



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 26, 2014 – 06:01 PM GMT

PDB ID : 2I2U  
Title : Crystal Structure of Ribosome with messenger RNA and the Anticodon stem-loop of P-site tRNA. This file contains the 30s subunit of one 70s ribosome. The entire crystal structure contains two 70s ribosomes and is described in remark 400.  
Authors : Berk, V.; Zhang, W.; Pai, R.D.; Cate, J.H.D.  
Deposited on : 2006-08-16  
Resolution : 3.22 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>

---

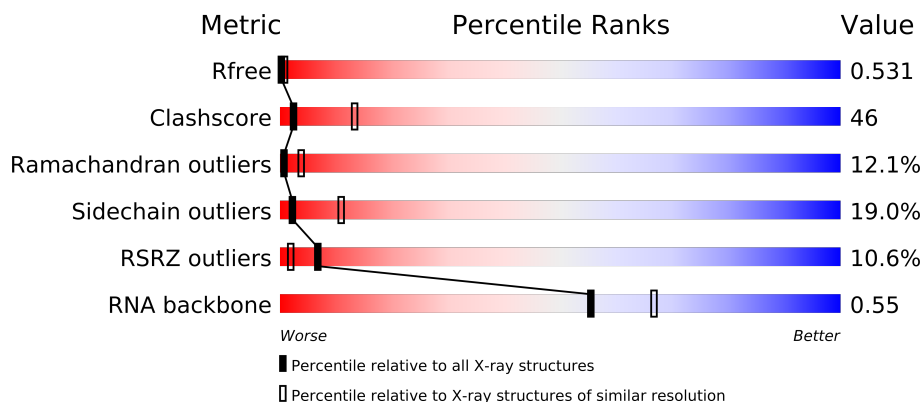
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable22639  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.22 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))
$R_{free}$	66092	1205 (3.30-3.14)
Clashscore	79885	1072 (3.28-3.16)
Ramachandran outliers	78287	1052 (3.28-3.16)
Sidechain outliers	78261	1051 (3.28-3.16)
RSRZ outliers	66119	1206 (3.30-3.14)
RNA backbone	1838	1004 (3.74-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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.

Mol	Chain	Length	Quality of chain
1	A	1542	
2	W	17	
3	X	6	
4	B	240	
5	C	232	
6	D	205	
7	E	166	
8	F	135	
9	G	178	
10	H	129	
11	I	129	
12	J	103	

Continued on next page...

*Continued from previous page...*

Mol	Chain	Length	Quality of chain
13	K	128	
14	L	123	
15	M	117	
16	N	100	
17	O	88	
18	P	82	
19	Q	83	
20	R	74	
21	S	91	
22	T	86	
23	U	70	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
24	MG	A	1557	-	X
24	MG	A	1563	-	X
24	MG	A	1578	-	X
24	MG	A	1585	-	X
24	MG	A	1586	-	X
24	MG	A	1587	-	X
24	MG	A	1591	-	X

## 2 Entry composition

There are 25 unique types of molecules in this entry. The entry contains 52179 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 RNA chain called PHE TRNA (UNMODIFIED BASES).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	W	17	Total	C	N	O	P	0	0	0
			360	161	64	118	17			

- Molecule 3 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	X	6	Total	C	N	O	P	0	0	0
			125	56	18	45	6			

- Molecule 4 is a protein called 30S ribosomal protein S2.

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

- Molecule 5 is a protein called 30S ribosomal protein S3.

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

- Molecule 6 is a protein called 30S ribosomal protein S4.

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

- Molecule 7 is a protein called 30S ribosomal protein S5.

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

- Molecule 8 is a protein called 30S ribosomal protein S6.

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

- Molecule 9 is a protein called 30S ribosomal protein S7.

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

- Molecule 10 is a protein called 30S ribosomal protein S8.

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

- Molecule 11 is a protein called 30S ribosomal protein S9.

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

- Molecule 12 is a protein called 30S ribosomal protein S10.

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

- Molecule 13 is a protein called 30S ribosomal protein S11.

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

- Molecule 14 is a protein called 30S ribosomal protein S12.

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

- Molecule 15 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

- Molecule 16 is a protein called 30S ribosomal protein S14.

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

- Molecule 17 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	88	Total	C	N	O	S	0	0	0
			716	440	146	129	1			

- Molecule 18 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

- Molecule 19 is a protein called 30S ribosomal protein S17.

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

- Molecule 20 is a protein called 30S ribosomal protein S18.

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

- Molecule 21 is a protein called 30S ribosomal protein S19.

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

- Molecule 22 is a protein called 30S ribosomal protein S20.

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

- Molecule 23 is a protein called 30S ribosomal protein S21.

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

- Molecule 24 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
24	X	1	Total	Mg	0	0
			1	1		
24	A	56	Total	Mg	0	0
			56	56		
24	N	1	Total	Mg	0	0
			1	1		

- Molecule 25 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
25	A	271	Total	O	0	0
			271	271		
25	I	2	Total	O	0	0
			2	2		
25	L	1	Total	O	0	0
			1	1		
25	N	1	Total	O	0	0
			1	1		
25	P	2	Total	O	0	0
			2	2		
25	T	2	Total	O	0	0
			2	2		
25	U	1	Total	O	0	0
			1	1		

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
25	X	5	Total	O	0	0
			5	5		

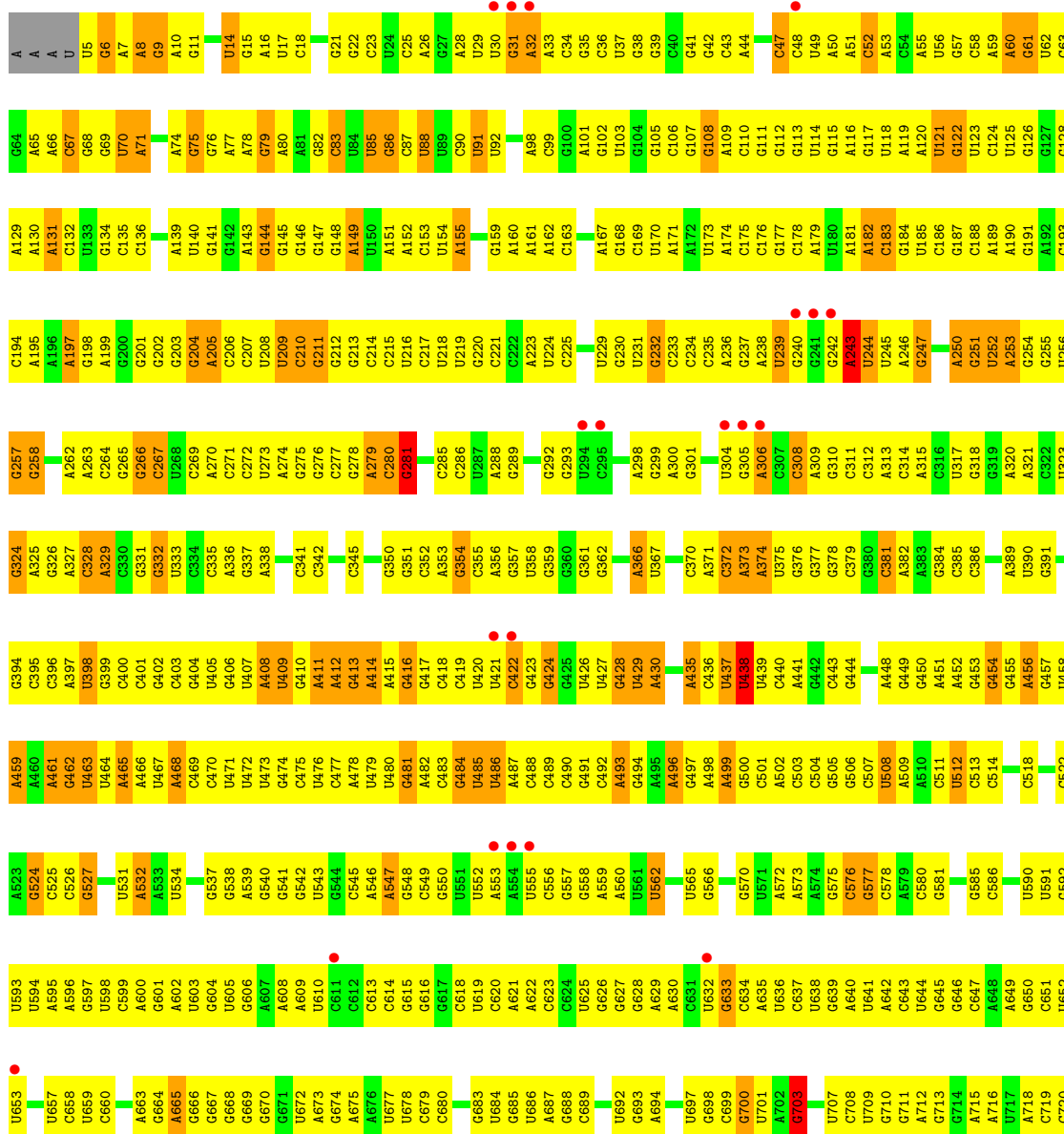


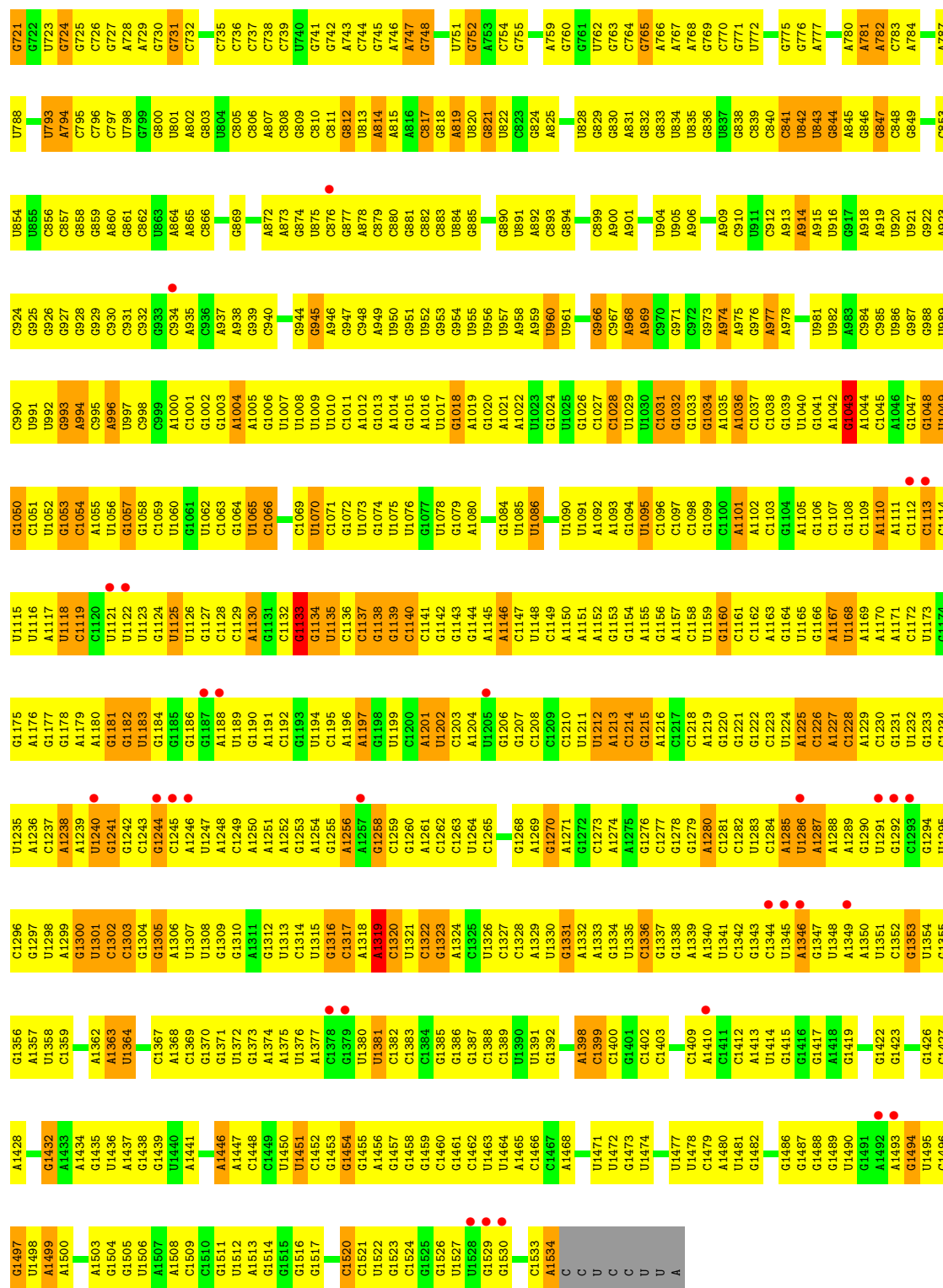
### 3 Residue-property plots

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.

#### • Molecule 1: 16S ribosomal RNA

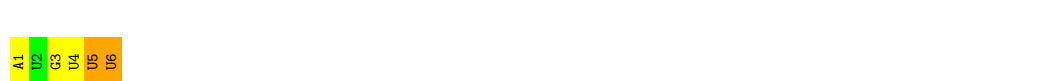
Chain A: 





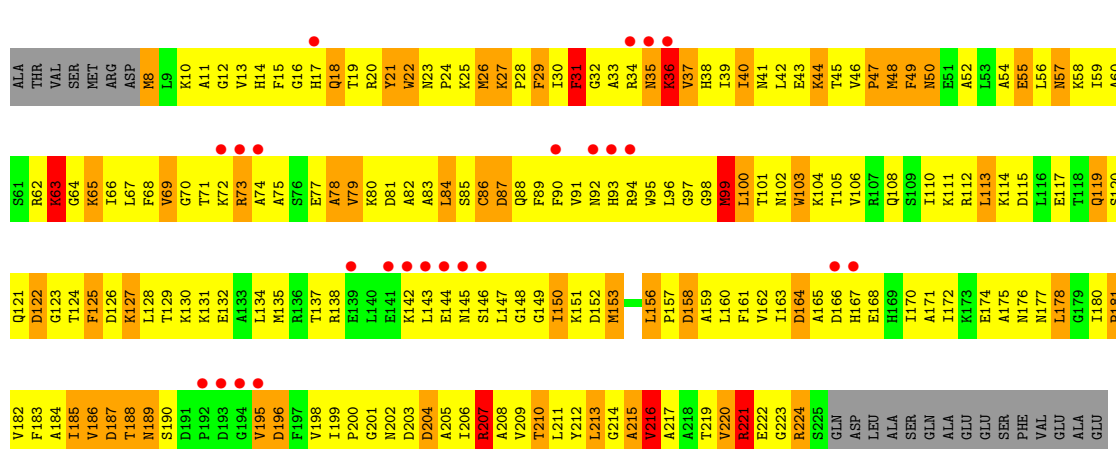
- Molecule 3: MRNA

Chain X:



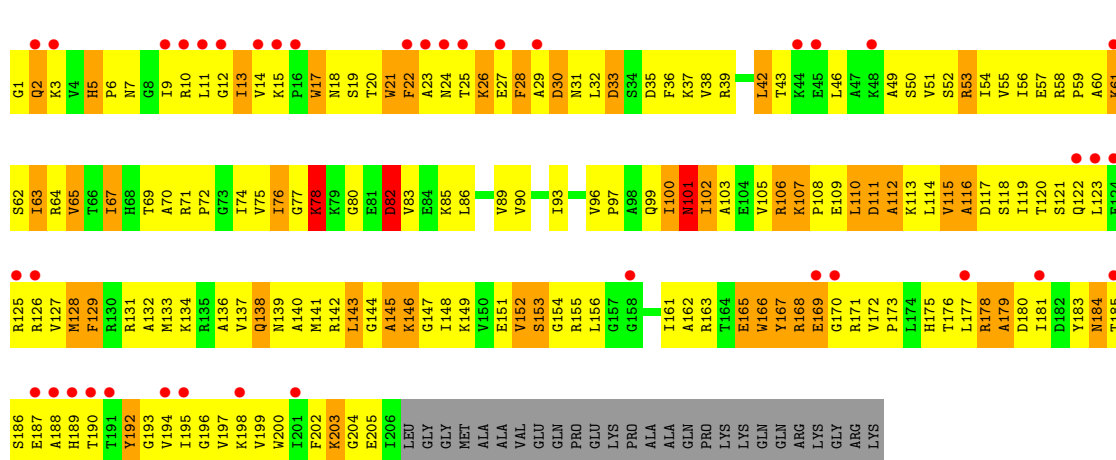
- Molecule 4: 30S ribosomal protein S2

Chain B:



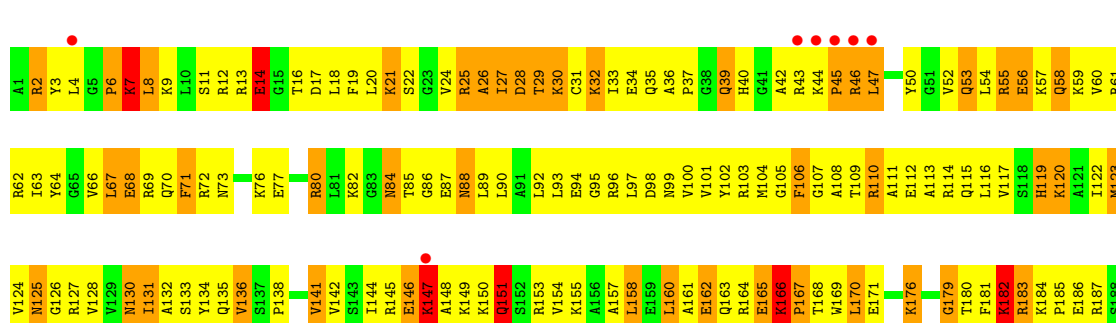
- Molecule 5: 30S ribosomal protein S3

Chain C:



- Molecule 6: 30S ribosomal protein S4

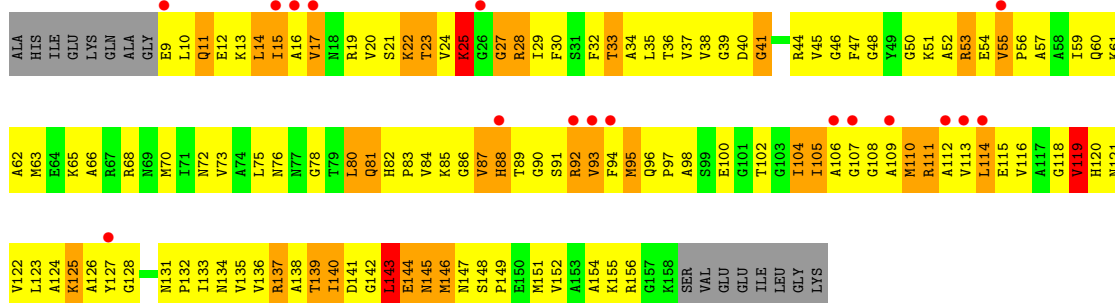
Chain D:





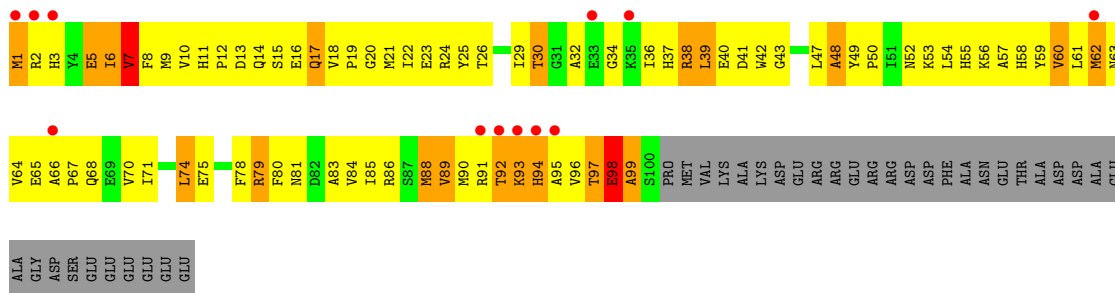
• Molecule 7: 30S ribosomal protein S5

Chain E:



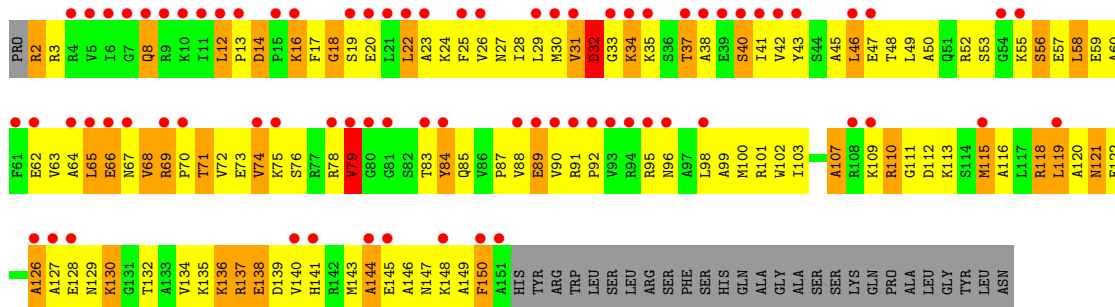
• Molecule 8: 30S ribosomal protein S6

Chain F:



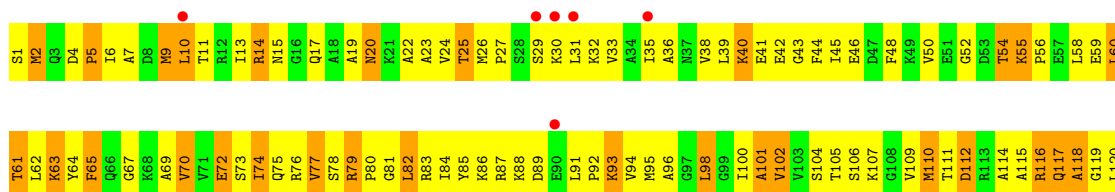
• Molecule 9: 30S ribosomal protein S7

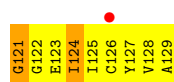
Chain G:



• Molecule 10: 30S ribosomal protein S8

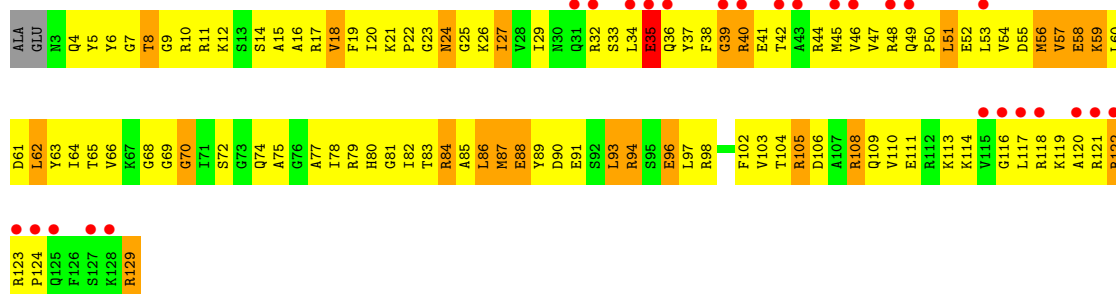
Chain H:





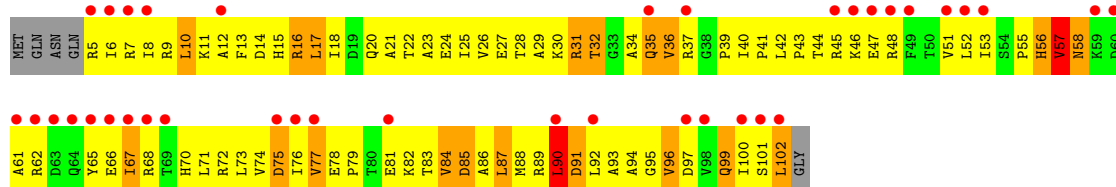
• Molecule 11: 30S ribosomal protein S9

Chain I:



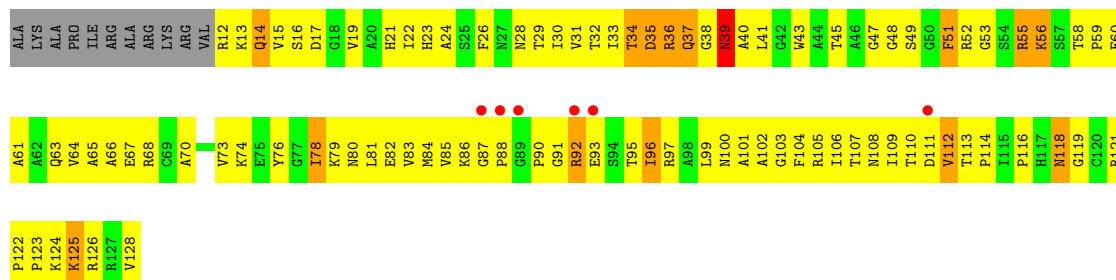
• Molecule 12: 30S ribosomal protein S10

Chain J:



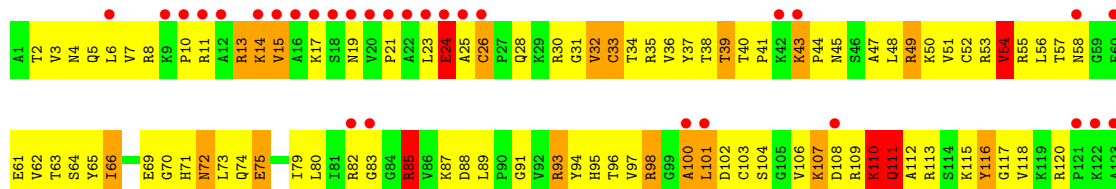
• Molecule 13: 30S ribosomal protein S11

Chain K:



• Molecule 14: 30S ribosomal protein S12

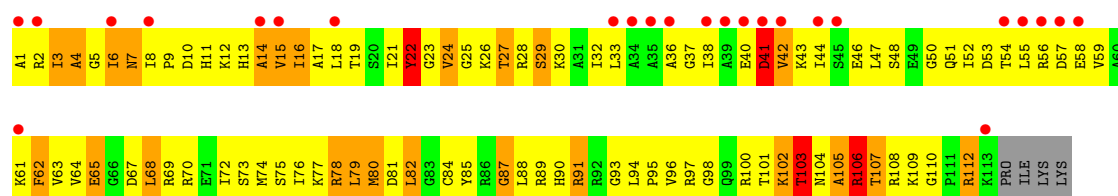
Chain L:



• Molecule 15: 30S ribosomal protein S13

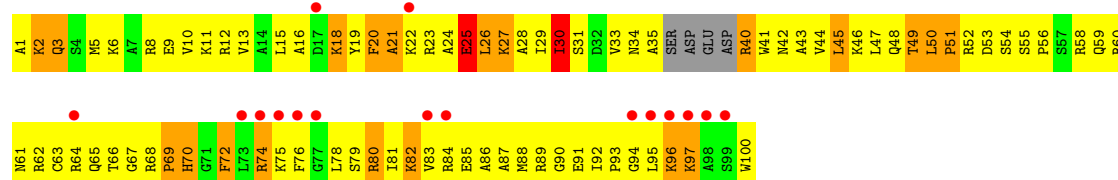
Chain M:





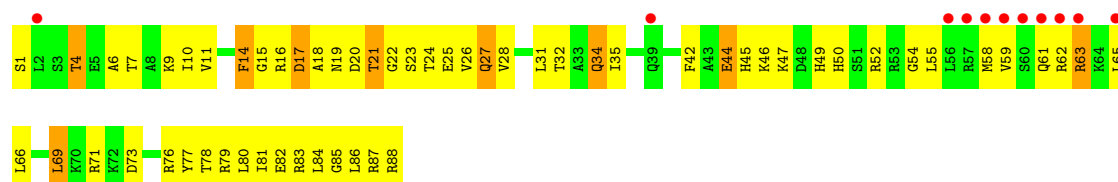
• Molecule 16: 30S ribosomal protein S14

Chain N:



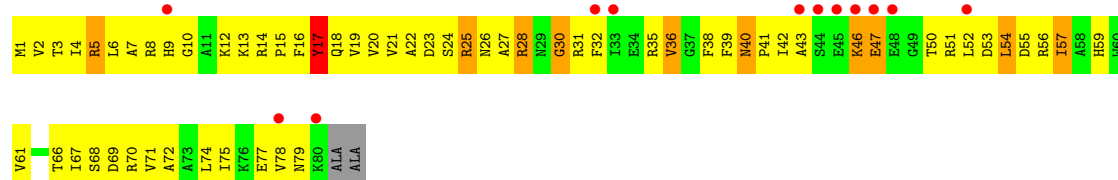
• Molecule 17: 30S ribosomal protein S15

Chain O:



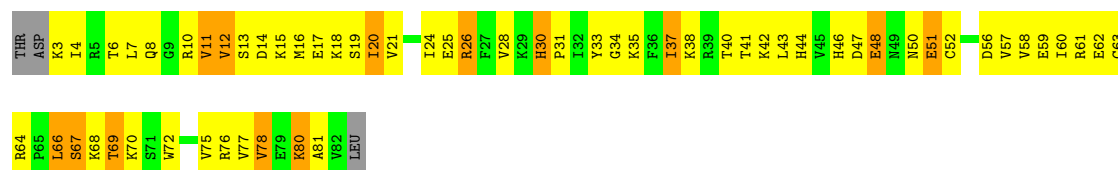
• Molecule 18: 30S ribosomal protein S16

Chain P:



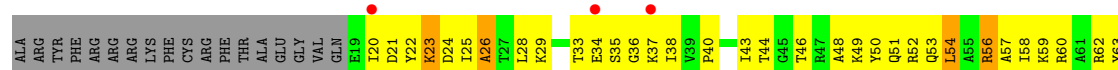
• Molecule 19: 30S ribosomal protein S17

Chain Q:



• Molecule 20: 30S ribosomal protein S18

Chain R:





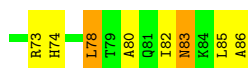
- Molecule 21: 30S ribosomal protein S19

Chain S:



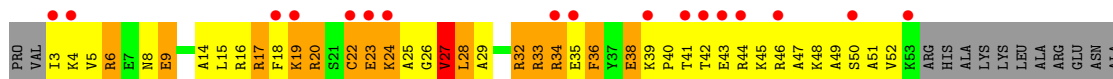
- Molecule 22: 30S ribosomal protein S20

Chain T:



- Molecule 23: 30S ribosomal protein S21

Chain U:



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.78Å 395.22Å 744.38Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.22 184.07 – 3.22	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-3.22) 75.7 (184.07-3.22)	Depositor EDS
$R_{merge}$	0.09	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.11 (at 3.19Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.287 , 0.320 0.528 , 0.531	Depositor DCC
$R_{free}$ test set	37268 reflections (4.95%)	DCC
Wilson B-factor (Å <sup>2</sup> )	80.0	Xtriage
Anisotropy	0.720	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.20 , 48.4	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	1 of 753156 reflections (0.000%)	Xtriage
$F_o, F_c$ correlation	0.56	EDS
Total number of atoms	52179	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	114.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.47% 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

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	0.25	0/36762	0.73	7/57350 (0.0%)
2	W	0.31	0/401	0.74	0/622
3	X	0.49	0/138	0.88	0/212
4	B	0.25	0/1735	0.45	0/2338
5	C	0.23	0/1651	0.44	0/2225
6	D	0.23	0/1665	0.45	0/2227
7	E	0.23	0/1118	0.47	0/1504
8	F	0.24	0/835	0.45	0/1128
9	G	0.23	0/1187	0.44	0/1591
10	H	0.23	0/989	0.46	0/1326
11	I	0.24	0/1034	0.44	0/1375
12	J	0.22	0/796	0.47	0/1077
13	K	0.24	0/893	0.45	0/1205
14	L	0.22	0/969	0.46	0/1300
15	M	0.22	0/884	0.46	0/1181
16	N	0.24	0/786	0.44	0/1046
17	O	0.23	0/724	0.44	0/966
18	P	0.25	0/648	0.43	0/870
19	Q	0.24	0/657	0.46	0/881
20	R	0.23	0/462	0.46	0/621
21	S	0.25	0/652	0.45	0/877
22	T	0.23	0/671	0.41	0/888
23	U	0.26	0/430	0.44	0/570
All	All	0.24	0/56087	0.66	7/83380 (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	15

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	438	U	N1-C1'-C2'	-6.97	104.33	112.00
1	A	243	A	C2'-C3'-O3'	6.77	124.53	113.70
1	A	765	G	N9-C1'-C2'	-6.69	104.64	112.00
1	A	232	G	C5'-C4'-C3'	-5.41	107.35	116.00
1	A	281	G	N9-C1'-C2'	-5.37	106.09	112.00
1	A	814	A	C5'-C4'-C3'	5.36	124.58	116.00
1	A	1043	G	N9-C1'-C2'	5.12	120.65	114.00

There are no chirality outliers.

All (15) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1043	G	Sidechain
1	A	1048	G	Sidechain
1	A	1057	G	Sidechain
1	A	1133	G	Sidechain
1	A	1244	G	Sidechain
1	A	1319	A	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	454	G	Sidechain
1	A	496	A	Sidechain
1	A	703	G	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	1465	0
2	W	360	0	185	9	0
3	X	125	0	63	5	0
4	B	1704	0	1732	320	0
5	C	1624	0	1699	251	0
6	D	1643	0	1710	255	0
7	E	1105	0	1148	217	0
8	F	817	0	808	123	0
9	G	1174	0	1230	167	0
10	H	979	0	1034	166	0
11	I	1022	0	1070	193	0
12	J	786	0	828	121	0
13	K	877	0	887	141	0
14	L	955	0	1019	119	0
15	M	876	0	937	165	0
16	N	774	0	828	133	0
17	O	716	0	742	70	0
18	P	638	0	656	103	0
19	Q	648	0	691	75	0
20	R	455	0	478	54	0
21	S	637	0	665	109	0
22	T	665	0	714	60	0
23	U	425	0	449	88	0
24	A	56	0	0	0	0
24	N	1	0	0	0	0
24	X	1	0	0	0	0
25	A	271	0	0	4	0
25	I	2	0	0	1	0
25	L	1	0	0	0	0
25	N	1	0	0	0	0
25	P	2	0	0	0	0
25	T	2	0	0	0	0
25	U	1	0	0	0	0
25	X	5	0	0	1	0
All	All	52179	0	36094	4054	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 46.

All (4054) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:47:PHE:H	7:E:66:ALA:HA	1.11	1.08
8:F:29:ILE:HG21	8:F:64:VAL:HG11	1.36	1.07

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:842:U:H3'	1:A:843:U:H4'	1.41	1.03
11:I:27:ILE:HA	11:I:62:LEU:HD21	1.39	1.03
1:A:1348:U:H4'	11:I:121:ARG:HD2	1.37	1.02
6:D:123:MET:HB2	6:D:128:VAL:HA	1.42	1.02
22:T:80:ALA:HA	22:T:83:ASN:HD22	1.21	1.01
4:B:30:ILE:HA	4:B:41:ASN:HB2	1.40	1.00
7:E:14:LEU:HD22	7:E:15:ILE:H	1.17	1.00
5:C:59:PRO:HG2	5:C:62:SER:HB2	1.43	0.99
21:S:4:LEU:HD21	21:S:69:LYS:HE3	1.45	0.99
15:M:79:LEU:HD13	15:M:87:GLY:HA2	1.43	0.98
5:C:58:ARG:HA	5:C:63:ILE:HA	1.45	0.97
7:E:15:ILE:HD11	7:E:37:VAL:HG23	1.44	0.97
7:E:92:ARG:HD2	7:E:93:VAL:H	1.24	0.97
11:I:94:ARG:HE	11:I:97:LEU:HD12	1.28	0.97
4:B:75:ALA:HB1	4:B:78:ALA:HB2	1.43	0.97
5:C:6:PRO:HG3	5:C:200:TRP:HE1	1.29	0.96
7:E:152:VAL:HA	7:E:155:LYS:HD3	1.47	0.95
4:B:59:ILE:HG22	4:B:62:ARG:HD2	1.46	0.95
1:A:619:U:H3	6:D:130:ASN:HD21	1.13	0.94
16:N:26:LEU:HG	16:N:44:VAL:HG22	1.48	0.94
23:U:19:LYS:HB2	23:U:20:ARG:HH21	1.29	0.94
8:F:3:HIS:HB2	8:F:92:THR:HA	1.50	0.94
6:D:187:ARG:HH21	6:D:196:GLU:HG2	1.32	0.93
8:F:54:LEU:HD22	8:F:55:HIS:H	1.33	0.93
21:S:44:ILE:HG23	21:S:62:THR:HA	1.50	0.92
4:B:158:ASP:HB3	4:B:181:PRO:HD2	1.51	0.92
17:O:69:LEU:HD11	17:O:76:ARG:HB2	1.51	0.91
22:T:61:ALA:HA	22:T:67:HIS:H	1.32	0.91
1:A:939:G:H5'	9:G:101:ARG:HH12	1.31	0.91
11:I:56:MET:HA	11:I:59:LYS:HB3	1.48	0.91
18:P:6:LEU:HA	18:P:19:VAL:HA	1.52	0.91
4:B:8:MET:HG2	4:B:46:VAL:HB	1.51	0.91
7:E:50:GLY:H	7:E:62:ALA:HB2	1.36	0.91
10:H:14:ARG:HB3	10:H:74:ILE:HD13	1.54	0.90
17:O:61:GLN:HE21	17:O:65:LEU:HD11	1.36	0.89
7:E:87:VAL:HG13	7:E:88:HIS:H	1.37	0.89
7:E:75:LEU:HA	7:E:81:GLN:HE21	1.36	0.89
4:B:67:LEU:HB2	4:B:157:PRO:HB2	1.53	0.89
15:M:80:MET:HE1	15:M:90:HIS:HB3	1.53	0.89
13:K:85:VAL:HG23	13:K:111:ASP:HA	1.55	0.89
18:P:40:ASN:HD22	18:P:41:PRO:HD2	1.34	0.89
5:C:69:THR:HG22	5:C:71:ARG:H	1.38	0.89

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:83:C:H2'	1:A:85:U:H3	1.38	0.89
6:D:55:ARG:HH12	6:D:58:GLN:HB3	1.37	0.88
7:E:83:PRO:HG3	7:E:97:PRO:HD3	1.55	0.88
4:B:41:ASN:HD22	4:B:44:LYS:H	1.13	0.88
4:B:22:TRP:H	4:B:189:ASN:HA	1.38	0.88
7:E:14:LEU:HD23	7:E:36:THR:HG22	1.55	0.88
11:I:32:ARG:HD2	11:I:36:GLN:HB3	1.56	0.88
12:J:8:ILE:HG22	12:J:100:ILE:HG22	1.55	0.88
4:B:48:MET:SD	4:B:199:ILE:HA	2.13	0.88
4:B:100:LEU:HD11	4:B:175:ALA:HB2	1.53	0.88
1:A:699:C:H2'	1:A:700:G:H5''	1.56	0.88
11:I:14:SER:HA	11:I:68:GLY:HA3	1.54	0.87
9:G:72:VAL:H	9:G:141:HIS:HE1	1.16	0.87
14:L:23:LEU:HD23	14:L:58:ASN:HB2	1.56	0.87
13:K:125:LYS:HD2	23:U:32:ARG:HB3	1.56	0.87
4:B:113:LEU:HD22	4:B:151:LYS:HB2	1.57	0.86
5:C:46:LEU:HD13	5:C:51:VAL:HG11	1.55	0.86
15:M:28:ARG:HH12	15:M:59:VAL:HA	1.39	0.86
8:F:38:ARG:HH11	8:F:98:GLU:H	1.20	0.86
15:M:30:LYS:HA	15:M:33:LEU:HD12	1.56	0.86
15:M:22:TYR:HD2	15:M:65:GLU:HA	1.41	0.86
1:A:1346:A:H61	1:A:1374:A:H3'	1.39	0.85
4:B:19:THR:HA	4:B:37:VAL:HG23	1.57	0.85
1:A:1294:G:H2'	1:A:1295:U:O4'	1.75	0.85
16:N:60:ARG:HH21	16:N:70:HIS:H	1.24	0.85
13:K:34:THR:HG23	13:K:39:ASN:H	1.42	0.85
16:N:78:LEU:HB3	16:N:82:LYS:HB3	1.58	0.85
15:M:21:ILE:HB	15:M:24:VAL:HG13	1.57	0.85
1:A:545:C:H5'	6:D:68:GLU:HB2	1.59	0.84
15:M:63:VAL:HG12	15:M:68:LEU:HB2	1.59	0.84
22:T:55:PRO:HG2	22:T:56:ILE:HD12	1.60	0.84
7:E:111:ARG:HE	7:E:112:ALA:HB2	1.43	0.84
9:G:128:GLU:HB2	9:G:130:LYS:HD3	1.59	0.84
15:M:28:ARG:HH21	15:M:62:PHE:HB2	1.43	0.84
4:B:45:THR:HG22	4:B:199:ILE:HD12	1.59	0.84
1:A:464:U:H2'	1:A:465:A:H3'	1.60	0.84
8:F:88:MET:HG3	8:F:89:VAL:H	1.42	0.84
7:E:28:ARG:HG2	7:E:29:ILE:H	1.42	0.84
5:C:151:GLU:HB3	5:C:198:LYS:HB2	1.60	0.84
19:Q:28:VAL:HG13	19:Q:37:ILE:HG13	1.60	0.84
4:B:18:GLN:HG2	4:B:189:ASN:HB3	1.59	0.83
6:D:12:ARG:HB3	6:D:37:PRO:HA	1.58	0.83

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:16:ILE:HG23	15:M:17:ALA:H	1.41	0.83
1:A:842:U:C3'	1:A:843:U:H4'	2.08	0.83
13:K:86:LYS:HB2	13:K:112:VAL:HG23	1.60	0.83
7:E:37:VAL:HG21	7:E:136:VAL:HG21	1.59	0.83
1:A:618:C:H1'	18:P:14:ARG:HH21	1.41	0.83
11:I:40:ARG:HH11	11:I:40:ARG:HB3	1.44	0.83
7:E:14:LEU:HD22	7:E:15:ILE:N	1.92	0.83
7:E:38:VAL:H	7:E:46:GLY:HA3	1.43	0.83
7:E:73:VAL:HG23	7:E:146:MET:HG3	1.60	0.83
11:I:98:ARG:HG2	11:I:103:VAL:HG21	1.60	0.82
1:A:1236:A:H4'	1:A:1304:G:H4'	1.60	0.82
9:G:13:PRO:HA	9:G:20:GLU:HA	1.60	0.82
19:Q:59:GLU:HB2	19:Q:76:ARG:HG2	1.61	0.82
16:N:26:LEU:HB3	16:N:44:VAL:HG13	1.59	0.82
1:A:1144:G:N2	1:A:1146:A:H62	1.77	0.82
23:U:47:ALA:HA	23:U:50:SER:HB2	1.61	0.82
13:K:125:LYS:HE3	23:U:32:ARG:HD2	1.59	0.82
1:A:796:C:H5'	13:K:128:VAL:HG13	1.62	0.82
11:I:23:GLY:H	11:I:60:LEU:HA	1.43	0.81
5:C:71:ARG:HH21	5:C:74:ILE:HG21	1.44	0.81
6:D:18:LEU:HB3	6:D:20:LEU:HG	1.62	0.81
13:K:28:ASN:HD22	13:K:56:LYS:HD2	1.45	0.81
1:A:56:U:H2'	1:A:57:G:H8	1.46	0.81
1:A:37:U:H5''	14:L:120:ARG:HH21	1.45	0.81
1:A:239:U:H4'	1:A:239:U:OP1	1.79	0.81
4:B:13:VAL:HB	4:B:207:ARG:HB3	1.61	0.81
1:A:1054:C:O2'	1:A:1055:A:H5''	1.81	0.81
1:A:1071:C:H2'	1:A:1072:G:H8	1.46	0.81
10:H:5:PRO:HG2	10:H:6:ILE:HD12	1.61	0.81
1:A:1323:G:H2'	1:A:1324:A:C8	2.16	0.81
4:B:68:PHE:HB3	4:B:79:VAL:HG22	1.63	0.81
1:A:82:G:H3'	1:A:83:C:H4'	1.63	0.80
8:F:11:HIS:ND1	8:F:12:PRO:HD2	1.96	0.80
5:C:112:ALA:HB1	5:C:184:ASN:HB2	1.61	0.80
1:A:1322:C:H2'	1:A:1322:C:O2	1.79	0.80
5:C:149:LYS:HB2	5:C:168:ARG:HG3	1.64	0.80
17:O:73:ASP:HB3	17:O:76:ARG:HG3	1.62	0.80
1:A:1238:A:H5'	1:A:1336:C:N4	1.97	0.80
1:A:814:A:H5'	1:A:1511:G:H4'	1.64	0.80
10:H:36:ALA:HA	10:H:39:LEU:HD23	1.62	0.80
18:P:5:ARG:HH21	18:P:24:SER:HA	1.47	0.80
4:B:130:LYS:HB3	4:B:134:LEU:HD12	1.62	0.80

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:40:ARG:HA	11:I:44:ARG:HH11	1.46	0.80
6:D:36:ALA:HB2	6:D:42:ALA:HB2	1.61	0.79
1:A:1320:C:H41	21:S:36:ARG:HG3	1.47	0.79
1:A:599:C:H4'	10:H:121:GLY:O	1.83	0.79
13:K:91:GLY:O	13:K:95:THR:HG22	1.82	0.79
12:J:46:LYS:HA	12:J:68:ARG:HA	1.65	0.79
10:H:128:VAL:HG23	10:H:129:ALA:H	1.47	0.79
21:S:61:VAL:HA	21:S:65:MET:SD	2.23	0.79
23:U:33:ARG:HD3	23:U:34:ARG:H	1.47	0.79
6:D:13:ARG:HA	6:D:37:PRO:HB3	1.64	0.79
1:A:562:U:H1'	14:L:11:ARG:HB3	1.65	0.79
12:J:30:LYS:HG3	12:J:31:ARG:HD3	1.65	0.79
5:C:110:LEU:H	5:C:114:LEU:HD13	1.47	0.79
4:B:80:LYS:HB3	4:B:92:ASN:HB3	1.65	0.79
6:D:146:GLU:CD	6:D:146:GLU:H	1.84	0.79
9:G:28:ILE:HG21	9:G:101:ARG:HA	1.63	0.78
4:B:195:VAL:HG12	4:B:196:ASP:H	1.47	0.78
14:L:80:LEU:HB2	14:L:101:LEU:HD12	1.66	0.78
11:I:11:ARG:HH21	11:I:12:LYS:HE3	1.48	0.78
4:B:89:PHE:HB3	4:B:149:GLY:HA2	1.66	0.78
4:B:114:LYS:HB2	4:B:152:ASP:HA	1.65	0.78
14:L:13:ARG:H	14:L:13:ARG:HD2	1.48	0.78
1:A:1436:U:H2'	1:A:1437:A:H8	1.49	0.78
10:H:77:VAL:HG23	10:H:126:CYS:HA	1.64	0.78
4:B:128:LEU:HD22	4:B:132:GLU:HB2	1.66	0.78
18:P:10:GLY:HA3	18:P:15:PRO:HA	1.65	0.78
4:B:70:GLY:HA3	4:B:163:ILE:HB	1.66	0.78
1:A:562:U:H2'	14:L:13:ARG:HG3	1.65	0.78
10:H:102:VAL:HG23	10:H:125:ILE:HB	1.66	0.78
5:C:53:ARG:NH1	5:C:53:ARG:HB2	1.99	0.78
22:T:70:LYS:HA	22:T:73:ARG:HH12	1.48	0.78
12:J:37:ARG:H	12:J:76:ILE:HG12	1.49	0.78
9:G:134:VAL:HA	9:G:138:GLU:HG3	1.66	0.78
16:N:56:PRO:HA	16:N:59:GLN:HG2	1.66	0.77
7:E:47:PHE:N	7:E:66:ALA:HA	1.96	0.77
4:B:19:THR:HG23	4:B:20:ARG:H	1.49	0.77
21:S:29:PRO:HB2	21:S:49:ALA:HB2	1.66	0.77
1:A:1328:C:H5''	15:M:27:THR:HG21	1.67	0.77
23:U:15:LEU:HA	23:U:17:ARG:NH1	2.00	0.77
15:M:3:ILE:HG22	15:M:4:ALA:H	1.47	0.77
7:E:37:VAL:HG13	7:E:46:GLY:H	1.50	0.77
1:A:1086:U:H3	1:A:1099:G:H22	1.31	0.77

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:18:GLN:HB2	4:B:188:THR:HB	1.65	0.77
16:N:8:ARG:HG2	16:N:12:ARG:HH12	1.49	0.77
11:I:117:LEU:HD21	11:I:123:ARG:HD3	1.66	0.77
1:A:1391:U:H2'	1:A:1392:G:C8	2.19	0.77
7:E:84:VAL:HB	7:E:143:LEU:HA	1.66	0.77
4:B:30:ILE:CA	4:B:41:ASN:HB2	2.15	0.77
4:B:66:ILE:HA	4:B:159:ALA:HB3	1.65	0.77
12:J:37:ARG:N	12:J:76:ILE:HG12	2.00	0.77
15:M:24:VAL:HG23	15:M:28:ARG:HB3	1.65	0.76
1:A:1170:A:H2'	1:A:1171:A:O4'	1.85	0.76
1:A:1142:G:H2'	1:A:1143:G:O4'	1.85	0.76
5:C:83:VAL:HG11	5:C:100:ILE:HG21	1.67	0.76
4:B:161:PHE:HA	4:B:183:PHE:HB2	1.67	0.76
1:A:83:C:H2'	1:A:85:U:N3	1.99	0.76
1:A:874:G:H21	10:H:15:ASN:HD21	1.32	0.76
4:B:40:ILE:HG12	4:B:188:THR:HG23	1.66	0.76
7:E:22:LYS:HB2	7:E:29:ILE:HG12	1.66	0.76
6:D:16:THR:HG22	6:D:18:LEU:H	1.50	0.76
1:A:1347:G:N2	1:A:1373:G:H2'	1.99	0.76
1:A:90:C:H2'	1:A:91:U:C6	2.20	0.76
7:E:106:ALA:CB	7:E:111:ARG:HA	2.15	0.76
4:B:82:ALA:HA	4:B:213:LEU:HD13	1.68	0.76
1:A:1167:A:H2'	1:A:1169:A:C8	2.21	0.76
14:L:43:LYS:HB3	14:L:44:PRO:HD2	1.67	0.76
19:Q:13:SER:HB3	19:Q:21:VAL:HB	1.68	0.76
1:A:199:A:H61	1:A:218:U:H3	1.32	0.76
9:G:58:LEU:HD23	9:G:58:LEU:H	1.51	0.76
1:A:1150:A:H1'	1:A:1280:A:N6	2.01	0.76
20:R:33:THR:HG21	20:R:37:LYS:HG2	1.67	0.76
6:D:55:ARG:NH1	6:D:58:GLN:HB3	2.00	0.75
20:R:62:ARG:HA	20:R:67:LEU:O	1.86	0.75
6:D:43:ARG:NH1	6:D:44:LYS:H	1.84	0.75
1:A:619:U:H3	6:D:130:ASN:ND2	1.84	0.75
12:J:39:PRO:HA	12:J:74:VAL:HA	1.68	0.75
5:C:147:GLY:HA3	5:C:171:ARG:H	1.51	0.75
1:A:486:U:H2'	1:A:487:A:H8	1.50	0.75
1:A:71:A:H61	1:A:99:C:H1'	1.51	0.75
5:C:86:LEU:O	5:C:89:VAL:HG22	1.86	0.75
21:S:4:LEU:H	21:S:4:LEU:HD12	1.50	0.75
15:M:29:SER:O	15:M:32:ILE:HG22	1.85	0.75
14:L:34:THR:HB	14:L:53:ARG:HB2	1.67	0.75
14:L:23:LEU:HB3	14:L:58:ASN:HD22	1.51	0.75

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:12:LYS:HE2	11:I:109:GLN:HG3	1.67	0.75
1:A:720:C:H4'	20:R:38:ILE:HD11	1.68	0.75
14:L:35:ARG:HH12	14:L:75:GLU:HG2	1.51	0.75
10:H:74:ILE:HA	10:H:128:VAL:HA	1.69	0.75
1:A:840:C:H2'	1:A:842:U:H5''	1.69	0.75
11:I:17:ARG:O	11:I:64:ILE:HA	1.85	0.75
19:Q:17:GLU:HG2	19:Q:18:LYS:HG2	1.68	0.75
5:C:109:GLU:HB2	5:C:143:LEU:HD11	1.69	0.75
17:O:6:ALA:HA	17:O:9:LYS:HE3	1.66	0.75
21:S:14:LEU:HD23	21:S:32:THR:HG23	1.69	0.75
1:A:1347:G:H22	1:A:1373:G:H2'	1.52	0.75
22:T:70:LYS:HA	22:T:73:ARG:NH1	2.00	0.74
1:A:473:U:H2'	1:A:474:G:C8	2.22	0.74
17:O:87:ARG:HG3	17:O:87:ARG:O	1.87	0.74
9:G:87:PRO:HG3	9:G:148:LYS:HA	1.69	0.74
1:A:462:G:H2'	1:A:463:U:H6	1.51	0.74
1:A:1320:C:OP2	21:S:2:ARG:HG2	1.87	0.74
8:F:62:MET:HG3	8:F:64:VAL:HG23	1.69	0.74
1:A:1118:U:H1'	1:A:1179:A:C4	2.22	0.74
1:A:507:C:H3'	1:A:508:U:H5''	1.69	0.74
6:D:125:ASN:HB2	6:D:127:ARG:NH1	2.02	0.74
1:A:1005:A:H61	1:A:1024:G:H1'	1.52	0.74
7:E:106:ALA:HB1	7:E:111:ARG:HA	1.69	0.74
7:E:11:GLN:HE21	7:E:13:LYS:HE3	1.52	0.74
23:U:15:LEU:HA	23:U:17:ARG:CZ	2.18	0.74
1:A:1376:U:H2'	1:A:1377:A:C8	2.21	0.74
15:M:72:ILE:O	15:M:76:ILE:HG13	1.87	0.74
1:A:458:U:H2'	1:A:459:A:H8	1.51	0.74
1:A:618:C:H1'	18:P:14:ARG:NH2	2.01	0.74
1:A:337:G:H2'	1:A:338:A:C8	2.22	0.74
1:A:640:A:O2'	10:H:106:SER:HB3	1.87	0.74
22:T:69:ASN:HD22	22:T:69:ASN:H	1.34	0.74
4:B:178:LEU:HD12	4:B:178:LEU:H	1.52	0.73
1:A:376:G:H1'	18:P:28:ARG:HD2	1.68	0.73
4:B:143:LEU:HB3	4:B:147:LEU:HD12	1.68	0.73
1:A:243:A:H4'	1:A:244:U:H5'	1.70	0.73
6:D:56:GLU:HG2	6:D:198:LEU:HD12	1.70	0.73
5:C:67:ILE:HG22	5:C:100:ILE:HD11	1.68	0.73
15:M:88:LEU:O	15:M:91:ARG:HG3	1.87	0.73
13:K:19:VAL:HA	13:K:82:GLU:HB2	1.70	0.73
6:D:185:PRO:HB2	6:D:190:LEU:HD11	1.68	0.73
15:M:82:LEU:HD12	15:M:84:CYS:SG	2.29	0.73

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:56:U:H2'	1:A:57:G:C8	2.22	0.73
1:A:1358:U:H2'	1:A:1359:C:O4'	1.89	0.73
16:N:40:ARG:NH1	21:S:6:LYS:HB2	2.04	0.73
4:B:158:ASP:HA	4:B:180:ILE:HG23	1.70	0.73
1:A:1226:C:H41	15:M:102:LYS:HD2	1.51	0.73
5:C:119:ILE:HD13	5:C:136:ALA:HB2	1.70	0.73
5:C:119:ILE:HA	5:C:122:GLN:NE2	2.04	0.73
4:B:98:GLY:O	4:B:106:VAL:HG11	1.86	0.73
12:J:57:VAL:O	12:J:58:ASN:HB2	1.88	0.73
9:G:23:ALA:O	9:G:26:VAL:HG22	1.88	0.73
1:A:275:G:H4'	19:Q:15:LYS:HG2	1.71	0.73
6:D:61:ARG:HH21	6:D:68:GLU:H	1.35	0.73
1:A:458:U:H2'	1:A:459:A:C8	2.23	0.73
18:P:4:ILE:HD13	18:P:57:ILE:HG12	1.69	0.73
9:G:110:ARG:HH21	9:G:122:GLU:HB2	1.52	0.73
11:I:93:LEU:HD23	11:I:96:GLU:HB2	1.71	0.73
1:A:1099:G:H5''	4:B:94:ARG:NE	2.03	0.73
6:D:52:VAL:HG12	6:D:198:LEU:HD13	1.70	0.73
1:A:323:U:H5'	22:T:17:ARG:HB2	1.71	0.73
4:B:199:ILE:HB	4:B:200:PRO:HD2	1.69	0.72
1:A:182:A:H1'	1:A:183:C:C4	2.24	0.72
13:K:70:ALA:HA	13:K:73:VAL:HG22	1.71	0.72
9:G:76:SER:HB3	9:G:85:GLN:HA	1.71	0.72
9:G:49:LEU:HA	9:G:52:ARG:HE	1.53	0.72
19:Q:62:GLU:HG2	19:Q:63:CYS:H	1.51	0.72
6:D:96:ARG:NH1	6:D:133:SER:HA	2.04	0.72
1:A:1112:C:N4	5:C:177:LEU:HD23	2.04	0.72
6:D:107:GLY:HA2	6:D:112:GLU:HG2	1.70	0.72
6:D:123:MET:HE1	6:D:126:GLY:H	1.53	0.72
5:C:156:LEU:CD1	5:C:165:GLU:H	2.02	0.72
1:A:1092:A:H5''	9:G:3:ARG:HD2	1.70	0.72
8:F:10:VAL:HA	8:F:84:VAL:HA	1.69	0.72
5:C:156:LEU:HD12	5:C:165:GLU:H	1.53	0.72
1:A:673:A:H2'	1:A:674:G:C8	2.24	0.72
12:J:52:LEU:HB2	16:N:80:ARG:HD2	1.70	0.72
1:A:859:G:H2'	1:A:860:A:C8	2.25	0.72
13:K:86:LYS:HG3	13:K:113:THR:HA	1.71	0.72
12:J:15:HIS:HA	12:J:18:ILE:HG22	1.70	0.72
19:Q:25:GLU:HA	19:Q:40:THR:HA	1.71	0.72
21:S:12:LEU:HD11	21:S:16:LYS:HE3	1.71	0.72
4:B:102:ASN:ND2	4:B:106:VAL:HB	2.05	0.72
4:B:83:ALA:HB3	4:B:90:PHE:HD2	1.54	0.72

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:15:ILE:HA	7:E:109:ALA:HB2	1.71	0.72
1:A:1186:G:H21	16:N:100:TRP:C	1.93	0.72
5:C:53:ARG:HH12	5:C:55:VAL:HG13	1.54	0.72
13:K:97:ARG:HD3	23:U:16:ARG:HH12	1.52	0.72
7:E:84:VAL:HG11	7:E:145:ASN:N	2.05	0.71
9:G:71:THR:HA	9:G:95:ARG:CZ	2.20	0.71
1:A:1385:G:H5'	11:I:129:ARG:HH22	1.55	0.71
5:C:53:ARG:HH11	5:C:53:ARG:HB2	1.55	0.71
19:Q:58:VAL:HA	19:Q:78:VAL:HG23	1.71	0.71
10:H:6:ILE:HD12	10:H:6:ILE:H	1.55	0.71
16:N:79:SER:O	16:N:83:VAL:HG23	1.89	0.71
20:R:26:ALA:HA	20:R:29:LYS:HE3	1.72	0.71
11:I:5:TYR:HB2	11:I:20:ILE:HB	1.71	0.71
1:A:1237:C:H3'	1:A:1336:C:H41	1.54	0.71
15:M:70:ARG:C	15:M:74:MET:HG2	2.10	0.71
1:A:1005:A:N6	1:A:1024:G:H1'	2.06	0.71
19:Q:16:MET:HB2	19:Q:19:SER:HB2	1.73	0.71
1:A:1291:U:H2'	1:A:1292:G:C8	2.26	0.71
7:E:46:GLY:HA2	7:E:66:ALA:O	1.90	0.71
11:I:59:LYS:HE2	11:I:60:LEU:HD23	1.70	0.71
6:D:182:LYS:HD3	6:D:183:ARG:HG3	1.72	0.71
1:A:939:G:H5'	9:G:101:ARG:NH1	2.02	0.71
4:B:150:ILE:HA	4:B:153:MET:HB3	1.71	0.71
17:O:28:VAL:HG13	17:O:62:ARG:HG3	1.73	0.71
1:A:541:G:O2'	6:D:39:GLN:HB3	1.91	0.71
8:F:81:ASN:HB3	8:F:84:VAL:HG12	1.72	0.71
9:G:19:SER:HB3	9:G:22:LEU:HB2	1.73	0.71
6:D:72:ARG:HG3	6:D:76:LYS:HE2	1.72	0.71
10:H:76:ARG:HD2	10:H:126:CYS:HB3	1.72	0.71
4:B:44:LYS:HD2	4:B:47:PRO:HG2	1.73	0.71
5:C:123:LEU:HA	5:C:127:VAL:HG22	1.72	0.71
22:T:8:LYS:O	22:T:11:ILE:HG12	1.91	0.71
11:I:51:LEU:HD22	11:I:56:MET:SD	2.30	0.71
1:A:974:A:H4'	1:A:975:A:H5'	1.72	0.71
8:F:71:ILE:O	8:F:75:GLU:HG3	1.91	0.71
5:C:106:ARG:HB3	5:C:106:ARG:HH11	1.55	0.70
13:K:32:THR:HG23	13:K:43:TRP:HB3	1.73	0.70
11:I:7:GLY:H	11:I:18:VAL:HG23	1.56	0.70
5:C:143:LEU:H	5:C:143:LEU:HD13	1.55	0.70
22:T:69:ASN:ND2	22:T:69:ASN:H	1.88	0.70
1:A:229:U:H2'	1:A:230:G:C8	2.26	0.70
6:D:117:VAL:HG12	6:D:130:ASN:HA	1.71	0.70

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1238:A:H5'	1:A:1336:C:H41	1.56	0.70
15:M:23:GLY:HA3	15:M:64:VAL:HA	1.74	0.70
1:A:781:A:H2'	1:A:782:A:H5'	1.72	0.70
9:G:74:VAL:HG13	9:G:144:ALA:HB2	1.73	0.70
1:A:1137:C:H1'	1:A:1138:G:C2	2.26	0.70
4:B:209:VAL:HG23	4:B:210:THR:H	1.56	0.70
1:A:1119:C:OP1	11:I:8:THR:HG21	1.91	0.70
1:A:1346:A:N1	1:A:1374:A:H5''	2.06	0.70
1:A:451:A:H4'	1:A:452:A:O4'	1.91	0.70
12:J:52:LEU:HD12	12:J:52:LEU:H	1.55	0.70
21:S:27:LYS:HB2	21:S:28:LYS:HZ2	1.55	0.70
1:A:67:C:H2'	1:A:68:G:C8	2.27	0.70
5:C:168:ARG:HG2	5:C:169:GLU:H	1.56	0.70
5:C:76:ILE:HA	5:C:83:VAL:HG23	1.73	0.70
12:J:47:GLU:O	12:J:66:GLU:HG3	1.92	0.70
6:D:58:GLN:O	6:D:62:ARG:HG2	1.91	0.70
11:I:8:THR:HG22	11:I:10:ARG:HH21	1.57	0.70
1:A:1319:A:H2'	1:A:1323:G:N7	2.07	0.70
16:N:65:GLN:HB3	16:N:82:LYS:HG2	1.73	0.70
1:A:1226:C:C5	15:M:102:LYS:HB3	2.26	0.70
1:A:1228:C:H5'	15:M:112:ARG:HB3	1.74	0.70
4:B:56:LEU:HD22	4:B:219:THR:HB	1.73	0.70
22:T:80:ALA:CA	22:T:83:ASN:HD22	2.02	0.69
5:C:119:ILE:HA	5:C:122:GLN:HE21	1.55	0.69
1:A:628:G:H2'	1:A:629:A:H8	1.57	0.69
19:Q:14:ASP:HA	19:Q:20:ILE:HD11	1.73	0.69
1:A:1356:G:H2'	1:A:1357:A:C8	2.27	0.69
1:A:1160:G:H2'	1:A:1161:C:H6	1.57	0.69
8:F:26:THR:HA	8:F:29:ILE:HD12	1.72	0.69
8:F:18:VAL:HG21	8:F:58:HIS:ND1	2.07	0.69
15:M:94:LEU:HB3	15:M:95:PRO:HD2	1.73	0.69
12:J:52:LEU:HA	12:J:62:ARG:HA	1.73	0.69
10:H:100:ILE:HD11	10:H:128:VAL:H	1.56	0.69
4:B:44:LYS:NZ	4:B:47:PRO:HB2	2.07	0.69
8:F:38:ARG:HD3	8:F:97:THR:HA	1.73	0.69
16:N:29:ILE:H	16:N:29:ILE:HD12	1.56	0.69
15:M:7:ASN:ND2	15:M:21:ILE:HA	2.06	0.69
1:A:649:A:H2'	1:A:650:G:O4'	1.92	0.69
1:A:1477:U:H2'	1:A:1478:U:C6	2.27	0.69
5:C:126:ARG:HA	5:C:126:ARG:CZ	2.22	0.69
1:A:184:G:H4'	1:A:224:U:O3'	1.93	0.69
1:A:824:G:O4'	10:H:1:SER:HA	1.92	0.69

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:50:GLY:CA	7:E:61:LYS:HB2	2.23	0.69
4:B:63:LYS:HG2	4:B:64:GLY:N	2.06	0.69
23:U:19:LYS:HG2	23:U:20:ARG:HE	1.58	0.69
13:K:92:ARG:HH21	23:U:24:LYS:HB2	1.55	0.69
1:A:1333:A:H2'	1:A:1334:G:O4'	1.93	0.69
1:A:674:G:H2'	1:A:675:A:H8	1.58	0.69
1:A:1001:C:H2'	1:A:1002:G:C8	2.28	0.69
19:Q:10:ARG:HB3	19:Q:10:ARG:HH11	1.57	0.69
1:A:1148:U:H2'	1:A:1149:C:O4'	1.92	0.69
6:D:90:LEU:HA	6:D:93:LEU:HD12	1.75	0.69
22:T:66:ILE:HG23	22:T:70:LYS:HE2	1.73	0.69
9:G:13:PRO:HB3	9:G:20:GLU:HG2	1.73	0.69
11:I:11:ARG:HE	11:I:12:LYS:HB2	1.57	0.69
20:R:33:THR:CG2	20:R:37:LYS:HG2	2.21	0.69
6:D:96:ARG:HH12	6:D:133:SER:HA	1.57	0.69
7:E:87:VAL:HG13	7:E:88:HIS:N	2.08	0.69
22:T:61:ALA:HA	22:T:67:HIS:N	2.05	0.69
15:M:21:ILE:HB	15:M:24:VAL:CG1	2.23	0.69
1:A:154:U:H2'	1:A:155:A:C8	2.27	0.69
23:U:24:LYS:H	23:U:28:LEU:HD12	1.57	0.69
18:P:71:VAL:O	18:P:75:ILE:HG13	1.92	0.69
15:M:28:ARG:NH1	15:M:59:VAL:HA	2.07	0.69
1:A:1226:C:H4'	1:A:1227:A:OP1	1.93	0.69
1:A:1221:G:OP1	21:S:35:ARG:HD2	1.93	0.68
14:L:34:THR:HG21	14:L:53:ARG:NH2	2.08	0.68
1:A:1412:C:H2'	1:A:1413:A:C8	2.28	0.68
11:I:29:ILE:HD11	11:I:66:VAL:HG12	1.74	0.68
5:C:183:TYR:HB2	5:C:200:TRP:CD1	2.29	0.68
13:K:109:ILE:H	23:U:6:ARG:HD3	1.58	0.68
1:A:723:U:H5'	23:U:45:LYS:HE3	1.75	0.68
11:I:109:GLN:HG2	11:I:110:VAL:H	1.57	0.68
9:G:110:ARG:HB2	9:G:118:ARG:HH11	1.59	0.68
1:A:1285:A:H4'	1:A:1286:U:O2	1.94	0.68
18:P:67:ILE:HG13	18:P:71:VAL:HG13	1.75	0.68
10:H:6:ILE:HD11	10:H:31:LEU:HD23	1.75	0.68
11:I:24:ASN:N	11:I:24:ASN:HD22	1.91	0.68
11:I:88:GLU:CD	11:I:89:TYR:H	1.96	0.68
5:C:42:LEU:O	5:C:46:LEU:HG	1.94	0.68
1:A:1302:C:OP1	15:M:16:ILE:HD11	1.92	0.68
1:A:505:G:H5'	1:A:534:U:H2'	1.75	0.68
11:I:94:ARG:NE	11:I:97:LEU:HD12	2.05	0.68
1:A:973:G:H3'	1:A:974:A:H5''	1.75	0.68

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:49:LEU:HD22	9:G:60:ALA:HB1	1.76	0.68
1:A:1118:U:O2	1:A:1118:U:H2'	1.92	0.68
20:R:21:ASP:OD1	20:R:23:LYS:HG3	1.93	0.68
5:C:5:HIS:ND1	16:N:88:MET:HB3	2.09	0.68
1:A:309:A:O3'	18:P:30:GLY:HA3	1.94	0.68
15:M:93:GLY:HA2	15:M:108:ARG:NH1	2.09	0.68
4:B:180:ILE:O	4:B:182:VAL:HG23	1.93	0.68
5:C:35:ASP:O	5:C:38:VAL:HG22	1.94	0.68
5:C:76:ILE:HD13	5:C:83:VAL:HG21	1.76	0.68
16:N:23:ARG:HA	16:N:26:LEU:HD13	1.75	0.68
4:B:163:ILE:HA	4:B:185:ILE:HD11	1.75	0.67
1:A:1071:C:H2'	1:A:1072:G:C8	2.28	0.67
19:Q:10:ARG:HG2	19:Q:57:VAL:HG22	1.75	0.67
10:H:76:ARG:HA	10:H:126:CYS:HB2	1.75	0.67
1:A:1370:G:O2'	1:A:1371:G:H5'	1.94	0.67
1:A:270:A:H2'	1:A:271:C:C6	2.29	0.67
1:A:423:G:H2'	1:A:424:G:C4'	2.24	0.67
11:I:9:GLY:O	11:I:15:ALA:HA	1.95	0.67
13:K:16:SER:N	13:K:78:ILE:HG22	2.09	0.67
14:L:85:ARG:HB3	14:L:93:ARG:HA	1.75	0.67
21:S:62:THR:CG2	21:S:64:GLU:HG2	2.24	0.67
6:D:84:ASN:ND2	6:D:85:THR:H	1.92	0.67
5:C:106:ARG:NH1	5:C:106:ARG:HB3	2.10	0.67
17:O:32:THR:HA	17:O:62:ARG:HH11	1.60	0.67
8:F:32:ALA:HB1	8:F:70:VAL:HG11	1.74	0.67
1:A:598:U:H4'	10:H:85:TYR:CG	2.29	0.67
8:F:29:ILE:HD13	8:F:64:VAL:HG21	1.75	0.67
21:S:38:THR:HG22	21:S:39:ILE:H	1.59	0.67
7:E:100:GLU:HB3	7:E:121:ASN:HB3	1.76	0.67
1:A:720:C:C4'	20:R:38:ILE:HD11	2.25	0.67
1:A:959:A:N3	1:A:985:C:H1'	2.08	0.67
14:L:49:ARG:HG3	14:L:65:TYR:CE2	2.29	0.67
1:A:1111:A:N1	5:C:176:THR:HG22	2.10	0.67
1:A:205:A:H2'	1:A:206:C:C6	2.30	0.67
7:E:147:ASN:ND2	10:H:70:VAL:HA	2.10	0.67
4:B:122:ASP:HB3	4:B:124:THR:HG22	1.75	0.67
4:B:66:ILE:O	4:B:89:PHE:HB2	1.93	0.67
1:A:443:C:H2'	1:A:444:G:H8	1.60	0.67
1:A:449:G:H2'	1:A:450:G:C8	2.29	0.67
4:B:29:PHE:HB2	4:B:44:LYS:HG2	1.77	0.67
1:A:1300:G:H1'	1:A:1301:U:C5	2.29	0.67
15:M:13:HIS:HB2	15:M:16:ILE:HG22	1.75	0.67

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:98:ARG:HG3	14:L:104:SER:O	1.95	0.67
18:P:17:TYR:H	18:P:17:TYR:HD1	1.43	0.67
1:A:278:G:H21	1:A:279:A:H62	1.42	0.67
13:K:30:ILE:HA	13:K:45:THR:HB	1.75	0.67
6:D:166:LYS:HZ2	6:D:166:LYS:HB3	1.60	0.66
5:C:61:LYS:HA	5:C:61:LYS:NZ	2.10	0.66
8:F:54:LEU:HD22	8:F:55:HIS:N	2.08	0.66
18:P:18:GLN:NE2	18:P:38:PHE:HB3	2.10	0.66
19:Q:44:HIS:O	19:Q:70:LYS:HG3	1.94	0.66
1:A:1412:C:H2'	1:A:1413:A:H8	1.60	0.66
9:G:55:LYS:HG2	9:G:59:GLU:CD	2.15	0.66
4:B:213:LEU:O	4:B:216:VAL:HG23	1.94	0.66
15:M:15:VAL:HG22	15:M:40:GLU:HB2	1.76	0.66
18:P:4:ILE:HG23	18:P:21:VAL:HG22	1.78	0.66
7:E:98:ALA:HB3	7:E:123:LEU:H	1.61	0.66
7:E:19:ARG:HD2	7:E:30:PHE:HA	1.77	0.66
11:I:11:ARG:HD3	11:I:106:ASP:HB3	1.75	0.66
1:A:1367:C:H5'	12:J:62:ARG:HH12	1.61	0.66
6:D:77:GLU:O	6:D:80:ARG:HG2	1.95	0.66
1:A:105:G:H2'	1:A:106:C:C6	2.31	0.66
11:I:18:VAL:HG11	11:I:81:GLY:HA3	1.77	0.66
15:M:80:MET:HE1	15:M:90:HIS:CB	2.25	0.66
8:F:50:PRO:HA	8:F:55:HIS:HB3	1.77	0.66
9:G:72:VAL:H	9:G:141:HIS:CE1	2.06	0.66
22:T:56:ILE:HD12	22:T:56:ILE:H	1.60	0.66
1:A:429:U:H1'	1:A:430:A:H5''	1.76	0.66
14:L:34:THR:HG21	14:L:53:ARG:HH21	1.60	0.66
1:A:513:C:H2'	1:A:514:C:C6	2.31	0.66
1:A:129:A:H1'	1:A:130:A:C8	2.30	0.66
7:E:85:LYS:HG2	7:E:86:GLY:H	1.59	0.66
15:M:64:VAL:HG23	15:M:65:GLU:HG2	1.77	0.66
17:O:77:TYR:OH	17:O:87:ARG:HD2	1.94	0.66
13:K:63:GLN:O	13:K:67:GLU:HG2	1.96	0.66
8:F:14:GLN:HE21	8:F:83:ALA:HA	1.60	0.66
6:D:12:ARG:HA	6:D:33:ILE:HG13	1.78	0.66
5:C:106:ARG:N	5:C:106:ARG:HD2	2.11	0.66
1:A:1166:G:H2'	1:A:1168:U:OP2	1.94	0.66
1:A:216:U:H2'	1:A:217:C:C6	2.30	0.66
1:A:1191:A:H5''	5:C:3:LYS:HZ3	1.60	0.66
1:A:1143:G:H2'	1:A:1144:G:C8	2.30	0.66
4:B:69:VAL:H	4:B:79:VAL:HG21	1.61	0.66
4:B:80:LYS:HG3	4:B:81:ASP:H	1.61	0.66

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:110:ARG:HE	9:G:122:GLU:HB2	1.61	0.66
1:A:812:G:H2'	1:A:812:G:N3	2.09	0.66
1:A:764:C:H2'	1:A:765:G:H5'	1.78	0.66
7:E:84:VAL:HB	7:E:144:GLU:N	2.11	0.66
18:P:5:ARG:NH2	18:P:24:SER:HA	2.10	0.66
1:A:309:A:H2'	1:A:310:G:H8	1.59	0.66
1:A:502:A:H4'	1:A:550:G:H4'	1.78	0.66
10:H:23:ALA:HA	10:H:62:LEU:HD13	1.77	0.66
4:B:34:ARG:HG2	4:B:39:ILE:HG13	1.77	0.66
4:B:160:LEU:HD12	4:B:182:VAL:HG22	1.78	0.66
18:P:36:VAL:O	18:P:53:ASP:HB2	1.96	0.66
13:K:82:GLU:HB3	13:K:108:ASN:HD22	1.61	0.66
1:A:613:C:P	6:D:80:ARG:HH22	2.19	0.66
4:B:11:ALA:HA	4:B:211:LEU:HD23	1.76	0.66
7:E:14:LEU:CD2	7:E:36:THR:HG22	2.26	0.65
6:D:61:ARG:HE	6:D:68:GLU:N	1.94	0.65
13:K:23:HIS:HB3	13:K:30:ILE:HG13	1.78	0.65
1:A:555:U:H2'	1:A:556:C:C6	2.31	0.65
1:A:1321:U:H3'	1:A:1322:C:O2	1.96	0.65
21:S:17:LYS:HA	21:S:20:LYS:HE3	1.77	0.65
8:F:92:THR:HG22	8:F:94:HIS:H	1.59	0.65
18:P:3:THR:HG22	18:P:66:THR:HB	1.79	0.65
1:A:308:C:H2'	1:A:309:A:H8	1.59	0.65
1:A:1309:G:H2'	1:A:1310:G:C8	2.31	0.65
7:E:92:ARG:HD2	7:E:93:VAL:N	2.07	0.65
1:A:1129:C:H1'	1:A:1130:A:N7	2.11	0.65
5:C:58:ARG:CA	5:C:63:ILE:HA	2.23	0.65
1:A:995:C:H2'	1:A:996:A:H5"	1.79	0.65
10:H:7:ALA:O	10:H:11:THR:HG23	1.97	0.65
11:I:4:GLN:NE2	11:I:21:LYS:HB2	2.12	0.65
11:I:113:LYS:HA	11:I:120:ALA:HB2	1.77	0.65
15:M:79:LEU:O	15:M:82:LEU:HG	1.97	0.65
15:M:26:LYS:O	15:M:29:SER:HB3	1.97	0.65
23:U:6:ARG:HB2	23:U:6:ARG:NH1	2.11	0.65
5:C:107:LYS:HB2	5:C:110:LEU:HD21	1.77	0.65
10:H:104:SER:HA	10:H:109:VAL:HG22	1.79	0.65
1:A:632:U:H3'	1:A:633:G:H5'	1.79	0.65
8:F:25:TYR:O	8:F:29:ILE:HG13	1.96	0.65
6:D:170:LEU:CA	6:D:182:LYS:HB2	2.26	0.65
5:C:53:ARG:NH1	5:C:55:VAL:HG13	2.12	0.65
7:E:21:SER:HA	7:E:28:ARG:HG3	1.78	0.65
20:R:59:LYS:HA	20:R:62:ARG:HG3	1.78	0.65

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1227:A:H8	1:A:1227:A:H5'	1.60	0.65
1:A:1273:C:H2'	1:A:1274:A:O4'	1.96	0.65
6:D:167:PRO:HB2	6:D:170:LEU:HD11	1.78	0.65
6:D:71:PHE:HE2	6:D:89:LEU:HD11	1.61	0.65
15:M:3:ILE:HD12	15:M:9:PRO:HD2	1.79	0.65
9:G:14:ASP:O	9:G:18:GLY:HA2	1.96	0.65
1:A:736:C:H2'	1:A:737:C:H6	1.62	0.65
7:E:81:GLN:HE22	7:E:149:PRO:HD2	1.61	0.65
10:H:14:ARG:HA	10:H:17:GLN:HB2	1.78	0.65
8:F:5:GLU:HG3	8:F:63:ASN:ND2	2.12	0.65
5:C:63:ILE:HG12	5:C:65:VAL:HG23	1.79	0.65
4:B:48:MET:HG3	4:B:199:ILE:HG22	1.79	0.65
6:D:8:LEU:HD23	6:D:21:LYS:HB3	1.79	0.65
15:M:75:SER:HB2	15:M:78:ARG:HH21	1.60	0.65
11:I:23:GLY:N	11:I:61:ASP:H	1.95	0.65
1:A:83:C:C2'	1:A:85:U:H3	2.10	0.65
1:A:1305:G:H21	1:A:1332:A:H8	1.44	0.65
22:T:2:ASN:ND2	22:T:3:ILE:HG13	2.11	0.65
1:A:269:C:H2'	1:A:270:A:H8	1.61	0.65
1:A:1063:C:H3'	1:A:1064:G:H2'	1.79	0.65
15:M:47:LEU:HG	15:M:51:GLN:HB2	1.78	0.65
11:I:25:GLY:HA2	11:I:60:LEU:O	1.97	0.65
5:C:96:VAL:HB	5:C:97:PRO:HD2	1.78	0.65
23:U:24:LYS:HA	23:U:28:LEU:HB2	1.77	0.65
7:E:105:ILE:HD11	7:E:123:LEU:HA	1.79	0.65
1:A:960:U:O2'	1:A:1223:C:H4'	1.97	0.65
8:F:10:VAL:HG12	8:F:11:HIS:H	1.62	0.64
4:B:55:GLU:OE2	4:B:58:LYS:HB3	1.97	0.64
4:B:112:ARG:NH1	4:B:112:ARG:HB2	2.12	0.64
15:M:12:LYS:HA	15:M:43:LYS:NZ	2.12	0.64
16:N:16:ALA:HA	16:N:54:SER:O	1.96	0.64
1:A:1176:A:H2'	1:A:1177:G:O4'	1.97	0.64
5:C:151:GLU:HB3	5:C:198:LYS:CB	2.26	0.64
1:A:1238:A:N7	1:A:1303:C:H1'	2.11	0.64
1:A:408:A:OP1	6:D:111:ALA:HB3	1.96	0.64
17:O:80:LEU:O	17:O:84:LEU:HD13	1.98	0.64
1:A:1254:A:H5'	1:A:1356:G:H4'	1.78	0.64
17:O:55:LEU:O	17:O:59:VAL:HG23	1.97	0.64
1:A:87:C:H2'	1:A:88:U:C6	2.32	0.64
13:K:114:PRO:O	23:U:28:LEU:HD21	1.97	0.64
20:R:52:ARG:O	20:R:56:ARG:HG2	1.96	0.64
1:A:1065:U:H5''	1:A:1190:G:N2	2.12	0.64

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:63:MET:O	7:E:66:ALA:HB3	1.96	0.64
16:N:50:LEU:HB2	16:N:51:PRO:HD3	1.80	0.64
21:S:27:LYS:HD3	21:S:28:LYS:HZ2	1.63	0.64
12:J:35:GLN:HB2	12:J:78:GLU:HB2	1.79	0.64
1:A:98:A:H2'	1:A:99:C:C6	2.33	0.64
1:A:1480:A:H2'	1:A:1481:U:C6	2.33	0.64
8:F:1:MET:O	8:F:65:GLU:HG3	1.97	0.64
1:A:946:A:H2'	1:A:947:G:C8	2.31	0.64
1:A:76:G:H2'	1:A:77:A:C8	2.33	0.64
1:A:874:G:N2	10:H:15:ASN:HD21	1.94	0.64
6:D:89:LEU:O	6:D:93:LEU:HG	1.97	0.64
18:P:18:GLN:HE21	18:P:38:PHE:HB3	1.61	0.64
12:J:9:ARG:HB2	12:J:99:GLN:HB2	1.79	0.64
1:A:1000:A:H2'	1:A:1001:C:C6	2.33	0.64
1:A:605:U:H2'	1:A:606:G:H8	1.61	0.64
10:H:35:ILE:O	10:H:38:VAL:HG12	1.97	0.64
11:I:48:ARG:HD3	11:I:51:LEU:HD12	1.80	0.64
11:I:83:THR:HA	11:I:86:LEU:HB2	1.79	0.64
23:U:34:ARG:HH21	23:U:36:PHE:HB3	1.62	0.64
13:K:83:VAL:HG11	13:K:96:ILE:HG23	1.78	0.64
8:F:88:MET:HG3	8:F:89:VAL:N	2.10	0.64
1:A:486:U:H2'	1:A:487:A:C8	2.32	0.64
12:J:102:LEU:N	12:J:102:LEU:HD13	2.12	0.64
1:A:1194:U:H2'	1:A:1195:C:C6	2.33	0.64
6:D:103:ARG:HD2	6:D:167:PRO:HB3	1.78	0.64
21:S:18:VAL:HG13	21:S:19:GLU:OE1	1.98	0.64
9:G:52:ARG:HH12	9:G:121:ASN:HD22	1.44	0.64
1:A:1327:C:H2'	1:A:1328:C:C6	2.33	0.64
1:A:672:U:H2'	1:A:673:A:H8	1.62	0.64
17:O:63:ARG:HH21	17:O:87:ARG:NE	1.95	0.64
1:A:860:A:H2'	1:A:861:G:O4'	1.97	0.64
1:A:731:G:H5'	1:A:766:A:H4'	1.80	0.64
1:A:1149:C:H2'	1:A:1150:A:C8	2.32	0.64
1:A:1241:G:H2'	1:A:1242:G:H8	1.61	0.64
5:C:72:PRO:HA	5:C:75:VAL:HG23	1.79	0.64
1:A:628:G:H2'	1:A:629:A:C8	2.33	0.64
9:G:45:ALA:HA	9:G:48:THR:HG23	1.79	0.64
4:B:147:LEU:HB3	4:B:151:LYS:HB3	1.79	0.64
1:A:922:G:H2'	1:A:923:A:C8	2.32	0.64
1:A:672:U:H2'	1:A:673:A:C8	2.33	0.64
1:A:736:C:H2'	1:A:737:C:C6	2.33	0.64
17:O:44:GLU:HB3	17:O:45:HIS:ND1	2.12	0.64

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:11:ASP:HB2	21:S:14:LEU:HD11	1.78	0.64
21:S:62:THR:HG23	21:S:64:GLU:H	1.62	0.64
4:B:143:LEU:HB2	4:B:144:GLU:OE2	1.98	0.64
1:A:1101:A:H5'	4:B:170:ILE:HD11	1.79	0.64
1:A:1226:C:OP2	15:M:101:THR:HG21	1.98	0.64
15:M:106:ARG:HA	15:M:106:ARG:HH11	1.63	0.64
11:I:49:GLN:N	11:I:50:PRO:HD2	2.13	0.63
1:A:975:A:O2'	1:A:1358:U:H1'	1.98	0.63
5:C:119:ILE:HD12	5:C:122:GLN:NE2	2.12	0.63
5:C:53:ARG:HB3	5:C:113:LYS:NZ	2.13	0.63
15:M:33:LEU:HD13	15:M:40:GLU:HB3	1.78	0.63
15:M:3:ILE:HG22	15:M:4:ALA:N	2.13	0.63
1:A:1237:C:OP1	1:A:1238:A:H1'	1.97	0.63
1:A:33:A:H2'	1:A:34:C:C6	2.32	0.63
14:L:93:ARG:H	14:L:93:ARG:HD2	1.63	0.63
10:H:76:ARG:HA	10:H:126:CYS:CB	2.28	0.63
1:A:707:U:H2'	1:A:708:C:C6	2.34	0.63
1:A:1465:A:H2'	1:A:1466:C:C6	2.33	0.63
7:E:87:VAL:HG22	7:E:88:HIS:N	2.13	0.63
5:C:61:LYS:HZ2	5:C:96:VAL:HG11	1.63	0.63
4:B:14:HIS:HA	4:B:208:ALA:HB2	1.80	0.63
9:G:72:VAL:HA	9:G:90:VAL:H	1.63	0.63
1:A:502:A:H2'	1:A:503:C:H6	1.62	0.63
4:B:105:THR:O	4:B:108:GLN:HG2	1.99	0.63
7:E:151:MET:HB3	7:E:154:ALA:HB3	1.80	0.63
10:H:11:THR:HA	10:H:14:ARG:NH1	2.13	0.63
1:A:1148:U:H5'	11:I:6:TYR:OH	1.99	0.63
1:A:829:G:H4'	4:B:24:PRO:CG	2.28	0.63
1:A:1314:C:C5	21:S:5:LYS:HG2	2.34	0.63
9:G:65:LEU:HD21	9:G:69:ARG:HH21	1.62	0.63
1:A:60:A:H4'	1:A:61:G:O5'	1.98	0.63
7:E:93:VAL:HG23	7:E:126:ALA:HA	1.81	0.63
5:C:168:ARG:HG2	5:C:169:GLU:N	2.11	0.63
22:T:65:LEU:HG	22:T:66:ILE:HD12	1.81	0.63
17:O:61:GLN:NE2	17:O:65:LEU:HD11	2.13	0.63
1:A:1436:U:H2'	1:A:1437:A:C8	2.31	0.63
9:G:16:LYS:HB3	9:G:16:LYS:NZ	2.14	0.63
1:A:17:U:H2'	1:A:18:C:C6	2.34	0.63
11:I:90:ASP:HB3	11:I:93:LEU:HD12	1.79	0.63
16:N:40:ARG:CZ	21:S:6:LYS:HB2	2.29	0.63
4:B:178:LEU:N	4:B:178:LEU:HD12	2.14	0.63
18:P:68:SER:HB3	18:P:71:VAL:HG12	1.79	0.63

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:194:C:O2'	1:A:195:A:H5'	1.98	0.63
1:A:1004:A:H2'	1:A:1005:A:C8	2.33	0.63
1:A:1222:G:H5''	21:S:77:ARG:HE	1.62	0.63
1:A:502:A:H2'	1:A:503:C:C6	2.33	0.63
17:O:11:VAL:HG21	17:O:21:THR:HG22	1.79	0.63
11:I:82:ILE:O	11:I:86:LEU:HB2	1.99	0.63
5:C:116:ALA:HB1	5:C:186:SER:HB3	1.81	0.63
23:U:24:LYS:HD2	23:U:25:ALA:N	2.13	0.63
9:G:70:PRO:HG3	9:G:102:TRP:HZ3	1.64	0.63
4:B:110:ILE:HG23	4:B:147:LEU:HD22	1.81	0.63
1:A:1226:C:H5''	15:M:101:THR:OG1	1.97	0.63
1:A:415:A:H2'	1:A:416:G:H5'	1.81	0.63
5:C:37:LYS:HB2	5:C:93:ILE:HG21	1.79	0.63
3:X:3:G:H5'	3:X:5:U:H5'	1.80	0.63
1:A:585:G:OP1	19:Q:38:LYS:HD3	1.97	0.63
7:E:149:PRO:O	7:E:152:VAL:HG23	1.99	0.63
1:A:1132:C:H2'	1:A:1133:G:C8	2.33	0.63
6:D:171:GLU:HB2	6:D:180:THR:HB	1.81	0.63
1:A:1320:C:N3	21:S:35:ARG:HD3	2.14	0.63
4:B:144:GLU:CD	4:B:144:GLU:H	2.02	0.63
15:M:42:VAL:HB	15:M:46:GLU:HG2	1.80	0.63
2:W:27:U:H2'	2:W:28:C:C6	2.33	0.63
4:B:69:VAL:C	4:B:79:VAL:HG11	2.18	0.63
1:A:629:A:H2'	1:A:630:A:O4'	1.98	0.63
1:A:255:G:H2'	1:A:256:U:C6	2.34	0.63
1:A:501:C:H2'	1:A:502:A:H8	1.64	0.63
1:A:211:G:N3	1:A:211:G:H3'	2.14	0.63
6:D:86:GLY:HA3	6:D:196:GLU:OE2	1.99	0.62
17:O:25:GLU:OE2	17:O:76:ARG:HB3	1.99	0.62
23:U:40:PRO:CB	23:U:44:ARG:HE	2.12	0.62
1:A:1513:A:H2'	1:A:1514:G:C8	2.33	0.62
14:L:53:ARG:O	14:L:54:VAL:HG13	1.98	0.62
1:A:1385:G:H5'	11:I:129:ARG:NH2	2.14	0.62
1:A:205:A:H2'	1:A:206:C:H6	1.63	0.62
1:A:512:U:H2'	1:A:513:C:C6	2.34	0.62
1:A:764:C:C2'	1:A:765:G:H5'	2.29	0.62
1:A:1062:U:H2'	1:A:1063:C:C6	2.33	0.62
13:K:58:THR:HB	13:K:59:PRO:HD2	1.81	0.62
4:B:30:ILE:HD11	4:B:40:ILE:HA	1.80	0.62
21:S:29:PRO:HA	21:S:47:THR:O	1.99	0.62
5:C:110:LEU:HB2	5:C:203:LYS:HE3	1.80	0.62
14:L:33:CYS:HB3	14:L:75:GLU:O	1.99	0.62

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:18:ASN:HB2	16:N:90:GLY:O	1.98	0.62
11:I:24:ASN:O	11:I:58:GLU:HA	1.99	0.62
7:E:22:LYS:HZ2	7:E:24:VAL:N	1.96	0.62
1:A:1010:U:H2'	1:A:1011:C:C6	2.34	0.62
10:H:81:GLY:HA2	19:Q:35:LYS:NZ	2.14	0.62
1:A:1432:G:H1'	1:A:1468:A:N6	2.15	0.62
7:E:89:THR:HG21	7:E:134:ASN:HD22	1.64	0.62
7:E:84:VAL:HB	7:E:143:LEU:CA	2.29	0.62
1:A:1305:G:H22	1:A:1331:G:H2'	1.64	0.62
7:E:115:GLU:HA	7:E:119:VAL:O	1.99	0.62
1:A:865:A:H5'	1:A:1078:U:O4	1.99	0.62
7:E:13:LYS:HB2	7:E:37:VAL:O	1.99	0.62
10:H:124:ILE:HD12	10:H:125:ILE:N	2.13	0.62
11:I:5:TYR:CD1	11:I:88:GLU:HG2	2.35	0.62
4:B:64:GLY:O	4:B:87:ASP:HB3	1.99	0.62
1:A:402:G:H2'	1:A:403:C:C6	2.34	0.62
13:K:34:THR:CG2	13:K:39:ASN:H	2.13	0.62
1:A:1000:A:H2'	1:A:1001:C:H6	1.63	0.62
1:A:1307:U:H2'	1:A:1308:U:C6	2.34	0.62
16:N:42:ASN:HA	16:N:45:LEU:HD12	1.82	0.62
12:J:12:ALA:HB2	12:J:96:VAL:HB	1.80	0.62
6:D:160:LEU:HD13	6:D:160:LEU:H	1.64	0.62
6:D:84:ASN:CG	6:D:85:THR:H	2.03	0.62
18:P:35:ARG:HG2	18:P:36:VAL:H	1.63	0.62
9:G:52:ARG:HH22	9:G:120:ALA:C	2.03	0.62
15:M:56:ARG:HA	15:M:59:VAL:HG12	1.82	0.62
1:A:1291:U:H2'	1:A:1292:G:H8	1.64	0.62
14:L:109:ARG:HG2	14:L:110:LYS:N	2.15	0.62
13:K:51:PHE:O	13:K:55:ARG:HB3	2.00	0.62
23:U:48:LYS:O	23:U:52:VAL:HB	1.99	0.62
5:C:190:THR:HG22	5:C:192:TYR:H	1.63	0.62
22:T:67:HIS:HB3	22:T:68:LYS:HE2	1.81	0.62
18:P:5:ARG:HB3	18:P:68:SER:HB2	1.80	0.62
1:A:269:C:H2'	1:A:270:A:C8	2.35	0.62
1:A:407:U:C1'	6:D:115:GLN:HE21	2.13	0.62
13:K:31:VAL:HG21	13:K:66:ALA:HA	1.80	0.62
14:L:2:THR:HB	14:L:5:GLN:HG3	1.81	0.62
1:A:272:C:H2'	1:A:273:U:C6	2.35	0.62
7:E:37:VAL:CG2	7:E:136:VAL:HG21	2.28	0.62
8:F:68:GLN:H	8:F:68:GLN:NE2	1.97	0.62
23:U:6:ARG:HB2	23:U:6:ARG:CZ	2.29	0.62
9:G:17:PHE:HB2	9:G:22:LEU:HD13	1.81	0.62

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1015:G:H2'	1:A:1016:A:C8	2.35	0.62
5:C:117:ASP:HA	5:C:120:THR:HB	1.81	0.62
9:G:100:MET:HA	9:G:103:ILE:HD12	1.81	0.62
1:A:202:G:H2'	1:A:203:G:C8	2.34	0.62
4:B:80:LYS:HG3	4:B:81:ASP:N	2.15	0.62
1:A:370:C:H2'	1:A:371:A:C8	2.35	0.62
1:A:151:A:H2'	1:A:152:A:O4'	2.00	0.62
15:M:44:ILE:HD12	15:M:44:ILE:H	1.64	0.62
6:D:63:ILE:HG23	6:D:64:TYR:CD1	2.35	0.62
1:A:1451:U:H5''	1:A:1452:C:OP2	1.99	0.62
18:P:26:ASN:ND2	18:P:31:ARG:HG2	2.15	0.62
10:H:110:MET:HB2	10:H:115:ALA:HB2	1.81	0.62
4:B:89:PHE:HB3	4:B:149:GLY:CA	2.30	0.62
1:A:451:A:C6	1:A:480:U:H2'	2.35	0.62
6:D:13:ARG:CA	6:D:37:PRO:HB3	2.29	0.62
1:A:299:G:H2'	1:A:300:A:C8	2.35	0.62
14:L:51:VAL:HG12	14:L:52:CYS:H	1.65	0.62
1:A:41:G:H2'	1:A:42:G:H8	1.65	0.62
7:E:84:VAL:C	7:E:143:LEU:HA	2.21	0.61
6:D:142:VAL:HG13	6:D:179:GLY:HA3	1.81	0.61
4:B:46:VAL:HG12	4:B:47:PRO:HD3	1.81	0.61
4:B:67:LEU:HB2	4:B:157:PRO:CB	2.28	0.61
9:G:70:PRO:HG3	9:G:102:TRP:CZ3	2.34	0.61
20:R:33:THR:HG22	20:R:37:LYS:O	2.00	0.61
20:R:40:PRO:HB2	20:R:43:ILE:HG12	1.81	0.61
7:E:50:GLY:HA3	7:E:61:LYS:HB2	1.82	0.61
7:E:92:ARG:O	7:E:93:VAL:HB	1.99	0.61
5:C:2:GLN:NE2	5:C:3:LYS:HE2	2.15	0.61
14:L:109:ARG:HG2	14:L:110:LYS:H	1.65	0.61
6:D:60:VAL:HA	6:D:63:ILE:HG22	1.81	0.61
19:Q:26:ARG:HB2	19:Q:26:ARG:HH11	1.63	0.61
7:E:111:ARG:HB2	7:E:111:ARG:HH11	1.65	0.61
7:E:111:ARG:NH1	7:E:111:ARG:HB2	2.15	0.61
7:E:16:ALA:O	7:E:34:ALA:HB1	2.01	0.61
7:E:85:LYS:HE3	7:E:94:PHE:HB2	1.81	0.61
4:B:30:ILE:CG1	4:B:40:ILE:HA	2.30	0.61
4:B:202:ASN:O	4:B:209:VAL:HG12	2.00	0.61
1:A:487:A:H2'	1:A:488:C:O4'	2.00	0.61
1:A:462:G:H2'	1:A:463:U:C6	2.35	0.61
1:A:1276:G:H2'	1:A:1277:C:C6	2.35	0.61
1:A:87:C:H2'	1:A:88:U:C5	2.35	0.61
16:N:10:VAL:HB	16:N:11:LYS:HZ3	1.65	0.61

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:54:THR:HA	15:M:57:ASP:HB3	1.82	0.61
1:A:476:U:H2'	1:A:477:C:C6	2.35	0.61
11:I:24:ASN:ND2	11:I:26:LYS:HG2	2.16	0.61
11:I:51:LEU:HB3	11:I:56:MET:CG	2.31	0.61
1:A:436:C:O2'	1:A:437:U:H5'	1.99	0.61
14:L:38:THR:HG22	14:L:50:LYS:HA	1.81	0.61
6:D:108:ALA:HB2	6:D:157:ALA:HA	1.82	0.61
11:I:87:MET:O	11:I:91:GLU:HA	2.01	0.61
11:I:116:GLY:O	11:I:117:LEU:HG	2.01	0.61
5:C:128:MET:HG2	5:C:131:ARG:HD3	1.80	0.61
5:C:185:THR:HG23	5:C:197:VAL:O	2.00	0.61
4:B:83:ALA:HB1	4:B:88:GLN:HB3	1.83	0.61
20:R:25:ILE:O	20:R:29:LYS:HG3	2.00	0.61
1:A:370:C:H2'	1:A:371:A:H8	1.63	0.61
1:A:173:U:H5'	1:A:197:A:O4'	2.01	0.61
10:H:23:ALA:HB2	10:H:61:THR:HA	1.82	0.61
1:A:1318:A:H4'	21:S:9:PHE:HB2	1.82	0.61
1:A:1099:G:H5''	4:B:94:ARG:HE	1.66	0.61
4:B:67:LEU:O	4:B:160:LEU:HD23	2.01	0.61
1:A:1458:G:H2'	1:A:1459:G:H8	1.66	0.61
7:E:89:THR:HG21	7:E:134:ASN:ND2	2.16	0.61
1:A:1057:G:O3'	5:C:196:GLY:HA3	2.00	0.61
4:B:72:LYS:HB2	4:B:204:ASP:OD1	2.00	0.61
1:A:673:A:H1'	20:R:63:TYR:HD1	1.65	0.61
9:G:110:ARG:HH21	9:G:122:GLU:CB	2.13	0.61
1:A:950:U:H2'	1:A:951:G:H8	1.65	0.61
14:L:69:GLU:O	14:L:107:LYS:HE2	2.01	0.61
7:E:37:VAL:HG22	7:E:46:GLY:O	2.01	0.61
9:G:31:VAL:O	9:G:31:VAL:HG12	2.00	0.61
1:A:403:C:H5'	6:D:131:ILE:HG23	1.83	0.61
15:M:43:LYS:O	15:M:46:GLU:HG3	2.01	0.61
9:G:58:LEU:HB2	9:G:62:GLU:CD	2.21	0.61
6:D:186:GLU:O	6:D:190:LEU:HG	2.01	0.61
9:G:16:LYS:HB3	9:G:16:LYS:HZ3	1.64	0.61
10:H:86:LYS:HD2	10:H:92:PRO:HD3	1.82	0.61
1:A:834:U:H2'	1:A:835:U:C6	2.35	0.61
12:J:27:GLU:O	12:J:30:LYS:HG2	2.01	0.61
1:A:507:C:C3'	1:A:508:U:H5''	2.31	0.61
1:A:16:A:O2'	1:A:17:U:H5'	2.01	0.61
14:L:51:VAL:HG12	14:L:52:CYS:N	2.16	0.61
1:A:147:G:H2'	1:A:148:G:C8	2.35	0.61
1:A:677:U:H3	1:A:713:G:H22	1.49	0.61

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:41:ASN:HD22	4:B:44:LYS:N	1.92	0.61
23:U:34:ARG:HG2	23:U:35:GLU:N	2.12	0.61
13:K:82:GLU:C	13:K:108:ASN:HD22	2.04	0.61
16:N:51:PRO:HG2	16:N:52:ARG:H	1.66	0.61
9:G:110:ARG:HB2	9:G:118:ARG:NH1	2.15	0.61
1:A:423:G:H2'	1:A:424:G:O4'	2.01	0.61
1:A:1048:G:H4'	16:N:2:LYS:HE2	1.81	0.61
7:E:50:GLY:HA2	7:E:61:LYS:HB2	1.83	0.60
1:A:1348:U:H4'	11:I:121:ARG:CD	2.23	0.60
9:G:42:VAL:O	9:G:46:LEU:HB2	2.01	0.60
11:I:12:LYS:HG3	11:I:109:GLN:HG3	1.83	0.60
19:Q:62:GLU:HG2	19:Q:63:CYS:N	2.15	0.60
14:L:64:SER:OG	14:L:96:THR:HG23	2.01	0.60
1:A:1202:U:H4'	16:N:68:ARG:HD2	1.82	0.60
16:N:96:LYS:O	16:N:97:LYS:HG3	2.00	0.60
1:A:1323:G:H2'	1:A:1324:A:H8	1.66	0.60
1:A:454:G:H2'	1:A:455:G:H8	1.64	0.60
1:A:1513:A:H2'	1:A:1514:G:H8	1.65	0.60
1:A:335:C:H2'	1:A:336:A:H8	1.67	0.60
8:F:38:ARG:HB3	8:F:63:ASN:HB2	1.82	0.60
4:B:21:TYR:HB3	4:B:189:ASN:HD22	1.66	0.60
21:S:4:LEU:HD22	21:S:8:PRO:HB3	1.83	0.60
4:B:210:THR:O	4:B:213:LEU:HG	2.00	0.60
23:U:39:LYS:H	23:U:40:PRO:HD2	1.66	0.60
1:A:33:A:H2'	1:A:34:C:H6	1.67	0.60
9:G:144:ALA:O	9:G:146:ALA:N	2.33	0.60
13:K:33:ILE:HG13	13:K:73:VAL:HG21	1.83	0.60
16:N:42:ASN:HA	16:N:45:LEU:CD1	2.32	0.60
13:K:51:PHE:HB3	13:K:55:ARG:O	2.00	0.60
13:K:81:LEU:HD13	13:K:104:PHE:CD1	2.37	0.60
1:A:1381:U:O2'	1:A:1382:C:H5'	2.01	0.60
1:A:1527:U:OP2	23:U:38:GLU:HB3	2.01	0.60
10:H:79:ARG:H	10:H:79:ARG:HD3	1.66	0.60
8:F:39:LEU:HD13	8:F:40:GLU:N	2.15	0.60
4:B:55:GLU:OE2	4:B:59:ILE:HG12	2.01	0.60
1:A:640:A:O2'	1:A:641:U:H5'	2.01	0.60
22:T:41:GLY:O	22:T:42:ASP:HB2	2.01	0.60
6:D:187:ARG:NH2	6:D:196:GLU:HG2	2.11	0.60
9:G:137:ARG:C	9:G:139:ASP:H	2.05	0.60
9:G:91:ARG:O	9:G:95:ARG:HG2	2.00	0.60
14:L:38:THR:HG22	14:L:50:LYS:HG3	1.82	0.60
5:C:166:TRP:CG	5:C:167:TYR:N	2.69	0.60

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1103:C:H5'	4:B:97:GLY:O	2.00	0.60
1:A:667:G:H4'	17:O:50:HIS:ND1	2.17	0.60
7:E:52:ALA:HB2	7:E:61:LYS:NZ	2.16	0.60
1:A:1134:G:C2	1:A:1135:U:H1'	2.37	0.60
11:I:22:PRO:HA	11:I:60:LEU:HB2	1.83	0.60
4:B:209:VAL:HG23	4:B:210:THR:N	2.17	0.60
12:J:51:VAL:HG22	16:N:80:ARG:HG3	1.81	0.60
1:A:407:U:H1'	6:D:115:GLN:HE21	1.67	0.60
1:A:384:G:H2'	1:A:385:C:C6	2.36	0.60
1:A:1499:A:O2'	1:A:1500:A:H5'	2.01	0.60
7:E:37:VAL:HG21	7:E:136:VAL:CG2	2.30	0.60
1:A:1375:A:H5'	9:G:27:ASN:HB3	1.83	0.60
16:N:29:ILE:HG13	16:N:34:ASN:CG	2.21	0.60
6:D:32:LYS:O	6:D:35:GLN:HB2	2.02	0.60
1:A:1260:G:H4'	1:A:1283:U:O2'	2.02	0.60
1:A:154:U:H2'	1:A:155:A:H8	1.65	0.60
17:O:23:SER:O	17:O:26:VAL:HG12	2.00	0.60
16:N:66:THR:HG22	16:N:82:LYS:HD3	1.83	0.60
5:C:11:LEU:HD12	16:N:96:LYS:HG3	1.83	0.60
1:A:67:C:H2'	1:A:68:G:H8	1.65	0.60
1:A:1282:C:H2'	1:A:1283:U:C6	2.36	0.60
15:M:47:LEU:HA	15:M:51:GLN:OE1	2.01	0.60
10:H:45:ILE:HA	10:H:63:LYS:H	1.66	0.60
1:A:1224:U:O2'	1:A:1322:C:H5'	2.02	0.60
23:U:40:PRO:HB2	23:U:44:ARG:HB2	1.84	0.60
1:A:707:U:H2'	1:A:708:C:H6	1.66	0.60
8:F:18:VAL:HG21	8:F:58:HIS:CG	2.37	0.60
1:A:439:U:O4'	6:D:119:HIS:HA	2.02	0.60
1:A:62:U:OP1	1:A:386:C:H5'	2.01	0.60
10:H:52:GLY:HA3	10:H:56:PRO:HA	1.84	0.60
7:E:125:LYS:HD2	7:E:126:ALA:N	2.16	0.60
11:I:48:ARG:HG3	11:I:52:GLU:OE1	2.01	0.60
15:M:76:ILE:O	15:M:80:MET:HE3	2.02	0.60
4:B:14:HIS:ND1	4:B:42:LEU:HD13	2.17	0.60
17:O:63:ARG:HH21	17:O:87:ARG:CZ	2.15	0.60
5:C:149:LYS:HE3	5:C:200:TRP:HE3	1.67	0.59
4:B:206:ILE:HA	4:B:210:THR:OG1	2.02	0.59
1:A:1219:A:H5''	16:N:52:ARG:NH1	2.17	0.59
1:A:1171:A:H2'	1:A:1172:C:C6	2.37	0.59
1:A:312:C:H2'	1:A:313:A:C8	2.37	0.59
1:A:461:A:H2'	1:A:461:A:N3	2.16	0.59
10:H:17:GLN:NE2	10:H:62:LEU:HB3	2.16	0.59

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:6:ILE:HG12	8:F:62:MET:HB2	1.82	0.59
4:B:23:ASN:ND2	4:B:24:PRO:HD2	2.16	0.59
1:A:619:U:C2	6:D:131:ILE:HD11	2.37	0.59
18:P:50:THR:HG22	18:P:51:ARG:N	2.17	0.59
1:A:83:C:H2'	1:A:85:U:C4	2.38	0.59
14:L:56:LEU:HB2	14:L:58:ASN:OD1	2.01	0.59
1:A:236:A:H2'	1:A:237:G:H8	1.66	0.59
19:Q:68:LYS:HG2	19:Q:69:THR:HG23	1.83	0.59
17:O:32:THR:HG21	17:O:84:LEU:HD23	1.84	0.59
3:X:3:G:H1'	3:X:5:U:C2	2.36	0.59
1:A:1352:C:H2'	1:A:1353:G:C8	2.37	0.59
1:A:175:C:H2'	1:A:176:C:C6	2.37	0.59
1:A:1032:G:H2'	1:A:1033:G:O4'	2.01	0.59
9:G:47:GLU:HA	9:G:57:GLU:OE1	2.01	0.59
9:G:83:THR:O	9:G:84:TYR:HB2	2.00	0.59
21:S:43:MET:O	21:S:46:LEU:HB2	2.01	0.59
18:P:75:ILE:O	18:P:78:VAL:HG12	2.02	0.59
1:A:1277:C:H1'	1:A:1282:C:C2	2.37	0.59
1:A:1308:U:H5''	15:M:96:VAL:HG21	1.84	0.59
6:D:155:LYS:HA	6:D:158:LEU:HG	1.83	0.59
10:H:40:LYS:HA	10:H:45:ILE:HG13	1.83	0.59
5:C:109:GLU:HB3	5:C:139:ASN:HB2	1.84	0.59
5:C:118:SER:O	5:C:122:GLN:HG3	2.01	0.59
5:C:128:MET:HE3	5:C:129:PHE:H	1.67	0.59
4:B:69:VAL:CA	4:B:79:VAL:HG11	2.31	0.59
1:A:474:G:H2'	1:A:475:C:O4'	2.02	0.59
9:G:109:LYS:HE2	9:G:109:LYS:HA	1.84	0.59
1:A:213:G:H2'	1:A:214:C:H5'	1.84	0.59
1:A:69:G:H2'	1:A:70:U:C6	2.37	0.59
7:E:75:LEU:HD13	7:E:80:LEU:HA	1.85	0.59
9:G:121:ASN:HD22	9:G:121:ASN:N	1.99	0.59
9:G:71:THR:HA	9:G:95:ARG:NE	2.17	0.59
8:F:8:PHE:O	8:F:60:VAL:HG12	2.03	0.59
5:C:10:ARG:HH21	5:C:179:ALA:N	2.00	0.59
1:A:1096:C:H2'	1:A:1097:C:C6	2.37	0.59
9:G:30:MET:O	9:G:31:VAL:HG23	2.03	0.59
6:D:103:ARG:HB3	6:D:167:PRO:HG3	1.84	0.59
4:B:26:MET:O	4:B:26:MET:HG2	2.03	0.59
5:C:129:PHE:HE2	5:C:152:VAL:HG21	1.67	0.59
6:D:58:GLN:HA	6:D:58:GLN:HE21	1.66	0.59
9:G:73:GLU:N	9:G:90:VAL:HG23	2.17	0.59
4:B:195:VAL:HG12	4:B:196:ASP:N	2.18	0.59

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:270:A:H2'	1:A:271:C:H6	1.67	0.59
15:M:102:LYS:HB2	15:M:102:LYS:HZ2	1.65	0.59
1:A:605:U:H2'	1:A:606:G:C8	2.37	0.59
4:B:44:LYS:HZ3	4:B:47:PRO:HB2	1.67	0.59
1:A:312:C:H2'	1:A:313:A:H8	1.68	0.59
1:A:512:U:H2'	1:A:513:C:H6	1.67	0.59
1:A:41:G:H2'	1:A:42:G:C8	2.38	0.59
14:L:79:ILE:HD12	14:L:96:THR:HG21	1.84	0.59
1:A:1060:U:H5''	12:J:53:ILE:HG12	1.85	0.59
1:A:1251:A:H2'	1:A:1252:A:C8	2.37	0.59
7:E:15:ILE:HG13	7:E:36:THR:HA	1.85	0.59
7:E:84:VAL:HG22	10:H:72:GLU:OE1	2.02	0.59
8:F:5:GLU:HG3	8:F:63:ASN:HD21	1.66	0.59
5:C:131:ARG:O	5:C:134:LYS:HB3	2.02	0.59
21:S:44:ILE:HD11	21:S:66:VAL:HG22	1.85	0.59
1:A:1305:G:N2	1:A:1331:G:H2'	2.17	0.59
8:F:59:TYR:O	8:F:60:VAL:HB	2.03	0.59
17:O:63:ARG:HA	17:O:63:ARG:HH11	1.67	0.59
13:K:16:SER:H	13:K:78:ILE:HG22	1.67	0.59
1:A:632:U:H6	1:A:633:G:H5'	1.68	0.59
7:E:35:LEU:HD23	7:E:36:THR:N	2.17	0.59
10:H:64:TYR:HA	10:H:69:ALA:HA	1.84	0.59
1:A:841:C:H3'	1:A:843:U:OP2	2.02	0.59
11:I:90:ASP:CB	11:I:93:LEU:HD12	2.33	0.59
9:G:35:LYS:O	9:G:38:ALA:HB3	2.03	0.59
6:D:16:THR:O	6:D:18:LEU:HD23	2.03	0.59
6:D:21:LYS:O	6:D:21:LYS:HD3	2.03	0.59
19:Q:67:SER:HB3	19:Q:70:LYS:HB3	1.84	0.59
6:D:186:GLU:HB2	6:D:189:ASP:CG	2.23	0.59
1:A:443:C:H2'	1:A:444:G:C8	2.38	0.59
14:L:109:ARG:HG3	14:L:109:ARG:HH11	1.66	0.59
1:A:575:G:H4'	1:A:576:C:H5''	1.84	0.59
1:A:1371:G:H2'	1:A:1372:U:O4'	2.03	0.59
16:N:26:LEU:O	16:N:44:VAL:HG11	2.03	0.59
23:U:5:VAL:O	23:U:6:ARG:HG3	2.02	0.59
19:Q:58:VAL:HG12	19:Q:77:VAL:HA	1.85	0.59
1:A:635:A:H2'	1:A:636:U:H6	1.67	0.59
4:B:73:ARG:HH11	4:B:73:ARG:C	2.07	0.58
1:A:699:C:C2'	1:A:700:G:H5''	2.31	0.58
1:A:1053:G:N7	1:A:1199:U:H3'	2.18	0.58
1:A:438:U:H4'	6:D:119:HIS:HB3	1.85	0.58
14:L:4:ASN:O	14:L:8:ARG:HD3	2.03	0.58

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1446:A:H2'	1:A:1447:A:H5''	1.85	0.58
1:A:264:C:H4'	19:Q:64:ARG:HE	1.68	0.58
13:K:74:LYS:HE3	13:K:79:LYS:HE2	1.84	0.58
1:A:974:A:C4'	1:A:975:A:H5'	2.33	0.58
5:C:57:GLU:O	5:C:64:ARG:HG3	2.02	0.58
15:M:72:ILE:HG23	15:M:73:SER:H	1.69	0.58
4:B:71:THR:H	4:B:167:HIS:CD2	2.21	0.58
1:A:402:G:H2'	1:A:403:C:H6	1.66	0.58
13:K:95:THR:HG23	13:K:96:ILE:N	2.18	0.58
1:A:677:U:H2'	1:A:678:U:H6	1.67	0.58
1:A:189:A:H2'	1:A:190:A:C8	2.38	0.58
1:A:1078:U:H4'	7:E:134:ASN:HD21	1.69	0.58
11:I:46:VAL:HA	11:I:49:GLN:CD	2.24	0.58
5:C:57:GLU:HB3	5:C:64:ARG:CD	2.33	0.58
4:B:151:LYS:HG3	4:B:152:ASP:H	1.68	0.58
1:A:203:G:H1'	1:A:465:A:N1	2.18	0.58
1:A:437:U:H2'	1:A:438:U:O4'	2.04	0.58
1:A:1354:U:H2'	1:A:1355:G:C8	2.38	0.58
4:B:184:ALA:H	4:B:198:VAL:HG11	1.67	0.58
1:A:842:U:H2'	1:A:843:U:O3'	2.04	0.58
1:A:1144:G:H21	1:A:1146:A:H62	1.51	0.58
1:A:1239:A:H4'	1:A:1240:U:H5'	1.84	0.58
9:G:49:LEU:HG	9:G:52:ARG:HH21	1.68	0.58
15:M:85:TYR:CZ	15:M:89:ARG:HD2	2.38	0.58
1:A:1480:A:H2'	1:A:1481:U:H6	1.67	0.58
1:A:1463:U:H2'	1:A:1464:U:C6	2.39	0.58
1:A:22:G:H2'	1:A:23:C:H6	1.68	0.58
1:A:1488:G:O2'	1:A:1489:G:H5'	2.03	0.58
11:I:51:LEU:HB3	11:I:56:MET:HG3	1.86	0.58
1:A:1342:C:H2'	1:A:1343:G:C8	2.39	0.58
6:D:87:GLU:HG3	6:D:88:ASN:H	1.68	0.58
18:P:50:THR:HG22	18:P:51:ARG:H	1.69	0.58
13:K:28:ASN:ND2	13:K:56:LYS:HD2	2.16	0.58
21:S:27:LYS:HD3	21:S:28:LYS:NZ	2.18	0.58
1:A:565:U:H3'	1:A:566:G:H2'	1.85	0.58
10:H:24:VAL:HG22	10:H:25:THR:H	1.69	0.58
1:A:838:G:H2'	1:A:839:C:O4'	2.03	0.58
7:E:15:ILE:HG23	7:E:109:ALA:HB3	1.84	0.58
1:A:843:U:H5'	1:A:844:G:OP2	2.04	0.58
4:B:44:LYS:C	4:B:47:PRO:HD2	2.23	0.58
16:N:96:LYS:HG2	16:N:97:LYS:NZ	2.18	0.58
1:A:409:U:H2'	1:A:410:G:C8	2.37	0.58

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:87:PRO:CG	9:G:148:LYS:HA	2.33	0.58
16:N:10:VAL:HB	16:N:11:LYS:NZ	2.18	0.58
1:A:958:A:C2	21:S:54:ARG:HG3	2.37	0.58
10:H:43:GLY:O	10:H:70:VAL:HG21	2.02	0.58
1:A:598:U:H4'	10:H:85:TYR:CD2	2.39	0.58
11:I:27:ILE:HG23	11:I:27:ILE:O	2.04	0.58
5:C:128:MET:SD	5:C:129:PHE:N	2.77	0.58
4:B:68:PHE:O	4:B:69:VAL:HG13	2.03	0.58
23:U:19:LYS:CG	23:U:20:ARG:HE	2.17	0.58
1:A:922:G:H2'	1:A:923:A:H8	1.68	0.58
6:D:13:ARG:O	6:D:14:GLU:HB2	2.03	0.58
1:A:1225:A:H3'	15:M:101:THR:OG1	2.03	0.58
1:A:1096:C:H2'	1:A:1097:C:H6	1.68	0.58
5:C:29:ALA:HB2	16:N:74:ARG:O	2.04	0.58
1:A:1323:G:H4'	1:A:1362:A:C5	2.39	0.58
4:B:70:GLY:CA	4:B:163:ILE:HB	2.34	0.58
1:A:468:A:H3'	1:A:469:C:H6	1.69	0.58
1:A:1169:A:H2'	1:A:1170:A:C8	2.38	0.58
14:L:35:ARG:HD3	14:L:37:TYR:CE2	2.38	0.58
1:A:1004:A:H2'	1:A:1005:A:H8	1.68	0.58
9:G:65:LEU:HD23	9:G:66:GLU:HG3	1.86	0.58
1:A:272:C:H2'	1:A:273:U:H6	1.67	0.58
11:I:24:ASN:N	11:I:24:ASN:ND2	2.52	0.58
4:B:85:SER:HB3	4:B:88:GLN:CD	2.24	0.58
1:A:242:G:H2'	1:A:243:A:H5''	1.86	0.58
6:D:94:GLU:OE1	6:D:190:LEU:HD22	2.04	0.58
1:A:129:A:H1'	1:A:130:A:N7	2.19	0.58
5:C:122:GLN:HA	5:C:125:ARG:NH1	2.19	0.58
18:P:8:ARG:HB3	18:P:28:ARG:HH22	1.67	0.58
1:A:797:C:OP1	13:K:126:ARG:HG2	2.03	0.58
1:A:1053:G:H4'	1:A:1054:C:H5'	1.84	0.58
17:O:66:LEU:HB3	17:O:77:TYR:HE1	1.69	0.58
9:G:110:ARG:NH2	9:G:122:GLU:HB2	2.19	0.58
1:A:1284:C:H3'	1:A:1285:A:H5''	1.84	0.58
1:A:1245:C:H2'	1:A:1246:A:C8	2.39	0.58
6:D:95:GLY:HA3	6:D:135:GLN:CD	2.24	0.58
1:A:685:G:O2'	1:A:686:U:H5'	2.04	0.58
1:A:1298:U:H2'	9:G:113:LYS:NZ	2.19	0.58
1:A:493:A:H3'	1:A:494:G:C8	2.38	0.58
22:T:48:LYS:HA	22:T:51:ASN:HD21	1.69	0.58
1:A:1149:C:OP1	11:I:10:ARG:HG2	2.04	0.57
6:D:160:LEU:HD22	6:D:161:ALA:N	2.19	0.57

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:38:HIS:CD2	4:B:188:THR:HG22	2.38	0.57
4:B:67:LEU:HA	4:B:89:PHE:O	2.04	0.57
1:A:626:G:H2'	1:A:627:G:C8	2.39	0.57
18:P:20:VAL:HG21	18:P:32:PHE:HB2	1.86	0.57
9:G:102:TRP:CD2	9:G:136:LYS:HD2	2.39	0.57
16:N:9:GLU:HA	16:N:12:ARG:HH11	1.68	0.57
5:C:120:THR:HG23	5:C:188:ALA:HB2	1.85	0.57
1:A:1498:U:H1'	1:A:1499:A:N7	2.18	0.57
1:A:1029:U:H2'	1:A:1031:C:C2	2.39	0.57
1:A:1354:U:H2'	1:A:1355:G:H8	1.68	0.57
1:A:22:G:H2'	1:A:23:C:C6	2.39	0.57
6:D:95:GLY:HA3	6:D:135:GLN:NE2	2.19	0.57
6:D:160:LEU:CD1	6:D:160:LEU:H	2.16	0.57
5:C:133:MET:O	5:C:137:VAL:HG23	2.04	0.57
23:U:18:PHE:HB3	23:U:19:LYS:HZ2	1.69	0.57
12:J:31:ARG:O	12:J:32:THR:HB	2.03	0.57
12:J:74:VAL:HG12	12:J:76:ILE:HG13	1.85	0.57
15:M:22:TYR:CE2	15:M:69:ARG:HG3	2.39	0.57
12:J:51:VAL:CG2	16:N:80:ARG:HG3	2.34	0.57
5:C:10:ARG:HH12	5:C:181:ILE:HB	1.68	0.57
1:A:1038:C:H2'	1:A:1039:G:C8	2.39	0.57
1:A:1179:A:H4'	11:I:104:THR:HA	1.86	0.57
11:I:50:PRO:HG2	11:I:51:LEU:HD23	1.86	0.57
5:C:71:ARG:NH2	5:C:74:ILE:HD13	2.18	0.57
4:B:59:ILE:HD12	4:B:220:VAL:HG11	1.86	0.57
15:M:28:ARG:NH2	15:M:62:PHE:HB2	2.16	0.57
1:A:323:U:H2'	1:A:324:G:O4'	2.04	0.57
1:A:426:U:H4'	6:D:39:GLN:HA	1.85	0.57
1:A:1356:G:H2'	1:A:1357:A:H8	1.66	0.57
10:H:79:ARG:N	10:H:79:ARG:HD3	2.19	0.57
16:N:63:CYS:SG	16:N:66:THR:HG23	2.44	0.57
21:S:42:ASN:OD1	21:S:43:MET:HG3	2.03	0.57
1:A:43:C:OP1	18:P:12:LYS:HB3	2.05	0.57
6:D:61:ARG:HA	6:D:66:VAL:HG13	1.86	0.57
5:C:106:ARG:C	5:C:107:LYS:HD2	2.25	0.57
9:G:110:ARG:HH21	9:G:122:GLU:CA	2.16	0.57
14:L:71:HIS:NE2	14:L:73:LEU:HB2	2.18	0.57
1:A:1349:A:OP1	11:I:119:LYS:HB2	2.05	0.57
14:L:106:VAL:CG2	14:L:116:TYR:HB3	2.34	0.57
4:B:35:ASN:O	4:B:36:LYS:HG3	2.04	0.57
1:A:1115:U:H2'	1:A:1116:U:C6	2.39	0.57
10:H:119:GLY:C	10:H:120:LEU:HD22	2.24	0.57

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:6:TYR:HA	11:I:18:VAL:O	2.03	0.57
4:B:59:ILE:HG22	4:B:62:ARG:HH11	1.70	0.57
1:A:1171:A:H2'	1:A:1172:C:H6	1.70	0.57
1:A:279:A:H5''	1:A:280:C:H3'	1.87	0.57
9:G:65:LEU:HD23	9:G:66:GLU:N	2.18	0.57
1:A:1060:U:C5'	12:J:53:ILE:HG12	2.35	0.57
1:A:1018:G:H2'	1:A:1019:A:C8	2.40	0.57
7:E:52:ALA:C	7:E:54:GLU:H	2.08	0.57
10:H:102:VAL:CG2	10:H:125:ILE:HB	2.33	0.57
4:B:101:THR:C	4:B:103:TRP:H	2.06	0.57
8:F:3:HIS:CG	8:F:92:THR:HG23	2.39	0.57
15:M:16:ILE:HG23	15:M:17:ALA:N	2.14	0.57
8:F:41:ASP:OD2	8:F:42:TRP:N	2.37	0.57
14:L:80:LEU:HB3	14:L:97:VAL:CG2	2.34	0.57
22:T:69:ASN:HD22	22:T:69:ASN:N	1.95	0.57
1:A:764:C:H3'	1:A:765:G:H21	1.68	0.57
1:A:996:A:H2'	1:A:997:U:C6	2.40	0.57
1:A:1206:G:O4'	5:C:193:GLY:HA2	2.05	0.57
1:A:1038:C:H2'	1:A:1039:G:H8	1.69	0.57
17:O:79:ARG:HA	17:O:82:GLU:OE1	2.04	0.57
13:K:118:ASN:HD22	13:K:118:ASN:N	2.03	0.57
1:A:65:A:H2	1:A:381:C:H2'	1.70	0.57
11:I:35:GLU:HA	11:I:39:GLY:HA2	1.85	0.57
12:J:65:TYR:OH	16:N:84:ARG:HG3	2.04	0.57
6:D:29:THR:HG22	6:D:30:LYS:H	1.69	0.57
16:N:5:MET:HG2	16:N:8:ARG:NH2	2.19	0.57
15:M:14:ALA:C	15:M:18:LEU:HD13	2.24	0.57
14:L:106:VAL:HB	14:L:116:TYR:HB3	1.87	0.57
1:A:120:A:H2'	1:A:121:U:H5''	1.87	0.57
9:G:27:ASN:O	9:G:30:MET:HB2	2.05	0.57
5:C:61:LYS:O	5:C:97:PRO:HD2	2.05	0.57
6:D:84:ASN:ND2	6:D:86:GLY:H	2.02	0.57
18:P:22:ALA:HB2	18:P:32:PHE:HA	1.85	0.57
9:G:136:LYS:HA	9:G:136:LYS:HE3	1.86	0.57
16:N:60:ARG:HG2	16:N:62:ARG:NH1	2.20	0.57
6:D:146:GLU:O	6:D:149:LYS:HG2	2.04	0.57
1:A:335:C:H2'	1:A:336:A:C8	2.40	0.57
4:B:120:SER:HA	4:B:125:PHE:CE2	2.40	0.57
7:E:44:ARG:HG2	7:E:45:VAL:N	2.20	0.57
1:A:78:A:H2'	1:A:79:G:C8	2.39	0.57
16:N:95:LEU:HD13	16:N:96:LYS:N	2.20	0.57
15:M:70:ARG:O	15:M:74:MET:HG2	2.05	0.57

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:17:LEU:HD13	12:J:21:ALA:HB3	1.87	0.57
4:B:112:ARG:HB2	4:B:112:ARG:HH11	1.70	0.57
15:M:22:TYR:C	15:M:69:ARG:HH12	2.07	0.57
1:A:204:G:H2'	1:A:205:A:H8	1.69	0.57
1:A:105:G:H2'	1:A:106:C:H6	1.68	0.57
5:C:120:THR:HG23	5:C:188:ALA:CB	2.34	0.57
1:A:577:G:O2'	1:A:578:C:H5'	2.05	0.57
1:A:858:G:O6	1:A:869:G:H3'	2.05	0.57
7:E:39:GLY:C	7:E:116:VAL:HG11	2.26	0.57
8:F:10:VAL:O	8:F:57:ALA:HB1	2.05	0.57
1:A:1147:C:H2'	1:A:1148:U:C6	2.40	0.57
6:D:120:LYS:HB3	6:D:145:ARG:HD2	1.86	0.57
5:C:143:LEU:N	5:C:143:LEU:HD13	2.18	0.57
14:L:24:GLU:HB3	14:L:26:CYS:SG	2.45	0.57
8:F:15:SER:O	8:F:18:VAL:HG23	2.05	0.57
7:E:20:VAL:O	7:E:29:ILE:HB	2.05	0.57
4:B:10:LYS:HE3	4:B:211:LEU:HG	1.87	0.57
1:A:500:G:H1'	1:A:547:A:N1	2.19	0.57
1:A:663:A:O2'	1:A:664:G:H5'	2.05	0.57
1:A:1496:C:H2'	1:A:1497:G:O4'	2.05	0.57
8:F:61:LEU:HD12	8:F:63:ASN:OD1	2.04	0.56
8:F:81:ASN:HB3	8:F:84:VAL:CG1	2.35	0.56
4:B:151:LYS:HG3	4:B:152:ASP:N	2.20	0.56
1:A:235:C:H2'	1:A:236:A:C8	2.40	0.56
5:C:108:PRO:HA	5:C:114:LEU:HD11	1.87	0.56
1:A:1219:A:H5''	16:N:52:ARG:HH12	1.70	0.56
1:A:1284:C:H3'	1:A:1285:A:C5'	2.35	0.56
1:A:683:G:O2'	1:A:684:U:H5'	2.03	0.56
1:A:493:A:H3'	1:A:494:G:H8	1.70	0.56
1:A:404:G:H2'	1:A:405:U:H6	1.69	0.56
11:I:94:ARG:HB3	11:I:98:ARG:NH2	2.20	0.56
4:B:71:THR:HG23	4:B:75:ALA:HB3	1.88	0.56
12:J:8:ILE:HD11	12:J:74:VAL:HG11	1.86	0.56
11:I:46:VAL:HA	11:I:49:GLN:OE1	2.05	0.56
1:A:829:G:H4'	4:B:24:PRO:HG3	1.86	0.56
4:B:21:TYR:CB	4:B:189:ASN:HD22	2.18	0.56
5:C:142:ARG:HB3	5:C:143:LEU:HD13	1.88	0.56
5:C:83:VAL:CG1	5:C:100:ILE:HG21	2.35	0.56
21:S:68:HIS:HB3	21:S:72:GLU:OE1	2.05	0.56
18:P:6:LEU:HD13	18:P:70:ARG:HG3	1.88	0.56
12:J:8:ILE:HG13	12:J:74:VAL:HB	1.87	0.56
1:A:202:G:H21	1:A:465:A:N6	2.02	0.56

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1160:G:OP1	4:B:131:LYS:HD3	2.04	0.56
14:L:100:ALA:O	14:L:103:CYS:SG	2.63	0.56
1:A:1001:C:H2'	1:A:1002:G:H8	1.70	0.56
8:F:67:PRO:O	8:F:70:VAL:HG22	2.04	0.56
10:H:81:GLY:HA2	19:Q:35:LYS:HZ1	1.70	0.56
1:A:635:A:H2'	1:A:636:U:C6	2.40	0.56
6:D:98:ASP:HB3	6:D:114:ARG:HE	1.68	0.56
7:E:132:PRO:HA	7:E:135:VAL:HG23	1.88	0.56
11:I:51:LEU:N	11:I:51:LEU:HD23	2.21	0.56
21:S:31:ARG:HB3	21:S:33:TRP:CZ3	2.40	0.56
13:K:35:ASP:HB3	13:K:39:ASN:CB	2.35	0.56
14:L:66:ILE:HG21	14:L:71:HIS:HD2	1.70	0.56
9:G:66:GLU:HA	9:G:69:ARG:NE	2.20	0.56
13:K:49:SER:OG	13:K:65:ALA:HB2	2.04	0.56
1:A:1162:C:H2'	1:A:1163:A:H8	1.70	0.56
17:O:20:ASP:C	17:O:22:GLY:H	2.09	0.56
7:E:109:ALA:O	7:E:113:VAL:HG22	2.06	0.56
7:E:73:VAL:HG22	7:E:75:LEU:HD23	1.86	0.56
1:A:862:C:P	7:E:87:VAL:HG11	2.45	0.56
4:B:26:MET:O	4:B:30:ILE:HD12	2.05	0.56
1:A:618:C:H3'	1:A:620:C:OP2	2.05	0.56
6:D:26:ALA:C	6:D:27:ILE:HD12	2.26	0.56
13:K:78:ILE:HD13	13:K:78:ILE:H	1.70	0.56
1:A:501:C:H2'	1:A:502:A:C8	2.40	0.56
1:A:26:A:H61	1:A:558:G:H1'	1.71	0.56
1:A:1351:U:O4'	9:G:32:ASP:HB3	2.06	0.56
6:D:6:PRO:O	6:D:9:LYS:HB3	2.05	0.56
7:E:11:GLN:HB2	7:E:13:LYS:HE3	1.87	0.56
10:H:75:GLN:NE2	10:H:76:ARG:H	2.04	0.56
8:F:14:GLN:HG3	8:F:83:ALA:HB1	1.88	0.56
8:F:62:MET:HG3	8:F:64:VAL:CG2	2.36	0.56
8:F:2:ARG:HG2	8:F:92:THR:OG1	2.06	0.56
6:D:90:LEU:HA	6:D:93:LEU:CD1	2.35	0.56
15:M:58:GLU:OE2	15:M:61:LYS:HD2	2.06	0.56
19:Q:61:ARG:HB3	19:Q:75:VAL:HG11	1.86	0.56
5:C:110:LEU:H	5:C:114:LEU:CD1	2.18	0.56
14:L:80:LEU:HB3	14:L:97:VAL:HG22	1.88	0.56
20:R:54:LEU:O	20:R:58:ILE:HG13	2.05	0.56
1:A:1007:U:H2'	1:A:1008:U:C6	2.40	0.56
7:E:136:VAL:C	7:E:138:ALA:H	2.09	0.56
1:A:1179:A:O3'	11:I:104:THR:HG23	2.05	0.56
13:K:108:ASN:HA	23:U:6:ARG:HD2	1.86	0.56

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:12:ARG:HD2	13:K:13:LYS:NZ	2.20	0.56
14:L:101:LEU:C	14:L:103:CYS:H	2.09	0.56
12:J:35:GLN:CB	12:J:78:GLU:HB2	2.35	0.56
10:H:79:ARG:CZ	10:H:82:LEU:HB2	2.36	0.56
1:A:663:A:H5'	1:A:836:G:OP1	2.06	0.56
4:B:25:LYS:HD3	4:B:25:LYS:H	1.71	0.56
1:A:1202:U:H2'	1:A:1203:C:O4'	2.06	0.56
16:N:87:ALA:HB1	16:N:95:LEU:HG	1.88	0.56
1:A:1314:C:C6	21:S:5:LYS:HE2	2.41	0.56
23:U:34:ARG:NH2	23:U:36:PHE:HB3	2.20	0.56
1:A:254:G:OP1	19:Q:68:LYS:O	2.22	0.56
6:D:63:ILE:HG23	6:D:64:TYR:HD1	1.69	0.56
1:A:492:C:H2'	1:A:493:A:N3	2.21	0.56
1:A:1508:A:H2'	1:A:1509:C:C6	2.41	0.56
10:H:29:SER:N	10:H:32:LYS:HD2	2.20	0.56
10:H:73:SER:HB2	10:H:128:VAL:O	2.06	0.56
11:I:4:GLN:HB3	11:I:20:ILE:O	2.06	0.56
5:C:183:TYR:OH	5:C:198:LYS:HE2	2.05	0.56
5:C:22:PHE:CE2	5:C:24:ASN:HB2	2.40	0.56
5:C:49:ALA:HA	5:C:71:ARG:CZ	2.36	0.56
9:G:92:PRO:HA	9:G:95:ARG:CG	2.36	0.56
4:B:99:MET:HE3	4:B:147:LEU:HD23	1.88	0.56
1:A:1160:G:H2'	1:A:1161:C:C6	2.40	0.56
11:I:109:GLN:HG2	11:I:110:VAL:N	2.21	0.56
1:A:1260:G:OP1	1:A:1284:C:H4'	2.05	0.56
10:H:81:GLY:O	19:Q:35:LYS:HD3	2.06	0.56
7:E:132:PRO:HA	7:E:135:VAL:CG2	2.36	0.56
1:A:257:G:H2'	1:A:258:G:H5''	1.87	0.56
1:A:1386:G:H2'	1:A:1387:G:H8	1.71	0.56
1:A:1107:C:C4	1:A:1108:G:N7	2.74	0.56
4:B:123:GLY:HA2	4:B:126:ASP:OD1	2.06	0.56
7:E:14:LEU:HD13	7:E:15:ILE:N	2.21	0.56
11:I:34:LEU:CD1	11:I:48:ARG:HH22	2.18	0.56
12:J:7:ARG:HH11	12:J:73:LEU:HD21	1.71	0.56
9:G:72:VAL:HG22	9:G:89:GLU:HA	1.88	0.56
4:B:134:LEU:HA	4:B:137:THR:OG1	2.06	0.56
19:Q:30:HIS:HB3	19:Q:34:GLY:H	1.71	0.56
1:A:1402:C:H2'	1:A:1403:C:O4'	2.06	0.56
1:A:875:U:O2'	10:H:14:ARG:HD2	2.06	0.55
11:I:48:ARG:HA	11:I:51:LEU:HG	1.88	0.55
21:S:17:LYS:O	21:S:20:LYS:HB3	2.05	0.55
9:G:137:ARG:NH1	9:G:141:HIS:HB2	2.21	0.55

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:99:ALA:O	9:G:103:ILE:HG13	2.06	0.55
1:A:920:U:H2'	1:A:921:U:C6	2.41	0.55
1:A:236:A:H2'	1:A:237:G:C8	2.41	0.55
1:A:238:A:H2'	1:A:239:U:H5''	1.87	0.55
1:A:308:C:H2'	1:A:309:A:C8	2.41	0.55
1:A:1015:G:H2'	1:A:1016:A:H8	1.71	0.55
1:A:160:A:H2'	1:A:161:A:O4'	2.05	0.55
1:A:651:C:O2'	1:A:652:U:H5'	2.06	0.55
7:E:76:ASN:H	7:E:81:GLN:HG2	1.71	0.55
10:H:11:THR:O	10:H:15:ASN:HB2	2.06	0.55
1:A:262:A:H5''	22:T:70:LYS:HG2	1.88	0.55
9:G:72:VAL:N	9:G:141:HIS:HE1	1.97	0.55
1:A:470:C:H2'	1:A:471:U:C6	2.42	0.55
6:D:12:ARG:O	6:D:37:PRO:HG3	2.07	0.55
1:A:332:G:H2'	1:A:333:U:H6	1.71	0.55
1:A:314:C:O2'	1:A:315:A:H5'	2.05	0.55
1:A:613:C:H2'	1:A:614:C:C6	2.41	0.55
1:A:1307:U:H2'	1:A:1308:U:H6	1.70	0.55
15:M:14:ALA:O	15:M:18:LEU:HD22	2.07	0.55
1:A:1450:U:H2'	1:A:1452:C:C5	2.42	0.55
1:A:1289:A:H3'	1:A:1290:G:H8	1.70	0.55
6:D:160:LEU:N	6:D:160:LEU:HD13	2.22	0.55
1:A:470:C:H2'	1:A:471:U:O4'	2.06	0.55
1:A:1165:U:H2'	1:A:1166:G:O4'	2.07	0.55
1:A:555:U:H2'	1:A:556:C:H6	1.71	0.55
1:A:1247:U:H2'	1:A:1248:A:H8	1.71	0.55
1:A:659:U:H2'	1:A:660:C:C6	2.41	0.55
7:E:76:ASN:N	7:E:81:GLN:HG2	2.22	0.55
8:F:38:ARG:CD	8:F:97:THR:HA	2.36	0.55
16:N:24:ALA:C	16:N:26:LEU:H	2.09	0.55
6:D:70:GLN:HA	6:D:73:ASN:HD22	1.71	0.55
13:K:125:LYS:CD	23:U:32:ARG:HB3	2.31	0.55
13:K:34:THR:HG23	13:K:39:ASN:N	2.17	0.55
1:A:468:A:H3'	1:A:469:C:C6	2.41	0.55
1:A:429:U:P	6:D:12:ARG:HE	2.30	0.55
1:A:797:C:O2'	1:A:798:U:H5'	2.07	0.55
1:A:1073:U:H2'	1:A:1074:G:H8	1.72	0.55
1:A:1167:A:H2'	1:A:1169:A:H8	1.71	0.55
9:G:112:ASP:HB2	9:G:118:ARG:HG3	1.88	0.55
1:A:586:C:O2'	1:A:878:A:H4'	2.05	0.55
10:H:45:ILE:HB	10:H:61:THR:O	2.07	0.55
4:B:31:PHE:HD1	4:B:32:GLY:H	1.53	0.55

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:67:LEU:HD12	4:B:89:PHE:O	2.06	0.55
6:D:58:GLN:HE21	6:D:58:GLN:CA	2.20	0.55
19:Q:28:VAL:HG12	19:Q:37:ILE:O	2.06	0.55
16:N:8:ARG:HG2	16:N:12:ARG:NH1	2.21	0.55
1:A:161:A:H2'	1:A:162:A:C8	2.41	0.55
1:A:625:U:H4'	18:P:16:PHE:CZ	2.41	0.55
1:A:992:U:H2'	1:A:1043:G:N7	2.21	0.55
11:I:70:GLY:O	11:I:74:GLN:HG2	2.06	0.55
1:A:923:A:H2'	1:A:924:C:C6	2.42	0.55
1:A:197:A:N3	1:A:198:G:H1'	2.22	0.55
1:A:139:A:H2'	1:A:140:U:C6	2.42	0.55
10:H:101:ALA:HA	10:H:127:TYR:HB3	1.87	0.55
1:A:600:A:P	10:H:87:ARG:HG2	2.47	0.55
1:A:1117:A:H2'	1:A:1118:U:C6	2.42	0.55
1:A:1143:G:H2'	1:A:1144:G:H8	1.71	0.55
11:I:32:ARG:HB3	11:I:36:GLN:HB2	1.89	0.55
11:I:56:MET:C	11:I:58:GLU:H	2.10	0.55
11:I:29:ILE:HD11	11:I:66:VAL:CG1	2.35	0.55
16:N:40:ARG:HH22	21:S:6:LYS:HG3	1.72	0.55
4:B:111:LYS:HZ1	4:B:112:ARG:HB2	1.71	0.55
4:B:114:LYS:O	4:B:117:GLU:HB2	2.07	0.55
20:R:33:THR:HG23	20:R:35:SER:H	1.71	0.55
5:C:179:ALA:HB1	5:C:202:PHE:CE1	2.42	0.55
1:A:985:C:H2'	1:A:986:U:C6	2.42	0.55
1:A:204:G:H2'	1:A:205:A:C8	2.41	0.55
1:A:1526:G:P	23:U:38:GLU:HB2	2.46	0.55
1:A:769:G:O2'	1:A:770:C:H5'	2.07	0.55
10:H:35:ILE:HG22	10:H:39:LEU:HD21	1.88	0.55
11:I:18:VAL:HG21	11:I:81:GLY:CA	2.37	0.55
4:B:163:ILE:O	4:B:164:ASP:HB2	2.06	0.55
4:B:122:ASP:C	4:B:124:THR:H	2.10	0.55
1:A:478:A:H2'	1:A:479:U:O4'	2.07	0.55
1:A:125:U:H2'	1:A:126:G:H8	1.72	0.55
7:E:84:VAL:HB	7:E:143:LEU:C	2.27	0.55
7:E:88:HIS:O	7:E:89:THR:HB	2.07	0.55
1:A:1151:A:H1'	1:A:1152:A:C8	2.42	0.55
5:C:71:ARG:NH2	5:C:74:ILE:HG21	2.20	0.55
16:N:96:LYS:HG2	16:N:97:LYS:HZ2	1.70	0.55
1:A:135:C:H2'	1:A:136:C:H5'	1.89	0.55
1:A:1237:C:H4'	1:A:1334:G:N2	2.22	0.55
23:U:14:ALA:HB3	23:U:16:ARG:CZ	2.37	0.55
1:A:673:A:N3	20:R:63:TYR:HE1	2.04	0.55

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1309:G:H2'	1:A:1310:G:H8	1.70	0.55
1:A:76:G:H2'	1:A:77:A:H8	1.72	0.55
1:A:190:A:H2'	1:A:191:G:O4'	2.06	0.55
1:A:1162:C:H2'	1:A:1163:A:C8	2.42	0.55
6:D:54:LEU:O	6:D:57:LYS:HB3	2.06	0.55
1:A:1137:C:H1'	1:A:1138:G:N1	2.22	0.55
1:A:829:G:H4'	4:B:24:PRO:HG2	1.89	0.55
4:B:30:ILE:CD1	4:B:40:ILE:HA	2.37	0.55
4:B:14:HIS:HD2	4:B:202:ASN:HD21	1.52	0.55
7:E:19:ARG:CG	7:E:29:ILE:HG22	2.37	0.55
19:Q:40:THR:HG22	19:Q:41:THR:H	1.71	0.55
1:A:673:A:H1'	20:R:63:TYR:CD1	2.41	0.55
1:A:474:G:H2'	1:A:475:C:C6	2.42	0.55
12:J:102:LEU:H	12:J:102:LEU:HD13	1.72	0.55
1:A:208:U:H2'	1:A:210:C:C5	2.42	0.55
9:G:149:ALA:HB2	13:K:55:ARG:CZ	2.36	0.55
1:A:586:C:O3'	10:H:80:PRO:HB2	2.07	0.55
1:A:1017:U:H2'	1:A:1018:G:C8	2.42	0.55
7:E:38:VAL:HG23	7:E:66:ALA:CB	2.37	0.54
11:I:34:LEU:C	11:I:36:GLN:H	2.10	0.54
1:A:1240:U:O2	9:G:31:VAL:HB	2.07	0.54
11:I:123:ARG:HG3	11:I:124:PRO:HD2	1.88	0.54
4:B:19:THR:HG23	4:B:20:ARG:N	2.21	0.54
5:C:115:VAL:HG12	5:C:136:ALA:HB1	1.90	0.54
12:J:65:TYR:CD1	16:N:95:LEU:HD11	2.42	0.54
16:N:29:ILE:HA	16:N:34:ASN:HB3	1.89	0.54
21:S:39:ILE:HG12	21:S:68:HIS:O	2.07	0.54
1:A:182:A:O2'	1:A:183:C:H3'	2.07	0.54
1:A:501:C:H1'	1:A:549:C:H1'	1.89	0.54
1:A:404:G:H2'	1:A:405:U:C6	2.42	0.54
6:D:3:TYR:OH	6:D:6:PRO:HG2	2.07	0.54
1:A:539:A:H2'	1:A:540:G:H8	1.71	0.54
11:I:15:ALA:O	11:I:66:VAL:HA	2.08	0.54
11:I:17:ARG:HH11	11:I:65:THR:HB	1.72	0.54
1:A:1320:C:H2'	1:A:1321:U:O4'	2.08	0.54
16:N:30:ILE:HB	16:N:44:VAL:HG21	1.88	0.54
13:K:125:LYS:CE	13:K:125:LYS:HA	2.37	0.54
15:M:13:HIS:C	15:M:15:VAL:H	2.10	0.54
1:A:1218:C:H2'	1:A:1219:A:H8	1.72	0.54
5:C:23:ALA:HB1	5:C:27:GLU:CB	2.37	0.54
1:A:1044:A:C5	1:A:1045:C:H1'	2.43	0.54
4:B:161:PHE:CE1	4:B:216:VAL:HG21	2.42	0.54

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:559:A:H4'	1:A:560:A:H3'	1.90	0.54
1:A:1247:U:H2'	1:A:1248:A:C8	2.42	0.54
18:P:56:ARG:O	18:P:59:HIS:HB3	2.07	0.54
18:P:46:LYS:CE	18:P:46:LYS:H	2.20	0.54
10:H:17:GLN:HG2	10:H:62:LEU:HD23	1.89	0.54
1:A:1134:G:H2'	1:A:1135:U:O4'	2.08	0.54
5:C:119:ILE:HD11	5:C:132:ALA:C	2.28	0.54
5:C:137:VAL:O	5:C:141:MET:HG2	2.07	0.54
5:C:19:SER:O	16:N:93:PRO:HB3	2.07	0.54
23:U:27:VAL:C	23:U:29:ALA:H	2.10	0.54
12:J:30:LYS:HA	12:J:36:VAL:HG21	1.88	0.54
4:B:43:GLU:C	4:B:45:THR:H	2.10	0.54
9:G:136:LYS:O	9:G:140:VAL:HG23	2.08	0.54
9:G:49:LEU:HD22	9:G:60:ALA:CB	2.37	0.54
1:A:1302:C:P	15:M:16:ILE:HD11	2.48	0.54
1:A:1295:U:H2'	1:A:1296:C:C6	2.42	0.54
1:A:201:G:H21	1:A:469:C:H1'	1.73	0.54
1:A:202:G:H2'	1:A:203:G:H8	1.70	0.54
1:A:66:A:H3'	1:A:67:C:H5''	1.90	0.54
1:A:1277:C:H1'	1:A:1282:C:O2	2.07	0.54
1:A:257:G:C2'	1:A:258:G:H5''	2.37	0.54
1:A:1153:G:H2'	1:A:1154:G:O4'	2.08	0.54
1:A:806:C:H2'	1:A:807:A:H8	1.73	0.54
1:A:594:U:H2'	1:A:595:A:O4'	2.08	0.54
8:F:6:ILE:HG12	8:F:62:MET:CB	2.38	0.54
1:A:1128:C:H4'	1:A:1148:U:H3	1.73	0.54
6:D:166:LYS:HB3	6:D:166:LYS:NZ	2.19	0.54
22:T:80:ALA:HA	22:T:83:ASN:ND2	2.06	0.54
15:M:80:MET:SD	15:M:91:ARG:HB3	2.47	0.54
9:G:25:PHE:HD1	9:G:100:MET:HG3	1.71	0.54
13:K:125:LYS:HD2	23:U:32:ARG:O	2.08	0.54
15:M:13:HIS:HD2	15:M:43:LYS:HG2	1.72	0.54
1:A:1332:A:H2'	1:A:1333:A:C8	2.42	0.54
22:T:54:GLN:N	22:T:55:PRO:HD2	2.22	0.54
1:A:202:G:H1'	1:A:468:A:H8	1.72	0.54
9:G:12:LEU:HD13	9:G:13:PRO:HD2	1.89	0.54
4:B:130:LYS:C	4:B:132:GLU:H	2.10	0.54
1:A:373:A:H3'	1:A:373:A:OP2	2.08	0.54
1:A:21:G:H2'	1:A:22:G:C8	2.43	0.54
12:J:83:THR:O	12:J:87:LEU:HB2	2.08	0.54
1:A:1109:C:H3'	25:A:1839:HOH:O	2.06	0.54
7:E:84:VAL:O	7:E:143:LEU:HD12	2.08	0.54

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:85:LYS:HA	7:E:142:GLY:O	2.07	0.54
10:H:46:GLU:HB2	10:H:61:THR:HB	1.90	0.54
1:A:1343:G:H2'	1:A:1344:C:C6	2.43	0.54
5:C:112:ALA:O	5:C:199:VAL:HG21	2.07	0.54
13:K:113:THR:HG22	23:U:28:LEU:HD22	1.90	0.54
8:F:68:GLN:CD	8:F:68:GLN:H	2.11	0.54
8:F:68:GLN:O	8:F:71:ILE:HG22	2.07	0.54
15:M:36:ALA:HB3	15:M:38:ILE:HG12	1.88	0.54
15:M:22:TYR:CD2	15:M:65:GLU:HA	2.32	0.54
1:A:783:C:O2'	1:A:784:A:H5'	2.08	0.54
1:A:966:G:H2'	1:A:967:C:C6	2.42	0.54
1:A:223:A:H2'	1:A:224:U:C6	2.42	0.54
1:A:1013:G:H2'	1:A:1015:G:OP2	2.08	0.54
1:A:384:G:H2'	1:A:385:C:H6	1.72	0.54
1:A:490:C:H2'	1:A:491:G:H8	1.73	0.54
10:H:29:SER:O	10:H:33:VAL:HG23	2.07	0.54
17:O:49:HIS:O	17:O:52:ARG:HB3	2.08	0.54
5:C:138:GLN:HE21	5:C:138:GLN:HA	1.73	0.54
8:F:10:VAL:HG12	8:F:11:HIS:N	2.23	0.54
11:I:98:ARG:CG	11:I:103:VAL:HG21	2.36	0.54
18:P:8:ARG:CZ	18:P:15:PRO:HB3	2.37	0.54
4:B:128:LEU:HD23	4:B:129:THR:N	2.22	0.54
1:A:250:A:H1'	1:A:252:U:C5	2.42	0.54
5:C:5:HIS:CG	16:N:88:MET:HB3	2.43	0.54
8:F:1:MET:HA	8:F:67:PRO:N	2.22	0.54
20:R:57:ALA:HA	20:R:60:ARG:HH11	1.71	0.54
15:M:44:ILE:HD12	15:M:44:ILE:N	2.22	0.54
1:A:660:C:OP1	17:O:4:THR:HG21	2.07	0.54
1:A:603:U:H2'	1:A:604:G:C8	2.42	0.54
8:F:38:ARG:HD3	8:F:96:VAL:O	2.08	0.54
11:I:33:SER:H	11:I:36:GLN:CG	2.21	0.54
4:B:30:ILE:HG12	4:B:40:ILE:HA	1.90	0.54
5:C:61:LYS:HA	5:C:61:LYS:HZ3	1.72	0.54
1:A:986:U:H1'	21:S:53:GLY:O	2.07	0.54
3:X:3:G:C5'	3:X:5:U:H5'	2.38	0.54
18:P:46:LYS:HE3	18:P:46:LYS:H	1.71	0.54
1:A:6:G:N3	1:A:6:G:H3'	2.22	0.54
22:T:50:PHE:O	22:T:53:MET:HG3	2.07	0.54
7:E:38:VAL:N	7:E:46:GLY:HA3	2.20	0.54
10:H:100:ILE:CD1	10:H:128:VAL:H	2.21	0.54
11:I:44:ARG:HG3	11:I:45:MET:SD	2.47	0.54
12:J:11:LYS:HD2	12:J:71:LEU:HD12	1.89	0.54

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1342:C:H2'	1:A:1343:G:H8	1.72	0.54
5:C:109:GLU:CB	5:C:143:LEU:HD11	2.38	0.54
21:S:30:LEU:HD12	21:S:47:THR:O	2.07	0.54
20:R:72:ARG:NH2	23:U:3:ILE:HG22	2.23	0.54
13:K:35:ASP:HB3	13:K:39:ASN:HB2	1.89	0.54
1:A:193:C:H2'	1:A:194:C:C6	2.43	0.54
1:A:331:G:OP1	1:A:332:G:H5'	2.08	0.54
1:A:266:G:O2'	1:A:267:C:H3'	2.08	0.54
1:A:255:G:H5''	19:Q:18:LYS:HB2	1.89	0.54
1:A:1191:A:H5''	5:C:3:LYS:NZ	2.23	0.54
22:T:37:ALA:HB1	22:T:42:ASP:O	2.07	0.54
1:A:1350:A:H2'	1:A:1351:U:C6	2.43	0.54
12:J:82:LYS:N	12:J:82:LYS:HD2	2.23	0.54
1:A:741:G:H4'	17:O:54:GLY:HA3	1.90	0.54
7:E:106:ALA:HB3	7:E:111:ARG:HA	1.88	0.54
8:F:38:ARG:O	8:F:39:LEU:HB3	2.06	0.54
4:B:14:HIS:CD2	4:B:202:ASN:HD21	2.26	0.54
4:B:69:VAL:HA	4:B:91:VAL:O	2.08	0.54
8:F:2:ARG:HB2	8:F:68:GLN:OE1	2.08	0.54
1:A:1437:A:H2'	1:A:1438:G:H8	1.72	0.54
19:Q:42:LYS:C	19:Q:43:LEU:HD12	2.28	0.54
1:A:154:U:O2'	1:A:155:A:H5'	2.08	0.54
2:W:28:C:H2'	2:W:29:G:H8	1.73	0.54
9:G:149:ALA:HB2	13:K:55:ARG:NH1	2.23	0.54
1:A:494:G:O2'	1:A:496:A:H1'	2.08	0.54
1:A:990:C:O2'	1:A:991:U:H5'	2.08	0.54
7:E:134:ASN:HB3	7:E:137:ARG:HD2	1.89	0.53
11:I:42:THR:O	11:I:45:MET:HG2	2.08	0.53
11:I:54:VAL:HG21	11:I:86:LEU:HD11	1.90	0.53
5:C:77:GLY:HA3	5:C:82:ASP:OD1	2.08	0.53
4:B:204:ASP:N	4:B:209:VAL:HG11	2.23	0.53
13:K:52:ARG:O	13:K:56:LYS:HB3	2.08	0.53
1:A:950:U:H2'	1:A:951:G:C8	2.42	0.53
1:A:1432:G:H1'	1:A:1468:A:H61	1.72	0.53
1:A:1134:G:N3	1:A:1135:U:H1'	2.22	0.53
12:J:12:ALA:HB2	12:J:96:VAL:CG2	2.38	0.53
4:B:46:VAL:N	4:B:47:PRO:CD	2.71	0.53
5:C:126:ARG:HA	5:C:126:ARG:NH1	2.23	0.53
5:C:137:VAL:HG13	5:C:148:ILE:HG23	1.89	0.53
15:M:73:SER:HA	15:M:76:ILE:HD12	1.90	0.53
1:A:1329:A:H5''	15:M:25:GLY:H	1.73	0.53
1:A:1328:C:H5''	15:M:27:THR:CG2	2.37	0.53

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1160:G:H5''	4:B:130:LYS:HB2	1.89	0.53
19:Q:11:VAL:HG23	19:Q:56:ASP:O	2.08	0.53
1:A:438:U:H1'	6:D:119:HIS:HD2	1.73	0.53
1:A:125:U:H2'	1:A:126:G:C8	2.44	0.53
7:E:84:VAL:HG21	7:E:144:GLU:C	2.29	0.53
7:E:75:LEU:HD12	7:E:76:ASN:N	2.23	0.53
7:E:75:LEU:CA	7:E:81:GLN:HE21	2.16	0.53
4:B:22:TRP:N	4:B:189:ASN:HA	2.18	0.53
4:B:73:ARG:HG3	4:B:74:ALA:N	2.24	0.53
7:E:28:ARG:HG2	7:E:29:ILE:N	2.19	0.53
1:A:57:G:H2'	1:A:58:C:C6	2.44	0.53
6:D:197:HIS:O	6:D:200:VAL:HG12	2.08	0.53
20:R:23:LYS:HE2	20:R:23:LYS:C	2.29	0.53
1:A:211:G:N3	1:A:211:G:H5''	2.23	0.53
14:L:7:VAL:HG13	19:Q:30:HIS:HE2	1.72	0.53
11:I:47:VAL:HG11	11:I:78:ILE:HD12	1.90	0.53
1:A:355:C:O2'	1:A:356:A:H5'	2.09	0.53
15:M:1:ALA:HA	15:M:10:ASP:OD1	2.08	0.53
17:O:34:GLN:HA	17:O:34:GLN:NE2	2.24	0.53
1:A:1040:U:H2'	1:A:1041:G:H8	1.71	0.53
8:F:38:ARG:HH21	8:F:63:ASN:HD21	1.56	0.53
6:D:61:ARG:HA	6:D:66:VAL:CG1	2.38	0.53
12:J:30:LYS:HG3	12:J:31:ARG:H	1.73	0.53
1:A:1218:C:H2'	1:A:1219:A:C8	2.44	0.53
9:G:19:SER:HB3	9:G:22:LEU:HD12	1.90	0.53
13:K:15:VAL:O	13:K:16:SER:HB3	2.08	0.53
1:A:993:G:H2'	1:A:995:C:H41	1.73	0.53
1:A:947:G:H2'	1:A:948:C:C6	2.43	0.53
14:L:116:TYR:CD2	14:L:116:TYR:N	2.76	0.53
1:A:9:G:H2'	1:A:10:A:H8	1.74	0.53
10:H:9:MET:HA	10:H:26:MET:HE3	1.89	0.53
4:B:104:LYS:HD2	4:B:104:LYS:H	1.74	0.53
1:A:1117:A:H2'	1:A:1118:U:H6	1.73	0.53
21:S:36:ARG:H	21:S:36:ARG:HD2	1.73	0.53
1:A:627:G:H2'	1:A:628:G:C8	2.44	0.53
12:J:28:THR:HG23	12:J:31:ARG:NH2	2.23	0.53
1:A:1306:A:H61	1:A:1331:G:H1'	1.73	0.53
4:B:80:LYS:HB3	4:B:92:ASN:CB	2.38	0.53
16:N:12:ARG:HD3	16:N:58:ARG:HB3	1.90	0.53
1:A:878:A:H5''	10:H:80:PRO:HG2	1.91	0.53
1:A:652:U:H4'	10:H:55:LYS:HZ1	1.74	0.53
7:E:139:THR:HA	7:E:143:LEU:CD2	2.39	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:37:VAL:HG13	7:E:46:GLY:N	2.21	0.53
5:C:183:TYR:HA	5:C:199:VAL:O	2.09	0.53
5:C:63:ILE:HG22	5:C:97:PRO:O	2.08	0.53
15:M:81:ASP:C	15:M:82:LEU:HD23	2.29	0.53
4:B:83:ALA:HB3	4:B:90:PHE:CD2	2.39	0.53
4:B:69:VAL:HG12	4:B:91:VAL:HB	1.91	0.53
8:F:92:THR:HG22	8:F:93:LYS:N	2.22	0.53
18:P:19:VAL:O	18:P:36:VAL:HG12	2.09	0.53
1:A:82:G:H3'	1:A:83:C:C4'	2.37	0.53
12:J:15:HIS:HB3	12:J:70:HIS:NE2	2.23	0.53
15:M:15:VAL:O	15:M:19:THR:HG23	2.08	0.53
8:F:19:PRO:HA	8:F:22:ILE:HD12	1.90	0.53
1:A:426:U:H2'	1:A:427:U:C6	2.44	0.53
4:B:124:THR:O	4:B:125:PHE:HB3	2.09	0.53
1:A:806:C:H2'	1:A:807:A:C8	2.44	0.53
1:A:265:G:H5'	19:Q:66:LEU:HA	1.90	0.53
7:E:23:THR:HA	7:E:27:GLY:O	2.09	0.53
1:A:1079:G:H2'	1:A:1080:A:C8	2.44	0.53
1:A:1129:C:H5'	11:I:17:ARG:NH2	2.23	0.53
1:A:1182:G:H4'	1:A:1183:U:H5'	1.91	0.53
9:G:25:PHE:CE2	9:G:119:LEU:HD11	2.44	0.53
15:M:6:ILE:N	15:M:6:ILE:HD12	2.24	0.53
9:G:115:MET:HA	9:G:118:ARG:HD2	1.91	0.53
1:A:1276:G:H2'	1:A:1277:C:H6	1.74	0.53
14:L:49:ARG:CD	14:L:89:LEU:HD21	2.38	0.53
1:A:513:C:H2'	1:A:514:C:H6	1.74	0.53
1:A:1264:U:H2'	1:A:1265:C:C6	2.44	0.53
1:A:737:C:H2'	1:A:738:C:H6	1.73	0.53
1:A:1446:A:C2'	1:A:1447:A:H5''	2.39	0.53
1:A:716:A:N3	13:K:119:GLY:HA2	2.24	0.53
11:I:38:PHE:HB2	11:I:44:ARG:HB3	1.90	0.53
4:B:26:MET:O	4:B:30:ILE:HB	2.09	0.53
7:E:98:ALA:HB3	7:E:123:LEU:N	2.24	0.53
9:G:99:ALA:HA	9:G:102:TRP:CE3	2.44	0.53
15:M:23:GLY:HA3	15:M:64:VAL:HG12	1.90	0.53
1:A:469:C:H2'	1:A:470:C:O4'	2.09	0.53
13:K:48:GLY:C	13:K:68:ARG:HH12	2.11	0.53
1:A:642:A:H2'	1:A:643:C:C6	2.43	0.53
16:N:50:LEU:HB2	16:N:51:PRO:CD	2.39	0.53
1:A:890:G:O2'	1:A:906:A:N6	2.42	0.53
1:A:373:A:O4'	1:A:481:G:H1'	2.08	0.53
1:A:1048:G:OP1	16:N:3:GLN:N	2.42	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:93:VAL:HA	7:E:127:TYR:CD1	2.44	0.53
21:S:62:THR:HG22	21:S:65:MET:CE	2.39	0.53
4:B:66:ILE:HA	4:B:159:ALA:CB	2.36	0.53
1:A:546:A:P	6:D:68:GLU:HB3	2.48	0.53
6:D:90:LEU:HD12	6:D:93:LEU:HD12	1.90	0.53
19:Q:59:GLU:O	19:Q:75:VAL:HG22	2.08	0.53
1:A:780:A:O2'	1:A:781:A:H5''	2.08	0.53
7:E:45:VAL:HB	7:E:140:ILE:HD11	1.91	0.53
5:C:78:LYS:HB3	5:C:78:LYS:NZ	2.24	0.53
11:I:34:LEU:HD11	11:I:48:ARG:HH22	1.72	0.53
1:A:1289:A:H2	1:A:1372:U:H1'	1.73	0.53
1:A:978:A:H4'	1:A:1322:C:C6	2.44	0.53
4:B:212:TYR:CE1	4:B:215:ALA:HB3	2.44	0.53
4:B:220:VAL:O	4:B:221:ARG:HB3	2.09	0.53
1:A:626:G:H2'	1:A:627:G:H8	1.73	0.53
18:P:41:PRO:O	18:P:42:ILE:HD13	2.09	0.53
1:A:708:C:H2'	1:A:709:U:C6	2.44	0.53
1:A:218:U:H2'	1:A:219:U:C6	2.43	0.53
1:A:252:U:H2'	1:A:253:A:C8	2.43	0.53
1:A:1091:U:H2'	1:A:1093:A:OP2	2.08	0.53
1:A:230:G:O2'	1:A:231:U:H5'	2.09	0.53
1:A:1062:U:H2'	1:A:1063:C:C5	2.44	0.53
3:X:5:U:H5''	25:X:281:HOH:O	2.08	0.53
1:A:1029:U:H2'	1:A:1031:C:N3	2.24	0.53
1:A:320:A:H2'	1:A:321:A:C8	2.44	0.53
1:A:599:C:H4'	10:H:122:GLY:HA2	1.91	0.52
10:H:83:ARG:HB3	10:H:85:TYR:CE1	2.44	0.52
10:H:93:LYS:HA	10:H:93:LYS:NZ	2.24	0.52
18:P:36:VAL:HG22	18:P:52:LEU:O	2.09	0.52
1:A:1329:A:H5''	15:M:25:GLY:N	2.25	0.52
8:F:7:VAL:HG13	8:F:88:MET:HB3	1.90	0.52
1:A:697:U:O2	1:A:798:U:H1'	2.09	0.52
1:A:1070:U:H2'	1:A:1071:C:C6	2.45	0.52
9:G:110:ARG:HD3	9:G:118:ARG:HG2	1.92	0.52
1:A:224:U:H2'	1:A:225:C:C6	2.44	0.52
14:L:93:ARG:N	14:L:93:ARG:HD2	2.24	0.52
14:L:93:ARG:HB2	14:L:94:TYR:CE1	2.45	0.52
1:A:762:U:H2'	1:A:763:G:H8	1.74	0.52
1:A:1029:U:H2'	1:A:1031:C:O2	2.09	0.52
17:O:10:ILE:HG23	17:O:14:PHE:CE1	2.44	0.52
1:A:952:U:H2'	1:A:953:G:C8	2.44	0.52
1:A:118:U:O4	1:A:288:A:H2'	2.09	0.52

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:16:ALA:HB2	11:I:66:VAL:HB	1.91	0.52
6:D:167:PRO:CB	6:D:170:LEU:HD11	2.39	0.52
1:A:1049:U:H1'	1:A:1201:A:C5	2.45	0.52
12:J:73:LEU:O	12:J:75:ASP:N	2.42	0.52
1:A:26:A:N6	1:A:558:G:H1'	2.23	0.52
1:A:833:G:H2'	1:A:834:U:C6	2.44	0.52
14:L:3:VAL:O	14:L:7:VAL:HG23	2.09	0.52
10:H:117:GLN:HE21	10:H:117:GLN:H	1.56	0.52
1:A:121:U:H3'	1:A:121:U:OP1	2.09	0.52
1:A:539:A:H2'	1:A:540:G:C8	2.45	0.52
1:A:1524:C:OP1	13:K:124:LYS:HD3	2.09	0.52
1:A:820:U:H4'	1:A:821:G:OP2	2.10	0.52
13:K:17:ASP:HB3	13:K:80:ASN:HB2	1.91	0.52
7:E:80:LEU:N	7:E:118:GLY:O	2.40	0.52
7:E:37:VAL:HA	7:E:46:GLY:HA3	1.91	0.52
12:J:12:ALA:HB2	12:J:96:VAL:CB	2.39	0.52
4:B:34:ARG:O	4:B:37:VAL:HG12	2.09	0.52
5:C:153:SER:HB3	5:C:196:GLY:O	2.09	0.52
21:S:14:LEU:HD12	21:S:15:LEU:H	1.74	0.52
4:B:58:LYS:O	4:B:58:LYS:HD3	2.10	0.52
6:D:130:ASN:HD22	6:D:130:ASN:H	1.56	0.52
13:K:85:VAL:CG2	13:K:111:ASP:HA	2.35	0.52
8:F:52:ASN:O	8:F:53:LYS:HB3	2.09	0.52
9:G:45:ALA:HA	9:G:48:THR:CG2	2.39	0.52
13:K:19:VAL:CG2	13:K:34:THR:HG22	2.39	0.52
14:L:35:ARG:HH12	14:L:75:GLU:CG	2.22	0.52
1:A:634:C:H2'	1:A:635:A:C8	2.45	0.52
1:A:264:C:H4'	19:Q:64:ARG:NE	2.25	0.52
1:A:1508:A:H2'	1:A:1509:C:H6	1.73	0.52
1:A:952:U:H2'	1:A:953:G:H8	1.73	0.52
1:A:669:G:O2'	1:A:670:G:H5'	2.08	0.52
10:H:39:LEU:H	10:H:39:LEU:HD22	1.75	0.52
10:H:46:GLU:HA	10:H:63:LYS:HD3	1.91	0.52
11:I:34:LEU:HD21	11:I:48:ARG:HH12	1.75	0.52
15:M:91:ARG:HD3	15:M:91:ARG:O	2.09	0.52
21:S:62:THR:H	21:S:65:MET:CG	2.22	0.52
1:A:1306:A:N6	1:A:1331:G:O2'	2.42	0.52
1:A:412:A:H4'	1:A:413:G:OP1	2.10	0.52
13:K:56:LYS:HA	13:K:61:ALA:CB	2.40	0.52
13:K:61:ALA:O	13:K:64:VAL:HG22	2.10	0.52
1:A:238:A:H3'	1:A:239:U:H5''	1.92	0.52
1:A:1074:G:H2'	1:A:1075:U:H6	1.74	0.52

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:9:GLU:O	16:N:13:VAL:HG23	2.10	0.52
1:A:719:C:H1'	20:R:37:LYS:HB2	1.91	0.52
1:A:255:G:H2'	1:A:256:U:H6	1.74	0.52
15:M:89:ARG:HH12	15:M:95:PRO:HG2	1.74	0.52
1:A:184:G:O4'	1:A:224:U:H4'	2.10	0.52
6:D:98:ASP:HB3	6:D:114:ARG:HB2	1.90	0.52
1:A:440:C:H2'	1:A:441:A:C8	2.44	0.52
1:A:1179:A:H2'	1:A:1180:A:O4'	2.10	0.52
4:B:30:ILE:CG1	4:B:41:ASN:H	2.23	0.52
16:N:97:LYS:HB2	16:N:97:LYS:NZ	2.25	0.52
21:S:32:THR:HG22	21:S:33:TRP:H	1.72	0.52
4:B:158:ASP:HA	4:B:180:ILE:HD12	1.91	0.52
4:B:67:LEU:O	4:B:160:LEU:HA	2.10	0.52
9:G:107:ALA:HB1	9:G:115:MET:CE	2.39	0.52
1:A:1479:C:H2'	1:A:1480:A:H8	1.74	0.52
1:A:1206:G:H2'	1:A:1207:G:O4'	2.10	0.52
6:D:22:SER:H	6:D:109:THR:HG22	1.75	0.52
1:A:65:A:C2	1:A:381:C:H2'	2.44	0.52
1:A:715:A:O2'	1:A:716:A:H5'	2.09	0.52
7:E:156:ARG:HG2	10:H:63:LYS:HD2	1.91	0.52
13:K:86:LYS:HA	13:K:113:THR:OG1	2.10	0.52
9:G:49:LEU:HG	9:G:52:ARG:NH2	2.25	0.52
14:L:23:LEU:CB	14:L:58:ASN:HD22	2.22	0.52
1:A:1053:G:O6	1:A:1199:U:H2'	2.09	0.52
1:A:91:U:H2'	1:A:92:U:C6	2.44	0.52
1:A:220:G:O2'	1:A:221:C:H5'	2.10	0.52
19:Q:58:VAL:HG12	19:Q:77:VAL:HG13	1.91	0.52
20:R:23:LYS:NZ	20:R:24:ASP:HB2	2.24	0.52
17:O:80:LEU:HD23	17:O:84:LEU:HD13	1.92	0.52
1:A:123:U:H5''	1:A:311:C:O2'	2.09	0.52
9:G:65:LEU:C	9:G:67:ASN:H	2.13	0.52
1:A:210:C:H4'	1:A:211:G:N1	2.25	0.52
1:A:1234:C:O2'	1:A:1235:U:H5'	2.08	0.52
1:A:994:A:N1	1:A:1047:G:H4'	2.24	0.52
7:E:12:GLU:C	7:E:13:LYS:HE2	2.31	0.52
1:A:842:U:H2'	1:A:844:G:P	2.50	0.52
4:B:38:HIS:HD2	4:B:188:THR:HG22	1.73	0.52
5:C:83:VAL:HA	5:C:86:LEU:HD13	1.91	0.52
1:A:1316:G:N2	1:A:1318:A:H3'	2.24	0.52
12:J:37:ARG:HD3	12:J:75:ASP:O	2.10	0.52
14:L:23:LEU:C	14:L:25:ALA:H	2.13	0.52
13:K:122:PRO:HB2	23:U:32:ARG:HA	1.91	0.52

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:62:ARG:HH21	16:N:69:PRO:HD3	1.75	0.52
1:A:408:A:H3'	1:A:409:U:H6	1.74	0.52
1:A:1056:U:H4'	5:C:155:ARG:HG3	1.92	0.52
16:N:51:PRO:HB2	16:N:54:SER:HB3	1.92	0.52
1:A:1014:A:H4'	21:S:13:HIS:CG	2.45	0.52
13:K:97:ARG:HD3	23:U:16:ARG:NH1	2.23	0.52
5:C:173:PRO:HB2	5:C:176:THR:HG23	1.91	0.52
1:A:763:G:H2'	1:A:764:C:H6	1.74	0.52
13:K:55:ARG:O	13:K:55:ARG:HD3	2.10	0.52
1:A:1414:U:H2'	1:A:1415:G:H8	1.75	0.52
1:A:1456:A:H2'	1:A:1457:G:C8	2.44	0.52
1:A:114:U:O2'	1:A:115:G:H5'	2.10	0.52
10:H:77:VAL:HG12	10:H:84:ILE:HD13	1.92	0.52
1:A:1137:C:O2	1:A:1137:C:O4'	2.27	0.52
1:A:44:A:OP2	18:P:12:LYS:HD2	2.09	0.52
9:G:72:VAL:HG13	9:G:88:VAL:O	2.10	0.52
15:M:63:VAL:O	15:M:68:LEU:HD13	2.10	0.52
6:D:7:LYS:HZ1	6:D:21:LYS:HA	1.75	0.52
6:D:29:THR:C	6:D:30:LYS:HZ2	2.13	0.52
1:A:1014:A:H4'	21:S:13:HIS:HB3	1.91	0.52
1:A:143:A:H2	1:A:220:G:H22	1.57	0.52
4:B:56:LEU:HD22	4:B:219:THR:CB	2.40	0.52
1:A:1011:C:H2'	1:A:1012:A:C8	2.45	0.52
15:M:51:GLN:O	15:M:55:LEU:HG	2.10	0.52
1:A:948:C:O2'	1:A:949:A:H5'	2.10	0.52
17:O:44:GLU:CD	17:O:45:HIS:H	2.12	0.52
5:C:190:THR:HB	5:C:193:GLY:H	1.74	0.52
1:A:1095:U:H2'	1:A:1096:C:C6	2.44	0.52
1:A:1105:A:H2'	1:A:1106:G:H8	1.75	0.52
1:A:954:G:H2'	1:A:955:U:H6	1.75	0.52
1:A:580:C:H2'	1:A:581:G:O4'	2.09	0.52
7:E:139:THR:HA	7:E:143:LEU:HD22	1.92	0.52
10:H:91:LEU:HD12	10:H:116:ARG:HG3	1.92	0.52
1:A:1127:G:O2'	1:A:1128:C:H5'	2.10	0.52
5:C:19:SER:HB3	5:C:21:TRP:CZ2	2.45	0.52
16:N:76:PHE:HE2	16:N:92:ILE:HG21	1.75	0.52
16:N:30:ILE:HA	16:N:40:ARG:HA	1.91	0.52
21:S:17:LYS:HB3	21:S:30:LEU:HD23	1.91	0.52
18:P:17:TYR:CD1	18:P:17:TYR:N	2.78	0.52
18:P:15:PRO:HG2	18:P:41:PRO:HG3	1.92	0.52
9:G:71:THR:HG23	9:G:141:HIS:CE1	2.45	0.52
1:A:1300:G:H1'	1:A:1301:U:H5	1.73	0.52

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:234:C:H2'	1:A:235:C:H6	1.75	0.52
6:D:125:ASN:HB2	6:D:127:ARG:HH12	1.72	0.52
17:O:32:THR:OG1	17:O:62:ARG:HD2	2.09	0.52
1:A:1262:C:H2'	1:A:1263:C:C6	2.44	0.52
17:O:27:GLN:OE1	17:O:27:GLN:HA	2.09	0.52
1:A:1031:C:H4'	1:A:1032:G:C4	2.44	0.52
1:A:1106:G:H2'	1:A:1107:C:H6	1.74	0.52
10:H:54:THR:HG23	10:H:55:LYS:HG2	1.92	0.52
1:A:1270:G:H2'	1:A:1271:A:C8	2.44	0.52
9:G:35:LYS:HZ2	9:G:35:LYS:HB2	1.75	0.52
6:D:170:LEU:HA	6:D:182:LYS:N	2.24	0.52
1:A:1099:G:H5''	4:B:94:ARG:CZ	2.40	0.52
23:U:24:LYS:HZ2	23:U:24:LYS:HB3	1.75	0.52
22:T:66:ILE:HG22	22:T:67:HIS:N	2.25	0.52
17:O:31:LEU:HD11	17:O:61:GLN:NE2	2.25	0.52
12:J:10:LEU:HD13	12:J:22:THR:OG1	2.10	0.52
1:A:1330:U:H2'	1:A:1331:G:O4'	2.09	0.52
1:A:1160:G:H5''	4:B:130:LYS:HG2	1.92	0.52
1:A:153:C:H2'	1:A:154:U:H6	1.75	0.52
5:C:192:TYR:N	5:C:192:TYR:CD2	2.78	0.52
1:A:1458:G:H2'	1:A:1459:G:C8	2.44	0.52
1:A:1060:U:C5	5:C:1:GLY:HA2	2.45	0.52
7:E:156:ARG:NE	10:H:63:LYS:HZ1	2.07	0.51
1:A:862:C:OP2	7:E:87:VAL:HG11	2.10	0.51
1:A:708:C:H2'	1:A:709:U:H6	1.76	0.51
16:N:50:LEU:H	16:N:51:PRO:HD2	1.75	0.51
20:R:58:ILE:O	20:R:67:LEU:HD12	2.11	0.51
1:A:224:U:H2'	1:A:225:C:H6	1.73	0.51
1:A:712:A:O2'	1:A:713:G:H5'	2.10	0.51
6:D:101:VAL:HB	6:D:113:ALA:HB1	1.90	0.51
1:A:1256:A:H5''	5:C:26:LYS:CE	2.40	0.51
1:A:131:A:H2'	1:A:132:C:C6	2.45	0.51
7:E:81:GLN:NE2	7:E:82:HIS:NE2	2.57	0.51
7:E:155:LYS:HD2	10:H:65:PHE:CE1	2.45	0.51
11:I:25:GLY:HA3	11:I:58:GLU:HA	1.91	0.51
12:J:42:LEU:HG	12:J:43:PRO:HD2	1.92	0.51
4:B:34:ARG:CG	4:B:39:ILE:HG13	2.40	0.51
1:A:1320:C:C2	21:S:71:GLY:HA3	2.46	0.51
18:P:40:ASN:HD22	18:P:41:PRO:CD	2.15	0.51
18:P:40:ASN:ND2	18:P:41:PRO:HD2	2.15	0.51
12:J:44:THR:HG23	12:J:70:HIS:N	2.24	0.51
14:L:38:THR:HA	14:L:49:ARG:O	2.10	0.51

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:O:42:PHE:CE1	17:O:55:LEU:HD22	2.45	0.51
18:P:43:ALA:HA	18:P:46:LYS:HE2	1.91	0.51
1:A:1426:G:H2'	1:A:1427:C:C6	2.45	0.51
1:A:864:A:H2'	1:A:865:A:C8	2.46	0.51
6:D:170:LEU:HA	6:D:182:LYS:HB2	1.91	0.51
1:A:1324:A:N6	21:S:2:ARG:N	2.57	0.51
1:A:627:G:H2'	1:A:628:G:H8	1.75	0.51
1:A:1335:U:H4'	1:A:1336:C:C5	2.44	0.51
1:A:267:C:OP2	19:Q:68:LYS:HD2	2.11	0.51
13:K:30:ILE:HG22	13:K:45:THR:HB	1.92	0.51
1:A:632:U:H3'	1:A:633:G:C5'	2.40	0.51
1:A:1464:U:H2'	1:A:1465:A:H8	1.75	0.51
6:D:98:ASP:OD2	6:D:132:ALA:HB1	2.10	0.51
1:A:341:C:O2'	1:A:342:C:H5'	2.10	0.51
19:Q:4:ILE:O	19:Q:4:ILE:HD12	2.11	0.51
15:M:48:SER:C	15:M:50:GLY:H	2.14	0.51
7:E:48:GLY:C	7:E:62:ALA:HA	2.31	0.51
7:E:75:LEU:HA	7:E:81:GLN:NE2	2.17	0.51
11:I:9:GLY:H	11:I:80:HIS:HD2	1.57	0.51
16:N:76:PHE:C	16:N:78:LEU:H	2.14	0.51
6:D:130:ASN:ND2	6:D:130:ASN:H	2.09	0.51
1:A:376:G:H2'	1:A:377:G:H8	1.75	0.51
18:P:5:ARG:HB3	18:P:68:SER:CB	2.40	0.51
9:G:87:PRO:HG3	9:G:148:LYS:CA	2.39	0.51
19:Q:10:ARG:NH1	19:Q:10:ARG:HB3	2.22	0.51
1:A:558:G:H2'	1:A:559:A:C2	2.45	0.51
1:A:686:U:O4	1:A:703:G:H1'	2.10	0.51
1:A:52:C:H2'	1:A:53:A:C8	2.46	0.51
4:B:25:LYS:O	4:B:26:MET:HB2	2.11	0.51
5:C:113:LYS:HE2	5:C:184:ASN:CG	2.31	0.51
5:C:184:ASN:H	5:C:199:VAL:HG23	1.76	0.51
5:C:39:ARG:HH21	5:C:55:VAL:HA	1.75	0.51
15:M:79:LEU:HD12	15:M:80:MET:H	1.75	0.51
4:B:101:THR:HG22	4:B:174:GLU:OE2	2.11	0.51
4:B:68:PHE:HB2	4:B:90:PHE:HA	1.92	0.51
18:P:74:LEU:HA	18:P:77:GLU:HG3	1.92	0.51
9:G:98:LEU:HD22	9:G:102:TRP:CZ2	2.46	0.51
19:Q:60:ILE:HA	19:Q:75:VAL:HG13	1.92	0.51
14:L:7:VAL:HG13	19:Q:30:HIS:NE2	2.25	0.51
1:A:1163:A:H2'	1:A:1164:G:C8	2.46	0.51
1:A:159:G:H1	1:A:163:C:N4	2.09	0.51
1:A:159:G:N1	1:A:163:C:N4	2.58	0.51

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:102:VAL:HG23	10:H:126:CYS:H	1.76	0.51
1:A:1128:C:H4'	1:A:1148:U:N3	2.26	0.51
12:J:42:LEU:HD23	12:J:71:LEU:HD23	1.93	0.51
6:D:171:GLU:HB2	6:D:179:GLY:O	2.10	0.51
5:C:85:LYS:CG	5:C:86:LEU:HD12	2.41	0.51
21:S:48:ILE:HB	21:S:59:VAL:HG23	1.93	0.51
4:B:175:ALA:HA	4:B:178:LEU:HD11	1.93	0.51
4:B:204:ASP:O	4:B:205:ALA:HB3	2.11	0.51
4:B:59:ILE:CG2	4:B:62:ARG:HH11	2.22	0.51
13:K:111:ASP:HB3	23:U:23:GLU:OE1	2.09	0.51
9:G:92:PRO:HA	9:G:95:ARG:HG2	1.92	0.51
1:A:542:G:O2'	1:A:543:U:H5'	2.10	0.51
1:A:123:U:OP1	1:A:312:C:H5'	2.11	0.51
13:K:81:LEU:HD23	13:K:99:LEU:HD23	1.93	0.51
1:A:1426:G:H2'	1:A:1427:C:H6	1.75	0.51
8:F:97:THR:O	8:F:98:GLU:HB3	2.10	0.51
1:A:1150:A:H1'	1:A:1280:A:C6	2.44	0.51
6:D:168:THR:C	6:D:170:LEU:H	2.14	0.51
1:A:1314:C:H2'	1:A:1315:U:C6	2.45	0.51
1:A:403:C:H5'	6:D:131:ILE:CG2	2.41	0.51
15:M:30:LYS:HA	15:M:33:LEU:CD1	2.34	0.51
5:C:147:GLY:HA2	5:C:170:GLY:HA3	1.91	0.51
20:R:25:ILE:HG23	20:R:26:ALA:H	1.76	0.51
1:A:325:A:H2'	1:A:326:G:C8	2.45	0.51
8:F:36:ILE:H	8:F:36:ILE:HD12	1.76	0.51
1:A:599:C:C4'	10:H:122:GLY:HA2	2.40	0.51
10:H:74:ILE:HG13	10:H:128:VAL:HG12	1.91	0.51
1:A:1157:A:C2	1:A:1180:A:H2'	2.46	0.51
11:I:60:LEU:HD12	11:I:60:LEU:O	2.11	0.51
21:S:32:THR:HG22	21:S:33:TRP:N	2.25	0.51
22:T:67:HIS:HB3	22:T:68:LYS:CE	2.40	0.51
9:G:137:ARG:HH11	9:G:141:HIS:CD2	2.29	0.51
13:K:125:LYS:HA	13:K:125:LYS:HE2	1.93	0.51
4:B:147:LEU:O	4:B:151:LYS:HG2	2.10	0.51
1:A:643:C:H5'	10:H:31:LEU:HD13	1.93	0.51
16:N:8:ARG:HD3	16:N:12:ARG:HH22	1.76	0.51
17:O:66:LEU:HB3	17:O:77:TYR:CE1	2.46	0.51
1:A:1227:A:C8	1:A:1227:A:H5'	2.42	0.51
1:A:1112:C:N3	5:C:177:LEU:HB2	2.25	0.51
12:J:5:ARG:O	12:J:102:LEU:HD12	2.10	0.51
1:A:16:A:N1	1:A:919:A:H2	2.09	0.51
1:A:1349:A:H2'	1:A:1350:A:O4'	2.10	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:175:C:H2'	1:A:176:C:H6	1.74	0.51
1:A:1214:C:H4'	1:A:1215:G:OP1	2.08	0.51
1:A:802:A:H2'	1:A:803:G:O4'	2.11	0.51
7:E:110:MET:HG2	7:E:114:LEU:HB2	1.92	0.51
7:E:106:ALA:HB1	7:E:110:MET:O	2.11	0.51
7:E:35:LEU:HD13	7:E:133:ILE:HG12	1.93	0.51
10:H:14:ARG:HE	10:H:74:ILE:HG23	1.76	0.51
9:G:38:ALA:O	9:G:42:VAL:HG23	2.10	0.51
5:C:55:VAL:C	5:C:56:ILE:HD12	2.30	0.51
16:N:31:SER:C	16:N:40:ARG:HD3	2.31	0.51
4:B:168:GLU:HB3	4:B:171:ALA:HB3	1.92	0.51
10:H:95:MET:HG2	10:H:98:LEU:HD11	1.92	0.51
12:J:10:LEU:O	12:J:18:ILE:HD11	2.10	0.51
13:K:48:GLY:HA3	13:K:68:ARG:HH22	1.75	0.51
1:A:1074:G:H2'	1:A:1075:U:C6	2.45	0.51
7:E:33:THR:HG22	7:E:51:LYS:HG3	1.93	0.51
6:D:146:GLU:CD	6:D:146:GLU:N	2.61	0.51
6:D:125:ASN:HA	6:D:141:VAL:HG23	1.93	0.51
1:A:658:C:H2'	1:A:659:U:H6	1.75	0.51
1:A:524:G:H2'	1:A:525:C:C6	2.46	0.51
5:C:152:VAL:HB	5:C:156:LEU:CD2	2.41	0.51
5:C:58:ARG:HB3	5:C:63:ILE:HD12	1.93	0.51
1:A:1438:G:O2'	1:A:1439:G:H5'	2.11	0.51
20:R:33:THR:HG23	20:R:35:SER:N	2.26	0.51
1:A:170:U:O2'	1:A:171:A:H5'	2.11	0.51
14:L:38:THR:CG2	14:L:50:LYS:HG3	2.40	0.51
1:A:373:A:H1'	1:A:481:G:N3	2.26	0.51
15:M:47:LEU:HD11	15:M:55:LEU:HD21	1.93	0.51
17:O:11:VAL:HA	17:O:26:VAL:HG21	1.93	0.51
1:A:208:U:C2'	1:A:209:U:H5''	2.41	0.51
1:A:1250:A:H2'	1:A:1251:A:C8	2.46	0.51
10:H:117:GLN:C	10:H:119:GLY:H	2.14	0.51
1:A:304:U:H2'	1:A:305:G:C8	2.46	0.51
1:A:1180:A:H5''	1:A:1181:G:OP2	2.11	0.50
11:I:32:ARG:HD2	11:I:36:GLN:CB	2.37	0.50
11:I:48:ARG:O	11:I:51:LEU:HG	2.10	0.50
4:B:16:GLY:O	4:B:188:THR:HG21	2.11	0.50
4:B:14:HIS:CE1	4:B:42:LEU:HD13	2.47	0.50
6:D:88:ASN:O	6:D:92:LEU:HD23	2.10	0.50
1:A:1123:U:O2'	12:J:40:ILE:HA	2.11	0.50
12:J:39:PRO:HA	12:J:74:VAL:HG22	1.93	0.50
13:K:106:ILE:HD11	13:K:109:ILE:HG13	1.94	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:88:MET:HG3	8:F:90:MET:HE3	1.92	0.50
1:A:235:C:H2'	1:A:236:A:H8	1.74	0.50
1:A:484:G:H4'	1:A:485:U:H5'	1.92	0.50
14:L:41:PRO:HB3	14:L:89:LEU:HD13	1.93	0.50
15:M:52:ILE:HG23	15:M:53:ASP:OD2	2.10	0.50
1:A:1464:U:H2'	1:A:1465:A:C8	2.46	0.50
1:A:300:A:H2'	1:A:301:G:O4'	2.11	0.50
1:A:636:U:H2'	1:A:637:C:C6	2.46	0.50
1:A:1298:U:H2'	9:G:113:LYS:HZ1	1.75	0.50
1:A:52:C:H2'	1:A:53:A:H8	1.76	0.50
1:A:31:G:N2	1:A:47:C:H4'	2.26	0.50
1:A:745:G:H2'	1:A:746:A:H8	1.77	0.50
1:A:603:U:H2'	1:A:604:G:H8	1.76	0.50
10:H:62:LEU:HD12	10:H:62:LEU:N	2.26	0.50
4:B:21:TYR:HB2	4:B:189:ASN:HB2	1.93	0.50
5:C:184:ASN:O	5:C:199:VAL:HG22	2.12	0.50
9:G:52:ARG:NH1	9:G:121:ASN:HD22	2.09	0.50
4:B:150:ILE:HA	4:B:153:MET:CB	2.40	0.50
8:F:20:GLY:HA2	8:F:23:GLU:OE2	2.11	0.50
1:A:1226:C:N4	15:M:102:LYS:HD2	2.24	0.50
15:M:95:PRO:HG3	15:M:101:THR:HG22	1.94	0.50
21:S:24:SER:HB3	21:S:27:LYS:NZ	2.26	0.50
1:A:1069:C:O2'	1:A:1192:C:H1'	2.10	0.50
1:A:22:G:H4'	1:A:885:G:C8	2.46	0.50
1:A:119:A:H4'	1:A:120:A:O4'	2.11	0.50
1:A:775:G:H2'	1:A:776:G:H8	1.77	0.50
7:E:139:THR:HA	7:E:143:LEU:HB3	1.92	0.50
15:M:74:MET:HA	15:M:77:LYS:NZ	2.25	0.50
15:M:73:SER:O	15:M:77:LYS:HG3	2.11	0.50
4:B:178:LEU:HD13	4:B:180:ILE:HG12	1.94	0.50
4:B:45:THR:CG2	4:B:199:ILE:HD12	2.37	0.50
13:K:35:ASP:HB2	13:K:41:LEU:HD21	1.93	0.50
1:A:924:C:H2'	1:A:925:G:C8	2.46	0.50
20:R:35:SER:HB2	20:R:37:LYS:HE3	1.93	0.50
19:Q:68:LYS:C	19:Q:70:LYS:H	2.13	0.50
1:A:541:G:H2'	1:A:542:G:H8	1.77	0.50
1:A:309:A:H2'	1:A:310:G:C8	2.43	0.50
12:J:35:GLN:HB2	12:J:78:GLU:CG	2.41	0.50
8:F:36:ILE:N	8:F:36:ILE:HD12	2.27	0.50
1:A:1268:G:H2'	1:A:1269:A:C8	2.47	0.50
1:A:646:G:H2'	1:A:647:C:H6	1.77	0.50
7:E:73:VAL:HA	7:E:146:MET:SD	2.51	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:24:ASN:ND2	11:I:24:ASN:H	2.10	0.50
4:B:99:MET:HE2	4:B:147:LEU:HA	1.92	0.50
15:M:4:ALA:HA	15:M:56:ARG:HD3	1.93	0.50
1:A:1330:U:H5''	15:M:69:ARG:NH2	2.26	0.50
16:N:1:ALA:O	16:N:5:MET:HB3	2.11	0.50
1:A:91:U:H2'	1:A:92:U:H6	1.76	0.50
19:Q:16:MET:CB	19:Q:19:SER:HB2	2.40	0.50
1:A:967:C:H2'	1:A:968:A:C2	2.47	0.50
1:A:279:A:OP1	1:A:281:G:H5'	2.11	0.50
13:K:22:ILE:HG22	13:K:31:VAL:HG22	1.94	0.50
11:I:40:ARG:HH11	11:I:40:ARG:CB	2.19	0.50
5:C:51:VAL:HG12	5:C:69:THR:OG1	2.12	0.50
1:A:1323:G:H4'	1:A:1362:A:C4	2.45	0.50
15:M:67:ASP:HA	15:M:70:ARG:NH2	2.25	0.50
4:B:91:VAL:HG13	4:B:146:SER:O	2.12	0.50
13:K:90:PRO:C	13:K:92:ARG:H	2.15	0.50
8:F:71:ILE:O	8:F:74:LEU:HB3	2.12	0.50
23:U:40:PRO:HB2	23:U:44:ARG:HE	1.74	0.50
6:D:7:LYS:HZ3	6:D:21:LYS:HG2	1.76	0.50
1:A:1073:U:H2'	1:A:1074:G:C8	2.46	0.50
1:A:208:U:H2'	1:A:210:C:C6	2.46	0.50
1:A:775:G:H2'	1:A:776:G:C8	2.46	0.50
1:A:358:U:H2'	1:A:359:G:C8	2.46	0.50
1:A:592:G:H2'	1:A:593:U:C6	2.46	0.50
1:A:389:A:H2'	1:A:389:A:N3	2.26	0.50
1:A:1453:G:H3'	1:A:1453:G:N3	2.26	0.50
7:E:41:GLY:HA2	7:E:116:VAL:HG12	1.94	0.50
10:H:42:GLU:HG3	10:H:100:ILE:HG21	1.92	0.50
6:D:171:GLU:OE1	6:D:182:LYS:HG2	2.11	0.50
16:N:68:ARG:HH12	16:N:81:ILE:HD12	1.77	0.50
1:A:1321:U:H5''	1:A:1322:C:OP2	2.12	0.50
23:U:39:LYS:N	23:U:40:PRO:HD2	2.26	0.50
13:K:41:LEU:HB3	13:K:76:TYR:CE1	2.47	0.50
8:F:18:VAL:O	8:F:22:ILE:HG13	2.11	0.50
4:B:128:LEU:HD23	4:B:129:THR:H	1.76	0.50
14:L:35:ARG:NH2	14:L:75:GLU:HB3	2.26	0.50
5:C:13:ILE:HD12	5:C:177:LEU:HB3	1.93	0.50
1:A:419:C:H2'	1:A:420:U:H6	1.76	0.50
1:A:1446:A:C3'	1:A:1447:A:H5''	2.41	0.50
1:A:741:G:OP2	17:O:1:SER:HB3	2.12	0.50
1:A:817:C:H1'	1:A:819:A:H5'	1.93	0.50
1:A:361:G:H3'	25:A:1629:HOH:O	2.12	0.50

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1368:A:O2'	1:A:1369:C:H5'	2.11	0.50
4:B:185:ILE:HB	4:B:202:ASN:O	2.12	0.50
18:P:6:LEU:HD12	18:P:19:VAL:HB	1.93	0.50
1:A:643:C:OP1	10:H:30:LYS:HD2	2.11	0.50
17:O:66:LEU:HD22	17:O:77:TYR:HE1	1.77	0.50
1:A:506:G:H2'	1:A:507:C:C6	2.46	0.50
6:D:185:PRO:CB	6:D:190:LEU:HD21	2.40	0.50
19:Q:20:ILE:HG12	19:Q:52:CYS:SG	2.51	0.50
1:A:812:G:HO2'	1:A:813:U:H6	1.58	0.50
1:A:328:C:H1'	1:A:329:A:OP2	2.12	0.50
7:E:55:VAL:N	7:E:56:PRO:HD2	2.27	0.50
10:H:100:ILE:HG13	10:H:129:ALA:O	2.12	0.50
11:I:4:GLN:CD	11:I:21:LYS:HB2	2.32	0.50
6:D:122:ILE:HG22	6:D:123:MET:N	2.27	0.50
16:N:65:GLN:HG2	16:N:82:LYS:NZ	2.27	0.50
4:B:100:LEU:HD13	4:B:174:GLU:HB3	1.93	0.50
8:F:68:GLN:HA	8:F:71:ILE:HG22	1.93	0.50
22:T:24:ARG:HD3	22:T:28:ARG:NH2	2.26	0.50
15:M:28:ARG:HH22	15:M:59:VAL:HA	1.75	0.50
1:A:1326:U:O2'	1:A:1327:C:H5'	2.12	0.50
19:Q:61:ARG:HG2	19:Q:61:ARG:HH11	1.77	0.50
5:C:70:ALA:HA	5:C:105:VAL:HG11	1.94	0.50
9:G:74:VAL:HA	9:G:87:PRO:HA	1.93	0.50
11:I:129:ARG:O	11:I:129:ARG:HD3	2.12	0.50
9:G:145:GLU:C	9:G:147:ASN:H	2.15	0.50
9:G:2:ARG:HH11	9:G:2:ARG:HG2	1.76	0.50
11:I:34:LEU:HB3	11:I:35:GLU:OE1	2.12	0.50
12:J:11:LYS:O	12:J:96:VAL:HG23	2.12	0.50
1:A:1242:G:H2'	1:A:1243:C:C6	2.47	0.50
1:A:1369:C:H2'	1:A:1370:G:C8	2.46	0.50
11:I:114:LYS:H	11:I:120:ALA:HA	1.77	0.50
1:A:1369:C:OP1	16:N:100:TRP:NE1	2.44	0.50
8:F:47:LEU:HD12	8:F:55:HIS:HA	1.94	0.50
4:B:110:ILE:CG2	4:B:147:LEU:HD22	2.42	0.50
4:B:128:LEU:CD2	4:B:132:GLU:HB2	2.40	0.50
11:I:110:VAL:HB	25:I:238:HOH:O	2.11	0.50
16:N:53:ASP:HA	16:N:58:ARG:HD2	1.93	0.50
1:A:824:G:O2'	10:H:2:MET:HB2	2.11	0.50
1:A:1222:G:O2'	1:A:1223:C:H5'	2.12	0.50
1:A:17:U:H2'	1:A:18:C:H6	1.76	0.50
1:A:701:U:O5'	1:A:703:G:H5'	2.12	0.50
10:H:17:GLN:NE2	10:H:69:ALA:HB2	2.27	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1241:G:H2'	1:A:1242:G:C8	2.44	0.49
1:A:1315:U:H2'	1:A:1316:G:O4'	2.12	0.49
4:B:168:GLU:O	4:B:172:ILE:HG12	2.12	0.49
7:E:105:ILE:HD11	7:E:122:VAL:O	2.12	0.49
7:E:22:LYS:NZ	7:E:24:VAL:HA	2.27	0.49
1:A:98:A:H2'	1:A:99:C:H6	1.72	0.49
6:D:150:LYS:O	6:D:151:GLN:C	2.50	0.49
1:A:168:G:O2'	1:A:169:C:H5'	2.12	0.49
1:A:372:C:H1'	1:A:373:A:OP2	2.12	0.49
12:J:35:GLN:HB2	12:J:78:GLU:CB	2.42	0.49
4:B:105:THR:HG23	4:B:108:GLN:OE1	2.12	0.49
22:T:29:THR:HA	22:T:32:LYS:HE2	1.93	0.49
13:K:100:ASN:C	13:K:102:ALA:H	2.16	0.49
1:A:63:C:P	1:A:384:G:H21	2.34	0.49
10:H:24:VAL:HG22	10:H:25:THR:N	2.27	0.49
1:A:954:G:H2'	1:A:955:U:C6	2.46	0.49
1:A:608:A:H2'	1:A:609:A:O4'	2.11	0.49
10:H:60:LEU:O	10:H:60:LEU:HD12	2.12	0.49
1:A:285:C:H2'	1:A:286:C:H6	1.77	0.49
6:D:167:PRO:HG2	6:D:170:LEU:HD11	1.94	0.49
1:A:1059:C:H5''	16:N:84:ARG:NH2	2.26	0.49
18:P:72:ALA:HA	18:P:75:ILE:HD12	1.93	0.49
8:F:58:HIS:HD2	8:F:59:TYR:N	2.10	0.49
17:O:63:ARG:NH1	17:O:63:ARG:HG2	2.27	0.49
14:L:48:LEU:O	14:L:50:LYS:HD2	2.11	0.49
1:A:1251:A:H2'	1:A:1252:A:H8	1.77	0.49
1:A:491:G:O2'	1:A:492:C:H5'	2.12	0.49
10:H:26:MET:HB2	10:H:27:PRO:HD2	1.94	0.49
1:A:390:U:H2'	1:A:391:G:C8	2.47	0.49
1:A:881:G:H2'	1:A:882:C:O4'	2.12	0.49
1:A:899:C:H2'	1:A:900:A:O4'	2.12	0.49
12:J:86:ALA:HA	12:J:90:LEU:HB3	1.93	0.49
12:J:88:MET:HA	12:J:91:ASP:OD2	2.12	0.49
21:S:52:ASN:HB3	21:S:55:GLN:O	2.12	0.49
23:U:8:ASN:O	23:U:9:GLU:HB2	2.12	0.49
1:A:876:C:H2'	1:A:877:G:C8	2.46	0.49
1:A:1133:G:O2'	1:A:1134:G:H5'	2.11	0.49
1:A:1133:G:H2'	1:A:1134:G:O4'	2.13	0.49
11:I:26:LYS:HG3	11:I:61:ASP:OD2	2.12	0.49
4:B:27:LYS:O	4:B:30:ILE:HG22	2.13	0.49
4:B:37:VAL:HG13	4:B:39:ILE:HD11	1.93	0.49
15:M:82:LEU:HD23	15:M:82:LEU:N	2.27	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:72:LYS:H	4:B:75:ALA:CB	2.26	0.49
12:J:30:LYS:HE3	12:J:31:ARG:HD2	1.93	0.49
12:J:36:VAL:HA	12:J:76:ILE:HD13	1.93	0.49
9:G:99:ALA:HA	9:G:102:TRP:HE3	1.76	0.49
8:F:86:ARG:HH12	20:R:63:TYR:C	2.16	0.49
1:A:1258:G:H2'	1:A:1259:C:C6	2.47	0.49
7:E:78:GLY:HA3	7:E:120:HIS:CE1	2.47	0.49
14:L:116:TYR:HD2	14:L:116:TYR:N	2.11	0.49
1:A:1422:G:O2'	1:A:1423:G:H5'	2.12	0.49
1:A:1035:A:H2'	1:A:1036:A:C8	2.47	0.49
1:A:1130:A:N6	1:A:1143:G:N2	2.59	0.49
6:D:123:MET:HE1	6:D:126:GLY:N	2.25	0.49
6:D:181:PHE:O	6:D:182:LYS:C	2.50	0.49
9:G:98:LEU:HB3	9:G:102:TRP:CH2	2.47	0.49
13:K:121:ARG:HH21	23:U:34:ARG:HG3	1.77	0.49
1:A:1511:G:H2'	1:A:1512:U:O4'	2.12	0.49
1:A:1009:U:O2'	1:A:1010:U:H5'	2.12	0.49
1:A:956:U:O2'	1:A:957:U:H5'	2.12	0.49
1:A:657:U:H1'	17:O:21:THR:O	2.11	0.49
10:H:79:ARG:HB2	10:H:80:PRO:HD2	1.94	0.49
9:G:50:ALA:HB2	9:G:57:GLU:HA	1.94	0.49
1:A:490:C:H2'	1:A:491:G:C8	2.48	0.49
1:A:721:G:OP1	20:R:51:GLN:HG2	2.12	0.49
1:A:394:G:H2'	1:A:395:C:H6	1.77	0.49
6:D:162:GLU:OE1	6:D:163:GLN:HG3	2.12	0.49
10:H:72:GLU:H	10:H:129:ALA:HB2	1.77	0.49
1:A:1128:C:O2'	1:A:1129:C:H5'	2.11	0.49
11:I:54:VAL:HG12	11:I:93:LEU:HD11	1.94	0.49
11:I:10:ARG:H	11:I:80:HIS:CD2	2.31	0.49
6:D:167:PRO:CG	6:D:170:LEU:HD11	2.43	0.49
5:C:29:ALA:HA	5:C:32:LEU:HD12	1.94	0.49
5:C:52:SER:HB2	5:C:111:ASP:OD2	2.11	0.49
5:C:57:GLU:HB3	5:C:64:ARG:HD2	1.93	0.49
21:S:15:LEU:HD23	21:S:19:GLU:OE1	2.13	0.49
6:D:61:ARG:HH21	6:D:68:GLU:N	2.06	0.49
9:G:49:LEU:CB	9:G:52:ARG:HH21	2.26	0.49
8:F:88:MET:O	8:F:89:VAL:HB	2.13	0.49
13:K:64:VAL:O	13:K:68:ARG:HB2	2.11	0.49
1:A:1053:G:C4'	1:A:1054:C:H5'	2.42	0.49
9:G:58:LEU:HB2	9:G:62:GLU:OE2	2.13	0.49
1:A:250:A:N3	1:A:250:A:H2'	2.27	0.49
17:O:32:THR:OG1	17:O:86:LEU:HD21	2.12	0.49

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:503:C:OP2	14:L:112:ALA:HB2	2.13	0.49
12:J:93:ALA:C	12:J:95:GLY:H	2.16	0.49
22:T:26:MET:O	22:T:30:PHE:HB2	2.11	0.49
1:A:107:G:O6	22:T:9:ARG:HD3	2.13	0.49
7:E:96:GLN:O	7:E:124:ALA:HB2	2.12	0.49
1:A:1375:A:H2'	1:A:1376:U:O4'	2.12	0.49
5:C:128:MET:SD	5:C:131:ARG:N	2.85	0.49
4:B:45:THR:HA	4:B:200:PRO:HD2	1.94	0.49
9:G:25:PHE:HE2	9:G:119:LEU:HD11	1.78	0.49
1:A:1329:A:H4'	15:M:23:GLY:O	2.13	0.49
13:K:21:HIS:CD2	13:K:34:THR:HB	2.47	0.49
1:A:1026:G:H2'	1:A:1027:C:H6	1.77	0.49
1:A:153:C:H2'	1:A:154:U:C6	2.47	0.49
13:K:23:HIS:O	13:K:29:THR:HA	2.11	0.49
1:A:215:C:H2'	1:A:216:U:C6	2.48	0.49
16:N:6:LYS:O	16:N:10:VAL:HG23	2.13	0.49
22:T:46:ALA:HB1	22:T:82:ILE:HG21	1.94	0.49
1:A:1141:C:H2'	1:A:1142:G:O4'	2.13	0.49
11:I:44:ARG:NE	11:I:45:MET:SD	2.86	0.49
1:A:1375:A:H2'	1:A:1376:U:C6	2.48	0.49
1:A:1320:C:H1'	21:S:72:GLU:CA	2.42	0.49
4:B:71:THR:OG1	4:B:78:ALA:HB3	2.12	0.49
4:B:48:MET:SD	4:B:200:PRO:HD3	2.53	0.49
8:F:9:MET:HA	8:F:58:HIS:O	2.13	0.49
1:A:37:U:H2'	1:A:38:G:H8	1.78	0.49
1:A:1225:A:H2'	1:A:1225:A:N3	2.26	0.49
12:J:62:ARG:HG3	12:J:62:ARG:HH11	1.77	0.49
12:J:62:ARG:HG3	12:J:62:ARG:NH1	2.27	0.49
1:A:737:C:H2'	1:A:738:C:C6	2.47	0.49
1:A:185:U:H2'	1:A:186:C:C6	2.47	0.49
1:A:1388:C:H2'	1:A:1389:C:H6	1.77	0.49
7:E:87:VAL:CG1	7:E:88:HIS:H	2.11	0.49
10:H:128:VAL:HG23	10:H:129:ALA:N	2.21	0.49
10:H:93:LYS:HG3	10:H:96:ALA:O	2.13	0.49
16:N:29:ILE:HD12	16:N:29:ILE:N	2.27	0.49
18:P:2:VAL:HA	18:P:23:ASP:HA	1.94	0.49
11:I:106:ASP:OD2	11:I:108:ARG:HG3	2.13	0.49
1:A:252:U:H2'	1:A:253:A:H8	1.76	0.49
1:A:1291:U:OP2	9:G:37:THR:HG23	2.13	0.49
1:A:1478:U:H2'	1:A:1479:C:C6	2.47	0.49
1:A:185:U:H2'	1:A:186:C:H6	1.77	0.49
1:A:1128:C:C4'	1:A:1148:U:H3	2.25	0.49

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:76:PHE:CE2	16:N:92:ILE:HG21	2.47	0.49
4:B:68:PHE:HB2	4:B:90:PHE:CB	2.42	0.49
15:M:33:LEU:HB3	15:M:38:ILE:O	2.13	0.49
1:A:1014:A:H4'	21:S:13:HIS:CD2	2.48	0.49
9:G:111:GLY:H	9:G:118:ARG:HH12	1.61	0.49
5:C:10:ARG:NH2	5:C:179:ALA:N	2.61	0.49
17:O:81:ILE:HG23	17:O:86:LEU:O	2.12	0.49
1:A:210:C:H4'	1:A:211:G:C2	2.48	0.49
6:D:22:SER:N	6:D:109:THR:HG22	2.28	0.49
1:A:113:G:O2'	1:A:354:G:H5'	2.13	0.49
10:H:17:GLN:HE22	10:H:69:ALA:HB2	1.78	0.49
5:C:116:ALA:HB1	5:C:186:SER:CB	2.43	0.49
16:N:63:CYS:HB2	16:N:79:SER:HB3	1.95	0.49
1:A:401:C:O2'	1:A:402:G:H5'	2.13	0.49
6:D:58:GLN:NE2	6:D:61:ARG:HD3	2.28	0.49
18:P:68:SER:H	18:P:71:VAL:CG1	2.26	0.49
7:E:83:PRO:HG3	7:E:97:PRO:CD	2.36	0.49
1:A:1101:A:H4'	1:A:1102:A:O5'	2.13	0.49
4:B:95:TRP:CD1	4:B:170:ILE:HB	2.48	0.49
1:A:1398:A:H61	7:E:25:LYS:HB2	1.78	0.49
1:A:920:U:H2'	1:A:921:U:H6	1.78	0.49
4:B:130:LYS:CA	4:B:134:LEU:HB2	2.42	0.49
1:A:373:A:H2'	1:A:374:A:C8	2.48	0.49
17:O:42:PHE:HE1	17:O:55:LEU:HD13	1.77	0.49
1:A:592:G:H2'	1:A:593:U:H6	1.78	0.49
1:A:1051:C:H2'	1:A:1052:U:C6	2.47	0.49
1:A:1339:A:H2'	1:A:1340:A:O4'	2.13	0.49
11:I:45:MET:O	11:I:49:GLN:HG3	2.13	0.48
6:D:138:PRO:HA	6:D:181:PHE:HB3	1.94	0.48
6:D:24:VAL:HG22	6:D:160:LEU:HB3	1.94	0.48
5:C:100:ILE:HG13	5:C:101:ASN:N	2.28	0.48
5:C:76:ILE:HD13	5:C:83:VAL:CG2	2.42	0.48
21:S:35:ARG:HA	21:S:70:LEU:HB2	1.95	0.48
4:B:159:ALA:O	4:B:160:LEU:HG	2.12	0.48
13:K:108:ASN:HA	23:U:6:ARG:CD	2.43	0.48
13:K:106:ILE:HG12	13:K:109:ILE:HD11	1.95	0.48
1:A:35:G:OP1	14:L:100:ALA:HB2	2.13	0.48
5:C:147:GLY:CA	5:C:170:GLY:HA3	2.43	0.48
19:Q:15:LYS:HG3	19:Q:16:MET:N	2.28	0.48
1:A:1385:G:C5'	11:I:129:ARG:HH22	2.26	0.48
14:L:66:ILE:HG21	14:L:71:HIS:CD2	2.48	0.48
2:W:27:U:H2'	2:W:28:C:H6	1.75	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:190:A:O5'	1:A:190:A:H8	1.96	0.48
1:A:580:C:H2'	1:A:581:G:C8	2.48	0.48
1:A:904:U:H2'	1:A:905:U:C6	2.48	0.48
7:E:109:ALA:C	7:E:111:ARG:H	2.15	0.48
11:I:33:SER:H	11:I:36:GLN:HG3	1.78	0.48
21:S:39:ILE:HB	21:S:66:VAL:O	2.13	0.48
4:B:101:THR:C	4:B:103:TRP:N	2.66	0.48
4:B:158:ASP:CA	4:B:180:ILE:HG23	2.39	0.48
4:B:93:HIS:O	4:B:146:SER:HB3	2.12	0.48
1:A:621:A:H2'	1:A:622:A:C8	2.48	0.48
8:F:3:HIS:HB2	8:F:92:THR:CA	2.32	0.48
13:K:125:LYS:HA	13:K:125:LYS:HZ3	1.78	0.48
1:A:1236:A:H2'	1:A:1237:C:C6	2.48	0.48
13:K:19:VAL:HG12	13:K:82:GLU:HB2	1.95	0.48
1:A:193:C:C4'	22:T:54:GLN:HG2	2.43	0.48
1:A:924:C:H2'	1:A:925:G:H8	1.77	0.48
1:A:1188:A:H2'	1:A:1189:U:O4'	2.12	0.48
1:A:832:G:O2'	1:A:833:G:H5'	2.13	0.48
7:E:23:THR:CB	7:E:27:GLY:H	2.26	0.48
1:A:1522:U:O2'	1:A:1523:G:H5'	2.13	0.48
7:E:11:GLN:NE2	7:E:13:LYS:HE3	2.24	0.48
10:H:46:GLU:HB2	10:H:61:THR:CB	2.44	0.48
6:D:164:ARG:O	6:D:166:LYS:N	2.46	0.48
5:C:36:PHE:O	5:C:39:ARG:HB2	2.14	0.48
5:C:59:PRO:HD2	5:C:63:ILE:CA	2.43	0.48
16:N:92:ILE:CG2	16:N:95:LEU:HB2	2.42	0.48
16:N:23:ARG:HA	16:N:26:LEU:CD1	2.42	0.48
16:N:29:ILE:CD1	16:N:29:ILE:H	2.26	0.48
22:T:68:LYS:HB2	22:T:70:LYS:HG3	1.95	0.48
19:Q:41:THR:HG22	19:Q:43:LEU:HD11	1.94	0.48
9:G:110:ARG:NE	9:G:122:GLU:HB2	2.27	0.48
5:C:10:ARG:O	5:C:13:ILE:O	2.31	0.48
1:A:667:G:H4'	17:O:50:HIS:CG	2.49	0.48
18:P:7:ALA:HB1	18:P:9:HIS:HE1	1.79	0.48
1:A:857:C:H2'	1:A:858:G:O4'	2.13	0.48
8:F:81:ASN:OD1	8:F:83:ALA:HB3	2.12	0.48
1:A:975:A:OP2	1:A:975:A:H4'	2.12	0.48
21:S:39:ILE:HA	21:S:43:MET:SD	2.54	0.48
23:U:24:LYS:N	23:U:28:LEU:HD12	2.27	0.48
12:J:17:LEU:CD1	12:J:21:ALA:HB3	2.43	0.48
1:A:976:G:OP1	16:N:70:HIS:HA	2.12	0.48
5:C:105:VAL:HG12	5:C:106:ARG:H	1.78	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:W:28:C:H2'	2:W:29:G:C8	2.49	0.48
10:H:9:MET:O	10:H:13:ILE:HG13	2.14	0.48
1:A:366:A:O2'	1:A:394:G:N2	2.46	0.48
16:N:48:GLN:HE21	16:N:49:THR:CG2	2.26	0.48
1:A:317:U:H2'	1:A:318:G:H8	1.78	0.48
4:B:163:ILE:HG12	4:B:203:ASP:O	2.13	0.48
4:B:148:GLY:HA2	4:B:151:LYS:CE	2.43	0.48
1:A:487:A:H3'	1:A:488:C:H6	1.78	0.48
1:A:183:C:O2	1:A:183:C:O4'	2.30	0.48
9:G:59:GLU:HG2	9:G:63:VAL:HB	1.95	0.48
1:A:1036:A:H2'	1:A:1037:C:O4'	2.13	0.48
1:A:865:A:H2'	1:A:866:C:C6	2.49	0.48
7:E:156:ARG:HG2	10:H:63:LYS:HZ3	1.77	0.48
7:E:84:VAL:HG12	7:E:85:LYS:H	1.79	0.48
11:I:79:ARG:NH2	11:I:102:PHE:HA	2.29	0.48
6:D:106:PHE:CD1	6:D:144:ILE:HD11	2.48	0.48
5:C:129:PHE:O	5:C:133:MET:HG2	2.14	0.48
21:S:36:ARG:HH11	21:S:36:ARG:HG2	1.79	0.48
4:B:69:VAL:N	4:B:79:VAL:HG21	2.26	0.48
8:F:75:GLU:O	8:F:79:ARG:HG2	2.14	0.48
18:P:6:LEU:HD23	18:P:17:TYR:CB	2.44	0.48
18:P:67:ILE:HD11	18:P:71:VAL:CG2	2.44	0.48
15:M:32:ILE:HG23	15:M:33:LEU:N	2.29	0.48
11:I:105:ARG:HD3	11:I:106:ASP:N	2.29	0.48
20:R:46:THR:HB	20:R:50:TYR:HD1	1.79	0.48
17:O:6:ALA:O	17:O:9:LYS:HB3	2.13	0.48
1:A:457:G:H2'	1:A:458:U:C6	2.48	0.48
1:A:532:A:H62	1:A:1207:G:H5'	1.78	0.48
1:A:878:A:C5'	10:H:80:PRO:HG2	2.43	0.48
22:T:37:ALA:HB2	22:T:45:ALA:HB3	1.96	0.48
10:H:77:VAL:CG2	10:H:126:CYS:HA	2.39	0.48
11:I:18:VAL:HA	11:I:63:TYR:O	2.13	0.48
4:B:30:ILE:HG12	4:B:41:ASN:H	1.78	0.48
5:C:197:VAL:HG12	5:C:198:LYS:N	2.29	0.48
13:K:110:THR:HG22	23:U:3:ILE:C	2.33	0.48
6:D:27:ILE:C	6:D:29:THR:H	2.17	0.48
1:A:1160:G:H5''	4:B:130:LYS:CG	2.43	0.48
5:C:110:LEU:HD12	5:C:203:LYS:HE3	1.95	0.48
9:G:134:VAL:O	9:G:138:GLU:HB2	2.14	0.48
5:C:13:ILE:O	5:C:14:VAL:HG22	2.14	0.48
1:A:423:G:H2'	1:A:424:G:H4'	1.96	0.48
1:A:1012:A:O2'	1:A:1013:G:H5'	2.14	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:947:G:H5''	15:M:106:ARG:O	2.13	0.48
1:A:1210:C:C2'	1:A:1211:U:H5'	2.44	0.48
1:A:1409:C:O2'	1:A:1410:A:H5'	2.13	0.48
1:A:600:A:H2'	1:A:601:G:C8	2.49	0.48
4:B:41:ASN:ND2	4:B:44:LYS:H	1.95	0.48
5:C:121:SER:O	5:C:125:ARG:HG3	2.14	0.48
6:D:45:PRO:O	6:D:46:ARG:HG2	2.14	0.48
1:A:122:G:O2'	1:A:123:U:H5'	2.13	0.48
14:L:62:VAL:HG21	14:L:94:TYR:CE1	2.49	0.48
1:A:1189:U:H2'	1:A:1190:G:H5'	1.95	0.48
14:L:107:LYS:HG2	14:L:108:ASP:OD2	2.14	0.48
1:A:833:G:H2'	1:A:834:U:H6	1.79	0.48
4:B:35:ASN:C	4:B:36:LYS:HG3	2.34	0.48
1:A:285:C:H2'	1:A:286:C:C6	2.48	0.48
1:A:1129:C:C1'	1:A:1146:A:H61	2.27	0.48
1:A:1374:A:O2'	1:A:1375:A:H5'	2.14	0.48
23:U:24:LYS:HD2	23:U:25:ALA:H	1.76	0.48
1:A:455:G:H2'	1:A:456:A:C8	2.48	0.48
18:P:2:VAL:HG23	18:P:22:ALA:O	2.13	0.48
18:P:66:THR:HG22	18:P:67:ILE:N	2.28	0.48
12:J:10:LEU:HD11	12:J:74:VAL:CG2	2.44	0.48
1:A:202:G:H1'	1:A:468:A:C8	2.48	0.48
1:A:413:G:H22	1:A:429:U:P	2.37	0.48
6:D:198:LEU:HA	6:D:201:GLU:OE2	2.13	0.48
6:D:185:PRO:HB2	6:D:190:LEU:HD21	1.94	0.48
15:M:89:ARG:NH1	15:M:95:PRO:HG2	2.28	0.48
1:A:984:C:H2'	1:A:985:C:H6	1.79	0.48
1:A:1526:G:OP1	23:U:38:GLU:HB2	2.14	0.48
14:L:7:VAL:HG13	19:Q:30:HIS:CD2	2.49	0.48
13:K:74:LYS:CE	13:K:79:LYS:HE2	2.43	0.48
17:O:34:GLN:HA	17:O:34:GLN:HE21	1.78	0.48
1:A:1417:G:N2	1:A:1482:G:H2'	2.29	0.48
1:A:601:G:H2'	1:A:602:A:H8	1.79	0.48
1:A:1135:U:H3'	1:A:1137:C:N4	2.29	0.48
11:I:16:ALA:HA	11:I:66:VAL:HA	1.96	0.48
16:N:29:ILE:C	16:N:31:SER:H	2.17	0.48
23:U:36:PHE:HB2	23:U:39:LYS:HB2	1.95	0.48
15:M:23:GLY:HA2	15:M:68:LEU:HD22	1.95	0.48
1:A:239:U:H6	1:A:239:U:C5'	2.27	0.48
4:B:130:LYS:CB	4:B:134:LEU:HD12	2.38	0.48
12:J:52:LEU:HD12	12:J:52:LEU:N	2.25	0.48
1:A:60:A:H2'	22:T:4:LYS:NZ	2.29	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:4:LYS:HD3	22:T:5:SER:N	2.28	0.48
1:A:1499:A:H3'	1:A:1499:A:OP2	2.14	0.48
11:I:75:ALA:HA	11:I:78:ILE:HD12	1.95	0.48
1:A:745:G:H2'	1:A:746:A:C8	2.48	0.48
1:A:1230:C:H2'	1:A:1231:G:H8	1.79	0.48
1:A:526:C:H2'	1:A:527:G:H4'	1.95	0.48
15:M:41:ASP:OD2	15:M:41:ASP:N	2.44	0.48
5:C:115:VAL:HB	5:C:199:VAL:HG11	1.96	0.47
5:C:184:ASN:H	5:C:199:VAL:CG2	2.27	0.47
23:U:3:ILE:HD11	23:U:18:PHE:CD1	2.50	0.47
8:F:78:PHE:C	8:F:80:PHE:H	2.17	0.47
4:B:45:THR:HG23	4:B:200:PRO:HG2	1.96	0.47
14:L:23:LEU:HG	14:L:24:GLU:N	2.29	0.47
15:M:12:LYS:HA	15:M:43:LYS:HZ3	1.79	0.47
13:K:83:VAL:HG21	13:K:106:ILE:HD12	1.95	0.47
12:J:52:LEU:N	12:J:62:ARG:HD3	2.28	0.47
15:M:112:ARG:HH11	15:M:112:ARG:H	1.61	0.47
19:Q:14:ASP:HA	19:Q:20:ILE:CD1	2.42	0.47
14:L:71:HIS:CE1	14:L:73:LEU:HB2	2.48	0.47
1:A:174:A:O2'	1:A:175:C:H5'	2.14	0.47
10:H:55:LYS:HB3	10:H:55:LYS:HZ3	1.77	0.47
11:I:75:ALA:HA	11:I:78:ILE:CD1	2.44	0.47
1:A:1434:A:H2'	1:A:1435:G:O4'	2.14	0.47
1:A:809:G:OP2	17:O:47:LYS:HE3	2.14	0.47
11:I:5:TYR:O	11:I:19:PHE:HA	2.14	0.47
11:I:114:LYS:HG3	11:I:120:ALA:HB1	1.96	0.47
15:M:79:LEU:HA	15:M:82:LEU:HG	1.95	0.47
16:N:26:LEU:CG	16:N:44:VAL:HG22	2.33	0.47
1:A:1237:C:C4'	1:A:1334:G:N2	2.77	0.47
7:E:28:ARG:CG	7:E:29:ILE:H	2.21	0.47
1:A:233:C:O2'	1:A:234:C:H5'	2.14	0.47
1:A:642:A:H2'	1:A:643:C:H6	1.78	0.47
1:A:1391:U:H2'	1:A:1392:G:H8	1.75	0.47
6:D:43:ARG:O	6:D:45:PRO:HD3	2.13	0.47
17:O:66:LEU:HD22	17:O:77:TYR:CE1	2.49	0.47
1:A:646:G:H2'	1:A:647:C:C6	2.50	0.47
7:E:75:LEU:HD22	7:E:80:LEU:HB2	1.95	0.47
1:A:1078:U:H5'	7:E:89:THR:OG1	2.14	0.47
11:I:61:ASP:C	11:I:62:LEU:HD13	2.34	0.47
5:C:21:TRP:O	5:C:22:PHE:HB2	2.14	0.47
16:N:66:THR:OG1	16:N:67:GLY:N	2.47	0.47
16:N:23:ARG:CA	16:N:26:LEU:HD13	2.43	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:21:ILE:O	15:M:21:ILE:HG22	2.14	0.47
15:M:33:LEU:O	15:M:38:ILE:N	2.46	0.47
16:N:13:VAL:O	16:N:16:ALA:HB3	2.14	0.47
19:Q:21:VAL:HG11	19:Q:42:LYS:HE2	1.97	0.47
19:Q:41:THR:HG22	19:Q:43:LEU:CD1	2.44	0.47
8:F:48:ALA:HB2	20:R:66:LEU:O	2.14	0.47
19:Q:67:SER:CB	19:Q:70:LYS:HB3	2.44	0.47
1:A:762:U:H2'	1:A:763:G:C8	2.49	0.47
9:G:66:GLU:HA	9:G:69:ARG:CD	2.44	0.47
14:L:107:LYS:O	14:L:107:LYS:HE3	2.14	0.47
4:B:184:ALA:H	4:B:198:VAL:CG1	2.27	0.47
1:A:930:C:O2'	1:A:931:C:H5'	2.14	0.47
10:H:105:THR:CG2	10:H:122:GLY:H	2.27	0.47
8:F:21:MET:HB3	8:F:25:TYR:CE1	2.49	0.47
1:A:1346:A:H5''	11:I:121:ARG:HH12	1.79	0.47
12:J:67:ILE:HG23	12:J:67:ILE:O	2.14	0.47
1:A:1237:C:H3'	1:A:1336:C:N4	2.26	0.47
1:A:407:U:O3'	6:D:112:GLU:HB2	2.15	0.47
1:A:420:U:H1'	1:A:424:G:N2	2.29	0.47
1:A:1175:G:O2'	1:A:1176:A:H5'	2.13	0.47
1:A:414:A:H2'	1:A:415:A:O4'	2.15	0.47
6:D:63:ILE:O	6:D:63:ILE:HG12	2.15	0.47
18:P:46:LYS:HD2	18:P:47:GLU:H	1.79	0.47
16:N:89:ARG:HB3	16:N:91:GLU:HG2	1.96	0.47
1:A:915:A:H2'	1:A:916:U:H5'	1.96	0.47
7:E:116:VAL:C	7:E:118:GLY:H	2.18	0.47
10:H:87:ARG:O	10:H:91:LEU:HG	2.15	0.47
11:I:4:GLN:NE2	11:I:19:PHE:HB3	2.29	0.47
6:D:142:VAL:O	6:D:142:VAL:HG22	2.14	0.47
1:A:976:G:H2'	25:A:1799:HOH:O	2.13	0.47
4:B:128:LEU:HD22	4:B:132:GLU:CB	2.39	0.47
1:A:719:C:N4	20:R:59:LYS:HE2	2.29	0.47
6:D:46:ARG:NE	6:D:46:ARG:HA	2.29	0.47
6:D:198:LEU:O	6:D:201:GLU:HB2	2.15	0.47
1:A:128:G:H2'	1:A:129:A:C8	2.50	0.47
15:M:106:ARG:HH12	15:M:109:LYS:HE3	1.80	0.47
1:A:6:G:O2'	1:A:7:A:H8	1.98	0.47
1:A:1338:G:H2'	1:A:1339:A:C8	2.49	0.47
1:A:1338:G:H21	2:W:41:C:H1'	1.79	0.47
2:W:37:A:H2'	2:W:38:A:O4'	2.14	0.47
1:A:126:G:OP1	1:A:605:U:O2'	2.28	0.47
7:E:85:LYS:HE2	7:E:92:ARG:NE	2.30	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:112:ASP:O	10:H:116:ARG:HB2	2.14	0.47
8:F:14:GLN:HE21	8:F:83:ALA:CA	2.27	0.47
12:J:66:GLU:HG2	12:J:67:ILE:H	1.79	0.47
15:M:72:ILE:HG23	15:M:73:SER:N	2.28	0.47
8:F:49:TYR:HB2	8:F:50:PRO:HD2	1.96	0.47
1:A:202:G:H21	1:A:465:A:H61	1.62	0.47
1:A:1398:A:H61	7:E:25:LYS:CB	2.27	0.47
5:C:146:LYS:N	5:C:146:LYS:HE3	2.29	0.47
6:D:195:ASN:HB3	6:D:197:HIS:CD2	2.49	0.47
1:A:1226:C:H3'	15:M:101:THR:O	2.14	0.47
1:A:812:G:O2'	1:A:813:U:H6	1.96	0.47
1:A:1262:C:N4	1:A:1273:C:H42	2.13	0.47
13:K:81:LEU:HD22	13:K:104:PHE:CD2	2.49	0.47
1:A:395:C:O2'	1:A:396:C:H5'	2.14	0.47
7:E:89:THR:HG22	7:E:90:GLY:N	2.29	0.47
7:E:111:ARG:HG3	7:E:112:ALA:H	1.80	0.47
7:E:137:ARG:HB3	7:E:141:ASP:HB2	1.96	0.47
1:A:1178:G:N2	1:A:1180:A:H3'	2.30	0.47
11:I:25:GLY:HA2	11:I:60:LEU:C	2.35	0.47
11:I:96:GLU:O	11:I:97:LEU:HD23	2.14	0.47
9:G:34:LYS:O	9:G:38:ALA:HB2	2.15	0.47
5:C:102:ILE:HD12	5:C:103:ALA:H	1.79	0.47
5:C:152:VAL:HB	5:C:156:LEU:HD21	1.97	0.47
21:S:63:ASP:O	21:S:66:VAL:HG23	2.13	0.47
21:S:35:ARG:HB2	21:S:71:GLY:N	2.29	0.47
16:N:21:ALA:O	16:N:24:ALA:HB3	2.15	0.47
16:N:26:LEU:HB3	16:N:44:VAL:CG1	2.36	0.47
16:N:27:LYS:HA	16:N:31:SER:HB2	1.97	0.47
4:B:55:GLU:HA	4:B:58:LYS:HB2	1.97	0.47
4:B:67:LEU:HD22	4:B:157:PRO:CG	2.45	0.47
6:D:66:VAL:HG23	6:D:70:GLN:CD	2.35	0.47
1:A:262:A:H2'	1:A:263:A:C8	2.50	0.47
1:A:626:G:H5''	18:P:38:PHE:CD2	2.49	0.47
1:A:1122:U:H2'	1:A:1123:U:C6	2.50	0.47
9:G:128:GLU:HG3	9:G:130:LYS:HG2	1.97	0.47
8:F:19:PRO:HG2	8:F:20:GLY:H	1.79	0.47
9:G:13:PRO:HB3	9:G:20:GLU:CG	2.44	0.47
1:A:58:C:O2'	1:A:59:A:H5'	2.14	0.47
4:B:130:LYS:HB3	4:B:134:LEU:HB2	1.96	0.47
1:A:1172:C:H2'	1:A:1173:U:C6	2.49	0.47
14:L:32:VAL:HG12	14:L:33:CYS:N	2.30	0.47
1:A:1004:A:H1'	1:A:1026:G:C6	2.50	0.47

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:56:HIS:H	16:N:80:ARG:NH2	2.12	0.47
1:A:763:G:H2'	1:A:764:C:C6	2.50	0.47
1:A:738:C:H2'	1:A:739:C:H6	1.78	0.47
9:G:66:GLU:HA	9:G:69:ARG:HD3	1.97	0.47
13:K:116:PRO:C	13:K:118:ASN:H	2.18	0.47
17:O:16:ARG:H	17:O:20:ASP:CG	2.17	0.47
1:A:744:C:H2'	1:A:745:G:C8	2.50	0.47
1:A:390:U:H2'	1:A:391:G:H8	1.80	0.47
1:A:1035:A:H2'	1:A:1036:A:H8	1.80	0.47
1:A:810:C:O2'	1:A:811:C:H5'	2.14	0.47
1:A:28:A:H2'	1:A:29:U:O4'	2.14	0.47
22:T:20:ASN:HA	22:T:23:ARG:HG2	1.96	0.47
1:A:787:A:O2'	1:A:788:U:H5'	2.15	0.47
5:C:38:VAL:O	5:C:42:LEU:HD23	2.15	0.47
4:B:64:GLY:O	4:B:66:ILE:HG12	2.14	0.47
4:B:68:PHE:CZ	4:B:83:ALA:HA	2.50	0.47
1:A:401:C:H2'	1:A:402:G:H8	1.79	0.47
18:P:12:LYS:O	18:P:13:LYS:HB2	2.15	0.47
9:G:71:THR:HG23	9:G:141:HIS:NE2	2.30	0.47
4:B:150:ILE:O	4:B:153:MET:HB3	2.15	0.47
1:A:254:G:O2'	1:A:255:G:H5'	2.15	0.47
1:A:462:G:H3'	1:A:463:U:H5''	1.97	0.47
15:M:102:LYS:O	15:M:103:THR:C	2.52	0.47
22:T:11:ILE:HG13	22:T:12:GLN:N	2.28	0.47
14:L:47:ALA:HB3	14:L:49:ARG:NH2	2.29	0.47
1:A:298:A:H2'	1:A:299:G:C8	2.49	0.47
1:A:1382:C:H2'	1:A:1383:C:C6	2.50	0.47
1:A:651:C:H2'	1:A:652:U:C6	2.49	0.47
1:A:361:G:O2'	1:A:362:G:H5'	2.15	0.47
1:A:1388:C:H2'	1:A:1389:C:C6	2.49	0.47
7:E:32:PHE:N	7:E:32:PHE:CD1	2.83	0.47
10:H:101:ALA:N	10:H:112:ASP:OD1	2.48	0.47
10:H:10:LEU:HD12	10:H:14:ARG:HH22	1.79	0.47
1:A:1139:G:H4'	1:A:1140:C:OP1	2.15	0.47
6:D:103:ARG:HB3	6:D:170:LEU:HD21	1.97	0.47
5:C:63:ILE:HG12	5:C:65:VAL:CG2	2.45	0.47
4:B:66:ILE:HB	4:B:87:ASP:O	2.14	0.47
13:K:111:ASP:H	23:U:3:ILE:N	2.12	0.47
18:P:8:ARG:NE	18:P:15:PRO:HB3	2.30	0.47
9:G:24:LYS:HB3	9:G:100:MET:HE1	1.97	0.47
22:T:55:PRO:HG2	22:T:56:ILE:H	1.80	0.47
1:A:643:C:C5'	10:H:31:LEU:HD13	2.45	0.47

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:101:LEU:HB2	14:L:103:CYS:SG	2.55	0.47
1:A:560:A:H5'	1:A:566:G:N2	2.30	0.47
1:A:735:C:H2'	1:A:736:C:H6	1.80	0.47
10:H:111:THR:O	10:H:115:ALA:N	2.48	0.47
18:P:46:LYS:HE3	18:P:46:LYS:N	2.30	0.47
4:B:21:TYR:HB2	4:B:189:ASN:HA	1.97	0.47
5:C:153:SER:OG	5:C:154:GLY:N	2.46	0.47
21:S:59:VAL:HG11	21:S:73:PHE:HB3	1.96	0.47
1:A:620:C:C2	6:D:131:ILE:HG21	2.50	0.47
23:U:18:PHE:CB	23:U:19:LYS:HZ2	2.28	0.47
23:U:20:ARG:NE	23:U:20:ARG:N	2.63	0.47
12:J:44:THR:HG23	12:J:70:HIS:HA	1.97	0.47
9:G:98:LEU:HB3	9:G:102:TRP:CZ3	2.50	0.47
1:A:202:G:HO2'	1:A:468:A:H8	1.61	0.47
1:A:238:A:C3'	1:A:239:U:H5''	2.45	0.47
5:C:110:LEU:O	5:C:110:LEU:HG	2.15	0.47
11:I:11:ARG:HA	11:I:105:ARG:CZ	2.45	0.47
1:A:474:G:H2'	1:A:475:C:H6	1.79	0.47
15:M:89:ARG:NH2	15:M:94:LEU:HB3	2.30	0.47
1:A:373:A:H2'	1:A:374:A:H8	1.79	0.47
1:A:665:A:H2'	1:A:725:G:N2	2.30	0.47
9:G:16:LYS:HD3	9:G:43:TYR:CE2	2.50	0.47
6:D:155:LYS:C	6:D:157:ALA:H	2.17	0.47
1:A:678:U:H2'	1:A:679:C:C6	2.50	0.47
1:A:1250:A:H4'	11:I:69:GLY:O	2.15	0.47
1:A:989:U:O2'	1:A:990:C:H5'	2.14	0.47
1:A:1270:G:H2'	1:A:1271:A:H8	1.79	0.47
1:A:900:A:O2'	1:A:901:A:H5'	2.15	0.47
12:J:14:ASP:OD1	12:J:16:ARG:HB2	2.15	0.47
1:A:1372:U:OP1	11:I:72:SER:HB2	2.16	0.46
4:B:27:LYS:H	4:B:28:PRO:CD	2.29	0.46
4:B:27:LYS:N	4:B:28:PRO:CD	2.78	0.46
15:M:70:ARG:HA	15:M:74:MET:HE3	1.97	0.46
4:B:78:ALA:HB1	4:B:163:ILE:HD12	1.96	0.46
4:B:14:HIS:HD2	4:B:202:ASN:ND2	2.14	0.46
4:B:215:ALA:O	4:B:216:VAL:HG13	2.14	0.46
6:D:130:ASN:N	6:D:130:ASN:ND2	2.63	0.46
14:L:56:LEU:C	14:L:58:ASN:H	2.18	0.46
1:A:1084:G:H5'	1:A:1102:A:OP2	2.14	0.46
16:N:62:ARG:NH2	16:N:69:PRO:HB3	2.30	0.46
8:F:8:PHE:CZ	8:F:60:VAL:HG11	2.50	0.46
6:D:33:ILE:C	6:D:35:GLN:H	2.18	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:40:THR:HG22	19:Q:41:THR:N	2.29	0.46
6:D:56:GLU:HG2	6:D:198:LEU:CD1	2.41	0.46
1:A:1225:A:N3	1:A:1225:A:C2'	2.78	0.46
1:A:993:G:C2'	1:A:995:C:H41	2.27	0.46
1:A:1351:U:O2'	1:A:1352:C:H5'	2.15	0.46
5:C:23:ALA:HB1	5:C:27:GLU:HB3	1.96	0.46
22:T:50:PHE:HD2	22:T:78:LEU:HD13	1.79	0.46
1:A:29:U:O2'	1:A:30:U:H5'	2.15	0.46
14:L:14:LYS:HG2	14:L:15:VAL:N	2.30	0.46
10:H:100:ILE:HA	10:H:112:ASP:OD2	2.15	0.46
12:J:12:ALA:HB2	12:J:96:VAL:HG23	1.96	0.46
5:C:51:VAL:HG23	5:C:51:VAL:O	2.15	0.46
23:U:26:GLY:O	23:U:27:VAL:HG13	2.16	0.46
12:J:9:ARG:NH2	12:J:99:GLN:HG3	2.31	0.46
6:D:8:LEU:HD13	6:D:11:SER:HB2	1.97	0.46
5:C:145:ALA:C	5:C:146:LYS:HE3	2.36	0.46
20:R:26:ALA:HA	20:R:29:LYS:CE	2.44	0.46
1:A:279:A:C5'	1:A:280:C:H3'	2.45	0.46
12:J:35:GLN:HB2	12:J:78:GLU:HG2	1.97	0.46
1:A:1125:U:O2'	1:A:1126:U:H2'	2.16	0.46
1:A:928:G:O2'	1:A:929:G:H5'	2.14	0.46
22:T:85:LEU:HG	22:T:86:ALA:N	2.29	0.46
8:F:10:VAL:HG21	8:F:21:MET:SD	2.56	0.46
1:A:844:G:N7	1:A:846:G:N3	2.63	0.46
5:C:53:ARG:HB3	5:C:113:LYS:HZ1	1.81	0.46
4:B:203:ASP:C	4:B:209:VAL:HG11	2.35	0.46
1:A:377:G:H5''	18:P:24:SER:HB2	1.98	0.46
12:J:7:ARG:O	12:J:100:ILE:HA	2.15	0.46
9:G:45:ALA:HB3	9:G:119:LEU:HD22	1.97	0.46
15:M:15:VAL:HG21	15:M:40:GLU:OE1	2.15	0.46
8:F:41:ASP:CG	8:F:58:HIS:HE2	2.19	0.46
13:K:48:GLY:CA	13:K:68:ARG:HH22	2.29	0.46
1:A:1055:A:C2	1:A:1056:U:H1'	2.49	0.46
1:A:949:A:O2'	1:A:950:U:H5'	2.15	0.46
1:A:1489:G:H2'	1:A:1490:U:C6	2.51	0.46
14:L:30:ARG:HH21	14:L:57:THR:HG21	1.80	0.46
1:A:883:C:O2'	1:A:884:U:H5'	2.15	0.46
19:Q:80:LYS:O	19:Q:81:ALA:HB3	2.15	0.46
1:A:602:A:O2'	1:A:603:U:H5'	2.15	0.46
7:E:91:SER:HB2	7:E:134:ASN:HB2	1.97	0.46
7:E:92:ARG:O	7:E:93:VAL:CB	2.64	0.46
10:H:75:GLN:O	10:H:126:CYS:HB2	2.15	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:16:ALA:CB	11:I:66:VAL:HB	2.44	0.46
11:I:46:VAL:O	11:I:79:ARG:HD3	2.16	0.46
5:C:149:LYS:HE3	5:C:200:TRP:CE3	2.50	0.46
5:C:53:ARG:HB2	5:C:54:ILE:H	1.61	0.46
1:A:1319:A:OP1	21:S:4:LEU:HD23	2.16	0.46
21:S:14:LEU:HD12	21:S:15:LEU:N	2.29	0.46
21:S:14:LEU:O	21:S:17:LYS:N	2.48	0.46
4:B:86:CYS:C	4:B:88:GLN:H	2.18	0.46
22:T:64:GLY:HA2	22:T:67:HIS:HD2	1.80	0.46
6:D:18:LEU:C	6:D:20:LEU:H	2.17	0.46
6:D:29:THR:HB	6:D:30:LYS:HZ1	1.81	0.46
6:D:40:HIS:O	6:D:43:ARG:HB2	2.14	0.46
1:A:484:G:H4'	1:A:485:U:C5'	2.45	0.46
1:A:1006:G:O2'	1:A:1007:U:H5'	2.15	0.46
6:D:148:ALA:O	6:D:151:GLN:HG2	2.14	0.46
9:G:37:THR:O	9:G:40:SER:HB2	2.15	0.46
1:A:1255:G:O2'	1:A:1258:G:H1'	2.15	0.46
1:A:724:G:O2'	1:A:725:G:H5'	2.14	0.46
1:A:585:G:N3	1:A:879:C:H4'	2.31	0.46
4:B:184:ALA:HB3	4:B:198:VAL:HG11	1.98	0.46
1:A:1234:C:H1'	1:A:1364:U:C6	2.51	0.46
1:A:747:A:H5'	1:A:748:G:OP2	2.14	0.46
12:J:86:ALA:HA	12:J:90:LEU:CB	2.46	0.46
6:D:100:VAL:HG21	6:D:136:VAL:HG21	1.97	0.46
1:A:1454:G:H2'	1:A:1455:G:H8	1.80	0.46
1:A:853:C:O2'	1:A:854:U:H5'	2.15	0.46
7:E:127:TYR:CG	7:E:128:GLY:N	2.84	0.46
6:D:123:MET:CE	6:D:126:GLY:H	2.25	0.46
1:A:1320:C:O2'	1:A:1321:U:H5'	2.16	0.46
16:N:20:PHE:C	16:N:24:ALA:HB2	2.36	0.46
4:B:66:ILE:CA	4:B:159:ALA:HB3	2.42	0.46
4:B:98:GLY:O	4:B:100:LEU:N	2.43	0.46
18:P:19:VAL:HG13	18:P:36:VAL:HG13	1.97	0.46
7:E:24:VAL:O	7:E:25:LYS:HB3	2.16	0.46
13:K:93:GLU:HG2	23:U:16:ARG:HD2	1.97	0.46
1:A:718:A:H61	20:R:62:ARG:NH1	2.13	0.46
1:A:230:G:H2'	1:A:231:U:O4'	2.16	0.46
1:A:371:A:O2'	1:A:372:C:H5'	2.16	0.46
1:A:1207:G:O2'	1:A:1208:C:H5'	2.15	0.46
1:A:188:C:H2'	1:A:189:A:O4'	2.16	0.46
6:D:6:PRO:HB2	6:D:9:LYS:HB2	1.96	0.46
1:A:1106:G:H2'	1:A:1107:C:C6	2.51	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:659:U:H2'	1:A:660:C:H6	1.79	0.46
18:P:43:ALA:HA	18:P:46:LYS:CE	2.46	0.46
1:A:847:G:H2'	1:A:848:C:H6	1.80	0.46
10:H:44:PHE:CE1	10:H:129:ALA:HB3	2.50	0.46
8:F:38:ARG:HH11	8:F:98:GLU:N	2.00	0.46
1:A:1342:C:O2'	1:A:1343:G:H5'	2.16	0.46
6:D:120:LYS:HG3	6:D:128:VAL:HG21	1.97	0.46
6:D:123:MET:CB	6:D:128:VAL:HA	2.30	0.46
4:B:83:ALA:O	4:B:84:LEU:C	2.54	0.46
13:K:122:PRO:HG2	23:U:33:ARG:O	2.16	0.46
1:A:194:C:H5'	22:T:55:PRO:HA	1.97	0.46
1:A:408:A:H3'	1:A:409:U:C6	2.50	0.46
1:A:410:G:H2'	1:A:429:U:C5	2.50	0.46
6:D:8:LEU:HD13	6:D:8:LEU:O	2.15	0.46
1:A:57:G:H2'	1:A:58:C:H6	1.81	0.46
5:C:110:LEU:HD12	5:C:203:LYS:HG2	1.96	0.46
17:O:63:ARG:HE	17:O:87:ARG:NH1	2.14	0.46
1:A:244:U:O4	1:A:906:A:H1'	2.15	0.46
6:D:197:HIS:CD2	6:D:198:LEU:HG	2.51	0.46
12:J:52:LEU:CD1	12:J:52:LEU:H	2.27	0.46
1:A:537:G:H2'	1:A:538:G:C8	2.50	0.46
22:T:29:THR:HA	22:T:32:LYS:CE	2.46	0.46
6:D:162:GLU:O	6:D:163:GLN:HB2	2.15	0.46
7:E:131:ASN:ND2	7:E:134:ASN:HD22	2.14	0.46
8:F:38:ARG:HE	8:F:63:ASN:ND2	2.14	0.46
11:I:50:PRO:HG2	11:I:51:LEU:CD2	2.46	0.46
1:A:1059:C:H5''	16:N:84:ARG:HH21	1.81	0.46
15:M:72:ILE:HG12	15:M:76:ILE:HD11	1.98	0.46
18:P:71:VAL:HG13	18:P:72:ALA:N	2.31	0.46
12:J:44:THR:HG23	12:J:70:HIS:CA	2.45	0.46
4:B:99:MET:CE	4:B:147:LEU:HD23	2.46	0.46
13:K:82:GLU:C	13:K:108:ASN:ND2	2.69	0.46
10:H:5:PRO:HG2	10:H:6:ILE:H	1.81	0.46
19:Q:12:VAL:HG11	19:Q:42:LYS:HE3	1.97	0.46
1:A:505:G:H2'	1:A:506:G:C8	2.50	0.46
9:G:55:LYS:O	9:G:56:SER:HB2	2.15	0.46
5:C:192:TYR:N	5:C:192:TYR:HD2	2.14	0.46
1:A:677:U:O2'	1:A:678:U:H5'	2.16	0.46
1:A:1097:C:O2'	1:A:1098:C:H5'	2.14	0.46
6:D:98:ASP:CB	6:D:114:ARG:HE	2.28	0.46
1:A:570:G:H1'	1:A:820:U:C4	2.50	0.46
1:A:1234:C:O4'	1:A:1364:U:H1'	2.16	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1229:A:H2'	1:A:1230:C:C6	2.50	0.46
12:J:92:LEU:HD23	12:J:92:LEU:N	2.30	0.46
10:H:17:GLN:NE2	10:H:62:LEU:HD23	2.31	0.46
1:A:844:G:C8	1:A:846:G:H1'	2.51	0.46
11:I:83:THR:HA	11:I:86:LEU:CB	2.46	0.46
9:G:31:VAL:C	9:G:33:GLY:H	2.18	0.46
5:C:29:ALA:O	5:C:32:LEU:HB2	2.16	0.46
4:B:100:LEU:HD22	4:B:174:GLU:HG2	1.97	0.46
23:U:18:PHE:H	23:U:19:LYS:NZ	2.14	0.46
6:D:61:ARG:HG2	6:D:66:VAL:O	2.16	0.46
15:M:15:VAL:CG2	15:M:40:GLU:HB2	2.45	0.46
10:H:30:LYS:HD3	10:H:31:LEU:N	2.31	0.46
1:A:1170:A:H5''	4:B:138:ARG:NH2	2.31	0.46
1:A:1166:G:H1'	1:A:1170:A:H61	1.80	0.46
1:A:255:G:C5'	19:Q:18:LYS:HB2	2.46	0.46
19:Q:18:LYS:HA	19:Q:47:ASP:O	2.16	0.46
1:A:66:A:C3'	1:A:67:C:H5''	2.46	0.46
1:A:738:C:H2'	1:A:739:C:C6	2.51	0.46
12:J:34:ALA:O	12:J:78:GLU:HG2	2.15	0.46
14:L:106:VAL:CB	14:L:116:TYR:HB3	2.46	0.46
7:E:14:LEU:HD21	7:E:16:ALA:O	2.16	0.46
8:F:38:ARG:O	8:F:39:LEU:CB	2.63	0.46
21:S:68:HIS:HB3	21:S:72:GLU:CD	2.37	0.46
4:B:14:HIS:HA	4:B:208:ALA:CB	2.45	0.46
18:P:1:MET:O	18:P:3:THR:HG23	2.15	0.46
1:A:1121:U:H2'	1:A:1122:U:C6	2.51	0.46
12:J:30:LYS:HG3	12:J:31:ARG:N	2.31	0.46
12:J:39:PRO:CB	12:J:74:VAL:HG22	2.46	0.46
9:G:49:LEU:CG	9:G:52:ARG:HH21	2.28	0.46
20:R:62:ARG:HG2	20:R:67:LEU:HB2	1.97	0.46
5:C:2:GLN:HE21	5:C:3:LYS:HG2	1.81	0.46
9:G:69:ARG:HG2	9:G:69:ARG:HH11	1.81	0.46
13:K:55:ARG:HH12	13:K:60:PHE:HD1	1.64	0.46
6:D:98:ASP:CB	6:D:114:ARG:HB2	2.45	0.46
1:A:257:G:C3'	1:A:258:G:H5''	2.46	0.46
1:A:139:A:H2'	1:A:140:U:H6	1.81	0.46
1:A:590:U:O2'	1:A:591:U:H5'	2.15	0.46
21:S:80:ARG:HB3	21:S:80:ARG:NH1	2.31	0.46
7:E:85:LYS:CG	7:E:86:GLY:H	2.26	0.46
11:I:88:GLU:CD	11:I:89:TYR:N	2.66	0.46
5:C:112:ALA:C	5:C:199:VAL:HG21	2.36	0.46
5:C:85:LYS:HG3	5:C:86:LEU:HD12	1.98	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:7:GLY:N	21:S:8:PRO:HD3	2.31	0.46
4:B:187:ASP:HB3	4:B:203:ASP:CG	2.37	0.46
18:P:8:ARG:NH2	18:P:15:PRO:HB3	2.31	0.46
4:B:99:MET:HG3	4:B:99:MET:H	1.54	0.46
14:L:43:LYS:HB3	14:L:44:PRO:CD	2.41	0.46
1:A:254:G:H2'	1:A:255:G:H8	1.81	0.46
19:Q:46:HIS:HB2	19:Q:70:LYS:HE3	1.98	0.46
6:D:115:GLN:OE1	6:D:119:HIS:HE1	1.99	0.46
1:A:1254:A:H2'	1:A:1255:G:C8	2.51	0.46
9:G:83:THR:O	9:G:84:TYR:CB	2.64	0.46
17:O:78:THR:O	17:O:82:GLU:HG2	2.16	0.46
1:A:31:G:N7	1:A:306:A:H1'	2.31	0.46
1:A:869:G:H4'	1:A:872:A:C8	2.50	0.45
7:E:32:PHE:CD2	7:E:55:VAL:HG13	2.51	0.45
7:E:59:ILE:O	7:E:62:ALA:HB3	2.16	0.45
10:H:22:ALA:O	10:H:62:LEU:N	2.48	0.45
1:A:841:C:H2'	1:A:843:U:O2	2.16	0.45
5:C:59:PRO:HD2	5:C:63:ILE:N	2.31	0.45
1:A:451:A:H5''	18:P:70:ARG:HH22	1.81	0.45
9:G:73:GLU:HB3	9:G:90:VAL:CG2	2.46	0.45
1:A:1328:C:H2'	1:A:1329:A:H8	1.81	0.45
6:D:27:ILE:HB	6:D:30:LYS:NZ	2.31	0.45
6:D:29:THR:HB	6:D:30:LYS:NZ	2.31	0.45
20:R:44:THR:OG1	20:R:46:THR:HG23	2.16	0.45
9:G:53:SER:C	9:G:55:LYS:N	2.69	0.45
14:L:109:ARG:HH21	14:L:112:ALA:C	2.18	0.45
20:R:56:ARG:O	20:R:60:ARG:HG3	2.16	0.45
1:A:1188:A:H2'	1:A:1189:U:H6	1.81	0.45
1:A:497:G:H2'	1:A:498:A:C8	2.52	0.45
11:I:75:ALA:HA	11:I:78:ILE:HG13	1.98	0.45
19:Q:3:LYS:HG2	19:Q:4:ILE:HG13	1.97	0.45
1:A:357:G:C2'	1:A:358:U:H5'	2.46	0.45
1:A:687:A:H4'	1:A:688:G:O5'	2.16	0.45
1:A:692:U:H2'	1:A:694:A:OP2	2.16	0.45
7:E:86:GLY:HA3	7:E:141:ASP:O	2.16	0.45
1:A:1181:G:C2	1:A:1182:G:N2	2.84	0.45
11:I:103:VAL:HG23	11:I:104:THR:N	2.31	0.45
11:I:50:PRO:HB2	11:I:83:THR:HG23	1.97	0.45
21:S:35:ARG:HD3	21:S:71:GLY:HA3	1.99	0.45
8:F:3:HIS:CD2	8:F:92:THR:HG23	2.51	0.45
12:J:26:VAL:O	12:J:29:ALA:HB3	2.16	0.45
13:K:106:ILE:HD11	13:K:109:ILE:CG1	2.46	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:6:ILE:CD1	10:H:6:ILE:H	2.26	0.45
1:A:1014:A:C2	1:A:1219:A:H1'	2.51	0.45
1:A:337:G:H2'	1:A:338:A:H8	1.76	0.45
5:C:172:VAL:HG12	5:C:202:PHE:HB2	1.96	0.45
1:A:1033:G:H2'	1:A:1034:G:O4'	2.16	0.45
14:L:7:VAL:HG12	14:L:8:ARG:NH1	2.32	0.45
1:A:327:A:H1'	1:A:329:A:O4'	2.16	0.45
1:A:1155:A:H2'	1:A:1156:G:O4'	2.16	0.45
3:X:1:A:H1'	3:X:6:U:O2'	2.16	0.45
10:H:88:LYS:O	10:H:91:LEU:HG	2.17	0.45
1:A:1343:G:H4'	11:I:123:ARG:O	2.17	0.45
5:C:21:TRP:CZ3	5:C:31:ASN:HB3	2.51	0.45
16:N:27:LYS:HA	16:N:31:SER:CB	2.47	0.45
4:B:162:VAL:HG23	4:B:162:VAL:O	2.15	0.45
23:U:3:ILE:HB	23:U:4:LYS:H	1.66	0.45
22:T:24:ARG:HD3	22:T:28:ARG:CZ	2.47	0.45
4:B:99:MET:CE	4:B:147:LEU:HA	2.46	0.45
1:A:193:C:O3'	22:T:55:PRO:HB3	2.16	0.45
7:E:22:LYS:HZ1	7:E:24:VAL:HA	1.81	0.45
22:T:2:ASN:CG	22:T:3:ILE:N	2.69	0.45
10:H:6:ILE:HD12	10:H:6:ILE:N	2.28	0.45
1:A:251:G:H4'	1:A:252:U:H5'	1.97	0.45
6:D:125:ASN:C	6:D:127:ARG:H	2.20	0.45
1:A:1003:G:N2	1:A:1005:A:H5'	2.31	0.45
12:J:55:PRO:O	12:J:56:HIS:HB3	2.16	0.45
12:J:51:VAL:O	12:J:62:ARG:HA	2.15	0.45
1:A:1090:U:H2'	1:A:1091:U:C6	2.52	0.45
1:A:957:U:H4'	21:S:78:THR:HB	1.98	0.45
10:H:79:ARG:CD	10:H:82:LEU:HB3	2.47	0.45
1:A:212:G:H2'	1:A:213:G:H8	1.82	0.45
1:A:497:G:H2'	1:A:498:A:H8	1.82	0.45
1:A:1220:G:O2'	21:S:51:HIS:ND1	2.48	0.45
7:E:35:LEU:HB3	7:E:133:ILE:HG13	1.98	0.45
4:B:67:LEU:HB3	4:B:159:ALA:O	2.17	0.45
1:A:1099:G:OP1	4:B:94:ARG:HG3	2.17	0.45
1:A:398:U:H2'	1:A:399:G:C8	2.51	0.45
23:U:24:LYS:NZ	23:U:24:LYS:HB3	2.32	0.45
23:U:27:VAL:C	23:U:29:ALA:N	2.70	0.45
9:G:17:PHE:CB	9:G:22:LEU:HD13	2.46	0.45
1:A:1253:G:N1	1:A:1285:A:N6	2.64	0.45
1:A:503:C:H2'	1:A:504:C:C6	2.52	0.45
1:A:499:A:H4'	1:A:500:G:OP1	2.16	0.45

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:805:C:O2'	1:A:806:C:H5'	2.16	0.45
1:A:1040:U:H2'	1:A:1041:G:C8	2.51	0.45
1:A:112:G:H21	1:A:354:G:C4'	2.29	0.45
1:A:688:G:O2'	1:A:689:C:H5'	2.16	0.45
1:A:794:A:O2'	1:A:795:C:H5'	2.17	0.45
1:A:604:G:H2'	1:A:605:U:O4'	2.17	0.45
10:H:123:GLU:HG2	10:H:124:ILE:O	2.17	0.45
11:I:25:GLY:HA3	11:I:58:GLU:CA	2.47	0.45
1:A:1358:U:OP1	16:N:74:ARG:HD2	2.16	0.45
4:B:156:LEU:HD12	4:B:156:LEU:O	2.16	0.45
1:A:451:A:N6	1:A:480:U:H2'	2.30	0.45
9:G:92:PRO:HA	9:G:95:ARG:HG3	1.98	0.45
15:M:7:ASN:CG	15:M:21:ILE:HG23	2.36	0.45
1:A:90:C:H2'	1:A:91:U:C5	2.50	0.45
6:D:46:ARG:NH1	6:D:46:ARG:HG2	2.32	0.45
15:M:95:PRO:CG	15:M:101:THR:HG22	2.47	0.45
13:K:15:VAL:HB	13:K:78:ILE:HG21	1.97	0.45
14:L:49:ARG:HG2	14:L:89:LEU:HD21	1.99	0.45
1:A:76:G:H2'	1:A:77:A:O4'	2.16	0.45
12:J:5:ARG:C	12:J:102:LEU:HB3	2.37	0.45
9:G:67:ASN:ND2	9:G:129:ASN:ND2	2.63	0.45
16:N:3:GLN:OE1	16:N:3:GLN:HA	2.17	0.45
1:A:547:A:H4'	1:A:548:G:O5'	2.17	0.45
5:C:27:GLU:HA	5:C:30:ASP:OD1	2.16	0.45
1:A:440:C:H2'	1:A:441:A:H8	1.81	0.45
1:A:1231:G:H2'	1:A:1232:U:C6	2.51	0.45
7:E:39:GLY:O	7:E:116:VAL:HG11	2.17	0.45
7:E:14:LEU:HA	7:E:36:THR:HB	1.99	0.45
7:E:16:ALA:O	7:E:17:VAL:HB	2.17	0.45
7:E:13:LYS:O	7:E:36:THR:HB	2.17	0.45
1:A:1157:A:H4'	1:A:1158:C:O5'	2.17	0.45
1:A:1182:G:C4'	1:A:1183:U:H5'	2.46	0.45
11:I:18:VAL:HG21	11:I:81:GLY:HA2	1.98	0.45
5:C:63:ILE:HG21	5:C:90:VAL:HG11	1.98	0.45
21:S:32:THR:HG21	21:S:70:LEU:HD13	1.98	0.45
4:B:68:PHE:CG	4:B:83:ALA:HB2	2.52	0.45
1:A:399:G:H2'	1:A:400:C:C6	2.52	0.45
1:A:378:G:H2'	1:A:379:C:C6	2.51	0.45
18:P:18:GLN:HA	18:P:38:PHE:HA	1.99	0.45
18:P:23:ASP:OD1	18:P:25:ARG:HB2	2.17	0.45
12:J:8:ILE:HA	12:J:99:GLN:O	2.17	0.45
4:B:143:LEU:O	4:B:147:LEU:HB2	2.17	0.45

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:11:ARG:HA	11:I:105:ARG:NH2	2.32	0.45
14:L:35:ARG:CZ	14:L:75:GLU:HB3	2.46	0.45
6:D:147:LYS:HA	6:D:150:LYS:HE3	1.98	0.45
20:R:25:ILE:HG23	20:R:26:ALA:N	2.31	0.45
1:A:371:A:H1'	1:A:482:A:H1'	1.98	0.45
7:E:115:GLU:O	7:E:120:HIS:HD2	1.99	0.45
1:A:22:G:O2'	1:A:23:C:H5'	2.17	0.45
17:O:20:ASP:O	17:O:22:GLY:N	2.49	0.45
22:T:53:MET:SD	22:T:57:VAL:HG21	2.57	0.45
12:J:81:GLU:HB2	12:J:82:LYS:NZ	2.31	0.45
1:A:1494:G:H2'	1:A:1495:U:C6	2.51	0.45
4:B:65:LYS:HE2	4:B:65:LYS:H	1.80	0.45
1:A:597:G:N2	10:H:85:TYR:HE2	2.14	0.45
10:H:10:LEU:HD12	10:H:14:ARG:NH2	2.30	0.45
5:C:49:ALA:O	5:C:51:VAL:HG13	2.17	0.45
16:N:96:LYS:C	16:N:97:LYS:HG3	2.37	0.45
21:S:31:ARG:HA	21:S:49:ALA:HB3	1.99	0.45
21:S:63:ASP:HA	21:S:66:VAL:CG2	2.46	0.45
4:B:210:THR:C	4:B:213:LEU:HG	2.36	0.45
1:A:400:C:O2'	1:A:401:C:H5'	2.17	0.45
1:A:622:A:H3'	1:A:623:C:H6	1.81	0.45
18:P:35:ARG:HG2	18:P:36:VAL:N	2.30	0.45
15:M:8:ILE:N	15:M:9:PRO:CD	2.79	0.45
4:B:130:LYS:HA	4:B:134:LEU:HB2	1.97	0.45
19:Q:24:ILE:HD13	19:Q:43:LEU:HD13	1.98	0.45
1:A:438:U:H1'	6:D:119:HIS:CD2	2.52	0.45
1:A:1477:U:H2'	1:A:1478:U:H6	1.81	0.45
1:A:128:G:H2'	1:A:129:A:H8	1.82	0.45
1:A:207:C:O2'	1:A:208:U:H5'	2.17	0.45
1:A:532:A:N6	1:A:1207:G:H5'	2.32	0.45
1:A:994:A:C8	1:A:1216:A:H4'	2.52	0.45
1:A:131:A:H2'	1:A:132:C:H6	1.81	0.45
1:A:746:A:C6	1:A:747:A:N6	2.85	0.45
9:G:143:MET:O	9:G:147:ASN:HB2	2.17	0.45
8:F:5:GLU:HG2	8:F:5:GLU:O	2.17	0.45
6:D:165:GLU:O	6:D:166:LYS:HB3	2.16	0.45
5:C:56:ILE:HG22	5:C:57:GLU:N	2.32	0.45
21:S:63:ASP:HA	21:S:66:VAL:HG23	1.98	0.45
4:B:60:ALA:O	4:B:223:GLY:HA3	2.17	0.45
1:A:402:G:H5'	1:A:621:A:H1'	1.98	0.45
1:A:135:C:O2	18:P:1:MET:HB2	2.17	0.45
12:J:13:PHE:O	12:J:70:HIS:NE2	2.50	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:42:VAL:HB	15:M:46:GLU:CG	2.47	0.45
1:A:237:G:O2'	1:A:238:A:H5'	2.16	0.45
21:S:27:LYS:HB2	21:S:28:LYS:NZ	2.30	0.45
1:A:1258:G:N3	1:A:1278:G:N2	2.65	0.45
1:A:419:C:O2'	1:A:420:U:H5'	2.16	0.45
1:A:987:G:H2'	1:A:988:G:H8	1.81	0.45
5:C:173:PRO:HB2	5:C:176:THR:CG2	2.47	0.45
1:A:1065:U:H5''	1:A:1190:G:H22	1.81	0.45
14:L:8:ARG:N	14:L:8:ARG:HD2	2.31	0.45
4:B:184:ALA:N	4:B:198:VAL:HG11	2.32	0.45
9:G:78:ARG:O	9:G:79:VAL:HG13	2.16	0.45
21:S:40:PHE:HD1	21:S:41:PRO:HD3	1.81	0.45
7:E:32:PHE:HB2	7:E:52:ALA:O	2.17	0.45
10:H:44:PHE:CE2	10:H:100:ILE:HG12	2.52	0.45
11:I:7:GLY:CA	11:I:85:ALA:HB2	2.47	0.45
9:G:33:GLY:O	9:G:35:LYS:N	2.50	0.45
5:C:140:ALA:HB2	5:C:148:ILE:HD12	1.97	0.45
8:F:93:LYS:O	8:F:93:LYS:HD2	2.17	0.45
18:P:19:VAL:HG13	18:P:36:VAL:CG1	2.47	0.45
12:J:26:VAL:HG11	12:J:39:PRO:HD3	1.99	0.45
14:L:23:LEU:HG	14:L:24:GLU:H	1.82	0.45
15:M:3:ILE:CD1	15:M:9:PRO:HD2	2.44	0.45
7:E:21:SER:HA	7:E:28:ARG:CG	2.47	0.45
15:M:85:TYR:O	15:M:89:ARG:HG3	2.17	0.45
1:A:448:A:H2'	1:A:449:G:O4'	2.16	0.45
1:A:735:C:H2'	1:A:736:C:C6	2.52	0.45
1:A:197:A:H4'	1:A:198:G:O5'	2.17	0.45
1:A:677:U:H2'	1:A:678:U:C6	2.50	0.45
5:C:23:ALA:O	5:C:27:GLU:HB2	2.17	0.45
4:B:50:ASN:HA	4:B:50:ASN:HD22	1.54	0.45
7:E:84:VAL:HG21	7:E:144:GLU:O	2.17	0.45
7:E:52:ALA:HB2	7:E:61:LYS:HZ1	1.81	0.45
11:I:114:LYS:H	11:I:120:ALA:CB	2.30	0.45
4:B:27:LYS:O	4:B:27:LYS:HD2	2.16	0.45
5:C:123:LEU:HA	5:C:127:VAL:CG2	2.45	0.45
16:N:63:CYS:O	16:N:67:GLY:HA2	2.17	0.45
21:S:17:LYS:HE2	21:S:17:LYS:N	2.32	0.45
4:B:68:PHE:CD1	4:B:83:ALA:HB2	2.52	0.45
1:A:628:G:O2'	1:A:629:A:H5'	2.17	0.45
18:P:52:LEU:HD11	18:P:74:LEU:HD22	1.99	0.45
12:J:10:LEU:HG	12:J:72:ARG:HB2	1.99	0.45
4:B:110:ILE:HG21	4:B:150:ILE:HG23	1.99	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1160:G:H5''	4:B:130:LYS:CB	2.47	0.45
14:L:43:LYS:C	14:L:45:ASN:H	2.21	0.45
1:A:250:A:N3	1:A:250:A:C2'	2.80	0.45
17:O:63:ARG:HH21	17:O:87:ARG:CD	2.29	0.45
21:S:12:LEU:HD13	21:S:12:LEU:O	2.17	0.45
1:A:1479:C:H2'	1:A:1480:A:C8	2.52	0.45
1:A:657:U:H5'	17:O:27:GLN:HE22	1.82	0.45
16:N:41:TRP:O	16:N:45:LEU:HG	2.16	0.45
1:A:679:C:H2'	1:A:680:C:C6	2.52	0.45
1:A:1018:G:H2'	1:A:1019:A:H8	1.80	0.45
1:A:1233:G:H21	1:A:1364:U:H6	1.65	0.45
1:A:144:G:OP2	1:A:144:G:H3'	2.17	0.45
12:J:6:ILE:HD12	12:J:79:PRO:HB3	1.98	0.45
7:E:38:VAL:HG23	7:E:66:ALA:HB1	1.99	0.44
16:N:72:PHE:CE1	16:N:74:ARG:HG3	2.52	0.44
1:A:1312:G:O2'	1:A:1313:U:H5'	2.16	0.44
16:N:46:LYS:HD3	21:S:10:ILE:HD12	1.98	0.44
21:S:4:LEU:HD22	21:S:8:PRO:CB	2.47	0.44
4:B:160:LEU:HB2	4:B:182:VAL:HG22	1.98	0.44
4:B:160:LEU:CD1	4:B:182:VAL:HG22	2.46	0.44
1:A:621:A:H2'	1:A:622:A:H8	1.83	0.44
23:U:3:ILE:HG23	23:U:23:GLU:OE1	2.17	0.44
16:N:56:PRO:CA	16:N:59:GLN:HG2	2.43	0.44
12:J:56:HIS:O	12:J:57:VAL:HG12	2.17	0.44
12:J:55:PRO:HA	16:N:80:ARG:HH21	1.82	0.44
1:A:373:A:O2'	1:A:374:A:H5'	2.16	0.44
1:A:610:U:O2	1:A:610:U:O4'	2.35	0.44
1:A:1078:U:H2'	1:A:1079:G:O4'	2.17	0.44
8:F:17:GLN:HB3	8:F:21:MET:HE3	1.99	0.44
11:I:90:ASP:O	11:I:93:LEU:HB2	2.17	0.44
1:A:1203:C:O2'	1:A:1204:A:H5'	2.17	0.44
5:C:76:ILE:CD1	5:C:83:VAL:HG21	2.46	0.44
6:D:55:ARG:HA	6:D:55:ARG:HH11	1.82	0.44
6:D:67:LEU:N	6:D:67:LEU:HD12	2.32	0.44
1:A:451:A:H4'	1:A:452:A:C1'	2.46	0.44
18:P:39:PHE:CG	18:P:40:ASN:N	2.86	0.44
18:P:72:ALA:HA	18:P:75:ILE:CD1	2.48	0.44
18:P:74:LEU:O	18:P:74:LEU:HD23	2.16	0.44
13:K:12:ARG:HD2	13:K:13:LYS:HZ3	1.81	0.44
23:U:47:ALA:O	23:U:51:ALA:N	2.51	0.44
22:T:17:ARG:C	22:T:17:ARG:HD2	2.38	0.44
1:A:859:G:H2'	1:A:860:A:H8	1.80	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:36:VAL:HG21	14:L:73:LEU:O	2.17	0.44
14:L:109:ARG:HG3	14:L:109:ARG:NH1	2.31	0.44
1:A:947:G:H2'	1:A:948:C:H6	1.81	0.44
1:A:211:G:N3	1:A:211:G:C3'	2.80	0.44
1:A:1382:C:H2'	1:A:1383:C:H6	1.82	0.44
15:M:105:ALA:O	15:M:107:THR:N	2.45	0.44
7:E:17:VAL:HA	7:E:34:ALA:HB2	1.98	0.44
10:H:77:VAL:HB	10:H:124:ILE:HD11	1.99	0.44
8:F:14:GLN:NE2	8:F:83:ALA:HA	2.29	0.44
5:C:53:ARG:NH1	5:C:54:ILE:H	2.15	0.44
21:S:32:THR:HB	21:S:50:VAL:HA	1.99	0.44
4:B:62:ARG:HG3	4:B:63:LYS:H	1.82	0.44
18:P:4:ILE:HB	18:P:67:ILE:HD12	2.00	0.44
7:E:104:ILE:HD13	7:E:105:ILE:N	2.32	0.44
9:G:137:ARG:HH11	9:G:141:HIS:HD2	1.65	0.44
14:L:89:LEU:HD22	14:L:89:LEU:N	2.32	0.44
1:A:538:G:H4'	14:L:110:LYS:NZ	2.31	0.44
20:R:48:ALA:HB1	20:R:52:ARG:NH1	2.32	0.44
5:C:93:ILE:H	5:C:93:ILE:HD12	1.82	0.44
1:A:1244:G:O2'	1:A:1245:C:H5'	2.18	0.44
1:A:800:G:HO2'	1:A:801:U:H6	1.60	0.44
1:A:389:A:H2'	1:A:390:U:H5'	2.00	0.44
4:B:49:PHE:CG	4:B:50:ASN:N	2.85	0.44
1:A:981:U:H2'	1:A:982:U:C5	2.52	0.44
1:A:246:A:N3	1:A:247:G:H1'	2.32	0.44
1:A:350:G:H2'	1:A:351:G:C8	2.52	0.44
1:A:1486:G:H2'	1:A:1487:G:O4'	2.18	0.44
1:A:862:C:OP1	7:E:87:VAL:HG11	2.17	0.44
10:H:10:LEU:HD23	10:H:10:LEU:H	1.82	0.44
1:A:1135:U:H2'	1:A:1138:G:O6	2.18	0.44
11:I:48:ARG:HB2	11:I:48:ARG:CZ	2.47	0.44
1:A:1317:C:H2'	1:A:1318:A:O4'	2.17	0.44
1:A:1320:C:H1'	21:S:72:GLU:N	2.32	0.44
4:B:93:HIS:O	4:B:94:ARG:HB2	2.17	0.44
1:A:43:C:OP2	18:P:12:LYS:HD3	2.16	0.44
15:M:33:LEU:HA	15:M:38:ILE:HB	1.99	0.44
15:M:33:LEU:HD23	15:M:38:ILE:HB	2.00	0.44
1:A:1237:C:H2'	1:A:1336:C:C5	2.52	0.44
1:A:1055:A:H1'	5:C:155:ARG:NH1	2.32	0.44
1:A:1172:C:O2'	1:A:1173:U:H5'	2.17	0.44
1:A:336:A:O2'	1:A:337:G:H5'	2.18	0.44
6:D:148:ALA:C	6:D:150:LYS:H	2.20	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:966:G:N2	11:I:129:ARG:HH11	2.15	0.44
1:A:730:G:O2'	1:A:766:A:H5'	2.16	0.44
10:H:119:GLY:O	10:H:120:LEU:HD22	2.17	0.44
5:C:23:ALA:HB3	5:C:28:PHE:HA	1.98	0.44
22:T:59:ARG:HE	22:T:59:ARG:HB2	1.61	0.44
7:E:144:GLU:O	7:E:146:MET:N	2.50	0.44
7:E:93:VAL:HG22	7:E:94:PHE:N	2.33	0.44
10:H:76:ARG:NE	10:H:78:SER:O	2.51	0.44
8:F:39:LEU:HD13	8:F:39:LEU:C	2.38	0.44
1:A:1130:A:H62	1:A:1143:G:H22	1.64	0.44
11:I:56:MET:O	11:I:57:VAL:HB	2.17	0.44
16:N:87:ALA:HB1	16:N:95:LEU:CD1	2.47	0.44
4:B:214:GLY:C	4:B:216:VAL:H	2.21	0.44
4:B:70:GLY:HA3	4:B:163:ILE:H	1.82	0.44
6:D:58:GLN:HA	6:D:58:GLN:NE2	2.32	0.44
15:M:32:ILE:CD1	15:M:59:VAL:HB	2.48	0.44
1:A:1335:U:O3'	1:A:1336:C:H6	2.00	0.44
15:M:63:VAL:HG12	15:M:68:LEU:CB	2.41	0.44
8:F:89:VAL:O	8:F:89:VAL:HG13	2.17	0.44
1:A:922:G:H4'	7:E:24:VAL:HB	1.99	0.44
1:A:409:U:OP2	6:D:21:LYS:HE2	2.18	0.44
13:K:56:LYS:HG2	13:K:56:LYS:O	2.16	0.44
1:A:266:G:N2	1:A:270:A:N6	2.65	0.44
1:A:995:C:C2'	1:A:996:A:H5''	2.46	0.44
1:A:1263:C:H2'	1:A:1264:U:H6	1.82	0.44
15:M:52:ILE:HA	15:M:55:LEU:HG	2.00	0.44
1:A:1458:G:OP1	22:T:29:THR:HG21	2.17	0.44
1:A:679:C:H2'	1:A:680:C:H6	1.83	0.44
1:A:1042:A:H2'	1:A:1043:G:O4'	2.18	0.44
1:A:50:A:N6	1:A:361:G:H4'	2.33	0.44
1:A:276:G:O2'	1:A:277:C:H5'	2.18	0.44
10:H:50:VAL:O	10:H:50:VAL:HG13	2.18	0.44
8:F:29:ILE:CD1	8:F:64:VAL:HG21	2.47	0.44
11:I:80:HIS:CE1	11:I:84:ARG:NE	2.86	0.44
11:I:5:TYR:CG	11:I:88:GLU:HG2	2.52	0.44
1:A:1374:A:H2'	1:A:1375:A:H8	1.81	0.44
4:B:32:GLY:O	4:B:34:ARG:HG2	2.17	0.44
5:C:21:TRP:HB2	5:C:22:PHE:H	1.45	0.44
23:U:27:VAL:HG23	23:U:28:LEU:H	1.82	0.44
12:J:7:ARG:HB3	12:J:101:SER:O	2.18	0.44
1:A:1300:G:C2'	1:A:1301:U:OP2	2.65	0.44
13:K:13:LYS:HB2	13:K:76:TYR:CE2	2.53	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:697:U:H2'	1:A:698:G:H5'	2.00	0.44
1:A:199:A:N1	1:A:218:U:O2	2.50	0.44
20:R:50:TYR:O	20:R:54:LEU:HB2	2.18	0.44
5:C:12:GLY:C	5:C:13:ILE:HG12	2.37	0.44
1:A:968:A:H4'	1:A:969:A:OP2	2.17	0.44
23:U:41:THR:O	23:U:45:LYS:HB3	2.17	0.44
1:A:310:G:O2'	1:A:311:C:H5'	2.17	0.44
1:A:812:G:O2'	1:A:813:U:C6	2.69	0.44
1:A:1461:G:H2'	1:A:1462:C:C6	2.52	0.44
1:A:31:G:H22	1:A:47:C:H4'	1.83	0.44
1:A:362:G:OP2	14:L:30:ARG:NH2	2.50	0.44
1:A:793:U:O2	1:A:1516:G:H4'	2.18	0.44
12:J:84:VAL:HB	12:J:89:ARG:NH2	2.33	0.44
1:A:644:U:O2'	1:A:645:G:H5'	2.17	0.44
14:L:113:ARG:HB3	14:L:118:VAL:O	2.18	0.44
1:A:1021:A:H2'	1:A:1022:A:C8	2.52	0.44
1:A:1240:U:N3	9:G:29:LEU:O	2.51	0.44
4:B:23:ASN:OD1	4:B:25:LYS:HD3	2.18	0.44
4:B:30:ILE:C	4:B:41:ASN:HB2	2.38	0.44
5:C:49:ALA:O	5:C:51:VAL:N	2.51	0.44
16:N:31:SER:HA	16:N:40:ARG:HD3	2.00	0.44
15:M:82:LEU:HD22	21:S:64:GLU:OE1	2.18	0.44
6:D:70:GLN:HA	6:D:73:ASN:ND2	2.33	0.44
1:A:451:A:C5'	18:P:70:ARG:HH22	2.31	0.44
12:J:37:ARG:HB2	12:J:75:ASP:O	2.17	0.44
9:G:73:GLU:H	9:G:90:VAL:HG23	1.82	0.44
13:K:83:VAL:HB	13:K:108:ASN:O	2.17	0.44
8:F:43:GLY:HA2	8:F:58:HIS:NE2	2.33	0.44
6:D:34:GLU:O	6:D:34:GLU:HG2	2.17	0.44
9:G:12:LEU:HD13	9:G:13:PRO:CD	2.48	0.44
1:A:1053:G:C3'	1:A:1054:C:H5'	2.48	0.44
1:A:1075:U:H2'	1:A:1076:U:C6	2.53	0.44
9:G:107:ALA:HB1	9:G:115:MET:HE2	1.99	0.44
1:A:932:C:H5'	9:G:3:ARG:HG2	1.99	0.44
1:A:723:U:C5'	23:U:45:LYS:HE3	2.45	0.44
1:A:731:G:O2'	1:A:732:C:H5'	2.17	0.44
1:A:1533:C:H2'	1:A:1534:A:H5'	1.99	0.44
11:I:90:ASP:HB3	11:I:93:LEU:HB2	1.98	0.44
12:J:11:LYS:HD2	12:J:71:LEU:CD1	2.47	0.44
6:D:123:MET:O	6:D:142:VAL:HA	2.18	0.44
1:A:978:A:H4'	1:A:1322:C:H6	1.80	0.44
21:S:4:LEU:N	21:S:4:LEU:HD12	2.24	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:162:VAL:HG22	4:B:183:PHE:O	2.17	0.44
7:E:97:PRO:HA	7:E:122:VAL:HB	2.00	0.44
12:J:7:ARG:NH1	12:J:73:LEU:HD21	2.33	0.44
9:G:48:THR:O	9:G:52:ARG:HG3	2.18	0.44
15:M:32:ILE:CG2	15:M:33:LEU:N	2.81	0.44
1:A:429:U:C1'	1:A:430:A:H5''	2.46	0.44
11:I:109:GLN:HG2	11:I:110:VAL:HG22	1.99	0.44
1:A:1351:U:C5	11:I:119:LYS:HE2	2.52	0.44
1:A:591:U:H2'	1:A:592:G:H8	1.82	0.44
6:D:100:VAL:HG21	6:D:136:VAL:CG2	2.48	0.44
1:A:981:U:H2'	1:A:982:U:C6	2.53	0.44
7:E:65:LYS:HD3	7:E:65:LYS:HA	1.79	0.44
1:A:771:G:O2'	1:A:772:U:H5'	2.18	0.44
7:E:14:LEU:C	7:E:14:LEU:HD13	2.38	0.44
1:A:1135:U:H3'	1:A:1137:C:H42	1.83	0.44
11:I:42:THR:HA	11:I:45:MET:HG2	1.99	0.44
4:B:8:MET:HG2	4:B:46:VAL:CB	2.35	0.44
5:C:32:LEU:O	5:C:35:ASP:HB3	2.17	0.44
12:J:66:GLU:HG2	12:J:67:ILE:N	2.33	0.44
8:F:2:ARG:HH12	8:F:91:ARG:CD	2.30	0.44
6:D:84:ASN:CG	6:D:85:THR:N	2.71	0.44
18:P:8:ARG:HB3	18:P:28:ARG:NH2	2.32	0.44
12:J:40:ILE:H	12:J:74:VAL:HA	1.83	0.44
13:K:83:VAL:HG21	13:K:96:ILE:HG23	2.00	0.44
1:A:234:C:H2'	1:A:235:C:C6	2.52	0.44
1:A:1072:G:P	7:E:51:LYS:HZ3	2.41	0.44
1:A:562:U:C2'	14:L:13:ARG:HG3	2.44	0.44
16:N:55:SER:OG	16:N:56:PRO:HD2	2.17	0.44
23:U:14:ALA:HB3	23:U:16:ARG:NE	2.33	0.44
1:A:275:G:C4'	19:Q:15:LYS:HG2	2.43	0.44
1:A:435:A:OP2	1:A:435:A:H8	2.01	0.44
14:L:65:TYR:C	14:L:66:ILE:HD13	2.39	0.44
1:A:557:G:N1	1:A:558:G:C2	2.86	0.44
1:A:637:C:H2'	1:A:638:U:C6	2.53	0.44
17:O:46:LYS:O	17:O:52:ARG:NH2	2.50	0.44
11:I:47:VAL:HG11	11:I:78:ILE:CD1	2.48	0.44
20:R:49:LYS:O	20:R:53:GLN:HG3	2.17	0.44
1:A:1399:C:H4'	1:A:1400:C:O5'	2.17	0.44
10:H:93:LYS:HE2	10:H:116:ARG:HH12	1.82	0.43
10:H:100:ILE:HD11	10:H:128:VAL:CG2	2.48	0.43
10:H:22:ALA:O	10:H:61:THR:HA	2.18	0.43
1:A:841:C:H2'	1:A:843:U:H1'	1.99	0.43

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1130:A:H62	1:A:1143:G:N2	2.16	0.43
1:A:1157:A:H2	1:A:1180:A:H2'	1.82	0.43
11:I:38:PHE:HA	11:I:41:GLU:CD	2.38	0.43
11:I:59:LYS:CE	11:I:60:LEU:HD23	2.41	0.43
11:I:79:ARG:HH21	11:I:102:PHE:HA	1.81	0.43
6:D:166:LYS:HG2	6:D:167:PRO:HD2	2.00	0.43
5:C:101:ASN:HB3	5:C:102:ILE:H	1.56	0.43
5:C:75:VAL:HG12	5:C:83:VAL:HG22	2.00	0.43
15:M:82:LEU:HD22	21:S:64:GLU:CD	2.38	0.43
12:J:23:ALA:HB1	12:J:27:GLU:CB	2.48	0.43
15:M:28:ARG:NH1	15:M:59:VAL:HG23	2.33	0.43
13:K:95:THR:HG23	13:K:96:ILE:H	1.83	0.43
6:D:17:ASP:HA	6:D:28:ASP:OD1	2.18	0.43
1:A:1283:U:C2'	1:A:1284:C:H5'	2.48	0.43
1:A:1279:G:N2	12:J:45:ARG:NE	2.65	0.43
1:A:1264:U:H2'	1:A:1265:C:H6	1.83	0.43
2:W:27:U:H2'	2:W:28:C:O4'	2.18	0.43
13:K:99:LEU:O	13:K:102:ALA:HB3	2.18	0.43
1:A:685:G:H5'	13:K:40:ALA:O	2.17	0.43
1:A:891:U:O2'	1:A:892:A:H5'	2.18	0.43
7:E:35:LEU:HD13	7:E:133:ILE:CG1	2.48	0.43
7:E:156:ARG:HE	10:H:63:LYS:HZ1	1.66	0.43
11:I:24:ASN:OD1	11:I:26:LYS:HE3	2.18	0.43
1:A:1320:C:H41	21:S:36:ARG:CG	2.25	0.43
15:M:70:ARG:O	15:M:74:MET:N	2.45	0.43
21:S:35:ARG:O	21:S:70:LEU:HB2	2.18	0.43
4:B:165:ALA:HA	4:B:172:ILE:HG13	2.00	0.43
15:M:23:GLY:HA3	15:M:64:VAL:CA	2.44	0.43
1:A:429:U:H4'	1:A:430:A:OP1	2.18	0.43
6:D:27:ILE:HB	6:D:30:LYS:HZ1	1.83	0.43
1:A:332:G:O2'	1:A:333:U:H5'	2.19	0.43
1:A:1171:A:O2'	1:A:1172:C:H5'	2.18	0.43
14:L:53:ARG:HA	14:L:63:THR:HA	1.99	0.43
14:L:32:VAL:O	14:L:54:VAL:HG12	2.17	0.43
8:F:66:ALA:HB1	8:F:70:VAL:HG21	1.98	0.43
1:A:1065:U:H1'	1:A:1066:C:OP2	2.17	0.43
1:A:1489:G:H2'	1:A:1490:U:H6	1.82	0.43
1:A:493:A:H5'	1:A:494:G:OP2	2.17	0.43
6:D:2:ARG:O	6:D:3:TYR:HB3	2.18	0.43
1:A:140:U:H2'	1:A:141:G:H8	1.82	0.43
16:N:86:ALA:O	16:N:91:GLU:HG2	2.19	0.43
1:A:710:G:O2'	1:A:711:G:H5'	2.18	0.43

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:36:ARG:NH1	13:K:36:ARG:HB3	2.33	0.43
1:A:1197:A:P	1:A:1197:A:H3'	2.58	0.43
7:E:15:ILE:HD12	7:E:35:LEU:CD2	2.48	0.43
7:E:38:VAL:HG23	7:E:66:ALA:HB3	1.99	0.43
10:H:44:PHE:HA	10:H:70:VAL:CG2	2.48	0.43
11:I:19:PHE:HB2	11:I:63:TYR:HB3	2.00	0.43
5:C:65:VAL:O	5:C:100:ILE:HD12	2.18	0.43
5:C:71:ARG:HH21	5:C:74:ILE:HD13	1.82	0.43
6:D:61:ARG:HE	6:D:67:LEU:C	2.20	0.43
6:D:66:VAL:HG23	6:D:70:GLN:CG	2.47	0.43
23:U:33:ARG:HD3	23:U:34:ARG:N	2.26	0.43
4:B:112:ARG:O	4:B:113:LEU:HB2	2.17	0.43
17:O:86:LEU:C	17:O:88:ARG:H	2.22	0.43
1:A:428:G:OP2	6:D:6:PRO:HG3	2.18	0.43
1:A:652:U:H4'	10:H:55:LYS:NZ	2.33	0.43
1:A:807:A:H2'	1:A:808:C:C6	2.53	0.43
15:M:48:SER:C	15:M:50:GLY:N	2.71	0.43
1:A:1213:A:H2'	1:A:1215:G:C8	2.52	0.43
1:A:598:U:H2'	1:A:599:C:C6	2.53	0.43
7:E:15:ILE:HG23	7:E:109:ALA:CB	2.48	0.43
1:A:1130:A:H1'	1:A:1146:A:C2	2.53	0.43
11:I:18:VAL:HG11	11:I:81:GLY:CA	2.47	0.43
11:I:29:ILE:HA	11:I:64:ILE:O	2.18	0.43
11:I:118:ARG:NH2	11:I:122:ARG:HE	2.15	0.43
1:A:830:G:H2'	1:A:831:A:H8	1.84	0.43
16:N:68:ARG:NH1	16:N:81:ILE:HD12	2.33	0.43
4:B:186:VAL:O	4:B:187:ASP:HB3	2.18	0.43
4:B:72:LYS:H	4:B:75:ALA:HB3	1.83	0.43
8:F:3:HIS:HB2	8:F:92:THR:HG23	2.00	0.43
18:P:6:LEU:CD1	18:P:19:VAL:HB	2.49	0.43
18:P:3:THR:CG2	18:P:66:THR:HB	2.47	0.43
13:K:13:LYS:N	13:K:13:LYS:HD2	2.34	0.43
1:A:922:G:N3	1:A:1398:A:H2	2.17	0.43
1:A:693:G:OP1	13:K:126:ARG:NH2	2.51	0.43
6:D:195:ASN:HB2	6:D:198:LEU:HD12	2.00	0.43
5:C:10:ARG:O	5:C:15:LYS:HB3	2.19	0.43
21:S:27:LYS:HB3	21:S:27:LYS:NZ	2.33	0.43
1:A:1364:U:O2	1:A:1364:U:O4'	2.35	0.43
5:C:195:ILE:HG22	5:C:195:ILE:O	2.18	0.43
7:E:50:GLY:N	7:E:62:ALA:HB2	2.17	0.43
1:A:842:U:O2'	1:A:846:G:N1	2.50	0.43
11:I:49:GLN:N	11:I:50:PRO:CD	2.80	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1201:A:H1'	1:A:1202:U:OP2	2.19	0.43
12:J:66:GLU:O	16:N:95:LEU:HA	2.19	0.43
15:M:70:ARG:CA	15:M:74:MET:HE3	2.49	0.43
4:B:57:ASN:HA	4:B:60:ALA:HB2	2.00	0.43
4:B:71:THR:N	4:B:167:HIS:CD2	2.85	0.43
13:K:113:THR:HG22	23:U:28:LEU:CD2	2.49	0.43
6:D:86:GLY:HA3	6:D:196:GLU:CD	2.37	0.43
18:P:15:PRO:HB2	18:P:17:TYR:CE1	2.53	0.43
6:D:17:ASP:O	6:D:18:LEU:HB2	2.17	0.43
1:A:266:G:H21	1:A:270:A:N6	2.16	0.43
1:A:812:G:H4'	1:A:812:G:OP1	2.18	0.43
1:A:556:C:O2'	1:A:557:G:H5'	2.18	0.43
15:M:44:ILE:H	15:M:44:ILE:CD1	2.31	0.43
1:A:428:G:H5''	6:D:9:LYS:HG3	2.01	0.43
10:H:9:MET:HA	10:H:26:MET:CE	2.47	0.43
20:R:22:TYR:HA	20:R:28:LEU:HD11	2.00	0.43
1:A:116:A:H2'	1:A:117:G:O4'	2.17	0.43
7:E:36:THR:HG23	7:E:62:ALA:CB	2.48	0.43
21:S:43:MET:O	21:S:46:LEU:HD23	2.19	0.43
4:B:85:SER:HB3	4:B:88:GLN:HG2	2.01	0.43
22:T:24:ARG:HH21	22:T:65:LEU:HD11	1.83	0.43
18:P:57:ILE:O	18:P:61:VAL:HG23	2.18	0.43
1:A:1236:A:C4'	1:A:1304:G:H4'	2.40	0.43
13:K:82:GLU:CB	13:K:108:ASN:HD22	2.31	0.43
22:T:52:GLU:O	22:T:56:ILE:HD13	2.18	0.43
7:E:24:VAL:HG23	7:E:25:LYS:HG2	2.01	0.43
1:A:32:A:H2'	1:A:33:A:C8	2.53	0.43
19:Q:68:LYS:O	19:Q:70:LYS:N	2.49	0.43
1:A:274:A:H4'	1:A:275:G:O5'	2.18	0.43
21:S:27:LYS:CB	21:S:28:LYS:HZ2	2.29	0.43
1:A:482:A:H2'	1:A:483:C:H5'	2.00	0.43
1:A:1069:C:O4'	1:A:1191:A:H2	2.02	0.43
1:A:1310:G:OP1	15:M:78:ARG:NH2	2.51	0.43
19:Q:38:LYS:N	19:Q:38:LYS:HD2	2.34	0.43
1:A:79:G:H8	1:A:79:G:OP2	2.01	0.43
1:A:625:U:H4'	18:P:16:PHE:CE2	2.53	0.43
1:A:539:A:O2'	1:A:540:G:H5'	2.18	0.43
18:P:46:LYS:HD2	18:P:47:GLU:N	2.34	0.43
1:A:1427:C:O2'	1:A:1428:A:H5'	2.18	0.43
1:A:1520:C:O2'	1:A:1521:C:H5'	2.18	0.43
1:A:1287:A:H2'	1:A:1288:A:C8	2.54	0.43
1:A:109:A:H5'	1:A:110:C:H5	1.84	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:29:ILE:CG2	8:F:64:VAL:HG11	2.27	0.43
5:C:100:ILE:HG13	5:C:101:ASN:H	1.84	0.43
5:C:125:ARG:O	5:C:126:ARG:HB2	2.19	0.43
1:A:453:G:H2'	1:A:454:G:O4'	2.19	0.43
1:A:375:U:C4'	18:P:17:TYR:HE2	2.32	0.43
18:P:20:VAL:HG22	18:P:21:VAL:N	2.33	0.43
18:P:71:VAL:HG13	18:P:72:ALA:H	1.83	0.43
4:B:95:TRP:HE1	4:B:170:ILE:CG2	2.31	0.43
1:A:219:U:H2'	1:A:220:G:O4'	2.18	0.43
1:A:103:U:H1'	1:A:171:A:N1	2.34	0.43
8:F:32:ALA:CB	8:F:70:VAL:HG11	2.46	0.43
1:A:1010:U:H2'	1:A:1011:C:H6	1.82	0.43
9:G:65:LEU:HD21	9:G:69:ARG:NH2	2.32	0.43
1:A:821:G:H2'	1:A:822:U:C6	2.54	0.43
1:A:25:C:C5'	1:A:524:G:H1'	2.48	0.43
16:N:89:ARG:HH11	16:N:91:GLU:CD	2.22	0.43
16:N:89:ARG:HD2	16:N:91:GLU:CD	2.39	0.43
5:C:180:ASP:HB2	5:C:204:GLY:O	2.19	0.43
8:F:96:VAL:HG12	8:F:97:THR:N	2.34	0.43
1:A:1150:A:N6	1:A:1151:A:N6	2.67	0.43
11:I:5:TYR:HD2	11:I:20:ILE:HB	1.82	0.43
11:I:17:ARG:HB2	11:I:65:THR:CB	2.49	0.43
6:D:182:LYS:HE3	6:D:182:LYS:HA	2.00	0.43
5:C:19:SER:HA	5:C:56:ILE:O	2.19	0.43
16:N:87:ALA:HB1	16:N:95:LEU:CG	2.49	0.43
4:B:79:VAL:HG23	4:B:161:PHE:HB3	2.01	0.43
8:F:53:LYS:O	8:F:54:LEU:HB3	2.19	0.43
1:A:939:G:H2'	1:A:940:C:C6	2.54	0.43
18:P:18:GLN:NE2	18:P:35:ARG:CZ	2.82	0.43
15:M:2:ARG:O	15:M:8:ILE:HG22	2.19	0.43
15:M:6:ILE:HD13	15:M:65:GLU:HG3	2.00	0.43
13:K:82:GLU:HA	13:K:108:ASN:HB3	2.00	0.43
6:D:17:ASP:C	6:D:19:PHE:H	2.22	0.43
13:K:28:ASN:HD22	13:K:56:LYS:CD	2.26	0.43
1:A:1092:A:H2'	1:A:1093:A:C8	2.54	0.43
21:S:12:LEU:CD1	21:S:16:LYS:HE3	2.43	0.43
9:G:67:ASN:ND2	9:G:127:ALA:HA	2.33	0.43
23:U:49:ALA:HA	23:U:52:VAL:CG1	2.49	0.43
1:A:148:G:H2'	1:A:149:A:H5''	2.00	0.43
1:A:357:G:O2'	1:A:358:U:H5'	2.19	0.43
1:A:689:C:OP1	13:K:47:GLY:HA3	2.18	0.43
1:A:292:G:OP2	1:A:293:G:N7	2.52	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:161:ILE:H	5:C:161:ILE:HG13	1.55	0.43
1:A:872:A:C4	1:A:874:G:N7	2.87	0.43
10:H:44:PHE:CZ	10:H:129:ALA:HB3	2.54	0.43
1:A:1144:G:H22	1:A:1146:A:H62	1.62	0.43
6:D:170:LEU:N	6:D:182:LYS:HB2	2.34	0.43
4:B:93:HIS:CB	4:B:145:ASN:HB3	2.48	0.43
12:J:39:PRO:HA	12:J:74:VAL:CA	2.42	0.43
12:J:41:PRO:O	12:J:72:ARG:HA	2.18	0.43
6:D:27:ILE:HD13	6:D:30:LYS:HE2	2.01	0.43
1:A:38:G:P	14:L:120:ARG:HH22	2.42	0.43
1:A:1512:U:H2'	1:A:1513:A:H8	1.83	0.43
20:R:21:ASP:CG	20:R:23:LYS:HG3	2.38	0.43
1:A:960:U:O2	1:A:960:U:H5''	2.19	0.43
1:A:373:A:C1'	1:A:481:G:H1'	2.48	0.43
23:U:49:ALA:HA	23:U:52:VAL:HG12	2.00	0.43
1:A:1526:G:O2'	1:A:1527:U:H5'	2.18	0.43
19:Q:30:HIS:ND1	19:Q:31:PRO:HD2	2.34	0.43
1:A:685:G:O4'	13:K:40:ALA:HB3	2.19	0.43
17:O:15:GLY:HA3	17:O:20:ASP:OD1	2.19	0.43
1:A:937:A:C5	1:A:938:A:N7	2.86	0.43
11:I:29:ILE:HG23	11:I:29:ILE:O	2.19	0.43
4:B:44:LYS:HA	4:B:47:PRO:HG2	2.01	0.43
1:A:1320:C:N4	21:S:35:ARG:HG3	2.34	0.43
1:A:977:A:H2'	1:A:978:A:H5''	2.01	0.43
15:M:74:MET:HA	15:M:77:LYS:HZ1	1.83	0.43
16:N:25:GLU:C	16:N:27:LYS:N	2.72	0.43
16:N:46:LYS:HE3	21:S:15:LEU:HD11	1.99	0.43
4:B:85:SER:OG	4:B:86:CYS:N	2.51	0.43
8:F:3:HIS:CB	8:F:92:THR:HA	2.36	0.43
1:A:377:G:H2'	1:A:378:G:H8	1.83	0.43
1:A:83:C:H2'	1:A:85:U:O4	2.18	0.43
12:J:15:HIS:C	12:J:17:LEU:H	2.21	0.43
12:J:41:PRO:HA	12:J:72:ARG:CD	2.49	0.43
15:M:15:VAL:HG13	15:M:33:LEU:CD1	2.48	0.43
15:M:28:ARG:NH2	15:M:59:VAL:HA	2.33	0.43
1:A:1306:A:N6	1:A:1331:G:H1'	2.33	0.43
6:D:27:ILE:HD13	6:D:30:LYS:CE	2.48	0.43
1:A:1070:U:H2'	1:A:1071:C:H6	1.82	0.43
19:Q:24:ILE:HD12	19:Q:24:ILE:N	2.33	0.43
1:A:674:G:H2'	1:A:675:A:C8	2.46	0.43
6:D:125:ASN:HB2	6:D:127:ARG:HH11	1.80	0.43
1:A:1002:G:H2'	1:A:1003:G:C8	2.54	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:275:G:C5'	19:Q:15:LYS:HG2	2.49	0.43
9:G:75:LYS:HB3	9:G:76:SER:H	1.71	0.43
1:A:437:U:H5''	6:D:151:GLN:NE2	2.34	0.43
13:K:30:ILE:HG22	13:K:45:THR:CB	2.48	0.43
1:A:834:U:H2'	1:A:835:U:H6	1.82	0.43
22:T:74:HIS:O	22:T:78:LEU:HB2	2.19	0.43
1:A:882:C:O2'	1:A:883:C:H5'	2.19	0.43
14:L:55:ARG:HD3	14:L:61:GLU:CD	2.39	0.43
7:E:142:GLY:O	7:E:143:LEU:HB2	2.19	0.42
10:H:102:VAL:HB	10:H:125:ILE:HD12	2.01	0.42
8:F:98:GLU:CD	8:F:99:ALA:H	2.23	0.42
11:I:79:ARG:HG3	11:I:79:ARG:HH11	1.84	0.42
6:D:170:LEU:N	6:D:170:LEU:HD12	2.33	0.42
4:B:206:ILE:C	4:B:208:ALA:H	2.22	0.42
4:B:83:ALA:CB	4:B:90:PHE:HB3	2.49	0.42
6:D:67:LEU:O	6:D:71:PHE:HB2	2.19	0.42
13:K:39:ASN:HA	13:K:39:ASN:HD22	1.55	0.42
13:K:33:ILE:HB	13:K:73:VAL:HG11	2.00	0.42
13:K:70:ALA:CA	13:K:73:VAL:HG22	2.46	0.42
19:Q:58:VAL:CG1	19:Q:77:VAL:HG13	2.47	0.42
1:A:1277:C:O2'	1:A:1279:G:H8	2.01	0.42
1:A:614:C:C2'	1:A:615:G:H5'	2.49	0.42
9:G:67:ASN:CG	9:G:127:ALA:HA	2.39	0.42
1:A:1471:U:O2'	1:A:1472:U:H5'	2.19	0.42
11:I:59:LYS:CD	11:I:60:LEU:HD23	2.49	0.42
12:J:11:LYS:HB3	12:J:71:LEU:HD12	2.01	0.42
11:I:117:LEU:HD23	11:I:123:ARG:HA	2.00	0.42
11:I:117:LEU:HD22	11:I:121:ARG:C	2.38	0.42
5:C:123:LEU:HG	5:C:129:PHE:HB2	2.01	0.42
5:C:32:LEU:CD1	16:N:76:PHE:HA	2.49	0.42
21:S:14:LEU:HD23	21:S:32:THR:CG2	2.44	0.42
8:F:55:HIS:ND1	8:F:55:HIS:N	2.67	0.42
17:O:61:GLN:O	17:O:65:LEU:HG	2.19	0.42
12:J:9:ARG:HH21	12:J:99:GLN:HG3	1.84	0.42
15:M:32:ILE:HG13	15:M:58:GLU:HG3	2.01	0.42
1:A:1305:G:O2'	1:A:1306:A:H8	2.02	0.42
13:K:12:ARG:C	13:K:13:LYS:HD2	2.39	0.42
1:A:202:G:N2	1:A:465:A:H61	2.17	0.42
1:A:274:A:H4'	19:Q:15:LYS:NZ	2.33	0.42
5:C:10:ARG:HH22	5:C:179:ALA:HB3	1.83	0.42
1:A:1090:U:H2'	1:A:1091:U:H6	1.84	0.42
1:A:370:C:O2'	1:A:371:A:H5'	2.20	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:47:LEU:CG	15:M:51:GLN:HB2	2.47	0.42
1:A:61:G:O2'	1:A:62:U:H5'	2.18	0.42
14:L:107:LYS:HD3	14:L:107:LYS:H	1.84	0.42
1:A:678:U:H2'	1:A:679:C:H6	1.84	0.42
17:O:14:PHE:HE2	17:O:83:ARG:HD3	1.82	0.42
1:A:1460:C:H2'	1:A:1461:G:O4'	2.19	0.42
7:E:65:LYS:HA	7:E:68:ARG:HG2	2.01	0.42
5:C:194:VAL:HG12	5:C:195:ILE:N	2.34	0.42
14:L:6:LEU:HB3	19:Q:33:TYR:OH	2.20	0.42
6:D:99:ASN:CG	6:D:110:ARG:HH22	2.22	0.42
17:O:17:ASP:HB2	17:O:18:ALA:H	1.57	0.42
7:E:131:ASN:OD1	7:E:133:ILE:HG22	2.19	0.42
7:E:95:MET:SD	7:E:138:ALA:O	2.77	0.42
1:A:1128:C:H2'	1:A:1129:C:C6	2.54	0.42
1:A:1151:A:C5'	12:J:43:PRO:HA	2.49	0.42
5:C:154:GLY:HA2	5:C:163:ARG:O	2.19	0.42
16:N:63:CYS:HB3	16:N:67:GLY:H	1.84	0.42
1:A:1313:U:H2'	1:A:1314:C:O4'	2.20	0.42
4:B:73:ARG:C	4:B:75:ALA:H	2.22	0.42
18:P:67:ILE:HG13	18:P:68:SER:H	1.84	0.42
12:J:7:ARG:HD3	12:J:75:ASP:OD1	2.20	0.42
9:G:52:ARG:NH1	9:G:121:ASN:ND2	2.66	0.42
23:U:36:PHE:HB2	23:U:39:LYS:CB	2.49	0.42
1:A:921:U:O2'	7:E:24:VAL:HG12	2.19	0.42
6:D:31:CYS:C	6:D:33:ILE:N	2.72	0.42
1:A:238:A:C2'	1:A:239:U:H5''	2.49	0.42
1:A:1075:U:H2'	1:A:1076:U:H6	1.83	0.42
17:O:63:ARG:CG	17:O:63:ARG:HH11	2.32	0.42
13:K:70:ALA:O	13:K:73:VAL:HG22	2.19	0.42
5:C:176:THR:C	5:C:178:ARG:H	2.23	0.42
9:G:83:THR:OG1	9:G:84:TYR:N	2.51	0.42
1:A:496:A:H2'	1:A:497:G:N7	2.34	0.42
1:A:162:A:H2'	1:A:163:C:O4'	2.19	0.42
1:A:658:C:O2'	1:A:659:U:H5'	2.19	0.42
1:A:5:U:H1'	1:A:6:G:C2	2.53	0.42
1:A:8:A:C5	6:D:205:LYS:HB2	2.53	0.42
1:A:751:U:H2'	1:A:752:G:O4'	2.20	0.42
1:A:759:A:H2'	1:A:760:G:O4'	2.19	0.42
10:H:42:GLU:HG3	10:H:100:ILE:CG2	2.49	0.42
10:H:62:LEU:CD1	10:H:62:LEU:N	2.82	0.42
10:H:76:ARG:HH11	10:H:76:ARG:HG2	1.84	0.42
11:I:23:GLY:HA3	11:I:61:ASP:HB2	2.00	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:19:SER:HB3	5:C:21:TRP:CE2	2.55	0.42
16:N:97:LYS:HB2	16:N:97:LYS:HZ2	1.85	0.42
21:S:5:LYS:NZ	21:S:5:LYS:HB3	2.35	0.42
4:B:85:SER:HB3	4:B:88:GLN:OE1	2.19	0.42
7:E:83:PRO:HG2	10:H:95:MET:SD	2.59	0.42
12:J:41:PRO:HA	12:J:72:ARG:HD2	2.00	0.42
8:F:16:GLU:O	8:F:19:PRO:HD2	2.19	0.42
8:F:20:GLY:O	8:F:24:ARG:HG3	2.19	0.42
16:N:5:MET:HG2	16:N:8:ARG:CZ	2.49	0.42
23:U:14:ALA:O	23:U:17:ARG:NH2	2.53	0.42
13:K:33:ILE:CG1	13:K:73:VAL:HG11	2.49	0.42
23:U:49:ALA:O	23:U:52:VAL:HG12	2.19	0.42
1:A:173:U:H5''	1:A:197:A:H5'	2.01	0.42
1:A:636:U:H2'	1:A:637:C:H6	1.83	0.42
5:C:138:GLN:HE21	5:C:138:GLN:CA	2.30	0.42
17:O:14:PHE:CE2	17:O:83:ARG:HD3	2.54	0.42
1:A:1456:A:H2'	1:A:1457:G:O4'	2.19	0.42
1:A:1213:A:C6	1:A:1215:G:H1'	2.54	0.42
1:A:590:U:H2'	1:A:591:U:H6	1.84	0.42
1:A:113:G:H1'	1:A:354:G:H5'	2.00	0.42
1:A:317:U:H2'	1:A:318:G:C8	2.54	0.42
14:L:39:THR:OG1	14:L:40:THR:N	2.52	0.42
1:A:1110:A:H2'	1:A:1110:A:N3	2.33	0.42
1:A:599:C:O2'	1:A:600:A:H5'	2.20	0.42
7:E:52:ALA:C	7:E:54:GLU:N	2.72	0.42
7:E:52:ALA:HB2	7:E:61:LYS:HZ2	1.83	0.42
10:H:100:ILE:O	10:H:101:ALA:HB2	2.20	0.42
10:H:39:LEU:C	10:H:45:ILE:HG12	2.40	0.42
11:I:103:VAL:HG23	11:I:104:THR:H	1.84	0.42
11:I:49:GLN:HB2	11:I:49:GLN:HE21	1.59	0.42
5:C:113:LYS:HA	5:C:116:ALA:CB	2.48	0.42
5:C:168:ARG:HB3	5:C:168:ARG:HE	1.70	0.42
5:C:22:PHE:CD2	12:J:97:ASP:HB2	2.55	0.42
1:A:1320:C:H1'	21:S:72:GLU:HB3	2.01	0.42
16:N:44:VAL:O	16:N:47:LEU:HB3	2.19	0.42
4:B:186:VAL:HA	4:B:190:SER:OG	2.20	0.42
13:K:92:ARG:NH2	23:U:24:LYS:HB2	2.30	0.42
8:F:54:LEU:HD13	8:F:55:HIS:N	2.34	0.42
18:P:53:ASP:O	18:P:54:LEU:C	2.57	0.42
12:J:20:GLN:OE1	12:J:21:ALA:HB2	2.19	0.42
15:M:33:LEU:HD22	15:M:40:GLU:CA	2.49	0.42
20:R:59:LYS:O	20:R:63:TYR:HD2	2.02	0.42

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:23:LYS:O	20:R:25:ILE:N	2.50	0.42
17:O:86:LEU:C	17:O:88:ARG:N	2.72	0.42
1:A:541:G:H2'	1:A:542:G:C8	2.53	0.42
14:L:109:ARG:HH21	14:L:112:ALA:CA	2.32	0.42
1:A:1463:U:H2'	1:A:1464:U:H6	1.84	0.42
1:A:616:G:O2'	18:P:47:GLU:HG3	2.19	0.42
1:A:328:C:H4'	1:A:329:A:O5'	2.19	0.42
1:A:847:G:H2'	1:A:848:C:C6	2.55	0.42
1:A:754:C:O5'	17:O:71:ARG:NH2	2.52	0.42
7:E:14:LEU:O	7:E:109:ALA:HB2	2.19	0.42
7:E:15:ILE:HB	7:E:16:ALA:H	1.61	0.42
1:A:845:A:H3'	1:A:846:G:O4'	2.20	0.42
1:A:1242:G:H2'	1:A:1243:C:H6	1.85	0.42
5:C:112:ALA:O	5:C:115:VAL:HG23	2.18	0.42
8:F:74:LEU:HD13	8:F:78:PHE:HE1	1.85	0.42
1:A:376:G:H5''	18:P:5:ARG:HB2	2.00	0.42
14:L:23:LEU:O	14:L:25:ALA:N	2.52	0.42
1:A:1101:A:N3	1:A:1102:A:H1'	2.34	0.42
7:E:25:LYS:HB3	7:E:25:LYS:NZ	2.34	0.42
14:L:43:LYS:CB	14:L:44:PRO:HD2	2.43	0.42
9:G:112:ASP:OD2	9:G:112:ASP:N	2.53	0.42
1:A:967:C:H1'	11:I:129:ARG:O	2.19	0.42
1:A:665:A:N3	1:A:732:C:H2'	2.34	0.42
1:A:476:U:H2'	1:A:477:C:H6	1.80	0.42
13:K:79:LYS:HD2	13:K:103:GLY:O	2.19	0.42
1:A:1163:A:H2'	1:A:1164:G:H8	1.82	0.42
1:A:1337:G:H5''	1:A:1338:G:OP1	2.20	0.42
13:K:24:ALA:HB3	13:K:87:GLY:O	2.19	0.42
1:A:1348:U:OP1	11:I:111:GLU:N	2.49	0.42
1:A:1375:A:H2'	1:A:1376:U:H6	1.83	0.42
4:B:83:ALA:HB2	4:B:90:PHE:HB3	2.01	0.42
18:P:4:ILE:HG12	18:P:21:VAL:HG22	2.02	0.42
23:U:36:PHE:CD1	23:U:36:PHE:N	2.87	0.42
1:A:181:A:N6	1:A:194:C:H2'	2.35	0.42
6:D:46:ARG:HH11	6:D:46:ARG:HG2	1.85	0.42
15:M:102:LYS:CB	15:M:102:LYS:HZ2	2.32	0.42
14:L:85:ARG:CB	14:L:93:ARG:HA	2.49	0.42
1:A:997:U:H2'	1:A:998:C:O4'	2.20	0.42
1:A:86:G:H1'	1:A:87:C:C5	2.55	0.42
5:C:17:TRP:HB3	5:C:18:ASN:H	1.70	0.42
10:H:29:SER:HB3	10:H:32:LYS:CD	2.50	0.42
4:B:123:GLY:HA2	4:B:126:ASP:CG	2.39	0.42

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:50:TYR:OH	6:D:54:LEU:HD12	2.20	0.42
1:A:726:C:O2'	1:A:727:G:H5'	2.19	0.42
7:E:80:LEU:HG	7:E:82:HIS:C	2.39	0.42
8:F:14:GLN:HE21	8:F:83:ALA:CB	2.33	0.42
6:D:170:LEU:HA	6:D:182:LYS:H	1.85	0.42
12:J:65:TYR:HB3	16:N:95:LEU:HD21	2.01	0.42
4:B:177:ASN:H	4:B:178:LEU:HD12	1.85	0.42
11:I:14:SER:O	11:I:77:ALA:HB2	2.19	0.42
15:M:23:GLY:CA	15:M:64:VAL:HG12	2.49	0.42
15:M:69:ARG:HG2	15:M:69:ARG:HH11	1.85	0.42
13:K:19:VAL:HG12	13:K:82:GLU:CB	2.50	0.42
6:D:25:ARG:O	6:D:26:ALA:HB2	2.20	0.42
6:D:26:ALA:C	6:D:28:ASP:H	2.23	0.42
13:K:56:LYS:HA	13:K:61:ALA:HB1	2.01	0.42
1:A:332:G:O5'	22:T:2:ASN:N	2.53	0.42
1:A:237:G:H2'	1:A:238:A:H8	1.85	0.42
1:A:782:A:H4'	1:A:1514:G:O2'	2.20	0.42
1:A:35:G:H2'	1:A:36:C:C6	2.54	0.42
20:R:62:ARG:HG2	20:R:67:LEU:CB	2.49	0.42
20:R:64:LEU:C	20:R:66:LEU:H	2.23	0.42
6:D:43:ARG:CZ	6:D:44:LYS:H	2.31	0.42
1:A:946:A:H2'	1:A:947:G:H8	1.79	0.42
1:A:146:G:H2'	1:A:147:G:C8	2.55	0.42
14:L:115:LYS:O	14:L:116:TYR:HB2	2.20	0.42
1:A:144:G:H2'	1:A:145:G:O4'	2.19	0.42
14:L:82:ARG:HG2	14:L:82:ARG:HH11	1.84	0.42
7:E:156:ARG:NE	10:H:63:LYS:NZ	2.67	0.42
1:A:1186:G:H21	16:N:100:TRP:CA	2.32	0.42
5:C:46:LEU:HD13	5:C:51:VAL:CG1	2.37	0.42
1:A:401:C:H2'	1:A:402:G:C8	2.54	0.42
13:K:86:LYS:HG3	13:K:113:THR:CA	2.45	0.42
9:G:68:VAL:HG23	9:G:99:ALA:HB1	2.01	0.42
13:K:21:HIS:NE2	13:K:34:THR:HB	2.34	0.42
1:A:193:C:H2'	1:A:194:C:C5	2.55	0.42
4:B:195:VAL:CG1	4:B:196:ASP:H	2.17	0.42
20:R:62:ARG:C	20:R:64:LEU:H	2.23	0.42
1:A:484:G:H5'	1:A:486:U:H5'	2.01	0.42
1:A:639:G:O2'	1:A:640:A:H5'	2.20	0.42
1:A:167:A:H2'	1:A:168:G:H8	1.85	0.42
1:A:957:U:H2'	1:A:959:A:OP2	2.19	0.42
4:B:122:ASP:O	4:B:124:THR:N	2.53	0.42
17:O:11:VAL:HA	17:O:26:VAL:CG2	2.50	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:93:ILE:HD12	5:C:93:ILE:N	2.35	0.42
1:A:1352:C:H2'	1:A:1353:G:H8	1.81	0.42
1:A:1028:C:H2'	1:A:1029:U:C6	2.55	0.42
1:A:213:G:C2'	1:A:214:C:H5'	2.48	0.42
1:A:418:C:H1'	1:A:540:G:O2'	2.19	0.42
1:A:994:A:N7	1:A:1216:A:H4'	2.35	0.42
1:A:954:G:H2'	1:A:955:U:O4'	2.20	0.42
1:A:1210:C:H4'	1:A:1214:C:N4	2.35	0.42
2:W:39:C:H2'	2:W:40:C:H6	1.84	0.42
7:E:57:ALA:HB1	7:E:61:LYS:HZ1	1.85	0.42
10:H:10:LEU:HD11	10:H:76:ARG:HB2	2.02	0.42
8:F:29:ILE:HG22	8:F:34:GLY:HA3	2.02	0.42
11:I:33:SER:H	11:I:36:GLN:HB2	1.85	0.42
11:I:117:LEU:HD13	11:I:120:ALA:C	2.41	0.42
5:C:76:ILE:HG22	5:C:80:GLY:HA2	2.02	0.42
5:C:85:LYS:HG3	5:C:86:LEU:N	2.34	0.42
21:S:30:LEU:O	21:S:32:THR:N	2.53	0.42
1:A:622:A:H2'	1:A:623:C:O4'	2.20	0.42
6:D:67:LEU:HD12	6:D:70:GLN:NE2	2.35	0.42
14:L:23:LEU:C	14:L:25:ALA:N	2.74	0.42
1:A:193:C:H4'	22:T:54:GLN:HG2	2.02	0.42
9:G:12:LEU:HD22	9:G:13:PRO:HD2	2.02	0.42
19:Q:61:ARG:HG2	19:Q:75:VAL:HG12	2.02	0.42
19:Q:11:VAL:HG12	19:Q:12:VAL:N	2.35	0.42
6:D:124:VAL:HA	6:D:141:VAL:O	2.19	0.42
1:A:824:G:O2'	1:A:825:A:H5'	2.20	0.42
14:L:21:PRO:HG2	14:L:94:TYR:OH	2.20	0.42
13:K:23:HIS:HB3	13:K:30:ILE:CG1	2.48	0.42
10:H:29:SER:HB3	10:H:32:LYS:HD2	2.02	0.42
1:A:10:A:H2'	1:A:11:G:H8	1.85	0.42
1:A:178:C:O2'	1:A:179:A:H5'	2.20	0.42
1:A:1473:G:O2'	1:A:1474:U:H5'	2.20	0.42
9:G:8:GLN:HB2	9:G:8:GLN:HE21	1.56	0.42
1:A:856:C:O2'	1:A:857:C:H5'	2.20	0.41
10:H:38:VAL:HG13	10:H:39:LEU:N	2.35	0.41
1:A:1118:U:H1'	1:A:1179:A:N3	2.34	0.41
11:I:29:ILE:HG22	11:I:33:SER:HA	2.02	0.41
1:A:1058:G:O2'	1:A:1059:C:H5'	2.19	0.41
16:N:25:GLU:C	16:N:27:LYS:H	2.23	0.41
21:S:62:THR:HG22	21:S:65:MET:HE2	2.01	0.41
4:B:142:LYS:HD2	4:B:145:ASN:ND2	2.34	0.41
23:U:19:LYS:CD	23:U:19:LYS:H	2.32	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:P:6:LEU:HD23	18:P:17:TYR:HB3	2.02	0.41
1:A:82:G:H2'	1:A:83:C:O3'	2.20	0.41
15:M:7:ASN:OD1	15:M:21:ILE:HG23	2.20	0.41
1:A:411:A:OP1	6:D:25:ARG:NH2	2.52	0.41
6:D:30:LYS:HZ2	6:D:30:LYS:HB2	1.84	0.41
1:A:796:C:O2'	1:A:797:C:H5'	2.19	0.41
20:R:33:THR:HG23	20:R:36:GLY:H	1.85	0.41
9:G:41:ILE:HG21	9:G:115:MET:HB3	2.01	0.41
1:A:812:G:C2'	1:A:812:G:N3	2.80	0.41
4:B:10:LYS:C	4:B:12:GLY:H	2.23	0.41
1:A:1526:G:O5'	23:U:38:GLU:HB2	2.20	0.41
1:A:885:G:N3	1:A:914:A:C2	2.87	0.41
1:A:489:C:O2'	1:A:490:C:H5'	2.19	0.41
10:H:114:ALA:HA	10:H:117:GLN:HE22	1.85	0.41
12:J:81:GLU:HB2	12:J:82:LYS:HZ3	1.84	0.41
17:O:35:ILE:HD11	17:O:58:MET:HB2	2.01	0.41
14:L:72:ASN:ND2	14:L:72:ASN:N	2.68	0.41
7:E:12:GLU:O	7:E:13:LYS:HE2	2.21	0.41
7:E:85:LYS:HG2	7:E:86:GLY:N	2.31	0.41
10:H:40:LYS:HD3	10:H:41:GLU:N	2.35	0.41
10:H:4:ASP:OD1	10:H:7:ALA:HB2	2.20	0.41
1:A:1138:G:H5'	1:A:1139:G:OP2	2.20	0.41
1:A:1239:A:H1'	1:A:1241:G:C5	2.55	0.41
1:A:1368:A:OP2	11:I:113:LYS:HD3	2.19	0.41
6:D:120:LYS:HB3	6:D:145:ARG:CD	2.49	0.41
6:D:160:LEU:O	6:D:164:ARG:HD3	2.20	0.41
1:A:975:A:HO2'	1:A:1358:U:H1'	1.85	0.41
5:C:59:PRO:HD3	5:C:64:ARG:HG3	2.02	0.41
4:B:158:ASP:O	4:B:180:ILE:HG23	2.20	0.41
14:L:31:GLY:HA2	14:L:56:LEU:HA	2.02	0.41
15:M:3:ILE:CG2	15:M:4:ALA:H	2.25	0.41
13:K:82:GLU:HB3	13:K:108:ASN:ND2	2.32	0.41
1:A:411:A:C4	1:A:413:G:H1'	2.55	0.41
1:A:37:U:H2'	1:A:38:G:C8	2.55	0.41
6:D:147:LYS:HB2	6:D:147:LYS:HE2	1.90	0.41
1:A:932:C:C5'	9:G:3:ARG:HG2	2.50	0.41
1:A:988:G:H21	1:A:1016:A:H1'	1.85	0.41
2:W:29:G:O2'	2:W:30:G:H5'	2.20	0.41
1:A:10:A:H2'	1:A:11:G:C8	2.55	0.41
1:A:768:A:H5'	1:A:1524:C:H1'	2.01	0.41
23:U:43:GLU:O	23:U:46:ARG:HB2	2.20	0.41
6:D:176:LYS:H	6:D:176:LYS:HD3	1.85	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:P:55:ASP:OD2	18:P:55:ASP:N	2.52	0.41
1:A:1504:G:H4'	1:A:1505:G:C4	2.56	0.41
7:E:87:VAL:CG1	7:E:88:HIS:N	2.76	0.41
7:E:89:THR:CG2	7:E:90:GLY:N	2.83	0.41
5:C:113:LYS:HE2	5:C:184:ASN:OD1	2.20	0.41
5:C:82:ASP:O	5:C:85:LYS:HG2	2.20	0.41
1:A:1323:G:O2'	1:A:1362:A:O4'	2.38	0.41
21:S:62:THR:HG22	21:S:65:MET:HE3	2.01	0.41
6:D:67:LEU:H	6:D:67:LEU:HD12	1.85	0.41
1:A:134:G:H1	18:P:25:ARG:HD2	1.84	0.41
9:G:137:ARG:C	9:G:139:ASP:N	2.71	0.41
13:K:121:ARG:NH2	23:U:34:ARG:HG3	2.35	0.41
15:M:3:ILE:HB	15:M:7:ASN:O	2.20	0.41
1:A:1328:C:H5''	15:M:27:THR:CB	2.51	0.41
15:M:68:LEU:HD23	15:M:69:ARG:N	2.35	0.41
13:K:84:MET:SD	13:K:108:ASN:ND2	2.91	0.41
1:A:693:G:P	13:K:126:ARG:HH12	2.42	0.41
1:A:34:C:H2'	1:A:35:G:C8	2.55	0.41
1:A:407:U:H1'	6:D:115:GLN:HG2	2.02	0.41
9:G:19:SER:CB	9:G:22:LEU:HD12	2.50	0.41
14:L:110:LYS:O	14:L:111:GLN:O	2.39	0.41
17:O:24:THR:O	17:O:27:GLN:HB2	2.20	0.41
1:A:1307:U:H2'	1:A:1308:U:O4'	2.20	0.41
1:A:492:C:H2'	1:A:493:A:C4	2.54	0.41
1:A:525:C:P	14:L:87:LYS:NZ	2.93	0.41
1:A:49:U:O2'	1:A:50:A:H2'	2.20	0.41
1:A:1231:G:H2'	1:A:1232:U:H6	1.86	0.41
1:A:8:A:N6	6:D:202:LEU:HA	2.35	0.41
1:A:552:U:H2'	1:A:553:A:H8	1.86	0.41
13:K:37:GLN:HE21	13:K:37:GLN:HB3	1.64	0.41
7:E:107:GLY:O	7:E:111:ARG:HB3	2.19	0.41
8:F:39:LEU:HD23	8:F:62:MET:SD	2.61	0.41
1:A:1138:G:H2'	1:A:1140:C:C6	2.56	0.41
1:A:1140:C:O2'	1:A:1141:C:H5'	2.21	0.41
11:I:16:ALA:HB2	11:I:66:VAL:CG2	2.50	0.41
1:A:1345:U:H4'	1:A:1346:A:H5''	2.02	0.41
4:B:30:ILE:HG23	4:B:31:PHE:O	2.20	0.41
5:C:56:ILE:CG2	5:C:57:GLU:N	2.83	0.41
16:N:81:ILE:C	16:N:83:VAL:H	2.23	0.41
4:B:163:ILE:O	4:B:185:ILE:HG13	2.20	0.41
4:B:75:ALA:C	4:B:77:GLU:H	2.23	0.41
12:J:15:HIS:HA	12:J:18:ILE:CG2	2.46	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:68:LEU:CD2	15:M:69:ARG:HH11	2.33	0.41
22:T:54:GLN:N	22:T:55:PRO:CD	2.84	0.41
6:D:19:PHE:N	6:D:19:PHE:CD2	2.88	0.41
4:B:131:LYS:HG3	4:B:135:MET:HE2	2.03	0.41
11:I:11:ARG:CD	11:I:106:ASP:HB3	2.45	0.41
20:R:33:THR:HG22	20:R:37:LYS:HG2	2.01	0.41
17:O:63:ARG:HG2	17:O:63:ARG:HH11	1.85	0.41
6:D:189:ASP:N	6:D:189:ASP:OD2	2.51	0.41
1:A:437:U:O2'	6:D:119:HIS:HB2	2.21	0.41
14:L:93:ARG:HD3	14:L:94:TYR:CE1	2.55	0.41
14:L:107:LYS:CD	14:L:107:LYS:H	2.33	0.41
1:A:404:G:OP2	6:D:2:ARG:CZ	2.68	0.41
1:A:801:U:H2'	1:A:802:A:H8	1.84	0.41
6:D:116:LEU:HD21	6:D:153:ARG:HD2	2.02	0.41
1:A:1363:A:H2'	1:A:1363:A:N3	2.34	0.41
7:E:111:ARG:HG3	7:E:112:ALA:N	2.34	0.41
7:E:39:GLY:HA2	7:E:116:VAL:HG21	2.03	0.41
7:E:59:ILE:HD12	7:E:63:MET:SD	2.60	0.41
7:E:75:LEU:HB2	7:E:80:LEU:HA	2.03	0.41
10:H:100:ILE:HD12	10:H:100:ILE:C	2.41	0.41
10:H:14:ARG:HG3	10:H:15:ASN:N	2.36	0.41
10:H:77:VAL:HG11	10:H:124:ILE:HD11	2.03	0.41
8:F:11:HIS:CG	8:F:12:PRO:HD2	2.53	0.41
1:A:829:G:O2'	1:A:830:G:H5'	2.21	0.41
5:C:58:ARG:HA	5:C:59:PRO:HD2	1.96	0.41
21:S:8:PRO:O	21:S:10:ILE:HG13	2.21	0.41
1:A:82:G:H3'	1:A:83:C:O3'	2.20	0.41
9:G:102:TRP:HB3	9:G:136:LYS:HG3	2.02	0.41
14:L:23:LEU:HB3	14:L:58:ASN:ND2	2.28	0.41
4:B:148:GLY:HA2	4:B:151:LYS:HG2	2.02	0.41
4:B:95:TRP:HZ3	4:B:99:MET:SD	2.44	0.41
16:N:13:VAL:HG22	16:N:59:GLN:OE1	2.20	0.41
8:F:86:ARG:NH2	20:R:63:TYR:O	2.54	0.41
9:G:14:ASP:HB3	9:G:19:SER:O	2.20	0.41
1:A:461:A:C2'	1:A:461:A:N3	2.83	0.41
1:A:21:G:H2'	1:A:22:G:H8	1.84	0.41
1:A:25:C:H5''	1:A:524:G:H1'	2.01	0.41
10:H:48:PHE:HA	10:H:60:LEU:HA	2.02	0.41
1:A:1520:C:H2'	1:A:1521:C:C6	2.55	0.41
5:C:60:ALA:H	12:J:94:ALA:HB1	1.86	0.41
1:A:728:A:H2'	1:A:729:A:C8	2.55	0.41
1:A:124:C:O2'	1:A:125:U:H5'	2.20	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:38:HIS:O	4:B:39:ILE:HD13	2.21	0.41
1:A:1057:G:H2'	1:A:1058:G:O4'	2.20	0.41
5:C:197:VAL:HG12	5:C:198:LYS:H	1.86	0.41
5:C:64:ARG:HA	5:C:99:GLN:HB2	2.03	0.41
16:N:82:LYS:HD2	16:N:82:LYS:HA	1.88	0.41
20:R:34:GLU:HB2	23:U:18:PHE:HZ	1.86	0.41
18:P:51:ARG:O	18:P:52:LEU:HD12	2.20	0.41
7:E:98:ALA:H	7:E:122:VAL:HG12	1.84	0.41
9:G:68:VAL:O	9:G:68:VAL:HG23	2.21	0.41
4:B:144:GLU:HB3	4:B:151:LYS:NZ	2.35	0.41
4:B:95:TRP:CZ3	4:B:99:MET:SD	3.14	0.41
4:B:130:LYS:HB3	4:B:134:LEU:CD1	2.41	0.41
5:C:146:LYS:HD2	5:C:203:LYS:O	2.21	0.41
1:A:959:A:N6	1:A:1222:G:H5'	2.35	0.41
9:G:53:SER:C	9:G:55:LYS:H	2.23	0.41
1:A:416:G:H2'	1:A:417:G:O4'	2.21	0.41
1:A:684:U:H2'	1:A:685:G:O4'	2.21	0.41
6:D:97:LEU:O	6:D:101:VAL:HG23	2.20	0.41
1:A:304:U:H2'	1:A:305:G:H8	1.86	0.41
1:A:394:G:H2'	1:A:395:C:C6	2.54	0.41
6:D:100:VAL:HG11	6:D:136:VAL:HG21	2.01	0.41
1:A:981:U:H3'	1:A:982:U:H2'	2.01	0.41
1:A:14:U:H5''	25:A:1626:HOH:O	2.21	0.41
16:N:15:LEU:HA	16:N:18:LYS:HB2	2.02	0.41
9:G:132:THR:O	9:G:135:LYS:N	2.54	0.41
1:A:841:C:H2'	1:A:843:U:C2	2.55	0.41
5:C:69:THR:O	5:C:72:PRO:HD3	2.21	0.41
4:B:160:LEU:O	4:B:183:PHE:N	2.50	0.41
23:U:40:PRO:HG3	23:U:44:ARG:HH21	1.85	0.41
13:K:34:THR:HG21	13:K:38:GLY:HA2	2.02	0.41
22:T:2:ASN:CG	22:T:3:ILE:H	2.24	0.41
6:D:197:HIS:CD2	6:D:198:LEU:N	2.89	0.41
21:S:12:LEU:HD13	21:S:16:LYS:HG3	2.03	0.41
17:O:81:ILE:O	17:O:85:GLY:N	2.54	0.41
20:R:56:ARG:HB2	20:R:60:ARG:HH12	1.84	0.41
1:A:918:A:H2'	1:A:919:A:C8	2.55	0.41
1:A:913:A:H4'	1:A:914:A:H4'	2.03	0.41
10:H:114:ALA:O	10:H:118:ALA:HB2	2.21	0.41
17:O:20:ASP:C	17:O:22:GLY:N	2.74	0.41
6:D:53:GLN:H	6:D:53:GLN:HG2	1.34	0.41
1:A:1426:G:O2'	1:A:1427:C:H5'	2.21	0.41
1:A:1340:A:H2'	1:A:1341:U:C6	2.55	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:99:ASN:OD1	6:D:110:ARG:NH1	2.51	0.41
1:A:1113:C:O2'	1:A:1114:C:H5'	2.20	0.41
7:E:114:LEU:CD2	7:E:139:THR:HG22	2.50	0.41
7:E:95:MET:HE3	7:E:114:LEU:HD21	2.03	0.41
8:F:62:MET:HB3	8:F:63:ASN:H	1.69	0.41
11:I:87:MET:HB3	11:I:94:ARG:NH2	2.35	0.41
6:D:165:GLU:O	6:D:166:LYS:CB	2.69	0.41
4:B:44:LYS:HD2	4:B:44:LYS:HA	1.94	0.41
5:C:62:SER:HA	5:C:96:VAL:HB	2.02	0.41
4:B:69:VAL:O	4:B:162:VAL:HA	2.20	0.41
20:R:54:LEU:HD22	20:R:58:ILE:HD11	2.03	0.41
1:A:68:G:O4'	1:A:171:A:H1'	2.19	0.41
13:K:23:HIS:O	13:K:29:THR:HG23	2.21	0.41
1:A:632:U:C3'	1:A:633:G:H5'	2.48	0.41
6:D:50:TYR:HA	6:D:53:GLN:HG3	2.02	0.41
16:N:48:GLN:HE21	16:N:49:THR:HG22	1.86	0.41
21:S:22:VAL:HG23	21:S:23:GLU:H	1.86	0.41
7:E:59:ILE:HG13	7:E:60:GLN:N	2.36	0.41
7:E:95:MET:O	7:E:96:GLN:NE2	2.53	0.41
8:F:11:HIS:HB3	8:F:14:GLN:HG2	2.03	0.41
8:F:30:THR:HA	8:F:34:GLY:O	2.20	0.41
5:C:129:PHE:CE2	5:C:156:LEU:HD13	2.56	0.41
5:C:39:ARG:NH2	5:C:55:VAL:HA	2.35	0.41
5:C:85:LYS:HG2	5:C:86:LEU:HD12	2.02	0.41
5:C:122:GLN:O	5:C:127:VAL:HG13	2.21	0.41
5:C:115:VAL:CG1	5:C:136:ALA:HB1	2.50	0.41
1:A:1321:U:O2'	21:S:76:THR:HG22	2.20	0.41
4:B:67:LEU:HD23	4:B:160:LEU:HD21	2.03	0.41
4:B:171:ALA:O	4:B:175:ALA:HB3	2.21	0.41
4:B:220:VAL:HG12	4:B:220:VAL:O	2.20	0.41
6:D:84:ASN:N	6:D:88:ASN:HD21	2.18	0.41
1:A:232:G:H1'	1:A:262:A:N1	2.36	0.41
1:A:452:A:H2'	1:A:453:G:O4'	2.21	0.41
12:J:41:PRO:O	12:J:72:ARG:HD3	2.20	0.41
15:M:3:ILE:O	15:M:5:GLY:N	2.45	0.41
1:A:471:U:H2'	1:A:472:U:H6	1.84	0.41
8:F:18:VAL:N	8:F:19:PRO:HD2	2.36	0.41
6:D:7:LYS:H	6:D:7:LYS:HG3	1.45	0.41
1:A:59:A:H3'	1:A:331:G:H22	1.85	0.41
4:B:195:VAL:CG1	4:B:196:ASP:N	2.82	0.41
11:I:12:LYS:H	11:I:105:ARG:NH2	2.19	0.41
11:I:12:LYS:HE2	11:I:109:GLN:CG	2.45	0.41

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:56:PRO:HA	16:N:59:GLN:CG	2.43	0.41
23:U:15:LEU:C	23:U:17:ARG:HD2	2.42	0.41
1:A:1168:U:H4'	1:A:1169:A:OP2	2.21	0.41
1:A:253:A:H2'	1:A:254:G:C8	2.55	0.41
1:A:253:A:H2'	1:A:254:G:H8	1.86	0.41
15:M:102:LYS:HZ1	15:M:103:THR:CG2	2.34	0.41
9:G:110:ARG:HD3	9:G:118:ARG:CB	2.51	0.41
1:A:1277:C:H2'	1:A:1278:G:H5''	2.03	0.41
1:A:313:A:O2'	1:A:314:C:H5'	2.20	0.41
1:A:450:G:N7	1:A:481:G:O6	2.54	0.41
13:K:30:ILE:HD12	13:K:30:ILE:O	2.21	0.41
1:A:1352:C:H2'	1:A:1353:G:O4'	2.21	0.41
1:A:522:C:H5''	14:L:116:TYR:OH	2.21	0.41
1:A:404:G:O2'	1:A:405:U:H5'	2.19	0.41
6:D:2:ARG:HG2	6:D:2:ARG:H	1.54	0.41
13:K:80:ASN:HA	13:K:105:ARG:H	1.86	0.41
14:L:87:LYS:HE2	14:L:87:LYS:HB3	1.89	0.41
1:A:915:A:C2'	1:A:916:U:H5'	2.51	0.41
1:A:110:C:H2'	1:A:111:G:C8	2.56	0.41
13:K:14:GLN:CD	13:K:14:GLN:N	2.74	0.41
1:A:177:G:O4'	1:A:177:G:N3	2.53	0.41
1:A:108:G:O4'	1:A:108:G:N3	2.54	0.41
1:A:893:C:H2'	1:A:894:G:C8	2.56	0.41
19:Q:6:THR:C	19:Q:7:LEU:HD22	2.41	0.41
1:A:742:G:O2'	1:A:743:A:H5'	2.21	0.41
1:A:1212:U:H5''	1:A:1212:U:C6	2.56	0.41
10:H:23:ALA:CB	10:H:61:THR:HA	2.50	0.41
1:A:1182:G:C3'	1:A:1183:U:H5'	2.51	0.41
11:I:6:TYR:HE1	11:I:8:THR:HA	1.85	0.41
11:I:94:ARG:HB3	11:I:98:ARG:CZ	2.51	0.41
11:I:93:LEU:O	11:I:97:LEU:HG	2.21	0.41
6:D:144:ILE:HG22	6:D:145:ARG:N	2.36	0.41
1:A:1049:U:H4'	1:A:1050:G:OP2	2.20	0.41
5:C:129:PHE:CZ	5:C:156:LEU:HD13	2.56	0.41
5:C:52:SER:C	5:C:53:ARG:HG3	2.38	0.41
1:A:1315:U:C5	21:S:5:LYS:HD2	2.56	0.41
21:S:48:ILE:HG21	21:S:70:LEU:HD22	2.03	0.41
18:P:12:LYS:C	18:P:14:ARG:H	2.23	0.41
13:K:92:ARG:NH2	23:U:20:ARG:HH22	2.19	0.41
23:U:24:LYS:O	23:U:28:LEU:N	2.54	0.41
8:F:3:HIS:ND1	8:F:95:ALA:HB2	2.35	0.41
6:D:86:GLY:O	6:D:89:LEU:HB3	2.20	0.41

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:707:U:H4'	13:K:21:HIS:CG	2.55	0.41
8:F:7:VAL:HG23	8:F:60:VAL:O	2.21	0.41
1:A:1112:C:H42	5:C:177:LEU:HD23	1.83	0.41
1:A:169:C:O2'	1:A:170:U:H5'	2.21	0.41
1:A:1283:U:O2'	1:A:1284:C:H5'	2.21	0.41
9:G:59:GLU:HA	9:G:63:VAL:HG23	2.03	0.41
1:A:613:C:OP2	6:D:80:ARG:NH2	2.54	0.41
15:M:106:ARG:HD3	15:M:110:GLY:O	2.21	0.41
9:G:66:GLU:HA	9:G:69:ARG:CZ	2.51	0.41
5:C:33:ASP:O	5:C:37:LYS:HG2	2.20	0.41
6:D:22:SER:HB3	6:D:108:ALA:O	2.21	0.41
6:D:98:ASP:O	6:D:113:ALA:HB3	2.20	0.41
1:A:818:G:C3'	1:A:819:A:H5''	2.51	0.41
1:A:880:C:O2'	1:A:881:G:H5'	2.20	0.41
1:A:1051:C:H2'	1:A:1052:U:H6	1.85	0.41
1:A:1129:C:O3'	1:A:1130:A:H8	2.04	0.40
1:A:1135:U:H3'	1:A:1137:C:N3	2.36	0.40
11:I:98:ARG:HA	11:I:103:VAL:HG22	2.02	0.40
6:D:104:MET:O	6:D:106:PHE:N	2.54	0.40
5:C:89:VAL:HG23	5:C:90:VAL:N	2.37	0.40
4:B:156:LEU:HA	4:B:157:PRO:HD2	1.91	0.40
4:B:210:THR:HA	4:B:213:LEU:HG	2.03	0.40
23:U:24:LYS:O	23:U:27:VAL:HG23	2.21	0.40
23:U:27:VAL:O	23:U:29:ALA:N	2.54	0.40
8:F:2:ARG:HG2	8:F:92:THR:HG1	1.86	0.40
4:B:199:ILE:C	4:B:201:GLY:H	2.24	0.40
9:G:73:GLU:HG2	9:G:88:VAL:HG13	2.02	0.40
15:M:13:HIS:HA	15:M:43:LYS:HA	2.03	0.40
13:K:95:THR:CG2	13:K:96:ILE:N	2.83	0.40
8:F:58:HIS:CD2	8:F:59:TYR:N	2.89	0.40
1:A:1014:A:C5'	21:S:13:HIS:HB3	2.51	0.40
6:D:125:ASN:H	6:D:141:VAL:HG23	1.86	0.40
1:A:1004:A:H2'	1:A:1005:A:O4'	2.21	0.40
1:A:422:C:H1'	1:A:423:G:N2	2.36	0.40
14:L:36:VAL:HG23	14:L:36:VAL:O	2.21	0.40
1:A:764:C:H2'	1:A:765:G:C5'	2.49	0.40
1:A:878:A:OP1	10:H:79:ARG:CZ	2.69	0.40
10:H:79:ARG:CB	10:H:80:PRO:HD2	2.51	0.40
1:A:1017:U:O2'	1:A:1018:G:H5'	2.21	0.40
7:E:45:VAL:HG21	7:E:140:ILE:HG12	2.03	0.40
1:A:876:C:H2'	1:A:877:G:H8	1.85	0.40
1:A:246:A:H4'	1:A:247:G:H4'	2.03	0.40

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:99:ASN:O	6:D:102:TYR:HB3	2.21	0.40
1:A:944:G:H2'	1:A:945:G:H5''	2.03	0.40
1:A:74:A:H2'	1:A:75:G:O4'	2.21	0.40
7:E:36:THR:HG23	7:E:62:ALA:HB1	2.02	0.40
7:E:89:THR:HG22	7:E:91:SER:H	1.86	0.40
5:C:136:ALA:O	5:C:139:ASN:OD1	2.38	0.40
5:C:9:ILE:HA	16:N:97:LYS:HE2	2.04	0.40
18:P:67:ILE:HD11	18:P:71:VAL:HG22	2.04	0.40
13:K:123:PRO:C	13:K:125:LYS:H	2.24	0.40
4:B:110:ILE:O	4:B:111:LYS:C	2.59	0.40
1:A:1299:A:N7	1:A:1302:C:H5	2.19	0.40
1:A:1299:A:C8	1:A:1301:U:H1'	2.56	0.40
15:M:33:LEU:O	15:M:37:GLY:N	2.54	0.40
1:A:1330:U:H5''	15:M:69:ARG:HH22	1.86	0.40
1:A:922:G:O2'	1:A:923:A:H5'	2.21	0.40
1:A:1072:G:H2'	1:A:1073:U:H6	1.86	0.40
1:A:1165:U:H2'	1:A:1166:G:C8	2.57	0.40
19:Q:12:VAL:O	19:Q:12:VAL:HG22	2.22	0.40
14:L:34:THR:HG21	14:L:53:ARG:CZ	2.50	0.40
19:Q:62:GLU:HA	19:Q:72:TRP:CD2	2.57	0.40
1:A:435:A:O2'	1:A:436:C:H5'	2.22	0.40
1:A:986:U:H2'	1:A:987:G:O4'	2.22	0.40
14:L:49:ARG:HG3	14:L:65:TYR:HE2	1.83	0.40
4:B:119:GLN:HG2	4:B:124:THR:CG2	2.52	0.40
1:A:766:A:H2'	1:A:767:A:O4'	2.21	0.40
1:A:102:G:N3	1:A:151:A:H2	2.20	0.40
6:D:53:GLN:HB3	6:D:53:GLN:HE21	1.67	0.40
11:I:75:ALA:HA	11:I:78:ILE:CG1	2.51	0.40
1:A:746:A:H2'	1:A:747:A:C8	2.56	0.40
6:D:116:LEU:CD2	6:D:153:ARG:HH11	2.33	0.40
10:H:19:ALA:O	10:H:20:ASN:HB3	2.21	0.40
4:B:224:ARG:HB3	4:B:224:ARG:CZ	2.50	0.40
1:A:597:G:H21	10:H:85:TYR:HE2	1.68	0.40
11:I:66:VAL:HG13	11:I:74:GLN:OE1	2.21	0.40
6:D:183:ARG:HB2	6:D:184:LYS:H	1.64	0.40
4:B:26:MET:HE2	4:B:38:HIS:NE2	2.36	0.40
5:C:19:SER:HB3	5:C:21:TRP:NE1	2.36	0.40
16:N:94:GLY:O	16:N:95:LEU:C	2.59	0.40
21:S:5:LYS:C	21:S:6:LYS:HD2	2.42	0.40
4:B:85:SER:HB3	4:B:88:GLN:CG	2.50	0.40
20:R:70:THR:C	20:R:72:ARG:H	2.25	0.40
8:F:74:LEU:HD13	8:F:74:LEU:C	2.42	0.40

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:P:67:ILE:HG13	18:P:68:SER:N	2.37	0.40
12:J:10:LEU:CG	12:J:72:ARG:HB2	2.52	0.40
14:L:23:LEU:HD23	14:L:58:ASN:CB	2.39	0.40
4:B:95:TRP:HZ3	4:B:99:MET:HB2	1.86	0.40
6:D:27:ILE:HG22	6:D:27:ILE:O	2.21	0.40
5:C:10:ARG:HG3	5:C:10:ARG:NH1	2.37	0.40
6:D:112:GLU:HA	6:D:115:GLN:HB3	2.02	0.40
1:A:372:C:C1'	1:A:373:A:OP2	2.69	0.40
1:A:60:A:C4'	1:A:61:G:O5'	2.64	0.40
15:M:14:ALA:HA	15:M:44:ILE:HD11	2.03	0.40
1:A:912:C:O2'	1:A:913:A:H5'	2.21	0.40
6:D:57:LYS:HE3	6:D:203:TYR:HE2	1.86	0.40
1:A:668:G:O2'	1:A:669:G:H5'	2.21	0.40
22:T:9:ARG:HH11	22:T:9:ARG:HG2	1.86	0.40
9:G:64:ALA:HA	9:G:126:ALA:HB1	2.03	0.40
1:A:599:C:H4'	10:H:121:GLY:C	2.41	0.40
7:E:54:GLU:CD	7:E:56:PRO:HG2	2.42	0.40
7:E:156:ARG:NH2	10:H:43:GLY:HA2	2.37	0.40
11:I:48:ARG:CA	11:I:51:LEU:HG	2.51	0.40
1:A:1343:G:H1'	11:I:122:ARG:HH12	1.86	0.40
5:C:115:VAL:HB	5:C:199:VAL:CG1	2.52	0.40
5:C:128:MET:C	5:C:128:MET:SD	3.00	0.40
5:C:140:ALA:HA	5:C:143:LEU:HD21	2.03	0.40
16:N:87:ALA:HB1	16:N:95:LEU:HD12	2.03	0.40
16:N:22:LYS:C	16:N:24:ALA:H	2.24	0.40
4:B:161:PHE:HE1	4:B:216:VAL:HG11	1.86	0.40
4:B:204:ASP:N	4:B:209:VAL:CG1	2.84	0.40
4:B:221:ARG:C	4:B:223:GLY:H	2.24	0.40
1:A:43:C:H5''	18:P:12:LYS:HB3	2.03	0.40
8:F:74:LEU:O	8:F:78:PHE:CE1	2.75	0.40
8:F:3:HIS:CE1	8:F:95:ALA:H	2.40	0.40
6:D:71:PHE:CE2	6:D:89:LEU:HD11	2.50	0.40
12:J:39:PRO:CA	12:J:74:VAL:HG22	2.51	0.40
9:G:70:PRO:HA	9:G:141:HIS:NE2	2.37	0.40
1:A:1053:G:C6	1:A:1199:U:H2'	2.57	0.40
1:A:266:G:HO2'	1:A:267:C:H3'	1.83	0.40
9:G:109:LYS:O	9:G:110:ARG:HG3	2.21	0.40
1:A:538:G:OP2	14:L:111:GLN:HB2	2.22	0.40
14:L:109:ARG:HH21	14:L:112:ALA:HB3	1.86	0.40
1:A:636:U:O2'	1:A:637:C:H5'	2.22	0.40
19:Q:48:GLU:C	19:Q:50:ASN:H	2.25	0.40
1:A:909:A:H2'	1:A:910:C:O4'	2.21	0.40

*Continued on next page...*

Continued from previous page...

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:600:A:OP2	10:H:87:ARG:HG2	2.21	0.40
7:E:93:VAL:HG22	7:E:95:MET:HG3	2.04	0.40
11:I:9:GLY:H	11:I:80:HIS:CD2	2.38	0.40
1:A:1344:C:OP1	11:I:123:ARG:NH2	2.55	0.40
4:B:24:PRO:O	4:B:28:PRO:HD3	2.21	0.40
5:C:119:ILE:HD13	5:C:136:ALA:CB	2.46	0.40
5:C:61:LYS:HZ2	5:C:61:LYS:HA	1.81	0.40
4:B:79:VAL:O	4:B:82:ALA:HB3	2.21	0.40
15:M:11:HIS:C	15:M:43:LYS:HD3	2.41	0.40
1:A:1327:C:H2'	1:A:1328:C:H6	1.83	0.40
16:N:60:ARG:O	16:N:61:ASN:HB2	2.21	0.40
6:D:33:ILE:O	6:D:34:GLU:HB3	2.21	0.40
1:A:1056:U:H5'	5:C:162:ALA:HB2	2.03	0.40
1:A:782:A:H2'	1:A:783:C:O4'	2.21	0.40
1:A:1005:A:C2	1:A:1006:G:H1'	2.56	0.40
1:A:509:A:N3	1:A:543:U:O2'	2.45	0.40
15:M:78:ARG:HB3	15:M:78:ARG:HE	1.63	0.40
22:T:19:HIS:CD2	22:T:23:ARG:HD3	2.57	0.40
4:B:52:ALA:C	4:B:54:ALA:H	2.24	0.40
4:B:127:LYS:NZ	4:B:127:LYS:HB2	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	
4	B	216/240 (90%)	106 (49%)	71 (33%)	39 (18%)	0	1
5	C	204/232 (88%)	119 (58%)	57 (28%)	28 (14%)	0	2
6	D	203/205 (99%)	122 (60%)	54 (27%)	27 (13%)	0	2
7	E	148/166 (89%)	78 (53%)	50 (34%)	20 (14%)	0	2
8	F	98/135 (73%)	52 (53%)	30 (31%)	16 (16%)	0	1
9	G	148/178 (83%)	89 (60%)	40 (27%)	19 (13%)	0	3

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	H	127/129 (98%)	78 (61%)	35 (28%)	14 (11%)	1	5
11	I	125/129 (97%)	74 (59%)	44 (35%)	7 (6%)	3	23
12	J	96/103 (93%)	60 (62%)	22 (23%)	14 (15%)	0	2
13	K	115/128 (90%)	82 (71%)	25 (22%)	8 (7%)	2	14
14	L	121/123 (98%)	80 (66%)	24 (20%)	17 (14%)	0	2
15	M	111/117 (95%)	66 (60%)	29 (26%)	16 (14%)	0	2
16	N	94/100 (94%)	46 (49%)	29 (31%)	19 (20%)	0	0
17	O	86/88 (98%)	70 (81%)	14 (16%)	2 (2%)	10	52
18	P	78/82 (95%)	53 (68%)	17 (22%)	8 (10%)	1	6
19	Q	78/83 (94%)	51 (65%)	20 (26%)	7 (9%)	1	8
20	R	53/74 (72%)	37 (70%)	12 (23%)	4 (8%)	2	12
21	S	77/91 (85%)	55 (71%)	18 (23%)	4 (5%)	3	25
22	T	83/86 (96%)	59 (71%)	20 (24%)	4 (5%)	4	27
23	U	49/70 (70%)	27 (55%)	16 (33%)	6 (12%)	1	3
All	All	2310/2559 (90%)	1404 (61%)	627 (27%)	279 (12%)	1	4

All (279) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	B	17	HIS
4	B	26	MET
4	B	125	PHE
4	B	186	VAL
4	B	187	ASP
4	B	221	ARG
4	B	224	ARG
5	C	50	SER
5	C	101	ASN
5	C	111	ASP
5	C	116	ALA
5	C	153	SER
5	C	203	LYS
6	D	7	LYS
6	D	14	GLU
6	D	146	GLU
6	D	165	GLU
6	D	182	LYS

Continued on next page...

*Continued from previous page...*

Mol	Chain	Res	Type
6	D	192	ALA
7	E	17	VAL
7	E	25	LYS
7	E	40	ASP
7	E	87	VAL
7	E	93	VAL
7	E	145	ASN
8	F	38	ARG
8	F	60	VAL
8	F	89	VAL
8	F	92	THR
8	F	98	GLU
9	G	107	ALA
9	G	126	ALA
9	G	150	PHE
10	H	98	LEU
10	H	110	MET
12	J	32	THR
12	J	57	VAL
12	J	61	ALA
12	J	67	ILE
12	J	90	LEU
13	K	36	ARG
14	L	32	VAL
14	L	100	ALA
14	L	111	GLN
15	M	3	ILE
15	M	29	SER
15	M	105	ALA
16	N	18	LYS
16	N	27	LYS
16	N	43	ALA
16	N	45	LEU
16	N	80	ARG
18	P	27	ALA
19	Q	78	VAL
20	R	66	LEU
21	S	22	VAL
22	T	42	ASP
23	U	27	VAL
23	U	32	ARG
4	B	22	TRP

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
4	B	73	ARG
4	B	78	ALA
4	B	79	VAL
4	B	113	LEU
4	B	195	VAL
4	B	216	VAL
5	C	22	PHE
5	C	25	THR
5	C	67	ILE
5	C	144	GLY
5	C	145	ALA
5	C	167	TYR
6	D	26	ALA
6	D	27	ILE
6	D	45	PRO
6	D	46	ARG
6	D	47	LEU
6	D	68	GLU
6	D	151	GLN
7	E	23	THR
7	E	28	ARG
7	E	119	VAL
7	E	143	LEU
8	F	5	GLU
8	F	56	LYS
8	F	62	MET
8	F	85	ILE
9	G	16	LYS
9	G	18	GLY
9	G	34	LYS
9	G	40	SER
9	G	56	SER
9	G	116	ALA
9	G	118	ARG
10	H	72	GLU
10	H	116	ARG
11	I	8	THR
11	I	55	ASP
11	I	56	MET
11	I	57	VAL
12	J	77	VAL
12	J	85	ASP

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
14	L	10	PRO
14	L	70	GLY
14	L	74	GLN
14	L	88	ASP
14	L	101	LEU
15	M	6	ILE
15	M	87	GLY
15	M	98	GLY
16	N	30	ILE
17	O	7	THR
17	O	21	THR
18	P	30	GLY
18	P	54	LEU
19	Q	12	VAL
19	Q	48	GLU
21	S	31	ARG
23	U	22	CYS
4	B	15	PHE
4	B	18	GLN
4	B	33	ALA
4	B	55	GLU
4	B	99	MET
4	B	100	LEU
4	B	103	TRP
4	B	150	ILE
5	C	82	ASP
5	C	107	LYS
5	C	112	ALA
5	C	178	ARG
5	C	179	ALA
5	C	189	HIS
6	D	29	THR
6	D	154	VAL
7	E	88	HIS
8	F	48	ALA
8	F	94	HIS
8	F	99	ALA
9	G	31	VAL
9	G	66	GLU
9	G	138	GLU
9	G	144	ALA
10	H	94	VAL

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type
10	H	101	ALA
11	I	39	GLY
12	J	17	LEU
12	J	35	GLN
13	K	39	ASN
13	K	101	ALA
14	L	85	ARG
15	M	14	ALA
15	M	106	ARG
16	N	2	LYS
16	N	35	ALA
16	N	49	THR
16	N	50	LEU
16	N	70	HIS
18	P	28	ARG
20	R	68	PRO
21	S	9	PHE
22	T	47	GLN
4	B	31	PHE
4	B	47	PRO
4	B	63	LYS
4	B	84	LEU
4	B	96	LEU
4	B	181	PRO
4	B	217	ALA
5	C	42	LEU
5	C	78	LYS
5	C	110	LEU
6	D	4	LEU
6	D	120	LYS
7	E	53	ARG
7	E	80	LEU
7	E	137	ARG
8	F	79	ARG
9	G	84	TYR
10	H	77	VAL
10	H	82	LEU
11	I	35	GLU
11	I	70	GLY
12	J	16	ARG
12	J	56	HIS
12	J	58	ASN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
12	J	75	ASP
13	K	14	GLN
13	K	35	ASP
14	L	24	GLU
14	L	83	GLY
14	L	102	ASP
14	L	110	LYS
15	M	16	ILE
15	M	41	ASP
15	M	62	PHE
15	M	103	THR
15	M	104	ASN
16	N	21	ALA
16	N	25	GLU
16	N	40	ARG
16	N	51	PRO
16	N	96	LYS
18	P	79	ASN
19	Q	67	SER
23	U	9	GLU
23	U	28	LEU
4	B	21	TYR
4	B	36	LYS
4	B	44	LYS
4	B	166	ASP
4	B	213	LEU
4	B	215	ALA
4	B	220	VAL
5	C	26	LYS
5	C	65	VAL
5	C	166	TRP
5	C	187	GLU
6	D	84	ASN
6	D	147	LYS
7	E	110	MET
8	F	37	HIS
8	F	39	LEU
9	G	68	VAL
9	G	96	ASN
10	H	74	ILE
13	K	88	PRO
13	K	96	ILE

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
14	L	43	LYS
14	L	117	GLY
15	M	65	GLU
18	P	17	TYR
18	P	36	VAL
18	P	47	GLU
19	Q	51	GLU
19	Q	69	THR
20	R	26	ALA
23	U	23	GLU
4	B	164	ASP
4	B	207	ARG
6	D	59	LYS
6	D	166	LYS
6	D	167	PRO
6	D	169	TRP
7	E	41	GLY
9	G	32	ASP
10	H	20	ASN
10	H	118	ALA
14	L	91	GLY
15	M	4	ALA
15	M	22	TYR
16	N	28	ALA
22	T	41	GLY
4	B	37	VAL
5	C	102	ILE
6	D	105	GLY
6	D	136	VAL
7	E	108	GLY
9	G	79	VAL
10	H	121	GLY
16	N	33	VAL
16	N	69	PRO
19	Q	11	VAL
5	C	63	ILE
6	D	179	GLY
7	E	15	ILE
10	H	67	GLY
12	J	36	VAL
13	K	53	GLY
14	L	54	VAL

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
20	R	20	ILE
7	E	27	GLY
7	E	140	ILE
10	H	5	PRO
21	S	61	VAL
22	T	55	PRO
5	C	100	ILE
6	D	6	PRO
8	F	7	VAL

### 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	
4	B	180/198 (91%)	143 (79%)	37 (21%)	2	8
5	C	170/189 (90%)	138 (81%)	32 (19%)	2	11
6	D	172/172 (100%)	130 (76%)	42 (24%)	1	3
7	E	113/125 (90%)	87 (77%)	26 (23%)	1	5
8	F	87/116 (75%)	76 (87%)	11 (13%)	7	30
9	G	123/146 (84%)	100 (81%)	23 (19%)	2	11
10	H	104/104 (100%)	81 (78%)	23 (22%)	1	6
11	I	105/106 (99%)	83 (79%)	22 (21%)	1	8
12	J	86/90 (96%)	71 (83%)	15 (17%)	3	13
13	K	90/98 (92%)	77 (86%)	13 (14%)	5	22
14	L	103/103 (100%)	80 (78%)	23 (22%)	1	6
15	M	91/95 (96%)	71 (78%)	20 (22%)	1	6
16	N	79/83 (95%)	66 (84%)	13 (16%)	3	14
17	O	76/76 (100%)	67 (88%)	9 (12%)	8	34
18	P	65/65 (100%)	58 (89%)	7 (11%)	9	37
19	Q	74/77 (96%)	66 (89%)	8 (11%)	9	37
20	R	48/64 (75%)	43 (90%)	5 (10%)	10	39
21	S	70/78 (90%)	51 (73%)	19 (27%)	1	2

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
22	T	65/65 (100%)	55 (85%)	10 (15%)	4	18
23	U	44/60 (73%)	32 (73%)	12 (27%)	0	2
All	All	1945/2110 (92%)	1575 (81%)	370 (19%)	2	11

All (370) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	B	8	MET
4	B	27	LYS
4	B	29	PHE
4	B	31	PHE
4	B	35	ASN
4	B	36	LYS
4	B	40	ILE
4	B	48	MET
4	B	49	PHE
4	B	50	ASN
4	B	57	ASN
4	B	63	LYS
4	B	65	LYS
4	B	69	VAL
4	B	86	CYS
4	B	87	ASP
4	B	99	MET
4	B	115	ASP
4	B	119	GLN
4	B	121	GLN
4	B	122	ASP
4	B	127	LYS
4	B	153	MET
4	B	156	LEU
4	B	158	ASP
4	B	176	ASN
4	B	178	LEU
4	B	185	ILE
4	B	188	THR
4	B	189	ASN
4	B	196	ASP
4	B	204	ASP
4	B	207	ARG
4	B	210	THR

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
4	B	216	VAL
4	B	221	ARG
4	B	222	GLU
5	C	2	GLN
5	C	5	HIS
5	C	7	ASN
5	C	13	ILE
5	C	17	TRP
5	C	20	THR
5	C	21	TRP
5	C	28	PHE
5	C	30	ASP
5	C	33	ASP
5	C	43	THR
5	C	53	ARG
5	C	61	LYS
5	C	76	ILE
5	C	78	LYS
5	C	82	ASP
5	C	101	ASN
5	C	106	ARG
5	C	115	VAL
5	C	128	MET
5	C	129	PHE
5	C	138	GLN
5	C	143	LEU
5	C	146	LYS
5	C	152	VAL
5	C	165	GLU
5	C	168	ARG
5	C	169	GLU
5	C	175	HIS
5	C	184	ASN
5	C	192	TYR
5	C	205	GLU
6	D	2	ARG
6	D	7	LYS
6	D	8	LEU
6	D	14	GLU
6	D	21	LYS
6	D	25	ARG
6	D	28	ASP

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
6	D	30	LYS
6	D	32	LYS
6	D	39	GLN
6	D	47	LEU
6	D	53	GLN
6	D	55	ARG
6	D	56	GLU
6	D	58	GLN
6	D	67	LEU
6	D	69	ARG
6	D	71	PHE
6	D	80	ARG
6	D	82	LYS
6	D	88	ASN
6	D	106	PHE
6	D	110	ARG
6	D	119	HIS
6	D	123	MET
6	D	125	ASN
6	D	130	ASN
6	D	131	ILE
6	D	134	TYR
6	D	141	VAL
6	D	147	LYS
6	D	151	GLN
6	D	158	LEU
6	D	160	LEU
6	D	162	GLU
6	D	166	LYS
6	D	170	LEU
6	D	176	LYS
6	D	182	LYS
6	D	183	ARG
6	D	189	ASP
6	D	197	HIS
7	E	9	GLU
7	E	10	LEU
7	E	11	GLN
7	E	14	LEU
7	E	22	LYS
7	E	25	LYS
7	E	33	THR

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
7	E	53	ARG
7	E	55	VAL
7	E	70	MET
7	E	72	ASN
7	E	81	GLN
7	E	92	ARG
7	E	95	MET
7	E	102	THR
7	E	104	ILE
7	E	105	ILE
7	E	111	ARG
7	E	114	LEU
7	E	119	VAL
7	E	125	LYS
7	E	139	THR
7	E	143	LEU
7	E	144	GLU
7	E	146	MET
7	E	148	SER
8	F	1	MET
8	F	6	ILE
8	F	7	VAL
8	F	13	ASP
8	F	17	GLN
8	F	30	THR
8	F	74	LEU
8	F	88	MET
8	F	93	LYS
8	F	97	THR
8	F	98	GLU
9	G	2	ARG
9	G	8	GLN
9	G	12	LEU
9	G	14	ASP
9	G	22	LEU
9	G	32	ASP
9	G	37	THR
9	G	46	LEU
9	G	58	LEU
9	G	65	LEU
9	G	69	ARG
9	G	71	THR

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type
9	G	74	VAL
9	G	79	VAL
9	G	89	GLU
9	G	110	ARG
9	G	115	MET
9	G	119	LEU
9	G	121	ASN
9	G	130	LYS
9	G	136	LYS
9	G	137	ARG
9	G	150	PHE
10	H	2	MET
10	H	9	MET
10	H	10	LEU
10	H	14	ARG
10	H	25	THR
10	H	40	LYS
10	H	54	THR
10	H	55	LYS
10	H	58	LEU
10	H	59	GLU
10	H	60	LEU
10	H	61	THR
10	H	63	LYS
10	H	65	PHE
10	H	70	VAL
10	H	79	ARG
10	H	89	ASP
10	H	93	LYS
10	H	102	VAL
10	H	107	LYS
10	H	112	ASP
10	H	117	GLN
10	H	124	ILE
11	I	18	VAL
11	I	24	ASN
11	I	27	ILE
11	I	35	GLU
11	I	37	TYR
11	I	40	ARG
11	I	51	LEU
11	I	53	LEU

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
11	I	58	GLU
11	I	59	LYS
11	I	62	LEU
11	I	84	ARG
11	I	86	LEU
11	I	87	MET
11	I	88	GLU
11	I	93	LEU
11	I	94	ARG
11	I	96	GLU
11	I	105	ARG
11	I	108	ARG
11	I	122	ARG
11	I	129	ARG
12	J	10	LEU
12	J	24	GLU
12	J	25	ILE
12	J	31	ARG
12	J	48	ARG
12	J	57	VAL
12	J	77	VAL
12	J	84	VAL
12	J	85	ASP
12	J	87	LEU
12	J	90	LEU
12	J	91	ASP
12	J	96	VAL
12	J	99	GLN
12	J	102	LEU
13	K	26	PHE
13	K	34	THR
13	K	37	GLN
13	K	39	ASN
13	K	51	PHE
13	K	55	ARG
13	K	56	LYS
13	K	78	ILE
13	K	92	ARG
13	K	107	THR
13	K	112	VAL
13	K	118	ASN
13	K	125	LYS

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
14	L	13	ARG
14	L	14	LYS
14	L	15	VAL
14	L	17	LYS
14	L	19	ASN
14	L	24	GLU
14	L	26	CYS
14	L	28	GLN
14	L	33	CYS
14	L	39	THR
14	L	49	ARG
14	L	54	VAL
14	L	66	ILE
14	L	72	ASN
14	L	75	GLU
14	L	85	ARG
14	L	93	ARG
14	L	95	HIS
14	L	98	ARG
14	L	107	LYS
14	L	110	LYS
14	L	111	GLN
14	L	116	TYR
15	M	7	ASN
15	M	15	VAL
15	M	22	TYR
15	M	24	VAL
15	M	27	THR
15	M	41	ASP
15	M	42	VAL
15	M	68	LEU
15	M	78	ARG
15	M	79	LEU
15	M	80	MET
15	M	82	LEU
15	M	91	ARG
15	M	97	ARG
15	M	100	ARG
15	M	102	LYS
15	M	103	THR
15	M	106	ARG
15	M	107	THR

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
15	M	112	ARG
16	N	3	GLN
16	N	19	TYR
16	N	20	PHE
16	N	25	GLU
16	N	26	LEU
16	N	30	ILE
16	N	64	ARG
16	N	72	PHE
16	N	74	ARG
16	N	75	LYS
16	N	82	LYS
16	N	85	GLU
16	N	97	LYS
17	O	4	THR
17	O	14	PHE
17	O	17	ASP
17	O	19	ASN
17	O	27	GLN
17	O	34	GLN
17	O	44	GLU
17	O	63	ARG
17	O	69	LEU
18	P	5	ARG
18	P	17	TYR
18	P	25	ARG
18	P	40	ASN
18	P	46	LYS
18	P	57	ILE
18	P	69	ASP
19	Q	8	GLN
19	Q	20	ILE
19	Q	26	ARG
19	Q	30	HIS
19	Q	37	ILE
19	Q	51	GLU
19	Q	66	LEU
19	Q	80	LYS
20	R	23	LYS
20	R	54	LEU
20	R	56	ARG
20	R	65	SER

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
20	R	72	ARG
21	S	3	SER
21	S	4	LEU
21	S	6	LYS
21	S	12	LEU
21	S	14	LEU
21	S	15	LEU
21	S	19	GLU
21	S	20	LYS
21	S	22	VAL
21	S	23	GLU
21	S	26	ASP
21	S	27	LYS
21	S	28	LYS
21	S	33	TRP
21	S	36	ARG
21	S	52	ASN
21	S	59	VAL
21	S	61	VAL
21	S	72	GLU
22	T	3	ILE
22	T	19	HIS
22	T	26	MET
22	T	35	TYR
22	T	53	MET
22	T	58	ASP
22	T	67	HIS
22	T	69	ASN
22	T	78	LEU
22	T	83	ASN
23	U	6	ARG
23	U	17	ARG
23	U	19	LYS
23	U	20	ARG
23	U	22	CYS
23	U	24	LYS
23	U	27	VAL
23	U	33	ARG
23	U	34	ARG
23	U	36	PHE
23	U	38	GLU
23	U	42	THR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
4	B	14	HIS
4	B	41	ASN
4	B	50	ASN
4	B	102	ASN
4	B	119	GLN
4	B	121	GLN
4	B	167	HIS
4	B	189	ASN
4	B	202	ASN
5	C	2	GLN
5	C	122	GLN
5	C	138	GLN
6	D	35	GLN
6	D	39	GLN
6	D	53	GLN
6	D	58	GLN
6	D	70	GLN
6	D	73	ASN
6	D	84	ASN
6	D	115	GLN
6	D	130	ASN
6	D	139	ASN
6	D	197	HIS
7	E	11	GLN
7	E	42	ASN
7	E	72	ASN
7	E	76	ASN
7	E	81	GLN
7	E	121	ASN
7	E	134	ASN
7	E	147	ASN
8	F	11	HIS
8	F	14	GLN
8	F	37	HIS
8	F	68	GLN
9	G	8	GLN
9	G	51	GLN
9	G	67	ASN
9	G	121	ASN
9	G	141	HIS
9	G	147	ASN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
10	H	15	ASN
10	H	17	GLN
10	H	75	GLN
10	H	117	GLN
11	I	4	GLN
11	I	24	ASN
11	I	49	GLN
11	I	80	HIS
11	I	109	GLN
12	J	99	GLN
13	K	14	GLN
13	K	28	ASN
13	K	37	GLN
13	K	39	ASN
13	K	63	GLN
13	K	108	ASN
13	K	118	ASN
14	L	28	GLN
14	L	45	ASN
14	L	72	ASN
15	M	13	HIS
16	N	48	GLN
16	N	61	ASN
17	O	34	GLN
17	O	37	HIS
17	O	39	GLN
17	O	49	HIS
17	O	61	GLN
18	P	18	GLN
18	P	40	ASN
18	P	59	HIS
19	Q	8	GLN
19	Q	49	ASN
21	S	13	HIS
21	S	52	ASN
22	T	2	ASN
22	T	12	GLN
22	T	54	GLN
22	T	60	GLN
22	T	67	HIS
22	T	69	ASN
22	T	83	ASN

## 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1529/1542 (99%)	272 (17%)	19 (1%)
2	W	16/17 (94%)	0	0
3	X	5/6 (83%)	3 (60%)	0
All	All	1550/1565 (99%)	275 (17%)	19 (1%)

All (275) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	14	U
1	A	15	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	47	C
1	A	48	C
1	A	51	A
1	A	52	C
1	A	55	A
1	A	61	G
1	A	67	C
1	A	70	U
1	A	71	A
1	A	75	G
1	A	79	G
1	A	80	A
1	A	83	C
1	A	85	U
1	A	86	G
1	A	88	U
1	A	91	U
1	A	101	A
1	A	108	G
1	A	121	U
1	A	122	G
1	A	131	A
1	A	144	G
1	A	149	A
1	A	155	A

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type
1	A	182	A
1	A	183	C
1	A	197	A
1	A	204	G
1	A	205	A
1	A	209	U
1	A	210	C
1	A	211	G
1	A	239	U
1	A	240	G
1	A	243	A
1	A	244	U
1	A	245	U
1	A	247	G
1	A	250	A
1	A	251	G
1	A	252	U
1	A	253	A
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	306	A
1	A	308	C
1	A	328	C
1	A	329	A
1	A	332	G
1	A	345	C
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	374	A
1	A	381	C
1	A	382	A
1	A	397	A
1	A	398	U
1	A	406	G

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	408	A
1	A	409	U
1	A	411	A
1	A	412	A
1	A	413	G
1	A	414	A
1	A	416	G
1	A	421	U
1	A	422	C
1	A	424	G
1	A	429	U
1	A	430	A
1	A	435	A
1	A	438	U
1	A	456	A
1	A	459	A
1	A	461	A
1	A	462	G
1	A	463	U
1	A	465	A
1	A	466	A
1	A	467	U
1	A	468	A
1	A	481	G
1	A	484	G
1	A	485	U
1	A	486	U
1	A	493	A
1	A	499	A
1	A	508	U
1	A	511	C
1	A	512	U
1	A	518	C
1	A	524	G
1	A	527	G
1	A	531	U
1	A	532	A
1	A	547	A
1	A	562	U
1	A	572	A
1	A	573	A
1	A	576	C

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	577	G
1	A	596	A
1	A	633	G
1	A	653	U
1	A	665	A
1	A	666	G
1	A	700	G
1	A	703	G
1	A	721	G
1	A	724	G
1	A	731	G
1	A	747	A
1	A	748	G
1	A	752	G
1	A	755	G
1	A	777	A
1	A	781	A
1	A	782	A
1	A	793	U
1	A	794	A
1	A	812	G
1	A	815	A
1	A	817	C
1	A	819	A
1	A	821	G
1	A	828	U
1	A	841	C
1	A	842	U
1	A	843	U
1	A	844	G
1	A	847	G
1	A	849	G
1	A	873	A
1	A	914	A
1	A	926	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	945	G
1	A	960	U
1	A	961	U
1	A	966	G

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	977	A
1	A	993	G
1	A	994	A
1	A	996	A
1	A	1004	A
1	A	1018	G
1	A	1020	G
1	A	1028	C
1	A	1031	C
1	A	1032	G
1	A	1034	G
1	A	1036	A
1	A	1050	G
1	A	1053	G
1	A	1054	C
1	A	1065	U
1	A	1066	C
1	A	1070	U
1	A	1085	U
1	A	1086	U
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1110	A
1	A	1113	C
1	A	1118	U
1	A	1119	C
1	A	1124	G
1	A	1125	U
1	A	1130	A
1	A	1133	G
1	A	1134	G
1	A	1135	U
1	A	1136	C
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	1145	A
1	A	1146	A
1	A	1159	U
1	A	1160	G
1	A	1167	A
1	A	1168	U
1	A	1181	G
1	A	1182	G
1	A	1183	U
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	1215	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1228	C
1	A	1238	A
1	A	1240	U
1	A	1241	G
1	A	1249	C
1	A	1256	A
1	A	1258	G
1	A	1261	A
1	A	1270	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	1303	C
1	A	1305	G
1	A	1316	G
1	A	1317	C
1	A	1319	A
1	A	1320	C

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1336	C
1	A	1346	A
1	A	1353	G
1	A	1363	A
1	A	1364	U
1	A	1380	U
1	A	1381	U
1	A	1398	A
1	A	1399	C
1	A	1419	G
1	A	1432	G
1	A	1446	A
1	A	1448	C
1	A	1451	U
1	A	1454	G
1	A	1493	A
1	A	1494	G
1	A	1497	G
1	A	1499	A
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	1534	A
3	X	4	U
3	X	5	U
3	X	6	U

All (19) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	51	A
1	A	60	A
1	A	243	A
1	A	279	A
1	A	328	C
1	A	366	A

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
1	A	372	C
1	A	428	G
1	A	429	U
1	A	484	G
1	A	960	U
1	A	1049	U
1	A	1065	U
1	A	1201	A
1	A	1214	C
1	A	1226	C
1	A	1300	G
1	A	1302	C
1	A	1319	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 58 ligands modelled in this entry, 58 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.



## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	A	1530/1542 (99%)	-0.09	50 (3%) 44 10	41, 109, 167, 180	0
2	W	17/17 (100%)	-0.12	0 100 100	63, 86, 126, 150	0
3	X	6/6 (100%)	-0.21	0 100 100	76, 83, 113, 115	0
4	B	218/240 (90%)	0.50	24 (11%) 6 2	67, 141, 180, 180	0
5	C	206/232 (88%)	0.92	39 (18%) 2 1	69, 121, 161, 180	0
6	D	205/205 (100%)	-0.17	7 (3%) 43 9	67, 120, 164, 180	0
7	E	150/166 (90%)	0.53	17 (11%) 6 2	46, 129, 180, 180	0
8	F	100/135 (74%)	0.31	12 (12%) 5 2	33, 101, 144, 165	0
9	G	150/178 (84%)	2.58	76 (50%) 0 0	71, 122, 165, 180	0
10	H	129/129 (100%)	0.08	7 (5%) 25 5	37, 106, 149, 176	0
11	I	127/129 (98%)	0.79	26 (20%) 1 1	68, 128, 167, 180	0
12	J	98/103 (95%)	2.01	37 (37%) 1 0	76, 131, 164, 180	0
13	K	117/128 (91%)	-0.11	6 (5%) 27 5	48, 91, 131, 159	0
14	L	123/123 (100%)	1.31	30 (24%) 1 1	42, 91, 138, 172	0
15	M	113/117 (96%)	0.73	25 (22%) 1 1	58, 121, 165, 176	0
16	N	96/100 (96%)	0.46	16 (16%) 2 1	65, 124, 154, 180	0
17	O	88/88 (100%)	0.75	11 (12%) 5 1	37, 96, 143, 160	0
18	P	80/82 (97%)	0.78	12 (15%) 3 1	68, 113, 155, 180	0
19	Q	80/83 (96%)	-0.18	0 100 100	50, 104, 145, 155	0
20	R	55/74 (74%)	0.35	4 (7%) 15 4	46, 101, 144, 157	0
21	S	79/91 (86%)	-0.34	1 (1%) 74 26	75, 128, 160, 180	0
22	T	85/86 (98%)	-0.35	0 100 100	65, 104, 154, 180	0
23	U	51/70 (72%)	1.62	17 (33%) 1 0	63, 125, 169, 180	0
All	All	3903/4124 (94%)	0.35	417 (10%) 7 2	33, 114, 167, 180	0

All (417) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
9	G	4	ARG	15.9
4	B	142	LYS	13.0
5	C	189	HIS	13.0
12	J	66	GLU	12.5
9	G	5	VAL	11.2
1	A	31	G	11.0
18	P	80	LYS	10.5
5	C	124	GLU	9.7
9	G	151	ALA	9.3
12	J	68	ARG	9.2
12	J	48	ARG	8.8
14	L	24	GLU	8.8
18	P	45	GLU	8.8
4	B	34	ARG	8.7
12	J	102	LEU	8.6
1	A	48	C	7.8
5	C	190	THR	7.7
14	L	16	ALA	7.7
14	L	14	LYS	7.6
9	G	8	GLN	7.5
7	E	113	VAL	7.4
7	E	114	LEU	7.2
1	A	421	U	7.1
9	G	95	ARG	7.0
14	L	23	LEU	7.0
16	N	96	LYS	7.0
9	G	6	ILE	7.0
12	J	47	GLU	6.9
23	U	43	GLU	6.9
12	J	46	LYS	6.8
1	A	1293	C	6.8
11	I	40	ARG	6.7
9	G	7	GLY	6.6
10	H	90	GLU	6.6
4	B	35	ASN	6.6
11	I	123	ARG	6.6
12	J	5	ARG	6.5
9	G	69	ARG	6.5
12	J	49	PHE	6.5
11	I	35	GLU	6.5
11	I	124	PRO	6.5
12	J	60	ASP	6.5

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
9	G	66	GLU	6.4
16	N	95	LEU	6.4
9	G	92	PRO	6.4
7	E	15	ILE	6.3
14	L	21	PRO	6.3
16	N	98	ALA	6.2
1	A	1286	U	6.2
9	G	65	LEU	6.1
11	I	122	ARG	6.1
1	A	1257	A	6.1
18	P	47	GLU	6.0
9	G	10	LYS	6.0
9	G	91	ARG	6.0
14	L	17	LYS	6.0
12	J	65	TYR	5.9
9	G	109	LYS	5.9
5	C	191	THR	5.9
8	F	93	LYS	5.8
9	G	22	LEU	5.8
4	B	73	ARG	5.7
4	B	94	ARG	5.7
9	G	150	PHE	5.7
9	G	127	ALA	5.6
14	L	12	ALA	5.6
9	G	12	LEU	5.6
15	M	57	ASP	5.5
12	J	100	ILE	5.5
14	L	123	ALA	5.5
4	B	72	LYS	5.5
1	A	241	G	5.5
17	O	61	GLN	5.4
9	G	94	ARG	5.4
11	I	121	ARG	5.4
23	U	46	ARG	5.3
1	A	1378	C	5.3
14	L	15	VAL	5.3
1	A	554	A	5.2
1	A	1345	U	5.2
1	A	306	A	5.2
9	G	89	GLU	5.2
5	C	126	ARG	5.2
9	G	21	LEU	5.1

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
6	D	46	ARG	5.1
5	C	23	ALA	5.1
23	U	53	LYS	5.1
18	P	44	SER	5.0
7	E	109	ALA	5.0
14	L	18	SER	5.0
16	N	17	ASP	5.0
23	U	22	CYS	4.9
21	S	80	ARG	4.9
4	B	139	GLU	4.9
1	A	1112	C	4.9
23	U	50	SER	4.9
4	B	36	LYS	4.8
12	J	75	ASP	4.7
10	H	31	LEU	4.7
5	C	188	ALA	4.7
1	A	1240	U	4.7
5	C	125	ARG	4.6
1	A	632	U	4.6
4	B	93	HIS	4.6
14	L	25	ALA	4.6
12	J	67	ILE	4.6
12	J	77	VAL	4.6
5	C	185	THR	4.6
12	J	53	ILE	4.6
4	B	74	ALA	4.5
5	C	123	LEU	4.5
18	P	43	ALA	4.5
1	A	1188	A	4.5
4	B	141	GLU	4.5
14	L	22	ALA	4.5
4	B	92	ASN	4.4
7	E	127	TYR	4.4
17	O	59	VAL	4.4
15	M	38	ILE	4.4
9	G	15	PRO	4.4
15	M	39	ALA	4.4
12	J	101	SER	4.4
1	A	422	C	4.4
5	C	169	GLU	4.4
1	A	1492	A	4.4
15	M	14	ALA	4.3

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
9	G	80	GLY	4.3
6	D	44	LYS	4.3
9	G	9	ARG	4.3
9	G	61	PHE	4.3
11	I	49	GLN	4.3
12	J	61	ALA	4.2
17	O	56	LEU	4.2
12	J	7	ARG	4.2
14	L	10	PRO	4.2
9	G	79	VAL	4.1
5	C	15	LYS	4.1
5	C	45	GLU	4.1
9	G	96	ASN	4.1
11	I	118	ARG	4.1
1	A	294	U	4.1
1	A	611	C	4.1
9	G	29	LEU	4.1
14	L	19	ASN	4.1
12	J	8	ILE	4.0
23	U	42	THR	4.0
1	A	1113	C	4.0
5	C	44	LYS	4.0
4	B	145	ASN	4.0
1	A	1493	A	4.0
4	B	167	HIS	4.0
16	N	75	LYS	4.0
12	J	64	GLN	3.9
7	E	16	ALA	3.9
11	I	32	ARG	3.9
15	M	40	GLU	3.9
12	J	12	ALA	3.9
23	U	35	GLU	3.8
15	M	41	ASP	3.8
1	A	1410	A	3.8
1	A	240	G	3.8
9	G	31	VAL	3.8
1	A	1292	G	3.8
9	G	35	LYS	3.8
11	I	34	LEU	3.8
5	C	187	GLU	3.8
9	G	145	GLU	3.8
17	O	58	MET	3.8

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
17	O	63	ARG	3.7
18	P	52	LEU	3.7
9	G	81	GLY	3.7
5	C	11	LEU	3.7
1	A	304	U	3.7
18	P	33	ILE	3.7
20	R	34	GLU	3.7
11	I	115	VAL	3.6
9	G	13	PRO	3.6
7	E	9	GLU	3.6
9	G	70	PRO	3.6
8	F	94	HIS	3.6
11	I	36	GLN	3.6
9	G	16	LYS	3.6
9	G	74	VAL	3.5
11	I	125	GLN	3.5
23	U	23	GLU	3.5
4	B	195	VAL	3.5
9	G	78	ARG	3.5
1	A	1187	G	3.5
23	U	34	ARG	3.5
9	G	67	ASN	3.5
6	D	4	LEU	3.4
4	B	90	PHE	3.4
8	F	1	MET	3.4
14	L	9	LYS	3.4
1	A	1379	G	3.4
9	G	62	GLU	3.4
9	G	39	GLU	3.4
9	G	126	ALA	3.4
10	H	30	LYS	3.4
9	G	25	PHE	3.3
9	G	11	ILE	3.3
12	J	90	LEU	3.3
11	I	31	GLN	3.3
1	A	1528	U	3.3
1	A	1529	G	3.3
17	O	62	ARG	3.3
12	J	69	THR	3.2
9	G	93	VAL	3.2
14	L	11	ARG	3.2
4	B	17	HIS	3.2

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
6	D	47	LEU	3.2
14	L	42	LYS	3.2
7	E	112	ALA	3.2
5	C	177	LEU	3.2
7	E	106	ALA	3.2
1	A	32	A	3.1
5	C	61	LYS	3.1
23	U	4	LYS	3.1
9	G	43	TYR	3.1
8	F	35	LYS	3.1
9	G	90	VAL	3.1
6	D	43	ARG	3.1
9	G	20	GLU	3.1
17	O	57	ARG	3.1
9	G	108	ARG	3.0
9	G	54	GLY	3.0
6	D	45	PRO	3.0
5	C	198	LYS	3.0
1	A	1122	U	3.0
16	N	94	GLY	3.0
23	U	18	PHE	3.0
15	M	35	ALA	3.0
9	G	55	LYS	3.0
11	I	116	GLY	3.0
16	N	97	LYS	3.0
5	C	22	PHE	3.0
1	A	1344	C	3.0
18	P	48	GLU	3.0
14	L	60	PHE	3.0
9	G	30	MET	3.0
4	B	192	PRO	3.0
5	C	2	GLN	3.0
13	K	92	ARG	3.0
9	G	47	GLU	3.0
12	J	76	ILE	3.0
10	H	126	CYS	2.9
9	G	88	VAL	2.9
15	M	8	ILE	2.9
9	G	34	LYS	2.9
15	M	54	THR	2.9
23	U	39	LYS	2.9
5	C	27	GLU	2.9

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
1	A	305	G	2.8
7	E	55	VAL	2.8
12	J	63	ASP	2.8
9	G	23	ALA	2.8
1	A	1346	A	2.8
8	F	33	GLU	2.8
14	L	83	GLY	2.8
9	G	83	THR	2.8
5	C	194	VAL	2.8
9	G	141	HIS	2.8
1	A	1349	A	2.8
11	I	127	SER	2.8
15	M	113	LYS	2.8
14	L	20	VAL	2.8
5	C	16	PRO	2.8
1	A	1205	U	2.8
5	C	48	LYS	2.8
11	I	128	LYS	2.8
11	I	117	LEU	2.8
15	M	34	ALA	2.7
5	C	122	GLN	2.7
14	L	122	LYS	2.7
18	P	78	VAL	2.7
1	A	1291	U	2.7
11	I	42	THR	2.7
4	B	194	GLY	2.7
12	J	52	LEU	2.7
5	C	14	VAL	2.7
16	N	64	ARG	2.7
1	A	295	C	2.6
8	F	95	ALA	2.6
15	M	56	ARG	2.6
12	J	92	LEU	2.6
9	G	46	LEU	2.6
9	G	26	VAL	2.6
4	B	143	LEU	2.6
1	A	1244	G	2.6
15	M	15	VAL	2.6
14	L	121	PRO	2.6
1	A	30	U	2.6
12	J	81	GLU	2.6
17	O	2	LEU	2.6

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
9	G	41	ILE	2.6
11	I	120	ALA	2.6
1	A	1121	U	2.6
18	P	46	LYS	2.5
23	U	41	THR	2.5
9	G	42	VAL	2.5
11	I	46	VAL	2.5
7	E	26	GLY	2.5
12	J	6	ILE	2.5
16	N	77	GLY	2.5
15	M	6	ILE	2.5
1	A	653	U	2.5
8	F	2	ARG	2.5
12	J	97	ASP	2.5
12	J	45	ARG	2.5
15	M	45	SER	2.5
4	B	144	GLU	2.5
23	U	44	ARG	2.5
7	E	88	HIS	2.5
9	G	75	LYS	2.5
14	L	101	LEU	2.4
15	M	1	ALA	2.4
7	E	92	ARG	2.4
20	R	20	ILE	2.4
15	M	61	LYS	2.4
4	B	146	SER	2.4
15	M	33	LEU	2.4
20	R	72	ARG	2.4
5	C	158	GLY	2.4
13	K	93	GLU	2.4
8	F	62	MET	2.4
12	J	35	GLN	2.4
8	F	66	ALA	2.4
8	F	92	THR	2.4
9	G	64	ALA	2.4
13	K	111	ASP	2.4
9	G	128	GLU	2.4
9	G	38	ALA	2.4
14	L	82	ARG	2.4
5	C	201	ILE	2.4
9	G	140	VAL	2.4
10	H	10	LEU	2.3

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
16	N	99	SER	2.3
4	B	193	ASP	2.3
13	K	89	GLY	2.3
16	N	76	PHE	2.3
5	C	29	ALA	2.3
11	I	43	ALA	2.3
14	L	100	ALA	2.3
8	F	3	HIS	2.3
12	J	37	ARG	2.3
4	B	166	ASP	2.3
7	E	107	GLY	2.3
9	G	84	TYR	2.3
5	C	9	ILE	2.3
5	C	181	ILE	2.3
9	G	115	MET	2.3
8	F	91	ARG	2.3
20	R	37	LYS	2.3
17	O	60	SER	2.3
16	N	74	ARG	2.3
11	I	53	LEU	2.3
13	K	87	GLY	2.3
14	L	108	ASP	2.3
17	O	65	LEU	2.3
13	K	88	PRO	2.3
9	G	98	LEU	2.3
5	C	12	GLY	2.3
9	G	37	THR	2.3
11	I	45	MET	2.3
1	A	1245	C	2.3
9	G	148	LYS	2.2
7	E	93	VAL	2.2
6	D	147	LYS	2.2
9	G	33	GLY	2.2
15	M	36	ALA	2.2
23	U	19	LYS	2.2
12	J	51	VAL	2.2
11	I	48	ARG	2.2
7	E	17	VAL	2.2
10	H	35	ILE	2.2
9	G	144	ALA	2.2
12	J	59	LYS	2.2
9	G	19	SER	2.2

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	RSRZ
18	P	9	HIS	2.2
9	G	119	LEU	2.2
1	A	553	A	2.2
15	M	42	VAL	2.2
17	O	39	GLN	2.2
5	C	25	THR	2.2
7	E	94	PHE	2.1
16	N	84	ARG	2.1
15	M	55	LEU	2.1
12	J	98	VAL	2.1
23	U	24	LYS	2.1
11	I	39	GLY	2.1
16	N	73	LEU	2.1
15	M	58	GLU	2.1
23	U	3	ILE	2.1
1	A	876	C	2.1
1	A	1530	G	2.1
12	J	62	ARG	2.1
5	C	3	LYS	2.1
14	L	43	LYS	2.1
16	N	83	VAL	2.1
9	G	40	SER	2.0
15	M	44	ILE	2.0
14	L	6	LEU	2.0
14	L	58	ASN	2.0
15	M	18	LEU	2.0
1	A	242	G	2.0
5	C	195	ILE	2.0
16	N	22	LYS	2.0
5	C	10	ARG	2.0
1	A	1246	A	2.0
1	A	555	U	2.0
5	C	24	ASN	2.0
18	P	32	PHE	2.0
1	A	934	C	2.0
14	L	26	CYS	2.0
15	M	2	ARG	2.0
5	C	170	GLY	2.0
10	H	29	SER	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
24	MG	A	1563	1/1	0.20	6.18	161,161,161,161	0
24	MG	A	1557	1/1	0.57	5.76	156,156,156,156	0
24	MG	A	1587	1/1	0.12	5.50	119,119,119,119	0
24	MG	A	1585	1/1	0.22	4.39	138,138,138,138	0
24	MG	A	1578	1/1	0.93	3.28	127,127,127,127	0
24	MG	A	1586	1/1	0.22	3.07	131,131,131,131	0
24	MG	A	1591	1/1	0.35	2.90	100,100,100,100	0
24	MG	A	1546	1/1	0.20	1.90	58,58,58,58	0
24	MG	A	1588	1/1	0.23	1.62	155,155,155,155	0
24	MG	A	1594	1/1	0.17	1.24	117,117,117,117	0
24	MG	A	1597	1/1	0.13	0.89	153,153,153,153	0
24	MG	A	1568	1/1	0.21	0.63	154,154,154,154	0
24	MG	A	1562	1/1	0.22	0.62	103,103,103,103	0
24	MG	A	1581	1/1	0.25	0.24	99,99,99,99	0
24	MG	A	1596	1/1	0.12	0.22	78,78,78,78	0
24	MG	A	1551	1/1	0.18	0.05	60,60,60,60	0
24	MG	A	1574	1/1	0.19	-0.02	154,154,154,154	0
24	MG	A	1559	1/1	0.31	-0.04	149,149,149,149	0
24	MG	A	1560	1/1	0.18	-0.11	87,87,87,87	0
24	MG	A	1552	1/1	0.19	-0.14	130,130,130,130	0
24	MG	A	1553	1/1	0.25	-0.14	102,102,102,102	0
24	MG	A	1592	1/1	0.20	-0.22	103,103,103,103	0
24	MG	A	1570	1/1	0.16	-0.32	106,106,106,106	0
24	MG	A	1544	1/1	0.16	-0.35	87,87,87,87	0
24	MG	A	1566	1/1	0.17	-0.45	103,103,103,103	0

*Continued on next page...*

*Continued from previous page...*

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
24	MG	A	1547	1/1	0.18	-0.51	98,98,98,98	0
24	MG	A	1589	1/1	0.14	-0.56	109,109,109,109	0
24	MG	A	1548	1/1	0.13	-0.69	139,139,139,139	0
24	MG	A	1577	1/1	0.12	-0.80	129,129,129,129	0
24	MG	A	1598	1/1	0.10	-0.92	97,97,97,97	0
24	MG	A	1593	1/1	0.11	-1.19	66,66,66,66	0
24	MG	A	1545	1/1	0.09	-1.20	124,124,124,124	0
24	MG	A	1549	1/1	0.09	-1.36	108,108,108,108	0
24	MG	A	1572	1/1	0.13	-1.43	97,97,97,97	0
24	MG	A	1595	1/1	0.08	-1.57	149,149,149,149	0
24	MG	A	1565	1/1	0.09	-1.58	136,136,136,136	0
24	MG	A	1555	1/1	0.09	-1.63	140,140,140,140	0
24	MG	A	1590	1/1	0.10	-1.83	119,119,119,119	0
24	MG	N	340	1/1	0.10	-1.93	104,104,104,104	0
24	MG	A	1575	1/1	0.16	-2.06	136,136,136,136	0
24	MG	A	1550	1/1	0.04	-2.09	82,82,82,82	0
24	MG	A	1579	1/1	0.07	-2.19	81,81,81,81	0
24	MG	A	1564	1/1	0.09	-2.30	98,98,98,98	0
24	MG	A	1569	1/1	0.08	-2.37	122,122,122,122	0
24	MG	A	1543	1/1	0.05	-2.68	48,48,48,48	0
24	MG	A	1573	1/1	0.10	-2.88	91,91,91,91	0
24	MG	A	1580	1/1	0.11	-2.93	102,102,102,102	0
24	MG	A	1561	1/1	0.04	-3.53	79,79,79,79	0
24	MG	X	358	1/1	0.07	-3.61	73,73,73,73	0
24	MG	A	1558	1/1	0.07	-4.44	80,80,80,80	0
24	MG	A	1571	1/1	0.06	-4.57	94,94,94,94	0
24	MG	A	1583	1/1	0.08	-4.91	123,123,123,123	0
24	MG	A	1554	1/1	0.04	-5.76	95,95,95,95	0
24	MG	A	1584	1/1	0.07	-5.96	110,110,110,110	0
24	MG	A	1576	1/1	0.07	-7.04	80,80,80,80	0
24	MG	A	1567	1/1	0.03	-7.37	54,54,54,54	0
24	MG	A	1556	1/1	0.08	-18.02	171,171,171,171	0
24	MG	A	1582	1/1	0.13	-211.00	138,138,138,138	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.