



Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Sep 17, 2017 – 02:48 AM EDT

PDB ID : 5U9G
EMDB ID: : EMD-8522
Title : 3.2 Å cryo-EM ArfA-RF2 ribosome rescue complex (Structure I)
Authors : Demo, G.; Svidritskiy, E.; Madireddy, R.; Diaz-Avalos, R.; Grant, T.; Grigorieff, N.; Sousa, D.; Korostelev, A.A.
Deposited on : unknown
Resolution : 3.20 Å(reported)

This is a Full wwPDB/EMDatabank EM Map/Model Validation Report
for a publicly released PDB/EMDB entry.

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

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

MolProbity : 4.02b-467
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20029824

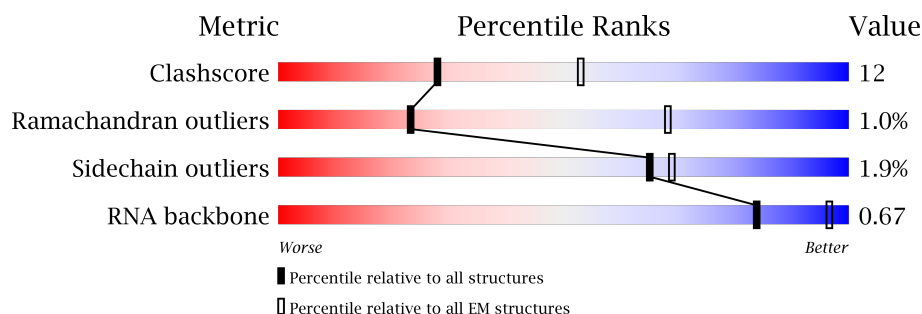
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.20 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.








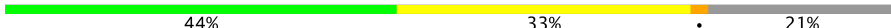



















Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	1539	63% 33% 5%
2	01	2903	61% 33% 6%
3	02	119	66% 32% .
4	Y	72	33% 10% . 56%
5	W	77	65% 31% .
5	X	77	60% 34% 6%
6	03	234	74% 19% . 6%
7	04	273	65% 34% .





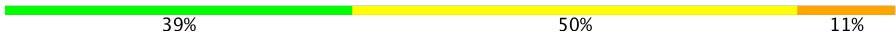






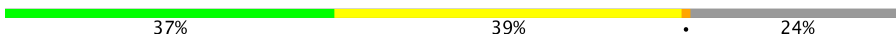













Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
8	05	209	
9	06	201	
10	07	179	
11	08	177	
12	09	149	
13	10	165	
14	11	142	
15	12	142	
16	13	123	
17	14	144	
18	15	136	
19	16	127	
20	17	117	
21	18	115	
22	19	118	
23	20	103	
24	21	110	
25	22	100	
26	23	104	
27	24	94	
28	25	85	
29	26	78	
30	27	63	
31	28	59	
32	29	70	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
33	30	57	
34	31	55	
35	32	46	
36	33	65	
37	34	38	
38	V	14	
39	Z	365	
40	B	241	
41	C	233	
42	D	206	
43	E	167	
44	F	131	
45	G	156	
46	H	130	
47	I	130	
48	J	103	
49	K	129	
50	L	124	
51	M	118	
52	N	101	
53	O	89	
54	P	82	
55	Q	84	
56	R	75	
57	S	92	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
58	T	87	<div><div></div><div>60%</div><div>37%</div><div>..</div></div>
59	U	71	<div><div></div><div>51%</div><div>35%</div><div>6%</div><div>8%</div></div>

2 Entry composition

There are 61 unique types of molecules in this entry. The entry contains 152649 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 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1539	Total	C	N	O	P	0	0
			33012	14725	6052	10697	1538		

- Molecule 2 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	01	2903	Total	C	N	O	P	0	0
			62318	27801	11467	20148	2902		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
01	1847	G	A	conflict	GB 42756

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	02	119	Total	C	N	O	P	0	0
			2546	1135	466	827	118		

- Molecule 4 is a protein called Alternative ribosome-rescue factor A.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	Y	32	Total	C	N	O	S	0	0
			249	155	53	40	1		

- Molecule 5 is a RNA chain called fMet-tRNA (P- and E-site).

Mol	Chain	Residues	Atoms					AltConf	Trace
5	X	77	Total	C	N	O	P	0	0
			1622	723	289	534	76		
5	W	77	Total	C	N	O	P	0	0
			1640	732	297	535	76		

- Molecule 6 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	03	220	Total	C	N	O	S	0	0
			1353	804	270	277	2		

- Molecule 7 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	04	271	Total	C	N	O	S	0	0
			2082	1288	423	364	7		

- Molecule 8 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	05	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 9 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	06	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 10 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	07	177	Total	C	N	O	S	0	0
			1410	899	249	256	6		

- Molecule 11 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	08	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 12 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	09	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 13 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	10	131	Total	C	N	O	S	0	0
			988	625	175	183	5		

- Molecule 14 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	11	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 15 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	12	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 16 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	13	122	Total	C	N	O	S	0	0
			938	587	180	165	6		

- Molecule 17 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	14	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 18 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	15	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 19 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	16	120	Total	C	N	O	S	0	0
			960	593	196	166	5		

- Molecule 20 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	17	116	Total	C	N	O	0	0
			892	552	178	162		

- Molecule 21 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	18	114	Total	C	N	O	S	0
			917	574	179	163	1	0

- Molecule 22 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
22	19	117	Total	C	N	O		0
			947	604	192	151		0

- Molecule 23 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	20	103	Total	C	N	O	S	0
			816	516	153	145	2	0

- Molecule 24 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms				AltConf	Trace
24	21	110	Total	C	N	O	S	0
			857	532	166	156	3	0

- Molecule 25 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	22	93	Total	C	N	O	S	0
			738	466	139	131	2	0

- Molecule 26 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
26	23	102	Total	C	N	O		0
			779	492	146	141		0

- Molecule 27 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	24	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 28 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	25	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

- Molecule 29 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	26	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 30 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	27	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 31 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	28	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 32 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	29	66	Total	C	N	O	S	0	0
			522	323	99	94	6		

- Molecule 33 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	30	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 34 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
34	31	50	Total	C	N	O	0	0
			409	263	75	71		

- Molecule 35 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	32	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 36 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	33	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 37 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	34	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 38 is a RNA chain called truncated mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	V	14	Total	C	N	O	P	0	0
			306	138	64	91	13		

- Molecule 39 is a protein called Peptide chain release factor RF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Z	361	Total	C	N	O	S	0	0
			2814	1728	499	578	9		

- Molecule 40 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	B	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

- Molecule 41 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	C	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

- Molecule 42 is a protein called 30S ribosomal protein S4.

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

- Molecule 43 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	E	157	Total	C	N	O	S	0	0
			1156	719	218	213	6		

- Molecule 44 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	F	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

- Molecule 45 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	G	151	Total	C	N	O	S	0	0
			1181	735	227	215	4		

- Molecule 46 is a protein called 30S ribosomal protein S8.

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

- Molecule 47 is a protein called 30S ribosomal protein S9.

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

- Molecule 48 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	J	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 49 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	K	116	Total	C	N	O	S	0	0
			869	535	173	158	3		

- Molecule 50 is a protein called 30S ribosomal protein S12.

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

- Molecule 51 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	M	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

- Molecule 52 is a protein called 30S ribosomal protein S14.

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

- Molecule 53 is a protein called 30S ribosomal protein S15.

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

- Molecule 54 is a protein called 30S ribosomal protein S16.

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

- Molecule 55 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	Q	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 56 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	R	65	Total	C	N	O	S	0	0
			535	339	100	95	1		

- Molecule 57 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	S	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 58 is a protein called 30S ribosomal protein S20.

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

- Molecule 59 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	U	65	Total	C	N	O	S	0	0
			544	335	117	91	1		

- Molecule 60 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
60	30	1	Total	Mg	0
			1	1	
60	14	1	Total	Mg	0
			1	1	
60	W	2	Total	Mg	0
			2	2	
60	H	1	Total	Mg	0
			1	1	
60	01	239	Total	Mg	0
			239	239	
60	25	1	Total	Mg	0
			1	1	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
60	A	97	Total 97	Mg 97	0
60	02	4	Total 4	Mg 4	0
60	X	2	Total 2	Mg 2	0

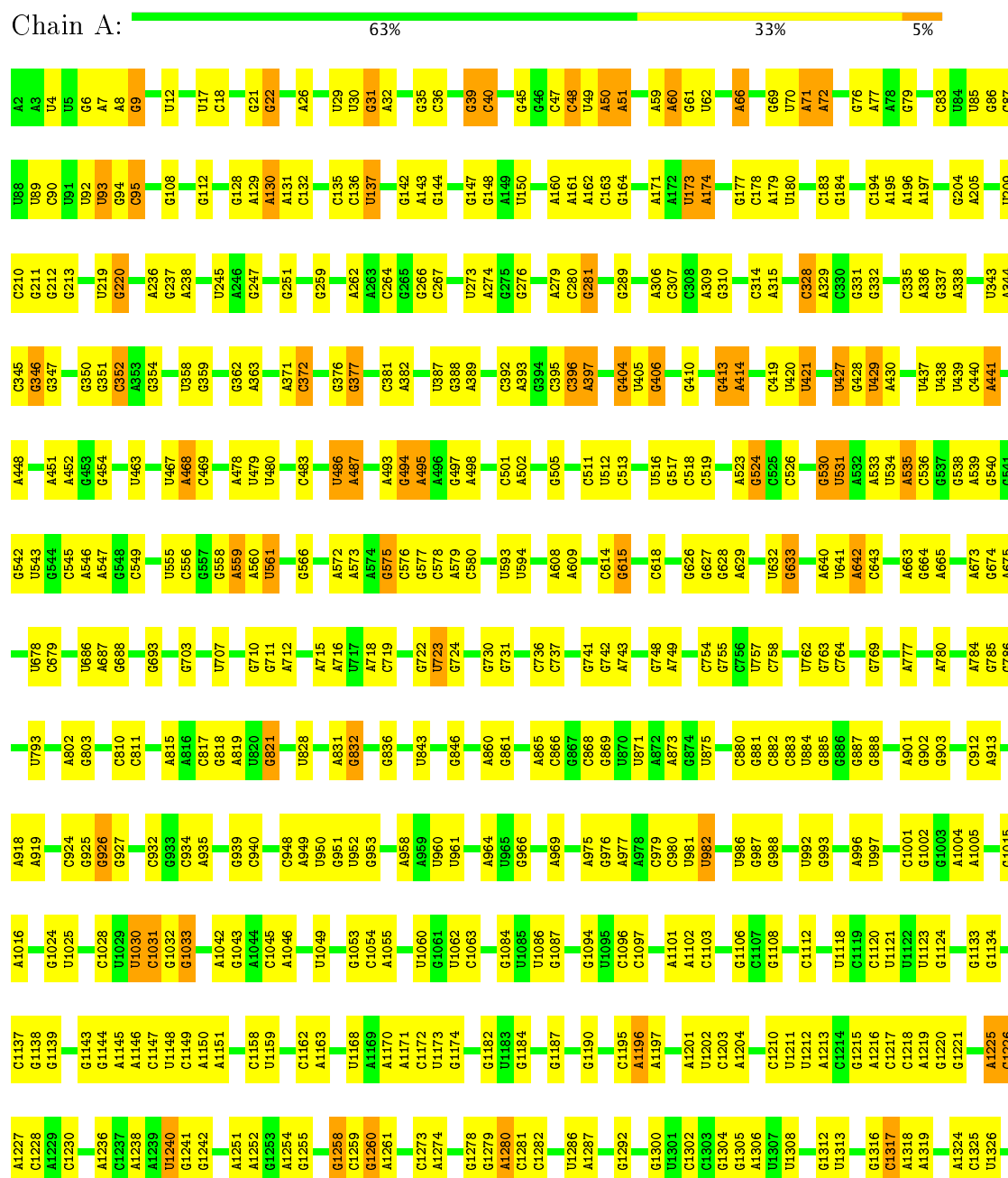
- Molecule 61 is ZINC ION (three-letter code: ZN) (formula: Zn).

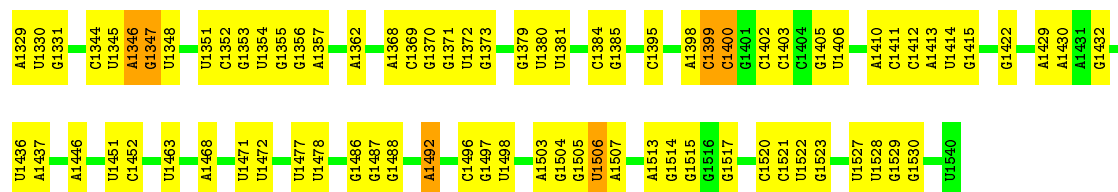
Mol	Chain	Residues	Atoms		AltConf
61	34	1	Total 1	Zn 1	0

3 Residue-property plots

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

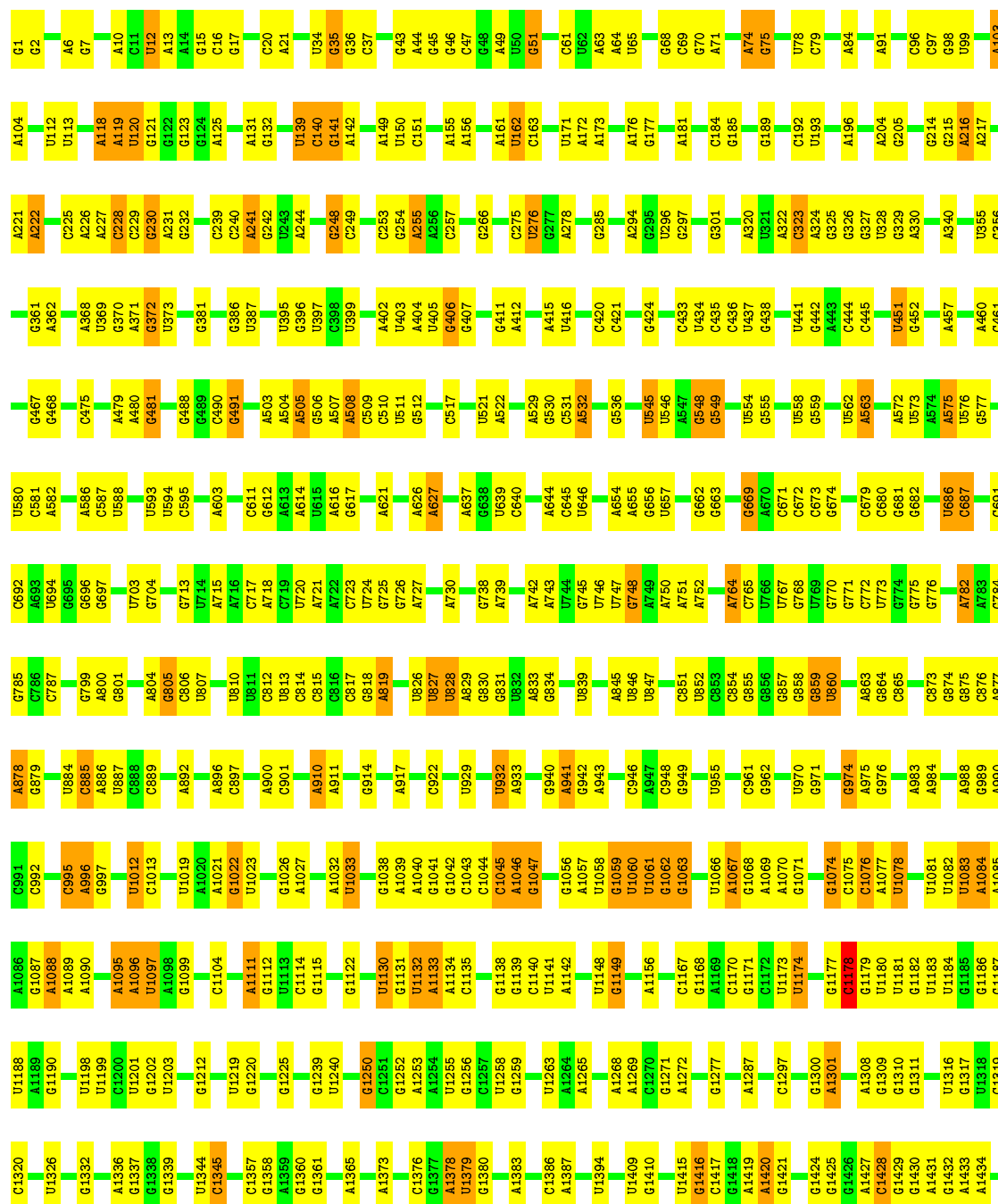
• Molecule 1: 16S ribosomal RNA

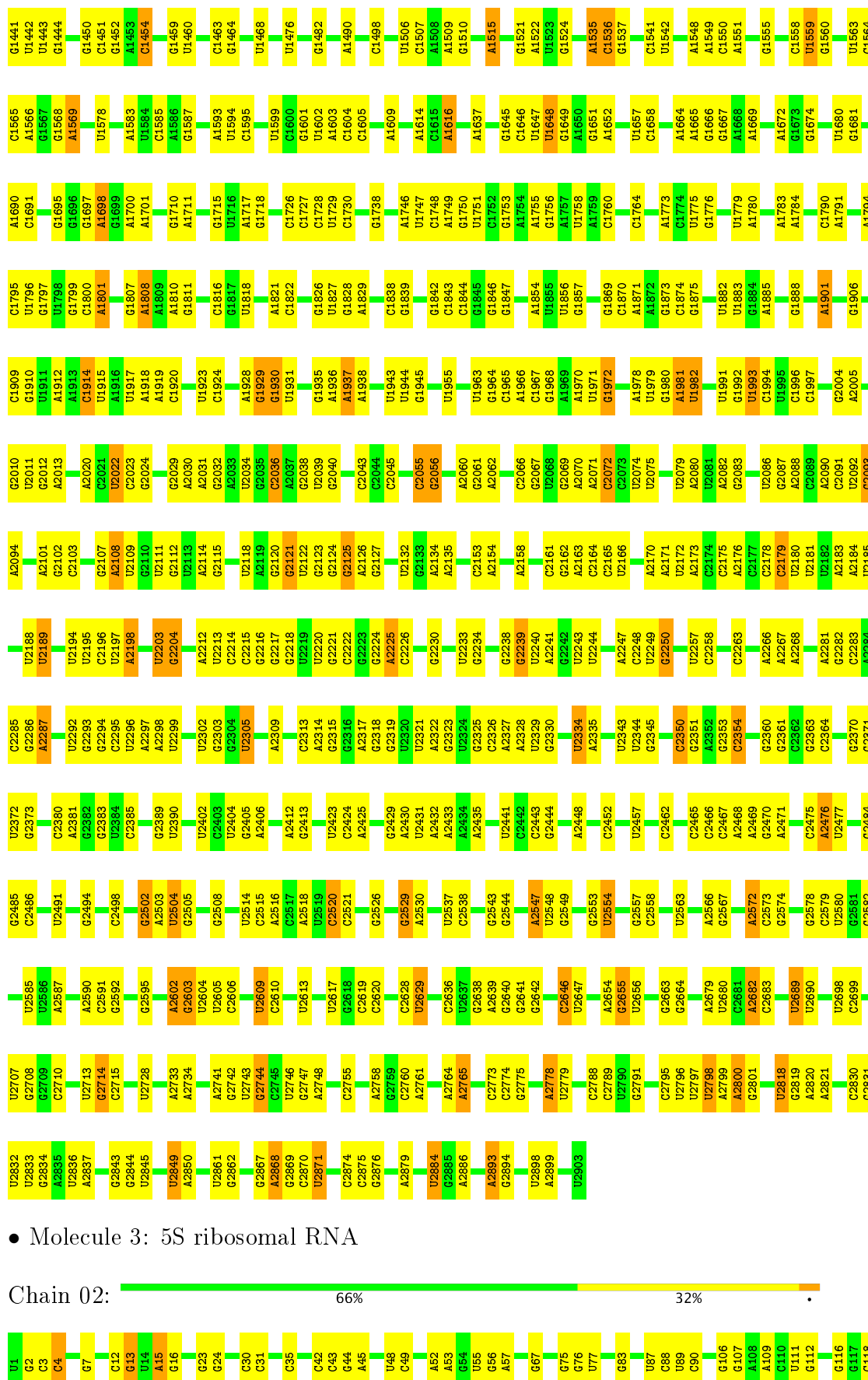




• Molecule 2: 23S ribosomal RNA


Chain 01: 61% 33% 6%





A119

- Molecule 4: Alternative ribosome-rescue factor A

Chain Y:  33% 10% 56%

MET SER ARG TRP G10 HIS THR LYS GLN ILE LYS ASP ASN ALA ILE E17 L20 L21 D22 P23 L24 F25 R26 Q27 R28 K34 K44 R45 GLY ASN TRP GLU ALA SER GLY LYS VAL ASN HIS PHE THR THR GLY LEU LEU SER GLY ALA CYS

- Molecule 5: fMet-tRNA (P- and E-site)

Chain X:  60% 34% 6%

G1 U8 G9 G10 A11 G17 U17A G18 A21 G22 C32 U33 C34 A35 U36 A37 C48 G49 U50 C51 C56 A59 U60 C61 C65 C66 C67 C68 C69 G70 G71 A72 A73 C74 C75 A76

- Molecule 5: fMet-tRNA (P- and E-site)

Chain W:  65% 31% 4%

G1 G6 G7 U8 G9 C16 C17 U17A U20 C23 U24 C28 G29 G30 A44 A45 G46 G47 C48 G49 U50 C51 C52 C53 A57 C61 C62 G63 C68 C69 A76

- Molecule 6: 50S ribosomal protein L1

Chain 03:  74% 19% 6%

MET ALA LYS LEU THR K6 R7 R8 R9 V10 V11 R12 R13 K14 Y21 D22 I23 I27 I28 A28 L29 L33 V39 E40 S41 V42 D43 V44 A45 V46 N47 L48 R53 K54 R60 L65 T69 G159 Q160 V161 R162 Y163 R164 N165 I171 H172 T173 T174 K177

F180 D181 K184 L185 N188 L192 L196 P201 A204 K205 G206 V207 V208 L209 K210 K211 S213 V222 A223 V224 D225 GLN ALA GLY LEU SER ALA SER VAL ASN

- Molecule 7: 50S ribosomal protein L2

Chain 04:  65% 34% 1%

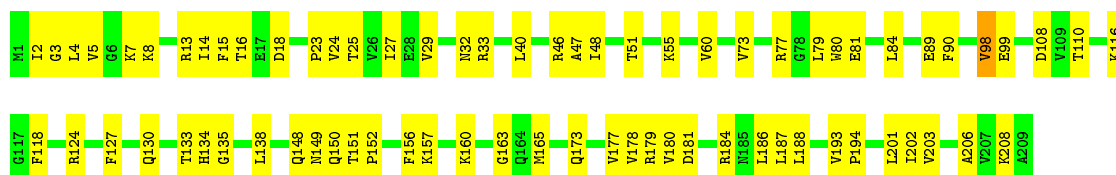
MET A1 V2 V3 K4 P7 V15 V16 K17 V18 V19 N20 L23 R24 K25 F29 L33 E34 K38 G41 R42 A43 N44 N45 I53 S54 G55 G56 H57 K58 F66 K70 I73 F74 V77 N89 I90 A91 Y95 K96 D97 R101 Y102 I103 L104

A105 P106 L109 Q116 A121 K124 M127 T128 L129 P130 M131 R132 V143 E144 K149 L153 N159 A154 R155 V161 L175 E179 M180 C187 V194 G195 N196 H199 P200 L201 R202 V203 L204 G205 K206 A207 V212 R213 R216 G221

T222 A223 R224 G232 G233 G236 R237 N238 R242 P243 V244 T245 P246 W247 G248 V249 Q250 T251 K252 G253 K254 R257 S258 N259 K260 R261 R268 R269 R270 S271 LYS

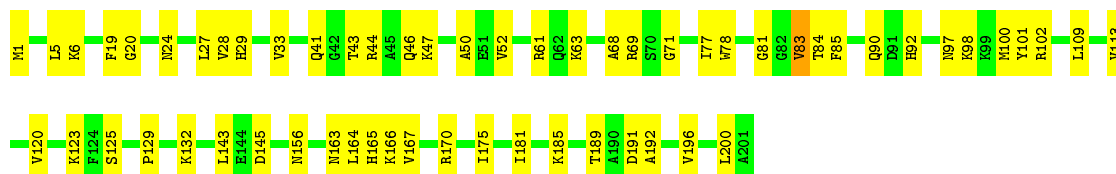
- Molecule 8: 50S ribosomal protein L3

Chain 05:  65% 34%



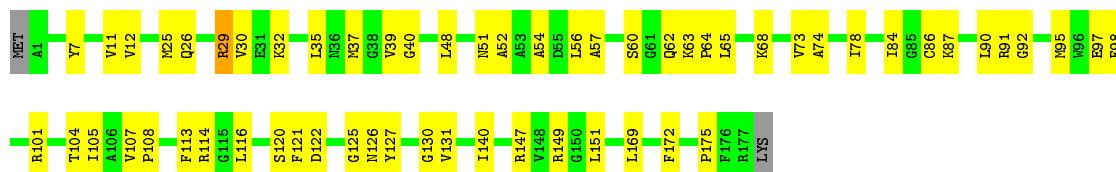
• Molecule 9: 50S ribosomal protein L4

Chain 06: 71% 29%



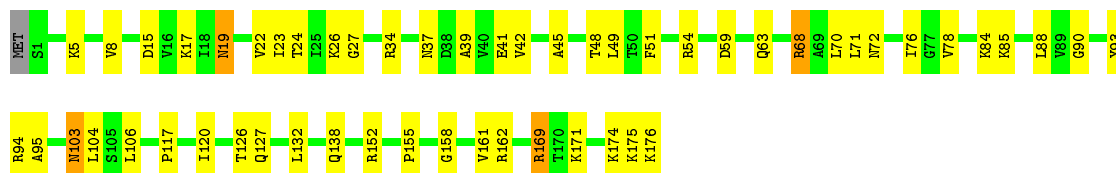
• Molecule 10: 50S ribosomal protein L5

Chain 07: 66% 32% ..



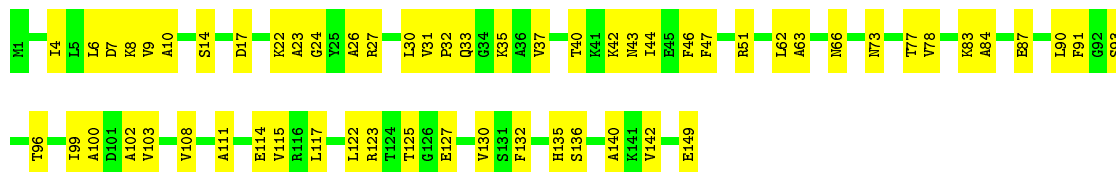
• Molecule 11: 50S ribosomal protein L6

Chain 08: 69% 28% ..



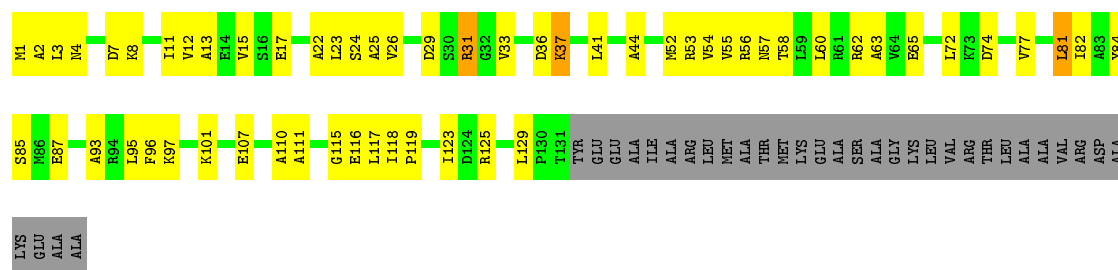
• Molecule 12: 50S ribosomal protein L9

Chain 09: 60% 40%



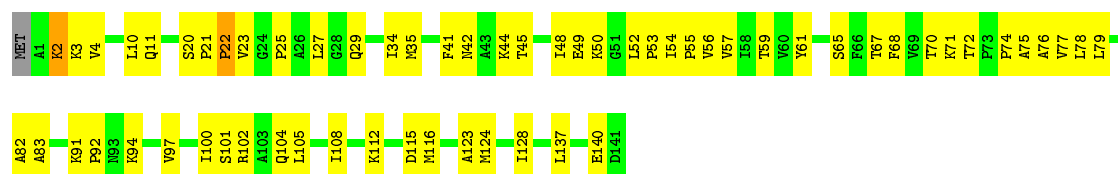
• Molecule 13: 50S ribosomal protein L10

Chain 10: 44% 33% 21%



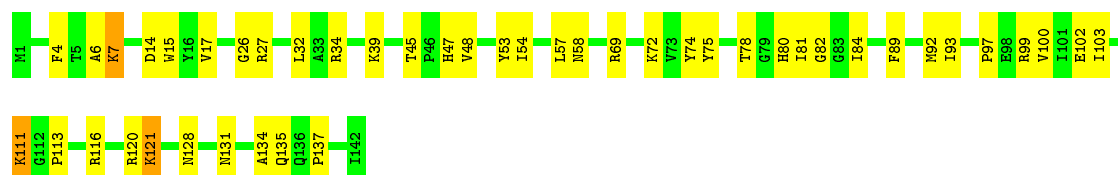
- Molecule 14: 50S ribosomal protein L11

Chain 11: 56% 42% ..



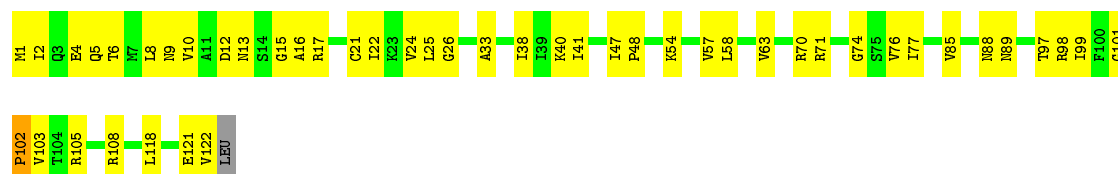
- Molecule 15: 50S ribosomal protein L13

Chain 12: 68% 30% .



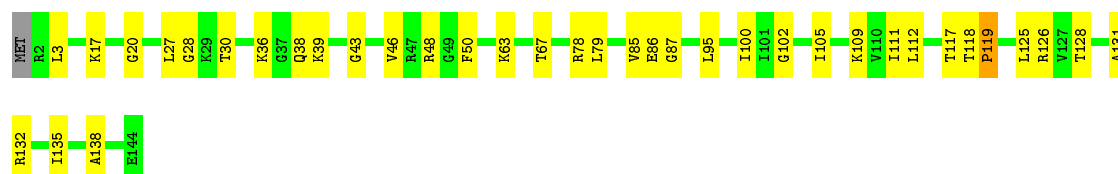
- Molecule 16: 50S ribosomal protein L14

Chain 13: 61% 37% ..

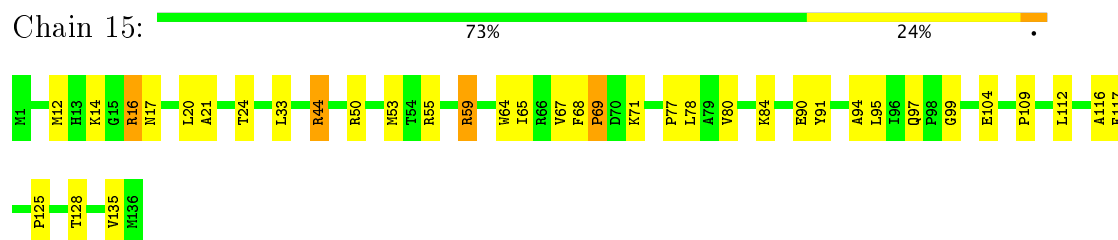


- Molecule 17: 50S ribosomal protein L15

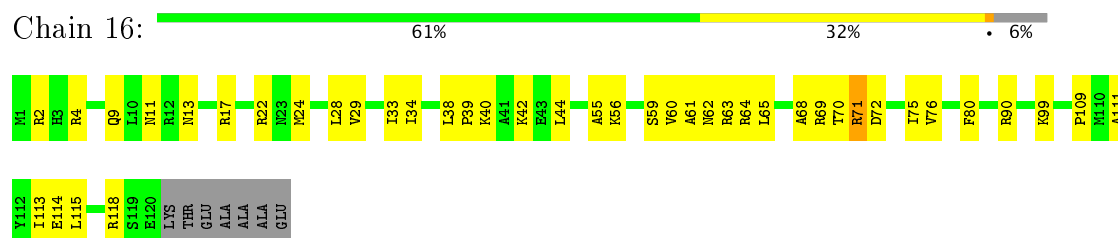
Chain 14: 74% 25% ..



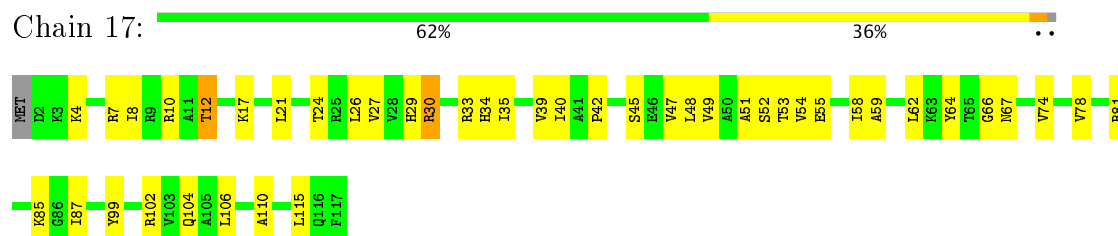
- Molecule 18: 50S ribosomal protein L16



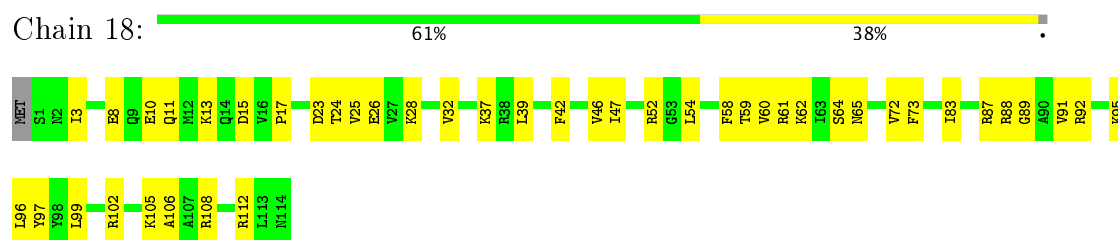
- Molecule 19: 50S ribosomal protein L17



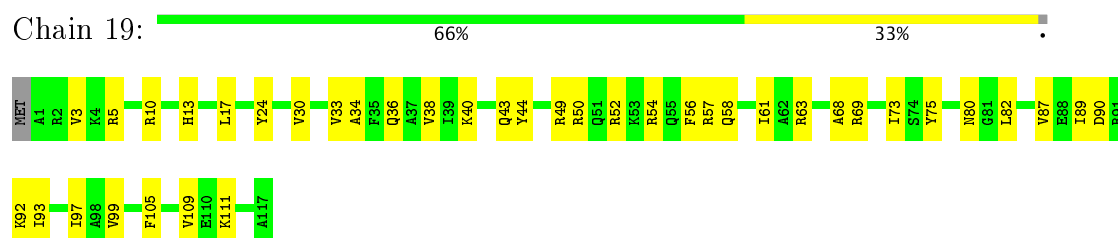
- Molecule 20: 50S ribosomal protein L18



- Molecule 21: 50S ribosomal protein L19

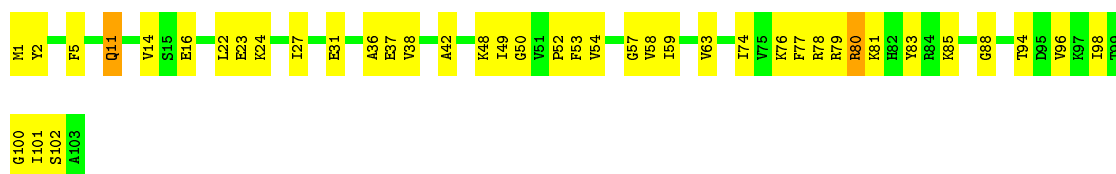


- Molecule 22: 50S ribosomal protein L20



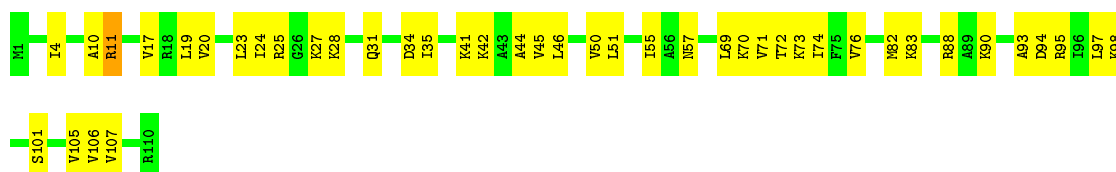
- Molecule 23: 50S ribosomal protein L21





- Molecule 24: 50S ribosomal protein L22

Chain 21: 61% 38%



- Molecule 25: 50S ribosomal protein L23

Chain 22: 62% 31% 7%



- Molecule 26: 50S ribosomal protein L24

Chain 23: 71% 25%



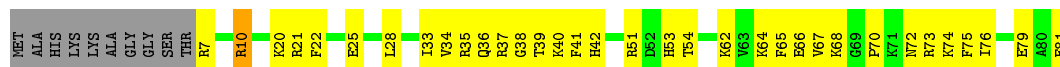
- Molecule 27: 50S ribosomal protein L25

Chain 24: 61% 39%



- Molecule 28: 50S ribosomal protein L27

Chain 25: 48% 39% 12%

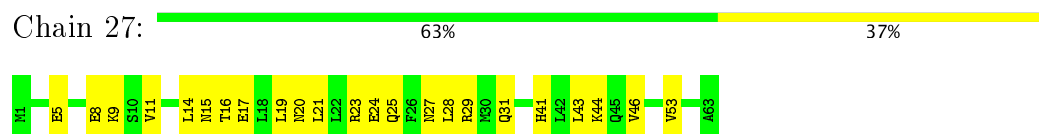


- Molecule 29: 50S ribosomal protein L28

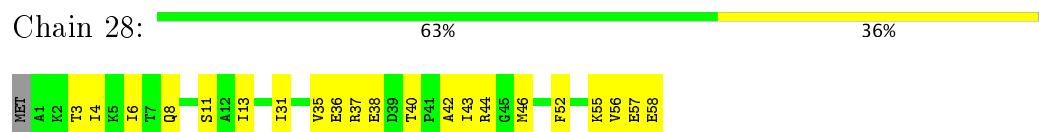
Chain 26: 71% 28%



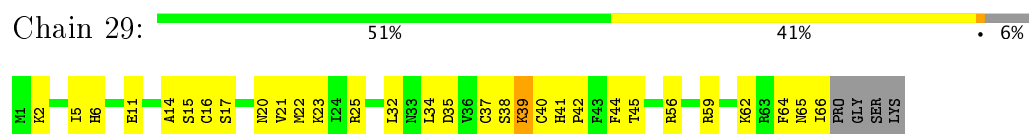
- Molecule 30: 50S ribosomal protein L29



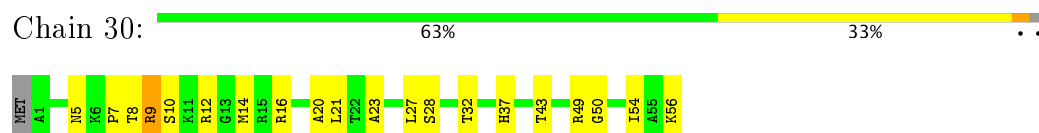
- Molecule 31: 50S ribosomal protein L30



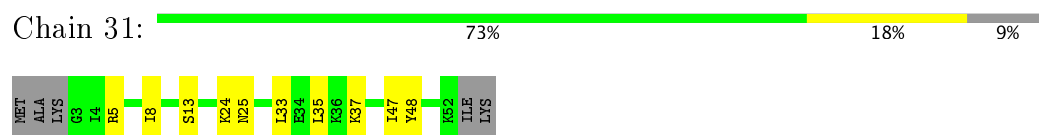
- Molecule 32: 50S ribosomal protein L31



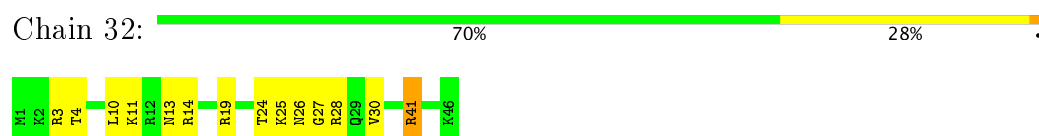
- Molecule 33: 50S ribosomal protein L32



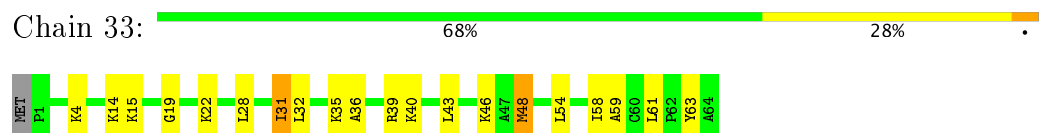
- Molecule 34: 50S ribosomal protein L33



- Molecule 35: 50S ribosomal protein L34



- Molecule 36: 50S ribosomal protein L35



- Molecule 37: 50S ribosomal protein L36





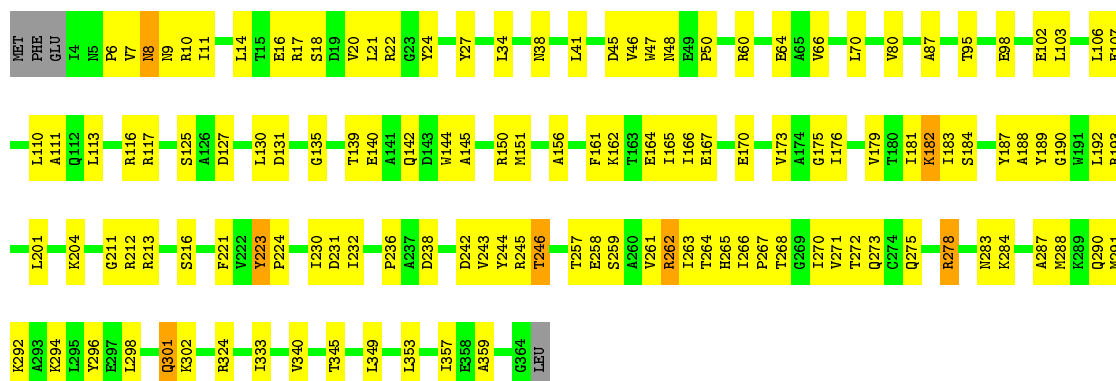
- Molecule 38: truncated mRNA

Chain V: 79% 21%



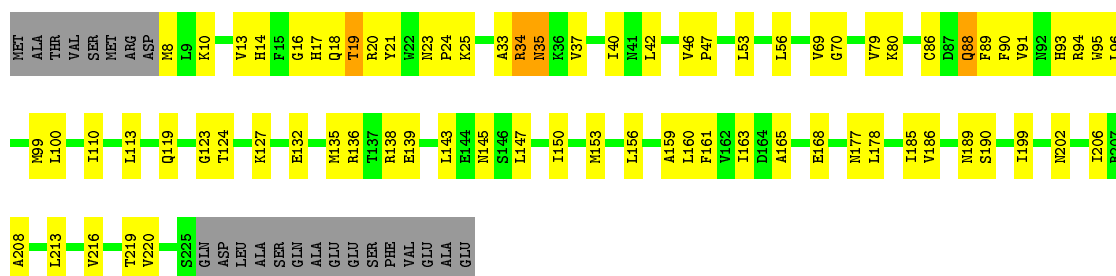
- Molecule 39: Peptide chain release factor RF2

Chain Z: 63% 34% ..



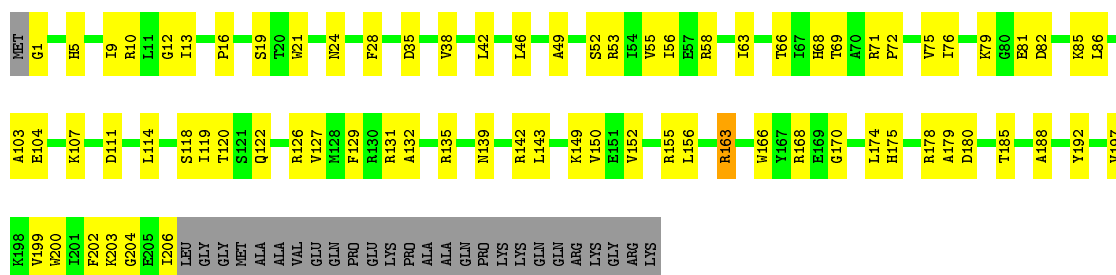
- Molecule 40: 30S ribosomal protein S2

Chain B: 59% 29% 10%

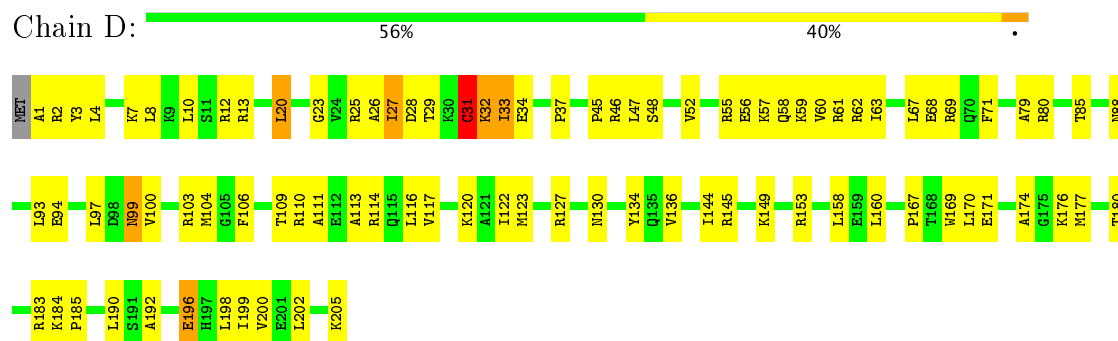


- Molecule 41: 30S ribosomal protein S3

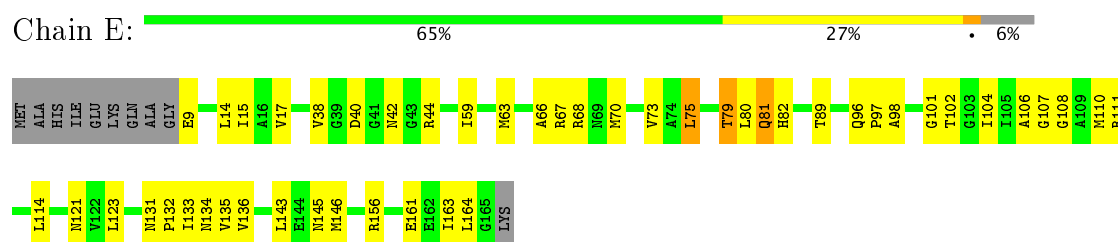
Chain C: 56% 32% 12%



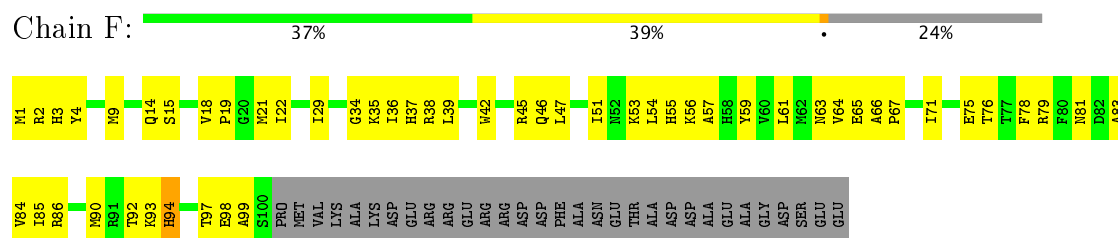
- Molecule 42: 30S ribosomal protein S4



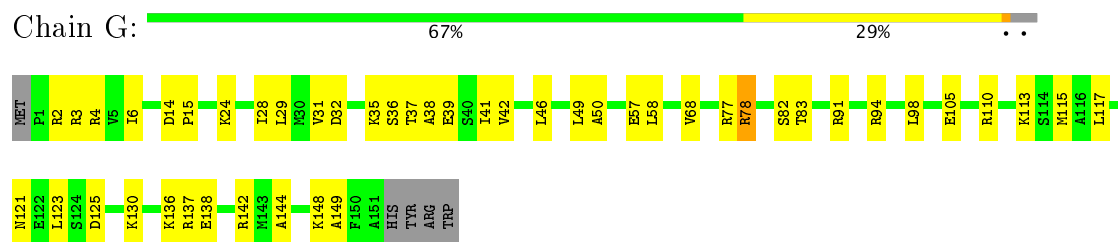
- Molecule 43: 30S ribosomal protein S5



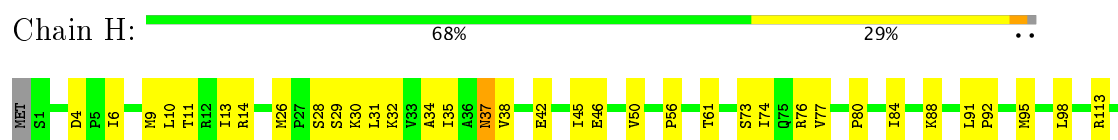
- Molecule 44: 30S ribosomal protein S6



- Molecule 45: 30S ribosomal protein S7



- Molecule 46: 30S ribosomal protein S8





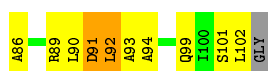
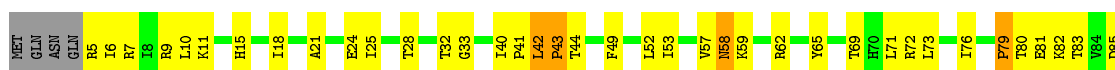
- Molecule 47: 30S ribosomal protein S9

Chain I: 59% 38%



- Molecule 48: 30S ribosomal protein S10

Chain J: 49% 41% 6% 5%



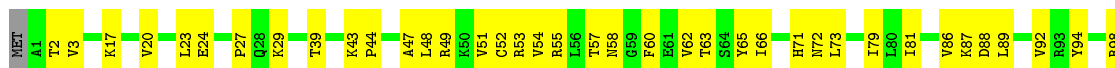
- Molecule 49: 30S ribosomal protein S11

Chain K: 55% 33% 10%



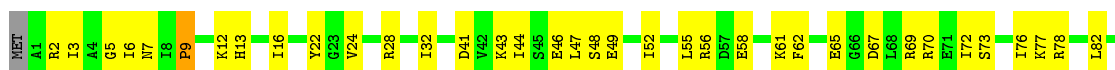
- Molecule 50: 30S ribosomal protein S12

Chain L: 60% 39%



- Molecule 51: 30S ribosomal protein S13

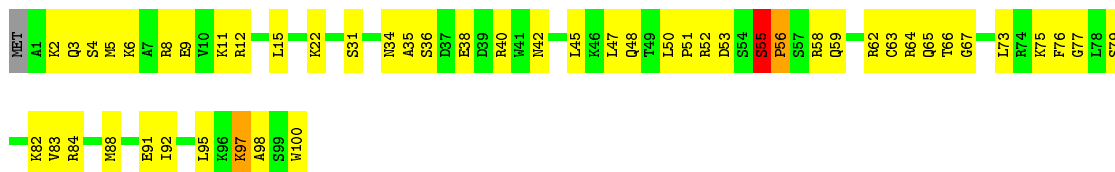
Chain M: 61% 35%





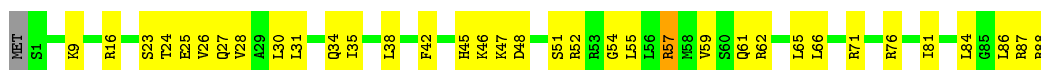
- Molecule 52: 30S ribosomal protein S14

Chain N: 50% 47%



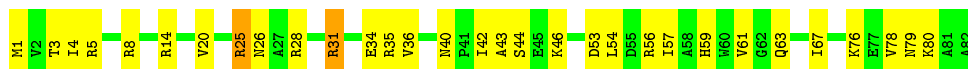
- Molecule 53: 30S ribosomal protein S15

Chain O: 60% 38%



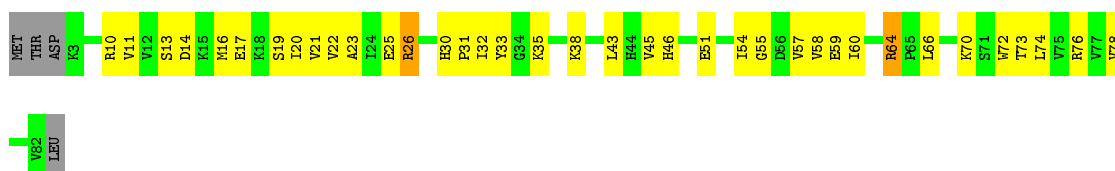
- Molecule 54: 30S ribosomal protein S16

Chain P: 62% 35%



- Molecule 55: 30S ribosomal protein S17

Chain Q: 51% 42%



- Molecule 56: 30S ribosomal protein S18

Chain R: 65% 19% 13%



- Molecule 57: 30S ribosomal protein S19

Chain S: 50% 36% 14%



ALA
ASP
LYS
LYS
ALA
LYS
LYS

- Molecule 58: 30S ribosomal protein S20



- Molecule 59: 30S ribosomal protein S21



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	139861	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.2	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	29000	Depositor
Image detector	DIRECT ELECTRON DE-20 (5k x 3k)	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 2$	RMSZ	$\# Z > 2$
1	A	0.25	0/36963	0.65	0/57662
10	07	0.32	0/1434	0.54	0/1926
11	08	0.29	0/1343	0.55	0/1816
12	09	0.31	0/1122	0.57	0/1515
13	10	0.35	0/1001	0.64	0/1350
14	11	0.31	0/1046	0.58	0/1410
15	12	0.30	0/1152	0.56	0/1551
16	13	0.30	0/947	0.60	0/1268
17	14	0.32	0/1054	0.59	0/1403
18	15	0.32	0/1093	0.59	0/1460
19	16	0.30	0/973	0.55	0/1301
2	01	0.24	0/69797	0.65	1/108890 (0.0%)
20	17	0.28	0/902	0.55	0/1209
21	18	0.31	0/929	0.54	0/1242
22	19	0.29	0/960	0.46	0/1278
23	20	0.33	0/829	0.63	1/1107 (0.1%)
24	21	0.28	0/864	0.56	0/1156
25	22	0.30	0/744	0.54	0/994
26	23	0.33	0/787	0.61	0/1051
27	24	0.30	0/766	0.55	0/1025
28	25	0.34	0/582	0.58	0/769
29	26	0.30	0/635	0.52	0/848
3	02	0.25	0/2847	0.65	0/4440
30	27	0.28	0/510	0.47	0/677
31	28	0.27	0/453	0.51	0/605
32	29	0.31	0/531	0.52	0/709
33	30	0.31	0/450	0.58	0/599
34	31	0.30	0/416	0.52	0/554
35	32	0.30	0/380	0.51	0/498
36	33	0.31	0/513	0.61	0/676
37	34	0.23	0/303	0.40	0/397
38	V	0.21	0/345	0.60	0/538

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
39	Z	0.31	0/2854	0.56	0/3842
4	Y	0.31	0/253	0.54	0/330
40	B	0.31	0/1735	0.57	0/2338
41	C	0.30	0/1651	0.54	0/2225
42	D	0.29	0/1665	0.59	0/2227
43	E	0.31	0/1169	0.59	0/1573
44	F	0.32	0/835	0.62	0/1128
45	G	0.29	0/1195	0.55	0/1602
46	H	0.30	0/989	0.57	0/1326
47	I	0.31	0/1034	0.59	0/1375
48	J	0.30	0/796	0.64	0/1077
49	K	0.31	0/885	0.60	0/1195
5	W	0.25	0/1832	0.64	0/2855
5	X	0.29	0/1811	0.67	1/2822 (0.0%)
50	L	0.31	0/969	0.67	1/1300 (0.1%)
51	M	0.28	0/892	0.57	0/1193
52	N	0.34	0/817	0.64	3/1088 (0.3%)
53	O	0.28	0/722	0.52	0/964
54	P	0.32	0/659	0.57	0/884
55	Q	0.30	0/657	0.58	0/881
56	R	0.30	0/544	0.57	0/731
57	S	0.32	0/652	0.56	0/877
58	T	0.28	0/671	0.44	0/888
59	U	0.37	0/550	0.67	0/728
6	03	0.28	0/1361	0.58	1/1796 (0.1%)
7	04	0.29	0/2121	0.59	0/2852
8	05	0.33	0/1586	0.57	0/2134
9	06	0.30	0/1571	0.58	1/2113 (0.0%)
All	All	0.27	0/165147	0.63	9/246268 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
39	Z	0	2
52	N	0	1
All	All	0	3

There are no bond length outliers.

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	06	81	GLY	N-CA-C	-7.61	94.08	113.10
52	N	55	SER	C-N-CD	-7.29	104.56	120.60
6	03	206	GLY	N-CA-C	-6.01	98.08	113.10
2	01	1178	C	N1-C1'-C2'	5.90	121.67	114.00
5	X	17(A)	U	N1-C1'-C2'	5.89	121.66	114.00
23	20	50	GLY	N-CA-C	-5.73	98.78	113.10
50	L	117	GLY	N-CA-C	5.68	127.30	113.10
52	N	56	PRO	N-CA-C	-5.53	97.71	112.10
52	N	55	SER	C-N-CA	5.34	144.45	122.00

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	N	55	SER	Mainchain
39	Z	236	PRO	Peptide
39	Z	246	THR	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	33012	0	16618	430	0
2	01	62318	0	31345	807	0
3	02	2546	0	1292	41	0
4	Y	249	0	255	13	0
5	W	1640	0	837	15	0
5	X	1622	0	827	17	0
6	03	1353	0	1159	38	0
7	04	2082	0	2157	79	0
8	05	1565	0	1616	69	0
9	06	1552	0	1619	47	0
10	07	1410	0	1447	56	0
11	08	1323	0	1374	54	0
12	09	1111	0	1148	51	0
13	10	988	0	1025	57	0
14	11	1032	0	1088	49	0
15	12	1129	0	1162	44	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	13	938	0	1012	38	0
17	14	1045	0	1117	30	0
18	15	1074	0	1157	31	0
19	16	960	0	1000	54	0
20	17	892	0	923	35	0
21	18	917	0	965	45	0
22	19	947	0	1022	35	0
23	20	816	0	839	36	0
24	21	857	0	922	38	0
25	22	738	0	807	30	0
26	23	779	0	834	17	0
27	24	753	0	780	34	0
28	25	575	0	592	30	0
29	26	625	0	655	22	0
30	27	509	0	543	19	0
31	28	449	0	491	18	0
32	29	522	0	524	28	0
33	30	444	0	461	26	0
34	31	409	0	440	8	0
35	32	377	0	418	22	0
36	33	504	0	574	16	0
37	34	302	0	340	30	0
38	V	306	0	154	1	0
39	Z	2814	0	2682	105	0
40	B	1704	0	1732	66	0
41	C	1624	0	1699	64	0
42	D	1643	0	1710	78	0
43	E	1156	0	1199	42	0
44	F	817	0	808	51	0
45	G	1181	0	1240	43	0
46	H	979	0	1034	28	0
47	I	1022	0	1070	59	0
48	J	786	0	828	52	0
49	K	869	0	878	42	0
50	L	955	0	1019	36	0
51	M	883	0	944	48	0
52	N	805	0	847	55	0
53	O	714	0	737	31	0
54	P	649	0	666	28	0
55	Q	648	0	691	36	0
56	R	535	0	552	18	0
57	S	637	0	665	30	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	T	665	0	714	29	0
59	U	544	0	579	32	0
60	01	239	0	0	0	0
60	02	4	0	0	0	0
60	14	1	0	0	0	0
60	25	1	0	0	0	0
60	30	1	0	0	0	0
60	A	97	0	0	0	0
60	H	1	0	0	0	0
60	W	2	0	0	0	0
60	X	2	0	0	0	0
61	34	1	0	0	0	0
All	All	152649	0	103833	3103	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 (3103) 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)
2:01:45:G:H5''	2:01:46:G:H5'	1.26	1.16
1:A:376:G:H2'	1:A:377:G:H5''	1.33	1.08
2:01:1173:U:H2'	2:01:1174:U:H4'	1.36	1.04
18:15:50:ARG:HD3	18:15:65:ILE:HD11	1.41	1.00
1:A:9:G:H5'	43:E:107:GLY:HA3	1.44	1.00
48:J:42:LEU:HD11	48:J:73:LEU:HG	1.43	0.99
2:01:2870:C:H2'	2:01:2871:U:H5''	1.44	0.99
2:01:548:G:H2'	2:01:549:G:H4'	1.46	0.98
2:01:1058:U:H2'	2:01:1059:G:H4'	1.44	0.97
16:13:13:ASN:HD21	16:13:98:ARG:HB2	1.29	0.97
39:Z:21:LEU:HD21	39:Z:110:LEU:HG	1.48	0.96
53:O:84:LEU:HD23	53:O:86:LEU:HD23	1.47	0.95
1:A:516:U:H5	1:A:533:A:H62	1.12	0.95
1:A:440:C:H2'	1:A:441:A:H5''	1.46	0.94
1:A:136:C:H2'	1:A:137:U:H5''	1.48	0.94
33:30:8:THR:HG22	33:30:9:ARG:HD2	1.50	0.94
2:01:1697:G:H3'	2:01:1698:A:H5''	1.48	0.94
37:34:11:CYS:HB2	37:34:14:CYS:SG	2.08	0.93
40:B:124:THR:HG22	40:B:127:LYS:HD2	1.50	0.93
1:A:718:A:H5'	49:K:118:ASN:HB2	1.50	0.93
28:25:36:GLN:HE22	28:25:41:PHE:H	1.16	0.92

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C:69:THR:HG21	41:C:75:VAL:HG21	1.52	0.92
52:N:52:ARG:HG3	52:N:58:ARG:HH12	1.33	0.91
39:Z:130:LEU:HD21	39:Z:192:LEU:HD21	1.49	0.91
1:A:179:A:H61	1:A:196:A:H62	1.19	0.90
54:P:5:ARG:HH22	54:P:26:ASN:HB2	1.34	0.90
16:13:13:ASN:ND2	16:13:98:ARG:HB2	1.85	0.89
2:01:275:C:H2'	2:01:276:U:H4'	1.54	0.89
39:Z:6:PRO:HA	39:Z:9:ASN:HD22	1.38	0.88
1:A:376:G:C2'	1:A:377:G:H5''	2.04	0.88
27:24:17:SER:HB3	27:24:21:ARG:HH12	1.39	0.87
46:H:10:LEU:HD22	46:H:74:ILE:HD11	1.54	0.87
15:12:58:ASN:HD21	15:12:128:ASN:ND2	1.73	0.86
7:04:77:VAL:HG21	7:04:109:LEU:HD11	1.54	0.86
2:01:1652:A:H62	19:16:11:ASN:HD21	1.22	0.86
52:N:73:LEU:HD12	52:N:83:VAL:HG21	1.56	0.86
39:Z:24:TYR:HB3	39:Z:117:ARG:HE	1.41	0.86
2:01:2188:U:H3'	2:01:2189:U:H5''	1.58	0.86
1:A:92:U:H2'	1:A:93:U:H4'	1.58	0.86
2:01:74:A:H4'	2:01:75:G:H5''	1.57	0.85
1:A:1259:C:H3'	1:A:1260:G:H5''	1.56	0.85
1:A:39:G:H2'	1:A:40:C:H5''	1.56	0.85
47:I:114:LYS:HE3	47:I:117:LEU:HD12	1.57	0.85
1:A:981:U:H3'	1:A:982:U:H5''	1.57	0.84
37:34:19:ARG:HD2	37:34:24:ARG:HD2	1.60	0.84
44:F:36:ILE:HD11	44:F:39:LEU:HB2	1.59	0.84
1:A:1108:G:H5'	41:C:175:HIS:CD2	2.12	0.83
13:10:54:VAL:HG21	13:10:56:ARG:HH21	1.40	0.83
2:01:1082:U:H3'	2:01:1083:U:H5''	1.59	0.83
10:07:35:LEU:HD21	10:07:151:LEU:HD22	1.60	0.83
1:A:420:U:H4'	1:A:421:U:H5	1.43	0.83
57:S:4:LEU:H	57:S:4:LEU:HD23	1.44	0.82
2:01:2508:G:H1	2:01:2580:U:H5	1.25	0.82
11:08:15:ASP:HB2	11:08:26:LYS:HB2	1.60	0.82
2:01:1807:G:H2'	2:01:1808:A:H5'	1.61	0.82
45:G:78:ARG:HD2	45:G:78:ARG:H	1.44	0.82
18:15:77:PRO:HG2	18:15:80:VAL:HG21	1.60	0.82
21:18:88:ARG:HE	21:18:112:ARG:HH21	1.22	0.82
24:21:82:MET:HB2	24:21:98:LYS:HB2	1.62	0.82
57:S:40:PHE:H	57:S:43:MET:HE3	1.45	0.82
1:A:614:C:H2'	1:A:615:G:H5''	1.62	0.82
11:08:117:PRO:HD2	11:08:120:ILE:HG13	1.62	0.81

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:376:G:H5''	54:P:5:ARG:HB2	1.62	0.81
1:A:1306:A:N6	1:A:1331:G:H1'	1.95	0.81
22:19:111:LYS:HD2	23:20:48:LYS:HE2	1.61	0.81
59:U:16:ARG:HB2	59:U:19:LYS:HD2	1.60	0.81
2:01:884:U:H3'	2:01:885:C:H5''	1.61	0.81
21:18:88:ARG:HE	21:18:112:ARG:NH2	1.78	0.80
2:01:1521:G:H3'	2:01:1522:A:H5''	1.64	0.80
52:N:52:ARG:HG3	52:N:58:ARG:NH1	1.95	0.80
56:R:47:ARG:HD2	56:R:47:ARG:H	1.46	0.80
2:01:955:U:H5	2:01:962:G:H1	1.29	0.80
2:01:1061:U:H3'	2:01:1062:G:H5'	1.62	0.80
43:E:96:GLN:HB3	43:E:123:LEU:HB2	1.62	0.79
2:01:2107:G:H2'	2:01:2108:A:H4'	1.65	0.79
2:01:2870:C:C2'	2:01:2871:U:H5''	2.11	0.79
1:A:1187:G:H4'	47:I:112:ARG:HH21	1.46	0.79
1:A:1228:C:H5''	51:M:114:PRO:HG3	1.64	0.79
3:02:45:A:H5'	10:07:91:ARG:HH11	1.47	0.79
40:B:19:THR:HG23	40:B:21:TYR:H	1.48	0.79
41:C:9:ILE:HA	52:N:97:LYS:HD3	1.65	0.79
19:16:63:ARG:HH11	19:16:76:VAL:HG12	1.48	0.78
13:10:1:MET:HG2	13:10:2:ALA:H	1.48	0.78
44:F:66:ALA:HB3	44:F:71:ILE:HD11	1.66	0.78
11:08:132:LEU:HD23	11:08:132:LEU:H	1.48	0.78
2:01:1558:C:H4'	2:01:1559:U:H5''	1.65	0.78
58:T:80:ALA:HA	58:T:83:ASN:HD22	1.49	0.78
2:01:1651:G:H4'	19:16:39:PRO:HG2	1.66	0.78
19:16:38:LEU:HD21	19:16:99:LYS:HG2	1.66	0.77
1:A:136:C:C2'	1:A:137:U:H5''	2.14	0.77
2:01:2553:G:H3'	2:01:2554:U:H5''	1.64	0.77
40:B:165:ALA:HB3	40:B:190:SER:HB3	1.67	0.77
28:25:39:THR:HG23	28:25:53:HIS:HD2	1.49	0.77
25:22:76:ARG:HB3	25:22:76:ARG:NH1	1.99	0.77
13:10:3:LEU:HD23	13:10:3:LEU:H	1.49	0.77
45:G:49:LEU:HB2	45:G:123:LEU:HD23	1.65	0.76
2:01:2502:G:H5'	2:01:2503:A:H5''	1.67	0.76
8:05:16:THR:HG22	8:05:18:ASP:H	1.51	0.76
14:11:21:PRO:HB2	14:11:22:PRO:HD3	1.66	0.76
51:M:28:ARG:HH21	51:M:62:PHE:HB2	1.50	0.76
42:D:158:LEU:HD21	42:D:174:ALA:HB1	1.65	0.76
13:10:23:LEU:HD21	13:10:96:PHE:HB2	1.67	0.76
2:01:1664:A:H61	2:01:1996:C:H42	1.32	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:X:73:A:H3'	5:X:74:C:C5'	2.15	0.76
2:01:1141:U:H4'	2:01:1142:A:O4'	1.86	0.76
1:A:769:G:H4'	1:A:1513:A:H4'	1.68	0.76
1:A:440:C:C2'	1:A:441:A:H5''	2.15	0.75
40:B:8:MET:HG2	40:B:10:LYS:H	1.50	0.75
1:A:723:U:H5'	59:U:48:LYS:HG3	1.68	0.75
47:I:83:THR:HG23	47:I:97:LEU:HD21	1.69	0.75
2:01:2297:A:N6	2:01:2319:G:H1'	2.02	0.75
13:10:23:LEU:HD12	13:10:119:PRO:HG3	1.67	0.75
2:01:704:G:H2'	2:01:726:G:H22	1.49	0.75
44:F:47:LEU:HD12	44:F:55:HIS:HA	1.67	0.75
8:05:108:ASP:OD2	8:05:206:ALA:HA	1.86	0.74
14:11:55:PRO:HG2	14:11:71:LYS:HB2	1.69	0.74
17:14:3:LEU:H	17:14:3:LEU:HD23	1.51	0.74
2:01:517:C:H5''	33:30:12:ARG:HH12	1.52	0.74
10:07:48:LEU:HA	10:07:51:ASN:HD22	1.53	0.74
21:18:47:ILE:HB	21:18:59:THR:HG23	1.67	0.74
2:01:215:G:H4'	2:01:216:A:H4'	1.68	0.74
47:I:24:ASN:HD22	47:I:26:LYS:CE	2.00	0.74
53:O:48:ASP:HB3	53:O:51:SER:HB2	1.70	0.74
2:01:2109:U:H3	2:01:2180:U:H3	1.34	0.74
49:K:126:ARG:HE	49:K:126:ARG:HA	1.52	0.74
8:05:181:ASP:HB2	8:05:186:LEU:HB2	1.69	0.74
25:22:40:LYS:HZ3	25:22:60:THR:HG22	1.52	0.74
9:06:5:LEU:HD23	9:06:6:LYS:N	2.03	0.74
27:24:56:PHE:CE1	27:24:61:LEU:HD21	2.23	0.74
46:H:77:VAL:HG12	46:H:84:ILE:HD12	1.70	0.74
41:C:16:PRO:HG2	41:C:53:ARG:HH22	1.51	0.73
2:01:2092:U:H4'	2:01:2093:G:H5''	1.70	0.73
25:22:76:ARG:HB3	25:22:76:ARG:HH11	1.53	0.73
45:G:113:LYS:HB2	45:G:117:LEU:HD23	1.70	0.73
45:G:49:LEU:HD22	45:G:123:LEU:HD22	1.70	0.73
2:01:775:G:H4'	2:01:776:G:H5'	1.69	0.73
1:A:328:C:H4'	1:A:329:A:H5'	1.69	0.73
42:D:10:LEU:HD13	42:D:62:ARG:HD2	1.71	0.73
42:D:25:ARG:HH21	42:D:29:THR:HB	1.53	0.73
40:B:33:ALA:HB3	40:B:37:VAL:HG23	1.70	0.73
1:A:1219:A:H5''	52:N:52:ARG:NH1	2.04	0.73
5:X:68:C:H2'	5:X:69:C:O4'	1.89	0.73
13:10:77:VAL:HG12	13:10:82:ILE:HG13	1.70	0.72
1:A:530:G:H3'	1:A:531:U:C5'	2.19	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1187:G:H4'	47:I:112:ARG:NH2	2.04	0.72
44:F:51:ILE:HD12	44:F:86:ARG:HE	1.54	0.72
40:B:86:CYS:HB2	40:B:88:GLN:HE22	1.53	0.72
30:27:17:GLU:HA	30:27:20:ASN:HD22	1.53	0.72
7:04:124:LYS:HB3	7:04:127:ASN:ND2	2.04	0.72
55:Q:46:HIS:HB2	55:Q:70:LYS:HZ3	1.54	0.72
1:A:1432:G:H1'	1:A:1468:A:H62	1.55	0.72
25:22:61:LEU:HD11	25:22:82:LYS:HE2	1.71	0.72
7:04:16:VAL:HB	7:04:203:VAL:HG22	1.71	0.71
46:H:11:THR:HA	46:H:14:ARG:HH12	1.54	0.71
54:P:14:ARG:HE	54:P:42:ILE:HD12	1.55	0.71
39:Z:87:ALA:HB2	39:Z:95:THR:HG22	1.71	0.71
2:01:1019:U:H3	2:01:1142:A:H62	1.38	0.71
47:I:29:ILE:HD11	47:I:66:VAL:HG12	1.71	0.71
2:01:2353:G:H2'	2:01:2354:C:H5''	1.72	0.71
2:01:929:U:H4'	31:28:37:ARG:HH21	1.53	0.71
2:01:1993:U:H4'	8:05:133:THR:HG21	1.71	0.71
2:01:992:C:H4'	23:20:74:ILE:HD13	1.72	0.71
59:U:15:LEU:HA	59:U:17:ARG:HH11	1.56	0.71
43:E:163:ILE:HD12	43:E:164:LEU:N	2.06	0.71
39:Z:41:LEU:HD23	39:Z:41:LEU:O	1.91	0.71
28:25:20:LYS:HA	28:25:20:LYS:HE2	1.73	0.70
1:A:1060:U:H5	41:C:1:GLY:HA3	1.56	0.70
1:A:1432:G:H1'	1:A:1468:A:N6	2.06	0.70
41:C:35:ASP:HB2	41:C:56:ILE:HD13	1.72	0.70
52:N:63:CYS:HB3	52:N:67:GLY:H	1.56	0.70
2:01:240:C:H3'	2:01:241:A:H5''	1.74	0.70
2:01:1901:A:H4'	7:04:252:LYS:HD3	1.74	0.70
45:G:39:GLU:OE1	47:I:42:THR:HB	1.90	0.70
49:K:22:ILE:HG21	49:K:95:THR:HG21	1.74	0.70
3:02:43:C:H4'	10:07:62:GLN:HE22	1.57	0.70
28:25:36:GLN:NE2	28:25:41:PHE:H	1.90	0.70
10:07:74:ALA:HB2	5:W:57:A:H5'	1.73	0.70
53:O:61:GLN:O	53:O:65:LEU:HD13	1.92	0.70
2:01:2305:U:H5''	10:07:130:GLY:HA3	1.74	0.69
51:M:55:LEU:HD12	51:M:56:ARG:N	2.06	0.69
2:01:885:C:H2'	2:01:886:A:C8	2.28	0.69
1:A:1028:C:H42	1:A:1033:G:H1	1.41	0.69
42:D:13:ARG:HD2	42:D:37:PRO:HB2	1.74	0.69
51:M:48:SER:O	51:M:52:ILE:HG13	1.93	0.69
47:I:104:THR:HG22	47:I:106:ASP:H	1.57	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:11:61:TYR:HD2	14:11:65:SER:HB3	1.57	0.69
1:A:310:G:H5''	54:P:31:ARG:HB2	1.73	0.69
42:D:57:LYS:HD3	42:D:202:LEU:HD23	1.74	0.69
53:O:31:LEU:O	53:O:35:ILE:HG12	1.93	0.69
1:A:1330:U:H4'	51:M:22:TYR:CE1	2.28	0.69
55:Q:19:SER:C	55:Q:20:ILE:HD12	2.13	0.69
48:J:59:LYS:HE2	48:J:62:ARG:HH21	1.58	0.69
2:01:663:G:H5''	17:14:17:LYS:HG2	1.75	0.69
12:09:78:VAL:HG11	12:09:102:ALA:HB1	1.73	0.69
1:A:614:C:C2'	1:A:615:G:H5''	2.23	0.69
49:K:72:ALA:HA	49:K:74:LYS:HZ3	1.58	0.69
50:L:109:ARG:HH12	50:L:112:ALA:H	1.39	0.69
17:14:119:PRO:HG3	17:14:138:ALA:O	1.93	0.69
28:25:67:VAL:HG22	28:25:74:LYS:HE2	1.75	0.69
2:01:1075:C:H3'	2:01:1076:C:H5''	1.74	0.69
7:04:250:GLN:HB3	7:04:254:LYS:HD2	1.74	0.69
24:21:11:ARG:HD2	24:21:11:ARG:H	1.57	0.69
51:M:24:VAL:HG23	51:M:28:ARG:HB3	1.75	0.69
2:01:74:A:H4'	2:01:75:G:C5'	2.23	0.68
59:U:40:PRO:HA	59:U:43:GLU:HG2	1.75	0.68
2:01:244:A:H5''	17:14:67:THR:HG21	1.74	0.68
10:07:97:GLU:HB2	32:29:25:ARG:HH21	1.57	0.68
1:A:1150:A:H4'	48:J:43:PRO:HG3	1.76	0.68
1:A:112:G:H21	1:A:354:G:H5'	1.58	0.68
2:01:884:U:H3'	2:01:885:C:C5'	2.23	0.68
1:A:1054:C:N4	39:Z:212:ARG:H	1.90	0.68
2:01:45:G:C5'	2:01:46:G:H5'	2.16	0.68
3:02:3:C:H3'	3:02:4:C:H5''	1.74	0.68
44:F:76:THR:HA	44:F:79:ARG:HH12	1.59	0.68
8:05:179:ARG:HB2	8:05:188:LEU:HD12	1.75	0.68
21:18:88:ARG:NE	21:18:112:ARG:HH21	1.91	0.68
46:H:11:THR:HA	46:H:14:ARG:NH1	2.09	0.68
2:01:1203:U:H4'	17:14:3:LEU:HD21	1.75	0.68
11:08:90:GLY:HA3	11:08:93:TYR:CD2	2.29	0.68
43:E:96:GLN:NE2	43:E:97:PRO:HD2	2.08	0.68
16:13:58:LEU:HD23	16:13:58:LEU:H	1.58	0.68
42:D:56:GLU:HG2	42:D:198:LEU:HB2	1.76	0.68
44:F:53:LYS:HG2	44:F:54:LEU:H	1.57	0.68
26:23:39:ASN:HB2	26:23:62:ALA:H	1.59	0.68
2:01:674:G:H5''	9:06:71:GLY:N	2.09	0.68
41:C:19:SER:OG	52:N:91:GLU:O	2.11	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:08:169:ARG:HD2	11:08:169:ARG:H	1.59	0.67
1:A:39:G:C2'	1:A:40:C:H5''	2.24	0.67
6:03:181:ASP:HB3	6:03:184:LYS:HG2	1.76	0.67
44:F:81:ASN:HD21	44:F:83:ALA:HB3	1.60	0.67
1:A:538:G:H5'	50:L:110:LYS:HB2	1.75	0.67
21:18:32:VAL:HG12	21:18:37:LYS:HA	1.76	0.67
1:A:1054:C:H41	39:Z:211:GLY:HA3	1.59	0.67
1:A:59:A:H3'	1:A:331:G:H22	1.59	0.67
54:P:36:VAL:HG23	54:P:53:ASP:HB2	1.74	0.67
6:03:180:PHE:HB2	6:03:185:LEU:HD21	1.76	0.67
1:A:1422:G:H5'	16:13:48:PRO:HG3	1.76	0.67
50:L:58:ASN:HD21	50:L:60:PHE:HD2	1.43	0.67
2:01:1173:U:C2'	2:01:1174:U:H4'	2.17	0.67
3:02:3:C:C3'	3:02:4:C:H5''	2.25	0.67
35:32:3:ARG:NE	35:32:3:ARG:HA	2.10	0.67
36:33:32:LEU:HD23	36:33:35:LYS:HD2	1.77	0.67
2:01:751:A:H5'	24:21:90:LYS:HA	1.76	0.67
32:29:64:PHE:O	32:29:66:ILE:HG13	1.95	0.67
2:01:2800:A:H3'	2:01:2801:G:H5'	1.75	0.67
2:01:2529:G:H4'	11:08:174:LYS:HE2	1.77	0.67
15:12:32:LEU:HD22	15:12:54:ILE:HD12	1.76	0.67
19:16:28:LEU:O	19:16:28:LEU:HD23	1.95	0.67
25:22:40:LYS:NZ	25:22:60:THR:HG22	2.10	0.67
34:31:13:SER:HB3	34:31:47:ILE:HG13	1.76	0.67
2:01:1459:G:H2'	2:01:1460:U:H5''	1.76	0.67
2:01:704:G:H2'	2:01:726:G:N2	2.10	0.67
10:07:73:VAL:H	10:07:78:ILE:HG13	1.60	0.67
14:11:72:THR:HB	14:11:115:ASP:HB2	1.77	0.67
2:01:1012:U:H3	15:12:27:ARG:HD2	1.60	0.66
24:21:74:ILE:HD13	24:21:105:VAL:HG22	1.76	0.66
2:01:955:U:H5	2:01:962:G:N1	1.92	0.66
8:05:7:LYS:HD3	8:05:77:ARG:HH22	1.60	0.66
15:12:17:VAL:HG23	15:12:137:PRO:HB2	1.78	0.66
21:18:28:LYS:HB3	21:18:39:LEU:HD11	1.78	0.66
1:A:1103:C:H5''	40:B:96:LEU:HD22	1.78	0.66
43:E:98:ALA:HB2	43:E:123:LEU:HG	1.77	0.66
8:05:46:ARG:HG2	8:05:84:LEU:HB2	1.78	0.66
13:10:26:VAL:HG12	13:10:84:TYR:HA	1.76	0.66
43:E:96:GLN:HE21	43:E:97:PRO:HD2	1.61	0.66
2:01:2297:A:N1	2:01:2321:U:H5	1.93	0.66
43:E:44:ARG:HE	43:E:70:MET:HB3	1.59	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:B:42:LEU:H	40:B:42:LEU:HD23	1.61	0.66
51:M:89:ARG:HB2	51:M:96:VAL:HG12	1.76	0.66
2:01:1645:G:H5''	2:01:1646:C:H5'	1.78	0.66
37:34:24:ARG:HH22	37:34:36:ARG:HH11	1.43	0.66
43:E:98:ALA:HB1	43:E:101:GLY:HA3	1.78	0.66
55:Q:46:HIS:HB2	55:Q:70:LYS:NZ	2.10	0.66
7:04:104:LEU:HD12	7:04:142:ASN:HD22	1.61	0.66
9:06:46:GLN:HB3	9:06:83:VAL:HG21	1.78	0.66
2:01:1084:A:H5''	13:10:54:VAL:HG13	1.77	0.66
2:01:1838:C:H4'	2:01:1839:G:H5'	1.78	0.66
47:I:24:ASN:HD22	47:I:26:LYS:HE2	1.59	0.66
52:N:8:ARG:HB3	52:N:12:ARG:HH12	1.60	0.66
13:10:44:ALA:HA	13:10:52:MET:SD	2.36	0.66
56:R:17:VAL:HG22	56:R:18:GLN:H	1.61	0.66
16:13:71:ARG:HE	16:13:77:ILE:HD11	1.60	0.65
42:D:45:PRO:HB2	42:D:47:LEU:HD12	1.77	0.65
48:J:80:THR:HG22	48:J:81:GLU:H	1.60	0.65
2:01:2457:U:H5	2:01:2494:G:H1	1.44	0.65
2:01:974:G:H1'	2:01:975:A:C8	2.31	0.65
3:02:118:C:H2'	3:02:119:A:H8	1.60	0.65
15:12:99:ARG:O	15:12:103:ILE:HG13	1.96	0.65
54:P:25:ARG:HD3	54:P:25:ARG:H	1.61	0.65
5:X:36:U:H2'	5:X:37:A:H5'	1.77	0.65
47:I:60:LEU:HD12	47:I:60:LEU:O	1.97	0.65
21:18:3:ILE:H	21:18:3:ILE:HD12	1.61	0.65
2:01:2188:U:H2'	2:01:2189:U:H4'	1.78	0.65
31:28:4:ILE:HG23	31:28:58:GLU:HG2	1.79	0.65
2:01:2884:U:C1'	33:30:49:ARG:HH12	2.10	0.65
44:F:81:ASN:ND2	44:F:83:ALA:HB3	2.12	0.65
2:01:548:G:H2'	2:01:549:G:C4'	2.24	0.65
3:02:3:C:H2'	3:02:4:C:H5''	1.78	0.65
1:A:719:C:N4	56:R:59:LYS:HE2	2.11	0.65
2:01:1857:G:H1'	2:01:1885:A:N6	2.11	0.65
2:01:2107:G:H3'	2:01:2108:A:H5''	1.78	0.65
2:01:322:A:H5'	2:01:340:A:H1'	1.79	0.65
2:01:361:G:O2'	2:01:362:A:H5'	1.97	0.65
7:04:144:GLU:HB2	7:04:187:CYS:HB3	1.79	0.65
2:01:805:G:H5''	17:14:38:GLN:HG3	1.79	0.65
39:Z:162:LYS:HB3	39:Z:184:SER:HB3	1.79	0.65
8:05:2:ILE:HG13	8:05:3:GLY:H	1.61	0.65
1:A:1506:U:O2'	1:A:1507:A:H5'	1.96	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:704:G:H1'	2:01:727:A:N6	2.12	0.65
33:30:9:ARG:H	33:30:9:ARG:HD2	1.62	0.65
2:01:1114:C:H2'	2:01:1115:G:O4'	1.96	0.64
2:01:1476:U:H3	2:01:1515:A:H62	1.44	0.64
5:X:73:A:H3'	5:X:74:C:H5''	1.77	0.64
2:01:1177:G:H2'	2:01:1178:C:H4'	1.80	0.64
8:05:151:THR:HB	8:05:152:PRO:HD3	1.79	0.64
1:A:454:G:H22	1:A:478:A:H2	1.43	0.64
1:A:501:C:H2'	1:A:502:A:C8	2.32	0.64
51:M:77:LYS:NZ	51:M:77:LYS:HB3	2.12	0.64
2:01:503:A:H4'	2:01:505:A:H5''	1.78	0.64
19:16:38:LEU:HB2	19:16:39:PRO:HD3	1.79	0.64
1:A:71:A:H3'	1:A:72:A:H5''	1.80	0.64
14:11:3:LYS:HG3	14:11:4:VAL:HG13	1.80	0.64
41:C:149:LYS:HE2	41:C:168:ARG:HD3	1.78	0.64
45:G:105:GLU:OE2	45:G:136:LYS:HE3	1.97	0.64
9:06:143:LEU:HD22	9:06:185:LYS:HG3	1.80	0.64
40:B:88:GLN:NE2	40:B:220:VAL:HG11	2.12	0.64
10:07:73:VAL:HB	10:07:78:ILE:HD11	1.78	0.64
37:34:14:CYS:HB3	37:34:27:CYS:SG	2.37	0.64
41:C:107:LYS:HB3	41:C:143:LEU:HD21	1.78	0.64
59:U:16:ARG:HE	59:U:20:ARG:HH22	1.46	0.64
39:Z:113:LEU:HD23	39:Z:113:LEU:O	1.98	0.64
39:Z:265:HIS:HB3	39:Z:270:ILE:HB	1.79	0.64
50:L:3:VAL:HG13	55:Q:35:LYS:HD2	1.79	0.64
5:X:65:C:H2'	5:X:66:C:C6	2.32	0.64
2:01:435:C:H2'	2:01:436:C:H5'	1.80	0.64
2:01:940:G:H2'	2:01:941:A:H5''	1.80	0.64
7:04:245:THR:HB	7:04:246:PRO:HD2	1.78	0.64
23:20:80:ARG:HG2	23:20:80:ARG:HH11	1.62	0.64
33:30:54:ILE:HG23	33:30:56:LYS:H	1.61	0.64
6:03:192:LEU:O	6:03:192:LEU:HD13	1.98	0.64
10:07:107:VAL:HG23	10:07:108:PRO:HD3	1.80	0.64
2:01:2389:G:H5''	2:01:2390:U:O4'	1.98	0.64
15:12:6:ALA:H	15:12:45:THR:HG21	1.62	0.64
2:01:2297:A:H62	2:01:2319:G:H1'	1.62	0.63
10:07:40:GLY:HA2	10:07:84:ILE:HD11	1.78	0.63
2:01:1131:G:OP2	15:12:82:GLY:HA2	1.98	0.63
18:15:53:MET:HG3	18:15:116:ALA:HB1	1.80	0.63
54:P:5:ARG:NH2	54:P:26:ASN:HB2	2.08	0.63
41:C:156:LEU:HD12	41:C:156:LEU:O	1.98	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:H:28:SER:HB3	46:H:56:PRO:HB2	1.80	0.63
51:M:28:ARG:NH2	51:M:62:PHE:HB2	2.13	0.63
52:N:65:GLN:HE21	52:N:82:LYS:HE2	1.62	0.63
13:10:87:GLU:HG2	13:10:93:ALA:HB3	1.80	0.63
2:01:1142:A:H4'	15:12:27:ARG:HH22	1.63	0.63
49:K:80:ASN:ND2	49:K:105:ARG:HD2	2.13	0.63
2:01:2743:U:H2'	2:01:2744:G:H5''	1.81	0.63
1:A:427:U:H5''	1:A:428:G:H2'	1.80	0.63
1:A:575:G:HO2'	1:A:821:G:H5'	1.63	0.63
42:D:31:CYS:HB3	42:D:32:LYS:HD3	1.81	0.63
12:09:6:LEU:HD23	12:09:6:LEU:O	1.98	0.63
1:A:673:A:H4'	44:F:86:ARG:HH12	1.63	0.63
59:U:8:ASN:H	59:U:8:ASN:HD22	1.47	0.63
32:29:11:GLU:HB2	32:29:23:LYS:HE3	1.81	0.63
2:01:713:G:H21	2:01:718:A:H62	1.45	0.63
14:11:25:PRO:O	14:11:29:GLN:HG2	1.98	0.63
53:O:55:LEU:O	53:O:55:LEU:HD23	1.99	0.63
10:07:32:LYS:HB3	10:07:91:ARG:NH2	2.13	0.63
1:A:614:C:C3'	1:A:615:G:H5''	2.28	0.63
41:C:35:ASP:HA	41:C:38:VAL:HG22	1.81	0.63
2:01:226:A:H2'	2:01:227:A:C8	2.34	0.63
2:01:1082:U:H3'	2:01:1083:U:C5'	2.29	0.62
2:01:674:G:H5''	9:06:71:GLY:H	1.64	0.62
40:B:14:HIS:CD2	40:B:42:LEU:HB3	2.34	0.62
44:F:42:TRP:HE1	44:F:61:LEU:HD22	1.64	0.62
47:I:20:ILE:HG21	47:I:60:LEU:HD22	1.81	0.62
10:07:60:SER:HB2	10:07:90:LEU:HD21	1.81	0.62
1:A:1305:G:H22	1:A:1331:G:H2'	1.63	0.62
1:A:136:C:C3'	1:A:137:U:H5''	2.29	0.62
42:D:117:VAL:HG22	42:D:122:ILE:HD12	1.81	0.62
2:01:1140:C:H5'	15:12:26:GLY:HA3	1.81	0.62
2:01:644:A:H2'	2:01:645:C:C4'	2.29	0.62
2:01:770:G:H5''	35:32:10:LEU:HD23	1.80	0.62
16:13:63:VAL:HG21	16:13:85:VAL:HG23	1.80	0.62
44:F:4:TYR:CE2	44:F:71:ILE:HG13	2.34	0.62
48:J:57:VAL:HG22	48:J:58:ASN:H	1.63	0.62
6:03:48:LEU:HD22	6:03:165:ASN:ND2	2.13	0.62
14:11:21:PRO:HB2	14:11:22:PRO:CD	2.29	0.62
2:01:2020:A:H62	33:30:5:ASN:ND2	1.98	0.62
1:A:262:A:H4'	58:T:67:HIS:CD2	2.34	0.62
1:A:352:C:H4'	1:A:354:G:OP1	1.99	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:06:24:ASN:ND2	9:06:27:LEU:HB2	2.13	0.62
20:17:48:LEU:HD21	20:17:87:ILE:HG13	1.81	0.62
55:Q:58:VAL:HG23	55:Q:76:ARG:O	2.00	0.62
2:01:1225:G:H5'	23:20:88:GLY:H	1.65	0.62
2:01:644:A:H2'	2:01:645:C:H4'	1.82	0.62
14:11:91:LYS:HB2	14:11:94:LYS:HB2	1.80	0.62
1:A:405:U:H1'	1:A:498:A:H2'	1.81	0.62
2:01:1697:G:C3'	2:01:1698:A:H5''	2.28	0.62
9:06:175:ILE:HD12	9:06:175:ILE:O	1.99	0.62
31:28:55:LYS:HG2	31:28:57:GLU:HG2	1.82	0.62
55:Q:10:ARG:HD3	55:Q:55:GLY:HA2	1.81	0.62
4:Y:20:LEU:HD23	4:Y:20:LEU:O	1.98	0.62
2:01:1084:A:H5''	13:10:54:VAL:CG1	2.29	0.62
2:01:45:G:H5''	2:01:46:G:C5'	2.16	0.62
2:01:511:U:H2'	2:01:512:G:H5'	1.80	0.62
19:16:90:ARG:HB2	19:16:90:ARG:NH1	2.14	0.62
1:A:1226:C:H2'	51:M:101:THR:HG22	1.81	0.62
55:Q:59:GLU:HG3	55:Q:76:ARG:NH2	2.15	0.62
2:01:2884:U:H1'	33:30:49:ARG:HH12	1.65	0.62
20:17:21:LEU:O	20:17:21:LEU:HD23	1.99	0.62
39:Z:21:LEU:HD23	39:Z:113:LEU:HD13	1.81	0.62
49:K:124:LYS:HA	59:U:34:ARG:HB3	1.80	0.62
1:A:1196:A:H1'	4:Y:34:LYS:HD3	1.81	0.62
2:01:1084:A:N3	13:10:56:ARG:HD2	2.15	0.61
14:11:53:PRO:HG2	14:11:77:VAL:HG11	1.80	0.61
2:01:1061:U:H3'	2:01:1062:G:C5'	2.30	0.61
11:08:171:LYS:HB2	11:08:171:LYS:NZ	2.15	0.61
24:21:83:LYS:NZ	24:21:83:LYS:HB2	2.14	0.61
45:G:24:LYS:HB2	45:G:24:LYS:NZ	2.16	0.61
2:01:1651:G:H5'	19:16:39:PRO:HB2	1.81	0.61
2:01:1810:A:H2'	2:01:1811:G:O4'	2.00	0.61
2:01:2071:A:H2'	2:01:2072:C:C6	2.35	0.61
19:16:38:LEU:HD22	19:16:42:LYS:NZ	2.14	0.61
42:D:200:VAL:HG11	43:E:102:THR:HG22	1.82	0.61
1:A:875:U:O2'	46:H:14:ARG:HD2	2.00	0.61
50:L:98:ARG:HB2	50:L:116:TYR:HA	1.82	0.61
54:P:78:VAL:HG13	54:P:80:LYS:H	1.64	0.61
34:31:37:LYS:HB2	34:31:48:TYR:CE2	2.35	0.61
1:A:1241:G:H2'	1:A:1242:G:H8	1.65	0.61
2:01:1535:A:H3'	2:01:1536:C:H5'	1.83	0.61
2:01:2537:U:H2'	2:01:2538:C:C6	2.36	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:481:G:H1'	2:01:506:G:N2	2.16	0.61
8:05:184:ARG:HD2	8:05:186:LEU:HD11	1.82	0.61
10:07:113:PHE:HB3	32:29:41:HIS:HE1	1.65	0.61
2:01:1081:U:H4'	14:11:123:ALA:HB1	1.82	0.61
16:13:13:ASN:HD21	16:13:98:ARG:CB	2.08	0.61
20:17:110:ALA:HB1	20:17:115:LEU:HD23	1.81	0.61
1:A:1318:A:H2'	1:A:1319:A:H5'	1.81	0.61
12:09:96:THR:HG22	12:09:117:LEU:HG	1.83	0.61
32:29:32:LEU:HD22	32:29:34:LEU:HD23	1.82	0.61
57:S:35:ARG:HD3	57:S:51:HIS:O	1.99	0.61
12:09:132:PHE:HB2	12:09:140:ALA:HB3	1.83	0.61
14:11:83:ALA:HB2	14:11:100:ILE:HD11	1.82	0.61
1:A:1306:A:H61	1:A:1331:G:H1'	1.64	0.61
40:B:23:ASN:ND2	40:B:25:LYS:HB2	2.15	0.61
3:02:2:G:H2'	3:02:3:C:C6	2.35	0.61
23:20:2:TYR:CE1	23:20:42:ALA:HB3	2.35	0.61
40:B:19:THR:HG23	40:B:21:TYR:N	2.15	0.61
43:E:81:GLN:HA	43:E:81:GLN:HE21	1.65	0.61
11:08:103:ASN:HD22	11:08:104:LEU:N	1.99	0.61
15:12:93:ILE:HD13	15:12:100:VAL:HG21	1.83	0.61
16:13:76:VAL:HG12	21:18:72:VAL:HG22	1.82	0.61
1:A:12:U:H4'	1:A:526:C:H4'	1.83	0.61
32:29:16:CYS:HA	32:29:34:LEU:HB2	1.83	0.61
1:A:1477:U:H2'	1:A:1478:U:C6	2.36	0.61
1:A:707:U:H4'	49:K:21:HIS:ND1	2.16	0.61
45:G:38:ALA:O	45:G:42:VAL:HG23	2.01	0.61
9:06:98:LYS:HB3	9:06:102:ARG:HH22	1.66	0.60
48:J:32:THR:HG23	48:J:33:GLY:H	1.65	0.60
38:V:17:U:H2'	38:V:18:G:C8	2.36	0.60
2:01:215:G:C4'	2:01:216:A:H4'	2.31	0.60
24:21:25:ARG:HE	24:21:74:ILE:HG23	1.66	0.60
1:A:1162:C:H2'	1:A:1163:A:H8	1.66	0.60
46:H:73:SER:HB2	46:H:129:ALA:HB3	1.83	0.60
2:01:1801:A:H5''	2:01:2203:U:H2'	1.82	0.60
2:01:876:C:H2'	2:01:877:A:H5'	1.83	0.60
3:02:3:C:C2'	3:02:4:C:H5''	2.32	0.60
49:K:34:THR:HG22	49:K:40:ALA:HA	1.83	0.60
2:01:810:U:O4	17:14:30:THR:HG22	2.01	0.60
47:I:24:ASN:HB3	47:I:26:LYS:HE2	1.84	0.60
53:O:25:GLU:OE1	53:O:76:ARG:HD3	2.00	0.60
59:U:40:PRO:O	59:U:44:ARG:HG2	2.01	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Z:257:THR:HG22	39:Z:259:SER:H	1.67	0.60
39:Z:272:THR:HG21	39:Z:291:MET:HA	1.84	0.60
2:01:2328:A:H2'	2:01:2329:U:C6	2.36	0.60
19:16:56:LYS:NZ	19:16:56:LYS:HB3	2.17	0.60
49:K:88:PRO:HA	49:K:92:ARG:HH11	1.66	0.60
1:A:1226:C:H5''	51:M:101:THR:HG21	1.83	0.60
6:03:65:LEU:HB2	6:03:188:ASN:HD21	1.67	0.60
7:04:33:LEU:HD23	7:04:34:GLU:N	2.17	0.60
27:24:30:ILE:HB	27:24:38:LEU:HB2	1.84	0.60
30:27:23:ARG:HA	30:27:23:ARG:HE	1.66	0.60
47:I:98:ARG:HG2	47:I:103:VAL:HG21	1.84	0.60
2:01:402:A:H2'	2:01:403:U:H5'	1.82	0.60
8:05:178:VAL:HG12	8:05:179:ARG:HG3	1.83	0.60
13:10:11:ILE:HG13	13:10:65:GLU:OE1	2.02	0.60
21:18:3:ILE:HD12	21:18:3:ILE:N	2.17	0.60
24:21:19:LEU:HD23	24:21:41:LYS:NZ	2.17	0.60
1:A:730:G:H2'	1:A:731:G:H5'	1.83	0.60
2:01:929:U:H4'	31:28:37:ARG:NH2	2.16	0.60
7:04:20:ASN:HB3	7:04:23:LEU:HG	1.83	0.60
42:D:59:LYS:O	42:D:63:ILE:HG13	2.02	0.60
46:H:6:ILE:HD11	46:H:31:LEU:HD23	1.84	0.60
14:11:25:PRO:HB2	39:Z:47:TRP:HE1	1.67	0.60
19:16:59:SER:HB2	19:16:62:ASN:HD22	1.67	0.60
45:G:138:GLU:HB3	45:G:142:ARG:HH12	1.66	0.60
12:09:84:ALA:HA	12:09:91:PHE:H	1.67	0.59
1:A:219:U:H2'	1:A:220:G:C4'	2.32	0.59
5:W:47:U:H3'	5:W:48:C:H5'	1.85	0.59
2:01:69:C:O2'	2:01:70:G:H5'	2.02	0.59
11:08:45:ALA:HB3	11:08:48:THR:O	2.02	0.59
26:23:27:VAL:HG12	26:23:33:VAL:HG12	1.84	0.59
41:C:9:ILE:HG23	41:C:10:ARG:HG3	1.83	0.59
16:13:10:VAL:HG21	16:13:16:ALA:HB3	1.84	0.59
1:A:1319:A:HO2'	57:S:2:ARG:N	1.99	0.59
58:T:59:ARG:HG2	58:T:63:LYS:HE2	1.84	0.59
2:01:1148:U:C3'	2:01:1149:G:H5''	2.32	0.59
2:01:161:A:H3'	2:01:162:U:H5''	1.83	0.59
3:02:118:C:H2'	3:02:119:A:C8	2.37	0.59
14:11:50:LYS:HZ3	14:11:50:LYS:HB3	1.67	0.59
27:24:53:LYS:HB2	27:24:53:LYS:NZ	2.17	0.59
12:09:27:ARG:HH12	29:26:55:MET:HB3	1.66	0.59
39:Z:181:ILE:N	39:Z:181:ILE:HD12	2.17	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:2313:C:H5'	10:07:87:LYS:HD3	1.85	0.59
24:21:83:LYS:HD2	24:21:95:ARG:NH1	2.17	0.59
37:34:34:LYS:HB3	37:34:34:LYS:NZ	2.18	0.59
41:C:19:SER:HB2	41:C:21:TRP:HE1	1.67	0.59
47:I:105:ARG:HD3	47:I:105:ARG:O	2.01	0.59
39:Z:156:ALA:HB1	39:Z:161:PHE:HB2	1.85	0.59
39:Z:193:ARG:HB3	39:Z:193:ARG:NH1	2.18	0.59
2:01:1082:U:H2'	2:01:1083:U:H4'	1.84	0.59
14:11:124:MET:O	14:11:128:ILE:HG13	2.03	0.59
17:14:95:LEU:HD22	17:14:100:ILE:HD11	1.84	0.59
17:14:95:LEU:HD11	17:14:125:LEU:HD21	1.83	0.59
1:A:1227:A:H2'	1:A:1228:C:H5'	1.84	0.59
1:A:1399:C:H1'	1:A:1400:C:OP2	2.02	0.59
48:J:91:ASP:O	48:J:92:LEU:HB2	2.02	0.59
2:01:1178:C:H2'	2:01:1178:C:O2	2.02	0.59
2:01:1652:A:H62	19:16:11:ASN:ND2	1.96	0.59
8:05:55:LYS:HD3	8:05:77:ARG:HA	1.83	0.59
1:A:31:G:N2	1:A:47:C:H5'	2.17	0.59
1:A:501:C:H2'	1:A:502:A:H8	1.68	0.59
40:B:17:HIS:HB3	40:B:37:VAL:HB	1.85	0.59
44:F:81:ASN:HD22	44:F:84:VAL:H	1.50	0.59
2:01:1026:G:H2'	2:01:1027:A:H8	1.67	0.59
2:01:2836:U:H2'	2:01:2837:A:C8	2.37	0.59
2:01:372:G:O4'	29:26:60:LYS:HD3	2.03	0.59
1:A:211:G:H2'	1:A:212:G:H5'	1.85	0.59
46:H:9:MET:HG3	46:H:26:MET:SD	2.43	0.59
59:U:23:GLU:OE2	59:U:27:VAL:HG11	2.03	0.59
11:08:19:ASN:HB3	11:08:22:VAL:HB	1.84	0.59
43:E:110:MET:O	43:E:114:LEU:HD13	2.02	0.59
1:A:194:C:H5'	58:T:55:PRO:HA	1.85	0.59
2:01:1468:U:H2'	2:01:1522:A:N6	2.18	0.59
10:07:151:LEU:HD12	10:07:151:LEU:O	2.03	0.59
15:12:47:HIS:ND1	15:12:48:VAL:HG23	2.17	0.59
18:15:14:LYS:HB2	18:15:14:LYS:NZ	2.17	0.59
1:A:1171:A:H2'	1:A:1172:C:C6	2.38	0.59
40:B:139:GLU:O	40:B:143:LEU:HD23	2.02	0.59
40:B:13:VAL:HG23	40:B:208:ALA:HB2	1.85	0.59
2:01:1344:U:H3'	2:01:1345:C:H5'	1.85	0.58
22:19:89:ILE:H	22:19:89:ILE:HD12	1.67	0.58
22:19:89:ILE:N	22:19:89:ILE:HD12	2.18	0.58
28:25:34:VAL:HG11	28:25:41:PHE:HD2	1.68	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:715:A:H2'	1:A:716:A:C8	2.38	0.58
39:Z:131:ASP:HB3	39:Z:221:PHE:HB3	1.85	0.58
14:11:21:PRO:HG3	39:Z:38:ASN:OD1	2.03	0.58
2:01:2845:U:H4'	21:18:52:ARG:NH1	2.18	0.58
14:11:42:ASN:HA	14:11:45:THR:HG22	1.85	0.58
20:17:24:THR:HG22	20:17:42:PRO:HD3	1.83	0.58
31:28:8:GLN:HE21	31:28:31:ILE:HG22	1.67	0.58
34:31:8:ILE:HD13	34:31:24:LYS:HB2	1.85	0.58
1:A:986:U:H2'	1:A:987:G:C8	2.38	0.58
39:Z:127:ASP:HA	39:Z:188:ALA:HB3	1.85	0.58
2:01:1060:U:O2'	14:11:74:PRO:HB3	2.01	0.58
15:12:58:ASN:HD21	15:12:128:ASN:HD22	1.51	0.58
29:26:32:LEU:HD21	29:26:49:ARG:HB3	1.86	0.58
44:F:93:LYS:NZ	44:F:93:LYS:HB3	2.18	0.58
50:L:54:VAL:HG21	50:L:81:ILE:HD11	1.86	0.58
50:L:71:HIS:HB2	50:L:73:LEU:HD13	1.84	0.58
1:A:1492:A:H1'	4:Y:26:ARG:CB	2.33	0.58
2:01:1450:G:H21	2:01:1452:G:H1	1.50	0.58
2:01:2074:U:H2'	2:01:2075:U:C6	2.38	0.58
2:01:381:G:H5''	29:26:15:ASN:HD22	1.68	0.58
51:M:3:ILE:O	51:M:3:ILE:HD12	2.03	0.58
2:01:1075:C:C3'	2:01:1076:C:H5''	2.33	0.58
2:01:1287:A:C2	2:01:1649:G:H4'	2.37	0.58
2:01:2870:C:C3'	2:01:2871:U:H5''	2.32	0.58
2:01:639:U:H2'	2:01:640:C:C6	2.39	0.58
12:09:40:THR:HB	12:09:43:ASN:HD22	1.68	0.58
44:F:1:MET:HG3	44:F:67:PRO:HG3	1.85	0.58
46:H:29:SER:HB3	46:H:32:LYS:HG3	1.86	0.58
55:Q:32:ILE:HD12	55:Q:32:ILE:N	2.18	0.58
2:01:192:C:H2'	2:01:193:U:H5'	1.84	0.58
1:A:130:A:O2'	1:A:264:C:H5'	2.03	0.58
41:C:71:ARG:O	41:C:75:VAL:HG23	2.04	0.58
8:05:46:ARG:HH22	8:05:89:GLU:HB2	1.69	0.58
41:C:185:THR:HG23	41:C:197:VAL:O	2.03	0.58
43:E:104:ILE:HG23	43:E:111:ARG:NH1	2.19	0.58
46:H:45:ILE:HG13	46:H:46:GLU:H	1.68	0.58
2:01:1076:C:H2'	2:01:1077:A:O4'	2.04	0.58
2:01:1373:A:H5'	2:01:2212:A:H1'	1.85	0.58
8:05:27:ILE:HB	8:05:187:LEU:HB3	1.86	0.58
12:09:62:LEU:HD23	12:09:66:ASN:ND2	2.17	0.58
2:01:1142:A:H4'	15:12:27:ARG:NH2	2.18	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:22:4:GLU:O	25:22:8:LEU:HD13	2.03	0.58
52:N:50:LEU:HD12	52:N:51:PRO:HD2	1.84	0.58
2:01:2122:U:H2'	2:01:2123:G:O4'	2.04	0.58
2:01:563:A:H4'	22:19:40:LYS:NZ	2.19	0.58
2:01:782:A:C2	7:04:224:MET:HG2	2.38	0.58
2:01:2642:G:H5'	15:12:80:HIS:CD2	2.39	0.58
2:01:1454:C:H5'	19:16:63:ARG:NH2	2.18	0.58
25:22:53:VAL:HG22	25:22:92:ASN:HB2	1.86	0.58
28:25:34:VAL:HG11	28:25:41:PHE:CD2	2.39	0.58
1:A:1259:C:C3'	1:A:1260:G:H5''	2.32	0.58
46:H:91:LEU:HD12	46:H:92:PRO:HD2	1.85	0.58
2:01:2682:A:C2	8:05:23:PRO:HB3	2.39	0.58
9:06:97:ASN:HB2	9:06:100:MET:HG3	1.86	0.58
24:21:34:ASP:HB3	33:30:27:LEU:HD11	1.86	0.58
1:A:362:G:H5''	50:L:57:THR:HG21	1.85	0.58
2:01:121:G:H4'	2:01:149:A:H5'	1.86	0.57
7:04:74:PRO:HG2	7:04:96:LYS:HG3	1.85	0.57
8:05:4:LEU:HD22	8:05:32:ASN:HD22	1.68	0.57
40:B:91:VAL:HG21	40:B:95:TRP:HD1	1.68	0.57
48:J:80:THR:HG22	48:J:81:GLU:N	2.18	0.57
49:K:88:PRO:HB2	59:U:28:LEU:HD22	1.86	0.57
39:Z:264:THR:HG22	39:Z:271:VAL:HG22	1.84	0.57
13:10:8:LYS:O	13:10:12:VAL:HG23	2.03	0.57
18:15:71:LYS:HZ3	18:15:95:LEU:HD11	1.69	0.57
26:23:25:LYS:HD3	26:23:36:GLU:HB3	1.86	0.57
1:A:505:G:H5'	1:A:534:U:O2'	2.05	0.57
43:E:106:ALA:HB1	43:E:110:MET:HE3	1.85	0.57
44:F:75:GLU:HA	44:F:78:PHE:HD2	1.69	0.57
48:J:40:ILE:HB	48:J:73:LEU:HB2	1.85	0.57
52:N:36:SER:HB2	52:N:40:ARG:NH1	2.19	0.57
3:02:43:C:H4'	10:07:62:GLN:NE2	2.19	0.57
21:18:105:LYS:HB3	21:18:108:ARG:HH22	1.69	0.57
26:23:35:VAL:HB	26:23:38:ILE:HG13	1.86	0.57
5:X:49:G:H2'	5:X:50:U:C6	2.39	0.57
2:01:1857:G:H1'	2:01:1885:A:H61	1.69	0.57
2:01:2066:C:O2'	2:01:2067:G:H5'	2.04	0.57
2:01:2297:A:N1	2:01:2321:U:C5	2.72	0.57
2:01:942:G:H2'	2:01:943:A:O4'	2.03	0.57
12:09:31:VAL:HB	12:09:32:PRO:HD3	1.86	0.57
13:10:3:LEU:CD2	13:10:3:LEU:H	2.17	0.57
9:06:181:ILE:HD13	17:14:3:LEU:HB3	1.87	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:16:55:ALA:HA	19:16:80:PHE:CE1	2.39	0.57
23:20:11:GLN:H	23:20:11:GLN:HE21	1.53	0.57
1:A:1240:U:H4'	45:G:37:THR:CG2	2.34	0.57
1:A:511:C:H2'	1:A:512:U:O2	2.05	0.57
40:B:132:GLU:O	40:B:136:ARG:HG2	2.04	0.57
40:B:46:VAL:HB	40:B:47:PRO:HD3	1.85	0.57
52:N:31:SER:HA	57:S:6:LYS:NZ	2.19	0.57
7:04:131:MET:HE2	7:04:187:CYS:HB2	1.86	0.57
37:34:36:ARG:HG2	37:34:37:GLN:N	2.20	0.57
1:A:1422:G:H5'	16:13:48:PRO:CG	2.35	0.57
50:L:79:ILE:HG22	50:L:103:CYS:HB2	1.86	0.57
2:01:1068:G:N2	2:01:1095:A:H1'	2.19	0.57
2:01:1148:U:H2'	2:01:1149:G:H5''	1.85	0.57
12:09:23:ALA:O	12:09:27:ARG:HG2	2.04	0.57
19:16:59:SER:O	19:16:63:ARG:HG3	2.05	0.57
35:32:41:ARG:HD2	35:32:41:ARG:H	1.69	0.57
55:Q:31:PRO:HB2	55:Q:32:ILE:HD12	1.85	0.57
39:Z:11:ILE:HG12	39:Z:103:LEU:HD13	1.86	0.57
27:24:42:LEU:HD11	27:24:91:PHE:HE2	1.70	0.57
1:A:9:G:H4'	43:E:108:GLY:H	1.69	0.57
49:K:80:ASN:HD21	49:K:105:ARG:HD2	1.70	0.57
50:L:43:LYS:HG3	50:L:44:PRO:HD3	1.85	0.57
52:N:42:ASN:HD22	52:N:42:ASN:N	2.01	0.57
2:01:2353:G:C2'	2:01:2354:C:H5''	2.35	0.57
30:27:24:GLU:O	30:27:28:LEU:HD12	2.05	0.57
1:A:419:C:H2'	1:A:420:U:O4'	2.05	0.57
2:01:1433:A:H2'	2:01:1434:A:O4'	2.05	0.57
2:01:2029:G:O6	2:01:2032:G:H5''	2.05	0.57
2:01:2526:G:H1'	37:34:1:MET:H1	1.70	0.57
2:01:738:G:O2'	2:01:739:A:H5'	2.04	0.57
6:03:23:ILE:O	6:03:27:ILE:HG13	2.04	0.57
11:08:8:VAL:HB	11:08:49:LEU:HB2	1.86	0.57
14:11:75:ALA:O	14:11:79:LEU:HD23	2.05	0.57
49:K:63:GLN:HG3	49:K:98:ALA:HB2	1.87	0.57
1:A:1379:G:O2'	1:A:1380:U:H5'	2.05	0.57
2:01:1846:G:H2'	2:01:1847:G:O4'	2.05	0.56
2:01:2164:C:H2'	2:01:2165:C:H5'	1.87	0.56
2:01:2834:G:H2'	2:01:2879:A:H61	1.70	0.56
2:01:704:G:H1'	2:01:727:A:H61	1.69	0.56
19:16:44:LEU:HD23	19:16:113:ILE:HD13	1.87	0.56
24:21:51:LEU:O	24:21:55:ILE:HG13	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:I:61:ASP:C	47:I:62:LEU:HD12	2.26	0.56
2:O1:242:G:H5''	36:33:63:TYR:CE2	2.40	0.56
10:07:63:LYS:HD2	32:29:5:ILE:HB	1.87	0.56
43:E:132:PRO:O	43:E:136:VAL:HG23	2.05	0.56
54:P:61:VAL:HG22	54:P:67:ILE:HD11	1.86	0.56
2:O1:1979:U:O2'	2:O1:1980:G:H5'	2.05	0.56
23:20:16:GLU:OE1	23:20:100:GLY:HA2	2.05	0.56
35:32:10:LEU:HD11	35:32:14:ARG:HH11	1.71	0.56
44:F:51:ILE:CD1	44:F:86:ARG:HE	2.18	0.56
52:N:40:ARG:O	52:N:40:ARG:HD2	2.05	0.56
55:Q:25:GLU:OE1	55:Q:38:LYS:HE2	2.05	0.56
2:O1:1451:C:H4'	2:O1:1452:G:O4'	2.05	0.56
2:O1:2092:U:C4'	2:O1:2093:G:H5''	2.35	0.56
23:20:76:LYS:HD2	23:20:85:LYS:HD2	1.86	0.56
31:28:40:THR:HG22	31:28:42:ALA:H	1.70	0.56
1:A:9:G:H5'	43:E:107:GLY:CA	2.29	0.56
40:B:185:ILE:HA	40:B:199:ILE:HB	1.87	0.56
41:C:120:THR:HG23	41:C:188:ALA:HA	1.88	0.56
44:F:51:ILE:HD12	44:F:86:ARG:HH21	1.70	0.56
47:I:118:ARG:HG2	47:I:119:LYS:HG3	1.87	0.56
1:A:686:U:H1'	49:K:43:TRP:HE1	1.70	0.56
50:L:86:VAL:HG23	50:L:88:ASP:H	1.68	0.56
39:Z:130:LEU:CD2	39:Z:192:LEU:HD21	2.29	0.56
10:07:147:ARG:HG2	10:07:149:ARG:NH1	2.19	0.56
11:08:49:LEU:HD13	11:08:71:LEU:HD21	1.87	0.56
30:27:17:GLU:HB2	30:27:53:VAL:HG11	1.87	0.56
1:A:673:A:H2'	1:A:674:G:C8	2.41	0.56
1:A:884:U:H4'	1:A:885:G:H5''	1.86	0.56
40:B:53:LEU:HB3	40:B:219:THR:HG21	1.87	0.56
50:L:113:ARG:HB2	50:L:118:VAL:HB	1.87	0.56
2:O1:2530:A:N6	11:08:155:PRO:HG3	2.21	0.56
27:24:20:LEU:HG	27:24:25:LYS:O	2.06	0.56
37:34:22:VAL:HG11	37:34:36:ARG:NH1	2.20	0.56
1:A:511:C:O2'	1:A:512:U:H5'	2.06	0.56
44:F:76:THR:HA	44:F:79:ARG:NH1	2.20	0.56
51:M:16:ILE:H	51:M:16:ILE:HD12	1.71	0.56
51:M:7:ASN:CG	51:M:9:PRO:HD3	2.25	0.56
53:O:34:GLN:HE22	53:O:38:LEU:HB2	1.69	0.56
53:O:87:ARG:HG3	53:O:88:ARG:HG2	1.87	0.56
2:O1:2249:U:H3'	2:O1:2250:G:H5'	1.88	0.56
2:O1:2849:U:H4'	2:O1:2868:A:C2	2.41	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:24:29:ILE:HG22	27:24:88:HIS:HE1	1.70	0.56
1:A:128:G:O2'	1:A:129:A:H5'	2.05	0.56
1:A:437:U:O2'	1:A:438:U:H5'	2.05	0.56
56:R:60:ARG:O	56:R:64:LEU:HD13	2.05	0.56
2:01:1182:G:H2'	2:01:1183:U:O4'	2.04	0.56
2:01:1319:C:O2'	2:01:1320:C:H5'	2.04	0.56
2:01:828:U:H2'	2:01:829:A:C8	2.40	0.56
26:23:4:ILE:N	26:23:4:ILE:HD12	2.21	0.56
1:A:440:C:C3'	1:A:441:A:H5''	2.35	0.56
40:B:86:CYS:HB2	40:B:88:GLN:NE2	2.21	0.56
42:D:113:ALA:O	42:D:117:VAL:HG23	2.06	0.56
2:01:297:G:OP1	26:23:91:LYS:HD3	2.06	0.56
21:18:59:THR:HB	21:18:72:VAL:HG12	1.86	0.56
37:34:14:CYS:CB	37:34:27:CYS:SG	2.94	0.56
1:A:1436:U:H2'	1:A:1437:A:H8	1.71	0.56
40:B:18:GLN:HB3	40:B:189:ASN:HD22	1.71	0.56
44:F:29:ILE:HG21	44:F:64:VAL:HG21	1.88	0.56
45:G:94:ARG:HG2	45:G:98:LEU:HD23	1.87	0.56
39:Z:151:MET:CE	39:Z:353:LEU:HD11	2.35	0.56
2:01:2175:C:O2'	2:01:2176:A:H5'	2.06	0.56
2:01:2298:A:H2'	2:01:2299:U:O4'	2.06	0.56
10:07:40:GLY:HA2	10:07:84:ILE:CD1	2.36	0.56
10:07:65:LEU:HD23	10:07:87:LYS:HE2	1.88	0.56
2:01:2514:U:H4'	15:12:81:ILE:HG21	1.88	0.56
17:14:48:ARG:HD2	36:33:59:ALA:O	2.05	0.56
19:16:90:ARG:HB2	19:16:90:ARG:HH11	1.71	0.56
21:18:17:PRO:HD2	21:18:83:ILE:HD11	1.86	0.56
23:20:11:GLN:H	23:20:11:GLN:NE2	2.04	0.56
1:A:530:G:H3'	1:A:531:U:H5'	1.88	0.56
1:A:664:G:H22	1:A:741:G:H1	1.54	0.56
7:04:128:THR:C	7:04:129:LEU:HD12	2.25	0.56
40:B:135:MET:HA	40:B:138:ARG:HG2	1.87	0.56
52:N:3:GLN:OE1	52:N:6:LYS:HD3	2.06	0.56
53:O:9:LYS:HB3	53:O:9:LYS:NZ	2.21	0.56
54:P:34:GLU:OE2	54:P:56:ARG:HD3	2.05	0.56
13:10:96:PHE:CD2	13:10:129:LEU:HD21	2.41	0.55
17:14:39:LYS:HB2	17:14:39:LYS:NZ	2.21	0.55
21:18:62:LYS:HB3	21:18:62:LYS:NZ	2.21	0.55
26:23:28:LEU:HD12	26:23:32:LYS:HB2	1.87	0.55
35:32:41:ARG:N	35:32:41:ARG:HD2	2.21	0.55
1:A:560:A:H5'	1:A:566:G:N2	2.22	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:1594:U:H2'	2:01:1595:C:C6	2.41	0.55
7:04:257:ARG:HH11	7:04:257:ARG:HG3	1.70	0.55
12:09:62:LEU:HD23	12:09:66:ASN:HD21	1.69	0.55
14:11:54:ILE:HD11	14:11:70:THR:OG1	2.06	0.55
19:16:38:LEU:HD22	19:16:42:LYS:HZ3	1.71	0.55
30:27:16:THR:HG22	30:27:20:ASN:HD21	1.70	0.55
33:30:49:ARG:HG2	33:30:49:ARG:O	2.04	0.55
2:01:141:G:H3'	2:01:142:A:O4'	2.06	0.55
2:01:1874:C:H2'	2:01:1875:G:O4'	2.05	0.55
2:01:593:U:H2'	2:01:594:U:C6	2.41	0.55
11:08:90:GLY:HA3	11:08:93:TYR:HD2	1.71	0.55
32:29:16:CYS:HB3	32:29:20:ASN:H	1.70	0.55
40:B:177:ASN:HD22	40:B:177:ASN:N	2.03	0.55
49:K:86:LYS:HG2	49:K:112:VAL:HG23	1.87	0.55
2:01:1443:U:H2'	2:01:1444:G:H8	1.71	0.55
2:01:813:U:H2'	2:01:814:C:C6	2.40	0.55
3:02:87:U:H5''	3:02:88:C:OP2	2.04	0.55
10:07:107:VAL:CG2	10:07:108:PRO:HD3	2.37	0.55
13:10:24:SER:H	13:10:118:ILE:HD12	1.71	0.55
20:17:30:ARG:HD2	20:17:102:ARG:NH1	2.22	0.55
1:A:211:G:C2'	1:A:212:G:H5'	2.36	0.55
55:Q:16:MET:HG2	55:Q:19:SER:HB2	1.88	0.55
1:A:60:A:H3'	58:T:4:LYS:HE3	1.87	0.55
39:Z:18:SER:O	39:Z:22:ARG:HG3	2.07	0.55
2:01:878:A:H3'	2:01:879:G:H8	1.71	0.55
7:04:153:LEU:HD13	7:04:175:LEU:HD21	1.87	0.55
12:09:47:PHE:HD1	12:09:51:ARG:HD2	1.71	0.55
24:21:23:LEU:HD11	33:30:23:ALA:HB2	1.88	0.55
1:A:831:A:H2'	1:A:832:G:H5''	1.88	0.55
49:K:109:ILE:N	49:K:109:ILE:HD12	2.21	0.55
57:S:12:LEU:HD12	57:S:13:HIS:N	2.21	0.55
2:01:2350:C:H2'	2:01:2351:G:O4'	2.07	0.55
2:01:2836:U:H2'	2:01:2837:A:H8	1.71	0.55
2:01:402:A:C2'	2:01:403:U:H5'	2.37	0.55
11:08:34:ARG:HE	11:08:70:LEU:HD13	1.71	0.55
1:A:1151:A:H5'	48:J:43:PRO:HA	1.88	0.55
1:A:1240:U:H4'	45:G:37:THR:HG22	1.89	0.55
39:Z:353:LEU:O	39:Z:357:ILE:HG13	2.05	0.55
2:01:1148:U:H3'	2:01:1149:G:H5''	1.89	0.55
2:01:1917:U:O2'	2:01:1918:A:H5'	2.06	0.55
2:01:548:G:H3'	2:01:549:G:H5''	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:05:25:THR:HG21	8:05:193:VAL:HG22	1.88	0.55
11:08:68:ARG:HG3	11:08:68:ARG:HH11	1.72	0.55
35:32:11:LYS:NZ	35:32:11:LYS:HB2	2.22	0.55
1:A:150:U:H3	1:A:171:A:H62	1.55	0.55
43:E:133:ILE:N	43:E:133:ILE:HD12	2.22	0.55
43:E:40:ASP:OD2	43:E:42:ASN:HB2	2.07	0.55
46:H:46:GLU:O	46:H:61:THR:HB	2.06	0.55
58:T:82:ILE:O	58:T:86:ALA:HB3	2.07	0.55
5:X:72:A:H2'	5:X:73:A:H4'	1.88	0.55
2:01:475:C:H4'	2:01:510:C:H5'	1.89	0.55
6:03:21:TYR:HB2	6:03:222:VAL:HG11	1.87	0.55
19:16:9:GLN:HA	19:16:17:ARG:HH21	1.71	0.55
25:22:11:LEU:HD11	25:22:32:LEU:HD22	1.88	0.55
25:22:61:LEU:HD11	25:22:82:LYS:HB3	1.88	0.55
40:B:91:VAL:HG21	40:B:95:TRP:CD1	2.42	0.55
52:N:31:SER:HA	57:S:6:LYS:HZ2	1.71	0.55
1:A:1216:A:H5''	52:N:4:SER:OG	2.06	0.55
58:T:34:VAL:HG11	58:T:78:LEU:HD21	1.89	0.55
2:01:488:G:H22	2:01:491:G:H5''	1.72	0.55
2:01:799:G:H5''	2:01:800:A:H2'	1.89	0.55
8:05:33:ARG:HD3	8:05:73:VAL:HB	1.89	0.55
8:05:46:ARG:HG2	8:05:84:LEU:HD12	1.89	0.55
11:08:126:THR:HG22	11:08:127:GLN:N	2.21	0.55
20:17:81:ARG:O	20:17:85:LYS:HD3	2.07	0.55
21:18:24:THR:HB	21:18:87:ARG:HG2	1.89	0.55
22:19:40:LYS:HG3	22:19:44:TYR:CE2	2.41	0.55
2:01:2010:G:H5''	24:21:42:LYS:HB2	1.89	0.55
25:22:9:LYS:HB3	25:22:9:LYS:NZ	2.22	0.55
1:A:1347:G:O2'	1:A:1348:U:H5	1.90	0.55
1:A:1356:G:H2'	1:A:1357:A:C8	2.42	0.55
1:A:414:A:H2'	1:A:414:A:N3	2.22	0.55
42:D:61:ARG:HH21	42:D:67:LEU:HA	1.71	0.55
59:U:60:ALA:HA	59:U:63:ASN:ND2	2.22	0.55
2:01:2432:A:H1'	5:X:75:C:H5'	1.89	0.55
1:A:1230:C:H5'	5:W:30:G:H5''	1.88	0.55
1:A:543:U:OP1	42:D:13:ARG:HG3	2.07	0.55
42:D:184:LYS:HD3	42:D:185:PRO:HD2	1.88	0.55
48:J:15:HIS:HA	48:J:18:ILE:HG22	1.89	0.55
50:L:109:ARG:HB3	50:L:118:VAL:HG21	1.89	0.55
50:L:47:ALA:HB3	50:L:49:ARG:HE	1.71	0.55
57:S:43:MET:HA	57:S:46:LEU:HD12	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Z:34:LEU:HD13	39:Z:34:LEU:O	2.07	0.55
2:01:118:A:H5'	2:01:119:A:H8	1.72	0.54
2:01:1360:G:H2'	2:01:1361:G:H5'	1.89	0.54
18:15:71:LYS:NZ	18:15:95:LEU:HD11	2.22	0.54
1:A:1031:C:H4'	1:A:1033:G:H21	1.71	0.54
1:A:1120:C:H2'	1:A:1121:U:C6	2.43	0.54
55:Q:35:LYS:NZ	55:Q:35:LYS:HB3	2.21	0.54
2:01:1394:U:H4'	2:01:1603:A:H4'	1.89	0.54
2:01:2087:G:H2'	2:01:2088:A:H8	1.73	0.54
2:01:2183:A:H2'	2:01:2184:A:H8	1.71	0.54
2:01:575:A:O2'	2:01:576:U:H5'	2.07	0.54
6:03:47:ASN:C	6:03:48:LEU:HD12	2.27	0.54
9:06:41:GLN:HG2	9:06:43:THR:HG23	1.88	0.54
16:13:71:ARG:HE	16:13:77:ILE:CD1	2.20	0.54
58:T:2:ASN:CG	58:T:3:ILE:H	2.11	0.54
58:T:34:VAL:O	58:T:38:ILE:HG13	2.07	0.54
39:Z:7:VAL:O	39:Z:11:ILE:HG13	2.07	0.54
2:01:1779:U:H5	2:01:1784:A:N7	2.05	0.54
2:01:2590:A:H61	2:01:2604:U:H3	1.53	0.54
2:01:433:C:O2'	2:01:434:U:H5'	2.07	0.54
6:03:41:SER:HA	6:03:177:LYS:HD3	1.88	0.54
13:10:22:ALA:HA	13:10:118:ILE:HG21	1.89	0.54
36:33:22:LYS:HA	36:33:48:MET:HA	1.89	0.54
37:34:36:ARG:HH11	37:34:36:ARG:HG3	1.72	0.54
1:A:575:G:O2'	1:A:821:G:H5'	2.06	0.54
41:C:13:ILE:N	41:C:13:ILE:HD12	2.23	0.54
41:C:55:VAL:CG2	41:C:66:THR:HB	2.36	0.54
45:G:137:ARG:HD2	45:G:137:ARG:O	2.07	0.54
47:I:80:HIS:O	47:I:84:ARG:HG2	2.07	0.54
54:P:67:ILE:N	54:P:67:ILE:HD12	2.23	0.54
2:01:1041:G:H2'	2:01:1042:G:H8	1.73	0.54
2:01:1443:U:H2'	2:01:1444:G:C8	2.42	0.54
2:01:745:G:H21	2:01:750:A:H61	1.53	0.54
8:05:4:LEU:HD22	8:05:32:ASN:ND2	2.22	0.54
8:05:2:ILE:HG13	8:05:3:GLY:N	2.21	0.54
11:08:17:LYS:HB2	11:08:24:THR:HB	1.88	0.54
23:20:11:GLN:NE2	23:20:11:GLN:N	2.56	0.54
30:27:14:LEU:HD23	30:27:14:LEU:O	2.06	0.54
30:27:23:ARG:HA	30:27:23:ARG:NE	2.21	0.54
1:A:1412:C:H2'	1:A:1413:A:C8	2.43	0.54
42:D:45:PRO:HB2	42:D:47:LEU:CD1	2.38	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:1076:C:O2'	14:11:92:PRO:HG3	2.06	0.54
2:01:1084:A:P	13:10:53:ARG:HG3	2.48	0.54
2:01:2039:U:H2'	2:01:2040:G:C8	2.42	0.54
2:01:395:U:H2'	2:01:396:G:C8	2.42	0.54
7:04:246:PRO:HG2	7:04:247:TRP:CE3	2.43	0.54
20:17:40:ILE:HG12	20:17:47:VAL:HG12	1.90	0.54
42:D:149:LYS:HG3	42:D:177:MET:CE	2.38	0.54
2:01:140:C:H2'	2:01:141:G:H4'	1.89	0.54
2:01:2238:G:N3	2:01:2238:G:H2'	2.22	0.54
2:01:2353:G:C3'	2:01:2354:C:H5''	2.38	0.54
2:01:558:U:P	15:12:113:PRO:HD2	2.48	0.54
6:03:8:MET:O	6:03:12:ARG:HG3	2.07	0.54
18:15:69:PRO:HA	18:15:94:ALA:HB2	1.89	0.54
20:17:35:ILE:HD11	20:17:106:LEU:HD12	1.89	0.54
1:A:259:G:P	58:T:77:ASN:HD22	2.30	0.54
41:C:180:ASP:HB3	41:C:204:GLY:H	1.72	0.54
48:J:59:LYS:CE	48:J:62:ARG:HH21	2.21	0.54
2:01:1794:A:H2'	2:01:1795:C:C6	2.43	0.54
2:01:184:C:H4'	2:01:217:A:C2	2.42	0.54
2:01:2475:C:H2'	2:01:2476:A:H5'	1.90	0.54
2:01:2834:G:H2'	2:01:2879:A:N6	2.23	0.54
7:04:131:MET:CE	7:04:187:CYS:HB2	2.38	0.54
11:08:88:LEU:HD22	11:08:95:ALA:HB2	1.89	0.54
24:21:74:ILE:CD1	24:21:105:VAL:HG22	2.37	0.54
1:A:1001:C:H2'	1:A:1002:G:C8	2.43	0.54
1:A:1219:A:H5''	52:N:52:ARG:HH12	1.73	0.54
1:A:276:G:H5'	55:Q:16:MET:CE	2.38	0.54
1:A:358:U:H2'	1:A:359:G:H8	1.73	0.54
47:I:41:GLU:HG3	47:I:42:THR:N	2.22	0.54
49:K:111:ASP:OD2	59:U:19:LYS:HD3	2.07	0.54
39:Z:345:THR:O	39:Z:349:LEU:HG	2.07	0.54
2:01:2257:U:O2'	2:01:2258:C:H5'	2.08	0.54
2:01:2360:G:H2'	2:01:2361:G:H5'	1.90	0.54
2:01:1252:G:OP2	22:19:13:HIS:HE1	1.90	0.54
23:20:58:VAL:O	23:20:58:VAL:HG13	2.08	0.54
36:33:39:ARG:O	36:33:43:LEU:HG	2.08	0.54
1:A:219:U:H3'	1:A:220:G:H5''	1.90	0.54
1:A:39:G:C3'	1:A:40:C:H5''	2.38	0.54
48:J:42:LEU:HD11	48:J:73:LEU:CG	2.29	0.54
2:01:1077:A:H2'	2:01:1078:U:H5'	1.90	0.54
11:08:27:GLY:HA3	11:08:78:VAL:HB	1.89	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:13:97:THR:O	16:13:118:LEU:HD13	2.08	0.54
1:A:711:G:O2'	1:A:712:A:H5'	2.08	0.54
46:H:95:MET:O	46:H:98:LEU:HD13	2.08	0.54
47:I:76:GLY:HA2	47:I:79:ARG:HG2	1.90	0.54
55:Q:22:VAL:HG22	55:Q:23:ALA:N	2.22	0.54
2:01:508:A:O2'	2:01:509:C:H5'	2.08	0.54
3:02:57:A:C2	10:07:25:MET:HB3	2.43	0.54
2:01:2746:U:H1'	11:08:138:GLN:HE22	1.73	0.54
32:29:2:LYS:HE2	32:29:5:ILE:HD13	1.90	0.54
1:A:376:G:C3'	1:A:377:G:H5''	2.38	0.54
48:J:57:VAL:O	48:J:58:ASN:HB2	2.08	0.54
48:J:7:ARG:O	48:J:101:SER:N	2.40	0.54
49:K:72:ALA:H	49:K:74:LYS:HZ2	1.57	0.54
1:A:526:C:OP2	50:L:87:LYS:HE2	2.07	0.54
39:Z:110:LEU:O	39:Z:110:LEU:HD23	2.07	0.54
2:01:2322:A:H2'	2:01:2323:G:O4'	2.07	0.53
2:01:2698:U:H2'	2:01:2699:C:C6	2.43	0.53
2:01:2578:G:H21	8:05:130:GLN:HE22	1.56	0.53
8:05:4:LEU:HD13	8:05:29:VAL:HG11	1.89	0.53
11:08:84:LYS:C	11:08:85:LYS:HD3	2.28	0.53
14:11:22:PRO:HB3	39:Z:60:ARG:HH22	1.73	0.53
29:26:31:ASN:HD22	29:26:52:ALA:HB2	1.73	0.53
1:A:1123:U:O2'	1:A:1124:G:H5'	2.08	0.53
1:A:437:U:C4'	42:D:153:ARG:HH12	2.21	0.53
42:D:109:THR:HG22	42:D:111:ALA:H	1.73	0.53
52:N:11:LYS:O	52:N:15:LEU:HD13	2.08	0.53
1:A:958:A:C2	57:S:54:ARG:HB3	2.43	0.53
39:Z:189:TYR:CZ	39:Z:224:PRO:HD3	2.43	0.53
1:A:332:G:OP1	58:T:4:LYS:HG3	2.09	0.53
2:01:1040:A:O2'	2:01:1041:G:H5'	2.07	0.53
7:04:41:GLY:CA	7:04:53:ILE:HD11	2.39	0.53
11:08:169:ARG:CD	11:08:169:ARG:H	2.22	0.53
11:08:88:LEU:CD2	11:08:95:ALA:HB2	2.39	0.53
21:18:88:ARG:HH11	21:18:112:ARG:HE	1.54	0.53
1:A:831:A:C3'	1:A:832:G:H5''	2.38	0.53
1:A:92:U:H3'	1:A:93:U:H5''	1.89	0.53
45:G:125:ASP:OD1	45:G:130:LYS:HE2	2.08	0.53
2:01:2334:U:C4'	20:17:12:THR:HB	2.38	0.53
1:A:194:C:O2'	1:A:195:A:H5'	2.08	0.53
40:B:156:LEU:HD12	40:B:156:LEU:O	2.08	0.53
50:L:39:THR:O	50:L:49:ARG:N	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M:49:GLU:HA	51:M:52:ILE:HD12	1.89	0.53
2:01:1255:U:C6	9:06:68:ALA:HA	2.43	0.53
12:09:90:LEU:HD23	12:09:93:SER:HA	1.90	0.53
13:10:58:THR:HA	13:10:63:ALA:HB2	1.89	0.53
32:29:17:SER:HB2	51:M:56:ARG:HH22	1.74	0.53
1:A:17:U:H2'	1:A:18:C:C6	2.44	0.53
1:A:626:G:H2'	1:A:627:G:C8	2.43	0.53
1:A:8:A:N7	42:D:205:LYS:HA	2.23	0.53
42:D:2:ARG:HB2	42:D:4:LEU:HD23	1.90	0.53
45:G:35:LYS:O	45:G:39:GLU:HG3	2.07	0.53
47:I:79:ARG:HG3	47:I:79:ARG:HH11	1.74	0.53
56:R:53:GLN:HA	56:R:53:GLN:HE21	1.74	0.53
2:01:1043:C:H2'	2:01:1044:C:O4'	2.08	0.53
14:11:11:GLN:HE22	14:11:41:PHE:HB2	1.73	0.53
18:15:16:ARG:N	18:15:16:ARG:HD2	2.23	0.53
36:33:28:LEU:HD21	36:33:43:LEU:HB2	1.90	0.53
1:A:219:U:C3'	1:A:220:G:H5''	2.39	0.53
7:04:66:PHE:HD1	7:04:142:ASN:HD21	1.57	0.53
2:01:2636:C:H4'	8:05:81:GLU:HG3	1.90	0.53
12:09:4:ILE:HG23	12:09:37:VAL:HG23	1.91	0.53
19:16:34:ILE:HD11	19:16:44:LEU:CD2	2.39	0.53
22:19:90:ASP:OD2	22:19:92:LYS:HB3	2.08	0.53
29:26:62:GLY:O	29:26:66:VAL:HG23	2.09	0.53
33:30:37:HIS:CD2	33:30:43:THR:HG22	2.43	0.53
1:A:1513:A:H2'	1:A:1514:G:C8	2.44	0.53
56:R:17:VAL:HG22	56:R:18:GLN:N	2.21	0.53
58:T:24:ARG:HB3	58:T:28:ARG:HH12	1.73	0.53
2:01:2086:U:H2'	2:01:2087:G:C8	2.44	0.53
2:01:932:U:H5'	2:01:933:A:N7	2.24	0.53
7:04:89:ASN:HD22	7:04:89:ASN:N	2.06	0.53
20:17:4:LYS:O	20:17:8:ILE:HG13	2.08	0.53
31:28:40:THR:HB	31:28:43:ILE:HG12	1.90	0.53
41:C:150:VAL:HG22	41:C:199:VAL:HG23	1.90	0.53
48:J:11:LYS:HG2	48:J:71:LEU:CD2	2.39	0.53
6:03:180:PHE:HB2	6:03:185:LEU:CD2	2.39	0.53
2:01:2641:G:H5'	15:12:78:THR:CG2	2.39	0.53
25:22:69:ARG:NH1	25:22:69:ARG:HB3	2.24	0.53
40:B:16:GLY:HA2	40:B:202:ASN:ND2	2.24	0.53
40:B:40:ILE:HD12	40:B:40:ILE:N	2.24	0.53
42:D:100:VAL:O	42:D:104:MET:HG2	2.09	0.53
54:P:28:ARG:HD2	54:P:28:ARG:O	2.08	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:06:196:VAL:O	9:06:200:LEU:HD13	2.08	0.53
13:10:23:LEU:N	13:10:118:ILE:HD12	2.23	0.53
1:A:493:A:H2'	1:A:494:G:C8	2.44	0.53
42:D:71:PHE:HE1	42:D:93:LEU:HD11	1.73	0.53
39:Z:238:ASP:OD2	39:Z:266:ILE:HG13	2.07	0.53
2:01:1882:U:H2'	2:01:1883:U:C6	2.44	0.52
13:10:25:ALA:HA	13:10:115:GLY:HA2	1.91	0.52
15:12:53:TYR:CE1	15:12:121:LYS:HG3	2.44	0.52
19:16:33:ILE:HG21	19:16:118:ARG:NH1	2.23	0.52
19:16:63:ARG:NH1	19:16:76:VAL:HG12	2.22	0.52
27:24:17:SER:HB3	27:24:21:ARG:NH1	2.17	0.52
35:32:26:ASN:HD22	35:32:26:ASN:N	2.06	0.52
1:A:39:G:H2'	1:A:40:C:C5'	2.34	0.52
1:A:406:G:H5'	42:D:4:LEU:CD1	2.39	0.52
53:O:81:ILE:HG22	53:O:86:LEU:HD11	1.89	0.52
58:T:2:ASN:ND2	58:T:3:ILE:H	2.07	0.52
39:Z:333:ILE:HD12	39:Z:333:ILE:N	2.23	0.52
2:01:1139:G:O2'	2:01:1140:C:H5'	2.09	0.52
2:01:1181:U:H2'	2:01:1182:G:C8	2.45	0.52
2:01:1609:A:H1'	2:01:1616:A:O4'	2.09	0.52
2:01:253:C:OP2	36:33:4:LYS:HE3	2.08	0.52
3:02:75:G:H5''	27:24:12:GLN:NE2	2.24	0.52
2:01:1826:G:OP1	7:04:222:THR:HG23	2.09	0.52
17:14:102:GLY:O	17:14:105:ILE:HD13	2.08	0.52
2:01:61:C:OP1	30:27:44:LYS:HB2	2.09	0.52
39:Z:278:ARG:HD3	39:Z:278:ARG:O	2.09	0.52
2:01:572:A:H61	2:01:2029:G:H21	1.56	0.52
10:07:122:ASP:OD1	10:07:126:ASN:HB2	2.09	0.52
21:18:102:ARG:HD2	21:18:106:ALA:HB1	1.92	0.52
32:29:59:ARG:HH21	32:29:62:LYS:HB2	1.75	0.52
1:A:1280:A:O2'	1:A:1281:C:H5'	2.08	0.52
1:A:663:A:H5'	1:A:836:G:OP1	2.09	0.52
47:I:90:ASP:C	47:I:94:ARG:HG2	2.30	0.52
49:K:74:LYS:HD3	49:K:74:LYS:H	1.74	0.52
58:T:66:ILE:HG23	58:T:70:LYS:HD3	1.91	0.52
4:Y:44:LYS:NZ	4:Y:44:LYS:HB3	2.24	0.52
2:01:2295:C:O2'	2:01:2296:U:H5'	2.08	0.52
2:01:662:G:O2'	2:01:663:G:H5'	2.09	0.52
2:01:703:U:H2'	2:01:704:G:O4'	2.09	0.52
6:03:29:LEU:O	6:03:33:LEU:HG	2.10	0.52
16:13:102:PRO:HB3	16:13:121:GLU:HB2	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:13:21:CYS:HA	16:13:41:ILE:HG22	1.90	0.52
22:19:54:ARG:O	22:19:58:GLN:HG3	2.09	0.52
1:A:558:G:H3'	1:A:559:A:H5'	1.90	0.52
1:A:736:C:H2'	1:A:737:C:C6	2.45	0.52
1:A:865:A:H2'	1:A:866:C:C6	2.45	0.52
45:G:29:LEU:O	45:G:29:LEU:HD23	2.10	0.52
1:A:1292:G:H5'	47:I:40:ARG:HE	1.74	0.52
48:J:7:ARG:N	48:J:101:SER:O	2.43	0.52
48:J:82:LYS:O	48:J:86:ALA:N	2.43	0.52
49:K:72:ALA:HA	49:K:74:LYS:NZ	2.24	0.52
51:M:16:ILE:N	51:M:16:ILE:HD12	2.25	0.52
51:M:77:LYS:HZ3	51:M:77:LYS:HB3	1.72	0.52
11:08:23:ILE:N	11:08:23:ILE:HD12	2.24	0.52
14:11:108:ILE:O	14:11:112:LYS:HG2	2.09	0.52
16:13:58:LEU:HD23	16:13:58:LEU:N	2.24	0.52
18:15:109:PRO:HD2	18:15:112:LEU:HD12	1.90	0.52
18:15:78:LEU:N	18:15:78:LEU:HD12	2.25	0.52
21:18:13:LYS:HG2	21:18:15:ASP:OD1	2.09	0.52
1:A:1005:A:H62	1:A:1024:G:H1'	1.74	0.52
1:A:463:U:H3	1:A:469:C:H42	1.56	0.52
41:C:56:ILE:HG23	41:C:63:ILE:HD11	1.92	0.52
42:D:149:LYS:NZ	42:D:149:LYS:HB3	2.25	0.52
42:D:116:LEU:HD23	42:D:153:ARG:HH21	1.75	0.52
59:U:16:ARG:HE	59:U:20:ARG:NH2	2.07	0.52
2:01:1300:G:H4'	2:01:1301:A:H5'	1.91	0.52
2:01:2638:G:H1'	2:01:2778:A:H61	1.75	0.52
2:01:948:C:H2'	2:01:949:G:C8	2.45	0.52
2:01:948:C:H2'	2:01:949:G:H8	1.75	0.52
8:05:149:ASN:O	8:05:152:PRO:HD2	2.10	0.52
10:07:39:VAL:HG13	10:07:40:GLY:N	2.24	0.52
15:12:74:TYR:CD2	15:12:92:MET:HG3	2.44	0.52
16:13:99:ILE:HD12	16:13:99:ILE:N	2.25	0.52
19:16:2:ARG:HD3	19:16:2:ARG:O	2.09	0.52
22:19:34:ALA:O	22:19:38:VAL:HG23	2.10	0.52
24:21:4:ILE:HG22	24:21:106:VAL:HG22	1.91	0.52
48:J:52:LEU:HD12	48:J:52:LEU:N	2.24	0.52
57:S:63:ASP:O	57:S:66:VAL:HG13	2.10	0.52
2:01:1255:U:C5	9:06:68:ALA:HA	2.44	0.52
2:01:155:A:H2'	2:01:156:A:C8	2.45	0.52
2:01:2120:G:H2'	2:01:2121:G:C8	2.44	0.52
2:01:910:A:H62	18:15:12:MET:HA	1.74	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1060:U:C5	41:C:1:GLY:HA3	2.42	0.52
47:I:119:LYS:HB2	47:I:119:LYS:NZ	2.25	0.52
57:S:66:VAL:HG23	57:S:67:GLY:N	2.25	0.52
2:01:1965:C:H5'	2:01:1966:A:H2'	1.92	0.52
2:01:2039:U:H2'	2:01:2040:G:H8	1.74	0.52
6:03:163:TYR:HB2	6:03:171:ILE:HD11	1.92	0.52
8:05:40:LEU:N	8:05:40:LEU:HD12	2.25	0.52
11:08:103:ASN:HD22	11:08:104:LEU:H	1.56	0.52
13:10:129:LEU:HD12	13:10:129:LEU:O	2.10	0.52
3:02:52:A:H61	20:17:33:ARG:HB2	1.75	0.52
25:22:61:LEU:CD1	25:22:82:LYS:HB3	2.40	0.52
1:A:108:G:N1	58:T:9:ARG:HG2	2.24	0.52
1:A:1273:C:H2'	1:A:1274:A:O4'	2.10	0.52
41:C:72:PRO:O	41:C:76:ILE:HG12	2.09	0.52
46:H:88:LYS:HE2	46:H:119:GLY:HA2	1.92	0.52
47:I:94:ARG:O	47:I:98:ARG:N	2.39	0.52
52:N:59:GLN:HA	52:N:59:GLN:HE21	1.74	0.52
2:01:686:U:H3'	2:01:687:C:H5'	1.91	0.52
7:04:202:ARG:O	7:04:202:ARG:HD2	2.09	0.52
9:06:123:LYS:HE3	9:06:125:SER:HB3	1.91	0.52
2:01:2444:G:OP2	9:06:63:LYS:HD2	2.10	0.52
17:14:105:ILE:N	17:14:105:ILE:HD12	2.25	0.52
20:17:53:THR:HG23	20:17:74:VAL:HG11	1.91	0.52
24:21:83:LYS:HD2	24:21:95:ARG:HH11	1.74	0.52
47:I:24:ASN:HD22	47:I:26:LYS:NZ	2.07	0.52
1:A:618:C:H1'	54:P:14:ARG:HH12	1.74	0.52
2:01:1023:U:O2'	2:01:1122:G:H5'	2.09	0.52
2:01:2243:U:H2'	2:01:2244:U:C6	2.45	0.52
2:01:581:C:H2'	2:01:582:A:C8	2.45	0.52
18:15:33:LEU:HD21	18:15:128:THR:HB	1.91	0.52
15:12:4:PHE:CD2	22:19:99:VAL:HG11	2.45	0.52
23:20:27:ILE:HG23	23:20:31:GLU:OE1	2.10	0.52
52:N:22:LYS:HD3	52:N:22:LYS:O	2.10	0.52
2:01:2639:A:H2'	2:01:2640:G:O4'	2.11	0.51
2:01:671:C:H2'	2:01:672:C:C6	2.45	0.51
14:11:41:PHE:O	14:11:45:THR:HG22	2.09	0.51
2:01:989:G:OP2	31:28:11:SER:HB2	2.10	0.51
1:A:1241:G:H2'	1:A:1242:G:C8	2.44	0.51
44:F:76:THR:HG23	44:F:79:ARG:NH2	2.25	0.51
48:J:24:GLU:O	48:J:28:THR:N	2.41	0.51
48:J:32:THR:HG23	48:J:33:GLY:N	2.24	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:R:37:LYS:NZ	56:R:37:LYS:HB2	2.25	0.51
59:U:8:ASN:H	59:U:8:ASN:ND2	2.06	0.51
39:Z:80:VAL:HG21	39:Z:106:LEU:HD11	1.93	0.51
2:01:2092:U:H4'	2:01:2093:G:C5'	2.38	0.51
2:01:96:C:H4'	30:27:41:HIS:CD2	2.45	0.51
8:05:124:ARG:HA	8:05:165:MET:CE	2.40	0.51
13:10:95:LEU:HD22	13:10:95:LEU:N	2.25	0.51
27:24:56:PHE:HE1	27:24:61:LEU:HD21	1.73	0.51
47:I:78:ILE:O	47:I:82:ILE:HG13	2.11	0.51
58:T:24:ARG:HB3	58:T:28:ARG:NH1	2.26	0.51
5:X:36:U:C2'	5:X:37:A:H5'	2.40	0.51
2:01:1186:G:H2'	2:01:1187:G:O4'	2.10	0.51
2:01:1827:U:O2'	2:01:1828:G:H5'	2.09	0.51
2:01:717:C:H2'	2:01:718:A:H5'	1.92	0.51
12:09:27:ARG:NH1	29:26:55:MET:HE2	2.26	0.51
1:A:1049:U:O2'	52:N:2:LYS:HD3	2.10	0.51
1:A:395:C:N4	1:A:396:C:H41	2.07	0.51
40:B:161:PHE:CZ	40:B:216:VAL:HG21	2.45	0.51
42:D:88:ASN:HD22	42:D:88:ASN:N	2.08	0.51
46:H:50:VAL:O	46:H:50:VAL:HG22	2.11	0.51
48:J:89:ARG:C	48:J:90:LEU:HD12	2.30	0.51
6:03:47:ASN:HD22	6:03:211:LYS:HB3	1.76	0.51
9:06:77:ILE:HG13	9:06:78:TRP:HD1	1.74	0.51
11:08:93:TYR:CD1	11:08:106:LEU:HA	2.46	0.51
12:09:99:ILE:HD12	12:09:117:LEU:HD21	1.93	0.51
25:22:64:LYS:HB3	25:22:64:LYS:NZ	2.25	0.51
1:A:1162:C:H2'	1:A:1163:A:C8	2.45	0.51
1:A:396:C:O2'	1:A:397:A:H5''	2.10	0.51
1:A:413:G:H1'	1:A:428:G:H22	1.76	0.51
39:Z:284:LYS:O	39:Z:288:MET:HG3	2.10	0.51
2:01:1424:G:H2'	2:01:1425:G:O4'	2.10	0.51
2:01:2011:U:H2'	2:01:2012:G:O4'	2.10	0.51
2:01:488:G:N2	2:01:491:G:H5''	2.25	0.51
9:06:132:LYS:HD3	9:06:132:LYS:O	2.11	0.51
2:01:2380:C:H5'	20:17:17:LYS:HE3	1.91	0.51
32:29:5:ILE:HG13	32:29:6:HIS:CD2	2.46	0.51
33:30:12:ARG:HD2	33:30:16:ARG:NH2	2.25	0.51
1:A:952:U:H4'	1:A:964:A:H61	1.74	0.51
41:C:111:ASP:HB3	41:C:114:LEU:HD12	1.93	0.51
43:E:40:ASP:OD1	43:E:44:ARG:HB3	2.11	0.51
46:H:45:ILE:HG13	46:H:46:GLU:N	2.25	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q:20:ILE:O	55:Q:45:VAL:N	2.43	0.51
2:01:1565:C:O2'	2:01:1566:A:H2'	2.10	0.51
2:01:2022:U:O2'	2:01:2617:U:H5'	2.11	0.51
2:01:2114:A:H2'	2:01:2114:A:N3	2.25	0.51
2:01:545:U:H2'	2:01:546:U:O4'	2.11	0.51
26:23:26:ASN:ND2	26:23:34:ILE:HD11	2.25	0.51
3:02:83:G:H4'	31:28:52:PHE:CD2	2.46	0.51
1:A:29:U:O2'	1:A:30:U:H5'	2.11	0.51
2:01:1637:A:H5'	2:01:1760:C:O2'	2.11	0.51
2:01:1923:U:H2'	2:01:1924:C:C6	2.46	0.51
2:01:49:A:H5'	2:01:51:G:O4'	2.10	0.51
22:19:13:HIS:O	22:19:17:LEU:HD13	2.11	0.51
1:A:1024:G:O2'	1:A:1025:U:H5'	2.10	0.51
49:K:88:PRO:HA	49:K:92:ARG:HD2	1.93	0.51
2:01:2520:C:O2'	2:01:2521:C:H5'	2.11	0.51
6:03:163:TYR:HD2	6:03:171:ILE:HG12	1.76	0.51
1:A:1278:G:H5'	1:A:1279:G:H5'	1.91	0.51
55:Q:32:ILE:HD12	55:Q:32:ILE:H	1.74	0.51
59:U:36:PHE:HB3	59:U:39:LYS:HB3	1.91	0.51
2:01:851:C:H2'	2:01:852:U:C6	2.46	0.51
3:02:55:U:O2'	3:02:56:G:H5'	2.10	0.51
10:07:140:ILE:N	10:07:140:ILE:HD12	2.26	0.51
17:14:117:THR:HG22	17:14:118:THR:N	2.26	0.51
3:02:12:C:H42	28:25:70:PRO:HG3	1.75	0.51
43:E:104:ILE:HG23	43:E:104:ILE:O	2.11	0.51
43:E:73:VAL:HG11	43:E:143:LEU:HB3	1.93	0.51
44:F:47:LEU:HD13	44:F:51:ILE:HG12	1.93	0.51
48:J:57:VAL:HG22	48:J:58:ASN:N	2.24	0.51
55:Q:26:ARG:O	55:Q:26:ARG:HD3	2.11	0.51
2:01:2788:C:H2'	2:01:2789:C:C6	2.46	0.51
2:01:2799:A:H2'	2:01:2800:A:H5'	1.92	0.51
12:09:8:LYS:O	12:09:8:LYS:HG2	2.10	0.51
13:10:33:VAL:HG22	13:10:36:ASP:OD2	2.10	0.51
21:18:62:LYS:HB3	21:18:62:LYS:HZ3	1.74	0.51
24:21:11:ARG:HD2	24:21:11:ARG:N	2.24	0.51
27:24:81:PRO:HG2	27:24:82:TYR:CD1	2.46	0.51
40:B:79:VAL:HA	40:B:213:LEU:HD21	1.93	0.51
40:B:91:VAL:O	40:B:91:VAL:HG23	2.11	0.51
42:D:183:ARG:HH11	42:D:183:ARG:HG2	1.76	0.51
52:N:63:CYS:HB2	52:N:79:SER:OG	2.11	0.51
57:S:36:ARG:O	57:S:69:LYS:HD2	2.11	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:826:U:H2'	2:01:828:U:O4'	2.11	0.50
7:04:213:ARG:HG3	7:04:213:ARG:HH11	1.76	0.50
11:08:5:LYS:NZ	11:08:5:LYS:HB2	2.25	0.50
1:A:1317:C:H4'	52:N:47:LEU:HD21	1.92	0.50
40:B:23:ASN:HD21	40:B:25:LYS:HB2	1.75	0.50
5:W:6:G:O2'	5:W:7:G:H5'	2.11	0.50
2:01:1336:A:H2'	2:01:1337:G:C8	2.46	0.50
13:10:97:LYS:O	13:10:101:LYS:HG3	2.10	0.50
25:22:61:LEU:HD12	25:22:61:LEU:O	2.12	0.50
28:25:66:GLU:N	28:25:75:PHE:O	2.42	0.50
2:01:189:G:P	29:26:13:THR:HG21	2.51	0.50
36:33:36:ALA:HB3	36:33:39:ARG:HG2	1.93	0.50
1:A:162:A:H2'	1:A:163:C:O4'	2.12	0.50
1:A:538:G:OP1	50:L:109:ARG:HD2	2.11	0.50
40:B:42:LEU:H	40:B:42:LEU:CD2	2.24	0.50
42:D:31:CYS:HB3	42:D:32:LYS:CD	2.40	0.50
48:J:40:ILE:HG22	48:J:42:LEU:HG	1.93	0.50
54:P:20:VAL:HA	54:P:35:ARG:HA	1.93	0.50
39:Z:144:TRP:CE2	39:Z:201:LEU:HB2	2.47	0.50
2:01:1909:C:H2'	2:01:1910:G:H8	1.77	0.50
2:01:2178:C:H2'	2:01:2179:C:C5	2.46	0.50
2:01:767:U:H2'	2:01:768:G:H8	1.77	0.50
12:09:14:SER:HB3	12:09:17:ASP:OD2	2.11	0.50
2:01:2469:A:H1'	18:15:55:ARG:NH2	2.26	0.50
21:18:23:ASP:O	21:18:46:VAL:HG23	2.11	0.50
24:21:69:LEU:HG	24:21:107:VAL:HG22	1.94	0.50
33:30:8:THR:HG22	33:30:9:ARG:H	1.75	0.50
1:A:1497:G:O2'	1:A:1498:U:H5'	2.11	0.50
40:B:99:MET:C	40:B:100:LEU:HD12	2.31	0.50
43:E:107:GLY:H	43:E:110:MET:HE2	1.76	0.50
39:Z:16:GLU:O	39:Z:20:VAL:HG23	2.12	0.50
2:01:854:C:O2'	2:01:855:G:H5'	2.12	0.50
15:12:134:ALA:HB3	15:12:135:GLN:HE22	1.77	0.50
2:01:1665:A:H1'	16:13:1:MET:HB2	1.93	0.50
24:21:19:LEU:HG	33:30:21:LEU:HG	1.93	0.50
2:01:1339:G:H5'	25:22:19:LYS:HD3	1.93	0.50
1:A:381:C:H2'	1:A:382:A:O4'	2.11	0.50
1:A:632:U:H3'	1:A:633:G:H5'	1.93	0.50
40:B:80:LYS:HA	40:B:90:PHE:CE2	2.47	0.50
39:Z:270:ILE:HG23	39:Z:294:LYS:HD3	1.94	0.50
2:01:1564:C:H2'	2:01:1565:C:O4'	2.12	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:2747:G:O6	2:01:2755:C:H5''	2.12	0.50
2:01:900:A:H2'	2:01:901:C:O4'	2.12	0.50
2:01:948:C:H1'	2:01:984:A:O2'	2.12	0.50
2:01:1799:G:C8	7:04:179:GLU:HG3	2.46	0.50
8:05:7:LYS:HD3	8:05:77:ARG:HH12	1.76	0.50
22:19:68:ALA:HB1	22:19:73:ILE:HG23	1.93	0.50
24:21:24:ILE:O	24:21:24:ILE:HG13	2.12	0.50
35:32:19:ARG:HG2	35:32:19:ARG:HH21	1.76	0.50
41:C:178:ARG:HD2	41:C:206:ILE:HB	1.92	0.50
43:E:15:ILE:N	43:E:15:ILE:HD12	2.25	0.50
48:J:44:THR:HG23	48:J:69:THR:O	2.12	0.50
6:03:209:ILE:HG13	6:03:209:ILE:O	2.12	0.50
9:06:5:LEU:HD23	9:06:6:LYS:H	1.76	0.50
12:09:40:THR:HB	12:09:43:ASN:ND2	2.26	0.50
12:09:40:THR:O	12:09:44:ILE:HG12	2.11	0.50
27:24:7:GLU:O	27:24:41:GLU:HG2	2.11	0.50
27:24:83:LYS:HB2	27:24:83:LYS:NZ	2.27	0.50
29:26:31:ASN:ND2	29:26:52:ALA:HB2	2.26	0.50
1:A:741:G:H4'	53:O:54:GLY:HA3	1.94	0.50
40:B:159:ALA:C	40:B:160:LEU:HD12	2.32	0.50
40:B:94:ARG:HD2	40:B:94:ARG:N	2.26	0.50
42:D:60:VAL:HG21	42:D:199:ILE:HD11	1.93	0.50
59:U:32:ARG:HG3	59:U:33:ARG:HG3	1.93	0.50
2:01:2125:G:H1	2:01:2170:A:H5'	1.76	0.50
2:01:1783:A:N1	2:01:2587:A:H2'	2.27	0.50
2:01:680:C:H2'	2:01:681:G:C8	2.46	0.50
2:01:873:C:H2'	2:01:874:G:C8	2.47	0.50
7:04:244:VAL:HA	7:04:251:THR:HG22	1.93	0.50
8:05:179:ARG:H	8:05:188:LEU:HB2	1.76	0.50
12:09:103:VAL:HG12	12:09:108:VAL:HB	1.93	0.50
17:14:131:ALA:O	17:14:135:ILE:HG13	2.12	0.50
20:17:49:VAL:HG21	20:17:81:ARG:HB3	1.94	0.50
30:27:21:LEU:HA	30:27:25:GLN:HB3	1.92	0.50
36:33:35:LYS:O	36:33:40:LYS:HE3	2.12	0.50
58:T:56:ILE:N	58:T:56:ILE:HD12	2.26	0.50
2:01:1148:U:C2'	2:01:1149:G:H5''	2.41	0.50
2:01:1378:A:H1'	2:01:1379:U:C5'	2.47	0.50
2:01:1509:A:H2'	2:01:1510:G:C8	2.47	0.50
2:01:1657:U:H2'	2:01:1658:C:C6	2.46	0.50
2:01:1909:C:H2'	2:01:1910:G:C8	2.47	0.50
2:01:1936:A:H3'	2:01:1937:A:H5'	1.94	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:2162:G:H2'	2:01:2163:A:H5'	1.94	0.50
2:01:2267:A:H5''	2:01:2268:A:H5'	1.92	0.50
2:01:2553:G:C3'	2:01:2554:U:H5''	2.40	0.50
2:01:420:C:O2'	2:01:421:C:H5'	2.10	0.50
2:01:827:U:H4'	2:01:828:U:C5	2.46	0.50
2:01:962:G:H21	2:01:2250:G:H1	1.59	0.50
2:01:322:A:OP2	9:06:163:ASN:HB2	2.12	0.50
10:07:56:LEU:HD13	10:07:86:CYS:HB2	1.94	0.50
25:22:28:ASN:OD1	25:22:87:LEU:HB2	2.12	0.50
26:23:5:ARG:HB2	26:23:8:ASP:OD2	2.11	0.50
1:A:420:U:H4'	1:A:421:U:C5	2.33	0.50
44:F:90:MET:HE1	56:R:60:ARG:HD3	1.93	0.50
49:K:33:ILE:HG23	49:K:69:CYS:SG	2.52	0.50
4:Y:22:ASP:OD1	4:Y:23:PRO:HD2	2.11	0.50
2:01:1170:C:H2'	2:01:1171:G:C8	2.46	0.50
2:01:2087:G:H2'	2:01:2088:A:C8	2.47	0.50
2:01:2465:C:O2'	2:01:2466:C:H5'	2.11	0.50
2:01:813:U:H2'	2:01:814:C:H6	1.77	0.50
2:01:941:A:H2'	2:01:942:G:O4'	2.12	0.50
3:02:53:A:N3	3:02:53:A:H2'	2.26	0.50
7:04:41:GLY:HA2	7:04:53:ILE:HD11	1.94	0.50
13:10:8:LYS:NZ	13:10:8:LYS:HB3	2.27	0.50
15:12:7:LYS:N	15:12:7:LYS:HD2	2.27	0.50
21:18:88:ARG:NH1	21:18:112:ARG:HE	2.08	0.50
27:24:9:ARG:HH21	27:24:39:ALA:HB1	1.77	0.50
48:J:5:ARG:HD3	48:J:79:PRO:HD3	1.93	0.50
50:L:49:ARG:HG3	50:L:89:LEU:HD11	1.93	0.50
2:01:2282:G:H4'	2:01:2389:G:O2'	2.12	0.49
2:01:2547:A:H2'	2:01:2548:U:C6	2.47	0.49
2:01:2655:G:O2'	2:01:2656:U:H5	1.95	0.49
21:18:105:LYS:HB3	21:18:108:ARG:NH2	2.26	0.49
1:A:1329:A:H5''	51:M:24:VAL:HA	1.94	0.49
53:O:45:HIS:O	53:O:47:LYS:N	2.44	0.49
56:R:47:ARG:CD	56:R:47:ARG:H	2.19	0.49
2:01:2452:C:N4	2:01:2504:U:C4	2.79	0.49
2:01:691:C:O2'	2:01:692:C:H5'	2.12	0.49
13:10:24:SER:N	13:10:118:ILE:HD12	2.27	0.49
14:11:56:VAL:HG22	14:11:57:VAL:N	2.26	0.49
36:33:31:ILE:O	36:33:35:LYS:HE3	2.12	0.49
48:J:65:TYR:HA	52:N:97:LYS:O	2.12	0.49
5:X:72:A:H2'	5:X:73:A:C4'	2.42	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Z:340:VAL:HG21	39:Z:359:ALA:HB2	1.94	0.49
2:01:1666:G:O2'	2:01:1667:G:H5'	2.13	0.49
2:01:2194:U:H2'	2:01:2195:U:C6	2.47	0.49
2:01:2281:A:O2'	2:01:2282:G:H5'	2.12	0.49
2:01:2683:C:C4'	8:05:13:ARG:HH11	2.24	0.49
2:01:2239:G:H5'	7:04:248:GLY:HA3	1.92	0.49
2:01:586:A:H5'	9:06:84:THR:HG21	1.93	0.49
1:A:1210:C:H2'	1:A:1211:U:H5'	1.93	0.49
1:A:1414:U:H2'	1:A:1415:G:H8	1.77	0.49
1:A:1436:U:H2'	1:A:1437:A:C8	2.47	0.49
45:G:28:ILE:O	45:G:28:ILE:HG22	2.12	0.49
45:G:46:LEU:HD11	45:G:57:GLU:HB3	1.93	0.49
45:G:78:ARG:H	45:G:78:ARG:CD	2.22	0.49
46:H:34:ALA:O	46:H:38:VAL:HG23	2.12	0.49
52:N:79:SER:O	52:N:83:VAL:HG23	2.11	0.49
13:10:117:LEU:HD12	13:10:117:LEU:N	2.27	0.49
25:22:33:LYS:HG2	25:22:80:TRP:CZ3	2.48	0.49
27:24:80:HIS:ND1	27:24:81:PRO:HD2	2.28	0.49
3:02:12:C:N4	28:25:70:PRO:HG3	2.27	0.49
31:28:6:ILE:N	31:28:6:ILE:HD12	2.28	0.49
2:01:2884:U:H1'	33:30:49:ARG:NH1	2.28	0.49
37:34:5:ALA:O	37:34:38:GLY:HA2	2.11	0.49
1:A:762:U:H2'	1:A:763:G:C8	2.47	0.49
42:D:58:GLN:O	42:D:62:ARG:HG2	2.13	0.49
43:E:96:GLN:HG2	43:E:123:LEU:HD12	1.95	0.49
52:N:65:GLN:HE21	52:N:82:LYS:CE	2.25	0.49
39:Z:45:ASP:HA	39:Z:48:ASN:HD22	1.77	0.49
2:01:1454:C:O2'	19:16:60:VAL:HG22	2.13	0.49
2:01:2529:G:OP2	2:01:2530:A:H5''	2.11	0.49
2:01:687:C:H42	2:01:787:C:H4'	1.77	0.49
19:16:13:ASN:O	19:16:17:ARG:HG3	2.12	0.49
1:A:31:G:H1	1:A:48:C:H5''	1.78	0.49
41:C:179:ALA:HB1	41:C:202:PHE:HE1	1.77	0.49
41:C:203:LYS:NZ	41:C:203:LYS:HB2	2.27	0.49
42:D:1:ALA:HA	42:D:67:LEU:HD11	1.94	0.49
48:J:9:ARG:HB3	48:J:99:GLN:HB3	1.94	0.49
1:A:675:A:H1'	49:K:117:HIS:CD2	2.47	0.49
2:01:1225:G:OP1	23:20:88:GLY:HA3	2.12	0.49
2:01:1386:C:H2'	2:01:1387:A:C8	2.47	0.49
2:01:189:G:H2'	2:01:205:G:N2	2.27	0.49
7:04:57:HIS:CD2	7:04:58:LYS:H	2.30	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:05:202:ILE:HD12	8:05:202:ILE:N	2.28	0.49
10:07:125:GLY:C	10:07:126:ASN:HD22	2.16	0.49
23:20:79:ARG:HG3	23:20:80:ARG:HE	1.77	0.49
35:32:26:ASN:ND2	35:32:26:ASN:N	2.60	0.49
40:B:93:HIS:CD2	40:B:145:ASN:HB2	2.48	0.49
41:C:21:TRP:HB3	41:C:58:ARG:HB3	1.94	0.49
44:F:54:LEU:HD12	44:F:54:LEU:O	2.13	0.49
55:Q:46:HIS:HB3	55:Q:73:THR:HG22	1.95	0.49
39:Z:87:ALA:HB2	39:Z:95:THR:CG2	2.40	0.49
2:01:1277:G:H5'	19:16:40:LYS:NZ	2.28	0.49
2:01:1386:C:H2'	2:01:1387:A:H8	1.78	0.49
2:01:1417:C:H4'	2:01:1587:G:H21	1.77	0.49
2:01:1700:A:H2'	2:01:1701:A:H5'	1.95	0.49
2:01:460:A:H2'	2:01:461:C:O4'	2.13	0.49
12:09:62:LEU:CD2	12:09:66:ASN:HD21	2.26	0.49
14:11:50:LYS:CB	14:11:50:LYS:HZ3	2.25	0.49
17:14:17:LYS:HD2	17:14:27:LEU:HD21	1.95	0.49
1:A:1062:U:H2'	1:A:1063:C:C6	2.48	0.49
1:A:132:C:H5'	1:A:262:A:O2'	2.13	0.49
41:C:107:LYS:HD3	41:C:143:LEU:HG	1.94	0.49
46:H:31:LEU:O	46:H:35:ILE:HG13	2.13	0.49
48:J:40:ILE:HG23	48:J:41:PRO:HD2	1.93	0.49
50:L:109:ARG:NH1	50:L:112:ALA:H	2.06	0.49
2:01:2224:G:H4'	2:01:2226:C:C2	2.48	0.49
2:01:669:G:N3	2:01:669:G:H2'	2.28	0.49
12:09:62:LEU:O	12:09:62:LEU:HD23	2.13	0.49
15:12:74:TYR:HD2	15:12:92:MET:HG3	1.78	0.49
17:14:128:THR:O	17:14:132:ARG:HG3	2.13	0.49
21:18:10:GLU:HG3	21:18:11:GLN:HG3	1.94	0.49
1:A:517:G:H4'	1:A:519:C:C2	2.48	0.49
1:A:754:C:H5'	53:O:71:ARG:NH2	2.27	0.49
1:A:784:A:H2'	1:A:785:G:C8	2.47	0.49
1:A:996:A:H2'	1:A:997:U:C6	2.48	0.49
40:B:70:GLY:HA2	40:B:163:ILE:CG2	2.43	0.49
41:C:119:ILE:HG23	41:C:132:ALA:HB1	1.95	0.49
42:D:123:MET:HG3	42:D:145:ARG:HB2	1.95	0.49
49:K:86:LYS:CG	49:K:112:VAL:HG23	2.43	0.49
39:Z:150:ARG:HH11	39:Z:150:ARG:HG2	1.76	0.49
2:01:1930:G:N2	2:01:1968:G:H2'	2.27	0.49
2:01:2543:G:H21	2:01:2646:C:H5''	1.77	0.49
7:04:131:MET:HG2	7:04:134:ILE:HD12	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:04:4:LYS:NZ	7:04:4:LYS:HB2	2.27	0.49
26:23:26:ASN:O	26:23:34:ILE:HG12	2.13	0.49
28:25:67:VAL:HG12	28:25:67:VAL:O	2.13	0.49
37:34:24:ARG:HG2	37:34:24:ARG:HH21	1.78	0.49
1:A:219:U:H2'	1:A:220:G:C5'	2.43	0.49
1:A:950:U:H2'	1:A:951:G:H8	1.78	0.49
41:C:81:GLU:O	41:C:85:LYS:HG3	2.12	0.49
47:I:118:ARG:HG3	47:I:118:ARG:HH11	1.78	0.49
47:I:14:SER:HA	47:I:68:GLY:HA3	1.95	0.49
1:A:1147:C:H4'	47:I:6:TYR:CE2	2.48	0.49
47:I:89:TYR:HB3	47:I:93:LEU:HB2	1.94	0.49
48:J:49:PHE:N	48:J:65:TYR:O	2.44	0.49
53:O:28:VAL:HG11	53:O:66:LEU:HD21	1.95	0.49
39:Z:164:GLU:HB2	39:Z:182:LYS:HB3	1.94	0.49
2:01:1521:G:H3'	2:01:1522:A:C5'	2.39	0.49
2:01:1796:U:H2'	2:01:1797:G:H8	1.76	0.49
15:12:69:ARG:HA	15:12:89:PHE:HD2	1.77	0.49
24:21:88:ARG:HG3	24:21:94:ASP:OD2	2.13	0.49
2:01:1263:U:O2'	33:30:7:PRO:HD2	2.12	0.49
42:D:100:VAL:HG21	42:D:136:VAL:HG21	1.93	0.49
42:D:149:LYS:HG3	42:D:177:MET:HE3	1.95	0.49
47:I:115:VAL:HG11	48:J:62:ARG:HB2	1.95	0.49
50:L:109:ARG:HG3	50:L:109:ARG:HH11	1.78	0.49
2:01:239:C:HO2'	2:01:621:A:H2	1.61	0.48
7:04:116:GLN:HG3	7:04:121:ALA:HB2	1.95	0.48
24:21:72:THR:HG22	24:21:73:LYS:HG3	1.95	0.48
1:A:1148:U:H2'	1:A:1149:C:O4'	2.13	0.48
1:A:1236:A:H4'	1:A:1304:G:H4'	1.94	0.48
1:A:831:A:H3'	1:A:832:G:H5''	1.95	0.48
1:A:868:C:H2'	1:A:869:G:O4'	2.12	0.48
53:O:34:GLN:NE2	53:O:38:LEU:HB2	2.28	0.48
39:Z:166:ILE:HD11	39:Z:182:LYS:HB2	1.95	0.48
2:01:112:U:H2'	2:01:113:U:H5'	1.94	0.48
2:01:2578:G:H21	8:05:130:GLN:NE2	2.11	0.48
2:01:2743:U:C3'	2:01:2744:G:H5''	2.43	0.48
2:01:771:G:OP1	35:32:14:ARG:HD2	2.14	0.48
25:22:11:LEU:HD23	25:22:50:LEU:HD23	1.94	0.48
25:22:76:ARG:CB	25:22:76:ARG:HH11	2.21	0.48
1:A:371:A:H2'	1:A:372:C:O4'	2.13	0.48
1:A:413:G:H1'	1:A:428:G:N2	2.27	0.48
1:A:516:U:O4	1:A:533:A:N7	2.46	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:I:114:LYS:CE	47:I:117:LEU:HD12	2.38	0.48
50:L:86:VAL:HG21	50:L:89:LEU:HD13	1.95	0.48
52:N:55:SER:HB2	52:N:56:PRO:HA	1.95	0.48
53:O:28:VAL:HG13	53:O:62:ARG:HG3	1.95	0.48
57:S:4:LEU:H	57:S:4:LEU:CD2	2.22	0.48
58:T:84:LYS:NZ	58:T:84:LYS:HB2	2.27	0.48
2:01:2153:C:H2'	2:01:2154:A:H5'	1.94	0.48
2:01:225:C:H2'	2:01:226:A:O4'	2.13	0.48
2:01:2679:A:O2'	2:01:2680:U:H5'	2.12	0.48
2:01:594:U:H2'	2:01:595:C:C6	2.48	0.48
2:01:974:G:N3	2:01:974:G:H2'	2.29	0.48
7:04:18:VAL:HG23	7:04:202:ARG:HB3	1.95	0.48
10:07:98:PHE:HA	10:07:101:ARG:CZ	2.44	0.48
13:10:72:LEU:HD12	13:10:72:LEU:N	2.28	0.48
1:A:939:G:H2'	1:A:940:C:C6	2.48	0.48
43:E:68:ARG:HD2	43:E:68:ARG:O	2.13	0.48
44:F:18:VAL:O	44:F:22:ILE:HG13	2.13	0.48
2:01:17:G:H4'	22:19:24:TYR:HE1	1.78	0.48
2:01:1697:G:H4'	2:01:1978:A:H5''	1.94	0.48
2:01:2094:A:P	12:09:22:LYS:HD2	2.53	0.48
2:01:2477:U:O4	37:34:10:LEU:HD22	2.13	0.48
7:04:124:LYS:HB3	7:04:127:ASN:HD22	1.76	0.48
27:24:40:ILE:O	27:24:40:ILE:HD12	2.14	0.48
29:26:67:LEU:HG	29:26:71:ARG:NH1	2.28	0.48
35:32:10:LEU:HD11	35:32:14:ARG:NH1	2.28	0.48
1:A:1060:U:H4'	48:J:53:ILE:HG23	1.94	0.48
1:A:50:A:H4'	1:A:51:A:H5'	1.96	0.48
41:C:72:PRO:HG3	41:C:104:GLU:OE2	2.13	0.48
43:E:131:ASN:HD22	43:E:134:ASN:ND2	2.11	0.48
39:Z:80:VAL:HG22	39:Z:102:GLU:HB3	1.96	0.48
2:01:2184:A:C2'	2:01:2185:U:H5'	2.44	0.48
2:01:2345:G:H21	2:01:2381:A:H3'	1.78	0.48
2:01:2743:U:C2'	2:01:2744:G:H5''	2.43	0.48
2:01:715:A:H4'	53:O:62:ARG:HH22	1.77	0.48
2:01:995:C:H5'	2:01:995:C:H6	1.78	0.48
3:02:48:U:H2'	3:02:49:C:C6	2.48	0.48
8:05:156:PHE:HB3	15:12:81:ILE:HG12	1.95	0.48
8:05:2:ILE:HD13	8:05:90:PHE:HE2	1.77	0.48
10:07:62:GLN:OE1	10:07:90:LEU:HD23	2.13	0.48
15:12:84:ILE:O	15:12:84:ILE:HG23	2.13	0.48
1:A:901:A:H2'	1:A:902:G:H5'	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:D:32:LYS:HD3	42:D:32:LYS:N	2.29	0.48
44:F:81:ASN:HD22	44:F:84:VAL:HG23	1.76	0.48
44:F:97:THR:HG23	44:F:98:GLU:HG3	1.95	0.48
45:G:144:ALA:O	45:G:148:LYS:HG3	2.14	0.48
55:Q:13:SER:HB2	55:Q:21:VAL:CG1	2.42	0.48
39:Z:204:LYS:HA	39:Z:213:ARG:HA	1.94	0.48
2:01:1038:G:H2'	2:01:1039:A:C8	2.49	0.48
2:01:1067:A:H2'	2:01:1068:G:C8	2.48	0.48
2:01:1077:A:N6	2:01:1088:A:H2'	2.28	0.48
2:01:1138:G:H2'	2:01:1139:G:O4'	2.13	0.48
2:01:139:U:H2'	2:01:140:C:C5	2.49	0.48
2:01:1565:C:O2'	2:01:1566:A:C8	2.67	0.48
2:01:172:A:H2'	2:01:173:A:C8	2.49	0.48
2:01:2161:C:O2	2:01:2161:C:H3'	2.13	0.48
2:01:2795:C:H2'	2:01:2796:U:O4'	2.14	0.48
15:12:99:ARG:HA	15:12:102:GLU:HB2	1.96	0.48
27:24:31:TYR:OH	27:24:75:GLN:HG2	2.13	0.48
36:33:54:LEU:O	36:33:58:ILE:HG13	2.14	0.48
1:A:1084:G:H5'	1:A:1102:A:OP2	2.13	0.48
1:A:641:U:H4'	1:A:642:A:H8	1.79	0.48
1:A:710:G:O2'	1:A:711:G:H5'	2.13	0.48
44:F:42:TRP:CD1	44:F:61:LEU:HD13	2.49	0.48
44:F:3:HIS:HB2	44:F:92:THR:HA	1.95	0.48
44:F:90:MET:CE	56:R:60:ARG:HD3	2.44	0.48
2:01:78:U:H2'	2:01:79:C:C6	2.48	0.48
6:03:41:SER:HB3	6:03:177:LYS:NZ	2.29	0.48
7:04:196:ASN:ND2	7:04:199:HIS:HB2	2.28	0.48
9:06:29:HIS:O	9:06:33:VAL:HG23	2.14	0.48
16:13:15:GLY:O	16:13:47:ILE:HG12	2.14	0.48
18:15:44:ARG:N	18:15:44:ARG:HD2	2.29	0.48
26:23:25:LYS:HB2	26:23:34:ILE:HG13	1.95	0.48
27:24:81:PRO:HG2	27:24:82:TYR:HD1	1.79	0.48
1:A:430:A:OP1	42:D:8:LEU:HG	2.14	0.48
1:A:950:U:H2'	1:A:951:G:C8	2.49	0.48
40:B:33:ALA:HB3	40:B:37:VAL:CG2	2.41	0.48
39:Z:14:LEU:HD23	39:Z:14:LEU:O	2.14	0.48
2:01:1201:U:H2'	2:01:1202:G:H8	1.79	0.48
2:01:2334:U:H4'	20:17:12:THR:HB	1.95	0.48
2:01:2462:C:H1'	2:01:2491:U:O4	2.13	0.48
2:01:2799:A:C2'	2:01:2800:A:H5'	2.44	0.48
3:02:106:G:H2'	3:02:107:G:O4'	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:07:54:ALA:HA	10:07:57:ALA:HB3	1.95	0.48
11:08:41:GLU:HG2	11:08:54:ARG:CG	2.44	0.48
12:09:111:ALA:HB3	12:09:114:GLU:HG3	1.95	0.48
18:15:17:ASN:OD1	18:15:95:LEU:HB3	2.14	0.48
28:25:33:ILE:HG22	28:25:34:VAL:HG23	1.96	0.48
32:29:14:ALA:N	32:29:22:MET:O	2.45	0.48
35:32:41:ARG:HG3	35:32:41:ARG:HH21	1.78	0.48
1:A:26:A:H61	1:A:558:G:H1'	1.78	0.48
40:B:18:GLN:HB3	40:B:189:ASN:ND2	2.28	0.48
42:D:46:ARG:HG2	42:D:46:ARG:HH11	1.79	0.48
51:M:13:HIS:CD2	51:M:41:ASP:HA	2.49	0.48
52:N:50:LEU:CD1	52:N:51:PRO:HD2	2.43	0.48
52:N:66:THR:HG21	52:N:82:LYS:HD3	1.95	0.48
5:X:32:C:H2'	5:X:33:U:O4'	2.14	0.48
39:Z:113:LEU:HD23	39:Z:117:ARG:HB2	1.96	0.48
2:01:2845:U:H3	2:01:2871:U:H3	1.61	0.48
2:01:397:U:OP2	29:26:9:LYS:HD3	2.14	0.48
2:01:932:U:H5'	2:01:933:A:C8	2.49	0.48
7:04:106:PRO:HD2	7:04:109:LEU:HB2	1.95	0.48
11:08:49:LEU:CD1	11:08:71:LEU:HD21	2.44	0.48
12:09:47:PHE:CD1	12:09:51:ARG:HD2	2.48	0.48
15:12:116:ARG:O	15:12:120:ARG:HG3	2.13	0.48
2:01:2563:U:H5''	16:13:26:GLY:O	2.13	0.48
3:02:112:G:H21	20:17:45:SER:HB2	1.78	0.48
25:22:59:ASN:N	25:22:59:ASN:HD22	2.11	0.48
27:24:48:MET:O	27:24:48:MET:HE3	2.14	0.48
37:34:17:VAL:CG1	37:34:19:ARG:HG3	2.44	0.48
1:A:346:G:H2'	1:A:347:G:H5'	1.96	0.48
1:A:420:U:HO2'	1:A:421:U:H6	1.58	0.48
1:A:593:U:H2'	1:A:594:U:C6	2.49	0.48
40:B:160:LEU:N	40:B:160:LEU:HD12	2.28	0.48
42:D:3:TYR:CZ	42:D:10:LEU:HD21	2.49	0.48
47:I:89:TYR:CG	47:I:93:LEU:HD12	2.49	0.48
55:Q:64:ARG:O	55:Q:66:LEU:HD12	2.13	0.48
58:T:27:MET:O	58:T:31:ILE:HG13	2.14	0.48
59:U:61:ARG:HH11	59:U:61:ARG:HG3	1.79	0.48
59:U:8:ASN:N	59:U:8:ASN:HD22	2.08	0.48
5:W:52:G:H2'	5:W:53:G:H8	1.79	0.48
39:Z:262:ARG:HE	39:Z:264:THR:CG2	2.27	0.48
2:01:1336:A:H2'	2:01:1337:G:H8	1.77	0.48
2:01:1463:C:H2'	2:01:1464:G:C8	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:2093:G:N7	2:01:2225:A:H2'	2.29	0.48
2:01:2170:A:O2'	2:01:2171:A:H4'	2.14	0.48
2:01:2217:G:O2'	2:01:2218:G:H5'	2.12	0.48
2:01:2514:U:H2'	2:01:2515:C:C6	2.49	0.48
8:05:173:GLN:NE2	8:05:208:LYS:HD2	2.28	0.48
13:10:31:ARG:O	13:10:31:ARG:HD3	2.14	0.48
13:10:72:LEU:HD12	13:10:72:LEU:H	1.79	0.48
14:11:97:VAL:HB	14:11:137:LEU:HD12	1.95	0.48
16:13:70:ARG:HH21	16:13:74:GLY:HA2	1.78	0.48
19:16:75:ILE:N	19:16:75:ILE:HD12	2.29	0.48
21:18:95:LYS:HD3	21:18:97:TYR:CE2	2.49	0.48
22:19:10:ARG:HE	22:19:10:ARG:HA	1.78	0.48
23:20:5:PHE:HB3	23:20:59:ILE:HD12	1.96	0.48
1:A:1292:G:C5'	47:I:40:ARG:HE	2.26	0.48
1:A:377:G:OP1	54:P:3:THR:HG21	2.14	0.48
1:A:545:C:O2'	1:A:549:C:H5''	2.13	0.48
1:A:948:C:H2'	1:A:949:A:H8	1.79	0.48
42:D:33:ILE:HG13	42:D:34:GLU:N	2.29	0.48
43:E:82:HIS:CE1	43:E:146:MET:HG3	2.49	0.48
47:I:74:GLN:O	47:I:78:ILE:HG13	2.13	0.48
39:Z:190:GLY:HA2	39:Z:193:ARG:HH12	1.79	0.48
39:Z:223:TYR:HE2	39:Z:290:GLN:HB2	1.79	0.48
2:01:172:A:H2'	2:01:173:A:H8	1.78	0.47
2:01:204:A:O3'	2:01:205:G:H4'	2.14	0.47
2:01:2314:A:H2'	2:01:2315:G:C8	2.49	0.47
2:01:2317:A:H2'	2:01:2318:G:O4'	2.14	0.47
14:11:34:ILE:HG13	14:11:35:MET:N	2.28	0.47
15:12:93:ILE:O	15:12:97:PRO:HG3	2.14	0.47
16:13:63:VAL:HG11	16:13:103:VAL:HG12	1.96	0.47
33:30:10:SER:O	33:30:14:MET:HG3	2.13	0.47
1:A:1527:U:O2'	1:A:1528:U:H5'	2.14	0.47
1:A:219:U:H2'	1:A:220:G:H5''	1.95	0.47
1:A:346:G:C2'	1:A:347:G:H5'	2.43	0.47
51:M:89:ARG:HH21	51:M:92:ARG:HD2	1.78	0.47
59:U:16:ARG:HD2	59:U:20:ARG:NH1	2.29	0.47
39:Z:24:TYR:HB3	39:Z:117:ARG:NE	2.20	0.47
39:Z:324:ARG:HG3	39:Z:324:ARG:HH11	1.79	0.47
2:01:1672:A:C2	2:01:2582:G:H5'	2.49	0.47
2:01:2641:G:H5'	15:12:78:THR:HG22	1.95	0.47
2:01:395:U:H2'	2:01:396:G:H8	1.77	0.47
2:01:723:C:H2'	2:01:724:U:O4'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:05:184:ARG:HG3	8:05:184:ARG:HH21	1.78	0.47
10:07:7:TYR:O	10:07:12:VAL:HG23	2.15	0.47
2:01:1669:A:O4'	16:13:5:GLN:HG3	2.14	0.47
17:14:79:LEU:HD12	17:14:112:LEU:HD12	1.96	0.47
18:15:24:THR:HG22	18:15:99:GLY:O	2.14	0.47
3:02:7:G:H5''	20:17:29:HIS:CD2	2.50	0.47
23:20:57:GLY:HA2	23:20:102:SER:HB2	1.96	0.47
29:26:31:ASN:HD22	29:26:52:ALA:CB	2.26	0.47
2:01:2466:C:OP1	37:34:4:ARG:HB3	2.13	0.47
45:G:68:VAL:HA	45:G:137:ARG:HG3	1.95	0.47
46:H:124:ILE:HG13	46:H:124:ILE:O	2.14	0.47
52:N:92:ILE:HG21	52:N:95:LEU:HD22	1.96	0.47
39:Z:10:ARG:HH21	39:Z:103:LEU:HD23	1.78	0.47
2:01:1032:A:O2'	2:01:1033:U:H5'	2.14	0.47
2:01:1651:G:H5'	19:16:39:PRO:CB	2.44	0.47
2:01:1930:G:O2'	2:01:1931:U:C5	2.67	0.47
2:01:254:G:C2'	2:01:255:A:H5''	2.44	0.47
2:01:2680:U:H5'	8:05:194:PRO:HA	1.96	0.47
2:01:6:A:H5''	15:12:131:ASN:HD22	1.79	0.47
2:01:940:G:C2'	2:01:941:A:H5''	2.44	0.47
7:04:143:VAL:HB	7:04:153:LEU:HB2	1.97	0.47
9:06:189:THR:HG22	9:06:191:ASP:H	1.79	0.47
11:08:8:VAL:HG21	11:08:71:LEU:HD23	1.95	0.47
16:13:76:VAL:HG12	21:18:72:VAL:CG2	2.44	0.47
23:20:22:LEU:HD12	23:20:23:GLU:O	2.13	0.47
28:25:35:ARG:NH1	28:25:54:THR:HG21	2.29	0.47
1:A:1370:G:O2'	1:A:1371:G:H5'	2.14	0.47
41:C:19:SER:HB2	41:C:21:TRP:NE1	2.29	0.47
51:M:22:TYR:HD2	51:M:65:GLU:HA	1.80	0.47
39:Z:139:THR:HG22	39:Z:173:VAL:HB	1.96	0.47
39:Z:243:VAL:HG22	39:Z:261:VAL:HG13	1.96	0.47
2:01:1697:G:H3'	2:01:1698:A:C5'	2.34	0.47
2:01:2266:A:H4'	2:01:2267:A:N3	2.30	0.47
2:01:2292:U:H2'	2:01:2293:G:C8	2.49	0.47
2:01:2605:U:H2'	2:01:2606:C:C6	2.49	0.47
2:01:679:C:H2'	2:01:680:C:C6	2.49	0.47
14:11:2:LYS:HD2	14:11:2:LYS:H	1.79	0.47
19:16:29:VAL:O	19:16:29:VAL:HG12	2.14	0.47
1:A:1429:A:H2'	1:A:1430:A:H8	1.79	0.47
40:B:34:ARG:HD3	40:B:35:ASN:N	2.28	0.47
49:K:30:ILE:HA	49:K:45:THR:HG22	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M:2:ARG:N	51:M:7:ASN:O	2.47	0.47
39:Z:170:GLU:HA	39:Z:176:ILE:HA	1.96	0.47
2:01:46:G:H2'	2:01:47:C:C6	2.49	0.47
2:01:680:C:H2'	2:01:681:G:H8	1.78	0.47
7:04:154:ALA:HB2	7:04:161:VAL:HG23	1.95	0.47
16:13:2:ILE:N	16:13:2:ILE:HD12	2.29	0.47
20:17:26:LEU:HD23	20:17:27:VAL:N	2.29	0.47
1:A:174:A:N3	1:A:174:A:H2'	2.29	0.47
41:C:68:HIS:HA	41:C:103:ALA:HB3	1.96	0.47
49:K:81:LEU:N	49:K:81:LEU:HD23	2.29	0.47
50:L:65:TYR:HB2	50:L:92:VAL:HG11	1.96	0.47
51:M:44:ILE:HA	51:M:47:LEU:HG	1.96	0.47
54:P:40:ASN:HD22	54:P:43:ALA:CA	2.28	0.47
58:T:73:ARG:HH11	58:T:73:ARG:HB3	1.78	0.47
2:01:1427:A:H4'	2:01:1428:C:O4'	2.14	0.47
2:01:1746:A:H2'	2:01:1747:U:C6	2.50	0.47
2:01:2869:G:H2'	2:01:2870:C:O4'	2.15	0.47
9:06:129:PRO:HG3	9:06:156:ASN:HA	1.97	0.47
11:08:158:GLY:HA3	11:08:162:ARG:NH1	2.29	0.47
18:15:64:TRP:HB2	18:15:104:GLU:HB2	1.97	0.47
1:A:1316:G:H2'	1:A:1317:C:H5''	1.96	0.47
1:A:404:G:N7	42:D:1:ALA:HB3	2.30	0.47
1:A:77:A:H61	1:A:92:U:H3	1.61	0.47
1:A:981:U:C3'	1:A:982:U:H5''	2.38	0.47
41:C:46:LEU:HB3	41:C:49:ALA:HB3	1.96	0.47
45:G:121:ASN:HD22	45:G:121:ASN:N	2.11	0.47
49:K:83:VAL:HG23	49:K:106:ILE:HG23	1.96	0.47
2:01:2045:C:H5''	33:30:14:MET:CE	2.45	0.47
2:01:325:G:H2'	2:01:326:G:H8	1.80	0.47
3:02:30:C:H2'	3:02:31:C:H5'	1.96	0.47
6:03:60:ARG:HH11	6:03:60:ARG:HG2	1.80	0.47
24:21:17:VAL:HG12	24:21:76:VAL:HG21	1.96	0.47
1:A:1144:G:O2'	1:A:1145:A:H5'	2.15	0.47
1:A:1225:A:H4'	57:S:77:ARG:HD3	1.97	0.47
1:A:1347:G:O2'	1:A:1348:U:C5	2.68	0.47
1:A:177:G:H2'	1:A:178:C:H6	1.79	0.47
1:A:802:A:H2'	1:A:803:G:O4'	2.14	0.47
49:K:19:VAL:HG23	49:K:36:ARG:HA	1.97	0.47
59:U:64:ALA:HB1	59:U:66:ARG:HG3	1.96	0.47
2:01:1250:G:H5''	22:19:5:ARG:CD	2.45	0.47
2:01:2743:U:H2'	2:01:2744:G:C5'	2.45	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:02:116:G:H4'	20:17:54:VAL:O	2.14	0.47
10:07:97:GLU:HG3	10:07:101:ARG:NH2	2.29	0.47
12:09:99:ILE:HD13	12:09:130:VAL:HG21	1.96	0.47
24:21:11:ARG:H	24:21:11:ARG:CD	2.24	0.47
25:22:6:ARG:O	25:22:10:VAL:HG23	2.15	0.47
30:27:5:GLU:HA	30:27:8:GLU:OE2	2.15	0.47
1:A:1513:A:H2'	1:A:1514:G:H8	1.79	0.47
1:A:1369:C:OP2	47:I:112:ARG:HG3	2.14	0.47
1:A:707:U:OP1	49:K:86:LYS:HD3	2.14	0.47
53:O:42:PHE:HE1	53:O:48:ASP:HB2	1.78	0.47
54:P:59:HIS:O	54:P:63:GLN:HG2	2.14	0.47
2:01:1601:G:C2'	2:01:1602:U:H5'	2.44	0.47
2:01:2628:C:H3'	2:01:2629:U:H5'	1.96	0.47
2:01:452:G:OP1	9:06:52:VAL:HG13	2.14	0.47
2:01:546:U:H1'	2:01:548:G:O6	2.14	0.47
3:02:2:G:H2'	3:02:3:C:H6	1.78	0.47
3:02:3:C:H3'	3:02:4:C:C5'	2.43	0.47
3:02:42:C:C4	10:07:65:LEU:HD22	2.50	0.47
6:03:48:LEU:HD22	6:03:165:ASN:HD21	1.78	0.47
2:01:2572:A:N7	8:05:150:GLN:HG3	2.29	0.47
8:05:5:VAL:HG11	8:05:80:TRP:CZ3	2.49	0.47
8:05:60:VAL:HG13	8:05:60:VAL:O	2.15	0.47
28:25:7:ARG:HH22	5:W:63:G:H5"	1.80	0.47
1:A:451:A:H4'	1:A:452:A:O4'	2.15	0.47
42:D:167:PRO:HB3	42:D:169:TRP:CZ3	2.50	0.47
47:I:62:LEU:HD12	47:I:62:LEU:N	2.30	0.47
56:R:53:GLN:HA	56:R:53:GLN:NE2	2.30	0.47
2:01:1083:U:H2'	2:01:1085:A:OP2	2.15	0.47
2:01:1563:U:H2'	2:01:1564:C:C6	2.50	0.47
2:01:2024:G:OP2	2:01:2034:U:H4'	2.15	0.47
2:01:2124:G:H3'	2:01:2125:G:C5'	2.45	0.47
2:01:325:G:H2'	2:01:326:G:C8	2.50	0.47
6:03:9:ARG:HA	6:03:12:ARG:HE	1.80	0.47
7:04:179:GLU:OE2	7:04:270:ARG:N	2.48	0.47
9:06:109:LEU:O	9:06:113:VAL:HG23	2.15	0.47
12:09:42:LYS:HE2	12:09:46:PHE:HE2	1.80	0.47
13:10:29:ASP:H	13:10:81:LEU:HD22	1.79	0.47
17:14:46:VAL:HB	17:14:50:PHE:HB3	1.97	0.47
32:29:11:GLU:HA	32:29:25:ARG:HA	1.96	0.47
33:30:32:THR:OG1	33:30:50:GLY:HA2	2.15	0.47
1:A:1225:A:H5'	1:A:1226:C:OP2	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:179:A:N3	1:A:179:A:H2'	2.30	0.47
1:A:59:A:H1'	1:A:354:G:N2	2.29	0.47
45:G:3:ARG:HG3	45:G:3:ARG:HH11	1.79	0.47
53:O:24:THR:O	53:O:28:VAL:HG23	2.15	0.47
54:P:40:ASN:HD22	54:P:43:ALA:HA	1.80	0.47
39:Z:278:ARG:HD3	39:Z:278:ARG:C	2.35	0.47
2:01:692:C:P	7:04:55:GLY:H	2.37	0.47
7:04:38:LYS:NZ	7:04:58:LYS:HA	2.30	0.47
8:05:48:ILE:HG23	8:05:84:LEU:HD21	1.97	0.47
19:16:22:ARG:HG3	19:16:70:THR:HA	1.97	0.47
20:17:7:ARG:HH11	20:17:7:ARG:HG3	1.80	0.47
21:18:95:LYS:HD3	21:18:97:TYR:HE2	1.79	0.47
22:19:43:GLN:NE2	23:20:77:PHE:HB3	2.29	0.47
2:01:682:G:H5'	35:32:26:ASN:OD1	2.15	0.47
1:A:1372:U:H2'	1:A:1373:G:O4'	2.15	0.47
1:A:429:U:P	42:D:8:LEU:HD11	2.55	0.47
1:A:831:A:C2'	1:A:832:G:H5''	2.45	0.47
48:J:82:LYS:HD2	48:J:85:ASP:HB3	1.97	0.47
10:07:114:ARG:NH2	51:M:67:ASP:OD1	2.46	0.47
57:S:8:PRO:HB2	57:S:38:THR:HG21	1.97	0.47
39:Z:232:ILE:O	39:Z:232:ILE:HG13	2.15	0.47
2:01:1690:A:H2'	2:01:1691:C:O4'	2.15	0.46
2:01:2249:U:O2'	2:01:2250:G:H5''	2.15	0.46
14:11:59:THR:CG2	14:11:67:THR:HB	2.45	0.46
28:25:51:ARG:HG3	28:25:51:ARG:HH11	1.79	0.46
1:A:1346:A:H2'	1:A:1346:A:N3	2.31	0.46
1:A:1354:U:H2'	1:A:1355:G:H8	1.80	0.46
42:D:94:GLU:HA	42:D:99:ASN:OD1	2.15	0.46
45:G:37:THR:O	45:G:41:ILE:HG13	2.16	0.46
55:Q:57:VAL:HG23	55:Q:78:VAL:O	2.15	0.46
56:R:25:ILE:O	56:R:29:LYS:HG3	2.15	0.46
57:S:30:LEU:N	57:S:30:LEU:HD12	2.30	0.46
5:X:68:C:H2'	5:X:69:C:C4'	2.44	0.46
39:Z:242:ASP:HB3	39:Z:262:ARG:HB3	1.97	0.46
39:Z:20:VAL:HG12	39:Z:24:TYR:CE2	2.51	0.46
2:01:2343:U:O2'	2:01:2344:U:H5'	2.15	0.46
3:02:111:U:H2'	3:02:112:G:H8	1.80	0.46
19:16:72:ASP:O	19:16:76:VAL:HG23	2.14	0.46
1:A:1463:U:OP1	21:18:108:ARG:HD2	2.16	0.46
22:19:105:PHE:O	22:19:109:VAL:HG23	2.15	0.46
27:24:45:ASP:HA	27:24:48:MET:HB3	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:31:5:ARG:HH11	34:31:25:ASN:HB2	1.80	0.46
1:A:335:C:H2'	1:A:336:A:C8	2.49	0.46
40:B:42:LEU:N	40:B:42:LEU:HD23	2.28	0.46
2:01:1087:G:C3'	2:01:1088:A:H5''	2.46	0.46
2:01:1981:A:H5''	2:01:1982:U:OP2	2.15	0.46
2:01:2363:G:O2'	2:01:2364:C:H5'	2.15	0.46
2:01:2591:C:H2'	2:01:2592:G:H8	1.80	0.46
2:01:2646:C:H2'	2:01:2647:U:O4'	2.15	0.46
2:01:1:G:H2'	2:01:2:G:C8	2.50	0.46
2:01:467:G:O2'	2:01:468:G:H5'	2.15	0.46
10:07:7:TYR:OH	10:07:29:ARG:HG3	2.15	0.46
2:01:2746:U:H1'	11:08:138:GLN:NE2	2.30	0.46
29:26:67:LEU:HG	29:26:71:ARG:HH12	1.80	0.46
1:A:1504:G:H4'	1:A:1505:G:O4'	2.15	0.46
1:A:337:G:H2'	1:A:338:A:C8	2.50	0.46
40:B:165:ALA:HB2	40:B:186:VAL:HG12	1.96	0.46
42:D:23:GLY:HA2	42:D:160:LEU:HD21	1.96	0.46
50:L:17:LYS:HB2	50:L:17:LYS:NZ	2.30	0.46
39:Z:298:LEU:O	39:Z:302:LYS:HG2	2.16	0.46
2:01:2485:G:O2'	2:01:2486:C:H5'	2.15	0.46
2:01:864:G:O2'	2:01:865:C:H5'	2.16	0.46
11:08:175:LYS:HG3	11:08:176:LYS:HG3	1.96	0.46
12:09:125:THR:HG22	12:09:125:THR:O	2.15	0.46
27:24:28:ALA:HB3	27:24:40:ILE:HD12	1.98	0.46
30:27:9:LYS:HG2	30:27:11:VAL:H	1.80	0.46
36:33:14:LYS:HD3	36:33:22:LYS:HE3	1.97	0.46
1:A:1410:A:H2'	1:A:1411:C:C6	2.50	0.46
1:A:309:A:H2'	1:A:310:G:H8	1.79	0.46
43:E:75:LEU:O	43:E:75:LEU:HD12	2.15	0.46
48:J:21:ALA:O	48:J:25:ILE:HG12	2.16	0.46
1:A:780:A:OP1	49:K:124:LYS:HG3	2.15	0.46
2:01:1156:A:C8	22:19:50:ARG:HD3	2.50	0.46
2:01:123:G:H4'	2:01:1376:C:O5'	2.15	0.46
2:01:1506:U:H2'	2:01:1507:C:C6	2.51	0.46
2:01:2874:C:OP1	19:16:4:ARG:HD2	2.15	0.46
2:01:970:U:H2'	2:01:971:G:H8	1.80	0.46
8:05:148:GLN:N	8:05:148:GLN:OE1	2.49	0.46
11:08:88:LEU:HG	11:08:161:VAL:HG22	1.97	0.46
2:01:1063:G:H4'	14:11:76:ALA:HB1	1.98	0.46
2:01:125:A:H4'	35:32:13:ASN:O	2.15	0.46
1:A:1170:A:H2'	1:A:1171:A:O4'	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1173:U:H2'	1:A:1174:G:H8	1.80	0.46
1:A:1218:C:H2'	1:A:1219:A:C8	2.50	0.46
1:A:1305:G:N2	1:A:1331:G:H2'	2.30	0.46
1:A:748:G:H2'	1:A:749:A:H8	1.80	0.46
40:B:56:LEU:HD13	40:B:216:VAL:HG13	1.97	0.46
41:C:38:VAL:O	41:C:42:LEU:HD13	2.15	0.46
50:L:54:VAL:N	50:L:62:VAL:O	2.48	0.46
52:N:92:ILE:N	52:N:92:ILE:HD12	2.30	0.46
39:Z:176:ILE:HD12	39:Z:176:ILE:C	2.36	0.46
2:01:176:A:O2'	2:01:177:G:H5'	2.15	0.46
2:01:1912:A:N7	2:01:1917:U:O4	2.48	0.46
2:01:2124:G:H2'	2:01:2125:G:H4'	1.96	0.46
2:01:644:A:H2'	2:01:645:C:C5'	2.45	0.46
3:02:23:G:H2'	3:02:24:G:C8	2.50	0.46
9:06:192:ALA:O	9:06:196:VAL:HG23	2.15	0.46
10:07:131:VAL:HG22	10:07:151:LEU:O	2.15	0.46
13:10:37:LYS:HD3	13:10:41:LEU:HD12	1.97	0.46
13:10:60:LEU:N	13:10:60:LEU:HD12	2.30	0.46
14:11:101:SER:HA	14:11:140:GLU:HG3	1.98	0.46
26:23:71:ILE:CD1	26:23:82:VAL:HG22	2.45	0.46
1:A:1251:A:O2'	1:A:1370:G:H5'	2.16	0.46
1:A:1384:C:H2'	1:A:1385:G:C8	2.50	0.46
1:A:21:G:H2'	1:A:22:G:C8	2.51	0.46
48:J:49:PHE:HZ	52:N:75:LYS:HG2	1.81	0.46
32:29:35:ASP:HA	51:M:56:ARG:NH1	2.31	0.46
59:U:17:ARG:HA	59:U:20:ARG:HH11	1.80	0.46
39:Z:98:GLU:O	39:Z:102:GLU:HG2	2.16	0.46
2:01:694:U:OP1	2:01:1569:A:H1'	2.16	0.46
8:05:24:VAL:HG22	8:05:178:VAL:HG21	1.97	0.46
18:15:20:LEU:HD13	27:24:81:PRO:HG3	1.97	0.46
25:22:69:ARG:CB	25:22:69:ARG:HH11	2.29	0.46
31:28:35:VAL:HG22	31:28:36:GLU:N	2.31	0.46
35:32:26:ASN:O	35:32:30:VAL:HG23	2.15	0.46
1:A:142:G:H2'	1:A:143:A:O4'	2.15	0.46
1:A:614:C:H3'	1:A:615:G:H5''	1.97	0.46
1:A:76:G:H2'	1:A:77:A:O4'	2.16	0.46
40:B:119:GLN:HA	40:B:123:GLY:HA3	1.98	0.46
42:D:104:MET:CE	42:D:170:LEU:HD13	2.45	0.46
42:D:97:LEU:HB2	42:D:134:TYR:HB3	1.97	0.46
44:F:46:GLN:HA	44:F:56:LYS:HG2	1.98	0.46
52:N:64:ARG:HG3	52:N:77:GLY:O	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:15:G:O2'	2:01:16:C:H5'	2.16	0.46
2:01:2543:G:H2'	2:01:2544:G:C8	2.49	0.46
8:05:116:LYS:HD2	8:05:165:MET:HG2	1.98	0.46
10:07:121:PHE:CE1	10:07:127:TYR:HB2	2.50	0.46
2:01:2091:C:H5'	12:09:27:ARG:HH22	1.81	0.46
14:11:44:LYS:HB2	14:11:68:PHE:HE2	1.81	0.46
17:14:63:LYS:HB3	17:14:63:LYS:NZ	2.30	0.46
18:15:33:LEU:C	18:15:33:LEU:HD23	2.36	0.46
28:25:7:ARG:O	28:25:10:ARG:NH1	2.49	0.46
28:25:37:ARG:HH11	28:25:37:ARG:HG2	1.80	0.46
1:A:516:U:H5	1:A:533:A:N6	1.96	0.46
42:D:27:ILE:HB	42:D:33:ILE:HG21	1.97	0.46
44:F:76:THR:HG23	44:F:79:ARG:HH22	1.81	0.46
47:I:109:GLN:NE2	47:I:110:VAL:HB	2.30	0.46
58:T:43:LYS:HG2	58:T:86:ALA:HA	1.97	0.46
2:01:2247:A:H2'	2:01:2248:C:C6	2.51	0.46
2:01:2360:G:C2'	2:01:2361:G:H5'	2.46	0.46
2:01:435:C:C2'	2:01:436:C:H5'	2.45	0.46
11:08:169:ARG:N	11:08:169:ARG:HD2	2.26	0.46
15:12:17:VAL:HG13	15:12:57:LEU:HD13	1.98	0.46
16:13:63:VAL:CG1	16:13:103:VAL:HG12	2.46	0.46
1:A:1045:C:O2'	1:A:1046:A:H5'	2.16	0.46
1:A:1221:G:O3'	57:S:76:THR:HG21	2.16	0.46
1:A:350:G:H2'	1:A:351:G:C8	2.51	0.46
1:A:363:A:C2	50:L:27:PRO:HD2	2.51	0.46
1:A:392:C:H2'	1:A:393:A:H8	1.80	0.46
1:A:730:G:C2'	1:A:731:G:H5'	2.46	0.46
1:A:748:G:H2'	1:A:749:A:C8	2.51	0.46
40:B:177:ASN:C	40:B:178:LEU:HD12	2.36	0.46
42:D:99:ASN:HD21	42:D:103:ARG:HE	1.64	0.46
42:D:8:LEU:O	42:D:12:ARG:HG3	2.16	0.46
48:J:102:LEU:O	48:J:102:LEU:HD12	2.15	0.46
54:P:76:LYS:O	54:P:79:ASN:ND2	2.48	0.46
2:01:103:A:H2'	2:01:104:A:O4'	2.15	0.46
2:01:1131:G:H21	2:01:1132:U:H5	1.63	0.46
2:01:1666:G:C2'	2:01:1667:G:H5'	2.46	0.46
2:01:1869:G:H3'	2:01:1870:C:C5'	2.46	0.46
2:01:2572:A:H5'	2:01:2574:G:H4'	1.98	0.46
2:01:2765:A:N3	2:01:2765:A:H3'	2.31	0.46
2:01:558:U:OP1	15:12:113:PRO:HD2	2.16	0.46
2:01:563:A:H4'	22:19:40:LYS:HZ3	1.80	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:04:43:ASN:HD21	7:04:45:ASN:HD22	1.63	0.46
8:05:13:ARG:HD3	8:05:15:PHE:CZ	2.51	0.46
8:05:180:VAL:O	8:05:180:VAL:HG23	2.16	0.46
10:07:121:PHE:HZ	10:07:169:LEU:HD12	1.81	0.46
1:A:1254:A:H2'	1:A:1255:G:H8	1.80	0.46
1:A:932:C:H5''	45:G:3:ARG:NH2	2.31	0.46
45:G:58:LEU:HD23	45:G:58:LEU:C	2.37	0.46
51:M:89:ARG:NE	51:M:89:ARG:HA	2.30	0.46
54:P:8:ARG:HG3	54:P:8:ARG:HH11	1.80	0.46
55:Q:10:ARG:HD2	55:Q:11:VAL:N	2.30	0.46
39:Z:167:GLU:HG2	39:Z:275:GLN:HB2	1.98	0.46
39:Z:244:TYR:HE1	39:Z:262:ARG:HB2	1.79	0.46
2:01:1059:G:H5'	2:01:1061:U:OP2	2.15	0.45
2:01:2082:A:H2'	2:01:2083:G:O4'	2.16	0.45
2:01:2263:C:H4'	2:01:2329:U:H4'	1.98	0.45
2:01:2898:U:H2'	2:01:2899:A:C8	2.51	0.45
2:01:415:A:H2'	2:01:416:U:C6	2.52	0.45
2:01:611:C:H2'	2:01:612:G:O4'	2.15	0.45
3:02:111:U:H2'	3:02:112:G:C8	2.51	0.45
8:05:133:THR:HG23	8:05:134:HIS:CD2	2.51	0.45
3:02:57:A:H4'	10:07:26:GLN:HE21	1.81	0.45
11:08:132:LEU:CD2	11:08:132:LEU:H	2.25	0.45
11:08:88:LEU:N	11:08:88:LEU:HD12	2.31	0.45
15:12:14:ASP:CG	15:12:15:TRP:H	2.18	0.45
2:01:1454:C:O2'	19:16:60:VAL:HG13	2.16	0.45
20:17:59:ALA:HA	20:17:62:LEU:HD12	1.98	0.45
20:17:64:TYR:HB3	20:17:67:ASN:HD21	1.81	0.45
23:20:24:LYS:HA	23:20:94:THR:OG1	2.16	0.45
37:34:36:ARG:CG	37:34:37:GLN:N	2.78	0.45
1:A:530:G:H3'	1:A:531:U:H5''	1.95	0.45
1:A:539:A:H2'	1:A:540:G:C8	2.51	0.45
40:B:216:VAL:O	40:B:220:VAL:HG23	2.16	0.45
43:E:104:ILE:HD11	43:E:114:LEU:HB2	1.97	0.45
48:J:59:LYS:HE2	48:J:62:ARG:NH2	2.28	0.45
49:K:24:ALA:HB1	49:K:29:THR:HG22	1.97	0.45
39:Z:145:ALA:HB1	39:Z:176:ILE:CD1	2.46	0.45
2:01:1060:U:H3'	2:01:1060:U:O2	2.15	0.45
2:01:2055:C:H5'	2:01:2056:G:O5'	2.17	0.45
2:01:240:C:C3'	2:01:241:A:H5''	2.44	0.45
7:04:74:PRO:HA	7:04:116:GLN:HB3	1.98	0.45
8:05:8:LYS:HB2	8:05:201:LEU:HD11	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:07:30:VAL:O	10:07:30:VAL:HG13	2.16	0.45
12:09:135:HIS:ND1	12:09:136:SER:N	2.65	0.45
13:10:57:ASN:HB3	13:10:62:ARG:HG2	1.99	0.45
17:14:109:LYS:NZ	17:14:126:ARG:HG2	2.31	0.45
20:17:58:ILE:O	20:17:62:LEU:HG	2.16	0.45
24:21:19:LEU:HD11	33:30:20:ALA:HA	1.97	0.45
1:A:1308:U:H5''	51:M:96:VAL:HG22	1.98	0.45
41:C:28:PHE:HE2	52:N:76:PHE:HD1	1.62	0.45
52:N:9:GLU:OE2	52:N:62:ARG:HG2	2.16	0.45
2:01:1919:A:H2'	2:01:1920:C:H5'	1.97	0.45
2:01:2123:G:H4'	6:03:172:HIS:HB2	1.98	0.45
2:01:451:U:H4'	9:06:47:LYS:NZ	2.32	0.45
12:09:122:LEU:HD12	12:09:122:LEU:N	2.32	0.45
20:17:52:SER:OG	20:17:53:THR:N	2.48	0.45
22:19:82:LEU:HD22	22:19:87:VAL:HG21	1.97	0.45
2:01:858:G:H5'	28:25:40:LYS:HE2	1.98	0.45
36:33:36:ALA:O	36:33:40:LYS:HG3	2.16	0.45
1:A:1150:A:N3	48:J:41:PRO:HG3	2.31	0.45
1:A:579:A:H2'	1:A:580:C:C6	2.52	0.45
41:C:79:LYS:HB2	41:C:81:GLU:OE1	2.16	0.45
49:K:126:ARG:HE	49:K:126:ARG:CA	2.24	0.45
50:L:58:ASN:ND2	50:L:60:PHE:CD2	2.84	0.45
2:01:112:U:C2'	2:01:113:U:H5'	2.47	0.45
2:01:1258:U:H2'	2:01:1259:G:C8	2.50	0.45
2:01:1666:G:H4'	16:13:6:THR:HG23	1.99	0.45
2:01:1856:U:H2'	2:01:1857:G:O4'	2.16	0.45
2:01:2404:U:H2'	2:01:2405:G:O4'	2.16	0.45
2:01:2412:A:H2'	2:01:2413:G:O4'	2.16	0.45
2:01:441:U:O2'	2:01:442:G:H5'	2.16	0.45
12:09:100:ALA:HB2	12:09:115:VAL:HG21	1.98	0.45
14:11:49:GLU:H	14:11:49:GLU:CD	2.20	0.45
1:A:1422:G:H4'	16:13:48:PRO:HB3	1.98	0.45
19:16:64:ARG:HG3	19:16:64:ARG:HH21	1.82	0.45
32:29:20:ASN:HB2	32:29:39:LYS:HE3	1.98	0.45
1:A:912:C:O2'	1:A:913:A:H5'	2.16	0.45
40:B:95:TRP:HZ2	40:B:100:LEU:HD13	1.82	0.45
44:F:51:ILE:HD12	44:F:86:ARG:NE	2.27	0.45
51:M:58:GLU:OE2	51:M:61:LYS:HD3	2.16	0.45
55:Q:16:MET:HG3	55:Q:17:GLU:H	1.81	0.45
4:Y:28:ARG:HH11	4:Y:28:ARG:HG2	1.82	0.45
2:01:1463:C:H2'	2:01:1464:G:H8	1.81	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:1541:C:H2'	2:01:1542:U:O4'	2.17	0.45
2:01:1914:C:H5'	2:01:1915:U:OP2	2.16	0.45
2:01:2070:A:H2'	2:01:2071:A:O4'	2.16	0.45
14:11:48:ILE:HG22	14:11:49:GLU:N	2.32	0.45
19:16:72:ASP:HB3	19:16:75:ILE:HD13	1.97	0.45
22:19:30:VAL:HG12	22:19:33:VAL:H	1.82	0.45
23:20:14:VAL:HG21	23:20:98:ILE:HG13	1.99	0.45
30:27:20:ASN:O	30:27:25:GLN:N	2.50	0.45
1:A:763:G:H2'	1:A:764:C:H6	1.80	0.45
40:B:150:ILE:HD11	40:B:153:MET:HE1	1.99	0.45
1:A:1380:U:C4	45:G:2:ARG:HG3	2.52	0.45
47:I:76:GLY:O	47:I:79:ARG:HG2	2.16	0.45
48:J:9:ARG:O	48:J:99:GLN:N	2.49	0.45
32:29:66:ILE:HG21	52:N:38:GLU:OE2	2.16	0.45
54:P:54:LEU:HD23	54:P:57:ILE:HD12	1.97	0.45
58:T:79:THR:HA	58:T:82:ILE:HG12	1.97	0.45
39:Z:21:LEU:CD2	39:Z:110:LEU:HG	2.34	0.45
2:01:2294:G:OP1	20:17:10:ARG:HD2	2.17	0.45
2:01:68:G:H2'	2:01:69:C:O4'	2.17	0.45
8:05:148:GLN:HB2	8:05:152:PRO:HG2	1.99	0.45
8:05:7:LYS:HB2	8:05:77:ARG:HH12	1.82	0.45
11:08:68:ARG:HD3	11:08:68:ARG:C	2.37	0.45
14:11:23:VAL:HG12	14:11:27:LEU:HG	1.99	0.45
8:05:14:ILE:HG23	21:18:11:GLN:HE22	1.82	0.45
2:01:1753:G:OP1	21:18:92:ARG:HD3	2.16	0.45
37:34:33:HIS:O	37:34:35:GLN:HG3	2.17	0.45
1:A:160:A:H2'	1:A:161:A:O4'	2.17	0.45
1:A:785:G:O2'	1:A:786:G:H5'	2.17	0.45
1:A:77:A:N6	1:A:92:U:H3	2.15	0.45
44:F:42:TRP:NE1	44:F:61:LEU:HD13	2.30	0.45
45:G:49:LEU:HD12	45:G:50:ALA:N	2.32	0.45
50:L:23:LEU:HD23	50:L:29:LYS:NZ	2.32	0.45
51:M:70:ARG:HH11	51:M:70:ARG:HG3	1.81	0.45
52:N:55:SER:CB	52:N:56:PRO:CA	2.94	0.45
57:S:66:VAL:HG23	57:S:67:GLY:H	1.82	0.45
2:01:2124:G:H4'	6:03:43:ASP:HB3	1.98	0.45
2:01:2457:U:O4	2:01:2494:G:O6	2.34	0.45
2:01:2682:A:O2'	2:01:2683:C:H5'	2.16	0.45
2:01:863:A:H2'	2:01:864:G:C8	2.51	0.45
2:01:873:C:H2'	2:01:874:G:H8	1.80	0.45
2:01:910:A:H2'	2:01:911:A:C8	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:04:70:LYS:HE2	7:04:73:ILE:HD12	1.99	0.45
8:05:187:LEU:HD21	8:05:203:VAL:HG11	1.98	0.45
10:07:57:ALA:HB2	10:07:64:PRO:HD3	1.98	0.45
13:10:11:ILE:O	13:10:15:VAL:HG23	2.17	0.45
16:13:22:ILE:HG12	16:13:40:LYS:O	2.17	0.45
17:14:17:LYS:HD2	17:14:27:LEU:CD2	2.46	0.45
1:A:1096:C:H2'	1:A:1097:C:C6	2.52	0.45
40:B:100:LEU:N	40:B:100:LEU:HD12	2.32	0.45
43:E:38:VAL:HG22	43:E:66:ALA:HB1	1.99	0.45
44:F:18:VAL:CG1	44:F:19:PRO:HD3	2.46	0.45
51:M:69:ARG:HA	51:M:72:ILE:HG12	1.97	0.45
39:Z:125:SER:HA	39:Z:187:TYR:CD1	2.51	0.45
39:Z:230:ILE:O	39:Z:231:ASP:HB2	2.16	0.45
2:01:2578:G:O2'	2:01:2579:C:H5'	2.17	0.45
2:01:2580:U:O2	2:01:2580:U:O4'	2.34	0.45
2:01:2609:U:H5'	2:01:2610:C:OP2	2.16	0.45
2:01:521:U:H2'	2:01:522:A:C8	2.52	0.45
2:01:720:U:H2'	2:01:721:A:C8	2.52	0.45
2:01:940:G:C3'	2:01:941:A:H5''	2.47	0.45
9:06:84:THR:HG23	9:06:85:PHE:N	2.31	0.45
12:09:4:ILE:HD11	12:09:47:PHE:CD2	2.52	0.45
19:16:24:MET:HG2	19:16:44:LEU:HD22	1.99	0.45
1:A:1312:G:N7	57:S:2:ARG:HD2	2.31	0.45
1:A:135:C:H2'	1:A:136:C:H5'	1.99	0.45
1:A:204:G:H2'	1:A:205:A:C8	2.52	0.45
1:A:236:A:H5''	55:Q:43:LEU:HD21	1.97	0.45
1:A:880:C:H2'	1:A:881:G:H8	1.82	0.45
42:D:120:LYS:HG2	42:D:130:ASN:HB3	1.98	0.45
53:O:23:SER:O	53:O:27:GLN:HG3	2.16	0.45
2:01:1827:U:H5'	2:01:1971:U:OP2	2.17	0.45
2:01:2248:C:H2'	2:01:2249:U:H5'	1.99	0.45
2:01:1790:C:O2'	7:04:207:ALA:HB2	2.16	0.45
8:05:127:PHE:HZ	8:05:160:LYS:HB2	1.82	0.45
14:11:10:LEU:HD13	14:11:23:VAL:HG13	1.99	0.45
19:16:59:SER:CB	19:16:62:ASN:HD22	2.29	0.45
20:17:106:LEU:C	20:17:106:LEU:HD23	2.36	0.45
21:18:91:VAL:HG21	21:18:96:LEU:HD21	1.99	0.45
24:21:28:LYS:HG2	24:21:70:LYS:HE2	1.99	0.45
29:26:10:ARG:HH11	29:26:10:ARG:HG2	1.81	0.45
37:34:17:VAL:HG12	37:34:19:ARG:HG3	1.97	0.45
37:34:30:GLU:CD	37:34:30:GLU:H	2.19	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1210:C:C2'	1:A:1211:U:H5'	2.47	0.45
48:J:11:LYS:HG2	48:J:71:LEU:HD23	1.98	0.45
5:X:50:U:H2'	5:X:51:C:C6	2.52	0.45
39:Z:107:GLU:O	39:Z:111:ALA:N	2.50	0.45
2:01:1568:G:H5'	7:04:58:LYS:O	2.17	0.45
2:01:1799:G:H8	7:04:179:GLU:HG3	1.81	0.45
2:01:2188:U:H2'	2:01:2189:U:C4'	2.46	0.45
10:07:37:MET:CE	10:07:52:ALA:HB1	2.47	0.45
22:19:50:ARG:HH11	22:19:50:ARG:HG3	1.82	0.45
2:01:1187:G:H5'	23:20:83:TYR:CZ	2.52	0.45
24:21:74:ILE:HG23	24:21:74:ILE:O	2.17	0.45
1:A:1158:C:O2	1:A:1158:C:H3'	2.16	0.45
1:A:1202:U:H2'	1:A:1203:C:O4'	2.16	0.45
1:A:66:A:H4'	1:A:173:U:N3	2.32	0.45
1:A:641:U:H4'	1:A:642:A:C8	2.52	0.45
47:I:15:ALA:N	47:I:67:LYS:O	2.49	0.45
48:J:80:THR:CG2	48:J:81:GLU:H	2.30	0.45
1:A:1317:C:H4'	52:N:47:LEU:CD2	2.46	0.45
53:O:55:LEU:C	53:O:55:LEU:HD23	2.37	0.45
2:01:1748:C:O2'	2:01:1749:A:H5'	2.16	0.44
2:01:20:C:H2'	2:01:21:A:H8	1.82	0.44
2:01:2898:U:H2'	2:01:2899:A:H8	1.82	0.44
2:01:296:U:H2'	2:01:297:G:H8	1.82	0.44
2:01:687:C:H5''	35:32:4:THR:O	2.16	0.44
13:10:4:ASN:HA	13:10:7:ASP:HB2	1.99	0.44
16:13:4:GLU:OE2	16:13:24:VAL:HG23	2.18	0.44
16:13:57:VAL:O	16:13:57:VAL:HG23	2.17	0.44
35:32:24:THR:HG23	35:32:27:GLY:H	1.81	0.44
1:A:1282:C:H6	1:A:1282:C:O5'	1.99	0.44
1:A:1352:C:H2'	1:A:1353:G:C8	2.52	0.44
1:A:742:G:O2'	1:A:743:A:H5'	2.17	0.44
41:C:129:PHE:H	41:C:129:PHE:HD1	1.65	0.44
41:C:5:HIS:CG	52:N:88:MET:HB3	2.53	0.44
55:Q:43:LEU:HD13	55:Q:72:TRP:CE2	2.51	0.44
56:R:55:ALA:O	56:R:59:LYS:HG2	2.17	0.44
2:01:1380:G:H1'	2:01:1569:A:H61	1.81	0.44
2:01:1826:G:H2'	2:01:1827:U:C6	2.52	0.44
2:01:2188:U:C3'	2:01:2189:U:H5''	2.40	0.44
2:01:2286:G:H4'	2:01:2287:A:O4'	2.17	0.44
2:01:2285:C:O2'	2:01:2287:A:H1'	2.16	0.44
2:01:2467:C:H2'	2:01:2468:A:O4'	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:296:U:H2'	2:01:297:G:C8	2.52	0.44
2:01:859:G:HO2'	2:01:860:U:H6	1.59	0.44
10:07:35:LEU:O	10:07:35:LEU:HD23	2.17	0.44
13:10:37:LYS:HD2	13:10:37:LYS:C	2.37	0.44
14:11:20:SER:OG	14:11:21:PRO:HD3	2.17	0.44
20:17:106:LEU:HD23	20:17:106:LEU:O	2.17	0.44
25:22:65:GLY:H	25:22:79:ASP:HB3	1.82	0.44
28:25:39:THR:HG23	28:25:53:HIS:CD2	2.40	0.44
37:34:25:VAL:O	37:34:25:VAL:HG12	2.18	0.44
2:01:2466:C:H5''	37:34:6:SER:OG	2.17	0.44
1:A:988:G:H1'	1:A:1015:G:H22	1.82	0.44
40:B:34:ARG:HH11	40:B:34:ARG:HG2	1.83	0.44
51:M:89:ARG:HE	51:M:89:ARG:HA	1.82	0.44
52:N:31:SER:C	57:S:6:LYS:HZ1	2.21	0.44
39:Z:165:ILE:O	39:Z:165:ILE:HG13	2.18	0.44
39:Z:182:LYS:HD3	39:Z:183:ILE:N	2.32	0.44
2:01:1420:A:H5'	2:01:1421:G:OP2	2.17	0.44
2:01:254:G:H2'	2:01:255:A:H5''	1.98	0.44
2:01:2603:G:O2'	2:01:2604:U:H5'	2.18	0.44
2:01:368:A:H2'	2:01:369:U:H5'	1.99	0.44
2:01:368:A:C2'	2:01:369:U:H5'	2.47	0.44
2:01:98:G:O2'	2:01:99:U:H5'	2.17	0.44
2:01:2595:G:H1	7:04:238:ASN:HD21	1.63	0.44
10:07:11:VAL:HG21	10:07:172:PHE:CE1	2.52	0.44
16:13:17:ARG:HE	16:13:47:ILE:HG22	1.82	0.44
18:15:90:GLU:HB2	18:15:91:TYR:HD1	1.82	0.44
24:21:31:GLN:O	24:21:35:ILE:HG13	2.17	0.44
2:01:1599:U:OP1	25:22:39:THR:HA	2.17	0.44
2:01:372:G:N7	29:26:56:ARG:HB3	2.32	0.44
31:28:4:ILE:N	31:28:37:ARG:O	2.42	0.44
1:A:1133:G:H2'	1:A:1134:G:C8	2.52	0.44
1:A:31:G:N1	1:A:48:C:H5''	2.31	0.44
1:A:608:A:H2'	1:A:609:A:O4'	2.17	0.44
42:D:13:ARG:HD2	42:D:37:PRO:CB	2.46	0.44
42:D:29:THR:HG22	42:D:29:THR:O	2.17	0.44
51:M:43:LYS:HB2	51:M:46:GLU:HG3	1.99	0.44
53:O:48:ASP:O	53:O:52:ARG:N	2.50	0.44
54:P:40:ASN:ND2	54:P:43:ALA:HA	2.33	0.44
59:U:40:PRO:O	59:U:44:ARG:N	2.50	0.44
2:01:1045:C:H5'	2:01:1046:A:H5''	2.00	0.44
2:01:1268:A:H2'	2:01:1269:A:O4'	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:1415:U:O2'	2:01:1416:G:H4'	2.17	0.44
2:01:1710:G:H2'	2:01:1711:A:C8	2.52	0.44
2:01:2654:A:O3'	2:01:2655:G:H4'	2.17	0.44
2:01:361:G:C2'	2:01:362:A:H5'	2.47	0.44
2:01:828:U:H4'	2:01:831:G:N1	2.32	0.44
6:03:69:THR:OG1	6:03:177:LYS:HE2	2.16	0.44
12:09:26:ALA:HA	12:09:30:LEU:HD12	1.99	0.44
14:11:52:LEU:HD12	14:11:52:LEU:N	2.32	0.44
14:11:91:LYS:CB	14:11:94:LYS:HB2	2.45	0.44
19:16:33:ILE:HG22	19:16:114:GLU:CB	2.48	0.44
27:24:24:ASN:C	27:24:25:LYS:HD2	2.38	0.44
28:25:64:LYS:HB2	28:25:79:GLU:OE1	2.18	0.44
2:01:2526:G:H1'	37:34:1:MET:N	2.32	0.44
1:A:131:A:H2'	1:A:132:C:C6	2.52	0.44
1:A:45:G:H5''	1:A:307:C:O2'	2.18	0.44
1:A:924:C:H2'	1:A:925:G:C8	2.53	0.44
1:A:986:U:H2'	1:A:987:G:H8	1.78	0.44
40:B:13:VAL:O	40:B:13:VAL:HG23	2.17	0.44
43:E:59:ILE:O	43:E:63:MET:HG2	2.17	0.44
44:F:15:SER:O	44:F:18:VAL:HG12	2.18	0.44
44:F:45:ARG:HH11	44:F:45:ARG:HG2	1.83	0.44
45:G:113:LYS:HB2	45:G:117:LEU:CD2	2.44	0.44
53:O:55:LEU:HD23	53:O:59:VAL:HG23	1.99	0.44
39:Z:189:TYR:CG	39:Z:224:PRO:HB3	2.52	0.44
2:01:2170:A:H2'	2:01:2171:A:C4'	2.47	0.44
2:01:2220:U:H2'	2:01:2221:G:H8	1.83	0.44
2:01:876:C:C2'	2:01:877:A:H5'	2.46	0.44
9:06:19:PHE:HB3	9:06:113:VAL:HG21	1.99	0.44
14:11:102:ARG:HA	14:11:105:LEU:HD12	2.00	0.44
28:25:62:LYS:HE3	28:25:81:GLU:HG2	2.00	0.44
12:09:27:ARG:NH1	29:26:55:MET:HB3	2.31	0.44
1:A:628:G:H2'	1:A:629:A:C8	2.53	0.44
1:A:828:U:H2'	40:B:24:PRO:HB2	1.98	0.44
41:C:82:ASP:O	41:C:86:LEU:HG	2.16	0.44
42:D:117:VAL:CG2	42:D:122:ILE:HD12	2.46	0.44
44:F:98:GLU:HB3	44:F:99:ALA:H	1.61	0.44
51:M:101:THR:O	51:M:101:THR:HG22	2.16	0.44
52:N:34:ASN:O	52:N:36:SER:N	2.51	0.44
1:A:1492:A:C1'	4:Y:26:ARG:HD3	2.47	0.44
39:Z:273:GLN:N	39:Z:273:GLN:OE1	2.51	0.44
2:01:1219:U:H2'	2:01:1220:G:C8	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:1265:A:N1	2:01:2013:A:H5''	2.33	0.44
2:01:1357:C:H2'	2:01:1358:G:O4'	2.17	0.44
2:01:1548:A:H2'	2:01:1549:A:C8	2.52	0.44
2:01:1827:U:H2'	2:01:1828:G:O4'	2.18	0.44
2:01:2184:A:H2'	2:01:2185:U:H5'	1.99	0.44
2:01:20:C:H2'	2:01:21:A:C8	2.53	0.44
2:01:2233:U:H2'	2:01:2234:G:C8	2.53	0.44
2:01:2353:G:H2'	2:01:2354:C:C5'	2.44	0.44
2:01:320:A:H4'	2:01:322:A:N7	2.32	0.44
2:01:886:A:H1'	2:01:889:C:H41	1.83	0.44
2:01:1566:A:H5'	7:04:213:ARG:HH22	1.82	0.44
2:01:2619:C:OP1	8:05:157:LYS:HE3	2.18	0.44
9:06:24:ASN:O	9:06:28:VAL:HG23	2.18	0.44
17:14:78:ARG:HG2	17:14:78:ARG:HH21	1.81	0.44
21:18:105:LYS:O	21:18:108:ARG:NH2	2.50	0.44
27:24:73:LYS:HG3	27:24:94:ALA:HB3	2.00	0.44
28:25:66:GLU:HB2	28:25:75:PHE:HB2	2.00	0.44
29:26:56:ARG:HH11	29:26:56:ARG:HG2	1.83	0.44
29:26:7:THR:HG21	29:26:9:LYS:NZ	2.32	0.44
32:29:44:PHE:HD1	32:29:44:PHE:H	1.63	0.44
1:A:1348:U:H4'	47:I:121:ARG:HG3	2.00	0.44
1:A:1514:G:O2'	1:A:1515:G:H5'	2.18	0.44
1:A:686:U:H2'	1:A:687:A:C8	2.52	0.44
1:A:757:U:H2'	1:A:758:C:O4'	2.18	0.44
41:C:126:ARG:HD3	41:C:126:ARG:N	2.33	0.44
42:D:110:ARG:O	42:D:114:ARG:HG3	2.17	0.44
53:O:52:ARG:HH11	53:O:52:ARG:HG2	1.83	0.44
54:P:14:ARG:HG3	54:P:14:ARG:HH11	1.83	0.44
57:S:14:LEU:O	57:S:18:VAL:HG23	2.18	0.44
2:01:1056:G:H5''	2:01:1057:A:O4'	2.16	0.44
2:01:2183:A:H2'	2:01:2184:A:C8	2.50	0.44
2:01:2196:C:O2'	2:01:2197:U:H5'	2.18	0.44
2:01:2619:C:O2'	2:01:2620:C:H5'	2.18	0.44
2:01:437:U:H2'	2:01:438:G:C8	2.52	0.44
2:01:554:U:H2'	2:01:555:G:O4'	2.17	0.44
2:01:562:U:O4'	2:01:2036:C:H5'	2.18	0.44
7:04:244:VAL:CA	7:04:251:THR:HG22	2.48	0.44
13:10:33:VAL:HG23	13:10:36:ASP:H	1.82	0.44
13:10:81:LEU:HD23	13:10:81:LEU:C	2.38	0.44
2:01:6:A:C5'	15:12:131:ASN:HD22	2.31	0.44
16:13:2:ILE:O	16:13:33:ALA:N	2.41	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:18:61:ARG:NH2	21:18:99:LEU:O	2.51	0.44
21:18:87:ARG:HH11	21:18:87:ARG:HG3	1.83	0.44
27:24:53:LYS:HB2	27:24:53:LYS:HZ3	1.82	0.44
40:B:17:HIS:CG	40:B:37:VAL:HB	2.53	0.44
41:C:139:ASN:N	41:C:139:ASN:HD22	2.14	0.44
41:C:152:VAL:O	41:C:152:VAL:HG23	2.18	0.44
47:I:20:ILE:CG2	47:I:60:LEU:HD22	2.47	0.44
47:I:89:TYR:HB3	47:I:93:LEU:HD12	1.99	0.44
54:P:67:ILE:H	54:P:67:ILE:HD12	1.81	0.44
55:Q:10:ARG:HH11	55:Q:10:ARG:HG3	1.83	0.44
49:K:26:PHE:HZ	59:U:28:LEU:HD11	1.82	0.44
39:Z:14:LEU:HD23	39:Z:14:LEU:C	2.38	0.44
39:Z:333:ILE:HD11	39:Z:345:THR:HG22	2.00	0.44
2:01:941:A:O2'	2:01:1190:G:H4'	2.17	0.44
2:01:1326:U:C2	2:01:1648:U:H1'	2.52	0.44
2:01:1790:C:H2'	2:01:1791:A:C5	2.53	0.44
2:01:227:A:O2'	2:01:228:C:H4'	2.17	0.44
2:01:627:A:N7	17:14:111:ILE:HD12	2.33	0.44
2:01:64:A:H2'	2:01:65:U:C6	2.52	0.44
2:01:696:G:O2'	2:01:697:G:H5'	2.18	0.44
3:02:116:G:P	20:17:55:GLU:HG2	2.58	0.44
6:03:161:VAL:HG21	6:03:174:THR:H	1.83	0.44
7:04:141:HIS:CD2	7:04:194:VAL:HG22	2.52	0.44
7:04:25:LYS:HB3	7:04:25:LYS:NZ	2.33	0.44
9:06:165:HIS:ND1	9:06:166:LYS:HD3	2.33	0.44
12:09:99:ILE:O	12:09:103:VAL:HG23	2.18	0.44
14:11:72:THR:HG22	14:11:116:MET:HE3	2.00	0.44
28:25:65:PHE:CD1	28:25:76:ILE:HG12	2.53	0.44
1:A:763:G:H2'	1:A:764:C:C6	2.52	0.44
40:B:150:ILE:HG12	40:B:150:ILE:O	2.18	0.44
41:C:155:ARG:HD3	41:C:192:TYR:O	2.18	0.44
41:C:28:PHE:HE2	52:N:76:PHE:CD1	2.36	0.44
57:S:68:HIS:HB3	57:S:72:GLU:OE2	2.17	0.44
39:Z:66:VAL:HG13	39:Z:116:ARG:HH12	1.83	0.44
39:Z:27:TYR:HB2	39:Z:70:LEU:HD21	1.99	0.44
2:01:2372:U:H2'	2:01:2373:G:H8	1.83	0.44
2:01:2591:C:H2'	2:01:2592:G:C8	2.53	0.44
2:01:2655:G:H2'	2:01:2664:G:C6	2.53	0.44
2:01:672:C:O2'	2:01:673:C:H5'	2.18	0.44
11:08:37:ASN:ND2	11:08:39:ALA:H	2.16	0.44
14:11:101:SER:O	14:11:105:LEU:HG	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:18:64:SER:OG	21:18:65:ASN:N	2.50	0.44
31:28:3:THR:HA	31:28:38:GLU:HA	1.99	0.44
1:A:1016:A:H4'	1:A:1218:C:H4'	2.00	0.44
1:A:1190:G:H5'	41:C:175:HIS:HE1	1.83	0.44
1:A:494:G:H2'	1:A:495:A:H4'	2.00	0.44
1:A:560:A:H4'	1:A:561:U:H5'	2.00	0.44
1:A:948:C:H2'	1:A:949:A:C8	2.53	0.44
41:C:163:ARG:HG3	41:C:163:ARG:HH11	1.82	0.44
42:D:158:LEU:HD23	42:D:158:LEU:O	2.18	0.44
45:G:4:ARG:HD2	45:G:6:ILE:HD13	2.00	0.44
49:K:124:LYS:C	49:K:124:LYS:HD2	2.38	0.44
2:01:746:U:H5'	2:01:748:G:H1'	1.99	0.43
6:03:10:VAL:O	6:03:14:LYS:HG3	2.18	0.43
7:04:237:ARG:HG3	7:04:237:ARG:HH11	1.82	0.43
2:01:1842:G:H1'	7:04:242:HIS:CD2	2.53	0.43
13:10:25:ALA:O	13:10:85:SER:OG	2.34	0.43
19:16:65:LEU:O	19:16:69:ARG:HG2	2.17	0.43
24:21:97:LEU:N	24:21:97:LEU:HD12	2.33	0.43
1:A:1227:A:C2'	1:A:1228:C:H5'	2.48	0.43
1:A:393:A:H5'	1:A:483:C:O2'	2.18	0.43
40:B:178:LEU:HD12	40:B:178:LEU:N	2.33	0.43
40:B:69:VAL:HG12	40:B:168:GLU:OE2	2.18	0.43
41:C:122:GLN:HB3	41:C:127:VAL:HG11	1.98	0.43
43:E:102:THR:H	43:E:121:ASN:HD22	1.65	0.43
48:J:57:VAL:O	48:J:58:ASN:CB	2.66	0.43
53:O:86:LEU:HD12	53:O:87:ARG:N	2.33	0.43
4:Y:24:LEU:C	4:Y:24:LEU:HD23	2.38	0.43
2:01:1936:A:H2	2:01:1943:U:H3	1.66	0.43
2:01:2221:G:O2'	2:01:2222:C:H5'	2.18	0.43
2:01:2758:A:C2	11:08:70:LEU:HD11	2.52	0.43
2:01:2760:C:O2'	2:01:2761:A:H5'	2.18	0.43
2:01:940:G:H2'	2:01:941:A:C5'	2.48	0.43
7:04:103:ILE:C	7:04:103:ILE:HD12	2.38	0.43
7:04:15:VAL:HG22	7:04:205:GLY:HA3	2.00	0.43
9:06:90:GLN:HG3	9:06:92:HIS:CE1	2.53	0.43
12:09:63:ALA:HA	12:09:66:ASN:HD22	1.82	0.43
15:12:128:ASN:OD1	15:12:128:ASN:O	2.37	0.43
16:13:12:ASP:HB3	16:13:99:ILE:HG13	2.00	0.43
2:01:807:U:OP2	17:14:36:LYS:HD2	2.18	0.43
19:16:29:VAL:HG11	19:16:75:ILE:HG23	1.99	0.43
23:20:49:ILE:HG22	23:20:54:VAL:HB	2.01	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:23:73:ASN:HB2	26:23:80:ASP:OD2	2.18	0.43
27:24:65:VAL:HG13	27:24:65:VAL:O	2.17	0.43
1:A:1042:A:H2'	1:A:1043:G:O4'	2.18	0.43
1:A:132:C:H5'	1:A:262:A:HO2'	1.83	0.43
1:A:410:G:H2'	1:A:429:U:C4	2.54	0.43
1:A:486:U:O2'	1:A:487:A:H8	2.01	0.43
1:A:535:A:H5'	1:A:536:C:H5	1.82	0.43
1:A:71:A:H3'	1:A:72:A:C5'	2.46	0.43
1:A:887:G:H2'	1:A:888:G:H5'	2.01	0.43
1:A:1369:C:P	47:I:112:ARG:HG3	2.58	0.43
47:I:122:ARG:HG3	47:I:122:ARG:HH11	1.82	0.43
53:O:26:VAL:O	53:O:30:LEU:HD13	2.17	0.43
59:U:36:PHE:HB3	59:U:40:PRO:HD3	1.99	0.43
39:Z:245:ARG:NH1	39:Z:259:SER:OG	2.50	0.43
2:01:2180:U:H2'	2:01:2181:U:O4'	2.18	0.43
2:01:2204:G:H4'	7:04:149:LYS:CD	2.49	0.43
2:01:230:G:O2'	2:01:231:A:H5'	2.18	0.43
2:01:491:G:N3	2:01:491:G:H2'	2.33	0.43
7:04:124:LYS:HB3	7:04:127:ASN:HD21	1.80	0.43
10:07:105:ILE:C	10:07:108:PRO:HD2	2.39	0.43
12:09:46:PHE:HB3	12:09:51:ARG:HH12	1.84	0.43
14:11:50:LYS:HB3	14:11:50:LYS:NZ	2.32	0.43
23:20:1:MET:CE	23:20:101:ILE:HD12	2.48	0.43
24:21:57:ASN:N	24:21:57:ASN:HD22	2.15	0.43
26:23:100:GLU:CD	26:23:101:THR:H	2.21	0.43
27:24:80:HIS:HE1	27:24:82:TYR:CE1	2.36	0.43
2:01:922:C:H1'	28:25:22:PHE:HD2	1.84	0.43
30:27:43:LEU:HD13	30:27:43:LEU:O	2.17	0.43
37:34:16:ILE:HD13	37:34:25:VAL:HG22	2.00	0.43
1:A:1086:U:H2'	1:A:1087:G:H5'	2.00	0.43
1:A:314:C:O2'	1:A:315:A:H5'	2.17	0.43
1:A:372:C:H41	1:A:387:U:H2'	1.82	0.43
44:F:9:MET:HG3	44:F:85:ILE:HG13	1.99	0.43
47:I:122:ARG:HD3	47:I:122:ARG:C	2.38	0.43
55:Q:30:HIS:HD2	55:Q:33:TYR:H	1.65	0.43
57:S:16:LYS:O	57:S:20:LYS:HG3	2.17	0.43
2:01:1604:C:O2'	2:01:1605:C:H5'	2.18	0.43
3:02:30:C:C2'	3:02:31:C:H5'	2.47	0.43
8:05:124:ARG:NH1	8:05:163:GLY:HA3	2.33	0.43
8:05:51:THR:HB	8:05:79:LEU:HD23	2.00	0.43
9:06:120:VAL:HG23	9:06:120:VAL:O	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:18:89:GLY:O	21:18:112:ARG:NH1	2.51	0.43
2:01:2353:G:O3'	28:25:28:LEU:HD12	2.18	0.43
36:33:28:LEU:HD11	36:33:43:LEU:O	2.19	0.43
1:A:523:A:C2'	1:A:524:G:H5''	2.48	0.43
42:D:2:ARG:HH11	42:D:2:ARG:HG2	1.82	0.43
1:A:546:A:H5''	42:D:69:ARG:NH2	2.33	0.43
50:L:52:CYS:SG	50:L:66:ILE:HD11	2.58	0.43
51:M:69:ARG:HG2	51:M:69:ARG:HH11	1.84	0.43
5:W:51:C:H2'	5:W:52:G:H8	1.83	0.43
5:X:9:G:H5'	5:X:11:A:OP2	2.18	0.43
2:01:1454:C:H5'	19:16:63:ARG:HH21	1.84	0.43
2:01:1775:U:H2'	2:01:1776:G:O4'	2.18	0.43
2:01:1917:U:C2'	2:01:1918:A:H5'	2.48	0.43
2:01:521:U:H2'	2:01:522:A:H8	1.82	0.43
2:01:818:G:C2'	2:01:819:A:H5''	2.49	0.43
7:04:221:GLY:HA2	7:04:224:MET:SD	2.59	0.43
7:04:23:LEU:HD21	7:04:89:ASN:OD1	2.18	0.43
9:06:44:ARG:HH12	9:06:90:GLN:NE2	2.17	0.43
7:04:132:ARG:HD2	12:09:123:ARG:NH1	2.34	0.43
18:15:50:ARG:HH21	18:15:50:ARG:HG2	1.84	0.43
27:24:28:ALA:HB3	27:24:40:ILE:CD1	2.48	0.43
31:28:44:ARG:HH21	31:28:44:ARG:HG2	1.82	0.43
31:28:56:VAL:O	31:28:56:VAL:HG13	2.19	0.43
1:A:762:U:H2'	1:A:763:G:H8	1.83	0.43
41:C:12:GLY:C	41:C:13:ILE:HD12	2.39	0.43
42:D:176:LYS:O	42:D:177:MET:HG2	2.18	0.43
43:E:131:ASN:HD22	43:E:134:ASN:HD22	1.67	0.43
44:F:42:TRP:NE1	44:F:61:LEU:HD22	2.30	0.43
5:W:52:G:H2'	5:W:53:G:C8	2.54	0.43
2:01:1695:G:H1'	7:04:7:PRO:O	2.19	0.43
2:01:1726:C:H2'	2:01:1727:C:C6	2.54	0.43
2:01:917:A:H5''	2:01:2268:A:H61	1.83	0.43
2:01:2602:A:H5'	2:01:2603:G:OP1	2.18	0.43
2:01:2830:C:O2'	2:01:2831:G:H5'	2.18	0.43
2:01:671:C:OP1	17:14:43:GLY:N	2.51	0.43
3:02:12:C:H1'	3:02:15:A:C2	2.54	0.43
14:11:54:ILE:O	14:11:54:ILE:HG23	2.19	0.43
22:19:57:ARG:HG2	22:19:57:ARG:HH11	1.84	0.43
1:A:26:A:N6	1:A:558:G:H1'	2.34	0.43
1:A:95:C:H2'	1:A:95:C:O2	2.18	0.43
1:A:437:U:H5'	42:D:153:ARG:HH12	1.84	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:G:77:ARG:HH11	45:G:77:ARG:HG2	1.84	0.43
49:K:60:PHE:O	49:K:64:VAL:HG23	2.18	0.43
4:Y:24:LEU:HD12	50:L:48:LEU:HD21	2.01	0.43
1:A:1492:A:N3	4:Y:26:ARG:HB3	2.33	0.43
39:Z:21:LEU:HA	39:Z:24:TYR:HD2	1.83	0.43
2:01:119:A:H4'	2:01:120:U:H5'	2.01	0.43
2:01:1583:A:H4'	2:01:1585:C:N4	2.34	0.43
2:01:2188:U:H3'	2:01:2189:U:C5'	2.38	0.43
2:01:2370:G:H2'	2:01:2371:G:C8	2.53	0.43
2:01:2345:G:N3	2:01:2381:A:H2'	2.34	0.43
2:01:2508:G:N1	2:01:2580:U:H5	2.04	0.43
2:01:801:G:C8	9:06:50:ALA:HB2	2.54	0.43
3:02:13:G:O2'	3:02:15:A:H2'	2.19	0.43
6:03:201:PRO:HD2	6:03:204:ALA:HB2	2.01	0.43
7:04:2:VAL:HG21	7:04:201:LEU:HD22	2.01	0.43
9:06:145:ASP:HA	9:06:166:LYS:HB3	2.01	0.43
9:06:170:ARG:HH21	9:06:170:ARG:HG2	1.84	0.43
14:11:22:PRO:HG2	14:11:23:VAL:HG23	2.01	0.43
20:17:39:VAL:HG11	20:17:48:LEU:HD23	2.00	0.43
23:20:85:LYS:HB2	23:20:85:LYS:NZ	2.34	0.43
24:21:25:ARG:HG3	24:21:25:ARG:HH11	1.83	0.43
34:31:5:ARG:NH1	34:31:25:ASN:HB2	2.33	0.43
34:31:35:LEU:HD13	34:31:37:LYS:HE3	1.99	0.43
1:A:279:A:H5'	1:A:281:G:O4'	2.19	0.43
42:D:58:GLN:OE1	42:D:58:GLN:HA	2.18	0.43
44:F:47:LEU:HD21	44:F:57:ALA:HB3	2.00	0.43
4:Y:44:LYS:HB3	4:Y:44:LYS:HZ3	1.82	0.43
2:01:1550:C:H2'	2:01:1551:A:H8	1.83	0.43
2:01:2079:U:H4'	2:01:2433:A:C2	2.54	0.43
2:01:587:C:H5'	9:06:85:PHE:CE2	2.53	0.43
2:01:616:A:H4'	9:06:101:TYR:CE2	2.54	0.43
20:17:51:ALA:HB3	20:17:78:VAL:HG22	2.01	0.43
25:22:69:ARG:NH1	25:22:69:ARG:CB	2.82	0.43
37:34:34:LYS:HZ2	37:34:34:LYS:HB3	1.84	0.43
1:A:1520:C:H2'	1:A:1521:C:C6	2.53	0.43
1:A:1522:U:H2'	1:A:1523:G:H8	1.83	0.43
1:A:784:A:H2'	1:A:785:G:H8	1.84	0.43
42:D:55:ARG:HH11	42:D:55:ARG:HG2	1.83	0.43
52:N:45:LEU:HD23	52:N:45:LEU:C	2.39	0.43
53:O:27:GLN:O	53:O:31:LEU:HG	2.18	0.43
5:X:10:G:H2'	5:X:11:A:C8	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:1111:A:H2'	2:01:1112:G:H4'	2.00	0.43
2:01:1178:C:O2	2:01:1178:C:C2'	2.67	0.43
2:01:2818:U:H2'	2:01:2819:G:H8	1.83	0.43
2:01:2834:G:O6	2:01:2879:A:H2'	2.19	0.43
2:01:817:C:O2'	2:01:839:U:H5''	2.19	0.43
3:02:30:C:H2'	3:02:31:C:O4'	2.19	0.43
9:06:164:LEU:HD13	9:06:167:VAL:HG21	2.01	0.43
10:07:92:GLY:O	10:07:95:MET:HG2	2.18	0.43
13:10:8:LYS:HG2	13:10:12:VAL:HG23	2.01	0.43
19:16:38:LEU:HG	19:16:109:PRO:O	2.19	0.43
24:21:42:LYS:O	24:21:45:VAL:HG12	2.18	0.43
43:E:132:PRO:HA	43:E:135:VAL:HG22	1.99	0.43
2:01:976:G:H4'	2:01:1156:A:N7	2.34	0.43
2:01:1669:A:O3'	2:01:2549:G:H5'	2.18	0.43
2:01:2126:A:H2	2:01:2163:A:H5''	1.84	0.43
2:01:2170:A:C2'	2:01:2171:A:H4'	2.49	0.43
2:01:2285:C:OP2	34:31:5:ARG:HD3	2.19	0.43
2:01:2832:U:H1'	2:01:2834:G:C2	2.54	0.43
7:04:180:MET:HB2	7:04:268:ARG:HB3	2.01	0.43
7:04:38:LYS:HZ3	7:04:58:LYS:HA	1.84	0.43
9:06:97:ASN:HB2	9:06:100:MET:CG	2.47	0.43
10:07:140:ILE:H	10:07:140:ILE:HD12	1.83	0.43
21:18:17:PRO:HD2	21:18:83:ILE:CD1	2.49	0.43
25:22:23:ALA:HB1	25:22:29:THR:HG23	2.01	0.43
27:24:21:ARG:HG2	27:24:21:ARG:HH11	1.84	0.43
30:27:25:GLN:O	30:27:29:ARG:HG3	2.18	0.43
32:29:56:ARG:CB	51:M:78:ARG:HH22	2.32	0.43
2:01:2045:C:H5''	33:30:14:MET:HE1	2.01	0.43
36:33:15:LYS:NZ	36:33:19:GLY:HA2	2.33	0.43
1:A:1133:G:H2'	1:A:1134:G:H8	1.84	0.43
1:A:1216:A:H2'	1:A:1217:C:C6	2.54	0.43
47:I:44:ARG:HG2	47:I:44:ARG:HH11	1.84	0.43
55:Q:22:VAL:HG21	55:Q:60:ILE:HD11	2.01	0.43
57:S:18:VAL:O	57:S:22:VAL:HG23	2.19	0.43
57:S:39:ILE:HA	57:S:43:MET:CE	2.49	0.43
58:T:16:ALA:O	58:T:20:ASN:ND2	2.51	0.43
2:01:1074:G:H2'	2:01:1075:C:C6	2.54	0.42
2:01:1239:G:H2'	2:01:1240:U:O4'	2.18	0.42
2:01:1409:U:H2'	2:01:1410:G:C8	2.54	0.42
2:01:1429:G:H2'	2:01:1430:G:H8	1.84	0.42
2:01:2134:A:H3'	2:01:2134:A:N3	2.34	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:04:95:TYR:CE2	7:04:101:ARG:HD2	2.54	0.42
8:05:177:VAL:O	8:05:177:VAL:HG13	2.19	0.42
9:06:84:THR:HG23	9:06:85:PHE:H	1.84	0.42
12:09:33:GLN:CG	12:09:35:LYS:HE2	2.49	0.42
12:09:77:THR:O	12:09:77:THR:HG23	2.19	0.42
17:14:117:THR:HG22	17:14:118:THR:H	1.83	0.42
19:16:59:SER:HB2	19:16:62:ASN:HB2	2.01	0.42
24:21:83:LYS:HZ2	24:21:83:LYS:HB2	1.82	0.42
28:25:66:GLU:O	28:25:74:LYS:HD3	2.19	0.42
1:A:1143:G:H2'	1:A:1144:G:C8	2.54	0.42
1:A:1219:A:H2'	1:A:1220:G:C8	2.54	0.42
1:A:1405:G:O2'	1:A:1406:U:H5'	2.19	0.42
1:A:558:G:H3'	1:A:559:A:C5'	2.49	0.42
1:A:952:U:H2'	1:A:953:G:H8	1.84	0.42
43:E:68:ARG:HH11	43:E:68:ARG:HG3	1.84	0.42
46:H:76:ARG:HH12	46:H:125:ILE:HG23	1.84	0.42
45:G:149:ALA:HB1	49:K:58:THR:HG21	2.01	0.42
53:O:81:ILE:HG22	53:O:86:LEU:CD1	2.49	0.42
58:T:2:ASN:ND2	58:T:3:ILE:N	2.66	0.42
39:Z:301:GLN:OE1	39:Z:301:GLN:O	2.37	0.42
2:01:1045:C:H4'	2:01:1047:G:H1'	2.00	0.42
2:01:184:C:H2'	2:01:185:G:C8	2.54	0.42
2:01:1854:A:N6	2:01:1888:G:H1'	2.34	0.42
2:01:2663:G:H2'	2:01:2664:G:O4'	2.20	0.42
2:01:372:G:O2'	2:01:373:U:H5	2.02	0.42
2:01:580:U:O3'	22:19:30:VAL:HG13	2.19	0.42
6:03:211:LYS:HD2	6:03:223:ALA:HB1	2.01	0.42
6:03:39:VAL:O	6:03:39:VAL:HG13	2.19	0.42
10:07:116:LEU:HD12	10:07:175:PRO:O	2.18	0.42
11:08:126:THR:HG22	11:08:127:GLN:H	1.82	0.42
20:17:64:TYR:HB3	20:17:67:ASN:ND2	2.33	0.42
23:20:1:MET:HE2	23:20:101:ILE:HD12	2.01	0.42
32:29:42:PRO:HB2	32:29:45:THR:OG1	2.19	0.42
32:29:56:ARG:HB2	51:M:78:ARG:HH22	1.84	0.42
37:34:1:MET:HE1	37:34:36:ARG:HB2	2.00	0.42
1:A:1251:A:H2'	1:A:1252:A:C8	2.54	0.42
1:A:555:U:H2'	1:A:556:C:C6	2.53	0.42
1:A:61:G:H2'	1:A:62:U:O4'	2.20	0.42
40:B:113:LEU:HD13	40:B:143:LEU:HB3	2.01	0.42
51:M:28:ARG:O	51:M:32:ILE:HG12	2.18	0.42
32:29:17:SER:CB	51:M:56:ARG:HH22	2.32	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Z:267:PRO:O	39:Z:268:THR:OG1	2.33	0.42
2:01:1021:A:H2'	2:01:1022:G:H4'	2.00	0.42
2:01:1167:C:H2'	2:01:1168:G:H8	1.83	0.42
2:01:192:C:C2'	2:01:193:U:H5'	2.49	0.42
2:01:226:A:H5''	2:01:257:C:O2'	2.18	0.42
2:01:833:A:H2'	2:01:834:G:H8	1.85	0.42
2:01:996:A:H2'	2:01:997:G:H8	1.83	0.42
7:04:179:GLU:OE2	7:04:270:ARG:HB2	2.18	0.42
11:08:34:ARG:HH11	11:08:34:ARG:HG3	1.84	0.42
12:09:4:ILE:CG2	12:09:37:VAL:HG23	2.48	0.42
13:10:107:GLU:HG2	13:10:110:ALA:HB2	2.01	0.42
13:10:3:LEU:HD23	13:10:3:LEU:N	2.25	0.42
18:15:135:VAL:HG11	27:24:57:TYR:CD2	2.54	0.42
2:01:1651:G:C4'	19:16:39:PRO:HG2	2.45	0.42
2:01:990:A:H61	23:20:78:ARG:HH11	1.67	0.42
23:20:78:ARG:HB2	23:20:83:TYR:HB3	2.00	0.42
35:32:25:LYS:HG3	35:32:28:ARG:HH21	1.83	0.42
1:A:1030:U:H3'	1:A:1031:C:H5'	2.00	0.42
1:A:1324:A:H4'	1:A:1362:A:O3'	2.19	0.42
1:A:674:G:H21	49:K:117:HIS:HB2	1.85	0.42
1:A:810:C:O2'	1:A:811:C:H5'	2.19	0.42
1:A:918:A:H2'	1:A:919:A:O4'	2.18	0.42
43:E:79:THR:OG1	43:E:80:LEU:N	2.52	0.42
1:A:1240:U:OP1	45:G:115:MET:HG2	2.19	0.42
46:H:120:LEU:O	46:H:120:LEU:HD12	2.19	0.42
47:I:89:TYR:CD1	47:I:93:LEU:HD12	2.55	0.42
48:J:89:ARG:HH11	48:J:89:ARG:HG2	1.83	0.42
53:O:38:LEU:HD23	53:O:55:LEU:HD12	2.01	0.42
55:Q:10:ARG:HD2	55:Q:11:VAL:O	2.19	0.42
55:Q:16:MET:CG	55:Q:19:SER:HB2	2.49	0.42
2:01:131:A:H2'	2:01:132:G:H8	1.84	0.42
2:01:1431:A:H2'	2:01:1432:G:C8	2.55	0.42
2:01:1935:G:H1'	2:01:1964:G:N2	2.34	0.42
2:01:2861:U:H2'	2:01:2862:G:C8	2.54	0.42
2:01:2886:A:H2	33:30:28:SER:HA	1.84	0.42
2:01:1658:C:H5'	8:05:138:LEU:HD23	2.01	0.42
13:10:31:ARG:HH11	13:10:31:ARG:HG3	1.84	0.42
23:20:80:ARG:NH1	23:20:80:ARG:HG2	2.31	0.42
1:A:1173:U:H2'	1:A:1174:G:C8	2.54	0.42
1:A:1228:C:H5''	51:M:114:PRO:CG	2.44	0.42
41:C:149:LYS:HD2	41:C:200:TRP:CE3	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C:56:ILE:CG2	41:C:63:ILE:HD11	2.49	0.42
44:F:35:LYS:HD3	44:F:37:HIS:CE1	2.55	0.42
48:J:57:VAL:CG2	48:J:58:ASN:H	2.32	0.42
48:J:89:ARG:HB2	48:J:90:LEU:HD12	2.00	0.42
51:M:65:GLU:O	51:M:69:ARG:HG3	2.19	0.42
51:M:82:LEU:HD11	57:S:65:MET:HG3	2.01	0.42
59:U:35:GLU:O	59:U:36:PHE:HB2	2.19	0.42
2:01:1183:U:H2'	2:01:1184:U:C6	2.55	0.42
2:01:150:U:H2'	2:01:151:C:C6	2.55	0.42
2:01:171:U:H2'	2:01:172:A:C8	2.53	0.42
10:07:56:LEU:HD13	10:07:86:CYS:CB	2.50	0.42
11:08:59:ASP:O	11:08:63:GLN:N	2.47	0.42
12:09:62:LEU:O	12:09:66:ASN:ND2	2.52	0.42
20:17:35:ILE:CD1	20:17:106:LEU:HD12	2.49	0.42
21:18:52:ARG:HH11	21:18:52:ARG:HG3	1.85	0.42
27:24:10:LYS:HG3	27:24:11:GLU:HG2	2.01	0.42
29:26:73:ARG:HB2	29:26:73:ARG:NH1	2.35	0.42
30:27:27:ASN:O	30:27:31:GLN:HG2	2.18	0.42
31:28:42:ALA:O	31:28:46:MET:HG3	2.19	0.42
32:29:15:SER:HA	32:29:21:VAL:HA	2.01	0.42
37:34:25:VAL:HB	37:34:35:GLN:HB2	2.00	0.42
1:A:108:G:C6	58:T:9:ARG:HG2	2.55	0.42
1:A:1384:C:H2'	1:A:1385:G:H8	1.85	0.42
1:A:427:U:H4'	1:A:542:G:OP1	2.20	0.42
41:C:135:ARG:HG3	41:C:135:ARG:HH11	1.85	0.42
42:D:190:LEU:HD12	42:D:190:LEU:C	2.39	0.42
42:D:79:ALA:HA	42:D:85:THR:CG2	2.49	0.42
44:F:64:VAL:HG22	44:F:65:GLU:N	2.34	0.42
48:J:6:ILE:O	48:J:76:ILE:N	2.52	0.42
48:J:5:ARG:HD3	48:J:79:PRO:CD	2.50	0.42
48:J:80:THR:HB	48:J:83:THR:OG1	2.18	0.42
50:L:49:ARG:NH1	50:L:88:ASP:OD2	2.52	0.42
59:U:36:PHE:CD1	59:U:39:LYS:HD3	2.53	0.42
59:U:60:ALA:HA	59:U:63:ASN:HD21	1.84	0.42
2:01:1993:U:H2'	2:01:1994:C:O4'	2.19	0.42
2:01:2004:G:H2'	2:01:2005:A:O4'	2.19	0.42
2:01:2164:C:C2'	2:01:2165:C:H5'	2.48	0.42
2:01:2240:U:O2'	2:01:2241:A:H5'	2.19	0.42
2:01:2773:C:H2'	2:01:2774:C:C6	2.54	0.42
2:01:804:A:H2'	2:01:806:C:C4	2.55	0.42
2:01:992:C:H4'	23:20:74:ILE:CD1	2.46	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:03:65:LEU:HD21	6:03:159:GLY:O	2.19	0.42
8:05:98:VAL:HG12	8:05:99:GLU:OE2	2.20	0.42
10:07:56:LEU:HD23	10:07:56:LEU:C	2.40	0.42
15:12:75:TYR:HB3	15:12:84:ILE:HD11	2.01	0.42
17:14:20:GLY:HA2	17:14:28:GLY:HA2	2.00	0.42
22:19:49:ARG:HG2	22:19:52:ARG:NH2	2.34	0.42
22:19:93:ILE:O	22:19:97:ILE:HG13	2.18	0.42
32:29:59:ARG:HH21	32:29:62:LYS:CB	2.33	0.42
42:D:7:LYS:HB3	42:D:20:LEU:HD13	2.01	0.42
50:L:20:VAL:HB	50:L:94:TYR:CE1	2.54	0.42
55:Q:22:VAL:HG22	55:Q:23:ALA:H	1.84	0.42
55:Q:26:ARG:HG2	55:Q:26:ARG:HH11	1.85	0.42
2:01:2080:A:H5'	29:26:18:SER:HB2	2.00	0.42
2:01:2297:A:N3	2:01:2297:A:H2'	2.34	0.42
6:03:48:LEU:HD21	6:03:196:LEU:HD11	2.02	0.42
18:15:77:PRO:HG2	18:15:80:VAL:CG2	2.40	0.42
1:A:1432:G:H3'	21:18:105:LYS:HD2	2.02	0.42
1:A:1254:A:H2'	1:A:1255:G:C8	2.54	0.42
1:A:179:A:H61	1:A:196:A:N6	2.01	0.42
1:A:372:C:N4	1:A:387:U:H2'	2.35	0.42
42:D:10:LEU:HD22	42:D:62:ARG:HE	1.84	0.42
44:F:38:ARG:HB3	44:F:63:ASN:HB2	2.02	0.42
44:F:81:ASN:ND2	44:F:84:VAL:HG23	2.34	0.42
45:G:49:LEU:HD22	45:G:123:LEU:CD2	2.46	0.42
47:I:129:ARG:HH11	47:I:129:ARG:HG2	1.85	0.42
49:K:24:ALA:CB	49:K:29:THR:HG22	2.50	0.42
52:N:84:ARG:O	52:N:84:ARG:HD3	2.19	0.42
55:Q:14:ASP:OD2	55:Q:54:ILE:HB	2.19	0.42
56:R:70:THR:OG1	56:R:71:ASP:N	2.53	0.42
2:01:1087:G:H3'	2:01:1088:A:H5''	2.01	0.42
2:01:1177:G:C8	2:01:1178:C:H1'	2.55	0.42
2:01:2372:U:H2'	2:01:2373:G:C8	2.55	0.42
2:01:2578:G:N2	8:05:130:GLN:NE2	2.67	0.42
2:01:420:C:H2'	2:01:421:C:O4'	2.20	0.42
6:03:53:ARG:HG2	6:03:53:ARG:HH11	1.85	0.42
6:03:54:LYS:HD2	6:03:54:LYS:N	2.35	0.42
7:04:29:PHE:HB3	7:04:102:TYR:OH	2.18	0.42
7:04:57:HIS:HD2	7:04:58:LYS:H	1.68	0.42
8:05:99:GLU:CD	8:05:99:GLU:H	2.23	0.42
2:01:2092:U:H5''	12:09:24:GLY:HA3	2.02	0.42
12:09:87:GLU:HG2	44:F:21:MET:SD	2.60	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:30:8:THR:HG22	33:30:9:ARG:N	2.34	0.42
33:30:9:ARG:HD2	33:30:9:ARG:N	2.34	0.42
36:33:46:LYS:HD2	36:33:46:LYS:N	2.34	0.42
1:A:1144:G:N2	1:A:1146:A:H62	2.17	0.42
1:A:212:G:H2'	1:A:213:G:H8	1.84	0.42
1:A:926:G:OP2	1:A:927:G:H5''	2.19	0.42
40:B:110:ILE:HD13	40:B:147:LEU:HD13	2.02	0.42
50:L:43:LYS:CG	50:L:44:PRO:HD3	2.49	0.42
56:R:70:THR:HG23	56:R:71:ASP:O	2.19	0.42
5:W:51:C:H2'	5:W:52:G:C8	2.53	0.42
2:01:1133:A:H4'	2:01:1134:A:H5''	2.01	0.42
2:01:1308:A:H2'	2:01:1309:G:O4'	2.20	0.42
2:01:184:C:H4'	2:01:217:A:H2	1.84	0.42
2:01:2875:C:H2'	2:01:2876:G:C8	2.55	0.42
2:01:656:G:O2'	2:01:657:U:H5'	2.20	0.42
19:16:28:LEU:HD21	19:16:115:LEU:HG	2.01	0.42
21:18:105:LYS:O	21:18:108:ARG:HG2	2.20	0.42
21:18:3:ILE:H	21:18:3:ILE:CD1	2.30	0.42
2:01:1250:G:H5''	22:19:5:ARG:HD3	2.02	0.42
22:19:63:ARG:HG3	22:19:63:ARG:HH11	1.84	0.42
1:A:1106:G:H4'	41:C:170:GLY:O	2.20	0.42
1:A:1312:G:O2'	1:A:1313:U:H5'	2.20	0.42
41:C:166:TRP:HZ3	41:C:168:ARG:HG2	1.85	0.42
1:A:545:C:H5'	42:D:68:GLU:CB	2.50	0.42
47:I:113:LYS:HE2	47:I:118:ARG:O	2.19	0.42
48:J:10:LEU:HB2	48:J:72:ARG:HB2	2.01	0.42
39:Z:17:ARG:O	39:Z:21:LEU:HD13	2.20	0.42
2:01:1199:U:H1'	22:19:3:VAL:HG22	2.02	0.42
2:01:2102:G:H2'	2:01:2103:C:O4'	2.20	0.42
2:01:2557:G:H2'	2:01:2558:C:C6	2.54	0.42
2:01:355:U:H2'	2:01:356:G:C8	2.55	0.42
7:04:269:ARG:HG2	7:04:269:ARG:HH11	1.85	0.42
10:07:73:VAL:CB	10:07:78:ILE:HD11	2.50	0.42
12:09:115:VAL:HA	12:09:132:PHE:HD1	1.85	0.42
34:31:24:LYS:HD3	34:31:33:LEU:HD11	2.00	0.42
37:34:13:ASN:OD1	37:34:13:ASN:N	2.53	0.42
1:A:1402:C:H2'	1:A:1403:C:O4'	2.20	0.42
1:A:860:A:H2'	1:A:861:G:O4'	2.19	0.42
40:B:13:VAL:CG2	40:B:208:ALA:HB2	2.49	0.42
1:A:1346:A:H2	47:I:108:ARG:NH2	2.18	0.42
50:L:51:VAL:HG12	50:L:65:TYR:HD1	1.85	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:O:57:ARG:HH11	53:O:57:ARG:HG3	1.85	0.42
39:Z:193:ARG:CB	39:Z:193:ARG:HH11	2.33	0.42
2:01:1058:U:H3'	2:01:1059:G:H5''	2.02	0.41
2:01:1680:U:C2'	2:01:1681:G:H5'	2.49	0.41
2:01:1717:A:H2'	2:01:1718:G:O4'	2.20	0.41
6:03:9:ARG:HG2	6:03:9:ARG:HH11	1.85	0.41
8:05:47:ALA:HA	8:05:84:LEU:HG	2.02	0.41
10:07:104:THR:HA	32:29:38:SER:HB3	2.01	0.41
11:08:171:LYS:HB2	11:08:171:LYS:HZ2	1.84	0.41
15:12:134:ALA:HB3	15:12:135:GLN:NE2	2.35	0.41
15:12:72:LYS:HB3	15:12:89:PHE:HB2	2.02	0.41
18:15:21:ALA:HB2	18:15:97:GLN:HB2	2.02	0.41
22:19:82:LEU:HB3	22:19:87:VAL:CG2	2.50	0.41
2:01:815:C:OP2	23:20:85:LYS:HE3	2.20	0.41
24:21:27:LYS:O	24:21:71:VAL:HG23	2.20	0.41
24:21:20:VAL:HG11	24:21:44:ALA:HA	2.01	0.41
27:24:61:LEU:HD12	27:24:61:LEU:N	2.35	0.41
27:24:72:VAL:HG12	27:24:93:ARG:HA	2.01	0.41
30:27:28:LEU:HD12	30:27:46:VAL:HG21	2.02	0.41
35:32:11:LYS:HZ2	35:32:11:LYS:HB2	1.85	0.41
1:A:493:A:H2'	1:A:494:G:N7	2.34	0.41
1:A:719:C:O2'	56:R:37:LYS:HB3	2.20	0.41
1:A:1112:C:H1'	41:C:178:ARG:HH11	1.85	0.41
1:A:439:U:H5''	42:D:120:LYS:NZ	2.35	0.41
43:E:17:VAL:O	43:E:17:VAL:HG13	2.20	0.41
43:E:156:ARG:HD3	46:H:42:GLU:O	2.19	0.41
50:L:89:LEU:HD12	50:L:89:LEU:N	2.34	0.41
52:N:45:LEU:HD23	52:N:45:LEU:O	2.20	0.41
57:S:12:LEU:C	57:S:12:LEU:HD12	2.40	0.41
57:S:62:THR:H	57:S:65:MET:HE3	1.85	0.41
5:W:8:U:H5'	5:W:49:G:OP2	2.19	0.41
39:Z:261:VAL:HG21	39:Z:283:ASN:HB2	2.02	0.41
39:Z:292:LYS:O	39:Z:296:TYR:N	2.53	0.41
2:01:131:A:H2'	2:01:132:G:C8	2.54	0.41
2:01:2135:A:H1'	2:01:2158:A:H5'	2.01	0.41
2:01:2485:G:O3'	18:15:125:PRO:HB3	2.20	0.41
2:01:2590:A:OP2	7:04:236:GLY:HA2	2.20	0.41
2:01:2638:G:H22	2:01:2775:G:H2'	1.84	0.41
2:01:2655:G:HO2'	2:01:2656:U:H5	1.68	0.41
2:01:2689:U:O2	2:01:2713:U:H5''	2.20	0.41
2:01:2708:G:H1'	19:16:71:ARG:NH2	2.35	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:2789:C:H2'	2:01:2893:A:N7	2.36	0.41
2:01:2845:U:H4'	21:18:52:ARG:HH12	1.82	0.41
2:01:2861:U:H2'	2:01:2862:G:H8	1.85	0.41
2:01:327:G:O2'	2:01:328:U:H5'	2.21	0.41
2:01:479:A:H4'	2:01:480:A:H5'	2.02	0.41
2:01:532:A:N3	2:01:532:A:H2'	2.35	0.41
7:04:74:PRO:HG2	7:04:96:LYS:CG	2.50	0.41
11:08:59:ASP:O	11:08:63:GLN:HG2	2.19	0.41
28:25:21:ARG:HD2	28:25:25:GLU:OE2	2.20	0.41
32:29:37:CYS:HB3	32:29:40:CYS:HB3	2.02	0.41
33:30:54:ILE:HD11	33:30:56:LYS:HE3	2.02	0.41
1:A:1258:G:H2'	1:A:1259:C:C6	2.55	0.41
1:A:35:G:H2'	1:A:36:C:C6	2.55	0.41
1:A:59:A:H2'	1:A:59:A:N3	2.35	0.41
1:A:674:G:H2'	1:A:675:A:C8	2.56	0.41
41:C:163:ARG:NH1	41:C:163:ARG:HG3	2.34	0.41
44:F:2:ARG:HH11	44:F:2:ARG:HG2	1.86	0.41
44:F:38:ARG:NE	44:F:38:ARG:HA	2.35	0.41
58:T:73:ARG:CB	58:T:73:ARG:HH11	2.33	0.41
2:01:1971:U:H5'	2:01:1972:G:H5''	2.02	0.41
2:01:2124:G:H3'	2:01:2125:G:H5''	2.02	0.41
2:01:222:A:N6	2:01:232:G:H1'	2.35	0.41
2:01:616:A:H2'	2:01:617:G:O4'	2.20	0.41
2:01:687:C:H1'	35:32:4:THR:HG22	2.03	0.41
2:01:989:G:C8	31:28:13:ILE:HD12	2.55	0.41
12:09:33:GLN:HG3	12:09:35:LYS:HE2	2.02	0.41
13:10:52:MET:HG2	13:10:52:MET:O	2.20	0.41
18:15:59:ARG:C	18:15:59:ARG:HD3	2.41	0.41
18:15:67:VAL:HG22	18:15:68:PHE:N	2.35	0.41
19:16:38:LEU:HD23	19:16:111:ALA:HB2	2.02	0.41
19:16:33:ILE:HG22	19:16:114:GLU:HB2	2.01	0.41
21:18:42:PHE:HE2	21:18:60:VAL:HG23	1.85	0.41
23:20:37:GLU:N	23:20:37:GLU:OE1	2.53	0.41
2:01:751:A:C5'	24:21:90:LYS:HA	2.47	0.41
2:01:96:C:H4'	30:27:41:HIS:NE2	2.36	0.41
1:A:1413:A:H2	1:A:1487:G:H22	1.66	0.41
1:A:640:A:H2'	1:A:641:U:H5'	2.01	0.41
41:C:35:ASP:HB2	41:C:56:ILE:CD1	2.46	0.41
42:D:106:PHE:CD1	42:D:144:ILE:HD11	2.56	0.41
1:A:1302:C:H5	51:M:12:LYS:HE3	1.85	0.41
52:N:42:ASN:N	52:N:42:ASN:ND2	2.67	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:108:G:H1	58:T:9:ARG:HG2	1.85	0.41
5:W:44:A:O2'	5:W:45:G:H5'	2.21	0.41
5:X:69:C:H2'	5:X:70:G:H8	1.85	0.41
39:Z:46:VAL:HG13	39:Z:47:TRP:N	2.36	0.41
2:01:1188:U:H4'	23:20:81:LYS:O	2.20	0.41
2:01:1535:A:H3'	2:01:1536:C:C5'	2.50	0.41
2:01:2553:G:H2'	2:01:2554:U:H4'	2.01	0.41
2:01:955:U:C5	2:01:962:G:N1	2.68	0.41
8:05:24:VAL:HG11	8:05:188:LEU:HB3	2.02	0.41
11:08:152:ARG:HH21	11:08:152:ARG:HG3	1.85	0.41
13:10:23:LEU:H	13:10:118:ILE:HG21	1.84	0.41
13:10:54:VAL:HG13	13:10:54:VAL:O	2.20	0.41
18:15:78:LEU:H	18:15:78:LEU:HD12	1.84	0.41
35:32:19:ARG:NH2	35:32:19:ARG:HG2	2.35	0.41
1:A:1203:C:H2'	1:A:1204:A:H8	1.85	0.41
1:A:1325:C:O2'	1:A:1326:U:H5'	2.20	0.41
1:A:212:G:O2'	1:A:213:G:H5'	2.19	0.41
46:H:4:ASP:HB2	46:H:80:PRO:HG3	2.02	0.41
51:M:7:ASN:HD21	51:M:9:PRO:HG3	1.86	0.41
56:R:53:GLN:HE21	56:R:53:GLN:CA	2.31	0.41
5:W:16:C:O2'	5:W:17:C:H5'	2.20	0.41
4:Y:20:LEU:HD21	39:Z:135:GLY:HA2	2.02	0.41
2:01:1198:U:H2'	2:01:1199:U:C6	2.55	0.41
2:01:12:U:O2'	2:01:13:A:H5'	2.20	0.41
2:01:1310:G:H2'	2:01:1311:G:H5'	2.02	0.41
2:01:2020:A:H5'	33:30:8:THR:OG1	2.20	0.41
2:01:2843:G:O2'	2:01:2844:G:H5'	2.21	0.41
2:01:536:G:H4'	22:19:56:PHE:CZ	2.55	0.41
2:01:626:A:H3'	2:01:627:A:C5'	2.51	0.41
3:02:76:G:O2'	3:02:77:U:H5'	2.21	0.41
11:08:23:ILE:HD11	11:08:42:VAL:HG11	2.02	0.41
13:10:74:ASP:OD1	13:10:116:GLU:HB3	2.20	0.41
3:02:7:G:H5''	20:17:29:HIS:NE2	2.35	0.41
22:19:69:ARG:HH21	22:19:69:ARG:HG3	1.85	0.41
24:21:46:LEU:O	24:21:50:VAL:HG23	2.21	0.41
25:22:32:LEU:O	25:22:32:LEU:HD12	2.21	0.41
25:22:9:LYS:HB3	25:22:9:LYS:HZ3	1.85	0.41
1:A:219:U:C2'	1:A:220:G:H5''	2.50	0.41
44:F:3:HIS:N	44:F:92:THR:HG22	2.35	0.41
49:K:23:HIS:HB3	49:K:30:ILE:CG2	2.51	0.41
49:K:20:ALA:HA	49:K:33:ILE:HA	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:M:76:ILE:HG23	51:M:90:HIS:CD2	2.55	0.41
52:N:59:GLN:HA	52:N:59:GLN:NE2	2.34	0.41
54:P:44:SER:H	54:P:46:LYS:NZ	2.18	0.41
39:Z:179:VAL:HG22	39:Z:181:ILE:HD11	2.01	0.41
2:01:1045:C:H4'	2:01:1047:G:C1'	2.50	0.41
2:01:1441:G:H2'	2:01:1442:U:C6	2.55	0.41
2:01:1821:A:H2'	2:01:1822:C:C6	2.54	0.41
2:01:399:U:OP1	2:01:2090:A:H5''	2.20	0.41
2:01:248:G:N3	2:01:2431:U:H4'	2.35	0.41
2:01:35:G:H2'	2:01:36:G:O4'	2.21	0.41
2:01:742:A:H2'	2:01:743:A:C8	2.56	0.41
2:01:970:U:H2'	2:01:971:G:C8	2.54	0.41
3:02:15:A:H5'	3:02:16:G:C8	2.55	0.41
8:05:110:THR:HB	8:05:202:ILE:HB	2.01	0.41
11:08:51:PHE:CE2	11:08:68:ARG:HA	2.55	0.41
11:08:94:ARG:HG3	11:08:94:ARG:HH11	1.86	0.41
12:09:7:ASP:CG	12:09:8:LYS:H	2.24	0.41
13:10:23:LEU:H	13:10:118:ILE:HB	1.85	0.41
13:10:13:ALA:O	13:10:17:GLU:HG3	2.21	0.41
15:12:121:LYS:HD2	15:12:121:LYS:N	2.35	0.41
15:12:39:LYS:HG2	15:12:39:LYS:O	2.20	0.41
18:15:33:LEU:HB2	18:15:117:PHE:CD1	2.56	0.41
18:15:16:ARG:HH11	18:15:16:ARG:HG3	1.86	0.41
21:18:58:PHE:O	21:18:73:PHE:N	2.49	0.41
23:20:38:VAL:HG13	23:20:54:VAL:HG12	2.02	0.41
37:34:1:MET:CE	37:34:36:ARG:HB2	2.50	0.41
1:A:237:G:H2'	1:A:238:A:O4'	2.20	0.41
1:A:112:G:N2	1:A:354:G:H5'	2.32	0.41
1:A:626:G:H2'	1:A:627:G:H8	1.84	0.41
1:A:643:C:OP1	46:H:30:LYS:HE3	2.21	0.41
1:A:952:U:C4'	1:A:964:A:H61	2.33	0.41
1:A:1112:C:H1'	41:C:178:ARG:NH1	2.35	0.41
43:E:14:LEU:C	43:E:15:ILE:HD12	2.40	0.41
47:I:109:GLN:NE2	47:I:110:VAL:N	2.69	0.41
52:N:84:ARG:C	52:N:84:ARG:HD3	2.41	0.41
54:P:4:ILE:HD12	54:P:67:ILE:HG13	2.01	0.41
5:X:48:C:H2'	5:X:59:A:H4'	2.03	0.41
39:Z:150:ARG:NH1	39:Z:150:ARG:HG2	2.35	0.41
2:01:1300:G:H4'	2:01:1301:A:C5'	2.51	0.41
2:01:1843:C:H2'	2:01:1844:C:C6	2.55	0.41
2:01:2107:G:H3'	2:01:2108:A:C5'	2.47	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:764:A:O2'	2:01:765:C:H5'	2.21	0.41
2:01:859:G:O2'	2:01:860:U:C6	2.69	0.41
2:01:96:C:H2'	2:01:97:C:C6	2.56	0.41
6:03:60:ARG:NH2	6:03:162:ARG:HB2	2.36	0.41
6:03:181:ASP:HB3	6:03:184:LYS:CG	2.48	0.41
6:03:48:LEU:N	6:03:48:LEU:HD12	2.35	0.41
9:06:1:MET:CE	9:06:20:GLY:HA3	2.50	0.41
10:07:98:PHE:HD1	10:07:101:ARG:NH1	2.19	0.41
14:11:23:VAL:C	14:11:25:PRO:HD2	2.41	0.41
14:11:78:LEU:O	14:11:82:ALA:N	2.50	0.41
15:12:111:LYS:O	15:12:111:LYS:HD2	2.20	0.41
16:13:8:LEU:O	16:13:9:ASN:ND2	2.48	0.41
19:16:63:ARG:HG2	19:16:80:PHE:CE2	2.55	0.41
21:18:25:VAL:HG22	21:18:26:GLU:N	2.36	0.41
21:18:8:GLU:HG3	21:18:54:LEU:HB2	2.03	0.41
22:19:10:ARG:HA	22:19:10:ARG:NE	2.36	0.41
23:20:36:ALA:N	23:20:37:GLU:OE1	2.54	0.41
26:23:13:LEU:HD11	26:23:70:ALA:HB2	2.03	0.41
28:25:42:HIS:CD2	28:25:73:ARG:HD3	2.56	0.41
35:32:3:ARG:CA	35:32:3:ARG:NE	2.81	0.41
1:A:1471:U:O2'	1:A:1472:U:H5'	2.20	0.41
1:A:1496:C:H2'	1:A:1497:G:O4'	2.21	0.41
1:A:392:C:H2'	1:A:393:A:C8	2.56	0.41
1:A:754:C:H5'	53:O:71:ARG:HH22	1.85	0.41
40:B:89:PHE:CE2	40:B:153:MET:HG3	2.55	0.41
43:E:63:MET:HB3	43:E:67:ARG:HH12	1.86	0.41
48:J:6:ILE:CD1	48:J:79:PRO:HB3	2.50	0.41
51:M:73:SER:O	51:M:77:LYS:HG3	2.20	0.41
56:R:24:ASP:O	56:R:28:LEU:HD23	2.20	0.41
2:01:1140:C:H2'	2:01:1141:U:H5'	2.03	0.41
2:01:1755:A:H2'	2:01:1756:G:H5'	2.02	0.41
2:01:189:G:H2'	2:01:205:G:H22	1.85	0.41
2:01:2318:G:H2'	2:01:2319:G:O4'	2.21	0.41
2:01:1297:C:OP1	2:01:2710:C:H4'	2.20	0.41
2:01:2714:G:O2'	2:01:2715:C:H5'	2.21	0.41
2:01:43:G:H2'	2:01:44:A:O4'	2.20	0.41
2:01:724:U:O2'	2:01:725:G:H5'	2.20	0.41
2:01:845:A:H3'	2:01:845:A:N3	2.36	0.41
11:08:85:LYS:N	11:08:85:LYS:HD3	2.35	0.41
13:10:33:VAL:N	13:10:36:ASP:HB2	2.36	0.41
2:01:7:G:H4'	15:12:15:TRP:HH2	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:16:33:ILE:HG21	19:16:118:ARG:HH12	1.85	0.41
26:23:39:ASN:O	26:23:41:VAL:HG23	2.21	0.41
32:29:32:LEU:HD22	32:29:34:LEU:CD2	2.50	0.41
32:29:2:LYS:HB2	32:29:5:ILE:HD11	2.02	0.41
1:A:715:A:H2'	1:A:716:A:H8	1.84	0.41
40:B:70:GLY:HA2	40:B:163:ILE:HG21	2.02	0.41
40:B:40:ILE:HD12	40:B:40:ILE:H	1.86	0.41
41:C:52:SER:HB3	41:C:111:ASP:OD2	2.21	0.41
42:D:27:ILE:C	42:D:29:THR:H	2.22	0.41
43:E:89:THR:O	43:E:89:THR:HG22	2.20	0.41
44:F:29:ILE:HG22	44:F:34:GLY:HA3	2.02	0.41
45:G:14:ASP:OD1	45:G:15:PRO:HD2	2.21	0.41
45:G:91:ARG:HH11	45:G:91:ARG:HG2	1.85	0.41
46:H:37:ASN:O	46:H:37:ASN:ND2	2.54	0.41
47:I:112:ARG:HD2	52:N:100:TRP:NE1	2.35	0.41
58:T:47:GLN:O	58:T:51:ASN:ND2	2.54	0.41
59:U:61:ARG:HG3	59:U:61:ARG:NH1	2.36	0.41
5:W:23:C:H2'	5:W:24:U:C6	2.56	0.41
1:A:1196:A:C1'	4:Y:34:LYS:HD3	2.50	0.41
39:Z:8:ASN:ND2	39:Z:8:ASN:O	2.54	0.41
2:01:155:A:H2'	2:01:156:A:H8	1.83	0.41
2:01:214:G:O2'	2:01:215:G:H5'	2.21	0.41
2:01:2508:G:O6	2:01:2580:U:O4	2.39	0.41
2:01:2707:U:H2'	2:01:2708:G:C8	2.55	0.41
2:01:2733:A:O2'	2:01:2734:A:H5'	2.21	0.41
2:01:372:G:O2'	2:01:373:U:C5	2.73	0.41
2:01:674:G:H1'	9:06:69:ARG:HD3	2.02	0.41
2:01:875:G:H2'	2:01:876:C:C6	2.56	0.41
6:03:65:LEU:N	6:03:65:LEU:HD23	2.36	0.41
7:04:216:ARG:HG2	7:04:216:ARG:HH11	1.85	0.41
13:10:53:ARG:HG2	13:10:55:VAL:HG13	2.03	0.41
14:11:104:GLN:O	14:11:108:ILE:HG13	2.21	0.41
16:13:103:VAL:O	16:13:122:VAL:HB	2.20	0.41
16:13:105:ARG:HH21	16:13:108:ARG:NH1	2.19	0.41
19:16:64:ARG:O	19:16:68:ALA:N	2.51	0.41
19:16:61:ALA:O	19:16:65:LEU:HD13	2.21	0.41
19:16:72:ASP:CB	19:16:75:ILE:HD13	2.51	0.41
23:20:63:VAL:HA	23:20:96:VAL:HG12	2.01	0.41
2:01:988:A:C8	31:28:13:ILE:HG13	2.55	0.41
1:A:1195:C:H5''	1:A:1196:A:OP2	2.20	0.41
1:A:1487:G:O2'	1:A:1488:G:H5'	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:17:U:H2'	1:A:18:C:H6	1.86	0.41
1:A:273:U:O2'	1:A:274:A:H5'	2.21	0.41
1:A:112:G:H4'	1:A:389:A:H5''	2.03	0.41
1:A:578:C:H2'	1:A:579:A:C8	2.55	0.41
1:A:618:C:H1'	54:P:14:ARG:NH1	2.36	0.41
1:A:758:C:H4'	1:A:880:C:H4'	2.02	0.41
1:A:902:G:O2'	1:A:903:G:H5'	2.21	0.41
1:A:932:C:H5''	45:G:3:ARG:HH22	1.86	0.41
42:D:158:LEU:HD11	42:D:174:ALA:HA	2.03	0.41
42:D:171:GLU:HB2	42:D:180:THR:HB	2.02	0.41
44:F:36:ILE:HA	44:F:64:VAL:HG23	2.01	0.41
44:F:9:MET:HB3	44:F:59:TYR:HD1	1.85	0.41
55:Q:16:MET:HB3	55:Q:19:SER:O	2.21	0.41
59:U:16:ARG:HD2	59:U:20:ARG:HH12	1.86	0.41
5:W:28:C:H2'	5:W:29:G:H8	1.85	0.41
39:Z:263:ILE:HD12	39:Z:287:ALA:HB3	2.03	0.41
2:01:1019:U:H3	2:01:1142:A:N6	2.11	0.41
2:01:2197:U:H1'	2:01:2198:A:C8	2.55	0.41
2:01:2330:G:H21	28:25:38:GLY:HA3	1.86	0.41
2:01:817:C:H2'	2:01:818:G:O4'	2.20	0.41
7:04:73:ILE:HG21	7:04:97:ASP:OD2	2.20	0.41
8:05:118:PHE:CE1	8:05:163:GLY:HA2	2.56	0.41
8:05:184:ARG:HD2	8:05:186:LEU:CD1	2.47	0.41
3:02:42:C:C5	10:07:65:LEU:HD22	2.56	0.41
10:07:68:LYS:HZ3	10:07:68:LYS:HB3	1.86	0.41
12:09:130:VAL:O	12:09:142:VAL:HG12	2.21	0.41
18:15:84:LYS:HD2	18:15:84:LYS:N	2.36	0.41
28:25:66:GLU:HB3	28:25:68:LYS:HG2	2.02	0.41
1:A:147:G:H2'	1:A:148:G:C8	2.56	0.41
1:A:35:G:H21	50:L:114:SER:HB2	1.86	0.41
1:A:722:G:N3	1:A:722:G:H3'	2.36	0.41
41:C:131:ARG:HH11	41:C:131:ARG:HG3	1.86	0.41
41:C:174:LEU:HD12	41:C:174:LEU:N	2.36	0.41
42:D:196:GLU:CD	42:D:196:GLU:H	2.23	0.41
45:G:4:ARG:HD2	45:G:6:ILE:CD1	2.51	0.41
47:I:32:ARG:HG2	47:I:32:ARG:HH11	1.86	0.41
47:I:79:ARG:HG3	47:I:79:ARG:NH1	2.35	0.41
51:M:22:TYR:HB3	51:M:65:GLU:HG2	2.02	0.41
51:M:69:ARG:NH1	51:M:69:ARG:HG2	2.36	0.41
39:Z:17:ARG:HD2	39:Z:110:LEU:HD11	2.03	0.41
39:Z:110:LEU:HD23	39:Z:110:LEU:C	2.41	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Z:246:THR:N	39:Z:258:GLU:O	2.52	0.41
2:01:1130:U:C2	8:05:152:PRO:HA	2.56	0.41
2:01:2475:C:C2'	2:01:2476:A:H5'	2.49	0.41
2:01:558:U:H2'	2:01:559:G:H8	1.86	0.41
11:08:103:ASN:ND2	11:08:104:LEU:N	2.66	0.41
13:10:26:VAL:HG11	13:10:82:ILE:CG2	2.50	0.41
16:13:25:LEU:HD12	16:13:38:ILE:HG22	2.03	0.41
16:13:54:LYS:HB3	16:13:54:LYS:NZ	2.36	0.41
19:16:90:ARG:CB	19:16:90:ARG:HH11	2.34	0.41
22:19:61:ILE:HG23	22:19:75:TYR:CE2	2.56	0.41
25:22:87:LEU:N	25:22:87:LEU:HD12	2.36	0.41
1:A:1486:G:H2'	1:A:1487:G:O4'	2.21	0.41
42:D:48:SER:O	42:D:52:VAL:HG23	2.21	0.41
47:I:109:GLN:NE2	47:I:110:VAL:H	2.19	0.41
1:A:1368:A:OP2	47:I:113:LYS:HG2	2.20	0.41
49:K:107:THR:HG23	49:K:108:ASN:OD1	2.21	0.41
2:01:1316:U:H2'	2:01:1317:G:H8	1.86	0.40
2:01:1593:A:H2'	2:01:1594:U:O4'	2.20	0.40
2:01:1614:A:C2	24:21:93:ALA:HB2	2.56	0.40
2:01:1664:A:H61	2:01:1996:C:N4	2.09	0.40
2:01:576:U:H2'	2:01:577:G:C8	2.56	0.40
9:06:44:ARG:NH1	9:06:90:GLN:NE2	2.69	0.40
12:09:83:LYS:HA	12:09:149:GLU:HB3	2.01	0.40
17:14:85:VAL:HG12	17:14:86:GLU:N	2.36	0.40
20:17:99:TYR:CE1	20:17:104:GLN:HA	2.56	0.40
23:20:52:PRO:O	23:20:53:PHE:HB2	2.21	0.40
30:27:15:ASN:O	30:27:19:LEU:HG	2.21	0.40
37:34:11:CYS:CB	37:34:14:CYS:SG	2.97	0.40
1:A:1412:C:H2'	1:A:1413:A:H8	1.85	0.40
41:C:118:SER:O	41:C:122:GLN:HG2	2.20	0.40
45:G:82:SER:OG	45:G:83:THR:N	2.52	0.40
47:I:119:LYS:HZ2	47:I:119:LYS:HB2	1.84	0.40
54:P:40:ASN:HD22	54:P:43:ALA:HB2	1.86	0.40
58:T:52:GLU:O	58:T:56:ILE:HD13	2.21	0.40
59:U:48:LYS:O	59:U:52:VAL:HG23	2.21	0.40
39:Z:46:VAL:HG13	39:Z:47:TRP:HD1	1.86	0.40
2:01:1252:G:H22	22:19:36:GLN:NE2	2.19	0.40
2:01:2038:G:H2'	2:01:2039:U:O4'	2.21	0.40
2:01:2101:A:H2'	2:01:2102:G:C8	2.55	0.40
2:01:2484:G:O2'	2:01:2485:G:H5'	2.20	0.40
2:01:2741:A:H2'	2:01:2742:G:O4'	2.20	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:323:C:H5'	9:06:163:ASN:HD21	1.87	0.40
2:01:444:C:O2'	2:01:445:C:H5'	2.20	0.40
6:03:45:ALA:N	6:03:213:SER:O	2.54	0.40
7:04:91:ALA:HB3	7:04:103:ILE:HD11	2.04	0.40
11:08:174:LYS:HE3	11:08:174:LYS:HB3	1.96	0.40
26:23:39:ASN:OD1	26:23:63:ALA:O	2.39	0.40
42:D:190:LEU:HD12	42:D:192:ALA:H	1.86	0.40
48:J:7:ARG:HH11	48:J:7:ARG:HG3	1.86	0.40
1:A:1279:G:H5''	48:J:9:ARG:NH1	2.36	0.40
49:K:126:ARG:NE	49:K:126:ARG:HA	2.28	0.40
52:N:92:ILE:HG22	52:N:95:LEU:HB2	2.03	0.40
55:Q:51:GLU:OE1	55:Q:74:LEU:HD11	2.21	0.40
5:W:68:C:H2'	5:W:69:C:C6	2.57	0.40
39:Z:142:GLN:HB3	39:Z:175:GLY:HA3	2.02	0.40
39:Z:60:ARG:HG2	39:Z:64:GLU:OE1	2.21	0.40
2:01:1096:A:H3'	2:01:1097:U:C5'	2.52	0.40
2:01:1750:G:O2'	2:01:1751:U:H5'	2.21	0.40
2:01:1818:U:H5	7:04:155:ARG:CZ	2.34	0.40
2:01:2215:C:H2'	2:01:2216:G:C8	2.56	0.40
2:01:2469:A:H2'	2:01:2470:G:O4'	2.22	0.40
2:01:2515:C:H2'	2:01:2516:A:H8	1.86	0.40
2:01:37:C:H4'	2:01:451:U:OP1	2.21	0.40
2:01:772:C:O2'	2:01:773:U:H5'	2.21	0.40
7:04:261:ARG:HH11	7:04:261:ARG:HG2	1.86	0.40
2:01:2683:C:H4'	8:05:13:ARG:HH11	1.87	0.40
20:17:66:GLY:HA2	20:17:102:ARG:HH21	1.87	0.40
25:22:57:VAL:HG22	25:22:58:VAL:N	2.36	0.40
27:24:17:SER:O	27:24:21:ARG:HG2	2.20	0.40
2:01:2230:G:O3'	29:26:29:LEU:HB2	2.22	0.40
1:A:468:A:N3	1:A:468:A:H2'	2.36	0.40
1:A:678:U:H2'	1:A:679:C:C6	2.56	0.40
40:B:88:GLN:OE1	40:B:88:GLN:N	2.54	0.40
41:C:142:ARG:HH11	41:C:142:ARG:HG3	1.86	0.40
46:H:9:MET:O	46:H:13:ILE:HG13	2.20	0.40
52:N:2:LYS:O	52:N:5:MET:N	2.54	0.40
55:Q:19:SER:OG	55:Q:70:LYS:HE3	2.21	0.40
52:N:48:GLN:NE2	57:S:10:ILE:O	2.42	0.40
39:Z:131:ASP:O	39:Z:221:PHE:N	2.48	0.40
39:Z:140:GLU:HG3	39:Z:216:SER:HB2	2.03	0.40
2:01:1148:U:H2'	2:01:1149:G:O4'	2.22	0.40
2:01:2170:A:H2'	2:01:2171:A:H4'	2.01	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:01:2371:G:O2'	2:01:2372:U:H5'	2.22	0.40
2:01:2443:C:O2'	2:01:2444:G:H5'	2.21	0.40
2:01:2553:G:H2'	2:01:2554:U:C4'	2.52	0.40
2:01:2733:A:C6	8:05:208:LYS:HG3	2.57	0.40
2:01:406:G:H2'	2:01:407:G:C8	2.57	0.40
2:01:833:A:H2'	2:01:834:G:C8	2.56	0.40
15:12:34:ARG:HG2	15:12:34:ARG:HH11	1.85	0.40
1:A:1219:A:H2'	1:A:1220:G:H8	1.86	0.40
1:A:1344:C:O2'	1:A:1345:U:H5'	2.21	0.40
42:D:127:ARG:HH11	42:D:127:ARG:HG3	1.87	0.40
42:D:183:ARG:NH1	42:D:183:ARG:HG2	2.37	0.40
45:G:31:VAL:HG22	45:G:32:ASP:CG	2.41	0.40
45:G:36:SER:HA	45:G:39:GLU:OE1	2.20	0.40
45:G:4:ARG:HH11	45:G:4:ARG:HG2	1.86	0.40
47:I:118:ARG:HG3	47:I:118:ARG:NH1	2.36	0.40
50:L:53:ARG:HA	50:L:63:THR:HA	2.04	0.40
1:A:1219:A:OP1	52:N:52:ARG:HG2	2.21	0.40
57:S:18:VAL:CG1	57:S:42:ASN:HD21	2.34	0.40
2:01:1727:C:H2'	2:01:1728:C:O4'	2.22	0.40
2:01:176:A:C2'	2:01:177:G:H5'	2.52	0.40
2:01:1928:A:H2'	2:01:1929:G:O4'	2.21	0.40
2:01:1982:U:H5'	2:01:1982:U:H6	1.86	0.40
2:01:2302:U:H2'	2:01:2303:G:H8	1.87	0.40
2:01:2470:G:O2'	2:01:2471:A:H5'	2.21	0.40
2:01:2682:A:H61	2:01:2728:U:H1'	1.86	0.40
2:01:2798:U:H4'	2:01:2799:A:C4	2.56	0.40
2:01:857:G:H2'	2:01:858:G:O4'	2.21	0.40
2:01:782:A:N3	7:04:224:MET:HG2	2.36	0.40
7:04:89:ASN:ND2	7:04:89:ASN:N	2.68	0.40
11:08:72:ASN:O	11:08:76:ILE:HG12	2.21	0.40
13:10:125:ARG:HG2	13:10:125:ARG:HH11	1.86	0.40
13:10:37:LYS:HD3	13:10:41:LEU:CD1	2.52	0.40
24:21:10:ALA:HB3	24:21:101:SER:HB2	2.03	0.40
29:26:67:LEU:HD11	29:26:77:TYR:CD2	2.57	0.40
37:34:20:ASP:C	37:34:22:VAL:H	2.24	0.40
1:A:1351:U:H2'	1:A:1352:C:C6	2.56	0.40
1:A:177:G:H2'	1:A:178:C:C6	2.56	0.40
1:A:882:C:O2'	1:A:883:C:H5'	2.21	0.40
1:A:979:C:H2'	1:A:980:C:H5'	2.02	0.40
42:D:62:ARG:HG2	42:D:62:ARG:HH11	1.86	0.40
43:E:114:LEU:HD12	43:E:114:LEU:N	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:G:110:ARG:HG3	45:G:110:ARG:HH11	1.86	0.40
46:H:95:MET:SD	46:H:129:ALA:HB1	2.61	0.40
1:A:693:G:P	49:K:126:ARG:HH12	2.44	0.40
52:N:50:LEU:CG	52:N:51:PRO:HD2	2.51	0.40
59:U:6:ARG:HB2	59:U:6:ARG:HH11	1.87	0.40
59:U:6:ARG:CB	59:U:6:ARG:NH1	2.85	0.40
39:Z:48:ASN:C	39:Z:50:PRO:HD3	2.42	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	
4	Y	30/72 (42%)	26 (87%)	4 (13%)	0	100	100
6	03	218/234 (93%)	192 (88%)	25 (12%)	1 (0%)	32	74
7	04	269/273 (98%)	244 (91%)	22 (8%)	3 (1%)	17	58
8	05	207/209 (99%)	181 (87%)	24 (12%)	2 (1%)	18	61
9	06	199/201 (99%)	179 (90%)	18 (9%)	2 (1%)	18	61
10	07	175/179 (98%)	148 (85%)	26 (15%)	1 (1%)	28	72
11	08	174/177 (98%)	164 (94%)	10 (6%)	0	100	100
12	09	147/149 (99%)	136 (92%)	9 (6%)	2 (1%)	13	53
13	10	129/165 (78%)	94 (73%)	32 (25%)	3 (2%)	7	40
14	11	139/142 (98%)	121 (87%)	17 (12%)	1 (1%)	25	68
15	12	140/142 (99%)	135 (96%)	5 (4%)	0	100	100
16	13	120/123 (98%)	102 (85%)	15 (12%)	3 (2%)	6	38
17	14	141/144 (98%)	126 (89%)	13 (9%)	2 (1%)	13	53
18	15	134/136 (98%)	122 (91%)	11 (8%)	1 (1%)	25	68

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
19	16	118/127 (93%)	102 (86%)	15 (13%)	1 (1%)	22	65
20	17	114/117 (97%)	106 (93%)	7 (6%)	1 (1%)	20	64
21	18	112/115 (97%)	101 (90%)	11 (10%)	0	100	100
22	19	115/118 (98%)	113 (98%)	2 (2%)	0	100	100
23	20	101/103 (98%)	85 (84%)	16 (16%)	0	100	100
24	21	108/110 (98%)	100 (93%)	8 (7%)	0	100	100
25	22	91/100 (91%)	84 (92%)	6 (7%)	1 (1%)	17	58
26	23	100/104 (96%)	87 (87%)	12 (12%)	1 (1%)	18	61
27	24	92/94 (98%)	86 (94%)	6 (6%)	0	100	100
28	25	73/85 (86%)	69 (94%)	4 (6%)	0	100	100
29	26	75/78 (96%)	66 (88%)	9 (12%)	0	100	100
30	27	61/63 (97%)	59 (97%)	2 (3%)	0	100	100
31	28	56/59 (95%)	51 (91%)	5 (9%)	0	100	100
32	29	64/70 (91%)	54 (84%)	9 (14%)	1 (2%)	11	50
33	30	54/57 (95%)	50 (93%)	4 (7%)	0	100	100
34	31	48/55 (87%)	45 (94%)	3 (6%)	0	100	100
35	32	44/46 (96%)	43 (98%)	1 (2%)	0	100	100
36	33	62/65 (95%)	57 (92%)	4 (6%)	1 (2%)	11	50
37	34	36/38 (95%)	29 (81%)	6 (17%)	1 (3%)	6	34
39	Z	359/365 (98%)	310 (86%)	49 (14%)	0	100	100
40	B	216/241 (90%)	188 (87%)	26 (12%)	2 (1%)	20	64
41	C	204/233 (88%)	191 (94%)	13 (6%)	0	100	100
42	D	203/206 (98%)	176 (87%)	24 (12%)	3 (2%)	12	51
43	E	155/167 (93%)	137 (88%)	18 (12%)	0	100	100
44	F	98/131 (75%)	83 (85%)	14 (14%)	1 (1%)	18	61
45	G	149/156 (96%)	133 (89%)	16 (11%)	0	100	100
46	H	127/130 (98%)	118 (93%)	9 (7%)	0	100	100
47	I	125/130 (96%)	107 (86%)	17 (14%)	1 (1%)	22	65
48	J	96/103 (93%)	78 (81%)	11 (12%)	7 (7%)	1	8
49	K	114/129 (88%)	96 (84%)	16 (14%)	2 (2%)	10	47
50	L	121/124 (98%)	99 (82%)	19 (16%)	3 (2%)	6	38

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	M	112/118 (95%)	100 (89%)	9 (8%)	3 (3%)	6	35
52	N	98/101 (97%)	80 (82%)	13 (13%)	5 (5%)	2	18
53	O	86/89 (97%)	82 (95%)	3 (4%)	1 (1%)	15	56
54	P	80/82 (98%)	67 (84%)	13 (16%)	0	100	100
55	Q	78/84 (93%)	61 (78%)	17 (22%)	0	100	100
56	R	63/75 (84%)	52 (82%)	10 (16%)	1 (2%)	11	50
57	S	77/92 (84%)	67 (87%)	10 (13%)	0	100	100
58	T	83/87 (95%)	81 (98%)	2 (2%)	0	100	100
59	U	63/71 (89%)	46 (73%)	12 (19%)	5 (8%)	1	7
All	All	6453/6864 (94%)	5709 (88%)	682 (11%)	62 (1%)	23	61

All (62) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	03	207	VAL
9	06	61	ARG
9	06	83	VAL
13	10	123	ILE
16	13	89	ASN
17	14	119	PRO
32	29	65	ASN
36	33	31	ILE
40	B	19	THR
40	B	206	ILE
42	D	31	CYS
47	I	91	GLU
48	J	58	ASN
48	J	92	LEU
52	N	55	SER
52	N	97	LYS
52	N	98	ALA
53	O	46	LYS
59	U	8	ASN
12	09	9	VAL
12	09	10	ALA
13	10	81	LEU
13	10	111	ALA
20	17	34	HIS
48	J	93	ALA

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
48	J	94	ALA
49	K	25	SER
52	N	35	ALA
8	05	135	GLY
25	22	36	LYS
42	D	28	ASP
50	L	2	THR
50	L	24	GLU
51	M	5	GLY
59	U	10	PRO
59	U	34	ARG
59	U	37	TYR
16	13	102	PRO
26	23	54	PRO
44	F	94	HIS
10	07	120	SER
16	13	101	GLY
17	14	87	GLY
42	D	26	ALA
48	J	42	LEU
50	L	119	LYS
52	N	53	ASP
56	R	19	GLU
59	U	9	GLU
7	04	204	LEU
18	15	69	PRO
19	16	71	ARG
7	04	233	GLY
48	J	43	PRO
37	34	25	VAL
51	M	6	ILE
8	05	98	VAL
7	04	232	GLY
14	11	22	PRO
48	J	79	PRO
49	K	87	GLY
51	M	9	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
4	Y	24/59 (41%)	23 (96%)	1 (4%)	34	72
6	03	106/181 (59%)	103 (97%)	3 (3%)	49	81
7	04	216/218 (99%)	213 (99%)	3 (1%)	71	90
8	05	164/164 (100%)	164 (100%)	0	100	100
9	06	165/165 (100%)	165 (100%)	0	100	100
10	07	148/150 (99%)	147 (99%)	1 (1%)	87	96
11	08	137/138 (99%)	133 (97%)	4 (3%)	48	80
12	09	114/114 (100%)	112 (98%)	2 (2%)	64	87
13	10	100/123 (81%)	98 (98%)	2 (2%)	60	86
14	11	109/110 (99%)	108 (99%)	1 (1%)	82	94
15	12	116/116 (100%)	113 (97%)	3 (3%)	51	83
16	13	103/104 (99%)	102 (99%)	1 (1%)	80	93
17	14	102/103 (99%)	102 (100%)	0	100	100
18	15	109/109 (100%)	106 (97%)	3 (3%)	49	81
19	16	100/104 (96%)	100 (100%)	0	100	100
20	17	86/87 (99%)	84 (98%)	2 (2%)	56	84
21	18	99/100 (99%)	99 (100%)	0	100	100
22	19	89/90 (99%)	88 (99%)	1 (1%)	78	92
23	20	84/84 (100%)	82 (98%)	2 (2%)	54	84
24	21	93/93 (100%)	92 (99%)	1 (1%)	78	92
25	22	80/84 (95%)	80 (100%)	0	100	100
26	23	83/85 (98%)	80 (96%)	3 (4%)	40	76
27	24	78/78 (100%)	78 (100%)	0	100	100
28	25	57/63 (90%)	55 (96%)	2 (4%)	41	76
29	26	67/68 (98%)	65 (97%)	2 (3%)	46	79
30	27	55/55 (100%)	55 (100%)	0	100	100
31	28	48/49 (98%)	48 (100%)	0	100	100
32	29	59/62 (95%)	58 (98%)	1 (2%)	66	88
33	30	47/48 (98%)	46 (98%)	1 (2%)	59	85

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	31	45/49 (92%)	45 (100%)	0	100	100
35	32	38/38 (100%)	37 (97%)	1 (3%)	51	83
36	33	51/52 (98%)	49 (96%)	2 (4%)	37	74
37	34	34/34 (100%)	31 (91%)	3 (9%)	12	42
39	Z	296/311 (95%)	290 (98%)	6 (2%)	60	86
40	B	180/199 (90%)	176 (98%)	4 (2%)	57	85
41	C	170/190 (90%)	168 (99%)	2 (1%)	75	91
42	D	172/173 (99%)	164 (95%)	8 (5%)	30	69
43	E	119/126 (94%)	113 (95%)	6 (5%)	28	67
44	F	87/112 (78%)	85 (98%)	2 (2%)	56	84
45	G	124/129 (96%)	123 (99%)	1 (1%)	85	95
46	H	104/105 (99%)	101 (97%)	3 (3%)	48	80
47	I	105/107 (98%)	104 (99%)	1 (1%)	80	93
48	J	86/90 (96%)	85 (99%)	1 (1%)	75	91
49	K	89/99 (90%)	84 (94%)	5 (6%)	25	64
50	L	103/104 (99%)	101 (98%)	2 (2%)	62	86
51	M	92/96 (96%)	92 (100%)	0	100	100
52	N	83/84 (99%)	83 (100%)	0	100	100
53	O	76/77 (99%)	74 (97%)	2 (3%)	51	83
54	P	65/65 (100%)	62 (95%)	3 (5%)	31	70
55	Q	74/78 (95%)	72 (97%)	2 (3%)	50	82
56	R	56/65 (86%)	54 (96%)	2 (4%)	40	76
57	S	70/79 (89%)	70 (100%)	0	100	100
58	T	65/66 (98%)	63 (97%)	2 (3%)	45	79
59	U	55/61 (90%)	53 (96%)	2 (4%)	40	76
All	All	5277/5593 (94%)	5178 (98%)	99 (2%)	65	86

All (99) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	Y	26	ARG
6	03	6	LYS
6	03	8	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	03	188	ASN
7	04	202	ARG
7	04	212	TRP
7	04	259	ASN
10	07	29	ARG
11	08	19	ASN
11	08	68	ARG
11	08	103	ASN
11	08	169	ARG
12	09	73	ASN
12	09	127	GLU
13	10	31	ARG
13	10	37	LYS
14	11	2	LYS
15	12	7	LYS
15	12	111	LYS
15	12	121	LYS
16	13	88	ASN
18	15	16	ARG
18	15	44	ARG
18	15	59	ARG
20	17	12	THR
20	17	30	ARG
22	19	80	ASN
23	20	11	GLN
23	20	80	ARG
24	21	11	ARG
26	23	6	ARG
26	23	36	GLU
26	23	73	ASN
28	25	10	ARG
28	25	72	ASN
29	26	16	ASN
29	26	26	ARG
32	29	39	LYS
33	30	9	ARG
35	32	41	ARG
36	33	48	MET
36	33	61	LEU
37	34	13	ASN
37	34	14	CYS
37	34	27	CYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
39	Z	8	ASN
39	Z	182	LYS
39	Z	223	TYR
39	Z	262	ARG
39	Z	278	ARG
39	Z	301	GLN
40	B	20	ARG
40	B	34	ARG
40	B	35	ASN
40	B	88	GLN
41	C	24	ASN
41	C	163	ARG
42	D	20	LEU
42	D	27	ILE
42	D	31	CYS
42	D	32	LYS
42	D	33	ILE
42	D	80	ARG
42	D	99	ASN
42	D	196	GLU
43	E	9	GLU
43	E	75	LEU
43	E	79	THR
43	E	81	GLN
43	E	145	ASN
43	E	161	GLU
44	F	14	GLN
44	F	94	HIS
45	G	78	ARG
46	H	37	ASN
46	H	113	ARG
46	H	120	LEU
47	I	122	ARG
48	J	91	ASP
49	K	14	GLN
49	K	74	LYS
49	K	100	ASN
49	K	124	LYS
49	K	126	ARG
50	L	55	ARG
50	L	72	ASN
53	O	16	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	O	57	ARG
54	P	1	MET
54	P	25	ARG
54	P	31	ARG
55	Q	26	ARG
55	Q	64	ARG
56	R	24	ASP
56	R	47	ARG
58	T	2	ASN
58	T	7	LYS
59	U	16	ARG
59	U	33	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (142) such sidechains are listed below:

Mol	Chain	Res	Type
4	Y	27	GLN
6	03	165	ASN
6	03	188	ASN
7	04	44	ASN
7	04	45	ASN
7	04	52	HIS
7	04	85	ASN
7	04	89	ASN
7	04	133	ASN
7	04	142	ASN
7	04	196	ASN
8	05	32	ASN
8	05	130	GLN
8	05	173	GLN
9	06	90	GLN
9	06	156	ASN
9	06	163	ASN
10	07	26	GLN
10	07	51	ASN
10	07	62	GLN
10	07	126	ASN
11	08	19	ASN
11	08	37	ASN
11	08	103	ASN
11	08	138	GLN
12	09	43	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	09	66	ASN
12	09	73	ASN
14	11	106	GLN
15	12	128	ASN
15	12	132	HIS
15	12	135	GLN
16	13	3	GLN
16	13	5	GLN
16	13	9	ASN
16	13	82	ASN
16	13	88	ASN
17	14	54	GLN
18	15	3	GLN
18	15	45	GLN
19	16	11	ASN
19	16	62	ASN
21	18	6	GLN
21	18	51	ASN
21	18	76	HIS
22	19	13	HIS
22	19	36	GLN
22	19	43	GLN
22	19	80	ASN
23	20	11	GLN
23	20	18	GLN
23	20	89	HIS
24	21	15	GLN
24	21	40	ASN
24	21	57	ASN
26	23	39	ASN
26	23	68	ASN
26	23	73	ASN
26	23	98	ASN
27	24	12	GLN
28	25	36	GLN
28	25	53	HIS
28	25	72	ASN
29	26	15	ASN
29	26	16	ASN
29	26	31	ASN
30	27	15	ASN
30	27	20	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
30	27	36	GLN
30	27	58	ASN
31	28	8	GLN
32	29	6	HIS
32	29	20	ASN
32	29	41	HIS
32	29	61	ASN
33	30	5	ASN
33	30	40	HIS
35	32	13	ASN
35	32	26	ASN
35	32	29	GLN
37	34	37	GLN
39	Z	8	ASN
39	Z	9	ASN
39	Z	48	ASN
39	Z	286	GLN
40	B	18	GLN
40	B	23	ASN
40	B	35	ASN
40	B	50	ASN
40	B	167	HIS
40	B	176	ASN
40	B	177	ASN
40	B	189	ASN
41	C	2	GLN
41	C	24	ASN
41	C	31	ASN
41	C	139	ASN
41	C	175	HIS
42	D	40	HIS
42	D	73	ASN
42	D	88	ASN
42	D	115	GLN
43	E	76	ASN
43	E	81	GLN
43	E	96	GLN
43	E	131	ASN
43	E	145	ASN
44	F	17	GLN
44	F	52	ASN
44	F	81	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
44	F	94	HIS
45	G	27	ASN
45	G	96	ASN
45	G	121	ASN
46	H	37	ASN
47	I	24	ASN
47	I	74	GLN
47	I	80	HIS
47	I	109	GLN
48	J	58	ASN
49	K	80	ASN
49	K	100	ASN
50	L	4	ASN
50	L	45	ASN
50	L	72	ASN
51	M	7	ASN
51	M	13	HIS
52	N	42	ASN
52	N	59	GLN
52	N	65	GLN
53	O	27	GLN
53	O	34	GLN
54	P	40	ASN
54	P	79	ASN
55	Q	30	HIS
56	R	30	ASN
56	R	53	GLN
58	T	2	ASN
58	T	81	GLN
58	T	83	ASN
59	U	8	ASN
59	U	63	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1538/1539 (99%)	176 (11%)	3 (0%)
2	01	2902/2903 (99%)	332 (11%)	3 (0%)
3	02	118/119 (99%)	9 (7%)	0
38	V	13/14 (92%)	1 (7%)	0
5	W	76/77 (98%)	8 (10%)	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
5	X	76/77 (98%)	14 (18%)	0
All	All	4723/4729 (99%)	540 (11%)	6 (0%)

All (540) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	4	U
1	A	6	G
1	A	7	A
1	A	9	G
1	A	22	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	40	C
1	A	48	C
1	A	49	U
1	A	50	A
1	A	51	A
1	A	60	A
1	A	66	A
1	A	70	U
1	A	71	A
1	A	72	A
1	A	79	G
1	A	83	C
1	A	85	U
1	A	86	G
1	A	87	C
1	A	89	U
1	A	90	C
1	A	93	U
1	A	94	G
1	A	95	C
1	A	130	A
1	A	137	U
1	A	144	G
1	A	164	G
1	A	173	U
1	A	174	A
1	A	180	U
1	A	183	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	184	G
1	A	197	A
1	A	209	U
1	A	210	C
1	A	220	G
1	A	245	U
1	A	247	G
1	A	251	G
1	A	266	G
1	A	267	C
1	A	280	C
1	A	281	G
1	A	289	G
1	A	306	A
1	A	328	C
1	A	344	A
1	A	345	C
1	A	346	G
1	A	352	C
1	A	372	C
1	A	377	G
1	A	388	G
1	A	396	C
1	A	397	A
1	A	404	G
1	A	406	G
1	A	413	G
1	A	414	A
1	A	421	U
1	A	427	U
1	A	429	U
1	A	441	A
1	A	448	A
1	A	467	U
1	A	468	A
1	A	479	U
1	A	480	U
1	A	486	U
1	A	487	A
1	A	494	G
1	A	495	A
1	A	497	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	513	C
1	A	518	C
1	A	524	G
1	A	530	G
1	A	531	U
1	A	535	A
1	A	547	A
1	A	559	A
1	A	561	U
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	C
1	A	577	G
1	A	615	G
1	A	633	G
1	A	642	A
1	A	665	A
1	A	688	G
1	A	703	G
1	A	723	U
1	A	724	G
1	A	755	G
1	A	777	A
1	A	793	U
1	A	815	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	821	G
1	A	832	G
1	A	843	U
1	A	846	G
1	A	871	U
1	A	873	A
1	A	926	G
1	A	934	C
1	A	935	A
1	A	960	U
1	A	961	U
1	A	966	G
1	A	969	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	975	A
1	A	976	G
1	A	977	A
1	A	982	U
1	A	992	U
1	A	993	G
1	A	1004	A
1	A	1030	U
1	A	1031	C
1	A	1032	G
1	A	1033	G
1	A	1053	G
1	A	1055	A
1	A	1094	G
1	A	1101	A
1	A	1118	U
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1159	U
1	A	1168	U
1	A	1182	G
1	A	1184	G
1	A	1196	A
1	A	1197	A
1	A	1201	A
1	A	1212	U
1	A	1213	A
1	A	1215	G
1	A	1225	A
1	A	1226	C
1	A	1238	A
1	A	1240	U
1	A	1258	G
1	A	1260	G
1	A	1261	A
1	A	1280	A
1	A	1286	U
1	A	1287	A
1	A	1300	G
1	A	1317	C
1	A	1346	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1347	G
1	A	1381	U
1	A	1395	C
1	A	1398	A
1	A	1400	C
1	A	1446	A
1	A	1451	U
1	A	1452	C
1	A	1492	A
1	A	1503	A
1	A	1506	U
1	A	1517	G
1	A	1529	G
1	A	1530	G
2	01	10	A
2	01	12	U
2	01	34	U
2	01	35	G
2	01	51	G
2	01	63	A
2	01	71	A
2	01	74	A
2	01	75	G
2	01	84	A
2	01	91	A
2	01	103	A
2	01	118	A
2	01	119	A
2	01	120	U
2	01	139	U
2	01	140	C
2	01	141	G
2	01	162	U
2	01	163	C
2	01	181	A
2	01	196	A
2	01	216	A
2	01	221	A
2	01	222	A
2	01	228	C
2	01	229	C
2	01	230	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	241	A
2	01	248	G
2	01	249	C
2	01	255	A
2	01	266	G
2	01	276	U
2	01	278	A
2	01	285	G
2	01	294	A
2	01	301	G
2	01	323	C
2	01	324	A
2	01	329	G
2	01	330	A
2	01	370	G
2	01	371	A
2	01	372	G
2	01	386	G
2	01	387	U
2	01	404	A
2	01	405	U
2	01	406	G
2	01	411	G
2	01	412	A
2	01	424	G
2	01	451	U
2	01	457	A
2	01	481	G
2	01	491	G
2	01	504	A
2	01	505	A
2	01	507	A
2	01	508	A
2	01	529	A
2	01	530	G
2	01	531	C
2	01	532	A
2	01	545	U
2	01	548	G
2	01	549	G
2	01	563	A
2	01	573	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	575	A
2	01	588	U
2	01	603	A
2	01	614	A
2	01	627	A
2	01	637	A
2	01	646	U
2	01	654	A
2	01	655	A
2	01	669	G
2	01	686	U
2	01	687	C
2	01	730	A
2	01	747	U
2	01	748	G
2	01	752	A
2	01	764	A
2	01	782	A
2	01	784	G
2	01	785	G
2	01	805	G
2	01	812	C
2	01	819	A
2	01	827	U
2	01	828	U
2	01	830	G
2	01	846	U
2	01	847	U
2	01	860	U
2	01	878	A
2	01	885	C
2	01	887	U
2	01	892	A
2	01	896	A
2	01	897	C
2	01	910	A
2	01	914	G
2	01	932	U
2	01	941	A
2	01	946	C
2	01	961	C
2	01	974	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	983	A
2	01	995	C
2	01	996	A
2	01	1012	U
2	01	1013	C
2	01	1022	G
2	01	1033	U
2	01	1045	C
2	01	1046	A
2	01	1047	G
2	01	1059	G
2	01	1060	U
2	01	1061	U
2	01	1062	G
2	01	1063	G
2	01	1066	U
2	01	1067	A
2	01	1069	A
2	01	1070	A
2	01	1071	G
2	01	1074	G
2	01	1076	C
2	01	1078	U
2	01	1083	U
2	01	1084	A
2	01	1088	A
2	01	1089	A
2	01	1090	A
2	01	1095	A
2	01	1096	A
2	01	1097	U
2	01	1099	G
2	01	1104	C
2	01	1111	A
2	01	1130	U
2	01	1132	U
2	01	1133	A
2	01	1135	C
2	01	1149	G
2	01	1174	U
2	01	1178	C
2	01	1179	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	1180	U
2	01	1212	G
2	01	1250	G
2	01	1253	A
2	01	1256	G
2	01	1271	G
2	01	1272	A
2	01	1301	A
2	01	1332	G
2	01	1345	C
2	01	1365	A
2	01	1378	A
2	01	1379	U
2	01	1383	A
2	01	1416	G
2	01	1419	A
2	01	1420	A
2	01	1428	C
2	01	1454	C
2	01	1482	G
2	01	1490	A
2	01	1498	C
2	01	1515	A
2	01	1524	G
2	01	1535	A
2	01	1536	C
2	01	1537	G
2	01	1555	G
2	01	1559	U
2	01	1560	G
2	01	1569	A
2	01	1578	U
2	01	1616	A
2	01	1647	U
2	01	1648	U
2	01	1674	G
2	01	1698	A
2	01	1715	G
2	01	1729	U
2	01	1730	C
2	01	1738	G
2	01	1758	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	1764	C
2	01	1773	A
2	01	1780	A
2	01	1800	C
2	01	1801	A
2	01	1808	A
2	01	1816	C
2	01	1829	A
2	01	1871	A
2	01	1873	G
2	01	1901	A
2	01	1906	G
2	01	1914	C
2	01	1929	G
2	01	1930	G
2	01	1937	A
2	01	1938	A
2	01	1944	U
2	01	1945	G
2	01	1955	U
2	01	1963	U
2	01	1967	C
2	01	1970	A
2	01	1972	G
2	01	1981	A
2	01	1982	U
2	01	1991	U
2	01	1992	G
2	01	1993	U
2	01	1997	C
2	01	2022	U
2	01	2023	C
2	01	2030	A
2	01	2031	A
2	01	2036	C
2	01	2043	C
2	01	2055	C
2	01	2056	G
2	01	2060	A
2	01	2061	G
2	01	2062	A
2	01	2069	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	2072	C
2	01	2093	G
2	01	2108	A
2	01	2111	U
2	01	2112	G
2	01	2115	G
2	01	2118	U
2	01	2121	G
2	01	2125	G
2	01	2127	G
2	01	2132	U
2	01	2166	U
2	01	2172	U
2	01	2173	A
2	01	2179	C
2	01	2189	U
2	01	2198	A
2	01	2203	U
2	01	2204	G
2	01	2213	U
2	01	2214	C
2	01	2225	A
2	01	2239	G
2	01	2250	G
2	01	2283	C
2	01	2287	A
2	01	2305	U
2	01	2309	A
2	01	2325	G
2	01	2327	A
2	01	2334	U
2	01	2335	A
2	01	2350	C
2	01	2354	C
2	01	2383	G
2	01	2385	C
2	01	2402	U
2	01	2406	A
2	01	2423	U
2	01	2424	C
2	01	2425	A
2	01	2429	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	2430	A
2	01	2435	A
2	01	2441	U
2	01	2448	A
2	01	2476	A
2	01	2498	C
2	01	2502	G
2	01	2504	U
2	01	2505	G
2	01	2518	A
2	01	2520	C
2	01	2529	G
2	01	2547	A
2	01	2554	U
2	01	2566	A
2	01	2567	G
2	01	2572	A
2	01	2573	C
2	01	2585	U
2	01	2602	A
2	01	2603	G
2	01	2609	U
2	01	2613	U
2	01	2629	U
2	01	2646	C
2	01	2655	G
2	01	2682	A
2	01	2689	U
2	01	2690	U
2	01	2714	G
2	01	2744	G
2	01	2748	A
2	01	2764	A
2	01	2765	A
2	01	2778	A
2	01	2779	U
2	01	2791	G
2	01	2797	U
2	01	2798	U
2	01	2800	A
2	01	2818	U
2	01	2820	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	01	2821	A
2	01	2833	U
2	01	2849	U
2	01	2850	A
2	01	2867	G
2	01	2868	A
2	01	2871	U
2	01	2884	U
2	01	2893	A
2	01	2894	G
3	02	4	C
3	02	13	G
3	02	15	A
3	02	35	C
3	02	44	G
3	02	67	G
3	02	89	U
3	02	90	C
3	02	109	A
5	X	8	U
5	X	9	G
5	X	17	C
5	X	17(A)	U
5	X	18	G
5	X	21	A
5	X	22	G
5	X	34	C
5	X	35	A
5	X	56	C
5	X	59	A
5	X	61	C
5	X	69	C
5	X	74	C
38	V	12	A
5	W	8	U
5	W	9	G
5	W	17(A)	U
5	W	20	U
5	W	47	U
5	W	48	C
5	W	61	C
5	W	76	A

All (6) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	69	G
1	A	343	U
1	A	1399	C
2	01	490	C
2	01	859	G
2	01	2326	C

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 349 ligands modelled in this entry, 349 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.