



Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 02:34 AM UTC

PDB ID : 7JT3 / pdb_00007jt3
EMDB ID : EMD-22472
Title : Rotated 70S ribosome stalled on long mRNA with ArfB-1 and ArfB-2 bound
in the A site (+9-IV)
Authors : Carbone, C.E.; Korostelev, A.A.
Deposited on : 2020-08-17
Resolution : 3.70 Å(reported)

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

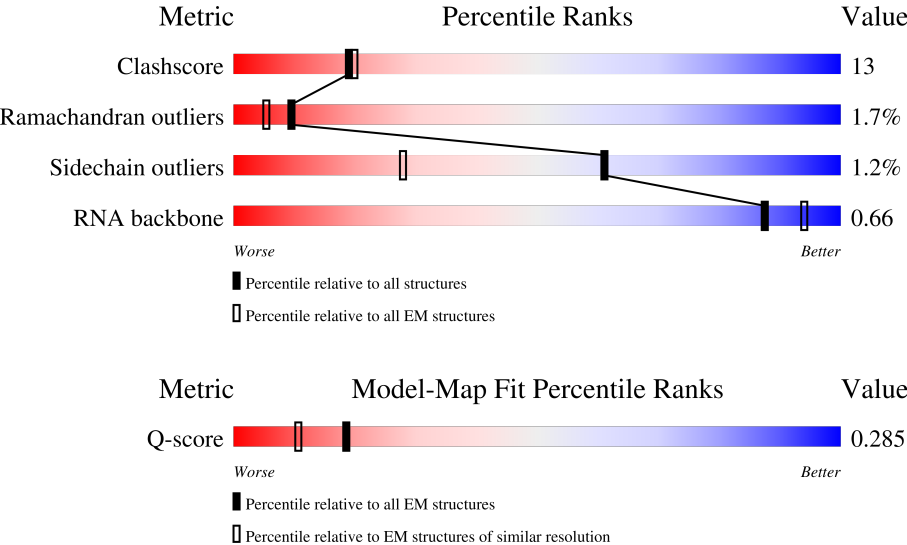
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance

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

The reported resolution of this entry is 3.70 Å.

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



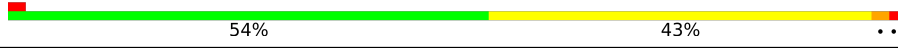
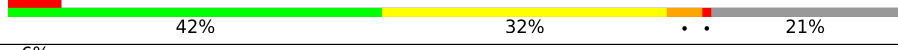
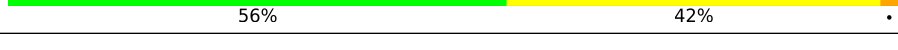
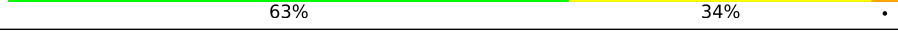
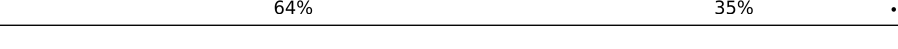
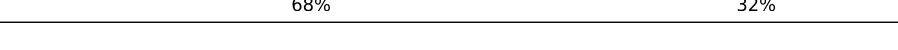
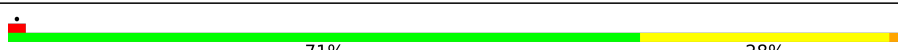
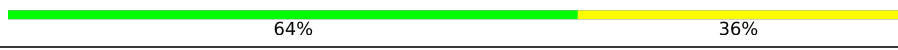
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	11569 (3.20 - 4.20)

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

Mol	Chain	Length	Quality of chain
1	b	271	
2	c	209	
3	d	201	

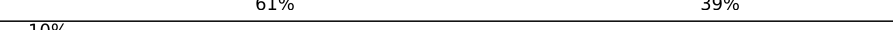
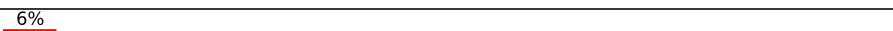
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	e	177	
5	f	176	
6	g	149	
7	h	165	
8	i	142	
9	j	142	
10	k	122	
11	l	143	
12	m	136	
13	n	120	
14	o	116	
15	p	114	
16	q	117	
17	r	103	
18	s	110	
19	t	93	
20	u	102	
21	v	94	
22	w	75	
23	x	77	
24	y	63	
25	z	58	
26	B	56	
27	C	50	
28	D	46	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	E	64	
30	F	38	
31	G	225	
32	H	206	
33	I	205	
34	J	157	
35	K	100	
36	L	151	
37	M	129	
38	N	127	
39	O	98	
40	P	116	
41	Q	123	
42	R	114	
43	S	100	
44	T	88	
45	U	82	
46	V	80	
47	W	65	
48	X	79	
49	Y	85	
50	Z	65	
51	a	234	
52	3	1539	
53	1	2903	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
54	2	120	58% 36% 7%
55	5	77	38% 42% 17%
56	4	20	5% 40% 30% 30%
57	8	130	5% 45% 47% 7%
57	9	130	8% 37% 28% 9% 25%

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 148603 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	b	271	Total	C	N	O	S	0	0
			2083	1288	423	365	7		

- Molecule 2 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	c	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 3 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	d	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 4 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	e	177	Total	C	N	O	S	0	0
			1411	899	249	257	6		

- Molecule 5 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	f	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 6 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	g	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 7 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	h	131	Total	C	N	O	S	0	0
			988	625	175	183	5		

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	i	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	j	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	k	122	Total	C	N	O	S	0	0
			939	587	180	166	6		

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	l	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	m	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 13 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	n	120	Total	C	N	O	S	0	0
			961	593	196	167	5		

- Molecule 14 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	o	116	Total	C	N	O	0	0
			892	552	178	162		

- Molecule 15 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	p	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	q	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	r	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 18 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	s	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 19 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	t	93	Total	C	N	O	S	0	0
			739	466	139	132	2		

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	u	102	Total	C	N	O	0	0
			780	492	146	142		

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	v	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	w	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	x	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	y	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	z	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	B	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 27 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	C	50	Total	C	N	O	0	0
			410	263	75	72		

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	D	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	E	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	F	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 31 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	G	225	Total	C	N	O	S	0	0
			1757	1111	315	323	8		

- Molecule 32 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	H	206	Total	C	N	O	S	0	0
			1625	1028	305	289	3		

- Molecule 33 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	I	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 34 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	J	157	Total	C	N	O	S	0	0
			1157	719	218	214	6		

- Molecule 35 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	K	100	Total	C	N	O	S	0	0
			818	515	148	149	6		

- Molecule 36 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	L	151	Total	C	N	O	S	0	0
			1182	735	227	216	4		

- Molecule 37 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	M	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 38 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	N	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 39 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	O	98	Total	C	N	O	S	0	0
			787	493	150	143	1		

- Molecule 40 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	P	116	Total	C	N	O	S	0	0
			870	535	173	159	3		

- Molecule 41 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Q	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 42 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	R	114	Total	C	N	O	S	0	0
			884	546	178	157	3		

- Molecule 43 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	S	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 44 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	T	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 45 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	U	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 46 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	V	80	Total	C	N	O	S	0	0
			649	411	121	114	3		

- Molecule 47 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	W	65	Total	C	N	O	S	0	0
			536	339	100	96	1		

- Molecule 48 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	X	79	Total	C	N	O	S	0	0
			638	408	120	108	2		

- Molecule 49 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Y	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 50 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Z	65	Total	C	N	O	S	0	0
			545	335	117	92	1		

- Molecule 51 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	a	134	Total	C	N	O	S	0	0
			1026	645	186	193	2		

- Molecule 52 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	3	1539	Total	C	N	O	P	0	0
			33012	14725	6053	10696	1538		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
3	1490	C	U	conflict	GB 1789840096

- Molecule 53 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	1	2903	Total	C	N	O	P	0	0
			62311	27801	11468	20140	2902		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	747	C	U	conflict	GB 802133627

- Molecule 54 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	2	120	Total	C	N	O	P	0	0
			2568	1145	471	833	119		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
2	120	A	-	insertion	GB 1266961702

- Molecule 55 is a RNA chain called tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	5	76	Total	C	N	O	P	0	0
			1618	722	292	529	75		

- Molecule 56 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	4	14	Total	C	N	O	P	0	0
			309	138	64	93	14		

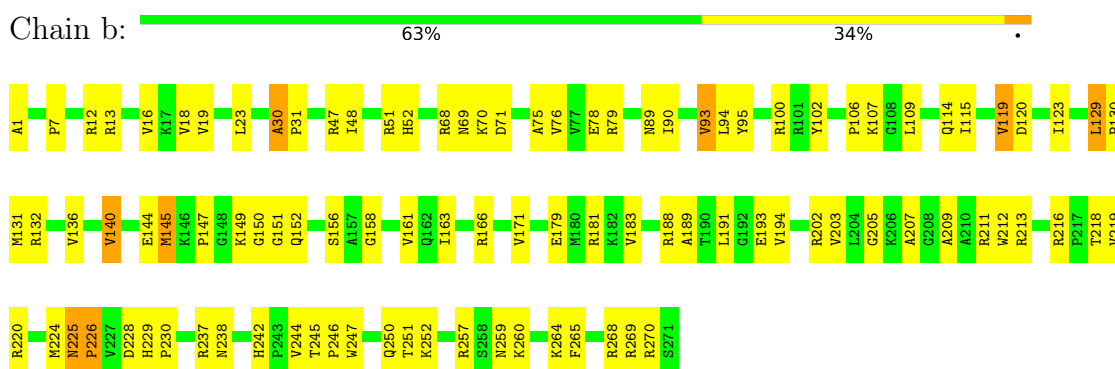
- Molecule 57 is a protein called Peptidyl-tRNA hydrolase ArfB.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	8	130	Total	C	N	O	S	0	0
			1016	627	202	185	2		
57	9	97	Total	C	N	O	S	0	0
			754	471	141	141	1		

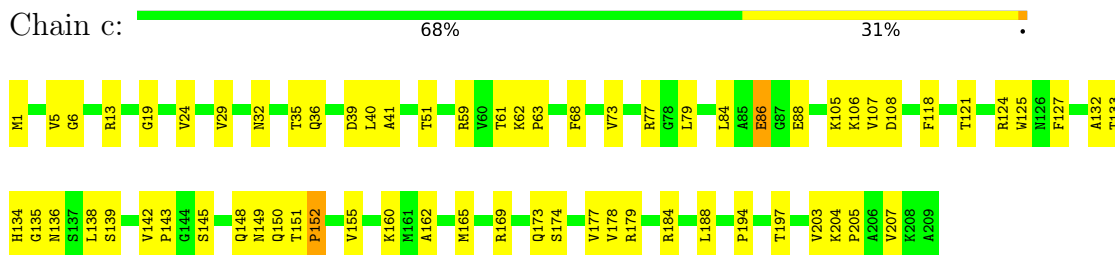
3 Residue-property plots

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

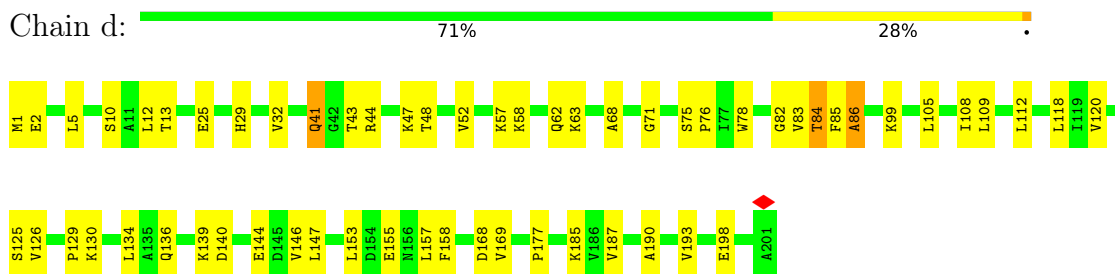
• Molecule 1: 50S ribosomal protein L2



• Molecule 2: 50S ribosomal protein L3

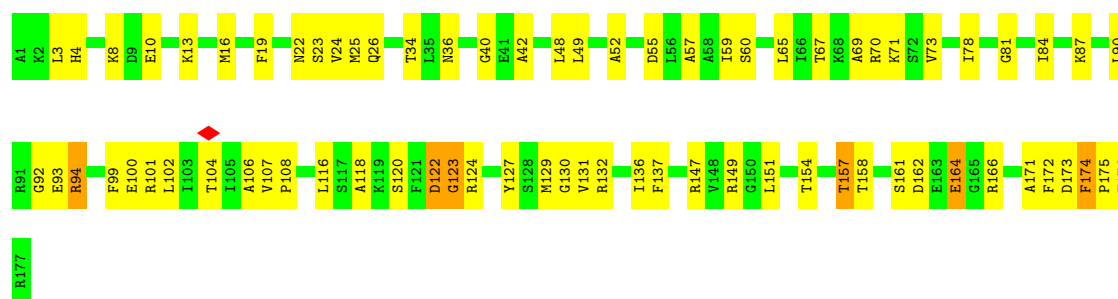


• Molecule 3: 50S ribosomal protein L4

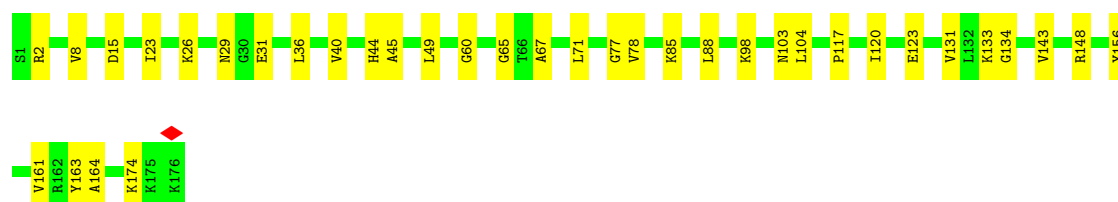
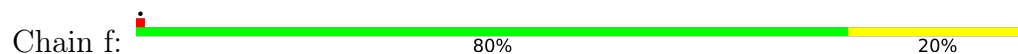


• Molecule 4: 50S ribosomal protein L5

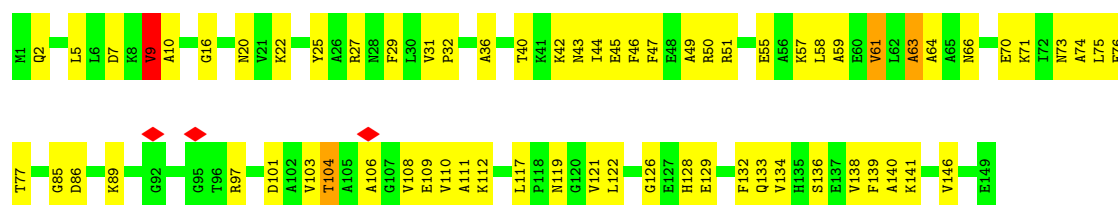




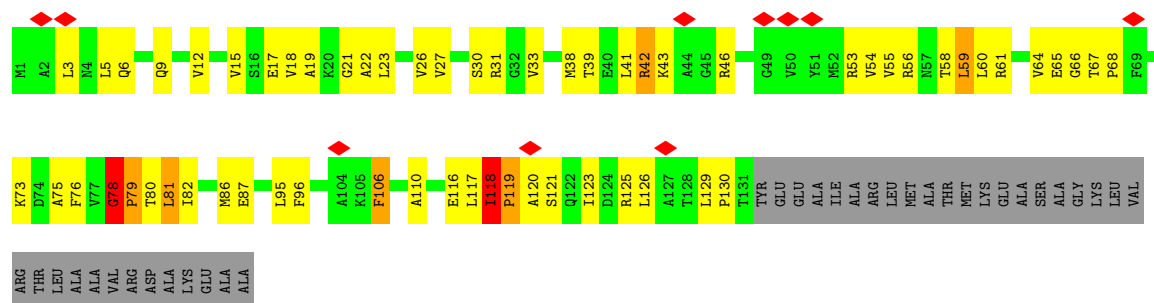
- Molecule 5: 50S ribosomal protein L6



- Molecule 6: 50S ribosomal protein L9

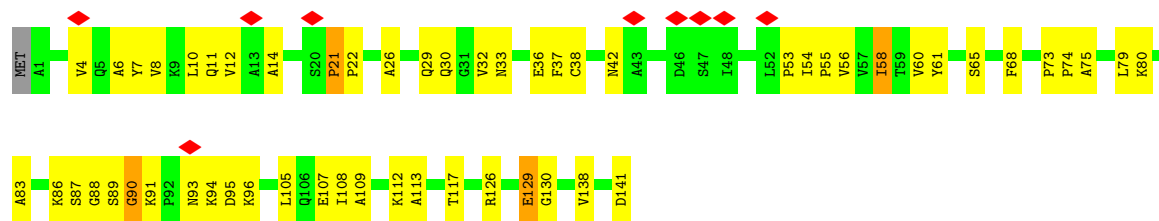


- Molecule 7: 50S ribosomal protein L10



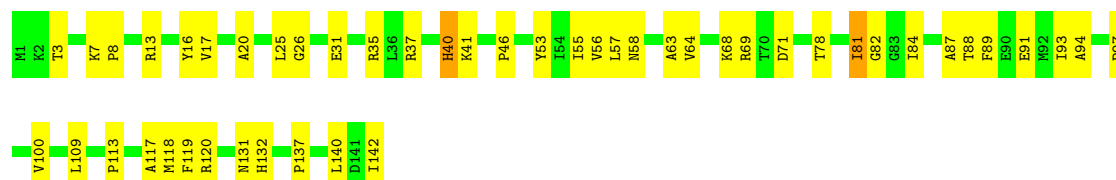
- Molecule 8: 50S ribosomal protein L11





• Molecule 9: 50S ribosomal protein L13

Chain j: 66% 32% .



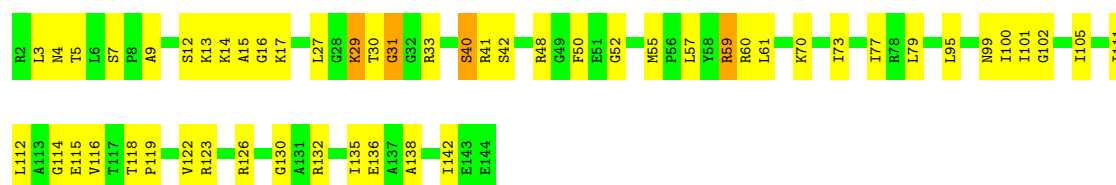
• Molecule 10: 50S ribosomal protein L14

Chain k: 56% 42% . .



• Molecule 11: 50S ribosomal protein L15

Chain l: 63% 34% .



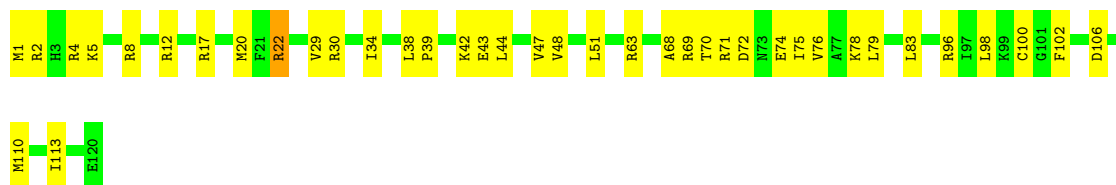
• Molecule 12: 50S ribosomal protein L16

Chain m: 64% 35% .



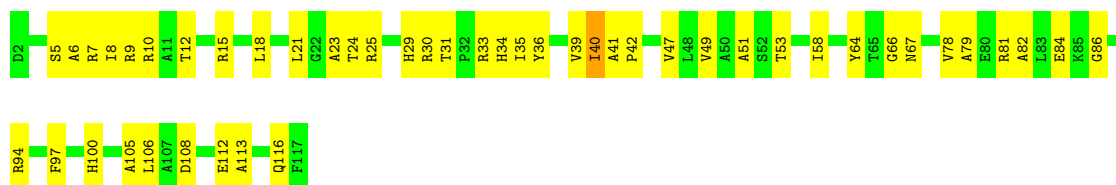
• Molecule 13: 50S ribosomal protein L17

Chain n:  68% 32% .



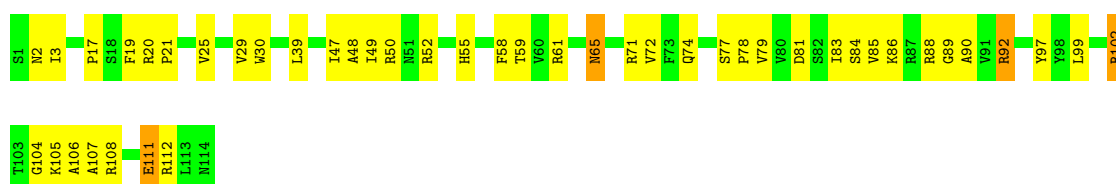
- Molecule 14: 50S ribosomal protein L18

Chain o:  59% 40% .



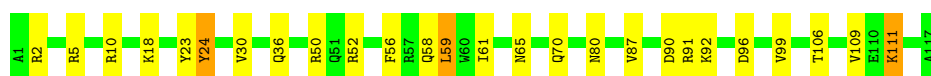
- Molecule 15: 50S ribosomal protein L19

Chain p:  61% 36% .



- Molecule 16: 50S ribosomal protein L20

Chain q:  78% 20% .



- Molecule 17: 50S ribosomal protein L21

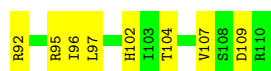
Chain r:  66% 27% 6% .



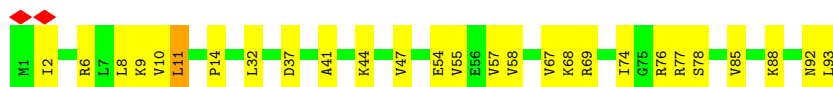
- Molecule 18: 50S ribosomal protein L22

Chain s:  63% 35% .

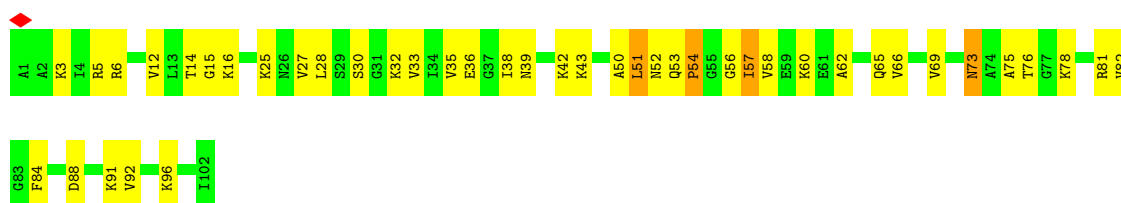




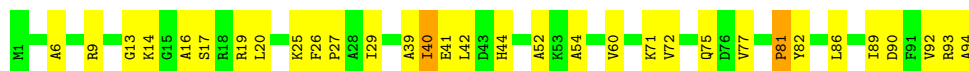
- Molecule 19: 50S ribosomal protein L23



- Molecule 20: 50S ribosomal protein L24



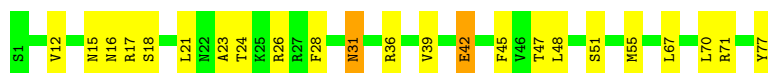
- Molecule 21: 50S ribosomal protein L25



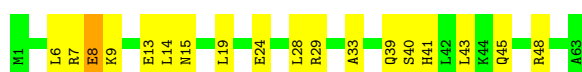
- Molecule 22: 50S ribosomal protein L27



- Molecule 23: 50S ribosomal protein L28

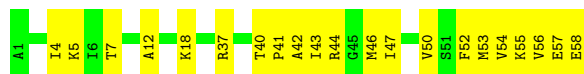


- Molecule 24: 50S ribosomal protein L29



- Molecule 25: 50S ribosomal protein L30

Chain z:  64% 36%



- Molecule 26: 50S ribosomal protein L32

Chain B:  64% 32% .



- Molecule 27: 50S ribosomal protein L33

Chain C:  76% 24%



- Molecule 28: 50S ribosomal protein L34

Chain D:  61% 35% .



- Molecule 29: 50S ribosomal protein L35

Chain E:  67% 30% .



- Molecule 30: 50S ribosomal protein L36

Chain F:  74% 24% .



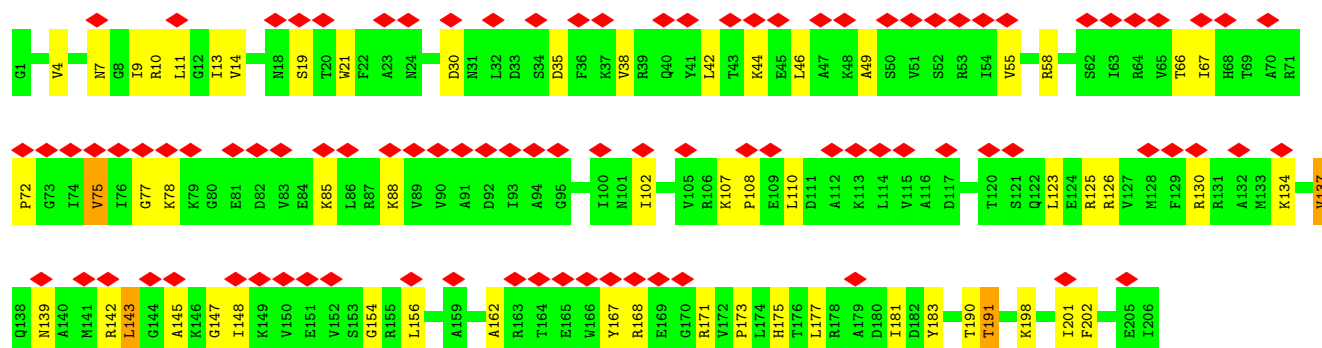
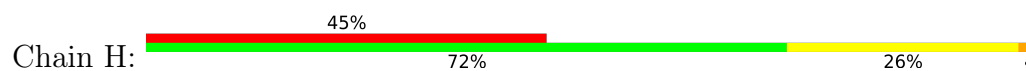
- Molecule 31: 30S ribosomal protein S2

Chain G:  72% 27% .

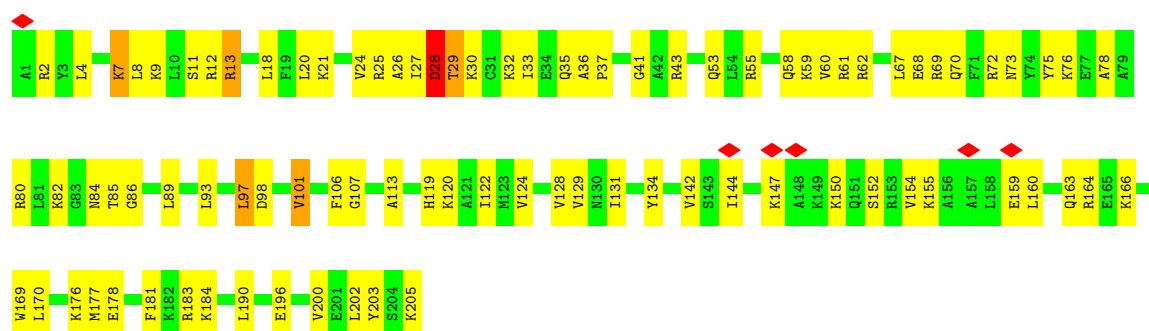




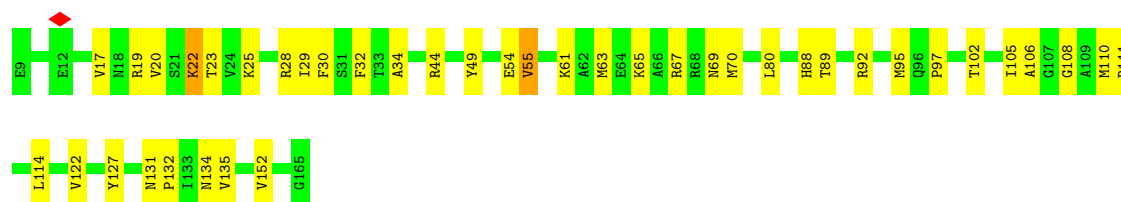
• Molecule 32: 30S ribosomal protein S3



• Molecule 33: 30S ribosomal protein S4

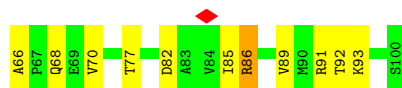


• Molecule 34: 30S ribosomal protein S5

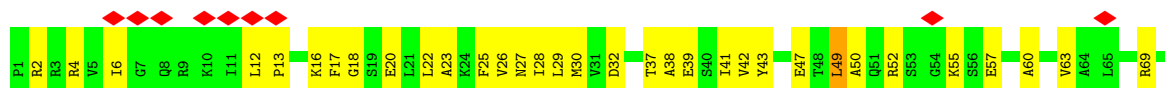


• Molecule 35: 30S ribosomal protein S6

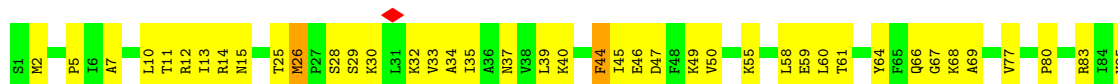




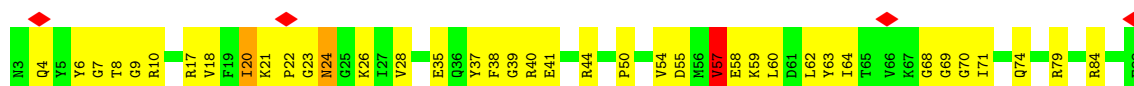
- Molecule 36: 30S ribosomal protein S7



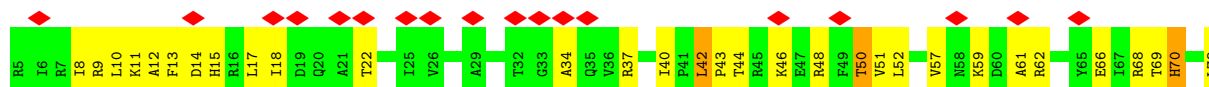
- Molecule 37: 30S ribosomal protein S8



- Molecule 38: 30S ribosomal protein S9



- Molecule 39: 30S ribosomal protein S10



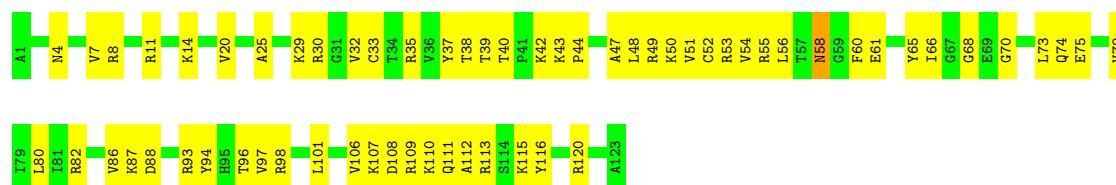
- Molecule 40: 30S ribosomal protein S11

Chain P:  62% 34%



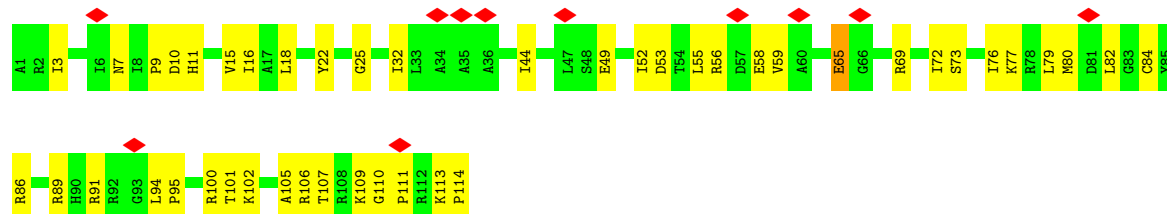
- Molecule 41: 30S ribosomal protein S12

Chain Q:  50% 50%



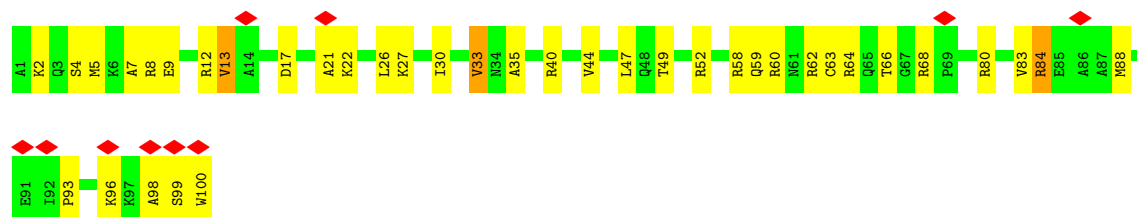
- Molecule 42: 30S ribosomal protein S13

Chain R:  10% 61% 39%



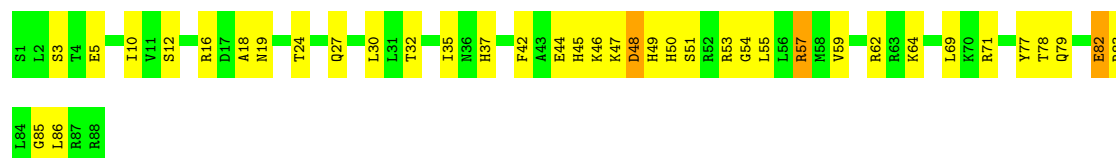
- Molecule 43: 30S ribosomal protein S14

Chain S:  10% 62% 35%

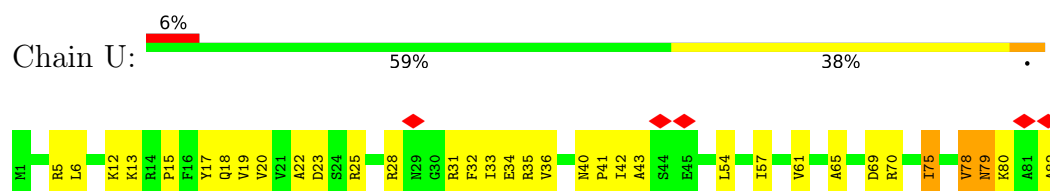


- Molecule 44: 30S ribosomal protein S15

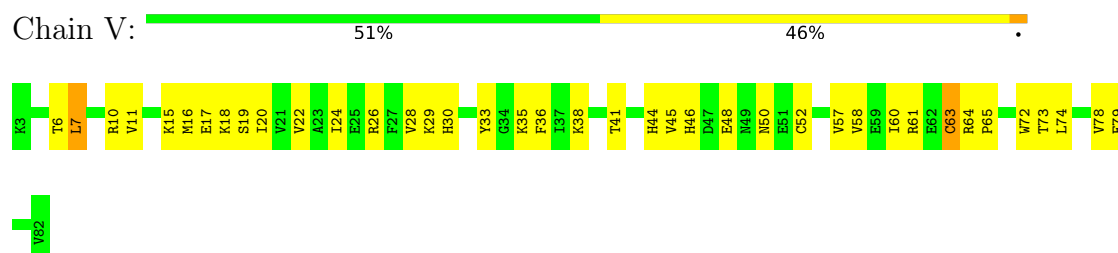
Chain T:  57% 40%



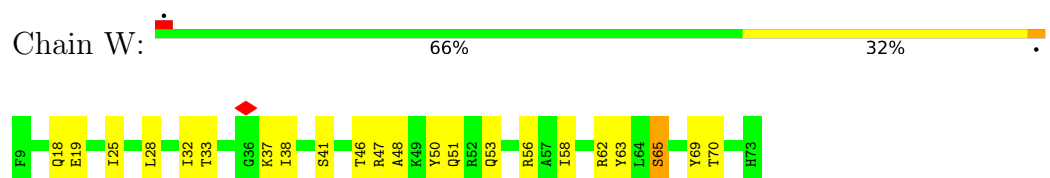
- Molecule 45: 30S ribosomal protein S16



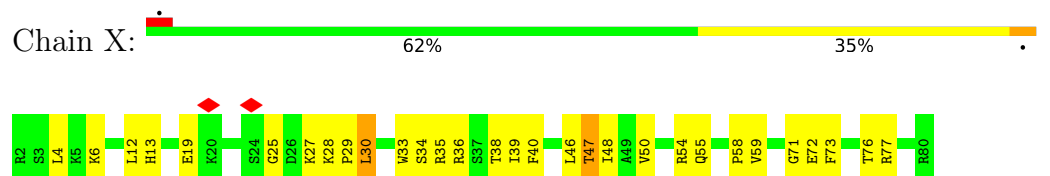
- Molecule 46: 30S ribosomal protein S17



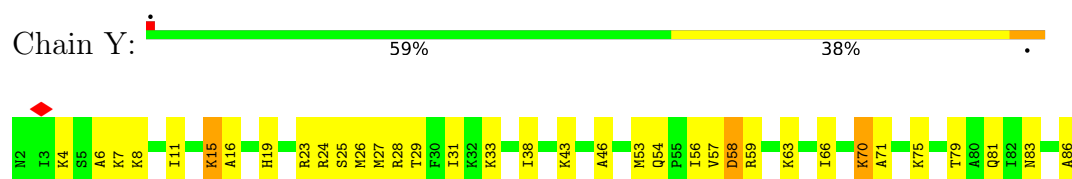
- Molecule 47: 30S ribosomal protein S18



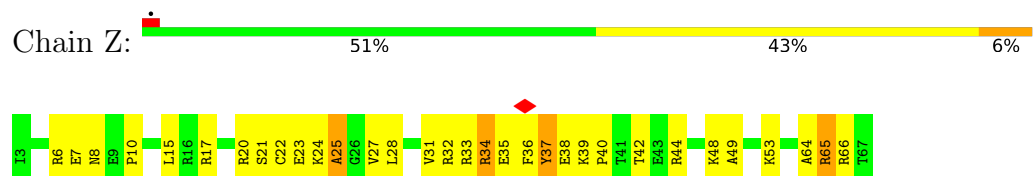
- Molecule 48: 30S ribosomal protein S19



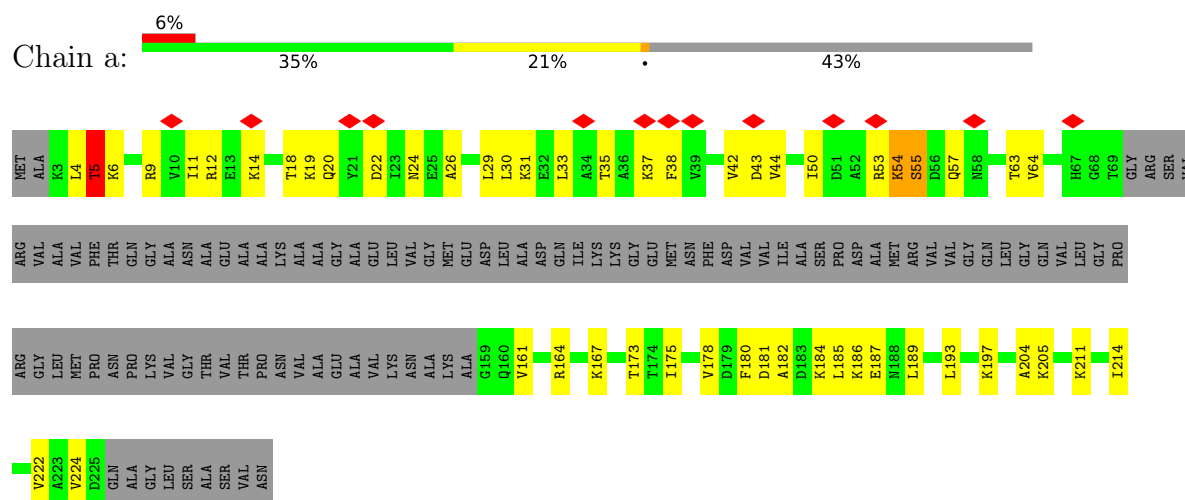
- Molecule 49: 30S ribosomal protein S20



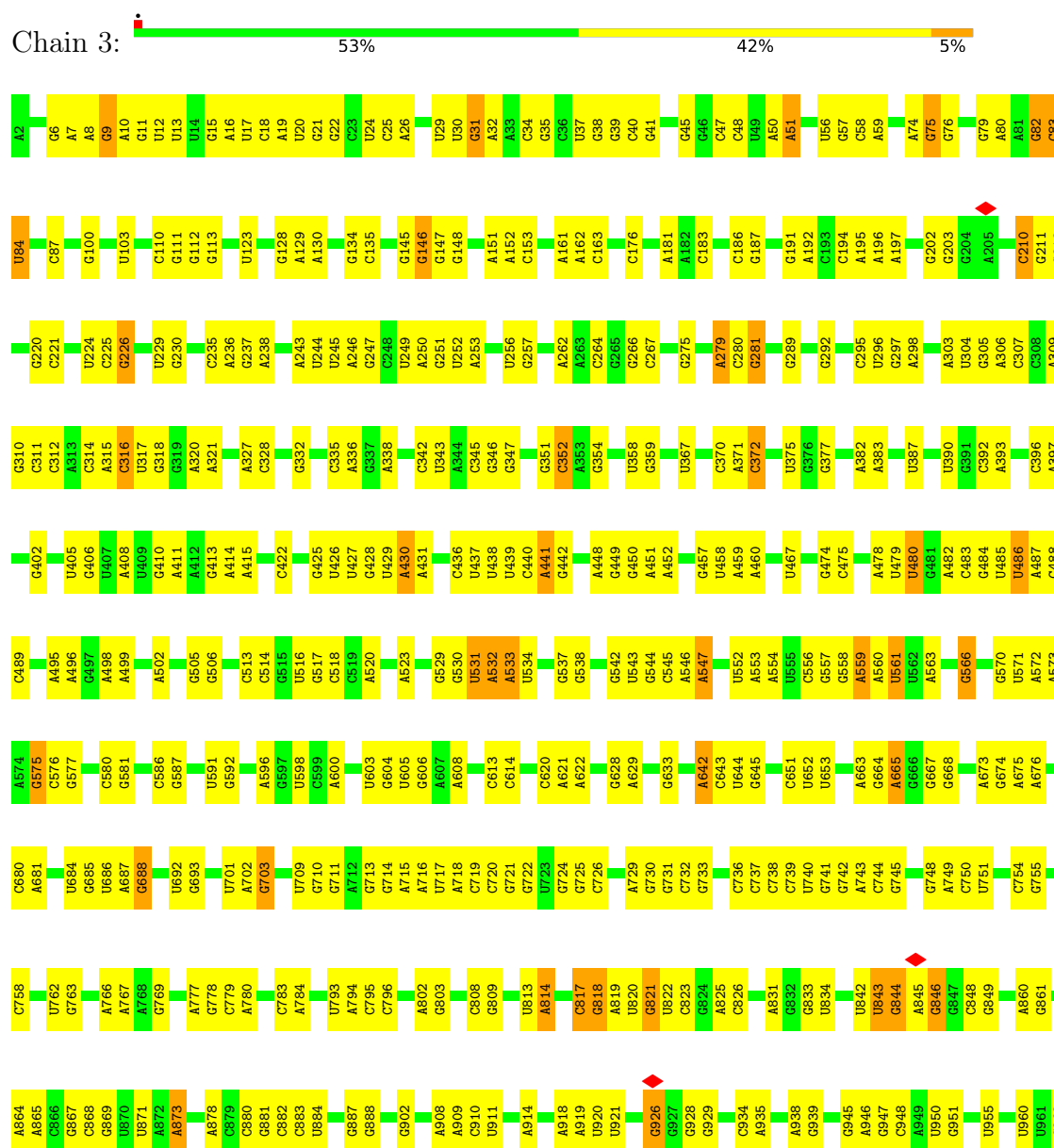
- Molecule 50: 30S ribosomal protein S21

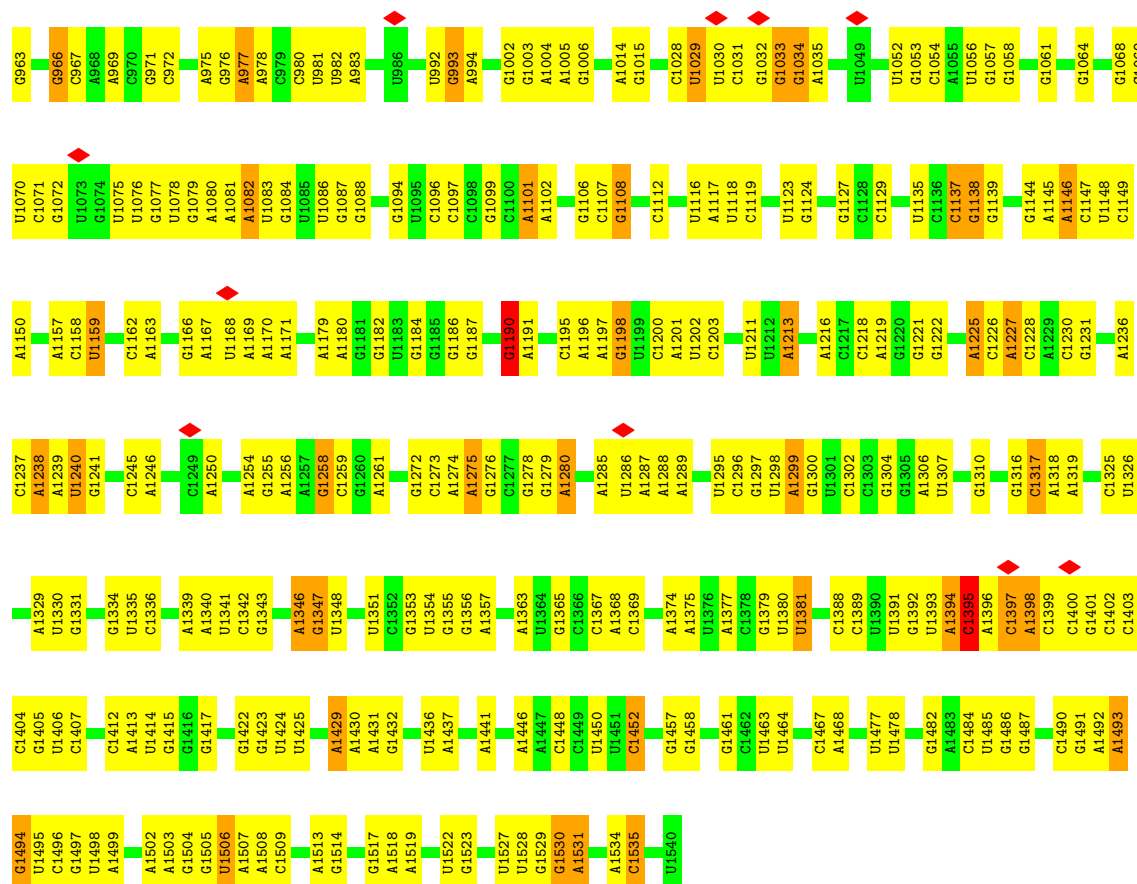


- Molecule 51: 50S ribosomal protein L1



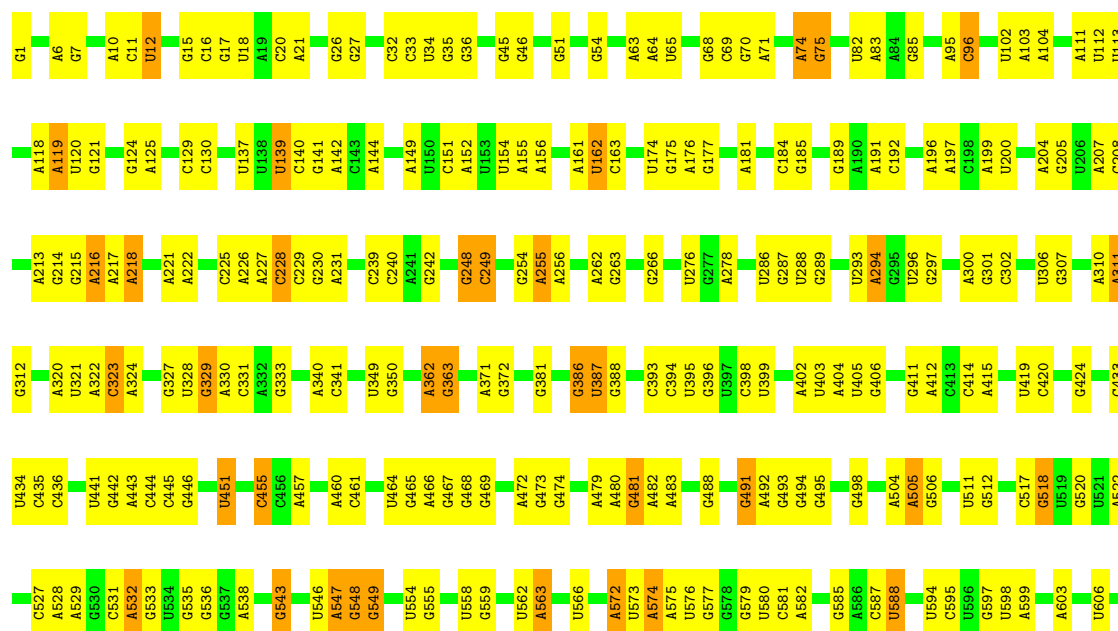
• Molecule 52: 16S ribosomal RNA



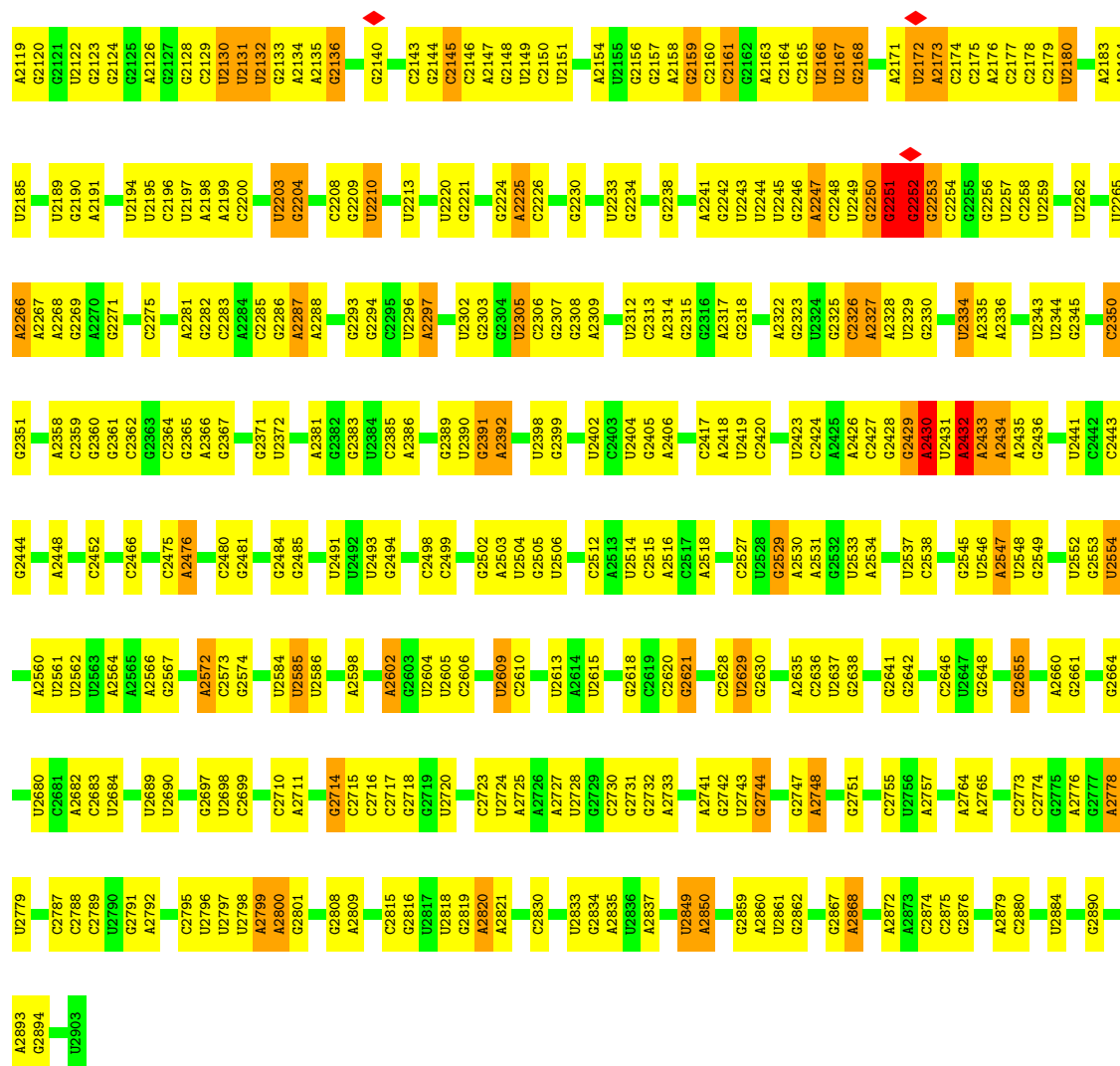


• Molecule 53: 23S ribosomal RNA

Chain 1: 57% 36% 6%

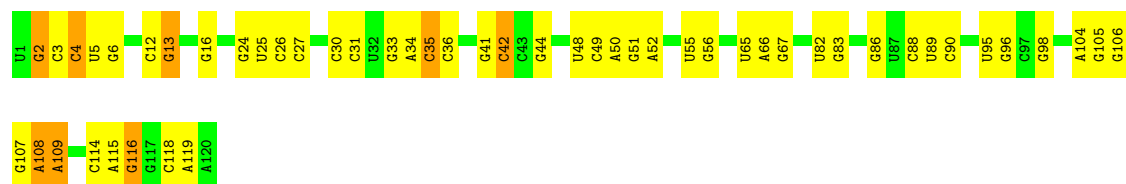


G2040	G1949	C1727	G1510	U1394	A1285	G1182	G1093	C1007	A910	C814	U714	A609
U2041	G1950	C1728	A1515	C1398	A1286	U1183	A1096	A1008	A917	C815	A715	C610
A2042	U1955	U1729	A1522	U1412	C1289	G1184	G1097	A1009	A917	C816	U720	C611
C2043	U1956	C1730	U1523	A1413	C1290	G1185	A1098	A1010	G923	C817	A721	G612
G2049	C1957	G1738	G1524	G1416	G1295	G1186	G1099	G1011	U929	G818	G726	A616
C2050	U1963	A1744	A1525	C1417	G1300	U1203	C1102	C1013	U932	U827	A727	G617
A2051	G1964	A1745	C1526	A1418	A1301	G1187	A1103	A1020	U932	U828	G728	G618
A2052	C1965	A1746	G1527	A1419	A1302	G1188	A1104	A1021	U933	A829	G729	G619
C2055	U1966	U1747	A1528	A1420	A1303	U1189	U1105	G1022	C935	A830	A730	G620
G2056	C1967	C1748	G1529	A1421	C1305	U1190	U1106	U1023	A936	G831	U737	G622
A2060	U1970	U1751	A1535	G1422	A1308	G1210	U1107	C1023	G940	U832	G738	A627
G2061	C1971	C1752	C1536	G1423	A1309	C1211	U1108	G1026	G940	A833	A739	A633
A2062	G1972	G1753	G1537	A1424	A1310	G1212	U1109	A1027	U941	U839	C740	C634
C2066	A1978	A1754	U1542	G1425	C1318	G1213	G1110	A1028	G942	G841	A742	C635
G2067	C1985	U1757	G1543	G1432	U1319	U1219	G1111	A1029	C943	A845	A743	G636
C2068	C1986	U1758	C1550	A1433	C1320	U1222	G1112	A1032	A945	U846	U744	A637
G2069	U1991	C1764	A1551	A1434	U1326	G1223	G1122	U1033	A947	U847	G745	A644
A2070	C1992	C1765	G1555	G1435	A1327	G1224	G1125	G1034	C948	U848	U746	C645
C2071	C1993	A1773	U1556	G1436	U1329	G1225	A1126	U1035	C949	U850	C747	C646
G2072	C1994	C1774	G1557	U1437	C1330	G1229	U1130	G1036	G953	A752	G748	U646
C2073	U1998	U1775	C1558	U1438	G1331	A1230	G1131	C1045	G954	U857	A752	G651
U2074	C1996	G1776	U1559	G1443	G1332	U1443	U1132	A1046	G955	G858	U760	U657
C2075	C1997	A1777	G1560	G1444	G1333	G1236	A1133	G1047	U954	G859	A781	A677
A2076	U1999	U1778	U1563	C1447	G1341	G1245	A1134	A1054	C957	U860	A782	A677
C2077	C2002	A1780	C1564	G1448	A1342	A1246	C1135	G1055	U958	G864	A783	G678
G2078	G2003	U1781	C1565	G1449	G1343	G1247	G1138	U1058	A959	G865	G771	A670
A2080	C2004	U1786	U1566	G1450	A1344	A1248	G1139	G1059	A960	U871	G774	A666
U2081	A2005	A1789	A1569	G1451	C1345	G1249	C1140	G1060	C962	U872	G775	U667
C2086	G2010	C1790	U1570	G1452	U1346	G1250	U1141	U1061	U967	U873	G776	G668
G2087	U2011	U1796	A1571	G1453	A1354	G1251	A1142	G1062	U967	G874	U779	G670
A2090	C2012	G1797	U1583	G1454	G1355	A1253	A1143	G1063	C968	C875	A781	C671
C2091	U2016	U1798	U1584	C1461	G1356	G1254	A1151	C1064	G969	A878	G780	C672
G2093	U2017	C1800	C1585	U1468	C1357	U1255	C1152	U1065	U970	G879	A782	A677
A2094	G2018	A1801	U1594	U1475	G1358	G1256	C1153	U1066	G971	G880	A783	G678
C2101	A2019	A1802	C1595	G1476	C1359	G1257	A1156	A1067	A973	G881	G784	C679
G2102	C2021	A1803	U1596	U1476	G1364	U1258	U1157	G1068	G974	G882	G785	C680
C2103	U2022	C1806	G1601	G1479	A1365	G1259	G1162	A1069	A975	C885	C786	G681
G2104	G2023	G1807	U1602	C1480	A1366	U1263	G1167	A1070	A983	A886	C787	G682
U2105	U1931	A1808	A1603	U1481	G1367	U1268	C1168	C1072	C984	U887	C796	U686
C2106	C2025	A1809	U1608	G1482	G1368	A1268	G1169	G1075	C985	C888	G797	C687
G2107	U1934	A1810	A1609	A1490	C1370	G1271	U1172	C1079	C986	C889	A804	G690
C2110	G1935	G1811	C1610	U1498	G1371	A1272	U1173	A1080	C989	C890	G805	C691
U2111	A1936	C1816	C1611	C1498	U1378	G1277	A1174	U1083	A989	G891	C806	U694
G2112	C1937	U1714	A1614	G1501	A1379	C1278	G1175	U1084	C992	U894	U807	U694
A2113	A1938	G1715	C1615	G1501	U1379	G1279	U1176	A1085	C995	U895	G808	U703
C2114	U1943	U1818	C1616	U1506	A1383	G1280	G1177	A1085	A996	A896	G809	G704
G2115	U1944	U1825	C1617	U1507	A1384	G1281	C1178	A1088	A1000	C897	U810	U703
C2116	C1947	G1826	U1725	C1507	C1386	G1282	U1179	A1088	A1001	C898	U811	G712
A2117	G1948	U1827	A1508	A1387	A1387	U1283	U1180	C1092	A1000	A899	C812	G713
U2118		G1828	C1638	A1509		A1284	U1181			A900	U813	



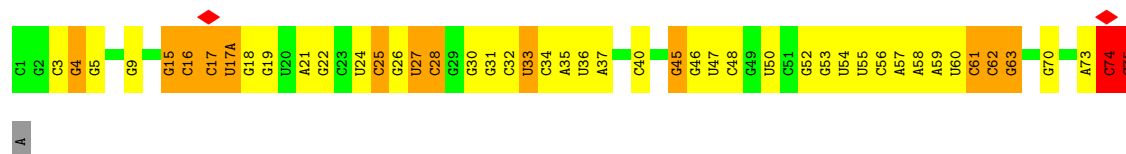
• Molecule 54: 5S ribosomal RNA

Chain 2: 58% 36% 7%

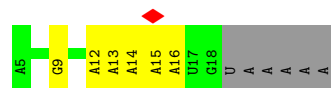


• Molecule 55: tRNAfMet

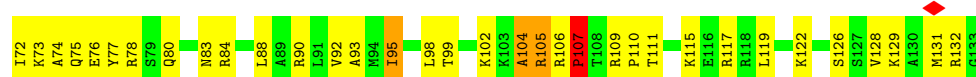
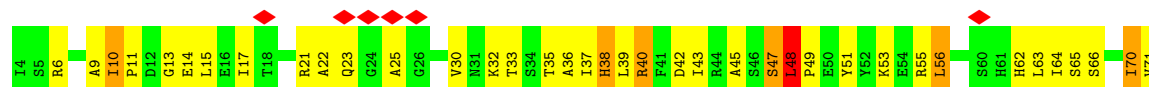
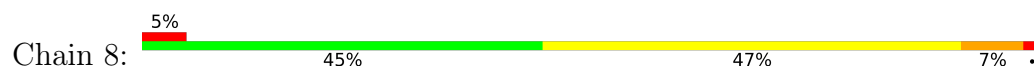
Chain 5: 38% 42% 17%



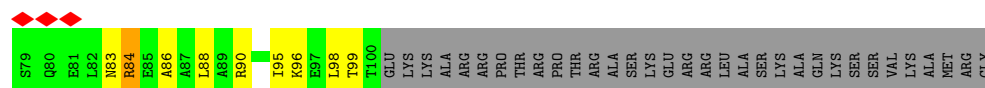
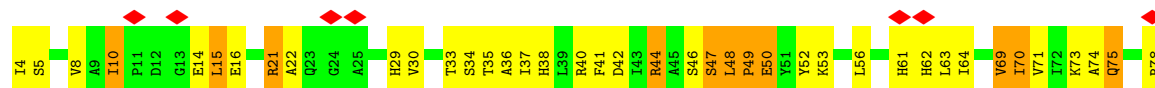
- Molecule 56: mRNA



- Molecule 57: Peptidyl-tRNA hydrolase ArfB



- Molecule 57: Peptidyl-tRNA hydrolase ArfB



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	5711	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	49.6	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	11.467	Depositor
Minimum map value	-5.886	Depositor
Average map value	0.100	Depositor
Map value standard deviation	0.580	Depositor
Recommended contour level	0.75	Depositor
Map size ($\text{\AA}$)	375.12003, 375.12003, 375.12003	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.042, 1.042, 1.042	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	b	0.30	0/2122	0.96	10/2852 (0.4%)
2	c	0.31	0/1586	0.89	3/2134 (0.1%)
3	d	0.31	0/1571	0.94	4/2113 (0.2%)
4	e	0.34	0/1435	1.06	18/1926 (0.9%)
5	f	0.33	0/1343	0.91	2/1816 (0.1%)
6	g	0.36	0/1122	1.07	10/1515 (0.7%)
7	h	0.38	0/1001	1.19	15/1350 (1.1%)
8	i	0.42	0/1046	1.05	8/1410 (0.6%)
9	j	0.31	0/1152	0.92	4/1551 (0.3%)
10	k	0.30	0/948	0.98	5/1268 (0.4%)
11	l	0.32	0/1054	0.94	4/1403 (0.3%)
12	m	0.32	0/1093	0.90	3/1460 (0.2%)
13	n	0.30	0/974	0.93	3/1301 (0.2%)
14	o	0.31	0/902	0.95	3/1209 (0.2%)
15	p	0.31	0/929	0.91	3/1242 (0.2%)
16	q	0.30	0/960	0.94	4/1278 (0.3%)
17	r	0.34	0/829	0.95	3/1107 (0.3%)
18	s	0.30	0/864	0.88	1/1156 (0.1%)
19	t	0.29	0/745	0.93	3/994 (0.3%)
20	u	0.33	0/788	0.95	5/1051 (0.5%)
21	v	0.34	0/766	0.90	3/1025 (0.3%)
22	w	0.31	0/582	0.97	2/769 (0.3%)
23	x	0.29	0/635	0.87	3/848 (0.4%)
24	y	0.30	0/510	0.96	3/677 (0.4%)
25	z	0.33	0/453	0.79	0/605
26	B	0.32	0/450	0.93	2/599 (0.3%)
27	C	0.35	0/417	0.89	1/554 (0.2%)
28	D	0.33	0/380	0.92	2/498 (0.4%)
29	E	0.31	0/513	0.89	1/676 (0.1%)
30	F	0.29	0/303	0.87	0/397
31	G	0.32	0/1788	0.89	3/2408 (0.1%)
32	H	0.38	0/1652	0.95	6/2225 (0.3%)
33	I	0.34	0/1665	1.04	12/2227 (0.5%)
34	J	0.43	1/1170 (0.1%)	1.07	4/1573 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	K	0.38	0/836	1.10	8/1128 (0.7%)
36	L	0.35	0/1196	0.96	3/1602 (0.2%)
37	M	0.34	0/989	1.01	4/1326 (0.3%)
38	N	0.38	0/1034	1.00	5/1375 (0.4%)
39	O	0.39	0/797	0.99	6/1077 (0.6%)
40	P	0.37	0/886	1.00	4/1195 (0.3%)
41	Q	0.34	0/969	1.02	4/1300 (0.3%)
42	R	0.38	0/893	1.02	2/1193 (0.2%)
43	S	0.34	0/817	1.06	6/1088 (0.6%)
44	T	0.33	0/722	1.03	7/964 (0.7%)
45	U	0.34	0/659	0.90	2/884 (0.2%)
46	V	0.35	0/658	0.91	1/881 (0.1%)
47	W	0.37	0/545	1.00	5/731 (0.7%)
48	X	0.40	0/653	0.92	2/877 (0.2%)
49	Y	0.32	0/671	1.03	3/888 (0.3%)
50	Z	0.36	0/551	0.94	0/728
51	a	0.38	0/1033	1.05	6/1387 (0.4%)
52	3	0.43	0/36963	0.48	2/57662 (0.0%)
53	1	0.42	0/69790	0.48	7/108873 (0.0%)
54	2	0.43	0/2872	0.46	0/4479
55	5	0.53	0/1807	0.62	2/2816 (0.1%)
56	4	0.51	0/348	0.51	0/542
57	8	0.39	0/1028	1.12	11/1378 (0.8%)
57	9	0.38	0/764	1.12	9/1031 (0.9%)
All	All	0.40	1/161229 (0.0%)	0.66	252/240622 (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
34	J	0	1
53	1	1	1
All	All	1	2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	J	55	VAL	C-N	5.37	1.40	1.34

All (252) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	K	82	ASP	N-CA-C	10.29	122.50	111.28
43	S	21	ALA	N-CA-C	-9.99	101.87	114.56
42	R	107	THR	N-CA-C	-9.57	99.15	112.45
57	9	44	ARG	N-CA-C	9.12	121.30	111.36
57	9	48	LEU	CA-C-N	8.96	131.04	119.84
57	9	48	LEU	C-N-CA	8.96	131.04	119.84
36	L	49	LEU	N-CA-C	-8.84	103.08	114.04
34	J	54	GLU	CA-C-N	8.83	125.80	120.24
34	J	54	GLU	C-N-CA	8.83	125.80	120.24
7	h	18	VAL	N-CA-C	8.74	118.64	110.42
53	l	2251	G	C2'-C3'-O3'	8.62	126.63	113.70
51	a	18	THR	N-CA-C	-8.50	101.59	114.16
1	b	225	ASN	CA-C-N	8.24	130.14	119.84
1	b	225	ASN	C-N-CA	8.24	130.14	119.84
51	a	161	VAL	N-CA-C	8.15	121.26	108.87
49	Y	70	LYS	N-CA-C	7.86	120.54	111.11
16	q	70	GLN	N-CA-C	-7.80	103.56	113.23
33	I	78	ALA	N-CA-C	-7.78	102.42	112.23
23	x	42	GLU	N-CA-C	-7.75	104.98	114.75
7	h	42	ARG	N-CA-C	-7.75	103.62	113.23
6	g	58	LEU	N-CA-C	-7.73	103.30	112.89
19	t	10	VAL	N-CA-C	7.71	118.48	110.62
55	5	75	C	C5'-C4'-O4'	7.63	120.55	109.10
57	8	115	LYS	N-CA-C	-7.62	103.81	113.72
33	I	190	LEU	N-CA-C	-7.55	103.14	113.18
51	a	187	GLU	N-CA-C	-7.55	104.57	114.31
57	8	10	ILE	CA-C-N	7.52	129.24	119.84
57	8	10	ILE	C-N-CA	7.52	129.24	119.84
17	r	50	GLY	N-CA-C	-7.50	95.41	113.18
3	d	82	GLY	N-CA-C	7.47	124.27	111.19
33	I	29	THR	N-CA-C	-7.44	104.71	114.31
24	y	14	LEU	N-CA-C	-7.41	102.89	112.23
9	j	119	PHE	N-CA-C	-7.33	104.14	113.23
57	9	21	ARG	N-CA-C	7.19	120.38	110.24
4	e	123	GLY	N-CA-C	-7.19	104.81	114.95
4	e	57	ALA	N-CA-C	-7.06	104.47	113.23
44	T	49	HIS	N-CA-C	7.00	118.80	111.03
3	d	198	GLU	N-CA-C	-6.92	104.98	113.50
4	e	164	GLU	N-CA-C	-6.92	104.31	112.89
6	g	61	VAL	N-CA-C	-6.91	103.75	110.72
7	h	118	ILE	CA-C-N	-6.87	111.25	119.84
7	h	118	ILE	C-N-CA	-6.87	111.25	119.84
23	x	67	LEU	N-CA-C	-6.79	103.96	111.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	l	2251	G	C4'-C3'-O3'	6.72	123.07	113.00
47	W	53	GLN	N-CA-C	-6.67	103.48	111.69
51	a	5	THR	N-CA-C	6.67	118.94	107.93
44	T	18	ALA	N-CA-C	-6.67	104.96	113.23
6	g	59	ALA	N-CA-C	-6.66	104.64	112.89
7	h	75	ALA	N-CA-C	6.63	118.59	111.36
18	s	69	LEU	N-CA-C	6.63	119.59	110.24
40	P	46	ALA	N-CA-C	-6.61	105.75	113.88
1	b	71	ASP	N-CA-C	6.60	119.94	110.10
13	n	71	ARG	N-CA-C	6.58	120.63	112.47
41	Q	58	ASN	N-CA-C	-6.57	104.49	113.30
43	S	49	THR	N-CA-C	-6.57	104.20	111.82
32	H	191	THR	N-CA-C	-6.56	105.24	113.18
32	H	137	VAL	N-CA-C	6.56	116.72	110.42
7	h	119	PRO	N-CA-C	-6.55	98.98	112.47
31	G	14	HIS	CA-C-N	6.54	130.44	120.82
31	G	14	HIS	C-N-CA	6.54	130.44	120.82
20	u	92	VAL	N-CA-C	6.54	118.10	109.21
47	W	65	SER	N-CA-C	6.52	120.55	112.47
14	o	116	GLN	N-CA-C	6.50	119.03	108.63
46	V	63	CYS	N-CA-C	6.48	115.94	108.49
44	T	82	GLU	N-CA-C	-6.47	105.55	113.50
47	W	69	TYR	N-CA-C	-6.47	103.92	110.97
45	U	69	ASP	N-CA-C	6.44	117.99	110.97
4	e	137	PHE	CA-C-N	6.42	126.34	119.28
4	e	137	PHE	C-N-CA	6.42	126.34	119.28
44	T	57	ARG	N-CA-C	-6.40	104.23	111.14
1	b	12	ARG	N-CA-C	-6.38	105.42	113.72
38	N	103	VAL	N-CA-C	-6.36	107.29	113.53
28	D	29	GLN	N-CA-C	-6.36	103.86	111.69
7	h	43	LYS	N-CA-C	-6.36	104.22	112.23
8	i	107	GLU	N-CA-C	-6.36	104.43	111.36
24	y	45	GLN	N-CA-C	6.35	118.20	111.28
26	B	53	VAL	N-CA-C	6.34	118.97	111.05
2	c	132	ALA	N-CA-C	-6.33	104.17	112.41
38	N	20	ILE	N-CA-C	6.32	117.21	107.99
57	8	102	LYS	N-CA-C	6.31	119.77	110.30
13	n	68	ALA	N-CA-C	-6.29	104.43	111.28
7	h	78	GLY	CA-C-N	6.28	127.69	119.84
7	h	78	GLY	C-N-CA	6.28	127.69	119.84
43	S	84	ARG	N-CA-C	-6.27	104.33	112.23
40	P	125	LYS	N-CA-C	6.26	118.21	109.31

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	g	9	VAL	N-CA-C	6.25	122.35	109.34
38	N	128	LYS	N-CA-C	6.25	117.97	111.03
4	e	104	THR	N-CA-C	6.23	119.04	111.82
31	G	167	HIS	N-CA-C	-6.21	106.30	114.31
3	d	41	GLN	N-CA-C	-6.19	106.69	114.56
41	Q	54	VAL	N-CA-C	6.19	117.12	107.28
40	P	30	ILE	N-CA-C	6.17	117.70	109.37
47	W	70	THR	N-CA-C	-6.17	100.37	109.81
7	h	78	GLY	N-CA-C	6.14	124.86	112.34
33	I	166	LYS	CA-C-N	6.13	126.16	119.90
33	I	166	LYS	C-N-CA	6.13	126.16	119.90
6	g	64	ALA	N-CA-C	-6.09	105.34	112.89
8	i	91	LYS	CA-C-N	6.09	127.45	119.84
8	i	91	LYS	C-N-CA	6.09	127.45	119.84
4	e	171	ALA	N-CA-C	-6.08	105.35	112.89
6	g	44	ILE	N-CA-C	-6.06	104.40	111.00
38	N	111	GLU	N-CA-C	6.04	118.12	110.33
57	9	48	LEU	N-CA-C	-6.04	96.46	109.81
29	E	58	ILE	N-CA-C	-6.02	104.88	113.07
15	p	102	ARG	N-CA-C	6.00	119.36	109.94
53	l	2432	A	O4'-C4'-C3'	-5.99	98.01	104.00
4	e	174	PHE	CA-C-N	5.98	127.32	119.84
4	e	174	PHE	C-N-CA	5.98	127.32	119.84
47	W	62	ARG	N-CA-C	-5.94	104.92	111.82
6	g	101	ASP	N-CA-C	-5.91	104.78	112.23
42	R	59	VAL	N-CA-C	5.91	116.65	110.62
8	i	21	PRO	N-CA-C	5.89	117.89	110.70
41	Q	113	ARG	N-CA-C	5.89	120.07	113.01
9	j	94	ALA	N-CA-C	5.88	117.49	111.14
8	i	75	ALA	N-CA-C	5.85	118.16	111.02
20	u	56	GLY	N-CA-C	5.85	120.25	112.65
49	Y	58	ASP	N-CA-C	-5.84	104.99	111.36
11	l	115	GLU	N-CA-C	5.82	119.14	111.28
36	L	22	LEU	N-CA-C	-5.80	105.69	112.89
44	T	53	ARG	N-CA-C	-5.80	105.03	111.36
14	o	82	ALA	N-CA-C	-5.79	105.05	111.36
4	e	94	ARG	N-CA-C	-5.78	106.06	113.23
57	8	95	ILE	N-CA-C	5.78	115.97	110.42
41	Q	110	LYS	N-CA-C	5.77	117.25	111.07
1	b	145	MET	N-CA-C	-5.77	106.16	113.43
15	p	111	GLU	N-CA-C	5.76	117.75	110.33
16	q	24	TYR	N-CA-C	5.75	118.79	110.28

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	D	20	ALA	N-CA-C	-5.74	105.54	112.54
32	H	148	ILE	N-CA-C	5.74	115.41	108.06
4	e	173	ASP	N-CA-C	5.73	119.30	111.39
14	o	86	GLY	N-CA-C	5.72	123.34	115.27
57	9	10	ILE	N-CA-C	5.72	113.55	108.63
15	p	92	ARG	N-CA-C	5.71	120.04	111.81
33	I	13	ARG	N-CA-C	-5.70	105.15	111.71
16	q	90	ASP	N-CA-C	5.70	117.41	110.41
57	8	38	HIS	N-CA-C	5.69	119.00	109.95
11	l	40	SER	N-CA-C	-5.69	104.90	113.89
37	M	44	PHE	N-CA-C	-5.68	104.35	112.13
9	j	40	HIS	N-CA-C	-5.66	106.36	113.72
43	S	13	VAL	N-CA-C	5.66	117.17	111.00
2	c	184	ARG	N-CA-C	-5.65	106.05	113.17
19	t	74	ILE	N-CA-C	5.65	116.60	110.21
4	e	19	PHE	N-CA-C	-5.65	104.60	113.02
22	w	63	VAL	N-CA-C	5.64	116.71	108.53
4	e	122	ASP	N-CA-C	5.64	117.10	111.07
39	O	42	LEU	CA-C-N	5.64	126.89	119.84
39	O	42	LEU	C-N-CA	5.64	126.89	119.84
57	8	6	ARG	N-CA-C	5.62	117.94	107.99
35	K	46	GLN	N-CA-C	5.62	117.55	110.24
37	M	26	MET	N-CA-C	5.62	114.77	108.25
10	k	112	PHE	N-CA-C	-5.62	103.81	111.56
33	I	62	ARG	N-CA-C	5.61	119.22	112.38
35	K	85	ILE	N-CA-C	5.59	116.53	108.48
7	h	106	PHE	N-CA-C	5.58	122.69	110.80
36	L	119	LEU	N-CA-C	-5.58	105.34	111.82
38	N	57	VAL	N-CA-C	5.58	120.95	109.34
10	k	110	GLU	N-CA-C	5.57	122.66	110.80
26	B	8	THR	N-CA-C	5.56	117.08	110.19
34	J	22	LYS	CA-C-N	5.56	132.15	121.54
34	J	22	LYS	C-N-CA	5.56	132.15	121.54
35	K	31	GLY	N-CA-C	-5.55	108.04	115.32
43	S	47	LEU	N-CA-C	-5.55	106.01	112.89
6	g	63	ALA	N-CA-C	-5.54	105.25	112.23
57	8	40	ARG	N-CA-C	5.54	117.99	110.35
17	r	53	PHE	N-CA-C	-5.52	103.79	111.52
4	e	172	PHE	N-CA-C	-5.52	106.43	112.72
57	9	75	GLN	N-CA-C	5.52	120.50	113.55
37	M	67	GLY	N-CA-C	-5.49	107.52	114.16
32	H	75	VAL	N-CA-C	-5.49	107.09	111.81

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	I	84	ASN	N-CA-C	-5.48	103.86	110.88
35	K	24	ARG	N-CA-C	-5.48	105.33	112.23
7	h	65	GLU	N-CA-C	-5.47	106.56	113.18
45	U	57	ILE	N-CA-C	5.47	115.56	110.42
10	k	109	SER	N-CA-C	5.47	119.21	107.67
57	9	16	GLU	N-CA-C	5.47	117.22	108.41
8	i	129	GLU	N-CA-C	-5.45	105.50	111.82
7	h	76	PHE	N-CA-C	5.42	118.11	111.82
10	k	57	VAL	N-CA-C	5.41	115.88	107.28
32	H	44	LYS	N-CA-C	5.39	119.81	112.04
49	Y	15	LYS	N-CA-C	-5.39	105.48	111.36
52	3	1190	G	C2'-C3'-O3'	5.39	117.58	109.50
53	1	1178	C	N1-C1'-C2'	5.37	120.05	112.00
39	O	22	THR	N-CA-C	-5.35	105.61	111.82
51	a	54	LYS	N-CA-C	-5.33	102.01	109.69
37	M	14	ARG	N-CA-C	-5.33	106.28	112.89
9	j	71	ASP	N-CA-C	5.33	121.52	114.12
35	K	39	LEU	N-CA-C	-5.33	105.84	114.09
12	m	91	TYR	N-CA-C	5.32	115.31	108.34
33	I	28	ASP	N-CA-C	5.32	122.12	110.80
33	I	82	LYS	N-CA-C	5.32	116.95	110.41
39	O	81	GLU	N-CA-C	5.31	117.07	111.28
7	h	19	ALA	N-CA-C	5.29	117.46	111.11
11	l	105	ILE	N-CA-C	5.28	116.19	108.58
13	n	22	ARG	N-CA-C	-5.28	105.44	111.14
33	I	26	ALA	N-CA-C	-5.28	106.61	113.16
17	r	36	ALA	N-CA-C	-5.27	106.71	112.72
3	d	140	ASP	N-CA-C	-5.27	106.36	112.89
5	f	60	GLY	N-CA-C	-5.26	107.25	113.99
20	u	30	SER	N-CA-C	-5.26	105.14	112.30
8	i	88	GLY	N-CA-C	5.26	117.94	110.74
52	3	1395	C	N1-C1'-C2'	5.26	119.89	112.00
5	f	44	HIS	N-CA-C	-5.25	104.93	112.13
39	O	70	HIS	N-CA-C	5.25	118.11	109.76
4	e	10	GLU	N-CA-C	5.25	116.81	111.14
12	m	111	GLU	N-CA-C	5.25	116.69	111.07
53	1	2252	G	N9-C1'-C2'	5.24	119.86	112.00
20	u	73	ASN	N-CA-C	5.22	116.77	111.14
32	H	67	ILE	N-CA-C	5.19	115.44	108.17
53	1	1020	A	C2'-C3'-O3'	5.18	117.27	109.50
44	T	12	SER	N-CA-C	5.17	117.33	111.02
20	u	58	VAL	N-CA-C	5.17	116.68	109.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	8	56	LEU	N-CA-C	-5.17	107.14	113.50
35	K	54	LEU	N-CA-C	5.17	121.80	110.80
23	x	70	LEU	N-CA-C	-5.16	105.83	111.82
40	P	69	CYS	N-CA-C	-5.16	106.99	113.28
4	e	52	ALA	N-CA-C	-5.16	105.84	111.82
6	g	104	THR	N-CA-C	-5.16	106.50	112.89
21	v	40	ILE	N-CA-C	5.15	115.38	108.17
55	5	74	C	N1-C1'-C2'	5.15	119.73	112.00
39	O	100	ILE	N-CA-C	5.12	116.06	108.23
57	8	13	GLY	N-CA-C	-5.12	107.63	115.00
11	l	59	ARG	N-CA-C	-5.11	106.97	114.39
1	b	93	VAL	N-CA-C	5.11	115.66	108.36
48	X	50	VAL	N-CA-C	5.10	116.15	109.21
1	b	129	LEU	CA-C-N	5.10	126.22	119.84
1	b	129	LEU	C-N-CA	5.10	126.22	119.84
1	b	259	ASN	N-CA-C	-5.10	107.61	113.88
27	C	50	GLU	N-CA-C	5.10	117.61	109.81
21	v	52	ALA	N-CA-C	-5.09	105.81	112.23
8	i	86	LYS	N-CA-C	5.09	119.33	113.38
7	h	125	ARG	N-CA-C	5.07	117.59	110.23
16	q	111	LYS	N-CA-C	-5.06	105.85	111.36
21	v	54	ALA	N-CA-C	5.06	117.53	111.71
57	9	84	ARG	N-CA-C	-5.05	105.96	111.82
10	k	55	GLY	N-CA-C	5.05	121.78	115.21
1	b	30	ALA	N-CA-C	5.05	119.61	112.75
51	a	43	ASP	N-CA-C	5.04	116.70	108.63
22	w	22	PHE	N-CA-C	5.03	116.60	110.41
48	X	19	GLU	N-CA-C	-5.03	105.88	111.36
19	t	6	ARG	N-CA-C	-5.03	105.51	111.69
43	S	7	ALA	N-CA-C	-5.03	105.90	112.23
4	e	100	GLU	N-CA-C	-5.02	105.89	111.36
33	I	163	GLN	N-CA-C	-5.02	107.00	112.72
35	K	62	MET	N-CA-C	5.02	119.00	112.13
53	1	2430	A	N9-C1'-C2'	5.02	121.53	114.00
57	8	48	LEU	N-CA-C	5.02	120.89	109.81
6	g	139	PHE	N-CA-C	5.01	118.13	110.36
2	c	152	PRO	N-CA-C	-5.01	106.69	113.40
12	m	110	GLU	N-CA-C	5.01	119.64	111.37
44	T	51	SER	N-CA-C	-5.01	105.92	112.23
4	e	166	ARG	N-CA-C	-5.00	105.92	112.23
24	y	8	GLU	N-CA-C	5.00	116.78	110.33

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
53	1	2251	G	C3'

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
53	1	2432	A	Sidechain
34	J	88	HIS	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	b	2083	0	2157	81	0
2	c	1565	0	1616	56	0
3	d	1552	0	1619	42	0
4	e	1411	0	1447	58	0
5	f	1323	0	1374	25	0
6	g	1111	0	1148	44	0
7	h	988	0	1025	54	0
8	i	1032	0	1088	38	0
9	j	1129	0	1162	37	0
10	k	939	0	1012	41	0
11	l	1045	0	1117	45	0
12	m	1074	0	1157	39	0
13	n	961	0	1000	31	0
14	o	892	0	923	35	0
15	p	917	0	965	43	0
16	q	947	0	1022	31	0
17	r	816	0	839	28	0
18	s	857	0	922	34	0
19	t	739	0	807	24	0
20	u	780	0	834	33	0
21	v	753	0	780	22	0
22	w	575	0	592	14	0
23	x	625	0	655	15	0
24	y	509	0	543	13	0
25	z	449	0	491	16	0
26	B	444	0	461	22	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	C	410	0	440	10	0
28	D	377	0	418	16	0
29	E	504	0	574	21	0
30	F	302	0	343	9	0
31	G	1757	0	1787	38	0
32	H	1625	0	1699	60	0
33	I	1643	0	1710	72	0
34	J	1157	0	1199	39	0
35	K	818	0	808	38	0
36	L	1182	0	1240	44	0
37	M	979	0	1034	51	0
38	N	1022	0	1070	74	0
39	O	787	0	828	38	0
40	P	870	0	878	44	0
41	Q	955	0	1019	50	0
42	R	884	0	944	40	0
43	S	805	0	847	38	0
44	T	714	0	737	34	0
45	U	649	0	666	31	0
46	V	649	0	691	40	0
47	W	536	0	552	13	0
48	X	638	0	665	25	0
49	Y	665	0	714	33	0
50	Z	545	0	579	36	0
51	a	1026	0	1092	45	0
52	3	33012	0	16619	739	0
53	1	62311	0	31346	1044	0
54	2	2568	0	1303	41	0
55	5	1618	0	826	85	0
56	4	309	0	153	11	0
57	8	1016	0	1067	84	0
57	9	754	0	773	43	0
All	All	148603	0	101377	3198	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 13.

All (3198) 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)
38:N:128:LYS:NZ	55:5:31:G:H5''	1.57	1.17

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2585:U:H4'	53:1:2586:U:H5'	1.22	1.16
55:5:62:C:H2'	55:5:63:G:H5''	1.22	1.12
53:1:2432:A:H1'	55:5:74:C:H2'	1.26	1.11
40:P:126:ARG:HA	52:3:796:C:H5''	1.33	1.09
53:1:45:G:H5''	53:1:46:G:H5'	1.35	1.07
8:i:21:PRO:HG2	8:i:22:PRO:HD3	1.33	1.06
53:1:2431:U:H2'	55:5:75:C:H1'	1.07	1.05
33:I:8:LEU:HD22	52:3:429:U:H5'	1.40	1.04
52:3:1397:C:H5'	52:3:1398:A:H4'	1.39	1.03
12:m:45:GLN:HE21	53:1:2485:G:H5''	1.25	1.02
52:3:1107:C:H3'	52:3:1108:G:H5''	1.43	1.00
52:3:225:C:H2'	52:3:226:G:H5''	1.41	0.99
53:1:2092:U:H4'	53:1:2093:G:H5''	1.42	0.98
53:1:1300:G:H4'	53:1:1301:A:H5''	1.45	0.98
50:Z:44:ARG:HH22	52:3:722:G:H5''	1.29	0.98
8:i:89:SER:HB3	53:1:1064:C:H4'	1.45	0.97
57:8:47:SER:O	57:8:48:LEU:HG	1.63	0.97
52:3:1394:A:H61	52:3:1508:A:H4'	1.28	0.96
53:1:2432:A:O5'	55:5:75:C:H5'	1.66	0.95
7:h:117:LEU:O	7:h:118:ILE:HG12	1.66	0.95
32:H:162:ALA:HB2	52:3:1056:U:H5'	1.45	0.95
50:Z:44:ARG:NH2	52:3:722:G:H5''	1.81	0.95
52:3:530:G:H1	57:8:119:LEU:HG	1.31	0.95
55:5:62:C:C2'	55:5:63:G:H5''	1.96	0.95
15:p:102:ARG:HD3	15:p:106:ALA:HB1	1.49	0.94
52:3:1341:U:H5''	55:5:32:C:H5'	1.45	0.94
53:1:2431:U:C2'	55:5:75:C:H1'	1.98	0.93
38:N:128:LYS:HZ1	55:5:31:G:H5''	1.28	0.93
29:E:31:ILE:HG12	29:E:34:LYS:HE2	1.51	0.93
6:g:9:VAL:HG13	6:g:10:ALA:H	1.31	0.92
53:1:1060:U:H4'	53:1:1061:U:H5'	1.49	0.92
53:1:2431:U:H2'	55:5:75:C:C1'	1.98	0.92
7:h:60:LEU:HD12	7:h:64:VAL:HG21	1.51	0.92
12:m:45:GLN:HE21	53:1:2485:G:C5'	1.84	0.91
7:h:55:VAL:HA	53:1:1084:A:H5''	1.50	0.91
7:h:119:PRO:HB3	7:h:126:LEU:HD11	1.52	0.91
52:3:1081:A:HO2'	52:3:1082:A:H8	0.94	0.91
40:P:43:TRP:HE1	52:3:686:U:H4'	1.37	0.90
34:J:25:LYS:HE2	52:3:1069:C:H5''	1.51	0.90
39:O:48:ARG:HD2	52:3:1368:A:H4'	1.52	0.90
53:1:2246:G:H3'	53:1:2251:G:N1	1.86	0.90

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:H:13:ILE:HG23	32:H:14:VAL:HG23	1.52	0.90
53:1:2432:A:H3'	53:1:2433:A:H5''	1.53	0.89
53:1:2584:U:H5''	57:8:25:ALA:HA	1.51	0.89
7:h:23:LEU:HD23	7:h:95:LEU:HB2	1.55	0.89
12:m:45:GLN:NE2	53:1:2485:G:H5''	1.87	0.89
38:N:17:ARG:HH12	52:3:1129:C:H5'	1.38	0.89
33:I:29:THR:HG23	33:I:30:LYS:HG2	1.52	0.88
38:N:128:LYS:HZ3	55:5:31:G:H5''	1.31	0.88
53:1:2265:U:H3'	53:1:2266:A:H5''	1.55	0.88
10:k:71:ARG:HG2	10:k:72:PRO:HD2	1.55	0.88
52:3:842:U:H3'	52:3:843:U:H5''	1.56	0.88
44:T:46:LYS:CE	52:3:808:C:H5''	2.03	0.88
5:f:98:LYS:HD2	5:f:103:ASN:HD22	1.38	0.88
52:3:1076:U:H3	52:3:1081:A:N6	1.72	0.87
53:1:2249:U:H2'	53:1:2250:G:H5'	1.56	0.87
33:I:89:LEU:HD11	33:I:200:VAL:HG22	1.54	0.87
37:M:29:SER:HB3	37:M:32:LYS:HD3	1.56	0.87
40:P:62:ALA:HB1	40:P:95:THR:HG22	1.56	0.87
55:5:15:G:H3'	55:5:16:C:H5'	1.57	0.87
57:8:22:ALA:HB2	57:8:37:ILE:HG13	1.57	0.87
53:1:2432:A:N3	55:5:75:C:O5'	2.08	0.87
52:3:1076:U:H3	52:3:1081:A:H61	1.19	0.86
53:1:1063:G:H22	53:1:1075:C:H42	1.23	0.86
53:1:517:C:H2'	53:1:518:G:H5''	1.57	0.86
53:1:1645:G:H5''	53:1:1646:C:H5'	1.55	0.85
25:z:37:ARG:HH12	53:1:929:U:H5'	1.41	0.85
53:1:2432:A:H1'	55:5:74:C:C2'	2.06	0.85
51:a:164:ARG:NH1	53:1:2122:U:H4'	1.92	0.85
53:1:2432:A:H5''	55:5:75:C:O4'	1.77	0.85
13:n:44:LEU:HD23	13:n:113:ILE:HD13	1.57	0.85
52:3:405:U:H3'	52:3:406:G:H5'	1.59	0.85
53:1:1906:G:H2'	53:1:1907:G:H5''	1.58	0.85
43:S:33:VAL:HG22	52:3:1272:G:H5'	1.59	0.84
12:m:20:LEU:HD22	21:v:81:PRO:HG2	1.56	0.84
45:U:75:ILE:HG23	45:U:80:LYS:HB3	1.56	0.84
53:1:2433:A:H8	55:5:75:C:C6	1.95	0.84
8:i:89:SER:CB	53:1:1064:C:H4'	2.08	0.83
8:i:21:PRO:CG	8:i:22:PRO:HD3	2.07	0.83
38:N:10:ARG:HH21	52:3:1148:U:H5''	1.44	0.83
53:1:1869:G:H3'	53:1:1870:C:H5'	1.61	0.83
53:1:1179:G:H2'	53:1:1180:U:H4'	1.61	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:l:48:ARG:HH11	53:1:666:A:H4'	1.43	0.83
53:1:1728:C:H2'	53:1:1729:U:H5''	1.61	0.83
53:1:1020:A:H1'	53:1:1021:A:OP2	1.79	0.83
10:k:115:ILE:H	10:k:115:ILE:HD12	1.43	0.83
38:N:50:PRO:HD3	38:N:79:ARG:HG3	1.60	0.82
53:1:882:G:H21	53:1:896:A:H62	1.24	0.82
45:U:28:ARG:HH12	52:3:390:U:H4'	1.44	0.82
53:1:1173:U:H2'	53:1:1174:U:H4'	1.61	0.82
52:3:1071:C:H2'	52:3:1072:G:H8	1.44	0.82
12:m:64:TRP:HB2	12:m:104:GLU:HB2	1.61	0.82
16:q:91:ARG:H	16:q:91:ARG:HD2	1.45	0.82
38:N:128:LYS:HZ1	55:5:31:G:C5'	1.93	0.81
14:o:12:THR:OG1	53:1:2334:U:H4'	1.80	0.81
7:h:27:VAL:HG13	7:h:110:ALA:HA	1.61	0.81
53:1:2246:G:H3'	53:1:2251:G:H1	1.42	0.81
2:c:148:GLN:HB2	2:c:152:PRO:HG2	1.60	0.81
53:1:2553:G:H3'	53:1:2554:U:H5''	1.62	0.81
4:e:84:ILE:HG12	53:1:2312:U:H5'	1.61	0.81
32:H:168:ARG:HH22	52:3:1107:C:H5'	1.46	0.81
33:I:12:ARG:HH22	52:3:428:G:H3'	1.44	0.81
40:P:48:GLY:HA3	52:3:688:G:H5'	1.61	0.81
41:Q:42:LYS:HG3	41:Q:44:PRO:HD2	1.62	0.81
57:8:42:ASP:HB3	57:8:70:ILE:HB	1.63	0.81
1:b:13:ARG:NH2	53:1:1693:U:H1'	1.94	0.81
32:H:49:ALA:HB1	32:H:75:VAL:HG22	1.63	0.80
48:X:54:ARG:HG3	48:X:55:GLN:HG2	1.61	0.80
52:3:225:C:C2'	52:3:226:G:H5''	2.11	0.80
52:3:1075:U:H3	52:3:1082:A:H61	1.29	0.80
35:K:52:ASN:O	35:K:53:LYS:HG2	1.81	0.80
55:5:3:C:H3'	55:5:4:G:H5''	1.62	0.80
37:M:28:SER:HB2	37:M:58:LEU:HB2	1.63	0.80
38:N:68:GLY:HA2	52:3:1250:A:H5'	1.64	0.80
53:1:1394:U:H4'	53:1:1603:A:H4'	1.63	0.80
38:N:22:PRO:HA	38:N:60:LEU:HD13	1.63	0.79
43:S:66:THR:HG21	52:3:1203:C:H4'	1.63	0.79
24:y:24:GLU:O	24:y:28:LEU:HD13	1.82	0.79
32:H:168:ARG:HH12	52:3:1107:C:H5'	1.48	0.79
50:Z:66:ARG:HH12	52:3:1167:A:H3'	1.46	0.79
54:2:3:C:H2'	54:2:4:C:H5''	1.64	0.79
3:d:190:ALA:O	3:d:193:VAL:HG22	1.83	0.79
32:H:171:ARG:HB3	52:3:1106:G:H5''	1.65	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:u:3:LYS:HD3	20:u:82:VAL:HG13	1.64	0.79
25:z:12:ALA:HB2	25:z:53:MET:HE1	1.63	0.78
7:h:33:VAL:HG22	53:1:1055:G:H5''	1.64	0.78
25:z:37:ARG:HH12	53:1:929:U:C5'	1.97	0.78
57:8:47:SER:C	57:8:49:PRO:HD3	2.09	0.78
1:b:119:VAL:HG23	1:b:120:ASP:H	1.47	0.78
52:3:484:G:H4'	52:3:485:U:H5''	1.65	0.78
53:1:1807:G:H2'	53:1:1808:A:H5'	1.65	0.78
53:1:2433:A:H8	55:5:75:C:H6	1.32	0.78
53:1:2800:A:H3'	53:1:2801:G:H5'	1.65	0.78
4:e:34:THR:HG21	53:1:2314:A:H4'	1.65	0.78
3:d:63:LYS:HE3	53:1:2060:A:H3'	1.65	0.77
11:l:122:VAL:HG11	11:l:142:ILE:HG23	1.65	0.77
53:1:886:A:H4'	53:1:890:C:H41	1.50	0.77
53:1:1609:A:H1'	53:1:1616:A:H1'	1.65	0.77
53:1:2391:G:H4'	53:1:2392:A:OP1	1.82	0.77
14:o:51:ALA:HB3	14:o:78:VAL:HG12	1.66	0.77
7:h:12:VAL:O	7:h:15:VAL:HG12	1.84	0.77
53:1:1300:G:C4'	53:1:1301:A:H5''	2.14	0.77
53:1:1177:G:H2'	53:1:1178:C:H4'	1.67	0.77
15:p:3:ILE:H	15:p:3:ILE:HD12	1.49	0.77
52:3:1137:C:H5'	52:3:1138:G:H5'	1.64	0.77
3:d:44:ARG:HD2	53:1:444:C:OP2	1.85	0.77
20:u:16:LYS:HG3	53:1:329:G:H1	1.49	0.77
52:3:701:U:H4'	52:3:703:G:H1'	1.67	0.77
48:X:48:ILE:H	48:X:48:ILE:HD12	1.50	0.76
19:t:11:LEU:HD11	19:t:32:LEU:HD22	1.66	0.76
44:T:46:LYS:HE2	52:3:808:C:H5''	1.66	0.76
30:F:36:ARG:HG2	30:F:37:GLN:H	1.49	0.76
52:3:1493:A:OP1	57:8:110:PRO:HA	1.84	0.76
52:3:1530:G:H2'	52:3:1531:A:H5''	1.68	0.76
55:5:61:C:H2'	55:5:62:C:H5''	1.67	0.76
2:c:151:THR:HB	2:c:152:PRO:HD3	1.67	0.76
53:1:1900:A:H1'	53:1:1970:A:H2'	1.67	0.76
52:3:327:A:O2'	52:3:328:C:H4'	1.86	0.76
52:3:1395:C:O2	52:3:1395:C:H2'	1.86	0.75
17:r:49:ILE:HG22	17:r:54:VAL:HG22	1.67	0.75
9:j:81:ILE:HG13	9:j:82:GLY:H	1.50	0.75
38:N:57:VAL:HG12	38:N:58:GLU:HG2	1.67	0.75
52:3:1394:A:H61	52:3:1508:A:C4'	1.96	0.75
53:1:215:G:H4'	53:1:216:A:H4'	1.68	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:5:55:U:H2'	55:5:57:A:OP2	1.87	0.75
22:w:51:ARG:HD3	53:1:2364:C:OP1	1.86	0.75
48:X:28:LYS:HG3	48:X:29:PRO:HD2	1.69	0.75
53:1:1100:C:H2'	53:1:1101:U:H4'	1.68	0.75
52:3:82:G:H3'	52:3:83:C:H5'	1.67	0.75
52:3:530:G:H22	57:8:119:LEU:CD1	2.00	0.75
53:1:2246:G:H3'	53:1:2251:G:C2	2.21	0.75
48:X:35:ARG:HD3	52:3:1221:G:H5'	1.69	0.75
53:1:2209:G:H3'	53:1:2210:U:H5''	1.69	0.75
5:f:148:ARG:HA	5:f:161:VAL:HG21	1.69	0.74
32:H:147:GLY:HA3	32:H:202:PHE:HB3	1.68	0.74
53:1:45:G:H5''	53:1:46:G:C5'	2.15	0.74
55:5:15:G:H3'	55:5:16:C:C5'	2.17	0.74
7:h:3:LEU:HG	7:h:5:LEU:H	1.51	0.74
6:g:117:LEU:HD13	6:g:121:VAL:HA	1.68	0.74
52:3:664:G:H22	52:3:741:G:H1	1.36	0.74
36:L:23:ALA:O	36:L:26:VAL:HG22	1.88	0.74
38:N:10:ARG:NH2	52:3:1148:U:H5''	2.03	0.74
45:U:25:ARG:HH12	52:3:230:G:H1'	1.52	0.74
51:a:14:LYS:HZ3	51:a:33:LEU:HG	1.51	0.74
52:3:530:G:H22	57:8:119:LEU:HD11	1.52	0.74
53:1:1664:A:H61	53:1:1996:C:H42	1.33	0.74
55:5:3:C:C3'	55:5:4:G:H5''	2.17	0.74
1:b:123:ILE:HA	1:b:191:LEU:HD13	1.70	0.74
34:J:22:LYS:HA	52:3:1081:A:H5''	1.69	0.74
40:P:126:ARG:HA	52:3:796:C:C5'	2.15	0.74
32:H:162:ALA:HB2	52:3:1056:U:C5'	2.17	0.73
57:8:38:HIS:HE1	57:8:84:ARG:HG2	1.53	0.73
4:e:102:LEU:O	4:e:106:ALA:HB3	1.87	0.73
33:I:4:LEU:HD21	52:3:405:U:C5	2.23	0.73
39:O:57:VAL:HG21	52:3:1198:G:H1'	1.69	0.73
49:Y:4:LYS:HD2	49:Y:6:ALA:HB3	1.68	0.73
53:1:546:U:H2'	53:1:547:A:H4'	1.70	0.73
1:b:13:ARG:HH21	53:1:1693:U:H1'	1.49	0.73
14:o:100:HIS:HD2	54:2:48:U:H4'	1.53	0.73
36:L:110:ARG:H	36:L:118:ARG:HH21	1.35	0.73
53:1:1304:A:H2'	53:1:1305:C:H5''	1.70	0.73
1:b:152:GLN:HG3	53:1:1818:U:O4	1.88	0.73
33:I:152:SER:OG	52:3:436:C:H4'	1.88	0.73
53:1:898:C:H2'	53:1:899:A:H5'	1.71	0.73
12:m:12:MET:HA	53:1:910:A:H62	1.52	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:h:56:ARG:HB2	53:1:1084:A:O4'	1.89	0.72
57:8:43:ILE:HG13	57:8:45:ALA:H	1.54	0.72
52:3:1394:A:N6	52:3:1508:A:H4'	2.03	0.72
44:T:46:LYS:NZ	52:3:808:C:H5''	2.05	0.72
51:a:54:LYS:HB2	51:a:57:GLN:HG3	1.71	0.72
2:c:155:VAL:HG21	53:1:2618:G:H21	1.54	0.72
19:t:47:VAL:HG23	19:t:55:VAL:HG11	1.69	0.72
53:1:322:A:H5'	53:1:340:A:H1'	1.68	0.72
36:L:94:ARG:NH2	52:3:938:A:O2'	2.22	0.72
40:P:124:LYS:NZ	50:Z:35:GLU:HB3	2.05	0.72
43:S:63:CYS:HB3	43:S:68:ARG:H	1.54	0.72
53:1:1869:G:H3'	53:1:1870:C:C5'	2.19	0.72
53:1:2092:U:C4'	53:1:2093:G:H5''	2.19	0.72
53:1:2247:A:H61	53:1:2257:U:H3	1.36	0.72
55:5:25:C:H6	55:5:25:C:H5'	1.54	0.72
3:d:105:LEU:HD21	3:d:177:PRO:HG3	1.71	0.72
52:3:730:G:H2'	52:3:731:G:H5'	1.72	0.72
52:3:440:C:H2'	52:3:441:A:H5''	1.72	0.72
52:3:769:G:H4'	52:3:1513:A:H4'	1.72	0.72
52:3:1084:G:H5'	52:3:1102:A:OP2	1.89	0.72
53:1:2114:A:H61	53:1:2117:A:H62	1.37	0.72
40:P:126:ARG:HD3	52:3:796:C:H4'	1.72	0.72
33:I:119:HIS:HB3	52:3:438:U:H4'	1.72	0.71
32:H:162:ALA:CB	52:3:1056:U:H5'	2.20	0.71
53:1:386:G:H3'	53:1:387:U:H5''	1.73	0.71
53:1:2433:A:C8	55:5:75:C:H6	2.09	0.71
18:s:73:LYS:HZ2	53:1:520:G:H4'	1.55	0.71
43:S:80:ARG:O	43:S:83:VAL:HG22	1.90	0.71
15:p:47:ILE:HD11	15:p:61:ARG:HB2	1.72	0.71
47:W:18:GLN:HG3	47:W:19:GLU:H	1.56	0.71
14:o:6:ALA:O	14:o:9:ARG:HG2	1.90	0.71
34:J:131:ASN:HD22	52:3:19:A:P	2.13	0.71
5:f:36:LEU:HD21	5:f:67:ALA:HB1	1.72	0.70
39:O:11:LYS:HE3	39:O:69:THR:OG1	1.91	0.70
11:l:16:GLY:HA2	53:1:662:G:O3'	1.91	0.70
39:O:9:ARG:HH12	52:3:1279:G:H5''	1.55	0.70
11:l:79:LEU:HB3	11:l:116:VAL:HG23	1.73	0.70
53:1:1326:U:H2'	53:1:1327:A:H8	1.55	0.70
53:1:1906:G:C2'	53:1:1907:G:H5''	2.21	0.70
25:z:40:THR:HG22	25:z:43:ILE:HG12	1.72	0.70
32:H:198:LYS:HE3	52:3:1058:G:OP1	1.92	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:Q:14:LYS:NZ	52:3:884:U:O2'	2.24	0.70
52:3:1393:U:H2'	52:3:1395:C:C5	2.27	0.70
57:8:92:VAL:HG22	57:9:4:ILE:HG22	1.73	0.70
57:9:41:PHE:HB3	57:9:69:VAL:HG12	1.72	0.70
52:3:1397:C:OP1	52:3:1402:C:H5'	1.90	0.70
53:1:827:U:H1'	53:1:2246:G:O2'	1.92	0.70
53:1:2431:U:O5'	53:1:2431:U:H6	1.74	0.70
2:c:173:GLN:HE21	53:1:2731:G:H4'	1.57	0.70
14:o:40:ILE:N	14:o:40:ILE:HD12	2.07	0.70
17:r:65:ALA:HB3	17:r:95:ASP:HB2	1.74	0.70
25:z:37:ARG:NH1	53:1:929:U:H5'	2.06	0.70
32:H:139:ASN:HA	32:H:142:ARG:HG2	1.72	0.70
40:P:39:ASN:HB3	52:3:684:U:O2'	1.92	0.70
53:1:1060:U:H1'	53:1:1062:G:H5'	1.72	0.70
53:1:2249:U:H3	53:1:2251:G:H4'	1.56	0.70
53:1:2427:C:H5''	53:1:2429:G:H5'	1.73	0.70
55:5:26:G:H3'	55:5:27:U:H5''	1.74	0.70
53:1:2584:U:H2'	53:1:2585:U:H2'	1.74	0.69
57:8:47:SER:CB	57:8:53:LYS:HG3	2.22	0.69
53:1:2430:A:H2	53:1:2431:U:H3	1.39	0.69
14:o:108:ASP:O	14:o:112:GLU:HG2	1.92	0.69
53:1:548:G:H3'	53:1:549:G:H5''	1.74	0.69
42:R:91:ARG:O	42:R:91:ARG:HD3	1.93	0.69
52:3:75:G:H2'	52:3:76:G:H5'	1.73	0.69
53:1:2113:U:H2'	53:1:2114:A:H5''	1.73	0.69
1:b:94:LEU:HD13	1:b:100:ARG:HE	1.58	0.69
7:h:33:VAL:HG22	53:1:1055:G:C5'	2.23	0.69
33:I:131:ILE:HG21	52:3:620:C:H1'	1.74	0.69
52:3:919:A:H1'	52:3:1079:G:H22	1.58	0.69
53:1:644:A:H2'	53:1:645:C:C4'	2.23	0.69
33:I:11:SER:HA	33:I:18:LEU:HD13	1.73	0.69
48:X:4:LEU:HG	48:X:6:LYS:H	1.56	0.69
53:1:1367:A:H2'	53:1:1368:G:H5'	1.74	0.69
6:g:63:ALA:O	6:g:66:ASN:OD1	2.10	0.69
9:j:26:GLY:HA3	53:1:1140:C:H5'	1.73	0.69
40:P:29:THR:HG21	40:P:95:THR:HG21	1.75	0.69
53:1:1026:G:H2'	53:1:1027:A:H8	1.58	0.69
53:1:121:G:H4'	53:1:149:A:H5'	1.74	0.68
53:1:729:G:H4'	53:1:763:G:H5'	1.73	0.68
8:i:29:GLN:NE2	8:i:30:GLN:HG3	2.09	0.68
15:p:88:ARG:HD3	15:p:112:ARG:HD3	1.75	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:s:61:ASN:HD21	53:1:495:G:H21	1.41	0.68
52:3:1457:G:H2'	52:3:1458:G:C8	2.29	0.68
6:g:40:THR:H	6:g:43:ASN:HB2	1.57	0.68
12:m:75:GLU:OE2	53:1:957:C:H5'	1.92	0.68
33:I:150:LYS:HD2	33:I:155:LYS:HG3	1.73	0.68
38:N:128:LYS:NZ	55:5:31:G:C5'	2.46	0.68
53:1:940:G:H2'	53:1:941:A:H5''	1.75	0.68
53:1:2585:U:C4'	53:1:2586:U:H5'	2.13	0.68
7:h:21:GLY:HA2	7:h:86:MET:HE2	1.76	0.68
29:E:34:LYS:HE3	53:1:2391:G:OP2	1.92	0.68
53:1:2243:U:H2'	53:1:2244:U:C6	2.29	0.68
52:3:1071:C:H2'	52:3:1072:G:C8	2.28	0.68
7:h:3:LEU:HB3	7:h:6:GLN:HG2	1.76	0.68
52:3:1457:G:H2'	52:3:1458:G:H8	1.57	0.68
54:2:65:U:H3'	54:2:108:A:H61	1.57	0.68
49:Y:54:GLN:NE2	52:3:192:A:N3	2.39	0.68
6:g:126:GLY:H	6:g:146:VAL:HG13	1.59	0.68
36:L:43:TYR:O	36:L:47:GLU:HB2	1.93	0.68
38:N:109:GLN:HE22	52:3:1116:U:H4'	1.59	0.68
42:R:32:ILE:HG13	42:R:58:GLU:HB3	1.75	0.68
45:U:40:ASN:HB3	45:U:43:ALA:HB2	1.76	0.68
52:3:181:A:H62	52:3:194:C:H2'	1.59	0.68
45:U:25:ARG:NH1	52:3:230:G:H1'	2.09	0.68
45:U:79:ASN:HB3	45:U:82:ALA:HB3	1.74	0.68
53:1:2129:C:H2'	53:1:2130:U:H5'	1.74	0.68
53:1:2246:G:H3'	53:1:2251:G:N2	2.09	0.68
53:1:11:C:H2'	53:1:12:U:H5''	1.76	0.68
53:1:2156:G:H2'	53:1:2157:G:H5'	1.76	0.68
1:b:213:ARG:HH21	53:1:1566:A:H5'	1.58	0.67
8:i:26:ALA:HA	53:1:1096:A:H2	1.58	0.67
10:k:48:PRO:HG3	52:3:1422:G:H5'	1.77	0.67
10:k:58:LEU:HA	10:k:89:ASN:HD22	1.58	0.67
32:H:168:ARG:HH12	52:3:1107:C:C5'	2.06	0.67
35:K:42:TRP:HB2	35:K:59:TYR:HB2	1.76	0.67
40:P:127:ARG:OXT	52:3:1506:U:H4'	1.94	0.67
7:h:67:THR:N	7:h:68:PRO:HD3	2.09	0.67
53:1:2180:U:H5''	55:5:17(A):U:OP2	1.94	0.67
6:g:103:VAL:HG12	6:g:108:VAL:HB	1.77	0.67
20:u:57:ILE:HD12	20:u:57:ILE:H	1.60	0.67
36:L:49:LEU:HD22	36:L:123:LEU:HB3	1.76	0.67
53:1:2249:U:N3	53:1:2251:G:H4'	2.09	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:8:38:HIS:CE1	57:8:84:ARG:HG2	2.29	0.67
57:9:48:LEU:N	57:9:49:PRO:HD3	2.09	0.67
57:9:48:LEU:H	57:9:49:PRO:HD3	1.59	0.67
1:b:16:VAL:HB	1:b:203:VAL:HG22	1.77	0.67
2:c:107:VAL:HG11	2:c:203:VAL:HG13	1.76	0.67
33:I:32:LYS:HD2	52:3:426:U:OP1	1.94	0.67
52:3:955:U:H3	52:3:1225:A:H61	1.42	0.67
43:S:40:ARG:NH1	43:S:44:VAL:HG21	2.10	0.67
16:q:87:VAL:HA	17:r:49:ILE:HD11	1.75	0.67
18:s:42:LYS:HB2	53:1:2010:G:H5'	1.75	0.67
53:1:2433:A:C8	55:5:75:C:C6	2.81	0.67
32:H:168:ARG:HH12	52:3:1107:C:C4'	2.07	0.66
40:P:124:LYS:HZ2	50:Z:35:GLU:HB3	1.58	0.66
47:W:25:ILE:H	47:W:25:ILE:HD12	1.60	0.66
36:L:4:ARG:HG2	36:L:6:ILE:HG23	1.76	0.66
38:N:104:THR:HG22	38:N:106:ASP:H	1.61	0.66
53:1:548:G:H2'	53:1:549:G:H4'	1.78	0.66
49:Y:79:THR:HG21	52:3:187:G:H4'	1.76	0.66
28:D:34:ARG:HD3	53:1:467:G:OP2	1.95	0.66
52:3:758:C:H4'	52:3:880:C:H4'	1.78	0.66
2:c:61:THR:HB	2:c:63:PRO:HD2	1.78	0.66
8:i:126:ARG:HH22	53:1:1079:C:H4'	1.60	0.66
15:p:59:THR:HG22	15:p:72:VAL:HG12	1.78	0.66
17:r:25:LEU:HD23	17:r:25:LEU:H	1.59	0.66
6:g:9:VAL:HG13	6:g:10:ALA:N	2.10	0.66
8:i:10:LEU:HD21	53:1:1061:U:O4'	1.96	0.66
33:I:8:LEU:HD11	33:I:21:LYS:HD2	1.77	0.66
42:R:106:ARG:HA	42:R:109:LYS:HG2	1.78	0.66
52:3:693:G:O4'	56:4:14:A:H1'	1.96	0.66
3:d:83:VAL:O	3:d:85:PHE:N	2.29	0.66
9:j:17:VAL:HG13	9:j:137:PRO:HB2	1.78	0.66
36:L:12:LEU:HD12	36:L:13:PRO:HD2	1.77	0.66
53:1:1300:G:H4'	53:1:1301:A:C5'	2.25	0.66
53:1:2307:G:H5'	53:1:2308:G:C4	2.31	0.66
15:p:99:LEU:HD11	15:p:107:ALA:HA	1.77	0.66
32:H:30:ASP:HA	43:S:64:ARG:HH12	1.59	0.66
32:H:168:ARG:NH1	52:3:1107:C:H5'	2.11	0.66
53:1:2452:C:OP1	57:8:33:THR:HG21	1.95	0.66
10:k:110:GLU:O	10:k:113:MET:HG2	1.96	0.65
26:B:2:VAL:HG21	53:1:2016:U:H1'	1.77	0.65
52:3:1088:G:H21	52:3:1167:A:H61	1.44	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:227:A:H2'	53:1:228:C:H4'	1.78	0.65
53:1:554:U:H2'	53:1:555:G:O4'	1.97	0.65
32:H:168:ARG:NH2	52:3:1107:C:H5'	2.09	0.65
51:a:205:LYS:NZ	53:1:1860:G:H5'	2.11	0.65
4:e:65:LEU:HD22	54:2:42:C:N4	2.12	0.65
20:u:73:ASN:ND2	20:u:75:ALA:HB3	2.12	0.65
20:u:78:LYS:HE2	53:1:302:C:H4'	1.78	0.65
51:a:42:VAL:HG23	51:a:178:VAL:HG21	1.77	0.65
53:1:1141:U:H4'	53:1:1142:A:O4'	1.96	0.65
53:1:2249:U:C4	53:1:2251:G:H4'	2.31	0.65
4:e:84:ILE:HG21	53:1:2312:U:C5'	2.26	0.65
33:I:35:GLN:NE2	33:I:36:ALA:HB2	2.11	0.65
37:M:12:ARG:HA	37:M:15:ASN:HD22	1.60	0.65
38:N:105:ARG:HD3	52:3:1117:A:O3'	1.97	0.65
38:N:111:GLU:OE2	38:N:120:ALA:HB3	1.95	0.65
39:O:44:THR:HG23	39:O:69:THR:O	1.96	0.65
40:P:124:LYS:HE3	50:Z:36:PHE:H	1.60	0.65
52:3:252:U:O2	52:3:252:U:H2'	1.95	0.65
42:R:113:LYS:HB3	42:R:114:PRO:HD3	1.77	0.65
45:U:12:LYS:HA	52:3:392:C:OP1	1.96	0.65
52:3:145:G:H2'	52:3:146:G:C4'	2.26	0.65
53:1:2573:C:H5''	53:1:2574:G:H5''	1.79	0.65
55:5:3:C:H2'	55:5:4:G:H5''	1.78	0.65
57:9:21:ARG:HA	57:9:34:SER:O	1.96	0.65
6:g:42:LYS:O	6:g:45:GLU:HG3	1.96	0.65
15:p:97:TYR:HB2	53:1:2718:G:OP1	1.96	0.65
45:U:5:ARG:NH1	52:3:377:G:H5'	2.11	0.65
49:Y:66:ILE:HG23	49:Y:70:LYS:HE2	1.79	0.65
52:3:478:A:H2'	52:3:479:U:H4'	1.78	0.65
55:5:3:C:C2'	55:5:4:G:H5''	2.27	0.65
53:1:2128:G:H1	53:1:2173:A:H2	1.44	0.64
12:m:69:PRO:HA	12:m:94:ALA:HB2	1.78	0.64
32:H:177:LEU:HD13	52:3:1112:C:N4	2.12	0.64
52:3:1492:A:H2'	52:3:1493:A:H4'	1.78	0.64
53:1:1100:C:H3'	53:1:1101:U:H5''	1.80	0.64
18:s:73:LYS:NZ	53:1:520:G:H4'	2.13	0.64
38:N:90:ASP:O	38:N:92:SER:N	2.30	0.64
52:3:978:A:H61	52:3:1316:G:H1'	1.62	0.64
57:8:23:GLN:HG2	57:8:75:GLN:HG3	1.79	0.64
2:c:138:LEU:HD23	2:c:138:LEU:O	1.97	0.64
21:v:16:ALA:O	21:v:19:ARG:HG2	1.97	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:X:76:THR:HG21	52:3:1221:G:H4'	1.80	0.64
52:3:314:C:O2'	52:3:315:A:H5'	1.98	0.64
11:l:55:MET:HE3	53:1:2392:A:C2	2.32	0.64
52:3:919:A:H1'	52:3:1079:G:N2	2.12	0.64
53:1:917:A:H5''	53:1:2268:A:H61	1.63	0.64
53:1:2529:G:OP2	53:1:2530:A:H5''	1.98	0.64
1:b:152:GLN:HG3	53:1:1818:U:C4	2.32	0.64
44:T:44:GLU:HG3	44:T:45:HIS:CD2	2.32	0.64
47:W:38:ILE:O	52:3:720:C:H5'	1.97	0.64
53:1:310:A:C2'	53:1:311:A:H5''	2.27	0.64
53:1:2430:A:H3'	53:1:2431:U:C5	2.32	0.64
57:9:86:ALA:O	57:9:90:ARG:HG3	1.98	0.64
5:f:104:LEU:H	5:f:104:LEU:HD23	1.63	0.64
35:K:29:ILE:HG22	35:K:34:GLY:HA3	1.80	0.64
3:d:129:PRO:O	53:1:321:U:H5'	1.98	0.64
30:F:31:PRO:HB2	53:1:2527:C:H5''	1.78	0.64
32:H:191:THR:HB	52:3:532:A:N6	2.12	0.64
52:3:1394:A:H5'	52:3:1395:C:OP2	1.98	0.64
13:n:2:ARG:O	13:n:2:ARG:HD3	1.98	0.64
31:G:131:LYS:HD2	52:3:1158:C:H4'	1.80	0.64
33:I:4:LEU:HD21	52:3:405:U:C4	2.33	0.64
38:N:123:ARG:HD2	38:N:124:PRO:HD2	1.79	0.64
40:P:41:LEU:HD13	40:P:78:ILE:HD11	1.80	0.64
53:1:1914:C:O2'	57:8:105:ARG:HB2	1.98	0.64
53:1:2834:G:H2'	53:1:2879:A:N6	2.13	0.64
4:e:131:VAL:HG22	4:e:132:ARG:H	1.62	0.63
10:k:49:ARG:NH2	52:3:1423:G:H5'	2.13	0.63
21:v:77:VAL:HG22	21:v:89:ILE:HG12	1.80	0.63
53:1:2104:C:H42	53:1:2185:U:H3	1.44	0.63
7:h:80:THR:C	7:h:81:LEU:HD23	2.22	0.63
35:K:15:SER:O	35:K:18:VAL:HG22	1.97	0.63
15:p:105:LYS:HG3	52:3:1464:U:OP1	1.98	0.63
42:R:9:PRO:HG2	42:R:44:ILE:HD13	1.81	0.63
53:1:1138:G:H2'	53:1:1139:G:O4'	1.98	0.63
53:1:1801:A:H5''	53:1:2203:U:H2'	1.79	0.63
8:i:126:ARG:HG2	53:1:1080:A:H4'	1.81	0.63
11:l:79:LEU:HD12	11:l:114:GLY:H	1.62	0.63
20:u:33:VAL:HG13	20:u:66:VAL:HG22	1.79	0.63
20:u:76:THR:HG23	20:u:78:LYS:H	1.62	0.63
45:U:19:VAL:HG13	45:U:36:VAL:HG23	1.80	0.63
48:X:29:PRO:HA	48:X:47:THR:HG23	1.80	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:I:98:ASP:HA	33:I:101:VAL:HG12	1.81	0.63
53:1:2430:A:H3'	53:1:2431:U:C6	2.33	0.63
12:m:4:PRO:HB3	12:m:68:PHE:HE2	1.64	0.63
35:K:52:ASN:C	35:K:53:LYS:HG2	2.24	0.63
53:1:2247:A:H8	53:1:2251:G:H21	1.46	0.63
46:V:29:LYS:HB2	46:V:36:PHE:CE1	2.33	0.63
7:h:33:VAL:HA	53:1:1055:G:H4'	1.80	0.63
40:P:126:ARG:CA	52:3:796:C:H5''	2.20	0.63
53:1:2286:G:H5''	53:1:2287:A:OP1	1.97	0.63
52:3:484:G:H4'	52:3:485:U:C5'	2.28	0.63
6:g:2:GLN:NE2	6:g:20:ASN:HB2	2.14	0.62
8:i:8:VAL:HG12	8:i:10:LEU:H	1.64	0.62
17:r:15:SER:O	17:r:18:GLN:HG2	1.99	0.62
35:K:47:LEU:HD13	35:K:57:ALA:H	1.63	0.62
52:3:560:A:H4'	52:3:561:U:H5'	1.80	0.62
52:3:1081:A:O2'	52:3:1082:A:H8	1.74	0.62
53:1:1172:C:H2'	53:1:1173:U:H5''	1.81	0.62
53:1:1178:C:O2	53:1:1178:C:H2'	1.98	0.62
4:e:132:ARG:HH11	53:1:2305:U:H4'	1.65	0.62
29:E:31:ILE:HG23	29:E:31:ILE:O	2.00	0.62
38:N:68:GLY:HA2	52:3:1250:A:C5'	2.29	0.62
53:1:511:U:H2'	53:1:512:G:H5'	1.80	0.62
53:1:1179:G:C2'	53:1:1180:U:H4'	2.29	0.62
53:1:1728:C:C2'	53:1:1729:U:H5''	2.29	0.62
8:i:11:GLN:HE21	8:i:56:VAL:HB	1.63	0.62
52:3:842:U:H3'	52:3:843:U:C5'	2.28	0.62
6:g:110:VAL:HG22	6:g:111:ALA:H	1.64	0.62
10:k:71:ARG:HG2	10:k:72:PRO:CD	2.26	0.62
12:m:75:GLU:HB2	12:m:90:GLU:HG3	1.79	0.62
46:V:58:VAL:HB	46:V:74:LEU:HD11	1.80	0.62
53:1:1906:G:C3'	53:1:1907:G:H5''	2.29	0.62
53:1:2305:U:H2'	53:1:2306:C:C6	2.33	0.62
53:1:2475:C:H2'	53:1:2476:A:H5'	1.79	0.62
1:b:145:MET:HE1	53:1:1800:C:H5'	1.80	0.62
24:y:7:ARG:HH21	24:y:8:GLU:HG3	1.64	0.62
45:U:28:ARG:NH1	52:3:390:U:H4'	2.11	0.62
51:a:53:ARG:HG2	51:a:167:LYS:HD3	1.81	0.62
52:3:1033:G:H2'	52:3:1034:G:H5''	1.80	0.62
19:t:69:ARG:HH21	53:1:1334:G:H5''	1.63	0.62
26:B:27:LEU:HD23	26:B:36:LYS:HD3	1.81	0.62
52:3:1107:C:H3'	52:3:1108:G:C5'	2.23	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1497:G:H2'	52:3:1498:U:H5'	1.82	0.62
53:1:1909:C:H2'	53:1:1910:G:C8	2.35	0.62
11:l:9:ALA:HB3	11:l:12:SER:OG	2.00	0.62
38:N:17:ARG:NH1	52:3:1129:C:H5'	2.13	0.62
57:8:37:ILE:HG23	57:8:74:ALA:O	1.99	0.62
2:c:124:ARG:HA	2:c:165:MET:SD	2.40	0.62
4:e:131:VAL:HG21	4:e:136:ILE:HD13	1.82	0.62
33:I:85:THR:HG21	34:J:102:THR:HG23	1.80	0.62
49:Y:4:LYS:HG3	49:Y:6:ALA:H	1.64	0.62
55:5:26:G:C3'	55:5:27:U:H5''	2.28	0.62
9:j:132:HIS:CD2	53:1:7:G:H5'	2.35	0.62
49:Y:53:MET:O	49:Y:57:VAL:HG22	2.00	0.62
2:c:62:LYS:HG2	53:1:2787:C:H4'	1.81	0.62
43:S:27:LYS:HE2	52:3:1317:C:OP2	2.00	0.62
50:Z:7:GLU:HG3	50:Z:15:LEU:HD13	1.81	0.62
53:1:974:G:H1'	53:1:975:A:C8	2.35	0.62
21:v:60:VAL:HG21	21:v:71:LYS:HE3	1.81	0.61
38:N:54:VAL:HG23	38:N:55:ASP:H	1.64	0.61
52:3:729:A:H2'	52:3:730:G:H8	1.65	0.61
53:1:1079:C:H2'	53:1:1080:A:C8	2.35	0.61
53:1:1177:G:C5	53:1:1178:C:H1'	2.35	0.61
53:1:2432:A:C5'	55:5:75:C:O4'	2.47	0.61
55:5:32:C:H3'	55:5:33:U:H5'	1.80	0.61
2:c:135:GLY:HA2	53:1:743:A:OP1	2.00	0.61
14:o:33:ARG:HB2	54:2:52:A:N6	2.14	0.61
45:U:61:VAL:HA	45:U:65:ALA:HB3	1.82	0.61
52:3:292:G:H21	52:3:608:A:H61	1.46	0.61
52:3:530:G:N1	57:8:119:LEU:HG	2.11	0.61
52:3:1502:A:H8	52:3:1505:G:H22	1.46	0.61
53:1:293:U:H2'	53:1:294:A:H5''	1.82	0.61
53:1:1060:U:C1'	53:1:1062:G:H5'	2.29	0.61
43:S:33:VAL:CG2	52:3:1272:G:H5'	2.28	0.61
53:1:2452:C:H42	53:1:2504:U:H3	1.48	0.61
43:S:40:ARG:HH12	43:S:44:VAL:HG21	1.65	0.61
52:3:335:C:H2'	52:3:336:A:H8	1.65	0.61
53:1:2430:A:C2	53:1:2431:U:N3	2.68	0.61
57:8:47:SER:CA	57:8:53:LYS:HG3	2.31	0.61
57:8:56:LEU:HD23	57:8:98:LEU:HD22	1.81	0.61
41:Q:109:ARG:CZ	52:3:537:G:H5''	2.30	0.61
53:1:2360:G:H2'	53:1:2361:G:H5'	1.83	0.61
40:P:121:ARG:NH1	40:P:122:PRO:O	2.34	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:T:35:ILE:HD11	53:1:715:A:H1'	1.82	0.61
53:1:1914:C:H1'	57:8:105:ARG:O	2.00	0.61
53:1:2430:A:H5''	53:1:2431:U:OP2	2.00	0.61
53:1:2628:C:H3'	53:1:2629:U:H5'	1.82	0.61
5:f:88:LEU:HD13	5:f:161:VAL:HG12	1.82	0.61
20:u:57:ILE:HD11	53:1:483:A:C2	2.35	0.61
44:T:78:THR:O	44:T:82:GLU:HG3	2.01	0.61
52:3:1170:A:H2'	52:3:1171:A:O4'	2.01	0.61
53:1:1936:A:H2	53:1:1943:U:H3	1.48	0.61
9:j:68:LYS:HD3	53:1:1022:G:N7	2.15	0.61
22:w:56:PHE:CZ	53:1:2365:G:H4'	2.36	0.61
40:P:43:TRP:NE1	52:3:686:U:H4'	2.12	0.61
53:1:2834:G:H2'	53:1:2879:A:H61	1.64	0.61
7:h:3:LEU:HD21	7:h:5:LEU:HD12	1.82	0.61
17:r:74:ILE:HD13	53:1:992:C:H4'	1.81	0.61
43:S:27:LYS:NZ	52:3:1317:C:H5'	2.16	0.61
50:Z:44:ARG:NH2	52:3:722:G:H21	1.98	0.61
55:5:61:C:C2'	55:5:62:C:H5''	2.31	0.61
2:c:148:GLN:O	53:1:2052:A:H4'	2.00	0.61
12:m:75:GLU:CD	53:1:957:C:H5'	2.25	0.61
33:I:7:LYS:HE2	52:3:408:A:OP2	2.01	0.61
33:I:155:LYS:O	33:I:159:GLU:HG2	2.01	0.61
33:I:170:LEU:HD23	33:I:181:PHE:HA	1.82	0.61
34:J:92:ARG:HB2	34:J:127:TYR:HB2	1.83	0.61
44:T:35:ILE:HD11	53:1:715:A:C1'	2.31	0.61
52:3:29:U:O2'	52:3:30:U:H5'	2.01	0.61
52:3:372:C:N4	52:3:387:U:H2'	2.16	0.61
52:3:392:C:H2'	52:3:393:A:H8	1.65	0.61
52:3:1527:U:O2'	52:3:1528:U:H5'	2.00	0.61
53:1:189:G:H2'	53:1:205:G:H22	1.65	0.61
33:I:2:ARG:NH1	52:3:405:U:OP2	2.34	0.60
38:N:8:THR:HG23	38:N:10:ARG:CZ	2.31	0.60
39:O:48:ARG:HD2	52:3:1368:A:C4'	2.29	0.60
53:1:2296:U:H5''	53:1:2297:A:OP1	2.01	0.60
12:m:74:THR:OG1	12:m:75:GLU:N	2.34	0.60
37:M:12:ARG:CZ	52:3:826:C:H5'	2.30	0.60
43:S:66:THR:HG21	52:3:1203:C:C4'	2.29	0.60
44:T:19:ASN:ND2	52:3:750:C:H5'	2.17	0.60
49:Y:4:LYS:O	49:Y:7:LYS:HG2	2.02	0.60
57:8:36:ALA:HB1	57:8:80:GLN:HB2	1.83	0.60
57:8:47:SER:HA	57:8:53:LYS:HG3	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:h:81:LEU:HD13	53:1:1106:G:H21	1.66	0.60
39:O:10:LEU:HD23	39:O:10:LEU:H	1.65	0.60
3:d:125:SER:HA	3:d:157:LEU:HD21	1.82	0.60
11:l:55:MET:SD	11:l:59:ARG:HD2	2.42	0.60
11:l:79:LEU:HD22	11:l:116:VAL:HG21	1.83	0.60
15:p:3:ILE:HD12	15:p:3:ILE:N	2.17	0.60
24:y:48:ARG:NH2	53:1:75:G:H4'	2.16	0.60
26:B:12:ARG:HD3	53:1:1263:U:H5''	1.83	0.60
36:L:27:ASN:OD1	52:3:1374:A:H4'	2.00	0.60
37:M:12:ARG:HD2	37:M:26:MET:SD	2.42	0.60
38:N:114:LYS:HE2	52:3:1187:G:H5'	1.82	0.60
42:R:94:LEU:HD21	52:3:1226:C:OP1	2.02	0.60
51:a:29:LEU:HB3	51:a:33:LEU:HD22	1.82	0.60
52:3:440:C:C3'	52:3:441:A:H5''	2.30	0.60
53:1:1909:C:H2'	53:1:1910:G:H8	1.66	0.60
53:1:2106:U:O2'	53:1:2107:G:H5'	2.02	0.60
57:9:47:SER:O	57:9:48:LEU:HB2	2.01	0.60
4:e:69:ALA:HB3	4:e:81:GLY:H	1.66	0.60
19:t:67:VAL:HG22	19:t:76:ARG:HG3	1.84	0.60
27:C:30:PRO:HG2	27:C:31:GLU:OE2	2.02	0.60
35:K:6:ILE:N	35:K:6:ILE:HD12	2.17	0.60
52:3:335:C:H2'	52:3:336:A:C8	2.36	0.60
52:3:715:A:H2'	52:3:716:A:C8	2.36	0.60
6:g:122:LEU:HD13	6:g:128:HIS:HB3	1.84	0.60
49:Y:58:ASP:OD1	52:3:194:C:H4'	2.02	0.60
57:9:78:ARG:HD2	57:9:78:ARG:N	2.16	0.60
11:l:55:MET:HE3	53:1:2392:A:H2	1.67	0.60
15:p:105:LYS:HD3	15:p:108:ARG:HG3	1.83	0.60
37:M:2:MET:HE3	37:M:5:PRO:HB3	1.83	0.60
49:Y:38:ILE:HG12	49:Y:81:GLN:HG3	1.84	0.60
53:1:704:G:H2'	53:1:726:G:N2	2.17	0.60
53:1:2245:U:H5''	53:1:2246:G:H5'	1.82	0.60
4:e:22:ASN:HB2	4:e:26:GLN:HE22	1.66	0.60
34:J:61:LYS:HE2	52:3:1072:G:H5''	1.82	0.60
52:3:145:G:H2'	52:3:146:G:H4'	1.84	0.60
53:1:310:A:H2'	53:1:311:A:H5''	1.84	0.60
1:b:207:ALA:HB2	53:1:1790:C:O2'	2.01	0.60
34:J:131:ASN:ND2	52:3:19:A:OP2	2.25	0.60
41:Q:88:ASP:OD1	52:3:523:A:N1	2.35	0.60
10:k:76:VAL:HG22	15:p:72:VAL:HG22	1.82	0.60
38:N:10:ARG:HH21	52:3:1148:U:C5'	2.14	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:440:C:C2'	52:3:441:A:H5''	2.31	0.60
52:3:1522:U:H2'	52:3:1523:G:H8	1.65	0.60
12:m:74:THR:HG21	12:m:86:LYS:HD2	1.84	0.59
17:r:15:SER:HB3	17:r:18:GLN:OE1	2.02	0.59
18:s:20:VAL:HG21	18:s:43:ALA:HB3	1.84	0.59
5:f:85:LYS:HB3	5:f:164:ALA:HB2	1.82	0.59
18:s:96:ILE:HG22	53:1:2013:A:H4'	1.83	0.59
50:Z:21:SER:CB	56:4:9:G:H4'	2.32	0.59
51:a:5:THR:OG1	53:1:2129:C:H5''	2.02	0.59
25:z:52:PHE:CD2	54:2:83:G:H4'	2.37	0.59
32:H:7:ASN:HD21	32:H:183:TYR:H	1.49	0.59
38:N:128:LYS:HG3	38:N:129:ARG:H	1.65	0.59
41:Q:20:VAL:HG21	52:3:553:A:H5''	1.84	0.59
52:3:693:G:C1'	56:4:14:A:H1'	2.32	0.59
53:1:2079:U:H4'	53:1:2433:A:C2	2.37	0.59
18:s:69:LEU:HD22	18:s:107:VAL:HG12	1.84	0.59
37:M:106:SER:HA	52:3:642:A:C5	2.38	0.59
39:O:48:ARG:HH12	39:O:50:THR:HG23	1.66	0.59
52:3:1341:U:H5''	55:5:32:C:C5'	2.27	0.59
53:1:704:G:H1'	53:1:727:A:H61	1.66	0.59
53:1:1911:U:H2'	53:1:1918:A:N1	2.18	0.59
53:1:2602:A:C8	57:8:30:VAL:HG12	2.37	0.59
1:b:224:MET:HG2	53:1:782:A:C2	2.36	0.59
12:m:29:GLY:HA2	12:m:106:ASP:HB2	1.84	0.59
32:H:55:VAL:HB	32:H:66:THR:HB	1.83	0.59
41:Q:29:LYS:HE2	41:Q:58:ASN:HD22	1.67	0.59
53:1:1304:A:C2'	53:1:1305:C:H5''	2.32	0.59
53:1:473:G:O2'	53:1:474:G:H5'	2.01	0.59
1:b:47:ARG:HH21	53:1:774:G:H5''	1.68	0.59
10:k:115:ILE:HD12	10:k:115:ILE:N	2.18	0.59
34:J:152:VAL:HG11	37:M:98:LEU:HD21	1.83	0.59
48:X:38:THR:HG22	48:X:39:ILE:H	1.67	0.59
52:3:21:G:H21	52:3:914:A:H62	1.49	0.59
52:3:245:U:O2'	52:3:246:A:H5'	2.03	0.59
55:5:3:C:H3'	55:5:4:G:C5'	2.32	0.59
1:b:76:VAL:HG22	1:b:114:GLN:HG3	1.85	0.59
19:t:2:ILE:HD11	53:1:144:A:H4'	1.85	0.59
32:H:168:ARG:CZ	52:3:1106:G:O2'	2.51	0.59
36:L:111:GLY:H	36:L:118:ARG:NH2	2.00	0.59
51:a:54:LYS:HB2	51:a:57:GLN:CG	2.32	0.59
53:1:2443:C:H2'	53:1:2444:G:H8	1.66	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:8:62:HIS:O	57:8:63:LEU:HB2	2.03	0.59
52:3:82:G:H3'	52:3:83:C:C5'	2.33	0.59
52:3:1033:G:C2'	52:3:1034:G:H5''	2.33	0.59
53:1:1609:A:H1'	53:1:1616:A:C1'	2.32	0.59
53:1:2443:C:H2'	53:1:2444:G:C8	2.37	0.59
6:g:134:VAL:HG22	6:g:138:VAL:O	2.03	0.59
18:s:1:MET:SD	18:s:2:GLU:HG3	2.43	0.59
40:P:22:ILE:HB	40:P:85:VAL:HA	1.84	0.59
41:Q:68:GLY:HA3	41:Q:98:ARG:HH11	1.66	0.59
50:Z:25:ALA:HA	50:Z:28:LEU:HB3	1.85	0.59
53:1:2251:G:H2'	53:1:2252:G:O5'	2.03	0.59
53:1:2267:A:H5''	53:1:2268:A:H5'	1.85	0.59
57:8:40:ARG:O	57:8:71:VAL:HG12	2.02	0.59
52:3:405:U:H1'	52:3:498:A:H2'	1.84	0.58
53:1:742:A:H2'	53:1:743:A:C8	2.38	0.58
53:1:1186:G:H2'	53:1:1187:G:O4'	2.02	0.58
5:f:148:ARG:HD2	5:f:163:TYR:HE1	1.68	0.58
28:D:34:ARG:NE	28:D:39:ARG:HD2	2.18	0.58
39:O:80:THR:O	39:O:83:THR:HG22	2.03	0.58
41:Q:52:CYS:HB2	41:Q:66:ILE:HD11	1.84	0.58
53:1:644:A:H2'	53:1:645:C:H4'	1.83	0.58
1:b:90:ILE:HD11	1:b:102:TYR:HB3	1.84	0.58
7:h:38:MET:HE1	53:1:1058:U:H4'	1.83	0.58
37:M:25:THR:HG22	37:M:59:GLU:HG3	1.85	0.58
38:N:89:TYR:HB2	38:N:94:ARG:HH12	1.68	0.58
53:1:1285:A:H2'	53:1:1286:A:H5'	1.85	0.58
12:m:60:GLN:HG3	12:m:108:VAL:HG22	1.85	0.58
13:n:12:ARG:O	53:1:2002:G:H5'	2.03	0.58
42:R:10:ASP:O	42:R:11:HIS:ND1	2.37	0.58
52:3:715:A:H2'	52:3:716:A:H8	1.67	0.58
52:3:864:A:H2'	52:3:865:A:C8	2.38	0.58
55:5:17:C:H5''	55:5:17(A):U:H5'	1.85	0.58
55:5:60:U:H5''	55:5:61:C:H5	1.68	0.58
57:8:56:LEU:HD11	57:8:95:ILE:HG23	1.84	0.58
15:p:90:ALA:HB2	15:p:112:ARG:HA	1.84	0.58
34:J:49:TYR:H	34:J:65:LYS:HD3	1.68	0.58
37:M:49:LYS:HB3	37:M:59:GLU:HB2	1.85	0.58
39:O:17:LEU:HD23	39:O:17:LEU:O	2.04	0.58
53:1:1796:U:H2'	53:1:1797:G:H8	1.68	0.58
53:1:2079:U:H5'	53:1:2433:A:H2	1.69	0.58
2:c:61:THR:CB	2:c:63:PRO:HD2	2.32	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:K:6:ILE:HD12	35:K:6:ILE:H	1.69	0.58
40:P:22:ILE:HG23	40:P:31:VAL:HG22	1.84	0.58
53:1:532:A:H2'	53:1:532:A:N3	2.19	0.58
53:1:859:G:H1'	53:1:860:U:H5	1.67	0.58
53:1:1344:U:H3'	53:1:1345:C:H5'	1.86	0.58
53:1:1837:C:H2'	53:1:1899:A:H61	1.68	0.58
55:5:52:G:O2'	55:5:53:G:H5'	2.04	0.58
57:9:50:GLU:H	57:9:53:LYS:HD3	1.68	0.58
4:e:84:ILE:HG21	53:1:2312:U:H5'	1.85	0.58
34:J:28:ARG:HD3	52:3:15:G:H1'	1.85	0.58
35:K:46:GLN:HA	35:K:56:LYS:HG2	1.86	0.58
53:1:546:U:H2'	53:1:547:A:C4'	2.33	0.58
53:1:1991:U:H2'	53:1:1992:G:H5''	1.86	0.58
1:b:156:SER:O	1:b:194:VAL:HG21	2.04	0.58
33:I:129:VAL:HG22	33:I:131:ILE:H	1.69	0.58
36:L:137:ARG:O	36:L:140:VAL:HG12	2.04	0.58
38:N:10:ARG:NH2	52:3:1148:U:C5'	2.67	0.58
49:Y:33:LYS:HE2	52:3:1457:G:H5'	1.86	0.58
53:1:161:A:H3'	53:1:162:U:H5''	1.86	0.58
53:1:1893:C:H2'	53:1:1894:C:H5'	1.85	0.58
12:m:86:LYS:HE2	53:1:955:U:H5''	1.85	0.58
13:n:29:VAL:HG12	13:n:78:LYS:HD2	1.86	0.58
35:K:2:ARG:NH1	52:3:738:C:OP1	2.37	0.58
53:1:2475:C:C2'	53:1:2476:A:H5'	2.34	0.58
57:8:47:SER:HB3	57:8:53:LYS:HG3	1.85	0.58
16:q:23:TYR:CD1	53:1:533:G:H5'	2.39	0.58
26:B:9:ARG:NE	53:1:517:C:OP2	2.37	0.58
32:H:137:VAL:HG21	32:H:167:TYR:HD2	1.69	0.58
32:H:175:HIS:ND1	52:3:1108:G:OP1	2.37	0.58
38:N:35:GLU:HA	38:N:39:GLY:HA2	1.86	0.58
41:Q:82:ARG:HH11	52:3:552:U:H5'	1.68	0.58
50:Z:7:GLU:HB3	50:Z:10:PRO:HG2	1.85	0.58
53:1:185:G:H4'	53:1:218:A:O2'	2.04	0.58
53:1:703:U:H2'	53:1:704:G:O4'	2.04	0.58
53:1:935:C:H2'	53:1:936:A:H8	1.69	0.58
53:1:1304:A:C3'	53:1:1305:C:H5''	2.33	0.58
53:1:2029:G:O6	53:1:2032:G:H5''	2.04	0.58
53:1:2077:A:O2'	53:1:2434:A:H4'	2.04	0.58
53:1:2799:A:H2'	53:1:2800:A:H5'	1.85	0.58
3:d:29:HIS:O	3:d:32:VAL:HG12	2.04	0.57
6:g:7:ASP:C	6:g:9:VAL:H	2.11	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1412:C:H2'	52:3:1413:A:C8	2.38	0.57
53:1:310:A:O2'	53:1:311:A:H5''	2.04	0.57
5:f:133:LYS:HD3	5:f:134:GLY:N	2.20	0.57
10:k:115:ILE:H	10:k:115:ILE:CD1	2.16	0.57
24:y:40:SER:HA	24:y:43:LEU:HD23	1.85	0.57
33:l:27:ILE:HG22	33:l:28:ASP:H	1.69	0.57
37:M:55:LYS:HE3	52:3:653:U:O2	2.04	0.57
40:P:117:HIS:CD2	52:3:675:A:H1'	2.38	0.57
42:R:25:GLY:H	52:3:1329:A:H5''	1.68	0.57
52:3:211:G:H2'	52:3:212:G:H5'	1.85	0.57
52:3:1397:C:C5'	52:3:1398:A:H4'	2.26	0.57
53:1:729:G:H4'	53:1:763:G:C5'	2.33	0.57
3:d:5:LEU:HA	3:d:120:VAL:HG13	1.86	0.57
11:l:29:LYS:HE3	53:1:566:U:OP1	2.03	0.57
14:o:53:THR:HA	14:o:58:ILE:HD13	1.87	0.57
29:E:57:VAL:O	29:E:61:LEU:HD23	2.04	0.57
38:N:108:ARG:HB3	52:3:1347:G:H5''	1.85	0.57
39:O:37:ARG:HG3	52:3:1124:G:H5''	1.85	0.57
41:Q:48:LEU:HD11	57:8:109:ARG:HE	1.69	0.57
52:3:1167:A:H2'	52:3:1167:A:N3	2.19	0.57
53:1:2432:A:C3'	53:1:2433:A:H5''	2.30	0.57
44:T:45:HIS:HB3	52:3:668:G:O2'	2.05	0.57
53:1:112:U:H2'	53:1:113:U:H5'	1.84	0.57
2:c:19:GLY:O	10:k:73:ASP:HB3	2.04	0.57
4:e:65:LEU:HD13	54:2:42:C:C5	2.39	0.57
4:e:132:ARG:NH1	53:1:2305:U:OP1	2.37	0.57
57:9:61:HIS:HB3	57:9:64:ILE:HD13	1.86	0.57
23:x:71:ARG:HD3	23:x:77:TYR:HE1	1.69	0.57
26:B:3:GLN:HA	53:1:2615:U:C2	2.39	0.57
32:H:154:GLY:HA2	52:3:1057:G:H5'	1.86	0.57
46:V:30:HIS:HD2	46:V:33:TYR:H	1.53	0.57
52:3:736:C:H2'	52:3:737:C:C6	2.40	0.57
52:3:1138:G:H3'	52:3:1138:G:N3	2.19	0.57
52:3:1346:A:H2'	52:3:1346:A:N3	2.19	0.57
53:1:395:U:H2'	53:1:396:G:C8	2.39	0.57
53:1:987:C:H2'	53:1:988:A:O4'	2.05	0.57
10:k:23:LYS:HB3	10:k:40:LYS:HB2	1.86	0.57
33:l:120:LYS:HE3	52:3:489:C:OP1	2.05	0.57
38:N:6:TYR:CZ	52:3:1147:C:H4'	2.40	0.57
42:R:106:ARG:HD2	52:3:947:G:OP2	2.04	0.57
46:V:61:ARG:NH1	46:V:63:CYS:HB3	2.20	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1079:G:H2'	52:3:1080:A:C8	2.39	0.57
53:1:2265:U:H3'	53:1:2266:A:C5'	2.30	0.57
53:1:2432:A:C2	55:5:75:C:H3'	2.39	0.57
12:m:103:TYR:HB2	12:m:117:PHE:HE1	1.70	0.57
16:q:80:ASN:OD1	53:1:1151:A:H4'	2.04	0.57
26:B:54:ILE:HG23	26:B:56:LYS:H	1.69	0.57
31:G:20:ARG:NE	52:3:831:A:H5''	2.19	0.57
37:M:59:GLU:C	37:M:60:LEU:HD22	2.30	0.57
40:P:53:GLY:O	40:P:55:ARG:N	2.36	0.57
52:3:1522:U:H2'	52:3:1523:G:C8	2.40	0.57
53:1:2183:A:H2'	53:1:2184:A:C8	2.39	0.57
14:o:29:HIS:HB3	14:o:36:TYR:HB2	1.87	0.57
15:p:105:LYS:HA	15:p:108:ARG:HG2	1.87	0.57
18:s:69:LEU:HA	18:s:109:ASP:HB3	1.85	0.57
38:N:20:ILE:HD11	38:N:60:LEU:HB3	1.86	0.57
49:Y:4:LYS:NZ	52:3:332:G:OP1	2.34	0.57
52:3:709:U:H2'	52:3:710:G:C8	2.40	0.57
53:1:1810:A:H2'	53:1:1811:G:O4'	2.05	0.57
53:1:2249:U:O4	53:1:2251:G:H4'	2.05	0.57
53:1:2860:A:H2'	53:1:2861:U:H5'	1.86	0.57
12:m:79:ALA:HA	53:1:2494:G:O2'	2.05	0.57
44:T:10:ILE:HD13	44:T:30:LEU:HA	1.87	0.57
53:1:2287:A:O2'	53:1:2288:A:H2'	2.05	0.57
53:1:2808:G:H2'	53:1:2890:G:C6	2.40	0.57
12:m:36:VAL:HG13	21:v:82:TYR:CD2	2.40	0.56
14:o:79:ALA:HB1	14:o:113:ALA:HB3	1.87	0.56
28:D:35:ARG:HE	53:1:54:G:H1'	1.70	0.56
34:J:108:GLY:H	52:3:9:G:H4'	1.70	0.56
37:M:39:LEU:HB3	37:M:44:PHE:HB2	1.86	0.56
37:M:45:ILE:HG21	37:M:60:LEU:HD12	1.87	0.56
38:N:59:LYS:C	38:N:60:LEU:HD22	2.30	0.56
47:W:41:SER:HB2	47:W:51:GLN:HG2	1.87	0.56
52:3:413:G:H5'	52:3:414:A:H5'	1.86	0.56
52:3:1356:G:H2'	52:3:1357:A:C8	2.40	0.56
52:3:1393:U:H2'	52:3:1395:C:C6	2.40	0.56
53:1:2432:A:O5'	55:5:75:C:C5'	2.49	0.56
55:5:34:C:H2'	55:5:35:A:H8	1.68	0.56
9:j:132:HIS:NE2	53:1:7:G:H5'	2.19	0.56
12:m:42:THR:HG22	12:m:45:GLN:HG3	1.88	0.56
23:x:31:ASN:HB3	53:1:2230:G:H1'	1.87	0.56
44:T:48:ASP:OD2	52:3:668:G:H1'	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:U:6:LEU:HD22	45:U:17:TYR:HB3	1.87	0.56
51:a:19:LYS:HG2	51:a:20:GLN:N	2.20	0.56
53:1:45:G:C5'	53:1:46:G:H5'	2.23	0.56
53:1:527:C:H4'	53:1:528:A:O4'	2.05	0.56
53:1:807:U:H2'	53:1:808:G:C8	2.40	0.56
53:1:1133:A:H4'	53:1:1134:A:H5''	1.88	0.56
55:5:26:G:H3'	55:5:27:U:C5'	2.35	0.56
4:e:73:VAL:HB	4:e:78:ILE:HD12	1.88	0.56
14:o:105:ALA:O	14:o:108:ASP:OD1	2.23	0.56
52:3:729:A:H2'	52:3:730:G:C8	2.40	0.56
52:3:813:U:H2'	52:3:814:A:H5''	1.87	0.56
53:1:481:G:H1'	53:1:506:G:N2	2.21	0.56
53:1:517:C:C2'	53:1:518:G:H5''	2.30	0.56
53:1:2224:G:H4'	53:1:2226:C:C2	2.40	0.56
4:e:65:LEU:HD22	54:2:42:C:C4	2.41	0.56
9:j:20:ALA:HB3	9:j:58:ASN:O	2.05	0.56
9:j:57:LEU:HD23	9:j:57:LEU:H	1.70	0.56
12:m:30:SER:HA	12:m:133:LYS:HD3	1.86	0.56
13:n:38:LEU:HB3	13:n:39:PRO:HD3	1.86	0.56
16:q:91:ARG:HD2	16:q:91:ARG:N	2.19	0.56
52:3:1123:U:O2'	52:3:1124:G:H5'	2.06	0.56
53:1:2314:A:H2'	53:1:2315:G:C8	2.41	0.56
53:1:2432:A:C6	53:1:2433:A:N3	2.74	0.56
53:1:2433:A:C8	55:5:75:C:H2'	2.40	0.56
1:b:136:VAL:HG13	1:b:163:ILE:HG22	1.88	0.56
8:i:33:ASN:HB2	8:i:36:GLU:HB3	1.87	0.56
20:u:3:LYS:HD3	20:u:82:VAL:CG1	2.36	0.56
6:g:5:LEU:HD13	6:g:36:ALA:HB2	1.87	0.56
34:J:95:MET:N	34:J:95:MET:SD	2.79	0.56
53:1:668:A:H2'	53:1:670:A:H62	1.71	0.56
53:1:2248:C:H42	53:1:2256:G:H1	1.53	0.56
57:8:9:ALA:H	57:9:5:SER:HA	1.70	0.56
8:i:126:ARG:NH2	53:1:1079:C:H4'	2.20	0.56
9:j:17:VAL:HG12	9:j:55:ILE:HB	1.86	0.56
12:m:42:THR:CG2	12:m:45:GLN:HG3	2.36	0.56
16:q:58:GLN:O	16:q:61:ILE:HG22	2.05	0.56
41:Q:29:LYS:HE2	41:Q:58:ASN:ND2	2.21	0.56
41:Q:32:VAL:HB	41:Q:55:ARG:HB3	1.87	0.56
44:T:69:LEU:HB3	44:T:77:TYR:HD1	1.71	0.56
52:3:18:C:H4'	52:3:1078:U:O2'	2.05	0.56
53:1:2620:C:H3'	53:1:2621:G:H5''	1.86	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:b:18:VAL:HB	1:b:202:ARG:HH21	1.71	0.56
1:b:30:ALA:HB3	1:b:31:PRO:HD3	1.87	0.56
11:l:122:VAL:HG22	11:l:123:ARG:H	1.70	0.56
12:m:11:LYS:HD3	12:m:86:LYS:HG2	1.88	0.56
18:s:8:ARG:NH1	53:1:494:G:OP1	2.37	0.56
19:t:41:ALA:O	19:t:44:LYS:HG2	2.06	0.56
32:H:191:THR:HB	52:3:532:A:H62	1.70	0.56
41:Q:115:LYS:HE2	41:Q:116:TYR:CZ	2.40	0.56
52:3:75:G:C2'	52:3:76:G:H5'	2.36	0.56
53:1:197:A:H4'	53:1:2069:G:OP2	2.05	0.56
53:1:296:U:H2'	53:1:297:G:C8	2.41	0.56
53:1:2086:U:H2'	53:1:2087:G:C8	2.40	0.56
2:c:150:GLN:NE2	53:1:574:A:H2	2.04	0.56
4:e:70:ARG:NH2	4:e:71:LYS:HB2	2.20	0.56
33:I:55:ARG:O	33:I:59:LYS:HG3	2.05	0.56
33:I:68:GLU:HB3	52:3:546:A:OP1	2.06	0.56
36:L:29:LEU:HD23	36:L:29:LEU:O	2.06	0.56
37:M:100:ILE:HG23	37:M:128:VAL:HG13	1.87	0.56
2:c:5:VAL:H	2:c:32:ASN:HD21	1.54	0.56
28:D:39:ARG:NH2	53:1:469:G:O6	2.39	0.56
52:3:1070:U:H2'	52:3:1071:C:C6	2.41	0.56
52:3:1144:G:H21	52:3:1146:A:H62	1.54	0.56
53:1:2233:U:H2'	53:1:2234:G:H8	1.70	0.56
15:p:105:LYS:HE3	52:3:1464:U:OP2	2.06	0.55
37:M:83:ARG:HG2	37:M:83:ARG:HH11	1.70	0.55
41:Q:111:GLN:HB2	52:3:538:G:OP2	2.06	0.55
52:3:1080:A:H2'	52:3:1081:A:H5'	1.88	0.55
53:1:349:U:H2'	53:1:350:G:H8	1.71	0.55
53:1:2547:A:H2'	53:1:2548:U:C6	2.40	0.55
2:c:1:MET:HB2	2:c:205:PRO:HG2	1.87	0.55
52:3:224:U:H2'	52:3:225:C:C6	2.42	0.55
52:3:1347:G:HO2'	52:3:1348:U:H5	1.54	0.55
52:3:1491:G:H2'	52:3:1492:A:O4'	2.06	0.55
53:1:2404:U:H2'	53:1:2405:G:O4'	2.06	0.55
16:q:80:ASN:CG	53:1:1151:A:H4'	2.31	0.55
26:B:5:ASN:HD22	53:1:2020:A:H62	1.53	0.55
31:G:68:PHE:H	31:G:90:PHE:HA	1.71	0.55
35:K:2:ARG:HD3	35:K:91:ARG:HH22	1.71	0.55
49:Y:28:ARG:HA	49:Y:31:ILE:HD13	1.88	0.55
52:3:1148:U:H2'	52:3:1149:C:O4'	2.05	0.55
53:1:1378:A:H1'	53:1:1379:U:C5	2.41	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:5:27:U:H2'	55:5:28:C:C5'	2.37	0.55
57:8:53:LYS:HD3	57:8:56:LEU:HD12	1.89	0.55
3:d:130:LYS:HD3	53:1:321:U:OP2	2.05	0.55
52:3:1028:C:H3'	52:3:1029:U:C5'	2.36	0.55
52:3:1436:U:H2'	52:3:1437:A:C8	2.41	0.55
53:1:2252:G:N2	53:1:2426:A:N6	2.54	0.55
53:1:2317:A:H2'	53:1:2318:G:O4'	2.07	0.55
54:2:115:A:H2'	54:2:116:G:C8	2.41	0.55
20:u:43:LYS:HD2	20:u:60:LYS:HE2	1.89	0.55
34:J:19:ARG:HA	34:J:32:PHE:HA	1.89	0.55
42:R:94:LEU:HD12	42:R:95:PRO:HD2	1.89	0.55
44:T:50:HIS:ND1	52:3:667:G:H4'	2.22	0.55
44:T:50:HIS:NE2	52:3:730:G:O6	2.28	0.55
52:3:1506:U:O2'	52:3:1507:A:H5'	2.06	0.55
53:1:2743:U:C3'	53:1:2744:G:H5''	2.36	0.55
57:8:104:ALA:O	57:8:105:ARG:HG2	2.07	0.55
7:h:61:ARG:HB2	53:1:1046:A:H4'	1.87	0.55
17:r:73:LYS:HE2	17:r:73:LYS:HA	1.89	0.55
18:s:29:VAL:HG12	18:s:71:VAL:HG13	1.89	0.55
19:t:32:LEU:HD12	19:t:32:LEU:O	2.06	0.55
30:F:4:ARG:HB2	53:1:2466:C:OP1	2.06	0.55
33:I:131:ILE:HG12	52:3:620:C:C2	2.42	0.55
34:J:30:PHE:HE1	52:3:16:A:OP1	1.89	0.55
36:L:29:LEU:HD22	36:L:38:ALA:HB1	1.89	0.55
38:N:84:ARG:HH21	52:3:1119:C:H5''	1.71	0.55
41:Q:93:ARG:NH1	52:3:911:U:OP2	2.35	0.55
52:3:145:G:H3'	52:3:146:G:H5''	1.89	0.55
52:3:320:A:H2'	52:3:321:A:O4'	2.07	0.55
53:1:1417:C:H2'	53:1:1418:G:O4'	2.07	0.55
53:1:2246:G:H3'	53:1:2251:G:H22	1.72	0.55
1:b:140:VAL:HG13	1:b:191:LEU:HA	1.89	0.55
2:c:173:GLN:NE2	53:1:2731:G:H4'	2.20	0.55
20:u:25:LYS:HE3	20:u:36:GLU:HG2	1.87	0.55
24:y:6:LEU:HD23	24:y:6:LEU:O	2.06	0.55
29:E:37:THR:HA	29:E:40:LYS:HE3	1.87	0.55
51:a:186:LYS:HA	51:a:189:LEU:HG	1.89	0.55
52:3:74:A:H2'	52:3:75:G:C8	2.42	0.55
52:3:1306:A:N6	52:3:1331:G:H1'	2.22	0.55
53:1:215:G:C4'	53:1:216:A:H4'	2.35	0.55
53:1:255:A:H2'	53:1:256:A:O4'	2.07	0.55
54:2:95:U:H2'	54:2:96:G:C8	2.42	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:8:37:ILE:HD13	57:8:83:ASN:HD21	1.71	0.55
5:f:15:ASP:HB3	5:f:26:LYS:HB2	1.89	0.55
9:j:37:ARG:NH2	53:1:1007:C:OP1	2.40	0.55
11:l:126:ARG:NH1	53:1:635:C:OP2	2.40	0.55
32:H:4:VAL:HB	52:3:1190:G:P	2.46	0.55
42:R:7:ASN:ND2	42:R:9:PRO:HD3	2.22	0.55
49:Y:43:LYS:HA	49:Y:46:ALA:HB3	1.89	0.55
53:1:741:U:H2'	53:1:742:A:C8	2.42	0.55
53:1:1827:U:O2'	53:1:1828:G:H5'	2.07	0.55
4:e:157:THR:HG22	4:e:158:THR:H	1.70	0.55
4:e:161:SER:HB3	4:e:164:GLU:HB3	1.88	0.55
13:n:63:ARG:HD3	53:1:1454:C:O4'	2.07	0.55
23:x:18:SER:HB2	53:1:2080:A:H5'	1.89	0.55
38:N:93:LEU:O	38:N:96:GLU:HG3	2.06	0.55
48:X:30:LEU:H	48:X:30:LEU:HD12	1.72	0.55
53:1:2818:U:H2'	53:1:2819:G:H8	1.72	0.55
10:k:26:GLY:O	10:k:30:ARG:HD2	2.07	0.55
10:k:105:ARG:HH22	15:p:71:ARG:HH12	1.54	0.55
33:I:9:LYS:HE3	52:3:542:G:OP1	2.06	0.55
41:Q:56:LEU:HD12	41:Q:60:PHE:HB2	1.89	0.55
52:3:457:G:H2'	52:3:458:U:H5'	1.88	0.55
52:3:1406:U:H2'	52:3:1407:C:O4'	2.07	0.55
53:1:95:A:H3'	53:1:96:C:H5''	1.88	0.55
57:9:14:GLU:OE1	57:9:47:SER:HB2	2.06	0.55
3:d:47:LYS:HD3	3:d:52:VAL:HA	1.88	0.54
33:I:124:VAL:HG22	33:I:142:VAL:HG23	1.88	0.54
53:1:1914:C:H1'	57:8:105:ARG:C	2.32	0.54
1:b:94:LEU:HD11	53:1:1501:G:H4'	1.88	0.54
3:d:76:PRO:HB3	3:d:84:THR:HG23	1.89	0.54
34:J:61:LYS:NZ	52:3:1072:G:H5''	2.21	0.54
52:3:1513:A:H2'	52:3:1514:G:C8	2.42	0.54
53:1:1432:G:H2'	53:1:1433:A:C8	2.43	0.54
1:b:257:ARG:HD3	53:1:1799:G:OP1	2.06	0.54
3:d:75:SER:HG	3:d:78:TRP:CD1	2.25	0.54
49:Y:33:LYS:CE	52:3:1457:G:H5'	2.37	0.54
52:3:243:A:H4'	52:3:244:U:H3'	1.90	0.54
53:1:898:C:C2'	53:1:899:A:H5'	2.35	0.54
4:e:34:THR:HG21	53:1:2314:A:C5'	2.38	0.54
8:i:6:ALA:H	8:i:60:VAL:HB	1.73	0.54
17:r:35:PHE:HB2	17:r:59:ILE:HB	1.88	0.54
28:D:24:THR:HG22	28:D:26:ASN:H	1.72	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:K:91:ARG:HG3	35:K:92:THR:H	1.72	0.54
52:3:18:C:O2'	52:3:1078:U:H1'	2.06	0.54
52:3:225:C:C3'	52:3:226:G:H5''	2.36	0.54
53:1:864:G:O2'	53:1:865:C:H5'	2.06	0.54
53:1:2432:A:O4'	55:5:75:C:O5'	2.25	0.54
53:1:2710:C:H2'	53:1:2711:A:C8	2.41	0.54
57:9:61:HIS:HB3	57:9:64:ILE:CD1	2.38	0.54
8:i:130:GLY:HA3	53:1:1079:C:H1'	1.89	0.54
17:r:14:VAL:HG21	17:r:98:ILE:HG13	1.89	0.54
32:H:171:ARG:C	32:H:173:PRO:HD3	2.33	0.54
51:a:11:ILE:HD11	51:a:35:THR:HG23	1.89	0.54
52:3:817:C:H4'	52:3:818:G:H5''	1.89	0.54
52:3:825:A:H2'	52:3:826:C:C6	2.43	0.54
52:3:1296:C:H4'	52:3:1302:C:H42	1.72	0.54
53:1:479:A:H4'	53:1:480:A:H5'	1.90	0.54
57:8:17:ILE:HD13	57:8:40:ARG:HE	1.72	0.54
2:c:59:ARG:NH1	53:1:2830:C:H3'	2.23	0.54
3:d:41:GLN:HG3	3:d:43:THR:HG23	1.89	0.54
33:I:176:LYS:HE2	33:I:178:GLU:HG3	1.89	0.54
37:M:29:SER:H	37:M:32:LYS:HB2	1.72	0.54
52:3:440:C:H3'	52:3:441:A:H5''	1.89	0.54
52:3:929:G:H5'	52:3:1534:A:H4'	1.90	0.54
52:3:1127:G:H5'	52:3:1280:A:O2'	2.08	0.54
52:3:1340:A:O2'	52:3:1341:U:H5'	2.08	0.54
53:1:2572:A:H5'	53:1:2574:G:H4'	1.88	0.54
53:1:2834:G:O2'	53:1:2835:A:H5'	2.07	0.54
57:8:95:ILE:HD12	57:9:4:ILE:HG13	1.89	0.54
33:I:24:VAL:HG13	33:I:25:ARG:HG3	1.90	0.54
35:K:11:HIS:HA	35:K:54:LEU:HD21	1.88	0.54
41:Q:101:LEU:HD12	41:Q:101:LEU:H	1.73	0.54
52:3:1227:A:C2'	52:3:1228:C:H5'	2.38	0.54
53:1:940:G:C2'	53:1:941:A:H5''	2.37	0.54
11:l:122:VAL:CG1	11:l:142:ILE:HG23	2.37	0.54
14:o:40:ILE:HG13	14:o:47:VAL:HG12	1.89	0.54
31:G:55:GLU:HA	31:G:58:LYS:HD3	1.90	0.54
36:L:26:VAL:HG12	36:L:42:VAL:HG21	1.88	0.54
52:3:130:A:O2'	52:3:264:C:H5'	2.08	0.54
52:3:1441:A:H62	52:3:1461:G:H21	1.54	0.54
53:1:493:G:O2'	53:1:494:G:H5'	2.08	0.54
53:1:889:C:H2'	53:1:890:C:H5'	1.89	0.54
53:1:1173:U:C2'	53:1:1174:U:H4'	2.36	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:1536:C:H4'	53:1:1537:G:C2	2.43	0.54
4:e:87:LYS:NZ	53:1:2314:A:OP1	2.40	0.54
27:C:4:ILE:N	27:C:4:ILE:HD12	2.23	0.54
52:3:392:C:H2'	52:3:393:A:C8	2.43	0.54
52:3:779:C:H2'	52:3:780:A:O4'	2.08	0.54
53:1:2743:U:H3'	53:1:2744:G:H5''	1.90	0.54
57:9:52:TYR:O	57:9:56:LEU:HD13	2.08	0.54
25:z:40:THR:HG23	25:z:42:ALA:H	1.72	0.54
42:R:100:ARG:HH21	42:R:102:LYS:HD3	1.72	0.54
52:3:1236:A:H2'	52:3:1237:C:O4'	2.08	0.54
52:3:1477:U:H2'	52:3:1478:U:C6	2.43	0.54
53:1:558:U:H2'	53:1:559:G:H8	1.72	0.54
54:2:35:C:H2'	54:2:36:C:H5'	1.89	0.54
2:c:194:PRO:HA	53:1:2680:U:C5'	2.38	0.53
3:d:58:LYS:HG2	3:d:71:GLY:HA2	1.89	0.53
28:D:26:ASN:CG	53:1:682:G:H5'	2.33	0.53
32:H:85:LYS:HA	32:H:88:LYS:HE2	1.90	0.53
34:J:23:THR:HA	34:J:29:ILE:H	1.73	0.53
39:O:12:ALA:HB2	39:O:96:VAL:HG22	1.89	0.53
46:V:61:ARG:HH12	46:V:63:CYS:HB3	1.73	0.53
48:X:77:ARG:HH11	52:3:1222:G:H5''	1.73	0.53
52:3:113:G:H1'	52:3:354:G:H5''	1.90	0.53
53:1:467:G:O2'	53:1:468:G:H5'	2.08	0.53
53:1:1357:C:H2'	53:1:1358:G:O4'	2.08	0.53
53:1:2533:U:H2'	53:1:2534:A:O4'	2.07	0.53
55:5:61:C:C3'	55:5:62:C:H5''	2.38	0.53
6:g:31:VAL:N	6:g:32:PRO:HD2	2.22	0.53
7:h:30:SER:HA	7:h:81:LEU:HD11	1.90	0.53
26:B:52:LYS:HE2	26:B:55:ALA:H	1.73	0.53
28:D:34:ARG:HE	28:D:39:ARG:HD2	1.74	0.53
39:O:48:ARG:CD	52:3:1368:A:H4'	2.32	0.53
45:U:22:ALA:HB2	45:U:32:PHE:HB3	1.90	0.53
53:1:2281:A:O2'	53:1:2282:G:H5'	2.08	0.53
57:8:10:ILE:HG23	57:8:10:ILE:O	2.08	0.53
3:d:146:VAL:HG22	3:d:147:LEU:N	2.22	0.53
4:e:149:ARG:NH1	53:1:2305:U:O2	2.42	0.53
5:f:29:ASN:HB2	5:f:78:VAL:HA	1.91	0.53
14:o:40:ILE:HG22	14:o:41:ALA:N	2.24	0.53
14:o:67:ASN:HA	54:2:50:A:OP2	2.08	0.53
48:X:28:LYS:HG3	48:X:29:PRO:CD	2.37	0.53
51:a:19:LYS:HG2	51:a:20:GLN:H	1.72	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:429:U:H3	52:3:431:A:H62	1.56	0.53
52:3:673:A:H61	52:3:717:U:H3	1.55	0.53
53:1:2166:U:H3'	53:1:2167:U:H5'	1.90	0.53
53:1:2724:U:H2'	53:1:2725:A:C8	2.44	0.53
57:8:126:SER:O	57:8:129:LYS:HG2	2.08	0.53
3:d:57:LYS:HE2	53:1:796:C:OP1	2.09	0.53
8:i:105:LEU:HD23	8:i:108:ILE:HD12	1.90	0.53
13:n:39:PRO:HG2	53:1:1651:G:H4'	1.89	0.53
25:z:4:ILE:HG13	25:z:58:GLU:HA	1.90	0.53
31:G:45:THR:HG22	31:G:200:PRO:HG2	1.91	0.53
32:H:9:ILE:HG13	32:H:10:ARG:HH21	1.73	0.53
33:I:37:PRO:HD2	33:I:41:GLY:HA3	1.90	0.53
39:O:88:MET:O	39:O:89:ARG:HB2	2.08	0.53
46:V:11:VAL:HG21	46:V:52:CYS:SG	2.49	0.53
46:V:26:ARG:CZ	52:3:237:G:H4'	2.38	0.53
50:Z:22:CYS:SG	50:Z:23:GLU:N	2.82	0.53
51:a:42:VAL:HB	51:a:178:VAL:HG11	1.91	0.53
52:3:560:A:H5'	52:3:566:G:N2	2.23	0.53
52:3:603:U:H2'	52:3:604:G:C8	2.44	0.53
53:1:940:G:C3'	53:1:941:A:H5''	2.39	0.53
53:1:2282:G:H4'	53:1:2389:G:O2'	2.09	0.53
57:9:15:LEU:HB2	57:9:40:ARG:HH21	1.73	0.53
1:b:123:ILE:HA	1:b:191:LEU:CD1	2.39	0.53
33:I:196:GLU:O	33:I:200:VAL:HG23	2.07	0.53
52:3:1086:U:H3	52:3:1099:G:H22	1.56	0.53
53:1:827:U:H1'	53:1:2246:G:HO2'	1.73	0.53
53:1:1856:U:H2'	53:1:1857:G:O4'	2.09	0.53
16:q:106:THR:O	16:q:109:VAL:HG12	2.09	0.53
31:G:15:PHE:O	31:G:202:ASN:ND2	2.42	0.53
32:H:156:LEU:H	32:H:156:LEU:HD12	1.74	0.53
35:K:66:ALA:HB1	35:K:70:VAL:CG2	2.38	0.53
38:N:128:LYS:HG3	38:N:129:ARG:N	2.24	0.53
48:X:12:LEU:HD23	48:X:13:HIS:N	2.23	0.53
48:X:30:LEU:HD21	48:X:46:LEU:HD22	1.89	0.53
52:3:7:A:H4'	52:3:298:A:OP1	2.09	0.53
52:3:134:G:H2'	52:3:135:C:O4'	2.08	0.53
52:3:596:A:H61	52:3:644:U:H3	1.57	0.53
53:1:2233:U:H2'	53:1:2234:G:C8	2.43	0.53
57:9:73:LYS:O	57:9:90:ARG:NH1	2.42	0.53
1:b:228:ASP:CG	53:1:780:G:H1	2.17	0.53
21:v:9:ARG:HG2	21:v:41:GLU:HB2	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:E:39:ARG:CZ	53:1:2362:C:H5''	2.38	0.53
34:J:152:VAL:HG21	37:M:98:LEU:HD21	1.91	0.53
1:b:158:GLY:N	1:b:194:VAL:HG23	2.24	0.53
5:f:123:GLU:HB3	5:f:131:VAL:HG23	1.91	0.53
6:g:110:VAL:HG22	6:g:111:ALA:N	2.23	0.53
12:m:16:ARG:HH12	53:1:953:G:H3'	1.74	0.53
29:E:18:LYS:HG2	53:1:651:G:H5'	1.90	0.53
33:I:68:GLU:OE2	52:3:545:C:H5''	2.08	0.53
38:N:23:GLY:H	38:N:60:LEU:HA	1.73	0.53
41:Q:47:ALA:HB1	52:3:520:A:OP2	2.09	0.53
52:3:1080:A:C2'	52:3:1081:A:H5'	2.38	0.53
52:3:1137:C:H4'	52:3:1138:G:C2	2.44	0.53
20:u:65:GLN:HG3	53:1:328:U:O3'	2.08	0.53
23:x:21:LEU:O	53:1:200:U:H4'	2.09	0.53
33:I:101:VAL:HG22	33:I:106:PHE:HD2	1.74	0.53
33:I:154:VAL:HG22	33:I:177:MET:HE1	1.90	0.53
46:V:26:ARG:NH2	52:3:237:G:H4'	2.24	0.53
48:X:77:ARG:NH1	52:3:1222:G:OP1	2.42	0.53
53:1:2788:C:H2'	53:1:2789:C:C6	2.44	0.53
1:b:7:PRO:HB2	1:b:13:ARG:NH1	2.24	0.53
3:d:68:ALA:HA	53:1:1255:U:C6	2.43	0.53
4:e:3:LEU:HD22	4:e:99:PHE:CD2	2.44	0.53
4:e:13:LYS:O	4:e:16:MET:HG2	2.09	0.53
7:h:22:ALA:O	7:h:117:LEU:HB3	2.09	0.53
18:s:55:ILE:HG23	18:s:66:ILE:HG12	1.91	0.53
27:C:7:LYS:NZ	53:1:2420:C:H5''	2.24	0.53
38:N:20:ILE:HD11	38:N:60:LEU:CB	2.39	0.53
43:S:2:LYS:HZ3	52:3:982:U:H5''	1.74	0.53
53:1:225:C:H2'	53:1:226:A:O4'	2.08	0.53
53:1:362:A:H3'	53:1:363:G:C8	2.44	0.53
53:1:1558:C:H4'	53:1:1560:G:OP2	2.09	0.53
53:1:1697:G:H4'	53:1:1978:A:H5''	1.90	0.53
53:1:2134:A:H1'	53:1:2158:A:H4'	1.91	0.53
53:1:2585:U:H4'	53:1:2586:U:C5'	2.16	0.53
1:b:140:VAL:O	1:b:161:VAL:HG12	2.09	0.52
3:d:1:MET:SD	3:d:1:MET:N	2.82	0.52
5:f:36:LEU:HD23	5:f:40:VAL:HG11	1.92	0.52
13:n:69:ARG:O	13:n:70:THR:OG1	2.25	0.52
31:G:104:LYS:O	31:G:108:GLN:NE2	2.42	0.52
34:J:61:LYS:CE	52:3:1072:G:H5''	2.39	0.52
36:L:50:ALA:HB2	36:L:57:GLU:HB3	1.90	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:a:63:THR:HG22	51:a:64:VAL:H	1.74	0.52
53:1:95:A:C3'	53:1:96:C:H5''	2.39	0.52
53:1:118:A:OP2	53:1:119:A:H5''	2.10	0.52
53:1:741:U:H2'	53:1:742:A:H8	1.75	0.52
11:l:57:LEU:HD12	11:l:60:ARG:HH12	1.74	0.52
26:B:9:ARG:CZ	53:1:517:C:OP2	2.57	0.52
52:3:346:G:H2'	52:3:347:G:O4'	2.10	0.52
52:3:1218:C:H2'	52:3:1219:A:C8	2.44	0.52
52:3:1397:C:H5'	52:3:1398:A:C4'	2.26	0.52
52:3:1504:G:OP1	52:3:1507:A:H4'	2.09	0.52
57:9:62:HIS:CD2	57:9:63:LEU:HG	2.45	0.52
2:c:59:ARG:HH11	53:1:2830:C:H3'	1.74	0.52
33:l:205:LYS:HB3	52:3:8:A:C6	2.45	0.52
38:N:28:VAL:HG13	38:N:63:TYR:HA	1.91	0.52
42:R:16:ILE:HG21	52:3:1302:C:C6	2.45	0.52
52:3:1504:G:H4'	52:3:1505:G:O4'	2.09	0.52
53:1:262:A:H2'	53:1:263:G:O4'	2.10	0.52
53:1:1662:U:H2'	53:1:1663:G:C8	2.44	0.52
53:1:2066:C:O2'	53:1:2067:G:H5'	2.09	0.52
53:1:2238:G:H2'	53:1:2238:G:N3	2.24	0.52
53:1:2243:U:H2'	53:1:2244:U:H6	1.71	0.52
55:5:57:A:C2'	55:5:58:A:H5'	2.39	0.52
55:5:60:U:H5''	55:5:61:C:C5	2.45	0.52
1:b:107:LYS:N	1:b:193:GLU:O	2.42	0.52
11:l:3:LEU:HD23	53:1:1203:U:H5'	1.92	0.52
11:l:112:LEU:HD22	11:l:130:GLY:HA3	1.91	0.52
15:p:52:ARG:NH2	53:1:2720:U:H5''	2.23	0.52
18:s:4:ILE:O	53:1:495:G:H4'	2.10	0.52
26:B:54:ILE:HG23	26:B:56:LYS:N	2.25	0.52
37:M:77:VAL:HG23	37:M:126:CYS:HA	1.92	0.52
51:a:44:VAL:HG22	51:a:214:ILE:HG12	1.91	0.52
10:k:64:ARG:HB2	10:k:83:ALA:H	1.74	0.52
13:n:8:ARG:N	13:n:43:GLU:OE2	2.42	0.52
18:s:82:MET:N	18:s:82:MET:SD	2.82	0.52
41:Q:50:LYS:HG2	41:Q:66:ILE:HD12	1.91	0.52
43:S:27:LYS:HZ3	52:3:1317:C:H5'	1.74	0.52
48:X:48:ILE:O	48:X:58:PRO:HA	2.09	0.52
51:a:205:LYS:HZ3	53:1:1860:G:H5'	1.74	0.52
52:3:651:C:H2'	52:3:652:U:C6	2.44	0.52
52:3:1513:A:H2'	52:3:1514:G:H8	1.74	0.52
53:1:677:A:O2'	53:1:2071:A:H5'	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:942:G:H2'	53:1:943:A:O4'	2.09	0.52
53:1:2166:U:H3'	53:1:2167:U:C5'	2.39	0.52
33:I:8:LEU:HB2	52:3:430:A:OP1	2.10	0.52
35:K:23:GLU:HA	35:K:26:THR:HG22	1.92	0.52
38:N:98:ARG:HA	38:N:102:PHE:HB2	1.92	0.52
53:1:2074:U:H2'	53:1:2075:U:C6	2.45	0.52
53:1:2515:C:H2'	53:1:2516:A:C8	2.45	0.52
9:j:81:ILE:HG13	9:j:82:GLY:N	2.23	0.52
20:u:81:ARG:HH12	53:1:300:A:P	2.32	0.52
35:K:92:THR:OG1	35:K:93:LYS:N	2.43	0.52
38:N:105:ARG:HD2	52:3:1118:U:OP1	2.09	0.52
41:Q:20:VAL:HG13	41:Q:94:TYR:HE1	1.75	0.52
45:U:5:ARG:HH12	52:3:377:G:H5'	1.75	0.52
52:3:665:A:N3	52:3:732:C:H2'	2.25	0.52
53:1:296:U:H2'	53:1:297:G:H8	1.73	0.52
54:2:106:G:H2'	54:2:107:G:O4'	2.08	0.52
2:c:197:THR:HB	53:1:2820:A:N1	2.25	0.52
12:m:12:MET:HA	53:1:910:A:N6	2.23	0.52
18:s:6:LYS:O	53:1:494:G:H4'	2.10	0.52
20:u:14:THR:OG1	20:u:15:GLY:N	2.32	0.52
39:O:15:HIS:HA	39:O:18:ILE:HG22	1.91	0.52
44:T:16:ARG:HH22	52:3:751:U:H5''	1.75	0.52
46:V:15:LYS:HD2	52:3:275:G:H5'	1.91	0.52
47:W:37:LYS:HB2	52:3:719:C:O2'	2.10	0.52
51:a:4:LEU:O	51:a:5:THR:HG23	2.09	0.52
53:1:286:U:H2'	53:1:287:G:C8	2.45	0.52
53:1:414:C:H2'	53:1:415:A:C8	2.45	0.52
53:1:433:C:O2'	53:1:434:U:H5'	2.10	0.52
53:1:720:U:H2'	53:1:721:A:H8	1.74	0.52
53:1:1367:A:C2'	53:1:1368:G:H5'	2.38	0.52
57:8:15:LEU:HD23	57:8:15:LEU:C	2.34	0.52
1:b:229:HIS:ND1	1:b:230:PRO:HD2	2.25	0.52
9:j:63:ALA:HA	9:j:69:ARG:HH22	1.74	0.52
9:j:113:PRO:HD2	53:1:558:U:P	2.50	0.52
15:p:29:VAL:HG12	15:p:79:VAL:HG22	1.92	0.52
40:P:53:GLY:C	40:P:55:ARG:H	2.18	0.52
52:3:440:C:H2'	52:3:441:A:C5'	2.39	0.52
52:3:1028:C:H3'	52:3:1029:U:H5''	1.92	0.52
52:3:1135:U:H2'	52:3:1137:C:OP2	2.10	0.52
53:1:579:G:H4'	53:1:2018:G:H5''	1.91	0.52
53:1:873:C:H2'	53:1:874:G:H8	1.75	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2602:A:O2'	57:8:78:ARG:HD2	2.10	0.52
54:2:104:A:H2'	54:2:105:G:O4'	2.10	0.52
2:c:194:PRO:HA	53:1:2680:U:H5'	1.92	0.52
16:q:80:ASN:HB2	53:1:1151:A:O2'	2.10	0.52
38:N:6:TYR:CE2	52:3:1147:C:H4'	2.45	0.52
41:Q:70:GLY:H	41:Q:106:VAL:HG22	1.75	0.52
46:V:15:LYS:O	52:3:275:G:H4'	2.09	0.52
52:3:766:A:H2'	52:3:767:A:O4'	2.10	0.52
52:3:1306:A:H2'	52:3:1307:U:O4'	2.09	0.52
53:1:1098:A:H2'	53:1:1099:G:O4'	2.08	0.52
54:2:3:C:C2'	54:2:4:C:H5''	2.38	0.52
1:b:75:ALA:HB1	1:b:93:VAL:CG1	2.40	0.51
1:b:209:ALA:HA	1:b:212:TRP:CE2	2.45	0.51
8:i:58:ILE:HD12	8:i:58:ILE:N	2.25	0.51
51:a:164:ARG:CZ	53:1:2122:U:H4'	2.40	0.51
52:3:12:U:H2'	52:3:13:U:H5''	1.90	0.51
52:3:1502:A:H5'	52:3:1504:G:N7	2.25	0.51
53:1:69:C:O2'	53:1:70:G:H5'	2.10	0.51
53:1:2011:U:H2'	53:1:2012:G:O4'	2.10	0.51
53:1:2257:U:O2'	53:1:2258:C:H5'	2.10	0.51
53:1:2452:C:H5''	57:8:33:THR:HG23	1.92	0.51
55:5:24:U:H2'	55:5:25:C:H5'	1.91	0.51
55:5:57:A:O2'	55:5:58:A:H5'	2.09	0.51
57:8:11:PRO:HB2	57:8:14:GLU:HB3	1.92	0.51
57:9:15:LEU:HD22	57:9:40:ARG:NH2	2.26	0.51
57:9:48:LEU:N	57:9:49:PRO:CD	2.70	0.51
1:b:269:ARG:HD3	1:b:270:ARG:N	2.24	0.51
8:i:89:SER:O	8:i:90:GLY:C	2.53	0.51
27:C:34:GLU:C	27:C:35:LEU:HD22	2.35	0.51
52:3:946:A:H2'	52:3:947:G:C8	2.45	0.51
53:1:796:C:H2'	53:1:797:G:C8	2.46	0.51
53:1:2432:A:H8	55:5:74:C:C2	2.28	0.51
53:1:2432:A:N9	55:5:74:C:H3'	2.24	0.51
53:1:2629:U:O2'	53:1:2630:G:H5''	2.11	0.51
7:h:119:PRO:HB3	7:h:126:LEU:CD1	2.33	0.51
11:l:30:THR:HG22	53:1:810:U:O4	2.10	0.51
13:n:22:ARG:HH22	13:n:69:ARG:HA	1.75	0.51
26:B:6:LYS:NZ	53:1:2019:A:OP1	2.40	0.51
32:H:126:ARG:NH2	32:H:191:THR:HG23	2.26	0.51
33:I:144:ILE:N	33:I:144:ILE:HD12	2.25	0.51
36:L:25:PHE:O	36:L:28:ILE:HG22	2.09	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:V:16:MET:HE1	46:V:44:HIS:HD2	1.74	0.51
54:2:95:U:H2'	54:2:96:G:H8	1.76	0.51
20:u:39:ASN:HB3	20:u:62:ALA:HB3	1.91	0.51
21:v:16:ALA:HA	21:v:19:ARG:HE	1.75	0.51
28:D:43:THR:HG22	28:D:44:VAL:H	1.74	0.51
35:K:8:PHE:HA	35:K:86:ARG:O	2.10	0.51
50:Z:21:SER:HB2	56:4:9:G:H4'	1.93	0.51
52:3:1285:A:H4'	52:3:1286:U:H5''	1.92	0.51
53:1:1308:A:H61	53:1:1608:A:H61	1.59	0.51
53:1:1747:U:H2'	53:1:1748:C:C6	2.45	0.51
7:h:41:LEU:HD22	53:1:1083:U:OP1	2.10	0.51
7:h:58:THR:HG21	7:h:81:LEU:HA	1.91	0.51
12:m:40:ARG:HB3	12:m:93:VAL:HG11	1.93	0.51
13:n:2:ARG:HA	13:n:5:LYS:HE2	1.91	0.51
30:F:23:ILE:HD13	53:1:1032:A:H1'	1.93	0.51
32:H:126:ARG:HH21	32:H:191:THR:HG23	1.75	0.51
33:I:150:LYS:HA	33:I:154:VAL:HG12	1.91	0.51
34:J:65:LYS:O	34:J:69:ASN:ND2	2.43	0.51
42:R:84:CYS:HB2	48:X:72:GLU:HG2	1.93	0.51
47:W:33:THR:OG1	47:W:37:LYS:HG2	2.09	0.51
52:3:279:A:H5'	52:3:281:G:H5'	1.93	0.51
52:3:570:G:H5'	52:3:820:U:O4'	2.10	0.51
53:1:64:A:H2'	53:1:65:U:C6	2.45	0.51
53:1:139:U:H5'	53:1:140:C:H5'	1.92	0.51
57:9:64:ILE:HG22	57:9:70:ILE:HG23	1.92	0.51
1:b:224:MET:HE3	53:1:782:A:C2	2.46	0.51
3:d:112:LEU:HB3	3:d:118:LEU:HG	1.93	0.51
11:l:42:SER:HB3	53:1:672:C:H5	1.76	0.51
15:p:3:ILE:H	15:p:3:ILE:CD1	2.20	0.51
18:s:83:LYS:HD3	18:s:95:ARG:HB3	1.92	0.51
40:P:124:LYS:HE3	50:Z:36:PHE:N	2.26	0.51
51:a:55:SER:HB3	55:5:54:U:O2	2.11	0.51
51:a:55:SER:HB2	55:5:54:U:H1'	1.93	0.51
52:3:882:C:O2'	52:3:883:C:H5'	2.11	0.51
53:1:1183:U:H2'	53:1:1184:U:C6	2.45	0.51
55:5:27:U:H2'	55:5:28:C:H5''	1.92	0.51
57:8:51:TYR:HB3	57:8:55:ARG:HH12	1.76	0.51
57:9:44:ARG:O	57:9:53:LYS:HE3	2.11	0.51
6:g:51:ARG:HA	6:g:55:GLU:HB2	1.91	0.51
20:u:28:LEU:HB2	20:u:32:LYS:HB2	1.93	0.51
35:K:6:ILE:HG13	35:K:89:VAL:HG22	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:O:46:LYS:HE2	39:O:68:ARG:NE	2.26	0.51
53:1:745:G:O2'	53:1:748:G:H1'	2.10	0.51
53:1:1752:C:H2'	53:1:1753:G:C8	2.46	0.51
53:1:2427:C:C5'	53:1:2429:G:H5'	2.39	0.51
57:9:74:ALA:HB1	57:9:86:ALA:HB3	1.93	0.51
1:b:131:MET:HE1	1:b:189:ALA:HB3	1.93	0.51
2:c:150:GLN:HE21	53:1:574:A:H2	1.58	0.51
4:e:34:THR:HG21	53:1:2314:A:C4'	2.37	0.51
10:k:1:MET:HE2	53:1:1664:A:H2	1.75	0.51
11:l:122:VAL:HG22	11:l:123:ARG:N	2.26	0.51
21:v:44:HIS:HE1	21:v:86:LEU:H	1.59	0.51
31:G:113:LEU:O	31:G:117:GLU:N	2.41	0.51
34:J:28:ARG:HD3	52:3:15:G:C1'	2.40	0.51
36:L:77:ARG:CZ	52:3:1381:U:H1'	2.40	0.51
36:L:94:ARG:HD2	52:3:1377:A:OP1	2.11	0.51
38:N:7:GLY:HA3	38:N:18:VAL:HB	1.92	0.51
41:Q:49:ARG:HB3	41:Q:65:TYR:HE1	1.76	0.51
52:3:580:C:H2'	52:3:581:G:O4'	2.11	0.51
52:3:966:G:N2	55:5:34:C:H4'	2.25	0.51
52:3:1330:U:H2'	52:3:1331:G:O4'	2.10	0.51
52:3:1486:G:H2'	52:3:1487:G:C8	2.45	0.51
53:1:1295:C:H2'	53:1:1296:G:H8	1.74	0.51
3:d:146:VAL:HA	3:d:185:LYS:O	2.10	0.51
7:h:117:LEU:C	7:h:119:PRO:CD	2.84	0.51
13:n:100:CYS:HA	26:B:42:ILE:HG12	1.93	0.51
38:N:123:ARG:O	38:N:125:GLN:N	2.43	0.51
41:Q:43:LYS:O	57:8:117:ARG:HD3	2.11	0.51
43:S:84:ARG:NH1	43:S:88:MET:HG3	2.26	0.51
49:Y:15:LYS:HD2	49:Y:15:LYS:C	2.36	0.51
52:3:235:C:H2'	52:3:236:A:C8	2.46	0.51
53:1:139:U:C5'	53:1:140:C:H5'	2.40	0.51
53:1:1026:G:H2'	53:1:1027:A:C8	2.41	0.51
53:1:2128:G:H2'	53:1:2129:C:O4'	2.10	0.51
53:1:2515:C:H2'	53:1:2516:A:H8	1.76	0.51
53:1:2620:C:C3'	53:1:2621:G:H5''	2.41	0.51
57:8:37:ILE:HD12	57:8:75:GLN:HA	1.93	0.51
57:8:40:ARG:HB2	57:8:72:ILE:H	1.76	0.51
17:r:25:LEU:O	17:r:27:ILE:HG12	2.11	0.51
30:F:33:HIS:O	30:F:35:GLN:HG3	2.11	0.51
32:H:9:ILE:O	43:S:96:LYS:HE2	2.11	0.51
46:V:15:LYS:HG3	52:3:275:G:H5'	1.91	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1530:G:C2'	52:3:1531:A:H5''	2.41	0.51
53:1:492:A:H2'	53:1:493:G:O4'	2.11	0.51
53:1:970:U:H2'	53:1:971:G:C8	2.46	0.51
53:1:1319:C:O2'	53:1:1320:C:H5'	2.11	0.51
53:1:2433:A:H5''	55:5:75:C:C2	2.47	0.51
8:i:38:CYS:SG	8:i:42:ASN:ND2	2.84	0.50
25:z:7:THR:HB	25:z:55:LYS:HB3	1.92	0.50
51:a:37:LYS:HG3	51:a:38:PHE:HD2	1.76	0.50
52:3:197:A:C6	52:3:221:C:H4'	2.46	0.50
53:1:744:U:H4'	53:1:1658:C:H4'	1.93	0.50
53:1:2432:A:H2	55:5:75:C:H3'	1.75	0.50
8:i:126:ARG:NH1	53:1:1079:C:O2'	2.43	0.50
13:n:4:ARG:HD2	53:1:2874:C:OP1	2.11	0.50
14:o:5:SER:O	14:o:8:ILE:HG22	2.11	0.50
20:u:81:ARG:HB2	20:u:96:LYS:HG3	1.93	0.50
36:L:30:MET:HE1	52:3:1374:A:H1'	1.92	0.50
36:L:41:ILE:HG23	36:L:116:ALA:HA	1.92	0.50
45:U:23:ASP:OD1	52:3:229:U:O2'	2.27	0.50
51:a:53:ARG:HA	51:a:53:ARG:NE	2.26	0.50
52:3:1450:U:H2'	52:3:1452:C:H5'	1.93	0.50
53:1:2431:U:C2	55:5:75:C:C2	2.99	0.50
20:u:5:ARG:HA	53:1:85:G:OP1	2.12	0.50
22:w:61:GLY:HA2	22:w:81:GLU:O	2.11	0.50
36:L:145:GLU:HA	36:L:148:LYS:HG2	1.93	0.50
40:P:109:ILE:N	40:P:109:ILE:HD12	2.26	0.50
44:T:32:THR:HA	44:T:62:ARG:NH1	2.26	0.50
47:W:48:ALA:HA	47:W:51:GLN:HB3	1.93	0.50
51:a:24:ASN:OD1	51:a:186:LYS:HD3	2.11	0.50
52:3:352:C:H4'	52:3:354:G:OP1	2.12	0.50
52:3:604:G:H2'	52:3:605:U:O4'	2.11	0.50
52:3:1075:U:H4'	52:3:1101:A:N6	2.27	0.50
52:3:1202:U:H2'	52:3:1203:C:O4'	2.11	0.50
53:1:594:U:H2'	53:1:595:C:C6	2.46	0.50
53:1:1655:A:C2	53:1:2049:G:H4'	2.46	0.50
55:5:47:U:H2'	55:5:50:U:OP1	2.11	0.50
57:8:104:ALA:O	57:8:105:ARG:CB	2.60	0.50
8:i:96:LYS:HB2	8:i:138:VAL:HG23	1.93	0.50
10:k:108:ARG:HA	10:k:116:ILE:HG21	1.94	0.50
17:r:23:GLU:H	17:r:23:GLU:CD	2.20	0.50
23:x:17:ARG:NH2	53:1:381:G:OP1	2.44	0.50
36:L:43:TYR:O	36:L:47:GLU:CB	2.60	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:R:76:ILE:HD11	42:R:77:LYS:HZ1	1.75	0.50
43:S:26:LEU:HA	43:S:30:ILE:HB	1.94	0.50
53:1:1251:C:O2'	53:1:1252:G:H3'	2.11	0.50
53:1:2209:G:C3'	53:1:2210:U:H5''	2.41	0.50
53:1:2431:U:C6	53:1:2431:U:H3'	2.47	0.50
53:1:2553:G:C3'	53:1:2554:U:H5''	2.39	0.50
53:1:2818:U:H2'	53:1:2819:G:C8	2.47	0.50
57:8:10:ILE:HD11	57:8:15:LEU:HD12	1.92	0.50
12:m:72:PRO:HD3	12:m:92:TRP:CZ3	2.46	0.50
17:r:32:THR:HA	17:r:62:GLU:HA	1.93	0.50
32:H:42:LEU:O	32:H:46:LEU:HD23	2.10	0.50
35:K:10:VAL:HG22	35:K:58:HIS:HB3	1.93	0.50
35:K:12:PRO:HD2	35:K:54:LEU:HD11	1.94	0.50
49:Y:23:ARG:NH1	52:3:176:C:H5''	2.26	0.50
53:1:1131:G:H1	53:1:2024:G:H21	1.59	0.50
53:1:1295:C:H2'	53:1:1296:G:C8	2.46	0.50
54:2:13:G:H21	54:2:16:G:H1'	1.76	0.50
55:5:26:G:H2'	55:5:27:U:H5''	1.93	0.50
57:9:40:ARG:O	57:9:71:VAL:HA	2.11	0.50
3:d:105:LEU:HD23	3:d:108:ILE:HD11	1.93	0.50
51:a:205:LYS:HZ1	53:1:1860:G:H5'	1.77	0.50
52:3:24:U:H2'	52:3:25:C:C6	2.47	0.50
52:3:1254:A:H2'	52:3:1255:G:C8	2.47	0.50
53:1:481:G:H1'	53:1:506:G:H21	1.76	0.50
53:1:2241:A:H2'	53:1:2242:G:C8	2.47	0.50
53:1:2350:C:H2'	53:1:2351:G:O4'	2.12	0.50
53:1:2743:U:H2'	53:1:2744:G:H5''	1.93	0.50
54:2:108:A:H5'	54:2:109:A:O5'	2.11	0.50
9:j:64:VAL:HG22	9:j:68:LYS:HE3	1.94	0.50
26:B:5:ASN:ND2	53:1:2020:A:H62	2.09	0.50
32:H:110:LEU:HD22	32:H:145:ALA:HB2	1.94	0.50
37:M:64:TYR:CE1	37:M:69:ALA:HB2	2.46	0.50
38:N:122:ARG:HD2	52:3:1343:G:O2'	2.11	0.50
39:O:62:ARG:CZ	52:3:1367:C:H5'	2.41	0.50
42:R:106:ARG:HD2	52:3:947:G:P	2.51	0.50
51:a:185:LEU:HD12	51:a:186:LYS:HG3	1.94	0.50
52:3:1075:U:H2'	52:3:1076:U:C6	2.47	0.50
52:3:1237:C:H4'	52:3:1334:G:H21	1.76	0.50
53:1:546:U:H1'	53:1:548:G:O6	2.12	0.50
53:1:873:C:H2'	53:1:874:G:C8	2.47	0.50
53:1:2220:U:H2'	53:1:2221:G:H8	1.76	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2329:U:H2'	53:1:2330:G:H8	1.77	0.50
53:1:2795:C:H2'	53:1:2796:U:O4'	2.11	0.50
3:d:136:GLN:OE1	3:d:139:LYS:HE2	2.11	0.50
10:k:68:GLY:HA3	10:k:78:ARG:HG2	1.93	0.50
11:l:132:ARG:O	11:l:136:GLU:HG3	2.11	0.50
31:G:85:SER:O	31:G:221:ARG:NH1	2.44	0.50
43:S:26:LEU:HD12	43:S:30:ILE:HD12	1.92	0.50
43:S:62:ARG:NH1	43:S:62:ARG:HB2	2.26	0.50
52:3:427:U:H2'	52:3:428:G:C8	2.46	0.50
52:3:1227:A:H2'	52:3:1228:C:H5'	1.93	0.50
53:1:882:G:N2	53:1:896:A:H62	2.02	0.50
53:1:1796:U:H2'	53:1:1797:G:C8	2.47	0.50
53:1:2484:G:O2'	53:1:2485:G:H5'	2.11	0.50
1:b:213:ARG:NH2	53:1:1566:A:H5'	2.24	0.50
1:b:244:VAL:HG12	1:b:250:GLN:HA	1.94	0.50
9:j:26:GLY:HA3	53:1:1140:C:C5'	2.41	0.50
9:j:78:THR:OG1	53:1:2641:G:H4'	2.11	0.50
10:k:70:ARG:HG2	10:k:76:VAL:HG12	1.94	0.50
12:m:71:LYS:HB3	12:m:93:VAL:O	2.11	0.50
17:r:91:GLN:HE22	53:1:1162:G:N2	2.10	0.50
43:S:9:GLU:HG2	43:S:62:ARG:HE	1.76	0.50
44:T:64:LYS:NZ	52:3:581:G:H5''	2.26	0.50
52:3:486:U:O2	52:3:486:U:H2'	2.11	0.50
52:3:730:G:C2'	52:3:731:G:H5'	2.40	0.50
53:1:2480:C:H2'	53:1:2481:G:O4'	2.12	0.50
1:b:219:VAL:HG21	53:1:782:A:N7	2.27	0.49
1:b:224:MET:HG2	53:1:782:A:N3	2.27	0.49
1:b:229:HIS:CG	1:b:230:PRO:HD2	2.47	0.49
10:k:76:VAL:HG22	15:p:72:VAL:CG2	2.42	0.49
13:n:17:ARG:NH1	53:1:2002:G:OP1	2.45	0.49
15:p:61:ARG:NH2	15:p:99:LEU:O	2.45	0.49
17:r:79:ARG:NH1	53:1:572:A:OP1	2.45	0.49
20:u:50:ALA:O	20:u:51:LEU:HG	2.12	0.49
29:E:15:LYS:NZ	29:E:17:GLY:O	2.38	0.49
41:Q:25:ALA:HA	52:3:553:A:O2'	2.12	0.49
42:R:76:ILE:HD11	42:R:77:LYS:NZ	2.27	0.49
47:W:32:ILE:HD11	47:W:58:ILE:HD13	1.93	0.49
52:3:495:A:H4'	52:3:496:A:O4'	2.12	0.49
52:3:1256:A:H4'	52:3:1258:G:C4	2.47	0.49
53:1:619:G:H3'	53:1:620:G:H21	1.76	0.49
53:1:1111:A:O2'	53:1:1112:G:H4'	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:1246:A:H2'	53:1:1247:A:O4'	2.12	0.49
53:1:2150:C:H2'	53:1:2151:U:O4'	2.12	0.49
53:1:2196:C:O2'	53:1:2197:U:H5'	2.11	0.49
33:I:67:LEU:HD23	52:3:402:G:OP2	2.12	0.49
39:O:48:ARG:NH1	39:O:50:THR:HG23	2.27	0.49
52:3:908:A:H2'	52:3:909:A:C8	2.46	0.49
52:3:1230:C:H5''	55:5:30:G:H5'	1.95	0.49
53:1:488:G:N2	53:1:491:G:H5''	2.27	0.49
53:1:1424:G:H2'	53:1:1425:G:O4'	2.12	0.49
53:1:1594:U:H2'	53:1:1595:C:C6	2.48	0.49
53:1:2101:A:H2'	53:1:2102:G:C8	2.46	0.49
53:1:2102:G:C2'	53:1:2103:C:H5'	2.42	0.49
53:1:2818:U:H4'	53:1:2837:A:H4'	1.92	0.49
53:1:2849:U:H4'	53:1:2868:A:C2	2.47	0.49
57:8:78:ARG:N	57:8:78:ARG:HD3	2.27	0.49
57:9:61:HIS:CD2	57:9:62:HIS:H	2.29	0.49
4:e:36:ASN:HB2	53:1:2313:C:H1'	1.94	0.49
4:e:118:ALA:HB2	4:e:176:PHE:HB3	1.94	0.49
9:j:84:ILE:HG23	9:j:84:ILE:O	2.12	0.49
17:r:40:MET:HE1	17:r:46:GLU:HB2	1.94	0.49
28:D:25:LYS:O	28:D:29:GLN:HG2	2.12	0.49
32:H:168:ARG:CZ	52:3:1107:C:H5'	2.42	0.49
38:N:17:ARG:HD3	52:3:1148:U:O4'	2.12	0.49
41:Q:86:VAL:HG23	41:Q:88:ASP:H	1.77	0.49
49:Y:4:LYS:HG3	49:Y:6:ALA:N	2.27	0.49
52:3:558:G:H2'	52:3:559:A:C2	2.47	0.49
52:3:1002:G:H2'	52:3:1003:G:O4'	2.12	0.49
52:3:1342:C:H2'	52:3:1343:G:C8	2.47	0.49
53:1:441:U:O2'	53:1:442:G:H5'	2.13	0.49
53:1:1103:A:H3'	53:1:1104:C:H5''	1.95	0.49
53:1:1528:A:H2'	53:1:1529:G:O4'	2.12	0.49
53:1:2430:A:C5'	53:1:2431:U:OP2	2.59	0.49
57:9:56:LEU:HG	57:9:98:LEU:HB2	1.94	0.49
7:h:61:ARG:HD2	53:1:1046:A:H4'	1.95	0.49
8:i:61:TYR:HD2	8:i:65:SER:HB2	1.78	0.49
16:q:50:ARG:HG2	53:1:1156:A:C8	2.47	0.49
31:G:81:ASP:OD1	31:G:81:ASP:N	2.44	0.49
32:H:191:THR:CB	52:3:532:A:N6	2.76	0.49
34:J:63:MET:SD	34:J:67:ARG:NH2	2.86	0.49
53:1:2149:U:H2'	53:1:2150:C:O4'	2.12	0.49
53:1:2329:U:H2'	53:1:2330:G:C8	2.47	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2433:A:H5'	55:5:75:C:C4	2.47	0.49
54:2:55:U:O2'	54:2:56:G:H5'	2.12	0.49
1:b:131:MET:O	1:b:166:ARG:NH1	2.44	0.49
4:e:42:ALA:HB2	4:e:49:LEU:HB2	1.95	0.49
7:h:117:LEU:C	7:h:119:PRO:HD2	2.37	0.49
19:t:14:PRO:HD2	24:y:33:ALA:HB1	1.94	0.49
22:w:33:ILE:HD11	22:w:78:ILE:HD11	1.94	0.49
52:3:40:C:H2'	52:3:41:G:H8	1.78	0.49
52:3:437:U:O2'	52:3:438:U:H5'	2.13	0.49
52:3:591:U:H2'	52:3:592:G:H8	1.76	0.49
52:3:621:A:H2'	52:3:622:A:C8	2.48	0.49
52:3:846:G:H2'	52:3:846:G:N3	2.28	0.49
52:3:1075:U:H3	52:3:1082:A:N6	2.06	0.49
1:b:1:ALA:N	1:b:19:VAL:O	2.45	0.49
1:b:224:MET:HE2	1:b:229:HIS:HB2	1.94	0.49
9:j:113:PRO:HD2	53:1:558:U:OP2	2.13	0.49
14:o:100:HIS:CD2	54:2:48:U:H4'	2.42	0.49
15:p:30:TRP:HE1	15:p:81:ASP:HB2	1.78	0.49
35:K:3:HIS:N	35:K:92:THR:HG22	2.28	0.49
43:S:52:ARG:CZ	52:3:1219:A:H5''	2.43	0.49
46:V:11:VAL:HA	46:V:22:VAL:HG12	1.94	0.49
53:1:742:A:H2'	53:1:743:A:H8	1.75	0.49
53:1:948:C:H2'	53:1:949:G:C8	2.48	0.49
53:1:1020:A:C1'	53:1:1021:A:OP2	2.56	0.49
20:u:42:LYS:HB3	20:u:57:ILE:HG22	1.95	0.49
37:M:30:LYS:O	37:M:33:VAL:HG12	2.12	0.49
41:Q:107:LYS:HG2	41:Q:108:ASP:CG	2.37	0.49
42:R:65:GLU:HG3	42:R:69:ARG:HE	1.78	0.49
52:3:123:U:OP1	52:3:312:C:H5'	2.12	0.49
52:3:415:A:N6	52:3:428:G:H1	2.10	0.49
52:3:722:G:H1	52:3:733:G:H1	1.61	0.49
53:1:807:U:H2'	53:1:808:G:H8	1.76	0.49
53:1:871:U:H2'	53:1:872:U:C6	2.48	0.49
57:8:65:SER:OG	57:8:66:SER:N	2.45	0.49
57:8:90:ARG:HA	57:8:93:ALA:HB3	1.94	0.49
3:d:62:GLN:HG3	3:d:63:LYS:HG2	1.95	0.49
9:j:64:VAL:CG2	9:j:68:LYS:HE3	2.42	0.49
14:o:21:LEU:O	14:o:23:ALA:N	2.46	0.49
34:J:28:ARG:HH11	52:3:15:G:H1'	1.78	0.49
40:P:113:THR:HG22	40:P:115:ILE:HG23	1.94	0.49
43:S:13:VAL:HA	43:S:59:GLN:HE22	1.78	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:316:C:H3'	52:3:316:C:OP1	2.13	0.49
52:3:929:G:C5'	52:3:1534:A:H4'	2.42	0.49
52:3:1230:C:H2'	52:3:1231:G:C8	2.48	0.49
53:1:828:U:H2'	53:1:829:A:C8	2.48	0.49
53:1:2189:U:H2'	53:1:2190:G:H8	1.77	0.49
53:1:2432:A:C4	55:5:74:C:H3'	2.47	0.49
13:n:38:LEU:HG	13:n:42:LYS:HE2	1.94	0.49
17:r:83:TYR:CZ	53:1:1187:G:H5''	2.48	0.49
32:H:181:ILE:HG12	32:H:202:PHE:HA	1.95	0.49
33:I:131:ILE:HG12	52:3:620:C:C1'	2.42	0.49
34:J:44:ARG:HH21	34:J:70:MET:HG3	1.77	0.49
35:K:4:TYR:OH	52:3:738:C:OP1	2.29	0.49
46:V:18:LYS:NZ	46:V:48:GLU:O	2.38	0.49
53:1:306:U:H3	53:1:310:A:H62	1.61	0.49
53:1:323:C:H2'	53:1:1205:A:H61	1.78	0.49
53:1:1450:G:O2'	53:1:1451:C:H5'	2.13	0.49
53:1:1652:A:H2'	53:1:1653:G:O4'	2.13	0.49
53:1:2055:C:H5'	53:1:2056:G:O5'	2.13	0.49
53:1:2698:U:H2'	53:1:2699:C:C6	2.48	0.49
57:9:35:THR:OG1	57:9:36:ALA:N	2.45	0.49
8:i:79:LEU:O	8:i:83:ALA:HB3	2.13	0.49
18:s:97:LEU:HD23	18:s:97:LEU:H	1.78	0.49
20:u:27:VAL:HG13	20:u:33:VAL:HG12	1.95	0.49
31:G:18:GLN:HA	31:G:37:VAL:HA	1.94	0.49
42:R:77:LYS:HA	42:R:80:MET:HG2	1.95	0.49
44:T:24:THR:HA	44:T:27:GLN:OE1	2.13	0.49
49:Y:26:MET:O	49:Y:29:THR:HG22	2.13	0.49
51:a:173:THR:HA	53:1:2124:G:H4'	1.95	0.49
52:3:303:A:H2'	52:3:304:U:O4'	2.13	0.49
52:3:1034:G:H2'	52:3:1035:A:C8	2.48	0.49
52:3:1077:G:N2	52:3:1079:G:H3'	2.28	0.49
52:3:1225:A:H2'	52:3:1225:A:N3	2.27	0.49
55:5:62:C:C3'	55:5:63:G:H5''	2.42	0.49
4:e:107:VAL:N	4:e:108:PRO:HD2	2.27	0.48
26:B:26:SER:OG	26:B:27:LEU:N	2.46	0.48
39:O:51:VAL:HG22	39:O:52:LEU:N	2.28	0.48
41:Q:109:ARG:NH1	41:Q:116:TYR:HE2	2.11	0.48
52:3:1402:C:H2'	52:3:1403:C:H4'	1.95	0.48
53:1:1947:C:H2'	53:1:1948:G:H8	1.77	0.48
53:1:2177:C:H2'	53:1:2178:C:O4'	2.13	0.48
53:1:2285:C:O2'	53:1:2287:A:H1'	2.12	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:57:LYS:O	6:g:61:VAL:HG23	2.12	0.48
8:i:14:ALA:HB3	8:i:54:ILE:HB	1.95	0.48
12:m:50:ARG:HG3	12:m:65:ILE:HD11	1.94	0.48
15:p:102:ARG:NH2	53:1:1754:A:O2'	2.46	0.48
36:L:113:LYS:HB3	52:3:1297:G:H21	1.78	0.48
41:Q:51:VAL:HG12	41:Q:65:TYR:HA	1.95	0.48
46:V:6:THR:OG1	46:V:7:LEU:N	2.45	0.48
52:3:152:A:H2'	52:3:153:C:H5'	1.95	0.48
53:1:2101:A:H2'	53:1:2102:G:H8	1.78	0.48
57:8:40:ARG:HH12	57:8:88:LEU:HA	1.78	0.48
7:h:116:GLU:O	7:h:119:PRO:HD2	2.13	0.48
33:I:119:HIS:CB	52:3:438:U:H4'	2.41	0.48
37:M:83:ARG:HG2	37:M:83:ARG:NH1	2.27	0.48
39:O:61:ALA:HB2	52:3:1061:G:H5'	1.95	0.48
48:X:28:LYS:CG	48:X:29:PRO:HD2	2.40	0.48
49:Y:59:ARG:O	49:Y:63:LYS:HG2	2.12	0.48
52:3:40:C:H2'	52:3:41:G:C8	2.48	0.48
52:3:436:C:H2'	52:3:437:U:C6	2.48	0.48
53:1:189:G:H2'	53:1:205:G:N2	2.28	0.48
53:1:845:A:N3	53:1:845:A:H3'	2.29	0.48
53:1:1213:A:N6	53:1:1236:G:H1'	2.27	0.48
57:8:98:LEU:O	57:8:98:LEU:HD23	2.14	0.48
1:b:90:ILE:HD11	1:b:102:TYR:CG	2.48	0.48
4:e:84:ILE:CG1	53:1:2312:U:H5'	2.40	0.48
23:x:47:THR:C	23:x:48:LEU:HD22	2.38	0.48
24:y:39:GLN:HB2	24:y:41:HIS:CE1	2.48	0.48
27:C:7:LYS:HZ1	29:E:31:ILE:HD12	1.77	0.48
35:K:29:ILE:HG21	35:K:64:VAL:HG21	1.95	0.48
37:M:46:GLU:O	37:M:61:THR:OG1	2.27	0.48
50:Z:66:ARG:NE	52:3:1166:G:O2'	2.46	0.48
53:1:1071:G:H2'	53:1:1071:G:N3	2.29	0.48
53:1:2079:U:C4'	53:1:2433:A:C2	2.96	0.48
53:1:2637:U:H2'	53:1:2638:G:O4'	2.13	0.48
21:v:72:VAL:HG12	21:v:93:ARG:HA	1.96	0.48
22:w:41:PHE:HB3	22:w:76:ILE:HD11	1.95	0.48
29:E:57:VAL:HA	29:E:60:CYS:SG	2.53	0.48
37:M:12:ARG:NH2	52:3:826:C:H5'	2.28	0.48
42:R:105:ALA:HA	52:3:948:C:OP1	2.14	0.48
45:U:13:LYS:N	52:3:392:C:OP1	2.39	0.48
52:3:31:G:H5'	52:3:306:A:C2	2.48	0.48
52:3:909:A:H2'	52:3:910:C:O4'	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1395:C:O2	52:3:1395:C:C2'	2.58	0.48
53:1:720:U:H2'	53:1:721:A:C8	2.49	0.48
53:1:948:C:H2'	53:1:949:G:H8	1.77	0.48
53:1:2004:G:H2'	53:1:2005:A:O4'	2.13	0.48
2:c:107:VAL:HG13	2:c:204:LYS:O	2.13	0.48
3:d:126:VAL:HB	3:d:134:LEU:HD13	1.95	0.48
10:k:71:ARG:HG2	10:k:71:ARG:NH1	2.29	0.48
15:p:50:ARG:NH1	53:1:2684:U:OP2	2.47	0.48
32:H:19:SER:O	43:S:93:PRO:HG3	2.14	0.48
52:3:31:G:N2	52:3:47:C:H5''	2.29	0.48
52:3:110:C:H2'	52:3:111:G:O4'	2.13	0.48
53:1:466:A:H2'	53:1:467:G:H5'	1.96	0.48
53:1:1706:C:C2	53:1:1757:A:H5'	2.48	0.48
53:1:2079:U:C5'	53:1:2433:A:H2	2.26	0.48
4:e:60:SER:HB2	4:e:90:LEU:HD11	1.95	0.48
16:q:2:ARG:HH22	53:1:446:G:H5'	1.79	0.48
46:V:38:LYS:HD2	46:V:38:LYS:O	2.14	0.48
50:Z:31:VAL:O	50:Z:31:VAL:HG12	2.14	0.48
52:3:146:G:H2'	52:3:147:G:C8	2.48	0.48
52:3:414:A:N3	52:3:414:A:H2'	2.29	0.48
52:3:1391:U:H2'	52:3:1392:G:C8	2.48	0.48
52:3:1406:U:H5'	52:3:1518:A:O2'	2.14	0.48
53:1:2252:G:N2	53:1:2426:A:H62	2.12	0.48
4:e:130:GLY:HA3	53:1:2305:U:H5''	1.95	0.48
7:h:55:VAL:HA	53:1:1084:A:C5'	2.33	0.48
7:h:61:ARG:HE	53:1:1047:G:P	2.37	0.48
37:M:102:VAL:HG23	37:M:125:ILE:HB	1.96	0.48
39:O:40:ILE:HB	39:O:73:LEU:HB3	1.95	0.48
41:Q:42:LYS:HG2	41:Q:88:ASP:O	2.13	0.48
41:Q:48:LEU:HB2	52:3:520:A:OP1	2.13	0.48
49:Y:83:ASN:HA	49:Y:86:ALA:HB2	1.95	0.48
52:3:220:G:O2'	52:3:221:C:H5'	2.14	0.48
52:3:411:A:N3	52:3:413:G:H1'	2.29	0.48
52:3:865:A:H8	52:3:865:A:O5'	1.97	0.48
52:3:1347:G:O2'	52:3:1348:U:H5	1.97	0.48
53:1:970:U:H2'	53:1:971:G:H8	1.79	0.48
53:1:1318:U:H2'	53:1:1319:C:C6	2.48	0.48
53:1:1874:C:H2'	53:1:1875:G:O4'	2.13	0.48
2:c:169:ARG:NE	53:1:2773:C:OP1	2.47	0.48
14:o:15:ARG:HA	14:o:18:LEU:HB3	1.95	0.48
16:q:91:ARG:NH2	53:1:1153:C:OP1	2.35	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:O:51:VAL:HG22	39:O:52:LEU:H	1.79	0.48
40:P:117:HIS:HD2	52:3:675:A:H1'	1.79	0.48
43:S:2:LYS:NZ	52:3:983:A:OP1	2.47	0.48
46:V:41:THR:HG23	46:V:41:THR:O	2.14	0.48
49:Y:31:ILE:HD12	49:Y:31:ILE:H	1.78	0.48
53:1:694:U:OP1	53:1:1569:A:H1'	2.14	0.48
53:1:935:C:H2'	53:1:936:A:C8	2.49	0.48
53:1:1905:C:H2'	53:1:1930:G:O4'	2.14	0.48
53:1:2604:U:H2'	53:1:2605:U:C6	2.49	0.48
57:9:22:ALA:H	57:9:34:SER:HB3	1.79	0.48
4:e:116:LEU:HD23	4:e:174:PHE:HB3	1.95	0.48
5:f:156:TYR:OH	53:1:2531:A:H5''	2.13	0.48
15:p:17:PRO:HD2	15:p:83:ILE:HD11	1.95	0.48
15:p:84:SER:OG	15:p:86:LYS:NZ	2.47	0.48
33:I:86:GLY:O	33:I:196:GLU:HG3	2.14	0.48
40:P:46:ALA:HB2	40:P:65:ALA:HB2	1.96	0.48
41:Q:32:VAL:HG23	41:Q:55:ARG:O	2.14	0.48
52:3:864:A:H1'	52:3:1078:U:H3	1.78	0.48
53:1:95:A:H2'	53:1:96:C:H5''	1.96	0.48
53:1:712:G:H2'	53:1:713:G:O4'	2.14	0.48
53:1:1063:G:H22	53:1:1075:C:N4	2.03	0.48
53:1:1827:U:C2'	53:1:1828:G:H5'	2.44	0.48
53:1:2156:G:C2'	53:1:2157:G:H5'	2.42	0.48
53:1:2398:U:H2'	53:1:2399:G:C8	2.48	0.48
4:e:23:SER:H	4:e:26:GLN:NE2	2.12	0.47
10:k:87:LEU:O	10:k:95:ILE:HD11	2.14	0.47
11:l:101:ILE:HG13	11:l:102:GLY:N	2.29	0.47
13:n:79:LEU:HD23	13:n:83:LEU:HB2	1.95	0.47
15:p:83:ILE:O	15:p:83:ILE:HG13	2.14	0.47
23:x:16:ASN:HB2	23:x:26:ARG:HB3	1.96	0.47
28:D:10:LEU:HD23	53:1:770:G:H5''	1.96	0.47
30:F:5:ALA:HB3	53:1:2466:C:H5'	1.95	0.47
37:M:66:GLN:HB2	37:M:68:LYS:HG2	1.96	0.47
39:O:40:ILE:CD1	52:3:1124:G:H4'	2.44	0.47
42:R:106:ARG:HG3	52:3:947:G:OP1	2.14	0.47
52:3:742:G:H2'	52:3:743:A:H8	1.79	0.47
52:3:817:C:H4'	52:3:818:G:C5'	2.44	0.47
52:3:1379:G:O2'	52:3:1380:U:H5'	2.14	0.47
53:1:1:G:N3	53:1:1:G:H2'	2.28	0.47
53:1:288:U:H2'	53:1:289:G:H8	1.78	0.47
53:1:671:C:H2'	53:1:672:C:C6	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:704:G:H2'	53:1:726:G:H22	1.78	0.47
53:1:828:U:H4'	53:1:831:G:N1	2.29	0.47
53:1:1167:C:H2'	53:1:1168:G:C8	2.49	0.47
53:1:1168:G:H1	53:1:1181:U:H3	1.62	0.47
53:1:2039:U:H2'	53:1:2040:G:C8	2.49	0.47
55:5:17:C:C5'	55:5:17(A):U:H5'	2.44	0.47
57:8:56:LEU:HD21	57:8:99:THR:HG23	1.95	0.47
1:b:76:VAL:HG13	1:b:114:GLN:NE2	2.29	0.47
3:d:153:LEU:HD23	3:d:153:LEU:C	2.38	0.47
4:e:24:VAL:HG23	4:e:25:MET:HE2	1.97	0.47
7:h:119:PRO:HG2	7:h:121:SER:H	1.79	0.47
10:k:71:ARG:HG2	10:k:71:ARG:HH11	1.79	0.47
14:o:18:LEU:HD21	14:o:25:ARG:HB3	1.96	0.47
16:q:56:PHE:CZ	53:1:536:G:H4'	2.49	0.47
20:u:27:VAL:HG12	20:u:28:LEU:N	2.29	0.47
39:O:9:ARG:NH1	52:3:1279:G:H5''	2.28	0.47
43:S:100:TRP:HZ2	52:3:1368:A:H5''	1.79	0.47
46:V:15:LYS:CG	52:3:275:G:H5'	2.45	0.47
48:X:38:THR:HG22	48:X:39:ILE:N	2.29	0.47
52:3:516:U:H3	52:3:533:A:H62	1.61	0.47
52:3:926:G:H22	56:4:15:A:H3'	1.79	0.47
52:3:1237:C:O2'	52:3:1335:U:H5'	2.14	0.47
53:1:176:A:H3'	53:1:177:G:N2	2.29	0.47
53:1:239:C:H2'	53:1:240:C:O4'	2.13	0.47
53:1:349:U:H2'	53:1:350:G:C8	2.48	0.47
4:e:87:LYS:HD3	53:1:2313:C:H5''	1.96	0.47
13:n:1:MET:HE3	53:1:2723:C:H4'	1.95	0.47
13:n:47:VAL:HG23	13:n:48:VAL:HG13	1.96	0.47
14:o:81:ARG:HA	14:o:84:GLU:HB3	1.96	0.47
17:r:68:ARG:HB3	17:r:90:ARG:HD3	1.94	0.47
25:z:50:VAL:O	25:z:54:VAL:HG22	2.14	0.47
33:I:53:GLN:HB3	33:I:202:LEU:HD21	1.96	0.47
36:L:86:VAL:O	36:L:88:VAL:HG23	2.14	0.47
43:S:2:LYS:HE2	43:S:5:MET:HB2	1.96	0.47
45:U:33:ILE:N	45:U:33:ILE:HD12	2.29	0.47
46:V:57:VAL:HB	46:V:79:GLU:HB2	1.96	0.47
46:V:63:CYS:SG	46:V:73:THR:HG22	2.54	0.47
52:3:372:C:H41	52:3:387:U:H2'	1.79	0.47
52:3:684:U:H2'	52:3:685:G:O4'	2.14	0.47
52:3:1436:U:H2'	52:3:1437:A:H8	1.79	0.47
53:1:528:A:C2	53:1:2042:A:H2'	2.48	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:779:U:H2'	53:1:780:G:C8	2.49	0.47
53:1:1550:C:H2'	53:1:1551:A:H8	1.79	0.47
53:1:2068:U:H3	53:1:2430:A:H62	1.62	0.47
53:1:2077:A:H1'	53:1:2434:A:O2'	2.14	0.47
53:1:2145:C:H3'	53:1:2146:C:H5'	1.96	0.47
53:1:2172:U:P	53:1:2173:A:H5''	2.54	0.47
55:5:28:C:H6	55:5:28:C:H5'	1.78	0.47
1:b:68:ARG:O	1:b:188:ARG:NH1	2.47	0.47
3:d:5:LEU:HD22	3:d:10:SER:HB2	1.95	0.47
4:e:65:LEU:HD11	54:2:41:G:H21	1.79	0.47
10:k:6:THR:HG23	53:1:1666:G:O3'	2.14	0.47
11:l:95:LEU:HD22	11:l:100:ILE:HD11	1.96	0.47
37:M:34:ALA:O	37:M:37:ASN:HB3	2.14	0.47
44:T:64:LYS:HZ3	52:3:581:G:H5''	1.79	0.47
45:U:28:ARG:HH12	52:3:390:U:C4'	2.23	0.47
52:3:83:C:H4'	52:3:84:U:H5	1.80	0.47
53:1:1535:A:H3'	53:1:1536:C:H5'	1.97	0.47
53:1:1542:U:H2'	53:1:1543:G:O4'	2.12	0.47
53:1:2327:A:H2'	53:1:2328:A:C8	2.49	0.47
4:e:4:HIS:CE1	4:e:8:LYS:HE3	2.49	0.47
4:e:67:THR:HG21	53:1:2313:C:H5'	1.96	0.47
7:h:87:GLU:HG2	7:h:95:LEU:HD11	1.95	0.47
14:o:39:VAL:CG1	14:o:49:VAL:H	2.28	0.47
23:x:39:VAL:HG13	23:x:42:GLU:HB3	1.95	0.47
26:B:54:ILE:HG23	26:B:56:LYS:HB3	1.95	0.47
38:N:24:ASN:OD1	38:N:26:LYS:HG2	2.15	0.47
38:N:98:ARG:HG3	38:N:101:GLY:O	2.14	0.47
44:T:55:LEU:O	44:T:59:VAL:HG23	2.14	0.47
51:a:30:LEU:HD12	51:a:31:LYS:HG2	1.95	0.47
52:3:58:C:O2'	52:3:59:A:H5'	2.14	0.47
52:3:256:U:H2'	52:3:257:G:C8	2.50	0.47
52:3:358:U:H2'	52:3:359:G:H8	1.80	0.47
52:3:452:A:H61	52:3:480:U:H3	1.61	0.47
52:3:1342:C:H2'	52:3:1343:G:H8	1.80	0.47
53:1:1182:G:H2'	53:1:1183:U:O4'	2.15	0.47
53:1:1917:U:O2'	53:1:1918:A:H5'	2.15	0.47
2:c:13:ARG:NH2	53:1:2683:C:H4'	2.30	0.47
6:g:16:GLY:HA2	6:g:47:PHE:HZ	1.79	0.47
9:j:131:ASN:ND2	53:1:6:A:H5''	2.28	0.47
13:n:96:ARG:HG2	13:n:98:LEU:HD11	1.97	0.47
15:p:52:ARG:HH22	53:1:2720:U:H5''	1.78	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B:54:ILE:CG2	26:B:56:LYS:H	2.27	0.47
37:M:91:LEU:HD13	37:M:92:PRO:HD2	1.96	0.47
40:P:123:PRO:HG2	50:Z:33:ARG:HB3	1.97	0.47
41:Q:11:ARG:HG3	52:3:563:A:OP2	2.14	0.47
52:3:920:U:O2'	52:3:921:U:H5'	2.15	0.47
52:3:1339:A:H4'	55:5:40:C:O2'	2.15	0.47
53:1:288:U:H2'	53:1:289:G:C8	2.50	0.47
53:1:687:C:H42	53:1:787:C:H4'	1.79	0.47
53:1:1083:U:H2'	53:1:1085:A:OP2	2.14	0.47
53:1:1683:U:H2'	53:1:1684:G:C8	2.50	0.47
53:1:2079:U:C4'	53:1:2433:A:H2	2.28	0.47
53:1:2252:G:H22	53:1:2426:A:H62	1.63	0.47
53:1:2859:G:H2'	53:1:2860:A:C8	2.49	0.47
53:1:2875:C:H2'	53:1:2876:G:C8	2.49	0.47
55:5:16:C:H5''	55:5:59:A:N1	2.30	0.47
57:8:106:ARG:HB3	57:8:107:PRO:HA	1.96	0.47
1:b:69:ASN:HA	1:b:188:ARG:HH12	1.79	0.47
3:d:130:LYS:HE3	53:1:320:A:OP1	2.15	0.47
3:d:147:LEU:HD12	3:d:168:ASP:O	2.15	0.47
6:g:133:GLN:HE21	6:g:136:SER:HA	1.79	0.47
18:s:43:ALA:O	18:s:47:VAL:HG12	2.14	0.47
19:t:54:GLU:HB3	19:t:88:LYS:HD2	1.97	0.47
32:H:177:LEU:HB2	52:3:1112:C:C4	2.50	0.47
34:J:131:ASN:ND2	52:3:18:C:H3'	2.29	0.47
36:L:50:ALA:HB1	36:L:55:LYS:O	2.13	0.47
37:M:125:ILE:H	37:M:125:ILE:HD12	1.79	0.47
38:N:17:ARG:HH22	52:3:1129:C:H5''	1.79	0.47
41:Q:39:THR:HG22	41:Q:40:THR:N	2.29	0.47
42:R:15:VAL:CG1	42:R:16:ILE:HD12	2.45	0.47
45:U:33:ILE:HD12	45:U:33:ILE:H	1.79	0.47
47:W:47:ARG:HB2	47:W:50:TYR:HB2	1.96	0.47
52:3:50:A:H4'	52:3:51:A:H5'	1.97	0.47
52:3:151:A:H2'	52:3:152:A:O4'	2.15	0.47
52:3:191:G:H2'	52:3:192:A:C8	2.50	0.47
52:3:1417:G:N2	52:3:1482:G:H2'	2.30	0.47
52:3:1467:C:H2'	52:3:1468:A:C8	2.50	0.47
53:1:1132:U:H2'	53:1:1133:A:C8	2.49	0.47
53:1:1300:G:C3'	53:1:1301:A:H5''	2.45	0.47
53:1:1507:C:H2'	53:1:1508:A:C4'	2.44	0.47
53:1:1919:A:H2'	53:1:1920:C:H5'	1.95	0.47
53:1:1991:U:C2'	53:1:1992:G:H5''	2.44	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2143:C:H2'	53:1:2144:G:O4'	2.14	0.47
53:1:2163:A:H2'	53:1:2164:C:H5'	1.96	0.47
53:1:2244:U:H1'	53:1:2434:A:C5	2.50	0.47
53:1:2343:U:O2'	53:1:2344:U:H5'	2.14	0.47
57:8:21:ARG:HA	57:8:35:THR:HA	1.96	0.47
57:8:48:LEU:N	57:8:49:PRO:HD3	2.30	0.47
57:9:40:ARG:HH12	57:9:88:LEU:HA	1.80	0.47
4:e:131:VAL:HG22	4:e:132:ARG:N	2.29	0.47
18:s:37:THR:HG22	18:s:48:LYS:HE3	1.96	0.47
38:N:111:GLU:CD	52:3:1348:U:H5''	2.40	0.47
40:P:116:PRO:HB3	52:3:676:A:O2'	2.14	0.47
45:U:15:PRO:HG2	45:U:41:PRO:HG3	1.96	0.47
52:3:128:G:O2'	52:3:129:A:H5'	2.14	0.47
53:1:386:G:H3'	53:1:387:U:C5'	2.44	0.47
53:1:435:C:H2'	53:1:436:C:H5'	1.96	0.47
53:1:2493:U:H4'	57:8:36:ALA:HB2	1.97	0.47
53:1:2730:C:H2'	53:1:2731:G:C8	2.50	0.47
7:h:117:LEU:HD12	7:h:118:ILE:H	1.80	0.47
9:j:7:LYS:HD3	53:1:538:A:O3'	2.14	0.47
11:l:33:ARG:HD3	11:l:40:SER:HA	1.97	0.47
14:o:94:ARG:NH2	14:o:97:PHE:O	2.48	0.47
25:z:44:ARG:HD3	25:z:47:ILE:HD12	1.96	0.47
33:I:58:GLN:NE2	52:3:544:G:OP1	2.48	0.47
40:P:85:VAL:HG13	40:P:111:ASP:OD1	2.14	0.47
46:V:26:ARG:NH2	52:3:237:G:H5''	2.30	0.47
50:Z:17:ARG:HA	50:Z:20:ARG:HD3	1.97	0.47
50:Z:39:LYS:N	50:Z:40:PRO:CD	2.78	0.47
50:Z:66:ARG:NH2	52:3:1167:A:C8	2.83	0.47
52:3:531:U:OP1	52:3:531:U:H3'	2.15	0.47
52:3:1492:A:C2'	52:3:1493:A:H4'	2.44	0.47
52:3:1535:C:N3	56:4:12:A:H2	2.13	0.47
53:1:227:A:C2'	53:1:228:C:H4'	2.44	0.47
53:1:1971:U:H5'	53:1:1972:G:H5''	1.95	0.47
53:1:2602:A:N7	57:8:30:VAL:HG12	2.29	0.47
4:e:55:ASP:O	4:e:59:ILE:HG12	2.15	0.47
6:g:47:PHE:HA	6:g:51:ARG:HB2	1.96	0.47
15:p:29:VAL:O	15:p:39:LEU:HD12	2.15	0.47
18:s:90:LYS:O	18:s:92:ARG:NH1	2.47	0.47
31:G:110:ILE:HD12	31:G:113:LEU:HB3	1.95	0.47
43:S:4:SER:OG	52:3:1216:A:H5''	2.15	0.47
52:3:664:G:N2	52:3:741:G:H1	2.07	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1494:G:H21	53:1:1912:A:H2	1.59	0.47
53:1:176:A:O2'	53:1:177:G:H5'	2.14	0.47
53:1:1222:U:H2'	53:1:1223:G:C8	2.50	0.47
53:1:2039:U:H2'	53:1:2040:G:H8	1.79	0.47
53:1:2432:A:H2'	53:1:2433:A:O5'	2.15	0.47
54:2:25:U:H2'	54:2:26:C:H5'	1.97	0.47
57:9:96:LYS:HA	57:9:99:THR:HB	1.96	0.47
3:d:109:LEU:HD23	3:d:112:LEU:HD12	1.96	0.46
4:e:48:LEU:HD22	4:e:48:LEU:N	2.30	0.46
18:s:14:ALA:O	18:s:18:ARG:HG3	2.16	0.46
40:P:117:HIS:O	40:P:118:ASN:HB2	2.14	0.46
41:Q:80:LEU:O	41:Q:97:VAL:HG12	2.15	0.46
49:Y:66:ILE:HD12	49:Y:70:LYS:HB2	1.96	0.46
52:3:202:G:H2'	52:3:203:G:O4'	2.15	0.46
52:3:295:C:H2'	52:3:296:U:O4'	2.15	0.46
52:3:309:A:H2'	52:3:310:G:H8	1.80	0.46
52:3:591:U:H2'	52:3:592:G:C8	2.50	0.46
52:3:693:G:H1'	56:4:14:A:N3	2.30	0.46
52:3:1340:A:H2'	52:3:1341:U:O4'	2.15	0.46
53:1:204:A:O3'	53:1:205:G:H4'	2.16	0.46
53:1:611:C:H2'	53:1:612:G:O4'	2.14	0.46
53:1:1258:U:H2'	53:1:1259:G:C8	2.50	0.46
53:1:2432:A:C3'	53:1:2433:A:C5'	2.92	0.46
53:1:2545:G:C2'	53:1:2546:U:H5'	2.45	0.46
54:2:118:C:H2'	54:2:119:A:C8	2.50	0.46
11:l:13:LYS:NZ	53:1:1245:G:OP1	2.37	0.46
31:G:69:VAL:HB	31:G:162:VAL:HG13	1.96	0.46
31:G:94:ARG:HH21	31:G:96:LEU:HD11	1.80	0.46
31:G:110:ILE:O	31:G:114:LYS:N	2.46	0.46
36:L:37:THR:HG21	52:3:1240:U:H4'	1.97	0.46
46:V:11:VAL:HG13	46:V:20:ILE:HD11	1.96	0.46
52:3:483:C:H2'	52:3:484:G:C8	2.50	0.46
52:3:1316:G:H2'	52:3:1317:C:H5''	1.98	0.46
53:1:414:C:H2'	53:1:415:A:H8	1.81	0.46
53:1:1280:G:O2'	53:1:1281:G:H5'	2.15	0.46
53:1:2079:U:H4'	53:1:2433:A:H2	1.80	0.46
53:1:2105:U:H2'	53:1:2106:U:O4'	2.16	0.46
53:1:2537:U:H2'	53:1:2538:C:C6	2.51	0.46
55:5:26:G:C2'	55:5:27:U:H5''	2.44	0.46
55:5:36:U:H3	56:4:16:A:H61	1.63	0.46
1:b:250:GLN:NE2	1:b:251:THR:O	2.48	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:20:ALA:HB3	9:j:58:ASN:C	2.40	0.46
12:m:42:THR:HG22	12:m:45:GLN:CG	2.45	0.46
38:N:70:GLY:O	38:N:74:GLN:HG3	2.16	0.46
40:P:91:GLY:C	40:P:93:GLU:H	2.23	0.46
44:T:71:ARG:NH2	52:3:754:C:OP1	2.49	0.46
52:3:396:C:C3'	52:3:397:A:H5''	2.45	0.46
53:1:20:C:H2'	53:1:21:A:C8	2.51	0.46
53:1:1304:A:H3'	53:1:1305:C:H5''	1.97	0.46
53:1:1956:U:H2'	53:1:1957:C:H5'	1.97	0.46
57:9:38:HIS:HD2	57:9:83:ASN:HB3	1.79	0.46
2:c:62:LYS:N	2:c:63:PRO:CD	2.77	0.46
3:d:99:LYS:HD3	53:1:606:U:OP2	2.16	0.46
21:v:72:VAL:HA	21:v:94:ALA:H	1.80	0.46
30:F:4:ARG:O	30:F:37:GLN:NE2	2.48	0.46
36:L:129:ASN:HA	36:L:134:VAL:HG21	1.98	0.46
39:O:99:GLN:NE2	39:O:101:SER:OG	2.40	0.46
50:Z:49:ALA:O	50:Z:53:LYS:HG3	2.16	0.46
52:3:962:C:H2'	52:3:963:G:H8	1.79	0.46
52:3:1273:C:H2'	52:3:1274:A:H5'	1.96	0.46
5:f:23:ILE:HG21	5:f:71:LEU:HD11	1.98	0.46
9:j:88:THR:OG1	9:j:89:PHE:N	2.48	0.46
26:B:8:THR:OG1	26:B:9:ARG:N	2.45	0.46
31:G:42:LEU:O	31:G:45:THR:OG1	2.32	0.46
32:H:35:ASP:O	32:H:38:VAL:HG12	2.14	0.46
37:M:15:ASN:ND2	52:3:826:C:H1'	2.31	0.46
52:3:414:A:H62	52:3:430:A:H61	1.64	0.46
53:1:460:A:H2'	53:1:461:C:O4'	2.16	0.46
53:1:2514:U:H2'	53:1:2515:C:C6	2.50	0.46
21:v:29:ILE:HG23	21:v:29:ILE:O	2.16	0.46
30:F:14:CYS:SG	30:F:33:HIS:ND1	2.89	0.46
32:H:173:PRO:HA	52:3:1108:G:OP2	2.16	0.46
47:W:56:ARG:HD2	47:W:56:ARG:N	2.31	0.46
52:3:644:U:H2'	52:3:645:G:H8	1.79	0.46
53:1:331:C:H41	53:1:1210:G:N2	2.14	0.46
53:1:840:C:H2'	53:1:841:G:C8	2.51	0.46
53:1:2360:G:C2'	53:1:2361:G:H5'	2.45	0.46
53:1:2714:G:O2'	53:1:2715:C:H5'	2.16	0.46
7:h:59:LEU:HG	53:1:1107:G:OP1	2.15	0.46
14:o:31:THR:CG2	14:o:34:HIS:O	2.64	0.46
15:p:92:ARG:HD3	53:1:1753:G:OP1	2.15	0.46
16:q:23:TYR:CE1	53:1:533:G:H5'	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:C:11:VAL:HA	27:C:19:PHE:HB3	1.97	0.46
38:N:64:ILE:HD12	38:N:64:ILE:N	2.30	0.46
41:Q:66:ILE:HG12	41:Q:96:THR:HG21	1.97	0.46
42:R:3:ILE:HA	42:R:56:ARG:HE	1.80	0.46
43:S:8:ARG:O	43:S:12:ARG:HG2	2.15	0.46
46:V:35:LYS:HZ3	52:3:586:C:H5'	1.81	0.46
51:a:185:LEU:HD12	51:a:186:LYS:N	2.30	0.46
51:a:205:LYS:NZ	53:1:1860:G:C5'	2.79	0.46
53:1:82:U:H2'	53:1:83:A:O4'	2.15	0.46
53:1:576:U:H2'	53:1:577:G:C8	2.51	0.46
53:1:686:U:H3'	53:1:687:C:H5'	1.97	0.46
53:1:857:G:H2'	53:1:858:G:O4'	2.16	0.46
53:1:1506:U:H2'	53:1:1507:C:C6	2.51	0.46
53:1:2389:G:H5''	53:1:2390:U:O4'	2.16	0.46
57:9:8:VAL:HB	57:9:10:ILE:HG23	1.96	0.46
4:e:59:ILE:O	4:e:101:ARG:NH2	2.49	0.46
16:q:111:LYS:HD3	17:r:48:LYS:HE3	1.98	0.46
17:r:37:GLU:HB3	17:r:53:PHE:CZ	2.51	0.46
22:w:12:SER:OG	53:1:2262:U:H5	1.98	0.46
33:I:9:LYS:HD3	33:I:9:LYS:HA	1.75	0.46
33:I:60:VAL:HG13	33:I:61:ARG:N	2.31	0.46
34:J:20:VAL:HB	52:3:1080:A:H4'	1.97	0.46
37:M:12:ARG:HB2	37:M:26:MET:SD	2.56	0.46
37:M:83:ARG:HH22	52:3:587:G:P	2.39	0.46
39:O:43:PRO:HG3	52:3:1150:A:H4'	1.97	0.46
39:O:86:ALA:HA	39:O:90:LEU:HD12	1.98	0.46
40:P:118:ASN:CG	52:3:718:A:H5'	2.41	0.46
41:Q:4:ASN:HB2	52:3:880:C:OP2	2.16	0.46
42:R:73:SER:O	42:R:77:LYS:HG2	2.16	0.46
42:R:95:PRO:HG3	42:R:101:THR:HB	1.97	0.46
49:Y:70:LYS:NZ	52:3:262:A:H5''	2.31	0.46
53:1:1363:C:H2'	53:1:1364:G:H8	1.80	0.46
53:1:1443:U:H2'	53:1:1444:G:H8	1.81	0.46
53:1:2431:U:C6	53:1:2431:U:C3'	2.99	0.46
54:2:114:C:H2'	54:2:115:A:C8	2.51	0.46
1:b:52:HIS:CG	1:b:218:THR:HG22	2.51	0.46
2:c:51:THR:HG21	2:c:68:PHE:HE1	1.81	0.46
2:c:68:PHE:HD1	2:c:73:VAL:HG13	1.81	0.46
4:e:84:ILE:HG21	53:1:2312:U:H5''	1.98	0.46
5:f:29:ASN:ND2	5:f:77:GLY:O	2.33	0.46
6:g:2:GLN:HE22	6:g:20:ASN:HB2	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:k:17:ARG:HB3	10:k:45:GLU:HB3	1.98	0.46
11:l:29:LYS:O	11:l:30:THR:OG1	2.29	0.46
31:G:4:SER:OG	31:G:5:MET:N	2.49	0.46
35:K:38:ARG:HD3	35:K:61:LEU:HD22	1.97	0.46
36:L:52:ARG:NH1	36:L:124:SER:OG	2.49	0.46
52:3:321:A:H61	52:3:332:G:H1	1.63	0.46
52:3:410:G:H2'	52:3:429:U:O4	2.16	0.46
52:3:982:U:H4'	52:3:983:A:O5'	2.16	0.46
53:1:1278:C:H2'	53:1:1279:G:C8	2.50	0.46
53:1:2326:C:O2'	53:1:2327:A:OP1	2.32	0.46
54:2:66:A:N1	54:2:107:G:H2'	2.30	0.46
57:8:40:ARG:HB2	57:8:72:ILE:N	2.30	0.46
57:8:77:TYR:C	57:8:78:ARG:HD3	2.40	0.46
7:h:66:GLY:C	7:h:68:PRO:HD3	2.40	0.46
21:v:14:LYS:HB2	54:2:98:G:H1	1.80	0.46
33:I:67:LEU:CD2	52:3:402:G:OP2	2.64	0.46
37:M:7:ALA:O	37:M:11:THR:HG23	2.16	0.46
37:M:83:ARG:NH2	52:3:587:G:OP1	2.48	0.46
37:M:120:LEU:HD12	37:M:120:LEU:O	2.16	0.46
38:N:17:ARG:NH2	52:3:1129:C:H5''	2.31	0.46
42:R:89:ARG:HH21	42:R:95:PRO:HG2	1.81	0.46
43:S:52:ARG:HH21	52:3:1015:G:H5'	1.81	0.46
52:3:532:A:O5'	52:3:532:A:N3	2.48	0.46
52:3:628:G:H2'	52:3:629:A:O4'	2.16	0.46
52:3:1086:U:O5'	52:3:1086:U:H6	1.99	0.46
53:1:1065:U:H5'	53:1:1066:U:OP2	2.16	0.46
53:1:1179:G:C3'	53:1:1180:U:H4'	2.46	0.46
53:1:2093:G:N7	53:1:2225:A:H2'	2.31	0.46
57:8:76:GLU:O	57:8:78:ARG:NH2	2.49	0.46
2:c:13:ARG:HH11	15:p:55:HIS:HA	1.82	0.45
5:f:36:LEU:HD21	5:f:67:ALA:CB	2.44	0.45
10:k:24:VAL:HG13	10:k:33:ALA:HB2	1.98	0.45
13:n:34:ILE:HD11	13:n:44:LEU:HD21	1.97	0.45
29:E:17:GLY:HA3	53:1:651:G:OP1	2.16	0.45
38:N:17:ARG:HH12	52:3:1129:C:C5'	2.19	0.45
52:3:249:U:O2'	52:3:250:A:H5'	2.15	0.45
52:3:304:U:O2'	52:3:305:G:H5'	2.16	0.45
52:3:1505:G:H5''	52:3:1506:U:O5'	2.16	0.45
53:1:445:C:O2'	53:1:446:G:H5'	2.16	0.45
53:1:1930:G:O2'	53:1:1931:U:C5	2.69	0.45
53:1:2430:A:N3	53:1:2431:U:N3	2.65	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:h:54:VAL:O	7:h:56:ARG:NH1	2.49	0.45
7:h:79:PRO:O	7:h:80:THR:OG1	2.29	0.45
18:s:18:ARG:NH2	53:1:517:C:O2'	2.44	0.45
31:G:173:LYS:O	31:G:177:ASN:ND2	2.50	0.45
35:K:37:HIS:NE2	35:K:65:GLU:HB2	2.31	0.45
38:N:40:ARG:HA	38:N:40:ARG:HD3	1.86	0.45
38:N:104:THR:HG23	52:3:1180:A:H5'	1.98	0.45
38:N:109:GLN:CD	52:3:1116:U:HO2'	2.23	0.45
53:1:1509:A:H2'	53:1:1510:G:C8	2.50	0.45
53:1:1914:C:C6	57:8:105:ARG:O	2.69	0.45
53:1:2102:G:H2'	53:1:2103:C:H5'	1.97	0.45
53:1:2253:G:N3	53:1:2253:G:H2'	2.32	0.45
53:1:2314:A:H2'	53:1:2315:G:H8	1.80	0.45
53:1:2371:G:O2'	53:1:2372:U:H5'	2.15	0.45
53:1:2602:A:H2'	57:8:78:ARG:HD2	1.98	0.45
3:d:2:GLU:HG3	3:d:13:THR:HA	1.97	0.45
11:l:27:LEU:O	11:l:31:GLY:HA2	2.15	0.45
11:l:41:ARG:HH11	53:1:806:C:P	2.39	0.45
16:q:96:ASP:O	16:q:99:VAL:HG22	2.16	0.45
17:r:68:ARG:HB2	17:r:90:ARG:HH11	1.82	0.45
18:s:97:LEU:HD23	18:s:97:LEU:N	2.31	0.45
41:Q:73:LEU:N	41:Q:73:LEU:HD23	2.30	0.45
45:U:70:ARG:HG2	52:3:375:U:H5''	1.98	0.45
50:Z:33:ARG:O	50:Z:34:ARG:CB	2.64	0.45
50:Z:39:LYS:HA	50:Z:42:THR:HG22	1.98	0.45
52:3:1298:U:H4'	52:3:1299:A:O4'	2.16	0.45
52:3:1397:C:O4'	52:3:1397:C:O2	2.33	0.45
53:1:226:A:H2'	53:1:227:A:O4'	2.16	0.45
53:1:1690:A:H2'	53:1:1691:C:O4'	2.16	0.45
53:1:2023:C:H2'	53:1:2024:G:H8	1.81	0.45
53:1:2660:A:H2'	53:1:2661:G:O4'	2.16	0.45
1:b:216:ARG:NH2	53:1:781:A:OP1	2.49	0.45
9:j:31:GLU:OE2	9:j:35:ARG:NE	2.49	0.45
12:m:84:LYS:HG3	53:1:2275:C:O2	2.15	0.45
15:p:25:VAL:HG12	15:p:85:VAL:HG22	1.97	0.45
20:u:53:GLN:N	20:u:54:PRO:HD3	2.31	0.45
34:J:17:VAL:HG13	34:J:34:ALA:HB2	1.98	0.45
40:P:91:GLY:O	40:P:93:GLU:N	2.48	0.45
40:P:123:PRO:O	50:Z:34:ARG:N	2.47	0.45
44:T:54:GLY:O	44:T:57:ARG:HB3	2.16	0.45
52:3:693:G:H1'	56:4:14:A:H1'	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:1346:A:H2'	52:3:1347:G:H4'	1.98	0.45
53:1:2452:C:H4'	57:8:32:LYS:HB3	1.97	0.45
53:1:2620:C:H2'	53:1:2621:G:O4'	2.15	0.45
1:b:123:ILE:HG22	1:b:123:ILE:O	2.16	0.45
2:c:108:ASP:OD1	2:c:207:VAL:HG22	2.16	0.45
4:e:92:GLY:O	4:e:94:ARG:N	2.43	0.45
6:g:97:ARG:HA	6:g:112:LYS:HB3	1.98	0.45
32:H:46:LEU:HB3	32:H:49:ALA:HB3	1.97	0.45
35:K:3:HIS:HD2	35:K:65:GLU:HG3	1.81	0.45
36:L:16:LYS:HD3	36:L:17:PHE:CE1	2.51	0.45
42:R:72:ILE:O	42:R:76:ILE:HG12	2.16	0.45
46:V:7:LEU:HD21	46:V:24:ILE:HD12	1.99	0.45
47:W:46:THR:OG1	47:W:47:ARG:N	2.48	0.45
52:3:342:C:H2'	52:3:343:U:O4'	2.16	0.45
53:1:1720:U:H2'	53:1:1721:G:O4'	2.17	0.45
53:1:1955:U:C4	53:1:2552:U:H1'	2.52	0.45
10:k:25:LEU:CD2	53:1:2562:U:H4'	2.47	0.45
15:p:19:PHE:N	15:p:19:PHE:CD1	2.85	0.45
20:u:84:PHE:CD1	20:u:91:LYS:HG2	2.52	0.45
22:w:36:GLN:HE22	22:w:41:PHE:HB2	1.80	0.45
26:B:2:VAL:CG2	53:1:2016:U:H1'	2.46	0.45
31:G:67:LEU:HD22	31:G:91:VAL:HG22	1.98	0.45
32:H:4:VAL:HB	52:3:1190:G:OP1	2.17	0.45
33:I:147:LYS:H	33:I:147:LYS:HD2	1.82	0.45
35:K:51:ILE:O	35:K:52:ASN:HB3	2.16	0.45
35:K:61:LEU:HD23	35:K:62:MET:N	2.32	0.45
52:3:252:U:O2	52:3:252:U:C2'	2.64	0.45
52:3:505:G:H5'	52:3:534:U:H2'	1.98	0.45
52:3:971:G:H1'	52:3:1365:G:O2'	2.17	0.45
52:3:1354:U:H2'	52:3:1355:G:H8	1.82	0.45
52:3:1490:C:H2'	52:3:1491:G:C8	2.52	0.45
53:1:74:A:H4'	53:1:75:G:O5'	2.17	0.45
53:1:974:G:N3	53:1:974:G:H2'	2.32	0.45
53:1:2148:G:H2'	53:1:2149:U:C6	2.51	0.45
54:2:51:G:H2'	54:2:52:A:O4'	2.15	0.45
57:8:47:SER:O	57:8:49:PRO:HD3	2.17	0.45
1:b:149:LYS:HE2	53:1:2204:G:H4'	1.98	0.45
11:l:14:LYS:NZ	53:1:597:G:H1'	2.32	0.45
23:x:36:ARG:HA	23:x:47:THR:HA	1.97	0.45
33:I:183:ARG:NH1	33:I:184:LYS:O	2.49	0.45
34:J:106:ALA:HB3	34:J:111:ARG:HB3	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:Q:4:ASN:O	41:Q:7:VAL:HG12	2.17	0.45
46:V:16:MET:HE1	46:V:44:HIS:CD2	2.51	0.45
46:V:35:LYS:NZ	52:3:586:C:H5'	2.32	0.45
51:a:55:SER:OG	55:5:53:G:N2	2.50	0.45
52:3:358:U:H2'	52:3:359:G:C8	2.52	0.45
52:3:762:U:H2'	52:3:763:G:C8	2.52	0.45
52:3:794:A:O2'	52:3:795:C:H5'	2.17	0.45
52:3:868:C:H2'	52:3:869:G:O4'	2.17	0.45
52:3:946:A:H2'	52:3:947:G:H8	1.80	0.45
52:3:1230:C:H2'	52:3:1231:G:H8	1.81	0.45
52:3:1237:C:H4'	52:3:1334:G:N2	2.32	0.45
52:3:1429:A:H2'	52:3:1430:A:C8	2.51	0.45
53:1:242:G:N2	53:1:254:G:H2'	2.31	0.45
53:1:1278:C:H2'	53:1:1279:G:H8	1.82	0.45
53:1:1386:C:H2'	53:1:1387:A:C8	2.52	0.45
53:1:2129:C:C2'	53:1:2130:U:H5'	2.46	0.45
53:1:2655:G:H2'	53:1:2664:G:C6	2.52	0.45
57:8:39:LEU:HD12	57:8:73:LYS:HD3	1.99	0.45
57:8:106:ARG:HB3	57:8:107:PRO:CA	2.46	0.45
2:c:133:THR:OG1	2:c:134:HIS:N	2.38	0.45
6:g:31:VAL:N	6:g:32:PRO:CD	2.79	0.45
10:k:102:PRO:HB3	10:k:121:GLU:HB2	1.99	0.45
11:l:101:ILE:HG13	11:l:102:GLY:H	1.82	0.45
18:s:29:VAL:HG21	18:s:66:ILE:HD11	1.97	0.45
31:G:122:ASP:OD1	31:G:122:ASP:N	2.50	0.45
34:J:89:THR:OG1	34:J:134:ASN:ND2	2.50	0.45
41:Q:39:THR:HG22	41:Q:40:THR:H	1.82	0.45
43:S:52:ARG:HD3	52:3:1219:A:OP1	2.17	0.45
48:X:59:VAL:HG21	48:X:73:PHE:HB3	1.99	0.45
52:3:529:G:OP2	57:8:122:LYS:HD3	2.16	0.45
52:3:813:U:H2'	52:3:814:A:C5'	2.45	0.45
52:3:822:U:H2'	52:3:823:C:C6	2.51	0.45
52:3:881:G:O2'	52:3:882:C:H5'	2.17	0.45
52:3:929:G:OP1	52:3:1534:A:O2'	2.33	0.45
52:3:993:G:N3	52:3:993:G:H2'	2.32	0.45
52:3:1082:A:O2'	52:3:1083:U:H5'	2.16	0.45
53:1:941:A:H2'	53:1:942:G:O4'	2.17	0.45
53:1:1092:C:H2'	53:1:1093:G:O4'	2.17	0.45
53:1:1695:G:H3'	53:1:1695:G:N3	2.31	0.45
53:1:2247:A:OP2	53:1:2251:G:C6	2.70	0.45
53:1:2398:U:H2'	53:1:2399:G:H8	1.82	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:9:37:ILE:HG23	57:9:74:ALA:O	2.16	0.45
57:9:64:ILE:HA	57:9:70:ILE:HA	1.99	0.45
9:j:117:ALA:HA	9:j:120:ARG:HH21	1.82	0.45
17:r:14:VAL:HG22	17:r:15:SER:N	2.32	0.45
20:u:50:ALA:C	20:u:52:ASN:H	2.25	0.45
23:x:24:THR:HG21	53:1:2081:U:H4'	1.99	0.45
37:M:40:LYS:HA	37:M:45:ILE:O	2.17	0.45
42:R:22:TYR:CE1	52:3:1330:U:H4'	2.51	0.45
52:3:966:G:H21	55:5:34:C:H4'	1.81	0.45
53:1:482:A:H1'	53:1:498:G:N2	2.32	0.45
53:1:598:U:H2'	53:1:599:A:C8	2.52	0.45
53:1:1172:C:C2'	53:1:1173:U:H5''	2.47	0.45
53:1:1638:C:H5''	53:1:2710:C:O2'	2.17	0.45
53:1:2286:G:H4'	53:1:2287:A:C4	2.51	0.45
57:9:15:LEU:HD22	57:9:40:ARG:HH22	1.82	0.45
7:h:96:PHE:CD2	7:h:126:LEU:HB2	2.52	0.45
9:j:16:TYR:HB3	9:j:140:LEU:HD22	1.99	0.45
16:q:36:GLN:HE21	53:1:1252:G:H22	1.64	0.45
16:q:52:ARG:HG3	53:1:535:G:O2'	2.15	0.45
31:G:82:ALA:HB1	31:G:213:LEU:HD22	1.99	0.45
31:G:160:LEU:HD23	31:G:180:ILE:HG21	1.98	0.45
33:I:70:GLN:OE1	33:I:73:ASN:HB2	2.17	0.45
33:I:107:GLY:O	33:I:164:ARG:NH2	2.49	0.45
52:3:758:C:H4'	52:3:880:C:C4'	2.46	0.45
53:1:738:G:O2'	53:1:739:A:H5'	2.16	0.45
53:1:1611:C:H6	53:1:1611:C:H5'	1.82	0.45
53:1:1910:G:O2'	53:1:1911:U:H5'	2.16	0.45
53:1:2190:G:H2'	53:1:2191:A:O4'	2.16	0.45
1:b:7:PRO:HB3	1:b:13:ARG:HG3	1.98	0.44
1:b:156:SER:HB2	53:1:1818:U:H5'	1.99	0.44
2:c:105:LYS:O	2:c:177:VAL:HG22	2.17	0.44
13:n:20:MET:HE3	53:1:1277:G:C5'	2.47	0.44
19:t:9:LYS:HA	24:y:29:ARG:HH12	1.82	0.44
31:G:106:VAL:HA	31:G:109:SER:HB3	1.98	0.44
32:H:139:ASN:O	32:H:143:LEU:HB2	2.17	0.44
34:J:132:PRO:HA	34:J:135:VAL:HG12	1.99	0.44
41:Q:49:ARG:HB3	41:Q:65:TYR:CE1	2.52	0.44
42:R:94:LEU:CD1	42:R:95:PRO:HD2	2.47	0.44
44:T:37:HIS:NE2	52:3:740:U:OP1	2.51	0.44
49:Y:66:ILE:HG21	49:Y:71:ALA:H	1.82	0.44
52:3:396:C:H2'	52:3:397:A:H5''	1.98	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:428:G:H8	52:3:428:G:OP1	2.00	0.44
52:3:977:A:H3'	52:3:977:A:N3	2.32	0.44
53:1:1550:C:H2'	53:1:1551:A:C8	2.52	0.44
53:1:2345:G:N3	53:1:2381:A:H2'	2.31	0.44
57:8:104:ALA:O	57:8:105:ARG:HB2	2.17	0.44
2:c:79:LEU:HB2	53:1:2635:A:H4'	1.98	0.44
4:e:129:MET:HG3	4:e:130:GLY:N	2.31	0.44
29:E:61:LEU:HG	29:E:61:LEU:O	2.17	0.44
31:G:98:GLY:N	31:G:174:GLU:OE2	2.50	0.44
33:I:73:ASN:HA	33:I:76:LYS:HZ3	1.81	0.44
38:N:71:ILE:HG13	52:3:1289:A:H61	1.82	0.44
42:R:86:ARG:HH22	52:3:1310:G:P	2.41	0.44
52:3:20:U:H2'	52:3:21:G:O4'	2.17	0.44
52:3:441:A:H3'	52:3:442:G:H8	1.83	0.44
52:3:701:U:C4'	52:3:703:G:H1'	2.44	0.44
52:3:813:U:C2'	52:3:814:A:H5''	2.46	0.44
53:1:199:A:N6	53:1:2433:A:C8	2.86	0.44
53:1:858:G:H5'	53:1:859:G:OP2	2.17	0.44
53:1:973:A:H5'	53:1:1188:U:H1'	2.00	0.44
53:1:1906:G:H2'	53:1:1907:G:C5'	2.40	0.44
54:2:30:C:H2'	54:2:31:C:O4'	2.17	0.44
57:9:46:SER:HB3	57:9:47:SER:H	1.66	0.44
2:c:136:ASN:ND2	2:c:139:SER:O	2.49	0.44
4:e:151:LEU:HA	53:1:2305:U:C5	2.52	0.44
32:H:9:ILE:HG23	32:H:10:ARG:HG2	1.99	0.44
36:L:39:GLU:OE2	38:N:44:ARG:NH1	2.50	0.44
37:M:32:LYS:O	37:M:35:ILE:HG22	2.17	0.44
39:O:59:LYS:HD3	52:3:972:C:O3'	2.16	0.44
40:P:71:ASP:O	40:P:72:ALA:HB3	2.18	0.44
41:Q:30:ARG:HH11	41:Q:78:VAL:HG11	1.82	0.44
50:Z:20:ARG:HA	50:Z:24:LYS:HD2	1.99	0.44
52:3:1068:G:H5'	52:3:1388:C:H5'	1.99	0.44
52:3:1424:U:H2'	52:3:1425:U:O4'	2.17	0.44
52:3:1429:A:H2'	52:3:1430:A:H8	1.81	0.44
52:3:1494:G:O2'	52:3:1495:U:H5'	2.16	0.44
53:1:154:U:H2'	53:1:155:A:C8	2.52	0.44
53:1:214:G:O2'	53:1:215:G:H5'	2.18	0.44
53:1:464:U:H2'	53:1:465:G:O4'	2.18	0.44
53:1:543:G:H8	53:1:543:G:H5'	1.81	0.44
53:1:752:A:O2'	53:1:1781:U:H5'	2.18	0.44
53:1:1045:C:P	53:1:1047:G:H5'	2.57	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:1047:G:H2'	53:1:1110:G:N2	2.32	0.44
53:1:1103:A:H2'	53:1:1104:C:OP1	2.17	0.44
53:1:1744:A:H3'	53:1:1745:A:H8	1.82	0.44
53:1:1806:C:H2'	53:1:1807:G:O4'	2.18	0.44
53:1:1912:A:H62	53:1:1917:U:H3	1.66	0.44
53:1:2757:A:H2'	53:1:2757:A:N3	2.32	0.44
4:e:107:VAL:HG23	4:e:108:PRO:HD3	2.00	0.44
30:F:36:ARG:HG2	30:F:37:GLN:N	2.26	0.44
39:O:40:ILE:HG13	39:O:73:LEU:HD23	1.99	0.44
52:3:449:G:H2'	52:3:450:G:C8	2.52	0.44
52:3:482:A:H2'	52:3:483:C:H5'	1.99	0.44
52:3:1405:G:H2'	52:3:1406:U:C6	2.53	0.44
53:1:184:C:H4'	53:1:217:A:C2	2.52	0.44
53:1:402:A:H2'	53:1:403:U:O4'	2.18	0.44
4:e:48:LEU:HG	4:e:147:ARG:CZ	2.47	0.44
8:i:4:VAL:HG11	8:i:7:TYR:HB3	1.99	0.44
12:m:16:ARG:NH1	53:1:953:G:H3'	2.31	0.44
14:o:64:TYR:HB3	14:o:67:ASN:ND2	2.33	0.44
19:t:68:LYS:HD3	19:t:68:LYS:HA	1.83	0.44
31:G:30:ILE:HD11	31:G:38:HIS:HB3	1.99	0.44
32:H:171:ARG:O	32:H:173:PRO:HD3	2.18	0.44
33:I:144:ILE:HD13	33:I:177:MET:HB3	2.00	0.44
40:P:34:THR:HG22	40:P:35:ASP:H	1.83	0.44
46:V:60:ILE:HG22	46:V:72:TRP:HB3	2.00	0.44
48:X:25:GLY:O	48:X:27:LYS:HG3	2.18	0.44
53:1:36:G:H4'	53:1:451:U:N3	2.33	0.44
53:1:690:G:O2'	53:1:691:C:H5'	2.18	0.44
53:1:1152:C:H2'	53:1:1153:C:C6	2.52	0.44
53:1:1447:C:H2'	53:1:1448:G:C8	2.53	0.44
53:1:1570:A:H2'	53:1:1571:A:C8	2.52	0.44
53:1:1727:C:O2'	53:1:1728:C:H5'	2.18	0.44
53:1:1751:U:H2'	53:1:1752:C:C6	2.53	0.44
53:1:1930:G:O2'	53:1:1931:U:H5	1.98	0.44
57:9:75:GLN:OE1	57:9:75:GLN:N	2.50	0.44
5:f:8:VAL:HB	5:f:49:LEU:HB3	2.00	0.44
6:g:25:TYR:CD1	53:1:2094:A:H5'	2.53	0.44
6:g:70:GLU:HG2	6:g:71:LYS:HG2	1.99	0.44
8:i:80:LYS:HE3	8:i:87:SER:C	2.43	0.44
9:j:109:LEU:HD13	9:j:118:MET:HG3	1.99	0.44
19:t:77:ARG:CZ	53:1:63:A:H4'	2.48	0.44
22:w:34:VAL:HG12	22:w:55:LEU:HB2	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:D:40:ALA:O	28:D:42:LEU:N	2.51	0.44
34:J:19:ARG:NH2	52:3:16:A:OP1	2.51	0.44
38:N:105:ARG:CD	52:3:1117:A:O3'	2.64	0.44
43:S:9:GLU:HG2	43:S:62:ARG:NE	2.32	0.44
49:Y:25:SER:OG	52:3:1458:G:H4'	2.18	0.44
50:Z:23:GLU:C	50:Z:25:ALA:H	2.24	0.44
52:3:665:A:O4'	52:3:733:G:H1'	2.17	0.44
52:3:939:G:H21	52:3:1375:A:H2	1.66	0.44
53:1:20:C:H2'	53:1:21:A:H8	1.83	0.44
53:1:880:G:H2'	53:1:881:G:O4'	2.18	0.44
53:1:1700:A:H2'	53:1:1701:A:H5'	1.99	0.44
53:1:2176:A:H2'	53:1:2177:C:O4'	2.18	0.44
53:1:2358:A:H2'	53:1:2359:C:O4'	2.18	0.44
53:1:2432:A:H1'	55:5:74:C:C3'	2.48	0.44
53:1:2732:G:O2'	53:1:2733:A:H5'	2.18	0.44
1:b:130:PRO:HB3	1:b:132:ARG:HH21	1.83	0.44
6:g:75:LEU:O	6:g:77:THR:HG23	2.18	0.44
9:j:46:PRO:HG3	16:q:59:LEU:HD21	1.99	0.44
9:j:56:VAL:HG13	9:j:56:VAL:O	2.17	0.44
11:l:17:LYS:HB2	53:1:663:G:H5''	1.99	0.44
11:l:48:ARG:NH1	53:1:666:A:H4'	2.22	0.44
14:o:106:LEU:C	14:o:106:LEU:HD12	2.43	0.44
19:t:14:PRO:HD2	24:y:33:ALA:CB	2.48	0.44
33:I:80:ARG:NH1	52:3:614:C:OP2	2.51	0.44
34:J:17:VAL:HG11	34:J:55:VAL:HG12	1.99	0.44
40:P:35:ASP:HB3	40:P:39:ASN:H	1.83	0.44
41:Q:38:THR:HG23	41:Q:49:ARG:C	2.42	0.44
43:S:2:LYS:NZ	52:3:982:U:H5''	2.33	0.44
52:3:304:U:H2'	52:3:305:G:C8	2.52	0.44
53:1:395:U:H2'	53:1:396:G:H8	1.78	0.44
53:1:1443:U:H2'	53:1:1444:G:C8	2.52	0.44
53:1:1524:G:H2'	53:1:1525:A:C8	2.53	0.44
53:1:2798:U:H4'	53:1:2799:A:C5	2.51	0.44
54:2:5:U:H2'	54:2:6:G:C8	2.52	0.44
1:b:251:THR:OG1	1:b:252:LYS:N	2.51	0.44
2:c:106:LYS:HE3	2:c:174:SER:HB2	1.99	0.44
6:g:43:ASN:HA	6:g:46:PHE:CD2	2.53	0.44
38:N:8:THR:HB	38:N:84:ARG:HG2	2.00	0.44
42:R:94:LEU:CG	42:R:95:PRO:HD2	2.48	0.44
51:a:180:PHE:HD1	51:a:184:LYS:HD2	1.82	0.44
52:3:18:C:C4'	52:3:1078:U:O2'	2.65	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:603:U:H2'	52:3:604:G:H8	1.82	0.44
52:3:714:G:H2'	52:3:715:A:C8	2.53	0.44
52:3:817:C:H5'	52:3:820:U:OP2	2.16	0.44
52:3:1497:G:C2'	52:3:1498:U:H5'	2.47	0.44
53:1:2042:A:H2'	53:1:2043:C:H5'	2.00	0.44
53:1:2246:G:C3'	53:1:2251:G:H1	2.23	0.44
53:1:2417:C:H2'	53:1:2418:A:H8	1.83	0.44
53:1:2716:C:O2'	53:1:2717:C:H5'	2.18	0.44
1:b:216:ARG:NH1	53:1:691:C:OP1	2.51	0.44
2:c:145:SER:O	53:1:2512:C:H1'	2.18	0.44
3:d:68:ALA:HA	53:1:1255:U:C5	2.53	0.44
6:g:73:ASN:ND2	6:g:106:ALA:O	2.51	0.44
7:h:31:ARG:HD2	53:1:1054:A:H4'	2.00	0.44
7:h:33:VAL:HG13	53:1:1055:G:O3'	2.18	0.44
7:h:73:LYS:HG2	7:h:116:GLU:HB3	1.99	0.44
9:j:7:LYS:HA	9:j:8:PRO:HD3	1.86	0.44
10:k:65:THR:H	10:k:79:PHE:HD2	1.66	0.44
14:o:40:ILE:HA	14:o:47:VAL:HA	1.99	0.44
15:p:20:ARG:HB3	15:p:21:PRO:HD2	1.98	0.44
20:u:12:VAL:HG22	20:u:69:VAL:HG12	1.99	0.44
50:Z:32:ARG:HD3	50:Z:33:ARG:HG2	2.00	0.44
52:3:1236:A:H4'	52:3:1304:G:H4'	2.00	0.44
53:1:419:U:H2'	53:1:420:C:C6	2.53	0.44
53:1:1167:C:H2'	53:1:1168:G:H8	1.83	0.44
54:2:35:C:C2'	54:2:36:C:H5'	2.46	0.44
9:j:13:ARG:NH2	9:j:53:TYR:OH	2.51	0.43
10:k:88:ASN:O	10:k:90:ASN:N	2.50	0.43
13:n:20:MET:HE3	53:1:1277:G:H5'	2.00	0.43
16:q:2:ARG:HH22	53:1:446:G:C5'	2.30	0.43
18:s:88:ARG:HH12	53:1:2013:A:H2	1.66	0.43
19:t:92:ASN:OD1	19:t:93:LEU:N	2.49	0.43
28:D:19:ARG:NH1	53:1:124:G:C8	2.86	0.43
29:E:32:LEU:HD13	53:1:2419:U:OP2	2.18	0.43
32:H:21:TRP:HB3	32:H:58:ARG:HB3	1.99	0.43
33:I:169:TRP:CD1	33:I:170:LEU:HG	2.53	0.43
37:M:10:LEU:HA	37:M:13:ILE:HG12	2.00	0.43
37:M:124:ILE:HD12	37:M:124:ILE:N	2.32	0.43
51:a:181:ASP:HB2	51:a:184:LYS:HZ3	1.82	0.43
52:3:317:U:H2'	52:3:318:G:C8	2.53	0.43
52:3:1397:C:H3'	52:3:1398:A:H5'	2.00	0.43
53:1:1965:C:H5''	53:1:1966:A:H2'	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2313:C:H2'	53:1:2314:A:C8	2.53	0.43
57:9:84:ARG:HE	57:9:88:LEU:HG	1.83	0.43
2:c:194:PRO:HA	53:1:2680:U:H5''	2.00	0.43
7:h:6:GLN:O	7:h:9:GLN:HG3	2.18	0.43
11:l:61:LEU:O	29:E:12:ARG:HD3	2.19	0.43
11:l:77:ILE:HD11	11:l:101:ILE:HG23	2.00	0.43
15:p:2:ASN:OD1	53:1:2876:G:H4'	2.19	0.43
21:v:20:LEU:HD12	21:v:25:LYS:O	2.19	0.43
23:x:15:ASN:HD21	23:x:23:ALA:HB1	1.83	0.43
29:E:53:ASP:HA	29:E:56:LEU:HD13	2.00	0.43
31:G:120:SER:OG	31:G:121:GLN:NE2	2.51	0.43
32:H:191:THR:CB	52:3:532:A:H62	2.31	0.43
37:M:83:ARG:NH2	52:3:587:G:P	2.91	0.43
46:V:78:VAL:HG23	46:V:79:GLU:H	1.83	0.43
51:a:50:ILE:HG23	51:a:204:ALA:HB3	2.00	0.43
51:a:205:LYS:HZ3	53:1:1860:G:C5'	2.31	0.43
52:3:553:A:H2'	52:3:554:A:C8	2.54	0.43
53:1:813:U:H2'	53:1:814:C:C6	2.53	0.43
53:1:1985:C:H2'	53:1:1986:C:C6	2.52	0.43
53:1:2815:C:H2'	53:1:2816:G:C8	2.53	0.43
54:2:2:G:H2'	54:2:3:C:O4'	2.18	0.43
1:b:106:PRO:HG2	1:b:109:LEU:HB2	1.99	0.43
2:c:39:ASP:OD2	2:c:41:ALA:HB3	2.18	0.43
4:e:3:LEU:HD22	4:e:99:PHE:CE2	2.53	0.43
6:g:73:ASN:HB3	6:g:108:VAL:HG23	2.00	0.43
10:k:87:LEU:HD22	10:k:92:GLU:O	2.18	0.43
12:m:33:LEU:HD13	12:m:117:PHE:HB3	2.01	0.43
22:w:51:ARG:O	53:1:2386:A:H4'	2.18	0.43
27:C:7:LYS:NZ	29:E:31:ILE:HD12	2.33	0.43
33:I:160:LEU:O	33:I:164:ARG:NH1	2.52	0.43
43:S:17:ASP:OD2	43:S:22:LYS:NZ	2.51	0.43
44:T:85:GLY:O	44:T:86:LEU:HD23	2.19	0.43
46:V:45:VAL:HG11	46:V:60:ILE:HD12	1.99	0.43
49:Y:16:ALA:HA	49:Y:19:HIS:HB3	2.00	0.43
52:3:211:G:C2'	52:3:212:G:H5'	2.47	0.43
52:3:742:G:H2'	52:3:743:A:C8	2.53	0.43
53:1:576:U:H2'	53:1:577:G:H8	1.83	0.43
53:1:1947:C:H2'	53:1:1948:G:C8	2.52	0.43
53:1:2159:G:O2'	53:1:2160:C:H5'	2.17	0.43
55:5:34:C:H2'	55:5:35:A:C8	2.52	0.43
1:b:144:GLU:HG2	1:b:150:GLY:H	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:155:GLU:OE1	3:d:158:PHE:HB3	2.18	0.43
4:e:40:GLY:HA2	4:e:84:ILE:HD12	2.00	0.43
7:h:126:LEU:HB3	7:h:129:LEU:HG	2.00	0.43
10:k:88:ASN:C	10:k:90:ASN:H	2.26	0.43
11:l:61:LEU:HD12	29:E:13:PHE:CZ	2.53	0.43
19:t:57:VAL:HG22	19:t:58:VAL:N	2.34	0.43
21:v:60:VAL:CG2	21:v:71:LYS:HE3	2.45	0.43
24:y:9:LYS:O	24:y:13:GLU:HG2	2.18	0.43
28:D:14:ARG:HG3	53:1:771:G:OP1	2.18	0.43
28:D:34:ARG:HH12	53:1:466:A:P	2.41	0.43
31:G:113:LEU:HA	31:G:116:LEU:HB3	2.00	0.43
36:L:37:THR:CG2	52:3:1240:U:H4'	2.49	0.43
39:O:57:VAL:CG2	52:3:1198:G:H1'	2.45	0.43
46:V:15:LYS:CD	52:3:275:G:H5'	2.48	0.43
52:3:674:G:H2'	52:3:675:A:C8	2.53	0.43
52:3:1238:A:O2'	52:3:1239:A:H5'	2.18	0.43
53:1:45:G:H5''	53:1:46:G:C4'	2.48	0.43
53:1:558:U:H2'	53:1:559:G:C8	2.52	0.43
53:1:621:A:H2'	53:1:622:G:H5'	2.00	0.43
53:1:784:G:H5'	53:1:785:G:OP1	2.18	0.43
53:1:1370:C:H2'	53:1:1371:G:O4'	2.18	0.43
53:1:1825:U:H2'	53:1:1826:G:C8	2.54	0.43
53:1:2815:C:H2'	53:1:2816:G:H8	1.83	0.43
1:b:16:VAL:CB	1:b:203:VAL:HG22	2.47	0.43
2:c:118:PHE:HB3	53:1:1654:A:O2'	2.18	0.43
2:c:179:ARG:HB3	2:c:188:LEU:HD12	2.01	0.43
20:u:14:THR:OG1	53:1:310:A:H5''	2.19	0.43
25:z:5:LYS:HB2	25:z:57:GLU:HB2	2.00	0.43
36:L:2:ARG:HG2	52:3:1380:U:C4	2.53	0.43
36:L:60:ALA:O	36:L:63:VAL:HG12	2.19	0.43
36:L:113:LYS:HD2	52:3:1298:U:C5	2.53	0.43
42:R:32:ILE:HD12	42:R:32:ILE:HA	1.91	0.43
44:T:42:PHE:CE2	44:T:55:LEU:HD22	2.54	0.43
45:U:31:ARG:HB2	52:3:310:G:H5''	2.01	0.43
46:V:48:GLU:OE2	46:V:48:GLU:N	2.44	0.43
52:3:38:G:H4'	52:3:547:A:C6	2.53	0.43
52:3:56:U:H2'	52:3:57:G:H8	1.83	0.43
52:3:513:C:H2'	52:3:514:C:C6	2.53	0.43
52:3:693:G:O4'	56:4:14:A:C1'	2.65	0.43
53:1:796:C:H2'	53:1:797:G:H8	1.81	0.43
53:1:894:U:H2'	53:1:895:U:O4'	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:1412:U:H2'	53:1:1413:A:C8	2.54	0.43
53:1:1423:G:H2'	53:1:1424:G:H8	1.83	0.43
53:1:2030:A:N3	53:1:2499:C:H5''	2.34	0.43
53:1:2194:U:H2'	53:1:2195:U:C6	2.54	0.43
53:1:2432:A:N6	53:1:2433:A:N3	2.66	0.43
1:b:144:GLU:HG3	1:b:151:GLY:HA2	2.00	0.43
1:b:242:HIS:O	1:b:244:VAL:HG13	2.17	0.43
2:c:197:THR:HB	53:1:2820:A:C6	2.54	0.43
3:d:25:GLU:OE2	11:l:7:SER:HB2	2.17	0.43
6:g:74:ALA:O	6:g:76:GLU:HG2	2.19	0.43
12:m:37:GLY:HA3	12:m:126:ILE:HG22	2.01	0.43
17:r:26:ASP:N	17:r:26:ASP:OD1	2.51	0.43
17:r:38:VAL:HG21	17:r:57:GLY:H	1.83	0.43
17:r:71:LYS:HD2	17:r:90:ARG:HH21	1.83	0.43
18:s:18:ARG:HH12	53:1:518:G:P	2.41	0.43
21:v:20:LEU:HD11	21:v:27:PRO:HD3	2.01	0.43
38:N:4:GLN:HE21	38:N:21:LYS:HG3	1.83	0.43
42:R:89:ARG:HD2	42:R:94:LEU:HD23	2.00	0.43
44:T:3:SER:OG	44:T:5:GLU:OE1	2.34	0.43
44:T:79:GLN:O	44:T:83:ARG:HG3	2.19	0.43
49:Y:75:LYS:HE2	52:3:186:C:H1'	2.01	0.43
51:a:4:LEU:HG	51:a:9:ARG:HB2	2.00	0.43
52:3:425:G:O2'	52:3:426:U:H5'	2.19	0.43
52:3:784:A:H5''	53:1:1837:C:OP1	2.18	0.43
52:3:1211:U:H4'	52:3:1213:A:C4	2.54	0.43
52:3:1508:A:H2'	52:3:1509:C:C6	2.53	0.43
52:3:1530:G:H2'	52:3:1531:A:C5'	2.44	0.43
53:1:562:U:O4'	53:1:2036:C:H5'	2.18	0.43
53:1:2199:A:H2'	53:1:2200:C:O4'	2.19	0.43
53:1:2545:G:O2'	53:1:2546:U:H5'	2.18	0.43
3:d:48:THR:HG22	3:d:86:ALA:HB2	2.00	0.43
4:e:123:GLY:HA2	4:e:162:ASP:OD1	2.18	0.43
7:h:46:ARG:C	7:h:46:ARG:HD3	2.43	0.43
8:i:94:LYS:HE2	8:i:94:LYS:HB3	1.89	0.43
8:i:95:ASP:OD1	8:i:95:ASP:N	2.52	0.43
14:o:94:ARG:HG2	14:o:97:PHE:O	2.19	0.43
15:p:48:ALA:H	15:p:59:THR:HG1	1.65	0.43
21:v:26:PHE:O	21:v:42:LEU:HD23	2.19	0.43
34:J:131:ASN:HA	34:J:132:PRO:HD3	1.91	0.43
37:M:120:LEU:HA	52:3:600:A:H5'	2.00	0.43
42:R:79:LEU:HD23	42:R:82:LEU:HD22	1.99	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:371:A:H2'	52:3:372:C:O4'	2.19	0.43
52:3:928:G:O2'	52:3:929:G:H5'	2.18	0.43
52:3:1162:C:H2'	52:3:1163:A:C8	2.53	0.43
52:3:1486:G:H2'	52:3:1487:G:H8	1.83	0.43
53:1:679:C:H2'	53:1:680:C:C6	2.53	0.43
53:1:1675:C:H2'	53:1:1676:A:O4'	2.19	0.43
53:1:2776:A:H4'	53:1:2778:A:OP1	2.18	0.43
54:2:82:U:H2'	54:2:83:G:C8	2.54	0.43
57:8:128:VAL:O	57:8:128:VAL:HG12	2.18	0.43
6:g:75:LEU:C	6:g:76:GLU:HG2	2.44	0.43
7:h:42:ARG:HD2	8:i:117:THR:HG23	2.01	0.43
7:h:59:LEU:HD22	7:h:61:ARG:NH1	2.34	0.43
8:i:58:ILE:HG13	8:i:68:PHE:HB3	1.99	0.43
11:l:41:ARG:NH1	53:1:806:C:OP2	2.49	0.43
14:o:24:THR:HG22	14:o:42:PRO:HD3	2.01	0.43
16:q:18:LYS:NZ	53:1:1219:U:OP2	2.51	0.43
18:s:33:LEU:HD23	18:s:51:LEU:HD23	2.01	0.43
18:s:43:ALA:HA	18:s:46:LEU:HB2	2.01	0.43
18:s:88:ARG:H	53:1:1614:A:N6	2.16	0.43
19:t:2:ILE:HD11	53:1:144:A:O3'	2.19	0.43
25:z:18:LYS:NZ	53:1:850:U:OP1	2.40	0.43
33:I:107:GLY:HA3	33:I:113:ALA:HB2	2.00	0.43
35:K:36:ILE:HA	35:K:64:VAL:HA	2.00	0.43
40:P:55:ARG:HA	40:P:58:THR:HG23	1.99	0.43
43:S:60:ARG:HG2	52:3:981:U:H4'	2.00	0.43
52:3:45:G:H5''	52:3:307:C:O2'	2.18	0.43
52:3:162:A:H2'	52:3:163:C:O4'	2.19	0.43
52:3:210:C:H5'	52:3:211:G:C2	2.54	0.43
52:3:848:C:H2'	52:3:849:G:O4'	2.18	0.43
52:3:1318:A:H2'	52:3:1319:A:H5'	2.01	0.43
53:1:517:C:H2'	53:1:518:G:C5'	2.38	0.43
53:1:1775:U:H2'	53:1:1776:G:O4'	2.19	0.43
57:8:40:ARG:H	57:8:72:ILE:H	1.66	0.43
1:b:264:LYS:HD3	53:1:2224:G:OP1	2.18	0.43
10:k:21:CYS:HA	10:k:41:ILE:HG22	2.01	0.43
19:t:47:VAL:HG21	19:t:85:VAL:HG11	2.01	0.43
23:x:31:ASN:OD1	23:x:51:SER:OG	2.36	0.43
28:D:12:ARG:NE	28:D:44:VAL:HG21	2.34	0.43
31:G:103:TRP:O	31:G:107:ARG:N	2.46	0.43
34:J:80:LEU:HD23	34:J:122:VAL:HG11	2.01	0.43
34:J:131:ASN:ND2	52:3:19:A:P	2.89	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:K:11:HIS:NE2	35:K:13:ASP:OD2	2.52	0.43
52:3:709:U:H2'	52:3:710:G:H8	1.80	0.43
52:3:928:G:H2'	52:3:929:G:H8	1.84	0.43
53:1:455:C:O2	53:1:472:A:H2'	2.19	0.43
53:1:505:A:H2'	53:1:506:G:H5'	2.01	0.43
53:1:1023:U:O2'	53:1:1122:G:H5'	2.19	0.43
53:1:1917:U:H2'	53:1:1918:A:O4'	2.18	0.43
53:1:2602:A:C2'	57:8:78:ARG:HD2	2.49	0.43
53:1:2741:A:H2'	53:1:2742:G:O4'	2.18	0.43
55:5:52:G:H2'	55:5:53:G:O4'	2.19	0.43
1:b:75:ALA:HB3	1:b:115:ILE:HG13	2.00	0.43
1:b:225:ASN:HA	1:b:226:PRO:HD3	1.79	0.43
2:c:6:GLY:HA3	2:c:29:VAL:HG22	2.00	0.43
4:e:106:ALA:HA	4:e:136:ILE:HB	2.01	0.43
5:f:98:LYS:HD2	5:f:103:ASN:ND2	2.19	0.43
11:l:50:PHE:CE2	11:l:52:GLY:HA2	2.54	0.43
13:n:30:ARG:NH1	13:n:75:ILE:HD11	2.34	0.43
14:o:34:HIS:CE1	54:2:27:C:OP1	2.72	0.43
16:q:30:VAL:HG13	53:1:580:U:O3'	2.19	0.43
21:v:6:ALA:HB1	21:v:40:ILE:HG23	2.00	0.43
29:E:5:THR:HG22	29:E:62:PRO:HG2	2.00	0.43
33:I:13:ARG:HD3	52:3:543:U:H5''	2.00	0.43
36:L:32:ASP:OD2	52:3:1351:U:H5'	2.18	0.43
38:N:71:ILE:CG1	52:3:1289:A:H61	2.32	0.43
46:V:7:LEU:HD11	46:V:24:ILE:HG21	2.01	0.43
48:X:36:ARG:HG2	48:X:36:ARG:HH11	1.84	0.43
52:3:123:U:H5''	52:3:311:C:O2'	2.19	0.43
52:3:736:C:H2'	52:3:737:C:H6	1.84	0.43
52:3:887:G:C2'	52:3:888:G:H5'	2.49	0.43
52:3:1116:U:HO2'	52:3:1117:A:H5'	1.84	0.43
53:1:1139:G:O2'	53:1:1140:C:H5'	2.19	0.43
53:1:2168:G:H1'	55:5:56:C:OP1	2.19	0.43
53:1:2875:C:H2'	53:1:2876:G:H8	1.84	0.43
53:1:2893:A:H4'	53:1:2894:G:O4'	2.18	0.43
57:8:17:ILE:HG21	57:8:84:ARG:HH21	1.84	0.43
1:b:211:ARG:HG3	53:1:764:A:O4'	2.19	0.42
1:b:220:ARG:HG3	53:1:1789:A:OP1	2.19	0.42
10:k:20:MET:HE2	10:k:42:THR:HG21	2.01	0.42
11:l:135:ILE:HD12	11:l:138:ALA:HB3	2.00	0.42
16:q:24:TYR:HE1	53:1:17:G:H4'	1.83	0.42
21:v:17:SER:O	21:v:20:LEU:HG	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:v:92:VAL:HG13	21:v:92:VAL:O	2.18	0.42
31:G:108:GLN:HA	31:G:111:LYS:HB2	2.01	0.42
33:I:75:TYR:CZ	33:I:203:TYR:HB2	2.53	0.42
33:I:131:ILE:HD12	33:I:131:ILE:N	2.34	0.42
35:K:51:ILE:C	35:K:53:LYS:H	2.27	0.42
38:N:38:PHE:HD2	38:N:41:GLU:HB2	1.83	0.42
42:R:49:GLU:O	42:R:52:ILE:HG22	2.19	0.42
46:V:45:VAL:HG12	46:V:46:HIS:N	2.34	0.42
50:Z:33:ARG:O	50:Z:34:ARG:HB2	2.19	0.42
52:3:56:U:H2'	52:3:57:G:C8	2.54	0.42
52:3:843:U:H5'	52:3:844:G:C8	2.54	0.42
52:3:1082:A:H2'	52:3:1083:U:O4'	2.19	0.42
52:3:1295:U:H2'	52:3:1296:C:C6	2.54	0.42
52:3:1404:C:H1'	52:3:1499:A:C6	2.54	0.42
53:1:1083:U:O2'	53:1:1084:A:H5'	2.18	0.42
53:1:1178:C:O2	53:1:1178:C:C2'	2.64	0.42
53:1:1786:A:H1'	53:1:1938:A:N6	2.34	0.42
53:1:2036:C:H2'	53:1:2037:A:C8	2.54	0.42
3:d:62:GLN:NE2	53:1:2444:G:OP1	2.50	0.42
29:E:31:ILE:CG1	29:E:34:LYS:HE2	2.35	0.42
32:H:125:ARG:HG3	32:H:125:ARG:O	2.19	0.42
36:L:74:VAL:HB	36:L:85:GLN:HB3	2.01	0.42
44:T:57:ARG:HD3	52:3:742:G:H5''	2.01	0.42
45:U:31:ARG:NH1	52:3:311:C:OP1	2.51	0.42
50:Z:38:GLU:OE2	52:3:1527:U:H5	2.02	0.42
52:3:950:U:H2'	52:3:951:G:C8	2.54	0.42
52:3:1064:G:H1'	52:3:1190:G:N2	2.35	0.42
52:3:1288:A:H1'	52:3:1353:G:H4'	2.01	0.42
53:1:68:G:H2'	53:1:69:C:O4'	2.19	0.42
53:1:581:C:H2'	53:1:582:A:H8	1.84	0.42
53:1:654:A:H3'	53:1:654:A:N3	2.34	0.42
53:1:1010:A:H1'	53:1:1153:C:H1'	2.01	0.42
53:1:1258:U:H2'	53:1:1259:G:H8	1.85	0.42
53:1:2861:U:H2'	53:1:2862:G:C8	2.54	0.42
6:g:119:ASN:OD1	6:g:122:LEU:HD21	2.20	0.42
10:k:25:LEU:HD12	10:k:38:ILE:HG22	2.01	0.42
12:m:42:THR:HA	12:m:93:VAL:HG22	2.02	0.42
16:q:92:LYS:HD2	53:1:996:A:C5'	2.49	0.42
21:v:13:GLY:O	21:v:17:SER:HB3	2.20	0.42
25:z:46:MET:HE3	53:1:850:U:O2	2.19	0.42
33:I:8:LEU:HD13	52:3:429:U:H3'	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:L:134:VAL:O	36:L:138:GLU:HG2	2.18	0.42
37:M:58:LEU:HG	37:M:60:LEU:HD21	2.01	0.42
42:R:52:ILE:HD12	42:R:55:LEU:HD12	2.00	0.42
46:V:10:ARG:NH1	46:V:11:VAL:O	2.53	0.42
48:X:33:TRP:HB3	48:X:34:SER:H	1.70	0.42
48:X:35:ARG:NH2	48:X:71:GLY:O	2.52	0.42
49:Y:24:ARG:O	49:Y:27:MET:HB3	2.19	0.42
50:Z:32:ARG:HD3	50:Z:33:ARG:CG	2.49	0.42
52:3:194:C:H5''	52:3:195:A:OP1	2.19	0.42
52:3:1052:U:H2'	52:3:1200:C:N4	2.35	0.42
52:3:1081:A:O2'	52:3:1082:A:O5'	2.36	0.42
52:3:1195:C:H2'	52:3:1197:A:O4'	2.20	0.42
52:3:1258:G:H2'	52:3:1259:C:C6	2.54	0.42
52:3:1484:C:H2'	52:3:1485:U:C6	2.55	0.42
53:1:737:C:H2'	53:1:738:G:O4'	2.20	0.42
53:1:1282:U:H2'	53:1:1283:G:O4'	2.20	0.42
53:1:1565:C:O2'	53:1:1566:A:C8	2.72	0.42
53:1:2743:U:C2'	53:1:2744:G:H5''	2.49	0.42
53:1:2747:G:O6	53:1:2755:C:H5''	2.19	0.42
53:1:2795:C:C2'	53:1:2796:U:H5'	2.49	0.42
54:2:48:U:H2'	54:2:49:C:C6	2.54	0.42
54:2:65:U:H3'	54:2:108:A:N6	2.28	0.42
5:f:120:ILE:HD13	5:f:143:VAL:HG21	2.00	0.42
14:o:7:ARG:HD3	14:o:97:PHE:CE1	2.55	0.42
15:p:49:ILE:HA	15:p:58:PHE:HA	2.01	0.42
20:u:73:ASN:HD21	20:u:75:ALA:HB3	1.84	0.42
24:y:15:ASN:O	24:y:19:LEU:HD23	2.20	0.42
43:S:40:ARG:NH1	43:S:40:ARG:HG2	2.35	0.42
44:T:19:ASN:HD21	52:3:750:C:H5'	1.84	0.42
52:3:26:A:N6	52:3:558:G:H1'	2.34	0.42
52:3:297:G:H4'	52:3:557:G:H4'	2.02	0.42
52:3:382:A:H2'	52:3:383:A:O4'	2.20	0.42
52:3:558:G:H3'	52:3:559:A:H2'	2.00	0.42
52:3:860:A:H2'	52:3:861:G:O4'	2.19	0.42
52:3:1014:A:N3	52:3:1219:A:H1'	2.35	0.42
52:3:1087:G:OP1	52:3:1389:C:H4'	2.18	0.42
52:3:1325:C:O2'	52:3:1326:U:H5'	2.19	0.42
53:1:63:A:H2'	53:1:64:A:C8	2.54	0.42
53:1:473:G:C2'	53:1:474:G:H5'	2.49	0.42
53:1:955:U:H3	53:1:962:G:H1	1.67	0.42
53:1:968:C:H2'	53:1:969:G:C8	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:1354:A:H2'	53:1:1355:G:O4'	2.20	0.42
53:1:2070:A:H2'	53:1:2071:A:O4'	2.19	0.42
57:8:62:HIS:C	57:8:64:ILE:H	2.27	0.42
1:b:245:THR:C	1:b:247:TRP:H	2.28	0.42
4:e:49:LEU:C	4:e:49:LEU:HD23	2.44	0.42
6:g:16:GLY:HA2	6:g:47:PHE:CZ	2.54	0.42
11:l:79:LEU:HG	11:l:111:ILE:O	2.20	0.42
20:u:73:ASN:HD22	20:u:76:THR:HG22	1.84	0.42
21:v:75:GLN:HB3	21:v:90:ASP:O	2.19	0.42
33:I:122:ILE:O	33:I:128:VAL:HG23	2.19	0.42
33:I:124:VAL:HG13	33:I:142:VAL:HA	2.02	0.42
37:M:80:PRO:HG2	52:3:878:A:C5'	2.49	0.42
48:X:35:ARG:HB3	48:X:71:GLY:HA3	2.02	0.42
51:a:193:LEU:HD22	51:a:197:LYS:HB2	2.01	0.42
52:3:237:G:H2'	52:3:238:A:C8	2.54	0.42
52:3:1306:A:H61	52:3:1331:G:H1'	1.83	0.42
53:1:112:U:C2'	53:1:113:U:H5'	2.49	0.42
53:1:2302:U:H2'	53:1:2303:G:C8	2.54	0.42
53:1:2322:A:H2'	53:1:2323:G:O4'	2.20	0.42
55:5:4:G:H2'	55:5:5:G:C8	2.54	0.42
1:b:246:PRO:HD2	1:b:247:TRP:CZ3	2.55	0.42
4:e:174:PHE:HA	4:e:175:PRO:HD3	1.73	0.42
6:g:50:ARG:HB2	6:g:55:GLU:OE2	2.20	0.42
7:h:119:PRO:CD	7:h:120:ALA:H	2.29	0.42
9:j:97:PRO:O	9:j:100:VAL:HG22	2.19	0.42
10:k:10:VAL:HG21	10:k:16:ALA:CB	2.50	0.42
12:m:17:ASN:ND2	12:m:38:ARG:HG2	2.34	0.42
13:n:17:ARG:HB3	13:n:17:ARG:NH2	2.35	0.42
32:H:123:LEU:HD21	32:H:190:THR:HG22	2.02	0.42
33:I:35:GLN:HE21	33:I:36:ALA:HB2	1.81	0.42
36:L:101:ARG:NH2	52:3:1375:A:O2'	2.52	0.42
44:T:37:HIS:CE1	52:3:740:U:OP1	2.72	0.42
49:Y:70:LYS:HZ2	52:3:262:A:H5''	1.85	0.42
51:a:222:VAL:HG22	51:a:224:VAL:HG23	2.01	0.42
52:3:505:G:H2'	52:3:506:G:C8	2.55	0.42
52:3:908:A:H2'	52:3:909:A:H8	1.85	0.42
52:3:1354:U:H2'	52:3:1355:G:C8	2.55	0.42
53:1:1601:G:O2'	53:1:1602:U:H5'	2.19	0.42
53:1:1882:U:H2'	53:1:1883:U:C6	2.55	0.42
53:1:2190:G:C2'	53:1:2191:A:H5'	2.49	0.42
53:1:2246:G:C3'	53:1:2251:G:H22	2.30	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2818:U:H4'	53:1:2837:A:C4'	2.49	0.42
55:5:45:G:O2'	55:5:46:G:H5'	2.20	0.42
57:8:17:ILE:HD11	57:8:38:HIS:CG	2.54	0.42
2:c:121:THR:HG23	2:c:162:ALA:HB2	2.01	0.42
2:c:143:PRO:HG3	53:1:2050:C:H4'	2.01	0.42
4:e:127:TYR:O	4:e:154:THR:HG23	2.20	0.42
5:f:65:GLY:HA3	53:1:2748:A:O2'	2.19	0.42
11:l:132:ARG:HG2	11:l:136:GLU:CD	2.44	0.42
13:n:51:LEU:HD21	13:n:69:ARG:HD2	2.02	0.42
18:s:85:ILE:HD13	18:s:95:ARG:HH21	1.85	0.42
26:B:49:ARG:HG2	53:1:2884:U:C5	2.54	0.42
32:H:191:THR:C	52:3:532:A:H61	2.26	0.42
35:K:5:GLU:HA	35:K:63:ASN:H	1.84	0.42
36:L:145:GLU:HA	36:L:148:LYS:CG	2.49	0.42
40:P:121:ARG:HG2	52:3:779:C:H1'	2.02	0.42
41:Q:14:LYS:HB2	41:Q:14:LYS:HE3	1.83	0.42
45:U:5:ARG:NH2	45:U:23:ASP:O	2.53	0.42
50:Z:38:GLU:OE2	52:3:1527:U:C5	2.72	0.42
52:3:235:C:H2'	52:3:236:A:H8	1.85	0.42
53:1:227:A:H2'	53:1:228:C:C4'	2.48	0.42
53:1:886:A:H5'	53:1:891:G:N2	2.35	0.42
53:1:1229:C:H2'	53:1:1230:A:C8	2.54	0.42
53:1:1662:U:H2'	53:1:1663:G:H8	1.81	0.42
53:1:2428:G:H5''	53:1:2429:G:O5'	2.20	0.42
53:1:2432:A:N6	53:1:2433:A:C2	2.88	0.42
2:c:136:ASN:HD21	2:c:139:SER:C	2.28	0.42
2:c:139:SER:OG	2:c:142:VAL:HG21	2.20	0.42
11:l:4:ASN:OD1	11:l:5:THR:N	2.51	0.42
13:n:74:GLU:OE1	53:1:1453:A:H2	2.02	0.42
15:p:29:VAL:CG1	15:p:79:VAL:HG22	2.49	0.42
22:w:36:GLN:NE2	22:w:41:PHE:HB2	2.34	0.42
31:G:130:LYS:HA	31:G:133:ALA:HB3	2.02	0.42
32:H:72:PRO:HB2	32:H:102:ILE:HD11	2.02	0.42
32:H:201:ILE:HD12	32:H:201:ILE:N	2.34	0.42
35:K:18:VAL:N	35:K:19:PRO:CD	2.83	0.42
38:N:9:GLY:O	38:N:10:ARG:NH1	2.50	0.42
52:3:663:A:H2'	52:3:664:G:O4'	2.20	0.42
52:3:721:G:H4'	52:3:722:G:O4'	2.19	0.42
52:3:725:G:H2'	52:3:726:C:C6	2.55	0.42
52:3:738:C:H2'	52:3:739:C:C6	2.55	0.42
52:3:744:C:H2'	52:3:745:G:H8	1.84	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:945:G:H2'	52:3:945:G:N3	2.34	0.42
53:1:832:U:H2'	53:1:833:A:C8	2.54	0.42
53:1:1140:C:H2'	53:1:1141:U:H5'	2.02	0.42
53:1:2249:U:H2'	53:1:2250:G:C5'	2.39	0.42
53:1:2432:A:C8	55:5:74:C:H3'	2.54	0.42
2:c:77:ARG:HH21	2:c:77:ARG:HG3	1.85	0.42
9:j:40:HIS:CE1	9:j:41:LYS:HG3	2.55	0.42
20:u:35:VAL:HG13	20:u:38:ILE:HB	2.01	0.42
34:J:32:PHE:CZ	57:8:129:LYS:HE2	2.55	0.42
34:J:97:PRO:HA	34:J:122:VAL:HG12	2.01	0.42
40:P:121:ARG:HB2	52:3:778:G:H21	1.84	0.42
41:Q:53:ARG:NH2	41:Q:61:GLU:HG3	2.34	0.42
41:Q:68:GLY:HA3	41:Q:98:ARG:NH1	2.35	0.42
46:V:28:VAL:HG12	46:V:29:LYS:N	2.34	0.42
50:Z:6:ARG:HE	50:Z:8:ASN:HB2	1.83	0.42
51:a:63:THR:HG22	51:a:64:VAL:N	2.33	0.42
52:3:11:G:OP1	57:8:131:MET:HE1	2.20	0.42
52:3:802:A:H2'	52:3:803:G:O4'	2.19	0.42
52:3:981:U:H2'	52:3:982:U:C5	2.54	0.42
53:1:95:A:H2'	53:1:96:C:C5'	2.49	0.42
53:1:306:U:H2'	53:1:307:G:O4'	2.19	0.42
53:1:859:G:H5'	53:1:2268:A:O2'	2.19	0.42
53:1:900:A:H2'	53:1:901:C:O4'	2.20	0.42
53:1:967:U:H2'	53:1:968:C:C6	2.55	0.42
53:1:1468:U:H2'	53:1:1522:A:H61	1.85	0.42
53:1:1479:G:O2'	53:1:1480:C:H5'	2.19	0.42
53:1:1507:C:H2'	53:1:1508:A:H4'	2.00	0.42
53:1:1802:A:H2'	53:1:1803:A:C8	2.55	0.42
53:1:2265:U:C3'	53:1:2266:A:H5''	2.39	0.42
53:1:2366:A:H2'	53:1:2367:G:O4'	2.20	0.42
2:c:204:LYS:HA	2:c:205:PRO:HD3	1.94	0.42
9:j:89:PHE:O	9:j:93:ILE:HG12	2.20	0.42
14:o:33:ARG:HB2	54:2:52:A:H62	1.83	0.42
19:t:77:ARG:HD3	19:t:78:SER:H	1.85	0.42
35:K:49:TYR:CE1	47:W:65:SER:HA	2.55	0.42
36:L:69:ARG:HH21	36:L:95:ARG:HB3	1.84	0.42
37:M:119:GLY:O	52:3:600:A:H4'	2.20	0.42
38:N:55:ASP:OD2	38:N:59:LYS:HG3	2.20	0.42
44:T:47:LYS:NZ	52:3:809:G:OP2	2.52	0.42
49:Y:8:LYS:HA	49:Y:11:ILE:HD13	2.02	0.42
49:Y:15:LYS:HD2	49:Y:15:LYS:O	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Z:48:LYS:HD3	50:Z:48:LYS:HA	1.88	0.42
52:3:499:A:H61	52:3:546:A:H2'	1.84	0.42
52:3:680:C:H2'	52:3:681:A:C8	2.55	0.42
52:3:1414:U:H2'	52:3:1415:G:H8	1.84	0.42
53:1:15:G:O2'	53:1:16:C:H5'	2.20	0.42
53:1:254:G:C2'	53:1:255:A:H5''	2.50	0.42
53:1:511:U:C2'	53:1:512:G:H5'	2.48	0.42
53:1:752:A:H2'	53:1:1781:U:H5'	2.02	0.42
53:1:1028:A:H2'	53:1:1029:A:C8	2.55	0.42
53:1:2161:C:O2'	53:1:2173:A:H1'	2.20	0.42
57:8:47:SER:HA	57:8:53:LYS:HE2	2.01	0.42
57:9:21:ARG:NH2	57:9:30:VAL:O	2.53	0.42
1:b:48:ILE:HD11	1:b:51:ARG:HA	2.02	0.41
1:b:76:VAL:HG13	1:b:114:GLN:HE21	1.85	0.41
1:b:229:HIS:ND1	1:b:230:PRO:CD	2.83	0.41
8:i:12:VAL:HG12	8:i:55:PRO:HB3	2.02	0.41
8:i:73:PRO:HA	8:i:74:PRO:HD3	1.86	0.41
20:u:73:ASN:ND2	20:u:76:THR:HG22	2.35	0.41
25:z:40:THR:OG1	25:z:41:PRO:HD2	2.20	0.41
26:B:33:SER:OG	26:B:35:GLU:HG2	2.19	0.41
31:G:209:VAL:HA	31:G:212:TYR:HB2	2.02	0.41
32:H:123:LEU:HD21	32:H:190:THR:CG2	2.50	0.41
36:L:20:GLU:H	36:L:20:GLU:HG2	1.63	0.41
37:M:100:ILE:HD11	37:M:111:THR:HB	2.01	0.41
39:O:62:ARG:NH1	52:3:1367:C:H5'	2.35	0.41
46:V:16:MET:HG3	46:V:19:SER:O	2.20	0.41
52:3:292:G:N2	52:3:608:A:H61	2.16	0.41
52:3:950:U:H2'	52:3:951:G:H8	1.85	0.41
52:3:1186:G:O2'	52:3:1187:G:H5'	2.19	0.41
52:3:1499:A:H1'	52:3:1519:A:H2'	2.01	0.41
53:1:75:G:H2'	53:1:75:G:N3	2.35	0.41
53:1:191:A:H2'	53:1:192:C:C6	2.55	0.41
53:1:727:A:O2'	53:1:728:G:H5'	2.19	0.41
53:1:827:U:O4	53:1:2431:U:O4	2.38	0.41
53:1:839:U:H2'	53:1:840:C:C6	2.55	0.41
53:1:1000:A:H2'	53:1:1001:A:C8	2.54	0.41
53:1:1563:U:H2'	53:1:1564:C:C6	2.54	0.41
53:1:1827:U:H2'	53:1:1828:G:O4'	2.19	0.41
53:1:2364:C:H2'	53:1:2365:G:O4'	2.20	0.41
54:2:5:U:H2'	54:2:6:G:H8	1.84	0.41
55:5:36:U:H2'	55:5:37:A:O4'	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:132:PHE:HB2	6:g:140:ALA:HB3	2.02	0.41
13:n:106:ASP:N	13:n:106:ASP:OD1	2.53	0.41
14:o:10:ARG:HD2	53:1:2294:G:OP1	2.20	0.41
15:p:89:GLY:HA2	15:p:111:GLU:HA	2.01	0.41
27:C:7:LYS:HA	27:C:23:THR:HA	2.01	0.41
27:C:39:ASP:OD1	27:C:41:VAL:HG22	2.20	0.41
33:I:128:VAL:O	33:I:128:VAL:HG13	2.20	0.41
36:L:27:ASN:HB3	52:3:1374:A:O2'	2.19	0.41
39:O:66:GLU:HB3	43:S:98:ALA:HB2	2.02	0.41
42:R:94:LEU:HG	42:R:95:PRO:HD2	2.01	0.41
52:3:9:G:O2'	52:3:10:A:H5'	2.19	0.41
52:3:487:A:H2'	52:3:488:C:O4'	2.20	0.41
52:3:673:A:H2'	52:3:674:G:C8	2.54	0.41
52:3:1169:A:H2'	52:3:1170:A:O4'	2.20	0.41
53:1:26:G:O2'	53:1:27:G:H5'	2.20	0.41
53:1:816:C:H2'	53:1:817:C:C6	2.55	0.41
53:1:1725:U:H2'	53:1:1726:C:C6	2.55	0.41
53:1:2343:U:H2'	53:1:2344:U:C6	2.55	0.41
53:1:2560:A:H2'	53:1:2561:U:O4'	2.20	0.41
54:2:86:G:C6	54:2:88:C:H1'	2.55	0.41
5:f:67:ALA:O	5:f:71:LEU:HD23	2.20	0.41
6:g:22:LYS:NZ	53:1:2094:A:OP1	2.47	0.41
6:g:129:GLU:HB3	6:g:141:LYS:HD2	2.01	0.41
8:i:109:ALA:HA	8:i:112:LYS:HE3	2.02	0.41
12:m:101:VAL:HG23	12:m:101:VAL:O	2.19	0.41
21:v:9:ARG:HD3	21:v:39:ALA:HB1	2.03	0.41
33:I:7:LYS:NZ	33:I:20:LEU:O	2.53	0.41
37:M:12:ARG:HD2	37:M:26:MET:HE3	2.01	0.41
39:O:44:THR:HG23	39:O:69:THR:C	2.44	0.41
44:T:10:ILE:HD12	44:T:30:LEU:HD12	2.02	0.41
52:3:34:C:H2'	52:3:35:G:C8	2.55	0.41
52:3:161:A:H2	52:3:347:G:H21	1.68	0.41
52:3:613:C:H2'	52:3:614:C:C6	2.56	0.41
52:3:833:G:H2'	52:3:834:U:O4'	2.19	0.41
52:3:1118:U:H2'	52:3:1119:C:O4'	2.21	0.41
53:1:230:G:O2'	53:1:231:A:H5'	2.20	0.41
53:1:399:U:OP1	53:1:2090:A:H5''	2.20	0.41
53:1:895:U:H4'	53:1:896:A:H5'	2.02	0.41
57:9:37:ILE:HD12	57:9:75:GLN:HA	2.02	0.41
2:c:125:TRP:CD2	2:c:160:LYS:HD2	2.55	0.41
37:M:80:PRO:HG2	52:3:878:A:H5''	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:N:69:GLY:H	52:3:1250:A:H4'	1.85	0.41
39:O:88:MET:O	39:O:89:ARG:CB	2.68	0.41
43:S:58:ARG:HH21	52:3:980:C:C4'	2.33	0.41
51:a:182:ALA:O	51:a:185:LEU:HG	2.19	0.41
52:3:7:A:H5'	52:3:298:A:H5'	2.02	0.41
52:3:1068:G:H5'	52:3:1388:C:C5'	2.50	0.41
53:1:18:U:H3	53:1:522:A:H61	1.67	0.41
53:1:155:A:H2'	53:1:156:A:C8	2.55	0.41
53:1:804:A:H2'	53:1:806:C:C4	2.55	0.41
53:1:1386:C:H2'	53:1:1387:A:H8	1.84	0.41
53:1:1437:C:H2'	53:1:1438:U:C6	2.55	0.41
53:1:1914:C:H6	57:8:105:ARG:O	2.04	0.41
53:1:1934:C:O2'	53:1:1935:G:H5'	2.20	0.41
53:1:2071:A:H2'	53:1:2072:C:C6	2.55	0.41
53:1:2220:U:H2'	53:1:2221:G:C8	2.55	0.41
57:9:56:LEU:HD21	57:9:95:ILE:HG23	2.00	0.41
14:o:94:ARG:NH2	53:1:2293:G:H5''	2.35	0.41
19:t:8:LEU:O	24:y:29:ARG:NH1	2.53	0.41
20:u:16:LYS:HG3	53:1:329:G:N1	2.25	0.41
26:B:49:ARG:HG2	53:1:2884:U:C6	2.56	0.41
38:N:62:LEU:HB3	38:N:64:ILE:HD11	2.02	0.41
39:O:13:PHE:CD2	43:S:93:PRO:HB2	2.56	0.41
39:O:15:HIS:HB3	39:O:70:HIS:CE1	2.55	0.41
42:R:105:ALA:H	52:3:948:C:P	2.43	0.41
52:3:605:U:H2'	52:3:606:G:C8	2.55	0.41
52:3:1096:C:H2'	52:3:1097:C:C6	2.55	0.41
52:3:1144:G:H2'	52:3:1145:A:C8	2.55	0.41
52:3:1275:A:H2'	52:3:1276:G:H5'	2.02	0.41
52:3:1431:A:H2'	52:3:1432:G:O4'	2.20	0.41
53:1:248:G:H3'	53:1:249:C:C5'	2.50	0.41
53:1:581:C:H2'	53:1:582:A:C8	2.55	0.41
53:1:840:C:H2'	53:1:841:G:H8	1.84	0.41
53:1:940:G:H2'	53:1:941:A:C5'	2.44	0.41
53:1:1130:U:O2	53:1:2025:C:H5''	2.20	0.41
53:1:1341:G:O2'	53:1:1342:A:H5'	2.20	0.41
53:1:2256:G:H2'	53:1:2257:U:C6	2.56	0.41
57:8:53:LYS:HA	57:8:56:LEU:HD12	2.03	0.41
1:b:179:GLU:HG3	1:b:268:ARG:O	2.21	0.41
1:b:211:ARG:HD2	1:b:211:ARG:HA	1.93	0.41
2:c:24:VAL:HG11	2:c:178:VAL:HG21	2.01	0.41
4:e:122:ASP:OD2	4:e:124:ARG:HB2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:h:17:GLU:HB2	7:h:53:ARG:HD3	2.02	0.41
7:h:117:LEU:O	7:h:119:PRO:HD3	2.20	0.41
18:s:29:VAL:HA	18:s:32:ALA:HB3	2.02	0.41
19:t:77:ARG:HD3	53:1:64:A:OP1	2.19	0.41
26:B:2:VAL:HG22	26:B:3:GLN:N	2.36	0.41
32:H:130:ARG:HH22	32:H:134:LYS:HD3	1.86	0.41
33:I:97:LEU:HD11	33:I:134:TYR:HB3	2.01	0.41
35:K:22:ILE:HD12	35:K:22:ILE:HA	1.94	0.41
37:M:85:TYR:CG	52:3:598:U:H4'	2.56	0.41
40:P:126:ARG:N	52:3:796:C:OP1	2.52	0.41
41:Q:87:LYS:HG3	41:Q:87:LYS:O	2.20	0.41
41:Q:120:ARG:HB3	52:3:37:U:OP1	2.21	0.41
42:R:9:PRO:CG	42:R:44:ILE:HD13	2.49	0.41
45:U:42:ILE:O	45:U:42:ILE:HG23	2.21	0.41
46:V:64:ARG:HA	46:V:65:PRO:HD3	1.94	0.41
52:3:34:C:H2'	52:3:35:G:H8	1.85	0.41
52:3:112:G:H21	52:3:354:G:H5'	1.86	0.41
52:3:1005:A:H2'	52:3:1006:G:O4'	2.20	0.41
53:1:129:C:H2'	53:1:130:C:C6	2.56	0.41
53:1:207:A:H2'	53:1:208:C:O4'	2.21	0.41
53:1:393:C:H2'	53:1:394:C:C6	2.56	0.41
53:1:859:G:C2'	53:1:860:U:OP2	2.69	0.41
53:1:1069:A:H4'	53:1:1096:A:H4'	2.01	0.41
53:1:1583:A:H4'	53:1:1585:C:N4	2.35	0.41
53:1:2208:C:H2'	53:1:2209:G:C8	2.55	0.41
53:1:2636:C:H2'	53:1:2637:U:C6	2.55	0.41
2:c:13:ARG:NH1	15:p:55:HIS:HA	2.35	0.41
3:d:144:GLU:N	3:d:144:GLU:OE2	2.54	0.41
10:k:98:ARG:HH22	52:3:338:A:P	2.43	0.41
12:m:81:ARG:HD3	53:1:2250:G:N7	2.36	0.41
18:s:80:PRO:HD3	18:s:102:HIS:HE2	1.84	0.41
23:x:12:VAL:HG13	23:x:28:PHE:HD2	1.86	0.41
29:E:43:LEU:HD11	53:1:2362:C:OP1	2.20	0.41
31:G:81:ASP:O	31:G:85:SER:OG	2.34	0.41
33:I:72:ARG:O	33:I:75:TYR:HB3	2.20	0.41
38:N:113:LYS:HD2	52:3:1368:A:N7	2.36	0.41
46:V:30:HIS:CD2	46:V:33:TYR:H	2.36	0.41
48:X:39:ILE:HG22	48:X:40:PHE:N	2.36	0.41
49:Y:43:LYS:O	49:Y:43:LYS:HD3	2.20	0.41
51:a:175:ILE:HD12	51:a:175:ILE:N	2.35	0.41
52:3:474:G:H2'	52:3:475:C:C6	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:3:517:G:C4	52:3:531:U:H5'	2.56	0.41
52:3:867:G:H21	52:3:873:A:H2	1.68	0.41
53:1:1913:A:N1	57:8:111:THR:HG22	2.35	0.41
53:1:2061:G:H4'	53:1:2061:G:OP1	2.21	0.41
53:1:2529:G:H5''	53:1:2530:A:H5''	2.03	0.41
53:1:2636:C:H2'	53:1:2637:U:H6	1.86	0.41
53:1:2697:G:H2'	53:1:2698:U:O4'	2.20	0.41
56:4:14:A:O2'	56:4:15:A:H5'	2.20	0.41
1:b:90:ILE:HD11	1:b:102:TYR:CB	2.50	0.41
1:b:181:ARG:NH1	1:b:265:PHE:HB2	2.36	0.41
4:e:149:ARG:NH1	53:1:2306:C:C2	2.89	0.41
13:n:44:LEU:O	13:n:48:VAL:HG22	2.20	0.41
16:q:36:GLN:HE21	53:1:1252:G:H1	1.69	0.41
25:z:4:ILE:HD11	25:z:56:VAL:CG2	2.50	0.41
27:C:4:ILE:HD12	27:C:4:ILE:H	1.86	0.41
29:E:30:HIS:O	29:E:31:ILE:C	2.63	0.41
33:I:43:ARG:HG3	33:I:43:ARG:O	2.20	0.41
35:K:68:GLN:H	35:K:68:GLN:HG2	1.69	0.41
40:P:43:TRP:HE1	52:3:686:U:C4'	2.21	0.41
41:Q:112:ALA:HA	52:3:502:A:OP2	2.20	0.41
42:R:110:GLY:HA2	42:R:111:PRO:HD3	1.87	0.41
50:Z:65:ARG:O	52:3:1088:G:O2'	2.32	0.41
51:a:22:ASP:H	51:a:26:ALA:HB2	1.86	0.41
52:3:451:A:H4'	52:3:452:A:O4'	2.21	0.41
52:3:459:A:H2'	52:3:460:A:C8	2.56	0.41
52:3:575:G:O2'	52:3:821:G:H5'	2.21	0.41
52:3:783:C:H4'	53:1:1836:C:OP1	2.21	0.41
52:3:1492:A:C3'	52:3:1493:A:H4'	2.51	0.41
53:1:327:G:O2'	53:1:328:U:H5'	2.20	0.41
53:1:333:G:H2'	53:1:333:G:N3	2.34	0.41
53:1:1028:A:N6	53:1:1125:G:H2'	2.36	0.41
53:1:1366:A:H2'	53:1:1367:A:O4'	2.21	0.41
53:1:1524:G:H2'	53:1:1525:A:H8	1.85	0.41
53:1:2609:U:H5'	53:1:2610:C:OP2	2.20	0.41
53:1:2730:C:H2'	53:1:2731:G:H8	1.85	0.41
53:1:2849:U:H4'	53:1:2850:A:H5'	2.02	0.41
1:b:238:ASN:ND2	53:1:2598:A:OP2	2.54	0.41
2:c:84:LEU:HD13	2:c:88:GLU:HB2	2.02	0.41
3:d:158:PHE:HA	3:d:169:VAL:HG11	2.03	0.41
6:g:75:LEU:HD23	6:g:77:THR:H	1.85	0.41
8:i:32:VAL:HG13	8:i:37:PHE:CG	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:j:87:ALA:HB1	9:j:91:GLU:HG2	2.02	0.41
10:k:12:ASP:HB3	10:k:99:ILE:HG12	2.03	0.41
10:k:70:ARG:HH12	53:1:2728:U:H5'	1.86	0.41
13:n:39:PRO:HG2	53:1:1651:G:C5'	2.51	0.41
15:p:77:SER:HA	15:p:78:PRO:HD3	1.90	0.41
15:p:108:ARG:HD2	52:3:1463:U:OP1	2.21	0.41
16:q:5:ARG:NH1	53:1:585:G:N7	2.62	0.41
17:r:79:ARG:NH2	53:1:563:A:OP2	2.54	0.41
18:s:6:LYS:HE3	18:s:104:THR:HG22	2.03	0.41
18:s:25:ARG:HE	18:s:25:ARG:HB2	1.74	0.41
19:t:37:ASP:OD1	19:t:37:ASP:N	2.53	0.41
22:w:25:GLU:HG3	53:1:923:G:H4'	2.02	0.41
31:G:120:SER:H	31:G:120:SER:HG	1.66	0.41
31:G:135:MET:HE2	31:G:135:MET:HB3	1.90	0.41
31:G:172:ILE:HD12	31:G:172:ILE:HA	1.90	0.41
32:H:107:LYS:HA	32:H:108:PRO:HD2	1.96	0.41
34:J:114:LEU:HD23	34:J:114:LEU:HA	1.95	0.41
35:K:50:PRO:HG3	35:K:55:HIS:NE2	2.35	0.41
36:L:115:MET:SD	36:L:118:ARG:HD3	2.61	0.41
38:N:104:THR:HG22	38:N:106:ASP:N	2.31	0.41
38:N:117:LEU:HD22	38:N:123:ARG:HA	2.03	0.41
38:N:128:LYS:HZ1	55:5:31:G:P	2.44	0.41
39:O:59:LYS:CB	52:3:972:C:H4'	2.51	0.41
40:P:95:THR:OG1	40:P:96:ILE:N	2.54	0.41
41:Q:8:ARG:NH2	52:3:881:G:OP1	2.52	0.41
45:U:6:LEU:HA	45:U:19:VAL:HA	2.03	0.41
45:U:12:LYS:HB2	52:3:392:C:H5'	2.03	0.41
46:V:16:MET:HG3	46:V:19:SER:OG	2.20	0.41
47:W:63:TYR:HE1	52:3:673:A:C4'	2.34	0.41
51:a:167:LYS:NZ	53:1:2179:C:H5'	2.36	0.41
51:a:180:PHE:HB3	51:a:184:LYS:HG3	2.02	0.41
52:3:195:A:H2'	52:3:196:A:C8	2.56	0.41
52:3:396:C:H3'	52:3:397:A:H5''	2.03	0.41
52:3:451:A:N6	52:3:480:U:H2'	2.36	0.41
52:3:865:A:C2	52:3:918:A:H4'	2.56	0.41
52:3:1179:A:H2'	52:3:1180:A:O4'	2.21	0.41
52:3:1396:A:H5'	52:3:1399:C:C5	2.55	0.41
53:1:609:A:H2'	53:1:610:C:O4'	2.21	0.41
53:1:1173:U:H1'	53:1:1177:G:O6	2.21	0.41
53:1:1268:A:H62	53:1:2012:G:H21	1.68	0.41
53:1:1669:A:O3'	53:1:2549:G:H5'	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:1:2244:U:H1'	53:1:2434:A:C6	2.56	0.41
53:1:2564:A:OP1	53:1:2648:G:H4'	2.21	0.41
53:1:2732:G:H3'	53:1:2733:A:C5'	2.50	0.41
54:2:49:C:H2'	54:2:50:A:C8	2.56	0.41
57:8:131:MET:HB3	57:8:132:ARG:H	1.57	0.41
57:9:42:ASP:O	57:9:69:VAL:HA	2.21	0.41
1:b:70:LYS:HD2	1:b:95:TYR:CZ	2.56	0.41
2:c:127:PHE:CE2	53:1:2512:C:H4'	2.56	0.41
5:f:156:TYR:CZ	53:1:2531:A:H5''	2.55	0.41
6:g:29:PHE:C	6:g:32:PRO:HD2	2.46	0.41
7:h:58:THR:OG1	7:h:78:GLY:O	2.39	0.41
8:i:53:PRO:HG2	8:i:73:PRO:HB3	2.03	0.41
8:i:141:ASP:OD1	8:i:141:ASP:N	2.51	0.41
16:q:10:ARG:HG3	16:q:10:ARG:HH11	1.86	0.41
17:r:57:GLY:O	17:r:58:VAL:C	2.63	0.41
20:u:88:ASP:OD2	20:u:88:ASP:N	2.54	0.41
22:w:16:ARG:N	22:w:16:ARG:HD2	2.36	0.41
36:L:4:ARG:HE	36:L:6:ILE:CG2	2.34	0.41
45:U:12:LYS:HE3	52:3:393:A:OP2	2.21	0.41
52:3:17:U:H2'	52:3:18:C:O4'	2.21	0.41
52:3:147:G:H2'	52:3:148:G:C8	2.55	0.41
52:3:1495:U:H2'	52:3:1496:C:C6	2.56	0.41
53:1:293:U:C2'	53:1:294:A:H5''	2.48	0.41
53:1:1678:A:H2'	53:1:1679:A:O4'	2.21	0.41
53:1:2028:U:H2'	53:1:2029:G:O4'	2.21	0.41
53:1:2041:U:H2'	53:1:2042:A:C8	2.54	0.41
53:1:2110:G:O6	53:1:2120:G:H1'	2.21	0.41
53:1:2114:A:N7	53:1:2115:G:H1'	2.35	0.41
53:1:2123:G:H2'	53:1:2124:G:C8	2.56	0.41
53:1:2136:G:H2'	53:1:2136:G:N3	2.35	0.41
3:d:85:PHE:CE2	53:1:587:C:H5'	2.55	0.40
5:f:120:ILE:CD1	5:f:143:VAL:HG21	2.51	0.40
6:g:104:THR:HG22	6:g:109:GLU:HA	2.03	0.40
7:h:39:THR:HA	7:h:42:ARG:HB2	2.03	0.40
7:h:81:LEU:HD23	7:h:81:LEU:N	2.36	0.40
9:j:25:LEU:O	9:j:25:LEU:HD23	2.22	0.40
11:l:118:THR:HA	11:l:119:PRO:HD3	1.83	0.40
16:q:92:LYS:HD2	53:1:996:A:H5'	2.03	0.40
17:r:88:GLY:H	53:1:1225:G:H5'	1.87	0.40
19:t:2:ILE:CG1	53:1:144:A:H4'	2.50	0.40
31:G:142:LYS:HE2	31:G:143:LEU:HD12	2.03	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:U:54:LEU:HD22	45:U:54:LEU:H	1.86	0.40
50:Z:27:VAL:O	50:Z:31:VAL:HG23	2.21	0.40
50:Z:65:ARG:O	50:Z:66:ARG:HB2	2.21	0.40
52:3:820:U:H3'	52:3:821:G:C5'	2.51	0.40
53:1:1363:C:H2'	53:1:1364:G:C8	2.56	0.40
53:1:1434:A:H2'	53:1:1435:G:C8	2.56	0.40
53:1:1614:A:H2'	53:1:1615:C:H5'	2.04	0.40
53:1:2641:G:H2'	53:1:2642:G:H8	1.85	0.40
5:f:2:ARG:HG2	53:1:2751:G:C5	2.57	0.40
6:g:27:ARG:NH1	23:x:55:MET:HB3	2.35	0.40
6:g:31:VAL:HG23	6:g:32:PRO:HD3	2.02	0.40
9:j:7:LYS:HE3	53:1:538:A:H5''	2.03	0.40
10:k:88:ASN:HB2	10:k:91:SER:OG	2.21	0.40
31:G:132:GLU:HA	31:G:135:MET:HE2	2.04	0.40
37:M:123:GLU:OE2	52:3:643:C:H1'	2.22	0.40
38:N:112:ARG:HA	52:3:1369:C:OP2	2.22	0.40
41:Q:74:GLN:O	41:Q:75:GLU:C	2.64	0.40
45:U:18:GLN:OE1	45:U:35:ARG:NE	2.54	0.40
49:Y:8:LYS:HE3	52:3:103:U:OP2	2.21	0.40
52:3:556:C:H2'	52:3:557:G:C8	2.57	0.40
52:3:710:G:O2'	52:3:711:G:H5'	2.21	0.40
52:3:1157:A:H4'	52:3:1158:C:O5'	2.20	0.40
52:3:1245:C:H2'	52:3:1246:A:H8	1.85	0.40
52:3:1441:A:H62	52:3:1461:G:N2	2.19	0.40
53:1:103:A:H2'	53:1:104:A:O4'	2.21	0.40
53:1:213:A:H2'	53:1:214:G:C8	2.56	0.40
53:1:1893:C:C2'	53:1:1894:C:H5'	2.50	0.40
53:1:1949:G:H2'	53:1:1950:G:C8	2.56	0.40
53:1:1991:U:H2'	53:1:1992:G:C5'	2.50	0.40
53:1:2800:A:C3'	53:1:2801:G:H5'	2.44	0.40
57:9:29:HIS:CD2	57:9:33:THR:HB	2.56	0.40
1:b:78:GLU:OE1	1:b:79:ARG:NE	2.55	0.40
1:b:171:VAL:O	1:b:183:VAL:HG22	2.22	0.40
2:c:13:ARG:HH22	15:p:74:GLN:HG2	1.85	0.40
2:c:35:THR:OG1	2:c:36:GLN:N	2.55	0.40
3:d:146:VAL:HG22	3:d:147:LEU:H	1.84	0.40
5:f:26:LYS:HD3	5:f:31:GLU:HB2	2.02	0.40
6:g:85:GLY:N	6:g:89:LYS:O	2.46	0.40
8:i:29:GLN:HE22	8:i:30:GLN:HG3	1.85	0.40
10:k:70:ARG:NH1	53:1:2727:A:O2'	2.55	0.40
11:l:99:ASN:ND2	53:1:621:A:OP2	2.54	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:n:102:PHE:C	13:n:110:MET:HE2	2.47	0.40
22:w:14:ALA:HB1	53:1:2271:G:OP1	2.21	0.40
31:G:20:ARG:HH21	52:3:831:A:H4'	1.86	0.40
32:H:7:ASN:O	32:H:11:LEU:HB2	2.21	0.40
34:J:106:ALA:HB1	34:J:110:MET:HG3	2.03	0.40
37:M:50:VAL:O	37:M:50:VAL:HG13	2.21	0.40
37:M:86:LYS:HD2	37:M:90:GLU:HG2	2.03	0.40
38:N:127:SER:HB3	52:3:967:C:H5''	2.04	0.40
40:P:27:ASN:ND2	52:3:692:U:H5	2.19	0.40
46:V:15:LYS:HD2	52:3:275:G:C5'	2.50	0.40
51:a:185:LEU:CD1	51:a:186:LYS:HG3	2.51	0.40
52:3:79:G:H2'	52:3:80:A:O4'	2.21	0.40
52:3:370:C:H2'	52:3:371:A:C8	2.56	0.40
52:3:1158:C:H2'	52:3:1159:U:H4'	2.02	0.40
52:3:1162:C:H2'	52:3:1163:A:H8	1.86	0.40
52:3:1197:A:H2'	52:3:1198:G:H5'	2.02	0.40
52:3:1256:A:H4'	52:3:1258:G:N9	2.36	0.40
53:1:32:C:H2'	53:1:33:C:C6	2.57	0.40
53:1:95:A:C2'	53:1:96:C:H5''	2.51	0.40
53:1:174:U:H2'	53:1:175:G:C8	2.57	0.40
53:1:587:C:H3'	53:1:588:U:H5'	2.03	0.40
53:1:1109:C:H2'	53:1:1110:G:H5'	2.02	0.40
53:1:1680:U:C2'	53:1:1681:G:H5'	2.51	0.40
53:1:2131:U:H5'	53:1:2132:U:H5'	2.03	0.40
55:5:17:C:H3'	55:5:17(A):U:C5'	2.52	0.40
1:b:23:LEU:HD21	1:b:89:ASN:OD1	2.21	0.40
3:d:146:VAL:HG21	3:d:187:VAL:HG13	2.03	0.40
4:e:149:ARG:CZ	53:1:2306:C:C2	3.04	0.40
7:h:26:VAL:HG12	7:h:82:ILE:HG21	2.03	0.40
8:i:112:LYS:HG3	8:i:113:ALA:N	2.37	0.40
11:l:70:LYS:HA	11:l:73:ILE:HG12	2.03	0.40
12:m:42:THR:HG22	12:m:45:GLN:CD	2.47	0.40
13:n:72:ASP:O	13:n:76:VAL:HG23	2.21	0.40
14:o:40:ILE:N	14:o:40:ILE:CD1	2.77	0.40
16:q:56:PHE:HA	16:q:59:LEU:HB2	2.04	0.40
16:q:56:PHE:HZ	53:1:536:G:H4'	1.87	0.40
19:t:11:LEU:O	24:y:29:ARG:NH2	2.55	0.40
19:t:57:VAL:HG22	19:t:58:VAL:H	1.86	0.40
22:w:20:LYS:O	22:w:21:ARG:HD2	2.22	0.40
23:x:31:ASN:HD21	53:1:398:C:P	2.44	0.40
28:D:21:ARG:NH1	53:1:466:A:H5'	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:I:69:ARG:HA	33:I:72:ARG:HE	1.86	0.40
35:K:15:SER:OG	35:K:44:ARG:NE	2.54	0.40
36:L:115:MET:HB3	52:3:1240:U:OP1	2.22	0.40
39:O:8:ILE:HD11	39:O:87:LEU:HD21	2.04	0.40
45:U:20:VAL:HG23	45:U:34:GLU:C	2.46	0.40
52:3:439:U:H2'	52:3:440:C:O4'	2.21	0.40
52:3:571:U:H6	52:3:571:U:O5'	2.04	0.40
52:3:748:G:O2'	52:3:749:A:H5'	2.20	0.40
52:3:1394:A:C6	52:3:1508:A:H4'	2.56	0.40
52:3:1502:A:H8	52:3:1505:G:N2	2.17	0.40
53:1:340:A:H2'	53:1:341:C:O4'	2.22	0.40
53:1:548:G:H3'	53:1:549:G:C5'	2.47	0.40
53:1:704:G:H1'	53:1:727:A:N6	2.34	0.40
53:1:1035:U:H2'	53:1:1036:G:H8	1.86	0.40
53:1:2078:C:O2'	53:1:2433:A:N3	2.55	0.40
54:2:3:C:H3'	54:2:4:C:C5'	2.50	0.40
54:2:33:G:H2'	54:2:34:A:O4'	2.22	0.40
1:b:70:LYS:HD2	1:b:95:TYR:CE2	2.57	0.40
14:o:30:ARG:HA	14:o:35:ILE:HG13	2.02	0.40
15:p:104:GLY:O	15:p:108:ARG:HG2	2.22	0.40
16:q:65:ASN:ND2	53:1:1010:A:OP1	2.54	0.40
32:H:77:GLY:O	32:H:78:LYS:HG2	2.20	0.40
32:H:147:GLY:CA	32:H:202:PHE:HB3	2.43	0.40
33:I:28:ASP:HB3	33:I:33:ILE:H	1.87	0.40
34:J:28:ARG:HH11	52:3:15:G:C1'	2.34	0.40
38:N:37:TYR:HD2	38:N:38:PHE:HD1	1.70	0.40
43:S:60:ARG:HD3	52:3:981:U:H1'	2.03	0.40
44:T:44:GLU:O	44:T:45:HIS:HB2	2.21	0.40
44:T:44:GLU:C	44:T:46:LYS:H	2.30	0.40
53:1:75:G:H22	53:1:111:A:H2	1.70	0.40
53:1:151:C:H2'	53:1:152:A:C8	2.56	0.40
53:1:443:A:OP1	53:1:443:A:H3'	2.21	0.40
53:1:616:A:H2'	53:1:617:G:O4'	2.22	0.40
53:1:633:A:H2'	53:1:634:C:H5'	2.03	0.40
53:1:1525:A:H2'	53:1:1526:C:O4'	2.22	0.40
53:1:1869:G:C3'	53:1:1870:C:C5'	2.96	0.40
53:1:2041:U:H2'	53:1:2042:A:H8	1.86	0.40
53:1:2605:U:H2'	53:1:2606:C:C6	2.57	0.40
53:1:2655:G:H2'	53:1:2664:G:O6	2.20	0.40
53:1:2773:C:H2'	53:1:2774:C:C6	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	b	269/271 (99%)	231 (86%)	32 (12%)	6 (2%)	5	31
2	c	207/209 (99%)	182 (88%)	23 (11%)	2 (1%)	12	43
3	d	199/201 (99%)	181 (91%)	16 (8%)	2 (1%)	12	43
4	e	175/177 (99%)	154 (88%)	19 (11%)	2 (1%)	11	42
5	f	174/176 (99%)	152 (87%)	19 (11%)	3 (2%)	7	34
6	g	147/149 (99%)	119 (81%)	25 (17%)	3 (2%)	6	32
7	h	129/165 (78%)	99 (77%)	23 (18%)	7 (5%)	1	16
8	i	139/142 (98%)	120 (86%)	18 (13%)	1 (1%)	18	50
9	j	140/142 (99%)	129 (92%)	10 (7%)	1 (1%)	18	50
10	k	120/122 (98%)	102 (85%)	15 (12%)	3 (2%)	4	29
11	l	141/143 (99%)	120 (85%)	18 (13%)	3 (2%)	5	31
12	m	134/136 (98%)	119 (89%)	12 (9%)	3 (2%)	5	31
13	n	118/120 (98%)	102 (86%)	16 (14%)	0	100	100
14	o	114/116 (98%)	103 (90%)	10 (9%)	1 (1%)	14	45
15	p	112/114 (98%)	96 (86%)	15 (13%)	1 (1%)	14	45
16	q	115/117 (98%)	112 (97%)	3 (3%)	0	100	100
17	r	101/103 (98%)	78 (77%)	19 (19%)	4 (4%)	2	21
18	s	108/110 (98%)	96 (89%)	10 (9%)	2 (2%)	6	33
19	t	91/93 (98%)	78 (86%)	13 (14%)	0	100	100
20	u	100/102 (98%)	80 (80%)	17 (17%)	3 (3%)	3	26
21	v	92/94 (98%)	85 (92%)	6 (6%)	1 (1%)	11	42
22	w	73/75 (97%)	63 (86%)	7 (10%)	3 (4%)	2	20
23	x	75/77 (97%)	70 (93%)	4 (5%)	1 (1%)	9	38
24	y	61/63 (97%)	56 (92%)	5 (8%)	0	100	100
25	z	56/58 (97%)	50 (89%)	6 (11%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	B	54/56 (96%)	48 (89%)	5 (9%)	1 (2%)	6	33
27	C	48/50 (96%)	43 (90%)	5 (10%)	0	100	100
28	D	44/46 (96%)	39 (89%)	3 (7%)	2 (4%)	2	18
29	E	62/64 (97%)	55 (89%)	5 (8%)	2 (3%)	3	25
30	F	36/38 (95%)	31 (86%)	4 (11%)	1 (3%)	4	27
31	G	223/225 (99%)	200 (90%)	23 (10%)	0	100	100
32	H	204/206 (99%)	184 (90%)	20 (10%)	0	100	100
33	I	203/205 (99%)	171 (84%)	30 (15%)	2 (1%)	12	43
34	J	155/157 (99%)	135 (87%)	20 (13%)	0	100	100
35	K	98/100 (98%)	79 (81%)	15 (15%)	4 (4%)	2	20
36	L	149/151 (99%)	130 (87%)	18 (12%)	1 (1%)	18	50
37	M	127/129 (98%)	113 (89%)	13 (10%)	1 (1%)	16	48
38	N	125/127 (98%)	94 (75%)	26 (21%)	5 (4%)	2	21
39	O	96/98 (98%)	78 (81%)	16 (17%)	2 (2%)	5	31
40	P	114/116 (98%)	86 (75%)	23 (20%)	5 (4%)	2	19
41	Q	121/123 (98%)	95 (78%)	24 (20%)	2 (2%)	7	34
42	R	112/114 (98%)	96 (86%)	15 (13%)	1 (1%)	14	45
43	S	98/100 (98%)	79 (81%)	17 (17%)	2 (2%)	6	32
44	T	86/88 (98%)	77 (90%)	8 (9%)	1 (1%)	10	40
45	U	80/82 (98%)	69 (86%)	9 (11%)	2 (2%)	4	29
46	V	78/80 (98%)	65 (83%)	11 (14%)	2 (3%)	4	28
47	W	63/65 (97%)	52 (82%)	11 (18%)	0	100	100
48	X	77/79 (98%)	61 (79%)	15 (20%)	1 (1%)	9	38
49	Y	83/85 (98%)	76 (92%)	7 (8%)	0	100	100
50	Z	63/65 (97%)	45 (71%)	13 (21%)	5 (8%)	1	10
51	a	130/234 (56%)	97 (75%)	30 (23%)	3 (2%)	5	30
57	8	128/130 (98%)	99 (77%)	23 (18%)	6 (5%)	2	18
57	9	95/130 (73%)	71 (75%)	20 (21%)	4 (4%)	2	20
All	All	6142/6418 (96%)	5245 (85%)	790 (13%)	107 (2%)	9	34

All (107) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	d	84	THR
4	e	120	SER
6	g	9	VAL
6	g	86	ASP
7	h	79	PRO
7	h	118	ILE
8	i	90	GLY
12	m	70	ASP
17	r	26	ASP
17	r	54	VAL
29	E	31	ILE
35	K	54	LEU
35	K	86	ARG
37	M	47	ASP
38	N	57	VAL
38	N	91	GLU
38	N	125	GLN
39	O	34	ALA
45	U	79	ASN
46	V	17	GLU
50	Z	34	ARG
57	8	47	SER
57	8	48	LEU
57	8	70	ILE
57	8	104	ALA
57	8	105	ARG
57	8	107	PRO
57	9	49	PRO
57	9	70	ILE
1	b	119	VAL
4	e	93	GLU
5	f	174	LYS
7	h	78	GLY
7	h	81	LEU
10	k	89	ASN
10	k	110	GLU
11	l	15	ALA
11	l	31	GLY
17	r	58	VAL
20	u	6	ARG
20	u	51	LEU
23	x	31	ASN
28	D	40	ALA

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
35	K	56	LYS
35	K	77	THR
36	L	18	GLY
40	P	54	SER
40	P	92	ARG
41	Q	33	CYS
44	T	48	ASP
50	Z	64	ALA
51	a	6	LYS
51	a	211	LYS
1	b	226	PRO
2	c	149	ASN
5	f	45	ALA
6	g	49	ALA
22	w	16	ARG
22	w	80	ALA
33	I	28	ASP
33	I	97	LEU
38	N	107	ALA
46	V	50	ASN
50	Z	25	ALA
50	Z	65	ARG
57	9	50	GLU
1	b	237	ARG
7	h	106	PHE
7	h	130	PRO
9	j	81	ILE
10	k	72	PRO
11	l	29	LYS
18	s	40	ASN
18	s	64	ALA
20	u	54	PRO
22	w	9	GLY
28	D	41	ARG
30	F	10	LEU
41	Q	35	ARG
42	R	65	GLU
48	X	30	LEU
50	Z	37	TYR
51	a	12	ARG
57	9	47	SER
1	b	260	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	c	86	GLU
5	f	117	PRO
21	v	81	PRO
39	O	42	LEU
40	P	13	LYS
43	S	35	ALA
3	d	86	ALA
12	m	125	PRO
15	p	65	ASN
26	B	25	THR
1	b	205	GLY
14	o	66	GLY
38	N	124	PRO
40	P	116	PRO
43	S	33	VAL
12	m	23	GLY
40	P	88	PRO
1	b	147	PRO
7	h	123	ILE
29	E	17	GLY
45	U	78	VAL
17	r	50	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	b	216/216 (100%)	214 (99%)	2 (1%)	70	75
2	c	164/164 (100%)	162 (99%)	2 (1%)	63	72
3	d	165/165 (100%)	164 (99%)	1 (1%)	78	79
4	e	148/148 (100%)	147 (99%)	1 (1%)	76	77
5	f	137/137 (100%)	137 (100%)	0	100	100
6	g	114/114 (100%)	114 (100%)	0	100	100
7	h	100/123 (81%)	99 (99%)	1 (1%)	68	74

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	i	109/110 (99%)	106 (97%)	3 (3%)	38	58
9	j	116/116 (100%)	114 (98%)	2 (2%)	53	67
10	k	103/103 (100%)	102 (99%)	1 (1%)	68	74
11	l	102/102 (100%)	102 (100%)	0	100	100
12	m	109/109 (100%)	105 (96%)	4 (4%)	30	54
13	n	100/100 (100%)	100 (100%)	0	100	100
14	o	86/86 (100%)	85 (99%)	1 (1%)	63	72
15	p	99/99 (100%)	98 (99%)	1 (1%)	68	74
16	q	89/89 (100%)	88 (99%)	1 (1%)	65	73
17	r	84/84 (100%)	81 (96%)	3 (4%)	31	54
18	s	93/93 (100%)	92 (99%)	1 (1%)	65	73
19	t	80/80 (100%)	79 (99%)	1 (1%)	61	71
20	u	83/83 (100%)	82 (99%)	1 (1%)	63	72
21	v	78/78 (100%)	78 (100%)	0	100	100
22	w	57/57 (100%)	57 (100%)	0	100	100
23	x	67/67 (100%)	66 (98%)	1 (2%)	57	68
24	y	55/55 (100%)	55 (100%)	0	100	100
25	z	48/48 (100%)	48 (100%)	0	100	100
26	B	47/47 (100%)	46 (98%)	1 (2%)	47	64
27	C	45/45 (100%)	45 (100%)	0	100	100
28	D	38/38 (100%)	38 (100%)	0	100	100
29	E	51/51 (100%)	51 (100%)	0	100	100
30	F	34/34 (100%)	33 (97%)	1 (3%)	37	57
31	G	186/186 (100%)	182 (98%)	4 (2%)	45	63
32	H	170/170 (100%)	169 (99%)	1 (1%)	78	79
33	I	172/172 (100%)	169 (98%)	3 (2%)	53	67
34	J	119/119 (100%)	118 (99%)	1 (1%)	73	76
35	K	87/87 (100%)	85 (98%)	2 (2%)	44	62
36	L	124/124 (100%)	124 (100%)	0	100	100
37	M	104/104 (100%)	103 (99%)	1 (1%)	68	74
38	N	105/105 (100%)	104 (99%)	1 (1%)	68	74

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	O	86/86 (100%)	84 (98%)	2 (2%)	44	62
40	P	89/89 (100%)	87 (98%)	2 (2%)	45	63
41	Q	103/103 (100%)	102 (99%)	1 (1%)	68	74
42	R	92/92 (100%)	90 (98%)	2 (2%)	45	63
43	S	83/83 (100%)	82 (99%)	1 (1%)	63	72
44	T	76/76 (100%)	76 (100%)	0	100	100
45	U	65/65 (100%)	63 (97%)	2 (3%)	35	57
46	V	74/74 (100%)	73 (99%)	1 (1%)	59	70
47	W	56/56 (100%)	55 (98%)	1 (2%)	51	67
48	X	70/70 (100%)	69 (99%)	1 (1%)	59	70
49	Y	65/65 (100%)	64 (98%)	1 (2%)	57	68
50	Z	55/55 (100%)	54 (98%)	1 (2%)	51	67
51	a	110/181 (61%)	108 (98%)	2 (2%)	51	67
57	8	106/106 (100%)	104 (98%)	2 (2%)	50	65
57	9	79/106 (74%)	77 (98%)	2 (2%)	42	61
All	All	5093/5215 (98%)	5030 (99%)	63 (1%)	61	72

All (63) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	b	129	LEU
1	b	140	VAL
2	c	40	LEU
2	c	86	GLU
3	d	12	LEU
4	e	157	THR
7	h	59	LEU
8	i	58	ILE
8	i	93	ASN
8	i	129	GLU
9	j	3	THR
9	j	142	ILE
10	k	110	GLU
12	m	3	GLN
12	m	20	LEU
12	m	126	ILE
12	m	136	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
14	o	40	ILE
15	p	65	ASN
16	q	59	LEU
17	r	25	LEU
17	r	54	VAL
17	r	95	ASP
18	s	71	VAL
19	t	11	LEU
20	u	57	ILE
23	x	45	PHE
26	B	54	ILE
30	F	33	HIS
31	G	37	VAL
31	G	91	VAL
31	G	182	VAL
31	G	183	PHE
32	H	143	LEU
33	I	7	LYS
33	I	93	LEU
33	I	101	VAL
34	J	105	ILE
35	K	6	ILE
35	K	51	ILE
37	M	91	LEU
38	N	24	ASN
39	O	14	ASP
39	O	50	THR
40	P	113	THR
40	P	127	ARG
41	Q	37	TYR
42	R	18	LEU
42	R	53	ASP
43	S	99	SER
45	U	75	ILE
45	U	78	VAL
46	V	7	LEU
47	W	28	LEU
48	X	47	THR
49	Y	56	ILE
50	Z	37	TYR
51	a	5	THR
51	a	55	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
57	8	48	LEU
57	8	107	PRO
57	9	15	LEU
57	9	69	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (123) such sidechains are listed below:

Mol	Chain	Res	Type
1	b	52	HIS
1	b	85	ASN
1	b	152	GLN
1	b	199	HIS
1	b	238	ASN
1	b	242	HIS
2	c	32	ASN
2	c	126	ASN
2	c	136	ASN
3	d	41	GLN
3	d	97	ASN
4	e	22	ASN
4	e	26	GLN
4	e	126	ASN
5	f	44	HIS
5	f	47	ASN
5	f	100	ASN
5	f	103	ASN
5	f	115	GLN
5	f	142	GLN
6	g	2	GLN
6	g	28	ASN
6	g	66	ASN
6	g	133	GLN
6	g	135	HIS
8	i	11	GLN
8	i	29	GLN
8	i	42	ASN
8	i	104	GLN
8	i	106	GLN
8	i	110	GLN
9	j	76	HIS
9	j	135	GLN
9	j	138	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	k	5	GLN
10	k	89	ASN
10	k	90	ASN
11	l	93	ASN
11	l	99	ASN
12	m	17	ASN
12	m	22	GLN
13	n	23	ASN
13	n	62	ASN
13	n	73	ASN
14	o	29	HIS
14	o	100	HIS
15	p	114	ASN
16	q	36	GLN
16	q	65	ASN
16	q	71	ASN
17	r	6	GLN
17	r	89	HIS
17	r	91	GLN
18	s	40	ASN
18	s	61	ASN
19	t	70	HIS
19	t	72	GLN
20	u	73	ASN
20	u	98	ASN
21	v	44	HIS
22	w	53	HIS
22	w	72	ASN
24	y	58	ASN
25	z	48	ASN
26	B	5	ASN
26	B	18	HIS
26	B	41	HIS
28	D	13	ASN
30	F	35	GLN
31	G	35	ASN
31	G	92	ASN
31	G	121	GLN
31	G	176	ASN
31	G	177	ASN
32	H	5	HIS
32	H	7	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	H	68	HIS
32	H	122	GLN
33	I	58	GLN
33	I	73	ASN
33	I	135	GLN
34	J	120	HIS
34	J	131	ASN
35	K	17	GLN
35	K	58	HIS
35	K	63	ASN
35	K	81	ASN
36	L	8	GLN
36	L	121	ASN
37	M	3	GLN
37	M	15	ASN
37	M	20	ASN
38	N	31	GLN
38	N	109	GLN
40	P	14	GLN
40	P	27	ASN
40	P	117	HIS
41	Q	28	GLN
42	R	90	HIS
43	S	3	GLN
43	S	59	GLN
43	S	61	ASN
43	S	70	HIS
44	T	36	ASN
44	T	41	HIS
44	T	45	HIS
45	U	9	HIS
46	V	30	HIS
47	W	73	HIS
49	Y	20	ASN
49	Y	47	GLN
49	Y	51	ASN
49	Y	60	GLN
49	Y	83	ASN
51	a	47	ASN
51	a	172	HIS
57	8	23	GLN
57	8	28	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
57	8	38	HIS
57	8	61	HIS
57	8	83	ASN
57	9	28	GLN
57	9	61	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	3	1538/1539 (99%)	153 (9%)	1 (0%)
53	1	2902/2903 (99%)	372 (12%)	9 (0%)
54	2	119/120 (99%)	14 (11%)	0
55	5	75/77 (97%)	23 (30%)	0
56	4	13/20 (65%)	1 (7%)	0
All	All	4647/4659 (99%)	563 (12%)	10 (0%)

All (563) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
52	3	6	G
52	3	9	G
52	3	22	G
52	3	31	G
52	3	32	A
52	3	39	G
52	3	48	C
52	3	51	A
52	3	75	G
52	3	82	G
52	3	83	C
52	3	84	U
52	3	87	C
52	3	100	G
52	3	146	G
52	3	183	C
52	3	210	C
52	3	226	G
52	3	247	G
52	3	251	G
52	3	253	A
52	3	266	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
52	3	267	C
52	3	279	A
52	3	280	C
52	3	281	G
52	3	289	G
52	3	316	C
52	3	345	C
52	3	351	G
52	3	352	C
52	3	367	U
52	3	372	C
52	3	422	C
52	3	430	A
52	3	441	A
52	3	448	A
52	3	467	U
52	3	480	U
52	3	486	U
52	3	518	C
52	3	531	U
52	3	532	A
52	3	533	A
52	3	547	A
52	3	559	A
52	3	561	U
52	3	566	G
52	3	572	A
52	3	573	A
52	3	575	G
52	3	576	C
52	3	577	G
52	3	633	G
52	3	642	A
52	3	665	A
52	3	687	A
52	3	688	G
52	3	702	A
52	3	703	G
52	3	713	G
52	3	724	G
52	3	755	G
52	3	777	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
52	3	793	U
52	3	814	A
52	3	817	C
52	3	818	G
52	3	819	A
52	3	821	G
52	3	843	U
52	3	844	G
52	3	845	A
52	3	846	G
52	3	871	U
52	3	873	A
52	3	902	G
52	3	926	G
52	3	934	C
52	3	935	A
52	3	960	U
52	3	966	G
52	3	969	A
52	3	975	A
52	3	976	G
52	3	977	A
52	3	992	U
52	3	993	G
52	3	994	A
52	3	1004	A
52	3	1029	U
52	3	1030	U
52	3	1031	C
52	3	1032	G
52	3	1033	G
52	3	1034	G
52	3	1053	G
52	3	1054	C
52	3	1082	A
52	3	1094	G
52	3	1101	A
52	3	1108	G
52	3	1137	C
52	3	1138	G
52	3	1139	G
52	3	1146	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
52	3	1159	U
52	3	1168	U
52	3	1182	G
52	3	1184	G
52	3	1191	A
52	3	1196	A
52	3	1198	G
52	3	1201	A
52	3	1213	A
52	3	1225	A
52	3	1227	A
52	3	1238	A
52	3	1240	U
52	3	1241	G
52	3	1258	G
52	3	1261	A
52	3	1275	A
52	3	1278	G
52	3	1280	A
52	3	1287	A
52	3	1299	A
52	3	1300	G
52	3	1317	C
52	3	1336	C
52	3	1346	A
52	3	1347	G
52	3	1363	A
52	3	1381	U
52	3	1394	A
52	3	1395	C
52	3	1397	C
52	3	1398	A
52	3	1400	C
52	3	1401	G
52	3	1429	A
52	3	1446	A
52	3	1448	C
52	3	1452	C
52	3	1493	A
52	3	1494	G
52	3	1503	A
52	3	1506	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
52	3	1517	G
52	3	1529	G
52	3	1530	G
52	3	1531	A
52	3	1535	C
53	1	10	A
53	1	12	U
53	1	34	U
53	1	35	G
53	1	51	G
53	1	71	A
53	1	74	A
53	1	75	G
53	1	96	C
53	1	102	U
53	1	119	A
53	1	120	U
53	1	125	A
53	1	137	U
53	1	139	U
53	1	141	G
53	1	142	A
53	1	162	U
53	1	163	C
53	1	181	A
53	1	196	A
53	1	216	A
53	1	218	A
53	1	221	A
53	1	222	A
53	1	228	C
53	1	229	C
53	1	248	G
53	1	249	C
53	1	255	A
53	1	266	G
53	1	276	U
53	1	278	A
53	1	294	A
53	1	301	G
53	1	311	A
53	1	312	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	323	C
53	1	324	A
53	1	329	G
53	1	330	A
53	1	362	A
53	1	363	G
53	1	371	A
53	1	372	G
53	1	386	G
53	1	387	U
53	1	388	G
53	1	404	A
53	1	405	U
53	1	406	G
53	1	411	G
53	1	412	A
53	1	424	G
53	1	451	U
53	1	455	C
53	1	457	A
53	1	481	G
53	1	491	G
53	1	504	A
53	1	505	A
53	1	518	G
53	1	529	A
53	1	531	C
53	1	532	A
53	1	543	G
53	1	547	A
53	1	548	G
53	1	549	G
53	1	563	A
53	1	572	A
53	1	573	U
53	1	574	A
53	1	575	A
53	1	588	U
53	1	603	A
53	1	627	A
53	1	637	A
53	1	646	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	654	A
53	1	686	U
53	1	687	C
53	1	730	A
53	1	747	C
53	1	748	G
53	1	752	A
53	1	764	A
53	1	775	G
53	1	776	G
53	1	782	A
53	1	784	G
53	1	785	G
53	1	805	G
53	1	812	C
53	1	819	A
53	1	827	U
53	1	828	U
53	1	830	G
53	1	845	A
53	1	846	U
53	1	847	U
53	1	860	U
53	1	878	A
53	1	886	A
53	1	887	U
53	1	896	A
53	1	910	A
53	1	932	U
53	1	941	A
53	1	945	A
53	1	946	C
53	1	959	A
53	1	961	C
53	1	974	G
53	1	983	A
53	1	985	C
53	1	995	C
53	1	996	A
53	1	1009	A
53	1	1012	U
53	1	1013	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	1021	A
53	1	1022	G
53	1	1026	G
53	1	1033	U
53	1	1045	C
53	1	1046	A
53	1	1047	G
53	1	1062	G
53	1	1065	U
53	1	1066	U
53	1	1068	G
53	1	1070	A
53	1	1071	G
53	1	1072	C
53	1	1075	C
53	1	1084	A
53	1	1088	A
53	1	1101	U
53	1	1104	C
53	1	1111	A
53	1	1126	A
53	1	1132	U
53	1	1133	A
53	1	1135	C
53	1	1143	A
53	1	1156	A
53	1	1172	C
53	1	1173	U
53	1	1174	U
53	1	1176	U
53	1	1178	C
53	1	1179	G
53	1	1180	U
53	1	1211	C
53	1	1212	G
53	1	1247	A
53	1	1248	G
53	1	1250	G
53	1	1251	C
53	1	1253	A
53	1	1256	G
53	1	1271	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	1272	A
53	1	1289	C
53	1	1301	A
53	1	1305	C
53	1	1329	U
53	1	1330	C
53	1	1332	G
53	1	1345	C
53	1	1365	A
53	1	1378	A
53	1	1379	U
53	1	1383	A
53	1	1398	C
53	1	1416	G
53	1	1419	A
53	1	1420	A
53	1	1421	G
53	1	1454	C
53	1	1461	C
53	1	1476	U
53	1	1482	G
53	1	1490	A
53	1	1498	C
53	1	1515	A
53	1	1524	G
53	1	1535	A
53	1	1536	C
53	1	1537	G
53	1	1555	G
53	1	1559	U
53	1	1560	G
53	1	1569	A
53	1	1608	A
53	1	1611	C
53	1	1616	A
53	1	1617	C
53	1	1647	U
53	1	1648	U
53	1	1660	G
53	1	1674	G
53	1	1699	G
53	1	1713	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	1715	G
53	1	1729	U
53	1	1730	C
53	1	1738	G
53	1	1758	U
53	1	1764	C
53	1	1773	A
53	1	1780	A
53	1	1800	C
53	1	1801	A
53	1	1808	A
53	1	1816	C
53	1	1829	A
53	1	1847	A
53	1	1871	A
53	1	1901	A
53	1	1906	G
53	1	1907	G
53	1	1912	A
53	1	1913	A
53	1	1914	C
53	1	1929	G
53	1	1930	G
53	1	1937	A
53	1	1938	A
53	1	1944	U
53	1	1955	U
53	1	1963	U
53	1	1966	A
53	1	1967	C
53	1	1970	A
53	1	1971	U
53	1	1972	G
53	1	1993	U
53	1	1997	C
53	1	2022	U
53	1	2023	C
53	1	2030	A
53	1	2031	A
53	1	2036	C
53	1	2043	C
53	1	2055	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	2056	G
53	1	2060	A
53	1	2061	G
53	1	2062	A
53	1	2069	G
53	1	2072	C
53	1	2093	G
53	1	2110	G
53	1	2111	U
53	1	2113	U
53	1	2114	A
53	1	2118	U
53	1	2119	A
53	1	2126	A
53	1	2130	U
53	1	2131	U
53	1	2132	U
53	1	2133	G
53	1	2135	A
53	1	2136	G
53	1	2140	G
53	1	2145	C
53	1	2147	A
53	1	2154	A
53	1	2159	G
53	1	2161	C
53	1	2165	C
53	1	2166	U
53	1	2167	U
53	1	2168	G
53	1	2171	A
53	1	2172	U
53	1	2173	A
53	1	2174	C
53	1	2175	C
53	1	2180	U
53	1	2198	A
53	1	2203	U
53	1	2204	G
53	1	2210	U
53	1	2213	U
53	1	2225	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	2247	A
53	1	2250	G
53	1	2251	G
53	1	2252	G
53	1	2253	G
53	1	2254	C
53	1	2259	U
53	1	2266	A
53	1	2269	G
53	1	2283	C
53	1	2287	A
53	1	2297	A
53	1	2305	U
53	1	2309	A
53	1	2325	G
53	1	2327	A
53	1	2334	U
53	1	2335	A
53	1	2336	A
53	1	2350	C
53	1	2383	G
53	1	2385	C
53	1	2392	A
53	1	2402	U
53	1	2406	A
53	1	2423	U
53	1	2424	C
53	1	2429	G
53	1	2430	A
53	1	2432	A
53	1	2433	A
53	1	2434	A
53	1	2435	A
53	1	2436	G
53	1	2441	U
53	1	2448	A
53	1	2476	A
53	1	2491	U
53	1	2498	C
53	1	2502	G
53	1	2503	A
53	1	2505	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	2506	U
53	1	2518	A
53	1	2529	G
53	1	2547	A
53	1	2554	U
53	1	2566	A
53	1	2567	G
53	1	2572	A
53	1	2585	U
53	1	2602	A
53	1	2609	U
53	1	2613	U
53	1	2621	G
53	1	2629	U
53	1	2646	C
53	1	2655	G
53	1	2682	A
53	1	2689	U
53	1	2690	U
53	1	2714	G
53	1	2744	G
53	1	2748	A
53	1	2764	A
53	1	2765	A
53	1	2778	A
53	1	2779	U
53	1	2791	G
53	1	2792	A
53	1	2797	U
53	1	2799	A
53	1	2800	A
53	1	2809	A
53	1	2820	A
53	1	2821	A
53	1	2833	U
53	1	2849	U
53	1	2850	A
53	1	2867	G
53	1	2868	A
53	1	2872	A
53	1	2880	C
54	2	2	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	2	4	C
54	2	12	C
54	2	13	G
54	2	24	G
54	2	35	C
54	2	42	C
54	2	44	G
54	2	67	G
54	2	89	U
54	2	90	C
54	2	108	A
54	2	109	A
54	2	116	G
55	5	4	G
55	5	9	G
55	5	15	G
55	5	16	C
55	5	17	C
55	5	17(A)	U
55	5	18	G
55	5	19	G
55	5	21	A
55	5	22	G
55	5	25	C
55	5	27	U
55	5	28	C
55	5	33	U
55	5	45	G
55	5	48	C
55	5	61	C
55	5	62	C
55	5	63	G
55	5	70	G
55	5	73	A
55	5	74	C
55	5	75	C
56	4	13	A

All (10) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
52	3	1190	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	1	859	G
53	1	1020	A
53	1	1475	G
53	1	2250	G
53	1	2251	G
53	1	2326	C
53	1	2391	G
53	1	2430	A
53	1	2433	A

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

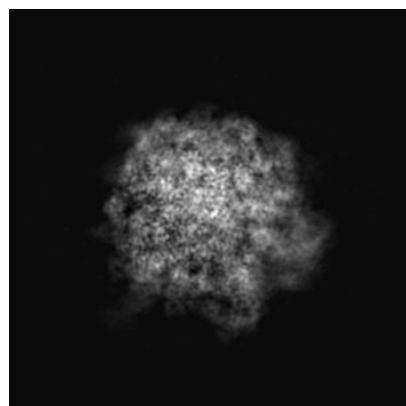
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22472. These allow visual inspection of the internal detail of the map and identification of artifacts.

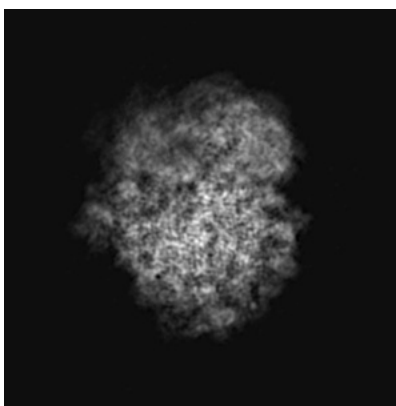
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

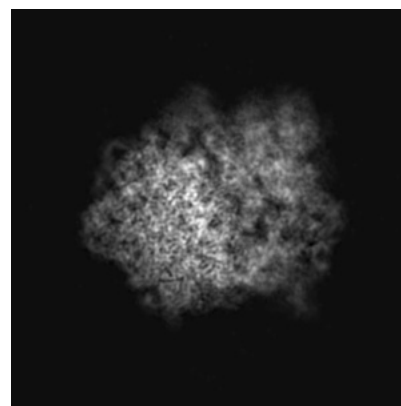
6.1.1 Primary map



X

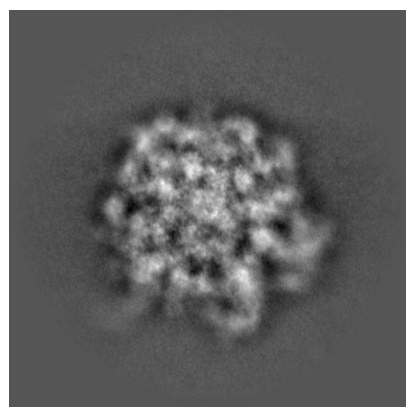


Y

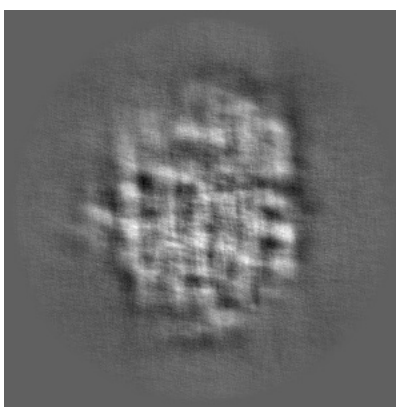


Z

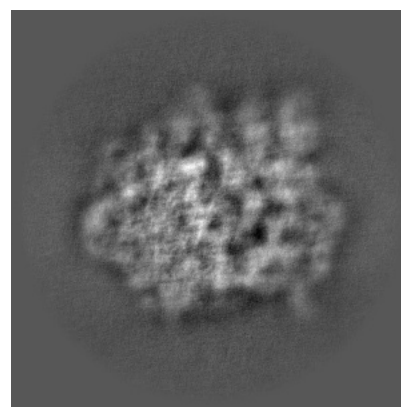
6.1.2 Raw map



X



Y

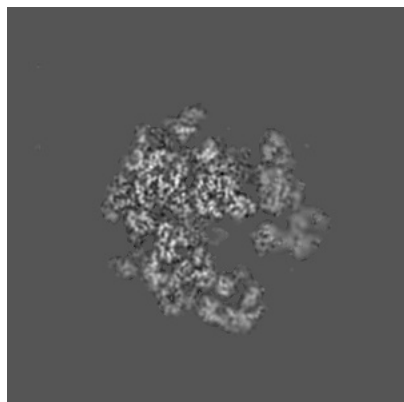


Z

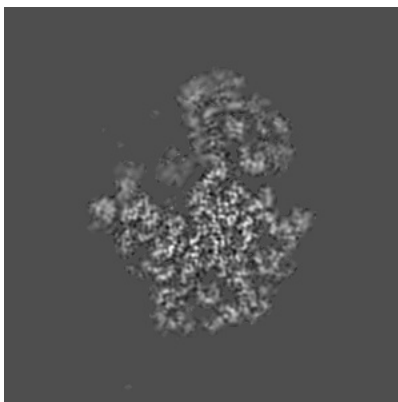
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

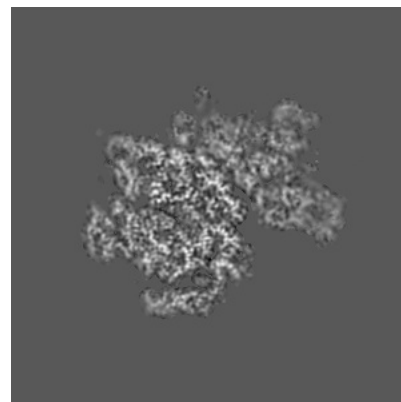
6.2.1 Primary map



X Index: 180

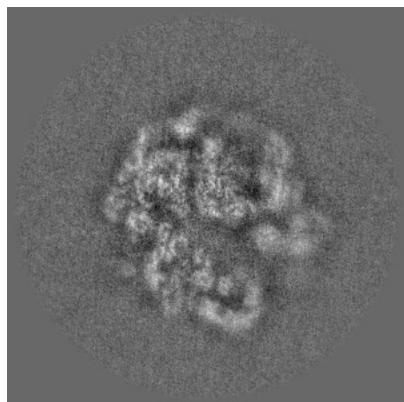


Y Index: 180

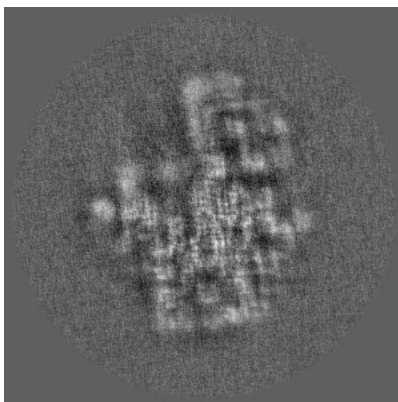


Z Index: 180

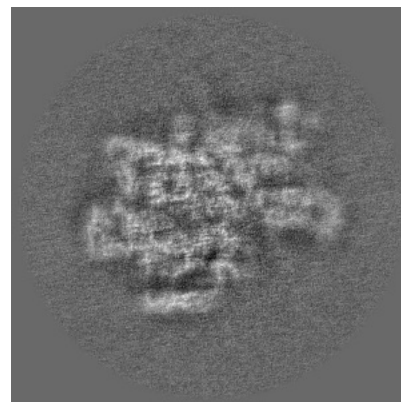
6.2.2 Raw map



X Index: 180



Y Index: 180

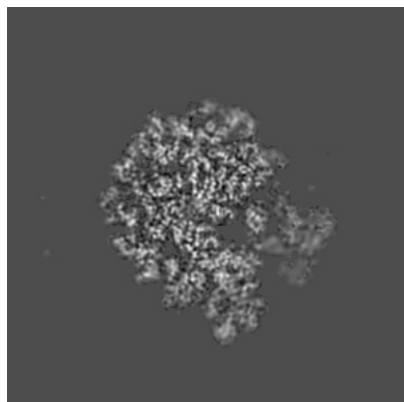


Z Index: 180

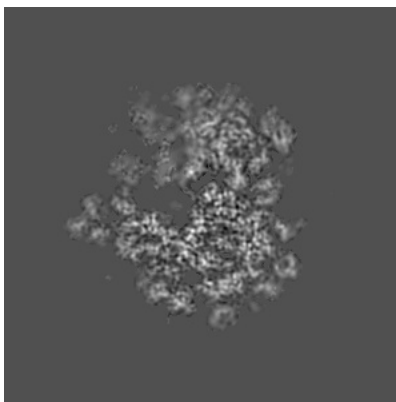
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

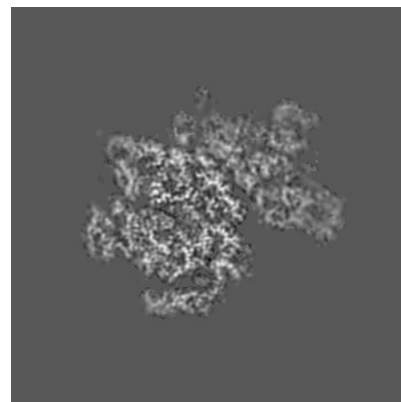
6.3.1 Primary map



X Index: 164

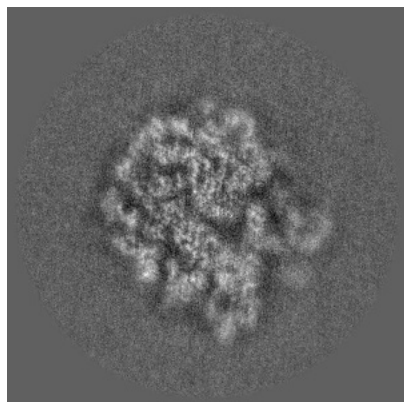


Y Index: 193

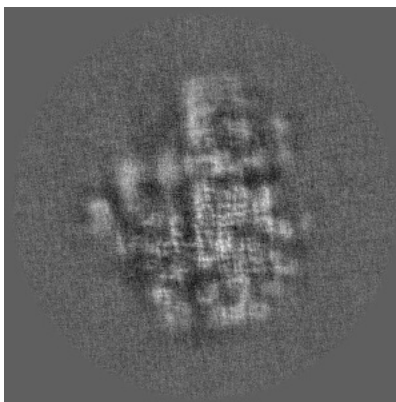


Z Index: 180

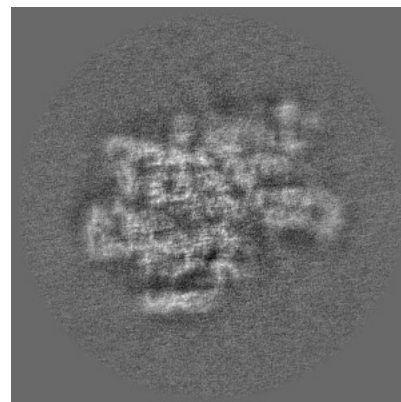
6.3.2 Raw map



X Index: 164



Y Index: 184

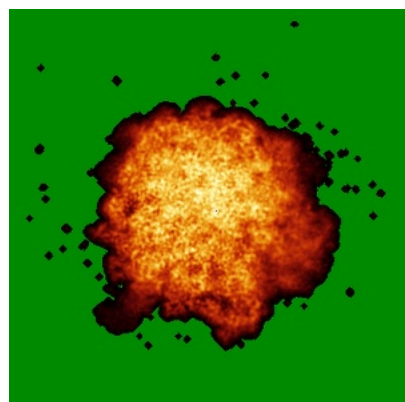


Z Index: 180

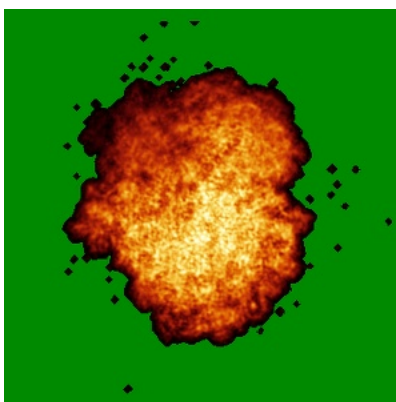
The images above show the largest variance slices of the map in three orthogonal directions.

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

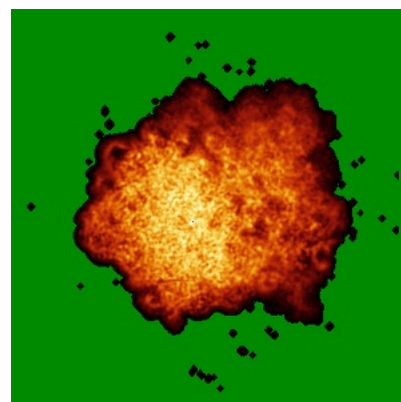
6.4.1 Primary map



X

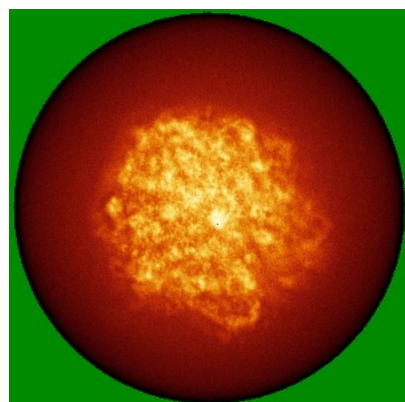


Y

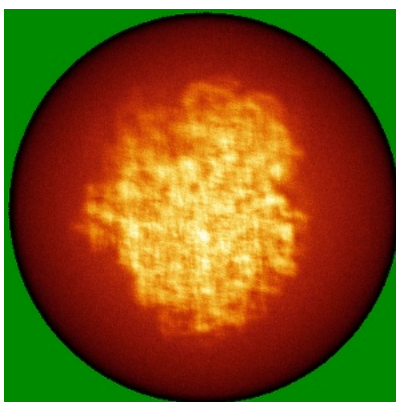


Z

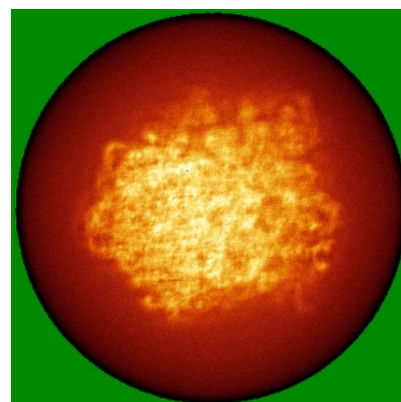
6.4.2 Raw map



X



Y

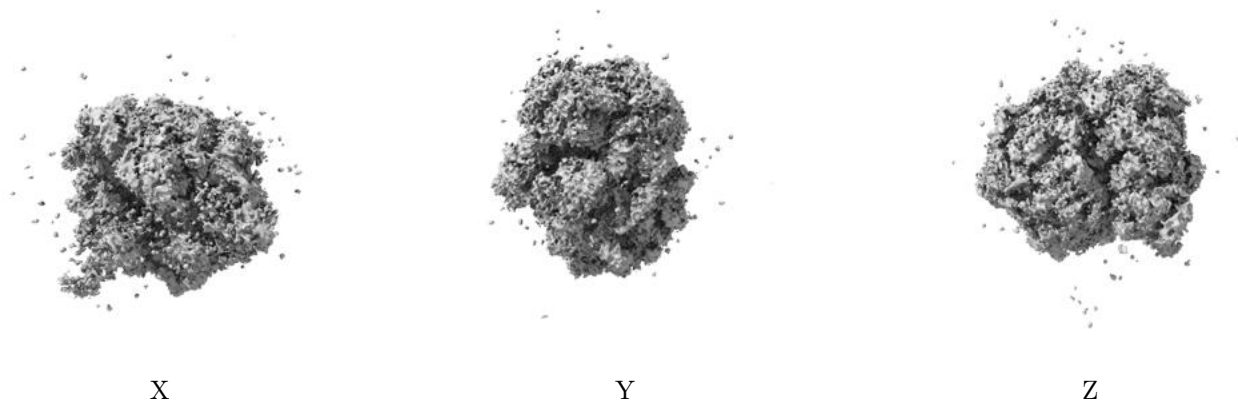


Z

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

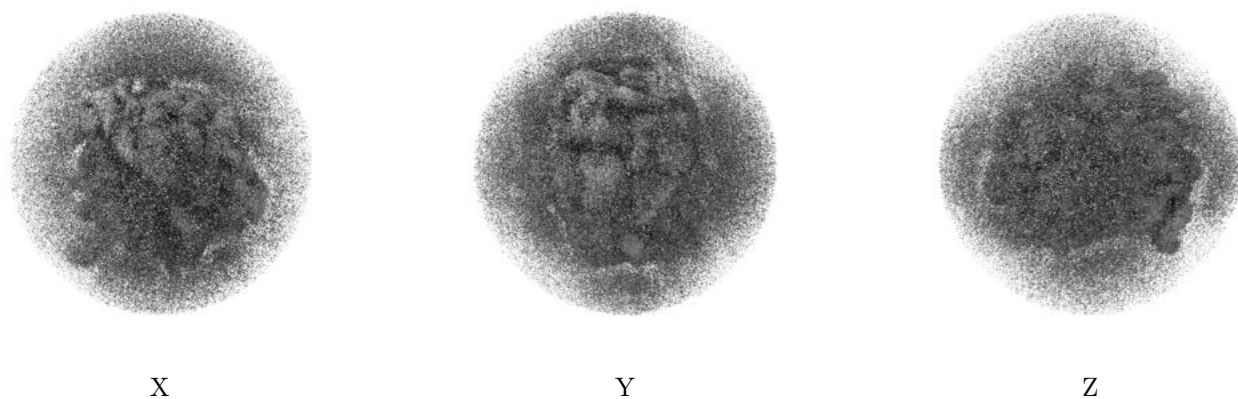
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.75. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

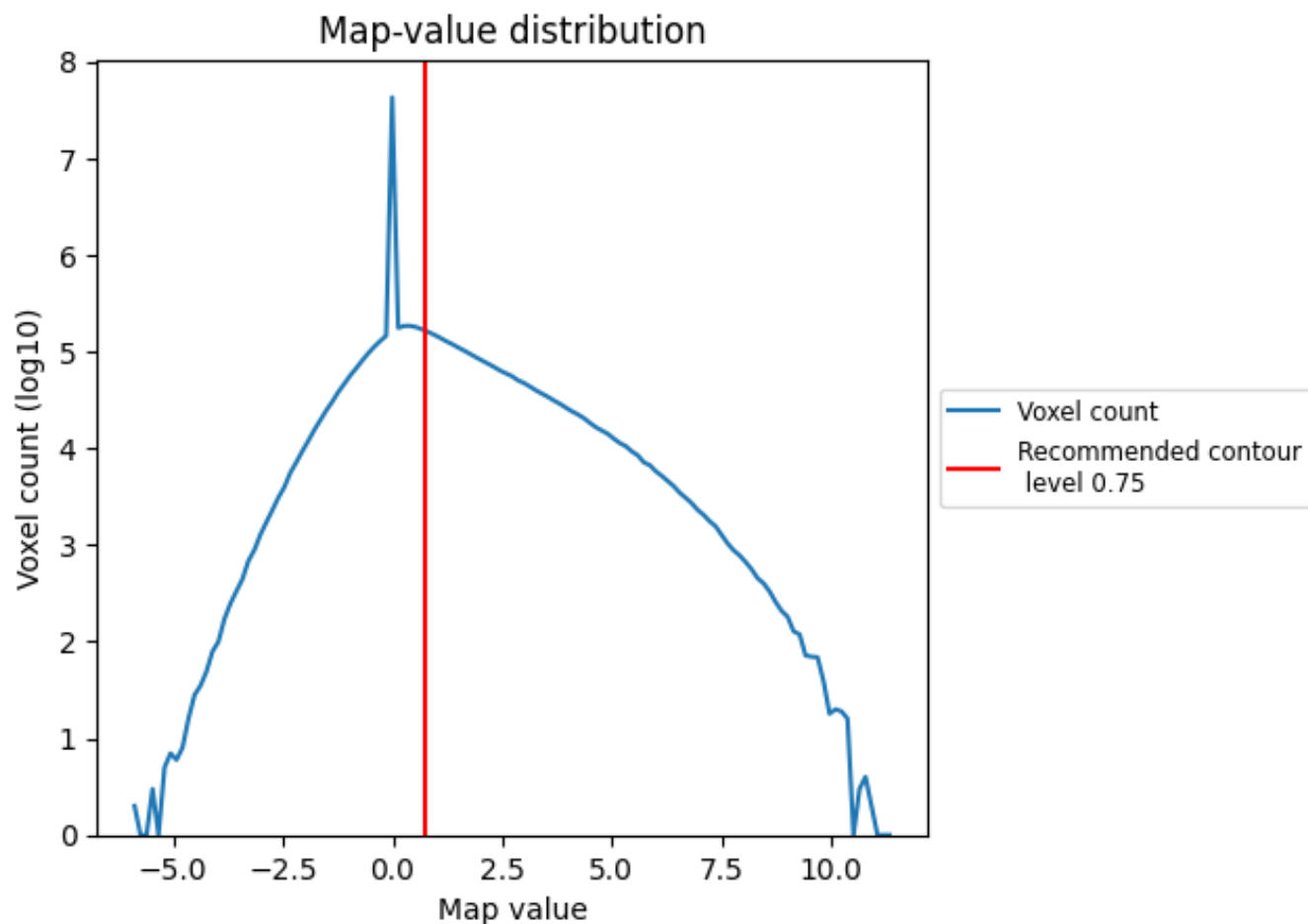
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

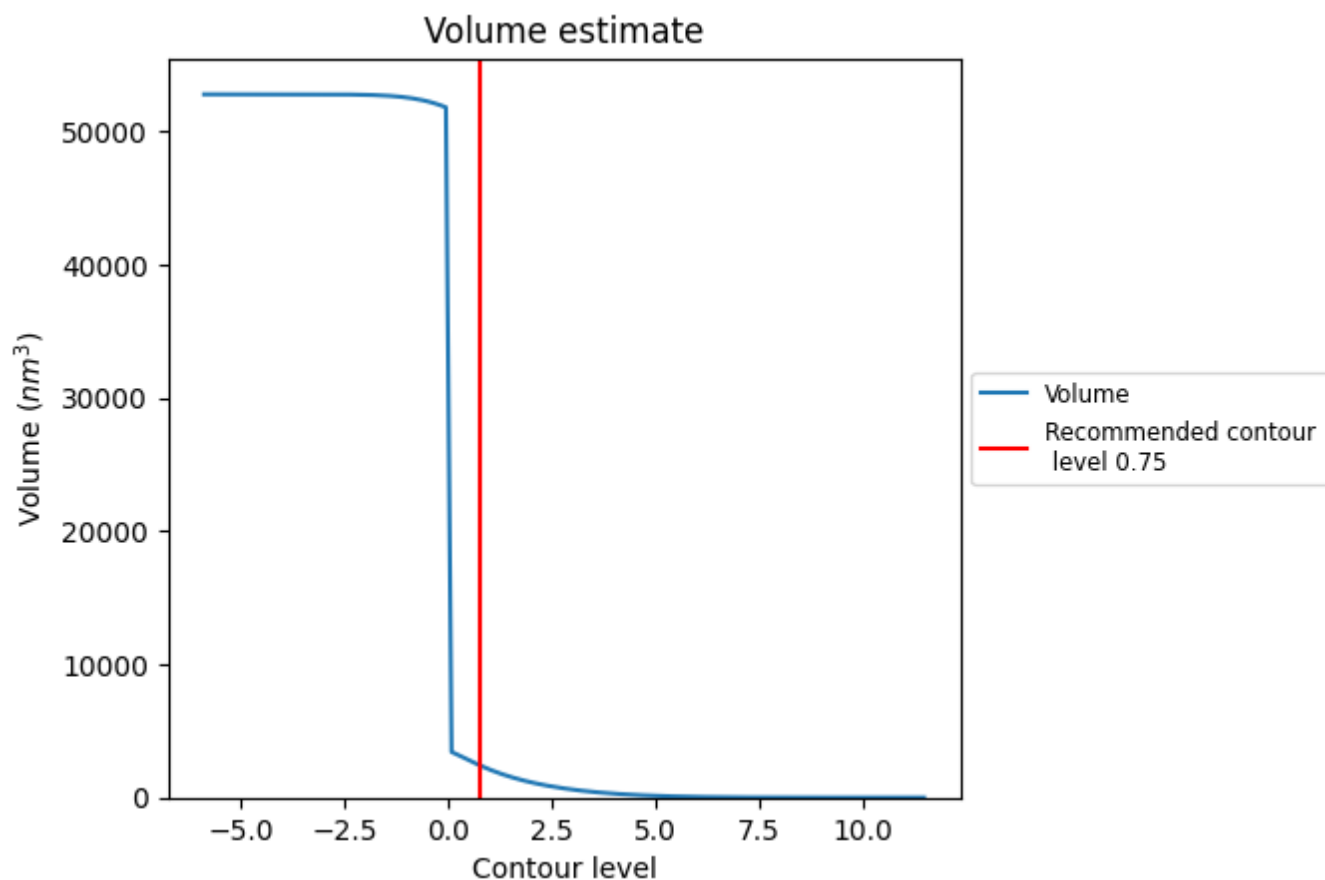
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

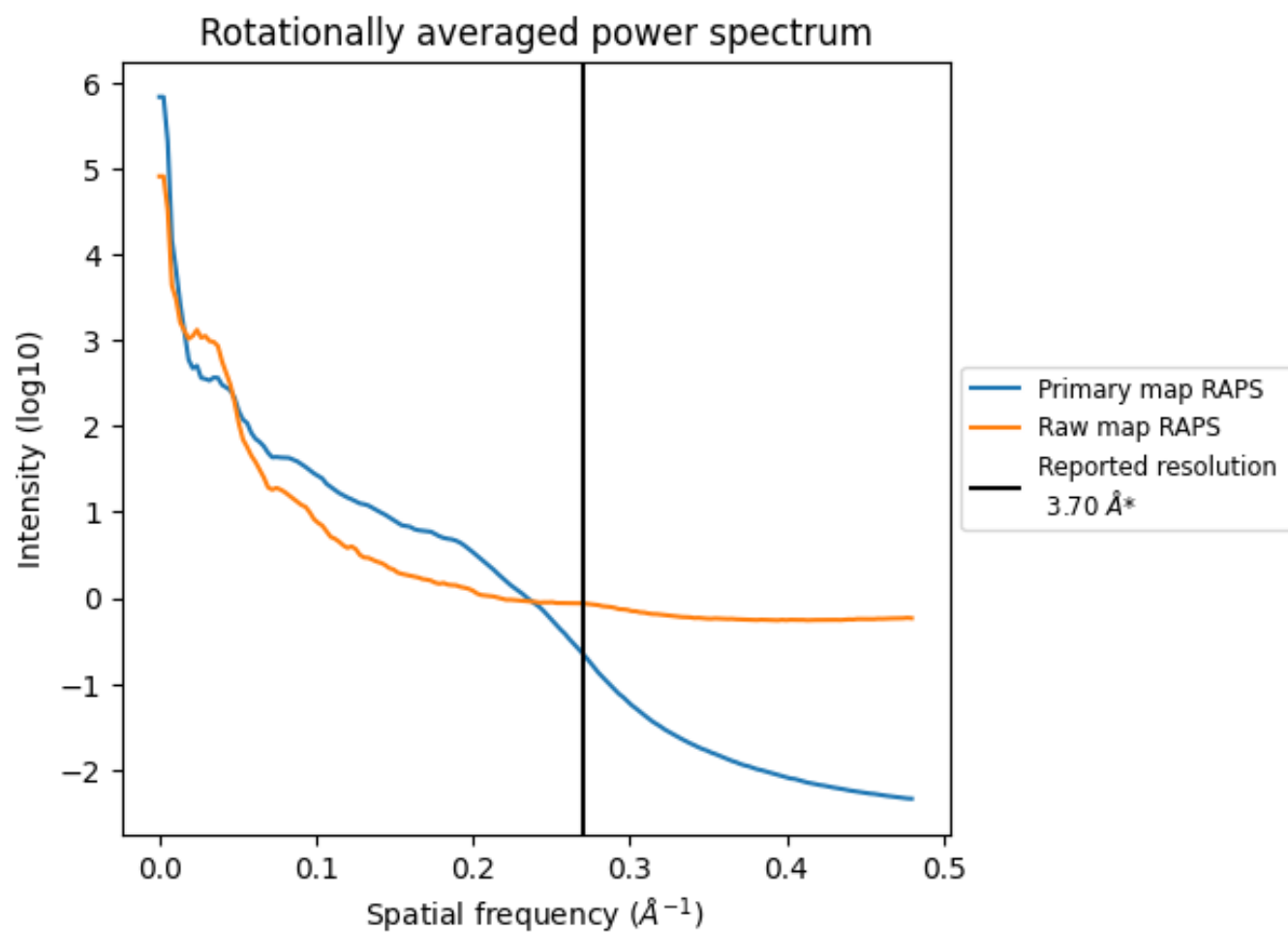
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2431 nm³; this corresponds to an approximate mass of 2196 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

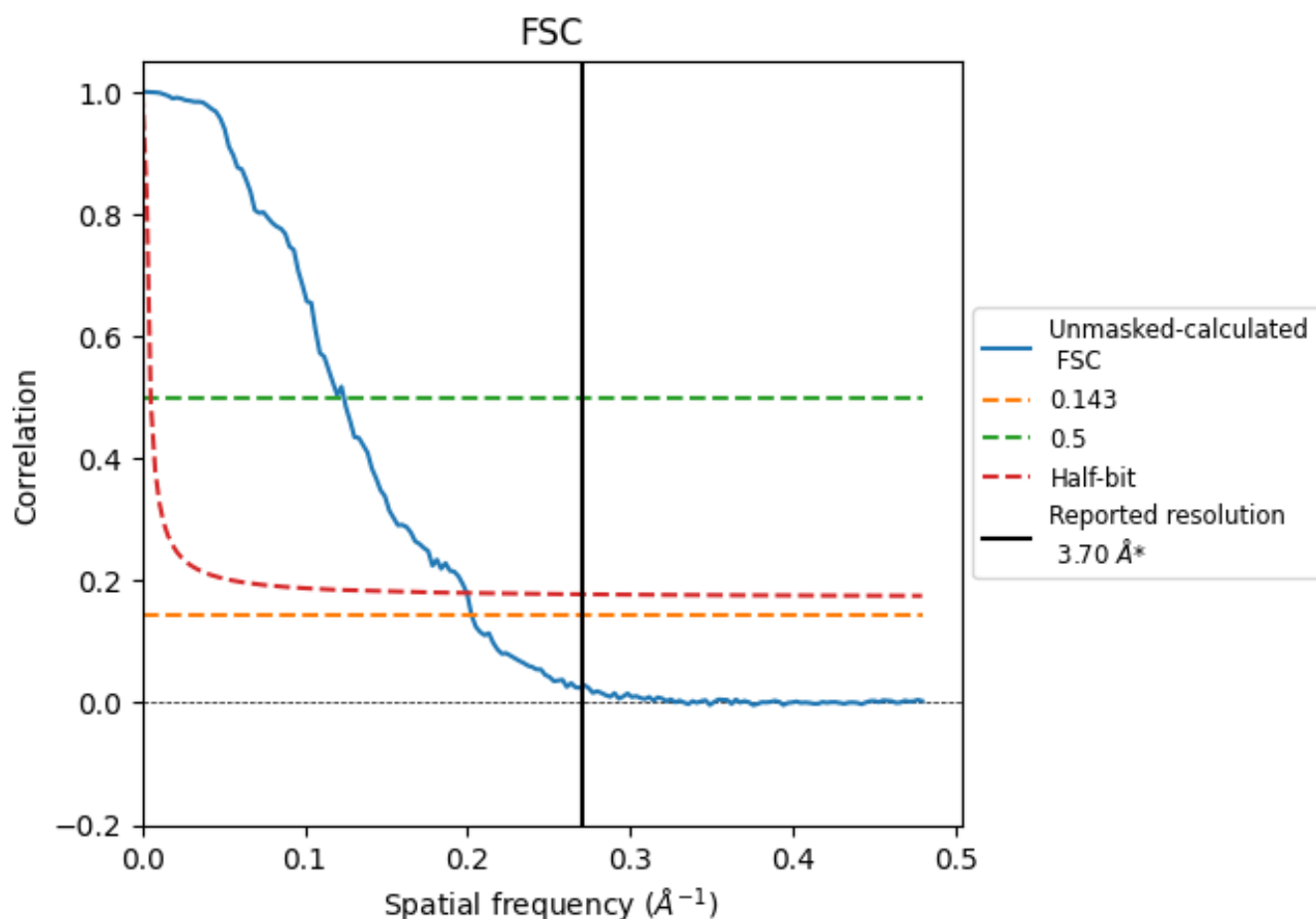


*Reported resolution corresponds to spatial frequency of 0.270 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.270 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

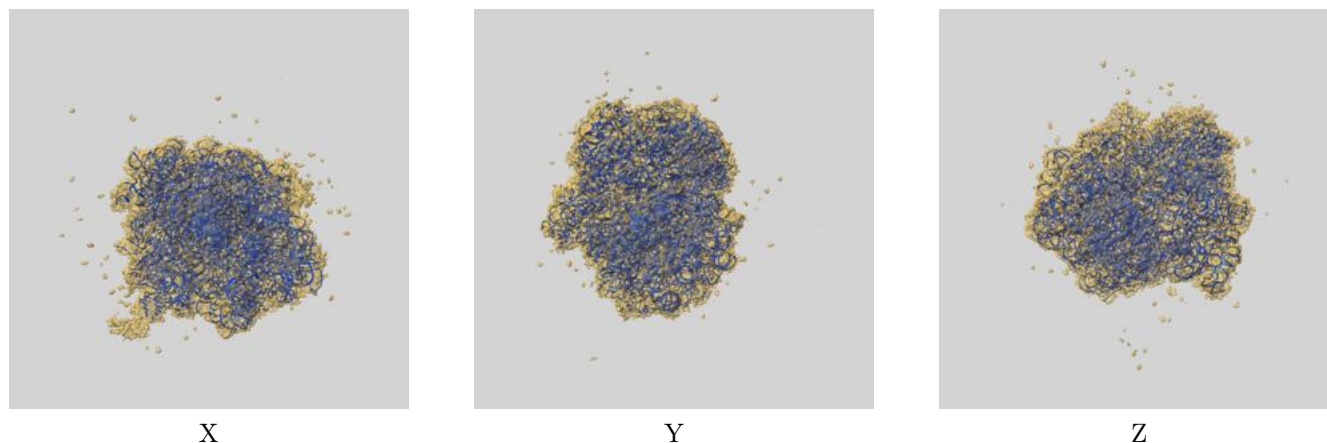
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.94	8.06	5.01

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.94 differs from the reported value 3.7 by more than 10 %

9 Map-model fit [i](#)

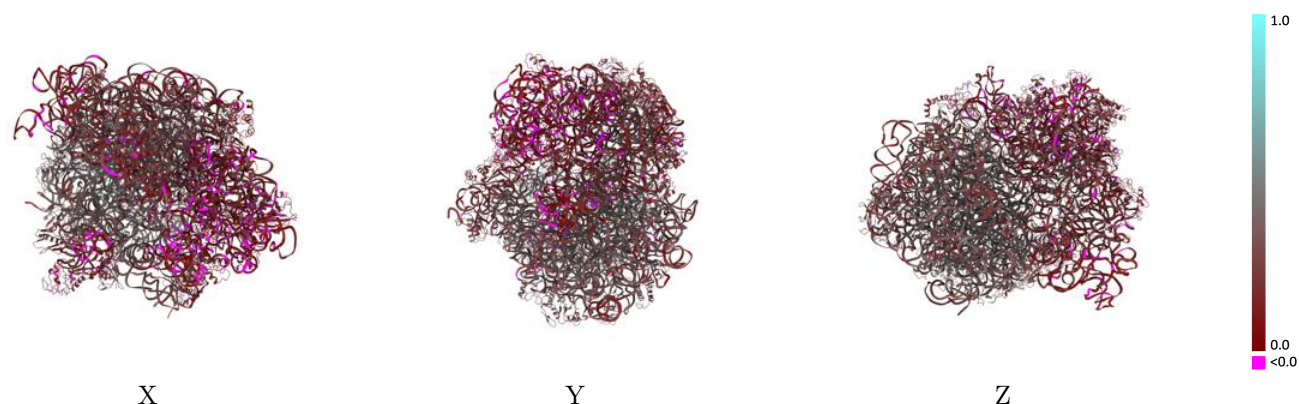
This section contains information regarding the fit between EMDB map EMD-22472 and PDB model 7JT3. Per-residue inclusion information can be found in [section 3](#) on [page 15](#).

9.1 Map-model overlay [i](#)



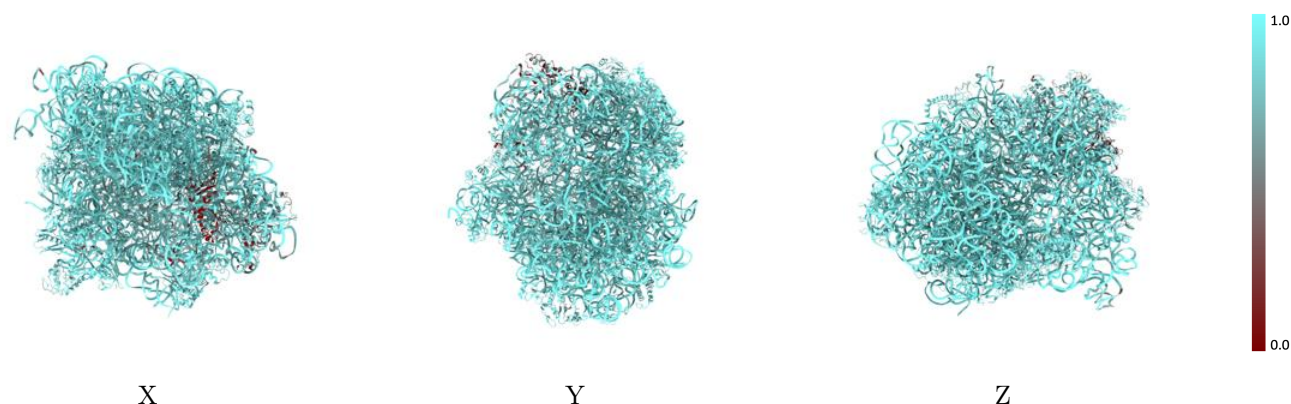
The images above show the 3D surface view of the map at the recommended contour level 0.75 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



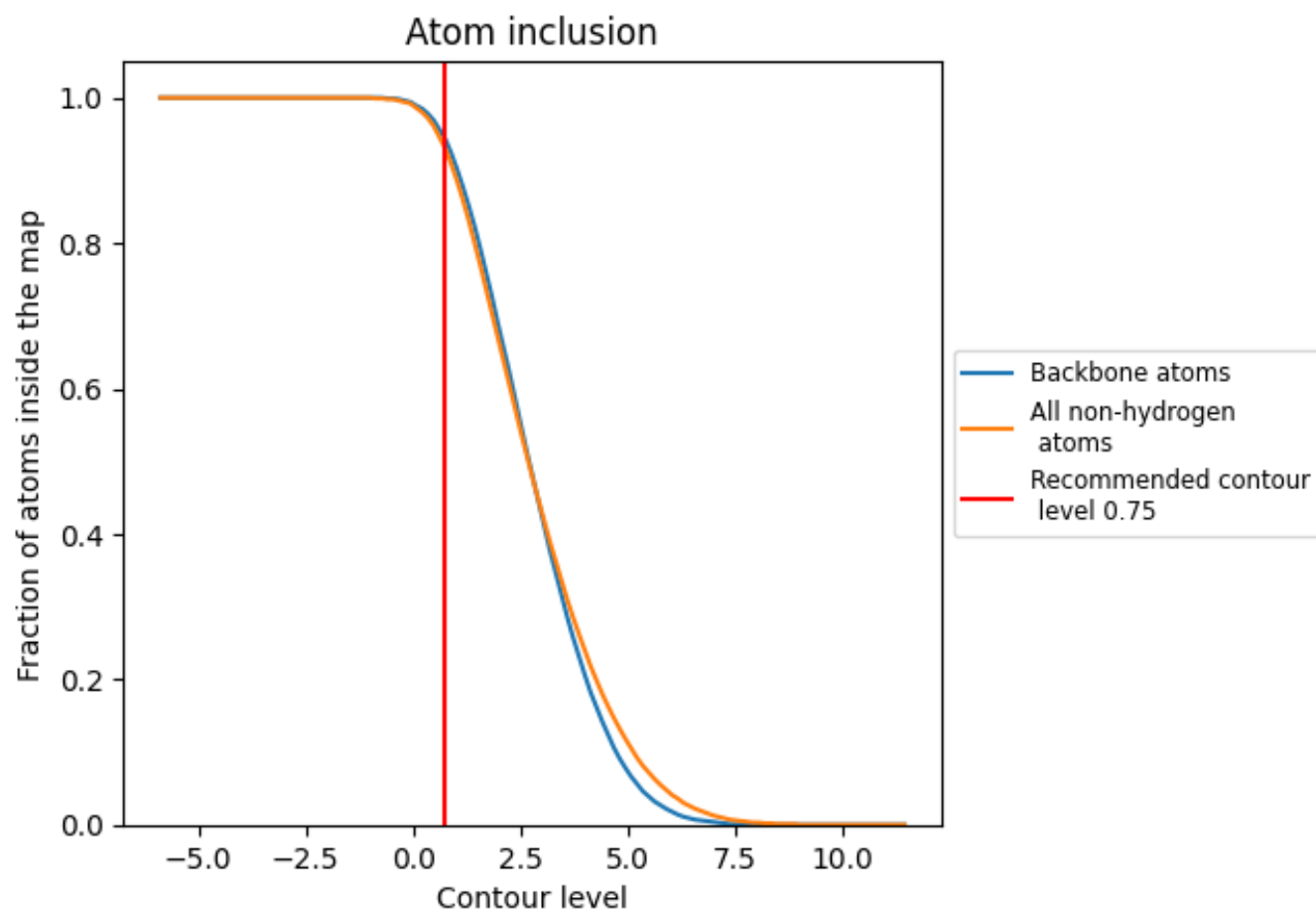
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.75).

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.75) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9310	 0.2850
1	 0.9730	 0.3430
2	 0.9730	 0.2820
3	 0.9200	 0.1850
4	 0.7990	 0.0730
5	 0.8790	 0.1310
8	 0.8640	 0.2250
9	 0.8460	 0.1470
B	 0.9460	 0.3870
C	 0.9400	 0.3490
D	 0.9610	 0.4210
E	 0.9230	 0.4120
F	 0.9310	 0.4010
G	 0.8870	 0.2380
H	 0.4840	 0.1340
I	 0.8620	 0.2090
J	 0.9060	 0.2250
K	 0.9230	 0.2330
L	 0.8040	 0.1920
M	 0.9270	 0.2530
N	 0.7680	 0.1650
O	 0.5490	 0.1370
P	 0.9120	 0.2310
Q	 0.9290	 0.3050
R	 0.7970	 0.1860
S	 0.7970	 0.1500
T	 0.9220	 0.2520
U	 0.8680	 0.2610
V	 0.9340	 0.2610
W	 0.8890	 0.2580
X	 0.8650	 0.1860
Y	 0.9010	 0.2370
Z	 0.8900	 0.2370
a	 0.8050	 0.1690
b	 0.9560	 0.4170



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
c	 0.9340	 0.4020
d	 0.9240	 0.3540
e	 0.9110	 0.2390
f	 0.9430	 0.3310
g	 0.8910	 0.2550
h	 0.8390	 0.1910
i	 0.8480	 0.1510
j	 0.9470	 0.3990
k	 0.9410	 0.3930
l	 0.9420	 0.3840
m	 0.9440	 0.3860
n	 0.9460	 0.3950
o	 0.9260	 0.3220
p	 0.9570	 0.3780
q	 0.9350	 0.3810
r	 0.9330	 0.3690
s	 0.9230	 0.4010
t	 0.9210	 0.3650
u	 0.9270	 0.3070
v	 0.9470	 0.3620
w	 0.9430	 0.3880
x	 0.9380	 0.3850
y	 0.9340	 0.3080
z	 0.9500	 0.3780