



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 31, 2014 – 05:41 PM BST

PDB ID : 2QBD
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with ribosome recycling factor (RRF). This file contains the 30S subunit of the first 70S ribosome. The entire crystal structure contains two 70S ribosomes and is described in remark 400.
Authors : Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on : 2007-06-16
Resolution : 3.30 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

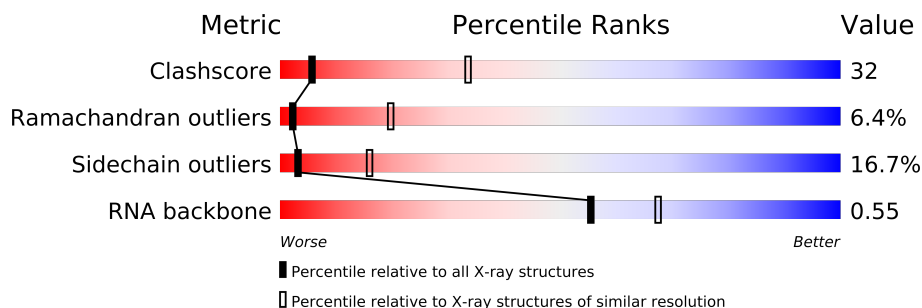
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : **NOT EXECUTED**
Percentile statistics : 21963
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23004

1 Overall quality at a glance

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1696 (3.40-3.20)
Ramachandran outliers	78287	1664 (3.40-3.20)
Sidechain outliers	78261	1662 (3.40-3.20)
RNA backbone	1838	1042 (3.90-2.70)

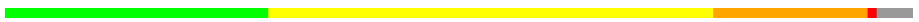
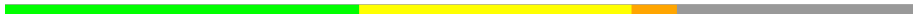
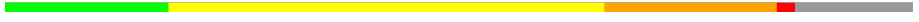

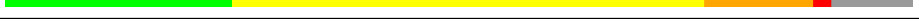

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1542	
2	C	232	
3	D	205	
4	E	166	
5	F	135	
6	G	178	
7	H	129	
8	I	129	
9	J	103	
10	K	128	
11	L	123	
12	M	117	
13	N	100	
14	O	89	
15	P	82	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
16	Q	83	
17	R	74	
18	S	91	
19	T	86	
20	B	240	
21	U	70	

2 Entry composition

There are 23 unique types of molecules in this entry. The entry contains 51727 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 2 is a protein called 30S ribosomal protein S3.

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

- Molecule 3 is a protein called 30S ribosomal protein S4.

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

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 5 is a protein called 30S ribosomal protein S6.

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

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	G	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

- Molecule 7 is a protein called 30S ribosomal protein S8.

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

- Molecule 8 is a protein called 30S ribosomal protein S9.

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

- Molecule 9 is a protein called 30S ribosomal protein S10.

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

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	K	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 11 is a protein called 30S ribosomal protein S12.

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

- Molecule 12 is a protein called 30S ribosomal protein S13.

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

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	N	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 14 is a protein called 30S ribosomal protein S15.

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

- Molecule 15 is a protein called 30S ribosomal protein S16.

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

- Molecule 16 is a protein called 30S ribosomal protein S17.

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

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	R	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 18 is a protein called 30S ribosomal protein S19.

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

- Molecule 19 is a protein called 30S ribosomal protein S20.

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

- Molecule 20 is a protein called 30S ribosomal protein S2.

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

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	U	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 22 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
22	A	60	Total	Mg	0	0
			60	60		

- Molecule 23 is water.

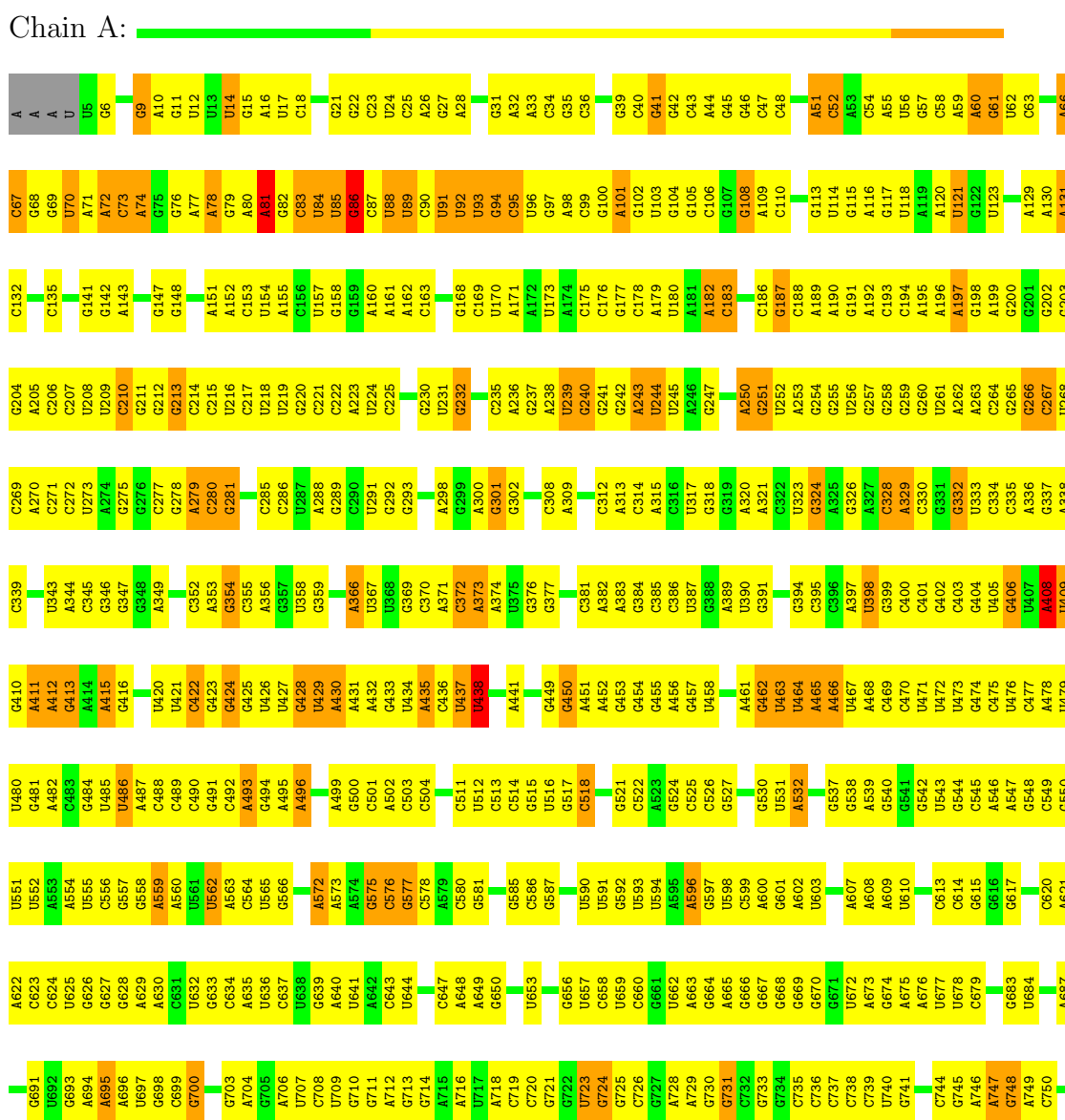
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
23	A	293	Total	O	0	0
			293	293		
23	E	3	Total	O	0	0
			3	3		
23	N	3	Total	O	0	0
			3	3		
23	T	1	Total	O	0	0
			1	1		

3 Residue-property plots

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

Note EDS was not executed.

• Molecule 1: 16S rRNA



● Molecule 2: 30S ribosomal protein S3

Chain C:

The sequence logo displays the conservation of amino acids at each position. The x-axis represents positions 1 to 229. The y-axis represents the log-odds of an amino acid being at that position. The logo is color-coded by amino acid type: G (green), A (yellow), C (blue), U (purple), and A (grey).

Position	Amino Acid
1	G
2	Q
3	K
4	P
5	G
6	I
7	R
8	V
9	I
10	R
11	L
12	G
13	I
14	K
15	V
16	G
17	E
18	S
19	T
20	S
21	T
22	F
23	N
24	N
25	T
26	K
27	E
28	F
29	A
30	N
31	N
32	L
33	D
34	S
35	D
36	F
37	K
38	V
39	A
40	Q
41	Y
42	L
43	L
44	L
45	L
46	L
47	L
48	L
49	L
50	L
51	V
52	S
53	R
54	I
55	V
56	I
57	E
58	R
59	P
60	A
61	K
62	V
63	S
64	L
65	L
66	T
67	L
68	L
69	L
70	L
71	L
72	L
73	L
74	L
75	L
76	L
77	L
78	L
79	L
80	L
81	L
82	L
83	L
84	L
85	L
86	L
87	L
88	L
89	L
90	L
91	L
92	L
93	L
94	L
95	L
96	L
97	L
98	L
99	L
100	L
101	L
102	L
103	L
104	L
105	L
106	L
107	L
108	L
109	L
110	L
111	L
112	L
113	L
114	L
115	L
116	L
117	L
118	L
119	L
120	L
121	L
122	L
123	L
124	L
125	L
126	L
127	L
128	L
129	L
130	L
131	L
132	L
133	L
134	L
135	L
136	L
137	L
138	L
139	L
140	L
141	L
142	L
143	L
144	L
145	L
146	L
147	L
148	L
149	L
150	L
151	L
152	L
153	L
154	L
155	L
156	L
157	L
158	L
159	L
160	L
161	L
162	L
163	L
164	L
165	L
166	L
167	L
168	L
169	L
170	L
171	L
172	L
173	L
174	L
175	L
176	L
177	L
178	L
179	L
180	L
181	L
182	L
183	L
184	L
185	L
186	L
187	L
188	L
189	L
190	L
191	L
192	L
193	L
194	L
195	L
196	L
197	L
198	L
199	L
200	L
201	L
202	L
203	L
204	L
205	L
206	L
207	L
208	L
209	L
210	L
211	L
212	L
213	L
214	L
215	L
216	L
217	L
218	L
219	L
220	L
221	L
222	L
223	L
224	L
225	L
226	L
227	L
228	L
229	L

- Molecule 2: 30S ribosomal protein S3

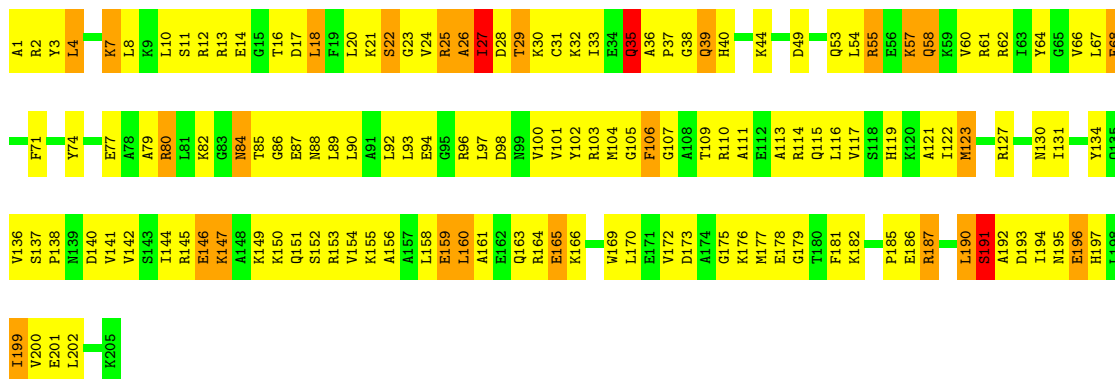
Chain C:



LEU
GLY
GLY
MET
ALA
ALA
VAL
GLU
GLN
PRO
GLU
GLU
LYS
PRO
ALA
ALA
GLN
PRO
PRO
LYS
LYS
GLN
GLN
ARG
LYS
GLY
ARG
LYS

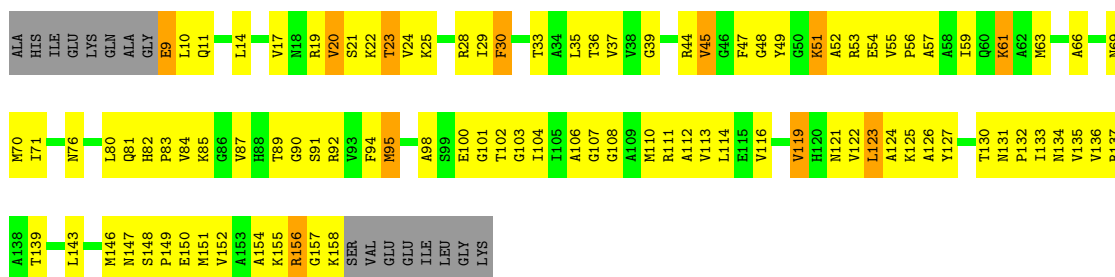
• Molecule 3: 30S ribosomal protein S4

Chain D:



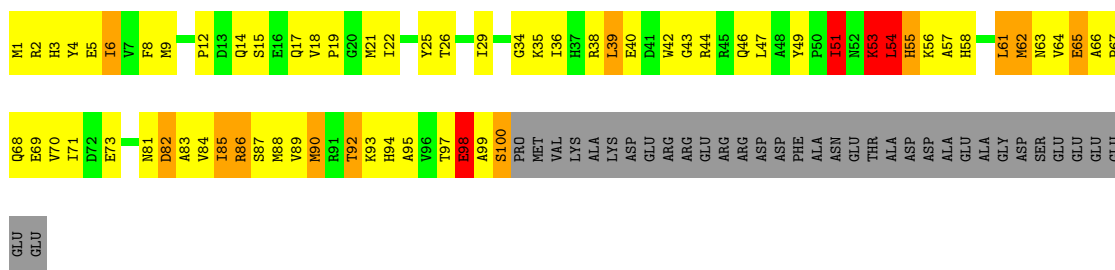
• Molecule 4: 30S ribosomal protein S5

Chain E:



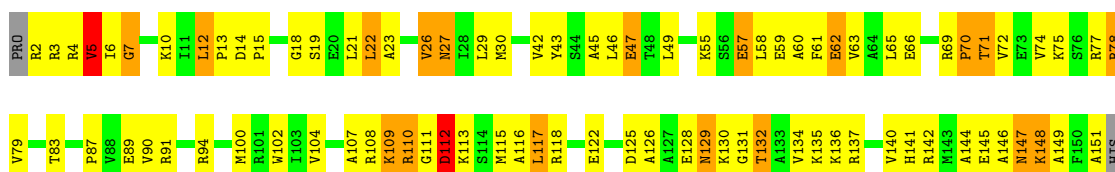
• Molecule 5: 30S ribosomal protein S6

Chain F:



• Molecule 6: 30S ribosomal protein S7

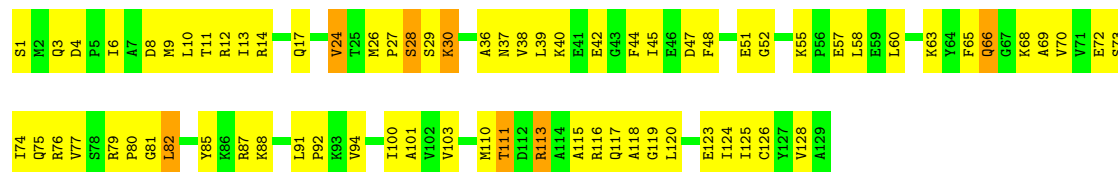
Chain G:



TYR
ARG
TRP
LEU
SER
LEU
ARG
SER
PHE
SER
HIS
GLN
ALA
GLY
ALA
SER
SER
LYS
GLN
PRO
ALA
LEU
GLY
TYR
LEU
ASN

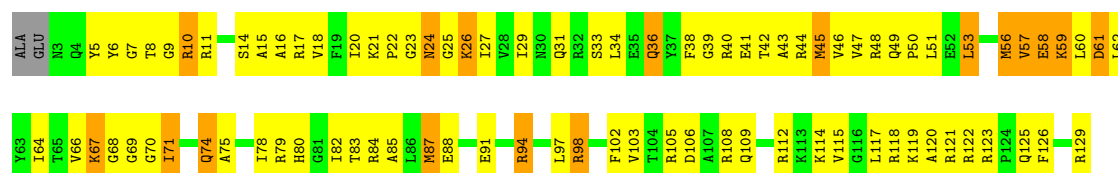
• Molecule 7: 30S ribosomal protein S8

Chain H:



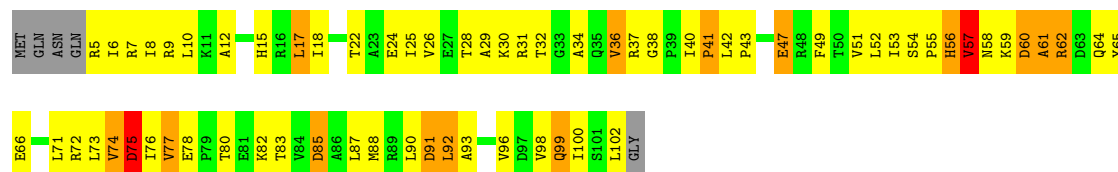
• Molecule 8: 30S ribosomal protein S9

Chain I:



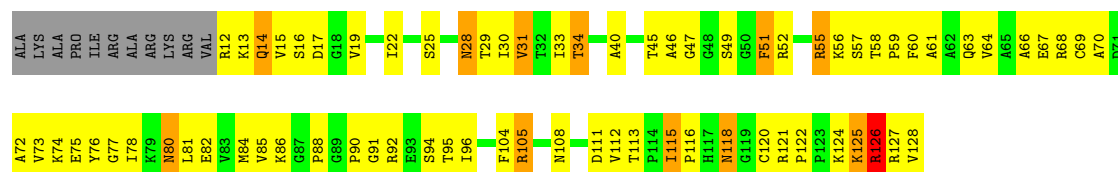
• Molecule 9: 30S ribosomal protein S10

Chain J:



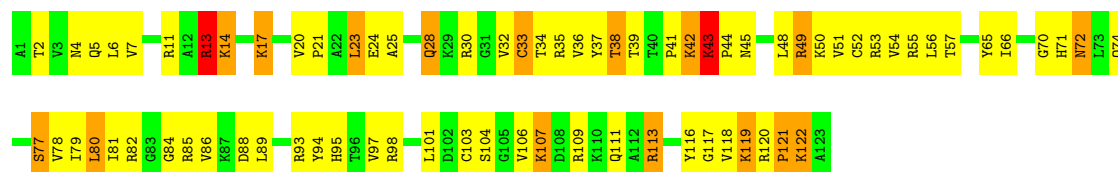
• Molecule 10: 30S ribosomal protein S11

Chain K:



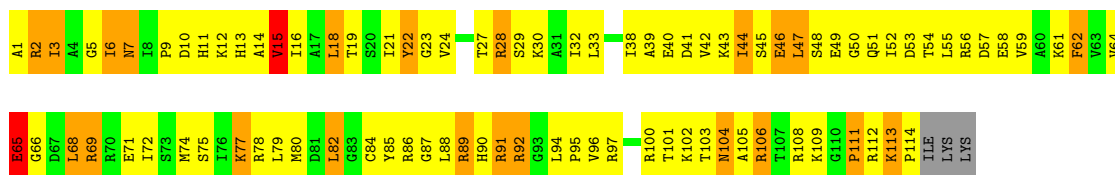
• Molecule 11: 30S ribosomal protein S12

Chain L:



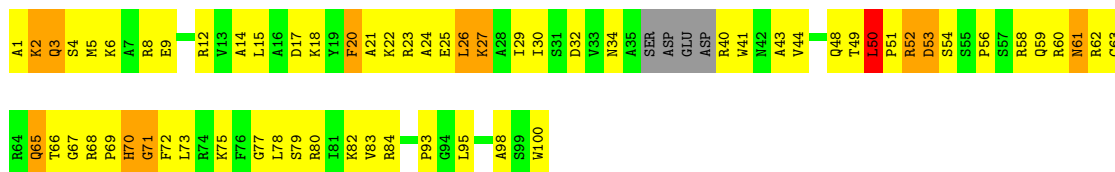
• Molecule 12: 30S ribosomal protein S13

Chain M:



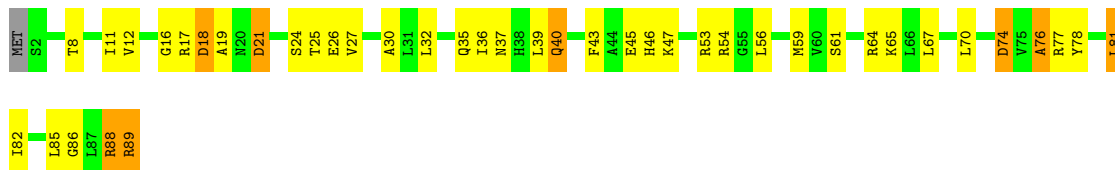
• Molecule 13: 30S ribosomal protein S14

Chain N:



• Molecule 14: 30S ribosomal protein S15

Chain O:



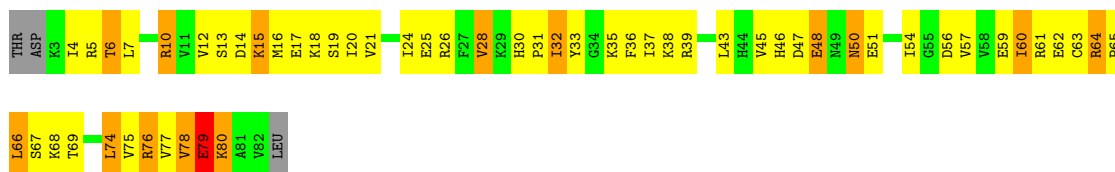
• Molecule 15: 30S ribosomal protein S16

Chain P:



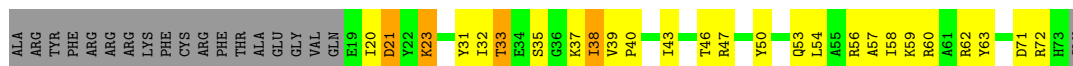
• Molecule 16: 30S ribosomal protein S17

Chain Q:



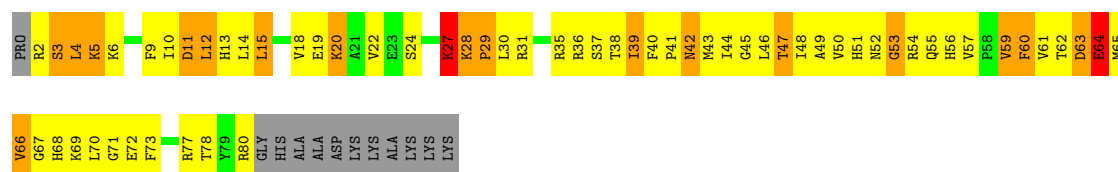
• Molecule 17: 30S ribosomal protein S18

Chain R:



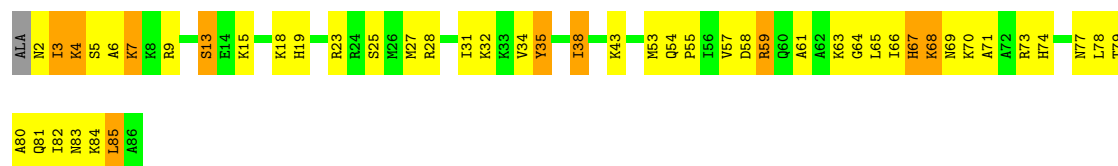
• Molecule 18: 30S ribosomal protein S19

Chain S:



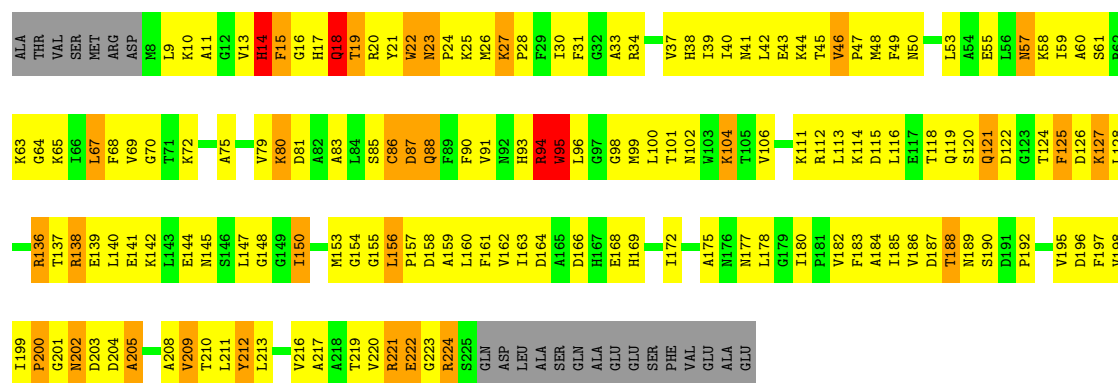
- Molecule 19: 30S ribosomal protein S20

Chain T:



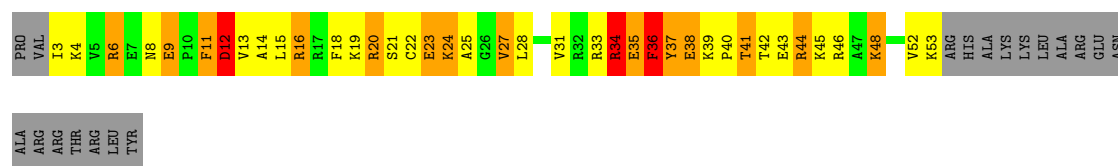
- Molecule 20: 30S ribosomal protein S2

Chain B:



- Molecule 21: 30S ribosomal protein S21

Chain U:



4 Data and refinement statistics

EDS was not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	207.90Å 378.20Å 736.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 3.30	Depositor
% Data completeness (in resolution range)	85.8 (40.00-3.30)	Depositor
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.17 (at 3.33Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.275 , 0.304	Depositor
Wilson B-factor (Å ²)	83.9	Xtriage
Anisotropy	0.393	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	2 of 738833 reflections (0.000%)	Xtriage
Total number of atoms	51727	wwPDB-VP
Average B, all atoms (Å ²)	78.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.37% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.26	0/36762	0.75	11/57350 (0.0%)
2	C	0.23	0/1651	0.44	0/2225
3	D	0.23	0/1665	0.44	0/2227
4	E	0.23	0/1118	0.46	0/1504
5	F	0.24	0/835	0.45	0/1128
6	G	0.23	0/1187	0.45	0/1591
7	H	0.23	0/989	0.44	0/1326
8	I	0.24	0/1034	0.46	0/1375
9	J	0.22	0/796	0.49	0/1077
10	K	0.24	0/893	0.46	0/1205
11	L	0.22	0/969	0.48	0/1300
12	M	0.21	0/892	0.46	0/1193
13	N	0.24	0/785	0.44	0/1043
14	O	0.23	0/722	0.47	0/964
15	P	0.25	0/659	0.45	0/884
16	Q	0.23	0/657	0.47	0/881
17	R	0.23	0/462	0.45	0/621
18	S	0.25	0/652	0.46	0/877
19	T	0.23	0/671	0.40	0/888
20	B	0.25	0/1735	0.45	0/2338
21	U	0.26	0/430	0.48	0/570
All	All	0.25	0/55564	0.67	11/82567 (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
1	A	0	14

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	232	G	C5'-C4'-C3'	-8.97	101.65	116.00
1	A	40	C	C5'-C4'-C3'	-7.27	104.37	116.00
1	A	765	G	N9-C1'-C2'	-6.92	104.39	112.00
1	A	438	U	N1-C1'-C2'	-6.68	104.66	112.00
1	A	765	G	C4'-C3'-O3'	6.47	125.94	113.00
1	A	814	A	C5'-C4'-C3'	5.45	124.73	116.00
1	A	101	A	C5'-C4'-C3'	-5.43	107.31	116.00
1	A	1250	A	C5'-C4'-C3'	5.36	124.58	116.00
1	A	408	A	C5'-C4'-C3'	-5.27	107.57	116.00
1	A	86	G	N9-C1'-C2'	5.25	120.82	114.00
1	A	1409	C	C5'-C4'-C3'	-5.05	107.91	116.00

There are no chirality outliers.

All (14) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1331	G	Sidechain
1	A	1432	G	Sidechain
1	A	1441	A	Sidechain
1	A	187	G	Sidechain
1	A	281	G	Sidechain
1	A	324	G	Sidechain
1	A	437	U	Sidechain
1	A	438	U	Sidechain
1	A	450	G	Sidechain
1	A	496	A	Sidechain
1	A	521	G	Sidechain
1	A	575	G	Sidechain
1	A	703	G	Sidechain
1	A	81	A	Sidechain

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32831	0	16521	1171	0
2	C	1624	0	1699	141	0
3	D	1643	0	1710	151	0
4	E	1105	0	1148	107	0
5	F	817	0	808	84	0
6	G	1174	0	1230	102	0
7	H	979	0	1034	62	0
8	I	1022	0	1070	123	0
9	J	786	0	828	76	0
10	K	877	0	887	84	0
11	L	955	0	1019	85	0
12	M	883	0	944	104	0
13	N	774	0	827	96	0
14	O	714	0	734	44	0
15	P	649	0	666	60	0
16	Q	648	0	691	64	0
17	R	455	0	478	36	0
18	S	637	0	665	89	0
19	T	665	0	714	45	0
20	B	1704	0	1732	195	0
21	U	425	0	449	69	0
22	A	60	0	0	0	0
23	A	293	0	0	1	0
23	E	3	0	0	0	0
23	N	3	0	0	0	0
23	T	1	0	0	0	0
All	All	51727	0	35854	2766	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 32.

All (2766) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:63:CYS:HB3	13:N:67:GLY:H	1.05	1.15
10:K:124:LYS:HA	21:U:34:ARG:HB3	1.27	1.14
2:C:78:LYS:HG3	2:C:81:GLU:HG2	1.35	1.08
1:A:82:G:H3'	1:A:83:C:H4'	1.19	1.07
9:J:53:ILE:HG22	9:J:61:ALA:HB1	1.37	1.05
5:F:3:HIS:HB2	5:F:92:THR:HA	1.38	1.04
8:I:25:GLY:HA3	8:I:57:VAL:HA	1.38	1.04
5:F:92:THR:HG22	5:F:94:HIS:H	1.22	1.04
4:E:158:LYS:HZ1	7:H:63:LYS:HD3	1.25	1.00
20:B:202:ASN:HD22	20:B:204:ASP:H	1.04	0.99

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:981:U:H4'	13:N:60:ARG:HD2	1.45	0.98
21:U:40:PRO:HA	21:U:44:ARG:HD2	1.45	0.97
1:A:203:G:H1'	1:A:465:A:H62	1.28	0.97
18:S:30:LEU:HD12	18:S:48:ILE:HG12	1.46	0.97
8:I:94:ARG:HH11	8:I:94:ARG:HB3	1.30	0.96
7:H:58:LEU:HD21	7:H:60:LEU:HD13	1.47	0.96
8:I:51:LEU:HB3	8:I:56:MET:HG2	1.44	0.96
21:U:36:PHE:HB3	21:U:40:PRO:HD3	1.47	0.95
3:D:25:ARG:HH11	3:D:26:ALA:H	1.15	0.95
20:B:46:VAL:HG13	20:B:47:PRO:HD3	1.49	0.94
20:B:202:ASN:ND2	20:B:204:ASP:H	1.66	0.94
1:A:203:G:H1'	1:A:465:A:N6	1.82	0.94
1:A:600:A:H5''	7:H:88:LYS:HD2	1.50	0.93
1:A:699:C:H2'	1:A:700:G:H5''	1.49	0.93
3:D:173:ASP:HB3	3:D:178:GLU:HB2	1.50	0.92
1:A:72:A:H61	1:A:98:A:H2	1.16	0.92
21:U:24:LYS:HD2	21:U:25:ALA:H	1.33	0.92
2:C:137:VAL:HA	2:C:148:ILE:HD13	1.53	0.91
15:P:28:ARG:HD3	15:P:29:ASN:H	1.35	0.91
10:K:22:ILE:HG21	10:K:95:THR:HG21	1.51	0.91
8:I:5:TYR:HB2	8:I:20:ILE:HB	1.53	0.90
1:A:243:A:H4'	1:A:244:U:H5'	1.53	0.90
13:N:51:PRO:HB2	13:N:54:SER:HB2	1.52	0.89
15:P:4:ILE:HG12	15:P:21:VAL:HG22	1.55	0.88
8:I:51:LEU:HD22	8:I:56:MET:HE3	1.55	0.88
9:J:36:VAL:HA	9:J:76:ILE:HG22	1.56	0.87
6:G:134:VAL:HB	6:G:137:ARG:HH21	1.37	0.87
4:E:37:VAL:HG11	4:E:113:VAL:HG12	1.54	0.87
1:A:120:A:H2'	1:A:121:U:H5''	1.55	0.87
5:F:29:ILE:HG21	5:F:64:VAL:HG11	1.55	0.87
13:N:63:CYS:HB3	13:N:67:GLY:N	1.90	0.87
1:A:1086:U:H3	1:A:1099:G:H22	1.18	0.87
21:U:42:THR:HB	21:U:46:ARG:HE	1.40	0.86
12:M:21:ILE:HB	12:M:24:VAL:HG22	1.58	0.85
3:D:84:ASN:ND2	4:E:101:GLY:HA3	1.91	0.85
11:L:35:ARG:HH21	11:L:36:VAL:HG22	1.42	0.85
12:M:85:TYR:HA	12:M:88:LEU:HD12	1.58	0.85
9:J:51:VAL:HG23	13:N:80:ARG:HB2	1.60	0.84
16:Q:18:LYS:HD3	16:Q:48:GLU:HA	1.57	0.84
8:I:56:MET:HG3	8:I:57:VAL:HG23	1.59	0.84
10:K:111:ASP:HB2	21:U:19:LYS:HE3	1.60	0.84
1:A:79:G:H2'	1:A:80:A:C8	2.12	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:74:VAL:HA	6:G:87:PRO:HA	1.58	0.83
16:Q:46:HIS:HE2	16:Q:48:GLU:HG2	1.43	0.83
10:K:34:THR:HB	10:K:40:ALA:HA	1.60	0.83
5:F:6:ILE:HG23	5:F:62:MET:HB3	1.58	0.83
21:U:16:ARG:HH22	21:U:19:LYS:HZ2	1.26	0.82
1:A:1004:A:H5'	1:A:1025:U:O2	1.79	0.82
3:D:84:ASN:HD21	4:E:101:GLY:HA3	1.44	0.82
10:K:55:ARG:HH12	10:K:60:PHE:HD1	1.26	0.82
20:B:221:ARG:HH11	20:B:221:ARG:HB3	1.44	0.82
1:A:1060:U:H4'	9:J:54:SER:HB2	1.61	0.81
16:Q:60:ILE:HG22	16:Q:74:LEU:HA	1.62	0.81
1:A:1328:C:H5''	12:M:27:THR:HG21	1.61	0.81
14:O:36:ILE:HD11	14:O:59:MET:HB2	1.62	0.81
1:A:978:A:H5'	1:A:1362:A:N6	1.95	0.81
4:E:52:ALA:HB2	4:E:61:LYS:HE2	1.60	0.81
1:A:1021:A:H2'	1:A:1022:A:O4'	1.80	0.81
1:A:73:C:H2'	1:A:74:A:O4'	1.80	0.81
2:C:63:ILE:HD11	2:C:94:ALA:HB3	1.62	0.81
14:O:70:LEU:HD11	14:O:77:ARG:HB2	1.63	0.81
3:D:25:ARG:HH11	3:D:26:ALA:N	1.78	0.80
2:C:70:ALA:HA	2:C:105:VAL:HG21	1.61	0.80
14:O:67:LEU:HD13	14:O:88:ARG:HH22	1.46	0.80
13:N:30:ILE:HG21	13:N:44:VAL:HG21	1.64	0.80
18:S:39:ILE:HB	18:S:66:VAL:HA	1.63	0.80
1:A:1323:G:H2'	1:A:1324:A:C8	2.17	0.80
9:J:9:ARG:HB2	9:J:99:GLN:HB3	1.63	0.80
6:G:6:ILE:HG13	6:G:7:GLY:H	1.47	0.80
1:A:87:C:H2'	1:A:88:U:H4'	1.65	0.79
18:S:51:HIS:HA	18:S:56:HIS:HA	1.64	0.79
3:D:11:SER:HA	3:D:18:LEU:HD22	1.62	0.79
8:I:47:VAL:HG23	8:I:48:ARG:HG3	1.65	0.79
5:F:29:ILE:HG22	5:F:34:GLY:HA3	1.63	0.79
2:C:122:GLN:HB3	2:C:127:VAL:HG21	1.65	0.79
2:C:76:ILE:HG22	2:C:80:GLY:HA2	1.62	0.79
1:A:86:G:H1'	1:A:88:U:C5	2.18	0.79
18:S:48:ILE:HB	18:S:59:VAL:HG23	1.64	0.79
6:G:149:ALA:HB2	10:K:55:ARG:NH1	1.97	0.79
11:L:107:LYS:HZ3	11:L:107:LYS:H	1.28	0.79
14:O:64:ARG:HH12	14:O:88:ARG:NH2	1.81	0.78
1:A:376:G:H5''	15:P:5:ARG:HD3	1.63	0.78
1:A:412:A:H1'	1:A:413:G:H5''	1.66	0.78
3:D:160:LEU:HD13	3:D:160:LEU:H	1.47	0.78

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:86:LYS:HB3	10:K:112:VAL:HG23	1.66	0.78
1:A:1035:A:H2'	1:A:1036:A:H8	1.49	0.78
1:A:1338:G:H2'	1:A:1339:A:C8	2.19	0.78
11:L:49:ARG:HG2	11:L:89:LEU:HD21	1.66	0.77
21:U:16:ARG:HH12	21:U:19:LYS:HZ3	1.33	0.77
19:T:61:ALA:HA	19:T:67:HIS:H	1.49	0.77
9:J:36:VAL:HG12	9:J:38:GLY:H	1.49	0.77
1:A:93:U:H5''	1:A:94:G:OP2	1.84	0.77
1:A:80:A:H2'	1:A:81:A:O4'	1.85	0.77
1:A:522:C:H41	11:L:49:ARG:HH22	1.31	0.77
16:Q:68:LYS:HG2	16:Q:69:THR:HG23	1.67	0.77
21:U:16:ARG:HH22	21:U:19:LYS:NZ	1.82	0.77
1:A:1032:G:H2'	1:A:1033:G:O4'	1.85	0.77
21:U:34:ARG:HE	21:U:35:GLU:C	1.88	0.76
1:A:978:A:H5'	1:A:1362:A:H62	1.49	0.76
1:A:1035:A:H2'	1:A:1036:A:C8	2.20	0.76
5:F:36:ILE:HG21	5:F:39:LEU:HD23	1.67	0.76
20:B:156:LEU:HD12	20:B:156:LEU:H	1.51	0.76
1:A:1003:G:N2	1:A:1005:A:H5'	2.00	0.76
1:A:747:A:H2'	1:A:748:G:O4'	1.85	0.76
12:M:22:TYR:HB3	12:M:69:ARG:HH21	1.50	0.76
1:A:82:G:H2'	1:A:84:U:OP1	1.86	0.76
12:M:106:ARG:HH12	12:M:109:LYS:HD2	1.50	0.76
4:E:156:ARG:HA	4:E:158:LYS:NZ	2.01	0.76
4:E:33:THR:HG22	4:E:51:LYS:HB3	1.67	0.76
1:A:999:C:H2'	1:A:1000:A:C8	2.21	0.76
6:G:49:LEU:HD22	6:G:60:ALA:HB1	1.66	0.76
12:M:10:ASP:HB3	12:M:45:SER:HB3	1.68	0.75
6:G:23:ALA:O	6:G:26:VAL:HG22	1.86	0.75
1:A:22:G:H2'	1:A:23:C:C6	2.21	0.75
11:L:79:ILE:HG22	11:L:103:CYS:HB2	1.67	0.75
1:A:946:A:H2'	1:A:947:G:C8	2.21	0.75
1:A:1206:G:H4'	2:C:192:TYR:HA	1.68	0.75
1:A:82:G:N7	1:A:83:C:H1'	2.01	0.75
14:O:32:LEU:HD12	14:O:59:MET:HB3	1.67	0.75
1:A:239:U:OP1	1:A:239:U:H4'	1.85	0.75
3:D:146:GLU:HA	3:D:149:LYS:HG2	1.69	0.75
15:P:61:VAL:HA	15:P:65:ALA:HB3	1.67	0.75
8:I:21:LYS:O	8:I:60:LEU:HB2	1.87	0.75
7:H:28:SER:HB2	7:H:58:LEU:HB2	1.68	0.75
20:B:83:ALA:O	20:B:88:GLN:HB2	1.87	0.74
9:J:42:LEU:HD11	9:J:73:LEU:HB2	1.69	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:524:G:H2'	1:A:525:C:C6	2.22	0.74
3:D:29:THR:HB	3:D:30:LYS:NZ	2.01	0.74
1:A:1250:A:H4'	8:I:69:GLY:H	1.51	0.74
4:E:143:LEU:O	4:E:146:MET:HG2	1.88	0.74
1:A:764:C:H2'	1:A:765:G:H5'	1.69	0.74
21:U:14:ALA:HB1	21:U:16:ARG:HD2	1.70	0.74
20:B:163:ILE:HG23	20:B:164:ASP:H	1.51	0.74
1:A:9:G:H5'	4:E:107:GLY:HA3	1.70	0.74
20:B:95:TRP:HH2	20:B:100:LEU:HB2	1.53	0.74
20:B:19:THR:HG23	20:B:20:ARG:H	1.53	0.74
6:G:107:ALA:HA	6:G:110:ARG:HD2	1.69	0.74
3:D:138:PRO:HA	3:D:181:PHE:HD2	1.51	0.73
6:G:112:ASP:HB2	6:G:118:ARG:HG2	1.70	0.73
1:A:1040:U:H2'	1:A:1041:G:C8	2.23	0.73
12:M:106:ARG:HD3	12:M:111:PRO:HA	1.70	0.73
1:A:429:U:H3'	3:D:8:LEU:HD23	1.68	0.73
8:I:25:GLY:HA2	8:I:60:LEU:O	1.88	0.73
21:U:24:LYS:CD	21:U:25:ALA:H	2.01	0.73
1:A:1241:G:H2'	1:A:1242:G:H8	1.53	0.73
7:H:76:ARG:HD2	7:H:125:ILE:O	1.89	0.73
12:M:79:LEU:HD22	12:M:86:ARG:HE	1.52	0.73
1:A:532:A:H62	2:C:191:THR:HB	1.54	0.73
15:P:52:LEU:HD21	15:P:75:ILE:HG12	1.69	0.73
1:A:269:C:H2'	1:A:270:A:C8	2.24	0.73
2:C:2:GLN:H	2:C:2:GLN:HE21	1.34	0.73
1:A:927:G:H4'	1:A:1503:A:N7	2.04	0.72
1:A:731:G:H5'	1:A:766:A:H4'	1.72	0.72
13:N:50:LEU:H	13:N:51:PRO:HD2	1.53	0.72
14:O:8:THR:O	14:O:12:VAL:HG23	1.89	0.72
1:A:973:G:H3'	1:A:974:A:H5''	1.70	0.72
1:A:814:A:H5'	1:A:1511:G:H4'	1.71	0.72
5:F:98:GLU:HG2	5:F:99:ALA:N	2.04	0.72
1:A:87:C:C2	1:A:88:U:H1'	2.23	0.72
20:B:42:LEU:HA	20:B:45:THR:HB	1.71	0.72
13:N:15:LEU:HD12	13:N:53:ASP:HB3	1.69	0.72
4:E:28:ARG:HH21	4:E:30:PHE:HA	1.54	0.72
17:R:40:PRO:HD2	17:R:43:ILE:HD12	1.71	0.72
2:C:149:LYS:HB3	2:C:200:TRP:HB2	1.72	0.72
13:N:30:ILE:HD12	13:N:30:ILE:H	1.55	0.72
13:N:26:LEU:HD11	13:N:44:VAL:HG13	1.70	0.72
1:A:1167:A:H2'	1:A:1169:A:N7	2.05	0.72
1:A:977:A:H2'	1:A:978:A:H5''	1.72	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:865:A:H5'	1:A:1078:U:O4	1.90	0.71
1:A:1236:A:H4'	1:A:1304:G:H4'	1.72	0.71
1:A:817:C:H1'	1:A:819:A:H5'	1.71	0.71
9:J:8:ILE:HG12	9:J:100:ILE:HG22	1.72	0.71
1:A:408:A:OP1	3:D:111:ALA:HB3	1.89	0.71
11:L:78:VAL:HG12	11:L:101:LEU:HD13	1.72	0.71
4:E:156:ARG:HA	4:E:158:LYS:HZ2	1.54	0.71
12:M:10:ASP:HA	12:M:44:ILE:HD13	1.73	0.71
17:R:21:ASP:OD1	17:R:23:LYS:HG3	1.91	0.71
6:G:142:ARG:HH11	6:G:142:ARG:HB2	1.54	0.71
1:A:473:U:H2'	1:A:474:G:H8	1.54	0.71
2:C:126:ARG:NH2	2:C:191:THR:HG23	2.06	0.71
1:A:135:C:O2	15:P:1:MET:HB2	1.90	0.71
10:K:31:VAL:HG21	10:K:66:ALA:HA	1.71	0.71
6:G:104:VAL:O	6:G:108:ARG:HG3	1.91	0.71
5:F:86:ARG:NH1	17:R:63:TYR:HB3	2.05	0.71
1:A:1391:U:H2'	1:A:1392:G:C8	2.26	0.71
20:B:216:VAL:O	20:B:220:VAL:HG23	1.90	0.71
1:A:501:C:H2'	1:A:502:A:H8	1.55	0.71
1:A:1237:C:H3'	1:A:1336:C:H41	1.56	0.70
18:S:10:ILE:HG22	18:S:37:SER:HB3	1.73	0.70
20:B:34:ARG:O	20:B:37:VAL:HG12	1.89	0.70
1:A:664:G:H22	1:A:741:G:H1	1.39	0.70
20:B:85:SER:HB3	20:B:221:ARG:HH12	1.56	0.70
19:T:19:HIS:O	19:T:23:ARG:HG2	1.90	0.70
1:A:33:A:H2'	1:A:34:C:C6	2.26	0.70
1:A:1412:C:H2'	1:A:1413:A:C8	2.27	0.70
5:F:81:ASN:HB3	5:F:84:VAL:HG12	1.73	0.70
1:A:1526:G:OP2	21:U:38:GLU:HB3	1.91	0.70
6:G:12:LEU:HD22	6:G:13:PRO:HD2	1.72	0.70
15:P:43:ALA:HA	15:P:46:LYS:HD2	1.74	0.70
1:A:108:G:C6	19:T:9:ARG:HG2	2.26	0.70
6:G:145:GLU:HA	6:G:148:LYS:HB2	1.73	0.70
1:A:452:A:H2'	1:A:453:G:O4'	1.92	0.70
8:I:51:LEU:HB3	8:I:56:MET:CG	2.18	0.70
5:F:53:LYS:HA	5:F:53:LYS:NZ	2.05	0.70
1:A:1001:C:H2'	1:A:1002:G:C8	2.27	0.69
3:D:94:GLU:HG2	3:D:185:PRO:HG3	1.74	0.69
1:A:993:G:H2'	1:A:995:C:H41	1.57	0.69
1:A:72:A:H2'	1:A:73:C:C6	2.26	0.69
1:A:1089:G:H1'	1:A:1167:A:H61	1.56	0.69
1:A:337:G:H2'	1:A:338:A:C8	2.27	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:24:LYS:NZ	21:U:24:LYS:HB3	2.06	0.69
1:A:1317:C:OP1	13:N:56:PRO:HD2	1.92	0.69
10:K:14:GLN:HA	10:K:76:TYR:O	1.92	0.69
20:B:184:ALA:HB3	20:B:195:VAL:HG21	1.73	0.69
2:C:19:SER:HB3	2:C:21:TRP:HE1	1.57	0.69
2:C:26:LYS:HG3	2:C:27:GLU:HG3	1.73	0.69
3:D:25:ARG:HD3	3:D:26:ALA:N	2.08	0.69
1:A:91:U:H2'	1:A:92:U:C6	2.27	0.69
2:C:70:ALA:HA	2:C:105:VAL:CG2	2.23	0.69
20:B:127:LYS:O	20:B:128:LEU:HB2	1.92	0.69
20:B:41:ASN:HD21	20:B:43:GLU:HB2	1.55	0.69
12:M:7:ASN:ND2	12:M:7:ASN:H	1.91	0.69
1:A:87:C:N3	1:A:88:U:H1'	2.07	0.69
1:A:266:G:O2'	1:A:267:C:H3'	1.92	0.69
5:F:47:LEU:HD13	5:F:51:ILE:HG22	1.73	0.69
20:B:41:ASN:ND2	20:B:43:GLU:HB2	2.07	0.69
1:A:93:U:H3'	1:A:94:G:H5''	1.73	0.69
2:C:126:ARG:HH22	2:C:190:THR:HB	1.57	0.69
1:A:238:A:H2'	1:A:239:U:H5''	1.74	0.69
1:A:812:G:H2'	1:A:812:G:N3	2.07	0.69
6:G:125:ASP:HB3	6:G:130:LYS:HB3	1.74	0.69
4:E:37:VAL:HA	4:E:47:PHE:HA	1.75	0.69
20:B:87:ASP:HB2	20:B:224:ARG:HH12	1.58	0.69
2:C:81:GLU:HG3	2:C:82:ASP:N	2.07	0.69
16:Q:74:LEU:HD22	16:Q:75:VAL:N	2.08	0.69
12:M:106:ARG:HA	12:M:106:ARG:HH11	1.58	0.69
3:D:29:THR:HG22	3:D:30:LYS:H	1.59	0.68
11:L:86:VAL:HB	11:L:89:LEU:HB2	1.74	0.68
1:A:764:C:C2'	1:A:765:G:H5'	2.23	0.68
1:A:215:C:H2'	1:A:216:U:C6	2.28	0.68
5:F:3:HIS:HB2	5:F:92:THR:CA	2.17	0.68
1:A:390:U:H5''	15:P:28:ARG:HH21	1.59	0.68
3:D:84:ASN:ND2	3:D:86:GLY:H	1.91	0.68
1:A:1348:U:H4'	8:I:121:ARG:HG3	1.75	0.68
8:I:20:ILE:HD13	8:I:85:ALA:HB3	1.74	0.68
18:S:18:VAL:O	18:S:22:VAL:HG23	1.92	0.68
1:A:390:U:H2'	1:A:391:G:C8	2.28	0.68
12:M:19:THR:HA	12:M:24:VAL:HG23	1.76	0.68
10:K:51:PHE:HB2	10:K:55:ARG:HB3	1.74	0.68
8:I:117:LEU:HD23	8:I:123:ARG:HB3	1.76	0.68
1:A:1314:C:OP2	18:S:5:LYS:HG2	1.93	0.68
18:S:69:LYS:O	18:S:72:GLU:HG2	1.94	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:17:ASP:HA	13:N:21:ALA:HB2	1.75	0.68
1:A:60:A:H4'	1:A:61:G:O5'	1.94	0.68
20:B:19:THR:O	20:B:37:VAL:HA	1.94	0.68
5:F:53:LYS:HA	5:F:53:LYS:HZ3	1.56	0.68
9:J:77:VAL:HB	9:J:78:GLU:OE2	1.94	0.68
1:A:1513:A:H2'	1:A:1514:G:C8	2.29	0.68
1:A:1238:A:H5'	1:A:1336:C:H41	1.59	0.68
11:L:72:ASN:HD21	11:L:104:SER:HB3	1.59	0.68
1:A:80:A:N3	1:A:81:A:H1'	2.09	0.68
20:B:57:ASN:HD22	20:B:223:GLY:HA2	1.58	0.68
1:A:51:A:H5''	1:A:52:C:H5''	1.75	0.68
1:A:920:U:H2'	1:A:921:U:C6	2.29	0.67
1:A:252:U:H2'	1:A:253:A:H8	1.57	0.67
11:L:85:ARG:HA	11:L:93:ARG:HA	1.75	0.67
3:D:90:LEU:HD11	3:D:194:ILE:HD13	1.76	0.67
1:A:384:G:H2'	1:A:385:C:C6	2.28	0.67
1:A:1062:U:H2'	1:A:1063:C:C6	2.30	0.67
20:B:67:LEU:HD21	20:B:91:VAL:HG23	1.75	0.67
12:M:43:LYS:HB2	12:M:46:GLU:HG3	1.76	0.67
1:A:1278:G:H4'	1:A:1279:G:H5'	1.76	0.67
20:B:127:LYS:HG2	20:B:128:LEU:HD23	1.77	0.67
1:A:1307:U:H2'	1:A:1308:U:C6	2.30	0.67
1:A:17:U:H2'	1:A:18:C:C6	2.30	0.67
8:I:71:ILE:HD12	8:I:71:ILE:H	1.60	0.67
20:B:44:LYS:C	20:B:47:PRO:HD2	2.15	0.67
11:L:107:LYS:NZ	11:L:107:LYS:H	1.93	0.67
1:A:1004:A:H2'	1:A:1005:A:O4'	1.95	0.67
7:H:10:LEU:HD22	7:H:74:ILE:HD11	1.76	0.67
1:A:699:C:C2'	1:A:700:G:H5''	2.24	0.67
11:L:98:ARG:HB2	11:L:116:TYR:HA	1.77	0.67
1:A:1075:U:H5'	20:B:101:THR:HG21	1.77	0.67
5:F:66:ALA:HB1	5:F:67:PRO:HD2	1.76	0.67
2:C:120:THR:HG22	2:C:188:ALA:HB2	1.77	0.67
21:U:39:LYS:N	21:U:40:PRO:HD2	2.11	0.66
20:B:46:VAL:HA	20:B:49:PHE:CD2	2.29	0.66
4:E:113:VAL:HG11	4:E:136:VAL:HG23	1.77	0.66
1:A:270:A:H2'	1:A:271:C:C6	2.30	0.66
16:Q:13:SER:HB3	16:Q:21:VAL:HB	1.77	0.66
16:Q:66:LEU:H	16:Q:66:LEU:HD12	1.59	0.66
1:A:190:A:H2'	1:A:191:G:O4'	1.95	0.66
16:Q:59:GLU:O	16:Q:75:VAL:HG22	1.94	0.66
1:A:1347:G:N2	1:A:1373:G:H2'	2.10	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1496:C:H2'	1:A:1497:G:O4'	1.96	0.66
3:D:197:HIS:O	3:D:200:VAL:HG22	1.96	0.66
4:E:131:ASN:HD21	4:E:133:ILE:HB	1.60	0.66
1:A:1213:A:O2'	1:A:1214:C:H5''	1.96	0.66
3:D:199:ILE:HG13	3:D:200:VAL:N	2.10	0.66
3:D:12:ARG:HD2	3:D:37:PRO:HA	1.77	0.66
20:B:80:LYS:HG3	20:B:81:ASP:N	2.11	0.66
6:G:129:ASN:HA	6:G:134:VAL:HG11	1.78	0.66
16:Q:20:ILE:HG22	16:Q:45:VAL:HB	1.78	0.66
1:A:1356:G:H2'	1:A:1357:A:C8	2.31	0.66
1:A:182:A:O2'	1:A:183:C:H3'	1.95	0.66
1:A:89:U:H2'	1:A:90:C:C6	2.30	0.66
16:Q:76:ARG:HH21	16:Q:78:VAL:HG13	1.61	0.66
1:A:405:U:O4	3:D:1:ALA:HA	1.95	0.66
18:S:42:ASN:ND2	18:S:43:MET:HG3	2.11	0.66
20:B:162:VAL:HG21	20:B:168:GLU:HB2	1.78	0.66
1:A:207:C:H2'	1:A:208:U:O4'	1.96	0.66
21:U:16:ARG:NE	21:U:16:ARG:HA	2.11	0.65
16:Q:45:VAL:HG12	16:Q:46:HIS:H	1.62	0.65
1:A:950:U:H2'	1:A:951:G:H8	1.61	0.65
1:A:232:G:H1'	1:A:262:A:N1	2.10	0.65
1:A:649:A:H2'	1:A:650:G:O4'	1.96	0.65
1:A:478:A:H2'	1:A:479:U:O4'	1.97	0.65
1:A:1171:A:H2'	1:A:1172:C:C6	2.31	0.65
1:A:1038:C:H2'	1:A:1039:G:C8	2.30	0.65
10:K:126:ARG:HB2	21:U:33:ARG:HD2	1.79	0.65
12:M:29:SER:HA	12:M:32:ILE:HG22	1.77	0.65
9:J:42:LEU:HB2	9:J:71:LEU:HD21	1.78	0.65
10:K:28:ASN:ND2	10:K:46:ALA:HB3	2.11	0.65
14:O:8:THR:O	14:O:11:ILE:HG22	1.97	0.65
1:A:22:G:H2'	1:A:23:C:H6	1.59	0.65
1:A:674:G:H2'	1:A:675:A:H8	1.59	0.65
1:A:406:G:H21	3:D:115:GLN:HE22	1.42	0.65
20:B:31:PHE:HB2	20:B:41:ASN:HA	1.78	0.65
21:U:16:ARG:HH12	21:U:19:LYS:NZ	1.95	0.65
1:A:269:C:H2'	1:A:270:A:H8	1.61	0.65
15:P:48:GLU:HG3	15:P:49:GLY:H	1.60	0.65
20:B:120:SER:HA	20:B:125:PHE:CD1	2.31	0.65
1:A:426:U:H4'	3:D:39:GLN:HA	1.77	0.65
1:A:1086:U:H3	1:A:1099:G:N2	1.91	0.65
1:A:1361:G:H2'	1:A:1362:A:H5''	1.79	0.65
13:N:14:ALA:HB1	13:N:18:LYS:HE3	1.77	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:64:ILE:H	8:I:64:ILE:HD12	1.62	0.65
20:B:172:ILE:HG23	20:B:182:VAL:HG11	1.79	0.65
4:E:156:ARG:O	4:E:158:LYS:HD3	1.96	0.65
12:M:14:ALA:HB2	12:M:42:VAL:HG23	1.79	0.65
1:A:1238:A:H5'	1:A:1336:C:N4	2.12	0.65
7:H:38:VAL:O	7:H:42:GLU:HG2	1.98	0.64
20:B:42:LEU:HA	20:B:45:THR:CB	2.27	0.64
1:A:72:A:H2'	1:A:73:C:H6	1.60	0.64
3:D:97:LEU:HB2	3:D:134:TYR:HB3	1.79	0.64
1:A:56:U:H2'	1:A:57:G:C8	2.32	0.64
2:C:154:GLY:HA2	2:C:163:ARG:O	1.97	0.64
1:A:86:G:H21	1:A:87:C:N4	1.95	0.64
5:F:3:HIS:CD2	5:F:65:GLU:HG3	2.31	0.64
1:A:1179:A:H2'	1:A:1180:A:O4'	1.97	0.64
15:P:28:ARG:HD3	15:P:29:ASN:N	2.09	0.64
1:A:1003:G:H21	1:A:1005:A:H5'	1.60	0.64
1:A:1033:G:H2'	1:A:1034:G:O4'	1.97	0.64
20:B:23:ASN:HD22	20:B:24:PRO:N	1.95	0.64
1:A:1019:A:H2'	1:A:1020:G:C8	2.32	0.64
16:Q:57:VAL:HB	16:Q:79:GLU:HB3	1.79	0.64
20:B:119:GLN:HA	20:B:124:THR:HG23	1.78	0.64
11:L:51:VAL:HG12	11:L:52:CYS:H	1.61	0.64
8:I:26:LYS:HE3	8:I:27:ILE:H	1.62	0.64
4:E:156:ARG:HD2	7:H:42:GLU:O	1.96	0.64
19:T:68:LYS:HA	19:T:68:LYS:NZ	2.13	0.64
9:J:8:ILE:HB	9:J:74:VAL:HB	1.80	0.64
3:D:26:ALA:HA	3:D:30:LYS:HE3	1.80	0.64
1:A:390:U:H2'	1:A:391:G:H8	1.61	0.64
15:P:40:ASN:HD21	15:P:43:ALA:H	1.45	0.64
1:A:812:G:OP1	1:A:812:G:H4'	1.97	0.64
1:A:1218:C:H2'	1:A:1219:A:C8	2.33	0.64
13:N:60:ARG:HG3	13:N:62:ARG:HG3	1.79	0.64
4:E:95:MET:HG3	4:E:124:ALA:HB2	1.79	0.64
3:D:22:SER:HB2	3:D:109:THR:HG22	1.78	0.64
7:H:44:PHE:HA	7:H:70:VAL:HG11	1.79	0.64
18:S:5:LYS:C	18:S:6:LYS:HD2	2.18	0.64
1:A:1288:A:H2'	1:A:1289:A:O4'	1.98	0.64
1:A:72:A:O2'	1:A:73:C:H5'	1.98	0.64
13:N:51:PRO:HB2	13:N:54:SER:CB	2.28	0.64
2:C:2:GLN:H	2:C:2:GLN:NE2	1.96	0.64
1:A:922:G:N3	1:A:1398:A:H2	1.95	0.64
6:G:108:ARG:HG2	6:G:115:MET:HE3	1.80	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:57:ASN:ND2	20:B:223:GLY:HA2	2.13	0.64
15:P:78:VAL:O	15:P:80:LYS:N	2.30	0.64
1:A:1202:U:H1'	13:N:68:ARG:HD2	1.80	0.63
2:C:2:GLN:N	2:C:2:GLN:HE21	1.95	0.63
1:A:501:C:H2'	1:A:502:A:C8	2.32	0.63
20:B:38:HIS:HB2	20:B:188:THR:HG21	1.79	0.63
1:A:1225:A:O2'	18:S:77:ARG:HD3	1.98	0.63
1:A:922:G:H2'	1:A:923:A:C8	2.33	0.63
1:A:1343:G:H2'	1:A:1344:C:C6	2.33	0.63
1:A:56:U:H2'	1:A:57:G:H8	1.62	0.63
1:A:1007:U:H2'	1:A:1008:U:C6	2.33	0.63
8:I:74:GLN:HE21	8:I:74:GLN:N	1.96	0.63
1:A:81:A:H3'	1:A:83:C:C6	2.34	0.63
10:K:58:THR:HB	10:K:59:PRO:HD2	1.81	0.63
1:A:1278:G:H4'	1:A:1279:G:C5'	2.28	0.63
1:A:97:G:H2'	1:A:98:A:O4'	1.98	0.63
1:A:235:C:H1'	16:Q:62:GLU:OE2	1.98	0.63
1:A:41:G:H2'	1:A:42:G:H8	1.63	0.63
4:E:85:LYS:HE3	4:E:94:PHE:HB2	1.79	0.63
8:I:38:PHE:HB3	8:I:43:ALA:HB3	1.80	0.63
1:A:430:A:OP1	3:D:8:LEU:HB2	1.97	0.63
1:A:57:G:H2'	1:A:58:C:H6	1.63	0.63
8:I:118:ARG:NH1	8:I:122:ARG:HE	1.96	0.63
8:I:56:MET:SD	8:I:57:VAL:N	2.71	0.63
2:C:140:ALA:HB3	2:C:148:ILE:HD12	1.80	0.63
12:M:68:LEU:HD22	12:M:69:ARG:NH1	2.14	0.63
7:H:124:ILE:HG22	7:H:125:ILE:H	1.64	0.63
2:C:13:ILE:O	2:C:14:VAL:HG22	1.98	0.63
1:A:837:U:H2'	1:A:838:G:H8	1.63	0.63
15:P:40:ASN:ND2	15:P:43:ALA:H	1.96	0.63
1:A:436:C:O2'	1:A:437:U:H5'	1.99	0.63
1:A:176:C:H2'	1:A:177:G:N3	2.14	0.63
1:A:177:G:H5''	19:T:59:ARG:HH21	1.64	0.63
4:E:9:GLU:CD	4:E:10:LEU:H	2.01	0.63
1:A:313:A:H2'	1:A:314:C:C6	2.34	0.63
21:U:36:PHE:HB3	21:U:40:PRO:CD	2.24	0.63
15:P:67:ILE:HG13	15:P:71:VAL:HG13	1.79	0.63
9:J:56:HIS:O	9:J:57:VAL:HG12	1.99	0.62
9:J:55:PRO:HA	13:N:80:ARG:NH2	2.14	0.62
13:N:24:ALA:O	13:N:27:LYS:HG3	1.99	0.62
3:D:154:VAL:HG23	3:D:155:LYS:H	1.63	0.62
1:A:220:G:O2'	1:A:221:C:H5'	1.98	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:43:LYS:HB2	11:L:44:PRO:CD	2.29	0.62
14:O:39:LEU:HD23	14:O:43:PHE:HE1	1.64	0.62
6:G:4:ARG:HE	6:G:6:ILE:HG12	1.64	0.62
3:D:90:LEU:HD21	3:D:196:GLU:HB3	1.81	0.62
18:S:39:ILE:HD11	18:S:68:HIS:HB2	1.81	0.62
10:K:46:ALA:HB1	10:K:61:ALA:HB1	1.79	0.62
1:A:602:A:O2'	1:A:603:U:H5'	1.99	0.62
1:A:1027:C:H2'	1:A:1028:C:C6	2.34	0.62
8:I:50:PRO:HD3	8:I:79:ARG:HG3	1.80	0.62
7:H:38:VAL:HG13	7:H:111:THR:HG22	1.81	0.62
1:A:89:U:H2'	1:A:90:C:H6	1.63	0.62
12:M:106:ARG:HE	12:M:112:ARG:CZ	2.13	0.62
1:A:108:G:O6	19:T:9:ARG:HG2	1.99	0.62
1:A:1513:A:H2'	1:A:1514:G:H8	1.62	0.62
1:A:806:C:H2'	1:A:807:A:H8	1.63	0.62
10:K:17:ASP:HA	10:K:80:ASN:O	2.00	0.62
1:A:168:G:O2'	1:A:169:C:H5'	1.99	0.62
15:P:6:LEU:HB3	15:P:17:TYR:HB3	1.80	0.62
21:U:42:THR:O	21:U:46:ARG:HG3	1.99	0.62
5:F:86:ARG:HH12	17:R:63:TYR:HB3	1.63	0.62
1:A:206:C:H2'	1:A:207:C:O4'	2.00	0.62
2:C:69:THR:HG21	2:C:75:VAL:HG21	1.82	0.62
1:A:1432:G:H1'	1:A:1468:A:N6	2.15	0.62
1:A:1031:C:H4'	1:A:1032:G:H5'	1.80	0.62
7:H:92:PRO:HG3	7:H:124:ILE:HD13	1.81	0.62
1:A:1070:U:H2'	1:A:1071:C:C6	2.34	0.62
1:A:1007:U:H2'	1:A:1008:U:H6	1.64	0.62
20:B:116:LEU:HD11	20:B:139:GLU:OE1	2.00	0.62
18:S:44:ILE:HA	18:S:61:VAL:HB	1.82	0.62
13:N:26:LEU:HD23	13:N:27:LYS:N	2.15	0.62
1:A:1071:C:H2'	1:A:1072:G:H8	1.64	0.62
1:A:1320:C:N3	18:S:35:ARG:HD3	2.14	0.62
1:A:335:C:H2'	1:A:336:A:H8	1.64	0.62
1:A:211:G:C5	1:A:212:G:H1'	2.35	0.62
1:A:673:A:H2'	1:A:674:G:C8	2.34	0.62
1:A:1018:G:H2'	1:A:1019:A:H8	1.64	0.62
1:A:876:C:H1'	7:H:11:THR:HG21	1.82	0.62
1:A:160:A:H2'	1:A:161:A:O4'	1.99	0.62
1:A:555:U:H2'	1:A:556:C:C6	2.35	0.62
18:S:35:ARG:HB2	18:S:71:GLY:CA	2.30	0.62
10:K:28:ASN:ND2	10:K:29:THR:H	1.98	0.62
1:A:1250:A:H2'	1:A:1251:A:C8	2.35	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1053:G:N7	1:A:1200:C:H5''	2.14	0.62
4:E:76:ASN:HB2	4:E:81:GLN:NE2	2.15	0.62
9:J:37:ARG:NE	9:J:37:ARG:HA	2.15	0.62
1:A:531:U:H6	1:A:531:U:H5'	1.65	0.62
4:E:111:ARG:HG3	4:E:112:ALA:N	2.13	0.62
5:F:81:ASN:OD1	5:F:83:ALA:HB3	2.00	0.61
20:B:61:SER:HA	20:B:224:ARG:HA	1.81	0.61
8:I:115:VAL:HG21	9:J:62:ARG:HG3	1.82	0.61
1:A:157:U:O2'	1:A:158:G:H5'	1.99	0.61
11:L:74:GLN:H	11:L:77:SER:HB2	1.64	0.61
1:A:1369:C:H2'	1:A:1370:G:C8	2.34	0.61
1:A:240:G:H8	1:A:240:G:H5'	1.63	0.61
6:G:149:ALA:H	10:K:55:ARG:NH2	1.98	0.61
20:B:163:ILE:HG23	20:B:164:ASP:N	2.14	0.61
1:A:806:C:H2'	1:A:807:A:C8	2.35	0.61
11:L:86:VAL:HG11	11:L:89:LEU:HD23	1.81	0.61
20:B:23:ASN:C	20:B:23:ASN:HD22	2.00	0.61
1:A:41:G:H2'	1:A:42:G:C8	2.35	0.61
1:A:859:G:H2'	1:A:860:A:C8	2.34	0.61
13:N:79:SER:O	13:N:83:VAL:HG23	2.00	0.61
1:A:1170:A:H2'	1:A:1171:A:O4'	2.00	0.61
1:A:472:U:H2'	1:A:473:U:C6	2.35	0.61
1:A:501:C:H1'	1:A:549:C:H1'	1.83	0.61
15:P:74:LEU:O	15:P:78:VAL:HG12	2.00	0.61
7:H:118:ALA:HB3	7:H:120:LEU:HD22	1.82	0.61
3:D:2:ARG:HD2	3:D:114:ARG:CZ	2.30	0.61
1:A:736:C:H2'	1:A:737:C:C6	2.36	0.61
1:A:1314:C:C6	18:S:5:LYS:HE2	2.36	0.61
2:C:13:ILE:HD13	2:C:13:ILE:H	1.66	0.61
16:Q:80:LYS:HD2	16:Q:80:LYS:H	1.66	0.61
18:S:28:LYS:HD2	18:S:28:LYS:H	1.65	0.61
1:A:33:A:H2'	1:A:34:C:H6	1.64	0.61
1:A:1437:A:H2'	1:A:1438:G:H8	1.65	0.61
1:A:264:C:O2'	16:Q:65:PRO:HG2	2.00	0.61
1:A:449:G:H2'	1:A:450:G:C8	2.36	0.61
9:J:29:ALA:O	9:J:32:THR:HG22	2.01	0.61
1:A:974:A:H4'	1:A:975:A:H5''	1.83	0.61
8:I:51:LEU:CB	8:I:56:MET:HG2	2.25	0.61
12:M:28:ARG:HH11	12:M:32:ILE:HD12	1.66	0.61
1:A:1009:U:H1'	1:A:1021:A:N1	2.16	0.61
10:K:80:ASN:HD22	10:K:105:ARG:HG2	1.66	0.61
3:D:7:LYS:HG2	3:D:20:LEU:HB3	1.81	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:12:ARG:HH21	13:N:58:ARG:HH12	1.47	0.61
18:S:43:MET:O	18:S:46:LEU:HB2	2.00	0.61
1:A:1486:G:H2'	1:A:1487:G:O4'	2.01	0.61
1:A:1273:C:H2'	1:A:1274:A:O4'	1.99	0.61
12:M:95:PRO:N	12:M:108:ARG:HG2	2.15	0.61
18:S:18:VAL:HG21	18:S:43:MET:HG2	1.81	0.61
1:A:252:U:H2'	1:A:253:A:C8	2.36	0.61
5:F:1:MET:HG3	5:F:67:PRO:HD3	1.83	0.61
11:L:2:THR:OG1	11:L:5:GLN:HG3	2.01	0.61
1:A:825:A:H2'	1:A:826:C:H6	1.65	0.61
1:A:1477:U:H2'	1:A:1478:U:C6	2.35	0.61
10:K:55:ARG:NH1	10:K:60:PHE:HD1	1.97	0.61
5:F:88:MET:HE3	17:R:60:ARG:HD3	1.82	0.61
20:B:161:PHE:HA	20:B:183:PHE:O	2.01	0.61
8:I:26:LYS:N	8:I:61:ASP:HB3	2.16	0.60
1:A:389:A:H3'	1:A:390:U:H6	1.66	0.60
12:M:86:ARG:HA	12:M:96:VAL:HG13	1.82	0.60
1:A:1143:G:H2'	1:A:1144:G:H8	1.66	0.60
11:L:35:ARG:HH21	11:L:36:VAL:CG2	2.14	0.60
17:R:59:LYS:HA	17:R:62:ARG:HD2	1.83	0.60
2:C:8:GLY:HA2	2:C:11:LEU:HG	1.83	0.60
21:U:40:PRO:O	21:U:44:ARG:HB2	2.00	0.60
9:J:28:THR:HG21	9:J:90:LEU:HD22	1.82	0.60
18:S:29:PRO:HA	18:S:47:THR:HB	1.82	0.60
3:D:24:VAL:HG23	3:D:25:ARG:H	1.66	0.60
15:P:67:ILE:HD11	15:P:71:VAL:HG22	1.83	0.60
1:A:1151:A:HO2'	1:A:1152:A:H8	1.47	0.60
15:P:3:THR:HB	15:P:66:THR:O	2.01	0.60
1:A:57:G:H2'	1:A:58:C:C6	2.36	0.60
17:R:56:ARG:O	17:R:60:ARG:HG2	2.02	0.60
1:A:1143:G:H2'	1:A:1144:G:C8	2.37	0.60
1:A:82:G:H3'	1:A:83:C:C4'	2.13	0.60
8:I:11:ARG:HA	8:I:105:ARG:CZ	2.30	0.60
14:O:26:GLU:HA	14:O:81:LEU:HD11	1.83	0.60
4:E:19:ARG:O	4:E:20:VAL:HB	2.00	0.60
9:J:80:THR:HB	9:J:83:THR:OG1	2.01	0.60
1:A:188:C:H2'	1:A:189:A:O4'	2.01	0.60
18:S:50:VAL:O	18:S:57:VAL:HG22	2.02	0.60
6:G:22:LEU:O	6:G:26:VAL:HG13	2.00	0.60
5:F:97:THR:O	5:F:98:GLU:HB3	1.99	0.60
1:A:194:C:O2'	1:A:195:A:H5'	2.01	0.60
3:D:117:VAL:O	3:D:130:ASN:HA	2.02	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1450:U:H2'	1:A:1452:C:C5	2.37	0.60
1:A:678:U:H2'	1:A:679:C:C6	2.37	0.60
21:U:43:GLU:HG2	21:U:44:ARG:HH21	1.67	0.60
12:M:22:TYR:HD1	12:M:65:GLU:HB3	1.67	0.60
8:I:126:PHE:HE1	8:I:129:ARG:HG2	1.66	0.60
1:A:279:A:H5'	1:A:281:G:O4'	2.00	0.60
8:I:24:ASN:ND2	8:I:25:GLY:H	2.00	0.60
20:B:187:ASP:HB3	20:B:201:GLY:O	2.02	0.60
20:B:202:ASN:HD22	20:B:202:ASN:C	2.04	0.60
16:Q:45:VAL:HG11	16:Q:60:ILE:HG21	1.84	0.60
16:Q:45:VAL:HG12	16:Q:46:HIS:N	2.16	0.60
1:A:745:G:H2'	1:A:746:A:O4'	2.02	0.60
2:C:126:ARG:HH22	2:C:190:THR:CB	2.14	0.60
2:C:19:SER:O	13:N:93:PRO:HB3	2.01	0.60
1:A:554:A:H5'	11:L:25:ALA:HB1	1.84	0.60
1:A:952:U:O4	12:M:102:LYS:HE2	2.02	0.60
6:G:21:LEU:HD23	6:G:21:LEU:H	1.67	0.60
1:A:763:G:H2'	1:A:764:C:H6	1.67	0.60
1:A:1027:C:H2'	1:A:1028:C:H6	1.66	0.60
6:G:109:LYS:HE2	6:G:109:LYS:HA	1.82	0.60
1:A:1131:G:O2'	1:A:1132:C:H5'	2.01	0.60
8:I:56:MET:C	8:I:58:GLU:H	2.05	0.60
11:L:35:ARG:NH2	11:L:36:VAL:HG22	2.15	0.60
1:A:676:A:H1'	10:K:116:PRO:HB3	1.83	0.60
21:U:16:ARG:NH1	21:U:19:LYS:HZ3	1.98	0.59
18:S:65:MET:HG3	18:S:73:PHE:CZ	2.37	0.59
6:G:110:ARG:HE	6:G:122:GLU:HB2	1.67	0.59
3:D:153:ARG:HG3	3:D:154:VAL:N	2.17	0.59
1:A:1533:C:O2'	1:A:1534:A:H4'	2.01	0.59
1:A:77:A:H2'	1:A:78:A:C8	2.36	0.59
20:B:204:ASP:O	20:B:208:ALA:HB3	2.01	0.59
18:S:61:VAL:HA	18:S:65:MET:SD	2.42	0.59
1:A:1023:U:H2'	1:A:1024:G:C8	2.37	0.59
20:B:83:ALA:HB3	20:B:90:PHE:HB3	1.84	0.59
2:C:51:VAL:HA	2:C:69:THR:HA	1.83	0.59
17:R:33:THR:HG23	17:R:37:LYS:O	2.02	0.59
2:C:119:ILE:O	2:C:123:LEU:HG	2.02	0.59
19:T:35:TYR:O	19:T:38:ILE:HG22	2.02	0.59
13:N:9:GLU:OE2	13:N:60:ARG:HG2	2.02	0.59
2:C:76:ILE:HA	2:C:83:VAL:HB	1.85	0.59
3:D:146:GLU:HB3	3:D:149:LYS:HE3	1.84	0.59
20:B:195:VAL:HG12	20:B:197:PHE:H	1.68	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:3:HIS:NE2	5:F:65:GLU:HG3	2.17	0.59
13:N:50:LEU:N	13:N:51:PRO:HD2	2.17	0.59
1:A:502:A:H2'	1:A:503:C:H6	1.67	0.59
1:A:1313:U:OP1	18:S:6:LYS:HD3	2.02	0.59
1:A:1074:G:H2'	1:A:1075:U:H6	1.67	0.59
1:A:1225:A:H3'	1:A:1226:C:C6	2.38	0.59
11:L:43:LYS:HB2	11:L:44:PRO:HD3	1.84	0.59
1:A:706:A:H4'	10:K:30:ILE:HD11	1.84	0.59
4:E:55:VAL:N	4:E:56:PRO:HD2	2.16	0.59
21:U:34:ARG:HD3	21:U:39:LYS:HZ1	1.67	0.59
12:M:28:ARG:NH2	12:M:62:PHE:HB2	2.16	0.59
2:C:63:ILE:HD12	2:C:98:ALA:HB2	1.84	0.59
20:B:55:GLU:HG3	20:B:197:PHE:CZ	2.37	0.59
7:H:8:ASP:OD1	7:H:12:ARG:HD2	2.02	0.59
6:G:87:PRO:HG2	6:G:151:ALA:HB2	1.85	0.59
6:G:142:ARG:NH1	6:G:142:ARG:HB2	2.16	0.59
2:C:39:ARG:HE	2:C:54:ILE:HG23	1.67	0.59
9:J:66:GLU:HB3	13:N:98:ALA:HB2	1.85	0.59
3:D:58:GLN:O	3:D:62:ARG:HG2	2.02	0.59
10:K:82:GLU:HG2	10:K:108:ASN:HB2	1.84	0.59
1:A:92:U:H2'	1:A:93:U:C6	2.38	0.59
21:U:16:ARG:HH12	21:U:19:LYS:CE	2.16	0.59
20:B:27:LYS:HA	20:B:30:ILE:HD12	1.83	0.59
1:A:1057:G:H5''	2:C:153:SER:HB2	1.84	0.59
12:M:7:ASN:H	12:M:7:ASN:HD22	1.49	0.59
1:A:1018:G:H2'	1:A:1019:A:C8	2.38	0.59
1:A:1469:C:H2'	1:A:1470:U:O4'	2.02	0.59
1:A:382:A:H2'	1:A:383:A:C8	2.36	0.59
10:K:51:PHE:CZ	10:K:61:ALA:HA	2.38	0.59
1:A:1006:G:H2'	1:A:1007:U:H6	1.67	0.59
9:J:59:LYS:HG3	9:J:60:ASP:N	2.17	0.59
2:C:121:SER:HB3	2:C:125:ARG:HH12	1.67	0.59
12:M:100:ARG:HH11	12:M:103:THR:HB	1.68	0.59
20:B:45:THR:HG22	20:B:49:PHE:CZ	2.37	0.59
2:C:72:PRO:O	2:C:76:ILE:HG12	2.03	0.59
2:C:26:LYS:HG3	2:C:27:GLU:N	2.18	0.59
1:A:1132:C:H2'	1:A:1133:G:H8	1.68	0.59
7:H:65:PHE:HE2	7:H:66:GLN:HE21	1.50	0.59
13:N:5:MET:O	13:N:8:ARG:HB2	2.03	0.58
1:A:1060:U:C4'	9:J:54:SER:HB2	2.29	0.58
3:D:116:LEU:HD21	3:D:153:ARG:HD2	1.85	0.58
1:A:285:C:H2'	1:A:286:C:C6	2.38	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:179:ALA:HB3	2:C:181:ILE:HD11	1.85	0.58
1:A:98:A:H2'	1:A:99:C:C6	2.38	0.58
5:F:62:MET:HG3	5:F:64:VAL:HG23	1.85	0.58
16:Q:60:ILE:HA	16:Q:75:VAL:HG13	1.84	0.58
11:L:54:VAL:HG11	11:L:79:ILE:HD11	1.85	0.58
20:B:96:LEU:HB2	20:B:99:MET:HE3	1.84	0.58
1:A:162:A:H2'	1:A:163:C:O4'	2.03	0.58
1:A:1527:U:H2'	1:A:1528:U:C6	2.39	0.58
5:F:29:ILE:HD13	5:F:64:VAL:HG11	1.85	0.58
1:A:1171:A:H2'	1:A:1172:C:H6	1.67	0.58
2:C:14:VAL:O	2:C:15:LYS:HD2	2.03	0.58
1:A:264:C:O2'	16:Q:64:ARG:HD2	2.03	0.58
19:T:38:ILE:O	19:T:38:ILE:HD13	2.03	0.58
8:I:40:ARG:H	8:I:44:ARG:HD3	1.67	0.58
3:D:165:GLU:HG3	3:D:166:LYS:N	2.18	0.58
13:N:5:MET:SD	13:N:8:ARG:HD2	2.44	0.58
1:A:796:C:H2'	1:A:797:C:H6	1.68	0.58
21:U:36:PHE:CB	21:U:40:PRO:HD3	2.28	0.58
20:B:40:ILE:HG21	20:B:200:PRO:O	2.03	0.58
18:S:28:LYS:HB2	18:S:29:PRO:HD2	1.85	0.58
5:F:43:GLY:HA2	5:F:58:HIS:NE2	2.18	0.58
1:A:1342:C:H2'	1:A:1343:G:C8	2.38	0.58
8:I:29:ILE:HG12	8:I:64:ILE:HB	1.84	0.58
1:A:373:A:H1'	1:A:481:G:H1'	1.86	0.58
1:A:996:A:H2'	1:A:997:U:C6	2.38	0.58
1:A:370:C:O2'	1:A:371:A:H5'	2.04	0.58
12:M:28:ARG:CZ	12:M:62:PHE:HB2	2.32	0.58
7:H:110:MET:HG3	7:H:115:ALA:HB2	1.85	0.58
11:L:56:LEU:HD21	11:L:81:ILE:HG13	1.85	0.58
1:A:72:A:N6	1:A:98:A:H2	1.96	0.58
6:G:43:TYR:O	6:G:47:GLU:HB2	2.04	0.58
1:A:270:A:H2'	1:A:271:C:H6	1.69	0.58
1:A:1226:C:O2'	1:A:1227:A:H5'	2.04	0.58
11:L:113:ARG:HG2	11:L:118:VAL:HB	1.86	0.58
20:B:46:VAL:O	20:B:49:PHE:HB2	2.03	0.58
5:F:29:ILE:HG21	5:F:64:VAL:CG1	2.31	0.58
12:M:42:VAL:HB	12:M:47:LEU:CD2	2.34	0.58
12:M:47:LEU:HB3	12:M:52:ILE:CD1	2.34	0.58
1:A:254:G:O2'	1:A:255:G:H5'	2.03	0.58
11:L:7:VAL:HG22	16:Q:33:TYR:HD1	1.69	0.58
20:B:94:ARG:HE	20:B:94:ARG:N	2.00	0.58
3:D:137:SER:HB3	3:D:138:PRO:HD2	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:335:C:H2'	1:A:336:A:C8	2.38	0.58
1:A:1308:U:H2'	1:A:1309:G:H8	1.68	0.58
1:A:1053:G:HO2'	1:A:1199:U:H5	1.52	0.58
20:B:10:LYS:HB2	20:B:211:LEU:HD21	1.86	0.58
1:A:26:A:N6	1:A:558:G:H1'	2.18	0.58
13:N:26:LEU:HG	13:N:30:ILE:HD13	1.85	0.58
1:A:285:C:H2'	1:A:286:C:H6	1.69	0.58
20:B:14:HIS:CD2	20:B:202:ASN:H	2.22	0.58
7:H:124:ILE:HG22	7:H:125:ILE:N	2.19	0.58
1:A:372:C:H4'	1:A:373:A:H5'	1.85	0.58
1:A:824:G:O2'	1:A:825:A:H5'	2.04	0.58
17:R:58:ILE:O	17:R:62:ARG:HG3	2.04	0.58
1:A:636:U:H2'	1:A:637:C:H6	1.68	0.58
21:U:27:VAL:O	21:U:31:VAL:HG23	2.04	0.58
14:O:45:GLU:O	14:O:46:HIS:HB2	2.04	0.58
16:Q:77:VAL:HG12	16:Q:79:GLU:H	1.68	0.57
1:A:254:G:OP1	16:Q:68:LYS:O	2.21	0.57
12:M:69:ARG:O	12:M:72:ILE:HG22	2.04	0.57
1:A:502:A:H2'	1:A:503:C:C6	2.39	0.57
20:B:118:THR:HA	20:B:121:GLN:HB3	1.86	0.57
3:D:104:MET:SD	3:D:179:GLY:HA3	2.43	0.57
1:A:512:U:H2'	1:A:513:C:C6	2.39	0.57
1:A:1524:C:H2'	1:A:1525:G:C8	2.38	0.57
10:K:33:ILE:HG12	10:K:69:CYS:SG	2.44	0.57
4:E:89:THR:HG21	4:E:134:ASN:ND2	2.18	0.57
1:A:1226:C:H4'	1:A:1227:A:OP1	2.04	0.57
2:C:119:ILE:HG21	2:C:197:VAL:HG11	1.84	0.57
12:M:15:VAL:HG22	12:M:40:GLU:HB3	1.85	0.57
1:A:763:G:H2'	1:A:764:C:C6	2.38	0.57
1:A:1463:U:H2'	1:A:1464:U:C6	2.39	0.57
1:A:590:U:H2'	1:A:591:U:H6	1.69	0.57
1:A:1316:G:N2	1:A:1318:A:H3'	2.18	0.57
3:D:170:LEU:HA	3:D:182:LYS:HB2	1.86	0.57
7:H:94:VAL:HG21	7:H:100:ILE:O	2.05	0.57
3:D:24:VAL:HG12	3:D:160:LEU:HB3	1.85	0.57
1:A:21:G:H2'	1:A:22:G:C8	2.39	0.57
1:A:336:A:O2'	1:A:337:G:H5'	2.03	0.57
1:A:636:U:H2'	1:A:637:C:C6	2.40	0.57
1:A:513:C:H2'	1:A:514:C:H6	1.70	0.57
1:A:878:A:H5''	7:H:80:PRO:HG2	1.86	0.57
1:A:621:A:H2'	1:A:622:A:C8	2.39	0.57
1:A:1032:G:H3'	1:A:1032:G:N3	2.19	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1142:G:H2'	1:A:1143:G:O4'	2.04	0.57
2:C:52:SER:HB3	2:C:114:LEU:HG	1.85	0.57
1:A:241:G:O2'	1:A:242:G:H5'	2.04	0.57
4:E:106:ALA:HB1	4:E:110:MET:HB3	1.85	0.57
20:B:202:ASN:ND2	20:B:204:ASP:N	2.47	0.57
20:B:33:ALA:HA	20:B:37:VAL:O	2.04	0.57
1:A:1508:A:H2'	1:A:1509:C:C6	2.39	0.57
1:A:1458:G:H5''	19:T:25:SER:HB2	1.85	0.57
20:B:186:VAL:O	20:B:200:PRO:HA	2.04	0.57
1:A:977:A:C2	1:A:1223:C:H2'	2.40	0.57
1:A:678:U:H2'	1:A:679:C:H6	1.69	0.57
6:G:91:ARG:HD2	6:G:91:ARG:H	1.70	0.57
20:B:45:THR:HG23	20:B:200:PRO:O	2.05	0.57
6:G:147:ASN:N	6:G:147:ASN:HD22	2.03	0.57
13:N:29:ILE:O	13:N:32:ASP:HB3	2.04	0.57
4:E:84:VAL:HG11	4:E:146:MET:HB3	1.84	0.57
10:K:73:VAL:O	10:K:76:TYR:HB2	2.05	0.57
1:A:1308:U:H3'	12:M:97:ARG:HH11	1.70	0.57
8:I:29:ILE:HG12	8:I:64:ILE:HD13	1.86	0.57
1:A:312:C:H2'	1:A:313:A:H8	1.69	0.57
8:I:94:ARG:HB3	8:I:94:ARG:NH1	2.12	0.57
3:D:160:LEU:HD22	3:D:161:ALA:N	2.20	0.57
20:B:88:GLN:HG2	20:B:220:VAL:HG11	1.86	0.57
12:M:47:LEU:HB3	12:M:52:ILE:HD11	1.85	0.57
1:A:1225:A:H3'	1:A:1226:C:H6	1.70	0.57
1:A:859:G:H2'	1:A:860:A:H8	1.69	0.57
1:A:373:A:C1'	1:A:481:G:H1'	2.34	0.57
9:J:91:ASP:C	9:J:92:LEU:HD13	2.26	0.57
13:N:25:GLU:O	13:N:29:ILE:HG13	2.03	0.57
13:N:41:TRP:NE1	13:N:43:ALA:HB3	2.19	0.57
19:T:66:ILE:HG23	19:T:70:LYS:HD3	1.87	0.57
12:M:22:TYR:HB3	12:M:69:ARG:NH2	2.18	0.57
1:A:1074:G:H2'	1:A:1075:U:C6	2.40	0.57
21:U:23:GLU:HA	21:U:27:VAL:HG21	1.87	0.57
1:A:586:C:H5''	7:H:81:GLY:HA2	1.87	0.57
9:J:57:VAL:HG22	9:J:58:ASN:H	1.69	0.56
12:M:79:LEU:HD22	12:M:86:ARG:NE	2.18	0.56
11:L:106:VAL:HA	11:L:107:LYS:NZ	2.19	0.56
1:A:950:U:H2'	1:A:951:G:C8	2.40	0.56
1:A:1147:C:O2'	8:I:17:ARG:HD2	2.05	0.56
5:F:3:HIS:CG	5:F:92:THR:HG23	2.40	0.56
8:I:23:GLY:N	8:I:60:LEU:HA	2.20	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:92:ARG:CZ	21:U:24:LYS:HG3	2.35	0.56
7:H:6:ILE:HB	7:H:76:ARG:NH1	2.19	0.56
1:A:1051:C:H2'	1:A:1052:U:C6	2.40	0.56
1:A:1380:U:O4	6:G:2:ARG:HB2	2.04	0.56
8:I:9:GLY:HA2	8:I:80:HIS:CD2	2.41	0.56
4:E:95:MET:HA	4:E:124:ALA:HB2	1.88	0.56
1:A:1241:G:H2'	1:A:1242:G:C8	2.37	0.56
1:A:272:C:H2'	1:A:273:U:H6	1.69	0.56
20:B:69:VAL:HB	20:B:162:VAL:HB	1.88	0.56
5:F:22:ILE:O	5:F:26:THR:HG23	2.05	0.56
20:B:87:ASP:HB2	20:B:224:ARG:NH1	2.20	0.56
1:A:769:G:H4'	1:A:1513:A:H4'	1.87	0.56
1:A:384:G:H2'	1:A:385:C:H6	1.70	0.56
3:D:151:GLN:HB3	3:D:154:VAL:HG22	1.86	0.56
3:D:155:LYS:HA	3:D:158:LEU:HD12	1.87	0.56
8:I:64:ILE:HG21	8:I:78:ILE:HG12	1.87	0.56
1:A:102:G:H2'	1:A:103:U:H6	1.69	0.56
1:A:1318:A:H4'	18:S:9:PHE:CE1	2.40	0.56
6:G:45:ALA:HB2	6:G:116:ALA:O	2.04	0.56
8:I:18:VAL:HG11	8:I:82:ILE:HG12	1.86	0.56
10:K:64:VAL:O	10:K:68:ARG:HB2	2.05	0.56
6:G:59:GLU:O	6:G:63:VAL:HG23	2.05	0.56
12:M:80:MET:HA	12:M:87:GLY:HA3	1.87	0.56
20:B:43:GLU:O	20:B:47:PRO:HG2	2.05	0.56
21:U:16:ARG:CA	21:U:16:ARG:NE	2.68	0.56
1:A:1080:A:O3'	4:E:20:VAL:HG11	2.05	0.56
2:C:126:ARG:NH2	2:C:191:THR:H	2.03	0.56
1:A:1342:C:H2'	1:A:1343:G:H8	1.70	0.56
2:C:81:GLU:HG3	2:C:82:ASP:H	1.70	0.56
1:A:93:U:H2'	1:A:95:C:C6	2.40	0.56
20:B:85:SER:HB3	20:B:221:ARG:NH1	2.20	0.56
12:M:48:SER:HB2	12:M:51:GLN:HG3	1.87	0.56
9:J:9:ARG:HG3	9:J:99:GLN:NE2	2.21	0.56
20:B:156:LEU:HD23	20:B:178:LEU:HD13	1.85	0.56
1:A:1152:A:H2'	1:A:1153:G:H8	1.69	0.56
5:F:47:LEU:HD21	5:F:57:ALA:HB2	1.87	0.56
3:D:105:GLY:HA3	3:D:158:LEU:HD23	1.87	0.56
1:A:154:U:H2'	1:A:155:A:C8	2.40	0.56
1:A:1162:C:H2'	1:A:1163:A:C8	2.41	0.56
1:A:559:A:H4'	1:A:560:A:H3'	1.86	0.56
8:I:36:GLN:HE21	8:I:36:GLN:N	2.03	0.56
5:F:38:ARG:HB3	5:F:63:ASN:HB2	1.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:21:ILE:HG22	12:M:23:GLY:H	1.70	0.56
11:L:35:ARG:HE	11:L:36:VAL:H	1.53	0.56
1:A:1313:U:O4	18:S:3:SER:HB2	2.06	0.56
2:C:139:ASN:O	2:C:143:LEU:HD22	2.05	0.56
19:T:15:LYS:HD3	19:T:18:LYS:HE3	1.88	0.56
6:G:47:GLU:HA	6:G:57:GLU:OE2	2.05	0.56
15:P:74:LEU:HA	15:P:77:GLU:OE2	2.06	0.56
4:E:149:PRO:HG2	4:E:150:GLU:OE1	2.06	0.56
1:A:323:U:H1'	19:T:13:SER:HB2	1.88	0.56
1:A:1283:U:H2'	1:A:1284:C:C6	2.41	0.56
5:F:92:THR:HG22	5:F:93:LYS:N	2.21	0.56
12:M:28:ARG:NH1	12:M:32:ILE:HD12	2.21	0.56
4:E:131:ASN:ND2	4:E:133:ILE:HB	2.21	0.56
11:L:43:LYS:HE3	11:L:44:PRO:HD3	1.86	0.56
1:A:235:C:H2'	1:A:236:A:C8	2.41	0.56
1:A:922:G:H4'	4:E:24:VAL:HA	1.88	0.56
1:A:923:A:H2'	1:A:924:C:C6	2.41	0.56
14:O:45:GLU:HG2	14:O:46:HIS:N	2.21	0.56
1:A:590:U:H2'	1:A:591:U:C6	2.41	0.56
1:A:843:U:H3'	1:A:844:G:H5'	1.87	0.56
1:A:131:A:H2'	1:A:132:C:C6	2.41	0.56
1:A:410:G:P	3:D:25:ARG:HE	2.29	0.56
15:P:48:GLU:CG	15:P:49:GLY:H	2.19	0.56
1:A:736:C:H2'	1:A:737:C:H6	1.69	0.56
10:K:108:ASN:ND2	21:U:6:ARG:HG3	2.21	0.56
1:A:1465:A:H2'	1:A:1466:C:C6	2.41	0.56
12:M:47:LEU:HD12	12:M:51:GLN:HB2	1.88	0.55
15:P:57:ILE:O	15:P:61:VAL:HG23	2.05	0.55
1:A:312:C:H2'	1:A:313:A:C8	2.40	0.55
16:Q:6:THR:HG22	16:Q:61:ARG:HB3	1.87	0.55
14:O:89:ARG:HH11	14:O:89:ARG:HA	1.70	0.55
1:A:1060:U:H2'	1:A:1061:G:H8	1.71	0.55
4:E:82:HIS:HB2	4:E:83:PRO:HD2	1.88	0.55
1:A:474:G:H2'	1:A:475:C:C6	2.41	0.55
20:B:23:ASN:HB3	20:B:188:THR:O	2.07	0.55
2:C:39:ARG:NH1	2:C:56:ILE:HD12	2.21	0.55
1:A:26:A:H61	1:A:558:G:H1'	1.71	0.55
2:C:62:SER:HB2	2:C:97:PRO:O	2.06	0.55
1:A:1352:C:H2'	1:A:1353:G:C8	2.40	0.55
4:E:14:LEU:HA	4:E:36:THR:HG22	1.88	0.55
13:N:71:GLY:O	13:N:79:SER:HA	2.06	0.55
10:K:111:ASP:HB2	21:U:19:LYS:CE	2.35	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:3:TYR:C	3:D:4:LEU:HD12	2.26	0.55
3:D:2:ARG:O	3:D:3:TYR:HB3	2.06	0.55
15:P:59:HIS:O	15:P:63:GLN:HG3	2.05	0.55
1:A:173:U:H5'	1:A:197:A:O4'	2.05	0.55
1:A:83:C:O2'	1:A:84:U:H5'	2.06	0.55
1:A:239:U:C5'	1:A:239:U:H6	2.19	0.55
1:A:1391:U:H2'	1:A:1392:G:H8	1.68	0.55
4:E:158:LYS:HZ1	7:H:63:LYS:CD	2.10	0.55
8:I:94:ARG:HA	8:I:97:LEU:HD12	1.88	0.55
3:D:29:THR:HB	3:D:30:LYS:HZ3	1.71	0.55
10:K:28:ASN:HD21	10:K:46:ALA:HB3	1.70	0.55
14:O:78:TYR:CZ	14:O:82:ILE:HD11	2.42	0.55
1:A:522:C:H41	11:L:49:ARG:NH2	2.01	0.55
1:A:215:C:H2'	1:A:216:U:H6	1.70	0.55
9:J:78:GLU:O	9:J:80:THR:N	2.38	0.55
6:G:58:LEU:O	6:G:62:GLU:HB2	2.07	0.55
6:G:3:ARG:O	6:G:5:VAL:HG22	2.06	0.55
1:A:208:U:H2'	1:A:210:C:C2	2.42	0.55
1:A:213:G:H2'	1:A:213:G:N3	2.20	0.55
1:A:1508:A:H2'	1:A:1509:C:H6	1.71	0.55
21:U:38:GLU:C	21:U:40:PRO:HD2	2.27	0.55
14:O:56:LEU:HD12	14:O:59:MET:HE3	1.89	0.55
1:A:212:G:H2'	1:A:213:G:C8	2.41	0.55
4:E:148:SER:O	4:E:152:VAL:HG23	2.06	0.55
1:A:719:C:H1'	17:R:37:LYS:HB2	1.86	0.55
20:B:138:ARG:HD3	20:B:141:GLU:OE1	2.07	0.55
1:A:539:A:H2'	1:A:540:G:H8	1.71	0.55
6:G:4:ARG:O	6:G:5:VAL:HG13	2.07	0.55
1:A:1000:A:H2'	1:A:1001:C:H6	1.72	0.55
1:A:1314:C:H3'	18:S:5:LYS:NZ	2.21	0.55
3:D:116:LEU:O	3:D:121:ALA:HB3	2.07	0.55
8:I:33:SER:OG	8:I:36:GLN:HB2	2.06	0.55
1:A:868:C:H2'	1:A:869:G:O4'	2.07	0.55
1:A:93:U:OP1	1:A:94:G:OP2	2.25	0.55
2:C:149:LYS:HG3	2:C:168:ARG:HB2	1.88	0.55
12:M:33:LEU:HD13	12:M:39:ALA:O	2.07	0.55
1:A:744:C:O2'	1:A:745:G:H5'	2.07	0.55
1:A:1027:C:H2'	1:A:1028:C:O4'	2.07	0.55
1:A:154:U:H2'	1:A:155:A:H8	1.72	0.55
1:A:470:C:H2'	1:A:471:U:H6	1.72	0.55
1:A:87:C:H2'	1:A:88:U:C4'	2.36	0.55
2:C:174:LEU:HD21	2:C:200:TRP:CD1	2.40	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1032:G:H2'	1:A:1033:G:C4'	2.36	0.55
1:A:532:A:H62	2:C:191:THR:CB	2.18	0.55
20:B:162:VAL:HG13	20:B:184:ALA:HB2	1.88	0.55
1:A:1432:G:H1'	1:A:1468:A:H61	1.72	0.55
1:A:1253:G:H2'	1:A:1254:A:C8	2.42	0.55
4:E:98:ALA:HB2	4:E:123:LEU:HG	1.88	0.55
9:J:53:ILE:HG13	13:N:84:ARG:CZ	2.37	0.54
1:A:1180:A:H5''	1:A:1181:G:OP2	2.07	0.54
3:D:172:VAL:HG23	3:D:178:GLU:O	2.06	0.54
12:M:82:LEU:HD21	18:S:65:MET:HB2	1.88	0.54
6:G:149:ALA:HB2	10:K:55:ARG:CZ	2.36	0.54
6:G:42:VAL:O	6:G:46:LEU:HB2	2.07	0.54
6:G:104:VAL:HG12	6:G:108:ARG:HD2	1.89	0.54
1:A:263:A:P	19:T:73:ARG:HH12	2.29	0.54
11:L:20:VAL:HB	11:L:94:TYR:HE1	1.72	0.54
1:A:328:C:H4'	1:A:329:A:H5'	1.89	0.54
1:A:882:C:O2'	1:A:883:C:H5'	2.07	0.54
1:A:420:U:H2'	1:A:422:C:C5	2.42	0.54
1:A:683:G:O2'	1:A:684:U:H5'	2.07	0.54
13:N:5:MET:HB3	13:N:62:ARG:HH12	1.72	0.54
1:A:86:G:N2	1:A:87:C:N4	2.54	0.54
1:A:475:C:H2'	1:A:476:U:C6	2.43	0.54
3:D:55:ARG:HA	3:D:55:ARG:NE	2.22	0.54
1:A:610:U:O4'	1:A:610:U:O2	2.23	0.54
18:S:14:LEU:O	18:S:18:VAL:HG12	2.07	0.54
20:B:85:SER:CB	20:B:221:ARG:HH12	2.20	0.54
3:D:153:ARG:HG3	3:D:154:VAL:H	1.72	0.54
1:A:1147:C:H1'	8:I:17:ARG:NH1	2.22	0.54
1:A:783:C:O2'	1:A:784:A:H5'	2.06	0.54
8:I:9:GLY:O	8:I:16:ALA:HB3	2.07	0.54
1:A:1089:G:H1'	1:A:1167:A:N6	2.23	0.54
20:B:23:ASN:ND2	20:B:25:LYS:H	2.05	0.54
17:R:31:TYR:HB3	17:R:54:LEU:HD21	1.89	0.54
1:A:423:G:H2'	1:A:424:G:O4'	2.07	0.54
1:A:695:A:H61	1:A:797:C:H1'	1.72	0.54
1:A:82:G:C5	1:A:83:C:H1'	2.43	0.54
5:F:61:LEU:CD1	5:F:62:MET:H	2.21	0.54
12:M:11:HIS:H	12:M:45:SER:HB3	1.72	0.54
6:G:4:ARG:HH21	6:G:6:ILE:HD13	1.73	0.54
1:A:1238:A:H2	1:A:1241:G:N3	2.05	0.54
4:E:89:THR:HG22	4:E:90:GLY:H	1.73	0.54
2:C:13:ILE:N	2:C:13:ILE:HD13	2.23	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:159:ALA:HB1	20:B:183:PHE:HE1	1.73	0.54
1:A:512:U:O2'	1:A:513:C:H5'	2.07	0.54
10:K:115:ILE:HD11	17:R:72:ARG:NH2	2.22	0.54
8:I:53:LEU:HD13	8:I:53:LEU:O	2.07	0.54
1:A:1237:C:H3'	1:A:1336:C:N4	2.22	0.54
4:E:111:ARG:HG3	4:E:112:ALA:H	1.72	0.54
1:A:399:G:H2'	1:A:400:C:C6	2.43	0.54
1:A:92:U:H2'	1:A:93:U:C5	2.42	0.54
13:N:50:LEU:HG	13:N:51:PRO:HD3	1.89	0.54
18:S:42:ASN:HD21	18:S:43:MET:HG3	1.72	0.54
15:P:3:THR:HA	15:P:66:THR:H	1.73	0.54
2:C:176:THR:HB	2:C:179:ALA:HB2	1.89	0.54
1:A:586:C:O2'	1:A:587:G:H5'	2.07	0.54
1:A:802:A:H2'	1:A:803:G:O4'	2.08	0.54
4:E:104:ILE:HG23	4:E:104:ILE:O	2.08	0.54
16:Q:7:LEU:O	16:Q:60:ILE:HD13	2.07	0.54
9:J:40:ILE:HD12	9:J:73:LEU:HD12	1.89	0.54
1:A:918:A:H2'	1:A:919:A:C8	2.42	0.54
1:A:818:G:O2'	1:A:819:A:H5''	2.08	0.54
1:A:1006:G:H2'	1:A:1007:U:C6	2.42	0.54
21:U:39:LYS:N	21:U:40:PRO:CD	2.71	0.54
6:G:130:LYS:N	6:G:134:VAL:HG21	2.22	0.54
10:K:70:ALA:C	10:K:72:ALA:H	2.11	0.54
8:I:120:ALA:O	8:I:121:ARG:HG2	2.08	0.54
1:A:1343:G:H2'	1:A:1344:C:H6	1.73	0.54
1:A:1071:C:H2'	1:A:1072:G:C8	2.42	0.54
2:C:156:LEU:HD12	2:C:163:ARG:HG3	1.88	0.54
1:A:1029:U:H3'	1:A:1029:U:P	2.48	0.54
4:E:148:SER:OG	4:E:150:GLU:HG2	2.08	0.54
11:L:33:CYS:HB2	11:L:77:SER:O	2.08	0.54
11:L:84:GLY:H	11:L:94:TYR:HA	1.73	0.54
1:A:1253:G:H2'	1:A:1254:A:H8	1.73	0.54
1:A:883:C:O2'	1:A:884:U:H5'	2.07	0.54
1:A:1234:C:O2'	1:A:1235:U:H5'	2.08	0.54
1:A:989:U:O2'	1:A:990:C:H5'	2.08	0.54
7:H:26:MET:HB2	7:H:27:PRO:HD2	1.89	0.54
18:S:35:ARG:HH21	18:S:52:ASN:HA	1.73	0.54
20:B:53:LEU:HD11	20:B:216:VAL:HA	1.90	0.54
1:A:104:G:O2'	1:A:105:G:H5'	2.08	0.54
19:T:57:VAL:HB	19:T:71:ALA:HB1	1.88	0.54
1:A:1042:A:H2'	1:A:1043:G:O4'	2.08	0.54
10:K:113:THR:HG21	21:U:28:LEU:HD11	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:74:LEU:HD22	16:Q:75:VAL:H	1.72	0.53
6:G:6:ILE:HG13	6:G:7:GLY:N	2.22	0.53
12:M:64:VAL:HB	12:M:65:GLU:OE2	2.08	0.53
6:G:26:VAL:HG12	6:G:42:VAL:HG11	1.90	0.53
1:A:1014:A:C2	1:A:1219:A:H1'	2.43	0.53
1:A:1118:U:H2'	1:A:1119:C:H6	1.73	0.53
11:L:106:VAL:HG23	11:L:116:TYR:HB3	1.89	0.53
1:A:268:U:H2'	1:A:269:C:C6	2.42	0.53
5:F:51:ILE:HG23	5:F:51:ILE:O	2.09	0.53
18:S:11:ASP:HB3	18:S:13:HIS:CD2	2.44	0.53
1:A:1451:U:H4'	1:A:1452:C:OP1	2.08	0.53
2:C:42:LEU:HD21	2:C:90:VAL:HG22	1.89	0.53
1:A:607:A:H2'	1:A:608:A:C8	2.43	0.53
1:A:441:A:H61	1:A:493:A:N6	2.06	0.53
12:M:86:ARG:CZ	18:S:2:ARG:HH22	2.22	0.53
16:Q:60:ILE:HD13	16:Q:60:ILE:H	1.72	0.53
1:A:1009:U:H1'	1:A:1021:A:C2	2.43	0.53
1:A:16:A:O2'	1:A:17:U:H5'	2.08	0.53
9:J:83:THR:O	9:J:87:LEU:HD13	2.08	0.53
1:A:1309:G:H2'	1:A:1310:G:H8	1.73	0.53
1:A:429:U:H1'	1:A:430:A:H5''	1.91	0.53
10:K:92:ARG:HH22	21:U:19:LYS:HG2	1.73	0.53
17:R:20:ILE:HG22	17:R:53:GLN:NE2	2.24	0.53
5:F:15:SER:HB2	5:F:44:ARG:HH12	1.73	0.53
5:F:18:VAL:HG21	5:F:58:HIS:CE1	2.44	0.53
1:A:219:U:H2'	1:A:220:G:H8	1.73	0.53
1:A:500:G:H5''	11:L:120:ARG:NH1	2.23	0.53
1:A:986:U:H1'	18:S:53:GLY:O	2.08	0.53
8:I:46:VAL:HG21	8:I:75:ALA:HB1	1.90	0.53
1:A:244:U:O4	1:A:906:A:H1'	2.09	0.53
18:S:66:VAL:C	18:S:68:HIS:H	2.12	0.53
12:M:14:ALA:O	12:M:18:LEU:HB2	2.07	0.53
2:C:126:ARG:HH22	2:C:191:THR:H	1.57	0.53
8:I:74:GLN:HE21	8:I:74:GLN:H	1.55	0.53
10:K:30:ILE:HG22	10:K:45:THR:OG1	2.09	0.53
20:B:65:LYS:HZ2	20:B:153:MET:HG2	1.74	0.53
1:A:580:C:H2'	1:A:581:G:O4'	2.09	0.53
1:A:85:U:H5''	1:A:85:U:O2	2.08	0.53
8:I:20:ILE:HD13	8:I:85:ALA:CB	2.39	0.53
14:O:56:LEU:HA	14:O:59:MET:HE3	1.91	0.53
2:C:95:GLY:O	2:C:96:VAL:HG13	2.09	0.53
1:A:1238:A:N7	1:A:1303:C:H1'	2.23	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:216:U:H2'	1:A:217:C:C6	2.43	0.53
1:A:1287:A:H2'	1:A:1288:A:C8	2.44	0.53
4:E:89:THR:HG22	4:E:90:GLY:N	2.24	0.53
11:L:51:VAL:HG12	11:L:52:CYS:N	2.23	0.53
19:T:59:ARG:HH11	19:T:59:ARG:HB2	1.74	0.53
1:A:860:A:H2'	1:A:861:G:O4'	2.08	0.53
20:B:11:ALA:C	20:B:13:VAL:H	2.12	0.53
19:T:54:GLN:N	19:T:55:PRO:HD2	2.24	0.53
18:S:29:PRO:HA	18:S:47:THR:O	2.08	0.53
18:S:68:HIS:HB3	18:S:72:GLU:OE2	2.08	0.53
16:Q:14:ASP:HB3	16:Q:54:ILE:HB	1.90	0.53
2:C:70:ALA:HA	2:C:105:VAL:HG11	1.89	0.53
18:S:31:ARG:HG3	18:S:56:HIS:NE2	2.23	0.53
1:A:237:G:H2'	1:A:238:A:H8	1.74	0.53
1:A:1390:U:H2'	1:A:1391:U:C6	2.43	0.53
1:A:358:U:H2'	1:A:359:G:C8	2.43	0.53
19:T:4:LYS:HZ1	19:T:6:ALA:HB2	1.72	0.53
20:B:16:GLY:HA3	20:B:39:ILE:HA	1.90	0.53
12:M:94:LEU:HB3	12:M:95:PRO:HD2	1.91	0.53
1:A:235:C:H2'	1:A:236:A:H8	1.74	0.53
3:D:12:ARG:HA	3:D:33:ILE:HD12	1.91	0.53
15:P:78:VAL:O	15:P:79:ASN:C	2.46	0.53
1:A:279:A:OP1	1:A:281:G:H5'	2.09	0.53
1:A:552:U:H4'	11:L:82:ARG:HG3	1.90	0.53
18:S:20:LYS:O	18:S:20:LYS:HD2	2.08	0.53
4:E:113:VAL:HG23	4:E:114:LEU:N	2.23	0.53
20:B:85:SER:N	20:B:88:GLN:HE22	2.07	0.53
1:A:237:G:H2'	1:A:238:A:C8	2.44	0.53
15:P:2:VAL:O	15:P:65:ALA:HA	2.08	0.53
1:A:272:C:H2'	1:A:273:U:C6	2.43	0.53
1:A:1522:U:O2'	1:A:1523:G:H5'	2.08	0.53
1:A:491:G:O2'	1:A:492:C:H5'	2.08	0.53
2:C:48:LYS:CD	2:C:48:LYS:H	2.21	0.53
1:A:90:C:H2'	1:A:91:U:C6	2.44	0.53
20:B:178:LEU:HB2	20:B:180:ILE:HG12	1.91	0.53
1:A:1001:C:H2'	1:A:1002:G:H8	1.71	0.53
1:A:1489:G:H2'	1:A:1490:U:C6	2.44	0.53
11:L:42:LYS:HD2	11:L:43:LYS:HG3	1.90	0.53
6:G:70:PRO:HD3	6:G:102:TRP:CZ3	2.44	0.53
1:A:518:C:H2'	1:A:530:G:C8	2.43	0.53
1:A:961:U:O4'	1:A:961:U:O2	2.26	0.53
5:F:93:LYS:O	5:F:94:HIS:HB2	2.08	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:198:VAL:HG12	20:B:200:PRO:HD3	1.92	0.52
16:Q:30:HIS:HB3	16:Q:33:TYR:HB2	1.91	0.52
8:I:25:GLY:CA	8:I:57:VAL:HA	2.26	0.52
8:I:61:ASP:O	8:I:62:LEU:HD13	2.09	0.52
3:D:29:THR:HG22	3:D:30:LYS:N	2.24	0.52
1:A:600:A:H2'	1:A:601:G:H8	1.74	0.52
1:A:1397:C:H4'	1:A:1398:A:OP2	2.10	0.52
1:A:34:C:H2'	1:A:35:G:H8	1.74	0.52
1:A:1306:A:N6	1:A:1331:G:H1'	2.23	0.52
1:A:454:G:O2'	1:A:455:G:H5'	2.08	0.52
2:C:184:ASN:HD22	2:C:185:THR:H	1.57	0.52
15:P:25:ARG:HD3	15:P:25:ARG:H	1.74	0.52
3:D:187:ARG:NH1	3:D:191:SER:HA	2.24	0.52
8:I:26:LYS:HE3	8:I:27:ILE:N	2.23	0.52
10:K:85:VAL:HG21	10:K:96:ILE:HD11	1.91	0.52
8:I:14:SER:HA	8:I:68:GLY:O	2.09	0.52
1:A:1078:U:H2'	1:A:1079:G:O4'	2.08	0.52
1:A:662:U:H2'	1:A:663:A:C8	2.44	0.52
1:A:1413:A:H2	1:A:1487:G:H22	1.57	0.52
1:A:1289:A:H61	8:I:71:ILE:HD13	1.75	0.52
1:A:551:U:H2'	1:A:552:U:C6	2.44	0.52
1:A:1302:C:OP2	12:M:16:ILE:HD11	2.09	0.52
15:P:68:SER:OG	15:P:71:VAL:HG12	2.08	0.52
1:A:949:A:O2'	1:A:950:U:H5'	2.09	0.52
1:A:475:C:H2'	1:A:476:U:H6	1.75	0.52
1:A:451:A:H4'	1:A:452:A:O4'	2.09	0.52
1:A:769:G:O2'	1:A:770:C:H5'	2.10	0.52
1:A:193:C:H2'	1:A:194:C:C6	2.44	0.52
1:A:513:C:H2'	1:A:514:C:C6	2.44	0.52
1:A:1461:G:H2'	1:A:1462:C:H6	1.74	0.52
1:A:840:C:H2'	1:A:842:U:H5''	1.91	0.52
1:A:538:G:OP2	11:L:111:GLN:HB2	2.09	0.52
6:G:102:TRP:CH2	6:G:140:VAL:HG21	2.44	0.52
20:B:40:ILE:HD13	20:B:201:GLY:HA2	1.91	0.52
11:L:88:ASP:C	11:L:89:LEU:HD22	2.30	0.52
5:F:44:ARG:HA	5:F:57:ALA:O	2.10	0.52
6:G:14:ASP:OD2	6:G:15:PRO:HD2	2.10	0.52
3:D:103:ARG:HH21	3:D:110:ARG:NH2	2.08	0.52
1:A:1013:G:H2'	1:A:1015:G:OP2	2.09	0.52
1:A:389:A:N3	1:A:389:A:H2'	2.25	0.52
20:B:221:ARG:HH11	20:B:221:ARG:CB	2.20	0.52
2:C:104:GLU:O	2:C:105:VAL:HG13	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:100:MET:O	6:G:104:VAL:HG23	2.10	0.52
5:F:47:LEU:HD12	5:F:55:HIS:HA	1.91	0.52
1:A:1477:U:H2'	1:A:1478:U:H6	1.73	0.52
1:A:706:A:C4'	10:K:30:ILE:HD11	2.39	0.52
1:A:560:A:H5'	1:A:566:G:N2	2.25	0.52
10:K:63:GLN:O	10:K:67:GLU:HG2	2.10	0.52
19:T:28:ARG:O	19:T:32:LYS:HG3	2.09	0.52
10:K:122:PRO:HD2	21:U:35:GLU:HG2	1.91	0.52
1:A:746:A:O2'	1:A:747:A:H5'	2.10	0.52
8:I:117:LEU:CD2	8:I:123:ARG:HB3	2.40	0.52
1:A:250:A:N3	1:A:250:A:H3'	2.25	0.52
1:A:738:C:H2'	1:A:739:C:H6	1.75	0.52
17:R:47:ARG:HD3	17:R:50:TYR:CE1	2.45	0.52
11:L:30:ARG:HB3	11:L:57:THR:HG23	1.92	0.52
20:B:185:ILE:HA	20:B:199:ILE:HB	1.92	0.52
1:A:846:G:H2'	1:A:846:G:N3	2.24	0.52
18:S:43:MET:C	18:S:46:LEU:HD23	2.29	0.52
11:L:107:LYS:HZ3	11:L:107:LYS:N	2.01	0.52
20:B:79:VAL:HG22	20:B:213:LEU:HD11	1.92	0.52
1:A:921:U:O2	4:E:23:THR:HG23	2.10	0.52
12:M:7:ASN:N	12:M:7:ASN:HD22	2.05	0.52
1:A:1308:U:H2'	1:A:1309:G:C8	2.45	0.52
15:P:23:ASP:OD1	15:P:25:ARG:HB2	2.10	0.52
12:M:92:ARG:HE	12:M:92:ARG:HA	1.75	0.52
11:L:54:VAL:CG1	11:L:79:ILE:HD11	2.40	0.52
1:A:475:C:O2'	1:A:476:U:H5'	2.10	0.52
8:I:39:GLY:O	8:I:40:ARG:HB2	2.10	0.52
1:A:173:U:H6	1:A:198:G:HO2'	1.56	0.52
1:A:366:A:O2'	1:A:394:G:N2	2.43	0.52
13:N:60:ARG:HE	13:N:62:ARG:HG2	1.74	0.52
1:A:1060:U:H2'	1:A:1061:G:C8	2.44	0.52
8:I:56:MET:O	8:I:58:GLU:HG2	2.10	0.52
3:D:25:ARG:NH1	3:D:26:ALA:H	1.96	0.52
13:N:22:LYS:HA	13:N:25:GLU:OE1	2.10	0.52
1:A:61:G:H2'	1:A:62:U:O4'	2.10	0.52
1:A:1132:C:H2'	1:A:1133:G:C8	2.44	0.52
10:K:115:ILE:HD11	17:R:72:ARG:HH22	1.74	0.52
5:F:17:GLN:O	5:F:21:MET:HG3	2.10	0.52
3:D:64:TYR:HB2	3:D:66:VAL:HG23	1.92	0.52
1:A:1165:U:H2'	1:A:1166:G:O4'	2.09	0.52
15:P:10:GLY:HA3	15:P:15:PRO:HA	1.91	0.52
18:S:39:ILE:CD1	18:S:68:HIS:HB2	2.41	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:217:ALA:O	20:B:220:VAL:HB	2.11	0.51
6:G:4:ARG:HD2	6:G:5:VAL:N	2.25	0.51
1:A:22:G:H4'	1:A:885:G:C8	2.45	0.51
9:J:10:LEU:CD2	9:J:98:VAL:HG12	2.40	0.51
1:A:1308:U:H3'	12:M:97:ARG:NH1	2.24	0.51
1:A:177:G:C5'	19:T:59:ARG:HH21	2.22	0.51
1:A:1298:U:H4'	1:A:1299:A:C4	2.45	0.51
1:A:1423:G:H2'	1:A:1424:U:C6	2.45	0.51
20:B:64:GLY:HA2	20:B:158:ASP:OD1	2.10	0.51
3:D:123:MET:HG3	3:D:127:ARG:C	2.31	0.51
1:A:728:A:H2'	1:A:729:A:C8	2.45	0.51
1:A:1339:A:H2'	1:A:1340:A:O4'	2.11	0.51
20:B:119:GLN:C	20:B:125:PHE:HB3	2.31	0.51
3:D:115:GLN:HG3	3:D:119:HIS:CE1	2.45	0.51
20:B:160:LEU:HD23	20:B:161:PHE:N	2.25	0.51
11:L:109:ARG:HB3	11:L:118:VAL:HG21	1.93	0.51
2:C:42:LEU:HD21	2:C:90:VAL:CG2	2.41	0.51
4:E:45:VAL:O	4:E:70:MET:HB3	2.10	0.51
6:G:27:ASN:HD22	6:G:27:ASN:N	2.08	0.51
8:I:51:LEU:HB3	8:I:56:MET:CB	2.40	0.51
1:A:1000:A:H2'	1:A:1001:C:C6	2.46	0.51
1:A:999:C:H2'	1:A:1000:A:H8	1.72	0.51
1:A:1392:G:O2'	1:A:1393:U:H5'	2.10	0.51
1:A:617:G:H4'	15:P:46:LYS:HE3	1.92	0.51
13:N:40:ARG:HH12	18:S:6:LYS:HG2	1.76	0.51
1:A:1438:G:O2'	1:A:1439:G:H5'	2.10	0.51
1:A:1162:C:H2'	1:A:1163:A:H8	1.75	0.51
3:D:102:TYR:CG	3:D:110:ARG:HG2	2.45	0.51
3:D:21:LYS:C	3:D:23:GLY:H	2.14	0.51
1:A:1068:G:N7	1:A:1094:G:H2'	2.25	0.51
1:A:821:G:H2'	1:A:822:U:C6	2.45	0.51
1:A:1281:C:H5'	1:A:1282:C:H5	1.74	0.51
12:M:89:ARG:HB3	12:M:96:VAL:HG22	1.90	0.51
14:O:85:LEU:N	14:O:85:LEU:HD12	2.26	0.51
20:B:63:LYS:HE3	20:B:224:ARG:HH22	1.76	0.51
1:A:1307:U:H2'	1:A:1308:U:H6	1.75	0.51
1:A:486:U:H2'	1:A:487:A:H8	1.74	0.51
20:B:147:LEU:HA	20:B:150:ILE:HG22	1.93	0.51
14:O:32:LEU:O	14:O:36:ILE:HG12	2.09	0.51
1:A:1323:G:H2'	1:A:1324:A:H8	1.72	0.51
1:A:17:U:H2'	1:A:18:C:H6	1.75	0.51
20:B:119:GLN:O	20:B:125:PHE:HB3	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:118:ARG:NH2	8:I:122:ARG:HH21	2.08	0.51
1:A:737:C:H5'	5:F:89:VAL:O	2.10	0.51
4:E:98:ALA:HB1	4:E:102:THR:HG21	1.93	0.51
9:J:65:TYR:HB3	13:N:95:LEU:HD11	1.93	0.51
6:G:72:VAL:HG12	6:G:89:GLU:HG3	1.92	0.51
7:H:113:ARG:HA	7:H:116:ARG:NH1	2.25	0.51
20:B:83:ALA:CB	20:B:90:PHE:HB3	2.41	0.51
1:A:1298:U:H4'	1:A:1299:A:N9	2.25	0.51
1:A:11:G:H2'	1:A:12:U:C6	2.46	0.51
10:K:81:LEU:CD2	10:K:104:PHE:HB3	2.41	0.51
1:A:1471:U:O2'	1:A:1472:U:H5'	2.10	0.51
15:P:4:ILE:O	15:P:71:VAL:HG11	2.10	0.51
1:A:1009:U:H2'	1:A:1010:U:C5	2.45	0.51
1:A:864:A:H2'	1:A:865:A:C8	2.46	0.51
10:K:69:CYS:O	10:K:73:VAL:HG22	2.10	0.51
21:U:52:VAL:HG13	21:U:53:LYS:N	2.25	0.51
7:H:85:TYR:CD2	7:H:123:GLU:HB2	2.46	0.51
7:H:51:GLU:HG2	7:H:52:GLY:H	1.76	0.51
20:B:204:ASP:CG	20:B:205:ALA:H	2.14	0.51
19:T:61:ALA:HA	19:T:67:HIS:N	2.22	0.51
1:A:1461:G:H2'	1:A:1462:C:C6	2.46	0.51
2:C:33:ASP:O	2:C:36:PHE:HB3	2.11	0.51
1:A:223:A:H2'	1:A:224:U:C6	2.45	0.51
3:D:24:VAL:HG23	3:D:25:ARG:N	2.26	0.51
4:E:132:PRO:O	4:E:136:VAL:HG12	2.11	0.51
2:C:2:GLN:N	2:C:2:GLN:NE2	2.57	0.51
1:A:34:C:H2'	1:A:35:G:C8	2.46	0.51
6:G:91:ARG:HD2	6:G:91:ARG:N	2.26	0.51
1:A:842:U:O2	1:A:842:U:H2'	2.11	0.51
2:C:48:LYS:HD3	2:C:48:LYS:H	1.76	0.51
1:A:994:A:C5	1:A:1216:A:H4'	2.45	0.51
1:A:1157:A:H4'	1:A:1158:C:O5'	2.09	0.51
1:A:546:A:P	3:D:68:GLU:HB3	2.50	0.51
1:A:462:G:H2'	1:A:463:U:C6	2.45	0.51
1:A:113:G:N2	1:A:353:A:H8	2.09	0.51
20:B:166:ASP:OD1	20:B:190:SER:HA	2.11	0.51
4:E:82:HIS:CE1	4:E:146:MET:HA	2.46	0.51
1:A:9:G:OP2	4:E:125:LYS:HE3	2.10	0.51
1:A:1309:G:H2'	1:A:1310:G:C8	2.46	0.51
20:B:26:MET:O	20:B:30:ILE:HG13	2.11	0.51
1:A:170:U:O2'	1:A:171:A:H5'	2.11	0.51
2:C:121:SER:CB	2:C:125:ARG:HH12	2.23	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:13:VAL:O	21:U:13:VAL:HG13	2.11	0.51
15:P:20:VAL:HG21	15:P:32:PHE:CD2	2.46	0.51
1:A:199:A:H2'	1:A:200:G:C8	2.46	0.51
8:I:112:ARG:HD2	13:N:100:TRP:OXT	2.11	0.51
1:A:797:C:O2'	1:A:798:U:H5'	2.11	0.50
10:K:127:ARG:HG3	10:K:127:ARG:HH11	1.75	0.50
1:A:82:G:OP2	1:A:83:C:H6	1.95	0.50
5:F:2:ARG:HG2	5:F:92:THR:OG1	2.11	0.50
16:Q:16:MET:CB	16:Q:19:SER:HB2	2.41	0.50
1:A:376:G:C5'	15:P:5:ARG:HD3	2.38	0.50
7:H:77:VAL:HG23	7:H:126:CYS:HA	1.93	0.50
1:A:1314:C:H2'	1:A:1315:U:C6	2.46	0.50
1:A:250:A:H1'	1:A:252:U:C5	2.46	0.50
1:A:1029:U:O4'	1:A:1029:U:O2	2.26	0.50
6:G:14:ASP:HB3	6:G:18:GLY:N	2.26	0.50
3:D:77:GLU:HA	3:D:80:ARG:HG2	1.93	0.50
21:U:35:GLU:HB2	21:U:37:TYR:CE2	2.46	0.50
1:A:78:A:H8	1:A:78:A:O5'	1.94	0.50
5:F:3:HIS:HA	5:F:65:GLU:HA	1.93	0.50
20:B:48:MET:CE	20:B:198:VAL:HB	2.41	0.50
5:F:68:GLN:O	5:F:71:ILE:HG13	2.11	0.50
1:A:1084:G:H5'	1:A:1102:A:OP2	2.11	0.50
20:B:212:TYR:O	20:B:216:VAL:HG22	2.11	0.50
1:A:35:G:H2'	1:A:36:C:C6	2.46	0.50
1:A:1038:C:H2'	1:A:1039:G:H8	1.75	0.50
2:C:129:PHE:CD2	2:C:156:LEU:HD22	2.46	0.50
1:A:1029:U:OP2	1:A:1029:U:H3'	2.11	0.50
1:A:470:C:H2'	1:A:471:U:C6	2.46	0.50
1:A:711:G:O2'	1:A:712:A:H5'	2.11	0.50
12:M:1:ALA:O	12:M:3:ILE:HG13	2.11	0.50
1:A:410:G:H2'	1:A:429:U:C5	2.45	0.50
20:B:95:TRP:CH2	20:B:100:LEU:HB2	2.40	0.50
13:N:15:LEU:HD23	13:N:18:LYS:HD2	1.93	0.50
3:D:113:ALA:O	3:D:117:VAL:HG23	2.12	0.50
1:A:554:A:H2'	1:A:555:U:C6	2.45	0.50
1:A:620:C:N1	3:D:131:ILE:HD13	2.26	0.50
1:A:839:C:H2'	1:A:840:C:O4'	2.12	0.50
1:A:858:G:O6	1:A:869:G:H3'	2.11	0.50
1:A:454:G:H2'	1:A:455:G:H8	1.76	0.50
1:A:577:G:O2'	1:A:578:C:H5'	2.12	0.50
1:A:593:U:H2'	1:A:594:U:C6	2.47	0.50
1:A:1060:U:H5''	9:J:53:ILE:HG12	1.92	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:40:ILE:HB	9:J:73:LEU:HB3	1.93	0.50
1:A:737:C:H2'	1:A:738:C:H6	1.77	0.50
1:A:738:C:H2'	1:A:739:C:C6	2.45	0.50
2:C:35:ASP:O	2:C:39:ARG:HG3	2.11	0.50
7:H:79:ARG:HB2	7:H:80:PRO:HD2	1.93	0.50
1:A:333:U:H2'	1:A:334:C:C6	2.46	0.50
20:B:147:LEU:O	20:B:150:ILE:HG22	2.11	0.50
1:A:320:A:H2'	1:A:321:A:C8	2.46	0.50
1:A:1479:C:H2'	1:A:1480:A:H8	1.75	0.50
2:C:88:LYS:O	2:C:88:LYS:HE3	2.12	0.50
8:I:20:ILE:HA	8:I:62:LEU:CD1	2.42	0.50
18:S:63:ASP:C	18:S:65:MET:H	2.13	0.50
6:G:144:ALA:C	6:G:146:ALA:H	2.14	0.50
6:G:146:ALA:C	6:G:147:ASN:HD22	2.14	0.50
10:K:28:ASN:HB2	10:K:56:LYS:HZ3	1.75	0.50
13:N:29:ILE:HB	13:N:30:ILE:HD12	1.94	0.50
12:M:106:ARG:HE	12:M:112:ARG:NH1	2.09	0.50
6:G:49:LEU:CD2	6:G:60:ALA:HB1	2.40	0.50
6:G:26:VAL:HB	6:G:42:VAL:HG21	1.94	0.50
9:J:10:LEU:O	9:J:71:LEU:HA	2.12	0.50
15:P:1:MET:HE3	15:P:1:MET:HA	1.93	0.50
1:A:214:C:H2'	1:A:215:C:C6	2.46	0.50
1:A:825:A:H2'	1:A:826:C:C6	2.46	0.50
1:A:539:A:H2'	1:A:540:G:C8	2.45	0.50
1:A:624:C:H2'	1:A:625:U:H6	1.77	0.50
1:A:713:G:H2'	1:A:714:G:C8	2.46	0.50
1:A:1404:C:H2'	1:A:1405:G:C8	2.47	0.50
1:A:1376:U:H2'	1:A:1377:A:C8	2.47	0.50
1:A:1519:A:H3'	1:A:1520:C:C5'	2.41	0.50
1:A:1060:U:C5	2:C:1:GLY:HA3	2.46	0.50
9:J:53:ILE:CG2	9:J:61:ALA:HB1	2.27	0.50
8:I:43:ALA:O	8:I:46:VAL:HG22	2.11	0.50
10:K:95:THR:HG23	10:K:96:ILE:N	2.27	0.50
1:A:120:A:H2'	1:A:121:U:C5'	2.36	0.50
11:L:86:VAL:CG1	11:L:89:LEU:HD23	2.41	0.50
1:A:332:G:OP2	19:T:4:LYS:HB2	2.11	0.50
21:U:11:PHE:CD1	21:U:13:VAL:HG12	2.47	0.50
1:A:204:G:H2'	1:A:205:A:C8	2.46	0.50
6:G:10:LYS:HB2	6:G:10:LYS:NZ	2.27	0.50
1:A:410:G:H2'	1:A:429:U:C4	2.46	0.50
21:U:24:LYS:CG	21:U:25:ALA:H	2.22	0.50
13:N:50:LEU:N	13:N:51:PRO:CD	2.75	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:927:G:O2'	1:A:928:G:H5'	2.12	0.50
1:A:314:C:O2'	1:A:315:A:H5'	2.11	0.50
1:A:218:U:H2'	1:A:219:U:C6	2.47	0.50
1:A:1436:U:H2'	1:A:1437:A:H8	1.75	0.50
2:C:185:THR:HG22	2:C:198:LYS:HG2	1.93	0.50
9:J:12:ALA:HB2	9:J:96:VAL:HG12	1.93	0.50
8:I:26:LYS:HA	8:I:26:LYS:HZ1	1.77	0.50
3:D:57:LYS:O	3:D:61:ARG:HB2	2.10	0.50
3:D:90:LEU:HD11	3:D:194:ILE:CD1	2.40	0.50
5:F:40:GLU:HB2	5:F:61:LEU:HB2	1.94	0.50
9:J:51:VAL:CG2	13:N:80:ARG:HB2	2.39	0.50
6:G:87:PRO:CG	6:G:151:ALA:HB2	2.41	0.50
14:O:35:GLN:O	14:O:39:LEU:HB2	2.12	0.50
1:A:238:A:C2'	1:A:239:U:H5''	2.40	0.50
1:A:1396:A:O4'	1:A:1398:A:H1'	2.12	0.50
15:P:46:LYS:O	15:P:48:GLU:N	2.44	0.50
16:Q:63:CYS:SG	16:Q:66:LEU:HD11	2.52	0.50
1:A:935:A:N6	6:G:2:ARG:HD2	2.26	0.50
1:A:366:A:H2	1:A:394:G:H1	1.60	0.50
1:A:1423:G:H2'	1:A:1424:U:H6	1.76	0.50
1:A:709:U:H2'	1:A:710:G:C8	2.47	0.50
13:N:79:SER:OG	13:N:82:LYS:HG2	2.11	0.50
6:G:149:ALA:HB1	10:K:58:THR:CB	2.42	0.50
14:O:16:GLY:HA2	14:O:27:VAL:CG2	2.41	0.50
6:G:46:LEU:HG	6:G:57:GLU:HG3	1.94	0.50
5:F:97:THR:O	5:F:98:GLU:CB	2.60	0.50
1:A:987:G:O2'	1:A:988:G:H5'	2.11	0.50
1:A:486:U:H2'	1:A:487:A:C8	2.47	0.50
1:A:147:G:H2'	1:A:148:G:C8	2.47	0.50
12:M:58:GLU:O	12:M:61:LYS:HG2	2.11	0.50
1:A:78:A:H2'	1:A:79:G:C8	2.47	0.49
5:F:85:ILE:HG22	5:F:86:ARG:N	2.26	0.49
17:R:63:TYR:CD2	17:R:63:TYR:N	2.78	0.49
20:B:23:ASN:HD21	20:B:25:LYS:HG3	1.77	0.49
1:A:1118:U:H2'	1:A:1119:C:C6	2.46	0.49
1:A:1216:A:H5''	13:N:4:SER:HB3	1.93	0.49
1:A:147:G:H2'	1:A:148:G:H8	1.78	0.49
4:E:53:ARG:HB3	4:E:53:ARG:NH1	2.27	0.49
8:I:5:TYR:HB2	8:I:20:ILE:CB	2.35	0.49
3:D:160:LEU:HA	3:D:163:GLN:HB2	1.94	0.49
4:E:113:VAL:HG21	4:E:139:THR:HG21	1.93	0.49
12:M:106:ARG:HH12	12:M:109:LYS:CD	2.22	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:474:G:H2'	1:A:475:C:H6	1.77	0.49
17:R:63:TYR:HD2	17:R:63:TYR:N	2.11	0.49
1:A:672:U:H2'	1:A:673:A:C8	2.47	0.49
6:G:72:VAL:HG12	6:G:89:GLU:HA	1.93	0.49
1:A:457:G:H2'	1:A:458:U:O4'	2.12	0.49
1:A:939:G:H2'	1:A:940:C:C6	2.47	0.49
8:I:20:ILE:HG23	8:I:60:LEU:CD1	2.42	0.49
8:I:7:GLY:HA3	8:I:85:ALA:HB2	1.94	0.49
16:Q:18:LYS:H	16:Q:50:ASN:ND2	2.10	0.49
1:A:1011:C:H2'	1:A:1012:A:C8	2.46	0.49
2:C:24:ASN:O	2:C:26:LYS:N	2.44	0.49
17:R:38:ILE:HG22	17:R:58:ILE:HG21	1.93	0.49
8:I:40:ARG:N	8:I:44:ARG:HD3	2.26	0.49
1:A:1405:G:H21	1:A:1518:A:H1'	1.77	0.49
1:A:1121:U:O2'	1:A:1122:U:H5'	2.12	0.49
4:E:87:VAL:HG23	4:E:91:SER:O	2.12	0.49
7:H:42:GLU:HG3	7:H:100:ILE:HD13	1.94	0.49
6:G:74:VAL:HG12	6:G:87:PRO:HB3	1.93	0.49
1:A:1004:A:N7	1:A:1025:U:H1'	2.27	0.49
13:N:41:TRP:HD1	13:N:44:VAL:H	1.60	0.49
9:J:42:LEU:HB3	9:J:43:PRO:HD2	1.95	0.49
1:A:1172:C:O2'	1:A:1173:U:H5'	2.13	0.49
1:A:191:G:H2'	1:A:192:A:H8	1.78	0.49
9:J:26:VAL:O	9:J:30:LYS:HG3	2.11	0.49
1:A:1320:C:H41	18:S:36:ARG:HB3	1.78	0.49
1:A:1152:A:H2'	1:A:1153:G:C8	2.46	0.49
3:D:169:TRP:CD2	3:D:185:PRO:HB3	2.47	0.49
8:I:71:ILE:N	8:I:71:ILE:HD12	2.27	0.49
8:I:118:ARG:CZ	8:I:122:ARG:HH21	2.24	0.49
1:A:821:G:H2'	1:A:822:U:H6	1.77	0.49
9:J:15:HIS:HA	9:J:18:ILE:HG22	1.95	0.49
1:A:973:G:H1'	9:J:56:HIS:HA	1.93	0.49
1:A:415:A:H3'	1:A:416:G:H8	1.78	0.49
6:G:21:LEU:HD23	6:G:21:LEU:N	2.27	0.49
6:G:108:ARG:HA	6:G:115:MET:HE1	1.95	0.49
1:A:208:U:H1'	1:A:212:G:N2	2.28	0.49
11:L:21:PRO:C	11:L:23:LEU:H	2.16	0.49
7:H:118:ALA:HB3	7:H:120:LEU:CD2	2.42	0.49
1:A:1163:A:H2'	1:A:1164:G:H8	1.77	0.49
1:A:709:U:H2'	1:A:710:G:H8	1.78	0.49
1:A:86:G:H1'	1:A:88:U:C4	2.48	0.49
8:I:49:GLN:N	8:I:50:PRO:HD2	2.27	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:51:LEU:HB3	8:I:56:MET:HB3	1.94	0.49
8:I:98:ARG:HA	8:I:103:VAL:HG22	1.93	0.49
20:B:221:ARG:NH1	20:B:221:ARG:HB3	2.20	0.49
14:O:30:ALA:HA	14:O:85:LEU:HD21	1.95	0.49
2:C:70:ALA:CA	2:C:105:VAL:HG21	2.39	0.49
5:F:100:SER:HA	17:R:23:LYS:CE	2.41	0.49
3:D:94:GLU:CG	3:D:185:PRO:HG3	2.43	0.49
1:A:1226:C:H5''	12:M:101:THR:CB	2.42	0.49
1:A:624:C:H2'	1:A:625:U:C6	2.47	0.49
1:A:1176:A:H2'	1:A:1177:G:O4'	2.13	0.49
8:I:10:ARG:HG3	8:I:105:ARG:HH21	1.77	0.49
4:E:114:LEU:O	4:E:119:VAL:HG23	2.12	0.49
4:E:101:GLY:H	4:E:121:ASN:HD21	1.59	0.49
1:A:1010:U:H2'	1:A:1011:C:C6	2.48	0.49
1:A:411:A:C4	1:A:413:G:H1'	2.47	0.49
4:E:17:VAL:HG23	4:E:33:THR:O	2.12	0.49
3:D:22:SER:H	3:D:109:THR:HG22	1.78	0.49
17:R:38:ILE:HD13	17:R:38:ILE:H	1.78	0.49
1:A:279:A:H5''	1:A:280:C:H3'	1.92	0.49
14:O:17:ARG:O	14:O:18:ASP:HB3	2.12	0.49
1:A:202:G:H4'	1:A:469:C:H5'	1.95	0.49
6:G:129:ASN:HA	6:G:134:VAL:HG21	1.93	0.49
18:S:63:ASP:O	18:S:66:VAL:HG22	2.13	0.49
14:O:43:PHE:CE1	14:O:56:LEU:HD22	2.47	0.49
1:A:1009:U:H2'	1:A:1010:U:C6	2.48	0.49
1:A:1010:U:H2'	1:A:1011:C:H6	1.78	0.49
12:M:112:ARG:HB3	12:M:114:PRO:HD3	1.95	0.49
1:A:1151:A:O2'	1:A:1152:A:H8	1.96	0.49
9:J:10:LEU:HD11	9:J:25:ILE:HD12	1.94	0.49
1:A:818:G:C2'	1:A:819:A:H5''	2.42	0.49
1:A:1074:G:O2'	20:B:101:THR:HG23	2.13	0.49
20:B:99:MET:HA	20:B:106:VAL:HG21	1.95	0.49
1:A:674:G:H2'	1:A:675:A:C8	2.45	0.49
12:M:77:LYS:O	12:M:80:MET:HB3	2.13	0.49
1:A:1260:G:OP1	1:A:1284:C:H4'	2.13	0.49
1:A:462:G:C8	1:A:462:G:H5''	2.48	0.49
1:A:909:A:H2'	1:A:910:C:O4'	2.12	0.49
3:D:96:ARG:HB3	3:D:98:ASP:OD2	2.12	0.49
4:E:84:VAL:CG1	4:E:146:MET:HB3	2.43	0.49
6:G:110:ARG:NE	6:G:122:GLU:HB2	2.26	0.49
1:A:35:G:H2'	1:A:36:C:H6	1.78	0.49
1:A:36:C:O3'	11:L:119:LYS:HA	2.13	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:210:C:H1'	1:A:211:G:N2	2.28	0.49
1:A:1367:C:H5''	8:I:115:VAL:HG23	1.93	0.49
1:A:586:C:C2'	1:A:587:G:H5'	2.43	0.49
10:K:16:SER:HA	10:K:77:GLY:O	2.13	0.49
11:L:65:TYR:HB3	11:L:95:HIS:CD2	2.48	0.49
21:U:16:ARG:NH2	21:U:19:LYS:NZ	2.57	0.48
5:F:6:ILE:HD11	5:F:8:PHE:HD2	1.78	0.48
14:O:56:LEU:HA	14:O:59:MET:CE	2.43	0.48
1:A:412:A:O2'	1:A:413:G:H5''	2.12	0.48
1:A:1237:C:H4'	1:A:1334:G:N2	2.28	0.48
13:N:15:LEU:HA	13:N:18:LYS:HD2	1.94	0.48
7:H:74:ILE:O	7:H:74:ILE:HG23	2.13	0.48
20:B:23:ASN:C	20:B:23:ASN:ND2	2.65	0.48
1:A:1225:A:H5'	1:A:1226:C:OP2	2.13	0.48
1:A:724:G:O2'	1:A:725:G:H5'	2.12	0.48
11:L:121:PRO:HB2	11:L:122:LYS:HE2	1.95	0.48
15:P:36:VAL:O	15:P:36:VAL:HG13	2.13	0.48
1:A:1085:U:H3'	1:A:1086:U:C5	2.47	0.48
11:L:107:LYS:CD	11:L:107:LYS:H	2.25	0.48
12:M:22:TYR:CD1	12:M:65:GLU:HB3	2.48	0.48
1:A:947:G:H5''	12:M:106:ARG:HB2	1.95	0.48
1:A:1489:G:H2'	1:A:1490:U:H6	1.78	0.48
2:C:26:LYS:HG3	2:C:27:GLU:H	1.78	0.48
1:A:972:C:P	9:J:59:LYS:HD3	2.53	0.48
1:A:696:A:H1'	1:A:786:G:O2'	2.13	0.48
11:L:48:LEU:O	11:L:50:LYS:HD2	2.13	0.48
21:U:8:ASN:O	21:U:9:GLU:HB3	2.12	0.48
1:A:1095:U:H2'	1:A:1096:C:C6	2.48	0.48
10:K:52:ARG:HA	10:K:56:LYS:HB3	1.95	0.48
19:T:66:ILE:HG22	19:T:67:HIS:N	2.27	0.48
1:A:928:G:O2'	1:A:929:G:H5'	2.13	0.48
20:B:87:ASP:CB	20:B:224:ARG:HH12	2.25	0.48
1:A:425:G:H2'	1:A:426:U:C6	2.49	0.48
6:G:14:ASP:HB3	6:G:18:GLY:H	1.77	0.48
4:E:22:LYS:O	4:E:29:ILE:HB	2.13	0.48
1:A:1239:A:H4'	1:A:1240:U:H5'	1.95	0.48
5:F:46:GLN:NE2	5:F:56:LYS:HE3	2.28	0.48
6:G:65:LEU:HB3	6:G:69:ARG:HE	1.78	0.48
20:B:163:ILE:CD1	20:B:209:VAL:HG12	2.43	0.48
1:A:437:U:H5''	3:D:151:GLN:NE2	2.28	0.48
20:B:10:LYS:HD2	20:B:10:LYS:H	1.79	0.48
1:A:1260:G:H4'	1:A:1283:U:O2'	2.12	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:658:C:O2'	1:A:659:U:H5'	2.13	0.48
13:N:79:SER:HG	13:N:82:LYS:HG2	1.78	0.48
21:U:24:LYS:HZ2	21:U:24:LYS:HB3	1.78	0.48
5:F:68:GLN:HA	5:F:71:ILE:CG1	2.43	0.48
12:M:86:ARG:NH1	18:S:2:ARG:HH22	2.12	0.48
20:B:125:PHE:CD2	20:B:126:ASP:N	2.81	0.48
13:N:40:ARG:NH1	18:S:6:LYS:HB2	2.28	0.48
1:A:1132:C:O2'	1:A:1133:G:H5'	2.13	0.48
19:T:5:SER:C	19:T:7:LYS:H	2.16	0.48
1:A:614:C:O2'	1:A:615:G:H5'	2.13	0.48
1:A:687:A:C2	1:A:704:A:C5	3.02	0.48
10:K:57:SER:O	10:K:90:PRO:HG3	2.13	0.48
11:L:35:ARG:NE	11:L:36:VAL:H	2.12	0.48
16:Q:17:GLU:C	16:Q:19:SER:H	2.16	0.48
14:O:88:ARG:HA	14:O:88:ARG:NE	2.29	0.48
4:E:28:ARG:NH2	4:E:30:PHE:HB3	2.28	0.48
1:A:224:U:H2'	1:A:225:C:C6	2.49	0.48
1:A:658:C:H2'	1:A:659:U:H6	1.78	0.48
11:L:6:LEU:HD22	11:L:11:ARG:HG2	1.95	0.48
3:D:88:ASN:O	3:D:92:LEU:HD23	2.12	0.48
1:A:109:A:H4'	1:A:110:C:OP2	2.14	0.48
1:A:542:G:O2'	1:A:543:U:H5'	2.14	0.48
18:S:35:ARG:NH2	18:S:52:ASN:HA	2.29	0.48
20:B:80:LYS:HB2	20:B:90:PHE:CE1	2.49	0.48
1:A:532:A:H8	2:C:192:TYR:CD2	2.32	0.48
9:J:7:ARG:HG2	9:J:75:ASP:OD2	2.14	0.48
9:J:7:ARG:O	9:J:100:ILE:HA	2.13	0.48
2:C:19:SER:HB3	2:C:21:TRP:NE1	2.26	0.48
11:L:20:VAL:O	11:L:20:VAL:HG23	2.14	0.48
1:A:992:U:H2'	1:A:1043:G:N7	2.28	0.48
1:A:659:U:H2'	1:A:660:C:C6	2.48	0.48
1:A:1430:A:H2'	1:A:1431:A:O4'	2.13	0.48
1:A:1192:C:H2'	1:A:1193:G:O4'	2.14	0.48
1:A:1329:A:OP1	12:M:28:ARG:HB2	2.13	0.48
12:M:44:ILE:O	12:M:47:LEU:HB2	2.14	0.48
1:A:1337:G:H5''	1:A:1338:G:OP1	2.13	0.48
20:B:75:ALA:CB	20:B:209:VAL:HG11	2.44	0.48
20:B:18:GLN:O	20:B:37:VAL:HG23	2.12	0.48
1:A:337:G:H2'	1:A:338:A:H8	1.76	0.48
20:B:63:LYS:HE3	20:B:224:ARG:NH2	2.29	0.48
20:B:57:ASN:HA	20:B:60:ALA:HB3	1.96	0.48
11:L:20:VAL:HB	11:L:94:TYR:CE1	2.49	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:842:U:H3'	1:A:842:U:OP1	2.13	0.48
2:C:184:ASN:ND2	2:C:185:THR:H	2.12	0.48
1:A:1137:C:O2'	1:A:1138:G:H5'	2.14	0.48
18:S:30:LEU:HG	18:S:47:THR:O	2.14	0.48
16:Q:78:VAL:O	16:Q:79:GLU:HB2	2.14	0.48
6:G:147:ASN:CA	10:K:55:ARG:HH21	2.27	0.48
20:B:216:VAL:HG23	20:B:217:ALA:H	1.79	0.48
12:M:42:VAL:HB	12:M:47:LEU:HD21	1.95	0.48
1:A:815:A:H4'	1:A:817:C:C4	2.49	0.48
1:A:1347:G:C8	8:I:108:ARG:HB3	2.49	0.48
1:A:437:U:H2'	1:A:438:U:O4'	2.13	0.48
3:D:115:GLN:HE21	3:D:153:ARG:HH22	1.61	0.48
1:A:373:A:H1'	1:A:481:G:N3	2.29	0.48
4:E:14:LEU:HD23	4:E:36:THR:HG22	1.96	0.48
3:D:21:LYS:O	3:D:23:GLY:N	2.45	0.48
1:A:598:U:H4'	7:H:85:TYR:CG	2.49	0.48
1:A:224:U:H2'	1:A:225:C:H6	1.78	0.48
6:G:29:LEU:O	6:G:29:LEU:HD23	2.14	0.48
19:T:80:ALA:HA	19:T:83:ASN:ND2	2.29	0.48
18:S:24:SER:OG	18:S:27:LYS:HE3	2.14	0.48
1:A:669:G:O2'	1:A:670:G:H5'	2.14	0.48
1:A:1494:G:O2'	1:A:1495:U:H5'	2.14	0.48
4:E:103:GLY:O	4:E:121:ASN:HA	2.14	0.48
2:C:70:ALA:HA	2:C:105:VAL:CG1	2.44	0.48
6:G:46:LEU:HD11	6:G:61:PHE:HB2	1.95	0.48
17:R:23:LYS:C	17:R:23:LYS:HD2	2.35	0.48
1:A:1487:G:O2'	1:A:1488:G:H5'	2.14	0.48
1:A:555:U:H2'	1:A:556:C:H6	1.77	0.48
20:B:160:LEU:HD13	20:B:175:ALA:HB2	1.96	0.48
1:A:986:U:H2'	1:A:987:G:O4'	2.13	0.48
1:A:1293:C:O2'	1:A:1294:G:H5'	2.14	0.48
11:L:13:ARG:HB2	11:L:14:LYS:H	1.43	0.48
3:D:160:LEU:N	3:D:160:LEU:HD13	2.24	0.47
4:E:80:LEU:HD11	4:E:95:MET:HG2	1.94	0.47
10:K:28:ASN:HB2	10:K:56:LYS:NZ	2.29	0.47
6:G:149:ALA:H	10:K:55:ARG:HH22	1.62	0.47
19:T:67:HIS:ND1	19:T:68:LYS:N	2.57	0.47
5:F:81:ASN:HB3	5:F:84:VAL:CG1	2.42	0.47
12:M:6:ILE:O	12:M:7:ASN:C	2.51	0.47
5:F:18:VAL:N	5:F:19:PRO:HD2	2.29	0.47
1:A:240:G:H5'	1:A:240:G:C8	2.47	0.47
1:A:1272:G:H2'	1:A:1273:C:C6	2.48	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:967:C:H2'	1:A:968:A:C2	2.48	0.47
3:D:36:ALA:C	3:D:38:GLY:H	2.16	0.47
1:A:1408:A:H4'	1:A:1408:A:OP1	2.14	0.47
1:A:1526:G:H2'	1:A:1527:U:C6	2.50	0.47
5:F:92:THR:HG22	5:F:94:HIS:N	2.07	0.47
13:N:51:PRO:O	13:N:52:ARG:HB3	2.14	0.47
19:T:68:LYS:HA	19:T:68:LYS:HZ3	1.77	0.47
11:L:23:LEU:O	11:L:25:ALA:N	2.47	0.47
9:J:24:GLU:O	9:J:28:THR:HG23	2.15	0.47
20:B:93:HIS:HD2	20:B:94:ARG:NH2	2.12	0.47
7:H:91:LEU:HD12	7:H:116:ARG:HB2	1.96	0.47
1:A:113:G:H2'	1:A:114:U:C6	2.49	0.47
1:A:712:A:O2'	1:A:713:G:H5'	2.13	0.47
4:E:29:ILE:O	4:E:29:ILE:HG22	2.14	0.47
1:A:777:A:H2'	1:A:778:G:H8	1.79	0.47
1:A:118:U:O4	1:A:288:A:H2'	2.14	0.47
1:A:403:C:O2'	1:A:404:G:H5'	2.14	0.47
8:I:46:VAL:HG23	8:I:47:VAL:N	2.30	0.47
20:B:42:LEU:HA	20:B:45:THR:OG1	2.14	0.47
8:I:87:MET:CE	8:I:91:GLU:HG2	2.44	0.47
5:F:61:LEU:HD13	5:F:62:MET:H	1.80	0.47
18:S:43:MET:CB	18:S:61:VAL:HG21	2.44	0.47
16:Q:75:VAL:HG23	16:Q:76:ARG:N	2.30	0.47
1:A:415:A:N1	1:A:428:G:O6	2.47	0.47
12:M:5:GLY:O	12:M:7:ASN:N	2.47	0.47
20:B:23:ASN:HD22	20:B:24:PRO:CD	2.27	0.47
11:L:30:ARG:HB3	11:L:57:THR:CG2	2.44	0.47
1:A:575:G:H4'	1:A:576:C:O5'	2.14	0.47
1:A:820:U:H4'	1:A:821:G:OP2	2.14	0.47
1:A:1240:U:H3	6:G:29:LEU:HD23	1.79	0.47
5:F:12:PRO:HG3	5:F:54:LEU:HG	1.95	0.47
2:C:182:ASP:HB2	2:C:203:LYS:HE2	1.97	0.47
1:A:833:G:O2'	1:A:834:U:H5'	2.13	0.47
13:N:2:LYS:HB3	13:N:5:MET:HB2	1.95	0.47
13:N:70:HIS:O	13:N:71:GLY:C	2.53	0.47
4:E:28:ARG:HH21	4:E:30:PHE:CA	2.25	0.47
1:A:1485:U:O2'	1:A:1486:G:H5'	2.15	0.47
20:B:63:LYS:HG2	20:B:224:ARG:CZ	2.45	0.47
1:A:632:U:H5''	1:A:633:G:C8	2.49	0.47
2:C:110:LEU:HD11	2:C:143:LEU:O	2.14	0.47
12:M:56:ARG:O	12:M:59:VAL:HG12	2.14	0.47
1:A:488:C:O2'	1:A:489:C:H5'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:57:VAL:HG13	9:J:58:ASN:N	2.28	0.47
13:N:73:LEU:HD12	13:N:83:VAL:HG21	1.96	0.47
8:I:56:MET:CG	8:I:57:VAL:N	2.77	0.47
18:S:48:ILE:HG21	18:S:70:LEU:HD21	1.95	0.47
3:D:152:SER:O	3:D:155:LYS:HG2	2.14	0.47
2:C:54:ILE:O	2:C:54:ILE:HG23	2.15	0.47
1:A:620:C:C1'	3:D:131:ILE:HD13	2.44	0.47
1:A:821:G:O2'	1:A:822:U:H5'	2.14	0.47
9:J:15:HIS:O	9:J:18:ILE:HG22	2.14	0.47
1:A:708:C:O2'	1:A:709:U:H5'	2.14	0.47
1:A:1491:G:N3	1:A:1491:G:H2'	2.29	0.47
1:A:76:G:H2'	1:A:77:A:C8	2.49	0.47
8:I:41:GLU:C	8:I:43:ALA:H	2.18	0.47
20:B:48:MET:HE1	20:B:198:VAL:HB	1.95	0.47
4:E:100:GLU:HA	4:E:121:ASN:ND2	2.29	0.47
6:G:148:LYS:HA	6:G:151:ALA:HB3	1.96	0.47
9:J:22:THR:OG1	9:J:72:ARG:HG3	2.14	0.47
1:A:1091:U:H2'	1:A:1093:A:OP2	2.15	0.47
2:C:156:LEU:HD11	2:C:165:GLU:HB2	1.97	0.47
9:J:92:LEU:HD22	9:J:92:LEU:N	2.30	0.47
8:I:36:GLN:HE21	8:I:36:GLN:CA	2.27	0.47
1:A:857:C:H2'	1:A:858:G:O4'	2.15	0.47
4:E:45:VAL:O	4:E:71:ILE:HG22	2.15	0.47
1:A:317:U:H2'	1:A:318:G:H8	1.79	0.47
10:K:124:LYS:O	21:U:33:ARG:NE	2.47	0.47
21:U:43:GLU:CG	21:U:44:ARG:HH21	2.27	0.47
8:I:51:LEU:C	8:I:53:LEU:H	2.18	0.47
18:S:65:MET:HG2	18:S:65:MET:O	2.15	0.47
1:A:1004:A:C8	1:A:1025:U:H1'	2.48	0.47
20:B:216:VAL:HG23	20:B:217:ALA:N	2.29	0.47
3:D:146:GLU:HA	3:D:149:LYS:CG	2.42	0.47
1:A:237:G:H5''	16:Q:26:ARG:NH2	2.30	0.47
13:N:14:ALA:HB1	13:N:18:LYS:CE	2.45	0.47
1:A:503:C:O2'	1:A:504:C:H5'	2.15	0.47
1:A:251:G:N3	1:A:266:G:O6	2.48	0.47
1:A:191:G:H2'	1:A:192:A:C8	2.50	0.47
3:D:35:GLN:O	3:D:37:PRO:HD3	2.15	0.47
1:A:182:A:HO2'	1:A:183:C:H3'	1.77	0.47
1:A:426:U:H2'	1:A:427:U:C6	2.49	0.47
1:A:169:C:O2'	1:A:170:U:H5'	2.14	0.47
3:D:165:GLU:CG	3:D:166:LYS:N	2.77	0.47
1:A:633:G:H2'	1:A:634:C:C6	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:634:C:H2'	1:A:635:A:H8	1.80	0.47
1:A:358:U:H2'	1:A:359:G:H8	1.77	0.47
1:A:394:G:H2'	1:A:395:C:C6	2.49	0.47
9:J:12:ALA:HB3	9:J:18:ILE:HB	1.97	0.47
1:A:957:U:H4'	18:S:78:THR:O	2.15	0.47
1:A:656:G:O2'	1:A:657:U:H5'	2.14	0.47
21:U:35:GLU:HB2	21:U:37:TYR:CZ	2.50	0.47
20:B:186:VAL:HB	20:B:190:SER:HB2	1.97	0.47
8:I:11:ARG:HA	8:I:105:ARG:NH1	2.30	0.47
3:D:160:LEU:H	3:D:160:LEU:CD1	2.22	0.47
2:C:91:ALA:HB1	2:C:96:VAL:O	2.15	0.47
1:A:946:A:H2'	1:A:947:G:H8	1.74	0.47
20:B:75:ALA:O	20:B:79:VAL:HG23	2.15	0.47
10:K:70:ALA:O	10:K:74:LYS:HB2	2.15	0.47
1:A:1219:A:H2'	1:A:1220:G:C8	2.50	0.47
1:A:313:A:H2'	1:A:314:C:H6	1.78	0.47
9:J:59:LYS:O	9:J:62:ARG:HG2	2.15	0.47
17:R:57:ALA:HA	17:R:60:ARG:HH11	1.79	0.47
1:A:66:A:H5'	1:A:173:U:O4	2.14	0.47
12:M:91:ARG:HG3	12:M:92:ARG:N	2.30	0.47
15:P:20:VAL:HG23	15:P:35:ARG:HA	1.96	0.47
20:B:31:PHE:HB2	20:B:41:ASN:CA	2.43	0.47
20:B:88:GLN:HE21	20:B:88:GLN:HB2	1.56	0.47
8:I:14:SER:HG	8:I:69:GLY:HA3	1.79	0.47
20:B:75:ALA:HB2	20:B:209:VAL:HG11	1.97	0.47
1:A:921:U:H2'	1:A:922:G:O4'	2.15	0.47
1:A:979:C:H1'	1:A:1317:C:H41	1.80	0.47
12:M:2:ARG:HG3	12:M:6:ILE:HA	1.95	0.47
1:A:1072:G:H2'	1:A:1073:U:C6	2.49	0.47
1:A:113:G:H21	1:A:353:A:H8	1.62	0.47
1:A:196:A:OP1	19:T:63:LYS:HE2	2.13	0.47
8:I:20:ILE:HG13	8:I:62:LEU:HD11	1.97	0.47
8:I:47:VAL:HG23	8:I:48:ARG:N	2.30	0.47
18:S:10:ILE:HB	18:S:14:LEU:HD21	1.97	0.47
1:A:1023:U:H2'	1:A:1024:G:H8	1.79	0.47
12:M:14:ALA:HB1	12:M:33:LEU:HD21	1.98	0.47
5:F:98:GLU:CG	5:F:99:ALA:N	2.77	0.47
15:P:40:ASN:ND2	15:P:43:ALA:N	2.62	0.47
1:A:68:G:H5'	1:A:171:A:O2'	2.15	0.47
1:A:105:G:H2'	1:A:106:C:C6	2.49	0.47
1:A:394:G:H2'	1:A:395:C:H6	1.80	0.47
1:A:1281:C:H3'	1:A:1282:C:H6	1.80	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1499:A:O2'	1:A:1500:A:H5'	2.15	0.47
1:A:489:C:H2'	1:A:490:C:H6	1.80	0.47
1:A:45:G:O2'	1:A:46:G:H5'	2.15	0.47
8:I:5:TYR:HD2	8:I:88:GLU:CB	2.28	0.46
7:H:101:ALA:O	7:H:103:VAL:HG23	2.16	0.46
13:N:50:LEU:H	13:N:51:PRO:CD	2.24	0.46
18:S:68:HIS:HB3	18:S:72:GLU:CD	2.35	0.46
16:Q:14:ASP:HA	16:Q:20:ILE:HD11	1.96	0.46
17:R:20:ILE:HA	17:R:53:GLN:NE2	2.30	0.46
9:J:77:VAL:HG12	9:J:78:GLU:H	1.80	0.46
2:C:59:PRO:HG2	2:C:62:SER:OG	2.15	0.46
21:U:11:PHE:O	21:U:12:ASP:C	2.53	0.46
1:A:1499:A:H1'	1:A:1520:C:H5'	1.96	0.46
1:A:708:C:H2'	1:A:709:U:H6	1.80	0.46
14:O:18:ASP:O	14:O:19:ALA:HB2	2.15	0.46
1:A:308:C:H2'	1:A:309:A:C8	2.49	0.46
3:D:29:THR:HG22	3:D:30:LYS:HD3	1.96	0.46
4:E:101:GLY:H	4:E:121:ASN:ND2	2.13	0.46
13:N:30:ILE:HG21	13:N:44:VAL:CG2	2.42	0.46
1:A:747:A:H2'	1:A:748:G:C4'	2.45	0.46
1:A:1028:C:O2	1:A:1028:C:H2'	2.14	0.46
10:K:108:ASN:HD21	21:U:6:ARG:HG3	1.80	0.46
20:B:93:HIS:HB2	20:B:145:ASN:O	2.15	0.46
3:D:170:LEU:O	3:D:170:LEU:HD12	2.15	0.46
1:A:398:U:H2'	1:A:399:G:H8	1.79	0.46
2:C:42:LEU:HD12	2:C:67:ILE:HD11	1.96	0.46
1:A:1047:G:H21	1:A:1215:G:C4'	2.28	0.46
9:J:17:LEU:HD12	9:J:96:VAL:HG13	1.98	0.46
1:A:691:G:H1'	1:A:696:A:N6	2.30	0.46
1:A:308:C:H2'	1:A:309:A:H8	1.80	0.46
1:A:260:G:H2'	1:A:261:U:C6	2.49	0.46
7:H:17:GLN:OE1	7:H:69:ALA:HB1	2.14	0.46
1:A:1525:G:O2'	1:A:1526:G:H5'	2.16	0.46
1:A:80:A:H2'	1:A:81:A:C1'	2.45	0.46
7:H:45:ILE:C	7:H:63:LYS:HE3	2.36	0.46
1:A:978:A:O2'	1:A:1322:C:H5	1.99	0.46
12:M:64:VAL:O	12:M:65:GLU:C	2.54	0.46
15:P:1:MET:HG3	15:P:3:THR:HG23	1.96	0.46
1:A:1073:U:H2'	1:A:1074:G:H8	1.80	0.46
1:A:1366:C:H2'	1:A:1367:C:C6	2.49	0.46
1:A:735:C:O2'	1:A:736:C:H5'	2.15	0.46
1:A:265:G:H5'	16:Q:65:PRO:O	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:38:VAL:O	2:C:42:LEU:HD23	2.16	0.46
2:C:46:LEU:HD21	2:C:86:LEU:HD22	1.97	0.46
1:A:1521:C:H2'	1:A:1522:U:H6	1.80	0.46
6:G:71:THR:C	6:G:90:VAL:HG22	2.35	0.46
14:O:19:ALA:C	14:O:21:ASP:H	2.19	0.46
14:O:61:SER:O	14:O:65:LYS:HG3	2.15	0.46
1:A:344:A:H4'	1:A:345:C:OP2	2.14	0.46
1:A:643:C:H2'	1:A:644:U:H6	1.79	0.46
15:P:11:ALA:N	15:P:14:ARG:O	2.48	0.46
1:A:95:C:O2	1:A:95:C:H2'	2.15	0.46
21:U:24:LYS:HD2	21:U:25:ALA:N	2.16	0.46
15:P:28:ARG:NH1	15:P:29:ASN:HB2	2.31	0.46
5:F:6:ILE:HG23	5:F:62:MET:CB	2.38	0.46
1:A:1034:G:C2'	1:A:1035:A:H5'	2.45	0.46
19:T:66:ILE:HG23	19:T:70:LYS:HB3	1.97	0.46
8:I:71:ILE:CD1	8:I:71:ILE:H	2.27	0.46
1:A:1347:G:H22	1:A:1373:G:H2'	1.78	0.46
1:A:1014:A:H4'	18:S:13:HIS:CG	2.50	0.46
16:Q:24:ILE:HD13	16:Q:43:LEU:HD13	1.98	0.46
1:A:84:U:H3'	1:A:87:C:C2	2.51	0.46
20:B:46:VAL:N	20:B:47:PRO:CD	2.78	0.46
9:J:52:LEU:HB2	13:N:80:ARG:NE	2.30	0.46
1:A:1396:A:H2	4:E:23:THR:HG21	1.80	0.46
6:G:12:LEU:HD13	6:G:13:PRO:HD2	1.96	0.46
1:A:556:C:O2'	1:A:557:G:H5'	2.16	0.46
1:A:1437:A:H2'	1:A:1438:G:C8	2.49	0.46
19:T:57:VAL:HG23	19:T:58:ASP:N	2.30	0.46
11:L:17:LYS:O	11:L:17:LYS:HD2	2.16	0.46
8:I:22:PRO:HA	8:I:60:LEU:CB	2.46	0.46
15:P:28:ARG:CZ	15:P:29:ASN:HD22	2.29	0.46
10:K:22:ILE:HD12	10:K:85:VAL:HG22	1.98	0.46
15:P:71:VAL:HG13	15:P:72:ALA:N	2.31	0.46
18:S:66:VAL:O	18:S:68:HIS:N	2.49	0.46
1:A:1011:C:H2'	1:A:1012:A:H8	1.79	0.46
1:A:1256:A:O4'	1:A:1278:G:N2	2.49	0.46
1:A:238:A:H3'	1:A:239:U:H5''	1.98	0.46
6:G:112:ASP:HB3	6:G:117:LEU:HD21	1.97	0.46
5:F:18:VAL:O	5:F:22:ILE:HG13	2.15	0.46
1:A:1141:C:H2'	1:A:1142:G:H8	1.79	0.46
1:A:1144:G:N2	1:A:1146:A:H62	2.14	0.46
1:A:587:G:H4'	7:H:3:GLN:HA	1.97	0.46
1:A:332:G:O2'	1:A:333:U:H5'	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:333:U:H2'	1:A:334:C:H6	1.80	0.46
3:D:16:THR:HG22	3:D:17:ASP:N	2.31	0.46
8:I:46:VAL:O	8:I:49:GLN:HB2	2.15	0.46
1:A:96:U:H2'	1:A:97:G:C8	2.51	0.46
5:F:62:MET:HG3	5:F:64:VAL:CG2	2.45	0.46
12:M:113:LYS:N	12:M:114:PRO:CD	2.79	0.46
20:B:18:GLN:HG2	20:B:189:ASN:HB3	1.98	0.46
5:F:85:ILE:HG22	5:F:86:ARG:H	1.81	0.46
5:F:47:LEU:HD21	5:F:57:ALA:CB	2.45	0.46
1:A:1073:U:H2'	1:A:1074:G:C8	2.51	0.46
16:Q:28:VAL:HG12	16:Q:37:ILE:O	2.16	0.46
1:A:178:C:O2'	1:A:179:A:H5'	2.15	0.46
11:L:34:THR:N	11:L:53:ARG:O	2.47	0.46
1:A:69:G:H2'	1:A:70:U:C6	2.50	0.46
13:N:68:ARG:HH12	13:N:71:GLY:H	1.64	0.46
21:U:24:LYS:O	21:U:28:LEU:HG	2.16	0.46
13:N:50:LEU:CD2	13:N:51:PRO:HD3	2.46	0.46
18:S:62:THR:HB	18:S:64:GLU:OE1	2.16	0.46
18:S:38:THR:HA	18:S:68:HIS:O	2.16	0.46
1:A:1390:U:H2'	1:A:1391:U:H6	1.81	0.46
1:A:279:A:H5'	1:A:281:G:C5'	2.46	0.46
1:A:1057:G:H4'	2:C:196:GLY:H	1.81	0.46
1:A:370:C:H2'	1:A:371:A:H8	1.80	0.46
16:Q:30:HIS:ND1	16:Q:32:ILE:HG22	2.30	0.46
1:A:398:U:H2'	1:A:399:G:C8	2.51	0.46
1:A:400:C:O2'	1:A:401:C:H5'	2.16	0.46
11:L:82:ARG:HB2	11:L:97:VAL:HG22	1.97	0.46
1:A:1521:C:H2'	1:A:1522:U:C6	2.50	0.46
4:E:39:GLY:HA2	4:E:44:ARG:O	2.15	0.46
5:F:12:PRO:C	5:F:14:GLN:H	2.19	0.46
16:Q:24:ILE:N	16:Q:24:ILE:HD12	2.31	0.46
7:H:14:ARG:NE	7:H:75:GLN:HE21	2.13	0.46
17:R:35:SER:HA	17:R:71:ASP:OD2	2.15	0.46
1:A:572:A:N3	1:A:917:G:H1'	2.31	0.46
13:N:63:CYS:SG	13:N:82:LYS:HG3	2.56	0.46
21:U:42:THR:O	21:U:46:ARG:N	2.48	0.46
12:M:11:HIS:H	12:M:45:SER:CB	2.29	0.46
2:C:63:ILE:CD1	2:C:94:ALA:HB3	2.40	0.46
7:H:76:ARG:HD2	7:H:77:VAL:H	1.81	0.46
17:R:21:ASP:CG	17:R:23:LYS:HG3	2.36	0.46
1:A:1389:C:H2'	1:A:1390:U:C6	2.51	0.46
13:N:17:ASP:O	13:N:21:ALA:HB3	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:105:G:H2'	1:A:106:C:H6	1.81	0.46
1:A:545:C:H5''	3:D:68:GLU:HG2	1.97	0.46
1:A:1410:A:H2'	1:A:1411:C:C6	2.51	0.46
3:D:101:VAL:HG13	3:D:106:PHE:HB2	1.98	0.46
6:G:77:ARG:O	6:G:79:VAL:HG23	2.16	0.46
19:T:34:VAL:CG1	19:T:78:LEU:HD22	2.46	0.46
1:A:1399:C:H1'	23:A:2340:HOH:O	2.14	0.46
13:N:61:ASN:HB3	13:N:72:PHE:CE2	2.51	0.46
1:A:1527:U:O2'	1:A:1528:U:H5'	2.16	0.46
8:I:46:VAL:HA	8:I:49:GLN:OE1	2.16	0.46
20:B:40:ILE:CG2	20:B:200:PRO:HB2	2.46	0.46
20:B:46:VAL:HA	20:B:49:PHE:CG	2.51	0.46
5:F:42:TRP:CZ2	5:F:61:LEU:HD23	2.51	0.46
1:A:1086:U:O4	1:A:1099:G:N1	2.47	0.46
18:S:18:VAL:HG13	18:S:19:GLU:N	2.30	0.46
20:B:88:GLN:CG	20:B:220:VAL:HG11	2.45	0.46
4:E:61:LYS:NZ	4:E:61:LYS:HB3	2.31	0.46
1:A:1089:G:H2'	1:A:1090:U:O4'	2.16	0.46
6:G:14:ASP:O	6:G:18:GLY:HA2	2.15	0.46
1:A:668:G:O2'	1:A:669:G:H5'	2.15	0.46
14:O:74:ASP:OD1	14:O:76:ALA:HB3	2.15	0.46
1:A:1203:C:H4'	13:N:66:THR:HG22	1.98	0.46
1:A:723:U:H5'	21:U:48:LYS:HG2	1.97	0.46
1:A:1097:C:H2'	1:A:1098:C:C6	2.51	0.45
12:M:78:ARG:HG2	12:M:82:LEU:HD12	1.98	0.45
12:M:90:HIS:HA	12:M:108:ARG:NH2	2.31	0.45
6:G:146:ALA:C	10:K:55:ARG:HH21	2.20	0.45
1:A:1190:G:OP1	2:C:3:LYS:HA	2.16	0.45
1:A:17:U:O2'	1:A:18:C:H5'	2.16	0.45
1:A:476:U:H2'	1:A:477:C:C6	2.52	0.45
20:B:125:PHE:N	20:B:125:PHE:CD2	2.84	0.45
1:A:216:U:H2'	1:A:217:C:H6	1.81	0.45
4:E:131:ASN:O	4:E:135:VAL:HG23	2.15	0.45
1:A:1220:G:H2'	1:A:1221:G:H8	1.81	0.45
20:B:142:LYS:HA	20:B:145:ASN:OD1	2.16	0.45
1:A:1464:U:H2'	1:A:1465:A:C8	2.51	0.45
1:A:1316:G:H1	18:S:4:LEU:HD21	1.81	0.45
1:A:843:U:H3'	1:A:844:G:C5'	2.46	0.45
1:A:537:G:H2'	1:A:538:G:H8	1.81	0.45
20:B:185:ILE:HG23	20:B:199:ILE:O	2.16	0.45
3:D:64:TYR:CD2	3:D:93:LEU:HB3	2.51	0.45
15:P:20:VAL:HG23	15:P:34:GLU:O	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:543:U:P	3:D:13:ARG:HH21	2.39	0.45
1:A:777:A:H2'	1:A:778:G:C8	2.51	0.45
8:I:42:THR:O	8:I:45:MET:HG2	2.16	0.45
1:A:629:A:H2'	1:A:630:A:O4'	2.16	0.45
1:A:640:A:O2'	1:A:641:U:H5'	2.16	0.45
1:A:464:U:H2'	1:A:466:A:OP2	2.15	0.45
14:O:47:LYS:O	14:O:53:ARG:NH2	2.49	0.45
1:A:87:C:C2'	1:A:88:U:H4'	2.41	0.45
8:I:26:LYS:HA	8:I:26:LYS:NZ	2.31	0.45
6:G:148:LYS:HA	6:G:151:ALA:CB	2.46	0.45
1:A:252:U:C2	1:A:253:A:N7	2.84	0.45
20:B:22:TRP:HZ3	20:B:27:LYS:HB2	1.81	0.45
1:A:1017:U:H2'	1:A:1018:G:C8	2.51	0.45
11:L:81:ILE:HG23	11:L:94:TYR:HB3	1.97	0.45
1:A:1015:G:O2'	1:A:1016:A:H5'	2.16	0.45
3:D:89:LEU:O	3:D:93:LEU:HD12	2.17	0.45
1:A:1188:A:H2'	1:A:1189:U:O4'	2.16	0.45
19:T:79:THR:O	19:T:82:ILE:HG13	2.17	0.45
20:B:186:VAL:CG2	20:B:198:VAL:HG13	2.47	0.45
3:D:25:ARG:C	3:D:25:ARG:HD3	2.35	0.45
3:D:30:LYS:HD3	3:D:30:LYS:N	2.31	0.45
3:D:57:LYS:HB2	3:D:199:ILE:HB	1.98	0.45
3:D:71:PHE:O	3:D:74:TYR:HB2	2.16	0.45
10:K:28:ASN:HD21	10:K:47:GLY:H	1.63	0.45
1:A:1206:G:C4'	2:C:192:TYR:HA	2.43	0.45
1:A:1343:G:H4'	8:I:123:ARG:O	2.16	0.45
1:A:1289:A:H5''	1:A:1290:G:C8	2.51	0.45
1:A:195:A:H1'	1:A:222:C:O2'	2.16	0.45
1:A:1225:A:N3	1:A:1225:A:H2'	2.31	0.45
1:A:1366:C:H2'	1:A:1367:C:H6	1.81	0.45
13:N:12:ARG:HH21	13:N:58:ARG:NH1	2.12	0.45
2:C:119:ILE:CG2	2:C:197:VAL:HG11	2.45	0.45
1:A:585:G:O2'	1:A:586:C:H5'	2.17	0.45
1:A:986:U:H2'	1:A:987:G:C8	2.51	0.45
1:A:1294:G:H2'	1:A:1295:U:C6	2.52	0.45
20:B:113:LEU:HD12	20:B:147:LEU:HB2	1.98	0.45
1:A:1350:A:H2'	1:A:1351:U:C6	2.51	0.45
1:A:24:U:O2'	1:A:25:C:H5'	2.17	0.45
11:L:66:ILE:HG21	11:L:71:HIS:HB3	1.98	0.45
1:A:1402:C:H2'	1:A:1403:C:O4'	2.15	0.45
13:N:60:ARG:O	13:N:62:ARG:N	2.50	0.45
8:I:27:ILE:HG21	8:I:34:LEU:HD22	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1101:A:H4'	1:A:1102:A:O5'	2.17	0.45
1:A:1025:U:H4'	1:A:1026:G:O5'	2.17	0.45
12:M:32:ILE:HG23	12:M:33:LEU:N	2.31	0.45
14:O:12:VAL:O	14:O:16:GLY:HA3	2.17	0.45
13:N:20:PHE:HA	13:N:24:ALA:H	1.81	0.45
1:A:412:A:C1'	1:A:413:G:H5''	2.41	0.45
1:A:1206:G:C4'	2:C:193:GLY:H	2.29	0.45
17:R:20:ILE:HA	17:R:53:GLN:HE21	1.81	0.45
5:F:43:GLY:HA2	5:F:58:HIS:CD2	2.51	0.45
1:A:212:G:H2'	1:A:213:G:H8	1.81	0.45
1:A:263:A:H2'	1:A:264:C:C6	2.51	0.45
1:A:1271:A:O2'	1:A:1272:G:H5'	2.16	0.45
7:H:65:PHE:CD2	7:H:66:GLN:HG3	2.51	0.45
1:A:1458:G:H2'	1:A:1459:G:H8	1.82	0.45
3:D:66:VAL:HG12	3:D:67:LEU:N	2.32	0.45
14:O:18:ASP:CG	14:O:19:ALA:H	2.19	0.45
1:A:109:A:H2'	1:A:326:G:N2	2.32	0.45
2:C:106:ARG:C	2:C:107:LYS:HE3	2.37	0.45
1:A:626:G:H2'	1:A:627:G:C8	2.52	0.45
1:A:43:C:H2'	1:A:44:A:O4'	2.15	0.45
3:D:145:ARG:HE	3:D:147:LYS:HG2	1.82	0.45
21:U:41:THR:O	21:U:45:LYS:HD2	2.15	0.45
9:J:76:ILE:O	9:J:76:ILE:HD12	2.16	0.45
13:N:26:LEU:HA	13:N:29:ILE:HD12	1.98	0.45
1:A:532:A:H8	2:C:192:TYR:HD2	1.65	0.45
3:D:149:LYS:HB2	3:D:177:MET:HG3	1.98	0.45
20:B:37:VAL:O	20:B:37:VAL:HG13	2.16	0.45
1:A:865:A:C2	1:A:918:A:H4'	2.51	0.45
1:A:837:U:H2'	1:A:838:G:C8	2.46	0.45
8:I:115:VAL:CG2	9:J:62:ARG:HG3	2.45	0.45
7:H:81:GLY:O	7:H:82:LEU:HB2	2.15	0.45
1:A:323:U:H2'	1:A:324:G:O4'	2.17	0.45
8:I:24:ASN:CG	8:I:25:GLY:H	2.20	0.45
7:H:94:VAL:CG2	7:H:101:ALA:HB2	2.47	0.45
8:I:94:ARG:HH11	8:I:94:ARG:CB	2.16	0.45
4:E:95:MET:HA	4:E:124:ALA:CB	2.46	0.45
5:F:25:TYR:O	5:F:29:ILE:HG13	2.16	0.45
13:N:20:PHE:O	13:N:24:ALA:HB3	2.16	0.45
1:A:473:U:H2'	1:A:474:G:C8	2.42	0.45
1:A:1226:C:H5''	12:M:101:THR:HB	1.98	0.45
2:C:71:ARG:O	2:C:75:VAL:HG23	2.17	0.45
4:E:14:LEU:HD13	4:E:14:LEU:O	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:537:G:H2'	1:A:538:G:C8	2.52	0.45
20:B:65:LYS:HB3	20:B:157:PRO:HA	1.97	0.45
18:S:20:LYS:HB3	18:S:20:LYS:HE3	1.80	0.45
1:A:114:U:O2'	1:A:115:G:H5'	2.17	0.45
1:A:516:U:O2'	1:A:517:G:H5'	2.17	0.45
1:A:1243:C:H2'	1:A:1244:G:H8	1.82	0.45
1:A:1181:G:O2'	1:A:1182:G:C8	2.70	0.45
7:H:40:LYS:CD	7:H:47:ASP:HA	2.47	0.45
13:N:52:ARG:C	13:N:54:SER:H	2.20	0.45
16:Q:16:MET:HB3	16:Q:19:SER:HB2	1.98	0.45
20:B:18:GLN:HG2	20:B:189:ASN:CG	2.37	0.45
1:A:635:A:H2'	1:A:636:U:C6	2.51	0.45
3:D:142:VAL:N	3:D:179:GLY:O	2.50	0.45
1:A:544:G:OP1	3:D:55:ARG:NH2	2.50	0.45
2:C:113:LYS:HD3	2:C:184:ASN:OD1	2.17	0.45
15:P:18:GLN:HE21	15:P:35:ARG:HD3	1.82	0.45
1:A:572:A:H5''	1:A:917:G:H4'	1.97	0.45
1:A:628:G:H2'	1:A:629:A:C8	2.51	0.45
3:D:44:LYS:NZ	3:D:44:LYS:HB3	2.31	0.45
1:A:202:G:H2'	1:A:203:G:C8	2.51	0.45
2:C:148:ILE:HG12	2:C:149:LYS:N	2.31	0.45
1:A:1320:C:O2'	1:A:1321:U:H5'	2.17	0.45
12:M:90:HIS:HA	12:M:108:ARG:HH22	1.81	0.45
12:M:79:LEU:HB2	12:M:84:CYS:SG	2.57	0.45
16:Q:60:ILE:HD13	16:Q:60:ILE:N	2.30	0.45
12:M:44:ILE:HA	12:M:47:LEU:HB2	1.98	0.45
14:O:39:LEU:HD23	14:O:43:PHE:CE1	2.47	0.45
14:O:77:ARG:O	14:O:81:LEU:HB2	2.17	0.45
13:N:20:PHE:CB	13:N:24:ALA:HB2	2.47	0.45
1:A:237:G:O2'	1:A:238:A:H5'	2.17	0.45
4:E:23:THR:HA	4:E:28:ARG:HA	1.99	0.45
9:J:7:ARG:HG3	9:J:102:LEU:O	2.17	0.45
1:A:1307:U:H2'	1:A:1308:U:O4'	2.16	0.45
20:B:26:MET:SD	20:B:192:PRO:HD3	2.56	0.45
1:A:103:U:H1'	1:A:171:A:N1	2.31	0.45
8:I:18:VAL:HG21	8:I:82:ILE:HG13	1.98	0.45
1:A:1283:U:H2'	1:A:1284:C:H6	1.81	0.45
2:C:146:LYS:HE3	2:C:202:PHE:HE2	1.81	0.45
12:M:38:ILE:HG13	12:M:55:LEU:CD2	2.46	0.45
7:H:117:GLN:C	7:H:119:GLY:H	2.20	0.45
10:K:122:PRO:HB2	21:U:33:ARG:O	2.17	0.45
1:A:410:G:H1'	1:A:432:A:N6	2.32	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:201:GLU:OE1	4:E:104:ILE:HG22	2.17	0.45
12:M:89:ARG:CB	12:M:96:VAL:HG22	2.47	0.45
12:M:89:ARG:HD2	12:M:95:PRO:O	2.17	0.45
18:S:39:ILE:HG13	18:S:68:HIS:O	2.17	0.45
10:K:86:LYS:HG3	10:K:86:LYS:O	2.15	0.45
6:G:46:LEU:HG	6:G:57:GLU:CG	2.46	0.45
1:A:818:G:C3'	1:A:819:A:H5''	2.47	0.45
3:D:117:VAL:HG12	3:D:130:ASN:HA	1.99	0.45
11:L:43:LYS:HE3	11:L:44:PRO:CD	2.47	0.45
1:A:636:U:O2'	1:A:637:C:H5'	2.16	0.45
1:A:622:A:H2'	1:A:623:C:H5'	1.97	0.45
2:C:40:GLN:HG3	2:C:41:TYR:N	2.32	0.45
6:G:125:ASP:HB3	6:G:131:GLY:H	1.81	0.45
14:O:24:SER:HB3	14:O:27:VAL:CG2	2.46	0.45
11:L:106:VAL:HA	11:L:107:LYS:HZ3	1.82	0.45
1:A:238:A:C3'	1:A:239:U:H5''	2.46	0.45
1:A:740:U:O2'	1:A:741:G:H5'	2.17	0.45
5:F:81:ASN:O	5:F:84:VAL:HG12	2.17	0.45
5:F:81:ASN:O	5:F:83:ALA:N	2.50	0.45
1:A:1074:G:H4'	20:B:102:ASN:HB2	1.99	0.45
1:A:1295:U:H2'	1:A:1296:C:C6	2.52	0.45
1:A:788:U:O2'	1:A:789:U:H5'	2.17	0.45
1:A:847:G:H2'	1:A:848:C:C6	2.52	0.45
7:H:94:VAL:HG23	7:H:101:ALA:HB2	1.98	0.44
20:B:204:ASP:O	20:B:205:ALA:HB3	2.17	0.44
20:B:45:THR:HG22	20:B:49:PHE:CE1	2.52	0.44
18:S:14:LEU:HG	18:S:15:LEU:N	2.32	0.44
2:C:50:SER:HB2	2:C:70:ALA:HB3	1.99	0.44
1:A:451:A:N6	1:A:480:U:H2'	2.31	0.44
10:K:74:LYS:C	10:K:76:TYR:H	2.19	0.44
8:I:66:VAL:HG22	8:I:67:LYS:N	2.33	0.44
1:A:737:C:H2'	1:A:738:C:C6	2.52	0.44
1:A:1133:G:H2'	1:A:1134:G:C8	2.52	0.44
6:G:62:GLU:OE2	6:G:66:GLU:HG3	2.17	0.44
1:A:1352:C:H2'	1:A:1353:G:O4'	2.18	0.44
1:A:597:G:H2'	1:A:598:U:H5'	1.99	0.44
1:A:199:A:H2'	1:A:200:G:H8	1.81	0.44
19:T:83:ASN:HB2	19:T:84:LYS:HD2	1.98	0.44
1:A:489:C:O2'	1:A:490:C:H5'	2.16	0.44
1:A:277:C:O2'	1:A:278:G:H5'	2.18	0.44
2:C:100:ILE:HG23	2:C:100:ILE:O	2.17	0.44
8:I:49:GLN:HB3	8:I:102:PHE:CE1	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:431:A:H2'	1:A:432:A:O4'	2.17	0.44
14:O:11:ILE:HD11	14:O:30:ALA:HB1	1.99	0.44
1:A:865:A:H2'	1:A:866:C:C6	2.52	0.44
1:A:102:G:H2'	1:A:103:U:C6	2.52	0.44
1:A:845:A:H3'	1:A:846:G:O4'	2.17	0.44
1:A:613:C:P	3:D:80:ARG:HH21	2.40	0.44
1:A:141:G:O2'	1:A:142:G:H5'	2.17	0.44
1:A:794:A:H2'	1:A:795:C:C6	2.52	0.44
1:A:1245:C:H2'	1:A:1246:A:H8	1.82	0.44
2:C:128:MET:HB2	2:C:131:ARG:HH11	1.82	0.44
1:A:694:A:H3'	1:A:695:A:H5''	1.98	0.44
21:U:34:ARG:HE	21:U:36:PHE:N	2.14	0.44
20:B:44:LYS:O	20:B:48:MET:HG3	2.18	0.44
1:A:96:U:H2'	1:A:97:G:H8	1.82	0.44
1:A:1102:A:H2'	1:A:1103:C:C6	2.53	0.44
1:A:1324:A:H4'	1:A:1363:A:OP1	2.17	0.44
1:A:1238:A:C2	1:A:1241:G:N3	2.84	0.44
5:F:18:VAL:HG11	5:F:58:HIS:NE2	2.31	0.44
1:A:1514:G:H2'	1:A:1515:G:H8	1.83	0.44
1:A:51:A:H4'	1:A:52:C:OP2	2.17	0.44
1:A:842:U:H2'	1:A:843:U:H4'	1.99	0.44
2:C:185:THR:CG2	2:C:198:LYS:HG2	2.47	0.44
11:L:32:VAL:HG23	11:L:55:ARG:O	2.18	0.44
1:A:718:A:H5'	10:K:118:ASN:HB2	1.99	0.44
1:A:6:G:H4'	1:A:298:A:H4'	2.00	0.44
2:C:23:ALA:HB3	2:C:28:PHE:CD1	2.52	0.44
1:A:768:A:H5'	1:A:1524:C:H1'	2.00	0.44
8:I:59:LYS:HB3	8:I:60:LEU:HD23	1.99	0.44
1:A:1180:A:OP2	8:I:98:ARG:NH2	2.50	0.44
3:D:197:HIS:O	3:D:201:GLU:HG3	2.18	0.44
18:S:38:THR:HA	18:S:69:LYS:HD3	1.98	0.44
1:A:376:G:H5''	15:P:5:ARG:HB2	1.99	0.44
20:B:125:PHE:HD2	20:B:125:PHE:N	2.14	0.44
9:J:77:VAL:HB	9:J:78:GLU:CD	2.37	0.44
20:B:102:ASN:O	20:B:106:VAL:HG23	2.17	0.44
1:A:192:A:O2'	1:A:193:C:H5'	2.18	0.44
8:I:66:VAL:HG11	8:I:78:ILE:HD11	1.99	0.44
2:C:129:PHE:CG	2:C:130:ARG:N	2.85	0.44
1:A:719:C:H2'	17:R:38:ILE:HD11	1.99	0.44
17:R:31:TYR:CB	17:R:54:LEU:HD21	2.47	0.44
20:B:94:ARG:NE	20:B:94:ARG:N	2.64	0.44
1:A:512:U:H2'	1:A:513:C:H6	1.81	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:613:C:H2'	1:A:614:C:C6	2.52	0.44
1:A:916:U:H2'	1:A:917:G:H8	1.81	0.44
12:M:50:GLY:HA2	12:M:53:ASP:OD1	2.18	0.44
1:A:796:C:H4'	10:K:126:ARG:HH21	1.81	0.44
1:A:410:G:H1'	1:A:432:A:H61	1.82	0.44
1:A:93:U:H2'	1:A:95:C:H6	1.82	0.44
4:E:100:GLU:HA	4:E:121:ASN:HD22	1.83	0.44
18:S:43:MET:HB3	18:S:61:VAL:HG21	2.00	0.44
1:A:1024:G:H2'	1:A:1025:U:O4'	2.18	0.44
20:B:86:CYS:C	20:B:88:GLN:H	2.21	0.44
1:A:885:G:O2'	1:A:886:G:H5'	2.17	0.44
9:J:8:ILE:HD12	9:J:74:VAL:HG11	1.98	0.44
3:D:116:LEU:HB3	3:D:122:ILE:HD11	2.00	0.44
7:H:12:ARG:HB3	7:H:24:VAL:HG21	2.00	0.44
19:T:34:VAL:HG12	19:T:78:LEU:HD22	2.00	0.44
1:A:1247:U:O2'	1:A:1248:A:H5'	2.17	0.44
16:Q:47:ASP:OD2	16:Q:51:GLU:HG2	2.18	0.44
1:A:1444:U:H2'	1:A:1445:U:C6	2.52	0.44
18:S:40:PHE:HB3	18:S:41:PRO:HD2	2.00	0.44
20:B:15:PHE:CD1	20:B:16:GLY:N	2.86	0.44
15:P:28:ARG:NH1	15:P:29:ASN:HD22	2.15	0.44
1:A:1096:C:H2'	1:A:1097:C:C6	2.52	0.44
3:D:84:ASN:C	3:D:84:ASN:ND2	2.69	0.44
1:A:1320:C:N4	18:S:36:ARG:HB3	2.33	0.44
6:G:144:ALA:O	6:G:146:ALA:N	2.42	0.44
12:M:29:SER:HA	12:M:32:ILE:CG2	2.46	0.44
9:J:6:ILE:O	9:J:75:ASP:HA	2.18	0.44
11:L:119:LYS:H	11:L:119:LYS:HG2	1.54	0.44
1:A:338:A:H2'	1:A:339:C:C6	2.53	0.44
1:A:373:A:O4'	1:A:481:G:H1'	2.18	0.44
4:E:55:VAL:O	4:E:59:ILE:HG13	2.18	0.44
1:A:635:A:H2'	1:A:636:U:H6	1.83	0.44
6:G:63:VAL:HA	6:G:66:GLU:CD	2.37	0.44
1:A:856:C:O2'	1:A:857:C:H5'	2.18	0.44
1:A:399:G:H2'	1:A:400:C:H6	1.83	0.44
1:A:343:U:O2'	1:A:344:A:H2'	2.17	0.44
1:A:1246:A:H2'	1:A:1247:U:C6	2.52	0.44
1:A:300:A:H2'	1:A:301:G:O4'	2.18	0.44
20:B:17:HIS:HD2	20:B:203:ASP:OD1	2.01	0.44
1:A:1097:C:H2'	1:A:1098:C:H6	1.82	0.44
18:S:64:GLU:N	18:S:64:GLU:OE1	2.50	0.44
12:M:15:VAL:CG2	12:M:40:GLU:HB3	2.47	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:76:ILE:O	2:C:83:VAL:HG12	2.17	0.44
1:A:1206:G:H2'	1:A:1207:G:O4'	2.17	0.44
1:A:236:A:H2'	1:A:237:G:H8	1.82	0.44
1:A:14:U:O2	1:A:17:U:H5	2.00	0.44
15:P:44:SER:OG	15:P:46:LYS:HG2	2.17	0.44
1:A:1313:U:H2'	1:A:1314:C:C6	2.53	0.44
12:M:12:LYS:O	12:M:43:LYS:HA	2.17	0.44
1:A:153:C:O2'	1:A:154:U:H5'	2.16	0.44
1:A:1436:U:H2'	1:A:1437:A:C8	2.53	0.44
1:A:197:A:H4'	1:A:198:G:O5'	2.18	0.44
3:D:55:ARG:HG3	3:D:55:ARG:HH11	1.82	0.44
1:A:1296:C:H4'	1:A:1302:C:N4	2.33	0.44
1:A:1300:G:H1'	1:A:1301:U:H5	1.82	0.44
1:A:1299:A:C8	1:A:1301:U:H1'	2.52	0.44
19:T:80:ALA:HA	19:T:83:ASN:HD22	1.82	0.44
18:S:27:LYS:HB3	18:S:27:LYS:NZ	2.32	0.44
9:J:82:LYS:HA	9:J:85:ASP:OD2	2.17	0.44
2:C:147:GLY:HA3	2:C:171:ARG:O	2.18	0.44
20:B:46:VAL:CG1	20:B:47:PRO:HD3	2.35	0.44
18:S:30:LEU:HB2	18:S:48:ILE:HA	2.00	0.44
4:E:80:LEU:HG	4:E:122:VAL:CG1	2.48	0.44
16:Q:46:HIS:NE2	16:Q:48:GLU:HG2	2.23	0.44
1:A:1077:G:N2	1:A:1080:A:OP2	2.49	0.44
1:A:175:C:H2'	1:A:176:C:C6	2.53	0.44
3:D:2:ARG:HD2	3:D:114:ARG:NE	2.33	0.44
1:A:575:G:O2'	1:A:821:G:H5'	2.17	0.44
1:A:1516:G:H2'	1:A:1518:A:OP2	2.17	0.44
1:A:847:G:H2'	1:A:848:C:H6	1.82	0.44
7:H:36:ALA:HA	7:H:39:LEU:HD12	2.00	0.44
20:B:17:HIS:NE2	20:B:204:ASP:HB2	2.33	0.44
5:F:70:VAL:HA	5:F:73:GLU:HG3	2.00	0.44
1:A:1238:A:C8	1:A:1303:C:H1'	2.53	0.44
10:K:13:LYS:HD2	10:K:76:TYR:HE2	1.83	0.44
20:B:127:LYS:HG2	20:B:128:LEU:CD2	2.46	0.44
1:A:1070:U:H2'	1:A:1071:C:H6	1.80	0.44
7:H:24:VAL:HG13	7:H:24:VAL:O	2.18	0.44
6:G:71:THR:HG22	6:G:141:HIS:NE2	2.33	0.44
6:G:90:VAL:O	6:G:90:VAL:HG23	2.18	0.44
13:N:72:PHE:CG	13:N:73:LEU:N	2.86	0.43
7:H:63:LYS:HD2	7:H:70:VAL:HG21	1.99	0.43
20:B:40:ILE:HD13	20:B:201:GLY:CA	2.48	0.43
8:I:87:MET:HG2	8:I:91:GLU:HG2	1.99	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:15:VAL:HG13	12:M:33:LEU:HD12	1.99	0.43
18:S:49:ALA:O	18:S:56:HIS:HB3	2.18	0.43
1:A:1031:C:H4'	1:A:1032:G:C5'	2.46	0.43
4:E:33:THR:HB	4:E:49:TYR:CE1	2.52	0.43
1:A:532:A:C8	2:C:192:TYR:CD2	3.06	0.43
3:D:151:GLN:HE22	3:D:153:ARG:NH1	2.15	0.43
1:A:1270:G:H2'	1:A:1271:A:H8	1.83	0.43
2:C:39:ARG:CZ	2:C:56:ILE:HD12	2.48	0.43
18:S:4:LEU:O	18:S:4:LEU:HD13	2.18	0.43
1:A:434:U:H3'	1:A:435:A:H8	1.83	0.43
2:C:155:ARG:HD2	2:C:155:ARG:HA	1.65	0.43
1:A:1526:G:P	21:U:38:GLU:HB3	2.58	0.43
8:I:83:THR:OG1	8:I:97:LEU:HD22	2.18	0.43
5:F:70:VAL:HG23	5:F:71:ILE:N	2.33	0.43
20:B:86:CYS:N	20:B:88:GLN:NE2	2.66	0.43
12:M:9:PRO:O	12:M:44:ILE:HD13	2.19	0.43
1:A:279:A:H4'	1:A:280:C:OP2	2.18	0.43
4:E:55:VAL:N	4:E:56:PRO:CD	2.80	0.43
1:A:63:C:H5''	1:A:383:A:H61	1.83	0.43
1:A:803:G:H2'	1:A:804:U:C6	2.53	0.43
1:A:545:C:O2'	1:A:546:A:H5'	2.18	0.43
1:A:893:C:H2'	1:A:894:G:C8	2.54	0.43
9:J:49:PHE:O	9:J:64:GLN:HA	2.18	0.43
20:B:15:PHE:HD1	20:B:16:GLY:N	2.15	0.43
2:C:137:VAL:HG11	2:C:169:GLU:HG3	2.00	0.43
5:F:4:TYR:CE2	5:F:71:ILE:HG12	2.54	0.43
18:S:39:ILE:H	18:S:39:ILE:HG13	1.66	0.43
20:B:221:ARG:HG3	20:B:222:GLU:N	2.33	0.43
1:A:1169:A:H2'	1:A:1170:A:C8	2.53	0.43
15:P:46:LYS:HG3	15:P:46:LYS:H	1.45	0.43
1:A:551:U:H2'	1:A:552:U:H6	1.83	0.43
1:A:624:C:H4'	15:P:10:GLY:O	2.19	0.43
1:A:716:A:N3	10:K:118:ASN:O	2.51	0.43
16:Q:10:ARG:HG3	16:Q:10:ARG:O	2.17	0.43
3:D:82:LYS:HB3	3:D:82:LYS:NZ	2.33	0.43
1:A:697:U:O2	1:A:798:U:H1'	2.18	0.43
1:A:766:A:H2'	1:A:767:A:O4'	2.18	0.43
6:G:149:ALA:HB1	10:K:58:THR:HG21	2.01	0.43
14:O:70:LEU:HD12	14:O:78:TYR:HB2	2.00	0.43
13:N:41:TRP:CD1	13:N:43:ALA:HB3	2.52	0.43
1:A:1036:A:H2'	1:A:1037:C:O4'	2.17	0.43
20:B:69:VAL:HB	20:B:162:VAL:CB	2.47	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:115:GLN:NE2	3:D:153:ARG:HH22	2.15	0.43
1:A:1133:G:H2'	1:A:1134:G:H8	1.82	0.43
1:A:1057:G:H5''	2:C:153:SER:CB	2.48	0.43
1:A:1163:A:H2'	1:A:1164:G:C8	2.52	0.43
3:D:66:VAL:HG12	3:D:67:LEU:H	1.83	0.43
1:A:1480:A:H2'	1:A:1481:U:O4'	2.18	0.43
16:Q:10:ARG:CZ	16:Q:12:VAL:HA	2.47	0.43
1:A:1263:C:H2'	1:A:1264:U:H6	1.83	0.43
1:A:1275:A:H2'	1:A:1276:G:O4'	2.19	0.43
13:N:1:ALA:HB1	13:N:6:LYS:HE2	2.01	0.43
1:A:1182:G:H4'	1:A:1183:U:H5'	1.99	0.43
8:I:80:HIS:HE1	8:I:103:VAL:O	2.01	0.43
16:Q:14:ASP:HA	16:Q:20:ILE:CD1	2.48	0.43
12:M:49:GLU:O	12:M:52:ILE:HB	2.18	0.43
14:O:24:SER:HB3	14:O:27:VAL:HG23	2.00	0.43
9:J:41:PRO:HG2	9:J:42:LEU:H	1.83	0.43
2:C:2:GLN:O	2:C:3:LYS:HB2	2.19	0.43
5:F:100:SER:HA	17:R:23:LYS:HD3	2.01	0.43
20:B:112:ARG:O	20:B:116:LEU:HB2	2.19	0.43
1:A:450:G:N7	1:A:481:G:O6	2.52	0.43
13:N:12:ARG:HE	13:N:58:ARG:HH11	1.67	0.43
10:K:19:VAL:HG12	10:K:82:GLU:HB2	2.00	0.43
3:D:100:VAL:HG11	3:D:142:VAL:HG21	2.00	0.43
9:J:12:ALA:N	9:J:18:ILE:HD13	2.34	0.43
1:A:956:U:O2'	1:A:957:U:H5'	2.18	0.43
1:A:1416:G:C2'	1:A:1417:G:H5'	2.49	0.43
1:A:1371:G:O3'	8:I:70:GLY:HA3	2.19	0.43
1:A:186:C:H2'	1:A:187:G:O4'	2.18	0.43
1:A:1286:U:OP1	1:A:1286:U:O2	2.37	0.43
1:A:754:C:H3'	1:A:754:C:O2	2.18	0.43
1:A:766:A:H2	1:A:1525:G:N3	2.16	0.43
21:U:42:THR:HB	21:U:46:ARG:NE	2.21	0.43
12:M:84:CYS:O	12:M:88:LEU:HG	2.19	0.43
6:G:111:GLY:HA2	6:G:118:ARG:NH1	2.34	0.43
17:R:20:ILE:HG13	17:R:21:ASP:N	2.33	0.43
1:A:1341:U:O2'	1:A:1342:C:H5'	2.17	0.43
8:I:17:ARG:O	8:I:64:ILE:HA	2.19	0.43
1:A:369:G:O2'	1:A:370:C:H5'	2.19	0.43
11:L:7:VAL:HG22	16:Q:33:TYR:CD1	2.50	0.43
1:A:628:G:H2'	1:A:629:A:H8	1.84	0.43
2:C:106:ARG:O	2:C:107:LYS:HE3	2.19	0.43
1:A:1257:A:H3'	1:A:1258:G:H5'	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:830:G:H2'	1:A:831:A:H8	1.83	0.43
1:A:749:A:O2'	1:A:750:C:H5'	2.19	0.43
1:A:796:C:OP1	10:K:127:ARG:HB3	2.18	0.43
1:A:84:U:H2'	1:A:84:U:H6	1.68	0.43
8:I:51:LEU:HD13	8:I:56:MET:HG2	2.01	0.43
1:A:432:A:H2'	1:A:433:G:H5'	1.99	0.43
10:K:91:GLY:O	10:K:95:THR:HG22	2.18	0.43
1:A:1098:C:O2'	1:A:1099:G:H5'	2.18	0.43
14:O:25:THR:HB	14:O:70:LEU:HD23	2.01	0.43
3:D:149:LYS:HD3	3:D:177:MET:CG	2.48	0.43
13:N:14:ALA:O	13:N:18:LYS:HG3	2.19	0.43
1:A:502:A:H4'	1:A:550:G:H4'	2.00	0.43
20:B:59:ILE:HD12	20:B:60:ALA:N	2.34	0.43
15:P:7:ALA:O	15:P:17:TYR:HA	2.18	0.43
8:I:126:PHE:CE1	8:I:129:ARG:HG2	2.51	0.43
2:C:111:ASP:HB3	2:C:114:LEU:HB2	2.01	0.43
6:G:27:ASN:O	6:G:30:MET:HB3	2.17	0.43
1:A:301:G:H2'	1:A:302:G:H8	1.84	0.43
1:A:1426:G:O2'	1:A:1427:C:H5'	2.19	0.43
19:T:27:MET:O	19:T:31:ILE:HG13	2.19	0.43
13:N:61:ASN:O	13:N:62:ARG:HB2	2.19	0.43
8:I:50:PRO:HD3	8:I:79:ARG:CG	2.48	0.43
21:U:16:ARG:NH1	21:U:19:LYS:HD3	2.34	0.43
3:D:61:ARG:HG3	3:D:71:PHE:CG	2.54	0.43
3:D:79:ALA:HA	3:D:85:THR:OG1	2.19	0.43
12:M:90:HIS:CE1	12:M:96:VAL:HG21	2.54	0.43
14:O:81:LEU:O	14:O:85:LEU:HD13	2.18	0.43
1:A:1206:G:O4'	2:C:193:GLY:N	2.52	0.43
1:A:108:G:O4'	1:A:108:G:N3	2.52	0.43
8:I:122:ARG:HG3	8:I:122:ARG:HH11	1.83	0.43
1:A:143:A:H2	1:A:220:G:H22	1.66	0.43
1:A:1298:U:H5	6:G:113:LYS:HD3	1.83	0.43
4:E:11:GLN:HB2	4:E:39:GLY:O	2.18	0.43
15:P:22:ALA:CB	15:P:32:PHE:HA	2.49	0.43
1:A:955:U:O2'	1:A:956:U:H5'	2.19	0.43
1:A:666:G:H5'	1:A:726:C:H1'	2.00	0.43
8:I:6:TYR:CG	8:I:7:GLY:N	2.86	0.43
7:H:48:PHE:CB	7:H:60:LEU:HD12	2.49	0.43
1:A:1099:G:H2'	1:A:1100:C:O4'	2.18	0.43
20:B:85:SER:O	20:B:86:CYS:HB2	2.18	0.43
1:A:947:G:H2'	1:A:948:C:C6	2.54	0.43
3:D:149:LYS:HD3	3:D:177:MET:HG2	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1169:A:C6	1:A:1170:A:C6	3.07	0.43
10:K:70:ALA:C	10:K:72:ALA:N	2.72	0.43
1:A:1313:U:OP2	18:S:5:LYS:HA	2.18	0.43
15:P:78:VAL:HG13	15:P:78:VAL:O	2.18	0.43
1:A:735:C:H2'	1:A:736:C:H6	1.83	0.43
1:A:113:G:H1'	1:A:354:G:H5'	2.00	0.43
3:D:106:PHE:CD1	3:D:144:ILE:HD11	2.53	0.43
1:A:893:C:H2'	1:A:894:G:H8	1.84	0.43
1:A:1149:C:H2'	1:A:1150:A:C8	2.54	0.43
1:A:1442:G:H2'	1:A:1443:C:C6	2.54	0.43
1:A:100:G:H2'	1:A:101:A:O4'	2.18	0.43
1:A:495:A:H4'	1:A:496:A:O5'	2.18	0.43
20:B:14:HIS:ND1	20:B:15:PHE:N	2.66	0.43
20:B:166:ASP:O	20:B:169:HIS:HB3	2.19	0.43
7:H:40:LYS:HE3	7:H:47:ASP:HA	2.01	0.43
7:H:47:ASP:CG	7:H:48:PHE:H	2.21	0.43
1:A:93:U:H3'	1:A:94:G:C5'	2.46	0.43
13:N:50:LEU:CG	13:N:51:PRO:HD3	2.49	0.43
1:A:1320:C:H2'	1:A:1321:U:O4'	2.18	0.43
10:K:28:ASN:HD22	10:K:29:THR:H	1.67	0.43
6:G:4:ARG:HD2	6:G:5:VAL:H	1.82	0.43
11:L:107:LYS:HD2	11:L:107:LYS:O	2.18	0.43
2:C:26:LYS:CG	2:C:27:GLU:HG3	2.42	0.43
2:C:163:ARG:HH11	2:C:163:ARG:HG2	1.84	0.43
20:B:27:LYS:HB3	20:B:28:PRO:HD3	2.00	0.43
1:A:177:G:N3	1:A:177:G:O4'	2.52	0.43
1:A:219:U:H2'	1:A:220:G:C8	2.52	0.43
4:E:56:PRO:HG2	4:E:57:ALA:H	1.84	0.43
16:Q:30:HIS:HD2	16:Q:37:ILE:HD11	1.84	0.43
1:A:455:G:O2'	1:A:456:A:H5'	2.18	0.43
1:A:1121:U:H2'	1:A:1122:U:C6	2.53	0.43
1:A:117:G:O2'	1:A:118:U:H5'	2.19	0.43
1:A:562:U:H5''	1:A:563:A:C4	2.54	0.43
1:A:796:C:H2'	1:A:797:C:C6	2.51	0.42
4:E:156:ARG:HB2	4:E:157:GLY:H	1.56	0.42
4:E:80:LEU:HG	4:E:122:VAL:HG11	2.01	0.42
12:M:84:CYS:SG	12:M:86:ARG:HB2	2.59	0.42
12:M:78:ARG:HH12	18:S:68:HIS:CE1	2.37	0.42
14:O:82:ILE:O	14:O:86:GLY:N	2.52	0.42
18:S:49:ALA:HA	18:S:57:VAL:O	2.19	0.42
11:L:98:ARG:HB2	11:L:116:TYR:CA	2.48	0.42
1:A:413:G:H2'	1:A:428:G:H21	1.83	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:236:A:H2'	1:A:237:G:C8	2.54	0.42
20:B:119:GLN:HA	20:B:124:THR:O	2.19	0.42
3:D:54:LEU:O	3:D:58:GLN:HB2	2.19	0.42
1:A:493:A:N3	1:A:493:A:O4'	2.52	0.42
1:A:1416:G:H2'	1:A:1417:G:H5'	2.00	0.42
2:C:102:ILE:HD12	2:C:102:ILE:N	2.34	0.42
13:N:63:CYS:C	13:N:65:GLN:H	2.22	0.42
8:I:80:HIS:O	8:I:83:THR:HG22	2.20	0.42
3:D:26:ALA:HA	3:D:30:LYS:CE	2.48	0.42
1:A:812:G:HO2'	1:A:813:U:H6	1.59	0.42
20:B:87:ASP:HB2	20:B:224:ARG:HH22	1.84	0.42
20:B:21:TYR:O	20:B:22:TRP:O	2.36	0.42
1:A:265:G:H4'	16:Q:67:SER:HA	2.02	0.42
19:T:73:ARG:HG3	19:T:74:HIS:N	2.34	0.42
20:B:68:PHE:HA	20:B:161:PHE:O	2.19	0.42
8:I:44:ARG:HG2	8:I:44:ARG:HH11	1.84	0.42
7:H:1:SER:O	7:H:3:GLN:HG3	2.19	0.42
19:T:5:SER:C	19:T:7:LYS:N	2.73	0.42
3:D:103:ARG:HH21	3:D:110:ARG:HH21	1.66	0.42
1:A:12:U:H4'	1:A:526:C:H4'	2.00	0.42
1:A:1479:C:O2'	1:A:1480:A:H5'	2.20	0.42
1:A:515:G:O2'	1:A:516:U:H5'	2.18	0.42
1:A:275:G:O5'	16:Q:15:LYS:HG2	2.19	0.42
1:A:862:C:O2'	1:A:863:U:H5'	2.19	0.42
12:M:71:GLU:HA	12:M:74:MET:HG3	2.02	0.42
19:T:85:LEU:HD23	19:T:85:LEU:N	2.33	0.42
1:A:129:A:H1'	1:A:130:A:C8	2.54	0.42
8:I:34:LEU:HD11	8:I:47:VAL:HG21	2.02	0.42
6:G:145:GLU:CD	6:G:148:LYS:HD2	2.40	0.42
1:A:977:A:N1	1:A:1224:U:OP1	2.52	0.42
1:A:153:C:H2'	1:A:154:U:C6	2.55	0.42
6:G:70:PRO:HA	6:G:141:HIS:CE1	2.55	0.42
1:A:957:U:H2'	1:A:959:A:OP2	2.19	0.42
1:A:1325:C:H2'	1:A:1326:U:H6	1.84	0.42
10:K:15:VAL:HB	10:K:78:ILE:CD1	2.50	0.42
1:A:291:U:O2'	1:A:292:G:H5'	2.19	0.42
2:C:78:LYS:CG	2:C:81:GLU:HG2	2.26	0.42
1:A:82:G:O6	1:A:83:C:O2	2.36	0.42
14:O:43:PHE:CD1	14:O:56:LEU:HD22	2.54	0.42
1:A:948:C:O2'	1:A:949:A:H5'	2.19	0.42
20:B:209:VAL:HG23	20:B:210:THR:H	1.84	0.42
3:D:138:PRO:C	3:D:140:ASP:H	2.23	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:51:A:H5''	1:A:52:C:C5'	2.46	0.42
3:D:154:VAL:HG23	3:D:155:LYS:N	2.31	0.42
1:A:531:U:H5'	1:A:531:U:C6	2.50	0.42
1:A:677:U:H2'	1:A:678:U:H6	1.84	0.42
4:E:54:GLU:HB3	4:E:56:PRO:HD2	2.01	0.42
4:E:11:GLN:HB3	4:E:116:VAL:HG12	2.02	0.42
1:A:489:C:H2'	1:A:490:C:C6	2.55	0.42
2:C:57:GLU:HB2	2:C:64:ARG:CB	2.49	0.42
6:G:126:ALA:C	6:G:128:GLU:H	2.23	0.42
1:A:27:G:O2'	1:A:28:A:H5'	2.19	0.42
1:A:852:G:H2'	1:A:853:C:C6	2.55	0.42
13:N:68:ARG:NH1	13:N:71:GLY:H	2.17	0.42
8:I:56:MET:C	8:I:58:GLU:N	2.72	0.42
1:A:698:G:H2'	1:A:699:C:H6	1.84	0.42
3:D:196:GLU:HG2	3:D:197:HIS:N	2.34	0.42
11:L:36:VAL:O	11:L:36:VAL:HG23	2.19	0.42
16:Q:75:VAL:CG2	16:Q:76:ARG:N	2.82	0.42
4:E:52:ALA:HB2	4:E:61:LYS:CE	2.41	0.42
1:A:919:A:O2'	1:A:920:U:H5'	2.19	0.42
8:I:15:ALA:O	8:I:66:VAL:HA	2.20	0.42
3:D:55:ARG:HG3	3:D:55:ARG:NH1	2.34	0.42
1:A:596:A:H2'	1:A:597:G:H8	1.84	0.42
1:A:708:C:H2'	1:A:709:U:C6	2.55	0.42
1:A:963:G:H2'	1:A:964:A:H8	1.84	0.42
1:A:600:A:H2'	1:A:601:G:C8	2.54	0.42
10:K:22:ILE:HD13	10:K:95:THR:CG2	2.50	0.42
4:E:113:VAL:CG1	4:E:136:VAL:HG23	2.47	0.42
18:S:63:ASP:C	18:S:65:MET:N	2.73	0.42
16:Q:74:LEU:C	16:Q:74:LEU:HD13	2.40	0.42
1:A:1004:A:H2'	1:A:1005:A:C8	2.54	0.42
1:A:960:U:O2'	1:A:1223:C:H4'	2.20	0.42
2:C:104:GLU:HG2	2:C:105:VAL:H	1.85	0.42
6:G:21:LEU:HG	6:G:22:LEU:N	2.34	0.42
1:A:923:A:H2'	1:A:924:C:H6	1.83	0.42
20:B:184:ALA:HB3	20:B:195:VAL:CG2	2.46	0.42
5:F:15:SER:HA	5:F:18:VAL:HG23	2.01	0.42
1:A:152:A:N6	1:A:170:U:C2	2.88	0.42
1:A:370:C:H2'	1:A:371:A:C8	2.54	0.42
20:B:113:LEU:CD1	20:B:147:LEU:HB2	2.50	0.42
1:A:1368:A:H5''	13:N:100:TRP:HZ2	1.84	0.42
1:A:707:U:H2'	1:A:708:C:C6	2.54	0.42
7:H:68:LYS:HG3	7:H:69:ALA:N	2.35	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:187:GLU:HB3	2:C:194:VAL:CG1	2.50	0.42
5:F:2:ARG:HG2	5:F:3:HIS:H	1.85	0.42
15:P:28:ARG:CD	15:P:28:ARG:N	2.82	0.42
13:N:49:THR:O	13:N:50:LEU:HB3	2.20	0.42
13:N:50:LEU:HG	13:N:51:PRO:CD	2.49	0.42
1:A:1329:A:O2'	1:A:1330:U:H5'	2.20	0.42
2:C:63:ILE:O	2:C:98:ALA:HA	2.20	0.42
2:C:91:ALA:HB2	2:C:98:ALA:HB3	2.01	0.42
11:L:106:VAL:CG2	11:L:116:TYR:HB3	2.49	0.42
1:A:1396:A:C2	4:E:23:THR:HG21	2.54	0.42
1:A:663:A:O2'	1:A:664:G:H5'	2.19	0.42
9:J:5:ARG:N	9:J:77:VAL:HA	2.35	0.42
1:A:1308:U:O2'	1:A:1309:G:H5'	2.18	0.42
2:C:65:VAL:HG21	2:C:90:VAL:HG11	2.02	0.42
1:A:546:A:H4'	1:A:548:G:O3'	2.20	0.42
3:D:36:ALA:C	3:D:38:GLY:N	2.73	0.42
1:A:656:G:H2'	1:A:657:U:H6	1.85	0.42
1:A:1107:C:OP1	2:C:171:ARG:HB2	2.20	0.42
1:A:429:U:C3'	3:D:8:LEU:HD23	2.46	0.42
21:U:42:THR:C	21:U:46:ARG:HG3	2.39	0.42
12:M:75:SER:O	12:M:78:ARG:HB3	2.20	0.42
1:A:376:G:O2'	1:A:377:G:H5'	2.19	0.42
7:H:4:ASP:CG	7:H:76:ARG:HH12	2.23	0.42
1:A:251:G:N2	1:A:266:G:O6	2.52	0.42
1:A:812:G:OP1	1:A:812:G:C4'	2.65	0.42
1:A:58:C:O2'	1:A:59:A:H5'	2.20	0.42
1:A:602:A:H2'	1:A:603:U:C6	2.54	0.42
1:A:1028:C:H3'	1:A:1029:U:N3	2.35	0.42
1:A:564:C:H1'	16:Q:32:ILE:O	2.20	0.42
1:A:1296:C:H4'	1:A:1302:C:H41	1.84	0.42
1:A:940:C:H2'	1:A:941:G:C8	2.55	0.42
1:A:810:C:O2'	1:A:811:C:H5'	2.20	0.42
3:D:156:ALA:O	3:D:159:GLU:HB2	2.19	0.42
9:J:31:ARG:HB2	9:J:31:ARG:HE	1.53	0.42
8:I:26:LYS:H	8:I:61:ASP:HB3	1.84	0.42
4:E:156:ARG:HA	4:E:158:LYS:HZ3	1.81	0.42
10:K:91:GLY:HA2	10:K:94:SER:HB3	2.00	0.42
4:E:125:LYS:HD2	4:E:126:ALA:N	2.35	0.42
20:B:124:THR:C	20:B:127:LYS:HE2	2.40	0.42
1:A:68:G:H5'	1:A:171:A:H1'	2.02	0.42
20:B:112:ARG:HA	20:B:115:ASP:OD2	2.20	0.42
11:L:2:THR:H	11:L:5:GLN:HE21	1.66	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:113:G:H2'	1:A:114:U:H6	1.83	0.42
1:A:300:A:H1'	1:A:565:U:O2	2.20	0.42
1:A:1382:C:H4'	6:G:78:ARG:NH1	2.34	0.42
1:A:386:C:C2'	1:A:387:U:H5'	2.50	0.42
11:L:45:ASN:HD22	11:L:45:ASN:N	2.18	0.42
1:A:730:G:O2'	1:A:766:A:H5'	2.20	0.42
3:D:194:ILE:HG23	3:D:194:ILE:O	2.20	0.42
6:G:144:ALA:C	6:G:146:ALA:N	2.74	0.42
1:A:1323:G:H4'	1:A:1362:A:C5	2.54	0.42
4:E:131:ASN:HD22	4:E:134:ASN:H	1.67	0.42
1:A:1468:A:O2'	1:A:1469:C:H5'	2.20	0.42
1:A:554:A:H2'	1:A:555:U:H6	1.84	0.42
2:C:55:VAL:HG12	2:C:56:ILE:N	2.35	0.42
19:T:84:LYS:HD2	19:T:84:LYS:N	2.35	0.42
3:D:36:ALA:O	3:D:38:GLY:N	2.53	0.42
1:A:179:A:H2'	1:A:180:U:O4'	2.20	0.42
1:A:1426:G:H2'	1:A:1427:C:H6	1.85	0.42
1:A:1230:C:H2'	1:A:1231:G:H8	1.85	0.42
4:E:48:GLY:HA3	4:E:66:ALA:HB2	2.01	0.42
18:S:45:GLY:HA2	18:S:60:PHE:CD1	2.55	0.42
5:F:3:HIS:N	5:F:3:HIS:CD2	2.87	0.41
2:C:137:VAL:HG13	2:C:148:ILE:CG2	2.50	0.41
4:E:114:LEU:HD13	4:E:122:VAL:HG21	2.02	0.41
1:A:1085:U:H3'	1:A:1086:U:C6	2.55	0.41
20:B:98:GLY:C	20:B:100:LEU:H	2.23	0.41
1:A:929:G:O2'	1:A:930:C:H5'	2.19	0.41
3:D:10:LEU:HD22	3:D:62:ARG:CZ	2.50	0.41
16:Q:30:HIS:C	16:Q:32:ILE:H	2.23	0.41
16:Q:32:ILE:HG23	16:Q:33:TYR:CD2	2.55	0.41
11:L:17:LYS:C	11:L:17:LYS:HD2	2.40	0.41
7:H:14:ARG:HE	7:H:75:GLN:NE2	2.18	0.41
7:H:9:MET:O	7:H:13:ILE:HG13	2.20	0.41
1:A:647:C:H2'	1:A:648:A:H8	1.84	0.41
4:E:151:MET:O	4:E:154:ALA:HB3	2.19	0.41
11:L:28:GLN:HE21	11:L:28:GLN:HB3	1.57	0.41
13:N:60:ARG:NH2	13:N:69:PRO:HB3	2.36	0.41
4:E:104:ILE:HD11	4:E:114:LEU:HB2	2.01	0.41
1:A:920:U:H2'	1:A:921:U:H6	1.77	0.41
1:A:1053:G:H4'	1:A:1054:C:H5'	2.03	0.41
11:L:113:ARG:NH2	11:L:120:ARG:HB3	2.35	0.41
1:A:366:A:H1'	1:A:395:C:O2	2.20	0.41
1:A:966:G:H2'	1:A:967:C:C6	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:117:G:H2'	1:A:118:U:O4'	2.19	0.41
1:A:903:G:H2'	1:A:904:U:C6	2.55	0.41
1:A:827:U:H2'	1:A:870:U:O4	2.20	0.41
20:B:31:PHE:HB3	20:B:39:ILE:O	2.20	0.41
8:I:87:MET:HB2	8:I:94:ARG:HD3	2.02	0.41
13:N:50:LEU:HD23	13:N:51:PRO:HD3	2.01	0.41
1:A:1103:C:O5'	1:A:1103:C:H6	2.03	0.41
1:A:271:C:H2'	1:A:272:C:H6	1.84	0.41
1:A:922:G:O2'	1:A:1398:A:N1	2.44	0.41
11:L:72:ASN:ND2	11:L:104:SER:HB3	2.32	0.41
1:A:279:A:H5'	1:A:281:G:H5'	2.03	0.41
16:Q:28:VAL:O	16:Q:36:PHE:HA	2.20	0.41
1:A:578:C:O2	1:A:728:A:H2	2.04	0.41
19:T:81:GLN:C	19:T:83:ASN:H	2.23	0.41
1:A:402:G:O2'	1:A:403:C:H5'	2.21	0.41
1:A:643:C:H2'	1:A:644:U:C6	2.56	0.41
7:H:39:LEU:HD21	7:H:128:VAL:HG21	2.02	0.41
1:A:293:G:H4'	1:A:609:A:N1	2.35	0.41
16:Q:25:GLU:OE2	16:Q:38:LYS:HD3	2.20	0.41
10:K:125:LYS:O	21:U:33:ARG:NE	2.50	0.41
9:J:53:ILE:HD11	13:N:84:ARG:NH2	2.35	0.41
18:S:36:ARG:O	18:S:69:LYS:HD2	2.20	0.41
12:M:15:VAL:N	12:M:33:LEU:HD11	2.36	0.41
1:A:1151:A:O4'	9:J:41:PRO:HB2	2.21	0.41
1:A:16:A:N1	1:A:919:A:H2	2.18	0.41
1:A:1173:U:H2'	1:A:1174:G:O4'	2.20	0.41
20:B:162:VAL:CG1	20:B:184:ALA:HB2	2.50	0.41
9:J:59:LYS:HB2	9:J:62:ARG:NH2	2.36	0.41
1:A:676:A:H2'	1:A:677:U:C6	2.56	0.41
16:Q:30:HIS:O	16:Q:32:ILE:N	2.51	0.41
20:B:93:HIS:O	20:B:94:ARG:C	2.58	0.41
1:A:493:A:H2'	1:A:494:G:O4'	2.20	0.41
19:T:4:LYS:O	19:T:7:LYS:N	2.47	0.41
1:A:551:U:O2'	1:A:552:U:H5'	2.21	0.41
3:D:187:ARG:HH12	3:D:191:SER:HA	1.83	0.41
1:A:113:G:O4'	1:A:354:G:H4'	2.19	0.41
1:A:115:G:H1'	1:A:116:A:N7	2.36	0.41
12:M:56:ARG:HA	12:M:59:VAL:HG12	2.01	0.41
1:A:488:C:H2'	1:A:489:C:C6	2.55	0.41
1:A:259:G:O2'	1:A:260:G:H5'	2.21	0.41
1:A:830:G:H2'	1:A:831:A:C8	2.56	0.41
1:A:1058:G:H2'	1:A:1059:C:H6	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:10:A:OP2	4:E:130:THR:HB	2.19	0.41
15:P:38:PHE:CZ	15:P:51:ARG:HD3	2.55	0.41
13:N:63:CYS:C	13:N:65:GLN:N	2.72	0.41
2:C:148:ILE:HA	2:C:200:TRP:O	2.21	0.41
6:G:134:VAL:O	6:G:137:ARG:HB3	2.20	0.41
3:D:84:ASN:HD22	3:D:85:THR:N	2.17	0.41
3:D:185:PRO:HB2	3:D:190:LEU:HG	2.01	0.41
2:C:13:ILE:C	2:C:15:LYS:H	2.24	0.41
16:Q:5:ARG:O	16:Q:6:THR:HG23	2.20	0.41
1:A:66:A:O2'	1:A:67:C:H5'	2.20	0.41
1:A:66:A:H8	1:A:66:A:O5'	2.03	0.41
20:B:147:LEU:O	20:B:148:GLY:C	2.59	0.41
1:A:1494:G:H2'	1:A:1495:U:C6	2.55	0.41
1:A:142:G:N3	1:A:196:A:H2	2.19	0.41
2:C:194:VAL:HG12	2:C:195:ILE:N	2.36	0.41
1:A:1232:U:H2'	1:A:1233:G:O4'	2.20	0.41
1:A:991:U:H2'	1:A:1212:U:O2	2.20	0.41
1:A:901:A:N7	1:A:902:G:H1'	2.35	0.41
1:A:1194:U:H2'	1:A:1195:C:C6	2.55	0.41
1:A:1195:C:H5''	1:A:1196:A:OP2	2.20	0.41
3:D:150:LYS:HD3	3:D:150:LYS:HA	1.88	0.41
20:B:17:HIS:HB3	20:B:187:ASP:OD2	2.20	0.41
10:K:92:ARG:NH1	21:U:20:ARG:NH2	2.69	0.41
4:E:136:VAL:HG13	4:E:137:ARG:N	2.36	0.41
18:S:66:VAL:C	18:S:68:HIS:N	2.74	0.41
19:T:64:GLY:O	19:T:66:ILE:N	2.54	0.41
1:A:1077:G:N1	1:A:1080:A:OP2	2.52	0.41
20:B:224:ARG:HG2	20:B:224:ARG:H	1.60	0.41
1:A:1342:C:O2'	8:I:125:GLN:HB3	2.21	0.41
1:A:1514:G:O2'	1:A:1515:G:H5'	2.20	0.41
1:A:1073:U:O2'	20:B:102:ASN:OD1	2.36	0.41
20:B:25:LYS:O	20:B:28:PRO:HD2	2.19	0.41
1:A:719:C:H2'	17:R:38:ILE:CD1	2.50	0.41
17:R:31:TYR:C	17:R:39:VAL:HG22	2.40	0.41
1:A:323:U:C1'	19:T:13:SER:HB2	2.49	0.41
20:B:153:MET:O	20:B:155:GLY:N	2.51	0.41
3:D:145:ARG:HH21	3:D:147:LYS:HE2	1.85	0.41
1:A:800:G:HO2'	1:A:801:U:H6	1.64	0.41
1:A:1384:C:O2'	1:A:1385:G:H5'	2.20	0.41
8:I:5:TYR:HD2	8:I:88:GLU:HB2	1.84	0.41
1:A:1080:A:OP1	4:E:51:LYS:HD2	2.20	0.41
9:J:40:ILE:O	9:J:72:ARG:HA	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1090:U:H2'	1:A:1091:U:C6	2.55	0.41
6:G:12:LEU:HD13	6:G:13:PRO:CD	2.50	0.41
5:F:44:ARG:HG3	5:F:44:ARG:HH11	1.85	0.41
4:E:35:LEU:HD22	4:E:133:ILE:HA	2.02	0.41
3:D:97:LEU:HD23	3:D:117:VAL:CG1	2.50	0.41
4:E:85:LYS:HE2	4:E:92:ARG:NH2	2.36	0.41
1:A:1142:G:H2'	1:A:1143:G:H5'	2.03	0.41
1:A:935:A:H61	6:G:2:ARG:HD2	1.86	0.41
1:A:1163:A:O2'	1:A:1164:G:H5'	2.20	0.41
1:A:784:A:H2'	1:A:785:G:H8	1.85	0.41
11:L:37:TYR:HB3	11:L:38:THR:H	1.72	0.41
20:B:136:ARG:HG2	20:B:136:ARG:H	1.58	0.41
16:Q:4:ILE:HD12	16:Q:4:ILE:O	2.20	0.41
4:E:155:LYS:HG3	4:E:155:LYS:H	1.68	0.41
20:B:14:HIS:HD2	20:B:202:ASN:H	1.67	0.41
3:D:29:THR:HB	3:D:30:LYS:HZ2	1.81	0.41
3:D:57:LYS:HE3	3:D:61:ARG:HD3	2.02	0.41
11:L:41:PRO:HB3	11:L:49:ARG:NH1	2.36	0.41
1:A:747:A:C4	1:A:748:G:H1'	2.56	0.41
9:J:7:ARG:HB2	9:J:7:ARG:NH1	2.36	0.41
1:A:674:G:O2'	1:A:675:A:H5'	2.21	0.41
4:E:85:LYS:HE2	4:E:92:ARG:HH22	1.85	0.41
1:A:1451:U:O3'	1:A:1452:C:H6	2.02	0.41
1:A:1407:C:H2'	1:A:1408:A:O4'	2.21	0.41
1:A:1245:C:H2'	1:A:1246:A:C8	2.56	0.41
20:B:111:LYS:O	20:B:114:LYS:HB2	2.21	0.41
10:K:125:LYS:O	10:K:126:ARG:O	2.39	0.41
1:A:82:G:C6	1:A:88:U:O2	2.74	0.41
3:D:25:ARG:O	3:D:27:ILE:HG13	2.20	0.41
1:A:93:U:H2'	1:A:94:G:H4'	2.02	0.41
10:K:113:THR:HG21	21:U:28:LEU:CD1	2.50	0.41
13:N:52:ARG:C	13:N:54:SER:N	2.74	0.41
4:E:113:VAL:CG2	4:E:114:LEU:N	2.83	0.41
5:F:38:ARG:O	5:F:62:MET:O	2.39	0.41
5:F:4:TYR:CD2	5:F:71:ILE:HG21	2.55	0.41
12:M:21:ILE:HB	12:M:24:VAL:CG2	2.41	0.41
18:S:62:THR:H	18:S:65:MET:HB3	1.86	0.41
14:O:85:LEU:N	14:O:85:LEU:CD1	2.84	0.41
11:L:98:ARG:CB	11:L:116:TYR:HA	2.48	0.41
1:A:532:A:H62	2:C:191:THR:CG2	2.34	0.41
9:J:42:LEU:CB	9:J:71:LEU:HD21	2.48	0.41
9:J:41:PRO:O	9:J:42:LEU:HB2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:2:GLN:HE21	2:C:2:GLN:CA	2.33	0.41
5:F:98:GLU:O	5:F:99:ALA:HB3	2.21	0.41
5:F:97:THR:O	5:F:98:GLU:CD	2.59	0.41
1:A:1074:G:C4'	20:B:102:ASN:HB2	2.50	0.41
12:M:103:THR:O	12:M:104:ASN:HB2	2.21	0.41
20:B:118:THR:HA	20:B:121:GLN:NE2	2.36	0.41
7:H:81:GLY:HA2	16:Q:35:LYS:HZ2	1.85	0.41
2:C:86:LEU:O	2:C:90:VAL:HG23	2.21	0.41
11:L:80:LEU:O	11:L:97:VAL:HG23	2.21	0.41
15:P:10:GLY:HA3	15:P:15:PRO:C	2.41	0.41
20:B:113:LEU:O	20:B:113:LEU:HD23	2.20	0.41
10:K:81:LEU:HD21	10:K:104:PHE:HB3	2.02	0.41
1:A:223:A:H2'	1:A:224:U:H6	1.85	0.41
1:A:994:A:N1	1:A:1047:G:H4'	2.35	0.41
15:P:20:VAL:HG21	15:P:32:PHE:CG	2.56	0.41
1:A:435:A:N3	1:A:435:A:H2'	2.35	0.41
1:A:829:G:O2'	1:A:830:G:H5'	2.21	0.41
1:A:1346:A:N1	1:A:1374:A:H5''	2.36	0.41
18:S:54:ARG:O	18:S:55:GLN:HG2	2.21	0.41
1:A:1268:G:H2'	1:A:1269:A:C8	2.55	0.41
1:A:1048:G:OP1	13:N:3:GLN:HB2	2.21	0.41
1:A:1049:U:H1'	1:A:1201:A:C5	2.56	0.41
13:N:60:ARG:HG3	13:N:62:ARG:CG	2.49	0.41
13:N:72:PHE:CD1	13:N:73:LEU:N	2.89	0.41
7:H:63:LYS:CD	7:H:70:VAL:HG21	2.51	0.41
1:A:1100:C:O2	1:A:1102:A:H5'	2.21	0.41
1:A:617:G:H4'	15:P:46:LYS:CE	2.50	0.41
3:D:97:LEU:HD12	3:D:136:VAL:CG2	2.51	0.41
2:C:179:ALA:CB	2:C:181:ILE:HD11	2.49	0.41
1:A:499:A:H4'	1:A:500:G:OP1	2.20	0.41
1:A:591:U:H2'	1:A:592:G:H8	1.85	0.41
1:A:620:C:H1'	3:D:131:ILE:HG21	2.03	0.41
1:A:1509:C:O2'	1:A:1510:C:H5'	2.21	0.41
4:E:44:ARG:HA	4:E:71:ILE:O	2.21	0.41
1:A:658:C:H2'	1:A:659:U:C6	2.56	0.41
1:A:179:A:H2'	1:A:180:U:C6	2.56	0.41
1:A:628:G:O2'	1:A:629:A:H5'	2.21	0.41
2:C:147:GLY:HA2	2:C:170:GLY:HA3	2.03	0.41
1:A:880:C:O2'	1:A:881:G:H5'	2.21	0.41
1:A:599:C:O2'	1:A:600:A:H5'	2.21	0.40
2:C:172:VAL:O	2:C:174:LEU:HD12	2.20	0.40
5:F:4:TYR:O	5:F:63:ASN:HA	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:63:ASP:O	18:S:65:MET:N	2.54	0.40
1:A:1328:C:O2'	1:A:1329:A:H5'	2.20	0.40
14:O:70:LEU:HD13	14:O:70:LEU:O	2.22	0.40
13:N:23:ARG:O	13:N:26:LEU:HB3	2.21	0.40
1:A:255:G:H2'	1:A:256:U:C6	2.56	0.40
1:A:1238:A:N3	1:A:1238:A:H2'	2.36	0.40
1:A:408:A:H3'	1:A:409:U:H6	1.87	0.40
1:A:338:A:H2'	1:A:339:C:H6	1.86	0.40
5:F:43:GLY:O	5:F:58:HIS:HA	2.20	0.40
1:A:1217:C:H2'	1:A:1218:C:H6	1.86	0.40
1:A:152:A:H2'	1:A:153:C:O4'	2.20	0.40
4:E:81:GLN:CD	4:E:148:SER:HA	2.42	0.40
9:J:37:ARG:CZ	9:J:37:ARG:HA	2.51	0.40
1:A:1142:G:C2'	1:A:1143:G:H5'	2.51	0.40
17:R:32:ILE:HG22	17:R:33:THR:O	2.21	0.40
4:E:59:ILE:O	4:E:63:MET:HG2	2.21	0.40
9:J:47:GLU:O	9:J:66:GLU:HA	2.21	0.40
1:A:538:G:O2'	1:A:539:A:H5'	2.21	0.40
19:T:57:VAL:HG23	19:T:58:ASP:H	1.86	0.40
1:A:317:U:H2'	1:A:318:G:C8	2.56	0.40
1:A:1263:C:H2'	1:A:1264:U:C6	2.56	0.40
1:A:1258:G:H2'	1:A:1259:C:C6	2.56	0.40
3:D:53:GLN:HB3	3:D:202:LEU:HB2	2.03	0.40
6:G:132:THR:HA	6:G:135:LYS:HB2	2.03	0.40
1:A:81:A:N3	1:A:82:G:N7	2.70	0.40
5:F:5:GLU:HA	5:F:63:ASN:HA	2.04	0.40
10:K:28:ASN:ND2	10:K:29:THR:N	2.68	0.40
1:A:1279:G:H5''	9:J:9:ARG:NH2	2.36	0.40
4:E:125:LYS:HD2	4:E:126:ALA:H	1.86	0.40
10:K:33:ILE:HG13	10:K:73:VAL:HG21	2.02	0.40
1:A:123:U:OP1	1:A:312:C:H5'	2.21	0.40
1:A:677:U:H1'	10:K:120:CYS:SG	2.60	0.40
1:A:677:U:H2'	1:A:678:U:C6	2.56	0.40
1:A:620:C:H2'	1:A:621:A:C8	2.56	0.40
11:L:6:LEU:HD21	11:L:11:ARG:NE	2.37	0.40
2:C:155:ARG:H	2:C:162:ALA:HA	1.86	0.40
15:P:38:PHE:CE2	15:P:51:ARG:HD3	2.56	0.40
1:A:230:G:O2'	1:A:231:U:H5'	2.21	0.40
1:A:720:C:H6	1:A:720:C:O5'	2.04	0.40
13:N:77:GLY:C	13:N:78:LEU:HD12	2.41	0.40
5:F:4:TYR:HA	5:F:90:MET:O	2.22	0.40
1:A:1096:C:H2'	1:A:1097:C:H6	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1488:G:O2'	1:A:1489:G:H5'	2.21	0.40
12:M:2:ARG:HA	12:M:6:ILE:O	2.22	0.40
1:A:154:U:O2'	1:A:155:A:H5'	2.21	0.40
3:D:62:ARG:HG2	3:D:62:ARG:H	1.75	0.40
1:A:1297:G:O2'	6:G:113:LYS:HE3	2.19	0.40
15:P:22:ALA:HB2	15:P:32:PHE:HA	2.02	0.40
1:A:1136:C:H3'	1:A:1138:G:O6	2.21	0.40
1:A:1426:G:H2'	1:A:1427:C:C6	2.56	0.40
1:A:1346:A:H61	1:A:1374:A:H3'	1.86	0.40
7:H:29:SER:O	7:H:30:LYS:C	2.59	0.40
21:U:3:ILE:HG21	21:U:18:PHE:HB3	2.03	0.40
2:C:9:ILE:HG23	2:C:10:ARG:HG3	2.03	0.40
1:A:1291:U:H2'	1:A:1292:G:C8	2.56	0.40
1:A:974:A:P	13:N:68:ARG:HH22	2.44	0.40
1:A:1526:G:H2'	1:A:1527:U:H6	1.86	0.40
21:U:34:ARG:NH2	21:U:36:PHE:CD2	2.89	0.40
16:Q:17:GLU:O	16:Q:18:LYS:HB2	2.21	0.40
3:D:14:GLU:HG3	3:D:18:LEU:HD21	2.04	0.40
1:A:413:G:C2'	1:A:428:G:H21	2.34	0.40
20:B:163:ILE:HD11	20:B:209:VAL:HG12	2.04	0.40
18:S:6:LYS:HD2	18:S:6:LYS:N	2.35	0.40
11:L:23:LEU:C	11:L:25:ALA:H	2.25	0.40
1:A:1477:U:O2'	1:A:1478:U:H5'	2.20	0.40
17:R:33:THR:HG22	17:R:39:VAL:HG12	2.03	0.40
1:A:343:U:H2'	1:A:345:C:C4	2.56	0.40
21:U:3:ILE:HG23	21:U:18:PHE:HD1	1.86	0.40
1:A:346:G:H2'	1:A:347:G:O4'	2.22	0.40
19:T:2:ASN:CG	19:T:3:ILE:N	2.74	0.40
14:O:37:ASN:HA	14:O:40:GLN:HG3	2.02	0.40
1:A:693:G:H2'	1:A:694:A:O4'	2.22	0.40
8:I:10:ARG:H	8:I:80:HIS:HD2	1.68	0.40
1:A:892:A:N7	1:A:906:A:H2	2.19	0.40
13:N:51:PRO:HG2	13:N:52:ARG:H	1.87	0.40
4:E:95:MET:HG3	4:E:124:ALA:CB	2.49	0.40
12:M:84:CYS:HA	18:S:72:GLU:O	2.20	0.40
12:M:13:HIS:HB3	12:M:40:GLU:O	2.22	0.40
12:M:47:LEU:HD13	12:M:48:SER:H	1.87	0.40
13:N:32:ASP:HB3	13:N:34:ASN:OD1	2.21	0.40
1:A:522:C:N4	11:L:49:ARG:HH22	2.09	0.40
2:C:21:TRP:CH2	2:C:31:ASN:HB3	2.57	0.40
20:B:128:LEU:HD13	20:B:128:LEU:HA	1.95	0.40
1:A:812:G:O2'	1:A:813:U:C6	2.71	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1349:A:OP1	8:I:121:ARG:HB2	2.22	0.40
1:A:1073:U:H4'	20:B:104:LYS:CE	2.51	0.40
20:B:22:TRP:CZ3	20:B:24:PRO:HA	2.56	0.40
18:S:12:LEU:O	18:S:13:HIS:C	2.60	0.40
11:L:23:LEU:C	11:L:25:ALA:N	2.75	0.40
17:R:38:ILE:O	17:R:38:ILE:HG12	2.21	0.40
5:F:49:TYR:HE1	17:R:62:ARG:O	2.05	0.40
2:C:54:ILE:O	2:C:54:ILE:HG12	2.22	0.40
10:K:108:ASN:ND2	21:U:6:ARG:HB2	2.36	0.40
20:B:94:ARG:O	20:B:94:ARG:HG2	2.22	0.40
1:A:621:A:H2'	1:A:622:A:H8	1.84	0.40
2:C:61:LYS:O	2:C:62:SER:HB3	2.22	0.40
20:B:11:ALA:C	20:B:13:VAL:N	2.73	0.40
1:A:518:C:H2'	1:A:530:G:H8	1.87	0.40
1:A:1424:U:H2'	1:A:1425:U:C6	2.57	0.40
21:U:52:VAL:CG1	21:U:53:LYS:N	2.84	0.40
1:A:793:U:O2	1:A:1516:G:H4'	2.21	0.40
1:A:667:G:H2'	1:A:668:G:H8	1.86	0.40
1:A:1493:A:N3	1:A:1494:G:N7	2.70	0.40
1:A:916:U:H2'	1:A:917:G:C8	2.56	0.40
11:L:66:ILE:HG21	11:L:71:HIS:CB	2.51	0.40
1:A:1417:G:N2	1:A:1482:G:H2'	2.37	0.40
1:A:1045:C:H2'	1:A:1046:A:O4'	2.21	0.40
1:A:1332:A:H2'	1:A:1333:A:H8	1.87	0.40
1:A:984:C:H2'	1:A:985:C:C6	2.57	0.40
1:A:355:C:O2'	1:A:356:A:H5'	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	C	204/232 (88%)	152 (74%)	36 (18%)	16 (8%)	1	14
3	D	203/205 (99%)	151 (74%)	39 (19%)	13 (6%)	2	20

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	E	148/166 (89%)	125 (84%)	20 (14%)	3 (2%)	11	58
5	F	98/135 (73%)	71 (72%)	18 (18%)	9 (9%)	1	9
6	G	148/178 (83%)	114 (77%)	28 (19%)	6 (4%)	4	35
7	H	127/129 (98%)	106 (84%)	17 (13%)	4 (3%)	7	45
8	I	125/129 (97%)	92 (74%)	28 (22%)	5 (4%)	5	36
9	J	96/103 (93%)	73 (76%)	13 (14%)	10 (10%)	1	7
10	K	115/128 (90%)	85 (74%)	25 (22%)	5 (4%)	4	34
11	L	121/123 (98%)	84 (69%)	28 (23%)	9 (7%)	2	15
12	M	112/117 (96%)	85 (76%)	16 (14%)	11 (10%)	1	8
13	N	92/100 (92%)	65 (71%)	19 (21%)	8 (9%)	1	11
14	O	86/89 (97%)	68 (79%)	15 (17%)	3 (4%)	6	41
15	P	80/82 (98%)	62 (78%)	10 (12%)	8 (10%)	1	8
16	Q	78/83 (94%)	59 (76%)	15 (19%)	4 (5%)	3	28
17	R	53/74 (72%)	48 (91%)	5 (9%)	0	100	100
18	S	77/91 (85%)	59 (77%)	12 (16%)	6 (8%)	1	14
19	T	83/86 (96%)	64 (77%)	15 (18%)	4 (5%)	4	30
20	B	216/240 (90%)	153 (71%)	48 (22%)	15 (7%)	2	17
21	U	49/70 (70%)	31 (63%)	10 (20%)	8 (16%)	0	1
All	All	2311/2560 (90%)	1747 (76%)	417 (18%)	147 (6%)	2	20

All (147) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	C	14	VAL
2	C	25	THR
2	C	54	ILE
2	C	100	ILE
2	C	104	GLU
2	C	153	SER
3	D	31	CYS
5	F	92	THR
7	H	66	GLN
8	I	8	THR
8	I	57	VAL
9	J	57	VAL
9	J	75	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	K	126	ARG
11	L	13	ARG
11	L	23	LEU
11	L	42	LYS
11	L	121	PRO
12	M	15	VAL
12	M	65	GLU
12	M	111	PRO
13	N	50	LEU
13	N	70	HIS
15	P	44	SER
16	Q	32	ILE
20	B	9	LEU
20	B	15	PHE
20	B	19	THR
20	B	22	TRP
20	B	94	ARG
21	U	35	GLU
2	C	145	ALA
2	C	205	GLU
3	D	22	SER
3	D	35	GLN
3	D	191	SER
4	E	20	VAL
4	E	108	GLY
5	F	54	LEU
5	F	85	ILE
6	G	5	VAL
6	G	112	ASP
7	H	82	LEU
9	J	36	VAL
9	J	74	VAL
10	K	88	PRO
11	L	24	GLU
11	L	70	GLY
11	L	117	GLY
12	M	66	GLY
12	M	105	ALA
13	N	61	ASN
14	O	18	ASP
14	O	76	ALA
15	P	28	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
15	P	47	GLU
15	P	79	ASN
16	Q	79	GLU
20	B	18	GLN
20	B	95	TRP
20	B	150	ILE
20	B	188	THR
21	U	23	GLU
21	U	34	ARG
3	D	165	GLU
5	F	82	ASP
6	G	71	THR
8	I	24	ASN
9	J	34	ALA
9	J	56	HIS
9	J	62	ARG
9	J	93	ALA
10	K	14	GLN
11	L	43	LYS
12	M	6	ILE
12	M	7	ASN
13	N	2	LYS
15	P	52	LEU
16	Q	28	VAL
18	S	27	LYS
18	S	53	GLY
18	S	64	GLU
18	S	67	GLY
19	T	65	LEU
19	T	85	LEU
20	B	14	HIS
21	U	12	ASP
21	U	22	CYS
21	U	36	PHE
2	C	3	LYS
2	C	60	ALA
2	C	65	VAL
2	C	107	LYS
3	D	159	GLU
3	D	192	ALA
5	F	35	LYS
5	F	98	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
9	J	61	ALA
10	K	49	SER
11	L	72	ASN
12	M	3	ILE
12	M	68	LEU
13	N	71	GLY
18	S	63	ASP
19	T	67	HIS
20	B	86	CYS
21	U	9	GLU
21	U	37	TYR
2	C	59	PRO
2	C	180	ASP
3	D	26	ALA
3	D	68	GLU
4	E	69	ASN
5	F	95	ALA
6	G	129	ASN
8	I	119	LYS
10	K	125	LYS
12	M	22	TYR
12	M	104	ASN
13	N	20	PHE
13	N	52	ARG
13	N	75	LYS
14	O	74	ASP
15	P	33	ILE
16	Q	31	PRO
19	T	3	ILE
20	B	200	PRO
20	B	205	ALA
2	C	26	LYS
2	C	167	TYR
3	D	29	THR
5	F	51	ILE
5	F	53	LYS
6	G	70	PRO
7	H	24	VAL
7	H	30	LYS
9	J	41	PRO
3	D	107	GLY
20	B	154	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	G	7	GLY
15	P	10	GLY
3	D	27	ILE
8	I	71	ILE
18	S	29	PRO
20	B	70	GLY
3	D	175	GLY
15	P	42	ILE

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	C	170/189 (90%)	145 (85%)	25 (15%)	4	22
3	D	172/172 (100%)	138 (80%)	34 (20%)	2	9
4	E	113/125 (90%)	99 (88%)	14 (12%)	7	31
5	F	87/116 (75%)	70 (80%)	17 (20%)	2	9
6	G	123/146 (84%)	101 (82%)	22 (18%)	2	13
7	H	104/104 (100%)	95 (91%)	9 (9%)	15	53
8	I	105/106 (99%)	86 (82%)	19 (18%)	2	12
9	J	86/90 (96%)	75 (87%)	11 (13%)	6	29
10	K	90/98 (92%)	74 (82%)	16 (18%)	2	13
11	L	103/103 (100%)	87 (84%)	16 (16%)	4	19
12	M	92/95 (97%)	71 (77%)	21 (23%)	1	5
13	N	79/83 (95%)	71 (90%)	8 (10%)	11	42
14	O	76/77 (99%)	70 (92%)	6 (8%)	18	59
15	P	65/65 (100%)	57 (88%)	8 (12%)	7	32
16	Q	74/77 (96%)	59 (80%)	15 (20%)	2	8
17	R	48/64 (75%)	43 (90%)	5 (10%)	10	41
18	S	70/78 (90%)	53 (76%)	17 (24%)	1	3
19	T	65/65 (100%)	54 (83%)	11 (17%)	3	15

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
20	B	180/198 (91%)	145 (81%)	35 (19%)	2	10
21	U	44/60 (73%)	28 (64%)	16 (36%)	0	1
All	All	1946/2111 (92%)	1621 (83%)	325 (17%)	3	16

All (325) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	C	2	GLN
2	C	13	ILE
2	C	20	THR
2	C	26	LYS
2	C	27	GLU
2	C	41	TYR
2	C	48	LYS
2	C	63	ILE
2	C	81	GLU
2	C	88	LYS
2	C	96	VAL
2	C	106	ARG
2	C	107	LYS
2	C	118	SER
2	C	120	THR
2	C	130	ARG
2	C	131	ARG
2	C	138	GLN
2	C	143	LEU
2	C	166	TRP
2	C	168	ARG
2	C	171	ARG
2	C	184	ASN
2	C	192	TYR
2	C	206	ILE
3	D	4	LEU
3	D	7	LYS
3	D	18	LEU
3	D	25	ARG
3	D	27	ILE
3	D	28	ASP
3	D	32	LYS
3	D	35	GLN
3	D	39	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	D	40	HIS
3	D	49	ASP
3	D	55	ARG
3	D	57	LYS
3	D	58	GLN
3	D	60	VAL
3	D	80	ARG
3	D	84	ASN
3	D	87	GLU
3	D	106	PHE
3	D	123	MET
3	D	141	VAL
3	D	146	GLU
3	D	147	LYS
3	D	160	LEU
3	D	164	ARG
3	D	176	LYS
3	D	186	GLU
3	D	187	ARG
3	D	190	LEU
3	D	191	SER
3	D	193	ASP
3	D	195	ASN
3	D	196	GLU
3	D	199	ILE
4	E	9	GLU
4	E	21	SER
4	E	23	THR
4	E	25	LYS
4	E	30	PHE
4	E	45	VAL
4	E	51	LYS
4	E	61	LYS
4	E	95	MET
4	E	119	VAL
4	E	123	LEU
4	E	127	TYR
4	E	147	ASN
4	E	156	ARG
5	F	6	ILE
5	F	9	MET
5	F	39	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	F	51	ILE
5	F	53	LYS
5	F	54	LEU
5	F	55	HIS
5	F	61	LEU
5	F	62	MET
5	F	65	GLU
5	F	69	GLU
5	F	82	ASP
5	F	86	ARG
5	F	87	SER
5	F	90	MET
5	F	98	GLU
5	F	100	SER
6	G	5	VAL
6	G	12	LEU
6	G	19	SER
6	G	22	LEU
6	G	26	VAL
6	G	27	ASN
6	G	47	GLU
6	G	55	LYS
6	G	57	GLU
6	G	62	GLU
6	G	75	LYS
6	G	78	ARG
6	G	83	THR
6	G	94	ARG
6	G	109	LYS
6	G	110	ARG
6	G	112	ASP
6	G	117	LEU
6	G	132	THR
6	G	136	LYS
6	G	147	ASN
6	G	148	LYS
7	H	28	SER
7	H	37	ASN
7	H	55	LYS
7	H	57	GLU
7	H	72	GLU
7	H	73	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	H	87	ARG
7	H	111	THR
7	H	113	ARG
8	I	10	ARG
8	I	26	LYS
8	I	31	GLN
8	I	36	GLN
8	I	45	MET
8	I	53	LEU
8	I	56	MET
8	I	58	GLU
8	I	59	LYS
8	I	61	ASP
8	I	67	LYS
8	I	74	GLN
8	I	84	ARG
8	I	87	MET
8	I	94	ARG
8	I	98	ARG
8	I	106	ASP
8	I	109	GLN
8	I	114	LYS
9	J	17	LEU
9	J	47	GLU
9	J	57	VAL
9	J	60	ASP
9	J	75	ASP
9	J	77	VAL
9	J	85	ASP
9	J	88	MET
9	J	91	ASP
9	J	92	LEU
9	J	99	GLN
10	K	12	ARG
10	K	25	SER
10	K	28	ASN
10	K	31	VAL
10	K	34	THR
10	K	51	PHE
10	K	55	ARG
10	K	75	GLU
10	K	80	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
10	K	84	MET
10	K	105	ARG
10	K	115	ILE
10	K	118	ASN
10	K	121	ARG
10	K	126	ARG
10	K	128	VAL
11	L	4	ASN
11	L	13	ARG
11	L	14	LYS
11	L	17	LYS
11	L	28	GLN
11	L	33	CYS
11	L	38	THR
11	L	39	THR
11	L	43	LYS
11	L	49	ARG
11	L	77	SER
11	L	80	LEU
11	L	107	LYS
11	L	113	ARG
11	L	119	LYS
11	L	122	LYS
12	M	2	ARG
12	M	15	VAL
12	M	18	LEU
12	M	28	ARG
12	M	30	LYS
12	M	41	ASP
12	M	44	ILE
12	M	46	GLU
12	M	47	LEU
12	M	54	THR
12	M	57	ASP
12	M	62	PHE
12	M	65	GLU
12	M	69	ARG
12	M	77	LYS
12	M	82	LEU
12	M	89	ARG
12	M	91	ARG
12	M	92	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	M	106	ARG
12	M	113	LYS
13	N	3	GLN
13	N	26	LEU
13	N	27	LYS
13	N	48	GLN
13	N	50	LEU
13	N	53	ASP
13	N	59	GLN
13	N	65	GLN
14	O	21	ASP
14	O	40	GLN
14	O	54	ARG
14	O	81	LEU
14	O	88	ARG
14	O	89	ARG
15	P	5	ARG
15	P	12	LYS
15	P	28	ARG
15	P	45	GLU
15	P	46	LYS
15	P	51	ARG
15	P	66	THR
15	P	68	SER
16	Q	6	THR
16	Q	10	ARG
16	Q	15	LYS
16	Q	39	ARG
16	Q	48	GLU
16	Q	50	ASN
16	Q	56	ASP
16	Q	60	ILE
16	Q	64	ARG
16	Q	66	LEU
16	Q	74	LEU
16	Q	76	ARG
16	Q	78	VAL
16	Q	79	GLU
16	Q	80	LYS
17	R	21	ASP
17	R	23	LYS
17	R	33	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	R	38	ILE
17	R	46	THR
18	S	3	SER
18	S	4	LEU
18	S	5	LYS
18	S	11	ASP
18	S	12	LEU
18	S	15	LEU
18	S	20	LYS
18	S	27	LYS
18	S	28	LYS
18	S	39	ILE
18	S	42	ASN
18	S	47	THR
18	S	59	VAL
18	S	60	PHE
18	S	64	GLU
18	S	66	VAL
18	S	80	ARG
19	T	4	LYS
19	T	7	LYS
19	T	13	SER
19	T	35	TYR
19	T	38	ILE
19	T	43	LYS
19	T	53	MET
19	T	59	ARG
19	T	68	LYS
19	T	69	ASN
19	T	77	ASN
20	B	14	HIS
20	B	18	GLN
20	B	23	ASN
20	B	27	LYS
20	B	46	VAL
20	B	50	ASN
20	B	57	ASN
20	B	58	LYS
20	B	67	LEU
20	B	72	LYS
20	B	80	LYS
20	B	87	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
20	B	88	GLN
20	B	94	ARG
20	B	95	TRP
20	B	104	LYS
20	B	121	GLN
20	B	122	ASP
20	B	125	PHE
20	B	127	LYS
20	B	136	ARG
20	B	137	THR
20	B	138	ARG
20	B	140	LEU
20	B	144	GLU
20	B	156	LEU
20	B	177	ASN
20	B	196	ASP
20	B	202	ASN
20	B	209	VAL
20	B	212	TYR
20	B	219	THR
20	B	221	ARG
20	B	222	GLU
20	B	224	ARG
21	U	4	LYS
21	U	6	ARG
21	U	11	PHE
21	U	12	ASP
21	U	15	LEU
21	U	16	ARG
21	U	20	ARG
21	U	21	SER
21	U	24	LYS
21	U	27	VAL
21	U	34	ARG
21	U	36	PHE
21	U	38	GLU
21	U	41	THR
21	U	44	ARG
21	U	48	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (58) such sidechains are listed below:

Mol	Chain	Res	Type
2	C	2	GLN
2	C	139	ASN
2	C	184	ASN
2	C	189	HIS
3	D	35	GLN
3	D	39	GLN
3	D	53	GLN
3	D	58	GLN
3	D	84	ASN
3	D	115	GLN
3	D	119	HIS
3	D	135	GLN
3	D	151	GLN
4	E	81	GLN
4	E	82	HIS
4	E	131	ASN
5	F	46	GLN
6	G	27	ASN
6	G	67	ASN
6	G	121	ASN
6	G	147	ASN
7	H	3	GLN
7	H	66	GLN
7	H	75	GLN
7	H	117	GLN
8	I	30	ASN
8	I	36	GLN
8	I	74	GLN
8	I	80	HIS
9	J	20	GLN
9	J	35	GLN
10	K	28	ASN
10	K	39	ASN
11	L	5	GLN
11	L	28	GLN
11	L	45	ASN
11	L	111	GLN
12	M	7	ASN
13	N	42	ASN
13	N	61	ASN
13	N	65	GLN
14	O	37	ASN
14	O	40	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
15	P	26	ASN
15	P	29	ASN
15	P	40	ASN
16	Q	50	ASN
17	R	53	GLN
18	S	42	ASN
18	S	68	HIS
19	T	12	GLN
19	T	51	ASN
20	B	23	ASN
20	B	57	ASN
20	B	88	GLN
20	B	119	GLN
20	B	121	GLN
20	B	202	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1529/1542 (99%)	248 (16%)	28 (1%)

All (248) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	9	G
1	A	14	U
1	A	15	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	41	G
1	A	47	C
1	A	48	C
1	A	52	C
1	A	54	C
1	A	55	A
1	A	61	G
1	A	66	A
1	A	67	C
1	A	70	U
1	A	71	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	72	A
1	A	73	C
1	A	74	A
1	A	78	A
1	A	81	A
1	A	83	C
1	A	84	U
1	A	85	U
1	A	86	G
1	A	88	U
1	A	89	U
1	A	91	U
1	A	92	U
1	A	93	U
1	A	94	G
1	A	95	C
1	A	108	G
1	A	121	U
1	A	131	A
1	A	151	A
1	A	182	A
1	A	183	C
1	A	197	A
1	A	209	U
1	A	210	C
1	A	213	G
1	A	239	U
1	A	240	G
1	A	243	A
1	A	244	U
1	A	245	U
1	A	247	G
1	A	250	A
1	A	251	G
1	A	257	G
1	A	258	G
1	A	266	G
1	A	267	C
1	A	280	C
1	A	289	G
1	A	301	G
1	A	328	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	329	A
1	A	330	C
1	A	332	G
1	A	349	A
1	A	352	C
1	A	354	G
1	A	367	U
1	A	372	C
1	A	373	A
1	A	374	A
1	A	381	C
1	A	397	A
1	A	398	U
1	A	406	G
1	A	408	A
1	A	409	U
1	A	411	A
1	A	412	A
1	A	413	G
1	A	415	A
1	A	421	U
1	A	422	C
1	A	424	G
1	A	429	U
1	A	430	A
1	A	435	A
1	A	461	A
1	A	462	G
1	A	463	U
1	A	464	U
1	A	465	A
1	A	466	A
1	A	467	U
1	A	468	A
1	A	482	A
1	A	484	G
1	A	485	U
1	A	486	U
1	A	493	A
1	A	511	C
1	A	518	C
1	A	527	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	532	A
1	A	547	A
1	A	559	A
1	A	562	U
1	A	572	A
1	A	573	A
1	A	576	C
1	A	577	G
1	A	596	A
1	A	639	G
1	A	653	U
1	A	665	A
1	A	695	A
1	A	700	G
1	A	721	G
1	A	723	U
1	A	724	G
1	A	731	G
1	A	733	G
1	A	747	A
1	A	748	G
1	A	755	G
1	A	777	A
1	A	793	U
1	A	794	A
1	A	812	G
1	A	815	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	821	G
1	A	828	U
1	A	841	C
1	A	842	U
1	A	843	U
1	A	844	G
1	A	845	A
1	A	848	C
1	A	849	G
1	A	914	A
1	A	926	G
1	A	927	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	934	C
1	A	935	A
1	A	960	U
1	A	961	U
1	A	966	G
1	A	969	A
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	984	C
1	A	992	U
1	A	993	G
1	A	994	A
1	A	1004	A
1	A	1009	U
1	A	1010	U
1	A	1020	G
1	A	1025	U
1	A	1026	G
1	A	1029	U
1	A	1030	U
1	A	1031	C
1	A	1033	G
1	A	1035	A
1	A	1050	G
1	A	1054	C
1	A	1065	U
1	A	1066	C
1	A	1085	U
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1118	U
1	A	1124	G
1	A	1129	C
1	A	1136	C
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1158	C
1	A	1167	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1168	U
1	A	1169	A
1	A	1178	G
1	A	1179	A
1	A	1181	G
1	A	1183	U
1	A	1184	G
1	A	1196	A
1	A	1197	A
1	A	1201	A
1	A	1202	U
1	A	1211	U
1	A	1212	U
1	A	1213	A
1	A	1214	C
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1238	A
1	A	1240	U
1	A	1241	G
1	A	1256	A
1	A	1257	A
1	A	1258	G
1	A	1270	G
1	A	1278	G
1	A	1279	G
1	A	1280	A
1	A	1281	C
1	A	1286	U
1	A	1289	A
1	A	1300	G
1	A	1301	U
1	A	1302	C
1	A	1305	G
1	A	1316	G
1	A	1317	C
1	A	1319	A
1	A	1320	C
1	A	1323	G
1	A	1336	C
1	A	1353	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1363	A
1	A	1364	U
1	A	1381	U
1	A	1398	A
1	A	1408	A
1	A	1411	C
1	A	1432	G
1	A	1446	A
1	A	1452	C
1	A	1489	G
1	A	1493	A
1	A	1497	G
1	A	1503	A
1	A	1506	U
1	A	1517	G
1	A	1519	A
1	A	1520	C
1	A	1529	G
1	A	1530	G
1	A	1533	C
1	A	1534	A

All (28) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	51	A
1	A	60	A
1	A	88	U
1	A	239	U
1	A	243	A
1	A	279	A
1	A	328	C
1	A	366	A
1	A	372	C
1	A	428	G
1	A	429	U
1	A	462	G
1	A	484	G
1	A	485	U
1	A	576	C
1	A	819	A
1	A	960	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	975	A
1	A	1025	U
1	A	1049	U
1	A	1065	U
1	A	1168	U
1	A	1201	A
1	A	1213	A
1	A	1226	C
1	A	1362	A
1	A	1397	C
1	A	1451	U

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 60 ligands modelled in this entry, 60 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.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.