



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 05:42 PM UTC

PDB ID : 8XU8 / pdb_00008xu8
EMDB ID : EMD-38660
Title : State 2c(S2c) of yeast 80S ribosome bound to compact eEF2 and 2 tRNAs during peptidyl transferation
Authors : Cheng, J.; Wu, C.L.; Li, J.X.; Zhang, X.Z.
Deposited on : 2024-01-12
Resolution : 3.40 Å(reported)

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

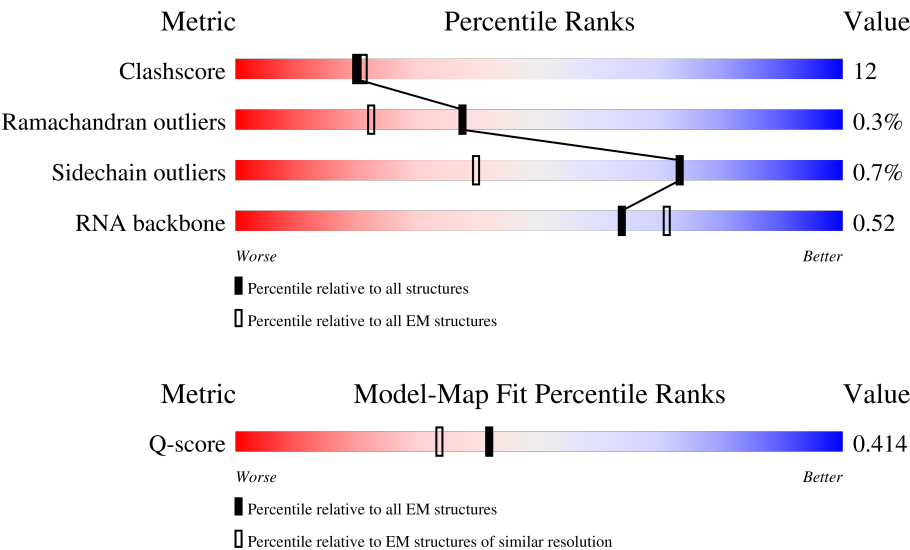
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.40 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	14717 (2.90 - 3.90)

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	2	1799	
2	A	3394	
3	B	121	

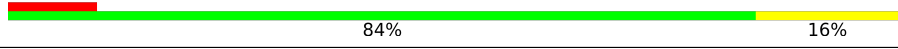
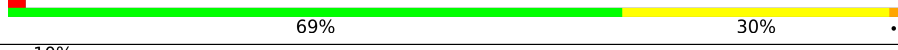
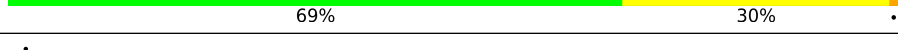
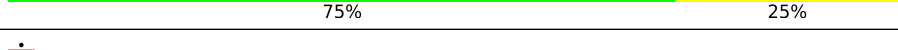
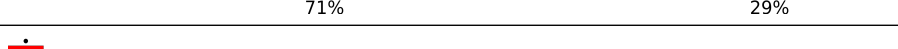
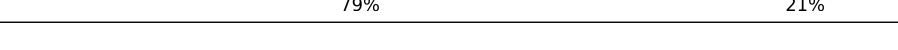
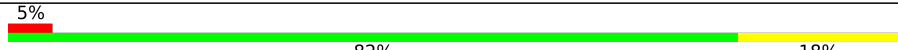
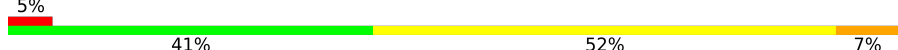
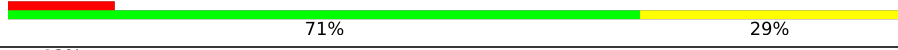
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	C	158	
5	D	251	
6	E	386	
7	F	361	
8	G	294	
9	H	175	
10	I	222	
11	J	233	
12	K	191	
13	L	218	
14	M	169	
15	N	193	
16	O	136	
17	P	203	
18	Q	197	
19	R	183	
20	S	185	
21	T	188	
22	U	171	
23	V	159	
24	W	100	
25	X	136	
26	Y	126	
27	Z	121	
28	a	125	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	b	135	
30	c	148	
31	d	58	
32	e	96	
33	f	109	
34	g	127	
35	h	106	
36	i	112	
37	j	119	
38	k	99	
39	l	81	
40	m	77	
41	n	50	
42	o	52	
43	p	25	
44	q	103	
45	r	91	
46	s	75	
46	t	75	
47	x	842	
48	SD	121	
49	SZ	127	
50	Se	94	
51	SC	92	
52	SE	117	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
53	SA	222	
54	SI	143	
55	SJ	100	
56	SL	63	
57	SM	53	
58	SB	206	
59	SF	141	
60	SH	145	
61	SO	312	
62	SN	73	
63	SG	121	
64	SP	206	
65	SQ	232	
66	SR	216	
67	SS	258	
68	ST	228	
69	SU	184	
70	SV	198	
71	SW	184	
72	SX	142	
73	SY	150	
74	Sa	87	
75	Sb	129	
76	Sc	144	
77	Sd	134	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
78	Sf	81	16% 62% 38%
79	Sg	60	17% 78% 22%
80	SK	108	43% 68% 28% 5%

2 Entry composition

There are 80 unique types of molecules in this entry. The entry contains 209284 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 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	2	1767	Total	C	N	O	P	0	0
			37653	16834	6668	12384	1767		

- Molecule 2 is a RNA chain called 25S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	3189	Total	C	N	O	P	0	0
			68216	30470	12302	22255	3189		

- Molecule 3 is a RNA chain called 5S rRNA.

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

- Molecule 4 is a RNA chain called 5.8S rRNA.

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

- Molecule 5 is a protein called Large ribosomal subunit protein uL2A.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	D	251	Total	C	N	O	S	0	0
			1899	1182	385	331	1		

- Molecule 6 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	E	386	Total	C	N	O	S	0	0
			3075	1950	584	533	8		

- Molecule 7 is a protein called Large ribosomal subunit protein uL4A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	F	361	Total	C	N	O	S	0	0
			2748	1729	522	494	3		

- Molecule 8 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	G	294	Total	C	N	O	S	0	0
			2351	1484	410	455	2		

- Molecule 9 is a protein called Large ribosomal subunit protein eL6B.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	H	167	Total	C	N	O	S	0	0
			1307	843	234	230			

- Molecule 10 is a protein called Large ribosomal subunit protein uL30A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	I	222	Total	C	N	O	S	0	0
			1784	1151	324	308	1		

- Molecule 11 is a protein called Large ribosomal subunit protein eL8A.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	J	233	Total	C	N	O	S	0	0
			1804	1151	323	327	3		

- Molecule 12 is a protein called Large ribosomal subunit protein uL6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	K	191	Total	C	N	O	S	0	0
			1508	957	274	273	4		

- Molecule 13 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	L	218	Total	C	N	O	S	0	0
			1764	1117	334	306	7		

- Molecule 14 is a protein called Large ribosomal subunit protein uL5B.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	M	169	Total	C	N	O	S	0	0
			1346	843	252	247	4		

- Molecule 15 is a protein called Large ribosomal subunit protein eL13A.

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

- Molecule 16 is a protein called Large ribosomal subunit protein eL14A.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	O	136	Total	C	N	O	S	0	0
			1053	675	199	177	2		

- Molecule 17 is a protein called Large ribosomal subunit protein eL15A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	P	203	Total	C	N	O	S	0	0
			1720	1077	361	281	1		

- Molecule 18 is a protein called Large ribosomal subunit protein uL13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Q	197	Total	C	N	O	S	197	0
			1555	1003	289	262	1		

- Molecule 19 is a protein called Large ribosomal subunit protein uL22A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	R	183	Total	C	N	O	S	0	0
			1416	879	284	253			

- Molecule 20 is a protein called Large ribosomal subunit protein eL18A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	S	185	Total	C	N	O	S	0	0
			1441	908	290	241	2		

- Molecule 21 is a protein called Large ribosomal subunit protein eL19A.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	T	188	Total	C	N	O	0	0
			1515	932	323	260		

- Molecule 22 is a protein called Large ribosomal subunit protein eL20A.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	U	171	Total	C	N	O	S	0	0
			1437	925	266	243	3		

- Molecule 23 is a protein called Large ribosomal subunit protein eL21A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	V	159	Total	C	N	O	S	0	0
			1272	802	245	221	4		

- Molecule 24 is a protein called Large ribosomal subunit protein eL22A.

Mol	Chain	Residues	Atoms				AltConf	Trace
24	W	100	Total	C	N	O	0	0
			796	516	131	149		

- Molecule 25 is a protein called Large ribosomal subunit protein uL14A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	X	136	Total	C	N	O	S	0	0
			1003	628	189	179	7		

- Molecule 26 is a protein called Large ribosomal subunit protein eL24A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Y	126	Total	C	N	O	S	0	0
			836	525	165	145	1		

- Molecule 27 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Z	121	Total	C	N	O	S	0	0
			964	620	169	173	2		

- Molecule 28 is a protein called Large ribosomal subunit protein uL24A.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	a	125	Total	C	N	O	0	0
			984	620	191	173		

- Molecule 29 is a protein called Large ribosomal subunit protein eL27A.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	b	135	Total	C	N	O	0	0
			1080	701	199	180		

- Molecule 30 is a protein called Large ribosomal subunit protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	c	148	Total	C	N	O	S	0	0
			1169	747	231	188	3		

- Molecule 31 is a protein called Large ribosomal subunit protein eL29.

Mol	Chain	Residues	Atoms				AltConf	Trace
31	d	58	Total	C	N	O	0	0
			462	289	100	73		

- Molecule 32 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	e	96	Total	C	N	O	S	0	0
			737	476	123	137	1		

- Molecule 33 is a protein called Large ribosomal subunit protein eL31A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	f	109	Total	C	N	O	S	0	0
			876	556	167	152	1		

- Molecule 34 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	g	127	Total	C	N	O	S	0	0
			1013	642	205	165	1		

- Molecule 35 is a protein called Large ribosomal subunit protein eL33A.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	h	106	Total	C	N	O	S	0	0
			850	540	165	144	1		

- Molecule 36 is a protein called Large ribosomal subunit protein eL34A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	i	112	Total	C	N	O	S	0	0
			880	545	179	152	4		

- Molecule 37 is a protein called Large ribosomal subunit protein uL29A.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	j	119	Total	C	N	O	S	0	0
			969	615	186	167	1		

- Molecule 38 is a protein called Large ribosomal subunit protein eL36A.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	k	99	Total	C	N	O	S	0	0
			766	478	154	132	2		

- Molecule 39 is a protein called Large ribosomal subunit protein eL37A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	l	81	Total	C	N	O	S	0	0
			645	393	141	106	5		

- Molecule 40 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	m	77	Total	C	N	O	0	0
			612	391	115	106		

- Molecule 41 is a protein called Large ribosomal subunit protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	n	50	Total	C	N	O	S	0	0
			436	272	97	65	2		

- Molecule 42 is a protein called Large ribosomal subunit protein eL40A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	o	52	Total	C	N	O	S	0	0
			410	254	86	65	5		

- Molecule 43 is a protein called Large ribosomal subunit protein eL41A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	p	25	Total	C	N	O	S	0	0
			229	139	62	27	1		

- Molecule 44 is a protein called Large ribosomal subunit protein eL42A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	q	103	Total	C	N	O	S	0	0
			824	517	167	135	5		

- Molecule 45 is a protein called Large ribosomal subunit protein eL43A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	r	91	Total	C	N	O	S	0	0
			694	429	138	121	6		

- Molecule 46 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	s	75	Total	C	N	O	P	0	0
			1605	716	297	517	75		
46	t	75	Total	C	N	O	P	0	0
			1606	716	297	518	75		

- Molecule 47 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	x	842	Total	C	N	O	S	0	0
			6559	4166	1124	1238	31		

- Molecule 48 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	SD	121	Total	C	N	O	S	0	0
			875	551	153	169	2		

- Molecule 49 is a protein called Small ribosomal subunit protein uS11B.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SZ	127	Total	C	N	O	S	0	0
			891	545	182	163	1		

- Molecule 50 is a protein called Small ribosomal subunit protein eS26A.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Se	94	Total	C	N	O	S	0	0
			750	462	157	126	5		

- Molecule 51 is a protein called Small ribosomal subunit protein eS10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SC	92	Total	C	N	O	S	0	0
			752	487	122	141	2		

- Molecule 52 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SE	117	Total	C	N	O	S	0	0
			916	583	171	155	7		

- Molecule 53 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SA	222	Total	C	N	O	S	0	0
			1729	1098	312	313	6		

- Molecule 54 is a protein called Small ribosomal subunit protein eS19A.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SI	143	Total	C	N	O	S	0	0
			1112	694	208	208	2		

- Molecule 55 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SJ	100	Total	C	N	O	S	0	0
			797	506	144	146	1		

- Molecule 56 is a protein called Small ribosomal subunit protein eS28A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SL	63	Total	C	N	O	S	0	0
			491	303	96	91	1		

- Molecule 57 is a protein called Small ribosomal subunit protein uS14A.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SM	53	Total	C	N	O	S	0	0
			442	274	92	72	4		

- Molecule 58 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SB	206	Total	C	N	O	S	0	0
			1605	1005	299	298	3		

- Molecule 59 is a protein called Small ribosomal subunit protein uS9A.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SF	141	Total	C	N	O	S	0	0
			1105	708	203	194			

- Molecule 60 is a protein called Small ribosomal subunit protein uS13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SH	145	Total	C	N	O	S	0	0
			1188	741	237	208	2		

- Molecule 61 is a protein called Small ribosomal subunit protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SO	304	Total	C	N	O	S	0	0
			2326	1477	401	440	8		

- Molecule 62 is a protein called Small ribosomal subunit protein eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SN	73	Total	C	N	O	S	0	0
			560	355	106	95	4		

- Molecule 63 is a protein called Small ribosomal subunit protein eS17A.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SG	121	Total	C	N	O	S	0	0
			961	599	182	178	2		

- Molecule 64 is a protein called Small ribosomal subunit protein uS2A.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SP	206	Total	C	N	O	S	0	0
			1603	1030	284	287	2		

- Molecule 65 is a protein called Small ribosomal subunit protein eS1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SQ	226	Total	C	N	O	S	0	0
			1798	1139	330	325	4		

- Molecule 66 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SR	216	Total	C	N	O	S	0	0
			1626	1042	287	295	2		

- Molecule 67 is a protein called Small ribosomal subunit protein eS4A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SS	258	Total	C	N	O	S	0	0
			2056	1308	387	358	3		

- Molecule 68 is a protein called Small ribosomal subunit protein eS6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	ST	228	Total	C	N	O	S	0	0
			1815	1138	351	323	3		

- Molecule 69 is a protein called Small ribosomal subunit protein eS7A.

Mol	Chain	Residues	Atoms				AltConf	Trace
69	SU	184	Total	C	N	O	0	0
			1473	946	263	264		

- Molecule 70 is a protein called Small ribosomal subunit protein eS8A.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	SV	187	Total	C	N	O	S	0	0
			1476	916	295	263	2		

- Molecule 71 is a protein called Small ribosomal subunit protein uS4A.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SW	184	Total	C	N	O	S	0	0
			1479	935	285	258	1		

- Molecule 72 is a protein called Small ribosomal subunit protein uS17A.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SX	142	Total	C	N	O	S	0	0
			1142	733	217	189	3		

- Molecule 73 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SY	150	Total	C	N	O	S	0	0
			1192	759	224	207	2		

- Molecule 74 is a protein called Small ribosomal subunit protein eS21A.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Sa	87	Total	C	N	O	S	0	0
			673	415	125	131	2		

- Molecule 75 is a protein called Small ribosomal subunit protein uS8A.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Sb	129	Total	C	N	O	S	0	0
			1021	650	188	180	3		

- Molecule 76 is a protein called Small ribosomal subunit protein uS12A.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Sc	144	Total	C	N	O	S	0	0
			1121	708	220	191	2		

- Molecule 77 is a protein called Small ribosomal subunit protein eS24A.

Mol	Chain	Residues	Atoms				AltConf	Trace
77	Sd	134	Total	C	N	O	0	0
			1073	676	208	189		

- Molecule 78 is a protein called Small ribosomal subunit protein eS27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Sf	81	Total	C	N	O	S	0	0
			610	382	110	113	5		

- Molecule 79 is a protein called Small ribosomal subunit protein eS30A.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Sg	60	Total	C	N	O	S	0	0
			472	298	97	76	1		

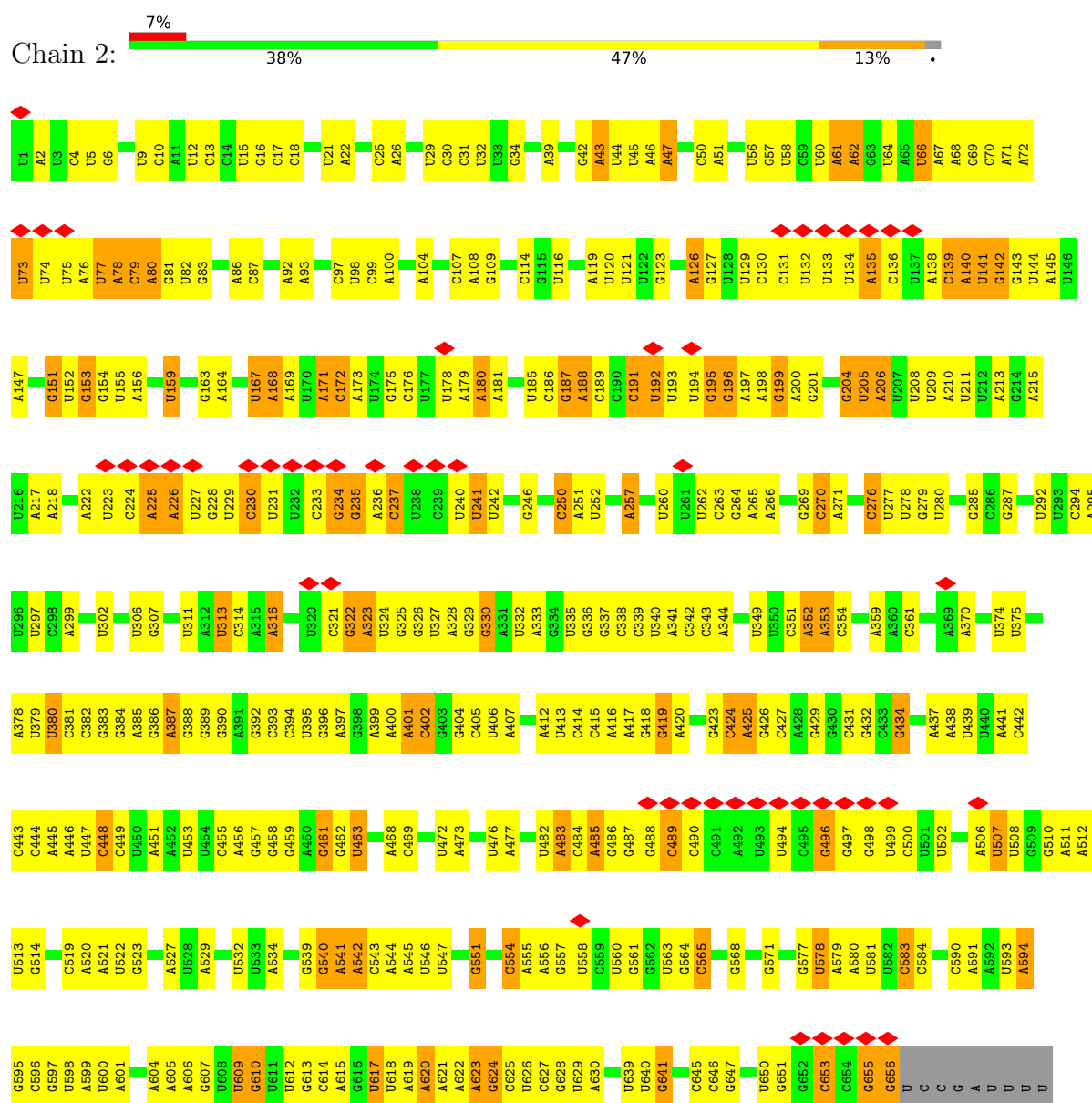
- Molecule 80 is a protein called Small ribosomal subunit protein eS25A.

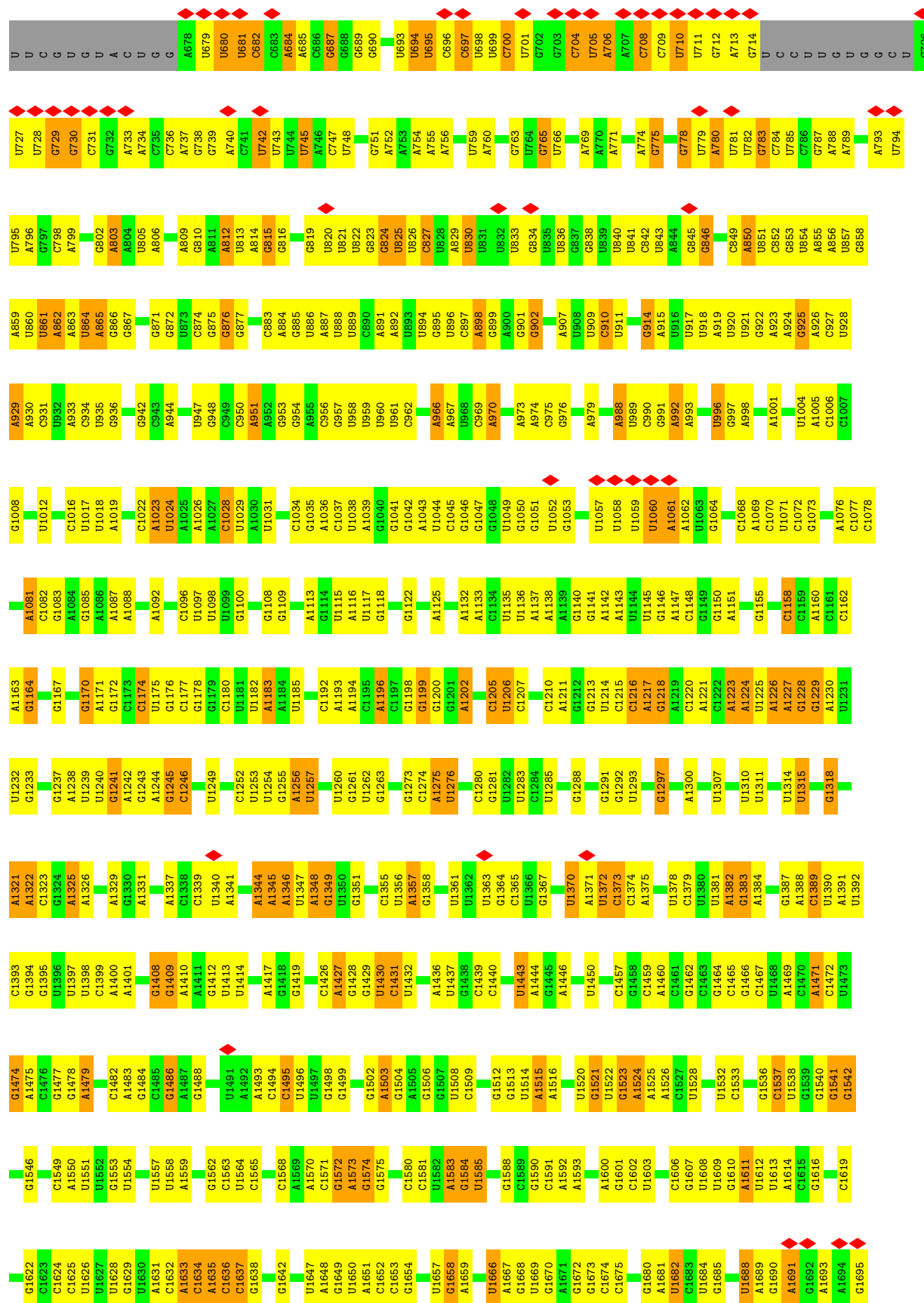
Mol	Chain	Residues	Atoms					AltConf	Trace
80	SK	103	Total	C	N	O	S	0	0
			810	514	151	143	2		

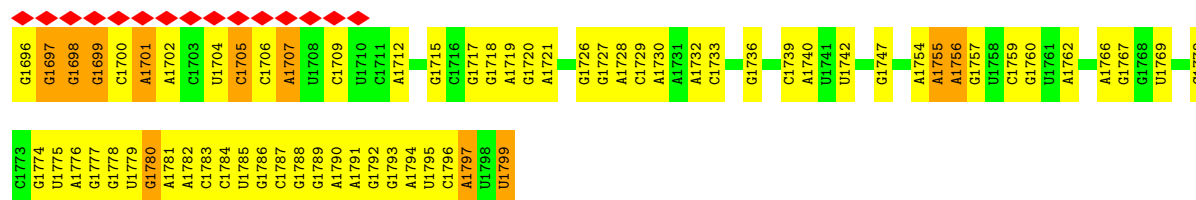
3 Residue-property plots

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: 18S rRNA

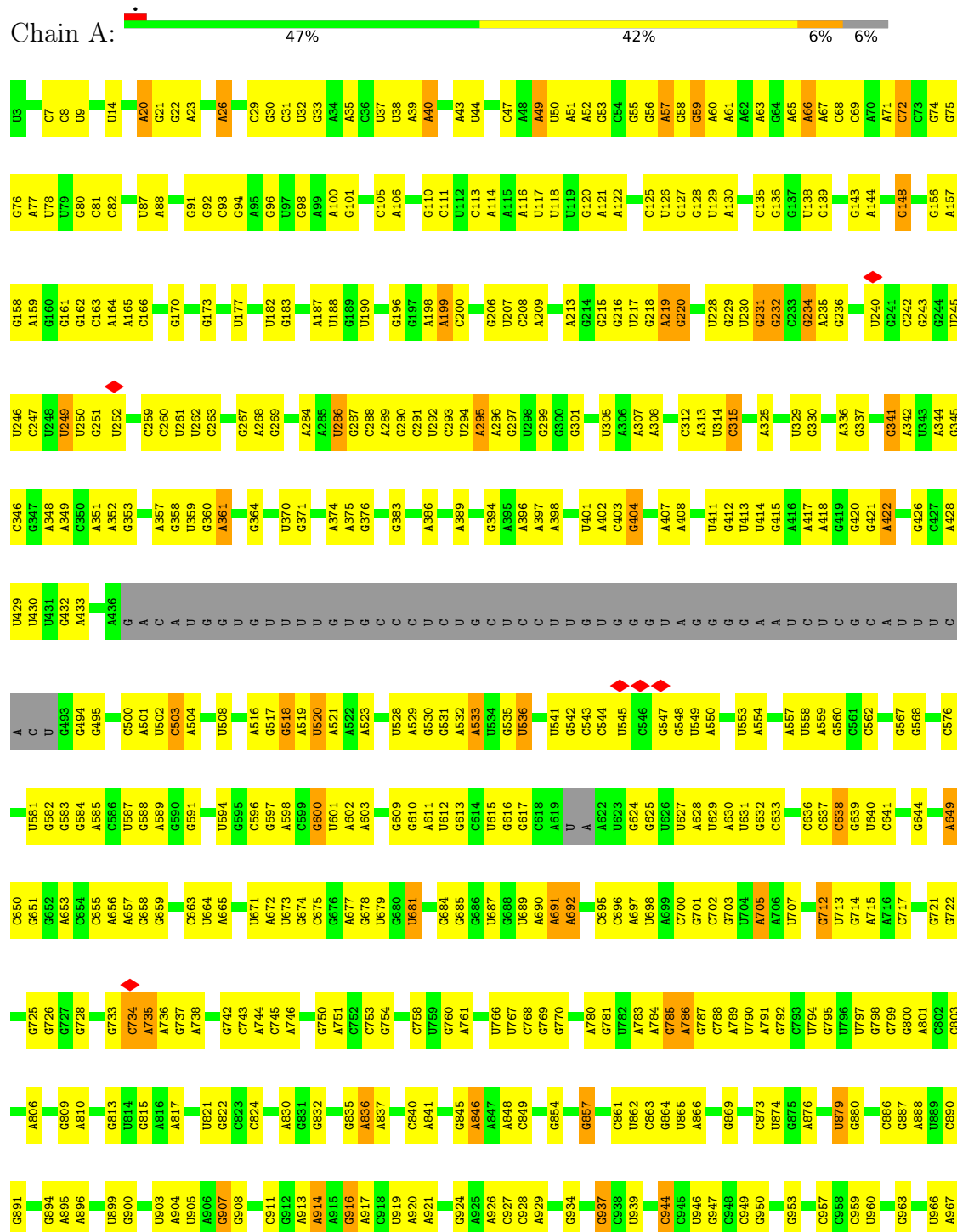






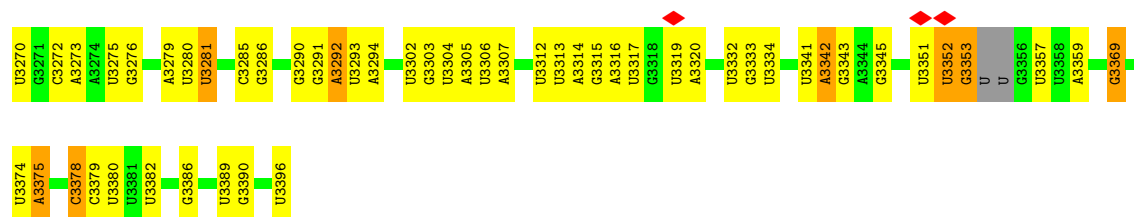
• Molecule 2: 25S rRNA

Chain A:

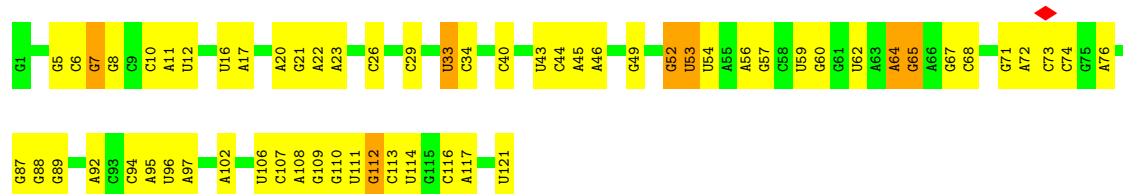




U3195	C2114	C2855	C3682	G2440	U2499	G2575	A2673	A2769	U2860	G2961	A3040	C3117	U3195	
U3196	G2115	U2285	A2363	G2441	A2500	G2576	A2674	G2770	U2866	U2962	U3041	C3118	U3196	
U3198	G2116	U2286	C2364	A2442	U2501	G2577	A2678	U2771	C2867	G2963	U3042	U3121	G3197	
U3199	G2117	U2287	C2365	G2443	G2502	U2578	C2682	C2772	U2868	G2964	G3045	A3122	U3198	
G3201	G2118	C2366	C2366	A2444	G2503	G2579	U2683	G2773	G2871	A2967	A3046	C3126	G3201	
G3202	G2119	U2288	A2502	C2445	U2504	G2584	U2684	G2774	A2872	G2968	U3047	A3127	G3202	
G3203	G2122	C2367	C2367	A2446	U2505	G2585	C2685	A2775	U2873	A2969	A3048	C3128	U3203	
G3204	U2129	U2289	A2367	U2447	U2506	G2586	U2686	G2776	G2877	G2970	U3049	A3129	G3204	
G3205	G2130	C2368	A2368	U2448	C2507	U2587	G2687	U2782	G2878	A2971	U3050	G3130	G3205	
G3206	A2131	G2295	A2372	A2449	G2507	U2588	U2688	G2786	G2879	U2975	U3051	U3131	U3206	
G3207	G2132	G2296	C2374	A2450	U2510	A2593	U2689	G2787	C2881	A2976	G3052	U3132	U3207	
G3208	U2137	A2205	U2375	G2451	U2511	C2594	G2690	G2788	U2882	G2977	G3053	C3132	G3208	
A3209	A2138	U2209	G2376	G2452	U2512	U2597	A2691	G2789	U2883	U2978	U3057	C3137	A3209	
G3210	A2139	G2210	U2377	G2453	U2513	G2598	A2692	G2790	U2884	U2979	U3058	U3138	A3210	
G3211	G2216	U2217	A2303	U2454	U2514	U2599	A2693	U2795	C2885	U2980	G3059	A3139	G3211	
G3212	U2218	G2218	G2304	U2455	A2515	G2602	A2694	G2796	C2886	U2981	U3060	G3140	G3212	
A3213	A2219	A2219	C2305	U2456	A2516	G2603	U2695	U2797	A2887	U2982	U3061	A3141	A3213	
A3214	G2220	G2220	G2306	U2457	A2517	G2604	G2696	U2798	U2888	C2983	G3062	A3142	U3214	
G3217	U2147	U2221	C2307	U2458	A2518	G2605	A2697	A2799	U2889	G2984	G3063	A3143	G3217	
A3218	U2148	G2222	C2308	U2459	A2519	G2606	G2698	G2800	C2890	C2985	U3064	G3146	A3218	
G3219	A2149	A2223	U2310	U2460	A2520	G2607	A2704	A2801	U2891	U2986	G3065	G3147	G3219	
A3223	U2152	U2224	U2311	U2461	A2521	G2608	C2708	A2802	G2888	A2987	U3066	U3153	A3223	
G3224	U2153	U2225	G2313	U2462	A2522	G2609	C2709	A2803	U2889	C2988	G3067	C3154	G3224	
U2154	U2154	G2226	U2314	U2463	A2523	G2610	C2710	A2804	C2890	C2989	U3068	U3155	A3225	
G2155	G2155	G2227	G2315	U2464	A2524	G2611	C2711	G2805	U2891	C2990	U3069	U3156	A3226	
A2158	U2158	A2228	U2316	U2465	G2525	G2612	C2712	G2806	G2888	G2991	A3070	U3157	G3227	
G2159	U2159	U2229	U2317	U2466	G2526	G2613	U2713	G2807	U2889	C2992	G3075	U3158	G3228	
G2160	G2160	G2230	U2318	U2467	G2527	G2614	U2714	G2808	A2902	U2993	C3076	C3159	U3231	
G2161	U2161	U2162	U2319	U2468	G2528	U2631	A2715	G2809	A2903	G3000	U3077	U3160	G3232	
U2162	U2162	G2231	U2320	U2469	A2531	U2632	G2720	G2810	A2904	C3001	U3078	C3161	G3233	
G2163	G2163	A2242	A2321	U2470	A2532	U2633	U2721	G2811	U2905	G3002	U3079	C3162	A3234	
A2166	A2166	A2244	G2322	U2471	A2533	U2634	U2722	U2812	G2936	G3003	C3082	U3169	U3237	
A2167	A2167	C2245	G2323	U2472	A2534	U2635	A2723	U2813	U2937	G3004	U3083	U3170	G3238	
G2168	A2168	G2249	G2324	U2473	A2535	U2636	G2724	U2814	G2938	C3005	A3094	A3171	A3243	
G2169	G2169	A2256	G2325	U2474	A2536	U2637	U2725	U2815	C2941	A3006	U3095	A3172	G3247	
U2176	U2176	A2257	G2326	U2475	A2537	U2638	A2726	U2816	C2942	G3007	C3096	A3173	G3248	
G2177	G2177	A2258	G2327	U2476	A2538	U2639	A2727	U2817	C2943	U3008	G3097	U3174	C3249	
G2180	G2180	A2259	G2328	U2477	A2539	U2640	U2728	U2818	U2944	A3009	U3100	A3175	G3250	
C2181	C2181	A2260	G2329	U2478	A2540	U2641	U2729	U2819	C2945	G3012	G3101	U3176	U3251	
A2182	A2182	A2261	U2340	U2479	A2541	U2642	C2737	U2820	U2946	G3103	G3102	C3181	G3252	
C2183	C2183	A2262	A2341	U2480	A2542	U2643	C2741	A2837	C2947	U3014	U3016	A3182	G3253	
U2184	U2184	A2263	U2344	U2481	A2543	U2644	G2745	C2840	U2948	U3015	A3105	A3183	G3256	
G2185	G2185	C2265	U2345	U2482	A2544	U2645	G2746	G2841	C2949	U3016	A3106	A3184	U3257	
U2186	U2186	U2266	U2426	U2483	A2545	U2646	A2747	U2842	U2949	G3017	G3107	G3185	G3260	
U2187	U2187	A2267	U2427	U2484	A2546	U2647	U2748	U2843	C2950	A3021	U3108	A3186	C3261	
A2188	A2188	A2270	U2428	U2485	A2547	U2648	G2749	U2844	G2951	G3024	G3109	U3187	C3262	
U2189	U2189	A2271	U2429	U2486	A2548	U2649	U2750	U2845	U2952	C3025	C3110	G3188	U3263	
U2190	U2190	G2272	U2430	U2487	A2549	U2650	A2751	U2846	C2953	G3026	G3111	G3189	G3264	
G2191	G2191	G2273	A2431	U2488	A2550	U2651	U2752	U2847	U2954	A3027	U3112	C3190	U3265	
C2192	C2192	G2274	U2432	U2489	A2551	U2652	U2753	A2850	U2955	G3028	G3113	U3192	G3266	
U2193	U2193	C2277	A2433	U2490	A2552	U2653	U2754	G2851	U2956	C3029	A3114	A3268	A3267	
G2194	G2194	G2278	U2434	A2491	A2553	U2654	U2755	C2852	C2957	A3030	C3115	C3193	U3268	
C2195	C2195	A2281	U2435	U2492	A2554	U2655	U2756	C2853	C2958	G3031	G3116	U3194	U3269	
			G2437	U2493	A2555	U2656	U2757	U2854	U2959	A3032				
				U2494	A2556	U2657	U2758	C2855	U2960	C3033				
				U2495	A2557	U2658	U2759	U2856	U2961					
				U2496	A2558	U2659	U2760	U2857	U2962					
				U2497	A2559	U2660	U2761	C2858	U2963					
				U2498	A2560	U2661	U2762	U2859	U2964					
					A2561	U2662	U2763	C2860	U2965					
					A2562	U2663	U2764	G2861	U2966					
					A2563	U2664	U2765	U2862	U2967					
					A2564	U2665	U2766	G2863	U2968					
					A2565	U2666	U2767	U2864	U2969					
					A2566	U2667	U2768	U2865	U2970					
					A2567	U2668	U2769	U2866	U2971					
					A2568	U2669	U2770	U2867	U2972					
					A2569	U2670	U2771	C2868	U2973					
					A2570	U2671	U2772	U2869	U2974					
					U2571	U2672	U2773	U2870	U2975					
					U2572	U2673	U2774	U2871	U2976					
					U2573	U2674	U2775	U2872	U2977					
					U2574	U2675	U2776	U2873	U2978					
						U2676	U2777	U2874	U2979					
						U2677	U2778	U2875	U2980					
						U2678	U2779	U2876	U2981					
						U2679	U2780	U2877	U2982					
						U2680	U2781	U2878	U2983					
						U2681	U2782	U2879	U2984					
						U2682	U2783	U2880	U2985					
						U2683	U2784	U2881	U2986					
						U2684	U2785	U2882	U2987					
						U2685	U2786	U2883	U2988					
						U2686	U2787	U2884	U2989					
						U2687	U2788	U2885	U2990					
						U2688	U2789	U2886	U2991					
						U2689	U2790	U2887	U2992					
						U2690	U2791	U2888	U2993					
						U2691	U2792	U2889	U2994					
						U2692	U2793	U2890	U2995					
						U2693	U2794	U2891	U2996					
						U2694	U2795	U2892	U2997					
						U2695	U2796	U2893	U2998					
						U2696	U2797	U2894	U2999					
						U2697	U2798	U2895	U3000					
						U2698	U2799	U2896	U3001					
						U2699	U2800	U2897	U3002					
						U2700	U2801	U2898	U3003					
						U2701	U2802	U2899	U3004					
						U2702	U2803	U2900	U3005					
						U2703	U2804	U2901	U3006					
						U2704	U2805	U2902	U3007					
						U2705	U2806	U2903	U3008					
						U2706	U2807	U2904	U3009					
						U2707	U2808	U2905	U3010					
						U2708	U2809	U2906	U3011					
						U2709	U2810	U2907	U3012					
						U2710	U2811	U2908	U3013					
						U2711	U2812	U2909	U3014					



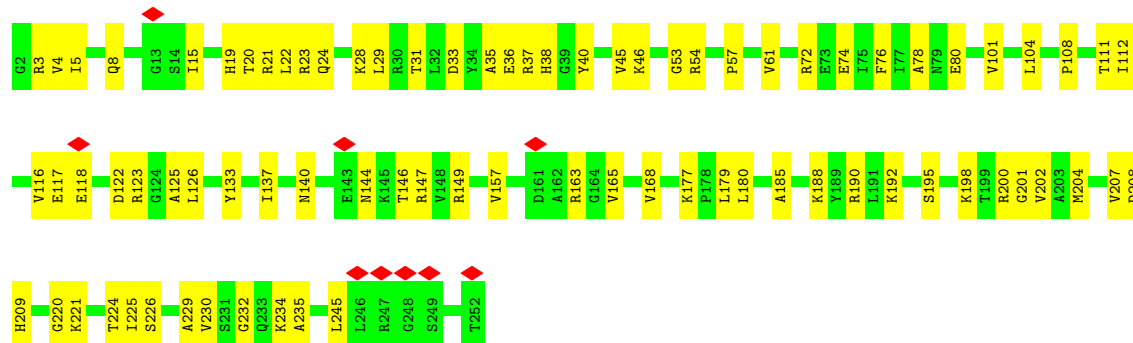
• Molecule 3: 5S rRNA



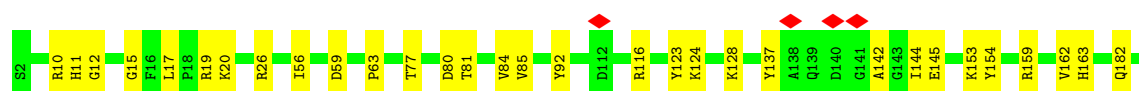
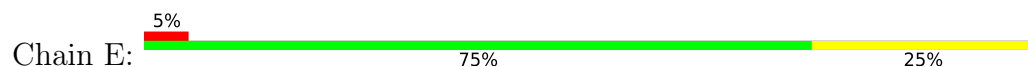
• Molecule 4: 5.8S rRNA

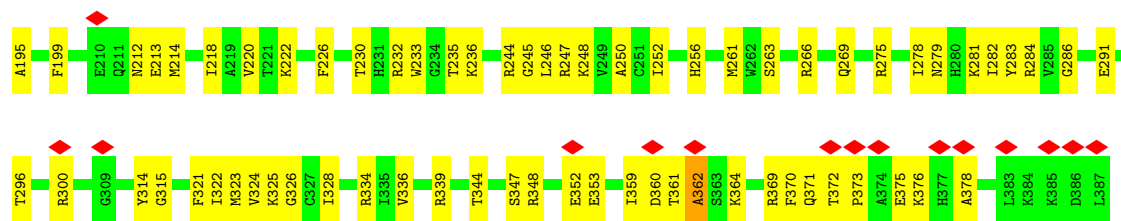


• Molecule 5: Large ribosomal subunit protein uL2A

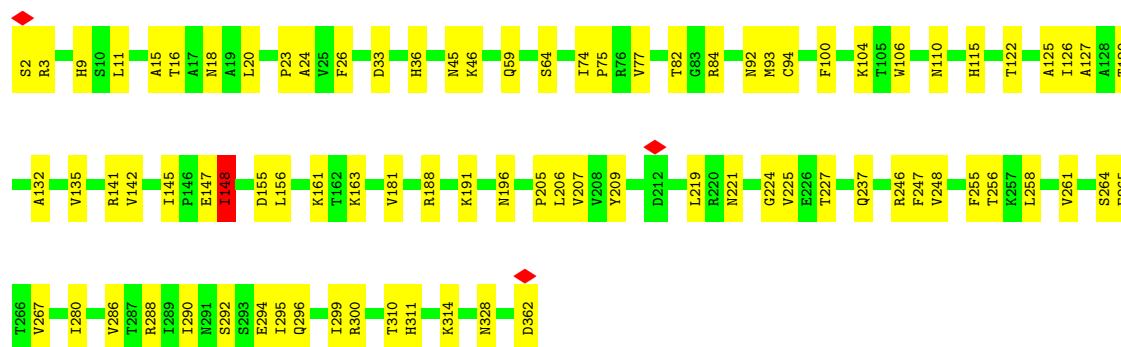
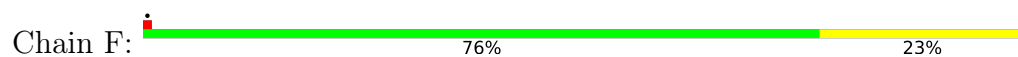


• Molecule 6: Large ribosomal subunit protein uL3

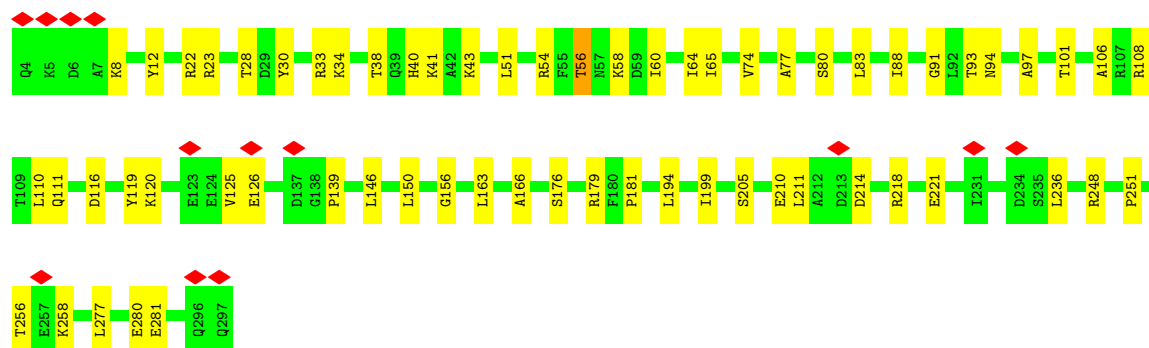
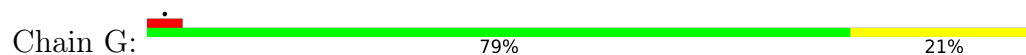




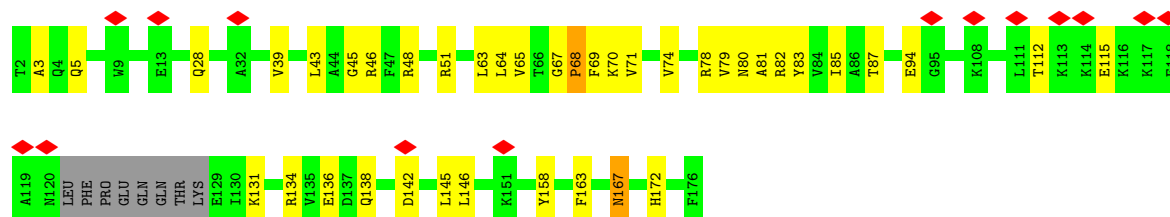
- Molecule 7: Large ribosomal subunit protein uL4A



- Molecule 8: Large ribosomal subunit protein uL18

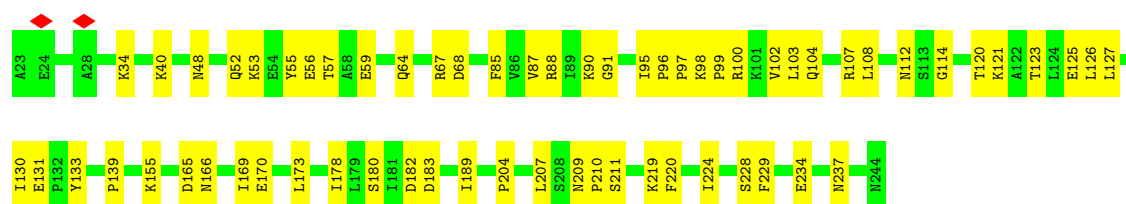


- Molecule 9: Large ribosomal subunit protein eL6B



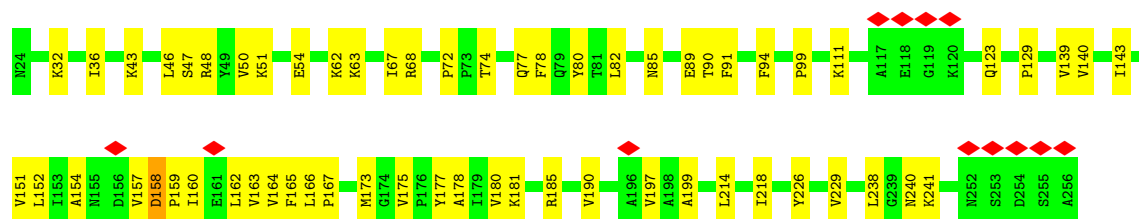
- Molecule 10: Large ribosomal subunit protein uL30A

Chain I:  72% 28%



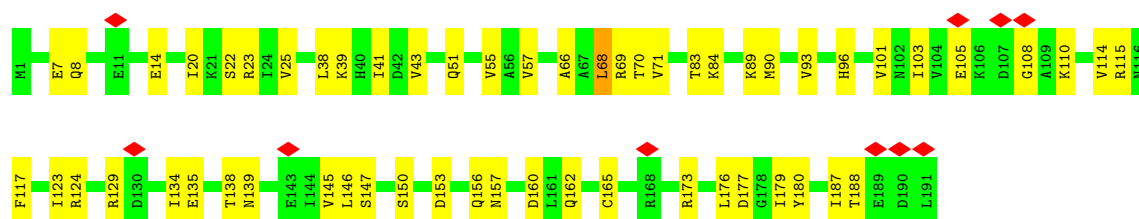
- Molecule 11: Large ribosomal subunit protein eL8A

Chain J:  5% 74% 26%



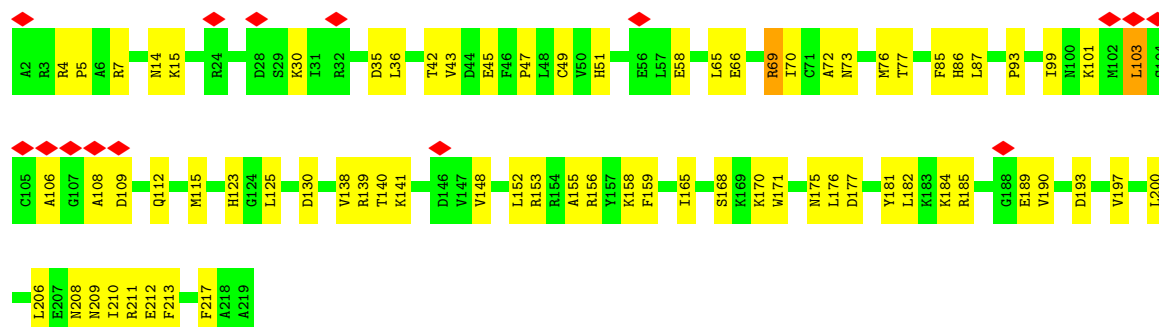
- Molecule 12: Large ribosomal subunit protein uL6A

Chain K:  5% 70% 29%



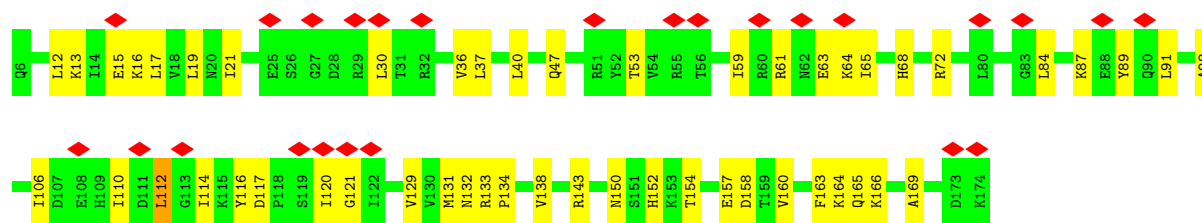
- Molecule 13: Large ribosomal subunit protein uL16

Chain L:  7% 67% 33%



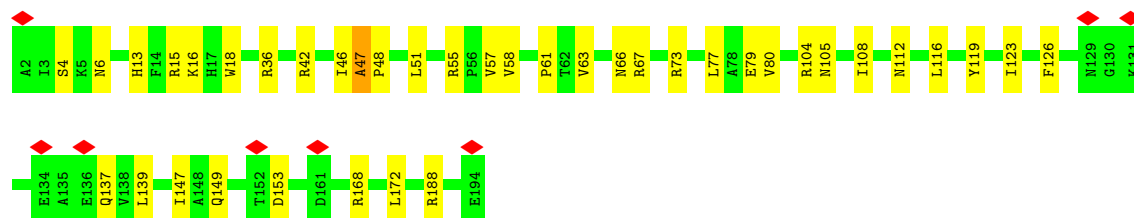
- Molecule 14: Large ribosomal subunit protein uL5B

Chain M:  15% 70% 30%



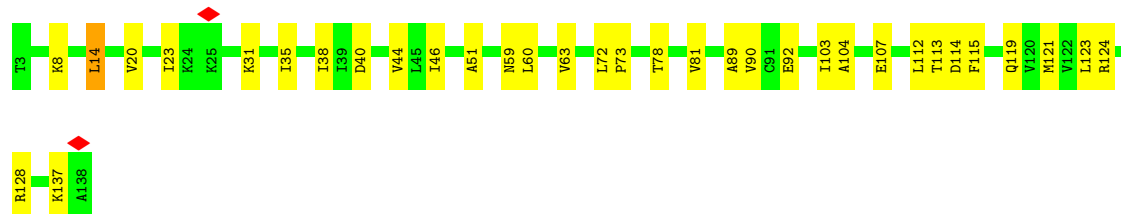
- Molecule 15: Large ribosomal subunit protein eL13A

Chain N: 80% 20%



- Molecule 16: Large ribosomal subunit protein eL14A

Chain O: 75% 24%



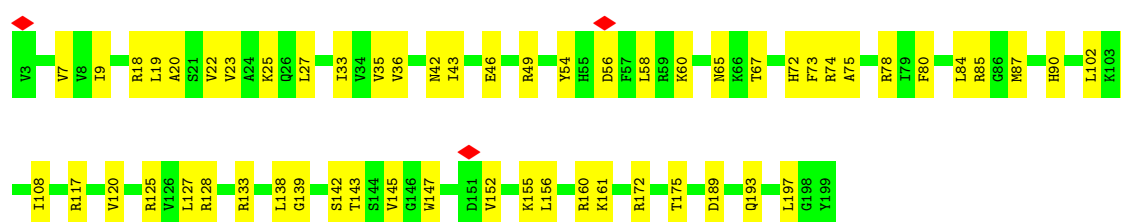
- Molecule 17: Large ribosomal subunit protein eL15A

Chain P: 70% 30%

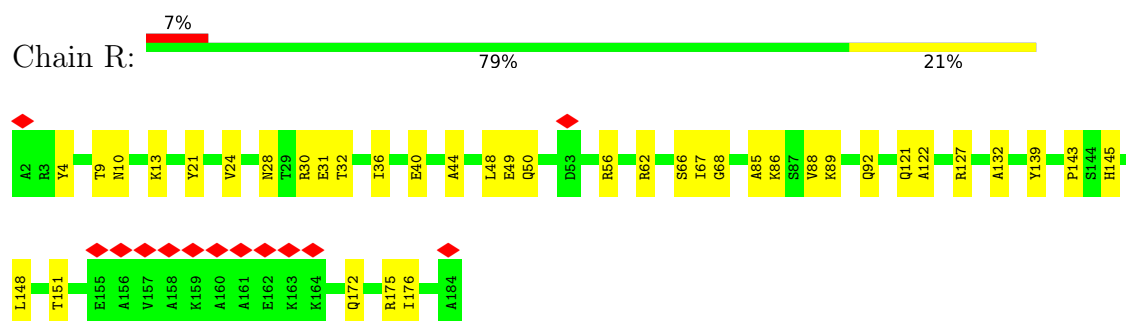


- Molecule 18: Large ribosomal subunit protein uL13A

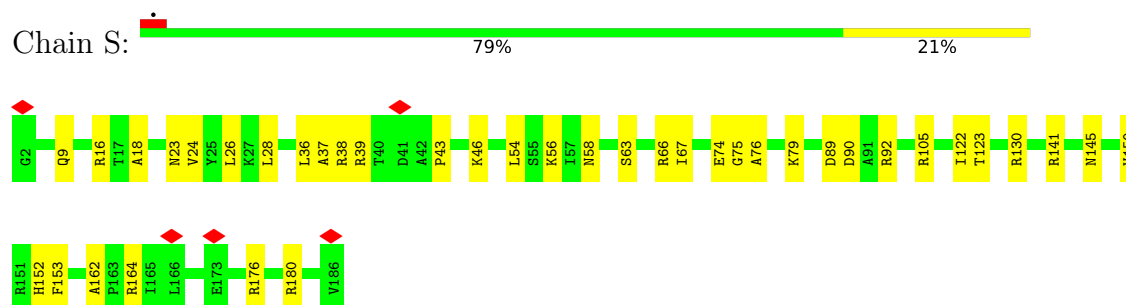
Chain Q: 71% 29%



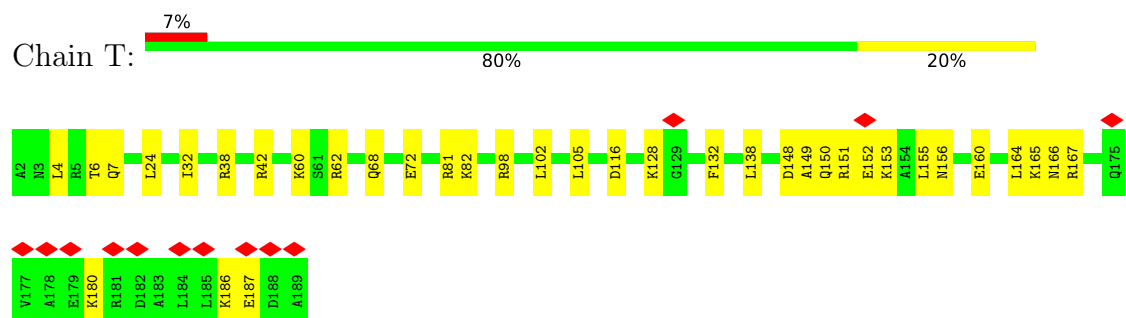
- Molecule 19: Large ribosomal subunit protein uL22A



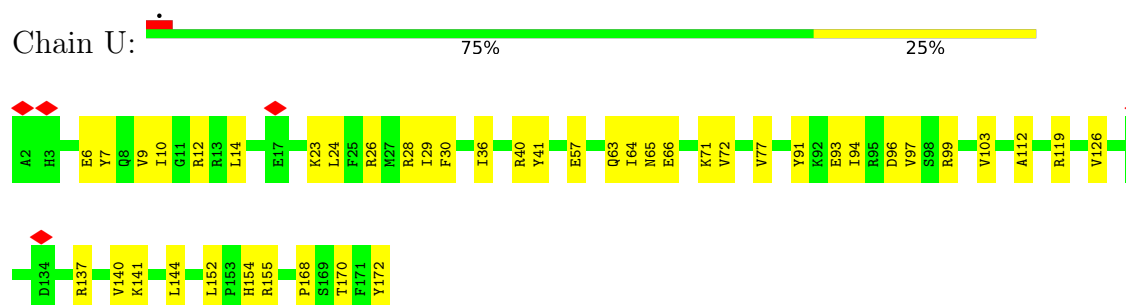
- Molecule 20: Large ribosomal subunit protein eL18A



- Molecule 21: Large ribosomal subunit protein eL19A

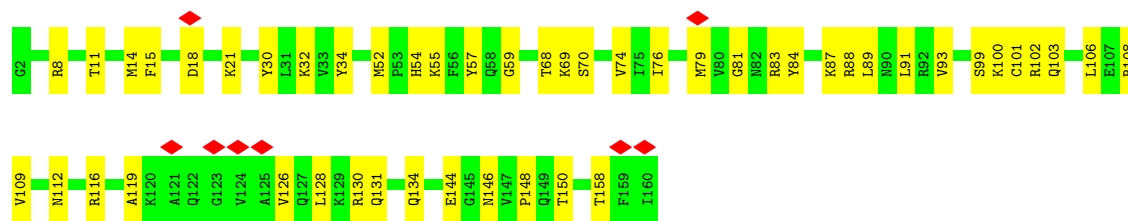


- Molecule 22: Large ribosomal subunit protein eL20A

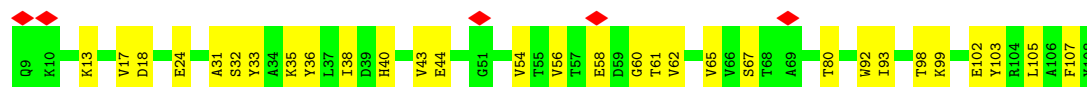


- Molecule 23: Large ribosomal subunit protein eL21A

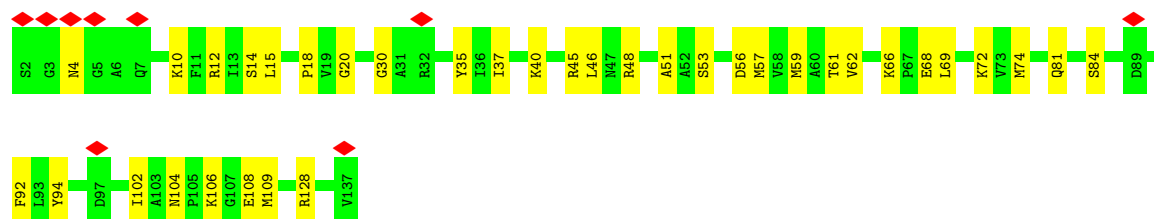
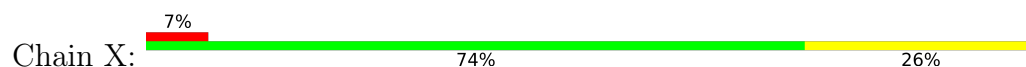




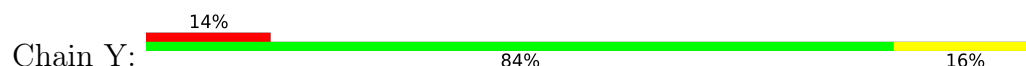
- Molecule 24: Large ribosomal subunit protein eL22A



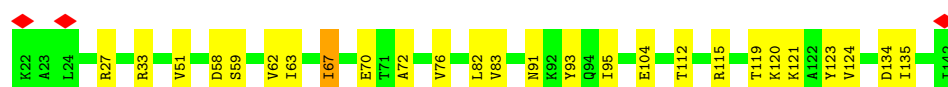
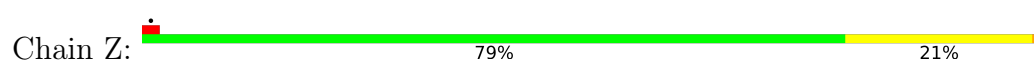
- Molecule 25: Large ribosomal subunit protein uL14A



- Molecule 26: Large ribosomal subunit protein eL24A



- Molecule 27: Large ribosomal subunit protein uL23

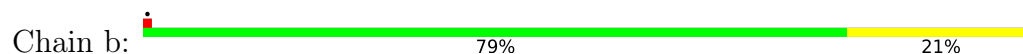


- Molecule 28: Large ribosomal subunit protein uL24A

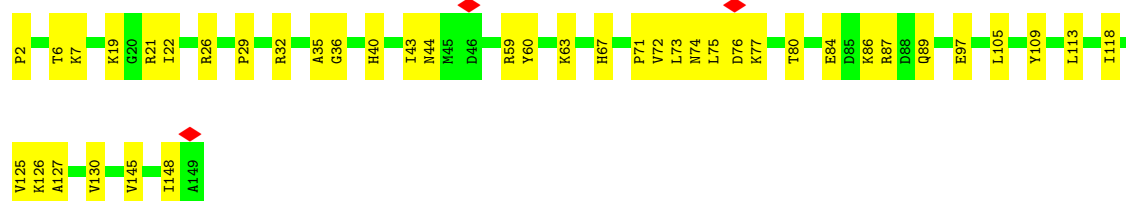




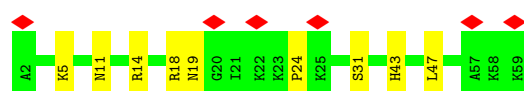
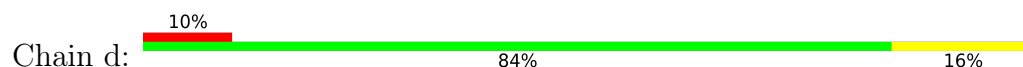
- Molecule 29: Large ribosomal subunit protein eL27A



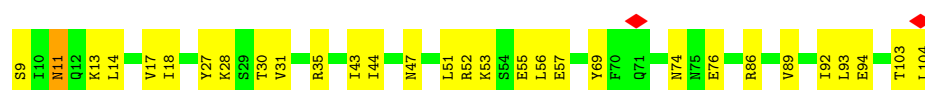
- Molecule 30: Large ribosomal subunit protein uL15



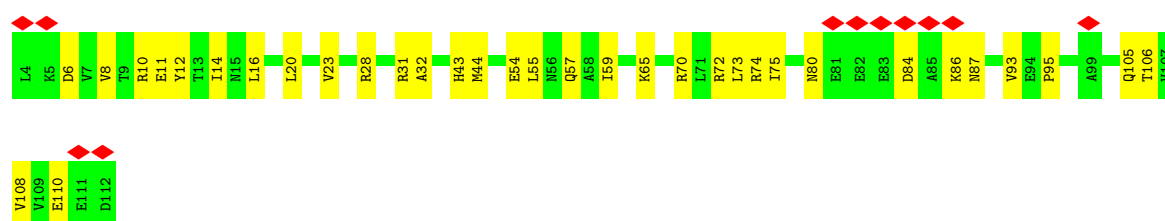
- Molecule 31: Large ribosomal subunit protein eL29



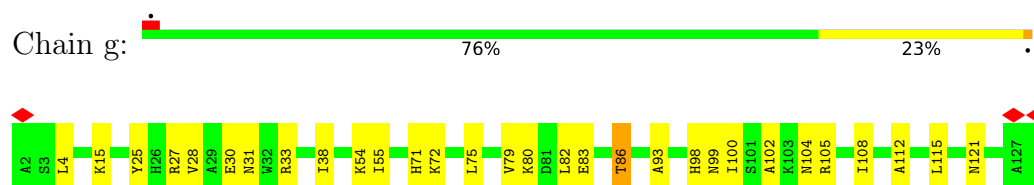
- Molecule 32: Large ribosomal subunit protein eL30



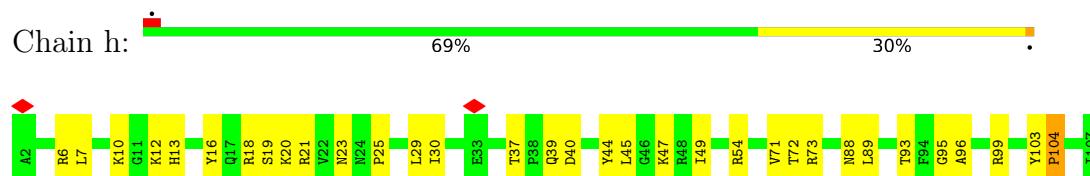
- Molecule 33: Large ribosomal subunit protein eL31A



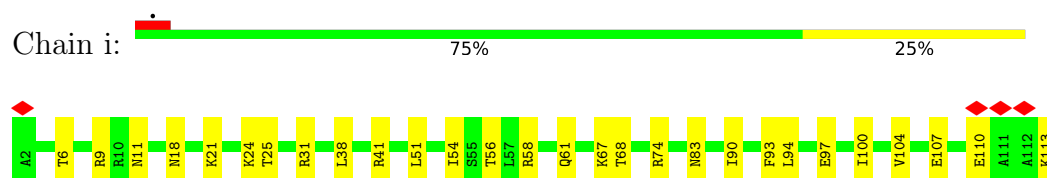
- Molecule 34: Large ribosomal subunit protein eL32



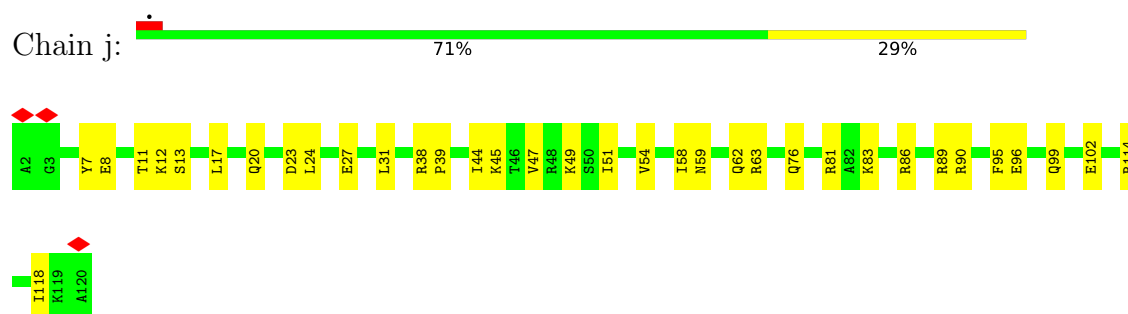
- Molecule 35: Large ribosomal subunit protein eL33A



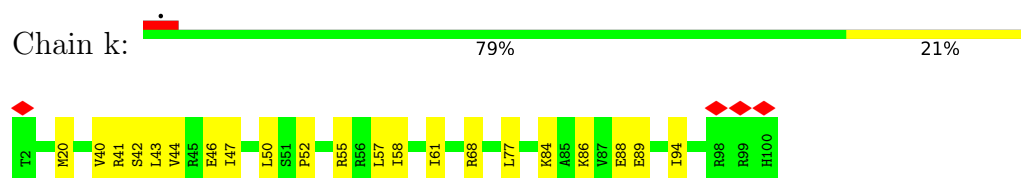
- Molecule 36: Large ribosomal subunit protein eL34A



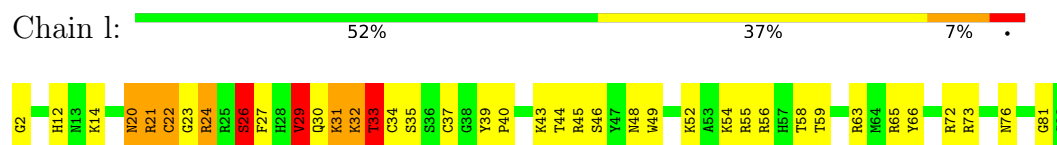
- Molecule 37: Large ribosomal subunit protein uL29A



- Molecule 38: Large ribosomal subunit protein eL36A

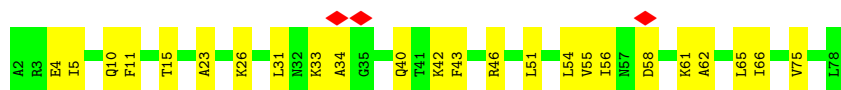


- Molecule 39: Large ribosomal subunit protein eL37A

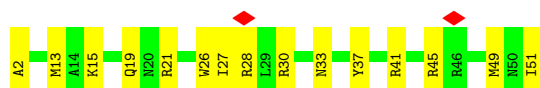


- Molecule 40: Large ribosomal subunit protein eL38

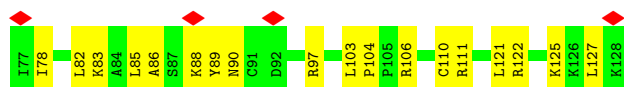




- Molecule 41: Large ribosomal subunit protein eL39



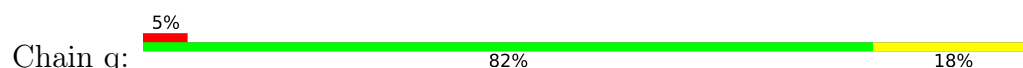
- Molecule 42: Large ribosomal subunit protein eL40A



- Molecule 43: Large ribosomal subunit protein eL41A



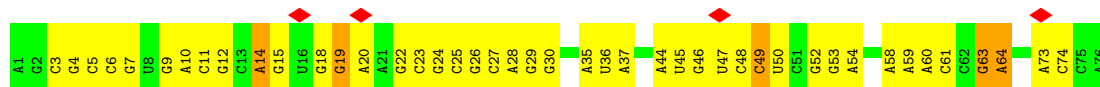
- Molecule 44: Large ribosomal subunit protein eL42A



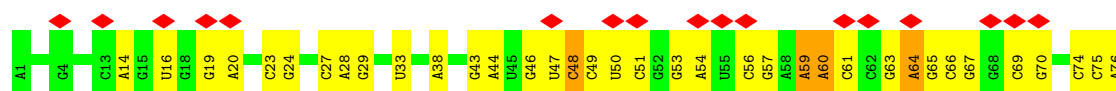
- Molecule 45: Large ribosomal subunit protein eL43A



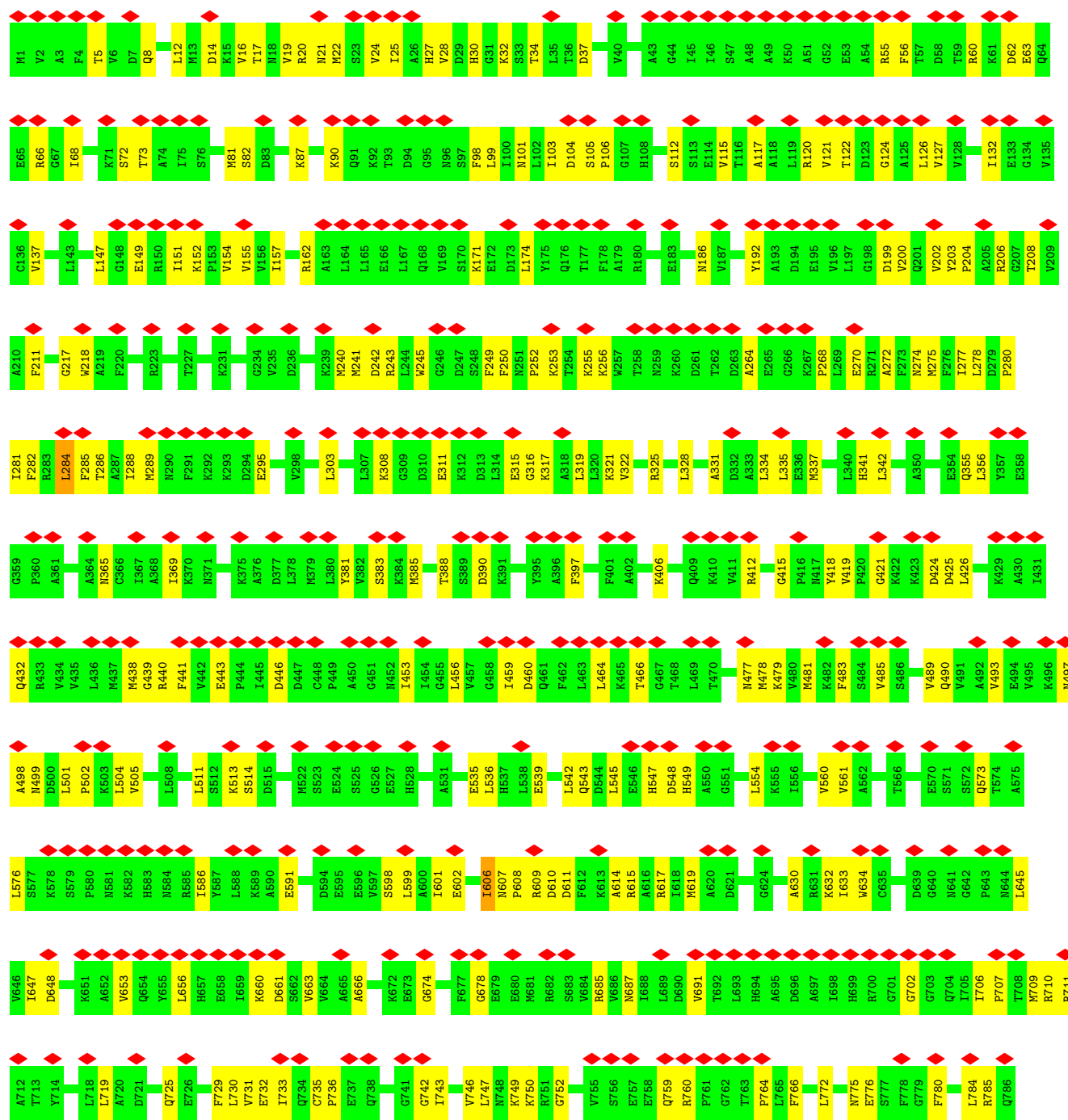
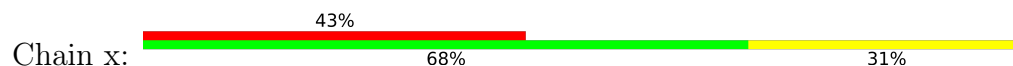
- Molecule 46: tRNA

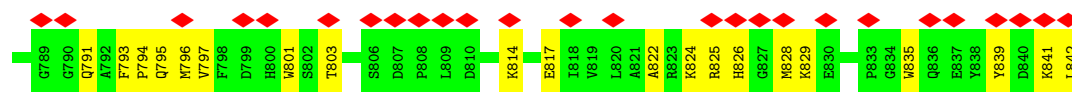


- Molecule 46: tRNA

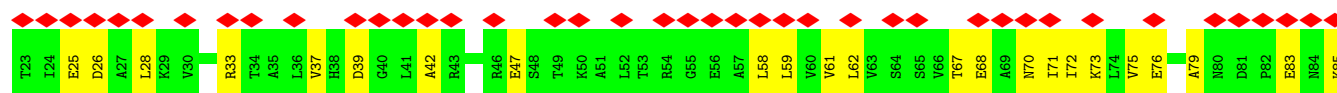
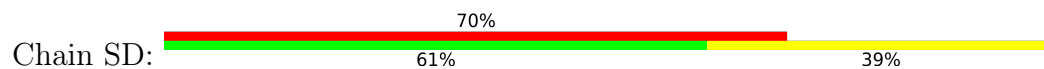


• Molecule 47: Elongation factor 2

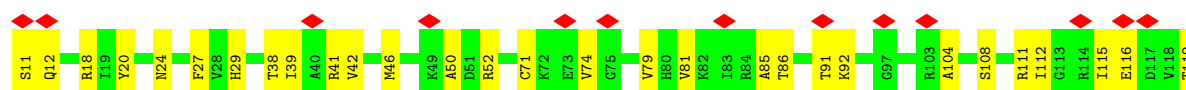
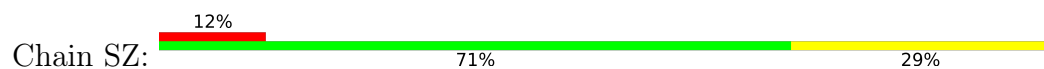




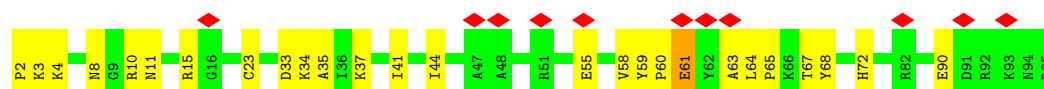
- Molecule 48: Small ribosomal subunit protein eS12



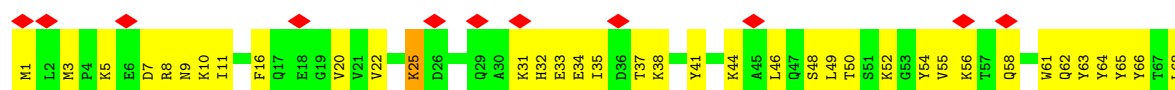
- Molecule 49: Small ribosomal subunit protein uS11B



- Molecule 50: Small ribosomal subunit protein eS26A

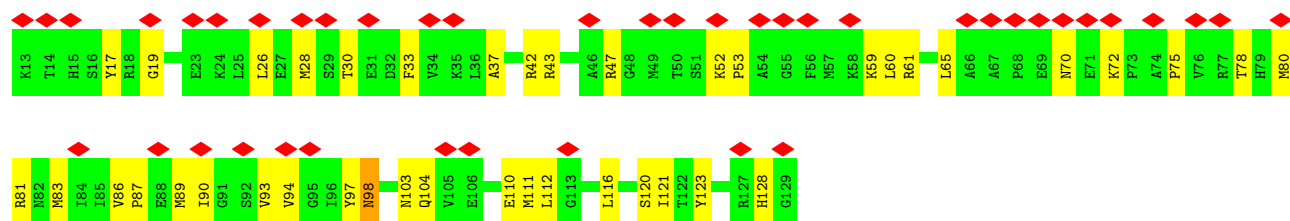


- Molecule 51: Small ribosomal subunit protein eS10A

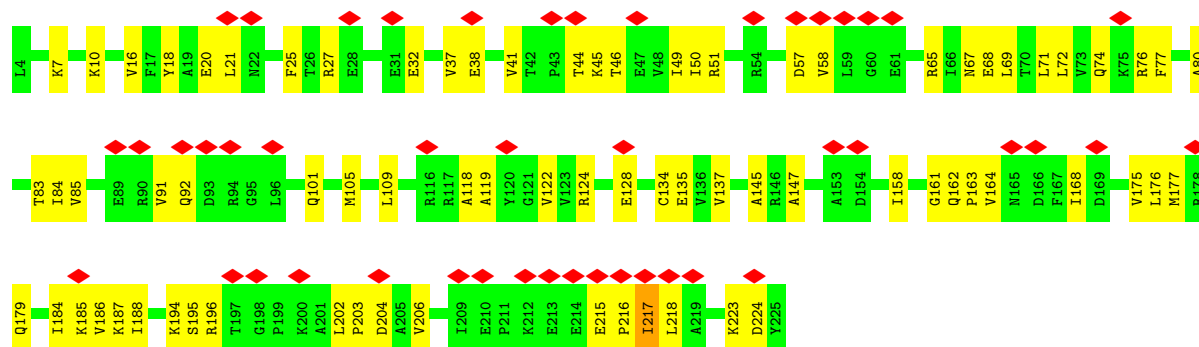


- Molecule 52: Small ribosomal subunit protein uS19

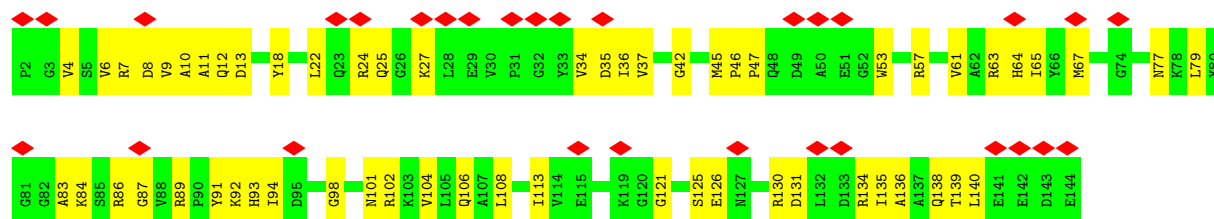




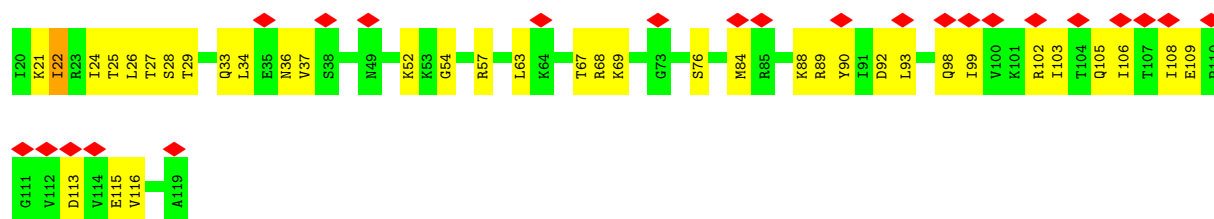
• Molecule 53: Small ribosomal subunit protein uS3



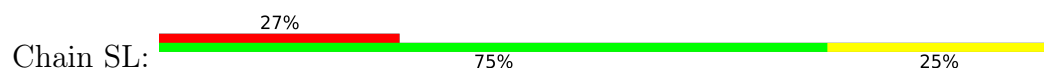
• Molecule 54: Small ribosomal subunit protein eS19A

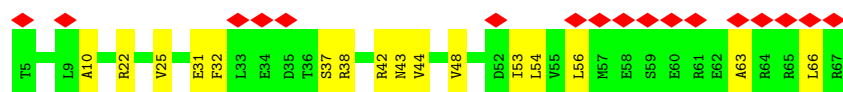


• Molecule 55: Small ribosomal subunit protein uS10

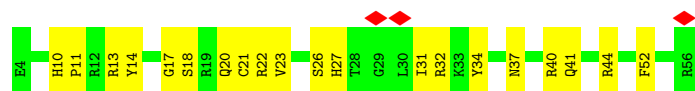


• Molecule 56: Small ribosomal subunit protein eS28A

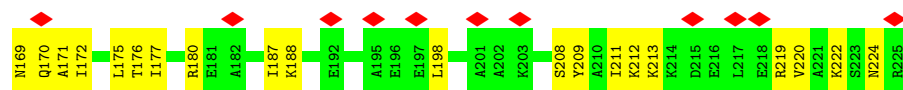
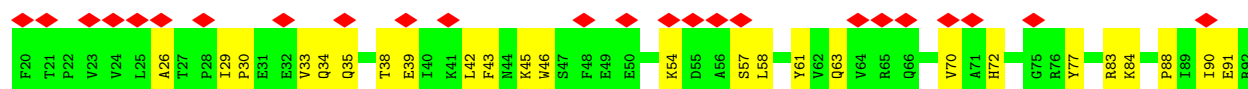




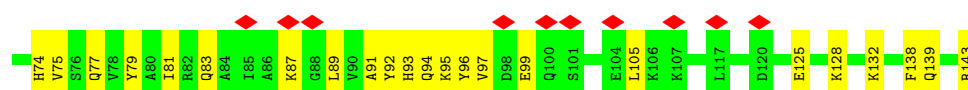
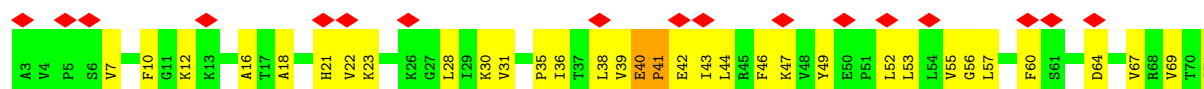
- Molecule 57: Small ribosomal subunit protein uS14A



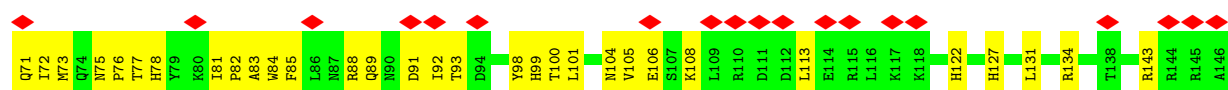
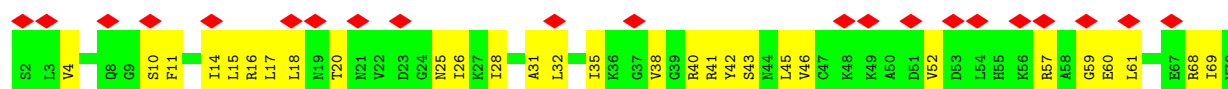
- Molecule 58: Small ribosomal subunit protein uS7



- Molecule 59: Small ribosomal subunit protein uS9A

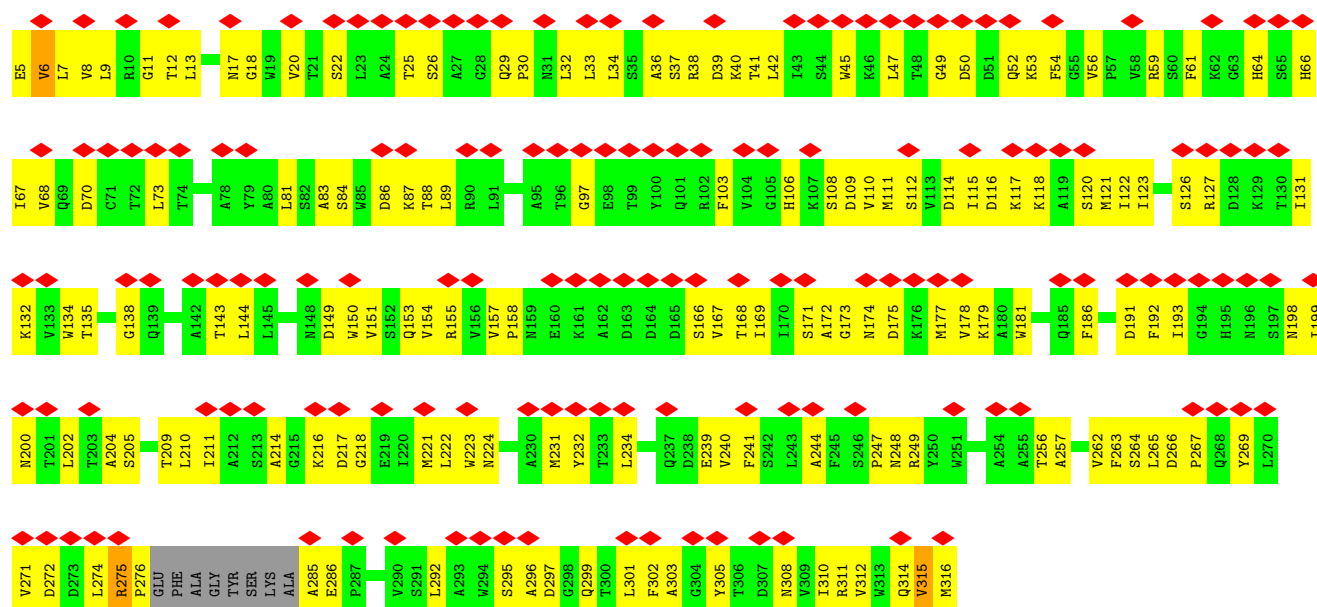


- Molecule 60: Small ribosomal subunit protein uS13A



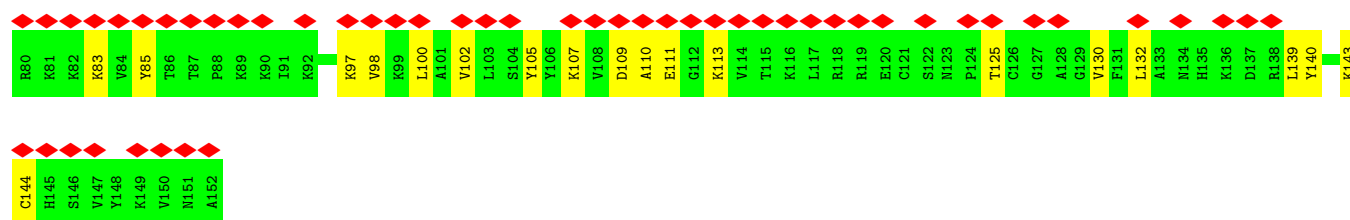
- Molecule 61: Small ribosomal subunit protein RACK1

Chain SO: 



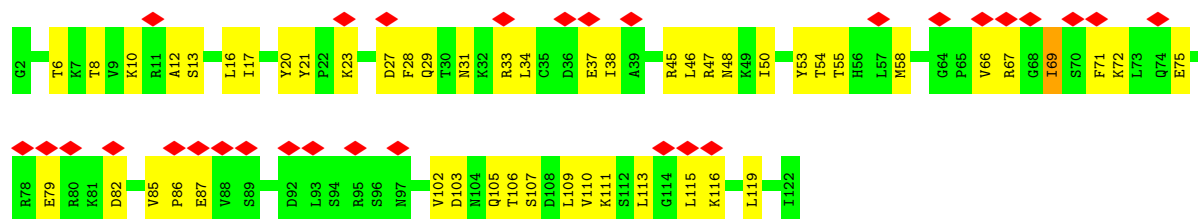
- Molecule 62: Small ribosomal subunit protein eS31

Chain SN: 



- Molecule 63: Small ribosomal subunit protein eS17A

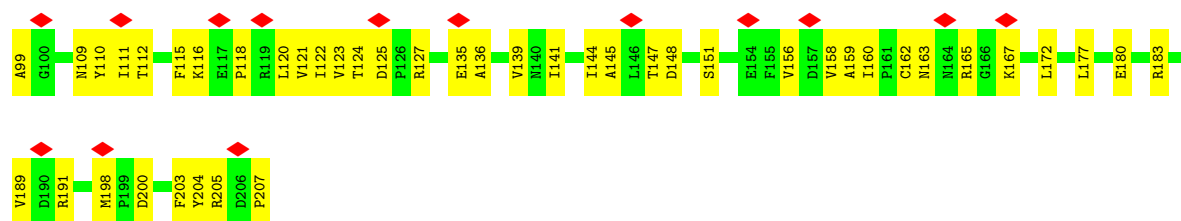
Chain SG: 



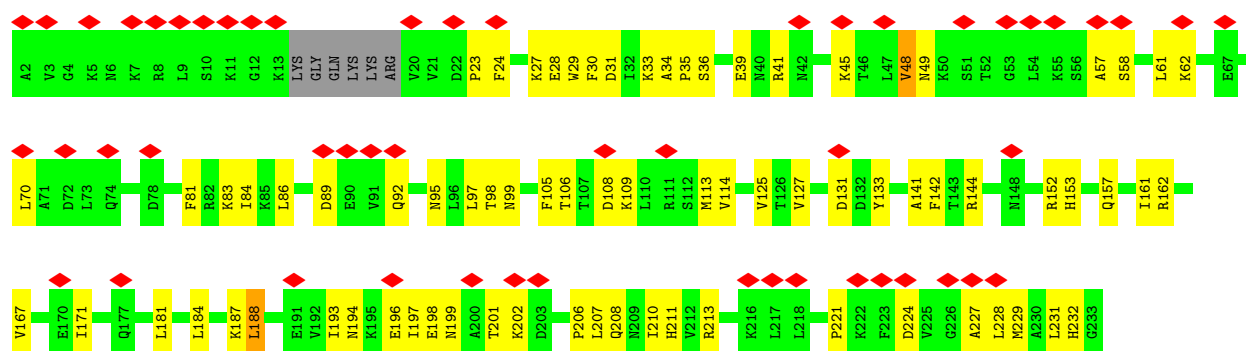
- Molecule 64: Small ribosomal subunit protein uS2A

Chain SP: 

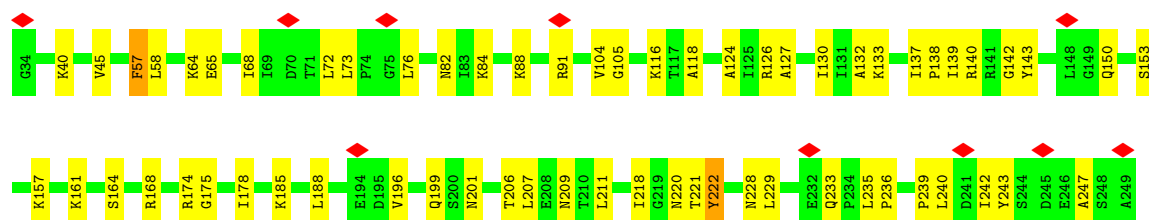
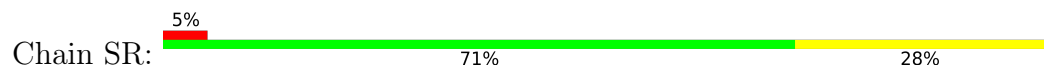




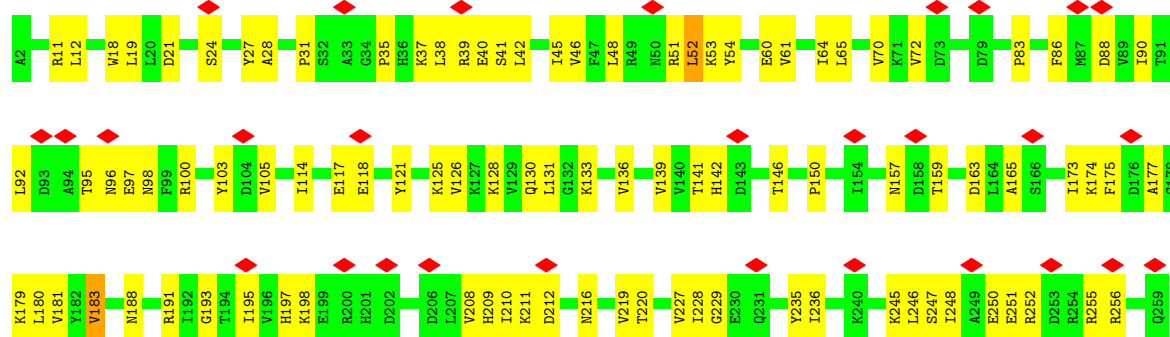
- Molecule 65: Small ribosomal subunit protein eS1A



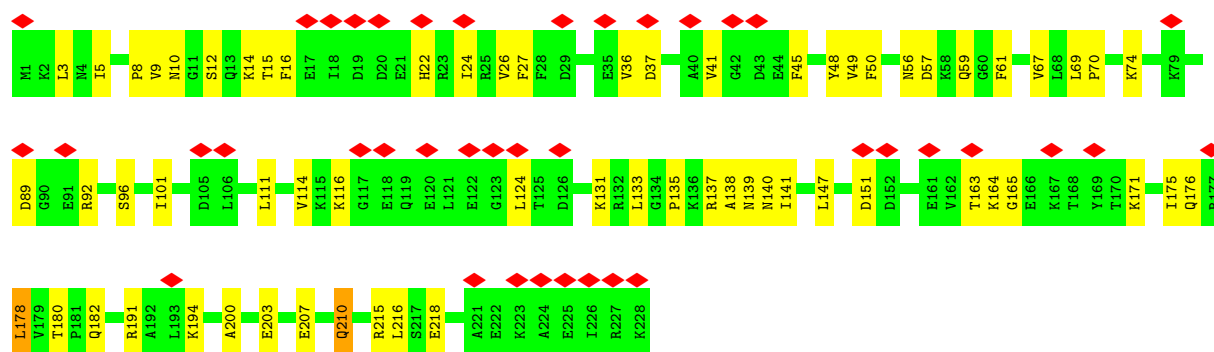
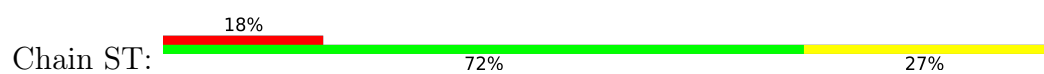
- Molecule 66: Small ribosomal subunit protein uS5



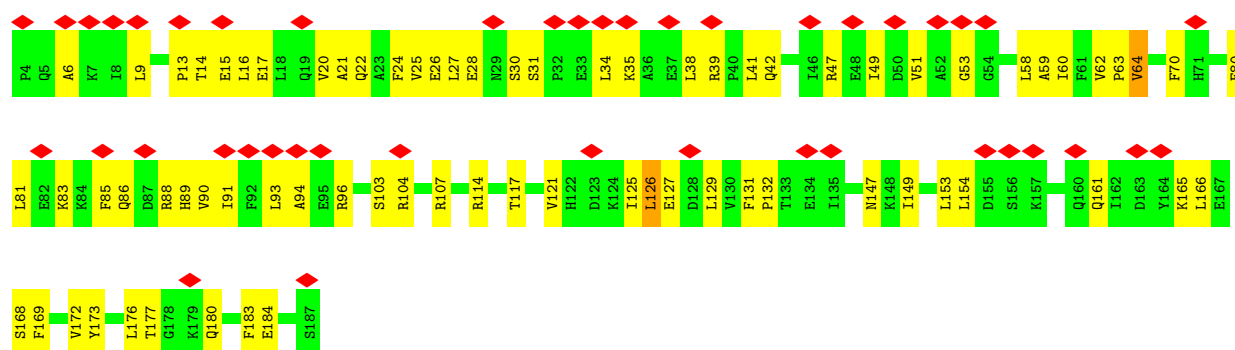
- Molecule 67: Small ribosomal subunit protein eS4A



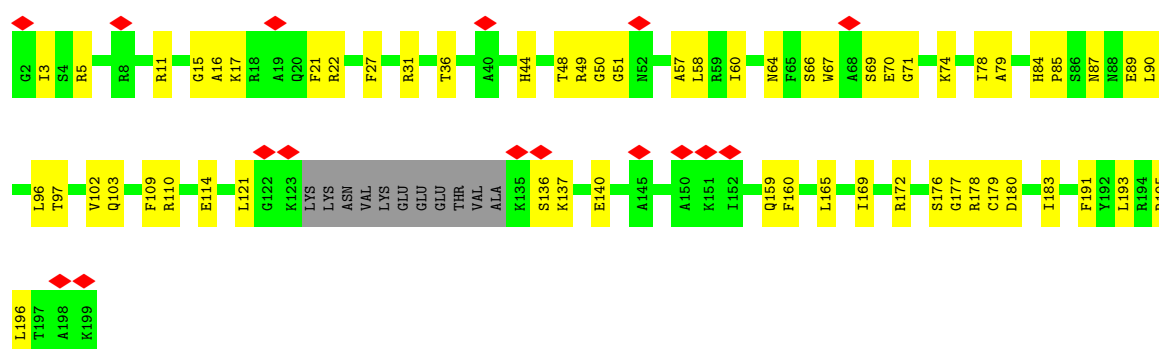
- Molecule 68: Small ribosomal subunit protein eS6A



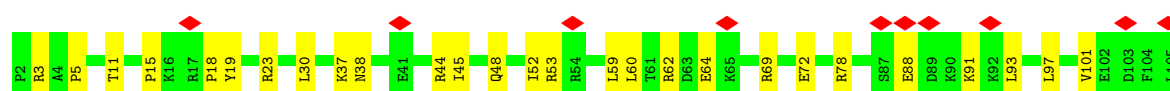
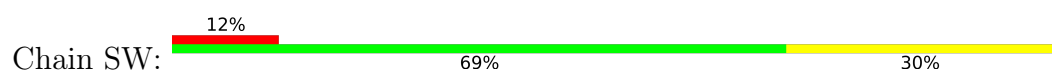
• Molecule 69: Small ribosomal subunit protein eS7A

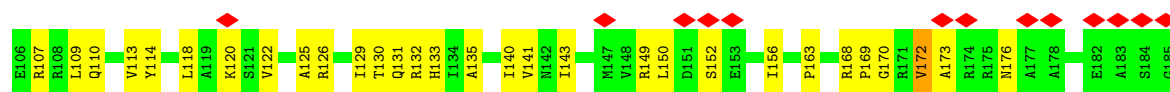


• Molecule 70: Small ribosomal subunit protein eS8A

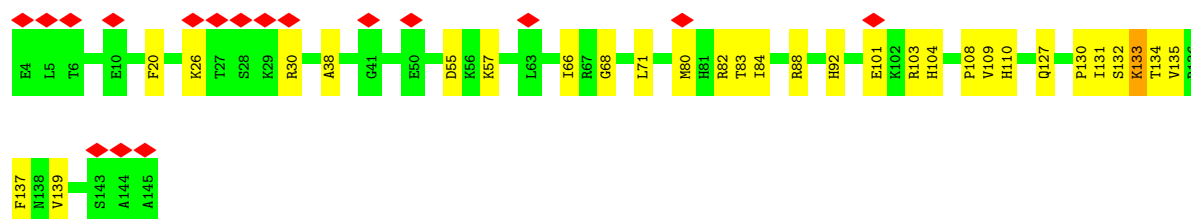
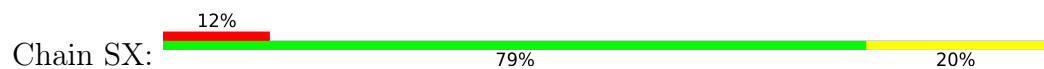


• Molecule 71: Small ribosomal subunit protein uS4A

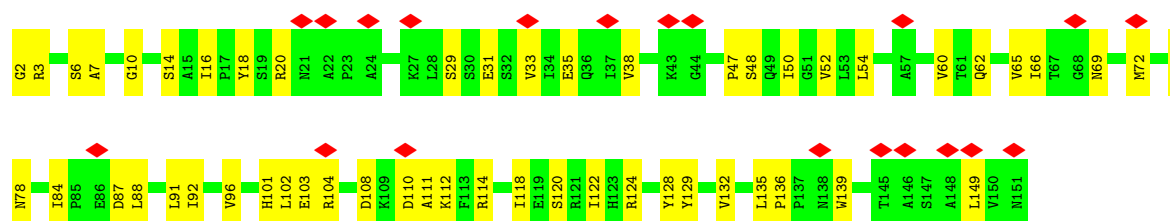




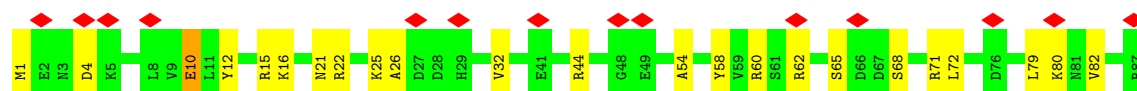
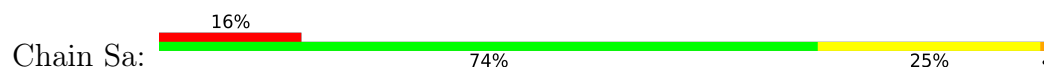
- Molecule 72: Small ribosomal subunit protein uS17A



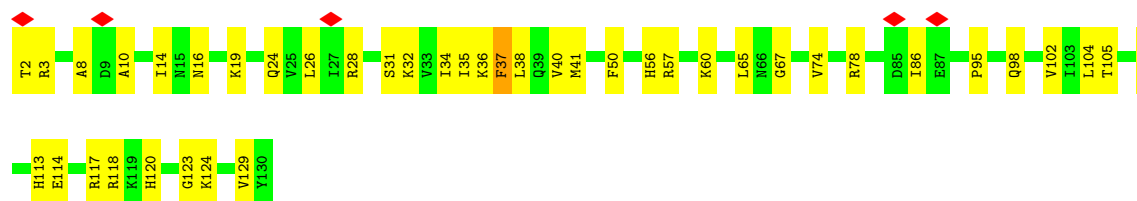
- Molecule 73: Small ribosomal subunit protein uS15



- Molecule 74: Small ribosomal subunit protein eS21A

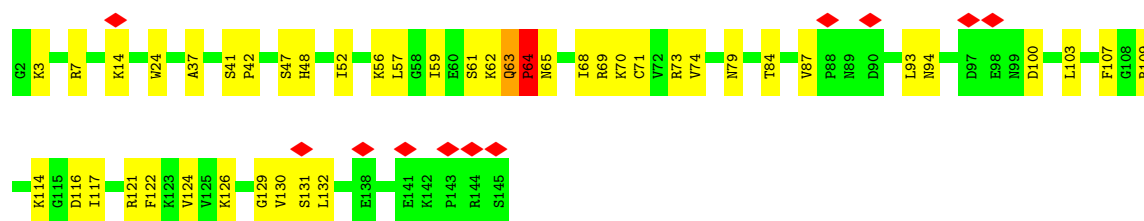


- Molecule 75: Small ribosomal subunit protein uS8A

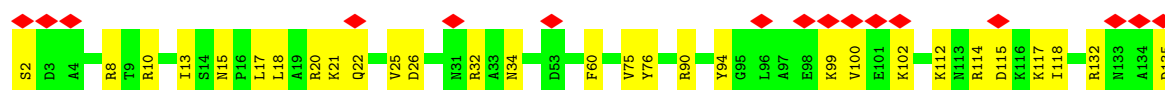
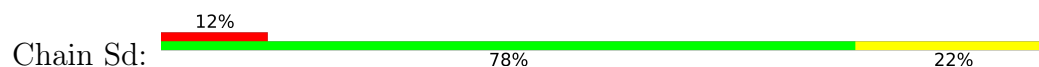


- Molecule 76: Small ribosomal subunit protein uS12A

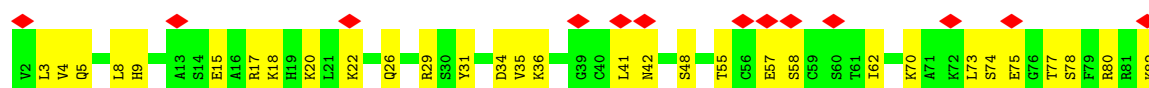




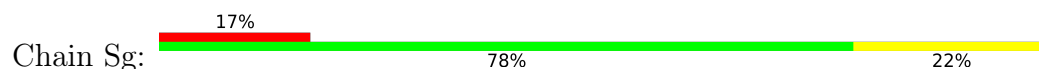
- Molecule 77: Small ribosomal subunit protein eS24A



- Molecule 78: Small ribosomal subunit protein eS27A



- Molecule 79: Small ribosomal subunit protein eS30A



- Molecule 80: Small ribosomal subunit protein eS25A



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	39857	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	1.933	Depositor
Minimum map value	-0.938	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.086	Depositor
Recommended contour level	0.295	Depositor
Map size ($\text{\AA}$)	528.0, 528.0, 528.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.32, 1.32, 1.32	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	2	0.09	0/42115	0.24	0/65623
2	A	0.08	0/76357	0.20	0/119043
3	B	0.07	0/2883	0.21	0/4491
4	C	0.09	0/3746	0.21	0/5832
5	D	0.13	0/1933	0.29	0/2598
6	E	0.10	0/3146	0.30	0/4228
7	F	0.19	2/2800 (0.1%)	0.30	0/3790
8	G	0.13	0/2400	0.34	1/3239 (0.0%)
9	H	0.14	0/1329	0.33	0/1794
10	I	0.15	0/1821	0.35	0/2451
11	J	0.12	0/1836	0.32	0/2481
12	K	0.13	0/1529	0.29	0/2060
13	L	0.17	0/1801	0.40	0/2416
14	M	0.13	0/1367	0.33	0/1834
15	N	0.11	0/1568	0.28	0/2106
16	O	0.16	0/1068	0.34	0/1438
17	P	0.13	0/1757	0.27	0/2354
18	Q	0.15	0/1585	0.34	0/2128
19	R	0.09	0/1439	0.27	0/1938
20	S	0.25	0/1465	0.34	0/1965
21	T	0.13	0/1532	0.29	0/2043
22	U	0.10	0/1473	0.27	0/1980
23	V	0.14	0/1296	0.33	0/1739
24	W	0.15	0/812	0.39	0/1099
25	X	0.08	0/1018	0.23	0/1369
26	Y	0.11	0/850	0.28	0/1152
27	Z	0.13	0/979	0.32	0/1321
28	a	0.10	0/995	0.25	0/1329
29	b	0.16	0/1106	0.36	0/1485
30	c	0.09	0/1200	0.24	0/1607
31	d	0.12	0/473	0.32	0/629
32	e	0.15	0/745	0.38	0/1001
33	f	0.12	0/890	0.29	0/1196
34	g	0.09	0/1034	0.24	0/1385

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	h	0.15	0/868	0.37	0/1168
36	i	0.10	0/890	0.24	0/1189
37	j	0.20	0/978	0.32	0/1301
38	k	0.12	0/772	0.35	0/1026
39	l	0.65	0/660	0.59	1/875 (0.1%)
40	m	0.13	0/618	0.36	0/826
41	n	0.09	0/443	0.29	0/588
42	o	0.14	0/416	0.30	0/553
43	p	0.08	0/230	0.17	0/296
44	q	0.12	0/836	0.30	0/1104
45	r	0.11	0/701	0.29	0/934
46	s	0.07	0/1795	0.19	0/2797
46	t	0.09	0/1796	0.21	0/2799
47	x	0.17	0/6685	0.46	2/9050 (0.0%)
48	SD	0.16	0/883	0.47	0/1199
49	SZ	0.16	0/901	0.45	0/1217
50	Se	0.15	0/761	0.43	0/1016
51	SC	0.30	0/769	0.50	0/1039
52	SE	0.22	0/936	0.46	0/1259
53	SA	0.19	0/1754	0.42	0/2361
54	SI	0.26	0/1130	0.50	0/1517
55	SJ	0.17	0/807	0.42	0/1091
56	SL	0.13	0/493	0.34	0/663
57	SM	0.12	0/452	0.28	0/600
58	SB	0.15	0/1625	0.40	0/2197
59	SF	0.23	0/1125	0.50	2/1510 (0.1%)
60	SH	0.19	0/1207	0.49	0/1623
61	SO	0.22	0/2376	0.51	1/3235 (0.0%)
62	SN	0.16	0/571	0.48	0/768
63	SG	0.17	0/971	0.46	0/1303
64	SP	0.15	0/1644	0.35	0/2249
65	SQ	0.14	0/1823	0.39	0/2447
66	SR	0.15	0/1656	0.36	0/2251
67	SS	0.16	0/2097	0.41	0/2823
68	ST	0.14	0/1839	0.31	0/2460
69	SU	0.21	0/1498	0.47	0/2019
70	SV	0.12	0/1501	0.33	0/2006
71	SW	0.14	0/1504	0.33	0/2016
72	SX	0.11	0/1168	0.32	0/1575
73	SY	0.14	0/1215	0.35	0/1638
74	Sa	0.16	0/682	0.42	0/921
75	Sb	0.18	0/1038	0.40	0/1395
76	Sc	0.18	0/1139	0.45	0/1518

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
77	Sd	0.14	0/1087	0.34	0/1449
78	Sf	0.10	0/620	0.30	0/838
79	Sg	0.13	0/480	0.35	0/639
80	SK	0.13	0/821	0.36	0/1096
All	All	0.13	2/224609 (0.0%)	0.28	7/329588 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	F	147	GLU	C-N	-7.01	1.25	1.33
7	F	148	ILE	C-N	5.26	1.44	1.34

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	SF	41	PRO	N-CA-C	7.62	123.75	113.84
8	G	251	PRO	CA-N-CD	-5.77	103.92	112.00
61	SO	265	LEU	CB-CA-C	-5.58	110.13	116.54
59	SF	41	PRO	CB-CA-C	-5.34	104.27	111.85
47	x	606	ILE	CA-C-N	5.15	127.80	120.49
47	x	606	ILE	C-N-CA	5.15	127.80	120.49
39	l	29	VAL	CB-CA-C	-5.09	102.94	111.29

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	2	37653	0	18945	747	0
2	A	68216	0	34282	1149	0
3	B	2579	0	1304	47	0
4	C	3353	0	1695	64	0
5	D	1899	0	1957	72	0
6	E	3075	0	3142	81	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	F	2748	0	2859	64	0
8	G	2351	0	2294	49	0
9	H	1307	0	1377	29	0
10	I	1784	0	1862	50	0
11	J	1804	0	1877	47	0
12	K	1508	0	1572	44	0
13	L	1764	0	1804	56	0
14	M	1346	0	1370	36	0
15	N	1543	0	1608	34	0
16	O	1053	0	1149	32	0
17	P	1720	0	1779	53	0
18	Q	1555	0	1659	45	0
19	R	1416	0	1433	26	0
20	S	1441	0	1543	34	0
21	T	1515	0	1606	35	0
22	U	1437	0	1475	34	0
23	V	1272	0	1312	38	0
24	W	796	0	812	19	0
25	X	1003	0	1048	28	0
26	Y	836	0	706	15	0
27	Z	964	0	1025	19	0
28	a	984	0	1075	20	0
29	b	1080	0	1122	28	0
30	c	1169	0	1211	37	0
31	d	462	0	491	8	0
32	e	737	0	792	22	0
33	f	876	0	912	24	0
34	g	1013	0	1077	25	0
35	h	850	0	880	32	0
36	i	880	0	945	23	0
37	j	969	0	1078	24	0
38	k	766	0	844	18	0
39	l	645	0	649	43	0
40	m	612	0	682	17	0
41	n	436	0	475	10	0
42	o	410	0	446	14	0
43	p	229	0	273	7	0
44	q	824	0	892	25	0
45	r	694	0	738	26	0
46	s	1605	0	816	34	0
46	t	1606	0	816	20	0
47	x	6559	0	6627	203	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	SD	875	0	878	39	0
49	SZ	891	0	883	28	0
50	Se	750	0	799	20	0
51	SC	752	0	719	47	0
52	SE	916	0	941	38	0
53	SA	1729	0	1812	61	0
54	SI	1112	0	1124	66	0
55	SJ	797	0	863	40	0
56	SL	491	0	524	12	0
57	SM	442	0	432	17	0
58	SB	1605	0	1669	58	0
59	SF	1105	0	1166	58	0
60	SH	1188	0	1218	59	0
61	SO	2326	0	2287	152	0
62	SN	560	0	560	19	0
63	SG	961	0	999	41	0
64	SP	1603	0	1610	68	0
65	SQ	1798	0	1890	56	0
66	SR	1626	0	1715	53	0
67	SS	2056	0	2140	81	0
68	ST	1815	0	1894	58	0
69	SU	1473	0	1555	68	0
70	SV	1476	0	1501	50	0
71	SW	1479	0	1556	44	0
72	SX	1142	0	1209	24	0
73	SY	1192	0	1255	41	0
74	Sa	673	0	662	29	0
75	Sb	1021	0	1060	41	0
76	Sc	1121	0	1196	40	0
77	Sd	1073	0	1132	23	0
78	Sf	610	0	633	28	0
79	Sg	472	0	521	13	0
80	SK	810	0	875	26	0
All	All	209284	0	155614	4444	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 12.

All (4444) 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)
66:SR:242:ILE:HG13	66:SR:243:TYR:CD1	1.99	0.98
1:2:222:A:H61	1:2:838:G:H1	1.03	0.97
39:l:22:CYS:HB2	39:l:37:CYS:SG	2.03	0.97
53:SA:20:GLU:HG2	53:SA:77:PHE:HZ	1.28	0.97
54:SI:47:PRO:HG3	54:SI:53:TRP:CZ3	1.99	0.96
1:2:1109:G:H1	1:2:1136:U:H3	1.12	0.96
76:Sc:63:GLN:HB3	76:Sc:64:PRO:HD2	1.46	0.96
69:SU:131:PHE:CD2	69:SU:132:PRO:HD3	2.01	0.93
2:A:341:G:H21	2:A:349:A:N6	1.68	0.92
53:SA:38:GLU:HB3	53:SA:49:ILE:HG22	1.49	0.92
1:2:394:C:H42	1:2:401:A:H62	1.15	0.92
21:T:150:GLN:HA	21:T:153:LYS:HE2	1.51	0.91
67:SS:48:LEU:HA	67:SS:52:LEU:HD22	1.53	0.90
51:SC:25:LYS:HZ2	51:SC:62:GLN:HA	1.37	0.90
60:SH:68:ARG:HA	60:SH:71:GLN:HE21	1.37	0.89
66:SR:137:ILE:HD12	66:SR:138:PRO:HD2	1.54	0.87
2:A:2216:G:H1	2:A:2229:A:H61	1.22	0.86
4:C:94:C:H5''	39:l:76:ASN:HD21	1.41	0.86
69:SU:131:PHE:HD2	69:SU:132:PRO:HD3	1.38	0.86
1:2:1034:C:HO2'	75:Sb:2:THR:N	1.74	0.86
1:2:1408:G:HO2'	61:SO:285:ALA:N	1.74	0.86
61:SO:248:ASN:H	61:SO:249:ARG:NH1	1.74	0.86
74:Sa:79:LEU:HD23	74:Sa:80:LYS:H	1.39	0.85
66:SR:242:ILE:HG13	66:SR:243:TYR:HD1	1.39	0.85
13:L:36:LEU:HD22	13:L:73:ASN:HD22	1.41	0.85
61:SO:11:GLY:HA2	61:SO:52:GLN:HB2	1.59	0.84
2:A:1786:G:H2'	2:A:1787:A:C8	2.11	0.84
2:A:1174:G:N2	18:Q:87[A]:MET:HE2	1.92	0.84
59:SF:57:LEU:HA	59:SF:60:PHE:CD1	2.13	0.84
1:2:925:G:H2'	1:2:926:A:H8	1.44	0.83
2:A:1717:U:H3	2:A:1727:G:H1	1.26	0.83
1:2:898:A:N6	1:2:914:G:H21	1.77	0.82
68:ST:14:LYS:NZ	68:ST:15:THR:O	2.11	0.82
1:2:222:A:N6	1:2:838:G:H1	1.77	0.82
1:2:1158:C:H42	1:2:1163:A:H61	1.24	0.82
55:SJ:99:ILE:O	55:SJ:103:ILE:HG12	1.80	0.81
66:SR:140:ARG:HH22	66:SR:229:LEU:HD11	1.46	0.81
54:SI:130:ARG:HG2	54:SI:134:ARG:HH21	1.44	0.81
1:2:898:A:H62	1:2:914:G:N2	1.79	0.81
47:x:759:GLN:NE2	47:x:760:ARG:O	2.14	0.81
2:A:2234:G:HO2'	2:A:2603:G:HO2'	1.23	0.80
30:c:60:TYR:HD2	30:c:63:LYS:HD2	1.47	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1242:G:N3	47:x:749:LYS:NZ	2.29	0.80
65:SQ:141:ALA:HB1	65:SQ:207:LEU:HD11	1.64	0.80
23:V:89:LEU:HD12	23:V:91:LEU:HD21	1.63	0.80
2:A:824:C:H5''	5:D:21:ARG:HD3	1.63	0.79
2:A:341:G:N2	2:A:349:A:N6	2.29	0.79
2:A:360:G:H21	2:A:815:G:H1'	1.48	0.79
13:L:182:LEU:HD22	13:L:185:ARG:HH22	1.48	0.78
54:SI:130:ARG:HG2	54:SI:134:ARG:NH2	1.99	0.78
47:x:784:LEU:HD12	47:x:794:PRO:HB3	1.65	0.78
1:2:1382:A:O2'	1:2:1383:G:O5'	2.02	0.77
47:x:591:GLU:HG2	47:x:687:ASN:HD21	1.49	0.77
2:A:1020:G:H2'	2:A:1021:G:H5'	1.65	0.77
61:SO:111:MET:SD	61:SO:111:MET:N	2.57	0.77
69:SU:14:THR:H	69:SU:17:GLU:HB2	1.49	0.77
1:2:924:A:H2'	1:2:925:G:C8	2.19	0.76
69:SU:129:LEU:HD11	69:SU:169:PHE:HD1	1.49	0.76
67:SS:114:ILE:HD12	67:SS:118:GLU:HB3	1.67	0.76
8:G:34:LYS:NZ	23:V:30:TYR:CZ	2.54	0.76
2:A:1310:G:H2'	2:A:1311:G:C8	2.21	0.76
30:c:60:TYR:CD2	30:c:63:LYS:HD2	2.20	0.76
51:SC:80:LEU:HB3	51:SC:82:LEU:HD21	1.66	0.76
2:A:2451:G:H1	2:A:2495:C:H42	1.34	0.76
73:SY:135:LEU:HD12	73:SY:136:PRO:HD2	1.68	0.76
1:2:1542:G:H5''	54:SI:87:GLY:HA2	1.68	0.75
2:A:1497:C:H2'	2:A:1498:A:H8	1.51	0.75
47:x:381:TYR:CE2	47:x:478:MET:HG3	2.21	0.75
47:x:72:SER:HB3	47:x:103:ILE:HD11	1.66	0.75
66:SR:228:ASN:ND2	74:Sa:1:MET:HG2	2.02	0.75
2:A:2964:G:N2	2:A:2967:A:OP2	2.20	0.75
2:A:2437:G:H1	2:A:2510:U:H3	1.32	0.75
22:U:96:ASP:OD1	22:U:97:VAL:N	2.19	0.75
24:W:92:TRP:HB3	24:W:107:PHE:HE1	1.49	0.75
61:SO:108:SER:HB2	61:SO:127:ARG:HB3	1.68	0.75
12:K:23:ARG:HH11	12:K:39:LYS:HA	1.51	0.75
66:SR:45:VAL:HG11	66:SR:68:ILE:HG23	1.67	0.75
2:A:627:U:H2'	2:A:628:A:H8	1.52	0.74
2:A:1493:G:N2	2:A:1493:G:OP2	2.19	0.74
6:E:361:THR:HB	6:E:371:GLN:HB2	1.69	0.74
40:m:42:LYS:HG2	40:m:55:VAL:HG12	1.68	0.74
61:SO:232:TYR:HB2	61:SO:234:LEU:HD23	1.69	0.74
2:A:2193:U:H5'	2:A:2194:G:H5'	1.69	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SF:36:ILE:HG13	59:SF:49:TYR:HE1	1.51	0.74
6:E:213:GLU:H	6:E:282:ILE:HG22	1.51	0.73
13:L:109:ASP:HA	13:L:112:GLN:HG2	1.70	0.73
58:SB:34:GLN:OE1	58:SB:34:GLN:N	2.20	0.73
1:2:992:A:H2	1:2:1012:U:H3	1.35	0.73
2:A:2094:C:H2'	2:A:2095:G:H8	1.53	0.73
58:SB:94:THR:HG22	58:SB:114:ILE:HG13	1.70	0.73
1:2:1673:G:O6	1:2:1728:A:N1	2.21	0.73
2:A:3201:C:H2'	2:A:3202:G:H8	1.53	0.73
2:A:1786:G:C6	2:A:1787:A:N6	2.56	0.73
47:x:459:ILE:HG22	47:x:460:ASP:H	1.52	0.73
48:SD:83:GLU:N	48:SD:83:GLU:OE2	2.21	0.73
5:D:4:VAL:HG23	5:D:8:GLN:OE1	1.87	0.73
18:Q:27[A]:LEU:HD11	18:Q:102[A]:LEU:HB2	1.71	0.73
42:o:103:LEU:HD21	42:o:110:CYS:HA	1.70	0.73
1:2:850:A:H5'	21:T:165:LYS:HE3	1.69	0.72
2:A:2393:G:N2	2:A:2394:G:O6	2.22	0.72
59:SF:57:LEU:HA	59:SF:60:PHE:HD1	1.52	0.72
3:B:64:A:H5'	3:B:65:G:H5''	1.71	0.72
51:SC:63:TYR:HB3	51:SC:65:TYR:HE1	1.53	0.72
52:SE:28:MET:HE3	52:SE:28:MET:H	1.54	0.72
55:SJ:27:THR:HG22	55:SJ:88:LYS:HG2	1.69	0.72
75:Sb:117:ARG:HH22	75:Sb:118:ARG:HG3	1.53	0.72
47:x:103:ILE:HG22	47:x:122:THR:HG21	1.71	0.72
64:SP:52:LYS:HE2	74:Sa:82:VAL:HG12	1.71	0.72
1:2:1016:C:H2'	1:2:1017:U:H6	1.55	0.72
1:2:1158:C:H42	1:2:1163:A:N6	1.87	0.72
54:SI:92:LYS:HD3	54:SI:94:ILE:HD11	1.70	0.72
61:SO:22:SER:HB2	61:SO:70:ASP:HA	1.71	0.72
1:2:394:C:N4	1:2:401:A:H62	1.87	0.72
2:A:182:U:H3	2:A:234:G:H1	1.36	0.72
1:2:394:C:H42	1:2:401:A:N6	1.87	0.72
6:E:291:GLU:N	6:E:291:GLU:OE2	2.23	0.72
1:2:1499:G:H1	1:2:1508:U:H3	1.38	0.72
61:SO:132:LYS:HB3	61:SO:134:TRP:NE1	2.05	0.72
1:2:78:A:N3	68:ST:175:ILE:HD12	2.05	0.71
61:SO:232:TYR:HD2	61:SO:234:LEU:HD23	1.55	0.71
61:SO:232:TYR:CD2	61:SO:234:LEU:HD23	2.24	0.71
61:SO:248:ASN:HB2	61:SO:249:ARG:HH22	1.55	0.71
10:I:48:ASN:ND2	10:I:182:ASP:OD2	2.24	0.71
1:2:1321:A:H4'	1:2:1322:A:H5'	1.72	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SI:84:LYS:HG2	54:SI:86:ARG:HG2	1.71	0.71
2:A:3225:C:N4	2:A:3226:A:N6	2.38	0.71
69:SU:168:SER:O	69:SU:172:VAL:HG12	1.90	0.71
75:Sb:78:ARG:HB3	75:Sb:124:LYS:HB3	1.73	0.71
2:A:3379:C:H4'	6:E:315:GLY:HA2	1.73	0.71
67:SS:195:ILE:HD12	67:SS:208:VAL:HG21	1.73	0.71
2:A:1404:G:N2	2:A:1407:A:OP2	2.22	0.71
53:SA:20:GLU:HG2	53:SA:77:PHE:CZ	2.19	0.71
1:2:78:A:N6	68:ST:178:LEU:HD11	2.05	0.71
46:t:53:G:H2'	46:t:54:A:H8	1.56	0.71
52:SE:33:PHE:CE2	52:SE:87:PRO:HD3	2.25	0.71
66:SR:57:PHE:CE1	66:SR:138:PRO:HD3	2.26	0.71
1:2:898:A:N6	1:2:914:G:N2	2.38	0.71
59:SF:39:VAL:HG13	59:SF:41:PRO:HD2	1.73	0.70
65:SQ:144:ARG:HB2	65:SQ:208:GLN:HB3	1.72	0.70
1:2:1158:C:N4	1:2:1163:A:H61	1.89	0.70
7:F:264:SER:HB3	7:F:267:VAL:HG12	1.73	0.70
44:q:73:GLU:HG2	44:q:80:ARG:CZ	2.21	0.70
61:SO:7:LEU:HD13	61:SO:271:VAL:HG21	1.71	0.70
80:SK:55:PRO:HG3	80:SK:88:ILE:HD11	1.73	0.70
1:2:332:U:H5''	70:SV:31:ARG:HH21	1.57	0.70
2:A:2138:A:HO2'	39:l:2:GLY:N	1.89	0.70
8:G:40:HIS:HB3	8:G:43:LYS:HG3	1.72	0.70
46:t:69:C:H2'	46:t:70:G:H8	1.57	0.70
1:2:1345:A:OP2	55:SJ:54:GLY:N	2.24	0.70
1:2:135:A:H4'	1:2:136:C:H5'	1.73	0.70
47:x:157:ILE:HB	47:x:211:PHE:HB3	1.73	0.70
51:SC:32:HIS:HE1	51:SC:35:ILE:HD13	1.56	0.70
1:2:209:U:O4	1:2:210:A:N6	2.24	0.70
63:SG:115:LEU:HG	63:SG:116:LYS:H	1.57	0.70
2:A:301:G:H1	2:A:314:U:H3	1.39	0.70
66:SR:168:ARG:HB3	66:SR:199:GLN:HG3	1.74	0.70
1:2:742:U:O2	69:SU:107:ARG:NH2	2.24	0.70
2:A:1370:G:H2'	2:A:1371:G:H8	1.55	0.70
46:s:53:G:H2'	46:s:54:A:H8	1.56	0.70
47:x:666:ALA:HB2	47:x:706:ILE:HD12	1.74	0.70
75:Sb:26:LEU:HD21	75:Sb:60:LYS:HD2	1.72	0.70
1:2:953:G:H2'	1:2:954:G:H8	1.56	0.70
61:SO:179:LYS:NZ	61:SO:191:ASP:OD1	2.24	0.70
71:SW:172:VAL:HG12	71:SW:173:ALA:H	1.56	0.70
1:2:1081:A:O2'	1:2:1083:G:N7	2.24	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:83:THR:HG23	12:K:84:LYS:HG3	1.72	0.69
1:2:736:C:H2'	1:2:737:A:H8	1.56	0.69
2:A:2493:U:H3'	2:A:2494:A:H5''	1.74	0.69
69:SU:27:LEU:HD21	69:SU:80:GLU:HG2	1.73	0.69
2:A:1010:G:N2	13:L:193:ASP:OD2	2.25	0.69
42:o:103:LEU:HD22	42:o:121:LEU:HD11	1.74	0.69
61:SO:248:ASN:HB2	61:SO:249:ARG:NH2	2.07	0.69
63:SG:27:ASP:O	63:SG:31:ASN:ND2	2.24	0.69
1:2:324:U:OP1	72:SX:133:LYS:NZ	2.21	0.69
51:SC:77:ARG:HA	51:SC:82:LEU:HD12	1.74	0.69
54:SI:61:VAL:O	54:SI:65:ILE:HD12	1.92	0.69
64:SP:84:ARG:HD3	64:SP:204:TYR:HA	1.74	0.69
78:Sf:36:LYS:HB2	78:Sf:78:SER:HB3	1.73	0.69
14:M:36:VAL:O	14:M:40:LEU:HD12	1.92	0.69
52:SE:81:ARG:HA	52:SE:116:LEU:HD21	1.73	0.69
69:SU:132:PRO:HB3	69:SU:161:GLN:NE2	2.08	0.69
1:2:706:A:N6	1:2:731:C:OP2	2.25	0.69
16:O:104:ALA:HA	16:O:107:GLU:OE2	1.92	0.69
47:x:545:LEU:HA	47:x:549:HIS:HB2	1.74	0.69
70:SV:109:PHE:HE2	70:SV:183:ILE:HD11	1.57	0.69
1:2:966:A:OP2	73:SY:124:ARG:NH1	2.26	0.69
1:2:1108:G:N2	1:2:1108:G:OP2	2.24	0.69
22:U:23:LYS:HA	23:V:146:ASN:HD21	1.57	0.69
47:x:481:MET:HE1	47:x:483:PHE:HB3	1.75	0.69
1:2:513:U:H2'	1:2:514:G:H8	1.58	0.69
2:A:687:U:OP2	15:N:36:ARG:NH2	2.22	0.69
75:Sb:10:ALA:O	75:Sb:14:ILE:HD12	1.93	0.69
75:Sb:36:LYS:O	75:Sb:40:VAL:HG23	1.93	0.69
1:2:925:G:H2'	1:2:926:A:C8	2.27	0.68
11:J:139:VAL:HG21	11:J:197:VAL:HG11	1.73	0.68
23:V:54:HIS:HB3	23:V:57:TYR:CD1	2.28	0.68
36:i:58:ARG:HB2	36:i:61:GLN:HG3	1.75	0.68
69:SU:35:LYS:HD3	69:SU:39:ARG:HH21	1.57	0.68
70:SV:11:ARG:HH12	70:SV:17:LYS:HE2	1.57	0.68
1:2:463:U:O2'	1:2:527:A:N6	2.26	0.68
47:x:775:ASN:ND2	47:x:776:GLU:OE1	2.27	0.68
51:SC:56:LYS:HG2	51:SC:58:GLN:HE22	1.58	0.68
67:SS:92:LEU:HD21	77:Sd:17:LEU:HD21	1.76	0.68
1:2:208:U:H4'	70:SV:176:SER:HB2	1.75	0.68
1:2:1175:U:H2'	1:2:1176:G:H8	1.58	0.68
21:T:6:THR:OG1	21:T:7:GLN:OE1	2.11	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SF:39:VAL:O	59:SF:40:GLU:HB3	1.92	0.68
21:T:148:ASP:OD1	21:T:151:ARG:NH2	2.26	0.68
1:2:1673:G:H1	1:2:1728:A:H2	1.39	0.68
29:b:88:ASP:HB3	29:b:121:ARG:HH22	1.58	0.68
47:x:383:SER:HA	47:x:466:THR:HG22	1.76	0.68
76:Sc:62:LYS:HG2	76:Sc:63:GLN:H	1.58	0.68
2:A:286:U:H2'	2:A:287:G:H8	1.58	0.68
50:Se:35:ALA:O	50:Se:37:LYS:NZ	2.26	0.68
75:Sb:31:SER:O	75:Sb:35:ILE:HD12	1.94	0.68
52:SE:30:THR:HG22	52:SE:87:PRO:HD2	1.76	0.68
53:SA:124:ARG:O	53:SA:128:GLU:HG2	1.93	0.68
56:SL:42:ARG:HG3	56:SL:56:LEU:HD21	1.76	0.68
59:SF:77:GLN:O	59:SF:81:ILE:HD12	1.93	0.68
60:SH:68:ARG:HA	60:SH:71:GLN:NE2	2.08	0.68
64:SP:89:PHE:O	64:SP:93:THR:HG22	1.93	0.68
63:SG:23:LYS:HB3	63:SG:34:LEU:HD11	1.76	0.68
13:L:189:GLU:OE2	13:L:189:GLU:N	2.20	0.68
53:SA:51:ARG:HB2	53:SA:91:VAL:HG22	1.74	0.68
47:x:270:GLU:N	47:x:270:GLU:OE2	2.27	0.67
61:SO:81:LEU:HD11	61:SO:89:LEU:HD11	1.75	0.67
1:2:780:A:N1	77:Sd:8:ARG:NH1	2.42	0.67
2:A:1472:U:H2'	2:A:1473:G:H8	1.59	0.67
2:A:3009:G:N2	6:E:15:GLY:O	2.22	0.67
44:q:71:ARG:NH2	44:q:80:ARG:HE	1.92	0.67
69:SU:126:LEU:HB2	69:SU:173:TYR:HE2	1.60	0.67
70:SV:21:PHE:HE2	70:SV:22:ARG:HE	1.42	0.67
21:T:186:LYS:HE3	21:T:187:GLU:HG2	1.74	0.67
1:2:1044:U:H5''	65:SQ:153:HIS:HE1	1.59	0.67
18:Q:160[A]:ARG:HH21	18:Q:161[A]:LYS:HG3	1.59	0.67
30:c:75:LEU:HB3	30:c:118:ILE:HG23	1.77	0.67
47:x:218:TRP:HZ3	47:x:328:LEU:HB3	1.60	0.67
2:A:1604:G:H5''	2:A:1835:A:H4'	1.77	0.67
11:J:151:VAL:HG23	11:J:199:ALA:HB2	1.75	0.67
51:SC:16:PHE:HE1	51:SC:88:PRO:HA	1.59	0.67
55:SJ:24:ILE:HG22	55:SJ:116:VAL:HG22	1.77	0.67
66:SR:40:LYS:HD2	66:SR:247:ALA:HB1	1.76	0.67
1:2:1183:A:N3	1:2:1210:C:O2'	2.27	0.67
59:SF:41:PRO:HB2	59:SF:44:LEU:H	1.59	0.67
62:SN:125:THR:OG1	62:SN:143:LYS:NZ	2.27	0.67
76:Sc:63:GLN:CB	76:Sc:64:PRO:HD2	2.19	0.67
79:Sg:13:LYS:HG2	79:Sg:17:GLN:NE2	2.10	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:153:G:H2'	1:2:154:G:H8	1.60	0.67
36:i:41:ARG:NH2	36:i:51:LEU:O	2.28	0.67
63:SG:58:MET:HA	63:SG:58:MET:HE3	1.77	0.67
64:SP:205:ARG:HG2	64:SP:207:PRO:HD2	1.77	0.67
2:A:517:G:OP1	10:I:67:ARG:NH2	2.28	0.67
17:P:84:PRO:HA	17:P:87:GLN:HG3	1.77	0.67
61:SO:232:TYR:HB2	61:SO:234:LEU:CD2	2.25	0.67
61:SO:276:PRO:HB3	61:SO:311:ARG:HH21	1.60	0.67
1:2:15:U:O2'	1:2:620:A:N6	2.28	0.67
21:T:150:GLN:HA	21:T:153:LYS:CE	2.22	0.67
44:q:38:GLN:OE1	44:q:41:ARG:NH1	2.27	0.67
63:SG:85:VAL:HG23	64:SP:198:MET:SD	2.35	0.67
66:SR:57:PHE:HD1	74:Sa:26:ALA:HB1	1.59	0.67
2:A:1174:G:H21	18:Q:87[A]:MET:HE2	1.59	0.66
5:D:61:VAL:HG23	5:D:74:GLU:HB2	1.77	0.66
35:h:103:TYR:HB3	35:h:104:PRO:HD2	1.77	0.66
65:SQ:31:ASP:HB2	65:SQ:45:LYS:HZ1	1.60	0.66
66:SR:68:ILE:O	66:SR:72:LEU:HD12	1.95	0.66
9:H:94:GLU:OE2	9:H:94:GLU:N	2.26	0.66
17:P:113:LEU:HD13	17:P:134:LEU:HB3	1.76	0.66
27:Z:70:GLU:N	27:Z:70:GLU:OE2	2.28	0.66
58:SB:133:VAL:HA	58:SB:198:LEU:HD21	1.76	0.66
61:SO:108:SER:CB	61:SO:127:ARG:HB3	2.25	0.66
1:2:1170:G:N2	1:2:1571:C:O2'	2.27	0.66
27:Z:121:LYS:NZ	27:Z:123:TYR:OH	2.28	0.66
1:2:1784:C:H2'	1:2:1785:U:C6	2.30	0.66
2:A:1497:C:H2'	2:A:1498:A:C8	2.31	0.66
2:A:2216:G:H1	2:A:2229:A:N6	1.94	0.66
12:K:103:ILE:HD11	12:K:110:LYS:HB3	1.76	0.66
61:SO:153:GLN:OE1	61:SO:155:ARG:NE	2.24	0.66
2:A:2975:U:H2'	2:A:2976:A:C8	2.30	0.66
70:SV:78:ILE:HD12	70:SV:78:ILE:H	1.58	0.66
2:A:674:G:O6	20:S:56:LYS:NZ	2.27	0.66
59:SF:93:HIS:HA	59:SF:97:VAL:HB	1.77	0.66
60:SH:75:ASN:OD1	60:SH:78:HIS:ND1	2.29	0.66
1:2:72:A:H2'	1:2:73:U:H4'	1.76	0.66
1:2:1591:C:H2'	1:2:1592:A:H8	1.60	0.66
29:b:88:ASP:HB3	29:b:121:ARG:NH2	2.10	0.66
2:A:2555:G:N2	29:b:135:ARG:O	2.29	0.66
13:L:76:MET:HB3	13:L:85:PHE:CE2	2.30	0.66
54:SI:10:ALA:HA	59:SF:38:LEU:HD21	1.78	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Sa:71:ARG:HD3	78:Sf:4:VAL:HG21	1.77	0.66
74:Sa:79:LEU:HD23	74:Sa:80:LYS:N	2.10	0.66
1:2:1073:G:H4'	73:SY:10:GLY:HA2	1.77	0.66
2:A:1119:C:H2'	2:A:1120:A:H8	1.61	0.66
2:A:2116:G:OP1	2:A:2118:C:N4	2.29	0.66
16:O:119:GLN:O	16:O:123:LEU:HD12	1.96	0.66
40:m:56:ILE:HG22	40:m:58:ASP:H	1.60	0.66
50:Se:90:GLU:N	50:Se:90:GLU:OE2	2.29	0.66
53:SA:216:PRO:O	53:SA:218:LEU:N	2.28	0.66
69:SU:34:LEU:HD22	69:SU:38:LEU:HD22	1.78	0.66
1:2:1237:G:H2'	1:2:1238:A:H8	1.61	0.66
61:SO:240:VAL:HA	61:SO:256:THR:HA	1.78	0.66
70:SV:191:PHE:O	70:SV:195:ARG:HG2	1.95	0.66
6:E:281:LYS:NZ	6:E:352:GLU:O	2.29	0.65
59:SF:52:LEU:HA	59:SF:60:PHE:CZ	2.32	0.65
59:SF:56:GLY:O	59:SF:60:PHE:HE1	1.79	0.65
1:2:1465:C:H5'	59:SF:139:GLN:HB3	1.76	0.65
2:A:813:G:O2'	39:l:45:ARG:NH1	2.29	0.65
2:A:1302:A:N7	2:A:2857:C:O2'	2.29	0.65
38:k:57:LEU:O	38:k:61:ILE:HG22	1.96	0.65
47:x:277:ILE:HG22	47:x:278:LEU:HD12	1.79	0.65
54:SI:131:ASP:HA	54:SI:134:ARG:HG2	1.79	0.65
67:SS:60:GLU:OE2	67:SS:60:GLU:N	2.23	0.65
1:2:647:G:H22	1:2:687:G:H1	1.43	0.65
2:A:364:G:OP2	39:l:52:LYS:NZ	2.28	0.65
5:D:101:VAL:HG22	5:D:165:VAL:HG12	1.78	0.65
8:G:125:VAL:HG11	8:G:199:ILE:HG21	1.77	0.65
76:Sc:56:LYS:HD2	76:Sc:93:LEU:HD11	1.78	0.65
21:T:186:LYS:HD2	21:T:187:GLU:N	2.11	0.65
2:A:209:A:N3	7:F:221:ASN:ND2	2.44	0.65
2:A:638:C:N4	2:A:639:G:O6	2.30	0.65
59:SF:41:PRO:C	59:SF:43:ILE:H	2.03	0.65
60:SH:84:TRP:CD1	60:SH:85:PHE:HD1	2.14	0.65
2:A:32:U:H3	2:A:52:A:H61	1.45	0.65
2:A:627:U:H2'	2:A:628:A:C8	2.31	0.65
16:O:38:ILE:HG23	16:O:44:VAL:HG12	1.78	0.65
47:x:60:ARG:HG3	47:x:63:GLU:HB2	1.78	0.65
54:SI:104:VAL:O	54:SI:108:LEU:HD12	1.97	0.65
1:2:234:G:N7	1:2:235:G:O2'	2.30	0.65
2:A:1015:U:H4'	2:A:1016:C:H5'	1.79	0.65
2:A:1382:G:OP2	7:F:188:ARG:NH2	2.28	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SH:106:GLU:OE2	60:SH:106:GLU:N	2.27	0.65
69:SU:129:LEU:CD1	69:SU:169:PHE:HD1	2.10	0.65
47:x:202:VAL:HG22	47:x:204:PRO:HD3	1.79	0.65
2:A:38:U:H4'	30:c:32:ARG:HD2	1.79	0.65
2:A:519:A:N6	22:U:65:ASN:O	2.30	0.65
5:D:5:ILE:HG22	5:D:208:ASP:O	1.97	0.65
19:R:85:ALA:O	19:R:89:LYS:HG3	1.96	0.65
1:2:44:U:OP2	1:2:437:A:N6	2.27	0.65
2:A:3160:U:H3	2:A:3290:G:H1	1.44	0.65
60:SH:25:ASN:HA	80:SK:40:VAL:HG11	1.79	0.65
1:2:862:A:H5''	73:SY:16:ILE:HG13	1.80	0.64
2:A:209:A:OP2	7:F:163:LYS:NZ	2.31	0.64
3:B:107:C:H2'	3:B:108:A:H8	1.62	0.64
10:I:53:LYS:O	10:I:57:THR:HG23	1.97	0.64
32:e:74:ASN:HB2	32:e:86:ARG:HB2	1.79	0.64
44:q:69:VAL:HG22	44:q:84:THR:HG22	1.79	0.64
58:SB:187:ILE:H	58:SB:187:ILE:HD12	1.61	0.64
71:SW:53:ARG:NH1	71:SW:97:LEU:O	2.30	0.64
1:2:1785:U:H2'	1:2:1786:G:H8	1.62	0.64
6:E:361:THR:HG22	6:E:362:ALA:H	1.62	0.64
17:P:6:TYR:CE2	38:k:40:VAL:HG22	2.31	0.64
69:SU:47:ARG:HB3	69:SU:59:ALA:HB3	1.79	0.64
74:Sa:32:VAL:HG13	74:Sa:60:ARG:HH12	1.62	0.64
1:2:1389:C:OP1	63:SG:48:ASN:ND2	2.30	0.64
2:A:1475:A:H4'	33:f:57:GLN:HG3	1.79	0.64
12:K:20:ILE:HG12	12:K:25:VAL:HG12	1.79	0.64
15:N:51:LEU:HD12	15:N:139:LEU:HB3	1.79	0.64
28:a:115:ARG:O	28:a:119:ILE:HG12	1.97	0.64
73:SY:102:LEU:HD11	73:SY:112:LYS:HA	1.78	0.64
1:2:1533:C:OP2	80:SK:77:ARG:NH2	2.30	0.64
12:K:187:ILE:HG23	12:K:188:THR:HG23	1.78	0.64
2:A:3118:C:O2'	42:o:106:ARG:NH2	2.31	0.64
23:V:134:GLN:OE1	23:V:134:GLN:N	2.30	0.64
61:SO:150:TRP:CD1	61:SO:151:VAL:H	2.15	0.64
25:X:20:GLY:HA2	25:X:35:TYR:HE1	1.63	0.64
1:2:476:U:H5''	1:2:477:A:H5''	1.80	0.64
1:2:1072:C:OP1	78:Sf:22:LYS:NZ	2.30	0.64
13:L:76:MET:HB3	13:L:85:PHE:CD2	2.33	0.64
14:M:116:TYR:HD2	60:SH:14:ILE:HG21	1.63	0.64
47:x:20:ARG:NH1	47:x:342:LEU:O	2.31	0.64
53:SA:68:GLU:O	53:SA:72:LEU:HD22	1.97	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SA:74:GLN:NE2	53:SA:80:ALA:O	2.31	0.64
63:SG:86:PRO:HD2	64:SP:200:ASP:OD2	1.97	0.64
2:A:267:G:H21	17:P:50:ARG:HG3	1.63	0.64
2:A:1596:C:O2'	2:A:1696:A:N3	2.29	0.64
2:A:1661:G:H2'	2:A:1662:G:C8	2.33	0.64
1:2:751:G:H2'	1:2:752:A:H8	1.63	0.64
1:2:925:G:N3	1:2:988:A:H1'	2.12	0.64
2:A:358:G:N2	2:A:361:A:OP2	2.30	0.64
2:A:1151:U:O2'	2:A:2369:G:N2	2.31	0.64
2:A:2295:A:N1	25:X:37:ILE:HB	2.13	0.64
22:U:93:GLU:HB2	22:U:140:VAL:HG21	1.80	0.64
47:x:759:GLN:HG2	47:x:764:PRO:O	1.98	0.64
29:b:91:ALA:O	29:b:95:VAL:HG12	1.98	0.64
70:SV:3:ILE:H	70:SV:3:ILE:HD12	1.62	0.64
1:2:39:A:OP1	71:SW:3:ARG:NH2	2.31	0.63
1:2:354:C:H5''	70:SV:16:ALA:HB2	1.79	0.63
2:A:542:G:O6	2:A:550:A:N1	2.31	0.63
2:A:1928:G:N2	2:A:2320:A:O2'	2.29	0.63
12:K:101:VAL:HG22	12:K:114:VAL:HG23	1.78	0.63
17:P:159:ARG:HB2	17:P:164:LEU:HB2	1.79	0.63
1:2:397:A:H4'	70:SV:50:GLY:HA2	1.79	0.63
1:2:802:G:H2'	1:2:803:A:C4	2.33	0.63
1:2:1280:C:H4'	55:SJ:69:LYS:HB3	1.80	0.63
13:L:87:LEU:HD12	13:L:138:VAL:HB	1.80	0.63
18:Q:75[A]:ALA:HB3	18:Q:78[A]:ARG:HG2	1.81	0.63
47:x:759:GLN:HE21	47:x:764:PRO:HA	1.62	0.63
65:SQ:196:GLU:HA	65:SQ:199:ASN:HB2	1.79	0.63
1:2:1739:C:H2'	1:2:1740:A:H8	1.63	0.63
2:A:799:G:O2'	15:N:18:TRP:NE1	2.32	0.63
52:SE:61:ARG:O	52:SE:65:LEU:HD12	1.99	0.63
65:SQ:125:VAL:HG22	65:SQ:127:VAL:HG13	1.79	0.63
38:k:84:LYS:O	38:k:88:GLU:HG2	1.98	0.63
53:SA:168:ILE:HD11	53:SA:187:LYS:HG2	1.80	0.63
2:A:71:A:OP1	30:c:67:HIS:NE2	2.26	0.63
2:A:3225:C:N4	2:A:3226:A:H62	1.96	0.63
9:H:63:LEU:HD11	9:H:81:ALA:HA	1.81	0.63
53:SA:179:GLN:N	53:SA:179:GLN:OE1	2.31	0.63
67:SS:18:TRP:O	67:SS:51:ARG:NH2	2.26	0.63
2:A:1527:C:N4	2:A:1528:G:O6	2.32	0.63
28:a:38:GLU:OE2	28:a:38:GLU:N	2.28	0.63
51:SC:16:PHE:CE1	51:SC:88:PRO:HA	2.33	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SL:53:ILE:HB	58:SB:57:SER:HA	1.79	0.63
2:A:370:U:H4'	2:A:404:G:H5'	1.80	0.63
2:A:408:A:N3	2:A:655:C:O2'	2.31	0.63
2:A:2217:U:H2'	2:A:2218:G:H8	1.63	0.63
13:L:101:LYS:HE2	13:L:101:LYS:HA	1.80	0.63
33:f:80:ASN:ND2	33:f:87:ASN:O	2.32	0.63
54:SI:131:ASP:O	54:SI:134:ARG:HG2	1.99	0.63
61:SO:132:LYS:HB3	61:SO:134:TRP:CD1	2.33	0.63
64:SP:57:LEU:HD23	64:SP:160:ILE:HD12	1.80	0.63
73:SY:135:LEU:HD11	73:SY:139:TRP:CD1	2.34	0.63
2:A:1577:G:H2'	2:A:1578:C:C6	2.33	0.63
47:x:315:GLU:HG2	47:x:319:LEU:HD22	1.79	0.63
49:SZ:79:VAL:O	49:SZ:112:ILE:HA	1.99	0.63
60:SH:76:PRO:HB2	60:SH:81:ILE:HG21	1.80	0.63
76:Sc:63:GLN:HB3	76:Sc:64:PRO:CD	2.25	0.63
2:A:312:C:H2'	2:A:313:A:H8	1.64	0.63
2:A:625:G:N2	2:A:1401:A:OP1	2.29	0.63
2:A:3206:C:H1'	22:U:155:ARG:HH12	1.63	0.63
13:L:58:GLU:OE1	13:L:58:GLU:N	2.32	0.63
48:SD:71:ILE:O	48:SD:75:VAL:HG23	1.98	0.63
1:2:1524:A:H4'	54:SI:93:HIS:CD2	2.33	0.62
2:A:640:U:OP1	30:c:21:ARG:NH2	2.32	0.62
2:A:681:U:O2	2:A:696:C:N4	2.30	0.62
2:A:1805:C:H2'	2:A:1806:A:H8	1.64	0.62
8:G:60:ILE:H	8:G:80:SER:HB2	1.64	0.62
25:X:14:SER:O	25:X:81:GLN:NE2	2.30	0.62
61:SO:192:PHE:HE2	61:SO:211:ILE:HG21	1.63	0.62
2:A:2941:A:H5'	2:A:2943:G:H4'	1.80	0.62
3:B:6:C:OP1	8:G:54:ARG:NH1	2.32	0.62
47:x:730:LEU:HB3	47:x:797:VAL:HG13	1.81	0.62
51:SC:33:GLU:HG2	51:SC:34:GLU:HG3	1.82	0.62
54:SI:25:GLN:OE1	54:SI:27:LYS:HB2	1.99	0.62
61:SO:87:LYS:HA	61:SO:109:ASP:HA	1.81	0.62
67:SS:114:ILE:HD12	67:SS:118:GLU:CB	2.29	0.62
1:2:1628:U:H2'	1:2:1629:G:C8	2.34	0.62
2:A:562:C:H5'	22:U:71:LYS:HD2	1.81	0.62
2:A:1020:G:C2'	2:A:1021:G:H5'	2.29	0.62
2:A:2392:C:H1'	6:E:266:ARG:HH21	1.63	0.62
66:SR:76:LEU:HD12	66:SR:133:LYS:HD3	1.82	0.62
1:2:1351:G:H4'	59:SF:21:HIS:NE2	2.14	0.62
8:G:210:GLU:O	8:G:214:ASP:HB2	2.00	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SQ:184:LEU:O	65:SQ:188:LEU:HD22	1.98	0.62
67:SS:174:LYS:O	67:SS:179:LYS:NZ	2.31	0.62
1:2:1122:G:N2	1:2:1125:A:OP2	2.32	0.62
1:2:1162:C:H5'	56:SL:22:ARG:NH2	2.14	0.62
2:A:584:G:H2'	2:A:585:A:H8	1.64	0.62
6:E:218:ILE:HD11	6:E:339:ARG:HH21	1.64	0.62
13:L:76:MET:HE1	13:L:148:VAL:HA	1.81	0.62
22:U:12:ARG:NH1	22:U:57:GLU:OE2	2.30	0.62
61:SO:157:VAL:HA	61:SO:204:ALA:HB3	1.82	0.62
1:2:208:U:H1'	70:SV:178:ARG:HD2	1.82	0.62
2:A:1235:U:H4'	2:A:1236:G:H5'	1.80	0.62
2:A:1602:A:H2'	2:A:1603:A:C4	2.34	0.62
2:A:2317:A:H2'	2:A:2318:U:C6	2.35	0.62
3:B:10:C:N4	8:G:30:TYR:OH	2.33	0.62
6:E:56:ILE:HG22	6:E:359:ILE:HG22	1.81	0.62
71:SW:18:PRO:HA	71:SW:23:ARG:NH2	2.12	0.62
1:2:896:U:O2	49:SZ:41:ARG:NH2	2.33	0.62
2:A:894:G:N2	2:A:1660:C:OP1	2.33	0.62
2:A:1463:U:H3	2:A:1467:A:H62	1.48	0.62
10:I:96:PRO:HB2	10:I:99:PRO:HD2	1.82	0.62
20:S:23:ASN:HB3	20:S:26:LEU:HB3	1.81	0.62
20:S:92:ARG:HG3	30:c:76:ASP:HB2	1.80	0.62
24:W:58:GLU:OE1	24:W:60:GLY:N	2.32	0.62
47:x:355:GLN:O	47:x:479:LYS:NZ	2.32	0.62
70:SV:109:PHE:CE2	70:SV:183:ILE:HD11	2.33	0.62
3:B:7:G:H4'	8:G:33:ARG:HH21	1.65	0.62
47:x:284:LEU:HD11	47:x:303:LEU:HD12	1.79	0.62
53:SA:194:LYS:O	53:SA:196:ARG:N	2.33	0.62
68:ST:137:ARG:HB3	68:ST:140:ASN:HB2	1.80	0.62
1:2:1482:C:O2'	59:SF:77:GLN:NE2	2.33	0.62
2:A:655:C:H2'	2:A:656:A:H8	1.65	0.62
2:A:2228:A:H2'	2:A:2229:A:H8	1.64	0.62
59:SF:125:GLU:N	59:SF:125:GLU:OE2	2.33	0.62
2:A:2423:U:H2'	2:A:2424:A:H8	1.65	0.62
2:A:2495:C:H3'	2:A:2496:C:C5'	2.30	0.62
2:A:3006:A:H62	2:A:3140:G:H21	1.48	0.62
2:A:3237:U:H2'	2:A:3238:G:C8	2.34	0.62
4:C:67:U:H2'	4:C:68:G:H8	1.65	0.62
8:G:150:LEU:HD13	14:M:143:ARG:HG3	1.81	0.62
11:J:139:VAL:O	11:J:143:ILE:HG13	2.00	0.62
46:s:28:A:H2'	46:s:29:G:H8	1.64	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:186:ASN:HD21	47:x:202:VAL:HB	1.65	0.62
51:SC:20:VAL:HG21	53:SA:72:LEU:HD13	1.81	0.62
61:SO:18:GLY:HA3	61:SO:38:ARG:HB3	1.82	0.62
61:SO:134:TRP:CD1	61:SO:134:TRP:H	2.18	0.62
61:SO:154:VAL:HG12	61:SO:171:SER:HA	1.80	0.62
65:SQ:105:PHE:HE1	65:SQ:213:ARG:HA	1.64	0.62
67:SS:21:ASP:HB3	67:SS:24:SER:HB3	1.80	0.62
1:2:918:U:O3'	49:SZ:18:ARG:NH1	2.33	0.61
2:A:341:G:N2	2:A:349:A:H61	1.96	0.61
2:A:928:C:H2'	2:A:929:A:H8	1.65	0.61
8:G:205:SER:HB2	8:G:236:LEU:HD21	1.81	0.61
1:2:1697:G:H1	1:2:1704:U:H3	1.48	0.61
2:A:1818:U:H2'	2:A:1819:U:C2	2.35	0.61
22:U:72:VAL:HA	22:U:97:VAL:HA	1.82	0.61
38:k:40:VAL:O	38:k:44:VAL:HG23	2.00	0.61
53:SA:175:VAL:HB	53:SA:177:MET:HE3	1.81	0.61
54:SI:83:ALA:HB1	54:SI:91:TYR:HB3	1.83	0.61
55:SJ:22:ILE:HG23	55:SJ:93:LEU:HB2	1.81	0.61
61:SO:314:GLN:HE21	61:SO:316:MET:HE2	1.64	0.61
1:2:513:U:H2'	1:2:514:G:C8	2.34	0.61
1:2:1022:C:H4'	1:2:1125:A:H61	1.64	0.61
2:A:297:G:OP2	2:A:297:G:N2	2.21	0.61
6:E:328:ILE:HD13	6:E:336:VAL:HG11	1.82	0.61
12:K:22:SER:OG	12:K:23:ARG:N	2.33	0.61
12:K:162:GLN:HE22	42:o:89:TYR:HE2	1.47	0.61
15:N:153:ASP:OD2	30:c:126:LYS:NZ	2.32	0.61
17:P:28:TRP:O	17:P:32:GLN:HG2	2.00	0.61
19:R:127:ARG:HB3	19:R:139:TYR:HB3	1.82	0.61
47:x:81:MET:HE3	47:x:82:SER:N	2.15	0.61
68:ST:48:TYR:HB3	68:ST:50:PHE:HE1	1.65	0.61
1:2:959:U:H5''	73:SY:14:SER:HB2	1.80	0.61
2:A:2435:G:N2	2:A:2514:U:O4	2.32	0.61
3:B:59:U:H2'	3:B:60:G:H8	1.65	0.61
4:C:8:C:H2'	4:C:9:A:H8	1.66	0.61
64:SP:148:ASP:H	64:SP:151:SER:HB2	1.65	0.61
72:SX:132:SER:HB3	72:SX:135:VAL:HG22	1.81	0.61
73:SY:18:TYR:O	75:Sb:56:HIS:ND1	2.32	0.61
2:A:2363:A:H2'	2:A:2364:G:C8	2.36	0.61
11:J:82:LEU:HD11	11:J:178:ALA:HB1	1.83	0.61
21:T:156:ASN:O	21:T:160:GLU:HG2	2.01	0.61
60:SH:100:THR:HG21	60:SH:108:LYS:HG3	1.81	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SS:252:ARG:O	67:SS:256:ARG:HG3	2.01	0.61
70:SV:11:ARG:NH1	70:SV:17:LYS:HE2	2.15	0.61
80:SK:62:VAL:O	80:SK:66:VAL:HG22	2.00	0.61
52:SE:60:LEU:HD21	52:SE:89:MET:HB3	1.83	0.61
60:SH:45:LEU:HD21	60:SH:81:ILE:HD11	1.83	0.61
1:2:705:U:O2'	1:2:706:A:O5'	2.18	0.61
1:2:1628:U:H2'	1:2:1629:G:H8	1.66	0.61
10:I:131:GLU:HG3	10:I:229:PHE:HE1	1.66	0.61
13:L:182:LEU:CD2	13:L:185:ARG:HH22	2.14	0.61
58:SB:39:GLU:OE2	58:SB:42:LEU:HD13	2.00	0.61
1:2:195:G:O6	70:SV:137:LYS:NZ	2.32	0.61
1:2:252:U:OP1	67:SS:133:LYS:NZ	2.33	0.61
2:A:68:C:N4	2:A:314:U:O2'	2.22	0.61
2:A:632:G:H21	35:h:23:ASN:HD21	1.46	0.61
2:A:2351:U:H2'	2:A:2352:A:H8	1.65	0.61
10:I:55:TYR:O	10:I:59:GLU:HG2	2.01	0.61
53:SA:92:GLN:OE1	53:SA:92:GLN:N	2.32	0.61
61:SO:204:ALA:HB2	61:SO:211:ILE:HD13	1.82	0.61
6:E:245:GLY:HA3	6:E:248:LYS:HE3	1.80	0.61
7:F:181:VAL:HG21	7:F:224:GLY:HA3	1.82	0.61
24:W:35:LYS:HA	24:W:38:ILE:HG12	1.81	0.61
29:b:75:VAL:HG13	29:b:80:LEU:HD12	1.82	0.61
35:h:29:LEU:C	35:h:30:ILE:HD13	2.26	0.61
63:SG:46:LEU:O	63:SG:50:ILE:HG13	2.00	0.61
65:SQ:194:ASN:ND2	65:SQ:210:ILE:O	2.33	0.61
76:Sc:42:PRO:O	76:Sc:79:ASN:ND2	2.34	0.61
10:I:102:VAL:CG2	10:I:126:LEU:HD22	2.31	0.61
21:T:186:LYS:NZ	21:T:187:GLU:OE2	2.28	0.61
57:SM:20:GLN:N	57:SM:20:GLN:OE1	2.33	0.61
1:2:599:A:N3	76:Sc:47:SER:OG	2.30	0.60
2:A:1145:G:N2	2:A:1331:U:O2'	2.33	0.60
2:A:2950:G:N2	2:A:2950:G:OP2	2.32	0.60
7:F:311:HIS:CE1	7:F:314:LYS:HA	2.36	0.60
53:SA:76:ARG:HG3	53:SA:77:PHE:CD1	2.36	0.60
61:SO:83:ALA:HB1	61:SO:110:VAL:HG23	1.81	0.60
66:SR:65:GLU:HB2	66:SR:68:ILE:HG12	1.82	0.60
70:SV:84:HIS:NE2	70:SV:97:THR:OG1	2.32	0.60
1:2:815:G:OP2	21:T:166:ASN:ND2	2.34	0.60
2:A:348:A:N3	2:A:352:A:O2'	2.35	0.60
2:A:800:G:H1	7:F:104:LYS:HZ1	1.48	0.60
8:G:146:LEU:HD13	8:G:163:LEU:HB2	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:W:17:VAL:HG12	24:W:103:TYR:HB2	1.83	0.60
32:e:14:LEU:O	32:e:18:ILE:HG22	2.01	0.60
47:x:619:MET:O	47:x:619:MET:HE3	2.01	0.60
54:SI:11:ALA:HA	54:SI:63:ARG:HH12	1.66	0.60
61:SO:26:SER:HA	61:SO:73:LEU:HD21	1.82	0.60
78:Sf:41:LEU:HD23	78:Sf:42:ASN:H	1.66	0.60
1:2:1682:U:O4	1:2:1720:G:N2	2.34	0.60
2:A:999:G:N3	2:A:1002:A:N6	2.49	0.60
13:L:170:LYS:HA	13:L:177:ASP:HA	1.84	0.60
35:h:12:LYS:NZ	35:h:95:GLY:O	2.27	0.60
76:Sc:130:VAL:HG23	76:Sc:131:SER:H	1.67	0.60
2:A:1141:C:O2'	2:A:1153:A:N3	2.32	0.60
40:m:43:PHE:HE2	40:m:56:ILE:HG12	1.67	0.60
72:SX:132:SER:OG	72:SX:133:LYS:N	2.33	0.60
1:2:1462:G:OP2	60:SH:143:ARG:NH1	2.32	0.60
13:L:42:THR:O	13:L:139:ARG:NH2	2.34	0.60
39:l:26:SER:HB2	39:l:35:SER:H	1.66	0.60
1:2:307:G:OP1	72:SX:103:ARG:NH1	2.33	0.60
2:A:2763:U:H5'	20:S:176:ARG:HD2	1.82	0.60
7:F:45:ASN:O	7:F:110:ASN:ND2	2.35	0.60
13:L:36:LEU:HD22	13:L:73:ASN:ND2	2.15	0.60
29:b:10:VAL:HG13	29:b:83:THR:HB	1.84	0.60
47:x:707:PRO:O	47:x:711:ARG:HG2	2.01	0.60
51:SC:3:MET:HB3	51:SC:8:ARG:HE	1.65	0.60
61:SO:25:THR:HG21	61:SO:295:SER:HB2	1.83	0.60
63:SG:33:ARG:O	63:SG:37:GLU:HG3	2.02	0.60
67:SS:247:SER:N	67:SS:250:GLU:OE2	2.34	0.60
78:Sf:75:GLU:N	78:Sf:75:GLU:OE2	2.33	0.60
1:2:947:U:H2'	1:2:948:G:H8	1.67	0.60
1:2:1142:A:H5''	50:Se:2:PRO:HB3	1.84	0.60
2:A:21:G:H3'	2:A:22:G:H8	1.66	0.60
2:A:1646:G:H21	2:A:1809:A:H62	1.48	0.60
11:J:140:VAL:HG21	17:P:3:ALA:HB2	1.83	0.60
23:V:57:TYR:CD2	23:V:89:LEU:HD13	2.36	0.60
28:a:42:GLN:HG2	28:a:43:TYR:CE1	2.36	0.60
39:l:20:ASN:O	39:l:21:ARG:C	2.44	0.60
67:SS:52:LEU:HG	67:SS:54:TYR:CD2	2.37	0.60
1:2:1022:C:O2'	1:2:1125:A:N1	2.34	0.60
1:2:1498:G:H4'	54:SI:121:GLY:H	1.67	0.60
2:A:2147:A:OP2	5:D:200:ARG:NH1	2.34	0.60
2:A:3027:A:H1'	47:x:785:ARG:HB3	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:206:LEU:O	13:L:210:ILE:HG12	2.01	0.60
47:x:203:TYR:HB3	47:x:206:ARG:HB2	1.83	0.60
54:SI:25:GLN:NE2	54:SI:27:LYS:H	1.99	0.60
1:2:142:G:H22	1:2:173:A:H2	1.50	0.60
1:2:1281:G:H4'	55:SJ:76:SER:H	1.67	0.60
1:2:1585:U:H3	1:2:1611:A:H2	1.50	0.60
2:A:518:G:H5'	2:A:520:U:H5'	1.84	0.60
2:A:616:G:H2'	2:A:617:G:H8	1.66	0.60
2:A:2344:U:H2'	2:A:2345:A:H8	1.66	0.60
4:C:47:C:H1'	4:C:61:A:H2'	1.84	0.60
42:o:86:ALA:O	42:o:90:ASN:ND2	2.31	0.60
1:2:192:U:O4	1:2:195:G:N2	2.35	0.60
1:2:382:C:H2'	1:2:383:G:C8	2.37	0.60
1:2:921:U:H2'	1:2:922:G:H8	1.67	0.60
2:A:284:A:OP2	44:q:41:ARG:NH1	2.34	0.60
65:SQ:167:VAL:O	65:SQ:171:ILE:HG12	2.02	0.60
75:Sb:57:ARG:NH1	78:Sf:26:GLN:OE1	2.35	0.60
1:2:142:G:H5''	68:ST:139:ASN:HD21	1.67	0.59
2:A:707:U:H1'	2:A:754:G:H1'	1.84	0.59
5:D:33:ASP:OD1	5:D:33:ASP:N	2.35	0.59
25:X:18:PRO:HA	25:X:51:ALA:HA	1.83	0.59
61:SO:59:ARG:HH22	61:SO:97:GLY:HA2	1.67	0.59
67:SS:118:GLU:HA	67:SS:121:TYR:CE1	2.37	0.59
2:A:2727:A:OP2	2:A:2728:G:N2	2.35	0.59
12:K:41:ILE:HG12	12:K:71:VAL:HG21	1.84	0.59
13:L:189:GLU:HB2	13:L:200:LEU:HB3	1.83	0.59
73:SY:16:ILE:HG23	73:SY:62:GLN:HE22	1.67	0.59
1:2:297:U:H5''	67:SS:37:LYS:HG2	1.84	0.59
1:2:1175:U:H2'	1:2:1176:G:C8	2.37	0.59
2:A:341:G:N2	2:A:349:A:C6	2.70	0.59
2:A:500:C:H5''	9:H:82:ARG:HG3	1.82	0.59
2:A:1370:G:H2'	2:A:1371:G:C8	2.37	0.59
2:A:2433:U:OP2	2:A:2434:U:O2'	2.19	0.59
38:k:50:LEU:O	38:k:55:ARG:NH2	2.35	0.59
47:x:132:ILE:HD11	47:x:162:ARG:HG3	1.84	0.59
47:x:634:TRP:HE1	47:x:648:ASP:HB2	1.67	0.59
47:x:725:GLN:HE21	47:x:801:TRP:HB3	1.67	0.59
47:x:736:PRO:HD2	47:x:791:GLN:HE21	1.66	0.59
55:SJ:28:SER:HB3	55:SJ:34:LEU:HD21	1.83	0.59
58:SB:219:ARG:HH21	58:SB:220:VAL:HG22	1.65	0.59
61:SO:248:ASN:H	61:SO:249:ARG:HH12	1.47	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SQ:34:ALA:HB3	65:SQ:41:ARG:HG3	1.84	0.59
1:2:1466:G:H2'	1:2:1467:C:C6	2.38	0.59
1:2:1550:A:OP1	52:SE:42:ARG:NH1	2.35	0.59
1:2:1695:G:H2'	1:2:1696:G:C8	2.37	0.59
2:A:2193:U:O4	2:A:2243:A:N6	2.36	0.59
2:A:2728:G:OP2	23:V:83:ARG:NH2	2.36	0.59
51:SC:63:TYR:HB3	51:SC:65:TYR:CE1	2.35	0.59
69:SU:90:VAL:C	69:SU:91:ILE:HD13	2.27	0.59
2:A:2382:G:OP2	18:Q:90[A]:HIS:NE2	2.32	0.59
3:B:17:A:OP1	14:M:150:ASN:ND2	2.35	0.59
30:c:71:PRO:HB2	30:c:109:TYR:HA	1.84	0.59
53:SA:32:GLU:OE2	53:SA:58:VAL:HG23	2.03	0.59
80:SK:13:ALA:O	80:SK:17:LEU:HD13	2.03	0.59
1:2:1262:U:H2'	1:2:1263:G:C8	2.38	0.59
1:2:1774:G:N7	43:p:4:LYS:NZ	2.47	0.59
2:A:528:U:H2'	2:A:529:A:C8	2.37	0.59
2:A:845:G:N2	2:A:848:A:OP2	2.35	0.59
2:A:928:C:H2'	2:A:929:A:C8	2.37	0.59
2:A:1014:U:O2	2:A:1017:C:N4	2.36	0.59
2:A:2305:G:N2	2:A:2305:G:OP2	2.35	0.59
2:A:2366:C:H2'	2:A:2367:A:H8	1.67	0.59
39:l:26:SER:O	39:l:34:CYS:HA	2.03	0.59
58:SB:43:PHE:CD1	58:SB:43:PHE:O	2.56	0.59
60:SH:32:LEU:HB2	60:SH:43:SER:HB2	1.85	0.59
61:SO:264:SER:HB3	61:SO:269:TYR:H	1.68	0.59
73:SY:118:ILE:O	73:SY:122:ILE:HG23	2.02	0.59
1:2:1293:U:O2	64:SP:109:ASN:ND2	2.35	0.59
1:2:1613:U:OP1	58:SB:169:ASN:ND2	2.35	0.59
2:A:1809:A:OP2	29:b:65:ARG:NH1	2.35	0.59
2:A:2526:C:H2'	2:A:2527:G:H8	1.67	0.59
2:A:3193:C:H2'	2:A:3194:C:H6	1.67	0.59
6:E:17:LEU:HD21	6:E:233:TRP:HH2	1.67	0.59
39:l:27:PHE:HA	39:l:33:THR:O	2.03	0.59
48:SD:129:GLU:HA	48:SD:133:LEU:HD23	1.85	0.59
58:SB:157:ARG:HB2	58:SB:224:ASN:HD22	1.66	0.59
73:SY:87:ASP:OD1	73:SY:87:ASP:N	2.35	0.59
2:A:567:G:H2'	2:A:568:G:C8	2.38	0.59
2:A:1046:A:O2'	2:A:1048:A:OP2	2.21	0.59
7:F:77:VAL:HG11	7:F:84:ARG:HD2	1.85	0.59
12:K:150:SER:OG	12:K:153:ASP:OD1	2.20	0.59
18:Q:56[A]:ASP:OD1	18:Q:60[A]:LYS:NZ	2.33	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:p:7:LYS:O	43:p:11:ARG:HG2	2.03	0.59
54:SI:47:PRO:HG3	54:SI:53:TRP:CE3	2.37	0.59
59:SF:52:LEU:HD13	59:SF:60:PHE:CE2	2.38	0.59
64:SP:162:CYS:SG	64:SP:163:ASN:N	2.75	0.59
70:SV:70:GLU:N	70:SV:70:GLU:OE2	2.35	0.59
1:2:329:G:H2'	1:2:330:G:H8	1.67	0.59
2:A:1101:G:H5''	10:I:107:ARG:HD3	1.84	0.59
5:D:80:GLU:HG3	45:r:66:GLY:HA2	1.83	0.59
7:F:125:ALA:O	7:F:129:THR:HG23	2.03	0.59
17:P:23:GLN:O	17:P:27:VAL:HG12	2.03	0.59
23:V:54:HIS:HB3	23:V:57:TYR:HD1	1.68	0.59
47:x:103:ILE:CG2	47:x:122:THR:HG21	2.33	0.59
1:2:1797:A:P	50:Se:10:ARG:HH12	2.25	0.59
2:A:2094:C:H2'	2:A:2095:G:C8	2.36	0.59
2:A:2424:A:H61	5:D:230:VAL:HG11	1.68	0.59
2:A:2842:U:OP1	2:A:2898:G:N2	2.35	0.59
2:A:3092:C:O2'	2:A:3094:A:OP2	2.20	0.59
4:C:23:U:H5''	28:a:13:ARG:HG3	1.85	0.59
4:C:71:A:H62	4:C:87:G:N2	2.01	0.59
11:J:54:GLU:CD	11:J:54:GLU:H	2.10	0.59
61:SO:89:LEU:HD23	61:SO:134:TRP:CZ3	2.36	0.59
64:SP:52:LYS:N	64:SP:52:LYS:HD2	2.18	0.59
67:SS:180:LEU:HB3	67:SS:228:ILE:HG12	1.85	0.59
1:2:996:U:H3	1:2:1008:G:H1	1.51	0.58
2:A:707:U:O2'	2:A:754:G:N3	2.35	0.58
2:A:969:C:OP1	31:d:19:ASN:ND2	2.36	0.58
2:A:1234:G:H2'	2:A:1235:U:C5	2.38	0.58
2:A:1886:A:H2'	2:A:1887:A:H8	1.67	0.58
7:F:9:HIS:HA	7:F:15:ALA:HA	1.84	0.58
20:S:54:LEU:HB3	20:S:58:ASN:HB3	1.84	0.58
47:x:419:VAL:HG22	47:x:421:GLY:H	1.68	0.58
59:SF:94:GLN:O	61:SO:52:GLN:NE2	2.33	0.58
67:SS:72:VAL:HG22	67:SS:90:ILE:HG22	1.85	0.58
1:2:229:U:OP2	1:2:230:C:N4	2.36	0.58
1:2:606:A:H4'	1:2:607:G:H3'	1.84	0.58
1:2:1171:A:H2'	1:2:1172:G:C8	2.37	0.58
1:2:1171:A:H2'	1:2:1172:G:H8	1.68	0.58
1:2:1553:G:N7	52:SE:43:ARG:NH2	2.50	0.58
2:A:57:A:H4'	17:P:157:LYS:HE3	1.84	0.58
2:A:1794:G:O2'	2:A:1796:G:N2	2.36	0.58
11:J:158:ASP:HB2	11:J:159:PRO:HD2	1.83	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:K:8:GLN:HG3	12:K:68:LEU:HD21	1.85	0.58
18:Q:54[A]:TYR:OH	18:Q:73[A]:PHE:O	2.20	0.58
45:r:7:LYS:O	45:r:27:LYS:NZ	2.36	0.58
61:SO:121:MET:HG3	61:SO:135:THR:HA	1.85	0.58
67:SS:52:LEU:HG	67:SS:54:TYR:HD2	1.68	0.58
69:SU:41:LEU:HG	69:SU:70:PHE:HE1	1.68	0.58
1:2:1606:C:H2'	1:2:1607:G:H8	1.68	0.58
2:A:695:C:OP2	7:F:115:HIS:NE2	2.37	0.58
2:A:2349:U:O2'	2:A:3307:A:N3	2.35	0.58
5:D:28:LYS:HB3	5:D:123:ARG:HB3	1.83	0.58
13:L:85:PHE:CD1	13:L:85:PHE:C	2.80	0.58
47:x:653:VAL:HG11	47:x:656:LEU:HD12	1.85	0.58
61:SO:110:VAL:HG12	61:SO:126:SER:HB3	1.86	0.58
65:SQ:57:ALA:O	65:SQ:61:LEU:HG	2.02	0.58
66:SR:76:LEU:HD22	66:SR:105:GLY:HA2	1.84	0.58
78:Sf:15:GLU:O	78:Sf:29:ARG:NH2	2.33	0.58
79:Sg:37:ARG:O	79:Sg:41:THR:HG23	2.04	0.58
1:2:1217:A:H4'	51:SC:44:LYS:NZ	2.18	0.58
2:A:75:G:H5'	15:N:58:VAL:HG21	1.84	0.58
2:A:364:G:N7	39:l:56:ARG:NH2	2.51	0.58
2:A:417:A:H2'	2:A:418:A:H8	1.69	0.58
18:Q:139[A]:GLY:O	18:Q:143[A]:THR:HG23	2.02	0.58
20:S:75:GLY:O	20:S:79:LYS:NZ	2.36	0.58
22:U:141:LYS:HA	22:U:144:LEU:HD12	1.84	0.58
61:SO:112:SER:OG	61:SO:155:ARG:NH2	2.36	0.58
69:SU:20:VAL:HG23	69:SU:24:PHE:HE1	1.68	0.58
73:SY:84:ILE:HD11	73:SY:149:LEU:HD22	1.86	0.58
78:Sf:15:GLU:HA	78:Sf:18:LYS:HZ3	1.67	0.58
1:2:343:C:H2'	1:2:344:A:H8	1.68	0.58
2:A:1389:G:OP1	34:g:104:ASN:ND2	2.33	0.58
2:A:2218:G:OP2	38:k:68:ARG:NH2	2.34	0.58
6:E:283:TYR:N	6:E:323:MET:O	2.23	0.58
17:P:160:GLU:H	17:P:160:GLU:CD	2.11	0.58
50:Se:44:ILE:HG23	50:Se:67:THR:HB	1.85	0.58
58:SB:133:VAL:HG22	58:SB:198:LEU:HD11	1.85	0.58
61:SO:33:LEU:HD11	61:SO:302:PHE:CD1	2.38	0.58
80:SK:47:TYR:CE1	80:SK:51:LEU:HD21	2.39	0.58
1:2:1151:A:O2'	1:2:1766:A:N7	2.32	0.58
1:2:1483:A:H4'	59:SF:71:GLY:HA2	1.85	0.58
1:2:1573:A:H4'	1:2:1574:G:O5'	2.02	0.58
1:2:1650:U:H2'	1:2:1651:A:C8	2.38	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:76:G:H3'	15:N:73:ARG:HD2	1.85	0.58
2:A:3015:G:H2'	2:A:3016:A:H8	1.68	0.58
14:M:21:ILE:HD13	14:M:37:LEU:HD13	1.86	0.58
24:W:61:THR:HG23	24:W:62:VAL:HG13	1.84	0.58
49:SZ:116:GLU:OE2	65:SQ:83:LYS:NZ	2.36	0.58
2:A:196:G:H22	2:A:199:A:H5'	1.69	0.58
2:A:542:G:C6	2:A:550:A:N1	2.72	0.58
19:R:49:GLU:OE2	19:R:92:GLN:NE2	2.29	0.58
26:Y:9:SER:HA	26:Y:52:THR:HB	1.86	0.58
28:a:99:LEU:HD13	28:a:104:LEU:HD21	1.84	0.58
47:x:117:ALA:O	47:x:121:VAL:HG23	2.04	0.58
51:SC:64:TYR:HB3	51:SC:66:TYR:CE1	2.38	0.58
53:SA:69:LEU:HD23	53:SA:72:LEU:HD23	1.86	0.58
54:SI:37:VAL:HG22	54:SI:53:TRP:HH2	1.68	0.58
75:Sb:8:ALA:HA	75:Sb:74:VAL:HG11	1.84	0.58
76:Sc:68:ILE:O	76:Sc:70:LYS:NZ	2.35	0.58
2:A:1756:C:H2'	2:A:1757:A:H8	1.67	0.58
5:D:177:LYS:HG2	45:r:26:VAL:HG12	1.85	0.58
6:E:278:ILE:HD12	6:E:279:ASN:HB2	1.86	0.58
8:G:91:GLY:O	8:G:94:ASN:ND2	2.37	0.58
18:Q:80[A]:PHE:CE1	18:Q:84[A]:LEU:HD11	2.38	0.58
21:T:148:ASP:HA	21:T:151:ARG:HE	1.69	0.58
27:Z:115:ARG:HH21	27:Z:119:THR:HG21	1.69	0.58
40:m:62:ALA:O	40:m:66:ILE:HG23	2.03	0.58
47:x:607:ASN:ND2	47:x:609:ARG:O	2.36	0.58
77:Sd:13:ILE:HG12	77:Sd:22:GLN:HB2	1.84	0.58
80:SK:81:ARG:HH11	80:SK:81:ARG:HG3	1.68	0.58
1:2:775:G:O6	1:2:785:U:O2	2.22	0.58
2:A:501:A:H4'	9:H:28:GLN:HB2	1.85	0.58
2:A:2185:G:H2'	2:A:2186:U:C6	2.39	0.58
2:A:2898:G:OP2	12:K:173:ARG:NH2	2.37	0.58
2:A:3002:C:OP1	6:E:26:ARG:NH2	2.37	0.58
3:B:40:C:O2	14:M:72:ARG:NH1	2.35	0.58
20:S:9:GLN:OE1	20:S:9:GLN:HA	2.04	0.58
33:f:72:ARG:NH2	33:f:105:GLN:O	2.37	0.58
48:SD:58:LEU:HD12	48:SD:125:ASN:H	1.67	0.58
49:SZ:39:ILE:H	49:SZ:39:ILE:HD12	1.69	0.58
59:SF:56:GLY:O	59:SF:60:PHE:CE1	2.56	0.58
68:ST:14:LYS:HZ3	68:ST:15:THR:H	1.51	0.58
1:2:929:A:OP1	1:2:931:C:N4	2.37	0.58
1:2:950:C:O2'	73:SY:104:ARG:NH1	2.37	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1037:C:O2	75:Sb:16:ASN:ND2	2.37	0.58
2:A:1084:A:H2'	2:A:1085:A:C8	2.38	0.58
2:A:1721:U:O4	21:T:128:LYS:NZ	2.36	0.58
2:A:3233:C:H2'	2:A:3234:A:C8	2.38	0.58
5:D:180:LEU:HD22	45:r:26:VAL:HG11	1.85	0.58
12:K:147:SER:HB3	12:K:187:ILE:HD12	1.86	0.58
21:T:166:ASN:OD1	21:T:167:ARG:N	2.37	0.58
23:V:112:ASN:HB3	23:V:128:LEU:HD13	1.86	0.58
44:q:25:VAL:HG22	44:q:72:LEU:HD22	1.86	0.58
47:x:381:TYR:CD2	47:x:478:MET:HG3	2.39	0.58
52:SE:111:MET:O	52:SE:112:LEU:HD23	2.04	0.58
67:SS:35:PRO:HD2	67:SS:83:PRO:HG2	1.84	0.58
1:2:755:A:O2'	67:SS:39:ARG:NH2	2.33	0.57
2:A:664:U:H2'	2:A:665:A:C8	2.39	0.57
20:S:145:ASN:HB2	20:S:150:VAL:HG11	1.86	0.57
32:e:51:LEU:HD11	36:i:90:ILE:HG22	1.86	0.57
48:SD:91:VAL:HG23	48:SD:92:ALA:H	1.68	0.57
49:SZ:20:TYR:HB3	49:SZ:27:PHE:HB2	1.85	0.57
54:SI:93:HIS:O	54:SI:94:ILE:HD13	2.04	0.57
54:SI:93:HIS:C	54:SI:94:ILE:HD13	2.29	0.57
58:SB:127:GLN:OE1	58:SB:128:ASN:N	2.28	0.57
64:SP:53:THR:O	64:SP:57:LEU:HG	2.03	0.57
66:SR:104:VAL:HG22	66:SR:132:ALA:HB1	1.86	0.57
75:Sb:14:ILE:HG23	75:Sb:65:LEU:HD11	1.85	0.57
1:2:1001:A:OP1	46:t:38:A:O2'	2.21	0.57
2:A:791:A:H2'	2:A:792:G:H8	1.69	0.57
2:A:1805:C:H2'	2:A:1806:A:C8	2.39	0.57
2:A:2209:U:H4'	2:A:2210:G:H5'	1.85	0.57
5:D:74:GLU:OE1	5:D:74:GLU:N	2.37	0.57
9:H:45:GLY:O	9:H:48:ARG:NH1	2.37	0.57
12:K:89:LYS:HG2	12:K:145:VAL:HG22	1.86	0.57
21:T:7:GLN:OE1	21:T:7:GLN:N	2.37	0.57
54:SI:126:GLU:CD	54:SI:126:GLU:H	2.11	0.57
58:SB:29:ILE:HD11	58:SB:33:VAL:HG21	1.86	0.57
1:2:78:A:C4	68:ST:175:ILE:HD12	2.39	0.57
1:2:1262:U:H2'	1:2:1263:G:H8	1.69	0.57
2:A:691:A:N1	4:C:28:C:O2'	2.34	0.57
4:C:60:U:O4	37:j:59:ASN:ND2	2.36	0.57
7:F:92:ASN:HD22	7:F:100:PHE:HB2	1.68	0.57
13:L:69:ARG:O	13:L:70:ILE:C	2.47	0.57
24:W:92:TRP:HB3	24:W:107:PHE:CE1	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:f:6:ASP:O	33:f:8:VAL:HG13	2.05	0.57
35:h:49:ILE:HD11	35:h:71:VAL:HG23	1.86	0.57
37:j:7:TYR:O	37:j:11:THR:HG23	2.04	0.57
53:SA:137:VAL:HB	53:SA:185:LYS:HB3	1.86	0.57
64:SP:144:ILE:HG12	64:SP:158:VAL:HB	1.86	0.57
66:SR:143:TYR:O	75:Sb:98:GLN:NE2	2.37	0.57
67:SS:65:LEU:HD23	67:SS:70:VAL:HG21	1.84	0.57
80:SK:47:TYR:HE1	80:SK:51:LEU:HD21	1.68	0.57
1:2:336:G:O6	70:SV:5:ARG:NH1	2.37	0.57
1:2:565:C:O2'	1:2:1755:A:N1	2.32	0.57
2:A:68:C:H41	2:A:314:U:HO2'	1.50	0.57
2:A:1057:A:OP1	10:I:98:LYS:NZ	2.38	0.57
11:J:151:VAL:C	11:J:152:LEU:HD12	2.29	0.57
13:L:73:ASN:O	13:L:77:THR:HG23	2.05	0.57
65:SQ:184:LEU:O	65:SQ:187:LYS:HG2	2.05	0.57
1:2:197:A:H2'	1:2:198:A:H8	1.69	0.57
2:A:664:U:H2'	2:A:665:A:H8	1.69	0.57
2:A:1184:A:H5''	16:O:59:ASN:HD22	1.69	0.57
2:A:2746:A:H4'	8:G:176:SER:HB2	1.87	0.57
6:E:347:SER:OG	6:E:348:ARG:N	2.36	0.57
9:H:67:GLY:HA3	9:H:74:VAL:HB	1.86	0.57
60:SH:69:ILE:HG23	60:SH:73:MET:HE3	1.85	0.57
1:2:123:G:H21	67:SS:146:THR:HG21	1.70	0.57
2:A:259:C:H2'	2:A:260:C:C6	2.39	0.57
2:A:991:G:N2	23:V:59:GLY:O	2.38	0.57
2:A:2446:U:H2'	2:A:2447:A:H8	1.68	0.57
2:A:3122:A:N1	12:K:70:THR:HG21	2.19	0.57
5:D:195:SER:O	5:D:195:SER:OG	2.23	0.57
7:F:219:LEU:HD12	7:F:225:VAL:HG11	1.86	0.57
17:P:186:GLY:O	17:P:190:THR:HG23	2.04	0.57
25:X:45:ARG:HD2	25:X:46:LEU:H	1.69	0.57
41:n:15:LYS:O	41:n:19:GLN:HG3	2.04	0.57
46:t:74:C:N3	46:t:75:C:N4	2.53	0.57
58:SB:140:THR:HG21	58:SB:175:LEU:HD21	1.87	0.57
1:2:144:U:H2'	1:2:145:A:C8	2.40	0.57
7:F:288:ARG:HB3	7:F:288:ARG:HH11	1.69	0.57
21:T:132:PHE:CD2	21:T:138:LEU:HD13	2.39	0.57
66:SR:220:ASN:OD1	74:Sa:25:LYS:NZ	2.36	0.57
67:SS:61:VAL:O	67:SS:64:ILE:HG22	2.04	0.57
1:2:58:U:O2'	1:2:451:A:N3	2.38	0.57
1:2:1180:C:H1'	52:SE:128:HIS:HE1	1.69	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1618:G:O2'	4:C:126:A:N1	2.37	0.57
6:E:300:ARG:HH12	68:ST:22:HIS:HB3	1.70	0.57
7:F:2:SER:OG	7:F:3:ARG:N	2.33	0.57
11:J:159:PRO:HB3	17:P:26:ARG:HH21	1.68	0.57
20:S:76:ALA:HA	20:S:79:LYS:HG3	1.86	0.57
59:SF:46:PHE:HD1	59:SF:49:TYR:HD2	1.53	0.57
61:SO:7:LEU:HG	61:SO:315:VAL:HA	1.85	0.57
72:SX:83:THR:HG22	72:SX:110:HIS:HA	1.86	0.57
1:2:1602:C:H2'	1:2:1603:U:C6	2.40	0.57
2:A:503:C:H2'	2:A:504:A:H8	1.70	0.57
2:A:797:U:H2'	2:A:798:G:H8	1.70	0.57
2:A:1080:A:H2'	2:A:1081:U:H3'	1.86	0.57
2:A:2585:G:N7	11:J:47:SER:OG	2.37	0.57
44:q:71:ARG:HH21	44:q:80:ARG:HE	1.50	0.57
61:SO:117:LYS:HZ1	61:SO:158:PRO:HA	1.69	0.57
63:SG:50:ILE:O	63:SG:54:THR:HG23	2.04	0.57
67:SS:11:ARG:HG3	67:SS:28:ALA:HB2	1.87	0.57
70:SV:78:ILE:HG23	70:SV:102:VAL:HG21	1.87	0.57
1:2:1280:C:H5''	55:SJ:69:LYS:HG2	1.87	0.57
2:A:170:G:C2	2:A:249:U:O2	2.57	0.57
2:A:2515:A:N1	2:A:2594:C:N4	2.51	0.57
61:SO:314:GLN:OE1	61:SO:314:GLN:N	2.36	0.57
64:SP:83:GLN:OE1	64:SP:99:ALA:HB1	2.05	0.57
65:SQ:29:TRP:HB3	65:SQ:45:LYS:HD3	1.87	0.57
65:SQ:144:ARG:NH2	65:SQ:206:PRO:O	2.37	0.57
1:2:1344:A:O2'	1:2:1345:A:O5'	2.23	0.56
2:A:1551:C:O2'	2:A:2170:U:O2'	2.21	0.56
2:A:1889:G:OP1	6:E:246:LEU:N	2.33	0.56
2:A:2495:C:H3'	2:A:2496:C:H5''	1.86	0.56
5:D:229:ALA:O	5:D:234:LYS:NZ	2.37	0.56
6:E:214:MET:HA	6:E:214:MET:HE3	1.86	0.56
8:G:126:GLU:OE1	8:G:126:GLU:N	2.38	0.56
22:U:77:VAL:HG12	22:U:126:VAL:HG13	1.87	0.56
35:h:19:SER:OG	35:h:20:LYS:N	2.37	0.56
55:SJ:106:ILE:O	55:SJ:106:ILE:HG13	2.04	0.56
2:A:63:A:N3	2:A:78:U:O2'	2.35	0.56
2:A:80:G:O6	2:A:106:A:N6	2.37	0.56
5:D:53:GLY:O	5:D:192:LYS:NZ	2.37	0.56
18:Q:43[A]:ILE:HD11	18:Q:138[A]:LEU:HD13	1.87	0.56
24:W:33:TYR:HH	24:W:80:THR:HG1	1.53	0.56
30:c:22:ILE:H	30:c:22:ILE:HD12	1.70	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SC:7:ASP:OD1	51:SC:7:ASP:N	2.37	0.56
54:SI:42:GLY:HA2	54:SI:84:LYS:HD2	1.88	0.56
65:SQ:83:LYS:HZ1	65:SQ:106:THR:HG22	1.70	0.56
65:SQ:196:GLU:OE2	65:SQ:196:GLU:N	2.28	0.56
70:SV:27:PHE:HB3	70:SV:49:ARG:NH2	2.21	0.56
74:Sa:62:ARG:HA	74:Sa:62:ARG:HE	1.70	0.56
1:2:680:U:O4	1:2:682:C:N4	2.33	0.56
1:2:1237:G:H2'	1:2:1238:A:C8	2.40	0.56
1:2:1374:C:H2'	1:2:1375:A:H8	1.70	0.56
1:2:1397:U:O2'	1:2:1401:A:N6	2.38	0.56
1:2:1504:G:H21	1:2:1563:C:H1'	1.70	0.56
1:2:1583:A:O2'	1:2:1585:U:O4'	2.23	0.56
2:A:260:C:H2'	2:A:261:U:C6	2.40	0.56
2:A:1729:A:N6	45:r:41:PHE:O	2.34	0.56
2:A:2122:G:O6	2:A:2332:A:N6	2.38	0.56
2:A:2144:A:OP1	2:A:2323:G:N2	2.36	0.56
2:A:2437:G:N2	2:A:2510:U:O2	2.33	0.56
5:D:108:PRO:O	5:D:111:THR:OG1	2.24	0.56
11:J:50:VAL:HG21	27:Z:27:ARG:HD2	1.87	0.56
12:K:114:VAL:HG12	12:K:124:ARG:HB2	1.85	0.56
14:M:133:ARG:NH2	14:M:158:ASP:OD2	2.38	0.56
51:SC:5:LYS:O	51:SC:9:ASN:ND2	2.37	0.56
61:SO:132:LYS:HB3	61:SO:134:TRP:HE1	1.70	0.56
61:SO:177:MET:HB3	61:SO:193:ILE:HD13	1.87	0.56
75:Sb:114:GLU:CG	75:Sb:118:ARG:HH21	2.18	0.56
76:Sc:107:PHE:CE1	76:Sc:114:LYS:HD3	2.40	0.56
77:Sd:20:ARG:NH1	77:Sd:76:TYR:OH	2.38	0.56
1:2:325:G:OP1	72:SX:134:THR:OG1	2.24	0.56
2:A:337:G:OP2	7:F:196:ASN:ND2	2.38	0.56
2:A:3094:A:OP1	25:X:14:SER:OG	2.23	0.56
54:SI:34:VAL:HG22	54:SI:53:TRP:CZ3	2.41	0.56
61:SO:41:THR:OG1	61:SO:61:PHE:O	2.22	0.56
69:SU:173:TYR:O	69:SU:177:THR:OG1	2.22	0.56
2:A:548:G:H2'	2:A:549:U:H6	1.71	0.56
2:A:591:G:N2	2:A:612:U:OP1	2.35	0.56
2:A:2837:A:H2'	2:A:2845:A:N1	2.21	0.56
2:A:2951:G:H2'	2:A:2952:G:C8	2.41	0.56
7:F:132:ALA:HA	7:F:148:ILE:HD13	1.87	0.56
27:Z:91:ASN:O	27:Z:95:ILE:HD12	2.05	0.56
61:SO:192:PHE:CZ	61:SO:223:TRP:HE3	2.23	0.56
64:SP:73:VAL:HG22	64:SP:120:LEU:HD21	1.88	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SU:165:LYS:HG3	69:SU:169:PHE:CE2	2.41	0.56
71:SW:126:ARG:O	71:SW:130:THR:HG22	2.05	0.56
73:SY:62:GLN:HB2	73:SY:65:VAL:HG12	1.87	0.56
1:2:694:U:N3	69:SU:96:ARG:O	2.32	0.56
1:2:1070:C:O2'	78:Sf:17:ARG:O	2.23	0.56
2:A:2137:U:OP2	2:A:2142:A:N6	2.39	0.56
2:A:3201:C:H2'	2:A:3202:G:C8	2.39	0.56
34:g:4:LEU:H	34:g:4:LEU:HD12	1.71	0.56
53:SA:223:LYS:HB3	61:SO:143:THR:HB	1.88	0.56
72:SX:108:PRO:HB2	72:SX:135:VAL:HG12	1.87	0.56
1:2:605:A:OP2	1:2:606:A:O2'	2.19	0.56
1:2:1045:C:H2'	1:2:1046:G:H8	1.71	0.56
1:2:1339:C:O2'	1:2:1341:A:N7	2.39	0.56
1:2:1633:A:H4'	1:2:1634:C:O5'	2.03	0.56
2:A:508:U:H3	2:A:583:G:H1	1.53	0.56
2:A:633:C:O2'	35:h:21:ARG:O	2.23	0.56
2:A:3226:A:N1	2:A:3260:G:C6	2.74	0.56
13:L:47:PRO:HD2	13:L:141:LYS:HA	1.87	0.56
47:x:308:LYS:HG2	47:x:311:GLU:HB2	1.86	0.56
64:SP:11:PRO:O	64:SP:15:GLN:HG2	2.05	0.56
70:SV:11:ARG:NH2	70:SV:15:GLY:O	2.38	0.56
1:2:29:U:H2'	1:2:30:G:H8	1.71	0.56
2:A:1104:G:H2'	2:A:1105:A:H8	1.70	0.56
2:A:1188:U:OP1	2:A:1210:U:O2'	2.23	0.56
2:A:1910:A:H2'	2:A:1911:A:H8	1.69	0.56
9:H:64:LEU:HD12	9:H:65:VAL:N	2.20	0.56
47:x:281:ILE:HA	47:x:284:LEU:HD22	1.86	0.56
60:SH:52:VAL:HG11	60:SH:69:ILE:HD11	1.88	0.56
67:SS:52:LEU:CG	67:SS:54:TYR:HD2	2.19	0.56
75:Sb:2:THR:OG1	75:Sb:3:ARG:N	2.38	0.56
1:2:168:A:O2'	68:ST:176:GLN:OE1	2.24	0.56
2:A:98:G:N7	15:N:13:HIS:NE2	2.54	0.56
2:A:541:U:N3	2:A:542:G:O6	2.39	0.56
2:A:2218:G:P	38:k:68:ARG:HH22	2.29	0.56
2:A:2432:A:N6	2:A:2598:G:O6	2.38	0.56
2:A:2450:G:O2'	2:A:2451:G:O5'	2.23	0.56
26:Y:12:LYS:HA	26:Y:12:LYS:HE2	1.86	0.56
46:s:37:A:H61	80:SK:3:PRO:HG3	1.69	0.56
53:SA:202:LEU:HD23	53:SA:203:PRO:HD2	1.88	0.56
68:ST:24:ILE:HG22	68:ST:27:PHE:HE2	1.71	0.56
1:2:577:G:N3	46:s:35:A:O2'	2.35	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:926:A:C2	49:SZ:125:SER:HA	2.41	0.56
1:2:1068:C:H2'	1:2:1069:A:H8	1.71	0.56
1:2:1672:G:H2'	1:2:1673:G:C8	2.41	0.56
2:A:3251:U:H2'	2:A:3252:G:C8	2.41	0.56
8:G:120:LYS:O	8:G:248:ARG:NH1	2.39	0.56
49:SZ:112:ILE:O	50:Se:58:VAL:N	2.34	0.56
58:SB:136:ALA:O	58:SB:140:THR:HG22	2.06	0.56
63:SG:103:ASP:OD2	64:SP:41:ARG:NE	2.25	0.56
66:SR:57:PHE:CD1	74:Sa:26:ALA:HB1	2.38	0.56
76:Sc:3:LYS:HD2	76:Sc:7:ARG:HH22	1.71	0.56
1:2:512:A:H5''	71:SW:163:PRO:HG2	1.88	0.55
1:2:1524:A:N3	1:2:1590:G:O2'	2.39	0.55
1:2:1650:U:H2'	1:2:1651:A:H8	1.69	0.55
2:A:1560:G:N3	2:A:1581:C:N4	2.54	0.55
2:A:3082:C:H2'	2:A:3083:G:H8	1.71	0.55
8:G:22:ARG:HB3	8:G:28:THR:HB	1.86	0.55
16:O:103:ILE:O	16:O:107:GLU:HG3	2.07	0.55
39:l:63:ARG:HH21	39:l:65:ARG:HD3	1.70	0.55
47:x:814:LYS:HA	47:x:817:GLU:OE1	2.06	0.55
55:SJ:26:LEU:HB3	55:SJ:34:LEU:HD11	1.88	0.55
61:SO:6:VAL:HA	61:SO:272:ASP:HB3	1.87	0.55
65:SQ:197:ILE:O	65:SQ:201:THR:OG1	2.22	0.55
1:2:907:A:HO2'	1:2:997:G:HO2'	1.53	0.55
2:A:35:A:O2'	2:A:809:G:N3	2.39	0.55
6:E:360:ASP:OD1	6:E:364:LYS:NZ	2.39	0.55
7:F:264:SER:OG	7:F:265:GLU:N	2.39	0.55
12:K:173:ARG:HB2	42:o:127:LEU:HD22	1.86	0.55
26:Y:2:LYS:NZ	26:Y:4:GLU:OE2	2.39	0.55
37:j:47:VAL:O	37:j:51:ILE:HG23	2.06	0.55
1:2:78:A:H61	68:ST:178:LEU:HD11	1.71	0.55
1:2:1037:C:H1'	75:Sb:16:ASN:HD22	1.71	0.55
1:2:1322:A:H2'	1:2:1323:C:C6	2.41	0.55
1:2:1388:A:H5''	63:SG:48:ASN:HD21	1.72	0.55
1:2:1504:G:N3	1:2:1563:C:O2'	2.38	0.55
2:A:629:U:H2'	2:A:630:A:C8	2.41	0.55
2:A:1695:U:O2'	2:A:1749:A:N1	2.38	0.55
5:D:112:ILE:HD13	45:r:79:VAL:HG22	1.87	0.55
10:I:127:LEU:HD23	10:I:130:ILE:HD11	1.88	0.55
47:x:619:MET:HG2	47:x:630:ALA:HB2	1.87	0.55
69:SU:85:PHE:HB3	69:SU:88:ARG:HD2	1.88	0.55
75:Sb:37:PHE:O	75:Sb:41:MET:HG2	2.07	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:961:U:H2'	1:2:962:C:C6	2.42	0.55
1:2:1145:U:H4'	66:SR:88:LYS:HE2	1.89	0.55
1:2:1689:A:H2'	1:2:1690:G:C8	2.41	0.55
2:A:57:A:H2'	2:A:58:G:C8	2.41	0.55
2:A:836:A:H4'	45:r:12:GLY:HA3	1.88	0.55
2:A:1776:G:H2'	2:A:1777:U:C6	2.42	0.55
2:A:2201:G:H21	5:D:224:THR:HG21	1.71	0.55
2:A:3116:G:OP1	2:A:3116:G:N2	2.37	0.55
5:D:37:ARG:HG2	5:D:38:HIS:CD2	2.42	0.55
23:V:99:SER:OG	23:V:101:CYS:SG	2.64	0.55
29:b:25:ILE:HA	29:b:43:VAL:HG12	1.89	0.55
51:SC:50:THR:HG22	51:SC:55:VAL:HB	1.88	0.55
55:SJ:102:ARG:HA	55:SJ:105:GLN:HE22	1.71	0.55
56:SL:43:ASN:HB2	58:SB:160:VAL:HG23	1.88	0.55
58:SB:29:ILE:HD12	58:SB:30:PRO:HD2	1.89	0.55
61:SO:66:HIS:CG	61:SO:67:ILE:H	2.25	0.55
73:SY:48:SER:O	73:SY:52:VAL:HG13	2.07	0.55
2:A:1168:U:H1'	10:I:209:ASN:HD22	1.72	0.55
2:A:1189:C:H41	18:Q:133[A]:ARG:HH21	1.54	0.55
2:A:1336:U:H2'	2:A:1337:A:H8	1.72	0.55
2:A:1361:U:H2'	2:A:1362:G:C8	2.42	0.55
2:A:1606:U:O4	36:i:9:ARG:NH1	2.40	0.55
2:A:3114:A:OP2	2:A:3115:C:O2'	2.23	0.55
2:A:3214:U:O4	16:O:124:ARG:NH2	2.38	0.55
2:A:3306:U:OP1	6:E:269:GLN:NE2	2.39	0.55
4:C:6:U:H2'	4:C:7:U:H6	1.70	0.55
5:D:57:PRO:HG2	5:D:78:ALA:HB3	1.89	0.55
11:J:178:ALA:HB2	11:J:218:ILE:HD13	1.87	0.55
27:Z:51:VAL:HG21	37:j:62:GLN:HB3	1.88	0.55
62:SN:130:VAL:HG11	62:SN:143:LYS:HB3	1.87	0.55
65:SQ:113:MET:HE1	65:SQ:211:HIS:ND1	2.22	0.55
66:SR:57:PHE:CZ	66:SR:138:PRO:HD3	2.41	0.55
72:SX:57:LYS:HE2	72:SX:131:ILE:HG23	1.88	0.55
1:2:895:G:N1	1:2:918:U:C2	2.74	0.55
1:2:1232:U:O4	62:SN:97:LYS:HD2	2.07	0.55
1:2:1603:U:OP2	59:SF:132:LYS:NZ	2.37	0.55
2:A:2988:C:OP1	18:Q:65[A]:ASN:ND2	2.39	0.55
12:K:115:ARG:HH21	12:K:123:ILE:HG23	1.70	0.55
46:t:64:A:H2'	46:t:65:G:H8	1.71	0.55
54:SI:47:PRO:HG3	54:SI:53:TRP:CH2	2.41	0.55
54:SI:61:VAL:O	54:SI:64:HIS:N	2.39	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SU:81:LEU:HB3	69:SU:90:VAL:HG11	1.89	0.55
74:Sa:71:ARG:HH21	78:Sf:3:LEU:HD23	1.72	0.55
2:A:288:C:H2'	2:A:289:A:H8	1.71	0.55
2:A:2184:U:H2'	2:A:2185:G:H8	1.72	0.55
2:A:2429:G:H2'	2:A:2430:A:H8	1.71	0.55
12:K:23:ARG:HH11	12:K:39:LYS:CA	2.20	0.55
15:N:149:GLN:N	15:N:149:GLN:OE1	2.40	0.55
47:x:610:ASP:HB2	47:x:615:ARG:HH21	1.70	0.55
55:SJ:63:LEU:HB2	55:SJ:84:MET:HB2	1.89	0.55
59:SF:75:VAL:O	59:SF:79:TYR:HD1	1.90	0.55
69:SU:125:ILE:HG12	69:SU:176:LEU:HD11	1.88	0.55
2:A:307:A:H2'	2:A:308:A:H8	1.71	0.55
2:A:370:U:O4	2:A:374:A:N7	2.40	0.55
3:B:89:G:N2	3:B:92:A:OP2	2.40	0.55
4:C:139:U:H2'	4:C:140:G:H8	1.72	0.55
7:F:16:THR:HG23	7:F:18:ASN:H	1.72	0.55
7:F:23:PRO:HB2	7:F:258:LEU:HD22	1.89	0.55
9:H:80:ASN:HB3	9:H:83:TYR:HD2	1.72	0.55
18:Q:189[A]:ASP:OD1	18:Q:189[A]:ASP:N	2.39	0.55
37:j:76:GLN:O	37:j:81:ARG:NH2	2.40	0.55
53:SA:16:VAL:HG11	57:SM:22:ARG:HH12	1.71	0.55
61:SO:199:ILE:HA	61:SO:214:ALA:HB3	1.89	0.55
69:SU:9:LEU:HD11	69:SU:13:PRO:HB3	1.89	0.55
69:SU:62:VAL:HB	69:SU:94:ALA:HA	1.88	0.55
1:2:93:A:H61	1:2:396:G:H1'	1.71	0.55
1:2:434:G:N1	1:2:437:A:OP2	2.38	0.55
1:2:923:A:H2'	1:2:924:A:C8	2.42	0.55
2:A:158:G:H2'	2:A:159:A:C8	2.42	0.55
2:A:919:U:H5''	2:A:920:A:H5'	1.88	0.55
2:A:1717:U:H2'	2:A:1718:G:C8	2.42	0.55
2:A:3042:U:OP2	2:A:3092:C:N4	2.40	0.55
10:I:234:GLU:OE1	10:I:234:GLU:N	2.40	0.55
34:g:100:ILE:O	34:g:105:ARG:NH1	2.40	0.55
48:SD:73:LYS:HA	48:SD:76:GLU:OE2	2.07	0.55
52:SE:78:THR:HG21	52:SE:116:LEU:HD11	1.89	0.55
80:SK:76:ALA:O	80:SK:80:LEU:HG	2.06	0.55
1:2:1085:G:OP2	66:SR:161:LYS:NZ	2.40	0.55
2:A:286:U:H2'	2:A:287:G:C8	2.41	0.55
2:A:417:A:H2'	2:A:418:A:C8	2.42	0.55
2:A:1634:G:N7	29:b:17:ARG:NH2	2.55	0.55
12:K:66:ALA:O	12:K:70:THR:HG23	2.07	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:V:18:ASP:HB2	23:V:21:LYS:HG3	1.89	0.55
38:k:42:SER:O	38:k:46:GLU:HG2	2.07	0.55
45:r:46:THR:OG1	45:r:57:CYS:SG	2.59	0.55
69:SU:62:VAL:HG22	69:SU:70:PHE:CE2	2.42	0.55
71:SW:170:GLY:O	71:SW:176:ASN:ND2	2.40	0.55
1:2:564:G:N1	1:2:580:A:OP2	2.30	0.54
1:2:710:U:H3	1:2:728:U:H3'	1.71	0.54
2:A:1322:U:H2'	2:A:1323:G:H8	1.72	0.54
2:A:1411:C:H2'	2:A:1412:G:H8	1.71	0.54
2:A:1516:C:H2'	2:A:1517:G:C8	2.42	0.54
2:A:1777:U:H2'	2:A:1778:G:C8	2.42	0.54
2:A:1935:G:H2'	2:A:1936:A:H8	1.72	0.54
2:A:2423:U:H2'	2:A:2424:A:C8	2.42	0.54
6:E:282:ILE:HD11	6:E:322:ILE:HD12	1.89	0.54
9:H:39:VAL:O	9:H:87:THR:OG1	2.23	0.54
23:V:88:ARG:NH2	31:d:31:SER:OG	2.40	0.54
25:X:37:ILE:HG12	25:X:59:MET:O	2.07	0.54
31:d:11:ASN:O	31:d:11:ASN:ND2	2.27	0.54
33:f:23:VAL:HG11	33:f:31:ARG:HG2	1.89	0.54
39:l:21:ARG:HE	39:l:39:TYR:HA	1.70	0.54
60:SH:15:LEU:HD23	60:SH:17:LEU:HD11	1.89	0.54
71:SW:44:ARG:O	71:SW:48:GLN:HG3	2.07	0.54
1:2:155:U:H4'	68:ST:59:GLN:HA	1.89	0.54
2:A:289:A:H2'	2:A:290:G:H8	1.72	0.54
2:A:655:C:H2'	2:A:656:A:C8	2.42	0.54
2:A:939:U:OP2	30:c:26:ARG:NH2	2.40	0.54
2:A:1516:C:H2'	2:A:1517:G:H8	1.71	0.54
2:A:2515:A:H5''	17:P:28:TRP:CD1	2.42	0.54
6:E:370:PHE:HB3	6:E:375:GLU:HG3	1.89	0.54
12:K:180:TYR:HB2	42:o:85:LEU:HD21	1.89	0.54
14:M:17:LEU:HD12	14:M:129:VAL:HG22	1.88	0.54
25:X:68:GLU:O	25:X:72:LYS:NZ	2.38	0.54
60:SH:26:ILE:HD11	60:SH:31:ALA:HA	1.89	0.54
64:SP:139:VAL:HG13	64:SP:141:ILE:HG12	1.88	0.54
69:SU:90:VAL:O	69:SU:91:ILE:HD13	2.07	0.54
1:2:472:U:H2'	1:2:473:A:C8	2.41	0.54
1:2:1606:C:H2'	1:2:1607:G:C8	2.42	0.54
2:A:799:G:H2'	2:A:801:A:H62	1.71	0.54
2:A:1361:U:H2'	2:A:1362:G:H8	1.71	0.54
2:A:1728:G:H5''	2:A:1729:A:H3'	1.89	0.54
2:A:1803:C:H2'	2:A:1804:A:H8	1.72	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2166:A:C4	17:P:74:PRO:HB3	2.43	0.54
2:A:3375:A:O2'	2:A:3378:C:OP2	2.22	0.54
12:K:41:ILE:HG13	12:K:43:VAL:HG13	1.89	0.54
18:Q:143[A]:THR:HG22	18:Q:147[A]:TRP:HB3	1.89	0.54
47:x:21:ASN:HD21	47:x:122:THR:HA	1.72	0.54
47:x:241:MET:HA	47:x:241:MET:HE3	1.88	0.54
65:SQ:24:PHE:HA	65:SQ:27:LYS:HB2	1.90	0.54
70:SV:84:HIS:CD2	70:SV:90:LEU:HD12	2.42	0.54
71:SW:48:GLN:O	71:SW:52:ILE:HG12	2.06	0.54
76:Sc:65:ASN:ND2	76:Sc:116:ASP:OD2	2.39	0.54
2:A:49:A:OP1	17:P:191:TRP:NE1	2.37	0.54
2:A:394:G:N1	2:A:397:A:OP2	2.34	0.54
2:A:1255:C:H2'	2:A:1256:G:C8	2.42	0.54
21:T:148:ASP:HA	21:T:151:ARG:HH21	1.72	0.54
29:b:89:VAL:HA	29:b:92:PHE:HD2	1.71	0.54
46:t:28:A:H2'	46:t:29:G:H8	1.72	0.54
54:SI:8:ASP:HA	59:SF:35:PRO:HD3	1.89	0.54
63:SG:21:TYR:HD2	63:SG:71:PHE:HB2	1.72	0.54
1:2:483:A:H2'	1:2:484:C:O4'	2.07	0.54
1:2:1695:G:H2'	1:2:1696:G:H8	1.72	0.54
2:A:1096:U:OP2	23:V:116:ARG:NH2	2.36	0.54
2:A:1646:G:H22	2:A:1808:G:H1'	1.72	0.54
2:A:3252:G:H2'	2:A:3253:G:C8	2.42	0.54
6:E:10:ARG:NH2	6:E:263:SER:O	2.38	0.54
10:I:234:GLU:O	10:I:237:ASN:ND2	2.40	0.54
20:S:67:ILE:H	20:S:67:ILE:HD12	1.73	0.54
30:c:84:GLU:HA	30:c:87:ARG:HB3	1.88	0.54
64:SP:59:LEU:O	64:SP:63:ILE:HG12	2.07	0.54
70:SV:48:THR:OG1	70:SV:51:GLY:O	2.22	0.54
1:2:327:U:O4	1:2:328:A:N6	2.41	0.54
2:A:1109:U:H2'	2:A:1110:U:C6	2.43	0.54
2:A:1447:G:N2	2:A:2356:A:OP2	2.39	0.54
2:A:1665:C:H2'	2:A:1666:G:H8	1.73	0.54
7:F:82:THR:HG22	7:F:84:ARG:H	1.73	0.54
7:F:135:VAL:HG13	7:F:142:VAL:HG21	1.89	0.54
47:x:22:MET:N	47:x:22:MET:SD	2.81	0.54
47:x:281:ILE:HD12	47:x:282:PHE:N	2.23	0.54
2:A:3268:A:H5'	9:H:46:ARG:HH22	1.72	0.54
15:N:168:ARG:O	15:N:172:LEU:HG	2.07	0.54
17:P:120:TRP:HE1	17:P:123:GLN:HB2	1.71	0.54
21:T:98:ARG:O	21:T:102:LEU:HG	2.08	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SS:64:ILE:HD11	77:Sd:17:LEU:HB3	1.90	0.54
1:2:187:G:N2	1:2:197:A:N7	2.56	0.54
2:A:23:A:OP1	39:l:44:THR:N	2.34	0.54
2:A:1108:U:H2'	2:A:1109:U:C6	2.43	0.54
2:A:2526:C:H2'	2:A:2527:G:C8	2.43	0.54
30:c:2:PRO:O	30:c:6:THR:OG1	2.22	0.54
73:SY:91:LEU:HB3	73:SY:122:ILE:HG22	1.89	0.54
80:SK:65:LEU:HD11	80:SK:71:ILE:HD11	1.88	0.54
1:2:1223:A:H2'	1:2:1224:A:H8	1.73	0.54
1:2:1292:G:H21	64:SP:111:ILE:HG21	1.73	0.54
2:A:67:A:O2'	2:A:315:C:O2	2.25	0.54
2:A:946:U:H2'	2:A:947:G:H8	1.73	0.54
2:A:2685:C:H2'	2:A:2686:A:H8	1.72	0.54
2:A:2735:U:H2'	2:A:2736:A:C8	2.43	0.54
3:B:87:G:H2'	3:B:88:G:H8	1.73	0.54
30:c:36:GLY:HA3	30:c:40:HIS:CE1	2.43	0.54
37:j:45:LYS:O	37:j:49:LYS:HG2	2.07	0.54
47:x:171:LYS:HD3	47:x:274:ASN:HB2	1.90	0.54
61:SO:127:ARG:HA	61:SO:150:TRP:HD1	1.72	0.54
65:SQ:181:LEU:HD13	65:SQ:184:LEU:HD23	1.90	0.54
1:2:1163:A:H4'	58:SB:166:ARG:HH22	1.73	0.54
1:2:1727:G:H2'	1:2:1728:A:C8	2.43	0.54
2:A:832:G:H1	2:A:862:U:H3	1.54	0.54
2:A:1460:A:H2'	2:A:1461:A:H8	1.73	0.54
3:B:23:A:H1'	3:B:121:U:H3'	1.90	0.54
6:E:220:VAL:O	6:E:334:ARG:NH1	2.41	0.54
13:L:49:CYS:HG	13:L:51:HIS:HE2	1.56	0.54
16:O:60:LEU:HD13	22:U:152:LEU:HD11	1.89	0.54
40:m:55:VAL:C	40:m:56:ILE:HD13	2.33	0.54
55:SJ:109:GLU:OE2	55:SJ:109:GLU:N	2.41	0.54
64:SP:71:GLU:OE2	64:SP:71:GLU:N	2.41	0.54
65:SQ:198:GLU:O	65:SQ:202:LYS:HB3	2.08	0.54
1:2:92:A:N6	68:ST:89:ASP:OD2	2.41	0.53
1:2:896:U:H2'	1:2:897:C:C6	2.43	0.53
2:A:242:C:H2'	2:A:243:G:H8	1.72	0.53
2:A:1493:G:N3	41:n:13:MET:HE1	2.23	0.53
2:A:2366:C:H2'	2:A:2367:A:C8	2.43	0.53
2:A:2947:G:C2	6:E:250:ALA:HB1	2.43	0.53
15:N:79:GLU:OE2	15:N:112:ASN:ND2	2.40	0.53
22:U:26:ARG:NH1	23:V:150:THR:OG1	2.41	0.53
25:X:10:LYS:NZ	25:X:53:SER:OG	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Z:134:ASP:OD1	27:Z:135:ILE:N	2.41	0.53
51:SC:35:ILE:HD12	51:SC:35:ILE:H	1.72	0.53
61:SO:114:ASP:OD2	61:SO:155:ARG:NH1	2.41	0.53
61:SO:123:ILE:HG21	61:SO:169:ILE:HG21	1.89	0.53
69:SU:58:LEU:HD11	69:SU:88:ARG:HD3	1.90	0.53
1:2:250:C:H2'	1:2:251:A:H8	1.74	0.53
1:2:898:A:N1	1:2:911:U:O2'	2.36	0.53
1:2:953:G:H2'	1:2:954:G:C8	2.41	0.53
1:2:1409:G:N1	1:2:1412:G:OP2	2.41	0.53
1:2:1564:U:H2'	1:2:1565:C:C6	2.43	0.53
2:A:1601:U:OP1	21:T:42:ARG:NH2	2.39	0.53
13:L:140:THR:HG21	13:L:148:VAL:HG21	1.88	0.53
21:T:4:LEU:HD22	21:T:32:ILE:HG22	1.90	0.53
47:x:120:ARG:HA	47:x:149:GLU:OE2	2.09	0.53
50:Se:37:LYS:HG2	50:Se:72:HIS:CD2	2.43	0.53
61:SO:240:VAL:HG22	61:SO:256:THR:HG22	1.90	0.53
64:SP:189:VAL:HA	74:Sa:44:ARG:HH22	1.73	0.53
66:SR:235:LEU:HD21	74:Sa:54:ALA:HB2	1.90	0.53
1:2:571:G:H5''	76:Sc:114:LYS:HD2	1.90	0.53
1:2:710:U:N3	1:2:729:G:OP2	2.41	0.53
2:A:346:C:N4	2:A:349:A:OP2	2.41	0.53
2:A:1256:G:H2'	2:A:1257:C:C6	2.44	0.53
2:A:1662:G:H22	2:A:1787:A:H2	1.56	0.53
6:E:159:ARG:HG2	6:E:182:GLN:HA	1.90	0.53
13:L:211:ARG:HG2	13:L:212:GLU:OE1	2.09	0.53
32:e:44:ILE:HG21	32:e:53:LYS:HG3	1.90	0.53
38:k:52:PRO:HA	38:k:55:ARG:HE	1.73	0.53
44:q:24:LYS:O	44:q:72:LEU:HA	2.08	0.53
67:SS:45:ILE:HD12	67:SS:61:VAL:HG11	1.89	0.53
2:A:712:G:N2	2:A:754:G:O3'	2.41	0.53
2:A:760:G:N2	2:A:770:G:N3	2.56	0.53
2:A:1408:G:OP2	34:g:31:ASN:ND2	2.41	0.53
2:A:1888:U:OP1	6:E:247:ARG:NH1	2.42	0.53
7:F:59:GLN:O	39:l:52:LYS:NZ	2.38	0.53
15:N:6:ASN:O	20:S:164:ARG:NH1	2.41	0.53
25:X:37:ILE:HG21	25:X:61:THR:HG23	1.90	0.53
58:SB:58:LEU:HD13	58:SB:138:THR:HG22	1.90	0.53
67:SS:229:GLY:HA2	67:SS:235:TYR:CD2	2.43	0.53
75:Sb:41:MET:HE1	75:Sb:129:VAL:HG21	1.90	0.53
1:2:147:A:H62	1:2:167:U:H3	1.57	0.53
1:2:461:G:H2'	1:2:462:G:H8	1.73	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2513:U:H1'	11:J:238:LEU:HD23	1.89	0.53
5:D:20:THR:HG23	5:D:23:ARG:HG3	1.90	0.53
5:D:45:VAL:HG12	5:D:61:VAL:HG12	1.91	0.53
17:P:99:ARG:HH21	17:P:167:THR:HB	1.74	0.53
74:Sa:1:MET:HG3	74:Sa:10:GLU:OE1	2.08	0.53
75:Sb:114:GLU:HG3	75:Sb:118:ARG:HH21	1.74	0.53
1:2:1171:A:O2'	1:2:1570:A:N3	2.41	0.53
2:A:120:G:N2	11:J:123:GLN:O	2.41	0.53
2:A:217:U:O2	28:a:103:LYS:NZ	2.41	0.53
2:A:547:G:H2'	2:A:548:G:C8	2.44	0.53
2:A:745:C:H2'	2:A:746:A:H8	1.73	0.53
2:A:1062:A:H5''	2:A:1063:G:H5'	1.90	0.53
2:A:2565:U:H3	2:A:2576:G:H1	1.56	0.53
2:A:2660:G:H4'	2:A:2749:G:H22	1.74	0.53
2:A:2741:C:HO2'	44:q:20:HIS:H	1.57	0.53
11:J:85:ASN:O	11:J:89:GLU:HG2	2.09	0.53
47:x:147:LEU:HD13	47:x:192:TYR:HB2	1.91	0.53
47:x:719:LEU:HD21	47:x:835:TRP:CD2	2.43	0.53
66:SR:140:ARG:HB2	66:SR:222:TYR:CD2	2.43	0.53
68:ST:180:THR:HG22	68:ST:182:GLN:H	1.74	0.53
69:SU:28:GLU:HG2	69:SU:39:ARG:HG3	1.91	0.53
71:SW:60:LEU:HD21	71:SW:93:LEU:HB3	1.91	0.53
76:Sc:70:LYS:HB3	76:Sc:93:LEU:HD22	1.90	0.53
78:Sf:34:ASP:HB2	78:Sf:80:ARG:HB3	1.90	0.53
1:2:590:C:H2'	1:2:591:A:C8	2.43	0.53
2:A:1757:A:H2'	2:A:1758:G:H8	1.73	0.53
2:A:2662:G:H2'	2:A:2663:G:H8	1.74	0.53
9:H:142:ASP:O	9:H:146:LEU:HG	2.09	0.53
51:SC:22:VAL:HG11	53:SA:76:ARG:HB2	1.91	0.53
53:SA:177:MET:HE2	53:SA:177:MET:N	2.24	0.53
54:SI:57:ARG:O	54:SI:61:VAL:HG13	2.09	0.53
58:SB:45:LYS:HG3	58:SB:46:TRP:CZ3	2.44	0.53
66:SR:58:LEU:HA	74:Sa:12:TYR:HE1	1.74	0.53
1:2:461:G:H2'	1:2:462:G:C8	2.44	0.53
1:2:759:U:H2'	1:2:760:A:H8	1.72	0.53
1:2:1504:G:OP1	54:SI:98:GLY:N	2.41	0.53
2:A:726:G:N2	2:A:743:C:OP2	2.37	0.53
2:A:894:G:H4'	2:A:895:A:H5'	1.90	0.53
2:A:1717:U:H2'	2:A:1718:G:H8	1.74	0.53
2:A:1813:A:H4'	2:A:1817:G:H1'	1.90	0.53
3:B:96:U:H2'	3:B:97:A:H8	1.74	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:168:VAL:HG13	45:r:79:VAL:HG11	1.89	0.53
6:E:362:ALA:HB2	6:E:371:GLN:HB3	1.90	0.53
15:N:42:ARG:NH2	15:N:51:LEU:O	2.42	0.53
19:R:28:ASN:O	19:R:32:THR:HG23	2.09	0.53
35:h:39:GLN:OE1	35:h:39:GLN:N	2.32	0.53
37:j:12:LYS:NZ	37:j:20:GLN:OE1	2.42	0.53
40:m:5:ILE:HG23	40:m:10:GLN:HG2	1.90	0.53
55:SJ:92:ASP:O	55:SJ:93:LEU:HD23	2.09	0.53
63:SG:6:THR:HG22	63:SG:8:THR:H	1.74	0.53
73:SY:31:GLU:H	73:SY:31:GLU:CD	2.17	0.53
1:2:153:G:H2'	1:2:154:G:C8	2.42	0.53
1:2:947:U:H2'	1:2:948:G:C8	2.43	0.53
1:2:1348:A:H2'	1:2:1349:G:O4'	2.09	0.53
1:2:1383:G:H2'	1:2:1384:A:C8	2.44	0.53
1:2:1591:C:H2'	1:2:1592:A:C8	2.42	0.53
2:A:87:U:H2'	2:A:88:A:H8	1.73	0.53
2:A:1609:C:H2'	2:A:1610:G:H8	1.74	0.53
2:A:2429:G:H2'	2:A:2430:A:C8	2.44	0.53
11:J:63:LYS:O	11:J:67:ILE:HG23	2.09	0.53
46:t:23:C:H2'	46:t:24:G:C8	2.44	0.53
54:SI:77:ASN:HD21	54:SI:98:GLY:HA2	1.74	0.53
1:2:1477:G:H5'	54:SI:45:MET:HB2	1.91	0.53
2:A:788:C:H2'	2:A:789:A:H8	1.74	0.53
2:A:1250:G:H2'	2:A:1251:A:C8	2.44	0.53
2:A:2426:U:H3	2:A:2603:G:H1	1.55	0.53
6:E:282:ILE:HG13	6:E:324:VAL:HG12	1.91	0.53
7:F:237:GLN:O	7:F:246:ARG:NH1	2.38	0.53
27:Z:62:VAL:HG12	27:Z:63:ILE:HD13	1.91	0.53
35:h:18:ARG:HA	35:h:23:ASN:HA	1.91	0.53
47:x:733:ILE:HD13	47:x:743:ILE:HG21	1.90	0.53
55:SJ:21:LYS:HZ1	55:SJ:93:LEU:H	1.56	0.53
66:SR:206:THR:HB	66:SR:209:ASN:HB2	1.90	0.53
1:2:866:G:H5''	73:SY:2:GLY:HA2	1.91	0.52
1:2:925:G:C2'	1:2:926:A:H8	2.20	0.52
2:A:250:U:H5''	2:A:251:G:H2'	1.90	0.52
2:A:612:U:H2'	2:A:613:G:H8	1.74	0.52
2:A:1339:C:H2'	2:A:1340:G:H8	1.74	0.52
2:A:2948:C:OP1	6:E:244:ARG:NH2	2.41	0.52
2:A:3138:U:H2'	2:A:3139:A:H8	1.73	0.52
10:I:102:VAL:HG21	10:I:126:LEU:HD22	1.91	0.52
11:J:162:LEU:HB3	17:P:7:LEU:HD11	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:200:LEU:HD12	13:L:213:PHE:HD2	1.74	0.52
23:V:102:ARG:O	23:V:106:LEU:HG	2.08	0.52
42:o:85:LEU:O	42:o:88:LYS:HG3	2.09	0.52
46:s:23:C:H2'	46:s:24:G:H8	1.73	0.52
47:x:252:PRO:O	47:x:253:LYS:HG2	2.09	0.52
47:x:489:VAL:HA	47:x:561:VAL:HA	1.91	0.52
55:SJ:67:THR:HG21	57:SM:44:ARG:HG3	1.90	0.52
58:SB:110:ALA:O	58:SB:114:ILE:HG12	2.08	0.52
60:SH:84:TRP:NE1	60:SH:85:PHE:CD1	2.77	0.52
64:SP:56:LYS:HZ3	74:Sa:82:VAL:HG11	1.74	0.52
67:SS:163:ASP:OD1	67:SS:165:ALA:N	2.42	0.52
67:SS:212:ASP:HB3	67:SS:216:ASN:HB2	1.91	0.52
69:SU:26:GLU:O	69:SU:30:SER:OG	2.27	0.52
1:2:488:G:N7	1:2:489:C:N4	2.57	0.52
1:2:496:G:H2'	1:2:497:G:C8	2.44	0.52
2:A:29:C:O3'	17:P:172:ARG:NH1	2.42	0.52
2:A:692:A:OP1	17:P:201:ARG:NH2	2.43	0.52
2:A:2815:G:N2	2:A:2818:U:O2	2.42	0.52
2:A:3213:A:H62	16:O:124:ARG:HH12	1.57	0.52
6:E:212:ASN:ND2	6:E:353:GLU:OE1	2.42	0.52
9:H:43:LEU:HD21	9:H:85:ILE:HD11	1.90	0.52
10:I:87:VAL:HG22	10:I:114:GLY:HA3	1.92	0.52
14:M:132:ASN:HA	14:M:154:THR:HG21	1.91	0.52
15:N:4:SER:O	30:c:44:ASN:ND2	2.41	0.52
17:P:88:GLY:C	17:P:92:LEU:HD21	2.35	0.52
18:Q:80[A]:PHE:O	18:Q:84[A]:LEU:HD13	2.10	0.52
21:T:68:GLN:O	21:T:72:GLU:HG2	2.08	0.52
44:q:23:HIS:HA	44:q:73:GLU:O	2.09	0.52
53:SA:176:LEU:C	53:SA:177:MET:HE2	2.34	0.52
64:SP:177:LEU:HA	64:SP:180:GLU:OE1	2.09	0.52
1:2:751:G:H2'	1:2:752:A:C8	2.44	0.52
1:2:1049:U:H2'	1:2:1050:G:H8	1.73	0.52
1:2:1791:A:H5''	50:Se:8:ASN:HB3	1.91	0.52
2:A:196:G:H21	2:A:219:A:H61	1.57	0.52
2:A:294:U:OP2	17:P:15:GLN:NE2	2.42	0.52
2:A:3231:U:O2	2:A:3256:G:O6	2.27	0.52
3:B:11:A:N1	3:B:67:G:O2'	2.41	0.52
17:P:46:ASP:OD1	17:P:47:LYS:N	2.42	0.52
25:X:30:GLY:HA3	25:X:66:LYS:HE2	1.92	0.52
26:Y:82:ILE:HA	68:ST:131:LYS:HB2	1.91	0.52
37:j:38:ARG:HG3	37:j:39:PRO:HD2	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:s:25:C:H2'	46:s:26:G:H8	1.74	0.52
52:SE:110:GLU:OE2	52:SE:110:GLU:N	2.38	0.52
61:SO:11:GLY:CA	61:SO:52:GLN:HB2	2.37	0.52
63:SG:82:ASP:OD1	63:SG:82:ASP:N	2.43	0.52
1:2:195:G:H2'	1:2:196:G:C8	2.45	0.52
1:2:406:U:H2'	1:2:407:A:H8	1.73	0.52
1:2:888:U:O2	1:2:988:A:O2'	2.26	0.52
1:2:1253:U:H5''	62:SN:130:VAL:HG12	1.92	0.52
1:2:1483:A:H2	1:2:1607:G:H1'	1.75	0.52
2:A:353:G:O6	39:l:55:ARG:NH2	2.42	0.52
2:A:1136:A:O4'	2:A:2636:A:N6	2.43	0.52
11:J:72:PRO:HG3	17:P:18:VAL:HA	1.91	0.52
32:e:76:GLU:CD	32:e:76:GLU:H	2.17	0.52
44:q:71:ARG:NE	44:q:80:ARG:NE	2.57	0.52
47:x:793:PHE:CD1	47:x:794:PRO:HD2	2.44	0.52
49:SZ:111:ARG:NH1	50:Se:55:GLU:O	2.42	0.52
64:SP:82:GLY:O	64:SP:86:VAL:HG13	2.10	0.52
67:SS:159:THR:HB	67:SS:173:ILE:HD12	1.91	0.52
1:2:520:A:H2'	1:2:521:A:H8	1.73	0.52
2:A:835:G:O2'	2:A:857:G:N2	2.41	0.52
2:A:1177:G:OP1	2:A:1177:G:N2	2.31	0.52
2:A:1564:U:H2'	2:A:1565:G:H8	1.74	0.52
2:A:1699:A:H2'	2:A:1700:G:H8	1.75	0.52
2:A:2448:G:H2'	2:A:2449:A:H8	1.75	0.52
4:C:68:G:H2'	4:C:69:U:H6	1.75	0.52
9:H:142:ASP:HA	9:H:145:LEU:HB2	1.91	0.52
10:I:98:LYS:O	10:I:102:VAL:HG12	2.10	0.52
11:J:162:LEU:HD12	11:J:163:VAL:HG13	1.92	0.52
14:M:47:GLN:HB2	14:M:64:LYS:HE2	1.91	0.52
22:U:91:TYR:OH	22:U:93:GLU:OE2	2.27	0.52
47:x:599:LEU:HD23	47:x:599:LEU:H	1.75	0.52
47:x:822:ALA:HA	47:x:825:ARG:HH12	1.75	0.52
77:Sd:114:ARG:O	77:Sd:118:ILE:HG23	2.10	0.52
1:2:29:U:H2'	1:2:30:G:C8	2.44	0.52
1:2:322:G:O2'	1:2:323:A:OP2	2.22	0.52
1:2:520:A:H2'	1:2:521:A:C8	2.45	0.52
1:2:1227:A:H4'	1:2:1229:G:H1'	1.92	0.52
2:A:609:G:H8	7:F:310:THR:HG23	1.75	0.52
2:A:1339:C:H2'	2:A:1340:G:C8	2.45	0.52
6:E:11:HIS:HD2	6:E:235:THR:HA	1.74	0.52
16:O:72:LEU:HD11	16:O:81:VAL:HG23	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:j:54:VAL:O	37:j:58:ILE:HD12	2.09	0.52
47:x:25:ILE:HD11	47:x:127:VAL:HG12	1.92	0.52
51:SC:55:VAL:HG22	51:SC:68:LEU:HD23	1.91	0.52
53:SA:161:GLY:O	53:SA:164:VAL:HG22	2.10	0.52
59:SF:22:VAL:HG12	59:SF:92:TYR:HD2	1.74	0.52
60:SH:69:ILE:O	60:SH:73:MET:HG2	2.09	0.52
61:SO:151:VAL:HA	61:SO:173:GLY:HA2	1.91	0.52
65:SQ:113:MET:HE3	65:SQ:142:PHE:CE1	2.45	0.52
68:ST:180:THR:HG22	68:ST:182:GLN:N	2.25	0.52
73:SY:128:TYR:O	73:SY:132:VAL:HG12	2.10	0.52
1:2:809:A:H2'	1:2:810:G:C8	2.45	0.52
1:2:886:U:H2'	1:2:887:A:H8	1.75	0.52
1:2:1524:A:H2'	1:2:1525:A:C8	2.45	0.52
2:A:26:A:H61	2:A:59:G:H1	1.58	0.52
2:A:114:A:H5''	17:P:49:ARG:HH21	1.74	0.52
2:A:728:G:H5''	20:S:43:PRO:HB2	1.92	0.52
2:A:2376:G:H2'	2:A:2377:G:C8	2.45	0.52
7:F:280:ILE:O	20:S:123:THR:OG1	2.27	0.52
10:I:55:TYR:HE1	10:I:189:ILE:HG21	1.74	0.52
14:M:63:GLU:N	14:M:63:GLU:OE2	2.42	0.52
23:V:106:LEU:O	23:V:109:VAL:HG12	2.10	0.52
39:l:21:ARG:O	39:l:22:CYS:C	2.52	0.52
48:SD:42:ALA:HB1	48:SD:47:GLU:HG3	1.92	0.52
51:SC:5:LYS:O	51:SC:5:LYS:HD2	2.09	0.52
51:SC:76:LEU:HA	51:SC:79:TYR:HB3	1.90	0.52
66:SR:207:LEU:HD12	66:SR:211:LEU:HD23	1.91	0.52
68:ST:48:TYR:HB3	68:ST:50:PHE:CE1	2.43	0.52
70:SV:87:ASN:ND2	70:SV:89:GLU:CD	2.68	0.52
71:SW:125:ALA:O	71:SW:129:ILE:HD12	2.09	0.52
2:A:1724:U:H1'	2:A:1725:C:C6	2.45	0.52
2:A:3275:U:O2'	35:h:99:ARG:NH1	2.42	0.52
6:E:373:PRO:HA	6:E:376:LYS:HE3	1.91	0.52
32:e:27:TYR:OH	32:e:55:GLU:OE1	2.28	0.52
46:s:58:A:O2'	46:s:60:A:OP2	2.21	0.52
61:SO:247:PRO:HB2	61:SO:249:ARG:HH12	1.74	0.52
70:SV:79:ALA:HB3	70:SV:103:GLN:HB2	1.91	0.52
73:SY:120:SER:O	73:SY:124:ARG:HG3	2.10	0.52
1:2:349:U:OP1	72:SX:104:HIS:NE2	2.38	0.52
1:2:1523:G:OP2	1:2:1523:G:N2	2.24	0.52
1:2:1787:C:H2'	1:2:1788:G:H8	1.75	0.52
2:A:129:U:H3	2:A:139:G:H1	1.58	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:161:G:H2'	2:A:162:G:C8	2.45	0.52
2:A:1884:A:OP2	33:f:31:ARG:NH2	2.43	0.52
2:A:1890:U:O4	2:A:1891:A:N6	2.43	0.52
2:A:2218:G:H2'	2:A:2219:A:H8	1.74	0.52
2:A:2954:U:H4'	2:A:2955:U:H5'	1.91	0.52
80:SK:47:TYR:O	80:SK:51:LEU:HG	2.10	0.52
1:2:382:C:H2'	1:2:383:G:H8	1.74	0.52
1:2:793:A:H5''	1:2:794:U:H5'	1.92	0.52
2:A:374:A:H4'	2:A:375:A:H5'	1.92	0.52
2:A:1595:U:O2'	2:A:1606:U:O2	2.20	0.52
2:A:2720:G:OP2	20:S:180:ARG:NH1	2.43	0.52
3:B:49:G:C8	8:G:58:LYS:HD3	2.45	0.52
15:N:55:ARG:NH1	15:N:73:ARG:O	2.43	0.52
28:a:86:THR:OG1	28:a:95:VAL:O	2.28	0.52
32:e:93:LEU:HD23	32:e:93:LEU:H	1.75	0.52
32:e:103:THR:HG23	32:e:104:LEU:HG	1.92	0.52
33:f:75:ILE:HG12	33:f:93:VAL:HG22	1.92	0.52
47:x:32:LYS:HE2	47:x:68:ILE:HD11	1.92	0.52
61:SO:178:VAL:HG13	61:SO:192:PHE:HB3	1.90	0.52
1:2:1097:U:O4	66:SR:201:ASN:ND2	2.43	0.51
1:2:1180:C:H1'	52:SE:128:HIS:CE1	2.45	0.51
2:A:501:A:H2'	2:A:502:U:C6	2.45	0.51
2:A:1616:U:H2'	2:A:1617:G:C8	2.44	0.51
2:A:1729:A:H5'	32:e:27:TYR:HB2	1.92	0.51
2:A:2228:A:H2'	2:A:2229:A:C8	2.44	0.51
2:A:2344:U:H2'	2:A:2345:A:C8	2.44	0.51
2:A:3193:C:H2'	2:A:3194:C:C6	2.45	0.51
6:E:59:ASP:OD1	6:E:59:ASP:N	2.40	0.51
12:K:23:ARG:HD2	12:K:39:LYS:HA	1.91	0.51
23:V:79:MET:HE1	23:V:81:GLY:O	2.10	0.51
39:l:33:THR:HG23	39:l:40:PRO:HG2	1.92	0.51
40:m:54:LEU:HD21	40:m:56:ILE:HD11	1.91	0.51
45:r:33:GLN:HG3	45:r:49:ARG:HD3	1.92	0.51
56:SL:25:VAL:HG13	58:SB:160:VAL:HG21	1.92	0.51
59:SF:41:PRO:C	59:SF:43:ILE:N	2.66	0.51
75:Sb:24:GLN:HE21	78:Sf:5:GLN:HG2	1.75	0.51
76:Sc:73:ARG:NH1	76:Sc:84:THR:OG1	2.42	0.51
1:2:60:U:H5''	1:2:455:C:H41	1.75	0.51
1:2:70:C:OP1	68:ST:164:LYS:NZ	2.39	0.51
1:2:147:A:N7	1:2:167:U:O4	2.43	0.51
1:2:623:A:H3'	1:2:624:G:H5''	1.91	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:616:G:H2'	2:A:617:G:C8	2.46	0.51
2:A:1448:U:OP1	19:R:67:ILE:HG22	2.10	0.51
2:A:3225:C:H2'	2:A:3226:A:C8	2.46	0.51
4:C:131:A:H4'	27:Z:93:TYR:CE2	2.45	0.51
10:I:173:LEU:HB3	10:I:178:ILE:HB	1.92	0.51
12:K:117:PHE:CD2	12:K:165:CYS:HB2	2.45	0.51
47:x:25:ILE:HG22	47:x:105:SER:OG	2.09	0.51
50:Se:41:ILE:HG22	50:Se:68:TYR:HD2	1.75	0.51
51:SC:46:LEU:O	51:SC:50:THR:HG23	2.11	0.51
1:2:5:U:H2'	1:2:6:G:C8	2.46	0.51
1:2:921:U:H2'	1:2:922:G:C8	2.46	0.51
2:A:671:U:H2'	2:A:672:A:H8	1.74	0.51
2:A:1054:A:H5''	2:A:2637:A:H61	1.75	0.51
2:A:1105:A:H2'	2:A:1106:G:C8	2.45	0.51
2:A:1219:C:O2'	2:A:1286:A:N1	2.37	0.51
2:A:2890:A:O2'	2:A:2933:A:N3	2.37	0.51
2:A:2968:G:H2'	2:A:2969:A:H8	1.75	0.51
2:A:3225:C:H42	2:A:3226:A:N6	2.09	0.51
5:D:31:THR:HB	5:D:123:ARG:HH12	1.74	0.51
7:F:33:ASP:N	7:F:33:ASP:OD1	2.44	0.51
47:x:835:TRP:O	47:x:839:TYR:HB2	2.09	0.51
58:SB:106:LYS:HG3	58:SB:109:LYS:HD2	1.91	0.51
1:2:445:A:H61	1:2:462:G:H1'	1.75	0.51
1:2:604:A:H2'	1:2:605:A:O4'	2.11	0.51
1:2:884:A:H2'	1:2:885:G:C8	2.46	0.51
1:2:1026:A:N7	1:2:1772:C:O2'	2.37	0.51
1:2:1739:C:H2'	1:2:1740:A:C8	2.43	0.51
2:A:47:C:H5''	15:N:16:LYS:HG2	1.92	0.51
2:A:797:U:H2'	2:A:798:G:C8	2.46	0.51
2:A:2163:C:H4'	5:D:8:GLN:HA	1.93	0.51
2:A:2584:G:O2'	11:J:240:ASN:ND2	2.43	0.51
8:G:34:LYS:O	8:G:38:THR:OG1	2.28	0.51
17:P:68:ARG:NH1	17:P:124:ASP:O	2.43	0.51
22:U:99:ARG:HH21	22:U:126:VAL:HB	1.75	0.51
30:c:105:LEU:HD23	30:c:127:ALA:HA	1.91	0.51
32:e:57:GLU:OE2	32:e:69:TYR:OH	2.29	0.51
39:l:66:TYR:OH	39:l:73:ARG:NH2	2.43	0.51
47:x:124:GLY:HA2	47:x:151:ILE:HG23	1.91	0.51
47:x:725:GLN:OE1	47:x:803:THR:OG1	2.22	0.51
58:SB:77:TYR:HA	58:SB:83:ARG:HG2	1.91	0.51
66:SR:137:ILE:HD12	66:SR:138:PRO:CD	2.33	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:Sc:57:LEU:HD12	79:Sg:4:VAL:HG23	1.92	0.51
76:Sc:103:LEU:HD23	76:Sc:126:LYS:HD3	1.91	0.51
1:2:384:G:H2'	1:2:385:A:H8	1.76	0.51
1:2:532:U:OP1	71:SW:132:ARG:NH1	2.44	0.51
1:2:593:U:H4'	1:2:595:G:H4'	1.93	0.51
1:2:841:U:H2'	1:2:842:C:C6	2.46	0.51
1:2:1347:U:OP1	55:SJ:90:TYR:OH	2.29	0.51
1:2:1536:G:H5'	80:SK:35:ARG:HB3	1.93	0.51
2:A:68:C:OP2	2:A:301:G:N2	2.41	0.51
2:A:127:G:H2'	2:A:128:G:H8	1.76	0.51
2:A:3014:U:H2'	2:A:3015:G:C8	2.46	0.51
4:C:71:A:H62	4:C:87:G:H21	1.57	0.51
15:N:47:ALA:HB1	15:N:48:PRO:HD2	1.93	0.51
47:x:498:ALA:HB3	76:Sc:129:GLY:HA3	1.91	0.51
67:SS:52:LEU:HD23	67:SS:53:LYS:N	2.25	0.51
67:SS:88:ASP:OD1	67:SS:88:ASP:N	2.42	0.51
70:SV:183:ILE:HD12	70:SV:183:ILE:H	1.75	0.51
71:SW:88:GLU:O	71:SW:91:LYS:NZ	2.29	0.51
76:Sc:48:HIS:HB3	76:Sc:103:LEU:HD11	1.92	0.51
78:Sf:20:LYS:HB3	78:Sf:29:ARG:HD2	1.93	0.51
1:2:1382:A:N3	55:SJ:57:ARG:HG3	2.25	0.51
1:2:1718:G:H2'	1:2:1719:A:H8	1.76	0.51
2:A:66:A:H61	2:A:76:G:H1'	1.76	0.51
2:A:528:U:H2'	2:A:529:A:H8	1.76	0.51
2:A:1130:A:H61	13:L:115:MET:HE1	1.74	0.51
2:A:1395:G:O2'	4:C:18:U:O2	2.28	0.51
2:A:1529:A:OP2	2:A:1592:G:N2	2.44	0.51
2:A:1712:G:O6	32:e:28:LYS:NZ	2.44	0.51
2:A:2217:U:H2'	2:A:2218:G:C8	2.45	0.51
2:A:3185:U:O2'	22:U:170:THR:OG1	2.22	0.51
46:s:26:G:N1	46:s:44:A:C2	2.75	0.51
47:x:272:ALA:HA	47:x:275:MET:HE3	1.92	0.51
47:x:337:MET:SD	47:x:341:HIS:CE1	3.04	0.51
54:SI:131:ASP:HA	54:SI:134:ARG:NE	2.26	0.51
61:SO:106:HIS:ND1	61:SO:134:TRP:HZ2	2.09	0.51
61:SO:305:TYR:H	61:SO:310:ILE:HG22	1.76	0.51
68:ST:163:THR:HG22	68:ST:165:GLY:H	1.75	0.51
80:SK:78:ILE:HD12	80:SK:78:ILE:H	1.75	0.51
1:2:1034:C:O2'	75:Sb:2:THR:N	2.42	0.51
1:2:1550:A:H2'	1:2:1551:U:C6	2.45	0.51
2:A:2357:A:H2'	2:A:2358:A:H8	1.75	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2515:A:H5''	17:P:28:TRP:HD1	1.76	0.51
2:A:3333:G:H22	2:A:3369:G:H1'	1.74	0.51
5:D:225:ILE:HG21	5:D:234:LYS:HA	1.93	0.51
13:L:49:CYS:SG	13:L:168:SER:OG	2.60	0.51
13:L:106:ALA:HB3	46:s:73:A:H5''	1.93	0.51
13:L:170:LYS:HD3	13:L:175:ASN:HA	1.92	0.51
19:R:85:ALA:O	19:R:88:VAL:HG12	2.11	0.51
34:g:82:LEU:HD22	34:g:108:ILE:HG23	1.92	0.51
35:h:45:LEU:HD11	35:h:73:ARG:HA	1.91	0.51
47:x:204:PRO:HB2	47:x:245:TRP:CE3	2.46	0.51
53:SA:175:VAL:HB	53:SA:177:MET:CE	2.41	0.51
64:SP:183:ARG:HD3	64:SP:191:ARG:HG2	1.92	0.51
69:SU:14:THR:HG22	69:SU:15:GLU:H	1.75	0.51
1:2:47:A:H61	1:2:385:A:H2	1.57	0.51
1:2:1226:A:H4'	1:2:1227:A:OP1	2.11	0.51
1:2:1474:G:OP1	58:SB:109:LYS:NZ	2.34	0.51
1:2:1684:U:H2'	1:2:1685:G:H8	1.76	0.51
2:A:143:G:H2'	2:A:144:A:H8	1.75	0.51
2:A:1881:A:H2'	2:A:1882:G:H8	1.76	0.51
2:A:2413:A:H2'	2:A:2414:G:H8	1.75	0.51
6:E:81:THR:O	6:E:81:THR:OG1	2.28	0.51
17:P:5:LYS:HG3	38:k:40:VAL:HG11	1.93	0.51
22:U:152:LEU:HB2	22:U:172:TYR:HD2	1.76	0.51
39:l:39:TYR:HB3	39:l:40:PRO:CD	2.40	0.51
40:m:23:ALA:HB3	40:m:75:VAL:HG12	1.93	0.51
47:x:736:PRO:HD2	47:x:791:GLN:NE2	2.26	0.51
49:SZ:92:LYS:O	49:SZ:92:LYS:HD2	2.11	0.51
58:SB:33:VAL:HG13	59:SF:53:LEU:HD21	1.93	0.51
61:SO:53:LYS:HZ2	61:SO:56:VAL:HG23	1.75	0.51
72:SX:66:ILE:HG22	72:SX:66:ILE:O	2.11	0.51
76:Sc:109:ARG:HG3	76:Sc:114:LYS:HA	1.93	0.51
1:2:5:U:H2'	1:2:6:G:H8	1.76	0.51
2:A:1472:U:H2'	2:A:1473:G:C8	2.45	0.51
2:A:1758:G:H2'	2:A:1759:C:C6	2.46	0.51
5:D:24:GLN:N	5:D:24:GLN:OE1	2.43	0.51
6:E:230:THR:HG21	6:E:247:ARG:HG2	1.93	0.51
6:E:284:ARG:HH12	6:E:296:THR:HG21	1.76	0.51
53:SA:83:THR:HG23	53:SA:84:ILE:HG23	1.93	0.51
61:SO:305:TYR:HE2	61:SO:311:ARG:HG2	1.76	0.51
66:SR:188:LEU:HD13	66:SR:196:VAL:HG21	1.93	0.51
67:SS:37:LYS:HB2	67:SS:40:GLU:OE1	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SS:61:VAL:O	67:SS:65:LEU:HG	2.10	0.51
69:SU:132:PRO:HB3	69:SU:161:GLN:HE21	1.75	0.51
69:SU:161:GLN:OE1	69:SU:161:GLN:N	2.35	0.51
1:2:1562:G:OP1	54:SI:89:ARG:NH1	2.44	0.51
2:A:911:C:H5''	5:D:15:ILE:HD13	1.93	0.51
2:A:1460:A:H2'	2:A:1461:A:C8	2.46	0.51
2:A:2535:A:H61	2:A:2545:C:H42	1.59	0.51
3:B:112:G:H2'	3:B:113:C:C6	2.46	0.51
7:F:3:ARG:HH22	7:F:24:ALA:H	1.59	0.51
14:M:157:GLU:HA	14:M:160:VAL:HG22	1.93	0.51
48:SD:79:ALA:HB1	48:SD:88:LEU:HG	1.92	0.51
51:SC:7:ASP:O	51:SC:11:ILE:HD12	2.11	0.51
54:SI:35:ASP:OD1	54:SI:35:ASP:N	2.44	0.51
61:SO:30:PRO:HG3	61:SO:297:ASP:HB2	1.92	0.51
64:SP:110:TYR:HA	64:SP:115:PHE:HD2	1.76	0.51
68:ST:49:VAL:HG13	68:ST:114:VAL:HB	1.92	0.51
69:SU:121:VAL:O	69:SU:125:ILE:HG22	2.11	0.51
77:Sd:17:LEU:HD12	77:Sd:17:LEU:H	1.75	0.51
1:2:64:U:O2'	1:2:168:A:N3	2.39	0.50
1:2:598:U:H2'	1:2:599:A:H8	1.76	0.50
1:2:1192:C:OP2	1:2:1193:A:O2'	2.26	0.50
1:2:1210:C:H2'	1:2:1211:A:H8	1.76	0.50
1:2:1393:C:H2'	1:2:1394:G:H8	1.77	0.50
2:A:658:G:H21	7:F:93:MET:HB2	1.77	0.50
2:A:837:A:OP2	45:r:4:ARG:NH1	2.43	0.50
2:A:2574:G:H2'	2:A:2575:G:H8	1.75	0.50
2:A:3374:U:H2'	2:A:3378:C:H41	1.76	0.50
4:C:41:A:H4'	39:l:59:THR:HG23	1.92	0.50
5:D:35:ALA:HA	11:J:36:ILE:HG23	1.93	0.50
15:N:188:ARG:NH1	15:N:188:ARG:HB3	2.26	0.50
49:SZ:128:LYS:NZ	50:Se:23:CYS:O	2.39	0.50
54:SI:36:ILE:O	60:SH:41:ARG:NH2	2.45	0.50
56:SL:31:GLU:N	56:SL:31:GLU:OE2	2.42	0.50
57:SM:21:CYS:HB3	57:SM:26:SER:H	1.76	0.50
61:SO:200:ASN:ND2	61:SO:241:PHE:O	2.41	0.50
61:SO:221:MET:HE3	61:SO:222:LEU:H	1.75	0.50
78:Sf:18:LYS:O	78:Sf:29:ARG:NH2	2.44	0.50
1:2:641:G:O6	1:2:693:U:O2	2.28	0.50
1:2:1588:G:H1	1:2:1608:U:H3	1.59	0.50
1:2:1608:U:H2'	1:2:1609:U:C6	2.46	0.50
2:A:594:U:P	2:A:609:G:H1	2.32	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:733:G:N2	2:A:736:A:OP2	2.45	0.50
2:A:1602:A:OP2	21:T:38:ARG:HG3	2.12	0.50
2:A:2483:G:H2'	2:A:2484:A:H2'	1.94	0.50
2:A:2975:U:H2'	2:A:2976:A:H8	1.75	0.50
2:A:3008:A:N1	2:A:3139:A:N6	2.59	0.50
2:A:3110:C:H2'	2:A:3111:U:C6	2.46	0.50
2:A:3180:A:O2'	18:Q:117[A]:ARG:NH2	2.44	0.50
20:S:150:VAL:O	20:S:153:PHE:HB2	2.11	0.50
47:x:56:PHE:CE1	47:x:440:ARG:HB2	2.46	0.50
47:x:126:LEU:HA	47:x:154:VAL:HG23	1.91	0.50
47:x:208:THR:HA	47:x:341:HIS:NE2	2.26	0.50
47:x:285:PHE:HA	47:x:288:ILE:HG12	1.92	0.50
58:SB:177:ILE:HA	58:SB:180:ARG:HG2	1.93	0.50
61:SO:131:ILE:HB	61:SO:144:LEU:HB2	1.92	0.50
66:SR:239:PRO:O	66:SR:242:ILE:HG12	2.11	0.50
70:SV:193:LEU:HD23	70:SV:196:LEU:HD21	1.94	0.50
71:SW:135:ALA:HA	71:SW:140:ILE:HA	1.92	0.50
72:SX:55:ASP:OD2	72:SX:82:ARG:NH1	2.44	0.50
1:2:143:G:OP2	68:ST:139:ASN:ND2	2.44	0.50
1:2:236:A:O2'	1:2:237:C:O5'	2.29	0.50
1:2:1071:U:H2'	1:2:1072:C:C6	2.46	0.50
2:A:56:G:H2'	2:A:57:A:C8	2.46	0.50
2:A:411:U:H2'	2:A:412:G:H8	1.76	0.50
2:A:1128:U:OP1	13:L:4:ARG:NH1	2.41	0.50
2:A:3176:G:OP1	35:h:6:ARG:NH1	2.45	0.50
47:x:311:GLU:HG2	47:x:322:VAL:HG21	1.93	0.50
47:x:750:LYS:HB3	47:x:772:LEU:HD12	1.93	0.50
58:SB:171:ALA:O	58:SB:175:LEU:HG	2.11	0.50
61:SO:120:SER:C	61:SO:121:MET:HE2	2.36	0.50
61:SO:166:SER:C	61:SO:168:THR:H	2.19	0.50
64:SP:67:ILE:HG13	64:SP:120:LEU:HD22	1.93	0.50
65:SQ:92:GLN:NE2	65:SQ:95:ASN:HB2	2.26	0.50
65:SQ:229:MET:HA	65:SQ:229:MET:HE3	1.93	0.50
68:ST:16:PHE:CE2	68:ST:45:PHE:HE2	2.29	0.50
1:2:61:A:O2'	1:2:62:A:O4'	2.28	0.50
1:2:152:U:H2'	1:2:153:G:O4'	2.10	0.50
1:2:929:A:H5''	1:2:931:C:H41	1.77	0.50
1:2:1609:U:H5''	59:SF:75:VAL:HG22	1.92	0.50
1:2:1718:G:H2'	1:2:1719:A:C8	2.45	0.50
1:2:1755:A:H2'	1:2:1756:A:C4	2.46	0.50
2:A:66:A:N6	2:A:76:G:H1'	2.26	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:188:U:O2'	2:A:207:U:O2	2.22	0.50
2:A:1112:A:N3	2:A:1370:G:O2'	2.37	0.50
2:A:1157:G:H5''	10:I:220:PHE:HE2	1.76	0.50
3:B:94:C:H2'	3:B:95:A:H8	1.76	0.50
8:G:23:ARG:O	8:G:23:ARG:NH1	2.39	0.50
29:b:34:LYS:N	29:b:34:LYS:HD3	2.26	0.50
35:h:16:TYR:OH	35:h:89:LEU:O	2.28	0.50
41:n:28:ARG:HA	41:n:33:ASN:HD22	1.76	0.50
47:x:12:LEU:HD22	47:x:99:LEU:HD13	1.93	0.50
48:SD:98:GLY:HA3	48:SD:115:VAL:HG11	1.93	0.50
53:SA:109:LEU:HD12	53:SA:184:ILE:HD11	1.92	0.50
61:SO:132:LYS:CB	61:SO:134:TRP:HE1	2.24	0.50
64:SP:156:VAL:O	74:Sa:65:SER:OG	2.29	0.50
71:SW:37:LYS:HG2	71:SW:38:ASN:H	1.76	0.50
73:SY:54:LEU:HB3	73:SY:60:VAL:HB	1.92	0.50
1:2:139:C:H4'	1:2:140:A:O5'	2.10	0.50
1:2:335:U:O2'	72:SX:130:PRO:O	2.24	0.50
1:2:895:G:O2'	49:SZ:38:THR:OG1	2.28	0.50
1:2:1220:C:H2'	1:2:1221:A:H8	1.75	0.50
1:2:1256:A:H4'	1:2:1257:U:O5'	2.11	0.50
1:2:1374:C:H2'	1:2:1375:A:C8	2.46	0.50
1:2:1554:U:OP1	57:SM:13:ARG:NH2	2.45	0.50
2:A:37:U:OP1	2:A:934:G:N2	2.45	0.50
2:A:207:U:H2'	2:A:208:C:C6	2.46	0.50
2:A:926:A:H2'	2:A:927:C:H6	1.77	0.50
2:A:2951:G:H2'	2:A:2952:G:H8	1.77	0.50
12:K:38:LEU:O	12:K:41:ILE:HG22	2.11	0.50
15:N:48:PRO:HA	15:N:137:GLN:HG3	1.92	0.50
15:N:105:ASN:HB3	15:N:108:ILE:HB	1.92	0.50
16:O:40:ASP:OD1	16:O:40:ASP:N	2.42	0.50
20:S:74:GLU:OE1	20:S:74:GLU:N	2.43	0.50
24:W:18:ASP:O	24:W:105:LEU:HD12	2.11	0.50
28:a:55:GLU:N	28:a:108:LYS:O	2.45	0.50
49:SZ:20:TYR:HE1	49:SZ:86:THR:HA	1.76	0.50
53:SA:69:LEU:HA	53:SA:72:LEU:HD23	1.93	0.50
60:SH:35:ILE:HG13	60:SH:38:VAL:HB	1.93	0.50
60:SH:75:ASN:ND2	60:SH:77:THR:H	2.10	0.50
73:SY:47:PRO:HA	73:SY:50:ILE:HG12	1.93	0.50
75:Sb:35:ILE:HD12	75:Sb:35:ILE:H	1.76	0.50
1:2:795:U:C2	1:2:796:A:C8	3.00	0.50
2:A:2697:A:H2'	2:A:2698:G:C8	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:3082:C:H2'	2:A:3083:G:C8	2.46	0.50
2:A:3374:U:OP2	33:f:70:ARG:NH2	2.44	0.50
19:R:50:GLN:OE1	19:R:56:ARG:NE	2.42	0.50
40:m:55:VAL:O	40:m:56:ILE:HD13	2.12	0.50
47:x:365:ASN:O	47:x:369:ILE:HG23	2.11	0.50
47:x:747:LEU:HD12	47:x:752:GLY:HA3	1.93	0.50
53:SA:206:VAL:HG11	63:SG:12:ALA:HB2	1.94	0.50
57:SM:32:ARG:HA	57:SM:37:ASN:H	1.77	0.50
69:SU:22:GLN:HA	69:SU:25:VAL:HG22	1.93	0.50
70:SV:136:SER:O	70:SV:140:GLU:HG2	2.11	0.50
79:Sg:12:GLY:O	79:Sg:16:SER:HB2	2.11	0.50
1:2:78:A:H2'	1:2:79:C:C6	2.46	0.50
1:2:250:C:H2'	1:2:251:A:C8	2.47	0.50
1:2:306:U:H2'	1:2:307:G:C8	2.46	0.50
1:2:392:G:O2'	1:2:1673:G:N3	2.45	0.50
1:2:393:C:H4'	1:2:1674:C:H5'	1.92	0.50
1:2:902:G:N7	49:SZ:24:ASN:ND2	2.60	0.50
2:A:50:U:H2'	2:A:51:A:H8	1.76	0.50
2:A:158:G:H2'	2:A:159:A:H8	1.76	0.50
2:A:944:C:OP1	34:g:33:ARG:NH1	2.45	0.50
2:A:1493:G:O6	41:n:2:ALA:N	2.45	0.50
2:A:1563:C:H2'	2:A:1564:U:C6	2.46	0.50
2:A:2207:A:H2'	2:A:2208:A:C4	2.46	0.50
2:A:3004:C:O2'	2:A:3005:A:OP1	2.29	0.50
6:E:19:ARG:HB2	6:E:232:ARG:HH21	1.77	0.50
33:f:55:LEU:O	33:f:59:ILE:HG13	2.10	0.50
36:i:100:ILE:O	36:i:104:VAL:HG13	2.11	0.50
37:j:24:LEU:HB3	37:j:51:ILE:HG22	1.93	0.50
46:s:9:G:H2'	46:s:11:C:H41	1.76	0.50
48:SD:37:VAL:HG22	51:SC:81:ASN:OD1	2.12	0.50
51:SC:58:GLN:HB2	51:SC:65:TYR:HB2	1.92	0.50
61:SO:264:SER:HB3	61:SO:269:TYR:N	2.26	0.50
1:2:12:U:OP1	66:SR:84:LYS:NZ	2.45	0.50
1:2:736:C:H2'	1:2:737:A:C8	2.42	0.50
1:2:1125:A:O3'	43:p:15:ARG:NH1	2.45	0.50
1:2:1747:G:HO2'	2:A:2303:A:HO2'	1.60	0.50
2:A:72:C:H4'	15:N:63:VAL:HB	1.94	0.50
2:A:806:A:N6	2:A:2411:U:O2'	2.45	0.50
2:A:1229:G:H2'	2:A:1230:G:H8	1.75	0.50
2:A:1868:G:H2'	2:A:1869:C:H6	1.77	0.50
2:A:3192:U:H2'	2:A:3193:C:C6	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:186:LYS:HD2	21:T:187:GLU:H	1.77	0.50
33:f:80:ASN:ND2	33:f:84:ASP:OD2	2.37	0.50
39:l:27:PHE:CE1	39:l:32:LYS:HA	2.46	0.50
39:l:34:CYS:CB	39:l:37:CYS:SG	3.00	0.50
46:t:64:A:H2'	46:t:65:G:C8	2.47	0.50
61:SO:192:PHE:CZ	61:SO:223:TRP:CE3	3.00	0.50
64:SP:41:ARG:HH11	64:SP:45:VAL:HB	1.77	0.50
64:SP:49:ASN:OD1	64:SP:51:GLY:N	2.45	0.50
66:SR:142:GLY:N	66:SR:153:SER:O	2.45	0.50
74:Sa:68:SER:O	74:Sa:72:LEU:HD23	2.12	0.50
1:2:742:U:H1'	69:SU:107:ARG:HH12	1.77	0.50
1:2:871:G:H2'	1:2:872:G:C8	2.47	0.50
1:2:1549:C:OP1	52:SE:42:ARG:NH2	2.44	0.50
2:A:914:A:C2	5:D:204:MET:SD	3.05	0.50
2:A:2095:G:H2'	2:A:2096:A:H8	1.77	0.50
2:A:2245:C:O2'	5:D:220:GLY:O	2.30	0.50
2:A:2532:U:H2'	2:A:2533:G:C4	2.46	0.50
2:A:2568:C:O2'	2:A:2569:A:H5'	2.11	0.50
2:A:3095:U:H2'	2:A:3096:C:C6	2.47	0.50
5:D:19:HIS:ND1	5:D:190:ARG:O	2.36	0.50
32:e:56:LEU:HD11	32:e:89:VAL:HG21	1.94	0.50
54:SI:86:ARG:HH11	54:SI:92:LYS:HG2	1.77	0.50
58:SB:188:LYS:HA	80:SK:63:SER:HB2	1.94	0.50
60:SH:28:ILE:HG12	60:SH:61:LEU:HD13	1.94	0.50
67:SS:252:ARG:HA	67:SS:255:ARG:HG2	1.93	0.50
68:ST:135:PRO:HB2	68:ST:140:ASN:HB3	1.94	0.50
80:SK:47:TYR:CE1	80:SK:51:LEU:HD11	2.47	0.50
80:SK:62:VAL:HG22	80:SK:80:LEU:HD11	1.94	0.50
1:2:1225:U:O2	1:2:1230:A:O2'	2.30	0.49
1:2:1275:A:O2'	53:SA:145:ALA:O	2.30	0.49
2:A:2881:C:OP1	6:E:11:HIS:NE2	2.45	0.49
2:A:2898:G:N7	42:o:125:LYS:NZ	2.59	0.49
2:A:3139:A:H4'	6:E:20:LYS:HD3	1.94	0.49
4:C:7:U:H2'	4:C:8:C:H6	1.76	0.49
32:e:31:VAL:HG12	32:e:35:ARG:HH12	1.77	0.49
49:SZ:85:ALA:H	49:SZ:119:THR:HB	1.76	0.49
66:SR:164:SER:O	66:SR:164:SER:OG	2.30	0.49
70:SV:195:ARG:HH11	70:SV:195:ARG:HG3	1.77	0.49
73:SY:108:ASP:HB3	73:SY:111:ALA:HB3	1.92	0.49
77:Sd:8:ARG:HB2	77:Sd:26:ASP:OD1	2.12	0.49
77:Sd:25:VAL:HG13	77:Sd:60:PHE:CZ	2.47	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:311:U:OP1	76:Sc:24:TRP:NE1	2.37	0.49
1:2:340:U:H2'	1:2:341:A:C8	2.47	0.49
1:2:1426:C:H3'	1:2:1427:A:H4'	1.94	0.49
2:A:542:G:O6	2:A:550:A:C6	2.64	0.49
2:A:705:A:N6	2:A:715:A:OP2	2.44	0.49
2:A:1039:U:H2'	2:A:1040:A:C8	2.47	0.49
2:A:1340:G:H2'	2:A:1341:U:C6	2.47	0.49
2:A:1756:C:H2'	2:A:1757:A:C8	2.47	0.49
2:A:2714:G:H4'	2:A:2715:A:H3'	1.95	0.49
2:A:3126:C:H2'	2:A:3127:A:C8	2.46	0.49
5:D:137:ILE:HG21	5:D:149:ARG:HG3	1.92	0.49
25:X:12:ARG:HH21	25:X:15:LEU:HD12	1.76	0.49
37:j:31:LEU:HB3	37:j:44:ILE:HG12	1.94	0.49
47:x:56:PHE:CZ	47:x:440:ARG:HB2	2.47	0.49
64:SP:56:LYS:HB3	64:SP:160:ILE:HD13	1.94	0.49
1:2:451:A:N6	1:2:453:U:O2	2.44	0.49
1:2:483:A:P	1:2:483:A:H8	2.35	0.49
1:2:541:A:O2'	1:2:542:A:OP1	2.30	0.49
1:2:650:U:H2'	1:2:651:G:C8	2.47	0.49
1:2:1488:G:H3'	1:2:1515:A:H61	1.77	0.49
1:2:1494:C:H2'	1:2:1495:C:C6	2.47	0.49
2:A:1019:G:H22	2:A:1033:U:H3	1.59	0.49
2:A:1175:C:H2'	2:A:1176:C:C6	2.46	0.49
2:A:2597:U:H2'	2:A:2598:G:H8	1.78	0.49
3:B:33:U:H2'	3:B:34:C:O4'	2.13	0.49
68:ST:8:PRO:O	68:ST:10:ASN:N	2.46	0.49
69:SU:16:LEU:O	69:SU:20:VAL:HG13	2.11	0.49
1:2:891:A:H2'	1:2:892:A:C8	2.47	0.49
2:A:32:U:H2'	2:A:33:G:O4'	2.13	0.49
2:A:345:G:O2'	4:C:25:G:N3	2.46	0.49
2:A:1144:U:OP1	2:A:1367:G:O2'	2.27	0.49
2:A:1425:U:O2'	7:F:36:HIS:NE2	2.38	0.49
2:A:1693:C:H2'	2:A:1773:C:H5	1.76	0.49
2:A:1914:G:N2	21:T:81:ARG:O	2.37	0.49
2:A:3175:U:H4'	2:A:3176:G:H5'	1.93	0.49
9:H:172:HIS:ND1	35:h:44:TYR:OH	2.32	0.49
10:I:90:LYS:HG2	10:I:95:ILE:HD11	1.94	0.49
26:Y:5:ILE:CD1	26:Y:12:LYS:HE3	2.42	0.49
34:g:121:ASN:N	34:g:121:ASN:OD1	2.45	0.49
35:h:93:THR:HB	35:h:96:ALA:HB3	1.94	0.49
46:t:48:C:H2'	46:t:59:A:O4'	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SI:131:ASP:HA	54:SI:134:ARG:HE	1.77	0.49
64:SP:3:LEU:HD13	64:SP:7:PHE:HB2	1.94	0.49
70:SV:36:THR:OG1	70:SV:96:LEU:O	2.30	0.49
72:SX:84:ILE:HD11	72:SX:139:VAL:HG21	1.94	0.49
73:SY:103:GLU:OE1	73:SY:103:GLU:C	2.55	0.49
77:Sd:99:LYS:NZ	77:Sd:100:VAL:O	2.45	0.49
1:2:316:A:O2'	1:2:353:A:N1	2.41	0.49
1:2:384:G:H2'	1:2:385:A:C8	2.47	0.49
1:2:1041:G:H2'	1:2:1042:G:C8	2.46	0.49
1:2:1163:A:H4'	58:SB:166:ARG:NH2	2.26	0.49
2:A:503:C:H2'	2:A:504:A:C8	2.47	0.49
2:A:700:C:H2'	2:A:701:G:H8	1.77	0.49
2:A:705:A:C5	30:c:113:LEU:HD23	2.46	0.49
2:A:879:U:H4'	19:R:132:ALA:HB3	1.95	0.49
2:A:1581:C:O2'	2:A:1582:C:O4'	2.30	0.49
2:A:1757:A:H2'	2:A:1758:G:C8	2.46	0.49
2:A:3067:C:H3'	21:T:62:ARG:HH22	1.77	0.49
5:D:36:GLU:OE2	5:D:163:ARG:NE	2.45	0.49
9:H:158:TYR:HE2	16:O:115:PHE:HA	1.77	0.49
52:SE:80:MET:HE3	52:SE:83:MET:SD	2.52	0.49
53:SA:134:CYS:SG	53:SA:135:GLU:N	2.86	0.49
54:SI:131:ASP:HA	54:SI:134:ARG:CG	2.41	0.49
61:SO:103:PHE:CE2	61:SO:138:GLY:HA2	2.47	0.49
73:SY:6:SER:OG	73:SY:7:ALA:N	2.46	0.49
76:Sc:69:ARG:HG3	76:Sc:117:ILE:HG12	1.94	0.49
1:2:79:C:H2'	1:2:80:A:C4	2.47	0.49
1:2:1542:G:N1	1:2:1568:C:O2'	2.44	0.49
2:A:94:G:OP1	2:A:2763:U:O2'	2.27	0.49
2:A:649:A:OP2	2:A:2868:U:O2'	2.29	0.49
2:A:1636:U:C2	29:b:38:PHE:CE2	3.00	0.49
2:A:2331:C:H2'	2:A:2332:A:H8	1.78	0.49
2:A:3187:A:H5'	12:K:22:SER:HA	1.95	0.49
13:L:130:ASP:OD1	13:L:130:ASP:N	2.39	0.49
22:U:10:ILE:HG12	22:U:26:ARG:HB2	1.93	0.49
47:x:493:VAL:HG11	47:x:554:LEU:HD12	1.94	0.49
54:SI:65:ILE:HD12	54:SI:65:ILE:H	1.77	0.49
64:SP:124:THR:OG1	64:SP:125:ASP:N	2.46	0.49
1:2:523:G:H1	1:2:527:A:H5''	1.77	0.49
1:2:629:U:OP2	1:2:969:C:N4	2.41	0.49
1:2:1085:G:N2	1:2:1088:A:OP2	2.40	0.49
1:2:1471:A:N6	1:2:1538:U:C2	2.81	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1680:G:O2'	1:2:1681:A:O4'	2.29	0.49
2:A:55:G:OP1	39:l:43:LYS:NZ	2.46	0.49
2:A:624:G:H2'	2:A:625:G:H8	1.78	0.49
2:A:2671:A:HO2'	14:M:98:ALA:H	1.59	0.49
4:C:95:G:OP1	39:l:76:ASN:ND2	2.45	0.49
18:Q:46[A]:GLU:HG2	18:Q:49[A]:ARG:HG3	1.94	0.49
24:W:33:TYR:OH	24:W:80:THR:OG1	2.24	0.49
27:Z:112:THR:HB	27:Z:120:LYS:HE2	1.94	0.49
32:e:13:LYS:O	32:e:17:VAL:HG12	2.13	0.49
51:SC:32:HIS:CE1	51:SC:35:ILE:HD13	2.42	0.49
61:SO:144:LEU:HD23	61:SO:181:TRP:CD1	2.48	0.49
68:ST:215:ARG:O	68:ST:218:GLU:HG3	2.13	0.49
72:SX:109:VAL:HG12	72:SX:137:PHE:HB2	1.94	0.49
78:Sf:48:SER:HB3	78:Sf:70:LYS:HG2	1.94	0.49
1:2:917:U:H2'	1:2:918:U:C6	2.48	0.49
2:A:389:A:OP1	19:R:4:TYR:OH	2.27	0.49
2:A:1506:A:H5''	2:A:1507:G:H5''	1.95	0.49
2:A:2193:U:O2	2:A:2315:G:N2	2.46	0.49
2:A:2349:U:H1'	2:A:3307:A:H1'	1.95	0.49
2:A:2685:C:H2'	2:A:2686:A:C8	2.47	0.49
2:A:3279:A:H61	35:h:54:ARG:HD3	1.78	0.49
6:E:92:TYR:CD2	6:E:159:ARG:HD2	2.47	0.49
7:F:258:LEU:HA	7:F:261:VAL:HB	1.95	0.49
8:G:41:LYS:NZ	23:V:32:LYS:O	2.46	0.49
18:Q:189[A]:ASP:C	18:Q:193[A]:GLN:HE21	2.20	0.49
25:X:20:GLY:HA2	25:X:35:TYR:CE1	2.47	0.49
25:X:62:VAL:HG21	25:X:69:LEU:HB3	1.95	0.49
29:b:83:THR:HG22	29:b:85:TYR:HD1	1.78	0.49
45:r:49:ARG:NH1	45:r:68:ALA:O	2.44	0.49
45:r:57:CYS:SG	45:r:60:CYS:N	2.86	0.49
46:s:26:G:O6	46:s:44:A:N1	2.46	0.49
47:x:295:GLU:OE2	47:x:295:GLU:N	2.34	0.49
1:2:1163:A:N3	1:2:1613:U:O2'	2.35	0.49
1:2:1508:U:H2'	1:2:1509:C:C6	2.47	0.49
1:2:1611:A:H2'	1:2:1612:U:O4'	2.13	0.49
2:A:1127:G:N2	2:A:1130:A:OP2	2.39	0.49
2:A:2185:G:H2'	2:A:2186:U:H6	1.77	0.49
2:A:2947:G:OP1	2:A:2982:A:N6	2.46	0.49
8:G:277:LEU:HD12	8:G:281:GLU:HB2	1.95	0.49
13:L:86:HIS:HB3	13:L:139:ARG:HG3	1.95	0.49
14:M:15:GLU:HG2	14:M:16:LYS:HG2	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:q:38:GLN:OE1	44:q:38:GLN:HA	2.12	0.49
47:x:586:ILE:HD13	47:x:691:VAL:HG22	1.94	0.49
47:x:711:ARG:HG3	47:x:842:LEU:HD22	1.94	0.49
63:SG:82:ASP:O	64:SP:84:ARG:NH2	2.46	0.49
66:SR:240:LEU:HD12	66:SR:240:LEU:H	1.78	0.49
76:Sc:64:PRO:O	76:Sc:65:ASN:HB3	2.13	0.49
1:2:883:C:H2'	1:2:884:A:C8	2.48	0.49
1:2:887:A:H1'	49:SZ:122:PRO:HB3	1.94	0.49
1:2:897:C:N4	1:2:914:G:O2'	2.45	0.49
1:2:1177:C:H2'	1:2:1178:G:H8	1.77	0.49
2:A:1480:G:O4'	2:A:1483:G:N2	2.46	0.49
2:A:1508:C:N4	2:A:1880:U:O2'	2.45	0.49
2:A:2871:G:H5'	2:A:2872:A:H5'	1.95	0.49
7:F:295:ILE:HD12	20:S:36:LEU:HD21	1.94	0.49
12:K:14:GLU:OE2	12:K:51:GLN:NE2	2.44	0.49
34:g:79:VAL:O	34:g:83:GLU:HG2	2.12	0.49
66:SR:139:ILE:HD12	66:SR:218:ILE:HD12	1.95	0.49
1:2:100:A:H61	1:2:385:A:H1'	1.77	0.48
1:2:381:C:H5'	67:SS:12:LEU:HD12	1.94	0.48
1:2:1699:G:H8	1:2:1702:A:H62	1.61	0.48
2:A:127:G:H2'	2:A:128:G:C8	2.48	0.48
2:A:351:A:N6	41:n:37:TYR:O	2.44	0.48
2:A:587:U:H2'	2:A:588:G:C8	2.47	0.48
2:A:790:U:H2'	2:A:791:A:C8	2.48	0.48
2:A:1533:U:H2'	2:A:1534:A:H8	1.77	0.48
2:A:2389:C:H5''	19:R:66:SER:HA	1.95	0.48
2:A:2494:A:H4'	2:A:2494:A:OP1	2.13	0.48
18:Q:23[A]:VAL:HG13	18:Q:33[A]:ILE:HG21	1.95	0.48
46:s:28:A:H2'	46:s:29:G:C8	2.45	0.48
69:SU:60:ILE:HD12	69:SU:60:ILE:H	1.77	0.48
1:2:168:A:H2'	1:2:169:A:C8	2.48	0.48
1:2:1087:A:H2'	1:2:1088:A:C8	2.48	0.48
2:A:985:U:H2'	2:A:986:U:H6	1.78	0.48
2:A:2369:G:H2'	2:A:2370:G:C8	2.48	0.48
10:I:102:VAL:HG23	10:I:126:LEU:HD22	1.95	0.48
46:s:63:G:H2'	46:s:64:A:C8	2.48	0.48
47:x:586:ILE:CD1	47:x:691:VAL:HG22	2.43	0.48
47:x:674:GLY:H	47:x:678:GLY:HA2	1.78	0.48
54:SI:131:ASP:HA	54:SI:134:ARG:CD	2.43	0.48
57:SM:31:ILE:HD11	57:SM:40:ARG:HB3	1.95	0.48
61:SO:103:PHE:HE2	61:SO:138:GLY:HA2	1.78	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SS:229:GLY:HA2	67:SS:235:TYR:CE2	2.48	0.48
71:SW:53:ARG:HG3	71:SW:97:LEU:HD23	1.95	0.48
73:SY:114:ARG:O	73:SY:118:ILE:HG13	2.13	0.48
1:2:251:A:H2	67:SS:131:LEU:HD21	1.78	0.48
1:2:812:A:O4'	1:2:858:G:N2	2.46	0.48
1:2:1226:A:O2'	1:2:1227:A:O5'	2.24	0.48
1:2:1584:G:H4'	1:2:1585:U:O5'	2.12	0.48
2:A:428:A:H2'	2:A:429:U:C6	2.48	0.48
2:A:1011:A:H2'	2:A:1012:G:H8	1.79	0.48
2:A:1693:C:H5''	2:A:1694:U:H5'	1.95	0.48
2:A:2338:C:H2'	2:A:2339:C:C5	2.47	0.48
2:A:3175:U:H5''	35:h:10:LYS:HZ1	1.77	0.48
2:A:3314:A:H5''	6:E:116:ARG:HH21	1.78	0.48
6:E:372:THR:HB	6:E:375:GLU:OE1	2.14	0.48
18:Q:7[A]:VAL:HB	18:Q:33[A]:ILE:HD13	1.95	0.48
22:U:14:LEU:H	22:U:14:LEU:HD12	1.78	0.48
44:q:23:HIS:HB3	44:q:72:LEU:HB3	1.94	0.48
45:r:57:CYS:SG	45:r:58:SER:N	2.85	0.48
54:SI:113:ILE:O	54:SI:125:SER:OG	2.31	0.48
61:SO:205:SER:HB2	61:SO:210:LEU:HB2	1.95	0.48
1:2:236:A:O2'	1:2:237:C:O4'	2.30	0.48
1:2:1382:A:HO2'	1:2:1383:G:H8	1.56	0.48
1:2:1443:U:H5'	1:2:1446:A:H1'	1.95	0.48
2:A:2577:C:H2'	2:A:2578:U:C6	2.49	0.48
2:A:3379:C:H2'	2:A:3380:U:C6	2.49	0.48
5:D:46:LYS:HD3	5:D:46:LYS:HA	1.64	0.48
8:G:256:THR:HG23	8:G:258:LYS:HG2	1.94	0.48
11:J:90:THR:HA	11:J:214:LEU:HD21	1.95	0.48
11:J:99:PRO:HG2	11:J:190:VAL:HA	1.96	0.48
53:SA:32:GLU:OE2	53:SA:58:VAL:N	2.46	0.48
59:SF:91:ALA:HA	59:SF:94:GLN:OE1	2.13	0.48
1:2:864:U:H5'	78:Sf:26:GLN:HE22	1.79	0.48
1:2:1045:C:H2'	1:2:1046:G:C8	2.48	0.48
1:2:1331:A:OP1	63:SG:45:ARG:NH2	2.46	0.48
2:A:125:C:H2'	2:A:126:U:H6	1.78	0.48
2:A:787:G:H2'	2:A:788:C:H6	1.77	0.48
2:A:900:G:H1'	2:A:1589:A:N6	2.28	0.48
2:A:1003:A:N1	2:A:1049:C:O2'	2.39	0.48
2:A:1020:G:H3'	2:A:1021:G:C8	2.49	0.48
2:A:1104:G:H2'	2:A:1105:A:C8	2.48	0.48
2:A:1192:C:N4	2:A:1300:G:OP2	2.45	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1347:U:OP2	20:S:38:ARG:NE	2.45	0.48
2:A:1660:C:H2'	2:A:1661:G:H8	1.78	0.48
11:J:143:ILE:HG23	11:J:175:VAL:HG21	1.96	0.48
14:M:30:LEU:HD21	14:M:47:GLN:HG2	1.95	0.48
28:a:31:LEU:HG	28:a:101:PRO:HG3	1.96	0.48
46:s:29:G:H2'	46:s:30:G:H8	1.77	0.48
47:x:573:GLN:HG3	47:x:835:TRP:CZ3	2.48	0.48
63:SG:87:GLU:O	64:SP:198:MET:HE1	2.14	0.48
69:SU:114:ARG:O	69:SU:117:THR:OG1	2.25	0.48
1:2:405:C:O2'	68:ST:92:ARG:O	2.32	0.48
1:2:825:U:H2'	1:2:826:U:O4'	2.12	0.48
1:2:874:C:H2'	1:2:875:G:C8	2.49	0.48
1:2:1325:A:H2'	1:2:1326:A:H8	1.79	0.48
1:2:1417:A:O3'	59:SF:128:LYS:NZ	2.41	0.48
1:2:1558:U:OP1	60:SH:122:HIS:ND1	2.47	0.48
2:A:7:C:H2'	2:A:8:C:C6	2.48	0.48
2:A:91:G:OP2	2:A:93:C:N4	2.46	0.48
2:A:371:G:O2'	2:A:396:A:N6	2.47	0.48
2:A:899:U:H2'	2:A:900:G:H8	1.78	0.48
2:A:1574:C:H3'	2:A:1575:A:C8	2.49	0.48
2:A:1635:G:O6	2:A:1639:C:N4	2.47	0.48
2:A:2331:C:H2'	2:A:2332:A:C8	2.49	0.48
2:A:2655:U:H1'	2:A:2656:A:C2	2.48	0.48
2:A:3016:A:H2'	2:A:3017:A:H8	1.78	0.48
5:D:207:VAL:HG13	5:D:208:ASP:OD1	2.14	0.48
12:K:90:MET:HE1	12:K:146:LEU:HD11	1.96	0.48
22:U:30:PHE:CD2	22:U:103:VAL:HG21	2.49	0.48
24:W:56:VAL:HG23	24:W:65:VAL:HG22	1.96	0.48
25:X:104:ASN:OD1	25:X:108:GLU:N	2.45	0.48
54:SI:36:ILE:HG13	60:SH:84:TRP:HZ2	1.79	0.48
55:SJ:102:ARG:C	55:SJ:103:ILE:HD13	2.39	0.48
58:SB:91:GLU:HG3	58:SB:95:ASN:HD21	1.77	0.48
61:SO:89:LEU:HD23	61:SO:134:TRP:CE3	2.47	0.48
63:SG:20:TYR:HB3	63:SG:23:LYS:HB2	1.95	0.48
1:2:126:A:H8	1:2:204:G:H21	1.60	0.48
1:2:1016:C:H2'	1:2:1017:U:C6	2.42	0.48
1:2:1135:U:OP1	76:Sc:121:ARG:NH1	2.47	0.48
2:A:163:C:H2'	2:A:164:A:C8	2.47	0.48
2:A:163:C:H2'	2:A:164:A:H8	1.78	0.48
2:A:261:U:H2'	2:A:262:U:C6	2.48	0.48
2:A:674:G:OP1	20:S:105:ARG:NH2	2.47	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1022:U:C2	2:A:1030:A:N6	2.82	0.48
2:A:1157:G:H5''	10:I:220:PHE:CE2	2.48	0.48
2:A:1486:G:H21	36:i:6:THR:HG22	1.79	0.48
2:A:1636:U:C4	29:b:38:PHE:CE1	3.01	0.48
2:A:1787:A:H8	2:A:1787:A:O5'	1.97	0.48
2:A:2697:A:H2'	2:A:2698:G:H8	1.79	0.48
2:A:2960:C:H2'	2:A:2961:G:H8	1.79	0.48
4:C:75:G:H2'	4:C:76:C:C6	2.49	0.48
4:C:104:A:OP2	4:C:105:A:H5''	2.13	0.48
5:D:37:ARG:HG2	5:D:38:HIS:HD2	1.78	0.48
21:T:105:LEU:HD22	21:T:138:LEU:HD23	1.96	0.48
46:s:27:C:H2'	46:s:28:A:H8	1.78	0.48
47:x:90:LYS:HB2	47:x:90:LYS:HE3	1.72	0.48
48:SD:61:VAL:HG13	48:SD:89:ILE:HG23	1.95	0.48
48:SD:89:ILE:HB	48:SD:140:PHE:HD2	1.79	0.48
56:SL:66:LEU:HD11	58:SB:158:GLN:HG2	1.95	0.48
61:SO:144:LEU:HD23	61:SO:181:TRP:HD1	1.77	0.48
2:A:1167:U:O2'	10:I:210:PRO:O	2.31	0.48
2:A:1666:G:H2'	2:A:1667:A:H8	1.78	0.48
2:A:1803:C:H2'	2:A:1804:A:C8	2.48	0.48
2:A:1829:G:H5''	2:A:1830:G:H5'	1.95	0.48
2:A:2527:G:H2'	2:A:2528:G:H8	1.79	0.48
2:A:3213:A:H62	16:O:124:ARG:NH1	2.12	0.48
4:C:128:U:OP1	4:C:129:C:N4	2.42	0.48
35:h:29:LEU:O	35:h:30:ILE:HD13	2.14	0.48
55:SJ:28:SER:HB3	55:SJ:34:LEU:CD2	2.43	0.48
55:SJ:63:LEU:HD22	57:SM:34:TYR:HE2	1.79	0.48
56:SL:37:SER:O	56:SL:38:ARG:HD3	2.13	0.48
59:SF:7:VAL:HG12	59:SF:95:LYS:HD3	1.95	0.48
61:SO:81:LEU:HD23	61:SO:115:ILE:HD11	1.95	0.48
61:SO:127:ARG:HA	61:SO:150:TRP:CD1	2.48	0.48
63:SG:105:GLN:HE22	64:SP:42:PRO:HD3	1.79	0.48
69:SU:166:LEU:HA	69:SU:169:PHE:HD2	1.78	0.48
72:SX:92:HIS:O	72:SX:101:GLU:N	2.41	0.48
76:Sc:126:LYS:HG2	76:Sc:130:VAL:HA	1.95	0.48
1:2:82:U:H2'	1:2:83:G:O4'	2.13	0.48
1:2:141:U:H5'	1:2:142:G:OP1	2.14	0.48
1:2:1546:G:OP2	60:SH:134:ARG:NH1	2.47	0.48
2:A:876:A:H4'	2:A:1890:U:H4'	1.96	0.48
2:A:2683:U:H2'	2:A:2684:C:H6	1.79	0.48
4:C:24:G:H2'	4:C:25:G:H8	1.79	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:51:G:C5	41:n:26:TRP:HZ2	2.31	0.48
6:E:85:VAL:HB	6:E:163:HIS:CD2	2.48	0.48
8:G:119:TYR:OH	8:G:139:PRO:O	2.27	0.48
18:Q:35[A]:VAL:HB	18:Q:104[A]:VAL:HG12	1.94	0.48
53:SA:58:VAL:O	53:SA:65:ARG:HB3	2.13	0.48
55:SJ:33:GLN:O	55:SJ:37:VAL:HG23	2.14	0.48
55:SJ:99:ILE:HG12	55:SJ:103:ILE:HG13	1.96	0.48
1:2:151:G:O6	1:2:164:A:N6	2.47	0.48
1:2:557:G:H5''	79:Sg:57:ASN:HB3	1.94	0.48
1:2:655:G:O2'	1:2:656:G:N2	2.47	0.48
1:2:860:U:H2'	1:2:861:U:C6	2.48	0.48
1:2:865:A:OP1	75:Sb:28:ARG:NH2	2.47	0.48
2:A:873:C:H4'	2:A:1908:A:H5'	1.96	0.48
2:A:1107:C:H2'	2:A:1108:U:H6	1.78	0.48
2:A:1138:U:H2'	2:A:1139:G:C8	2.48	0.48
2:A:1277:C:H2'	2:A:1278:A:H8	1.78	0.48
2:A:2945:G:O2'	2:A:2948:C:OP2	2.26	0.48
2:A:3101:G:H2'	2:A:3102:G:H8	1.78	0.48
3:B:20:A:H2'	3:B:21:G:H8	1.79	0.48
10:I:88:ARG:NH2	10:I:91:GLY:O	2.47	0.48
13:L:184:LYS:HG2	13:L:190:VAL:HG23	1.96	0.48
22:U:93:GLU:C	22:U:94:ILE:HD13	2.39	0.48
23:V:119:ALA:CB	23:V:126:VAL:HB	2.44	0.48
32:e:9:SER:O	32:e:13:LYS:HG3	2.13	0.48
33:f:12:TYR:CE1	33:f:106:THR:HG23	2.49	0.48
58:SB:70:VAL:HG11	59:SF:44:LEU:HD22	1.95	0.48
60:SH:11:PHE:CD1	60:SH:59:GLY:HA3	2.49	0.48
71:SW:141:VAL:HG12	71:SW:143:ILE:H	1.79	0.48
1:2:1430:U:O2'	1:2:1431:C:OP1	2.31	0.47
2:A:702:C:H2'	2:A:703:G:C8	2.49	0.47
2:A:957:C:H1'	30:c:43:ILE:HD11	1.95	0.47
2:A:1671:C:OP1	21:T:60:LYS:NZ	2.44	0.47
2:A:3342:A:H2'	2:A:3343:G:O4'	2.14	0.47
3:B:20:A:H2'	3:B:21:G:C8	2.50	0.47
4:C:47:C:O2'	4:C:62:C:OP2	2.29	0.47
18:Q:74[A]:ARG:O	18:Q:142[A]:SER:HB3	2.14	0.47
19:R:21:TYR:H	19:R:145:HIS:CE1	2.31	0.47
26:Y:47:ARG:HB3	26:Y:47:ARG:CZ	2.43	0.47
47:x:412:ARG:HE	47:x:426:LEU:HD11	1.79	0.47
58:SB:90:ILE:O	58:SB:94:THR:HG23	2.14	0.47
59:SF:31:VAL:HG23	59:SF:67:VAL:HG23	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SO:40:LYS:HA	61:SO:68:VAL:HG13	1.95	0.47
65:SQ:28:GLU:HG3	65:SQ:30:PHE:HE1	1.79	0.47
68:ST:70:PRO:HA	68:ST:101:ILE:HB	1.95	0.47
70:SV:67:TRP:O	70:SV:71:GLY:N	2.35	0.47
75:Sb:31:SER:O	75:Sb:34:ILE:HB	2.13	0.47
1:2:142:G:H5''	68:ST:139:ASN:ND2	2.28	0.47
1:2:877:G:O6	1:2:951:A:N1	2.47	0.47
1:2:1477:G:H2'	1:2:1478:G:H8	1.80	0.47
2:A:1148:G:OP1	35:h:20:LYS:HB3	2.14	0.47
2:A:1157:G:H2'	2:A:1158:A:O4'	2.14	0.47
3:B:7:G:H5'	8:G:33:ARG:HE	1.79	0.47
7:F:328:ASN:OD1	10:I:48:ASN:ND2	2.47	0.47
10:I:219:LYS:HG3	10:I:228:SER:HB2	1.96	0.47
34:g:72:LYS:O	34:g:93:ALA:N	2.45	0.47
47:x:282:PHE:HA	47:x:285:PHE:CE1	2.49	0.47
51:SC:77:ARG:HA	51:SC:82:LEU:CD1	2.44	0.47
53:SA:101:GLN:HE21	53:SA:122:VAL:HG23	1.78	0.47
61:SO:52:GLN:HA	61:SO:54:PHE:CD2	2.49	0.47
64:SP:122:ILE:N	64:SP:122:ILE:HD12	2.29	0.47
67:SS:95:THR:OG1	67:SS:97:GLU:OE1	2.32	0.47
74:Sa:58:TYR:OH	75:Sb:19:LYS:O	2.32	0.47
1:2:419:G:H2'	1:2:420:A:C8	2.49	0.47
1:2:431:C:H2'	1:2:432:G:H8	1.79	0.47
1:2:483:A:H8	1:2:483:A:OP1	1.97	0.47
1:2:1297:G:N2	1:2:1300:A:OP2	2.39	0.47
2:A:307:A:H2'	2:A:308:A:C8	2.47	0.47
2:A:549:U:C2	2:A:550:A:C8	3.02	0.47
2:A:1290:A:H2'	2:A:1291:A:C8	2.49	0.47
2:A:1699:A:N6	2:A:1747:G:O6	2.48	0.47
2:A:1895:A:O2'	2:A:3053:G:H4'	2.14	0.47
2:A:2578:U:H2'	2:A:2579:G:O4'	2.15	0.47
2:A:2963:C:H2'	2:A:2964:G:C8	2.50	0.47
5:D:29:LEU:HA	5:D:76:PHE:HE1	1.78	0.47
8:G:58:LYS:HA	8:G:93:THR:HB	1.95	0.47
11:J:226:TYR:HA	11:J:229:VAL:HG22	1.97	0.47
36:i:97:GLU:HA	36:i:97:GLU:OE2	2.14	0.47
47:x:321:LYS:O	47:x:325:ARG:HG2	2.15	0.47
47:x:824:LYS:O	47:x:824:LYS:NZ	2.42	0.47
59:SF:23:LYS:HG2	59:SF:64:ASP:OD1	2.14	0.47
60:SH:84:TRP:CD1	60:SH:84:TRP:C	2.92	0.47
62:SN:97:LYS:HG2	62:SN:98:VAL:H	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SR:218:ILE:O	66:SR:221:THR:HG22	2.13	0.47
67:SS:183:VAL:HG11	67:SS:188:ASN:HB2	1.96	0.47
74:Sa:62:ARG:HA	74:Sa:62:ARG:NE	2.29	0.47
76:Sc:57:LEU:HB3	76:Sc:71:CYS:SG	2.54	0.47
78:Sf:31:TYR:O	78:Sf:48:SER:OG	2.27	0.47
80:SK:80:LEU:HB3	80:SK:101:TYR:HE2	1.79	0.47
1:2:313:U:O4'	1:2:1118:G:N2	2.47	0.47
1:2:420:A:OP1	68:ST:74:LYS:NZ	2.47	0.47
1:2:930:A:H2'	65:SQ:114:VAL:HG11	1.97	0.47
2:A:544:C:O2	2:A:547:G:N2	2.44	0.47
2:A:2181:C:H2'	2:A:2182:A:C8	2.49	0.47
2:A:2389:C:H2'	2:A:2390:A:H8	1.79	0.47
2:A:2947:G:N3	6:E:250:ALA:HB1	2.30	0.47
2:A:3047:U:H2'	2:A:3048:A:C4	2.49	0.47
3:B:67:G:H1	3:B:111:U:H3	1.61	0.47
3:B:96:U:H2'	3:B:97:A:C8	2.49	0.47
6:E:195:ALA:O	6:E:199:PHE:HD1	1.97	0.47
9:H:131:LYS:HB2	9:H:134:ARG:HG3	1.95	0.47
10:I:120:THR:HB	10:I:123:THR:HG23	1.96	0.47
11:J:91:PHE:CE1	11:J:185:ARG:HG2	2.50	0.47
13:L:30:LYS:HD2	13:L:30:LYS:HA	1.74	0.47
13:L:35:ASP:OD2	13:L:86:HIS:NE2	2.45	0.47
14:M:157:GLU:OE1	14:M:157:GLU:N	2.44	0.47
19:R:122:ALA:HB3	19:R:143:PRO:HG2	1.96	0.47
44:q:72:LEU:HD11	44:q:83:LEU:HD23	1.95	0.47
54:SI:45:MET:HE1	60:SH:40:ARG:HB3	1.96	0.47
75:Sb:105:THR:O	75:Sb:123:GLY:HA3	2.14	0.47
78:Sf:42:ASN:ND2	78:Sf:58:SER:OG	2.47	0.47
1:2:1245:G:H4'	1:2:1246:C:C5	2.49	0.47
1:2:1759:C:H2'	1:2:1760:G:C8	2.49	0.47
2:A:840:C:H2'	2:A:841:A:H8	1.79	0.47
2:A:2351:U:H2'	2:A:2352:A:C8	2.46	0.47
2:A:3101:G:H2'	2:A:3102:G:C8	2.49	0.47
2:A:3280:U:HO2'	2:A:3281:U:H6	1.61	0.47
3:B:7:G:OP1	8:G:33:ARG:NE	2.47	0.47
3:B:59:U:H2'	3:B:60:G:C8	2.47	0.47
11:J:143:ILE:O	11:J:173:MET:HG3	2.15	0.47
16:O:23:ILE:HA	16:O:63:VAL:HG12	1.96	0.47
17:P:28:TRP:NE1	17:P:32:GLN:HE21	2.12	0.47
25:X:10:LYS:NZ	25:X:56:ASP:OD1	2.32	0.47
46:s:6:C:H2'	46:s:7:G:C8	2.50	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:s:9:G:H1'	46:s:45:U:H2'	1.96	0.47
61:SO:26:SER:OG	61:SO:29:GLN:O	2.32	0.47
73:SY:72:MET:HE2	73:SY:72:MET:HA	1.96	0.47
1:2:395:U:H3	1:2:399:A:H62	1.61	0.47
1:2:763:G:OP1	71:SW:78:ARG:NH2	2.39	0.47
1:2:888:U:H2'	1:2:889:U:C6	2.49	0.47
1:2:973:A:H2'	1:2:974:A:H8	1.79	0.47
1:2:1071:U:H2'	1:2:1072:C:H6	1.79	0.47
1:2:1357:A:H2'	1:2:1358:G:C8	2.49	0.47
2:A:753:C:H2'	2:A:754:G:H8	1.77	0.47
2:A:1311:G:H2'	2:A:1312:C:C6	2.48	0.47
2:A:1711:C:H2'	2:A:1712:G:O4'	2.15	0.47
2:A:2297:U:H2'	2:A:2299:A:N7	2.30	0.47
5:D:118:GLU:HG3	5:D:126:LEU:HD11	1.96	0.47
11:J:94:PHE:CZ	11:J:152:LEU:HD13	2.50	0.47
15:N:188:ARG:HB3	15:N:188:ARG:HH11	1.79	0.47
24:W:54:VAL:HG12	24:W:67:SER:HA	1.96	0.47
29:b:14:VAL:HG23	29:b:15:ARG:HG3	1.95	0.47
31:d:43:HIS:O	31:d:47:LEU:HD23	2.14	0.47
46:s:63:G:O2'	46:s:64:A:OP1	2.29	0.47
46:t:27:C:H2'	46:t:28:A:H8	1.80	0.47
57:SM:41:GLN:OE1	57:SM:41:GLN:N	2.32	0.47
61:SO:239:GLU:HB3	61:SO:257:ALA:HB2	1.97	0.47
65:SQ:193:ILE:H	65:SQ:193:ILE:HD12	1.79	0.47
69:SU:154:LEU:HD11	69:SU:183:PHE:HB3	1.97	0.47
1:2:17:C:H2'	1:2:18:C:H6	1.80	0.47
1:2:197:A:H2'	1:2:198:A:C8	2.48	0.47
1:2:386:G:O2'	1:2:425:A:N1	2.36	0.47
1:2:456:A:H2'	1:2:457:G:C8	2.50	0.47
1:2:513:U:H1'	71:SW:131:GLN:HE22	1.80	0.47
1:2:891:A:H2'	1:2:892:A:H8	1.79	0.47
1:2:1478:G:H3'	1:2:1479:A:H8	1.80	0.47
1:2:1483:A:H2'	1:2:1484:G:C8	2.48	0.47
1:2:1701:A:H8	1:2:1702:A:C8	2.32	0.47
1:2:1795:U:OP2	50:Se:4:LYS:NZ	2.47	0.47
2:A:692:A:H4'	7:F:46:LYS:HB2	1.96	0.47
2:A:1533:U:H1'	2:A:1798:A:H2	1.79	0.47
2:A:1568:U:H2'	2:A:1570:U:OP2	2.15	0.47
2:A:1912:U:H2'	2:A:1913:A:O4'	2.15	0.47
2:A:2129:U:H2'	2:A:2130:G:C8	2.49	0.47
2:A:2166:A:H4'	17:P:72:LYS:HE2	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2866:U:O2	2:A:2867:C:N4	2.48	0.47
2:A:2986:U:C2	2:A:2987:A:C8	3.03	0.47
4:C:6:U:H2'	4:C:7:U:C6	2.50	0.47
5:D:179:LEU:HD13	5:D:185:ALA:HB2	1.95	0.47
6:E:282:ILE:HA	6:E:324:VAL:HA	1.95	0.47
8:G:83:LEU:HD12	8:G:88:ILE:HB	1.96	0.47
13:L:72:ALA:O	13:L:76:MET:HG2	2.15	0.47
13:L:103:LEU:HD12	13:L:108:ALA:HB1	1.96	0.47
22:U:24:LEU:HD12	23:V:148:PRO:HG3	1.95	0.47
37:j:13:SER:O	37:j:17:LEU:HG	2.15	0.47
46:t:43:G:H2'	46:t:44:A:C8	2.50	0.47
47:x:14:ASP:OD1	47:x:14:ASP:N	2.47	0.47
47:x:660:LYS:HG3	47:x:661:ASP:N	2.30	0.47
50:Se:33:ASP:OD1	50:Se:34:LYS:N	2.47	0.47
52:SE:75:PRO:HA	52:SE:93:VAL:HG23	1.97	0.47
53:SA:185:LYS:HB2	53:SA:185:LYS:HE3	1.71	0.47
58:SB:43:PHE:O	58:SB:43:PHE:HD1	1.98	0.47
58:SB:72:HIS:CD2	58:SB:107:LYS:HG2	2.50	0.47
60:SH:82:PRO:HB2	60:SH:84:TRP:CD1	2.50	0.47
62:SN:132:LEU:HD23	62:SN:139:LEU:HD11	1.96	0.47
64:SP:200:ASP:HA	64:SP:203:PHE:CE2	2.50	0.47
65:SQ:39:GLU:HA	65:SQ:39:GLU:OE2	2.15	0.47
65:SQ:157:GLN:O	65:SQ:161:ILE:HG12	2.14	0.47
66:SR:126:ARG:O	66:SR:130:ILE:HG12	2.14	0.47
67:SS:45:ILE:HG23	67:SS:46:VAL:H	1.80	0.47
67:SS:247:SER:OG	67:SS:250:GLU:HG3	2.15	0.47
69:SU:49:ILE:HG21	69:SU:172:VAL:HA	1.96	0.47
1:2:78:A:H2'	1:2:79:C:C5	2.49	0.47
1:2:154:G:H1'	68:ST:56:ASN:ND2	2.29	0.47
2:A:422:A:N1	2:A:2362:C:O2'	2.37	0.47
2:A:1176:C:OP2	2:A:1177:G:O2'	2.31	0.47
2:A:1609:C:H2'	2:A:1610:G:C8	2.48	0.47
2:A:1704:A:H1'	2:A:1741:A:H61	1.80	0.47
2:A:2320:A:H2	45:r:16:VAL:HB	1.80	0.47
2:A:3084:C:H2'	2:A:3085:G:O4'	2.15	0.47
16:O:35:ILE:HD13	16:O:46:ILE:HG22	1.97	0.47
27:Z:82:LEU:HB2	27:Z:124:VAL:HG13	1.95	0.47
27:Z:83:VAL:HG22	27:Z:123:TYR:CD1	2.50	0.47
28:a:50:ILE:HD12	28:a:50:ILE:HA	1.83	0.47
47:x:16:VAL:HG23	47:x:17:THR:H	1.80	0.47
47:x:438:MET:SD	47:x:439:GLY:N	2.88	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SC:49:LEU:O	51:SC:54:TYR:HB2	2.15	0.47
61:SO:33:LEU:O	61:SO:34:LEU:HD22	2.15	0.47
61:SO:231:MET:CG	61:SO:232:TYR:HD1	2.27	0.47
63:SG:106:THR:HG21	64:SP:23:HIS:CE1	2.49	0.47
68:ST:16:PHE:CD2	68:ST:45:PHE:HE2	2.33	0.47
69:SU:62:VAL:HG23	69:SU:93:LEU:O	2.15	0.47
1:2:918:U:H2'	1:2:919:A:H8	1.79	0.47
1:2:1216:C:H1'	1:2:1217:A:C8	2.50	0.47
2:A:966:U:H2'	2:A:967:A:H8	1.80	0.47
2:A:1310:G:N2	2:A:2381:G:OP1	2.44	0.47
2:A:1729:A:O4'	32:e:52:ARG:NH1	2.48	0.47
3:B:22:A:H2'	3:B:23:A:H8	1.80	0.47
4:C:27:U:H2'	4:C:28:C:H6	1.80	0.47
4:C:69:U:H2'	4:C:70:G:O4'	2.15	0.47
4:C:142:C:H2'	4:C:143:U:C6	2.50	0.47
4:C:142:C:H2'	4:C:143:U:H6	1.78	0.47
5:D:116:VAL:O	5:D:126:LEU:N	2.46	0.47
20:S:89:ASP:OD1	20:S:90:ASP:N	2.48	0.47
21:T:24:LEU:HD23	21:T:32:ILE:HD12	1.97	0.47
34:g:80:LYS:HA	34:g:83:GLU:HG2	1.97	0.47
39:l:54:LYS:O	39:l:58:THR:HB	2.15	0.47
46:s:22:G:H2'	46:s:23:C:C6	2.50	0.47
47:x:331:ALA:O	47:x:334:LEU:HD23	2.15	0.47
47:x:660:LYS:O	47:x:663:VAL:HG12	2.15	0.47
52:SE:33:PHE:O	52:SE:37:ALA:HB2	2.15	0.47
53:SA:32:GLU:CD	53:SA:57:ASP:HB3	2.39	0.47
60:SH:84:TRP:CD1	60:SH:85:PHE:CD1	2.99	0.47
60:SH:101:LEU:O	60:SH:105:VAL:HG13	2.14	0.47
63:SG:106:THR:O	63:SG:110:VAL:HG12	2.14	0.47
77:Sd:90:ARG:O	77:Sd:94:TYR:HD1	1.98	0.47
1:2:1202:A:N6	1:2:1457:C:O5'	2.48	0.47
1:2:1213:G:H1	1:2:1450:U:H3	1.63	0.47
1:2:1245:G:H4'	1:2:1246:C:H5	1.80	0.47
1:2:1602:C:H2'	1:2:1603:U:H6	1.79	0.47
2:A:44:U:O2'	44:q:46:LYS:NZ	2.42	0.47
2:A:361:A:H4'	39:l:35:SER:O	2.15	0.47
2:A:1017:C:O2'	2:A:1035:G:N2	2.48	0.47
2:A:1135:A:N6	2:A:1136:A:N6	2.63	0.47
2:A:2852:C:N3	13:L:158:LYS:NZ	2.58	0.47
47:x:32:LYS:HB2	47:x:68:ILE:HD12	1.96	0.47
60:SH:20:THR:HG21	60:SH:35:ILE:HA	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SO:8:VAL:HG12	61:SO:9:LEU:H	1.79	0.47
61:SO:262:VAL:C	61:SO:263:PHE:HD1	2.23	0.47
61:SO:299:GLN:HA	61:SO:315:VAL:HB	1.97	0.47
64:SP:148:ASP:OD2	64:SP:165:ARG:NH2	2.47	0.47
67:SS:191:ARG:HD3	67:SS:245:LYS:HD3	1.96	0.47
67:SS:211:LYS:HE3	67:SS:211:LYS:HB3	1.77	0.47
2:A:342:A:H5'	2:A:344:A:C8	2.50	0.46
2:A:684:G:H2'	2:A:685:G:H8	1.79	0.46
2:A:995:U:H2'	2:A:996:A:H8	1.79	0.46
2:A:1597:C:H2'	2:A:1598:G:C8	2.50	0.46
4:C:8:C:H2'	4:C:9:A:C8	2.47	0.46
4:C:131:A:H4'	27:Z:93:TYR:CD2	2.51	0.46
16:O:78:THR:HA	16:O:81:VAL:HG12	1.97	0.46
21:T:176:ARG:O	21:T:180:LYS:HG3	2.14	0.46
27:Z:72:ALA:O	27:Z:76:VAL:HG12	2.14	0.46
47:x:826:HIS:CE1	47:x:828:MET:HG2	2.50	0.46
48:SD:62:LEU:HD13	48:SD:75:VAL:HG11	1.97	0.46
48:SD:73:LYS:HE3	62:SN:110:ALA:HA	1.96	0.46
50:Se:10:ARG:HG3	50:Se:34:LYS:HA	1.97	0.46
60:SH:75:ASN:HD21	60:SH:77:THR:HB	1.79	0.46
61:SO:116:ASP:OD1	61:SO:120:SER:OG	2.32	0.46
64:SP:121:VAL:HG13	64:SP:141:ILE:HG21	1.96	0.46
1:2:51:A:OP2	1:2:424:C:N4	2.48	0.46
1:2:198:A:H3'	1:2:199:G:H5''	1.96	0.46
2:A:1186:G:N3	22:U:112:ALA:HB1	2.30	0.46
2:A:1381:A:H2'	2:A:1382:G:H8	1.81	0.46
2:A:1796:G:H5'	5:D:22:LEU:HD22	1.97	0.46
2:A:3175:U:OP1	35:h:10:LYS:NZ	2.33	0.46
3:B:8:G:OP2	8:G:30:TYR:OH	2.25	0.46
3:B:87:G:H2'	3:B:88:G:C8	2.50	0.46
8:G:77:ALA:O	8:G:108:ARG:NH1	2.48	0.46
12:K:129:ARG:H	12:K:157:ASN:HD21	1.64	0.46
18:Q:108[A]:ILE:HG13	18:Q:160[A]:ARG:NH1	2.30	0.46
36:i:25:THR:HG21	36:i:31:ARG:HE	1.80	0.46
47:x:281:ILE:HD13	47:x:285:PHE:HZ	1.79	0.46
47:x:653:VAL:HG21	47:x:656:LEU:HG	1.97	0.46
58:SB:108:LEU:H	58:SB:108:LEU:HD12	1.80	0.46
61:SO:132:LYS:HE3	61:SO:143:THR:OG1	2.15	0.46
68:ST:14:LYS:NZ	68:ST:15:THR:H	2.13	0.46
68:ST:138:ALA:O	68:ST:141:ILE:HG13	2.15	0.46
1:2:472:U:OP1	71:SW:11:THR:OG1	2.32	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:512:A:H4'	71:SW:133:HIS:HE1	1.80	0.46
1:2:1133:A:N3	1:2:1650:U:O2'	2.47	0.46
1:2:1466:G:H2'	1:2:1467:C:H6	1.80	0.46
1:2:1483:A:OP2	1:2:1521:G:N2	2.45	0.46
2:A:542:G:N1	2:A:550:A:C2	2.83	0.46
2:A:970:A:H2'	2:A:971:G:C8	2.51	0.46
2:A:1135:A:OP2	31:d:5:LYS:NZ	2.39	0.46
2:A:1647:A:H2'	2:A:1648:A:H8	1.80	0.46
2:A:2261:G:H4'	2:A:2262:A:O5'	2.14	0.46
2:A:2524:A:O4'	11:J:46:LEU:HD11	2.15	0.46
4:C:71:A:H4'	4:C:72:A:O5'	2.14	0.46
21:T:82:LYS:HE2	21:T:82:LYS:HB3	1.67	0.46
37:j:96:GLU:O	37:j:99:GLN:HB2	2.15	0.46
47:x:432:GLN:HA	47:x:432:GLN:OE1	2.14	0.46
48:SD:135:MET:O	48:SD:136:ILE:HD13	2.15	0.46
52:SE:94:VAL:N	52:SE:104:GLN:HE22	2.12	0.46
58:SB:100:ASN:HD21	58:SB:180:ARG:HD3	1.80	0.46
58:SB:166:ARG:HG3	58:SB:170:GLN:OE1	2.14	0.46
61:SO:18:GLY:O	61:SO:308:ASN:HB3	2.16	0.46
72:SX:80:MET:HE2	72:SX:83:THR:OG1	2.15	0.46
2:A:361:A:OP1	39:l:24:ARG:NH2	2.48	0.46
2:A:585:A:H4'	35:h:72:THR:HG22	1.97	0.46
2:A:615:U:H2'	2:A:616:G:H8	1.80	0.46
2:A:656:A:H2'	2:A:657:A:C8	2.51	0.46
2:A:1709:C:H2'	2:A:1710:C:C6	2.50	0.46
2:A:1918:C:O2'	2:A:1919:G:H5'	2.15	0.46
2:A:2138:A:O2'	39:l:2:GLY:N	2.46	0.46
2:A:2177:G:C6	5:D:125:ALA:HB1	2.50	0.46
2:A:2186:U:H2'	2:A:2187:G:O4'	2.15	0.46
2:A:2196:C:H2'	2:A:2242:A:H61	1.81	0.46
2:A:3225:C:C4	2:A:3226:A:N6	2.83	0.46
5:D:72:ARG:NH1	5:D:74:GLU:CD	2.73	0.46
15:N:57:VAL:HG23	15:N:147:ILE:HD11	1.97	0.46
17:P:9:GLU:HG3	38:k:40:VAL:HG12	1.97	0.46
20:S:145:ASN:HA	20:S:150:VAL:HG21	1.96	0.46
30:c:76:ASP:OD1	30:c:77:LYS:N	2.48	0.46
47:x:539:GLU:O	47:x:543:GLN:HG2	2.15	0.46
48:SD:26:ASP:OD1	48:SD:26:ASP:N	2.49	0.46
51:SC:1:MET:SD	51:SC:1:MET:N	2.82	0.46
55:SJ:57:ARG:HD2	55:SJ:89:ARG:HH11	1.80	0.46
61:SO:39:ASP:N	61:SO:39:ASP:OD1	2.48	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SU:20:VAL:O	69:SU:24:PHE:CD1	2.69	0.46
73:SY:20:ARG:HG3	75:Sb:56:HIS:CE1	2.50	0.46
1:2:21:U:H2'	1:2:22:A:C8	2.51	0.46
1:2:210:A:H2'	1:2:211:U:C6	2.49	0.46
1:2:295:A:H4'	67:SS:128:LYS:HZ2	1.80	0.46
1:2:413:U:H2'	1:2:414:C:C6	2.50	0.46
1:2:512:A:H4'	71:SW:133:HIS:CE1	2.50	0.46
1:2:1537:C:OP2	1:2:1572:G:N2	2.48	0.46
1:2:1706:C:H2'	1:2:1707:A:C4	2.50	0.46
2:A:96:G:H5'	15:N:15:ARG:NH1	2.31	0.46
2:A:783:A:H5''	2:A:784:A:H5'	1.97	0.46
2:A:890:C:H2'	2:A:891:G:C8	2.50	0.46
2:A:927:C:C2	2:A:928:C:C5	3.04	0.46
2:A:3184:A:N3	2:A:3187:A:O2'	2.40	0.46
2:A:3214:U:N3	16:O:121:MET:HG3	2.29	0.46
4:C:67:U:H2'	4:C:68:G:C8	2.47	0.46
6:E:63:PRO:HD2	6:E:348:ARG:HE	1.80	0.46
6:E:286:GLY:HA3	6:E:321:PHE:CE1	2.51	0.46
9:H:51:ARG:HE	9:H:163:PHE:HB2	1.81	0.46
10:I:98:LYS:HB3	10:I:99:PRO:HD3	1.98	0.46
10:I:103:LEU:HD22	10:I:108:LEU:HB2	1.98	0.46
13:L:72:ALA:HB2	13:L:155:ALA:HB2	1.97	0.46
26:Y:13:ILE:HD11	26:Y:32:GLN:HA	1.97	0.46
37:j:58:ILE:HD12	37:j:58:ILE:H	1.79	0.46
38:k:20:MET:HE3	38:k:20:MET:HB3	1.77	0.46
47:x:611:ASP:C	47:x:611:ASP:OD1	2.58	0.46
65:SQ:113:MET:HE1	65:SQ:211:HIS:HD1	1.80	0.46
71:SW:64:GLU:OE2	71:SW:64:GLU:HA	2.15	0.46
75:Sb:38:LEU:HB3	75:Sb:50:PHE:CD2	2.50	0.46
80:SK:79:ALA:O	80:SK:83:LEU:HG	2.16	0.46
1:2:126:A:N6	1:2:263:C:O2'	2.45	0.46
1:2:139:C:N4	1:2:175:G:O2'	2.49	0.46
1:2:617:U:H5'	1:2:1031:U:H5'	1.97	0.46
1:2:925:G:H8	1:2:925:G:OP2	1.98	0.46
1:2:1136:U:H2'	1:2:1137:A:C8	2.51	0.46
2:A:105:C:H2'	2:A:106:A:H8	1.80	0.46
2:A:231:G:H5'	2:A:232:G:OP2	2.16	0.46
2:A:1341:U:H2'	2:A:1342:C:C6	2.51	0.46
2:A:1616:U:H2'	2:A:1617:G:H8	1.81	0.46
2:A:3231:U:H2'	2:A:3232:G:H8	1.80	0.46
13:L:209:ASN:HB3	13:L:217:PHE:HE2	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:O:14:LEU:H	16:O:14:LEU:HD12	1.81	0.46
23:V:8:ARG:HH11	23:V:52:MET:HE1	1.81	0.46
37:j:83:LYS:O	37:j:89:ARG:NH1	2.39	0.46
47:x:24:VAL:HG13	47:x:104:ASP:HA	1.97	0.46
47:x:152:LYS:HD2	47:x:200:VAL:HB	1.97	0.46
47:x:497:ASN:ND2	47:x:499:ASN:OD1	2.48	0.46
50:Se:63:ALA:O	50:Se:64:LEU:HD12	2.15	0.46
60:SH:68:ARG:O	60:SH:71:GLN:NE2	2.49	0.46
61:SO:25:THR:HA	61:SO:33:LEU:HD23	1.97	0.46
68:ST:26:VAL:HG22	68:ST:36:VAL:HG12	1.98	0.46
69:SU:80:GLU:HA	69:SU:83:LYS:HG2	1.97	0.46
1:2:99:C:OP2	1:2:378:A:O2'	2.20	0.46
1:2:329:G:H2'	1:2:330:G:C8	2.50	0.46
1:2:1379:C:H5'	59:SF:10:PHE:HD2	1.81	0.46
2:A:148:G:OP2	17:P:4:TYR:OH	2.28	0.46
2:A:170:G:N1	2:A:249:U:N3	2.64	0.46
2:A:533:A:H2'	2:A:535:G:C8	2.49	0.46
2:A:1236:G:N2	2:A:1244:A:O5'	2.48	0.46
2:A:1413:G:H2'	2:A:1414:G:H8	1.80	0.46
2:A:1422:G:N2	9:H:5:GLN:OE1	2.35	0.46
2:A:2588:U:OP1	11:J:241:LYS:NZ	2.49	0.46
2:A:2710:C:H2'	2:A:2711:C:C6	2.50	0.46
2:A:2999:U:H2'	2:A:3000:A:C8	2.50	0.46
3:B:71:G:H2'	3:B:72:A:C8	2.50	0.46
8:G:218:ARG:HA	8:G:221:GLU:HG2	1.98	0.46
13:L:176:LEU:HB3	13:L:181:TYR:HB2	1.98	0.46
14:M:13:LYS:HD2	14:M:134:PRO:HB3	1.97	0.46
22:U:9:VAL:HG21	22:U:41:TYR:HB2	1.97	0.46
24:W:98:THR:HG23	24:W:99:LYS:HG2	1.96	0.46
39:l:21:ARG:HD2	39:l:37:CYS:HB2	1.97	0.46
44:q:71:ARG:HE	44:q:80:ARG:NE	2.13	0.46
47:x:337:MET:HE2	47:x:337:MET:HA	1.97	0.46
47:x:601:ILE:HG12	47:x:606:ILE:HD13	1.98	0.46
54:SI:63:ARG:O	54:SI:67:MET:HG2	2.15	0.46
60:SH:32:LEU:HB3	60:SH:35:ILE:HD11	1.98	0.46
62:SN:83:LYS:HD3	62:SN:85:TYR:HE2	1.79	0.46
62:SN:107:LYS:HG3	62:SN:109:ASP:H	1.81	0.46
67:SS:183:VAL:HG13	67:SS:220:THR:HG21	1.97	0.46
70:SV:57:ALA:HB2	70:SV:177:GLY:HA2	1.97	0.46
1:2:894:U:H2'	1:2:895:G:C8	2.50	0.46
1:2:1018:U:H2'	1:2:1019:A:H8	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:1436:A:H2'	1:2:1437:U:O4'	2.16	0.46
2:A:7:C:H2'	2:A:8:C:H6	1.80	0.46
2:A:508:U:OP1	10:I:211:SER:OG	2.21	0.46
2:A:531:G:H2'	2:A:532:A:C8	2.51	0.46
2:A:840:C:H2'	2:A:841:A:C8	2.51	0.46
2:A:1119:C:H2'	2:A:1120:A:C8	2.48	0.46
2:A:1184:A:O3'	16:O:59:ASN:ND2	2.49	0.46
2:A:1207:G:O2'	2:A:1209:G:OP1	2.23	0.46
2:A:1304:A:O2'	2:A:2884:C:O2	2.31	0.46
2:A:3070:A:OP1	21:T:62:ARG:NH1	2.49	0.46
2:A:3159:C:H2'	2:A:3160:U:H6	1.81	0.46
17:P:150:TRP:CD1	17:P:150:TRP:H	2.32	0.46
26:Y:8:PHE:CD1	26:Y:46:PRO:HG3	2.51	0.46
26:Y:37:ALA:O	26:Y:41:LYS:HG3	2.16	0.46
45:r:88:GLU:HA	45:r:88:GLU:OE2	2.16	0.46
46:t:66:C:H2'	46:t:67:G:H8	1.81	0.46
54:SI:6:VAL:HA	54:SI:9:VAL:HB	1.98	0.46
54:SI:102:ARG:O	54:SI:106:GLN:HG3	2.16	0.46
57:SM:14:TYR:N	57:SM:18:SER:OG	2.49	0.46
61:SO:217:ASP:OD1	61:SO:218:GLY:N	2.48	0.46
61:SO:295:SER:OG	61:SO:296:ALA:N	2.49	0.46
69:SU:6:ALA:HA	69:SU:9:LEU:HB2	1.97	0.46
69:SU:51:VAL:HG22	69:SU:53:GLY:H	1.81	0.46
1:2:263:C:H2'	1:2:264:G:C8	2.51	0.46
1:2:956:C:H2'	1:2:957:G:H8	1.81	0.46
1:2:1439:C:H2'	1:2:1440:C:C6	2.50	0.46
2:A:1666:G:H2'	2:A:1667:A:C8	2.51	0.46
2:A:1709:C:H2'	2:A:1710:C:H6	1.80	0.46
2:A:2296:A:O2'	2:A:2928:C:O2	2.30	0.46
2:A:2440:G:H2'	2:A:2441:A:C8	2.51	0.46
2:A:2810:C:OP2	2:A:2955:U:O2'	2.33	0.46
3:B:71:G:H2'	3:B:72:A:H8	1.81	0.46
5:D:147:ARG:HG2	5:D:157:VAL:HG12	1.97	0.46
6:E:344:THR:O	6:E:344:THR:OG1	2.34	0.46
8:G:23:ARG:HD2	8:G:23:ARG:HA	1.68	0.46
8:G:97:ALA:O	8:G:101:THR:HG22	2.15	0.46
11:J:165:PHE:CE1	11:J:166:LEU:HD22	2.51	0.46
14:M:53:THR:HG22	14:M:61:ARG:N	2.31	0.46
17:P:160:GLU:OE1	17:P:160:GLU:N	2.36	0.46
33:f:11:GLU:HG2	33:f:74:ARG:HB2	1.97	0.46
46:s:19:G:H5'	46:s:20:A:N3	2.31	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:t:69:C:H2'	46:t:70:G:C8	2.45	0.46
47:x:21:ASN:ND2	47:x:122:THR:HA	2.30	0.46
47:x:793:PHE:CE1	47:x:794:PRO:O	2.69	0.46
53:SA:27:ARG:HE	53:SA:27:ARG:HB2	1.56	0.46
61:SO:276:PRO:HB3	61:SO:311:ARG:NH2	2.29	0.46
63:SG:105:GLN:HE22	64:SP:41:ARG:HA	1.80	0.46
65:SQ:62:LYS:NZ	65:SQ:89:ASP:O	2.48	0.46
76:Sc:37:ALA:HA	76:Sc:41:SER:HB2	1.97	0.46
76:Sc:62:LYS:CG	76:Sc:63:GLN:H	2.28	0.46
1:2:294:C:H2'	1:2:295:A:H8	1.81	0.46
1:2:429:G:OP1	1:2:438:A:O2'	2.31	0.46
1:2:607:G:H21	1:2:614:C:H5''	1.81	0.46
1:2:866:G:H2'	1:2:867:G:H8	1.80	0.46
1:2:1072:C:H2'	1:2:1073:G:C8	2.51	0.46
1:2:1429:G:H2'	1:2:1430:U:C6	2.51	0.46
1:2:1609:U:H2'	1:2:1610:G:O4'	2.16	0.46
1:2:1625:C:H2'	1:2:1626:U:H6	1.81	0.46
1:2:1652:C:H2'	1:2:1653:C:C6	2.51	0.46
2:A:383:G:N2	2:A:386:A:OP2	2.42	0.46
2:A:1109:U:H5'	20:S:153:PHE:CD2	2.50	0.46
2:A:2446:U:H2'	2:A:2447:A:C8	2.50	0.46
2:A:2513:U:C5	11:J:68:ARG:HB3	2.51	0.46
18:Q:22[A]:VAL:HG21	18:Q:120[A]:VAL:HG11	1.98	0.46
23:V:84:TYR:HB3	31:d:24:PRO:HD3	1.97	0.46
27:Z:83:VAL:HG22	27:Z:123:TYR:HD1	1.81	0.46
32:e:92:ILE:HD11	32:e:94:GLU:O	2.15	0.46
49:SZ:104:ALA:O	49:SZ:108:SER:OG	2.32	0.46
52:SE:59:LYS:H	52:SE:59:LYS:HG2	1.60	0.46
53:SA:16:VAL:HG11	57:SM:22:ARG:NH1	2.30	0.46
54:SI:22:LEU:HA	54:SI:25:GLN:HG3	1.98	0.46
58:SB:208:SER:OG	58:SB:211:ILE:HB	2.17	0.46
58:SB:222:LYS:HA	58:SB:222:LYS:HD3	1.69	0.46
61:SO:17:ASN:O	61:SO:308:ASN:ND2	2.49	0.46
67:SS:117:GLU:O	67:SS:121:TYR:HD1	1.99	0.46
75:Sb:32:LYS:HA	75:Sb:35:ILE:CD1	2.45	0.46
1:2:926:A:H2'	1:2:927:C:C6	2.51	0.45
1:2:1486:G:N2	1:2:1522:U:O4	2.49	0.45
1:2:1652:C:H2'	1:2:1653:C:H6	1.81	0.45
1:2:1747:G:O2'	2:A:2303:A:O2'	2.32	0.45
2:A:341:G:H4'	2:A:344:A:H1'	1.97	0.45
2:A:364:G:O6	39:l:56:ARG:NE	2.34	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:370:U:C2	2:A:374:A:N6	2.84	0.45
2:A:2646:C:H2'	2:A:2647:A:C8	2.51	0.45
10:I:166:ASN:HA	10:I:169:ILE:HD12	1.97	0.45
16:O:31:LYS:HB3	16:O:51:ALA:HB1	1.97	0.45
27:Z:104:GLU:OE1	27:Z:104:GLU:N	2.48	0.45
30:c:19:LYS:HD3	30:c:19:LYS:HA	1.73	0.45
39:l:39:TYR:O	39:l:40:PRO:C	2.58	0.45
39:l:46:SER:OG	39:l:54:LYS:HE2	2.16	0.45
45:r:85:ARG:HG2	45:r:85:ARG:HH11	1.81	0.45
47:x:250:PHE:HB3	47:x:275:MET:HE1	1.98	0.45
47:x:355:GLN:OE1	47:x:356:LEU:HD12	2.16	0.45
47:x:502:PRO:HA	47:x:505:VAL:HG22	1.98	0.45
52:SE:111:MET:C	52:SE:112:LEU:HD23	2.41	0.45
53:SA:105:MET:HE1	53:SA:119:ALA:N	2.31	0.45
55:SJ:106:ILE:HD12	55:SJ:108:ILE:HG12	1.97	0.45
59:SF:28:LEU:HB3	59:SF:64:ASP:HB2	1.98	0.45
62:SN:113:LYS:HD2	62:SN:113:LYS:HA	1.72	0.45
65:SQ:224:ASP:O	65:SQ:228:LEU:HB2	2.16	0.45
68:ST:207:GLU:O	68:ST:210:GLN:HG3	2.16	0.45
69:SU:6:ALA:HA	69:SU:9:LEU:HD12	1.98	0.45
71:SW:168:ARG:O	71:SW:169:PRO:C	2.59	0.45
72:SX:71:LEU:HD12	72:SX:88:ARG:HD2	1.98	0.45
76:Sc:59:ILE:H	76:Sc:59:ILE:HG13	1.59	0.45
80:SK:48:ASP:OD1	80:SK:49:ARG:N	2.49	0.45
1:2:427:C:H1'	1:2:459:G:H1'	1.98	0.45
1:2:590:C:H5''	79:Sg:43:ARG:HH22	1.81	0.45
1:2:708:C:H5'	1:2:730:G:C5	2.50	0.45
2:A:20:A:H2'	2:A:21:G:C8	2.52	0.45
2:A:69:C:HO2'	2:A:101:G:HO2'	1.58	0.45
2:A:629:U:H2'	2:A:630:A:H8	1.80	0.45
2:A:1570:U:O2	2:A:1572:U:O2'	2.34	0.45
2:A:1843:C:H2'	2:A:1844:C:C6	2.51	0.45
2:A:2152:A:H2'	2:A:2153:U:H6	1.82	0.45
2:A:2449:A:C6	2:A:2450:G:C6	3.04	0.45
4:C:75:G:H2'	4:C:76:C:H6	1.82	0.45
9:H:112:THR:HG23	9:H:115:GLU:H	1.81	0.45
15:N:42:ARG:O	15:N:46:ILE:HG23	2.17	0.45
47:x:446:ASP:N	47:x:446:ASP:OD1	2.49	0.45
48:SD:33:ARG:NH1	48:SD:100:TRP:O	2.50	0.45
51:SC:16:PHE:HE2	51:SC:77:ARG:HG3	1.82	0.45
53:SA:158:ILE:HG23	53:SA:164:VAL:HG12	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SI:57:ARG:HG2	54:SI:104:VAL:HG21	1.97	0.45
54:SI:136:ALA:HA	54:SI:139:THR:HG22	1.98	0.45
59:SF:55:VAL:HG11	59:SF:105:LEU:HD12	1.98	0.45
61:SO:192:PHE:CE1	61:SO:223:TRP:HE3	2.34	0.45
67:SS:179:LYS:HB3	67:SS:227:VAL:HG13	1.97	0.45
70:SV:69:SER:HA	72:SX:20:PHE:CZ	2.51	0.45
1:2:325:G:H2'	1:2:326:G:C8	2.52	0.45
1:2:918:U:H2'	1:2:919:A:C8	2.52	0.45
1:2:926:A:H2'	1:2:927:C:H6	1.81	0.45
1:2:1283:U:O2'	66:SR:91:ARG:NH2	2.49	0.45
1:2:1608:U:H2'	1:2:1609:U:H6	1.82	0.45
2:A:612:U:H2'	2:A:613:G:C8	2.51	0.45
2:A:1490:A:O2'	39:l:12:HIS:O	2.31	0.45
2:A:2646:C:H2'	2:A:2647:A:H8	1.81	0.45
2:A:2812:C:H2'	2:A:2813:A:C8	2.51	0.45
2:A:3045:G:OP1	6:E:19:ARG:NH2	2.43	0.45
5:D:104:LEU:HB3	5:D:146:THR:HG21	1.98	0.45
15:N:119:TYR:O	15:N:123:ILE:HG23	2.17	0.45
17:P:9:GLU:OE1	38:k:41:ARG:HG2	2.16	0.45
23:V:116:ARG:HB2	23:V:128:LEU:HD11	1.98	0.45
32:e:47:ASN:OD1	32:e:74:ASN:ND2	2.49	0.45
53:SA:7:LYS:HD3	53:SA:7:LYS:HA	1.72	0.45
66:SR:140:ARG:HB3	66:SR:221:THR:HG23	1.98	0.45
67:SS:96:ASN:O	67:SS:96:ASN:ND2	2.49	0.45
67:SS:125:LYS:O	67:SS:142:HIS:N	2.49	0.45
67:SS:133:LYS:O	67:SS:136:VAL:HG22	2.16	0.45
71:SW:135:ALA:HB2	71:SW:140:ILE:HG22	1.99	0.45
1:2:12:U:H2'	1:2:13:C:C6	2.51	0.45
1:2:755:A:HO2'	67:SS:39:ARG:HH22	1.62	0.45
1:2:783:G:H2'	1:2:784:C:C6	2.51	0.45
1:2:958:U:OP2	78:Sf:20:LYS:NZ	2.46	0.45
1:2:1503:A:H3'	1:2:1504:G:H8	1.81	0.45
2:A:26:A:N6	2:A:59:G:H1	2.14	0.45
2:A:235:A:H2'	2:A:236:G:H8	1.81	0.45
2:A:359:U:H2'	2:A:360:G:O4'	2.17	0.45
2:A:821:U:H2'	2:A:822:G:H8	1.82	0.45
2:A:1659:U:H2'	2:A:1660:C:C6	2.51	0.45
2:A:3064:U:H2'	2:A:3065:G:H8	1.82	0.45
6:E:128:LYS:HE2	6:E:128:LYS:HB2	1.81	0.45
7:F:155:ASP:OD1	7:F:155:ASP:N	2.49	0.45
8:G:194:LEU:HD23	8:G:194:LEU:HA	1.83	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:166:LYS:HD3	14:M:166:LYS:HA	1.77	0.45
24:W:31:ALA:O	24:W:35:LYS:HG2	2.16	0.45
25:X:109:MET:H	25:X:128:ARG:HG2	1.81	0.45
29:b:73:LYS:HB2	29:b:73:LYS:HE3	1.73	0.45
34:g:25:TYR:HB2	34:g:28:VAL:HG23	1.98	0.45
35:h:37:THR:HG23	35:h:40:ASP:H	1.80	0.45
47:x:385:MET:SD	47:x:514:SER:HA	2.56	0.45
47:x:539:GLU:O	47:x:542:LEU:HG	2.16	0.45
48:SD:85:LYS:O	48:SD:87:PRO:HD3	2.16	0.45
51:SC:7:ASP:C	51:SC:11:ILE:HD12	2.41	0.45
52:SE:33:PHE:N	52:SE:33:PHE:CD1	2.83	0.45
54:SI:25:GLN:HE22	54:SI:27:LYS:HB3	1.81	0.45
55:SJ:63:LEU:HB3	57:SM:34:TYR:CE2	2.52	0.45
61:SO:286:GLU:CD	61:SO:311:ARG:HH22	2.25	0.45
64:SP:123:VAL:O	64:SP:145:ALA:HA	2.17	0.45
67:SS:98:ASN:HB2	67:SS:114:ILE:HG12	1.96	0.45
73:SY:84:ILE:HG23	73:SY:88:LEU:HB3	1.98	0.45
74:Sa:22:ARG:NH1	74:Sa:58:TYR:HB2	2.31	0.45
77:Sd:20:ARG:HD3	77:Sd:76:TYR:CZ	2.52	0.45
80:SK:66:VAL:HG12	80:SK:71:ILE:O	2.17	0.45
1:2:472:U:O2'	1:2:769:A:N3	2.49	0.45
1:2:1205:C:O2'	1:2:1206:U:OP1	2.28	0.45
1:2:1474:G:H2'	1:2:1475:A:C8	2.51	0.45
2:A:288:C:H2'	2:A:289:A:C8	2.50	0.45
2:A:535:G:N2	2:A:536:U:O4	2.46	0.45
2:A:651:G:O2'	2:A:1435:A:OP1	2.33	0.45
2:A:786:A:O3'	2:A:787:G:H8	1.99	0.45
2:A:947:G:H5''	34:g:55:ILE:HB	1.99	0.45
2:A:990:U:H4'	23:V:100:LYS:HB2	1.97	0.45
2:A:2374:C:O2	6:E:256:HIS:NE2	2.50	0.45
2:A:2527:G:H2'	2:A:2528:G:C8	2.51	0.45
2:A:2745:G:N2	2:A:2748:A:OP2	2.45	0.45
2:A:3057:U:O2'	2:A:3058:U:H4'	2.16	0.45
2:A:3270:U:C4	19:R:175:ARG:HA	2.52	0.45
3:B:16:U:H2'	3:B:17:A:C8	2.51	0.45
4:C:68:G:H2'	4:C:69:U:C6	2.51	0.45
12:K:162:GLN:HG3	12:K:179:ILE:O	2.15	0.45
30:c:130:VAL:HG21	30:c:145:VAL:HG21	1.98	0.45
33:f:12:TYR:O	33:f:73:LEU:HD23	2.16	0.45
33:f:43:HIS:HB3	33:f:44:MET:HE3	1.99	0.45
45:r:57:CYS:SG	45:r:59:CYS:N	2.83	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:33:ARG:HD3	48:SD:33:ARG:HA	1.73	0.45
52:SE:103:ASN:HD21	52:SE:120:SER:HB2	1.82	0.45
60:SH:100:THR:HB	60:SH:104:ASN:HB2	1.99	0.45
60:SH:104:ASN:O	60:SH:108:LYS:HG2	2.17	0.45
61:SO:274:LEU:HB3	61:SO:275:ARG:H	1.51	0.45
63:SG:102:VAL:HG11	64:SP:18:LEU:HD12	1.98	0.45
72:SX:68:GLY:HA3	72:SX:127:GLN:HB3	1.99	0.45
1:2:564:G:O2'	1:2:578:U:OP2	2.32	0.45
1:2:695:U:O2'	1:2:697:C:OP1	2.23	0.45
1:2:922:G:H2'	1:2:923:A:C8	2.51	0.45
1:2:1220:C:H2'	1:2:1221:A:C8	2.52	0.45
1:2:1541:G:H2'	1:2:1542:G:C4	2.52	0.45
2:A:1107:C:H2'	2:A:1108:U:C6	2.51	0.45
2:A:1203:A:OP2	2:A:1301:A:N6	2.43	0.45
2:A:1335:C:H2'	2:A:1336:U:H6	1.82	0.45
2:A:2451:G:O6	2:A:2494:A:N6	2.42	0.45
2:A:3314:A:H2'	2:A:3315:G:C8	2.52	0.45
4:C:154:C:H5''	11:J:181:LYS:HD3	1.98	0.45
14:M:120:ILE:HD12	14:M:121:GLY:N	2.31	0.45
36:i:41:ARG:HG2	36:i:56:THR:HG21	1.99	0.45
40:m:43:PHE:CE2	40:m:56:ILE:HG12	2.48	0.45
42:o:78:ILE:HG21	42:o:83:LYS:HE3	1.98	0.45
47:x:21:ASN:OD1	47:x:122:THR:HG22	2.16	0.45
47:x:37:ASP:OD2	47:x:55:ARG:HB2	2.16	0.45
47:x:87:LYS:HA	47:x:87:LYS:HD2	1.87	0.45
47:x:280:PRO:O	47:x:284:LEU:HD13	2.17	0.45
47:x:511:LEU:HD22	47:x:545:LEU:HD21	1.97	0.45
53:SA:224:ASP:HA	61:SO:186:PHE:HD2	1.81	0.45
55:SJ:28:SER:OG	55:SJ:29:THR:N	2.50	0.45
64:SP:110:TYR:HA	64:SP:115:PHE:CD2	2.52	0.45
67:SS:92:LEU:HD22	67:SS:97:GLU:CG	2.47	0.45
75:Sb:102:VAL:O	75:Sb:113:HIS:N	2.49	0.45
1:2:352:A:H4'	1:2:353:A:O5'	2.16	0.45
1:2:614:C:H2'	1:2:615:A:H8	1.82	0.45
2:A:74:G:H2'	2:A:75:G:H8	1.81	0.45
2:A:246:U:H2'	2:A:247:C:C6	2.51	0.45
2:A:370:U:H2'	2:A:371:G:O4'	2.17	0.45
2:A:596:C:O2'	10:I:165:ASP:OD2	2.24	0.45
2:A:734:C:H3'	2:A:735:A:H8	1.81	0.45
2:A:1564:U:O2	2:A:1565:G:C8	2.70	0.45
2:A:3127:A:H2'	2:A:3128:G:O4'	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:275:ARG:HD3	6:E:275:ARG:HA	1.79	0.45
11:J:160:ILE:O	11:J:164:VAL:HG13	2.16	0.45
11:J:165:PHE:CD1	11:J:165:PHE:C	2.95	0.45
13:L:65:LEU:HD23	13:L:159:PHE:HZ	1.82	0.45
14:M:87:LYS:HD3	14:M:87:LYS:HA	1.67	0.45
18:Q:58[A]:LEU:HA	18:Q:72[A]:HIS:CD2	2.52	0.45
38:k:44:VAL:HA	38:k:47:ILE:HG12	1.98	0.45
47:x:120:ARG:NH2	47:x:481:MET:HB3	2.32	0.45
48:SD:79:ALA:O	48:SD:86:VAL:HG12	2.17	0.45
54:SI:45:MET:SD	54:SI:46:PRO:HD2	2.56	0.45
60:SH:113:LEU:HD11	60:SH:127:HIS:CG	2.52	0.45
61:SO:47:LEU:HD12	61:SO:54:PHE:CD1	2.52	0.45
64:SP:17:LEU:O	64:SP:22:THR:HG23	2.17	0.45
64:SP:28:ASN:OD1	64:SP:28:ASN:N	2.49	0.45
65:SQ:81:PHE:CD2	65:SQ:109:LYS:HE3	2.52	0.45
1:2:257:A:N3	70:SV:64:ASN:ND2	2.65	0.45
1:2:554:C:O4'	71:SW:19:TYR:HD2	1.99	0.45
1:2:1023:A:H4'	1:2:1024:U:O5'	2.16	0.45
1:2:1036:A:H2'	1:2:1037:C:H6	1.82	0.45
1:2:1280:C:H2'	1:2:1281:G:H8	1.82	0.45
1:2:1394:G:H2'	1:2:1395:G:O4'	2.17	0.45
2:A:946:U:H2'	2:A:947:G:C8	2.50	0.45
2:A:1011:A:H2'	2:A:1012:G:C8	2.51	0.45
2:A:1856:C:H2'	2:A:1857:C:C6	2.52	0.45
2:A:2662:G:H2'	2:A:2663:G:C8	2.51	0.45
4:C:103:G:P	4:C:105:A:HO2'	2.39	0.45
5:D:72:ARG:HG3	5:D:72:ARG:HH11	1.82	0.45
11:J:74:THR:O	11:J:77:GLN:NE2	2.47	0.45
27:Z:67:ILE:HG12	27:Z:115:ARG:HH12	1.80	0.45
40:m:31:LEU:HD12	40:m:34:ALA:HA	1.98	0.45
46:t:66:C:H2'	46:t:67:G:C8	2.51	0.45
47:x:30:HIS:O	47:x:34:THR:OG1	2.32	0.45
55:SJ:25:THR:HG22	55:SJ:90:TYR:HB3	1.98	0.45
58:SB:176:THR:HG22	58:SB:180:ARG:NH1	2.32	0.45
61:SO:18:GLY:HA2	61:SO:38:ARG:NH2	2.32	0.45
61:SO:47:LEU:HD12	61:SO:54:PHE:HD1	1.82	0.45
63:SG:113:LEU:HD21	64:SP:49:ASN:HD21	1.81	0.45
67:SS:181:VAL:HG12	67:SS:183:VAL:H	1.81	0.45
68:ST:138:ALA:HB2	68:ST:178:LEU:HB3	1.98	0.45
78:Sf:8:LEU:HB3	78:Sf:9:HIS:CE1	2.52	0.45
1:2:590:C:H5''	79:Sg:43:ARG:HH12	1.82	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:936:G:N7	50:Se:15:ARG:NH1	2.65	0.45
1:2:1037:C:H2'	1:2:1038:U:C6	2.52	0.45
1:2:1049:U:H2'	1:2:1050:G:C8	2.51	0.45
1:2:1512:G:H2'	1:2:1513:G:C8	2.52	0.45
2:A:44:U:H4'	44:q:54:THR:HG22	1.99	0.45
2:A:100:A:H3'	2:A:101:G:H21	1.82	0.45
2:A:1132:C:H2'	2:A:1133:A:H8	1.81	0.45
2:A:1333:C:C2	2:A:1334:U:C5	3.05	0.45
2:A:2374:C:OP1	2:A:2823:G:O2'	2.28	0.45
2:A:2573:G:H2'	2:A:2574:G:C8	2.52	0.45
7:F:135:VAL:HG11	7:F:148:ILE:CD1	2.47	0.45
17:P:48:ALA:HB1	17:P:53:TYR:HB3	1.98	0.45
22:U:66:GLU:OE2	22:U:99:ARG:N	2.46	0.45
46:s:3:C:H2'	46:s:4:G:C8	2.52	0.45
47:x:316:GLY:H	47:x:319:LEU:HB3	1.81	0.45
47:x:424:ASP:N	47:x:424:ASP:OD1	2.49	0.45
47:x:443:GLU:N	47:x:443:GLU:OE1	2.49	0.45
51:SC:69:THR:OG1	51:SC:70:GLU:N	2.50	0.45
55:SJ:36:ASN:C	55:SJ:36:ASN:OD1	2.59	0.45
65:SQ:224:ASP:OD1	65:SQ:227:ALA:HB3	2.17	0.45
67:SS:163:ASP:OD1	67:SS:163:ASP:C	2.60	0.45
68:ST:5:ILE:HG12	68:ST:50:PHE:HE2	1.82	0.45
1:2:246:G:N2	72:SX:38:ALA:O	2.37	0.45
1:2:788:A:C6	67:SS:19:LEU:HD21	2.52	0.45
1:2:1218:G:O4'	1:2:1444:A:N6	2.50	0.45
1:2:1387:G:H21	1:2:1410:A:H61	1.64	0.45
1:2:1474:G:H2'	1:2:1475:A:H8	1.81	0.45
2:A:87:U:H2'	2:A:88:A:C8	2.52	0.45
2:A:314:U:H2'	2:A:315:C:C6	2.52	0.45
2:A:907:G:H4'	2:A:908:G:H5'	1.98	0.45
2:A:1403:C:H2'	2:A:1404:G:C8	2.52	0.45
2:A:2666:C:OP2	2:A:2687:G:N1	2.49	0.45
2:A:2889:C:H2'	2:A:2890:A:H8	1.81	0.45
2:A:3006:A:H62	2:A:3140:G:N2	2.14	0.45
2:A:3111:U:H2'	2:A:3112:G:O4'	2.17	0.45
4:C:30:C:H2'	4:C:31:G:H8	1.82	0.45
4:C:95:G:OP2	39:l:72:ARG:NH1	2.43	0.45
27:Z:58:ASP:OD1	27:Z:59:SER:N	2.46	0.45
47:x:242:ASP:OD1	47:x:242:ASP:N	2.48	0.45
56:SL:10:ALA:HA	56:SL:32:PHE:HA	1.98	0.45
59:SF:23:LYS:O	59:SF:64:ASP:N	2.43	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SH:18:LEU:HD13	60:SH:101:LEU:HD13	1.98	0.45
61:SO:178:VAL:O	61:SO:192:PHE:HB2	2.17	0.45
65:SQ:98:THR:OG1	65:SQ:99:ASN:N	2.50	0.45
69:SU:86:GLN:N	69:SU:86:GLN:OE1	2.50	0.45
70:SV:96:LEU:HD21	70:SV:169:ILE:HD13	1.99	0.45
73:SY:135:LEU:HD12	73:SY:136:PRO:CD	2.44	0.45
76:Sc:94:ASN:OD1	76:Sc:94:ASN:N	2.45	0.45
78:Sf:35:VAL:HG23	78:Sf:77:THR:HB	1.99	0.45
1:2:1252:C:H2'	1:2:1253:U:H6	1.82	0.44
1:2:1573:A:H5'	1:2:1574:G:N3	2.32	0.44
2:A:863:C:H2'	2:A:864:G:O4'	2.18	0.44
2:A:1177:G:H4'	35:h:18:ARG:HD3	1.98	0.44
2:A:1596:C:H2'	2:A:1597:C:C6	2.52	0.44
2:A:2181:C:H2'	2:A:2182:A:H8	1.82	0.44
2:A:2519:A:H2'	2:A:2520:A:C8	2.51	0.44
6:E:11:HIS:HE1	25:X:45:ARG:HH22	1.65	0.44
9:H:63:LEU:HD12	9:H:79:VAL:O	2.17	0.44
10:I:112:ASN:HB3	10:I:207:LEU:O	2.16	0.44
14:M:84:LEU:HD21	14:M:163:PHE:HZ	1.82	0.44
19:R:40:GLU:CD	19:R:40:GLU:H	2.25	0.44
36:i:113:LYS:HD2	36:i:113:LYS:HA	1.82	0.44
42:o:97:ARG:HH21	42:o:122:ARG:HD3	1.81	0.44
53:SA:162:GLN:N	53:SA:163:PRO:HD2	2.33	0.44
61:SO:106:HIS:NE2	61:SO:132:LYS:HD3	2.32	0.44
61:SO:112:SER:HB2	61:SO:153:GLN:HA	1.99	0.44
63:SG:20:TYR:HE2	63:SG:38:ILE:HD13	1.82	0.44
75:Sb:104:LEU:HB2	75:Sb:124:LYS:O	2.17	0.44
1:2:270:C:H2'	1:2:271:A:C8	2.52	0.44
2:A:1060:U:H2'	2:A:1061:A:H8	1.81	0.44
2:A:1368:U:C2	2:A:1369:A:C8	3.05	0.44
2:A:1935:G:H2'	2:A:1936:A:C8	2.52	0.44
2:A:2634:U:H4'	13:L:15:LYS:HZ2	1.81	0.44
2:A:2786:G:H5''	44:q:38:GLN:HB2	1.99	0.44
2:A:2889:C:H2'	2:A:2890:A:C8	2.52	0.44
2:A:3211:C:H2'	2:A:3212:C:H6	1.82	0.44
4:C:97:A:H5'	37:j:63:ARG:NH1	2.33	0.44
7:F:74:ILE:HD11	7:F:94:CYS:SG	2.57	0.44
8:G:106:ALA:O	8:G:110:LEU:HD23	2.17	0.44
16:O:31:LYS:HE2	16:O:51:ALA:HB1	1.99	0.44
16:O:113:THR:OG1	16:O:114:ASP:N	2.50	0.44
17:P:59:PHE:CE2	17:P:142:ILE:HD11	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:V:34:TYR:HE2	23:V:93:VAL:HG13	1.82	0.44
36:i:54:ILE:HD13	36:i:54:ILE:HA	1.87	0.44
46:s:23:C:H2'	46:s:24:G:C8	2.51	0.44
46:t:27:C:H2'	46:t:28:A:C8	2.53	0.44
47:x:211:PHE:HE2	47:x:245:TRP:HH2	1.65	0.44
47:x:759:GLN:CG	47:x:764:PRO:HA	2.47	0.44
53:SA:186:VAL:HG12	53:SA:188:ILE:HG23	2.00	0.44
54:SI:138:GLN:H	54:SI:138:GLN:CD	2.25	0.44
58:SB:93:LEU:HD13	58:SB:172:ILE:HG13	1.98	0.44
61:SO:36:ALA:HB1	61:SO:68:VAL:HG21	1.98	0.44
61:SO:244:ALA:HB2	61:SO:292:LEU:HG	2.00	0.44
63:SG:13:SER:O	63:SG:17:ILE:HG12	2.16	0.44
68:ST:36:VAL:HG23	68:ST:50:PHE:HB2	1.98	0.44
68:ST:74:LYS:HA	68:ST:96:SER:HA	1.97	0.44
76:Sc:68:ILE:HG22	76:Sc:70:LYS:HG3	1.99	0.44
1:2:17:C:H2'	1:2:18:C:C6	2.52	0.44
1:2:895:G:N1	1:2:918:U:N3	2.65	0.44
1:2:960:U:H2'	1:2:961:U:C6	2.52	0.44
1:2:1276:U:H4'	53:SA:147:ALA:HB2	1.99	0.44
1:2:1315:U:H5''	1:2:1329:A:H2	1.82	0.44
1:2:1673:G:C6	1:2:1728:A:N1	2.84	0.44
1:2:1779:U:H2'	1:2:1781:A:OP2	2.17	0.44
2:A:516:A:H2'	2:A:517:G:C8	2.52	0.44
2:A:529:A:H2'	2:A:530:G:C8	2.53	0.44
2:A:542:G:C6	2:A:550:A:C2	3.06	0.44
2:A:2285:C:OP2	2:A:2286:U:O2'	2.29	0.44
2:A:2295:A:C2	25:X:37:ILE:HB	2.52	0.44
2:A:2768:U:H2'	2:A:2769:A:H8	1.81	0.44
2:A:3243:A:C4	18:Q:156[A]:LEU:HD13	2.52	0.44
6:E:375:GLU:HA	6:E:378:ALA:HB3	1.98	0.44
7:F:26:PHE:HA	7:F:127:ALA:HA	1.99	0.44
7:F:142:VAL:HA	7:F:145:ILE:HG12	1.99	0.44
12:K:135:GLU:N	12:K:135:GLU:OE2	2.51	0.44
17:P:184:LYS:HE3	17:P:184:LYS:HB3	1.72	0.44
18:Q:42[A]:ASN:OD1	18:Q:125[A]:ARG:NH1	2.50	0.44
30:c:86:LYS:O	30:c:89:GLN:HG3	2.16	0.44
45:r:49:ARG:HH12	45:r:52:ALA:HA	1.83	0.44
47:x:174:LEU:HD12	47:x:174:LEU:HA	1.84	0.44
47:x:243:ARG:NH1	47:x:249:PHE:O	2.50	0.44
50:Se:44:ILE:HD11	50:Se:65:PRO:HG2	1.99	0.44
51:SC:48:SER:O	51:SC:52:LYS:NZ	2.51	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SE:86:VAL:HB	52:SE:87:PRO:HD2	1.99	0.44
60:SH:84:TRP:HD1	60:SH:85:PHE:N	2.15	0.44
61:SO:6:VAL:HG23	61:SO:6:VAL:O	2.16	0.44
62:SN:143:LYS:HE2	62:SN:144:CYS:SG	2.57	0.44
64:SP:56:LYS:NZ	74:Sa:82:VAL:HG11	2.31	0.44
65:SQ:61:LEU:HD23	65:SQ:61:LEU:N	2.31	0.44
67:SS:177:ALA:HA	67:SS:195:ILE:HG22	1.99	0.44
68:ST:147:LEU:HD12	68:ST:151:ASP:HB3	1.98	0.44
73:SY:77:SER:OG	73:SY:78:ASN:OD1	2.34	0.44
1:2:446:A:N1	1:2:461:G:O2'	2.50	0.44
1:2:1132:A:H2'	1:2:1133:A:H8	1.82	0.44
1:2:1198:G:OP1	1:2:1199:G:O2'	2.24	0.44
1:2:1658:G:H2'	1:2:1659:A:H8	1.82	0.44
1:2:1776:A:H2'	1:2:1777:G:H8	1.82	0.44
2:A:412:G:OP1	19:R:62:ARG:NH1	2.51	0.44
2:A:658:G:N2	7:F:93:MET:HB2	2.32	0.44
2:A:717:C:OP1	2:A:751:A:O2'	2.34	0.44
2:A:998:A:H2'	2:A:999:G:H8	1.82	0.44
2:A:1869:C:H2'	2:A:1870:C:H6	1.82	0.44
2:A:2225:U:H2'	2:A:2226:U:C6	2.51	0.44
2:A:2668:U:H2'	2:A:2669:G:H8	1.82	0.44
2:A:3075:G:H2'	2:A:3076:C:C6	2.52	0.44
2:A:3188:G:H2'	2:A:3189:G:H8	1.81	0.44
2:A:3212:C:OP2	16:O:124:ARG:NH1	2.49	0.44
4:C:76:C:H2'	4:C:77:A:C8	2.52	0.44
10:I:90:LYS:HB3	10:I:133:TYR:HB3	2.00	0.44
17:P:27:VAL:HB	17:P:122:ASN:OD1	2.18	0.44
18:Q:54[A]:TYR:CD2	18:Q:145[A]:VAL:HG21	2.53	0.44
29:b:116:LYS:HE2	29:b:116:LYS:HB3	1.68	0.44
33:f:86:LYS:HA	33:f:86:LYS:HD2	1.79	0.44
35:h:47:LYS:HA	35:h:47:LYS:HD3	1.76	0.44
38:k:52:PRO:O	38:k:55:ARG:HG2	2.17	0.44
52:SE:83:MET:HE2	52:SE:116:LEU:CD2	2.47	0.44
52:SE:97:TYR:O	52:SE:98:ASN:O	2.36	0.44
56:SL:42:ARG:HA	56:SL:42:ARG:HD2	1.57	0.44
61:SO:36:ALA:HB2	61:SO:42:LEU:HD23	2.00	0.44
61:SO:232:TYR:CB	61:SO:234:LEU:HD23	2.45	0.44
67:SS:125:LYS:HZ3	67:SS:157:ASN:HA	1.83	0.44
69:SU:149:ILE:HG23	69:SU:180:GLN:HG3	2.00	0.44
1:2:306:U:H2'	1:2:307:G:H8	1.83	0.44
1:2:447:U:O2'	67:SS:27:TYR:O	2.35	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:250:U:H3'	2:A:251:G:H8	1.83	0.44
2:A:529:A:H2'	2:A:530:G:H8	1.81	0.44
2:A:1139:G:OP2	31:d:14:ARG:NH1	2.51	0.44
2:A:1660:C:H2'	2:A:1661:G:C8	2.52	0.44
2:A:2184:U:H2'	2:A:2185:G:C8	2.52	0.44
2:A:3189:G:H1	2:A:3203:U:H3	1.65	0.44
12:K:105:GLU:HG3	12:K:108:GLY:HA2	2.00	0.44
18:Q:128[A]:ARG:HA	18:Q:128[A]:ARG:HD2	1.86	0.44
23:V:158:THR:HG23	23:V:158:THR:O	2.18	0.44
29:b:93:LYS:HE2	29:b:93:LYS:HB2	1.82	0.44
30:c:74:ASN:HB2	30:c:76:ASP:OD1	2.18	0.44
46:s:5:C:H2'	46:s:6:C:C6	2.53	0.44
46:t:23:C:H2'	46:t:24:G:H8	1.82	0.44
69:SU:153:LEU:HA	69:SU:184:GLU:O	2.18	0.44
73:SY:110:ASP:OD1	73:SY:114:ARG:NH2	2.42	0.44
1:2:15:U:H2'	1:2:16:G:O4'	2.18	0.44
1:2:86:A:H2'	1:2:87:C:H6	1.82	0.44
1:2:159:U:H5''	77:Sd:117:LYS:HG2	2.00	0.44
1:2:180:A:H2'	1:2:181:A:C8	2.52	0.44
1:2:614:C:H2'	1:2:615:A:C8	2.53	0.44
2:A:198:A:N3	2:A:218:G:O2'	2.39	0.44
2:A:288:C:C2	2:A:289:A:C8	3.05	0.44
2:A:407:A:H4'	2:A:1397:C:H5'	2.00	0.44
2:A:663:C:H2'	2:A:664:U:H6	1.81	0.44
2:A:671:U:H2'	2:A:672:A:C8	2.52	0.44
2:A:1020:G:H3'	2:A:1021:G:H8	1.82	0.44
2:A:1022:U:O2	2:A:1029:G:N2	2.50	0.44
2:A:1566:A:H61	2:A:1571:A:H1'	1.82	0.44
2:A:1699:A:H2'	2:A:1700:G:C8	2.52	0.44
2:A:2443:A:H2'	2:A:2444:C:H6	1.82	0.44
2:A:2960:C:H2'	2:A:2961:G:C8	2.51	0.44
2:A:3039:C:C2	2:A:3040:A:C8	3.05	0.44
2:A:3213:A:N7	16:O:124:ARG:NH2	2.61	0.44
10:I:34:LYS:HD3	10:I:34:LYS:HA	1.81	0.44
13:L:70:ILE:N	13:L:70:ILE:HD13	2.33	0.44
33:f:14:ILE:HG12	33:f:16:LEU:HD12	2.00	0.44
34:g:82:LEU:HD21	34:g:112:ALA:HB2	1.99	0.44
41:n:27:ILE:O	41:n:30:ARG:NH1	2.50	0.44
46:s:5:C:H2'	46:s:6:C:H6	1.83	0.44
47:x:27:HIS:ND1	47:x:28:VAL:HG22	2.32	0.44
47:x:81:MET:HG2	47:x:98:PHE:HE1	1.82	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:71:ILE:HD11	62:SN:102:VAL:HG11	2.00	0.44
49:SZ:137:LEU:H	49:SZ:137:LEU:HD12	1.81	0.44
64:SP:147:THR:HG21	64:SP:159:ALA:HB1	2.00	0.44
68:ST:3:LEU:HD21	68:ST:111:LEU:HD12	1.98	0.44
68:ST:14:LYS:HD2	68:ST:14:LYS:HA	1.77	0.44
71:SW:15:PRO:HG3	71:SW:23:ARG:NH1	2.32	0.44
77:Sd:135:ASP:OD1	77:Sd:135:ASP:N	2.49	0.44
1:2:626:U:H2'	1:2:627:C:H6	1.83	0.44
1:2:909:U:H2'	1:2:910:C:C6	2.52	0.44
1:2:1291:G:OP2	1:2:1291:G:N2	2.48	0.44
1:2:1592:A:H2'	1:2:1593:A:C8	2.53	0.44
1:2:1719:A:H2'	1:2:1720:G:O4'	2.18	0.44
2:A:245:U:H2'	2:A:246:U:C6	2.52	0.44
2:A:286:U:O2'	17:P:179:LYS:O	2.34	0.44
2:A:548:G:H2'	2:A:549:U:C6	2.51	0.44
2:A:655:C:OP2	34:g:27:ARG:NH1	2.47	0.44
2:A:656:A:H2'	2:A:657:A:H8	1.83	0.44
2:A:903:U:H2'	2:A:904:A:C8	2.52	0.44
2:A:1390:A:N6	2:A:1418:A:O2'	2.51	0.44
2:A:2100:A:H2'	2:A:2101:C:C6	2.52	0.44
2:A:2111:G:O2'	26:Y:44:LYS:NZ	2.50	0.44
2:A:2154:U:H2'	2:A:2155:G:C8	2.53	0.44
2:A:2535:A:H2'	2:A:2536:A:H8	1.81	0.44
2:A:3021:A:N1	2:A:3032:A:H5''	2.32	0.44
4:C:95:G:O2'	39:l:81:GLY:O	2.29	0.44
4:C:103:G:OP2	4:C:105:A:O2'	2.33	0.44
7:F:20:LEU:HD21	7:F:256:THR:HG23	1.99	0.44
8:G:51:LEU:HB2	8:G:64:ILE:HG12	2.00	0.44
9:H:3:ALA:HB3	34:g:75:LEU:HB3	2.00	0.44
16:O:112:LEU:HD11	18:Q:197[A]:LEU:O	2.18	0.44
17:P:103:GLU:HG3	17:P:160:GLU:HB2	1.99	0.44
20:S:24:VAL:O	20:S:28:LEU:HG	2.18	0.44
30:c:72:VAL:HB	30:c:113:LEU:HD22	2.00	0.44
33:f:12:TYR:CD1	33:f:106:THR:HG23	2.53	0.44
47:x:112:SER:HA	47:x:115:VAL:HG22	2.00	0.44
49:SZ:91:THR:O	49:SZ:92:LYS:HB3	2.18	0.44
54:SI:7:ARG:HH12	54:SI:67:MET:HA	1.82	0.44
57:SM:17:GLY:HA2	57:SM:27:HIS:ND1	2.33	0.44
61:SO:11:GLY:HA3	61:SO:54:PHE:CE2	2.53	0.44
61:SO:193:ILE:O	61:SO:223:TRP:HH2	2.00	0.44
64:SP:71:GLU:O	64:SP:116:LYS:NZ	2.38	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SQ:58:SER:O	65:SQ:62:LYS:HG3	2.18	0.44
65:SQ:131:ASP:OD1	65:SQ:131:ASP:N	2.37	0.44
70:SV:121:LEU:HD22	70:SV:160:PHE:CG	2.52	0.44
76:Sc:93:LEU:HD21	79:Sg:8:LEU:HD23	2.00	0.44
79:Sg:13:LYS:HG2	79:Sg:17:GLN:HE22	1.83	0.44
1:2:1176:G:H2'	1:2:1177:C:H6	1.82	0.44
1:2:1634:C:H5''	1:2:1635:A:C8	2.52	0.44
2:A:31:C:H2'	2:A:32:U:C6	2.52	0.44
2:A:904:A:H2'	2:A:905:U:C6	2.53	0.44
2:A:987:U:H2'	2:A:988:U:C6	2.53	0.44
2:A:1340:G:H2'	2:A:1341:U:H6	1.82	0.44
2:A:1663:C:H2'	2:A:1664:G:H8	1.83	0.44
2:A:1667:A:H2'	2:A:1668:G:H8	1.83	0.44
2:A:2263:C:O5'	2:A:2263:C:H6	2.00	0.44
2:A:2448:G:H2'	2:A:2449:A:C8	2.53	0.44
2:A:2981:U:OP2	6:E:244:ARG:NH1	2.45	0.44
2:A:3014:U:H2'	2:A:3015:G:H8	1.83	0.44
2:A:3272:C:OP2	9:H:78:ARG:NE	2.41	0.44
6:E:222:LYS:HA	6:E:334:ARG:HH22	1.83	0.44
16:O:89:ALA:HB1	16:O:92:GLU:CD	2.42	0.44
17:P:119:TYR:OH	17:P:131:GLU:OE1	2.32	0.44
19:R:9:THR:HG21	19:R:151:THR:HG21	2.00	0.44
20:S:37:ALA:HB1	20:S:46:LYS:HG3	2.00	0.44
29:b:88:ASP:OD1	29:b:88:ASP:C	2.61	0.44
47:x:137:VAL:HG21	47:x:795:GLN:CD	2.43	0.44
48:SD:58:LEU:HB2	48:SD:123:VAL:O	2.18	0.44
48:SD:73:LYS:HA	48:SD:76:GLU:CD	2.43	0.44
50:Se:33:ASP:OD1	50:Se:33:ASP:C	2.60	0.44
51:SC:65:TYR:C	51:SC:66:TYR:HD1	2.25	0.44
56:SL:44:VAL:HG11	56:SL:48:VAL:HG21	1.99	0.44
59:SF:39:VAL:HG13	59:SF:40:GLU:H	1.83	0.44
59:SF:99:GLU:OE2	61:SO:12:THR:HG22	2.18	0.44
67:SS:209:HIS:HA	67:SS:219:VAL:HA	1.99	0.44
75:Sb:24:GLN:NE2	78:Sf:5:GLN:HG2	2.32	0.44
1:2:392:G:OP1	1:2:1729:C:O2'	2.35	0.44
1:2:1684:U:H2'	1:2:1685:G:C8	2.53	0.44
2:A:697:A:H2'	2:A:698:U:C6	2.52	0.44
2:A:929:A:O2'	39:l:49:TRP:O	2.36	0.44
2:A:1126:G:OP2	13:L:14:ASN:ND2	2.51	0.44
2:A:1257:C:H42	2:A:1261:G:H22	1.65	0.44
2:A:2152:A:H2'	2:A:2153:U:C6	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2711:C:H2'	2:A:2712:U:C6	2.52	0.44
4:C:38:U:O2'	37:j:83:LYS:NZ	2.51	0.44
5:D:28:LYS:HE2	5:D:123:ARG:HD3	1.99	0.44
5:D:208:ASP:OD1	5:D:208:ASP:N	2.50	0.44
10:I:55:TYR:CE1	10:I:189:ILE:HG21	2.53	0.44
13:L:43:VAL:HG11	13:L:197:VAL:HB	1.99	0.44
13:L:208:ASN:OD1	13:L:211:ARG:NH1	2.50	0.44
15:N:104:ARG:HA	38:k:20:MET:HB2	1.99	0.44
18:Q:20[A]:ALA:HA	18:Q:84[A]:LEU:HD11	1.99	0.44
24:W:36:TYR:O	24:W:40:HIS:HB2	2.17	0.44
30:c:125:VAL:HG13	30:c:145:VAL:HG23	2.00	0.44
32:e:43:ILE:N	32:e:43:ILE:HD12	2.33	0.44
60:SH:16:ARG:HA	60:SH:16:ARG:HD2	1.72	0.44
61:SO:266:ASP:HB2	61:SO:267:PRO:HD3	1.99	0.44
62:SN:97:LYS:CG	62:SN:98:VAL:H	2.29	0.44
66:SR:157:LYS:HG3	75:Sb:95:PRO:O	2.18	0.44
67:SS:246:LEU:HD22	67:SS:250:GLU:CD	2.43	0.44
69:SU:62:VAL:HG13	69:SU:70:PHE:CE2	2.53	0.44
70:SV:69:SER:HA	72:SX:20:PHE:HZ	1.83	0.44
80:SK:98:GLN:HE21	80:SK:100:ILE:HD11	1.82	0.44
1:2:1355:C:H2'	1:2:1356:U:O4'	2.17	0.43
1:2:1372:U:H2'	1:2:1373:C:C6	2.53	0.43
1:2:1633:A:H5'	1:2:1635:A:O4'	2.18	0.43
1:2:1647:U:H2'	1:2:1648:A:C8	2.53	0.43
1:2:1680:G:H1'	1:2:1721:A:H61	1.83	0.43
2:A:165:A:H2'	2:A:166:C:C6	2.52	0.43
2:A:600:G:N2	2:A:603:A:OP2	2.30	0.43
2:A:784:A:H2	20:S:92:ARG:HB3	1.82	0.43
2:A:788:C:H2'	2:A:789:A:C8	2.53	0.43
2:A:2185:G:OP1	5:D:202:VAL:HG13	2.18	0.43
2:A:2427:U:H3	2:A:2602:G:H1	1.66	0.43
2:A:2585:G:H8	11:J:48:ARG:HG3	1.82	0.43
2:A:2891:U:O2'	2:A:3014:U:H5''	2.18	0.43
2:A:2968:G:H2'	2:A:2969:A:C8	2.53	0.43
2:A:3015:G:H2'	2:A:3016:A:C8	2.50	0.43
12:K:7:GLU:OE2	12:K:7:GLU:C	2.61	0.43
23:V:76:ILE:HD13	23:V:76:ILE:HA	1.91	0.43
23:V:131:GLN:OE1	23:V:131:GLN:HA	2.18	0.43
25:X:4:ASN:HD21	25:X:40:LYS:HE3	1.82	0.43
35:h:13:HIS:ND1	35:h:93:THR:OG1	2.31	0.43
40:m:46:ARG:HH11	40:m:51:LEU:HB2	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:84:ARG:O	45:r:88:GLU:HG2	2.17	0.43
51:SC:38:LYS:HZ3	51:SC:41:TYR:HD2	1.66	0.43
52:SE:33:PHE:N	52:SE:33:PHE:HD1	2.15	0.43
59:SF:83:GLN:HG2	59:SF:87:LYS:HE2	2.00	0.43
60:SH:72:ILE:CG2	60:SH:73:MET:HE2	2.48	0.43
61:SO:64:HIS:CE1	61:SO:84:SER:HB2	2.53	0.43
61:SO:149:ASP:OD1	61:SO:149:ASP:N	2.44	0.43
65:SQ:133:TYR:CE1	65:SQ:221:PRO:HD2	2.53	0.43
68:ST:57:ASP:OD1	68:ST:61:PHE:HB2	2.17	0.43
68:ST:74:LYS:HE3	68:ST:74:LYS:HB3	1.78	0.43
68:ST:191:ARG:HA	68:ST:191:ARG:HD2	1.77	0.43
70:SV:66:SER:O	70:SV:183:ILE:HD12	2.17	0.43
70:SV:74:LYS:HB2	70:SV:109:PHE:HE1	1.81	0.43
71:SW:45:ILE:HG22	71:SW:101:VAL:HG12	2.01	0.43
71:SW:120:LYS:HE3	71:SW:120:LYS:HB3	1.77	0.43
76:Sc:14:LYS:HE2	76:Sc:14:LYS:HB2	1.78	0.43
1:2:829:A:H2'	1:2:830:U:C6	2.53	0.43
1:2:1018:U:C2	1:2:1019:A:N7	2.86	0.43
1:2:1060:U:H3'	1:2:1061:A:H5''	2.00	0.43
1:2:1580:C:H2'	1:2:1581:C:C6	2.53	0.43
2:A:581:U:H2'	2:A:582:G:H8	1.83	0.43
2:A:707:U:O2	2:A:754:G:O2'	2.34	0.43
2:A:794:U:H2'	2:A:795:G:C8	2.53	0.43
2:A:1388:U:O2'	34:g:99:ASN:O	2.36	0.43
2:A:1564:U:C2	2:A:1576:G:N1	2.86	0.43
2:A:1615:C:H2'	2:A:1616:U:C6	2.53	0.43
2:A:2196:C:O2'	2:A:2270:A:H1'	2.17	0.43
2:A:2883:U:H2'	2:A:2884:C:C6	2.53	0.43
2:A:3211:C:C2	2:A:3212:C:C5	3.06	0.43
3:B:116:C:H2'	3:B:117:A:H8	1.83	0.43
6:E:84:VAL:CG1	6:E:162:VAL:HB	2.48	0.43
7:F:23:PRO:HD3	7:F:255:PHE:CE2	2.53	0.43
7:F:161:LYS:HD3	7:F:161:LYS:HA	1.72	0.43
8:G:80:SER:HA	8:G:83:LEU:HD23	2.00	0.43
8:G:156:GLY:HA2	8:G:181:PRO:HD3	2.00	0.43
10:I:40:LYS:HD3	10:I:170:GLU:OE1	2.17	0.43
10:I:121:LYS:HD2	10:I:125:GLU:OE1	2.18	0.43
17:P:66:VAL:HG11	17:P:98:LEU:HB3	2.00	0.43
17:P:114:ARG:CZ	17:P:157:LYS:HG2	2.48	0.43
46:s:49:C:H2'	46:s:50:U:C6	2.53	0.43
47:x:63:GLU:OE1	47:x:63:GLU:N	2.50	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:59:LEU:HA	48:SD:87:PRO:HB2	2.00	0.43
48:SD:130:THR:OG1	48:SD:131:ASP:N	2.51	0.43
51:SC:7:ASP:O	51:SC:10:LYS:HG2	2.19	0.43
60:SH:46:VAL:HG11	60:SH:73:MET:HE1	2.00	0.43
60:SH:91:ASP:OD2	60:SH:93:THR:OG1	2.35	0.43
61:SO:209:THR:O	61:SO:224:ASN:HA	2.18	0.43
63:SG:10:LYS:HG3	63:SG:53:TYR:HE2	1.83	0.43
67:SS:139:VAL:HG13	67:SS:150:PRO:HG3	1.99	0.43
69:SU:131:PHE:CD2	69:SU:132:PRO:CD	2.88	0.43
74:Sa:4:ASP:OD1	74:Sa:4:ASP:N	2.50	0.43
1:2:50:C:H2'	1:2:424:C:H41	1.83	0.43
1:2:521:A:H2'	1:2:522:U:H6	1.83	0.43
2:A:58:G:O2'	2:A:61:A:H5'	2.17	0.43
2:A:785:G:O4'	20:S:92:ARG:NH2	2.51	0.43
2:A:787:G:H2'	2:A:788:C:C6	2.52	0.43
2:A:1249:G:H2'	2:A:1250:G:H8	1.83	0.43
2:A:1508:C:N4	2:A:1880:U:HO2'	2.17	0.43
2:A:1804:A:H2'	2:A:1805:C:H6	1.82	0.43
2:A:1886:A:H2'	2:A:1887:A:C8	2.51	0.43
2:A:2095:G:H2'	2:A:2096:A:C8	2.52	0.43
2:A:2313:A:H5'	2:A:2315:G:H1'	2.00	0.43
2:A:2456:A:H2'	2:A:2457:G:C8	2.53	0.43
2:A:2545:C:H2'	2:A:2546:C:C6	2.53	0.43
2:A:2561:A:C2	11:J:32:LYS:HB2	2.53	0.43
2:A:2837:A:H2'	2:A:2845:A:C2	2.52	0.43
2:A:2985:C:H2'	2:A:2986:U:H6	1.83	0.43
7:F:84:ARG:O	7:F:84:ARG:HD3	2.19	0.43
8:G:8:LYS:HD3	8:G:12:TYR:HE2	1.83	0.43
13:L:42:THR:N	13:L:45:GLU:OE1	2.36	0.43
24:W:13:LYS:HB2	24:W:13:LYS:HE3	1.84	0.43
28:a:42:GLN:HG2	28:a:43:TYR:CD1	2.53	0.43
33:f:20:LEU:HD11	33:f:32:ALA:HB2	2.00	0.43
33:f:28:ARG:HD2	33:f:65:LYS:HA	2.01	0.43
34:g:71:HIS:HB3	34:g:93:ALA:HB2	1.99	0.43
37:j:23:ASP:O	37:j:27:GLU:HG2	2.17	0.43
47:x:464:LEU:HA	47:x:513:LYS:HD2	2.00	0.43
51:SC:31:LYS:HD2	51:SC:31:LYS:HA	1.74	0.43
52:SE:116:LEU:N	52:SE:116:LEU:HD23	2.33	0.43
54:SI:8:ASP:HA	59:SF:35:PRO:CD	2.48	0.43
58:SB:116:HIS:O	58:SB:120:ILE:HG12	2.18	0.43
59:SF:22:VAL:HG12	59:SF:92:TYR:CD2	2.52	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SO:49:GLY:H	61:SO:54:PHE:HA	1.83	0.43
63:SG:17:ILE:HD12	63:SG:58:MET:SD	2.59	0.43
63:SG:28:PHE:HA	63:SG:55:THR:HG21	2.00	0.43
69:SU:27:LEU:HD23	69:SU:27:LEU:HA	1.85	0.43
1:2:446:A:N3	1:2:446:A:H2'	2.33	0.43
1:2:653:C:H41	1:2:681:U:H3	1.66	0.43
1:2:922:G:H2'	1:2:923:A:H8	1.83	0.43
1:2:1042:G:H2'	1:2:1043:A:H8	1.83	0.43
1:2:1252:C:H1'	62:SN:140:TYR:CE1	2.53	0.43
1:2:1636:C:H4'	1:2:1637:C:O5'	2.18	0.43
2:A:1246:G:N3	2:A:1264:G:O2'	2.47	0.43
2:A:1534:A:OP2	2:A:1586:G:N1	2.31	0.43
2:A:2778:G:H2'	2:A:2779:A:H8	1.82	0.43
2:A:3305:A:H2'	2:A:3306:U:C2	2.54	0.43
3:B:52:G:O2'	3:B:53:U:O4'	2.20	0.43
7:F:362:ASP:OD1	7:F:362:ASP:N	2.52	0.43
14:M:110:ILE:HA	14:M:114:ILE:HG13	2.01	0.43
26:Y:35:LYS:O	26:Y:39:LEU:HD13	2.18	0.43
28:a:21:THR:HG22	28:a:21:THR:O	2.18	0.43
39:l:34:CYS:CB	39:l:37:CYS:HG	2.29	0.43
40:m:61:LYS:O	40:m:65:LEU:HD23	2.18	0.43
47:x:342:LEU:HD23	47:x:342:LEU:HA	1.86	0.43
47:x:702:GLY:O	47:x:706:ILE:HG12	2.19	0.43
61:SO:66:HIS:HB3	61:SO:86:ASP:HB3	2.00	0.43
61:SO:153:GLN:HE21	61:SO:202:LEU:H	1.66	0.43
61:SO:175:ASP:OD1	61:SO:175:ASP:N	2.49	0.43
61:SO:178:VAL:HG13	61:SO:192:PHE:CB	2.49	0.43
65:SQ:27:LYS:HE3	65:SQ:49:ASN:N	2.34	0.43
71:SW:109:LEU:HD23	71:SW:109:LEU:HA	1.83	0.43
73:SY:29:SER:O	73:SY:33:VAL:HG12	2.18	0.43
74:Sa:16:LYS:HB2	74:Sa:16:LYS:NZ	2.33	0.43
1:2:205:U:H2'	1:2:206:A:H8	1.84	0.43
1:2:689:G:H2'	1:2:690:G:H8	1.83	0.43
1:2:876:G:H1'	1:2:944:A:O4'	2.18	0.43
1:2:966:A:N1	1:2:967:A:N6	2.67	0.43
1:2:1227:A:N1	48:SD:103:LEU:HD13	2.34	0.43
1:2:1315:U:H5''	1:2:1329:A:C2	2.53	0.43
1:2:1502:G:N7	54:SI:102:ARG:NH2	2.58	0.43
1:2:1524:A:H2	1:2:1590:G:H1'	1.83	0.43
1:2:1590:G:H2'	1:2:1591:C:C6	2.54	0.43
1:2:1659:A:H61	1:2:1742:U:H3	1.65	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:53:G:P	39:I:48:ASN:HB2	2.59	0.43
2:A:229:G:H2'	2:A:230:U:C6	2.54	0.43
2:A:702:C:H2'	2:A:703:G:H8	1.82	0.43
2:A:785:G:OP1	20:S:66:ARG:NH2	2.52	0.43
2:A:1168:U:H1'	10:I:209:ASN:ND2	2.33	0.43
2:A:1421:G:H2'	2:A:1422:G:H8	1.84	0.43
2:A:1618:G:H2'	2:A:1619:A:C8	2.54	0.43
3:B:26:C:H5'	8:G:56:THR:OG1	2.18	0.43
3:B:87:G:O2'	22:U:119:ARG:NH2	2.52	0.43
4:C:26:U:H2'	4:C:27:U:H6	1.84	0.43
5:D:221:LYS:HB2	5:D:221:LYS:HE3	1.90	0.43
6:E:11:HIS:CD2	6:E:235:THR:HA	2.52	0.43
8:G:106:ALA:HB2	8:G:166:ALA:HA	2.00	0.43
12:K:103:ILE:HD12	12:K:134:ILE:HD11	2.01	0.43
15:N:77:LEU:HA	15:N:80:VAL:HG22	2.00	0.43
18:Q:36[A]:VAL:HB	18:Q:108[A]:ILE:HD13	2.00	0.43
18:Q:78[A]:ARG:NE	18:Q:78[A]:ARG:HA	2.33	0.43
46:s:6:C:H2'	46:s:7:G:H8	1.83	0.43
47:x:270:GLU:CD	47:x:275:MET:HE2	2.44	0.43
47:x:281:ILE:HD12	47:x:282:PHE:HD1	1.83	0.43
47:x:282:PHE:O	47:x:286:THR:OG1	2.20	0.43
47:x:611:ASP:CG	47:x:614:ALA:HB3	2.44	0.43
61:SO:172:ALA:HB1	61:SO:199:ILE:HB	2.00	0.43
63:SG:75:GLU:O	63:SG:79:GLU:HG2	2.19	0.43
64:SP:89:PHE:CZ	64:SP:93:THR:HG21	2.54	0.43
64:SP:118:PRO:HD2	64:SP:141:ILE:HG13	2.00	0.43
69:SU:62:VAL:HG22	69:SU:70:PHE:HE2	1.81	0.43
73:SY:60:VAL:HA	73:SY:66:ILE:HD13	2.01	0.43
76:Sc:100:ASP:OD1	76:Sc:100:ASP:N	2.51	0.43
78:Sf:42:ASN:ND2	78:Sf:57:GLU:OE2	2.52	0.43
1:2:277:U:O2	1:2:279:G:C6	2.72	0.43
1:2:625:C:H2'	1:2:626:U:C6	2.54	0.43
1:2:907:A:N1	1:2:1008:G:O2'	2.47	0.43
1:2:1068:C:H2'	1:2:1069:A:C8	2.53	0.43
1:2:1070:C:H5''	78:Sf:17:ARG:NH2	2.34	0.43
1:2:1564:U:H2'	1:2:1565:C:H6	1.83	0.43
1:2:1590:G:H2'	1:2:1591:C:H6	1.83	0.43
1:2:1649:G:H2'	1:2:1650:U:C6	2.54	0.43
1:2:1759:C:H2'	1:2:1760:G:H8	1.82	0.43
2:A:426:G:OP1	34:g:15:LYS:NZ	2.52	0.43
2:A:553:U:H2'	2:A:554:A:O4'	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:790:U:H2'	2:A:791:A:H8	1.81	0.43
2:A:1380:G:H5'	7:F:191:LYS:H	1.83	0.43
2:A:2144:A:H1'	2:A:2281:A:H61	1.83	0.43
2:A:3050:U:O2'	26:Y:16:GLY:O	2.37	0.43
2:A:3146:G:H2'	2:A:3147:G:C8	2.53	0.43
4:C:13:A:O2'	19:R:121:GLN:O	2.35	0.43
5:D:40:TYR:CD1	5:D:40:TYR:C	2.97	0.43
7:F:296:GLN:HA	7:F:299:ILE:HG12	2.00	0.43
9:H:82:ARG:HB3	35:h:104:PRO:HA	2.00	0.43
37:j:86:ARG:O	37:j:90:ARG:HG2	2.19	0.43
43:p:2:ARG:HB2	43:p:5:TRP:CD1	2.54	0.43
48:SD:62:LEU:HD21	48:SD:72:ILE:HG23	1.99	0.43
53:SA:32:GLU:CD	53:SA:58:VAL:HG23	2.44	0.43
58:SB:61:TYR:HE2	58:SB:164:PRO:HG2	1.83	0.43
64:SP:52:LYS:HD2	64:SP:52:LYS:H	1.84	0.43
65:SQ:36:SER:N	65:SQ:231:LEU:O	2.51	0.43
1:2:342:C:H2'	1:2:343:C:C6	2.54	0.43
1:2:521:A:H1'	77:Sd:34:ASN:HD21	1.84	0.43
1:2:551:G:OP2	1:2:581:U:H2'	2.19	0.43
1:2:599:A:H2'	1:2:600:U:H6	1.83	0.43
1:2:600:U:C2	1:2:601:A:C8	3.06	0.43
2:A:8:C:H2'	2:A:9:U:C6	2.54	0.43
2:A:121:A:C2	11:J:129:PRO:HB3	2.54	0.43
2:A:1535:A:H62	2:A:1586:G:H21	1.67	0.43
2:A:1669:C:OP1	36:i:24:LYS:NZ	2.50	0.43
2:A:1880:U:O4	2:A:1881:A:N6	2.52	0.43
2:A:2383:C:P	18:Q:85[A]:ARG:HH22	2.42	0.43
2:A:2769:A:H2'	2:A:2770:G:C8	2.54	0.43
2:A:3008:A:H4'	18:Q:67[A]:THR:HA	2.00	0.43
3:B:5:G:OP1	14:M:143:ARG:NH2	2.43	0.43
4:C:143:U:C2	4:C:144:G:C8	3.07	0.43
5:D:5:ILE:HD11	5:D:232:GLY:HA2	2.01	0.43
5:D:112:ILE:HG23	5:D:133:TYR:HB2	2.00	0.43
10:I:85:PHE:HB2	10:I:139:PRO:HG3	2.01	0.43
33:f:55:LEU:HB2	33:f:95:PRO:HD3	2.00	0.43
44:q:71:ARG:NH2	44:q:80:ARG:NE	2.65	0.43
45:r:87:ARG:O	45:r:91:GLU:HG2	2.18	0.43
47:x:331:ALA:O	47:x:335:LEU:HD13	2.18	0.43
47:x:732:GLU:N	47:x:795:GLN:HE21	2.17	0.43
48:SD:61:VAL:HB	48:SD:121:VAL:HG22	1.99	0.43
49:SZ:81:VAL:CG1	49:SZ:115:ILE:HG12	2.48	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SA:18:TYR:C	53:SA:18:TYR:CD1	2.96	0.43
55:SJ:68:ARG:HE	55:SJ:68:ARG:HB3	1.71	0.43
61:SO:275:ARG:HG3	61:SO:276:PRO:HD2	1.99	0.43
63:SG:29:GLN:O	63:SG:33:ARG:HG2	2.19	0.43
63:SG:66:VAL:HG13	63:SG:67:ARG:H	1.83	0.43
65:SQ:33:LYS:HD3	65:SQ:33:LYS:HA	1.88	0.43
65:SQ:35:PRO:HA	65:SQ:231:LEU:HB3	2.01	0.43
65:SQ:105:PHE:CE1	65:SQ:213:ARG:HA	2.50	0.43
66:SR:228:ASN:HD21	74:Sa:1:MET:HG2	1.79	0.43
70:SV:74:LYS:HB2	70:SV:109:PHE:CE1	2.53	0.43
76:Sc:87:VAL:HA	76:Sc:124:VAL:HG22	2.01	0.43
1:2:191:C:O2	70:SV:137:LYS:NZ	2.43	0.43
1:2:385:A:H2'	1:2:386:G:C8	2.53	0.43
1:2:431:C:H2'	1:2:432:G:C8	2.54	0.43
1:2:956:C:H1'	1:2:1047:G:O2'	2.19	0.43
1:2:1163:A:H2'	1:2:1164:G:O4'	2.18	0.43
2:A:40:A:H61	2:A:963:G:H21	1.65	0.43
2:A:721:G:H2'	2:A:722:G:H8	1.82	0.43
2:A:1132:C:H2'	2:A:1133:A:C8	2.54	0.43
2:A:1243:G:N2	2:A:1270:A:O2'	2.49	0.43
2:A:1386:A:H5''	7:F:141:ARG:HH22	1.83	0.43
2:A:1411:C:OP2	34:g:98:HIS:ND1	2.51	0.43
2:A:2219:A:H2'	2:A:2220:A:H8	1.84	0.43
2:A:3137:C:H2'	2:A:3138:U:C6	2.53	0.43
6:E:11:HIS:CE1	25:X:45:ARG:HH22	2.37	0.43
6:E:17:LEU:HD21	6:E:233:TRP:CH2	2.52	0.43
10:I:180:SER:N	10:I:183:ASP:OD2	2.52	0.43
14:M:117:ASP:HB2	14:M:120:ILE:HG13	2.00	0.43
16:O:20:VAL:HG21	16:O:90:VAL:HG11	2.00	0.43
19:R:30:ARG:NH1	19:R:31:GLU:OE1	2.51	0.43
23:V:144:GLU:OE2	23:V:144:GLU:N	2.47	0.43
35:h:88:ASN:N	35:h:88:ASN:OD1	2.51	0.43
46:s:27:C:H2'	46:s:28:A:C8	2.53	0.43
46:t:56:C:H2'	46:t:57:G:C8	2.54	0.43
47:x:272:ALA:HA	47:x:275:MET:HG3	2.00	0.43
53:SA:10:LYS:NZ	55:SJ:113:ASP:OD2	2.49	0.43
55:SJ:98:GLN:HE21	55:SJ:102:ARG:HG3	1.83	0.43
61:SO:11:GLY:O	61:SO:311:ARG:HA	2.19	0.43
61:SO:174:ASN:HA	61:SO:198:ASN:HD22	1.83	0.43
61:SO:178:VAL:C	61:SO:179:LYS:HD2	2.44	0.43
75:Sb:41:MET:HE1	75:Sb:129:VAL:CG2	2.47	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:78:A:N1	68:ST:178:LEU:HD21	2.34	0.43
1:2:188:A:N3	1:2:188:A:H2'	2.34	0.43
1:2:861:U:H3'	1:2:862:A:C8	2.53	0.43
1:2:979:A:H4'	1:2:1786:G:N2	2.33	0.43
1:2:990:C:H5''	49:SZ:129:LYS:HB2	2.00	0.43
1:2:1217:A:OP1	51:SC:1:MET:HG2	2.19	0.43
2:A:737:G:H2'	2:A:738:A:H8	1.84	0.43
2:A:1060:U:H2'	2:A:1061:A:C8	2.54	0.43
2:A:1261:G:H1'	2:A:1278:A:H61	1.83	0.43
2:A:1498:A:H2'	2:A:1499:C:C6	2.53	0.43
2:A:3126:C:H2'	2:A:3127:A:H8	1.84	0.43
2:A:3175:U:H5''	35:h:10:LYS:NZ	2.34	0.43
2:A:3251:U:H2'	2:A:3252:G:H8	1.83	0.43
6:E:123:TYR:CZ	6:E:124:LYS:HG3	2.53	0.43
7:F:3:ARG:NH2	7:F:24:ALA:H	2.16	0.43
7:F:11:LEU:HD23	7:F:11:LEU:HA	1.86	0.43
7:F:300:ARG:HH11	20:S:39:ARG:HA	1.84	0.43
11:J:111:LYS:HB3	11:J:111:LYS:HE2	1.62	0.43
13:L:5:PRO:HB2	13:L:7:ARG:HG2	2.01	0.43
13:L:153:ARG:HA	13:L:156:ARG:HD2	2.00	0.43
19:R:148:LEU:O	19:R:148:LEU:HD12	2.19	0.43
30:c:7:LYS:HA	30:c:7:LYS:HD3	1.85	0.43
38:k:77:LEU:HD21	38:k:86:LYS:HG3	2.00	0.43
47:x:202:VAL:HG22	47:x:204:PRO:CD	2.48	0.43
47:x:459:ILE:CG2	47:x:460:ASP:H	2.28	0.43
47:x:543:GLN:O	47:x:547:HIS:CE1	2.71	0.43
47:x:610:ASP:HB2	47:x:615:ARG:NH2	2.33	0.43
47:x:731:VAL:HG21	47:x:780:PHE:CZ	2.54	0.43
47:x:793:PHE:HD1	47:x:794:PRO:HD2	1.83	0.43
47:x:822:ALA:HA	47:x:825:ARG:NH1	2.33	0.43
49:SZ:29:HIS:HA	49:SZ:41:ARG:HA	1.99	0.43
61:SO:20:VAL:HG22	61:SO:37:SER:HB3	2.01	0.43
61:SO:59:ARG:NH2	61:SO:97:GLY:HA2	2.32	0.43
67:SS:41:SER:OG	67:SS:42:LEU:N	2.52	0.43
67:SS:180:LEU:HD23	67:SS:228:ILE:HD11	2.01	0.43
1:2:380:U:N3	71:SW:5:PRO:HB3	2.34	0.43
1:2:646:C:H2'	1:2:647:G:C8	2.54	0.43
1:2:990:C:H2'	1:2:991:G:O4'	2.19	0.43
1:2:1525:A:H2'	1:2:1526:A:C8	2.54	0.43
2:A:293:C:H2'	2:A:294:U:O4'	2.19	0.43
2:A:357:A:H2'	2:A:358:G:C8	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:407:A:N1	4:C:17:A:H1'	2.34	0.43
2:A:429:U:H2'	2:A:430:U:H6	1.83	0.43
2:A:658:G:H2'	2:A:659:G:H8	1.84	0.43
2:A:1138:U:H2'	2:A:1139:G:H8	1.84	0.43
2:A:1198:C:OP2	2:A:1199:C:O2'	2.23	0.43
2:A:2684:C:H2'	2:A:2685:C:H6	1.83	0.43
2:A:2736:A:O2'	23:V:68:THR:HG21	2.18	0.43
2:A:2827:U:O2'	2:A:2829:U:O4	2.24	0.43
8:G:54:ARG:HD3	8:G:54:ARG:HA	1.79	0.43
9:H:68:PRO:O	9:H:71:VAL:HG22	2.18	0.43
21:T:166:ASN:OD1	21:T:166:ASN:C	2.61	0.43
28:a:86:THR:HA	28:a:97:ILE:HG22	2.00	0.43
36:i:58:ARG:HD2	36:i:58:ARG:HA	1.73	0.43
46:s:3:C:H2'	46:s:4:G:H8	1.83	0.43
47:x:632:LYS:HD2	47:x:648:ASP:HB3	1.99	0.43
54:SI:18:TYR:CD2	54:SI:22:LEU:HD11	2.54	0.43
58:SB:91:GLU:O	58:SB:95:ASN:ND2	2.52	0.43
60:SH:10:SER:O	60:SH:60:GLU:HA	2.19	0.43
62:SN:97:LYS:HG2	62:SN:98:VAL:N	2.33	0.43
66:SR:150:GLN:O	66:SR:174:ARG:NH2	2.36	0.43
71:SW:59:LEU:HD11	71:SW:72:GLU:HB2	2.01	0.43
74:Sa:21:ASN:HB2	75:Sb:67:GLY:HA3	2.01	0.43
78:Sf:62:ILE:O	78:Sf:74:SER:OG	2.30	0.43
1:2:276:C:H3'	1:2:277:U:H6	1.84	0.42
1:2:745:U:O4	69:SU:104:ARG:NH1	2.52	0.42
1:2:783:G:H2'	1:2:784:C:H6	1.84	0.42
1:2:1042:G:H2'	1:2:1043:A:C8	2.54	0.42
1:2:1146:G:H2'	1:2:1147:A:C8	2.54	0.42
1:2:1214:U:H2'	1:2:1215:C:C6	2.53	0.42
1:2:1220:C:OP1	51:SC:48:SER:OG	2.36	0.42
1:2:1223:A:O2'	1:2:1224:A:H5'	2.18	0.42
1:2:1322:A:H2'	1:2:1323:C:H6	1.82	0.42
2:A:750:G:C2	2:A:751:A:C8	3.07	0.42
2:A:974:G:H5'	20:S:16:ARG:HB2	2.00	0.42
2:A:1022:U:H6	2:A:1022:U:P	2.42	0.42
2:A:1135:A:H2'	2:A:1136:A:H8	1.84	0.42
2:A:1150:A:N7	2:A:1310:G:H5'	2.33	0.42
2:A:1842:A:H5''	41:n:45:ARG:HH22	1.84	0.42
2:A:2956:A:H61	2:A:2977:G:H1'	1.83	0.42
4:C:9:A:H2'	4:C:10:A:H8	1.84	0.42
6:E:12:GLY:HA3	6:E:233:TRP:HE3	1.83	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:11:LEU:HD21	7:F:156:LEU:HB2	2.01	0.42
7:F:362:ASP:HA	22:U:28:ARG:HD2	2.01	0.42
8:G:111:GLN:HA	8:G:116:ASP:HB2	2.01	0.42
9:H:136:GLU:C	9:H:136:GLU:OE2	2.62	0.42
29:b:120:GLU:OE2	29:b:120:GLU:HA	2.19	0.42
46:s:53:G:H2'	46:s:54:A:C8	2.45	0.42
47:x:101:ASN:HB3	47:x:453:ILE:HD11	2.00	0.42
47:x:388:THR:HG23	47:x:390:ASP:HB3	2.00	0.42
47:x:607:ASN:OD1	47:x:608:PRO:HD2	2.19	0.42
52:SE:26:LEU:HD11	52:SE:90:ILE:HG21	2.01	0.42
65:SQ:48:VAL:HG11	65:SQ:61:LEU:HD21	2.01	0.42
70:SV:44:HIS:HE1	70:SV:58:LEU:HD23	1.85	0.42
73:SY:3:ARG:NH1	73:SY:10:GLY:O	2.51	0.42
75:Sb:32:LYS:HA	75:Sb:35:ILE:HD13	2.01	0.42
77:Sd:2:SER:HA	77:Sd:32:ARG:HG3	2.01	0.42
1:2:108:A:H2'	1:2:109:G:C8	2.54	0.42
1:2:626:U:H2'	1:2:627:C:C6	2.54	0.42
1:2:700:C:H2'	1:2:701:U:C6	2.54	0.42
1:2:1666:U:H2'	1:2:1667:A:O4'	2.19	0.42
2:A:975:C:H2'	2:A:976:U:C6	2.54	0.42
2:A:1019:G:N2	2:A:1033:U:H3	2.17	0.42
2:A:1105:A:H2'	2:A:1106:G:H8	1.83	0.42
2:A:2226:U:H2'	2:A:2227:C:C6	2.54	0.42
2:A:2350:C:H5''	19:R:68:GLY:HA3	2.01	0.42
2:A:2368:A:H2'	2:A:2369:G:H8	1.84	0.42
2:A:2631:U:H2'	2:A:2632:G:H8	1.83	0.42
2:A:2929:C:H2'	2:A:2930:A:C8	2.54	0.42
2:A:3109:G:N2	12:K:156:GLN:OE1	2.53	0.42
3:B:56:A:H4'	14:M:152:HIS:HB2	2.00	0.42
5:D:188:LYS:O	5:D:192:LYS:HG3	2.19	0.42
6:E:12:GLY:HA3	6:E:233:TRP:CE3	2.54	0.42
7:F:205:PRO:HB3	7:F:247:PHE:CD2	2.54	0.42
21:T:116:ASP:C	21:T:116:ASP:OD1	2.62	0.42
22:U:40:ARG:HD2	22:U:40:ARG:HA	1.76	0.42
22:U:137:ARG:HD3	22:U:137:ARG:HA	1.89	0.42
22:U:154:HIS:HA	22:U:170:THR:HB	2.01	0.42
24:W:32:SER:HA	24:W:35:LYS:HG2	2.00	0.42
33:f:10:ARG:HG2	33:f:108:VAL:HA	2.00	0.42
36:i:21:LYS:HB3	36:i:21:LYS:HE2	1.74	0.42
44:q:47:GLN:OE1	44:q:47:GLN:HA	2.20	0.42
47:x:611:ASP:O	47:x:615:ARG:HG2	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:68:GLU:CD	48:SD:70:ASN:HB2	2.44	0.42
54:SI:53:TRP:CD1	54:SI:53:TRP:C	2.98	0.42
54:SI:131:ASP:CA	54:SI:134:ARG:HG2	2.48	0.42
61:SO:26:SER:HB3	61:SO:32:LEU:HB2	2.02	0.42
63:SG:47:ARG:HA	63:SG:50:ILE:HD12	2.01	0.42
64:SP:125:ASP:OD1	64:SP:125:ASP:C	2.62	0.42
66:SR:116:LYS:HG2	66:SR:127:ALA:HB3	2.01	0.42
67:SS:19:LEU:O	67:SS:51:ARG:NH2	2.52	0.42
68:ST:171:LYS:HE2	68:ST:171:LYS:HB3	1.92	0.42
69:SU:80:GLU:O	69:SU:83:LYS:HG2	2.18	0.42
69:SU:129:LEU:HD11	69:SU:169:PHE:CD1	2.40	0.42
70:SV:87:ASN:ND2	70:SV:89:GLU:OE2	2.52	0.42
71:SW:113:VAL:HG13	71:SW:118:LEU:HB3	2.02	0.42
71:SW:172:VAL:HG12	71:SW:173:ALA:N	2.30	0.42
73:SY:92:ILE:O	73:SY:96:VAL:HG13	2.19	0.42
1:2:78:A:C6	68:ST:178:LEU:HD21	2.54	0.42
1:2:609:U:H4'	1:2:610:G:O5'	2.18	0.42
1:2:694:U:H5''	1:2:695:U:H5	1.85	0.42
1:2:1196:A:OP2	1:2:1464:G:N2	2.51	0.42
1:2:1260:U:H2'	1:2:1261:G:C8	2.54	0.42
1:2:1488:G:O2'	1:2:1494:C:H1'	2.20	0.42
2:A:705:A:C6	30:c:113:LEU:HD23	2.54	0.42
2:A:1020:G:C3'	2:A:1021:G:H5'	2.50	0.42
2:A:1098:A:OP2	23:V:108:ARG:NH1	2.52	0.42
2:A:1733:G:H2'	2:A:1734:G:C8	2.54	0.42
2:A:2218:G:H2'	2:A:2219:A:C8	2.54	0.42
2:A:2308:C:H5''	2:A:2309:A:H2'	2.01	0.42
2:A:3005:A:N1	2:A:3140:G:O2'	2.49	0.42
2:A:3024:A:H5''	12:K:96:HIS:ND1	2.33	0.42
2:A:3161:C:H2'	2:A:3162:C:C6	2.54	0.42
2:A:3214:U:OP2	16:O:128:ARG:NH1	2.51	0.42
2:A:3332:U:H2'	2:A:3333:G:O4'	2.20	0.42
14:M:12:LEU:HB3	14:M:131:MET:HE2	2.01	0.42
16:O:44:VAL:HG11	16:O:60:LEU:HD21	2.01	0.42
19:R:24:VAL:HG22	19:R:86:LYS:HG2	2.01	0.42
22:U:29:ILE:HD13	22:U:29:ILE:HA	1.88	0.42
24:W:43:VAL:O	24:W:44:GLU:HG2	2.19	0.42
28:a:40:ARG:HH12	28:a:46:LYS:HE2	1.84	0.42
30:c:73:LEU:HD23	30:c:109:TYR:CD2	2.54	0.42
47:x:32:LYS:HD2	47:x:106:PRO:HA	1.99	0.42
51:SC:63:TYR:CD2	53:SA:76:ARG:NE	2.87	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SI:34:VAL:HG23	54:SI:53:TRP:CH2	2.54	0.42
55:SJ:25:THR:OG1	55:SJ:115:GLU:HB2	2.20	0.42
55:SJ:67:THR:CG2	55:SJ:68:ARG:N	2.82	0.42
61:SO:50:ASP:OD1	61:SO:50:ASP:N	2.47	0.42
61:SO:192:PHE:CE2	61:SO:223:TRP:CE3	3.07	0.42
66:SR:175:GLY:HA3	71:SW:97:LEU:HD22	2.01	0.42
69:SU:31:SER:HB2	69:SU:34:LEU:HB2	2.02	0.42
71:SW:110:GLN:OE1	71:SW:126:ARG:HB2	2.19	0.42
76:Sc:61:SER:HB3	76:Sc:65:ASN:OD1	2.19	0.42
78:Sf:34:ASP:OD1	78:Sf:82:LYS:HG2	2.19	0.42
1:2:330:G:OP2	70:SV:172:ARG:NH2	2.50	0.42
1:2:628:G:O2'	2:A:846:A:N6	2.51	0.42
1:2:1210:C:H2'	1:2:1211:A:C8	2.54	0.42
1:2:1241:G:H3'	1:2:1242:A:H8	1.83	0.42
1:2:1280:C:H2'	1:2:1281:G:C8	2.55	0.42
2:A:296:A:N3	2:A:299:G:O2'	2.50	0.42
2:A:547:G:H2'	2:A:548:G:H8	1.84	0.42
2:A:916:G:C6	5:D:207:VAL:HG11	2.54	0.42
2:A:1300:G:OP2	2:A:1301:A:O2'	2.33	0.42
2:A:1369:A:H5''	30:c:21:ARG:HH11	1.83	0.42
2:A:2190:U:H2'	2:A:2191:U:C6	2.55	0.42
2:A:2341:A:OP2	6:E:247:ARG:NH2	2.53	0.42
2:A:2658:G:H2'	2:A:2659:G:H8	1.85	0.42
2:A:2741:C:O2'	44:q:20:HIS:N	2.43	0.42
3:B:106:U:H2'	3:B:107:C:C6	2.55	0.42
15:N:123:ILE:HG22	37:j:118:ILE:HG12	2.02	0.42
40:m:11:PHE:O	40:m:15:THR:HG22	2.19	0.42
46:s:10:A:C2	46:s:26:G:H1'	2.54	0.42
47:x:211:PHE:HE2	47:x:245:TRP:CH2	2.37	0.42
47:x:501:LEU:O	47:x:504:LEU:HD23	2.19	0.42
47:x:633:ILE:HD11	47:x:645:LEU:HD12	2.01	0.42
47:x:647:ILE:HD13	47:x:685:ARG:HH12	1.83	0.42
58:SB:54:LYS:HB2	58:SB:138:THR:HG21	2.01	0.42
59:SF:95:LYS:HG2	59:SF:96:TYR:CE1	2.54	0.42
63:SG:72:LYS:HA	63:SG:72:LYS:HD2	1.77	0.42
63:SG:109:LEU:HD21	64:SP:49:ASN:HA	2.01	0.42
71:SW:62:ARG:HB3	71:SW:69:ARG:HB2	2.02	0.42
78:Sf:73:LEU:HD23	78:Sf:73:LEU:H	1.85	0.42
79:Sg:29:LYS:HB3	79:Sg:29:LYS:HE3	1.88	0.42
79:Sg:43:ARG:HH11	79:Sg:56:MET:HG2	1.84	0.42
1:2:225:A:O2'	1:2:226:A:OP1	2.34	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:431:C:C2	1:2:432:G:C8	3.08	0.42
1:2:468:A:N1	1:2:594:A:O2'	2.50	0.42
1:2:1346:A:H62	1:2:1370:U:H5	1.67	0.42
1:2:1471:A:N6	1:2:1538:U:N3	2.66	0.42
1:2:1667:A:H2'	1:2:1668:G:H8	1.85	0.42
2:A:113:C:OP1	17:P:147:ARG:NH1	2.52	0.42
2:A:375:A:O2'	28:a:87:LYS:NZ	2.52	0.42
2:A:432:G:H2'	2:A:433:A:C8	2.55	0.42
2:A:1229:G:H2'	2:A:1230:G:C8	2.53	0.42
2:A:1298:C:H2'	2:A:1299:U:C6	2.55	0.42
2:A:1491:A:O2'	2:A:1843:C:H4'	2.20	0.42
2:A:1576:G:H2'	2:A:1577:G:C8	2.54	0.42
2:A:1781:C:H2'	2:A:1782:U:C6	2.55	0.42
2:A:2444:C:C2	2:A:2445:A:C8	3.07	0.42
2:A:2936:A:H2'	2:A:2937:G:C8	2.54	0.42
2:A:3105:U:O4	2:A:3106:A:N6	2.53	0.42
2:A:3203:U:H2'	2:A:3204:C:C6	2.54	0.42
4:C:71:A:N6	4:C:87:G:H21	2.17	0.42
17:P:7:LEU:HB3	17:P:46:ASP:OD2	2.19	0.42
18:Q:25[A]:LYS:HA	18:Q:25[A]:LYS:HD2	1.72	0.42
22:U:7:TYR:HE1	22:U:63:GLN:HB2	1.85	0.42
29:b:38:PHE:N	29:b:38:PHE:CD1	2.88	0.42
34:g:102:ALA:HA	34:g:105:ARG:HB2	2.02	0.42
36:i:67:LYS:HE3	36:i:67:LYS:HB2	1.82	0.42
38:k:43:LEU:O	38:k:47:ILE:HG23	2.19	0.42
40:m:33:LYS:HA	40:m:33:LYS:HD3	1.71	0.42
47:x:217:GLY:O	47:x:325:ARG:NH1	2.53	0.42
47:x:598:SER:O	47:x:602:GLU:HG2	2.19	0.42
48:SD:85:LYS:C	48:SD:87:PRO:HD3	2.44	0.42
48:SD:124:LYS:HB2	48:SD:124:LYS:HE3	1.83	0.42
54:SI:131:ASP:O	54:SI:135:ILE:HG22	2.19	0.42
56:SL:43:ASN:HD21	56:SL:63:ALA:HB1	1.84	0.42
58:SB:148:ARG:HA	58:SB:148:ARG:HD2	1.83	0.42
60:SH:83:ALA:O	60:SH:89:GLN:NE2	2.43	0.42
61:SO:81:LEU:HD21	61:SO:122:ILE:HG21	2.01	0.42
61:SO:292:LEU:HA	61:SO:303:ALA:HA	2.01	0.42
61:SO:305:TYR:CE2	61:SO:310:ILE:HA	2.54	0.42
68:ST:67:VAL:HG12	68:ST:69:LEU:HB2	2.01	0.42
1:2:155:U:OP2	77:Sd:132:ARG:NH1	2.44	0.42
1:2:448:C:H2'	1:2:449:C:C6	2.55	0.42
1:2:521:A:O2'	1:2:522:U:H5'	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:2:628:G:N1	1:2:970:A:OP2	2.37	0.42
1:2:1174:C:H42	1:2:1465:C:N4	2.17	0.42
1:2:1318:G:OP2	63:SG:67:ARG:HG2	2.20	0.42
1:2:1321:A:N6	64:SP:135:GLU:OE2	2.52	0.42
1:2:1592:A:H2'	1:2:1593:A:H8	1.85	0.42
1:2:1653:C:H2'	1:2:1654:G:O4'	2.19	0.42
1:2:1698:G:H5''	1:2:1699:G:H21	1.83	0.42
1:2:1799:U:H5	65:SQ:152:ARG:HD3	1.84	0.42
2:A:219:A:O2'	2:A:220:G:N2	2.35	0.42
2:A:713:U:H2'	2:A:714:G:O4'	2.19	0.42
2:A:1237:G:H1	2:A:1251:A:H2	1.59	0.42
2:A:1495:U:H2'	2:A:1842:A:C2	2.54	0.42
2:A:1778:G:O2'	2:A:1780:G:OP2	2.32	0.42
2:A:1806:A:H2'	2:A:1807:G:O4'	2.20	0.42
2:A:1917:C:H2'	2:A:1918:C:C6	2.55	0.42
2:A:3069:G:H2'	2:A:3070:A:H8	1.85	0.42
5:D:8:GLN:NE2	5:D:232:GLY:CA	2.82	0.42
10:I:100:ARG:O	10:I:104:GLN:HG3	2.19	0.42
15:N:67:ARG:HD3	30:c:105:LEU:O	2.20	0.42
29:b:83:THR:HG23	36:i:93:PHE:CZ	2.54	0.42
37:j:8:GLU:H	37:j:8:GLU:HG2	1.61	0.42
45:r:41:PHE:HB2	45:r:60:CYS:SG	2.59	0.42
47:x:439:GLY:O	47:x:441:PHE:HD1	2.02	0.42
47:x:483:PHE:CD2	47:x:485:VAL:HG22	2.54	0.42
47:x:617:ARG:HG3	47:x:617:ARG:HH11	1.84	0.42
55:SJ:99:ILE:HG12	55:SJ:103:ILE:CG1	2.49	0.42
58:SB:208:SER:O	58:SB:212:LYS:HG3	2.19	0.42
61:SO:86:ASP:OD1	61:SO:88:THR:HG22	2.20	0.42
61:SO:244:ALA:CB	61:SO:292:LEU:HG	2.50	0.42
64:SP:84:ARG:O	64:SP:88:LYS:HG2	2.20	0.42
73:SY:3:ARG:HB3	73:SY:6:SER:HB3	2.00	0.42
1:2:78:A:C4	68:ST:175:ILE:CD1	3.03	0.42
1:2:378:A:H2'	1:2:379:U:O4'	2.19	0.42
1:2:798:C:H2'	1:2:799:A:H8	1.85	0.42
1:2:1632:C:N4	1:2:1633:A:N6	2.67	0.42
1:2:1704:U:H2'	1:2:1705:C:C6	2.55	0.42
2:A:229:G:H5''	28:a:4:GLN:HG2	2.02	0.42
2:A:407:A:H2'	2:A:408:A:C8	2.55	0.42
2:A:1098:A:H4'	23:V:130:ARG:O	2.19	0.42
2:A:1102:A:OP1	10:I:155:LYS:NZ	2.51	0.42
2:A:1318:A:N6	18:Q:18[A]:ARG:HD3	2.34	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1597:C:H5'	2:A:1696:A:H1'	2.01	0.42
2:A:1661:G:H2'	2:A:1662:G:H8	1.83	0.42
2:A:2177:G:N1	5:D:118:GLU:OE2	2.41	0.42
2:A:2188:A:H2'	2:A:2188:A:N3	2.34	0.42
2:A:2286:U:O4'	2:A:2288:G:H5'	2.20	0.42
2:A:2392:C:O2	6:E:266:ARG:NH2	2.52	0.42
2:A:2407:C:H2'	2:A:2408:U:C6	2.54	0.42
3:B:12:U:OP2	3:B:68:C:O2'	2.37	0.42
6:E:236:LYS:HE3	6:E:236:LYS:HB2	1.74	0.42
6:E:281:LYS:O	6:E:325:LYS:N	2.45	0.42
6:E:369:ARG:HG3	6:E:370:PHE:CE1	2.55	0.42
7:F:206:LEU:HD23	7:F:248:VAL:HG13	2.01	0.42
12:K:176:LEU:HD13	42:o:86:ALA:HB3	2.02	0.42
19:R:10:ASN:HD22	19:R:13:LYS:HG3	1.85	0.42
35:h:18:ARG:NH2	35:h:20:LYS:O	2.52	0.42
46:s:14:A:H3'	46:s:15:G:H8	1.84	0.42
46:s:52:G:H2'	46:s:53:G:C8	2.55	0.42
47:x:73:THR:HB	47:x:440:ARG:CZ	2.50	0.42
48:SD:37:VAL:HG22	51:SC:81:ASN:CG	2.44	0.42
54:SI:63:ARG:HD2	54:SI:67:MET:HE3	2.01	0.42
55:SJ:21:LYS:HZ1	55:SJ:93:LEU:N	2.17	0.42
58:SB:107:LYS:O	58:SB:111:VAL:HG22	2.20	0.42
59:SF:18:ALA:HA	59:SF:69:VAL:HA	2.01	0.42
61:SO:177:MET:CB	61:SO:193:ILE:HD13	2.50	0.42
65:SQ:86:LEU:HB3	65:SQ:98:THR:OG1	2.20	0.42
67:SS:248:ILE:HA	67:SS:251:GLU:OE2	2.20	0.42
69:SU:41:LEU:HD23	69:SU:42:GLN:N	2.35	0.42
69:SU:126:LEU:HB2	69:SU:173:TYR:CE2	2.47	0.42
78:Sf:55:THR:HB	78:Sf:62:ILE:HD13	2.01	0.42
1:2:107:C:H2'	1:2:108:A:C8	2.54	0.42
1:2:419:G:H2'	1:2:420:A:H8	1.84	0.42
1:2:765:G:N7	71:SW:149:ARG:NH2	2.68	0.42
1:2:1383:G:P	55:SJ:89:ARG:HH12	2.42	0.42
1:2:1459:C:OP1	60:SH:131:LEU:HD21	2.19	0.42
1:2:1690:G:C2'	1:2:1691:A:H5'	2.49	0.42
2:A:597:G:H2'	2:A:598:A:H8	1.85	0.42
2:A:650:C:H2'	2:A:651:G:C8	2.54	0.42
2:A:786:A:H1'	2:A:787:G:C8	2.55	0.42
2:A:824:C:O2'	2:A:1534:A:N3	2.51	0.42
2:A:1138:U:O3'	10:I:97:PRO:HD3	2.20	0.42
2:A:1559:A:OP2	27:Z:33:ARG:NH1	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:1596:C:H2'	2:A:1597:C:H6	1.84	0.42
2:A:1795:U:N3	45:r:50:GLY:O	2.50	0.42
2:A:2103:U:H2'	2:A:2104:A:C8	2.54	0.42
2:A:2152:A:H4'	5:D:245:LEU:HD12	2.02	0.42
2:A:2176:U:OP1	5:D:54:ARG:NH1	2.40	0.42
2:A:2319:U:H5'	2:A:2320:A:OP1	2.19	0.42
2:A:3139:A:H2'	2:A:3140:G:O4'	2.19	0.42
2:A:3261:C:H2'	2:A:3262:U:C6	2.54	0.42
3:B:116:C:H2'	3:B:117:A:C8	2.55	0.42
7:F:286:VAL:O	7:F:290:ILE:HG12	2.19	0.42
11:J:62:LYS:HB3	11:J:62:LYS:HE2	1.81	0.42
13:L:93:PRO:HB2	13:L:125:LEU:HB3	2.02	0.42
13:L:171:TRP:CD1	13:L:171:TRP:C	2.98	0.42
14:M:91:LEU:HD12	14:M:163:PHE:CE2	2.55	0.42
17:P:143:ARG:HG2	37:j:96:GLU:OE1	2.20	0.42
18:Q:152[A]:VAL:HA	18:Q:155[A]:LYS:HE3	2.01	0.42
26:Y:8:PHE:O	26:Y:46:PRO:HB3	2.20	0.42
47:x:255:LYS:HB3	47:x:256:LYS:H	1.71	0.42
53:SA:71:LEU:HD13	53:SA:71:LEU:HA	1.85	0.42
60:SH:15:LEU:HD12	60:SH:15:LEU:HA	1.82	0.42
63:SG:20:TYR:CE2	63:SG:38:ILE:HD13	2.54	0.42
64:SP:122:ILE:O	64:SP:122:ILE:HG22	2.19	0.42
65:SQ:70:LEU:HB2	65:SQ:84:ILE:HD12	2.01	0.42
65:SQ:97:LEU:HD22	65:SQ:232:HIS:CG	2.55	0.42
66:SR:118:ALA:HB3	66:SR:124:ALA:HB2	2.02	0.42
67:SS:126:VAL:HA	67:SS:141:THR:HA	2.00	0.42
1:2:43:A:H2'	1:2:44:U:C6	2.55	0.42
1:2:845:G:H2'	1:2:846:G:O4'	2.20	0.42
1:2:1115:U:H2'	1:2:1116:A:C8	2.55	0.42
1:2:1232:U:H2'	1:2:1233:G:C8	2.55	0.42
1:2:1689:A:H2'	1:2:1690:G:H8	1.83	0.42
2:A:49:A:N7	17:P:187:ARG:NH1	2.68	0.42
2:A:675:C:O2'	2:A:679:U:OP1	2.34	0.42
2:A:1261:G:N2	2:A:1261:G:OP2	2.53	0.42
2:A:1617:G:H2'	2:A:1618:G:C8	2.55	0.42
2:A:2149:A:C2	2:A:2188:A:H4'	2.55	0.42
2:A:2203:U:H2'	2:A:2204:C:C6	2.54	0.42
2:A:2407:C:H2'	2:A:2408:U:H6	1.85	0.42
2:A:2407:C:H1'	2:A:2818:U:H3	1.85	0.42
2:A:2477:G:N3	2:A:2477:G:H2'	2.35	0.42
2:A:3051:U:H2'	2:A:3052:G:H8	1.83	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:81:U:C2	4:C:83:C:H5''	2.55	0.42
5:D:201:GLY:HA2	5:D:204:MET:HB2	2.01	0.42
6:E:142:ALA:O	6:E:145:GLU:HG2	2.20	0.42
14:M:112:LEU:HD12	14:M:114:ILE:HG12	2.00	0.42
15:N:126:PHE:O	37:j:114:ARG:NH2	2.53	0.42
25:X:37:ILE:HG12	25:X:59:MET:C	2.45	0.42
28:a:42:GLN:C	28:a:43:TYR:HD1	2.27	0.42
47:x:22:MET:HE2	47:x:342:LEU:CD1	2.50	0.42
47:x:264:ALA:HB3	47:x:268:PRO:HA	2.01	0.42
47:x:406:LYS:HE2	47:x:406:LYS:HB3	1.78	0.42
52:SE:17:TYR:C	52:SE:19:GLY:H	2.28	0.42
53:SA:118:ALA:O	53:SA:122:VAL:HG12	2.20	0.42
60:SH:42:TYR:CE2	60:SH:99:HIS:CD2	3.07	0.42
64:SP:13:ASP:N	64:SP:13:ASP:OD1	2.53	0.42
67:SS:236:ILE:HD12	67:SS:236:ILE:HA	1.87	0.42
1:2:66:U:C4	68:ST:133:LEU:HB2	2.55	0.42
1:2:231:U:H1'	1:2:235:G:N2	2.35	0.42
1:2:976:G:N1	1:2:1023:A:H1'	2.35	0.42
1:2:992:A:H2	1:2:1012:U:N3	2.11	0.42
2:A:638:C:H1'	2:A:1434:G:H22	1.85	0.42
2:A:974:G:N1	2:A:1108:U:O4	2.53	0.42
2:A:1592:G:OP1	36:i:58:ARG:NH2	2.53	0.42
2:A:1819:U:H2'	2:A:1820:U:C2	2.55	0.42
2:A:3099:C:H2'	2:A:3100:U:C6	2.54	0.42
2:A:3112:G:H21	2:A:3122:A:H62	1.66	0.42
6:E:261:MET:HE2	6:E:261:MET:HB3	1.80	0.42
13:L:66:GLU:O	13:L:70:ILE:HG12	2.20	0.42
16:O:8:LYS:HD2	16:O:8:LYS:HA	1.87	0.42
18:Q:9[A]:ILE:HG21	18:Q:19[A]:LEU:HD11	2.02	0.42
21:T:149:ALA:O	21:T:153:LYS:HD3	2.20	0.42
23:V:11:THR:HB	23:V:15:PHE:HD2	1.83	0.42
31:d:18:ARG:HH11	31:d:18:ARG:HG2	1.84	0.42
41:n:49:MET:HB3	41:n:51:ILE:HG12	2.01	0.42
44:q:71:ARG:HH21	44:q:80:ARG:HG2	1.85	0.42
47:x:284:LEU:HD11	47:x:303:LEU:CD1	2.48	0.42
57:SM:10:HIS:HA	57:SM:11:PRO:HD3	1.91	0.42
59:SF:28:LEU:HD21	59:SF:30:LYS:HE2	2.02	0.42
59:SF:52:LEU:HD13	59:SF:60:PHE:CD2	2.55	0.42
61:SO:221:MET:HE1	61:SO:232:TYR:H	1.84	0.42
61:SO:301:LEU:O	61:SO:312:VAL:HG13	2.19	0.42
69:SU:62:VAL:HG22	69:SU:70:PHE:CD2	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SW:45:ILE:HA	71:SW:48:GLN:OE1	2.20	0.42
75:Sb:14:ILE:HD12	75:Sb:14:ILE:H	1.85	0.42
75:Sb:86:ILE:HD12	75:Sb:86:ILE:HA	1.93	0.42
1:2:689:G:H2'	1:2:690:G:C8	2.55	0.41
1:2:859:A:N7	73:SY:69:ASN:ND2	2.68	0.41
1:2:1484:G:H21	1:2:1606:C:H1'	1.85	0.41
2:A:21:G:OP1	4:C:36:G:N1	2.40	0.41
2:A:336:A:OP1	28:a:10:SER:OG	2.35	0.41
2:A:689:U:O4	7:F:209:TYR:OH	2.30	0.41
2:A:1362:G:H2'	2:A:1363:A:C8	2.55	0.41
2:A:1643:A:O2'	2:A:1644:C:O4'	2.32	0.41
2:A:3154:C:O2'	2:A:3155:U:H5'	2.20	0.41
9:H:167:ASN:OD1	9:H:167:ASN:N	2.50	0.41
23:V:74:VAL:HG12	23:V:76:ILE:HG12	2.02	0.41
29:b:24:VAL:HG11	29:b:87:LEU:HD13	2.02	0.41
32:e:55:GLU:HA	36:i:94:LEU:HD21	2.02	0.41
37:j:102:GLU:OE2	37:j:102:GLU:HA	2.20	0.41
47:x:735:CYS:CB	47:x:791:GLN:HE22	2.33	0.41
49:SZ:50:ALA:C	49:SZ:52:ARG:H	2.28	0.41
63:SG:69:ILE:HD12	63:SG:71:PHE:CE2	2.55	0.41
66:SR:235:LEU:HD12	66:SR:236:PRO:HD2	2.02	0.41
67:SS:175:PHE:HE2	67:SS:198:LYS:HD2	1.84	0.41
1:2:560:U:H2'	1:2:561:G:H8	1.84	0.41
1:2:826:U:O2'	1:2:827:C:H5'	2.20	0.41
1:2:927:C:H1'	49:SZ:124:ASP:O	2.20	0.41
1:2:1391:A:H2'	1:2:1392:U:C6	2.55	0.41
1:2:1624:C:H2'	1:2:1625:C:H6	1.84	0.41
1:2:1648:A:H2'	1:2:1649:G:C8	2.55	0.41
1:2:1787:C:H2'	1:2:1788:G:C8	2.54	0.41
2:A:260:C:H2'	2:A:261:U:H6	1.84	0.41
2:A:412:G:H2'	2:A:413:U:H6	1.84	0.41
2:A:1117:G:O6	2:A:1142:G:N2	2.53	0.41
2:A:1411:C:O3'	34:g:121:ASN:ND2	2.53	0.41
2:A:1435:A:N6	2:A:1437:C:O2	2.53	0.41
2:A:2222:A:N6	2:A:2782:U:O2'	2.43	0.41
2:A:2708:C:H2'	2:A:2709:C:C6	2.55	0.41
2:A:2902:A:H2'	2:A:2903:A:O4'	2.20	0.41
2:A:3040:A:C2	2:A:3041:U:C5	3.08	0.41
2:A:3352:U:O2'	2:A:3353:G:N7	2.53	0.41
10:I:64:GLN:O	10:I:68:ASP:OD2	2.38	0.41
12:K:57:VAL:HG23	12:K:68:LEU:HD12	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:M:19:LEU:O	14:M:68:HIS:HA	2.20	0.41
15:N:66:ASN:OD1	15:N:66:ASN:C	2.63	0.41
16:O:137:LYS:HE3	16:O:137:LYS:HB3	1.89	0.41
17:P:100:ALA:O	17:P:103:GLU:HG2	2.20	0.41
17:P:123:GLN:HB2	17:P:128:LYS:HG2	2.01	0.41
24:W:24:GLU:C	24:W:24:GLU:OE1	2.63	0.41
47:x:62:ASP:OD2	47:x:547:HIS:NE2	2.53	0.41
47:x:490:GLN:HE22	47:x:560:VAL:HG23	1.85	0.41
48:SD:59:LEU:HD12	48:SD:123:VAL:HG21	2.02	0.41
52:SE:72:LYS:HA	52:SE:72:LYS:HD3	1.76	0.41
52:SE:83:MET:HE2	52:SE:83:MET:HB2	1.86	0.41
52:SE:116:LEU:HD23	52:SE:116:LEU:H	1.86	0.41
52:SE:121:ILE:HD11	52:SE:123:TYR:CE1	2.55	0.41
54:SI:12:GLN:NE2	54:SI:13:ASP:OD1	2.53	0.41
55:SJ:26:LEU:HB3	55:SJ:34:LEU:CD1	2.50	0.41
58:SB:84:LYS:HE2	58:SB:165:LEU:HD11	2.02	0.41
59:SF:23:LYS:HA	59:SF:92:TYR:HE2	1.86	0.41
59:SF:30:LYS:H	59:SF:30:LYS:HG2	1.64	0.41
68:ST:48:TYR:CE1	68:ST:116:LYS:HA	2.55	0.41
68:ST:200:ALA:HA	68:ST:203:GLU:HG2	2.02	0.41
71:SW:114:TYR:HD2	71:SW:122:VAL:HG13	1.84	0.41
1:2:97:C:H2'	1:2:98:U:C6	2.55	0.41
1:2:381:C:H2'	1:2:382:C:C6	2.56	0.41
1:2:395:U:O4	1:2:399:A:N7	2.53	0.41
1:2:507:U:H2'	1:2:508:U:O4'	2.20	0.41
1:2:606:A:H1'	1:2:609:U:OP1	2.20	0.41
1:2:824:G:C2'	1:2:825:U:H5'	2.51	0.41
1:2:1471:A:H2	1:2:1474:G:H21	1.68	0.41
1:2:1667:A:H2'	1:2:1668:G:C8	2.55	0.41
2:A:39:A:H5''	30:c:35:ALA:HB2	2.01	0.41
2:A:1234:G:OP2	2:A:1235:U:H3'	2.20	0.41
2:A:1590:G:O2'	2:A:1797:A:N6	2.53	0.41
2:A:2180:G:H2'	2:A:2181:C:C6	2.56	0.41
2:A:2609:A:H2'	2:A:2610:G:H8	1.85	0.41
4:C:7:U:H2'	4:C:8:C:C6	2.54	0.41
4:C:20:U:H2'	4:C:21:C:H6	1.85	0.41
4:C:104:A:OP2	4:C:105:A:H2'	2.21	0.41
5:D:140:ASN:OD1	5:D:140:ASN:C	2.63	0.41
8:G:280:GLU:HG2	8:G:281:GLU:N	2.35	0.41
10:I:97:PRO:O	10:I:100:ARG:HG2	2.19	0.41
13:L:99:ILE:HD11	13:L:123:HIS:CG	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:89:ASP:OD1	20:S:89:ASP:C	2.63	0.41
48:SD:93:ASP:O	48:SD:97:LEU:HD23	2.20	0.41
49:SZ:46:MET:SD	49:SZ:46:MET:N	2.88	0.41
51:SC:16:PHE:C	51:SC:16:PHE:CD1	2.98	0.41
52:SE:43:ARG:HH21	52:SE:47:ARG:HH21	1.67	0.41
52:SE:83:MET:HE2	52:SE:116:LEU:HD22	2.01	0.41
60:SH:92:ILE:HD13	60:SH:92:ILE:HA	1.86	0.41
61:SO:64:HIS:ND1	61:SO:84:SER:HB2	2.36	0.41
63:SG:107:SER:C	63:SG:111:LYS:HE2	2.45	0.41
69:SU:21:ALA:HA	69:SU:24:PHE:HD1	1.85	0.41
71:SW:152:SER:O	71:SW:156:ILE:HG12	2.21	0.41
76:Sc:52:ILE:O	76:Sc:74:VAL:HG23	2.20	0.41
1:2:210:A:H2'	1:2:211:U:H6	1.85	0.41
1:2:788:A:C4	67:SS:19:LEU:HD11	2.55	0.41
1:2:827:C:N4	1:2:846:G:O6	2.54	0.41
1:2:1774:G:OP1	43:p:7:LYS:NZ	2.53	0.41
2:A:143:G:H2'	2:A:144:A:C8	2.55	0.41
2:A:768:C:H2'	2:A:769:G:O4'	2.21	0.41
2:A:865:U:C2	2:A:866:A:C8	3.07	0.41
2:A:911:C:H42	5:D:3:ARG:HH11	1.68	0.41
2:A:1072:G:H2'	2:A:1073:U:C6	2.55	0.41
2:A:1491:A:H5'	39:l:12:HIS:O	2.20	0.41
2:A:1578:C:OP1	11:J:43:LYS:NZ	2.41	0.41
2:A:1783:U:H2'	2:A:1784:G:C8	2.55	0.41
2:A:1809:A:P	29:b:65:ARG:HH12	2.43	0.41
2:A:1919:G:N2	2:A:1934:G:C6	2.89	0.41
2:A:2103:U:H2'	2:A:2104:A:H8	1.86	0.41
2:A:2206:G:O2'	2:A:2207:A:O5'	2.31	0.41
2:A:2440:G:H2'	2:A:2441:A:H8	1.86	0.41
2:A:2840:C:H2'	2:A:2841:G:O4'	2.21	0.41
2:A:2881:C:H2'	2:A:2882:U:C6	2.56	0.41
2:A:3016:A:H2'	2:A:3017:A:C8	2.55	0.41
2:A:3266:G:OP2	9:H:70:LYS:NZ	2.50	0.41
4:C:57:C:H4'	4:C:63:G:N7	2.35	0.41
4:C:149:A:H2'	4:C:150:G:C8	2.55	0.41
6:E:77:THR:OG1	6:E:326:GLY:O	2.29	0.41
6:E:137:TYR:HA	6:E:144:ILE:HD13	2.02	0.41
7:F:64:SER:HA	7:F:75:PRO:HA	2.02	0.41
7:F:122:THR:O	7:F:126:ILE:HG13	2.20	0.41
9:H:145:LEU:HD23	9:H:145:LEU:HA	1.82	0.41
10:I:56:GLU:HA	10:I:56:GLU:OE2	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:172[A]:ARG:HA	18:Q:175[A]:THR:HG22	2.01	0.41
19:R:32:THR:O	19:R:36:ILE:HG23	2.20	0.41
20:S:122:ILE:HD13	20:S:130:ARG:HH21	1.85	0.41
23:V:87:LYS:HZ3	23:V:87:LYS:HG2	1.79	0.41
28:a:42:GLN:HG2	28:a:43:TYR:HE1	1.80	0.41
41:n:21:ARG:N	41:n:41:ARG:HH12	2.18	0.41
47:x:19:VAL:HG12	47:x:99:LEU:HB3	2.02	0.41
47:x:535:GLU:HG3	47:x:536:LEU:N	2.34	0.41
47:x:729:PHE:CE2	47:x:796:MET:HB3	2.55	0.41
49:SZ:11:SER:O	49:SZ:12:GLN:HG2	2.20	0.41
53:SA:67:ASN:OD1	53:SA:71:LEU:HD23	2.21	0.41
58:SB:63:GLN:HE22	58:SB:88:PRO:HA	1.85	0.41
59:SF:52:LEU:HD12	59:SF:57:LEU:HD23	2.02	0.41
60:SH:143:ARG:HD3	60:SH:143:ARG:HA	1.87	0.41
62:SN:83:LYS:HD3	62:SN:85:TYR:CE2	2.55	0.41
64:SP:167:LYS:HD3	64:SP:204:TYR:CE1	2.55	0.41
67:SS:100:ARG:NH2	67:SS:118:GLU:O	2.49	0.41
71:SW:156:ILE:HD13	71:SW:156:ILE:HA	1.95	0.41
1:2:540:G:H1'	1:2:542:A:C2	2.56	0.41
1:2:842:C:H2'	1:2:843:U:O4'	2.21	0.41
1:2:1006:C:O2'	49:SZ:136:ARG:O	2.33	0.41
1:2:1532:U:P	80:SK:77:ARG:HH21	2.43	0.41
2:A:597:G:H2'	2:A:598:A:C8	2.55	0.41
2:A:1318:A:H62	18:Q:18[A]:ARG:HD3	1.84	0.41
2:A:1408:G:OP1	34:g:33:ARG:NH2	2.54	0.41
2:A:1448:U:H2'	2:A:1449:A:C8	2.55	0.41
2:A:1507:G:H1'	19:R:139:TYR:CE2	2.56	0.41
2:A:1804:A:H2'	2:A:1805:C:C6	2.55	0.41
2:A:1889:G:OP1	6:E:247:ARG:N	2.51	0.41
2:A:2270:A:H2'	2:A:2271:A:C8	2.56	0.41
2:A:2277:C:H2'	2:A:2278:C:C6	2.55	0.41
2:A:2683:U:H2'	2:A:2684:C:C6	2.55	0.41
2:A:2877:G:H2'	2:A:2878:G:H8	1.85	0.41
2:A:3027:A:H2'	2:A:3028:G:C8	2.55	0.41
2:A:3303:G:N2	2:A:3312:U:H1'	2.35	0.41
3:B:45:A:H2'	3:B:46:A:H8	1.85	0.41
11:J:78:PHE:C	11:J:80:TYR:H	2.27	0.41
25:X:45:ARG:HB3	25:X:48:ARG:HB3	2.02	0.41
29:b:10:VAL:HG11	29:b:85:TYR:HB2	2.01	0.41
34:g:86:THR:HG22	34:g:115:LEU:HD23	2.02	0.41
36:i:11:ASN:HB3	36:i:18:ASN:ND2	2.36	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:127:VAL:HG23	47:x:155:VAL:HA	2.01	0.41
47:x:418:TYR:O	47:x:477:ASN:ND2	2.53	0.41
47:x:706:ILE:HA	47:x:709:MET:HE3	2.01	0.41
50:Se:3:LYS:HD2	50:Se:3:LYS:HA	1.92	0.41
54:SI:57:ARG:NH1	54:SI:101:ASN:OD1	2.51	0.41
58:SB:35:GLN:O	58:SB:38:THR:OG1	2.38	0.41
58:SB:105:GLY:C	58:SB:106:LYS:HG2	2.46	0.41
60:SH:101:LEU:HD23	60:SH:101:LEU:HA	1.80	0.41
61:SO:150:TRP:CD1	61:SO:151:VAL:N	2.86	0.41
64:SP:136:ALA:HB1	64:SP:141:ILE:HB	2.03	0.41
67:SS:128:LYS:NZ	67:SS:130:GLN:HE22	2.18	0.41
72:SX:82:ARG:HG3	72:SX:110:HIS:CE1	2.55	0.41
77:Sd:112:LYS:HA	77:Sd:115:ASP:OD2	2.20	0.41
80:SK:61:SER:HB2	80:SK:64:VAL:HG23	2.03	0.41
1:2:200:A:H2'	1:2:201:G:C8	2.56	0.41
1:2:387:A:H2'	1:2:402:C:H5'	2.02	0.41
1:2:596:C:H2'	1:2:597:G:H8	1.86	0.41
1:2:617:U:H2'	1:2:618:U:C6	2.55	0.41
1:2:1142:A:H2'	1:2:1143:A:C8	2.56	0.41
1:2:1344:A:O2'	1:2:1345:A:C8	2.68	0.41
1:2:1393:C:H2'	1:2:1394:G:C8	2.54	0.41
1:2:1732:A:H2'	1:2:1733:C:C6	2.55	0.41
1:2:1780:G:H2'	1:2:1781:A:C8	2.56	0.41
2:A:640:U:OP2	34:g:38:ILE:HG12	2.21	0.41
2:A:937:G:H5'	30:c:29:PRO:HA	2.03	0.41
2:A:1190:A:H2'	2:A:1190:A:N3	2.35	0.41
2:A:1557:A:OP1	11:J:51:LYS:NZ	2.41	0.41
2:A:2322:C:O2'	2:A:2323:G:H5'	2.21	0.41
2:A:2656:A:N7	2:A:2658:G:C8	2.89	0.41
2:A:2769:A:O2'	44:q:80:ARG:O	2.36	0.41
2:A:3028:G:O2'	2:A:3029:A:OP1	2.30	0.41
2:A:3160:U:H2'	2:A:3161:C:C6	2.56	0.41
2:A:3302:U:H2'	2:A:3303:G:C8	2.56	0.41
3:B:57:G:H4'	14:M:138:VAL:HG11	2.02	0.41
4:C:143:U:H2'	4:C:144:G:C8	2.56	0.41
7:F:207:VAL:HB	7:F:227:THR:HG22	2.02	0.41
10:I:107:ARG:HE	10:I:204:PRO:HG3	1.85	0.41
11:J:154:ALA:HA	11:J:180:VAL:O	2.20	0.41
16:O:60:LEU:HA	16:O:60:LEU:HD23	1.83	0.41
21:T:164:LEU:HD12	21:T:164:LEU:HA	1.96	0.41
25:X:92:PHE:O	26:Y:20:LEU:N	2.46	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y:4:GLU:O	26:Y:5:ILE:HD13	2.21	0.41
30:c:77:LYS:O	30:c:80:THR:OG1	2.32	0.41
33:f:110:GLU:OE1	33:f:110:GLU:N	2.50	0.41
36:i:107:GLU:O	36:i:110:GLU:HG3	2.20	0.41
39:l:21:ARG:HH21	39:l:39:TYR:HA	1.85	0.41
48:SD:70:ASN:HA	48:SD:73:LYS:HB3	2.03	0.41
60:SH:4:VAL:HG13	80:SK:42:LEU:HD23	2.02	0.41
60:SH:57:ARG:HA	60:SH:57:ARG:HD3	1.92	0.41
62:SN:110:ALA:O	62:SN:111:GLU:HG2	2.20	0.41
65:SQ:108:ASP:OD1	65:SQ:108:ASP:C	2.64	0.41
68:ST:5:ILE:HD12	68:ST:111:LEU:O	2.20	0.41
69:SU:129:LEU:O	69:SU:129:LEU:HD12	2.20	0.41
76:Sc:121:ARG:HG3	76:Sc:122:PHE:CZ	2.56	0.41
77:Sd:15:ASN:HD21	77:Sd:18:LEU:HD12	1.85	0.41
1:2:199:G:H2'	1:2:200:A:C8	2.56	0.41
1:2:612:U:OP2	1:2:613:G:O2'	2.37	0.41
1:2:976:G:H1	1:2:1023:A:H1'	1.84	0.41
1:2:1228:G:H22	48:SD:67:THR:HB	1.85	0.41
1:2:1254:U:H2'	1:2:1255:G:C8	2.56	0.41
2:A:8:C:H2'	2:A:9:U:H6	1.85	0.41
2:A:213:A:N6	2:A:228:U:O4'	2.54	0.41
2:A:631:U:H2'	2:A:632:G:C8	2.56	0.41
2:A:632:G:H2'	2:A:633:C:C6	2.56	0.41
2:A:1187:C:O2'	2:A:1295:G:N2	2.53	0.41
2:A:1293:U:H2'	2:A:1294:A:C8	2.55	0.41
2:A:1624:G:O2'	2:A:1643:A:N1	2.47	0.41
2:A:1640:G:H2'	2:A:1641:U:C6	2.56	0.41
2:A:1869:C:H2'	2:A:1870:C:C6	2.55	0.41
2:A:2778:G:H2'	2:A:2779:A:C8	2.56	0.41
2:A:3025:C:H2'	2:A:3026:G:O4'	2.21	0.41
3:B:52:G:H2'	3:B:53:U:C6	2.56	0.41
12:K:93:VAL:HG23	12:K:177:ASP:HA	2.03	0.41
13:L:152:LEU:HB3	13:L:165:ILE:HD13	2.03	0.41
17:P:180:PHE:N	17:P:180:PHE:CD1	2.87	0.41
25:X:57:MET:HE2	25:X:57:MET:HB2	1.89	0.41
29:b:9:LYS:NZ	29:b:83:THR:O	2.47	0.41
32:e:27:TYR:O	32:e:30:THR:HG22	2.21	0.41
40:m:26:LYS:HA	40:m:26:LYS:HD2	1.86	0.41
53:SA:25:PHE:HE2	53:SA:50:ILE:HG13	1.86	0.41
53:SA:41:VAL:HG23	53:SA:46:THR:HG22	2.02	0.41
53:SA:215:GLU:HA	53:SA:216:PRO:HD3	1.93	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SF:44:LEU:HD12	59:SF:47:LYS:HD2	2.02	0.41
60:SH:28:ILE:HD12	60:SH:31:ALA:HB3	2.03	0.41
65:SQ:23:PRO:O	65:SQ:27:LYS:HG2	2.21	0.41
66:SR:139:ILE:HD12	66:SR:218:ILE:CD1	2.51	0.41
70:SV:64:ASN:O	70:SV:180:ASP:HA	2.21	0.41
70:SV:84:HIS:CD2	70:SV:90:LEU:CD1	3.03	0.41
70:SV:159:GLN:HB3	70:SV:165:LEU:HD23	2.02	0.41
1:2:1028:C:H4'	1:2:1029:U:H2'	2.03	0.41
1:2:1036:A:H2'	1:2:1037:C:C6	2.55	0.41
1:2:1239:U:H2'	1:2:1240:U:O4'	2.20	0.41
1:2:1382:A:O2'	1:2:1383:G:H8	2.03	0.41
1:2:1471:A:N3	1:2:1471:A:H2'	2.36	0.41
1:2:1508:U:H2'	1:2:1509:C:H6	1.86	0.41
1:2:1778:G:H2'	1:2:1779:U:C6	2.55	0.41
2:A:129:U:H2'	2:A:130:A:C8	2.55	0.41
2:A:308:A:H1'	2:A:2222:A:N3	2.36	0.41
2:A:576:C:H2'	2:A:577:C:C6	2.55	0.41
2:A:725:G:H2'	2:A:726:G:O4'	2.21	0.41
2:A:887:G:H2'	2:A:888:A:C8	2.56	0.41
2:A:1415:U:H2'	2:A:1416:C:O4'	2.20	0.41
2:A:2202:C:H5''	5:D:226:SER:HB2	2.02	0.41
2:A:3113:A:H4'	12:K:69:ARG:HG3	2.01	0.41
4:C:24:G:H2'	4:C:25:G:C8	2.56	0.41
5:D:198:LYS:HB3	5:D:198:LYS:HE3	1.94	0.41
8:G:22:ARG:HD3	8:G:22:ARG:HA	1.91	0.41
12:K:23:ARG:NH1	12:K:39:LYS:O	2.54	0.41
12:K:138:THR:OG1	12:K:139:ASN:N	2.53	0.41
18:Q:108[A]:ILE:HG13	18:Q:160[A]:ARG:HH11	1.86	0.41
19:R:172:GLN:O	19:R:176:ILE:HG22	2.20	0.41
20:S:63:SER:HB2	20:S:90:ASP:HB2	2.02	0.41
33:f:10:ARG:NH1	33:f:12:TYR:OH	2.53	0.41
39:l:39:TYR:HB3	39:l:40:PRO:HD3	2.02	0.41
46:t:50:U:H2'	46:t:51:C:H6	1.86	0.41
48:SD:135:MET:C	48:SD:136:ILE:HD13	2.46	0.41
51:SC:20:VAL:HG22	53:SA:71:LEU:HB3	2.03	0.41
53:SA:217:ILE:HG13	53:SA:218:LEU:H	1.86	0.41
58:SB:209:TYR:CZ	58:SB:213:LYS:HD2	2.56	0.41
61:SO:174:ASN:HB3	61:SO:198:ASN:ND2	2.36	0.41
64:SP:55:GLU:O	64:SP:58:VAL:HG12	2.20	0.41
67:SS:105:VAL:HG21	67:SS:245:LYS:H	1.85	0.41
73:SY:129:TYR:HD1	73:SY:129:TYR:HA	1.81	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sb:24:GLN:OE1	75:Sb:24:GLN:N	2.53	0.41
76:Sc:69:ARG:NH2	76:Sc:116:ASP:OD2	2.40	0.41
1:2:86:A:H2'	1:2:87:C:C6	2.56	0.41
1:2:171:A:H2'	1:2:172:C:C6	2.56	0.41
1:2:563:U:H2'	1:2:564:G:O4'	2.21	0.41
1:2:747:C:H2'	1:2:748:U:C6	2.55	0.41
1:2:925:G:C2	1:2:988:A:H1'	2.56	0.41
1:2:1035:G:C2	1:2:1036:A:N7	2.89	0.41
1:2:1775:U:P	43:p:11:ARG:HH22	2.44	0.41
1:2:1789:G:H2'	1:2:1790:A:H8	1.86	0.41
2:A:81:C:H2'	2:A:82:C:C6	2.56	0.41
2:A:794:U:H2'	2:A:795:G:H8	1.85	0.41
2:A:949:C:H2'	2:A:950:G:O4'	2.21	0.41
2:A:998:A:H2'	2:A:999:G:C8	2.55	0.41
2:A:1564:U:O5'	2:A:1564:U:H6	2.04	0.41
2:A:1574:C:H3'	2:A:1575:A:H8	1.85	0.41
2:A:1626:U:H2'	2:A:1627:U:C6	2.56	0.41
2:A:1767:C:H2'	2:A:1768:U:C6	2.56	0.41
2:A:2573:G:H2'	2:A:2574:G:H8	1.85	0.41
2:A:2631:U:H2'	2:A:2632:G:C8	2.56	0.41
2:A:3131:U:H2'	2:A:3132:C:C6	2.55	0.41
2:A:3307:A:OP1	6:E:226:PHE:HB2	2.20	0.41
3:B:113:C:H2'	3:B:114:U:O4'	2.21	0.41
7:F:292:SER:OG	7:F:294:GLU:OE1	2.39	0.41
10:I:52:GLN:C	10:I:52:GLN:OE1	2.63	0.41
13:L:76:MET:CB	13:L:85:PHE:CE2	3.00	0.41
18:Q:127[A]:LEU:HD11	22:U:168:PRO:HG3	2.03	0.41
28:a:119:ILE:HG22	28:a:124:GLY:HA3	2.01	0.41
30:c:148:ILE:HD12	30:c:148:ILE:HA	1.95	0.41
32:e:11:ASN:OD1	32:e:11:ASN:N	2.52	0.41
35:h:16:TYR:CD2	35:h:25:PRO:HA	2.56	0.41
39:l:31:LYS:HB2	39:l:31:LYS:HE2	1.74	0.41
42:o:104:PRO:HD3	42:o:111:ARG:HH12	1.85	0.41
47:x:5:THR:HG23	47:x:8:GLN:H	1.86	0.41
47:x:274:ASN:OD1	47:x:274:ASN:N	2.53	0.41
47:x:742:GLY:O	47:x:746:VAL:HG22	2.21	0.41
52:SE:70:ASN:OD1	52:SE:70:ASN:C	2.64	0.41
52:SE:93:VAL:HB	52:SE:104:GLN:NE2	2.36	0.41
53:SA:21:LEU:HD23	53:SA:37:VAL:HG21	2.03	0.41
54:SI:92:LYS:CD	54:SI:94:ILE:HD11	2.48	0.41
58:SB:144:GLU:OE1	58:SB:144:GLU:HA	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SP:16:LEU:HB3	64:SP:172:LEU:HD21	2.03	0.41
65:SQ:48:VAL:CB	65:SQ:61:LEU:HD21	2.51	0.41
66:SR:82:ASN:OD1	66:SR:82:ASN:C	2.64	0.41
67:SS:70:VAL:HG12	67:SS:72:VAL:HG23	2.03	0.41
67:SS:86:PHE:HB2	67:SS:103:TYR:HE1	1.85	0.41
67:SS:180:LEU:HD12	67:SS:180:LEU:HA	1.91	0.41
68:ST:194:LYS:HE3	68:ST:194:LYS:HB2	1.95	0.41
69:SU:63:PRO:O	69:SU:64:VAL:HG23	2.21	0.41
70:SV:110:ARG:O	70:SV:114:GLU:HG2	2.20	0.41
71:SW:107:ARG:HH12	71:SW:150:LEU:HD13	1.86	0.41
72:SX:26:LYS:O	72:SX:30:ARG:NH2	2.53	0.41
1:2:386:G:N3	1:2:425:A:H2	2.18	0.41
1:2:583:C:H2'	1:2:584:C:C6	2.56	0.41
1:2:778:G:H1	77:Sd:10:ARG:HE	1.69	0.41
1:2:895:G:C6	1:2:918:U:N3	2.89	0.41
1:2:1523:G:O2'	54:SI:79:LEU:HB2	2.21	0.41
1:2:1584:G:N2	1:2:1611:A:OP2	2.54	0.41
1:2:1680:G:N2	1:2:1720:G:H2'	2.36	0.41
2:A:245:U:H2'	2:A:246:U:H6	1.86	0.41
2:A:886:C:H2'	2:A:887:G:H8	1.86	0.41
2:A:1550:C:H2'	2:A:1551:C:C6	2.56	0.41
2:A:1746:U:O2'	40:m:4:GLU:OE1	2.38	0.41
2:A:2658:G:H2'	2:A:2659:G:C8	2.56	0.41
2:A:2724:U:OP2	2:A:2726:C:N4	2.54	0.41
2:A:3121:U:H4'	2:A:3122:A:OP1	2.21	0.41
2:A:3183:A:H2'	2:A:3184:A:H8	1.86	0.41
2:A:3285:C:H2'	2:A:3286:G:C8	2.56	0.41
5:D:116:VAL:HG23	5:D:126:LEU:HB2	2.03	0.41
7:F:132:ALA:HB2	7:F:148:ILE:CG2	2.51	0.41
8:G:211:LEU:HD12	8:G:218:ARG:HB3	2.03	0.41
11:J:154:ALA:HB3	11:J:157:VAL:HG22	2.02	0.41
14:M:106:ILE:HD13	14:M:106:ILE:HA	1.90	0.41
14:M:165:GLN:OE1	14:M:166:LYS:HB2	2.20	0.41
22:U:6:GLU:HB3	22:U:64:ILE:HB	2.03	0.41
23:V:14:MET:HE1	23:V:55:LYS:HB3	2.03	0.41
23:V:69:LYS:NZ	23:V:70:SER:OG	2.38	0.41
30:c:59:ARG:HH12	44:q:38:GLN:HE21	1.69	0.41
45:r:83:ILE:HD13	45:r:83:ILE:HA	1.90	0.41
47:x:240:MET:SD	47:x:240:MET:O	2.79	0.41
47:x:736:PRO:HA	47:x:766:PHE:H	1.85	0.41
50:Se:60:PRO:HB2	50:Se:61:GLU:OE1	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SB:211:ILE:HD13	58:SB:211:ILE:HA	1.97	0.41
59:SF:49:TYR:O	59:SF:53:LEU:HG	2.22	0.41
59:SF:74:HIS:O	59:SF:77:GLN:HB2	2.20	0.41
59:SF:132:LYS:HG2	59:SF:138:PHE:HE1	1.86	0.41
61:SO:216:LYS:HA	61:SO:216:LYS:HD2	1.60	0.41
64:SP:122:ILE:O	64:SP:123:VAL:C	2.64	0.41
64:SP:127:ARG:HH21	64:SP:151:SER:HA	1.86	0.41
69:SU:89:HIS:CE1	69:SU:165:LYS:HE3	2.57	0.41
1:2:31:C:O2'	1:2:547:U:OP1	2.39	0.40
1:2:780:A:H2	77:Sd:8:ARG:HB3	1.85	0.40
1:2:805:U:H2'	1:2:806:A:C8	2.56	0.40
1:2:860:U:O4'	69:SU:114:ARG:HG3	2.21	0.40
1:2:1072:C:H2'	1:2:1073:G:H8	1.86	0.40
1:2:1344:A:O2'	1:2:1345:A:P	2.79	0.40
2:A:138:U:H2'	2:A:139:G:H8	1.86	0.40
2:A:268:A:N1	2:A:295:A:H5'	2.36	0.40
2:A:289:A:C2	2:A:290:G:N7	2.89	0.40
2:A:547:G:O2'	2:A:548:G:O4'	2.31	0.40
2:A:803:C:H4'	7:F:92:ASN:HD21	1.86	0.40
2:A:1077:U:O3'	8:G:43:LYS:NZ	2.51	0.40
2:A:1281:G:C2	2:A:1282:G:C8	3.09	0.40
2:A:1485:G:H2'	2:A:1486:G:H8	1.86	0.40
2:A:1499:C:H2'	2:A:1500:G:C8	2.56	0.40
2:A:1644:C:H41	36:i:68:THR:HG21	1.86	0.40
2:A:2586:G:O2'	2:A:2588:U:OP2	2.40	0.40
2:A:3182:G:H4'	18:Q:161[A]:LYS:HG2	2.03	0.40
4:C:30:C:H2'	4:C:31:G:C8	2.57	0.40
5:D:117:GLU:HB2	5:D:122:ASP:HB3	2.03	0.40
5:D:140:ASN:O	5:D:144:ASN:HA	2.20	0.40
14:M:59:ILE:HG12	14:M:65:ILE:HD11	2.03	0.40
14:M:89:TYR:HD2	14:M:169:ALA:HB2	1.86	0.40
15:N:116:LEU:HD23	15:N:116:LEU:HA	1.91	0.40
16:O:72:LEU:HD23	16:O:73:PRO:O	2.20	0.40
20:S:152:HIS:ND1	20:S:162:ALA:O	2.55	0.40
21:T:152:GLU:O	21:T:155:LEU:HG	2.21	0.40
30:c:97:GLU:OE1	30:c:97:GLU:N	2.53	0.40
34:g:54:LYS:HE3	34:g:54:LYS:HB2	1.89	0.40
44:q:93:LEU:HD12	44:q:93:LEU:HA	1.95	0.40
46:s:49:C:H2'	46:s:50:U:H6	1.85	0.40
47:x:21:ASN:C	47:x:22:MET:HE3	2.46	0.40
47:x:60:ARG:H	47:x:60:ARG:HG2	1.64	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:186:ASN:ND2	47:x:202:VAL:HB	2.34	0.40
47:x:415:GLY:N	47:x:425:ASP:OD2	2.46	0.40
58:SB:123:VAL:HG11	80:SK:59:TYR:HD1	1.86	0.40
59:SF:89:LEU:HD23	59:SF:89:LEU:C	2.46	0.40
60:SH:60:GLU:OE2	60:SH:60:GLU:O	2.40	0.40
60:SH:88:ARG:HB3	60:SH:98:TYR:HB2	2.03	0.40
61:SO:13:LEU:HD12	61:SO:45:TRP:CD2	2.56	0.40
65:SQ:83:LYS:HE2	65:SQ:83:LYS:HB3	1.93	0.40
67:SS:31:PRO:HG2	67:SS:38:LEU:HB2	2.03	0.40
69:SU:147:ASN:OD1	69:SU:147:ASN:N	2.48	0.40
70:SV:60:ILE:HG21	70:SV:179:CYS:SG	2.61	0.40
70:SV:121:LEU:H	70:SV:121:LEU:HD12	1.86	0.40
75:Sb:105:THR:HG22	75:Sb:110:ILE:HD11	2.03	0.40
77:Sd:102:LYS:HE3	77:Sd:102:LYS:HB2	1.89	0.40
1:2:269:G:H2'	1:2:270:C:C6	2.57	0.40
1:2:325:G:O6	1:2:344:A:N6	2.55	0.40
1:2:351:C:OP1	1:2:630:A:O2'	2.29	0.40
1:2:627:C:H2'	1:2:628:G:O4'	2.22	0.40
1:2:759:U:H2'	1:2:760:A:C8	2.54	0.40
1:2:1310:U:H2'	1:2:1311:U:C6	2.56	0.40
1:2:1546:G:OP1	60:SH:127:HIS:NE2	2.51	0.40
1:2:1607:G:H2'	1:2:1608:U:C6	2.55	0.40
1:2:1688:U:H3'	1:2:1689:A:H8	1.86	0.40
2:A:639:G:H2'	2:A:640:U:C6	2.56	0.40
2:A:644:G:H21	2:A:2372:A:H5'	1.87	0.40
2:A:1140:G:H2'	2:A:1141:C:C6	2.56	0.40
2:A:1934:G:C6	2:A:1935:G:N7	2.89	0.40
2:A:2208:A:C4	2:A:2209:U:H5	2.39	0.40
2:A:2394:G:H8	6:E:252:ILE:HD11	1.86	0.40
2:A:2468:A:H1'	2:A:2477:G:N2	2.36	0.40
2:A:2531:C:C2'	2:A:2532:U:H5'	2.51	0.40
2:A:2696:A:H62	2:A:2758:A:N6	2.20	0.40
2:A:3208:G:O4'	2:A:3210:A:C8	2.74	0.40
4:C:142:C:C2	4:C:143:U:C5	3.09	0.40
6:E:80:ASP:OD2	6:E:314:TYR:OH	2.39	0.40
6:E:153:LYS:NZ	6:E:154:TYR:OH	2.42	0.40
29:b:22:LYS:HB2	29:b:49:TYR:OH	2.21	0.40
35:h:7:LEU:HD23	35:h:7:LEU:HA	1.96	0.40
46:s:52:G:H2'	46:s:53:G:H8	1.86	0.40
46:t:33:U:OP2	59:SF:143:ARG:NH1	2.45	0.40
46:t:59:A:H2'	46:t:60:A:C8	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:735:CYS:SG	47:x:791:GLN:NE2	2.91	0.40
47:x:829:LYS:O	47:x:829:LYS:HG3	2.20	0.40
51:SC:16:PHE:C	51:SC:16:PHE:HD1	2.29	0.40
54:SI:77:ASN:HD21	54:SI:98:GLY:CA	2.34	0.40
55:SJ:84:MET:HG2	57:SM:52:PHE:CE1	2.56	0.40
61:SO:192:PHE:CE2	61:SO:211:ILE:HG21	2.48	0.40
66:SR:72:LEU:O	66:SR:73:LEU:HD23	2.21	0.40
66:SR:233:GLN:HE22	74:Sa:15:ARG:HA	1.86	0.40
68:ST:37:ASP:O	68:ST:41:VAL:HG13	2.20	0.40
70:SV:84:HIS:ND1	70:SV:85:PRO:HD2	2.36	0.40
1:2:77:U:H1'	1:2:78:A:OP2	2.21	0.40
1:2:119:A:H2'	1:2:120:U:O4'	2.21	0.40
1:2:325:G:H2'	1:2:326:G:H8	1.86	0.40
1:2:374:U:H2'	1:2:375:U:H6	1.86	0.40
1:2:684:A:H2'	1:2:685:A:H8	1.86	0.40
1:2:864:U:OP1	75:Sb:28:ARG:NH2	2.54	0.40
1:2:887:A:H2'	1:2:888:U:C6	2.56	0.40
1:2:919:A:H2'	1:2:920:U:C6	2.56	0.40
1:2:922:G:C2	1:2:923:A:C5	3.09	0.40
1:2:947:U:OP1	65:SQ:162:ARG:HG3	2.21	0.40
1:2:1077:C:C2	1:2:1078:C:C5	3.09	0.40
1:2:1117:U:H2'	1:2:1118:G:H8	1.85	0.40
1:2:1669:U:H2'	1:2:1670:G:O4'	2.21	0.40
1:2:1674:C:H2'	1:2:1675:C:C6	2.56	0.40
2:A:74:G:O2'	15:N:61:PRO:HA	2.22	0.40
2:A:291:C:C2	2:A:292:U:C5	3.10	0.40
2:A:744:A:H1'	20:S:141:ARG:HE	1.86	0.40
2:A:809:G:H2'	2:A:810:A:C8	2.57	0.40
2:A:1103:A:H5''	2:A:1104:G:H5''	2.03	0.40
2:A:1549:U:H2'	2:A:1550:C:H6	1.87	0.40
2:A:1639:C:OP2	36:i:74:ARG:NH1	2.33	0.40
2:A:1696:A:H2'	2:A:1697:A:C8	2.57	0.40
2:A:1843:C:H2'	2:A:1844:C:H6	1.86	0.40
2:A:1886:A:O4'	2:A:3307:A:H5'	2.21	0.40
2:A:2290:C:H2'	2:A:2291:A:H8	1.86	0.40
2:A:3211:C:H2'	2:A:3212:C:C6	2.55	0.40
9:H:69:PHE:HB2	9:H:138:GLN:CD	2.46	0.40
11:J:167:PRO:HB3	11:J:177:TYR:CE2	2.57	0.40
29:b:15:ARG:NH2	36:i:83:ASN:OD1	2.46	0.40
47:x:663:VAL:HG23	47:x:709:MET:SD	2.62	0.40
47:x:759:GLN:NE2	47:x:764:PRO:HA	2.33	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SC:61:TRP:HA	57:SM:23:VAL:HG12	2.03	0.40
52:SE:52:LYS:HB2	52:SE:53:PRO:HD3	2.04	0.40
60:SH:18:LEU:CD1	60:SH:101:LEU:HD13	2.52	0.40
66:SR:58:LEU:HA	74:Sa:12:TYR:CE1	2.54	0.40
66:SR:64:LYS:HA	66:SR:64:LYS:HD2	1.87	0.40
67:SS:193:GLY:HA3	67:SS:210:ILE:HD12	2.01	0.40
68:ST:12:SER:HB2	68:ST:124:LEU:O	2.21	0.40
69:SU:127:GLU:OE2	69:SU:127:GLU:C	2.64	0.40
71:SW:30:LEU:HD12	71:SW:30:LEU:HA	1.84	0.40
77:Sd:21:LYS:HB2	77:Sd:75:VAL:HG13	2.03	0.40
1:2:395:U:H2'	1:2:396:G:O4'	2.22	0.40
1:2:485:A:H2'	1:2:486:G:O4'	2.22	0.40
1:2:684:A:H2'	1:2:685:A:C8	2.56	0.40
1:2:1141:G:H2'	1:2:1142:A:C8	2.57	0.40
1:2:1382:A:O2'	1:2:1383:G:P	2.79	0.40
1:2:1466:G:O2'	1:2:1602:C:OP1	2.34	0.40
1:2:1642:G:H5'	43:p:1:MET:HB3	2.03	0.40
2:A:215:G:H2'	2:A:216:G:H8	1.87	0.40
2:A:640:U:H2'	2:A:641:C:C6	2.56	0.40
2:A:653:A:H5''	2:A:2361:A:H5''	2.03	0.40
2:A:673:U:H2'	2:A:674:G:C8	2.56	0.40
2:A:913:A:H5''	2:A:914:A:N7	2.36	0.40
2:A:914:A:N1	5:D:204:MET:HE1	2.36	0.40
2:A:1334:U:H2'	2:A:1335:C:H6	1.86	0.40
2:A:1667:A:H2'	2:A:1668:G:C8	2.56	0.40
2:A:1707:A:H2'	2:A:1708:C:C6	2.57	0.40
2:A:2199:G:H2'	2:A:2200:U:C6	2.57	0.40
2:A:2425:G:H1	2:A:2604:U:H3	1.69	0.40
2:A:3096:C:H2'	2:A:3097:C:C6	2.56	0.40
2:A:3153:U:H1'	2:A:3293:U:C4	2.57	0.40
3:B:43:U:H2'	3:B:44:C:O4'	2.20	0.40
3:B:62:U:H5''	8:G:277:LEU:HD22	2.02	0.40
3:B:94:C:H2'	3:B:95:A:C8	2.55	0.40
4:C:36:G:H4'	4:C:40:A:H5'	2.02	0.40
5:D:21:ARG:HE	5:D:21:ARG:HB3	1.75	0.40
8:G:65:ILE:HG12	8:G:74:VAL:HG13	2.02	0.40
8:G:179:ARG:HD3	8:G:179:ARG:HA	1.82	0.40
15:N:168:ARG:NE	15:N:172:LEU:HD21	2.36	0.40
19:R:44:ALA:O	19:R:48:LEU:HG	2.21	0.40
24:W:102:GLU:N	24:W:102:GLU:OE2	2.54	0.40
25:X:106:LYS:HA	25:X:106:LYS:HD3	1.92	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:21:SER:OG	45:r:25:GLN:OE1	2.39	0.40
45:r:45:LYS:HE3	45:r:45:LYS:HB3	1.95	0.40
47:x:66:ARG:NH1	47:x:66:ARG:HG2	2.36	0.40
48:SD:39:ASP:OD1	48:SD:39:ASP:O	2.39	0.40
53:SA:45:LYS:HE3	53:SA:85:VAL:HG11	2.03	0.40
53:SA:202:LEU:HD22	53:SA:204:ASP:OD1	2.20	0.40
57:SM:40:ARG:H	57:SM:40:ARG:HG2	1.72	0.40
66:SR:178:ILE:HB	66:SR:185:LYS:HG3	2.03	0.40
73:SY:35:GLU:HA	73:SY:38:VAL:HG12	2.03	0.40
79:Sg:43:ARG:HD3	79:Sg:56:MET:HE2	2.03	0.40
1:2:241:U:H2'	1:2:242:U:C6	2.56	0.40
1:2:324:U:OP1	72:SX:133:LYS:CE	2.69	0.40
1:2:650:U:H2'	1:2:651:G:H8	1.86	0.40
1:2:704:C:H2'	1:2:705:U:O4'	2.22	0.40
1:2:951:A:H1'	73:SY:101:HIS:CD2	2.56	0.40
1:2:975:C:H2'	1:2:976:G:O4'	2.22	0.40
1:2:1147:A:H2'	1:2:1148:C:C6	2.57	0.40
1:2:1364:G:H2'	1:2:1365:C:C6	2.56	0.40
2:A:286:U:O3'	17:P:179:LYS:HE3	2.22	0.40
2:A:412:G:H2'	2:A:413:U:C6	2.56	0.40
2:A:414:U:C2	2:A:415:G:C8	3.09	0.40
2:A:589:A:N6	2:A:610:G:H1'	2.35	0.40
2:A:737:G:H2'	2:A:738:A:C8	2.56	0.40
2:A:869:G:N1	2:A:891:G:C6	2.89	0.40
2:A:2160:G:H2'	2:A:2161:G:H8	1.87	0.40
2:A:2682:C:H2'	2:A:2683:U:H6	1.86	0.40
2:A:2727:A:C2	30:c:43:ILE:HG23	2.56	0.40
2:A:3291:G:H2'	2:A:3292:A:C8	2.56	0.40
3:B:109:G:H2'	3:B:110:G:H8	1.87	0.40
4:C:140:G:N2	17:P:112:ASN:OD1	2.55	0.40
5:D:209:HIS:CE1	5:D:235:ALA:HB1	2.57	0.40
10:I:224:ILE:HD12	22:U:36:ILE:HA	2.04	0.40
12:K:117:PHE:CE2	12:K:165:CYS:HB2	2.57	0.40
12:K:160:ASP:OD1	12:K:160:ASP:N	2.55	0.40
14:M:164:LYS:HA	14:M:164:LYS:HD2	1.91	0.40
25:X:74:MET:SD	25:X:102:ILE:HD13	2.62	0.40
25:X:84:SER:HA	25:X:94:TYR:HB3	2.02	0.40
33:f:54:GLU:H	33:f:54:GLU:CD	2.29	0.40
35:h:12:LYS:HE3	35:h:96:ALA:O	2.22	0.40
39:l:21:ARG:O	39:l:23:GLY:N	2.55	0.40
42:o:78:ILE:O	42:o:82:LEU:HB2	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:x:576:LEU:HD23	47:x:841:LYS:NZ	2.37	0.40
47:x:710:ARG:NH1	47:x:711:ARG:HH22	2.19	0.40
48:SD:25:GLU:OE2	48:SD:28:LEU:HD23	2.21	0.40
49:SZ:71:CYS:O	49:SZ:74:VAL:HG12	2.22	0.40
51:SC:32:HIS:HB3	51:SC:37:THR:O	2.22	0.40
59:SF:10:PHE:O	59:SF:87:LYS:HE3	2.21	0.40
59:SF:12:LYS:HA	59:SF:16:ALA:O	2.21	0.40
61:SO:5:GLU:O	61:SO:5:GLU:HG2	2.22	0.40
62:SN:98:VAL:HG12	62:SN:100:LEU:HG	2.04	0.40
62:SN:105:TYR:CD1	62:SN:105:TYR:C	2.99	0.40
64:SP:109:ASN:OD1	64:SP:112:THR:HG22	2.21	0.40
67:SS:125:LYS:NZ	67:SS:157:ASN:HD22	2.18	0.40
74:Sa:12:TYR:O	74:Sa:12:TYR:CG	2.74	0.40
76:Sc:56:LYS:H	76:Sc:56:LYS:HG2	1.65	0.40
79:Sg:3:LYS:H	79:Sg:3:LYS:HG2	1.73	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	D	249/251 (99%)	236 (95%)	13 (5%)	0	100	100
6	E	384/386 (100%)	363 (94%)	20 (5%)	1 (0%)	36	65
7	F	359/361 (99%)	350 (98%)	9 (2%)	0	100	100
8	G	292/294 (99%)	280 (96%)	12 (4%)	0	100	100
9	H	163/175 (93%)	155 (95%)	7 (4%)	1 (1%)	21	50
10	I	220/222 (99%)	216 (98%)	4 (2%)	0	100	100
11	J	231/233 (99%)	223 (96%)	7 (3%)	1 (0%)	30	59
12	K	189/191 (99%)	178 (94%)	11 (6%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	L	216/218 (99%)	208 (96%)	8 (4%)	0	100	100
14	M	167/169 (99%)	162 (97%)	5 (3%)	0	100	100
15	N	191/193 (99%)	180 (94%)	10 (5%)	1 (0%)	24	54
16	O	134/136 (98%)	131 (98%)	3 (2%)	0	100	100
17	P	201/203 (99%)	200 (100%)	1 (0%)	0	100	100
18	Q	195/197 (99%)	190 (97%)	5 (3%)	0	100	100
19	R	181/183 (99%)	176 (97%)	5 (3%)	0	100	100
20	S	183/185 (99%)	178 (97%)	4 (2%)	1 (0%)	24	54
21	T	186/188 (99%)	184 (99%)	2 (1%)	0	100	100
22	U	169/171 (99%)	166 (98%)	3 (2%)	0	100	100
23	V	157/159 (99%)	150 (96%)	7 (4%)	0	100	100
24	W	98/100 (98%)	92 (94%)	6 (6%)	0	100	100
25	X	134/136 (98%)	134 (100%)	0	0	100	100
26	Y	124/126 (98%)	121 (98%)	2 (2%)	1 (1%)	16	44
27	Z	119/121 (98%)	114 (96%)	5 (4%)	0	100	100
28	a	123/125 (98%)	121 (98%)	2 (2%)	0	100	100
29	b	133/135 (98%)	128 (96%)	5 (4%)	0	100	100
30	c	146/148 (99%)	141 (97%)	5 (3%)	0	100	100
31	d	56/58 (97%)	53 (95%)	3 (5%)	0	100	100
32	e	94/96 (98%)	93 (99%)	1 (1%)	0	100	100
33	f	107/109 (98%)	104 (97%)	3 (3%)	0	100	100
34	g	125/127 (98%)	123 (98%)	2 (2%)	0	100	100
35	h	104/106 (98%)	97 (93%)	6 (6%)	1 (1%)	12	40
36	i	110/112 (98%)	106 (96%)	4 (4%)	0	100	100
37	j	117/119 (98%)	115 (98%)	2 (2%)	0	100	100
38	k	97/99 (98%)	94 (97%)	3 (3%)	0	100	100
39	l	79/81 (98%)	68 (86%)	6 (8%)	5 (6%)	1	7
40	m	75/77 (97%)	74 (99%)	1 (1%)	0	100	100
41	n	48/50 (96%)	47 (98%)	1 (2%)	0	100	100
42	o	50/52 (96%)	47 (94%)	3 (6%)	0	100	100
43	p	23/25 (92%)	23 (100%)	0	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
44	q	101/103 (98%)	96 (95%)	5 (5%)	0	100	100
45	r	89/91 (98%)	87 (98%)	2 (2%)	0	100	100
47	x	840/842 (100%)	755 (90%)	84 (10%)	1 (0%)	48	78
48	SD	119/121 (98%)	95 (80%)	24 (20%)	0	100	100
49	SZ	125/127 (98%)	101 (81%)	23 (18%)	1 (1%)	16	44
50	Se	92/94 (98%)	81 (88%)	9 (10%)	2 (2%)	5	24
51	SC	90/92 (98%)	78 (87%)	10 (11%)	2 (2%)	5	24
52	SE	115/117 (98%)	96 (84%)	18 (16%)	1 (1%)	14	42
53	SA	220/222 (99%)	206 (94%)	11 (5%)	3 (1%)	9	31
54	SI	141/143 (99%)	132 (94%)	8 (6%)	1 (1%)	18	47
55	SJ	98/100 (98%)	91 (93%)	7 (7%)	0	100	100
56	SL	61/63 (97%)	59 (97%)	2 (3%)	0	100	100
57	SM	51/53 (96%)	47 (92%)	4 (8%)	0	100	100
58	SB	204/206 (99%)	182 (89%)	21 (10%)	1 (0%)	24	54
59	SF	139/141 (99%)	131 (94%)	6 (4%)	2 (1%)	9	31
60	SH	143/145 (99%)	123 (86%)	20 (14%)	0	100	100
61	SO	300/312 (96%)	238 (79%)	57 (19%)	5 (2%)	7	28
62	SN	71/73 (97%)	52 (73%)	19 (27%)	0	100	100
63	SG	119/121 (98%)	106 (89%)	13 (11%)	0	100	100
64	SP	204/206 (99%)	191 (94%)	13 (6%)	0	100	100
65	SQ	222/232 (96%)	201 (90%)	21 (10%)	0	100	100
66	SR	214/216 (99%)	205 (96%)	9 (4%)	0	100	100
67	SS	256/258 (99%)	226 (88%)	29 (11%)	1 (0%)	30	59
68	ST	226/228 (99%)	213 (94%)	12 (5%)	1 (0%)	30	59
69	SU	182/184 (99%)	174 (96%)	7 (4%)	1 (0%)	24	54
70	SV	183/198 (92%)	171 (93%)	12 (7%)	0	100	100
71	SW	182/184 (99%)	166 (91%)	15 (8%)	1 (0%)	24	54
72	SX	140/142 (99%)	132 (94%)	8 (6%)	0	100	100
73	SY	148/150 (99%)	144 (97%)	4 (3%)	0	100	100
74	Sa	85/87 (98%)	80 (94%)	4 (5%)	1 (1%)	10	35
75	Sb	127/129 (98%)	123 (97%)	4 (3%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
76	Sc	142/144 (99%)	127 (89%)	13 (9%)	2 (1%)	9	31
77	Sd	132/134 (98%)	129 (98%)	3 (2%)	0	100	100
78	Sf	79/81 (98%)	79 (100%)	0	0	100	100
79	Sg	58/60 (97%)	56 (97%)	2 (3%)	0	100	100
80	SK	99/108 (92%)	98 (99%)	1 (1%)	0	100	100
All	All	11826/12024 (98%)	11092 (94%)	696 (6%)	38 (0%)	37	65

All (38) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	E	362	ALA
9	H	68	PRO
35	h	104	PRO
49	SZ	42	VAL
51	SC	87	VAL
51	SC	88	PRO
52	SE	98	ASN
53	SA	195	SER
53	SA	217	ILE
59	SF	40	GLU
59	SF	42	GLU
61	SO	6	VAL
69	SU	64	VAL
71	SW	172	VAL
76	Sc	64	PRO
11	J	158	ASP
39	l	20	ASN
39	l	26	SER
53	SA	44	THR
61	SO	167	VAL
47	x	317	LYS
61	SO	118	LYS
15	N	47	ALA
39	l	22	CYS
39	l	29	VAL
39	l	33	THR
50	Se	61	GLU
54	SI	4	VAL
58	SB	26	ALA
20	S	18	ALA

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	Y	86	SER
74	Sa	10	GLU
76	Sc	132	LEU
67	SS	183	VAL
50	Se	59	TYR
61	SO	275	ARG
61	SO	315	VAL
68	ST	9	VAL

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	D	190/193 (98%)	190 (100%)	0	100	100
6	E	319/322 (99%)	319 (100%)	0	100	100
7	F	288/288 (100%)	286 (99%)	2 (1%)	76	78
8	G	241/243 (99%)	240 (100%)	1 (0%)	84	83
9	H	139/154 (90%)	138 (99%)	1 (1%)	76	78
10	I	186/186 (100%)	186 (100%)	0	100	100
11	J	187/191 (98%)	187 (100%)	0	100	100
12	K	168/171 (98%)	166 (99%)	2 (1%)	63	72
13	L	185/185 (100%)	183 (99%)	2 (1%)	65	74
14	M	145/147 (99%)	144 (99%)	1 (1%)	76	78
15	N	154/154 (100%)	154 (100%)	0	100	100
16	O	107/107 (100%)	106 (99%)	1 (1%)	70	76
17	P	175/175 (100%)	175 (100%)	0	100	100
18	Q	160/160 (100%)	160 (100%)	0	100	100
19	R	138/145 (95%)	138 (100%)	0	100	100
20	S	150/150 (100%)	150 (100%)	0	100	100
21	T	152/153 (99%)	152 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
22	U	155/155 (100%)	155 (100%)	0	100	100
23	V	135/136 (99%)	134 (99%)	1 (1%)	76	78
24	W	87/87 (100%)	86 (99%)	1 (1%)	65	74
25	X	104/104 (100%)	104 (100%)	0	100	100
26	Y	56/108 (52%)	56 (100%)	0	100	100
27	Z	104/105 (99%)	103 (99%)	1 (1%)	68	75
28	a	108/108 (100%)	106 (98%)	2 (2%)	50	66
29	b	112/115 (97%)	112 (100%)	0	100	100
30	c	117/118 (99%)	117 (100%)	0	100	100
31	d	46/46 (100%)	46 (100%)	0	100	100
32	e	81/81 (100%)	80 (99%)	1 (1%)	63	72
33	f	92/96 (96%)	92 (100%)	0	100	100
34	g	107/109 (98%)	105 (98%)	2 (2%)	50	66
35	h	90/90 (100%)	90 (100%)	0	100	100
36	i	95/95 (100%)	94 (99%)	1 (1%)	65	74
37	j	104/104 (100%)	103 (99%)	1 (1%)	68	75
38	k	80/81 (99%)	77 (96%)	3 (4%)	29	54
39	l	67/67 (100%)	58 (87%)	9 (13%)	4	15
40	m	68/68 (100%)	67 (98%)	1 (2%)	57	69
41	n	45/45 (100%)	45 (100%)	0	100	100
42	o	45/47 (96%)	45 (100%)	0	100	100
43	p	22/23 (96%)	22 (100%)	0	100	100
44	q	87/88 (99%)	85 (98%)	2 (2%)	44	63
45	r	71/71 (100%)	71 (100%)	0	100	100
47	x	715/715 (100%)	709 (99%)	6 (1%)	73	77
48	SD	88/98 (90%)	87 (99%)	1 (1%)	65	74
49	SZ	81/96 (84%)	80 (99%)	1 (1%)	63	72
50	Se	81/81 (100%)	80 (99%)	1 (1%)	63	72
51	SC	77/85 (91%)	76 (99%)	1 (1%)	61	71
52	SE	95/98 (97%)	95 (100%)	0	100	100
53	SA	182/182 (100%)	182 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	SI	115/115 (100%)	113 (98%)	2 (2%)	53	67
55	SJ	93/93 (100%)	91 (98%)	2 (2%)	45	63
56	SL	55/56 (98%)	54 (98%)	1 (2%)	51	67
57	SM	47/47 (100%)	47 (100%)	0	100	100
58	SB	172/173 (99%)	171 (99%)	1 (1%)	78	80
59	SF	117/117 (100%)	117 (100%)	0	100	100
60	SH	127/128 (99%)	127 (100%)	0	100	100
61	SO	246/257 (96%)	246 (100%)	0	100	100
62	SN	57/64 (89%)	57 (100%)	0	100	100
63	SG	105/110 (96%)	102 (97%)	3 (3%)	37	60
64	SP	170/173 (98%)	170 (100%)	0	100	100
65	SQ	200/205 (98%)	198 (99%)	2 (1%)	68	75
66	SR	175/175 (100%)	173 (99%)	2 (1%)	65	74
67	SS	220/220 (100%)	218 (99%)	2 (1%)	70	76
68	ST	189/195 (97%)	186 (98%)	3 (2%)	55	68
69	SU	163/165 (99%)	161 (99%)	2 (1%)	63	72
70	SV	148/159 (93%)	148 (100%)	0	100	100
71	SW	156/157 (99%)	156 (100%)	0	100	100
72	SX	126/127 (99%)	125 (99%)	1 (1%)	73	77
73	SY	127/127 (100%)	127 (100%)	0	100	100
74	Sa	71/74 (96%)	71 (100%)	0	100	100
75	Sb	110/110 (100%)	108 (98%)	2 (2%)	51	67
76	Sc	119/119 (100%)	117 (98%)	2 (2%)	53	67
77	Sd	112/112 (100%)	112 (100%)	0	100	100
78	Sf	70/70 (100%)	70 (100%)	0	100	100
79	Sg	50/51 (98%)	50 (100%)	0	100	100
80	SK	85/89 (96%)	85 (100%)	0	100	100
All	All	9906/10114 (98%)	9836 (99%)	70 (1%)	73	78

All (70) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
7	F	106	TRP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	F	148	ILE
8	G	56	THR
9	H	167	ASN
12	K	55	VAL
12	K	68	LEU
13	L	69	ARG
13	L	103	LEU
14	M	112	LEU
16	O	14	LEU
23	V	103	GLN
24	W	93	ILE
27	Z	67	ILE
28	a	59	VAL
28	a	97	ILE
32	e	11	ASN
34	g	30	GLU
34	g	86	THR
36	i	38	LEU
37	j	95	PHE
38	k	58	ILE
38	k	89	GLU
38	k	94	ILE
39	l	14	LYS
39	l	21	ARG
39	l	24	ARG
39	l	26	SER
39	l	29	VAL
39	l	30	GLN
39	l	31	LYS
39	l	32	LYS
39	l	33	THR
40	m	40	GLN
44	q	58	PHE
44	q	82	GLN
47	x	199	ASP
47	x	284	LEU
47	x	289	MET
47	x	397	PHE
47	x	456	LEU
47	x	548	ASP
48	SD	126	TRP
49	SZ	121	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
50	Se	11	ASN
51	SC	25	LYS
54	SI	24	ARG
54	SI	140	LEU
55	SJ	22	ILE
55	SJ	52	LYS
56	SL	54	LEU
58	SB	130	ILE
63	SG	16	LEU
63	SG	69	ILE
63	SG	119	LEU
65	SQ	48	VAL
65	SQ	188	LEU
66	SR	57	PHE
66	SR	222	TYR
67	SS	52	LEU
67	SS	197	HIS
68	ST	178	LEU
68	ST	210	GLN
68	ST	216	LEU
69	SU	103	SER
69	SU	126	LEU
72	SX	133	LYS
75	Sb	37	PHE
75	Sb	120	HIS
76	Sc	63	GLN
76	Sc	64	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (133) such sidechains are listed below:

Mol	Chain	Res	Type
5	D	38	HIS
5	D	97	ASN
5	D	115	ASN
5	D	139	HIS
5	D	187	HIS
5	D	217	GLN
6	E	13	HIS
6	E	109	HIS
6	E	182	GLN
6	E	224	HIS
6	E	243	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	E	259	HIS
6	E	279	ASN
7	F	5	GLN
7	F	45	ASN
7	F	48	GLN
7	F	87	GLN
7	F	175	HIS
7	F	201	GLN
7	F	311	HIS
7	F	316	ASN
8	G	40	HIS
8	G	296	GLN
9	H	4	GLN
10	I	112	ASN
10	I	225	GLN
11	J	155	ASN
11	J	240	ASN
11	J	252	ASN
12	K	139	ASN
12	K	157	ASN
13	L	73	ASN
13	L	113	GLN
13	L	162	GLN
15	N	19	GLN
16	O	59	ASN
17	P	86	ASN
17	P	87	GLN
17	P	117	ASN
17	P	122	ASN
17	P	123	GLN
18	Q	122[A]	GLN
19	R	10	ASN
21	T	134	HIS
22	U	49	HIS
23	V	90	ASN
23	V	127	GLN
23	V	146	ASN
25	X	28	ASN
30	c	38	GLN
31	d	48	HIS
32	e	74	ASN
32	e	75	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
34	g	31	ASN
36	i	11	ASN
36	i	52	GLN
37	j	99	GLN
38	k	12	ASN
39	l	13	ASN
39	l	28	HIS
39	l	30	GLN
39	l	76	ASN
41	n	19	GLN
41	n	50	ASN
44	q	82	GLN
47	x	30	HIS
47	x	138	GLN
47	x	461	GLN
47	x	694	HIS
47	x	699	HIS
47	x	759	GLN
47	x	786	GLN
47	x	791	GLN
47	x	826	HIS
49	SZ	24	ASN
50	Se	80	HIS
51	SC	13	GLN
51	SC	28	ASN
51	SC	32	HIS
51	SC	58	GLN
52	SE	104	GLN
53	SA	56	GLN
53	SA	74	GLN
53	SA	101	GLN
55	SJ	40	ASN
57	SM	37	ASN
58	SB	95	ASN
58	SB	139	ASN
58	SB	169	ASN
59	SF	100	GLN
59	SF	139	GLN
60	SH	71	GLN
60	SH	103	ASN
61	SO	139	GLN
61	SO	159	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
61	SO	198	ASN
61	SO	299	GLN
61	SO	308	ASN
63	SG	104	ASN
64	SP	46	HIS
64	SP	140	ASN
65	SQ	79	HIS
65	SQ	92	GLN
65	SQ	99	ASN
65	SQ	153	HIS
66	SR	87	GLN
67	SS	96	ASN
67	SS	130	GLN
67	SS	157	ASN
68	ST	139	ASN
68	ST	201	GLN
68	ST	210	GLN
69	SU	22	GLN
70	SV	44	HIS
71	SW	176	ASN
72	SX	16	GLN
72	SX	92	HIS
72	SX	110	HIS
72	SX	118	GLN
72	SX	138	ASN
73	SY	62	GLN
75	Sb	16	ASN
75	Sb	42	GLN
76	Sc	27	ASN
76	Sc	99	ASN
77	Sd	22	GLN
77	Sd	106	GLN
77	Sd	113	ASN
77	Sd	133	ASN
78	Sf	26	GLN
78	Sf	42	ASN
79	Sg	17	GLN
80	SK	98	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	2	1764/1799 (98%)	502 (28%)	32 (1%)
2	A	3183/3394 (93%)	526 (16%)	12 (0%)
3	B	120/121 (99%)	12 (10%)	1 (0%)
4	C	157/158 (99%)	30 (19%)	1 (0%)
46	s	74/75 (98%)	14 (18%)	0
46	t	74/75 (98%)	14 (18%)	0
All	All	5372/5622 (95%)	1098 (20%)	46 (0%)

All (1098) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	2	2	A
1	2	4	C
1	2	9	U
1	2	10	G
1	2	25	C
1	2	26	A
1	2	32	U
1	2	34	G
1	2	42	G
1	2	43	A
1	2	45	U
1	2	46	A
1	2	47	A
1	2	56	U
1	2	57	G
1	2	61	A
1	2	62	A
1	2	66	U
1	2	67	A
1	2	68	A
1	2	69	G
1	2	71	A
1	2	73	U
1	2	74	U
1	2	75	U
1	2	76	A
1	2	78	A
1	2	79	C
1	2	80	A
1	2	81	G
1	2	104	A
1	2	114	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	116	U
1	2	121	U
1	2	126	A
1	2	127	G
1	2	129	U
1	2	130	C
1	2	131	C
1	2	132	U
1	2	133	U
1	2	134	U
1	2	135	A
1	2	138	A
1	2	139	C
1	2	140	A
1	2	141	U
1	2	142	G
1	2	151	G
1	2	153	G
1	2	156	A
1	2	159	U
1	2	163	G
1	2	167	U
1	2	168	A
1	2	171	A
1	2	172	C
1	2	176	C
1	2	178	U
1	2	179	A
1	2	180	A
1	2	185	U
1	2	186	C
1	2	187	G
1	2	188	A
1	2	189	C
1	2	191	C
1	2	192	U
1	2	193	U
1	2	194	U
1	2	195	G
1	2	196	G
1	2	199	G
1	2	204	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	205	U
1	2	206	A
1	2	213	A
1	2	215	A
1	2	217	A
1	2	218	A
1	2	223	U
1	2	224	C
1	2	226	A
1	2	227	U
1	2	228	G
1	2	230	C
1	2	233	C
1	2	234	G
1	2	235	G
1	2	237	C
1	2	240	U
1	2	241	U
1	2	250	C
1	2	257	A
1	2	260	U
1	2	262	U
1	2	265	A
1	2	266	A
1	2	270	C
1	2	276	C
1	2	278	U
1	2	280	U
1	2	285	G
1	2	287	G
1	2	292	U
1	2	299	A
1	2	302	U
1	2	313	U
1	2	314	C
1	2	316	A
1	2	321	C
1	2	322	G
1	2	323	A
1	2	330	G
1	2	333	A
1	2	337	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	338	C
1	2	339	C
1	2	352	A
1	2	353	A
1	2	359	A
1	2	361	C
1	2	370	A
1	2	380	U
1	2	388	G
1	2	389	G
1	2	390	G
1	2	400	A
1	2	401	A
1	2	402	C
1	2	404	G
1	2	412	A
1	2	415	C
1	2	416	A
1	2	417	A
1	2	418	G
1	2	419	G
1	2	423	G
1	2	424	C
1	2	425	A
1	2	426	G
1	2	434	G
1	2	439	U
1	2	441	A
1	2	442	C
1	2	443	C
1	2	444	C
1	2	448	C
1	2	458	G
1	2	461	G
1	2	463	U
1	2	469	C
1	2	482	U
1	2	483	A
1	2	485	A
1	2	487	G
1	2	489	C
1	2	490	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	494	U
1	2	496	G
1	2	498	G
1	2	499	U
1	2	500	C
1	2	502	U
1	2	506	A
1	2	507	U
1	2	510	G
1	2	511	A
1	2	519	C
1	2	529	A
1	2	534	A
1	2	539	G
1	2	540	G
1	2	541	A
1	2	542	A
1	2	543	C
1	2	544	A
1	2	545	A
1	2	546	U
1	2	551	G
1	2	554	C
1	2	555	A
1	2	556	A
1	2	558	U
1	2	565	C
1	2	568	G
1	2	578	U
1	2	579	A
1	2	583	C
1	2	594	A
1	2	609	U
1	2	610	G
1	2	617	U
1	2	619	A
1	2	620	A
1	2	621	A
1	2	622	A
1	2	623	A
1	2	624	G
1	2	639	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	640	U
1	2	641	G
1	2	645	C
1	2	653	C
1	2	655	G
1	2	656	G
1	2	679	U
1	2	680	U
1	2	681	U
1	2	682	C
1	2	684	A
1	2	687	G
1	2	694	U
1	2	695	U
1	2	696	C
1	2	697	C
1	2	698	U
1	2	699	U
1	2	700	C
1	2	704	C
1	2	705	U
1	2	706	A
1	2	708	C
1	2	709	C
1	2	710	U
1	2	711	U
1	2	712	G
1	2	713	A
1	2	714	G
1	2	727	U
1	2	729	G
1	2	730	G
1	2	733	A
1	2	734	A
1	2	738	G
1	2	739	G
1	2	740	A
1	2	742	U
1	2	743	U
1	2	745	U
1	2	754	A
1	2	756	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	765	G
1	2	766	U
1	2	771	A
1	2	774	A
1	2	775	G
1	2	778	G
1	2	779	U
1	2	780	A
1	2	781	U
1	2	782	U
1	2	783	G
1	2	787	G
1	2	789	A
1	2	803	A
1	2	812	A
1	2	813	U
1	2	814	A
1	2	815	G
1	2	816	G
1	2	819	G
1	2	820	U
1	2	821	U
1	2	822	U
1	2	823	G
1	2	824	G
1	2	825	U
1	2	827	C
1	2	830	U
1	2	833	U
1	2	834	G
1	2	836	U
1	2	840	U
1	2	846	G
1	2	849	C
1	2	850	A
1	2	851	U
1	2	852	C
1	2	853	G
1	2	854	U
1	2	855	A
1	2	856	A
1	2	857	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	861	U
1	2	862	A
1	2	863	A
1	2	864	U
1	2	865	A
1	2	876	G
1	2	898	A
1	2	899	G
1	2	901	G
1	2	902	G
1	2	910	C
1	2	914	G
1	2	915	A
1	2	925	G
1	2	929	A
1	2	933	A
1	2	934	C
1	2	935	U
1	2	942	G
1	2	951	A
1	2	966	A
1	2	970	A
1	2	988	A
1	2	989	U
1	2	992	A
1	2	993	A
1	2	996	U
1	2	998	A
1	2	1004	U
1	2	1005	A
1	2	1023	A
1	2	1024	U
1	2	1028	C
1	2	1039	A
1	2	1051	G
1	2	1052	U
1	2	1053	G
1	2	1057	U
1	2	1058	U
1	2	1059	U
1	2	1060	U
1	2	1061	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1062	A
1	2	1064	G
1	2	1076	A
1	2	1081	A
1	2	1082	C
1	2	1092	A
1	2	1096	C
1	2	1098	U
1	2	1100	G
1	2	1113	A
1	2	1138	A
1	2	1140	G
1	2	1150	G
1	2	1155	G
1	2	1158	C
1	2	1160	A
1	2	1164	G
1	2	1167	G
1	2	1170	G
1	2	1174	C
1	2	1182	U
1	2	1183	A
1	2	1185	U
1	2	1194	A
1	2	1196	A
1	2	1199	G
1	2	1200	G
1	2	1202	A
1	2	1206	U
1	2	1207	C
1	2	1216	C
1	2	1217	A
1	2	1218	G
1	2	1223	A
1	2	1224	A
1	2	1227	A
1	2	1228	G
1	2	1229	G
1	2	1241	G
1	2	1243	G
1	2	1244	A
1	2	1245	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1246	C
1	2	1249	U
1	2	1256	A
1	2	1257	U
1	2	1274	C
1	2	1275	A
1	2	1276	U
1	2	1285	U
1	2	1288	G
1	2	1297	G
1	2	1307	U
1	2	1314	U
1	2	1315	U
1	2	1318	G
1	2	1321	A
1	2	1322	A
1	2	1325	A
1	2	1337	A
1	2	1340	U
1	2	1344	A
1	2	1345	A
1	2	1346	A
1	2	1348	A
1	2	1349	G
1	2	1357	A
1	2	1361	U
1	2	1363	U
1	2	1367	G
1	2	1370	U
1	2	1371	A
1	2	1372	U
1	2	1373	C
1	2	1378	U
1	2	1381	U
1	2	1382	A
1	2	1383	G
1	2	1389	C
1	2	1390	U
1	2	1398	U
1	2	1399	C
1	2	1400	A
1	2	1408	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1409	G
1	2	1413	U
1	2	1414	U
1	2	1419	G
1	2	1427	A
1	2	1428	G
1	2	1431	C
1	2	1432	U
1	2	1443	U
1	2	1460	A
1	2	1469	A
1	2	1472	C
1	2	1474	G
1	2	1479	A
1	2	1486	G
1	2	1493	A
1	2	1495	C
1	2	1496	U
1	2	1503	A
1	2	1506	G
1	2	1514	U
1	2	1515	A
1	2	1516	A
1	2	1520	U
1	2	1521	G
1	2	1523	G
1	2	1524	A
1	2	1528	U
1	2	1537	C
1	2	1540	G
1	2	1541	G
1	2	1542	G
1	2	1557	U
1	2	1559	A
1	2	1572	G
1	2	1573	A
1	2	1574	G
1	2	1575	G
1	2	1583	A
1	2	1584	G
1	2	1585	U
1	2	1600	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1601	G
1	2	1611	A
1	2	1614	A
1	2	1616	G
1	2	1619	C
1	2	1622	G
1	2	1631	A
1	2	1633	A
1	2	1634	C
1	2	1635	A
1	2	1636	C
1	2	1637	C
1	2	1638	G
1	2	1657	U
1	2	1658	G
1	2	1666	U
1	2	1682	U
1	2	1688	U
1	2	1691	A
1	2	1693	A
1	2	1697	G
1	2	1698	G
1	2	1699	G
1	2	1700	C
1	2	1701	A
1	2	1705	C
1	2	1707	A
1	2	1709	C
1	2	1712	A
1	2	1715	G
1	2	1717	G
1	2	1726	G
1	2	1730	A
1	2	1736	G
1	2	1754	A
1	2	1755	A
1	2	1756	A
1	2	1757	G
1	2	1762	A
1	2	1767	G
1	2	1769	U
1	2	1780	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1782	A
1	2	1783	C
1	2	1792	G
1	2	1793	G
1	2	1794	A
1	2	1796	C
1	2	1797	A
1	2	1799	U
2	A	14	U
2	A	20	A
2	A	26	A
2	A	30	G
2	A	40	A
2	A	43	A
2	A	49	A
2	A	57	A
2	A	59	G
2	A	60	A
2	A	65	A
2	A	66	A
2	A	72	C
2	A	77	A
2	A	92	G
2	A	110	G
2	A	111	C
2	A	116	A
2	A	117	U
2	A	118	U
2	A	122	A
2	A	135	C
2	A	136	G
2	A	148	G
2	A	156	G
2	A	157	A
2	A	173	G
2	A	177	U
2	A	183	G
2	A	187	A
2	A	190	U
2	A	199	A
2	A	200	C
2	A	206	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	219	A
2	A	220	G
2	A	231	G
2	A	232	G
2	A	234	G
2	A	240	U
2	A	249	U
2	A	252	U
2	A	263	C
2	A	269	G
2	A	286	U
2	A	295	A
2	A	305	U
2	A	315	C
2	A	325	A
2	A	329	U
2	A	330	G
2	A	341	G
2	A	361	A
2	A	376	G
2	A	398	A
2	A	401	U
2	A	402	A
2	A	403	C
2	A	404	G
2	A	420	G
2	A	421	G
2	A	422	A
2	A	494	G
2	A	495	G
2	A	503	C
2	A	518	G
2	A	520	U
2	A	521	A
2	A	523	A
2	A	533	A
2	A	536	U
2	A	543	C
2	A	545	U
2	A	557	A
2	A	558	U
2	A	559	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	560	G
2	A	600	G
2	A	601	U
2	A	602	A
2	A	611	A
2	A	636	C
2	A	637	C
2	A	638	C
2	A	649	A
2	A	677	A
2	A	678	G
2	A	681	U
2	A	690	A
2	A	691	A
2	A	692	A
2	A	705	A
2	A	712	G
2	A	734	C
2	A	735	A
2	A	742	G
2	A	758	C
2	A	761	A
2	A	766	U
2	A	767	U
2	A	780	A
2	A	781	G
2	A	785	G
2	A	786	A
2	A	817	A
2	A	830	A
2	A	836	A
2	A	846	A
2	A	849	C
2	A	854	G
2	A	857	G
2	A	861	C
2	A	874	U
2	A	879	U
2	A	880	G
2	A	896	A
2	A	907	G
2	A	914	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	916	G
2	A	917	A
2	A	921	A
2	A	924	G
2	A	937	G
2	A	944	C
2	A	953	G
2	A	959	C
2	A	960	U
2	A	974	G
2	A	976	U
2	A	977	C
2	A	979	U
2	A	980	A
2	A	982	C
2	A	1006	A
2	A	1015	U
2	A	1016	C
2	A	1017	C
2	A	1018	G
2	A	1020	G
2	A	1021	G
2	A	1022	U
2	A	1037	C
2	A	1047	A
2	A	1063	G
2	A	1064	A
2	A	1066	G
2	A	1072	G
2	A	1076	C
2	A	1079	A
2	A	1082	U
2	A	1083	G
2	A	1093	A
2	A	1094	U
2	A	1095	U
2	A	1096	U
2	A	1097	G
2	A	1098	A
2	A	1104	G
2	A	1117	G
2	A	1131	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	1153	A
2	A	1159	A
2	A	1174	G
2	A	1178	G
2	A	1179	A
2	A	1180	A
2	A	1181	U
2	A	1182	A
2	A	1189	C
2	A	1190	A
2	A	1193	A
2	A	1196	C
2	A	1201	C
2	A	1209	G
2	A	1220	U
2	A	1222	G
2	A	1235	U
2	A	1236	G
2	A	1240	A
2	A	1242	G
2	A	1245	A
2	A	1246	G
2	A	1252	A
2	A	1253	U
2	A	1257	C
2	A	1258	U
2	A	1263	A
2	A	1265	U
2	A	1272	C
2	A	1287	A
2	A	1302	A
2	A	1307	G
2	A	1308	A
2	A	1317	A
2	A	1330	A
2	A	1331	U
2	A	1345	G
2	A	1348	U
2	A	1349	G
2	A	1350	A
2	A	1352	A
2	A	1355	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	1357	G
2	A	1386	A
2	A	1392	G
2	A	1399	A
2	A	1400	G
2	A	1417	G
2	A	1418	A
2	A	1431	G
2	A	1434	G
2	A	1437	C
2	A	1443	G
2	A	1446	A
2	A	1483	G
2	A	1495	U
2	A	1496	C
2	A	1508	C
2	A	1511	U
2	A	1528	G
2	A	1556	C
2	A	1557	A
2	A	1560	G
2	A	1562	C
2	A	1564	U
2	A	1567	U
2	A	1568	U
2	A	1570	U
2	A	1575	A
2	A	1576	G
2	A	1577	G
2	A	1578	C
2	A	1579	C
2	A	1580	A
2	A	1581	C
2	A	1582	C
2	A	1583	A
2	A	1593	A
2	A	1594	A
2	A	1605	A
2	A	1607	U
2	A	1630	U
2	A	1642	A
2	A	1643	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	1645	U
2	A	1647	A
2	A	1657	C
2	A	1658	G
2	A	1694	U
2	A	1705	U
2	A	1713	G
2	A	1724	U
2	A	1735	G
2	A	1741	A
2	A	1743	G
2	A	1750	A
2	A	1751	G
2	A	1752	A
2	A	1753	G
2	A	1756	C
2	A	1759	C
2	A	1763	U
2	A	1765	U
2	A	1767	C
2	A	1769	G
2	A	1773	C
2	A	1775	G
2	A	1796	G
2	A	1797	A
2	A	1813	A
2	A	1814	A
2	A	1815	U
2	A	1816	A
2	A	1820	U
2	A	1821	U
2	A	1822	C
2	A	1840	U
2	A	1842	A
2	A	1846	C
2	A	1850	A
2	A	1858	A
2	A	1866	C
2	A	1879	A
2	A	1880	U
2	A	1893	A
2	A	1906	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	1920	U
2	A	1952	G
2	A	2111	G
2	A	2112	U
2	A	2114	C
2	A	2122	G
2	A	2131	A
2	A	2158	A
2	A	2167	A
2	A	2168	A
2	A	2169	G
2	A	2170	U
2	A	2188	A
2	A	2205	U
2	A	2206	G
2	A	2207	A
2	A	2208	A
2	A	2209	U
2	A	2210	G
2	A	2223	A
2	A	2244	A
2	A	2249	G
2	A	2252	A
2	A	2253	G
2	A	2256	A
2	A	2261	G
2	A	2262	A
2	A	2264	U
2	A	2266	U
2	A	2270	A
2	A	2272	G
2	A	2273	G
2	A	2281	A
2	A	2306	C
2	A	2307	G
2	A	2310	U
2	A	2313	A
2	A	2315	G
2	A	2320	A
2	A	2335	G
2	A	2336	U
2	A	2340	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	2372	A
2	A	2373	A
2	A	2374	C
2	A	2375	G
2	A	2376	G
2	A	2388	U
2	A	2393	G
2	A	2394	G
2	A	2397	A
2	A	2402	A
2	A	2403	G
2	A	2404	A
2	A	2411	U
2	A	2418	G
2	A	2450	G
2	A	2451	G
2	A	2453	U
2	A	2454	G
2	A	2458	A
2	A	2459	A
2	A	2462	A
2	A	2463	G
2	A	2468	A
2	A	2469	G
2	A	2472	U
2	A	2474	G
2	A	2477	G
2	A	2478	C
2	A	2485	A
2	A	2490	C
2	A	2494	A
2	A	2496	C
2	A	2504	U
2	A	2513	U
2	A	2515	A
2	A	2523	A
2	A	2524	A
2	A	2532	U
2	A	2533	G
2	A	2534	G
2	A	2535	A
2	A	2537	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	2539	C
2	A	2540	A
2	A	2541	U
2	A	2547	A
2	A	2549	G
2	A	2552	C
2	A	2555	G
2	A	2560	C
2	A	2561	A
2	A	2569	A
2	A	2570	U
2	A	2571	U
2	A	2572	C
2	A	2573	G
2	A	2585	G
2	A	2593	A
2	A	2602	G
2	A	2606	G
2	A	2607	G
2	A	2614	G
2	A	2635	A
2	A	2637	A
2	A	2652	U
2	A	2656	A
2	A	2657	A
2	A	2672	G
2	A	2674	A
2	A	2678	A
2	A	2688	U
2	A	2689	A
2	A	2691	A
2	A	2696	A
2	A	2704	A
2	A	2712	U
2	A	2713	U
2	A	2728	G
2	A	2729	U
2	A	2737	C
2	A	2753	G
2	A	2762	A
2	A	2772	C
2	A	2773	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	2777	G
2	A	2778	G
2	A	2791	G
2	A	2795	U
2	A	2796	G
2	A	2799	A
2	A	2800	G
2	A	2801	A
2	A	2808	A
2	A	2810	C
2	A	2817	A
2	A	2821	C
2	A	2843	U
2	A	2845	A
2	A	2847	A
2	A	2850	G
2	A	2860	U
2	A	2867	C
2	A	2871	G
2	A	2873	U
2	A	2887	A
2	A	2889	C
2	A	2899	C
2	A	2911	A
2	A	2934	A
2	A	2935	U
2	A	2936	A
2	A	2941	A
2	A	2951	G
2	A	2971	A
2	A	2979	U
2	A	2983	C
2	A	2997	G
2	A	3003	G
2	A	3005	A
2	A	3012	A
2	A	3021	A
2	A	3028	G
2	A	3029	A
2	A	3030	G
2	A	3048	A
2	A	3049	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	3057	U
2	A	3059	G
2	A	3078	U
2	A	3079	U
2	A	3092	C
2	A	3101	G
2	A	3109	G
2	A	3113	A
2	A	3115	C
2	A	3117	C
2	A	3122	A
2	A	3130	A
2	A	3131	U
2	A	3142	A
2	A	3143	C
2	A	3153	U
2	A	3154	C
2	A	3155	U
2	A	3156	U
2	A	3168	A
2	A	3170	A
2	A	3172	A
2	A	3173	G
2	A	3174	A
2	A	3176	G
2	A	3179	U
2	A	3181	C
2	A	3187	A
2	A	3196	U
2	A	3198	U
2	A	3203	U
2	A	3207	U
2	A	3210	A
2	A	3217	C
2	A	3218	A
2	A	3219	G
2	A	3223	A
2	A	3228	C
2	A	3247	G
2	A	3248	C
2	A	3249	C
2	A	3260	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	A	3263	G
2	A	3268	A
2	A	3273	A
2	A	3276	G
2	A	3281	U
2	A	3292	A
2	A	3294	A
2	A	3304	U
2	A	3313	U
2	A	3316	A
2	A	3317	U
2	A	3319	U
2	A	3320	A
2	A	3334	U
2	A	3341	U
2	A	3342	A
2	A	3345	G
2	A	3351	U
2	A	3352	U
2	A	3353	G
2	A	3357	U
2	A	3359	A
2	A	3369	G
2	A	3375	A
2	A	3378	C
2	A	3382	U
2	A	3386	G
2	A	3389	U
2	A	3390	G
2	A	3396	U
3	B	7	G
3	B	29	C
3	B	33	U
3	B	53	U
3	B	54	U
3	B	64	A
3	B	65	G
3	B	73	C
3	B	74	C
3	B	76	A
3	B	102	A
3	B	112	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	C	15	G
4	C	16	G
4	C	23	U
4	C	34	U
4	C	35	C
4	C	39	G
4	C	59	A
4	C	62	C
4	C	63	G
4	C	80	A
4	C	81	U
4	C	82	U
4	C	83	C
4	C	84	C
4	C	86	U
4	C	90	U
4	C	91	C
4	C	95	G
4	C	100	U
4	C	106	C
4	C	111	A
4	C	113	U
4	C	116	G
4	C	125	U
4	C	126	A
4	C	129	C
4	C	146	U
4	C	148	G
4	C	151	C
4	C	152	G
46	s	12	G
46	s	14	A
46	s	18	G
46	s	19	G
46	s	36	U
46	s	46	G
46	s	47	U
46	s	48	C
46	s	49	C
46	s	59	A
46	s	61	C
46	s	63	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
46	s	64	A
46	s	74	C
46	t	14	A
46	t	16	U
46	t	19	G
46	t	20	A
46	t	46	G
46	t	47	U
46	t	48	C
46	t	49	C
46	t	59	A
46	t	60	A
46	t	61	C
46	t	63	G
46	t	64	A
46	t	76	A

All (46) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	2	68	A
1	2	77	U
1	2	139	C
1	2	225	A
1	2	322	G
1	2	352	A
1	2	387	A
1	2	400	A
1	2	489	C
1	2	541	A
1	2	555	A
1	2	609	U
1	2	639	U
1	2	705	U
1	2	711	U
1	2	819	G
1	2	928	U
1	2	1023	A
1	2	1205	C
1	2	1226	A
1	2	1256	A
1	2	1273	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	1274	C
1	2	1344	A
1	2	1382	A
1	2	1430	U
1	2	1471	A
1	2	1573	A
1	2	1584	G
1	2	1633	A
1	2	1636	C
1	2	1756	A
2	A	601	U
2	A	916	G
2	A	1081	U
2	A	1814	A
2	A	2261	G
2	A	2450	G
2	A	2533	G
2	A	2842	U
2	A	3004	C
2	A	3028	G
2	A	3121	U
2	A	3341	U
3	B	52	G
4	C	85	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

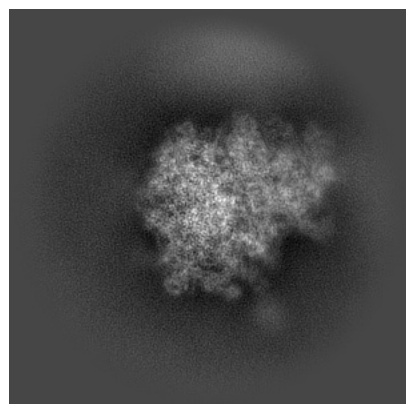
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38660. These allow visual inspection of the internal detail of the map and identification of artifacts.

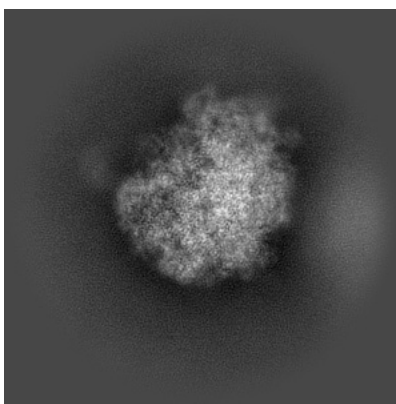
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

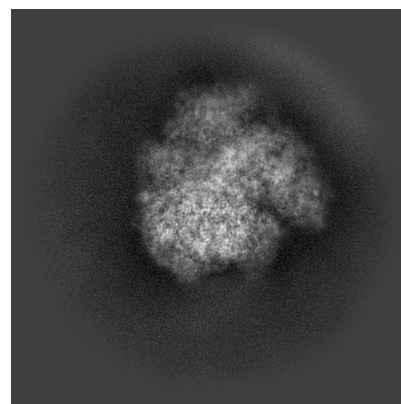
6.1.1 Primary map



X

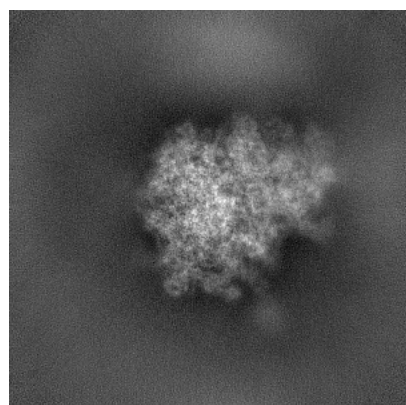


Y

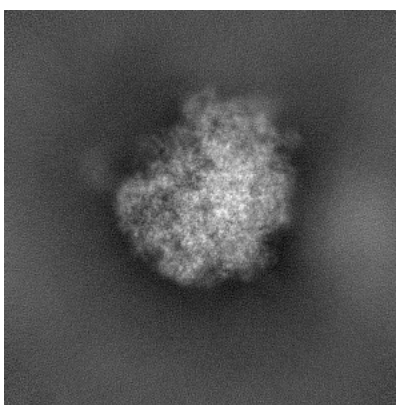


Z

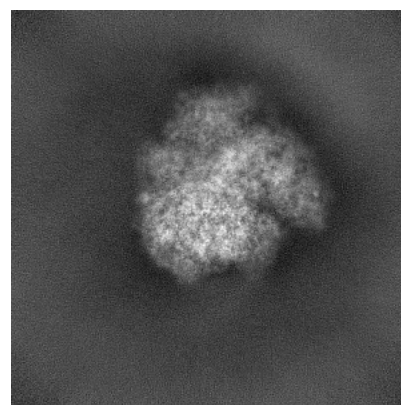
6.1.2 Raw map



X



Y

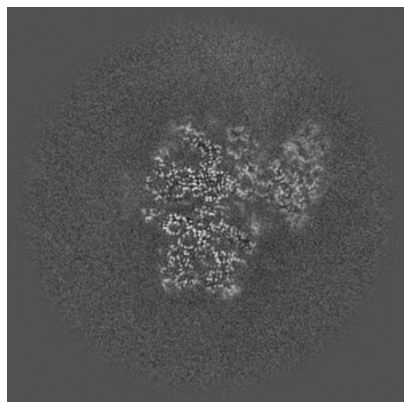


Z

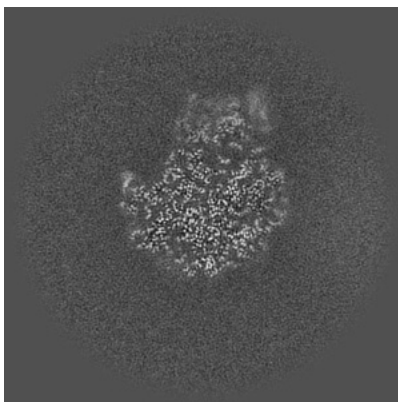
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

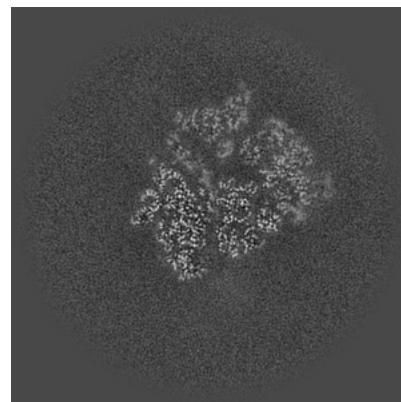
6.2.1 Primary map



X Index: 200

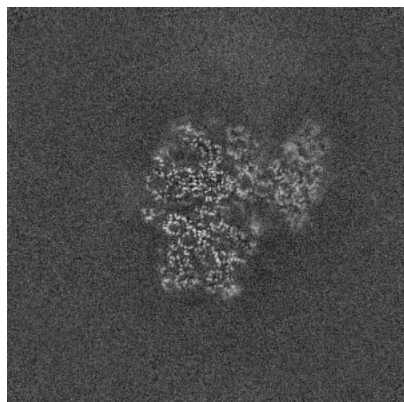


Y Index: 200

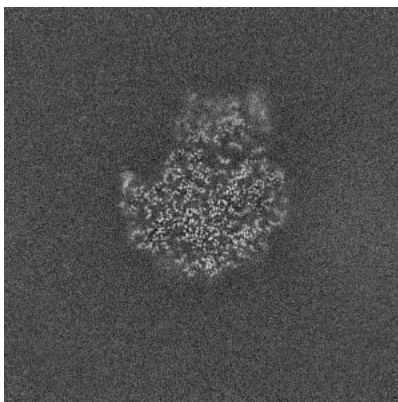


Z Index: 200

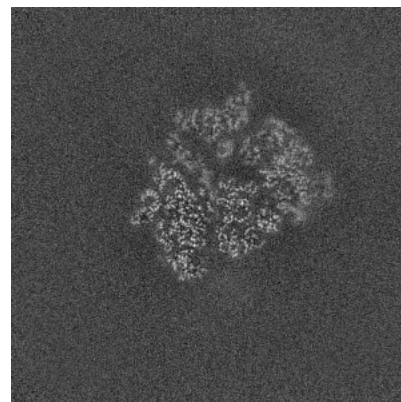
6.2.2 Raw map



X Index: 200



Y Index: 200

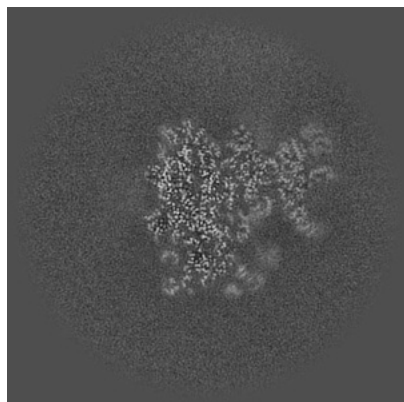


Z Index: 200

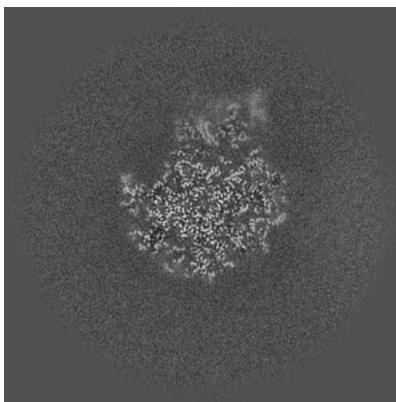
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

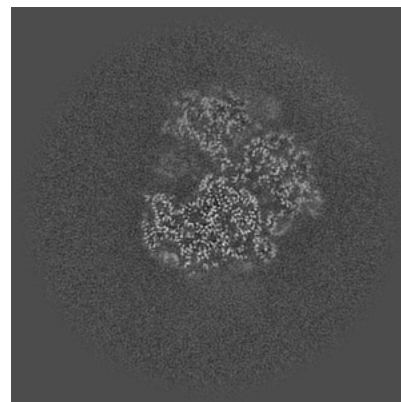
6.3.1 Primary map



X Index: 212

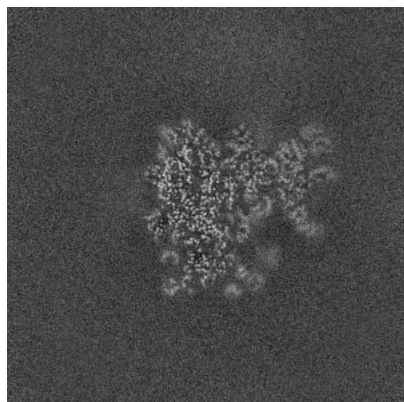


Y Index: 198

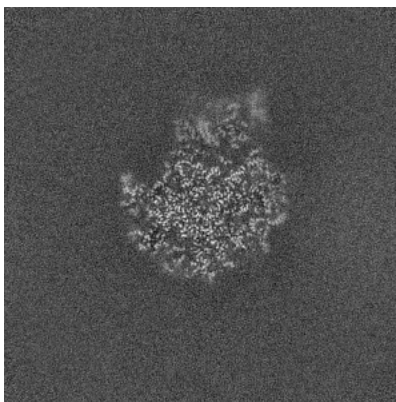


Z Index: 222

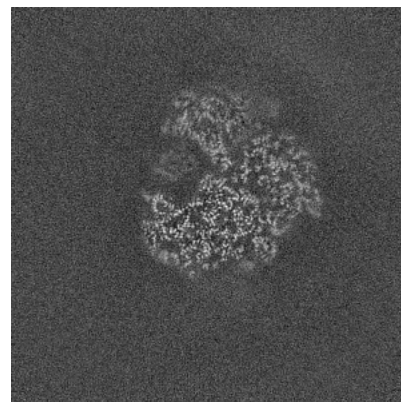
6.3.2 Raw map



X Index: 212



Y Index: 198

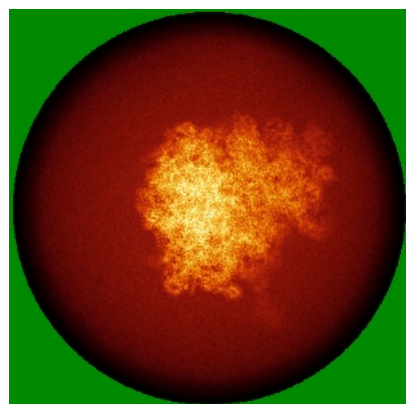


Z Index: 223

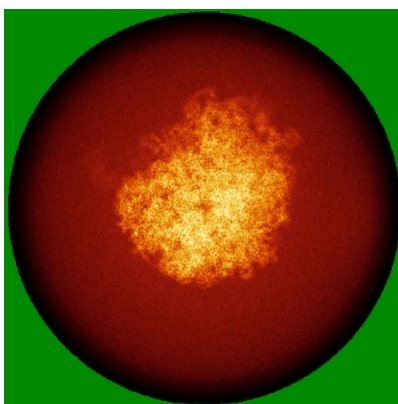
The images above show the largest variance slices of the map in three orthogonal directions.

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

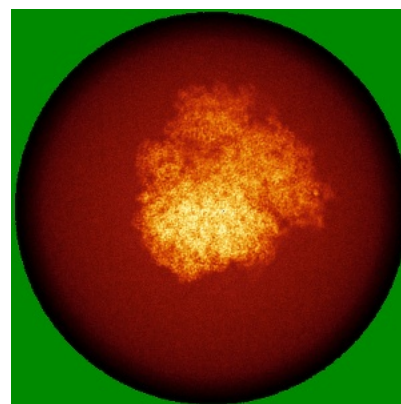
6.4.1 Primary map



X

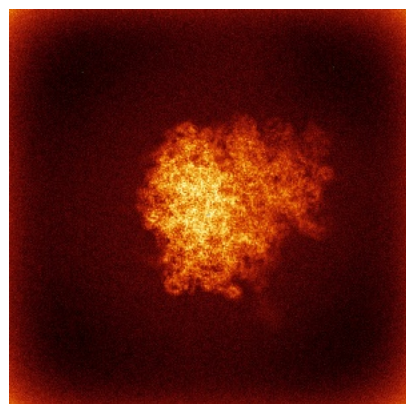


Y

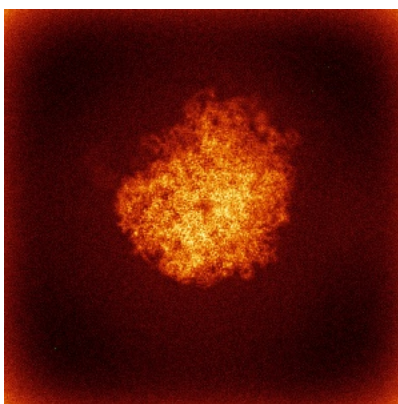


Z

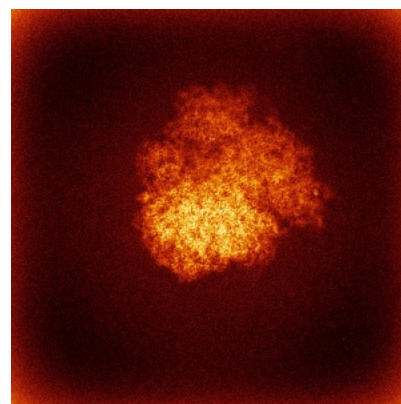
6.4.2 Raw map



X



Y

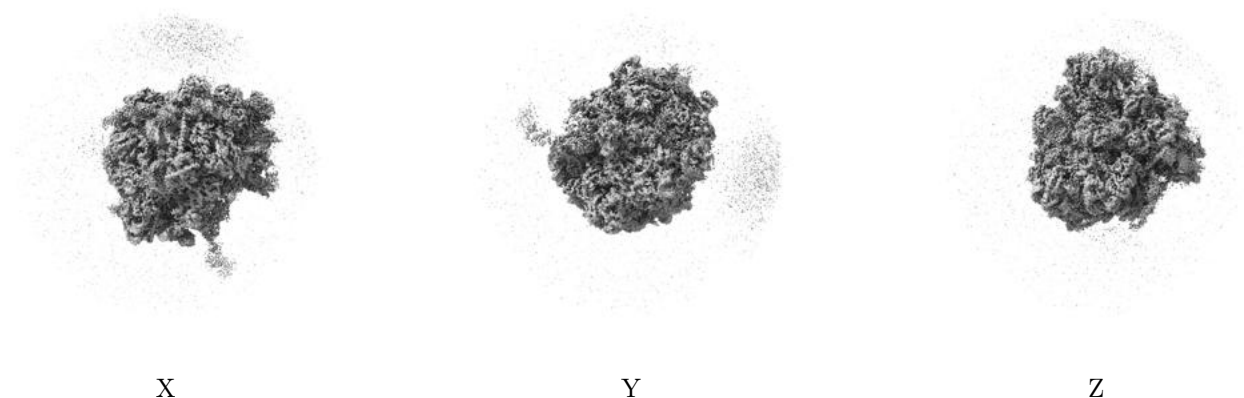


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.295. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

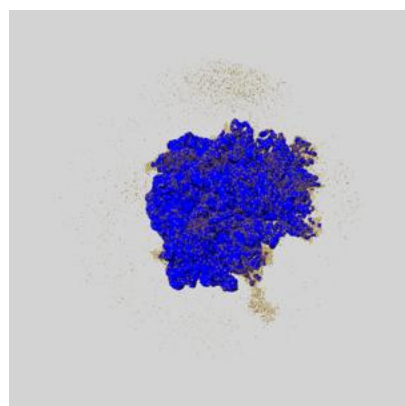
6.6 Mask visualisation [i](#)

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

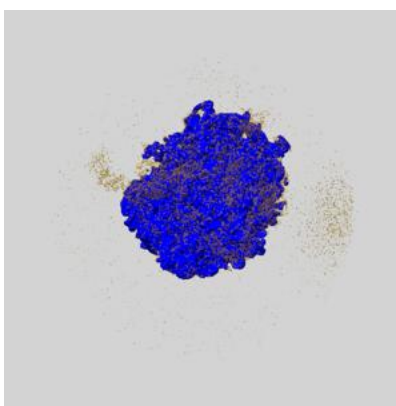
A mask typically either:

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

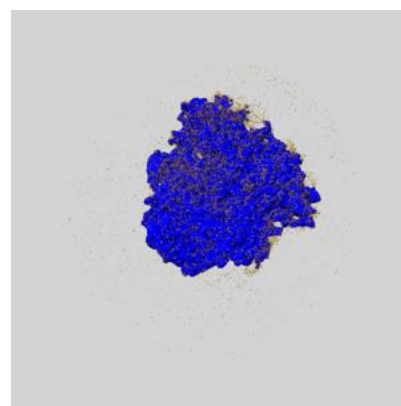
6.6.1 emd_38660_msk_1.map [i](#)



X



Y

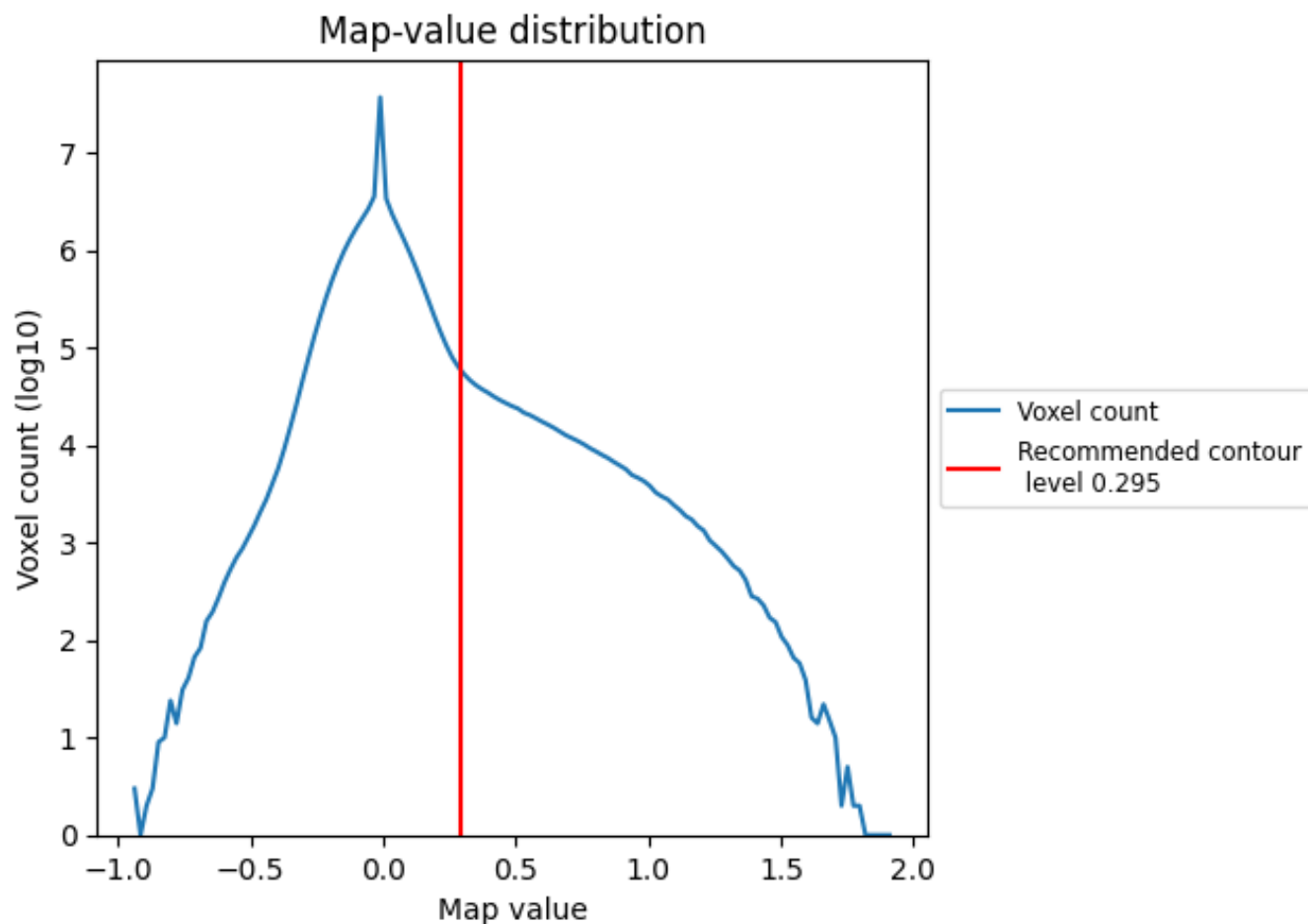


Z

7 Map analysis [i](#)

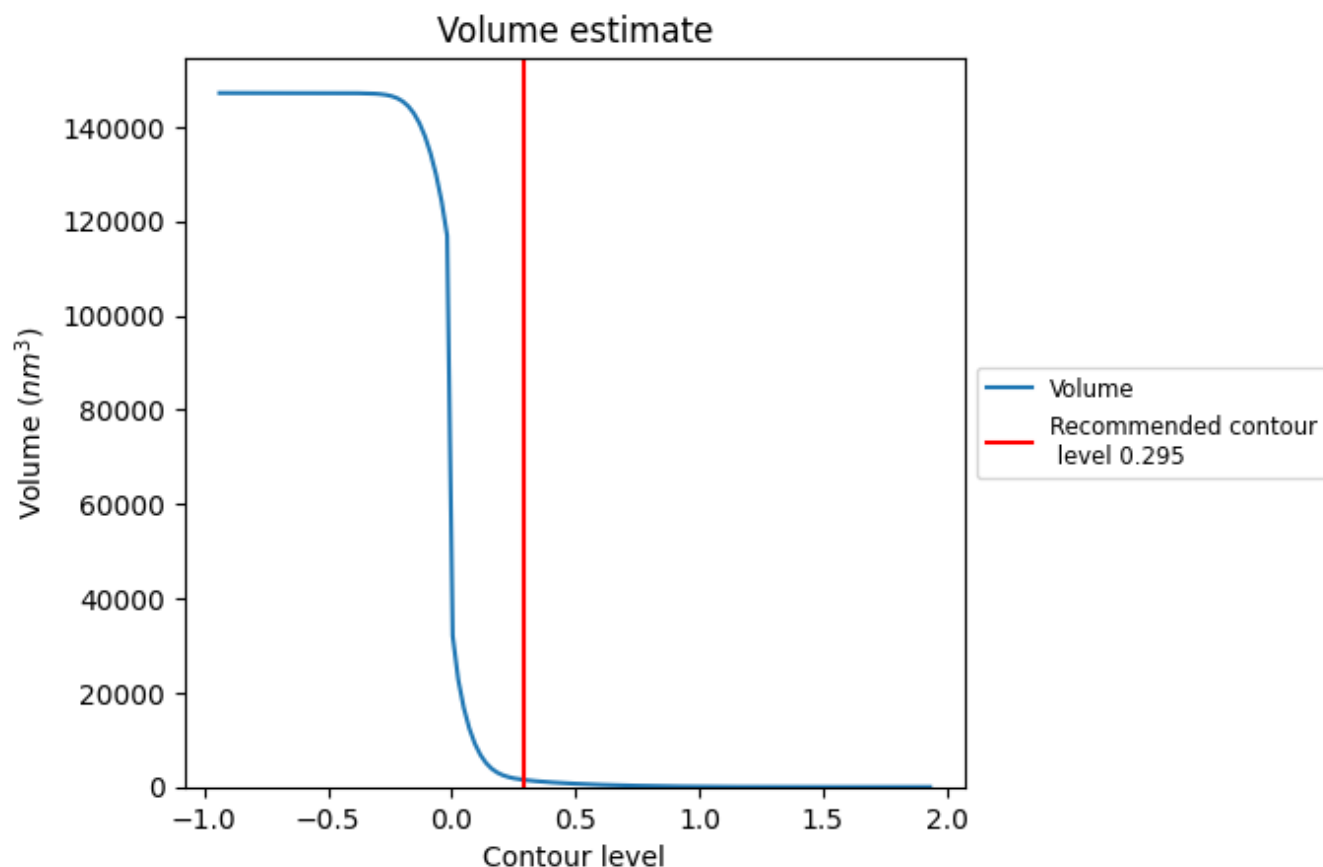
This section contains the results of statistical analysis of the map.

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.

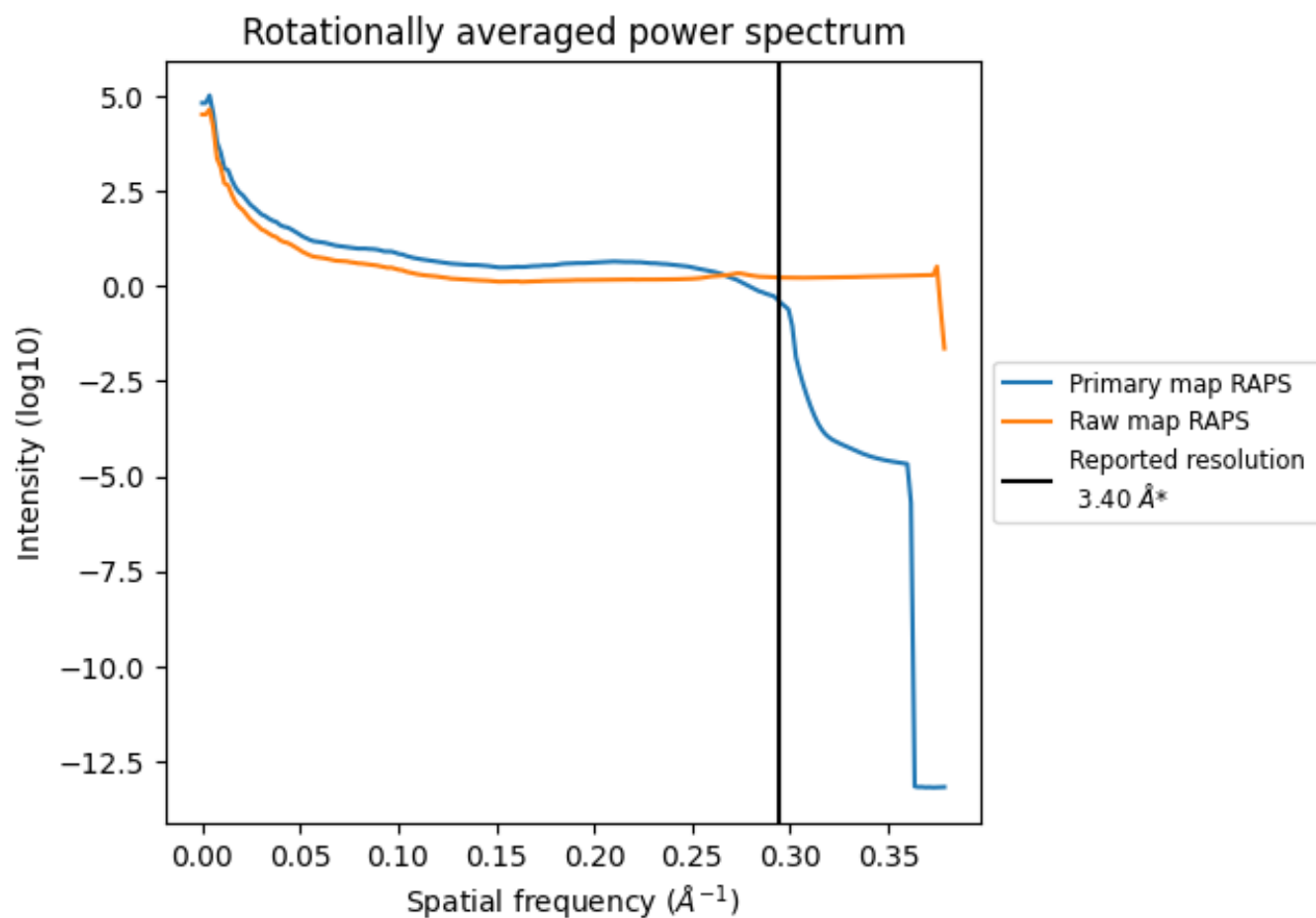
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1478 nm³; this corresponds to an approximate mass of 1335 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 ⓘ

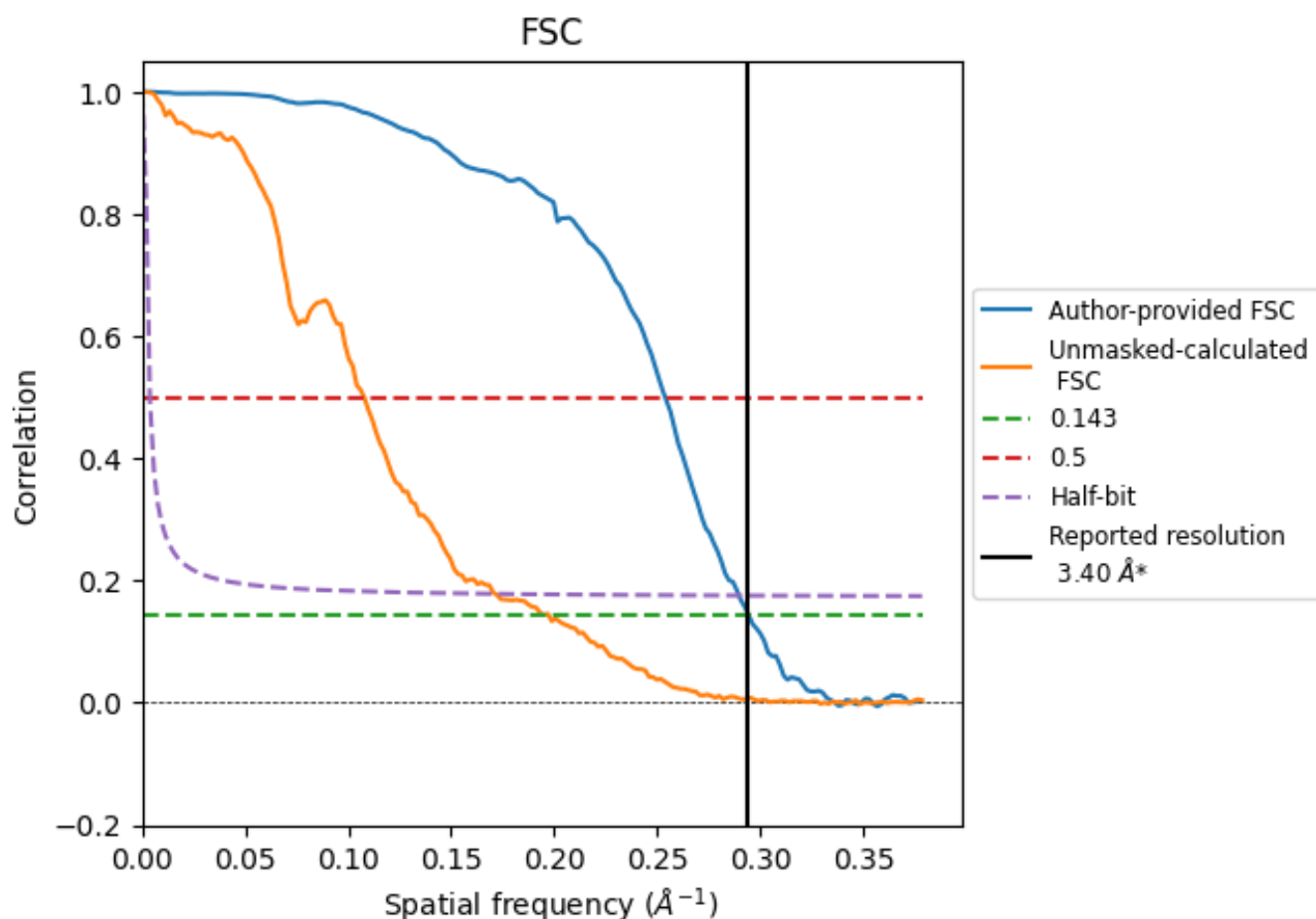


*Reported resolution corresponds to spatial frequency of 0.294 Å⁻¹

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 0.294 Å⁻¹

8.2 Resolution estimates [i](#)

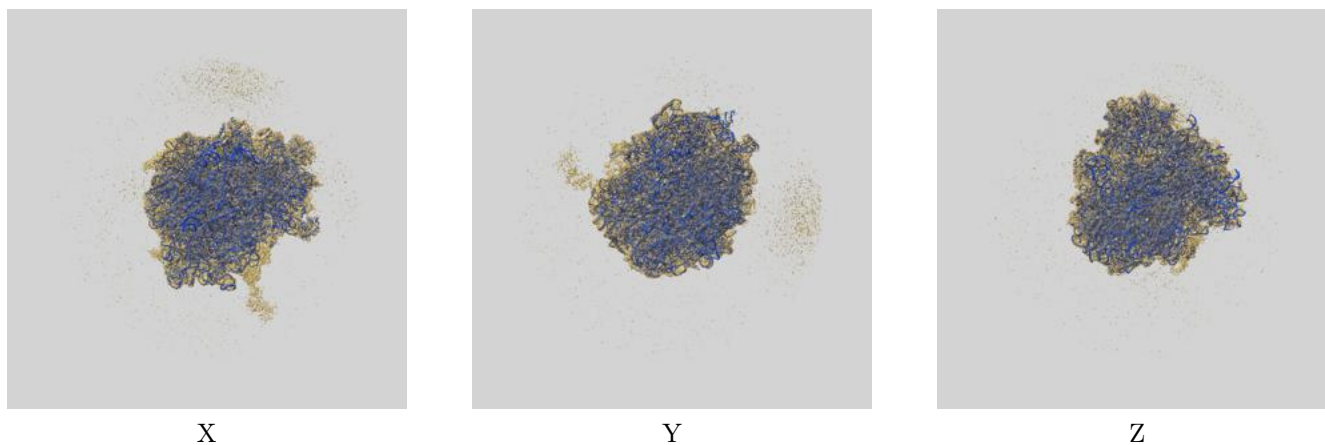
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	3.39	3.94	3.45
Unmasked-calculated*	5.07	9.29	5.83

*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 5.07 differs from the reported value 3.4 by more than 10 %

9 Map-model fit [i](#)

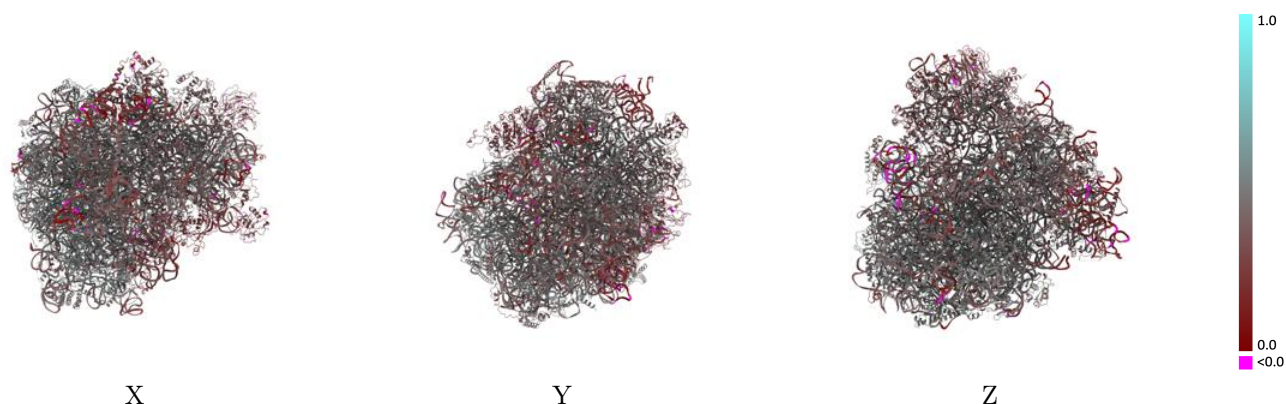
This section contains information regarding the fit between EMDB map EMD-38660 and PDB model 8XU8. Per-residue inclusion information can be found in section [3](#) on page [19](#).

9.1 Map-model overlay [i](#)



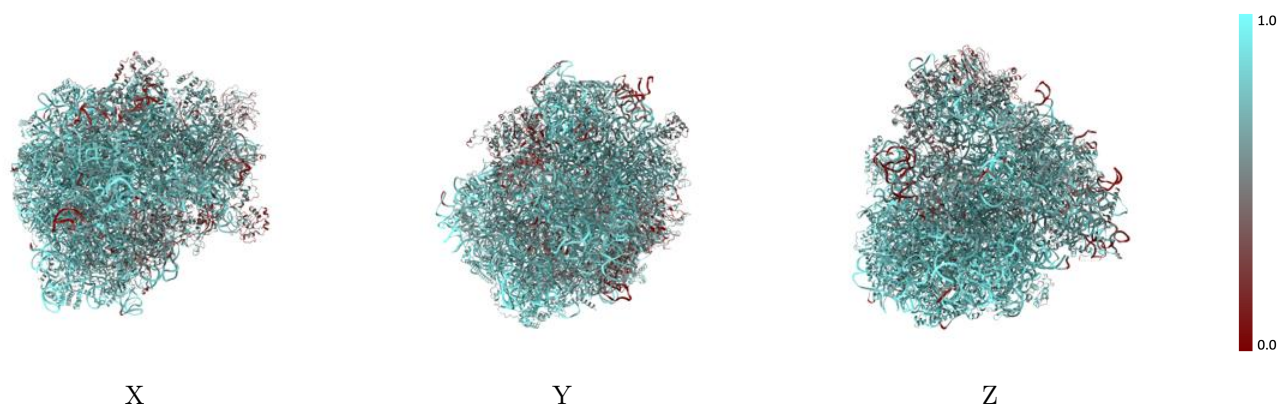
The images above show the 3D surface view of the map at the recommended contour level 0.295 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



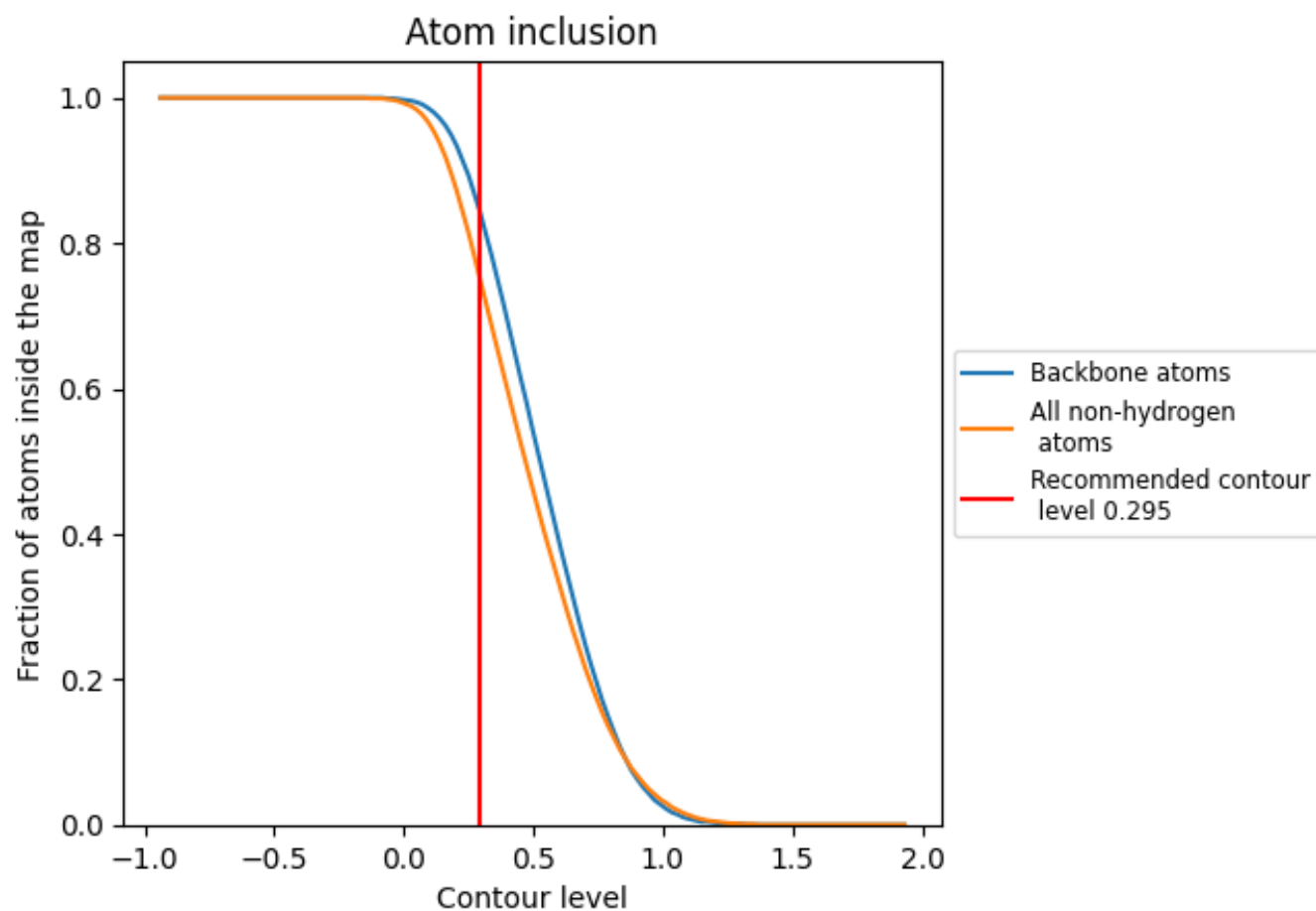
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.295).

9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 75% 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 (0.295) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7500	 0.4140
2	 0.7930	 0.3750
A	 0.8510	 0.4220
B	 0.8930	 0.4220
C	 0.8730	 0.4380
D	 0.7310	 0.5010
E	 0.7570	 0.4770
F	 0.7650	 0.4880
G	 0.7330	 0.4310
H	 0.7220	 0.4460
I	 0.7620	 0.4740
J	 0.7270	 0.4500
K	 0.7240	 0.4610
L	 0.6960	 0.4560
M	 0.6140	 0.3900
N	 0.7610	 0.4880
O	 0.7620	 0.4670
P	 0.7800	 0.5040
Q	 0.7510	 0.4770
R	 0.7540	 0.4960
S	 0.7570	 0.4980
SA	 0.5610	 0.4110
SB	 0.5240	 0.3680
SC	 0.5770	 0.3500
SD	 0.3090	 0.2760
SE	 0.5070	 0.3480
SF	 0.5710	 0.3770
SG	 0.5640	 0.3770
SH	 0.5420	 0.3580
SI	 0.5780	 0.3640
SJ	 0.5260	 0.3810
SK	 0.4300	 0.3110
SL	 0.5070	 0.3940
SM	 0.7090	 0.4250
SN	 0.3090	 0.1940



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
SO	 0.4070	 0.2720
SP	 0.6190	 0.3890
SQ	 0.5420	 0.3890
SR	 0.6570	 0.4430
SS	 0.6430	 0.4290
ST	 0.5980	 0.3940
SU	 0.5550	 0.3530
SV	 0.6820	 0.4410
SW	 0.6450	 0.4070
SX	 0.6630	 0.4660
SY	 0.6490	 0.4340
SZ	 0.6350	 0.4260
Sa	 0.6200	 0.4120
Sb	 0.6820	 0.4530
Sc	 0.6460	 0.4650
Sd	 0.6460	 0.4080
Se	 0.6570	 0.4400
Sf	 0.6060	 0.4050
Sg	 0.6140	 0.4140
T	 0.7050	 0.4540
U	 0.7600	 0.4940
V	 0.7340	 0.4830
W	 0.6960	 0.4330
X	 0.6970	 0.4970
Y	 0.6900	 0.4240
Z	 0.7400	 0.4910
a	 0.7670	 0.4920
b	 0.7560	 0.4740
c	 0.7920	 0.4980
d	 0.7190	 0.4710
e	 0.7030	 0.4510
f	 0.7190	 0.4780
g	 0.7480	 0.5070
h	 0.7710	 0.4970
i	 0.7200	 0.4870
j	 0.7300	 0.4680
k	 0.7100	 0.4490
l	 0.8300	 0.5260
m	 0.7250	 0.4490
n	 0.7280	 0.4890
o	 0.7500	 0.4930
p	 0.7500	 0.5070

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
q	 0.7290	 0.4970
r	 0.7090	 0.4810
s	 0.7250	 0.3220
t	 0.5790	 0.2830
x	 0.4480	 0.2750