1:2:1327:C:C2	1:2:1328:G:C8	3.08	0.42
37:3:68:C:H2'	37:3:69:C:C6	2.53	0.42
36:5:109:A:O5'	36:5:109:A:H8	2.02	0.42
36:5:1767:C:H2'	36:5:1768:U:H6	1.84	0.42
36:5:284:A:H4'	36:5:285:A:C2	2.55	0.42
36:5:874:U:H5''	36:5:2950:G:OP1	2.19	0.42
36:5:3174:A:C6	36:5:3175:U:C4	3.07	0.42
1:6:1018:U:H2'	1:6:1019:A:C8	2.55	0.42
1:6:1207:C:H42	1:6:1456:C:H5	1.66	0.42
1:6:1620:C:HO2'	1:6:1621:U:P	2.41	0.42
1:6:248:U:H2'	1:6:249:U:H5''	2.01	0.42
1:6:41:A:O2'	1:6:437:A:O2'	2.21	0.42
11:S9:82:ARG:NH1	1:6:765:G:N7	429.43	0.42
15:C3:84:ILE:HD11	15:C3:89:TYR:HD2	2.04	0.42
17:C5:24:LYS:O	17:C5:28:MET:HB2	2.19	0.42
17:C5:33:PHE:O	17:C5:36:LEU:HD22	4.75	0.42
18:C6:38:LEU:O	18:C6:45:ARG:NE	2.52	0.42
19:C7:63:LYS:HE2	34:SR:284:ALA:CB	2.48	0.42
20:C8:11:PHE:CZ	20:C8:59:GLY:HA3	4.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:D2:25:VAL:O	24:D2:62:VAL:HA	2.20	0.42
26:D4:45:ALA:HA	26:D4:55:VAL:HG21	2.02	0.42
27:D5:60:VAL:HG23	27:D5:65:LEU:HD21	4.86	0.42
39:L2:101:VAL:HA	39:L2:165:VAL:HA	2.42	0.42
40:L3:46:PHE:CE2	40:L3:205:VAL:HG13	3.77	0.42
41:L4:185:LYS:HE3	41:L4:201:GLN:HG2	4.65	0.42
42:L5:50:ARG:O	42:L5:64:ILE:HA	2.42	0.42
44:L7:168:ILE:O	44:L7:172:ASN:ND2	4.26	0.42
45:L8:26:LEU:H	45:L8:26:LEU:HD12	1.84	0.42
47:M0:200:LEU:HB2	47:M0:213:PHE:CD2	2.54	0.42
48:M1:173:ASP:HB3	48:M1:174:LYS:H	1.66	0.42
51:M5:175:ASN:HB2	51:M5:180:PHE:CD1	2.54	0.42
55:M9:160:GLU:CD	55:M9:163:ARG:HE	4.63	0.42
55:M9:41:ILE:O	55:M9:45:VAL:HG23	2.19	0.42
56:N0:91:TYR:HD1	56:N0:137:ARG:NH1	2.55	0.42
57:N1:73:GLY:HA2	57:N1:89:LEU:O	2.48	0.42
58:N2:79:LEU:O	58:N2:82:LYS:HB3	2.19	0.42
62:N6:37:LYS:H	62:N6:37:LYS:CD	2.30	0.42
65:N9:7:HIS:CG	65:N9:8:THR:N	2.87	0.42
68:O2:103:LYS:O	68:O2:106:VAL:HG22	5.31	0.42
78:Q2:12:CYS:HB3	78:Q2:17:CYS:HB3	2.01	0.42
2:S0:79:ARG:O	2:S0:83:GLN:HG3	2.20	0.42
4:S2:106:ASP:OD1	4:S2:107:SER:N	2.53	0.42
4:S2:174:ARG:HB2	11:S9:97:LEU:HB3	2.00	0.42
5:S3:58:VAL:O	5:S3:60:GLY:N	4.14	0.42
6:S4:115:THR:HG23	6:S4:118:GLU:HB2	2.00	0.42
11:S9:172:VAL:HG13	1:6:512:A:OP2	458.17	0.42
36:1:3045:G:O3'	40:L3:275:ARG:NH1	2.52	0.42
36:1:955:U:H2'	36:1:956:U:C6	2.55	0.42
1:2:1274:C:H5	35:SM:95:SER:HA	1.85	0.42
1:2:1657:U:H1'	1:2:1658:G:OP2	2.20	0.42
1:2:223:U:H2'	1:2:224:C:C6	2.54	0.42
1:2:278:U:H4'	1:2:279:G:O5'	2.20	0.42
37:3:27:A:O5'	42:L5:57:ASN:ND2	2.52	0.42
44:L7:208:SER:HB2	36:5:1334:U:C1'	241.84	0.42
36:5:1692:U:C4	36:5:1693:C:N4	2.87	0.42
36:5:1925:U:H5''	36:5:1926:C:C5	2.54	0.42
36:5:2279:A:H2'	36:5:2288:G:O6	2.20	0.42
36:5:251:G:H1'	36:5:252:U:C2	2.54	0.42
36:5:3061:G:H2'	36:5:3062:G:H8	1.85	0.42
36:5:2993:G:C6	36:5:3142:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1940:G:N2	36:5:3362:A:H8	2.13	0.42
1:6:260:U:H3'	1:6:261:U:C5'	2.48	0.42
1:6:486:G:N2	1:6:487:G:N7	2.67	0.42
1:6:825:U:O2'	1:6:826:U:P	2.78	0.42
18:C6:114:ARG:O	18:C6:115:THR:OG1	2.29	0.42
18:C6:79:TYR:O	18:C6:82:ARG:HG2	2.20	0.42
1:2:1566:U:H4'	20:C8:37:GLY:O	2.18	0.42
22:D0:50:LEU:HD22	22:D0:93:LEU:HD22	2.00	0.42
27:D5:102:THR:HB	27:D5:103:ARG:H	1.66	0.42
27:D5:87:GLY:O	27:D5:89:ILE:N	2.51	0.42
16:C4:111:ARG:HA	28:D6:56:ALA:O	2.81	0.42
30:D8:14:LYS:HE3	30:D8:14:LYS:HA	2.01	0.42
31:D9:6:VAL:HB	31:D9:7:TRP:H	4.21	0.42
40:L3:153:LYS:HD3	40:L3:154:TYR:CE2	2.54	0.42
42:L5:159:VAL:HG13	42:L5:160:PHE:CD1	2.55	0.42
43:L6:69:PHE:CE1	36:5:3268:A:C4	259.27	0.42
45:L8:84:ARG:NH2	45:L8:181:LYS:HZ1	2.17	0.42
49:M3:54:LEU:HD13	49:M3:75:PHE:CZ	2.55	0.42
53:M7:54:HIS:HA	53:M7:83:TRP:CD1	2.54	0.42
62:N6:100:HIS:HA	62:N6:101:PRO:HD2	1.61	0.42
64:N8:104:THR:HG21	64:N8:112:ILE:HD11	2.12	0.42
64:N8:22:ILE:H	64:N8:22:ILE:HD12	2.16	0.42
64:N8:36:GLY:HA3	64:N8:40:HIS:CE1	2.54	0.42
68:O2:71:HIS:HB3	68:O2:92:TYR:HA	3.18	0.42
2:S0:142:PRO:HB3	23:D1:34:ILE:HD13	2.02	0.42
4:S2:230:TRP:NE1	24:D2:68:ARG:HB2	4.30	0.42
6:S4:2:ALA:O	6:S4:3:ARG:HB2	2.78	0.42
11:S9:112:GLN:HG3	11:S9:148:VAL:HG21	2.60	0.42
11:S9:59:LEU:HD23	11:S9:62:ARG:HD2	2.00	0.42
5:S3:115:ILE:HG21	35:SM:110:TRP:HA	2.01	0.42
34:SR:121:MET:SD	34:SR:183:LEU:HD23	6.43	0.42
34:SR:179:LYS:HD3	34:SR:188:ILE:HD13	3.85	0.42
34:SR:22:SER:HB3	34:SR:71:CYS:HB3	2.02	0.42
34:SR:45:TRP:N	34:SR:45:TRP:CD1	2.87	0.42
36:1:2249:G:C8	36:1:2272:G:C4	3.07	0.42
36:1:2809:C:N3	36:1:2810:C:H1'	2.35	0.42
36:1:3029:A:C5	36:1:3030:G:H1'	2.54	0.42
36:1:3060:C:H1'	36:1:3332:U:H1'	2.00	0.42
36:1:643:U:O4	36:1:644:G:C6	2.73	0.42
36:1:661:G:C5	36:1:802:C:C6	3.08	0.42
1:2:1017:U:H2'	1:2:1018:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1179:G:N2	1:2:1461:C:C4	2.88	0.42
1:2:341:A:H2'	1:2:342:C:C6	2.55	0.42
1:2:862:A:H4'	1:2:863:A:O5'	2.18	0.42
36:5:1329:U:O2'	36:5:1330:A:P	2.78	0.42
36:5:1562:C:H2'	36:5:1563:C:C6	2.54	0.42
36:5:1641:U:O2'	36:5:1642:A:H3'	2.19	0.42
36:5:1656:A:H8	36:5:1656:A:OP1	2.02	0.42
36:5:182:U:H2'	36:5:183:G:C8	2.53	0.42
36:5:1528:G:H1	36:5:1832:C:H42	1.66	0.42
36:5:196:G:C2	36:5:199:A:C8	3.07	0.42
36:5:3089:C:H2'	36:5:3090:U:O4'	2.19	0.42
36:5:380:U:H2'	36:5:381:U:C6	2.54	0.42
1:6:1160:A:H2'	1:6:1161:C:H6	1.82	0.42
1:6:1330:G:H2'	1:6:1331:A:O4'	2.20	0.42
1:6:1699:G:N2	1:6:1701:A:H5''	2.35	0.42
1:6:252:U:H2'	1:6:253:A:C8	2.54	0.42
1:6:329:G:H2'	1:6:330:G:C8	2.55	0.42
1:6:484:C:N4	1:6:503:G:H22	2.18	0.42
1:6:542:A:OP1	1:6:544:A:C5	2.73	0.42
1:6:820:U:HO2'	1:6:821:U:P	2.42	0.42
1:6:922:G:H2'	1:6:923:A:C8	2.55	0.42
37:7:26:C:H2'	37:7:27:A:O4'	2.20	0.42
37:7:36:C:O2	37:7:45:A:H1'	2.19	0.42
17:C5:85:ILE:HG22	17:C5:112:LEU:HD23	2.18	0.42
5:S3:209:ILE:HG22	19:C7:38:ILE:O	2.34	0.42
31:D9:6:VAL:O	31:D9:8:PHE:N	4.32	0.42
41:L4:10:SER:C	41:L4:12:THR:H	2.38	0.42
41:L4:145:ILE:HA	41:L4:146:PRO:HD2	1.71	0.42
41:L4:186:LYS:N	41:L4:200:THR:O	2.78	0.42
41:L4:93:MET:CE	41:L4:93:MET:H	3.41	0.42
44:L7:40:LYS:HB2	44:L7:40:LYS:HE3	1.84	0.42
46:L9:27:VAL:HG11	46:L9:79:ILE:HA	2.01	0.42
47:M0:36:LEU:HD12	47:M0:87:LEU:HB3	3.30	0.42
47:M0:4:ARG:NH2	47:M0:99:ILE:HG22	6.44	0.42
49:M3:132:ALA:HB2	71:O5:115:LYS:HE3	2.02	0.42
50:M4:22:LEU:HD22	50:M4:94:TRP:CH2	2.54	0.42
50:M4:60:LEU:O	50:M4:63:VAL:HG12	2.20	0.42
50:M4:17:VAL:HG11	50:M4:74:ARG:HA	2.02	0.42
51:M5:140:LYS:HA	51:M5:143:ARG:HB2	2.72	0.42
54:M8:144:ARG:HH12	36:5:976:U:C5'	179.17	0.42
59:N3:28:ASN:ND2	59:N3:112:SER:H	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:N7:18:TYR:CE1	63:N7:47:GLU:HG3	4.39	0.42
64:N8:7:LYS:HA	64:N8:7:LYS:HD3	1.85	0.42
67:O1:14:ILE:HG13	67:O1:19:ARG:NH1	2.34	0.42
68:O2:126:LEU:HD23	68:O2:126:LEU:HA	1.77	0.42
68:O2:17:PHE:CD1	68:O2:53:PRO:HD3	2.90	0.42
71:O5:89:ARG:HD2	38:8:38:U:C4	68.45	0.42
74:O8:13:GLU:H	74:O8:13:GLU:HG3	2.10	0.42
2:S0:53:THR:HA	2:S0:161:PRO:HD2	2.81	0.42
3:S1:48:VAL:HG22	3:S1:64:ARG:NH2	3.29	0.42
4:S2:97:ARG:HG2	4:S2:97:ARG:H	1.41	0.42
5:S3:150:MET:HG3	35:SM:110:TRP:CE3	2.55	0.42
6:S4:136:VAL:HG11	6:S4:148:ARG:HD2	2.01	0.42
7:S5:56:ALA:O	7:S5:58:LEU:N	3.68	0.42
9:S7:111:LYS:HB3	9:S7:112:ARG:H	1.69	0.42
36:1:1022:U:H2'	36:1:1023:C:O4'	2.19	0.42
36:1:1257:C:H42	36:1:1261:G:H22	1.65	0.42
36:1:1322:U:OP1	56:N0:117:ARG:HD2	2.19	0.42
36:1:1333:C:H2'	36:1:1334:U:C6	2.55	0.42
36:1:2281:A:H2	36:1:2974:U:O2	2.03	0.42
36:1:67:A:O2'	36:1:315:C:O2	2.31	0.42
36:1:108:A:H4'	36:1:323:A:N1	2.35	0.42
36:1:3267:A:H2'	43:L6:69:PHE:CE1	2.55	0.42
36:1:655:C:H5''	68:O2:26:HIS:HB2	2.01	0.42
1:2:972:G:O2'	36:1:847:A:N1	2.42	0.42
1:2:1482:C:OP2	1:2:1521:G:N2	2.45	0.42
37:3:112:G:H2'	37:3:113:C:C6	2.55	0.42
37:3:45:A:H2'	37:3:46:A:C8	2.54	0.42
36:5:1114:U:C4	36:5:1115:G:N7	2.88	0.42
36:5:1877:U:H5''	36:5:1878:G:O5'	2.20	0.42
51:M5:14:LYS:HZ1	36:5:269:G:H5''	132.37	0.42
36:5:2665:U:O4	36:5:2703:A:H4'	2.20	0.42
47:M0:63:GLU:O	36:5:2853:A:H4'	302.14	0.42
36:5:539:C:H42	36:5:552:G:H1	1.68	0.42
36:5:565:U:H2'	36:5:566:G:H8	1.85	0.42
1:6:1634:C:H4'	1:6:1635:A:OP2	2.19	0.42
38:8:121:U:H2'	38:8:122:U:C6	2.53	0.42
12:C0:24:LYS:HB2	12:C0:63:TYR:CE1	2.55	0.42
13:C1:75:VAL:HG22	13:C1:84:ILE:HD12	2.01	0.42
16:C4:135:ARG:HB2	1:6:1007:C:H5''	298.05	0.42
17:C5:98:ASN:HB2	17:C5:122:THR:HG22	2.02	0.42
17:C5:86:VAL:O	17:C5:89:MET:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:C8:104:ASN:HA	20:C8:107:SER:HB2	4.05	0.42
21:C9:53:TRP:HA	21:C9:56:LYS:HB2	2.23	0.42
27:D5:41:ILE:HG23	27:D5:42:LEU:N	2.34	0.42
32:E0:17:GLN:OE1	1:6:563:U:H4'	384.57	0.42
1:2:545:A:OP1	32:E0:31:LYS:HG3	2.19	0.42
39:L2:143:GLU:O	39:L2:145:LYS:HG2	2.18	0.42
41:L4:59:GLN:OE1	73:O7:55:ARG:NH2	3.13	0.42
42:L5:254:LYS:HD2	42:L5:255:PRO:O	4.56	0.42
42:L5:270:LYS:HG2	37:7:2:G:H5'	320.68	0.42
44:L7:90:LYS:HG2	44:L7:133:TYR:HD1	1.85	0.42
50:M4:8:LYS:HB3	50:M4:9:ALA:H	1.50	0.42
51:M5:44:ARG:HH22	36:5:269:G:P	125.93	0.42
52:M6:106:GLU:H	52:M6:106:GLU:HG2	2.10	0.42
52:M6:85:ARG:C	52:M6:87:MET:H	2.23	0.42
54:M8:34:THR:HG22	54:M8:49:LEU:HD11	2.01	0.42
58:N2:38:ILE:HG12	58:N2:56:VAL:HB	4.62	0.42
61:N5:105:VAL:HA	61:N5:130:TYR:CE2	2.55	0.42
70:O4:43:LYS:HD3	70:O4:50:ALA:HA	2.02	0.42
71:O5:101:THR:HG23	71:O5:104:GLN:H	2.13	0.42
71:O5:18:ALA:O	71:O5:22:VAL:HG23	2.85	0.42
71:O5:78:LYS:HG2	71:O5:81:ARG:HD2	2.81	0.42
76:Q0:103:LEU:HD12	76:Q0:121:LEU:HD21	2.01	0.42
78:Q2:3:ASN:HA	78:Q2:92:GLU:O	2.20	0.42
2:S0:56:LYS:HD2	2:S0:158:VAL:HG23	2.00	0.42
3:S1:103:MET:HB3	3:S1:215:VAL:HG13	2.01	0.42
3:S1:185:THR:O	3:S1:189:ILE:HG13	2.19	0.42
3:S1:105:PHE:HZ	3:S1:211:HIS:ND1	2.71	0.42
4:S2:95:ARG:HD3	4:S2:97:ARG:HD2	6.10	0.42
5:S3:202:LEU:HA	5:S3:203:PRO:HD3	2.14	0.42
5:S3:211:PRO:CG	19:C7:19:ARG:HB3	4.91	0.42
5:S3:220:PRO:HB2	5:S3:221:SER:H	1.62	0.42
5:S3:45:LYS:HB2	5:S3:45:LYS:HE2	1.86	0.42
6:S4:128:LYS:HB3	6:S4:128:LYS:HE2	1.78	0.42
7:S5:64:VAL:O	7:S5:65:ARG:HB2	2.20	0.42
9:S7:31:SER:HA	9:S7:35:LYS:CB	3.98	0.42
35:SM:61:ILE:HG13	35:SM:61:ILE:H	1.60	0.42
36:1:999:G:O2'	36:1:1000:C:H5'	2.20	0.42
36:1:1097:G:H4'	36:1:1098:A:O5'	2.20	0.42
36:1:1668:G:C6	36:1:1669:C:C4	3.07	0.42
36:1:929:A:H2'	36:1:930:U:C6	2.55	0.42
1:2:301:A:H2'	1:2:302:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:328:A:OP2	13:C1:56:LYS:NZ	2.47	0.42
1:2:542:A:H3'	1:2:543:C:H5'	2.02	0.42
1:2:996:U:H3	1:2:1008:G:H1	1.68	0.42
44:L7:208:SER:HB2	36:5:1334:U:H1'	242.59	0.42
68:O2:103:LYS:HD2	36:5:1391:C:C2	126.97	0.42
36:5:1445:U:H5''	36:5:1446:A:OP2	2.19	0.42
36:5:1541:G:C2	36:5:1542:G:H1'	2.55	0.42
36:5:2150:G:O2'	36:5:2189:U:OP1	2.31	0.42
36:5:537:A:H2'	36:5:538:G:O4'	2.19	0.42
36:5:730:C:H2'	36:5:731:U:H6	1.84	0.42
39:L2:3:ARG:NH1	36:5:911:C:H42	179.61	0.42
36:5:92:G:H5'	36:5:93:C:O5'	2.20	0.42
1:6:1320:U:H3	1:6:1323:C:P	2.43	0.42
1:6:1657:U:O2'	1:6:1658:G:P	2.78	0.42
1:6:245:U:H2'	1:6:247:A:OP2	2.20	0.42
1:6:430:G:C6	1:6:431:C:C4	3.07	0.42
1:6:520:A:H2'	1:6:521:A:C8	2.54	0.42
25:D3:3:LYS:HE3	1:6:614:C:OP2	353.08	0.42
1:6:840:U:H2'	1:6:841:U:C6	2.55	0.42
12:C0:11:ILE:HD12	12:C0:42:VAL:HG13	2.02	0.42
18:C6:83:GLN:HG3	18:C6:116:LEU:O	2.19	0.42
18:C6:142:TYR:HB2	18:C6:143:ARG:H	2.04	0.42
20:C8:33:THR:HA	20:C8:38:VAL:HG22	4.13	0.42
22:D0:100:VAL:O	22:D0:104:THR:HG23	2.20	0.42
26:D4:112:LYS:O	26:D4:116:LYS:HG3	2.20	0.42
16:C4:131:GLY:H	28:D6:22:ARG:HH22	3.60	0.42
28:D6:79:ILE:HA	28:D6:84:VAL:CG1	2.49	0.42
29:D7:73:LEU:H	29:D7:73:LEU:HD12	1.85	0.42
33:E1:119:ARG:HG2	33:E1:120:GLU:H	4.25	0.42
33:E1:143:LYS:O	33:E1:145:HIS:N	2.53	0.42
36:1:2175:U:O4	39:L2:20:THR:HG23	2.20	0.42
41:L4:301:PRO:C	54:M8:39:ARG:HH12	2.23	0.42
41:L4:305:ALA:HA	36:5:1347:U:H4'	196.06	0.42
42:L5:235:SER:O	42:L5:239:ILE:HG13	2.19	0.42
42:L5:55:PHE:CZ	42:L5:158:ARG:HG3	2.55	0.42
43:L6:97:ASN:O	43:L6:99:GLU:HG3	2.19	0.42
36:1:2618:G:H5''	47:M0:116:ARG:HB2	2.01	0.42
47:M0:86:HIS:N	47:M0:139:ARG:O	3.08	0.42
49:M3:168:ARG:NH1	49:M3:172:LEU:HD11	2.98	0.42
36:1:2168:A:H5''	51:M5:67:ARG:NH1	2.33	0.42
54:M8:104:LEU:HA	54:M8:104:LEU:HD23	3.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:M9:88:ARG:HD3	36:5:1864:A:H5'	211.05	0.42
56:N0:52:LYS:HZ2	37:7:100:C:P	281.89	0.42
57:N1:122:GLN:HB2	57:N1:124:VAL:HG22	7.92	0.42
57:N1:108:ARG:HD2	57:N1:130:ARG:HD3	2.02	0.42
61:N5:76:VAL:HG22	61:N5:81:ILE:O	2.24	0.42
63:N7:80:LEU:HD23	63:N7:80:LEU:HA	4.42	0.42
66:O0:43:ILE:HD12	66:O0:90:VAL:HB	2.01	0.42
68:O2:11:LYS:O	68:O2:12:LYS:HB3	3.19	0.42
36:1:1739:U:H4'	70:O4:54:ILE:O	2.20	0.42
70:O4:63:ALA:HB2	36:5:1802:C:O3'	157.15	0.42
71:O5:15:GLU:OE2	71:O5:15:GLU:N	4.56	0.42
71:O5:21:LEU:HD22	71:O5:25:LYS:HE3	2.02	0.42
2:S0:74:VAL:HA	2:S0:96:THR:O	2.20	0.42
4:S2:202:GLY:O	4:S2:204:THR:HG23	2.19	0.42
5:S3:142:LEU:C	5:S3:144:ALA:H	2.23	0.42
6:S4:24:SER:OG	6:S4:24:SER:O	2.38	0.42
7:S5:172:ILE:O	7:S5:176:THR:HG23	2.45	0.42
8:S6:131:LYS:O	60:N4:82:ILE:HA	2.20	0.42
9:S7:46:ILE:HD11	9:S7:60:ILE:HG12	2.02	0.42
9:S7:91:ILE:HD11	9:S7:128:ASP:O	4.48	0.42
36:1:1764:U:H5''	55:M9:43:LYS:NZ	2.35	0.42
36:1:2228:A:H2'	36:1:2229:A:C8	2.54	0.42
36:1:2652:U:C5	36:1:2653:C:C5	3.08	0.42
36:1:543:C:H3'	36:1:544:C:C6	2.55	0.42
1:2:1214:U:OP1	1:2:1246:C:H1'	2.20	0.42
1:2:1261:G:H2'	1:2:1262:U:C6	2.55	0.42
1:2:1586:A:H2'	1:2:1587:A:O4'	2.20	0.42
1:2:258:C:C2'	1:2:259:U:H5'	2.50	0.42
1:2:755:A:H2'	1:2:756:A:O4'	2.19	0.42
37:3:28:C:O3'	48:M1:135:GLY:HA2	2.20	0.42
53:M7:67:ILE:HD11	36:5:1447:G:H3'	165.78	0.42
36:5:1541:G:N1	36:5:1542:G:H1'	2.34	0.42
36:5:1577:G:H2'	36:5:1578:C:C6	2.54	0.42
36:5:1815:U:O2'	36:5:1816:A:P	2.78	0.42
36:5:1836:C:O2'	36:5:1842:A:N1	2.47	0.42
36:5:2875:U:H3	36:5:2952:G:H1	1.68	0.42
49:M3:171:ARG:HD3	36:5:770:G:OP1	145.85	0.42
36:5:80:G:H2'	36:5:81:C:C6	2.55	0.42
1:6:1580:C:H2'	1:6:1581:C:O4'	2.20	0.42
25:D3:65:ASN:ND2	1:6:574:G:O6	365.65	0.42
1:6:5:U:C2	1:6:20:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:649:U:H2'	1:6:650:U:H5	1.84	0.42
12:C0:3:MET:HE2	12:C0:3:MET:HB3	2.35	0.42
13:C1:21:ASN:HD22	13:C1:32:LYS:H	1.66	0.42
13:C1:79:LYS:HB2	1:6:346:G:H5'	284.40	0.42
14:C2:85:LYS:HE2	14:C2:87:PRO:HG3	4.39	0.42
15:C3:34:ILE:O	15:C3:38:VAL:HG23	2.20	0.42
1:2:927:C:O2'	16:C4:125:SER:HB2	2.19	0.42
16:C4:129:LYS:HE3	16:C4:129:LYS:HB2	1.80	0.42
18:C6:10:PHE:CE2	1:6:1379:C:H5'	433.85	0.42
18:C6:6:SER:OG	18:C6:6:SER:O	2.83	0.42
2:S0:50:VAL:HG22	19:C7:109:LEU:HD21	2.01	0.42
21:C9:126:GLU:H	21:C9:126:GLU:HG2	3.06	0.42
22:D0:82:TYR:HB3	31:D9:52:PHE:HB3	2.09	0.42
28:D6:44:ILE:HD12	28:D6:45:VAL:N	2.35	0.42
28:D6:84:VAL:O	28:D6:86:VAL:N	2.52	0.42
39:L2:192:LYS:HB3	39:L2:193:ARG:NH2	2.33	0.42
39:L2:238:ILE:HD12	39:L2:238:ILE:HA	4.53	0.42
41:L4:304:GLN:C	41:L4:306:THR:H	2.23	0.42
42:L5:39:GLN:OE1	42:L5:40:HIS:N	2.52	0.42
47:M0:174:THR:HG23	47:M0:176:LEU:N	2.13	0.42
51:M5:99:ARG:HB2	51:M5:130:PHE:CE1	3.37	0.42
51:M5:172:ARG:CZ	51:M5:174:ILE:HD11	2.76	0.42
54:M8:138:LEU:HD23	36:5:728:G:H21	179.02	0.42
36:1:746:A:OP1	54:M8:145:ASN:ND2	2.52	0.42
55:M9:23:TRP:CE3	55:M9:51:VAL:HG13	2.55	0.42
56:N0:47:LYS:O	56:N0:48:LEU:HD23	2.19	0.42
59:N3:3:GLY:CA	59:N3:40:LYS:HB3	4.91	0.42
67:O1:27:LYS:C	67:O1:30:PRO:HD2	2.40	0.42
69:O3:67:MET:HE2	69:O3:89:LEU:HD23	4.88	0.42
71:O5:38:ARG:HH11	71:O5:41:LEU:HD13	1.84	0.42
71:O5:66:VAL:HA	71:O5:69:LEU:HD23	3.95	0.42
49:M3:170:LEU:HB3	72:O6:9:ILE:HD11	2.00	0.42
78:Q2:53:GLN:NE2	78:Q2:55:LYS:H	2.38	0.42
79:Q3:30:GLU:HA	79:Q3:33:GLN:OE1	2.20	0.42
36:1:1926:C:H3'	79:Q3:7:LYS:HG2	2.02	0.42
2:S0:110:TYR:HA	2:S0:115:PHE:CG	3.21	0.42
2:S0:167:LYS:HG2	2:S0:168:HIS:CD2	3.92	0.42
3:S1:41:ARG:NH2	3:S1:97:LEU:HD11	2.35	0.42
3:S1:61:LEU:HD23	3:S1:62:LYS:H	1.84	0.42
4:S2:218:ILE:H	4:S2:218:ILE:HG13	1.70	0.42
6:S4:176:ASP:HB2	6:S4:179:LYS:NZ	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S4:180:LEU:HA	6:S4:194:THR:HA	2.02	0.42
10:S8:34:ALA:O	10:S8:36:THR:N	3.73	0.42
11:S9:59:LEU:HD22	11:S9:69:ARG:HA	2.01	0.42
36:1:1545:A:H2'	36:1:1547:G:OP2	2.20	0.42
36:1:2367:A:H2'	36:1:2368:A:C8	2.55	0.42
36:1:256:G:H2'	36:1:257:U:C6	2.53	0.42
36:1:2514:U:OP2	36:1:2586:G:N2	2.53	0.42
36:1:2732:G:C6	36:1:2733:A:C5	3.08	0.42
36:1:3269:U:H5'	36:1:3269:U:O2	2.20	0.42
36:1:883:A:C6	36:1:921:A:C5	3.08	0.42
1:2:1556:A:H3'	17:C5:40:ARG:HD3	2.01	0.42
1:2:1524:A:C2	1:2:1590:G:H1'	2.54	0.42
1:2:1795:U:O2	28:D6:10:ARG:HD2	2.19	0.42
1:2:912:U:H4'	1:2:913:G:O5'	2.20	0.42
36:5:1716:U:H5'	36:5:1716:U:H6	1.85	0.42
36:5:2304:C:C5	36:5:2305:G:C6	3.08	0.42
41:L4:67:THR:HG21	36:5:2402:A:H2'	175.83	0.42
36:5:381:U:H2'	36:5:382:U:C6	2.55	0.42
1:6:1263:G:H2'	1:6:1264:G:O4'	2.20	0.42
1:6:1275:A:N6	1:6:1438:G:C6	2.88	0.42
25:D3:20:ARG:HD2	1:6:310:C:OP1	331.21	0.42
1:6:485:A:C6	1:6:486:G:H1'	2.54	0.42
1:6:697:C:O2'	1:6:698:U:OP1	2.35	0.42
1:6:926:A:H2'	1:6:927:C:C6	2.55	0.42
13:C1:67:ARG:O	13:C1:127:GLN:HB3	2.82	0.42
16:C4:92:LYS:HB2	16:C4:92:LYS:HE2	2.82	0.42
17:C5:56:PHE:O	17:C5:60:LEU:HG	4.06	0.42
17:C5:86:VAL:O	17:C5:89:MET:HG3	3.32	0.42
20:C8:49:LYS:NZ	20:C8:80:LYS:HB2	4.93	0.42
21:C9:28:LEU:O	21:C9:107:ALA:HB1	2.19	0.42
25:D3:83:VAL:HG21	25:D3:122:PHE:CE2	2.60	0.42
39:L2:80:GLU:HB2	39:L2:170:ALA:HA	2.27	0.42
41:L4:222:VAL:HA	41:L4:223:PRO:HD3	1.92	0.42
41:L4:316:ASN:HA	41:L4:317:PRO:HD3	2.10	0.42
41:L4:326:ARG:O	44:L7:41:ARG:NH2	4.39	0.42
41:L4:352:ALA:HB2	44:L7:71:ALA:O	2.19	0.42
43:L6:68:PRO:HD2	43:L6:71:VAL:CG2	2.95	0.42
44:L7:103:LEU:HD23	44:L7:130:ILE:HD11	3.76	0.42
44:L7:180:SER:H	44:L7:183:ASP:HB2	1.84	0.42
44:L7:234:GLU:HG2	44:L7:234:GLU:H	1.71	0.42
41:L4:330:TYR:CZ	44:L7:49:ALA:HA	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:L9:41:ILE:HD11	46:L9:67:ALA:HB1	2.01	0.42
47:M0:24:ARG:HB2	47:M0:24:ARG:HH11	1.85	0.42
47:M0:71:CYS:O	47:M0:73:ASN:N	3.52	0.42
50:M4:32:LEU:HD11	50:M4:94:TRP:CG	2.55	0.42
53:M7:111:LYS:HB3	53:M7:153:LYS:HB3	2.01	0.42
56:N0:96:ASP:OD1	56:N0:97:VAL:N	2.51	0.42
58:N2:37:LEU:O	58:N2:41:ILE:HG13	2.42	0.42
60:N4:17:ARG:HE	60:N4:17:ARG:HB2	1.71	0.42
61:N5:42:ARG:HG2	36:5:14:U:O2'	104.25	0.42
63:N7:13:VAL:HB	63:N7:18:TYR:O	2.20	0.42
73:O7:84:SER:O	73:O7:85:LYS:HB3	3.86	0.42
2:S0:200:ASP:HA	2:S0:203:PHE:CE1	2.64	0.42
2:S0:74:VAL:HG22	2:S0:96:THR:HG23	2.02	0.42
5:S3:21:LEU:HD23	5:S3:21:LEU:HA	1.91	0.42
6:S4:133:LYS:HB2	6:S4:133:LYS:HE2	1.92	0.42
6:S4:176:ASP:OD2	6:S4:176:ASP:N	3.14	0.42
7:S5:150:GLY:O	7:S5:152:GLY:N	3.39	0.42
9:S7:28:GLU:HG2	9:S7:35:LYS:CG	2.47	0.42
10:S8:166:TYR:HB3	10:S8:184:LEU:HD22	2.02	0.42
10:S8:43:ILE:HG12	10:S8:57:ALA:HA	2.02	0.42
10:S8:72:ILE:HG13	10:S8:72:ILE:H	2.06	0.42
34:SR:61:PHE:HB3	34:SR:92:TRP:CZ3	2.93	0.42
36:1:2898:G:H5''	36:1:2899:C:C5'	2.50	0.41
36:1:293:C:H2'	36:1:294:U:O4'	2.20	0.41
36:1:2999:U:H2'	36:1:3000:A:C8	2.54	0.41
36:1:3124:G:N2	36:1:3125:U:H1'	2.35	0.41
36:1:657:A:H2'	36:1:658:G:H8	1.84	0.41
1:2:1354:G:H3'	1:2:1355:C:C6	2.55	0.41
1:2:1370:U:O2'	1:2:1371:A:OP2	2.27	0.41
1:2:196:G:HO2'	1:2:197:A:P	2.43	0.41
1:2:292:U:H2'	1:2:293:U:C6	2.55	0.41
1:2:362:G:C6	1:2:383:G:C6	3.08	0.41
1:2:422:G:O2'	1:2:423:G:H5'	2.20	0.41
1:2:46:A:N1	1:2:432:G:O2'	2.48	0.41
1:2:589:C:H2'	1:2:590:C:H6	1.85	0.41
36:1:409:A:N6	38:4:15:G:H1'	2.32	0.41
36:5:1339:C:H2'	36:5:1340:G:O4'	2.20	0.41
63:N7:64:LYS:NZ	36:5:1812:G:N7	183.99	0.41
36:5:2437:G:H2'	36:5:2438:A:H5'	2.02	0.41
36:5:377:A:H1'	36:5:392:G:C2	2.55	0.41
36:5:620:U:H5''	36:5:621:A:C8	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1603:U:H2'	1:6:1604:U:C6	2.55	0.41
1:6:1697:G:H2'	1:6:1697:G:N3	2.35	0.41
6:S4:38:LEU:HD23	1:6:298:C:H5''	354.41	0.41
1:6:312:A:C5	1:6:314:C:C4	3.08	0.41
1:6:514:G:O2'	1:6:515:A:H8	2.03	0.41
1:6:603:U:H2'	1:6:604:A:C8	2.55	0.41
1:6:700:C:H2'	1:6:701:U:C6	2.55	0.41
1:6:820:U:H2'	1:6:820:U:H6	1.64	0.41
1:6:828:U:H2'	1:6:829:A:H5''	2.01	0.41
1:6:961:U:H2'	1:6:962:C:C6	2.54	0.41
15:C3:54:LEU:O	15:C3:58:HIS:HB2	2.20	0.41
18:C6:28:LEU:HG	18:C6:64:ASP:OD2	2.20	0.41
18:C6:66:ARG:NH2	18:C6:68:ARG:HD2	2.35	0.41
19:C7:20:TYR:O	19:C7:24:LEU:HG	4.81	0.41
20:C8:27:LYS:HA	20:C8:57:ARG:HA	2.08	0.41
20:C8:81:ILE:HA	20:C8:82:PRO:HD2	2.91	0.41
20:C8:91:ASP:O	20:C8:92:ILE:HB	3.09	0.41
29:D7:61:THR:O	29:D7:62:ILE:HB	2.20	0.41
30:D8:49:ARG:HG2	30:D8:52:ASP:OD1	2.25	0.41
33:E1:147:VAL:HG23	33:E1:148:TYR:CG	2.54	0.41
39:L2:214:GLY:O	39:L2:215:ASN:HB2	4.69	0.41
39:L2:43:GLY:O	39:L2:88:ILE:N	2.87	0.41
36:1:2341:A:P	40:L3:247:ARG:HH22	2.43	0.41
36:1:2924:U:H5''	40:L3:5:LYS:NZ	2.34	0.41
37:3:46:A:P	42:L5:158:ARG:HH11	2.43	0.41
42:L5:222:LEU:HA	42:L5:222:LEU:HD23	3.79	0.41
42:L5:271:LYS:C	42:L5:273:ARG:H	2.59	0.41
42:L5:69:ILE:HD12	42:L5:69:ILE:H	4.78	0.41
43:L6:149:ILE:HG23	43:L6:155:LEU:HD13	2.36	0.41
44:L7:224:ILE:HD13	56:N0:39:SER:HB2	2.01	0.41
45:L8:181:LYS:HB2	45:L8:181:LYS:NZ	2.35	0.41
45:L8:33:ASN:HA	36:5:2549:G:N2	212.72	0.41
46:L9:124:ARG:HB3	46:L9:164:ILE:HD13	3.54	0.41
46:L9:18:VAL:HA	46:L9:26:LYS:O	2.20	0.41
47:M0:58:GLU:HB2	47:M0:59:GLN:H	1.75	0.41
47:M0:74:LYS:HE3	47:M0:74:LYS:HB3	3.21	0.41
47:M0:77:THR:O	47:M0:80:SER:N	3.09	0.41
48:M1:28:ASP:O	48:M1:32:ARG:HG3	3.21	0.41
50:M4:19:ARG:NH2	50:M4:69:THR:HG22	3.80	0.41
50:M4:47:ASP:OD1	50:M4:55:ARG:HB2	2.22	0.41
51:M5:35:VAL:O	51:M5:64:VAL:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:M6:124:LEU:O	52:M6:128:ARG:HB2	3.41	0.41
54:M8:32:LEU:O	54:M8:35:PHE:HB3	2.20	0.41
56:N0:111:ALA:O	56:N0:115:ARG:HA	2.81	0.41
61:N5:103:TYR:HA	61:N5:138:ARG:HH12	2.45	0.41
62:N6:110:HIS:ND1	62:N6:110:HIS:O	2.53	0.41
62:N6:124:GLY:C	62:N6:126:LEU:H	3.70	0.41
63:N7:29:HIS:CE1	63:N7:42:LEU:HD13	2.60	0.41
36:1:715:A:C8	64:N8:115:LYS:HG2	2.52	0.41
69:O3:67:MET:HE3	69:O3:87:ASN:HB2	6.46	0.41
78:Q2:45:ARG:HG3	78:Q2:46:LYS:N	2.35	0.41
78:Q2:61:LYS:H	78:Q2:61:LYS:HG2	4.41	0.41
2:S0:179:ARG:HD3	2:S0:183:ARG:HD2	2.01	0.41
4:S2:143:TYR:CD2	4:S2:147:ASN:HA	3.21	0.41
5:S3:66:ILE:O	5:S3:70:THR:N	2.94	0.41
7:S5:128:ASN:O	7:S5:132:VAL:HG23	2.35	0.41
7:S5:131:GLN:HG3	7:S5:135:ASP:OD1	2.94	0.41
7:S5:89:ILE:HD12	7:S5:90:ILE:H	1.84	0.41
10:S8:72:ILE:HG21	10:S8:112:TRP:CE2	2.55	0.41
10:S8:184:LEU:HD21	10:S8:192:TYR:CD2	3.07	0.41
34:SR:166:SER:HA	34:SR:184:ASN:HD21	1.84	0.41
36:1:1083:G:C2	36:1:1084:A:C4	3.08	0.41
36:1:1578:C:H3'	36:1:1579:C:C5	2.55	0.41
36:1:1915:A:H2'	36:1:1916:U:C6	2.56	0.41
36:1:2340:U:H2'	36:1:2341:A:C8	2.55	0.41
36:1:2403:G:H5'	36:1:2871:G:H5'	2.01	0.41
36:1:2623:G:H3'	36:1:2624:G:H8	1.85	0.41
36:1:27:C:H1'	36:1:328:U:H1'	2.01	0.41
36:1:946:U:H2'	36:1:947:G:H8	1.85	0.41
36:1:976:U:H5'	54:M8:144:ARG:NH1	2.32	0.41
1:2:1209:C:H2'	1:2:1210:C:C6	2.55	0.41
1:2:1552:U:H2'	1:2:1553:G:O4'	2.20	0.41
1:2:19:A:H2'	1:2:20:G:H8	1.85	0.41
1:2:74:U:C1'	1:2:75:U:H5'	2.39	0.41
1:2:870:C:H2'	1:2:871:G:H8	1.85	0.41
1:2:976:G:OP1	15:C3:109:LYS:NZ	2.53	0.41
38:4:121:U:H2'	38:4:122:U:H6	1.85	0.41
38:4:122:U:H2'	38:4:123:G:C8	2.55	0.41
36:5:1020:G:H2'	36:5:1021:G:O4'	2.20	0.41
36:5:130:A:C6	36:5:139:G:C6	3.08	0.41
36:5:2253:G:C6	36:5:2254:U:C4	3.08	0.41
36:5:2611:U:H2'	36:5:2612:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:3131:U:H2'	36:5:3132:C:C6	2.56	0.41
36:5:58:G:O2'	36:5:61:A:H5'	2.21	0.41
39:L2:207:VAL:HG21	36:5:916:G:C6	188.08	0.41
1:6:1001:A:N6	1:6:1002:G:C6	2.88	0.41
14:C2:43:ARG:HB2	1:6:1227:A:C2	465.49	0.41
1:6:506:A:OP1	1:6:506:A:H3'	2.19	0.41
32:E0:14:VAL:HG23	1:6:567:A:H1'	378.11	0.41
1:6:867:G:C4	1:6:868:G:C8	3.08	0.41
38:8:82:U:O2	38:8:87:G:H4'	2.20	0.41
19:C7:87:GLU:O	19:C7:88:VAL:HG12	2.19	0.41
20:C8:57:ARG:N	20:C8:60:GLU:OE1	2.33	0.41
20:C8:83:ALA:O	20:C8:86:LEU:HB2	2.20	0.41
21:C9:30:VAL:HA	21:C9:31:PRO:HD2	1.79	0.41
24:D2:104:LEU:HD23	24:D2:125:ILE:HA	5.16	0.41
24:D2:14:ILE:HG23	24:D2:65:LEU:HD11	4.71	0.41
1:2:1104:U:C5	25:D3:4:GLY:HA2	2.55	0.41
6:S4:54:TYR:CD1	26:D4:17:LEU:HD11	2.55	0.41
27:D5:38:HIS:CG	27:D5:39:ALA:N	2.89	0.41
28:D6:10:ARG:HB3	28:D6:11:ASN:H	3.71	0.41
39:L2:30:ARG:HG2	39:L2:74:GLU:OE2	3.08	0.41
39:L2:29:LEU:HA	39:L2:76:PHE:CE1	2.55	0.41
40:L3:144:ILE:HG22	40:L3:148:LEU:HD22	2.63	0.41
40:L3:256:HIS:HA	40:L3:257:PRO:C	2.45	0.41
40:L3:83:PRO:HG3	40:L3:204:ALA:HB2	3.80	0.41
41:L4:93:MET:O	36:5:1438:U:H1'	142.63	0.41
42:L5:122:VAL:O	42:L5:124:GLU:N	4.13	0.41
37:3:121:U:O2	42:L5:268:GLU:HB3	2.20	0.41
44:L7:52:GLN:O	44:L7:56:GLU:HG2	2.19	0.41
44:L7:68:ASP:O	44:L7:71:ALA:N	3.05	0.41
44:L7:92:ILE:HA	44:L7:92:ILE:HD12	1.70	0.41
45:L8:111:LYS:HD3	45:L8:111:LYS:HA	1.89	0.41
45:L8:97:TYR:O	45:L8:132:VAL:HG13	3.94	0.41
45:L8:97:TYR:CZ	45:L8:203:VAL:HG22	2.56	0.41
45:L8:38:GLN:N	45:L8:38:GLN:OE1	4.92	0.41
46:L9:111:PHE:CD1	46:L9:127:PRO:HA	2.78	0.41
46:L9:172:ILE:H	46:L9:172:ILE:HD13	1.86	0.41
48:M1:116:TYR:O	48:M1:117:ASP:HB3	2.19	0.41
48:M1:11:ASP:HB3	48:M1:12:LEU:H	1.58	0.41
48:M1:162:TRP:CH2	48:M1:167:TYR:HE1	2.38	0.41
50:M4:55:ARG:HD3	56:N0:70:THR:OG1	2.21	0.41
36:1:269:G:H5'	51:M5:120:TRP:CE3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:M6:142:SER:HB3	52:M6:147:TRP:HB2	2.17	0.41
53:M7:122:ALA:HB3	53:M7:143:PRO:HB2	2.56	0.41
59:N3:120:LYS:HB2	59:N3:120:LYS:HE3	4.71	0.41
59:N3:86:ARG:HG3	59:N3:92:PHE:CE2	2.54	0.41
61:N5:67:ILE:HD12	61:N5:121:LYS:HG3	2.02	0.41
62:N6:95:VAL:HA	62:N6:96:PRO:HD3	2.23	0.41
66:O0:42:ILE:HG22	66:O0:91:SER:HA	2.01	0.41
67:O1:83:GLU:O	67:O1:85:ALA:N	3.69	0.41
70:O4:81:CYS:O	70:O4:83:ASN:N	2.62	0.41
2:S0:53:THR:OG1	2:S0:161:PRO:HG2	2.49	0.41
3:S1:97:LEU:HB3	3:S1:232:HIS:CD2	4.51	0.41
3:S1:70:LEU:HA	3:S1:73:LEU:HG	2.01	0.41
4:S2:87:GLN:HA	4:S2:95:ARG:O	2.54	0.41
6:S4:131:LEU:HD22	6:S4:131:LEU:HA	1.93	0.41
6:S4:50:ASN:HB3	6:S4:51:ARG:NH2	3.64	0.41
8:S6:7:TYR:HD2	8:S6:8:PRO:HD2	1.84	0.41
8:S6:78:THR:HG22	8:S6:92:ARG:HG2	2.02	0.41
10:S8:197:THR:HA	10:S8:200:LYS:HD2	2.01	0.41
11:S9:133:HIS:HD2	11:S9:162:SER:CB	3.45	0.41
34:SR:132:LYS:HB2	34:SR:134:TRP:HE1	1.85	0.41
34:SR:170:ILE:HD11	34:SR:204:ALA:HB2	2.02	0.41
36:1:1094:U:H4'	36:1:1095:U:OP1	2.20	0.41
36:1:1223:A:C5	36:1:1224:C:C5	3.09	0.41
36:1:1393:A:O5'	36:1:1393:A:H8	2.03	0.41
36:1:831:G:O2'	36:1:1864:A:N3	2.50	0.41
36:1:2842:U:C4	36:1:2843:U:C4	3.08	0.41
36:1:2916:U:H5	36:1:2935:U:HO2'	1.67	0.41
36:1:31:C:H2'	36:1:32:U:O4'	2.21	0.41
36:1:54:C:H2'	36:1:55:G:C8	2.55	0.41
36:1:625:G:H2'	36:1:626:U:H6	1.85	0.41
1:2:1291:G:H8	1:2:1291:G:O5'	2.03	0.41
1:2:1660:A:H2'	1:2:1661:U:C6	2.55	0.41
1:2:1684:U:O2	1:2:1718:G:N2	2.53	0.41
1:2:1699:G:H2'	1:2:1700:C:H5''	2.01	0.41
1:2:407:A:H2'	1:2:408:C:C6	2.55	0.41
38:4:34:U:O2'	38:4:35:C:OP2	2.26	0.41
36:5:2603:G:C6	36:5:2604:U:C2	3.09	0.41
36:5:327:A:C5	36:5:328:U:C4	3.09	0.41
36:5:378:A:N7	36:5:391:A:H2	2.18	0.41
36:5:828:A:H2'	36:5:829:U:H6	1.85	0.41
1:6:1029:U:O2'	1:6:1030:A:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1147:A:H2'	1:6:1148:C:O4'	2.20	0.41
1:6:1372:U:H2'	1:6:1373:C:C6	2.56	0.41
1:6:1476:C:C2'	1:6:1477:G:H5'	2.50	0.41
1:6:1752:U:H2'	1:6:1753:A:C8	2.55	0.41
1:6:249:U:H3'	1:6:250:C:C5'	2.50	0.41
1:6:53:G:H2'	1:6:54:C:O4'	2.20	0.41
32:E0:28:LYS:NZ	1:6:542:A:H61	431.19	0.41
9:S7:107:ARG:NH1	1:6:741:C:O2'	345.78	0.41
16:C4:49:LYS:HA	16:C4:49:LYS:HD3	2.23	0.41
17:C5:15:HIS:CG	17:C5:16:SER:N	2.88	0.41
17:C5:74:ALA:HA	17:C5:75:PRO:HD3	2.06	0.41
20:C8:30:TYR:HE2	20:C8:40:ARG:HD2	2.00	0.41
23:D1:55:LEU:HD13	23:D1:65:SER:OG	2.20	0.41
24:D2:55:ASP:OD2	24:D2:60:LYS:HG3	2.61	0.41
25:D3:110:LYS:O	25:D3:112:LYS:HG2	2.19	0.41
27:D5:47:TYR:CE1	27:D5:51:LEU:HD11	5.29	0.41
1:2:933:A:OP1	28:D6:70:LYS:NZ	2.53	0.41
28:D6:38:ARG:NE	28:D6:83:ILE:HG13	2.30	0.41
28:D6:82:ARG:HB2	28:D6:85:ARG:CZ	7.50	0.41
33:E1:120:GLU:HB3	33:E1:130:VAL:HB	6.95	0.41
33:E1:83:LYS:O	33:E1:84:VAL:HG22	4.69	0.41
40:L3:187:SER:OG	40:L3:188:ILE:HD12	2.21	0.41
41:L4:361:HIS:CG	41:L4:362:ASP:H	2.37	0.41
42:L5:110:LEU:HD13	42:L5:171:LEU:HD23	2.02	0.41
43:L6:52:VAL:HG13	43:L6:65:ILE:HD12	4.68	0.41
45:L8:230:LYS:HG3	45:L8:230:LYS:O	2.19	0.41
49:M3:175:SER:O	49:M3:178:LYS:N	2.53	0.41
55:M9:115:ILE:HD11	55:M9:119:LEU:HG	2.03	0.41
56:N0:40:ARG:HA	56:N0:40:ARG:HD2	1.58	0.41
56:N0:45:LEU:HA	56:N0:45:LEU:HD22	1.78	0.41
60:N4:4:GLU:HG2	60:N4:30:ARG:CD	2.50	0.41
61:N5:45:LYS:HD3	71:O5:75:TYR:CE2	3.68	0.41
63:N7:109:GLU:O	63:N7:112:LYS:HB2	2.20	0.41
63:N7:135:ARG:HB3	63:N7:135:ARG:NH2	2.90	0.41
64:N8:127:ALA:O	64:N8:148:ILE:HG12	2.20	0.41
64:N8:16:SER:HA	36:5:942:U:C4	171.48	0.41
64:N8:70:LYS:N	64:N8:71:PRO:HD3	2.43	0.41
64:N8:73:LEU:HD13	64:N8:109:TYR:CE1	2.55	0.41
65:N9:23:LYS:CB	65:N9:24:PRO:HD3	3.84	0.41
65:N9:28:LYS:HB2	36:5:1065:A:C4	214.17	0.41
66:O0:99:ASP:OD1	66:O0:103:THR:OG1	5.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:O1:60:TRP:CZ3	67:O1:64:VAL:HG12	2.82	0.41
67:O1:8:VAL:HG23	67:O1:77:ARG:HE	3.26	0.41
68:O2:101:SER:O	68:O2:105:ARG:HG3	2.20	0.41
68:O2:19:ARG:HE	68:O2:33:ARG:CB	3.05	0.41
70:O4:7:PHE:CD1	70:O4:20:ILE:HD12	4.50	0.41
2:S0:12:GLU:HA	2:S0:15:GLN:OE1	2.84	0.41
3:S1:173:THR:O	3:S1:177:GLN:HB2	6.24	0.41
5:S3:217:ILE:HG22	5:S3:218:LEU:H	1.84	0.41
9:S7:79:ARG:NH2	9:S7:161:GLN:HG3	5.75	0.41
9:S7:55:LYS:HB2	9:S7:56:LYS:H	2.23	0.41
9:S7:75:THR:HG22	9:S7:161:GLN:HE22	3.78	0.41
10:S8:74:LYS:HB2	10:S8:109:PHE:CE1	2.55	0.41
10:S8:110:ARG:HH22	10:S8:160:PHE:HB3	4.12	0.41
34:SR:40:LYS:HD2	34:SR:65:SER:O	4.34	0.41
36:1:1161:G:C2	36:1:1162:U:C5	3.08	0.41
36:1:1390:A:N6	36:1:1418:A:O2'	2.50	0.41
36:1:1728:G:H5''	36:1:1730:G:O4'	2.20	0.41
36:1:1713:G:N2	36:1:1730:G:H1'	2.35	0.41
36:1:177:U:C4	36:1:178:U:C4	3.08	0.41
36:1:3015:G:N2	36:1:3040:A:H1'	2.35	0.41
36:1:3242:G:H8	40:L3:154:TYR:CE2	2.38	0.41
36:1:3356:G:H2'	36:1:3357:U:O4'	2.20	0.41
36:1:530:G:N2	36:1:531:G:H1'	2.35	0.41
1:2:1068:C:H2'	1:2:1069:A:H8	1.85	0.41
1:2:1409:G:N2	1:2:1411:A:H3'	2.36	0.41
1:2:68:A:OP1	8:S6:160:ARG:NH1	2.51	0.41
1:2:778:G:O6	26:D4:10:ARG:HA	2.19	0.41
1:2:973:A:H2'	1:2:974:A:C8	2.52	0.41
36:5:1176:C:H2'	36:5:1177:G:N2	2.35	0.41
55:M9:20:ARG:NH2	36:5:1875:G:O6	148.91	0.41
36:5:193:C:C2	36:5:203:G:N2	2.88	0.41
36:5:2404:A:N3	36:5:2404:A:H2'	2.35	0.41
36:5:3078:U:H4'	36:5:3079:U:O5'	2.21	0.41
41:L4:347:THR:HB	36:5:520:U:O4	322.83	0.41
1:6:1079:U:H2'	1:6:1080:U:O4'	2.21	0.41
24:D2:71:LYS:HD2	1:6:1098:U:O2'	382.18	0.41
1:6:1260:U:H2'	1:6:1261:G:C8	2.55	0.41
1:6:1438:G:H2'	1:6:1439:C:C6	2.56	0.41
38:8:6:U:H2'	38:8:7:U:C6	2.56	0.41
14:C2:91:VAL:HG22	14:C2:92:ALA:H	4.48	0.41
1:2:1192:C:H5'	18:C6:142:TYR:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:C6:78:VAL:O	18:C6:81:ILE:HG12	2.21	0.41
20:C8:122:HIS:NE2	20:C8:126:ARG:HD3	2.35	0.41
25:D3:19:ARG:NH1	1:6:610:G:H21	343.79	0.41
29:D7:14:SER:HB3	29:D7:17:ARG:HE	1.85	0.41
41:L4:232:SER:OG	41:L4:233:LEU:N	2.53	0.41
41:L4:289:ILE:O	41:L4:295:ILE:HD12	2.21	0.41
42:L5:176:SER:HG	36:5:2747:A:P	247.09	0.41
42:L5:63:GLN:HG2	42:L5:77:ALA:HB2	3.03	0.41
44:L7:126:LEU:HD23	44:L7:126:LEU:HA	1.79	0.41
45:L8:116:VAL:O	45:L8:120:LYS:HA	2.21	0.41
46:L9:106:LYS:HG2	46:L9:107:ASP:OD2	2.20	0.41
47:M0:206:LEU:HD12	47:M0:206:LEU:HA	2.16	0.41
49:M3:55:ARG:O	49:M3:115:ARG:NH2	2.53	0.41
51:M5:36:ILE:HG12	51:M5:64:VAL:HB	2.03	0.41
52:M6:124:LEU:HA	52:M6:124:LEU:HD12	1.69	0.41
55:M9:172:ARG:O	55:M9:176:ARG:HG2	2.20	0.41
55:M9:43:LYS:HG3	36:5:1765:U:H5	97.96	0.41
56:N0:133:ALA:HA	56:N0:141:LYS:NZ	4.27	0.41
56:N0:2:ALA:HB3	56:N0:32:SER:HB3	2.01	0.41
58:N2:19:VAL:HG11	58:N2:33:TYR:CE2	2.56	0.41
61:N5:48:SER:OG	61:N5:49:LYS:N	3.16	0.41
66:O0:66:LYS:N	66:O0:66:LYS:HD2	4.28	0.41
36:1:1405:U:H5'	68:O2:57:TYR:O	2.20	0.41
43:L6:85:ILE:HG23	69:O3:107:ILE:HB	2.02	0.41
69:O3:38:PRO:HG3	69:O3:77:ASN:HA	2.02	0.41
69:O3:89:LEU:HA	69:O3:89:LEU:HD23	1.76	0.41
36:1:135:C:C4	71:O5:94:LYS:HD2	2.55	0.41
2:S0:167:LYS:HB3	2:S0:168:HIS:H	1.64	0.41
2:S0:55:GLU:OE2	23:D1:80:LYS:N	2.73	0.41
3:S1:39:GLU:HG3	3:S1:40:ASN:N	2.35	0.41
4:S2:148:LEU:CD1	4:S2:149:GLY:H	2.32	0.41
4:S2:140:ARG:HD3	4:S2:222:TYR:CE1	2.54	0.41
8:S6:26:VAL:HG21	8:S6:40:ALA:HB1	2.01	0.41
9:S7:85:PHE:HB3	9:S7:88:ARG:HG3	4.75	0.41
10:S8:138:ASN:HA	10:S8:141:ARG:HD2	3.88	0.41
11:S9:113:VAL:O	11:S9:118:LEU:HB2	2.21	0.41
34:SR:91:LEU:HG	34:SR:100:TYR:HB2	2.02	0.41
34:SR:275:ARG:HA	34:SR:276:PRO:HD2	1.93	0.41
34:SR:282:SER:H	34:SR:285:ALA:HB3	1.84	0.41
34:SR:255:ALA:HB2	34:SR:292:LEU:HD22	2.01	0.41
36:1:1504:A:C5	36:1:1505:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1690:C:OP1	55:M9:60:LYS:N	2.49	0.41
36:1:1740:U:H1'	36:1:1741:A:H2	1.85	0.41
36:1:2443:A:N6	36:1:2504:U:C4	2.88	0.41
36:1:3069:G:H2'	36:1:3070:A:C8	2.55	0.41
36:1:270:U:O2'	36:1:318:A:H1'	2.20	0.41
36:1:379:C:H42	36:1:390:G:H1	1.67	0.41
36:1:95:A:C5	36:1:96:G:H1'	2.56	0.41
1:2:1011:G:HO2'	1:2:1012:U:H6	1.65	0.41
1:2:1222:C:H2'	1:2:1223:A:O4'	2.20	0.41
1:2:1719:A:H3'	1:2:1720:G:C8	2.55	0.41
1:2:569:C:H2'	1:2:570:A:O4'	2.21	0.41
1:2:651:G:C2	1:2:684:A:C6	3.09	0.41
1:2:67:A:O2'	1:2:69:G:OP1	2.16	0.41
1:2:721:U:H4'	1:2:722:G:OP2	2.21	0.41
1:2:831:U:H2'	1:2:831:U:O2	2.19	0.41
1:2:953:G:H2'	1:2:954:G:C8	2.55	0.41
37:3:42:A:C5	37:3:43:U:C5	3.08	0.41
36:5:1114:U:C2	36:5:1115:G:C8	3.08	0.41
36:5:1313:G:N3	36:5:1318:A:H2	2.18	0.41
36:5:2213:A:H2	36:5:2601:A:N3	2.19	0.41
36:5:2251:G:C2	36:5:2252:A:C4	3.09	0.41
36:5:229:G:C6	36:5:230:U:C4	3.09	0.41
36:5:653:A:C8	36:5:2360:C:C4	3.08	0.41
36:5:2370:G:H2'	36:5:2371:G:O4'	2.20	0.41
39:L2:2:GLY:HA3	36:5:2415:C:OP1	184.11	0.41
36:5:2727:A:H4'	36:5:2728:G:OP2	2.19	0.41
53:M7:69:ARG:NH1	36:5:3308:C:N3	190.89	0.41
1:6:1352:G:N2	1:6:1373:C:O2	2.52	0.41
20:C8:136:GLN:NE2	1:6:1544:U:OP1	356.49	0.41
1:6:1642:G:N2	1:6:1781:A:N3	2.68	0.41
1:6:217:A:O2'	1:6:218:A:O5'	2.27	0.41
1:6:271:A:C2	1:6:285:G:C6	3.08	0.41
1:6:329:G:H2'	1:6:330:G:H8	1.85	0.41
1:6:536:C:N4	1:6:537:G:C6	2.89	0.41
24:D2:105:THR:HG22	1:6:804:A:N3	369.07	0.41
1:6:841:U:H2'	1:6:842:C:O4'	2.20	0.41
1:6:846:G:C2	1:6:847:A:C4	3.09	0.41
12:C0:24:LYS:HB3	12:C0:24:LYS:HE2	1.75	0.41
14:C2:46:ARG:O	14:C2:49:THR:OG1	3.01	0.41
15:C3:28:LEU:HB3	15:C3:29:SER:H	1.71	0.41
15:C3:46:THR:OG1	15:C3:49:GLN:HG2	4.11	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:C7:106:THR:O	19:C7:110:VAL:HG23	2.20	0.41
19:C7:71:PHE:CZ	19:C7:74:GLN:HB2	5.33	0.41
21:C9:117:SER:HB3	21:C9:123:ARG:HB3	2.03	0.41
21:C9:10:ALA:O	21:C9:12:GLN:N	2.54	0.41
22:D0:54:GLY:HA2	22:D0:91:ILE:HG23	2.35	0.41
23:D1:3:ASN:HD22	23:D1:9:VAL:HB	1.85	0.41
24:D2:7:LEU:HD21	24:D2:37:PHE:CD2	3.78	0.41
25:D3:107:PHE:HA	25:D3:107:PHE:HD1	1.66	0.41
25:D3:117:ILE:HA	25:D3:118:PRO:HD3	2.33	0.41
27:D5:50:ILE:O	27:D5:54:VAL:HG23	2.19	0.41
40:L3:85:VAL:O	40:L3:162:VAL:HA	2.71	0.41
40:L3:75:ALA:HB2	36:5:3049:A:C2	247.57	0.41
36:1:1347:U:H4'	41:L4:305:ALA:HB2	2.02	0.41
42:L5:254:LYS:HG3	42:L5:254:LYS:O	2.21	0.41
42:L5:62:CYS:HB2	42:L5:78:ALA:O	2.45	0.41
44:L7:206:LYS:HB3	44:L7:206:LYS:HE3	1.86	0.41
44:L7:208:SER:HB2	36:5:1334:U:O4'	242.22	0.41
45:L8:96:LYS:HB3	45:L8:204:ARG:NH1	2.35	0.41
46:L9:106:LYS:H	46:L9:109:ALA:HB3	1.85	0.41
47:M0:76:MET:SD	47:M0:148:VAL:HG13	4.02	0.41
48:M1:131:MET:HB3	48:M1:131:MET:HE3	2.28	0.41
48:M1:166:LYS:HD3	48:M1:167:TYR:CE1	2.55	0.41
49:M3:87:ALA:O	49:M3:91:ARG:HG3	2.21	0.41
51:M5:160:GLU:OE1	51:M5:160:GLU:N	2.77	0.41
53:M7:67:ILE:HD12	53:M7:82:ARG:NH1	3.42	0.41
57:N1:9:SER:O	57:N1:11:THR:HG23	2.32	0.41
58:N2:56:VAL:HG22	58:N2:65:VAL:HG13	2.02	0.41
60:N4:50:ALA:HA	60:N4:55:PHE:CD1	2.70	0.41
60:N4:58:HIS:HD2	60:N4:59:HIS:ND1	5.86	0.41
61:N5:132:ALA:O	61:N5:135:ILE:HG22	2.21	0.41
62:N6:112:ASP:HB2	62:N6:115:ARG:H	2.40	0.41
36:1:200:C:OP1	62:N6:60:ARG:NH1	2.53	0.41
63:N7:126:LYS:C	63:N7:128:GLN:H	2.24	0.41
63:N7:85:TYR:HE2	63:N7:129:TRP:CE2	3.85	0.41
67:O1:8:VAL:HG21	67:O1:77:ARG:HH21	2.97	0.41
68:O2:4:LEU:HA	68:O2:4:LEU:HD12	1.88	0.41
69:O3:38:PRO:HD3	69:O3:77:ASN:O	2.20	0.41
36:1:3275:U:C5'	69:O3:68:TRP:HZ2	2.32	0.41
1:2:1116:A:P	77:Q1:17:ARG:HH21	2.43	0.41
77:Q1:9:ARG:HB2	77:Q1:9:ARG:HH11	2.70	0.41
79:Q3:50:GLY:O	79:Q3:51:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S0:206:ASP:H	2:S0:207:PRO:HA	4.85	0.41
3:S1:134:VAL:O	3:S1:218:LEU:HD22	2.21	0.41
3:S1:92:GLN:O	3:S1:94:LYS:N	2.54	0.41
9:S7:109:VAL:HG22	9:S7:110:GLN:H	4.13	0.41
9:S7:166:LEU:HD22	9:S7:166:LEU:H	1.85	0.41
10:S8:3:ILE:O	10:S8:30:GLY:N	2.46	0.41
11:S9:126:ARG:O	11:S9:130:THR:HG23	2.20	0.41
35:SM:140:ASP:N	35:SM:140:ASP:OD1	2.53	0.41
34:SR:50:ASP:O	34:SR:52:GLN:N	2.53	0.41
36:1:118:U:C5	36:1:119:U:C4	3.09	0.41
36:1:1333:C:O5'	36:1:1333:C:H6	2.04	0.41
36:1:2108:C:H1'	36:1:3344:A:H8	1.82	0.41
36:1:2163:C:H4'	39:L2:7:ASN:O	2.21	0.41
36:1:2179:C:O3'	39:L2:174:ARG:NH2	2.52	0.41
36:1:2227:C:OP1	78:Q2:32:LYS:NZ	2.34	0.41
36:1:2765:C:O3'	78:Q2:39:GLY:HA3	2.20	0.41
36:1:2898:G:H5''	36:1:2899:C:O5'	2.20	0.41
36:1:3030:G:C6	36:1:3031:G:C4	3.09	0.41
36:1:372:A:H2'	36:1:373:A:O4'	2.21	0.41
1:2:1603:U:H2'	1:2:1604:U:C6	2.55	0.41
1:2:187:G:C6	1:2:197:A:N6	2.88	0.41
1:2:751:G:H2'	1:2:752:A:C8	2.56	0.41
1:2:876:G:H8	1:2:876:G:O5'	2.03	0.41
36:5:260:C:H2'	36:5:261:U:O4'	2.21	0.41
36:5:261:U:H2'	36:5:262:U:C6	2.55	0.41
36:5:2702:A:H5'	36:5:2704:A:O4'	2.20	0.41
36:5:3088:G:H2'	36:5:3089:C:O4'	2.21	0.41
36:5:645:A:H4'	36:5:647:A:H62	1.86	0.41
36:5:676:G:N2	36:5:786:A:C4	2.88	0.41
36:5:359:U:H4'	36:5:817:A:N6	2.36	0.41
6:S4:155:LYS:NZ	1:6:244:A:OP1	347.29	0.41
15:C3:20:ARG:O	15:C3:65:VAL:HG13	2.21	0.41
19:C7:113:LEU:HG	19:C7:114:GLY:N	2.35	0.41
25:D3:29:TYR:CZ	25:D3:33:LEU:HD12	2.55	0.41
25:D3:33:LEU:HD23	25:D3:33:LEU:HA	1.73	0.41
25:D3:69:ARG:NH1	25:D3:116:ASP:OD1	2.54	0.41
26:D4:21:LYS:N	26:D4:75:VAL:O	2.88	0.41
33:E1:116:LYS:HE3	33:E1:116:LYS:HB2	1.92	0.41
39:L2:46:LYS:O	39:L2:47:GLN:HB2	2.21	0.41
39:L2:79:ASN:O	39:L2:82:VAL:HG13	2.21	0.41
40:L3:306:THR:HA	40:L3:307:PRO:HD3	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:L3:311:PHE:HB2	40:L3:315:GLY:O	2.63	0.41
42:L5:242:SER:O	42:L5:245:GLU:HB3	3.72	0.41
44:L7:156:ILE:HD12	44:L7:161:VAL:HB	2.03	0.41
45:L8:133:LYS:HD2	45:L8:138:HIS:HE1	1.86	0.41
45:L8:33:ASN:HA	36:5:2549:G:C2	212.52	0.41
46:L9:109:ALA:HB1	46:L9:111:PHE:CE2	2.56	0.41
47:M0:171:TRP:O	47:M0:174:THR:HG23	3.78	0.41
47:M0:214:PRO:HD2	47:M0:215:GLU:OE1	7.45	0.41
48:M1:15:GLU:HB3	48:M1:130:VAL:HG13	2.02	0.41
48:M1:87:LYS:HA	48:M1:87:LYS:HD2	1.93	0.41
49:M3:107:GLU:HG2	49:M3:107:GLU:H	2.59	0.41
49:M3:108:ILE:H	49:M3:108:ILE:HG12	1.69	0.41
49:M3:168:ARG:O	49:M3:168:ARG:HG3	2.49	0.41
50:M4:13:ARG:NH1	50:M4:65:LEU:O	2.93	0.41
51:M5:49:ARG:NH1	51:M5:49:ARG:HB2	2.33	0.41
51:M5:6:TYR:CE2	72:O6:40:VAL:HG13	2.71	0.41
53:M7:27:LYS:HA	53:M7:63:PHE:CD2	2.81	0.41
55:M9:130:ASN:O	55:M9:132:PHE:N	2.50	0.41
57:N1:132:PRO:O	57:N1:134:GLN:HG2	3.17	0.41
57:N1:137:GLU:O	57:N1:139:ARG:HD3	2.21	0.41
57:N1:83:ARG:NH1	57:N1:85:LEU:HD21	2.35	0.41
58:N2:85:LYS:HG2	36:5:1682:U:C6	153.50	0.41
59:N3:75:PRO:HB2	59:N3:103:ALA:O	2.19	0.41
59:N3:135:VAL:HG11	60:N4:26:SER:HB3	2.02	0.41
60:N4:6:ASP:HA	60:N4:13:ILE:HD11	2.30	0.41
61:N5:105:VAL:HG12	61:N5:106:ASP:O	2.20	0.41
61:N5:51:VAL:HG12	61:N5:52:PRO:O	2.21	0.41
63:N7:81:LEU:HA	63:N7:81:LEU:HD22	2.52	0.41
65:N9:21:ILE:O	65:N9:22:LYS:NZ	7.61	0.41
67:O1:19:ARG:HD3	67:O1:35:GLU:CG	2.51	0.41
68:O2:75:LEU:HA	68:O2:75:LEU:HD23	1.82	0.41
74:O8:77:ARG:HB2	74:O8:77:ARG:NH1	2.36	0.41
3:S1:181:LEU:O	3:S1:182:ALA:C	2.58	0.41
5:S3:191:ASP:HA	5:S3:192:PRO:HD2	1.90	0.41
6:S4:37:LYS:NZ	6:S4:40:GLU:OE2	6.29	0.41
8:S6:10:ASN:OD1	8:S6:10:ASN:N	2.87	0.41
9:S7:156:SER:OG	9:S7:186:PRO:HG2	4.56	0.41
9:S7:7:LYS:HE3	9:S7:7:LYS:HB2	4.70	0.41
10:S8:9:HIS:O	10:S8:10:LYS:HB3	2.20	0.41
34:SR:25:THR:HG21	34:SR:294:TRP:O	3.80	0.41
36:1:2724:U:H4'	57:N1:54:HIS:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:2746:A:H2'	36:1:2747:A:O4'	2.20	0.41
36:1:2747:A:OP1	42:L5:176:SER:OG	2.33	0.41
36:1:278:U:H2'	36:1:279:U:C6	2.55	0.41
36:1:2816:G:C8	36:1:2869:U:H3'	2.56	0.41
36:1:3006:A:C2	36:1:3141:A:C4	3.09	0.41
36:1:898:U:H2'	36:1:899:U:C6	2.56	0.41
1:2:1002:G:H2'	1:2:1003:A:H5'	2.03	0.41
1:2:1147:A:H2'	1:2:1148:C:H6	1.85	0.41
1:2:1241:G:H5''	17:C5:77:ARG:HB3	2.02	0.41
1:2:142:G:C5	1:2:266:A:C6	3.08	0.41
1:2:1561:U:H2'	1:2:1562:G:C8	2.55	0.41
1:2:495:C:H3'	1:2:496:G:C4'	2.50	0.41
1:2:853:G:N7	55:M9:173:ARG:NH2	2.68	0.41
37:3:92:A:C5	37:3:93:C:H1'	2.55	0.41
38:4:59:A:C2	38:4:100:U:H1'	2.55	0.41
38:4:62:C:H4'	38:4:63:G:O5'	2.21	0.41
36:5:2537:U:O2'	36:5:2538:U:O5'	2.38	0.41
39:L2:215:ASN:HB2	36:5:2968:G:N7	218.33	0.41
36:5:374:A:H4'	36:5:375:A:OP1	2.20	0.41
36:5:86:G:O2'	36:5:98:G:O6	2.28	0.41
1:6:1070:C:H2'	1:6:1071:U:O4'	2.19	0.41
28:D6:2:PRO:HG3	1:6:1143:A:P	355.11	0.41
17:C5:102:PHE:CZ	1:6:1241:G:H5''	386.76	0.41
1:6:1572:G:H2'	1:6:1572:G:N3	2.36	0.41
1:6:1686:C:N3	1:6:1716:C:N4	2.69	0.41
1:6:874:C:H2'	1:6:875:G:C8	2.56	0.41
1:6:914:G:H8	1:6:914:G:OP2	2.04	0.41
1:6:980:G:H4'	1:6:1776:A:H4'	2.03	0.41
38:8:1:A:C2	38:8:2:A:C4	3.09	0.41
14:C2:83:GLU:C	14:C2:85:LYS:H	4.56	0.41
19:C7:44:LYS:HG2	19:C7:48:ASN:HD21	1.86	0.41
19:C7:57:LEU:O	19:C7:61:ILE:HG13	2.21	0.41
21:C9:52:GLY:HA2	21:C9:55:TYR:CD2	2.56	0.41
24:D2:28:ARG:HA	24:D2:29:PRO:HA	1.80	0.41
28:D6:10:ARG:CB	28:D6:34:LYS:HA	2.60	0.41
29:D7:51:GLN:O	29:D7:66:PRO:HG3	2.21	0.41
39:L2:32:LEU:HG	39:L2:163:ARG:CZ	3.41	0.41
41:L4:144:LYS:HE3	41:L4:173:GLY:O	2.21	0.41
41:L4:64:SER:HA	41:L4:75:PRO:HA	2.03	0.41
42:L5:176:SER:OG	36:5:2747:A:OP1	245.52	0.41
47:M0:207:GLU:HB3	47:M0:211:ARG:NH2	5.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:M1:91:LEU:O	48:M1:171:VAL:HA	5.34	0.41
48:M1:40:LEU:HD11	48:M1:79:ILE:HG21	2.03	0.41
49:M3:129:ASN:ND2	49:M3:131:LYS:HG2	5.58	0.41
52:M6:8:VAL:HG12	52:M6:117:ARG:HB3	2.60	0.41
52:M6:173:ALA:O	52:M6:176:LYS:HB3	2.88	0.41
52:M6:8:VAL:HA	52:M6:34:VAL:O	2.44	0.41
53:M7:36:ILE:O	53:M7:38:GLY:N	3.25	0.41
54:M8:126:GLN:O	54:M8:130:ARG:HG3	2.21	0.41
54:M8:173:GLU:OE2	64:N8:49:HIS:HD2	5.61	0.41
59:N3:39:VAL:HG22	59:N3:52:ALA:HB2	2.28	0.41
36:1:2916:U:C1'	59:N3:44:SER:HB3	2.51	0.41
61:N5:45:LYS:HB2	61:N5:45:LYS:HE2	1.82	0.41
64:N8:116:GLY:HA2	64:N8:137:LYS:HZ1	1.85	0.41
69:O3:8:TYR:CE2	69:O3:99:ARG:HG2	2.56	0.41
70:O4:70:LYS:HZ2	36:5:1804:A:P	168.18	0.41
74:O8:16:ARG:HG3	74:O8:70:PRO:CG	3.53	0.41
74:O8:36:LYS:HA	74:O8:37:PRO:HD3	2.73	0.41
2:S0:112:THR:HG23	2:S0:115:PHE:HB2	2.02	0.41
3:S1:191:GLU:OE1	3:S1:194:ASN:ND2	2.54	0.41
4:S2:179:VAL:HG11	1:6:2:A:H3'	393.36	0.41
5:S3:70:THR:HG22	5:S3:86:LEU:HD13	2.01	0.41
6:S4:29:PRO:O	6:S4:31:PRO:HD3	2.21	0.41
7:S5:149:VAL:HG12	7:S5:156:ARG:O	2.82	0.41
7:S5:73:THR:HG22	7:S5:75:GLY:N	2.35	0.41
8:S6:16:PHE:CD1	8:S6:45:PHE:HZ	3.51	0.41
10:S8:26:LYS:O	10:S8:29:LEU:HB3	2.20	0.41
11:S9:22:SER:O	11:S9:25:ASP:HB2	2.20	0.41
11:S9:34:PHE:CE1	11:S9:105:LEU:HB3	2.56	0.41
35:SM:100:THR:HG23	35:SM:101:ASP:O	2.21	0.41
35:SM:140:ASP:HB2	35:SM:141:ALA:H	1.62	0.41
36:1:1161:G:H5'	36:1:1365:G:O2'	2.20	0.41
36:1:1564:U:H2'	36:1:1565:G:H8	1.82	0.41
36:1:2208:A:O3'	36:1:2209:U:H6	2.04	0.41
36:1:2442:G:H2'	36:1:2443:A:H5''	2.01	0.41
36:1:2565:U:H2'	36:1:2566:C:H6	1.84	0.41
36:1:2656:A:C4	36:1:2658:G:N7	2.89	0.41
36:1:2773:C:H2'	36:1:2774:C:H6	1.86	0.41
36:1:3147:G:HO2'	40:L3:104:THR:HG1	1.66	0.41
36:1:563:U:H2'	36:1:564:G:H8	1.85	0.41
36:1:625:G:H2'	36:1:626:U:C6	2.55	0.41
36:1:816:A:H5''	36:1:920:A:H62	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:978:G:H1'	36:1:1104:G:N2	2.36	0.41
36:1:981:U:HO2'	36:1:982:C:P	2.43	0.41
1:2:1013:A:C2	1:2:1014:G:H1'	2.56	0.41
1:2:1080:U:H3'	1:2:1081:A:C8	2.56	0.41
1:2:744:U:N3	1:2:808:U:O2	2.54	0.41
38:4:56:G:H2'	38:4:57:C:C6	2.55	0.41
57:N1:129:LYS:HB2	36:5:1098:A:O5'	253.69	0.41
36:5:1226:G:H2'	36:5:1227:C:C6	2.56	0.41
36:5:2273:G:N2	36:5:2311:G:H2'	2.35	0.41
36:5:3257:C:H2'	36:5:3258:U:O4'	2.21	0.41
54:M8:43:PRO:HG2	36:5:729:C:P	192.62	0.41
36:5:810:A:H2'	36:5:811:U:C6	2.55	0.41
36:5:90:C:C2'	36:5:91:G:H5'	2.50	0.41
1:6:1092:A:O2'	1:6:1093:A:H3'	2.21	0.41
1:6:151:G:N2	1:6:164:A:C4	2.89	0.41
1:6:28:A:H2'	1:6:29:U:C6	2.55	0.41
38:8:71:A:H4'	38:8:72:A:O5'	2.21	0.41
13:C1:5:LEU:HD23	13:C1:7:VAL:HA	7.97	0.41
1:2:926:A:H2	16:C4:125:SER:HB3	1.86	0.41
17:C5:47:ARG:HH22	1:6:1553:G:H3'	407.29	0.41
21:C9:6:VAL:C	21:C9:8:ASP:H	2.24	0.41
22:D0:57:ARG:HD2	22:D0:89:ARG:HD3	2.02	0.41
26:D4:110:GLN:O	26:D4:114:ARG:HB2	2.94	0.41
26:D4:116:LYS:HG2	1:6:159:U:C4	337.64	0.41
26:D4:12:VAL:HA	26:D4:23:PHE:HB3	2.36	0.41
28:D6:37:LYS:O	28:D6:38:ARG:NH1	2.54	0.41
28:D6:40:ALA:HB3	28:D6:69:ASN:HB3	4.87	0.41
39:L2:69:TYR:O	39:L2:70:ARG:HB3	2.49	0.41
40:L3:2:SER:HA	36:5:2940:A:N7	240.42	0.41
41:L4:23:PRO:HD2	41:L4:26:PHE:CD2	2.56	0.41
43:L6:43:LEU:HD11	43:L6:85:ILE:HG13	2.11	0.41
46:L9:86:TYR:CD1	46:L9:151:VAL:HG13	2.65	0.41
46:L9:163:GLN:O	46:L9:166:ARG:HG3	3.73	0.41
46:L9:171:ASP:CG	46:L9:173:ARG:HH11	2.86	0.41
47:M0:156:ARG:NH1	47:M0:163:GLN:O	3.27	0.41
47:M0:212:GLU:O	47:M0:214:PRO:HD3	3.54	0.41
48:M1:15:GLU:HB3	48:M1:130:VAL:HG22	3.02	0.41
51:M5:58:GLY:HA3	51:M5:142:ILE:CD1	2.51	0.41
52:M6:41:LEU:HD12	52:M6:42:ASN:H	2.57	0.41
56:N0:32:SER:OG	56:N0:36:ILE:HD12	2.20	0.41
57:N1:122:GLN:HB3	57:N1:123:GLY:H	1.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:N3:27:ASP:HA	59:N3:113:ALA:O	2.75	0.41
59:N3:68:GLU:CD	59:N3:68:GLU:H	2.24	0.41
60:N4:60:LYS:O	60:N4:63:ILE:HD11	8.25	0.41
61:N5:24:LEU:HB3	61:N5:25:LYS:H	1.54	0.41
36:1:1476:G:O3'	67:O1:63:GLY:HA2	2.21	0.41
71:O5:101:THR:HG22	71:O5:104:GLN:H	1.85	0.41
36:1:157:A:C8	72:O6:26:ILE:HG12	2.56	0.41
73:O7:12:HIS:O	36:5:1491:A:H5'	138.12	0.41
79:Q3:28:LYS:O	79:Q3:32:GLN:HG3	4.66	0.41
3:S1:107:THR:O	3:S1:111:ARG:HB2	2.20	0.41
4:S2:121:VAL:O	4:S2:125:ILE:HG13	2.20	0.41
4:S2:84:LYS:HA	4:S2:85:PRO:HD3	1.78	0.41
5:S3:179:GLN:HB3	5:S3:180:GLY:H	3.04	0.41
5:S3:52:ALA:O	5:S3:91:VAL:HG12	2.20	0.41
8:S6:153:VAL:O	8:S6:156:PHE:HB2	3.49	0.41
10:S8:69:SER:OG	10:S8:185:GLU:OE2	2.95	0.41
10:S8:61:GLU:OE2	10:S8:77:ARG:NH2	9.26	0.41
11:S9:134:ILE:N	11:S9:134:ILE:HD12	4.45	0.41
34:SR:117:LYS:CD	34:SR:117:LYS:H	2.34	0.41
34:SR:295:SER:HB2	34:SR:300:THR:HB	2.02	0.41
34:SR:73:LEU:CD2	34:SR:77:GLY:HA2	2.50	0.41
36:1:2356:A:OP1	53:M7:138:LYS:NZ	2.54	0.41
36:1:3204:C:O2'	36:1:3205:G:H5'	2.21	0.41
36:1:3277:U:H2'	53:M7:175:ARG:HH22	1.86	0.41
36:1:391:A:C5	36:1:392:G:C8	3.09	0.41
36:1:817:A:H8	73:O7:15:SER:OG	2.04	0.41
1:2:1017:U:H2'	1:2:1018:U:C6	2.56	0.41
1:2:156:A:H2'	1:2:157:A:O4'	2.21	0.41
1:2:61:A:H8	1:2:269:G:HO2'	1.67	0.41
1:2:645:C:H42	1:2:689:G:H1	1.69	0.41
36:1:408:A:N6	38:4:15:G:H1'	2.36	0.41
36:5:1135:A:C2	36:5:1136:A:C8	3.09	0.41
36:5:1481:A:O4'	36:5:1481:A:OP1	2.39	0.41
36:5:2223:A:OP2	36:5:2223:A:H8	2.04	0.41
36:5:3335:A:N7	36:5:3370:A:O2'	2.49	0.41
36:5:3356:G:C6	36:5:3357:U:C4	3.08	0.41
54:M8:107:THR:HG21	36:5:676:G:H3'	136.96	0.41
36:5:70:A:N1	36:5:313:A:O2'	2.52	0.41
1:6:1241:G:H2'	1:6:1242:A:O4'	2.21	0.41
1:6:1426:C:H6	1:6:1426:C:H2'	1.65	0.41
1:6:1503:A:H2'	1:6:1504:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:C5:122:THR:CG2	1:6:1558:U:H3	368.87	0.41
1:6:2:A:C8	1:6:370:A:H1'	2.56	0.41
1:6:417:A:H5'	1:6:418:G:C5	2.56	0.41
1:6:603:U:H2'	1:6:604:A:H8	1.86	0.41
1:6:755:A:H2'	1:6:756:A:C8	2.56	0.41
1:6:837:G:H2'	1:6:838:G:H8	1.85	0.41
16:C4:54:GLU:CD	1:6:901:G:H22	283.62	0.41
38:8:117:C:H2'	38:8:118:C:C6	2.55	0.41
13:C1:22:ASN:HA	13:C1:23:PRO:HD3	1.91	0.41
15:C3:54:LEU:HB3	15:C3:60:VAL:HG13	4.99	0.41
16:C4:42:VAL:HG23	16:C4:63:ALA:HB1	2.03	0.41
18:C6:54:LEU:HD22	18:C6:54:LEU:HA	1.83	0.41
19:C7:32:LYS:HG3	19:C7:47:ARG:HD3	2.01	0.41
19:C7:49:LYS:HB3	19:C7:49:LYS:HE2	4.94	0.41
21:C9:53:TRP:HH2	21:C9:100:ILE:HD12	2.26	0.41
24:D2:89:TRP:O	24:D2:93:LEU:HD22	2.21	0.41
30:D8:64:ARG:HB3	30:D8:65:ARG:H	1.72	0.41
39:L2:90:ALA:CB	39:L2:101:VAL:HG13	2.79	0.41
40:L3:92:TYR:HB2	40:L3:157:VAL:HG13	3.92	0.41
37:3:46:A:OP2	42:L5:158:ARG:NH1	2.54	0.41
43:L6:54:TYR:CE2	43:L6:63:LEU:HD22	2.56	0.41
47:M0:60:LEU:HD11	47:M0:135:ILE:HD13	3.68	0.41
47:M0:34:TYR:CD1	47:M0:34:TYR:N	2.97	0.41
48:M1:19:LEU:HD13	48:M1:40:LEU:HD12	2.03	0.41
50:M4:24:LYS:HE2	50:M4:24:LYS:HB3	4.41	0.41
52:M6:140:LYS:HE3	52:M6:143:THR:HG21	2.02	0.41
61:N5:60:TYR:CD1	71:O5:25:LYS:HD3	2.56	0.41
63:N7:76:ASN:OD1	63:N7:77:TYR:N	2.54	0.41
66:O0:28:LYS:HE2	66:O0:28:LYS:HB3	1.74	0.41
70:O4:56:THR:HA	70:O4:62:TYR:OH	2.20	0.41
71:O5:107:LYS:HB2	71:O5:107:LYS:HE3	1.76	0.41
3:S1:161:ILE:O	3:S1:165:ARG:HB2	2.59	0.41
5:S3:119:ALA:O	5:S3:123:VAL:HG23	2.27	0.41
6:S4:131:LEU:HD12	1:6:252:U:H4'	326.84	0.41
6:S4:126:VAL:HA	6:S4:141:THR:HA	2.01	0.41
7:S5:136:ALA:HA	7:S5:201:ALA:O	2.21	0.41
8:S6:48:TYR:OH	8:S6:119:GLN:O	2.19	0.41
8:S6:57:ASP:OD1	8:S6:72:ARG:NH1	2.81	0.41
11:S9:109:LEU:HA	11:S9:148:VAL:HG23	2.03	0.41
11:S9:14:THR:HA	11:S9:15:PRO:HD3	1.97	0.41
34:SR:22:SER:OG	34:SR:70:ASP:HA	3.16	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:1714:A:O4'	36:1:1731:A:N6	2.54	0.41
36:1:2179:C:N3	39:L2:173:GLY:N	2.45	0.41
36:1:2226:U:H2'	36:1:2227:C:C6	2.56	0.41
36:1:2879:C:H5''	36:1:2880:U:OP2	2.21	0.41
36:1:3295:A:H2'	36:1:3296:A:C8	2.55	0.41
36:1:696:C:OP1	41:L4:272:VAL:N	2.47	0.41
36:1:709:A:O5'	36:1:709:A:H8	2.04	0.41
1:2:1010:C:H2'	1:2:1011:G:O4'	2.21	0.41
1:2:1054:U:C4	1:2:1055:U:C4	3.09	0.41
1:2:1349:G:H2'	1:2:1350:U:H6	1.86	0.41
1:2:738:G:H2'	1:2:739:G:H8	1.86	0.41
1:2:960:U:H2'	1:2:961:U:H6	1.86	0.41
57:N1:105:PHE:CE2	36:5:1062:A:H4'	245.11	0.41
68:O2:45:ARG:NH1	36:5:1160:C:O2	206.78	0.41
36:5:1704:A:O2'	36:5:1705:U:H5''	2.21	0.41
36:5:1756:C:H2'	36:5:1757:A:H8	1.84	0.41
36:5:343:U:O2	36:5:1439:U:H1'	2.20	0.41
36:5:382:U:H3	36:5:387:A:N6	2.19	0.41
54:M8:21:SER:OG	36:5:673:U:OP1	151.36	0.41
36:5:897:U:H2'	36:5:898:U:C6	2.56	0.41
1:6:1176:G:C6	1:6:1464:G:C6	3.09	0.41
1:6:120:U:H2'	1:6:121:U:C6	2.55	0.41
1:6:1223:A:H2'	1:6:1224:A:H8	1.84	0.41
1:6:1547:A:H2'	1:6:1548:G:C8	2.56	0.41
1:6:420:A:H2'	1:6:421:A:O4'	2.21	0.41
1:6:697:C:HO2'	1:6:698:U:P	2.44	0.41
36:5:408:A:N6	38:8:15:G:H1'	2.35	0.41
15:C3:109:LYS:H	15:C3:109:LYS:HG2	1.44	0.41
15:C3:26:PHE:CE2	15:C3:28:LEU:HB2	3.05	0.41
16:C4:41:ARG:O	16:C4:42:VAL:HG22	2.21	0.41
19:C7:25:THR:OG1	19:C7:26:LEU:N	3.72	0.41
17:C5:123:TYR:OH	20:C8:122:HIS:NE2	2.48	0.41
20:C8:131:LEU:HA	20:C8:145:ARG:HH12	1.85	0.41
22:D0:36:ASN:OD1	22:D0:36:ASN:N	4.27	0.41
22:D0:99:ILE:HA	22:D0:102:ARG:HB3	2.54	0.41
28:D6:45:VAL:HG22	28:D6:64:LEU:HD11	2.01	0.41
39:L2:82:VAL:HA	39:L2:86:GLN:OE1	2.52	0.41
40:L3:227:GLU:HG2	40:L3:270:ARG:HD3	2.02	0.41
41:L4:132:ALA:HA	41:L4:148:ILE:HD13	2.03	0.41
41:L4:208:VAL:HG11	41:L4:230:VAL:HG13	2.02	0.41
42:L5:191:ASP:HA	42:L5:192:PRO:HD3	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:L5:195:LEU:O	42:L5:199:ILE:HG13	2.21	0.41
43:L6:72:ASN:HB3	43:L6:160:SER:HA	2.02	0.41
43:L6:65:ILE:HD11	43:L6:77:ARG:HB3	2.02	0.41
44:L7:103:LEU:HA	44:L7:130:ILE:HD11	4.68	0.41
44:L7:176:TYR:CD2	44:L7:194:HIS:CD2	4.05	0.41
46:L9:37:ASN:OD1	46:L9:39:LYS:HB2	2.68	0.41
47:M0:74:LYS:O	47:M0:78:THR:HG23	2.21	0.41
36:1:1543:G:OP1	51:M5:35:VAL:HG23	2.21	0.41
51:M5:93:LYS:HG3	36:5:289:A:H2	148.05	0.41
36:1:1316:C:C5	52:M6:130:LYS:HA	2.56	0.41
36:1:2352:A:H5''	53:M7:83:TRP:O	2.21	0.41
42:L5:40:HIS:CE1	57:N1:69:LYS:HA	2.72	0.41
59:N3:87:ARG:HG3	59:N3:93:LEU:HD21	3.72	0.41
62:N6:55:GLU:CB	62:N6:108:LYS:HB2	2.51	0.41
70:O4:65:VAL:HG13	70:O4:69:HIS:HB2	2.19	0.41
71:O5:93:THR:H	71:O5:96:GLU:HG3	1.84	0.41
76:Q0:125:LYS:HG3	36:5:2897:A:H5''	328.18	0.41
3:S1:176:VAL:HG12	3:S1:177:GLN:H	1.85	0.41
4:S2:152:HIS:CD2	4:S2:152:HIS:N	3.24	0.41
4:S2:95:ARG:HD3	4:S2:97:ARG:CD	6.12	0.41
7:S5:216:GLU:HG3	7:S5:219:ARG:HH21	1.86	0.41
7:S5:59:VAL:O	7:S5:60:ASP:HB2	2.21	0.41
1:2:154:G:H5'	8:S6:108:VAL:HG21	2.03	0.41
8:S6:153:VAL:HG23	8:S6:154:ARG:H	5.26	0.41
1:2:767:U:H1'	11:S9:141:VAL:HG22	2.03	0.41
11:S9:62:ARG:CZ	11:S9:68:LYS:HD3	2.51	0.41
35:SM:104:LYS:O	35:SM:108:GLN:HG2	2.21	0.41
34:SR:131:ILE:HG23	34:SR:154:VAL:HG11	2.03	0.41
36:1:1134:G:N1	36:1:1135:A:N7	2.68	0.41
36:1:2167:A:C6	36:1:2168:A:C6	3.09	0.41
36:1:2174:G:H8	36:1:2174:G:OP1	2.04	0.41
36:1:3077:A:N6	36:1:3080:G:C5	2.88	0.41
36:1:3372:A:C6	36:1:3373:U:C4	3.09	0.41
36:1:642:U:O5'	36:1:642:U:H6	2.04	0.41
1:2:1354:G:H3'	1:2:1355:C:H6	1.86	0.41
1:2:1562:G:C6	1:2:1563:C:C4	3.09	0.41
1:2:788:A:H2'	6:S4:19:LEU:HD22	2.03	0.41
1:2:795:U:H6	1:2:795:U:H2'	1.66	0.41
1:2:810:G:C5	9:S7:111:LYS:HE3	2.56	0.41
36:5:1692:U:O4	36:5:1693:C:N4	2.54	0.41
36:5:2546:C:H2'	36:5:2547:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:2648:G:C4	36:5:2649:A:C8	3.09	0.41
36:5:2707:C:H2'	36:5:2708:C:C6	2.56	0.41
36:5:314:U:H2'	36:5:315:C:C6	2.55	0.41
52:M6:115:LYS:HG2	36:5:3178:A:C2	261.02	0.41
36:5:3236:U:H2'	36:5:3237:U:H6	1.86	0.41
36:5:535:G:C6	36:5:555:U:C4	3.08	0.41
36:5:725:G:H5'	36:5:726:G:OP2	2.20	0.41
1:6:1002:G:C6	1:6:1003:A:N7	2.89	0.41
1:6:1492:A:O2'	1:6:1493:A:P	2.79	0.41
6:S4:38:LEU:HB3	1:6:298:C:H5''	354.83	0.41
1:6:393:C:H2'	1:6:394:C:C6	2.55	0.41
1:6:509:G:O5'	1:6:509:G:H8	2.04	0.41
1:6:879:G:H2'	1:6:880:C:C6	2.56	0.41
48:M1:137:ARG:NH2	37:7:44:C:OP2	298.00	0.41
13:C1:81:HIS:O	13:C1:83:THR:HG22	2.26	0.41
15:C3:27:LYS:CD	15:C3:27:LYS:H	2.34	0.41
18:C6:52:LEU:HA	18:C6:60:PHE:CE1	3.28	0.41
20:C8:108:LYS:HA	20:C8:108:LYS:HD2	1.82	0.41
20:C8:112:ASP:O	20:C8:116:LEU:HD22	2.80	0.41
20:C8:16:ARG:O	20:C8:17:LEU:HD23	3.70	0.41
2:S0:140:ASN:OD1	23:D1:29:HIS:HA	2.28	0.41
25:D3:23:ARG:HB3	25:D3:29:TYR:CE1	2.55	0.41
39:L2:97:ASN:HB2	39:L2:100:ASN:ND2	2.85	0.41
40:L3:303:LYS:HZ2	40:L3:361:THR:HB	3.57	0.41
40:L3:376:LYS:O	40:L3:380:MET:HB2	2.21	0.41
41:L4:258:LEU:HD12	41:L4:258:LEU:HA	1.84	0.41
41:L4:307:GLN:NE2	36:5:1346:G:H1'	204.85	0.41
42:L5:59:ASP:OD2	42:L5:60:ILE:N	3.15	0.41
38:4:154:C:O2'	45:L8:185:ARG:HG3	2.20	0.41
45:L8:98:ARG:HG2	45:L8:98:ARG:H	2.35	0.41
46:L9:93:VAL:HG22	76:Q0:82:LEU:HB3	2.03	0.41
48:M1:26:SER:HB3	48:M1:63:GLU:HG2	2.18	0.41
49:M3:37:ASN:O	49:M3:41:THR:HG23	4.03	0.41
50:M4:17:VAL:HA	50:M4:35:ILE:O	2.36	0.41
51:M5:168:GLY:O	51:M5:172:ARG:HB2	2.73	0.41
52:M6:27:LEU:HD22	52:M6:101:ARG:HB2	2.03	0.41
53:M7:19:GLY:HA3	53:M7:22:LEU:HD11	2.02	0.41
54:M8:176:ARG:HA	54:M8:182:LYS:HB3	2.10	0.41
56:N0:12:ARG:HB3	56:N0:24:LEU:HD23	2.03	0.41
57:N1:108:ARG:CD	57:N1:130:ARG:HD3	2.51	0.41
57:N1:56:PHE:HE1	57:N1:78:LYS:HB2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:1:3051:U:H5''	60:N4:18:GLY:H	1.86	0.41
60:N4:49:ILE:O	60:N4:52:THR:OG1	2.27	0.41
63:N7:70:PRO:HG3	63:N7:115:LYS:HB2	2.11	0.41
63:N7:53:VAL:HA	63:N7:57:HIS:HD2	1.84	0.41
36:1:2552:C:C5	66:O0:53:LYS:HE3	2.56	0.41
67:O1:55:LEU:O	67:O1:59:ILE:HG13	2.33	0.41
69:O3:48:ARG:HD2	69:O3:48:ARG:HA	3.18	0.41
70:O4:81:CYS:SG	70:O4:84:CYS:SG	3.34	0.41
71:O5:45:LYS:HA	71:O5:48:ARG:HG2	2.02	0.41
71:O5:98:SER:O	71:O5:100:VAL:N	3.03	0.41
72:O6:26:ILE:H	72:O6:26:ILE:HG13	1.56	0.41
74:O8:61:LYS:HB3	74:O8:61:LYS:HE3	1.78	0.41
76:Q0:92:ASP:O	76:Q0:105:PRO:HG3	2.21	0.41
2:S0:184:LEU:HA	23:D1:43:GLY:O	2.21	0.41
3:S1:115:ARG:HB3	3:S1:118:GLN:NE2	2.36	0.41
3:S1:135:LEU:HD21	3:S1:176:VAL:HG11	2.02	0.41
3:S1:206:PRO:HB2	3:S1:207:LEU:H	1.70	0.41
5:S3:187:LYS:HB2	5:S3:187:LYS:HE3	3.94	0.41
5:S3:202:LEU:C	5:S3:204:ASP:H	2.78	0.41
1:2:252:U:H4'	6:S4:132:GLY:O	2.21	0.41
35:SM:53:ARG:HE	35:SM:53:ARG:HA	1.85	0.41
36:1:1015:U:O4	36:1:1035:G:N2	2.53	0.40
36:1:1269:U:O2	36:1:1269:U:H2'	2.20	0.40
36:1:1481:A:H2'	36:1:1481:A:N3	2.36	0.40
36:1:2694:A:C6	36:1:2695:A:C6	3.09	0.40
36:1:2869:U:H1'	36:1:2873:U:H3	1.86	0.40
36:1:3000:A:H2'	36:1:3001:C:C6	2.56	0.40
36:1:301:G:C6	36:1:302:U:C4	3.09	0.40
36:1:423:A:C6	36:1:424:G:C6	3.09	0.40
36:1:718:G:O6	36:1:751:A:H1'	2.21	0.40
1:2:1600:A:O2'	1:2:1602:C:N4	2.55	0.40
1:2:1662:G:H2'	1:2:1663:G:H8	1.87	0.40
37:3:45:A:H2'	37:3:46:A:H8	1.85	0.40
37:3:47:C:H2'	37:3:48:U:C6	2.56	0.40
75:O9:42:ARG:HH22	36:5:1494:U:P	108.41	0.40
36:5:3045:G:H2'	36:5:3046:A:O4'	2.21	0.40
36:5:549:U:H2'	36:5:550:A:H8	1.84	0.40
1:6:1001:A:C6	1:6:1002:G:C6	3.09	0.40
1:6:117:U:H2'	1:6:118:U:O4'	2.21	0.40
22:D0:75:GLY:N	1:6:1194:A:OP2	376.07	0.40
1:6:1671:A:H2'	1:6:1672:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:532:U:H2'	1:6:533:U:O4'	2.21	0.40
1:6:567:A:N1	1:6:583:C:H1'	2.36	0.40
1:6:836:U:H2'	1:6:837:G:C8	2.53	0.40
37:7:92:A:C5	37:7:93:C:H1'	2.56	0.40
12:C0:33:GLU:O	12:C0:34:GLU:HB2	2.21	0.40
12:C0:25:LYS:HD3	12:C0:62:GLN:HE22	2.28	0.40
14:C2:67:THR:O	14:C2:69:ALA:N	2.53	0.40
15:C3:16:ILE:HA	15:C3:17:PRO:HD3	1.88	0.40
16:C4:102:LEU:HA	16:C4:105:LEU:HG	2.03	0.40
17:C5:28:MET:O	17:C5:32:ASP:HB2	2.20	0.40
18:C6:55:VAL:HG21	18:C6:105:LEU:HG	2.03	0.40
18:C6:79:TYR:HA	18:C6:82:ARG:HD3	2.02	0.40
19:C7:71:PHE:CE1	19:C7:74:GLN:HG3	2.56	0.40
23:D1:32:VAL:HG12	23:D1:55:LEU:HB2	2.03	0.40
28:D6:34:LYS:HB3	28:D6:35:ALA:H	3.96	0.40
29:D7:2:VAL:O	29:D7:3:LEU:HB2	2.25	0.40
33:E1:121:CYS:SG	33:E1:122:SER:N	2.94	0.40
33:E1:123:ASN:HA	33:E1:124:PRO:HD2	2.05	0.40
39:L2:3:ARG:HD3	36:5:911:C:N4	180.16	0.40
36:1:2987:A:O2'	40:L3:259:HIS:HB3	2.21	0.40
41:L4:152:VAL:HG11	41:L4:156:LEU:HD12	2.02	0.40
41:L4:16:THR:HG23	41:L4:17:ALA:N	3.06	0.40
41:L4:6:VAL:HG23	41:L4:20:LEU:O	3.12	0.40
42:L5:55:PHE:HE2	42:L5:159:VAL:HA	1.86	0.40
42:L5:261:THR:N	42:L5:264:GLN:HB2	2.51	0.40
43:L6:22:ARG:O	43:L6:23:LYS:HD3	2.20	0.40
47:M0:127:ALA:O	47:M0:129:VAL:HG23	5.97	0.40
48:M1:54:VAL:O	48:M1:55:ARG:HB3	2.20	0.40
51:M5:194:GLN:OE1	36:5:99:A:H5'	121.98	0.40
51:M5:56:LYS:HE3	51:M5:56:LYS:HB2	1.89	0.40
54:M8:144:ARG:HH22	36:5:976:U:P	176.63	0.40
54:M8:159:LYS:O	54:M8:161:LYS:HD2	3.63	0.40
55:M9:130:ASN:HB3	55:M9:131:ALA:H	1.56	0.40
57:N1:79:MET:HA	57:N1:84:TYR:HA	2.03	0.40
62:N6:2:ALA:HA	36:5:213:A:O4'	80.26	0.40
62:N6:57:LEU:HD22	62:N6:58:VAL:H	2.62	0.40
63:N7:104:PRO:O	63:N7:108:GLU:HG3	2.38	0.40
63:N7:87:LEU:HD12	63:N7:88:ASP:N	2.35	0.40
64:N8:86:LYS:HD2	64:N8:90:TYR:HE2	1.85	0.40
65:N9:29:TYR:HD1	65:N9:29:TYR:N	2.19	0.40
65:N9:39:PHE:O	65:N9:43:HIS:N	2.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:O0:36:GLN:HB2	66:O0:38:LYS:HG3	2.04	0.40
68:O2:32:TRP:CG	68:O2:33:ARG:N	2.94	0.40
69:O3:59:VAL:HG23	69:O3:60:ARG:H	2.93	0.40
3:S1:69:CYS:HB3	3:S1:72:ASP:OD1	2.20	0.40
4:S2:94:GLN:NE2	4:S2:96:THR:HB	5.74	0.40
6:S4:100:ARG:HH11	6:S4:236:ILE:HB	1.86	0.40
8:S6:127:THR:OG1	8:S6:128:THR:N	2.54	0.40
9:S7:105:THR:OG1	9:S7:106:SER:N	4.26	0.40
9:S7:160:GLN:HA	9:S7:163:ASP:OD2	2.92	0.40
11:S9:68:LYS:HE2	11:S9:72:GLU:OE1	2.21	0.40
36:1:1260:A:H1'	36:1:1280:C:H1'	2.03	0.40
36:1:1369:A:OP1	64:N8:21:ARG:NH1	2.54	0.40
36:1:1544:G:C2	36:1:1550:C:C2	3.10	0.40
36:1:1567:U:H3'	36:1:1568:U:H5''	2.02	0.40
36:1:158:G:N2	36:1:264:G:H1'	2.36	0.40
36:1:1682:U:H4'	36:1:1684:U:O4	2.22	0.40
36:1:1686:U:O2	36:1:1688:U:H1'	2.21	0.40
36:1:1878:G:C3'	36:1:1879:A:H5'	2.51	0.40
36:1:2359:C:H2'	36:1:2360:C:C6	2.56	0.40
36:1:2502:A:N3	36:1:2502:A:H2'	2.35	0.40
36:1:2669:G:C2	36:1:2686:A:C2	3.10	0.40
36:1:2743:A:H2'	36:1:2744:U:O4'	2.21	0.40
36:1:578:A:H5''	36:1:579:G:O5'	2.20	0.40
36:1:810:A:O2'	36:1:811:U:H5'	2.21	0.40
36:1:821:U:H2'	36:1:822:G:H8	1.86	0.40
36:1:898:U:H2'	36:1:899:U:H6	1.86	0.40
1:2:1152:A:H2'	1:2:1153:G:C8	2.55	0.40
1:2:1283:U:H2'	1:2:1284:C:C5	2.56	0.40
1:2:1345:A:H2'	1:2:1348:A:H62	1.87	0.40
1:2:1349:G:H2'	1:2:1350:U:C6	2.56	0.40
1:2:1746:A:H2'	1:2:1747:G:O4'	2.21	0.40
1:2:1785:U:OP2	16:C4:133:ARG:NH2	2.54	0.40
1:2:287:G:O2'	1:2:288:A:P	2.80	0.40
1:2:391:A:O2'	1:2:1730:A:H4'	2.21	0.40
1:2:704:C:N4	1:2:735:C:C2	2.90	0.40
1:2:775:G:O6	26:D4:11:LYS:NZ	2.55	0.40
1:2:943:C:OP2	28:D6:17:HIS:ND1	2.54	0.40
36:5:1846:C:H5'	36:5:1849:C:N4	2.36	0.40
36:5:224:C:H2'	36:5:225:C:C6	2.54	0.40
36:5:238:A:H2'	36:5:239:G:C8	2.55	0.40
36:5:244:G:C6	36:5:245:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:L8:241:LYS:HB2	36:5:2586:G:N7	185.43	0.40
36:5:3048:A:C8	36:5:3090:U:O4	2.75	0.40
36:5:326:U:H6	36:5:326:U:O5'	2.05	0.40
1:6:1110:G:N2	1:6:1136:U:H1'	2.36	0.40
1:6:1620:C:H2'	1:6:1621:U:H6	1.86	0.40
1:6:50:C:H2'	1:6:424:C:H41	1.86	0.40
1:6:461:G:H2'	1:6:462:G:H8	1.87	0.40
1:6:680:U:C2	1:6:682:C:N4	2.90	0.40
9:S7:107:ARG:NH2	1:6:741:C:O2	348.59	0.40
1:6:922:G:H2'	1:6:923:A:H8	1.86	0.40
13:C1:84:ILE:HD13	13:C1:117:VAL:HG11	2.76	0.40
14:C2:32:LEU:O	14:C2:36:LEU:HB2	2.21	0.40
14:C2:89:ILE:HG12	14:C2:90:LYS:H	1.86	0.40
15:C3:70:LYS:HE2	1:6:962:C:OP2	335.64	0.40
16:C4:105:LEU:O	16:C4:110:LEU:HB2	2.21	0.40
17:C5:124:THR:OG1	1:6:1182:U:H4'	353.03	0.40
20:C8:115:ARG:O	20:C8:119:ILE:HG12	4.42	0.40
21:C9:14:PHE:CZ	21:C9:132:LEU:HG	2.56	0.40
29:D7:26:GLN:HB2	29:D7:26:GLN:HE21	1.50	0.40
29:D7:50:ALA:O	29:D7:52:THR:N	2.53	0.40
31:D9:6:VAL:HG23	31:D9:7:TRP:CE3	2.56	0.40
32:E0:39:LEU:HA	32:E0:39:LEU:HD22	1.84	0.40
1:2:1233:G:O2'	33:E1:145:HIS:HB2	2.20	0.40
39:L2:55:GLY:O	39:L2:56:ALA:HB3	4.50	0.40
39:L2:83:HIS:CE1	39:L2:86:GLN:HB2	2.56	0.40
40:L3:341:SER:OG	40:L3:343:TYR:O	2.35	0.40
41:L4:264:SER:OG	41:L4:267:VAL:HG13	2.22	0.40
44:L7:96:PRO:HA	44:L7:97:PRO:HD3	1.96	0.40
46:L9:3:TYR:HE1	56:N0:138:GLN:HE22	3.69	0.40
46:L9:68:LEU:O	46:L9:71:VAL:HB	2.28	0.40
47:M0:48:LEU:O	47:M0:139:ARG:HA	2.31	0.40
52:M6:108:ILE:HD12	52:M6:160:ARG:CZ	2.50	0.40
55:M9:39:ASN:HB2	55:M9:42:ARG:HH21	1.86	0.40
55:M9:59:SER:C	55:M9:61:SER:H	2.24	0.40
63:N7:81:LEU:HA	63:N7:81:LEU:HD23	1.96	0.40
64:N8:8:THR:O	64:N8:8:THR:OG1	2.84	0.40
65:N9:38:LYS:HE2	65:N9:38:LYS:HB2	3.61	0.40
67:O1:22:GLY:H	67:O1:28:ARG:HH22	1.69	0.40
72:O6:80:PHE:HB3	72:O6:81:THR:H	1.76	0.40
73:O7:31:LYS:HB3	73:O7:31:LYS:NZ	2.37	0.40
73:O7:64:MET:O	73:O7:68:LYS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:Q0:103:LEU:HA	76:Q0:103:LEU:HD23	1.91	0.40
2:S0:165:ARG:HD3	2:S0:165:ARG:HA	1.72	0.40
3:S1:188:LEU:HA	3:S1:188:LEU:HD23	1.79	0.40
4:S2:163:GLY:HA3	4:S2:209:ASN:ND2	2.36	0.40
5:S3:107:PHE:O	5:S3:111:ASN:HB2	2.40	0.40
5:S3:210:GLU:HA	5:S3:211:PRO:HD3	1.86	0.40
7:S5:77:TYR:CE1	7:S5:87:CYS:HB2	2.73	0.40
8:S6:12:SER:HB3	8:S6:124:LEU:HA	2.12	0.40
8:S6:153:VAL:HG11	8:S6:175:ILE:HG21	2.02	0.40
8:S6:211:LEU:HD23	8:S6:211:LEU:HA	1.88	0.40
9:S7:35:LYS:NZ	9:S7:39:ARG:HD2	2.36	0.40
11:S9:74:ASN:O	11:S9:78:ARG:HB3	2.76	0.40
35:SM:51:ARG:NH2	35:SM:52:PRO:HD2	6.33	0.40
35:SM:64:LYS:H	35:SM:64:LYS:HD3	1.85	0.40
34:SR:159:ASN:ND2	34:SR:163:ASP:HA	2.36	0.40
34:SR:288:HIS:H	34:SR:288:HIS:HD2	1.68	0.40
34:SR:16:HIS:CE1	34:SR:37:SER:HB2	2.57	0.40
34:SR:44:SER:O	34:SR:58:VAL:HG22	2.20	0.40
36:1:1029:G:C2	36:1:1030:A:C5	3.09	0.40
36:1:1051:U:H4'	57:N1:19:PHE:CD2	2.55	0.40
36:1:1310:G:H2'	36:1:1311:G:H8	1.86	0.40
36:1:1478:C:H2'	36:1:1479:U:H6	1.86	0.40
36:1:1581:C:H2'	36:1:1581:C:O2	2.22	0.40
36:1:2244:A:OP1	39:L2:244:GLY:N	2.53	0.40
36:1:420:G:C5	36:1:2384:A:C2	3.09	0.40
36:1:2544:U:H2'	36:1:2545:C:C6	2.56	0.40
36:1:2913:C:H2'	36:1:2914:G:C8	2.56	0.40
36:1:3049:A:O4'	40:L3:53:MET:HB2	2.21	0.40
36:1:3100:U:O2	36:1:3101:G:C8	2.75	0.40
36:1:547:G:H1'	36:1:548:G:C8	2.57	0.40
36:1:855:U:H2'	36:1:856:G:O4'	2.20	0.40
1:2:1186:U:C4	1:2:1187:U:C5	3.09	0.40
1:2:1357:A:H2'	1:2:1358:G:H8	1.85	0.40
1:2:1533:C:OP2	27:D5:77:ARG:NH1	2.46	0.40
1:2:139:C:C5	1:2:176:C:H1'	2.56	0.40
1:2:512:A:H2'	1:2:513:U:C6	2.56	0.40
1:2:706:A:O2'	1:2:707:A:O4'	2.25	0.40
1:2:852:C:N4	1:2:853:G:C6	2.89	0.40
1:2:870:C:H2'	1:2:871:G:C8	2.56	0.40
1:2:960:U:H2'	1:2:961:U:C6	2.56	0.40
36:5:1047:A:N3	36:5:2633:U:O2'	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:5:1131:G:C4	36:5:2373:A:C2	3.09	0.40
36:5:1348:U:O4'	36:5:1355:A:N6	2.54	0.40
36:5:1393:A:N3	36:5:1419:A:O2'	2.48	0.40
36:5:142:C:H2'	36:5:143:G:O4'	2.21	0.40
36:5:240:U:O2'	36:5:241:G:O5'	2.34	0.40
36:5:2897:A:H2'	36:5:2899:C:C5'	2.52	0.40
36:5:2946:A:H5''	36:5:2947:G:H5'	2.03	0.40
36:5:3027:A:H2'	36:5:3028:G:O4'	2.20	0.40
40:L3:53:MET:HE1	36:5:3047:U:O2'	237.63	0.40
36:5:3225:C:H2'	36:5:3226:A:H8	1.87	0.40
36:5:3223:A:C5	36:5:3263:G:C6	3.09	0.40
36:5:33:G:H1'	36:5:52:A:N6	2.37	0.40
36:5:730:C:H2'	36:5:731:U:C6	2.56	0.40
1:6:1135:U:H2'	1:6:1136:U:C6	2.56	0.40
33:E1:133:ALA:HB1	1:6:1251:U:H4'	442.04	0.40
1:6:1735:U:H2'	1:6:1736:G:O4'	2.21	0.40
1:6:234:G:H2'	1:6:235:G:O4'	2.22	0.40
1:6:250:C:H2'	1:6:251:A:H8	1.86	0.40
1:6:279:G:C6	1:6:281:G:C5	3.10	0.40
1:6:620:A:C5	1:6:621:A:N1	2.89	0.40
1:6:704:C:H2'	1:6:705:U:O4'	2.21	0.40
13:C1:92:HIS:O	13:C1:100:TYR:HA	2.22	0.40
13:C1:78:THR:HG21	13:C1:118:GLN:HA	3.16	0.40
13:C1:84:ILE:HG23	13:C1:111:VAL:HG11	2.03	0.40
14:C2:84:ASN:OD1	14:C2:85:LYS:N	2.39	0.40
17:C5:68:PRO:HB2	17:C5:69:GLU:H	4.10	0.40
18:C6:115:THR:O	18:C6:115:THR:HG23	4.62	0.40
19:C7:88:VAL:HG22	19:C7:89:SER:H	1.87	0.40
23:D1:64:GLU:HG3	29:D7:3:LEU:HG	2.11	0.40
24:D2:31:SER:H	24:D2:34:ILE:HD12	2.91	0.40
31:D9:40:ARG:HG3	31:D9:41:GLN:N	2.37	0.40
36:1:2155:G:O2'	39:L2:227:ARG:NH2	2.53	0.40
40:L3:236:LYS:HG3	40:L3:237:LYS:O	3.19	0.40
40:L3:56:ILE:HD12	40:L3:56:ILE:HA	2.45	0.40
41:L4:131:VAL:O	41:L4:135:VAL:HG23	2.39	0.40
41:L4:136:LEU:HA	41:L4:136:LEU:HD23	2.29	0.40
41:L4:205:PRO:HB3	41:L4:247:PHE:CD2	3.03	0.40
41:L4:62:ALA:HB3	41:L4:90:PHE:CE2	2.55	0.40
42:L5:227:LEU:HD12	42:L5:227:LEU:HA	1.85	0.40
44:L7:156:ILE:HG12	44:L7:172:ASN:OD1	2.21	0.40
44:L7:89:ILE:HA	44:L7:89:ILE:HD13	1.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:M0:89:VAL:HG22	47:M0:136:PHE:CE1	3.05	0.40
49:M3:126:PHE:H	49:M3:126:PHE:HD1	2.32	0.40
50:M4:102:LYS:HB2	50:M4:102:LYS:HE3	1.73	0.40
36:1:2424:A:OP1	51:M5:90:ASN:HB2	2.22	0.40
54:M8:38:ARG:HH22	36:5:1348:U:P	187.43	0.40
55:M9:89:LEU:HA	55:M9:90:PRO:HD2	2.42	0.40
56:N0:67:ALA:O	56:N0:69:PRO:HD3	3.20	0.40
58:N2:98:THR:O	58:N2:99:LYS:HG3	4.75	0.40
61:N5:63:ILE:HA	61:N5:86:VAL:HG23	2.66	0.40
62:N6:40:ARG:O	62:N6:44:GLY:N	2.49	0.40
66:O0:53:LYS:NZ	36:5:2552:C:H5	243.55	0.40
67:O1:44:MET:HB3	67:O1:77:ARG:NH1	3.82	0.40
68:O2:103:LYS:O	68:O2:106:VAL:HG12	2.20	0.40
36:1:634:C:OP1	69:O3:21:ARG:HD3	2.22	0.40
75:O9:23:LEU:HA	75:O9:24:PRO:HD2	2.55	0.40
2:S0:170:ILE:HG13	2:S0:170:ILE:H	1.55	0.40
2:S0:185:ARG:HB2	23:D1:45:ALA:HB3	2.02	0.40
6:S4:230:GLU:HB2	6:S4:233:LYS:HE3	5.43	0.40
8:S6:64:LYS:O	8:S6:67:VAL:HG22	2.24	0.40
9:S7:129:LEU:HD23	9:S7:129:LEU:HA	1.82	0.40
4:S2:121:VAL:HB	35:SM:120:GLU:OE1	2.21	0.40
20:C8:125:ILE:HG12	35:SM:61:ILE:HB	4.86	0.40
35:SM:62:ARG:HA	35:SM:62:ARG:HD3	1.83	0.40
34:SR:146:GLY:HA3	34:SR:181:TRP:HH2	1.85	0.40
34:SR:214:ALA:HB1	34:SR:240:VAL:HB	2.26	0.40
34:SR:79:TYR:HE1	34:SR:100:TYR:HE1	3.18	0.40
36:1:1194:G:H2'	36:1:1195:A:C8	2.57	0.40
36:1:1472:U:H2'	36:1:1473:G:H8	1.85	0.40
36:1:1504:A:N1	36:1:1515:A:O2'	2.46	0.40
36:1:1507:G:N3	36:1:1507:G:H2'	2.36	0.40
36:1:199:A:C4	36:1:201:A:C8	3.09	0.40
36:1:256:G:H4'	71:O5:111:PHE:HZ	1.85	0.40
36:1:2658:G:C6	36:1:2659:G:N7	2.90	0.40
36:1:3028:G:H2'	36:1:3029:A:O4'	2.21	0.40
36:1:3124:G:H5'	46:L9:40:HIS:ND1	2.36	0.40
36:1:3330:A:OP2	40:L3:376:LYS:NZ	2.55	0.40
36:1:587:U:H2'	36:1:588:G:H5'	2.03	0.40
36:1:693:A:O2'	36:1:694:C:H5'	2.21	0.40
36:1:706:A:H4'	36:1:781:G:O2'	2.22	0.40
36:1:966:U:H2'	36:1:967:A:C8	2.57	0.40
1:2:1196:A:C8	1:2:1602:C:H4'	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1240:U:O4	17:C5:59:LYS:NZ	2.51	0.40
1:2:1272:U:O2'	1:2:1275:A:OP2	2.35	0.40
1:2:276:C:O2'	1:2:277:U:H5''	2.22	0.40
1:2:396:G:N2	1:2:398:G:H3'	2.37	0.40
1:2:641:G:H1	1:2:693:U:H3	1.70	0.40
38:4:37:A:N3	38:4:37:A:H2'	2.37	0.40
36:5:1943:C:H42	36:5:2105:G:H1	1.68	0.40
36:5:2444:C:H2'	36:5:2445:A:C8	2.56	0.40
36:5:3081:C:H2'	36:5:3082:C:H6	1.86	0.40
36:5:3357:U:O2'	36:5:3358:U:OP1	2.38	0.40
73:O7:48:ASN:HB2	36:5:53:G:OP1	122.62	0.40
36:5:945:C:H2'	36:5:946:U:H6	1.87	0.40
36:5:999:G:H5''	37:7:104:A:O2'	2.20	0.40
1:6:1363:U:H3'	1:6:1364:G:H8	1.86	0.40
1:6:208:U:C2	1:6:209:U:C5	3.10	0.40
1:6:291:G:H2'	1:6:292:U:C6	2.56	0.40
1:6:498:G:N7	1:6:499:U:N3	2.69	0.40
14:C2:80:ASN:HA	14:C2:86:VAL:HG12	2.02	0.40
16:C4:79:VAL:HG22	16:C4:80:HIS:O	2.62	0.40
19:C7:32:LYS:HB3	19:C7:32:LYS:HE2	2.21	0.40
21:C9:91:TYR:N	21:C9:91:TYR:CD1	3.34	0.40
25:D3:42:PRO:HA	25:D3:81:LYS:HD2	2.41	0.40
26:D4:104:SER:OG	26:D4:107:GLN:OE1	4.64	0.40
26:D4:21:LYS:NZ	26:D4:77:ASN:OD1	2.45	0.40
40:L3:255:TRP:CD1	40:L3:256:HIS:CE1	4.07	0.40
40:L3:41:VAL:HG11	40:L3:194:TRP:CG	2.56	0.40
41:L4:34:ILE:O	41:L4:38:VAL:HG23	2.28	0.40
42:L5:196:ARG:HA	42:L5:199:ILE:HD12	2.50	0.40
42:L5:18:THR:HA	42:L5:19:PRO:HD3	1.81	0.40
42:L5:218:ARG:HH21	42:L5:222:LEU:HD21	1.87	0.40
44:L7:130:ILE:HG21	44:L7:130:ILE:HD13	2.14	0.40
45:L8:166:LEU:HD23	45:L8:166:LEU:HA	2.33	0.40
45:L8:24:ASN:N	45:L8:25:PRO:HD2	2.37	0.40
46:L9:94:TYR:CD2	46:L9:98:PRO:HA	2.56	0.40
38:4:141:C:OP1	51:M5:109:ARG:NH1	2.54	0.40
51:M5:94:TYR:CZ	51:M5:96:ARG:HB2	2.57	0.40
52:M6:16:VAL:HG23	52:M6:42:ASN:O	2.21	0.40
52:M6:18:ARG:O	52:M6:22:VAL:HG13	2.21	0.40
52:M6:65:ASN:O	52:M6:68:ARG:HG3	3.69	0.40
53:M7:82:ARG:HA	53:M7:83:TRP:CE3	2.81	0.40
54:M8:42:ALA:HB2	54:M8:133:LYS:HD3	3.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:M8:153:PHE:O	54:M8:161:LYS:HD3	2.22	0.40
55:M9:173:ARG:HE	55:M9:177:VAL:CG2	8.43	0.40
57:N1:136:ARG:HD3	57:N1:139:ARG:NH1	2.36	0.40
59:N3:46:LEU:HA	59:N3:46:LEU:HD12	2.46	0.40
66:O0:30:THR:O	66:O0:34:LEU:N	2.93	0.40
68:O2:93:ALA:HB1	68:O2:120:THR:HG22	2.02	0.40
70:O4:44:CYS:N	70:O4:49:SER:O	3.33	0.40
77:Q1:25:LYS:HA	77:Q1:25:LYS:HD3	4.70	0.40
79:Q3:49:ARG:CD	79:Q3:50:GLY:H	2.89	0.40
79:Q3:87:ARG:O	79:Q3:90:VAL:HG22	5.40	0.40
3:S1:205:PHE:HA	3:S1:206:PRO:HD2	1.82	0.40
4:S2:72:LEU:HD12	4:S2:72:LEU:HA	1.89	0.40
5:S3:135:GLU:HG3	5:S3:153:ALA:HB2	3.91	0.40
5:S3:32:GLU:N	5:S3:32:GLU:OE1	2.75	0.40
5:S3:93:ASP:N	5:S3:93:ASP:OD2	2.54	0.40
8:S6:211:LEU:HD22	8:S6:215:ARG:HH21	1.85	0.40
9:S7:155:ASP:OD2	9:S7:157:LYS:N	2.46	0.40
11:S9:159:ALA:HB3	11:S9:162:SER:OG	2.90	0.40
34:SR:81:LEU:HD11	34:SR:122:ILE:HD13	2.03	0.40
36:1:1602:A:H5''	55:M9:38:ARG:HG3	2.02	0.40
36:1:1676:A:P	58:N2:73:GLY:H	2.45	0.40
36:1:2144:A:C4	36:1:2281:A:N6	2.89	0.40
36:1:2425:G:OP1	51:M5:72:LYS:HE3	2.22	0.40
36:1:3370:A:H5'	40:L3:384:LYS:HD2	2.04	0.40
36:1:535:G:C4	36:1:554:A:C6	3.10	0.40
36:1:595:G:C6	36:1:609:G:H5''	2.57	0.40
1:2:1111:G:C6	1:2:1112:G:C4	3.10	0.40
1:2:1196:A:H4'	1:2:1197:C:C5'	2.52	0.40
1:2:423:G:H4'	1:2:424:C:OP1	2.21	0.40
1:2:45:U:O2	1:2:434:G:H1'	2.21	0.40
1:2:72:A:O2'	1:2:73:U:O4'	2.39	0.40
37:3:100:C:H2'	37:3:101:G:O4'	2.21	0.40
38:4:142:C:OP1	51:M5:38:ARG:NH1	2.53	0.40
38:4:77:A:H2'	38:4:78:G:O4'	2.21	0.40
36:5:1804:A:H2'	36:5:1805:C:H6	1.84	0.40
36:5:3337:G:H2'	36:5:3338:C:O4'	2.21	0.40
36:5:411:U:H2'	36:5:412:G:H8	1.86	0.40
36:5:359:U:N3	36:5:815:G:O2'	2.54	0.40
1:6:1258:U:H5	1:6:1259:U:C2	2.40	0.40
1:6:1393:C:H2'	1:6:1394:G:C8	2.56	0.40
1:6:138:A:C8	1:6:142:G:H5'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:6:1695:G:N2	1:6:1705:C:H41	2.19	0.40
77:Q1:2:ARG:HD2	1:6:1773:C:OP2	312.55	0.40
1:6:222:A:H62	1:6:833:U:H3	1.70	0.40
38:8:121:U:H2'	38:8:122:U:H6	1.87	0.40
15:C3:139:TRP:O	15:C3:140:LYS:HB3	4.17	0.40
16:C4:81:VAL:HG13	16:C4:115:ILE:HG23	3.42	0.40
19:C7:34:LEU:O	19:C7:38:ILE:HG12	5.56	0.40
22:D0:32:LYS:HA	22:D0:32:LYS:HD2	1.89	0.40
1:2:1429:G:C1'	22:D0:74:GLU:HG2	2.38	0.40
1:2:1038:U:H4'	24:D2:20:THR:HG21	2.04	0.40
26:D4:119:PHE:CE2	1:6:86:A:H5''	329.87	0.40
32:E0:40:TYR:CD2	32:E0:44:PHE:HE1	7.62	0.40
40:L3:151:ILE:O	40:L3:155:ALA:HB3	2.32	0.40
40:L3:56:ILE:HD12	40:L3:359:ILE:HA	2.47	0.40
46:L9:80:THR:O	46:L9:84:LYS:N	3.26	0.40
49:M3:149:GLN:HA	49:M3:150:PRO:HD3	1.91	0.40
51:M5:176:LYS:HB2	36:5:68:C:H4'	107.52	0.40
55:M9:159:ALA:HA	55:M9:162:ARG:NH1	2.37	0.40
56:N0:85:SER:OG	36:5:1294:A:H5''	303.26	0.40
57:N1:39:ILE:HD12	57:N1:102:ARG:HB2	2.03	0.40
60:N4:6:ASP:HA	60:N4:30:ARG:O	2.21	0.40
61:N5:92:LYS:HG3	36:5:1831:U:OP1	100.32	0.40
64:N8:118:ILE:HG12	64:N8:119:PRO:O	2.21	0.40
65:N9:29:TYR:CD1	65:N9:29:TYR:N	2.89	0.40
77:Q1:6:ARG:O	77:Q1:10:THR:HG23	2.30	0.40
2:S0:154:GLU:H	2:S0:154:GLU:HG2	1.59	0.40
2:S0:54:TRP:O	2:S0:58:VAL:HG23	2.33	0.40
1:2:933:A:P	3:S1:116:LYS:HZ1	2.44	0.40
3:S1:70:LEU:HB2	3:S1:82:ARG:O	4.48	0.40
4:S2:81:MET:N	4:S2:101:VAL:O	2.49	0.40
7:S5:120:ILE:O	7:S5:124:LEU:HD12	2.21	0.40
7:S5:42:LEU:H	7:S5:42:LEU:HD12	4.78	0.40
8:S6:121:LEU:O	8:S6:124:LEU:N	3.43	0.40
9:S7:46:ILE:HA	9:S7:59:ALA:O	2.63	0.40
10:S8:11:ARG:NH1	10:S8:15:GLY:O	3.28	0.40
11:S9:65:LYS:NZ	1:6:650:U:H5'	422.67	0.40
34:SR:129:LYS:HG2	34:SR:149:ASP:O	2.42	0.40
34:SR:112:SER:CB	34:SR:153:GLN:HA	2.52	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)
1:2:236:A:O2'	38:4:158:U:O2'[2_556]	2.19	0.01

## 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%)	156 (76%)	30 (15%)	18 (9%)	1	6
2	s0	204/251 (81%)	158 (78%)	31 (15%)	15 (7%)	1	10
3	S1	212/254 (84%)	154 (73%)	36 (17%)	22 (10%)	1	4
3	s1	214/254 (84%)	165 (77%)	37 (17%)	12 (6%)	2	17
4	S2	215/253 (85%)	174 (81%)	33 (15%)	8 (4%)	4	28
4	s2	215/253 (85%)	175 (81%)	26 (12%)	14 (6%)	1	13
5	S3	221/239 (92%)	189 (86%)	21 (10%)	11 (5%)	3	20
5	s3	221/239 (92%)	183 (83%)	27 (12%)	11 (5%)	3	20
6	S4	258/260 (99%)	205 (80%)	37 (14%)	16 (6%)	2	14
6	s4	258/260 (99%)	198 (77%)	44 (17%)	16 (6%)	2	14
7	S5	204/224 (91%)	163 (80%)	28 (14%)	13 (6%)	2	13
7	s5	204/224 (91%)	157 (77%)	30 (15%)	17 (8%)	1	7
8	S6	224/236 (95%)	198 (88%)	17 (8%)	9 (4%)	4	26
8	s6	216/236 (92%)	186 (86%)	24 (11%)	6 (3%)	6	37
9	S7	182/189 (96%)	137 (75%)	27 (15%)	18 (10%)	1	4
9	s7	184/189 (97%)	146 (79%)	25 (14%)	13 (7%)	1	10
10	S8	184/200 (92%)	159 (86%)	18 (10%)	7 (4%)	4	28
10	s8	184/200 (92%)	156 (85%)	21 (11%)	7 (4%)	4	28
11	S9	183/196 (93%)	148 (81%)	28 (15%)	7 (4%)	4	28
11	s9	183/196 (93%)	151 (82%)	24 (13%)	8 (4%)	3	23
12	C0	94/105 (90%)	74 (79%)	13 (14%)	7 (7%)	1	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	C1	153/155 (99%)	123 (80%)	23 (15%)	7 (5%)	3	22
13	c1	144/155 (93%)	122 (85%)	20 (14%)	2 (1%)	14	54
14	C2	122/142 (86%)	73 (60%)	32 (26%)	17 (14%)	0	1
14	c2	122/142 (86%)	76 (62%)	30 (25%)	16 (13%)	0	2
15	C3	148/150 (99%)	122 (82%)	20 (14%)	6 (4%)	3	26
15	c3	148/150 (99%)	117 (79%)	21 (14%)	10 (7%)	1	11
16	C4	125/136 (92%)	92 (74%)	21 (17%)	12 (10%)	1	5
16	c4	126/136 (93%)	98 (78%)	19 (15%)	9 (7%)	1	10
17	C5	122/141 (86%)	90 (74%)	17 (14%)	15 (12%)	0	2
17	c5	133/141 (94%)	98 (74%)	19 (14%)	16 (12%)	0	2
18	C6	139/142 (98%)	111 (80%)	19 (14%)	9 (6%)	1	13
18	c6	140/142 (99%)	123 (88%)	11 (8%)	6 (4%)	3	25
19	C7	116/136 (85%)	89 (77%)	20 (17%)	7 (6%)	2	15
19	c7	113/136 (83%)	89 (79%)	16 (14%)	8 (7%)	1	10
20	C8	143/145 (99%)	109 (76%)	27 (19%)	7 (5%)	3	21
20	c8	143/145 (99%)	116 (81%)	21 (15%)	6 (4%)	3	25
21	C9	141/143 (99%)	115 (82%)	19 (14%)	7 (5%)	3	20
21	c9	141/143 (99%)	119 (84%)	17 (12%)	5 (4%)	4	30
22	D0	105/120 (88%)	90 (86%)	9 (9%)	6 (6%)	2	17
22	d0	108/120 (90%)	87 (81%)	18 (17%)	3 (3%)	6	37
23	D1	85/87 (98%)	61 (72%)	17 (20%)	7 (8%)	1	7
23	d1	85/87 (98%)	71 (84%)	8 (9%)	6 (7%)	1	10
24	D2	127/129 (98%)	111 (87%)	12 (9%)	4 (3%)	5	34
24	d2	127/129 (98%)	117 (92%)	7 (6%)	3 (2%)	7	41
25	D3	142/144 (99%)	109 (77%)	20 (14%)	13 (9%)	1	5
25	d3	142/144 (99%)	125 (88%)	14 (10%)	3 (2%)	9	45
26	D4	132/134 (98%)	114 (86%)	8 (6%)	10 (8%)	1	9
26	d4	132/134 (98%)	110 (83%)	14 (11%)	8 (6%)	2	15
27	D5	68/107 (64%)	47 (69%)	15 (22%)	6 (9%)	1	6
27	d5	67/107 (63%)	52 (78%)	14 (21%)	1 (2%)	13	53
28	D6	95/97 (98%)	62 (65%)	19 (20%)	14 (15%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	d6	95/97 (98%)	70 (74%)	20 (21%)	5 (5%)	2	18
29	D7	79/81 (98%)	58 (73%)	18 (23%)	3 (4%)	4	28
29	d7	79/81 (98%)	62 (78%)	15 (19%)	2 (2%)	7	40
30	D8	61/66 (92%)	53 (87%)	6 (10%)	2 (3%)	5	32
30	d8	61/66 (92%)	47 (77%)	10 (16%)	4 (7%)	1	12
31	D9	51/55 (93%)	42 (82%)	6 (12%)	3 (6%)	2	16
31	d9	51/55 (93%)	41 (80%)	7 (14%)	3 (6%)	2	16
32	E0	58/62 (94%)	48 (83%)	7 (12%)	3 (5%)	2	19
32	e0	60/62 (97%)	46 (77%)	8 (13%)	6 (10%)	1	4
33	E1	69/76 (91%)	39 (56%)	12 (17%)	18 (26%)	0	0
33	e1	74/76 (97%)	38 (51%)	12 (16%)	24 (32%)	0	0
34	SR	316/318 (99%)	266 (84%)	34 (11%)	16 (5%)	2	20
34	sR	316/318 (99%)	264 (84%)	39 (12%)	13 (4%)	3	26
35	SM	155/273 (57%)	114 (74%)	22 (14%)	19 (12%)	0	2
35	sM	98/273 (36%)	59 (60%)	28 (29%)	11 (11%)	0	3
39	L2	250/253 (99%)	216 (86%)	25 (10%)	9 (4%)	4	29
39	l2	250/253 (99%)	208 (83%)	32 (13%)	10 (4%)	4	26
40	L3	384/386 (100%)	332 (86%)	39 (10%)	13 (3%)	5	31
40	l3	384/386 (100%)	341 (89%)	38 (10%)	5 (1%)	15	56
41	L4	359/361 (99%)	296 (82%)	38 (11%)	25 (7%)	1	10
41	l4	359/361 (99%)	295 (82%)	42 (12%)	22 (6%)	2	15
42	L5	294/296 (99%)	231 (79%)	38 (13%)	25 (8%)	1	6
42	l5	292/296 (99%)	253 (87%)	31 (11%)	8 (3%)	6	37
43	L6	152/175 (87%)	135 (89%)	13 (9%)	4 (3%)	7	39
43	l6	153/175 (87%)	125 (82%)	24 (16%)	4 (3%)	7	39
44	L7	220/243 (90%)	190 (86%)	24 (11%)	6 (3%)	6	37
44	l7	221/243 (91%)	199 (90%)	17 (8%)	5 (2%)	8	42
45	L8	231/255 (91%)	190 (82%)	30 (13%)	11 (5%)	3	21
45	l8	229/255 (90%)	178 (78%)	37 (16%)	14 (6%)	2	15
46	L9	189/191 (99%)	161 (85%)	20 (11%)	8 (4%)	3	25
46	l9	189/191 (99%)	170 (90%)	16 (8%)	3 (2%)	12	52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	M0	207/220 (94%)	169 (82%)	32 (16%)	6 (3%)	6	36
47	m0	209/220 (95%)	161 (77%)	35 (17%)	13 (6%)	2	14
48	M1	167/173 (96%)	130 (78%)	25 (15%)	12 (7%)	1	10
48	m1	167/173 (96%)	139 (83%)	18 (11%)	10 (6%)	2	15
49	M3	191/198 (96%)	149 (78%)	34 (18%)	8 (4%)	3	25
49	m3	192/198 (97%)	148 (77%)	30 (16%)	14 (7%)	1	10
50	M4	134/137 (98%)	116 (87%)	14 (10%)	4 (3%)	5	35
50	m4	135/137 (98%)	120 (89%)	13 (10%)	2 (2%)	13	53
51	M5	201/203 (99%)	178 (89%)	16 (8%)	7 (4%)	4	30
51	m5	201/203 (99%)	178 (89%)	18 (9%)	5 (2%)	7	40
52	M6	195/198 (98%)	171 (88%)	17 (9%)	7 (4%)	4	29
52	m6	195/198 (98%)	173 (89%)	18 (9%)	4 (2%)	9	45
53	M7	181/183 (99%)	149 (82%)	26 (14%)	6 (3%)	5	32
53	m7	153/183 (84%)	140 (92%)	11 (7%)	2 (1%)	15	56
54	M8	183/185 (99%)	157 (86%)	22 (12%)	4 (2%)	8	43
54	m8	183/185 (99%)	152 (83%)	25 (14%)	6 (3%)	5	32
55	M9	186/188 (99%)	164 (88%)	19 (10%)	3 (2%)	12	52
55	m9	186/188 (99%)	166 (89%)	20 (11%)	0	100	100
56	N0	170/172 (99%)	150 (88%)	13 (8%)	7 (4%)	3	26
56	n0	170/172 (99%)	156 (92%)	13 (8%)	1 (1%)	30	72
57	N1	157/159 (99%)	135 (86%)	16 (10%)	6 (4%)	4	28
57	n1	157/159 (99%)	138 (88%)	14 (9%)	5 (3%)	5	33
58	N2	98/120 (82%)	73 (74%)	21 (21%)	4 (4%)	3	26
58	n2	96/120 (80%)	84 (88%)	8 (8%)	4 (4%)	3	25
59	N3	134/136 (98%)	117 (87%)	11 (8%)	6 (4%)	3	23
59	n3	134/136 (98%)	121 (90%)	7 (5%)	6 (4%)	3	23
60	N4	96/155 (62%)	76 (79%)	15 (16%)	5 (5%)	2	19
60	n4	133/155 (86%)	109 (82%)	16 (12%)	8 (6%)	2	15
61	N5	119/141 (84%)	101 (85%)	16 (13%)	2 (2%)	11	50
61	n5	118/141 (84%)	101 (86%)	13 (11%)	4 (3%)	5	31
62	N6	124/126 (98%)	109 (88%)	13 (10%)	2 (2%)	12	52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
62	n6	124/126 (98%)	104 (84%)	16 (13%)	4 (3%)	5	33
63	N7	133/135 (98%)	106 (80%)	16 (12%)	11 (8%)	1	7
63	n7	133/135 (98%)	111 (84%)	15 (11%)	7 (5%)	2	18
64	N8	146/148 (99%)	121 (83%)	20 (14%)	5 (3%)	5	31
64	n8	146/148 (99%)	122 (84%)	18 (12%)	6 (4%)	3	26
65	N9	56/58 (97%)	47 (84%)	7 (12%)	2 (4%)	4	29
65	n9	56/58 (97%)	40 (71%)	10 (18%)	6 (11%)	0	3
66	O0	95/104 (91%)	84 (88%)	11 (12%)	0	100	100
66	o0	98/104 (94%)	85 (87%)	9 (9%)	4 (4%)	3	26
67	O1	107/112 (96%)	92 (86%)	9 (8%)	6 (6%)	2	17
67	o1	107/112 (96%)	91 (85%)	9 (8%)	7 (6%)	1	13
68	O2	125/129 (97%)	111 (89%)	13 (10%)	1 (1%)	24	66
68	o2	125/129 (97%)	112 (90%)	10 (8%)	3 (2%)	7	41
69	O3	104/106 (98%)	98 (94%)	5 (5%)	1 (1%)	19	62
69	o3	104/106 (98%)	90 (86%)	11 (11%)	3 (3%)	6	36
70	O4	110/119 (92%)	94 (86%)	15 (14%)	1 (1%)	21	64
70	o4	110/119 (92%)	93 (84%)	15 (14%)	2 (2%)	11	49
71	O5	117/119 (98%)	97 (83%)	14 (12%)	6 (5%)	2	20
71	o5	117/119 (98%)	103 (88%)	12 (10%)	2 (2%)	11	50
72	O6	97/99 (98%)	78 (80%)	12 (12%)	7 (7%)	1	10
72	o6	97/99 (98%)	76 (78%)	13 (13%)	8 (8%)	1	7
73	O7	85/87 (98%)	73 (86%)	11 (13%)	1 (1%)	16	58
73	o7	85/87 (98%)	75 (88%)	10 (12%)	0	100	100
74	O8	75/77 (97%)	63 (84%)	9 (12%)	3 (4%)	4	26
74	o8	75/77 (97%)	59 (79%)	10 (13%)	6 (8%)	1	8
75	O9	48/50 (96%)	40 (83%)	7 (15%)	1 (2%)	9	45
75	o9	48/50 (96%)	39 (81%)	7 (15%)	2 (4%)	3	25
76	Q0	50/52 (96%)	42 (84%)	5 (10%)	3 (6%)	2	15
76	q0	50/52 (96%)	47 (94%)	1 (2%)	2 (4%)	4	26
77	Q1	23/25 (92%)	19 (83%)	4 (17%)	0	100	100
77	q1	23/25 (92%)	22 (96%)	1 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
78	Q2	103/105 (98%)	84 (82%)	12 (12%)	7 (7%)	1	11
78	q2	103/105 (98%)	88 (85%)	11 (11%)	4 (4%)	4	27
79	Q3	89/91 (98%)	77 (86%)	6 (7%)	6 (7%)	1	12
79	q3	89/91 (98%)	80 (90%)	7 (8%)	2 (2%)	8	43
80	c0	92/105 (88%)	63 (68%)	16 (17%)	13 (14%)	0	1
82	p0	139/311 (45%)	113 (81%)	20 (14%)	6 (4%)	3	25
85	f	146/157 (93%)	98 (67%)	30 (20%)	18 (12%)	0	2
All	All	22479/24300 (92%)	18504 (82%)	2828 (13%)	1147 (5%)	2	20

All (1147) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	S0	4	PRO
2	S0	158	VAL
2	S0	190	ASP
2	S0	191	ARG
2	S0	192	THR
3	S1	37	THR
3	S1	132	ASP
3	S1	181	LEU
3	S1	182	ALA
3	S1	206	PRO
3	S1	213	ARG
4	S2	48	GLY
5	S3	195	SER
5	S3	211	PRO
5	S3	220	PRO
6	S4	12	LEU
7	S5	26	ALA
7	S5	39	GLU
7	S5	51	VAL
7	S5	63	GLN
7	S5	98	MET
8	S6	122	GLU
8	S6	149	LYS
8	S6	173	PRO
8	S6	174	LYS
9	S7	31	SER
9	S7	32	PRO
9	S7	64	VAL

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Mol	Chain	Res	Type
9	S7	74	GLN
9	S7	112	ARG
9	S7	131	PHE
9	S7	186	PRO
11	S9	93	LEU
11	S9	134	ILE
12	C0	87	VAL
12	C0	88	PRO
12	C0	92	ILE
13	C1	7	VAL
13	C1	55	ASP
13	C1	155	LYS
14	C2	91	VAL
15	C3	68	GLY
16	C4	42	VAL
16	C4	125	SER
17	C5	11	VAL
17	C5	52	LYS
17	C5	54	ALA
17	C5	80	MET
17	C5	87	PRO
17	C5	125	PRO
18	C6	41	PRO
18	C6	58	ASP
18	C6	114	ARG
18	C6	138	PHE
19	C7	85	VAL
19	C7	86	PRO
19	C7	88	VAL
21	C9	11	ALA
21	C9	31	PRO
21	C9	53	TRP
21	C9	69	LYS
24	D2	78	ARG
24	D2	83	ILE
25	D3	114	LYS
27	D5	43	ASP
27	D5	44	GLN
28	D6	45	VAL
28	D6	82	ARG
28	D6	84	VAL
28	D6	85	ARG

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Mol	Chain	Res	Type
28	D6	86	VAL
29	D7	62	ILE
33	E1	93	HIS
33	E1	98	VAL
33	E1	102	VAL
33	E1	103	LEU
34	SR	318	ALA
35	SM	140	ASP
35	SM	153	LYS
35	SM	171	PRO
39	L2	20	THR
39	L2	130	SER
40	L3	3	HIS
40	L3	4	ARG
40	L3	140	ASP
41	L4	15	ALA
41	L4	146	PRO
41	L4	232	SER
41	L4	233	LEU
41	L4	270	SER
41	L4	291	ASN
41	L4	317	PRO
41	L4	318	LEU
41	L4	341	SER
42	L5	57	ASN
42	L5	178	ASN
42	L5	221	GLU
42	L5	223	PHE
42	L5	233	ALA
42	L5	234	ASP
42	L5	257	GLU
42	L5	258	LYS
42	L5	292	ALA
42	L5	293	LEU
44	L7	163	LEU
45	L8	25	PRO
45	L8	31	PRO
45	L8	116	VAL
45	L8	122	LYS
45	L8	157	VAL
46	L9	50	ASN
47	M0	145	LYS

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Mol	Chain	Res	Type
47	M0	219	ALA
48	M1	8	PRO
48	M1	11	ASP
49	M3	129	ASN
50	M4	9	ALA
51	M5	74	PRO
52	M6	16	VAL
52	M6	110	PRO
52	M6	111	PRO
52	M6	112	TYR
56	N0	133	ALA
56	N0	167	ARG
57	N1	126	VAL
58	N2	51	GLY
60	N4	81	PRO
63	N7	30	ASP
63	N7	128	GLN
67	O1	21	HIS
67	O1	99	ALA
71	O5	71	LYS
71	O5	119	LYS
72	O6	33	ALA
74	O8	33	LYS
78	Q2	30	ALA
78	Q2	100	LYS
2	s0	65	ALA
2	s0	66	ALA
2	s0	95	ALA
2	s0	164	ASN
2	s0	189	VAL
2	s0	194	PRO
2	s0	206	ASP
3	s1	147	ALA
3	s1	206	PRO
3	s1	231	LEU
4	s2	91	ARG
5	s3	211	PRO
5	s3	217	ILE
5	s3	220	PRO
6	s4	104	ASP
6	s4	163	ASP
6	s4	195	ILE

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Mol	Chain	Res	Type
6	s4	196	VAL
7	s5	36	ALA
7	s5	184	PHE
7	s5	204	GLY
8	s6	154	ARG
9	s7	63	PRO
9	s7	106	SER
9	s7	131	PHE
11	s9	118	LEU
11	s9	121	SER
80	c0	2	LEU
80	c0	83	PRO
80	c0	94	ILE
13	c1	40	LEU
14	c2	22	VAL
14	c2	89	ILE
14	c2	131	ASP
15	c3	12	SER
15	c3	66	ILE
15	c3	87	ASP
16	c4	91	THR
16	c4	98	GLY
16	c4	132	ARG
17	c5	11	VAL
17	c5	52	LYS
17	c5	68	PRO
17	c5	125	PRO
18	c6	42	GLU
18	c6	97	VAL
19	c7	67	ARG
19	c7	88	VAL
19	c7	99	VAL
20	c8	92	ILE
21	c9	33	TYR
24	d2	68	ARG
25	d3	138	GLU
26	d4	52	LYS
28	d6	34	LYS
30	d8	32	PHE
30	d8	61	ARG
31	d9	6	VAL
32	e0	60	PRO

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Mol	Chain	Res	Type
33	e1	79	LYS
33	e1	83	LYS
33	e1	87	THR
33	e1	92	LYS
33	e1	98	VAL
33	e1	102	VAL
34	sR	163	ASP
35	sM	83	LYS
40	l3	140	ASP
40	l3	188	ILE
41	l4	142	VAL
41	l4	233	LEU
41	l4	305	ALA
41	l4	329	PRO
41	l4	349	THR
41	l4	361	HIS
42	l5	178	ASN
44	l7	193	PRO
45	l8	25	PRO
45	l8	26	LEU
45	l8	34	PHE
45	l8	122	LYS
47	m0	153	ARG
48	m1	8	PRO
48	m1	108	GLU
49	m3	51	LEU
49	m3	134	GLU
51	m5	76	PRO
51	m5	183	THR
52	m6	110	PRO
52	m6	111	PRO
53	m7	37	ASN
54	m8	41	ASP
54	m8	112	ALA
54	m8	113	LYS
57	n1	135	PRO
60	n4	63	ILE
60	n4	76	VAL
61	n5	44	PRO
62	n6	84	LYS
63	n7	5	LEU
65	n9	23	LYS

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Mol	Chain	Res	Type
65	n9	24	PRO
65	n9	39	PHE
67	o1	5	LYS
67	o1	84	ASP
67	o1	86	LYS
68	o2	6	HIS
69	o3	88	ASN
71	o5	99	GLN
72	o6	33	ALA
72	o6	79	SER
72	o6	98	ARG
74	o8	17	ARG
85	f	64	ILE
85	f	109	THR
85	f	111	ASP
85	f	148	ILE
2	S0	39	ASN
2	S0	66	ALA
2	S0	95	ALA
2	S0	194	PRO
3	S1	21	VAL
3	S1	58	SER
3	S1	62	LYS
3	S1	63	GLY
3	S1	93	GLY
3	S1	177	GLN
4	S2	91	ARG
5	S3	144	ALA
5	S3	216	PRO
6	S4	24	SER
6	S4	104	ASP
6	S4	195	ILE
7	S5	35	GLN
7	S5	43	PHE
7	S5	150	GLY
7	S5	153	GLY
8	S6	148	SER
8	S6	152	ASP
9	S7	110	GLN
9	S7	111	LYS
9	S7	116	ARG
10	S8	149	SER

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Mol	Chain	Res	Type
11	S9	150	LEU
11	S9	167	ALA
13	C1	40	LEU
13	C1	145	ALA
14	C2	101	ALA
14	C2	119	SER
14	C2	126	TRP
14	C2	127	GLY
14	C2	131	ASP
15	C3	19	SER
15	C3	22	ALA
15	C3	24	ALA
16	C4	96	PRO
16	C4	126	THR
17	C5	48	GLY
18	C6	59	LYS
18	C6	97	VAL
19	C7	124	VAL
20	C8	14	ILE
20	C8	91	ASP
20	C8	92	ILE
21	C9	50	ALA
22	D0	55	PRO
23	D1	81	ASN
25	D3	4	GLY
25	D3	110	LYS
25	D3	112	LYS
25	D3	137	LYS
26	D4	5	VAL
26	D4	100	VAL
27	D5	41	ILE
27	D5	71	ILE
28	D6	36	ILE
31	D9	20	GLN
32	E0	51	ASN
33	E1	83	LYS
33	E1	106	TYR
33	E1	144	CYS
34	SR	51	ASP
34	SR	163	ASP
35	SM	12	VAL
35	SM	42	ALA

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Mol	Chain	Res	Type
35	SM	52	PRO
35	SM	166	LYS
39	L2	13	GLY
39	L2	34	TYR
39	L2	246	LEU
39	L2	251	LYS
40	L3	351	LEU
40	L3	385	LYS
41	L4	268	ALA
41	L4	311	HIS
41	L4	313	LEU
41	L4	338	LYS
42	L5	59	ASP
42	L5	93	THR
42	L5	252	ALA
42	L5	253	PHE
44	L7	26	VAL
45	L8	36	ILE
45	L8	39	ALA
45	L8	115	ALA
46	L9	188	THR
47	M0	63	GLU
47	M0	117	GLY
48	M1	12	LEU
48	M1	24	GLY
48	M1	114	ILE
48	M1	115	LYS
49	M3	47	ALA
49	M3	141	ALA
49	M3	166	ALA
51	M5	184	LYS
53	M7	67	ILE
55	M9	53	LYS
55	M9	130	ASN
56	N0	24	LEU
58	N2	11	ILE
58	N2	60	GLY
59	N3	82	ALA
61	N5	24	LEU
62	N6	126	LEU
63	N7	3	LYS
63	N7	17	ARG

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Mol	Chain	Res	Type
63	N7	125	GLY
64	N8	66	ALA
64	N8	76	ASP
64	N8	96	LYS
67	O1	6	ASP
67	O1	83	GLU
67	O1	84	ASP
71	O5	35	LYS
72	O6	80	PHE
78	Q2	34	SER
78	Q2	94	GLY
79	Q3	59	CYS
2	s0	44	GLY
2	s0	68	PRO
3	s1	41	ARG
3	s1	82	ARG
3	s1	93	GLY
3	s1	106	THR
4	s2	92	ALA
4	s2	121	VAL
4	s2	149	GLY
4	s2	163	GLY
5	s3	93	ASP
5	s3	115	ILE
5	s3	179	GLN
6	s4	164	LEU
7	s5	26	ALA
7	s5	35	GLN
7	s5	43	PHE
7	s5	100	ASN
8	s6	156	PHE
8	s6	164	LYS
9	s7	10	SER
10	s8	35	ASN
10	s8	122	GLY
80	c0	23	ALA
80	c0	32	HIS
80	c0	88	ILE
15	c3	18	TYR
15	c3	19	SER
15	c3	60	VAL
16	c4	97	GLY

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Mol	Chain	Res	Type
17	c5	8	LYS
17	c5	17	TYR
17	c5	20	VAL
17	c5	47	ARG
17	c5	71	GLU
17	c5	80	MET
18	c6	39	VAL
18	c6	113	ASP
20	c8	14	ILE
20	c8	91	ASP
21	c9	26	GLY
21	c9	34	VAL
22	d0	17	GLN
22	d0	49	ASN
23	d1	2	GLU
26	d4	33	ALA
26	d4	35	VAL
26	d4	53	ASP
26	d4	68	LYS
27	d5	53	GLU
28	d6	13	LYS
29	d7	57	GLU
30	d8	33	LEU
31	d9	7	TRP
31	d9	11	PRO
32	e0	51	ASN
33	e1	84	VAL
33	e1	100	LEU
33	e1	107	LYS
33	e1	110	ALA
33	e1	127	GLY
34	sR	160	GLU
35	sM	42	ALA
35	sM	47	ALA
35	sM	50	ASN
35	sM	66	ALA
35	sM	163	GLU
39	l2	80	GLU
39	l2	94	ALA
39	l2	194	ASN
39	l2	212	GLY
40	l3	155	ALA

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Mol	Chain	Res	Type
40	l3	347	SER
41	l4	15	ALA
41	l4	90	PHE
41	l4	221	ASN
41	l4	311	HIS
41	l4	330	TYR
41	l4	338	LYS
42	l5	260	PHE
44	l7	191	VAL
45	l8	69	LEU
45	l8	118	GLU
45	l8	237	ILE
46	l9	130	ASP
46	l9	144	ILE
47	m0	57	LEU
47	m0	77	THR
47	m0	78	THR
47	m0	195	ALA
48	m1	94	ARG
48	m1	114	ILE
48	m1	152	HIS
49	m3	44	ALA
49	m3	47	ALA
49	m3	76	THR
49	m3	93	ILE
49	m3	150	PRO
51	m5	181	ASN
51	m5	184	LYS
58	n2	51	GLY
59	n3	4	ASN
60	n4	25	ASP
60	n4	26	SER
61	n5	45	LYS
61	n5	62	VAL
62	n6	6	LEU
63	n7	56	LYS
63	n7	125	GLY
64	n8	76	ASP
65	n9	5	LYS
65	n9	21	ILE
66	o0	7	GLN
66	o0	101	LEU

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Mol	Chain	Res	Type
67	o1	45	GLY
68	o2	5	PRO
68	o2	124	GLY
71	o5	119	LYS
72	o6	34	SER
72	o6	64	SER
74	o8	18	ALA
76	q0	78	ILE
82	p0	68	SER
82	p0	278	PRO
2	S0	5	ALA
2	S0	109	ASN
2	S0	161	PRO
2	S0	195	TRP
2	S0	202	TYR
3	S1	54	LEU
3	S1	209	ASN
4	S2	106	ASP
5	S3	217	ILE
5	S3	218	LEU
6	S4	26	CYS
7	S5	45	LYS
8	S6	69	LEU
8	S6	165	GLY
9	S7	36	ALA
9	S7	98	ILE
9	S7	129	LEU
9	S7	134	GLU
10	S8	40	ALA
10	S8	120	THR
10	S8	152	ILE
10	S8	153	GLU
11	S9	147	MET
12	C0	30	ALA
12	C0	34	GLU
12	C0	60	SER
14	C2	22	VAL
14	C2	93	ASP
14	C2	106	ILE
14	C2	107	ASP
14	C2	112	ALA
15	C3	28	LEU

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Mol	Chain	Res	Type
16	C4	18	ARG
16	C4	40	ALA
16	C4	114	ARG
16	C4	124	ASP
17	C5	109	PRO
17	C5	127	ARG
19	C7	115	LEU
20	C8	76	PRO
20	C8	103	ASN
22	D0	17	GLN
22	D0	96	PRO
22	D0	120	SER
23	D1	7	GLN
23	D1	15	ARG
25	D3	39	LYS
25	D3	41	SER
25	D3	80	GLY
25	D3	96	VAL
25	D3	138	GLU
26	D4	4	ALA
26	D4	54	ALA
26	D4	95	GLY
28	D6	8	ASN
28	D6	11	ASN
28	D6	46	GLU
29	D7	75	GLU
30	D8	36	THR
32	E0	47	VAL
33	E1	87	THR
33	E1	111	GLU
33	E1	118	ARG
33	E1	145	HIS
34	SR	3	SER
34	SR	15	GLY
34	SR	16	HIS
34	SR	135	THR
34	SR	186	PHE
35	SM	64	LYS
35	SM	82	THR
35	SM	86	ASN
35	SM	87	THR
35	SM	139	GLU

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Mol	Chain	Res	Type
35	SM	173	THR
39	L2	47	GLN
39	L2	127	ALA
40	L3	142	ALA
40	L3	155	ALA
40	L3	174	LYS
40	L3	291	GLU
40	L3	348	ARG
41	L4	4	PRO
41	L4	14	GLU
42	L5	7	ALA
42	L5	137	ASP
42	L5	212	ALA
42	L5	259	LYS
42	L5	289	LYS
43	L6	20	LYS
46	L9	2	LYS
46	L9	59	ASN
46	L9	107	ASP
46	L9	189	GLU
46	L9	190	ASP
48	M1	108	GLU
48	M1	152	HIS
49	M3	134	GLU
49	M3	136	GLU
50	M4	10	SER
50	M4	29	ALA
51	M5	158	HIS
52	M6	123	ALA
52	M6	182	ASN
53	M7	159	LYS
53	M7	160	ALA
53	M7	164	LYS
54	M8	74	GLU
57	N1	122	GLN
59	N3	134	GLY
60	N4	76	VAL
60	N4	97	LYS
61	N5	48	SER
63	N7	16	GLY
63	N7	102	GLU
63	N7	124	ALA

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Mol	Chain	Res	Type
64	N8	97	GLU
64	N8	117	ARG
71	O5	90	ARG
71	O5	91	ALA
72	O6	78	GLY
75	O9	3	ALA
76	Q0	120	GLN
78	Q2	17	CYS
78	Q2	60	LYS
78	Q2	102	GLN
79	Q3	60	CYS
2	s0	191	ARG
3	s1	207	LEU
3	s1	209	ASN
3	s1	224	ASP
5	s3	44	THR
5	s3	196	ARG
6	s4	23	LEU
6	s4	66	MET
6	s4	168	LYS
6	s4	214	LEU
7	s5	28	PRO
7	s5	39	GLU
8	s6	152	ASP
9	s7	41	LEU
10	s8	199	LYS
11	s9	3	ARG
11	s9	5	PRO
11	s9	120	LYS
11	s9	167	ALA
80	c0	30	ALA
80	c0	82	LEU
80	c0	95	GLN
13	c1	55	ASP
14	c2	58	LEU
15	c3	43	LYS
15	c3	140	LYS
16	c4	51	ASP
17	c5	6	ASN
17	c5	127	ARG
19	c7	103	ASP
20	c8	77	THR

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Mol	Chain	Res	Type
21	c9	29	GLU
21	c9	68	ARG
22	d0	119	ALA
23	d1	44	ARG
26	d4	58	PHE
28	d6	46	GLU
32	e0	61	SER
33	e1	81	LYS
33	e1	85	TYR
33	e1	103	LEU
33	e1	105	TYR
33	e1	112	GLY
33	e1	128	ALA
33	e1	136	LYS
34	sR	15	GLY
34	sR	28	GLY
34	sR	63	GLY
34	sR	226	ALA
35	sM	165	ILE
35	sM	172	ALA
40	l3	3	HIS
41	l4	4	PRO
41	l4	5	GLN
41	l4	146	PRO
41	l4	302	ALA
41	l4	342	LYS
42	l5	119	TYR
42	l5	245	GLU
42	l5	258	LYS
43	l6	11	PRO
43	l6	173	MET
44	l7	158	LYS
45	l8	39	ALA
45	l8	81	THR
45	l8	203	VAL
45	l8	230	LYS
47	m0	3	ARG
47	m0	130	ASP
47	m0	154	ARG
47	m0	176	LEU
47	m0	187	ALA
47	m0	196	PHE

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Mol	Chain	Res	Type
48	m1	95	ASN
48	m1	145	LYS
49	m3	50	PRO
49	m3	135	ALA
52	m6	5	PRO
54	m8	99	THR
54	m8	108	ALA
57	n1	136	ARG
58	n2	105	LEU
59	n3	42	SER
59	n3	106	LYS
60	n4	64	THR
60	n4	83	THR
61	n5	55	ASN
62	n6	125	LYS
63	n7	36	HIS
63	n7	103	GLN
64	n8	47	LYS
64	n8	129	PHE
67	o1	82	GLU
69	o3	94	PHE
70	o4	82	ALA
72	o6	99	ARG
74	o8	74	LYS
75	o9	40	LYS
82	p0	102	SER
85	f	132	LYS
2	S0	26	ALA
2	S0	94	GLY
2	S0	205	ARG
3	S1	35	PRO
3	S1	224	ASP
3	S1	230	ALA
4	S2	39	THR
4	S2	107	SER
4	S2	148	LEU
4	S2	182	PRO
5	S3	62	ASN
5	S3	81	PRO
6	S4	11	ARG
6	S4	77	ARG
6	S4	200	ARG

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Mol	Chain	Res	Type
6	S4	201	HIS
6	S4	205	PHE
6	S4	245	LYS
7	S5	58	LEU
7	S5	64	VAL
9	S7	15	GLU
9	S7	30	SER
10	S8	10	LYS
10	S8	52	ASN
11	S9	98	ALA
13	C1	6	THR
14	C2	83	GLU
14	C2	87	PRO
16	C4	39	ILE
17	C5	29	SER
17	C5	69	GLU
17	C5	101	ALA
18	C6	33	GLY
18	C6	142	TYR
19	C7	87	GLU
22	D0	16	GLN
23	D1	10	GLU
23	D1	42	GLU
25	D3	3	LYS
25	D3	40	SER
26	D4	34	ASN
26	D4	134	ALA
27	D5	88	ILE
28	D6	15	ARG
33	E1	84	VAL
33	E1	94	LYS
33	E1	109	ASP
33	E1	148	TYR
34	SR	98	GLU
34	SR	139	GLN
34	SR	161	LYS
34	SR	237	GLN
35	SM	53	ARG
35	SM	174	LYS
39	L2	234	LYS
40	L3	258	ALA
41	L4	16	THR

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Mol	Chain	Res	Type
41	L4	140	HIS
41	L4	361	HIS
42	L5	185	PHE
42	L5	214	ASP
42	L5	295	GLY
43	L6	58	LEU
44	L7	72	ALA
44	L7	178	ILE
45	L8	79	GLN
46	L9	96	HIS
48	M1	117	ASP
49	M3	76	THR
51	M5	94	TYR
51	M5	165	THR
54	M8	99	THR
54	M8	162	ALA
55	M9	3	ASN
56	N0	2	ALA
57	N1	124	VAL
59	N3	81	GLN
59	N3	132	ASN
60	N4	86	SER
63	N7	7	ALA
63	N7	103	GLN
65	N9	32	LEU
71	O5	118	ILE
72	O6	3	VAL
76	Q0	79	GLU
79	Q3	7	LYS
79	Q3	58	SER
79	Q3	91	GLU
2	s0	10	THR
2	s0	163	ASN
3	s1	218	LEU
3	s1	223	PHE
4	s2	93	GLY
4	s2	150	GLN
4	s2	235	LEU
4	s2	238	SER
6	s4	11	ARG
6	s4	57	ASN
6	s4	90	ILE

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Mol	Chain	Res	Type
7	s5	55	ASP
7	s5	56	ALA
7	s5	60	ASP
9	s7	9	LEU
9	s7	11	GLN
9	s7	64	VAL
9	s7	74	GLN
9	s7	105	THR
9	s7	133	THR
10	s8	52	ASN
80	c0	3	MET
80	c0	31	LYS
14	c2	39	ASP
14	c2	106	ILE
14	c2	108	ARG
15	c3	29	SER
16	c4	37	GLU
16	c4	114	ARG
16	c4	125	SER
17	c5	49	MET
18	c6	4	VAL
19	c7	113	LEU
23	d1	10	GLU
23	d1	42	GLU
24	d2	56	HIS
26	d4	54	ALA
28	d6	35	ALA
30	d8	16	LEU
32	e0	47	VAL
32	e0	54	ARG
33	e1	94	LYS
33	e1	137	ASP
34	sR	161	LYS
34	sR	165	ASP
35	sM	43	ASP
35	sM	168	ALA
39	l2	56	ALA
41	l4	11	LEU
41	l4	143	GLU
41	l4	328	ASN
44	l7	229	PHE
45	l8	133	LYS

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Mol	Chain	Res	Type
47	m0	117	GLY
48	m1	165	GLN
49	m3	60	ALA
49	m3	101	ARG
49	m3	129	ASN
50	m4	8	LYS
50	m4	136	ALA
51	m5	68	ARG
52	m6	109	PRO
54	m8	145	ASN
56	n0	2	ALA
57	n1	127	GLN
58	n2	60	GLY
59	n3	16	GLY
59	n3	107	GLY
60	n4	72	SER
64	n8	110	GLY
67	o1	91	SER
69	o3	59	VAL
72	o6	20	MET
74	o8	3	ARG
74	o8	20	VAL
78	q2	33	ALA
78	q2	78	LYS
79	q3	4	ARG
82	p0	33	VAL
82	p0	289	ALA
85	f	97	ASP
85	f	113	VAL
85	f	120	LEU
85	f	122	ASP
85	f	152	GLU
2	S0	102	PHE
3	S1	210	ILE
3	S1	221	PRO
5	S3	93	ASP
5	S3	196	ARG
6	S4	193	GLY
6	S4	194	THR
7	S5	65	ARG
9	S7	38	LEU
13	C1	30	ARG

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Mol	Chain	Res	Type
14	C2	68	GLU
14	C2	82	PRO
14	C2	108	ARG
15	C3	3	ARG
16	C4	51	ASP
16	C4	75	GLY
17	C5	130	ARG
18	C6	39	VAL
19	C7	25	THR
20	C8	36	LYS
20	C8	82	PRO
25	D3	143	PRO
26	D4	6	THR
26	D4	50	ALA
28	D6	97	PRO
29	D7	51	GLN
31	D9	19	ARG
33	E1	85	TYR
33	E1	100	LEU
35	SM	89	ARG
35	SM	100	THR
40	L3	317	ILE
41	L4	90	PHE
41	L4	223	PRO
42	L5	85	ARG
44	L7	164	SER
44	L7	191	VAL
48	M1	64	LYS
48	M1	141	ARG
49	M3	165	SER
50	M4	6	ILE
51	M5	81	TYR
52	M6	89	SER
53	M7	182	ILE
57	N1	18	ASP
57	N1	159	PHE
59	N3	109	MET
68	O2	12	LYS
72	O6	21	THR
72	O6	34	SER
72	O6	99	ARG
73	O7	68	LYS

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Mol	Chain	Res	Type
74	O8	34	ALA
2	s0	103	THR
2	s0	127	ARG
4	s2	164	SER
5	s3	59	LEU
5	s3	61	GLU
5	s3	203	PRO
6	s4	30	ARG
7	s5	29	ILE
7	s5	45	LYS
8	s6	68	LEU
8	s6	70	PRO
9	s7	112	ARG
10	s8	78	ILE
10	s8	101	ILE
80	c0	35	ILE
80	c0	90	PRO
14	c2	25	GLU
14	c2	63	VAL
14	c2	87	PRO
14	c2	109	GLU
14	c2	115	VAL
16	c4	77	THR
17	c5	12	PHE
17	c5	130	ARG
18	c6	142	TYR
19	c7	111	LYS
20	c8	61	LEU
23	d1	41	GLU
25	d3	131	SER
26	d4	30	PRO
28	d6	59	TYR
29	d7	75	GLU
32	e0	43	ARG
33	e1	106	TYR
33	e1	131	PHE
33	e1	146	SER
33	e1	148	TYR
34	sR	97	GLY
34	sR	105	GLY
34	sR	186	PHE
34	sR	250	TYR

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Mol	Chain	Res	Type
39	l2	32	LEU
39	l2	70	ARG
39	l2	215	ASN
42	l5	98	ALA
42	l5	270	LYS
43	l6	10	TYR
44	l7	178	ILE
45	l8	121	SER
46	l9	167	VAL
48	m1	12	LEU
49	m3	45	LYS
53	m7	75	GLU
57	n1	148	PRO
63	n7	102	GLU
65	n9	32	LEU
66	o0	10	ILE
66	o0	103	THR
67	o1	83	GLU
76	q0	80	PRO
78	q2	76	LYS
79	q3	51	ALA
82	p0	198	PRO
85	f	13	ALA
85	f	121	GLY
6	S4	152	PRO
6	S4	214	LEU
9	S7	67	LEU
11	S9	18	PRO
12	C0	93	GLN
17	C5	39	ALA
21	C9	39	THR
23	D1	12	TYR
24	D2	67	GLY
26	D4	133	ASN
27	D5	86	GLU
28	D6	61	GLU
28	D6	63	ALA
33	E1	86	THR
34	SR	160	GLU
34	SR	238	ASP
35	SM	22	PRO
41	L4	5	GLN

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Mol	Chain	Res	Type
41	L4	141	ARG
42	L5	115	LEU
42	L5	249	ALA
43	L6	98	VAL
47	M0	6	ALA
57	N1	155	PRO
69	O3	59	VAL
79	Q3	51	ALA
2	s0	9	LEU
4	s2	106	ASP
4	s2	155	ALA
4	s2	182	PRO
11	s9	165	GLY
14	c2	90	LYS
19	c7	86	PRO
39	l2	247	ARG
41	l4	13	GLY
42	l5	125	VAL
59	n3	28	ASN
62	n6	12	ARG
63	n7	70	PRO
64	n8	24	LYS
64	n8	56	VAL
70	o4	59	PRO
75	o9	24	PRO
78	q2	74	CYS
85	f	11	ALA
85	f	17	ALA
85	f	18	THR
85	f	98	GLY
3	S1	176	VAL
17	C5	126	VAL
21	C9	116	ILE
43	L6	36	PRO
51	M5	75	VAL
58	N2	19	VAL
63	N7	37	PRO
67	O1	7	VAL
6	s4	243	GLY
7	s5	59	VAL
7	s5	151	GLY
9	s7	8	ILE

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Mol	Chain	Res	Type
11	s9	162	SER
17	c5	126	VAL
20	c8	4	VAL
35	sM	51	ARG
39	l2	175	VAL
43	l6	36	PRO
48	m1	117	ASP
60	n4	132	GLY
74	o8	35	GLY
85	f	143	GLY
3	S1	75	GLY
24	D2	48	GLY
32	E0	50	VAL
34	SR	194	GLY
35	SM	154	VAL
41	L4	272	VAL
45	L8	135	GLY
53	M7	157	VAL
56	N0	22	PRO
56	N0	72	VAL
60	N4	80	ARG
65	N9	21	ILE
70	O4	77	GLY
74	O8	37	PRO
4	s2	62	PRO
6	s4	135	GLY
7	s5	101	GLY
14	c2	44	GLY
14	c2	66	VAL
15	c3	22	ALA
25	d3	80	GLY
34	sR	194	GLY
47	m0	47	PRO
72	o6	78	GLY
3	S1	48	VAL
4	S2	235	LEU
8	S6	162	VAL
28	D6	64	LEU
31	D9	11	PRO
41	L4	181	VAL
45	L8	30	THR
48	M1	67	VAL

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Mol	Chain	Res	Type
56	N0	135	VAL
10	s8	50	GLY
19	c7	68	GLY
24	d2	6	VAL
41	l4	190	GLY
57	n1	124	VAL
85	f	118	GLY
6	S4	239	PRO
14	C2	66	VAL
16	C4	118	VAL
30	D8	44	VAL
34	SR	30	PRO
41	L4	348	GLY
47	M0	194	GLY
54	M8	97	PRO
59	N3	3	GLY
62	N6	45	ILE
6	s4	150	PRO
14	c2	110	GLY
45	l8	163	VAL
58	n2	30	PRO
22	D0	118	VAL
23	D1	82	VAL
76	Q0	78	ILE
23	d1	9	VAL
49	m3	46	ILE
40	L3	257	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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%)	138 (84%)	26 (16%)	3	15
2	s0	165/209 (79%)	142 (86%)	23 (14%)	4	21
3	S1	191/223 (86%)	159 (83%)	32 (17%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	s1	192/223 (86%)	157 (82%)	35 (18%)	2	10
4	S2	176/204 (86%)	148 (84%)	28 (16%)	3	15
4	s2	176/204 (86%)	141 (80%)	35 (20%)	1	8
5	S3	182/194 (94%)	153 (84%)	29 (16%)	3	15
5	s3	182/194 (94%)	150 (82%)	32 (18%)	2	11
6	S4	221/221 (100%)	188 (85%)	33 (15%)	4	17
6	s4	221/221 (100%)	192 (87%)	29 (13%)	5	24
7	S5	173/190 (91%)	154 (89%)	19 (11%)	8	32
7	s5	173/190 (91%)	150 (87%)	23 (13%)	5	23
8	S6	188/201 (94%)	160 (85%)	28 (15%)	4	17
8	s6	187/201 (93%)	158 (84%)	29 (16%)	3	16
9	S7	165/169 (98%)	137 (83%)	28 (17%)	2	13
9	s7	165/169 (98%)	146 (88%)	19 (12%)	7	30
10	S8	150/161 (93%)	132 (88%)	18 (12%)	6	28
10	s8	150/161 (93%)	132 (88%)	18 (12%)	6	28
11	S9	158/165 (96%)	133 (84%)	25 (16%)	3	15
11	s9	158/165 (96%)	128 (81%)	30 (19%)	2	9
12	C0	77/98 (79%)	66 (86%)	11 (14%)	4	19
13	C1	129/136 (95%)	120 (93%)	9 (7%)	19	57
13	c1	129/136 (95%)	113 (88%)	16 (12%)	6	26
14	C2	88/118 (75%)	76 (86%)	12 (14%)	5	22
14	c2	88/118 (75%)	76 (86%)	12 (14%)	5	22
15	C3	127/127 (100%)	107 (84%)	20 (16%)	3	15
15	c3	127/127 (100%)	108 (85%)	19 (15%)	3	17
16	C4	81/104 (78%)	62 (76%)	19 (24%)	1	4
16	c4	97/104 (93%)	84 (87%)	13 (13%)	5	22
17	C5	101/117 (86%)	83 (82%)	18 (18%)	2	11
17	c5	103/117 (88%)	85 (82%)	18 (18%)	2	12
18	C6	117/118 (99%)	101 (86%)	16 (14%)	4	21
18	c6	118/118 (100%)	96 (81%)	22 (19%)	2	10
19	C7	94/124 (76%)	76 (81%)	18 (19%)	2	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	c7	92/124 (74%)	80 (87%)	12 (13%)	5	24
20	C8	128/128 (100%)	105 (82%)	23 (18%)	2	11
20	c8	128/128 (100%)	104 (81%)	24 (19%)	2	10
21	C9	115/115 (100%)	99 (86%)	16 (14%)	4	21
21	c9	115/115 (100%)	105 (91%)	10 (9%)	13	45
22	D0	100/113 (88%)	88 (88%)	12 (12%)	6	28
22	d0	103/113 (91%)	87 (84%)	16 (16%)	3	16
23	D1	74/74 (100%)	61 (82%)	13 (18%)	2	11
23	d1	74/74 (100%)	63 (85%)	11 (15%)	4	17
24	D2	110/110 (100%)	91 (83%)	19 (17%)	2	12
24	d2	110/110 (100%)	92 (84%)	18 (16%)	3	14
25	D3	119/119 (100%)	103 (87%)	16 (13%)	5	22
25	d3	119/119 (100%)	108 (91%)	11 (9%)	11	40
26	D4	112/112 (100%)	103 (92%)	9 (8%)	15	50
26	d4	112/112 (100%)	96 (86%)	16 (14%)	4	19
27	D5	61/88 (69%)	49 (80%)	12 (20%)	1	8
27	d5	61/88 (69%)	52 (85%)	9 (15%)	4	18
28	D6	83/83 (100%)	71 (86%)	12 (14%)	4	19
28	d6	83/83 (100%)	74 (89%)	9 (11%)	8	33
29	D7	70/70 (100%)	64 (91%)	6 (9%)	13	46
29	d7	70/70 (100%)	59 (84%)	11 (16%)	3	15
30	D8	56/59 (95%)	47 (84%)	9 (16%)	3	14
30	d8	56/59 (95%)	45 (80%)	11 (20%)	1	8
31	D9	47/48 (98%)	36 (77%)	11 (23%)	1	4
31	d9	47/48 (98%)	37 (79%)	10 (21%)	1	6
32	E0	51/53 (96%)	43 (84%)	8 (16%)	3	15
32	e0	53/53 (100%)	41 (77%)	12 (23%)	1	5
33	E1	62/66 (94%)	45 (73%)	17 (27%)	0	2
33	e1	66/66 (100%)	54 (82%)	12 (18%)	2	10
34	SR	259/261 (99%)	230 (89%)	29 (11%)	7	31
34	sR	260/261 (100%)	236 (91%)	24 (9%)	11	40

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	SM	97/228 (42%)	82 (84%)	15 (16%)	3	16
35	sM	54/228 (24%)	46 (85%)	8 (15%)	4	18
39	L2	193/195 (99%)	158 (82%)	35 (18%)	2	11
39	l2	192/195 (98%)	156 (81%)	36 (19%)	2	10
40	L3	320/322 (99%)	274 (86%)	46 (14%)	4	19
40	l3	319/322 (99%)	264 (83%)	55 (17%)	2	12
41	L4	288/288 (100%)	241 (84%)	47 (16%)	3	14
41	l4	288/288 (100%)	247 (86%)	41 (14%)	4	20
42	L5	244/244 (100%)	203 (83%)	41 (17%)	2	13
42	l5	243/244 (100%)	201 (83%)	42 (17%)	2	12
43	L6	134/152 (88%)	114 (85%)	20 (15%)	4	17
43	l6	135/152 (89%)	115 (85%)	20 (15%)	4	18
44	L7	186/204 (91%)	164 (88%)	22 (12%)	6	29
44	l7	187/204 (92%)	164 (88%)	23 (12%)	6	26
45	L8	187/207 (90%)	160 (86%)	27 (14%)	4	19
45	l8	177/207 (86%)	154 (87%)	23 (13%)	5	24
46	L9	171/171 (100%)	151 (88%)	20 (12%)	7	29
46	l9	171/171 (100%)	142 (83%)	29 (17%)	2	13
47	M0	177/186 (95%)	142 (80%)	35 (20%)	1	8
47	m0	179/186 (96%)	143 (80%)	36 (20%)	1	7
48	M1	147/150 (98%)	124 (84%)	23 (16%)	3	16
48	m1	147/150 (98%)	120 (82%)	27 (18%)	2	10
49	M3	154/158 (98%)	138 (90%)	16 (10%)	9	34
49	m3	154/158 (98%)	132 (86%)	22 (14%)	4	19
50	M4	107/108 (99%)	92 (86%)	15 (14%)	4	20
50	m4	108/108 (100%)	94 (87%)	14 (13%)	5	24
51	M5	175/175 (100%)	153 (87%)	22 (13%)	5	25
51	m5	175/175 (100%)	152 (87%)	23 (13%)	5	24
52	M6	160/161 (99%)	136 (85%)	24 (15%)	3	17
52	m6	160/161 (99%)	134 (84%)	26 (16%)	3	14
53	M7	140/145 (97%)	123 (88%)	17 (12%)	6	27

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	m7	125/145 (86%)	107 (86%)	18 (14%)	4	19
54	M8	150/150 (100%)	136 (91%)	14 (9%)	11	40
54	m8	150/150 (100%)	120 (80%)	30 (20%)	1	7
55	M9	153/153 (100%)	132 (86%)	21 (14%)	4	21
55	m9	153/153 (100%)	129 (84%)	24 (16%)	3	15
56	N0	156/156 (100%)	134 (86%)	22 (14%)	4	20
56	n0	156/156 (100%)	135 (86%)	21 (14%)	5	22
57	N1	136/136 (100%)	107 (79%)	29 (21%)	1	6
57	n1	136/136 (100%)	113 (83%)	23 (17%)	2	13
58	N2	87/106 (82%)	79 (91%)	8 (9%)	11	40
58	n2	85/106 (80%)	72 (85%)	13 (15%)	3	17
59	N3	104/104 (100%)	90 (86%)	14 (14%)	5	22
59	n3	104/104 (100%)	89 (86%)	15 (14%)	4	19
60	N4	57/129 (44%)	50 (88%)	7 (12%)	6	26
60	n4	100/129 (78%)	88 (88%)	12 (12%)	6	28
61	N5	104/117 (89%)	86 (83%)	18 (17%)	2	12
61	n5	104/117 (89%)	92 (88%)	12 (12%)	7	30
62	N6	109/109 (100%)	90 (83%)	19 (17%)	2	12
62	n6	109/109 (100%)	89 (82%)	20 (18%)	2	10
63	N7	115/115 (100%)	104 (90%)	11 (10%)	10	38
63	n7	115/115 (100%)	95 (83%)	20 (17%)	2	12
64	N8	118/118 (100%)	100 (85%)	18 (15%)	3	17
64	n8	118/118 (100%)	100 (85%)	18 (15%)	3	17
65	N9	46/46 (100%)	40 (87%)	6 (13%)	5	24
65	n9	46/46 (100%)	41 (89%)	5 (11%)	8	32
66	O0	81/87 (93%)	70 (86%)	11 (14%)	5	22
66	o0	84/87 (97%)	71 (84%)	13 (16%)	3	16
67	O1	92/96 (96%)	78 (85%)	14 (15%)	3	17
67	o1	94/96 (98%)	76 (81%)	18 (19%)	2	9
68	O2	109/110 (99%)	91 (84%)	18 (16%)	3	14
68	o2	109/110 (99%)	85 (78%)	24 (22%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
69	O3	90/90 (100%)	81 (90%)	9 (10%)	9	36
69	o3	90/90 (100%)	77 (86%)	13 (14%)	4	19
70	O4	95/101 (94%)	84 (88%)	11 (12%)	7	30
70	o4	95/101 (94%)	80 (84%)	15 (16%)	3	15
71	O5	104/104 (100%)	90 (86%)	14 (14%)	5	22
71	o5	103/104 (99%)	90 (87%)	13 (13%)	5	25
72	O6	81/81 (100%)	66 (82%)	15 (18%)	2	10
72	o6	80/81 (99%)	56 (70%)	24 (30%)	0	1
73	O7	70/70 (100%)	55 (79%)	15 (21%)	1	6
73	o7	70/70 (100%)	58 (83%)	12 (17%)	2	13
74	O8	68/68 (100%)	53 (78%)	15 (22%)	1	5
74	o8	67/68 (98%)	55 (82%)	12 (18%)	2	11
75	O9	45/45 (100%)	38 (84%)	7 (16%)	3	16
75	o9	45/45 (100%)	36 (80%)	9 (20%)	1	7
76	Q0	47/47 (100%)	39 (83%)	8 (17%)	2	13
76	q0	47/47 (100%)	42 (89%)	5 (11%)	8	34
77	Q1	23/23 (100%)	19 (83%)	4 (17%)	2	12
77	q1	23/23 (100%)	15 (65%)	8 (35%)	0	0
78	Q2	90/90 (100%)	76 (84%)	14 (16%)	3	16
78	q2	90/90 (100%)	77 (86%)	13 (14%)	4	19
79	Q3	71/71 (100%)	59 (83%)	12 (17%)	2	13
79	q3	71/71 (100%)	60 (84%)	11 (16%)	3	16
80	c0	73/98 (74%)	64 (88%)	9 (12%)	6	26
82	p0	105/253 (42%)	94 (90%)	11 (10%)	8	34
85	f	124/133 (93%)	108 (87%)	16 (13%)	5	24
All	All	18850/20374 (92%)	15999 (85%)	2851 (15%)	3	17

All (2851) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	S0	7	PHE
2	S0	32	HIS
2	S0	43	ASP

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Mol	Chain	Res	Type
2	S0	50	VAL
2	S0	52	LYS
2	S0	57	LEU
2	S0	62	ARG
2	S0	84	ARG
2	S0	87	LEU
2	S0	88	LYS
2	S0	96	THR
2	S0	101	ARG
2	S0	103	THR
2	S0	108	THR
2	S0	110	TYR
2	S0	117	GLU
2	S0	140	ASN
2	S0	154	GLU
2	S0	156	VAL
2	S0	164	ASN
2	S0	168	HIS
2	S0	170	ILE
2	S0	172	LEU
2	S0	188	LEU
2	S0	189	VAL
2	S0	200	ASP
3	S1	21	VAL
3	S1	22	ASP
3	S1	29	TRP
3	S1	30	PHE
3	S1	39	GLU
3	S1	46	THR
3	S1	61	LEU
3	S1	65	VAL
3	S1	70	LEU
3	S1	77	GLU
3	S1	81	PHE
3	S1	83	LYS
3	S1	105	PHE
3	S1	108	ASP
3	S1	111	ARG
3	S1	117	TRP
3	S1	129	THR
3	S1	144	ARG
3	S1	148	ASN

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Mol	Chain	Res	Type
3	S1	179	SER
3	S1	180	THR
3	S1	181	LEU
3	S1	193	ILE
3	S1	198	GLU
3	S1	202	LYS
3	S1	203	ASP
3	S1	214	LYS
3	S1	215	VAL
3	S1	218	LEU
3	S1	220	GLN
3	S1	222	LYS
3	S1	223	PHE
4	S2	51	THR
4	S2	70	ASP
4	S2	72	LEU
4	S2	76	LEU
4	S2	77	GLN
4	S2	89	GLN
4	S2	90	THR
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	134	LEU
4	S2	137	ILE
4	S2	146	THR
4	S2	148	LEU
4	S2	159	THR
4	S2	166	THR
4	S2	189	GLN
4	S2	198	THR
4	S2	207	LEU
4	S2	208	GLU
4	S2	222	TYR
4	S2	225	LEU
4	S2	226	THR
4	S2	237	VAL
5	S3	4	LEU

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Mol	Chain	Res	Type
5	S3	23	GLU
5	S3	65	ARG
5	S3	66	ILE
5	S3	76	ARG
5	S3	89	GLU
5	S3	92	GLN
5	S3	93	ASP
5	S3	103	GLU
5	S3	111	ASN
5	S3	113	LEU
5	S3	117	ARG
5	S3	124	ARG
5	S3	135	GLU
5	S3	142	LEU
5	S3	143	ARG
5	S3	146	ARG
5	S3	150	MET
5	S3	158	ILE
5	S3	172	THR
5	S3	175	VAL
5	S3	176	LEU
5	S3	177	MET
5	S3	182	LEU
5	S3	200	LYS
5	S3	207	THR
5	S3	212	LYS
5	S3	215	GLU
5	S3	224	ASP
6	S4	3	ARG
6	S4	6	LYS
6	S4	11	ARG
6	S4	12	LEU
6	S4	38	LEU
6	S4	65	LEU
6	S4	77	ARG
6	S4	78	THR
6	S4	90	ILE
6	S4	92	LEU
6	S4	108	ARG
6	S4	115	THR
6	S4	126	VAL
6	S4	129	VAL

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Mol	Chain	Res	Type
6	S4	130	GLN
6	S4	131	LEU
6	S4	160	VAL
6	S4	166	SER
6	S4	180	LEU
6	S4	181	VAL
6	S4	182	TYR
6	S4	187	ARG
6	S4	189	LEU
6	S4	192	ILE
6	S4	206	ASP
6	S4	215	ASP
6	S4	219	VAL
6	S4	220	THR
6	S4	222	LEU
6	S4	226	PHE
6	S4	227	VAL
6	S4	240	LYS
6	S4	246	LEU
7	S5	25	LEU
7	S5	32	GLU
7	S5	43	PHE
7	S5	45	LYS
7	S5	46	TRP
7	S5	48	PHE
7	S5	53	VAL
7	S5	65	ARG
7	S5	79	ASN
7	S5	93	LEU
7	S5	112	ARG
7	S5	119	ASP
7	S5	146	THR
7	S5	149	VAL
7	S5	156	ARG
7	S5	157	ARG
7	S5	160	VAL
7	S5	177	ILE
7	S5	216	GLU
8	S6	6	SER
8	S6	7	TYR
8	S6	15	THR
8	S6	25	ARG

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Mol	Chain	Res	Type
8	S6	45	PHE
8	S6	69	LEU
8	S6	71	THR
8	S6	76	LEU
8	S6	82	SER
8	S6	97	VAL
8	S6	109	LEU
8	S6	120	GLU
8	S6	126	ASP
8	S6	127	THR
8	S6	128	THR
8	S6	133	LEU
8	S6	150	GLU
8	S6	151	ASP
8	S6	153	VAL
8	S6	155	ASP
8	S6	169	TYR
8	S6	170	THR
8	S6	177	ARG
8	S6	193	LEU
8	S6	201	GLN
8	S6	207	GLU
8	S6	212	LEU
8	S6	223	LYS
9	S7	15	GLU
9	S7	16	LEU
9	S7	24	PHE
9	S7	38	LEU
9	S7	46	ILE
9	S7	49	ILE
9	S7	51	VAL
9	S7	67	LEU
9	S7	71	HIS
9	S7	75	THR
9	S7	77	LEU
9	S7	85	PHE
9	S7	87	ASP
9	S7	97	ARG
9	S7	110	GLN
9	S7	114	ARG
9	S7	115	SER
9	S7	118	LEU

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Mol	Chain	Res	Type
9	S7	122	HIS
9	S7	123	ASP
9	S7	126	LEU
9	S7	130	VAL
9	S7	166	LEU
9	S7	167	GLU
9	S7	174	ASN
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	29	LEU
10	S8	32	GLN
10	S8	36	THR
10	S8	37	LYS
10	S8	46	VAL
10	S8	58	LEU
10	S8	60	ILE
10	S8	69	SER
10	S8	88	ASN
10	S8	97	THR
10	S8	137	LYS
10	S8	152	ILE
10	S8	160	PHE
10	S8	185	GLU
10	S8	193	LEU
11	S9	3	ARG
11	S9	9	SER
11	S9	10	LYS
11	S9	28	LEU
11	S9	39	LYS
11	S9	46	SER
11	S9	49	LEU
11	S9	74	ASN
11	S9	78	ARG
11	S9	82	ARG
11	S9	88	GLU
11	S9	92	LYS
11	S9	93	LEU
11	S9	94	ASP

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Mol	Chain	Res	Type
11	S9	99	LEU
11	S9	101	VAL
11	S9	110	GLN
11	S9	134	ILE
11	S9	138	LYS
11	S9	149	ARG
11	S9	161	THR
11	S9	171	ARG
11	S9	172	VAL
11	S9	174	ARG
11	S9	182	GLU
12	C0	7	ASP
12	C0	12	HIS
12	C0	27	PHE
12	C0	50	THR
12	C0	51	SER
12	C0	55	VAL
12	C0	67	THR
12	C0	76	LEU
12	C0	78	GLU
12	C0	81	ASN
12	C0	82	LEU
13	C1	21	ASN
13	C1	30	ARG
13	C1	40	LEU
13	C1	44	THR
13	C1	67	ARG
13	C1	69	LYS
13	C1	74	THR
13	C1	80	MET
13	C1	123	VAL
14	C2	28	LEU
14	C2	33	ARG
14	C2	37	VAL
14	C2	43	ARG
14	C2	52	LEU
14	C2	71	ILE
14	C2	74	LEU
14	C2	86	VAL
14	C2	103	LEU
14	C2	126	TRP
14	C2	129	GLU

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Mol	Chain	Res	Type
14	C2	132	GLU
15	C3	3	ARG
15	C3	6	SER
15	C3	9	LYS
15	C3	16	ILE
15	C3	27	LYS
15	C3	31	GLU
15	C3	39	LYS
15	C3	42	ARG
15	C3	60	VAL
15	C3	64	ARG
15	C3	66	ILE
15	C3	83	GLU
15	C3	88	LEU
15	C3	102	LEU
15	C3	105	ASN
15	C3	109	LYS
15	C3	115	LEU
15	C3	125	LEU
15	C3	142	GLU
15	C3	149	LEU
16	C4	13	VAL
16	C4	16	VAL
16	C4	26	THR
16	C4	29	HIS
16	C4	31	THR
16	C4	39	ILE
16	C4	42	VAL
16	C4	46	MET
16	C4	51	ASP
16	C4	84	ARG
16	C4	89	THR
16	C4	92	LYS
16	C4	99	GLN
16	C4	103	ARG
16	C4	125	SER
16	C4	128	LYS
16	C4	132	ARG
16	C4	136	ARG
16	C4	137	LEU
17	C5	11	VAL
17	C5	21	ASP

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Mol	Chain	Res	Type
17	C5	22	LEU
17	C5	29	SER
17	C5	31	GLU
17	C5	34	VAL
17	C5	36	LEU
17	C5	40	ARG
17	C5	44	ARG
17	C5	50	THR
17	C5	52	LYS
17	C5	60	LEU
17	C5	69	GLU
17	C5	71	GLU
17	C5	80	MET
17	C5	86	VAL
17	C5	88	GLU
17	C5	106	GLU
18	C6	4	VAL
18	C6	14	LYS
18	C6	29	ILE
18	C6	39	VAL
18	C6	52	LEU
18	C6	53	LEU
18	C6	54	LEU
18	C6	57	LEU
18	C6	66	ARG
18	C6	69	VAL
18	C6	103	ASN
18	C6	109	PHE
18	C6	123	ARG
18	C6	127	LYS
18	C6	128	LYS
18	C6	137	ARG
19	C7	3	ARG
19	C7	5	ARG
19	C7	6	THR
19	C7	7	LYS
19	C7	8	THR
19	C7	24	LEU
19	C7	25	THR
19	C7	38	ILE
19	C7	49	LYS
19	C7	58	MET

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Mol	Chain	Res	Type
19	C7	69	ILE
19	C7	76	GLU
19	C7	84	TYR
19	C7	88	VAL
19	C7	105	GLN
19	C7	107	SER
19	C7	113	LEU
19	C7	115	LEU
20	C8	3	LEU
20	C8	5	VAL
20	C8	8	GLN
20	C8	11	PHE
20	C8	13	HIS
20	C8	14	ILE
20	C8	17	LEU
20	C8	25	ASN
20	C8	28	ILE
20	C8	32	LEU
20	C8	40	ARG
20	C8	57	ARG
20	C8	86	LEU
20	C8	92	ILE
20	C8	93	THR
20	C8	97	ASP
20	C8	107	SER
20	C8	108	LYS
20	C8	110	ARG
20	C8	115	ARG
20	C8	136	GLN
20	C8	138	THR
20	C8	143	ARG
21	C9	12	GLN
21	C9	22	LEU
21	C9	28	LEU
21	C9	33	TYR
21	C9	34	VAL
21	C9	35	ASP
21	C9	36	ILE
21	C9	54	PHE
21	C9	57	ARG
21	C9	64	HIS
21	C9	67	MET

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Mol	Chain	Res	Type
21	C9	71	VAL
21	C9	76	LEU
21	C9	114	VAL
21	C9	127	ASN
21	C9	130	ARG
22	D0	19	ILE
22	D0	20	ILE
22	D0	22	ILE
22	D0	31	VAL
22	D0	51	VAL
22	D0	57	ARG
22	D0	66	SER
22	D0	74	GLU
22	D0	76	SER
22	D0	81	THR
22	D0	89	ARG
22	D0	121	ASN
23	D1	5	LYS
23	D1	11	LEU
23	D1	32	VAL
23	D1	36	VAL
23	D1	41	GLU
23	D1	52	THR
23	D1	62	ARG
23	D1	65	SER
23	D1	68	SER
23	D1	74	GLN
23	D1	78	LEU
23	D1	79	LEU
23	D1	87	ARG
24	D2	4	SER
24	D2	7	LEU
24	D2	16	ASN
24	D2	24	GLN
24	D2	27	ILE
24	D2	42	GLN
24	D2	53	ILE
24	D2	56	HIS
24	D2	65	LEU
24	D2	66	ASN
24	D2	76	SER
24	D2	86	ILE

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Mol	Chain	Res	Type
24	D2	93	LEU
24	D2	98	GLN
24	D2	103	ILE
24	D2	104	LEU
24	D2	105	THR
24	D2	107	SER
24	D2	121	VAL
25	D3	3	LYS
25	D3	7	ARG
25	D3	9	LEU
25	D3	14	LYS
25	D3	16	ARG
25	D3	47	SER
25	D3	73	ARG
25	D3	79	ASN
25	D3	84	THR
25	D3	96	VAL
25	D3	100	ASP
25	D3	103	LEU
25	D3	107	PHE
25	D3	114	LYS
25	D3	128	SER
25	D3	144	ARG
26	D4	17	LEU
26	D4	34	ASN
26	D4	51	GLU
26	D4	57	VAL
26	D4	96	LEU
26	D4	99	LYS
26	D4	102	LYS
26	D4	124	ARG
26	D4	127	LYS
27	D5	40	VAL
27	D5	42	LEU
27	D5	47	TYR
27	D5	58	ARG
27	D5	62	VAL
27	D5	67	ASP
27	D5	69	LEU
27	D5	75	LEU
27	D5	95	HIS
27	D5	96	SER

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Mol	Chain	Res	Type
27	D5	97	LYS
27	D5	102	THR
28	D6	12	LYS
28	D6	15	ARG
28	D6	19	LYS
28	D6	30	ILE
28	D6	36	ILE
28	D6	38	ARG
28	D6	44	ILE
28	D6	46	GLU
28	D6	61	GLU
28	D6	64	LEU
28	D6	68	TYR
28	D6	91	ASP
29	D7	3	LEU
29	D7	23	THR
29	D7	26	GLN
29	D7	33	LEU
29	D7	34	ASP
29	D7	61	THR
30	D8	14	LYS
30	D8	19	THR
30	D8	31	GLU
30	D8	32	PHE
30	D8	35	ASP
30	D8	48	VAL
30	D8	54	LEU
30	D8	58	GLU
30	D8	65	ARG
31	D9	6	VAL
31	D9	7	TRP
31	D9	9	SER
31	D9	12	ARG
31	D9	14	TYR
31	D9	19	ARG
31	D9	22	ARG
31	D9	28	THR
31	D9	30	LEU
31	D9	32	ARG
31	D9	36	LEU
32	E0	21	VAL
32	E0	22	GLU

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Mol	Chain	Res	Type
32	E0	28	LYS
32	E0	36	LYS
32	E0	39	LEU
32	E0	42	ARG
32	E0	46	ASN
32	E0	50	VAL
33	E1	89	LYS
33	E1	93	HIS
33	E1	98	VAL
33	E1	102	VAL
33	E1	103	LEU
33	E1	106	TYR
33	E1	108	VAL
33	E1	111	GLU
33	E1	113	LYS
33	E1	120	GLU
33	E1	126	CYS
33	E1	134	ASN
33	E1	135	HIS
33	E1	137	ASP
33	E1	138	ARG
33	E1	147	VAL
33	E1	151	ASN
34	SR	6	VAL
34	SR	32	LEU
34	SR	45	TRP
34	SR	52	GLN
34	SR	65	SER
34	SR	66	HIS
34	SR	71	CYS
34	SR	73	LEU
34	SR	76	ASP
34	SR	106	HIS
34	SR	116	ASP
34	SR	117	LYS
34	SR	136	ILE
34	SR	137	LYS
34	SR	144	LEU
34	SR	145	LEU
34	SR	191	ASP
34	SR	223	TRP
34	SR	233	THR

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Mol	Chain	Res	Type
34	SR	238	ASP
34	SR	248	ASN
34	SR	266	ASP
34	SR	268	GLN
34	SR	269	TYR
34	SR	288	HIS
34	SR	290	VAL
34	SR	308	ASN
34	SR	314	GLN
34	SR	317	THR
35	SM	33	LYS
35	SM	46	LYS
35	SM	48	ARG
35	SM	53	ARG
35	SM	64	LYS
35	SM	68	ARG
35	SM	77	THR
35	SM	84	LYS
35	SM	89	ARG
35	SM	96	ARG
35	SM	100	THR
35	SM	102	THR
35	SM	116	GLU
35	SM	121	LYS
35	SM	139	GLU
39	L2	20	THR
39	L2	28	LYS
39	L2	31	THR
39	L2	32	LEU
39	L2	44	ILE
39	L2	45	VAL
39	L2	46	LYS
39	L2	49	VAL
39	L2	62	VAL
39	L2	70	ARG
39	L2	71	LEU
39	L2	72	ARG
39	L2	74	GLU
39	L2	84	THR
39	L2	101	VAL
39	L2	102	LEU
39	L2	104	LEU

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Mol	Chain	Res	Type
39	L2	109	GLU
39	L2	113	VAL
39	L2	126	LEU
39	L2	128	ARG
39	L2	135	ILE
39	L2	149	ARG
39	L2	157	VAL
39	L2	165	VAL
39	L2	168	VAL
39	L2	179	LEU
39	L2	180	LEU
39	L2	191	LEU
39	L2	202	VAL
39	L2	204	MET
39	L2	207	VAL
39	L2	227	ARG
39	L2	241	ARG
39	L2	252	THR
40	L3	7	GLU
40	L3	17	LEU
40	L3	19	ARG
40	L3	25	ILE
40	L3	37	ARG
40	L3	44	THR
40	L3	47	LEU
40	L3	55	THR
40	L3	56	ILE
40	L3	67	PHE
40	L3	81	THR
40	L3	84	VAL
40	L3	85	VAL
40	L3	103	THR
40	L3	104	THR
40	L3	114	VAL
40	L3	116	ARG
40	L3	148	LEU
40	L3	160	VAL
40	L3	166	ILE
40	L3	169	THR
40	L3	174	LYS
40	L3	183	LEU
40	L3	187	SER

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Mol	Chain	Res	Type
40	L3	188	ILE
40	L3	192	VAL
40	L3	196	ARG
40	L3	202	THR
40	L3	211	GLN
40	L3	229	VAL
40	L3	235	THR
40	L3	238	LEU
40	L3	246	LEU
40	L3	252	ILE
40	L3	264	VAL
40	L3	284	ARG
40	L3	296	THR
40	L3	304	THR
40	L3	305	ILE
40	L3	320	ASP
40	L3	332	ARG
40	L3	338	LEU
40	L3	353	GLU
40	L3	380	MET
40	L3	386	ASP
40	L3	387	LEU
41	L4	4	PRO
41	L4	27	SER
41	L4	69	ARG
41	L4	71	VAL
41	L4	74	ILE
41	L4	92	ASN
41	L4	93	MET
41	L4	99	MET
41	L4	120	TYR
41	L4	124	SER
41	L4	133	SER
41	L4	152	VAL
41	L4	153	SER
41	L4	156	LEU
41	L4	172	VAL
41	L4	179	LEU
41	L4	187	LEU
41	L4	194	TYR
41	L4	200	THR
41	L4	203	ARG

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Mol	Chain	Res	Type
41	L4	211	GLU
41	L4	222	VAL
41	L4	227	THR
41	L4	230	VAL
41	L4	246	ARG
41	L4	256	THR
41	L4	258	LEU
41	L4	259	ASP
41	L4	284	SER
41	L4	287	THR
41	L4	292	SER
41	L4	293	SER
41	L4	296	GLN
41	L4	306	THR
41	L4	307	GLN
41	L4	313	LEU
41	L4	316	ASN
41	L4	323	VAL
41	L4	327	LEU
41	L4	333	VAL
41	L4	339	LEU
41	L4	341	SER
41	L4	343	LYS
41	L4	349	THR
41	L4	354	VAL
41	L4	359	LEU
41	L4	361	HIS
42	L5	5	LYS
42	L5	8	LYS
42	L5	22	ARG
42	L5	23	ARG
42	L5	35	ARG
42	L5	41	LYS
42	L5	56	THR
42	L5	66	SER
42	L5	67	SER
42	L5	69	ILE
42	L5	101	THR
42	L5	105	ILE
42	L5	113	LEU
42	L5	115	LEU
42	L5	126	GLU

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Mol	Chain	Res	Type
42	L5	128	GLU
42	L5	137	ASP
42	L5	140	ARG
42	L5	146	LEU
42	L5	151	GLN
42	L5	152	ARG
42	L5	155	THR
42	L5	163	LEU
42	L5	177	GLU
42	L5	185	PHE
42	L5	188	GLU
42	L5	190	ILE
42	L5	194	LEU
42	L5	208	MET
42	L5	211	LEU
42	L5	216	GLU
42	L5	222	LEU
42	L5	223	PHE
42	L5	227	LEU
42	L5	231	ILE
42	L5	234	ASP
42	L5	237	GLU
42	L5	242	SER
42	L5	272	TYR
42	L5	278	SER
42	L5	293	LEU
43	L6	5	LYS
43	L6	14	ASP
43	L6	15	VAL
43	L6	21	THR
43	L6	31	ARG
43	L6	35	VAL
43	L6	48	ARG
43	L6	52	VAL
43	L6	57	HIS
43	L6	64	LEU
43	L6	65	ILE
43	L6	76	LEU
43	L6	78	ARG
43	L6	84	VAL
43	L6	89	THR
43	L6	93	VAL

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Mol	Chain	Res	Type
43	L6	134	ARG
43	L6	152	THR
43	L6	154	LEU
43	L6	160	SER
44	L7	24	GLU
44	L7	25	GLN
44	L7	26	VAL
44	L7	38	LYS
44	L7	60	ARG
44	L7	78	GLU
44	L7	82	LYS
44	L7	93	ASN
44	L7	98	LYS
44	L7	100	ARG
44	L7	107	ARG
44	L7	110	ARG
44	L7	115	THR
44	L7	124	LEU
44	L7	127	LEU
44	L7	143	THR
44	L7	157	ASN
44	L7	173	LEU
44	L7	179	LEU
44	L7	182	ASP
44	L7	184	LEU
44	L7	239	LEU
45	L8	26	LEU
45	L8	41	GLN
45	L8	50	VAL
45	L8	57	ARG
45	L8	63	LYS
45	L8	69	LEU
45	L8	71	VAL
45	L8	74	THR
45	L8	79	GLN
45	L8	84	ARG
45	L8	109	LEU
45	L8	134	TYR
45	L8	136	LEU
45	L8	145	ASN
45	L8	150	LEU
45	L8	156	ASP

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Mol	Chain	Res	Type
45	L8	157	VAL
45	L8	169	LEU
45	L8	180	VAL
45	L8	181	LYS
45	L8	185	ARG
45	L8	189	LEU
45	L8	203	VAL
45	L8	218	ILE
45	L8	230	LYS
45	L8	246	MET
45	L8	248	LYS
46	L9	5	GLN
46	L9	9	GLN
46	L9	41	ILE
46	L9	48	VAL
46	L9	49	ASN
46	L9	52	LEU
46	L9	68	LEU
46	L9	69	ARG
46	L9	70	THR
46	L9	80	THR
46	L9	82	VAL
46	L9	132	VAL
46	L9	151	VAL
46	L9	152	GLU
46	L9	157	ASN
46	L9	161	LEU
46	L9	164	ILE
46	L9	172	ILE
46	L9	187	ILE
46	L9	189	GLU
47	M0	3	ARG
47	M0	24	ARG
47	M0	26	VAL
47	M0	28	ASP
47	M0	30	LYS
47	M0	31	ILE
47	M0	32	ARG
47	M0	33	ILE
47	M0	39	LYS
47	M0	48	LEU
47	M0	52	LEU

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Mol	Chain	Res	Type
47	M0	60	LEU
47	M0	61	SER
47	M0	63	GLU
47	M0	87	LEU
47	M0	91	VAL
47	M0	102	MET
47	M0	116	ARG
47	M0	128	ARG
47	M0	131	ILE
47	M0	138	VAL
47	M0	139	ARG
47	M0	140	THR
47	M0	145	LYS
47	M0	146	ASP
47	M0	163	GLN
47	M0	165	ILE
47	M0	169	LYS
47	M0	174	THR
47	M0	178	ARG
47	M0	185	ARG
47	M0	189	GLU
47	M0	192	ASP
47	M0	203	LYS
47	M0	215	GLU
48	M1	10	ARG
48	M1	12	LEU
48	M1	13	LYS
48	M1	19	LEU
48	M1	25	GLU
48	M1	44	THR
48	M1	46	VAL
48	M1	78	GLU
48	M1	80	LEU
48	M1	82	ARG
48	M1	85	LYS
48	M1	101	ASN
48	M1	106	ILE
48	M1	112	LEU
48	M1	115	LYS
48	M1	117	ASP
48	M1	138	VAL
48	M1	140	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	M1	142	LYS
48	M1	158	ASP
48	M1	166	LYS
48	M1	168	ASP
48	M1	171	VAL
49	M3	23	LYS
49	M3	24	VAL
49	M3	35	ARG
49	M3	54	LEU
49	M3	55	ARG
49	M3	57	VAL
49	M3	59	ARG
49	M3	67	ARG
49	M3	104	ARG
49	M3	114	GLN
49	M3	122	LYS
49	M3	128	ARG
49	M3	131	LYS
49	M3	134	GLU
49	M3	164	GLU
49	M3	168	ARG
50	M4	5	SER
50	M4	8	LYS
50	M4	15	VAL
50	M4	20	VAL
50	M4	43	LYS
50	M4	53	VAL
50	M4	58	ILE
50	M4	63	VAL
50	M4	64	VAL
50	M4	65	LEU
50	M4	74	ARG
50	M4	90	VAL
50	M4	92	GLU
50	M4	105	GLN
50	M4	130	THR
51	M5	15	GLN
51	M5	17	ASP
51	M5	18	VAL
51	M5	22	LEU
51	M5	49	ARG
51	M5	75	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	M5	80	THR
51	M5	92	LEU
51	M5	106	VAL
51	M5	133	ILE
51	M5	151	ILE
51	M5	153	ASP
51	M5	155	VAL
51	M5	157	LYS
51	M5	171	SER
51	M5	182	ASN
51	M5	183	THR
51	M5	184	LYS
51	M5	188	ARG
51	M5	190	THR
51	M5	198	SER
51	M5	201	ARG
52	M6	3	VAL
52	M6	22	VAL
52	M6	31	GLN
52	M6	32	LYS
52	M6	34	VAL
52	M6	48	PHE
52	M6	67	THR
52	M6	78	ARG
52	M6	85	ARG
52	M6	89	SER
52	M6	101	ARG
52	M6	106	GLU
52	M6	113	ASP
52	M6	114	LYS
52	M6	116	LYS
52	M6	117	ARG
52	M6	124	LEU
52	M6	128	ARG
52	M6	138	LEU
52	M6	140	LYS
52	M6	143	THR
52	M6	160	ARG
52	M6	187	GLU
52	M6	189	ASP
53	M7	7	THR
53	M7	24	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	M7	29	THR
53	M7	36	ILE
53	M7	42	THR
53	M7	52	LEU
53	M7	69	ARG
53	M7	91	VAL
53	M7	112	LEU
53	M7	114	VAL
53	M7	127	ARG
53	M7	128	ARG
53	M7	129	THR
53	M7	142	SER
53	M7	144	SER
53	M7	168	LEU
53	M7	171	ARG
54	M8	17	THR
54	M8	24	VAL
54	M8	26	LEU
54	M8	32	LEU
54	M8	49	LEU
54	M8	69	ARG
54	M8	80	THR
54	M8	86	THR
54	M8	105	ARG
54	M8	135	GLN
54	M8	136	ASN
54	M8	138	LEU
54	M8	171	LYS
54	M8	181	SER
55	M9	22	VAL
55	M9	36	ASN
55	M9	41	ILE
55	M9	44	LEU
55	M9	47	ASN
55	M9	51	VAL
55	M9	55	VAL
55	M9	60	LYS
55	M9	61	SER
55	M9	74	ARG
55	M9	76	SER
55	M9	103	ARG
55	M9	105	LEU

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Mol	Chain	Res	Type
55	M9	116	ASP
55	M9	126	GLU
55	M9	127	SER
55	M9	134	HIS
55	M9	138	LEU
55	M9	160	GLU
55	M9	165	LYS
55	M9	180	LYS
56	N0	1	MET
56	N0	16	THR
56	N0	45	LEU
56	N0	61	ILE
56	N0	71	LYS
56	N0	81	TYR
56	N0	87	THR
56	N0	88	HIS
56	N0	97	VAL
56	N0	115	ARG
56	N0	117	ARG
56	N0	120	SER
56	N0	130	GLU
56	N0	132	THR
56	N0	137	ARG
56	N0	145	THR
56	N0	149	LYS
56	N0	160	THR
56	N0	162	THR
56	N0	167	ARG
56	N0	171	PHE
56	N0	172	TYR
57	N1	12	ARG
57	N1	14	MET
57	N1	18	ASP
57	N1	25	VAL
57	N1	26	HIS
57	N1	27	LEU
57	N1	32	LYS
57	N1	39	ILE
57	N1	55	LYS
57	N1	75	ILE
57	N1	78	LYS
57	N1	79	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	N1	83	ARG
57	N1	88	ARG
57	N1	89	LEU
57	N1	101	CYS
57	N1	104	GLU
57	N1	106	LEU
57	N1	118	GLU
57	N1	122	GLN
57	N1	126	VAL
57	N1	127	GLN
57	N1	131	GLN
57	N1	139	ARG
57	N1	141	VAL
57	N1	143	THR
57	N1	154	VAL
57	N1	157	GLU
57	N1	158	THR
58	N2	10	LYS
58	N2	16	THR
58	N2	38	ILE
58	N2	50	LEU
58	N2	52	ASN
58	N2	70	LYS
58	N2	99	LYS
58	N2	100	THR
59	N3	9	THR
59	N3	13	ILE
59	N3	44	SER
59	N3	54	LEU
59	N3	69	LEU
59	N3	73	VAL
59	N3	83	LYS
59	N3	84	SER
59	N3	86	ARG
59	N3	102	ILE
59	N3	106	LYS
59	N3	108	GLU
59	N3	115	THR
59	N3	124	ASP
60	N4	4	GLU
60	N4	5	ILE
60	N4	17	ARG

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Mol	Chain	Res	Type
60	N4	19	THR
60	N4	41	LYS
60	N4	43	ARG
60	N4	45	ASN
61	N5	27	ARG
61	N5	28	THR
61	N5	34	LEU
61	N5	36	LYS
61	N5	37	THR
61	N5	38	LEU
61	N5	63	ILE
61	N5	71	THR
61	N5	73	MET
61	N5	74	LYS
61	N5	108	LEU
61	N5	115	ARG
61	N5	125	ARG
61	N5	127	THR
61	N5	133	LEU
61	N5	135	ILE
61	N5	139	ILE
61	N5	142	ILE
62	N6	3	LYS
62	N6	10	SER
62	N6	14	LYS
62	N6	37	LYS
62	N6	40	ARG
62	N6	45	ILE
62	N6	50	ILE
62	N6	51	ARG
62	N6	56	VAL
62	N6	57	LEU
62	N6	59	VAL
62	N6	71	SER
62	N6	74	TYR
62	N6	76	LEU
62	N6	89	LYS
62	N6	111	LEU
62	N6	113	LYS
62	N6	115	ARG
62	N6	127	GLU
63	N7	17	ARG

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Mol	Chain	Res	Type
63	N7	30	ASP
63	N7	34	LYS
63	N7	46	ILE
63	N7	60	LYS
63	N7	64	LYS
63	N7	75	VAL
63	N7	83	THR
63	N7	102	GLU
63	N7	109	GLU
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	14	HIS
64	N8	42	ARG
64	N8	46	ASP
64	N8	60	TYR
64	N8	73	LEU
64	N8	76	ASP
64	N8	78	LEU
64	N8	88	ASP
64	N8	115	LYS
64	N8	118	ILE
64	N8	120	ASN
64	N8	130	VAL
64	N8	133	LEU
65	N9	22	LYS
65	N9	25	LYS
65	N9	28	LYS
65	N9	38	LYS
65	N9	50	THR
65	N9	59	LYS
66	O0	12	GLN
66	O0	16	LEU
66	O0	18	ILE
66	O0	32	LYS
66	O0	33	SER
66	O0	52	ARG
66	O0	61	MET
66	O0	67	VAL

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Mol	Chain	Res	Type
66	O0	83	LYS
66	O0	87	VAL
66	O0	100	ILE
67	O1	6	ASP
67	O1	16	LEU
67	O1	26	LYS
67	O1	41	LYS
67	O1	55	LEU
67	O1	64	VAL
67	O1	65	LYS
67	O1	68	GLU
67	O1	73	LEU
67	O1	76	SER
67	O1	79	ARG
67	O1	82	GLU
67	O1	83	GLU
67	O1	106	THR
68	O2	3	SER
68	O2	16	LYS
68	O2	19	ARG
68	O2	24	ARG
68	O2	31	ASN
68	O2	33	ARG
68	O2	35	GLN
68	O2	41	VAL
68	O2	55	ILE
68	O2	61	LYS
68	O2	62	LYS
68	O2	73	THR
68	O2	79	VAL
68	O2	103	LYS
68	O2	106	VAL
68	O2	109	LEU
68	O2	125	ARG
68	O2	126	LEU
69	O3	37	THR
69	O3	48	ARG
69	O3	49	ILE
69	O3	56	SER
69	O3	59	VAL
69	O3	70	LYS
69	O3	78	SER

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Mol	Chain	Res	Type
69	O3	81	VAL
69	O3	98	VAL
70	O4	8	ARG
70	O4	21	LYS
70	O4	29	ILE
70	O4	38	LEU
70	O4	57	LEU
70	O4	58	ARG
70	O4	65	VAL
70	O4	71	THR
70	O4	86	LYS
70	O4	102	LYS
70	O4	104	VAL
71	O5	7	TYR
71	O5	13	SER
71	O5	15	GLU
71	O5	21	LEU
71	O5	22	VAL
71	O5	28	LEU
71	O5	47	VAL
71	O5	48	ARG
71	O5	71	LYS
71	O5	89	ARG
71	O5	90	ARG
71	O5	96	GLU
71	O5	101	THR
71	O5	102	GLU
72	O6	11	LEU
72	O6	21	THR
72	O6	26	ILE
72	O6	36	ARG
72	O6	53	TYR
72	O6	57	LEU
72	O6	58	ILE
72	O6	62	ARG
72	O6	68	ARG
72	O6	76	ARG
72	O6	81	THR
72	O6	90	MET
72	O6	91	ASN
72	O6	98	ARG
72	O6	99	ARG

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Mol	Chain	Res	Type
73	O7	12	HIS
73	O7	16	HIS
73	O7	21	ARG
73	O7	24	ARG
73	O7	25	ARG
73	O7	31	LYS
73	O7	44	THR
73	O7	46	SER
73	O7	55	ARG
73	O7	58	THR
73	O7	65	ARG
73	O7	67	LEU
73	O7	75	LYS
73	O7	85	LYS
73	O7	87	SER
74	O8	5	ILE
74	O8	8	ILE
74	O8	39	ARG
74	O8	41	THR
74	O8	45	VAL
74	O8	46	ARG
74	O8	51	LEU
74	O8	52	TYR
74	O8	53	THR
74	O8	64	LYS
74	O8	65	LEU
74	O8	67	GLN
74	O8	69	LEU
74	O8	77	ARG
74	O8	78	LEU
75	O9	5	LYS
75	O9	21	ARG
75	O9	23	LEU
75	O9	28	ARG
75	O9	34	THR
75	O9	37	TYR
75	O9	51	ILE
76	Q0	77	ILE
76	Q0	79	GLU
76	Q0	85	LEU
76	Q0	97	ARG
76	Q0	112	LYS

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Mol	Chain	Res	Type
76	Q0	113	ARG
76	Q0	114	LYS
76	Q0	127	LEU
77	Q1	2	ARG
77	Q1	10	THR
77	Q1	11	ARG
77	Q1	13	LEU
78	Q2	8	ARG
78	Q2	9	LYS
78	Q2	20	HIS
78	Q2	26	THR
78	Q2	45	ARG
78	Q2	47	GLN
78	Q2	80	ARG
78	Q2	83	LEU
78	Q2	84	THR
78	Q2	92	GLU
78	Q2	93	LEU
78	Q2	100	LYS
78	Q2	104	LEU
78	Q2	105	GLN
79	Q3	5	THR
79	Q3	11	THR
79	Q3	25	GLN
79	Q3	28	LYS
79	Q3	33	GLN
79	Q3	36	ARG
79	Q3	40	SER
79	Q3	45	LYS
79	Q3	49	ARG
79	Q3	64	VAL
79	Q3	70	THR
79	Q3	84	ARG
2	s0	9	LEU
2	s0	12	GLU
2	s0	31	VAL
2	s0	41	ARG
2	s0	45	VAL
2	s0	69	ASN
2	s0	87	LEU
2	s0	93	THR
2	s0	101	ARG

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Mol	Chain	Res	Type
2	s0	108	THR
2	s0	124	THR
2	s0	138	TYR
2	s0	154	GLU
2	s0	158	VAL
2	s0	172	LEU
2	s0	179	ARG
2	s0	180	GLU
2	s0	183	ARG
2	s0	185	ARG
2	s0	188	LEU
2	s0	189	VAL
2	s0	198	MET
2	s0	200	ASP
3	s1	21	VAL
3	s1	25	THR
3	s1	26	ARG
3	s1	39	GLU
3	s1	42	ASN
3	s1	47	LEU
3	s1	51	SER
3	s1	62	LYS
3	s1	66	VAL
3	s1	68	VAL
3	s1	70	LEU
3	s1	73	LEU
3	s1	78	ASP
3	s1	81	PHE
3	s1	83	LYS
3	s1	87	ARG
3	s1	105	PHE
3	s1	115	ARG
3	s1	124	ASN
3	s1	126	THR
3	s1	135	LEU
3	s1	137	ILE
3	s1	152	ARG
3	s1	154	SER
3	s1	173	THR
3	s1	177	GLN
3	s1	181	LEU
3	s1	184	LEU

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Mol	Chain	Res	Type
3	s1	185	THR
3	s1	209	ASN
3	s1	212	VAL
3	s1	215	VAL
3	s1	219	LYS
3	s1	231	LEU
3	s1	232	HIS
4	s2	41	LEU
4	s2	53	ILE
4	s2	54	GLU
4	s2	58	LEU
4	s2	69	ILE
4	s2	70	ASP
4	s2	72	LEU
4	s2	78	ASP
4	s2	83	ILE
4	s2	87	GLN
4	s2	90	THR
4	s2	91	ARG
4	s2	97	ARG
4	s2	111	VAL
4	s2	113	LEU
4	s2	115	ILE
4	s2	141	ARG
4	s2	146	THR
4	s2	150	GLN
4	s2	152	HIS
4	s2	164	SER
4	s2	166	THR
4	s2	170	ILE
4	s2	195	ASP
4	s2	196	VAL
4	s2	218	ILE
4	s2	221	THR
4	s2	222	TYR
4	s2	224	PHE
4	s2	225	LEU
4	s2	226	THR
4	s2	238	SER
4	s2	240	LEU
4	s2	242	ILE
4	s2	250	GLN

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Mol	Chain	Res	Type
5	s3	4	LEU
5	s3	7	LYS
5	s3	9	ARG
5	s3	21	LEU
5	s3	31	GLU
5	s3	34	TYR
5	s3	37	VAL
5	s3	44	THR
5	s3	55	THR
5	s3	59	LEU
5	s3	61	GLU
5	s3	67	ASN
5	s3	79	TYR
5	s3	84	ILE
5	s3	90	ARG
5	s3	91	VAL
5	s3	96	LEU
5	s3	115	ILE
5	s3	120	TYR
5	s3	125	TYR
5	s3	127	MET
5	s3	128	GLU
5	s3	158	ILE
5	s3	162	GLN
5	s3	164	VAL
5	s3	168	ILE
5	s3	169	ASP
5	s3	176	LEU
5	s3	189	MET
5	s3	212	LYS
5	s3	218	LEU
5	s3	223	LYS
6	s4	12	LEU
6	s4	38	LEU
6	s4	42	LEU
6	s4	48	LEU
6	s4	49	ARG
6	s4	51	ARG
6	s4	66	MET
6	s4	70	VAL
6	s4	78	THR
6	s4	96	ASN

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Mol	Chain	Res	Type
6	s4	113	ARG
6	s4	120	SER
6	s4	128	LYS
6	s4	131	LEU
6	s4	148	ARG
6	s4	164	LEU
6	s4	170	THR
6	s4	180	LEU
6	s4	182	TYR
6	s4	184	THR
6	s4	194	THR
6	s4	214	LEU
6	s4	219	VAL
6	s4	220	THR
6	s4	221	ARG
6	s4	222	LEU
6	s4	223	ASN
6	s4	227	VAL
6	s4	246	LEU
7	s5	24	VAL
7	s5	25	LEU
7	s5	27	THR
7	s5	31	GLU
7	s5	42	LEU
7	s5	45	LYS
7	s5	48	PHE
7	s5	63	GLN
7	s5	65	ARG
7	s5	68	ILE
7	s5	93	LEU
7	s5	94	THR
7	s5	102	ARG
7	s5	112	ARG
7	s5	119	ASP
7	s5	124	LEU
7	s5	137	ILE
7	s5	147	THR
7	s5	157	ARG
7	s5	193	THR
7	s5	203	LYS
7	s5	219	ARG
7	s5	225	ARG

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Mol	Chain	Res	Type
8	s6	10	ASN
8	s6	15	THR
8	s6	31	ARG
8	s6	34	GLN
8	s6	65	GLN
8	s6	71	THR
8	s6	76	LEU
8	s6	78	THR
8	s6	82	SER
8	s6	93	LYS
8	s6	97	VAL
8	s6	101	ILE
8	s6	108	VAL
8	s6	109	LEU
8	s6	121	LEU
8	s6	126	ASP
8	s6	127	THR
8	s6	128	THR
8	s6	133	LEU
8	s6	137	ARG
8	s6	143	LYS
8	s6	153	VAL
8	s6	155	ASP
8	s6	156	PHE
8	s6	163	THR
8	s6	177	ARG
8	s6	179	VAL
8	s6	191	ARG
8	s6	215	ARG
9	s7	24	PHE
9	s7	33	GLU
9	s7	49	ILE
9	s7	50	ASP
9	s7	60	ILE
9	s7	75	THR
9	s7	77	LEU
9	s7	80	GLU
9	s7	86	GLN
9	s7	95	GLU
9	s7	97	ARG
9	s7	108	GLN
9	s7	114	ARG

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Mol	Chain	Res	Type
9	s7	116	ARG
9	s7	126	LEU
9	s7	143	LEU
9	s7	144	VAL
9	s7	148	LYS
9	s7	159	VAL
10	s8	4	SER
10	s8	10	LYS
10	s8	22	ARG
10	s8	25	ARG
10	s8	29	LEU
10	s8	36	THR
10	s8	46	VAL
10	s8	59	ARG
10	s8	61	GLU
10	s8	72	ILE
10	s8	76	THR
10	s8	77	ARG
10	s8	89	GLU
10	s8	138	ASN
10	s8	151	LYS
10	s8	152	ILE
10	s8	183	ILE
10	s8	187	GLU
11	s9	3	ARG
11	s9	6	ARG
11	s9	7	THR
11	s9	8	TYR
11	s9	16	LYS
11	s9	28	LEU
11	s9	33	GLU
11	s9	46	SER
11	s9	49	LEU
11	s9	50	SER
11	s9	61	THR
11	s9	78	ARG
11	s9	82	ARG
11	s9	83	VAL
11	s9	93	LEU
11	s9	96	VAL
11	s9	99	LEU
11	s9	101	VAL

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Mol	Chain	Res	Type
11	s9	103	ASP
11	s9	109	LEU
11	s9	111	THR
11	s9	121	SER
11	s9	126	ARG
11	s9	132	ARG
11	s9	134	ILE
11	s9	151	ASP
11	s9	171	ARG
11	s9	172	VAL
11	s9	180	LYS
11	s9	182	GLU
80	c0	2	LEU
80	c0	15	LEU
80	c0	20	VAL
80	c0	27	PHE
80	c0	36	ASP
80	c0	47	GLN
80	c0	55	VAL
80	c0	71	GLU
80	c0	77	ARG
13	c1	3	THR
13	c1	5	LEU
13	c1	30	ARG
13	c1	40	LEU
13	c1	44	THR
13	c1	47	THR
13	c1	60	PHE
13	c1	67	ARG
13	c1	74	THR
13	c1	79	LYS
13	c1	86	ILE
13	c1	87	ARG
13	c1	90	TYR
13	c1	117	VAL
13	c1	118	GLN
13	c1	129	ARG
14	c2	38	HIS
14	c2	52	LEU
14	c2	59	LEU
14	c2	61	VAL
14	c2	62	LEU

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Mol	Chain	Res	Type
14	c2	71	ILE
14	c2	74	LEU
14	c2	103	LEU
14	c2	120	VAL
14	c2	121	VAL
14	c2	132	GLU
14	c2	136	ILE
15	c3	6	SER
15	c3	16	ILE
15	c3	20	ARG
15	c3	21	ASN
15	c3	29	SER
15	c3	33	VAL
15	c3	53	LEU
15	c3	64	ARG
15	c3	66	ILE
15	c3	67	THR
15	c3	70	LYS
15	c3	84	ILE
15	c3	87	ASP
15	c3	103	GLU
15	c3	115	LEU
15	c3	127	ARG
15	c3	138	ASN
15	c3	139	TRP
15	c3	141	TYR
16	c4	20	TYR
16	c4	23	PHE
16	c4	26	THR
16	c4	28	VAL
16	c4	31	THR
16	c4	51	ASP
16	c4	62	LEU
16	c4	107	ARG
16	c4	114	ARG
16	c4	123	SER
16	c4	133	ARG
16	c4	136	ARG
16	c4	137	LEU
17	c5	12	PHE
17	c5	20	VAL
17	c5	21	ASP

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Mol	Chain	Res	Type
17	c5	27	GLU
17	c5	36	LEU
17	c5	44	ARG
17	c5	59	LYS
17	c5	61	ARG
17	c5	69	GLU
17	c5	71	GLU
17	c5	84	ILE
17	c5	89	MET
17	c5	107	ILE
17	c5	110	GLU
17	c5	122	THR
17	c5	126	VAL
17	c5	127	ARG
17	c5	128	HIS
18	c6	6	SER
18	c6	7	VAL
18	c6	17	THR
18	c6	23	LYS
18	c6	26	LYS
18	c6	28	LEU
18	c6	37	THR
18	c6	43	ILE
18	c6	53	LEU
18	c6	55	VAL
18	c6	57	LEU
18	c6	58	ASP
18	c6	63	ILE
18	c6	64	ASP
18	c6	68	ARG
18	c6	70	THR
18	c6	76	SER
18	c6	81	ILE
18	c6	94	GLN
18	c6	114	ARG
18	c6	115	THR
18	c6	137	ARG
19	c7	3	ARG
19	c7	5	ARG
19	c7	6	THR
19	c7	27	ASP
19	c7	29	GLN

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Mol	Chain	Res	Type
19	c7	34	LEU
19	c7	46	LEU
19	c7	72	LYS
19	c7	85	VAL
19	c7	88	VAL
19	c7	108	ASP
19	c7	113	LEU
20	c8	2	SER
20	c8	3	LEU
20	c8	4	VAL
20	c8	5	VAL
20	c8	6	GLN
20	c8	20	THR
20	c8	21	ASN
20	c8	25	ASN
20	c8	27	LYS
20	c8	28	ILE
20	c8	33	THR
20	c8	36	LYS
20	c8	40	ARG
20	c8	68	ARG
20	c8	85	PHE
20	c8	87	ASN
20	c8	94	ASP
20	c8	100	THR
20	c8	101	LEU
20	c8	116	LEU
20	c8	133	VAL
20	c8	134	ARG
20	c8	136	GLN
20	c8	141	THR
21	c9	6	VAL
21	c9	7	ARG
21	c9	28	LEU
21	c9	29	GLU
21	c9	33	TYR
21	c9	57	ARG
21	c9	68	ARG
21	c9	71	VAL
21	c9	123	ARG
21	c9	140	LEU
22	d0	13	GLU

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Mol	Chain	Res	Type
22	d0	27	THR
22	d0	44	ASN
22	d0	57	ARG
22	d0	60	THR
22	d0	63	LEU
22	d0	70	THR
22	d0	74	GLU
22	d0	77	LYS
22	d0	88	LYS
22	d0	98	GLN
22	d0	99	ILE
22	d0	103	ILE
22	d0	105	GLN
22	d0	107	THR
22	d0	115	GLU
23	d1	2	GLU
23	d1	5	LYS
23	d1	12	TYR
23	d1	17	CYS
23	d1	27	ASP
23	d1	32	VAL
23	d1	50	TYR
23	d1	52	THR
23	d1	62	ARG
23	d1	68	SER
23	d1	81	ASN
24	d2	4	SER
24	d2	22	LYS
24	d2	23	ARG
24	d2	24	GLN
24	d2	25	VAL
24	d2	26	LEU
24	d2	35	ILE
24	d2	36	LYS
24	d2	37	PHE
24	d2	42	GLN
24	d2	55	ASP
24	d2	65	LEU
24	d2	68	ARG
24	d2	88	LYS
24	d2	98	GLN
24	d2	103	ILE

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Mol	Chain	Res	Type
24	d2	105	THR
24	d2	126	LEU
25	d3	14	LYS
25	d3	16	ARG
25	d3	19	ARG
25	d3	40	SER
25	d3	72	VAL
25	d3	73	ARG
25	d3	84	THR
25	d3	100	ASP
25	d3	103	LEU
25	d3	107	PHE
25	d3	117	ILE
26	d4	5	VAL
26	d4	10	ARG
26	d4	21	LYS
26	d4	26	ASP
26	d4	34	ASN
26	d4	43	LYS
26	d4	44	LEU
26	d4	49	LYS
26	d4	58	PHE
26	d4	62	THR
26	d4	74	LEU
26	d4	88	THR
26	d4	98	GLU
26	d4	104	SER
26	d4	116	LYS
26	d4	133	ASN
27	d5	41	ILE
27	d5	51	LEU
27	d5	54	VAL
27	d5	57	TYR
27	d5	60	VAL
27	d5	77	ARG
27	d5	81	ARG
27	d5	88	ILE
27	d5	92	ILE
28	d6	10	ARG
28	d6	24	VAL
28	d6	25	ASN
28	d6	33	ASP

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Mol	Chain	Res	Type
28	d6	74	CYS
28	d6	82	ARG
28	d6	88	SER
28	d6	89	ARG
28	d6	91	ASP
29	d7	3	LEU
29	d7	11	THR
29	d7	34	ASP
29	d7	41	LEU
29	d7	43	ILE
29	d7	46	VAL
29	d7	67	THR
29	d7	77	THR
29	d7	80	ARG
29	d7	81	ARG
29	d7	82	LYS
30	d8	5	THR
30	d8	7	VAL
30	d8	8	THR
30	d8	22	ARG
30	d8	25	VAL
30	d8	33	LEU
30	d8	37	SER
30	d8	39	THR
30	d8	41	VAL
30	d8	54	LEU
30	d8	58	GLU
31	d9	10	HIS
31	d9	12	ARG
31	d9	21	CYS
31	d9	28	THR
31	d9	30	LEU
31	d9	32	ARG
31	d9	36	LEU
31	d9	42	CYS
31	d9	54	LYS
31	d9	56	ARG
32	e0	13	LYS
32	e0	21	VAL
32	e0	22	GLU
32	e0	24	THR
32	e0	25	GLU

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Mol	Chain	Res	Type
32	e0	29	LYS
32	e0	41	THR
32	e0	44	PHE
32	e0	46	ASN
32	e0	54	ARG
32	e0	55	ARG
32	e0	56	MET
33	e1	78	LYS
33	e1	80	ARG
33	e1	86	THR
33	e1	93	HIS
33	e1	98	VAL
33	e1	100	LEU
33	e1	102	VAL
33	e1	106	TYR
33	e1	113	LYS
33	e1	135	HIS
33	e1	147	VAL
33	e1	148	TYR
34	sR	29	GLN
34	sR	35	SER
34	sR	51	ASP
34	sR	52	GLN
34	sR	58	VAL
34	sR	59	ARG
34	sR	76	ASP
34	sR	96	THR
34	sR	106	HIS
34	sR	131	ILE
34	sR	145	LEU
34	sR	153	GLN
34	sR	160	GLU
34	sR	167	VAL
34	sR	183	LEU
34	sR	184	ASN
34	sR	202	LEU
34	sR	207	ASP
34	sR	245	PHE
34	sR	272	ASP
34	sR	278	PHE
34	sR	291	SER
34	sR	297	ASP

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Mol	Chain	Res	Type
34	sR	317	THR
35	sM	23	LYS
35	sM	43	ASP
35	sM	49	LYS
35	sM	50	ASN
35	sM	61	ILE
35	sM	68	ARG
35	sM	74	LYS
35	sM	77	THR
39	l2	10	LYS
39	l2	23	ARG
39	l2	32	LEU
39	l2	42	ARG
39	l2	44	ILE
39	l2	46	LYS
39	l2	48	ILE
39	l2	49	VAL
39	l2	62	VAL
39	l2	72	ARG
39	l2	74	GLU
39	l2	79	ASN
39	l2	82	VAL
39	l2	84	THR
39	l2	96	LEU
39	l2	101	VAL
39	l2	104	LEU
39	l2	107	VAL
39	l2	109	GLU
39	l2	112	ILE
39	l2	116	VAL
39	l2	128	ARG
39	l2	137	ILE
39	l2	147	ARG
39	l2	159	SER
39	l2	168	VAL
39	l2	179	LEU
39	l2	180	LEU
39	l2	207	VAL
39	l2	225	ILE
39	l2	227	ARG
39	l2	230	VAL
39	l2	238	ILE

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Mol	Chain	Res	Type
39	12	242	ARG
39	12	246	LEU
39	12	247	ARG
40	13	2	SER
40	13	3	HIS
40	13	4	ARG
40	13	7	GLU
40	13	10	ARG
40	13	17	LEU
40	13	19	ARG
40	13	20	LYS
40	13	37	ARG
40	13	43	LEU
40	13	44	THR
40	13	46	PHE
40	13	47	LEU
40	13	56	ILE
40	13	58	ARG
40	13	59	ASP
40	13	69	LYS
40	13	77	THR
40	13	85	VAL
40	13	103	THR
40	13	110	LEU
40	13	112	ASP
40	13	114	VAL
40	13	127	LYS
40	13	139	GLN
40	13	140	ASP
40	13	145	GLU
40	13	148	LEU
40	13	157	VAL
40	13	167	ARG
40	13	168	LYS
40	13	169	THR
40	13	183	LEU
40	13	188	ILE
40	13	192	VAL
40	13	196	ARG
40	13	205	VAL
40	13	208	VAL
40	13	211	GLN

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Mol	Chain	Res	Type
40	l3	231	HIS
40	l3	232	ARG
40	l3	238	LEU
40	l3	264	VAL
40	l3	274	SER
40	l3	282	ILE
40	l3	284	ARG
40	l3	297	SER
40	l3	304	THR
40	l3	308	MET
40	l3	324	VAL
40	l3	328	ILE
40	l3	332	ARG
40	l3	340	LYS
40	l3	341	SER
40	l3	347	SER
41	l4	2	SER
41	l4	14	GLU
41	l4	69	ARG
41	l4	73	ARG
41	l4	90	PHE
41	l4	92	ASN
41	l4	93	MET
41	l4	105	THR
41	l4	120	TYR
41	l4	136	LEU
41	l4	138	ARG
41	l4	144	LYS
41	l4	150	LEU
41	l4	153	SER
41	l4	156	LEU
41	l4	177	ASP
41	l4	179	LEU
41	l4	186	LYS
41	l4	187	LEU
41	l4	193	LYS
41	l4	201	GLN
41	l4	203	ARG
41	l4	206	LEU
41	l4	220	ARG
41	l4	222	VAL
41	l4	230	VAL

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Mol	Chain	Res	Type
41	14	246	ARG
41	14	258	LEU
41	14	259	ASP
41	14	265	GLU
41	14	286	VAL
41	14	289	ILE
41	14	313	LEU
41	14	316	ASN
41	14	319	LYS
41	14	327	LEU
41	14	333	VAL
41	14	338	LYS
41	14	345	GLU
41	14	347	THR
41	14	349	THR
42	15	4	GLN
42	15	14	SER
42	15	15	ARG
42	15	34	LYS
42	15	35	ARG
42	15	51	LEU
42	15	65	ILE
42	15	74	VAL
42	15	75	LEU
42	15	89	THR
42	15	110	LEU
42	15	112	LYS
42	15	113	LEU
42	15	118	THR
42	15	122	VAL
42	15	132	THR
42	15	133	GLU
42	15	136	GLU
42	15	140	ARG
42	15	144	VAL
42	15	146	LEU
42	15	148	ILE
42	15	152	ARG
42	15	155	THR
42	15	185	PHE
42	15	194	LEU
42	15	210	GLU

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Mol	Chain	Res	Type
42	15	217	GLU
42	15	218	ARG
42	15	227	LEU
42	15	254	LYS
42	15	258	LYS
42	15	259	LYS
42	15	263	GLU
42	15	268	GLU
42	15	271	LYS
42	15	273	ARG
42	15	275	THR
42	15	279	LYS
42	15	281	GLU
42	15	293	LEU
42	15	296	GLN
43	16	13	GLU
43	16	20	LYS
43	16	21	THR
43	16	26	ARG
43	16	29	LYS
43	16	48	ARG
43	16	52	VAL
43	16	64	LEU
43	16	78	ARG
43	16	79	VAL
43	16	89	THR
43	16	91	VAL
43	16	104	GLU
43	16	131	LYS
43	16	152	THR
43	16	155	LEU
43	16	162	SER
43	16	166	LYS
43	16	173	MET
43	16	175	LYS
44	17	26	VAL
44	17	41	ARG
44	17	53	LYS
44	17	60	ARG
44	17	83	LEU
44	17	88	ARG
44	17	93	ASN

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Mol	Chain	Res	Type
44	17	98	LYS
44	17	107	ARG
44	17	124	LEU
44	17	156	ILE
44	17	158	LYS
44	17	164	SER
44	17	173	LEU
44	17	175	LYS
44	17	179	LEU
44	17	183	ASP
44	17	184	LEU
44	17	194	HIS
44	17	196	LYS
44	17	229	PHE
44	17	234	GLU
44	17	239	LEU
45	18	41	GLN
45	18	50	VAL
45	18	54	GLU
45	18	57	ARG
45	18	68	ARG
45	18	71	VAL
45	18	74	THR
45	18	79	GLN
45	18	81	THR
45	18	89	GLU
45	18	98	ARG
45	18	133	LYS
45	18	136	LEU
45	18	157	VAL
45	18	160	ILE
45	18	163	VAL
45	18	169	LEU
45	18	172	LYS
45	18	211	LEU
45	18	213	LYS
45	18	240	ASN
45	18	245	LYS
45	18	248	LYS
46	19	1	MET
46	19	6	THR
46	19	17	THR

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Mol	Chain	Res	Type
46	19	18	VAL
46	19	22	SER
46	19	33	THR
46	19	46	THR
46	19	55	VAL
46	19	62	ARG
46	19	68	LEU
46	19	70	THR
46	19	80	THR
46	19	102	ASN
46	19	105	GLU
46	19	118	LEU
46	19	122	LYS
46	19	129	ARG
46	19	133	THR
46	19	138	THR
46	19	144	ILE
46	19	151	VAL
46	19	157	ASN
46	19	162	GLN
46	19	166	ARG
46	19	173	ARG
46	19	177	ASP
46	19	179	ILE
46	19	187	ILE
46	19	191	LEU
47	m0	3	ARG
47	m0	21	ARG
47	m0	28	ASP
47	m0	32	ARG
47	m0	34	TYR
47	m0	36	LEU
47	m0	42	THR
47	m0	48	LEU
47	m0	52	LEU
47	m0	58	GLU
47	m0	61	SER
47	m0	62	SER
47	m0	71	CYS
47	m0	78	THR
47	m0	80	SER
47	m0	87	LEU

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Mol	Chain	Res	Type
47	m0	88	ARG
47	m0	91	VAL
47	m0	99	ILE
47	m0	103	LEU
47	m0	125	LEU
47	m0	137	SER
47	m0	141	LYS
47	m0	153	ARG
47	m0	156	ARG
47	m0	167	LEU
47	m0	169	LYS
47	m0	174	THR
47	m0	176	LEU
47	m0	177	ASP
47	m0	182	LEU
47	m0	193	ASP
47	m0	197	VAL
47	m0	206	LEU
47	m0	212	GLU
47	m0	217	PHE
48	m1	10	ARG
48	m1	13	LYS
48	m1	16	LYS
48	m1	29	ARG
48	m1	30	LEU
48	m1	46	VAL
48	m1	48	SER
48	m1	51	ARG
48	m1	55	ARG
48	m1	56	THR
48	m1	61	ARG
48	m1	80	LEU
48	m1	92	ARG
48	m1	99	THR
48	m1	107	ASP
48	m1	112	LEU
48	m1	129	VAL
48	m1	130	VAL
48	m1	137	ARG
48	m1	140	ARG
48	m1	147	THR
48	m1	153	LYS

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Mol	Chain	Res	Type
48	m1	155	THR
48	m1	158	ASP
48	m1	161	SER
48	m1	171	VAL
48	m1	172	LEU
49	m3	13	HIS
49	m3	17	HIS
49	m3	45	LYS
49	m3	54	LEU
49	m3	58	VAL
49	m3	59	ARG
49	m3	67	ARG
49	m3	69	VAL
49	m3	73	ARG
49	m3	76	THR
49	m3	85	LEU
49	m3	86	THR
49	m3	100	ARG
49	m3	107	GLU
49	m3	128	ARG
49	m3	131	LYS
49	m3	149	GLN
49	m3	164	GLU
49	m3	168	ARG
49	m3	176	GLU
49	m3	184	GLU
49	m3	189	GLU
50	m4	3	THR
50	m4	4	ASP
50	m4	15	VAL
50	m4	39	ILE
50	m4	43	LYS
50	m4	53	VAL
50	m4	62	GLN
50	m4	66	THR
50	m4	69	THR
50	m4	72	LEU
50	m4	91	CYS
50	m4	107	GLU
50	m4	108	ARG
50	m4	123	LEU
51	m5	5	LYS

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Mol	Chain	Res	Type
51	m5	10	LEU
51	m5	12	ARG
51	m5	22	LEU
51	m5	31	ARG
51	m5	49	ARG
51	m5	54	LYS
51	m5	66	VAL
51	m5	67	ARG
51	m5	68	ARG
51	m5	73	ARG
51	m5	80	THR
51	m5	83	LYS
51	m5	92	LEU
51	m5	105	ARG
51	m5	106	VAL
51	m5	117	ASN
51	m5	138	GLN
51	m5	142	ILE
51	m5	153	ASP
51	m5	176	LYS
51	m5	178	HIS
51	m5	182	ASN
52	m6	3	VAL
52	m6	22	VAL
52	m6	34	VAL
52	m6	46	GLU
52	m6	66	LYS
52	m6	67	THR
52	m6	68	ARG
52	m6	74	ARG
52	m6	84	LEU
52	m6	85	ARG
52	m6	100	GLU
52	m6	106	GLU
52	m6	110	PRO
52	m6	113	ASP
52	m6	116	LYS
52	m6	117	ARG
52	m6	124	LEU
52	m6	126	VAL
52	m6	134	LYS
52	m6	143	THR

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Mol	Chain	Res	Type
52	m6	160	ARG
52	m6	175	THR
52	m6	180	SER
52	m6	182	ASN
52	m6	190	VAL
52	m6	197	LEU
53	m7	7	THR
53	m7	9	THR
53	m7	23	ARG
53	m7	32	THR
53	m7	42	THR
53	m7	52	LEU
53	m7	78	VAL
53	m7	79	THR
53	m7	97	ASN
53	m7	112	LEU
53	m7	114	VAL
53	m7	119	VAL
53	m7	121	GLN
53	m7	126	ARG
53	m7	136	ILE
53	m7	144	SER
53	m7	150	VAL
53	m7	153	LYS
54	m8	3	ILE
54	m8	7	SER
54	m8	12	ARG
54	m8	17	THR
54	m8	22	ASP
54	m8	31	LYS
54	m8	32	LEU
54	m8	34	THR
54	m8	38	ARG
54	m8	41	ASP
54	m8	64	VAL
54	m8	66	ARG
54	m8	78	ASN
54	m8	80	THR
54	m8	81	VAL
54	m8	86	THR
54	m8	93	ILE
54	m8	98	LYS

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Mol	Chain	Res	Type
54	m8	113	LYS
54	m8	122	ILE
54	m8	127	LEU
54	m8	135	GLN
54	m8	138	LEU
54	m8	140	LEU
54	m8	161	LYS
54	m8	165	ILE
54	m8	166	LEU
54	m8	170	ARG
54	m8	176	ARG
54	m8	185	LYS
55	m9	7	GLN
55	m9	10	LEU
55	m9	20	ARG
55	m9	21	LYS
55	m9	29	THR
55	m9	43	LYS
55	m9	56	THR
55	m9	63	THR
55	m9	74	ARG
55	m9	106	LEU
55	m9	116	ASP
55	m9	117	LYS
55	m9	126	GLU
55	m9	127	SER
55	m9	134	HIS
55	m9	146	LYS
55	m9	148	ASP
55	m9	152	GLU
55	m9	153	LYS
55	m9	158	GLU
55	m9	167	ARG
55	m9	173	ARG
55	m9	180	LYS
55	m9	186	LYS
56	n0	1	MET
56	n0	13	ARG
56	n0	17	GLU
56	n0	35	VAL
56	n0	50	LYS
56	n0	80	ARG

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Mol	Chain	Res	Type
56	n0	87	THR
56	n0	88	HIS
56	n0	96	ASP
56	n0	97	VAL
56	n0	100	VAL
56	n0	107	TYR
56	n0	130	GLU
56	n0	132	THR
56	n0	136	LYS
56	n0	137	ARG
56	n0	145	THR
56	n0	148	LEU
56	n0	162	THR
56	n0	164	SER
56	n0	172	TYR
57	n1	9	SER
57	n1	12	ARG
57	n1	18	ASP
57	n1	25	VAL
57	n1	35	LYS
57	n1	47	SER
57	n1	71	SER
57	n1	78	LYS
57	n1	80	VAL
57	n1	83	ARG
57	n1	88	ARG
57	n1	89	LEU
57	n1	96	ILE
57	n1	102	ARG
57	n1	104	GLU
57	n1	118	GLU
57	n1	124	VAL
57	n1	126	VAL
57	n1	130	ARG
57	n1	139	ARG
57	n1	141	VAL
57	n1	150	THR
57	n1	159	PHE
58	n2	27	VAL
58	n2	37	LEU
58	n2	38	ILE
58	n2	43	VAL

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Mol	Chain	Res	Type
58	n2	49	ASN
58	n2	57	THR
58	n2	58	GLU
58	n2	61	THR
58	n2	66	VAL
58	n2	75	TYR
58	n2	96	VAL
58	n2	98	THR
58	n2	100	THR
59	n3	4	ASN
59	n3	7	GLN
59	n3	9	THR
59	n3	13	ILE
59	n3	32	ARG
59	n3	48	ARG
59	n3	74	MET
59	n3	83	LYS
59	n3	88	ARG
59	n3	93	LEU
59	n3	98	ASN
59	n3	108	GLU
59	n3	124	ASP
59	n3	125	LEU
59	n3	136	VAL
60	n4	1	MET
60	n4	5	ILE
60	n4	12	LYS
60	n4	19	THR
60	n4	39	LEU
60	n4	59	HIS
60	n4	63	ILE
60	n4	96	LEU
60	n4	99	GLU
60	n4	107	GLU
60	n4	127	LYS
60	n4	134	GLN
61	n5	27	ARG
61	n5	56	ARG
61	n5	57	LEU
61	n5	63	ILE
61	n5	65	GLN
61	n5	69	SER

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Mol	Chain	Res	Type
61	n5	108	LEU
61	n5	115	ARG
61	n5	125	ARG
61	n5	135	ILE
61	n5	137	ASN
61	n5	142	ILE
62	n6	4	GLN
62	n6	5	SER
62	n6	10	SER
62	n6	12	ARG
62	n6	13	ARG
62	n6	17	LYS
62	n6	37	LYS
62	n6	40	ARG
62	n6	45	ILE
62	n6	50	ILE
62	n6	51	ARG
62	n6	56	VAL
62	n6	57	LEU
62	n6	66	GLN
62	n6	69	LYS
62	n6	74	TYR
62	n6	76	LEU
62	n6	83	ASP
62	n6	115	ARG
62	n6	127	GLU
63	n7	14	VAL
63	n7	17	ARG
63	n7	24	VAL
63	n7	27	LYS
63	n7	46	ILE
63	n7	47	GLU
63	n7	52	LYS
63	n7	57	HIS
63	n7	72	ILE
63	n7	74	VAL
63	n7	81	LEU
63	n7	83	THR
63	n7	86	THR
63	n7	90	GLU
63	n7	95	VAL
63	n7	100	THR

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Mol	Chain	Res	Type
63	n7	102	GLU
63	n7	111	LYS
63	n7	126	LYS
63	n7	134	LEU
64	n8	4	ARG
64	n8	8	THR
64	n8	10	LYS
64	n8	15	VAL
64	n8	19	LYS
64	n8	27	LYS
64	n8	42	ARG
64	n8	46	ASP
64	n8	56	VAL
64	n8	60	TYR
64	n8	65	GLN
64	n8	80	THR
64	n8	85	ASP
64	n8	91	LEU
64	n8	95	SER
64	n8	98	THR
64	n8	123	VAL
64	n8	133	LEU
65	n9	13	THR
65	n9	19	ASN
65	n9	38	LYS
65	n9	58	LYS
65	n9	59	LYS
66	o0	18	ILE
66	o0	19	LYS
66	o0	40	LYS
66	o0	41	LEU
66	o0	61	MET
66	o0	63	SER
66	o0	74	ASN
66	o0	76	GLU
66	o0	86	ARG
66	o0	87	VAL
66	o0	94	GLU
66	o0	97	ASP
66	o0	103	THR
67	o1	6	ASP
67	o1	8	VAL

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Mol	Chain	Res	Type
67	o1	13	THR
67	o1	16	LEU
67	o1	24	SER
67	o1	26	LYS
67	o1	31	ARG
67	o1	34	LYS
67	o1	44	MET
67	o1	62	ARG
67	o1	76	SER
67	o1	81	GLU
67	o1	90	PHE
67	o1	91	SER
67	o1	96	VAL
67	o1	102	LYS
67	o1	106	THR
67	o1	110	GLU
68	o2	3	SER
68	o2	4	LEU
68	o2	6	HIS
68	o2	14	THR
68	o2	16	LYS
68	o2	24	ARG
68	o2	27	ARG
68	o2	31	ASN
68	o2	33	ARG
68	o2	34	LYS
68	o2	41	VAL
68	o2	50	ILE
68	o2	61	LYS
68	o2	63	THR
68	o2	73	THR
68	o2	75	LEU
68	o2	82	LEU
68	o2	84	THR
68	o2	86	THR
68	o2	88	HIS
68	o2	95	GLU
68	o2	103	LYS
68	o2	106	VAL
68	o2	109	LEU
69	o3	4	SER
69	o3	15	SER

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Mol	Chain	Res	Type
69	o3	31	LYS
69	o3	37	THR
69	o3	45	LEU
69	o3	48	ARG
69	o3	49	ILE
69	o3	58	GLU
69	o3	59	VAL
69	o3	73	ARG
69	o3	81	VAL
69	o3	84	THR
69	o3	98	VAL
70	o4	5	VAL
70	o4	6	THR
70	o4	20	ILE
70	o4	29	ILE
70	o4	31	ARG
70	o4	35	VAL
70	o4	44	CYS
70	o4	54	ILE
70	o4	58	ARG
70	o4	65	VAL
70	o4	68	THR
70	o4	71	THR
70	o4	83	ASN
70	o4	85	VAL
70	o4	88	ARG
71	o5	20	GLN
71	o5	21	LEU
71	o5	37	SER
71	o5	38	ARG
71	o5	47	VAL
71	o5	59	ASN
71	o5	62	GLN
71	o5	69	LEU
71	o5	79	ASP
71	o5	84	LYS
71	o5	85	THR
71	o5	89	ARG
71	o5	100	VAL
72	o6	2	THR
72	o6	3	VAL
72	o6	9	ILE

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Mol	Chain	Res	Type
72	o6	11	LEU
72	o6	15	LYS
72	o6	17	VAL
72	o6	20	MET
72	o6	21	THR
72	o6	26	ILE
72	o6	35	ASN
72	o6	36	ARG
72	o6	43	LEU
72	o6	45	ARG
72	o6	57	LEU
72	o6	58	ILE
72	o6	60	LEU
72	o6	62	ARG
72	o6	68	ARG
72	o6	76	ARG
72	o6	79	SER
72	o6	81	THR
72	o6	88	GLU
72	o6	94	ILE
72	o6	98	ARG
73	o7	15	SER
73	o7	17	THR
73	o7	25	ARG
73	o7	36	SER
73	o7	44	THR
73	o7	46	SER
73	o7	59	THR
73	o7	65	ARG
73	o7	67	LEU
73	o7	75	LYS
73	o7	80	THR
73	o7	84	SER
74	o8	5	ILE
74	o8	8	ILE
74	o8	13	GLU
74	o8	14	LEU
74	o8	19	ASP
74	o8	24	THR
74	o8	41	THR
74	o8	49	SER
74	o8	53	THR

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Mol	Chain	Res	Type
74	o8	61	LYS
74	o8	64	LYS
74	o8	65	LEU
75	o9	4	GLN
75	o9	5	LYS
75	o9	17	LYS
75	o9	19	GLN
75	o9	21	ARG
75	o9	23	LEU
75	o9	28	ARG
75	o9	29	LEU
75	o9	45	ARG
76	q0	85	LEU
76	q0	106	ARG
76	q0	112	LYS
76	q0	113	ARG
76	q0	114	LYS
77	q1	2	ARG
77	q1	9	ARG
77	q1	13	LEU
77	q1	15	ARG
77	q1	21	ARG
77	q1	23	ARG
77	q1	24	SER
77	q1	25	LYS
78	q2	7	THR
78	q2	8	ARG
78	q2	26	THR
78	q2	35	LEU
78	q2	61	LYS
78	q2	71	ARG
78	q2	78	LYS
78	q2	80	ARG
78	q2	84	THR
78	q2	85	LEU
78	q2	93	LEU
78	q2	105	GLN
78	q2	106	PHE
79	q3	3	LYS
79	q3	22	LEU
79	q3	33	GLN
79	q3	42	CYS

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Mol	Chain	Res	Type
79	q3	49	ARG
79	q3	54	ILE
79	q3	56	THR
79	q3	58	SER
79	q3	59	CYS
79	q3	73	THR
79	q3	78	THR
82	p0	4	ILE
82	p0	5	ARG
82	p0	30	VAL
82	p0	48	ARG
82	p0	52	LEU
82	p0	57	THR
82	p0	67	LEU
82	p0	70	LEU
82	p0	91	GLU
82	p0	93	LEU
82	p0	97	LYS
85	f	12	ASP
85	f	37	ARG
85	f	52	HIS
85	f	78	HIS
85	f	80	MET
85	f	87	ARG
85	f	94	ASP
85	f	102	LEU
85	f	105	MET
85	f	109	THR
85	f	112	ASP
85	f	120	LEU
85	f	123	SER
85	f	124	LEU
85	f	137	THR
85	f	148	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (44) such sidechains are listed below:

Mol	Chain	Res	Type
3	S1	95	ASN
5	S3	159	HIS
6	S4	142	HIS
7	S5	116	HIS

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Mol	Chain	Res	Type
10	S8	32	GLN
10	S8	52	ASN
11	S9	110	GLN
12	C0	81	ASN
20	C8	127	HIS
22	D0	44	ASN
25	D3	79	ASN
27	D5	95	HIS
30	D8	27	GLN
33	E1	134	ASN
35	SM	94	HIS
40	L3	211	GLN
42	L5	40	HIS
46	L9	139	ASN
47	M0	14	ASN
47	M0	144	ASN
51	M5	15	GLN
52	M6	193	GLN
54	M8	135	GLN
63	N7	57	HIS
3	s1	149	GLN
3	s1	209	ASN
6	s4	142	HIS
10	s8	32	GLN
11	s9	133	HIS
80	c0	62	GLN
24	d2	56	HIS
27	d5	38	HIS
34	sR	106	HIS
34	sR	182	ASN
41	l4	296	GLN
41	l4	328	ASN
44	l7	48	ASN
49	m3	99	HIS
52	m6	29	ASN
55	m9	7	GLN
56	n0	8	GLN
60	n4	58	HIS
61	n5	137	ASN
64	n8	44	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	1776/1800 (98%)	454 (25%)	49 (2%)
1	6	1791/1800 (99%)	436 (24%)	35 (1%)
36	1	3145/3396 (92%)	652 (20%)	49 (1%)
36	5	3163/3396 (93%)	650 (20%)	49 (1%)
37	3	120/121 (99%)	11 (9%)	0
37	7	120/121 (99%)	16 (13%)	1 (0%)
38	4	157/158 (99%)	36 (22%)	1 (0%)
38	8	157/158 (99%)	33 (21%)	1 (0%)
All	All	10429/10950 (95%)	2288 (21%)	185 (1%)

All (2288) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	2	A
1	2	4	C
1	2	8	U
1	2	17	C
1	2	25	C
1	2	26	A
1	2	27	U
1	2	34	G
1	2	42	G
1	2	44	U
1	2	45	U
1	2	47	A
1	2	57	G
1	2	60	U
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	76	A
1	2	95	G
1	2	101	U
1	2	104	A
1	2	111	U
1	2	114	C
1	2	115	G
1	2	131	C
1	2	132	U
1	2	133	U

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Mol	Chain	Res	Type
1	2	134	U
1	2	135	A
1	2	136	C
1	2	137	U
1	2	140	A
1	2	141	U
1	2	145	A
1	2	146	U
1	2	153	G
1	2	158	U
1	2	159	U
1	2	169	A
1	2	178	U
1	2	179	A
1	2	185	U
1	2	186	C
1	2	187	G
1	2	189	C
1	2	190	C
1	2	191	C
1	2	192	U
1	2	193	U
1	2	194	U
1	2	195	G
1	2	196	G
1	2	197	A
1	2	198	A
1	2	200	A
1	2	215	A
1	2	217	A
1	2	218	A
1	2	219	A
1	2	226	A
1	2	227	U
1	2	228	G
1	2	233	C
1	2	234	G
1	2	235	G
1	2	238	U
1	2	239	C
1	2	240	U
1	2	241	U

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Mol	Chain	Res	Type
1	2	242	U
1	2	249	U
1	2	250	C
1	2	257	A
1	2	259	U
1	2	261	U
1	2	262	U
1	2	265	A
1	2	271	A
1	2	272	U
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	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	322	G
1	2	323	A
1	2	333	A
1	2	337	G
1	2	338	C
1	2	352	A
1	2	359	A
1	2	360	A
1	2	361	C
1	2	400	A
1	2	402	C
1	2	403	G
1	2	404	G
1	2	416	A
1	2	418	G
1	2	419	G

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Mol	Chain	Res	Type
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	446	A
1	2	448	C
1	2	455	C
1	2	456	A
1	2	468	A
1	2	477	A
1	2	484	C
1	2	485	A
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
1	2	507	U
1	2	508	U
1	2	510	G
1	2	511	A
1	2	513	U
1	2	515	A
1	2	516	G
1	2	527	A
1	2	532	U
1	2	538	A

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Mol	Chain	Res	Type
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	557	G
1	2	558	U
1	2	559	C
1	2	565	C
1	2	566	C
1	2	571	G
1	2	578	U
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	609	U
1	2	619	A
1	2	620	A
1	2	622	A
1	2	623	A
1	2	624	G
1	2	639	U
1	2	640	U
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	679	U
1	2	684	A
1	2	686	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

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Mol	Chain	Res	Type
1	2	703	G
1	2	704	C
1	2	705	U
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	720	G
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	730	G
1	2	731	C
1	2	732	G
1	2	733	A
1	2	734	A
1	2	735	C
1	2	736	C
1	2	737	A
1	2	738	G
1	2	742	U
1	2	745	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

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Mol	Chain	Res	Type
1	2	795	U
1	2	803	A
1	2	812	A
1	2	814	A
1	2	815	G
1	2	816	G
1	2	818	C
1	2	820	U
1	2	821	U
1	2	822	U
1	2	823	G
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	848	C
1	2	856	A
1	2	860	U
1	2	863	A
1	2	873	U
1	2	876	G
1	2	886	U
1	2	896	U
1	2	898	A
1	2	912	U
1	2	914	G
1	2	915	A
1	2	926	A
1	2	933	A
1	2	935	U
1	2	942	G
1	2	944	A
1	2	951	A
1	2	960	U
1	2	966	A
1	2	979	A
1	2	992	A
1	2	993	A
1	2	997	G

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Mol	Chain	Res	Type
1	2	1003	A
1	2	1004	U
1	2	1005	A
1	2	1020	A
1	2	1021	C
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	1058	U
1	2	1059	U
1	2	1060	U
1	2	1061	A
1	2	1073	G
1	2	1074	G
1	2	1082	C
1	2	1083	G
1	2	1086	A
1	2	1091	A
1	2	1092	A
1	2	1096	C
1	2	1097	U
1	2	1100	G
1	2	1138	A
1	2	1146	G
1	2	1151	A
1	2	1155	G
1	2	1158	C
1	2	1160	A
1	2	1163	A
1	2	1167	G
1	2	1185	U
1	2	1194	A
1	2	1196	A
1	2	1197	C
1	2	1198	G
1	2	1199	G
1	2	1200	G
1	2	1202	A

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Mol	Chain	Res	Type
1	2	1208	A
1	2	1217	A
1	2	1218	G
1	2	1227	A
1	2	1229	G
1	2	1244	A
1	2	1245	G
1	2	1250	U
1	2	1251	U
1	2	1254	U
1	2	1256	A
1	2	1258	U
1	2	1276	U
1	2	1284	C
1	2	1286	U
1	2	1301	U
1	2	1307	U
1	2	1311	U
1	2	1312	A
1	2	1314	U
1	2	1315	U
1	2	1321	A
1	2	1337	A
1	2	1339	C
1	2	1340	U
1	2	1341	A
1	2	1344	A
1	2	1345	A
1	2	1346	A
1	2	1348	A
1	2	1355	C
1	2	1361	U
1	2	1363	U
1	2	1370	U
1	2	1371	A
1	2	1372	U
1	2	1390	U
1	2	1398	U
1	2	1399	C
1	2	1412	G
1	2	1413	U
1	2	1414	U

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Mol	Chain	Res	Type
1	2	1415	U
1	2	1420	C
1	2	1427	A
1	2	1428	G
1	2	1432	U
1	2	1446	A
1	2	1456	C
1	2	1458	G
1	2	1459	C
1	2	1461	C
1	2	1471	A
1	2	1473	U
1	2	1474	G
1	2	1477	G
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	1496	U
1	2	1499	G
1	2	1506	G
1	2	1514	U
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	1526	A
1	2	1530	C
1	2	1535	U
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	1560	U
1	2	1569	A

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Mol	Chain	Res	Type
1	2	1574	G
1	2	1584	G
1	2	1596	C
1	2	1601	G
1	2	1616	G
1	2	1619	C
1	2	1624	C
1	2	1625	C
1	2	1626	U
1	2	1631	A
1	2	1634	C
1	2	1636	C
1	2	1657	U
1	2	1658	G
1	2	1680	G
1	2	1681	A
1	2	1683	C
1	2	1684	U
1	2	1685	G
1	2	1697	G
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	1704	U
1	2	1712	A
1	2	1713	G
1	2	1731	A
1	2	1732	A
1	2	1752	U
1	2	1760	G
1	2	1762	A
1	2	1766	A
1	2	1769	U
1	2	1770	U
1	2	1780	G
1	2	1782	A
1	2	1783	C
1	2	1792	G
1	2	1793	G

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Mol	Chain	Res	Type
1	2	1794	A
1	2	1795	U
1	2	1796	C
1	2	1798	U
36	1	15	C
36	1	16	A
36	1	18	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	68	C
36	1	76	G
36	1	88	A
36	1	92	G
36	1	93	C
36	1	99	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	133	U
36	1	135	C
36	1	136	G
36	1	148	G
36	1	156	G
36	1	157	A
36	1	160	G
36	1	166	C
36	1	170	G
36	1	174	C
36	1	187	A
36	1	190	U

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Mol	Chain	Res	Type
36	1	191	U
36	1	206	G
36	1	210	U
36	1	213	A
36	1	218	G
36	1	219	A
36	1	233	C
36	1	240	U
36	1	241	G
36	1	242	C
36	1	243	G
36	1	245	U
36	1	249	U
36	1	252	U
36	1	256	G
36	1	266	A
36	1	269	G
36	1	282	G
36	1	283	G
36	1	286	U
36	1	295	A
36	1	298	U
36	1	305	U
36	1	315	C
36	1	323	A
36	1	329	U
36	1	334	A
36	1	338	A
36	1	339	C
36	1	343	U
36	1	349	A
36	1	350	C
36	1	376	G
36	1	391	A
36	1	398	A
36	1	399	A
36	1	401	U
36	1	402	A
36	1	403	C
36	1	404	G
36	1	412	G
36	1	421	G

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Mol	Chain	Res	Type
36	1	422	A
36	1	438	A
36	1	440	A
36	1	495	G
36	1	498	A
36	1	520	U
36	1	521	A
36	1	530	G
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	551	A
36	1	552	G
36	1	555	U
36	1	557	A
36	1	558	U
36	1	559	A
36	1	578	A
36	1	579	G
36	1	588	G
36	1	591	G
36	1	592	A
36	1	604	G
36	1	609	G
36	1	611	A
36	1	620	U
36	1	621	A
36	1	622	A
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	691	A
36	1	705	A
36	1	708	G
36	1	709	A

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Mol	Chain	Res	Type
36	1	712	G
36	1	715	A
36	1	716	A
36	1	720	A
36	1	725	G
36	1	736	A
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	806	A
36	1	816	A
36	1	817	A
36	1	830	A
36	1	837	A
36	1	849	C
36	1	861	C
36	1	874	U
36	1	879	U
36	1	885	U
36	1	890	C
36	1	896	A
36	1	907	G
36	1	908	G
36	1	910	G
36	1	914	A
36	1	916	G
36	1	917	A
36	1	921	A
36	1	923	C
36	1	924	G
36	1	937	G
36	1	938	C
36	1	944	C
36	1	959	C
36	1	960	U
36	1	963	G

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Mol	Chain	Res	Type
36	1	978	G
36	1	979	U
36	1	980	A
36	1	981	U
36	1	982	C
36	1	987	U
36	1	994	G
36	1	1000	C
36	1	1001	G
36	1	1002	A
36	1	1006	A
36	1	1010	G
36	1	1013	G
36	1	1015	U
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	1036	A
36	1	1047	A
36	1	1049	C
36	1	1052	U
36	1	1064	A
36	1	1065	A
36	1	1071	U
36	1	1072	G
36	1	1081	U
36	1	1083	G
36	1	1090	G
36	1	1093	A
36	1	1094	U
36	1	1095	U
36	1	1096	U
36	1	1097	G
36	1	1098	A
36	1	1103	A
36	1	1104	G
36	1	1117	G
36	1	1131	G
36	1	1153	A

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Mol	Chain	Res	Type
36	1	1159	A
36	1	1160	C
36	1	1162	U
36	1	1174	G
36	1	1179	A
36	1	1180	A
36	1	1181	U
36	1	1182	A
36	1	1192	C
36	1	1201	C
36	1	1209	G
36	1	1212	A
36	1	1213	G
36	1	1217	A
36	1	1222	G
36	1	1225	A
36	1	1227	C
36	1	1232	C
36	1	1233	G
36	1	1235	U
36	1	1236	G
36	1	1237	G
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	1254	C
36	1	1258	U
36	1	1262	G
36	1	1263	A
36	1	1264	G
36	1	1266	G
36	1	1269	U
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

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Mol	Chain	Res	Type
36	1	1305	U
36	1	1307	G
36	1	1308	A
36	1	1309	U
36	1	1318	A
36	1	1320	C
36	1	1330	A
36	1	1331	U
36	1	1332	A
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	1355	A
36	1	1356	U
36	1	1357	G
36	1	1386	A
36	1	1392	G
36	1	1398	U
36	1	1399	A
36	1	1400	G
36	1	1418	A
36	1	1419	A
36	1	1433	A
36	1	1434	G
36	1	1437	C
36	1	1446	A
36	1	1449	A
36	1	1450	G
36	1	1481	A
36	1	1482	A
36	1	1485	G
36	1	1508	C
36	1	1527	C
36	1	1533	U
36	1	1535	A
36	1	1556	C
36	1	1560	G
36	1	1561	G
36	1	1562	C

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Mol	Chain	Res	Type
36	1	1563	C
36	1	1564	U
36	1	1566	A
36	1	1567	U
36	1	1568	U
36	1	1569	U
36	1	1570	U
36	1	1571	A
36	1	1572	U
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	1605	A
36	1	1620	U
36	1	1629	U
36	1	1639	C
36	1	1641	U
36	1	1643	A
36	1	1644	C
36	1	1645	U
36	1	1657	C
36	1	1677	G
36	1	1683	A
36	1	1688	U
36	1	1689	U
36	1	1716	U
36	1	1717	U
36	1	1724	U
36	1	1729	A
36	1	1736	G
36	1	1742	U
36	1	1746	U
36	1	1749	A
36	1	1750	A
36	1	1751	G
36	1	1752	A
36	1	1763	U
36	1	1764	U

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Mol	Chain	Res	Type
36	1	1765	U
36	1	1766	G
36	1	1767	C
36	1	1770	G
36	1	1780	G
36	1	1797	A
36	1	1798	A
36	1	1808	G
36	1	1810	A
36	1	1814	A
36	1	1815	U
36	1	1816	A
36	1	1817	G
36	1	1819	U
36	1	1820	U
36	1	1821	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	1864	A
36	1	1866	C
36	1	1879	A
36	1	1880	U
36	1	1906	G
36	1	1927	G
36	1	1934	G
36	1	1948	G
36	1	1951	C
36	1	1952	G
36	1	1953	G
36	1	1954	G
36	1	2094	C
36	1	2101	C
36	1	2102	U
36	1	2111	G
36	1	2113	A
36	1	2114	C
36	1	2121	G
36	1	2122	G

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Mol	Chain	Res	Type
36	1	2131	A
36	1	2140	U
36	1	2144	A
36	1	2158	A
36	1	2168	A
36	1	2169	G
36	1	2170	U
36	1	2187	G
36	1	2188	A
36	1	2195	C
36	1	2198	A
36	1	2205	U
36	1	2208	A
36	1	2209	U
36	1	2210	G
36	1	2213	A
36	1	2215	A
36	1	2225	U
36	1	2244	A
36	1	2249	G
36	1	2250	G
36	1	2255	A
36	1	2256	A
36	1	2272	G
36	1	2273	G
36	1	2279	A
36	1	2281	A
36	1	2282	U
36	1	2283	G
36	1	2298	U
36	1	2299	A
36	1	2301	U
36	1	2303	A
36	1	2307	G
36	1	2310	U
36	1	2313	A
36	1	2314	U
36	1	2315	G
36	1	2319	U
36	1	2334	U
36	1	2335	G
36	1	2336	U

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Mol	Chain	Res	Type
36	1	2355	G
36	1	2361	A
36	1	2366	C
36	1	2372	A
36	1	2373	A
36	1	2374	C
36	1	2375	G
36	1	2378	C
36	1	2382	G
36	1	2385	G
36	1	2388	U
36	1	2393	G
36	1	2394	G
36	1	2397	A
36	1	2401	A
36	1	2402	A
36	1	2403	G
36	1	2404	A
36	1	2405	C
36	1	2406	C
36	1	2411	U
36	1	2418	G
36	1	2419	A
36	1	2437	G
36	1	2444	C
36	1	2445	A
36	1	2502	A
36	1	2503	G
36	1	2504	U
36	1	2507	C
36	1	2509	U
36	1	2514	U
36	1	2515	A
36	1	2522	G
36	1	2523	A
36	1	2526	C
36	1	2530	G
36	1	2531	C
36	1	2532	U
36	1	2533	G
36	1	2534	G
36	1	2537	U

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Mol	Chain	Res	Type
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	2544	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	2589	G
36	1	2593	A
36	1	2594	C
36	1	2606	G
36	1	2607	G
36	1	2614	G
36	1	2621	G
36	1	2626	A
36	1	2637	A
36	1	2638	C
36	1	2652	U
36	1	2656	A
36	1	2657	A
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

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Mol	Chain	Res	Type
36	1	2705	A
36	1	2706	G
36	1	2714	G
36	1	2728	G
36	1	2729	U
36	1	2752	U
36	1	2753	G
36	1	2755	C
36	1	2762	A
36	1	2771	U
36	1	2772	C
36	1	2777	G
36	1	2778	G
36	1	2780	A
36	1	2796	G
36	1	2797	C
36	1	2799	A
36	1	2800	G
36	1	2801	A
36	1	2803	A
36	1	2810	C
36	1	2816	G
36	1	2817	A
36	1	2818	U
36	1	2838	A
36	1	2842	U
36	1	2843	U
36	1	2845	A
36	1	2853	A
36	1	2860	U
36	1	2861	U
36	1	2871	G
36	1	2872	A
36	1	2879	C
36	1	2887	A
36	1	2898	G
36	1	2899	C
36	1	2923	U
36	1	2928	C
36	1	2935	U
36	1	2936	A
36	1	2942	C

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Mol	Chain	Res	Type
36	1	2947	G
36	1	2954	U
36	1	2955	U
36	1	2971	A
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	3040	A
36	1	3049	A
36	1	3056	U
36	1	3058	U
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	3092	C
36	1	3104	U
36	1	3118	C
36	1	3119	U
36	1	3122	A
36	1	3123	A
36	1	3129	A
36	1	3130	A
36	1	3131	U
36	1	3142	A
36	1	3143	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	3164	C
36	1	3165	A
36	1	3167	A

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Mol	Chain	Res	Type
36	1	3168	A
36	1	3169	U
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	3205	G
36	1	3207	U
36	1	3210	A
36	1	3213	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	3243	A
36	1	3244	A
36	1	3245	A
36	1	3246	G
36	1	3247	G
36	1	3253	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	3278	C
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

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Mol	Chain	Res	Type
36	1	3304	U
36	1	3307	A
36	1	3313	U
36	1	3316	A
36	1	3317	U
36	1	3318	G
36	1	3319	U
36	1	3334	U
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	3353	G
36	1	3354	U
36	1	3355	U
36	1	3356	G
36	1	3368	U
36	1	3369	G
36	1	3378	C
36	1	3381	U
36	1	3382	U
36	1	3383	G
36	1	3389	U
36	1	3396	U
37	3	7	G
37	3	11	A
37	3	22	A
37	3	41	G
37	3	54	U
37	3	65	G
37	3	74	C
37	3	76	A
37	3	102	A
37	3	112	G
37	3	121	U
38	4	18	U
38	4	20	U
38	4	34	U
38	4	35	C
38	4	48	A

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Mol	Chain	Res	Type
38	4	51	G
38	4	53	A
38	4	59	A
38	4	62	C
38	4	63	G
38	4	75	G
38	4	80	A
38	4	81	U
38	4	82	U
38	4	83	C
38	4	84	C
38	4	85	G
38	4	86	U
38	4	87	G
38	4	90	U
38	4	95	G
38	4	98	U
38	4	102	U
38	4	104	A
38	4	105	A
38	4	106	C
38	4	111	A
38	4	113	U
38	4	125	U
38	4	126	A
38	4	128	U
38	4	138	A
38	4	152	G
38	4	155	A
38	4	157	U
38	4	158	U
1	6	2	A
1	6	4	C
1	6	11	A
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	40	A
1	6	42	G

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Mol	Chain	Res	Type
1	6	46	A
1	6	47	A
1	6	57	G
1	6	60	U
1	6	65	A
1	6	68	A
1	6	69	G
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	97	C
1	6	104	A
1	6	111	U
1	6	114	C
1	6	116	U
1	6	132	U
1	6	137	U
1	6	138	A
1	6	140	A
1	6	141	U
1	6	145	A
1	6	146	U
1	6	153	G
1	6	158	U
1	6	159	U
1	6	166	C
1	6	175	G
1	6	178	U
1	6	181	A
1	6	185	U
1	6	188	A
1	6	190	C
1	6	191	C
1	6	192	U
1	6	193	U
1	6	194	U
1	6	195	G
1	6	198	A

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Mol	Chain	Res	Type
1	6	199	G
1	6	200	A
1	6	215	A
1	6	216	U
1	6	217	A
1	6	218	A
1	6	219	A
1	6	220	A
1	6	222	A
1	6	226	A
1	6	227	U
1	6	228	G
1	6	230	C
1	6	232	U
1	6	233	C
1	6	234	G
1	6	240	U
1	6	241	U
1	6	249	U
1	6	250	C
1	6	261	U
1	6	265	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	321	C
1	6	334	G
1	6	337	G
1	6	338	C
1	6	352	A
1	6	359	A

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Mol	Chain	Res	Type
1	6	361	C
1	6	378	A
1	6	393	C
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	424	C
1	6	425	A
1	6	426	G
1	6	434	G
1	6	438	A
1	6	439	U
1	6	444	C
1	6	445	A
1	6	448	C
1	6	468	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	502	U
1	6	504	U
1	6	505	A
1	6	506	A
1	6	508	U
1	6	516	G
1	6	519	C
1	6	527	A
1	6	536	C
1	6	538	A

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Mol	Chain	Res	Type
1	6	539	G
1	6	540	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
1	6	564	G
1	6	565	C
1	6	568	G
1	6	570	A
1	6	574	G
1	6	577	G
1	6	579	A
1	6	580	A
1	6	582	U
1	6	584	C
1	6	594	A
1	6	595	G
1	6	606	A
1	6	609	U
1	6	611	U
1	6	619	A
1	6	620	A
1	6	622	A
1	6	623	A
1	6	639	U
1	6	640	U
1	6	650	U
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

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Mol	Chain	Res	Type
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	697	C
1	6	698	U
1	6	709	C
1	6	710	U
1	6	711	U
1	6	718	U
1	6	719	U
1	6	720	G
1	6	721	U
1	6	722	G
1	6	730	G
1	6	734	A
1	6	740	A
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	766	U
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	793	A
1	6	794	U
1	6	810	G
1	6	811	A
1	6	812	A
1	6	813	U
1	6	814	A

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Mol	Chain	Res	Type
1	6	815	G
1	6	816	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
1	6	832	U
1	6	834	G
1	6	835	U
1	6	860	U
1	6	861	U
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	911	U
1	6	912	U
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	970	A
1	6	971	A
1	6	983	A
1	6	988	A
1	6	992	A
1	6	996	U
1	6	997	G
1	6	1000	C
1	6	1003	A

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Mol	Chain	Res	Type
1	6	1004	U
1	6	1005	A
1	6	1021	C
1	6	1026	A
1	6	1028	C
1	6	1039	A
1	6	1040	G
1	6	1052	U
1	6	1053	G
1	6	1057	U
1	6	1058	U
1	6	1059	U
1	6	1060	U
1	6	1072	C
1	6	1073	G
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	1109	G
1	6	1111	G
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	1164	G
1	6	1167	G
1	6	1185	U
1	6	1186	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

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Mol	Chain	Res	Type
1	6	1208	A
1	6	1217	A
1	6	1218	G
1	6	1220	C
1	6	1226	A
1	6	1228	G
1	6	1229	G
1	6	1230	A
1	6	1239	U
1	6	1241	G
1	6	1242	A
1	6	1243	G
1	6	1244	A
1	6	1245	G
1	6	1246	C
1	6	1255	G
1	6	1256	A
1	6	1257	U
1	6	1258	U
1	6	1273	G
1	6	1284	C
1	6	1286	U
1	6	1291	G
1	6	1314	U
1	6	1316	G
1	6	1321	A
1	6	1338	C
1	6	1343	U
1	6	1344	A
1	6	1345	A
1	6	1346	A
1	6	1353	U
1	6	1361	U
1	6	1362	U
1	6	1363	U
1	6	1364	G
1	6	1367	G
1	6	1370	U
1	6	1371	A
1	6	1390	U
1	6	1398	U
1	6	1399	C

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Mol	Chain	Res	Type
1	6	1400	A
1	6	1413	U
1	6	1414	U
1	6	1415	U
1	6	1426	C
1	6	1427	A
1	6	1428	G
1	6	1433	G
1	6	1437	U
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	1477	G
1	6	1481	C
1	6	1482	C
1	6	1486	G
1	6	1489	U
1	6	1490	C
1	6	1491	U
1	6	1492	A
1	6	1493	A
1	6	1506	G
1	6	1514	U
1	6	1516	A
1	6	1521	G
1	6	1523	G
1	6	1524	A
1	6	1531	G
1	6	1535	U
1	6	1536	G
1	6	1537	C
1	6	1538	U
1	6	1540	G
1	6	1554	U

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Mol	Chain	Res	Type
1	6	1557	U
1	6	1559	A
1	6	1573	A
1	6	1574	G
1	6	1577	A
1	6	1582	U
1	6	1584	G
1	6	1600	A
1	6	1601	G
1	6	1607	G
1	6	1616	G
1	6	1621	U
1	6	1631	A
1	6	1634	C
1	6	1637	C
1	6	1638	G
1	6	1657	U
1	6	1658	G
1	6	1670	G
1	6	1683	C
1	6	1697	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	1731	A
1	6	1736	G
1	6	1750	A
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

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Mol	Chain	Res	Type
1	6	1794	A
1	6	1795	U
1	6	1796	C
1	6	1799	U
1	6	1800	A
36	5	15	C
36	5	16	A
36	5	26	A
36	5	40	A
36	5	49	A
36	5	59	G
36	5	60	A
36	5	65	A
36	5	66	A
36	5	68	C
36	5	73	C
36	5	76	G
36	5	77	A
36	5	93	C
36	5	94	G
36	5	96	G
36	5	99	A
36	5	102	C
36	5	109	A
36	5	110	G
36	5	113	C
36	5	116	A
36	5	118	U
36	5	120	G
36	5	121	A
36	5	122	A
36	5	134	U
36	5	135	C
36	5	136	G
36	5	156	G
36	5	157	A
36	5	160	G
36	5	165	A
36	5	166	C
36	5	170	G
36	5	171	G
36	5	172	G

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Mol	Chain	Res	Type
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
36	5	200	C
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	224	C
36	5	235	A
36	5	239	G
36	5	240	U
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	284	A
36	5	286	U
36	5	295	A
36	5	298	U
36	5	315	C
36	5	323	A
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	369	A
36	5	375	A

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Mol	Chain	Res	Type
36	5	376	G
36	5	379	C
36	5	380	U
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	421	G
36	5	422	A
36	5	438	A
36	5	439	C
36	5	440	A
36	5	441	U
36	5	442	G
36	5	492	U
36	5	495	G
36	5	521	A
36	5	542	G
36	5	546	C
36	5	547	G
36	5	548	G
36	5	551	A
36	5	552	G
36	5	554	A
36	5	557	A
36	5	559	A
36	5	569	A
36	5	578	A
36	5	579	G
36	5	581	U
36	5	592	A
36	5	600	G
36	5	604	G
36	5	607	A
36	5	609	G
36	5	611	A
36	5	619	A
36	5	621	A
36	5	626	U
36	5	636	C

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Mol	Chain	Res	Type
36	5	647	A
36	5	649	A
36	5	651	G
36	5	660	A
36	5	677	A
36	5	681	U
36	5	683	U
36	5	691	A
36	5	692	A
36	5	705	A
36	5	712	G
36	5	715	A
36	5	716	A
36	5	718	G
36	5	720	A
36	5	725	G
36	5	736	A
36	5	750	G
36	5	758	C
36	5	763	G
36	5	766	U
36	5	767	U
36	5	774	G
36	5	776	U
36	5	777	U
36	5	780	A
36	5	781	G
36	5	785	G
36	5	786	A
36	5	806	A
36	5	817	A
36	5	820	A
36	5	826	G
36	5	830	A
36	5	861	C
36	5	874	U
36	5	877	C
36	5	879	U
36	5	890	C
36	5	895	A
36	5	896	A
36	5	907	G

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Mol	Chain	Res	Type
36	5	908	G
36	5	910	G
36	5	914	A
36	5	916	G
36	5	917	A
36	5	922	U
36	5	923	C
36	5	924	G
36	5	925	A
36	5	937	G
36	5	944	C
36	5	958	C
36	5	959	C
36	5	960	U
36	5	962	A
36	5	963	G
36	5	964	G
36	5	979	U
36	5	981	U
36	5	983	A
36	5	994	G
36	5	1000	C
36	5	1001	G
36	5	1002	A
36	5	1010	G
36	5	1014	U
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	1041	U
36	5	1047	A
36	5	1049	C
36	5	1064	A
36	5	1065	A

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Mol	Chain	Res	Type
36	5	1066	G
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	1094	U
36	5	1095	U
36	5	1097	G
36	5	1098	A
36	5	1103	A
36	5	1104	G
36	5	1112	A
36	5	1117	G
36	5	1131	G
36	5	1152	G
36	5	1153	A
36	5	1159	A
36	5	1178	G
36	5	1179	A
36	5	1180	A
36	5	1181	U
36	5	1182	A
36	5	1192	C
36	5	1193	A
36	5	1196	C
36	5	1201	C
36	5	1209	G
36	5	1222	G
36	5	1223	A
36	5	1233	G
36	5	1235	U
36	5	1236	G
36	5	1237	G
36	5	1239	C
36	5	1241	U
36	5	1242	G
36	5	1245	A
36	5	1246	G
36	5	1252	A
36	5	1253	U

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Mol	Chain	Res	Type
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	1285	G
36	5	1291	A
36	5	1292	C
36	5	1307	G
36	5	1308	A
36	5	1309	U
36	5	1313	G
36	5	1318	A
36	5	1330	A
36	5	1331	U
36	5	1332	A
36	5	1333	C
36	5	1345	G
36	5	1348	U
36	5	1349	G
36	5	1351	U
36	5	1352	A
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	1399	A
36	5	1400	G
36	5	1417	G
36	5	1418	A
36	5	1419	A
36	5	1425	U
36	5	1431	G
36	5	1433	A
36	5	1434	G
36	5	1437	C
36	5	1446	A

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Mol	Chain	Res	Type
36	5	1450	G
36	5	1462	A
36	5	1481	A
36	5	1482	A
36	5	1484	U
36	5	1490	A
36	5	1508	C
36	5	1527	C
36	5	1536	G
36	5	1547	G
36	5	1553	U
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	1568	U
36	5	1569	U
36	5	1570	U
36	5	1571	A
36	5	1572	U
36	5	1573	G
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	1623	G
36	5	1629	U
36	5	1632	A

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Mol	Chain	Res	Type
36	5	1639	C
36	5	1641	U
36	5	1643	A
36	5	1644	C
36	5	1645	U
36	5	1655	G
36	5	1657	C
36	5	1658	G
36	5	1675	G
36	5	1677	G
36	5	1683	A
36	5	1705	U
36	5	1716	U
36	5	1717	U
36	5	1724	U
36	5	1725	C
36	5	1750	A
36	5	1751	G
36	5	1759	C
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	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	1839	A
36	5	1841	A
36	5	1842	A
36	5	1846	C
36	5	1849	C
36	5	1850	A
36	5	1858	A

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Mol	Chain	Res	Type
36	5	1871	U
36	5	1878	G
36	5	1879	A
36	5	1880	U
36	5	1886	A
36	5	1891	A
36	5	1894	U
36	5	1906	G
36	5	1951	C
36	5	1953	G
36	5	2100	A
36	5	2101	C
36	5	2102	U
36	5	2111	G
36	5	2112	U
36	5	2113	A
36	5	2121	G
36	5	2122	G
36	5	2131	A
36	5	2134	G
36	5	2144	A
36	5	2158	A
36	5	2168	A
36	5	2169	G
36	5	2184	U
36	5	2187	G
36	5	2188	A
36	5	2192	C
36	5	2198	A
36	5	2205	U
36	5	2206	G
36	5	2208	A
36	5	2210	G
36	5	2223	A
36	5	2225	U
36	5	2244	A
36	5	2250	G
36	5	2252	A
36	5	2255	A
36	5	2256	A
36	5	2258	U
36	5	2270	A

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Mol	Chain	Res	Type
36	5	2273	G
36	5	2276	G
36	5	2279	A
36	5	2280	A
36	5	2281	A
36	5	2288	G
36	5	2298	U
36	5	2303	A
36	5	2307	G
36	5	2310	U
36	5	2313	A
36	5	2315	G
36	5	2324	A
36	5	2334	U
36	5	2335	G
36	5	2336	U
36	5	2358	A
36	5	2360	C
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	2398	A
36	5	2400	G
36	5	2401	A
36	5	2403	G
36	5	2404	A
36	5	2405	C
36	5	2411	U
36	5	2418	G
36	5	2419	A
36	5	2444	C
36	5	2445	A
36	5	2446	U
36	5	2447	A
36	5	2451	G
36	5	2452	G
36	5	2493	U
36	5	2494	A

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Mol	Chain	Res	Type
36	5	2495	C
36	5	2497	U
36	5	2501	U
36	5	2502	A
36	5	2503	G
36	5	2504	U
36	5	2510	U
36	5	2513	U
36	5	2514	U
36	5	2515	A
36	5	2523	A
36	5	2526	C
36	5	2530	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
36	5	2552	C
36	5	2555	G
36	5	2560	C
36	5	2566	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	2593	A
36	5	2603	G
36	5	2606	G
36	5	2607	G
36	5	2614	G
36	5	2637	A
36	5	2652	U
36	5	2656	A
36	5	2674	A

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Mol	Chain	Res	Type
36	5	2675	C
36	5	2677	G
36	5	2689	A
36	5	2691	A
36	5	2694	A
36	5	2696	A
36	5	2705	A
36	5	2714	G
36	5	2719	U
36	5	2728	G
36	5	2729	U
36	5	2737	C
36	5	2739	A
36	5	2752	U
36	5	2753	G
36	5	2755	C
36	5	2762	A
36	5	2771	U
36	5	2772	C
36	5	2773	C
36	5	2777	G
36	5	2778	G
36	5	2796	G
36	5	2799	A
36	5	2800	G
36	5	2801	A
36	5	2810	C
36	5	2817	A
36	5	2818	U
36	5	2838	A
36	5	2843	U
36	5	2845	A
36	5	2847	A
36	5	2849	C
36	5	2851	A
36	5	2853	A
36	5	2861	U
36	5	2863	G
36	5	2871	G
36	5	2872	A
36	5	2886	U
36	5	2887	A

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Mol	Chain	Res	Type
36	5	2889	C
36	5	2899	C
36	5	2904	U
36	5	2911	A
36	5	2914	G
36	5	2923	U
36	5	2935	U
36	5	2936	A
36	5	2942	C
36	5	2945	G
36	5	2947	G
36	5	2954	U
36	5	2972	G
36	5	2979	U
36	5	2983	C
36	5	2990	G
36	5	2996	U
36	5	2997	G
36	5	3012	A
36	5	3028	G
36	5	3030	G
36	5	3054	U
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	3119	U
36	5	3122	A
36	5	3130	A
36	5	3131	U
36	5	3132	C
36	5	3142	A
36	5	3143	C
36	5	3150	A
36	5	3153	U
36	5	3156	U
36	5	3157	U
36	5	3158	G

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Mol	Chain	Res	Type
36	5	3164	C
36	5	3165	A
36	5	3167	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
36	5	3180	A
36	5	3181	C
36	5	3187	A
36	5	3188	G
36	5	3195	U
36	5	3196	U
36	5	3207	U
36	5	3217	C
36	5	3218	A
36	5	3219	G
36	5	3229	G
36	5	3233	C
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	3252	G
36	5	3253	G
36	5	3259	U
36	5	3272	C
36	5	3275	U
36	5	3276	G
36	5	3277	U
36	5	3279	A
36	5	3281	U
36	5	3282	U
36	5	3285	C
36	5	3286	G
36	5	3288	G
36	5	3289	G

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Mol	Chain	Res	Type
36	5	3290	G
36	5	3294	A
36	5	3304	U
36	5	3313	U
36	5	3316	A
36	5	3317	U
36	5	3318	G
36	5	3319	U
36	5	3320	A
36	5	3342	A
36	5	3345	G
36	5	3348	G
36	5	3350	C
36	5	3351	U
36	5	3352	U
36	5	3354	U
36	5	3355	U
36	5	3356	G
36	5	3358	U
36	5	3368	U
36	5	3369	G
36	5	3378	C
36	5	3389	U
36	5	3390	G
36	5	3396	U
37	7	7	G
37	7	22	A
37	7	41	G
37	7	45	A
37	7	54	U
37	7	60	G
37	7	65	G
37	7	73	C
37	7	76	A
37	7	99	G
37	7	101	G
37	7	102	A
37	7	103	A
37	7	110	G
37	7	112	G
37	7	121	U
38	8	16	G

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Mol	Chain	Res	Type
38	8	34	U
38	8	35	C
38	8	48	A
38	8	51	G
38	8	53	A
38	8	58	G
38	8	59	A
38	8	62	C
38	8	63	G
38	8	75	G
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	104	A
38	8	105	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	138	A
38	8	152	G
38	8	157	U
38	8	158	U

All (185) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	2	25	C
1	2	45	U
1	2	103	A
1	2	114	C
1	2	130	C
1	2	131	C

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Mol	Chain	Res	Type
1	2	136	C
1	2	158	U
1	2	217	A
1	2	218	A
1	2	240	U
1	2	278	U
1	2	280	U
1	2	322	G
1	2	417	A
1	2	497	G
1	2	499	U
1	2	501	U
1	2	503	G
1	2	512	A
1	2	558	U
1	2	571	G
1	2	622	A
1	2	685	A
1	2	704	C
1	2	720	G
1	2	721	U
1	2	794	U
1	2	829	A
1	2	1058	U
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	1490	C
1	2	1568	C
1	2	1573	A
1	2	1615	C
1	2	1657	U
1	2	1698	G
1	2	1711	C

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Mol	Chain	Res	Type
1	2	1761	U
36	1	65	A
36	1	109	A
36	1	239	G
36	1	282	G
36	1	619	A
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
36	1	1103	A
36	1	1273	A
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	1562	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	2403	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	3078	U
36	1	3121	U

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Mol	Chain	Res	Type
36	1	3169	U
36	1	3228	C
36	1	3269	U
36	1	3275	U
36	1	3316	A
36	1	3350	C
36	1	3351	U
36	1	3353	G
38	4	85	G
1	6	25	C
1	6	76	A
1	6	103	A
1	6	114	C
1	6	158	U
1	6	187	G
1	6	192	U
1	6	217	A
1	6	400	A
1	6	417	A
1	6	542	A
1	6	555	A
1	6	557	G
1	6	558	U
1	6	697	C
1	6	717	C
1	6	755	A
1	6	829	A
1	6	1051	G
1	6	1058	U
1	6	1097	U
1	6	1241	G
1	6	1244	A
1	6	1255	G
1	6	1344	A
1	6	1481	C
1	6	1489	U
1	6	1491	U
1	6	1535	U
1	6	1573	A
1	6	1600	A
1	6	1620	C
1	6	1657	U

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Mol	Chain	Res	Type
1	6	1698	G
1	6	1700	C
36	5	238	A
36	5	285	A
36	5	397	A
36	5	438	A
36	5	588	G
36	5	765	C
36	5	916	G
36	5	993	G
36	5	1027	A
36	5	1064	A
36	5	1081	U
36	5	1152	G
36	5	1222	G
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	1572	U
36	5	1716	U
36	5	1816	A
36	5	1878	G
36	5	2101	C
36	5	2112	U
36	5	2168	A
36	5	2204	C
36	5	2209	U
36	5	2249	G
36	5	2255	A
36	5	2257	C
36	5	2372	A
36	5	2445	A
36	5	2446	U
36	5	2493	U
36	5	2500	A
36	5	2771	U

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Mol	Chain	Res	Type
36	5	2772	C
36	5	2818	U
36	5	2971	A
36	5	3078	U
36	5	3195	U
36	5	3275	U
36	5	3289	G
36	5	3317	U
36	5	3357	U
37	7	111	U
38	8	111	A

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 16 ligands modelled in this entry, 16 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	2	2
81	m2	2
80	c0	1
36	5	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	c0	84:GLU	C	87:HIS	N	7.38
1	2	1716:C	O3'	1717:G	P	5.29
1	5	2437:G	O3'	2438:A	P	3.76
1	m2	52:UNK	C	54:UNK	N	3.58
1	m2	23:UNK	C	28:UNK	N	3.14
1	2	1685:G	O3'	1686:C	P	3.04

## 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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	2	1781/1800 (98%)	0.93	211 (11%) 6 4	60, 99, 172, 210	0
1	6	1795/1800 (99%)	0.61	94 (5%) 31 22	46, 86, 159, 201	0
2	S0	206/251 (82%)	2.50	120 (58%) 0 0	101, 114, 125, 133	0
2	s0	206/251 (82%)	1.65	78 (37%) 0 1	83, 99, 113, 119	0
3	S1	214/254 (84%)	0.78	33 (15%) 3 2	107, 142, 167, 173	0
3	s1	216/254 (85%)	0.83	30 (13%) 4 3	84, 98, 115, 123	0
4	S2	217/253 (85%)	1.54	63 (29%) 1 1	84, 97, 111, 115	0
4	s2	217/253 (85%)	1.42	57 (26%) 1 1	68, 81, 96, 103	0
5	S3	223/239 (93%)	1.73	88 (39%) 0 1	89, 100, 122, 129	0
5	s3	223/239 (93%)	2.19	112 (50%) 0 0	84, 111, 133, 137	0
6	S4	260/260 (100%)	1.35	74 (28%) 1 1	77, 102, 110, 125	0
6	s4	260/260 (100%)	0.69	23 (8%) 12 8	61, 83, 97, 119	0
7	S5	206/224 (91%)	1.02	40 (19%) 1 1	102, 123, 131, 134	0
7	s5	206/224 (91%)	1.25	53 (25%) 1 1	87, 108, 122, 128	0
8	S6	226/236 (95%)	1.15	58 (25%) 1 1	78, 110, 127, 139	0
8	s6	218/236 (92%)	0.77	25 (11%) 6 4	60, 89, 107, 116	0
9	S7	184/189 (97%)	0.93	38 (20%) 1 1	101, 123, 139, 142	0
9	s7	186/189 (98%)	0.79	26 (13%) 4 3	77, 105, 132, 137	0
10	S8	188/200 (94%)	1.50	55 (29%) 1 1	71, 89, 123, 135	0
10	s8	188/200 (94%)	1.08	35 (18%) 2 1	56, 75, 116, 133	0
11	S9	185/196 (94%)	1.33	49 (26%) 1 1	90, 107, 133, 150	0
11	s9	185/196 (94%)	0.82	17 (9%) 11 8	72, 90, 116, 130	0
12	C0	96/105 (91%)	1.39	27 (28%) 1 1	92, 113, 133, 141	0
13	C1	155/155 (100%)	2.03	71 (45%) 0 0	73, 85, 112, 127	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å <sup>2</sup> )	Q<0.9
13	c1	146/155 (94%)	1.48	32 (21%)	1	1	59, 72, 97, 121	0
14	C2	124/142 (87%)	1.09	30 (24%)	1	1	138, 146, 152, 159	0
14	c2	124/142 (87%)	2.35	51 (41%)	0	1	169, 184, 194, 196	0
15	C3	150/150 (100%)	1.39	41 (27%)	1	1	81, 94, 113, 116	0
15	c3	150/150 (100%)	1.37	45 (30%)	1	1	67, 80, 97, 102	0
16	C4	127/136 (93%)	1.03	25 (19%)	1	1	84, 139, 155, 159	0
16	c4	128/136 (94%)	1.36	35 (27%)	1	1	66, 102, 112, 119	0
17	C5	124/141 (87%)	0.55	7 (5%)	28	20	88, 100, 112, 119	0
17	c5	135/141 (95%)	1.00	28 (20%)	1	1	78, 105, 114, 118	0
18	C6	141/142 (99%)	3.39	94 (66%)	0	0	92, 112, 117, 120	0
18	c6	142/142 (100%)	2.37	74 (52%)	0	0	80, 101, 116, 125	0
19	C7	120/136 (88%)	2.78	81 (67%)	0	0	99, 108, 126, 129	0
19	c7	117/136 (86%)	1.44	40 (34%)	0	1	87, 102, 115, 118	0
20	C8	145/145 (100%)	0.41	8 (5%)	29	21	86, 110, 131, 137	0
20	c8	145/145 (100%)	0.50	5 (3%)	49	39	88, 100, 118, 127	0
21	C9	143/143 (100%)	2.22	82 (57%)	0	0	95, 110, 121, 126	0
21	c9	143/143 (100%)	1.21	27 (18%)	2	1	84, 96, 112, 121	0
22	D0	107/120 (89%)	1.89	41 (38%)	0	1	85, 112, 128, 130	0
22	d0	110/120 (91%)	2.20	53 (48%)	0	0	84, 114, 139, 156	0
23	D1	87/87 (100%)	2.09	43 (49%)	0	0	100, 106, 118, 127	0
23	d1	87/87 (100%)	0.99	20 (22%)	1	1	80, 88, 108, 116	0
24	D2	129/129 (100%)	3.54	106 (82%)	0	0	83, 94, 103, 112	0
24	d2	129/129 (100%)	1.40	38 (29%)	1	1	65, 75, 82, 89	0
25	D3	144/144 (100%)	1.42	40 (27%)	1	1	71, 77, 86, 97	0
25	d3	144/144 (100%)	1.04	21 (14%)	3	2	58, 63, 74, 82	0
26	D4	134/134 (100%)	0.51	12 (8%)	12	8	88, 111, 122, 128	0
26	d4	134/134 (100%)	0.37	4 (2%)	54	44	68, 92, 105, 108	0
27	D5	70/107 (65%)	0.28	5 (7%)	19	14	119, 131, 137, 138	0
27	d5	69/107 (64%)	0.59	6 (8%)	13	8	97, 115, 125, 126	0
28	D6	97/97 (100%)	2.65	57 (58%)	0	0	88, 104, 150, 154	0
28	d6	97/97 (100%)	2.41	52 (53%)	0	0	71, 86, 115, 119	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
29	D7	81/81 (100%)	1.64	35 (43%)	0	0	98, 110, 134, 137	0
29	d7	81/81 (100%)	1.88	32 (39%)	0	1	80, 94, 124, 130	0
30	D8	63/66 (95%)	1.23	16 (25%)	1	1	110, 125, 137, 139	0
30	d8	63/66 (95%)	1.61	21 (33%)	0	1	103, 116, 125, 130	0
31	D9	53/55 (96%)	1.52	15 (28%)	1	1	86, 90, 106, 111	0
31	d9	53/55 (96%)	2.69	35 (66%)	0	0	81, 92, 128, 141	0
32	E0	60/62 (96%)	2.14	24 (40%)	0	1	77, 108, 128, 130	0
32	e0	62/62 (100%)	1.00	13 (20%)	1	1	66, 91, 110, 113	0
33	E1	71/76 (93%)	0.87	12 (16%)	2	2	105, 134, 149, 153	0
33	e1	76/76 (100%)	1.55	23 (30%)	1	1	112, 161, 175, 179	0
34	SR	318/318 (100%)	1.65	110 (34%)	0	1	108, 119, 131, 147	0
34	sR	318/318 (100%)	2.41	159 (50%)	0	0	110, 127, 139, 150	0
35	SM	159/273 (58%)	1.25	45 (28%)	1	1	62, 98, 144, 148	0
35	sM	104/273 (38%)	0.74	16 (15%)	3	2	56, 109, 181, 186	0
36	1	3149/3396 (92%)	0.63	163 (5%)	31	22	38, 61, 124, 213	0
36	5	3169/3396 (93%)	0.65	118 (3%)	45	35	37, 56, 124, 192	0
37	3	121/121 (100%)	0.22	0	100	100	44, 76, 91, 98	0
37	7	121/121 (100%)	0.31	1 (0%)	87	82	41, 62, 74, 80	0
38	4	158/158 (100%)	0.42	2 (1%)	79	71	47, 64, 94, 125	0
38	8	158/158 (100%)	0.45	3 (1%)	70	60	46, 66, 95, 118	0
39	L2	252/253 (99%)	1.22	60 (23%)	1	1	46, 64, 80, 86	0
39	l2	252/253 (99%)	1.40	69 (27%)	1	1	45, 61, 75, 85	0
40	L3	386/386 (100%)	0.63	32 (8%)	14	9	44, 64, 77, 87	0
40	l3	386/386 (100%)	0.43	13 (3%)	49	39	37, 51, 64, 79	0
41	L4	361/361 (100%)	0.57	40 (11%)	7	5	42, 57, 70, 74	0
41	l4	361/361 (100%)	0.77	44 (12%)	5	4	45, 60, 74, 82	0
42	L5	296/296 (100%)	0.46	21 (7%)	19	14	60, 83, 99, 107	0
42	l5	294/296 (99%)	0.36	10 (3%)	49	39	50, 64, 89, 105	0
43	L6	156/175 (89%)	0.48	2 (1%)	79	71	52, 59, 72, 82	0
43	l6	157/175 (89%)	0.50	10 (6%)	23	17	53, 60, 78, 87	0
44	L7	222/243 (91%)	0.55	5 (2%)	64	54	42, 52, 78, 100	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	l7	223/243 (91%)	0.30	0 100 100	42, 51, 80, 105	0
45	L8	233/255 (91%)	0.64	22 (9%) 11 8	70, 86, 109, 117	0
45	l8	231/255 (90%)	0.79	26 (11%) 7 5	73, 86, 106, 114	0
46	L9	191/191 (100%)	0.30	5 (2%) 59 50	62, 72, 83, 92	0
46	l9	191/191 (100%)	0.37	4 (2%) 67 57	47, 57, 72, 82	0
47	M0	211/220 (95%)	0.55	6 (2%) 56 47	47, 61, 88, 110	0
47	m0	213/220 (96%)	0.72	13 (6%) 25 18	45, 64, 88, 97	0
48	M1	169/173 (97%)	0.66	13 (7%) 16 12	70, 88, 99, 102	0
48	m1	169/173 (97%)	0.31	4 (2%) 62 52	54, 71, 79, 83	0
49	M3	193/198 (97%)	1.06	37 (19%) 2 1	43, 68, 93, 114	0
49	m3	194/198 (97%)	0.56	13 (6%) 21 15	44, 71, 100, 112	0
50	M4	136/137 (99%)	0.23	1 (0%) 89 84	56, 62, 74, 86	0
50	m4	137/137 (100%)	0.12	0 100 100	51, 57, 70, 81	0
51	M5	203/203 (100%)	0.86	19 (9%) 11 8	45, 59, 70, 72	0
51	m5	203/203 (100%)	1.07	32 (15%) 3 2	46, 63, 73, 78	0
52	M6	197/198 (99%)	0.57	7 (3%) 46 37	44, 51, 67, 69	0
52	m6	197/198 (99%)	0.49	8 (4%) 41 31	37, 45, 64, 67	0
53	M7	183/183 (100%)	1.25	26 (14%) 4 3	49, 56, 93, 112	0
53	m7	155/183 (84%)	0.45	7 (4%) 37 28	42, 50, 63, 82	0
54	M8	185/185 (100%)	0.66	11 (5%) 26 18	45, 58, 71, 86	0
54	m8	185/185 (100%)	0.80	18 (9%) 10 7	44, 60, 70, 74	0
55	M9	188/188 (100%)	0.86	21 (11%) 7 5	67, 80, 140, 146	0
55	m9	188/188 (100%)	0.68	14 (7%) 17 13	53, 67, 127, 138	0
56	N0	172/172 (100%)	0.65	6 (3%) 48 38	51, 59, 70, 76	0
56	n0	172/172 (100%)	0.29	1 (0%) 90 86	45, 52, 62, 68	0
57	N1	159/159 (100%)	0.57	5 (3%) 52 43	46, 58, 95, 103	0
57	n1	159/159 (100%)	0.43	4 (2%) 61 51	43, 52, 86, 91	0
58	N2	100/120 (83%)	1.17	25 (25%) 1 1	95, 107, 121, 123	0
58	n2	98/120 (81%)	0.98	21 (21%) 1 1	78, 90, 97, 100	0
59	N3	136/136 (100%)	1.35	31 (22%) 1 1	54, 62, 72, 79	0
59	n3	136/136 (100%)	0.79	8 (5%) 26 18	38, 47, 57, 59	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
60	N4	98/155 (63%)	2.94	38 (38%) 0 1	63, 75, 134, 138	0
60	n4	135/155 (87%)	1.08	19 (14%) 4 3	47, 94, 119, 124	0
61	N5	121/141 (85%)	0.87	12 (9%) 9 7	62, 73, 86, 99	0
61	n5	120/141 (85%)	0.66	9 (7%) 17 12	58, 72, 86, 98	0
62	N6	126/126 (100%)	0.39	3 (2%) 62 52	53, 66, 76, 81	0
62	n6	126/126 (100%)	0.66	6 (4%) 34 26	55, 68, 79, 85	0
63	N7	135/135 (100%)	0.61	12 (8%) 12 8	87, 98, 107, 111	0
63	n7	135/135 (100%)	0.62	15 (11%) 7 5	80, 92, 102, 106	0
64	N8	148/148 (100%)	1.15	19 (12%) 5 3	38, 60, 79, 86	0
64	n8	148/148 (100%)	1.12	24 (16%) 3 2	38, 61, 75, 78	0
65	N9	58/58 (100%)	0.80	6 (10%) 9 6	41, 63, 89, 95	0
65	n9	58/58 (100%)	0.49	3 (5%) 31 22	41, 60, 82, 89	0
66	O0	97/104 (93%)	0.24	2 (2%) 67 57	85, 93, 107, 109	0
66	o0	100/104 (96%)	0.42	5 (5%) 32 24	74, 83, 101, 111	0
67	O1	109/112 (97%)	1.06	26 (23%) 1 1	62, 73, 92, 98	0
67	o1	109/112 (97%)	0.85	10 (9%) 11 8	49, 60, 84, 98	0
68	O2	127/129 (98%)	0.53	4 (3%) 52 43	39, 53, 65, 71	0
68	o2	127/129 (98%)	0.48	5 (3%) 43 33	38, 56, 69, 72	0
69	O3	106/106 (100%)	0.85	6 (5%) 27 19	44, 49, 70, 78	0
69	o3	106/106 (100%)	1.11	15 (14%) 4 3	42, 49, 70, 78	0
70	O4	112/119 (94%)	1.26	34 (30%) 1 1	61, 78, 107, 113	0
70	o4	112/119 (94%)	1.04	26 (23%) 1 1	54, 72, 102, 107	0
71	O5	119/119 (100%)	0.35	1 (0%) 87 82	58, 74, 82, 87	0
71	o5	119/119 (100%)	0.20	1 (0%) 87 82	62, 75, 89, 98	0
72	O6	99/99 (100%)	0.19	2 (2%) 68 58	64, 72, 94, 105	0
72	o6	99/99 (100%)	0.30	3 (3%) 54 44	66, 75, 87, 101	0
73	O7	87/87 (100%)	1.54	24 (27%) 1 1	46, 53, 71, 76	0
73	o7	87/87 (100%)	1.42	19 (21%) 1 1	43, 52, 76, 93	0
74	O8	77/77 (100%)	0.37	5 (6%) 22 16	86, 97, 109, 114	0
74	o8	77/77 (100%)	0.80	12 (15%) 3 2	80, 91, 101, 103	0
75	O9	50/50 (100%)	1.79	18 (36%) 0 1	55, 60, 64, 65	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
75	o9	50/50 (100%)	1.44	15 (30%) 1 1	52, 58, 66, 67	0
76	Q0	52/52 (100%)	0.38	2 (3%) 44 34	52, 60, 76, 79	0
76	q0	52/52 (100%)	0.22	0 100 100	43, 47, 56, 59	0
77	Q1	25/25 (100%)	2.53	15 (60%) 0 0	62, 66, 73, 73	0
77	q1	25/25 (100%)	1.56	7 (28%) 1 1	53, 58, 59, 59	0
78	Q2	105/105 (100%)	0.34	3 (2%) 55 46	46, 58, 78, 103	0
78	q2	105/105 (100%)	0.65	8 (7%) 17 12	45, 56, 71, 94	0
79	Q3	91/91 (100%)	1.02	17 (18%) 2 1	56, 68, 82, 90	0
79	q3	91/91 (100%)	1.08	22 (24%) 1 1	47, 60, 76, 85	0
80	c0	96/105 (91%)	2.70	61 (63%) 0 0	104, 135, 149, 151	0
81	m2	0/150	-	-	-	-
82	p0	143/311 (45%)	0.82	19 (13%) 4 3	102, 125, 192, 199	0
83	p1	0/47	-	-	-	-
84	p2	0/46	-	-	-	-
85	f	148/157 (94%)	3.43	96 (64%) 0 0	49, 95, 145, 147	148 (100%)
All	All	33261/35493 (93%)	0.93	4886 (14%) 3 2	37, 76, 134, 213	148 (0%)

All (4886) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
53	M7	161	ALA	23.1
1	2	1699	G	20.2
60	N4	86	SER	15.9
53	M7	160	ALA	14.8
60	N4	88	ASP	13.4
18	C6	21	HIS	12.6
53	M7	162	GLU	12.6
85	f	120	LEU	12.3
1	2	1696	G	12.2
19	C7	2	GLY	11.9
13	c1	3	THR	11.9
1	2	1698	G	11.7
34	sR	303	ALA	11.6
1	2	1708	U	11.4
60	N4	89	LEU	11.4
34	sR	213	SER	11.4
4	s2	87	GLN	11.1
80	c0	22	VAL	11.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	2	1709	C	10.9
60	N4	83	THR	10.9
1	2	1694	A	10.8
18	C6	68	ARG	10.8
28	D6	2	PRO	10.6
5	s3	151	LYS	10.5
18	C6	20	ALA	10.5
60	N4	84	GLY	10.5
1	2	715	U	10.4
16	C4	75	GLY	10.3
85	f	30	GLY	10.2
60	N4	71	ARG	10.0
1	2	1695	G	10.0
60	N4	85	ALA	9.9
14	c2	20	ALA	9.8
7	S5	152	GLY	9.7
13	C1	146	ALA	9.6
85	f	18	THR	9.5
2	S0	98	ILE	9.4
14	c2	122	VAL	9.3
1	2	718	U	9.3
80	c0	23	ALA	9.3
22	d0	64	LYS	9.2
18	C6	9	THR	9.2
13	c1	2	SER	9.2
18	C6	15	SER	9.2
19	C7	62	GLN	9.1
4	s2	88	LYS	9.0
60	N4	90	ILE	9.0
32	E0	61	SER	8.9
60	N4	75	THR	8.9
34	sR	72	THR	8.9
1	2	1697	G	8.9
36	1	1570	U	8.8
23	d1	87	ARG	8.8
14	c2	105	LYS	8.6
1	2	1707	A	8.6
14	c2	103	LEU	8.6
14	c2	102	GLY	8.5
34	sR	158	PRO	8.5
19	C7	65	PRO	8.4
85	f	71	GLU	8.3

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Mol	Chain	Res	Type	RSRZ
15	C3	15	ALA	8.3
16	C4	74	VAL	8.3
32	E0	46	ASN	8.3
17	c5	134	THR	8.3
60	N4	70	LYS	8.3
24	D2	111	MET	8.2
35	SM	170	VAL	8.2
3	S1	92	GLN	8.1
36	5	2873	U	8.1
31	D9	56	ARG	8.1
1	2	1702	A	8.1
22	d0	67	THR	8.1
14	c2	112	ALA	8.0
7	S5	151	GLY	8.0
34	sR	67	ILE	8.0
34	sR	81	LEU	8.0
7	s5	37	GLN	7.9
8	S6	77	LEU	7.9
18	C6	6	SER	7.9
2	s0	46	HIS	7.8
34	sR	33	LEU	7.8
34	sR	122	ILE	7.8
85	f	46	THR	7.7
14	c2	36	LEU	7.7
34	SR	25	THR	7.7
22	D0	82	TYR	7.7
60	N4	72	SER	7.7
28	D6	3	LYS	7.7
14	c2	32	LEU	7.7
24	D2	27	ILE	7.7
4	s2	105	GLY	7.6
9	S7	108	GLN	7.6
3	s1	54	LEU	7.6
53	M7	184	ALA	7.5
60	N4	69	LYS	7.5
19	C7	99	VAL	7.5
1	2	1710	U	7.5
1	2	1706	C	7.5
80	c0	25	LYS	7.5
34	sR	24	ALA	7.5
32	E0	48	THR	7.5
14	c2	133	LEU	7.5

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Mol	Chain	Res	Type	RSRZ
18	C6	123	ARG	7.5
34	sR	25	THR	7.4
4	s2	93	GLY	7.4
36	5	2403	G	7.4
1	2	1711	C	7.4
35	SM	85	SER	7.4
28	D6	31	PRO	7.3
22	D0	86	ILE	7.3
1	2	1705	C	7.3
85	f	42	VAL	7.3
34	SR	284	ALA	7.2
13	C1	147	GLY	7.2
1	2	1692	G	7.2
36	5	2871	G	7.2
4	s2	89	GLN	7.2
24	D2	34	ILE	7.2
24	D2	71	LYS	7.2
1	2	716	C	7.2
14	c2	21	GLU	7.2
34	SR	44	SER	7.2
14	c2	106	ILE	7.1
85	f	61	ALA	7.1
1	2	913	G	7.1
21	C9	71	VAL	7.1
28	D6	89	ARG	7.1
34	SR	32	LEU	7.0
24	D2	65	LEU	7.0
28	D6	20	PRO	7.0
6	S4	54	TYR	7.0
34	sR	301	LEU	7.0
85	f	63	ASP	7.0
60	N4	68	ALA	7.0
33	e1	81	LYS	7.0
18	C6	22	VAL	7.0
56	N0	1	MET	7.0
14	C2	20	ALA	7.0
18	C6	13	LYS	7.0
85	f	38	PRO	7.0
1	6	662	U	6.9
41	L4	67	THR	6.9
34	SR	33	LEU	6.9
22	D0	120	SER	6.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	C6	118	ILE	6.9
1	2	714	G	6.9
7	s5	152	GLY	6.9
31	d9	4	GLU	6.9
28	D6	8	ASN	6.9
18	C6	14	LYS	6.9
60	N4	98	PRO	6.9
35	sM	119	ALA	6.9
36	5	2442	G	6.9
24	D2	25	VAL	6.9
23	D1	69	LEU	6.9
60	N4	87	LEU	6.9
34	sR	170	ILE	6.9
13	C1	152	GLN	6.9
18	C6	12	LYS	6.8
36	1	1569	U	6.8
36	1	2402	A	6.8
18	C6	17	THR	6.8
22	D0	87	HIS	6.8
34	sR	314	GLN	6.8
18	C6	7	VAL	6.8
18	C6	8	GLN	6.8
85	f	49	THR	6.8
60	N4	82	ILE	6.8
34	sR	26	SER	6.8
14	c2	123	VAL	6.8
73	O7	2	GLY	6.7
85	f	31	PHE	6.7
60	n4	67	VAL	6.7
21	c9	18	TYR	6.7
21	c9	55	TYR	6.7
36	1	2871	G	6.7
14	c2	41	LEU	6.7
29	d7	46	VAL	6.7
70	O4	23	VAL	6.7
80	c0	65	TYR	6.7
1	2	1693	A	6.7
1	2	719	U	6.7
2	S0	97	PRO	6.7
1	2	709	C	6.7
1	2	1690	G	6.7
8	S6	75	LEU	6.7

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Mol	Chain	Res	Type	RSRZ
39	L2	253	GLN	6.6
85	f	20	PRO	6.6
18	C6	115	THR	6.6
45	L8	116	VAL	6.6
18	C6	10	PHE	6.6
23	D1	53	TYR	6.6
85	f	72	ASP	6.6
5	s3	185	LYS	6.6
34	sR	202	LEU	6.6
1	2	1701	A	6.6
16	C4	15	GLY	6.5
85	f	83	PRO	6.5
80	c0	93	TYR	6.5
5	s3	69	LEU	6.5
33	e1	77	ALA	6.5
30	D8	66	LEU	6.5
71	O5	120	ALA	6.5
4	S2	62	PRO	6.5
33	e1	96	LYS	6.5
5	s3	138	VAL	6.5
8	S6	73	ILE	6.5
85	f	59	LEU	6.5
7	s5	158	GLN	6.5
19	C7	71	PHE	6.4
85	f	57	VAL	6.4
33	e1	85	TYR	6.4
8	S6	78	THR	6.4
5	s3	184	ILE	6.4
4	s2	118	ALA	6.4
8	S6	66	GLY	6.4
60	N4	74	LYS	6.4
85	f	73	LEU	6.4
28	D6	76	SER	6.4
34	SR	253	ALA	6.4
9	S7	105	THR	6.4
22	D0	81	THR	6.4
35	SM	19	VAL	6.4
34	sR	241	PHE	6.4
85	f	87	ARG	6.4
13	C1	145	ALA	6.4
60	N4	73	ARG	6.4
3	S1	46	THR	6.4

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Mol	Chain	Res	Type	RSRZ
39	L2	252	THR	6.4
15	c3	8	GLY	6.4
5	S3	186	VAL	6.3
4	S2	88	LYS	6.3
28	D6	88	SER	6.3
85	f	58	HIS	6.3
28	d6	8	ASN	6.3
3	S1	42	ASN	6.3
41	L4	69	ARG	6.3
11	S9	5	PRO	6.3
16	C4	16	VAL	6.3
1	2	1700	C	6.2
1	6	659	C	6.2
28	D6	18	VAL	6.2
34	sR	157	VAL	6.2
11	S9	2	PRO	6.2
34	sR	65	SER	6.2
75	O9	2	ALA	6.2
34	sR	92	TRP	6.2
33	e1	87	THR	6.2
4	s2	90	THR	6.2
5	s3	139	SER	6.2
21	C9	108	LEU	6.2
4	S2	69	ILE	6.2
13	c1	4	GLU	6.2
36	1	2401	A	6.2
23	D1	55	LEU	6.2
85	f	45	SER	6.2
34	sR	23	LEU	6.1
80	c0	28	ASN	6.1
24	D2	76	SER	6.1
29	d7	24	LEU	6.1
8	S6	74	LYS	6.1
3	S1	151	LYS	6.1
5	s3	113	LEU	6.1
14	c2	39	ASP	6.1
35	SM	171	PRO	6.1
33	E1	87	THR	6.1
33	e1	80	ARG	6.1
41	l4	67	THR	6.1
33	E1	86	THR	6.1
1	6	658	C	6.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
85	f	70	LEU	6.1
28	d6	93	LYS	6.1
77	Q1	25	LYS	6.1
8	S6	96	SER	6.1
23	D1	68	SER	6.1
24	D2	104	LEU	6.0
85	f	41	ILE	6.0
5	s3	152	PHE	6.0
14	c2	128	ALA	6.0
85	f	121	GLY	6.0
1	2	506	A	6.0
85	f	81	GLU	6.0
24	D2	69	LEU	6.0
1	2	1370	U	6.0
15	c3	16	ILE	6.0
10	S8	200	LYS	6.0
53	M7	130	TYR	6.0
4	s2	86	VAL	6.0
2	s0	151	SER	6.0
14	C2	141	SER	6.0
30	D8	16	LEU	6.0
2	S0	174	TRP	6.0
24	D2	60	LYS	6.0
1	2	1703	C	6.0
32	e0	63	GLN	6.0
29	d7	21	LEU	6.0
2	S0	113	ARG	6.0
15	c3	83	GLU	6.0
19	c7	41	ILE	6.0
34	sR	21	THR	6.0
45	l8	192	GLN	5.9
34	sR	302	PHE	5.9
28	d6	73	TYR	5.9
19	C7	63	LYS	5.9
85	f	35	LYS	5.9
60	n4	68	ALA	5.9
16	C4	13	VAL	5.9
24	D2	46	TYR	5.9
24	D2	117	ARG	5.9
34	sR	61	PHE	5.9
36	5	2402	A	5.9
23	D1	32	VAL	5.9

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Mol	Chain	Res	Type	RSRZ
28	D6	83	ILE	5.9
18	C6	132	LYS	5.9
2	S0	126	PRO	5.9
1	2	1686	C	5.9
85	f	22	GLN	5.9
18	C6	117	LEU	5.9
85	f	64	ILE	5.9
10	s8	200	LYS	5.9
7	s5	153	GLY	5.9
24	D2	72	CYS	5.9
18	c6	19	VAL	5.8
4	s2	96	THR	5.8
31	d9	29	GLY	5.8
4	s2	84	LYS	5.8
53	M7	168	LEU	5.8
28	D6	92	ARG	5.8
85	f	142	MET	5.8
9	S7	150	GLN	5.8
2	s0	101	ARG	5.8
5	s3	153	ALA	5.8
29	D7	7	LEU	5.8
11	S9	97	LEU	5.8
2	S0	138	TYR	5.8
28	d6	69	ASN	5.8
85	f	84	VAL	5.8
54	M8	167	SER	5.7
33	e1	86	THR	5.7
2	S0	139	VAL	5.7
24	D2	92	ASN	5.7
34	SR	198	ASN	5.7
29	d7	22	LYS	5.7
17	c5	4	ALA	5.7
18	C6	29	ILE	5.7
34	sR	34	LEU	5.7
34	sR	32	LEU	5.7
24	D2	6	VAL	5.7
53	M7	158	ALA	5.7
14	c2	111	ASN	5.7
18	C6	11	GLY	5.7
41	L4	68	GLY	5.7
15	c3	9	LYS	5.7
24	D2	11	LEU	5.7

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Mol	Chain	Res	Type	RSRZ
7	S5	71	ALA	5.7
24	D2	39	GLN	5.7
31	D9	55	PHE	5.7
18	C6	36	ILE	5.7
45	l8	109	LEU	5.6
31	d9	5	ASN	5.6
24	D2	59	GLY	5.6
29	d7	60	SER	5.6
18	c6	52	LEU	5.6
4	S2	178	ILE	5.6
21	C9	67	MET	5.6
19	c7	28	PHE	5.6
31	d9	52	PHE	5.6
18	c6	124	PRO	5.6
3	s1	89	ASP	5.6
19	C7	89	SER	5.6
2	S0	17	LEU	5.6
70	o4	39	ALA	5.6
34	sR	121	MET	5.6
2	S0	23	HIS	5.6
7	s5	82	PHE	5.6
30	d8	44	VAL	5.6
25	D3	2	GLY	5.6
85	f	76	SER	5.6
80	c0	57	THR	5.6
2	S0	74	VAL	5.6
21	C9	114	VAL	5.6
60	N4	76	VAL	5.6
79	q3	2	ALA	5.6
7	S5	79	ASN	5.6
34	SR	79	TYR	5.5
32	E0	47	VAL	5.5
32	E0	56	MET	5.5
1	2	711	U	5.5
59	N3	32	ARG	5.5
19	C7	74	GLN	5.5
22	D0	71	PRO	5.5
36	5	2494	A	5.5
18	c6	18	ALA	5.5
7	S5	37	GLN	5.5
34	sR	62	LYS	5.5
21	C9	113	ILE	5.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	M7	181	ARG	5.5
85	f	17	ALA	5.5
24	D2	41	MET	5.5
18	c6	68	ARG	5.5
7	s5	36	ALA	5.5
14	C2	83	GLU	5.5
10	S8	152	ILE	5.5
34	SR	72	THR	5.5
7	S5	36	ALA	5.5
18	C6	69	VAL	5.5
24	D2	62	VAL	5.5
7	S5	153	GLY	5.5
49	m3	191	ALA	5.5
85	f	47	SER	5.5
80	c0	64	TYR	5.4
85	f	115	ALA	5.4
4	S2	63	VAL	5.4
18	c6	44	LEU	5.4
15	C3	14	SER	5.4
60	N4	67	VAL	5.4
21	C9	28	LEU	5.4
18	C6	3	ALA	5.4
19	C7	60	ARG	5.4
18	C6	121	SER	5.4
73	O7	12	HIS	5.4
24	D2	14	ILE	5.4
34	sR	212	ALA	5.4
85	f	11	ALA	5.4
85	f	39	CYS	5.4
2	S0	110	TYR	5.4
19	C7	18	GLU	5.4
2	s0	98	ILE	5.4
21	C9	27	LYS	5.4
23	D1	73	ALA	5.4
18	C6	70	THR	5.4
2	S0	170	ILE	5.4
15	C3	123	HIS	5.4
85	f	56	LYS	5.4
1	2	717	C	5.4
63	n7	68	ILE	5.4
34	SR	305	TYR	5.4
24	D2	85	ASP	5.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
35	SM	89	ARG	5.3
13	C1	74	THR	5.3
18	C6	74	HIS	5.3
33	e1	88	PRO	5.3
34	sR	14	GLU	5.3
34	sR	115	ILE	5.3
28	d6	88	SER	5.3
28	D6	17	HIS	5.3
2	S0	100	GLY	5.3
28	d6	11	ASN	5.3
34	sR	20	VAL	5.3
85	f	60	VAL	5.3
23	D1	62	ARG	5.3
18	C6	81	ILE	5.3
28	D6	90	GLU	5.3
34	SR	131	ILE	5.3
85	f	37	ARG	5.3
36	1	2874	G	5.3
36	5	2443	A	5.3
34	SR	216	LYS	5.3
85	f	149	SER	5.3
18	c6	20	ALA	5.2
22	d0	98	GLN	5.2
36	1	1568	U	5.2
24	D2	108	ALA	5.2
29	d7	32	PHE	5.2
28	d6	14	GLY	5.2
8	S6	97	VAL	5.2
2	S0	118	PRO	5.2
5	s3	115	ILE	5.2
28	d6	71	LEU	5.2
2	S0	203	PHE	5.2
24	D2	22	LYS	5.2
24	D2	110	ILE	5.2
18	C6	16	ALA	5.2
2	S0	146	LEU	5.2
34	SR	61	PHE	5.2
13	C1	127	GLN	5.2
2	S0	99	ALA	5.2
18	C6	32	ASN	5.2
24	D2	129	VAL	5.2
82	p0	280	ALA	5.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
11	S9	29	LYS	5.2
85	f	43	ASP	5.2
60	n4	87	LEU	5.2
70	O4	6	THR	5.2
36	1	2873	U	5.2
5	s3	8	LYS	5.2
85	f	86	LYS	5.2
1	2	1794	A	5.1
1	2	656	G	5.1
2	S0	201	LEU	5.1
36	5	2539	C	5.1
19	C7	59	LYS	5.1
18	c6	90	VAL	5.1
4	S2	232	GLU	5.1
73	O7	5	THR	5.1
18	C6	79	TYR	5.1
18	c6	8	GLN	5.1
85	f	85	VAL	5.1
5	s3	137	VAL	5.1
29	d7	54	VAL	5.1
28	d6	76	SER	5.1
34	sR	77	GLY	5.1
7	s5	68	ILE	5.1
24	D2	74	VAL	5.1
5	s3	182	LEU	5.1
21	C9	95	ASP	5.1
22	D0	61	LYS	5.1
26	d4	2	SER	5.1
21	C9	119	LYS	5.1
22	d0	79	TRP	5.1
32	E0	54	ARG	5.1
24	D2	128	PHE	5.1
34	sR	186	PHE	5.1
5	s3	150	MET	5.0
22	d0	37	VAL	5.0
36	1	1567	U	5.0
8	S6	149	LYS	5.0
9	S7	142	TYR	5.0
45	l8	120	LYS	5.0
85	f	23	CYS	5.0
2	S0	198	MET	5.0
41	l4	69	ARG	5.0

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Mol	Chain	Res	Type	RSRZ
22	D0	72	ASN	5.0
58	N2	27	VAL	5.0
10	S8	22	ARG	5.0
15	C3	5	HIS	5.0
13	c1	5	LEU	5.0
39	L2	201	GLY	5.0
2	S0	72	ASP	5.0
36	1	2403	G	5.0
22	d0	83	GLU	5.0
3	S1	95	ASN	5.0
29	D7	38	PRO	5.0
2	s0	170	ILE	5.0
22	d0	29	THR	5.0
24	D2	120	HIS	5.0
2	S0	107	PHE	5.0
19	C7	101	ASN	4.9
4	S2	155	ALA	4.9
23	D1	56	SER	4.9
21	C9	132	LEU	4.9
29	D7	3	LEU	4.9
2	S0	153	SER	4.9
34	SR	40	LYS	4.9
55	M9	52	LYS	4.9
19	C7	21	TYR	4.9
2	s0	165	ARG	4.9
55	M9	51	VAL	4.9
30	D8	67	ARG	4.9
36	5	2874	G	4.9
11	S9	96	VAL	4.9
34	sR	104	VAL	4.9
2	S0	188	LEU	4.9
8	S6	175	ILE	4.9
34	SR	115	ILE	4.9
10	S8	179	CYS	4.9
2	S0	122	ILE	4.9
35	SM	151	ALA	4.9
85	f	148	ILE	4.9
31	d9	20	GLN	4.9
43	l6	129	GLU	4.9
53	M7	179	GLN	4.9
23	D1	34	ILE	4.9
22	d0	87	HIS	4.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	sR	138	GLY	4.9
16	c4	28	VAL	4.9
34	sR	113	VAL	4.9
5	s3	114	ALA	4.9
18	C6	142	TYR	4.9
80	c0	24	LYS	4.9
18	C6	19	VAL	4.8
18	C6	40	GLU	4.8
28	d6	9	GLY	4.8
28	D6	73	TYR	4.8
18	c6	28	LEU	4.8
21	C9	90	PRO	4.8
24	D2	81	VAL	4.8
32	E0	45	VAL	4.8
2	s0	48	ILE	4.8
1	2	793	A	4.8
8	S6	71	THR	4.8
36	1	2404	A	4.8
2	S0	137	SER	4.8
1	2	134	U	4.8
7	S5	78	ALA	4.8
19	c7	57	LEU	4.8
32	E0	6	GLY	4.8
6	S4	111	VAL	4.8
18	C6	143	ARG	4.8
34	sR	89	LEU	4.8
85	f	33	VAL	4.8
18	C6	65	ILE	4.8
28	d6	30	ILE	4.8
16	c4	92	LYS	4.8
9	s7	43	PHE	4.8
12	C0	93	GLN	4.8
34	sR	82	SER	4.8
8	S6	153	VAL	4.8
4	s2	95	ARG	4.8
5	s3	98	ALA	4.8
70	O4	32	ALA	4.8
22	d0	30	LYS	4.8
18	C6	39	VAL	4.8
18	c6	49	TYR	4.8
14	c2	126	TRP	4.8
5	s3	202	LEU	4.8

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Mol	Chain	Res	Type	RSRZ
51	M5	60	VAL	4.8
24	D2	37	PHE	4.8
10	s8	95	THR	4.8
28	D6	9	GLY	4.8
39	L2	224	THR	4.8
32	E0	44	PHE	4.7
24	D2	10	ALA	4.7
85	f	134	LEU	4.7
34	sR	309	VAL	4.7
33	e1	89	LYS	4.7
27	d5	89	ILE	4.7
85	f	153	ALA	4.7
29	d7	47	PHE	4.7
24	d2	61	ILE	4.7
25	D3	7	ARG	4.7
2	S0	18	LEU	4.7
2	S0	156	VAL	4.7
85	f	157	ASP	4.7
23	D1	10	GLU	4.7
34	sR	252	LEU	4.7
14	c2	31	VAL	4.7
34	SR	36	ALA	4.7
36	1	2872	A	4.7
5	S3	161	GLY	4.7
19	C7	25	THR	4.7
28	D6	78	ALA	4.7
28	d6	21	VAL	4.7
34	sR	116	ASP	4.7
6	S4	44	LEU	4.7
16	c4	91	THR	4.7
19	C7	57	LEU	4.7
32	e0	49	LEU	4.7
13	c1	139	VAL	4.7
11	S9	186	GLU	4.7
13	c1	117	VAL	4.7
5	S3	150	MET	4.7
2	S0	161	PRO	4.7
11	s9	148	VAL	4.7
19	c7	4	VAL	4.7
2	S0	22	THR	4.7
24	D2	121	VAL	4.7
36	1	1572	U	4.7

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Mol	Chain	Res	Type	RSRZ
18	c6	38	LEU	4.7
58	N2	28	PHE	4.7
18	c6	83	GLN	4.6
6	S4	38	LEU	4.6
29	D7	19	HIS	4.6
15	C3	121	ARG	4.6
24	D2	124	LYS	4.6
36	1	1564	U	4.6
70	o4	38	LEU	4.6
2	S0	158	VAL	4.6
4	s2	119	LYS	4.6
5	S3	187	LYS	4.6
61	N5	124	VAL	4.6
4	s2	85	PRO	4.6
8	S6	148	SER	4.6
18	C6	114	ARG	4.6
75	O9	46	ARG	4.6
19	c7	42	GLN	4.6
9	S7	104	ARG	4.6
56	N0	2	ALA	4.6
28	D6	29	SER	4.6
10	S8	8	ARG	4.6
22	D0	70	THR	4.6
18	c6	29	ILE	4.6
34	sR	123	ILE	4.6
85	f	78	HIS	4.6
22	D0	64	LYS	4.6
19	C7	64	GLY	4.6
2	S0	30	GLN	4.6
18	C6	90	VAL	4.6
18	c6	55	VAL	4.6
2	S0	177	LEU	4.6
4	S2	66	PHE	4.6
14	C2	32	LEU	4.6
4	s2	117	THR	4.6
25	d3	2	GLY	4.6
2	s0	152	PRO	4.6
3	S1	91	VAL	4.6
4	S2	157	LYS	4.6
75	O9	45	ARG	4.6
23	D1	23	ILE	4.6
34	sR	45	TRP	4.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	c6	51	PRO	4.6
2	s0	162	CYS	4.6
28	D6	77	CYS	4.6
82	p0	69	ASP	4.6
34	sR	124	SER	4.6
24	D2	73	GLY	4.6
85	f	44	MET	4.6
80	c0	94	ILE	4.5
64	N8	108	GLY	4.5
11	S9	101	VAL	4.5
13	C1	136	ARG	4.5
32	E0	60	PRO	4.5
34	SR	78	ALA	4.5
24	D2	15	ASN	4.5
34	SR	313	TRP	4.5
21	C9	124	ILE	4.5
22	d0	77	LYS	4.5
34	SR	214	ALA	4.5
24	D2	51	GLU	4.5
85	f	27	ARG	4.5
10	S8	62	THR	4.5
18	C6	120	ASP	4.5
28	D6	85	ARG	4.5
60	N4	78	ALA	4.5
39	l2	194	ASN	4.5
74	o8	2	ALA	4.5
18	c6	121	SER	4.5
13	c1	116	ARG	4.5
31	d9	27	HIS	4.5
39	L2	216	HIS	4.5
8	S6	67	VAL	4.5
18	C6	64	ASP	4.5
36	1	1762	C	4.5
2	S0	101	ARG	4.5
85	f	74	SER	4.5
4	S2	144	TRP	4.5
75	o9	51	ILE	4.5
80	c0	62	GLN	4.5
33	e1	83	LYS	4.5
77	Q1	15	ARG	4.5
70	O4	64	THR	4.5
80	c0	79	TYR	4.5

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Mol	Chain	Res	Type	RSRZ
5	s3	148	LYS	4.5
5	s3	186	VAL	4.5
35	SM	141	ALA	4.5
18	c6	94	GLN	4.5
41	l4	62	ALA	4.5
3	s1	153	HIS	4.5
15	C3	53	LEU	4.5
12	C0	91	TYR	4.5
36	5	2441	A	4.5
25	d3	11	SER	4.5
2	S0	32	HIS	4.5
18	C6	126	PRO	4.5
19	c7	104	ASN	4.5
3	S1	32	ILE	4.4
24	D2	103	ILE	4.4
18	c6	54	LEU	4.4
2	S0	106	SER	4.4
39	l2	18	SER	4.4
5	S3	152	PHE	4.4
1	2	1096	C	4.4
30	d8	17	GLY	4.4
30	d8	9	LEU	4.4
74	o8	54	LEU	4.4
80	c0	68	LEU	4.4
34	SR	92	TRP	4.4
14	c2	43	ARG	4.4
14	c2	65	SER	4.4
18	C6	92	TYR	4.4
8	s6	162	VAL	4.4
18	C6	67	VAL	4.4
34	SR	20	VAL	4.4
7	s5	42	LEU	4.4
19	C7	53	TYR	4.4
2	s0	164	ASN	4.4
5	S3	218	LEU	4.4
24	D2	61	ILE	4.4
7	S5	70	VAL	4.4
28	D6	80	HIS	4.4
63	N7	26	VAL	4.4
39	l2	60	LYS	4.4
60	N4	66	GLU	4.4
59	N3	137	VAL	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	SR	34	LEU	4.4
75	O9	47	THR	4.4
75	O9	51	ILE	4.4
28	D6	86	VAL	4.4
8	s6	147	LEU	4.4
5	s3	167	PHE	4.4
7	s5	154	ALA	4.4
18	C6	119	ALA	4.4
26	d4	99	LYS	4.4
34	SR	108	SER	4.4
2	S0	105	GLY	4.4
30	d8	21	SER	4.4
53	M7	183	ALA	4.4
7	s5	44	ASN	4.4
15	c3	125	LEU	4.4
19	C7	14	LYS	4.4
24	D2	126	LEU	4.4
24	D2	21	GLY	4.4
21	C9	110	LYS	4.4
28	D6	84	VAL	4.4
1	2	696	C	4.4
1	6	1695	G	4.3
15	c3	40	TYR	4.3
33	e1	84	VAL	4.3
1	6	678	A	4.3
24	D2	70	ASN	4.3
31	d9	55	PHE	4.3
28	D6	19	LYS	4.3
35	sM	83	LYS	4.3
19	C7	50	ILE	4.3
80	c0	21	VAL	4.3
2	S0	157	ASP	4.3
19	c7	65	PRO	4.3
28	d6	2	PRO	4.3
25	D3	18	HIS	4.3
1	2	1796	C	4.3
13	C1	91	LEU	4.3
31	d9	30	LEU	4.3
85	f	65	PHE	4.3
85	f	119	GLU	4.3
34	sR	36	ALA	4.3
18	C6	57	LEU	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	c7	67	ARG	4.3
1	6	1199	G	4.3
18	C6	136	SER	4.3
35	SM	86	ASN	4.3
13	C1	64	VAL	4.3
14	c2	59	LEU	4.3
24	D2	35	ILE	4.3
80	c0	44	LYS	4.3
19	c7	3	ARG	4.3
61	n5	23	ALA	4.3
22	D0	62	VAL	4.3
34	SR	94	VAL	4.3
13	C1	4	GLU	4.3
31	D9	54	LYS	4.3
1	6	1799	U	4.3
80	c0	29	GLN	4.3
4	s2	92	ALA	4.3
1	2	1410	A	4.3
24	D2	50	PHE	4.3
1	6	1082	C	4.3
5	S3	208	ILE	4.3
18	c6	11	GLY	4.3
34	SR	150	TRP	4.3
39	L2	195	SER	4.3
60	n4	95	SER	4.3
67	O1	27	LYS	4.3
25	D3	4	GLY	4.3
34	SR	278	PHE	4.3
21	C9	38	LYS	4.3
5	S3	21	LEU	4.3
6	S4	45	ILE	4.3
8	S6	81	VAL	4.3
28	d6	35	ALA	4.3
48	M1	104	PHE	4.3
36	5	1569	U	4.2
21	C9	80	TYR	4.2
34	sR	294	TRP	4.2
2	s0	17	LEU	4.2
18	C6	63	ILE	4.2
22	D0	54	GLY	4.2
85	f	50	GLY	4.2
1	2	1795	U	4.2

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Mol	Chain	Res	Type	RSRZ
31	d9	36	LEU	4.2
2	S0	199	PRO	4.2
2	S0	111	ILE	4.2
14	c2	121	VAL	4.2
80	c0	74	GLU	4.2
36	5	1568	U	4.2
82	p0	70	LEU	4.2
1	6	1694	A	4.2
28	d6	18	VAL	4.2
14	c2	42	ALA	4.2
80	c0	3	MET	4.2
85	f	135	MET	4.2
7	S5	61	TYR	4.2
2	S0	83	GLN	4.2
34	SR	81	LEU	4.2
2	S0	47	VAL	4.2
10	S8	102	VAL	4.2
11	S9	32	GLY	4.2
35	SM	88	ARG	4.2
34	sR	87	LYS	4.2
58	N2	33	TYR	4.2
4	s2	162	CYS	4.2
4	S2	224	PHE	4.2
7	s5	30	PRO	4.2
34	SR	66	HIS	4.2
30	d8	66	LEU	4.2
1	6	506	A	4.2
4	S2	87	GLN	4.2
18	C6	129	PHE	4.2
30	d8	65	ARG	4.2
22	D0	84	MET	4.2
1	2	710	U	4.2
34	SR	42	LEU	4.2
34	SR	291	SER	4.2
59	n3	2	SER	4.2
24	D2	68	ARG	4.2
31	D9	52	PHE	4.2
60	N4	97	LYS	4.2
67	o1	82	GLU	4.2
70	o4	21	LYS	4.2
85	f	55	ALA	4.2
12	C0	66	TYR	4.2

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Mol	Chain	Res	Type	RSRZ
14	c2	107	ASP	4.2
53	M7	157	VAL	4.2
1	2	723	G	4.2
24	d2	126	LEU	4.2
85	f	66	THR	4.2
18	c6	12	LYS	4.2
2	s0	150	ASP	4.2
6	S4	66	MET	4.2
24	D2	3	ARG	4.2
13	C1	137	PHE	4.2
6	S4	110	ALA	4.2
80	c0	98	ASN	4.2
28	d6	13	LYS	4.2
58	N2	92	TRP	4.2
73	O7	29	VAL	4.2
2	S0	196	SER	4.2
64	n8	124	ILE	4.2
5	S3	96	LEU	4.1
59	N3	4	ASN	4.1
80	c0	5	LYS	4.1
13	C1	90	TYR	4.1
14	c2	22	VAL	4.1
78	Q2	106	PHE	4.1
9	S7	109	VAL	4.1
18	c6	69	VAL	4.1
7	S5	76	ARG	4.1
53	M7	176	ILE	4.1
33	e1	79	LYS	4.1
18	c6	39	VAL	4.1
28	d6	10	ARG	4.1
5	s3	38	GLU	4.1
28	d6	36	ILE	4.1
34	SR	99	THR	4.1
34	sR	42	LEU	4.1
34	sR	171	SER	4.1
39	L2	223	SER	4.1
49	M3	140	SER	4.1
31	d9	16	LYS	4.1
28	d6	89	ARG	4.1
29	d7	17	ARG	4.1
10	s8	199	LYS	4.1
26	D4	25	VAL	4.1

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Mol	Chain	Res	Type	RSRZ
33	E1	147	VAL	4.1
58	n2	70	LYS	4.1
60	n4	69	LYS	4.1
79	q3	3	LYS	4.1
80	c0	20	VAL	4.1
4	S2	113	LEU	4.1
34	SR	7	LEU	4.1
7	S5	154	ALA	4.1
32	E0	55	ARG	4.1
5	S3	184	ILE	4.1
2	S0	123	VAL	4.1
70	O4	5	VAL	4.1
2	S0	175	TYR	4.1
23	D1	58	TYR	4.1
48	M1	167	TYR	4.1
7	S5	96	SER	4.1
34	SR	43	ILE	4.1
68	O2	51	SER	4.1
25	d3	15	LEU	4.1
34	SR	62	LYS	4.1
85	f	26	LEU	4.1
18	C6	77	GLN	4.1
24	D2	24	GLN	4.1
39	l2	250	GLN	4.1
47	m0	221	ALA	4.1
65	N9	2	ALA	4.1
10	S8	168	CYS	4.1
21	C9	39	THR	4.1
34	SR	199	ILE	4.1
66	o0	6	SER	4.1
6	S4	8	HIS	4.1
14	c2	56	GLU	4.1
75	o9	11	GLN	4.1
2	s0	134	LYS	4.1
4	s2	64	LYS	4.1
19	C7	38	ILE	4.1
24	D2	55	ASP	4.1
34	sR	257	ALA	4.1
18	c6	143	ARG	4.1
1	6	663	U	4.1
34	sR	272	ASP	4.1
39	l2	208	ASP	4.1

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Mol	Chain	Res	Type	RSRZ
34	sR	140	CYS	4.1
34	sR	244	ALA	4.1
16	c4	129	LYS	4.1
60	N4	65	GLU	4.1
6	S4	65	LEU	4.1
36	5	2404	A	4.1
11	S9	20	GLU	4.0
19	C7	7	LYS	4.0
34	sR	27	ALA	4.0
39	l2	251	LYS	4.0
14	c2	110	GLY	4.0
70	O4	35	VAL	4.0
32	E0	49	LEU	4.0
11	S9	104	PHE	4.0
2	s0	116	LYS	4.0
34	sR	166	SER	4.0
53	M7	136	ILE	4.0
29	d7	55	THR	4.0
85	f	77	THR	4.0
18	c6	141	SER	4.0
19	C7	46	LEU	4.0
34	sR	112	SER	4.0
2	S0	102	PHE	4.0
8	S6	95	LYS	4.0
14	c2	33	ARG	4.0
22	D0	53	LYS	4.0
70	O4	21	LYS	4.0
4	s2	82	ASN	4.0
18	c6	119	ALA	4.0
2	S0	152	PRO	4.0
24	d2	20	THR	4.0
85	f	90	TYR	4.0
22	d0	100	VAL	4.0
34	SR	262	VAL	4.0
34	sR	83	ALA	4.0
16	C4	92	LYS	4.0
27	d5	50	ILE	4.0
31	d9	40	ARG	4.0
39	l2	5	ILE	4.0
47	m0	103	LEU	4.0
79	Q3	24	ARG	4.0
24	D2	18	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
7	S5	41	LYS	4.0
14	c2	104	GLY	4.0
34	sR	243	LEU	4.0
25	D3	24	TRP	4.0
80	c0	66	TYR	4.0
36	5	2444	C	4.0
58	n2	13	LYS	4.0
39	l2	16	PHE	4.0
8	S6	154	ARG	4.0
34	SR	41	THR	4.0
85	f	68	LYS	4.0
11	S9	87	SER	4.0
64	N8	73	LEU	4.0
18	C6	66	ARG	4.0
85	f	136	VAL	4.0
5	S3	183	GLY	4.0
2	S0	26	ALA	4.0
5	S3	188	ILE	4.0
17	c5	103	ASN	4.0
31	d9	56	ARG	4.0
7	s5	129	PRO	4.0
2	S0	85	ALA	4.0
13	C1	122	ILE	4.0
15	C3	122	ILE	4.0
29	d7	18	LYS	4.0
34	sR	167	VAL	4.0
61	n5	113	LEU	4.0
34	sR	201	THR	4.0
60	n4	27	LYS	4.0
85	f	25	ALA	4.0
24	D2	5	SER	4.0
5	S3	206	VAL	3.9
32	e0	51	ASN	3.9
53	M7	163	LYS	3.9
5	S3	166	ASP	3.9
11	s9	184	SER	3.9
24	D2	58	SER	3.9
9	s7	11	GLN	3.9
2	S0	149	LEU	3.9
10	s8	179	CYS	3.9
22	d0	63	LEU	3.9
26	D4	125	LEU	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S0	104	PRO	3.9
5	S3	25	PHE	3.9
15	c3	56	ASP	3.9
24	D2	53	ILE	3.9
24	d2	55	ASP	3.9
4	S2	156	THR	3.9
10	s8	36	THR	3.9
24	D2	101	TYR	3.9
34	SR	85	TRP	3.9
39	L2	189	TYR	3.9
1	2	1777	G	3.9
1	2	1151	A	3.9
9	S7	147	ASN	3.9
4	s2	161	LYS	3.9
13	C1	148	LYS	3.9
34	SR	283	LYS	3.9
39	L2	198	LYS	3.9
77	Q1	14	LYS	3.9
59	N3	2	SER	3.9
4	s2	203	LYS	3.9
7	S5	74	ALA	3.9
3	S1	20	VAL	3.9
11	S9	28	LEU	3.9
73	o7	23	GLY	3.9
5	s3	83	THR	3.9
34	sR	41	THR	3.9
14	C2	82	PRO	3.9
34	sR	134	TRP	3.9
1	2	742	U	3.9
7	s5	150	GLY	3.9
10	S8	58	LEU	3.9
19	c7	24	LEU	3.9
85	f	28	LYS	3.9
2	s0	27	ARG	3.9
3	S1	140	ILE	3.9
14	C2	136	ILE	3.9
34	SR	65	SER	3.9
75	o9	2	ALA	3.9
25	D3	29	TYR	3.9
33	e1	78	LYS	3.9
2	S0	131	GLN	3.9
70	O4	34	HIS	3.9

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Mol	Chain	Res	Type	RSRZ
2	s0	145	ALA	3.9
5	s3	193	ALA	3.9
36	1	2397	A	3.9
13	C1	117	VAL	3.9
18	C6	41	PRO	3.9
18	c6	142	TYR	3.9
80	c0	55	VAL	3.9
1	2	1338	C	3.9
13	c1	115	PHE	3.9
28	D6	5	ARG	3.9
19	c7	69	ILE	3.9
36	1	2205	U	3.9
13	C1	93	TYR	3.9
13	c1	142	VAL	3.9
21	c9	9	VAL	3.9
34	sR	30	PRO	3.9
15	C3	16	ILE	3.9
39	L2	250	GLN	3.9
5	S3	148	LYS	3.9
28	D6	35	ALA	3.9
8	s6	160	ARG	3.9
46	l9	191	LEU	3.9
34	sR	85	TRP	3.9
80	c0	60	SER	3.9
39	l2	253	GLN	3.9
43	l6	130	ILE	3.9
1	2	195	G	3.9
5	s3	11	LEU	3.8
16	c4	110	LEU	3.8
70	O4	2	ALA	3.9
22	D0	85	ARG	3.8
24	D2	93	LEU	3.8
29	D7	2	VAL	3.8
35	SM	175	VAL	3.8
59	N3	33	ASN	3.8
22	D0	65	ILE	3.8
55	M9	72	GLU	3.8
58	N2	93	ILE	3.8
80	c0	78	GLU	3.8
10	S8	20	GLN	3.8
55	M9	181	ARG	3.8
21	C9	37	VAL	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	S1	49	ASN	3.8
1	6	1800	A	3.8
18	c6	10	PHE	3.8
28	d6	34	LYS	3.8
36	5	1025	A	3.8
9	S7	91	ILE	3.8
16	c4	22	SER	3.8
24	d2	27	ILE	3.8
67	O1	33	VAL	3.8
18	C6	87	LYS	3.8
18	C6	128	LYS	3.8
18	c6	130	GLY	3.8
36	5	2401	A	3.8
1	2	1704	U	3.8
25	D3	34	LEU	3.8
34	sR	139	GLN	3.8
51	M5	198	SER	3.8
59	N3	52	ALA	3.8
35	SM	152	LYS	3.8
39	L2	99	GLY	3.8
6	S4	26	CYS	3.8
12	C0	92	ILE	3.8
85	f	138	ILE	3.8
39	l2	234	LYS	3.8
85	f	32	VAL	3.8
16	c4	27	PHE	3.8
4	s2	97	ARG	3.8
19	c7	2	GLY	3.8
33	E1	85	TYR	3.8
39	l2	19	HIS	3.8
41	l4	66	GLY	3.8
34	sR	310	ILE	3.8
34	sR	73	LEU	3.8
60	N4	81	PRO	3.8
5	S3	143	ARG	3.8
35	sM	85	SER	3.8
39	l2	72	ARG	3.8
85	f	16	SER	3.8
18	c6	21	HIS	3.8
10	s8	58	LEU	3.8
18	C6	44	LEU	3.8
64	n8	120	ASN	3.8

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Mol	Chain	Res	Type	RSRZ
19	C7	58	MET	3.8
11	S9	31	ALA	3.8
22	d0	54	GLY	3.8
1	6	1340	U	3.8
66	o0	23	TYR	3.8
6	S4	143	ASP	3.8
7	s5	145	ASP	3.8
9	S7	123	ASP	3.8
21	c9	22	LEU	3.8
1	6	1696	G	3.8
18	c6	114	ARG	3.8
13	C1	153	PHE	3.8
2	s0	33	GLN	3.8
24	D2	13	ALA	3.8
25	d3	10	ASN	3.8
65	n9	23	LYS	3.8
2	S0	124	THR	3.8
2	s0	173	ILE	3.8
55	M9	24	LEU	3.8
5	s3	183	GLY	3.8
22	d0	84	MET	3.8
4	S2	41	LEU	3.8
9	S7	98	ILE	3.8
2	s0	166	GLY	3.7
4	S2	64	LYS	3.7
8	S6	64	LYS	3.7
2	S0	195	TRP	3.7
24	D2	23	ARG	3.7
34	sR	313	TRP	3.7
34	SR	310	ILE	3.7
21	c9	93	HIS	3.7
22	d0	81	THR	3.7
34	sR	88	THR	3.7
35	SM	99	LYS	3.7
2	S0	135	GLU	3.7
28	D6	33	ASP	3.7
72	o6	58	ILE	3.7
5	s3	160	SER	3.7
14	c2	40	GLY	3.7
85	f	15	SER	3.7
4	s2	209	ASN	3.7
5	s3	9	ARG	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	s0	34	GLU	3.7
4	s2	166	THR	3.7
10	S8	44	HIS	3.7
75	O9	49	MET	3.7
85	f	52	HIS	3.7
13	C1	149	ALA	3.7
34	SR	35	SER	3.7
45	l8	113	ALA	3.7
1	2	1107	G	3.7
22	d0	65	ILE	3.7
24	D2	75	ILE	3.7
26	D4	7	ILE	3.7
34	sR	79	TYR	3.7
36	5	2447	A	3.7
2	S0	162	CYS	3.7
3	S1	114	VAL	3.7
7	s5	133	VAL	3.7
25	D3	20	ARG	3.7
28	D6	21	VAL	3.7
25	D3	28	ASN	3.7
25	d3	18	HIS	3.7
7	s5	58	LEU	3.7
45	L8	93	LEU	3.7
5	s3	208	ILE	3.7
22	d0	62	VAL	3.7
23	D1	51	VAL	3.7
34	SR	45	TRP	3.7
53	M7	135	ARG	3.7
36	1	2139	A	3.7
1	2	1399	C	3.7
3	S1	110	LEU	3.7
5	S3	142	LEU	3.7
34	sR	183	LEU	3.7
7	s5	130	ILE	3.7
21	C9	70	GLN	3.7
28	d6	68	TYR	3.7
34	sR	35	SER	3.7
18	c6	138	PHE	3.7
34	SR	290	VAL	3.7
15	c3	53	LEU	3.7
7	S5	149	VAL	3.7
22	d0	97	VAL	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
8	s6	131	LYS	3.7
9	s7	184	GLU	3.7
24	D2	28	ARG	3.7
1	2	1691	A	3.7
24	d2	86	ILE	3.7
3	S1	52	THR	3.7
8	S6	79	LYS	3.7
19	C7	83	GLN	3.7
36	5	2540	A	3.7
21	C9	92	LYS	3.7
4	s2	91	ARG	3.7
21	C9	123	ARG	3.7
8	S6	80	ASN	3.7
24	D2	125	ILE	3.7
5	s3	175	VAL	3.7
31	d9	23	VAL	3.7
35	SM	18	VAL	3.7
67	O1	67	VAL	3.7
1	6	1707	A	3.7
5	s3	134	CYS	3.7
64	n8	104	THR	3.7
80	c0	48	SER	3.7
10	S8	53	LYS	3.7
14	c2	27	ALA	3.7
22	d0	88	LYS	3.7
5	s3	48	VAL	3.7
21	C9	18	TYR	3.7
21	C9	129	GLN	3.7
5	s3	65	ARG	3.7
28	D6	82	ARG	3.7
53	M7	169	THR	3.7
5	S3	157	LEU	3.7
14	C2	41	LEU	3.7
16	c4	53	ASP	3.7
35	sM	121	ALA	3.7
82	p0	192	ASP	3.7
45	L8	218	ILE	3.7
21	C9	6	VAL	3.7
24	D2	102	VAL	3.7
31	d9	12	ARG	3.7
45	L8	191	ASN	3.7
63	N7	90	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
70	O4	16	ARG	3.7
7	S5	104	ASN	3.7
55	M9	44	LEU	3.6
26	D4	2	SER	3.6
16	C4	76	ILE	3.6
21	C9	104	VAL	3.6
5	s3	176	LEU	3.6
13	C1	40	LEU	3.6
34	sR	292	LEU	3.6
5	S3	90	ARG	3.6
13	c1	145	ALA	3.6
17	c5	135	THR	3.6
5	s3	191	ASP	3.6
34	SR	188	ILE	3.6
6	S4	6	LYS	3.6
2	s0	146	LEU	3.6
4	s2	211	LEU	3.6
6	s4	23	LEU	3.6
18	c6	60	PHE	3.6
23	D1	87	ARG	3.6
6	S4	15	PRO	3.6
11	S9	144	PRO	3.6
43	L6	130	ILE	3.6
51	m5	111	ALA	3.6
8	s6	169	TYR	3.6
19	c7	60	ARG	3.6
2	s0	49	ASN	3.6
18	c6	118	ILE	3.6
2	S0	114	SER	3.6
15	C3	128	TYR	3.6
14	c2	26	ASP	3.6
11	s9	149	ARG	3.6
29	D7	26	GLN	3.6
12	C0	39	ASN	3.6
31	D9	38	ILE	3.6
63	N7	2	ALA	3.6
85	f	82	VAL	3.6
29	d7	33	LEU	3.6
34	sR	52	GLN	3.6
53	M7	172	GLN	3.6
28	D6	28	LYS	3.6
29	d7	49	HIS	3.6

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Mol	Chain	Res	Type	RSRZ
30	d8	32	PHE	3.6
34	SR	55	GLY	3.6
41	L4	73	ARG	3.6
41	l4	73	ARG	3.6
2	S0	182	LEU	3.6
5	s3	72	LEU	3.6
6	s4	207	LEU	3.6
21	C9	139	THR	3.6
36	5	1580	A	3.6
34	sR	263	PHE	3.6
18	c6	91	ALA	3.6
22	D0	119	ALA	3.6
22	d0	82	TYR	3.6
11	S9	39	LYS	3.6
18	C6	116	LEU	3.6
45	l8	65	LEU	3.6
59	N3	25	CYS	3.6
34	SR	306	THR	3.6
2	S0	48	ILE	3.6
2	s0	123	VAL	3.6
13	C1	88	ARG	3.6
39	l2	15	ILE	3.6
2	S0	171	GLY	3.6
10	S8	96	LEU	3.6
23	D1	21	ASN	3.6
5	s3	179	GLN	3.6
5	s3	173	ARG	3.6
29	d7	81	ARG	3.6
49	M3	34	SER	3.6
25	D3	30	LYS	3.6
73	O7	88	ALA	3.6
42	L5	146	LEU	3.6
80	c0	76	LEU	3.6
24	D2	12	ASN	3.6
41	l4	65	TRP	3.6
8	S6	180	THR	3.6
18	C6	141	SER	3.6
19	c7	8	THR	3.6
24	D2	2	THR	3.6
34	SR	201	THR	3.6
35	SM	137	GLU	3.6
41	l4	103	THR	3.6

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Mol	Chain	Res	Type	RSRZ
24	D2	130	TYR	3.6
34	SR	89	LEU	3.6
1	2	1077	C	3.6
1	2	1379	C	3.6
51	m5	76	PRO	3.6
60	n4	94	ARG	3.6
17	C5	104	GLN	3.6
6	S4	47	PHE	3.5
2	S0	76	ILE	3.5
22	D0	83	GLU	3.5
29	D7	51	GLN	3.5
85	f	139	ILE	3.5
18	C6	133	GLY	3.5
22	d0	28	SER	3.5
24	d2	21	GLY	3.5
39	L2	246	LEU	3.5
19	C7	78	ARG	3.5
5	s3	7	LYS	3.5
15	C3	9	LYS	3.5
30	D8	45	LYS	3.5
32	e0	62	VAL	3.5
14	c2	92	ALA	3.5
34	sR	13	LEU	3.5
15	c3	5	HIS	3.5
74	o8	33	LYS	3.5
10	S8	60	ILE	3.5
4	s2	113	LEU	3.5
6	S4	55	ALA	3.5
34	sR	214	ALA	3.5
10	S8	23	LYS	3.5
35	SM	84	LYS	3.5
80	c0	54	TYR	3.5
18	c6	115	THR	3.5
22	d0	78	THR	3.5
28	d6	90	GLU	3.5
36	1	2502	A	3.5
41	L4	105	THR	3.5
5	s3	164	VAL	3.5
85	f	34	ILE	3.5
5	S3	201	ALA	3.5
8	S6	76	LEU	3.5
39	l2	196	TRP	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
41	L4	65	TRP	3.5
21	C9	72	GLY	3.5
24	D2	119	LYS	3.5
41	l4	79	GLY	3.5
85	f	51	LYS	3.5
13	c1	90	TYR	3.5
31	d9	14	TYR	3.5
31	d9	43	PHE	3.5
48	M1	127	PHE	3.5
55	M9	78	TYR	3.5
4	s2	165	VAL	3.5
28	d6	86	VAL	3.5
34	sR	203	THR	3.5
5	S3	185	LYS	3.5
34	sR	161	LYS	3.5
51	M5	197	LEU	3.5
34	sR	254	ALA	3.5
39	l2	186	PHE	3.5
1	2	1340	U	3.5
2	s0	129	ASP	3.5
41	l4	71	VAL	3.5
61	n5	114	VAL	3.5
72	O6	100	HIS	3.5
7	s5	137	ILE	3.5
13	C1	3	THR	3.5
23	D1	24	ILE	3.5
5	s3	142	LEU	3.5
24	D2	122	SER	3.5
24	d2	2	THR	3.5
42	L5	51	LEU	3.5
55	m9	83	GLY	3.5
1	2	713	A	3.5
1	2	1337	A	3.5
1	2	1371	A	3.5
30	D8	41	VAL	3.5
49	m3	6	ASN	3.5
14	C2	26	ASP	3.5
16	c4	55	SER	3.5
21	c9	28	LEU	3.5
24	D2	26	LEU	3.5
63	N7	42	LEU	3.5
39	l2	13	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
85	f	24	SER	3.5
4	S2	57	PHE	3.5
19	C7	28	PHE	3.5
13	c1	97	TYR	3.5
10	S8	151	LYS	3.5
2	S0	49	ASN	3.5
25	D3	22	ASN	3.5
36	1	2954	U	3.5
51	M5	134	LEU	3.5
2	s0	99	ALA	3.5
15	c3	15	ALA	3.5
33	e1	90	LYS	3.5
4	S2	45	VAL	3.5
18	C6	75	VAL	3.5
1	2	315	A	3.5
34	SR	174	ASN	3.5
34	sR	64	HIS	3.5
13	C1	156	PHE	3.5
21	C9	7	ARG	3.5
34	sR	200	ASN	3.5
2	S0	20	ALA	3.5
9	s7	187	SER	3.5
28	d6	20	PRO	3.5
63	n7	75	VAL	3.5
19	C7	26	LEU	3.5
2	s0	100	GLY	3.5
18	c6	82	ARG	3.5
28	d6	15	ARG	3.5
60	N4	94	ARG	3.5
32	e0	2	ALA	3.5
80	c0	39	ASN	3.5
4	S2	169	LEU	3.5
5	s3	10	LYS	3.5
16	C4	18	ARG	3.5
34	sR	7	LEU	3.5
8	S6	99	GLY	3.5
20	c8	142	GLY	3.5
5	S3	169	ASP	3.4
22	d0	33	GLN	3.4
12	C0	64	TYR	3.4
24	D2	52	TYR	3.4
1	2	1766	A	3.4

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Mol	Chain	Res	Type	RSRZ
3	s1	111	ARG	3.4
34	SR	26	SER	3.4
36	1	2808	A	3.4
40	l3	242	THR	3.4
19	C7	44	LYS	3.4
19	C7	69	ILE	3.4
75	O9	48	LYS	3.4
8	S6	54	GLY	3.4
16	c4	23	PHE	3.4
74	O8	43	PHE	3.4
5	s3	171	ALA	3.4
55	m9	178	ALA	3.4
5	S3	54	ARG	3.4
5	S3	190	ARG	3.4
61	N5	82	LEU	3.4
70	o4	37	LYS	3.4
70	o4	57	LEU	3.4
51	M5	196	THR	3.4
1	2	1712	A	3.4
3	S1	53	GLY	3.4
36	1	1605	A	3.4
80	c0	58	GLN	3.4
6	S4	102	VAL	3.4
26	D4	31	ASN	3.4
1	6	1700	C	3.4
21	C9	60	SER	3.4
22	D0	60	THR	3.4
18	c6	132	LYS	3.4
19	C7	19	ARG	3.4
24	d2	22	LYS	3.4
29	d7	50	ALA	3.4
7	s5	86	GLN	3.4
18	C6	83	GLN	3.4
2	s0	177	LEU	3.4
19	C7	100	LEU	3.4
22	d0	58	LEU	3.4
55	m9	184	LEU	3.4
21	C9	77	ASN	3.4
25	D3	21	ASN	3.4
34	sR	54	PHE	3.4
49	M3	26	PHE	3.4
23	D1	20	THR	3.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	2	1105	C	3.4
4	S2	231	ALA	3.4
82	p0	296	ALA	3.4
23	D1	33	GLN	3.4
29	d7	51	GLN	3.4
34	sR	47	LEU	3.4
49	M3	7	LEU	3.4
23	D1	17	CYS	3.4
80	c0	43	ILE	3.4
39	L2	208	ASP	3.4
41	L4	81	GLY	3.4
59	n3	3	GLY	3.4
6	S4	159	THR	3.4
14	C2	28	LEU	3.4
79	Q3	22	LEU	3.4
2	S0	141	ILE	3.4
25	d3	6	PRO	3.4
28	d6	70	LYS	3.4
34	sR	70	ASP	3.4
35	sM	122	ASP	3.4
1	2	492	A	3.4
1	2	1681	A	3.4
29	D7	42	ASN	3.4
36	5	1566	A	3.4
1	2	1774	G	3.4
5	S3	122	VAL	3.4
15	C3	57	ALA	3.4
19	C7	120	SER	3.4
24	D2	17	ALA	3.4
1	6	1491	U	3.4
8	S6	84	TYR	3.4
70	O4	30	LEU	3.4
3	S1	233	GLY	3.4
57	n1	79	MET	3.4
6	S4	261	LEU	3.4
49	M3	2	ALA	3.4
5	S3	120	TYR	3.4
18	C6	101	SER	3.4
21	C9	57	ARG	3.4
18	C6	88	GLY	3.4
73	o7	12	HIS	3.4
85	f	54	HIS	3.4

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Mol	Chain	Res	Type	RSRZ
1	2	1100	G	3.4
9	s7	154	LEU	3.4
14	C2	86	VAL	3.4
77	Q1	18	ARG	3.4
5	s3	101	GLN	3.4
18	c6	129	PHE	3.4
19	C7	70	SER	3.4
5	s3	16	VAL	3.4
19	C7	9	VAL	3.4
22	d0	116	VAL	3.4
28	D6	34	LYS	3.4
79	Q3	36	ARG	3.4
1	6	1709	C	3.4
5	s3	168	ILE	3.4
28	D6	11	ASN	3.4
2	S0	108	THR	3.4
3	s1	143	THR	3.4
32	E0	7	SER	3.4
6	S4	199	GLU	3.4
59	N3	61	THR	3.4
80	c0	67	THR	3.4
14	C2	33	ARG	3.4
24	d2	60	LYS	3.4
32	E0	53	LYS	3.4
19	C7	16	LEU	3.4
5	s3	3	ALA	3.4
13	c1	89	ALA	3.4
24	d2	13	ALA	3.4
28	D6	6	ALA	3.4
35	SM	106	VAL	3.4
39	l2	59	ALA	3.4
23	D1	75	ASN	3.4
34	sR	17	ASN	3.4
39	L2	219	ILE	3.4
1	6	1033	C	3.4
9	S7	103	SER	3.4
6	S4	49	ARG	3.4
35	SM	105	LYS	3.4
58	N2	94	ARG	3.4
80	c0	12	HIS	3.4
5	s3	86	LEU	3.3
34	SR	312	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
58	n2	66	VAL	3.3
2	S0	38	PHE	3.3
15	C3	114	ARG	3.3
17	c5	8	LYS	3.3
41	L4	80	GLY	3.3
60	n4	70	LYS	3.3
85	f	79	ASN	3.3
15	c3	14	SER	3.3
39	l2	17	THR	3.3
58	n2	97	SER	3.3
7	S5	165	LEU	3.3
58	n2	37	LEU	3.3
60	n4	75	THR	3.3
40	L3	217	ALA	3.3
1	2	626	U	3.3
22	d0	86	ILE	3.3
16	c4	45	GLY	3.3
24	D2	19	LYS	3.3
39	l2	28	LYS	3.3
60	n4	73	ARG	3.3
13	c1	138	ASN	3.3
14	C2	31	VAL	3.3
65	N9	54	LEU	3.3
39	l2	199	THR	3.3
70	O4	66	SER	3.3
5	s3	102	ALA	3.3
7	S5	155	ALA	3.3
25	D3	5	LYS	3.3
39	L2	225	ILE	3.3
19	C7	82	ASP	3.3
41	L4	63	GLU	3.3
6	S4	52	LEU	3.3
55	m9	24	LEU	3.3
80	c0	49	LEU	3.3
49	M3	33	VAL	3.3
7	S5	69	PHE	3.3
34	sR	143	THR	3.3
41	l4	82	THR	3.3
2	s0	160	ILE	3.3
21	C9	66	TYR	3.3
24	D2	47	ILE	3.3
64	N8	82	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
54	m8	148	GLU	3.3
16	c4	137	LEU	3.3
58	N2	9	GLN	3.3
9	S7	141	ARG	3.3
34	SR	102	ARG	3.3
18	c6	9	THR	3.3
53	M7	182	ILE	3.3
82	p0	25	LEU	3.3
55	M9	177	VAL	3.3
5	S3	24	PHE	3.3
13	c1	144	ALA	3.3
2	s0	110	TYR	3.3
31	d9	45	GLU	3.3
11	S9	11	THR	3.3
58	N2	108	TYR	3.3
19	C7	22	PRO	3.3
36	5	3276	G	3.3
11	S9	128	LEU	3.3
22	D0	34	LEU	3.3
24	d2	26	LEU	3.3
39	l2	191	LEU	3.3
49	M3	10	LEU	3.3
4	s2	103	VAL	3.3
24	d2	63	VAL	3.3
79	Q3	71	VAL	3.3
17	c5	80	MET	3.3
67	O1	25	PHE	3.3
6	s4	14	ALA	3.3
51	m5	129	TYR	3.3
12	C0	24	LYS	3.3
40	L3	277	SER	3.3
77	Q1	7	LYS	3.3
85	f	36	SER	3.3
14	c2	28	LEU	3.3
6	S4	181	VAL	3.3
49	M3	18	TRP	3.3
24	D2	79	PHE	3.3
60	n4	88	ASP	3.3
34	sR	211	ILE	3.3
69	o3	55	ALA	3.3
1	2	1342	C	3.3
16	c4	20	TYR	3.3

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Mol	Chain	Res	Type	RSRZ
25	D3	48	HIS	3.3
28	d6	7	SER	3.3
2	s0	115	PHE	3.3
29	D7	4	VAL	3.3
2	S0	159	ALA	3.3
2	S0	160	ILE	3.3
5	s3	187	LYS	3.3
29	D7	18	LYS	3.3
34	sR	114	ASP	3.3
43	l6	149	ILE	3.3
85	f	48	LYS	3.3
15	C3	4	MET	3.3
19	C7	75	GLU	3.3
25	d3	110	LYS	3.3
34	sR	239	GLU	3.3
39	L2	191	LEU	3.3
2	S0	181	VAL	3.3
18	C6	78	VAL	3.3
25	d3	21	ASN	3.3
5	s3	200	LYS	3.3
11	s9	87	SER	3.3
73	o7	10	LYS	3.3
2	s0	41	ARG	3.3
5	s3	135	GLU	3.3
19	C7	45	ARG	3.3
21	C9	8	ASP	3.3
23	D1	57	GLY	3.3
12	C0	65	TYR	3.3
16	c4	105	LEU	3.3
25	D3	133	LEU	3.3
80	c0	41	TYR	3.3
11	S9	123	HIS	3.3
18	c6	67	VAL	3.3
29	D7	32	PHE	3.3
33	E1	145	HIS	3.3
41	l4	191	LYS	3.3
7	s5	92	ARG	3.2
18	C6	124	PRO	3.2
49	M3	37	ASN	3.2
34	SR	213	SER	3.2
79	q3	55	TRP	3.2
80	c0	11	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
13	C1	154	ALA	3.2
7	s5	161	ASP	3.2
25	D3	15	LEU	3.2
2	s0	107	PHE	3.2
5	S3	200	LYS	3.2
21	C9	14	PHE	3.2
22	d0	32	LYS	3.2
25	D3	39	LYS	3.2
73	O7	8	PHE	3.2
5	S3	92	GLN	3.2
5	S3	213	GLU	3.2
6	s4	15	PRO	3.2
34	SR	82	SER	3.2
34	sR	108	SER	3.2
39	l2	225	ILE	3.2
41	l4	93	MET	3.2
1	6	794	U	3.2
1	6	1756[A]	A	3.2
45	L8	131	ALA	3.2
73	O7	7	SER	3.2
2	s0	29	VAL	3.2
9	s7	70	PHE	3.2
30	d8	67	ARG	3.2
32	e0	55	ARG	3.2
49	m3	192	GLU	3.2
78	q2	59	HIS	3.2
5	S3	216	PRO	3.2
9	S7	146	GLY	3.2
31	d9	11	PRO	3.2
34	sR	159	ASN	3.2
2	s0	40	ALA	3.2
24	D2	4	SER	3.2
40	L3	47	LEU	3.2
51	M5	192	LYS	3.2
67	O1	101	ALA	3.2
1	6	711	U	3.2
8	S6	87	ARG	3.2
74	O8	6	THR	3.2
36	5	2397	A	3.2
69	O3	22	VAL	3.2
2	S0	134	LYS	3.2
1	2	1584	G	3.2

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Mol	Chain	Res	Type	RSRZ
1	6	660	G	3.2
1	6	712	G	3.2
5	s3	109	LEU	3.2
6	S4	23	LEU	3.2
21	c9	92	LYS	3.2
79	Q3	25	GLN	3.2
28	d6	6	ALA	3.2
30	d8	43	ASN	3.2
51	m5	200	TRP	3.2
17	c5	78	THR	3.2
34	SR	110	VAL	3.2
48	M1	148	VAL	3.2
28	D6	32	LYS	3.2
28	d6	17	HIS	3.2
39	l2	48	ILE	3.2
40	l3	245	GLY	3.2
2	S0	136	ALA	3.2
13	C1	144	ALA	3.2
41	L4	50	TYR	3.2
41	L4	71	VAL	3.2
75	O9	43	ASN	3.2
1	2	1150	G	3.2
39	l2	243	THR	3.2
2	s0	25	GLY	3.2
3	s1	140	ILE	3.2
5	s3	105	MET	3.2
5	s3	177	MET	3.2
7	S5	89	ILE	3.2
22	D0	26	LEU	3.2
30	d8	61	ARG	3.2
34	sR	147	HIS	3.2
60	N4	79	GLN	3.2
5	S3	144	ALA	3.2
16	c4	48	VAL	3.2
23	d1	53	TYR	3.2
39	L2	196	TRP	3.2
24	d2	3	ARG	3.2
28	d6	22	ARG	3.2
7	s5	108	LEU	3.2
7	s5	151	GLY	3.2
8	S6	69	LEU	3.2
32	E0	39	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
63	n7	46	ILE	3.2
36	1	1955	U	3.2
68	o2	52	GLN	3.2
73	O7	28	HIS	3.2
3	S1	225	VAL	3.2
4	S2	171	PRO	3.2
41	L4	72	ALA	3.2
5	s3	123	VAL	3.2
12	C0	25	LYS	3.2
34	sR	133	VAL	3.2
5	s3	178	ARG	3.2
15	C3	124	ARG	3.2
22	d0	85	ARG	3.2
28	D6	87	ARG	3.2
34	SR	197	SER	3.2
22	d0	27	THR	3.2
24	D2	83	ILE	3.2
39	L2	204	MET	3.2
1	2	1398	U	3.2
2	S0	155	PHE	3.2
9	s7	108	GLN	3.2
80	c0	59	PHE	3.2
16	C4	120	PRO	3.2
24	D2	63	VAL	3.2
41	L4	106	TRP	3.2
2	s0	28	ASN	3.2
19	C7	48	ASN	3.2
16	C4	97	GLY	3.2
34	sR	205	SER	3.2
34	sR	304	GLY	3.2
61	N5	108	LEU	3.2
74	O8	5	ILE	3.2
10	s8	37	LYS	3.2
12	C0	17	GLN	3.2
2	S0	127	ARG	3.2
5	s3	37	VAL	3.2
30	D8	15	VAL	3.2
8	S6	101	ILE	3.2
31	d9	50	ILE	3.2
39	L2	179	LEU	3.2
13	C1	46	LYS	3.2
42	l5	290	ILE	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	2	623	A	3.2
1	2	1076	A	3.2
22	d0	66	SER	3.2
29	D7	30	SER	3.2
3	S1	98	THR	3.2
36	1	1103	A	3.2
36	5	1534	A	3.2
28	d6	33	ASP	3.2
1	6	1705	C	3.2
5	S3	210	GLU	3.2
6	S4	180	LEU	3.2
10	s8	23	LYS	3.2
10	s8	177	GLY	3.2
39	L2	180	LEU	3.2
54	M8	166	LEU	3.2
60	N4	41	LYS	3.2
13	C1	116	ARG	3.2
16	C4	135	ARG	3.2
73	O7	13	ASN	3.2
4	s2	94	GLN	3.2
19	C7	121	VAL	3.2
34	SR	318	ALA	3.2
28	D6	91	ASP	3.2
35	SM	97	THR	3.2
42	l5	267	ALA	3.2
45	L8	114	ALA	3.2
70	O4	33	GLN	3.2
5	S3	211	PRO	3.1
1	6	679	U	3.1
7	s5	40	ILE	3.1
14	c2	98	GLY	3.1
15	c3	88	LEU	3.1
28	d6	19	LYS	3.1
33	E1	82	LYS	3.1
36	5	2496	C	3.1
70	o4	19	LYS	3.1
22	d0	73	GLY	3.1
39	L2	236	GLY	3.1
13	C1	60	PHE	3.1
39	L2	247	ARG	3.1
14	C2	21	GLU	3.1
19	C7	66	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
19	c7	29	GLN	3.1
39	l2	249	SER	3.1
55	m9	21	LYS	3.1
29	D7	8	LEU	3.1
39	l2	29	LEU	3.1
2	S0	144	ILE	3.1
7	s5	75	GLY	3.1
19	C7	41	ILE	3.1
36	1	2143	A	3.1
41	L4	74	ILE	3.1
57	n1	160	ILE	3.1
1	6	710	U	3.1
15	c3	4	MET	3.1
70	O4	7	PHE	3.1
2	s0	83	GLN	3.1
21	c9	17	ALA	3.1
45	l8	104	GLU	3.1
51	m5	15	GLN	3.1
8	s6	76	LEU	3.1
39	L2	245	LEU	3.1
67	O1	71	LEU	3.1
23	d1	63	GLY	3.1
41	l4	75	PRO	3.1
54	m8	94	PHE	3.1
1	6	1337	A	3.1
7	s5	84	LYS	3.1
9	S7	151	LYS	3.1
9	s7	134	GLU	3.1
27	D5	97	LYS	3.1
34	sR	46	LYS	3.1
36	1	2187	G	3.1
36	5	2538	U	3.1
18	C6	94	GLN	3.1
85	f	19	TYR	3.1
16	C4	102	LEU	3.1
75	O9	21	ARG	3.1
77	Q1	24	SER	3.1
5	s3	154	ASP	3.1
21	C9	128	GLY	3.1
35	sM	39	PRO	3.1
39	l2	164	GLY	3.1
21	c9	4	VAL	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
16	c4	59	ALA	3.1
39	L2	235	ALA	3.1
8	S6	182	GLN	3.1
36	5	2872	A	3.1
45	L8	130	TYR	3.1
6	S4	167	GLY	3.1
2	S0	147	THR	3.1
3	s1	30	PHE	3.1
10	S8	177	GLY	3.1
31	d9	46	LYS	3.1
36	1	1486	G	3.1
43	l6	66	SER	3.1
58	n2	100	THR	3.1
60	n4	66	GLU	3.1
14	c2	101	ALA	3.1
60	n4	85	ALA	3.1
77	Q1	17	ARG	3.1
13	C1	128	CYS	3.1
5	S3	95	GLY	3.1
21	C9	103	LYS	3.1
28	d6	80	HIS	3.1
52	M6	42	ASN	3.1
5	s3	12	VAL	3.1
10	S8	6	ASP	3.1
19	C7	40	THR	3.1
49	M3	22	VAL	3.1
63	N7	91	ALA	3.1
15	C3	54	LEU	3.1
18	C6	96	TYR	3.1
22	d0	93	LEU	3.1
27	d5	59	TYR	3.1
34	sR	187	GLN	3.1
59	N3	81	GLN	3.1
63	n7	49	TYR	3.1
35	SM	103	LYS	3.1
34	SR	211	ILE	3.1
58	n2	11	ILE	3.1
1	6	493	U	3.1
34	SR	90	ARG	3.1
36	1	3079	U	3.1
2	S0	29	VAL	3.1
1	6	1424	A	3.1

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Mol	Chain	Res	Type	RSRZ
35	SM	91	THR	3.1
73	O7	3	LYS	3.1
10	S8	101	ILE	3.1
36	5	2440	G	3.1
41	L4	66	GLY	3.1
1	6	864	U	3.1
7	S5	98	MET	3.1
34	sR	71	CYS	3.1
73	O7	6	PRO	3.1
78	q2	34	SER	3.1
39	l2	182	ALA	3.1
3	s1	155	TYR	3.1
10	s8	103	GLN	3.1
30	d8	27	GLN	3.1
42	L5	148	ILE	3.1
56	N0	129	ILE	3.1
34	SR	6	VAL	3.1
18	c6	106	LYS	3.1
19	C7	72	LYS	3.1
28	d6	3	LYS	3.1
33	e1	145	HIS	3.1
34	sR	132	LYS	3.1
2	S0	164	ASN	3.1
5	S3	119	ALA	3.1
21	C9	107	ALA	3.1
40	l3	387	LEU	3.1
56	N0	85	SER	3.1
16	C4	89	THR	3.1
45	L8	90	THR	3.1
34	sR	185	GLN	3.1
42	L5	63	GLN	3.1
59	N3	3	GLY	3.1
1	2	708	C	3.1
5	S3	105	MET	3.1
13	C1	155	LYS	3.1
34	sR	94	VAL	3.1
25	D3	9	LEU	3.1
39	l2	211	HIS	3.1
22	d0	36	ASN	3.1
3	S1	30	PHE	3.1
21	c9	14	PHE	3.1
25	D3	11	SER	3.1

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Mol	Chain	Res	Type	RSRZ
22	d0	107	THR	3.1
64	N8	110	GLY	3.1
67	O1	14	ILE	3.1
79	q3	11	THR	3.1
82	p0	88	PHE	3.1
36	1	2150	G	3.1
13	C1	56	LYS	3.1
13	c1	57	LYS	3.1
35	sM	169	GLU	3.1
85	f	21	MET	3.1
1	2	1078	C	3.1
1	2	1332	C	3.1
17	c5	137	ARG	3.1
26	D4	18	LEU	3.1
36	5	1016	C	3.1
5	s3	43	PRO	3.0
34	SR	83	ALA	3.1
3	s1	117	TRP	3.0
9	S7	115	SER	3.0
10	S8	192	TYR	3.0
10	s8	109	PHE	3.0
14	c2	125	ASN	3.0
29	D7	27	GLY	3.0
85	f	150	PHE	3.0
1	2	494	U	3.0
18	C6	107	LYS	3.0
6	S4	80	THR	3.0
29	D7	45	THR	3.0
30	d8	28	VAL	3.0
1	2	1416	G	3.0
2	s0	149	LEU	3.0
18	c6	66	ARG	3.0
30	d8	33	LEU	3.0
2	S0	178	ALA	3.0
5	S3	153	ALA	3.0
14	C2	27	ALA	3.0
17	c5	101	ALA	3.0
1	2	1082	C	3.0
1	6	1794	A	3.0
3	S1	55	LYS	3.0
4	S2	84	LYS	3.0
5	S3	50	ILE	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	S8	26	LYS	3.0
18	C6	138	PHE	3.0
70	o4	42	PRO	3.0
80	c0	27	PHE	3.0
35	SM	107	ASN	3.0
76	Q0	77	ILE	3.0
24	d2	25	VAL	3.0
34	sR	178	VAL	3.0
51	M5	95	GLN	3.0
39	L2	199	THR	3.0
61	n5	119	THR	3.0
70	o4	35	VAL	3.0
19	C7	12	ALA	3.0
21	C9	21	PHE	3.0
34	SR	263	PHE	3.0
63	n7	2	ALA	3.0
73	o7	41	ALA	3.0
10	s8	30	GLY	3.0
21	C9	29	GLU	3.0
1	2	491	C	3.0
1	2	1776	A	3.0
1	6	1217	A	3.0
8	s6	88	ARG	3.0
13	C1	138	ASN	3.0
64	N8	65	GLN	3.0
19	C7	8	THR	3.0
19	c7	25	THR	3.0
15	C3	107	LYS	3.0
73	o7	32	LYS	3.0
80	c0	1	MET	3.0
28	D6	26	CYS	3.0
13	C1	66	ILE	3.0
34	sR	288	HIS	3.0
39	L2	15	ILE	3.0
6	s4	183	VAL	3.0
9	S7	140	VAL	3.0
33	E1	114	VAL	3.0
39	L2	242	ARG	3.0
51	M5	155	VAL	3.0
53	M7	131	ARG	3.0
51	M5	200	TRP	3.0
3	s1	110	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
4	s2	164	SER	3.0
29	D7	24	LEU	3.0
36	1	2947	G	3.0
39	l2	179	LEU	3.0
85	f	88	ASN	3.0
19	c7	55	THR	3.0
29	D7	52	THR	3.0
5	s3	76	ARG	3.0
24	d2	53	ILE	3.0
31	D9	40	ARG	3.0
18	C6	140	LYS	3.0
24	D2	64	GLN	3.0
77	q1	25	LYS	3.0
31	d9	8	PHE	3.0
10	s8	42	ARG	3.0
15	C3	61	THR	3.0
28	d6	49	ALA	3.0
5	s3	99	VAL	3.0
7	S5	24	VAL	3.0
25	D3	123	LYS	3.0
34	SR	57	PRO	3.0
34	SR	240	VAL	3.0
7	S5	92	ARG	3.0
15	c3	6	SER	3.0
23	D1	31	SER	3.0
24	d2	12	ASN	3.0
25	D3	27	ASN	3.0
58	N2	107	PHE	3.0
8	s6	165	GLY	3.0
16	c4	19	ILE	3.0
19	c7	59	LYS	3.0
41	L4	54	GLU	3.0
79	Q3	70	THR	3.0
80	c0	35	ILE	3.0
3	S1	101	HIS	3.0
5	s3	159	HIS	3.0
13	C1	123	VAL	3.0
18	C6	48	VAL	3.0
32	e0	5	HIS	3.0
34	sR	141	LEU	3.0
64	n8	81	LEU	3.0
18	C6	109	PHE	3.0

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Mol	Chain	Res	Type	RSRZ
4	s2	178	ILE	3.0
9	s7	49	ILE	3.0
77	Q1	19	LYS	3.0
5	s3	53	THR	3.0
19	C7	4	VAL	3.0
34	sR	168	THR	3.0
3	s1	181	LEU	3.0
40	l3	244	ARG	3.0
49	M3	8	PRO	3.0
2	S0	116	LYS	3.0
34	sR	19	TRP	3.0
36	5	2183	A	3.0
66	o0	22	LYS	3.0
74	o8	26	LYS	3.0
24	D2	86	ILE	3.0
28	d6	79	ILE	3.0
32	E0	25	GLU	3.0
44	L7	209	ASN	3.0
4	S2	96	THR	3.0
14	c2	113	ARG	3.0
18	c6	89	LEU	3.0
39	l2	3	ARG	3.0
39	l2	252	THR	3.0
6	S4	226	PHE	3.0
8	S6	145	PHE	3.0
17	c5	83	MET	3.0
31	d9	33	LYS	3.0
38	4	158	U	3.0
19	C7	20	TYR	3.0
21	c9	19	ALA	3.0
34	SR	93	ASP	3.0
64	N8	35	ALA	3.0
5	s3	73	VAL	3.0
9	S7	126	LEU	3.0
11	S9	86	LEU	3.0
24	D2	97	ARG	3.0
29	d7	30	SER	3.0
39	L2	241	ARG	3.0
60	N4	95	SER	3.0
77	q1	13	LEU	3.0
13	C1	151	LYS	3.0
18	c6	46	PHE	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
48	M1	83	GLY	3.0
36	5	1567	U	3.0
1	2	910	C	3.0
5	s3	85	VAL	3.0
13	c1	64	VAL	3.0
19	C7	34	LEU	3.0
30	d8	48	VAL	3.0
49	M3	98	ASP	3.0
51	m5	75	VAL	3.0
70	O4	22	VAL	3.0
23	D1	81	ASN	3.0
34	sR	66	HIS	3.0
34	sR	130	THR	3.0
34	SR	280	GLY	2.9
2	S0	75	ALA	2.9
22	d0	103	ILE	2.9
36	1	1565	G	2.9
39	l2	240	ALA	2.9
6	S4	7	LYS	2.9
12	C0	5	LYS	2.9
41	L4	55	LYS	2.9
59	N3	35	TYR	2.9
28	D6	27	SER	2.9
36	1	1581	C	2.9
2	s0	80	THR	2.9
4	S2	151	PRO	2.9
4	s2	208	GLU	2.9
22	D0	68	ARG	2.9
85	f	105	MET	2.9
2	S0	19	ALA	2.9
2	S0	143	VAL	2.9
4	S2	103	VAL	2.9
18	C6	28	LEU	2.9
24	d2	62	VAL	2.9
25	D3	31	LYS	2.9
28	d6	45	VAL	2.9
67	O1	51	LEU	2.9
5	s3	77	PHE	2.9
13	C1	65	SER	2.9
19	C7	67	ARG	2.9
23	D1	65	SER	2.9
24	D2	109	GLY	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
6	S4	127	LYS	2.9
18	c6	13	LYS	2.9
29	D7	43	ILE	2.9
42	L5	5	LYS	2.9
5	s3	120	TYR	2.9
18	C6	4	VAL	2.9
21	c9	10	ALA	2.9
24	D2	38	LEU	2.9
34	SR	27	ALA	2.9
36	1	884	A	2.9
11	S9	6	ARG	2.9
39	L2	176	ASP	2.9
59	N3	70	ARG	2.9
70	o4	41	ARG	2.9
75	O9	4	GLN	2.9
18	c6	126	PRO	2.9
39	L2	218	HIS	2.9
7	s5	48	PHE	2.9
51	M5	191	TRP	2.9
39	L2	183	GLY	2.9
41	L4	88	GLY	2.9
2	s0	76	ILE	2.9
22	D0	91	ILE	2.9
34	sR	69	GLN	2.9
30	D8	28	VAL	2.9
34	sR	145	LEU	2.9
41	L4	53	SER	2.9
5	S3	34	TYR	2.9
1	2	810	G	2.9
1	2	1685	G	2.9
10	S8	109	PHE	2.9
16	C4	133	ARG	2.9
28	d6	85	ARG	2.9
34	SR	135	THR	2.9
51	m5	6	TYR	2.9
36	1	2185	G	2.9
1	2	489	C	2.9
13	C1	69	LYS	2.9
4	S2	242	ILE	2.9
5	s3	39	VAL	2.9
14	c2	116	VAL	2.9
31	d9	38	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
70	O4	20	ILE	2.9
4	s2	182	PRO	2.9
5	S3	88	ALA	2.9
8	S6	144	PHE	2.9
21	c9	90	PRO	2.9
85	f	141	ALA	2.9
58	n2	15	PHE	2.9
60	N4	40	PHE	2.9
55	m9	84	THR	2.9
70	o4	36	LYS	2.9
23	d1	83	TRP	2.9
6	S4	124	GLY	2.9
4	S2	218	ILE	2.9
9	S7	62	VAL	2.9
10	s8	60	ILE	2.9
11	s9	110	GLN	2.9
19	c7	17	ILE	2.9
22	d0	99	ILE	2.9
22	d0	108	ILE	2.9
49	m3	182	ILE	2.9
67	O1	16	LEU	2.9
2	s0	60	ALA	2.9
31	d9	34	TYR	2.9
42	L5	3	PHE	2.9
51	m5	39	ALA	2.9
61	n5	123	TYR	2.9
79	q3	7	LYS	2.9
16	c4	120	PRO	2.9
49	M3	41	THR	2.9
6	S4	77	ARG	2.9
17	c5	89	MET	2.9
34	sR	240	VAL	2.9
1	2	1339	C	2.9
5	S3	102	ALA	2.9
13	c1	79	LYS	2.9
21	C9	19	ALA	2.9
29	D7	48	SER	2.9
39	L2	209	HIS	2.9
2	S0	21	ASN	2.9
36	1	896	A	2.9
36	1	2978	U	2.9
5	S3	207	THR	2.9

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Mol	Chain	Res	Type	RSRZ
35	sM	82	THR	2.9
45	L8	52	TRP	2.9
64	N8	31	GLY	2.9
77	Q1	5	TRP	2.9
3	s1	121	ILE	2.9
6	S4	101	LEU	2.9
12	C0	42	VAL	2.9
13	C1	119	VAL	2.9
23	D1	25	LYS	2.9
45	l8	245	LYS	2.9
15	C3	113	PHE	2.9
19	C7	29	GLN	2.9
41	L4	87	GLN	2.9
45	l8	196	ALA	2.9
2	s0	161	PRO	2.9
5	S3	199	PRO	2.9
6	S4	36	HIS	2.9
33	e1	93	HIS	2.9
22	D0	121	ASN	2.9
22	d0	68	ARG	2.9
1	2	1295	G	2.9
1	2	1413	U	2.9
1	6	664	U	2.9
1	6	1697	G	2.9
2	S0	197	ILE	2.9
2	s0	147	THR	2.9
19	c7	81	LYS	2.9
36	1	870	G	2.9
36	1	3085	G	2.9
39	L2	215	ASN	2.9
16	C4	39	ILE	2.9
34	SR	113	VAL	2.9
40	L3	164	THR	2.9
40	l3	47	LEU	2.9
41	L4	103	THR	2.9
49	M3	46	ILE	2.9
58	N2	80	THR	2.9
74	o8	53	THR	2.9
51	m5	3	ALA	2.9
58	N2	95	PHE	2.9
3	S1	89	ASP	2.9
28	d6	38	ARG	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
35	SM	93	ARG	2.9
7	S5	80	LYS	2.9
12	C0	53	GLY	2.9
16	C4	137	LEU	2.9
18	C6	76	SER	2.9
21	C9	125	SER	2.9
24	d2	73	GLY	2.9
35	SM	176	LYS	2.9
85	f	75	PRO	2.9
6	S4	9	LEU	2.9
58	n2	54	VAL	2.9
75	O9	44	TRP	2.9
48	M1	96	PHE	2.9
49	M3	14	PHE	2.9
58	N2	15	PHE	2.9
59	N3	115	THR	2.9
6	S4	2	ALA	2.9
7	s5	85	ALA	2.9
39	L2	229	ALA	2.9
18	C6	122	ARG	2.9
19	C7	11	ARG	2.9
39	L2	149	ARG	2.9
40	l3	240	ARG	2.9
51	M5	204	LYS	2.9
7	S5	75	GLY	2.9
18	c6	93	HIS	2.9
24	D2	67	GLY	2.9
41	L4	58	HIS	2.9
46	L9	85	GLY	2.9
70	o4	26	PRO	2.9
3	s1	91	VAL	2.8
4	s2	104	VAL	2.8
19	C7	85	VAL	2.8
24	D2	16	ASN	2.8
28	d6	39	MET	2.8
1	6	494	U	2.8
16	c4	84	ARG	2.8
36	1	818	C	2.8
36	1	1765	U	2.8
36	5	3166	C	2.8
40	L3	242	THR	2.8
5	s3	106	LYS	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	2	628	G	2.8
1	2	1654	G	2.8
7	S5	105	GLY	2.8
9	s7	153	LEU	2.8
22	D0	63	LEU	2.8
30	D8	17	GLY	2.8
36	5	1524	A	2.8
29	d7	19	HIS	2.8
41	L4	75	PRO	2.8
34	SR	121	MET	2.8
51	M5	61	ILE	2.8
59	N3	114	ILE	2.8
11	S9	3	ARG	2.8
39	L2	184	ARG	2.8
18	C6	18	ALA	2.8
18	c6	47	LYS	2.8
8	s6	170	THR	2.8
18	c6	79	TYR	2.8
39	L2	185	ALA	2.8
55	m9	12	ALA	2.8
70	O4	71	THR	2.8
13	C1	71	LEU	2.8
49	M3	51	LEU	2.8
4	S2	85	PRO	2.8
5	S3	17	PHE	2.8
6	s4	45	ILE	2.8
7	s5	83	ARG	2.8
22	D0	20	ILE	2.8
54	m8	186	VAL	2.8
22	d0	102	ARG	2.8
23	D1	22	ARG	2.8
34	sR	38	ARG	2.8
9	S7	124	LYS	2.8
14	c2	124	LYS	2.8
65	N9	25	LYS	2.8
1	6	1433	G	2.8
2	s0	106	SER	2.8
5	s3	205	ALA	2.8
9	s7	127	GLU	2.8
36	1	805	G	2.8
17	c5	104	GLN	2.8
40	L3	22	ALA	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	C6	110	THR	2.8
52	m6	62	THR	2.8
19	C7	61	ILE	2.8
23	d1	36	VAL	2.8
31	D9	43	PHE	2.8
34	SR	46	LYS	2.8
39	L2	202	VAL	2.8
54	M8	93	ILE	2.8
64	n8	46	ASP	2.8
78	Q2	50	PHE	2.8
7	s5	31	GLU	2.8
35	SM	110	TRP	2.8
19	C7	42	GLN	2.8
36	1	2145	A	2.8
1	2	722	G	2.8
2	S0	84	ARG	2.8
2	S0	103	THR	2.8
2	s0	31	VAL	2.8
4	S2	140	ARG	2.8
4	s2	205	ARG	2.8
9	s7	126	LEU	2.8
9	S7	111	LYS	2.8
19	C7	3	ARG	2.8
29	D7	44	THR	2.8
29	d7	52	THR	2.8
31	d9	17	GLY	2.8
34	SR	96	THR	2.8
39	l2	2	GLY	2.8
29	d7	2	VAL	2.8
34	sR	68	VAL	2.8
6	S4	43	PRO	2.8
42	L5	6	ASP	2.8
2	S0	180	GLU	2.8
36	5	2495	C	2.8
5	s3	79	TYR	2.8
10	S8	34	ALA	2.8
34	sR	253	ALA	2.8
3	s1	152	ARG	2.8
4	S2	220	ASN	2.8
7	S5	107	LYS	2.8
17	c5	10	ARG	2.8
34	sR	210	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
35	SM	96	ARG	2.8
2	S0	53	THR	2.8
22	D0	117	VAL	2.8
36	1	914	A	2.8
1	2	1130	G	2.8
1	2	1145	U	2.8
1	2	1199	G	2.8
8	s6	35	GLU	2.8
36	1	963	G	2.8
36	1	3069	G	2.8
41	l4	243	HIS	2.8
9	S7	173	TYR	2.8
10	S8	13	ALA	2.8
39	L2	182	ALA	2.8
29	D7	68	GLY	2.8
49	M3	19	GLN	2.8
5	s3	49	ILE	2.8
39	l2	61	VAL	2.8
2	s0	22	THR	2.8
2	s0	185	ARG	2.8
6	S4	254	ARG	2.8
15	c3	110	ASP	2.8
19	C7	126	ALA	2.8
21	C9	134	ARG	2.8
22	D0	69	LYS	2.8
23	d1	22	ARG	2.8
35	SM	172	ALA	2.8
1	2	914	G	2.8
14	c2	96	GLN	2.8
28	D6	75	VAL	2.8
36	1	363	G	2.8
70	o4	33	GLN	2.8
1	2	1482	C	2.8
7	s5	29	ILE	2.8
9	s7	136	VAL	2.8
28	d6	29	SER	2.8
2	S0	112	THR	2.8
8	S6	63	MET	2.8
11	S9	64	GLU	2.8
15	c3	61	THR	2.8
41	L4	82	THR	2.8
54	M8	151	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
1	6	661	A	2.8
2	S0	184	LEU	2.8
3	s1	141	ALA	2.8
4	S2	134	LEU	2.8
19	C7	15	ALA	2.8
29	d7	7	LEU	2.8
36	5	2143	A	2.8
61	N5	122	ALA	2.8
7	S5	150	GLY	2.8
19	C7	68	GLY	2.8
80	c0	73	VAL	2.8
18	c6	36	ILE	2.8
29	D7	37	CYS	2.8
59	N3	36	ILE	2.8
33	E1	83	LYS	2.8
35	SM	95	SER	2.8
41	L4	85	SER	2.8
1	2	1606	C	2.8
1	2	1713	G	2.8
1	6	942	G	2.8
36	1	2134	G	2.8
36	5	2950	G	2.8
49	m3	183	ARG	2.8
67	O1	34	LYS	2.8
73	O7	14	LYS	2.8
17	c5	109	PRO	2.8
18	C6	49	TYR	2.8
18	c6	117	LEU	2.8
19	c7	26	LEU	2.8
24	D2	7	LEU	2.8
29	d7	31	TYR	2.8
31	D9	36	LEU	2.8
58	n2	106	ALA	2.8
77	Q1	22	ALA	2.8
1	2	1738	U	2.8
17	C5	105	VAL	2.8
4	S2	46	LYS	2.8
5	s3	5	ILE	2.8
6	s4	162	ILE	2.8
7	S5	106	LYS	2.8
15	C3	106	ARG	2.8
28	d6	44	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
75	o9	36	ARG	2.8
80	c0	97	ARG	2.8
20	C8	73	MET	2.8
79	Q3	21	SER	2.8
11	S9	36	LEU	2.8
16	c4	85	ALA	2.8
35	SM	138	ALA	2.8
47	m0	111	LEU	2.8
73	O7	17	THR	2.8
1	2	1605	G	2.8
6	S4	208	VAL	2.8
7	S5	72	HIS	2.8
36	1	1349	G	2.8
18	C6	137	ARG	2.8
22	D0	88	LYS	2.8
22	D0	89	ARG	2.8
24	d2	57	ARG	2.8
39	l2	227	ARG	2.8
60	n4	79	GLN	2.8
5	s3	103	GLU	2.8
80	c0	33	GLU	2.8
1	6	1425	A	2.8
36	1	1535	A	2.8
58	N2	84	LEU	2.8
61	N5	24	LEU	2.8
5	s3	133	GLY	2.8
70	o4	50	ALA	2.8
1	6	1772	C	2.8
5	s3	75	LYS	2.8
8	s6	79	LYS	2.8
13	C1	87	ARG	2.8
14	c2	108	ARG	2.8
18	c6	127	LYS	2.8
24	D2	29	PRO	2.8
25	D3	23	ARG	2.8
34	SR	315	VAL	2.8
58	n2	14	THR	2.8
60	N4	21	PHE	2.8
61	n5	112	THR	2.8
36	1	1857	C	2.8
36	1	2821	C	2.8
64	N8	29	PRO	2.8

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Mol	Chain	Res	Type	RSRZ
70	O4	4	ARG	2.8
57	n1	76	ILE	2.7
19	C7	79	GLU	2.7
1	2	980	G	2.7
11	S9	24	LEU	2.7
19	C7	73	LEU	2.7
18	c6	26	LYS	2.7
41	L4	114	ASN	2.7
53	M7	174	GLY	2.7
70	o4	58	ARG	2.7
45	l8	159	PRO	2.7
47	M0	148	VAL	2.7
55	m9	93	VAL	2.7
79	Q3	18	TYR	2.7
5	s3	158	ILE	2.7
32	E0	41	THR	2.7
34	SR	71	CYS	2.7
34	sR	74	THR	2.7
19	c7	27	ASP	2.7
46	L9	190	ASP	2.7
6	S4	39	ARG	2.7
7	s5	76	ARG	2.7
10	s8	59	ARG	2.7
11	S9	60	LEU	2.7
24	d2	65	LEU	2.7
77	Q1	6	ARG	2.7
77	Q1	16	LYS	2.7
5	s3	6	SER	2.7
5	s3	17	PHE	2.7
9	s7	2	SER	2.7
10	S8	21	PHE	2.7
63	N7	95	VAL	2.7
68	o2	40	SER	2.7
80	c0	75	TYR	2.7
31	d9	28	THR	2.7
14	C2	59	LEU	2.7
15	C3	127	ARG	2.7
31	D9	33	LYS	2.7
1	2	747	C	2.7
24	D2	45	GLY	2.7
1	6	718	U	2.7
36	1	2148	U	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
41	l4	70	ALA	2.7
69	o3	51	TYR	2.7
5	s3	50	ILE	2.7
5	s3	84	ILE	2.7
2	s0	126	PRO	2.7
14	c2	132	GLU	2.7
39	l2	7	ASN	2.7
45	L8	202	GLU	2.7
36	1	2130	G	2.7
36	5	2957	G	2.7
39	l2	218	HIS	2.7
1	2	173	A	2.7
5	s3	42	THR	2.7
6	S4	191	ARG	2.7
11	S9	61	THR	2.7
14	c2	93	ASP	2.7
49	M3	23	LYS	2.7
70	O4	60	ARG	2.7
73	O7	10	LYS	2.7
36	1	1842	A	2.7
77	q1	11	ARG	2.7
82	p0	281	THR	2.7
15	c3	25	TRP	2.7
34	SR	173	GLY	2.7
1	2	1664	C	2.7
2	S0	204	TYR	2.7
24	d2	130	TYR	2.7
12	C0	6	GLU	2.7
4	s2	250	GLN	2.7
5	s3	94	ARG	2.7
24	D2	78	ARG	2.7
59	N3	7	GLN	2.7
39	L2	237	LEU	2.7
85	f	12	ASP	2.7
1	6	1702	A	2.7
2	s0	38	PHE	2.7
7	s5	33	VAL	2.7
36	5	3167	A	2.7
7	S5	91	GLU	2.7
18	c6	14	LYS	2.7
18	c6	81	ILE	2.7
31	D9	31	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
49	m3	23	LYS	2.7
69	o3	100	ILE	2.7
5	s3	163	PRO	2.7
23	d1	86	SER	2.7
24	D2	98	GLN	2.7
34	sR	60	SER	2.7
36	5	2146	C	2.7
69	o3	19	SER	2.7
23	D1	29	HIS	2.7
23	d1	75	ASN	2.7
59	N3	132	ASN	2.7
10	S8	27	PHE	2.7
22	D0	79	TRP	2.7
69	O3	72	THR	2.7
85	f	53	GLY	2.7
7	s5	70	VAL	2.7
9	s7	20	VAL	2.7
5	S3	31	GLU	2.7
5	S3	51	ARG	2.7
9	S7	107	ARG	2.7
21	C9	50	ALA	2.7
2	S0	24	LEU	2.7
4	S2	229	LEU	2.7
15	c3	62	GLN	2.7
17	c5	22	LEU	2.7
18	c6	53	LEU	2.7
69	O3	7	LEU	2.7
1	2	741	C	2.7
1	2	965	U	2.7
3	s1	142	PHE	2.7
28	d6	72	HIS	2.7
34	sR	106	HIS	2.7
4	S2	82	ASN	2.7
36	1	1495	U	2.7
11	s9	183	ALA	2.7
16	c4	126	THR	2.7
17	C5	59	LYS	2.7
28	D6	93	LYS	2.7
57	N1	62	GLY	2.7
74	O8	57	ASN	2.7
85	f	98	GLY	2.7
35	SM	101	ASP	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
5	S3	69	LEU	2.7
10	S8	90	LEU	2.7
5	s3	199	PRO	2.7
1	2	133	U	2.7
4	s2	111	VAL	2.7
7	s5	81	ARG	2.7
16	c4	128	LYS	2.7
25	d3	5	LYS	2.7
48	m1	174	LYS	2.7
60	N4	29	PHE	2.7
64	N8	111	LYS	2.7
73	o7	84	SER	2.7
9	S7	144	VAL	2.7
36	1	2400	G	2.7
38	8	22	U	2.7
51	m5	66	VAL	2.7
67	O1	23	VAL	2.7
67	O1	64	VAL	2.7
4	S2	139	ILE	2.7
5	S3	204	ASP	2.7
5	s3	47	GLU	2.7
36	1	1866	C	2.7
45	L8	117	ALA	2.7
49	M3	96	ALA	2.7
79	q3	18	TYR	2.7
8	S6	147	LEU	2.7
30	d8	56	LEU	2.7
5	s3	156	PHE	2.7
5	s3	194	LYS	2.7
51	M5	189	LYS	2.7
47	m0	204	GLY	2.7
52	m6	64	PHE	2.7
54	m8	178	ARG	2.7
5	S3	97	SER	2.7
49	M3	17	HIS	2.7
59	N3	84	SER	2.7
1	2	1095	U	2.7
2	S0	125	ASP	2.7
15	C3	25	TRP	2.7
31	d9	31	ILE	2.7
58	n2	33	TYR	2.7
1	2	976	G	2.7

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Mol	Chain	Res	Type	RSRZ
1	2	1717	G	2.7
42	L5	131	LEU	2.7
85	f	137	THR	2.7
4	s2	212	LYS	2.7
36	1	1923	C	2.7
39	L2	177	LYS	2.7
7	S5	86	GLN	2.7
13	C1	30	ARG	2.7
21	C9	63	ARG	2.7
16	C4	96	PRO	2.7
64	n8	121	VAL	2.7
23	D1	19	ALA	2.7
24	D2	96	ALA	2.7
31	D9	25	SER	2.7
49	M3	142	ALA	2.7
19	c7	35	CYS	2.7
1	2	1380	U	2.7
5	s3	170	THR	2.7
13	C1	67	ARG	2.7
14	C2	36	LEU	2.7
36	5	3277	U	2.7
59	N3	54	LEU	2.7
60	n4	83	THR	2.7
75	o9	45	ARG	2.7
80	c0	15	LEU	2.7
1	6	1792	G	2.7
2	s0	35	PRO	2.7
5	S3	138	VAL	2.7
12	C0	22	VAL	2.7
14	c2	129	GLU	2.7
19	c7	66	VAL	2.7
32	e0	59	GLY	2.7
36	5	2418	G	2.7
42	l5	295	GLY	2.7
54	M8	87	VAL	2.7
3	S1	139	ALA	2.7
6	s4	245	LYS	2.6
19	c7	32	LYS	2.6
21	C9	93	HIS	2.7
53	M7	159	LYS	2.6
58	N2	11	ILE	2.7
23	d1	62	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
25	d3	76	LEU	2.6
67	o1	16	LEU	2.6
80	c0	8	ARG	2.6
24	d2	9	ASP	2.6
1	2	1688	U	2.6
24	D2	20	THR	2.6
54	m8	6	THR	2.6
2	s0	73	VAL	2.6
3	S1	93	GLY	2.6
26	D4	120	GLY	2.6
36	1	913	A	2.6
36	1	1800	A	2.6
16	c4	79	VAL	2.6
41	l4	88	GLY	2.6
21	C9	115	GLU	2.6
1	2	1739	C	2.6
13	C1	86	ILE	2.6
41	l4	55	LYS	2.6
49	m3	8	PRO	2.6
1	6	1699	G	2.6
6	S4	92	LEU	2.6
10	s8	176	SER	2.6
11	s9	80	LEU	2.6
21	C9	55	TYR	2.6
64	n8	102	ILE	2.6
9	s7	103	SER	2.6
41	L4	64	SER	2.6
49	M3	172	LEU	2.6
45	L8	91	PHE	2.6
46	l9	186	PHE	2.6
11	S9	7	THR	2.6
18	c6	48	VAL	2.6
31	d9	15	GLY	2.6
21	C9	126	GLU	2.6
36	1	2344	U	2.6
41	l4	147	GLU	2.6
47	m0	191	LYS	2.6
62	N6	116	LYS	2.6
18	C6	45	ARG	2.6
19	C7	5	ARG	2.6
14	c2	35	ALA	2.6
15	C3	102	LEU	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	C7	39	ALA	2.6
64	n8	29	PRO	2.6
2	S0	73	VAL	2.6
18	c6	103	ASN	2.6
20	c8	73	MET	2.6
30	D8	25	VAL	2.6
34	sR	315	VAL	2.6
49	M3	74	GLY	2.6
63	n7	96	VAL	2.6
28	d6	92	ARG	2.6
2	s0	122	ILE	2.6
4	S2	53	ILE	2.6
5	S3	171	ALA	2.6
6	s4	261	LEU	2.6
16	C4	17	ALA	2.6
17	c5	85	ILE	2.6
18	C6	51	PRO	2.6
19	c7	109	LEU	2.6
39	l2	238	ILE	2.6
53	m7	130	TYR	2.6
21	C9	64	HIS	2.6
2	s0	2	SER	2.6
55	M9	23	TRP	2.6
80	c0	61	TRP	2.6
4	s2	63	VAL	2.6
7	s5	60	ASP	2.6
15	C3	119	GLU	2.6
41	l4	76	ARG	2.6
85	f	144	GLU	2.6
15	c3	69	ASN	2.6
4	S2	90	THR	2.6
7	s5	90	ILE	2.6
22	D0	67	THR	2.6
24	D2	94	LEU	2.6
27	D5	102	THR	2.6
82	p0	19	LEU	2.6
11	S9	163	PRO	2.6
21	c9	122	ARG	2.6
1	2	754	A	2.6
15	C3	13	SER	2.6
24	D2	40	VAL	2.6
34	sR	160	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
36	1	2813	A	2.6
36	5	2971	A	2.6
45	l8	121	SER	2.6
5	S3	170	THR	2.6
5	s3	21	LEU	2.6
21	C9	65	ILE	2.6
34	sR	9	LEU	2.6
34	sR	144	LEU	2.6
36	1	1761	C	2.6
39	L2	150	LEU	2.6
57	N1	42	ILE	2.6
5	s3	19	ALA	2.6
8	S6	93	LYS	2.6
8	S6	169	TYR	2.6
1	2	194	U	2.6
1	6	1390	U	2.6
15	c3	58	HIS	2.6
19	c7	47	ARG	2.6
36	1	3155	U	2.6
1	2	720	G	2.6
2	s0	143	VAL	2.6
10	S8	67	TRP	2.6
36	1	2957	G	2.6
36	5	1507	G	2.6
45	L8	58	VAL	2.6
64	n8	79	TRP	2.6
6	S4	259	GLN	2.6
3	s1	116	LYS	2.6
19	C7	113	LEU	2.6
36	5	2256	A	2.6
36	5	2969	A	2.6
39	l2	22	LEU	2.6
58	n2	41	ILE	2.6
64	N8	63	LYS	2.6
70	O4	24	LYS	2.6
80	c0	26	ASP	2.6
5	S3	87	TYR	2.6
21	c9	136	ALA	2.6
6	s4	39	ARG	2.6
16	C4	91	THR	2.6
24	D2	90	THR	2.6
30	D8	26	THR	2.6

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Mol	Chain	Res	Type	RSRZ
34	sR	90	ARG	2.6
39	L2	243	THR	2.6
65	N9	14	ARG	2.6
2	S0	168	HIS	2.6
4	S2	112	GLY	2.6
4	s2	202	GLY	2.6
58	N2	54	VAL	2.6
15	C3	139	TRP	2.6
4	s2	181	SER	2.6
19	c7	38	ILE	2.6
21	C9	78	LYS	2.6
21	c9	94	ILE	2.6
41	l4	104	LYS	2.6
58	N2	41	ILE	2.6
58	N2	89	LEU	2.6
63	N7	46	ILE	2.6
63	n7	80	LEU	2.6
16	c4	133	ARG	2.6
36	1	2950	G	2.6
59	N3	98	ASN	2.6
63	n7	136	PHE	2.6
1	6	1196	A	2.6
73	o7	20	ASN	2.6
2	S0	80	THR	2.6
15	C3	67	THR	2.6
1	2	870	C	2.6
1	6	495	C	2.6
25	D3	42	PRO	2.6
3	S1	50	LYS	2.6
75	O9	5	LYS	2.6
8	S6	68	LEU	2.6
15	C3	37	ILE	2.6
15	C3	125	LEU	2.6
21	C9	100	ILE	2.6
26	d4	18	LEU	2.6
74	o8	51	LEU	2.6
31	d9	19	ARG	2.6
2	s0	157	ASP	2.6
5	S3	149	ALA	2.6
5	s3	107	PHE	2.6
7	s5	69	PHE	2.6
8	s6	144	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
29	D7	6	ASP	2.6
41	L4	70	ALA	2.6
42	L5	2	ALA	2.6
73	O7	15	SER	2.6
2	s0	186	GLY	2.6
4	S2	223	GLY	2.6
4	s2	201	ASN	2.6
13	c1	113	PRO	2.6
15	c3	10	GLY	2.6
18	C6	131	GLY	2.6
22	d0	72	ASN	2.6
22	D0	55	PRO	2.6
34	sR	300	THR	2.6
6	S4	48	LEU	2.6
8	s6	1	MET	2.6
36	1	1588	A	2.6
36	5	1850	A	2.6
1	6	1708	U	2.6
6	s4	18	TRP	2.6
14	C2	89	ILE	2.6
34	sR	188	ILE	2.6
45	l8	152	LEU	2.6
79	Q3	83	ILE	2.6
4	s2	199	GLN	2.6
6	S4	182	TYR	2.6
8	S6	138	ALA	2.6
15	c3	26	PHE	2.6
30	d8	59	SER	2.6
34	SR	296	ALA	2.6
39	L2	59	ALA	2.6
8	S6	105	ASP	2.6
5	S3	164	VAL	2.6
11	S9	37	LYS	2.6
21	C9	69	LYS	2.6
21	c9	37	VAL	2.6
34	sR	107	LYS	2.6
51	M5	195	ASN	2.6
53	m7	137	ASN	2.6
54	M8	2	GLY	2.6
6	S4	142	HIS	2.6
24	d2	41	MET	2.6
28	D6	10	ARG	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
40	L3	369	ARG	2.6
45	l8	238	LEU	2.6
51	M5	199	LEU	2.6
51	m5	22	LEU	2.6
70	o4	25	THR	2.6
10	s8	67	TRP	2.6
21	C9	94	ILE	2.6
40	L3	252	ILE	2.6
42	l5	247	ILE	2.6
47	M0	166	ILE	2.6
1	2	1610	G	2.6
1	2	1333	C	2.6
1	6	1634	C	2.6
2	s0	30	GLN	2.6
36	5	817	A	2.6
36	1	1563	C	2.6
41	l4	26	PHE	2.6
5	S3	212	LYS	2.6
8	s6	171	LYS	2.6
11	S9	19	TYR	2.6
39	l2	67	TYR	2.6
82	p0	291	ALA	2.6
22	D0	76	SER	2.6
24	D2	33	VAL	2.6
49	m3	153	ASP	2.6
64	N8	51	GLY	2.6
28	d6	5	ARG	2.6
77	Q1	11	ARG	2.6
3	s1	47	LEU	2.6
4	S2	226	THR	2.6
13	c1	92	HIS	2.6
24	D2	56	HIS	2.6
70	o4	34	HIS	2.6
3	s1	100	PHE	2.5
6	s4	133	LYS	2.5
14	C2	126	TRP	2.5
48	M1	102	PHE	2.5
14	c2	114	LYS	2.5
18	C6	127	LYS	2.5
25	d3	3	LYS	2.5
34	sR	228	LYS	2.5
11	S9	27	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
1	2	627	C	2.5
10	S8	56	ARG	2.5
18	c6	7	VAL	2.5
23	D1	59	VAL	2.5
36	1	830	A	2.5
36	1	919	U	2.5
36	1	2398	A	2.5
36	5	915	A	2.5
36	5	1492	G	2.5
39	L2	175	VAL	2.5
40	L3	336	VAL	2.5
61	N5	107	VAL	2.5
63	N7	96	VAL	2.5
57	N1	85	LEU	2.5
11	s9	147	MET	2.5
13	C1	54	ILE	2.5
17	c5	84	ILE	2.5
18	C6	5	PRO	2.5
21	C9	101	ASN	2.5
24	d2	29	PRO	2.5
4	s2	99	LYS	2.5
6	S4	71	LYS	2.5
6	s4	109	PHE	2.5
25	D3	10	ASN	2.5
25	D3	59	ILE	2.5
47	m0	27	PRO	2.5
45	L8	92	LYS	2.5
78	q2	106	PHE	2.5
8	S6	88	ARG	2.5
13	C1	89	ALA	2.5
23	D1	54	ALA	2.5
73	o7	11	ARG	2.5
49	M3	138	VAL	2.5
1	2	993	A	2.5
1	2	1721	A	2.5
14	C2	81	ASP	2.5
20	c8	18	LEU	2.5
27	d5	42	LEU	2.5
29	D7	21	LEU	2.5
60	N4	39	LEU	2.5
67	O1	104	LEU	2.5
12	C0	59	PHE	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	C6	47	LYS	2.5
36	1	364	G	2.5
80	c0	4	PRO	2.5
24	D2	80	ASN	2.5
51	M5	112	ASN	2.5
2	S0	132	ALA	2.5
21	C9	59	ALA	2.5
28	d6	23	CYS	2.5
29	D7	50	ALA	2.5
45	l8	154	ALA	2.5
5	s3	122	VAL	2.5
33	E1	84	VAL	2.5
69	o3	52	VAL	2.5
21	c9	84	LYS	2.5
35	sM	170	LYS	2.5
1	2	174	U	2.5
6	S4	90	ILE	2.5
17	c5	51	SER	2.5
28	D6	30	ILE	2.5
59	N3	53	SER	2.5
34	sR	102	ARG	2.5
36	1	47	C	2.5
36	1	1566	A	2.5
36	1	2149	A	2.5
36	5	1839	A	2.5
36	5	2812	C	2.5
3	s1	133	TYR	2.5
5	S3	205	ALA	2.5
39	l2	215	ASN	2.5
59	n3	38	ALA	2.5
67	o1	58	ALA	2.5
1	2	1316	G	2.5
4	S2	160	GLY	2.5
8	S6	165	GLY	2.5
8	s6	134	GLY	2.5
10	s8	102	VAL	2.5
36	5	1560	G	2.5
67	o1	60	TRP	2.5
73	O7	4	GLY	2.5
22	d0	61	LYS	2.5
23	D1	8	LEU	2.5
25	d3	112	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
45	l8	122	LYS	2.5
16	C4	136	ARG	2.5
63	N7	65	ARG	2.5
9	s7	63	PRO	2.5
15	C3	23	PRO	2.5
34	sR	291	SER	2.5
49	M3	48	PRO	2.5
18	C6	93	HIS	2.5
31	d9	6	VAL	2.5
34	SR	2	ALA	2.5
35	sM	168	ALA	2.5
34	SR	21	THR	2.5
34	sR	258	THR	2.5
36	1	931	C	2.5
36	1	1667	A	2.5
39	l2	49	VAL	2.5
41	l4	239	ALA	2.5
19	C7	23	LYS	2.5
21	C9	75	LYS	2.5
42	L5	34	LYS	2.5
2	S0	87	LEU	2.5
72	o6	2	THR	2.5
75	o9	47	THR	2.5
5	s3	24	PHE	2.5
28	D6	36	ILE	2.5
36	5	805	G	2.5
36	5	1655	G	2.5
24	D2	9	ASP	2.5
34	SR	3	SER	2.5
1	2	1414	U	2.5
2	S0	88	LYS	2.5
6	S4	103	TYR	2.5
8	s6	164	LYS	2.5
30	d8	45	LYS	2.5
36	1	1436	U	2.5
36	1	2953	U	2.5
39	L2	181	LYS	2.5
85	f	116	PRO	2.5
21	C9	4	VAL	2.5
39	L2	248	GLY	2.5
40	L3	250	ALA	2.5
47	m0	188	GLY	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	S2	154	LEU	2.5
11	S9	30	LEU	2.5
73	o7	33	THR	2.5
6	S4	205	PHE	2.5
67	O1	36	ILE	2.5
40	L3	251	CYS	2.5
21	C9	112	GLY	2.5
31	d9	51	GLY	2.5
79	q3	14	TYR	2.5
3	S1	96	LEU	2.5
15	c3	106	ARG	2.5
28	D6	72	HIS	2.5
31	D9	44	ARG	2.5
36	1	939	U	2.5
58	n2	79	LEU	2.5
32	E0	51	ASN	2.5
4	s2	206	THR	2.5
40	l3	230	THR	2.5
64	N8	112	ILE	2.5
4	S2	65	GLU	2.5
24	d2	51	GLU	2.5
36	5	1792	C	2.5
2	S0	119	ARG	2.5
5	s3	27	ARG	2.5
8	S6	62	PRO	2.5
16	c4	42	VAL	2.5
21	C9	88	VAL	2.5
11	s9	36	LEU	2.5
34	sR	155	ARG	2.5
74	o8	34	ALA	2.5
13	C1	92	HIS	2.5
1	2	794	U	2.5
8	S6	61	PHE	2.5
2	s0	124	THR	2.5
16	c4	89	THR	2.5
18	c6	107	LYS	2.5
28	D6	41	ILE	2.5
85	f	104	ASN	2.5
20	C8	141	THR	2.5
58	N2	64	THR	2.5
73	O7	33	THR	2.5
10	s8	195	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
6	s4	9	LEU	2.5
1	2	312	A	2.5
8	S6	104	PRO	2.5
20	C8	146	ALA	2.5
24	d2	10	ALA	2.5
34	SR	73	LEU	2.5
34	SR	104	VAL	2.5
34	SR	252	LEU	2.5
41	l4	89	ALA	2.5
55	M9	54	ALA	2.5
64	n8	109	TYR	2.5
13	C1	77	SER	2.5
19	c7	105	GLN	2.5
25	d3	116	ASP	2.5
36	5	2145	A	2.5
21	C9	54	PHE	2.5
64	N8	3	SER	2.5
21	C9	111	ILE	2.5
42	L5	88	ILE	2.5
6	S4	3	ARG	2.5
7	s5	156	ARG	2.5
18	c6	17	THR	2.5
20	C8	40	ARG	2.5
22	D0	40	ASN	2.5
1	2	1032	G	2.5
1	2	1386	G	2.5
2	s0	57	LEU	2.5
5	s3	112	GLY	2.5
7	S5	217	LEU	2.5
13	C1	100	TYR	2.5
22	d0	119	ALA	2.5
28	d6	84	VAL	2.5
36	1	2165	G	2.5
36	1	2977	G	2.5
36	5	916	G	2.5
47	m0	114	GLY	2.5
53	M7	132	ALA	2.5
61	n5	90	ALA	2.5
5	S3	194	LYS	2.5
7	s5	43	PHE	2.5
10	S8	160	PHE	2.5
12	C0	16	PHE	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
13	C1	26	LYS	2.5
13	c1	141	LYS	2.5
21	C9	49	ASP	2.5
34	sR	53	LYS	2.5
55	M9	60	LYS	2.5
82	p0	197	PHE	2.5
1	2	1027	A	2.5
12	C0	51	SER	2.5
15	C3	116	ILE	2.5
36	1	877	C	2.5
43	l6	146	ILE	2.5
80	c0	70	GLU	2.5
9	S7	99	LEU	2.5
12	C0	68	LEU	2.5
23	D1	72	LEU	2.5
32	E0	14	VAL	2.5
29	d7	16	ALA	2.5
70	o4	51	LEU	2.5
30	D8	6	PRO	2.5
41	L4	90	PHE	2.5
1	2	1351	G	2.5
6	S4	11	ARG	2.5
8	s6	158	ILE	2.5
21	c9	86	ARG	2.5
33	E1	91	ILE	2.5
70	o4	16	ARG	2.5
70	o4	54	ILE	2.5
40	L3	45	SER	2.5
55	M9	59	SER	2.5
1	6	1037	C	2.4
1	2	1331	A	2.4
2	S0	120	LEU	2.4
2	s0	39	ASN	2.4
6	s4	101	LEU	2.4
11	S9	93	LEU	2.4
14	C2	133	LEU	2.4
17	c5	11	VAL	2.4
26	D4	117	LYS	2.4
41	l4	94	CYS	2.4
51	m5	90	ASN	2.4
75	O9	18	LYS	2.4
10	S8	83	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
15	c3	18	TYR	2.4
22	d0	104	THR	2.4
32	E0	40	TYR	2.4
75	o9	43	ASN	2.4
41	l4	56	ALA	2.4
13	C1	42	PHE	2.4
18	c6	109	PHE	2.4
8	S6	65	GLN	2.4
8	S6	113	ILE	2.4
10	S8	38	ILE	2.4
25	D3	19	ARG	2.4
34	SR	122	ILE	2.4
70	o4	8	ARG	2.4
73	O7	24	ARG	2.4
11	S9	115	LYS	2.4
14	C2	135	MET	2.4
23	d1	56	SER	2.4
34	SR	16	HIS	2.4
1	2	488	G	2.4
13	C1	125	VAL	2.4
28	d6	28	LYS	2.4
13	c1	147	GLY	2.4
36	1	800	G	2.4
64	N8	144	VAL	2.4
66	O0	14	LEU	2.4
79	q3	66	GLY	2.4
1	2	1527	C	2.4
6	S4	27	TYR	2.4
36	5	873	C	2.4
2	S0	96	THR	2.4
27	D5	58	ARG	2.4
35	SM	108	GLN	2.4
36	5	2508	U	2.4
36	5	2981	U	2.4
3	s1	84	ILE	2.4
8	s6	161	GLU	2.4
15	c3	37	ILE	2.4
44	L7	25	GLN	2.4
2	s0	148	ASP	2.4
10	S8	199	LYS	2.4
25	D3	44	GLY	2.4
29	d7	48	SER	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	SR	202	LEU	2.4
40	L3	243	HIS	2.4
51	M5	72	LYS	2.4
9	S7	93	LEU	2.4
12	C0	40	LEU	2.4
51	m5	37	HIS	2.4
41	l4	68	GLY	2.4
49	m3	4	SER	2.4
58	n2	89	LEU	2.4
67	O1	17	HIS	2.4
15	c3	59	GLY	2.4
69	o3	89	LEU	2.4
25	D3	107	PHE	2.4
32	E0	35	TYR	2.4
3	s1	148	ASN	2.4
5	S3	89	GLU	2.4
1	2	261	U	2.4
1	2	1002	G	2.4
7	S5	222	LYS	2.4
7	s5	121	ILE	2.4
10	s8	76	THR	2.4
16	c4	119	THR	2.4
36	1	2922	G	2.4
36	1	926	A	2.4
36	5	2159	U	2.4
10	s8	193	LEU	2.4
34	SR	175	ASP	2.4
34	sR	6	VAL	2.4
34	sR	225	LEU	2.4
39	l2	58	LEU	2.4
28	D6	22	ARG	2.4
40	l3	243	HIS	2.4
75	o9	44	TRP	2.4
79	q3	50	GLY	2.4
29	d7	58	SER	2.4
34	SR	279	ALA	2.4
34	sR	204	ALA	2.4
61	N5	32	PHE	2.4
73	o7	8	PHE	2.4
80	c0	63	TYR	2.4
2	S0	63	ILE	2.4
5	s3	31	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
22	D0	74	GLU	2.4
24	D2	87	GLU	2.4
51	m5	61	ILE	2.4
29	D7	28	PRO	2.4
6	S4	30	ARG	2.4
14	C2	78	LEU	2.4
24	d2	33	VAL	2.4
36	1	2192	C	2.4
33	e1	112	GLY	2.4
36	5	1588	A	2.4
40	L3	330	GLY	2.4
45	l8	157	VAL	2.4
47	M0	149	VAL	2.4
1	2	1102	G	2.4
1	6	1774	G	2.4
54	m8	154	GLY	2.4
12	C0	44	LYS	2.4
39	l2	14	SER	2.4
41	l4	64	SER	2.4
64	n8	16	SER	2.4
6	S4	64	ILE	2.4
8	S6	91	GLU	2.4
41	l4	63	GLU	2.4
79	q3	10	ILE	2.4
19	C7	123	ASN	2.4
10	S8	46	VAL	2.4
15	C3	137	PRO	2.4
19	c7	30	THR	2.4
34	sR	57	PRO	2.4
40	L3	48	GLY	2.4
41	L4	52	VAL	2.4
48	M1	54	VAL	2.4
64	N8	98	THR	2.4
1	2	653	C	2.4
1	2	909	U	2.4
35	SM	27	LYS	2.4
63	N7	92	PHE	2.4
21	c9	91	TYR	2.4
41	L4	62	ALA	2.4
75	o9	39	ALA	2.4
1	6	1488	G	2.4
11	S9	156	ILE	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	5	1875	G	2.4
8	S6	85	ARG	2.4
20	C8	145	ARG	2.4
5	S3	165	ASN	2.4
53	M7	95	LEU	2.4
5	S3	7	LYS	2.4
18	c6	73	GLY	2.4
58	N2	87	ASN	2.4
64	n8	72	VAL	2.4
39	l2	198	LYS	2.4
85	f	67	GLY	2.4
41	L4	100	PHE	2.4
51	m5	130	PHE	2.4
10	S8	182	TYR	2.4
75	O9	16	ALA	2.4
79	q3	52	ALA	2.4
15	c3	66	ILE	2.4
21	C9	99	SER	2.4
15	c3	91	LEU	2.4
34	SR	237	GLN	2.4
36	1	1571	A	2.4
34	sR	154	VAL	2.4
48	M1	160	VAL	2.4
49	M3	170	LEU	2.4
35	sM	40	PRO	2.4
36	5	1845	G	2.4
39	l2	204	MET	2.4
54	M8	150	VAL	2.4
62	n6	8	VAL	2.4
74	o8	45	VAL	2.4
29	d7	38	PRO	2.4
10	S8	116	HIS	2.4
18	C6	125	GLU	2.4
21	C9	33	TYR	2.4
39	l2	143	GLU	2.4
47	m0	56	GLU	2.4
70	o4	62	TYR	2.4
82	p0	293	GLU	2.4
12	C0	61	TRP	2.4
16	c4	112	ILE	2.4
1	2	1317	C	2.4
1	2	1518	C	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	S1	45	LYS	2.4
3	S1	48	VAL	2.4
5	s3	74	GLN	2.4
2	s0	81	PHE	2.4
3	s1	233	GLY	2.4
14	C2	60	VAL	2.4
35	SM	17	VAL	2.4
59	N3	34	LEU	2.4
67	o1	61	LYS	2.4
39	L2	53	GLY	2.4
24	d2	16	ASN	2.4
28	D6	67	THR	2.4
34	sR	31	ASN	2.4
36	5	1842	A	2.4
36	5	2941	A	2.4
4	S2	222	TYR	2.4
45	L8	113	ALA	2.4
54	m8	168	THR	2.4
4	S2	35	TRP	2.4
5	S3	93	ASP	2.4
41	l4	74	ILE	2.4
66	o0	100	ILE	2.4
67	O1	59	ILE	2.4
85	f	97	ASP	2.4
9	S7	143	LEU	2.4
46	L9	191	LEU	2.4
58	n2	76	LEU	2.4
62	n6	57	LEU	2.4
3	S1	138	PHE	2.4
4	S2	219	GLY	2.4
10	S8	181	GLY	2.4
23	D1	39	VAL	2.4
41	L4	59	GLN	2.4
41	L4	91	GLY	2.4
2	s0	127	ARG	2.4
5	S3	27	ARG	2.4
16	c4	132	ARG	2.4
2	s0	163	ASN	2.4
24	D2	77	PRO	2.4
7	s5	172	ILE	2.4
13	C1	83	THR	2.4
13	C1	124	THR	2.4

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Mol	Chain	Res	Type	RSRZ
19	c7	23	LYS	2.4
34	SR	130	THR	2.4
36	1	920	A	2.4
39	l2	41	ILE	2.4
40	L3	337	THR	2.4
33	E1	93	HIS	2.4
56	N0	88	HIS	2.4
70	o4	20	ILE	2.4
3	S1	47	LEU	2.4
17	C5	65	LEU	2.4
21	C9	105	LEU	2.4
55	M9	138	LEU	2.4
79	Q3	86	LEU	2.4
5	s3	41	VAL	2.4
25	d3	17	VAL	2.4
1	6	936	G	2.4
1	6	959	U	2.4
36	5	2137	U	2.4
36	5	2980	U	2.4
52	m6	69	GLY	2.4
17	c5	136	SER	2.4
10	S8	24	LYS	2.4
19	C7	51	ALA	2.4
21	C9	2	PRO	2.4
22	d0	59	PRO	2.4
35	SM	90	ALA	2.4
39	L2	178	PRO	2.4
45	l8	161	GLU	2.4
80	c0	71	GLU	2.4
1	2	1128	C	2.4
1	6	1090	C	2.4
36	1	2507	C	2.4
7	S5	25	LEU	2.4
17	c5	116	LEU	2.4
19	c7	46	LEU	2.4
42	L5	103	LEU	2.4
54	M8	88	THR	2.4
1	2	1425	A	2.3
4	S2	163	GLY	2.3
13	C1	68	GLY	2.3
21	C9	9	VAL	2.3
27	D5	73	GLY	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
35	SM	92	ASP	2.3
36	5	914	A	2.3
46	l9	190	ASP	2.3
49	M3	174	ARG	2.3
62	N6	124	GLY	2.3
64	n8	26	ARG	2.3
69	o3	65	ARG	2.3
29	d7	26	GLN	2.3
1	6	1286	U	2.3
7	s5	41	LYS	2.3
18	C6	30	LYS	2.3
19	C7	76	GLU	2.3
58	N2	81	LYS	2.3
63	n7	21	LYS	2.3
2	s0	132	ALA	2.3
8	S6	86	PRO	2.3
10	S8	16	ALA	2.3
15	c3	84	ILE	2.3
16	c4	17	ALA	2.3
19	C7	86	PRO	2.3
24	d2	47	ILE	2.3
34	SR	136	ILE	2.3
36	5	2155	G	2.3
52	m6	61	ALA	2.3
28	D6	94	ASN	2.3
80	c0	40	LEU	2.3
1	2	1625	C	2.3
10	s8	48	THR	2.3
13	C1	75	VAL	2.3
13	c1	140	VAL	2.3
39	l2	209	HIS	2.3
41	l4	207	VAL	2.3
55	M9	63	THR	2.3
75	O9	42	ARG	2.3
6	S4	206	ASP	2.3
70	o4	7	PHE	2.3
10	S8	54	LYS	2.3
1	2	621	A	2.3
1	2	1583	A	2.3
36	1	2147	A	2.3
2	S0	78	SER	2.3
2	s0	204	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
5	S3	160	SER	2.3
4	S2	190	LEU	2.3
6	s4	84	ALA	2.3
15	c3	7	ALA	2.3
34	sR	152	SER	2.3
36	5	2978	U	2.3
73	o7	15	SER	2.3
8	S6	31	ARG	2.3
16	c4	57	PRO	2.3
20	C8	15	LEU	2.3
11	s9	10	LYS	2.3
13	c1	68	GLY	2.3
13	c1	119	VAL	2.3
14	c2	38	HIS	2.3
18	c6	22	VAL	2.3
28	d6	94	ASN	2.3
30	d8	46	GLY	2.3
31	D9	23	VAL	2.3
45	L8	94	PHE	2.3
58	n2	17	VAL	2.3
33	e1	125	THR	2.3
34	SR	88	THR	2.3
34	sR	137	LYS	2.3
36	5	1833	G	2.3
59	N3	8	GLY	2.3
64	N8	74	ASN	2.3
67	O1	26	LYS	2.3
73	o7	2	GLY	2.3
75	o9	50	ASN	2.3
5	S3	154	ASP	2.3
39	l2	47	GLN	2.3
49	M3	164	GLU	2.3
1	2	1116	A	2.3
5	S3	49	ILE	2.3
13	c1	94	ILE	2.3
21	c9	132	LEU	2.3
24	D2	30	SER	2.3
35	sM	162	ALA	2.3
54	m8	139	ILE	2.3
58	N2	105	LEU	2.3
67	O1	20	LEU	2.3
73	O7	36	SER	2.3

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Mol	Chain	Res	Type	RSRZ
3	s1	150	VAL	2.3
5	S3	136	VAL	2.3
5	s3	25	PHE	2.3
11	S9	122	VAL	2.3
25	d3	14	LYS	2.3
35	SM	83	LYS	2.3
36	5	2493	U	2.3
40	L3	370	PHE	2.3
49	m3	131	LYS	2.3
63	n7	23	VAL	2.3
68	o2	37	GLY	2.3
10	s8	61	GLU	2.3
31	D9	4	GLU	2.3
68	O2	32	TRP	2.3
39	l2	233	GLN	2.3
80	c0	92	THR	2.3
39	L2	190	ARG	2.3
39	l2	9	ARG	2.3
39	l2	241	ARG	2.3
35	sM	128	ALA	2.3
36	5	360	G	2.3
54	m8	151	ARG	2.3
2	s0	26	ALA	2.3
21	C9	22	LEU	2.3
44	L7	136	TYR	2.3
8	S6	36	VAL	2.3
9	s7	64	VAL	2.3
39	l2	207	VAL	2.3
42	l5	55	PHE	2.3
46	L9	43	VAL	2.3
70	o4	55	SER	2.3
77	Q1	8	LYS	2.3
1	2	959	U	2.3
1	2	1025	A	2.3
36	1	1764	U	2.3
36	1	2142	A	2.3
36	1	2956	A	2.3
36	5	2542	U	2.3
2	S0	109	ASN	2.3
12	C0	67	THR	2.3
30	D8	29	ARG	2.3
41	L4	110	ASN	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
48	m1	173	ASP	2.3
4	s2	183	ALA	2.3
8	S6	83	CYS	2.3
49	M3	132	ALA	2.3
52	m6	98	ALA	2.3
58	N2	76	LEU	2.3
59	N3	49	LEU	2.3
59	N3	64	LYS	2.3
61	N5	60	TYR	2.3
1	2	724	C	2.3
1	6	1399	C	2.3
1	6	1624	C	2.3
26	D4	70	VAL	2.3
1	2	1521	G	2.3
1	2	1607	G	2.3
1	6	1616	G	2.3
13	C1	2	SER	2.3
22	d0	111	GLY	2.3
52	m6	80	PHE	2.3
73	O7	35	SER	2.3
75	o9	24	PRO	2.3
30	D8	49	ARG	2.3
1	2	169	A	2.3
4	s2	144	TRP	2.3
36	1	48	A	2.3
36	1	929	A	2.3
36	1	1575	A	2.3
80	c0	32	HIS	2.3
3	s1	86	LEU	2.3
4	S2	158	THR	2.3
10	s8	94	ASN	2.3
15	c3	36	GLN	2.3
61	N5	100	LYS	2.3
75	O9	50	ASN	2.3
5	s3	149	ALA	2.3
20	C8	125	ILE	2.3
34	SR	244	ALA	2.3
2	S0	50	VAL	2.3
2	s0	50	VAL	2.3
15	c3	52	VAL	2.3
28	D6	24	VAL	2.3
32	e0	44	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
42	L5	144	VAL	2.3
9	s7	104	ARG	2.3
15	c3	120	SER	2.3
18	C6	34	SER	2.3
20	c8	76	PRO	2.3
54	m8	156	GLY	2.3
28	D6	7	SER	2.3
27	d5	46	LYS	2.3
36	1	1017	C	2.3
67	O1	24	SER	2.3
6	s4	22	LYS	2.3
49	M3	31	LYS	2.3
1	2	1035	G	2.3
1	2	1362	U	2.3
2	S0	33	GLN	2.3
2	S0	54	TRP	2.3
3	s1	228	LEU	2.3
11	S9	110	GLN	2.3
36	1	2955	U	2.3
11	S9	56	ALA	2.3
17	c5	121	ILE	2.3
19	C7	55	THR	2.3
40	L3	49	TYR	2.3
67	o1	75	ILE	2.3
42	L5	53	VAL	2.3
47	M0	50	VAL	2.3
52	M6	80	PHE	2.3
69	o3	9	VAL	2.3
2	S0	179	ARG	2.3
40	l3	19	ARG	2.3
60	N4	24	GLY	2.3
2	s0	114	SER	2.3
9	S7	138	LYS	2.3
10	S8	45	SER	2.3
15	c3	109	LYS	2.3
32	E0	27	PRO	2.3
65	n9	24	PRO	2.3
16	C4	46	MET	2.3
40	L3	323	MET	2.3
1	6	1773	C	2.3
4	S2	225	LEU	2.3
12	C0	46	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
10	s8	169	ILE	2.3
11	s9	156	ILE	2.3
21	c9	23	GLN	2.3
29	D7	33	LEU	2.3
40	L3	328	ILE	2.3
77	q1	5	TRP	2.3
1	2	968	U	2.3
4	S2	86	VAL	2.3
6	S4	109	PHE	2.3
15	C3	108	ASP	2.3
22	D0	31	VAL	2.3
34	SR	241	PHE	2.3
36	5	909	G	2.3
39	l2	201	GLY	2.3
39	l2	247	ARG	2.3
40	L3	4	ARG	2.3
41	L4	92	ASN	2.3
79	Q3	69	TYR	2.3
24	D2	105	THR	2.3
67	o1	31	ARG	2.3
69	o3	54	ARG	2.3
80	c0	77	ARG	2.3
1	2	175	G	2.3
1	2	505	A	2.3
1	2	1484	G	2.3
1	6	1789	G	2.3
5	S3	135	GLU	2.3
61	n5	92	LYS	2.3
17	c5	87	PRO	2.3
6	S4	164	LEU	2.3
23	D1	61	SER	2.3
74	O8	51	LEU	2.3
4	S2	233	GLN	2.3
5	S3	179	GLN	2.3
42	l5	294	ALA	2.3
48	M1	55	ARG	2.3
55	m9	151	ARG	2.3
59	N3	13	ILE	2.3
9	S7	61	PHE	2.3
23	d1	58	TYR	2.3
24	D2	8	ALA	2.3
33	e1	102	VAL	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
35	sM	131	ALA	2.3
80	c0	45	ALA	2.3
82	p0	283	ALA	2.3
1	2	376	C	2.3
2	s0	167	LYS	2.3
34	SR	74	THR	2.3
34	sR	105	GLY	2.3
36	1	1907	C	2.3
14	C2	130	THR	2.3
36	1	3351	U	2.3
36	5	1764	U	2.3
58	N2	91	ASP	2.3
58	n2	16	THR	2.3
65	N9	6	ASN	2.3
67	o1	18	LYS	2.3
15	C3	103	GLU	2.3
15	c3	17	PRO	2.3
1	2	400	A	2.3
1	6	1466	G	2.3
8	s6	148	SER	2.3
5	S3	52	ALA	2.3
6	S4	99	PHE	2.3
12	C0	62	GLN	2.3
55	M9	50	ILE	2.3
55	M9	74	ARG	2.3
71	o5	118	ILE	2.3
73	O7	21	ARG	2.3
8	S6	223	LYS	2.3
22	D0	116	VAL	2.3
29	d7	13	ALA	2.3
40	L3	51	ALA	2.3
47	m0	11	TYR	2.3
51	m5	77	LYS	2.3
69	o3	66	VAL	2.3
70	O4	39	ALA	2.3
16	C4	131	GLY	2.3
26	D4	122	GLY	2.3
1	2	1684	U	2.3
36	1	2245	C	2.3
36	1	2405	C	2.3
36	5	823	C	2.3
36	5	1579	C	2.3

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Mol	Chain	Res	Type	RSRZ
22	d0	89	ARG	2.3
54	m8	140	LEU	2.3
15	C3	109	LYS	2.3
63	n7	92	PHE	2.3
73	o7	3	LYS	2.3
1	2	807	A	2.3
2	S0	169	SER	2.3
10	s8	39	GLY	2.2
10	s8	100	ALA	2.3
25	d3	119	GLY	2.2
28	d6	40	ALA	2.3
29	d7	53	ALA	2.3
39	L2	18	SER	2.3
66	O0	81	VAL	2.3
70	O4	73	SER	2.3
80	c0	30	ALA	2.3
82	p0	294	ALA	2.3
36	1	2952	G	2.2
1	2	504	U	2.2
6	S4	56	LEU	2.2
15	c3	117	LEU	2.2
16	c4	117	ASP	2.2
19	C7	36	ASP	2.2
22	D0	44	ASN	2.2
25	D3	90	ASP	2.2
28	d6	91	ASP	2.2
29	D7	17	ARG	2.2
25	d3	114	LYS	2.2
36	1	1782	U	2.2
36	1	2314	U	2.2
64	n8	73	LEU	2.2
1	2	1591	C	2.2
2	S0	4	PRO	2.2
9	s7	185	ILE	2.2
21	c9	27	LYS	2.2
21	c9	69	LYS	2.2
11	S9	148	VAL	2.2
15	C3	26	PHE	2.2
24	d2	34	ILE	2.2
60	n4	90	ILE	2.2
69	o3	57	LYS	2.2
25	D3	38	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
75	o9	9	ILE	2.2
5	s3	206	VAL	2.2
8	s6	97	VAL	2.2
19	c7	62	GLN	2.2
45	L8	197	VAL	2.2
45	l8	203	VAL	2.2
35	SM	135	ALA	2.2
52	m6	63	ALA	2.2
36	5	806	A	2.2
53	m7	23	ARG	2.2
4	S2	240	LEU	2.2
26	D4	121	THR	2.2
29	d7	23	THR	2.2
34	sR	39	ASP	2.2
34	sR	117	LYS	2.2
70	o4	24	LYS	2.2
76	Q0	85	LEU	2.2
79	Q3	29	LEU	2.2
13	C1	150	ASN	2.2
11	S9	77	ILE	2.2
11	s9	104	PHE	2.2
14	c2	23	THR	2.2
36	1	909	G	2.2
36	1	1547	G	2.2
36	1	1845	G	2.2
36	5	1514	G	2.2
70	o4	6	THR	2.2
80	c0	36	ASP	2.2
85	f	122	ASP	2.2
9	S7	63	PRO	2.2
13	C1	140	VAL	2.2
34	SR	192	PHE	2.2
40	l3	260	VAL	2.2
54	m8	153	PHE	2.2
54	m8	172	PHE	2.2
63	N7	82	PRO	2.2
1	6	1379	C	2.2
18	c6	16	ALA	2.2
21	C9	120	GLY	2.2
25	D3	49	ALA	2.2
29	d7	68	GLY	2.2
36	5	1846	C	2.2

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Mol	Chain	Res	Type	RSRZ
44	L7	135	ALA	2.2
50	M4	138	ALA	2.2
51	m5	62	TYR	2.2
19	C7	80	ARG	2.2
21	C9	5	SER	2.2
23	D1	71	ARG	2.2
24	d2	58	SER	2.2
28	D6	95	ARG	2.2
67	O1	60	TRP	2.2
69	o3	82	ARG	2.2
16	c4	102	LEU	2.2
40	L3	237	LYS	2.2
45	L8	46	LEU	2.2
55	M9	53	LYS	2.2
60	N4	54	LEU	2.2
1	2	1797	A	2.2
1	6	713	A	2.2
1	6	1027	A	2.2
19	c7	58	MET	2.2
7	S5	29	ILE	2.2
23	D1	66	ASP	2.2
82	p0	86	PHE	2.2
1	2	337	G	2.2
1	2	1115	U	2.2
1	6	867	G	2.2
1	6	1155	G	2.2
2	S0	36	TYR	2.2
2	S0	65	ALA	2.2
7	s5	39	GLU	2.2
7	s5	127	GLN	2.2
24	D2	57	ARG	2.2
34	SR	293	ALA	2.2
36	1	2973	G	2.2
36	1	2974	U	2.2
36	5	2165	G	2.2
53	m7	126	ARG	2.2
62	N6	127	GLU	2.2
65	N9	55	ALA	2.2
67	O1	10	ARG	2.2
73	o7	30	GLN	2.2
79	q3	15	GLY	2.2
19	C7	49	LYS	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	C7	56	HIS	2.2
41	l4	58	HIS	2.2
3	S1	54	LEU	2.2
5	S3	86	LEU	2.2
23	d1	72	LEU	2.2
41	l4	106	TRP	2.2
43	l6	43	LEU	2.2
66	o0	84	LEU	2.2
73	o7	26	SER	2.2
17	C5	28	MET	2.2
34	SR	103	PHE	2.2
6	s4	208	VAL	2.2
11	S9	85	VAL	2.2
18	C6	31	VAL	2.2
1	2	740	A	2.2
5	s3	192	PRO	2.2
13	C1	16	GLN	2.2
14	C2	55	GLY	2.2
14	C2	80	ASN	2.2
57	n1	80	VAL	2.2
25	D3	88	PRO	2.2
64	N8	104	THR	2.2
64	n8	27	LYS	2.2
64	n8	119	PRO	2.2
69	O3	99	ARG	2.2
6	s4	13	ALA	2.2
22	d0	69	LYS	2.2
25	D3	114	LYS	2.2
1	2	1735	U	2.2
7	s5	25	LEU	2.2
9	S7	129	LEU	2.2
24	d2	56	HIS	2.2
34	sR	251	TRP	2.2
39	l2	71	LEU	2.2
41	l4	187	LEU	2.2
1	2	356	G	2.2
1	2	954	G	2.2
10	S8	149	SER	2.2
32	e0	56	MET	2.2
36	5	1117	G	2.2
36	5	2952	G	2.2
41	l4	199	TRP	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	s8	43	ILE	2.2
14	C2	22	VAL	2.2
24	d2	75	ILE	2.2
33	e1	98	VAL	2.2
39	L2	134	VAL	2.2
62	n6	45	ILE	2.2
4	s2	210	THR	2.2
8	s6	128	THR	2.2
23	D1	14	PRO	2.2
23	D1	50	TYR	2.2
30	d8	52	ASP	2.2
33	E1	111	GLU	2.2
34	sR	51	ASP	2.2
45	l8	110	THR	2.2
51	m5	181	ASN	2.2
58	N2	36	TYR	2.2
67	O1	63	GLY	2.2
69	O3	20	LYS	2.2
35	SM	81	THR	2.2
63	n7	76	ASN	2.2
78	q2	43	TYR	2.2
23	D1	74	GLN	2.2
79	q3	51	ALA	2.2
1	2	1088	A	2.2
22	d0	34	LEU	2.2
30	d8	54	LEU	2.2
36	1	665	A	2.2
36	1	1491	A	2.2
58	N2	37	LEU	2.2
24	D2	113	HIS	2.2
41	l4	250	TRP	2.2
5	S3	75	LYS	2.2
14	C2	121	VAL	2.2
21	c9	100	ILE	2.2
25	D3	117	ILE	2.2
41	l4	25	VAL	2.2
41	l4	61	SER	2.2
43	l6	2	SER	2.2
55	m9	60	LYS	2.2
73	o7	31	LYS	2.2
82	p0	27	VAL	2.2
1	2	975	C	2.2

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Mol	Chain	Res	Type	RSRZ
6	S4	82	TYR	2.2
32	E0	32	GLY	2.2
34	sR	125	GLY	2.2
36	1	1889	G	2.2
36	1	2316	G	2.2
36	5	912	G	2.2
36	5	2977	G	2.2
13	C1	106	ASN	2.2
22	d0	55	PRO	2.2
39	L2	217	GLN	2.2
68	O2	29	ALA	2.2
6	S4	207	LEU	2.2
41	l4	235	LEU	2.2
42	L5	115	LEU	2.2
3	s1	144	ARG	2.2
6	S4	59	ARG	2.2
17	c5	102	PHE	2.2
29	D7	47	PHE	2.2
31	d9	54	LYS	2.2
49	M3	16	LYS	2.2
54	m8	152	HIS	2.2
67	O1	62	ARG	2.2
1	2	907	A	2.2
6	s4	24	SER	2.2
6	s4	41	SER	2.2
13	C1	109	VAL	2.2
15	c3	60	VAL	2.2
16	c4	121	VAL	2.2
36	5	2149	A	2.2
38	8	81	U	2.2
55	m9	51	VAL	2.2
6	S4	74	GLY	2.2
40	l3	217	ALA	2.2
42	L5	30	TYR	2.2
59	N3	94	TYR	2.2
1	6	1796	C	2.2
3	S1	188	LEU	2.2
4	S2	78	ASP	2.2
1	2	1101	G	2.2
1	2	1364	G	2.2
2	S0	56	LYS	2.2
7	s5	79	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
10	S8	25	ARG	2.2
5	S3	77	PHE	2.2
10	S8	37	LYS	2.2
15	C3	138	ASN	2.2
25	d3	123	LYS	2.2
34	sR	59	ARG	2.2
34	sR	278	PHE	2.2
35	SM	114	LYS	2.2
36	1	2122	G	2.2
36	1	2246	G	2.2
47	m0	217	PHE	2.2
61	n5	120	LYS	2.2
9	s7	181	ILE	2.2
10	S8	187	GLU	2.2
13	C1	135	VAL	2.2
34	SR	294	TRP	2.2
47	m0	95	HIS	2.2
51	m5	142	ILE	2.2
53	m7	24	VAL	2.2
1	2	1628	U	2.2
29	D7	14	SER	2.2
36	5	2954	U	2.2
41	l4	53	SER	2.2
1	2	1587	A	2.2
11	S9	105	LEU	2.2
2	s0	97	PRO	2.2
6	S4	79	ASP	2.2
18	c6	139	GLN	2.2
48	m1	12	LEU	2.2
24	D2	88	LYS	2.2
59	n3	63	LYS	2.2
75	o9	4	GLN	2.2
78	q2	47	GLN	2.2
79	q3	23	ARG	2.2
1	2	1323	C	2.2
5	s3	46	THR	2.2
36	1	918	C	2.2
42	l5	109	THR	2.2
4	s2	179	VAL	2.2
5	s3	136	VAL	2.2
79	Q3	26	VAL	2.2
1	6	624	G	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	1	1954	G	2.2
38	8	15	G	2.2
64	n8	51	GLY	2.2
7	s5	77	TYR	2.2
10	S8	29	LEU	2.2
18	c6	123	ARG	2.2
19	C7	47	ARG	2.2
23	D1	16	LYS	2.2
26	D4	20	ARG	2.2
28	D6	48	ALA	2.2
39	l2	221	LYS	2.2
39	l2	235	ALA	2.2
43	L6	134	ARG	2.2
45	L8	55	TYR	2.2
47	M0	167	LEU	2.2
60	N4	12	LYS	2.2
62	n6	35	LEU	2.2
69	o3	60	ARG	2.2
9	s7	123	ASP	2.2
13	c1	42	PHE	2.2
16	C4	27	PHE	2.2
17	c5	119	PHE	2.2
4	s2	102	VAL	2.2
22	D0	115	GLU	2.2
40	L3	229	VAL	2.2
73	O7	48	ASN	2.2
1	6	1787	C	2.2
5	S3	121	GLY	2.2
28	D6	13	LYS	2.2
36	5	2098	C	2.2
42	L5	95	TRP	2.2
11	s9	70	LEU	2.2
19	c7	7	LYS	2.2
51	m5	192	LYS	2.2
67	O1	61	LYS	2.2
70	O4	31	ARG	2.2
4	S2	247	ALA	2.2
29	D7	73	LEU	2.2
39	l2	237	LEU	2.2
1	6	1278	G	2.2
5	s3	56	GLN	2.2
36	1	2979	U	2.2

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Mol	Chain	Res	Type	RSRZ
36	1	3287	U	2.2
36	1	867	G	2.2
36	1	910	G	2.2
36	1	1493	G	2.2
40	L3	46	PHE	2.2
63	n7	118	PHE	2.2
3	s1	65	VAL	2.2
14	c2	71	ILE	2.2
18	C6	113	ASP	2.2
23	D1	67	ASP	2.2
23	d1	34	ILE	2.2
24	D2	54	ASP	2.2
1	2	1421	A	2.2
1	6	1081	A	2.2
21	C9	45	MET	2.2
27	d5	84	GLU	2.2
2	s0	84	ARG	2.2
5	S3	40	ARG	2.2
5	S3	65	ARG	2.2
6	S4	57	ASN	2.2
18	c6	56	GLY	2.2
21	C9	68	ARG	2.2
25	D3	89	ASN	2.2
36	1	2138	A	2.2
36	1	2345	A	2.2
29	D7	49	HIS	2.2
49	M3	21	ARG	2.2
2	s0	36	TYR	2.1
7	s5	198	LEU	2.1
1	6	393	C	2.1
15	C3	95	ALA	2.1
36	1	1856	C	2.1
36	1	2151	C	2.1
58	n2	53	ALA	2.1
7	S5	184	PHE	2.1
54	m8	96	PHE	2.1
4	s2	81	MET	2.1
4	s2	167	VAL	2.1
5	S3	126	VAL	2.1
5	S3	209	ILE	2.1
6	S4	70	VAL	2.1
32	e0	60	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
11	S9	63	ASP	2.1
28	D6	74	CYS	2.1
29	D7	70	LYS	2.1
39	L2	10	LYS	2.1
39	l2	190	ARG	2.1
42	L5	159	VAL	2.1
48	M1	18	VAL	2.1
55	m9	74	ARG	2.1
62	n6	58	VAL	2.1
74	o8	55	VAL	2.1
1	6	1793	G	2.1
21	C9	82	GLY	2.1
67	O1	41	LYS	2.1
36	5	1573	G	2.1
79	Q3	19	GLY	2.1
1	2	1020	A	2.1
1	2	1023	A	2.1
1	6	1300	A	2.1
2	S0	46	HIS	2.1
2	S0	59	LEU	2.1
3	s1	107	THR	2.1
8	S6	163	THR	2.1
10	s8	84	HIS	2.1
11	S9	95	TYR	2.1
11	s9	59	LEU	2.1
13	c1	40	LEU	2.1
14	c2	58	LEU	2.1
15	c3	128	TYR	2.1
18	c6	116	LEU	2.1
19	C7	24	LEU	2.1
36	5	904	A	2.1
60	n4	96	LEU	2.1
64	n8	8	THR	2.1
75	O9	37	TYR	2.1
79	q3	70	THR	2.1
16	C4	101	ALA	2.1
1	2	239	C	2.1
5	s3	20	GLU	2.1
12	C0	86	ILE	2.1
17	C5	121	ILE	2.1
21	C9	84	LYS	2.1
25	D3	3	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
25	d3	7	ARG	2.1
28	D6	37	LYS	2.1
34	sR	136	ILE	2.1
35	SM	28	SER	2.1
53	M7	128	ARG	2.1
70	O4	9	ARG	2.1
78	q2	60	LYS	2.1
1	2	1104	U	2.1
1	6	1029	U	2.1
5	s3	93	ASP	2.1
10	S8	50	GLY	2.1
34	sR	316	MET	2.1
39	L2	51	ASP	2.1
45	L8	207	ASP	2.1
59	N3	93	LEU	2.1
77	Q1	13	LEU	2.1
78	q2	35	LEU	2.1
24	D2	89	TRP	2.1
35	sM	134	ALA	2.1
39	L2	7	ASN	2.1
45	l8	191	ASN	2.1
42	L5	145	PHE	2.1
59	N3	51	ALA	2.1
69	o3	13	HIS	2.1
70	O4	18	ASN	2.1
26	d4	72	PHE	2.1
77	q1	22	ALA	2.1
1	2	941	A	2.1
1	2	1387	G	2.1
1	6	623	A	2.1
2	S0	15	GLN	2.1
2	s0	47	VAL	2.1
4	s2	36	VAL	2.1
7	s5	66	GLN	2.1
19	c7	14	LYS	2.1
36	1	924	G	2.1
34	sR	237	GLN	2.1
36	5	2808	A	2.1
36	5	3080	G	2.1
29	d7	5	GLN	2.1
54	M8	92	ARG	2.1
75	o9	48	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
8	S6	41	VAL	2.1
9	S7	187	SER	2.1
13	c1	66	ILE	2.1
18	c6	15	SER	2.1
20	c8	81	ILE	2.1
64	n8	71	PRO	2.1
1	2	1022	C	2.1
1	2	1314	U	2.1
1	6	968	U	2.1
6	S4	42	LEU	2.1
34	SR	109	ASP	2.1
36	1	1028	U	2.1
36	5	1437	C	2.1
36	5	2436	U	2.1
37	7	73	C	2.1
40	L3	338	LEU	2.1
82	p0	93	LEU	2.1
2	s0	138	TYR	2.1
5	S3	106	LYS	2.1
15	c3	57	ALA	2.1
19	C7	33	ARG	2.1
25	d3	86	PHE	2.1
30	D8	5	THR	2.1
31	d9	53	ASN	2.1
40	L3	379	PHE	2.1
43	l6	70	LYS	2.1
69	o3	50	ALA	2.1
4	S2	102	VAL	2.1
22	d0	80	GLU	2.1
30	D8	48	VAL	2.1
30	d8	15	VAL	2.1
48	M1	90	GLN	2.1
55	M9	142	ILE	2.1
80	c0	95	GLN	2.1
1	2	746	A	2.1
1	2	972	G	2.1
1	6	1050	G	2.1
34	sR	111	MET	2.1
29	D7	41	LEU	2.1
36	1	921	A	2.1
36	1	1306	G	2.1
36	5	913	A	2.1

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Mol	Chain	Res	Type	RSRZ
41	l4	11	LEU	2.1
9	S7	101	LYS	2.1
10	s8	40	ALA	2.1
17	c5	72	LYS	2.1
41	l4	90	PHE	2.1
45	l8	34	PHE	2.1
51	m5	147	ARG	2.1
20	C8	55	HIS	2.1
39	l2	187	HIS	2.1
52	M6	191	ALA	2.1
2	S0	140	ASN	2.1
5	S3	37	VAL	2.1
5	S3	46	THR	2.1
8	s6	140	ASN	2.1
10	S8	76	THR	2.1
10	s8	46	VAL	2.1
13	C1	139	VAL	2.1
22	d0	44	ASN	2.1
35	sM	57	ASN	2.1
41	L4	60	THR	2.1
41	l4	77	VAL	2.1
51	m5	34	ASN	2.1
59	n3	19	VAL	2.1
59	n3	33	ASN	2.1
70	O4	68	THR	2.1
73	o7	58	THR	2.1
5	S3	162	GLN	2.1
21	C9	98	GLY	2.1
32	E0	30	PRO	2.1
34	SR	23	LEU	2.1
39	l2	11	GLY	2.1
40	l3	178	LEU	2.1
51	m5	78	GLY	2.1
51	m5	163	GLY	2.1
4	S2	227	PRO	2.1
8	S6	82	SER	2.1
9	s7	151	LYS	2.1
11	S9	16	LYS	2.1
19	C7	43	SER	2.1
41	l4	277	PRO	2.1
63	N7	132	SER	2.1
74	o8	17	ARG	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
24	d2	17	ALA	2.1
34	sR	165	ASP	2.1
36	1	1858	A	2.1
45	l8	254	ASP	2.1
79	Q3	14	TYR	2.1
1	6	1604	U	2.1
36	1	651	G	2.1
36	1	912	G	2.1
36	5	443	G	2.1
36	5	910	G	2.1
36	5	1586	G	2.1
1	6	1404	C	2.1
4	S2	167	VAL	2.1
23	D1	13	VAL	2.1
52	M6	65	ASN	2.1
59	N3	101	VAL	2.1
65	n9	7	HIS	2.1
36	5	1832	C	2.1
67	O1	93	VAL	2.1
2	s0	131	GLN	2.1
17	C5	50	THR	2.1
18	c6	37	THR	2.1
2	S0	172	LEU	2.1
3	S1	103	MET	2.1
6	S4	144	GLY	2.1
32	e0	17	GLN	2.1
4	S2	141	ARG	2.1
18	C6	89	LEU	2.1
28	D6	70	LYS	2.1
41	l4	179	LEU	2.1
42	l5	270	LYS	2.1
46	L9	31	ARG	2.1
51	m5	67	ARG	2.1
51	m5	72	LYS	2.1
61	N5	40	LEU	2.1
62	n6	104	LEU	2.1
73	o7	67	LEU	2.1
2	S0	81	PHE	2.1
6	s4	86	PHE	2.1
68	O2	53	PRO	2.1
8	S6	100	ALA	2.1
13	c1	146	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
21	C9	96	ALA	2.1
43	l6	142	ASP	2.1
55	m9	87	ALA	2.1
61	N5	103	TYR	2.1
67	o1	40	ALA	2.1
1	2	1296	A	2.1
1	2	1790	A	2.1
1	6	979	A	2.1
1	6	1791	A	2.1
13	C1	25	VAL	2.1
15	C3	66	ILE	2.1
15	C3	134	VAL	2.1
36	1	846	A	2.1
36	5	919	U	2.1
36	5	1491	A	2.1
1	2	867	G	2.1
6	S4	62	LYS	2.1
1	6	614	C	2.1
7	S5	93	LEU	2.1
10	S8	184	LEU	2.1
33	e1	92	LYS	2.1
34	SR	107	LYS	2.1
35	SM	87	THR	2.1
36	1	2728	G	2.1
36	1	2948	C	2.1
38	4	24	G	2.1
57	N1	59	GLY	2.1
64	n8	108	GLY	2.1
70	O4	19	LYS	2.1
78	Q2	104	LEU	2.1
79	Q3	23	ARG	2.1
11	S9	18	PRO	2.1
13	C1	115	PHE	2.1
17	c5	68	PRO	2.1
24	d2	95	PRO	2.1
28	D6	98	PRO	2.1
31	D9	34	TYR	2.1
45	l8	117	ALA	2.1
52	M6	40	GLU	2.1
78	q2	33	ALA	2.1
5	s3	204	ASP	2.1
6	S4	145	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
6	S4	248	ILE	2.1
11	S9	62	ARG	2.1
13	C1	131	ILE	2.1
15	c3	116	ILE	2.1
19	C7	122	ILE	2.1
21	c9	36	ILE	2.1
47	M0	138	VAL	2.1
57	N1	74	VAL	2.1
68	o2	41	VAL	2.1
21	C9	79	LEU	2.1
23	D1	60	ARG	2.1
40	l3	238	LEU	2.1
41	L4	79	GLY	2.1
44	L7	124	LEU	2.1
49	m3	180	ARG	2.1
1	2	2	A	2.1
1	2	622	A	2.1
1	2	971	A	2.1
1	2	992	A	2.1
1	6	1044	U	2.1
1	6	1283	U	2.1
34	SR	221	MET	2.1
48	m1	39	GLN	2.1
70	O4	61	GLN	2.1
73	O7	18	LEU	2.1
10	S8	95	THR	2.1
18	c6	70	THR	2.1
63	n7	4	PHE	2.1
79	q3	63	THR	2.1
36	1	2325	G	2.1
59	n3	35	TYR	2.1
70	O4	26	PRO	2.1
4	s2	120	GLU	2.1
14	C2	42	ALA	2.1
13	c1	85	VAL	2.1
15	c3	43	LYS	2.1
15	c3	126	ALA	2.1
24	D2	49	GLU	2.1
6	S4	210	ILE	2.1
8	s6	132	ARG	2.1
16	c4	135	ARG	2.1
19	c7	43	SER	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	sR	290	VAL	2.1
39	L2	234	LYS	2.1
41	L4	104	LYS	2.1
70	O4	58	ARG	2.1
4	S2	145	GLY	2.1
25	d3	9	LEU	2.1
49	M3	13	HIS	2.1
13	C1	118	GLN	2.1
9	S7	133	THR	2.1
10	S8	48	THR	2.1
13	C1	72	THR	2.1
23	d1	81	ASN	2.1
28	d6	25	ASN	2.1
34	sR	48	THR	2.1
36	5	939	U	2.1
55	m9	56	THR	2.1
1	2	1336	A	2.1
1	2	1345	A	2.1
8	s6	86	PRO	2.1
1	2	625	C	2.1
1	2	962	C	2.1
2	S0	86	VAL	2.1
4	S2	91	ARG	2.1
13	C1	141	LYS	2.1
13	c1	101	GLU	2.1
36	1	1589	A	2.1
36	1	2820	A	2.1
15	C3	3	ARG	2.1
15	c3	63	ALA	2.1
31	d9	47	ALA	2.1
49	M3	32	LYS	2.1
51	M5	30	TYR	2.1
21	C9	122	ARG	2.1
54	M8	171	LYS	2.1
54	m8	101	VAL	2.1
70	O4	65	VAL	2.1
73	O7	11	ARG	2.1
9	s7	162	ILE	2.1
25	D3	58	GLY	2.1
32	e0	61	SER	2.1
36	5	82	C	2.1
36	5	818	C	2.1

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Mol	Chain	Res	Type	RSRZ
54	m8	7	SER	2.1
69	O3	49	ILE	2.1
1	2	607	G	2.1
10	S8	2	GLY	2.1
19	c7	56	HIS	2.1
21	C9	131	ASP	2.1
36	1	98	G	2.1
36	1	3286	G	2.1
36	5	364	G	2.1
74	o8	69	LEU	2.1
11	S9	146	PHE	2.1
42	L5	151	GLN	2.1
42	l5	4	GLN	2.1
45	l8	243	GLN	2.1
49	m3	19	GLN	2.1
1	6	1254	U	2.1
6	S4	256	ARG	2.1
19	c7	37	GLU	2.1
33	e1	143	LYS	2.1
34	SR	98	GLU	2.1
39	L2	192	LYS	2.1
15	C3	33	VAL	2.1
23	d1	26	ALA	2.1
36	5	2975	U	2.1
45	l8	199	ALA	2.1
53	m7	132	ALA	2.1
54	m8	149	ALA	2.1
79	q3	5	THR	2.1
60	N4	22	VAL	2.1
9	s7	135	ILE	2.1
10	S8	43	ILE	2.1
12	C0	76	LEU	2.1
21	c9	135	ILE	2.1
22	d0	22	ILE	2.1
24	d2	125	ILE	2.1
34	SR	15	GLY	2.1
36	1	2126	A	2.1
36	5	884	A	2.1
36	5	2445	A	2.1
39	l2	245	LEU	2.1
23	d1	68	SER	2.1
79	q3	53	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
10	S8	103	GLN	2.0
10	s8	123	LYS	2.0
43	l6	47	PHE	2.0
54	M8	172	PHE	2.0
59	N3	126	TRP	2.0
60	N4	1	MET	2.1
39	L2	200	ARG	2.0
1	2	383	G	2.0
33	e1	110	ALA	2.0
34	SR	100	TYR	2.0
36	1	880	G	2.0
36	5	822	G	2.0
4	S2	239	PRO	2.0
4	s2	198	THR	2.0
11	s9	2	PRO	2.0
14	C2	123	VAL	2.0
34	SR	317	THR	2.0
39	l2	26	ALA	2.0
42	L5	134	ALA	2.0
45	l8	240	ASN	2.0
49	M3	12	ASN	2.0
49	M3	135	ALA	2.0
49	M3	173	ALA	2.0
51	m5	89	VAL	2.0
56	n0	2	ALA	2.0
58	n2	65	VAL	2.0
27	D5	80	LEU	2.0
28	D6	79	ILE	2.0
51	m5	58	GLY	2.0
52	M6	27	LEU	2.0
52	M6	43	ILE	2.0
55	M9	99	LEU	2.0
64	N8	102	ILE	2.0
70	O4	12	PRO	2.0
4	s2	114	GLY	2.0
8	S6	55	GLY	2.0
18	C6	33	GLY	2.0
34	sR	49	GLY	2.0
3	S1	130	SER	2.0
9	s7	157	LYS	2.0
34	SR	117	LYS	2.0
35	SM	94	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
35	SM	113	ASP	2.0
36	1	3077	A	2.0
48	M1	163	PHE	2.0
74	o8	44	LYS	2.0
75	o9	15	LYS	2.0
10	s8	44	HIS	2.0
15	c3	64	ARG	2.0
24	d2	64	GLN	2.0
53	m7	133	HIS	2.0
55	M9	175	GLN	2.0
79	Q3	32	GLN	2.0
79	q3	17	ARG	2.0
29	D7	57	GLU	2.0
34	SR	239	GLU	2.0
36	1	346	C	2.0
36	5	1836	C	2.0
5	s3	201	ALA	2.0
7	S5	77	TYR	2.0
63	n7	24	VAL	2.0
64	n8	48	TYR	2.0
73	o7	39	TYR	2.0
82	p0	295	ALA	2.0
4	s2	53	ILE	2.0
6	S4	83	PRO	2.0
6	s4	56	LEU	2.0
11	s9	111	THR	2.0
45	L8	67	ILE	2.0
34	sR	11	GLY	2.0
59	n3	4	ASN	2.0
64	n8	44	ASN	2.0
72	o6	57	LEU	2.0
79	q3	22	LEU	2.0
1	2	1276	U	2.0
1	2	1798	U	2.0
1	6	729	G	2.0
1	6	1412	G	2.0
36	1	1905	G	2.0
36	5	2150	G	2.0
36	5	2947	G	2.0
5	S3	177	MET	2.0
8	S6	177	ARG	2.0
49	m3	21	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
77	q1	2	ARG	2.0
77	q1	6	ARG	2.0
2	s0	168	HIS	2.0
9	S7	155	ASP	2.0
21	C9	25	GLN	2.0
23	d1	40	ASP	2.0
31	d9	41	GLN	2.0
39	l2	231	SER	2.0
56	N0	42	TRP	2.0
60	n4	135	SER	2.0
82	p0	20	GLU	2.0
1	6	1026	A	2.0
36	1	2324	A	2.0
5	s3	110	LEU	2.0
7	s5	159	ALA	2.0
13	C1	70	ILE	2.0
22	d0	52	LYS	2.0
51	m5	197	LEU	2.0
13	C1	78	THR	2.0
19	c7	31	ASN	2.0
51	M5	88	GLY	2.0
64	N8	33	GLY	2.0
52	m6	71	PHE	2.0
70	O4	15	THR	2.0
1	2	1103	U	2.0
1	6	406	U	2.0
36	1	1925	U	2.0
36	1	3275	U	2.0
21	C9	44	GLU	2.0
23	d1	64	GLU	2.0
35	SM	140	ASP	2.0
36	1	1488	G	2.0
36	1	2300	G	2.0
36	5	1116	G	2.0
36	5	2814	G	2.0
67	o1	111	GLU	2.0
16	C4	34	SER	2.0
45	L8	47	SER	2.0
60	n4	72	SER	2.0
15	c3	134	VAL	2.0
51	m5	64	VAL	2.0
45	l8	189	LEU	2.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	M7	156	ALA	2.0
55	M9	82	LYS	2.0
64	n8	101	VAL	2.0
5	S3	72	LEU	2.0
8	s6	77	LEU	2.0
9	S7	58	LEU	2.0
21	C9	58	ALA	2.0
39	l2	229	ALA	2.0
40	L3	102	LEU	2.0
40	L3	267	ALA	2.0
79	q3	69	TYR	2.0
1	2	1400	A	2.0
1	6	862	A	2.0
5	S3	63	GLY	2.0
10	s8	31	ARG	2.0
36	1	806	A	2.0
36	1	883	A	2.0
36	1	1456	A	2.0
36	5	2138	A	2.0
40	L3	244	ARG	2.0
3	s1	25	THR	2.0
10	S8	52	ASN	2.0
34	SR	308	ASN	2.0
35	SM	102	THR	2.0
70	O4	11	ASN	2.0
11	S9	106	GLU	2.0
22	D0	80	GLU	2.0
1	2	232	U	2.0
1	2	982	U	2.0
35	SM	174	LYS	2.0
36	1	1512	U	2.0
36	5	1533	U	2.0
42	l5	296	GLN	2.0
2	s0	139	VAL	2.0
10	s8	156	VAL	2.0
17	c5	52	LYS	2.0
25	D3	130	VAL	2.0
40	L3	174	LYS	2.0
46	l9	3	TYR	2.0
47	m0	181	TYR	2.0
53	M7	170	SER	2.0
64	n8	130	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
13	C1	73	GLY	2.0
18	c6	25	GLY	2.0
19	C7	17	ILE	2.0
41	L4	76	ARG	2.0
61	N5	98	ALA	2.0
36	1	860	G	2.0
36	1	937	G	2.0
36	1	1573	G	2.0
36	1	1833	G	2.0
36	1	1852	G	2.0
72	O6	14	GLY	2.0
9	S7	92	PHE	2.0
18	C6	60	PHE	2.0
68	o2	53	PRO	2.0
1	2	1287	A	2.0
1	6	1790	A	2.0
7	s5	144	GLU	2.0
25	D3	36	THR	2.0
30	D8	50	GLU	2.0
4	S2	89	GLN	2.0
9	S7	148	LYS	2.0
36	1	2329	C	2.0
36	5	356	C	2.0
51	m5	204	LYS	2.0
58	n2	101	ASN	2.0
79	q3	73	THR	2.0
75	O9	11	GLN	2.0
80	c0	47	GLN	2.0
5	S3	73	VAL	2.0
7	s5	53	VAL	2.0
9	S7	152	VAL	2.0
11	s9	76	LEU	2.0
23	d1	12	TYR	2.0
23	d1	39	VAL	2.0
39	L2	133	TYR	2.0
39	l2	4	VAL	2.0
40	L3	272	TYR	2.0
51	m5	134	LEU	2.0

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

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

### 6.3 Carbohydrates [i](#)

There are no carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> 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.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
86	ZN	d7	101	1/1	0.78	0.31	0.32	134,134,134,134	0
86	ZN	q3	501	1/1	0.99	0.18	-0.43	64,64,64,64	0
86	ZN	E1	501	1/1	0.91	0.15	-0.77	133,133,133,133	0
86	ZN	Q3	501	1/1	0.99	0.14	-1.11	74,74,74,74	0
86	ZN	Q0	500	1/1	0.98	0.20	-1.22	57,57,57,57	0
86	ZN	e1	501	1/1	0.72	0.15	-1.27	165,165,165,165	0
86	ZN	d9	101	1/1	0.95	0.13	-1.49	93,93,93,93	0
86	ZN	D9	101	1/1	0.97	0.11	-1.62	89,89,89,89	0
86	ZN	Q2	501	1/1	0.97	0.08	-1.73	78,78,78,78	0
86	ZN	o7	501	1/1	0.99	0.14	-1.89	53,53,53,53	0
86	ZN	O7	100	1/1	1.00	0.13	-1.98	53,53,53,53	0
86	ZN	q2	501	1/1	0.95	0.07	-2.36	74,74,74,74	0
86	ZN	d6	500	1/1	0.94	0.07	-2.57	82,82,82,82	0
86	ZN	D6	500	1/1	0.94	0.06	-3.00	99,99,99,99	0
86	ZN	q0	500	1/1	0.99	0.16	-3.58	48,48,48,48	0
86	ZN	D7	101	1/1	0.76	0.17	-	140,140,140,140	0

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

There are no such residues in this entry.