



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 03:54 AM UTC

PDB ID : 7P6Z / pdb_00007p6z
EMDB ID : EMD-13234
Title : Mycoplasma pneumoniae 70S ribosome in untreated cells
Authors : Xue, L.; Lenz, S.; Rappsilber, J.; Mahamid, J.
Deposited on : 2021-07-18
Resolution : 3.50 Å (reported)
Based on initial models : 3J9W, 7OOD, 7OOC, 4V7C

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

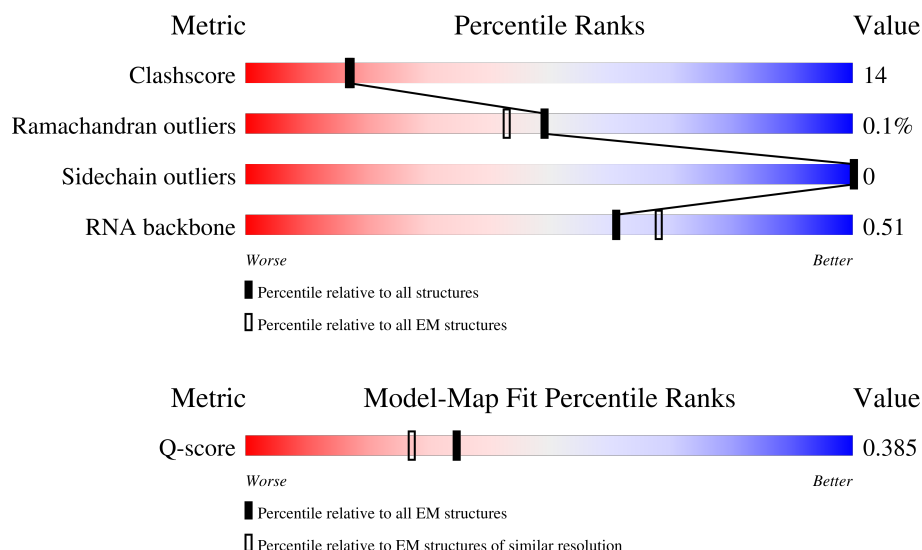
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 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	13950 (3.00 - 4.00)

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	3	2907	
2	4	108	
3	w	111	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	a	287	
5	c	212	
6	e	184	
7	k	151	
8	i	146	
9	m	124	
10	q	100	
11	u	104	
12	y	57	
13	0	48	
14	2	37	
15	1	59	
16	o	119	
17	s	237	
18	v	65	
19	x	97	
20	z	53	
21	d	180	
22	b	287	
23	l	139	
24	p	127	
25	j	122	
26	n	116	
27	t	111	
28	r	159	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	B	273	
30	D	219	
31	F	155	
32	A	294	
33	H	132	
34	J	121	
35	C	205	
36	S	87	
37	O	94	
38	K	139	
39	M	61	
40	I	108	
41	L	124	
42	N	86	
43	R	87	
44	T	60	
45	G	142	
46	Q	104	
47	E	215	
48	P	85	
49	5	1520	
50	Z	5	
51	7	76	
52	Y	9	
53	f	149	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
54	h	137	93% 88% 5% • 7%
55	g	161	77% 71% 5% • 22%

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 142534 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 RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	3	2879	Total	C	N	O	P	0	0
			61690	27566	11236	20009	2879		

- Molecule 2 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	4	105	Total	C	N	O	P	0	0
			2245	1003	409	728	105		

- Molecule 3 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
3	w	99	Total	C	N	O	0	0
			798	505	149	144		

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	a	285	Total	C	N	O	S	0	0
			2199	1370	433	390	6		

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	c	210	Total	C	N	O	S	0	0
			1613	1026	294	290	3		

- Molecule 6 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms				AltConf	Trace
6	e	176	Total	C	N	O	0	0
			1349	867	240	242		

- Molecule 7 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	k	148	Total	C	N	O	0	0
			1138	722	223	193		

- Molecule 8 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	i	144	Total	C	N	O	S	0	0
			1158	733	212	208	5		

- Molecule 9 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	m	119	Total	C	N	O	S	0	0
			957	609	175	170	3		

- Molecule 10 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	q	99	Total	C	N	O	S	0	0
			809	525	148	133	3		

- Molecule 11 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	u	86	Total	C	N	O	S	0	0
			641	397	127	116	1		

- Molecule 12 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	y	56	Total	C	N	O	S	0	0
			436	262	96	73	5		

- Molecule 13 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	0	47	Total	C	N	O	S	0	0
			377	234	81	61	1		

- Molecule 14 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	2	37	Total	C	N	O	S	0	0
			303	189	65	45	4		

- Molecule 15 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	1	59	Total	C	N	O	S	0	0
			477	300	99	77	1		

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	o	115	Total	C	N	O	S	0	0
			895	568	169	157	1		

- Molecule 17 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	s	92	Total	C	N	O	S	0	0
			714	470	121	122	1		

- Molecule 18 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	v	63	Total	C	N	O	S	0	0
			504	312	107	84	1		

- Molecule 19 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	x	44	Total	C	N	O	0	0
			218	130	44	44		

- Molecule 20 is a protein called 50S ribosomal protein L33 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	z	50	Total	C	N	O	S	0	0
			408	255	81	68	4		

- Molecule 21 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	d	175	Total	C	N	O	S	0	0
			1244	797	214	229	4		

- Molecule 22 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	b	229	Total	C	N	O	S	0	0
			1758	1116	317	318	7		

- Molecule 23 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	l	136	Total	C	N	O	S	0	0
			1057	680	193	177	7		

- Molecule 24 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	p	114	Total	C	N	O	S	0	0
			941	600	185	154	2		

- Molecule 25 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	j	122	Total	C	N	O	S	0	0
			944	595	178	167	4		

- Molecule 26 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	n	112	Total	C	N	O	S	0	0
			853	534	169	149	1		

- Molecule 27 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	t	96	Total	C	N	O	S	0	0
			706	449	132	122	3		

- Molecule 28 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	r	139	Total	C	N	O	S	0	0
			1068	663	207	191	7		

- Molecule 29 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	B	215	Total	C	N	O	S	0	0
			1682	1063	308	306	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
30	D	153	Total	C	N	O	S	0	0
			1153	731	222	197	3		

- Molecule 31 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	F	154	Total	C	N	O	S	0	0
			1231	777	234	215	5		

- Molecule 32 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	A	249	Total	C	N	O	S	0	0
			1917	1224	331	355	7		

- Molecule 33 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	H	128	Total	C	N	O	S	0	0
			993	634	184	174	1		

- Molecule 34 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	J	114	Total	C	N	O	S	0	0
			828	514	153	155	6		

- Molecule 35 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	C	203	Total	C	N	O	S	0	0
			1605	1015	306	280	4		

- Molecule 36 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	S	77	Total	C	N	O		0	0
			629	383	135	111			

- Molecule 37 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	O	87	Total	C	N	O	S	0	0
			690	445	128	115	2		

- Molecule 38 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	K	136	Total	C	N	O	S	0	0
			1055	667	209	177	2		

- Molecule 39 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	M	60	Total	C	N	O	S	0	0
			473	302	96	71	4		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	I	101	Total	C	N	O	S	0	0
			803	518	141	143	1		

- Molecule 41 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	L	118	Total	C	N	O		0	0
			922	576	186	160			

- Molecule 42 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	N	83	Total	C	N	O	0	0
			673	428	125	120		

- Molecule 43 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	R	84	Total	C	N	O	S	0
			654	419	119	114	2	0

- Molecule 44 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	T	53	Total	C	N	O	S	0
			439	275	93	70	1	0

- Molecule 45 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	G	141	Total	C	N	O	S	0
			1103	720	192	189	2	0

- Molecule 46 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
46	Q	65	Total	C	N	O	S	0
			535	342	103	86	4	0

- Molecule 47 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms				AltConf	Trace
47	E	167	Total	C	N	O	S	0
			1211	762	219	229	1	0

- Molecule 48 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	P	83	Total	C	N	O	0	0
			675	425	135	115		

- Molecule 49 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	5	1493	Total	C	N	O	P	0	0
			31952	14279	5792	10388	1493		

- Molecule 50 is a protein called nascent peptide.

Mol	Chain	Residues	Atoms				AltConf	Trace
50	Z	5	Total	C	N	O	0	0
			26	15	5	6		

- Molecule 51 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	7	76	Total	C	N	O	P	0	0
			1618	723	289	531	75		

- Molecule 52 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	Y	9	Total	C	N	O	P	0	0
			177	81	18	70	8		

- Molecule 53 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms				AltConf	Trace
53	f	144	Total	C	N	O	0	0
			713	425	144	144		

- Molecule 54 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms				AltConf	Trace
54	h	128	Total	C	N	O	0	0
			630	374	128	128		

- Molecule 55 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				AltConf	Trace
55	g	125	Total	C	N	O	0	0
			617	367	125	125		

- Molecule 56 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
56	3	24	Total 24	Mg 24	0
56	y	1	Total 1	Mg 1	0

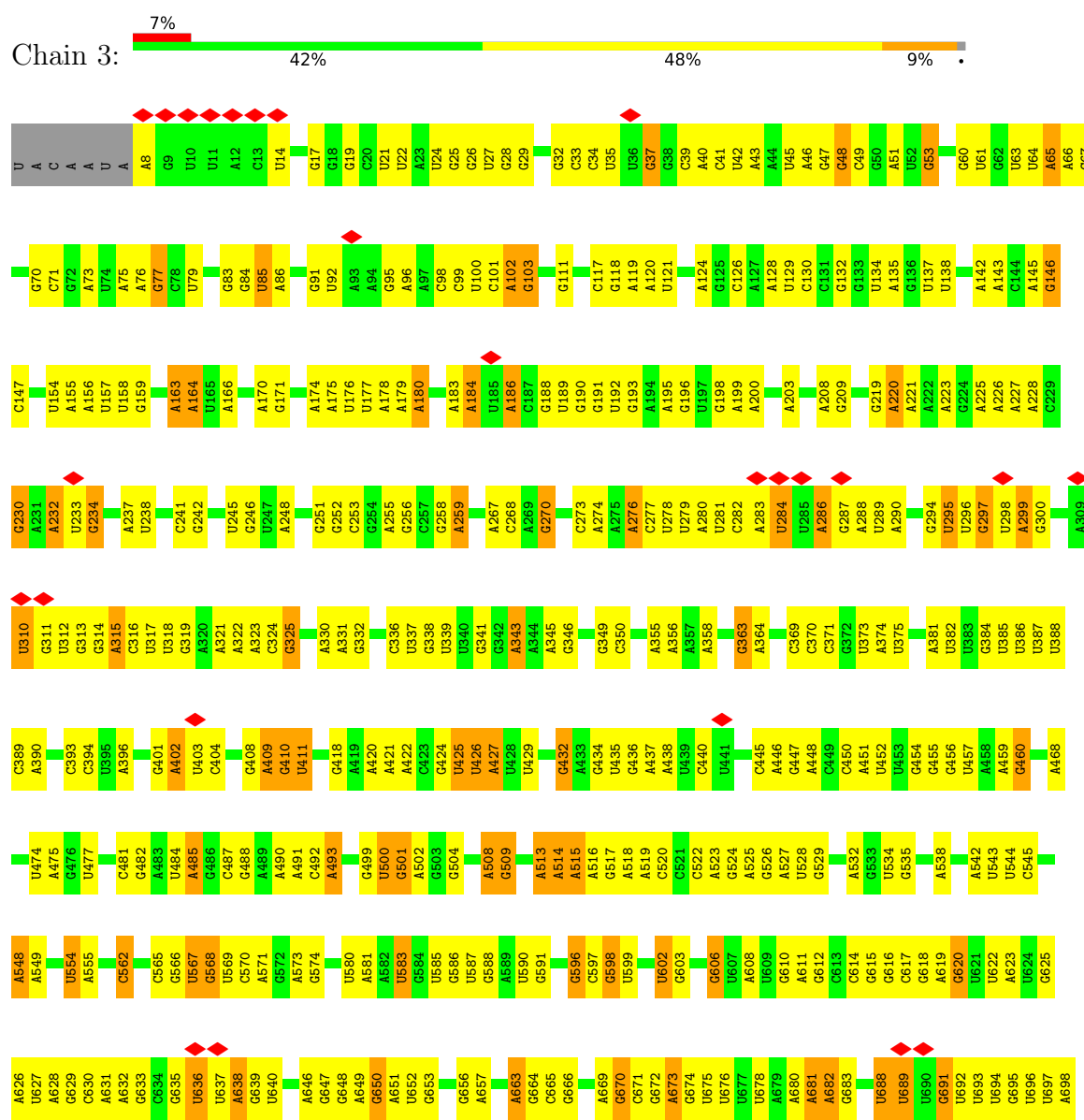
- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
57	y	1	Total 1	Zn 1	0
57	2	1	Total 1	Zn 1	0
57	z	1	Total 1	Zn 1	0
57	M	1	Total 1	Zn 1	0
57	Q	1	Total 1	Zn 1	0

3 Residue-property plots

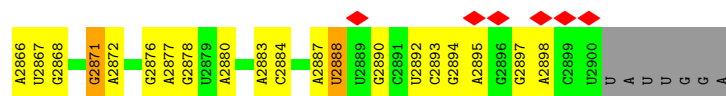
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: 23S ribosomal RNA

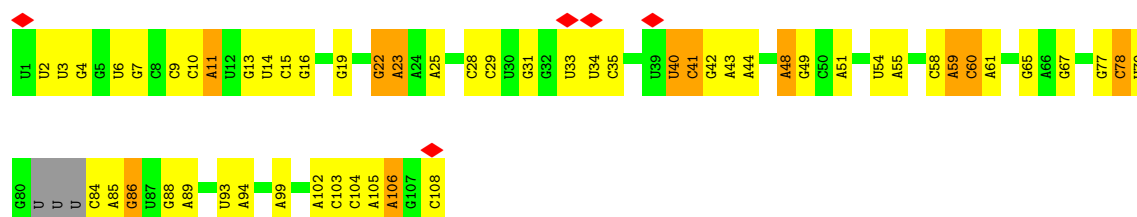


A1580	G1682	U1533	A1462	U1391	G1306	U1232	U1153	U1093	A1008	A937	U659
G1681	A1603	A1534	G1463	A1392	G1307	A1233	U1154	G1094	A1009	A938	U700
G1682	A1604	A1535	G1464	A1393	A1430	A1234	U1155	U1095	G1010	U939	U701
A1605	C1536	U1465	U1466	U1400	U1310	G1236	A1161	U1096	A1016	U944	G704
A1606	A1537	U1467	A1401	A1402	A1314	G1237	A1164	U1097	A1019	U945	A705
	U1538	U1468	G1406		A1315	A1238	U1165	G1098	A1020	U946	C706
	U1539	C1469	U1407	A1406	U1316	G1239	G1166	C1099	G1026	A947	C707
	A1541	A1471	U1407		G1242		A1167	U1100	U1027	U948	C708
	A1545	C1472	A1412	A1412	A1323	G1245	A1168	U1101	A1028	U949	G709
	A1546	A1473	A1413	A1413	A1324	U1246	A1169	U1102	C1028	U950	C713
	G1547	C1474	C1414	C1414	C1325	C1247	A1170	U1103	G1029	C951	G714
	A1548	C1475	C1415	A1415	G1326	A1247	C1170	G1103	A1029	U952	G715
	U1549	A1477	G1416	G1416	C1327	A1248	G1171	A1104	A1032	G953	G716
			A1417	A1417	A1328	A1249	C1174	A1105	A1036		U717
			U1418	U1418	U1329	A1250	G1175	A1106	A1037	G957	U718
			U1419	U1419	G1330	G1251	U1176	C1107	G1038	C958	U719
			A1420	A1420	A1332	G1255	A1177	G1108	G1039	U960	A720
			A1421	A1421	C1333		A1178	U1109	C1043	U961	G721
			U1422	U1422	U1334	U1261	A1186	G1109	A1055	U962	A728
			G1484	A1423	A1335	G1262	C1187	C1110	A1056	U963	
			A1485	A1423	A1336	G1263	C1188	C1111	G1057	A893	
			U1486	U1424	A1336	U1264	G1189	C1112	U1058	C894	
			U1487	U1425	G1337	U1264	G1189	A1112	U1049	U965	G732
			U1488	C1426	U1337	G1265		A1113	U1054	U966	C733
				C1427	U1341	G1266	U1192	U1113	U1054	U967	
				U1428	C1342	A1267	U1193	C1114	A1055	A888	A740
				A1429	C1343	U1268	U1197	G1115	A1056	C901	
				U1430	U1344	C1269	G1197	U1116	G1057	U902	U749
				A1431	G1345	U1269		U1117	U1058	A903	
				C1432	G1346	C1270		U1118		C904	C752
				U1433	A1347	C1275	U1200	U1119	A1061	A977	
				U1434	C1348	A1276	A1201	A1120	A1062	C980	C755
				A1435	C1349	A1277	G1203	A1121	A1063	A981	A757
				A1436	A1503		A1204	G1122	A1064	U825	
				A1437	G1504		U1205	A1123			
				G1438		A1281	U1206	A1233	U1068	A983	
				U1439		G1282	U1207	G1124	G1069	C984	
				U1440		A1283	U1207	U1125	U1070	A915	
				A1441		A1284	A1208	G1126	U1071	U916	G761
				G1442		U1285	A1208	C1127	G1072	G917	A762
				A1443		G1286	U1209	G1128	A1073	G918	G763
				C1444		C1358	A1210	U1129	A1074	G919	G764
				U1445		C1288	U1211	U1075	G1076	C921	A765
				A1446		G1289	C1212	A1130	U1077	C922	C766
				G1446			U1213	U1078	G1078	C921	G768
				A1447		A1292	U1214	C1132	C1077	C922	
				U1448		U1293	G1217	A1133	G1078	A996	C771
				G1449		G1294	G1218	C1133	U1079	C998	C772
				U1450		A1295	U1219	C1135	A1080	C924	G773
				A1451		G1296	U1220	U1136	A1082	C925	A774
				G1452		U1297	A1221	A1083	U1082	U999	C775
						A1298	G1221	C1137	C1084	U1000	C776
				A1455		U1299	G1224	A1138	C1084	C1001	C777
				C1456		C1300		U1139	A1085	G928	U778
				A1457		U1385	G1302	U1140	G1086	U1004	C779
				A1458		C1301	C1227	U1141	C1087	G929	U779
				A1459		G1302	G1228	U1142	A1088	G1005	A780
				G1460		U1303	U1229	U1143		U931	U781
				A1461		A1304	U1230	G1144	A1088	C1006	U782
						G1305	U1230	C1145			
							G1231	G1146	A1092		
								A1146			
								G1147			
								U1148			
								G1149			
								U1150			
								U1151			
								U1152			

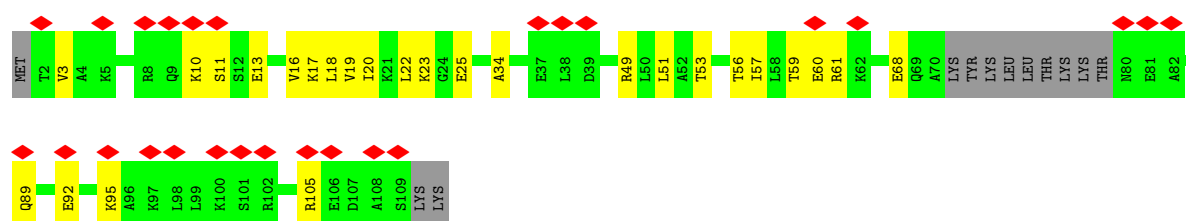
U2800	U2716	U2555	G2472	G2391	U2320	G2243	G2176	G2033	G1965	G1853	G1776
U2801	G2717	C2556	C2473	U2392	C2321	G2244	G2177	G2036	G1955	A1854	G1777
C2802	G2718	U2562	C2474	C2393	U2322	G2245	U2178	G2037	G1956	G1857	G1778
G	G2719	G2563	G2475	U2394	U2323	G2246	U2179	A2038	U1958	U1858	G1779
C		A2640	A2476	U2395	U2324	G2247	U2180	G2039	U1959	U1859	A1760
A	G2722	G2564	A2477	U2396	U2325	G2248	G2120	A2040	A1960	A1860	
A		G2478	G2478	G2397	G2326	G2249	A2121	A2041	A1961	A1861	G1763
G2807	G2727	C2565		U2398	U2327	A2249	U2181	A2042	U1962		
A2808	U2728	C2566	A2484	U2399	A2328	G2250	C2182	A2043	U1963	A1866	
A2809	A2729	G2568	U2485	U2401	U2329	U2251	U2183	A2044	C1964		
A2810		A2569	A2486	G2402	G2329	U2252	A2123	G2046	C1965		
G2811				C2403		U2253	A2124		C1966		
G2812				G2404	U2332	U2254	U2125	G2050			
A2813	G2735	A2574	C2491	U2333	G2333	U2255	A2126				
G2814	U2736	G2575	G2492	U2334	U2334	U2256	G2127	C2054	G1969	G1876	
G2815	G2737	A2580	G2493	A2335	A2335	U2257	U2128	A2056	C1970	C1877	
G2816	U2738	U2581	G2494	U2336	A2336	U2258	U2129	C2057	G1971	A1878	
G2817	G2739	G2582	A2495	U2337	U2337	U2259	U2130	G2058	C1972	A1879	
	U2740	U2583	G2496	G2338	G2338	G2260	G2131	G2059	U1973	G1880	
	A2741	G2584		U2339	U2339	G2261	A2132	A2061	A1977	G1881	
		A2585	U2499	U2340	U2340	G2262	G2133	G2062	U1978	U1801	
	U2742	G2586	U2500	G2341	U2341	C2266	A2134	G2063	U1979	G1802	
	U2743	U2587	U2501	U2342	U2342		G2135		G1980	U1803	
	A2744	G2588	G2502	A2343	A2343		A2136	A2067		A1804	
	G2745	U2589	G2503	G2344	G2344		U2137	G2068		U1805	
	A2746	G2590	A2504	U2345	U2345		G2138	G2069		G1806	
		G2591	A2505	G2346	G2346		U2139	C2070		G1807	
		U2592	C2506	U2347	U2347		G2140	C2071		C1808	
	G2751	G2593	C2507	G2348	G2348		A2141	G2072			
	G2752	C2594	U2508	U2349	G2349		U2142	C2073			
		A2595	G2509	G2350	U2350		G2143				
		U2596	G2510	U2351	U2351		U2144	G2074			
		G2597	U2511	U2352	U2352		U2145	A2077			
		C2598	U2512	A2353	G2353		U2146	A2078			
		G2599	U2513	A2354	U2354		U2147	G2079			
		G2600	U2514	C2355	C2355		U2148	C2080			
			G2515	U2356	U2356		U2149	U2081			
			G2516	U2357	U2357		U2150	U2082			
			G2517	U2358	U2358		U2151	A2097			
			A2521	U2359	U2359		U2152	G2004			
			U2522	G2360	G2360		U2153	G2005			
			C2523	U2361	U2361		U2154	A2010			
			U2524	G2362	A2362		U2155	G2011			
			U2525	U2363	C2363		U2156	A2012			
			C2526	U2364	A2364		U2157	C2013			
			A2527	U2365	U2365		U2158	G2017			
			U2528	A2366	A2366		U2159	U2018			
			C2529				U2160	G2019			
				G2369	G2369		U2161	A2020			
				U2370	U2370		U2162	G2024			
				G2371	U2371		U2163	C2025			
				U2372	C2372		U2164	A2026			
				G2373	G2373		U2165	G2027			
				U2374	U2374		U2166	U2028			
				G2375	U2375		U2167	G2029			
				U2376	U2376		U2168	A2030			
				G2377	U2377		U2169	G2031			
				U2378	U2378		U2170	G2032			
				G2379	U2379		U2171				
				U2380	U2380		U2172				
				G2381	U2381		U2173				
				U2382	U2382		U2174				
				G2383	U2383		U2175				
				U2384	U2384						
				G2385	U2385						
				U2386	U2386						
				G2387	U2387						
				U2388	U2388						
				G2389	U2389						
				U2390	U2390						
				G2391	U2391						
				U2392	U2392						
				G2393	U2393						
				U2394	U2394						
				G2395	U2395						
				U2396	U2396						
				G2397	U2397						
				U2398	U2398						
				G2399	U2399						
				U2400	U2400						
				G2401	U2401						
				U2402	U2402						
				G2403	U2403						
				U2404	U2404						
				G2405	U2405						
				U2406	U2406						
				G2407	U2407						
				U2408	U2408						
				G2409	U2409						
				U2410	U2410						
				G2411	U2411						
				U2412	U2412						
				G2413	U2413						
				U2414	U2414						
				G2415	U2415						
				U2416	U2416						
				G2417	U2417						
				U2418	U2418						
				G2419	U2419						
				U2420	U2420						
				G2421	U2421						
				U2422	U2422						
				G2423	U2423						
				U2424	U2424						
				G2425	U2425						
				U2426	U2426						
				G2427	U2427						
				U2428	U2428						
				G2429	U2429						
				U2430	U2430						
				G2431	U2431						
				U2432	U2432						
				G2433	U2433						
				U2434	U2434						
				G2435	U2435						
				U2436	U2436						
				G2437	U2437						
				U2438	U2438						
				G2439	U2439						
				U2440	U2440						
				G2441	U2441						
				U2442	U2442						
				G2443	U2443						
				U2444	U2444						
				G2445	U2445						
				U2446	U2446						
				G2447	U2447						
				U2448	U2448						
				G2449	U2449						
				U2450	U2450						
				G2451	U2451						
				U2452	U2452						
				G2453	U2453						
				U2454	U2454						
				G2455	U2455						
				U2456	U2456						
				G2457	U2457						
				U2458	U2458						
				G2459	U2459						
				U2460	U2460						
				G2461	U2461						
				U2462	U2462						
				G2463	U2463						
				U2464	U2464						
				G2465	U2465						
				U2466	U2466						
				G2467	U2467						
				U2468	U2468						
				G2469	U2469						
				U2470	U2470						
				G2471	U2471						
				U2472	U2472						
				G2473	U2473						
				U2474	U2474						
				G2475	U2475						
				U2476	U2476						
				G2477	U2477						
				U2478	U2478						
				G2479	U2479						
				U2480	U2480						
				G2481	U2481						
				U2482	U2482						
				G2483	U2483						
				U2484	U2484						
				G2485	U2485						
				U2486	U2486						
				G2487	U2487						
				U2488	U2488						



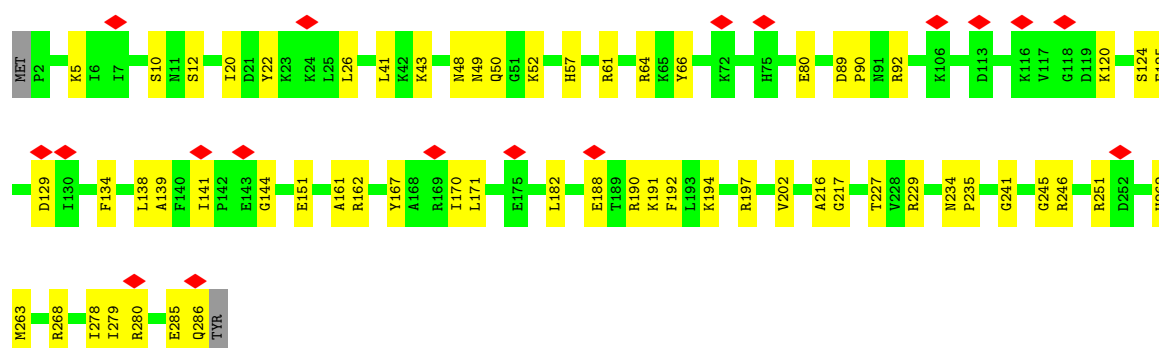
• Molecule 2: 5S ribosomal RNA



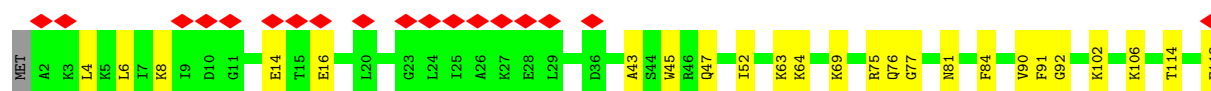
• Molecule 3: 50S ribosomal protein L29

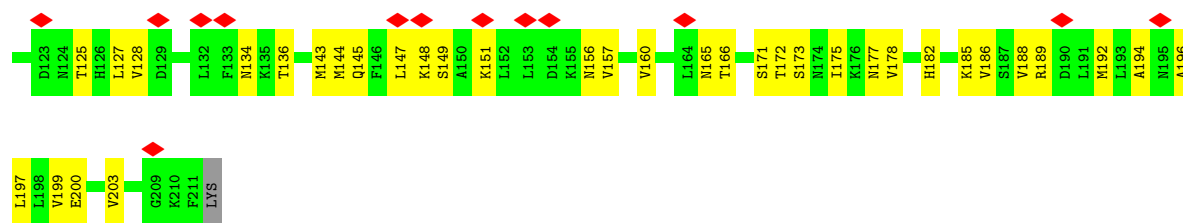


• Molecule 4: 50S ribosomal protein L2

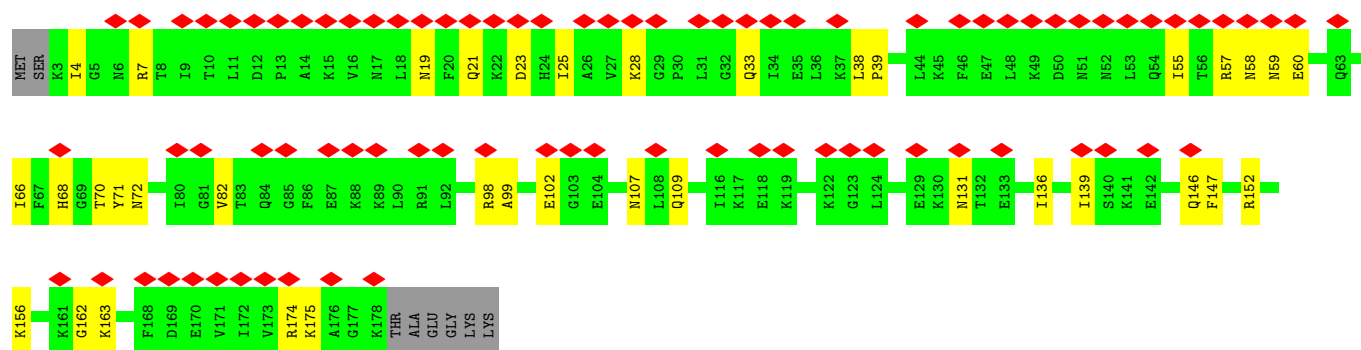
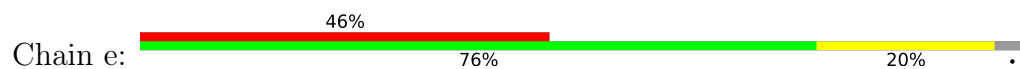


• Molecule 5: 50S ribosomal protein L4

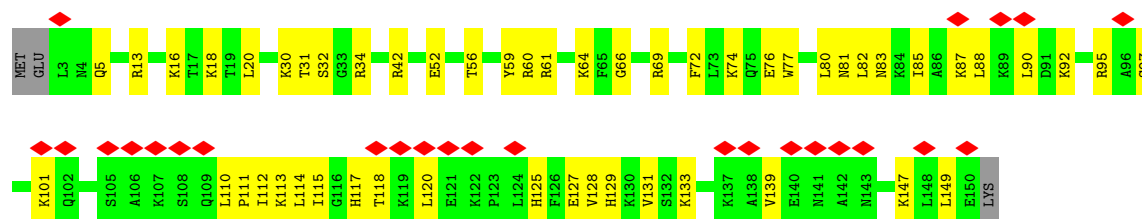




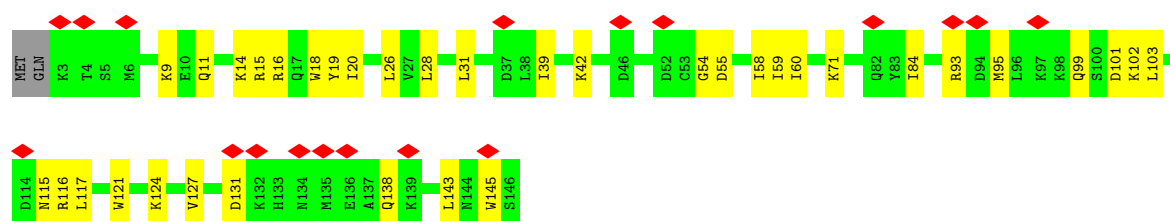
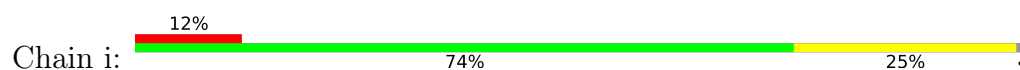
• Molecule 6: 50S ribosomal protein L6



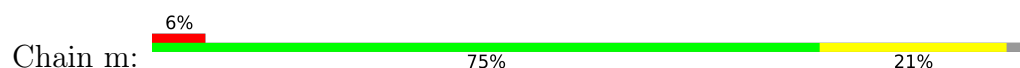
• Molecule 7: 50S ribosomal protein L15

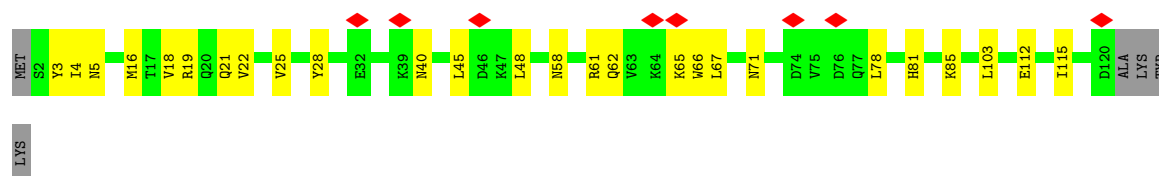


• Molecule 8: 50S ribosomal protein L13

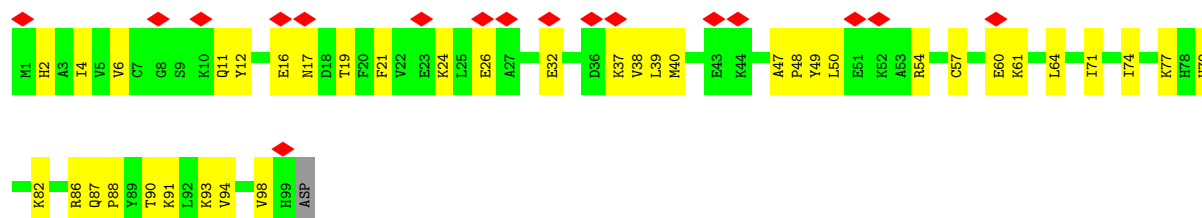


• Molecule 9: 50S ribosomal protein L17

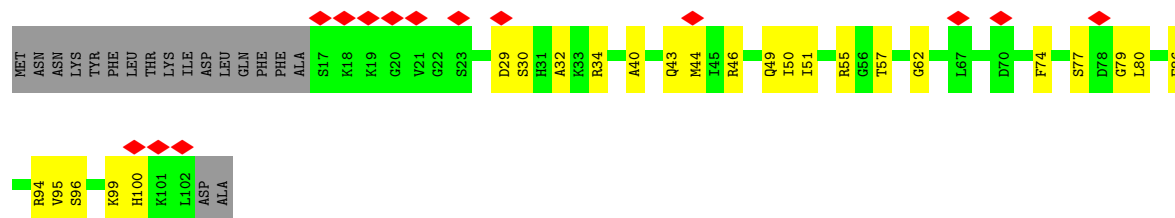




- Molecule 10: 50S ribosomal protein L21



- Molecule 11: 50S ribosomal protein L27



- Molecule 12: 50S ribosomal protein L32

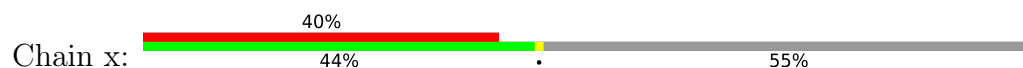


- Molecule 13: 50S ribosomal protein L34

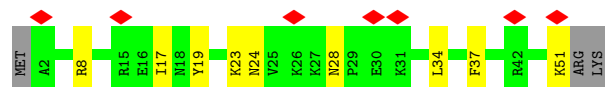
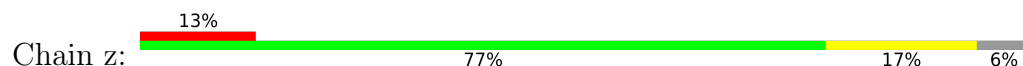


- Molecule 14: 50S ribosomal protein L36

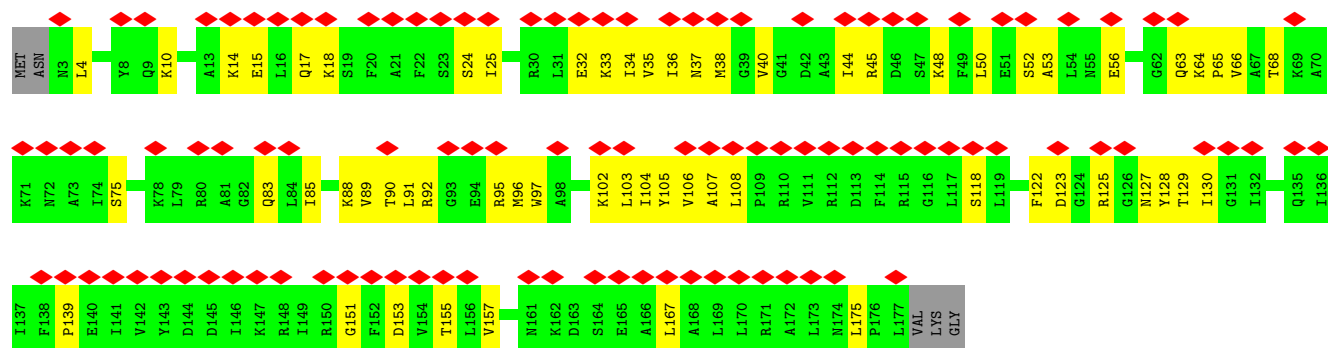




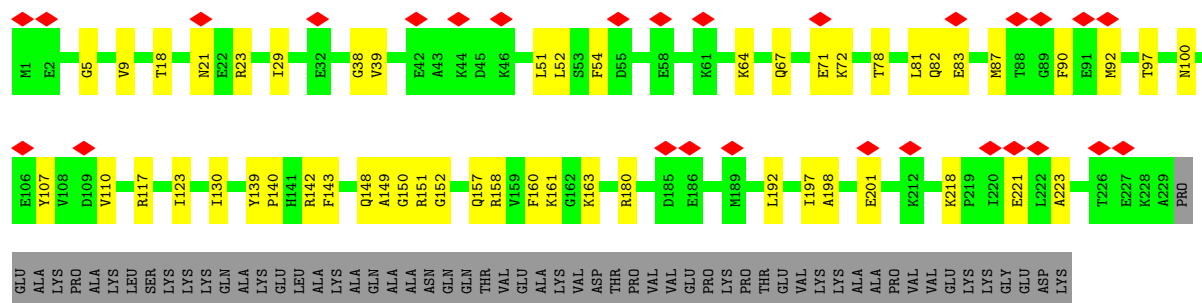
- Molecule 20: 50S ribosomal protein L33 1



- Molecule 21: 50S ribosomal protein L5



- Molecule 22: 50S ribosomal protein L3

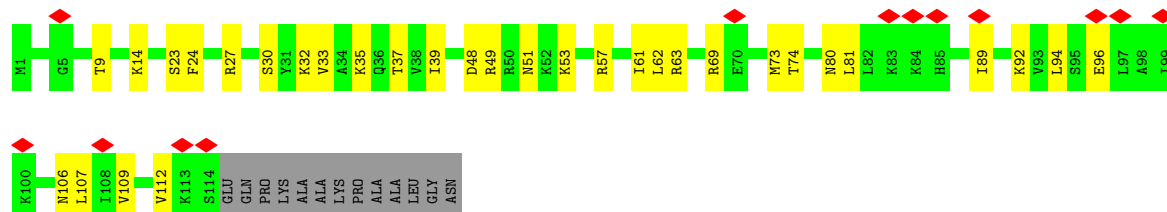


- Molecule 23: 50S ribosomal protein L16

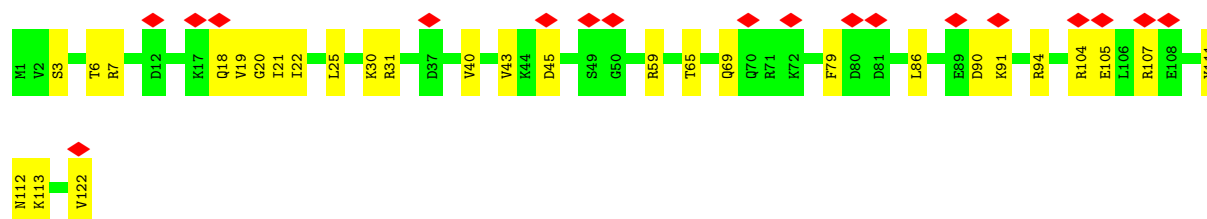
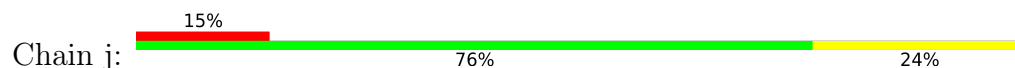




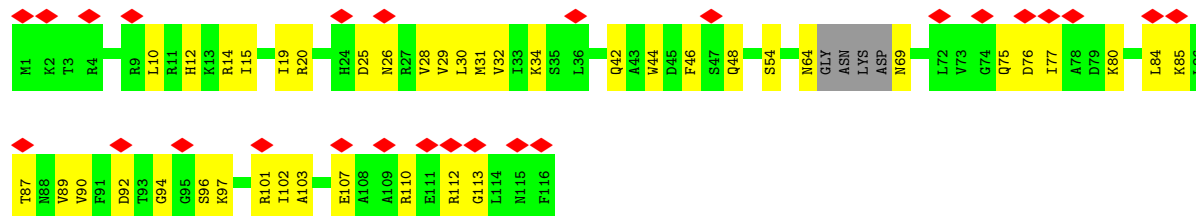
- Molecule 24: 50S ribosomal protein L20



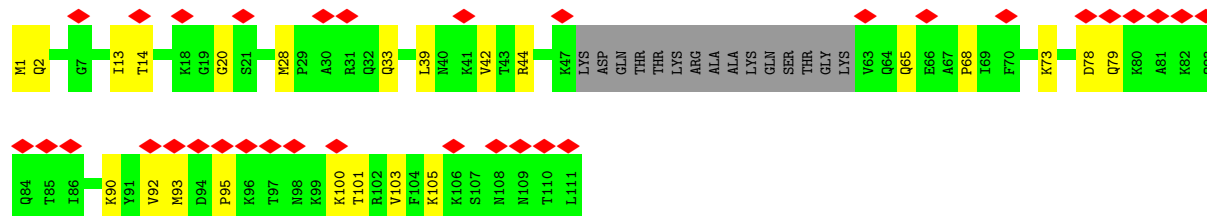
- Molecule 25: 50S ribosomal protein L14



- Molecule 26: 50S ribosomal protein L18

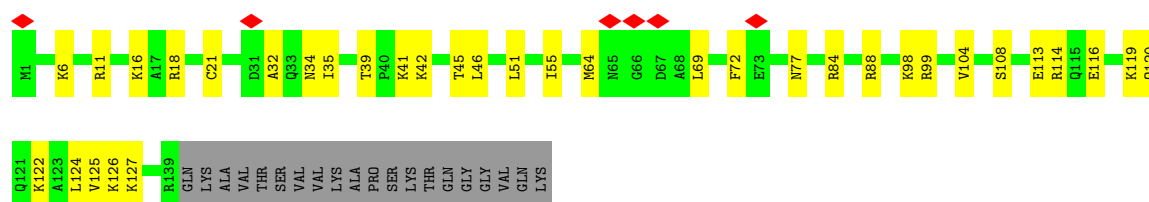


- Molecule 27: 50S ribosomal protein L24



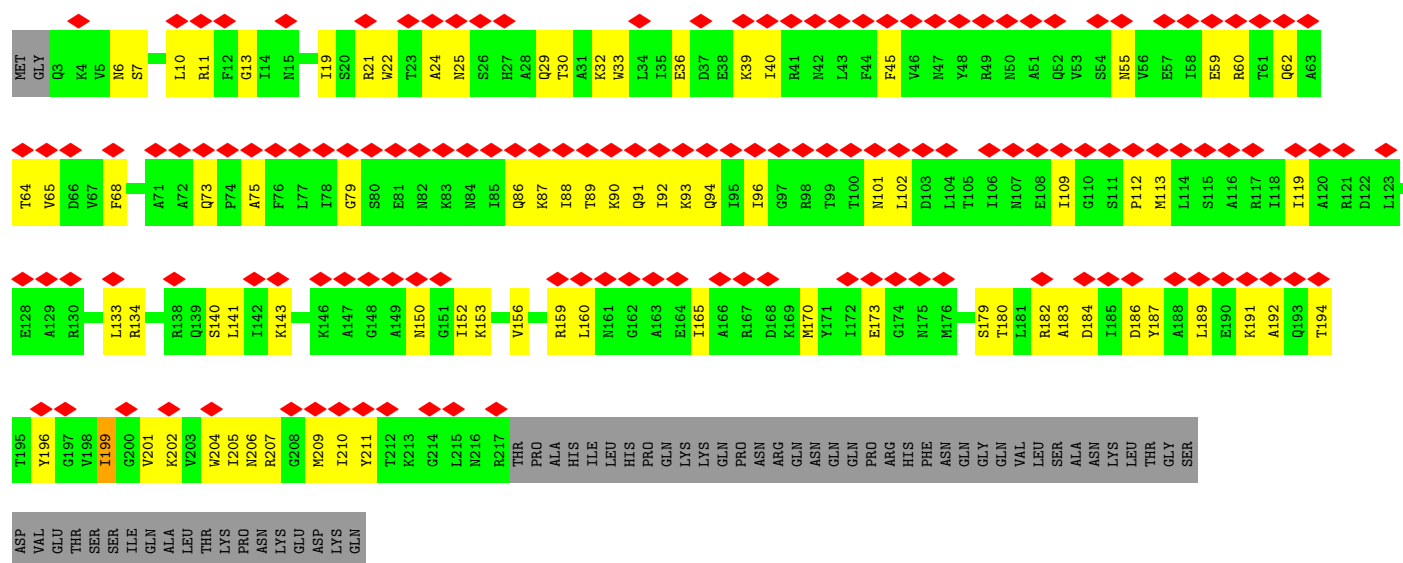
- Molecule 28: 50S ribosomal protein L22

Chain r: 

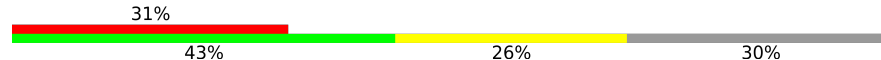


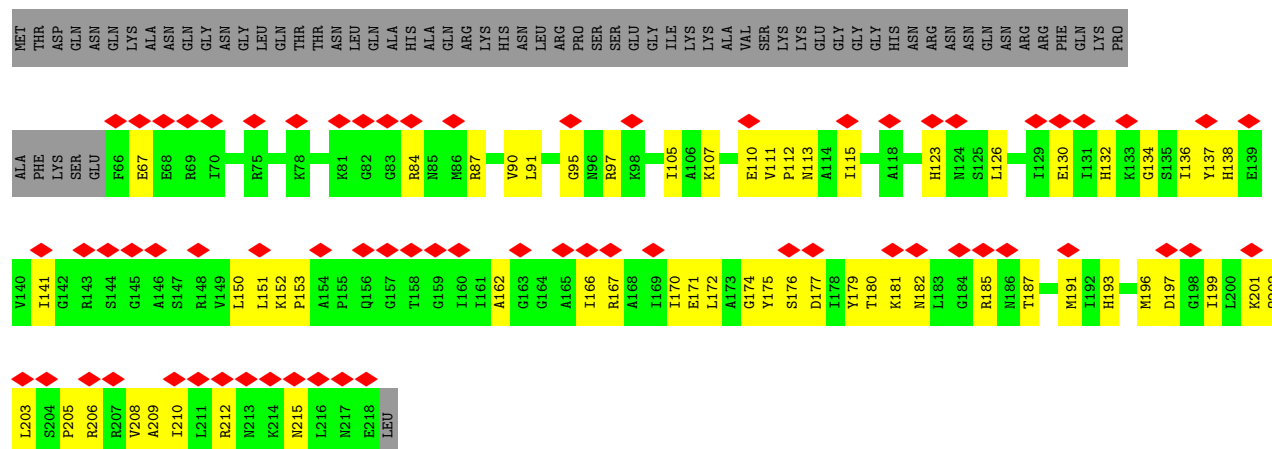
• Molecule 29: 30S ribosomal protein S3

Chain B: 

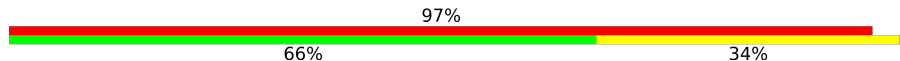


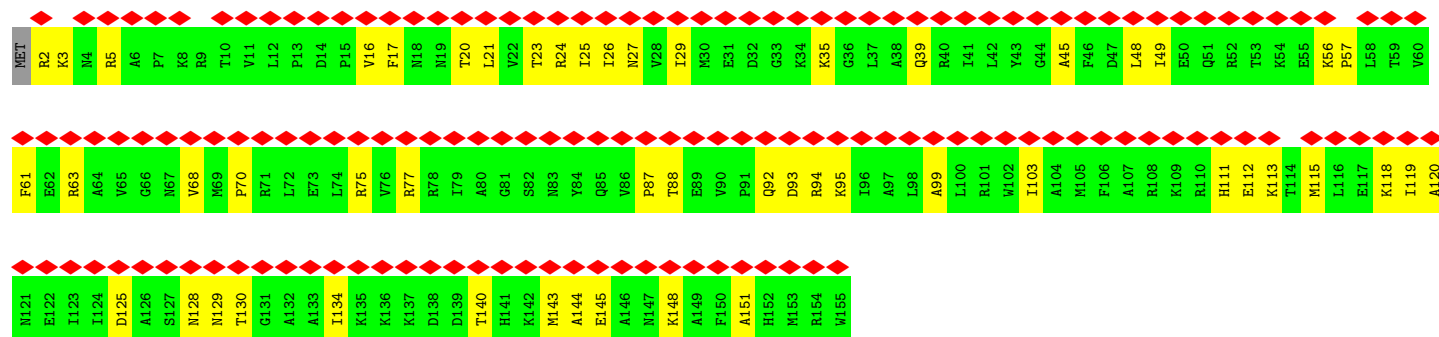
• Molecule 30: 30S ribosomal protein S5

Chain D: 

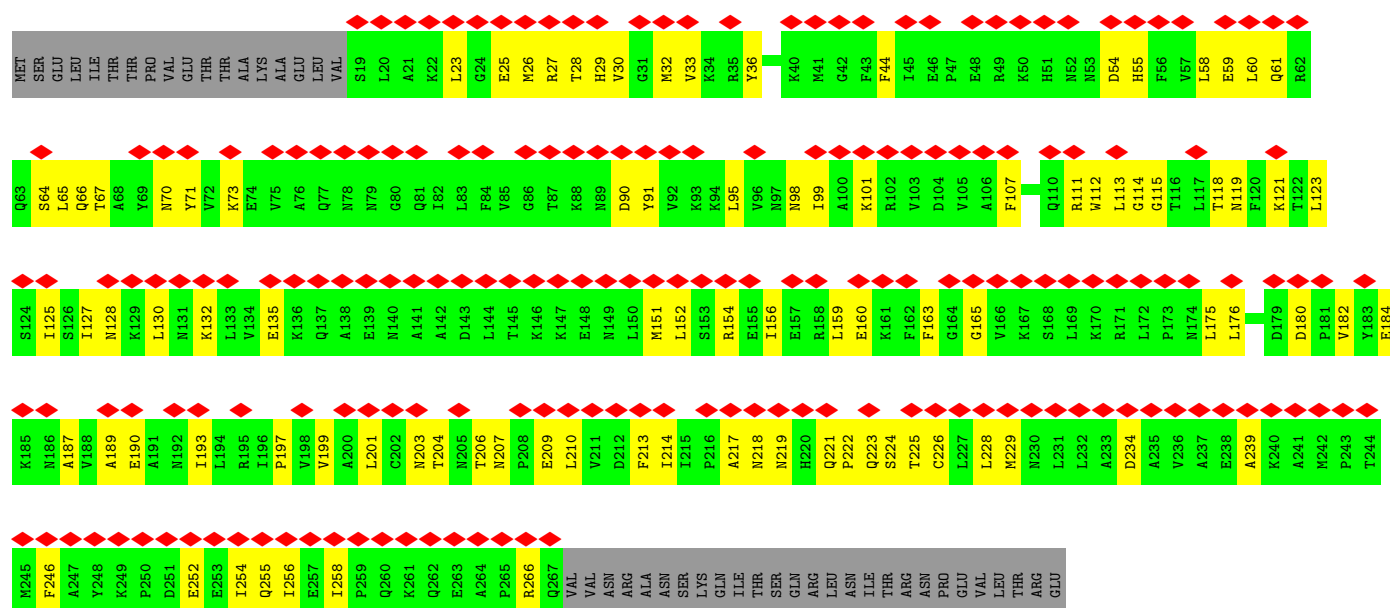


• Molecule 31: 30S ribosomal protein S7

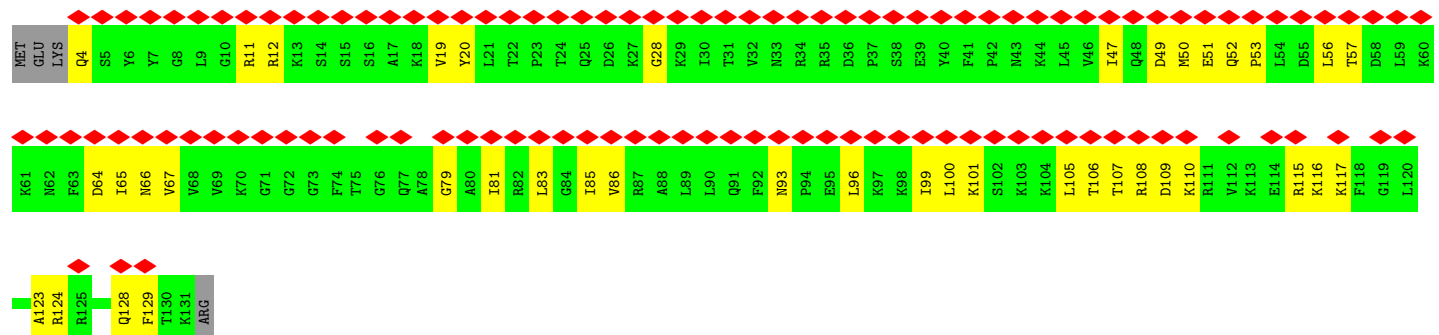
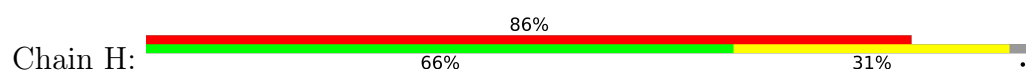
Chain F: 



• Molecule 32: 30S ribosomal protein S2

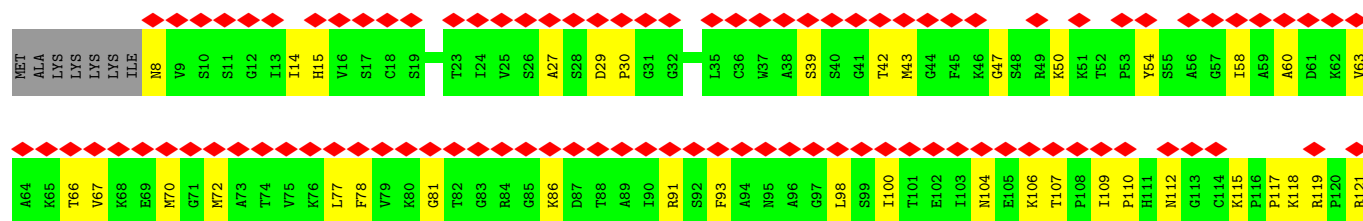


• Molecule 33: 30S ribosomal protein S9

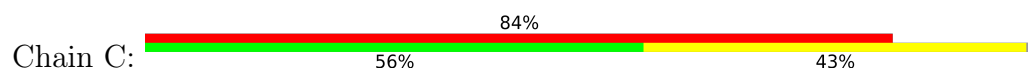


• Molecule 34: 30S ribosomal protein S11

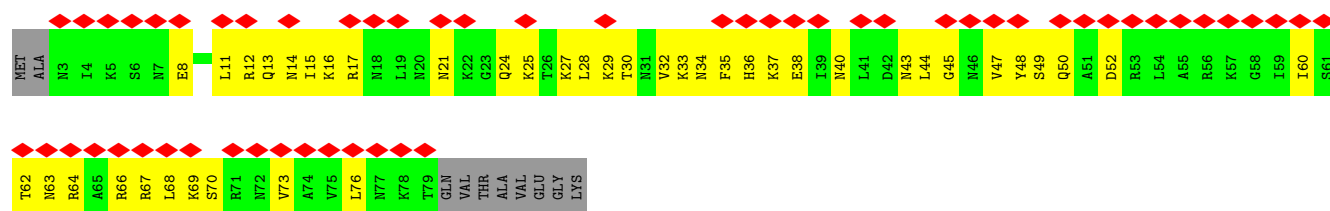




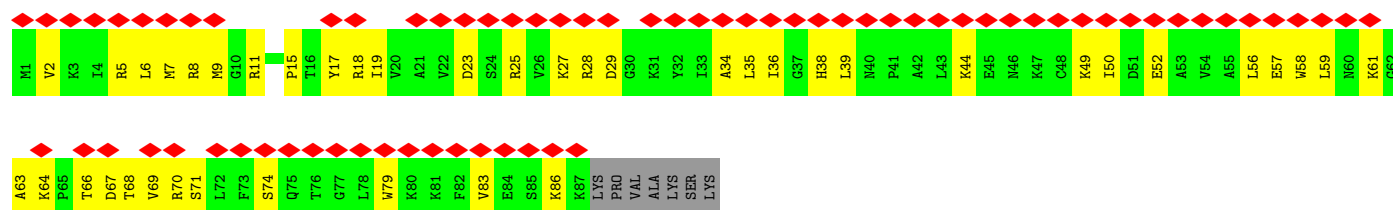
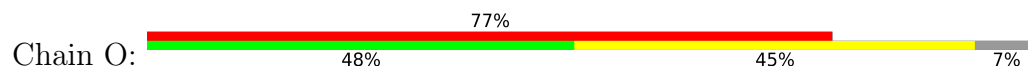
• Molecule 35: 30S ribosomal protein S4



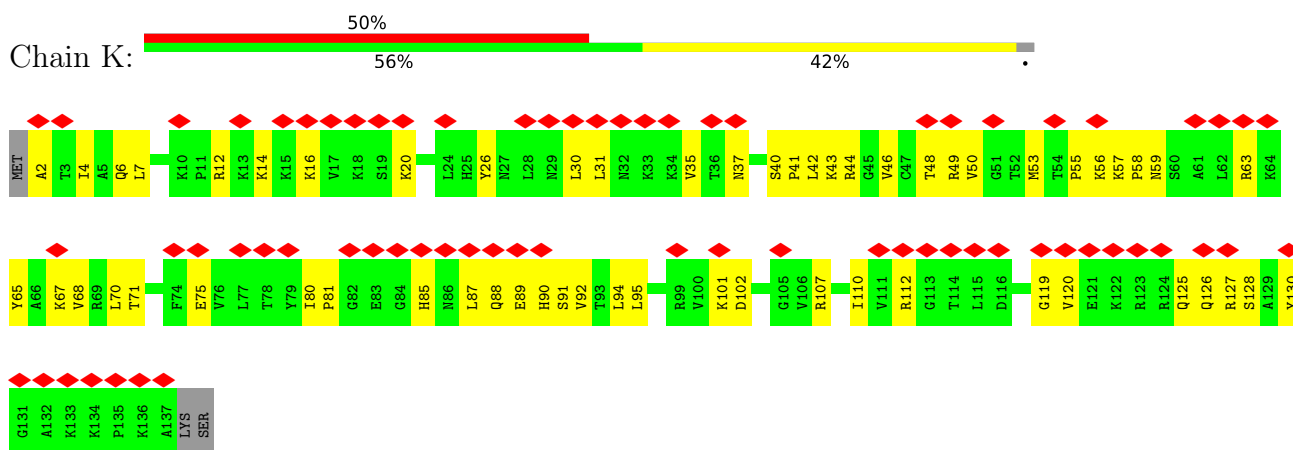
• Molecule 36: 30S ribosomal protein S20



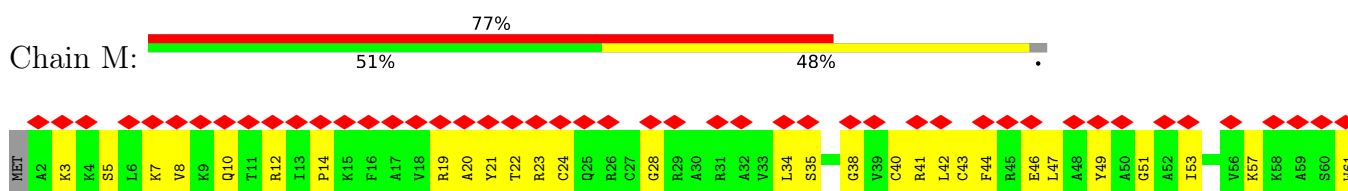
• Molecule 37: 30S ribosomal protein S16



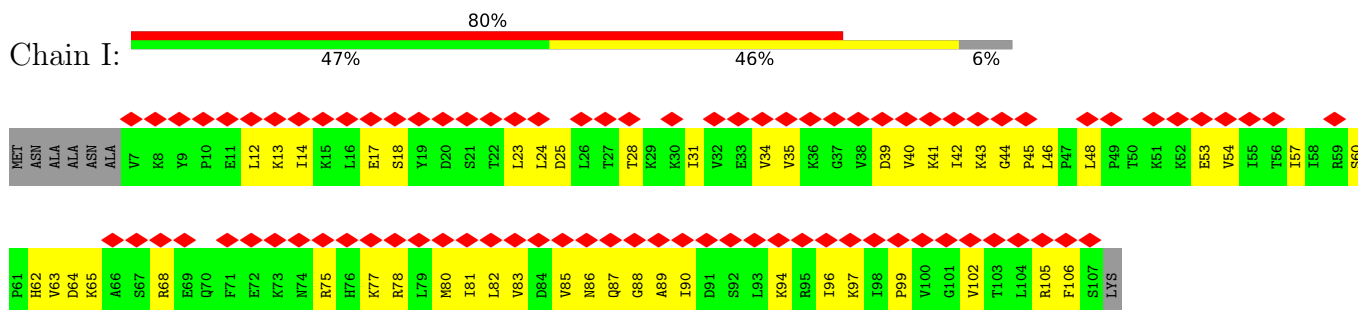
• Molecule 38: 30S ribosomal protein S12



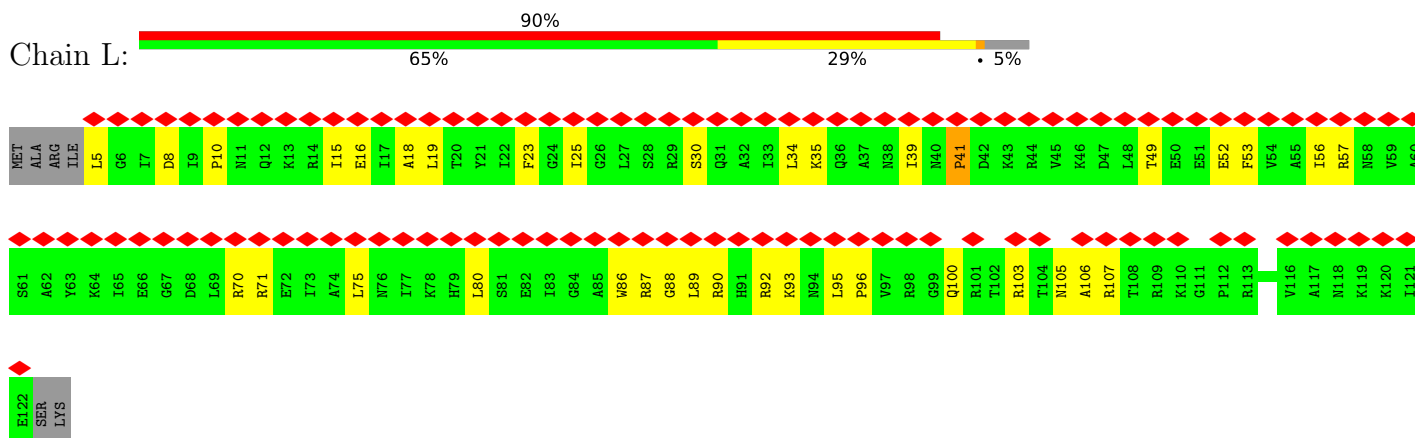
- Molecule 39: 30S ribosomal protein S14 type Z



- Molecule 40: 30S ribosomal protein S10

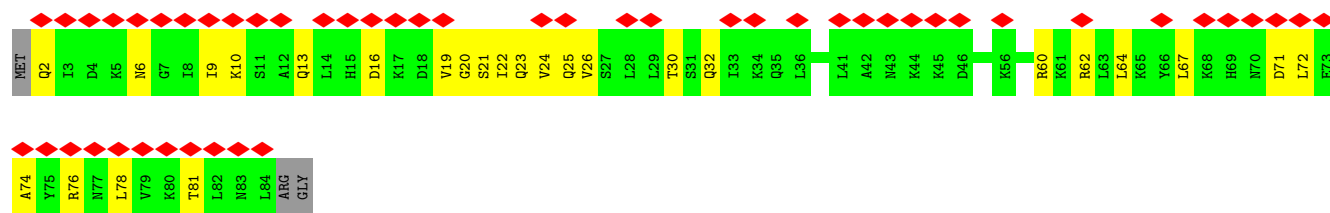


- Molecule 41: 30S ribosomal protein S13

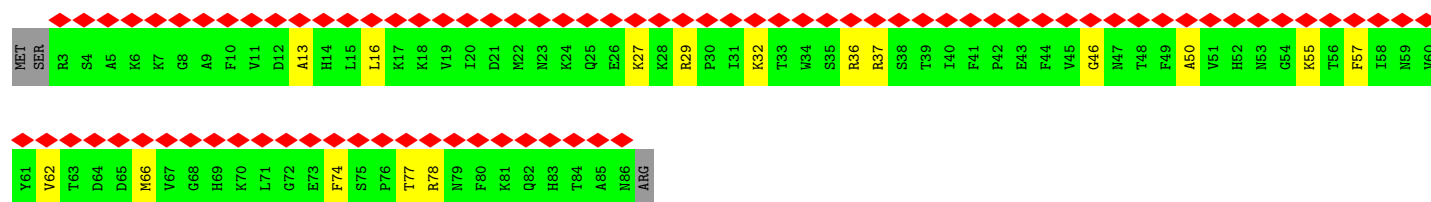
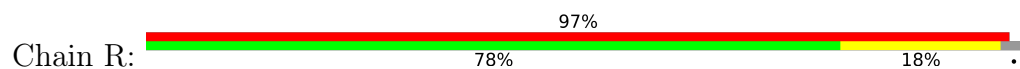


- Molecule 42: 30S ribosomal protein S15

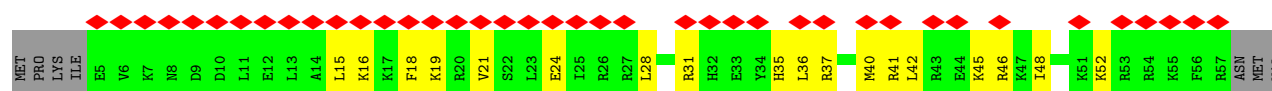




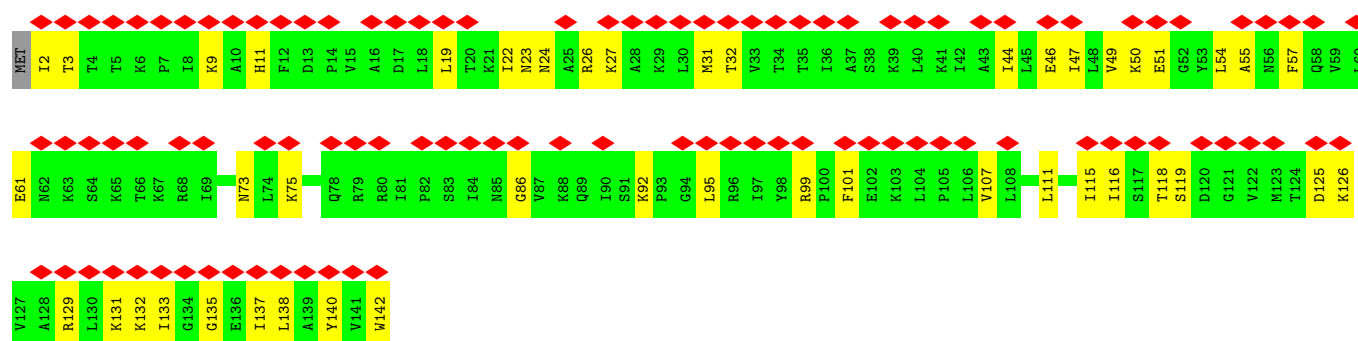
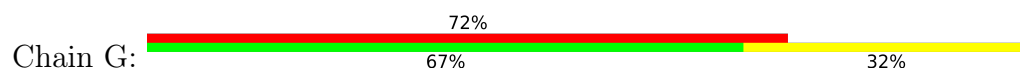
• Molecule 43: 30S ribosomal protein S19



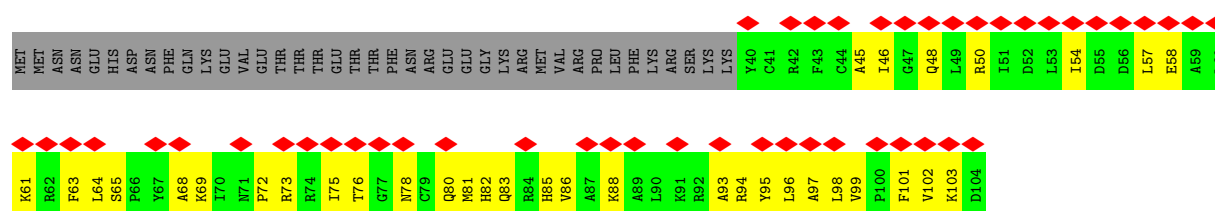
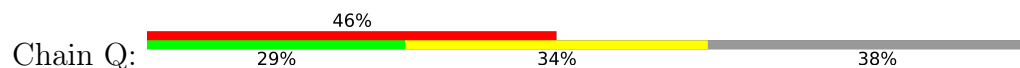
• Molecule 44: 30S ribosomal protein S21



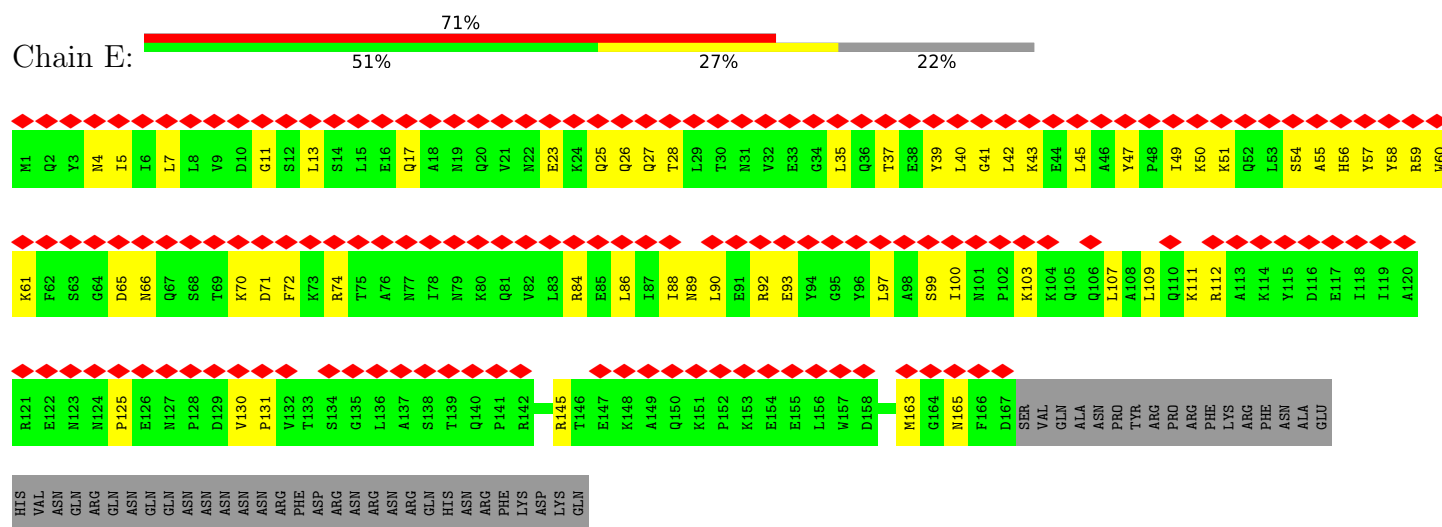
• Molecule 45: 30S ribosomal protein S8



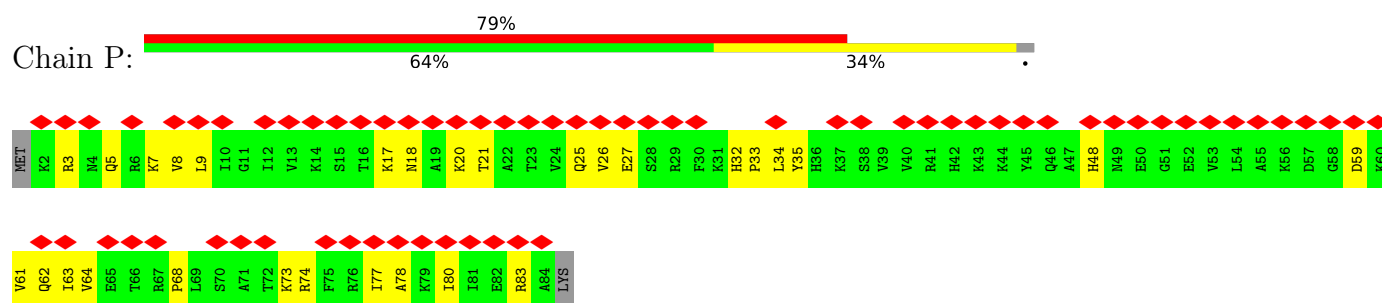
• Molecule 46: 30S ribosomal protein S18



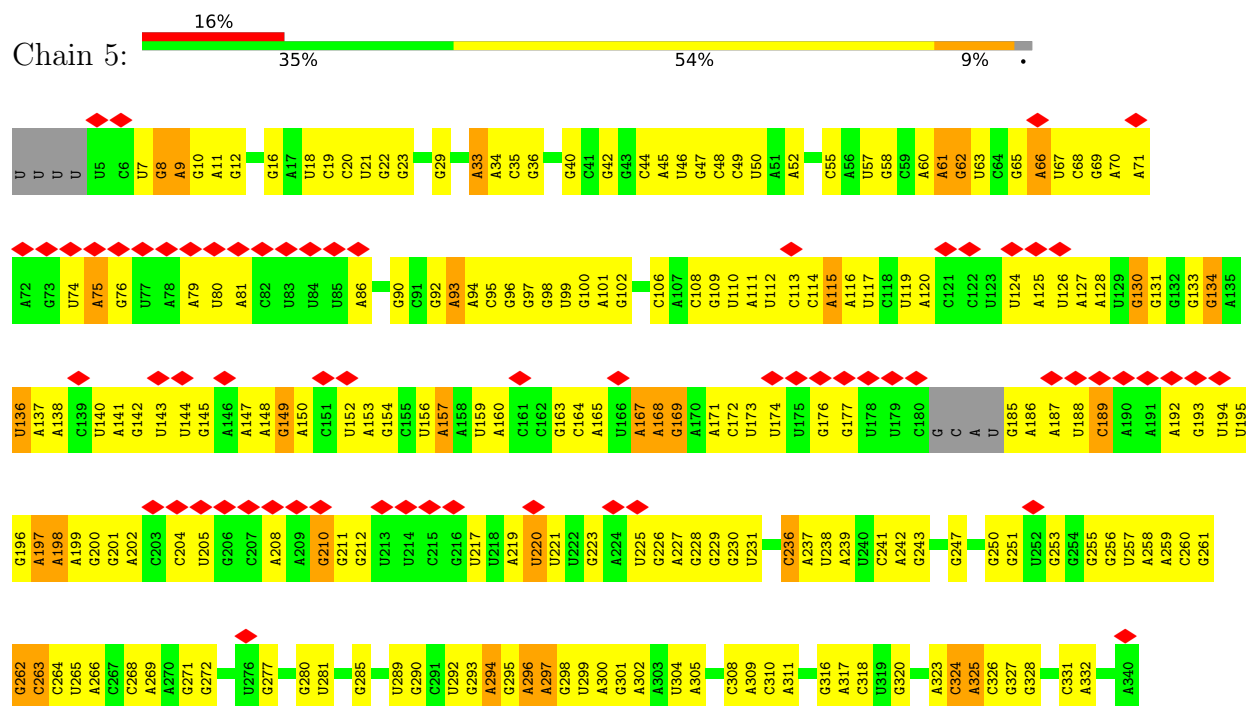
- Molecule 47: 30S ribosomal protein S6

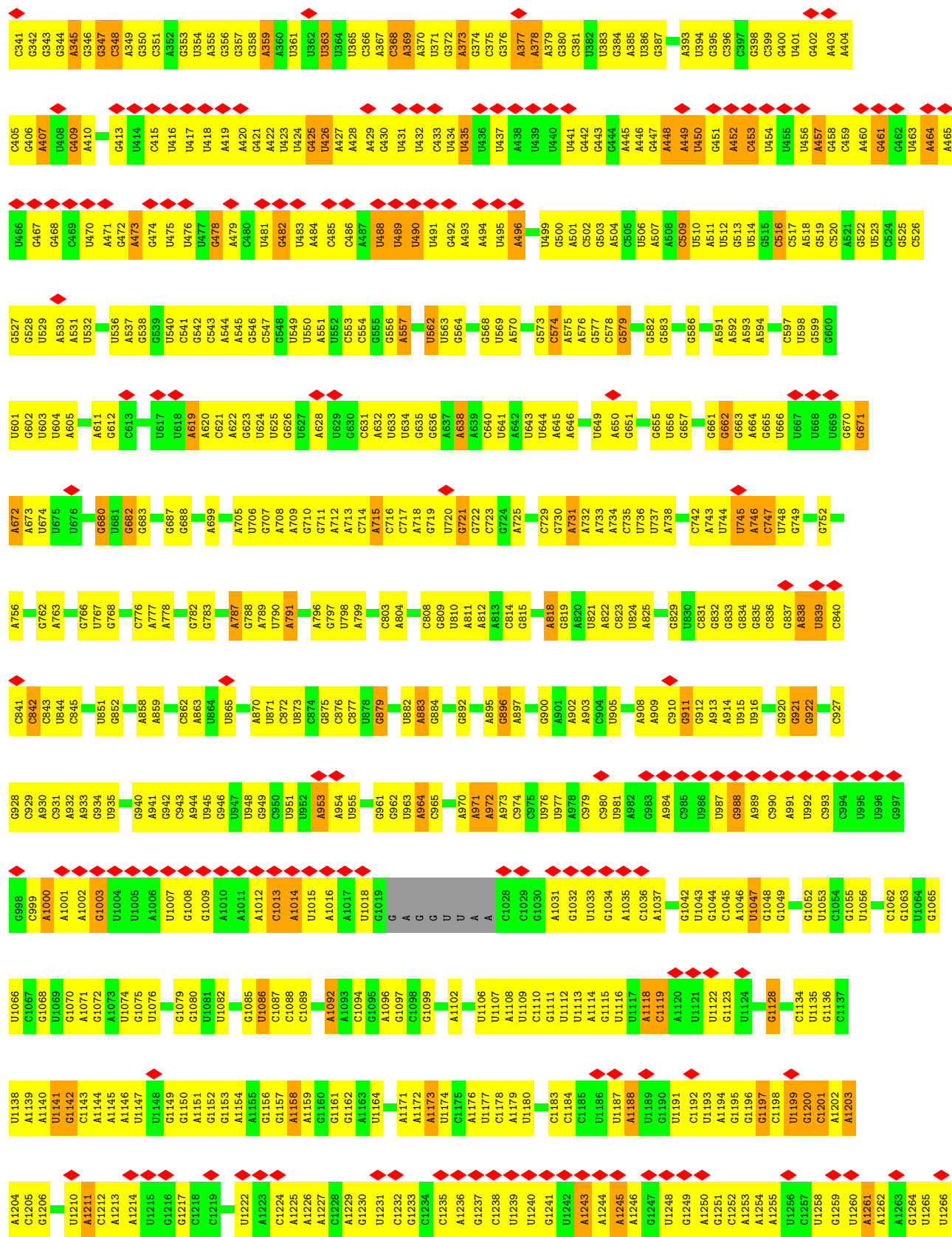


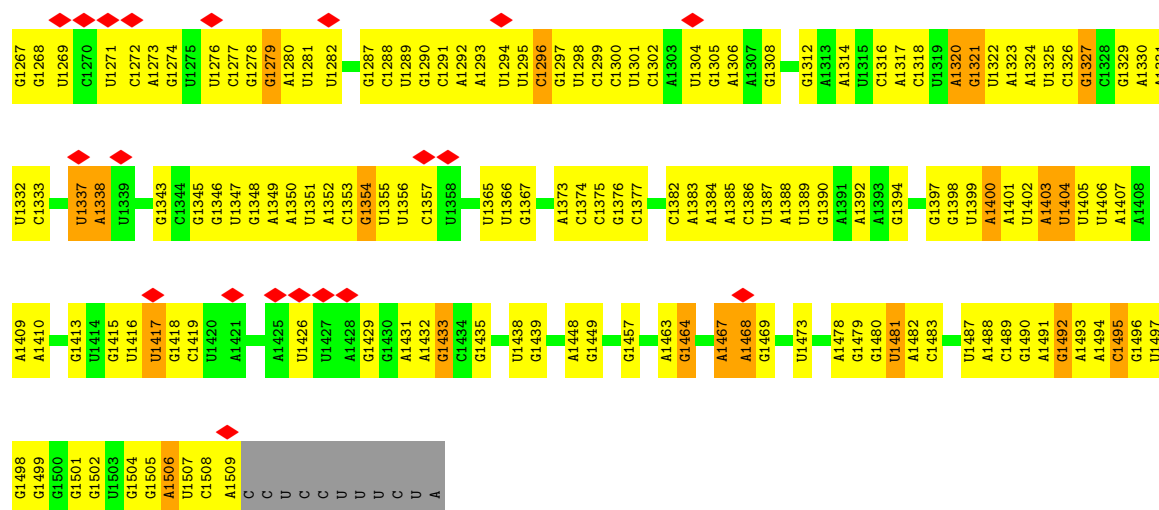
- Molecule 48: 30S ribosomal protein S17



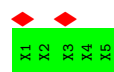
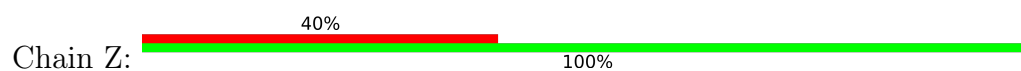
- Molecule 49: 16S ribosomal RNA



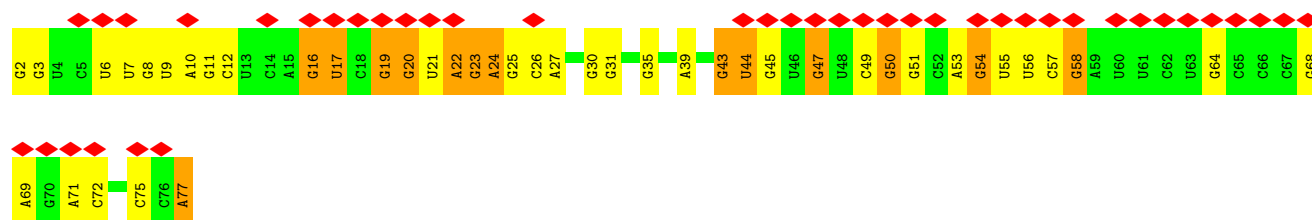
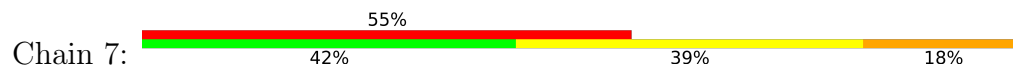




- Molecule 50: nascent peptide



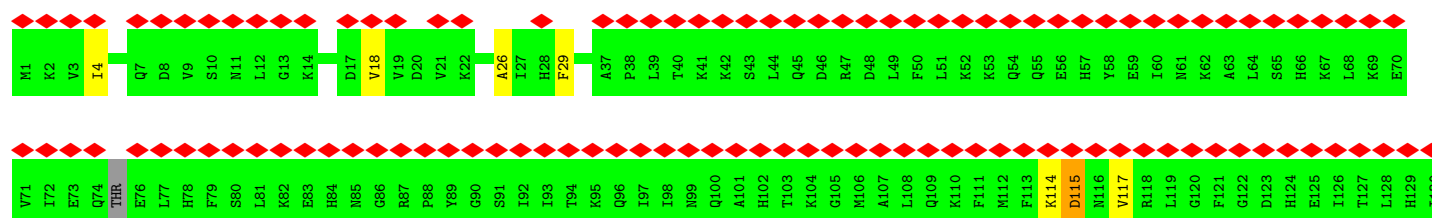
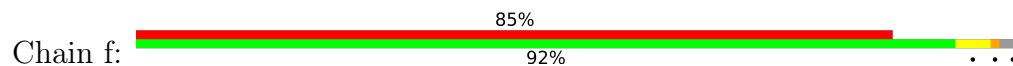
- Molecule 51: tRNA-Phe

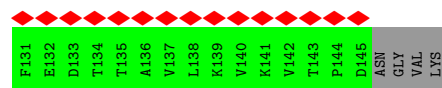


- Molecule 52: mRNA

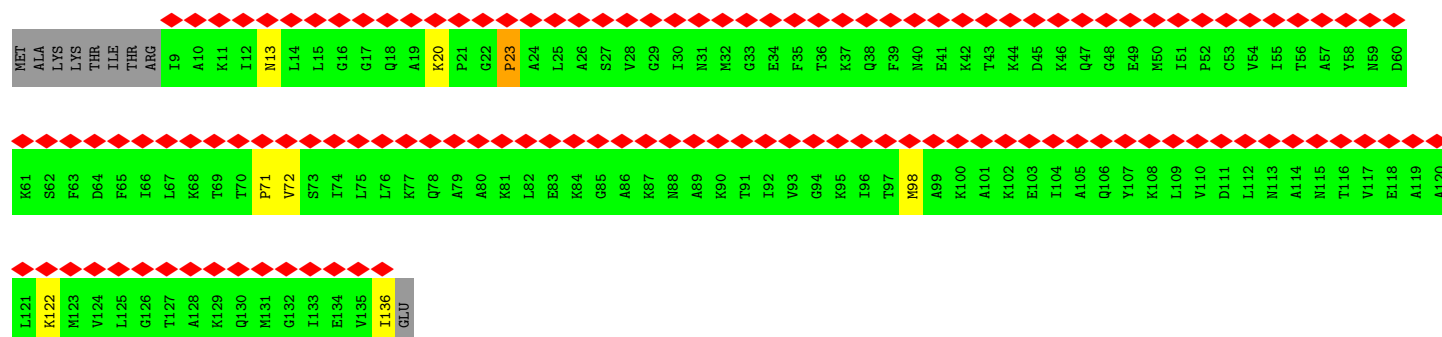
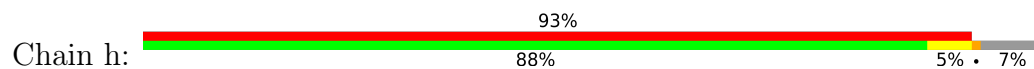


- Molecule 53: 50S ribosomal protein L9

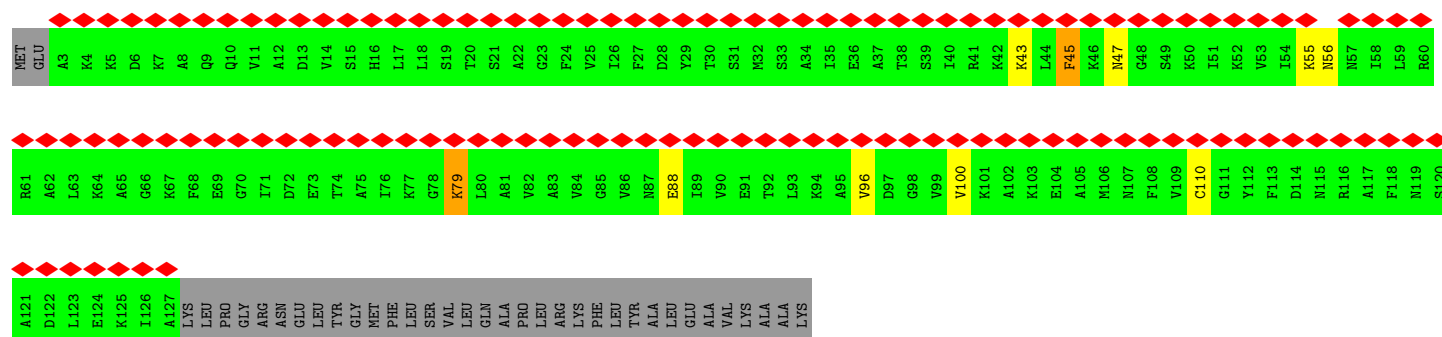
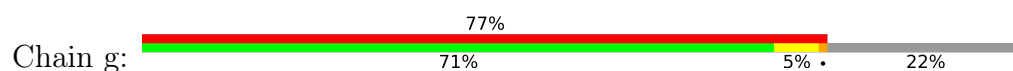




• Molecule 54: 50S ribosomal protein L11



• Molecule 55: 50S ribosomal protein L10



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	77539	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	3.2	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3750	Depositor
Magnification	81000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.009	Depositor
Minimum map value	-0.002	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.000	Depositor
Recommended contour level	0.0024	Depositor
Map size (Å)	571.368, 571.368, 571.368	wwPDB
Map dimensions	336, 336, 336	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.7004999, 1.7004999, 1.7004999	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	3	0.14	0/69100	0.30	9/107749 (0.0%)
2	4	0.12	0/2511	0.29	0/3910
3	w	0.17	0/806	0.47	0/1080
4	a	0.15	0/2241	0.38	0/3013
5	c	0.16	0/1639	0.47	0/2209
6	e	0.13	0/1373	0.32	0/1854
7	k	0.25	0/1155	0.47	0/1541
8	i	0.15	0/1180	0.38	0/1585
9	m	0.14	0/972	0.39	0/1308
10	q	0.16	0/826	0.45	0/1109
11	u	0.16	0/649	0.42	0/867
12	y	0.16	0/440	0.47	0/582
13	0	0.14	0/380	0.36	0/501
14	2	0.18	0/305	0.40	0/401
15	1	0.14	0/484	0.39	0/637
16	o	0.18	0/905	0.43	0/1211
17	s	0.15	0/726	0.40	0/981
18	v	0.14	0/510	0.39	0/684
19	x	0.14	0/217	0.31	0/301
20	z	0.14	0/412	0.42	0/547
21	d	0.18	0/1264	0.48	0/1719
22	b	0.14	0/1791	0.39	0/2408
23	l	0.17	0/1082	0.41	0/1456
24	p	0.15	0/955	0.38	0/1271
25	j	0.16	0/953	0.49	0/1275
26	n	0.18	0/861	0.45	0/1156
27	t	0.14	0/712	0.38	0/954
28	r	0.16	0/1077	0.39	0/1441
29	B	0.29	1/1705 (0.1%)	0.45	0/2304
30	D	0.16	0/1168	0.43	0/1568
31	F	0.19	0/1250	0.51	0/1682
32	A	0.17	0/1951	0.44	0/2652

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	H	0.16	0/1009	0.46	0/1354
34	J	0.23	0/843	0.49	2/1136 (0.2%)
35	C	0.19	0/1635	0.48	0/2202
36	S	0.24	0/631	0.63	0/838
37	O	0.15	0/703	0.41	0/945
38	K	0.17	0/1073	0.51	0/1445
39	M	0.16	0/482	0.40	0/643
40	I	0.18	0/814	0.48	0/1096
41	L	0.24	0/933	0.61	2/1254 (0.2%)
42	N	0.16	0/679	0.36	0/907
43	R	0.17	0/670	0.44	0/904
44	T	0.29	0/442	0.58	0/582
45	G	0.16	0/1119	0.45	0/1508
46	Q	0.19	0/545	0.46	0/730
47	E	0.20	0/1229	0.44	0/1670
48	P	0.14	0/684	0.43	0/913
49	5	0.12	0/35777	0.26	0/55776
51	7	0.13	0/1808	0.33	0/2817
52	Y	0.83	3/194 (1.5%)	0.42	0/298
53	f	0.66	0/711	1.06	1/988 (0.1%)
54	h	1.01	0/629	1.69	2/873 (0.2%)
55	g	1.21	0/616	1.76	7/856 (0.8%)
All	All	0.18	4/154826 (0.0%)	0.37	23/231691 (0.0%)

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	B	199	ILE	C-N	9.42	1.38	1.33
52	Y	2	U	C1'-N1	6.67	1.58	1.48
52	Y	9	U	C1'-N1	6.40	1.58	1.48
52	Y	1	U	C1'-N1	6.21	1.57	1.48

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	L	41	PRO	CA-N-CD	-9.17	99.16	112.00
1	3	1211	U	C2'-C3'-O3'	7.98	125.67	113.70
41	L	41	PRO	N-CD-CG	-7.66	91.71	103.20
1	3	1209	U	C2'-C3'-O3'	7.29	120.44	109.50
53	f	117	VAL	N-CA-C	6.91	117.96	108.84
55	g	100	VAL	CB-CA-C	-6.79	102.98	112.14
1	3	1571	G	C3'-C2'-O2'	6.60	124.50	114.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	3	1206	U	C4'-C3'-O3'	6.57	122.85	113.00
55	g	56	ASN	CB-CA-C	-6.53	99.96	110.79
1	3	1207	U	C3'-C2'-O2'	-6.40	104.99	114.60
34	J	119	ARG	CA-CB-CG	5.98	126.06	114.10
54	h	23	PRO	N-CA-C	5.93	124.70	112.47
1	3	1203	G	C2'-C3'-O3'	-5.90	104.85	113.70
34	J	119	ARG	CG-CD-NE	5.84	124.85	112.00
1	3	1205	U	C3'-C2'-O2'	5.83	119.44	110.70
1	3	1210	A	C4'-C3'-O3'	-5.75	104.38	113.00
55	g	79	LYS	CA-C-N	-5.50	113.80	122.76
55	g	79	LYS	C-N-CA	-5.50	113.80	122.76
55	g	56	ASN	N-CA-C	5.43	117.20	111.28
55	g	96	VAL	CA-C-N	5.33	127.42	120.28
55	g	96	VAL	C-N-CA	5.33	127.42	120.28
54	h	23	PRO	O-C-N	-5.26	115.53	122.64
1	3	1570	A	C2'-C3'-O3'	-5.23	105.86	113.70

There are no chirality outliers.

There are no planarity outliers.

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	3	61690	0	30961	1261	0
2	4	2245	0	1135	33	0
3	w	798	0	838	19	0
4	a	2199	0	2248	52	0
5	c	1613	0	1676	46	0
6	e	1349	0	1373	29	0
7	k	1138	0	1223	43	0
8	i	1158	0	1176	31	0
9	m	957	0	1008	19	0
10	q	809	0	852	31	0
11	u	641	0	650	19	0
12	y	436	0	441	17	0
13	0	377	0	422	12	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	2	303	0	347	9	0
15	1	477	0	530	12	0
16	o	895	0	932	33	0
17	s	714	0	785	12	0
18	v	504	0	542	9	0
19	x	218	0	90	1	0
20	z	408	0	436	6	0
21	d	1244	0	1160	50	0
22	b	1758	0	1797	47	0
23	l	1057	0	1088	31	0
24	p	941	0	1017	27	0
25	j	944	0	1019	24	0
26	n	853	0	873	28	0
27	t	706	0	726	18	0
28	r	1068	0	1150	27	0
29	B	1682	0	1733	59	0
30	D	1153	0	1231	42	0
31	F	1231	0	1285	41	0
32	A	1917	0	1894	69	0
33	H	993	0	1023	35	0
34	J	828	0	855	31	0
35	C	1605	0	1603	75	0
36	S	629	0	681	39	0
37	O	690	0	726	35	0
38	K	1055	0	1124	48	0
39	M	473	0	505	31	0
40	I	803	0	876	44	0
41	L	922	0	957	28	0
42	N	673	0	730	20	0
43	R	654	0	629	14	0
44	T	439	0	467	13	0
45	G	1103	0	1218	34	0
46	Q	535	0	559	37	0
47	E	1211	0	1108	49	0
48	P	675	0	728	25	0
49	5	31952	0	16055	835	0
50	Z	26	0	8	0	0
51	7	1618	0	821	38	0
52	Y	177	0	92	5	0
53	f	713	0	313	3	0
54	h	630	0	309	12	0
55	g	617	0	308	7	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	3	24	0	0	0	0
56	y	1	0	0	0	0
57	2	1	0	0	0	0
57	M	1	0	0	0	0
57	Q	1	0	0	0	0
57	y	1	0	0	0	0
57	z	1	0	0	0	0
All	All	142534	0	94333	3200	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 14.

All (3200) 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)
51:7:35:G:H1	52:Y:5:U:H3	1.00	1.00
1:3:1095:U:OP2	54:h:72:VAL:N	1.95	0.98
49:5:940:G:H1	49:5:1211:A:N6	1.60	0.98
49:5:612:G:H1	49:5:624:U:H3	1.08	0.98
49:5:1138:U:H3	49:5:1149:G:H1	1.03	0.97
1:3:1095:U:P	54:h:72:VAL:CB	2.57	0.93
1:3:1142:G:H4'	55:g:79:LYS:HA	1.49	0.92
49:5:1217:G:H1	49:5:1269:U:H3	1.01	0.92
49:5:1003:G:H1	49:5:1018:U:H3	1.17	0.92
1:3:1485:A:H61	1:3:2710:G:H1	1.18	0.91
1:3:2143:G:H1	1:3:2162:U:H3	1.15	0.91
1:3:1093:U:H3	1:3:1115:G:H1	0.92	0.91
49:5:833:G:H1	49:5:844:U:H3	1.02	0.91
1:3:1485:A:N6	1:3:2710:G:H1	1.68	0.90
1:3:1095:U:OP1	54:h:72:VAL:CB	2.21	0.89
1:3:893:A:H61	1:3:957:G:H1	1.16	0.88
1:3:1095:U:P	54:h:72:VAL:H	1.97	0.88
5:c:189:ARG:HG3	7:k:5:GLN:HE22	1.37	0.88
49:5:661:G:H1	49:5:738:A:H61	1.21	0.87
1:3:313:G:N2	1:3:394:C:O2	2.10	0.84
14:2:11:CYS:SG	14:2:32:HIS:HE1	2.01	0.83
49:5:1112:U:H3	49:5:1128:G:H1	1.27	0.82
51:7:7:U:H3	51:7:68:G:H1	0.86	0.82
1:3:892:G:H2'	1:3:893:A:H8	1.45	0.81
34:J:77:LEU:HB2	34:J:100:ILE:HD11	1.62	0.80
1:3:1071:G:H1	1:3:1154:U:H3	1.28	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:940:G:H1	49:5:1211:A:H61	0.84	0.80
51:7:35:G:N2	52:Y:5:U:O2	2.12	0.80
49:5:144:U:O2	49:5:149:G:O6	1.99	0.79
35:C:9:LYS:NZ	49:5:540:U:OP1	2.12	0.79
1:3:47:G:H5''	1:3:48:G:H5'	1.63	0.79
1:3:925:C:OP2	41:L:92:ARG:NH2	2.15	0.79
1:3:928:G:H2'	1:3:929:G:H8	1.48	0.79
1:3:1210:A:P	1:3:1210:A:H8	2.06	0.79
1:3:1292:A:H61	1:3:2024:C:H42	1.30	0.79
37:O:34:ALA:HB3	37:O:58:TRP:HE1	1.47	0.78
1:3:1208:A:H8	1:3:1208:A:H3'	1.49	0.78
32:A:199:VAL:HG12	32:A:213:PHE:HB2	1.65	0.78
49:5:354:U:H2'	49:5:355:A:H8	1.49	0.78
1:3:591:G:H5''	8:i:115:ASN:HD21	1.48	0.78
1:3:721:G:H21	13:0:7:PRO:HA	1.48	0.78
29:B:73:GLN:HE22	29:B:75:ALA:HB3	1.49	0.78
12:y:42:VAL:HG12	12:y:48:TYR:HB2	1.64	0.78
53:f:114:LYS:O	53:f:115:ASP:CB	2.30	0.77
1:3:2106:G:H22	1:3:2198:G:H1	1.33	0.77
45:G:11:HIS:NE2	49:5:821:U:O2	2.18	0.77
25:j:69:GLN:NE2	25:j:105:GLU:OE1	2.18	0.77
5:c:192:MET:HE2	7:k:5:GLN:HG3	1.64	0.77
40:I:43:LYS:HD3	49:5:1115:G:H4'	1.67	0.77
49:5:136:U:H3	49:5:157:A:H62	1.31	0.77
42:N:62:ARG:HH11	49:5:579:G:H5''	1.50	0.77
1:3:2589:G:N2	1:3:2589:G:OP2	2.17	0.77
1:3:2337:U:H2'	1:3:2338:G:H8	1.51	0.76
49:5:93:A:H5'	49:5:94:A:H5''	1.68	0.76
6:e:4:ILE:O	6:e:72:ASN:ND2	2.18	0.76
49:5:136:U:H3	49:5:157:A:N6	1.82	0.76
47:E:92:ARG:HE	47:E:93:GLU:H	1.31	0.75
1:3:1262:G:H2'	1:3:1263:G:H8	1.51	0.75
29:B:21:ARG:NH2	29:B:59:GLU:OE1	2.19	0.75
30:D:137:TYR:OH	30:D:203:LEU:O	2.04	0.75
49:5:671:G:H2'	49:5:672:A:H8	1.51	0.75
49:5:47:G:HO2'	49:5:361:U:HO2'	1.21	0.75
1:3:548:A:H2'	1:3:549:A:C8	2.21	0.75
7:k:59:TYR:O	15:1:10:ARG:NH1	2.19	0.75
1:3:918:G:O6	1:3:932:U:C2	2.40	0.75
49:5:63:U:H3	49:5:90:G:H1	1.31	0.75
49:5:409:G:H1'	49:5:425:G:H21	1.52	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:S:32:VAL:HG12	36:S:36:HIS:CE1	2.22	0.74
49:5:922:G:H1	49:5:1365:U:H3	1.32	0.74
1:3:1814:G:N2	1:3:1817:A:OP2	2.20	0.74
30:D:110:GLU:OE2	30:D:113:ASN:ND2	2.15	0.74
38:K:107:ARG:NH1	49:5:905:U:OP2	2.21	0.74
44:T:36:LEU:HD23	44:T:41:ARG:HH22	1.52	0.74
49:5:413:G:H1	49:5:423:U:H3	1.33	0.74
1:3:548:A:H2'	1:3:549:A:H8	1.50	0.74
6:e:98:ARG:NH1	6:e:109:GLN:OE1	2.19	0.74
30:D:152:LYS:HB3	30:D:179:TYR:HB2	1.69	0.74
1:3:1204:A:H2'	1:3:1204:A:N3	2.01	0.74
33:H:107:THR:HA	49:5:1154:A:H4'	1.68	0.73
1:3:1558:A:H2'	1:3:1558:A:N3	2.03	0.73
31:F:129:ASN:HA	31:F:134:ILE:HG13	1.69	0.73
16:o:62:GLU:HB3	16:o:81:ILE:HD13	1.68	0.73
39:M:24:CYS:HB2	39:M:40:CYS:SG	2.28	0.73
1:3:1786:U:OP2	1:3:1791:A:N6	2.18	0.73
1:3:230:G:O2'	1:3:232:A:N6	2.22	0.73
1:3:893:A:N6	1:3:957:G:H1	1.87	0.73
40:I:63:VAL:HG23	40:I:64:ASP:H	1.52	0.73
49:5:1150:G:H2'	49:5:1151:A:H8	1.54	0.73
21:d:35:VAL:HG12	21:d:90:THR:HG22	1.71	0.73
1:3:1919:A:O2'	49:5:1469:G:O2'	2.07	0.73
29:B:179:SER:OG	49:5:1102:A:N6	2.22	0.73
49:5:621:C:H2'	49:5:622:A:H8	1.53	0.73
29:B:165:ILE:HD12	49:5:1047:U:H4'	1.71	0.73
36:S:29:LYS:NZ	49:5:1413:G:OP2	2.21	0.73
29:B:60:ARG:HG2	29:B:65:VAL:HG22	1.70	0.73
40:I:12:LEU:HB3	40:I:82:LEU:HB2	1.71	0.72
47:E:26:GLN:HE22	47:E:35:LEU:HD11	1.53	0.72
49:5:358:G:N2	49:5:361:U:OP2	2.22	0.72
35:C:14:LEU:O	35:C:59:ARG:NH2	2.21	0.72
49:5:1241:G:N2	49:5:1244:A:OP2	2.23	0.72
51:7:2:G:H2'	51:7:3:G:H8	1.54	0.72
49:5:1079:G:H2'	49:5:1080:G:C8	2.23	0.72
38:K:4:ILE:HG13	45:G:95:LEU:HD11	1.72	0.72
49:5:536:U:H2'	49:5:537:A:H8	1.53	0.72
2:4:6:U:H2'	2:4:7:G:H8	1.55	0.72
31:F:87:PRO:HD2	31:F:151:ALA:HB2	1.72	0.72
28:r:116:GLU:O	28:r:120:GLN:NE2	2.22	0.72
38:K:88:GLN:HB3	38:K:91:SER:HB3	1.72	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:670:G:H2'	49:5:671:G:C8	2.24	0.72
49:5:1330:A:H2'	49:5:1331:A:C8	2.25	0.72
1:3:1142:G:OP1	55:g:55:LYS:CB	2.38	0.71
34:J:118:LYS:NZ	49:5:1498:G:OP1	2.19	0.71
8:i:42:LYS:HD2	24:p:62:LEU:HD11	1.72	0.71
32:A:222:PRO:HG2	32:A:258:ILE:HD11	1.70	0.71
49:5:711:G:H2'	49:5:712:A:C8	2.25	0.71
1:3:656:G:H4'	1:3:657:A:H5'	1.73	0.70
1:3:1096:U:O4	54:h:13:ASN:CB	2.39	0.70
1:3:918:G:O6	1:3:932:U:O2	2.09	0.70
1:3:1300:C:H5''	1:3:1301:G:H5'	1.72	0.70
1:3:2118:U:OP2	1:3:2152:C:N4	2.25	0.70
1:3:2291:U:O2	1:3:2333:G:O6	2.08	0.70
1:3:2299:U:H2'	1:3:2300:A:C8	2.26	0.70
16:o:85:ASN:OD1	22:b:21:ASN:ND2	2.24	0.70
1:3:603:G:N1	1:3:2507:C:OP1	2.24	0.70
1:3:2682:A:H4'	25:j:30:LYS:HD2	1.73	0.70
35:C:118:ASN:ND2	49:5:400:G:OP1	2.23	0.70
43:R:77:THR:O	49:5:953:A:N6	2.23	0.70
49:5:1062:C:H2'	49:5:1063:G:H8	1.55	0.70
49:5:1068:G:N2	49:5:1071:A:OP2	2.24	0.70
1:3:1208:A:H3'	1:3:1208:A:C8	2.26	0.70
1:3:2068:G:OP1	5:c:69:LYS:NZ	2.24	0.70
38:K:112:ARG:HG2	38:K:119:GLY:HA2	1.73	0.70
1:3:1865:A:H62	1:3:1891:A:H8	1.39	0.70
23:l:111:GLU:HA	23:l:114:MET:HE2	1.73	0.70
40:I:44:GLY:HA3	49:5:1114:A:H4'	1.73	0.70
31:F:75:ARG:HH12	31:F:77:ARG:HH21	1.40	0.70
33:H:11:ARG:NH1	49:5:1110:C:OP2	2.25	0.70
49:5:1279:G:N2	49:5:1306:A:OP2	2.25	0.70
1:3:889:G:H1	1:3:961:U:H3	1.39	0.69
41:L:90:ARG:HD2	41:L:95:LEU:HD22	1.74	0.69
45:G:24:ASN:ND2	49:5:823:C:O2	2.25	0.69
1:3:2364:A:H2'	1:3:2365:U:O4'	1.92	0.69
29:B:184:ASP:HB2	29:B:210:ILE:HB	1.75	0.69
1:3:2104:A:H2'	1:3:2105:G:H8	1.56	0.69
10:q:11:GLN:NE2	24:p:89:ILE:O	2.21	0.69
49:5:710:G:H2'	49:5:711:G:C8	2.27	0.69
1:3:555:A:H4'	28:r:114:ARG:HH12	1.57	0.69
1:3:1122:G:O6	1:3:1124:G:N2	2.26	0.69
49:5:803:C:H2'	49:5:804:A:H8	1.57	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:d:129:THR:HG22	21:d:155:THR:HG22	1.74	0.69
24:p:49:ARG:O	24:p:53:LYS:NZ	2.23	0.69
42:N:32:GLN:NE2	49:5:738:A:OP1	2.25	0.69
1:3:2254:G:H2'	1:3:2255:A:H8	1.57	0.69
29:B:159:ARG:NH2	49:5:1046:A:N3	2.40	0.69
1:3:1446:G:O2'	1:3:1613:A:N6	2.25	0.69
1:3:2155:G:H2'	1:3:2156:G:H8	1.58	0.69
4:a:41:LEU:HG	4:a:66:TYR:HB2	1.73	0.69
4:a:48:ASN:OD1	4:a:49:ASN:N	2.25	0.69
34:J:78:PHE:HE1	34:J:104:ASN:HD22	1.40	0.69
1:3:918:G:H1	1:3:932:U:HO2'	1.41	0.69
49:5:1000:A:H2'	49:5:1001:A:H8	1.58	0.69
1:3:1211:U:C6	1:3:1211:U:H3'	2.27	0.69
5:c:156:ASN:ND2	5:c:177:ASN:OD1	2.25	0.69
7:k:56:THR:O	7:k:61:ARG:NH1	2.26	0.69
49:5:1249:G:N2	49:5:1250:A:N7	2.41	0.69
1:3:1209:U:O2	1:3:1209:U:O2'	2.07	0.69
7:k:64:LYS:HG2	15:1:10:ARG:HE	1.58	0.69
1:3:2120:G:H1	1:3:2176:G:H4'	1.56	0.68
49:5:50:U:H3	49:5:358:G:H1'	1.57	0.68
49:5:1278:G:N2	49:5:1308:G:O6	2.26	0.68
34:J:121:ARG:NH2	49:5:1481:U:O2	2.25	0.68
49:5:236:C:H2'	49:5:237:A:C8	2.28	0.68
1:3:270:G:O2'	1:3:315:A:N6	2.26	0.68
49:5:137:A:N7	49:5:157:A:N6	2.42	0.68
49:5:242:A:H62	49:5:277:G:N2	1.91	0.68
49:5:1288:C:H2'	49:5:1289:U:H6	1.57	0.68
49:5:136:U:N3	49:5:157:A:N6	2.41	0.68
1:3:622:U:H2'	1:3:623:A:H8	1.57	0.68
29:B:159:ARG:HD3	29:B:196:TYR:HB3	1.74	0.68
49:5:376:G:N2	49:5:379:A:OP2	2.27	0.68
49:5:293:G:N2	49:5:296:A:OP2	2.27	0.68
49:5:921:G:H22	52:Y:2:U:H3'	1.58	0.68
1:3:1834:U:OP2	4:a:229:ARG:NH2	2.26	0.67
2:4:22:G:O2'	2:4:25:A:N6	2.27	0.67
49:5:400:G:O2'	49:5:496:A:N6	2.27	0.67
1:3:1837:C:H2'	1:3:1838:A:H8	1.60	0.67
21:d:118:SER:HA	21:d:128:TYR:HE2	1.59	0.67
29:B:191:LYS:NZ	49:5:1048:G:N3	2.40	0.67
1:3:2293:C:OP2	20:z:24:ASN:ND2	2.25	0.67
25:j:18:GLN:HB3	25:j:45:ASP:HB3	1.76	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:R:37:ARG:HH11	49:5:1292:A:H1'	1.59	0.67
16:o:57:GLY:HA3	16:o:62:GLU:HA	1.75	0.67
48:P:73:LYS:NZ	49:5:251:G:OP1	2.22	0.67
49:5:733:A:H2'	49:5:734:A:H8	1.59	0.67
1:3:2155:G:H2'	1:3:2156:G:C8	2.28	0.67
35:C:78:VAL:O	35:C:81:GLN:NE2	2.27	0.67
49:5:661:G:H1	49:5:738:A:N6	1.91	0.67
1:3:1294:G:OP1	12:y:16:ARG:NH1	2.27	0.67
1:3:2453:G:OP1	5:c:75:ARG:NH2	2.26	0.67
1:3:2668:A:O2'	1:3:2669:G:O5'	2.12	0.67
36:S:67:ARG:NH1	49:5:259:A:OP1	2.28	0.67
49:5:573:G:H4'	49:5:574:C:H5''	1.77	0.67
1:3:2362:A:H4'	11:u:49:GLN:HG2	1.77	0.67
1:3:2451:C:H2'	1:3:2452:G:H8	1.58	0.67
4:a:151:GLU:OE1	4:a:197:ARG:N	2.22	0.67
12:y:36:LYS:HG3	28:r:34:ASN:HD22	1.59	0.67
27:t:13:ILE:HG22	27:t:14:THR:HG23	1.76	0.67
32:A:130:LEU:HD12	32:A:159:LEU:HB3	1.75	0.67
4:a:43:LYS:NZ	4:a:61:ARG:O	2.22	0.67
36:S:34:ASN:OD1	36:S:37:LYS:NZ	2.27	0.67
49:5:644:U:H2'	49:5:645:A:H8	1.59	0.67
2:4:104:C:H2'	2:4:105:A:H8	1.60	0.67
21:d:122:PHE:HE2	21:d:167:LEU:HD22	1.59	0.67
1:3:1463:G:H2'	1:3:1464:G:H8	1.60	0.67
27:t:28:MET:HE2	27:t:33:GLN:HB2	1.76	0.67
49:5:111:A:OP1	49:5:603:U:O2'	2.12	0.67
8:i:14:LYS:O	8:i:15:ARG:NH1	2.28	0.66
48:P:20:LYS:HD3	49:5:251:G:H4'	1.77	0.66
49:5:931:C:O2'	49:5:1357:C:N3	2.27	0.66
49:5:1266:U:H2'	49:5:1267:G:H8	1.58	0.66
1:3:709:G:H5''	5:c:77:GLY:H	1.58	0.66
1:3:2865:U:H2'	1:3:2866:A:H8	1.60	0.66
24:p:106:ASN:HA	24:p:109:VAL:HG22	1.77	0.66
1:3:332:G:N2	1:3:375:U:O4	2.29	0.66
46:Q:94:ARG:HE	46:Q:101:PHE:HA	1.60	0.66
49:5:304:U:H2'	49:5:305:A:H8	1.61	0.66
49:5:763:A:N6	49:5:810:U:C2	2.64	0.66
1:3:2190:G:H2'	1:3:2191:G:H8	1.59	0.66
1:3:2337:U:H2'	1:3:2338:G:C8	2.30	0.66
35:C:78:VAL:HG11	35:C:89:LEU:HD13	1.76	0.66
36:S:27:LYS:HA	36:S:30:THR:HG22	1.78	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1142:G:OP1	55:g:55:LYS:HA	1.96	0.66
27:t:1:MET:HG2	27:t:2:GLN:H	1.61	0.66
32:A:32:MET:SD	32:A:203:ASN:ND2	2.60	0.66
35:C:111:ARG:NH1	49:5:403:A:OP1	2.28	0.66
49:5:972:A:N6	49:5:1199:U:OP1	2.29	0.66
1:3:504:G:N7	13:0:39:ARG:NH2	2.42	0.66
1:3:2336:A:H2'	1:3:2337:U:C6	2.30	0.66
13:0:24:THR:HG23	13:0:27:GLY:H	1.61	0.66
49:5:1287:G:H2'	49:5:1288:C:C6	2.30	0.66
1:3:585:U:H2'	1:3:586:G:H8	1.61	0.66
1:3:1754:U:H2'	1:3:1755:A:H8	1.60	0.66
35:C:67:THR:H	35:C:70:GLN:HE21	1.42	0.66
1:3:620:G:H22	7:k:34:ARG:HD3	1.61	0.66
42:N:6:ASN:OD1	42:N:10:LYS:NZ	2.27	0.66
49:5:316:G:H2'	49:5:317:A:C8	2.30	0.66
51:7:22:A:N7	51:7:47:G:O2'	2.27	0.66
35:C:10:ARG:NH1	49:5:541:C:OP1	2.27	0.66
11:u:40:ALA:N	11:u:43:GLN:OE1	2.29	0.65
45:G:61:GLU:O	47:E:145:ARG:N	2.30	0.65
49:5:185:G:H2'	49:5:186:A:C8	2.31	0.65
49:5:236:C:H2'	49:5:237:A:H8	1.59	0.65
1:3:1460:G:H2'	1:3:1461:A:C8	2.30	0.65
16:o:53:LEU:HB2	16:o:65:ILE:HB	1.78	0.65
46:Q:72:PRO:HD2	46:Q:75:ILE:HD12	1.78	0.65
1:3:652:U:H2'	1:3:653:G:H8	1.61	0.65
1:3:2018:U:OP2	28:r:16:LYS:NZ	2.24	0.65
1:3:2861:G:N2	1:3:2864:A:OP2	2.25	0.65
1:3:2384:A:N3	26:n:110:ARG:NH2	2.44	0.65
2:4:85:A:H2'	2:4:86:G:C8	2.32	0.65
49:5:951:U:O2	49:5:1200:G:C2	2.49	0.65
1:3:2223:C:H2'	1:3:2224:A:H8	1.62	0.65
4:a:170:ILE:HD13	4:a:182:LEU:HD21	1.77	0.65
49:5:265:U:H2'	49:5:266:A:C8	2.31	0.65
1:3:1092:A:OP2	1:3:1124:G:N1	2.30	0.65
1:3:1652:A:N1	9:m:3:TYR:OH	2.29	0.65
31:F:70:PRO:O	31:F:95:LYS:NZ	2.27	0.65
36:S:49:SER:HB2	49:5:195:U:H4'	1.79	0.65
42:N:21:SER:OG	42:N:23:GLN:OE1	2.15	0.65
51:7:43:G:H3'	51:7:44:U:H5''	1.78	0.65
1:3:2104:A:H2'	1:3:2105:G:C8	2.32	0.65
36:S:63:ASN:ND2	49:5:258:A:O3'	2.30	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:k:127:GLU:HB2	7:k:149:LEU:HD13	1.80	0.64
29:B:186:ASP:OD1	29:B:187:TYR:N	2.31	0.64
38:K:42:LEU:HD12	38:K:94:LEU:HD21	1.79	0.64
45:G:46:GLU:HA	45:G:49:VAL:HG12	1.78	0.64
1:3:343:A:N3	1:3:363:G:O2'	2.30	0.64
1:3:1502:A:O2'	1:3:1541:A:N6	2.30	0.64
23:l:34:LEU:HB2	23:l:118:LEU:HD12	1.77	0.64
37:O:17:TYR:O	37:O:39:LEU:N	2.30	0.64
38:K:12:ARG:NH1	49:5:562:U:OP2	2.28	0.64
49:5:712:A:H2'	49:5:713:A:C8	2.32	0.64
51:7:19:G:N1	51:7:56:U:O2'	2.30	0.64
1:3:253:C:OP2	1:3:2402:C:O2'	2.15	0.64
1:3:1218:G:H5''	10:q:79:HIS:CE1	2.32	0.64
1:3:1648:A:H61	28:r:88:ARG:H	1.45	0.64
36:S:62:THR:HB	36:S:66:ARG:HH22	1.62	0.64
1:3:2266:C:O2'	1:3:2435:C:OP2	2.13	0.64
21:d:128:TYR:HE1	21:d:130:ILE:HG13	1.62	0.64
40:I:17:GLU:HG2	40:I:77:LYS:HG3	1.80	0.64
49:5:1288:C:H2'	49:5:1289:U:C6	2.33	0.64
49:5:1402:U:H2'	49:5:1403:A:H8	1.61	0.64
1:3:2254:G:H2'	1:3:2255:A:C8	2.33	0.64
29:B:87:LYS:O	29:B:90:LYS:HG3	1.97	0.64
1:3:1353:G:OP1	1:3:1681:G:O2'	2.15	0.64
1:3:2862:U:O2'	1:3:2863:G:OP1	2.16	0.64
30:D:166:ILE:HD11	30:D:191:MET:HE3	1.79	0.64
39:M:10:GLN:NE2	39:M:21:TYR:O	2.30	0.64
49:5:8:G:N3	49:5:294:A:N6	2.45	0.64
49:5:407:A:H61	49:5:427:A:H62	1.45	0.64
7:k:127:GLU:HA	7:k:147:LYS:O	1.97	0.64
36:S:27:LYS:NZ	36:S:50:GLN:OE1	2.30	0.64
38:K:63:ARG:HH12	49:5:520:C:H41	1.45	0.64
1:3:636:U:O2'	7:k:87:LYS:NZ	2.31	0.64
1:3:1094:G:O3'	54:h:72:VAL:CB	2.45	0.64
1:3:1447:A:O2'	1:3:1449:G:N7	2.27	0.64
1:3:2041:C:H2'	1:3:2042:A:C8	2.32	0.64
1:3:2504:C:O2'	1:3:2505:A:OP1	2.15	0.64
10:q:47:ALA:HB3	10:q:48:PRO:HD3	1.79	0.64
1:3:1054:U:OP1	1:3:1070:U:O2'	2.16	0.64
1:3:2190:G:H2'	1:3:2191:G:C8	2.33	0.64
1:3:2239:U:H5''	18:v:29:TRP:HD1	1.63	0.64
51:7:2:G:H2'	51:7:3:G:C8	2.33	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:619:A:N1	1:3:844:G:O2'	2.29	0.63
1:3:921:C:H2'	1:3:922:C:C6	2.33	0.63
39:M:41:ARG:HB2	40:I:57:ILE:HG23	1.80	0.63
43:R:50:ALA:HB1	43:R:57:PHE:HB3	1.80	0.63
45:G:115:ILE:HB	45:G:138:LEU:HB2	1.79	0.63
49:5:164:C:H2'	49:5:165:A:H8	1.63	0.63
49:5:808:C:O2'	49:5:895:A:N1	2.30	0.63
49:5:949:G:H21	49:5:1202:A:H62	1.45	0.63
1:3:499:G:N2	1:3:502:A:OP2	2.19	0.63
49:5:70:A:H2'	49:5:71:A:H8	1.63	0.63
49:5:951:U:N3	49:5:1200:G:N1	2.46	0.63
1:3:501:G:OP1	13:0:12:ARG:NH2	2.31	0.63
1:3:522:C:H2'	1:3:523:A:H8	1.63	0.63
49:5:1096:A:H2'	49:5:1097:G:H8	1.64	0.63
51:7:10:A:H5'	51:7:22:A:H61	1.63	0.63
1:3:930:C:H2'	1:3:931:G:C8	2.34	0.63
7:k:95:ARG:HH22	7:k:110:LEU:H	1.47	0.63
33:H:116:LYS:HA	33:H:123:ALA:HB2	1.81	0.63
49:5:133:G:H2'	49:5:134:G:C8	2.33	0.63
1:3:1990:C:H2'	1:3:1991:U:H6	1.64	0.63
21:d:63:GLN:NE2	21:d:90:THR:O	2.31	0.63
30:D:84:ARG:HH12	49:5:16:G:H4'	1.63	0.63
38:K:56:LYS:NZ	38:K:101:LYS:O	2.28	0.63
49:5:242:A:H62	49:5:277:G:H21	1.46	0.63
5:c:144:MET:HE3	5:c:175:ILE:HD12	1.81	0.63
49:5:198:A:HO2'	49:5:217:U:HO2'	1.46	0.63
1:3:625:G:H1	1:3:700:U:H3	1.47	0.62
16:o:78:ASN:OD1	16:o:79:PHE:N	2.32	0.62
35:C:84:ASN:O	35:C:88:ASN:ND2	2.32	0.62
49:5:1332:U:H3	49:5:1338:A:H61	1.47	0.62
49:5:46:U:H2'	49:5:47:G:H8	1.64	0.62
49:5:550:U:H2'	49:5:551:A:H8	1.64	0.62
49:5:1330:A:H2'	49:5:1331:A:H8	1.60	0.62
55:g:43:LYS:C	55:g:45:PHE:H	2.07	0.62
1:3:1414:C:H2'	1:3:1415:A:C8	2.34	0.62
1:3:2259:G:N2	51:7:77:A:OP1	2.32	0.62
6:e:99:ALA:O	6:e:131:ASN:ND2	2.32	0.62
47:E:125:PRO:HA	49:5:838:A:H61	1.64	0.62
49:5:145:G:N2	49:5:148:A:OP2	2.31	0.62
49:5:1287:G:H1	49:5:1298:U:H3	1.47	0.62
1:3:1142:G:OP1	55:g:55:LYS:CA	2.47	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:4:3:U:OP1	2:4:59:A:O2'	2.17	0.62
16:o:3:LYS:HD3	16:o:4:ILE:HG22	1.81	0.62
49:5:126:U:H2'	49:5:127:A:H8	1.63	0.62
49:5:188:U:H2'	49:5:189:C:H6	1.65	0.62
49:5:1432:A:H2'	49:5:1433:G:C8	2.34	0.62
1:3:590:U:OP1	8:i:116:ARG:NH2	2.32	0.62
1:3:615:G:H2'	1:3:616:G:H8	1.64	0.62
1:3:2038:A:N3	1:3:2463:G:O2'	2.32	0.62
25:j:104:ARG:NH1	25:j:122:VAL:OXT	2.33	0.62
29:B:75:ALA:O	29:B:79:GLY:N	2.29	0.62
41:L:34:LEU:HD12	41:L:39:ILE:HB	1.82	0.62
1:3:1093:U:O4	1:3:1115:G:O6	2.18	0.62
1:3:1233:A:O2'	5:c:189:ARG:NH1	2.29	0.62
9:m:19:ARG:NH1	9:m:65:LYS:O	2.32	0.62
10:q:19:THR:HG22	10:q:93:LYS:HB3	1.81	0.62
23:l:27:VAL:HG11	23:l:134:ARG:HA	1.80	0.62
37:O:44:LYS:HE3	49:5:449:A:H5''	1.82	0.62
1:3:79:U:H5''	3:w:3:VAL:HG21	1.82	0.62
1:3:1672:C:O2	1:3:2706:U:O2'	2.17	0.62
35:C:123:LEU:HD21	35:C:126:ASP:HA	1.82	0.62
49:5:457:A:H2'	49:5:458:G:C8	2.35	0.62
49:5:1193:U:H2'	49:5:1194:A:C8	2.35	0.62
49:5:1241:G:O2'	49:5:1243:A:N6	2.32	0.62
1:3:26:G:H1'	28:r:77:ASN:HB3	1.81	0.62
1:3:1055:A:N1	1:3:1176:U:O2'	2.30	0.62
49:5:61:A:OP1	49:5:327:G:N1	2.33	0.62
49:5:1290:G:N1	49:5:1293:A:OP2	2.33	0.62
1:3:849:C:H1'	1:3:1255:G:H21	1.63	0.62
1:3:1485:A:N1	1:3:2710:G:N2	2.45	0.62
1:3:2026:A:OP2	12:y:6:ARG:NH2	2.32	0.62
16:o:25:PHE:HB3	16:o:90:LEU:HD21	1.82	0.62
31:F:93:ASP:OD1	31:F:94:ARG:N	2.33	0.62
35:C:49:GLY:HA2	35:C:52:GLN:HE21	1.64	0.62
28:r:108:SER:HB2	28:r:113:GLU:HG2	1.82	0.61
1:3:1588:A:H2'	1:3:1589:A:C8	2.34	0.61
1:3:2189:U:H2'	1:3:2190:G:H8	1.64	0.61
1:3:2716:U:H2'	1:3:2717:G:H8	1.64	0.61
33:H:106:THR:HG23	33:H:107:THR:HG23	1.82	0.61
49:5:1144:A:H2'	49:5:1145:A:C8	2.36	0.61
1:3:1961:A:O2'	1:3:1963:U:O4	2.16	0.61
1:3:2247:G:OP1	4:a:251:ARG:NH2	2.33	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:b:123:ILE:HD13	22:b:130:ILE:HG12	1.82	0.61
31:F:145:GLU:HA	31:F:148:LYS:HB2	1.82	0.61
39:M:35:SER:OG	49:5:1332:U:OP1	2.18	0.61
1:3:330:A:O3'	27:t:100:LYS:NZ	2.34	0.61
1:3:2336:A:H2'	1:3:2337:U:H6	1.65	0.61
2:4:40:U:H4'	21:d:64:LYS:HB2	1.81	0.61
22:b:18:THR:OG1	22:b:221:GLU:O	2.16	0.61
30:D:87:ARG:HH11	30:D:107:LYS:HD3	1.64	0.61
35:C:59:ARG:HB3	35:C:191:ILE:HD12	1.82	0.61
46:Q:63:PHE:HD1	46:Q:86:VAL:HG11	1.65	0.61
49:5:372:G:H1	49:5:383:U:H3	1.48	0.61
12:y:47:MET:HE1	12:y:52:ARG:HD2	1.82	0.61
21:d:40:VAL:HG11	21:d:50:LEU:HD13	1.81	0.61
1:3:118:G:OP2	1:3:120:A:O2'	2.19	0.61
1:3:728:A:O2'	1:3:1381:A:N3	2.33	0.61
1:3:891:G:H2'	1:3:892:G:H8	1.65	0.61
1:3:2141:A:H8	1:3:2164:G:H21	1.49	0.61
30:D:185:ARG:NH2	49:5:22:G:O6	2.32	0.61
49:5:22:G:H2'	49:5:23:G:C8	2.35	0.61
1:3:65:A:H2'	1:3:66:A:C8	2.35	0.61
1:3:2145:A:H2'	1:3:2146:A:C8	2.36	0.61
1:3:2794:U:OP1	22:b:72:LYS:NZ	2.33	0.61
36:S:33:LYS:HA	36:S:36:HIS:ND1	2.16	0.61
39:M:14:PRO:HB2	39:M:19:ARG:HB3	1.82	0.61
1:3:1814:G:HO2'	1:3:1816:A:H62	1.49	0.61
37:O:9:MET:HE3	49:5:623:G:H5''	1.82	0.61
49:5:1142:G:HO2'	49:5:1144:A:H62	1.47	0.61
1:3:1923:A:N1	49:5:1383:A:O2'	2.33	0.61
35:C:58:GLN:HA	35:C:61:GLN:HE21	1.64	0.61
38:K:40:SER:OG	49:5:359:A:N6	2.34	0.61
42:N:19:VAL:O	42:N:25:GLN:NE2	2.34	0.61
29:B:93:LYS:HA	29:B:96:ILE:HG22	1.83	0.61
39:M:21:TYR:OH	39:M:23:ARG:NH1	2.34	0.61
49:5:834:G:H2'	49:5:835:G:C8	2.36	0.61
49:5:940:G:N2	49:5:1211:A:N1	2.40	0.61
49:5:992:U:H2'	49:5:993:C:H6	1.65	0.61
49:5:1003:G:N2	49:5:1018:U:O2	2.31	0.61
49:5:1258:U:H2'	49:5:1259:G:H8	1.66	0.61
49:5:1402:U:H2'	49:5:1403:A:C8	2.36	0.61
1:3:356:A:OP1	5:c:173:SER:OG	2.17	0.60
1:3:841:C:OP2	7:k:42:ARG:NH1	2.34	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:d:36:ILE:HB	21:d:89:VAL:HB	1.82	0.60
49:5:621:C:H2'	49:5:622:A:C8	2.34	0.60
49:5:709:A:H2'	49:5:710:G:C8	2.36	0.60
1:3:2228:U:H2'	1:3:2229:C:C6	2.36	0.60
4:a:22:TYR:HA	4:a:26:LEU:HD13	1.83	0.60
49:5:97:G:H21	49:5:350:G:H5'	1.64	0.60
1:3:1824:G:OP1	4:a:92:ARG:NH2	2.33	0.60
31:F:115:MET:HE3	31:F:119:ILE:HB	1.83	0.60
1:3:1296:G:O2'	1:3:2019:G:O6	2.19	0.60
10:q:38:VAL:HG13	10:q:50:LEU:HB3	1.83	0.60
49:5:763:A:N7	49:5:810:U:O4	2.34	0.60
49:5:1295:U:H3'	49:5:1296:C:H2'	1.82	0.60
1:3:522:C:H2'	1:3:523:A:C8	2.36	0.60
1:3:615:G:H2'	1:3:616:G:C8	2.37	0.60
1:3:891:G:H2'	1:3:892:G:C8	2.36	0.60
1:3:1208:A:C8	1:3:1208:A:C3'	2.83	0.60
1:3:2847:C:H2'	1:3:2848:A:H8	1.67	0.60
32:A:26:MET:HE2	32:A:58:LEU:HD21	1.82	0.60
33:H:124:ARG:HG3	49:5:1322:U:H4'	1.82	0.60
38:K:56:LYS:HG3	38:K:58:PRO:HD2	1.83	0.60
49:5:500:G:H2'	49:5:501:A:C8	2.37	0.60
1:3:640:U:OP2	5:c:106:LYS:NZ	2.29	0.60
47:E:49:ILE:HG23	47:E:50:LYS:H	1.66	0.60
1:3:573:A:O2'	8:i:11:GLN:OE1	2.16	0.60
1:3:1281:A:OP1	24:p:9:THR:OG1	2.20	0.60
1:3:2653:G:OP2	1:3:2653:G:N2	2.22	0.60
27:t:20:GLY:HA3	27:t:39:LEU:HD21	1.82	0.60
47:E:70:LYS:HB3	47:E:74:ARG:NH2	2.17	0.60
49:5:92:G:C2	49:5:93:A:H1'	2.36	0.60
1:3:516:A:OP2	27:t:44:ARG:NH2	2.35	0.60
37:O:70:ARG:NH2	49:5:452:A:OP1	2.34	0.60
48:P:3:ARG:NH2	49:5:113:C:O5'	2.35	0.60
49:5:649:U:O4	49:5:749:G:O2'	2.18	0.60
1:3:2145:A:H2'	1:3:2146:A:H8	1.67	0.60
25:j:40:VAL:HA	25:j:59:ARG:HA	1.83	0.60
48:P:21:THR:HA	48:P:48:HIS:HA	1.82	0.60
49:5:289:U:H2'	49:5:290:G:H8	1.67	0.60
49:5:403:A:H2'	49:5:404:A:C8	2.37	0.60
6:e:55:ILE:HD11	6:e:72:ASN:HB2	1.83	0.60
31:F:68:VAL:HG21	31:F:103:ILE:HD11	1.83	0.60
42:N:30:THR:HA	42:N:60:ARG:HH11	1.66	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:1406:U:O4	49:5:1407:A:N6	2.35	0.60
1:3:77:G:O3'	3:w:49:ARG:NH1	2.35	0.59
1:3:583:U:OP2	10:q:61:LYS:NZ	2.33	0.59
1:3:892:G:H2'	1:3:893:A:C8	2.31	0.59
1:3:2189:U:H2'	1:3:2190:G:C8	2.37	0.59
4:a:191:LYS:HD2	4:a:279:ILE:HD11	1.84	0.59
33:H:47:ILE:HA	33:H:50:MET:HE1	1.83	0.59
49:5:787:A:OP1	51:7:39:A:O2'	2.17	0.59
26:n:75:GLN:HG3	26:n:112:ARG:HE	1.67	0.59
36:S:35:PHE:CE1	36:S:44:LEU:HB2	2.37	0.59
41:L:35:LYS:HA	41:L:35:LYS:HE3	1.83	0.59
49:5:137:A:H3'	49:5:138:A:H8	1.67	0.59
49:5:1463:A:H2'	49:5:1464:G:C8	2.37	0.59
1:3:154:U:H2'	1:3:155:A:H8	1.66	0.59
1:3:1670:U:H2'	1:3:1671:C:C6	2.36	0.59
1:3:2604:U:O2'	1:3:2605:G:OP1	2.19	0.59
49:5:733:A:H2'	49:5:734:A:C8	2.35	0.59
49:5:1150:G:H2'	49:5:1151:A:C8	2.34	0.59
1:3:409:A:N6	1:3:438:A:OP2	2.36	0.59
1:3:622:U:H2'	1:3:623:A:C8	2.36	0.59
1:3:776:U:H2'	1:3:777:C:H6	1.67	0.59
1:3:1959:A:C4	25:j:22:ILE:HD11	2.37	0.59
34:J:115:LYS:NZ	49:5:776:C:O2'	2.31	0.59
36:S:44:LEU:HD23	36:S:76:LEU:HD11	1.85	0.59
51:7:44:U:OP1	51:7:44:U:H4'	2.01	0.59
1:3:1831:G:H21	4:a:262:HIS:HE1	1.50	0.59
1:3:1890:U:O2'	1:3:1891:A:O5'	2.21	0.59
34:J:112:ASN:ND2	49:5:715:A:O5'	2.35	0.59
49:5:433:C:H2'	49:5:434:U:C6	2.36	0.59
49:5:1197:G:H2'	49:5:1198:C:C6	2.38	0.59
49:5:1417:U:H2'	49:5:1418:G:H8	1.66	0.59
1:3:2110:U:O2	1:3:2194:G:N2	2.35	0.59
29:B:40:ILE:HG23	29:B:92:ILE:HD12	1.84	0.59
36:S:38:GLU:OE1	36:S:40:ASN:ND2	2.35	0.59
37:O:18:ARG:NH1	49:5:624:U:OP1	2.34	0.59
1:3:2270:U:OP2	11:u:30:SER:OG	2.17	0.59
2:4:31:G:O6	2:4:48:A:N6	2.36	0.59
40:I:28:THR:HA	40:I:31:ILE:HG22	1.85	0.59
51:7:7:U:H2'	51:7:8:G:C8	2.37	0.59
1:3:708:C:O3'	5:c:81:ASN:ND2	2.35	0.59
32:A:180:ASP:OD1	32:A:219:ASN:ND2	2.35	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:H:93:ASN:HB3	33:H:96:LEU:HD23	1.84	0.59
39:M:23:ARG:HD3	39:M:28:GLY:HA2	1.83	0.59
43:R:27:LYS:O	43:R:29:ARG:NH1	2.36	0.59
49:5:126:U:H2'	49:5:127:A:C8	2.38	0.59
49:5:763:A:N6	49:5:810:U:N3	2.49	0.59
1:3:1063:A:H2'	1:3:1064:A:H8	1.68	0.59
1:3:1553:G:N1	1:3:1577:A:OP2	2.31	0.59
1:3:1557:G:OP2	1:3:1557:G:H8	1.85	0.59
1:3:1841:U:H5''	1:3:1842:G:H5'	1.85	0.59
16:o:13:VAL:HG21	22:b:192:LEU:HD11	1.84	0.59
49:5:421:G:H2'	49:5:422:A:H8	1.68	0.59
49:5:1384:A:H2'	49:5:1385:A:H8	1.68	0.59
1:3:177:U:H2'	1:3:178:A:C8	2.38	0.59
1:3:2584:G:O2'	1:3:2587:U:OP2	2.18	0.59
16:o:36:LYS:HB2	16:o:85:ASN:HB3	1.83	0.59
22:b:148:GLN:OE1	22:b:150:GLY:N	2.36	0.59
22:b:180:ARG:HD3	22:b:218:LYS:HG3	1.85	0.59
26:n:76:ASP:OD1	26:n:77:ILE:N	2.35	0.59
48:P:74:ARG:NH1	49:5:230:G:O2'	2.36	0.59
49:5:409:G:O3'	49:5:425:G:N2	2.36	0.59
1:3:227:A:O2'	1:3:456:G:N3	2.32	0.58
1:3:358:A:N6	1:3:373:U:O4'	2.36	0.58
1:3:1282:G:N2	24:p:32:LYS:HB3	2.17	0.58
1:3:1467:U:H3	1:3:1587:U:H3	1.51	0.58
5:c:81:ASN:HB2	5:c:84:PHE:CD1	2.37	0.58
35:C:68:ASP:HB2	49:5:543:C:H5'	1.84	0.58
45:G:92:LYS:HB3	45:G:95:LEU:HB2	1.85	0.58
46:Q:80:GLN:NE2	49:5:832:G:OP1	2.35	0.58
49:5:1110:C:H2'	49:5:1111:G:H8	1.67	0.58
1:3:2224:A:H2'	1:3:2225:G:H8	1.68	0.58
8:i:60:ILE:HG23	8:i:131:ASP:HA	1.86	0.58
29:B:182:ARG:HD2	29:B:211:TYR:HA	1.85	0.58
47:E:11:GLY:HA2	47:E:55:ALA:HA	1.85	0.58
49:5:992:U:H2'	49:5:993:C:C6	2.38	0.58
1:3:195:A:H2'	1:3:196:G:H8	1.68	0.58
1:3:1096:U:O4	54:h:13:ASN:N	2.36	0.58
7:k:80:LEU:HG	7:k:112:ILE:HD11	1.85	0.58
49:5:220:U:C4	49:5:221:U:O4	2.56	0.58
1:3:899:A:H2'	1:3:900:G:H8	1.68	0.58
2:4:6:U:H2'	2:4:7:G:C8	2.36	0.58
5:c:81:ASN:HB2	5:c:84:PHE:HD1	1.68	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:e:102:GLU:OE2	6:e:107:ASN:ND2	2.36	0.58
49:5:63:U:O2	49:5:375:C:O2'	2.21	0.58
49:5:80:U:H2'	49:5:81:A:C8	2.39	0.58
49:5:268:C:H2'	49:5:269:A:H8	1.68	0.58
1:3:154:U:H2'	1:3:155:A:C8	2.38	0.58
1:3:1956:G:H2'	1:3:1957:G:H8	1.68	0.58
16:o:54:ARG:HB2	16:o:100:TYR:HD1	1.68	0.58
21:d:17:GLN:NE2	21:d:24:SER:O	2.36	0.58
29:B:88:ILE:O	29:B:92:ILE:HG12	2.02	0.58
29:B:205:ILE:HG22	29:B:207:ARG:HG2	1.85	0.58
34:J:39:SER:O	34:J:42:THR:OG1	2.20	0.58
45:G:125:ASP:OD2	45:G:126:LYS:N	2.36	0.58
49:5:655:G:O6	49:5:744:U:C2	2.57	0.58
1:3:2752:G:N2	6:e:146:GLN:OE1	2.37	0.58
21:d:75:SER:HA	51:7:58:G:H21	1.68	0.58
22:b:38:GLY:HA2	22:b:92:MET:HE1	1.84	0.58
37:O:7:MET:HG3	37:O:29:ASP:HA	1.85	0.58
1:3:628:A:H2'	1:3:629:G:H8	1.68	0.58
1:3:2383:G:N2	1:3:2386:A:OP2	2.27	0.58
1:3:2880:A:O2'	16:o:6:LYS:NZ	2.36	0.58
32:A:95:LEU:HD11	32:A:226:CYS:HA	1.85	0.58
41:L:100:GLN:NE2	49:5:1281:U:OP1	2.34	0.58
49:5:63:U:O2'	49:5:375:C:O2	2.22	0.58
1:3:1831:G:OP2	4:a:57:HIS:NE2	2.32	0.58
1:3:2745:G:H2'	1:3:2746:A:C8	2.39	0.58
1:3:569:U:H2'	1:3:570:C:C6	2.38	0.58
1:3:1080:A:H3'	1:3:1081:A:H5'	1.86	0.58
46:Q:57:LEU:HB3	46:Q:61:LYS:HZ2	1.69	0.58
1:3:899:A:H2'	1:3:900:G:C8	2.39	0.58
29:B:59:GLU:HG3	29:B:68:PHE:HE2	1.69	0.58
37:O:66:THR:O	37:O:70:ARG:N	2.30	0.58
49:5:1226:A:H2'	49:5:1227:A:C8	2.39	0.58
1:3:652:U:H2'	1:3:653:G:C8	2.39	0.57
1:3:1588:A:O2'	1:3:1589:A:OP1	2.21	0.57
1:3:1860:A:H2'	1:3:1861:A:C8	2.38	0.57
35:C:194:SER:HA	35:C:197:VAL:HG12	1.86	0.57
49:5:399:C:H2'	49:5:400:G:H8	1.66	0.57
49:5:435:U:O2'	49:5:437:U:O4	2.17	0.57
1:3:8:A:O2'	8:i:138:GLN:NE2	2.37	0.57
1:3:47:G:O2'	1:3:184:A:N6	2.37	0.57
1:3:614:C:H2'	1:3:615:G:H8	1.69	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:831:U:H2'	1:3:832:C:C6	2.39	0.57
1:3:1282:G:N2	24:p:32:LYS:O	2.37	0.57
1:3:1831:G:H2'	1:3:1832:G:H8	1.67	0.57
26:n:25:ASP:OD1	26:n:26:ASN:N	2.34	0.57
29:B:180:THR:HG22	49:5:1102:A:N1	2.19	0.57
32:A:207:ASN:HB3	32:A:210:LEU:HD13	1.85	0.57
49:5:324:C:H4'	49:5:325:A:H5''	1.86	0.57
49:5:1320:A:N6	49:5:1350:A:OP2	2.37	0.57
49:5:1438:U:H2'	49:5:1439:G:H8	1.69	0.57
1:3:1754:U:H2'	1:3:1755:A:C8	2.39	0.57
1:3:2321:C:H2'	1:3:2322:G:H8	1.70	0.57
43:R:13:ALA:HA	43:R:16:LEU:HD13	1.85	0.57
47:E:7:LEU:HB2	47:E:58:TYR:HB2	1.86	0.57
49:5:351:C:H1'	49:5:384:G:H1'	1.86	0.57
49:5:372:G:H2'	49:5:373:A:C8	2.38	0.57
49:5:1287:G:H2'	49:5:1288:C:H6	1.68	0.57
51:7:44:U:C2	51:7:45:G:C8	2.93	0.57
1:3:610:G:H2'	1:3:611:A:C8	2.39	0.57
1:3:1149:G:H2'	1:3:1150:U:C6	2.40	0.57
1:3:2401:U:O2'	7:k:60:ARG:O	2.20	0.57
1:3:2661:U:O2	1:3:2676:G:C2	2.57	0.57
30:D:90:VAL:HG11	30:D:115:ILE:HD13	1.86	0.57
38:K:59:ASN:ND2	38:K:102:ASP:OD1	2.34	0.57
40:I:53:GLU:N	40:I:53:GLU:OE2	2.37	0.57
42:N:26:VAL:HG11	42:N:78:LEU:HD21	1.87	0.57
47:E:109:LEU:HD22	49:5:838:A:H8	1.69	0.57
1:3:2111:U:N3	1:3:2112:A:N7	2.52	0.57
2:4:7:G:O3'	26:n:20:ARG:NH2	2.37	0.57
30:D:212:ARG:NH2	45:G:51:GLU:OE2	2.37	0.57
39:M:7:LYS:HE2	39:M:28:GLY:HA3	1.86	0.57
49:5:369:A:O2'	49:5:448:A:N7	2.37	0.57
49:5:1501:G:H2'	49:5:1502:G:H8	1.69	0.57
1:3:868:C:H1'	7:k:52:GLU:HG3	1.86	0.57
1:3:1205:U:H3'	1:3:1206:U:H6	1.70	0.57
1:3:2054:C:H2'	1:3:2055:A:H8	1.69	0.57
1:3:2756:A:H1'	6:e:70:THR:HG22	1.85	0.57
24:p:81:LEU:HB3	24:p:112:VAL:HB	1.86	0.57
48:P:25:GLN:HE22	48:P:27:GLU:HG2	1.68	0.57
49:5:108:C:H2'	49:5:109:G:H8	1.70	0.57
1:3:542:A:H5''	1:3:543:U:H2'	1.85	0.57
1:3:914:G:N2	1:3:937:A:OP2	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:z:19:TYR:OH	20:z:37:PHE:O	2.23	0.57
46:Q:58:GLU:HA	46:Q:61:LYS:HE2	1.87	0.57
49:5:142:G:H2'	49:5:143:U:C6	2.39	0.57
49:5:742:C:H2'	49:5:743:A:C8	2.40	0.57
1:3:401:G:O2'	1:3:402:A:OP1	2.21	0.57
1:3:1063:A:N3	1:3:2494:C:O2'	2.34	0.57
1:3:2352:U:H2'	20:z:34:LEU:HD12	1.87	0.57
36:S:67:ARG:NH2	49:5:257:U:OP2	2.37	0.57
37:O:18:ARG:HA	37:O:38:HIS:HA	1.85	0.57
48:P:9:LEU:HD12	48:P:26:VAL:HG11	1.87	0.57
49:5:299:U:H2'	49:5:300:A:C8	2.39	0.57
49:5:1214:A:H62	49:5:1273:A:H62	1.52	0.57
1:3:627:U:H2'	1:3:628:A:C8	2.39	0.57
1:3:631:A:H2'	1:3:632:A:H8	1.70	0.57
1:3:1095:U:P	54:h:72:VAL:N	2.73	0.57
10:q:39:LEU:HA	10:q:50:LEU:HB2	1.87	0.57
33:H:106:THR:O	33:H:107:THR:OG1	2.18	0.57
37:O:27:LYS:HB3	49:5:96:G:H5''	1.87	0.57
41:L:16:GLU:O	41:L:30:SER:OG	2.23	0.57
49:5:1488:A:H2'	49:5:1489:C:C6	2.40	0.57
1:3:2580:A:OP1	1:3:2582:G:H4'	2.05	0.57
1:3:2781:C:H2'	1:3:2782:A:H8	1.70	0.57
5:c:160:VAL:HG12	5:c:186:VAL:HG11	1.86	0.57
21:d:123:ASP:OD2	21:d:127:ASN:ND2	2.33	0.57
36:S:44:LEU:HD12	36:S:47:VAL:HB	1.86	0.57
41:L:89:LEU:O	41:L:93:LYS:NZ	2.38	0.57
44:T:28:LEU:HA	44:T:31:ARG:NH1	2.20	0.57
46:Q:57:LEU:HB3	46:Q:61:LYS:NZ	2.19	0.57
49:5:1222:U:O2	49:5:1264:G:O6	2.22	0.57
49:5:1497:U:H2'	49:5:1498:G:H8	1.69	0.57
1:3:1245:G:O6	1:3:1265:G:N2	2.38	0.56
1:3:1248:A:OP2	24:p:14:LYS:NZ	2.34	0.56
1:3:1750:A:H2'	1:3:1751:A:O4'	2.05	0.56
1:3:2237:U:H2'	1:3:2238:G:H8	1.69	0.56
1:3:2551:G:H2'	1:3:2552:G:C8	2.40	0.56
26:n:28:VAL:HG13	26:n:89:VAL:HG12	1.87	0.56
47:E:65:ASP:OD2	47:E:66:ASN:N	2.37	0.56
49:5:318:C:H42	49:5:325:A:H62	1.52	0.56
1:3:193:G:O6	1:3:209:G:O2'	2.23	0.56
4:a:139:ALA:HB2	4:a:194:LYS:HB2	1.87	0.56
29:B:109:ILE:HG23	29:B:112:PRO:HB3	1.88	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:A:246:PHE:HE1	32:A:256:ILE:HD11	1.70	0.56
49:5:563:U:OP2	49:5:564:G:O2'	2.20	0.56
49:5:1490:G:H2'	49:5:1491:A:C8	2.40	0.56
1:3:188:G:H2'	1:3:189:U:C6	2.39	0.56
1:3:195:A:H2'	1:3:196:G:C8	2.41	0.56
1:3:925:C:H4'	1:3:926:U:O4'	2.04	0.56
1:3:1103:G:O2'	1:3:1131:A:O4'	2.24	0.56
1:3:1297:U:O2'	1:3:1298:A:OP1	2.21	0.56
7:k:82:LEU:HA	7:k:85:ILE:HG22	1.86	0.56
7:k:83:ASN:HA	7:k:118:THR:HG21	1.87	0.56
29:B:192:ALA:HB3	29:B:199:ILE:HB	1.88	0.56
32:A:30:VAL:HB	32:A:55:HIS:HA	1.87	0.56
40:I:97:LYS:HD2	40:I:97:LYS:O	2.05	0.56
48:P:68:PRO:O	49:5:260:C:O2'	2.18	0.56
49:5:60:A:H3'	49:5:327:G:H22	1.70	0.56
49:5:70:A:H2'	49:5:71:A:C8	2.41	0.56
49:5:169:G:H21	49:5:220:U:H4'	1.71	0.56
49:5:500:G:H2'	49:5:501:A:H8	1.69	0.56
49:5:577:G:H5'	49:5:725:A:H1'	1.87	0.56
49:5:662:G:H1'	49:5:730:G:H5'	1.87	0.56
49:5:662:G:O6	49:5:721:G:O6	2.23	0.56
49:5:988:G:N7	49:5:1188:A:N6	2.52	0.56
49:5:1161:G:H2'	49:5:1162:G:H8	1.68	0.56
1:3:101:C:H5''	1:3:102:A:H5'	1.85	0.56
1:3:580:U:OP1	1:3:1249:A:O2'	2.18	0.56
1:3:2223:C:H2'	1:3:2224:A:C8	2.40	0.56
1:3:2504:C:HO2'	1:3:2505:A:P	2.27	0.56
4:a:190:ARG:HG3	4:a:278:ILE:HD13	1.87	0.56
23:l:24:ASN:OD1	23:l:67:ARG:NE	2.39	0.56
51:7:7:U:O2	51:7:68:G:N2	2.20	0.56
1:3:317:U:H2'	1:3:318:U:C6	2.40	0.56
1:3:1347:A:H2'	1:3:1348:C:C6	2.41	0.56
1:3:1451:A:H2'	1:3:1452:G:C8	2.41	0.56
1:3:2744:A:H2'	1:3:2745:G:H8	1.69	0.56
15:1:36:LYS:HA	15:1:39:ARG:NH1	2.21	0.56
30:D:182:ASN:ND2	30:D:191:MET:SD	2.79	0.56
36:S:38:GLU:OE2	36:S:43:ASN:ND2	2.38	0.56
38:K:125:GLN:NE2	49:5:537:A:OP2	2.38	0.56
47:E:59:ARG:HH22	47:E:61:LYS:HD3	1.70	0.56
49:5:473:A:H2'	49:5:474:G:C8	2.40	0.56
1:3:223:A:N3	1:3:238:U:O2'	2.29	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:755:C:H2'	1:3:756:A:H8	1.69	0.56
1:3:1211:U:C6	1:3:1211:U:C3'	2.89	0.56
1:3:1529:U:H2'	1:3:1530:G:C8	2.41	0.56
1:3:2106:G:N2	1:3:2198:G:H22	2.04	0.56
21:d:37:ASN:O	21:d:153:ASP:N	2.39	0.56
30:D:162:ALA:HB1	30:D:166:ILE:HB	1.86	0.56
30:D:167:ARG:NH1	30:D:171:GLU:OE2	2.39	0.56
49:5:68:C:H2'	49:5:69:G:C8	2.40	0.56
1:3:2027:G:N7	12:y:6:ARG:NH1	2.53	0.56
23:l:106:VAL:HG23	23:l:114:MET:HG3	1.88	0.56
27:t:78:ASP:OD1	27:t:79:GLN:N	2.39	0.56
33:H:117:LYS:NZ	49:5:1161:G:O2'	2.39	0.56
36:S:60:ILE:HD11	36:S:64:ARG:HG2	1.88	0.56
38:K:80:ILE:HG22	38:K:110:ILE:HD13	1.88	0.56
49:5:453:C:H2'	49:5:454:U:C6	2.40	0.56
49:5:1205:C:H2'	49:5:1206:G:H8	1.71	0.56
1:3:174:A:H2'	1:3:175:A:H8	1.70	0.56
1:3:2745:G:H2'	1:3:2746:A:H8	1.71	0.56
8:i:121:TRP:HD1	8:i:124:LYS:HE2	1.71	0.56
37:O:11:ARG:HD2	49:5:44:C:H4'	1.88	0.56
49:5:239:A:N6	49:5:277:G:N3	2.54	0.56
1:3:707:C:H2'	1:3:708:C:C6	2.41	0.56
1:3:1247:C:H2'	1:3:1248:A:H8	1.69	0.56
1:3:1619:A:H2'	1:3:1620:A:C8	2.41	0.56
22:b:152:GLY:C	22:b:157:GLN:HE21	2.14	0.56
49:5:528:G:N2	49:5:528:G:OP2	2.36	0.56
1:3:1691:U:H2'	1:3:1692:A:H8	1.71	0.56
1:3:2565:G:H2'	1:3:2566:C:C6	2.41	0.56
7:k:64:LYS:HG2	15:1:10:ARG:NE	2.21	0.56
29:B:65:VAL:HG21	29:B:96:ILE:HD11	1.86	0.56
40:I:14:ILE:HA	40:I:106:PHE:HA	1.88	0.56
49:5:611:A:H2'	49:5:612:G:H8	1.71	0.56
49:5:821:U:H2'	49:5:822:A:C8	2.41	0.56
1:3:337:U:H2'	1:3:338:G:H8	1.71	0.55
1:3:2106:G:H22	1:3:2198:G:H22	1.53	0.55
1:3:2495:A:H2'	1:3:2496:G:H8	1.71	0.55
7:k:114:LEU:HB3	7:k:131:VAL:HG12	1.88	0.55
32:A:252:GLU:HA	32:A:255:GLN:HE22	1.70	0.55
38:K:41:PRO:HD2	49:5:359:A:N6	2.21	0.55
49:5:671:G:H2'	49:5:672:A:C8	2.36	0.55
1:3:1511:C:H2'	1:3:1512:A:H8	1.70	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1519:A:H4'	1:3:1520:A:OP1	2.07	0.55
1:3:2820:G:N3	1:3:2887:A:O2'	2.40	0.55
49:5:991:A:H2'	49:5:992:U:C6	2.41	0.55
1:3:879:U:O4	1:3:968:U:O2'	2.22	0.55
32:A:113:LEU:HD21	32:A:163:PHE:HE1	1.70	0.55
38:K:112:ARG:HD3	38:K:120:VAL:HG23	1.89	0.55
49:5:1266:U:H2'	49:5:1267:G:C8	2.41	0.55
1:3:1043:C:OP1	8:i:42:LYS:NZ	2.32	0.55
1:3:2781:C:H2'	1:3:2782:A:C8	2.41	0.55
5:c:149:SER:O	5:c:151:LYS:NZ	2.39	0.55
33:H:52:GLN:HG3	33:H:53:PRO:HD3	1.87	0.55
47:E:35:LEU:HB2	47:E:61:LYS:H	1.72	0.55
49:5:664:A:H2'	49:5:665:G:H8	1.71	0.55
1:3:42:U:H2'	1:3:43:A:H8	1.70	0.55
1:3:2005:G:OP2	22:b:142:ARG:NH2	2.38	0.55
1:3:2077:A:H2'	1:3:2078:A:C8	2.41	0.55
1:3:1585:A:C6	1:3:1749:A:H1'	2.42	0.55
1:3:2251:U:H2'	1:3:2252:U:C6	2.42	0.55
1:3:2299:U:H2'	1:3:2300:A:H8	1.72	0.55
1:3:2614:U:H2'	1:3:2615:G:C8	2.42	0.55
7:k:69:ARG:HG2	7:k:72:PHE:HB2	1.87	0.55
18:v:53:ARG:O	18:v:57:THR:HG23	2.06	0.55
31:F:144:ALA:O	31:F:145:GLU:HG2	2.07	0.55
49:5:69:G:H1	49:5:86:A:H61	1.53	0.55
49:5:456:U:O4	49:5:457:A:N6	2.40	0.55
49:5:922:G:N2	49:5:1365:U:O2	2.33	0.55
1:3:1343:C:H2'	1:3:1344:U:C6	2.42	0.55
1:3:2756:A:H5'	6:e:4:ILE:HD12	1.89	0.55
1:3:2812:U:H1'	1:3:2813:A:H2'	1.89	0.55
35:C:13:ARG:NH1	49:5:540:U:O2'	2.40	0.55
49:5:1193:U:H2'	49:5:1194:A:H8	1.71	0.55
1:3:1082:A:H4'	1:3:1083:A:H5'	1.88	0.55
31:F:115:MET:HA	31:F:118:LYS:HG2	1.89	0.55
49:5:188:U:H2'	49:5:189:C:C6	2.42	0.55
49:5:503:G:H2'	49:5:504:A:C8	2.42	0.55
1:3:1803:U:H2'	1:3:1804:A:H8	1.70	0.55
1:3:2347:G:H2'	1:3:2348:U:C6	2.42	0.55
25:j:113:LYS:H	25:j:113:LYS:HD2	1.70	0.55
27:t:33:GLN:HB3	27:t:68:PRO:HB2	1.89	0.55
32:A:33:VAL:HG12	32:A:266:ARG:H	1.70	0.55
35:C:132:PRO:HD2	49:5:399:C:H5''	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:C:151:ILE:HB	35:C:154:VAL:HG12	1.89	0.55
42:N:22:ILE:HD11	42:N:67:LEU:HD13	1.89	0.55
47:E:89:ASN:OD1	47:E:90:LEU:N	2.37	0.55
1:3:1350:A:O3'	28:r:84:ARG:NH2	2.39	0.55
1:3:2031:C:H2'	1:3:2032:G:H8	1.71	0.55
1:3:2077:A:H2'	1:3:2078:A:H8	1.71	0.55
1:3:2395:U:O2'	11:u:55:ARG:NH1	2.40	0.55
1:3:2751:C:OP1	14:2:33:LYS:NZ	2.40	0.55
23:l:37:THR:HG1	23:l:128:THR:HG1	1.55	0.55
23:l:109:ILE:HG23	23:l:114:MET:SD	2.47	0.55
33:H:64:ASP:OD1	33:H:65:ILE:N	2.39	0.55
39:M:12:ARG:NH1	49:5:989:A:O2'	2.39	0.55
49:5:297:A:H2'	49:5:298:G:C8	2.42	0.55
49:5:371:U:H2'	49:5:372:G:O4'	2.07	0.55
51:7:23:G:H2'	51:7:24:A:H8	1.70	0.55
1:3:274:A:OP2	1:3:294:G:N1	2.39	0.54
1:3:1493:A:N7	1:3:1579:G:H2'	2.22	0.54
1:3:1662:G:H2'	1:3:1663:G:H8	1.72	0.54
21:d:106:VAL:HG11	21:d:139:PRO:HG3	1.88	0.54
36:S:52:ASP:OD2	49:5:195:U:O2'	2.22	0.54
49:5:394:U:H2'	49:5:395:G:H8	1.71	0.54
49:5:611:A:H2'	49:5:612:G:C8	2.42	0.54
49:5:1009:G:N2	49:5:1012:A:OP2	2.40	0.54
49:5:1277:C:H2'	49:5:1278:G:O4'	2.07	0.54
1:3:984:C:H2'	1:3:985:A:H8	1.73	0.54
1:3:2386:A:H1'	26:n:90:VAL:HG23	1.90	0.54
1:3:2809:A:H2'	1:3:2810:A:C8	2.42	0.54
5:c:145:GLN:HA	5:c:148:LYS:HZ3	1.72	0.54
10:q:60:GLU:HB2	10:q:91:LYS:HG2	1.88	0.54
38:K:68:VAL:HG11	38:K:95:LEU:HD21	1.89	0.54
38:K:112:ARG:HD2	38:K:130:TYR:HA	1.88	0.54
4:a:262:HIS:HE1	4:a:263:MET:HE2	1.73	0.54
9:m:22:VAL:HG21	9:m:48:LEU:HD12	1.90	0.54
21:d:103:LEU:HD12	21:d:107:ALA:HB3	1.88	0.54
45:G:116:ILE:HG13	45:G:137:ILE:HG12	1.88	0.54
48:P:77:ILE:H	48:P:77:ILE:HD12	1.71	0.54
1:3:715:G:OP2	1:3:811:G:N2	2.40	0.54
1:3:1431:A:O5'	3:w:105:ARG:NH2	2.40	0.54
4:a:262:HIS:CE1	4:a:263:MET:HE2	2.42	0.54
33:H:20:TYR:HB2	33:H:66:ASN:HB2	1.88	0.54
49:5:664:A:H2'	49:5:665:G:C8	2.42	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:838:A:O2'	49:5:839:U:OP1	2.22	0.54
49:5:1003:G:O6	49:5:1018:U:O4	2.25	0.54
33:H:56:LEU:HD12	33:H:57:THR:HG23	1.89	0.54
33:H:117:LYS:NZ	49:5:1162:G:H5'	2.22	0.54
41:L:5:LEU:HD21	41:L:57:ARG:HD2	1.89	0.54
43:R:55:LYS:HB2	49:5:953:A:C2	2.42	0.54
1:3:389:C:H2'	1:3:390:A:C8	2.42	0.54
1:3:555:A:O2'	28:r:114:ARG:NH2	2.41	0.54
1:3:1583:G:O2'	1:3:1584:U:OP1	2.22	0.54
1:3:2854:A:N7	1:3:2872:A:O2'	2.37	0.54
40:I:43:LYS:HD2	40:I:81:ILE:HD11	1.90	0.54
49:5:136:U:O4	49:5:157:A:N7	2.41	0.54
49:5:747:C:H2'	49:5:748:U:C6	2.43	0.54
1:3:806:A:H2'	1:3:807:U:C6	2.41	0.54
1:3:1261:U:H2'	1:3:1262:G:C8	2.43	0.54
34:J:8:ASN:N	34:J:70:MET:SD	2.80	0.54
49:5:169:G:N2	49:5:219:A:O2'	2.41	0.54
49:5:457:A:H2'	49:5:458:G:H8	1.71	0.54
49:5:483:U:H2'	49:5:484:A:C8	2.42	0.54
49:5:818:A:H2'	49:5:819:G:H8	1.72	0.54
1:3:915:A:N6	1:3:936:G:O2'	2.40	0.54
1:3:2334:U:H3	1:3:2397:G:H1	1.55	0.54
3:w:13:GLU:O	3:w:16:VAL:HG22	2.08	0.54
8:i:101:ASP:OD1	8:i:102:LYS:N	2.40	0.54
10:q:6:VAL:HG22	10:q:11:GLN:HG2	1.89	0.54
10:q:71:ILE:HG22	10:q:82:LYS:HG3	1.90	0.54
23:l:109:ILE:HG13	23:l:110:PRO:HD2	1.88	0.54
27:t:42:VAL:HG23	27:t:65:GLN:HE21	1.71	0.54
37:O:67:ASP:OD1	37:O:68:THR:N	2.41	0.54
49:5:308:C:H2'	49:5:309:A:H8	1.72	0.54
49:5:1230:G:H3'	49:5:1254:A:H61	1.72	0.54
1:3:37:G:H1'	1:3:490:A:N3	2.23	0.54
1:3:633:G:H1	1:3:692:U:H3	1.54	0.54
1:3:1426:C:H2'	1:3:1427:C:H6	1.72	0.54
21:d:44:ILE:HG13	21:d:45:ARG:H	1.73	0.54
31:F:26:ILE:HD12	31:F:29:ILE:HD11	1.89	0.54
35:C:63:MET:O	35:C:110:ARG:NH2	2.41	0.54
49:5:29:G:O2'	49:5:292:U:OP1	2.25	0.54
49:5:167:A:N6	49:5:197:A:O4'	2.41	0.54
49:5:458:G:H2'	49:5:459:C:C6	2.43	0.54
1:3:420:A:H2'	1:3:421:A:O4'	2.07	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:481:C:H2'	1:3:482:G:C8	2.42	0.54
1:3:762:A:H2'	1:3:763:G:C8	2.43	0.54
1:3:1334:U:H2'	1:3:1335:A:H8	1.73	0.54
1:3:1618:U:H4'	1:3:1619:A:OP2	2.08	0.54
1:3:2028:G:OP2	12:y:12:ARG:NH1	2.41	0.54
28:r:122:LYS:HA	28:r:125:VAL:HG22	1.89	0.54
35:C:58:GLN:NE2	49:5:542:G:OP1	2.30	0.54
49:5:747:C:H2'	49:5:748:U:H6	1.73	0.54
49:5:1279:G:O2'	49:5:1280:A:O4'	2.26	0.54
1:3:1440:U:H2'	1:3:1441:A:H8	1.73	0.53
1:3:2154:A:H2'	1:3:2155:G:C8	2.43	0.53
1:3:2249:A:H2'	1:3:2250:G:C8	2.43	0.53
32:A:218:ASN:O	32:A:224:SER:OG	2.22	0.53
49:5:413:G:N2	49:5:423:U:O2	2.37	0.53
1:3:1248:A:H2'	1:3:1249:A:C8	2.43	0.53
1:3:1522:U:H5''	1:3:1523:C:H5	1.71	0.53
1:3:2081:U:H2'	1:3:2082:U:C6	2.44	0.53
1:3:2364:A:H4'	11:u:34:ARG:HG3	1.90	0.53
40:I:80:MET:HA	40:I:80:MET:HE3	1.90	0.53
47:E:13:LEU:HD12	47:E:17:GLN:HE21	1.72	0.53
49:5:655:G:C6	49:5:746:A:C6	2.96	0.53
49:5:1280:A:N6	49:5:1304:U:O2	2.41	0.53
49:5:1329:G:H2'	49:5:1330:A:H8	1.73	0.53
51:7:30:G:H2'	51:7:31:G:H8	1.73	0.53
1:3:755:C:H2'	1:3:756:A:C8	2.44	0.53
1:3:1582:G:H2'	1:3:1583:G:C8	2.44	0.53
1:3:2751:C:OP2	1:3:2763:C:N4	2.41	0.53
31:F:94:ARG:NH1	49:5:933:A:O2'	2.41	0.53
32:A:66:GLN:O	32:A:70:ASN:ND2	2.41	0.53
35:C:64:TYR:OH	35:C:94:GLU:OE2	2.16	0.53
38:K:85:HIS:HA	38:K:112:ARG:HH22	1.72	0.53
48:P:59:ASP:OD2	48:P:83:ARG:NH1	2.41	0.53
49:5:65:G:H4'	49:5:66:A:H3'	1.89	0.53
49:5:536:U:H2'	49:5:537:A:C8	2.37	0.53
49:5:682:G:O2'	49:5:683:G:O4'	2.20	0.53
49:5:798:U:H2'	49:5:799:A:H8	1.74	0.53
49:5:988:G:O2'	49:5:989:A:N7	2.41	0.53
1:3:19:G:OP1	12:y:11:HIS:ND1	2.36	0.53
1:3:137:U:H2'	1:3:138:U:C6	2.44	0.53
1:3:1082:A:O2'	1:3:1083:A:O5'	2.25	0.53
1:3:1414:C:H2'	1:3:1415:A:H8	1.73	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:2102:U:H2'	1:3:2103:C:C6	2.44	0.53
27:t:42:VAL:O	27:t:65:GLN:NE2	2.42	0.53
37:O:6:LEU:HB3	37:O:17:TYR:CD1	2.44	0.53
46:Q:96:LEU:HD21	47:E:86:LEU:HB2	1.90	0.53
49:5:842:C:H2'	49:5:843:C:C6	2.43	0.53
49:5:973:A:N6	49:5:1292:A:N7	2.56	0.53
1:3:37:G:O2'	1:3:490:A:O4'	2.26	0.53
1:3:500:U:HO2'	1:3:501:G:P	2.31	0.53
1:3:1174:G:H5'	8:i:28:LEU:HD23	1.91	0.53
1:3:1508:G:O6	1:3:1531:C:N4	2.41	0.53
1:3:2598:C:OP2	4:a:245:GLY:HA2	2.09	0.53
21:d:35:VAL:HG22	21:d:155:THR:OG1	2.09	0.53
32:A:115:GLY:N	32:A:190:GLU:OE2	2.41	0.53
40:I:18:SER:HB3	40:I:24:LEU:HD12	1.89	0.53
45:G:2:ILE:HG22	45:G:3:THR:HG23	1.89	0.53
48:P:5:GLN:HG2	49:5:112:U:O2'	2.09	0.53
49:5:603:U:H2'	49:5:604:U:C6	2.44	0.53
51:7:26:C:H2'	51:7:27:A:H8	1.72	0.53
1:3:627:U:H2'	1:3:628:A:H8	1.73	0.53
1:3:965:U:H2'	1:3:966:U:H6	1.73	0.53
1:3:991:G:OP1	23:l:87:LYS:NZ	2.38	0.53
1:3:2669:G:H2'	1:3:2670:A:C8	2.44	0.53
2:4:102:A:H2'	2:4:103:C:C6	2.43	0.53
23:l:37:THR:OG1	23:l:128:THR:OG1	2.23	0.53
33:H:117:LYS:HZ2	49:5:1162:G:H5'	1.74	0.53
49:5:140:U:H2'	49:5:141:A:C8	2.44	0.53
49:5:372:G:N2	49:5:383:U:O2	2.32	0.53
49:5:441:U:H2'	49:5:442:G:C8	2.44	0.53
49:5:1347:U:H2'	49:5:1348:G:O4'	2.09	0.53
1:3:788:G:H2'	1:3:789:A:H8	1.73	0.53
1:3:1314:A:H1'	1:3:1316:U:OP2	2.08	0.53
29:B:91:GLN:HA	29:B:94:GLN:HG2	1.91	0.53
30:D:197:ASP:OD2	30:D:201:LYS:NZ	2.41	0.53
35:C:38:HIS:HE1	49:5:509:C:H1'	1.74	0.53
35:C:94:GLU:OE1	35:C:99:ASN:ND2	2.42	0.53
49:5:176:G:H2'	49:5:177:G:C8	2.43	0.53
1:3:323:A:H2'	1:3:324:C:C6	2.44	0.53
1:3:1142:G:C4'	55:g:79:LYS:HA	2.31	0.53
1:3:1221:G:OP1	7:k:31:THR:OG1	2.25	0.53
1:3:1801:U:H2'	1:3:1802:C:C6	2.43	0.53
1:3:2057:C:H2'	1:3:2058:G:C8	2.43	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:2297:G:H2'	1:3:2298:G:H8	1.74	0.53
1:3:2311:G:H2'	1:3:2312:G:H8	1.73	0.53
22:b:51:LEU:HD21	22:b:81:LEU:HB3	1.90	0.53
31:F:16:VAL:HG13	31:F:17:PHE:CD1	2.44	0.53
45:G:101:PHE:HE1	45:G:129:ARG:HG2	1.73	0.53
1:3:60:G:H2'	1:3:61:U:C6	2.44	0.53
1:3:2078:A:H2'	1:3:2079:G:H8	1.74	0.53
1:3:2555:U:H2'	1:3:2556:C:C6	2.44	0.53
2:4:104:C:H2'	2:4:105:A:C8	2.43	0.53
2:4:105:A:H2'	2:4:106:A:C8	2.44	0.53
33:H:96:LEU:HB3	33:H:100:LEU:HD23	1.91	0.53
38:K:126:GLN:O	38:K:128:SER:N	2.42	0.53
45:G:31:MET:HE2	45:G:73:ASN:HB3	1.89	0.53
1:3:694:U:H2'	1:3:695:G:C8	2.44	0.53
1:3:1436:C:H2'	1:3:1437:A:C8	2.43	0.53
1:3:1691:U:H2'	1:3:1692:A:C8	2.44	0.53
1:3:1755:A:H2'	1:3:1756:A:H8	1.74	0.53
1:3:2840:U:H2'	1:3:2841:A:H8	1.73	0.53
24:p:61:ILE:HD11	24:p:92:LYS:HD3	1.90	0.53
34:J:106:LYS:NZ	49:5:705:A:OP1	2.40	0.53
46:Q:81:MET:O	46:Q:85:HIS:ND1	2.33	0.53
1:3:1287:C:H5'	5:c:76:GLN:NE2	2.24	0.52
1:3:2301:C:H2'	1:3:2302:C:H6	1.74	0.52
1:3:2323:U:O2	21:d:125:ARG:NH2	2.41	0.52
1:3:2738:U:H2'	1:3:2739:C:H6	1.73	0.52
25:j:6:THR:H	25:j:21:ILE:HB	1.74	0.52
35:C:95:SER:OG	35:C:136:LEU:N	2.42	0.52
45:G:55:ALA:HB3	45:G:73:ASN:HB2	1.91	0.52
47:E:4:ASN:HB2	47:E:88:ILE:HB	1.91	0.52
47:E:97:LEU:HB3	47:E:100:ILE:HG22	1.92	0.52
49:5:242:A:N6	49:5:277:G:H21	2.07	0.52
49:5:268:C:H2'	49:5:269:A:C8	2.44	0.52
1:3:410:G:H2'	18:v:57:THR:HG22	1.90	0.52
1:3:573:A:H2'	1:3:574:G:O4'	2.09	0.52
1:3:700:U:H2'	1:3:701:A:H8	1.73	0.52
1:3:1079:U:O2'	1:3:1146:A:N1	2.40	0.52
1:3:1210:A:H8	1:3:1210:A:OP1	1.91	0.52
1:3:1292:A:OP1	28:r:99:ARG:NH1	2.42	0.52
1:3:1451:A:H2'	1:3:1452:G:H8	1.73	0.52
1:3:1645:C:H2'	1:3:1646:G:H8	1.73	0.52
21:d:32:GLU:HB3	21:d:157:VAL:HG13	1.92	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:582:G:H2'	49:5:583:G:H8	1.74	0.52
1:3:42:U:H2'	1:3:43:A:C8	2.44	0.52
1:3:995:A:H2'	1:3:996:A:C8	2.44	0.52
1:3:1460:G:H2'	1:3:1461:A:H8	1.75	0.52
1:3:1803:U:H2'	1:3:1804:A:C8	2.44	0.52
11:u:86:PHE:CE1	11:u:94:ARG:HG3	2.44	0.52
16:o:101:ILE:HD12	16:o:104:MET:HE2	1.91	0.52
31:F:92:GLN:HA	31:F:95:LYS:HD3	1.90	0.52
38:K:63:ARG:NH1	49:5:520:C:H41	2.07	0.52
48:P:64:VAL:HB	48:P:78:ALA:HB2	1.91	0.52
49:5:187:A:H2'	49:5:188:U:C6	2.45	0.52
49:5:403:A:H2'	49:5:404:A:H8	1.73	0.52
49:5:460:A:N1	49:5:467:G:O6	2.42	0.52
49:5:896:G:H2'	49:5:897:A:H8	1.75	0.52
49:5:979:C:N3	49:5:1197:G:N2	2.57	0.52
49:5:1415:G:H2'	49:5:1416:U:C6	2.45	0.52
1:3:597:C:H2'	1:3:598:G:H8	1.74	0.52
1:3:678:U:N3	1:3:681:A:OP2	2.32	0.52
1:3:858:A:H2'	1:3:859:G:H8	1.75	0.52
1:3:1224:G:N7	7:k:16:LYS:NZ	2.54	0.52
1:3:1990:C:H2'	1:3:1991:U:C6	2.45	0.52
1:3:2737:G:H2'	1:3:2738:U:C6	2.45	0.52
8:i:117:LEU:O	8:i:121:TRP:N	2.34	0.52
34:J:67:VAL:HG22	34:J:72:MET:HB2	1.92	0.52
48:P:61:VAL:HG12	48:P:80:ILE:HG13	1.92	0.52
49:5:98:G:HO2'	49:5:349:A:HO2'	1.57	0.52
49:5:568:G:H2'	49:5:569:U:C6	2.45	0.52
49:5:625:U:H2'	49:5:626:G:C8	2.44	0.52
49:5:971:A:OP2	49:5:1332:U:O2'	2.26	0.52
1:3:504:G:O3'	5:c:63:LYS:NZ	2.43	0.52
1:3:799:A:H5''	4:a:217:GLY:HA3	1.90	0.52
1:3:2865:U:H2'	1:3:2866:A:C8	2.43	0.52
6:e:82:VAL:HA	6:e:139:ILE:HD11	1.91	0.52
36:S:25:LYS:O	36:S:29:LYS:HG3	2.09	0.52
49:5:386:U:H2'	49:5:387:G:C8	2.44	0.52
49:5:599:G:H1	49:5:634:U:H3	1.57	0.52
49:5:673:A:H2'	49:5:674:U:H6	1.74	0.52
1:3:614:C:H2'	1:3:615:G:C8	2.44	0.52
1:3:776:U:H2'	1:3:777:C:C6	2.44	0.52
1:3:1530:G:H2'	1:3:1531:C:C6	2.44	0.52
1:3:2342:U:O2	26:n:14:ARG:NH1	2.43	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:s:3:VAL:HG13	17:s:5:ASN:H	1.75	0.52
24:p:48:ASP:HA	24:p:51:ASN:HB2	1.90	0.52
26:n:15:ILE:O	26:n:19:ILE:HD12	2.10	0.52
28:r:72:PHE:HE1	28:r:114:ARG:HD3	1.75	0.52
42:N:16:ASP:OD1	42:N:16:ASP:N	2.42	0.52
45:G:24:ASN:HD22	49:5:823:C:H1'	1.75	0.52
49:5:142:G:H2'	49:5:143:U:H6	1.74	0.52
49:5:143:U:H2'	49:5:144:U:O4'	2.10	0.52
49:5:421:G:H2'	49:5:422:A:C8	2.44	0.52
49:5:593:A:N6	49:5:638:A:O2'	2.42	0.52
51:7:6:U:H2'	51:7:7:U:C6	2.44	0.52
51:7:17:U:N3	51:7:20:G:OP2	2.38	0.52
1:3:2880:A:H4'	16:o:6:LYS:HD3	1.91	0.52
5:c:14:GLU:CD	5:c:16:GLU:H	2.18	0.52
32:A:234:ASP:OD2	32:A:246:PHE:N	2.22	0.52
33:H:56:LEU:HD13	33:H:99:ILE:HG13	1.90	0.52
35:C:67:THR:OG1	49:5:544:A:OP2	2.28	0.52
35:C:106:PHE:HD1	35:C:144:LEU:HD13	1.74	0.52
35:C:184:ARG:HH22	35:C:189:ALA:HA	1.74	0.52
38:K:63:ARG:NH1	38:K:102:ASP:OD2	2.42	0.52
49:5:98:G:O2'	49:5:349:A:O2'	2.24	0.52
49:5:195:U:H2'	49:5:196:G:C8	2.45	0.52
49:5:624:U:H2'	49:5:625:U:C6	2.45	0.52
49:5:934:G:H2'	49:5:935:U:C6	2.45	0.52
49:5:1297:G:H2'	49:5:1298:U:O4'	2.09	0.52
51:7:43:G:C2	51:7:44:U:H1'	2.45	0.52
1:3:1426:C:O3'	17:s:26:LYS:NZ	2.39	0.52
1:3:2224:A:H2'	1:3:2225:G:C8	2.45	0.52
24:p:27:ARG:HD3	24:p:37:THR:HG21	1.92	0.52
30:D:138:HIS:NE2	30:D:202:GLN:HG3	2.25	0.52
35:C:159:GLU:HA	35:C:171:ASN:HD21	1.74	0.52
1:3:408:G:OP2	1:3:459:A:N6	2.42	0.52
1:3:474:U:H2'	1:3:475:A:C8	2.45	0.52
1:3:1458:A:H2'	1:3:1459:A:C8	2.44	0.52
1:3:1507:G:O6	1:3:1537:A:N6	2.43	0.52
5:c:143:MET:HG2	5:c:172:THR:HG22	1.92	0.52
11:u:29:ASP:OD1	11:u:30:SER:N	2.41	0.52
21:d:65:PRO:HA	21:d:89:VAL:HG22	1.91	0.52
22:b:97:THR:OG1	22:b:100:ASN:OD1	2.18	0.52
29:B:182:ARG:HH11	29:B:209:MET:HE3	1.73	0.52
38:K:26:TYR:HA	38:K:37:ASN:HA	1.92	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:I:13:LYS:HG2	40:I:81:ILE:HG22	1.92	0.52
40:I:87:GLN:O	40:I:90:ILE:HG22	2.09	0.52
47:E:89:ASN:ND2	49:5:735:C:OP1	2.43	0.52
49:5:1385:A:H2'	49:5:1386:C:C6	2.45	0.52
51:7:11:G:H2'	51:7:12:C:C6	2.45	0.52
1:3:928:G:H2'	1:3:929:G:C8	2.37	0.52
1:3:2406:U:H2'	1:3:2407:G:H8	1.74	0.52
1:3:2853:U:N3	1:3:2871:G:N3	2.58	0.52
6:e:66:ILE:O	6:e:70:THR:HG23	2.10	0.52
7:k:92:LYS:HD2	7:k:125:HIS:HB2	1.91	0.52
12:y:22:LEU:HD11	28:r:41:LYS:HE3	1.91	0.52
32:A:182:VAL:HG23	32:A:206:THR:HG22	1.92	0.52
36:S:24:GLN:O	36:S:28:LEU:HD23	2.10	0.52
45:G:23:ASN:OD1	45:G:26:ARG:NH1	2.43	0.52
49:5:253:G:O6	49:5:266:A:N6	2.43	0.52
1:3:765:A:OP1	4:a:12:SER:OG	2.17	0.51
1:3:1063:A:H2'	1:3:1064:A:C8	2.45	0.51
1:3:1445:U:O4	1:3:1446:G:N2	2.43	0.51
1:3:1470:C:H2'	1:3:1471:A:C8	2.45	0.51
1:3:1601:A:H5''	4:a:90:PRO:HB3	1.92	0.51
1:3:2627:U:H5''	22:b:161:LYS:HD3	1.92	0.51
5:c:145:GLN:HA	5:c:148:LYS:NZ	2.24	0.51
26:n:87:THR:OG1	26:n:113:GLY:O	2.28	0.51
34:J:121:ARG:NH2	49:5:1497:U:OP1	2.43	0.51
37:O:57:GLU:O	37:O:61:LYS:HG2	2.10	0.51
45:G:44:ILE:HA	45:G:47:ILE:HG22	1.91	0.51
49:5:661:G:N2	49:5:738:A:N1	2.49	0.51
49:5:711:G:H2'	49:5:712:A:H8	1.72	0.51
49:5:972:A:HO2'	49:5:976:U:H3	1.54	0.51
1:3:1121:A:O2'	1:3:1138:A:N1	2.41	0.51
1:3:1583:G:H2'	1:3:1584:U:C6	2.46	0.51
1:3:1851:U:H2'	1:3:1852:G:H8	1.75	0.51
30:D:67:GLU:OE2	30:D:97:ARG:NH2	2.43	0.51
35:C:111:ARG:HB3	49:5:403:A:H5''	1.92	0.51
40:I:23:LEU:HD11	40:I:99:PRO:HG3	1.91	0.51
47:E:39:TYR:HD2	47:E:41:GLY:H	1.58	0.51
49:5:317:A:H2'	49:5:318:C:H6	1.75	0.51
49:5:1138:U:O2	49:5:1149:G:N2	2.34	0.51
49:5:1139:A:H2'	49:5:1140:A:C8	2.45	0.51
1:3:830:A:H2'	1:3:831:U:C6	2.46	0.51
1:3:1570:A:H2'	1:3:1572:U:C6	2.46	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:2344:A:H61	11:u:57:THR:HG21	1.75	0.51
3:w:19:VAL:O	3:w:23:LYS:HG2	2.10	0.51
25:j:7:ARG:HB3	25:j:18:GLN:HE21	1.75	0.51
48:P:17:LYS:HD3	49:5:271:G:H5'	1.91	0.51
49:5:76:G:N2	49:5:79:A:OP2	2.42	0.51
49:5:762:G:N1	49:5:809:G:O2'	2.38	0.51
49:5:1034:G:H2'	49:5:1035:A:C8	2.45	0.51
49:5:1109:U:H1'	49:5:1154:A:C5	2.45	0.51
49:5:1387:U:H2'	49:5:1388:A:C8	2.45	0.51
1:3:388:U:H2'	1:3:389:C:C6	2.45	0.51
1:3:1801:U:H2'	1:3:1802:C:H6	1.75	0.51
7:k:20:LEU:HD23	7:k:32:SER:HB3	1.91	0.51
8:i:39:ILE:O	8:i:54:GLY:HA3	2.11	0.51
8:i:99:GLN:O	8:i:99:GLN:HG2	2.11	0.51
11:u:44:MET:HA	11:u:44:MET:HE3	1.93	0.51
32:A:175:LEU:HD13	32:A:197:PRO:HG2	1.92	0.51
35:C:50:TYR:CD2	49:5:506:U:H4'	2.46	0.51
35:C:155:LYS:O	35:C:158:SER:N	2.43	0.51
36:S:28:LEU:HD13	36:S:50:GLN:HG3	1.93	0.51
49:5:377:A:H2'	49:5:377:A:N3	2.24	0.51
49:5:405:C:H2'	49:5:406:G:O4'	2.11	0.51
1:3:664:G:H2'	1:3:665:C:C6	2.46	0.51
1:3:814:U:H2'	1:3:815:G:C8	2.46	0.51
1:3:1797:C:O2'	4:a:216:ALA:HB2	2.11	0.51
1:3:2823:A:O2'	1:3:2825:A:N7	2.33	0.51
29:B:159:ARG:HG3	29:B:165:ILE:HD11	1.92	0.51
31:F:48:LEU:HD22	31:F:120:ALA:HB1	1.93	0.51
38:K:6:GLN:NE2	49:5:875:G:OP2	2.44	0.51
38:K:71:THR:OG1	49:5:358:G:OP1	2.26	0.51
45:G:49:VAL:HG11	45:G:57:PHE:HE1	1.75	0.51
49:5:308:C:H2'	49:5:309:A:C8	2.45	0.51
49:5:1261:A:H2'	49:5:1262:A:C8	2.46	0.51
1:3:963:U:H2'	1:3:964:A:H8	1.75	0.51
1:3:1337:G:H4'	13:0:7:PRO:HG2	1.92	0.51
1:3:2210:G:O2'	1:3:2212:U:OP2	2.28	0.51
1:3:2232:G:H4'	1:3:2234:C:C2	2.46	0.51
1:3:2634:C:H2'	1:3:2635:G:H8	1.75	0.51
3:w:22:LEU:HD13	3:w:25:GLU:OE2	2.10	0.51
7:k:95:ARG:NH2	7:k:110:LEU:O	2.44	0.51
9:m:3:TYR:HD2	9:m:4:ILE:HG23	1.76	0.51
21:d:104:ILE:HG23	21:d:105:TYR:CD1	2.45	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:l:18:GLU:O	23:l:18:GLU:HG2	2.10	0.51
35:C:116:LEU:HG	35:C:121:HIS:HD2	1.75	0.51
41:L:107:ARG:NH1	49:5:1203:A:OP1	2.37	0.51
46:Q:54:ILE:HA	46:Q:57:LEU:HD21	1.92	0.51
49:5:1332:U:OP2	49:5:1333:C:N4	2.42	0.51
49:5:1384:A:H2'	49:5:1385:A:C8	2.46	0.51
1:3:286:A:H4'	1:3:287:G:H8	1.75	0.51
1:3:848:U:H2'	1:3:849:C:C6	2.45	0.51
1:3:899:A:OP2	23:l:22:LYS:HD2	2.11	0.51
1:3:1440:U:H2'	1:3:1441:A:C8	2.44	0.51
1:3:2249:A:H2'	1:3:2250:G:H8	1.76	0.51
1:3:2491:C:O2	23:l:49:SER:OG	2.20	0.51
8:i:93:ARG:HG2	8:i:93:ARG:HH21	1.76	0.51
22:b:139:TYR:CD1	22:b:140:PRO:HD3	2.46	0.51
32:A:28:THR:O	32:A:223:GLN:NE2	2.42	0.51
37:O:28:ARG:NH2	49:5:386:U:O3'	2.44	0.51
38:K:59:ASN:CG	49:5:526:C:H41	2.19	0.51
49:5:297:A:H2'	49:5:298:G:H8	1.76	0.51
49:5:836:C:H3'	49:5:837:G:H8	1.76	0.51
49:5:1062:C:H2'	49:5:1063:G:C8	2.41	0.51
49:5:1079:G:H2'	49:5:1080:G:H8	1.74	0.51
49:5:1212:C:H3'	49:5:1213:A:H5'	1.92	0.51
49:5:1473:U:O2'	52:Y:4:U:OP1	2.19	0.51
1:3:562:C:N4	1:3:2787:U:OP2	2.38	0.51
1:3:992:G:N2	1:3:996:A:OP2	2.43	0.51
1:3:1700:G:H4'	25:j:6:THR:HG23	1.93	0.51
1:3:2017:G:H5''	28:r:42:LYS:HB2	1.92	0.51
1:3:2255:A:H2'	1:3:2256:C:H6	1.76	0.51
1:3:2521:A:H2'	1:3:2522:U:C6	2.46	0.51
21:d:25:ILE:H	21:d:25:ILE:HD12	1.76	0.51
29:B:141:LEU:HD21	29:B:173:GLU:HG2	1.92	0.51
35:C:131:THR:O	35:C:134:ILE:HG12	2.10	0.51
49:5:212:G:O2'	49:5:464:A:N6	2.44	0.51
49:5:259:A:H2'	49:5:260:C:H6	1.75	0.51
49:5:556:G:OP2	49:5:557:A:O2'	2.28	0.51
1:3:2030:A:H2'	1:3:2031:C:C6	2.46	0.51
1:3:2303:U:H3	1:3:2345:G:H1	1.59	0.51
21:d:44:ILE:HG13	21:d:45:ARG:N	2.26	0.51
31:F:35:LYS:HG3	49:5:1348:G:H5''	1.91	0.51
35:C:13:ARG:NE	49:5:541:C:H5'	2.25	0.51
49:5:490:U:H2'	49:5:491:U:C6	2.45	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:510:U:H2'	49:5:511:A:H8	1.76	0.51
49:5:1398:G:H2'	49:5:1399:U:H6	1.76	0.51
1:3:1217:G:H2'	1:3:1218:G:O4'	2.11	0.51
1:3:1436:C:H2'	1:3:1437:A:H8	1.76	0.51
1:3:1485:A:N6	1:3:2710:G:N1	2.32	0.51
1:3:2867:U:H2'	1:3:2868:G:C8	2.46	0.51
7:k:13:ARG:HD2	7:k:13:ARG:O	2.11	0.51
18:v:34:GLN:HB2	18:v:55:LEU:HD11	1.92	0.51
32:A:111:ARG:NH1	49:5:1094:C:OP1	2.44	0.51
32:A:119:ASN:HB3	49:5:1065:G:H4'	1.93	0.51
42:N:2:GLN:NE2	49:5:737:U:OP2	2.44	0.51
49:5:34:A:H2'	49:5:35:C:C6	2.46	0.51
49:5:212:G:H1'	49:5:464:A:H61	1.76	0.51
49:5:305:A:O2'	49:5:605:A:N1	2.38	0.51
1:3:349:G:H2'	1:3:350:C:C6	2.47	0.50
1:3:1545:A:H2'	1:3:1546:U:C6	2.46	0.50
31:F:26:ILE:HD11	31:F:39:GLN:HA	1.93	0.50
35:C:54:LEU:O	35:C:58:GLN:HG2	2.12	0.50
36:S:29:LYS:O	36:S:33:LYS:HG2	2.11	0.50
49:5:597:C:H2'	49:5:598:U:C6	2.46	0.50
1:3:526:G:H2'	1:3:527:A:C8	2.46	0.50
1:3:1633:C:H2'	1:3:1634:A:C8	2.47	0.50
1:3:1979:G:H2'	1:3:1980:G:H8	1.77	0.50
8:i:95:MET:HG2	8:i:103:LEU:HD12	1.93	0.50
20:z:8:ARG:HE	20:z:17:ILE:HG21	1.77	0.50
34:J:60:ALA:HA	34:J:63:VAL:HG12	1.92	0.50
37:O:44:LYS:HD2	49:5:449:A:H2'	1.93	0.50
49:5:310:C:H2'	49:5:311:A:C8	2.46	0.50
49:5:1212:C:H4'	49:5:1308:G:N2	2.26	0.50
51:7:6:U:H2'	51:7:7:U:H6	1.76	0.50
1:3:960:A:H2'	1:3:961:U:H6	1.76	0.50
1:3:1691:U:O3'	22:b:139:TYR:HB2	2.12	0.50
1:3:2688:C:H5'	22:b:198:ALA:HA	1.92	0.50
29:B:92:ILE:HB	29:B:102:LEU:HD11	1.92	0.50
29:B:150:ASN:HB2	29:B:206:ASN:HB3	1.93	0.50
31:F:111:HIS:CG	31:F:112:GLU:H	2.28	0.50
32:A:98:ASN:HA	32:A:101:LYS:HG2	1.94	0.50
39:M:34:LEU:O	39:M:38:GLY:N	2.44	0.50
1:3:410:G:H4'	1:3:411:U:O5'	2.10	0.50
1:3:1247:C:H2'	1:3:1248:A:C8	2.46	0.50
1:3:1343:C:H2'	1:3:1344:U:H6	1.77	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1507:G:O2'	1:3:1508:G:P	2.69	0.50
1:3:1587:U:O2'	1:3:1588:A:OP1	2.23	0.50
1:3:2599:C:N4	1:3:2600:G:O6	2.44	0.50
18:v:52:THR:HA	18:v:55:LEU:HD12	1.93	0.50
34:J:72:MET:HG3	34:J:98:LEU:HD11	1.94	0.50
1:3:714:G:H2'	1:3:715:G:H8	1.75	0.50
1:3:1200:U:H2'	1:3:1201:A:H8	1.77	0.50
1:3:1768:G:H2'	1:3:1769:A:O4'	2.12	0.50
1:3:2322:G:H2'	1:3:2323:U:C6	2.45	0.50
1:3:2495:A:H2'	1:3:2496:G:C8	2.47	0.50
1:3:2736:U:O2'	1:3:2737:G:H8	1.95	0.50
25:j:25:LEU:HD11	25:j:40:VAL:HG12	1.92	0.50
32:A:90:ASP:OD1	32:A:91:TYR:N	2.44	0.50
1:3:807:U:H2'	1:3:808:U:C6	2.46	0.50
1:3:1743:U:H2'	1:3:1744:U:C6	2.47	0.50
1:3:2604:U:HO2'	1:3:2605:G:P	2.34	0.50
32:A:73:LYS:HG2	32:A:239:ALA:HB2	1.93	0.50
32:A:112:TRP:NE1	32:A:190:GLU:OE1	2.42	0.50
33:H:12:ARG:HD3	33:H:79:GLY:HA3	1.92	0.50
49:5:1289:U:H2'	49:5:1290:G:O4'	2.12	0.50
1:3:313:G:H2'	1:3:314:G:C8	2.47	0.50
1:3:1388:G:C8	1:3:1389:G:C8	3.00	0.50
1:3:2840:U:H2'	1:3:2841:A:C8	2.46	0.50
25:j:7:ARG:HA	25:j:20:GLY:HA2	1.92	0.50
29:B:25:ASN:OD1	29:B:29:GLN:NE2	2.44	0.50
29:B:153:LYS:HB3	29:B:204:TRP:HB2	1.93	0.50
40:I:18:SER:HB2	40:I:102:VAL:HA	1.94	0.50
44:T:16:LYS:HA	44:T:19:LYS:HE2	1.92	0.50
45:G:19:LEU:HA	45:G:22:ILE:HG22	1.94	0.50
49:5:369:A:H61	49:5:387:G:H1'	1.77	0.50
49:5:591:A:H2'	49:5:592:A:C8	2.46	0.50
1:3:322:A:H2'	1:3:323:A:C8	2.46	0.50
1:3:1213:U:H2'	1:3:1214:U:C6	2.47	0.50
1:3:1534:A:O2'	1:3:1535:A:H8	1.95	0.50
1:3:2738:U:H2'	1:3:2739:C:C6	2.46	0.50
5:c:182:HIS:HB3	5:c:185:LYS:HG2	1.93	0.50
19:x:26:GLU:H	21:d:102:LYS:NZ	2.10	0.50
32:A:27:ARG:HD3	32:A:27:ARG:H	1.77	0.50
49:5:821:U:H2'	49:5:822:A:H8	1.75	0.50
49:5:973:A:C8	49:5:974:C:H5	2.30	0.50
49:5:1217:G:O6	49:5:1269:U:O4	2.30	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:1431:A:H2'	49:5:1432:A:O4'	2.12	0.50
1:3:330:A:H2'	1:3:331:A:H8	1.77	0.50
1:3:614:C:OP2	24:p:32:LYS:HE2	2.12	0.50
1:3:1210:A:H8	1:3:1210:A:OP2	1.94	0.50
1:3:1476:C:H2'	1:3:1477:A:C8	2.47	0.50
1:3:1994:U:H2'	1:3:1995:G:H8	1.77	0.50
1:3:2239:U:H5''	18:v:29:TRP:CD1	2.46	0.50
1:3:2757:A:H1'	6:e:66:ILE:HG12	1.94	0.50
8:i:84:ILE:HD11	22:b:160:PHE:CD1	2.47	0.50
24:p:57:ARG:O	24:p:61:ILE:HG12	2.12	0.50
31:F:20:THR:O	31:F:23:THR:OG1	2.24	0.50
47:E:70:LYS:HB3	47:E:74:ARG:HH21	1.76	0.50
49:5:55:C:H2'	49:5:348:C:H41	1.77	0.50
49:5:323:A:H1'	49:5:325:A:O4'	2.12	0.50
49:5:578:C:H2'	49:5:579:G:O4'	2.11	0.50
49:5:902:A:H2'	49:5:903:A:H8	1.77	0.50
49:5:1034:G:O2'	49:5:1035:A:O4'	2.28	0.50
1:3:1063:A:OP2	1:3:1161:A:N6	2.45	0.49
1:3:1890:U:O2'	1:3:1891:A:N3	2.43	0.49
1:3:2071:C:H2'	1:3:2072:C:H6	1.77	0.49
1:3:2492:G:OP1	23:l:45:ARG:HD2	2.12	0.49
1:3:2623:U:H2'	1:3:2624:C:H6	1.76	0.49
6:e:136:ILE:HD13	6:e:147:PHE:HD1	1.77	0.49
10:q:16:GLU:HG3	10:q:17:ASN:ND2	2.27	0.49
25:j:86:LEU:O	25:j:94:ARG:N	2.33	0.49
30:D:203:LEU:HD12	30:D:208:VAL:HB	1.94	0.49
49:5:320:G:N1	49:5:323:A:OP2	2.45	0.49
49:5:870:A:H2'	49:5:871:U:C6	2.46	0.49
49:5:1301:U:H2'	49:5:1302:C:C6	2.46	0.49
49:5:1506:A:H2'	49:5:1507:U:C6	2.47	0.49
1:3:501:G:H2'	1:3:502:A:C8	2.47	0.49
1:3:1127:C:H2'	1:3:1128:G:O4'	2.12	0.49
1:3:1507:G:O2'	1:3:1508:G:OP1	2.27	0.49
1:3:1662:G:H2'	1:3:1663:G:C8	2.46	0.49
1:3:2451:C:H2'	1:3:2452:G:C8	2.45	0.49
1:3:2455:G:N2	1:3:2458:A:OP2	2.41	0.49
1:3:2665:A:O2'	6:e:163:LYS:NZ	2.44	0.49
31:F:75:ARG:HE	31:F:88:THR:HG21	1.77	0.49
44:T:42:LEU:HB3	44:T:46:ARG:HH22	1.77	0.49
47:E:23:GLU:HG3	47:E:27:GLN:NE2	2.26	0.49
48:P:21:THR:HG21	49:5:250:G:H4'	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:927:C:H2'	49:5:928:G:C8	2.48	0.49
49:5:1392:A:C6	49:5:1457:G:C6	3.00	0.49
49:5:1417:U:H3	49:5:1435:G:N2	2.10	0.49
1:3:1969:C:O2'	1:3:1971:G:OP1	2.29	0.49
1:3:2103:C:H2'	1:3:2104:A:H8	1.77	0.49
1:3:2310:C:O2'	21:d:123:ASP:O	2.28	0.49
1:3:2681:G:H2'	1:3:2682:A:H8	1.77	0.49
32:A:25:GLU:HG2	32:A:254:ILE:HG21	1.94	0.49
46:Q:81:MET:HG2	46:Q:85:HIS:CE1	2.47	0.49
49:5:304:U:H2'	49:5:305:A:C8	2.45	0.49
49:5:582:G:H2'	49:5:583:G:C8	2.48	0.49
49:5:748:U:H2'	49:5:749:G:O4'	2.13	0.49
49:5:1156:G:H1'	49:5:1157:G:C4	2.48	0.49
49:5:1490:G:H2'	49:5:1491:A:H8	1.77	0.49
1:3:1282:G:H21	24:p:32:LYS:HB3	1.76	0.49
1:3:2320:U:O2	21:d:37:ASN:ND2	2.45	0.49
1:3:2826:G:O2'	1:3:2828:C:OP2	2.22	0.49
17:s:16:VAL:O	17:s:20:GLN:HG2	2.12	0.49
21:d:10:LYS:O	21:d:14:LYS:NZ	2.45	0.49
28:r:122:LYS:O	28:r:126:LYS:HB2	2.12	0.49
30:D:134:GLY:O	30:D:176:SER:OG	2.22	0.49
32:A:123:LEU:O	32:A:127:ILE:HG23	2.13	0.49
32:A:222:PRO:O	32:A:225:THR:OG1	2.26	0.49
37:O:71:SER:OG	49:5:451:G:H5'	2.12	0.49
39:M:19:ARG:HH22	49:5:974:C:H2'	1.77	0.49
1:3:614:C:OP1	24:p:30:SER:OG	2.26	0.49
1:3:694:U:H2'	1:3:695:G:H8	1.77	0.49
1:3:701:A:H2'	1:3:702:U:C6	2.48	0.49
1:3:1002:A:H4'	1:3:2279:G:H22	1.76	0.49
1:3:1204:A:N3	1:3:1204:A:C2'	2.71	0.49
1:3:1323:A:H2'	1:3:1324:A:C8	2.47	0.49
1:3:1552:C:H2'	1:3:1553:G:O4'	2.12	0.49
1:3:2169:G:H4'	1:3:2170:A:H3'	1.94	0.49
1:3:2321:C:H2'	1:3:2322:G:C8	2.48	0.49
1:3:2634:C:H2'	1:3:2635:G:C8	2.47	0.49
4:a:167:TYR:HB3	4:a:202:VAL:HG12	1.94	0.49
8:i:20:ILE:HD13	8:i:58:ILE:HB	1.93	0.49
30:D:123:HIS:HA	30:D:126:LEU:HD21	1.95	0.49
48:P:18:ASN:ND2	49:5:272:G:H5'	2.28	0.49
49:5:478:G:H21	49:5:479:A:H61	1.60	0.49
49:5:710:G:H2'	49:5:711:G:H8	1.75	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:635:G:HO2'	1:3:638:A:HO2'	1.60	0.49
1:3:1512:A:H2'	1:3:1513:A:H8	1.77	0.49
1:3:1934:A:H2'	1:3:1935:A:C8	2.47	0.49
1:3:2175:U:O2	1:3:2179:A:N7	2.46	0.49
1:3:2275:A:H5''	1:3:2276:A:H5''	1.94	0.49
1:3:2651:G:H2'	1:3:2652:U:C6	2.48	0.49
1:3:2764:U:H1'	1:3:2765:A:H5''	1.95	0.49
29:B:29:GLN:HB2	29:B:32:LYS:HE3	1.95	0.49
30:D:203:LEU:HD23	30:D:203:LEU:H	1.78	0.49
32:A:184:GLU:HB3	32:A:187:ALA:HB3	1.95	0.49
32:A:225:THR:HB	32:A:229:MET:HE1	1.93	0.49
37:O:66:THR:H	37:O:69:VAL:HB	1.76	0.49
38:K:67:LYS:HG3	38:K:75:GLU:OE2	2.12	0.49
49:5:61:A:OP2	49:5:96:G:N2	2.44	0.49
49:5:446:A:H2'	49:5:447:G:O4'	2.12	0.49
49:5:831:C:H2'	49:5:832:G:H8	1.77	0.49
51:7:53:A:C6	51:7:64:G:C6	3.00	0.49
1:3:85:U:O4	1:3:103:G:O2'	2.25	0.49
1:3:788:G:H2'	1:3:789:A:C8	2.46	0.49
1:3:840:G:H22	1:3:863:U:H5'	1.77	0.49
1:3:976:C:H2'	1:3:977:A:O4'	2.11	0.49
1:3:1264:U:H2'	1:3:1265:G:C8	2.47	0.49
1:3:1914:G:O6	1:3:1931:C:N4	2.45	0.49
1:3:2146:A:H2'	1:3:2147:G:C8	2.48	0.49
1:3:2515:C:H2'	1:3:2516:G:O4'	2.12	0.49
1:3:2736:U:H4'	22:b:23:ARG:HH12	1.76	0.49
7:k:88:LEU:HD11	7:k:101:LYS:HG3	1.93	0.49
49:5:11:A:H2'	49:5:12:G:C8	2.48	0.49
49:5:356:G:H2'	49:5:357:G:C8	2.47	0.49
1:3:500:U:O2'	1:3:501:G:OP1	2.25	0.49
1:3:918:G:C6	1:3:932:U:O2	2.66	0.49
1:3:945:U:OP2	23:l:22:LYS:NZ	2.46	0.49
1:3:1616:G:H2'	1:3:1617:U:C6	2.47	0.49
1:3:1626:C:H2'	1:3:1627:U:H6	1.78	0.49
1:3:2699:C:H2'	1:3:2700:C:H6	1.77	0.49
3:w:56:THR:HA	3:w:59:THR:HG22	1.95	0.49
10:q:54:ARG:O	10:q:98:VAL:N	2.45	0.49
36:S:13:GLN:HB3	36:S:17:ARG:HH22	1.77	0.49
41:L:105:ASN:ND2	49:5:944:A:OP2	2.46	0.49
49:5:210:G:H2'	49:5:211:G:H8	1.78	0.49
49:5:782:G:H2'	49:5:783:G:H8	1.78	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:381:A:H2'	1:3:382:U:C6	2.48	0.49
1:3:961:U:H2'	1:3:962:U:C6	2.48	0.49
1:3:1186:A:O3'	24:p:80:ASN:ND2	2.44	0.49
1:3:1572:U:H2'	1:3:1573:A:C8	2.48	0.49
1:3:2608:A:H2'	1:3:2609:C:C6	2.47	0.49
1:3:2759:G:O3'	6:e:4:ILE:HD11	2.12	0.49
16:o:10:ILE:O	16:o:13:VAL:HG12	2.13	0.49
21:d:104:ILE:HD11	21:d:175:LEU:HA	1.95	0.49
23:l:54:ILE:HD12	23:l:104:PHE:HD1	1.78	0.49
29:B:134:ARG:CZ	30:D:112:PRO:HG2	2.43	0.49
46:Q:96:LEU:HD11	47:E:86:LEU:HD22	1.95	0.49
49:5:762:G:N2	49:5:810:U:OP2	2.46	0.49
1:3:91:G:H2'	1:3:92:U:C6	2.47	0.49
1:3:401:G:O2'	1:3:402:A:O4'	2.30	0.49
1:3:818:A:H2'	1:3:819:U:H4'	1.94	0.49
1:3:1116:U:H2'	1:3:1117:U:C6	2.48	0.49
1:3:1230:U:H2'	1:3:1231:G:H8	1.78	0.49
1:3:1572:U:H2'	1:3:1573:A:H8	1.78	0.49
1:3:1789:C:O2	1:3:2616:G:O2'	2.31	0.49
1:3:2586:G:N3	22:b:143:PHE:HZ	2.10	0.49
1:3:2867:U:H2'	1:3:2868:G:H8	1.78	0.49
4:a:61:ARG:HD2	4:a:64:ARG:NH1	2.28	0.49
5:c:157:VAL:HA	5:c:196:ALA:O	2.12	0.49
21:d:33:LYS:HB2	21:d:92:ARG:HD2	1.94	0.49
32:A:118:THR:HG21	49:5:1092:A:H61	1.77	0.49
38:K:53:MET:HE2	38:K:65:TYR:CG	2.47	0.49
39:M:41:ARG:HB2	40:I:57:ILE:HD12	1.95	0.49
42:N:21:SER:O	42:N:24:VAL:HG22	2.13	0.49
49:5:172:C:H2'	49:5:173:U:C6	2.48	0.49
49:5:458:G:H2'	49:5:459:C:H6	1.78	0.49
49:5:1416:U:H3	49:5:1435:G:H1	1.60	0.49
1:3:311:G:O2'	1:3:396:A:N1	2.46	0.48
1:3:554:U:H2'	1:3:555:A:C8	2.47	0.48
1:3:602:U:H2'	1:3:603:G:C8	2.48	0.48
1:3:1087:C:H2'	1:3:1088:A:H8	1.78	0.48
1:3:1230:U:H2'	1:3:1231:G:C8	2.48	0.48
1:3:1557:G:H3'	1:3:1571:G:H22	1.78	0.48
1:3:2209:U:H2'	1:3:2210:G:C8	2.48	0.48
3:w:34:ALA:HB2	17:s:9:LYS:HG3	1.95	0.48
5:c:200:GLU:OE2	5:c:203:VAL:HG13	2.12	0.48
24:p:33:VAL:O	24:p:37:THR:HG23	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:F:35:LYS:O	31:F:39:GLN:HB2	2.12	0.48
35:C:98:ASP:OD1	35:C:99:ASN:N	2.45	0.48
37:O:71:SER:HG	49:5:451:G:H5'	1.77	0.48
39:M:23:ARG:NH2	39:M:28:GLY:O	2.45	0.48
45:G:54:LEU:HA	45:G:75:LYS:H	1.78	0.48
49:5:951:U:C2	49:5:1200:G:N1	2.81	0.48
49:5:1329:G:H2'	49:5:1330:A:C8	2.48	0.48
52:Y:6:U:H2'	52:Y:7:U:C6	2.48	0.48
1:3:129:U:H2'	1:3:130:C:H6	1.78	0.48
1:3:176:U:C2	1:3:177:U:C5	3.01	0.48
1:3:179:A:O2'	1:3:180:A:O5'	2.31	0.48
1:3:714:G:H2'	1:3:715:G:C8	2.47	0.48
1:3:2358:U:H5	15:1:39:ARG:HH21	1.61	0.48
1:3:2522:U:H2'	1:3:2523:C:C6	2.48	0.48
10:q:74:ILE:HG22	10:q:77:LYS:HB2	1.94	0.48
21:d:68:THR:OG1	21:d:85:ILE:O	2.29	0.48
22:b:107:TYR:HE2	22:b:218:LYS:HG2	1.78	0.48
25:j:91:LYS:HD2	25:j:111:TYR:H	1.78	0.48
30:D:151:LEU:HD13	30:D:180:THR:HG22	1.94	0.48
48:P:21:THR:HG22	48:P:48:HIS:HB3	1.94	0.48
49:5:237:A:H2'	49:5:238:U:C6	2.48	0.48
49:5:822:A:H2'	49:5:823:C:C6	2.48	0.48
49:5:964:A:H2'	49:5:965:C:C6	2.48	0.48
49:5:1087:C:H2'	49:5:1088:C:C6	2.48	0.48
49:5:1146:A:H2'	49:5:1147:U:C6	2.48	0.48
49:5:1495:C:H2'	49:5:1496:G:C8	2.48	0.48
51:7:30:G:H2'	51:7:31:G:C8	2.48	0.48
55:g:43:LYS:C	55:g:45:PHE:N	2.69	0.48
1:3:313:G:N1	1:3:394:C:N3	2.40	0.48
1:3:696:U:H2'	1:3:697:U:C6	2.48	0.48
1:3:1165:U:N3	1:3:2032:G:OP1	2.45	0.48
1:3:1433:U:H2'	1:3:1434:U:C6	2.48	0.48
1:3:1487:U:H2'	1:3:1488:U:C6	2.49	0.48
1:3:1508:G:OP2	1:3:1508:G:H4'	2.04	0.48
1:3:1964:C:H2'	1:3:1965:C:C6	2.49	0.48
1:3:2253:U:H5''	1:3:2254:G:H5'	1.95	0.48
1:3:2575:G:H2'	1:3:2576:A:C8	2.48	0.48
26:n:29:VAL:HG22	26:n:44:TRP:O	2.14	0.48
26:n:77:ILE:HA	26:n:80:LYS:HE2	1.95	0.48
38:K:127:ARG:NH2	49:5:499:U:OP1	2.44	0.48
39:M:22:THR:OG1	49:5:1333:C:OP1	2.20	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L:96:PRO:HG2	41:L:106:ALA:HB1	1.95	0.48
49:5:21:U:H2'	49:5:22:G:O4'	2.14	0.48
49:5:109:G:H2'	49:5:110:U:O4'	2.13	0.48
49:5:193:G:H2'	49:5:194:U:C6	2.49	0.48
49:5:844:U:C2	49:5:845:C:C5	3.01	0.48
49:5:991:A:H2'	49:5:992:U:H6	1.79	0.48
49:5:1293:A:C8	49:5:1297:G:C5	3.01	0.48
51:7:24:A:H2'	51:7:25:G:C8	2.48	0.48
1:3:325:G:C6	1:3:384:G:C6	3.01	0.48
1:3:606:G:N1	1:3:2038:A:OP1	2.44	0.48
1:3:1128:G:H21	1:3:1133:A:H62	1.61	0.48
1:3:2713:A:O2'	1:3:2856:G:OP1	2.31	0.48
6:e:19:ASN:HD22	6:e:21:GLN:HE22	1.60	0.48
36:S:12:ARG:O	36:S:15:ILE:HG12	2.12	0.48
43:R:37:ARG:NH1	49:5:1291:C:O2	2.46	0.48
49:5:140:U:H2'	49:5:141:A:H8	1.77	0.48
49:5:168:A:O2'	49:5:169:G:OP1	2.29	0.48
49:5:1238:C:H2'	49:5:1239:U:H6	1.78	0.48
51:7:7:U:H2'	51:7:8:G:H8	1.74	0.48
1:3:34:C:H2'	1:3:35:U:C6	2.49	0.48
1:3:918:G:N1	1:3:932:U:O2'	2.35	0.48
1:3:1457:A:H2'	1:3:1458:A:C8	2.48	0.48
1:3:1645:C:H2'	1:3:1646:G:C8	2.48	0.48
1:3:2018:U:H2'	1:3:2019:G:O4'	2.13	0.48
1:3:2580:A:N7	22:b:151:ARG:HG2	2.27	0.48
1:3:2580:A:H8	22:b:151:ARG:O	1.96	0.48
1:3:2698:U:O4	9:m:40:ASN:ND2	2.36	0.48
21:d:91:LEU:C	21:d:92:ARG:HD3	2.39	0.48
35:C:153:ILE:HD12	49:5:404:A:H1'	1.96	0.48
35:C:201:LYS:HD3	49:5:9:A:C5	2.49	0.48
46:Q:95:TYR:O	47:E:84:ARG:NH1	2.47	0.48
49:5:445:A:OP2	49:5:482:G:N1	2.44	0.48
49:5:601:U:H2'	49:5:602:G:H8	1.78	0.48
49:5:612:G:O6	49:5:624:U:O4	2.30	0.48
49:5:844:U:H2'	49:5:845:C:H6	1.79	0.48
1:3:597:C:H2'	1:3:598:G:C8	2.48	0.48
1:3:1070:U:O2	1:3:1155:G:O6	2.32	0.48
1:3:1084:C:C2	1:3:1085:A:C8	3.01	0.48
1:3:1461:A:H2'	1:3:1462:A:C8	2.49	0.48
1:3:1463:G:H2'	1:3:1464:G:C8	2.46	0.48
1:3:1697:C:O2'	1:3:2694:A:H4'	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1837:C:H2'	1:3:1838:A:C8	2.45	0.48
1:3:1989:U:H2'	1:3:1990:C:H6	1.79	0.48
1:3:2258:G:O2'	1:3:2504:C:OP1	2.27	0.48
1:3:2361:G:O3'	11:u:46:ARG:NH1	2.46	0.48
1:3:2406:U:H2'	1:3:2407:G:C8	2.48	0.48
1:3:2842:G:C4	1:3:2843:G:C8	3.02	0.48
1:3:2863:G:H2'	1:3:2864:A:C8	2.48	0.48
11:u:32:ALA:O	11:u:34:ARG:NH2	2.46	0.48
21:d:48:LYS:HD2	21:d:52:SER:OG	2.13	0.48
39:M:40:CYS:O	39:M:44:PHE:N	2.35	0.48
45:G:9:LYS:HG3	49:5:822:A:H5''	1.94	0.48
47:E:43:LYS:HB2	47:E:57:TYR:CE2	2.48	0.48
49:5:380:G:H2'	49:5:381:C:C6	2.49	0.48
49:5:512:U:H2'	49:5:513:G:H8	1.79	0.48
49:5:673:A:H2'	49:5:674:U:C6	2.49	0.48
49:5:945:U:H2'	49:5:946:G:C8	2.49	0.48
49:5:1231:U:O2'	49:5:1253:A:N6	2.47	0.48
49:5:1351:U:H2'	49:5:1352:A:C8	2.49	0.48
1:3:1261:U:H2'	1:3:1262:G:H8	1.79	0.48
1:3:1628:G:OP1	3:w:95:LYS:HD3	2.13	0.48
9:m:112:GLU:OE1	12:y:41:ARG:NE	2.38	0.48
21:d:104:ILE:HG13	21:d:108:LEU:HD21	1.95	0.48
32:A:95:LEU:O	32:A:99:ILE:HG12	2.13	0.48
35:C:195:TYR:O	35:C:199:TRP:HB2	2.13	0.48
49:5:173:U:H2'	49:5:174:U:H6	1.79	0.48
49:5:640:C:H2'	49:5:641:U:C6	2.49	0.48
49:5:1087:C:H2'	49:5:1088:C:O4'	2.13	0.48
51:7:23:G:H2'	51:7:24:A:C8	2.48	0.48
1:3:702:U:H2'	1:3:703:A:O4'	2.14	0.48
1:3:1208:A:C4	1:3:1210:A:H1'	2.48	0.48
1:3:1807:C:OP2	4:a:190:ARG:NH2	2.44	0.48
1:3:2424:C:H2'	1:3:2425:C:C6	2.49	0.48
1:3:2474:C:OP1	14:2:4:ARG:HG2	2.14	0.48
11:u:44:MET:HE1	11:u:80:LEU:HD22	1.96	0.48
23:l:41:TRP:HB3	23:l:94:VAL:HG21	1.94	0.48
25:j:105:GLU:N	25:j:105:GLU:OE2	2.47	0.48
30:D:181:LYS:NZ	49:5:557:A:OP2	2.42	0.48
35:C:149:ILE:O	35:C:155:LYS:NZ	2.47	0.48
41:L:23:PHE:CE2	41:L:70:ARG:HG3	2.49	0.48
49:5:842:C:H2'	49:5:843:C:O4'	2.14	0.48
1:3:1555:G:H2'	1:3:1556:U:C6	2.49	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:2669:G:O2'	1:3:2670:A:O4'	2.15	0.48
13:0:42:LEU:HG	13:0:43:THR:HG23	1.96	0.48
33:H:52:GLN:HE22	33:H:105:LEU:HD22	1.79	0.48
37:O:71:SER:O	37:O:74:SER:OG	2.23	0.48
38:K:81:PRO:O	38:K:112:ARG:NH1	2.47	0.48
49:5:386:U:H2'	49:5:387:G:H8	1.79	0.48
49:5:519:G:O6	49:5:527:G:N1	2.47	0.48
49:5:549:U:H2'	49:5:550:U:C6	2.48	0.48
49:5:631:C:H2'	49:5:632:A:C8	2.48	0.48
49:5:1136:G:O6	49:5:1157:G:O6	2.32	0.48
1:3:849:C:H2'	1:3:850:G:H8	1.79	0.48
1:3:1293:U:OP1	12:y:13:ARG:NH2	2.47	0.48
1:3:1521:A:H2'	1:3:1523:C:C4	2.49	0.48
1:3:1639:C:H2'	1:3:1640:G:O4'	2.13	0.48
1:3:1857:G:H2'	1:3:1858:U:C6	2.48	0.48
8:i:84:ILE:HD11	22:b:160:PHE:CG	2.49	0.48
35:C:2:LYS:NZ	35:C:70:GLN:HE22	2.12	0.48
47:E:163:MET:O	47:E:165:ASN:N	2.45	0.48
49:5:115:A:H4'	49:5:116:A:H5''	1.94	0.48
49:5:491:U:H2'	49:5:492:G:C8	2.49	0.48
1:3:41:C:H2'	1:3:42:U:C6	2.49	0.47
1:3:514:A:O2'	1:3:515:A:OP1	2.31	0.47
1:3:664:G:H2'	1:3:665:C:H6	1.79	0.47
1:3:1521:A:H2'	1:3:1523:C:C5	2.49	0.47
1:3:1831:G:H21	4:a:262:HIS:CE1	2.32	0.47
1:3:2106:G:N2	1:3:2198:G:H1	2.07	0.47
1:3:2651:G:H2'	1:3:2652:U:H6	1.78	0.47
17:s:59:ILE:HG22	17:s:79:LYS:HB2	1.94	0.47
31:F:45:ALA:O	31:F:49:ILE:HG13	2.13	0.47
34:J:63:VAL:HA	34:J:66:THR:HG22	1.96	0.47
49:5:377:A:O5'	49:5:378:A:N6	2.47	0.47
49:5:778:A:OP2	49:5:797:G:N1	2.39	0.47
49:5:1401:A:H2'	49:5:1402:U:H6	1.79	0.47
1:3:332:G:N1	1:3:373:U:OP2	2.35	0.47
1:3:966:U:H2'	1:3:967:U:C6	2.48	0.47
1:3:1309:G:H2'	1:3:1310:U:C6	2.49	0.47
1:3:1511:C:H2'	1:3:1512:A:C8	2.49	0.47
1:3:2060:G:O2'	22:b:157:GLN:OE1	2.21	0.47
4:a:129:ASP:HB2	4:a:134:PHE:CE2	2.50	0.47
26:n:112:ARG:O	26:n:112:ARG:HG2	2.13	0.47
29:B:113:MET:HG2	29:B:119:ILE:HD11	1.95	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D:208:VAL:HG11	45:G:111:LEU:HD12	1.96	0.47
34:J:81:GLY:O	34:J:86:LYS:NZ	2.42	0.47
42:N:62:ARG:NH1	49:5:579:G:H5''	2.25	0.47
46:Q:81:MET:HE1	46:Q:82:HIS:CE1	2.49	0.47
49:5:46:U:H2'	49:5:47:G:C8	2.46	0.47
49:5:280:G:H2'	49:5:281:U:C6	2.49	0.47
49:5:798:U:H2'	49:5:799:A:C8	2.49	0.47
49:5:1229:A:H2'	49:5:1230:G:C8	2.49	0.47
1:3:330:A:H2'	1:3:331:A:C8	2.49	0.47
1:3:355:A:O2'	1:3:374:A:N3	2.47	0.47
1:3:1082:A:H2'	1:3:1145:G:C2	2.50	0.47
1:3:1671:C:H2'	1:3:1672:C:C6	2.49	0.47
7:k:20:LEU:HB3	7:k:32:SER:HB3	1.96	0.47
46:Q:81:MET:HG2	46:Q:85:HIS:HE1	1.79	0.47
49:5:601:U:H2'	49:5:602:G:C8	2.49	0.47
1:3:1676:G:H2'	1:3:1677:G:H8	1.79	0.47
1:3:2097:A:N6	1:3:2238:G:O6	2.47	0.47
1:3:2580:A:OP2	22:b:151:ARG:N	2.48	0.47
1:3:2667:G:N2	1:3:2670:A:OP2	2.47	0.47
2:4:103:C:H2'	2:4:104:C:C6	2.49	0.47
26:n:12:HIS:HA	26:n:15:ILE:HG22	1.97	0.47
40:I:78:ARG:HH22	49:5:1128:G:P	2.38	0.47
49:5:1196:G:H2'	49:5:1197:G:C8	2.49	0.47
49:5:1210:U:H2'	49:5:1211:A:O4'	2.14	0.47
1:3:14:U:O2	1:3:14:U:H2'	2.13	0.47
1:3:32:G:H2'	1:3:33:C:H6	1.79	0.47
1:3:612:G:C2	1:3:1292:A:C5	3.02	0.47
1:3:806:A:H2'	1:3:807:U:H6	1.79	0.47
1:3:962:U:H2'	1:3:963:U:C6	2.50	0.47
1:3:965:U:H2'	1:3:966:U:C6	2.49	0.47
1:3:1627:U:C2	1:3:1628:G:C8	3.03	0.47
1:3:2054:C:H2'	1:3:2055:A:C8	2.50	0.47
35:C:88:ASN:HA	35:C:91:ARG:HE	1.80	0.47
40:I:24:LEU:HD21	40:I:78:ARG:HB2	1.95	0.47
49:5:20:C:H2'	49:5:21:U:H6	1.79	0.47
49:5:134:G:H22	49:5:160:A:H2	1.60	0.47
49:5:1139:A:C6	49:5:1149:G:C6	3.02	0.47
49:5:1487:U:H2'	49:5:1488:A:H8	1.79	0.47
49:5:1493:A:H2'	49:5:1494:A:C8	2.50	0.47
1:3:183:A:O2'	1:3:184:A:H3'	2.14	0.47
1:3:276:A:H5'	1:3:277:C:OP2	2.15	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:337:U:H2'	1:3:338:G:C8	2.48	0.47
1:3:343:A:OP2	1:3:343:A:H8	1.97	0.47
1:3:858:A:H2'	1:3:859:G:C8	2.50	0.47
1:3:859:G:H2'	1:3:860:C:C6	2.50	0.47
1:3:1761:C:H5	16:o:98:ARG:HH22	1.61	0.47
1:3:2146:A:H2'	1:3:2147:G:H8	1.79	0.47
1:3:2309:A:H2'	1:3:2310:C:C6	2.49	0.47
4:a:57:HIS:CG	4:a:227:THR:HG22	2.49	0.47
22:b:148:GLN:OE1	22:b:149:ALA:N	2.47	0.47
23:l:45:ARG:HH11	23:l:45:ARG:HG3	1.80	0.47
32:A:32:MET:HG3	32:A:33:VAL:HG22	1.96	0.47
44:T:37:ARG:HH11	44:T:40:MET:HE2	1.79	0.47
46:Q:73:ARG:NE	46:Q:78:ASN:O	2.46	0.47
47:E:26:GLN:NE2	47:E:35:LEU:HD11	2.23	0.47
49:5:74:U:H2'	49:5:75:A:C8	2.50	0.47
49:5:541:C:H2'	49:5:542:G:H8	1.79	0.47
53:f:4:ILE:HA	53:f:18:VAL:HA	1.96	0.47
1:3:134:U:H2'	1:3:135:A:H8	1.79	0.47
1:3:176:U:H2'	1:3:177:U:H6	1.80	0.47
1:3:188:G:H2'	1:3:189:U:H6	1.80	0.47
1:3:901:C:O2'	1:3:902:U:O5'	2.30	0.47
1:3:960:A:H2'	1:3:961:U:C6	2.50	0.47
1:3:1036:A:H2'	1:3:1037:A:C8	2.49	0.47
1:3:1115:G:O2'	54:h:122:LYS:O	2.33	0.47
1:3:1175:C:OP2	8:i:71:LYS:NZ	2.44	0.47
1:3:1210:A:OP2	1:3:1210:A:C8	2.67	0.47
1:3:1264:U:C4	1:3:1265:G:C6	3.02	0.47
1:3:1470:C:H2'	1:3:1471:A:H8	1.78	0.47
1:3:1802:C:H2'	1:3:1803:U:C6	2.50	0.47
1:3:2025:C:H2'	1:3:2026:A:H8	1.80	0.47
1:3:2371:U:H2'	1:3:2372:C:H6	1.79	0.47
1:3:2797:C:O2'	1:3:2895:A:N3	2.48	0.47
1:3:2892:U:H2'	1:3:2893:C:H6	1.80	0.47
2:4:59:A:HO2'	2:4:60:C:P	2.38	0.47
3:w:18:LEU:O	3:w:22:LEU:HD23	2.14	0.47
3:w:22:LEU:HB3	3:w:51:LEU:HD11	1.97	0.47
4:a:89:ASP:OD1	4:a:92:ARG:NH1	2.47	0.47
12:y:37:LYS:HD3	12:y:43:CYS:HB3	1.96	0.47
25:j:19:VAL:HG22	25:j:43:VAL:HA	1.97	0.47
28:r:124:LEU:O	28:r:127:LYS:HG2	2.15	0.47
34:J:78:PHE:CD1	34:J:104:ASN:HB3	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:C:38:HIS:CE1	49:5:509:C:H1'	2.49	0.47
36:S:11:LEU:HA	36:S:14:ASN:HD21	1.79	0.47
36:S:66:ARG:HG3	36:S:66:ARG:HH21	1.79	0.47
40:I:90:ILE:O	40:I:94:LYS:HG2	2.15	0.47
47:E:25:GLN:O	47:E:28:THR:OG1	2.25	0.47
48:P:8:VAL:HA	48:P:62:GLN:HE21	1.80	0.47
48:P:62:GLN:NE2	48:P:63:ILE:O	2.47	0.47
49:5:251:G:O6	49:5:262:G:O6	2.31	0.47
49:5:289:U:H2'	49:5:290:G:C8	2.47	0.47
49:5:395:G:H2'	49:5:396:C:C6	2.50	0.47
49:5:482:G:N2	49:5:483:U:O4	2.42	0.47
49:5:522:G:H2'	49:5:523:U:C6	2.50	0.47
49:5:818:A:H2'	49:5:819:G:C8	2.49	0.47
49:5:912:G:H2'	49:5:913:A:H8	1.78	0.47
49:5:1007:U:H2'	49:5:1008:G:C8	2.50	0.47
49:5:1109:U:H2'	49:5:1110:C:C6	2.48	0.47
1:3:67:C:O2'	1:3:492:C:N3	2.40	0.47
1:3:174:A:H2'	1:3:175:A:C8	2.48	0.47
1:3:289:U:H2'	1:3:290:A:C8	2.50	0.47
1:3:432:G:H5''	18:v:31:VAL:HG12	1.96	0.47
1:3:477:U:O2'	5:c:47:GLN:NE2	2.28	0.47
1:3:508:A:O2'	1:3:509:G:OP1	2.27	0.47
1:3:1692:A:H2'	1:3:1693:U:C6	2.49	0.47
1:3:2148:U:C2	1:3:2149:U:C6	3.03	0.47
1:3:2857:C:H2'	1:3:2858:A:H8	1.80	0.47
46:Q:46:ILE:HB	47:E:107:LEU:HD13	1.97	0.47
46:Q:83:GLN:HE22	49:5:717:C:H4'	1.80	0.47
49:5:130:G:H2'	49:5:131:G:C8	2.49	0.47
49:5:230:G:H2'	49:5:231:U:C6	2.49	0.47
1:3:246:G:N2	1:3:259:A:OP2	2.48	0.47
1:3:759:U:H2'	1:3:760:G:C8	2.50	0.47
1:3:780:G:O2'	1:3:783:G:H1'	2.14	0.47
1:3:1598:U:H2'	1:3:1599:C:C6	2.50	0.47
1:3:1991:U:H2'	1:3:1992:C:H6	1.78	0.47
10:q:24:LYS:NZ	10:q:26:GLU:OE1	2.48	0.47
26:n:32:VAL:HG22	26:n:92:ASP:O	2.15	0.47
29:B:24:ALA:HB3	29:B:30:THR:HG22	1.97	0.47
33:H:108:ARG:NH2	33:H:110:LYS:H	2.13	0.47
39:M:5:SER:HA	39:M:8:VAL:HG12	1.97	0.47
46:Q:102:VAL:C	46:Q:103:LYS:HD2	2.40	0.47
49:5:152:U:H2'	49:5:153:A:C8	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:331:C:H2'	49:5:332:A:C8	2.50	0.47
49:5:394:U:H2'	49:5:395:G:C8	2.49	0.47
49:5:470:U:O4	49:5:471:A:N6	2.48	0.47
49:5:472:G:H2'	49:5:473:A:C8	2.50	0.47
49:5:499:U:H2'	49:5:500:G:C8	2.50	0.47
1:3:501:G:N2	1:3:719:G:H1'	2.30	0.47
1:3:933:A:H3'	1:3:934:C:H6	1.80	0.47
1:3:1392:G:N7	18:v:2:ALA:N	2.63	0.47
1:3:2082:U:OP1	4:a:251:ARG:HD3	2.15	0.47
1:3:2692:U:P	16:o:56:ARG:HH21	2.38	0.47
8:i:26:LEU:HG	8:i:31:LEU:HD12	1.97	0.47
28:r:51:LEU:O	28:r:55:ILE:HG12	2.15	0.47
32:A:201:LEU:HD12	32:A:217:ALA:HB3	1.97	0.47
39:M:7:LYS:HE2	39:M:28:GLY:CA	2.44	0.47
49:5:625:U:H2'	49:5:626:G:H8	1.78	0.47
1:3:32:G:H2'	1:3:33:C:C6	2.49	0.46
1:3:177:U:H2'	1:3:178:A:H8	1.81	0.46
1:3:519:A:H5''	1:3:520:C:H5	1.79	0.46
1:3:670:G:H2'	1:3:671:C:C6	2.51	0.46
1:3:720:A:N1	1:3:822:C:H1'	2.30	0.46
1:3:1019:A:N6	1:3:1020:G:O6	2.48	0.46
1:3:2551:G:H21	1:3:2654:U:H5''	1.79	0.46
31:F:21:LEU:O	31:F:25:ILE:HG12	2.15	0.46
32:A:255:GLN:O	32:A:255:GLN:HG2	2.13	0.46
49:5:167:A:C5	49:5:196:G:C6	3.03	0.46
49:5:747:C:C2	49:5:748:U:C5	3.03	0.46
49:5:912:G:H2'	49:5:913:A:C8	2.50	0.46
49:5:913:A:H2'	49:5:914:A:C8	2.50	0.46
49:5:1264:G:C6	49:5:1265:U:C4	3.03	0.46
49:5:1326:C:H2'	49:5:1327:G:O4'	2.15	0.46
49:5:1415:G:H2'	49:5:1416:U:H6	1.80	0.46
1:3:128:A:H5''	1:3:129:U:C6	2.50	0.46
1:3:692:U:H2'	1:3:693:U:C6	2.50	0.46
1:3:1106:G:N2	1:3:1124:G:N3	2.63	0.46
1:3:2106:G:H22	1:3:2198:G:N2	2.14	0.46
1:3:2243:G:H2'	1:3:2244:U:C6	2.50	0.46
1:3:2426:A:OP1	15:1:42:ARG:NH2	2.48	0.46
10:q:40:MET:HG3	10:q:40:MET:O	2.15	0.46
25:j:30:LYS:O	25:j:31:ARG:HG2	2.15	0.46
25:j:107:ARG:NH1	25:j:112:ASN:OD1	2.48	0.46
32:A:33:VAL:HG23	32:A:36:TYR:HB2	1.96	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:L:19:LEU:HD23	41:L:30:SER:HA	1.96	0.46
42:N:13:GLN:NE2	42:N:16:ASP:O	2.49	0.46
43:R:66:MET:HE3	43:R:74:PHE:HZ	1.79	0.46
47:E:107:LEU:O	47:E:111:LYS:HG3	2.15	0.46
49:5:354:U:H2'	49:5:355:A:C8	2.39	0.46
49:5:553:C:H2'	49:5:554:C:C6	2.50	0.46
49:5:951:U:C2	49:5:1200:G:C2	3.03	0.46
1:3:98:C:H2'	1:3:99:C:H6	1.80	0.46
1:3:691:G:H2'	1:3:692:U:C6	2.50	0.46
1:3:764:G:OP1	4:a:10:SER:OG	2.33	0.46
1:3:1293:U:H2'	1:3:1294:G:C8	2.51	0.46
1:3:1722:U:O2'	1:3:1734:A:N7	2.37	0.46
1:3:2012:A:C8	1:3:2013:C:C5	3.04	0.46
1:3:2808:A:H2'	1:3:2809:A:C5	2.50	0.46
30:D:182:ASN:HD22	30:D:191:MET:HE1	1.79	0.46
38:K:55:PRO:HB3	38:K:102:ASP:HB3	1.97	0.46
40:I:46:LEU:HD11	49:5:1116:U:C5	2.51	0.46
40:I:60:SER:HB3	40:I:64:ASP:HB2	1.98	0.46
40:I:86:ASN:O	40:I:89:ALA:N	2.32	0.46
45:G:32:THR:HB	45:G:73:ASN:OD1	2.16	0.46
49:5:259:A:H2'	49:5:260:C:C6	2.50	0.46
49:5:1332:U:H3	49:5:1338:A:N6	2.11	0.46
1:3:184:A:O2'	1:3:186:A:N7	2.34	0.46
1:3:767:C:H2'	1:3:768:G:O4'	2.15	0.46
1:3:774:A:H1'	1:3:775:C:H5	1.81	0.46
1:3:932:U:H2'	1:3:934:C:N4	2.31	0.46
1:3:1288:C:H2'	1:3:1289:G:C8	2.50	0.46
1:3:1990:C:C2	1:3:1991:U:C5	3.03	0.46
1:3:2078:A:H2'	1:3:2079:G:C8	2.51	0.46
1:3:2124:A:H61	1:3:2174:G:N2	2.14	0.46
1:3:2190:G:C2	1:3:2191:G:C5	3.03	0.46
1:3:2685:A:H2'	1:3:2686:C:C6	2.50	0.46
1:3:2816:A:H2'	1:3:2817:G:H8	1.80	0.46
16:o:30:GLU:HA	16:o:51:THR:HA	1.97	0.46
16:o:31:VAL:HG12	16:o:90:LEU:HD23	1.97	0.46
27:t:93:MET:HE1	27:t:95:PRO:HG3	1.97	0.46
40:I:31:ILE:HA	40:I:34:VAL:HG12	1.96	0.46
43:R:78:ARG:NH2	49:5:1295:U:O2'	2.47	0.46
49:5:74:U:H2'	49:5:75:A:H8	1.79	0.46
49:5:226:G:H2'	49:5:227:A:C8	2.50	0.46
1:3:288:A:H2'	1:3:289:U:C6	2.50	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:680:A:H2'	1:3:682:A:C8	2.51	0.46
1:3:756:A:H2'	1:3:757:A:C8	2.51	0.46
1:3:1288:C:H2'	1:3:1289:G:H8	1.79	0.46
1:3:1422:U:H4'	1:3:1637:A:H4'	1.98	0.46
1:3:1457:A:H2'	1:3:1458:A:H8	1.80	0.46
1:3:1605:A:H2'	1:3:1606:A:C8	2.50	0.46
1:3:1676:G:H2'	1:3:1677:G:C8	2.51	0.46
1:3:1743:U:H2'	1:3:1744:U:H6	1.81	0.46
1:3:2623:U:C2	1:3:2624:C:C5	3.03	0.46
1:3:2625:U:H2'	1:3:2626:A:H8	1.80	0.46
4:a:138:LEU:HA	4:a:141:ILE:HD12	1.96	0.46
5:c:165:ASN:OD1	5:c:166:THR:N	2.49	0.46
28:r:6:LYS:HB2	28:r:104:VAL:HG12	1.97	0.46
35:C:56:GLU:HA	35:C:59:ARG:HD3	1.96	0.46
40:I:42:ILE:HD12	40:I:82:LEU:HD13	1.98	0.46
41:L:71:ARG:O	41:L:75:LEU:HG	2.15	0.46
49:5:22:G:H2'	49:5:23:G:H8	1.81	0.46
49:5:309:A:H2'	49:5:310:C:C6	2.51	0.46
49:5:1161:G:H2'	49:5:1162:G:C8	2.49	0.46
1:3:451:A:H2'	1:3:452:U:C6	2.51	0.46
1:3:671:C:O2'	1:3:675:U:OP1	2.33	0.46
1:3:1106:G:C2	1:3:1124:G:C4	3.03	0.46
1:3:1211:U:H2'	1:3:1212:C:C6	2.51	0.46
4:a:144:GLY:H	4:a:170:ILE:HB	1.79	0.46
10:q:4:ILE:HB	10:q:39:LEU:O	2.16	0.46
34:J:15:HIS:CD2	34:J:78:PHE:HB2	2.51	0.46
34:J:54:TYR:O	34:J:58:ILE:HG23	2.15	0.46
39:M:61:TRP:CE3	40:I:54:VAL:HG21	2.51	0.46
40:I:62:HIS:CD2	49:5:1174:U:H4'	2.50	0.46
46:Q:48:GLN:NE2	46:Q:50:ARG:O	2.49	0.46
49:5:377:A:H5''	49:5:378:A:N7	2.31	0.46
1:3:425:U:H4'	1:3:426:U:OP2	2.15	0.46
1:3:697:U:H2'	1:3:698:A:C8	2.50	0.46
1:3:985:A:H2'	1:3:986:G:H8	1.81	0.46
1:3:999:U:H2'	1:3:1000:U:C6	2.51	0.46
1:3:1207:U:O5'	1:3:1207:U:H6	1.97	0.46
1:3:1446:G:H2'	1:3:1612:U:O4	2.16	0.46
1:3:1516:G:H2'	1:3:1517:G:H8	1.80	0.46
1:3:1716:A:H2'	1:3:1717:C:C6	2.50	0.46
1:3:2197:U:H3'	1:3:2198:G:H8	1.79	0.46
2:4:29:C:O2'	2:4:51:A:N1	2.46	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:m:18:VAL:O	9:m:22:VAL:HG12	2.14	0.46
14:2:1:MET:HE2	14:2:35:ARG:HB2	1.98	0.46
29:B:22:TRP:HB3	29:B:60:ARG:H	1.80	0.46
31:F:23:THR:O	31:F:26:ILE:HG22	2.15	0.46
32:A:223:GLN:HB3	32:A:258:ILE:HG12	1.97	0.46
41:L:19:LEU:HG	41:L:25:ILE:HG21	1.97	0.46
44:T:48:ILE:O	44:T:52:LYS:HG2	2.15	0.46
49:5:18:U:H2'	49:5:19:C:C6	2.50	0.46
49:5:430:G:H2'	49:5:431:U:C6	2.50	0.46
1:3:2643:A:H2'	1:3:2644:U:O4'	2.16	0.46
4:a:188:GLU:HG3	4:a:280:ARG:O	2.15	0.46
28:r:119:LYS:HA	28:r:119:LYS:HD3	1.76	0.46
29:B:24:ALA:HB2	29:B:33:TRP:CZ3	2.51	0.46
29:B:180:THR:OG1	29:B:183:ALA:HB2	2.16	0.46
30:D:205:PRO:HB3	45:G:111:LEU:HD11	1.98	0.46
31:F:27:ASN:OD1	49:5:1350:A:H5'	2.15	0.46
32:A:115:GLY:O	32:A:119:ASN:ND2	2.49	0.46
35:C:124:LEU:HD13	35:C:142:VAL:HG22	1.98	0.46
36:S:21:ASN:O	36:S:25:LYS:HG3	2.16	0.46
46:Q:82:HIS:O	46:Q:86:VAL:HG23	2.16	0.46
49:5:69:G:H2'	49:5:70:A:O4'	2.16	0.46
49:5:537:A:H2'	49:5:538:G:C8	2.50	0.46
49:5:576:A:O2'	49:5:725:A:N3	2.47	0.46
49:5:631:C:H2'	49:5:632:A:H8	1.81	0.46
49:5:788:G:O6	49:5:789:A:N6	2.46	0.46
49:5:1177:U:H2'	49:5:1178:C:O4'	2.16	0.46
1:3:178:A:H2'	1:3:179:A:C8	2.51	0.46
1:3:789:A:H2'	1:3:790:U:C6	2.50	0.46
1:3:795:G:H2'	1:3:796:A:O4'	2.16	0.46
1:3:1298:A:H1'	1:3:2020:A:N6	2.31	0.46
1:3:1389:G:H2'	1:3:1390:C:C6	2.51	0.46
1:3:2010:A:H1'	9:m:5:ASN:HD22	1.81	0.46
1:3:2103:C:H2'	1:3:2104:A:C8	2.51	0.46
1:3:2332:U:H3	1:3:2339:G:H1	1.64	0.46
1:3:2372:C:H2'	1:3:2373:G:O4'	2.16	0.46
1:3:2506:C:H4'	1:3:2507:C:OP1	2.15	0.46
1:3:2862:U:HO2'	1:3:2863:G:P	2.39	0.46
21:d:37:ASN:HB3	21:d:153:ASP:HB2	1.98	0.46
21:d:50:LEU:HD12	21:d:53:ALA:HB3	1.98	0.46
25:j:7:ARG:HB3	25:j:18:GLN:NE2	2.30	0.46
30:D:180:THR:O	49:5:8:G:O2'	2.33	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D:187:THR:O	30:D:191:MET:HG2	2.16	0.46
31:F:2:ARG:HD2	49:5:1355:U:O2'	2.16	0.46
31:F:63:ARG:NH1	31:F:128:ASN:OD1	2.49	0.46
32:A:23:LEU:HD23	32:A:58:LEU:HD12	1.97	0.46
34:J:117:PRO:O	44:T:35:HIS:N	2.39	0.46
46:Q:46:ILE:HD11	46:Q:48:GLN:HB2	1.97	0.46
48:P:74:ARG:HH12	49:5:230:G:H4'	1.81	0.46
49:5:23:G:H4'	49:5:879:G:C8	2.51	0.46
49:5:1239:U:H2'	49:5:1240:U:C6	2.51	0.46
49:5:1324:A:H2'	49:5:1325:U:O4'	2.16	0.46
1:3:198:G:H2'	1:3:199:A:O4'	2.16	0.46
1:3:279:U:H2'	1:3:280:A:H8	1.81	0.46
1:3:289:U:H2'	1:3:290:A:H8	1.81	0.46
1:3:666:G:O6	7:k:74:LYS:NZ	2.46	0.46
1:3:666:G:N2	1:3:669:A:OP2	2.48	0.46
1:3:1048:A:H2'	1:3:1049:U:H6	1.81	0.46
1:3:1106:G:H2'	1:3:1107:C:C4	2.51	0.46
1:3:1884:A:H2'	1:3:1885:G:C8	2.50	0.46
1:3:1887:U:H2'	1:3:1888:U:C6	2.51	0.46
1:3:2059:G:N2	22:b:158:ARG:HA	2.31	0.46
13:0:10:LEU:O	13:0:14:LYS:HG3	2.15	0.46
18:v:15:GLY:HA3	18:v:29:TRP:HZ3	1.81	0.46
31:F:113:LYS:HD2	49:5:1272:C:C2	2.51	0.46
32:A:26:MET:HA	32:A:29:HIS:ND1	2.31	0.46
34:J:78:PHE:HB3	34:J:106:LYS:HE2	1.98	0.46
37:O:79:TRP:O	37:O:83:VAL:HG22	2.16	0.46
40:I:14:ILE:HG23	40:I:80:MET:HB2	1.98	0.46
49:5:45:A:H2'	49:5:46:U:C6	2.51	0.46
49:5:119:U:H3	49:5:225:U:H3	1.64	0.46
49:5:858:A:H2'	49:5:859:A:C8	2.51	0.46
49:5:909:A:O2'	49:5:911:G:H5''	2.16	0.46
49:5:934:G:H2'	49:5:935:U:H6	1.81	0.46
49:5:1401:A:H2'	49:5:1402:U:C6	2.50	0.46
49:5:1495:C:H2'	49:5:1496:G:H8	1.81	0.46
1:3:555:A:H1'	28:r:114:ARG:HH22	1.81	0.45
1:3:630:C:H2'	1:3:631:A:C8	2.52	0.45
1:3:701:A:H1'	15:1:1:MET:HG2	1.97	0.45
1:3:1165:U:O2'	1:3:1166:G:H8	1.99	0.45
1:3:1192:U:H2'	1:3:1193:U:C6	2.51	0.45
1:3:1805:U:H5''	4:a:268:ARG:HB2	1.98	0.45
1:3:2596:A:C6	1:3:2615:G:N1	2.84	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:c:43:ALA:C	5:c:45:TRP:H	2.25	0.45
29:B:64:THR:OG1	29:B:101:ASN:OD1	2.27	0.45
29:B:152:ILE:HG23	29:B:205:ILE:HD13	1.98	0.45
32:A:54:ASP:HB2	32:A:204:THR:HG21	1.97	0.45
38:K:49:ARG:HH11	38:K:65:TYR:HE2	1.62	0.45
49:5:141:A:N6	49:5:153:A:H61	2.14	0.45
49:5:369:A:C4	49:5:479:A:C6	3.03	0.45
49:5:442:G:H2'	49:5:443:G:C8	2.51	0.45
49:5:876:C:H2'	49:5:877:C:H6	1.81	0.45
49:5:953:A:O2'	49:5:954:A:O4'	2.29	0.45
49:5:1176:A:H4'	49:5:1177:U:H5''	1.98	0.45
1:3:666:G:OP1	15:1:20:LYS:NZ	2.47	0.45
1:3:1878:A:H2'	1:3:1879:A:O4'	2.16	0.45
1:3:2568:G:H2'	1:3:2569:A:C8	2.51	0.45
16:o:7:GLN:NE2	22:b:201:GLU:OE2	2.48	0.45
24:p:35:LYS:O	24:p:39:ILE:HG12	2.16	0.45
28:r:18:ARG:HA	28:r:21:CYS:HB3	1.97	0.45
32:A:107:PHE:CE1	32:A:165:GLY:HA2	2.51	0.45
49:5:295:G:H2'	49:5:296:A:C8	2.51	0.45
49:5:1320:A:H62	49:5:1349:A:H3'	1.81	0.45
1:3:1117:U:H2'	1:3:1118:U:O4'	2.17	0.45
1:3:1206:U:O2	1:3:1206:U:H2'	2.17	0.45
1:3:1516:G:H2'	1:3:1517:G:C8	2.51	0.45
22:b:110:VAL:HG11	22:b:197:ILE:HD12	1.98	0.45
32:A:71:TYR:CD1	32:A:213:PHE:HE2	2.35	0.45
33:H:83:LEU:HA	33:H:86:VAL:HG22	1.99	0.45
34:J:91:ARG:HH12	44:T:15:LEU:CD2	2.29	0.45
36:S:66:ARG:HG3	36:S:66:ARG:NH2	2.30	0.45
37:O:2:VAL:HA	37:O:23:ASP:HA	1.98	0.45
37:O:59:LEU:HA	37:O:63:ALA:HB3	1.99	0.45
38:K:41:PRO:HD2	49:5:359:A:H61	1.81	0.45
38:K:49:ARG:HH12	38:K:67:LYS:HE3	1.81	0.45
41:L:39:ILE:HG13	41:L:56:ILE:HD11	1.97	0.45
49:5:18:U:O2'	49:5:1070:G:H1'	2.16	0.45
49:5:66:A:C2	49:5:202:A:H1'	2.51	0.45
49:5:633:U:H2'	49:5:634:U:C6	2.51	0.45
49:5:1267:G:H2'	49:5:1268:G:H8	1.81	0.45
49:5:1304:U:H2'	49:5:1305:G:O4'	2.16	0.45
49:5:1325:U:O2	49:5:1346:G:O6	2.34	0.45
1:3:117:C:H2'	1:3:118:G:O4'	2.16	0.45
1:3:280:A:H2'	1:3:281:U:C6	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:426:U:O2'	1:3:427:A:H8	1.99	0.45
1:3:474:U:H2'	1:3:475:A:H8	1.81	0.45
1:3:903:A:HO2'	1:3:904:C:P	2.40	0.45
1:3:919:C:H2'	1:3:920:G:C8	2.51	0.45
1:3:1028:C:H2'	1:3:1029:A:H8	1.80	0.45
1:3:1151:U:H2'	1:3:1152:U:C6	2.52	0.45
1:3:1204:A:C8	1:3:1204:A:OP2	2.69	0.45
1:3:2173:G:H2'	1:3:2174:G:O4'	2.17	0.45
1:3:2388:C:H2'	1:3:2389:A:C8	2.51	0.45
1:3:2416:U:H2'	1:3:2417:G:H8	1.82	0.45
1:3:2469:A:H2'	1:3:2470:C:C6	2.51	0.45
1:3:2713:A:H2	9:m:61:ARG:HH12	1.64	0.45
2:4:60:C:H2'	2:4:61:A:H8	1.81	0.45
4:a:182:LEU:HD12	4:a:192:PHE:CD2	2.51	0.45
5:c:4:LEU:HD11	5:c:125:THR:O	2.17	0.45
21:d:92:ARG:HA	21:d:96:MET:HB2	1.98	0.45
29:B:10:LEU:HD22	49:5:1164:U:H4'	1.98	0.45
32:A:44:PHE:HE2	32:A:214:ILE:HG21	1.81	0.45
32:A:218:ASN:ND2	32:A:221:GLN:OE1	2.49	0.45
34:J:112:ASN:HD21	49:5:715:A:P	2.40	0.45
36:S:24:GLN:HA	36:S:27:LYS:HE3	1.99	0.45
39:M:41:ARG:HG3	39:M:42:LEU:H	1.80	0.45
41:L:89:LEU:CD2	41:L:92:ARG:HH11	2.29	0.45
47:E:100:ILE:O	47:E:103:LYS:HG2	2.16	0.45
49:5:452:A:H2'	49:5:452:A:N3	2.31	0.45
49:5:680:G:O6	49:5:705:A:N6	2.49	0.45
49:5:1317:A:H2'	49:5:1318:C:C6	2.51	0.45
49:5:1417:U:H3	49:5:1435:G:H22	1.63	0.45
1:3:279:U:H2'	1:3:280:A:C8	2.52	0.45
1:3:626:A:H2'	1:3:627:U:C6	2.51	0.45
1:3:1210:A:OP1	1:3:1210:A:C8	2.69	0.45
1:3:1622:C:H2'	1:3:1623:U:C6	2.52	0.45
1:3:2522:U:H2'	1:3:2523:C:H6	1.82	0.45
4:a:124:SER:OG	4:a:125:GLU:N	2.49	0.45
12:y:29:VAL:HG22	12:y:36:LYS:HD3	1.99	0.45
22:b:87:MET:HE2	22:b:90:PHE:HE2	1.80	0.45
41:L:34:LEU:HD21	41:L:41:PRO:HD3	1.97	0.45
43:R:66:MET:HE3	43:R:74:PHE:CZ	2.52	0.45
49:5:511:A:H2'	49:5:512:U:H6	1.82	0.45
49:5:706:U:H2'	49:5:707:G:H8	1.81	0.45
49:5:1194:A:H2'	49:5:1195:G:H8	1.81	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:86:A:N1	1:3:100:U:O2'	2.49	0.45
1:3:549:A:N3	1:3:614:C:O2'	2.43	0.45
1:3:778:U:O2'	1:3:1693:U:OP1	2.33	0.45
1:3:1009:A:H5'	1:3:1219:U:H1'	1.97	0.45
1:3:1587:U:H2'	1:3:1588:A:C8	2.52	0.45
1:3:1804:A:H2'	1:3:1805:U:C6	2.52	0.45
1:3:1991:U:C2	1:3:1992:C:C5	3.04	0.45
1:3:2239:U:H2'	1:3:2240:U:C6	2.51	0.45
1:3:2287:G:O2'	1:3:2335:A:O2'	2.29	0.45
1:3:2547:C:H4'	14:2:3:VAL:HG21	1.99	0.45
4:a:20:ILE:H	4:a:20:ILE:HD12	1.81	0.45
4:a:285:GLU:HB3	4:a:286:GLN:OE1	2.16	0.45
5:c:175:ILE:HB	5:c:178:VAL:HG22	1.97	0.45
24:p:73:MET:HE1	24:p:81:LEU:HD12	1.99	0.45
26:n:34:LYS:HE2	26:n:101:ARG:NH2	2.32	0.45
26:n:64:ASN:O	26:n:69:ASN:N	2.50	0.45
31:F:113:LYS:H	31:F:113:LYS:HG2	1.56	0.45
33:H:12:ARG:NH1	49:5:1321:G:O6	2.50	0.45
34:J:14:ILE:HG21	34:J:93:PHE:HE1	1.82	0.45
36:S:66:ARG:HA	36:S:69:LYS:HG2	1.99	0.45
37:O:23:ASP:OD2	49:5:225:U:O2'	2.27	0.45
39:M:41:ARG:HG3	39:M:42:LEU:N	2.32	0.45
41:L:23:PHE:CE1	49:5:1304:U:H4'	2.51	0.45
47:E:7:LEU:HD21	47:E:60:TRP:NE1	2.31	0.45
49:5:147:A:H2'	49:5:148:A:C8	2.51	0.45
49:5:226:G:H2'	49:5:227:A:H8	1.82	0.45
49:5:862:C:H2'	49:5:863:A:O4'	2.17	0.45
49:5:920:G:C2	49:5:922:G:C8	3.05	0.45
49:5:951:U:O2	49:5:1200:G:N2	2.50	0.45
49:5:1065:G:H2'	49:5:1066:U:C6	2.52	0.45
49:5:1487:U:H2'	49:5:1488:A:C8	2.52	0.45
1:3:630:C:H2'	1:3:631:A:H8	1.82	0.45
1:3:682:A:H3'	1:3:683:G:H8	1.80	0.45
1:3:1082:A:H2'	1:3:1145:G:N1	2.31	0.45
1:3:1100:U:H2'	1:3:1101:U:C6	2.52	0.45
1:3:1123:A:H2'	1:3:1123:A:N3	2.32	0.45
1:3:1205:U:O2	1:3:1205:U:H2'	2.17	0.45
1:3:1292:A:C6	1:3:1293:U:C4	3.05	0.45
1:3:1426:C:H2'	1:3:1427:C:C6	2.52	0.45
1:3:1512:A:H2'	1:3:1513:A:C8	2.52	0.45
1:3:1538:U:H2'	1:3:1539:U:C6	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1884:A:H2'	1:3:1885:G:H8	1.81	0.45
1:3:2625:U:C2	1:3:2626:A:C8	3.05	0.45
17:s:12:LEU:HD12	17:s:17:TYR:CZ	2.51	0.45
21:d:4:LEU:HD23	21:d:97:TRP:HE3	1.81	0.45
21:d:36:ILE:O	21:d:88:LYS:HA	2.17	0.45
27:t:90:LYS:HB2	27:t:103:VAL:HG13	1.98	0.45
31:F:25:ILE:HG13	31:F:61:PHE:HE1	1.81	0.45
46:Q:46:ILE:O	47:E:107:LEU:HD22	2.17	0.45
47:E:109:LEU:HA	47:E:112:ARG:HG2	1.99	0.45
1:3:759:U:C4	1:3:760:G:C6	3.04	0.45
1:3:1401:A:C2	1:3:1402:G:H1'	2.52	0.45
1:3:1596:U:H2'	1:3:1597:U:C6	2.52	0.45
1:3:1597:U:H2'	1:3:1598:U:C6	2.52	0.45
1:3:2793:U:H2'	1:3:2794:U:C6	2.52	0.45
6:e:39:PRO:HD3	6:e:71:TYR:OH	2.17	0.45
9:m:28:TYR:OH	9:m:71:ASN:OD1	2.33	0.45
9:m:103:LEU:HD21	9:m:115:ILE:HG13	1.98	0.45
23:l:35:VAL:HG22	23:l:102:VAL:HG12	1.98	0.45
29:B:189:LEU:HD12	29:B:202:LYS:HG2	1.99	0.45
35:C:97:LEU:HD21	35:C:122:VAL:HG11	1.99	0.45
35:C:107:ALA:HB3	35:C:113:ALA:HB2	1.99	0.45
35:C:166:PHE:CD2	35:C:167:VAL:HG13	2.52	0.45
49:5:510:U:H2'	49:5:511:A:C8	2.51	0.45
49:5:735:C:H2'	49:5:736:U:C6	2.51	0.45
49:5:776:C:H2'	49:5:777:A:O4'	2.17	0.45
49:5:844:U:H2'	49:5:845:C:C6	2.52	0.45
49:5:882:U:H3'	49:5:883:A:H8	1.82	0.45
49:5:961:G:H2'	49:5:962:G:C8	2.51	0.45
49:5:1382:C:H2'	49:5:1383:A:C8	2.52	0.45
1:3:628:A:H2'	1:3:629:G:C8	2.50	0.45
1:3:693:U:O2'	5:c:102:LYS:NZ	2.49	0.45
1:3:813:G:H5'	4:a:52:LYS:HE3	1.98	0.45
1:3:916:U:H2'	1:3:917:G:O4'	2.17	0.45
1:3:963:U:H2'	1:3:964:A:C8	2.51	0.45
1:3:1080:A:H4'	1:3:1081:A:OP2	2.16	0.45
1:3:1167:U:H2'	1:3:1168:A:C8	2.52	0.45
1:3:1341:U:H2'	1:3:1644:A:C2	2.51	0.45
1:3:1417:G:H2'	1:3:1418:U:C6	2.51	0.45
1:3:1743:U:O2'	1:3:2863:G:H1'	2.17	0.45
1:3:2635:G:O2'	1:3:2789:A:N1	2.42	0.45
1:3:2814:A:H5''	22:b:64:LYS:HD3	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:w:11:SER:O	3:w:61:ARG:NH1	2.50	0.45
4:a:49:ASN:OD1	4:a:50:GLN:N	2.50	0.45
37:O:64:LYS:HD3	37:O:64:LYS:HA	1.71	0.45
40:I:41:LYS:HB3	40:I:83:VAL:HG11	1.98	0.45
44:T:45:LYS:NZ	49:5:718:A:O3'	2.36	0.45
46:Q:85:HIS:NE2	47:E:93:GLU:OE1	2.50	0.45
49:5:144:U:O2	49:5:149:G:C6	2.70	0.45
49:5:501:A:H2'	49:5:502:C:C6	2.52	0.45
49:5:1300:C:H2'	49:5:1301:U:C6	2.51	0.45
1:3:176:U:H2'	1:3:177:U:C6	2.52	0.45
1:3:513:A:H2'	1:3:514:A:C8	2.52	0.45
1:3:672:G:C4	7:k:115:ILE:HD11	2.52	0.45
1:3:966:U:H2'	1:3:967:U:H6	1.82	0.45
1:3:1633:C:H2'	1:3:1634:A:H8	1.80	0.45
1:3:1955:G:C6	1:3:1966:G:C6	3.04	0.45
1:3:2469:A:H1'	1:3:2500:U:N3	2.33	0.45
1:3:2640:A:H2'	1:3:2641:A:C8	2.52	0.45
1:3:2744:A:H2'	1:3:2745:G:C8	2.51	0.45
27:t:42:VAL:HG23	27:t:65:GLN:NE2	2.32	0.45
29:B:194:THR:HG23	29:B:196:TYR:H	1.81	0.45
31:F:5:ARG:NH2	49:5:1354:G:OP2	2.48	0.45
31:F:56:LYS:HD3	31:F:57:PRO:HD2	1.99	0.45
32:A:59:GLU:HG2	32:A:60:LEU:N	2.31	0.45
35:C:101:VAL:O	35:C:104:MET:HB2	2.17	0.45
42:N:20:GLY:HA3	49:5:747:C:O2	2.17	0.45
49:5:915:U:H2'	49:5:916:U:C6	2.51	0.45
49:5:1141:U:O2'	49:5:1142:G:H8	2.00	0.45
49:5:1231:U:N3	49:5:1252:C:C4	2.85	0.45
1:3:21:U:H2'	1:3:22:U:C6	2.52	0.44
1:3:26:G:C6	1:3:27:U:C4	3.05	0.44
1:3:338:G:H2'	1:3:339:U:C6	2.52	0.44
1:3:445:C:H2'	1:3:446:A:C8	2.53	0.44
1:3:611:A:OP1	1:3:1285:U:O2'	2.35	0.44
1:3:674:G:H2'	1:3:675:U:C6	2.52	0.44
1:3:852:C:O2'	1:3:874:U:OP1	2.32	0.44
1:3:954:A:H5''	1:3:2276:A:H61	1.82	0.44
1:3:1208:A:C8	1:3:1208:A:O5'	2.69	0.44
1:3:1239:G:O2'	1:3:1267:A:N1	2.49	0.44
1:3:1331:G:O6	1:3:1332:A:N6	2.50	0.44
1:3:1417:G:H2'	1:3:1418:U:H6	1.82	0.44
1:3:1438:G:H2'	1:3:1439:U:C6	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1519:A:O2'	1:3:1520:A:O4'	2.35	0.44
1:3:1603:A:H2'	1:3:1604:A:C8	2.52	0.44
1:3:2737:G:H2'	1:3:2738:U:H6	1.80	0.44
7:k:112:ILE:H	7:k:129:HIS:HD1	1.65	0.44
7:k:133:LYS:HE2	7:k:133:LYS:HB2	1.59	0.44
20:z:23:LYS:NZ	20:z:28:ASN:O	2.42	0.44
21:d:37:ASN:OD1	21:d:38:MET:N	2.50	0.44
25:j:90:ASP:OD1	25:j:91:LYS:N	2.46	0.44
28:r:11:ARG:HH21	28:r:98:LYS:HD2	1.82	0.44
29:B:36:GLU:O	29:B:39:LYS:HB2	2.16	0.44
33:H:19:VAL:HG12	33:H:67:VAL:HG22	1.99	0.44
34:J:78:PHE:CD1	34:J:106:LYS:HG3	2.52	0.44
37:O:18:ARG:NH2	37:O:35:LEU:HD11	2.31	0.44
43:R:46:GLY:H	43:R:62:VAL:HG23	1.82	0.44
43:R:78:ARG:HH11	49:5:1200:G:H4'	1.82	0.44
49:5:1238:C:H2'	49:5:1239:U:C6	2.52	0.44
49:5:1261:A:N3	49:5:1327:G:O2'	2.41	0.44
49:5:1497:U:H2'	49:5:1498:G:C8	2.51	0.44
1:3:678:U:O2'	1:3:680:A:N7	2.46	0.44
1:3:1227:C:H2'	1:3:1228:G:H8	1.81	0.44
1:3:1534:A:HO2'	1:3:1535:A:H8	1.63	0.44
1:3:1605:A:H2'	1:3:1606:A:H8	1.82	0.44
1:3:1996:A:H2'	1:3:1997:C:O4'	2.18	0.44
1:3:2120:G:O6	1:3:2176:G:O2'	2.35	0.44
1:3:2661:U:OP2	1:3:2662:A:O2'	2.35	0.44
2:4:84:C:O2	2:4:85:A:N6	2.51	0.44
5:c:197:LEU:HD13	5:c:199:VAL:HG23	1.98	0.44
17:s:26:LYS:HG2	17:s:84:THR:HG22	1.99	0.44
22:b:54:PHE:O	22:b:78:THR:HB	2.18	0.44
22:b:67:GLN:O	22:b:71:GLU:HG2	2.17	0.44
26:n:92:ASP:OD1	26:n:94:GLY:N	2.47	0.44
30:D:95:GLY:N	30:D:172:LEU:HD12	2.33	0.44
38:K:14:LYS:O	38:K:16:LYS:NZ	2.40	0.44
38:K:41:PRO:HD2	49:5:359:A:C6	2.52	0.44
49:5:35:C:H2'	49:5:36:G:H8	1.82	0.44
49:5:1488:A:H2'	49:5:1489:C:H6	1.82	0.44
1:3:95:G:H2'	1:3:96:A:C8	2.52	0.44
1:3:385:U:H2'	1:3:386:U:C6	2.52	0.44
1:3:713:C:H2'	1:3:714:G:C8	2.53	0.44
1:3:1099:C:N4	1:3:1105:A:OP1	2.51	0.44
1:3:1293:U:C4	1:3:1294:G:C6	3.05	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1337:G:OP1	13:0:9:LYS:HG2	2.17	0.44
1:3:1428:U:H2'	1:3:1429:G:C8	2.52	0.44
1:3:1507:G:HO2'	1:3:1508:G:P	2.41	0.44
1:3:1557:G:OP2	1:3:1557:G:C8	2.69	0.44
1:3:1648:A:N6	28:r:88:ARG:H	2.14	0.44
1:3:2071:C:H2'	1:3:2072:C:C6	2.52	0.44
1:3:2159:U:H2'	1:3:2160:U:C6	2.53	0.44
3:w:89:GLN:HA	3:w:92:GLU:CD	2.42	0.44
8:i:101:ASP:HB2	8:i:127:VAL:HG13	1.98	0.44
22:b:139:TYR:CG	22:b:140:PRO:HD3	2.52	0.44
23:l:42:ILE:HG22	23:l:126:PRO:HG2	1.98	0.44
29:B:7:SER:O	29:B:11:ARG:NH2	2.50	0.44
30:D:209:ALA:HB1	30:D:215:ASN:HA	1.98	0.44
38:K:44:ARG:HA	38:K:94:LEU:HA	1.99	0.44
40:I:17:GLU:OE2	40:I:75:ARG:HB3	2.17	0.44
42:N:78:LEU:O	42:N:81:THR:OG1	2.24	0.44
47:E:23:GLU:HG3	47:E:27:GLN:HE22	1.81	0.44
49:5:144:U:H2'	49:5:145:G:C8	2.53	0.44
49:5:1173:A:H2'	49:5:1174:U:C6	2.52	0.44
49:5:1248:U:H2'	49:5:1249:G:O4'	2.18	0.44
1:3:24:U:H2'	1:3:25:G:C8	2.53	0.44
1:3:63:U:O2	1:3:96:A:H2	2.00	0.44
1:3:282:C:H5'	1:3:284:U:OP2	2.17	0.44
1:3:297:G:H1	1:3:440:C:H5	1.65	0.44
1:3:518:A:O2'	1:3:532:A:N1	2.41	0.44
1:3:1095:U:OP2	54:h:71:PRO:HA	2.17	0.44
1:3:1345:G:H2'	1:3:1346:G:H8	1.83	0.44
1:3:1507:G:H1'	1:3:1508:G:OP2	2.18	0.44
1:3:1532:A:H5'	1:3:1533:U:C5	2.52	0.44
1:3:1638:C:H2'	1:3:1639:C:C6	2.52	0.44
4:a:43:LYS:HB3	4:a:61:ARG:CZ	2.47	0.44
5:c:188:VAL:O	5:c:192:MET:HG2	2.16	0.44
10:q:57:CYS:SG	10:q:94:VAL:HG12	2.58	0.44
22:b:9:VAL:O	22:b:29:ILE:HG23	2.18	0.44
29:B:62:GLN:OE1	29:B:62:GLN:HA	2.16	0.44
38:K:50:VAL:HG21	38:K:87:LEU:HB3	2.00	0.44
49:5:407:A:N6	49:5:427:A:H62	2.14	0.44
1:3:625:G:H2'	1:3:626:A:C8	2.52	0.44
1:3:887:A:H2'	1:3:888:A:C8	2.52	0.44
1:3:1029:A:N3	10:q:87:GLN:NE2	2.66	0.44
1:3:2353:G:N3	1:3:2389:A:H2'	2.33	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:4:22:G:N2	2:4:58:C:O2	2.45	0.44
7:k:112:ILE:HG23	7:k:128:VAL:HA	1.99	0.44
21:d:15:GLU:HA	21:d:18:LYS:HE3	1.99	0.44
25:j:22:ILE:HG23	25:j:40:VAL:HG13	1.98	0.44
31:F:24:ARG:NH1	49:5:1351:U:OP1	2.51	0.44
32:A:209:GLU:HG2	32:A:210:LEU:HD12	2.00	0.44
49:5:296:A:C8	49:5:297:A:H1'	2.52	0.44
49:5:920:G:H1	49:5:1366:U:H3	1.64	0.44
49:5:1345:G:C2	49:5:1346:G:C8	3.05	0.44
1:3:454:G:H2'	1:3:455:G:H8	1.83	0.44
1:3:675:U:H2'	1:3:676:U:C6	2.52	0.44
1:3:848:U:H2'	1:3:849:C:H6	1.82	0.44
1:3:960:A:H4'	11:u:43:GLN:CG	2.47	0.44
1:3:1101:U:H3	1:3:1104:A:H2'	1.83	0.44
1:3:1458:A:H2'	1:3:1459:A:H8	1.80	0.44
1:3:1817:A:C8	1:3:1818:G:C8	3.06	0.44
1:3:2676:G:H2'	1:3:2677:A:H8	1.82	0.44
10:q:21:PHE:HE1	10:q:91:LYS:HD2	1.83	0.44
11:u:77:SER:OG	11:u:99:LYS:HE2	2.18	0.44
16:o:96:VAL:HG21	16:o:101:ILE:HG21	1.99	0.44
32:A:151:MET:O	32:A:154:ARG:HB3	2.18	0.44
41:L:103:ARG:HG3	49:5:1201:C:N4	2.32	0.44
49:5:45:A:C6	49:5:395:G:C6	3.05	0.44
49:5:415:C:H2'	49:5:416:U:O4'	2.17	0.44
49:5:442:G:H2'	49:5:443:G:H8	1.83	0.44
49:5:635:G:H2'	49:5:636:G:O4'	2.18	0.44
49:5:1106:U:H2'	49:5:1107:U:C6	2.53	0.44
49:5:1403:A:C6	49:5:1448:A:N1	2.86	0.44
1:3:163:A:N3	1:3:2216:U:O2'	2.46	0.44
1:3:903:A:O2'	1:3:904:C:OP1	2.32	0.44
1:3:1309:G:H2'	1:3:1310:U:H6	1.82	0.44
1:3:1825:U:OP2	4:a:162:ARG:NE	2.32	0.44
1:3:1881:C:H2'	1:3:1882:G:O4'	2.17	0.44
1:3:2152:C:H5''	1:3:2153:U:H5	1.82	0.44
1:3:2300:A:H2'	1:3:2301:C:C6	2.53	0.44
1:3:2371:U:H2'	1:3:2372:C:C6	2.53	0.44
1:3:2732:A:H2'	1:3:2733:A:C8	2.53	0.44
2:4:11:A:OP1	2:4:11:A:H4'	2.11	0.44
5:c:194:ALA:C	5:c:196:ALA:H	2.24	0.44
10:q:2:HIS:HE1	10:q:40:MET:HG3	1.82	0.44
26:n:12:HIS:CE1	26:n:31:MET:HE3	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D:130:GLU:HG3	30:D:132:HIS:CE1	2.53	0.44
35:C:2:LYS:HZ2	35:C:114:ARG:NH1	2.16	0.44
37:O:56:LEU:HD23	37:O:56:LEU:HA	1.85	0.44
46:Q:102:VAL:HG23	46:Q:103:LYS:HD2	1.99	0.44
49:5:11:A:H2'	49:5:12:G:H8	1.82	0.44
49:5:42:G:C6	49:5:398:G:C6	3.06	0.44
49:5:108:C:H2'	49:5:109:G:C8	2.49	0.44
49:5:116:A:N1	49:5:229:G:H1'	2.33	0.44
49:5:474:G:H2'	49:5:475:U:C6	2.53	0.44
49:5:484:A:H2'	49:5:485:C:O4'	2.17	0.44
49:5:787:A:H2'	49:5:788:G:C8	2.52	0.44
49:5:884:G:O2'	49:5:900:G:O6	2.34	0.44
49:5:1323:A:H2'	49:5:1324:A:O4'	2.18	0.44
1:3:28:G:O2'	1:3:29:G:O4'	2.25	0.44
1:3:83:G:H2'	1:3:84:G:C8	2.53	0.44
1:3:322:A:H2'	1:3:323:A:H8	1.82	0.44
1:3:571:A:O2'	8:i:9:LYS:NZ	2.51	0.44
1:3:935:U:H2'	1:3:936:G:O4'	2.17	0.44
1:3:966:U:C2	1:3:967:U:C5	3.06	0.44
1:3:1064:A:H2	1:3:2474:C:O4'	2.01	0.44
1:3:1269:C:H2'	1:3:1270:C:H6	1.82	0.44
1:3:1755:A:H2'	1:3:1756:A:C8	2.52	0.44
1:3:1851:U:H2'	1:3:1852:G:C8	2.52	0.44
1:3:2700:C:H2'	1:3:2701:A:H8	1.82	0.44
1:3:2831:U:H2'	1:3:2832:G:H8	1.82	0.44
1:3:2892:U:H2'	1:3:2893:C:C6	2.53	0.44
2:4:4:G:O6	2:4:105:A:N6	2.50	0.44
4:a:80:GLU:OE2	4:a:120:LYS:HB3	2.18	0.44
7:k:18:LYS:HB3	7:k:18:LYS:HE2	1.81	0.44
23:l:54:ILE:HG13	23:l:121:ALA:HB2	1.99	0.44
29:B:159:ARG:HH22	49:5:1046:A:H1'	1.82	0.44
31:F:99:ALA:O	31:F:103:ILE:HG12	2.18	0.44
32:A:154:ARG:NH1	49:5:1088:C:O3'	2.51	0.44
37:O:38:HIS:NE2	37:O:49:LYS:HE3	2.33	0.44
40:I:65:LYS:HE3	40:I:68:ARG:HH12	1.81	0.44
42:N:6:ASN:HA	42:N:9:ILE:HD12	2.00	0.44
44:T:18:PHE:HA	44:T:21:VAL:HG22	2.00	0.44
46:Q:69:LYS:NZ	49:5:715:A:N7	2.66	0.44
49:5:714:C:O2'	49:5:731:A:H5'	2.18	0.44
49:5:796:A:H3'	49:5:797:G:H8	1.82	0.44
49:5:1140:A:C2'	49:5:1141:U:H5'	2.46	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:1267:G:H2'	49:5:1268:G:C8	2.52	0.44
1:3:1127:C:H3'	1:3:1128:G:H8	1.83	0.44
1:3:1306:G:H2'	1:3:1307:G:H8	1.83	0.44
1:3:1475:C:H2'	1:3:1476:C:H6	1.83	0.44
1:3:1802:C:H2'	1:3:1803:U:H6	1.82	0.44
1:3:1850:C:H2'	1:3:1851:U:C6	2.52	0.44
1:3:2688:C:OP2	22:b:117:ARG:NH1	2.51	0.44
2:4:11:A:N6	2:4:67:G:O2'	2.51	0.44
3:w:17:LYS:HA	3:w:20:ILE:HG12	1.99	0.44
5:c:128:VAL:O	5:c:200:GLU:HA	2.18	0.44
6:e:25:ILE:HG13	6:e:38:LEU:HD11	1.99	0.44
10:q:54:ARG:HA	10:q:54:ARG:HD3	1.77	0.44
24:p:69:ARG:HE	24:p:74:THR:HG22	1.82	0.44
30:D:91:LEU:HD13	30:D:105:ILE:HB	1.99	0.44
32:A:189:ALA:O	32:A:193:ILE:HG12	2.17	0.44
35:C:73:ARG:HH11	49:5:619:A:H1'	1.83	0.44
39:M:43:CYS:HA	39:M:46:GLU:HG2	2.00	0.44
42:N:71:ASP:HB2	42:N:74:ALA:HB2	1.98	0.44
49:5:766:G:H4'	49:5:1488:A:H4'	2.00	0.44
49:5:1109:U:H2'	49:5:1110:C:H6	1.81	0.44
49:5:1197:G:OP2	49:5:1197:G:H8	2.00	0.44
49:5:1229:A:H2'	49:5:1230:G:H8	1.83	0.44
49:5:1492:G:H2'	49:5:1493:A:C8	2.53	0.44
1:3:45:U:H2'	1:3:46:A:O4'	2.18	0.43
1:3:363:G:N7	27:t:73:LYS:NZ	2.52	0.43
1:3:1188:C:H2'	1:3:1189:G:O4'	2.17	0.43
1:3:1581:U:H2'	1:3:1582:G:C8	2.53	0.43
1:3:1604:A:H2'	1:3:1605:A:C8	2.52	0.43
1:3:1956:G:C4	1:3:1957:G:C8	3.06	0.43
1:3:2298:G:H2'	1:3:2299:U:C6	2.52	0.43
1:3:2692:U:OP2	16:o:56:ARG:NH2	2.50	0.43
9:m:67:LEU:HD13	9:m:78:LEU:HD22	1.99	0.43
9:m:81:HIS:CE1	9:m:85:LYS:HD2	2.53	0.43
22:b:51:LEU:HA	22:b:83:GLU:HA	2.00	0.43
30:D:152:LYS:HA	30:D:153:PRO:HD3	1.88	0.43
31:F:27:ASN:ND2	49:5:1349:A:O3'	2.49	0.43
33:H:101:LYS:NZ	49:5:1153:G:N7	2.62	0.43
35:C:51:ALA:HB2	49:5:507:A:H5''	2.00	0.43
40:I:48:LEU:HB2	40:I:77:LYS:HB3	2.00	0.43
46:Q:64:LEU:HD11	46:Q:68:ALA:HA	1.99	0.43
49:5:228:G:H2'	49:5:229:G:H8	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:264:C:H2'	49:5:265:U:O4'	2.18	0.43
49:5:512:U:C2	49:5:513:G:C8	3.06	0.43
49:5:656:U:H2'	49:5:657:G:C8	2.53	0.43
49:5:789:A:O2'	49:5:791:A:N7	2.44	0.43
49:5:1239:U:H2'	49:5:1240:U:H6	1.83	0.43
1:3:98:C:H2'	1:3:99:C:C6	2.53	0.43
1:3:164:A:OP2	1:3:164:A:H8	2.00	0.43
1:3:277:C:C4	1:3:278:U:C4	3.05	0.43
1:3:393:C:H2'	1:3:394:C:H6	1.83	0.43
1:3:1246:U:H2'	1:3:1247:C:C6	2.53	0.43
1:3:1625:G:H2'	1:3:1626:C:C6	2.53	0.43
1:3:1950:U:H4'	1:3:1951:A:H3'	2.00	0.43
1:3:2555:U:H2'	1:3:2556:C:H6	1.83	0.43
1:3:2697:C:OP2	1:3:2727:G:N2	2.43	0.43
11:u:50:ILE:HG22	11:u:74:PHE:HB3	2.01	0.43
21:d:83:GLN:O	21:d:85:ILE:HG23	2.19	0.43
21:d:118:SER:HA	21:d:128:TYR:CE2	2.47	0.43
35:C:166:PHE:HA	35:C:180:ARG:HG2	1.99	0.43
36:S:64:ARG:O	36:S:68:LEU:HD23	2.18	0.43
40:I:39:ASP:OD1	40:I:40:VAL:N	2.51	0.43
47:E:40:LEU:HD21	47:E:59:ARG:HD2	2.00	0.43
47:E:107:LEU:HB3	47:E:111:LYS:HE2	1.99	0.43
49:5:8:G:C4	49:5:294:A:C6	3.07	0.43
49:5:20:C:H2'	49:5:21:U:C6	2.53	0.43
49:5:57:U:H2'	49:5:58:G:C8	2.53	0.43
49:5:220:U:O4	49:5:221:U:O4	2.35	0.43
49:5:948:U:H2'	49:5:949:G:C8	2.53	0.43
1:3:158:U:H2'	1:3:159:G:H8	1.82	0.43
1:3:717:U:H5'	13:0:26:SER:HB2	1.98	0.43
1:3:868:C:H2'	1:3:869:U:C6	2.53	0.43
1:3:1242:G:N2	1:3:1266:G:O2'	2.50	0.43
1:3:2325:U:H2'	1:3:2326:G:O4'	2.18	0.43
10:q:24:LYS:HA	10:q:90:THR:HG23	2.00	0.43
25:j:3:SER:O	25:j:6:THR:OG1	2.34	0.43
35:C:143:ARG:HG2	35:C:144:LEU:H	1.82	0.43
49:5:98:G:H2'	49:5:99:U:C6	2.53	0.43
49:5:707:G:H2'	49:5:708:A:H8	1.83	0.43
49:5:942:G:H2'	49:5:943:C:C6	2.53	0.43
49:5:979:C:C4	49:5:1197:G:N2	2.87	0.43
49:5:1432:A:H2'	49:5:1433:G:H8	1.80	0.43
49:5:1498:G:H2'	49:5:1499:G:H8	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:192:U:H2'	1:3:193:G:O4'	2.19	0.43
1:3:1005:G:H2'	1:3:1006:U:C6	2.52	0.43
1:3:1237:G:H2'	1:3:1238:A:H8	1.83	0.43
1:3:1324:A:H2'	1:3:1325:C:C6	2.53	0.43
1:3:1595:C:H2'	1:3:1596:U:H6	1.83	0.43
1:3:2191:G:C5	1:3:2192:U:C4	3.06	0.43
1:3:2193:U:H2'	1:3:2194:G:O4'	2.18	0.43
1:3:2259:G:OP1	23:l:82:ARG:NH1	2.51	0.43
1:3:2313:U:H3	21:d:151:GLY:H	1.66	0.43
1:3:2407:G:C6	1:3:2426:A:N1	2.87	0.43
1:3:2541:C:H2'	1:3:2542:A:O4'	2.19	0.43
1:3:2551:G:H2'	1:3:2552:G:H8	1.79	0.43
1:3:2718:C:H2'	1:3:2719:A:C8	2.54	0.43
1:3:2739:C:H2'	1:3:2740:U:C6	2.53	0.43
1:3:2765:A:N1	6:e:70:THR:HG21	2.34	0.43
1:3:2794:U:H2'	1:3:2795:C:H6	1.82	0.43
1:3:2795:C:H2'	1:3:2796:C:H6	1.83	0.43
5:c:52:ILE:HD13	5:c:92:GLY:HA3	2.01	0.43
8:i:18:TRP:CE2	8:i:138:GLN:HG2	2.53	0.43
16:o:17:GLN:NE2	22:b:223:ALA:H	2.15	0.43
35:C:147:LYS:HE2	49:5:488:U:H1'	1.98	0.43
48:P:32:HIS:CG	48:P:33:PRO:HD2	2.53	0.43
49:5:767:U:H2'	49:5:768:G:H8	1.82	0.43
49:5:1034:G:O2'	49:5:1035:A:O5'	2.31	0.43
49:5:1191:U:H2'	49:5:1192:C:C6	2.53	0.43
49:5:1225:A:H2'	49:5:1226:A:C8	2.54	0.43
1:3:241:C:H2'	1:3:242:G:H8	1.84	0.43
1:3:248:A:H62	1:3:258:G:H21	1.66	0.43
1:3:321:A:H2'	1:3:322:A:H8	1.83	0.43
1:3:1205:U:H3'	1:3:1206:U:C6	2.50	0.43
1:3:1229:U:H2'	1:3:1230:U:C6	2.52	0.43
1:3:2349:G:H2'	1:3:2350:C:C6	2.53	0.43
1:3:2865:U:C2	1:3:2866:A:C8	3.07	0.43
1:3:2888:U:O4	12:y:37:LYS:NZ	2.37	0.43
2:4:59:A:H2'	2:4:60:C:C6	2.53	0.43
14:2:4:ARG:HG3	14:2:4:ARG:HH21	1.82	0.43
23:l:106:VAL:CG2	23:l:114:MET:HG3	2.49	0.43
24:p:63:ARG:NE	24:p:96:GLU:OE2	2.45	0.43
28:r:64:MET:HE3	28:r:69:LEU:HD21	2.00	0.43
29:B:24:ALA:HB1	29:B:29:GLN:HE22	1.82	0.43
38:K:57:LYS:HD3	38:K:57:LYS:HA	1.84	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:P:3:ARG:O	48:P:3:ARG:HD2	2.19	0.43
49:5:404:A:H2'	49:5:405:C:O4'	2.18	0.43
49:5:516:C:H5'	49:5:528:G:O4'	2.18	0.43
49:5:734:A:H2'	49:5:735:C:C6	2.53	0.43
49:5:735:C:H2'	49:5:736:U:H6	1.82	0.43
49:5:1245:A:H2'	49:5:1246:A:C8	2.53	0.43
49:5:1491:A:H2'	49:5:1493:A:OP2	2.18	0.43
1:3:220:A:C8	1:3:468:A:C6	3.07	0.43
1:3:317:U:H2'	1:3:318:U:H6	1.83	0.43
1:3:631:A:H2'	1:3:632:A:C8	2.51	0.43
1:3:688:U:H4'	1:3:689:U:OP2	2.18	0.43
1:3:1073:A:H2'	1:3:1074:A:C8	2.53	0.43
1:3:1093:U:H2'	1:3:1094:G:C8	2.53	0.43
1:3:1201:A:H2'	1:3:1202:A:C8	2.54	0.43
1:3:1203:G:H3'	1:3:1204:A:H8	1.84	0.43
1:3:1442:G:H2'	1:3:1443:A:C8	2.53	0.43
1:3:2511:A:O2'	1:3:2513:G:OP2	2.36	0.43
1:3:2694:A:H2'	1:3:2695:U:C6	2.53	0.43
2:4:43:A:C4	2:4:44:A:C8	3.06	0.43
11:u:79:GLY:HA2	11:u:100:HIS:CE1	2.53	0.43
21:d:75:SER:HB3	51:7:58:G:O4'	2.18	0.43
30:D:136:ILE:HD12	30:D:202:GLN:OE1	2.18	0.43
31:F:3:LYS:HE3	31:F:3:LYS:HB2	1.72	0.43
33:H:128:GLN:HG2	33:H:129:PHE:H	1.83	0.43
44:T:42:LEU:HB3	44:T:46:ARG:NH2	2.34	0.43
46:Q:93:ALA:HB1	46:Q:98:LEU:HB2	2.00	0.43
49:5:353:G:OP1	49:5:363:U:H5''	2.19	0.43
49:5:517:C:N4	49:5:527:G:O2'	2.52	0.43
49:5:742:C:H2'	49:5:743:A:H8	1.84	0.43
49:5:988:G:H2'	49:5:990:C:H41	1.83	0.43
1:3:129:U:OP2	17:s:34:LYS:NZ	2.43	0.43
1:3:434:G:H2'	1:3:435:U:C6	2.53	0.43
1:3:524:G:N2	1:3:527:A:OP2	2.44	0.43
1:3:617:C:C2	1:3:618:G:C8	3.07	0.43
1:3:932:U:H2'	1:3:934:C:H41	1.83	0.43
1:3:1082:A:O2'	1:3:1083:A:P	2.77	0.43
1:3:2197:U:H2'	1:3:2198:G:C8	2.53	0.43
1:3:2208:U:H2'	1:3:2209:U:C6	2.54	0.43
1:3:2404:G:C2	1:3:2405:G:C8	3.07	0.43
1:3:2423:G:O3'	7:k:66:GLY:HA3	2.19	0.43
1:3:2502:G:C2	1:3:2503:G:C8	3.07	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:2623:U:C2	12:y:4:GLN:HA	2.54	0.43
25:j:65:THR:H	25:j:79:PHE:HD2	1.67	0.43
27:t:90:LYS:HG3	27:t:105:LYS:HG2	2.00	0.43
33:H:51:GLU:N	33:H:51:GLU:OE2	2.51	0.43
35:C:13:ARG:HB2	35:C:35:PRO:HD2	1.99	0.43
36:S:24:GLN:HG3	36:S:27:LYS:HE3	2.00	0.43
37:O:25:ARG:HE	49:5:95:C:H4'	1.84	0.43
38:K:30:LEU:C	38:K:31:LEU:HD23	2.44	0.43
49:5:145:G:C6	49:5:149:G:O6	2.71	0.43
49:5:643:U:H2'	49:5:644:U:C6	2.54	0.43
49:5:644:U:H2'	49:5:645:A:C8	2.48	0.43
49:5:1065:G:H2'	49:5:1066:U:H6	1.83	0.43
1:3:273:C:N4	1:3:295:U:O2	2.52	0.43
1:3:756:A:H2'	1:3:757:A:H8	1.83	0.43
1:3:1434:U:H2'	1:3:1435:A:H8	1.83	0.43
1:3:1677:G:H2'	1:3:1678:U:C6	2.53	0.43
1:3:1776:G:C2	1:3:1777:G:C8	3.06	0.43
1:3:1879:A:H2'	1:3:1880:G:O4'	2.19	0.43
1:3:2342:U:C2	26:n:10:LEU:HD21	2.54	0.43
1:3:2845:U:H2'	1:3:2846:A:C8	2.53	0.43
2:4:19:G:C6	2:4:61:A:C6	3.07	0.43
6:e:7:ARG:HB3	6:e:72:ASN:HD21	1.83	0.43
21:d:66:VAL:HG12	21:d:88:LYS:O	2.19	0.43
21:d:91:LEU:HD12	21:d:95:ARG:HG2	2.01	0.43
29:B:133:LEU:HD13	29:B:160:LEU:HD22	2.01	0.43
35:C:10:ARG:O	35:C:14:LEU:HB2	2.18	0.43
35:C:76:ARG:O	35:C:80:LYS:HG2	2.19	0.43
45:G:55:ALA:N	45:G:73:ASN:O	2.50	0.43
45:G:131:LYS:O	45:G:133:ILE:HG12	2.19	0.43
46:Q:54:ILE:HA	46:Q:57:LEU:CD2	2.49	0.43
47:E:49:ILE:HG23	47:E:50:LYS:N	2.32	0.43
49:5:1008:G:C6	49:5:1014:A:N6	2.87	0.43
49:5:1281:U:H2'	49:5:1282:U:O4'	2.18	0.43
49:5:1287:G:N2	49:5:1298:U:O2	2.43	0.43
49:5:1383:A:N6	49:5:1384:A:H62	2.17	0.43
49:5:1409:A:H2'	49:5:1410:A:C8	2.53	0.43
1:3:1205:U:O5'	1:3:1205:U:C6	2.72	0.43
1:3:1498:U:H2'	1:3:1499:C:C6	2.54	0.43
1:3:1720:C:H3'	1:3:1721:G:H8	1.84	0.43
1:3:1819:G:H2'	1:3:1820:U:H6	1.82	0.43
1:3:2290:G:H4'	1:3:2397:G:O2'	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:2358:U:H2'	1:3:2359:G:O4'	2.18	0.43
1:3:2743:U:H2'	1:3:2744:A:H8	1.84	0.43
1:3:2760:C:H2'	1:3:2761:A:O4'	2.18	0.43
1:3:2795:C:H2'	1:3:2796:C:C6	2.54	0.43
1:3:2877:A:O2'	1:3:2878:G:H5'	2.19	0.43
9:m:3:TYR:CD2	9:m:4:ILE:HG23	2.52	0.43
10:q:71:ILE:HD12	24:p:39:ILE:HD13	2.01	0.43
17:s:9:LYS:O	17:s:30:VAL:HG12	2.19	0.43
17:s:69:SER:C	17:s:71:PHE:H	2.26	0.43
30:D:162:ALA:HB3	30:D:167:ARG:HG3	2.01	0.43
30:D:206:ARG:O	30:D:210:ILE:HG12	2.19	0.43
39:M:14:PRO:HG3	39:M:20:ALA:HB2	2.00	0.43
49:5:33:A:H2'	49:5:34:A:C8	2.54	0.43
49:5:125:A:N1	49:5:221:U:C4	2.87	0.43
49:5:662:G:H21	49:5:729:C:H3'	1.83	0.43
49:5:1151:A:H2'	49:5:1152:G:C8	2.53	0.43
49:5:1224:C:O2	49:5:1262:A:N6	2.52	0.43
1:3:51:A:N1	1:3:180:A:N7	2.67	0.43
1:3:331:A:H2'	1:3:332:G:O4'	2.19	0.43
1:3:771:C:H2'	1:3:772:C:C6	2.54	0.43
1:3:908:A:OP1	23:l:5:LYS:HG3	2.19	0.43
1:3:1510:A:H2'	1:3:1511:C:C6	2.54	0.43
1:3:1536:C:H2'	1:3:1537:A:C8	2.54	0.43
1:3:2667:G:O2'	1:3:2669:G:O6	2.35	0.43
2:4:22:G:H5''	2:4:23:A:OP1	2.18	0.43
3:w:53:THR:O	3:w:57:ILE:HG12	2.19	0.43
6:e:58:ASN:OD1	6:e:59:ASN:N	2.51	0.43
8:i:19:TYR:CD2	8:i:143:LEU:HD22	2.54	0.43
15:1:39:ARG:HG2	15:1:39:ARG:HH11	1.84	0.43
23:l:77:LYS:HD3	23:l:78:PRO:HD2	2.01	0.43
35:C:8:PHE:HD2	49:5:426:U:H5'	1.83	0.43
35:C:37:GLN:NE2	49:5:423:U:O2	2.52	0.43
40:I:63:VAL:HG23	40:I:64:ASP:N	2.28	0.43
40:I:85:VAL:O	40:I:89:ALA:HB3	2.19	0.43
41:L:15:ILE:HA	41:L:18:ALA:HB3	2.00	0.43
46:Q:45:ALA:O	49:5:838:A:H1'	2.19	0.43
49:5:204:C:H2'	49:5:205:U:O4'	2.18	0.43
49:5:1052:G:H2'	49:5:1053:U:C6	2.54	0.43
49:5:1250:A:H3'	49:5:1251:G:H8	1.84	0.43
49:5:1298:U:H2'	49:5:1299:C:C6	2.54	0.43
49:5:1325:U:H2'	49:5:1326:C:C6	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:740:A:C2	1:3:762:A:H1'	2.53	0.42
1:3:757:A:H2'	1:3:758:C:C6	2.54	0.42
1:3:894:G:N3	1:3:2276:A:H2'	2.34	0.42
1:3:1354:U:H2'	1:3:1355:C:C6	2.53	0.42
1:3:1614:G:H2'	1:3:1615:G:O4'	2.18	0.42
1:3:1848:U:C2	1:3:1849:G:C8	3.06	0.42
1:3:2169:G:H1'	1:3:2173:G:C6	2.54	0.42
1:3:2529:C:C2	1:3:2553:G:N2	2.86	0.42
2:4:4:G:C6	2:4:105:A:C6	3.07	0.42
9:m:22:VAL:HG23	9:m:45:LEU:HD13	2.01	0.42
27:t:93:MET:HE3	27:t:101:THR:OG1	2.19	0.42
37:O:5:ARG:HH21	49:5:372:G:H4'	1.83	0.42
39:M:5:SER:HB2	49:5:1191:U:H5''	2.01	0.42
46:Q:97:ALA:HA	47:E:47:TYR:CE2	2.54	0.42
47:E:43:LYS:HB2	47:E:57:TYR:HE2	1.84	0.42
49:5:253:G:C6	49:5:266:A:C6	3.07	0.42
49:5:478:G:H21	49:5:479:A:N6	2.16	0.42
49:5:665:G:H2'	49:5:666:U:C6	2.54	0.42
49:5:892:G:N2	49:5:895:A:OP2	2.51	0.42
49:5:1337:U:O5'	49:5:1338:A:H5'	2.19	0.42
49:5:1501:G:H2'	49:5:1502:G:C8	2.51	0.42
51:7:55:U:H2'	51:7:56:U:O4'	2.19	0.42
1:3:771:C:H2'	1:3:772:C:H6	1.83	0.42
1:3:777:C:H2'	1:3:778:U:C6	2.54	0.42
1:3:1817:A:H8	1:3:1818:G:C8	2.37	0.42
1:3:1956:G:H2'	1:3:1957:G:C8	2.52	0.42
1:3:2399:G:OP2	15:1:32:HIS:ND1	2.37	0.42
1:3:2845:U:H2'	1:3:2846:A:H8	1.83	0.42
8:i:19:TYR:HD2	8:i:143:LEU:HD22	1.83	0.42
21:d:52:SER:O	21:d:56:GLU:OE1	2.36	0.42
30:D:111:VAL:HB	30:D:112:PRO:HD3	2.00	0.42
37:O:86:LYS:HE3	49:5:124:U:H5''	2.00	0.42
38:K:20:LYS:HD2	38:K:20:LYS:HA	1.81	0.42
41:L:53:PHE:O	41:L:57:ARG:HG2	2.19	0.42
49:5:35:C:H2'	49:5:36:G:C8	2.53	0.42
49:5:136:U:O2'	49:5:137:A:O5'	2.37	0.42
49:5:1111:G:H2'	49:5:1112:U:H6	1.83	0.42
49:5:1366:U:H2'	49:5:1367:G:H8	1.83	0.42
49:5:1376:G:H2'	49:5:1377:C:O4'	2.20	0.42
1:3:39:C:H2'	1:3:40:A:C8	2.54	0.42
1:3:599:U:H5''	7:k:30:LYS:HZ2	1.85	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:673:A:H5'	7:k:117:HIS:HB2	2.02	0.42
1:3:890:U:H2'	1:3:891:G:H8	1.85	0.42
1:3:1069:G:H2'	1:3:1070:U:O4'	2.19	0.42
1:3:1413:A:H1'	1:3:1414:C:C6	2.55	0.42
1:3:1626:C:H2'	1:3:1627:U:C6	2.53	0.42
1:3:1634:A:N6	1:3:1635:G:O6	2.52	0.42
1:3:2255:A:H2'	1:3:2256:C:C6	2.54	0.42
1:3:2298:G:H2'	1:3:2299:U:H6	1.85	0.42
1:3:2310:C:O2	21:d:125:ARG:NH2	2.52	0.42
1:3:2523:C:H2'	1:3:2524:U:H6	1.84	0.42
1:3:2695:U:H2'	1:3:2696:G:O4'	2.20	0.42
1:3:2812:U:O2'	1:3:2813:A:H5''	2.19	0.42
2:4:2:U:H2'	2:4:3:U:C6	2.54	0.42
3:w:89:GLN:HA	3:w:92:GLU:OE2	2.19	0.42
5:c:8:LYS:HE2	5:c:8:LYS:HB2	1.71	0.42
6:e:25:ILE:HD12	6:e:38:LEU:HD21	2.00	0.42
10:q:32:GLU:HA	10:q:32:GLU:OE2	2.19	0.42
27:t:90:LYS:HB3	27:t:92:VAL:HG12	2.01	0.42
33:H:107:THR:HG22	49:5:1154:A:H5''	2.01	0.42
35:C:183:GLU:OE1	35:C:185:SER:N	2.39	0.42
36:S:34:ASN:HA	36:S:37:LYS:NZ	2.34	0.42
39:M:3:LYS:HG3	39:M:7:LYS:HE3	2.00	0.42
47:E:37:THR:HG22	47:E:37:THR:O	2.19	0.42
49:5:45:A:N1	49:5:395:G:C6	2.87	0.42
49:5:346:G:H2'	49:5:347:G:C8	2.55	0.42
49:5:488:U:H5'	49:5:489:U:H5'	2.02	0.42
49:5:511:A:H2'	49:5:512:U:C6	2.54	0.42
49:5:1236:A:C4	49:5:1237:G:C8	3.08	0.42
1:3:70:G:H2'	1:3:71:C:O4'	2.19	0.42
1:3:142:A:H2'	1:3:143:A:C8	2.55	0.42
1:3:393:C:H2'	1:3:394:C:C6	2.54	0.42
1:3:454:G:H2'	1:3:455:G:C8	2.54	0.42
1:3:519:A:H3'	1:3:520:C:H6	1.83	0.42
1:3:938:A:H2'	1:3:939:U:C6	2.54	0.42
1:3:1439:U:H2'	1:3:1440:U:C6	2.54	0.42
1:3:1596:U:H2'	1:3:1597:U:H6	1.83	0.42
1:3:1677:G:H2'	1:3:1678:U:H6	1.84	0.42
1:3:2059:G:H21	22:b:158:ARG:HA	1.84	0.42
1:3:2700:C:C2	1:3:2701:A:C8	3.08	0.42
1:3:2757:A:N1	1:3:2758:A:N6	2.67	0.42
6:e:152:ARG:HD3	6:e:156:LYS:HE3	2.02	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:k:76:GLU:HG3	7:k:110:LEU:HD21	2.00	0.42
7:k:120:LEU:HD21	7:k:139:VAL:HA	2.00	0.42
10:q:48:PRO:C	10:q:49:TYR:HD1	2.26	0.42
29:B:45:PHE:HZ	29:B:55:ASN:HA	1.84	0.42
32:A:107:PHE:O	32:A:165:GLY:HA3	2.19	0.42
35:C:57:LYS:O	35:C:61:GLN:HG3	2.18	0.42
40:I:86:ASN:O	40:I:88:GLY:N	2.52	0.42
49:5:345:A:H2'	49:5:346:G:C8	2.54	0.42
49:5:1008:G:O6	49:5:1014:A:N6	2.51	0.42
49:5:1243:A:HO2'	49:5:1300:C:HO2'	1.58	0.42
49:5:1295:U:H5''	49:5:1296:C:OP2	2.19	0.42
49:5:1300:C:H2'	49:5:1301:U:H6	1.83	0.42
49:5:1467:A:H3'	49:5:1468:A:C8	2.54	0.42
1:3:384:G:H2'	1:3:385:U:C6	2.54	0.42
1:3:410:G:H1'	1:3:411:U:OP2	2.19	0.42
1:3:1470:C:C2	1:3:1583:G:N2	2.88	0.42
1:3:1497:A:H2'	1:3:1498:U:C6	2.53	0.42
1:3:1814:G:O2'	1:3:1816:A:N6	2.29	0.42
1:3:1828:A:H2'	1:3:1829:U:C6	2.54	0.42
1:3:2030:A:H2'	1:3:2031:C:H6	1.83	0.42
14:2:16:ILE:HG22	14:2:25:VAL:HB	2.01	0.42
17:s:63:THR:H	17:s:75:SER:HG	1.64	0.42
21:d:34:ILE:HG23	21:d:155:THR:O	2.19	0.42
22:b:5:GLY:H	22:b:87:MET:HE1	1.83	0.42
26:n:103:ALA:O	26:n:107:GLU:HG2	2.19	0.42
33:H:106:THR:OG1	33:H:107:THR:N	2.53	0.42
36:S:70:SER:O	36:S:73:VAL:HG12	2.19	0.42
49:5:210:G:H2'	49:5:211:G:C8	2.55	0.42
49:5:915:U:H2'	49:5:916:U:H6	1.85	0.42
49:5:941:A:H2'	49:5:942:G:C8	2.54	0.42
49:5:1403:A:H2'	49:5:1404:U:C6	2.54	0.42
1:3:51:A:C8	1:3:53:G:C2	3.07	0.42
1:3:386:U:H2'	1:3:387:U:C6	2.55	0.42
1:3:526:G:H2'	1:3:527:A:H8	1.84	0.42
1:3:1326:C:H2'	1:3:1327:G:O4'	2.20	0.42
1:3:1367:G:P	17:s:60:ARG:HH12	2.42	0.42
1:3:1628:G:H2'	1:3:1629:U:C6	2.54	0.42
1:3:1816:A:O2'	1:3:1817:A:O4'	2.28	0.42
1:3:2163:U:H2'	1:3:2164:G:C4	2.54	0.42
3:w:16:VAL:HG11	3:w:68:GLU:HB2	2.00	0.42
5:c:172:THR:HB	5:c:178:VAL:HG21	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:59:ILE:HB	8:i:127:VAL:HA	2.02	0.42
16:o:22:VAL:HG23	16:o:81:ILE:HG21	2.01	0.42
16:o:52:VAL:HA	16:o:65:ILE:O	2.20	0.42
26:n:84:LEU:O	26:n:85:LYS:HG2	2.18	0.42
29:B:6:ASN:HD22	39:M:49:TYR:HB3	1.84	0.42
32:A:156:ILE:O	32:A:160:GLU:HG2	2.19	0.42
35:C:50:TYR:CZ	35:C:54:LEU:HD11	2.55	0.42
41:L:107:ARG:HH12	49:5:1203:A:P	2.40	0.42
49:5:110:U:H2'	49:5:111:A:C8	2.55	0.42
49:5:423:U:H2'	49:5:424:U:O4'	2.19	0.42
49:5:517:C:H2'	49:5:518:A:C8	2.54	0.42
49:5:1138:U:N3	49:5:1139:A:N7	2.67	0.42
49:5:1198:C:H5''	49:5:1199:U:H5''	2.02	0.42
49:5:1386:C:H2'	49:5:1387:U:C6	2.54	0.42
51:7:50:G:H2'	51:7:51:G:C8	2.54	0.42
1:3:420:A:C2	1:3:429:U:C2	3.08	0.42
1:3:721:G:N2	13:0:7:PRO:HA	2.27	0.42
1:3:2640:A:H2'	1:3:2641:A:H8	1.85	0.42
4:a:234:ASN:O	4:a:241:GLY:HA3	2.19	0.42
10:q:64:LEU:HB3	10:q:86:ARG:HE	1.84	0.42
29:B:86:GLN:HA	29:B:89:THR:HG22	2.02	0.42
29:B:156:VAL:HG22	29:B:201:VAL:HG12	2.02	0.42
35:C:14:LEU:HD23	35:C:59:ARG:HA	2.01	0.42
45:G:118:THR:OG1	45:G:119:SER:N	2.53	0.42
45:G:132:LYS:HE2	45:G:132:LYS:HB3	1.95	0.42
49:5:192:A:H2'	49:5:193:G:H8	1.84	0.42
49:5:1142:G:N2	49:5:1145:A:OP2	2.51	0.42
1:3:343:A:H1'	1:3:363:G:N3	2.35	0.42
1:3:567:U:H4'	1:3:568:G:C8	2.55	0.42
1:3:646:A:H2'	1:3:647:G:O4'	2.20	0.42
1:3:852:C:H2'	1:3:853:G:O4'	2.20	0.42
1:3:1298:A:H1'	1:3:2020:A:H61	1.84	0.42
1:3:1546:U:H2'	1:3:1547:G:O4'	2.19	0.42
1:3:2058:G:H8	1:3:2058:G:OP2	2.03	0.42
1:3:2097:A:C6	1:3:2238:G:C6	3.08	0.42
1:3:2151:G:O2'	1:3:2154:A:N6	2.52	0.42
1:3:2384:A:O2'	26:n:110:ARG:NH1	2.50	0.42
2:4:41:C:O2	21:d:92:ARG:NH1	2.50	0.42
5:c:90:VAL:HG13	5:c:91:PHE:HD1	1.84	0.42
22:b:52:LEU:N	22:b:82:GLN:O	2.45	0.42
26:n:42:GLN:HA	26:n:54:SER:HA	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:n:46:PHE:C	26:n:48:GLN:H	2.28	0.42
35:C:78:VAL:HG21	35:C:89:LEU:HA	2.02	0.42
38:K:26:TYR:HD1	38:K:35:VAL:HG11	1.85	0.42
38:K:46:VAL:C	38:K:68:VAL:HG23	2.45	0.42
39:M:46:GLU:HG3	39:M:47:LEU:HD22	2.01	0.42
46:Q:65:SER:HG	46:Q:69:LYS:C	2.28	0.42
49:5:149:G:C6	49:5:150:A:C6	3.07	0.42
49:5:449:A:OP1	49:5:450:U:H5''	2.20	0.42
49:5:485:C:H2'	49:5:486:C:C6	2.55	0.42
49:5:1031:A:H2'	49:5:1032:G:C8	2.54	0.42
1:3:155:A:C6	1:3:178:A:N1	2.88	0.42
1:3:190:G:H2'	1:3:191:G:H8	1.84	0.42
1:3:227:A:H5'	1:3:228:A:H5'	2.02	0.42
1:3:267:A:H2'	1:3:268:C:C6	2.55	0.42
1:3:703:A:N6	1:3:705:A:O2'	2.51	0.42
1:3:1135:C:H2'	1:3:1136:U:O4'	2.19	0.42
1:3:1204:A:OP2	1:3:1204:A:H8	2.02	0.42
1:3:1388:G:C6	1:3:1400:U:C2	3.08	0.42
1:3:1887:U:H2'	1:3:1888:U:H6	1.85	0.42
1:3:2072:C:H2'	1:3:2073:C:H6	1.85	0.42
1:3:2363:C:H1'	11:u:50:ILE:HD11	2.01	0.42
1:3:2408:G:H2'	1:3:2409:U:O4'	2.19	0.42
1:3:2764:U:H4'	1:3:2765:A:OP1	2.19	0.42
1:3:2887:A:OP1	12:y:48:TYR:OH	2.26	0.42
8:i:16:ARG:HB3	8:i:55:ASP:HA	2.02	0.42
9:m:48:LEU:HD21	9:m:66:TRP:CD1	2.54	0.42
16:o:14:GLU:O	16:o:18:LEU:HG	2.19	0.42
30:D:177:ASP:N	30:D:177:ASP:OD1	2.52	0.42
31:F:125:ASP:HB3	31:F:130:THR:OG1	2.20	0.42
32:A:224:SER:O	32:A:228:LEU:HD23	2.20	0.42
33:H:129:PHE:HB3	49:5:1316:C:H5''	2.02	0.42
34:J:14:ILE:HD12	34:J:27:ALA:HB2	2.02	0.42
35:C:52:GLN:NE2	35:C:53:GLN:HG3	2.35	0.42
35:C:159:GLU:HA	35:C:171:ASN:ND2	2.34	0.42
37:O:35:LEU:O	37:O:36:ILE:HD13	2.19	0.42
40:I:105:ARG:HA	40:I:105:ARG:NE	2.34	0.42
49:5:1144:A:O2'	49:5:1145:A:O4'	2.24	0.42
49:5:1157:G:H4'	49:5:1158:A:H5'	2.00	0.42
49:5:1398:G:H2'	49:5:1399:U:C6	2.54	0.42
49:5:1405:U:H2'	49:5:1406:U:C6	2.55	0.42
51:7:68:G:H2'	51:7:69:A:C8	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:h:98:MET:N	54:h:136:ILE:O	2.52	0.42
1:3:299:A:H2'	1:3:300:G:C8	2.54	0.42
1:3:764:G:O2'	1:3:798:G:H4'	2.19	0.42
1:3:785:A:OP1	1:3:1649:C:N4	2.52	0.42
1:3:1071:G:O6	1:3:1154:U:O4	2.37	0.42
1:3:1086:G:H1	1:3:1143:U:H3	1.66	0.42
1:3:1106:G:H8	1:3:1106:G:OP1	2.03	0.42
1:3:1207:U:O5'	1:3:1207:U:C6	2.73	0.42
1:3:1345:G:C6	1:3:1364:A:C6	3.07	0.42
1:3:1710:A:H2'	1:3:1711:A:O4'	2.20	0.42
1:3:2081:U:H2'	1:3:2082:U:H6	1.85	0.42
1:3:2538:A:N7	6:e:175:LYS:NZ	2.65	0.42
20:z:51:LYS:HA	20:z:51:LYS:HD2	1.76	0.42
30:D:141:ILE:HG22	30:D:150:LEU:HD13	2.02	0.42
32:A:27:ARG:HH22	32:A:223:GLN:CD	2.28	0.42
33:H:109:ASP:O	33:H:110:LYS:HG3	2.20	0.42
40:I:43:LYS:HB2	49:5:1115:G:H5'	2.02	0.42
45:G:46:GLU:O	45:G:50:LYS:HG2	2.19	0.42
45:G:107:VAL:HG22	45:G:140:TYR:CE2	2.55	0.42
49:5:141:A:N6	49:5:153:A:N6	2.68	0.42
49:5:261:G:N2	49:5:263:C:O4'	2.52	0.42
49:5:428:A:C4	49:5:429:A:C8	3.08	0.42
49:5:822:A:H2'	49:5:823:C:H6	1.83	0.42
49:5:980:C:H2'	49:5:981:U:H6	1.85	0.42
49:5:1118:A:C5	49:5:1119:C:C2	3.08	0.42
49:5:1376:G:O6	49:5:1479:G:N2	2.53	0.42
1:3:504:G:OP2	13:0:37:LYS:NZ	2.45	0.41
1:3:535:G:N1	1:3:538:A:OP2	2.53	0.41
1:3:596:G:C6	1:3:2025:C:C2	3.08	0.41
1:3:1096:U:C4	54:h:13:ASN:CB	3.03	0.41
1:3:1701:G:O2'	1:3:1998:U:O4	2.34	0.41
1:3:2299:U:OP1	1:3:2388:C:O2'	2.38	0.41
1:3:2322:G:H2'	1:3:2323:U:H6	1.84	0.41
1:3:2405:G:H2'	1:3:2406:U:H6	1.85	0.41
1:3:2849:G:H2'	1:3:2850:G:H8	1.84	0.41
7:k:77:TRP:CE3	7:k:113:LYS:HB2	2.55	0.41
10:q:87:GLN:OE1	10:q:88:PRO:HD2	2.20	0.41
15:1:21:ARG:O	15:1:44:GLN:HB2	2.20	0.41
34:J:107:THR:HG23	34:J:109:ILE:HB	2.02	0.41
36:S:63:ASN:HD21	49:5:259:A:H5'	1.84	0.41
38:K:48:THR:OG1	38:K:67:LYS:O	2.33	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:E:51:LYS:HD2	47:E:51:LYS:HA	1.86	0.41
49:5:670:G:H2'	49:5:671:G:H8	1.79	0.41
49:5:1258:U:H2'	49:5:1259:G:C8	2.50	0.41
49:5:1374:C:H4'	49:5:1375:C:H3'	2.02	0.41
1:3:528:U:H2'	1:3:529:G:C8	2.55	0.41
1:3:909:U:H2'	1:3:910:G:C8	2.55	0.41
1:3:1111:C:N3	1:3:1112:A:N6	2.68	0.41
1:3:1151:U:H2'	1:3:1152:U:H6	1.84	0.41
1:3:1343:C:O2'	1:3:1420:A:H1'	2.20	0.41
1:3:1469:C:H2'	1:3:1470:C:C6	2.54	0.41
1:3:2109:A:N6	1:3:2196:G:O6	2.53	0.41
6:e:23:ASP:HA	6:e:38:LEU:HB2	2.01	0.41
29:B:192:ALA:N	29:B:199:ILE:O	2.53	0.41
32:A:61:GLN:O	32:A:65:LEU:HD23	2.20	0.41
32:A:121:LYS:O	32:A:125:ILE:HG12	2.20	0.41
36:S:8:GLU:O	36:S:11:LEU:HB3	2.20	0.41
38:K:7:LEU:HB3	48:P:35:TYR:HE1	1.84	0.41
38:K:43:LYS:HB2	38:K:70:LEU:HD12	2.02	0.41
39:M:53:ILE:H	39:M:53:ILE:HD12	1.85	0.41
42:N:6:ASN:O	42:N:10:LYS:NZ	2.52	0.41
46:Q:76:THR:HG23	46:Q:78:ASN:H	1.85	0.41
46:Q:88:LYS:HZ3	49:5:732:A:H5''	1.85	0.41
49:5:1065:G:H1	49:5:1074:U:H3	1.68	0.41
49:5:1382:C:H2'	49:5:1383:A:H8	1.85	0.41
1:3:158:U:H2'	1:3:159:G:C8	2.55	0.41
1:3:639:G:H2'	1:3:640:U:O4'	2.20	0.41
1:3:1036:A:H2'	1:3:1037:A:H8	1.86	0.41
1:3:1297:U:HO2'	1:3:1298:A:P	2.41	0.41
1:3:1383:G:H2'	1:3:1384:C:H6	1.85	0.41
1:3:1957:G:N2	1:3:1961:A:C4	2.88	0.41
1:3:2661:U:H3'	1:3:2662:A:H8	1.85	0.41
2:4:78:C:H6	2:4:78:C:H2'	1.71	0.41
2:4:93:U:H2'	2:4:94:A:H8	1.85	0.41
4:a:5:LYS:HE2	4:a:5:LYS:HB3	1.85	0.41
16:o:10:ILE:O	16:o:14:GLU:OE1	2.39	0.41
32:A:67:THR:HA	32:A:70:ASN:HD21	1.85	0.41
32:A:151:MET:SD	32:A:152:LEU:N	2.93	0.41
34:J:115:LYS:HD2	44:T:35:HIS:NE2	2.35	0.41
49:5:99:U:H2'	49:5:100:G:C8	2.55	0.41
49:5:255:G:H2'	49:5:256:G:O4'	2.20	0.41
49:5:450:U:H2'	49:5:451:G:O4'	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:962:G:OP2	49:5:963:U:O2'	2.25	0.41
1:3:146:G:C6	1:3:147:C:C4	3.09	0.41
1:3:178:A:C6	1:3:179:A:N6	2.88	0.41
1:3:488:G:N2	1:3:493:A:O2'	2.52	0.41
1:3:587:U:H2'	1:3:588:G:C8	2.55	0.41
1:3:663:A:N7	7:k:81:ASN:ND2	2.68	0.41
1:3:1085:A:C4	1:3:1086:G:C8	3.08	0.41
1:3:1778:G:H2'	1:3:1779:G:C8	2.55	0.41
1:3:1831:G:H2'	1:3:1832:G:C8	2.51	0.41
1:3:2081:U:O2'	1:3:2605:G:H1'	2.20	0.41
6:e:162:GLY:N	6:e:174:ARG:HH22	2.19	0.41
8:i:26:LEU:HD21	8:i:145:TRP:CD1	2.55	0.41
9:m:16:MET:HA	9:m:19:ARG:HD3	2.02	0.41
10:q:37:LYS:HG2	10:q:49:TYR:HE2	1.86	0.41
14:2:2:LYS:NZ	14:2:31:LYS:O	2.35	0.41
14:2:16:ILE:O	14:2:16:ILE:HG13	2.20	0.41
23:l:81:VAL:HG22	23:l:82:ARG:O	2.20	0.41
29:B:19:ILE:HG22	39:M:51:GLY:O	2.20	0.41
32:A:128:ASN:O	32:A:132:LYS:HG2	2.20	0.41
33:H:81:ILE:O	33:H:85:ILE:HG13	2.20	0.41
41:L:8:ASP:O	41:L:10:PRO:HD3	2.20	0.41
49:5:369:A:C2	49:5:370:A:C8	3.09	0.41
49:5:823:C:H2'	49:5:824:U:C6	2.56	0.41
49:5:1321:G:H1'	49:5:1322:U:H5	1.85	0.41
49:5:1482:A:H2'	49:5:1483:C:C6	2.56	0.41
1:3:156:A:C6	1:3:157:U:C4	3.09	0.41
1:3:170:A:C2	1:3:171:G:H1'	2.56	0.41
1:3:732:G:H2'	1:3:733:C:C6	2.56	0.41
1:3:757:A:H2'	1:3:758:C:H6	1.86	0.41
1:3:895:G:O2'	1:3:953:G:O6	2.35	0.41
1:3:1295:A:OP2	1:3:2623:U:H5'	2.20	0.41
1:3:1348:C:C5	1:3:1357:U:H5''	2.55	0.41
1:3:1597:U:H2'	1:3:1598:U:H6	1.84	0.41
1:3:1711:A:C4	1:3:1712:A:C8	3.08	0.41
1:3:1795:C:H2'	1:3:1796:A:H8	1.85	0.41
1:3:2477:A:H2'	1:3:2478:G:O4'	2.20	0.41
1:3:2800:U:H3	1:3:2809:A:H2	1.67	0.41
1:3:2823:A:C6	1:3:2832:G:C6	3.09	0.41
1:3:2893:C:H2'	1:3:2894:G:O4'	2.20	0.41
5:c:127:LEU:HD12	5:c:199:VAL:O	2.20	0.41
26:n:30:LEU:HD12	26:n:30:LEU:HA	1.87	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:r:35:ILE:O	28:r:39:THR:HG23	2.20	0.41
28:r:45:THR:HG23	28:r:46:LEU:HD12	2.03	0.41
30:D:170:ILE:HG23	30:D:175:TYR:HD2	1.86	0.41
33:H:4:GLN:OE1	33:H:4:GLN:HA	2.20	0.41
33:H:28:GLY:O	33:H:64:ASP:HA	2.20	0.41
36:S:45:GLY:HA2	36:S:48:TYR:HD2	1.86	0.41
41:L:80:LEU:HD11	41:L:87:ARG:HE	1.85	0.41
49:5:101:A:H2'	49:5:102:G:O4'	2.21	0.41
49:5:168:A:H2'	49:5:169:G:O4'	2.20	0.41
49:5:356:G:H2'	49:5:357:G:H8	1.85	0.41
49:5:501:A:H2'	49:5:502:C:H6	1.84	0.41
49:5:579:G:N1	49:5:756:A:OP2	2.45	0.41
49:5:663:G:H5'	49:5:723:C:H1'	2.03	0.41
1:3:48:G:H2'	1:3:49:C:C6	2.56	0.41
1:3:310:U:H1'	1:3:311:G:N7	2.36	0.41
1:3:411:U:OP2	1:3:436:G:N1	2.46	0.41
1:3:749:U:H1'	1:3:752:C:H5	1.86	0.41
1:3:777:C:H2'	1:3:778:U:H6	1.85	0.41
1:3:1005:G:H2'	1:3:1006:U:H6	1.85	0.41
1:3:1595:C:H2'	1:3:1596:U:C6	2.55	0.41
2:4:15:C:C4	2:4:16:G:C8	3.09	0.41
3:w:10:LYS:NZ	3:w:13:GLU:HB2	2.36	0.41
5:c:114:THR:O	5:c:118:GLU:OE1	2.39	0.41
10:q:12:TYR:C	24:p:94:LEU:HD21	2.45	0.41
12:y:32:LYS:HZ3	12:y:50:ASP:HA	1.86	0.41
30:D:175:TYR:CE2	30:D:199:ILE:HD11	2.55	0.41
32:A:91:TYR:O	32:A:95:LEU:HB2	2.19	0.41
32:A:112:TRP:CD1	32:A:114:GLY:H	2.39	0.41
35:C:145:LYS:HD3	35:C:147:LYS:HB3	2.01	0.41
37:O:19:ILE:HB	37:O:36:ILE:O	2.20	0.41
39:M:47:LEU:O	39:M:51:GLY:N	2.44	0.41
40:I:35:VAL:HG22	40:I:39:ASP:HB3	2.02	0.41
46:Q:63:PHE:CD1	46:Q:86:VAL:HG11	2.50	0.41
47:E:97:LEU:HG	47:E:99:SER:H	1.86	0.41
49:5:186:A:C6	49:5:187:A:N1	2.89	0.41
49:5:296:A:N7	49:5:297:A:H1'	2.36	0.41
49:5:459:C:H2'	49:5:460:A:C8	2.55	0.41
49:5:687:G:H2'	49:5:688:G:O4'	2.20	0.41
49:5:1244:A:C8	49:5:1245:A:H1'	2.56	0.41
49:5:1293:A:C8	49:5:1297:G:C6	3.08	0.41
49:5:1448:A:H2'	49:5:1449:G:C8	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:220:A:C4	1:3:221:A:C8	3.09	0.41
1:3:450:C:H2'	1:3:451:A:H8	1.85	0.41
1:3:586:G:C4	1:3:587:U:C5	3.09	0.41
1:3:671:C:H2'	1:3:672:G:O4'	2.21	0.41
1:3:760:G:O5'	1:3:760:G:H8	2.03	0.41
1:3:1087:C:H2'	1:3:1088:A:C8	2.55	0.41
1:3:1357:U:O2'	1:3:1358:C:H5'	2.21	0.41
1:3:1620:A:H2'	1:3:1621:U:O4'	2.20	0.41
6:e:57:ARG:NH1	6:e:60:GLU:HA	2.36	0.41
9:m:21:GLN:O	9:m:25:VAL:HG23	2.21	0.41
11:u:62:GLY:HA3	11:u:96:SER:HB3	2.02	0.41
31:F:111:HIS:O	31:F:112:GLU:HG2	2.21	0.41
31:F:140:THR:HA	31:F:143:MET:HE2	2.02	0.41
32:A:132:LYS:O	32:A:135:GLU:HG3	2.20	0.41
33:H:49:ASP:O	33:H:52:GLN:HG3	2.21	0.41
34:J:47:GLY:O	34:J:50:LYS:HG2	2.20	0.41
35:C:89:LEU:O	35:C:93:LEU:HD23	2.21	0.41
38:K:89:GLU:O	38:K:90:HIS:HB2	2.20	0.41
47:E:5:ILE:HG22	47:E:7:LEU:HD22	2.02	0.41
49:5:200:G:H2'	49:5:201:G:H8	1.85	0.41
49:5:399:C:H2'	49:5:400:G:C8	2.51	0.41
49:5:488:U:H5'	49:5:489:U:OP2	2.21	0.41
49:5:655:G:O6	49:5:744:U:O2	2.38	0.41
49:5:1204:A:H2'	49:5:1205:C:C6	2.56	0.41
49:5:1402:U:O2'	49:5:1403:A:H5'	2.20	0.41
1:3:19:G:H4'	24:p:24:PHE:CE1	2.55	0.41
1:3:1391:U:O2'	1:3:1816:A:H1'	2.21	0.41
1:3:1447:A:N6	1:3:1613:A:H1'	2.35	0.41
1:3:1857:G:H2'	1:3:1858:U:H6	1.86	0.41
1:3:1943:A:C8	1:3:1952:G:N7	2.89	0.41
3:w:57:ILE:O	3:w:60:GLU:HG3	2.19	0.41
5:c:189:ARG:HG3	7:k:5:GLN:NE2	2.19	0.41
16:o:84:PRO:HG3	22:b:223:ALA:HB1	2.01	0.41
23:l:40:ASN:OD1	23:l:41:TRP:N	2.53	0.41
29:B:165:ILE:HB	49:5:1047:U:OP1	2.20	0.41
32:A:32:MET:HG3	32:A:33:VAL:N	2.34	0.41
39:M:8:VAL:HG21	49:5:990:C:H5'	2.02	0.41
43:R:32:LYS:HD2	43:R:57:PHE:CZ	2.56	0.41
45:G:86:GLY:HA3	45:G:142:TRP:CE2	2.55	0.41
48:P:34:LEU:HD11	49:5:297:A:O5'	2.20	0.41
49:5:537:A:H2'	49:5:538:G:H8	1.86	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:843:C:H2'	49:5:844:U:H6	1.85	0.41
49:5:1327:G:C2	49:5:1345:G:C2	3.09	0.41
49:5:1399:U:H2'	49:5:1400:A:C8	2.55	0.41
51:7:20:G:N2	51:7:57:C:O2'	2.54	0.41
51:7:50:G:H2'	51:7:51:G:H8	1.85	0.41
1:3:129:U:H2'	1:3:130:C:C6	2.56	0.41
1:3:286:A:H4'	1:3:287:G:C8	2.56	0.41
1:3:370:C:H2'	1:3:371:C:C6	2.56	0.41
1:3:481:C:O2'	1:3:485:A:N3	2.53	0.41
1:3:534:U:H2'	1:3:535:G:O4'	2.20	0.41
1:3:721:G:H21	13:0:8:SER:H	1.69	0.41
1:3:783:G:N3	1:3:785:A:N6	2.68	0.41
1:3:859:G:H2'	1:3:860:C:H6	1.84	0.41
1:3:1077:G:C6	1:3:1149:G:C5	3.08	0.41
1:3:1105:A:H5'	1:3:1107:C:OP1	2.20	0.41
1:3:1128:G:N2	1:3:1133:A:H62	2.19	0.41
1:3:1307:G:H2'	1:3:1308:A:H8	1.85	0.41
1:3:1325:C:OP1	1:3:2718:C:H4'	2.21	0.41
1:3:1381:A:H2'	1:3:1382:A:C8	2.55	0.41
1:3:1471:A:H2'	1:3:1472:C:C6	2.56	0.41
1:3:1852:G:C6	1:3:1903:A:C6	3.09	0.41
1:3:1991:U:H2'	1:3:1992:C:C6	2.55	0.41
1:3:2032:G:H2'	1:3:2033:G:H8	1.85	0.41
1:3:2036:G:N1	1:3:2040:A:OP2	2.29	0.41
1:3:2148:U:H2'	1:3:2149:U:H6	1.86	0.41
1:3:2580:A:C8	22:b:151:ARG:HG2	2.56	0.41
1:3:2712:C:C2	1:3:2713:A:C8	3.09	0.41
1:3:2728:U:C2	1:3:2729:A:C8	3.08	0.41
1:3:2814:A:H2'	1:3:2815:G:O4'	2.21	0.41
1:3:2857:C:H2'	1:3:2858:A:C8	2.56	0.41
1:3:2862:U:O2'	1:3:2863:G:P	2.79	0.41
4:a:64:ARG:HE	4:a:90:PRO:HB2	1.86	0.41
4:a:171:LEU:HD23	4:a:171:LEU:HA	1.88	0.41
8:i:54:GLY:O	8:i:124:LYS:NZ	2.53	0.41
22:b:163:LYS:HD2	22:b:163:LYS:HA	1.93	0.41
23:l:119:THR:HG22	23:l:129:TRP:CH2	2.56	0.41
26:n:96:SER:OG	26:n:97:LYS:N	2.53	0.41
32:A:113:LEU:HD22	32:A:123:LEU:HD21	2.03	0.41
34:J:29:ASP:HB2	34:J:30:PRO:HD2	2.03	0.41
35:C:8:PHE:CE2	49:5:426:U:H3'	2.55	0.41
36:S:15:ILE:HG13	36:S:16:LYS:N	2.35	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:O:50:ILE:HB	37:O:52:GLU:OE2	2.21	0.41
40:I:25:ASP:HA	40:I:28:THR:HG22	2.03	0.41
40:I:45:PRO:HA	40:I:80:MET:SD	2.61	0.41
40:I:96:ILE:O	40:I:97:LYS:HG3	2.21	0.41
42:N:72:LEU:O	42:N:76:ARG:NH2	2.54	0.41
45:G:99:ARG:O	45:G:135:GLY:N	2.53	0.41
46:Q:94:ARG:HD3	46:Q:99:VAL:HG23	2.03	0.41
49:5:45:A:H2'	49:5:46:U:H6	1.86	0.41
49:5:62:G:H2'	49:5:63:U:H6	1.86	0.41
49:5:432:U:H2'	49:5:433:C:C6	2.56	0.41
49:5:503:G:H5'	49:5:532:U:C2	2.56	0.41
49:5:546:G:H2'	49:5:547:C:C6	2.56	0.41
49:5:550:U:H2'	49:5:551:A:C8	2.50	0.41
49:5:599:G:C6	49:5:635:G:C6	3.09	0.41
49:5:611:A:C6	49:5:626:G:C6	3.09	0.41
49:5:670:G:C6	49:5:731:A:C6	3.09	0.41
49:5:872:C:H2'	49:5:873:U:C6	2.56	0.41
49:5:931:C:C4	49:5:932:A:C8	3.09	0.41
49:5:1012:A:H3'	49:5:1013:C:O4'	2.20	0.41
49:5:1086:U:OP1	49:5:1099:G:N2	2.29	0.41
51:7:54:G:C2	51:7:55:U:C4	3.09	0.41
1:3:369:C:H2'	1:3:370:C:H6	1.86	0.41
1:3:650:G:H2'	1:3:651:A:H8	1.86	0.41
1:3:1445:U:H2'	1:3:1446:G:O4'	2.21	0.41
1:3:1471:A:H2'	1:3:1472:C:H6	1.86	0.41
1:3:1501:U:H2'	1:3:1502:A:O4'	2.21	0.41
1:3:1535:A:H2'	1:3:1536:C:C6	2.56	0.41
1:3:2059:G:H4'	22:b:148:GLN:HB2	2.03	0.41
1:3:2638:G:H2'	1:3:2639:G:H8	1.85	0.41
6:e:57:ARG:HD3	6:e:68:HIS:HB2	2.03	0.41
11:u:51:ILE:HG21	11:u:95:VAL:HG21	2.03	0.41
16:o:28:GLY:HA3	16:o:96:VAL:HG11	2.03	0.41
27:t:1:MET:HG2	27:t:2:GLN:N	2.32	0.41
33:H:115:ARG:NH2	49:5:1343:G:OP1	2.53	0.41
38:K:46:VAL:HG22	38:K:92:VAL:HA	2.03	0.41
47:E:130:VAL:N	47:E:131:PRO:HD3	2.36	0.41
49:5:503:G:H2'	49:5:504:A:H8	1.81	0.41
1:3:255:A:C5	1:3:256:G:H1'	2.56	0.40
1:3:408:G:C6	1:3:460:G:N7	2.89	0.40
1:3:450:C:H2'	1:3:451:A:C8	2.55	0.40
1:3:958:C:H2'	1:3:959:C:C6	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:3:1003:U:H2'	1:3:1004:U:C6	2.56	0.40
1:3:1077:G:H2'	1:3:1078:C:H6	1.86	0.40
1:3:1384:C:H2'	1:3:1385:U:C6	2.56	0.40
1:3:1671:C:H5'	1:3:1767:A:O2'	2.21	0.40
1:3:2134:G:H2'	1:3:2135:C:C6	2.55	0.40
1:3:2203:U:H2'	1:3:2204:C:H6	1.87	0.40
1:3:2209:U:H2'	1:3:2210:G:H8	1.84	0.40
1:3:2217:G:H3'	1:3:2218:U:H2'	2.03	0.40
1:3:2305:C:O2	1:3:2305:C:H2'	2.21	0.40
1:3:2469:A:H2'	1:3:2470:C:H6	1.87	0.40
1:3:2599:C:OP2	4:a:246:ARG:HB2	2.21	0.40
1:3:2649:G:H2'	1:3:2650:A:C8	2.56	0.40
1:3:2660:C:H2'	1:3:2661:U:O4'	2.21	0.40
1:3:2691:C:H5''	16:o:56:ARG:HH22	1.86	0.40
9:m:58:ASN:O	9:m:62:GLN:HG2	2.20	0.40
16:o:11:ASP:O	16:o:15:GLN:HG2	2.21	0.40
16:o:36:LYS:HD2	16:o:85:ASN:HD22	1.86	0.40
16:o:56:ARG:HH11	16:o:56:ARG:HG2	1.87	0.40
29:B:87:LYS:O	29:B:91:GLN:OE1	2.39	0.40
29:B:140:SER:O	29:B:143:LYS:HG2	2.20	0.40
29:B:170:MET:HE3	29:B:170:MET:HB3	1.84	0.40
31:F:26:ILE:HD12	31:F:26:ILE:HA	1.87	0.40
34:J:109:ILE:HD12	34:J:110:PRO:HD2	2.03	0.40
35:C:57:LYS:HD2	35:C:199:TRP:CZ3	2.56	0.40
41:L:86:TRP:HA	41:L:89:LEU:HD12	2.03	0.40
47:E:5:ILE:O	47:E:59:ARG:HA	2.21	0.40
49:5:513:G:H2'	49:5:514:U:H6	1.87	0.40
49:5:1389:U:H2'	49:5:1390:G:H8	1.86	0.40
1:3:60:G:H2'	1:3:61:U:H6	1.84	0.40
1:3:232:A:C6	1:3:234:G:C2	3.09	0.40
1:3:525:A:H2'	1:3:526:G:O4'	2.21	0.40
1:3:599:U:H4'	1:3:844:G:OP2	2.21	0.40
1:3:1197:G:N2	10:q:87:GLN:HE22	2.19	0.40
1:3:1473:C:H2'	1:3:1474:C:H6	1.86	0.40
1:3:1487:U:H2'	1:3:1488:U:H6	1.85	0.40
1:3:2031:C:O3'	22:b:158:ARG:NH1	2.54	0.40
1:3:2032:G:C6	1:3:2046:G:N1	2.90	0.40
1:3:2238:G:C6	1:3:2239:U:C4	3.09	0.40
1:3:2474:C:H2'	1:3:2475:C:H6	1.86	0.40
1:3:2658:U:H2'	1:3:2659:U:C6	2.56	0.40
1:3:2794:U:H2'	1:3:2795:C:C6	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1:20:LYS:HD2	15:1:44:GLN:HG3	2.02	0.40
16:o:100:TYR:CE2	16:o:102:SER:HB2	2.56	0.40
26:n:32:VAL:HG21	26:n:102:ILE:HD12	2.02	0.40
32:A:175:LEU:HD12	32:A:176:LEU:H	1.87	0.40
37:O:8:ARG:CZ	37:O:15:PRO:HG3	2.51	0.40
40:I:62:HIS:CE1	40:I:63:VAL:HG13	2.57	0.40
41:L:49:THR:O	41:L:52:GLU:HG3	2.20	0.40
43:R:36:ARG:NH2	49:5:1294:U:O2	2.54	0.40
45:G:11:HIS:CE1	49:5:870:A:H2	2.39	0.40
45:G:27:LYS:HD2	45:G:27:LYS:HA	1.89	0.40
49:5:111:A:H2'	49:5:112:U:O4'	2.20	0.40
49:5:1031:A:H2'	49:5:1032:G:H8	1.85	0.40
49:5:1179:A:H2'	49:5:1180:U:O4'	2.21	0.40
49:5:1183:C:H2'	49:5:1184:C:C6	2.56	0.40
51:7:16:G:O2'	51:7:17:U:OP1	2.31	0.40
51:7:26:C:C2	51:7:27:A:C8	3.09	0.40
1:3:145:A:H2'	1:3:146:G:H8	1.86	0.40
1:3:1009:A:H5''	10:q:77:LYS:HD3	2.03	0.40
1:3:1206:U:O2	1:3:1206:U:C2'	2.69	0.40
1:3:1931:C:H2'	1:3:1932:C:C6	2.56	0.40
1:3:2587:U:H2'	1:3:2588:U:C6	2.56	0.40
5:c:143:MET:O	5:c:147:LEU:HD23	2.22	0.40
7:k:77:TRP:CZ3	7:k:111:PRO:HB2	2.56	0.40
8:i:115:ASN:OD1	8:i:116:ARG:N	2.54	0.40
23:l:111:GLU:HA	23:l:114:MET:CE	2.46	0.40
24:p:23:SER:OG	24:p:27:ARG:HB2	2.21	0.40
24:p:106:ASN:OD1	24:p:107:LEU:N	2.55	0.40
25:j:22:ILE:HG22	25:j:40:VAL:O	2.21	0.40
28:r:32:ALA:HA	28:r:35:ILE:HG22	2.03	0.40
29:B:13:GLY:O	39:M:57:LYS:HE3	2.21	0.40
32:A:59:GLU:HG2	32:A:60:LEU:H	1.86	0.40
32:A:61:GLN:O	32:A:64:SER:OG	2.36	0.40
34:J:43:MET:HE3	34:J:58:ILE:HG13	2.03	0.40
35:C:100:ILE:HD13	35:C:100:ILE:HA	1.87	0.40
36:S:73:VAL:HG23	36:S:76:LEU:HD12	2.03	0.40
46:Q:69:LYS:HB3	49:5:716:C:O2'	2.21	0.40
49:5:137:A:C2	49:5:138:A:H1'	2.57	0.40
49:5:366:C:H2'	49:5:367:A:C8	2.57	0.40
49:5:722:G:H2'	49:5:723:C:H6	1.86	0.40
49:5:1048:G:H2'	49:5:1049:G:O4'	2.21	0.40
49:5:1107:U:H2'	49:5:1108:A:C8	2.57	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:5:1265:U:H2'	49:5:1266:U:C6	2.56	0.40
49:5:1418:G:H2'	49:5:1419:C:C6	2.57	0.40
1:3:279:U:C2	1:3:280:A:C8	3.10	0.40
1:3:675:U:H2'	1:3:676:U:H6	1.85	0.40
1:3:675:U:C2	1:3:676:U:C5	3.09	0.40
1:3:961:U:H2'	1:3:962:U:H6	1.86	0.40
1:3:990:G:H4'	23:l:13:HIS:CE1	2.57	0.40
1:3:1203:G:N3	1:3:1203:G:H2'	2.36	0.40
1:3:1482:U:O2'	1:3:1483:G:N7	2.52	0.40
1:3:1485:A:N6	1:3:2710:G:C6	2.83	0.40
1:3:1825:U:O2'	4:a:161:ALA:N	2.53	0.40
1:3:2665:A:O3'	6:e:163:LYS:NZ	2.54	0.40
2:4:79:U:H5	2:4:85:A:H61	1.69	0.40
4:a:182:LEU:HA	4:a:182:LEU:HD23	1.82	0.40
5:c:6:LEU:HA	5:c:127:LEU:HB3	2.03	0.40
5:c:64:LYS:NZ	5:c:77:GLY:HA2	2.36	0.40
7:k:90:LEU:HD21	7:k:97:SER:HB3	2.03	0.40
23:l:73:SER:OG	23:l:74:LYS:N	2.55	0.40
30:D:97:ARG:HD3	30:D:174:GLY:HA2	2.03	0.40
30:D:193:HIS:O	30:D:196:MET:HG2	2.22	0.40
47:E:42:LEU:HD13	47:E:56:HIS:CE1	2.56	0.40
47:E:45:LEU:HG	47:E:54:SER:HA	2.04	0.40
49:5:67:U:H2'	49:5:68:C:C6	2.56	0.40
49:5:368:C:H42	49:5:385:A:H62	1.69	0.40
49:5:425:G:OP1	49:5:427:A:H1'	2.21	0.40
49:5:650:A:O2'	49:5:651:G:H8	2.04	0.40
49:5:744:U:H5'	49:5:745:U:OP1	2.21	0.40
49:5:1042:G:H2'	49:5:1043:U:C6	2.56	0.40
1:3:60:G:O2'	1:3:75:A:N1	2.54	0.40
1:3:297:G:H2'	1:3:457:U:OP2	2.22	0.40
1:3:867:G:H2'	1:3:868:C:C6	2.56	0.40
1:3:954:A:H5''	1:3:2276:A:N6	2.37	0.40
1:3:1275:C:H2'	1:3:1276:A:C8	2.56	0.40
1:3:1545:A:H2'	1:3:1546:U:H6	1.85	0.40
1:3:1831:G:N3	4:a:262:HIS:NE2	2.68	0.40
1:3:2264:G:H2'	1:3:2265:U:C6	2.57	0.40
1:3:2784:A:H4'	1:3:2786:A:OP1	2.22	0.40
2:4:58:C:H2'	2:4:59:A:C8	2.56	0.40
4:a:234:ASN:HB3	4:a:235:PRO:HD2	2.03	0.40
5:c:134:ASN:C	5:c:136:THR:H	2.30	0.40
5:c:171:SER:C	5:c:173:SER:H	2.29	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:e:28:LYS:HA	6:e:33:GLN:HA	2.04	0.40
22:b:39:VAL:HG23	22:b:39:VAL:O	2.22	0.40
31:F:25:ILE:HG13	31:F:61:PHE:CE1	2.56	0.40
35:C:10:ARG:HD3	35:C:62:TYR:CE1	2.57	0.40
35:C:80:LYS:O	35:C:82:ARG:NH1	2.55	0.40
35:C:151:ILE:HG22	35:C:153:ILE:H	1.86	0.40
38:K:2:ALA:HB2	49:5:876:C:N4	2.36	0.40
41:L:88:GLY:O	41:L:92:ARG:HG3	2.21	0.40
42:N:26:VAL:HG21	42:N:64:LEU:HD21	2.02	0.40
44:T:21:VAL:HA	44:T:24:GLU:HG3	2.03	0.40
47:E:71:ASP:OD1	47:E:72:PHE:N	2.55	0.40
48:P:5:GLN:OE1	48:P:7:LYS:HD3	2.21	0.40
49:5:460:A:H2'	49:5:461:G:C8	2.57	0.40
49:5:471:A:H2'	49:5:472:G:C8	2.57	0.40
49:5:706:U:H2'	49:5:707:G:C8	2.57	0.40
49:5:851:U:H2'	49:5:852:G:O4'	2.21	0.40
53:f:26:ALA:O	53:f:29:PHE:N	2.44	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	
3	w	95/111 (86%)	91 (96%)	4 (4%)	0	100	100
4	a	283/287 (99%)	265 (94%)	18 (6%)	0	100	100
5	c	208/212 (98%)	190 (91%)	18 (9%)	0	100	100
6	e	174/184 (95%)	168 (97%)	6 (3%)	0	100	100
7	k	146/151 (97%)	126 (86%)	20 (14%)	0	100	100
8	i	142/146 (97%)	133 (94%)	9 (6%)	0	100	100
9	m	117/124 (94%)	113 (97%)	4 (3%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	q	97/100 (97%)	88 (91%)	9 (9%)	0	100	100
11	u	84/104 (81%)	79 (94%)	5 (6%)	0	100	100
12	y	54/57 (95%)	49 (91%)	5 (9%)	0	100	100
13	0	45/48 (94%)	44 (98%)	1 (2%)	0	100	100
14	2	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
15	1	57/59 (97%)	55 (96%)	2 (4%)	0	100	100
16	o	113/119 (95%)	101 (89%)	12 (11%)	0	100	100
17	s	90/237 (38%)	84 (93%)	6 (7%)	0	100	100
18	v	61/65 (94%)	58 (95%)	3 (5%)	0	100	100
19	x	42/97 (43%)	38 (90%)	4 (10%)	0	100	100
20	z	48/53 (91%)	46 (96%)	2 (4%)	0	100	100
21	d	173/180 (96%)	156 (90%)	17 (10%)	0	100	100
22	b	227/287 (79%)	217 (96%)	10 (4%)	0	100	100
23	l	134/139 (96%)	127 (95%)	7 (5%)	0	100	100
24	p	112/127 (88%)	109 (97%)	3 (3%)	0	100	100
25	j	120/122 (98%)	106 (88%)	14 (12%)	0	100	100
26	n	108/116 (93%)	102 (94%)	6 (6%)	0	100	100
27	t	92/111 (83%)	83 (90%)	9 (10%)	0	100	100
28	r	137/159 (86%)	127 (93%)	10 (7%)	0	100	100
29	B	213/273 (78%)	200 (94%)	13 (6%)	0	100	100
30	D	151/219 (69%)	142 (94%)	9 (6%)	0	100	100
31	F	152/155 (98%)	135 (89%)	17 (11%)	0	100	100
32	A	247/294 (84%)	228 (92%)	19 (8%)	0	100	100
33	H	126/132 (96%)	104 (82%)	22 (18%)	0	100	100
34	J	112/121 (93%)	105 (94%)	7 (6%)	0	100	100
35	C	201/205 (98%)	191 (95%)	10 (5%)	0	100	100
36	S	75/87 (86%)	72 (96%)	3 (4%)	0	100	100
37	O	85/94 (90%)	79 (93%)	6 (7%)	0	100	100
38	K	134/139 (96%)	117 (87%)	17 (13%)	0	100	100
39	M	58/61 (95%)	55 (95%)	3 (5%)	0	100	100
40	I	99/108 (92%)	87 (88%)	12 (12%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	L	116/124 (94%)	103 (89%)	13 (11%)	0	100	100
42	N	81/86 (94%)	80 (99%)	1 (1%)	0	100	100
43	R	82/87 (94%)	77 (94%)	5 (6%)	0	100	100
44	T	51/60 (85%)	44 (86%)	7 (14%)	0	100	100
45	G	139/142 (98%)	122 (88%)	17 (12%)	0	100	100
46	Q	63/104 (61%)	57 (90%)	6 (10%)	0	100	100
47	E	165/215 (77%)	148 (90%)	17 (10%)	0	100	100
48	P	81/85 (95%)	75 (93%)	6 (7%)	0	100	100
53	f	140/149 (94%)	124 (89%)	15 (11%)	1 (1%)	18	51
54	h	126/137 (92%)	116 (92%)	8 (6%)	2 (2%)	7	36
55	g	123/161 (76%)	115 (94%)	4 (3%)	4 (3%)	3	23
All	All	5814/6670 (87%)	5364 (92%)	443 (8%)	7 (0%)	49	79

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
53	f	115	ASP
54	h	20	LYS
55	g	45	PHE
55	g	110	CYS
54	h	23	PRO
55	g	88	GLU
55	g	47	ASN

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	
3	w	83/98 (85%)	83 (100%)	0	100	100
4	a	233/243 (96%)	233 (100%)	0	100	100
5	c	174/184 (95%)	174 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	e	138/159 (87%)	138 (100%)	0	100	100
7	k	118/126 (94%)	118 (100%)	0	100	100
8	i	124/128 (97%)	124 (100%)	0	100	100
9	m	104/109 (95%)	104 (100%)	0	100	100
10	q	88/91 (97%)	88 (100%)	0	100	100
11	u	64/85 (75%)	64 (100%)	0	100	100
12	y	45/49 (92%)	45 (100%)	0	100	100
13	0	39/41 (95%)	39 (100%)	0	100	100
14	2	35/35 (100%)	35 (100%)	0	100	100
15	1	51/51 (100%)	51 (100%)	0	100	100
16	o	91/105 (87%)	91 (100%)	0	100	100
17	s	80/208 (38%)	80 (100%)	0	100	100
18	v	55/60 (92%)	55 (100%)	0	100	100
20	z	47/50 (94%)	47 (100%)	0	100	100
21	d	111/154 (72%)	111 (100%)	0	100	100
22	b	185/233 (79%)	185 (100%)	0	100	100
23	l	107/115 (93%)	107 (100%)	0	100	100
24	p	99/108 (92%)	99 (100%)	0	100	100
25	j	103/103 (100%)	103 (100%)	0	100	100
26	n	85/99 (86%)	85 (100%)	0	100	100
27	t	69/96 (72%)	69 (100%)	0	100	100
28	r	116/132 (88%)	116 (100%)	0	100	100
29	B	176/232 (76%)	176 (100%)	0	100	100
30	D	117/178 (66%)	117 (100%)	0	100	100
31	F	128/132 (97%)	128 (100%)	0	100	100
32	A	200/262 (76%)	200 (100%)	0	100	100
33	H	101/115 (88%)	101 (100%)	0	100	100
34	J	91/97 (94%)	91 (100%)	0	100	100
35	C	164/183 (90%)	164 (100%)	0	100	100
36	S	70/77 (91%)	70 (100%)	0	100	100
37	O	71/82 (87%)	71 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	K	111/120 (92%)	111 (100%)	0	100	100
39	M	47/48 (98%)	47 (100%)	0	100	100
40	I	93/99 (94%)	93 (100%)	0	100	100
41	L	92/105 (88%)	92 (100%)	0	100	100
42	N	76/78 (97%)	76 (100%)	0	100	100
43	R	66/77 (86%)	66 (100%)	0	100	100
44	T	43/56 (77%)	43 (100%)	0	100	100
45	G	121/124 (98%)	121 (100%)	0	100	100
46	Q	56/94 (60%)	56 (100%)	0	100	100
47	E	107/196 (55%)	107 (100%)	0	100	100
48	P	73/75 (97%)	73 (100%)	0	100	100
All	All	4447/5292 (84%)	4447 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (63) such sidechains are listed below:

Mol	Chain	Res	Type
4	a	11	ASN
5	c	32	GLN
5	c	130	GLN
5	c	156	ASN
5	c	162	ASN
6	e	21	GLN
7	k	5	GLN
7	k	75	GLN
7	k	117	HIS
8	i	17	GLN
8	i	126	HIS
9	m	42	GLN
9	m	58	ASN
9	m	59	ASN
10	q	17	ASN
11	u	90	GLN
15	l	28	HIS
17	s	20	GLN
18	v	17	ASN
18	v	61	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
20	z	18	ASN
21	d	63	GLN
22	b	20	ASN
22	b	177	GLN
23	l	3	GLN
23	l	71	HIS
25	j	18	GLN
25	j	70	GLN
26	n	26	ASN
27	t	64	GLN
28	r	15	GLN
28	r	22	GLN
29	B	29	GLN
29	B	82	ASN
29	B	91	GLN
29	B	94	GLN
30	D	132	HIS
30	D	182	ASN
31	F	67	ASN
31	F	129	ASN
31	F	147	ASN
32	A	70	ASN
33	H	52	GLN
35	C	37	GLN
35	C	52	GLN
35	C	53	GLN
35	C	61	GLN
35	C	70	GLN
35	C	171	ASN
38	K	86	ASN
39	M	36	HIS
40	I	70	GLN
40	I	86	ASN
41	L	36	GLN
41	L	76	ASN
41	L	91	HIS
41	L	94	ASN
42	N	43	ASN
45	G	24	ASN
46	Q	83	GLN
48	P	18	ASN
48	P	25	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
48	P	62	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	3	2877/2907 (98%)	532 (18%)	37 (1%)
2	4	103/108 (95%)	28 (27%)	2 (1%)
49	5	1490/1520 (98%)	274 (18%)	6 (0%)
51	7	75/76 (98%)	20 (26%)	1 (1%)
52	Y	8/9 (88%)	0	0
All	All	4553/4620 (98%)	854 (18%)	46 (1%)

All (854) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	3	17	G
1	3	37	G
1	3	48	G
1	3	53	G
1	3	64	U
1	3	65	A
1	3	73	A
1	3	76	A
1	3	77	G
1	3	85	U
1	3	102	A
1	3	103	G
1	3	111	G
1	3	119	A
1	3	121	U
1	3	124	A
1	3	126	C
1	3	132	G
1	3	146	G
1	3	163	A
1	3	164	A
1	3	166	A
1	3	180	A
1	3	184	A
1	3	186	A
1	3	200	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	203	A
1	3	208	A
1	3	219	G
1	3	220	A
1	3	225	A
1	3	226	A
1	3	230	G
1	3	232	A
1	3	233	U
1	3	234	G
1	3	237	A
1	3	245	U
1	3	251	G
1	3	252	G
1	3	259	A
1	3	270	G
1	3	276	A
1	3	283	A
1	3	284	U
1	3	286	A
1	3	295	U
1	3	296	U
1	3	297	G
1	3	298	U
1	3	299	A
1	3	310	U
1	3	312	U
1	3	315	A
1	3	316	C
1	3	319	G
1	3	325	G
1	3	336	C
1	3	341	G
1	3	343	A
1	3	345	A
1	3	346	G
1	3	363	G
1	3	364	A
1	3	402	A
1	3	403	U
1	3	404	C
1	3	409	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	411	U
1	3	418	G
1	3	422	A
1	3	424	G
1	3	425	U
1	3	426	U
1	3	427	A
1	3	432	G
1	3	437	A
1	3	447	G
1	3	448	A
1	3	460	G
1	3	484	U
1	3	485	A
1	3	487	C
1	3	491	A
1	3	493	A
1	3	501	G
1	3	509	G
1	3	513	A
1	3	514	A
1	3	515	A
1	3	517	G
1	3	544	U
1	3	545	C
1	3	548	A
1	3	554	U
1	3	562	C
1	3	565	C
1	3	566	G
1	3	567	U
1	3	568	G
1	3	581	A
1	3	583	U
1	3	596	G
1	3	598	G
1	3	602	U
1	3	606	G
1	3	608	A
1	3	620	G
1	3	636	U
1	3	637	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	638	A
1	3	648	G
1	3	649	A
1	3	650	G
1	3	663	A
1	3	670	G
1	3	673	A
1	3	681	A
1	3	682	A
1	3	689	U
1	3	691	G
1	3	705	A
1	3	706	C
1	3	721	G
1	3	752	C
1	3	765	A
1	3	782	U
1	3	792	G
1	3	799	A
1	3	800	C
1	3	810	G
1	3	811	G
1	3	817	A
1	3	818	A
1	3	819	U
1	3	820	U
1	3	825	U
1	3	828	A
1	3	829	A
1	3	840	G
1	3	847	C
1	3	854	A
1	3	862	U
1	3	881	A
1	3	882	C
1	3	883	A
1	3	887	A
1	3	895	G
1	3	902	U
1	3	903	A
1	3	904	C
1	3	924	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	926	U
1	3	932	U
1	3	936	G
1	3	944	U
1	3	947	A
1	3	949	C
1	3	951	C
1	3	952	U
1	3	953	G
1	3	970	U
1	3	981	A
1	3	982	G
1	3	994	U
1	3	995	A
1	3	997	G
1	3	1008	A
1	3	1009	A
1	3	1010	G
1	3	1016	A
1	3	1026	A
1	3	1032	A
1	3	1039	G
1	3	1049	U
1	3	1055	A
1	3	1057	G
1	3	1058	U
1	3	1061	A
1	3	1068	U
1	3	1075	G
1	3	1080	A
1	3	1081	A
1	3	1082	A
1	3	1083	A
1	3	1102	A
1	3	1103	G
1	3	1104	A
1	3	1105	A
1	3	1106	G
1	3	1107	C
1	3	1112	A
1	3	1123	A
1	3	1124	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	1125	U
1	3	1126	G
1	3	1130	A
1	3	1131	A
1	3	1132	C
1	3	1140	U
1	3	1146	A
1	3	1147	G
1	3	1148	U
1	3	1151	U
1	3	1154	U
1	3	1161	A
1	3	1164	A
1	3	1165	U
1	3	1166	G
1	3	1167	U
1	3	1168	A
1	3	1169	A
1	3	1170	C
1	3	1171	G
1	3	1176	U
1	3	1177	A
1	3	1178	A
1	3	1186	A
1	3	1192	U
1	3	1204	A
1	3	1206	U
1	3	1207	U
1	3	1208	A
1	3	1209	U
1	3	1210	A
1	3	1211	U
1	3	1212	C
1	3	1217	G
1	3	1234	U
1	3	1235	U
1	3	1236	G
1	3	1242	G
1	3	1250	A
1	3	1251	G
1	3	1255	G
1	3	1268	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	1277	A
1	3	1283	A
1	3	1286	G
1	3	1295	A
1	3	1298	A
1	3	1301	G
1	3	1302	C
1	3	1303	U
1	3	1304	U
1	3	1315	A
1	3	1325	C
1	3	1328	A
1	3	1329	U
1	3	1330	U
1	3	1369	U
1	3	1380	U
1	3	1393	A
1	3	1406	A
1	3	1407	U
1	3	1412	A
1	3	1414	C
1	3	1423	A
1	3	1424	U
1	3	1431	A
1	3	1436	C
1	3	1444	C
1	3	1445	U
1	3	1448	U
1	3	1455	A
1	3	1456	C
1	3	1466	U
1	3	1480	A
1	3	1481	U
1	3	1483	G
1	3	1485	A
1	3	1486	U
1	3	1487	U
1	3	1504	G
1	3	1508	G
1	3	1509	U
1	3	1510	A
1	3	1513	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	1514	U
1	3	1515	A
1	3	1518	C
1	3	1519	A
1	3	1520	A
1	3	1522	U
1	3	1523	C
1	3	1532	A
1	3	1533	U
1	3	1534	A
1	3	1535	A
1	3	1541	A
1	3	1557	G
1	3	1558	A
1	3	1559	A
1	3	1571	G
1	3	1581	U
1	3	1584	U
1	3	1585	A
1	3	1586	U
1	3	1587	U
1	3	1588	A
1	3	1589	A
1	3	1600	A
1	3	1601	A
1	3	1603	A
1	3	1612	U
1	3	1616	G
1	3	1618	U
1	3	1619	A
1	3	1641	A
1	3	1643	A
1	3	1644	A
1	3	1651	C
1	3	1653	C
1	3	1668	G
1	3	1680	A
1	3	1681	G
1	3	1682	C
1	3	1688	A
1	3	1695	G
1	3	1706	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	1708	G
1	3	1727	U
1	3	1741	G
1	3	1748	U
1	3	1764	U
1	3	1765	G
1	3	1769	A
1	3	1770	A
1	3	1771	C
1	3	1780	A
1	3	1783	G
1	3	1789	C
1	3	1791	A
1	3	1807	C
1	3	1808	C
1	3	1815	U
1	3	1823	U
1	3	1836	A
1	3	1842	G
1	3	1854	A
1	3	1866	G
1	3	1869	G
1	3	1876	G
1	3	1891	A
1	3	1910	G
1	3	1913	G
1	3	1920	A
1	3	1921	C
1	3	1936	G
1	3	1938	U
1	3	1945	A
1	3	1962	U
1	3	1972	C
1	3	1977	A
1	3	1978	U
1	3	1979	G
1	3	1998	U
1	3	2000	U
1	3	2004	G
1	3	2010	A
1	3	2027	G
1	3	2030	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	2037	A
1	3	2038	A
1	3	2040	A
1	3	2050	G
1	3	2057	C
1	3	2059	G
1	3	2062	C
1	3	2063	G
1	3	2067	A
1	3	2068	G
1	3	2069	A
1	3	2076	G
1	3	2099	U
1	3	2100	G
1	3	2106	G
1	3	2107	A
1	3	2108	C
1	3	2110	U
1	3	2111	U
1	3	2112	A
1	3	2114	C
1	3	2115	A
1	3	2117	G
1	3	2123	A
1	3	2124	A
1	3	2125	U
1	3	2128	G
1	3	2130	A
1	3	2133	A
1	3	2139	C
1	3	2141	A
1	3	2151	G
1	3	2153	U
1	3	2164	G
1	3	2166	U
1	3	2171	A
1	3	2172	A
1	3	2180	U
1	3	2181	A
1	3	2193	U
1	3	2195	U
1	3	2196	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	2198	G
1	3	2199	C
1	3	2200	U
1	3	2202	U
1	3	2206	A
1	3	2207	A
1	3	2211	G
1	3	2212	U
1	3	2219	U
1	3	2220	A
1	3	2222	C
1	3	2233	A
1	3	2246	G
1	3	2247	G
1	3	2274	A
1	3	2276	A
1	3	2286	A
1	3	2291	U
1	3	2294	A
1	3	2295	A
1	3	2313	U
1	3	2316	G
1	3	2317	A
1	3	2324	A
1	3	2327	U
1	3	2328	A
1	3	2329	G
1	3	2333	G
1	3	2334	U
1	3	2335	A
1	3	2341	G
1	3	2342	U
1	3	2343	A
1	3	2344	A
1	3	2352	U
1	3	2355	C
1	3	2358	U
1	3	2366	A
1	3	2369	G
1	3	2391	G
1	3	2393	C
1	3	2401	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	2410	C
1	3	2411	C
1	3	2414	U
1	3	2422	G
1	3	2430	C
1	3	2433	A
1	3	2437	G
1	3	2438	A
1	3	2440	A
1	3	2449	U
1	3	2455	G
1	3	2456	A
1	3	2472	G
1	3	2478	G
1	3	2484	A
1	3	2486	A
1	3	2499	U
1	3	2502	G
1	3	2505	A
1	3	2506	C
1	3	2507	C
1	3	2509	C
1	3	2510	G
1	3	2512	U
1	3	2513	G
1	3	2521	A
1	3	2526	A
1	3	2528	C
1	3	2543	G
1	3	2562	U
1	3	2563	U
1	3	2574	A
1	3	2575	G
1	3	2580	A
1	3	2593	U
1	3	2594	C
1	3	2605	G
1	3	2610	A
1	3	2617	U
1	3	2621	U
1	3	2622	A
1	3	2629	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	2637	A
1	3	2638	G
1	3	2644	U
1	3	2649	G
1	3	2654	U
1	3	2668	A
1	3	2669	G
1	3	2687	A
1	3	2697	C
1	3	2698	U
1	3	2722	G
1	3	2732	A
1	3	2734	C
1	3	2737	G
1	3	2741	A
1	3	2752	G
1	3	2756	A
1	3	2765	A
1	3	2773	A
1	3	2785	G
1	3	2786	A
1	3	2797	C
1	3	2798	A
1	3	2799	U
1	3	2801	U
1	3	2808	A
1	3	2811	G
1	3	2812	U
1	3	2813	A
1	3	2822	C
1	3	2824	A
1	3	2829	G
1	3	2839	A
1	3	2853	U
1	3	2863	G
1	3	2865	U
1	3	2871	G
1	3	2876	G
1	3	2883	A
1	3	2884	C
1	3	2888	U
1	3	2890	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	2897	G
1	3	2898	A
2	4	9	C
2	4	10	C
2	4	11	A
2	4	13	G
2	4	14	U
2	4	22	G
2	4	23	A
2	4	28	C
2	4	33	U
2	4	34	U
2	4	35	C
2	4	40	U
2	4	41	C
2	4	42	G
2	4	48	A
2	4	49	G
2	4	54	U
2	4	55	A
2	4	60	C
2	4	65	G
2	4	77	G
2	4	78	C
2	4	86	G
2	4	88	G
2	4	89	A
2	4	99	A
2	4	106	A
2	4	108	C
49	5	7	U
49	5	8	G
49	5	9	A
49	5	10	G
49	5	33	A
49	5	40	G
49	5	48	C
49	5	49	C
49	5	52	A
49	5	61	A
49	5	62	G
49	5	66	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	75	A
49	5	93	A
49	5	106	C
49	5	114	C
49	5	115	A
49	5	117	U
49	5	120	A
49	5	128	A
49	5	130	G
49	5	134	G
49	5	136	U
49	5	149	G
49	5	154	G
49	5	156	U
49	5	157	A
49	5	159	U
49	5	163	G
49	5	167	A
49	5	168	A
49	5	169	G
49	5	171	A
49	5	189	C
49	5	197	A
49	5	198	A
49	5	199	A
49	5	208	A
49	5	210	G
49	5	220	U
49	5	223	G
49	5	236	C
49	5	241	C
49	5	243	G
49	5	247	G
49	5	262	G
49	5	263	C
49	5	285	G
49	5	294	A
49	5	296	A
49	5	297	A
49	5	301	G
49	5	302	A
49	5	324	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	325	A
49	5	326	C
49	5	328	G
49	5	341	C
49	5	342	G
49	5	343	G
49	5	344	G
49	5	345	A
49	5	347	G
49	5	348	C
49	5	359	A
49	5	363	U
49	5	365	U
49	5	368	C
49	5	369	A
49	5	373	A
49	5	374	G
49	5	377	A
49	5	378	A
49	5	393	A
49	5	401	U
49	5	402	G
49	5	407	A
49	5	409	G
49	5	410	A
49	5	417	U
49	5	418	U
49	5	419	A
49	5	420	A
49	5	425	G
49	5	426	U
49	5	435	U
49	5	448	A
49	5	449	A
49	5	450	U
49	5	452	A
49	5	453	C
49	5	457	A
49	5	461	G
49	5	463	U
49	5	464	A
49	5	465	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	468	G
49	5	473	A
49	5	476	U
49	5	478	G
49	5	481	U
49	5	482	G
49	5	488	U
49	5	489	U
49	5	490	U
49	5	493	A
49	5	494	A
49	5	495	U
49	5	496	A
49	5	509	C
49	5	516	C
49	5	525	G
49	5	529	U
49	5	530	A
49	5	531	A
49	5	545	A
49	5	557	A
49	5	562	U
49	5	570	A
49	5	574	C
49	5	575	A
49	5	579	G
49	5	586	G
49	5	594	A
49	5	619	A
49	5	620	A
49	5	628	A
49	5	638	A
49	5	646	A
49	5	662	G
49	5	671	G
49	5	672	A
49	5	680	G
49	5	682	G
49	5	699	A
49	5	715	A
49	5	719	G
49	5	720	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	721	G
49	5	731	A
49	5	745	U
49	5	746	A
49	5	747	C
49	5	752	G
49	5	787	A
49	5	790	U
49	5	791	A
49	5	811	A
49	5	812	A
49	5	814	C
49	5	815	G
49	5	818	A
49	5	825	A
49	5	829	G
49	5	838	A
49	5	839	U
49	5	840	C
49	5	841	C
49	5	842	C
49	5	865	U
49	5	879	G
49	5	883	A
49	5	896	G
49	5	908	A
49	5	910	C
49	5	911	G
49	5	921	G
49	5	922	G
49	5	929	C
49	5	930	A
49	5	953	A
49	5	955	U
49	5	964	A
49	5	970	A
49	5	971	A
49	5	972	A
49	5	977	U
49	5	984	A
49	5	987	U
49	5	988	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	999	C
49	5	1000	A
49	5	1002	A
49	5	1003	G
49	5	1013	C
49	5	1014	A
49	5	1015	U
49	5	1016	A
49	5	1033	U
49	5	1036	C
49	5	1037	A
49	5	1044	G
49	5	1045	C
49	5	1047	U
49	5	1055	G
49	5	1056	U
49	5	1072	G
49	5	1075	G
49	5	1076	U
49	5	1082	U
49	5	1085	G
49	5	1086	U
49	5	1089	C
49	5	1092	A
49	5	1113	U
49	5	1118	A
49	5	1119	C
49	5	1122	U
49	5	1123	G
49	5	1128	G
49	5	1134	C
49	5	1135	U
49	5	1141	U
49	5	1142	G
49	5	1143	C
49	5	1158	A
49	5	1159	A
49	5	1171	A
49	5	1172	A
49	5	1173	A
49	5	1187	U
49	5	1188	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	1197	G
49	5	1199	U
49	5	1200	G
49	5	1201	C
49	5	1203	A
49	5	1211	A
49	5	1232	C
49	5	1233	G
49	5	1235	C
49	5	1243	A
49	5	1245	A
49	5	1255	A
49	5	1260	U
49	5	1261	A
49	5	1271	U
49	5	1274	G
49	5	1276	U
49	5	1279	G
49	5	1296	C
49	5	1312	G
49	5	1314	A
49	5	1320	A
49	5	1321	G
49	5	1327	G
49	5	1337	U
49	5	1338	A
49	5	1353	C
49	5	1354	G
49	5	1356	U
49	5	1373	A
49	5	1394	G
49	5	1397	G
49	5	1400	A
49	5	1403	A
49	5	1404	U
49	5	1417	U
49	5	1426	U
49	5	1429	G
49	5	1433	G
49	5	1464	G
49	5	1467	A
49	5	1468	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	5	1478	A
49	5	1480	G
49	5	1481	U
49	5	1492	G
49	5	1495	C
49	5	1504	G
49	5	1505	G
49	5	1506	A
49	5	1508	C
49	5	1509	A
51	7	9	U
51	7	16	G
51	7	17	U
51	7	19	G
51	7	20	G
51	7	21	U
51	7	22	A
51	7	23	G
51	7	24	A
51	7	43	G
51	7	44	U
51	7	47	G
51	7	49	C
51	7	50	G
51	7	54	G
51	7	58	G
51	7	71	A
51	7	72	C
51	7	75	C
51	7	77	A

All (46) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	3	315	A
1	3	410	G
1	3	425	U
1	3	500	U
1	3	508	A
1	3	513	A
1	3	514	A
1	3	688	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	3	881	A
1	3	901	C
1	3	903	A
1	3	952	U
1	3	980	C
1	3	996	A
1	3	1048	A
1	3	1082	A
1	3	1207	U
1	3	1209	U
1	3	1210	A
1	3	1211	U
1	3	1297	U
1	3	1302	C
1	3	1507	G
1	3	1519	A
1	3	1570	A
1	3	1583	G
1	3	1585	A
1	3	1587	U
1	3	1588	A
1	3	1618	U
1	3	2342	U
1	3	2504	C
1	3	2506	C
1	3	2604	U
1	3	2668	A
1	3	2764	U
1	3	2862	U
2	4	54	U
2	4	59	A
49	5	168	A
49	5	419	A
49	5	449	A
49	5	838	A
49	5	999	C
49	5	1075	G
51	7	16	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 30 ligands modelled in this entry, 30 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

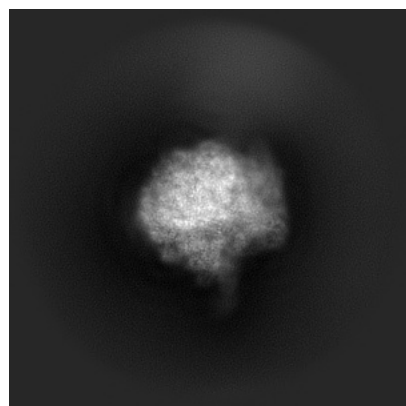
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13234. These allow visual inspection of the internal detail of the map and identification of artifacts.

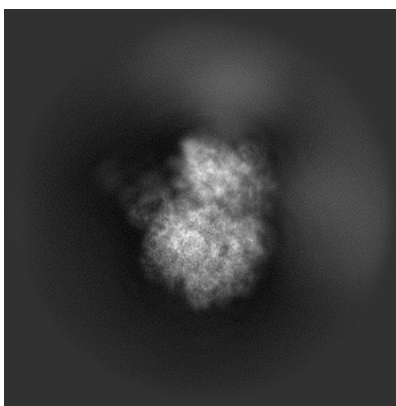
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

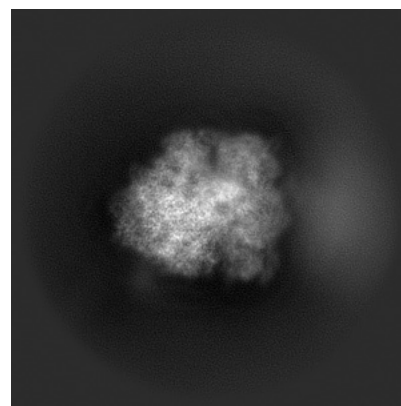
6.1.1 Primary map



X

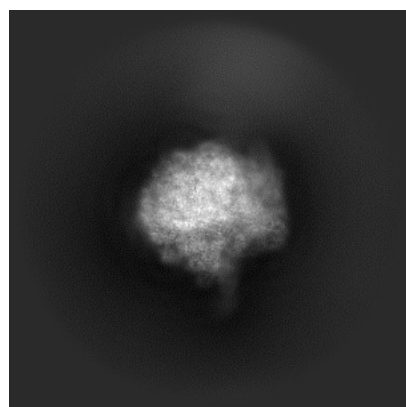


Y

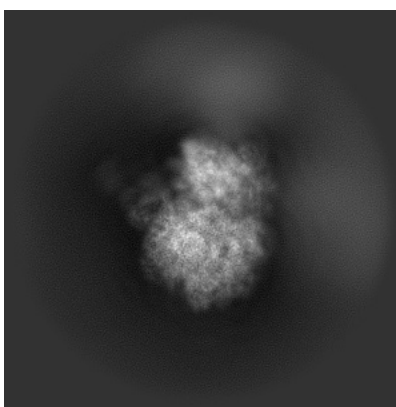


Z

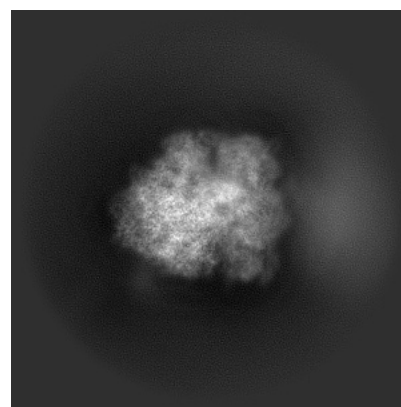
6.1.2 Raw map



X



Y

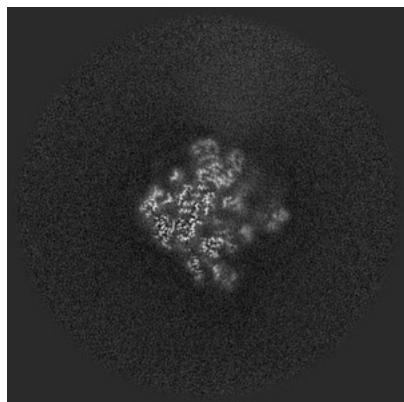


Z

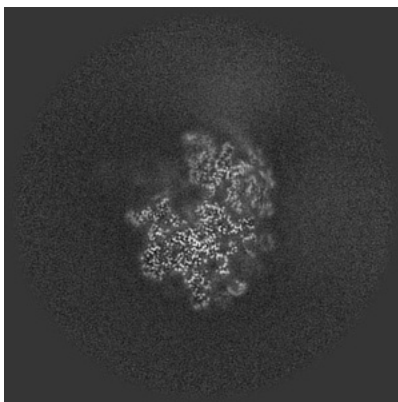
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

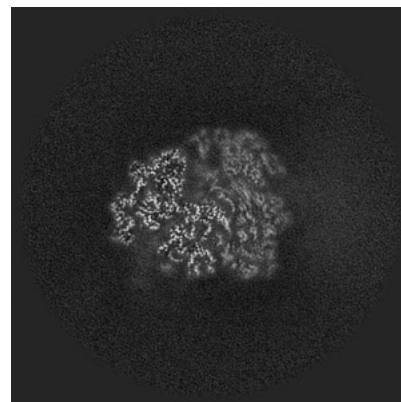
6.2.1 Primary map



X Index: 168

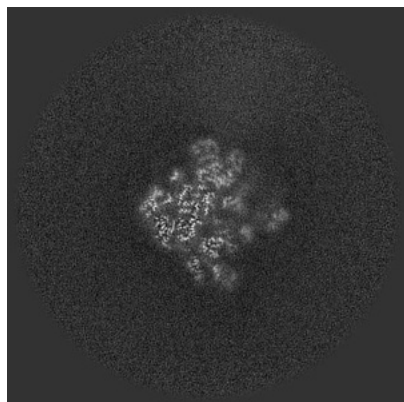


Y Index: 168

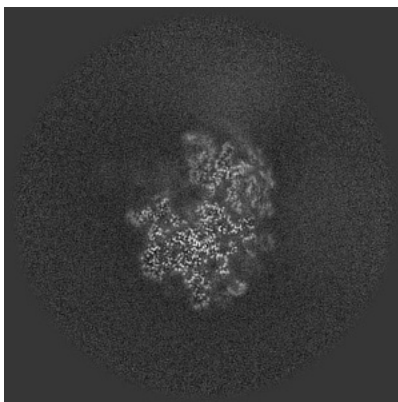


Z Index: 168

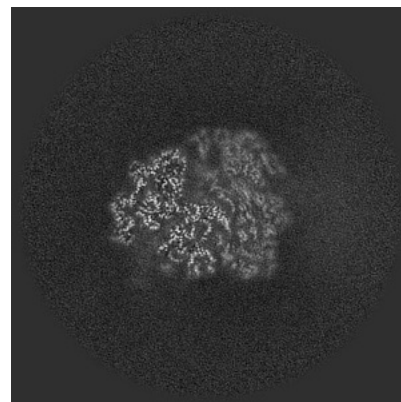
6.2.2 Raw map



X Index: 168



Y Index: 168

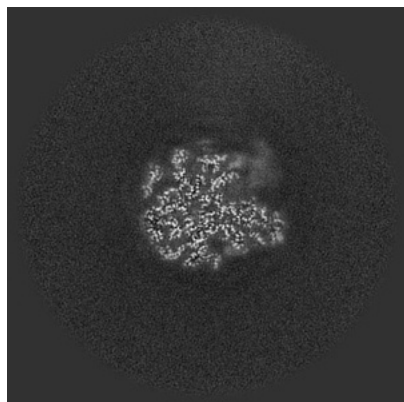


Z Index: 168

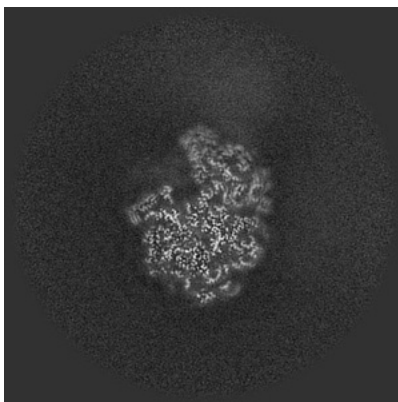
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

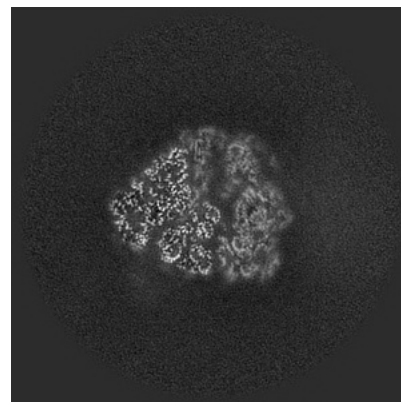
6.3.1 Primary map



X Index: 142

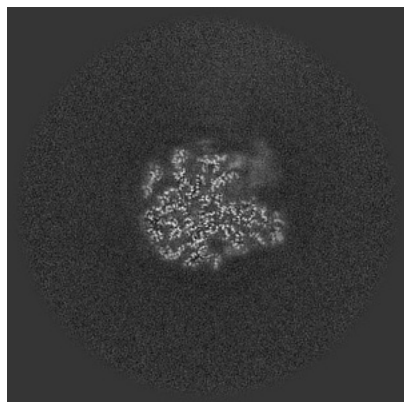


Y Index: 160

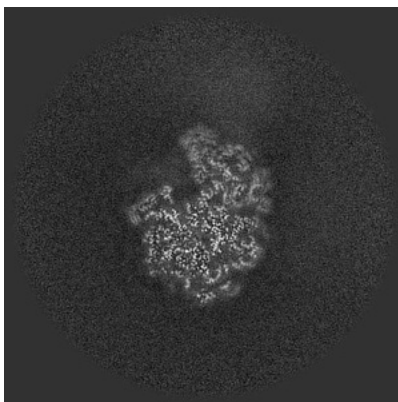


Z Index: 163

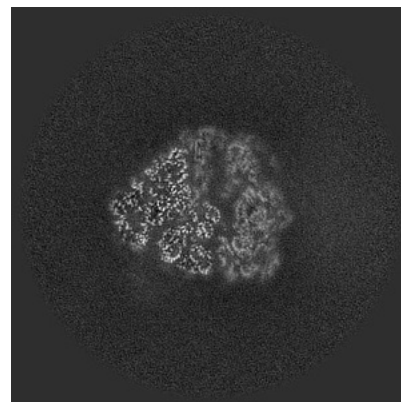
6.3.2 Raw map



X Index: 142



Y Index: 160

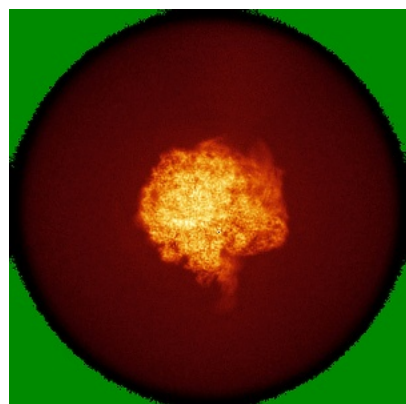


Z Index: 163

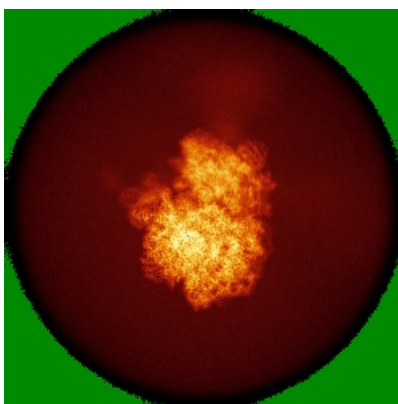
The images above show the largest variance slices of the map in three orthogonal directions.

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

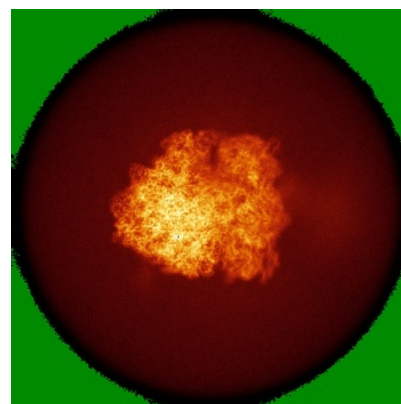
6.4.1 Primary map



X

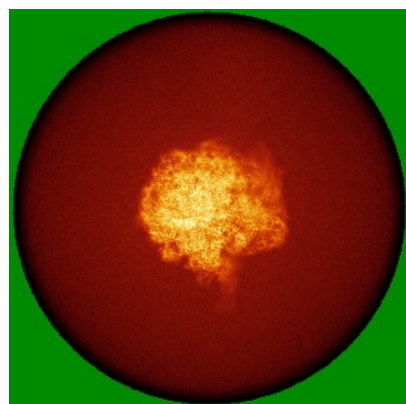


Y

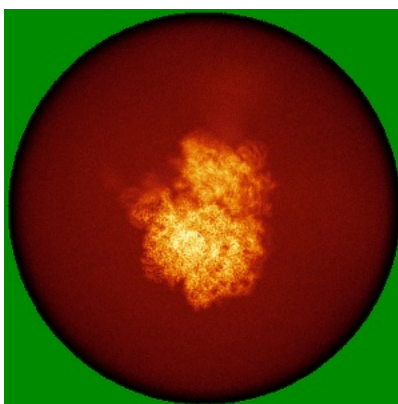


Z

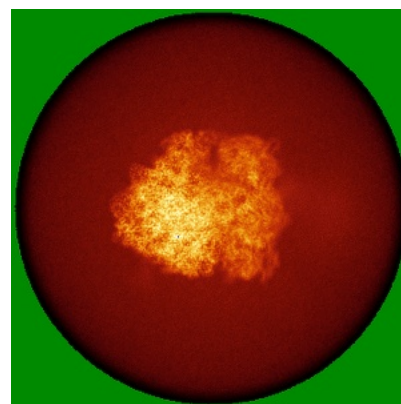
6.4.2 Raw map



X



Y



Z

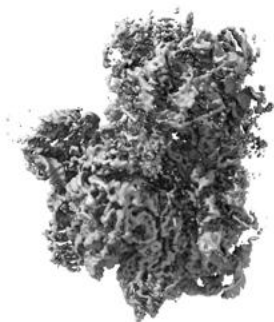
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



Y



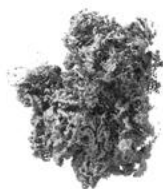
Z

The images above show the 3D surface view of the map at the recommended contour level 0.0024. 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



X



Y



Z

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.

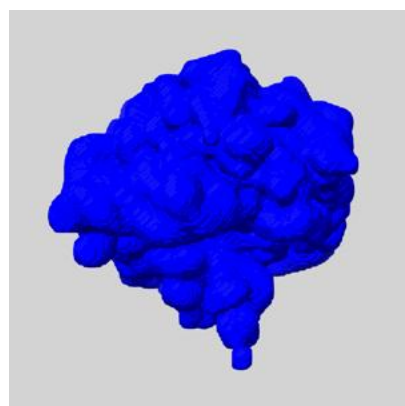
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

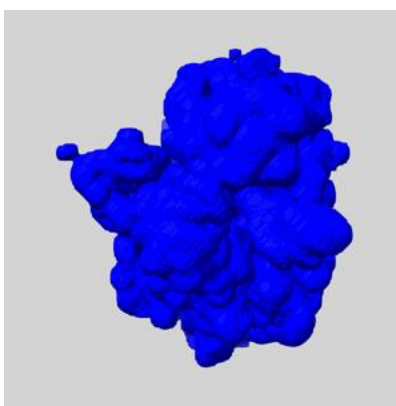
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

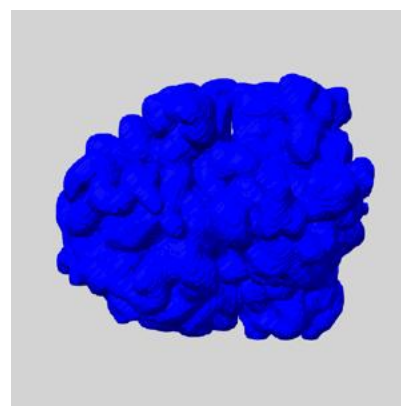
6.6.1 emd_13234_msk_1.map [i](#)



X



Y

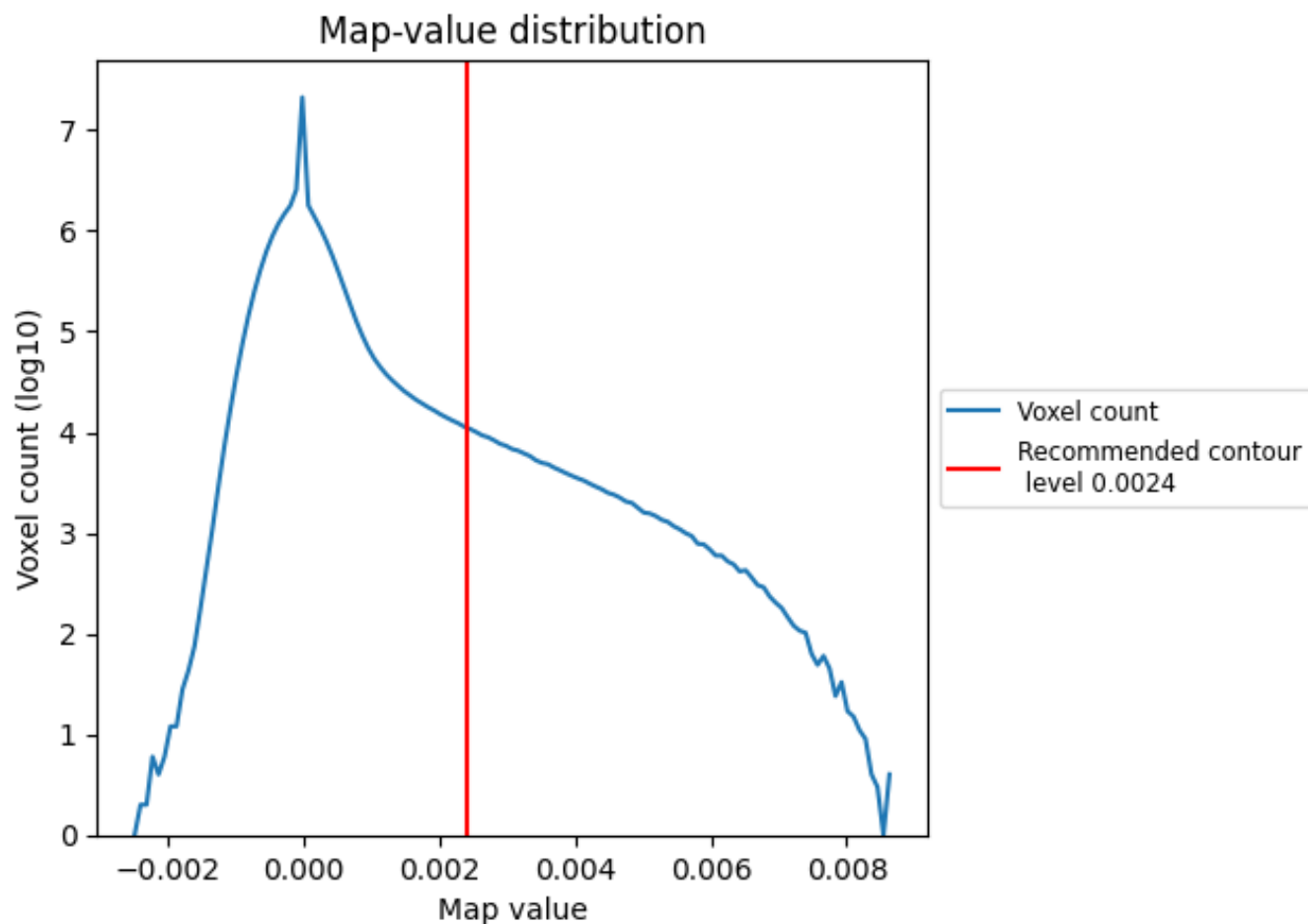


Z

7 Map analysis [i](#)

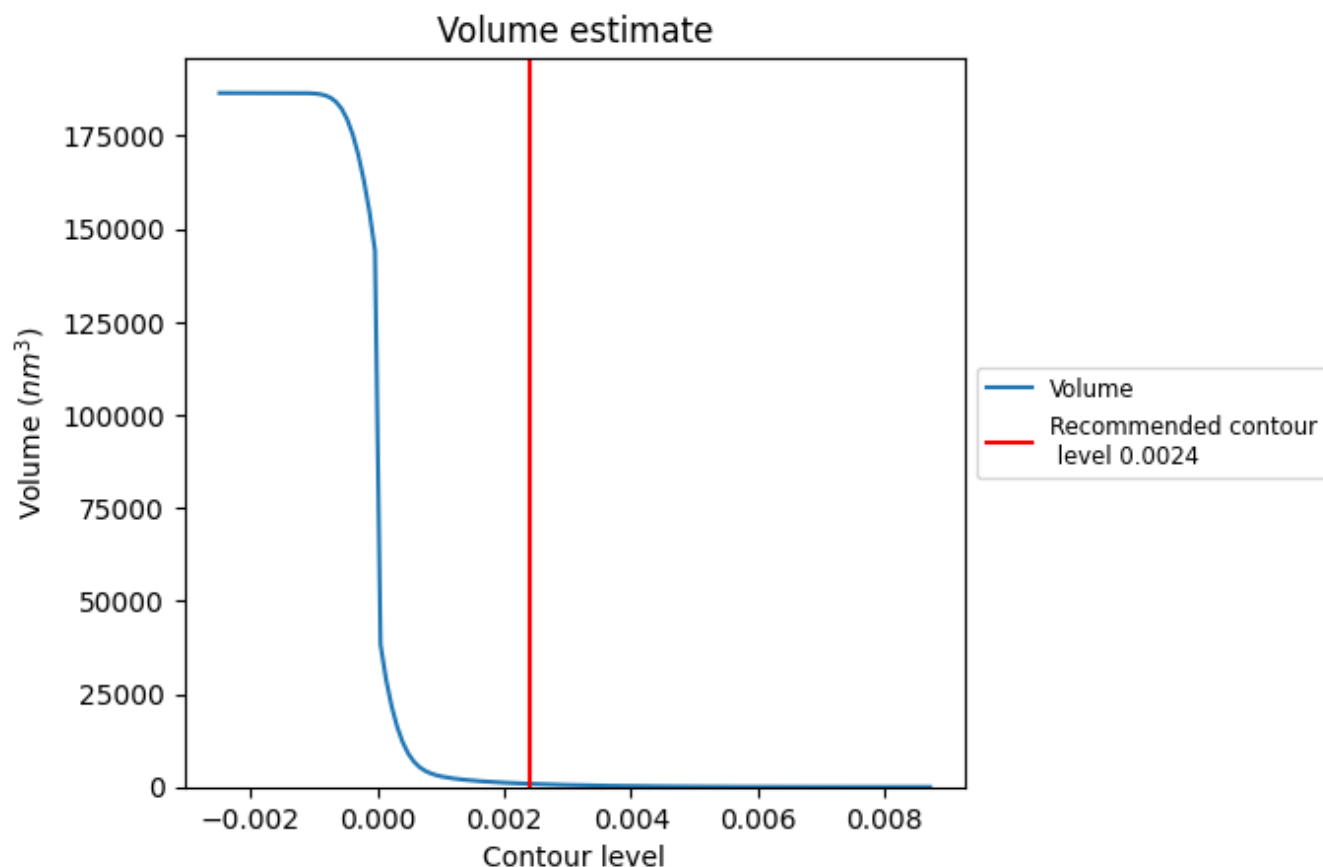
This section contains the results of statistical analysis of the map.

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.

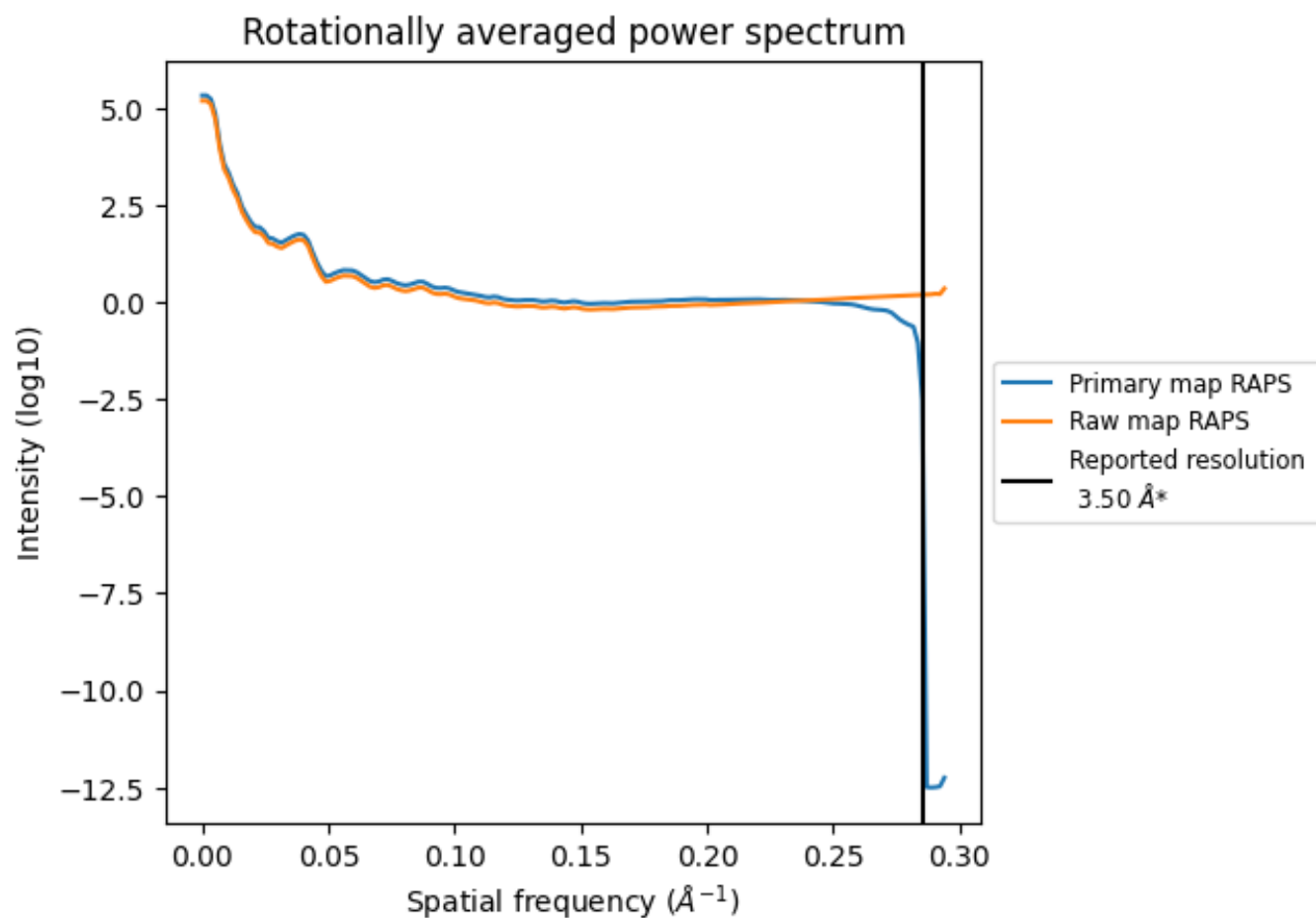
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 852 nm^3 ; this corresponds to an approximate mass of 770 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 ⓘ

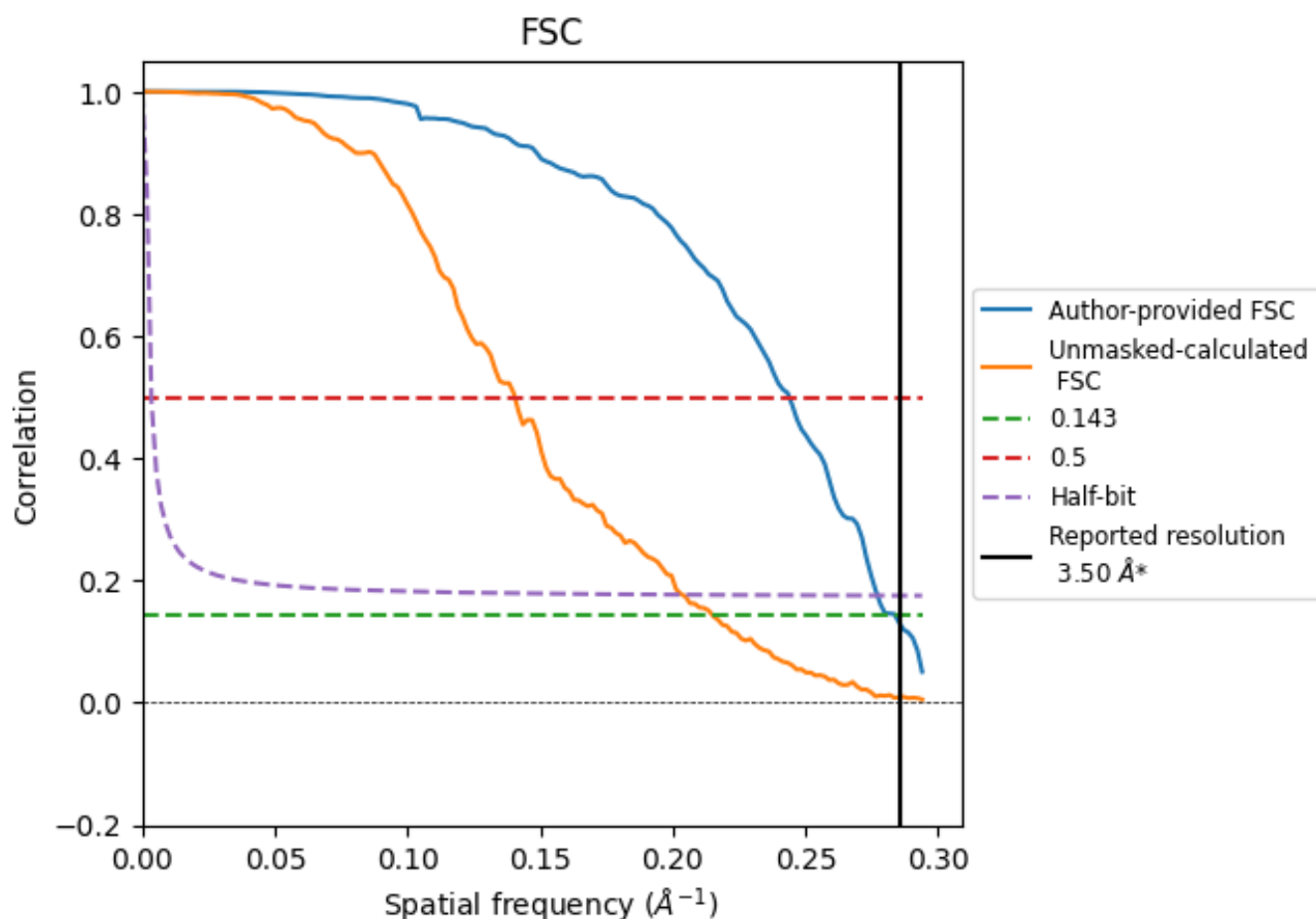


*Reported resolution corresponds to spatial frequency of 0.286 Å⁻¹

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 0.286 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.50	-	-
Author-provided FSC curve	3.52	4.10	3.61
Unmasked-calculated*	4.65	7.12	4.91

*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 4.65 differs from the reported value 3.5 by more than 10 %

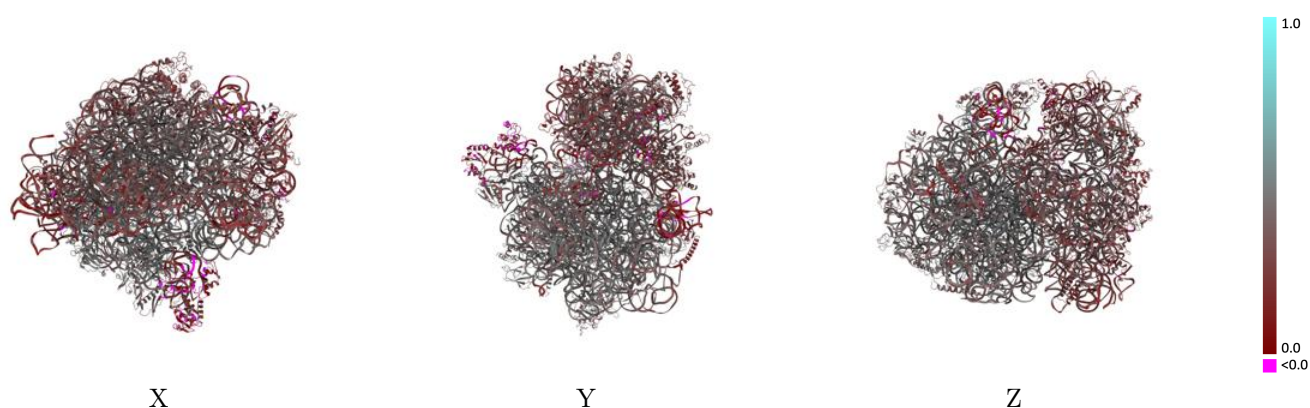
9 Map-model fit [i](#)

This section contains information regarding the fit between EMD map EMD-13234 and PDB model 7P6Z. Per-residue inclusion information can be found in section 3 on page 15.

9.1 Map-model overlay [i](#)

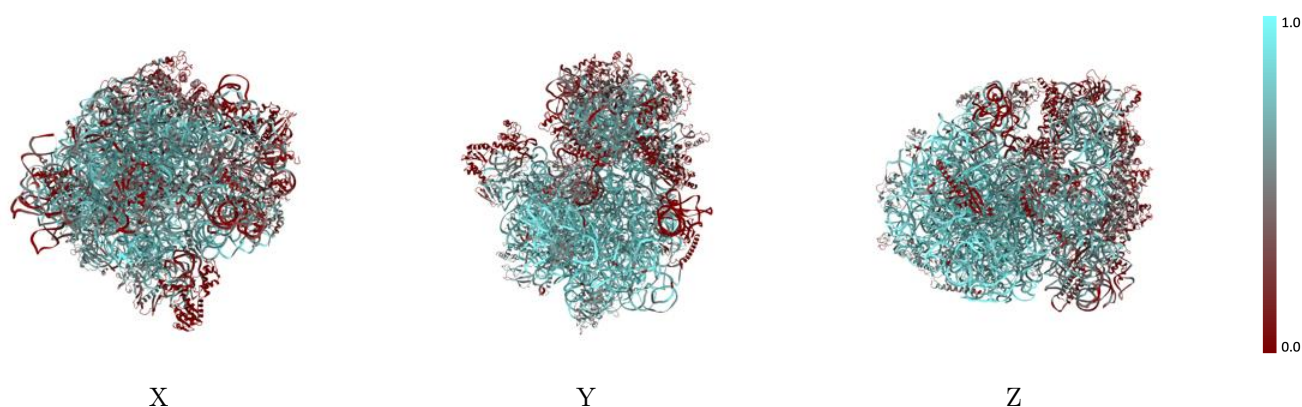
This section was not generated.

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



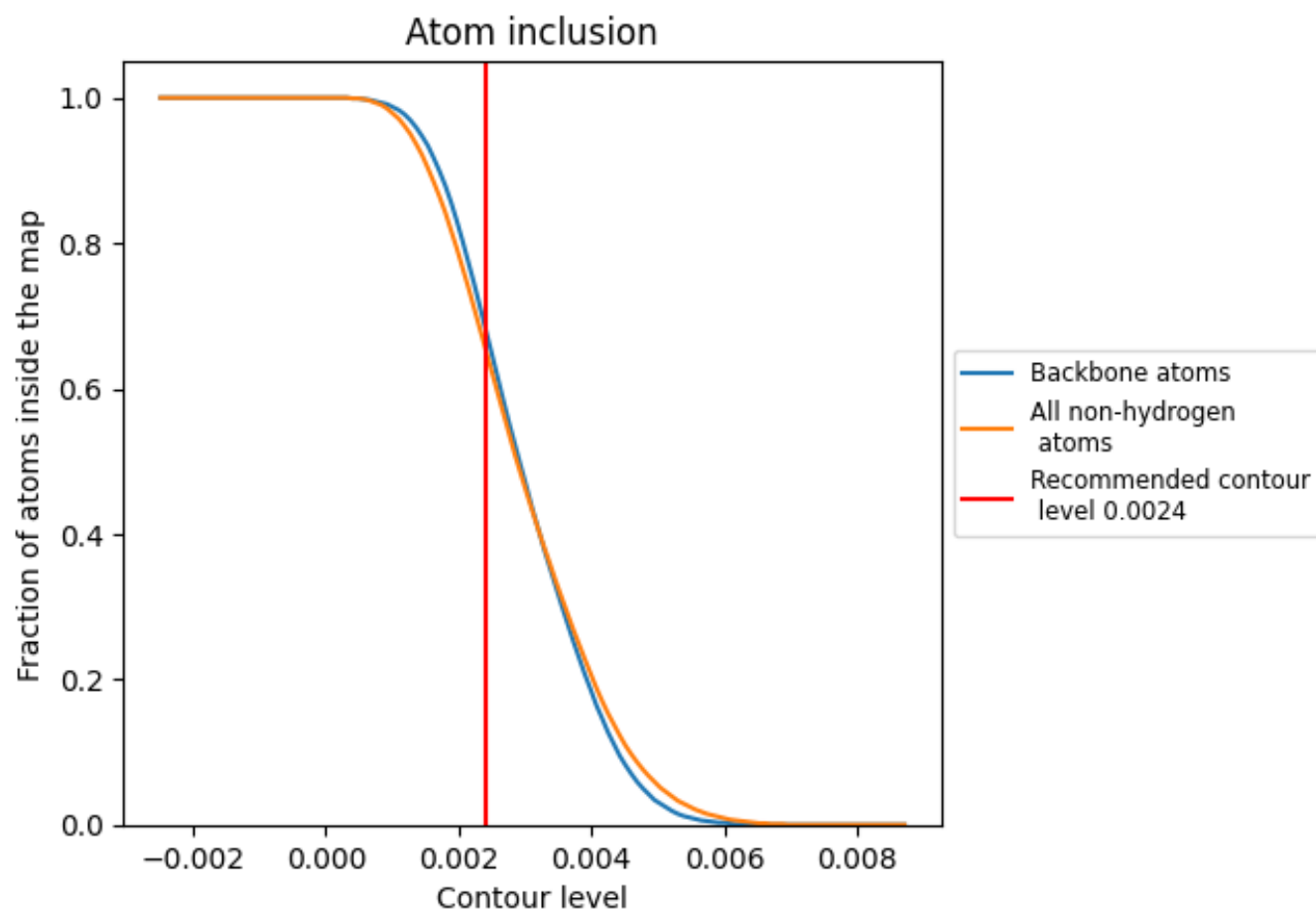
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0024).

9.4 Atom inclusion [i](#)



At the recommended contour level, 68% of all backbone atoms, 66% 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 (0.0024) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6560	 0.3850
0	 0.7400	 0.4890
1	 0.6250	 0.4890
2	 0.6550	 0.4960
3	 0.8260	 0.4190
4	 0.7900	 0.3920
5	 0.6650	 0.3330
7	 0.4130	 0.2870
A	 0.2560	 0.3130
B	 0.3260	 0.3640
C	 0.1810	 0.2840
D	 0.4440	 0.3790
E	 0.1370	 0.2990
F	 0.0730	 0.2520
G	 0.2910	 0.3320
H	 0.1410	 0.2910
I	 0.1610	 0.3110
J	 0.1810	 0.3320
K	 0.3930	 0.3910
L	 0.0730	 0.2260
M	 0.2420	 0.3610
N	 0.3160	 0.2880
O	 0.1970	 0.3180
P	 0.1890	 0.2940
Q	 0.2520	 0.3370
R	 0.0330	 0.2340
S	 0.2770	 0.2470
T	 0.3010	 0.3340
Y	 0.7680	 0.4050
Z	 0.4620	 0.4520
a	 0.6720	 0.4760
b	 0.6260	 0.4640
c	 0.6010	 0.4470
d	 0.3720	 0.3530
e	 0.4140	 0.4210



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
f	 0.1360	 0.2600
g	 0.0150	 0.1680
h	 0.0000	 0.0500
i	 0.6360	 0.4600
j	 0.5840	 0.4740
k	 0.6070	 0.4570
l	 0.6540	 0.4710
m	 0.6380	 0.4660
n	 0.5490	 0.4160
o	 0.6020	 0.4660
p	 0.6540	 0.4630
q	 0.6110	 0.4780
r	 0.6660	 0.4580
s	 0.5760	 0.4550
t	 0.4690	 0.4420
u	 0.6070	 0.4830
v	 0.6210	 0.4680
w	 0.5150	 0.3970
x	 0.2290	 0.3570
y	 0.7030	 0.4800
z	 0.6010	 0.4670