



# Full wwPDB X-ray Structure Validation Report

Mar 31, 2014 – 06:08 PM BST

PDB ID : 3DF1  
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with hygromycin B. This file contains the 30S subunit of the first 70S ribosome, with hygromycin B bound. The entire crystal structure contains two 70S ribosomes.  
Authors : Borovinskaya, M.A.; Shoji, S.; Fredrick, K.; Cate, J.H.D.  
Deposited on : 2008-06-11  
Resolution : 3.50 Å(reported)

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

---

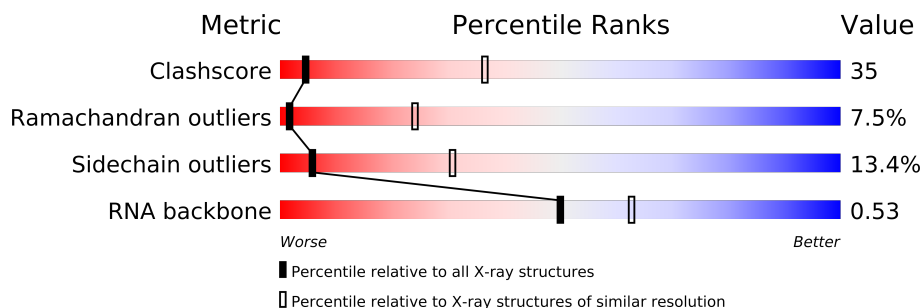
The following versions of software and data (see [references](#)) were used in the production of this report:

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 3.50 Å.

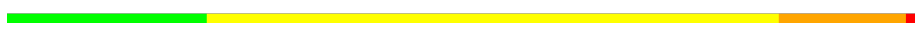
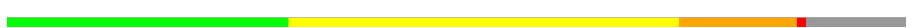
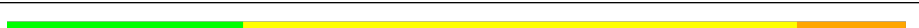

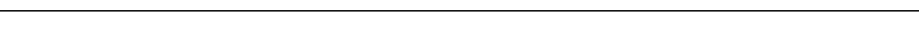





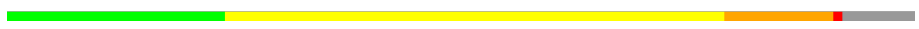
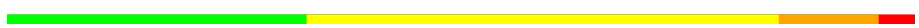

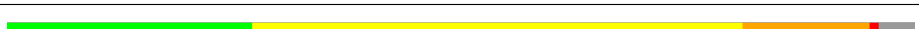
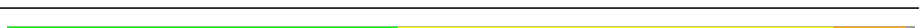
Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1039 (3.66-3.34)
Ramachandran outliers	78287	1000 (3.66-3.34)
Sidechain outliers	78261	1000 (3.66-3.34)
RNA backbone	1838	1007 (4.22-2.76)

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  $\geq 3$ , 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	<div><div></div></div>
17	R	74	<div><div></div></div>
18	S	91	<div><div></div></div>
19	T	86	<div><div></div></div>
20	B	240	<div><div></div></div>
21	U	71	<div><div></div></div>

## 2 Entry composition

There are 24 unique types of molecules in this entry. The entry contains 51764 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 ribosomal RNA.

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
			715	440	146	128	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			

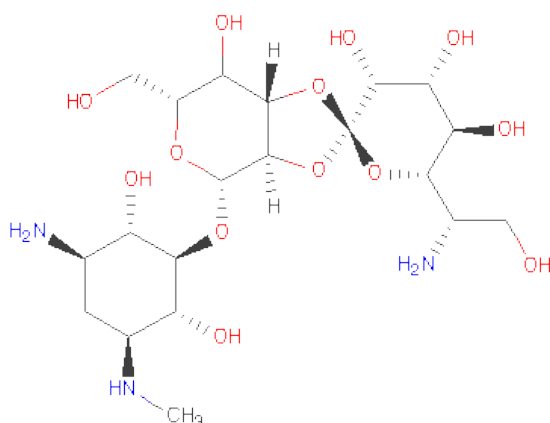
- Molecule 21 is a protein called 30S ribosomal protein S21.

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	58	Total	Mg	0	0
			58	58		
22	N	1	Total	Mg	0	0
			1	1		
22	E	1	Total	Mg	0	0
			1	1		

- Molecule 23 is HYGROMYCIN B (three-letter code: HYG) (formula: C<sub>20</sub>H<sub>37</sub>N<sub>3</sub>O<sub>13</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
23	A	1	Total	C	N	O	0	0
			36	20	3	13		

- Molecule 24 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
24	A	285	Total	O	0	0
			285	285		
24	E	3	Total	O	0	0
			3	3		

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
24	L	6	Total 6	O 6	0	0
24	N	3	Total 3	O 3	0	0
24	T	3	Total 3	O 3	0	0

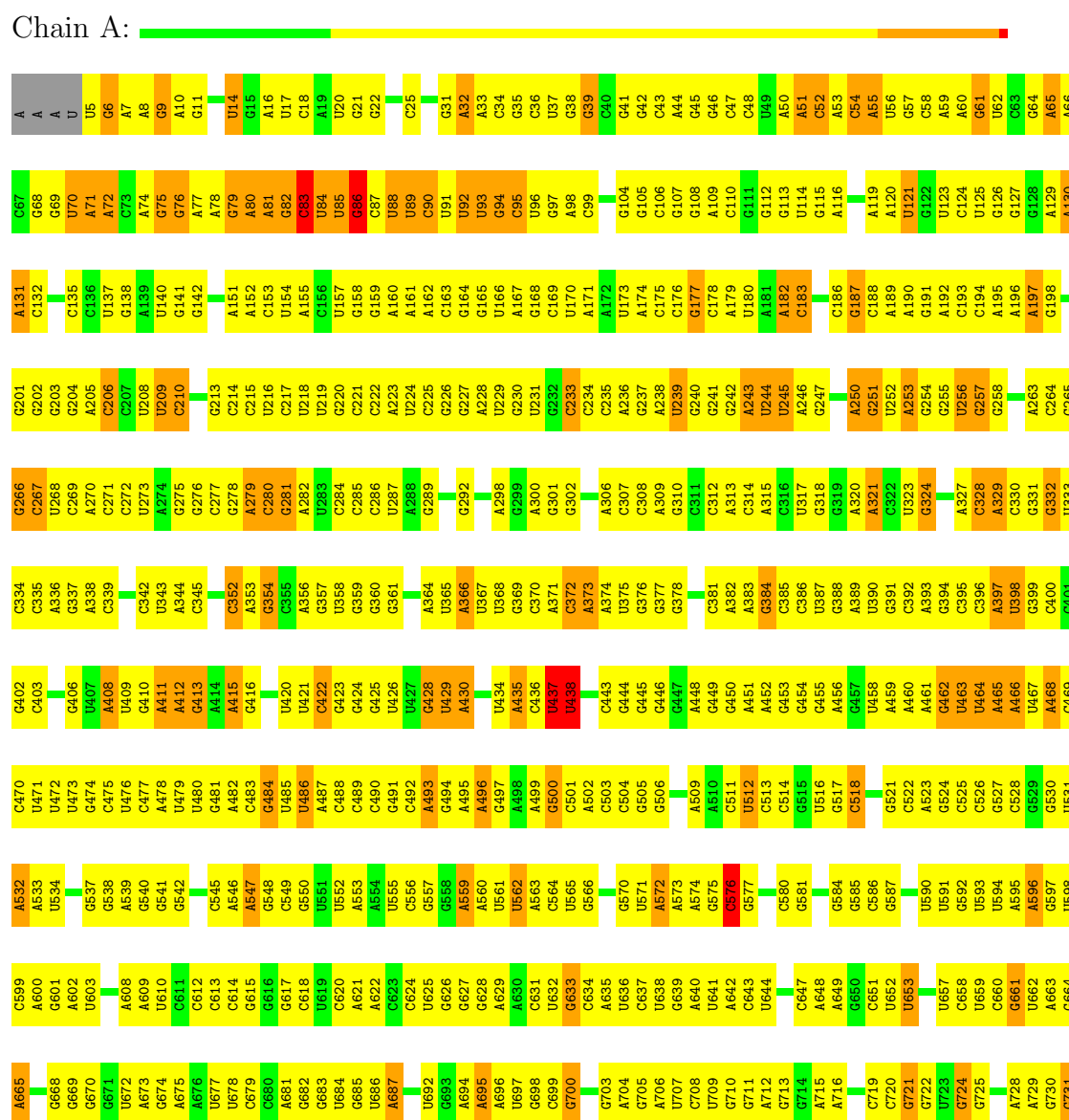


### 3 Residue-property plots

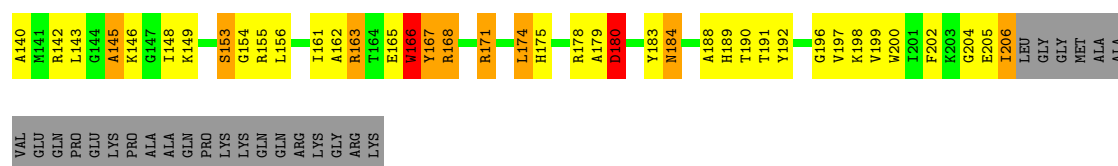
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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 ribosomal RNA

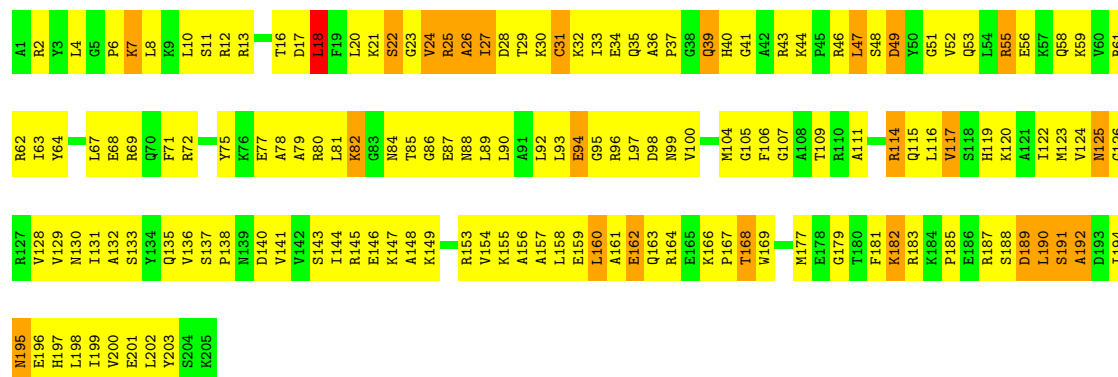






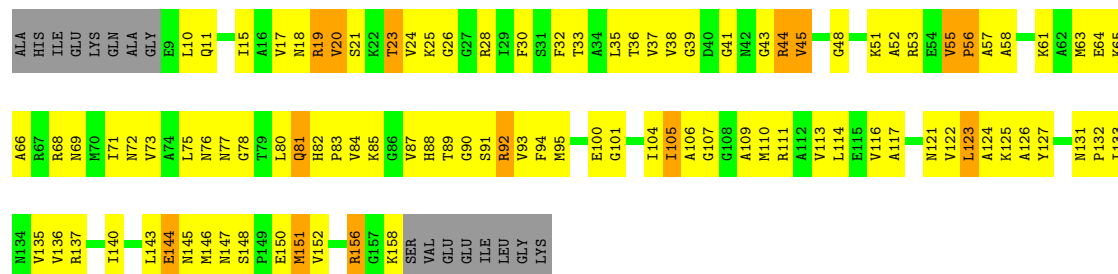
• Molecule 3: 30S ribosomal protein S4

Chain D:



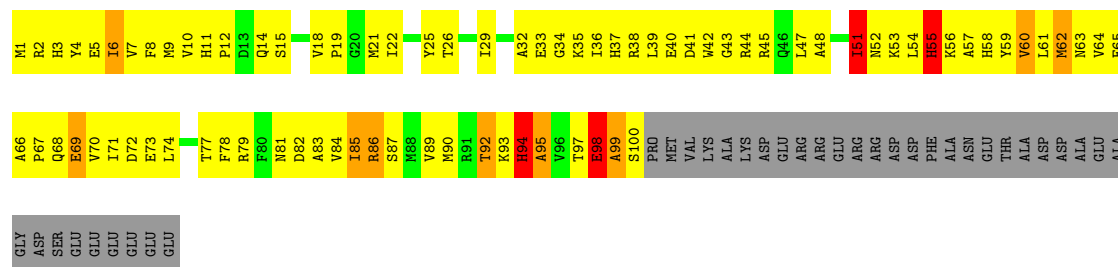
• Molecule 4: 30S ribosomal protein S5

Chain E:



• Molecule 5: 30S ribosomal protein S6

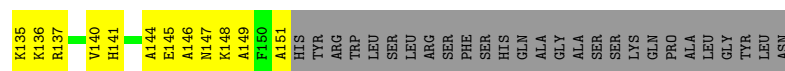
Chain F:



• Molecule 6: 30S ribosomal protein S7

Chain G:





• Molecule 7: 30S ribosomal protein S8

Chain H:



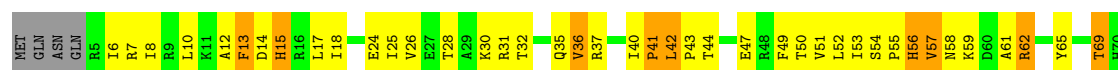
• Molecule 8: 30S ribosomal protein S9

Chain I:



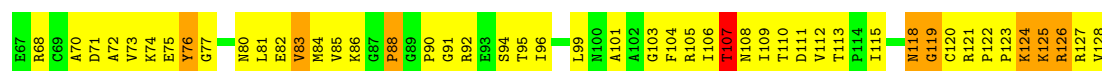
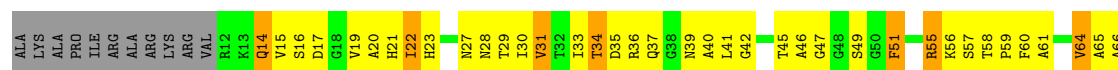
• Molecule 9: 30S ribosomal protein S10

Chain J:



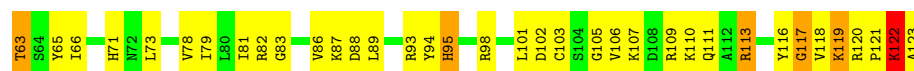
• Molecule 10: 30S ribosomal protein S11

Chain K:



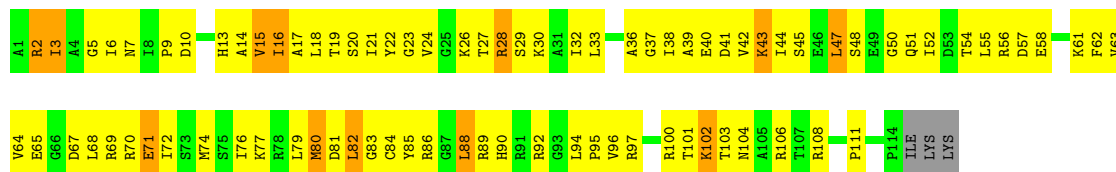
• Molecule 11: 30S ribosomal protein S12

Chain L:



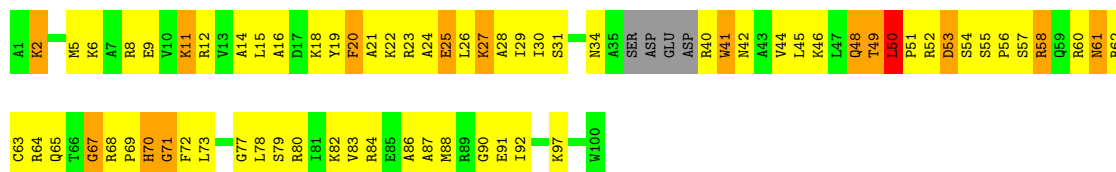
- Molecule 12: 30S ribosomal protein S13

Chain M:



- Molecule 13: 30S ribosomal protein S14

Chain N:



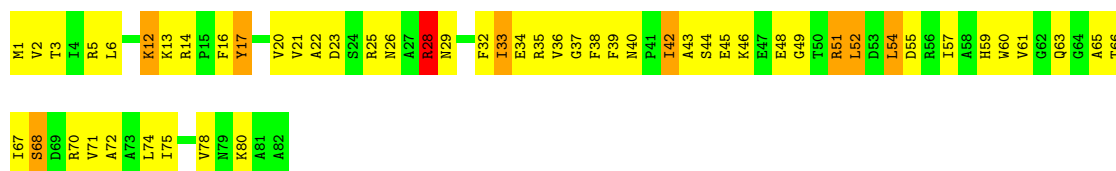
- Molecule 14: 30S ribosomal protein S15

Chain O:



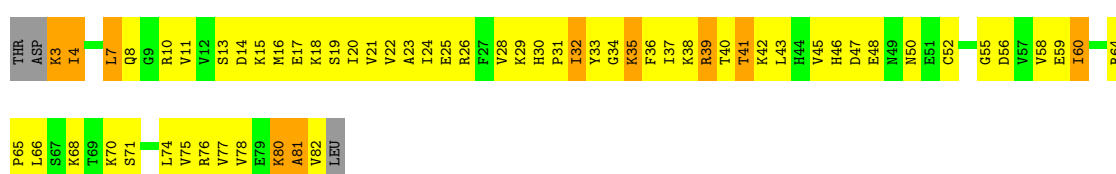
- Molecule 15: 30S ribosomal protein S16

Chain P:



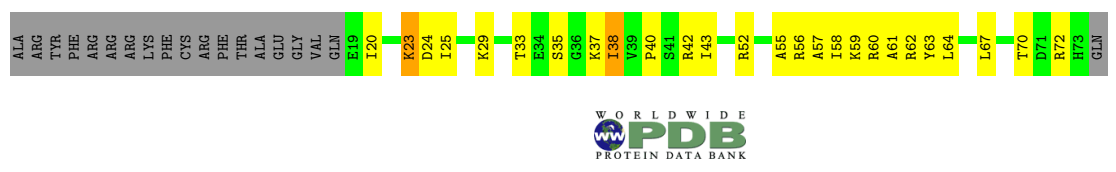
- Molecule 16: 30S ribosomal protein S17

Chain Q:



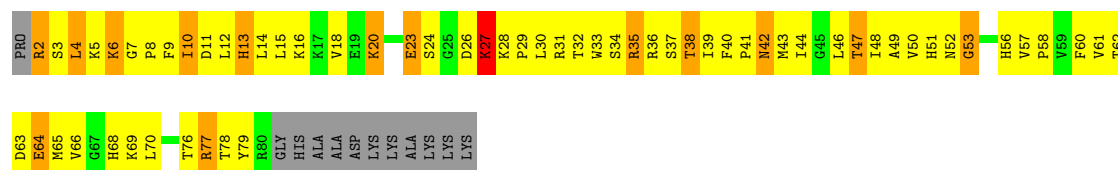
- Molecule 17: 30S ribosomal protein S18

Chain R:



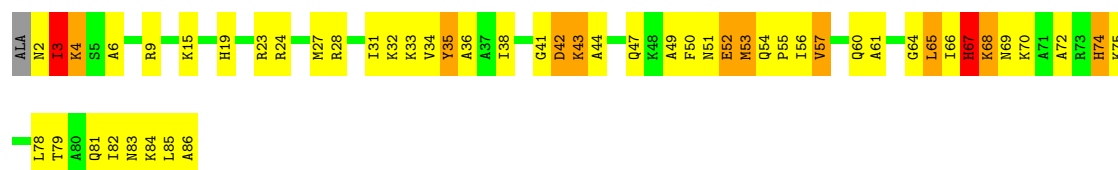
- Molecule 18: 30S ribosomal protein S19

Chain S:



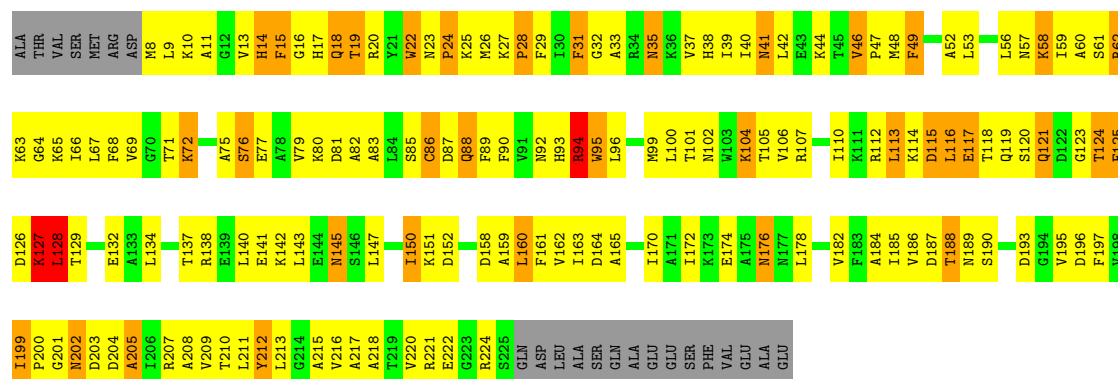
- Molecule 19: 30S ribosomal protein S20

Chain T:



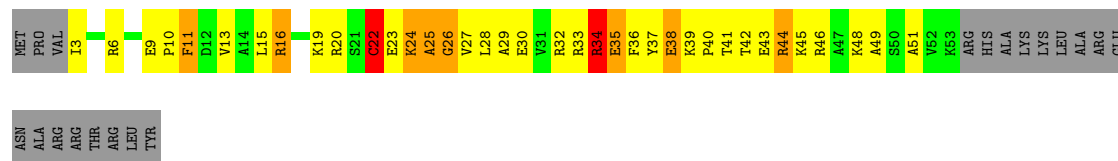
- Molecule 20: 30S ribosomal protein S2

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, $\alpha$ , $\beta$ , $\gamma$	208.70Å 379.50Å 739.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.50	Depositor
% Data completeness (in resolution range)	62.1 (70.00-3.50)	Depositor
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.07	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.88 (at 3.49Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.269 , 0.318	Depositor
Wilson B-factor (Å <sup>2</sup> )	117.9	Xtriage
Anisotropy	0.294	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.50$ , $\langle L^2 \rangle = 0.33$	Xtriage
Outliers	0 of 454411 reflections	Xtriage
Total number of atoms	51764	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	93.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.15% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities 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, HYG

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	1/36762 (0.0%)	0.77	13/57350 (0.0%)
2	C	0.23	0/1651	0.44	0/2225
3	D	0.23	0/1665	0.43	0/2227
4	E	0.23	0/1118	0.45	0/1504
5	F	0.24	0/835	0.44	0/1128
6	G	0.23	0/1187	0.45	0/1591
7	H	0.23	0/989	0.45	0/1326
8	I	0.24	0/1034	0.44	0/1375
9	J	0.22	0/796	0.47	0/1077
10	K	0.24	0/893	0.46	0/1205
11	L	0.22	0/969	0.47	0/1300
12	M	0.21	0/892	0.45	0/1193
13	N	0.24	0/785	0.43	0/1043
14	O	0.22	0/723	0.44	0/966
15	P	0.25	0/659	0.45	0/884
16	Q	0.24	0/657	0.46	0/881
17	R	0.23	0/462	0.44	0/621
18	S	0.25	0/652	0.45	0/877
19	T	0.23	0/671	0.41	0/888
20	B	0.25	0/1735	0.44	0/2338
21	U	0.26	0/430	0.46	0/570
All	All	0.25	1/55565 (0.0%)	0.69	13/82569 (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	13



All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	495	A	N3-C4	-5.62	1.31	1.34

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1213	A	O5'-P-OP2	-29.58	75.21	110.70
1	A	1213	A	O5'-P-OP1	16.79	130.85	110.70
1	A	1212	U	OP2-P-O3'	14.25	136.56	105.20
1	A	975	A	C5'-C4'-C3'	-6.77	105.17	116.00
1	A	1212	U	O3'-P-O5'	-6.76	91.16	104.00
1	A	86	G	N9-C1'-C2'	6.63	122.62	114.00
1	A	576	C	C5'-C4'-C3'	5.87	125.39	116.00
1	A	1213	A	C1'-O4'-C4'	-5.75	105.30	109.90
1	A	765	G	N9-C1'-C2'	-5.51	105.94	112.00
1	A	437	U	N1-C1'-C2'	5.27	120.85	114.00
1	A	1362	A	C5'-C4'-O4'	5.23	115.38	109.10
1	A	1049	U	O5'-P-OP1	5.12	116.84	110.70
1	A	1049	U	O5'-P-OP2	-5.11	101.11	105.70

There are no chirality outliers.

All (13) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1006	G	Sidechain
1	A	1047	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	496	A	Sidechain
1	A	703	G	Sidechain
1	A	83	C	Sidechain
1	A	832	G	Sidechain
1	A	992	U	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	1346	0
2	C	1624	0	1699	137	0
3	D	1643	0	1710	166	0
4	E	1105	0	1148	105	0
5	F	817	0	808	95	0
6	G	1174	0	1230	118	0
7	H	979	0	1034	93	0
8	I	1022	0	1070	151	0
9	J	786	0	828	78	0
10	K	877	0	887	99	0
11	L	955	0	1019	90	0
12	M	883	0	944	108	0
13	N	774	0	827	96	0
14	O	715	0	742	44	0
15	P	649	0	666	53	0
16	Q	648	0	691	73	0
17	R	455	0	478	34	0
18	S	637	0	665	101	0
19	T	665	0	714	49	0
20	B	1704	0	1732	205	0
21	U	425	0	449	67	0
22	A	58	0	0	0	0
22	E	1	0	0	0	0
22	N	1	0	0	0	0
23	A	36	0	37	2	0
24	A	285	0	0	4	0
24	E	3	0	0	0	0
24	L	6	0	0	0	0
24	N	3	0	0	0	0
24	T	3	0	0	0	0
All	All	51764	0	35899	3057	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 35.

All (3057) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:16:ARG:HE	21:U:16:ARG:HA	1.20	1.04
1:A:1221:G:H4'	18:S:76:THR:HG21	1.40	1.03
8:I:20:ILE:HA	8:I:62:LEU:HD12	1.37	1.02
1:A:1086:U:H3	1:A:1099:G:H22	1.10	1.00
13:N:51:PRO:HB2	13:N:54:SER:HB3	1.44	1.00
2:C:128:MET:HB2	2:C:131:ARG:HB2	1.46	0.98
5:F:92:THR:HG22	5:F:94:HIS:H	1.26	0.97
20:B:202:ASN:HD22	20:B:204:ASP:H	1.07	0.96
10:K:33:ILE:HB	10:K:73:VAL:HG11	1.44	0.96
20:B:46:VAL:HG13	20:B:47:PRO:HD3	1.47	0.96
1:A:1399:C:H4'	1:A:1400:C:H5''	1.48	0.95
2:C:69:THR:HG21	2:C:75:VAL:HG21	1.48	0.95
18:S:18:VAL:HG21	18:S:43:MET:HG2	1.48	0.95
15:P:28:ARG:HD2	15:P:29:ASN:H	1.32	0.94
5:F:29:ILE:HG21	5:F:64:VAL:HG11	1.49	0.94
1:A:465:A:H2'	1:A:466:A:H3'	1.49	0.94
10:K:88:PRO:HD3	21:U:28:LEU:HD11	1.49	0.93
2:C:48:LYS:HE2	2:C:48:LYS:H	1.33	0.92
12:M:21:ILE:HB	12:M:24:VAL:HG22	1.49	0.92
1:A:1003:G:N2	1:A:1005:A:H5'	1.85	0.91
3:D:116:LEU:HB3	3:D:122:ILE:HD11	1.51	0.91
5:F:3:HIS:ND1	5:F:92:THR:HG23	1.85	0.91
21:U:24:LYS:HZ3	21:U:25:ALA:H	1.17	0.91
20:B:65:LYS:HB2	20:B:158:ASP:H	1.34	0.91
1:A:1003:G:H21	1:A:1005:A:H5'	1.33	0.90
8:I:5:TYR:HB2	8:I:20:ILE:HB	1.51	0.90
16:Q:74:LEU:HD22	16:Q:75:VAL:H	1.35	0.90
1:A:699:C:H2'	1:A:700:G:H5''	1.49	0.90
3:D:160:LEU:HD13	3:D:160:LEU:H	1.37	0.90
6:G:3:ARG:H	6:G:3:ARG:HD3	1.36	0.90
3:D:90:LEU:HA	3:D:93:LEU:HD12	1.51	0.89
20:B:112:ARG:HD2	20:B:116:LEU:HD12	1.54	0.89
1:A:600:A:H5''	7:H:88:LYS:HD2	1.54	0.89
1:A:812:G:HO2'	1:A:813:U:H6	0.92	0.89
8:I:34:LEU:HD21	8:I:48:ARG:HH21	1.37	0.89
12:M:52:ILE:HD12	12:M:55:LEU:HD12	1.54	0.88
1:A:429:U:H5'	3:D:8:LEU:HG	1.56	0.88
5:F:3:HIS:HB2	5:F:92:THR:HA	1.56	0.88
20:B:85:SER:HB3	20:B:221:ARG:HD3	1.52	0.88
6:G:14:ASP:H	6:G:23:ALA:HB2	1.37	0.87
3:D:105:GLY:HA3	3:D:158:LEU:HD23	1.55	0.87
1:A:981:U:H4'	13:N:60:ARG:HD2	1.55	0.87
4:E:81:GLN:HG2	4:E:148:SER:HA	1.57	0.86

Continued on next page...

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:72:A:H61	1:A:99:C:H1'	1.41	0.86
20:B:125:PHE:HD2	20:B:125:PHE:H	1.24	0.86
15:P:61:VAL:HA	15:P:65:ALA:HB3	1.57	0.86
6:G:149:ALA:H	10:K:55:ARG:NH2	1.73	0.86
10:K:86:LYS:HB3	10:K:112:VAL:HG23	1.58	0.86
3:D:138:PRO:HA	3:D:181:PHE:HD2	1.42	0.85
6:G:46:LEU:HG	6:G:57:GLU:HB3	1.56	0.85
9:J:42:LEU:HD11	9:J:73:LEU:HB2	1.58	0.85
20:B:221:ARG:HG3	20:B:222:GLU:HG2	1.57	0.85
19:T:24:ARG:HG3	19:T:65:LEU:HD11	1.57	0.85
15:P:40:ASN:HD21	15:P:43:ALA:N	1.75	0.84
6:G:129:ASN:HA	6:G:134:VAL:HG11	1.57	0.84
1:A:1493:A:H1'	23:A:3001:HYG:H362	1.41	0.84
8:I:26:LYS:H	8:I:61:ASP:HB3	1.41	0.84
1:A:1060:U:H4'	9:J:54:SER:HB2	1.57	0.84
1:A:1323:G:H2'	1:A:1324:A:C8	2.13	0.84
1:A:781:A:H2'	1:A:782:A:H5'	1.59	0.84
4:E:21:SER:HB2	4:E:28:ARG:HE	1.40	0.84
14:O:88:ARG:HA	14:O:88:ARG:HH11	1.43	0.84
1:A:120:A:H2'	1:A:121:U:H5''	1.59	0.83
2:C:70:ALA:HA	2:C:105:VAL:HG21	1.59	0.83
11:L:13:ARG:HD2	11:L:13:ARG:H	1.44	0.83
17:R:40:PRO:HD2	17:R:43:ILE:HD12	1.59	0.83
10:K:105:ARG:HH21	21:U:10:PRO:HD3	1.42	0.83
6:G:4:ARG:HG3	6:G:5:VAL:H	1.44	0.83
1:A:426:U:H4'	3:D:39:GLN:HA	1.60	0.82
10:K:22:ILE:HD13	10:K:85:VAL:HG22	1.61	0.82
21:U:36:PHE:HB3	21:U:40:PRO:HD3	1.59	0.82
6:G:62:GLU:HG2	6:G:69:ARG:HH21	1.44	0.82
10:K:31:VAL:HG21	10:K:66:ALA:HA	1.62	0.82
1:A:817:C:H1'	1:A:819:A:H5'	1.61	0.81
5:F:86:ARG:NH1	17:R:63:TYR:HB3	1.94	0.81
19:T:34:VAL:HG11	19:T:78:LEU:HD22	1.61	0.81
16:Q:16:MET:HB2	16:Q:19:SER:HB2	1.61	0.81
1:A:1328:C:H5''	12:M:27:THR:HG21	1.61	0.81
8:I:39:GLY:HA2	8:I:44:ARG:HD3	1.62	0.81
5:F:38:ARG:HH21	5:F:63:ASN:ND2	1.78	0.81
20:B:19:THR:HG23	20:B:20:ARG:H	1.45	0.81
12:M:47:LEU:HD13	12:M:51:GLN:HB3	1.62	0.80
1:A:935:A:N6	6:G:2:ARG:HD2	1.96	0.80
18:S:51:HIS:HA	18:S:56:HIS:HA	1.63	0.80
2:C:137:VAL:HA	2:C:148:ILE:HD13	1.63	0.80

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:841:C:H3'	1:A:843:U:OP2	1.81	0.80
1:A:1343:G:H1'	8:I:122:ARG:HH12	1.47	0.80
1:A:1361:G:H2'	1:A:1362:A:H5''	1.64	0.80
6:G:21:LEU:HD23	6:G:21:LEU:H	1.46	0.79
12:M:44:ILE:HD12	12:M:44:ILE:H	1.48	0.79
10:K:124:LYS:HA	21:U:34:ARG:HB3	1.63	0.79
14:O:35:ILE:HD11	14:O:58:MET:HG3	1.65	0.79
11:L:20:VAL:HG12	11:L:93:ARG:HB3	1.63	0.79
2:C:122:GLN:HB3	2:C:127:VAL:HG21	1.63	0.79
1:A:264:C:H4'	16:Q:64:ARG:HD2	1.64	0.79
20:B:116:LEU:HD22	20:B:140:LEU:HD11	1.64	0.79
1:A:1032:G:H2'	1:A:1033:G:O4'	1.83	0.79
20:B:32:GLY:H	20:B:39:ILE:HB	1.48	0.79
4:E:104:ILE:HG23	4:E:111:ARG:HH12	1.47	0.78
13:N:87:ALA:HB2	13:N:92:ILE:HD12	1.65	0.78
12:M:89:ARG:HH22	12:M:94:LEU:HD12	1.48	0.78
8:I:29:ILE:HG12	8:I:64:ILE:HB	1.64	0.78
13:N:15:LEU:HB3	13:N:54:SER:HB2	1.65	0.78
3:D:29:THR:H	3:D:33:ILE:HG21	1.47	0.78
6:G:91:ARG:HD2	6:G:91:ARG:H	1.49	0.78
19:T:85:LEU:HD23	19:T:86:ALA:H	1.49	0.78
12:M:19:THR:HA	12:M:24:VAL:HG23	1.66	0.77
1:A:108:G:H5'	1:A:109:A:H5''	1.66	0.77
1:A:1057:G:H4'	2:C:196:GLY:H	1.50	0.77
8:I:27:ILE:HD12	8:I:34:LEU:HD22	1.67	0.77
10:K:106:ILE:HG13	10:K:107:THR:H	1.50	0.77
6:G:74:VAL:HA	6:G:87:PRO:HA	1.67	0.77
2:C:26:LYS:HG3	2:C:27:GLU:HG3	1.65	0.77
7:H:103:VAL:HG22	7:H:124:ILE:HA	1.65	0.76
1:A:243:A:H4'	1:A:244:U:H5'	1.67	0.76
20:B:163:ILE:HG23	20:B:164:ASP:H	1.49	0.76
15:P:3:THR:HG22	15:P:66:THR:HB	1.68	0.76
3:D:24:VAL:HA	3:D:27:ILE:HD11	1.66	0.76
1:A:410:G:OP2	3:D:25:ARG:HD2	1.85	0.76
12:M:2:ARG:HB2	12:M:56:ARG:HH22	1.49	0.75
1:A:238:A:H2'	1:A:239:U:H5''	1.65	0.75
8:I:33:SER:HB3	8:I:36:GLN:HB2	1.68	0.75
1:A:1133:G:H2'	1:A:1134:G:O4'	1.87	0.75
1:A:1306:A:H61	1:A:1331:G:H1'	1.50	0.75
2:C:119:ILE:HG21	2:C:197:VAL:HG11	1.69	0.75
1:A:269:C:H2'	1:A:270:A:C8	2.22	0.75
1:A:674:G:H2'	1:A:675:A:H8	1.52	0.75

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:2:ARG:HB3	6:G:3:ARG:HH11	1.50	0.75
1:A:423:G:H2'	1:A:424:G:O4'	1.86	0.75
1:A:1348:U:H4'	8:I:121:ARG:HG3	1.69	0.75
20:B:59:ILE:H	20:B:59:ILE:HD12	1.52	0.74
4:E:105:ILE:HG13	4:E:123:LEU:HA	1.69	0.74
9:J:36:VAL:HG22	9:J:76:ILE:HG22	1.68	0.74
1:A:979:C:H1'	1:A:1317:C:H41	1.52	0.74
1:A:1144:G:N2	1:A:1146:A:H62	1.84	0.74
2:C:77:GLY:HA3	2:C:81:GLU:HB3	1.69	0.74
1:A:1472:U:H2'	1:A:1473:G:C8	2.23	0.74
3:D:13:ARG:HA	3:D:37:PRO:HB3	1.69	0.74
10:K:91:GLY:HA2	10:K:94:SER:HB3	1.70	0.74
10:K:22:ILE:HG21	10:K:95:THR:HG21	1.68	0.74
2:C:57:GLU:HB2	2:C:64:ARG:HB2	1.68	0.74
17:R:38:ILE:HD13	17:R:38:ILE:H	1.51	0.74
19:T:38:ILE:HD11	19:T:82:ILE:HG22	1.68	0.74
20:B:202:ASN:ND2	20:B:204:ASP:H	1.84	0.74
9:J:51:VAL:HG23	13:N:80:ARG:HB2	1.69	0.74
15:P:25:ARG:HD3	15:P:25:ARG:H	1.53	0.74
3:D:137:SER:HB2	3:D:138:PRO:HD2	1.70	0.73
1:A:1220:G:H3'	18:S:36:ARG:HH21	1.53	0.73
8:I:46:VAL:HA	8:I:49:GLN:HG3	1.70	0.73
1:A:842:U:H3'	1:A:843:U:H4'	1.68	0.73
1:A:1472:U:H2'	1:A:1473:G:H8	1.51	0.73
4:E:44:ARG:HA	4:E:71:ILE:O	1.88	0.73
9:J:10:LEU:HD11	9:J:25:ILE:HD12	1.68	0.73
13:N:52:ARG:HH11	13:N:58:ARG:HH21	1.36	0.73
21:U:43:GLU:HG3	21:U:44:ARG:HH21	1.54	0.73
14:O:7:THR:O	14:O:10:ILE:HG22	1.88	0.73
12:M:92:ARG:HH12	18:S:79:TYR:HD2	1.37	0.73
19:T:47:GLN:HG2	19:T:82:ILE:HD12	1.70	0.73
21:U:36:PHE:CB	21:U:40:PRO:HD3	2.19	0.73
1:A:84:U:O2	1:A:84:U:H2'	1.88	0.73
6:G:3:ARG:N	6:G:3:ARG:HD3	2.03	0.72
8:I:126:PHE:HE1	8:I:129:ARG:HD3	1.54	0.72
20:B:61:SER:HB2	20:B:62:ARG:HH11	1.53	0.72
6:G:110:ARG:HD2	6:G:122:GLU:HB2	1.69	0.72
21:U:16:ARG:CA	21:U:16:ARG:HE	2.01	0.72
5:F:64:VAL:HG12	5:F:65:GLU:H	1.52	0.72
7:H:74:ILE:HG13	7:H:128:VAL:HG22	1.72	0.72
1:A:1320:C:H41	18:S:36:ARG:HG2	1.53	0.72
1:A:1118:U:H2'	1:A:1119:C:C6	2.24	0.72

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:156:LEU:HD12	2:C:163:ARG:HD2	1.70	0.72
2:C:149:LYS:HB3	2:C:200:TRP:HB2	1.71	0.72
12:M:67:ASP:O	12:M:71:GLU:HB2	1.89	0.72
13:N:30:ILE:HB	13:N:44:VAL:HG11	1.71	0.72
18:S:30:LEU:HB2	18:S:48:ILE:HG23	1.72	0.72
20:B:120:SER:HA	20:B:125:PHE:CG	2.25	0.72
1:A:1412:C:H2'	1:A:1413:A:C8	2.24	0.72
12:M:10:ASP:HA	12:M:44:ILE:HD13	1.70	0.72
9:J:8:ILE:HG13	9:J:100:ILE:HG22	1.72	0.72
10:K:20:ALA:HB2	10:K:81:LEU:HD12	1.71	0.72
1:A:1292:G:H2'	1:A:1293:C:C6	2.25	0.72
1:A:946:A:H2'	1:A:947:G:C8	2.24	0.72
2:C:16:PRO:HG2	2:C:53:ARG:HH12	1.54	0.72
8:I:25:GLY:HA2	8:I:60:LEU:O	1.90	0.72
7:H:17:GLN:HG2	7:H:62:LEU:HD23	1.70	0.72
15:P:28:ARG:CD	15:P:29:ASN:H	2.03	0.71
6:G:87:PRO:HG2	6:G:151:ALA:HB2	1.69	0.71
20:B:66:ILE:HD13	20:B:159:ALA:HB3	1.72	0.71
13:N:68:ARG:HH12	13:N:70:HIS:HB2	1.53	0.71
1:A:337:G:H2'	1:A:338:A:C8	2.26	0.71
1:A:408:A:OP1	3:D:111:ALA:HB3	1.90	0.71
1:A:764:C:H2'	1:A:765:G:H5'	1.71	0.71
13:N:50:LEU:H	13:N:51:PRO:HD2	1.53	0.71
2:C:63:ILE:HD12	2:C:98:ALA:HB2	1.71	0.71
8:I:26:LYS:H	8:I:61:ASP:CB	2.03	0.71
3:D:196:GLU:O	3:D:199:ILE:HG13	1.90	0.71
16:Q:20:ILE:HD13	16:Q:47:ASP:HB3	1.73	0.71
19:T:43:LYS:HE2	19:T:44:ALA:H	1.55	0.71
20:B:205:ALA:HB3	20:B:208:ALA:HB3	1.72	0.71
1:A:1391:U:H2'	1:A:1392:G:C8	2.24	0.71
1:A:812:G:O2'	1:A:813:U:H6	1.72	0.71
9:J:12:ALA:HB2	9:J:96:VAL:HG12	1.70	0.71
20:B:19:THR:HA	20:B:37:VAL:HA	1.72	0.71
2:C:148:ILE:HA	2:C:200:TRP:O	1.90	0.71
1:A:1412:C:H2'	1:A:1413:A:H8	1.55	0.71
4:E:36:THR:HG21	4:E:63:MET:HG2	1.72	0.71
1:A:559:A:H4'	1:A:560:A:H3'	1.73	0.71
6:G:14:ASP:HB3	6:G:19:SER:H	1.54	0.71
1:A:957:U:H4'	18:S:78:THR:HB	1.71	0.71
1:A:1477:U:H2'	1:A:1478:U:C6	2.26	0.71
1:A:677:U:H2'	1:A:678:U:C6	2.26	0.71
20:B:61:SER:HB2	20:B:62:ARG:NH1	2.05	0.71

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:42:THR:O	21:U:46:ARG:HG3	1.91	0.71
1:A:1072:G:N2	20:B:105:THR:HG21	2.06	0.71
20:B:53:LEU:HA	20:B:56:LEU:HD13	1.73	0.70
8:I:93:LEU:HD13	8:I:97:LEU:HD11	1.73	0.70
1:A:108:G:C6	19:T:9:ARG:HG2	2.26	0.70
1:A:764:C:C2'	1:A:765:G:H5'	2.22	0.70
1:A:1142:G:H2'	1:A:1143:G:O4'	1.91	0.70
2:C:112:ALA:HB1	2:C:184:ASN:HB2	1.72	0.70
1:A:437:U:H2'	1:A:438:U:O4'	1.90	0.70
7:H:44:PHE:HA	7:H:70:VAL:HG11	1.72	0.70
1:A:475:C:H2'	1:A:476:U:C6	2.25	0.70
1:A:90:C:H2'	1:A:91:U:C5	2.27	0.70
18:S:62:THR:HB	18:S:64:GLU:OE1	1.92	0.70
20:B:99:MET:HA	20:B:106:VAL:HG21	1.72	0.70
4:E:76:ASN:HB2	4:E:81:GLN:NE2	2.07	0.70
16:Q:74:LEU:HD22	16:Q:75:VAL:N	2.06	0.70
16:Q:30:HIS:CE1	16:Q:32:ILE:HG22	2.27	0.70
3:D:58:GLN:O	3:D:62:ARG:HG2	1.92	0.70
8:I:64:ILE:HD12	8:I:64:ILE:H	1.57	0.70
16:Q:59:GLU:O	16:Q:75:VAL:HG22	1.91	0.70
20:B:76:SER:HA	20:B:92:ASN:HB2	1.73	0.70
1:A:964:A:H2'	1:A:965:U:H5''	1.72	0.70
20:B:15:PHE:HA	20:B:42:LEU:HD21	1.72	0.70
16:Q:45:VAL:HG12	16:Q:46:HIS:H	1.55	0.70
12:M:86:ARG:HG3	12:M:96:VAL:HG11	1.74	0.70
1:A:974:A:H4'	1:A:975:A:H5'	1.74	0.70
15:P:52:LEU:HD21	15:P:75:ILE:HG12	1.71	0.70
20:B:60:ALA:HA	20:B:64:GLY:HA3	1.74	0.69
1:A:920:U:H2'	1:A:921:U:C6	2.27	0.69
3:D:29:THR:HB	3:D:30:LYS:NZ	2.06	0.69
3:D:153:ARG:HG3	3:D:154:VAL:N	2.08	0.69
1:A:193:C:H2'	1:A:194:C:C6	2.26	0.69
4:E:32:PHE:O	4:E:51:LYS:HB2	1.91	0.69
2:C:171:ARG:HB2	2:C:171:ARG:HH11	1.57	0.69
5:F:26:THR:HA	5:F:29:ILE:HD12	1.74	0.69
1:A:17:U:H2'	1:A:18:C:C6	2.27	0.69
2:C:104:GLU:HG2	2:C:105:VAL:H	1.56	0.69
12:M:90:HIS:HA	12:M:108:ARG:NH2	2.08	0.69
1:A:239:U:OP1	1:A:239:U:H4'	1.90	0.69
9:J:57:VAL:HG22	9:J:58:ASN:H	1.56	0.69
13:N:30:ILE:HG22	13:N:41:TRP:HB2	1.73	0.69
7:H:63:LYS:HD2	7:H:70:VAL:HG21	1.74	0.69

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1026:G:H2'	1:A:1027:C:H6	1.55	0.69
11:L:66:ILE:HG21	11:L:71:HIS:HB3	1.72	0.69
1:A:859:G:H2'	1:A:860:A:C8	2.25	0.69
1:A:449:G:H2'	1:A:450:G:C8	2.28	0.69
20:B:199:ILE:HD13	20:B:212:TYR:HE2	1.58	0.69
1:A:617:G:H4'	15:P:46:LYS:HE2	1.73	0.69
1:A:797:C:OP1	10:K:125:LYS:HE3	1.92	0.69
13:N:63:CYS:HB2	13:N:79:SER:HB3	1.74	0.69
1:A:522:C:H41	11:L:49:ARG:HH22	1.40	0.69
1:A:462:G:H5'	1:A:463:U:OP2	1.93	0.69
1:A:1004:A:H3'	1:A:1024:G:H22	1.56	0.69
1:A:1060:U:C4'	9:J:54:SER:HB2	2.23	0.69
6:G:66:GLU:HA	6:G:69:ARG:HD2	1.75	0.69
1:A:522:C:H41	11:L:49:ARG:NH2	1.89	0.69
6:G:115:MET:HA	6:G:118:ARG:HD2	1.74	0.69
11:L:51:VAL:HG12	11:L:52:CYS:H	1.57	0.69
1:A:532:A:H62	2:C:191:THR:CB	2.05	0.69
21:U:16:ARG:NE	21:U:16:ARG:HA	2.00	0.69
3:D:122:ILE:O	3:D:128:VAL:HG23	1.93	0.69
1:A:662:U:H2'	1:A:663:A:C8	2.27	0.69
1:A:1026:G:H2'	1:A:1027:C:C6	2.28	0.69
20:B:69:VAL:HB	20:B:162:VAL:HG23	1.73	0.69
11:L:86:VAL:HG11	11:L:89:LEU:HD23	1.74	0.69
20:B:145:ASN:HD22	20:B:145:ASN:N	1.88	0.69
16:Q:77:VAL:HG11	16:Q:80:LYS:HB3	1.75	0.68
7:H:124:ILE:HG22	7:H:125:ILE:H	1.57	0.68
2:C:51:VAL:HA	2:C:69:THR:HA	1.75	0.68
7:H:11:THR:HG22	7:H:14:ARG:HH22	1.59	0.68
4:E:85:LYS:HG3	4:E:93:VAL:O	1.92	0.68
20:B:88:GLN:OE1	20:B:221:ARG:HB3	1.92	0.68
1:A:935:A:H61	6:G:2:ARG:HD2	1.57	0.68
1:A:532:A:H62	2:C:191:THR:HB	1.58	0.68
18:S:38:THR:HA	18:S:69:LYS:HA	1.75	0.68
13:N:52:ARG:NH1	13:N:58:ARG:HH21	1.92	0.68
1:A:1306:A:N6	1:A:1331:G:H1'	2.08	0.68
15:P:34:GLU:CD	15:P:60:TRP:HE1	1.97	0.68
1:A:1288:A:N1	1:A:1371:G:H1'	2.08	0.68
1:A:176:C:H2'	1:A:177:G:N3	2.09	0.68
19:T:61:ALA:HA	19:T:67:HIS:H	1.58	0.68
4:E:84:VAL:HG11	4:E:146:MET:HB3	1.74	0.68
1:A:108:G:O6	19:T:9:ARG:HG2	1.93	0.68
20:B:9:LEU:H	20:B:9:LEU:HD12	1.57	0.68

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1513:A:H2'	1:A:1514:G:C8	2.29	0.68
3:D:47:LEU:HB2	3:D:51:GLY:HA3	1.77	0.67
13:N:86:ALA:HB1	13:N:91:GLU:HB2	1.74	0.67
1:A:451:A:H5'	15:P:70:ARG:HH22	1.59	0.67
1:A:279:A:H5''	1:A:280:C:H3'	1.74	0.67
11:L:106:VAL:HG23	11:L:116:TYR:HB3	1.76	0.67
1:A:1486:G:H2'	1:A:1487:G:O4'	1.94	0.67
21:U:38:GLU:C	21:U:40:PRO:HD2	2.14	0.67
16:Q:16:MET:CB	16:Q:19:SER:HB2	2.24	0.67
1:A:195:A:H1'	1:A:222:C:O2'	1.94	0.67
1:A:80:A:H3'	1:A:81:A:H8	1.57	0.67
2:C:2:GLN:H	2:C:2:GLN:NE2	1.92	0.67
15:P:28:ARG:HD2	15:P:29:ASN:N	2.06	0.67
1:A:763:G:H2'	1:A:764:C:H6	1.59	0.67
11:L:37:TYR:HB2	11:L:51:VAL:HB	1.75	0.67
1:A:1314:C:H3'	18:S:5:LYS:HZ2	1.59	0.67
1:A:1148:U:H5'	8:I:6:TYR:OH	1.94	0.67
1:A:98:A:H2'	1:A:99:C:O4'	1.94	0.67
1:A:1132:C:H2'	1:A:1133:G:H8	1.58	0.67
1:A:973:G:H3'	1:A:974:A:H5''	1.75	0.67
3:D:36:ALA:HA	3:D:41:GLY:HA3	1.75	0.67
8:I:71:ILE:HD12	8:I:71:ILE:H	1.59	0.67
12:M:28:ARG:NH2	12:M:62:PHE:HB2	2.09	0.67
1:A:1323:G:H2'	1:A:1324:A:H8	1.55	0.67
1:A:1297:G:H1'	1:A:1298:U:H5	1.60	0.67
18:S:41:PRO:O	18:S:44:ILE:HG22	1.95	0.67
12:M:64:VAL:HA	12:M:68:LEU:HD11	1.75	0.67
1:A:337:G:H2'	1:A:338:A:H8	1.60	0.67
1:A:882:C:O2'	1:A:883:C:H5'	1.93	0.67
14:O:28:VAL:HG11	14:O:80:LEU:HD21	1.77	0.67
1:A:1258:G:H2'	1:A:1259:C:C6	2.30	0.67
20:B:113:LEU:HD13	20:B:147:LEU:HB2	1.76	0.67
2:C:149:LYS:HA	2:C:168:ARG:HB2	1.77	0.67
12:M:89:ARG:HG3	12:M:96:VAL:HG13	1.76	0.67
1:A:373:A:H2'	1:A:374:A:H8	1.59	0.67
1:A:344:A:H4'	1:A:345:C:OP2	1.94	0.67
1:A:539:A:H2'	1:A:540:G:C8	2.30	0.67
9:J:7:ARG:O	9:J:100:ILE:HA	1.95	0.67
1:A:1513:A:H2'	1:A:1514:G:H8	1.58	0.67
6:G:72:VAL:HG12	6:G:89:GLU:HB3	1.76	0.67
1:A:235:C:H2'	1:A:236:A:C8	2.29	0.66
12:M:2:ARG:HD3	12:M:2:ARG:H	1.58	0.66

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:17:U:H2'	1:A:18:C:H6	1.60	0.66
1:A:157:U:O2'	1:A:158:G:H5'	1.95	0.66
1:A:841:C:O5'	1:A:842:U:H5''	1.95	0.66
6:G:91:ARG:HB3	6:G:92:PRO:HD2	1.76	0.66
1:A:21:G:H2'	1:A:22:G:C8	2.31	0.66
20:B:209:VAL:HG23	20:B:210:THR:H	1.61	0.66
20:B:119:GLN:O	20:B:124:THR:HG23	1.96	0.66
1:A:1152:A:H2'	1:A:1153:G:H8	1.61	0.66
1:A:1343:G:H1'	8:I:122:ARG:NH1	2.10	0.66
7:H:6:ILE:HD11	7:H:31:LEU:HD23	1.78	0.66
11:L:122:LYS:HD2	11:L:123:ALA:N	2.10	0.66
7:H:51:GLU:HG2	7:H:52:GLY:H	1.61	0.66
10:K:33:ILE:HG13	10:K:73:VAL:HG21	1.77	0.66
1:A:865:A:H2	1:A:918:A:H4'	1.59	0.66
1:A:129:A:H1'	1:A:130:A:C8	2.31	0.66
1:A:1391:U:H2'	1:A:1392:G:H8	1.61	0.66
1:A:473:U:H2'	1:A:474:G:C8	2.31	0.66
8:I:87:MET:HA	8:I:93:LEU:HD11	1.77	0.66
1:A:1080:A:H2'	1:A:1081:A:H5'	1.78	0.66
8:I:10:ARG:HA	8:I:77:ALA:HB1	1.76	0.66
1:A:6:G:N3	1:A:6:G:H3'	2.09	0.66
1:A:86:G:H1'	1:A:87:C:C5	2.30	0.66
1:A:1141:C:H2'	1:A:1142:G:H8	1.61	0.66
10:K:108:ASN:ND2	21:U:6:ARG:HB2	2.11	0.66
1:A:384:G:H2'	1:A:385:C:C6	2.31	0.66
1:A:1095:U:H2'	1:A:1096:C:C6	2.31	0.66
2:C:48:LYS:HE2	2:C:48:LYS:N	2.09	0.66
20:B:212:TYR:HA	20:B:215:ALA:HB3	1.78	0.66
12:M:89:ARG:NH2	12:M:94:LEU:HD12	2.11	0.66
20:B:68:PHE:HA	20:B:161:PHE:O	1.96	0.66
12:M:63:VAL:O	12:M:68:LEU:HD21	1.96	0.66
3:D:197:HIS:O	3:D:200:VAL:HG22	1.96	0.66
8:I:29:ILE:HA	8:I:64:ILE:O	1.96	0.65
1:A:335:C:H2'	1:A:336:A:H8	1.62	0.65
1:A:1382:C:H4'	6:G:78:ARG:CZ	2.26	0.65
20:B:71:THR:CG2	20:B:94:ARG:H	2.10	0.65
12:M:70:ARG:O	12:M:74:MET:HG2	1.94	0.65
6:G:23:ALA:O	6:G:26:VAL:HG22	1.97	0.65
18:S:30:LEU:HD12	18:S:48:ILE:HG12	1.78	0.65
6:G:49:LEU:HD21	6:G:60:ALA:HB3	1.78	0.65
10:K:83:VAL:HG21	10:K:109:ILE:HG12	1.77	0.65
1:A:1320:C:N4	18:S:36:ARG:HG2	2.11	0.65

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:195:VAL:HG12	20:B:197:PHE:H	1.62	0.65
3:D:123:MET:SD	3:D:145:ARG:HD2	2.37	0.65
1:A:677:U:H2'	1:A:678:U:H6	1.61	0.65
1:A:1270:G:H2'	1:A:1271:A:H8	1.61	0.65
16:Q:13:SER:HB3	16:Q:21:VAL:HB	1.77	0.65
1:A:1307:U:H2'	1:A:1308:U:C6	2.32	0.65
10:K:28:ASN:HD21	10:K:46:ALA:HB3	1.61	0.65
1:A:1347:G:N2	1:A:1373:G:H2'	2.11	0.65
3:D:84:ASN:ND2	4:E:101:GLY:HA3	2.12	0.65
14:O:7:THR:O	14:O:11:VAL:HG23	1.96	0.65
1:A:78:A:H3'	1:A:79:G:C8	2.31	0.65
1:A:706:A:H4'	10:K:30:ILE:HD11	1.79	0.65
1:A:810:C:O2'	1:A:811:C:H5'	1.96	0.65
5:F:3:HIS:CE1	5:F:95:ALA:H	2.15	0.65
12:M:3:ILE:O	12:M:56:ARG:HG3	1.97	0.65
1:A:673:A:H2'	1:A:674:G:C8	2.32	0.65
10:K:75:GLU:CD	10:K:75:GLU:H	2.00	0.65
10:K:28:ASN:ND2	10:K:46:ALA:HB3	2.12	0.65
1:A:1213:A:H2'	1:A:1215:G:N7	2.12	0.65
1:A:208:U:H2'	1:A:210:C:C4	2.31	0.65
20:B:14:HIS:HB2	20:B:208:ALA:HB2	1.79	0.65
3:D:25:ARG:CZ	3:D:26:ALA:HB2	2.26	0.65
1:A:695:A:H61	1:A:797:C:H1'	1.59	0.65
15:P:57:ILE:O	15:P:61:VAL:HG23	1.96	0.64
13:N:68:ARG:NH1	13:N:71:GLY:H	1.95	0.64
1:A:1072:G:H21	20:B:105:THR:HG21	1.62	0.64
1:A:82:G:H2'	1:A:83:C:O4'	1.98	0.64
1:A:1423:G:H2'	1:A:1424:U:C6	2.32	0.64
1:A:802:A:H2'	1:A:803:G:O4'	1.97	0.64
20:B:186:VAL:HB	20:B:190:SER:CB	2.28	0.64
9:J:52:LEU:HD12	9:J:52:LEU:H	1.63	0.64
1:A:229:U:H2'	1:A:230:G:C8	2.31	0.64
1:A:218:U:H2'	1:A:219:U:C6	2.30	0.64
8:I:51:LEU:HD13	8:I:56:MET:HG2	1.79	0.64
1:A:78:A:H3'	1:A:79:G:H8	1.62	0.64
5:F:40:GLU:HB2	5:F:61:LEU:HB2	1.79	0.64
1:A:376:G:H5''	15:P:5:ARG:HB2	1.77	0.64
1:A:1342:C:H2'	1:A:1343:G:C8	2.32	0.64
2:C:59:PRO:HG2	2:C:62:SER:OG	1.97	0.64
2:C:13:ILE:O	2:C:14:VAL:HG22	1.97	0.64
1:A:1432:G:H1'	1:A:1468:A:N6	2.13	0.64
5:F:18:VAL:HG21	5:F:58:HIS:ND1	2.13	0.64

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:845:A:H5''	1:A:846:G:N7	2.12	0.64
1:A:859:G:H2'	1:A:860:A:H8	1.63	0.64
1:A:229:U:H2'	1:A:230:G:H8	1.62	0.64
1:A:415:A:H3'	1:A:416:G:H8	1.63	0.64
1:A:1437:A:H2'	1:A:1438:G:H8	1.63	0.64
3:D:88:ASN:O	3:D:92:LEU:HD23	1.98	0.64
6:G:56:SER:HB3	6:G:59:GLU:HG3	1.80	0.64
13:N:58:ARG:HH11	13:N:58:ARG:HB3	1.63	0.64
8:I:23:GLY:H	8:I:60:LEU:HA	1.63	0.64
1:A:270:A:H2'	1:A:271:C:C6	2.32	0.64
1:A:1070:U:H2'	1:A:1071:C:C6	2.33	0.64
20:B:128:LEU:HD12	20:B:132:GLU:HB3	1.79	0.64
20:B:115:ASP:O	20:B:119:GLN:HG2	1.97	0.64
9:J:52:LEU:HA	9:J:62:ARG:HA	1.79	0.64
7:H:94:VAL:HG23	7:H:101:ALA:HB2	1.80	0.64
1:A:921:U:H2'	1:A:922:G:C8	2.33	0.63
21:U:33:ARG:HG2	21:U:34:ARG:H	1.64	0.63
1:A:763:G:H2'	1:A:764:C:C6	2.32	0.63
1:A:1210:C:H1'	1:A:1214:C:H2'	1.80	0.63
1:A:499:A:H4'	1:A:500:G:H5'	1.80	0.63
1:A:865:A:C2	1:A:918:A:H4'	2.33	0.63
1:A:41:G:H2'	1:A:42:G:C8	2.33	0.63
8:I:27:ILE:HB	8:I:34:LEU:HB2	1.81	0.63
1:A:865:A:H5'	1:A:1078:U:O4	1.99	0.63
1:A:918:A:H2'	1:A:919:A:C8	2.32	0.63
4:E:37:VAL:HG11	4:E:113:VAL:HG12	1.81	0.63
1:A:51:A:H5''	1:A:52:C:H5''	1.80	0.63
3:D:25:ARG:NH1	3:D:26:ALA:HB2	2.14	0.63
13:N:9:GLU:HB2	13:N:62:ARG:NE	2.13	0.63
1:A:978:A:H5'	1:A:1362:A:N6	2.14	0.63
13:N:26:LEU:HA	13:N:29:ILE:HD12	1.81	0.63
8:I:20:ILE:H	8:I:20:ILE:HD12	1.62	0.63
3:D:138:PRO:HA	3:D:181:PHE:CD2	2.31	0.63
11:L:49:ARG:HG2	11:L:89:LEU:HD21	1.80	0.63
4:E:125:LYS:HD2	4:E:126:ALA:N	2.13	0.63
1:A:1258:G:H2'	1:A:1259:C:H6	1.64	0.63
1:A:1173:U:H2'	1:A:1174:G:C8	2.33	0.63
5:F:42:TRP:HB2	5:F:59:TYR:HB2	1.78	0.63
1:A:1234:C:O2'	1:A:1235:U:H5'	1.99	0.63
1:A:1236:A:H4'	1:A:1304:G:H4'	1.81	0.63
4:E:106:ALA:HB1	4:E:110:MET:HB3	1.81	0.63
12:M:63:VAL:HG13	12:M:67:ASP:HB2	1.81	0.63

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:63:CYS:HB3	13:N:67:GLY:H	1.64	0.63
19:T:4:LYS:HZ1	19:T:6:ALA:HB2	1.63	0.63
1:A:412:A:H4'	1:A:413:G:OP1	1.99	0.63
1:A:825:A:H2'	1:A:826:C:H6	1.62	0.63
1:A:950:U:H2'	1:A:951:G:C8	2.33	0.63
21:U:48:LYS:HA	21:U:51:ALA:HB3	1.79	0.63
4:E:45:VAL:HG12	4:E:116:VAL:HG23	1.79	0.63
8:I:42:THR:HA	8:I:45:MET:SD	2.38	0.62
1:A:1134:G:C2	1:A:1135:U:H1'	2.33	0.62
1:A:437:U:H4'	3:D:153:ARG:HH12	1.62	0.62
1:A:208:U:H2'	1:A:210:C:N3	2.14	0.62
1:A:154:U:H2'	1:A:155:A:C8	2.33	0.62
1:A:462:G:N3	1:A:462:G:H2'	2.12	0.62
1:A:750:C:O2	14:O:22:GLY:HA3	2.00	0.62
18:S:31:ARG:HA	18:S:49:ALA:HB3	1.81	0.62
3:D:56:GLU:HG2	3:D:198:LEU:HD12	1.81	0.62
1:A:1278:G:H4'	1:A:1279:G:C5'	2.29	0.62
7:H:6:ILE:HB	7:H:76:ARG:NH1	2.15	0.62
7:H:25:THR:HA	7:H:58:LEU:O	1.99	0.62
1:A:792:A:H1'	1:A:794:A:N7	2.14	0.62
13:N:42:ASN:O	13:N:46:LYS:HG2	1.99	0.62
9:J:28:THR:O	9:J:32:THR:HG22	1.99	0.62
5:F:47:LEU:HD21	5:F:57:ALA:HB3	1.81	0.62
9:J:55:PRO:HA	13:N:80:ARG:NH2	2.15	0.62
2:C:62:SER:HA	2:C:97:PRO:O	1.99	0.62
6:G:45:ALA:HB1	6:G:120:ALA:HB2	1.79	0.62
1:A:1085:U:H3'	1:A:1086:U:C5	2.34	0.62
1:A:1004:A:H3'	1:A:1024:G:N2	2.14	0.62
1:A:97:G:H2'	1:A:98:A:O4'	1.99	0.62
11:L:40:THR:HG22	11:L:41:PRO:HD2	1.81	0.62
6:G:14:ASP:N	6:G:23:ALA:HB2	2.13	0.62
19:T:24:ARG:HD2	19:T:28:ARG:NH2	2.14	0.62
8:I:126:PHE:CE1	8:I:129:ARG:HD3	2.35	0.62
11:L:113:ARG:HG2	11:L:118:VAL:HB	1.82	0.62
1:A:1323:G:H4'	1:A:1362:A:C4	2.35	0.62
3:D:96:ARG:HB3	3:D:98:ASP:OD2	2.00	0.62
1:A:46:G:O2'	1:A:365:U:H1'	1.99	0.62
1:A:1132:C:H2'	1:A:1133:G:C8	2.34	0.62
1:A:678:U:H2'	1:A:679:C:C6	2.35	0.62
6:G:78:ARG:HH11	6:G:81:GLY:H	1.47	0.62
1:A:1414:U:H2'	1:A:1415:G:H8	1.65	0.62
1:A:131:A:H2'	1:A:132:C:C6	2.34	0.62

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:221:ARG:HG3	20:B:222:GLU:N	2.15	0.62
20:B:62:ARG:H	20:B:62:ARG:HD2	1.65	0.62
1:A:1151:A:HO2'	1:A:1152:A:H8	1.45	0.62
21:U:40:PRO:HA	21:U:44:ARG:HB2	1.80	0.62
1:A:266:G:O2'	1:A:267:C:H3'	1.99	0.62
1:A:1238:A:H5'	1:A:1336:C:H41	1.64	0.62
1:A:806:C:H2'	1:A:807:A:C8	2.35	0.62
1:A:834:U:H2'	1:A:835:U:C6	2.35	0.62
1:A:658:C:H2'	1:A:659:U:H6	1.63	0.62
18:S:42:ASN:N	18:S:42:ASN:HD22	1.95	0.62
20:B:72:LYS:HE3	20:B:203:ASP:O	2.00	0.62
16:Q:58:VAL:HG12	16:Q:77:VAL:HA	1.80	0.62
1:A:335:C:H2'	1:A:336:A:C8	2.34	0.62
1:A:1296:C:H4'	1:A:1302:C:N3	2.15	0.62
1:A:1053:G:H4'	1:A:1054:C:H5'	1.82	0.62
1:A:1463:U:H2'	1:A:1464:U:C6	2.34	0.62
1:A:482:A:H2'	1:A:483:C:O4'	2.00	0.62
3:D:12:ARG:HA	3:D:33:ILE:HD12	1.82	0.61
1:A:735:C:O2'	1:A:736:C:H5'	1.99	0.61
18:S:5:LYS:O	18:S:6:LYS:HD2	2.00	0.61
8:I:7:GLY:HA2	8:I:85:ALA:HB2	1.82	0.61
20:B:202:ASN:HD22	20:B:204:ASP:N	1.90	0.61
1:A:600:A:H2'	1:A:601:G:H8	1.64	0.61
3:D:29:THR:HG22	3:D:30:LYS:HD3	1.80	0.61
1:A:1179:A:H2'	1:A:1180:A:O4'	2.01	0.61
12:M:89:ARG:HD3	12:M:95:PRO:O	1.99	0.61
24:A:4202:HOH:O	8:I:110:VAL:HG13	1.99	0.61
18:S:50:VAL:O	18:S:57:VAL:HG22	1.99	0.61
20:B:187:ASP:HB3	20:B:201:GLY:O	2.01	0.61
8:I:25:GLY:HA3	8:I:57:VAL:CA	2.30	0.61
1:A:1342:C:H2'	1:A:1343:G:H8	1.63	0.61
1:A:131:A:H2'	1:A:132:C:H6	1.64	0.61
1:A:1239:A:H4'	1:A:1240:U:H5'	1.82	0.61
20:B:163:ILE:HG23	20:B:164:ASP:N	2.15	0.61
6:G:2:ARG:HB3	6:G:3:ARG:NH1	2.15	0.61
1:A:253:A:H2'	1:A:254:G:C8	2.35	0.61
1:A:1029:U:H1'	1:A:1032:G:O6	2.00	0.61
4:E:105:ILE:HD11	4:E:123:LEU:HB3	1.83	0.61
1:A:825:A:H2'	1:A:826:C:C6	2.34	0.61
1:A:512:U:H2'	1:A:513:C:C6	2.36	0.61
4:E:61:LYS:O	4:E:65:LYS:HG2	2.01	0.61
1:A:958:A:H61	18:S:53:GLY:HA3	1.65	0.61

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:75:VAL:HG23	16:Q:76:ARG:HG2	1.82	0.61
1:A:1343:G:H2'	1:A:1344:C:C6	2.36	0.61
20:B:101:THR:HG22	20:B:174:GLU:OE1	1.99	0.61
3:D:153:ARG:HG3	3:D:154:VAL:H	1.65	0.61
1:A:473:U:H2'	1:A:474:G:H8	1.65	0.61
3:D:106:PHE:CD1	3:D:144:ILE:HD11	2.36	0.61
1:A:524:G:H2'	1:A:525:C:C6	2.36	0.61
5:F:79:ARG:NH2	5:F:87:SER:HB3	2.14	0.61
1:A:204:G:H2'	1:A:205:A:C8	2.36	0.61
4:E:28:ARG:NH1	4:E:30:PHE:HB3	2.15	0.61
1:A:1486:G:H2'	1:A:1487:G:C1'	2.30	0.61
3:D:169:TRP:CE2	3:D:185:PRO:HB3	2.35	0.61
1:A:253:A:H2'	1:A:254:G:H8	1.66	0.61
1:A:1144:G:H21	1:A:1146:A:H62	1.48	0.61
1:A:1411:C:O2'	1:A:1412:C:H5'	2.00	0.61
1:A:946:A:H2'	1:A:947:G:H8	1.65	0.61
1:A:1271:A:H5'	1:A:1314:C:H5''	1.83	0.61
9:J:24:GLU:HG3	9:J:90:LEU:HD11	1.83	0.61
12:M:21:ILE:HB	12:M:24:VAL:CG2	2.29	0.61
3:D:123:MET:HB3	3:D:128:VAL:HA	1.82	0.61
4:E:143:LEU:O	4:E:146:MET:HG2	2.00	0.61
9:J:56:HIS:O	9:J:57:VAL:HG12	2.01	0.61
1:A:87:C:H2'	1:A:88:U:H4'	1.83	0.61
1:A:1038:C:H2'	1:A:1039:G:C8	2.36	0.61
1:A:651:C:H2'	1:A:652:U:C6	2.36	0.61
18:S:18:VAL:CG2	18:S:43:MET:HG2	2.29	0.60
8:I:18:VAL:HG11	8:I:82:ILE:HG12	1.83	0.60
3:D:160:LEU:HA	3:D:163:GLN:HG3	1.83	0.60
1:A:255:G:H2'	1:A:256:U:C6	2.36	0.60
19:T:79:THR:HA	19:T:82:ILE:HG12	1.83	0.60
1:A:195:A:H2'	1:A:196:A:C8	2.36	0.60
14:O:72:LYS:O	14:O:73:ASP:HB2	2.01	0.60
1:A:751:U:H4'	14:O:23:SER:HA	1.82	0.60
18:S:62:THR:HG22	18:S:63:ASP:H	1.66	0.60
1:A:707:U:H2'	1:A:708:C:C6	2.36	0.60
13:N:14:ALA:O	13:N:18:LYS:HG2	2.01	0.60
1:A:620:C:C2	3:D:131:ILE:HD13	2.36	0.60
18:S:16:LYS:O	18:S:20:LYS:HB2	2.01	0.60
1:A:1249:C:H4'	8:I:37:TYR:OH	2.00	0.60
1:A:10:A:H2'	1:A:11:G:C8	2.37	0.60
1:A:1405:G:O4'	1:A:1519:A:H4'	2.01	0.60
1:A:909:A:H2'	1:A:910:C:O4'	2.01	0.60

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:487:A:H2'	1:A:488:C:O4'	2.00	0.60
8:I:17:ARG:O	8:I:64:ILE:HA	2.01	0.60
1:A:239:U:C5'	1:A:239:U:H6	2.14	0.60
1:A:376:G:H2'	1:A:377:G:H8	1.65	0.60
1:A:162:A:H2'	1:A:163:C:O4'	2.01	0.60
1:A:719:C:O2'	17:R:37:LYS:HB2	2.02	0.60
12:M:77:LYS:HG2	12:M:81:ASP:OD2	2.01	0.60
20:B:205:ALA:O	20:B:209:VAL:HG22	2.01	0.60
20:B:16:GLY:HA3	20:B:39:ILE:HA	1.82	0.60
8:I:79:ARG:NH2	8:I:102:PHE:HA	2.15	0.60
1:A:35:G:H2'	1:A:36:C:C6	2.36	0.60
5:F:29:ILE:HG23	5:F:66:ALA:HB2	1.82	0.60
1:A:1149:C:H2'	1:A:1150:A:H8	1.65	0.60
1:A:919:A:O2'	1:A:920:U:H5'	2.01	0.60
13:N:30:ILE:HG21	13:N:44:VAL:HG21	1.83	0.60
1:A:532:A:N6	2:C:191:THR:HB	2.16	0.60
1:A:1218:C:H2'	1:A:1219:A:C8	2.37	0.60
18:S:10:ILE:HD12	18:S:15:LEU:HG	1.82	0.60
8:I:29:ILE:HD13	8:I:78:ILE:HD13	1.82	0.60
1:A:1330:U:H4'	12:M:69:ARG:HH12	1.67	0.60
1:A:1001:C:H2'	1:A:1002:G:C8	2.37	0.60
5:F:86:ARG:HH12	17:R:63:TYR:HB3	1.66	0.60
10:K:70:ALA:O	10:K:74:LYS:HB2	2.01	0.60
1:A:1053:G:HO2'	1:A:1199:U:H5	1.48	0.60
12:M:58:GLU:O	12:M:61:LYS:HG2	2.02	0.60
1:A:1382:C:H4'	6:G:78:ARG:NH2	2.16	0.60
1:A:411:A:H62	1:A:413:G:H21	1.49	0.60
1:A:1238:A:N3	1:A:1238:A:H2'	2.16	0.60
3:D:22:SER:H	3:D:109:THR:HG22	1.66	0.60
11:L:35:ARG:HA	11:L:35:ARG:NH1	2.17	0.60
1:A:538:G:H5''	11:L:110:LYS:HG2	1.83	0.60
1:A:1090:U:H2'	1:A:1091:U:C6	2.37	0.60
1:A:492:C:H2'	1:A:493:A:N3	2.16	0.60
1:A:1329:A:OP1	12:M:28:ARG:HB2	2.02	0.59
1:A:410:G:P	3:D:25:ARG:HD2	2.42	0.59
8:I:93:LEU:O	8:I:97:LEU:HG	2.02	0.59
4:E:158:LYS:HZ3	7:H:63:LYS:HD3	1.67	0.59
1:A:1508:A:H2'	1:A:1509:C:C6	2.37	0.59
1:A:685:G:O2'	1:A:686:U:H5'	2.02	0.59
13:N:16:ALA:HB2	13:N:55:SER:N	2.17	0.59
12:M:39:ALA:HB3	12:M:42:VAL:HG13	1.84	0.59
20:B:65:LYS:H	20:B:158:ASP:CG	2.04	0.59

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:25:GLY:HA3	8:I:57:VAL:N	2.16	0.59
3:D:29:THR:HG22	3:D:30:LYS:H	1.67	0.59
9:J:53:ILE:HG22	9:J:61:ALA:HB1	1.83	0.59
20:B:99:MET:HA	20:B:106:VAL:HG11	1.84	0.59
1:A:1301:U:H2'	1:A:1301:U:O2	2.01	0.59
4:E:81:GLN:H	4:E:146:MET:CE	2.15	0.59
10:K:51:PHE:HB2	10:K:55:ARG:HB3	1.85	0.59
10:K:81:LEU:HD11	10:K:99:LEU:HD23	1.82	0.59
1:A:370:C:O2'	1:A:371:A:H5'	2.02	0.59
4:E:82:HIS:HB2	4:E:83:PRO:HD2	1.84	0.59
5:F:3:HIS:NE2	5:F:95:ALA:HB2	2.18	0.59
19:T:66:ILE:HG22	19:T:67:HIS:N	2.16	0.59
6:G:64:ALA:HA	6:G:127:ALA:HA	1.84	0.59
1:A:845:A:H3'	1:A:846:G:C8	2.37	0.59
13:N:68:ARG:NH1	13:N:70:HIS:HB2	2.16	0.59
2:C:8:GLY:HA2	2:C:11:LEU:HG	1.83	0.59
5:F:98:GLU:HG2	5:F:99:ALA:N	2.17	0.59
20:B:31:PHE:N	20:B:39:ILE:O	2.34	0.59
11:L:14:LYS:HG2	11:L:16:ALA:H	1.66	0.59
12:M:79:LEU:HD11	12:M:86:ARG:NH2	2.18	0.59
1:A:182:A:O2'	1:A:183:C:H3'	2.03	0.59
4:E:152:VAL:HG21	7:H:98:LEU:HB3	1.82	0.59
1:A:275:G:H5'	16:Q:15:LYS:HD3	1.84	0.59
6:G:24:LYS:HA	6:G:27:ASN:HD22	1.67	0.59
2:C:183:TYR:HA	2:C:199:VAL:O	2.02	0.59
14:O:43:ALA:O	14:O:46:LYS:HE3	2.03	0.59
1:A:699:C:C2'	1:A:700:G:H5''	2.26	0.59
1:A:1213:A:O2'	1:A:1214:C:H5''	2.03	0.59
1:A:996:A:H2'	1:A:997:U:C6	2.37	0.59
1:A:746:A:H2'	1:A:747:A:C8	2.36	0.59
20:B:42:LEU:O	20:B:46:VAL:HG12	2.02	0.59
20:B:110:ILE:HG23	20:B:151:LYS:HA	1.84	0.59
20:B:20:ARG:HA	20:B:38:HIS:CE1	2.38	0.59
16:Q:26:ARG:HG2	16:Q:39:ARG:O	2.02	0.59
13:N:41:TRP:HB3	13:N:44:VAL:HB	1.84	0.59
15:P:20:VAL:HG23	15:P:35:ARG:HA	1.85	0.59
16:Q:45:VAL:HG12	16:Q:46:HIS:N	2.18	0.59
1:A:1007:U:H2'	1:A:1008:U:C6	2.37	0.59
7:H:46:GLU:HB2	7:H:61:THR:HB	1.85	0.59
1:A:1302:C:H5'	12:M:16:ILE:HG13	1.85	0.59
11:L:35:ARG:HA	11:L:35:ARG:CZ	2.33	0.59
15:P:68:SER:OG	15:P:71:VAL:HG12	2.02	0.59

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:140:LEU:HD12	20:B:140:LEU:H	1.68	0.59
18:S:30:LEU:H	18:S:48:ILE:HA	1.67	0.59
1:A:1294:G:H2'	1:A:1295:U:C6	2.38	0.59
1:A:628:G:H2'	1:A:629:A:C8	2.38	0.59
6:G:26:VAL:HB	6:G:39:GLU:HG2	1.84	0.59
6:G:62:GLU:O	6:G:66:GLU:HG3	2.03	0.59
10:K:81:LEU:HD21	10:K:104:PHE:HB3	1.85	0.59
5:F:100:SER:HA	17:R:23:LYS:CE	2.32	0.59
1:A:922:G:H4'	4:E:24:VAL:HA	1.85	0.58
1:A:264:C:O2'	16:Q:65:PRO:HG2	2.03	0.58
1:A:1270:G:H2'	1:A:1271:A:C8	2.38	0.58
2:C:82:ASP:HA	2:C:85:LYS:HB3	1.84	0.58
17:R:55:ALA:HA	17:R:58:ILE:HD13	1.84	0.58
19:T:19:HIS:O	19:T:23:ARG:HG2	2.02	0.58
1:A:812:G:H2'	1:A:812:G:N3	2.18	0.58
8:I:25:GLY:HA3	8:I:57:VAL:H	1.68	0.58
1:A:1008:U:H5''	13:N:23:ARG:NH2	2.17	0.58
4:E:11:GLN:HE22	4:E:41:GLY:HA3	1.69	0.58
20:B:126:ASP:O	20:B:127:LYS:HB3	2.03	0.58
1:A:68:G:H5'	1:A:171:A:H1'	1.84	0.58
21:U:3:ILE:HD12	21:U:3:ILE:N	2.18	0.58
18:S:11:ASP:H	18:S:14:LEU:HD21	1.67	0.58
18:S:43:MET:HB2	18:S:61:VAL:HG11	1.84	0.58
1:A:539:A:H2'	1:A:540:G:H8	1.67	0.58
6:G:78:ARG:NH1	6:G:81:GLY:H	2.01	0.58
11:L:109:ARG:HB3	11:L:118:VAL:HG21	1.85	0.58
1:A:370:C:H2'	1:A:371:A:H8	1.67	0.58
1:A:881:G:P	11:L:8:ARG:HH12	2.26	0.58
11:L:26:CYS:SG	11:L:29:LYS:HE2	2.43	0.58
1:A:728:A:H2'	1:A:729:A:C8	2.39	0.58
1:A:1149:C:H2'	1:A:1150:A:C8	2.38	0.58
1:A:93:U:O2'	1:A:94:G:H5'	2.04	0.58
1:A:625:U:H4'	15:P:16:PHE:CZ	2.38	0.58
18:S:11:ASP:O	18:S:14:LEU:HG	2.02	0.58
6:G:14:ASP:CB	6:G:19:SER:H	2.15	0.58
13:N:9:GLU:HB2	13:N:62:ARG:CZ	2.33	0.58
10:K:70:ALA:C	10:K:72:ALA:H	2.07	0.58
7:H:17:GLN:HE21	7:H:62:LEU:HB3	1.69	0.58
1:A:1071:C:H2'	1:A:1072:G:H8	1.69	0.58
1:A:1062:U:H2'	1:A:1063:C:C6	2.39	0.58
20:B:172:ILE:HG22	20:B:176:ASN:HD21	1.69	0.58
10:K:124:LYS:HA	21:U:34:ARG:CB	2.33	0.58

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:27:GLN:O	14:O:31:LEU:HD23	2.03	0.58
7:H:45:ILE:HG22	7:H:62:LEU:HA	1.86	0.58
20:B:93:HIS:CD2	20:B:145:ASN:HB3	2.39	0.58
6:G:72:VAL:HG12	6:G:89:GLU:HA	1.85	0.58
1:A:1461:G:H2'	1:A:1462:C:H6	1.69	0.58
1:A:352:C:H4'	1:A:354:G:OP1	2.03	0.58
1:A:596:A:H2'	1:A:597:G:H8	1.69	0.58
1:A:472:U:H2'	1:A:473:U:C6	2.39	0.58
1:A:328:C:H4'	1:A:329:A:H5''	1.84	0.58
18:S:27:LYS:HB3	18:S:27:LYS:NZ	2.19	0.58
20:B:23:ASN:HD22	20:B:24:PRO:HD2	1.67	0.58
3:D:123:MET:HB2	3:D:126:GLY:O	2.04	0.58
20:B:83:ALA:CB	20:B:90:PHE:HB3	2.34	0.58
6:G:65:LEU:O	6:G:69:ARG:HG3	2.04	0.58
2:C:154:GLY:HA3	2:C:162:ALA:HB1	1.86	0.58
1:A:265:G:H2'	1:A:267:C:H5	1.68	0.58
12:M:79:LEU:HD21	12:M:86:ARG:HH21	1.67	0.58
10:K:16:SER:HA	10:K:77:GLY:O	2.02	0.58
2:C:18:ASN:OD1	2:C:53:ARG:HD2	2.04	0.58
3:D:7:LYS:O	3:D:20:LEU:HD12	2.04	0.58
1:A:1250:A:H2'	1:A:1251:A:C8	2.39	0.58
1:A:208:U:H4'	1:A:209:U:C5	2.38	0.58
1:A:313:A:H2'	1:A:314:C:C6	2.39	0.58
1:A:1338:G:H2'	1:A:1339:A:C8	2.39	0.58
1:A:621:A:H2'	1:A:622:A:C8	2.38	0.58
1:A:190:A:H8	1:A:190:A:O5'	1.87	0.58
20:B:32:GLY:N	20:B:39:ILE:HB	2.18	0.58
12:M:2:ARG:HB2	12:M:56:ARG:NH2	2.18	0.58
1:A:276:G:H5'	16:Q:16:MET:SD	2.44	0.58
12:M:95:PRO:N	12:M:108:ARG:HG2	2.18	0.58
1:A:1141:C:H2'	1:A:1142:G:C8	2.39	0.58
4:E:125:LYS:HD2	4:E:126:ALA:H	1.69	0.58
17:R:25:ILE:O	17:R:29:LYS:HG3	2.02	0.58
1:A:60:A:H4'	1:A:61:G:OP1	2.03	0.58
11:L:13:ARG:CD	11:L:13:ARG:H	2.16	0.58
3:D:201:GLU:OE1	4:E:104:ILE:HG22	2.04	0.58
4:E:73:VAL:HB	4:E:75:LEU:HD21	1.86	0.58
6:G:72:VAL:HA	6:G:89:GLU:HA	1.86	0.58
1:A:950:U:H2'	1:A:951:G:H8	1.67	0.58
1:A:1244:G:H2'	1:A:1245:C:C6	2.38	0.58
18:S:24:SER:HB2	18:S:27:LYS:HE3	1.86	0.58
1:A:1427:C:H2'	1:A:1428:A:C8	2.38	0.58

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:9:GLY:HA3	8:I:81:GLY:H	1.69	0.58
3:D:77:GLU:O	3:D:81:LEU:HG	2.04	0.58
1:A:668:G:O2'	14:O:45:HIS:HB3	2.03	0.58
5:F:36:ILE:HG13	5:F:64:VAL:HG13	1.86	0.57
20:B:117:GLU:HA	20:B:140:LEU:HD21	1.86	0.57
20:B:20:ARG:HA	20:B:38:HIS:HE1	1.68	0.57
1:A:1057:G:H5''	2:C:153:SER:HB2	1.86	0.57
1:A:791:G:C6	1:A:792:A:N7	2.72	0.57
17:R:58:ILE:HD12	17:R:58:ILE:H	1.69	0.57
1:A:987:G:O2'	1:A:988:G:H5'	2.03	0.57
21:U:36:PHE:HA	21:U:39:LYS:HE2	1.85	0.57
11:L:3:VAL:O	11:L:7:VAL:HG23	2.04	0.57
1:A:1091:U:H2'	1:A:1093:A:OP2	2.03	0.57
1:A:518:C:H2'	1:A:530:G:H8	1.69	0.57
1:A:638:U:H2'	1:A:639:G:O4'	2.03	0.57
1:A:285:C:H2'	1:A:286:C:H6	1.68	0.57
10:K:58:THR:HB	10:K:59:PRO:HD2	1.86	0.57
2:C:33:ASP:O	2:C:37:LYS:HG3	2.04	0.57
12:M:48:SER:O	12:M:52:ILE:HG22	2.05	0.57
12:M:79:LEU:HD11	12:M:86:ARG:HH21	1.68	0.57
1:A:678:U:H2'	1:A:679:C:H6	1.67	0.57
1:A:476:U:O2'	1:A:477:C:H5'	2.03	0.57
4:E:39:GLY:HA2	4:E:45:VAL:HA	1.86	0.57
5:F:79:ARG:HH21	5:F:87:SER:HB3	1.69	0.57
3:D:77:GLU:HA	3:D:80:ARG:HG2	1.87	0.57
8:I:19:PHE:O	8:I:62:LEU:HA	2.04	0.57
4:E:93:VAL:HG13	4:E:126:ALA:HB2	1.85	0.57
2:C:71:ARG:O	2:C:74:ILE:HG22	2.04	0.57
1:A:600:A:H2'	1:A:601:G:C8	2.39	0.57
21:U:36:PHE:HB3	21:U:39:LYS:HB2	1.87	0.57
1:A:451:A:H5'	15:P:70:ARG:NH2	2.18	0.57
14:O:78:THR:HA	14:O:81:ILE:HD12	1.86	0.57
18:S:43:MET:O	18:S:61:VAL:HB	2.05	0.57
8:I:6:TYR:HB2	8:I:19:PHE:CE1	2.39	0.57
1:A:920:U:H2'	1:A:921:U:H6	1.68	0.57
1:A:736:C:H2'	1:A:737:C:C6	2.40	0.57
1:A:860:A:H2'	1:A:861:G:O4'	2.05	0.57
1:A:32:A:H2'	1:A:33:A:C8	2.38	0.57
10:K:34:THR:HA	10:K:41:LEU:HG	1.86	0.57
1:A:272:C:H2'	1:A:273:U:C6	2.39	0.57
1:A:580:C:H2'	1:A:581:G:O4'	2.05	0.57
19:T:15:LYS:HA	19:T:15:LYS:HE2	1.86	0.57

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:U:28:LEU:HD23	21:U:29:ALA:N	2.19	0.57
1:A:1123:U:O2'	1:A:1124:G:H5'	2.04	0.57
10:K:22:ILE:HD12	10:K:84:MET:O	2.03	0.57
16:Q:39:ARG:HH11	16:Q:39:ARG:HG3	1.69	0.57
1:A:1477:U:H2'	1:A:1478:U:H6	1.69	0.57
7:H:24:VAL:HG12	7:H:60:LEU:O	2.04	0.57
1:A:1296:C:H4'	1:A:1302:C:C4	2.38	0.57
10:K:34:THR:HB	10:K:40:ALA:HA	1.86	0.57
1:A:1004:A:N7	1:A:1025:U:H1'	2.20	0.57
1:A:923:A:H2'	1:A:924:C:C6	2.40	0.57
1:A:336:A:O2'	1:A:337:G:H5'	2.05	0.57
1:A:437:U:H4'	3:D:153:ARG:NH1	2.20	0.57
4:E:18:ASN:HB2	4:E:33:THR:OG1	2.05	0.57
1:A:518:C:H2'	1:A:530:G:C8	2.40	0.57
1:A:545:C:H5''	3:D:68:GLU:HG2	1.86	0.57
18:S:14:LEU:O	18:S:18:VAL:HG12	2.05	0.57
1:A:843:U:H5'	1:A:844:G:N7	2.20	0.57
10:K:14:GLN:HA	10:K:77:GLY:HA3	1.87	0.57
13:N:71:GLY:O	13:N:79:SER:HA	2.05	0.57
1:A:373:A:H1'	1:A:481:G:N3	2.20	0.57
1:A:10:A:H2'	1:A:11:G:H8	1.69	0.57
10:K:27:ASN:O	10:K:56:LYS:HE3	2.05	0.57
5:F:67:PRO:HG2	5:F:70:VAL:HG22	1.86	0.57
10:K:86:LYS:HA	10:K:113:THR:OG1	2.05	0.57
1:A:1152:A:H2'	1:A:1153:G:C8	2.38	0.57
8:I:113:LYS:HA	8:I:120:ALA:HB2	1.87	0.57
1:A:272:C:H2'	1:A:273:U:H6	1.70	0.57
12:M:22:TYR:HB2	12:M:65:GLU:HA	1.86	0.57
2:C:149:LYS:HB2	2:C:168:ARG:HG3	1.87	0.56
11:L:7:VAL:HG22	16:Q:33:TYR:HD1	1.70	0.56
1:A:1054:C:O2'	1:A:1055:A:H5''	2.05	0.56
1:A:624:C:H2'	1:A:625:U:H6	1.70	0.56
20:B:40:ILE:HD13	20:B:201:GLY:HA2	1.88	0.56
8:I:50:PRO:HB3	8:I:83:THR:HB	1.86	0.56
6:G:129:ASN:ND2	6:G:137:ARG:HH22	2.03	0.56
7:H:124:ILE:HG22	7:H:125:ILE:N	2.19	0.56
1:A:82:G:H1'	1:A:89:U:O2	2.06	0.56
1:A:811:C:H4'	1:A:900:A:N6	2.20	0.56
1:A:1417:G:H22	1:A:1482:G:H2'	1.70	0.56
8:I:27:ILE:HG21	8:I:34:LEU:HD13	1.88	0.56
9:J:40:ILE:HB	9:J:73:LEU:HB3	1.87	0.56
1:A:1078:U:H2'	1:A:1079:G:O4'	2.05	0.56

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:922:G:N3	1:A:1398:A:H2	2.03	0.56
1:A:734:G:H21	17:R:63:TYR:HE1	1.53	0.56
6:G:145:GLU:HA	6:G:148:LYS:HB2	1.86	0.56
1:A:1317:C:OP1	13:N:56:PRO:HD2	2.05	0.56
1:A:90:C:H2'	1:A:91:U:C6	2.40	0.56
1:A:1296:C:H4'	1:A:1302:C:N4	2.21	0.56
4:E:82:HIS:CD2	7:H:95:MET:HG3	2.41	0.56
1:A:190:A:H2'	1:A:191:G:O4'	2.05	0.56
1:A:505:G:H2'	1:A:506:G:H8	1.68	0.56
4:E:56:PRO:HG2	4:E:57:ALA:H	1.70	0.56
1:A:390:U:H2'	1:A:391:G:C8	2.40	0.56
15:P:40:ASN:ND2	15:P:42:ILE:H	2.04	0.56
13:N:79:SER:OG	13:N:82:LYS:HG2	2.05	0.56
1:A:33:A:H2'	1:A:34:C:H6	1.70	0.56
1:A:505:G:H4'	1:A:534:U:C4	2.40	0.56
1:A:1058:G:OP1	2:C:198:LYS:HE3	2.05	0.56
12:M:43:LYS:H	12:M:43:LYS:HD2	1.70	0.56
1:A:224:U:H2'	1:A:225:C:C6	2.39	0.56
1:A:1004:A:H5'	1:A:1024:G:N2	2.20	0.56
4:E:19:ARG:HH11	4:E:28:ARG:HH22	1.53	0.56
1:A:975:A:H4'	1:A:976:G:O5'	2.04	0.56
7:H:13:ILE:HD11	7:H:60:LEU:HD21	1.87	0.56
1:A:135:C:O2	15:P:1:MET:HB2	2.04	0.56
1:A:555:U:H2'	1:A:556:C:H6	1.70	0.56
20:B:58:LYS:NZ	20:B:58:LYS:HB3	2.20	0.56
1:A:933:G:N7	6:G:2:ARG:NH1	2.54	0.56
19:T:85:LEU:HD23	19:T:86:ALA:N	2.21	0.56
1:A:672:U:H2'	1:A:673:A:C8	2.40	0.56
1:A:777:A:H2'	1:A:778:G:C8	2.40	0.56
20:B:145:ASN:ND2	20:B:145:ASN:N	2.53	0.56
11:L:122:LYS:HD2	11:L:123:ALA:H	1.69	0.56
1:A:1347:G:H22	1:A:1373:G:H2'	1.71	0.56
1:A:824:G:O2'	1:A:825:A:H5'	2.05	0.56
1:A:1508:A:H2'	1:A:1509:C:H6	1.70	0.56
1:A:562:U:H2'	1:A:562:U:OP2	2.05	0.56
1:A:1332:A:H2'	1:A:1333:A:H8	1.69	0.56
3:D:40:HIS:HB3	3:D:43:ARG:HG2	1.87	0.56
1:A:1351:U:O2'	1:A:1352:C:H5'	2.05	0.56
6:G:25:PHE:HZ	6:G:119:LEU:HD11	1.71	0.56
8:I:126:PHE:O	8:I:128:LYS:N	2.39	0.56
13:N:63:CYS:HB3	13:N:67:GLY:N	2.20	0.56
1:A:1171:A:H2'	1:A:1172:C:C6	2.40	0.56

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:44:LYS:HD2	3:D:46:ARG:HG2	1.88	0.56
20:B:16:GLY:CA	20:B:40:ILE:H	2.19	0.56
20:B:15:PHE:O	20:B:40:ILE:HD12	2.05	0.56
21:U:24:LYS:NZ	21:U:25:ALA:H	1.98	0.56
20:B:65:LYS:HG2	20:B:89:PHE:HE1	1.71	0.56
20:B:114:LYS:HE2	20:B:151:LYS:HZ1	1.71	0.56
20:B:112:ARG:HH11	20:B:116:LEU:HG	1.71	0.56
8:I:55:ASP:CB	8:I:59:LYS:HG3	2.36	0.56
21:U:39:LYS:N	21:U:40:PRO:HD2	2.21	0.56
3:D:55:ARG:HG3	3:D:55:ARG:HH11	1.70	0.56
1:A:45:G:H2'	1:A:46:G:H8	1.71	0.56
3:D:2:ARG:HH22	3:D:132:ALA:HB3	1.71	0.56
15:P:74:LEU:O	15:P:78:VAL:HG12	2.06	0.56
1:A:715:A:H2'	1:A:716:A:C8	2.41	0.56
1:A:576:C:OP2	1:A:576:C:H3'	2.06	0.56
19:T:49:ALA:HA	19:T:52:GLU:HB3	1.87	0.56
19:T:68:LYS:NZ	19:T:68:LYS:HA	2.21	0.56
1:A:1534:A:N3	1:A:1534:A:H3'	2.21	0.56
18:S:39:ILE:HB	18:S:65:MET:O	2.06	0.56
1:A:465:A:O2'	1:A:466:A:H5'	2.06	0.56
20:B:199:ILE:HG21	20:B:212:TYR:CE2	2.41	0.56
20:B:112:ARG:HA	20:B:115:ASP:OD2	2.06	0.56
1:A:1397:C:H4'	1:A:1398:A:OP2	2.05	0.56
1:A:1343:G:H4'	8:I:123:ARG:O	2.06	0.56
1:A:778:G:H2'	1:A:779:C:H6	1.71	0.56
14:O:28:VAL:HB	14:O:80:LEU:HD11	1.88	0.56
1:A:811:C:H4'	1:A:900:A:H62	1.72	0.56
5:F:15:SER:HA	5:F:18:VAL:HG23	1.88	0.56
1:A:41:G:H2'	1:A:42:G:H8	1.71	0.56
4:E:92:ARG:HB3	4:E:92:ARG:HH11	1.70	0.56
1:A:501:C:H2'	1:A:502:A:C8	2.41	0.56
1:A:216:U:H2'	1:A:217:C:C6	2.41	0.56
5:F:92:THR:HG22	5:F:93:LYS:N	2.20	0.55
1:A:332:G:OP2	19:T:4:LYS:HB2	2.06	0.55
1:A:182:A:H1'	1:A:183:C:C5	2.40	0.55
18:S:6:LYS:O	18:S:8:PRO:HD3	2.05	0.55
1:A:189:A:H2'	1:A:190:A:C8	2.41	0.55
18:S:41:PRO:HA	18:S:66:VAL:HG11	1.88	0.55
1:A:778:G:H2'	1:A:779:C:C6	2.41	0.55
7:H:11:THR:HA	7:H:14:ARG:CZ	2.36	0.55
1:A:45:G:H2'	1:A:46:G:C8	2.41	0.55
1:A:709:U:H2'	1:A:710:G:H8	1.71	0.55

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:68:HIS:HA	2:C:103:ALA:HB3	1.88	0.55
19:T:53:MET:O	19:T:57:VAL:HG22	2.07	0.55
1:A:490:C:H2'	1:A:491:G:C8	2.41	0.55
9:J:40:ILE:HD12	9:J:73:LEU:HD12	1.88	0.55
11:L:13:ARG:O	11:L:14:LYS:HB3	2.06	0.55
1:A:77:A:OP1	1:A:88:U:H5''	2.06	0.55
1:A:546:A:OP1	3:D:69:ARG:HB2	2.07	0.55
1:A:1021:A:H2'	1:A:1022:A:O4'	2.06	0.55
18:S:52:ASN:CG	18:S:53:GLY:H	2.08	0.55
2:C:16:PRO:CG	2:C:53:ARG:HH12	2.20	0.55
1:A:1432:G:H1'	1:A:1468:A:H61	1.70	0.55
1:A:168:G:O2'	1:A:169:C:H5'	2.06	0.55
1:A:33:A:H2'	1:A:34:C:C6	2.41	0.55
1:A:1246:A:H2'	1:A:1247:U:O4'	2.05	0.55
1:A:484:G:H5'	1:A:486:U:H5'	1.87	0.55
1:A:692:U:O2	1:A:694:A:H5''	2.07	0.55
1:A:590:U:H2'	1:A:591:U:H6	1.72	0.55
1:A:742:G:H2'	1:A:743:A:H8	1.71	0.55
1:A:1320:C:H42	18:S:35:ARG:HD3	1.70	0.55
12:M:18:LEU:HB2	12:M:29:SER:OG	2.06	0.55
2:C:6:PRO:HA	2:C:9:ILE:HG22	1.87	0.55
12:M:86:ARG:HA	12:M:96:VAL:HG11	1.88	0.55
20:B:95:TRP:CH2	20:B:100:LEU:HB2	2.41	0.55
20:B:80:LYS:HG3	20:B:81:ASP:H	1.71	0.55
1:A:179:A:H2'	1:A:180:U:C6	2.41	0.55
1:A:1085:U:H3'	1:A:1086:U:H5	1.72	0.55
8:I:49:GLN:N	8:I:50:PRO:HD2	2.22	0.55
13:N:5:MET:HE3	13:N:60:ARG:HH11	1.70	0.55
1:A:34:C:H2'	1:A:35:G:C8	2.42	0.55
15:P:38:PHE:CD2	15:P:51:ARG:HB2	2.41	0.55
5:F:69:GLU:OE1	5:F:70:VAL:HG13	2.07	0.55
1:A:430:A:OP1	3:D:8:LEU:HB2	2.06	0.55
13:N:60:ARG:HD3	13:N:62:ARG:CZ	2.37	0.55
6:G:4:ARG:HG3	6:G:5:VAL:N	2.18	0.55
1:A:845:A:H3'	1:A:846:G:H8	1.71	0.55
1:A:1226:C:H4'	1:A:1227:A:OP1	2.06	0.55
4:E:158:LYS:NZ	7:H:63:LYS:HD3	2.22	0.55
2:C:171:ARG:HB2	2:C:171:ARG:NH1	2.22	0.55
2:C:2:GLN:H	2:C:2:GLN:HE21	1.55	0.55
1:A:620:C:O2	3:D:131:ILE:HG21	2.07	0.55
18:S:62:THR:H	18:S:65:MET:HB2	1.71	0.55
20:B:53:LEU:HD11	20:B:216:VAL:HA	1.88	0.55

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:7:LEU:O	16:Q:60:ILE:HD13	2.06	0.55
3:D:29:THR:HG22	3:D:30:LYS:N	2.22	0.55
13:N:60:ARG:NE	13:N:62:ARG:HG2	2.21	0.55
1:A:16:A:O2'	1:A:17:U:H5'	2.07	0.55
1:A:1006:G:H2'	1:A:1007:U:H6	1.71	0.55
1:A:769:G:H4'	1:A:1513:A:H4'	1.87	0.55
1:A:642:A:H2'	1:A:643:C:H6	1.72	0.55
7:H:76:ARG:HG3	7:H:77:VAL:N	2.21	0.55
6:G:78:ARG:HG2	6:G:83:THR:HG22	1.88	0.55
1:A:1438:G:O2'	1:A:1439:G:H5'	2.06	0.55
1:A:692:U:C2	1:A:694:A:H5''	2.42	0.55
15:P:59:HIS:O	15:P:63:GLN:HG3	2.07	0.55
1:A:1448:C:H2'	1:A:1449:C:C6	2.42	0.55
13:N:11:LYS:N	13:N:11:LYS:HZ3	2.05	0.55
1:A:137:U:H2'	1:A:138:G:C8	2.42	0.55
1:A:1147:C:H2'	1:A:1148:U:C6	2.42	0.55
20:B:205:ALA:HB3	20:B:208:ALA:CB	2.37	0.55
1:A:1332:A:H2'	1:A:1333:A:C8	2.42	0.55
1:A:1004:A:C8	1:A:1025:U:H1'	2.42	0.55
3:D:24:VAL:HG13	3:D:160:LEU:HB3	1.87	0.55
8:I:46:VAL:O	8:I:79:ARG:HG3	2.06	0.55
4:E:148:SER:OG	4:E:151:MET:HB2	2.07	0.55
20:B:33:ALA:HA	20:B:38:HIS:HA	1.87	0.55
11:L:41:PRO:HB3	11:L:49:ARG:NH1	2.22	0.55
1:A:230:G:H2'	1:A:231:U:O4'	2.07	0.55
1:A:747:A:H2'	1:A:748:G:O4'	2.07	0.55
19:T:53:MET:HA	19:T:56:ILE:HD12	1.89	0.55
1:A:858:G:O6	1:A:869:G:H3'	2.07	0.55
9:J:53:ILE:CG2	9:J:61:ALA:HB1	2.37	0.55
1:A:1349:A:H2'	1:A:1350:A:O4'	2.07	0.55
1:A:474:G:H2'	1:A:475:C:H6	1.72	0.55
1:A:80:A:N3	1:A:81:A:H1'	2.22	0.55
1:A:235:C:H2'	1:A:236:A:H8	1.69	0.55
1:A:153:C:H2'	1:A:154:U:C6	2.42	0.55
2:C:142:ARG:HH21	2:C:143:LEU:HD21	1.72	0.55
3:D:24:VAL:CG1	3:D:160:LEU:HB3	2.37	0.54
3:D:90:LEU:HD11	3:D:194:ILE:CD1	2.37	0.54
9:J:93:ALA:HB3	9:J:96:VAL:HG22	1.89	0.54
12:M:89:ARG:HB3	12:M:96:VAL:HG22	1.90	0.54
7:H:123:GLU:HG2	7:H:124:ILE:O	2.07	0.54
1:A:777:A:H2'	1:A:778:G:H8	1.72	0.54
1:A:474:G:H2'	1:A:475:C:C6	2.42	0.54

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:37:ILE:HG22	16:Q:38:LYS:H	1.70	0.54
8:I:18:VAL:HA	8:I:64:ILE:HG13	1.88	0.54
13:N:20:PHE:C	13:N:22:LYS:H	2.10	0.54
8:I:22:PRO:HA	8:I:60:LEU:HB2	1.87	0.54
1:A:251:G:H1	1:A:271:C:H41	1.53	0.54
15:P:25:ARG:N	15:P:25:ARG:HD3	2.22	0.54
19:T:54:GLN:N	19:T:55:PRO:HD2	2.22	0.54
12:M:33:LEU:HD13	12:M:39:ALA:O	2.07	0.54
1:A:343:U:O2'	1:A:344:A:H2'	2.07	0.54
1:A:1166:G:H2'	1:A:1168:U:OP2	2.07	0.54
1:A:555:U:H2'	1:A:556:C:C6	2.42	0.54
1:A:31:G:H5'	1:A:306:A:C2	2.42	0.54
1:A:1524:C:H2'	1:A:1525:G:C8	2.42	0.54
12:M:50:GLY:O	12:M:54:THR:HG23	2.08	0.54
1:A:90:C:H2'	1:A:91:U:H5	1.72	0.54
20:B:75:ALA:O	20:B:79:VAL:HG23	2.07	0.54
1:A:1446:A:H2'	1:A:1447:A:H5''	1.89	0.54
1:A:5:U:H4'	1:A:6:G:H5'	1.90	0.54
1:A:384:G:H2'	1:A:385:C:H6	1.73	0.54
1:A:499:A:H4'	1:A:500:G:OP1	2.07	0.54
1:A:224:U:H2'	1:A:225:C:H6	1.71	0.54
1:A:1450:U:H2'	1:A:1452:C:C5	2.42	0.54
2:C:31:ASN:ND2	2:C:58:ARG:HE	2.05	0.54
8:I:20:ILE:N	8:I:20:ILE:HD12	2.22	0.54
11:L:98:ARG:HB2	11:L:116:TYR:HA	1.90	0.54
1:A:1275:A:H2'	1:A:1276:G:O4'	2.07	0.54
5:F:22:ILE:HD11	5:F:60:VAL:HG11	1.90	0.54
10:K:17:ASP:C	10:K:36:ARG:HH12	2.11	0.54
2:C:39:ARG:HG3	2:C:56:ILE:HD11	1.90	0.54
1:A:1014:A:H4'	18:S:13:HIS:CE1	2.42	0.54
1:A:1118:U:H2'	1:A:1119:C:H6	1.69	0.54
1:A:1324:A:H2'	1:A:1325:C:O4'	2.08	0.54
4:E:19:ARG:NH1	4:E:28:ARG:HH22	2.05	0.54
11:L:20:VAL:O	11:L:20:VAL:HG23	2.08	0.54
1:A:194:C:O2'	1:A:195:A:H5'	2.07	0.54
6:G:78:ARG:C	6:G:78:ARG:HD2	2.28	0.54
3:D:84:ASN:ND2	3:D:86:GLY:H	2.05	0.54
1:A:1437:A:H2'	1:A:1438:G:C8	2.43	0.54
20:B:172:ILE:H	20:B:172:ILE:HD12	1.71	0.54
1:A:389:A:N3	1:A:389:A:H2'	2.23	0.54
18:S:38:THR:HG22	18:S:68:HIS:O	2.08	0.54
8:I:18:VAL:HG13	8:I:64:ILE:HG13	1.88	0.54

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:70:VAL:HA	5:F:73:GLU:HG3	1.89	0.54
19:T:65:LEU:HG	19:T:66:ILE:HD13	1.90	0.54
21:U:35:GLU:HB2	21:U:37:TYR:CZ	2.43	0.54
1:A:1349:A:OP1	8:I:121:ARG:HB2	2.08	0.54
9:J:52:LEU:HB2	13:N:80:ARG:HE	1.73	0.54
7:H:94:VAL:CG2	7:H:101:ALA:HB2	2.37	0.54
1:A:1512:U:H2'	1:A:1513:A:C8	2.43	0.54
1:A:501:C:H2'	1:A:502:A:H8	1.73	0.54
1:A:95:C:H2'	1:A:96:U:H6	1.73	0.54
1:A:1017:U:H2'	1:A:1018:G:C8	2.42	0.54
13:N:20:PHE:HB2	13:N:54:SER:OG	2.07	0.54
1:A:565:U:H3'	1:A:566:G:H2'	1.90	0.54
1:A:1261:A:H1'	1:A:1275:A:C2	2.43	0.54
4:E:152:VAL:O	4:E:156:ARG:HG2	2.08	0.54
4:E:156:ARG:HB2	7:H:43:GLY:HA3	1.90	0.54
1:A:562:U:H1'	11:L:11:ARG:HD2	1.90	0.54
1:A:443:C:H2'	1:A:444:G:C8	2.43	0.54
1:A:1262:C:H2'	1:A:1263:C:C6	2.43	0.54
15:P:6:LEU:HB3	15:P:17:TYR:HB3	1.89	0.54
6:G:2:ARG:HG2	6:G:3:ARG:HD3	1.90	0.54
6:G:13:PRO:O	6:G:14:ASP:O	2.26	0.54
1:A:1124:G:H4'	9:J:40:ILE:HG12	1.89	0.54
15:P:40:ASN:HD21	15:P:42:ILE:C	2.11	0.54
1:A:1492:A:H5'	1:A:1493:A:OP2	2.08	0.54
1:A:844:G:H2'	1:A:846:G:C8	2.43	0.54
1:A:268:U:H2'	1:A:269:C:C6	2.42	0.54
4:E:140:ILE:HG22	4:E:144:GLU:OE1	2.07	0.54
11:L:52:CYS:SG	11:L:66:ILE:HD11	2.48	0.54
3:D:100:VAL:O	3:D:104:MET:HG3	2.08	0.54
13:N:50:LEU:N	13:N:51:PRO:HD2	2.20	0.54
20:B:107:ARG:HA	20:B:110:ILE:HD12	1.90	0.54
6:G:14:ASP:OD2	6:G:22:LEU:HB3	2.08	0.54
3:D:75:TYR:HE1	3:D:200:VAL:HA	1.73	0.54
1:A:613:C:H2'	1:A:614:C:C6	2.43	0.54
1:A:1127:G:H5'	1:A:1280:A:O2'	2.07	0.54
4:E:100:GLU:HA	4:E:121:ASN:ND2	2.22	0.54
6:G:70:PRO:O	6:G:95:ARG:HG3	2.08	0.54
4:E:53:ARG:NH1	4:E:53:ARG:HB3	2.23	0.54
20:B:186:VAL:HB	20:B:190:SER:HB2	1.88	0.53
2:C:70:ALA:HA	2:C:105:VAL:CG2	2.33	0.53
1:A:560:A:H4'	1:A:561:U:H5''	1.88	0.53
8:I:10:ARG:HB3	8:I:15:ALA:HA	1.89	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:28:THR:O	9:J:31:ARG:HG2	2.09	0.53
1:A:1253:G:N1	1:A:1285:A:N6	2.56	0.53
20:B:44:LYS:C	20:B:47:PRO:HD2	2.27	0.53
16:Q:75:VAL:HG23	16:Q:76:ARG:N	2.23	0.53
20:B:18:GLN:O	20:B:37:VAL:HG23	2.07	0.53
11:L:20:VAL:HB	11:L:94:TYR:CE1	2.43	0.53
7:H:10:LEU:HD22	7:H:74:ILE:HD11	1.90	0.53
1:A:453:G:H2'	1:A:454:G:C8	2.44	0.53
1:A:1273:C:H2'	1:A:1274:A:O4'	2.09	0.53
1:A:590:U:H2'	1:A:591:U:C6	2.43	0.53
1:A:1162:C:H2'	1:A:1163:A:C8	2.43	0.53
1:A:961:U:O4'	1:A:961:U:O2	2.26	0.53
18:S:44:ILE:HG13	18:S:62:THR:HA	1.89	0.53
20:B:13:VAL:HG11	20:B:207:ARG:HG2	1.89	0.53
4:E:28:ARG:CZ	4:E:30:PHE:HB3	2.39	0.53
1:A:734:G:O2'	17:R:59:LYS:HD3	2.08	0.53
2:C:190:THR:HG22	2:C:191:THR:N	2.23	0.53
1:A:205:A:H2'	1:A:206:C:C6	2.43	0.53
1:A:505:G:H2'	1:A:506:G:C8	2.43	0.53
1:A:301:G:H2'	1:A:302:G:H8	1.73	0.53
20:B:27:LYS:HB3	20:B:28:PRO:HD3	1.91	0.53
18:S:43:MET:O	18:S:46:LEU:HB2	2.09	0.53
1:A:470:C:H2'	1:A:471:U:C6	2.43	0.53
1:A:978:A:HO2'	1:A:1322:C:H5	1.53	0.53
6:G:91:ARG:HD2	6:G:91:ARG:N	2.22	0.53
1:A:1511:G:O2'	1:A:1512:U:H5'	2.08	0.53
1:A:1258:G:O2'	1:A:1259:C:H5'	2.09	0.53
1:A:1277:C:O2'	1:A:1279:G:H1'	2.08	0.53
1:A:1278:G:H4'	1:A:1279:G:H5'	1.89	0.53
2:C:13:ILE:HD13	2:C:13:ILE:H	1.74	0.53
1:A:284:C:H2'	1:A:285:C:H6	1.73	0.53
1:A:1525:G:O2'	1:A:1526:G:H5'	2.08	0.53
1:A:1018:G:H2'	1:A:1019:A:C8	2.43	0.53
15:P:54:LEU:HD13	15:P:80:LYS:HG3	1.90	0.53
13:N:60:ARG:HD3	13:N:62:ARG:NH2	2.22	0.53
1:A:1060:U:H5"	9:J:53:ILE:HG12	1.90	0.53
8:I:32:ARG:HH21	8:I:36:GLN:HG3	1.73	0.53
9:J:8:ILE:HD11	9:J:76:ILE:HG13	1.91	0.53
13:N:26:LEU:HD12	13:N:44:VAL:HG13	1.89	0.53
10:K:30:ILE:HG22	10:K:45:THR:OG1	2.08	0.53
3:D:169:TRP:HB2	3:D:183:ARG:O	2.09	0.53
5:F:37:HIS:O	5:F:97:THR:HG23	2.09	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:24:ILE:O	16:Q:40:THR:HA	2.09	0.53
1:A:796:C:OP1	10:K:127:ARG:HB3	2.08	0.53
5:F:74:LEU:HG	5:F:78:PHE:CE1	2.43	0.53
18:S:35:ARG:HB3	18:S:50:VAL:HG13	1.90	0.53
13:N:50:LEU:HG	13:N:51:PRO:HD3	1.91	0.53
1:A:1326:U:H2'	1:A:1327:C:H6	1.74	0.53
3:D:96:ARG:NH1	3:D:133:SER:HA	2.24	0.53
1:A:652:U:H1'	1:A:653:U:C5	2.44	0.53
1:A:1020:G:H2'	1:A:1021:A:H5'	1.90	0.53
2:C:19:SER:HB2	2:C:39:ARG:HH22	1.74	0.53
5:F:6:ILE:HG23	5:F:62:MET:HB3	1.91	0.53
21:U:35:GLU:HB2	21:U:37:TYR:CE2	2.43	0.53
8:I:33:SER:CB	8:I:36:GLN:HB2	2.38	0.53
14:O:80:LEU:HD21	14:O:84:LEU:HD22	1.91	0.53
1:A:370:C:H2'	1:A:371:A:C8	2.44	0.53
1:A:787:A:O2'	1:A:788:U:H5'	2.08	0.53
1:A:738:C:H2'	1:A:739:C:C6	2.44	0.53
1:A:1101:A:C8	20:B:170:ILE:HD12	2.43	0.53
8:I:61:ASP:C	8:I:62:LEU:HD13	2.29	0.53
6:G:131:GLY:O	6:G:134:VAL:HG22	2.09	0.53
4:E:23:THR:HA	4:E:28:ARG:HA	1.90	0.53
1:A:678:U:H4'	1:A:778:G:OP1	2.09	0.53
1:A:1250:A:H4'	8:I:69:GLY:O	2.08	0.53
1:A:312:C:H2'	1:A:313:A:C8	2.43	0.53
1:A:820:U:H4'	1:A:821:G:OP2	2.09	0.53
1:A:429:U:H3'	3:D:8:LEU:HD23	1.91	0.53
9:J:76:ILE:HD13	9:J:79:PRO:HB3	1.91	0.53
1:A:462:G:H3'	1:A:463:U:C6	2.44	0.53
7:H:31:LEU:O	7:H:35:ILE:HG13	2.09	0.53
20:B:101:THR:HA	20:B:178:LEU:HD21	1.91	0.53
1:A:709:U:H2'	1:A:710:G:C8	2.43	0.53
1:A:546:A:OP2	3:D:67:LEU:HB3	2.09	0.53
1:A:784:A:H2'	1:A:785:G:C8	2.44	0.53
1:A:320:A:H2'	1:A:321:A:C8	2.44	0.53
1:A:632:U:H3'	1:A:633:G:H5'	1.90	0.53
5:F:53:LYS:HZ2	5:F:53:LYS:H	1.57	0.53
6:G:29:LEU:HD23	6:G:29:LEU:O	2.09	0.53
16:Q:29:LYS:HG3	16:Q:34:GLY:HA2	1.90	0.53
8:I:44:ARG:O	8:I:47:VAL:HG22	2.08	0.52
1:A:9:G:OP2	4:E:125:LYS:HD3	2.09	0.52
1:A:8:A:H61	3:D:53:GLN:HE22	1.56	0.52
3:D:53:GLN:HB3	3:D:202:LEU:HB2	1.91	0.52

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:806:C:H2'	1:A:807:A:H8	1.73	0.52
1:A:434:U:H3'	1:A:435:A:H8	1.72	0.52
6:G:15:PRO:HG2	6:G:43:TYR:OH	2.10	0.52
1:A:930:C:H2'	1:A:931:C:O4'	2.08	0.52
12:M:17:ALA:CB	12:M:44:ILE:HD11	2.39	0.52
1:A:782:A:H2'	1:A:783:C:O4'	2.09	0.52
2:C:156:LEU:HD11	2:C:165:GLU:HB2	1.91	0.52
1:A:269:C:H2'	1:A:270:A:H8	1.73	0.52
11:L:7:VAL:HG22	16:Q:33:TYR:CD1	2.44	0.52
1:A:169:C:O2'	1:A:170:U:H5'	2.09	0.52
1:A:490:C:H2'	1:A:491:G:H8	1.73	0.52
1:A:1320:C:C5	18:S:36:ARG:HA	2.45	0.52
8:I:55:ASP:HB2	8:I:59:LYS:HG3	1.92	0.52
1:A:79:G:H8	1:A:79:G:OP2	1.93	0.52
1:A:927:G:O2'	1:A:928:G:H5'	2.09	0.52
12:M:44:ILE:HA	12:M:47:LEU:HD23	1.90	0.52
13:N:5:MET:HB3	13:N:62:ARG:HH12	1.74	0.52
17:R:60:ARG:O	17:R:64:LEU:HD13	2.09	0.52
10:K:124:LYS:HA	21:U:34:ARG:HG2	1.91	0.52
10:K:126:ARG:NE	10:K:126:ARG:HA	2.24	0.52
3:D:55:ARG:HG3	3:D:55:ARG:NH1	2.25	0.52
1:A:1070:U:H2'	1:A:1071:C:H6	1.73	0.52
11:L:43:LYS:NZ	11:L:44:PRO:HD3	2.24	0.52
1:A:552:U:O2'	1:A:553:A:H5'	2.10	0.52
1:A:399:G:H2'	1:A:400:C:C6	2.44	0.52
1:A:586:C:O2'	1:A:878:A:H4'	2.10	0.52
21:U:3:ILE:HD13	21:U:19:LYS:HA	1.91	0.52
12:M:10:ASP:CA	12:M:44:ILE:HD13	2.39	0.52
8:I:35:GLU:HG3	8:I:44:ARG:HD3	1.92	0.52
10:K:81:LEU:HD23	10:K:81:LEU:N	2.24	0.52
1:A:312:C:H2'	1:A:313:A:H8	1.74	0.52
1:A:314:C:O2'	1:A:315:A:H5'	2.09	0.52
1:A:151:A:H5'	1:A:152:A:OP2	2.09	0.52
1:A:1300:G:H1'	1:A:1301:U:H5	1.73	0.52
1:A:996:A:H2	1:A:1045:C:HO2'	1.55	0.52
1:A:1461:G:H2'	1:A:1462:C:C6	2.44	0.52
1:A:215:C:H2'	1:A:216:U:C6	2.45	0.52
2:C:34:SER:O	2:C:38:VAL:HG22	2.10	0.52
1:A:608:A:H3'	24:A:4244:HOH:O	2.09	0.52
3:D:117:VAL:O	3:D:130:ASN:HA	2.10	0.52
3:D:157:ALA:O	3:D:160:LEU:HD22	2.10	0.52
1:A:1121:U:O2'	1:A:1122:U:H5'	2.10	0.52

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1121:U:H2'	1:A:1122:U:O4'	2.09	0.52
21:U:40:PRO:HA	21:U:44:ARG:HD2	1.91	0.52
1:A:252:U:H2'	1:A:253:A:C8	2.45	0.52
1:A:560:A:N1	1:A:566:G:H5'	2.24	0.52
1:A:957:U:O2	1:A:959:A:H8	1.92	0.52
1:A:411:A:C4	1:A:413:G:H1'	2.45	0.52
2:C:35:ASP:HB3	2:C:39:ARG:HH12	1.75	0.52
1:A:1127:G:O2'	1:A:1128:C:H5'	2.09	0.52
1:A:1521:C:H2'	1:A:1522:U:C6	2.45	0.52
2:C:88:LYS:O	2:C:88:LYS:HE3	2.09	0.52
18:S:12:LEU:O	18:S:15:LEU:HB2	2.09	0.52
21:U:24:LYS:HZ3	21:U:25:ALA:N	1.99	0.52
19:T:66:ILE:HG23	19:T:70:LYS:HB3	1.92	0.52
1:A:1326:U:H2'	1:A:1327:C:C6	2.44	0.52
1:A:1029:U:O3'	1:A:1030:U:H3'	2.10	0.52
12:M:22:TYR:CD1	12:M:65:GLU:HA	2.45	0.52
1:A:398:U:H2'	1:A:399:G:C8	2.45	0.52
2:C:178:ARG:HG2	2:C:206:ILE:HA	1.90	0.52
3:D:94:GLU:HG3	3:D:99:ASN:HD21	1.75	0.52
18:S:63:ASP:O	18:S:66:VAL:HG22	2.10	0.52
13:N:50:LEU:CD2	13:N:51:PRO:HD3	2.40	0.52
11:L:49:ARG:HH12	11:L:88:ASP:CB	2.23	0.52
20:B:134:LEU:HA	20:B:137:THR:HG23	1.90	0.52
1:A:1207:G:O2'	1:A:1208:C:H5'	2.10	0.52
6:G:135:LYS:HE2	6:G:136:LYS:N	2.24	0.52
1:A:17:U:O2'	1:A:18:C:H5'	2.10	0.52
21:U:40:PRO:O	21:U:44:ARG:HB2	2.10	0.52
2:C:166:TRP:CE3	2:C:166:TRP:HA	2.45	0.52
14:O:35:ILE:CD1	14:O:58:MET:HG3	2.38	0.52
2:C:120:THR:HG22	2:C:188:ALA:HB2	1.92	0.52
1:A:455:G:O2'	1:A:456:A:H5'	2.10	0.52
1:A:1168:U:H4'	1:A:1169:A:OP2	2.10	0.52
1:A:36:C:H4'	11:L:118:VAL:O	2.09	0.52
1:A:1238:A:H2	1:A:1241:G:N3	2.07	0.52
1:A:1245:C:H2'	1:A:1246:A:C8	2.45	0.52
5:F:52:ASN:HA	5:F:53:LYS:HZ3	1.75	0.52
1:A:398:U:H2'	1:A:399:G:H8	1.73	0.52
1:A:165:G:O2'	1:A:166:U:H5'	2.10	0.52
13:N:50:LEU:H	13:N:51:PRO:CD	2.23	0.52
20:B:204:ASP:O	20:B:208:ALA:HB3	2.09	0.52
1:A:469:C:H2'	1:A:470:C:H6	1.75	0.52
3:D:33:ILE:HG13	3:D:34:GLU:N	2.25	0.52

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:63:TYR:CD2	17:R:63:TYR:N	2.77	0.52
7:H:17:GLN:NE2	7:H:62:LEU:HB3	2.25	0.52
3:D:199:ILE:HD12	3:D:200:VAL:N	2.25	0.52
1:A:376:G:H2'	1:A:377:G:C8	2.45	0.52
1:A:707:U:H4'	10:K:21:HIS:CD2	2.45	0.52
1:A:547:A:H4'	1:A:548:G:O5'	2.10	0.52
6:G:42:VAL:O	6:G:46:LEU:HB2	2.10	0.51
1:A:1120:C:H2'	1:A:1121:U:C6	2.46	0.51
1:A:1151:A:O2'	1:A:1152:A:H8	1.92	0.51
6:G:129:ASN:HA	6:G:134:VAL:HG21	1.92	0.51
13:N:26:LEU:HA	13:N:29:ILE:HB	1.93	0.51
11:L:106:VAL:CG2	11:L:116:TYR:HB3	2.40	0.51
8:I:71:ILE:HD12	8:I:71:ILE:N	2.25	0.51
3:D:185:PRO:HB2	3:D:190:LEU:HD12	1.91	0.51
17:R:23:LYS:HG3	17:R:24:ASP:N	2.26	0.51
1:A:1101:A:H4'	1:A:1102:A:O5'	2.10	0.51
6:G:99:ALA:O	6:G:103:ILE:HG13	2.10	0.51
1:A:160:A:H2'	1:A:161:A:O4'	2.10	0.51
1:A:730:G:O2'	1:A:766:A:H5'	2.09	0.51
1:A:1220:G:H2'	1:A:1221:G:H8	1.74	0.51
5:F:73:GLU:O	5:F:77:THR:HG23	2.10	0.51
1:A:238:A:C2'	1:A:239:U:H5''	2.36	0.51
7:H:100:ILE:HG13	7:H:128:VAL:O	2.10	0.51
18:S:29:PRO:HA	18:S:47:THR:O	2.11	0.51
10:K:74:LYS:C	10:K:76:TYR:H	2.14	0.51
1:A:1478:U:H2'	1:A:1479:C:C6	2.45	0.51
15:P:72:ALA:HA	15:P:75:ILE:HD12	1.92	0.51
1:A:1315:U:H5	18:S:5:LYS:HZ1	1.57	0.51
4:E:113:VAL:HG11	4:E:136:VAL:HG23	1.90	0.51
4:E:35:LEU:HD22	4:E:133:ILE:HA	1.92	0.51
19:T:49:ALA:C	19:T:52:GLU:HB3	2.31	0.51
1:A:1530:G:H2'	1:A:1531:A:H8	1.75	0.51
1:A:724:G:O2'	1:A:725:G:H5'	2.10	0.51
1:A:458:U:H2'	1:A:459:A:H8	1.75	0.51
1:A:254:G:H4'	16:Q:19:SER:OG	2.10	0.51
5:F:5:GLU:HA	5:F:63:ASN:HA	1.92	0.51
4:E:10:LEU:HA	4:E:39:GLY:O	2.10	0.51
2:C:35:ASP:HB3	2:C:39:ARG:NH1	2.26	0.51
11:L:82:ARG:HG2	11:L:82:ARG:HH11	1.75	0.51
1:A:1229:A:H2'	1:A:1230:C:C6	2.45	0.51
10:K:110:THR:HA	21:U:3:ILE:O	2.10	0.51
18:S:10:ILE:HG22	18:S:37:SER:HB3	1.91	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:50:SER:HB2	2:C:70:ALA:HB3	1.91	0.51
1:A:104:G:O2'	1:A:105:G:H5'	2.11	0.51
1:A:1471:U:O2'	1:A:1472:U:H5'	2.10	0.51
1:A:522:C:H2'	1:A:523:A:O4'	2.10	0.51
7:H:4:ASP:OD1	7:H:7:ALA:HB2	2.11	0.51
1:A:1297:G:H1'	1:A:1298:U:C5	2.43	0.51
1:A:636:U:H2'	1:A:637:C:C6	2.45	0.51
19:T:49:ALA:O	19:T:52:GLU:HB3	2.11	0.51
1:A:501:C:H1'	1:A:549:C:H1'	1.91	0.51
1:A:1430:A:H2'	1:A:1431:A:O4'	2.10	0.51
1:A:1136:C:OP1	1:A:1136:C:H3'	2.10	0.51
18:S:11:ASP:OD1	18:S:34:SER:HA	2.10	0.51
20:B:119:GLN:O	20:B:125:PHE:HB3	2.10	0.51
21:U:39:LYS:O	21:U:43:GLU:HB3	2.09	0.51
5:F:38:ARG:HH21	5:F:63:ASN:HD21	1.53	0.51
9:J:30:LYS:NZ	9:J:36:VAL:HB	2.25	0.51
15:P:25:ARG:CD	15:P:25:ARG:H	2.23	0.51
1:A:762:U:H2'	1:A:763:G:C8	2.45	0.51
19:T:43:LYS:HE2	19:T:44:ALA:N	2.22	0.51
1:A:79:G:H2'	1:A:80:A:N7	2.25	0.51
5:F:100:SER:HA	17:R:23:LYS:HE2	1.91	0.51
12:M:14:ALA:HB2	12:M:42:VAL:HG23	1.92	0.51
7:H:11:THR:HA	7:H:14:ARG:NH1	2.25	0.51
1:A:1512:U:H2'	1:A:1513:A:H8	1.75	0.51
1:A:218:U:H2'	1:A:219:U:H6	1.74	0.51
1:A:968:A:C8	1:A:1062:U:H4'	2.44	0.51
1:A:531:U:H3	1:A:1208:C:H5''	1.76	0.51
1:A:1219:A:H2'	1:A:1220:G:C8	2.46	0.51
3:D:187:ARG:NH1	3:D:191:SER:HB3	2.26	0.51
9:J:12:ALA:HB3	9:J:18:ILE:HB	1.92	0.51
6:G:61:PHE:O	6:G:65:LEU:HD13	2.11	0.51
18:S:49:ALA:O	18:S:56:HIS:HD2	1.93	0.51
1:A:797:C:O2'	1:A:798:U:H5'	2.10	0.51
1:A:1008:U:H5''	13:N:23:ARG:HH22	1.75	0.51
20:B:69:VAL:HB	20:B:162:VAL:CG2	2.40	0.51
1:A:176:C:H3'	1:A:177:G:H21	1.76	0.51
4:E:15:ILE:HD12	4:E:35:LEU:HG	1.92	0.51
1:A:188:C:H2'	1:A:189:A:O4'	2.10	0.51
1:A:285:C:H2'	1:A:286:C:C6	2.45	0.51
21:U:13:VAL:HG13	21:U:13:VAL:O	2.10	0.51
14:O:52:ARG:HG3	14:O:56:LEU:HD13	1.92	0.51
14:O:42:PHE:CE1	14:O:55:LEU:HD22	2.46	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1427:C:H2'	1:A:1428:A:H8	1.75	0.51
14:O:63:ARG:HH12	14:O:87:ARG:HH22	1.57	0.51
2:C:78:LYS:C	2:C:80:GLY:H	2.14	0.51
1:A:610:U:O2	1:A:610:U:O4'	2.29	0.51
12:M:3:ILE:HD12	12:M:9:PRO:HD2	1.93	0.51
20:B:119:GLN:C	20:B:125:PHE:HB3	2.31	0.51
6:G:126:ALA:HA	6:G:134:VAL:HG13	1.92	0.51
1:A:663:A:O2'	1:A:664:G:H5'	2.11	0.51
3:D:72:ARG:HD3	3:D:203:TYR:CZ	2.45	0.51
10:K:28:ASN:HD21	10:K:47:GLY:H	1.59	0.51
1:A:1302:C:H4'	1:A:1303:C:OP2	2.10	0.51
20:B:95:TRP:HH2	20:B:100:LEU:HB2	1.76	0.51
1:A:620:C:C2	3:D:131:ILE:HG21	2.46	0.51
7:H:27:PRO:HA	7:H:56:PRO:O	2.11	0.51
13:N:50:LEU:HD23	13:N:51:PRO:HD3	1.93	0.51
20:B:143:LEU:HB3	20:B:147:LEU:HD12	1.93	0.51
1:A:1225:A:H5'	1:A:1226:C:OP2	2.11	0.51
8:I:120:ALA:O	8:I:121:ARG:HG2	2.11	0.51
11:L:113:ARG:HE	11:L:120:ARG:HA	1.75	0.51
1:A:807:A:H2'	1:A:808:C:C6	2.45	0.51
1:A:512:U:H2'	1:A:513:C:H6	1.75	0.51
1:A:1352:C:H2'	1:A:1353:G:C8	2.46	0.51
1:A:1448:C:H2'	1:A:1449:C:H6	1.76	0.51
5:F:21:MET:HB3	5:F:25:TYR:CZ	2.46	0.51
1:A:772:U:H2'	1:A:773:G:C8	2.46	0.51
13:N:2:LYS:O	13:N:6:LYS:HG3	2.11	0.51
13:N:16:ALA:HA	13:N:20:PHE:HB2	1.93	0.50
20:B:212:TYR:O	20:B:216:VAL:HG22	2.10	0.50
8:I:25:GLY:HA3	8:I:57:VAL:HA	1.93	0.50
6:G:20:GLU:O	6:G:23:ALA:HB3	2.11	0.50
15:P:43:ALA:HA	15:P:46:LYS:HE3	1.93	0.50
1:A:1361:G:C2'	1:A:1362:A:H5''	2.39	0.50
5:F:51:ILE:HD11	5:F:86:ARG:HG3	1.93	0.50
4:E:132:PRO:O	4:E:136:VAL:HG12	2.11	0.50
1:A:658:C:H2'	1:A:659:U:C6	2.45	0.50
7:H:55:LYS:HA	7:H:55:LYS:NZ	2.27	0.50
20:B:23:ASN:HD22	20:B:24:PRO:CD	2.23	0.50
1:A:1417:G:N2	1:A:1482:G:H2'	2.25	0.50
1:A:1500:A:H2'	1:A:1501:C:H5'	1.93	0.50
1:A:1283:U:H2'	1:A:1284:C:C6	2.46	0.50
7:H:47:ASP:CG	7:H:48:PHE:H	2.15	0.50
1:A:584:G:O2'	1:A:585:G:H5'	2.11	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:78:ILE:HG22	8:I:82:ILE:HD11	1.93	0.50
1:A:464:U:H2'	1:A:466:A:OP2	2.11	0.50
14:O:55:LEU:O	14:O:59:VAL:HG23	2.11	0.50
9:J:8:ILE:N	9:J:8:ILE:HD12	2.25	0.50
1:A:448:A:H2'	1:A:449:G:C8	2.46	0.50
1:A:708:C:O2'	1:A:709:U:H5'	2.10	0.50
1:A:627:G:H2'	1:A:628:G:C8	2.47	0.50
1:A:575:G:H4'	1:A:576:C:O5'	2.11	0.50
1:A:586:C:H5''	7:H:81:GLY:HA2	1.93	0.50
1:A:1434:A:H2'	1:A:1435:G:C8	2.46	0.50
1:A:394:G:H2'	1:A:395:C:H6	1.75	0.50
1:A:1097:C:H2'	1:A:1098:C:C6	2.46	0.50
12:M:15:VAL:O	12:M:19:THR:HG23	2.11	0.50
21:U:20:ARG:N	21:U:20:ARG:HD2	2.27	0.50
20:B:116:LEU:HA	20:B:119:GLN:HG3	1.93	0.50
1:A:1150:A:H4'	9:J:43:PRO:HB3	1.94	0.50
1:A:1150:A:O2'	1:A:1151:A:H5'	2.12	0.50
15:P:39:PHE:CG	15:P:40:ASN:N	2.79	0.50
1:A:1493:A:H1'	23:A:3001:HYG:N36	2.19	0.50
1:A:734:G:H2'	1:A:735:C:H6	1.76	0.50
1:A:239:U:H5'	1:A:239:U:H6	1.74	0.50
2:C:57:GLU:O	2:C:63:ILE:HA	2.10	0.50
1:A:1006:G:H2'	1:A:1007:U:C6	2.46	0.50
1:A:1515:G:O2'	1:A:1516:G:H5'	2.11	0.50
1:A:1521:C:H2'	1:A:1522:U:H6	1.75	0.50
1:A:1379:G:O2'	1:A:1380:U:H5'	2.11	0.50
20:B:46:VAL:O	20:B:49:PHE:HB2	2.12	0.50
20:B:68:PHE:HE1	20:B:88:GLN:HB3	1.77	0.50
1:A:720:C:OP1	17:R:40:PRO:HG3	2.12	0.50
5:F:51:ILE:HG23	5:F:51:ILE:O	2.11	0.50
10:K:106:ILE:HG13	10:K:107:THR:N	2.22	0.50
6:G:74:VAL:HG12	6:G:87:PRO:HB3	1.93	0.50
8:I:32:ARG:NH1	8:I:37:TYR:HA	2.27	0.50
1:A:974:A:H8	1:A:974:A:OP1	1.95	0.50
1:A:1291:U:H2'	1:A:1292:G:C8	2.46	0.50
7:H:17:GLN:OE1	7:H:69:ALA:HB1	2.11	0.50
1:A:1389:C:H2'	1:A:1390:U:C6	2.47	0.50
1:A:1074:G:C4'	20:B:102:ASN:HB2	2.42	0.50
3:D:48:SER:O	3:D:52:VAL:HG23	2.11	0.50
11:L:42:LYS:HB3	11:L:44:PRO:HD2	1.93	0.50
1:A:531:U:H3	1:A:1208:C:C5'	2.24	0.50
15:P:12:LYS:HD2	15:P:13:LYS:HG3	1.93	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:16:ARG:HA	14:O:16:ARG:HH11	1.75	0.50
1:A:600:A:OP2	7:H:87:ARG:HG2	2.11	0.50
10:K:95:THR:HG23	10:K:96:ILE:N	2.27	0.50
10:K:83:VAL:HG22	10:K:106:ILE:HD11	1.93	0.50
3:D:7:LYS:HB2	3:D:21:LYS:HE2	1.94	0.50
1:A:193:C:H2'	1:A:194:C:H6	1.75	0.50
5:F:18:VAL:HG21	5:F:58:HIS:CE1	2.46	0.50
1:A:1243:C:O2'	1:A:1244:G:H5'	2.11	0.50
1:A:634:C:H2'	1:A:635:A:H8	1.76	0.50
1:A:137:U:H2'	1:A:138:G:H8	1.75	0.50
12:M:36:ALA:HB1	12:M:54:THR:HB	1.92	0.50
1:A:1500:A:C2'	1:A:1501:C:H5'	2.41	0.50
1:A:602:A:O2'	1:A:603:U:H5'	2.11	0.50
12:M:106:ARG:HD3	12:M:111:PRO:HA	1.94	0.50
20:B:10:LYS:O	20:B:13:VAL:HG23	2.12	0.50
12:M:17:ALA:HB2	12:M:44:ILE:HD11	1.93	0.50
6:G:21:LEU:HG	6:G:22:LEU:H	1.76	0.50
1:A:1118:U:H1'	1:A:1179:A:C4	2.47	0.50
6:G:67:ASN:HB2	6:G:134:VAL:HG12	1.93	0.50
17:R:42:ARG:HG3	17:R:43:ILE:N	2.27	0.50
1:A:1029:U:H5''	1:A:1030:U:C5	2.47	0.50
14:O:80:LEU:O	14:O:84:LEU:HD13	2.11	0.50
1:A:390:U:H2'	1:A:391:G:H8	1.76	0.50
3:D:149:LYS:HB2	3:D:177:MET:HG3	1.94	0.50
1:A:114:U:H2'	1:A:115:G:C8	2.47	0.50
18:S:39:ILE:HG21	18:S:61:VAL:HG13	1.92	0.50
12:M:21:ILE:HG22	12:M:23:GLY:H	1.76	0.50
12:M:29:SER:O	12:M:33:LEU:HG	2.12	0.50
17:R:42:ARG:HG3	17:R:43:ILE:H	1.76	0.50
1:A:452:A:H2'	1:A:453:G:O4'	2.11	0.50
8:I:109:GLN:NE2	8:I:110:VAL:H	2.09	0.50
1:A:767:A:H2'	1:A:768:A:C8	2.47	0.50
2:C:146:LYS:HD3	2:C:204:GLY:HA2	1.92	0.50
3:D:16:THR:HG22	3:D:17:ASP:N	2.27	0.50
12:M:82:LEU:HD11	18:S:64:GLU:HB2	1.92	0.50
20:B:216:VAL:O	20:B:220:VAL:HG23	2.12	0.50
11:L:14:LYS:HG2	11:L:15:VAL:N	2.27	0.50
11:L:13:ARG:HG2	11:L:14:LYS:H	1.77	0.50
3:D:71:PHE:CE1	3:D:89:LEU:HD11	2.46	0.50
7:H:51:GLU:HB3	7:H:57:GLU:HB3	1.94	0.50
4:E:35:LEU:HD21	4:E:136:VAL:HG11	1.93	0.50
1:A:657:U:O2'	1:A:658:C:H5'	2.11	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:493:A:H3'	1:A:494:G:C8	2.47	0.50
3:D:77:GLU:OE2	3:D:81:LEU:HD21	2.12	0.50
4:E:55:VAL:N	4:E:56:PRO:HD2	2.26	0.50
2:C:139:ASN:O	2:C:143:LEU:HD23	2.11	0.50
16:Q:3:LYS:HE2	16:Q:3:LYS:HA	1.92	0.50
18:S:20:LYS:O	18:S:23:GLU:HG3	2.11	0.50
20:B:8:MET:HB3	20:B:46:VAL:HB	1.93	0.50
8:I:56:MET:O	8:I:57:VAL:HB	2.12	0.50
1:A:1081:A:O2'	1:A:1082:A:H5'	2.12	0.50
1:A:1057:G:O3'	2:C:196:GLY:HA3	2.11	0.50
1:A:1432:G:O2'	1:A:1468:A:N6	2.45	0.50
1:A:538:G:OP2	11:L:111:GLN:HB2	2.12	0.50
1:A:1451:U:O2	1:A:1451:U:H2'	2.12	0.50
13:N:61:ASN:HB3	13:N:72:PHE:CE2	2.47	0.50
1:A:528:C:H41	11:L:45:ASN:CG	2.16	0.50
18:S:44:ILE:HG23	18:S:44:ILE:O	2.11	0.49
5:F:2:ARG:O	5:F:65:GLU:HA	2.12	0.49
20:B:212:TYR:O	20:B:216:VAL:HG13	2.12	0.49
8:I:46:VAL:HG23	8:I:47:VAL:H	1.77	0.49
15:P:43:ALA:CA	15:P:46:LYS:HE3	2.42	0.49
2:C:155:ARG:NH2	2:C:192:TYR:HB2	2.26	0.49
9:J:36:VAL:HA	9:J:76:ILE:HA	1.93	0.49
1:A:1317:C:H3'	1:A:1318:A:H8	1.76	0.49
1:A:9:G:H2'	1:A:10:A:H8	1.76	0.49
10:K:30:ILE:HG22	10:K:45:THR:CB	2.42	0.49
1:A:512:U:O2'	1:A:513:C:H5'	2.12	0.49
1:A:636:U:H2'	1:A:637:C:H6	1.77	0.49
7:H:113:ARG:NH2	7:H:114:ALA:HA	2.27	0.49
8:I:30:ASN:O	8:I:31:GLN:HB2	2.12	0.49
20:B:59:ILE:HG21	20:B:158:ASP:HB3	1.94	0.49
1:A:921:U:H2'	1:A:922:G:H8	1.75	0.49
4:E:113:VAL:HG23	4:E:114:LEU:N	2.27	0.49
1:A:113:G:O4'	1:A:354:G:H4'	2.12	0.49
4:E:53:ARG:CZ	4:E:53:ARG:HB3	2.41	0.49
2:C:161:ILE:HD12	2:C:161:ILE:N	2.27	0.49
3:D:120:LYS:O	3:D:145:ARG:HG3	2.12	0.49
8:I:56:MET:HA	8:I:59:LYS:HB2	1.94	0.49
17:R:63:TYR:HD2	17:R:63:TYR:N	2.10	0.49
12:M:90:HIS:CE1	12:M:96:VAL:HG21	2.47	0.49
6:G:144:ALA:O	6:G:146:ALA:N	2.38	0.49
1:A:1480:A:H2'	1:A:1481:U:O4'	2.12	0.49
1:A:1073:U:H2'	1:A:1074:G:H8	1.77	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:14:VAL:O	2:C:15:LYS:HD2	2.12	0.49
4:E:136:VAL:HG13	4:E:137:ARG:N	2.27	0.49
1:A:411:A:N6	1:A:413:G:H21	2.09	0.49
1:A:1464:U:H2'	1:A:1465:A:C8	2.47	0.49
11:L:34:THR:O	11:L:35:ARG:HD2	2.12	0.49
10:K:90:PRO:C	10:K:92:ARG:H	2.15	0.49
16:Q:29:LYS:HG3	16:Q:34:GLY:O	2.12	0.49
1:A:1522:U:H2'	1:A:1523:G:H8	1.77	0.49
1:A:393:A:O2'	1:A:394:G:H5'	2.12	0.49
9:J:15:HIS:O	9:J:18:ILE:HG22	2.13	0.49
1:A:1124:G:H5''	9:J:37:ARG:O	2.13	0.49
15:P:46:LYS:C	15:P:48:GLU:H	2.16	0.49
17:R:56:ARG:O	17:R:60:ARG:HG2	2.12	0.49
1:A:1314:C:H3'	18:S:5:LYS:NZ	2.26	0.49
1:A:898:G:N2	1:A:900:A:H3'	2.28	0.49
20:B:128:LEU:HD13	20:B:129:THR:H	1.77	0.49
1:A:55:A:OP2	1:A:352:C:N4	2.44	0.49
5:F:2:ARG:HB3	5:F:92:THR:OG1	2.11	0.49
3:D:29:THR:HB	3:D:30:LYS:HZ3	1.77	0.49
9:J:41:PRO:O	9:J:42:LEU:HB2	2.12	0.49
1:A:1030:U:H4'	1:A:1031:C:OP2	2.12	0.49
1:A:106:C:O2'	1:A:107:G:H5'	2.13	0.49
2:C:190:THR:HG22	2:C:191:THR:H	1.75	0.49
2:C:72:PRO:O	2:C:76:ILE:HG12	2.12	0.49
3:D:97:LEU:HD13	3:D:136:VAL:HG11	1.93	0.49
1:A:233:C:H2'	1:A:234:C:H6	1.77	0.49
6:G:113:LYS:HB3	6:G:113:LYS:HZ2	1.77	0.49
1:A:252:U:H2'	1:A:253:A:H8	1.77	0.49
19:T:4:LYS:HZ1	19:T:6:ALA:CB	2.25	0.49
10:K:28:ASN:ND2	10:K:29:THR:H	2.11	0.49
2:C:59:PRO:HD2	2:C:62:SER:O	2.11	0.49
2:C:96:VAL:HB	2:C:97:PRO:HD2	1.93	0.49
1:A:1163:A:H2'	1:A:1164:G:H8	1.77	0.49
1:A:1346:A:N1	1:A:1374:A:H5''	2.27	0.49
11:L:2:THR:HG22	11:L:5:GLN:NE2	2.27	0.49
1:A:847:G:H2'	1:A:848:C:C6	2.47	0.49
8:I:78:ILE:O	8:I:82:ILE:HG13	2.12	0.49
1:A:1005:A:H4'	1:A:1037:C:O2	2.13	0.49
21:U:43:GLU:HA	21:U:46:ARG:NE	2.28	0.49
12:M:64:VAL:HA	12:M:68:LEU:CD1	2.40	0.49
13:N:25:GLU:O	13:N:29:ILE:HG13	2.12	0.49
18:S:48:ILE:O	18:S:58:PRO:HA	2.12	0.49

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:30:HIS:HB3	16:Q:33:TYR:HB2	1.93	0.49
1:A:80:A:H3'	1:A:81:A:C8	2.44	0.49
1:A:1299:A:H2'	1:A:1301:U:H1'	1.95	0.49
1:A:728:A:H2'	1:A:729:A:H8	1.78	0.49
1:A:784:A:H2'	1:A:785:G:H8	1.77	0.49
5:F:53:LYS:HB2	5:F:54:LEU:HD22	1.94	0.49
1:A:724:G:H2'	1:A:725:G:H8	1.78	0.49
1:A:1159:U:O4'	1:A:1182:G:N2	2.45	0.49
7:H:115:ALA:O	7:H:120:LEU:HD23	2.13	0.49
16:Q:74:LEU:HD13	16:Q:75:VAL:N	2.28	0.49
1:A:17:U:H1'	1:A:1080:A:N3	2.28	0.49
1:A:844:G:H3'	1:A:844:G:OP2	2.13	0.49
1:A:846:G:N3	1:A:846:G:H2'	2.27	0.49
1:A:1343:G:H2'	1:A:1344:C:H6	1.76	0.49
10:K:83:VAL:HB	10:K:109:ILE:HG23	1.93	0.49
1:A:1074:G:H4'	20:B:102:ASN:HB2	1.94	0.49
1:A:79:G:C2	1:A:80:A:N6	2.80	0.49
4:E:92:ARG:HB3	4:E:92:ARG:NH1	2.27	0.49
2:C:78:LYS:HE3	2:C:79:LYS:NZ	2.28	0.49
1:A:420:U:H2'	1:A:422:C:C5	2.47	0.49
10:K:60:PHE:O	10:K:64:VAL:HG12	2.13	0.49
18:S:10:ILE:HB	18:S:14:LEU:HD11	1.95	0.49
21:U:20:ARG:HD2	21:U:20:ARG:H	1.78	0.49
20:B:186:VAL:O	20:B:200:PRO:HA	2.13	0.49
8:I:46:VAL:HG23	8:I:47:VAL:N	2.27	0.49
1:A:1060:U:H2'	1:A:1061:G:H8	1.77	0.49
10:K:108:ASN:HD21	21:U:6:ARG:HD2	1.78	0.49
1:A:34:C:H2'	1:A:35:G:H8	1.77	0.49
1:A:36:C:O3'	11:L:119:LYS:HA	2.12	0.49
3:D:2:ARG:HG3	3:D:114:ARG:NH1	2.28	0.49
1:A:715:A:H2'	1:A:716:A:H8	1.78	0.49
1:A:66:A:H5'	1:A:173:U:O4	2.13	0.49
13:N:50:LEU:N	13:N:51:PRO:CD	2.76	0.49
20:B:31:PHE:HB2	20:B:41:ASN:HA	1.94	0.49
12:M:44:ILE:O	12:M:47:LEU:HB2	2.12	0.49
3:D:192:ALA:C	3:D:194:ILE:H	2.16	0.49
3:D:90:LEU:HD13	3:D:93:LEU:HD12	1.94	0.49
2:C:165:GLU:HG3	2:C:166:TRP:H	1.77	0.49
12:M:68:LEU:O	12:M:72:ILE:HG22	2.13	0.49
1:A:242:G:H2'	1:A:243:A:H5''	1.94	0.49
1:A:674:G:H2'	1:A:675:A:C8	2.40	0.49
9:J:76:ILE:O	9:J:76:ILE:HD12	2.13	0.49

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:15:ILE:HB	4:E:35:LEU:O	2.13	0.49
1:A:153:C:H2'	1:A:154:U:H6	1.78	0.49
1:A:1464:U:H2'	1:A:1465:A:H8	1.77	0.49
5:F:54:LEU:HD22	5:F:54:LEU:N	2.28	0.49
1:A:602:A:H2'	1:A:603:U:C6	2.48	0.49
7:H:111:THR:H	7:H:114:ALA:HB3	1.76	0.49
1:A:50:A:N6	1:A:361:G:H4'	2.28	0.49
1:A:382:A:H2'	1:A:383:A:C8	2.48	0.49
1:A:1114:C:O2'	1:A:1115:U:H5'	2.13	0.49
16:Q:28:VAL:O	16:Q:36:PHE:HA	2.13	0.49
1:A:1221:G:O2'	1:A:1222:G:H5'	2.13	0.48
1:A:1109:C:H2'	1:A:1110:A:O4'	2.13	0.48
8:I:44:ARG:HE	8:I:48:ARG:HH22	1.61	0.48
10:K:86:LYS:HB2	10:K:113:THR:HA	1.94	0.48
1:A:922:G:H2'	1:A:923:A:C8	2.49	0.48
1:A:815:A:H4'	1:A:817:C:C4	2.48	0.48
12:M:86:ARG:HA	12:M:96:VAL:CG1	2.43	0.48
13:N:79:SER:O	13:N:83:VAL:HG23	2.13	0.48
7:H:9:MET:O	7:H:13:ILE:HG13	2.13	0.48
1:A:1239:A:H4'	1:A:1240:U:C5'	2.43	0.48
3:D:22:SER:HB2	3:D:109:THR:HG22	1.94	0.48
20:B:23:ASN:C	20:B:25:LYS:H	2.16	0.48
1:A:1254:A:H2'	1:A:1255:G:C8	2.48	0.48
1:A:598:U:H4'	7:H:85:TYR:CG	2.48	0.48
18:S:62:THR:O	18:S:66:VAL:HG13	2.13	0.48
1:A:1001:C:H2'	1:A:1002:G:H8	1.78	0.48
3:D:24:VAL:O	3:D:27:ILE:HG13	2.13	0.48
6:G:12:LEU:HD22	6:G:13:PRO:HD2	1.94	0.48
4:E:148:SER:HB2	4:E:150:GLU:OE1	2.13	0.48
2:C:149:LYS:O	2:C:200:TRP:HE3	1.95	0.48
14:O:55:LEU:O	14:O:58:MET:HG2	2.14	0.48
1:A:264:C:HO2'	16:Q:65:PRO:HG2	1.78	0.48
12:M:90:HIS:HA	12:M:108:ARG:HH22	1.76	0.48
4:E:71:ILE:HG21	4:E:144:GLU:OE2	2.12	0.48
8:I:127:SER:O	8:I:129:ARG:HG3	2.12	0.48
1:A:1424:U:H2'	1:A:1425:U:C6	2.47	0.48
2:C:13:ILE:N	2:C:13:ILE:HD13	2.29	0.48
1:A:1234:C:H1'	1:A:1364:U:O2	2.14	0.48
6:G:120:ALA:O	6:G:123:LEU:HB2	2.13	0.48
1:A:1414:U:H2'	1:A:1415:G:C8	2.48	0.48
1:A:908:A:H2'	1:A:909:A:H8	1.78	0.48
6:G:136:LYS:O	6:G:140:VAL:HG23	2.13	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:317:U:H2'	1:A:318:G:H8	1.78	0.48
12:M:15:VAL:HG22	12:M:33:LEU:CD1	2.44	0.48
3:D:31:CYS:SG	3:D:33:ILE:HB	2.53	0.48
1:A:1178:G:H3'	8:I:98:ARG:NH2	2.29	0.48
1:A:251:G:N3	1:A:266:G:O6	2.46	0.48
15:P:6:LEU:HD12	15:P:6:LEU:N	2.28	0.48
21:U:39:LYS:H	21:U:39:LYS:HD3	1.78	0.48
2:C:149:LYS:HE3	2:C:166:TRP:CH2	2.49	0.48
1:A:1390:U:O2'	1:A:1391:U:H5'	2.14	0.48
1:A:175:C:H2'	1:A:176:C:H6	1.78	0.48
1:A:814:A:H5'	1:A:1511:G:H4'	1.96	0.48
1:A:87:C:H2'	1:A:88:U:O3'	2.13	0.48
4:E:87:VAL:HG22	4:E:88:HIS:N	2.28	0.48
17:R:58:ILE:O	17:R:62:ARG:HG3	2.14	0.48
1:A:624:C:H2'	1:A:625:U:C6	2.48	0.48
1:A:591:U:OP2	7:H:30:LYS:HE2	2.14	0.48
3:D:104:MET:SD	3:D:179:GLY:HA3	2.54	0.48
11:L:33:CYS:HA	11:L:54:VAL:HA	1.96	0.48
1:A:56:U:H2'	1:A:57:G:H8	1.79	0.48
1:A:1320:C:N4	18:S:35:ARG:HD3	2.28	0.48
16:Q:60:ILE:HG22	16:Q:74:LEU:HA	1.95	0.48
4:E:80:LEU:HA	4:E:146:MET:HE1	1.95	0.48
19:T:61:ALA:HB1	19:T:67:HIS:HA	1.95	0.48
21:U:33:ARG:HG2	21:U:34:ARG:N	2.27	0.48
12:M:89:ARG:CB	12:M:96:VAL:HG22	2.43	0.48
8:I:32:ARG:HD3	8:I:37:TYR:CD1	2.49	0.48
2:C:91:ALA:HB2	2:C:98:ALA:H	1.78	0.48
13:N:29:ILE:HB	13:N:30:ILE:HD12	1.95	0.48
1:A:957:U:H2'	1:A:959:A:OP2	2.13	0.48
3:D:10:LEU:HD12	3:D:20:LEU:HD11	1.96	0.48
7:H:7:ALA:O	7:H:11:THR:HG23	2.14	0.48
1:A:36:C:O2'	1:A:37:U:H5'	2.14	0.48
7:H:95:MET:HG2	7:H:98:LEU:HB2	1.95	0.48
2:C:21:TRP:CH2	2:C:31:ASN:HB3	2.49	0.48
1:A:409:U:OP1	3:D:23:GLY:HA3	2.13	0.48
20:B:63:LYS:HA	20:B:224:ARG:NH1	2.29	0.48
1:A:309:A:O2'	1:A:310:G:H5'	2.12	0.48
1:A:69:G:H2'	1:A:70:U:C6	2.48	0.48
15:P:36:VAL:O	15:P:36:VAL:HG13	2.14	0.48
8:I:17:ARG:HB2	8:I:65:THR:HB	1.95	0.48
3:D:160:LEU:H	3:D:160:LEU:CD1	2.16	0.48
12:M:52:ILE:HA	12:M:55:LEU:HG	1.96	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:4:ARG:CG	6:G:5:VAL:H	2.22	0.48
11:L:81:ILE:HG23	11:L:94:TYR:HB3	1.95	0.48
3:D:10:LEU:HD13	3:D:62:ARG:HD3	1.95	0.48
1:A:660:C:H2'	1:A:661:G:O4'	2.13	0.48
8:I:12:LYS:HA	8:I:109:GLN:HG2	1.94	0.48
1:A:1530:G:HO2'	1:A:1531:A:H8	1.62	0.48
16:Q:3:LYS:HG3	16:Q:4:ILE:H	1.78	0.48
11:L:33:CYS:H	11:L:54:VAL:HG13	1.79	0.48
1:A:517:G:H22	1:A:533:A:P	2.37	0.48
11:L:65:TYR:HB3	11:L:95:HIS:CD2	2.48	0.48
8:I:16:ALA:HA	8:I:66:VAL:HA	1.96	0.48
8:I:74:GLN:O	8:I:78:ILE:HG13	2.13	0.48
12:M:14:ALA:O	12:M:17:ALA:HB3	2.14	0.48
20:B:217:ALA:O	20:B:221:ARG:HG2	2.14	0.48
20:B:83:ALA:O	20:B:88:GLN:HB2	2.14	0.48
20:B:113:LEU:HD23	20:B:114:LYS:N	2.28	0.48
5:F:85:ILE:HG22	5:F:86:ARG:H	1.78	0.48
1:A:1293:C:O2'	1:A:1294:G:H5'	2.13	0.48
7:H:45:ILE:HB	7:H:61:THR:O	2.14	0.48
1:A:1388:C:H2'	1:A:1389:C:C6	2.48	0.48
1:A:1479:C:O2'	1:A:1480:A:H5'	2.14	0.48
1:A:436:C:O2'	1:A:437:U:H5'	2.12	0.48
1:A:373:A:H2'	1:A:374:A:C8	2.46	0.48
20:B:71:THR:HG23	20:B:94:ARG:H	1.78	0.48
4:E:37:VAL:HG11	4:E:113:VAL:CG1	2.43	0.48
3:D:129:VAL:HG12	3:D:131:ILE:H	1.78	0.48
1:A:369:G:O2'	1:A:370:C:H5'	2.13	0.48
1:A:95:C:H2'	1:A:96:U:C6	2.48	0.48
1:A:612:C:H2'	1:A:613:C:C6	2.48	0.48
1:A:613:C:H2'	1:A:614:C:H6	1.78	0.48
1:A:308:C:H2'	1:A:309:A:H8	1.79	0.48
1:A:945:G:H21	1:A:1334:G:H4'	1.79	0.48
1:A:893:C:H2'	1:A:894:G:C8	2.48	0.48
1:A:687:A:C2	1:A:704:A:C5	3.01	0.48
12:M:83:GLY:O	12:M:88:LEU:HD21	2.14	0.48
1:A:734:G:H2'	1:A:735:C:C6	2.48	0.48
1:A:643:C:H2'	1:A:644:U:H6	1.79	0.48
1:A:208:U:O2'	1:A:209:U:H3'	2.13	0.48
1:A:1216:A:H2'	1:A:1217:C:C6	2.48	0.48
1:A:868:C:H2'	1:A:869:G:O4'	2.14	0.48
1:A:1459:G:H2'	1:A:1460:C:C6	2.48	0.48
15:P:28:ARG:HD3	15:P:29:ASN:HD22	1.77	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:13:HIS:O	12:M:17:ALA:HB2	2.13	0.48
1:A:981:U:C4'	13:N:60:ARG:HD2	2.37	0.48
10:K:122:PRO:HG2	21:U:34:ARG:HA	1.95	0.48
18:S:4:LEU:HD11	18:S:9:PHE:HB3	1.96	0.48
13:N:68:ARG:HH11	13:N:71:GLY:H	1.60	0.48
20:B:93:HIS:O	20:B:94:ARG:O	2.32	0.48
1:A:875:U:O2'	7:H:14:ARG:HD2	2.14	0.48
6:G:72:VAL:HG12	6:G:89:GLU:CB	2.43	0.48
1:A:794:A:H2'	1:A:795:C:C6	2.48	0.48
1:A:537:G:H2'	1:A:538:G:H8	1.78	0.48
1:A:586:C:H2'	1:A:587:G:H5'	1.95	0.48
1:A:847:G:H2'	1:A:848:C:H6	1.79	0.48
1:A:599:C:H4'	7:H:121:GLY:HA3	1.94	0.48
1:A:72:A:N6	1:A:99:C:H1'	2.20	0.48
1:A:270:A:H2'	1:A:271:C:O4'	2.14	0.48
2:C:119:ILE:CG2	2:C:120:THR:N	2.76	0.48
7:H:94:VAL:HG12	7:H:99:GLY:HA3	1.96	0.48
4:E:17:VAL:HG23	4:E:33:THR:O	2.14	0.48
20:B:142:LYS:HA	20:B:145:ASN:OD1	2.13	0.48
18:S:42:ASN:ND2	18:S:42:ASN:N	2.62	0.48
1:A:546:A:P	3:D:68:GLU:HB3	2.54	0.48
12:M:43:LYS:N	12:M:43:LYS:HD2	2.28	0.48
1:A:502:A:H2'	1:A:503:C:H6	1.78	0.48
1:A:1009:U:H2'	1:A:1010:U:C6	2.48	0.48
9:J:80:THR:HG21	9:J:82:LYS:HZ2	1.79	0.48
3:D:125:ASN:OD1	3:D:140:ASP:HA	2.14	0.48
1:A:1016:A:H4'	1:A:1218:C:H4'	1.95	0.47
1:A:429:U:H3'	3:D:8:LEU:CD2	2.44	0.47
3:D:106:PHE:CE1	3:D:158:LEU:HD21	2.49	0.47
8:I:98:ARG:NE	8:I:103:VAL:HG21	2.29	0.47
1:A:818:G:C3'	1:A:819:A:H5''	2.43	0.47
12:M:76:ILE:HG23	12:M:79:LEU:HD12	1.95	0.47
20:B:75:ALA:C	20:B:79:VAL:HG23	2.33	0.47
1:A:643:C:H2'	1:A:644:U:C6	2.49	0.47
1:A:1423:G:H2'	1:A:1424:U:H6	1.77	0.47
1:A:716:A:N3	10:K:118:ASN:O	2.47	0.47
1:A:1263:C:O2'	1:A:1264:U:H5'	2.14	0.47
6:G:104:VAL:O	6:G:108:ARG:HG3	2.14	0.47
8:I:18:VAL:HA	8:I:64:ILE:HA	1.96	0.47
1:A:1004:A:H5'	1:A:1024:G:H22	1.77	0.47
14:O:88:ARG:CA	14:O:88:ARG:HH11	2.22	0.47
1:A:1032:G:H5''	1:A:1032:G:N3	2.29	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:68:LYS:HG3	7:H:69:ALA:N	2.29	0.47
1:A:142:G:N3	1:A:196:A:H2	2.12	0.47
6:G:72:VAL:HG12	6:G:89:GLU:CA	2.43	0.47
1:A:1436:U:H2'	1:A:1437:A:H8	1.78	0.47
1:A:949:A:H2'	1:A:950:U:O4'	2.14	0.47
1:A:1252:A:H2'	1:A:1253:G:O4'	2.14	0.47
1:A:738:C:H2'	1:A:739:C:H6	1.78	0.47
14:O:67:ASP:O	14:O:71:ARG:HG3	2.13	0.47
21:U:3:ILE:HB	21:U:19:LYS:HD2	1.96	0.47
21:U:20:ARG:HG3	21:U:24:LYS:HG3	1.97	0.47
20:B:53:LEU:HD13	20:B:216:VAL:HG12	1.96	0.47
16:Q:59:GLU:HG3	16:Q:78:VAL:HG21	1.95	0.47
8:I:22:PRO:HA	8:I:60:LEU:CB	2.44	0.47
9:J:41:PRO:HA	9:J:72:ARG:HD3	1.96	0.47
1:A:109:A:H4'	1:A:110:C:OP2	2.14	0.47
16:Q:11:VAL:HG13	16:Q:20:ILE:HG23	1.95	0.47
1:A:82:G:H1'	1:A:89:U:H1'	1.96	0.47
1:A:814:A:H2'	1:A:816:A:O5'	2.14	0.47
1:A:805:C:O2'	1:A:806:C:H5'	2.13	0.47
1:A:591:U:H2'	1:A:592:G:H8	1.77	0.47
1:A:443:C:H2'	1:A:444:G:H8	1.78	0.47
1:A:366:A:O2'	1:A:394:G:N2	2.48	0.47
13:N:64:ARG:HB2	13:N:77:GLY:O	2.13	0.47
20:B:163:ILE:HD12	20:B:185:ILE:HD12	1.97	0.47
20:B:83:ALA:HA	20:B:88:GLN:NE2	2.29	0.47
20:B:19:THR:HG23	20:B:20:ARG:N	2.23	0.47
1:A:251:G:H1	1:A:271:C:N4	2.12	0.47
6:G:144:ALA:O	6:G:145:GLU:HB3	2.15	0.47
13:N:27:LYS:HG3	13:N:28:ALA:H	1.79	0.47
1:A:454:G:H2'	1:A:455:G:H8	1.78	0.47
3:D:22:SER:N	3:D:109:THR:HG22	2.29	0.47
1:A:1300:G:H1'	1:A:1301:U:C5	2.49	0.47
1:A:562:U:H4'	1:A:563:A:O5'	2.15	0.47
1:A:1499:A:O2'	1:A:1500:A:H5'	2.14	0.47
1:A:366:A:H1'	1:A:395:C:O2	2.14	0.47
9:J:80:THR:HB	9:J:83:THR:OG1	2.15	0.47
3:D:33:ILE:O	3:D:35:GLN:HG3	2.15	0.47
12:M:86:ARG:CG	12:M:96:VAL:HG11	2.43	0.47
1:A:86:G:H1'	1:A:87:C:H5	1.77	0.47
6:G:78:ARG:NH1	6:G:80:GLY:H	2.13	0.47
1:A:1339:A:H2'	1:A:1340:A:O4'	2.14	0.47
2:C:111:ASP:HB3	2:C:114:LEU:HD12	1.97	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:44:THR:HG23	9:J:69:THR:O	2.13	0.47
17:R:35:SER:O	17:R:70:THR:HA	2.15	0.47
1:A:386:C:C2'	1:A:387:U:H5'	2.45	0.47
1:A:916:U:O2'	1:A:917:G:H5'	2.14	0.47
3:D:162:GLU:HA	3:D:166:LYS:NZ	2.29	0.47
20:B:35:ASN:HA	20:B:35:ASN:HD22	1.54	0.47
18:S:40:PHE:O	18:S:43:MET:HG3	2.15	0.47
8:I:56:MET:SD	8:I:57:VAL:N	2.87	0.47
2:C:156:LEU:CD1	2:C:165:GLU:HB2	2.44	0.47
7:H:94:VAL:HG21	7:H:100:ILE:O	2.14	0.47
11:L:66:ILE:N	11:L:66:ILE:HD12	2.30	0.47
7:H:77:VAL:HG23	7:H:126:CYS:HA	1.96	0.47
1:A:811:C:O2'	1:A:901:A:N1	2.46	0.47
4:E:87:VAL:HG23	4:E:92:ARG:HA	1.96	0.47
4:E:45:VAL:HG11	4:E:117:ALA:HB2	1.97	0.47
1:A:1062:U:H2'	1:A:1063:C:C5	2.50	0.47
1:A:394:G:O2'	1:A:395:C:H5'	2.15	0.47
5:F:32:ALA:O	5:F:33:GLU:HB2	2.15	0.47
5:F:4:TYR:CE2	5:F:71:ILE:HD13	2.50	0.47
1:A:1097:C:H2'	1:A:1098:C:H6	1.79	0.47
5:F:1:MET:HG2	5:F:67:PRO:HD3	1.97	0.47
20:B:46:VAL:HA	20:B:49:PHE:CD2	2.49	0.47
2:C:71:ARG:O	2:C:75:VAL:HG23	2.14	0.47
1:A:1024:G:H2'	1:A:1025:U:C6	2.50	0.47
20:B:120:SER:HA	20:B:125:PHE:CD1	2.49	0.47
20:B:116:LEU:HA	20:B:119:GLN:CG	2.45	0.47
13:N:60:ARG:HE	13:N:62:ARG:HG2	1.79	0.47
8:I:117:LEU:HD22	8:I:123:ARG:HG2	1.96	0.47
10:K:83:VAL:CG2	10:K:106:ILE:HD11	2.45	0.47
6:G:110:ARG:HD3	6:G:118:ARG:HA	1.96	0.47
1:A:1071:C:O2'	1:A:1072:G:H5'	2.15	0.47
1:A:222:C:H2'	1:A:223:A:H8	1.79	0.47
11:L:51:VAL:HG12	11:L:63:THR:HG22	1.96	0.47
1:A:462:G:H5'	1:A:463:U:P	2.55	0.47
1:A:1486:G:C2'	1:A:1487:G:O4'	2.63	0.47
7:H:58:LEU:HD22	7:H:60:LEU:HB2	1.96	0.47
1:A:900:A:H2'	1:A:901:A:C8	2.50	0.47
1:A:377:G:H2'	1:A:378:G:H8	1.80	0.47
4:E:88:HIS:CE1	4:E:137:ARG:HD2	2.49	0.47
1:A:1169:A:H2'	1:A:1170:A:C8	2.50	0.47
3:D:44:LYS:HD2	3:D:46:ARG:CG	2.44	0.47
1:A:1009:U:H1'	1:A:1021:A:C2	2.49	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:87:ARG:HD3	2:C:88:LYS:N	2.30	0.47
1:A:57:G:H2'	1:A:58:C:C6	2.49	0.47
1:A:246:A:C2	1:A:282:A:C5	3.03	0.47
1:A:889:A:N1	1:A:907:A:H5''	2.29	0.47
10:K:37:GLN:HB2	10:K:39:ASN:ND2	2.29	0.47
1:A:953:G:H2'	1:A:954:G:O4'	2.15	0.47
6:G:30:MET:HA	6:G:38:ALA:CB	2.44	0.47
19:T:3:ILE:HG13	19:T:3:ILE:H	1.46	0.47
1:A:1222:G:C2'	1:A:1223:C:H5'	2.44	0.47
1:A:1320:C:OP2	18:S:69:LYS:HE3	2.14	0.47
1:A:468:A:H3'	1:A:469:C:C6	2.50	0.47
1:A:981:U:H2'	1:A:982:U:C5	2.50	0.47
1:A:373:A:C1'	1:A:481:G:H1'	2.45	0.47
20:B:93:HIS:HA	20:B:94:ARG:NH2	2.30	0.47
15:P:20:VAL:HG21	15:P:32:PHE:CG	2.50	0.47
1:A:323:U:H2'	1:A:324:G:O4'	2.14	0.47
1:A:586:C:C2'	1:A:587:G:H5'	2.45	0.47
12:M:38:ILE:HD12	12:M:47:LEU:HD11	1.95	0.47
7:H:87:ARG:HD3	7:H:90:GLU:OE1	2.15	0.47
8:I:123:ARG:CZ	8:I:123:ARG:HB3	2.45	0.47
10:K:75:GLU:CD	10:K:75:GLU:N	2.68	0.47
1:A:475:C:H2'	1:A:476:U:H6	1.76	0.47
1:A:1510:C:H2'	1:A:1511:G:C8	2.49	0.47
18:S:2:ARG:HD3	18:S:3:SER:N	2.29	0.47
20:B:172:ILE:HD12	20:B:172:ILE:N	2.30	0.47
12:M:84:CYS:O	12:M:88:LEU:HG	2.15	0.47
1:A:1187:G:OP1	8:I:114:LYS:HE3	2.15	0.47
2:C:110:LEU:HD22	2:C:145:ALA:HB2	1.96	0.47
1:A:76:G:OP2	1:A:76:G:H8	1.97	0.47
20:B:118:THR:HA	20:B:121:GLN:HB2	1.95	0.47
12:M:37:GLY:O	12:M:38:ILE:HD13	2.15	0.47
3:D:123:MET:CB	3:D:128:VAL:HA	2.45	0.47
8:I:87:MET:HA	8:I:90:ASP:O	2.15	0.47
1:A:429:U:OP2	3:D:31:CYS:HB2	2.15	0.47
1:A:1118:U:H1'	1:A:1179:A:C5	2.49	0.47
6:G:125:ASP:HB3	6:G:131:GLY:H	1.78	0.47
18:S:51:HIS:HB2	18:S:56:HIS:CE1	2.49	0.47
1:A:130:A:H1'	1:A:263:A:O2'	2.14	0.47
1:A:332:G:H2'	1:A:333:U:H6	1.80	0.47
1:A:1072:G:H2'	1:A:1073:U:C6	2.51	0.47
1:A:279:A:C5'	1:A:280:C:H3'	2.43	0.47
1:A:5:U:H1'	1:A:6:G:C2	2.50	0.47

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1302:C:H6	1:A:1302:C:H5'	1.80	0.47
1:A:1238:A:C8	1:A:1303:C:H1'	2.50	0.47
20:B:80:LYS:HG3	20:B:81:ASP:N	2.30	0.47
7:H:83:ARG:HB3	7:H:85:TYR:CE1	2.50	0.47
10:K:37:GLN:HB2	10:K:39:ASN:HD22	1.80	0.47
6:G:101:ARG:HG2	6:G:105:GLU:OE2	2.15	0.47
3:D:90:LEU:HD11	3:D:194:ILE:HD11	1.95	0.46
8:I:50:PRO:HD3	8:I:79:ARG:CG	2.45	0.46
1:A:1225:A:H3'	1:A:1226:C:C6	2.50	0.46
4:E:156:ARG:HB3	7:H:43:GLY:O	2.15	0.46
1:A:286:C:H2'	1:A:287:U:C6	2.51	0.46
1:A:556:C:O2'	1:A:557:G:H5'	2.14	0.46
20:B:27:LYS:C	20:B:29:PHE:H	2.17	0.46
5:F:6:ILE:HG13	5:F:6:ILE:O	2.15	0.46
14:O:68:TYR:HA	14:O:71:ARG:HE	1.79	0.46
9:J:13:PHE:CD2	9:J:69:THR:HG23	2.50	0.46
5:F:11:HIS:CG	5:F:12:PRO:HD2	2.51	0.46
1:A:220:G:O2'	1:A:221:C:H5'	2.16	0.46
1:A:1040:U:H2'	1:A:1041:G:C8	2.50	0.46
1:A:202:G:H2'	1:A:203:G:H8	1.79	0.46
8:I:83:THR:OG1	8:I:97:LEU:HD22	2.15	0.46
19:T:64:GLY:O	19:T:66:ILE:N	2.47	0.46
6:G:71:THR:H	6:G:141:HIS:CE1	2.33	0.46
21:U:44:ARG:HG3	21:U:44:ARG:HH11	1.81	0.46
2:C:129:PHE:CE2	2:C:156:LEU:HD13	2.50	0.46
16:Q:64:ARG:HG2	16:Q:65:PRO:HD2	1.95	0.46
1:A:193:C:H2'	1:A:194:C:C5	2.51	0.46
4:E:136:VAL:HG13	4:E:137:ARG:H	1.79	0.46
20:B:23:ASN:O	20:B:25:LYS:N	2.48	0.46
2:C:146:LYS:HB2	2:C:202:PHE:CD2	2.49	0.46
5:F:36:ILE:N	5:F:36:ILE:HD12	2.30	0.46
12:M:3:ILE:HA	12:M:56:ARG:HB2	1.97	0.46
12:M:3:ILE:H	12:M:56:ARG:NH2	2.13	0.46
3:D:160:LEU:HA	3:D:163:GLN:CG	2.44	0.46
20:B:116:LEU:O	20:B:119:GLN:HB2	2.15	0.46
1:A:599:C:O2'	1:A:600:A:H5'	2.15	0.46
1:A:429:U:H1'	1:A:430:A:H5''	1.98	0.46
6:G:137:ARG:HE	6:G:137:ARG:HB3	1.52	0.46
11:L:17:LYS:N	11:L:17:LYS:NZ	2.64	0.46
2:C:149:LYS:HG3	2:C:168:ARG:HB2	1.97	0.46
3:D:61:ARG:HG3	3:D:71:PHE:CD2	2.50	0.46
1:A:521:G:O2'	1:A:522:C:H5'	2.16	0.46

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:9:MET:HB3	5:F:59:TYR:CD2	2.50	0.46
1:A:1465:A:H2'	1:A:1466:C:C6	2.51	0.46
14:O:23:SER:HB3	14:O:26:VAL:CG2	2.45	0.46
1:A:549:C:H2'	1:A:550:G:C8	2.51	0.46
7:H:12:ARG:HH11	7:H:12:ARG:HG3	1.80	0.46
15:P:22:ALA:HA	15:P:33:ILE:HG13	1.97	0.46
6:G:75:LYS:HD3	6:G:76:SER:N	2.30	0.46
19:T:70:LYS:O	19:T:74:HIS:HB2	2.14	0.46
8:I:129:ARG:HB2	8:I:129:ARG:CZ	2.45	0.46
7:H:46:GLU:N	7:H:63:LYS:HB2	2.31	0.46
3:D:75:TYR:CE1	3:D:200:VAL:HA	2.50	0.46
1:A:1369:C:H2'	1:A:1370:G:C8	2.51	0.46
1:A:451:A:H4'	1:A:452:A:O4'	2.16	0.46
1:A:1278:G:H4'	1:A:1279:G:O4'	2.16	0.46
1:A:1242:G:H2'	1:A:1243:C:O4'	2.14	0.46
1:A:707:U:H2'	1:A:708:C:H6	1.79	0.46
1:A:669:G:H2'	1:A:670:G:C8	2.50	0.46
1:A:984:C:O2'	1:A:985:C:H5'	2.15	0.46
13:N:97:LYS:HB3	13:N:97:LYS:NZ	2.31	0.46
1:A:1147:C:H2'	1:A:1148:U:H6	1.81	0.46
13:N:12:ARG:NE	13:N:58:ARG:HH12	2.13	0.46
8:I:34:LEU:HD21	8:I:48:ARG:NH2	2.18	0.46
1:A:1180:A:OP1	8:I:104:THR:HG22	2.16	0.46
1:A:16:A:N1	1:A:919:A:H2	2.13	0.46
2:C:63:ILE:HD12	2:C:90:VAL:HG12	1.96	0.46
1:A:640:A:O2'	1:A:641:U:H5'	2.16	0.46
1:A:948:C:O2'	1:A:949:A:H5'	2.16	0.46
1:A:659:U:O2'	1:A:660:C:H5'	2.16	0.46
1:A:189:A:O2'	1:A:190:A:H5'	2.16	0.46
1:A:197:A:H4'	1:A:198:G:O5'	2.16	0.46
19:T:72:ALA:HA	19:T:75:LYS:HD3	1.96	0.46
13:N:20:PHE:CD1	13:N:24:ALA:HB2	2.51	0.46
1:A:600:A:OP1	7:H:87:ARG:HB3	2.16	0.46
6:G:13:PRO:O	6:G:14:ASP:C	2.53	0.46
1:A:1125:U:C6	9:J:40:ILE:HD13	2.51	0.46
9:J:53:ILE:HG13	13:N:84:ARG:CZ	2.46	0.46
1:A:119:A:H4'	1:A:120:A:O4'	2.14	0.46
1:A:697:U:H2'	1:A:698:G:H5'	1.97	0.46
1:A:279:A:H5'	1:A:281:G:O4'	2.15	0.46
4:E:132:PRO:HG2	4:E:133:ILE:H	1.79	0.46
1:A:1216:A:H2'	1:A:1217:C:H6	1.81	0.46
1:A:669:G:H2'	1:A:670:G:H8	1.80	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:7:VAL:O	5:F:7:VAL:HG13	2.15	0.46
21:U:11:PHE:CE1	21:U:13:VAL:HG12	2.50	0.46
7:H:40:LYS:HD3	7:H:48:PHE:CE1	2.49	0.46
19:T:2:ASN:CG	19:T:3:ILE:N	2.69	0.46
1:A:1360:A:H2'	1:A:1361:G:O4'	2.15	0.46
1:A:106:C:HO2'	1:A:107:G:H5'	1.80	0.46
9:J:6:ILE:O	9:J:8:ILE:HD12	2.16	0.46
1:A:1317:C:H3'	1:A:1318:A:C8	2.49	0.46
1:A:762:U:H2'	1:A:763:G:H8	1.80	0.46
1:A:1392:G:H2'	1:A:1393:U:C6	2.51	0.46
15:P:52:LEU:CD2	15:P:75:ILE:HA	2.45	0.46
1:A:87:C:C2'	1:A:88:U:H4'	2.45	0.46
1:A:803:G:H2'	1:A:804:U:O4'	2.15	0.46
1:A:503:C:H2'	1:A:504:C:C6	2.51	0.46
4:E:77:ASN:CG	4:E:78:GLY:H	2.17	0.46
11:L:78:VAL:O	11:L:102:ASP:HB2	2.16	0.46
18:S:40:PHE:HB2	18:S:43:MET:HE2	1.97	0.46
8:I:16:ALA:HA	8:I:66:VAL:HG23	1.98	0.46
8:I:78:ILE:HG22	8:I:82:ILE:CD1	2.46	0.46
12:M:19:THR:HG22	12:M:29:SER:HB3	1.98	0.46
20:B:117:GLU:HA	20:B:140:LEU:CD2	2.45	0.46
20:B:151:LYS:HG3	20:B:152:ASP:N	2.30	0.46
8:I:56:MET:SD	8:I:57:VAL:HG23	2.55	0.46
1:A:918:A:C6	1:A:919:A:C6	3.04	0.46
9:J:8:ILE:H	9:J:8:ILE:HD12	1.81	0.46
1:A:861:G:H2'	1:A:862:C:H6	1.80	0.46
1:A:313:A:H2'	1:A:314:C:H6	1.80	0.46
8:I:109:GLN:CD	8:I:110:VAL:H	2.19	0.46
1:A:545:C:O2'	1:A:546:A:H5'	2.15	0.46
1:A:502:A:H2'	1:A:503:C:C6	2.50	0.46
3:D:162:GLU:C	3:D:164:ARG:H	2.19	0.46
2:C:106:ARG:HH11	2:C:106:ARG:HG2	1.81	0.46
5:F:93:LYS:O	5:F:94:HIS:HB2	2.15	0.46
16:Q:60:ILE:HD13	16:Q:60:ILE:H	1.80	0.46
6:G:2:ARG:HG2	6:G:3:ARG:CD	2.46	0.46
6:G:46:LEU:HG	6:G:57:GLU:CB	2.38	0.46
1:A:1125:U:HO2'	1:A:1126:U:H2'	1.81	0.46
2:C:155:ARG:H	2:C:162:ALA:HA	1.80	0.46
10:K:124:LYS:CA	21:U:34:ARG:HB3	2.39	0.46
3:D:148:ALA:O	3:D:154:VAL:HG11	2.16	0.46
1:A:373:A:O2'	1:A:374:A:H5'	2.16	0.46
1:A:113:G:O2'	1:A:354:G:H5'	2.16	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:631:C:H3'	1:A:632:U:H5'	1.97	0.46
9:J:35:GLN:HG2	9:J:78:GLU:OE2	2.16	0.46
1:A:828:U:H4'	1:A:828:U:OP1	2.14	0.46
9:J:6:ILE:HB	9:J:76:ILE:HD11	1.98	0.46
1:A:677:U:H3	1:A:713:G:H22	1.63	0.46
5:F:43:GLY:HA2	5:F:58:HIS:CD2	2.51	0.46
11:L:113:ARG:NE	11:L:120:ARG:HA	2.30	0.46
14:O:69:LEU:HD11	14:O:76:ARG:CB	2.46	0.46
1:A:572:A:N3	1:A:917:G:H1'	2.31	0.46
7:H:82:LEU:O	7:H:82:LEU:HD13	2.16	0.46
1:A:960:U:H6	1:A:1222:G:O2'	1.99	0.45
12:M:2:ARG:N	12:M:2:ARG:HD3	2.30	0.45
12:M:9:PRO:HB2	12:M:17:ALA:HB1	1.97	0.45
1:A:571:U:O2	1:A:918:A:H5'	2.15	0.45
1:A:1226:C:H3'	12:M:101:THR:OG1	2.16	0.45
1:A:1130:A:H2'	1:A:1131:G:C8	2.51	0.45
1:A:89:U:H3'	1:A:90:C:C6	2.50	0.45
4:E:106:ALA:HB1	4:E:110:MET:CB	2.47	0.45
1:A:1415:G:O2'	1:A:1416:G:H5'	2.16	0.45
1:A:25:C:H5'	1:A:524:G:H1'	1.98	0.45
11:L:24:GLU:HB2	11:L:26:CYS:SG	2.57	0.45
5:F:12:PRO:C	5:F:14:GLN:H	2.20	0.45
1:A:213:G:H3'	1:A:214:C:H6	1.81	0.45
1:A:936:C:H2'	1:A:937:A:O4'	2.16	0.45
14:O:30:LEU:HD23	14:O:30:LEU:C	2.36	0.45
1:A:780:A:O2'	1:A:781:A:H5''	2.16	0.45
4:E:19:ARG:O	4:E:20:VAL:HB	2.16	0.45
10:K:106:ILE:O	10:K:107:THR:HG23	2.17	0.45
10:K:72:ALA:O	10:K:75:GLU:HG2	2.17	0.45
1:A:1206:G:H4'	2:C:191:THR:O	2.15	0.45
1:A:833:G:O2'	1:A:834:U:H5'	2.16	0.45
1:A:1299:A:C2'	1:A:1301:U:H1'	2.46	0.45
1:A:54:C:H2'	1:A:352:C:H41	1.80	0.45
1:A:328:C:H4'	1:A:329:A:C5'	2.46	0.45
1:A:562:U:H5''	1:A:563:A:C4	2.51	0.45
5:F:55:HIS:CD2	5:F:56:LYS:HE3	2.51	0.45
1:A:1181:G:H1'	1:A:1182:G:C5	2.50	0.45
1:A:245:U:H2'	1:A:246:A:H5'	1.98	0.45
20:B:209:VAL:HG23	20:B:210:THR:N	2.28	0.45
1:A:1004:A:H2'	1:A:1005:A:O4'	2.16	0.45
8:I:52:GLU:O	8:I:53:LEU:HD13	2.16	0.45
1:A:254:G:O2'	1:A:255:G:H5'	2.15	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:18:LYS:HG2	16:Q:48:GLU:O	2.17	0.45
1:A:9:G:H5'	4:E:107:GLY:HA3	1.98	0.45
1:A:1261:A:H1'	1:A:1275:A:N1	2.31	0.45
19:T:35:TYR:CG	19:T:36:ALA:N	2.84	0.45
1:A:908:A:H2'	1:A:909:A:C8	2.51	0.45
5:F:97:THR:HG22	5:F:98:GLU:N	2.31	0.45
10:K:19:VAL:HG22	10:K:34:THR:O	2.17	0.45
7:H:12:ARG:NH1	7:H:26:MET:HB3	2.31	0.45
1:A:14:U:H5''	24:A:4101:HOH:O	2.16	0.45
1:A:754:C:H3'	1:A:754:C:O2	2.16	0.45
8:I:29:ILE:HG23	8:I:64:ILE:HB	1.98	0.45
8:I:30:ASN:HD22	8:I:65:THR:HA	1.82	0.45
1:A:1096:C:H2'	1:A:1097:C:H6	1.81	0.45
1:A:202:G:H2'	1:A:203:G:C8	2.51	0.45
13:N:5:MET:SD	13:N:8:ARG:HD3	2.56	0.45
1:A:1122:U:H2'	1:A:1123:U:C6	2.51	0.45
1:A:1060:U:H2'	1:A:1061:G:C8	2.51	0.45
1:A:255:G:H5'	16:Q:17:GLU:O	2.16	0.45
2:C:6:PRO:HB3	2:C:174:LEU:HD21	1.99	0.45
1:A:1007:U:H2'	1:A:1008:U:H6	1.80	0.45
7:H:23:ALA:CB	7:H:61:THR:HA	2.46	0.45
1:A:373:A:H1'	1:A:481:G:H1'	1.98	0.45
7:H:11:THR:HG22	7:H:14:ARG:NH2	2.30	0.45
1:A:85:U:H4'	1:A:86:G:OP1	2.16	0.45
6:G:59:GLU:O	6:G:63:VAL:HG23	2.17	0.45
1:A:993:G:H21	1:A:996:A:N6	2.14	0.45
1:A:634:C:H2'	1:A:635:A:C8	2.51	0.45
1:A:1127:G:C2'	1:A:1128:C:H5'	2.46	0.45
2:C:134:LYS:HA	2:C:167:TYR:HE2	1.82	0.45
1:A:1085:U:H3'	1:A:1086:U:C6	2.52	0.45
1:A:1096:C:H2'	1:A:1097:C:C6	2.51	0.45
20:B:120:SER:HA	20:B:125:PHE:CB	2.47	0.45
1:A:1057:G:H5''	2:C:153:SER:CB	2.46	0.45
1:A:175:C:H2'	1:A:176:C:C6	2.51	0.45
10:K:65:ALA:O	10:K:68:ARG:HB3	2.16	0.45
5:F:8:PHE:O	5:F:60:VAL:HG23	2.16	0.45
5:F:52:ASN:O	5:F:52:ASN:CG	2.55	0.45
1:A:1040:U:H2'	1:A:1041:G:O4'	2.16	0.45
11:L:105:GLY:HA3	11:L:117:GLY:O	2.17	0.45
12:M:100:ARG:HD3	12:M:103:THR:OG1	2.16	0.45
1:A:227:G:H2'	1:A:228:A:C8	2.51	0.45
21:U:26:GLY:O	21:U:30:GLU:HB3	2.16	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:49:GLN:HA	8:I:52:GLU:HG2	1.99	0.45
16:Q:39:ARG:NH1	16:Q:39:ARG:HG3	2.29	0.45
7:H:58:LEU:CD2	7:H:60:LEU:HB2	2.47	0.45
1:A:154:U:H2'	1:A:155:A:H8	1.77	0.45
1:A:1260:G:OP1	1:A:1284:C:H4'	2.16	0.45
5:F:68:GLN:HA	5:F:71:ILE:HD11	1.98	0.45
2:C:110:LEU:HD21	2:C:140:ALA:O	2.16	0.45
20:B:160:LEU:HD22	20:B:182:VAL:HA	1.97	0.45
6:G:13:PRO:O	6:G:18:GLY:HA2	2.17	0.45
1:A:1266:G:N2	1:A:1268:G:H3'	2.32	0.45
1:A:1363:A:N3	1:A:1363:A:H2'	2.31	0.45
10:K:122:PRO:HD2	21:U:35:GLU:HG2	1.99	0.45
1:A:241:G:O2'	1:A:242:G:H5'	2.16	0.45
1:A:333:U:H2'	1:A:334:C:C6	2.52	0.45
20:B:94:ARG:HE	20:B:94:ARG:N	2.15	0.45
1:A:79:G:C2'	1:A:80:A:N7	2.79	0.45
1:A:364:A:H2'	1:A:365:U:O2	2.16	0.45
1:A:53:A:C2	1:A:54:C:H1'	2.52	0.45
8:I:9:GLY:HA2	8:I:80:HIS:CD2	2.51	0.45
1:A:552:U:H5'	11:L:82:ARG:HH11	1.81	0.45
1:A:496:A:H2'	1:A:497:G:C8	2.51	0.45
11:L:15:VAL:O	11:L:16:ALA:C	2.54	0.45
17:R:52:ARG:O	17:R:56:ARG:HG3	2.17	0.45
1:A:1056:U:H2'	1:A:1057:G:H8	1.81	0.45
2:C:63:ILE:O	2:C:65:VAL:HG23	2.15	0.45
1:A:967:C:H5'	8:I:129:ARG:HA	1.99	0.45
13:N:26:LEU:HD23	13:N:27:LYS:H	1.81	0.45
3:D:2:ARG:HG3	3:D:114:ARG:CZ	2.47	0.45
3:D:11:SER:HA	3:D:18:LEU:HD22	1.99	0.45
10:K:111:ASP:HB2	21:U:19:LYS:HE3	1.99	0.45
1:A:1148:U:O4'	8:I:17:ARG:HD3	2.17	0.45
21:U:26:GLY:C	21:U:28:LEU:N	2.71	0.45
16:Q:52:CYS:SG	16:Q:77:VAL:HG22	2.57	0.45
6:G:21:LEU:H	6:G:21:LEU:CD2	2.24	0.45
1:A:865:A:H5'	1:A:1078:U:C4	2.52	0.45
1:A:222:C:H2'	1:A:223:A:C8	2.52	0.45
1:A:859:G:O2'	1:A:860:A:H5'	2.16	0.45
1:A:454:G:O2'	1:A:455:G:H5'	2.17	0.45
1:A:968:A:H3'	1:A:969:A:C5'	2.47	0.45
8:I:9:GLY:HA2	8:I:80:HIS:HD2	1.81	0.45
1:A:1352:C:H2'	1:A:1353:G:H8	1.82	0.45
1:A:1459:G:H2'	1:A:1460:C:H6	1.80	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:358:U:H2'	1:A:359:G:C8	2.52	0.45
4:E:89:THR:HG22	4:E:90:GLY:N	2.31	0.45
20:B:48:MET:O	20:B:52:ALA:HB3	2.17	0.45
20:B:120:SER:HA	20:B:125:PHE:HB3	1.99	0.45
1:A:1152:A:H4'	9:J:15:HIS:CD2	2.52	0.45
1:A:864:A:H2'	1:A:865:A:C8	2.52	0.45
1:A:865:A:O2'	1:A:866:C:H5'	2.17	0.45
10:K:80:ASN:HB3	10:K:105:ARG:HB3	1.99	0.45
1:A:664:G:H5''	17:R:52:ARG:HE	1.82	0.45
9:J:6:ILE:O	9:J:75:ASP:HA	2.17	0.45
9:J:55:PRO:O	9:J:56:HIS:HB3	2.17	0.45
7:H:74:ILE:CG1	7:H:128:VAL:HG22	2.45	0.45
13:N:26:LEU:HD23	13:N:27:LYS:N	2.32	0.45
1:A:1073:U:O2'	20:B:102:ASN:OD1	2.28	0.45
1:A:474:G:O2'	1:A:475:C:H5'	2.17	0.45
1:A:642:A:C5	7:H:106:SER:HA	2.52	0.45
3:D:188:SER:C	3:D:190:LEU:H	2.19	0.45
1:A:435:A:N3	1:A:435:A:H2'	2.31	0.45
1:A:744:C:H2'	1:A:745:G:C8	2.52	0.45
4:E:131:ASN:O	4:E:135:VAL:HG23	2.16	0.45
1:A:593:U:O2'	1:A:594:U:H5'	2.17	0.45
8:I:20:ILE:HD13	8:I:85:ALA:HB3	1.99	0.44
21:U:26:GLY:C	21:U:28:LEU:H	2.19	0.44
21:U:25:ALA:O	21:U:27:VAL:N	2.50	0.44
3:D:29:THR:CG2	3:D:30:LYS:HD3	2.47	0.44
15:P:2:VAL:O	15:P:65:ALA:HA	2.17	0.44
6:G:125:ASP:HB3	6:G:131:GLY:N	2.33	0.44
2:C:129:PHE:CD2	2:C:156:LEU:HD22	2.52	0.44
1:A:477:C:H2'	1:A:478:A:C8	2.51	0.44
20:B:99:MET:CA	20:B:106:VAL:HG21	2.43	0.44
2:C:171:ARG:CB	2:C:171:ARG:HH11	2.25	0.44
1:A:861:G:H2'	1:A:862:C:C6	2.52	0.44
1:A:1514:G:H2'	1:A:1515:G:H8	1.82	0.44
1:A:1313:U:OP2	18:S:5:LYS:HA	2.17	0.44
1:A:668:G:O2'	1:A:669:G:H5'	2.16	0.44
1:A:503:C:H2'	1:A:504:C:H6	1.81	0.44
1:A:1499:A:H1'	1:A:1520:C:OP1	2.17	0.44
1:A:1527:U:O2'	1:A:1528:U:H5'	2.16	0.44
4:E:95:MET:HA	4:E:124:ALA:HB2	1.98	0.44
1:A:1469:C:H2'	1:A:1470:U:O4'	2.16	0.44
1:A:64:G:OP1	1:A:64:G:H3'	2.17	0.44
1:A:1498:U:H6	1:A:1498:U:O5'	1.99	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:77:LYS:O	12:M:80:MET:HG2	2.16	0.44
8:I:20:ILE:CD1	8:I:85:ALA:HB3	2.48	0.44
5:F:3:HIS:HA	5:F:64:VAL:O	2.17	0.44
20:B:14:HIS:HD2	20:B:202:ASN:H	1.64	0.44
1:A:1035:A:H2'	1:A:1036:A:C8	2.51	0.44
1:A:1194:U:H2'	1:A:1195:C:C6	2.53	0.44
17:R:57:ALA:O	17:R:60:ARG:HG3	2.16	0.44
1:A:1342:C:O2'	8:I:125:GLN:HB3	2.17	0.44
1:A:967:C:H4'	8:I:129:ARG:HG2	1.99	0.44
1:A:1276:G:H2'	1:A:1277:C:C6	2.53	0.44
1:A:25:C:C5'	1:A:524:G:H1'	2.47	0.44
1:A:653:U:C6	7:H:55:LYS:HE2	2.52	0.44
5:F:45:ARG:NH2	17:R:25:ILE:HD13	2.32	0.44
1:A:284:C:O2'	1:A:285:C:H5'	2.17	0.44
19:T:56:ILE:O	19:T:60:GLN:HG2	2.16	0.44
1:A:1020:G:N3	1:A:1020:G:H2'	2.32	0.44
2:C:35:ASP:O	2:C:39:ARG:HG3	2.16	0.44
1:A:58:C:O2'	1:A:59:A:H5'	2.17	0.44
1:A:1138:G:H3'	1:A:1138:G:N3	2.32	0.44
1:A:1408:A:O2'	1:A:1409:C:H5'	2.17	0.44
1:A:1222:G:H2'	1:A:1223:C:H5'	1.99	0.44
18:S:33:TRP:C	18:S:35:ARG:H	2.20	0.44
1:A:203:G:H1'	1:A:465:A:N6	2.32	0.44
1:A:781:A:H2'	1:A:782:A:C5'	2.40	0.44
1:A:817:C:H1'	1:A:819:A:C5'	2.40	0.44
1:A:237:G:H2'	1:A:238:A:C8	2.51	0.44
9:J:8:ILE:HA	9:J:100:ILE:HG22	1.99	0.44
1:A:677:U:H1'	10:K:120:CYS:SG	2.58	0.44
1:A:1212:U:H4'	1:A:1213:A:C8	2.53	0.44
1:A:513:C:H2'	1:A:514:C:H6	1.83	0.44
1:A:626:G:H2'	1:A:627:G:C8	2.53	0.44
1:A:1451:U:O3'	1:A:1452:C:H6	2.00	0.44
3:D:97:LEU:HD13	3:D:136:VAL:CG1	2.47	0.44
1:A:1163:A:H2'	1:A:1164:G:C8	2.51	0.44
1:A:395:C:H2'	1:A:396:C:C6	2.52	0.44
9:J:80:THR:HG21	9:J:82:LYS:NZ	2.32	0.44
18:S:39:ILE:HG12	18:S:70:LEU:CD1	2.48	0.44
13:N:20:PHE:CD2	13:N:55:SER:HA	2.51	0.44
5:F:67:PRO:O	5:F:70:VAL:HG22	2.17	0.44
20:B:16:GLY:HA2	20:B:40:ILE:H	1.81	0.44
1:A:1178:G:H2'	1:A:1180:A:OP2	2.17	0.44
9:J:12:ALA:H	9:J:18:ILE:HD13	1.82	0.44

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:174:LEU:HD11	2:C:200:TRP:NE1	2.32	0.44
13:N:30:ILE:CG2	13:N:41:TRP:HB2	2.44	0.44
1:A:338:A:H2'	1:A:339:C:C6	2.53	0.44
1:A:1390:U:H2'	1:A:1391:U:C6	2.51	0.44
1:A:473:U:H6	1:A:473:U:O5'	2.00	0.44
11:L:71:HIS:HD2	11:L:73:LEU:HG	1.82	0.44
1:A:1314:C:H2'	1:A:1315:U:C6	2.52	0.44
1:A:488:C:O2'	1:A:489:C:H5'	2.18	0.44
1:A:993:G:N2	1:A:996:A:N6	2.65	0.44
1:A:596:A:H2'	1:A:597:G:C8	2.52	0.44
16:Q:10:ARG:NH2	16:Q:55:GLY:HA2	2.33	0.44
11:L:60:PHE:O	11:L:62:VAL:HG13	2.17	0.44
1:A:938:A:H1'	1:A:1376:U:O2'	2.18	0.44
6:G:55:LYS:HG2	6:G:55:LYS:H	1.62	0.44
1:A:1014:A:N3	1:A:1219:A:H1'	2.33	0.44
1:A:1219:A:H2'	1:A:1220:G:H8	1.82	0.44
8:I:19:PHE:HB2	8:I:63:TYR:HB3	1.99	0.44
3:D:123:MET:HA	3:D:128:VAL:HA	1.99	0.44
20:B:218:ALA:O	20:B:222:GLU:N	2.51	0.44
3:D:25:ARG:HD3	3:D:26:ALA:HB3	1.99	0.44
10:K:112:VAL:HA	17:R:72:ARG:HH21	1.82	0.44
1:A:1080:A:O3'	4:E:20:VAL:HG11	2.17	0.44
21:U:39:LYS:N	21:U:40:PRO:CD	2.81	0.44
20:B:18:GLN:HB2	20:B:188:THR:OG1	2.17	0.44
13:N:23:ARG:C	13:N:25:GLU:H	2.21	0.44
10:K:74:LYS:HG3	10:K:104:PHE:CZ	2.52	0.44
1:A:1388:C:H2'	1:A:1389:C:H6	1.83	0.44
1:A:1510:C:H2'	1:A:1511:G:H8	1.82	0.44
13:N:86:ALA:HA	13:N:91:GLU:HG3	1.99	0.44
8:I:10:ARG:CB	8:I:15:ALA:HA	2.48	0.44
1:A:751:U:O2'	14:O:24:THR:HG23	2.18	0.44
1:A:486:U:O2'	1:A:487:A:H5'	2.18	0.44
1:A:537:G:H2'	1:A:538:G:C8	2.52	0.44
2:C:5:HIS:ND1	13:N:88:MET:HB3	2.33	0.44
1:A:586:C:O2'	1:A:587:G:H5'	2.17	0.44
1:A:458:U:H2'	1:A:459:A:C8	2.53	0.44
1:A:940:C:H2'	1:A:941:G:C8	2.52	0.44
5:F:35:LYS:HB2	5:F:65:GLU:HB3	2.00	0.44
20:B:187:ASP:OD1	20:B:203:ASP:HB3	2.17	0.44
9:J:18:ILE:HG13	9:J:72:ARG:HG2	1.98	0.44
2:C:129:PHE:HD2	2:C:156:LEU:HD22	1.83	0.44
4:E:104:ILE:CG2	4:E:111:ARG:HH12	2.23	0.44

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:107:G:O6	19:T:9:ARG:HD3	2.17	0.44
1:A:1134:G:N2	1:A:1135:U:H1'	2.32	0.44
1:A:1318:A:H4'	18:S:9:PHE:CE1	2.53	0.44
15:P:67:ILE:O	15:P:67:ILE:HG23	2.18	0.44
10:K:47:GLY:C	10:K:49:SER:H	2.21	0.44
1:A:44:A:O2'	1:A:45:G:H5'	2.18	0.44
1:A:618:C:N3	1:A:622:A:N6	2.63	0.44
1:A:356:A:H2'	1:A:357:G:O4'	2.18	0.44
1:A:1175:G:O2'	1:A:1176:A:H5'	2.18	0.44
1:A:1456:A:H2'	1:A:1457:G:O4'	2.17	0.44
1:A:1105:A:O2'	1:A:1106:G:H5'	2.17	0.44
18:S:10:ILE:HB	18:S:14:LEU:HD21	2.00	0.44
20:B:16:GLY:HA2	20:B:40:ILE:HG13	2.00	0.44
20:B:40:ILE:HD13	20:B:201:GLY:CA	2.47	0.44
20:B:16:GLY:HA2	20:B:40:ILE:CG1	2.48	0.44
20:B:64:GLY:HA2	20:B:158:ASP:OD1	2.17	0.44
1:A:599:C:H4'	7:H:121:GLY:CA	2.48	0.44
6:G:67:ASN:ND2	6:G:127:ALA:HA	2.32	0.44
1:A:244:U:O4	1:A:906:A:H1'	2.17	0.44
10:K:70:ALA:C	10:K:72:ALA:N	2.71	0.44
2:C:52:SER:O	2:C:113:LYS:HG2	2.18	0.44
11:L:49:ARG:N	11:L:49:ARG:HD2	2.32	0.44
1:A:342:C:O2'	1:A:343:U:H5'	2.18	0.44
3:D:2:ARG:HH22	3:D:132:ALA:CB	2.30	0.44
19:T:49:ALA:CA	19:T:52:GLU:HB3	2.47	0.44
1:A:502:A:H2'	1:A:503:C:O4'	2.17	0.44
1:A:647:C:H2'	1:A:648:A:C8	2.52	0.44
7:H:29:SER:OG	7:H:32:LYS:HG3	2.17	0.44
8:I:82:ILE:O	8:I:86:LEU:HB2	2.17	0.44
20:B:46:VAL:HA	20:B:49:PHE:HD2	1.82	0.44
8:I:52:GLU:C	8:I:53:LEU:HD22	2.38	0.44
6:G:46:LEU:O	6:G:57:GLU:HG3	2.18	0.44
6:G:129:ASN:HD22	6:G:137:ARG:HH22	1.63	0.44
1:A:570:G:H2'	1:A:571:U:C6	2.52	0.44
4:E:21:SER:CB	4:E:28:ARG:HE	2.22	0.44
17:R:63:TYR:C	17:R:64:LEU:HD12	2.37	0.44
2:C:122:GLN:O	2:C:127:VAL:HG13	2.17	0.44
16:Q:47:ASP:CG	16:Q:50:ASN:HA	2.38	0.44
1:A:643:C:H5'	7:H:31:LEU:HD13	2.00	0.44
1:A:1245:C:H2'	1:A:1246:A:H8	1.81	0.44
1:A:708:C:H2'	1:A:709:U:C6	2.53	0.44
12:M:57:ASP:O	12:M:61:LYS:HE2	2.17	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:71:ILE:HG13	5:F:72:ASP:N	2.33	0.44
18:S:77:ARG:HG2	18:S:77:ARG:H	1.56	0.44
18:S:10:ILE:CD1	18:S:14:LEU:HD11	2.47	0.44
1:A:1086:U:H3	1:A:1099:G:N2	1.94	0.44
3:D:187:ARG:CZ	3:D:191:SER:HB3	2.48	0.44
1:A:1057:G:H4'	2:C:196:GLY:N	2.27	0.44
20:B:102:ASN:ND2	20:B:105:THR:HB	2.32	0.44
11:L:98:ARG:HD2	11:L:103:CYS:SG	2.58	0.44
1:A:167:A:O2'	1:A:168:G:H5'	2.17	0.44
1:A:159:G:N1	1:A:163:C:N4	2.66	0.44
1:A:746:A:N1	1:A:747:A:N6	2.66	0.44
20:B:22:TRP:CZ3	20:B:24:PRO:HA	2.53	0.44
1:A:186:C:H2'	1:A:187:G:O4'	2.18	0.44
1:A:284:C:H2'	1:A:285:C:C6	2.52	0.44
10:K:57:SER:O	10:K:90:PRO:HG3	2.18	0.44
1:A:584:G:H2'	1:A:585:G:H8	1.83	0.44
1:A:308:C:H2'	1:A:309:A:C8	2.52	0.44
1:A:915:A:H2'	1:A:916:U:H5'	2.00	0.44
6:G:30:MET:HG3	6:G:35:LYS:HA	2.00	0.44
4:E:95:MET:HA	4:E:124:ALA:CB	2.47	0.44
1:A:683:G:O2'	1:A:684:U:H5'	2.17	0.44
18:S:52:ASN:ND2	18:S:53:GLY:H	2.16	0.43
8:I:20:ILE:H	8:I:20:ILE:CD1	2.30	0.43
13:N:50:LEU:CG	13:N:51:PRO:HD3	2.47	0.43
1:A:201:G:O2'	1:A:469:C:H4'	2.17	0.43
3:D:123:MET:HG3	3:D:143:SER:OG	2.18	0.43
3:D:29:THR:HB	3:D:30:LYS:HZ2	1.81	0.43
15:P:40:ASN:ND2	15:P:43:ALA:HB2	2.33	0.43
21:U:40:PRO:HG2	21:U:41:THR:H	1.83	0.43
1:A:845:A:H5''	1:A:846:G:C8	2.53	0.43
10:K:126:ARG:HB2	21:U:33:ARG:HD2	1.99	0.43
13:N:69:PRO:HG2	13:N:70:HIS:H	1.83	0.43
1:A:90:C:OP2	1:A:90:C:H6	2.01	0.43
3:D:7:LYS:HB3	3:D:20:LEU:HB3	1.99	0.43
5:F:18:VAL:N	5:F:19:PRO:HD2	2.32	0.43
1:A:791:G:C5	1:A:792:A:N7	2.86	0.43
1:A:987:G:H2'	1:A:988:G:H8	1.83	0.43
1:A:178:C:O2'	1:A:179:A:H5'	2.17	0.43
1:A:1102:A:H2'	1:A:1103:C:C6	2.53	0.43
1:A:878:A:C5'	7:H:80:PRO:HG2	2.48	0.43
11:L:54:VAL:CG2	11:L:79:ILE:HD11	2.48	0.43
1:A:516:U:O2'	1:A:517:G:H5'	2.17	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:21:VAL:HG12	15:P:33:ILE:HD12	1.98	0.43
1:A:885:G:O2'	1:A:886:G:H5'	2.17	0.43
1:A:837:U:H2'	1:A:838:G:H8	1.83	0.43
1:A:1200:C:H4'	1:A:1201:A:H3'	2.00	0.43
1:A:1406:U:O2'	1:A:1407:C:H5'	2.18	0.43
3:D:24:VAL:HA	3:D:27:ILE:CD1	2.45	0.43
6:G:137:ARG:HG2	6:G:141:HIS:NE2	2.32	0.43
1:A:923:A:OP1	4:E:25:LYS:HB3	2.18	0.43
1:A:736:C:H2'	1:A:737:C:H6	1.83	0.43
5:F:47:LEU:HD13	5:F:51:ILE:HG22	2.00	0.43
20:B:17:HIS:CG	20:B:18:GLN:H	2.36	0.43
20:B:17:HIS:CG	20:B:18:GLN:N	2.86	0.43
9:J:8:ILE:CD1	9:J:76:ILE:HG13	2.47	0.43
19:T:42:ASP:OD1	19:T:44:ALA:HB3	2.18	0.43
5:F:40:GLU:CB	5:F:61:LEU:HB2	2.46	0.43
1:A:389:A:C6	1:A:390:U:H1'	2.53	0.43
1:A:893:C:H2'	1:A:894:G:H8	1.82	0.43
8:I:95:SER:O	8:I:99:LYS:HB2	2.18	0.43
4:E:64:GLU:O	4:E:68:ARG:HG2	2.18	0.43
2:C:179:ALA:O	2:C:180:ASP:O	2.36	0.43
1:A:1320:C:H41	18:S:36:ARG:HA	1.83	0.43
1:A:1148:U:C4'	8:I:17:ARG:HD3	2.48	0.43
6:G:22:LEU:O	6:G:25:PHE:HB3	2.18	0.43
8:I:119:LYS:C	8:I:121:ARG:H	2.22	0.43
1:A:1292:G:H2'	1:A:1293:C:H6	1.78	0.43
1:A:182:A:HO2'	1:A:183:C:H3'	1.82	0.43
11:L:51:VAL:HG12	11:L:52:CYS:N	2.30	0.43
3:D:47:LEU:HD13	3:D:52:VAL:HG22	1.98	0.43
1:A:152:A:H3'	1:A:153:C:C6	2.54	0.43
1:A:1241:G:O2'	1:A:1242:G:H5'	2.18	0.43
3:D:169:TRP:O	3:D:182:LYS:HB2	2.18	0.43
5:F:98:GLU:CG	5:F:99:ALA:N	2.80	0.43
5:F:45:ARG:HH22	17:R:25:ILE:HD13	1.83	0.43
3:D:40:HIS:O	3:D:43:ARG:HG2	2.18	0.43
1:A:138:G:C6	1:A:226:G:C6	3.06	0.43
11:L:31:GLY:HA3	11:L:54:VAL:HG11	2.00	0.43
1:A:1069:C:O4'	1:A:1191:A:H2	2.00	0.43
8:I:18:VAL:HG12	8:I:19:PHE:N	2.33	0.43
20:B:31:PHE:HB3	20:B:39:ILE:CG2	2.48	0.43
1:A:1002:G:H2'	1:A:1003:G:O4'	2.18	0.43
8:I:42:THR:O	8:I:46:VAL:HG22	2.18	0.43
6:G:11:ILE:HG22	6:G:12:LEU:N	2.33	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1150:A:O3'	9:J:43:PRO:HA	2.19	0.43
11:L:16:ALA:HB1	11:L:17:LYS:HZ1	1.82	0.43
21:U:44:ARG:HG3	21:U:44:ARG:NH1	2.33	0.43
1:A:1381:U:O2'	1:A:1382:C:H5'	2.18	0.43
1:A:1426:G:H2'	1:A:1427:C:O4'	2.19	0.43
1:A:394:G:H2'	1:A:395:C:C6	2.53	0.43
5:F:10:VAL:HG12	5:F:11:HIS:N	2.33	0.43
20:B:48:MET:H	20:B:48:MET:HG2	1.58	0.43
11:L:60:PHE:O	11:L:62:VAL:N	2.51	0.43
4:E:68:ARG:O	4:E:69:ASN:HB2	2.17	0.43
9:J:49:PHE:HB2	9:J:65:TYR:HB2	1.99	0.43
12:M:30:LYS:HG3	12:M:40:GLU:OE1	2.19	0.43
12:M:102:LYS:HB2	12:M:102:LYS:NZ	2.33	0.43
1:A:1042:A:H2'	1:A:1043:G:O4'	2.18	0.43
18:S:40:PHE:HB3	18:S:41:PRO:HD2	1.98	0.43
20:B:11:ALA:C	20:B:13:VAL:H	2.22	0.43
10:K:88:PRO:HD3	21:U:28:LEU:CD1	2.34	0.43
20:B:160:LEU:HG	20:B:161:PHE:N	2.34	0.43
3:D:25:ARG:HE	3:D:25:ARG:HB2	1.57	0.43
9:J:12:ALA:CB	9:J:96:VAL:HG12	2.43	0.43
11:L:21:PRO:HG2	11:L:94:TYR:OH	2.18	0.43
3:D:115:GLN:HG3	3:D:119:HIS:CE1	2.53	0.43
20:B:96:LEU:HB2	20:B:99:MET:HE2	1.98	0.43
1:A:1250:A:H2	1:A:1370:G:H1'	1.82	0.43
1:A:1261:A:N7	1:A:1274:A:H2	2.17	0.43
20:B:184:ALA:HB3	20:B:195:VAL:HG21	2.01	0.43
1:A:1439:G:OP2	19:T:32:LYS:HE2	2.18	0.43
1:A:1337:G:H5''	1:A:1338:G:OP1	2.18	0.43
1:A:808:C:O2'	1:A:809:G:H5'	2.18	0.43
2:C:8:GLY:HA3	13:N:88:MET:SD	2.58	0.43
2:C:19:SER:HB2	2:C:39:ARG:NH2	2.32	0.43
10:K:61:ALA:O	10:K:64:VAL:HG13	2.19	0.43
12:M:63:VAL:HG13	12:M:67:ASP:CB	2.48	0.43
1:A:975:A:H61	9:J:50:THR:HG21	1.83	0.43
9:J:50:THR:HG22	9:J:62:ARG:HD2	2.00	0.43
1:A:332:G:O2'	1:A:333:U:H5'	2.19	0.43
1:A:1421:G:N2	1:A:1479:C:O2	2.51	0.43
11:L:86:VAL:HG12	11:L:89:LEU:H	1.82	0.43
11:L:89:LEU:HD22	11:L:89:LEU:N	2.33	0.43
1:A:642:A:H2'	1:A:643:C:C6	2.52	0.43
20:B:95:TRP:CH2	20:B:100:LEU:HD13	2.53	0.43
20:B:172:ILE:CG2	20:B:176:ASN:HD21	2.31	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:767:A:H2'	1:A:768:A:H8	1.84	0.43
1:A:721:G:H4'	1:A:722:G:O4'	2.18	0.43
1:A:541:G:H2'	1:A:542:G:H8	1.84	0.43
11:L:30:ARG:O	11:L:57:THR:HG23	2.18	0.43
8:I:54:VAL:HG21	8:I:86:LEU:HD21	2.00	0.43
8:I:66:VAL:HG11	8:I:78:ILE:HD11	2.01	0.43
1:A:1329:A:O2'	1:A:1330:U:H5'	2.18	0.43
3:D:106:PHE:CD1	3:D:158:LEU:HD21	2.54	0.43
1:A:71:A:O2'	1:A:72:A:H5''	2.18	0.43
2:C:50:SER:CB	2:C:70:ALA:HB3	2.48	0.43
1:A:263:A:H2'	1:A:264:C:C6	2.53	0.43
12:M:72:ILE:O	12:M:76:ILE:HG13	2.18	0.43
9:J:8:ILE:HB	9:J:74:VAL:HB	2.01	0.43
1:A:1140:C:O2'	1:A:1141:C:H5'	2.18	0.43
1:A:82:G:H1'	1:A:89:U:C2	2.54	0.43
2:C:2:GLN:O	2:C:3:LYS:HB2	2.19	0.43
1:A:187:G:N2	1:A:189:A:H3'	2.34	0.43
1:A:191:G:H2'	1:A:192:A:H8	1.84	0.43
8:I:9:GLY:HA3	8:I:81:GLY:N	2.32	0.43
1:A:716:A:H1'	10:K:119:GLY:HA2	2.01	0.43
5:F:6:ILE:HG23	5:F:62:MET:CB	2.48	0.43
1:A:386:C:O2'	1:A:387:U:H5'	2.18	0.43
1:A:594:U:O2'	1:A:595:A:H5'	2.17	0.43
5:F:81:ASN:O	5:F:84:VAL:HG12	2.18	0.43
5:F:3:HIS:CD2	5:F:65:GLU:HG3	2.53	0.43
1:A:1305:G:H22	1:A:1331:G:H2'	1.83	0.43
12:M:18:LEU:HD13	12:M:33:LEU:HD21	2.01	0.43
1:A:1120:C:H2'	1:A:1121:U:H6	1.82	0.43
15:P:43:ALA:HB1	15:P:46:LYS:HE3	2.01	0.43
8:I:118:ARG:NH1	8:I:122:ARG:HE	2.17	0.43
19:T:32:LYS:O	19:T:35:TYR:N	2.51	0.43
16:Q:34:GLY:O	16:Q:35:LYS:C	2.57	0.43
1:A:704:A:C2	1:A:705:G:H1'	2.54	0.43
6:G:100:MET:O	6:G:104:VAL:HG23	2.18	0.43
1:A:1527:U:H2'	1:A:1528:U:C6	2.54	0.43
16:Q:45:VAL:HG11	16:Q:60:ILE:HG21	2.00	0.43
6:G:149:ALA:HB2	10:K:55:ARG:CZ	2.48	0.43
1:A:425:G:H2'	1:A:426:U:C6	2.54	0.43
1:A:956:U:O2'	1:A:957:U:H5'	2.19	0.43
1:A:779:C:H5''	10:K:123:PRO:HB3	2.00	0.43
1:A:523:A:H61	11:L:88:ASP:HB2	1.83	0.43
1:A:1313:U:OP1	18:S:6:LYS:HD3	2.19	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:574:A:H1'	1:A:883:C:O4'	2.18	0.43
20:B:128:LEU:CD1	20:B:132:GLU:HB3	2.48	0.43
1:A:152:A:H3'	1:A:153:C:H6	1.84	0.43
1:A:307:C:H2'	1:A:308:C:H6	1.84	0.43
20:B:82:ALA:HB3	20:B:213:LEU:HD22	2.00	0.43
1:A:1065:U:H1'	1:A:1066:C:OP2	2.19	0.43
1:A:904:U:H2'	1:A:905:U:C6	2.53	0.43
1:A:1488:G:H2'	1:A:1489:G:O4'	2.19	0.43
1:A:1495:U:O2'	1:A:1496:C:H5'	2.19	0.43
18:S:41:PRO:C	18:S:43:MET:H	2.22	0.43
6:G:14:ASP:HB2	6:G:19:SER:O	2.19	0.43
4:E:143:LEU:C	4:E:145:ASN:H	2.22	0.43
1:A:250:A:H1'	1:A:252:U:C5	2.54	0.43
1:A:256:U:H3'	1:A:257:G:H8	1.84	0.43
14:O:42:PHE:CD1	14:O:55:LEU:HD22	2.53	0.43
9:J:57:VAL:HG13	9:J:58:ASN:N	2.34	0.43
14:O:10:ILE:O	14:O:14:PHE:HD1	2.02	0.43
1:A:970:C:H42	8:I:128:LYS:HG2	1.84	0.43
13:N:30:ILE:O	13:N:40:ARG:HA	2.18	0.43
16:Q:30:HIS:CB	16:Q:33:TYR:HB2	2.49	0.43
9:J:32:THR:O	9:J:32:THR:HG23	2.18	0.43
1:A:1296:C:H4'	1:A:1302:C:H42	1.83	0.43
1:A:994:A:C5	1:A:1216:A:H4'	2.54	0.43
3:D:78:ALA:HA	3:D:81:LEU:HD12	2.01	0.43
3:D:97:LEU:HA	3:D:100:VAL:CG2	2.49	0.43
11:L:43:LYS:CD	11:L:44:PRO:HD3	2.49	0.43
3:D:94:GLU:HG3	3:D:99:ASN:ND2	2.33	0.43
1:A:1113:C:O2'	1:A:1114:C:H5'	2.19	0.43
1:A:59:A:H3'	1:A:331:G:H22	1.84	0.43
9:J:80:THR:O	9:J:84:VAL:HG23	2.18	0.43
11:L:28:GLN:HE21	11:L:28:GLN:HB3	1.50	0.43
2:C:130:ARG:HA	2:C:130:ARG:HD2	1.90	0.43
1:A:429:U:H5'	3:D:8:LEU:CG	2.38	0.42
18:S:30:LEU:HG	18:S:47:THR:O	2.19	0.42
16:Q:18:LYS:H	16:Q:50:ASN:HD21	1.67	0.42
20:B:93:HIS:O	20:B:94:ARG:HG2	2.19	0.42
1:A:402:G:O2'	1:A:403:C:H5'	2.19	0.42
1:A:927:G:H2'	1:A:928:G:H8	1.83	0.42
1:A:878:A:OP1	7:H:80:PRO:HG2	2.18	0.42
18:S:52:ASN:CG	18:S:53:GLY:N	2.71	0.42
5:F:34:GLY:C	5:F:35:LYS:HD2	2.40	0.42
5:F:92:THR:CG2	5:F:94:HIS:H	2.14	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:88:PRO:HG3	21:U:28:LEU:HD21	2.00	0.42
3:D:8:LEU:HD12	3:D:31:CYS:SG	2.59	0.42
6:G:11:ILE:HD12	6:G:11:ILE:N	2.33	0.42
15:P:42:ILE:HG22	15:P:43:ALA:N	2.33	0.42
6:G:129:ASN:HA	6:G:134:VAL:CG1	2.39	0.42
1:A:1324:A:H4'	1:A:1363:A:OP1	2.19	0.42
1:A:1078:U:H2'	1:A:1079:G:C8	2.54	0.42
2:C:119:ILE:CG2	2:C:197:VAL:HG11	2.46	0.42
11:L:66:ILE:CG2	11:L:71:HIS:HB3	2.44	0.42
1:A:174:A:O2'	1:A:175:C:H5'	2.19	0.42
1:A:175:C:O2	1:A:1447:A:H2	2.03	0.42
3:D:47:LEU:HD22	3:D:51:GLY:O	2.19	0.42
4:E:11:GLN:O	4:E:38:VAL:HA	2.19	0.42
14:O:73:ASP:OD1	14:O:75:ALA:HB3	2.19	0.42
20:B:138:ARG:O	20:B:141:GLU:HB2	2.19	0.42
1:A:1229:A:H2'	1:A:1230:C:H6	1.82	0.42
1:A:445:G:H2'	1:A:446:G:O4'	2.18	0.42
12:M:5:GLY:O	12:M:6:ILE:HB	2.19	0.42
7:H:112:ASP:HB2	7:H:116:ARG:NH2	2.35	0.42
20:B:150:ILE:O	20:B:150:ILE:HG12	2.18	0.42
13:N:45:LEU:HD23	13:N:45:LEU:O	2.19	0.42
5:F:36:ILE:HD12	5:F:36:ILE:H	1.84	0.42
20:B:165:ALA:HB3	20:B:186:VAL:HG11	2.00	0.42
3:D:64:TYR:CE2	3:D:93:LEU:HB3	2.54	0.42
8:I:48:ARG:O	8:I:52:GLU:HG2	2.19	0.42
1:A:923:A:H2'	1:A:924:C:H6	1.82	0.42
14:O:54:GLY:O	14:O:58:MET:HG2	2.19	0.42
2:C:119:ILE:HD13	2:C:136:ALA:HB2	2.00	0.42
1:A:1290:G:H2'	1:A:1291:U:C6	2.53	0.42
13:N:79:SER:HG	13:N:82:LYS:HG2	1.83	0.42
1:A:43:C:H2'	1:A:44:A:O4'	2.19	0.42
19:T:52:GLU:O	19:T:52:GLU:HG2	2.18	0.42
16:Q:23:ALA:HA	16:Q:41:THR:O	2.19	0.42
1:A:731:G:H5'	1:A:766:A:H4'	2.02	0.42
1:A:848:C:H2'	1:A:849:G:O4'	2.18	0.42
12:M:85:TYR:HA	12:M:88:LEU:CD1	2.49	0.42
3:D:162:GLU:HB2	3:D:166:LYS:HZ1	1.84	0.42
5:F:68:GLN:HA	5:F:71:ILE:HG12	2.00	0.42
16:Q:10:ARG:HG3	16:Q:10:ARG:O	2.18	0.42
1:A:775:G:H2'	1:A:776:G:H8	1.84	0.42
16:Q:81:ALA:O	16:Q:82:VAL:HB	2.19	0.42
1:A:74:A:H2'	1:A:75:G:H5''	2.01	0.42

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:40:PHE:HB2	18:S:43:MET:CE	2.49	0.42
8:I:62:LEU:HD22	8:I:62:LEU:N	2.34	0.42
13:N:20:PHE:HB2	13:N:54:SER:HG	1.83	0.42
13:N:16:ALA:O	13:N:20:PHE:HB3	2.19	0.42
1:A:1178:G:H3'	8:I:98:ARG:HH21	1.85	0.42
10:K:14:GLN:HA	10:K:76:TYR:O	2.19	0.42
1:A:372:C:H1'	1:A:373:A:OP2	2.19	0.42
7:H:6:ILE:CD1	7:H:31:LEU:HD23	2.48	0.42
1:A:1172:C:O2'	1:A:1173:U:H5'	2.19	0.42
1:A:1302:C:H6	12:M:16:ILE:HG13	1.84	0.42
14:O:69:LEU:HD11	14:O:76:ARG:HB2	2.02	0.42
11:L:43:LYS:N	11:L:44:PRO:HD2	2.34	0.42
1:A:602:A:H2'	1:A:603:U:H6	1.84	0.42
1:A:1366:C:H2'	1:A:1367:C:H6	1.84	0.42
1:A:292:G:O2'	1:A:609:A:N6	2.53	0.42
1:A:1011:C:H2'	1:A:1012:A:C8	2.54	0.42
7:H:108:GLY:O	7:H:110:MET:HG3	2.18	0.42
13:N:15:LEU:HB3	13:N:54:SER:CB	2.44	0.42
1:A:1305:G:O2'	1:A:1332:A:N6	2.53	0.42
1:A:1330:U:H2'	1:A:1331:G:O4'	2.19	0.42
16:Q:80:LYS:H	16:Q:80:LYS:NZ	2.17	0.42
19:T:64:GLY:H	19:T:67:HIS:CD2	2.37	0.42
15:P:46:LYS:C	15:P:48:GLU:N	2.73	0.42
1:A:1077:G:N1	1:A:1081:A:C6	2.88	0.42
10:K:91:GLY:O	10:K:95:THR:HG22	2.20	0.42
17:R:57:ALA:HA	17:R:60:ARG:HH11	1.84	0.42
1:A:254:G:OP1	16:Q:68:LYS:O	2.38	0.42
2:C:154:GLY:HA2	2:C:163:ARG:N	2.34	0.42
2:C:112:ALA:O	2:C:113:LYS:C	2.58	0.42
20:B:142:LYS:HA	20:B:145:ASN:CG	2.40	0.42
1:A:9:G:H2'	1:A:10:A:C8	2.55	0.42
6:G:89:GLU:H	6:G:89:GLU:HG3	1.61	0.42
1:A:991:U:H2'	1:A:1212:U:O2	2.19	0.42
1:A:204:G:H2'	1:A:205:A:H8	1.81	0.42
1:A:493:A:H3'	1:A:494:G:H8	1.83	0.42
1:A:61:G:H2'	1:A:62:U:C6	2.54	0.42
2:C:99:GLN:O	2:C:100:ILE:HB	2.19	0.42
20:B:134:LEU:HA	20:B:137:THR:CG2	2.49	0.42
11:L:2:THR:HG22	11:L:5:GLN:HE21	1.83	0.42
11:L:31:GLY:HA3	11:L:54:VAL:CG1	2.50	0.42
9:J:92:LEU:HD22	9:J:92:LEU:N	2.34	0.42
7:H:49:LYS:HA	7:H:49:LYS:HD2	1.89	0.42

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:61:VAL:HA	18:S:65:MET:SD	2.59	0.42
13:N:12:ARG:NE	13:N:58:ARG:NH1	2.68	0.42
5:F:36:ILE:HA	5:F:64:VAL:HG13	2.01	0.42
8:I:35:GLU:HG3	8:I:44:ARG:CD	2.49	0.42
1:A:98:A:O2'	1:A:99:C:H5'	2.19	0.42
9:J:18:ILE:CG1	9:J:72:ARG:HG2	2.50	0.42
1:A:1029:U:H2'	1:A:1031:C:C2	2.55	0.42
8:I:36:GLN:HE21	8:I:36:GLN:N	2.17	0.42
12:M:92:ARG:NH1	18:S:79:TYR:HD2	2.10	0.42
4:E:33:THR:HG22	4:E:51:LYS:CB	2.49	0.42
1:A:51:A:H61	1:A:314:C:H1'	1.85	0.42
1:A:152:A:N6	1:A:170:U:C2	2.88	0.42
1:A:795:C:H1'	1:A:1506:U:C5	2.54	0.42
20:B:95:TRP:HZ3	20:B:174:GLU:CD	2.23	0.42
7:H:54:THR:HG23	7:H:55:LYS:HG2	2.01	0.42
5:F:53:LYS:N	5:F:53:LYS:NZ	2.67	0.42
1:A:160:A:H2'	1:A:161:A:C8	2.55	0.42
15:P:21:VAL:O	15:P:33:ILE:HB	2.19	0.42
13:N:97:LYS:HB3	13:N:97:LYS:HZ2	1.84	0.42
9:J:35:GLN:HG2	9:J:77:VAL:HG23	2.01	0.42
1:A:1186:G:H4'	8:I:111:GLU:OE1	2.19	0.42
2:C:42:LEU:O	2:C:46:LEU:HB2	2.20	0.42
1:A:770:C:O2'	1:A:771:G:H5'	2.19	0.42
18:S:52:ASN:HB2	18:S:76:THR:HG22	2.02	0.42
20:B:83:ALA:HA	20:B:88:GLN:HE21	1.84	0.42
1:A:663:A:O3'	17:R:52:ARG:NH2	2.49	0.42
1:A:696:A:O2'	1:A:697:U:H5'	2.20	0.42
13:N:70:HIS:O	13:N:71:GLY:C	2.58	0.42
2:C:52:SER:HA	2:C:113:LYS:HG2	2.01	0.42
1:A:141:G:H2'	1:A:142:G:O4'	2.19	0.42
1:A:1446:A:C2'	1:A:1447:A:H5''	2.50	0.42
10:K:46:ALA:HA	10:K:65:ALA:HB2	2.00	0.42
1:A:36:C:C2'	1:A:37:U:H5'	2.50	0.42
2:C:85:LYS:O	2:C:89:VAL:HG23	2.20	0.42
1:A:585:G:H4'	11:L:4:ASN:HD21	1.85	0.42
7:H:5:PRO:HB2	7:H:32:LYS:NZ	2.34	0.42
1:A:1320:C:N4	18:S:36:ARG:HA	2.34	0.42
18:S:39:ILE:HD13	18:S:65:MET:HB3	2.01	0.42
21:U:20:ARG:C	21:U:22:CYS:H	2.21	0.42
16:Q:60:ILE:HD13	16:Q:60:ILE:N	2.34	0.42
8:I:35:GLU:O	8:I:39:GLY:HA3	2.20	0.42
6:G:67:ASN:O	6:G:134:VAL:HA	2.19	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:154:GLY:HA2	2:C:163:ARG:H	1.84	0.42
9:J:6:ILE:HD12	9:J:76:ILE:HD11	2.01	0.42
9:J:52:LEU:HB2	13:N:80:ARG:NE	2.35	0.42
16:Q:30:HIS:CG	16:Q:33:TYR:HB2	2.54	0.42
6:G:49:LEU:HD21	6:G:60:ALA:CB	2.46	0.42
1:A:36:C:H5''	11:L:119:LYS:HD2	2.01	0.42
4:E:82:HIS:HE1	4:E:147:ASN:H	1.68	0.42
1:A:993:G:O2'	1:A:994:A:N7	2.53	0.42
15:P:20:VAL:HG21	15:P:32:PHE:CD2	2.54	0.42
3:D:78:ALA:HB1	3:D:85:THR:O	2.19	0.42
1:A:126:G:H2'	1:A:127:G:O4'	2.20	0.42
1:A:1451:U:O5'	1:A:1452:C:H5	2.03	0.42
1:A:301:G:H2'	1:A:302:G:C8	2.52	0.42
3:D:18:LEU:HG	3:D:63:ILE:HG12	2.02	0.42
1:A:64:G:H4'	1:A:65:A:H3'	2.02	0.42
1:A:939:G:H2'	1:A:940:C:C6	2.54	0.42
1:A:277:C:O2'	1:A:278:G:H5'	2.18	0.42
1:A:958:A:N1	18:S:53:GLY:C	2.73	0.42
1:A:1036:A:H2'	1:A:1037:C:O4'	2.19	0.42
8:I:93:LEU:HD13	8:I:97:LEU:CD1	2.47	0.42
6:G:129:ASN:CA	6:G:134:VAL:HG21	2.49	0.42
5:F:44:ARG:HA	5:F:57:ALA:O	2.20	0.42
5:F:47:LEU:HD13	5:F:51:ILE:CG2	2.50	0.42
5:F:51:ILE:CD1	5:F:86:ARG:HG3	2.50	0.42
10:K:124:LYS:HA	21:U:34:ARG:CG	2.49	0.42
1:A:438:U:H4'	3:D:119:HIS:HD2	1.85	0.42
1:A:564:C:C4	16:Q:32:ILE:HD11	2.55	0.42
1:A:706:A:C4'	10:K:30:ILE:HD11	2.48	0.42
19:T:54:GLN:O	19:T:57:VAL:HG23	2.20	0.42
1:A:614:C:O2'	1:A:615:G:H5'	2.20	0.42
1:A:300:A:H2'	1:A:301:G:O4'	2.19	0.42
1:A:821:G:O2'	1:A:822:U:H5'	2.20	0.42
11:L:82:ARG:NH1	11:L:82:ARG:HG2	2.35	0.42
20:B:137:THR:O	20:B:141:GLU:HG3	2.20	0.42
1:A:1136:C:O2	1:A:1136:C:H2'	2.19	0.42
14:O:49:HIS:O	14:O:52:ARG:HB3	2.20	0.42
2:C:78:LYS:HE3	2:C:79:LYS:HZ3	1.84	0.42
11:L:79:ILE:C	11:L:101:LEU:HD12	2.40	0.42
1:A:984:C:H2'	1:A:985:C:H6	1.85	0.42
1:A:1202:U:H2'	1:A:1203:C:H5'	2.02	0.42
8:I:19:PHE:HB2	8:I:63:TYR:O	2.20	0.42
20:B:8:MET:O	20:B:11:ALA:HB3	2.20	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:164:ASP:OD1	20:B:186:VAL:HA	2.20	0.42
20:B:68:PHE:CE1	20:B:88:GLN:HB3	2.55	0.42
1:A:978:A:H5'	1:A:1362:A:H62	1.84	0.42
1:A:1194:U:H5'	4:E:26:GLY:O	2.20	0.42
21:U:36:PHE:CE1	21:U:44:ARG:HD3	2.55	0.42
10:K:125:LYS:O	21:U:33:ARG:NH2	2.53	0.42
1:A:1225:A:H5''	1:A:1226:C:C5	2.55	0.42
9:J:26:VAL:HG12	9:J:30:LYS:HG3	2.02	0.42
1:A:564:C:H1'	16:Q:32:ILE:O	2.19	0.42
1:A:450:G:N7	1:A:481:G:O6	2.52	0.42
2:C:38:VAL:HG23	2:C:39:ARG:N	2.34	0.42
6:G:70:PRO:HD2	6:G:95:ARG:O	2.20	0.42
1:A:317:U:H2'	1:A:318:G:C8	2.54	0.42
1:A:828:U:H2'	1:A:829:G:O5'	2.20	0.42
1:A:647:C:H2'	1:A:648:A:H8	1.85	0.42
1:A:1046:A:H2'	1:A:1047:G:O4'	2.20	0.42
1:A:1013:G:H2'	1:A:1015:G:OP2	2.20	0.42
13:N:53:ASP:HA	13:N:58:ARG:NE	2.35	0.41
20:B:46:VAL:CG1	20:B:47:PRO:HD3	2.34	0.41
20:B:165:ALA:H	20:B:186:VAL:HG12	1.85	0.41
1:A:1152:A:H4'	9:J:15:HIS:HD2	1.85	0.41
9:J:42:LEU:CD1	9:J:73:LEU:HB2	2.39	0.41
1:A:817:C:C2	1:A:819:A:O4'	2.73	0.41
1:A:560:A:H5'	1:A:566:G:N2	2.35	0.41
1:A:33:A:O2'	1:A:34:C:H5'	2.20	0.41
1:A:35:G:H2'	1:A:36:C:H6	1.80	0.41
18:S:42:ASN:H	18:S:42:ASN:HD22	1.67	0.41
20:B:25:LYS:HD3	20:B:193:ASP:OD2	2.20	0.41
1:A:742:G:H2'	1:A:743:A:C8	2.53	0.41
5:F:6:ILE:HD12	5:F:7:VAL:N	2.34	0.41
1:A:878:A:H5''	7:H:80:PRO:HG2	2.02	0.41
7:H:118:ALA:HB3	7:H:120:LEU:CD2	2.50	0.41
11:L:56:LEU:HG	11:L:60:PHE:O	2.20	0.41
12:M:26:LYS:O	12:M:30:LYS:HB2	2.20	0.41
1:A:1504:G:H3'	24:A:4053:HOH:O	2.20	0.41
11:L:53:ARG:HG2	11:L:61:GLU:OE1	2.20	0.41
1:A:1386:G:H2'	1:A:1387:G:H8	1.85	0.41
18:S:35:ARG:HB3	18:S:50:VAL:CG1	2.49	0.41
8:I:30:ASN:ND2	8:I:65:THR:HA	2.35	0.41
13:N:55:SER:HB2	13:N:58:ARG:HD2	2.02	0.41
4:E:20:VAL:HG12	4:E:21:SER:N	2.35	0.41
8:I:123:ARG:NH1	8:I:123:ARG:HB3	2.34	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:697:U:O2	1:A:798:U:H1'	2.20	0.41
4:E:104:ILE:HG13	4:E:122:VAL:HG23	2.02	0.41
16:Q:39:ARG:HA	16:Q:39:ARG:CZ	2.50	0.41
7:H:10:LEU:CD2	7:H:74:ILE:HD11	2.49	0.41
1:A:91:U:H2'	1:A:92:U:O4'	2.20	0.41
20:B:75:ALA:O	20:B:76:SER:C	2.59	0.41
1:A:1269:A:N6	1:A:1313:U:H5'	2.35	0.41
1:A:1258:G:C2	1:A:1278:G:N2	2.88	0.41
5:F:42:TRP:HE1	5:F:61:LEU:CD2	2.33	0.41
1:A:1170:A:H3'	1:A:1171:A:H8	1.85	0.41
20:B:95:TRP:HH2	20:B:100:LEU:HD22	1.86	0.41
1:A:621:A:H2'	1:A:622:A:H8	1.83	0.41
1:A:285:C:O2'	1:A:286:C:H5'	2.20	0.41
1:A:857:C:H2'	1:A:858:G:O4'	2.21	0.41
11:L:43:LYS:HG3	11:L:43:LYS:H	1.65	0.41
2:C:87:ARG:HB2	2:C:100:ILE:HG22	2.02	0.41
2:C:78:LYS:C	2:C:80:GLY:N	2.73	0.41
1:A:1201:A:H4'	1:A:1202:U:O5'	2.20	0.41
5:F:81:ASN:OD1	5:F:83:ALA:HB3	2.20	0.41
1:A:1355:G:O2'	1:A:1356:G:H5'	2.20	0.41
20:B:187:ASP:O	20:B:189:ASN:N	2.53	0.41
20:B:218:ALA:C	20:B:220:VAL:H	2.24	0.41
3:D:25:ARG:O	3:D:27:ILE:N	2.53	0.41
20:B:114:LYS:O	20:B:117:GLU:HB3	2.21	0.41
8:I:98:ARG:HG3	8:I:103:VAL:HG22	2.01	0.41
1:A:720:C:H6	1:A:720:C:O5'	2.03	0.41
3:D:55:ARG:HA	3:D:55:ARG:NE	2.36	0.41
14:O:8:ALA:O	14:O:11:VAL:HB	2.21	0.41
7:H:63:LYS:HG2	7:H:64:TYR:N	2.35	0.41
1:A:1256:A:O4'	1:A:1278:G:N2	2.54	0.41
1:A:1238:A:H5'	1:A:1336:C:N4	2.30	0.41
1:A:708:C:H2'	1:A:709:U:H6	1.84	0.41
1:A:637:C:H2'	1:A:638:U:C6	2.55	0.41
1:A:1058:G:H2'	1:A:1059:C:C6	2.56	0.41
1:A:692:U:H2'	1:A:694:A:OP2	2.20	0.41
3:D:95:GLY:O	3:D:136:VAL:HG22	2.20	0.41
11:L:54:VAL:HG12	11:L:55:ARG:H	1.85	0.41
1:A:775:G:H2'	1:A:776:G:C8	2.55	0.41
4:E:48:GLY:H	4:E:66:ALA:CB	2.34	0.41
1:A:1329:A:H5''	12:M:24:VAL:HA	2.02	0.41
20:B:59:ILE:O	20:B:62:ARG:HD2	2.21	0.41
16:Q:80:LYS:HD2	16:Q:80:LYS:O	2.21	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:B:112:ARG:O	20:B:116:LEU:HB2	2.20	0.41
8:I:53:LEU:N	8:I:53:LEU:HD22	2.34	0.41
6:G:57:GLU:H	6:G:57:GLU:CD	2.24	0.41
4:E:19:ARG:HH12	4:E:28:ARG:HH12	1.67	0.41
2:C:154:GLY:HA2	2:C:163:ARG:O	2.20	0.41
12:M:63:VAL:CG1	12:M:67:ASP:HB2	2.49	0.41
1:A:1314:C:N4	18:S:3:SER:HB3	2.35	0.41
1:A:8:A:H1'	4:E:106:ALA:O	2.20	0.41
5:F:79:ARG:HD3	5:F:79:ARG:HA	1.89	0.41
1:A:54:C:N4	1:A:352:C:H2'	2.35	0.41
3:D:79:ALA:N	3:D:85:THR:HG23	2.35	0.41
1:A:125:U:H2'	1:A:126:G:C8	2.56	0.41
1:A:766:A:H2'	1:A:767:A:C8	2.55	0.41
14:O:87:ARG:HA	14:O:87:ARG:NE	2.35	0.41
1:A:1394:A:C5	1:A:1501:C:H4'	2.55	0.41
1:A:282:A:N3	1:A:282:A:H2'	2.35	0.41
7:H:12:ARG:NH1	7:H:12:ARG:HG3	2.35	0.41
4:E:52:ALA:H	4:E:58:ALA:HB2	1.85	0.41
1:A:902:G:H2'	1:A:903:G:H8	1.85	0.41
1:A:526:C:OP2	11:L:87:LYS:HE3	2.20	0.41
5:F:66:ALA:HB1	5:F:70:VAL:HG21	2.01	0.41
5:F:66:ALA:HB1	5:F:67:PRO:HD2	2.03	0.41
20:B:85:SER:O	20:B:86:CYS:HB2	2.21	0.41
19:T:69:ASN:O	19:T:70:LYS:C	2.58	0.41
2:C:133:MET:O	2:C:137:VAL:HG23	2.20	0.41
13:N:73:LEU:HD12	13:N:83:VAL:HG21	2.03	0.41
1:A:1269:A:H2	1:A:1312:G:H21	1.67	0.41
6:G:80:GLY:C	6:G:82:SER:H	2.24	0.41
1:A:415:A:N1	1:A:428:G:O6	2.54	0.41
1:A:1436:U:H2'	1:A:1437:A:C8	2.55	0.41
1:A:493:A:H5'	1:A:494:G:OP2	2.20	0.41
12:M:43:LYS:C	12:M:45:SER:N	2.73	0.41
1:A:856:C:O2'	1:A:857:C:H5'	2.20	0.41
10:K:15:VAL:C	10:K:17:ASP:H	2.24	0.41
1:A:1285:A:HO2'	1:A:1286:U:P	2.44	0.41
1:A:553:A:O2'	11:L:25:ALA:HB1	2.20	0.41
10:K:35:ASP:OD1	10:K:37:GLN:HB2	2.20	0.41
2:C:134:LYS:HE3	2:C:138:GLN:HG2	2.03	0.41
1:A:356:A:H1'	1:A:368:U:O2'	2.20	0.41
20:B:104:LYS:HB2	20:B:104:LYS:NZ	2.35	0.41
1:A:298:A:OP1	1:A:298:A:H8	2.03	0.41
1:A:1320:C:N3	18:S:35:ARG:NH1	2.69	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:15:VAL:N	12:M:33:LEU:HD11	2.36	0.41
20:B:185:ILE:HA	20:B:199:ILE:O	2.20	0.41
1:A:865:A:H2'	1:A:866:C:C6	2.55	0.41
21:U:39:LYS:N	21:U:39:LYS:HD3	2.36	0.41
16:Q:65:PRO:HA	16:Q:71:SER:OG	2.20	0.41
2:C:120:THR:CG2	2:C:188:ALA:HB2	2.51	0.41
3:D:13:ARG:HG3	3:D:55:ARG:NH1	2.36	0.41
1:A:1291:U:H2'	1:A:1292:G:H8	1.84	0.41
3:D:115:GLN:HE21	3:D:119:HIS:CE1	2.37	0.41
3:D:20:LEU:C	3:D:21:LYS:HD2	2.41	0.41
1:A:1370:G:O2'	1:A:1371:G:H5'	2.21	0.41
3:D:48:SER:O	3:D:49:ASP:C	2.59	0.41
1:A:80:A:C4	1:A:81:A:H1'	2.56	0.41
4:E:87:VAL:HG23	4:E:91:SER:O	2.20	0.41
2:C:76:ILE:O	2:C:82:ASP:N	2.53	0.41
12:M:43:LYS:C	12:M:45:SER:H	2.24	0.41
1:A:360:G:O2'	1:A:361:G:H5'	2.20	0.41
1:A:648:A:O2'	1:A:649:A:H5'	2.21	0.41
1:A:38:G:O2'	1:A:39:G:H5'	2.21	0.41
1:A:1320:C:H2'	1:A:1321:U:O4'	2.21	0.41
18:S:12:LEU:HA	18:S:15:LEU:HD12	2.02	0.41
8:I:18:VAL:CG1	8:I:82:ILE:HG12	2.51	0.41
20:B:16:GLY:HA2	20:B:40:ILE:HD12	2.02	0.41
20:B:85:SER:CB	20:B:221:ARG:HD3	2.38	0.41
8:I:44:ARG:HB3	8:I:48:ARG:NH2	2.35	0.41
1:A:1119:C:O2'	1:A:1120:C:H5'	2.21	0.41
6:G:64:ALA:O	6:G:68:VAL:HG23	2.21	0.41
1:A:237:G:H2'	1:A:238:A:H8	1.85	0.41
15:P:67:ILE:HD11	15:P:75:ILE:HD11	2.02	0.41
4:E:93:VAL:HG22	4:E:126:ALA:CB	2.51	0.41
1:A:1313:U:O2'	1:A:1314:C:H5'	2.20	0.41
2:C:59:PRO:HB2	2:C:60:ALA:H	1.74	0.41
1:A:751:U:H2'	1:A:752:G:O4'	2.21	0.41
1:A:618:C:H3'	1:A:620:C:OP2	2.21	0.41
1:A:112:G:O2'	1:A:113:G:H5'	2.20	0.41
1:A:324:G:N1	1:A:327:A:OP2	2.50	0.41
1:A:635:A:H2'	1:A:636:U:C6	2.56	0.41
10:K:59:PRO:HA	10:K:90:PRO:HB2	2.02	0.41
1:A:796:C:H5'	10:K:128:VAL:HG13	2.03	0.41
1:A:1230:C:H2'	1:A:1231:G:H8	1.86	0.41
1:A:173:U:H5'	1:A:197:A:O4'	2.21	0.41
1:A:711:G:O2'	1:A:712:A:H5'	2.20	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:7:ASN:N	12:M:7:ASN:HD22	2.18	0.41
1:A:1220:G:H2'	1:A:1221:G:C8	2.55	0.41
1:A:1220:G:O3'	18:S:35:ARG:HD2	2.19	0.41
18:S:44:ILE:HD12	18:S:63:ASP:HA	2.03	0.41
20:B:31:PHE:HB3	20:B:39:ILE:HG22	2.03	0.41
15:P:28:ARG:HD3	15:P:29:ASN:ND2	2.36	0.41
12:M:18:LEU:C	12:M:20:SER:N	2.74	0.41
20:B:83:ALA:C	20:B:85:SER:H	2.24	0.41
3:D:191:SER:O	3:D:192:ALA:HB2	2.20	0.41
5:F:47:LEU:HD21	5:F:57:ALA:CB	2.48	0.41
5:F:90:MET:HE3	17:R:60:ARG:HE	1.84	0.41
1:A:1226:C:H5''	12:M:94:LEU:HD11	2.02	0.41
1:A:1348:U:C4'	8:I:121:ARG:HG3	2.46	0.41
1:A:1473:G:O2'	1:A:1474:U:H5'	2.21	0.41
3:D:197:HIS:CE1	3:D:198:LEU:HG	2.56	0.41
4:E:107:GLY:C	4:E:109:ALA:H	2.24	0.41
1:A:1514:G:H2'	1:A:1515:G:C8	2.55	0.41
1:A:1258:G:C4	1:A:1278:G:N2	2.89	0.41
10:K:23:HIS:HB3	10:K:30:ILE:HG12	2.03	0.41
14:O:77:TYR:CZ	14:O:81:ILE:HD11	2.54	0.41
2:C:87:ARG:HB2	2:C:100:ILE:CG2	2.50	0.41
1:A:998:C:H2'	1:A:999:C:C6	2.56	0.41
18:S:13:HIS:HD2	18:S:34:SER:HB3	1.86	0.41
8:I:64:ILE:N	8:I:64:ILE:HD12	2.31	0.41
1:A:1098:C:O2'	1:A:1099:G:H5'	2.20	0.41
1:A:1095:U:H5''	1:A:1109:C:O2	2.19	0.41
12:M:15:VAL:HG22	12:M:33:LEU:HD12	2.02	0.41
16:Q:75:VAL:CG2	16:Q:76:ARG:N	2.83	0.41
8:I:48:ARG:HA	8:I:51:LEU:HD12	2.02	0.41
3:D:31:CYS:O	3:D:32:LYS:HB2	2.20	0.41
10:K:51:PHE:HD1	10:K:51:PHE:O	2.03	0.41
6:G:149:ALA:H	10:K:55:ARG:HH21	1.63	0.41
9:J:53:ILE:HG23	9:J:54:SER:N	2.36	0.41
1:A:1325:C:H2'	1:A:1326:U:H6	1.85	0.41
1:A:664:G:P	17:R:52:ARG:HH21	2.44	0.41
6:G:148:LYS:HG3	6:G:151:ALA:HB3	2.02	0.41
1:A:237:G:H5''	16:Q:26:ARG:NH2	2.36	0.41
16:Q:25:GLU:HA	16:Q:39:ARG:O	2.21	0.41
2:C:63:ILE:CD1	2:C:98:ALA:HB2	2.46	0.41
1:A:975:A:N1	9:J:50:THR:HB	2.36	0.41
13:N:27:LYS:HA	13:N:31:SER:HB2	2.03	0.41
7:H:68:LYS:HZ3	7:H:69:ALA:HB3	1.86	0.41

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:78:LEU:HD23	13:N:82:LYS:HB3	2.03	0.41
13:N:68:ARG:HG2	13:N:68:ARG:HH11	1.86	0.41
3:D:72:ARG:O	3:D:75:TYR:HB3	2.21	0.41
1:A:1073:U:O2'	1:A:1074:G:H5'	2.21	0.41
11:L:66:ILE:HG22	11:L:66:ILE:O	2.21	0.41
8:I:14:SER:HB2	8:I:69:GLY:HA3	2.01	0.41
1:A:509:A:H5'	3:D:51:GLY:HA2	2.02	0.41
14:O:80:LEU:HD23	14:O:80:LEU:C	2.41	0.41
1:A:641:U:H1'	1:A:642:A:N7	2.35	0.41
1:A:1307:U:H2'	1:A:1308:U:H6	1.82	0.41
5:F:18:VAL:O	5:F:22:ILE:HG13	2.20	0.41
1:A:51:A:H4'	1:A:52:C:C5'	2.51	0.41
1:A:1170:A:H2'	1:A:1171:A:O4'	2.21	0.41
4:E:11:GLN:HB2	4:E:116:VAL:HB	2.03	0.41
1:A:488:C:H2'	1:A:489:C:H6	1.86	0.41
1:A:1162:C:H2'	1:A:1163:A:O4'	2.21	0.41
1:A:586:C:O2'	7:H:3:GLN:NE2	2.54	0.41
1:A:1254:A:H2'	1:A:1255:G:O4'	2.21	0.41
1:A:984:C:H2'	1:A:985:C:C6	2.55	0.41
19:T:27:MET:O	19:T:31:ILE:HG13	2.20	0.41
3:D:155:LYS:HG3	3:D:156:ALA:N	2.36	0.41
1:A:397:A:N3	1:A:397:A:H3'	2.36	0.41
2:C:126:ARG:NE	2:C:126:ARG:HA	2.36	0.41
12:M:82:LEU:HD21	18:S:64:GLU:OE1	2.20	0.41
10:K:42:GLY:HA3	10:K:73:VAL:HG13	2.02	0.41
16:Q:58:VAL:HB	16:Q:74:LEU:CD2	2.51	0.41
1:A:270:A:H2'	1:A:271:C:H6	1.82	0.41
15:P:3:THR:CG2	15:P:66:THR:HB	2.44	0.41
8:I:32:ARG:HH11	8:I:37:TYR:HD1	1.69	0.41
1:A:334:C:H2'	1:A:335:C:C6	2.56	0.41
1:A:1072:G:H2'	1:A:1073:U:H6	1.85	0.41
1:A:176:C:H3'	1:A:177:G:N2	2.35	0.41
1:A:451:A:N6	1:A:480:U:H2'	2.36	0.41
1:A:20:U:H2'	1:A:21:G:O4'	2.21	0.41
21:U:48:LYS:HG3	21:U:49:ALA:N	2.34	0.41
1:A:402:G:H5'	1:A:621:A:H1'	2.02	0.41
5:F:97:THR:O	5:F:98:GLU:O	2.38	0.41
1:A:1176:A:H2'	1:A:1177:G:O4'	2.21	0.41
3:D:124:VAL:HA	3:D:141:VAL:O	2.21	0.41
3:D:159:GLU:C	3:D:161:ALA:H	2.24	0.41
9:J:14:ASP:OD1	9:J:17:LEU:HB2	2.20	0.41
10:K:111:ASP:HB3	21:U:3:ILE:N	2.36	0.40

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:25:LYS:HG3	4:E:26:GLY:N	2.36	0.40
21:U:33:ARG:NE	21:U:34:ARG:HG3	2.36	0.40
6:G:92:PRO:HG2	6:G:93:VAL:H	1.86	0.40
1:A:1317:C:O2'	13:N:49:THR:HG23	2.21	0.40
18:S:4:LEU:HD22	18:S:7:GLY:O	2.21	0.40
3:D:56:GLU:OE1	3:D:195:ASN:HB2	2.21	0.40
1:A:1073:U:H2'	1:A:1074:G:C8	2.56	0.40
1:A:451:A:C1'	1:A:452:A:C8	3.05	0.40
1:A:1314:C:H2'	1:A:1315:U:H6	1.85	0.40
7:H:106:SER:C	7:H:107:LYS:HE2	2.42	0.40
1:A:6:G:N3	1:A:6:G:C3'	2.81	0.40
19:T:32:LYS:O	19:T:33:LYS:C	2.59	0.40
1:A:1167:A:O2'	1:A:1168:U:H2'	2.21	0.40
1:A:766:A:H2'	1:A:767:A:O4'	2.21	0.40
1:A:56:U:H2'	1:A:57:G:C8	2.54	0.40
12:M:7:ASN:ND2	12:M:7:ASN:N	2.69	0.40
19:T:81:GLN:C	19:T:83:ASN:H	2.23	0.40
10:K:101:ALA:C	10:K:103:GLY:H	2.24	0.40
1:A:681:A:H2'	1:A:682:G:C8	2.56	0.40
20:B:77:GLU:HG2	20:B:77:GLU:O	2.21	0.40
21:U:16:ARG:CZ	21:U:19:LYS:HD3	2.51	0.40
18:S:12:LEU:O	18:S:16:LYS:HE2	2.21	0.40
1:A:1096:C:O2'	1:A:1097:C:H5'	2.20	0.40
6:G:147:ASN:C	10:K:55:ARG:HH21	2.24	0.40
9:J:59:LYS:C	9:J:61:ALA:H	2.25	0.40
20:B:18:GLN:C	20:B:37:VAL:HG23	2.42	0.40
2:C:174:LEU:O	2:C:174:LEU:HD23	2.21	0.40
1:A:264:C:H2'	1:A:265:G:O4'	2.22	0.40
6:G:107:ALA:O	6:G:118:ARG:HB3	2.22	0.40
13:N:63:CYS:HB3	13:N:68:ARG:H	1.86	0.40
3:D:196:GLU:HG3	3:D:197:HIS:N	2.36	0.40
15:P:75:ILE:HG13	15:P:75:ILE:H	1.73	0.40
20:B:71:THR:HG21	20:B:94:ARG:H	1.85	0.40
1:A:1288:A:H2'	1:A:1289:A:O4'	2.21	0.40
1:A:1313:U:H6	1:A:1313:U:O5'	2.04	0.40
1:A:883:C:O2'	1:A:884:U:H5'	2.20	0.40
7:H:57:GLU:HG3	7:H:58:LEU:H	1.86	0.40
1:A:1308:U:H3'	12:M:97:ARG:NH1	2.36	0.40
1:A:327:A:O2'	1:A:329:A:H5''	2.21	0.40
1:A:126:G:H4'	1:A:634:C:O2	2.22	0.40
14:O:77:TYR:O	14:O:81:ILE:HG13	2.21	0.40
2:C:31:ASN:ND2	2:C:58:ARG:NE	2.69	0.40

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:665:A:H2'	1:A:725:G:N2	2.36	0.40
16:Q:66:LEU:HB2	16:Q:70:LYS:HG2	2.04	0.40
12:M:80:MET:C	12:M:82:LEU:H	2.24	0.40
8:I:29:ILE:HG12	8:I:64:ILE:HD13	2.03	0.40
1:A:201:G:H2'	1:A:202:G:C8	2.56	0.40
1:A:201:G:O2'	1:A:202:G:H5'	2.22	0.40
20:B:68:PHE:HD1	20:B:89:PHE:O	2.05	0.40
21:U:42:THR:O	21:U:45:LYS:N	2.55	0.40
1:A:818:G:H3'	1:A:819:A:H5''	2.04	0.40
20:B:26:MET:HG3	20:B:188:THR:O	2.21	0.40
1:A:1033:G:H2'	1:A:1034:G:H5''	2.03	0.40
4:E:105:ILE:HG12	4:E:122:VAL:O	2.21	0.40
1:A:105:G:H2'	1:A:106:C:C6	2.57	0.40
13:N:30:ILE:CG2	13:N:44:VAL:HG21	2.49	0.40
3:D:195:ASN:HD22	3:D:195:ASN:HA	1.57	0.40
1:A:81:A:OP2	1:A:81:A:O4'	2.39	0.40
16:Q:13:SER:HB3	16:Q:21:VAL:CB	2.49	0.40
1:A:880:C:H2'	1:A:881:G:H8	1.85	0.40
1:A:191:G:H2'	1:A:192:A:C8	2.57	0.40
14:O:69:LEU:HD12	14:O:77:TYR:HB2	2.03	0.40
5:F:54:LEU:C	5:F:56:LYS:H	2.24	0.40
18:S:77:ARG:HB3	18:S:77:ARG:HE	1.64	0.40
16:Q:22:VAL:O	16:Q:42:LYS:HA	2.22	0.40
1:A:1067:A:H4'	1:A:1068:G:O5'	2.21	0.40
1:A:123:U:H2'	1:A:124:C:C6	2.57	0.40
1:A:116:A:H8	1:A:116:A:O5'	2.04	0.40
14:O:57:ARG:CZ	14:O:61:GLN:HE22	2.34	0.40
18:S:20:LYS:HD2	18:S:20:LYS:O	2.20	0.40
18:S:33:TRP:CE3	18:S:33:TRP:N	2.90	0.40
1:A:430:A:P	3:D:6:PRO:HA	2.61	0.40
6:G:147:ASN:CA	10:K:55:ARG:HH21	2.35	0.40
9:J:71:LEU:H	9:J:71:LEU:HD23	1.87	0.40
2:C:18:ASN:HB2	13:N:90:GLY:HA3	2.04	0.40
1:A:761:G:O2'	1:A:762:U:H5'	2.21	0.40
16:Q:32:ILE:HG23	16:Q:33:TYR:CD2	2.56	0.40
1:A:140:U:H2'	1:A:141:G:H8	1.86	0.40
1:A:177:G:N3	1:A:177:G:O4'	2.54	0.40
1:A:78:A:H8	1:A:78:A:O5'	2.03	0.40
1:A:1336:C:O4'	1:A:1337:G:C2	2.74	0.40
1:A:832:G:H2'	1:A:833:G:H8	1.86	0.40
12:M:22:TYR:N	12:M:22:TYR:CD2	2.88	0.40
4:E:94:PHE:O	4:E:124:ALA:HB1	2.22	0.40

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:61:ALA:HB3	17:R:67:LEU:HD12	2.02	0.40
1:A:1107:C:C4	1:A:1108:G:N7	2.89	0.40
6:G:10:LYS:NZ	6:G:10:LYS:HB2	2.35	0.40
1:A:1147:C:H4'	8:I:6:TYR:CE1	2.56	0.40
12:M:29:SER:HA	12:M:32:ILE:HG22	2.04	0.40
8:I:42:THR:O	8:I:45:MET:HG2	2.22	0.40
8:I:24:ASN:O	8:I:60:LEU:N	2.55	0.40
6:G:14:ASP:OD2	6:G:22:LEU:HD22	2.22	0.40
1:A:977:A:H1'	1:A:982:U:O4	2.21	0.40
9:J:71:LEU:O	9:J:72:ARG:HD3	2.22	0.40
4:E:25:LYS:HG3	4:E:26:GLY:H	1.87	0.40
14:O:31:LEU:O	14:O:35:ILE:HG12	2.21	0.40
1:A:7:A:H2'	4:E:123:LEU:HB2	2.03	0.40
1:A:242:G:H2'	1:A:243:A:C5'	2.52	0.40
4:E:71:ILE:HD12	4:E:73:VAL:CG2	2.52	0.40
3:D:89:LEU:HD22	3:D:199:ILE:HD11	2.04	0.40
16:Q:11:VAL:HG13	16:Q:20:ILE:CG2	2.52	0.40
16:Q:30:HIS:HE1	16:Q:32:ILE:HG22	1.78	0.40
1:A:448:A:H2'	1:A:449:G:H8	1.85	0.40
1:A:80:A:OP2	1:A:81:A:N7	2.54	0.40
7:H:24:VAL:CG1	7:H:60:LEU:HB3	2.52	0.40
1:A:375:U:O2'	1:A:376:G:H5'	2.22	0.40
13:N:46:LYS:HD3	13:N:46:LYS:HA	1.87	0.40
1:A:1053:G:C6	1:A:1199:U:H2'	2.57	0.40
14:O:81:ILE:HG23	14:O:86:LEU:HB2	2.04	0.40
1:A:1058:G:H2'	1:A:1059:C:H6	1.87	0.40
19:T:50:PHE:C	19:T:52:GLU:H	2.24	0.40
16:Q:40:THR:HG22	16:Q:41:THR:N	2.36	0.40
15:P:12:LYS:C	15:P:14:ARG:H	2.23	0.40
1:A:58:C:O2'	1:A:388:G:N7	2.49	0.40
1:A:1386:G:O2'	1:A:1387:G:H5'	2.21	0.40
16:Q:43:LEU:HD12	16:Q:43:LEU:N	2.37	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%)	147 (72%)	40 (20%)	17 (8%)	1	20
3	D	203/205 (99%)	136 (67%)	52 (26%)	15 (7%)	2	24
4	E	148/166 (89%)	117 (79%)	27 (18%)	4 (3%)	8	56
5	F	98/135 (73%)	66 (67%)	21 (21%)	11 (11%)	1	13
6	G	148/178 (83%)	122 (82%)	18 (12%)	8 (5%)	3	35
7	H	127/129 (98%)	92 (72%)	26 (20%)	9 (7%)	2	25
8	I	125/129 (97%)	88 (70%)	29 (23%)	8 (6%)	2	29
9	J	96/103 (93%)	69 (72%)	17 (18%)	10 (10%)	1	14
10	K	115/128 (90%)	81 (70%)	26 (23%)	8 (7%)	2	26
11	L	121/123 (98%)	78 (64%)	29 (24%)	14 (12%)	1	12
12	M	112/117 (96%)	72 (64%)	36 (32%)	4 (4%)	5	49
13	N	92/100 (92%)	57 (62%)	25 (27%)	10 (11%)	1	13
14	O	86/89 (97%)	65 (76%)	16 (19%)	5 (6%)	3	32
15	P	80/82 (98%)	56 (70%)	15 (19%)	9 (11%)	1	12
16	Q	78/83 (94%)	56 (72%)	17 (22%)	5 (6%)	2	29
17	R	53/74 (72%)	41 (77%)	10 (19%)	2 (4%)	5	46
18	S	77/91 (85%)	58 (75%)	17 (22%)	2 (3%)	8	57
19	T	83/86 (96%)	59 (71%)	19 (23%)	5 (6%)	2	31
20	B	216/240 (90%)	143 (66%)	53 (24%)	20 (9%)	1	18
21	U	49/71 (69%)	28 (57%)	14 (29%)	7 (14%)	0	7
All	All	2311/2561 (90%)	1631 (71%)	507 (22%)	173 (8%)	2	24

All (173) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	C	112	ALA
2	C	180	ASP
2	C	205	GLU
4	E	20	VAL
5	F	98	GLU
6	G	6	ILE
6	G	14	ASP
8	I	127	SER

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
9	J	36	VAL
9	J	57	VAL
10	K	126	ARG
11	L	13	ARG
11	L	38	THR
11	L	121	PRO
13	N	50	LEU
14	O	73	ASP
15	P	44	SER
16	Q	32	ILE
20	B	22	TRP
20	B	58	LYS
20	B	94	ARG
20	B	188	THR
2	C	14	VAL
2	C	59	PRO
2	C	100	ILE
2	C	153	SER
3	D	107	GLY
3	D	191	SER
3	D	192	ALA
5	F	41	ASP
5	F	92	THR
6	G	5	VAL
7	H	2	MET
7	H	66	GLN
7	H	70	VAL
7	H	82	LEU
7	H	114	ALA
8	I	8	THR
9	J	74	VAL
9	J	75	ASP
10	K	124	LYS
11	L	14	LYS
11	L	42	LYS
11	L	61	GLU
11	L	117	GLY
12	M	3	ILE
12	M	47	LEU
12	M	104	ASN
13	N	2	LYS
13	N	70	HIS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
13	N	71	GLY
14	O	17	ASP
15	P	52	LEU
16	Q	81	ALA
19	T	41	GLY
19	T	65	LEU
20	B	14	HIS
20	B	19	THR
20	B	121	GLN
20	B	150	ILE
21	U	23	GLU
21	U	25	ALA
21	U	34	ARG
21	U	35	GLU
2	C	81	GLU
2	C	104	GLU
3	D	24	VAL
3	D	26	ALA
3	D	31	CYS
3	D	168	THR
3	D	182	LYS
3	D	189	ASP
4	E	144	GLU
5	F	51	ILE
8	I	9	GLY
9	J	56	HIS
9	J	93	ALA
10	K	88	PRO
10	K	125	LYS
11	L	23	LEU
11	L	47	ALA
13	N	21	ALA
14	O	33	ALA
16	Q	14	ASP
17	R	20	ILE
19	T	42	ASP
19	T	67	HIS
20	B	15	PHE
20	B	18	GLN
20	B	41	ASN
20	B	76	SER
20	B	127	LYS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
20	B	205	ALA
21	U	22	CYS
21	U	26	GLY
2	C	3	LYS
2	C	166	TRP
3	D	27	ILE
3	D	167	PRO
5	F	48	ALA
5	F	89	VAL
6	G	8	GLN
6	G	112	ASP
8	I	25	GLY
8	I	34	LEU
8	I	106	ASP
10	K	71	ASP
10	K	107	THR
11	L	24	GLU
11	L	33	CYS
11	L	122	LYS
12	M	15	VAL
13	N	34	ASN
13	N	48	GLN
13	N	61	ASN
14	O	75	ALA
16	Q	35	LYS
20	B	86	CYS
20	B	128	LEU
20	B	211	LEU
21	U	9	GLU
2	C	107	LYS
2	C	145	ALA
2	C	189	HIS
3	D	18	LEU
3	D	22	SER
3	D	59	LYS
4	E	43	GLY
4	E	56	PRO
5	F	85	ILE
5	F	95	ALA
6	G	7	GLY
7	H	30	LYS
9	J	13	PHE

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
9	J	62	ARG
10	K	14	GLN
10	K	119	GLY
11	L	83	GLY
13	N	57	SER
13	N	67	GLY
15	P	17	TYR
15	P	28	ARG
15	P	54	LEU
16	Q	31	PRO
17	R	33	THR
20	B	24	PRO
2	C	83	VAL
2	C	167	TYR
3	D	82	LYS
5	F	55	HIS
5	F	94	HIS
5	F	99	ALA
8	I	55	ASP
18	S	27	LYS
18	S	53	GLY
20	B	123	GLY
6	G	15	PRO
9	J	41	PRO
9	J	42	LEU
15	P	42	ILE
19	T	3	ILE
20	B	28	PRO
6	G	92	PRO
7	H	71	VAL
7	H	128	VAL
8	I	71	ILE
14	O	28	VAL
15	P	33	ILE
7	H	125	ILE
11	L	15	VAL
15	P	37	GLY
15	P	49	GLY
2	C	80	GLY



### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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%)	144 (85%)	26 (15%)	4	25
3	D	172/172 (100%)	148 (86%)	24 (14%)	5	28
4	E	113/125 (90%)	100 (88%)	13 (12%)	8	39
5	F	87/116 (75%)	76 (87%)	11 (13%)	7	34
6	G	123/146 (84%)	108 (88%)	15 (12%)	7	36
7	H	104/104 (100%)	96 (92%)	8 (8%)	18	64
8	I	105/106 (99%)	94 (90%)	11 (10%)	10	46
9	J	86/90 (96%)	79 (92%)	7 (8%)	17	61
10	K	90/98 (92%)	77 (86%)	13 (14%)	5	27
11	L	103/103 (100%)	85 (82%)	18 (18%)	3	17
12	M	92/95 (97%)	82 (89%)	10 (11%)	9	43
13	N	79/83 (95%)	67 (85%)	12 (15%)	4	25
14	O	76/77 (99%)	69 (91%)	7 (9%)	13	53
15	P	65/65 (100%)	57 (88%)	8 (12%)	7	35
16	Q	74/77 (96%)	65 (88%)	9 (12%)	7	36
17	R	48/64 (75%)	46 (96%)	2 (4%)	40	84
18	S	70/78 (90%)	52 (74%)	18 (26%)	1	5
19	T	65/65 (100%)	53 (82%)	12 (18%)	2	13
20	B	180/198 (91%)	152 (84%)	28 (16%)	4	23
21	U	44/61 (72%)	35 (80%)	9 (20%)	2	10
All	All	1946/2112 (92%)	1685 (87%)	261 (13%)	6	31

All (261) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	C	2	GLN
2	C	13	ILE
2	C	17	TRP
2	C	18	ASN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	C	20	THR
2	C	27	GLU
2	C	35	ASP
2	C	41	TYR
2	C	48	LYS
2	C	62	SER
2	C	69	THR
2	C	87	ARG
2	C	88	LYS
2	C	113	LYS
2	C	128	MET
2	C	131	ARG
2	C	138	GLN
2	C	163	ARG
2	C	166	TRP
2	C	168	ARG
2	C	171	ARG
2	C	174	LEU
2	C	175	HIS
2	C	180	ASP
2	C	184	ASN
2	C	206	ILE
3	D	4	LEU
3	D	7	LYS
3	D	18	LEU
3	D	25	ARG
3	D	28	ASP
3	D	39	GLN
3	D	47	LEU
3	D	49	ASP
3	D	55	ARG
3	D	82	LYS
3	D	87	GLU
3	D	94	GLU
3	D	114	ARG
3	D	117	VAL
3	D	125	ASN
3	D	135	GLN
3	D	146	GLU
3	D	147	LYS
3	D	160	LEU
3	D	162	GLU

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
3	D	168	THR
3	D	189	ASP
3	D	190	LEU
3	D	195	ASN
4	E	19	ARG
4	E	23	THR
4	E	44	ARG
4	E	45	VAL
4	E	55	VAL
4	E	72	ASN
4	E	81	GLN
4	E	92	ARG
4	E	105	ILE
4	E	123	LEU
4	E	127	TYR
4	E	151	MET
4	E	156	ARG
5	F	6	ILE
5	F	39	LEU
5	F	51	ILE
5	F	55	HIS
5	F	60	VAL
5	F	62	MET
5	F	69	GLU
5	F	82	ASP
5	F	86	ARG
5	F	94	HIS
5	F	98	GLU
6	G	3	ARG
6	G	5	VAL
6	G	10	LYS
6	G	21	LEU
6	G	49	LEU
6	G	51	GLN
6	G	55	LYS
6	G	62	GLU
6	G	67	ASN
6	G	78	ARG
6	G	89	GLU
6	G	94	ARG
6	G	96	ASN
6	G	105	GLU

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
6	G	113	LYS
7	H	2	MET
7	H	30	LYS
7	H	55	LYS
7	H	61	THR
7	H	72	GLU
7	H	82	LEU
7	H	105	THR
7	H	113	ARG
8	I	36	GLN
8	I	45	MET
8	I	59	LYS
8	I	62	LEU
8	I	87	MET
8	I	93	LEU
8	I	96	GLU
8	I	105	ARG
8	I	109	GLN
8	I	112	ARG
8	I	114	LYS
9	J	15	HIS
9	J	47	GLU
9	J	69	THR
9	J	77	VAL
9	J	78	GLU
9	J	88	MET
9	J	97	ASP
10	K	22	ILE
10	K	31	VAL
10	K	34	THR
10	K	51	PHE
10	K	55	ARG
10	K	64	VAL
10	K	76	TYR
10	K	82	GLU
10	K	83	VAL
10	K	107	THR
10	K	115	ILE
10	K	118	ASN
10	K	121	ARG
11	L	13	ARG
11	L	14	LYS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
11	L	15	VAL
11	L	17	LYS
11	L	18	SER
11	L	19	ASN
11	L	28	GLN
11	L	35	ARG
11	L	38	THR
11	L	40	THR
11	L	43	LYS
11	L	61	GLU
11	L	63	THR
11	L	95	HIS
11	L	107	LYS
11	L	113	ARG
11	L	119	LYS
11	L	122	LYS
12	M	2	ARG
12	M	16	ILE
12	M	28	ARG
12	M	41	ASP
12	M	43	LYS
12	M	71	GLU
12	M	80	MET
12	M	82	LEU
12	M	88	LEU
12	M	102	LYS
13	N	11	LYS
13	N	19	TYR
13	N	20	PHE
13	N	25	GLU
13	N	27	LYS
13	N	41	TRP
13	N	48	GLN
13	N	49	THR
13	N	50	LEU
13	N	53	ASP
13	N	58	ARG
13	N	65	GLN
14	O	17	ASP
14	O	39	GLN
14	O	53	ARG
14	O	65	LEU

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
14	O	69	LEU
14	O	87	ARG
14	O	88	ARG
15	P	12	LYS
15	P	23	ASP
15	P	26	ASN
15	P	28	ARG
15	P	45	GLU
15	P	51	ARG
15	P	55	ASP
15	P	68	SER
16	Q	3	LYS
16	Q	4	ILE
16	Q	7	LEU
16	Q	8	GLN
16	Q	39	ARG
16	Q	41	THR
16	Q	56	ASP
16	Q	60	ILE
16	Q	80	LYS
17	R	23	LYS
17	R	38	ILE
18	S	2	ARG
18	S	4	LEU
18	S	6	LYS
18	S	10	ILE
18	S	13	HIS
18	S	20	LYS
18	S	23	GLU
18	S	26	ASP
18	S	27	LYS
18	S	28	LYS
18	S	32	THR
18	S	35	ARG
18	S	38	THR
18	S	42	ASN
18	S	47	THR
18	S	60	PHE
18	S	64	GLU
18	S	77	ARG
19	T	3	ILE
19	T	4	LYS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
19	T	35	TYR
19	T	43	LYS
19	T	51	ASN
19	T	52	GLU
19	T	53	MET
19	T	57	VAL
19	T	67	HIS
19	T	68	LYS
19	T	74	HIS
19	T	84	LYS
20	B	31	PHE
20	B	35	ASN
20	B	46	VAL
20	B	49	PHE
20	B	57	ASN
20	B	62	ARG
20	B	67	LEU
20	B	72	LYS
20	B	87	ASP
20	B	88	GLN
20	B	94	ARG
20	B	95	TRP
20	B	104	LYS
20	B	113	LEU
20	B	115	ASP
20	B	116	LEU
20	B	117	GLU
20	B	124	THR
20	B	125	PHE
20	B	127	LYS
20	B	128	LEU
20	B	145	ASN
20	B	160	LEU
20	B	176	ASN
20	B	196	ASP
20	B	199	ILE
20	B	202	ASN
20	B	212	TYR
21	U	11	PHE
21	U	15	LEU
21	U	16	ARG
21	U	22	CYS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
21	U	24	LYS
21	U	32	ARG
21	U	34	ARG
21	U	38	GLU
21	U	44	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (71) such sidechains are listed below:

Mol	Chain	Res	Type
2	C	2	GLN
2	C	7	ASN
2	C	31	ASN
2	C	68	HIS
2	C	139	ASN
3	D	35	GLN
3	D	39	GLN
3	D	53	GLN
3	D	70	GLN
3	D	88	ASN
3	D	115	GLN
3	D	135	GLN
3	D	195	ASN
4	E	18	ASN
4	E	72	ASN
4	E	81	GLN
4	E	131	ASN
5	F	46	GLN
6	G	27	ASN
6	G	67	ASN
6	G	121	ASN
6	G	129	ASN
6	G	141	HIS
7	H	3	GLN
7	H	75	GLN
7	H	117	GLN
8	I	30	ASN
8	I	31	GLN
8	I	36	GLN
8	I	80	HIS
8	I	109	GLN
9	J	15	HIS
9	J	20	GLN

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type
9	J	56	HIS
9	J	70	HIS
10	K	14	GLN
10	K	28	ASN
10	K	39	ASN
10	K	118	ASN
11	L	5	GLN
11	L	28	GLN
11	L	45	ASN
11	L	71	HIS
12	M	7	ASN
13	N	34	ASN
13	N	48	GLN
13	N	61	ASN
14	O	27	GLN
14	O	36	ASN
14	O	39	GLN
14	O	61	GLN
15	P	9	HIS
15	P	29	ASN
15	P	40	ASN
16	Q	50	ASN
17	R	53	GLN
17	R	73	HIS
18	S	42	ASN
18	S	56	HIS
18	S	68	HIS
19	T	67	HIS
19	T	74	HIS
20	B	14	HIS
20	B	23	ASN
20	B	35	ASN
20	B	38	HIS
20	B	41	ASN
20	B	119	GLN
20	B	145	ASN
20	B	169	HIS
20	B	202	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1529/1542 (99%)	257 (16%)	27 (1%)

All (257) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	9	G
1	A	14	U
1	A	32	A
1	A	39	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	65	A
1	A	70	U
1	A	71	A
1	A	72	A
1	A	75	G
1	A	76	G
1	A	79	G
1	A	80	A
1	A	81	A
1	A	82	G
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	90	C
1	A	92	U
1	A	93	U
1	A	94	G
1	A	95	C
1	A	121	U
1	A	130	A
1	A	131	A
1	A	164	G
1	A	177	G
1	A	182	A

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	183	C
1	A	197	A
1	A	206	C
1	A	209	U
1	A	210	C
1	A	233	C
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	253	A
1	A	256	U
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	321	A
1	A	328	C
1	A	329	A
1	A	330	C
1	A	332	G
1	A	352	C
1	A	353	A
1	A	354	G
1	A	367	U
1	A	372	C
1	A	373	A
1	A	381	C
1	A	384	G
1	A	392	C
1	A	397	A
1	A	398	U
1	A	406	G
1	A	408	A
1	A	411	A
1	A	412	A

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	413	G
1	A	415	A
1	A	421	U
1	A	422	C
1	A	429	U
1	A	430	A
1	A	435	A
1	A	438	U
1	A	460	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	479	U
1	A	484	G
1	A	485	U
1	A	486	U
1	A	493	A
1	A	500	G
1	A	511	C
1	A	512	U
1	A	518	C
1	A	527	G
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	633	G
1	A	653	U
1	A	661	G
1	A	665	A
1	A	687	A
1	A	695	A

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	700	G
1	A	721	G
1	A	724	G
1	A	731	G
1	A	747	A
1	A	748	G
1	A	755	G
1	A	777	A
1	A	781	A
1	A	782	A
1	A	785	G
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	828	U
1	A	829	G
1	A	841	C
1	A	843	U
1	A	844	G
1	A	845	A
1	A	846	G
1	A	847	G
1	A	849	G
1	A	914	A
1	A	926	G
1	A	927	G
1	A	931	C
1	A	933	G
1	A	934	C
1	A	935	A
1	A	960	U
1	A	961	U
1	A	966	G
1	A	968	A
1	A	969	A
1	A	974	A
1	A	975	A
1	A	976	G

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	977	A
1	A	984	C
1	A	991	U
1	A	992	U
1	A	993	G
1	A	1003	G
1	A	1004	A
1	A	1010	U
1	A	1019	A
1	A	1020	G
1	A	1028	C
1	A	1030	U
1	A	1031	C
1	A	1034	G
1	A	1035	A
1	A	1041	G
1	A	1049	U
1	A	1050	G
1	A	1054	C
1	A	1065	U
1	A	1066	C
1	A	1081	A
1	A	1094	G
1	A	1101	A
1	A	1136	C
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1146	A
1	A	1159	U
1	A	1167	A
1	A	1168	U
1	A	1174	G
1	A	1179	A
1	A	1181	G
1	A	1184	G
1	A	1196	A
1	A	1197	A
1	A	1202	U
1	A	1212	U
1	A	1213	A
1	A	1214	C

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1238	A
1	A	1240	U
1	A	1250	A
1	A	1256	A
1	A	1261	A
1	A	1278	G
1	A	1279	G
1	A	1280	A
1	A	1281	C
1	A	1285	A
1	A	1286	U
1	A	1287	A
1	A	1297	G
1	A	1300	G
1	A	1301	U
1	A	1302	C
1	A	1303	C
1	A	1305	G
1	A	1316	G
1	A	1317	C
1	A	1323	G
1	A	1336	C
1	A	1362	A
1	A	1363	A
1	A	1364	U
1	A	1398	A
1	A	1400	C
1	A	1401	G
1	A	1410	A
1	A	1432	G
1	A	1446	A
1	A	1448	C
1	A	1452	C
1	A	1475	G
1	A	1490	U
1	A	1491	G
1	A	1492	A
1	A	1493	A
1	A	1494	G

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	1497	G
1	A	1503	A
1	A	1506	U
1	A	1517	G
1	A	1520	C
1	A	1529	G
1	A	1530	G
1	A	1533	C
1	A	1534	A

All (27) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	51	A
1	A	81	A
1	A	84	U
1	A	243	A
1	A	279	A
1	A	328	C
1	A	366	A
1	A	372	C
1	A	412	A
1	A	428	G
1	A	429	U
1	A	484	G
1	A	576	C
1	A	960	U
1	A	975	A
1	A	1030	U
1	A	1049	U
1	A	1065	U
1	A	1201	A
1	A	1213	A
1	A	1226	C
1	A	1285	A
1	A	1302	C
1	A	1362	A
1	A	1397	C
1	A	1451	U
1	A	1492	A



## 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 61 ligands modelled in this entry, 60 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. 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  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
23	HYG	A	3001	-	39,39,39	1.48	6 (15%)	60,60,60	1.45	7 (11%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
23	HYG	A	3001	-	-	1/14/87/87	0/2/4/4

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	A	3001	HYG	C3-C2	5.09	1.56	1.52
23	A	3001	HYG	C27-C33	2.66	1.56	1.52
23	A	3001	HYG	O28-C23	2.17	1.44	1.40
23	A	3001	HYG	C34-C33	2.06	1.55	1.51
23	A	3001	HYG	C16-C15	2.05	1.57	1.53
23	A	3001	HYG	C3-C4	2.01	1.56	1.53

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	A	3001	HYG	C23-O28-C27	4.40	115.86	111.82
23	A	3001	HYG	O22-C17-C16	4.30	122.08	111.24
23	A	3001	HYG	C10-N9-C4	3.72	115.90	113.82
23	A	3001	HYG	O8-C1-C2	-3.34	101.81	109.66
23	A	3001	HYG	O35-C34-C33	-2.90	103.97	111.25
23	A	3001	HYG	C26-C25-C24	-2.15	108.22	111.31
23	A	3001	HYG	C23-O22-C17	-2.04	102.22	106.50

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
23	A	3001	HYG	C26-C27-C33-N36

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.