



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 6, 2020 – 05:54 am BST

PDB ID : 6OXA
Title : Dimeric E.coli YoeB bound to Thermus thermophilus 70S pre-cleavage (AAU)
Authors : Pavelich, I.J.; Hoffer, E.D.; Maehigashi, T.; Dunham, C.M.
Deposited on : 2019-05-13
Resolution : 3.25 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : **FAILED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

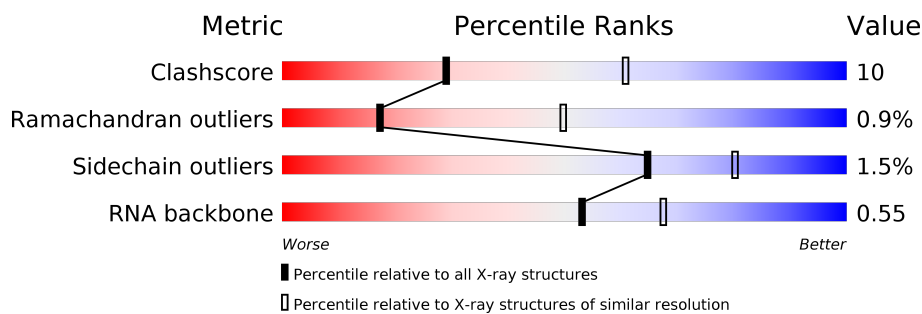
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.25 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1251 (3.30-3.22)
Ramachandran outliers	138981	1229 (3.30-3.22)
Sidechain outliers	138945	1228 (3.30-3.22)
RNA backbone	3102	1072 (3.62-2.90)

















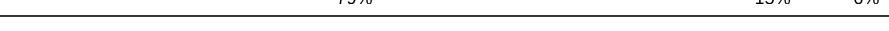

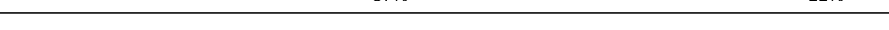
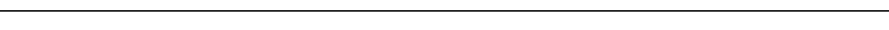
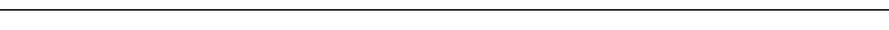
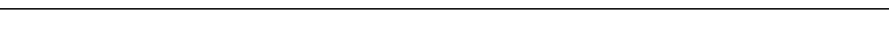
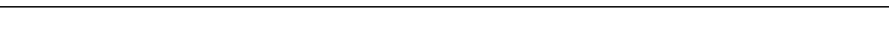
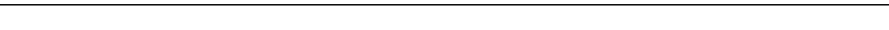

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively.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

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	QA	1521	56% 33% 9% ..
1	XA	1521	58% 30% 10% ..
2	QB	256	33% 51% 7% 8%
2	XB	256	79% 13% 8%
3	QC	239	70% 16% 14%
3	XC	239	77% 9% 14%
4	QD	209	81% 18%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QM	126	
12	XM	126	
13	QN	61	
13	XN	61	
14	QO	89	
14	XO	89	
15	QP	88	
15	XP	88	
16	QQ	105	
16	XQ	105	















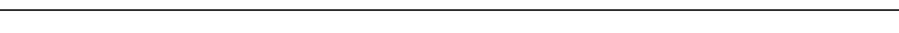




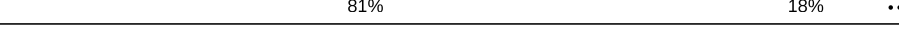

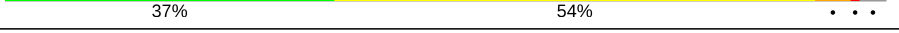



Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
17	QR	88	
17	XR	88	
18	QS	93	
18	XS	93	
19	QT	106	
19	XT	106	
20	QU	27	
20	XU	27	
21	QV	77	
21	QW	77	
21	XV	77	
21	XW	77	
22	QX	22	
22	XX	22	
23	QY	84	
23	QZ	84	
23	XY	84	
23	XZ	84	
24	R0	85	
24	Y0	85	
25	R2	72	
25	Y2	72	
26	R3	60	
26	Y3	60	
27	R4	71	




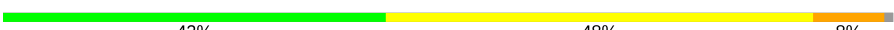

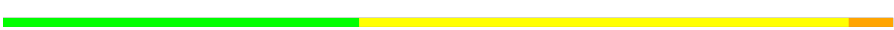



















Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
27	Y4	71	
28	R5	60	
28	Y5	60	
29	R6	54	
29	Y6	54	
30	R7	49	
30	Y7	49	
31	R9	37	
31	Y9	37	
32	RA	2915	
32	YA	2915	
33	RB	124	
33	YB	124	
34	RD	276	
34	YD	276	
35	RE	206	
35	YE	206	
36	RG	182	
36	YG	182	
37	RH	180	
37	YH	180	
38	RI	148	
38	YI	148	
39	RN	140	
39	YN	140	






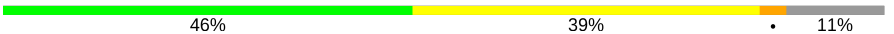

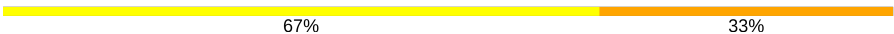
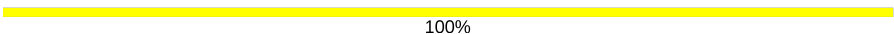
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
40	RO	122	
40	YO	122	
41	RP	150	
41	YP	150	
42	RQ	141	
42	YQ	141	
43	RR	118	
43	YR	118	
44	RS	112	
44	YS	112	
45	RT	146	
45	YT	146	
46	RU	118	
46	YU	118	
47	RV	101	
47	YV	101	
48	RW	113	
48	YW	113	
49	RX	96	
49	YX	96	
50	RY	110	
50	YY	110	
51	QL	132	
51	XL	132	
52	R1	98	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
52	Y1	98	 82% 12% • 5%
53	R8	65	 57% 42% •
53	Y8	65	 77% 15% 5% • •
54	RF	210	 61% 33% • •
54	YF	210	 81% 14% •
55	RZ	206	 46% 39% • 11%
55	YZ	206	 58% 30% • 11%
56	ZA	3	 67% 33%
56	ZB	3	 100%

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 298432 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	QA	1510	Total	C	N	O	P	0	0	0
			32452	14444	6009	10489	1510			
1	XA	1507	Total	C	N	O	P	0	0	0
			32389	14416	5999	10467	1507			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	QB	235	Total	C	N	O	S	0	0	0
			1907	1217	342	343	5			
2	XB	236	Total	C	N	O	S	0	0	0
			1915	1223	343	344	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	QC	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
3	XC	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	QD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	XD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	QE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	XE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	QF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	XF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	QG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	XG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	QH	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			
8	XH	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	QI	127	Total	C	N	O		0	0	0
			1010	639	197	174				
9	XI	126	Total	C	N	O		0	0	0
			998	633	193	172				

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	QJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	XJ	96	Total	C	N	O	S	0	0	0
			777	487	153	136	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	QK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	XK	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	QM	120	Total	C	N	O	S	0	0	0
			955	591	197	165	2			
12	XM	119	Total	C	N	O	S	0	0	0
			946	585	195	164	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
13	XN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	QO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
14	XO	87	Total	C	N	O	S	0	0	0
			729	457	146	124	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	QP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
15	XP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	QQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
16	XQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QR	70	Total	C	N	O		0	0	0
			574	367	112	95				
17	XR	70	Total	C	N	O		0	0	0
			574	367	112	95				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	QS	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
18	XS	83	Total	C	N	O	S	0	0	0
			656	418	123	113	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
19	XT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	QU	25	Total	C	N	O	0	0	0
			217	134	52	31			
20	XU	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 21 is a RNA chain called P-site tRNA-fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	QV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
21	QW	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
21	XV	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			
21	XW	77	Total	C	N	O	P	0	0	0
			1640	732	297	535	76			

- Molecule 22 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QX	20	Total	C	N	O	P	0	0	0
			435	198	87	131	19			
22	XX	20	Total	C	N	O	P	0	0	0
			435	198	87	131	19			

- Molecule 23 is a protein called Addiction module toxin, Txe/YoeB family.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QY	84	Total	C	N	O	S	0	0	0
			723	464	126	131	2			
23	QZ	84	Total	C	N	O	S	0	0	0
			723	464	126	131	2			
23	XY	84	Total	C	N	O	S	0	0	0
			723	464	126	131	2			
23	XZ	84	Total	C	N	O	S	0	0	0
			723	464	126	131	2			

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	R0	81	Total	C	N	O	S	0	0	0
			643	398	137	107	1			
24	Y0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	R2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Y2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	R3	59	Total	C	N	O		0	0	0
			469	298	90	81				
26	Y3	59	Total	C	N	O		0	0	0
			469	298	90	81				

- Molecule 27 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	R4	69	Total	C	N	O	S	0	0	0
			565	356	103	101	5			
27	Y4	69	Total	C	N	O	S	0	0	0
			565	356	103	101	5			

- Molecule 28 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
28	Y5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 29 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	R6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
29	Y6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			

- Molecule 30 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	R7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
30	Y7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
31	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 32 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	RA	2891	Total	C	N	O	P	0	0	0
			62266	27713	11649	20014	2890			
32	YA	2875	Total	C	N	O	P	0	0	0
			61921	27560	11583	19904	2874			

- Molecule 33 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	RB	120	Total	C	N	O	P	0	0	0
			2576	1146	476	834	120			
33	YB	120	Total	C	N	O	P	0	0	0
			2576	1146	476	834	120			

- Molecule 34 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	RD	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
34	YD	274	Total	C	N	O	S	0	0	0
			2135	1347	426	359	3			

- Molecule 35 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	RE	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
35	YE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 36 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	RG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			
36	YG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 37 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
37	YH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			

- Molecule 38 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	RI	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
38	YI	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 39 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	RN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
39	YN	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 40 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
40	YO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 41 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	RP	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	YP	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			

- Molecule 42 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	RQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
42	YQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 43 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	RR	117	Total	C	N	O		0	0	0
			960	599	202	159				
43	YR	117	Total	C	N	O		0	0	0
			960	599	202	159				

- Molecule 44 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	RS	111	Total	C	N	O		0	0	0
			882	556	176	150				
44	YS	111	Total	C	N	O		0	0	0
			882	556	176	150				

- Molecule 45 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	RT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
45	YT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 46 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	RU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
46	YU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 47 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	RV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
47	YV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 48 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	RW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			
48	YW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

- Molecule 49 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	RX	92	Total	C	N	O	0	0	0
			725	471	131	123			
49	YX	92	Total	C	N	O	0	0	0
			725	471	131	123			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	RY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			
50	YY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			

- Molecule 51 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	XL	122	Total	C	N	O	S	0	0	0
			956	603	193	159	1			
51	QL	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

- Molecule 52 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	Y1	93	Total	C	N	O	S	0	0	0
			729	457	145	126	1			
52	R1	94	Total	C	N	O	S	0	0	0
			737	463	146	127	1			

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
53	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 54 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	YF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
54	RF	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

- Molecule 55 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	RZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			
55	YZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			

- Molecule 56 is a RNA chain called CCPuro.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	ZA	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
56	ZB	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	94	Total	Mg	0	0
			94	94		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	YV	1	Total 1	Mg 1	0	0
57	RP	2	Total 2	Mg 2	0	0
57	QX	1	Total 1	Mg 1	0	0
57	YA	326	Total 326	Mg 326	0	0
57	Y9	1	Total 1	Mg 1	0	0
57	QD	2	Total 2	Mg 2	0	0
57	RN	1	Total 1	Mg 1	0	0
57	XE	1	Total 1	Mg 1	0	0
57	YD	5	Total 5	Mg 5	0	0
57	QV	3	Total 3	Mg 3	0	0
57	YO	1	Total 1	Mg 1	0	0
57	XA	116	Total 116	Mg 116	0	0
57	RQ	2	Total 2	Mg 2	0	0
57	R0	1	Total 1	Mg 1	0	0
57	RO	1	Total 1	Mg 1	0	0
57	Y0	2	Total 2	Mg 2	0	0
57	YG	1	Total 1	Mg 1	0	0
57	YQ	3	Total 3	Mg 3	0	0
57	RY	1	Total 1	Mg 1	0	0
57	XF	1	Total 1	Mg 1	0	0
57	RR	2	Total 2	Mg 2	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	RD	1	Total 1	Mg 1	0	0
57	QF	1	Total 1	Mg 1	0	0
57	RA	302	Total 302	Mg 302	0	0
57	Y3	1	Total 1	Mg 1	0	0
57	YF	1	Total 1	Mg 1	0	0
57	RE	1	Total 1	Mg 1	0	0
57	XL	1	Total 1	Mg 1	0	0
57	YB	5	Total 5	Mg 5	0	0
57	XV	3	Total 3	Mg 3	0	0
57	RB	3	Total 3	Mg 3	0	0
57	QE	1	Total 1	Mg 1	0	0
57	XD	1	Total 1	Mg 1	0	0
57	R8	1	Total 1	Mg 1	0	0
57	XM	1	Total 1	Mg 1	0	0
57	YE	5	Total 5	Mg 5	0	0

- Molecule 58 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
58	QD	1	Total	Fe	S	0	0
			8	4	4		
58	XD	1	Total	Fe	S	0	0
			8	4	4		

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

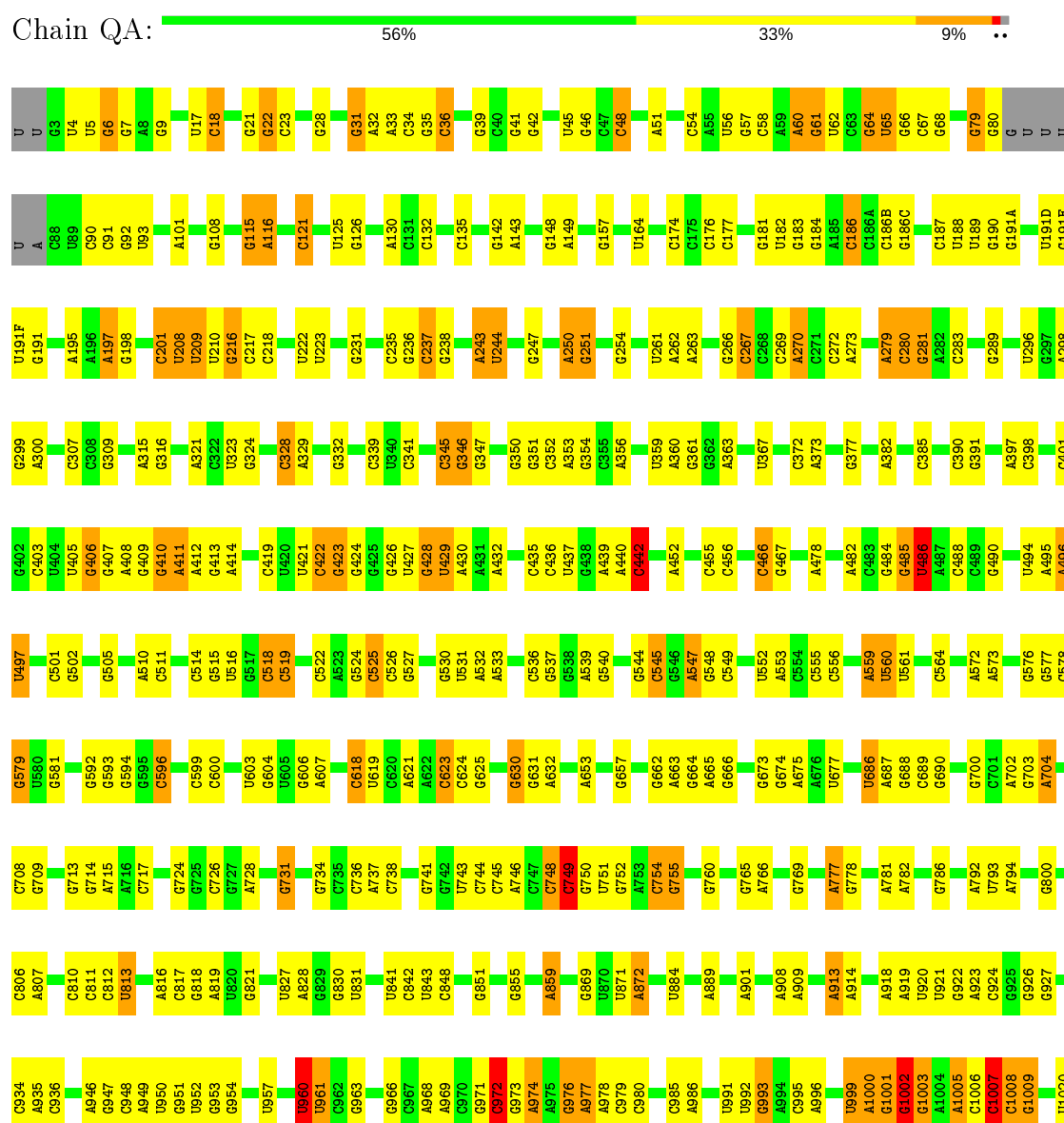
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	Y6	1	Total	Zn	0	0
			1	1		
59	QN	1	Total	Zn	0	0
			1	1		
59	XN	1	Total	Zn	0	0
			1	1		
59	Y4	1	Total	Zn	0	0
			1	1		
59	R6	1	Total	Zn	0	0
			1	1		
59	R5	1	Total	Zn	0	0
			1	1		
59	R4	1	Total	Zn	0	0
			1	1		
59	R9	1	Total	Zn	0	0
			1	1		

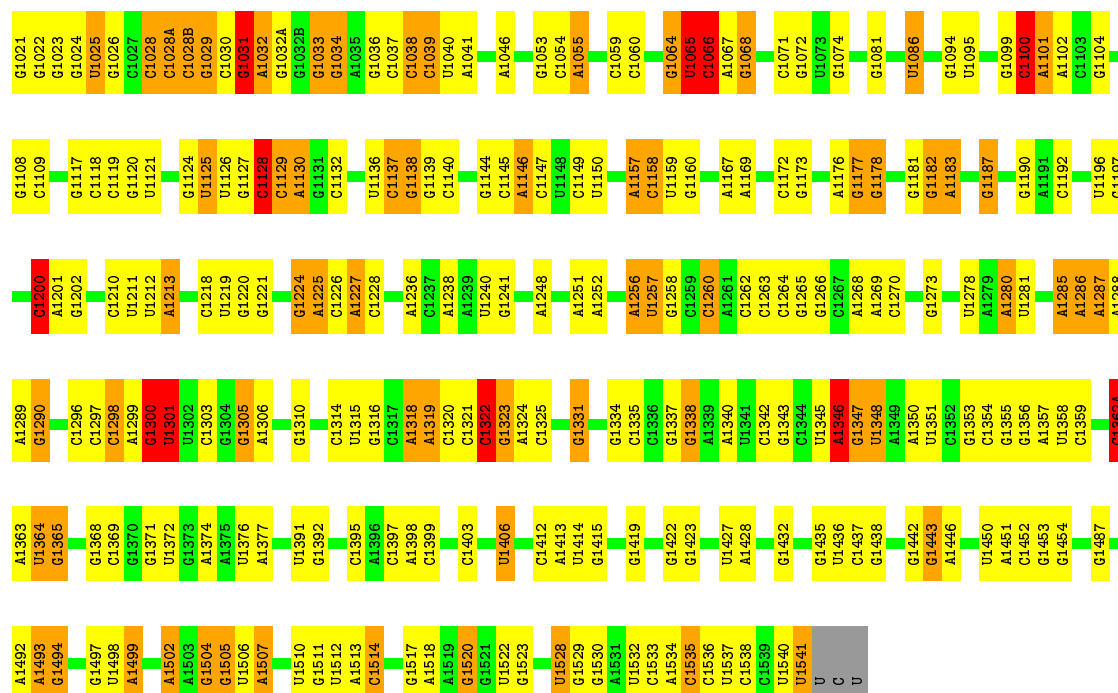
3 Residue-property plots

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

Note EDS failed to run properly.

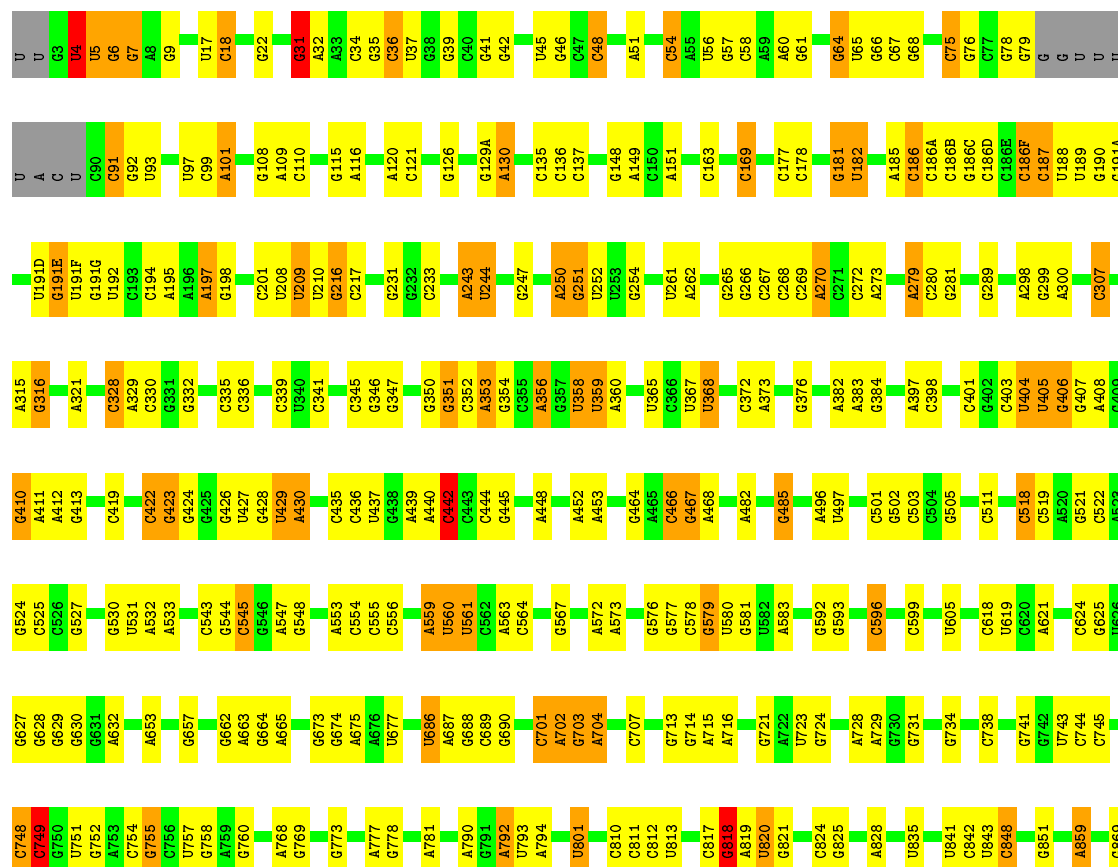
• Molecule 1: 16S rRNA

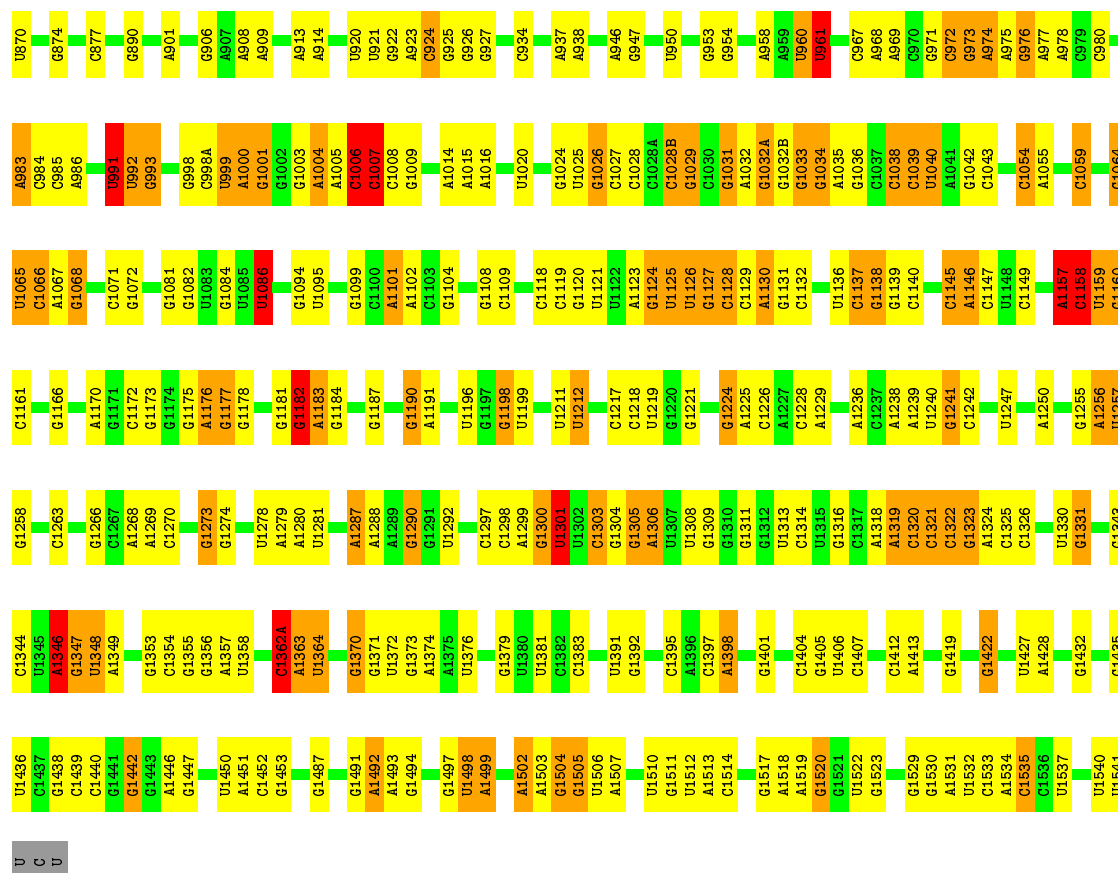




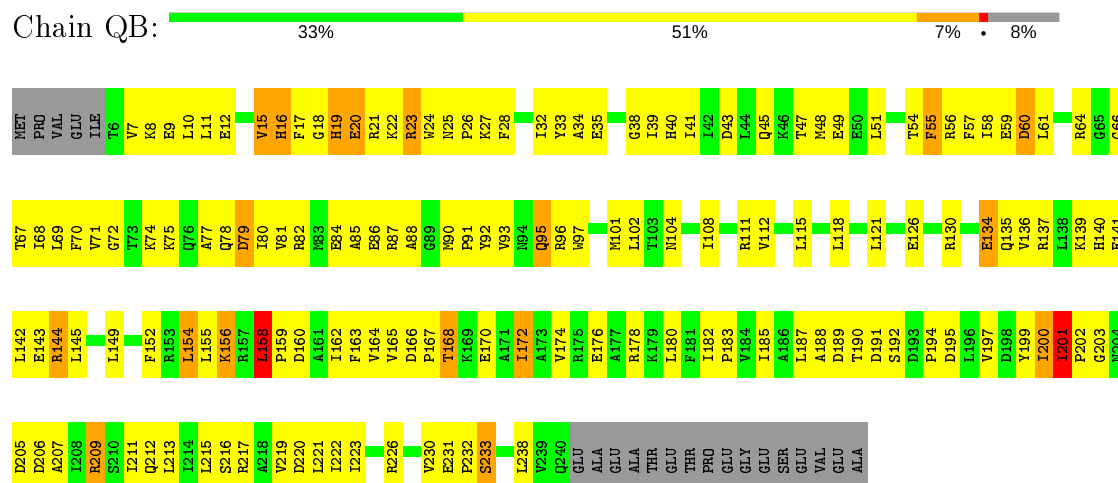
• Molecule 1: 16S rRNA

Chain XA: 58% 30% 10% ..

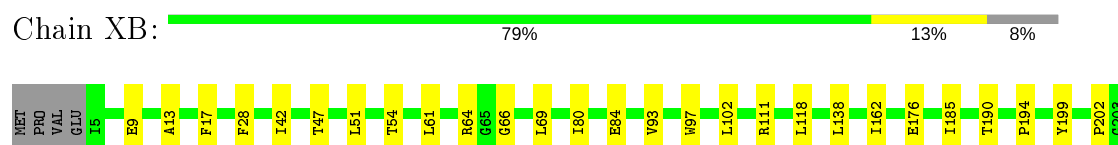


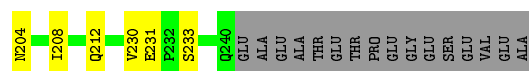


• Molecule 2: 30S ribosomal protein S2

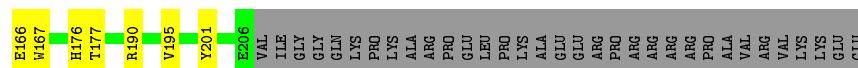
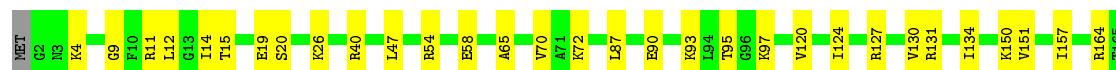


• Molecule 2: 30S ribosomal protein S2

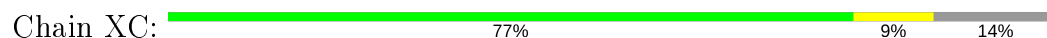




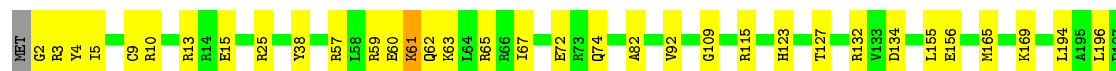
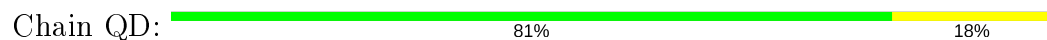
- Molecule 3: 30S ribosomal protein S3



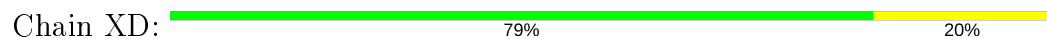
- Molecule 3: 30S ribosomal protein S3



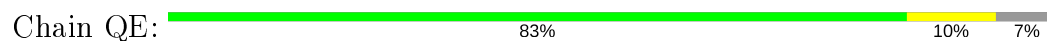
- Molecule 4: 30S ribosomal protein S4




- Molecule 4: 30S ribosomal protein S4



- Molecule 5: 30S ribosomal protein S5




- Molecule 5: 30S ribosomal protein S5

Chain XE:  81% 12% 7%




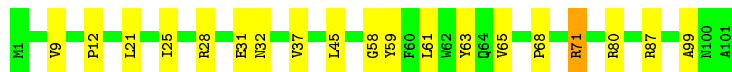
- Molecule 6: 30S ribosomal protein S6

Chain QF:  88% 12%



- Molecule 6: 30S ribosomal protein S6

Chain XF:  81% 18% .




- Molecule 7: 30S ribosomal protein S7

Chain QG:  90% 10% .




- Molecule 7: 30S ribosomal protein S7

Chain XG:  88% 12% .




- Molecule 8: 30S ribosomal protein S8

Chain QH:  81% 17% ..




- Molecule 8: 30S ribosomal protein S8

Chain XH:  80% 20% .




- Molecule 9: 30S ribosomal protein S9

Chain QI:  74% 25%




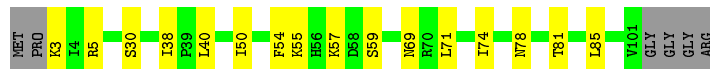
- Molecule 9: 30S ribosomal protein S9

Chain XI:  78% 20%



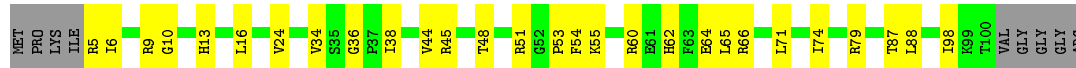
- Molecule 10: 30S ribosomal protein S10

Chain QJ:  79% 15% 6%




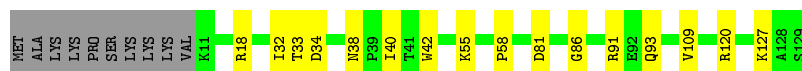
- Molecule 10: 30S ribosomal protein S10

Chain XJ:  65% 27% 9%




- Molecule 11: 30S ribosomal protein S11

Chain QK:  80% 12% 8%




- Molecule 11: 30S ribosomal protein S11

Chain XK:  77% 13% 10%




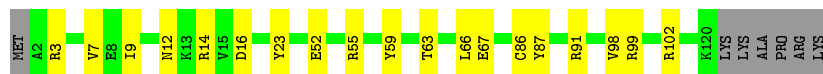
- Molecule 12: 30S ribosomal protein S13

Chain QM:  71% 21% 5%




- Molecule 12: 30S ribosomal protein S13

Chain XM:  79% 15% 6%




- Molecule 13: 30S ribosomal protein S14 type Z

Chain QN:  74% 25% .



- Molecule 13: 30S ribosomal protein S14 type Z

Chain XN:  87% 11% .




- Molecule 14: 30S ribosomal protein S15

Chain QO:  89% 10% .




- Molecule 14: 30S ribosomal protein S15

Chain XO:  84% 13% .




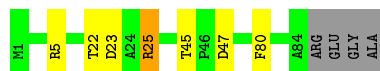
- Molecule 15: 30S ribosomal protein S16

Chain QP:  88% 8% 5%




- Molecule 15: 30S ribosomal protein S16

Chain XP:  88% 7% 5%




- Molecule 16: 30S ribosomal protein S17

Chain QQ:  83% 12% 5%



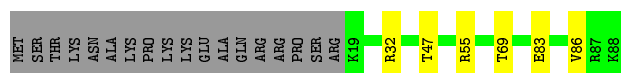
- Molecule 16: 30S ribosomal protein S17

Chain XQ:  84% 11% 5%




- Molecule 17: 30S ribosomal protein S18

Chain QR:  73% 7% 20%



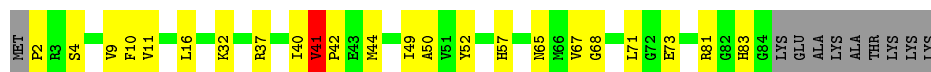
- Molecule 17: 30S ribosomal protein S18

Chain XR:  74% 6% 20%



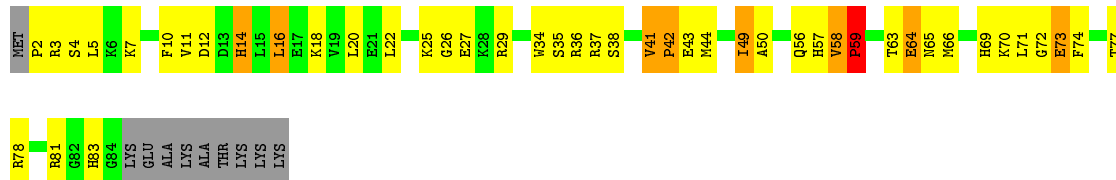
- Molecule 18: 30S ribosomal protein S19

Chain QS:  65% 24% 11%




- Molecule 18: 30S ribosomal protein S19

Chain XS:  40% 40% 9% 11%

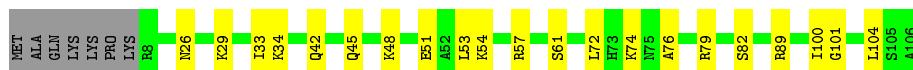


- Molecule 19: 30S ribosomal protein S20

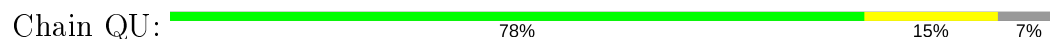
Chain QT:  85% 8% 7%



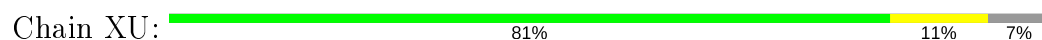
- Molecule 19: 30S ribosomal protein S20



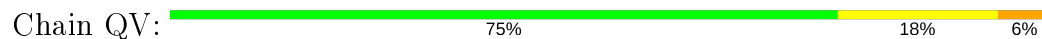
- Molecule 20: 30S ribosomal protein Thx



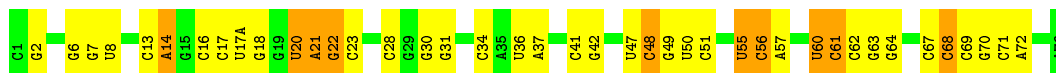
- Molecule 20: 30S ribosomal protein Thx



- Molecule 21: P-site tRNA-fMet



- Molecule 21: P-site tRNA-fMet



- Molecule 21: P-site tRNA-fMet

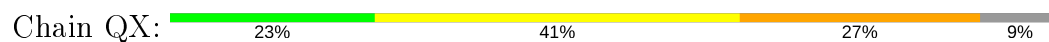


- Molecule 21: P-site tRNA-fMet

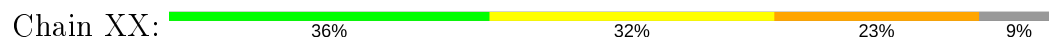




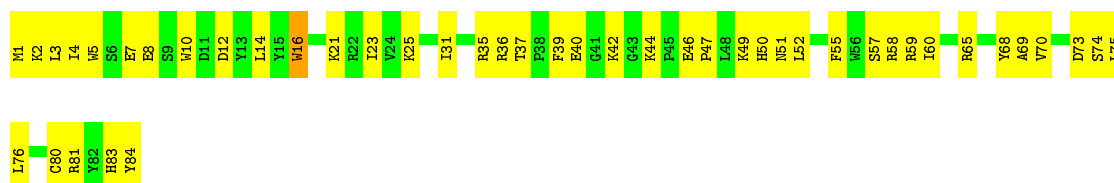
- Molecule 22: mRNA



- Molecule 22: mRNA



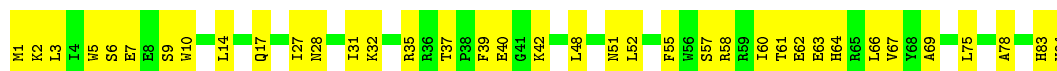
- Molecule 23: Addiction module toxin, Txe/YoeB family



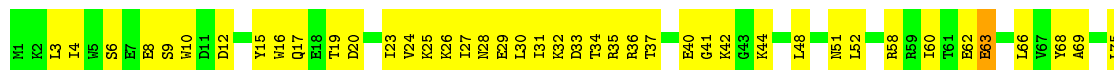
- Molecule 23: Addiction module toxin, Txe/YoeB family



- Molecule 23: Addiction module toxin, Txe/YoeB family



- Molecule 23: Addiction module toxin, Txe/YoeB family





- Molecule 24: 50S ribosomal protein L27

Chain R0: 76% 16% 5%



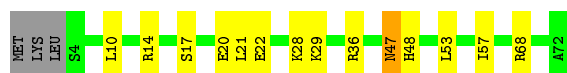
- Molecule 24: 50S ribosomal protein L27

Chain Y0: 84% 12% 2%



- Molecule 25: 50S ribosomal protein L29

Chain R2: 76% 18% 2%



- Molecule 25: 50S ribosomal protein L29

Chain Y2: 83% 13% 2%



- Molecule 26: 50S ribosomal protein L30

Chain R3: 92% 7% 1%



- Molecule 26: 50S ribosomal protein L30

Chain Y3: 88% 10% 2%

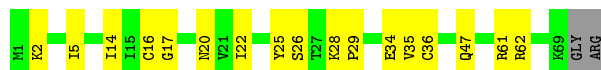


- Molecule 27: 50S ribosomal protein L31

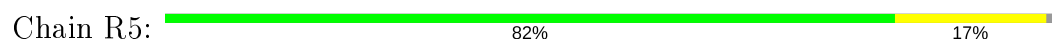
Chain R4: 66% 24% 6% 2%



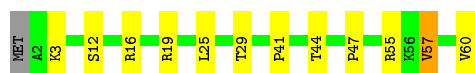
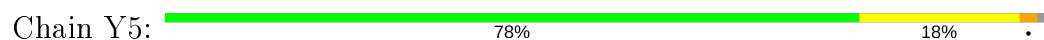
- Molecule 27: 50S ribosomal protein L31



- Molecule 28: 50S ribosomal protein L32



- Molecule 28: 50S ribosomal protein L32



- Molecule 29: 50S ribosomal protein L33



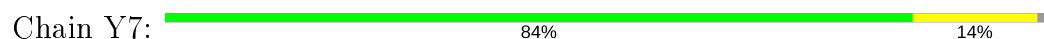
- Molecule 29: 50S ribosomal protein L33



- Molecule 30: 50S ribosomal protein L34



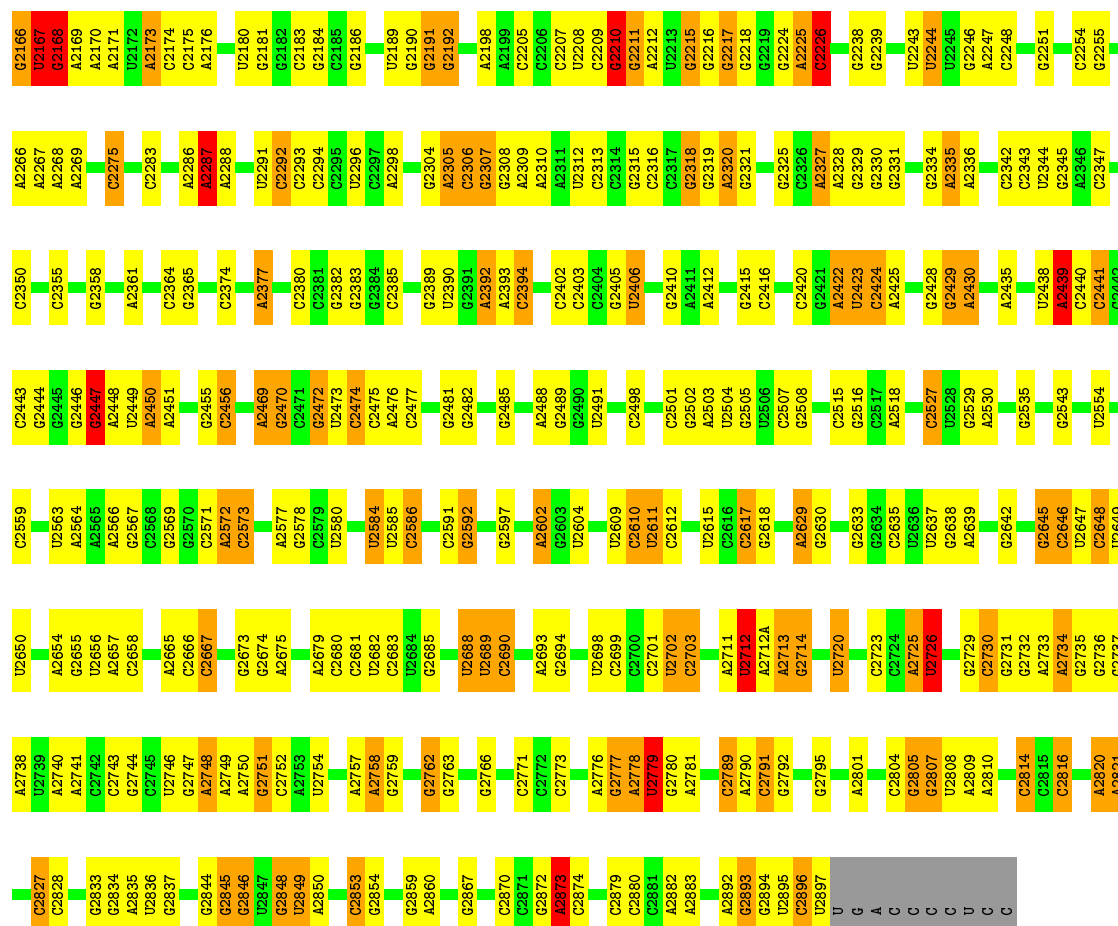
- Molecule 30: 50S ribosomal protein L34



C2283	C2284	C2285	C2286	A2287	U2291	C2292	C2293	C2294	C2295	U2296	C2297	A2298	C2304	A2305	C2306	C2307	C2308	C2209	A2310	C2311	C2312	C2313	C2316	C2317	C2318	A2319	A2320	C2325	A2328	C2329	C2334	A2335	A2336	C2343	U2344	C2345	A2346	C2347	C2349	C2350	C2351	A2352	A2266	A2267	A2268	A2269	C2362	C2363	C2364	C2365	C2373							
G2181	G2182	C2183	C2184	C2185	G2186	G2187	C2188	U2189	C2190	G2191	C2192	U2197	A2198	A2199	C2200	C2201	U2208	C2209	C2210	C2211	C2212	C2213	C2214	C2216	C2217	C2218	A2219	A2220	C2223	C2224	C2225	C2226	U2233	C2234	C2235	C2236	C2237	C2238	C2239	U2243	U2244	U2245	C2246	C2247	C2248	C2254	C2255	C2256	C2257	A2266	A2267	A2268	A2269	C2362	C2363	C2364	C2365	C2373
U2109	G2110	C2111	C2112	C2113	A2114	C2115	C2116	A2117	U2118	A2119	G2120	G2124	G2125	G2126	G2127	C2128	C2129	U2130	C2131	U2132	C2133	A2134	C2140	C2141	C2142	C2143	U2144	C2145	C2146	C2147	C2148	C2149	U2150	G2154	C2155	C2156	C2157	A2158	C2161	C2162	G2165	C2166	U2167	C2168	A2169	A2170	A2171	U2172	A2266	A2267	A2268	A2269	C2362	C2363	C2364	C2365	C2373	
G2023	G2024	C2025	C2026	G2027	A2030	A2031	G2032	A2033	G2037	C2038	C2039	C2040	U2041	A2042	C2043	C2044	G2046	U2047	C2048	G2049	G2051	C2052	C2053	A2054	C2055	C2056	A2059	A2060	C2061	A2062	C2063	C2064	C2065	C2066	C2067	U2068	C2069	U2074	U2075	C2081	A2082	U2086	U2092	G2093	U2099	U2100	U2101	U2102	U2103	U2104	C2108							
U1911	A1912	A1913	C1914	C1920	G1929	G1930	U1931	G1935	A1936	A1937	A1938	U1939	U1940	C1941	C1942	C1947	G1948	G1949	G1950	U1955	U1956	C1957	C1958	U1963	U1964	C1967	A1970	A1971	A1972	C1979	G1980	A1981	C1982	U1991	U1992	U1993	C1996	G2002	C2006	C2007	C2008	C2009	U2010	A2019	A2020	C2021	U2022											
C1800	G1801	A1802	A1803	A1812	G1813	G1816	U1817	U1818	A1819	U1820	G1824	C1827	G1828	A1829	C1830	G1835	G1838	G1839	A1847	U1851	C1852	A1853	G1858	G1869	C1870	A1871	A1872	C1878	C1879	C1880	C1881	C1882	A1884	G1888	A1889	A1890	G1899	A1900	A1901	C1902	G1903	G1906	A2019	A2020	C2021	U2022												
U1911	A1912	A1913	C1914	C1920	G1929	G1930	U1931	G1935	A1936	A1937	A1938	U1939	U1940	C1941	C1942	C1947	G1948	G1949	G1950	U1955	U1956	C1957	C1958	U1963	U1964	C1967	A1970	A1971	A1972	C1979	G1980	A1981	C1982	U1991	U1992	U1993	C1996	G2002	C2006	C2007	C2008	C2009	U2010	A2019	A2020	C2021	U2022											
G2023	G2024	C2025	C2026	G2027	A2030	A2031	G2032	A2033	G2037	C2038	C2039	C2040	U2041	A2042	C2043	C2044	G2046	U2047	C2048	G2049	G2051	C2052	C2053	A2054	C2055	C2056	A2059	A2060	C2061	A2062	C2063	C2064	C2065	C2066	C2067	U2068	C2069	U2074	U2075	C2081	A2082	U2086	U2092	G2093	U2099	U2100	U2101	U2102	U2103	U2104	C2108							
U2109	G2110	C2111	C2112	C2113	A2114	C2115	C2116	A2117	U2118	A2119	G2120	G2124	G2125	G2126	G2127	C2128	C2129	U2130	C2131	U2132	C2133	A2134	C2140	C2141	C2142	C2143	U2144	C2145	C2146	C2147	C2148	C2149	U2150	G2154	C2155	C2156	C2157	A2158	C2161	C2162	G2165	C2166	U2167	C2168	A2169	A2170	A2171	U2172	A2266	A2267	A2268	A2269	C2362	C2363	C2364	C2365	C2373	
G2181	G2182	C2183	C2184	C2185	G2186	G2187	C2188	U2189	C2190	G2191	C2192	U2197	A2198	A2199	C2200	C2201	U2208	C2209	C2210	C2211	C2212	C2213	C2214	C2216	C2217	C2218	A2219	A2220	C2223	C2224	C2225	C2226	U2233	C2234	C2235	C2236	C2237	C2238	C2239	U2243	U2244	U2245	C2246	C2247	C2248	C2254	C2255	C2256	C2257	A2266	A2267	A2268	A2269	C2362	C2363	C2364	C2365	C2373
G874	G875	C876	U877	A878	G879	C880	G881	C882	C883	C884	C885	C886	A887	C888	A889	C890	C891	G892	C893	C894	U895	A896	C897	A900	A901	U905	G906	U907	A910	U911	U912	C913	G914	G915	U916	U917	U922	C923	G928	G929	G932	A933	G934	A941	A945	G946	G956	A957	U958	A959	A960	C961	C965					
U969	C970	U971	G972	A973	G974	C975	A983	G987	A988	C989	C990	C991	C992	C993	C994	C995	A996	C997	A1000	A1001	G1002	G1003	C1004	C1005	A1010	U1011	U1012	C1013	G919	U1014	U1015	U1016	U1017	U1022	U1023	U1024	G1025	U1026	A1027	A1032	U1033	G1034	G1044	A1045	A1046	U1047	A1048	C1049	G1056	A1057								
G1058	U1061	U1070	G1071	C1072	A1073	C1079	A1085	A1086	C1087	A1088	A1089	A1095	A1096	U1101	C1102	A1103	C1104	C1105	U1106	A1111	G1122	U1130	C1135	C1136	C1139	C1140	U1141	U1142	A1142A	A1143	G1151	C1152	C1153	G1154	A1155	A1156	G1157	C1158	U1159	A1165	C1166	G1170	G1171	G1173	A1174													
U1175	G1176	A1177	C1178	C1179	C1180	C1181	A1182	G1183	C1185	G1186	G1187	G1191	G1195	C1196	G1197	C1202	G1203	A1204	U1205	G1206	A1210	U1211	G1212	A1220	C1221	C1224	C1225	C1230	G1231	G1232	C1233	U1234	G1235	G1236	G1245	G1250	A1253	A1254	U1255	G1256	A1262	U1263	G1264	A1265	G1266	U1267												
C1270	G1271	U1272	U1273	G1281	A1286	A1287	U1288	U1294	U1300	A1301	A1302	C1303	C1304	A1308	G1309	G1310	G1311	U1312	U1313	C1314	C1315	U1316	A1317	C1318	G1319	U1329	G1332	G1339	U1340	U1341	A1342	G1343	U1352	A1353	A1354	A1359	G1364	A1365	G1368	A1379	G1380	A1384	G1385	C1387														
G1388	A1392	A1393	A1394	A1395	U1396	C1403	C1404	U1405	U1406	C1407	C1408	C1409	U1415	C1416	C1417	G1418	U1419	U1420	G1421	A1427	C1428	G1429	U1431	C1437	A1444A	A1449	G1449A	A1453	U1454	G1455	A1460	G1461	C1464	C1467	A1471	C1474	G1475	A1476	A1477	G1478	G1479	G1480	U1482	G1483														
A1486	G1487	G1488	U1489	A1490	C1493	C1499	C1502	C1505	U1509	A1510	U1514	C1515	U1520	G1521	G1522	U1523	G1524	G1525	G1526	G1527	A1528	C1533	G1534	U1535	A1536	C1537	G1542	A1543	C1544	A1545	C1547	C1550	A1554	A1558	G1559	G1560	A1566	A1567	G1568	A1569	A1570	A1571	A1572	U1578														
C1585	A1586	A1587	C1588	C1592	G1593	G1594	G1595	C1598	C1599	U1602	A1603	C1604	G1605	C1606	C1607	U1608	A1609	A1610	G1611	A1616	U1629	G1630	G1635	C1636	A1637	C1638	C1640	G1643	C1644	C1648	G1649	G1651	A1652	G1653	A1654	A1655	C1656	C1657	G1666	G1667	A1668	A1669	A1674	U1679	U1680	G1681												
G1682	C1686	A1687	U1688	A1689	C1694	G1695	U1696	A1698	A1699	A1700	A1701	G1725	G1728	A1729	G1731	A1732	G1733	C1734	C1735	U1743	C1754	A1755	G1756	A1762	G1763	G1764	G1765	U1766	G1769	A1773	C1774	U1775	A1779	A1780	C1781	C1782	A1783	A1784	A1785	A1786	A1787	A1788	A1789	C1790	A1791	G1792												
C1800	G1801	A1802	A1803	A1812	G1813	G1816	U1817	U1818	A1819	U1820	G1824	C1827	G1828	A1829	C1830	G1835	G1838	G1839	A1847	U1851	C1852	A1853	G1858	G1869	C1870	A1871	A1872	C1878	C1879	C1880	C1881	C1882	A1884	G1888	A1889	A1890	G1899	A1900	A1901	C1902	G1903	G1906	A2019	A2020	C2021	U2022												
U1911	A1912	A1913	C1914	C1920	G1929	G1930	U1931	G1935	A1936	A1937	A1938	U1939	U1940	C1941	C1942	C1947	G1948	G1949	G1950	U1955	U1956	C1957	C1958	U1963	U1964	C1967	A1970	A1971	A1972	C1979	G1980	A1981	C1982	U1991	U1992	U1993	C1996	G2002	C2006	C2007	C2008	C2009	U2010	A2019	A2020	C2021	U2022											
C2023	G2024	C2025	C2026	G2027	A2030	A2031	G2032	A2033	G2037	C2038	C2039	C2040	U2041	A2042	C2043	C2044	G2046	U2047	C2048	G2049	G2051	C2052	C2053	A2054	C2055	C2056	A2059	A2060	C2061	A2062	C2063	C2064	C2065	C2066	C2067	U2068	C2069	U2074	U2075	C2081	A2082	U2086	U2092	G2093	U2099	U2100	U2101	U2102	U2103	U2104	C2108							
U2109	G2110	C2111	C2112	C2113	A2114	C2115	C2116	A2117	U2118	A2119	G2120	G2124	G2125	G2126	G2127	C2128	C2129	U2130	C2131	U2132	C2133	A2134	C2140	C2141	C2142	C2143	U2144	C2145	C2146	C2147	C2148	C2149	U2150	G2154	C2155	C2156	C2157	A2158	C2161	C2162	G2165	C2166	U2167	C2168	A2169	A2170	A2171	U2172	A2266	A2267	A2268	A2269	C2362	C2363	C2364	C2365	C2373	
G2181	G2182	C2183	C2184	C2185	G2186	G2187	C2188	U2189	C2190	G2191	C2192	U2197	A2198	A2199	C2200	C2201	U2208	C2209	C2210	C2211	C2212																																					

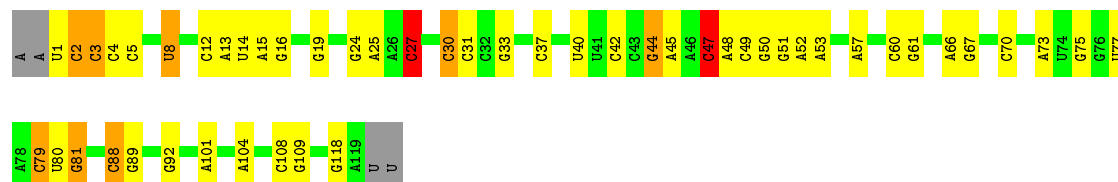


C2095	G1997	C1902	C1795	U1679	G1581	C1499	U1415	G1309	C1202	C1102	U1019	G932	C856	G763
U2096	A2001	C1905	U1796	U1680	C1585	G1500	G1416	G1310	G1203	A1102	G1022	A933	C857	A764
U2099	G2002	G1906	U1798	G1681	A1586	G1501	G1417	U1312	A1204	U1104	U1023	G938	U858	G765
G2100	C2006	C1909	U1799	G1694	C1588	C1505	G1418	U1313	U1205	U1105	G1024	G939	G859	A774
U2102	G2010	A1912	G1800	G1695	C1588	A1508	A1419	C1314	A1210	G1106	G1025	G940	A861	G775
C2103	U2011	A1913	A1802	G1696	C1592	C1509	U1420	C1315	U1211	U1113	A1027	A941	G862	G776
G2104	G2012	C1914	A1803	G1697	G1593	A1510	G1421	U1316	G1212	G1114	U1032	A945	G864	U779
C2111	C1915	U1915	C1804	G1699	C1598	U1514	G1422	G1317	U1213	U1114	A1032	G946	G865	G780
G2112	A2020	A1916	A1809	A1700	C1599	C1515	G1423	G1318	A1220	G1122	U1033	C949	G866	A781
U2113	C2021	U1917	G1812	G1703	C1600	C1518	G1424	G1319	G1226	A1126	U1035	G950	G867	A782
A2114	U2022	A1918	G1813	G1725	U1602	U1519	A1427	G1324	G1230	A1127	G1042	A953	U870	A783
G2115	G2023	A1919	G1814	G1726	U1602	U1520	G1428	G1325	G1231	A1128	U1043	G954	G868	A784
G2116	C1920	C1920	G1815	G1728	C1607	G1521	G1429	U1329	G1232	G1131	G1044	C955	G869	G785
A2117	G2026	A1927	G1816	A1729	A1608	G1522	U1431	C1331	C1233	A1132	A1045	G956	U871	A789
G2120	G2027	G1928	G1817	U1730	C1612	G1526	A1434	G1332	G1236	U1133	G1046	A957	U877	C790
U2128	U2028	C1928	U1817	G1730	C1616	G1527	G1435	U1342	A1237	G1136	A1048	A959	G879	C791
G2129	G2029	A1928	U1818	G1731	A1616	U1528	G1436	U1352	G1243	G1139	C1049	A960	G881	A793
U2122	A2030	G1930	G1819	G1732	C1617	A1528	C1437	U1353	G1247	C1140	A1050	C961	G882	C797
G2123	C2031	U1931	G1820	C1734	A1618	G1534	A1444	A1353	A1247	U1141	G1051	G968	G883	G805
G2124	G2032	A1932	G1826	G1741	C1622	U1535	A1445	A1354	G1248	U1142	C1052	U969	G884	C806
G2125	A2033	C1933	A1829	G1742	G1622	A1536	A1446	G1355	U1249	A1142	G1053	C970	G885	U807
A2126	U2034	C1934	C1830	G1743	U1629	C1537	U1449	G1358	G1250	A1143	G1054	G971	G886	
G2127	G2035	G1935	G1831	G1744	G1628	G1538	G1449A	A1359	G1253	C1153	G1056	G972	G889	U811
C2128	C2036	A1936	G1832	C1754	U1628	U1539	U1454	A1360	A1254	G1154	A1057	A973	A890	C812
G2129	G2037	A1937	G1833	A1755	G1629	G1540	G1455	A1360	U1255	C974A	G1058	C974	C894	G818
U2130	G2038	U1938	G1835	U1756	G1630	U1541	U1456	A1363	G1256	U1159	U1060	G975	A895	A819
C2131	U2041	C1947	C1836	U1757	G1635	G1542	G1458	G1368	A1262	C1162	U1061	A980	C897	A820
U2132	A2042	G1948	C1837	G1758	C1636	A1543	A1459	A1378	U1263	U1165	C1064	A983	A900	U826
A2134	C2043	G1949	G1838	G1758	C1637	C1544	G1459	A1379	G1264	C1166	A1070	A983	U900	U827
C2137	G2046	G1950	G1842	A1762	A1637	A1545	A1460	G1380	U1267	U1167	G1071	G987	C904	A829
C2138	A2051	U1955	G1845	G1763	U1638	A1545	G1461	A1384	C1267	G1168	C1072	G988	U905	G830
C2139	C2051	U1956	G1846	C1765	C1640	C1547	G1462	C1386	C1270	G1169	A1073	G989	G906	G831
G2140	U2140	C1957	A1847	U1766	A1641	C1548	G1463	U1391	G1271	G1170	G1074	A990	U907	G832
C2141	C2055	C1958	A1847	U1766	G1642	C1549	C1464	A1392	A1272	G1173	C1075	C991	C908	
C2142	G2056	U1951	U1851	G1769	G1643	A1554	C1467	U1391	G1275	G1174	C1076	G993	A910	G836
U2144	A2059	U1963	G1858	A1773	C1644	A1554	C1467	U1396	A1276	U1175	G1079	C994	A910	U839
C2145	A2060	G1964	G1858	C1774	C1648	C1557	A1471	U1391	G1281	A1176	C1080	C995	C914	C840
C2146	G2061	C1965	U1864	G1779	A1652	A1558	G1475	U1391	U1286	G1177	A1085	A996	C915	A841
G2147	A2062	C1967	G1869	U1779	G1652	C1558	U1482	C1399	A1286	C1178	A1086	G997	G916	G842
C2148	C2063	G1870	G1663	A1780	C1657	A1569	G1483	C1402	G1484	C1179	G1087	C998	A917	G845
G2149	G2064	A1871	A1871	C1781	A1654	A1570	G1484	C1403	U1288	C1180	A1088	U999	A918	C846
U2150	C2065	A1971	G1878	G1782	C1655	A1571	G1485	C1404	C1294	G1184	G1089	A1000	G919	U847
G2151	A1972	A1972	A1873	C1782	A1655	A1572	C1486	C1404	U1294	U1187	A1089	A1001	U922	G848
U2068	G2068	U1973	G1881	A1783	C1656	A1566	G1478	U1396	G1281	A1176	C1080	C995	C914	U839
G2069	C2069	C1979	C1881	A1785	A1657	A1567	U1482	U1399	U1286	G1177	A1085	A996	C915	C840
C2073	U2074	A1980	G1882	G1786	C1657	G1567	G1483	C1402	A1286	C1178	A1086	G997	G916	A841
G2157	G2073	C1981	G1883	A1787	C1658	A1569	G1484	C1403	G1484	C1179	G1087	C998	A917	G842
A2158	U2074	C1982	G1883	A1787	C1658	A1571	G1485	C1403	U1288	C1180	A1088	U999	A918	G845
G2159	G2086	U1991	G1889	C1788	G1667	A1568	U1488	C1404	U1294	G1184	G1089	A1000	G919	C846
C2160	U2075	C1990	A1889	A1789	A1669	A1575	U1489	U1405	C1295	U1187	C1092	C1005	U922	G848
C2161	G2087	U1991	G1899	A1791	C1674	U1576	A1490	U1406	C1295	U1188	C1092	C1006	C923	A849
G2162	G2087	C1992	A1900	G1792	C1675	U1577	G1493	C1408	U1301	G1191	A1096	U1012	G928	G851
U2165	C2094	U1993	A1901	C1793	A1579	A1590	C1493	C1411	A1412	C1195	A1099	C1013	U930	G853
				U1794	C1676	A1592	A1496	C1412	A1308	C1195	C1099		C934	



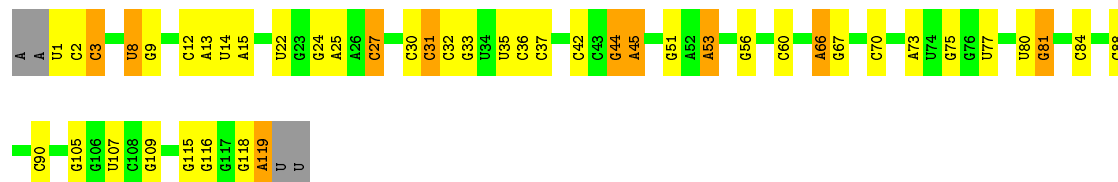
- Molecule 33: 5S rRNA

Chain RB:  56% 32% 6% . .




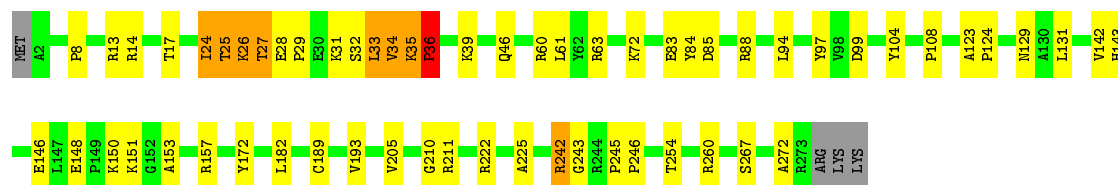
- Molecule 33: 5S rRNA

Chain YB:  60% 28% 8% .

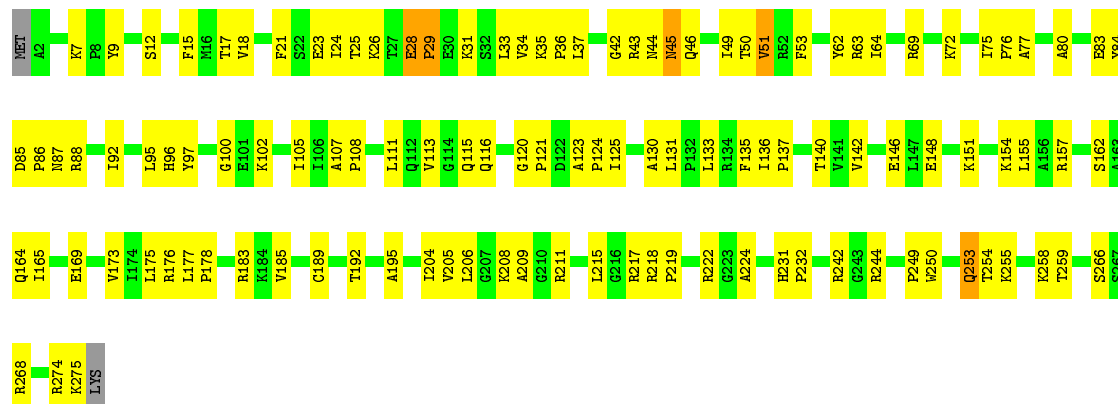


- Molecule 34: 50S ribosomal protein L2

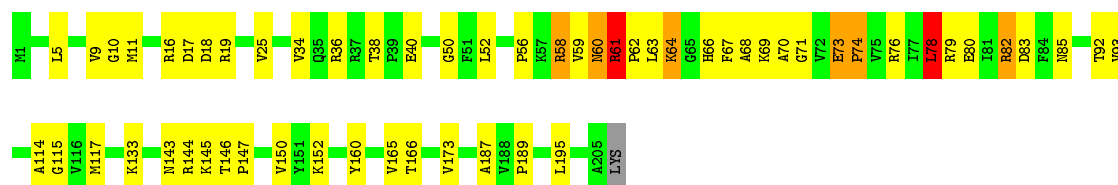
Chain RD:  77% 18% 5%



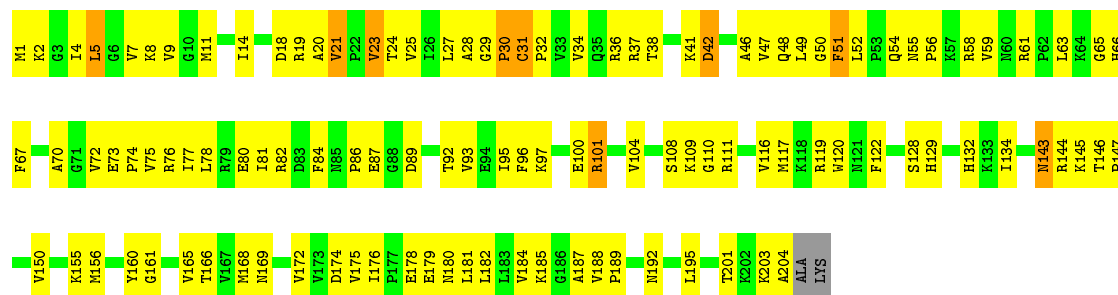
• Molecule 34: 50S ribosomal protein L2



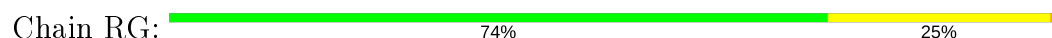
• Molecule 35: 50S ribosomal protein L3



• Molecule 35: 50S ribosomal protein L3



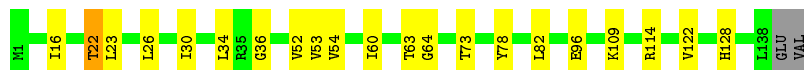
• Molecule 36: 50S ribosomal protein L5





- Molecule 39: 50S ribosomal protein L13

Chain RN: 84% 14% ..



- Molecule 39: 50S ribosomal protein L13

Chain YN: 86% 12% ..



- Molecule 40: 50S ribosomal protein L14

Chain RO: 85% 15%



- Molecule 40: 50S ribosomal protein L14

Chain YO: 83% 17%



- Molecule 41: 50S ribosomal protein L15

Chain RP: 76% 20% .




- Molecule 41: 50S ribosomal protein L15

Chain YP: 43% 48% 8% .



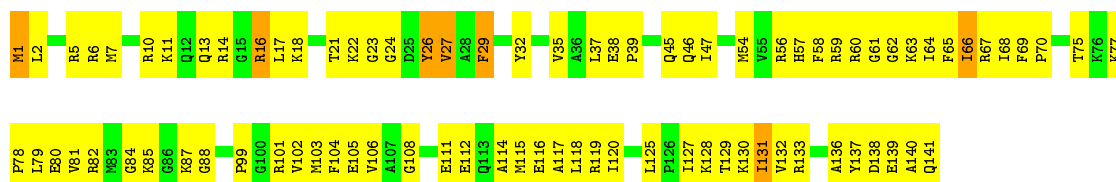
- Molecule 42: 50S ribosomal protein L16

Chain RQ:  80% 19%




- Molecule 42: 50S ribosomal protein L16

Chain YQ:  40% 55% 5%



- Molecule 43: 50S ribosomal protein L17

Chain RR:  87% 11%




- Molecule 43: 50S ribosomal protein L17

Chain YR:  90% 9%




- Molecule 44: 50S ribosomal protein L18

Chain RS:  84% 15%



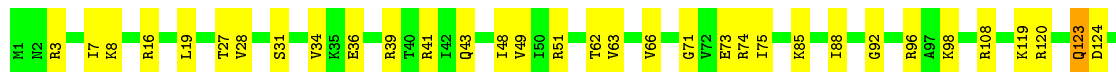
- Molecule 44: 50S ribosomal protein L18

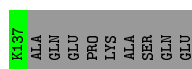
Chain YS:  76% 21%



- Molecule 45: 50S ribosomal protein L19

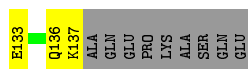
Chain RT:  71% 22% 6%





- Molecule 45: 50S ribosomal protein L19

Chain YT: 70% 23% 6%



- Molecule 46: 50S ribosomal protein L20

Chain RU: 83% 15% ..



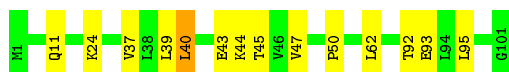
- Molecule 46: 50S ribosomal protein L20

Chain YU: 86% 12% ..



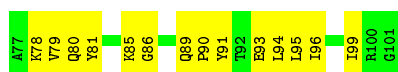
- Molecule 47: 50S ribosomal protein L21

Chain RV: 86% 13% .



- Molecule 47: 50S ribosomal protein L21

Chain YV: 49% 50% .



- Molecule 48: 50S ribosomal protein L22

Chain RW: 80% 20%



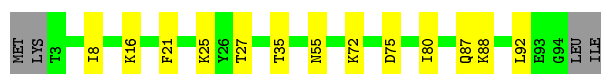
- Molecule 48: 50S ribosomal protein L22

Chain YW: 86% 14%



- Molecule 49: 50S ribosomal protein L23

Chain RX: 82% 14% .



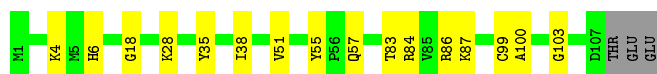
- Molecule 49: 50S ribosomal protein L23

Chain YX: 83% 13% .



- Molecule 50: 50S ribosomal protein L24

Chain RY: 83% 15% .



- Molecule 50: 50S ribosomal protein L24

Chain YY: 78% 18% ..



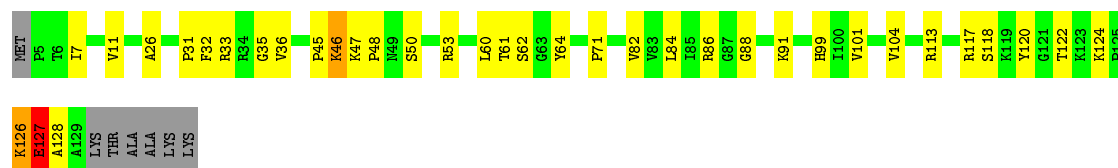
- Molecule 51: 30S ribosomal protein S12

Chain XL: 78% 13% . 8%



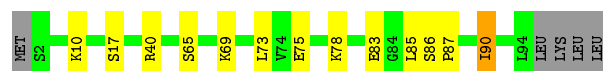
- Molecule 51: 30S ribosomal protein S12

Chain QL: 67% 25% .. 5%



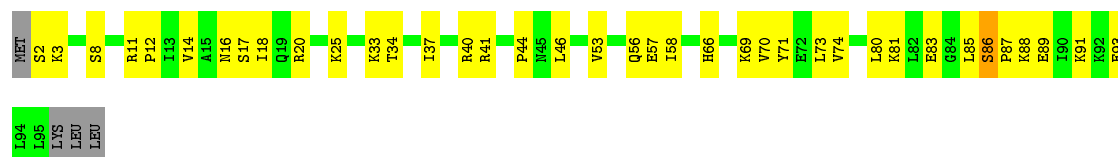
- Molecule 52: 50S ribosomal protein L28

Chain Y1: 82% 12% • 5%



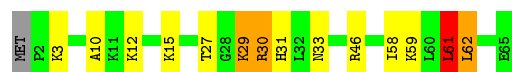
- Molecule 52: 50S ribosomal protein L28

Chain R1: 57% 38% • •



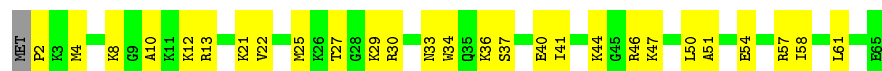
- Molecule 53: 50S ribosomal protein L35

Chain Y8: 77% 15% 5% • •



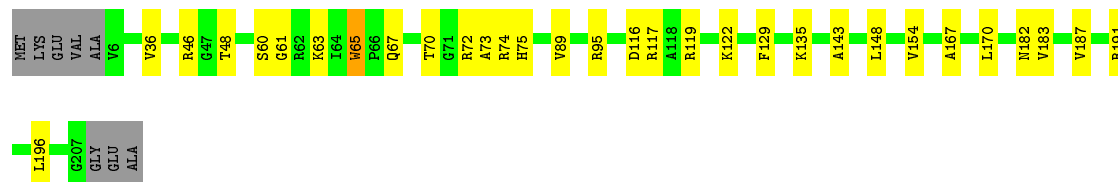
- Molecule 53: 50S ribosomal protein L35

Chain R8: 57% 42% •



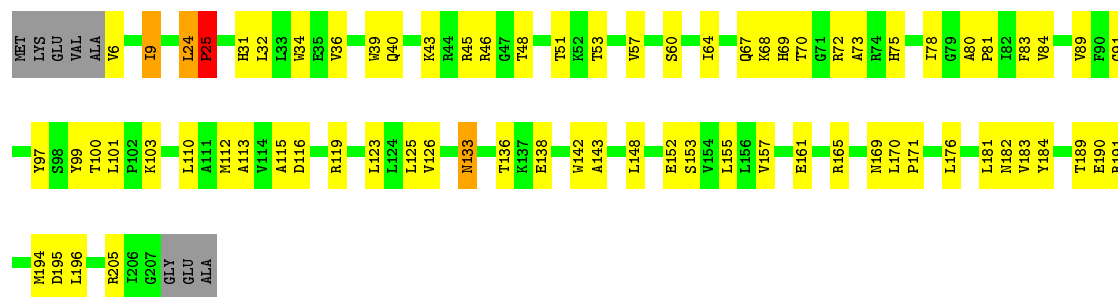
- Molecule 54: 50S ribosomal protein L4

Chain YF: 81% 14% •

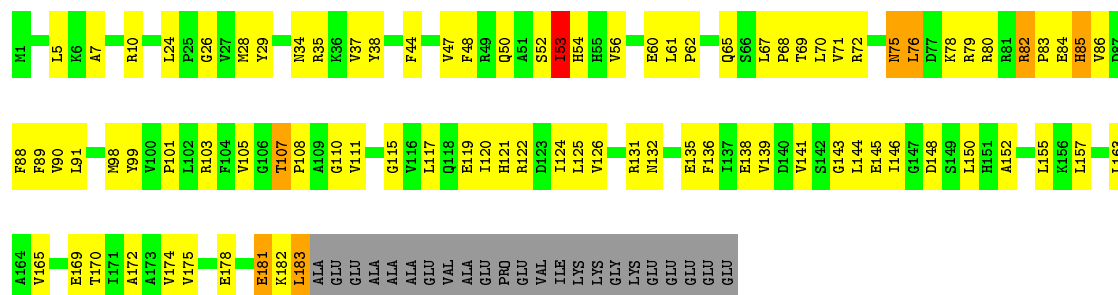


- Molecule 54: 50S ribosomal protein L4

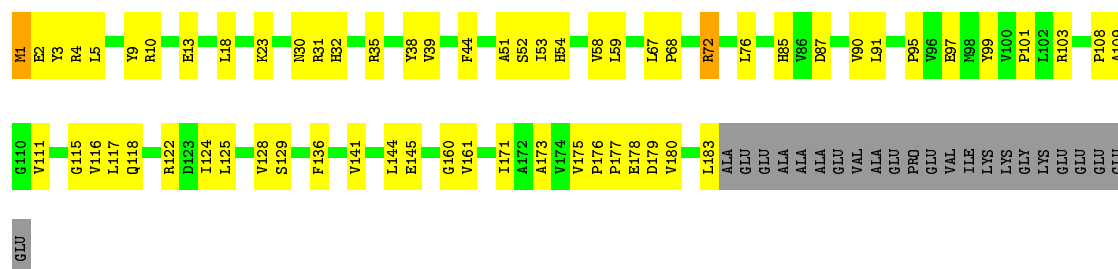
Chain RF: 61% 33% • •



- Molecule 55: 50S ribosomal protein L25



- Molecule 55: 50S ribosomal protein L25



- Molecule 56: CCPuro



- Molecule 56: CCPuro



4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	212.79Å 453.08Å 608.93Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	146.59 – 3.25	Depositor
% Data completeness (in resolution range)	93.4 (146.59-3.25)	Depositor
R_{merge}	0.23	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.56 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.15.2_3472	Depositor
R, R_{free}	0.229 , 0.256	Depositor
Wilson B-factor (Å ²)	60.8	Xtriage
Anisotropy	0.347	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	298432	wwPDB-VP
Average B, all atoms (Å ²)	88.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.35% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, PPU, SF4, MG, OMU, A2M

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	QA	0.44	0/36324	1.10	168/56690 (0.3%)
1	XA	0.46	2/36254 (0.0%)	1.08	154/56581 (0.3%)
2	QB	0.72	3/1942 (0.2%)	0.75	1/2619 (0.0%)
2	XB	0.37	0/1950	0.61	0/2630
3	QC	0.32	0/1629	0.56	0/2195
3	XC	0.31	0/1629	0.55	0/2195
4	QD	0.34	0/1733	0.57	0/2318
4	XD	0.35	0/1733	0.56	0/2318
5	QE	0.30	0/1171	0.55	0/1576
5	XE	0.33	0/1171	0.58	0/1576
6	QF	0.34	0/856	0.56	0/1154
6	XF	0.30	0/856	0.56	0/1154
7	QG	0.31	0/1276	0.52	0/1709
7	XG	0.34	0/1276	0.52	0/1709
8	QH	0.54	2/1128 (0.2%)	0.62	1/1517 (0.1%)
8	XH	0.34	0/1128	0.54	0/1517
9	QI	0.37	0/1029	0.68	0/1379
9	XI	0.36	0/1017	0.64	0/1365
10	QJ	0.33	0/814	0.59	0/1095
10	XJ	0.36	0/790	0.64	0/1063
11	QK	0.31	0/900	0.55	0/1213
11	XK	0.32	0/879	0.56	0/1187
12	QM	0.39	0/965	0.69	0/1292
12	XM	0.34	0/956	0.68	0/1281
13	QN	0.38	0/501	0.64	0/664
13	XN	0.35	0/501	0.61	0/664
14	QO	0.29	0/745	0.52	0/992
14	XO	0.30	0/740	0.50	0/987
15	QP	0.31	0/721	0.57	0/970
15	XP	0.32	0/721	0.58	0/970
16	QQ	0.30	0/847	0.53	0/1131
16	XQ	0.32	0/847	0.57	1/1131 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QR	0.29	0/579	0.58	0/768
17	XR	0.31	0/579	0.56	0/768
18	QS	0.37	0/680	0.65	0/915
18	XS	1.02	4/671 (0.6%)	0.84	2/904 (0.2%)
19	QT	0.30	0/765	0.58	0/1007
19	XT	0.31	0/765	0.59	0/1007
20	QU	0.25	0/221	0.56	0/288
20	XU	0.28	0/221	0.66	0/288
21	QV	0.38	0/1832	1.02	2/2855 (0.1%)
21	QW	0.31	0/1832	1.07	8/2855 (0.3%)
21	XV	0.40	0/1832	1.05	5/2855 (0.2%)
21	XW	0.33	0/1832	1.10	6/2855 (0.2%)
22	QX	0.41	0/414	0.89	0/645
22	XX	0.35	0/414	0.91	0/645
23	QY	0.60	0/743	0.67	0/1002
23	QZ	0.60	0/743	0.69	0/1002
23	XY	0.59	0/743	0.72	0/1002
23	XZ	0.60	0/743	0.60	0/1002
24	R0	0.36	0/652	0.68	1/867 (0.1%)
24	Y0	0.40	0/657	0.66	2/874 (0.2%)
25	R2	0.31	0/583	0.61	0/771
25	Y2	0.36	0/583	0.64	0/771
26	R3	0.31	0/474	0.54	0/635
26	Y3	0.33	0/474	0.56	0/635
27	R4	0.54	1/578 (0.2%)	1.01	5/776 (0.6%)
27	Y4	0.36	0/578	0.71	0/776
28	R5	0.34	0/473	0.55	0/639
28	Y5	0.38	0/473	0.56	0/639
29	R6	0.30	0/460	0.55	0/613
29	Y6	0.30	0/460	0.53	0/613
30	R7	0.30	0/417	0.53	0/550
30	Y7	0.30	0/426	0.53	0/561
31	R9	0.32	0/310	0.55	0/407
31	Y9	0.27	0/310	0.54	0/407
32	RA	0.51	2/69739 (0.0%)	1.15	477/108870 (0.4%)
32	YA	0.52	1/69353 (0.0%)	1.13	428/108267 (0.4%)
33	RB	0.46	0/2881	1.16	18/4494 (0.4%)
33	YB	0.51	1/2881 (0.0%)	1.16	23/4494 (0.5%)
34	RD	0.40	1/2165 (0.0%)	0.74	6/2919 (0.2%)
34	YD	0.67	2/2185 (0.1%)	0.81	2/2944 (0.1%)
35	RE	0.40	0/1601	0.78	3/2160 (0.1%)
35	YE	0.64	1/1592 (0.1%)	0.83	1/2149 (0.0%)
36	RG	0.37	0/1499	0.66	0/2016

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
36	YG	0.33	0/1499	0.65	0/2016
37	RH	0.46	1/1362 (0.1%)	0.74	2/1841 (0.1%)
37	YH	0.64	0/1356	0.80	1/1834 (0.1%)
38	RI	0.55	1/1151 (0.1%)	0.91	6/1558 (0.4%)
38	YI	0.33	0/1151	0.69	1/1558 (0.1%)
39	RN	0.33	0/1131	0.67	2/1525 (0.1%)
39	YN	0.32	0/1131	0.66	2/1525 (0.1%)
40	RO	0.34	0/943	0.56	0/1269
40	YO	0.34	0/943	0.57	0/1269
41	RP	0.39	0/1162	0.80	1/1544 (0.1%)
41	YP	0.61	0/1152	0.71	0/1533
42	RQ	0.37	0/1143	0.67	0/1527
42	YQ	0.61	0/1143	0.75	0/1527
43	RR	0.32	0/974	0.62	1/1302 (0.1%)
43	YR	0.30	0/974	0.61	0/1302
44	RS	0.36	0/892	0.69	0/1187
44	YS	0.35	0/892	0.73	2/1187 (0.2%)
45	RT	0.32	0/1155	0.67	0/1542
45	YT	0.35	0/1155	0.71	2/1542 (0.1%)
46	RU	0.36	0/982	0.56	0/1306
46	YU	0.34	0/982	0.58	0/1306
47	RV	0.39	0/790	0.74	0/1057
47	YV	0.62	0/790	0.87	1/1057 (0.1%)
48	RW	0.31	0/911	0.56	0/1220
48	YW	0.33	0/911	0.56	0/1220
49	RX	0.34	0/739	0.54	0/993
49	YX	0.33	0/739	0.55	0/993
50	RY	0.38	0/831	0.62	1/1108 (0.1%)
50	YY	0.33	0/831	0.56	0/1108
51	QL	0.29	0/991	0.55	0/1327
51	XL	0.35	0/972	0.64	1/1301 (0.1%)
52	R1	0.39	0/744	0.55	0/989
52	Y1	0.42	0/736	0.59	0/978
53	R8	0.52	0/525	0.58	0/691
53	Y8	0.42	0/525	0.92	4/691 (0.6%)
54	RF	0.48	2/1620 (0.1%)	0.54	1/2194 (0.0%)
54	YF	0.39	0/1620	0.60	0/2194
55	RZ	0.53	2/1493 (0.1%)	0.65	0/2026
55	YZ	0.36	0/1493	0.52	0/2026
56	ZA	1.50	1/40 (2.5%)	0.89	0/60
56	ZB	0.27	0/40	0.53	0/60
All	All	0.47	27/323056 (0.0%)	1.01	1342/482845 (0.3%)

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
2	QB	0	1
24	Y0	0	1
32	YA	0	1
37	YH	0	1
41	RP	0	1
51	QL	0	1
53	R8	0	1
All	All	0	7

All (27) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	YD	29	PRO	N-CA	13.69	1.70	1.47
18	XS	42	PRO	N-CA	13.61	1.70	1.47
18	XS	59	PRO	N-CA	13.52	1.70	1.47
54	RF	25	PRO	N-CA	13.16	1.69	1.47
38	RI	142	VAL	N-CA	-13.01	1.20	1.46
8	QH	74	PRO	N-CA	12.71	1.68	1.47
2	QB	201	ILE	C-N	9.06	1.51	1.34
2	QB	182	ILE	C-N	8.76	1.50	1.34
55	RZ	107	THR	C-N	8.56	1.50	1.34
35	YE	21	VAL	C-N	8.54	1.50	1.34
55	RZ	82	ARG	C-N	8.54	1.50	1.34
2	QB	158	LEU	C-N	8.46	1.50	1.34
37	RH	11	VAL	C-N	8.46	1.50	1.34
33	YB	115	G	O3'-P	-7.64	1.51	1.61
56	ZA	74	C	O3'-P	-7.40	1.52	1.61
1	XA	191(E)	G	C1'-N9	-7.09	1.36	1.46
32	RA	2053	G	C8-N7	7.02	1.35	1.30
1	XA	1038	C	O3'-P	6.93	1.69	1.61
54	RF	24	LEU	C-N	6.53	1.46	1.34
18	XS	58	VAL	C-N	6.01	1.45	1.34
34	YD	28	GLU	C-N	5.97	1.45	1.34
18	XS	41	VAL	C-N	5.96	1.45	1.34
32	YA	2287	A	N9-C4	-5.81	1.34	1.37
27	R4	36	CYS	CB-SG	-5.71	1.72	1.81
8	QH	73	ASP	C-N	5.68	1.45	1.34
34	RD	35	LYS	C-N	5.66	1.45	1.34
32	RA	2053	G	N7-C5	5.54	1.42	1.39

All (1342) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	309	G	O5'-P-OP2	-24.58	81.20	110.70
32	RA	2614	A	C6-N1-C2	-16.89	108.46	118.60
32	RA	2053	G	C5-N7-C8	-16.23	96.18	104.30
32	RA	308	G	OP2-P-O3'	-14.86	72.52	105.20
32	RA	2053	G	C4-C5-N7	14.51	116.61	110.80
32	RA	309	G	C4-N9-C1'	-14.05	108.23	126.50
32	RA	309	G	C8-N9-C1'	13.99	145.18	127.00
38	RI	142	VAL	CB-CA-C	-13.36	86.03	111.40
38	RI	142	VAL	N-CA-C	12.80	145.56	111.00
1	QA	1158	C	N1-C2-O2	12.57	126.44	118.90
1	QA	1301	U	N1-C2-O2	12.49	131.54	122.80
34	RD	27	THR	C-N-CA	12.43	152.77	121.70
32	RA	2614	A	C5-C6-N1	12.36	123.88	117.70
1	XA	1038	C	P-O3'-C3'	12.09	134.21	119.70
32	YA	884	C	C5-C6-N1	11.59	126.80	121.00
1	QA	1147	C	N1-C2-O2	11.53	125.82	118.90
32	RA	2052	G	C4-C5-N7	11.45	115.38	110.80
1	QA	1322	C	N1-C2-O2	11.17	125.60	118.90
33	YB	31	C	N1-C2-O2	11.12	125.57	118.90
1	QA	1301	U	N3-C2-O2	-11.00	114.50	122.20
32	YA	1914	C	N1-C2-O2	10.56	125.24	118.90
32	RA	2052	G	C5-N7-C8	-10.54	99.03	104.30
33	RB	31	C	N1-C2-O2	10.54	125.22	118.90
1	XA	1158	C	N1-C2-O2	10.33	125.10	118.90
1	QA	1158	C	N3-C2-O2	-10.18	114.77	121.90
32	RA	2614	A	N1-C2-N3	10.18	134.39	129.30
32	RA	2474	C	N1-C2-O2	10.17	125.00	118.90
1	XA	961	U	N3-C2-O2	-10.16	115.09	122.20
1	QA	1066	C	N1-C2-O2	10.12	124.97	118.90
1	QA	1128	C	C5-C6-N1	10.03	126.01	121.00
32	YA	884	C	C6-N1-C2	-9.89	116.34	120.30
1	QA	328	C	N1-C2-O2	9.88	124.83	118.90
1	QA	1158	C	C2-N1-C1'	9.87	129.66	118.80
1	QA	1128	C	C6-N1-C2	-9.86	116.36	120.30
1	XA	1086	U	N1-C2-O2	9.82	129.68	122.80
32	YA	2666	C	N1-C2-O2	9.75	124.75	118.90
32	YA	856	C	C6-N1-C2	-9.63	116.45	120.30
32	YA	2051	A	C2-N3-C4	-9.59	105.80	110.60
32	RA	856	C	C6-N1-C2	-9.57	116.47	120.30
32	RA	2053	G	N7-C8-N9	9.56	117.88	113.10
1	QA	1147	C	N3-C2-O2	-9.55	115.22	121.90
21	QW	13	C	N1-C2-O2	9.54	124.62	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	1914	C	N1-C2-O2	9.52	124.61	118.90
32	YA	624	C	C6-N1-C2	-9.32	116.57	120.30
32	RA	1313	U	N1-C2-O2	9.31	129.32	122.80
32	YA	1313	U	N1-C2-O2	9.22	129.26	122.80
32	RA	308	G	OP1-P-O3'	9.16	125.34	105.20
33	RB	31	C	C2-N1-C1'	9.12	128.83	118.80
32	YA	652	C	N1-C2-O2	9.12	124.37	118.90
33	RB	31	C	C6-N1-C2	-9.11	116.66	120.30
32	RA	828	U	C2-N1-C1'	9.08	128.59	117.70
1	QA	999	U	N1-C2-O2	9.06	129.15	122.80
1	QA	1158	C	C6-N1-C2	-9.04	116.68	120.30
32	YA	2394	C	N1-C2-O2	9.04	124.32	118.90
32	YA	1162	G	C8-N9-C1'	-9.01	115.29	127.00
1	QA	1322	C	N3-C2-O2	-9.00	115.60	121.90
32	RA	2873	A	N7-C8-N9	8.95	118.27	113.80
1	XA	328	C	N1-C2-O2	8.94	124.26	118.90
32	RA	2474	C	N3-C2-O2	-8.91	115.66	121.90
32	RA	856	C	C5-C6-N1	8.89	125.45	121.00
32	YA	1914	C	N3-C2-O2	-8.88	115.68	121.90
32	RA	1544	C	N1-C2-O2	8.88	124.22	118.90
32	YA	527	C	N1-C2-O2	8.78	124.17	118.90
32	YA	1313	U	N3-C2-O2	-8.76	116.07	122.20
1	XA	1086	U	N3-C2-O2	-8.72	116.09	122.20
33	RB	47	C	N1-C2-O2	8.64	124.08	118.90
1	XA	1301	U	N1-C2-O2	8.62	128.84	122.80
32	RA	537	C	C5-C6-N1	8.62	125.31	121.00
32	YA	269	U	N3-C2-O2	-8.60	116.18	122.20
1	QA	999	U	N3-C2-O2	-8.56	116.20	122.20
1	XA	330	C	N1-C2-O2	8.53	124.02	118.90
32	RA	859	G	C8-N9-C1'	-8.53	115.92	127.00
33	YB	31	C	N3-C2-O2	-8.51	115.94	121.90
32	YA	856	C	C5-C6-N1	8.50	125.25	121.00
32	RA	1313	U	N3-C2-O2	-8.46	116.28	122.20
32	RA	269	U	N3-C2-O2	-8.45	116.28	122.20
33	YB	31	C	C6-N1-C2	-8.45	116.92	120.30
32	YA	1162	G	C4-N9-C1'	8.44	137.47	126.50
1	QA	1260	C	N3-C2-O2	-8.43	116.00	121.90
32	RA	2666	C	N1-C2-O2	8.42	123.95	118.90
44	YS	110	LEU	CA-CB-CG	8.42	134.66	115.30
32	YA	624	C	C5-C6-N1	8.38	125.19	121.00
32	YA	269	U	N1-C2-O2	8.33	128.63	122.80
21	QW	13	C	N3-C2-O2	-8.30	116.09	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	1658	C	C5-C6-N1	8.27	125.13	121.00
32	RA	859	G	C4-N9-C1'	8.26	137.24	126.50
1	XA	1301	U	C2-N1-C1'	8.26	127.61	117.70
1	XA	1149	C	N1-C2-O2	8.25	123.85	118.90
32	RA	1956	U	N3-C2-O2	-8.25	116.42	122.20
32	YA	270(Q)	C	N1-C2-O2	8.22	123.83	118.90
1	XA	1158	C	N3-C2-O2	-8.20	116.16	121.90
32	RA	2792	G	N3-C4-N9	8.18	130.91	126.00
1	XA	307	C	N1-C2-O2	8.17	123.80	118.90
1	QA	135	C	C6-N1-C2	-8.16	117.03	120.30
1	QA	307	C	N1-C2-O2	8.15	123.79	118.90
32	RA	884	C	C5-C6-N1	8.13	125.06	121.00
1	QA	1260	C	N1-C2-O2	8.12	123.77	118.90
32	RA	613	U	N3-C2-O2	-8.11	116.52	122.20
32	YA	2666	C	N3-C2-O2	-8.09	116.24	121.90
32	YA	2394	C	N3-C2-O2	-8.08	116.24	121.90
18	XS	59	PRO	CA-N-CD	-8.07	100.20	111.50
1	QA	237	C	N3-C4-C5	-8.07	118.67	121.90
32	RA	1640	C	N1-C2-O2	8.07	123.74	118.90
1	XA	1301	U	N3-C2-O2	-8.05	116.56	122.20
32	RA	69	C	C2-N1-C1'	8.04	127.64	118.80
1	XA	1158	C	C2-N1-C1'	8.01	127.61	118.80
1	XA	1031	G	N3-C4-C5	-8.01	124.59	128.60
32	YA	2726	U	N3-C2-O2	-8.01	116.59	122.20
32	RA	2477	C	N1-C2-O2	7.99	123.69	118.90
33	RB	51	G	N1-C6-O6	-7.98	115.11	119.90
32	RA	69	C	C5-C6-N1	7.98	124.99	121.00
32	YA	69	C	N1-C2-O2	7.97	123.68	118.90
32	YA	2873	A	N7-C8-N9	7.96	117.78	113.80
1	QA	1301	U	C2-N1-C1'	7.94	127.23	117.70
32	RA	2873	A	C8-N9-C4	-7.94	102.62	105.80
32	RA	613	U	N1-C2-O2	7.93	128.35	122.80
1	QA	328	C	C2-N1-C1'	7.92	127.52	118.80
32	YA	2584	U	C2-N1-C1'	7.92	127.21	117.70
32	RA	143	C	C5-C6-N1	7.91	124.96	121.00
32	YA	2051	A	N1-C2-N3	7.91	133.26	129.30
50	RY	55	TYR	N-CA-CB	7.91	124.84	110.60
32	RA	1313	U	C2-N1-C1'	7.90	127.18	117.70
1	QA	961	U	N3-C2-O2	-7.89	116.68	122.20
32	RA	753	C	C5-C6-N1	7.89	124.94	121.00
32	YA	286	C	C2-N1-C1'	7.88	127.47	118.80
1	QA	1301	U	C5-C6-N1	7.88	126.64	122.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	2226	C	N1-C2-O2	7.87	123.62	118.90
32	YA	2791	C	C6-N1-C1'	7.85	130.22	120.80
33	RB	31	C	C5-C6-N1	7.84	124.92	121.00
32	YA	2584	U	N3-C2-O2	-7.82	116.73	122.20
53	Y8	61	LEU	CA-CB-CG	7.81	133.26	115.30
1	QA	328	C	N3-C2-O2	-7.81	116.43	121.90
1	XA	1145	C	N1-C2-O2	7.80	123.58	118.90
1	XA	1158	C	C6-N1-C2	-7.78	117.19	120.30
32	YA	2161	C	N1-C2-O2	7.76	123.56	118.90
32	RA	749	C	N1-C2-O2	7.76	123.56	118.90
1	XA	328	C	C6-N1-C2	-7.76	117.20	120.30
33	RB	31	C	N3-C2-O2	-7.76	116.47	121.90
1	XA	1031	G	N3-C4-N9	7.72	130.63	126.00
1	QA	1086	U	N1-C2-O2	7.71	128.19	122.80
34	YD	29	PRO	CA-N-CD	-7.71	100.71	111.50
32	YA	435	C	N1-C2-O2	7.71	123.52	118.90
32	RA	1914	C	N3-C2-O2	-7.70	116.51	121.90
21	QW	13	C	C6-N1-C2	-7.69	117.22	120.30
32	YA	277	C	N1-C2-O2	7.68	123.51	118.90
32	YA	753	C	C5-C6-N1	7.68	124.84	121.00
1	XA	1128	C	C6-N1-C2	-7.68	117.23	120.30
21	XW	2	G	N3-C4-N9	7.67	130.60	126.00
32	YA	2573	C	O5'-P-OP1	7.67	119.91	110.70
1	QA	1066	C	N3-C2-O2	-7.67	116.53	121.90
32	YA	708	C	N1-C2-O2	7.66	123.50	118.90
32	YA	1588	C	C5-C6-N1	7.65	124.83	121.00
32	RA	269	U	N1-C2-O2	7.65	128.16	122.80
32	YA	2210	G	N3-C4-C5	-7.65	124.78	128.60
1	XA	1007	C	C5-C6-N1	7.64	124.82	121.00
32	YA	2394	C	C6-N1-C2	-7.62	117.25	120.30
32	RA	69	C	C6-N1-C2	-7.61	117.25	120.30
32	YA	1920	C	C5-C6-N1	7.61	124.81	121.00
32	RA	1914	C	C2-N1-C1'	7.61	127.17	118.80
32	YA	652	C	N3-C2-O2	-7.61	116.58	121.90
24	Y0	8	GLY	CA-C-N	-7.58	100.53	117.20
32	RA	143	C	C6-N1-C2	-7.58	117.27	120.30
32	RA	2584	U	C2-N1-C1'	7.56	126.78	117.70
32	RA	1920	C	C5-C6-N1	7.56	124.78	121.00
1	QA	1260	C	C6-N1-C2	-7.55	117.28	120.30
32	RA	2617	C	N1-C2-O2	7.54	123.42	118.90
1	QA	328	C	C6-N1-C2	-7.53	117.29	120.30
32	YA	1963	U	N1-C2-O2	7.52	128.06	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	1407	C	C6-N1-C2	-7.50	117.30	120.30
33	YB	27	C	N1-C2-O2	7.48	123.39	118.90
32	RA	2702	U	N3-C2-O2	-7.46	116.98	122.20
32	YA	1170	G	N3-C4-N9	7.46	130.47	126.00
32	RA	2827	C	C5-C6-N1	7.44	124.72	121.00
32	RA	309	G	O5'-P-OP1	7.42	119.61	110.70
32	RA	2053	G	C5-C6-N1	7.42	115.21	111.50
32	RA	527	C	N1-C2-O2	7.42	123.35	118.90
1	XA	328	C	C2-N1-C1'	7.41	126.95	118.80
1	XA	328	C	N3-C2-O2	-7.41	116.71	121.90
32	RA	93	C	C5-C6-N1	7.41	124.70	121.00
32	YA	2168	G	N3-C4-N9	7.40	130.44	126.00
32	YA	12	U	N3-C2-O2	-7.39	117.02	122.20
32	RA	2099	U	N1-C2-O2	7.39	127.97	122.80
32	RA	2294	C	C6-N1-C2	-7.39	117.34	120.30
1	XA	1149	C	N3-C2-O2	-7.37	116.74	121.90
8	QH	74	PRO	CA-N-CD	-7.36	101.20	111.50
32	RA	2226	C	N1-C2-O2	7.36	123.32	118.90
32	RA	1407	C	C2-N1-C1'	7.36	126.89	118.80
32	RA	2559	C	N1-C2-O2	7.33	123.30	118.90
32	RA	2346	A	O4'-C1'-N9	7.33	114.06	108.20
32	YA	1956	U	N3-C2-O2	-7.32	117.07	122.20
32	RA	2584	U	N3-C2-O2	-7.32	117.08	122.20
32	YA	1407	C	C2-N1-C1'	7.32	126.85	118.80
32	YA	143	C	C5-C6-N1	7.31	124.66	121.00
32	YA	994	C	C2-N1-C1'	7.31	126.84	118.80
32	RA	93	C	C6-N1-C2	-7.29	117.38	120.30
32	YA	2294	C	C6-N1-C2	-7.27	117.39	120.30
32	YA	2808	U	N3-C2-O2	-7.26	117.12	122.20
1	QA	1066	C	C2-N1-C1'	7.25	126.77	118.80
32	YA	2873	A	C8-N9-C4	-7.24	102.90	105.80
32	RA	1956	U	N1-C2-O2	7.24	127.87	122.80
32	YA	1159	U	N3-C2-O2	-7.24	117.13	122.20
18	XS	42	PRO	CA-N-CD	-7.24	101.37	111.50
1	XA	442	C	C6-N1-C2	-7.22	117.41	120.30
32	YA	373	U	N3-C2-O2	-7.22	117.15	122.20
32	RA	2791	C	C6-N1-C1'	7.21	129.46	120.80
32	RA	2099	U	N3-C2-O2	-7.20	117.16	122.20
1	QA	960	U	N1-C2-O2	7.20	127.84	122.80
32	RA	69	C	N1-C2-O2	7.20	123.22	118.90
32	YA	1640	C	N1-C2-O2	7.19	123.22	118.90
32	RA	2460	U	N1-C2-O2	7.19	127.83	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	1159	U	N1-C2-O2	7.18	127.82	122.80
32	YA	1881	C	C6-N1-C2	-7.17	117.43	120.30
1	QA	717	C	N1-C2-O2	7.16	123.20	118.90
32	RA	884	C	C6-N1-C2	-7.14	117.44	120.30
32	YA	270(Q)	C	N3-C2-O2	-7.14	116.90	121.90
1	QA	486	U	N1-C2-O2	7.14	127.80	122.80
1	QA	1086	U	N3-C2-O2	-7.13	117.20	122.20
32	YA	758	C	C6-N1-C2	-7.13	117.45	120.30
32	YA	1881	C	C5-C6-N1	7.12	124.56	121.00
32	YA	2210	G	N3-C4-N9	7.12	130.27	126.00
32	RA	2474	C	C6-N1-C2	-7.11	117.45	120.30
27	R4	6	HIS	N-CA-C	7.10	130.18	111.00
32	YA	1162	G	O4'-C1'-N9	7.10	113.88	108.20
32	YA	1430	C	C5-C6-N1	7.09	124.55	121.00
32	RA	881	G	N3-C4-N9	7.09	130.25	126.00
1	QA	960	U	N3-C2-O2	-7.08	117.24	122.20
32	RA	435	C	N1-C2-O2	7.08	123.15	118.90
32	YA	2827	C	C5-C6-N1	7.08	124.54	121.00
33	YB	31	C	C2-N1-C1'	7.07	126.57	118.80
32	RA	2052	G	C6-C5-N7	-7.06	126.16	130.40
32	RA	2688	U	N3-C2-O2	-7.06	117.26	122.20
32	YA	265	A	O4'-C1'-N9	7.04	113.84	108.20
32	YA	527	C	N3-C2-O2	-7.04	116.97	121.90
32	RA	2051	A	C2-N3-C4	-7.04	107.08	110.60
32	YA	2143	C	N3-C2-O2	-7.03	116.98	121.90
1	XA	18	C	C5-C6-N1	7.03	124.51	121.00
1	QA	1028(B)	C	C6-N1-C2	-7.03	117.49	120.30
32	RA	1407	C	C6-N1-C2	-7.02	117.49	120.30
32	YA	143	C	C6-N1-C2	-7.02	117.49	120.30
32	YA	753	C	C6-N1-C2	-7.01	117.50	120.30
33	YB	31	C	C5-C6-N1	7.00	124.50	121.00
32	RA	2666	C	N3-C2-O2	-7.00	117.00	121.90
32	RA	758	C	N1-C2-O2	6.99	123.09	118.90
1	QA	1158	C	C5-C6-N1	6.98	124.49	121.00
32	YA	2143	C	N1-C2-O2	6.97	123.08	118.90
32	RA	2827	C	C2-N1-C1'	6.97	126.47	118.80
32	YA	2559	C	N1-C2-O2	6.97	123.08	118.90
32	RA	2791	C	N1-C2-N3	6.97	124.08	119.20
32	YA	12	U	N1-C2-O2	6.97	127.68	122.80
32	RA	828	U	N1-C2-O2	6.95	127.66	122.80
32	YA	273(D)	C	C6-N1-C2	-6.94	117.52	120.30
32	RA	2053	G	C8-N9-C1'	6.93	136.01	127.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	270(U)	C	N1-C2-O2	6.93	123.06	118.90
32	RA	1588	C	N1-C2-O2	6.93	123.06	118.90
32	YA	277	C	C6-N1-C2	-6.92	117.53	120.30
32	RA	2752	C	N1-C2-O2	6.92	123.05	118.90
32	YA	2808	U	N1-C2-O2	6.92	127.64	122.80
32	RA	1781	C	N1-C2-O2	6.91	123.05	118.90
32	RA	2614	A	N3-C4-C5	-6.91	121.97	126.80
32	YA	708	C	C5-C6-N1	6.91	124.45	121.00
32	YA	2043	C	C5-C6-N1	6.90	124.45	121.00
32	YA	273(D)	C	C5-C6-N1	6.90	124.45	121.00
1	QA	1039	C	C6-N1-C2	-6.89	117.54	120.30
33	YB	36	C	N1-C2-O2	6.89	123.04	118.90
32	RA	2460	U	N3-C2-O2	-6.89	117.38	122.20
1	XA	442	C	C5-C6-N1	6.89	124.44	121.00
27	R4	22	ILE	C-N-CA	6.88	138.90	121.70
1	QA	1066	C	C6-N1-C2	-6.88	117.55	120.30
1	XA	4	U	N3-C2-O2	-6.88	117.39	122.20
32	YA	1588	C	C6-N1-C2	-6.87	117.55	120.30
1	XA	307	C	N3-C2-O2	-6.86	117.10	121.90
32	RA	1528	A	N7-C8-N9	6.86	117.23	113.80
32	RA	2335	A	O4'-C1'-N9	6.85	113.68	108.20
32	RA	537	C	C6-N1-C2	-6.85	117.56	120.30
1	XA	18	C	C6-N1-C2	-6.84	117.56	120.30
32	YA	234	C	N1-C2-O2	6.84	123.00	118.90
1	XA	209	U	N1-C2-O2	6.83	127.58	122.80
32	YA	1774	C	C6-N1-C2	-6.83	117.57	120.30
32	RA	279	C	C5-C6-N1	6.81	124.41	121.00
32	YA	2527	C	C5-C6-N1	6.81	124.41	121.00
32	RA	2559	C	C6-N1-C2	-6.81	117.58	120.30
32	YA	2720	U	N1-C2-O2	6.80	127.56	122.80
32	RA	2211	G	N3-C4-N9	6.80	130.08	126.00
32	YA	1588	C	N1-C2-O2	6.80	122.98	118.90
32	YA	2416	C	C5-C6-N1	6.80	124.40	121.00
21	QW	34	C	C6-N1-C2	-6.80	117.58	120.30
32	RA	1774	C	C6-N1-C2	-6.80	117.58	120.30
32	RA	2559	C	C5-C6-N1	6.80	124.40	121.00
32	YA	2791	C	C2-N1-C1'	-6.79	111.33	118.80
32	YA	1658	C	C6-N1-C2	-6.79	117.58	120.30
32	RA	2053	G	C5-C6-O6	-6.78	124.53	128.60
32	RA	856	C	N1-C2-O2	6.77	122.96	118.90
32	RA	2712	U	C2-N1-C1'	6.77	125.83	117.70
33	RB	27	C	N1-C2-O2	6.76	122.96	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	435	C	N3-C2-O2	-6.76	117.17	121.90
1	QA	186	C	N1-C2-O2	6.76	122.95	118.90
32	YA	856	C	N1-C2-O2	6.75	122.95	118.90
33	RB	30	C	C6-N1-C2	-6.75	117.60	120.30
32	YA	1963	U	N3-C2-O2	-6.75	117.48	122.20
1	XA	1128	C	C5-C6-N1	6.73	124.37	121.00
32	RA	1544	C	N3-C2-O2	-6.72	117.19	121.90
32	YA	1294	U	N1-C2-O2	6.72	127.50	122.80
35	RE	67	PHE	C-N-CA	6.71	138.47	121.70
32	YA	2294	C	C5-C6-N1	6.71	124.35	121.00
32	RA	2467	C	C6-N1-C2	-6.70	117.62	120.30
32	RA	753	C	C6-N1-C2	-6.70	117.62	120.30
32	YA	652	C	C6-N1-C2	-6.69	117.62	120.30
32	RA	1407	C	N1-C2-O2	6.69	122.91	118.90
1	QA	186	C	C6-N1-C2	-6.69	117.63	120.30
32	RA	1640	C	N3-C2-O2	-6.68	117.22	121.90
32	YA	1407	C	C5-C6-N1	6.68	124.34	121.00
1	QA	486	U	N3-C2-O2	-6.67	117.53	122.20
1	XA	848	C	C5-C6-N1	6.67	124.34	121.00
32	RA	2808	U	N3-C2-O2	-6.67	117.53	122.20
32	RA	2827	C	C6-N1-C2	-6.66	117.63	120.30
32	RA	1342	A	O4'-C1'-N9	6.66	113.53	108.20
32	YA	2712	U	C2-N1-C1'	6.66	125.69	117.70
32	RA	2726	U	C2-N1-C1'	6.66	125.69	117.70
32	RA	2053	G	C4-C5-C6	-6.66	114.81	118.80
32	YA	556	G	N7-C8-N9	6.65	116.43	113.10
1	QA	419	C	C6-N1-C2	-6.65	117.64	120.30
32	YA	1882	C	C6-N1-C2	-6.65	117.64	120.30
32	YA	2043	C	C6-N1-C2	-6.65	117.64	120.30
32	RA	2210	G	N3-C4-C5	-6.64	125.28	128.60
32	RA	2726	U	N3-C2-O2	-6.63	117.56	122.20
1	XA	4	U	N1-C2-O2	6.62	127.44	122.80
32	YA	1437	C	C6-N1-C2	-6.62	117.65	120.30
32	RA	2043	C	C5-C6-N1	6.61	124.31	121.00
32	RA	2477	C	N3-C2-O2	-6.61	117.27	121.90
32	YA	277	C	C2-N1-C1'	6.61	126.06	118.80
1	QA	1066	C	C5-C6-N1	6.60	124.30	121.00
33	RB	77	U	N1-C2-O2	6.60	127.42	122.80
32	YA	2161	C	N3-C2-O2	-6.60	117.28	121.90
1	XA	404	U	N3-C2-O2	-6.59	117.59	122.20
32	YA	1934	C	C6-N1-C2	-6.59	117.66	120.30
32	RA	279	C	C6-N1-C2	-6.59	117.67	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	708	C	N1-C2-O2	6.58	122.85	118.90
32	YA	613	U	N3-C2-O2	-6.58	117.59	122.20
32	YA	2559	C	C6-N1-C2	-6.57	117.67	120.30
32	RA	1899	G	N3-C2-N2	6.57	124.50	119.90
32	RA	1882	C	C6-N1-C2	-6.57	117.67	120.30
32	RA	1528	A	C8-N9-C4	-6.57	103.17	105.80
32	YA	2827	C	N1-C2-O2	6.57	122.84	118.90
1	QA	1109	C	N1-C2-O2	6.56	122.84	118.90
1	QA	1298	C	N1-C2-O2	6.56	122.84	118.90
32	YA	1956	U	N1-C2-O2	6.56	127.39	122.80
32	YA	1314	C	C6-N1-C2	-6.56	117.67	120.30
1	QA	307	C	N3-C2-O2	-6.56	117.31	121.90
32	YA	2688	U	C2-N1-C1'	6.56	125.57	117.70
34	RD	32	SER	C-N-CA	6.55	138.08	121.70
1	XA	1502	A	N7-C8-N9	6.55	117.08	113.80
32	YA	2666	C	C6-N1-C2	-6.54	117.68	120.30
32	RA	1170	G	N3-C4-N9	6.54	129.92	126.00
53	Y8	61	LEU	CB-CG-CD1	-6.54	99.89	111.00
1	QA	1028	C	N1-C2-O2	6.53	122.82	118.90
32	YA	2827	C	C6-N1-C2	-6.52	117.69	120.30
1	QA	536	C	N1-C2-O2	6.52	122.81	118.90
32	RA	105	C	N1-C2-O2	6.51	122.81	118.90
32	YA	2063	C	N1-C2-O2	6.51	122.81	118.90
32	YA	758	C	N1-C2-O2	6.50	122.80	118.90
32	YA	1294	U	N3-C2-O2	-6.50	117.65	122.20
32	YA	2827	C	C2-N1-C1'	6.50	125.95	118.80
32	RA	837	C	C6-N1-C2	-6.50	117.70	120.30
32	YA	613	U	N1-C2-O2	6.50	127.35	122.80
32	YA	862	G	N3-C4-N9	6.50	129.90	126.00
32	RA	1899	G	N3-C4-N9	6.49	129.90	126.00
32	YA	1920	C	C6-N1-C2	-6.49	117.70	120.30
32	YA	373	U	N1-C2-O2	6.49	127.34	122.80
32	RA	2052	G	C8-N9-C1'	6.49	135.44	127.00
32	YA	2226	C	N3-C2-O2	-6.48	117.36	121.90
32	RA	1644	C	C6-N1-C2	-6.47	117.71	120.30
32	RA	1979	C	N1-C2-O2	6.47	122.78	118.90
32	YA	613	U	C2-N1-C1'	6.47	125.47	117.70
32	YA	2572	A	P-O3'-C3'	6.47	127.47	119.70
32	RA	234	C	N1-C2-O2	6.47	122.78	118.90
32	RA	1774	C	N1-C2-O2	6.47	122.78	118.90
32	YA	1313	U	C2-N1-C1'	6.47	125.46	117.70
32	YA	2063	C	N3-C2-O2	-6.47	117.37	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	RB	77	U	N3-C2-O2	-6.46	117.67	122.20
32	RA	1314	C	C2-N1-C1'	6.45	125.90	118.80
32	YA	2335	A	O4'-C1'-N9	6.45	113.36	108.20
32	YA	2527	C	C6-N1-C2	-6.45	117.72	120.30
32	YA	1407	C	N1-C2-O2	6.45	122.77	118.90
32	RA	1882	C	C5-C6-N1	6.45	124.22	121.00
32	RA	1920	C	C6-N1-C2	-6.45	117.72	120.30
32	YA	1314	C	C2-N1-C1'	6.44	125.88	118.80
32	YA	2168	G	N3-C4-C5	-6.43	125.39	128.60
32	RA	2211	G	N3-C4-C5	-6.43	125.39	128.60
32	RA	1679	U	N3-C2-O2	-6.43	117.70	122.20
32	RA	1544	C	C2-N1-C1'	6.42	125.87	118.80
1	XA	1145	C	N3-C2-O2	-6.42	117.40	121.90
32	RA	2210	G	N3-C4-N9	6.42	129.85	126.00
1	QA	58	C	C6-N1-C2	-6.42	117.73	120.30
1	XA	1158	C	C5-C6-N1	6.41	124.21	121.00
1	XA	91	C	N3-C2-O2	-6.41	117.41	121.90
32	YA	1417	C	C5-C6-N1	6.41	124.20	121.00
33	RB	51	G	C5-C6-O6	6.40	132.44	128.60
32	YA	2791	C	N1-C2-N3	6.40	123.68	119.20
1	QA	237	C	C6-N1-C2	-6.40	117.74	120.30
32	RA	1640	C	C6-N1-C2	-6.40	117.74	120.30
32	RA	758	C	N3-C2-O2	-6.39	117.43	121.90
1	XA	1007	C	C2-N1-C1'	6.39	125.83	118.80
1	QA	328	C	C5-C6-N1	6.38	124.19	121.00
32	RA	1180	C	C2-N1-C1'	6.38	125.82	118.80
1	QA	186	C	C2-N1-C1'	6.38	125.82	118.80
1	QA	186	C	C5-C6-N1	6.37	124.19	121.00
32	RA	309	G	O4'-C1'-N9	6.36	113.29	108.20
1	XA	330	C	N3-C2-O2	-6.36	117.45	121.90
1	XA	1086	U	C5-C6-N1	6.36	125.88	122.70
32	RA	860	U	N1-C2-O2	6.35	127.25	122.80
32	RA	1267	U	N3-C2-O2	-6.35	117.75	122.20
32	YA	994	C	C6-N1-C1'	-6.35	113.18	120.80
34	RD	24	ILE	C-N-CA	6.35	137.58	121.70
35	RE	63	LEU	N-CA-C	-6.35	93.86	111.00
32	RA	2063	C	N1-C2-O2	6.34	122.70	118.90
32	RA	1588	C	C5-C6-N1	6.33	124.17	121.00
32	RA	2847	U	N1-C2-O2	6.33	127.23	122.80
32	YA	1406	U	N1-C2-O2	6.33	127.23	122.80
32	RA	105	C	C5-C6-N1	6.32	124.16	121.00
21	QV	56	C	N1-C2-O2	6.32	122.69	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	991	U	N1-C2-O2	6.32	127.22	122.80
32	YA	527	C	C2-N1-C1'	6.31	125.74	118.80
32	YA	1188	U	N1-C2-O2	6.31	127.22	122.80
32	YA	2174	C	N1-C2-O2	6.31	122.69	118.90
32	YA	1640	C	C6-N1-C2	-6.30	117.78	120.30
32	YA	708	C	C6-N1-C2	-6.30	117.78	120.30
1	QA	1502	A	N7-C8-N9	6.30	116.95	113.80
1	XA	1007	C	N1-C2-O2	6.30	122.68	118.90
32	YA	270(Q)	C	C6-N1-C2	-6.30	117.78	120.30
32	RA	435	C	N3-C2-O2	-6.29	117.50	121.90
32	YA	1947	C	C5-C6-N1	6.29	124.14	121.00
1	XA	973	G	C4-N9-C1'	-6.28	118.33	126.50
32	YA	1675	C	N1-C2-O2	6.28	122.67	118.90
32	RA	2394	C	C6-N1-C2	-6.28	117.79	120.30
32	YA	1774	C	N1-C2-O2	6.28	122.67	118.90
32	RA	2226	C	N3-C2-O2	-6.27	117.51	121.90
32	YA	2217	G	N9-C1'-C2'	-6.27	105.10	112.00
32	RA	9	U	N1-C2-O2	6.27	127.19	122.80
32	RA	1180	C	N1-C2-O2	6.27	122.66	118.90
32	RA	2827	C	N1-C2-O2	6.26	122.66	118.90
32	RA	758	C	C6-N1-C2	-6.26	117.80	120.30
32	RA	828	U	N3-C2-O2	-6.25	117.82	122.20
1	XA	4	U	C5-C6-N1	6.25	125.83	122.70
32	RA	2527	C	C5-C6-N1	6.25	124.13	121.00
32	RA	1233	C	C6-N1-C2	-6.25	117.80	120.30
32	RA	2604	U	N1-C2-O2	6.25	127.17	122.80
32	YA	758	C	N3-C2-O2	-6.25	117.53	121.90
1	XA	58	C	C6-N1-C2	-6.25	117.80	120.30
1	XA	1126	U	C5-C6-N1	6.24	125.82	122.70
1	QA	442	C	N1-C2-O2	6.24	122.64	118.90
32	RA	2128	C	N1-C2-O2	6.24	122.64	118.90
32	RA	2205	C	C6-N1-C2	-6.24	117.81	120.30
1	XA	754	C	C2-N1-C1'	6.24	125.66	118.80
33	YB	35	U	N1-C2-O2	6.24	127.16	122.80
32	RA	2666	C	C6-N1-C2	-6.23	117.81	120.30
32	RA	2752	C	N3-C2-O2	-6.23	117.54	121.90
33	YB	27	C	C5-C6-N1	6.23	124.12	121.00
32	RA	309	G	OP1-P-OP2	-6.23	110.26	119.60
32	RA	1950	G	C4-N9-C1'	6.23	134.59	126.50
32	YA	153	C	N1-C2-O2	6.23	122.64	118.90
32	YA	537	C	C5-C6-N1	6.23	124.11	121.00
32	RA	2343	C	N1-C2-O2	6.23	122.64	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	749	C	N3-C2-O2	-6.22	117.54	121.90
32	YA	1075	C	C5-C6-N1	6.22	124.11	121.00
32	RA	2394	C	N1-C2-O2	6.22	122.63	118.90
32	YA	2226	C	C6-N1-C2	-6.22	117.81	120.30
1	XA	328	C	C5-C6-N1	6.22	124.11	121.00
32	YA	708	C	C2-N1-C1'	6.22	125.64	118.80
32	YA	2688	U	N3-C2-O2	-6.22	117.85	122.20
32	YA	2128	C	N1-C2-O2	6.21	122.63	118.90
32	RA	860	U	N3-C2-O2	-6.21	117.85	122.20
32	YA	2726	U	N1-C2-O2	6.21	127.14	122.80
32	YA	1314	C	C5-C6-N1	6.21	124.10	121.00
32	YA	277	C	N3-C2-O2	-6.20	117.56	121.90
32	YA	1881	C	C2-N1-C1'	6.20	125.62	118.80
32	RA	1588	C	C6-N1-C2	-6.20	117.82	120.30
32	RA	2808	U	N1-C2-O2	6.20	127.14	122.80
1	XA	419	C	C6-N1-C2	-6.20	117.82	120.30
32	RA	527	C	N3-C2-O2	-6.19	117.57	121.90
32	RA	1437	C	C6-N1-C2	-6.19	117.82	120.30
1	XA	991	U	N3-C2-O2	-6.19	117.87	122.20
33	RB	47	C	N3-C2-O2	-6.19	117.57	121.90
1	QA	1322	C	C2-N1-C1'	6.18	125.60	118.80
32	RA	384	U	N1-C2-O2	6.18	127.13	122.80
32	RA	1779	U	C2-N1-C1'	6.18	125.11	117.70
32	RA	2294	C	C5-C6-N1	6.18	124.09	121.00
1	XA	1407	C	C6-N1-C2	-6.18	117.83	120.30
21	XW	2	G	N3-C4-C5	-6.18	125.51	128.60
32	YA	1406	U	C5-C6-N1	6.18	125.79	122.70
33	YB	30	C	C6-N1-C2	-6.18	117.83	120.30
32	RA	1588	C	C2-N1-C1'	6.17	125.59	118.80
35	RE	67	PHE	N-CA-C	-6.17	94.33	111.00
32	YA	2065	C	C5-C6-N1	6.17	124.09	121.00
32	RA	2166	G	C4-N9-C1'	6.17	134.52	126.50
32	YA	1914	C	C6-N1-C2	-6.16	117.83	120.30
32	RA	2052	G	N7-C8-N9	6.16	116.18	113.10
27	R4	40	HIS	N-CA-C	6.16	127.62	111.00
1	XA	1028(B)	C	C6-N1-C2	-6.15	117.84	120.30
1	XA	1038	C	N3-C2-O2	-6.15	117.59	121.90
32	YA	1882	C	C5-C6-N1	6.15	124.08	121.00
32	RA	1159	U	N3-C2-O2	-6.15	117.89	122.20
54	RF	25	PRO	CA-N-CD	-6.15	102.89	111.50
1	QA	1395	C	N1-C2-O2	6.15	122.59	118.90
32	YA	1437	C	C5-C6-N1	6.14	124.07	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	2394	C	C5-C6-N1	6.14	124.07	121.00
32	RA	2043	C	C6-N1-C2	-6.14	117.84	120.30
32	YA	2559	C	C5-C6-N1	6.14	124.07	121.00
32	RA	1881	C	C6-N1-C2	-6.13	117.85	120.30
33	RB	31	C	C2-N3-C4	6.13	122.97	119.90
1	QA	36	C	C5-C6-N1	6.13	124.06	121.00
1	XA	1406	U	N3-C2-O2	-6.13	117.91	122.20
32	YA	2041	U	N1-C2-O2	6.13	127.09	122.80
33	YB	36	C	N3-C2-O2	-6.13	117.61	121.90
39	YN	114	ARG	N-CA-C	-6.12	94.46	111.00
32	RA	270(U)	C	C6-N1-C2	-6.12	117.85	120.30
32	RA	2292	C	C5-C6-N1	6.12	124.06	121.00
32	RA	1417	C	C5-C6-N1	6.12	124.06	121.00
1	XA	749	C	C6-N1-C2	-6.12	117.85	120.30
1	QA	442	C	C6-N1-C2	-6.12	117.85	120.30
32	RA	2791	C	C6-N1-C2	-6.11	117.86	120.30
32	YA	32	C	N1-C2-O2	6.11	122.57	118.90
32	YA	637	A	C4-N9-C1'	-6.11	115.30	126.30
32	YA	1788	C	C6-N1-C2	-6.11	117.86	120.30
1	XA	801	U	N1-C2-O2	6.10	127.07	122.80
1	QA	1109	C	N3-C2-O2	-6.10	117.63	121.90
21	QW	13	C	C5-C6-N1	6.09	124.05	121.00
32	RA	2702	U	N1-C2-O2	6.09	127.07	122.80
32	YA	1934	C	C5-C6-N1	6.09	124.05	121.00
32	YA	529	A	C8-N9-C4	-6.09	103.36	105.80
1	XA	1007	C	C6-N1-C2	-6.09	117.86	120.30
32	RA	2166	G	C8-N9-C1'	-6.09	119.08	127.00
32	RA	2712	U	N1-C2-O2	6.08	127.06	122.80
32	YA	273(D)	C	C2-N1-C1'	6.08	125.49	118.80
1	XA	209	U	C2-N1-C1'	6.08	125.00	117.70
32	RA	1180	C	C5-C6-N1	6.08	124.04	121.00
1	XA	91	C	N1-C2-O2	6.08	122.55	118.90
32	RA	828	U	C5-C6-N1	6.07	125.73	122.70
32	YA	2051	A	N9-C4-C5	-6.07	103.37	105.80
32	RA	1180	C	C6-N1-C2	-6.06	117.88	120.30
32	RA	1430	C	C5-C6-N1	6.06	124.03	121.00
32	YA	860	U	N1-C2-O2	6.06	127.04	122.80
32	YA	1881	C	N1-C2-O2	6.05	122.53	118.90
32	YA	2474	C	N1-C2-O2	6.05	122.53	118.90
44	YS	109	GLY	C-N-CA	6.05	136.82	121.70
32	YA	153	C	C5-C6-N1	6.05	124.02	121.00
1	QA	419	C	C5-C6-N1	6.05	124.02	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	169	C	N1-C2-O2	6.05	122.53	118.90
32	YA	624	C	N1-C2-O2	6.05	122.53	118.90
32	YA	624	C	C2-N1-C1'	6.05	125.45	118.80
32	YA	286	C	N1-C2-O2	6.04	122.53	118.90
32	RA	828	U	C6-N1-C1'	-6.04	112.74	121.20
1	QA	1002	G	N7-C8-N9	6.04	116.12	113.10
1	QA	36	C	C6-N1-C2	-6.04	117.89	120.30
1	XA	1132	C	N1-C2-O2	6.04	122.52	118.90
21	XV	20	U	N3-C2-O2	-6.04	117.97	122.20
32	YA	234	C	N3-C2-O2	-6.03	117.68	121.90
1	QA	1007	C	C2-N1-C1'	6.02	125.42	118.80
32	RA	1979	C	C6-N1-C2	-6.02	117.89	120.30
32	RA	2063	C	C6-N1-C2	-6.02	117.89	120.30
32	RA	2063	C	N3-C2-O2	-6.02	117.68	121.90
39	RN	114	ARG	N-CA-C	-6.02	94.74	111.00
32	YA	1267	U	N3-C2-O2	-6.02	117.98	122.20
32	YA	459	U	N1-C2-O2	6.02	127.01	122.80
33	YB	35	U	N3-C2-O2	-6.02	117.99	122.20
32	YA	31	C	C5-C6-N1	6.01	124.01	121.00
33	YB	31	C	C2-N3-C4	6.01	122.91	119.90
32	RA	1930	G	P-O3'-C3'	6.01	126.91	119.70
32	YA	2321	G	N3-C4-C5	-6.01	125.59	128.60
32	RA	1005	C	C6-N1-C2	-6.01	117.90	120.30
32	YA	2041	U	C5-C6-N1	6.01	125.70	122.70
24	R0	48	GLY	N-CA-C	6.00	128.11	113.10
32	YA	1430	C	C6-N1-C2	-6.00	117.90	120.30
47	YV	52	VAL	N-CA-C	-6.00	94.79	111.00
32	YA	637	A	C8-N9-C1'	6.00	138.50	127.70
32	RA	2248	C	N1-C2-O2	6.00	122.50	118.90
1	XA	404	U	N1-C2-O2	6.00	127.00	122.80
32	YA	39	C	C5-C6-N1	5.99	124.00	121.00
32	YA	2585	U	N1-C2-O2	5.99	126.99	122.80
32	YA	1963	U	C2-N1-C1'	5.99	124.88	117.70
1	QA	1158	C	C6-N1-C1'	-5.98	113.62	120.80
1	QA	961	U	N1-C2-N3	5.98	118.49	114.90
32	RA	270(U)	C	N3-C2-O2	-5.98	117.72	121.90
32	RA	1267	U	N1-C2-O2	5.98	126.98	122.80
32	YA	243	U	N1-C2-O2	5.98	126.98	122.80
32	YA	1788	C	C5-C6-N1	5.98	123.99	121.00
1	QA	623	C	N1-C2-O2	5.97	122.48	118.90
32	RA	227	A	P-O3'-C3'	5.97	126.87	119.70
32	RA	384	U	N3-C2-O2	-5.97	118.02	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	2759	G	N3-C4-N9	5.97	129.58	126.00
32	RA	2575	C	C6-N1-C2	-5.97	117.91	120.30
32	RA	907	U	N3-C2-O2	-5.97	118.02	122.20
1	QA	596	C	N1-C2-O2	5.96	122.48	118.90
1	QA	1298	C	C2-N1-C1'	5.96	125.36	118.80
1	QA	1322	C	C6-N1-C2	-5.96	117.91	120.30
1	QA	749	C	C6-N1-C2	-5.96	117.92	120.30
1	XA	1031	G	C2-N3-C4	5.96	114.88	111.90
32	RA	1735	C	N1-C2-O2	5.95	122.47	118.90
32	RA	881	G	N3-C4-C5	-5.95	125.62	128.60
32	RA	2066	C	N1-C2-O2	5.95	122.47	118.90
32	YA	1499	C	C6-N1-C2	-5.95	117.92	120.30
32	YA	277	C	C5-C6-N1	5.95	123.97	121.00
32	RA	1881	C	C5-C6-N1	5.95	123.97	121.00
21	QW	34	C	C5-C6-N1	5.94	123.97	121.00
32	RA	867	C	N1-C2-O2	5.94	122.47	118.90
32	YA	384	U	N3-C2-O2	-5.94	118.04	122.20
32	YA	69	C	C6-N1-C2	-5.94	117.93	120.30
1	QA	135	C	N3-C2-O2	-5.93	117.75	121.90
32	RA	1950	G	O4'-C1'-N9	5.93	112.94	108.20
32	YA	269	U	C2-N1-C1'	5.93	124.81	117.70
24	Y0	8	GLY	C-N-CA	-5.92	106.89	121.70
32	YA	2656	U	N1-C2-O2	5.92	126.95	122.80
32	RA	1598	C	N1-C2-O2	5.92	122.45	118.90
32	YA	2456	C	C5-C6-N1	5.92	123.96	121.00
32	YA	1514	U	N1-C2-O2	5.92	126.94	122.80
32	YA	1914	C	C2-N1-C1'	5.92	125.31	118.80
32	RA	1304	C	C6-N1-C2	-5.92	117.93	120.30
32	RA	1314	C	C5-C6-N1	5.91	123.96	121.00
1	XA	186	C	C6-N1-C2	-5.91	117.94	120.30
32	YA	2792	G	N3-C4-N9	5.91	129.55	126.00
1	XA	1502	A	C8-N9-C4	-5.91	103.44	105.80
1	QA	1031	G	N3-C4-C5	-5.90	125.65	128.60
32	RA	273(D)	C	C6-N1-C2	-5.90	117.94	120.30
32	RA	2527	C	C6-N1-C2	-5.90	117.94	120.30
32	RA	1437	C	C5-C6-N1	5.90	123.95	121.00
32	RA	2041	U	N1-C2-O2	5.90	126.93	122.80
32	RA	2065	C	C5-C6-N1	5.90	123.95	121.00
34	RD	33	LEU	CA-CB-CG	5.90	128.87	115.30
32	YA	288	C	C2-N1-C1'	5.90	125.29	118.80
21	XV	64	G	C4-N9-C1'	5.89	134.16	126.50
32	RA	1774	C	N3-C2-O2	-5.89	117.78	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	2688	U	C2-N1-C1'	5.89	124.76	117.70
1	XA	442	C	N1-C2-O2	5.88	122.43	118.90
32	YA	9	U	C5-C6-N1	5.88	125.64	122.70
32	RA	2667	C	N1-C2-O2	5.88	122.43	118.90
32	YA	69	C	C5-C6-N1	5.87	123.94	121.00
32	YA	384	U	N1-C2-O2	5.87	126.91	122.80
32	YA	974	G	C4-N9-C1'	-5.87	118.87	126.50
32	RA	459	U	N1-C2-O2	5.87	126.91	122.80
32	RA	1505	C	C5-C6-N1	5.87	123.93	121.00
32	YA	2063	C	C6-N1-C2	-5.87	117.95	120.30
32	YA	343	C	C6-N1-C2	-5.86	117.95	120.30
1	XA	1406	U	N1-C2-O2	5.86	126.90	122.80
1	QA	341	C	C6-N1-C2	-5.86	117.96	120.30
21	XV	20	U	N1-C2-O2	5.86	126.90	122.80
1	XA	1383	C	N1-C2-O2	5.85	122.41	118.90
1	XA	1395	C	N1-C2-O2	5.85	122.41	118.90
1	XA	209	U	N3-C2-O2	-5.85	118.11	122.20
34	RD	36	PRO	CA-N-CD	-5.85	103.31	111.50
1	XA	801	U	N3-C2-O2	-5.84	118.11	122.20
32	YA	1640	C	C5-C6-N1	5.84	123.92	121.00
33	YB	27	C	C6-N1-C2	-5.84	117.96	120.30
1	QA	79	G	N3-C4-C5	-5.84	125.68	128.60
32	RA	2847	U	N3-C2-O2	-5.84	118.11	122.20
33	YB	44	G	C4-N9-C1'	-5.83	118.91	126.50
32	RA	528	A	C8-N9-C4	-5.83	103.47	105.80
32	RA	588	U	C5-C6-N1	5.83	125.61	122.70
32	RA	2585	U	N1-C2-O2	5.83	126.88	122.80
32	RA	2312	U	C5-C6-N1	5.83	125.61	122.70
32	RA	373	U	N3-C2-O2	-5.82	118.12	122.20
32	YA	104	U	N3-C2-O2	-5.82	118.13	122.20
1	XA	169	C	C6-N1-C2	-5.82	117.97	120.30
21	QW	68	C	C5-C6-N1	5.81	123.91	121.00
32	RA	960	A	C5-C6-N6	-5.81	119.05	123.70
1	XA	961	U	N1-C2-N3	5.81	118.39	114.90
32	YA	1774	C	C5-C6-N1	5.81	123.90	121.00
32	RA	2616	C	C5-C6-N1	5.80	123.90	121.00
32	RA	1300	U	P-O3'-C3'	5.80	126.66	119.70
1	XA	186	C	C5-C6-N1	5.80	123.90	121.00
1	QA	1031	G	N3-C4-N9	5.80	129.48	126.00
32	RA	2723	C	C6-N1-C2	-5.80	117.98	120.30
32	YA	2254	C	C6-N1-C2	-5.80	117.98	120.30
1	QA	1406	U	N1-C2-O2	5.79	126.86	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	105	C	C6-N1-C2	-5.79	117.98	120.30
32	YA	1202	C	N1-C2-O2	5.79	122.38	118.90
32	RA	676	A	N7-C8-N9	5.79	116.69	113.80
32	YA	1141	U	P-O3'-C3'	5.79	126.65	119.70
32	RA	2615	U	C5-C6-N1	5.79	125.59	122.70
32	YA	2287	A	C4-N9-C1'	-5.79	115.89	126.30
32	YA	1947	C	C6-N1-C2	-5.78	117.99	120.30
1	XA	1439	C	N1-C2-O2	5.78	122.37	118.90
32	RA	2792	G	N3-C4-C5	-5.78	125.71	128.60
32	YA	881	G	N3-C4-N9	5.78	129.47	126.00
32	RA	1102	C	N1-C2-O2	5.78	122.37	118.90
32	RA	363(E)	U	N1-C2-O2	5.78	126.84	122.80
32	RA	1406	U	N1-C2-O2	5.77	126.84	122.80
32	YA	104	U	N1-C2-O2	5.77	126.84	122.80
32	RA	2604	U	N3-C2-O2	-5.77	118.16	122.20
32	YA	1233	C	C6-N1-C2	-5.77	117.99	120.30
45	YT	105	LEU	CA-CB-CG	5.77	128.57	115.30
32	RA	2403	C	C6-N1-C2	-5.77	117.99	120.30
1	QA	486	U	C5-C6-N1	5.76	125.58	122.70
32	RA	1499	C	C6-N1-C2	-5.76	118.00	120.30
32	RA	269	U	C6-N1-C2	-5.76	117.55	121.00
1	XA	31	G	C4-N9-C1'	5.76	133.98	126.50
1	XA	4	U	C6-N1-C2	-5.75	117.55	121.00
1	XA	1301	U	C5-C6-N1	5.75	125.58	122.70
32	RA	708	C	C6-N1-C2	-5.75	118.00	120.30
32	RA	1304	C	C5-C6-N1	5.75	123.88	121.00
32	RA	1499	C	C5-C6-N1	5.75	123.88	121.00
32	RA	708	C	C5-C6-N1	5.75	123.87	121.00
32	YA	2723	C	C6-N1-C2	-5.75	118.00	120.30
1	QA	754	C	C2-N1-C1'	5.75	125.12	118.80
1	XA	1325	C	C6-N1-C2	-5.75	118.00	120.30
1	XA	1362(A)	C	N3-C2-O2	-5.74	117.88	121.90
32	RA	1314	C	N1-C2-O2	5.74	122.34	118.90
1	XA	1059	C	C6-N1-C2	-5.74	118.00	120.30
32	YA	588	U	C5-C6-N1	5.74	125.57	122.70
32	YA	1644	C	C6-N1-C2	-5.73	118.01	120.30
43	RR	75	LEU	CA-CB-CG	5.73	128.48	115.30
1	QA	54	C	N1-C2-O2	5.73	122.34	118.90
32	YA	974(A)	C	N1-C2-O2	5.72	122.33	118.90
1	QA	91	C	C6-N1-C2	-5.72	118.01	120.30
32	RA	154	G	N3-C4-N9	5.72	129.43	126.00
32	RA	2064	C	C6-N1-C2	-5.72	118.01	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	2254	C	N1-C2-O2	5.71	122.33	118.90
32	RA	2517	C	C2-N1-C1'	5.71	125.08	118.80
1	XA	596	C	C6-N1-C2	-5.71	118.02	120.30
1	QA	536	C	C6-N1-C2	-5.71	118.02	120.30
32	RA	1385	G	C8-N9-C1'	5.71	134.43	127.00
32	YA	41	C	C5-C6-N1	5.71	123.86	121.00
32	RA	373	U	N1-C2-O2	5.71	126.80	122.80
32	RA	1170	G	N3-C4-C5	-5.70	125.75	128.60
32	YA	1549	C	N1-C2-O2	5.70	122.32	118.90
1	XA	405	U	N1-C2-O2	5.70	126.79	122.80
1	QA	749	C	N3-C2-O2	-5.69	117.91	121.90
1	QA	999	U	C5-C6-N1	5.69	125.55	122.70
32	RA	857	C	N1-C2-O2	5.69	122.31	118.90
1	XA	848	C	C6-N1-C2	-5.69	118.02	120.30
32	YA	69	C	N3-C2-O2	-5.69	117.92	121.90
32	YA	2244	U	N3-C4-O4	5.69	123.38	119.40
1	QA	1059	C	C6-N1-C2	-5.69	118.02	120.30
32	RA	1474	C	N1-C2-O2	5.69	122.31	118.90
32	RA	114	U	C5-C6-N1	5.69	125.54	122.70
32	RA	1022	G	P-O3'-C3'	5.69	126.53	119.70
32	RA	1385	G	C4-N9-C1'	-5.69	119.11	126.50
32	RA	2053	G	N1-C2-N3	-5.69	120.49	123.90
33	YB	44	G	C8-N9-C1'	5.69	134.39	127.00
32	YA	1679	U	N3-C2-O2	-5.68	118.22	122.20
32	RA	1407	C	C5-C6-N1	5.68	123.84	121.00
32	YA	2065	C	C6-N1-C2	-5.68	118.03	120.30
32	RA	308	G	O3'-P-O5'	5.68	114.78	104.00
32	YA	174	C	N1-C2-O2	5.68	122.31	118.90
32	RA	2205	C	C5-C6-N1	5.67	123.84	121.00
39	YN	114	ARG	C-N-CA	5.67	135.88	121.70
32	YA	286	C	C6-N1-C1'	-5.67	114.00	120.80
32	RA	274	G	C8-N9-C4	-5.67	104.13	106.40
32	RA	1686	C	C6-N1-C2	-5.67	118.03	120.30
21	XV	64	G	C8-N9-C1'	-5.67	119.63	127.00
32	YA	459	U	N3-C2-O2	-5.67	118.23	122.20
32	YA	2292	C	C5-C6-N1	5.67	123.83	121.00
32	RA	1314	C	C6-N1-C2	-5.66	118.03	120.30
32	RA	1899	G	C6-C5-N7	-5.66	127.00	130.40
32	YA	288	C	C6-N1-C2	-5.66	118.03	120.30
1	XA	442	C	C2-N1-C1'	5.66	125.03	118.80
32	YA	2226	C	C5-C6-N1	5.66	123.83	121.00
1	QA	174	C	C5-C6-N1	5.66	123.83	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	2646	C	N1-C2-O2	5.66	122.30	118.90
32	YA	2527	C	N1-C2-O2	5.66	122.29	118.90
32	YA	1406	U	N3-C2-O2	-5.65	118.24	122.20
32	RA	1971	A	C2-N3-C4	5.65	113.42	110.60
32	RA	2791	C	C5-C4-N4	5.65	124.16	120.20
32	RA	2053	G	C4-N9-C1'	-5.65	119.16	126.50
1	QA	435	C	C5-C6-N1	5.65	123.82	121.00
1	QA	1100	C	O4'-C1'-N1	5.65	112.72	108.20
32	YA	2287	A	N3-C4-N9	-5.65	122.88	127.40
32	RA	1735	C	C6-N1-C2	-5.64	118.04	120.30
32	YA	1076	C	C5-C6-N1	5.64	123.82	121.00
32	YA	2167	U	N3-C2-O2	-5.64	118.25	122.20
33	RB	88	C	N1-C2-O2	5.64	122.28	118.90
1	QA	1406	U	N3-C2-O2	-5.64	118.25	122.20
1	XA	596	C	N1-C2-O2	5.64	122.28	118.90
21	QV	56	C	N3-C2-O2	-5.63	117.96	121.90
32	RA	1499	C	N1-C2-O2	5.63	122.28	118.90
32	RA	1679	U	N1-C2-O2	5.63	126.74	122.80
38	RI	142	VAL	N-CA-CB	5.63	123.89	111.50
32	YA	860	U	N3-C2-O2	-5.63	118.26	122.20
32	RA	2791	C	C2-N1-C1'	-5.63	112.61	118.80
1	XA	330	C	C6-N1-C2	-5.63	118.05	120.30
32	YA	672	C	C5-C6-N1	5.63	123.81	121.00
1	QA	972	C	C6-N1-C2	-5.63	118.05	120.30
1	QA	1263	C	N1-C2-O2	5.62	122.27	118.90
32	RA	527	C	C2-N1-C1'	5.62	124.98	118.80
1	QA	1065	U	P-O3'-C3'	5.62	126.44	119.70
37	RH	53	GLU	C-N-CA	5.62	135.75	121.70
32	YA	2343	C	N1-C2-O2	5.62	122.27	118.90
32	YA	1882	C	C2-N1-C1'	5.61	124.97	118.80
1	QA	1003	G	N3-C4-N9	5.61	129.37	126.00
32	RA	2051	A	N9-C4-C5	-5.61	103.56	105.80
32	YA	529	A	C2-N3-C4	5.61	113.41	110.60
32	RA	1644	C	N1-C2-O2	5.61	122.27	118.90
32	YA	2501	C	C2-N1-C1'	-5.61	112.63	118.80
1	XA	91	C	C6-N1-C2	-5.61	118.06	120.30
32	RA	2052	G	C5-C6-O6	-5.60	125.24	128.60
32	YA	1402	C	C6-N1-C2	-5.60	118.06	120.30
33	YB	51	G	N1-C6-O6	-5.60	116.54	119.90
32	RA	894	C	C6-N1-C2	-5.60	118.06	120.30
32	RA	1610	A	N7-C8-N9	5.60	116.60	113.80
32	YA	1022	G	P-O3'-C3'	5.60	126.42	119.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	1686	C	N1-C2-O2	5.59	122.26	118.90
32	RA	1835	G	N3-C4-C5	-5.59	125.80	128.60
32	RA	153	C	N1-C2-O2	5.59	122.25	118.90
1	QA	187	C	N1-C2-O2	5.59	122.25	118.90
32	YA	556	G	C6-C5-N7	-5.59	127.05	130.40
1	QA	993	G	C6-C5-N7	-5.59	127.05	130.40
32	YA	783	A	C8-N9-C4	-5.59	103.56	105.80
32	RA	2896	C	N1-C2-O2	5.58	122.25	118.90
32	RA	1544	C	C6-N1-C2	-5.58	118.07	120.30
32	RA	2575	C	C5-C6-N1	5.58	123.79	121.00
1	XA	1346	A	P-O3'-C3'	5.58	126.40	119.70
32	YA	1437	C	N1-C2-O2	5.58	122.25	118.90
33	YB	77	U	N1-C2-O2	5.58	126.70	122.80
32	YA	1267	U	C2-N1-C1'	5.58	124.39	117.70
32	YA	2617	C	C5-C6-N1	5.58	123.79	121.00
1	QA	993	G	N3-C4-N9	5.57	129.34	126.00
32	YA	1233	C	N1-C2-O2	5.57	122.24	118.90
32	YA	1267	U	N1-C2-O2	5.57	126.70	122.80
32	RA	837	C	C5-C6-N1	5.57	123.78	121.00
32	YA	1233	C	C5-C6-N1	5.57	123.78	121.00
32	RA	2617	C	C5-C6-N1	5.57	123.78	121.00
32	YA	2474	C	N3-C2-O2	-5.57	118.00	121.90
1	QA	328	C	P-O3'-C3'	5.57	126.38	119.70
32	RA	1735	C	C5-C6-N1	5.57	123.78	121.00
32	YA	2210	G	C2-N3-C4	5.56	114.68	111.90
32	RA	1781	C	N3-C2-O2	-5.56	118.01	121.90
33	RB	79	C	C6-N1-C2	-5.56	118.08	120.30
1	XA	36	C	C5-C6-N1	5.56	123.78	121.00
32	RA	537	C	N1-C2-O2	5.56	122.23	118.90
1	QA	1535	C	C2-N1-C1'	5.55	124.91	118.80
33	YB	27	C	N3-C2-O2	-5.55	118.01	121.90
32	YA	884	C	N3-C4-N4	5.55	121.89	118.00
1	XA	197	A	P-O3'-C3'	5.55	126.36	119.70
1	XA	1439	C	C6-N1-C2	-5.55	118.08	120.30
1	QA	18	C	C5-C6-N1	5.54	123.77	121.00
1	QA	596	C	C6-N1-C2	-5.54	118.08	120.30
1	XA	137	C	N1-C2-O2	5.54	122.22	118.90
1	QA	442	C	C5-C6-N1	5.54	123.77	121.00
32	RA	1474	C	C6-N1-C2	-5.54	118.08	120.30
32	YA	267	C	C6-N1-C2	-5.54	118.09	120.30
32	YA	537	C	C6-N1-C2	-5.54	118.09	120.30
1	XA	1109	C	N1-C2-O2	5.53	122.22	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	18	C	C6-N1-C2	-5.53	118.09	120.30
32	YA	385	C	C6-N1-C2	-5.53	118.09	120.30
32	YA	2287	A	C4-C5-C6	-5.53	114.23	117.00
1	QA	623	C	C5-C6-N1	5.53	123.77	121.00
1	QA	1028(A)	C	C6-N1-C2	-5.53	118.09	120.30
32	YA	243	U	C5-C6-N1	5.53	125.46	122.70
32	RA	1882	C	N1-C2-O2	5.53	122.22	118.90
32	YA	603	A	P-O3'-C3'	5.52	126.33	119.70
32	YA	2712	U	N1-C2-O2	5.52	126.66	122.80
32	RA	974(A)	C	N1-C2-O2	5.52	122.21	118.90
32	RA	2292	C	C6-N1-C2	-5.52	118.09	120.30
32	YA	529	A	N7-C8-N9	5.52	116.56	113.80
38	YI	10	GLU	C-N-CA	5.52	135.49	121.70
32	RA	279	C	N1-C2-O2	5.51	122.21	118.90
32	RA	1352	U	N3-C2-O2	-5.51	118.34	122.20
32	RA	1909	C	N1-C2-O2	5.51	122.21	118.90
32	YA	2244	U	C5-C4-O4	-5.51	122.59	125.90
32	RA	1599	C	C6-N1-C2	-5.51	118.10	120.30
1	QA	54	C	C6-N1-C2	-5.50	118.10	120.30
32	RA	845	G	OP1-P-O3'	5.50	117.31	105.20
1	XA	365	U	C2-N1-C1'	5.50	124.31	117.70
1	QA	536	C	N3-C2-O2	-5.50	118.05	121.90
32	YA	2254	C	C5-C6-N1	5.50	123.75	121.00
32	RA	1233	C	C5-C6-N1	5.50	123.75	121.00
32	RA	2688	U	N1-C2-O2	5.50	126.65	122.80
32	YA	2167	U	N1-C2-O2	5.50	126.65	122.80
32	YA	1314	C	N1-C2-O2	5.50	122.20	118.90
32	YA	2617	C	N1-C2-O2	5.50	122.20	118.90
32	YA	1644	C	N1-C2-O2	5.49	122.19	118.90
32	RA	1899	G	N3-C4-C5	-5.49	125.86	128.60
32	YA	2720	U	N3-C2-O2	-5.49	118.36	122.20
32	YA	140	A	N7-C8-N9	5.49	116.54	113.80
32	YA	153	C	C6-N1-C2	-5.49	118.11	120.30
32	RA	9	U	C5-C6-N1	5.48	125.44	122.70
32	RA	1294	U	N3-C2-O2	-5.48	118.36	122.20
32	RA	2447	G	P-O3'-C3'	5.48	126.27	119.70
32	RA	806	C	C6-N1-C2	-5.48	118.11	120.30
32	RA	1880	C	C5-C6-N1	5.47	123.74	121.00
32	YA	1656	C	C5-C6-N1	5.47	123.74	121.00
1	QA	1002	G	C6-C5-N7	-5.47	127.12	130.40
1	QA	435	C	C6-N1-C2	-5.47	118.11	120.30
32	YA	1979	C	N1-C2-O2	5.47	122.18	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	1385	G	N3-C4-N9	-5.47	122.72	126.00
1	XA	503	C	C6-N1-C2	-5.47	118.11	120.30
33	YB	77	U	N3-C2-O2	-5.47	118.37	122.20
32	RA	243	U	N1-C2-O2	5.47	126.63	122.80
32	YA	1437	C	C2-N1-C1'	5.47	124.81	118.80
1	XA	435	C	C5-C6-N1	5.47	123.73	121.00
1	QA	1301	U	C6-N1-C2	-5.46	117.72	121.00
32	RA	556	G	C6-C5-N7	-5.46	127.12	130.40
32	RA	1644	C	N3-C2-O2	-5.46	118.07	121.90
1	XA	31	G	C8-N9-C1'	-5.46	119.90	127.00
1	QA	341	C	N1-C2-O2	5.46	122.18	118.90
27	R4	6	HIS	N-CA-CB	-5.46	100.77	110.60
32	RA	1882	C	C2-N1-C1'	5.46	124.81	118.80
32	YA	2320	A	C2-N3-C4	5.46	113.33	110.60
1	QA	58	C	C5-C6-N1	5.46	123.73	121.00
32	RA	2794	C	C6-N1-C2	-5.46	118.12	120.30
1	XA	328	C	P-O3'-C3'	5.46	126.25	119.70
32	YA	435	C	C6-N1-C2	-5.46	118.12	120.30
32	RA	1835	G	N3-C4-N9	5.45	129.27	126.00
1	QA	1109	C	C6-N1-C2	-5.45	118.12	120.30
1	QA	993	G	C4-N9-C1'	5.45	133.59	126.50
32	RA	31	C	C5-C6-N1	5.45	123.72	121.00
32	YA	1075	C	C6-N1-C2	-5.45	118.12	120.30
32	YA	1735	C	C5-C6-N1	5.45	123.72	121.00
32	RA	2394	C	N3-C2-O2	-5.44	118.09	121.90
32	YA	1640	C	N3-C2-O2	-5.44	118.09	121.90
32	YA	862	G	C6-C5-N7	-5.44	127.13	130.40
32	RA	2648	C	C5-C6-N1	5.44	123.72	121.00
32	RA	308	G	O4'-C1'-N9	5.44	112.55	108.20
32	RA	1979	C	N3-C2-O2	-5.44	118.09	121.90
32	RA	1880	C	C6-N1-C2	-5.43	118.13	120.30
32	YA	288	C	C5-C6-N1	5.43	123.72	121.00
32	YA	2099	U	N1-C2-O2	5.43	126.60	122.80
27	R4	39	CYS	C-N-CA	5.43	135.27	121.70
32	RA	2143	C	N1-C2-O2	5.43	122.16	118.90
1	QA	1038	C	N3-C2-O2	-5.43	118.10	121.90
1	QA	1362(A)	C	N3-C2-O2	-5.42	118.10	121.90
32	RA	2026	C	C5-C6-N1	5.42	123.71	121.00
32	RA	1669	A	C2-N3-C4	5.42	113.31	110.60
39	RN	114	ARG	C-N-CA	5.42	135.26	121.70
32	YA	1170	G	N3-C4-C5	-5.42	125.89	128.60
32	RA	273(D)	C	N1-C2-O2	5.42	122.15	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	2772	C	C5-C6-N1	5.42	123.71	121.00
32	RA	2847	U	C5-C6-N1	5.42	125.41	122.70
32	RA	1166	C	C5-C6-N1	5.42	123.71	121.00
32	RA	273(D)	C	C2-N1-C1'	5.41	124.75	118.80
1	XA	405	U	N3-C2-O2	-5.41	118.41	122.20
1	QA	135	C	N1-C2-O2	5.41	122.15	118.90
32	YA	1909	C	C5-C6-N1	5.41	123.70	121.00
32	YA	2667	C	N1-C2-O2	5.41	122.15	118.90
32	RA	174	C	N1-C2-O2	5.41	122.14	118.90
32	RA	214	G	C8-N9-C1'	5.41	134.03	127.00
32	RA	1407	C	N3-C2-O2	-5.41	118.12	121.90
1	XA	435	C	C6-N1-C2	-5.40	118.14	120.30
1	QA	486	U	C2-N1-C1'	5.40	124.18	117.70
32	RA	851	U	N3-C2-O2	-5.40	118.42	122.20
21	XW	67	C	N1-C2-O2	5.40	122.14	118.90
32	YA	1514	U	N3-C2-O2	-5.39	118.42	122.20
32	RA	2870	C	C6-N1-C2	-5.39	118.14	120.30
1	XA	632	A	N7-C8-N9	5.39	116.50	113.80
32	RA	1474	C	C5-C6-N1	5.39	123.69	121.00
32	RA	2416	C	C5-C6-N1	5.38	123.69	121.00
1	XA	252	U	C5-C6-N1	5.38	125.39	122.70
32	YA	758	C	C5-C6-N1	5.38	123.69	121.00
1	QA	197	A	P-O3'-C3'	5.38	126.15	119.70
32	RA	907	U	N1-C2-O2	5.38	126.56	122.80
32	RA	1475	G	N3-C4-N9	5.38	129.23	126.00
32	RA	1762	A	C2-N3-C4	5.38	113.29	110.60
32	YA	2254	C	N1-C2-O2	5.38	122.13	118.90
1	QA	1502	A	C8-N9-C4	-5.37	103.65	105.80
32	YA	1804	C	C5-C6-N1	5.37	123.69	121.00
32	YA	2321	G	C8-N9-C4	-5.37	104.25	106.40
1	XA	749	C	N1-C2-O2	5.37	122.12	118.90
32	YA	1462	C	N1-C2-O2	5.37	122.12	118.90
32	YA	1735	C	N1-C2-O2	5.37	122.12	118.90
1	QA	1132	C	N1-C2-O2	5.37	122.12	118.90
1	XA	252	U	C2-N1-C1'	5.37	124.14	117.70
1	QA	1200	C	C3'-C2'-C1'	5.37	105.80	101.50
32	YA	41	C	N1-C2-O2	5.37	122.12	118.90
32	RA	1914	C	C6-N1-C2	-5.37	118.15	120.30
32	RA	1502	C	C6-N1-C2	-5.37	118.15	120.30
32	YA	2814	C	N1-C2-O2	5.37	122.12	118.90
32	RA	183	C	N1-C2-O2	5.36	122.12	118.90
32	RA	270(Q)	C	C6-N1-C2	-5.36	118.16	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	2772	C	C6-N1-C2	-5.36	118.16	120.30
32	YA	2527	C	C2-N1-C1'	5.36	124.70	118.80
1	XA	1054	C	P-O3'-C3'	5.36	126.13	119.70
32	YA	2318	G	C4-N9-C1'	5.36	133.47	126.50
32	YA	1385	G	N9-C4-C5	5.36	107.54	105.40
32	RA	1992	G	P-O3'-C3'	5.35	126.12	119.70
32	YA	1774	C	N3-C2-O2	-5.35	118.15	121.90
32	YA	243	U	N3-C2-O2	-5.35	118.45	122.20
32	RA	234	C	N3-C2-O2	-5.35	118.16	121.90
1	XA	307	C	C6-N1-C2	-5.34	118.16	120.30
1	XA	1038	C	N1-C2-O2	5.34	122.11	118.90
1	XA	1157	A	C4-N9-C1'	5.34	135.92	126.30
32	YA	2073	C	C6-N1-C2	-5.34	118.16	120.30
21	XW	25	C	N1-C2-O2	5.34	122.11	118.90
32	RA	436	C	N1-C2-O2	5.34	122.10	118.90
32	RA	2460	U	C5-C6-N1	5.34	125.37	122.70
32	RA	894	C	N3-C2-O2	-5.34	118.16	121.90
1	XA	419	C	C5-C6-N1	5.34	123.67	121.00
32	YA	2439	A	P-O3'-C3'	5.34	126.10	119.70
32	RA	2394	C	C5-C6-N1	5.33	123.67	121.00
1	QA	1395	C	C6-N1-C2	-5.33	118.17	120.30
32	YA	2726	U	C6-N1-C2	-5.33	117.80	121.00
1	XA	75	C	C6-N1-C2	-5.33	118.17	120.30
53	Y8	61	LEU	CB-CG-CD2	5.33	120.06	111.00
33	RB	31	C	C6-N1-C1'	-5.33	114.40	120.80
32	RA	128	C	C6-N1-C2	-5.33	118.17	120.30
32	YA	2648	C	C5-C6-N1	5.33	123.66	121.00
32	RA	624	C	C6-N1-C2	-5.33	118.17	120.30
1	XA	961	U	N1-C2-O2	5.32	126.53	122.80
32	YA	1180	C	C5-C6-N1	5.32	123.66	121.00
32	YA	1979	C	C6-N1-C2	-5.32	118.17	120.30
32	YA	2006	C	C6-N1-C2	-5.32	118.17	120.30
32	YA	2791	C	C5-C4-N4	5.32	123.93	120.20
45	YT	99	LEU	CA-CB-CG	5.32	127.54	115.30
1	QA	235	C	C6-N1-C2	-5.32	118.17	120.30
32	YA	9	U	N1-C2-O2	5.32	126.52	122.80
32	YA	2501	C	C6-N1-C1'	5.32	127.18	120.80
32	RA	1514	U	N3-C2-O2	-5.32	118.48	122.20
32	YA	269	U	C6-N1-C2	-5.31	117.81	121.00
32	YA	2477	C	N1-C2-O2	5.31	122.09	118.90
32	RA	2726	U	C6-N1-C2	-5.31	117.81	121.00
32	RA	459	U	N3-C2-O2	-5.31	118.48	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	965	C	C5-C6-N1	5.31	123.65	121.00
32	RA	2065	C	C6-N1-C2	-5.31	118.18	120.30
32	YA	1656	C	C6-N1-C2	-5.31	118.18	120.30
32	RA	1544	C	C5-C6-N1	5.30	123.65	121.00
32	RA	2584	U	N1-C2-O2	5.30	126.51	122.80
33	YB	70	C	C6-N1-C2	-5.30	118.18	120.30
32	RA	196	A	O4'-C1'-N9	5.30	112.44	108.20
32	RA	2128	C	C6-N1-C2	-5.30	118.18	120.30
32	YA	2604	U	C5-C6-N1	5.30	125.35	122.70
32	RA	2739	U	N3-C2-O2	-5.30	118.49	122.20
32	YA	1588	C	C2-N1-C1'	5.30	124.63	118.80
32	RA	273(D)	C	C5-C6-N1	5.30	123.65	121.00
32	YA	273(D)	C	N1-C2-O2	5.30	122.08	118.90
32	YA	1528	A	N7-C8-N9	5.29	116.45	113.80
32	RA	859	G	P-O3'-C3'	5.29	126.05	119.70
32	RA	1774	C	C5-C6-N1	5.29	123.65	121.00
1	XA	1306	A	N7-C8-N9	5.29	116.45	113.80
1	QA	121	C	C2-N3-C4	-5.29	117.25	119.90
32	RA	603	A	P-O3'-C3'	5.29	126.05	119.70
32	YA	1076	C	C6-N1-C2	-5.29	118.19	120.30
1	QA	810	C	C6-N1-C2	-5.29	118.19	120.30
32	RA	1558	A	P-O3'-C3'	5.29	126.04	119.70
1	XA	187	C	C6-N1-C2	-5.29	118.19	120.30
1	XA	1086	U	C2-N1-C1'	5.29	124.04	117.70
1	XA	1348	U	C2-N1-C1'	5.29	124.04	117.70
32	YA	1074	G	C8-N9-C4	-5.28	104.29	106.40
32	RA	881	G	C6-C5-N7	-5.28	127.23	130.40
32	RA	2189	U	N3-C2-O2	-5.28	118.50	122.20
1	QA	79	G	N3-C4-N9	5.28	129.17	126.00
38	RI	10	GLU	C-N-CA	5.28	134.90	121.70
32	YA	923	C	C5-C6-N1	5.28	123.64	121.00
1	QA	497	U	N1-C2-O2	5.28	126.50	122.80
1	XA	1407	C	N3-C2-O2	-5.28	118.21	121.90
32	YA	1675	C	N3-C2-O2	-5.28	118.21	121.90
1	QA	525	C	C5-C6-N1	5.28	123.64	121.00
1	XA	1109	C	N3-C2-O2	-5.28	118.21	121.90
1	XA	1182	G	N3-C4-N9	-5.27	122.84	126.00
32	RA	2501	C	C2-N1-C1'	-5.27	113.00	118.80
32	RA	2702	U	C6-N1-C2	-5.27	117.84	121.00
32	RA	2467	C	N1-C2-N3	5.27	122.89	119.20
32	YA	2896	C	N1-C2-O2	5.27	122.06	118.90
32	YA	831	G	C3'-C2'-O2'	5.27	128.58	113.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YA	1558	A	P-O3'-C3'	5.27	126.02	119.70
32	YA	894	C	C6-N1-C2	-5.26	118.19	120.30
32	YA	1188	U	N3-C2-O2	-5.26	118.51	122.20
1	QA	749	C	N1-C2-O2	5.26	122.06	118.90
32	YA	198	C	C5-C6-N1	5.26	123.63	121.00
33	RB	27	C	N3-C2-O2	-5.26	118.22	121.90
32	RA	104	U	N3-C2-O2	-5.26	118.52	122.20
32	RA	288	C	C6-N1-C2	-5.26	118.20	120.30
32	RA	1157	G	N3-C4-N9	5.26	129.15	126.00
32	YA	974	G	N3-C4-N9	-5.26	122.85	126.00
32	YA	2456	C	C6-N1-C2	-5.26	118.20	120.30
1	QA	183	G	N3-C4-N9	5.25	129.15	126.00
32	YA	894	C	C2-N1-C1'	5.25	124.58	118.80
32	RA	286	C	N1-C2-O2	5.25	122.05	118.90
32	YA	974	G	C8-N9-C1'	5.25	133.82	127.00
1	QA	135	C	C5-C6-N1	5.25	123.62	121.00
32	RA	2439	A	P-O3'-C3'	5.25	126.00	119.70
32	YA	884	C	C2-N3-C4	5.25	122.52	119.90
32	YA	2712	U	C6-N1-C1'	-5.25	113.85	121.20
32	RA	2051	A	N1-C2-N3	5.25	131.92	129.30
1	QA	623	C	C6-N1-C2	-5.24	118.20	120.30
1	QA	1228	C	C6-N1-C2	-5.24	118.20	120.30
1	XA	1086	U	C6-N1-C2	-5.24	117.86	121.00
32	RA	288	C	C2-N1-C1'	5.24	124.56	118.80
32	YA	1332	G	C4-N9-C1'	5.24	133.31	126.50
32	YA	1332	G	N7-C8-N9	5.24	115.72	113.10
32	RA	2143	C	N3-C2-O2	-5.24	118.23	121.90
16	XQ	13	ASP	CB-CG-OD1	5.24	123.01	118.30
32	YA	2099	U	N3-C2-O2	-5.24	118.53	122.20
32	YA	2870	C	C6-N1-C2	-5.24	118.21	120.30
32	YA	676	A	N7-C8-N9	5.23	116.42	113.80
32	RA	1011	G	C8-N9-C1'	5.23	133.80	127.00
32	YA	32	C	C2-N1-C1'	5.23	124.55	118.80
32	YA	392	C	C5-C6-N1	5.23	123.61	121.00
38	RI	9	LEU	CA-CB-CG	5.23	127.32	115.30
32	YA	1102	C	N1-C2-O2	5.23	122.04	118.90
32	RA	894	C	N1-C2-O2	5.22	122.03	118.90
32	RA	9	U	N3-C2-O2	-5.22	118.54	122.20
1	XA	1228	C	N1-C2-O2	5.22	122.03	118.90
51	XL	46	LYS	C-N-CA	5.22	134.76	121.70
32	YA	1669	A	C2-N3-C4	5.22	113.21	110.60
32	RA	481	G	O4'-C1'-N9	5.22	112.38	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	738	C	C5-C6-N1	5.22	123.61	121.00
32	YA	2585	U	C2-N1-C1'	5.22	123.96	117.70
1	XA	1161	C	N1-C2-O2	5.22	122.03	118.90
33	YB	8	U	N1-C2-O2	5.22	126.45	122.80
1	XA	330	C	C5-C6-N1	5.21	123.61	121.00
32	RA	867	C	N3-C2-O2	-5.21	118.25	121.90
1	QA	1535	C	C5-C6-N1	5.21	123.60	121.00
32	RA	387	U	P-O3'-C3'	5.21	125.95	119.70
1	QA	341	C	C5-C6-N1	5.20	123.60	121.00
32	RA	1406	U	N3-C2-O2	-5.20	118.56	122.20
32	RA	2501	C	C6-N1-C1'	5.20	127.04	120.80
32	RA	2646	C	C5-C6-N1	5.20	123.60	121.00
32	RA	1394	U	C6-N1-C1'	5.20	128.48	121.20
32	RA	214	G	C4-N9-C1'	-5.20	119.74	126.50
41	RP	56	SER	C-N-CA	5.20	134.70	121.70
32	RA	2006	C	C6-N1-C2	-5.20	118.22	120.30
32	YA	930	U	N3-C2-O2	-5.20	118.56	122.20
1	QA	1345	U	C2-N1-C1'	-5.20	111.47	117.70
32	RA	1881	C	N1-C2-O2	5.20	122.02	118.90
32	YA	1766	U	N3-C2-O2	-5.20	118.56	122.20
1	QA	1535	C	N1-C2-O2	5.19	122.02	118.90
32	RA	1533	C	N1-C2-O2	5.19	122.02	118.90
1	QA	913	A	P-O3'-C3'	5.19	125.93	119.70
32	RA	797	C	C5-C6-N1	5.19	123.60	121.00
32	RA	1437	C	C2-N1-C1'	5.19	124.51	118.80
32	YA	1934	C	N1-C2-O2	5.19	122.02	118.90
32	YA	2896	C	N3-C2-O2	-5.19	118.27	121.90
32	RA	2874	C	N1-C2-O2	5.19	122.01	118.90
1	QA	1100	C	C2-N1-C1'	-5.19	113.10	118.80
32	YA	563	G	N3-C4-C5	-5.18	126.01	128.60
32	YA	998	C	C6-N1-C2	-5.18	118.23	120.30
32	YA	2805	G	C5-C6-O6	5.18	131.71	128.60
32	YA	1882	C	N1-C2-O2	5.18	122.01	118.90
2	QB	19	HIS	CB-CA-C	5.18	120.76	110.40
32	RA	528	A	N7-C8-N9	5.18	116.39	113.80
32	RA	867	C	C6-N1-C2	-5.18	118.23	120.30
32	YA	1640	C	C2-N1-C1'	5.18	124.50	118.80
1	QA	1007	C	N1-C2-O2	5.17	122.00	118.90
32	YA	2816	C	C6-N1-C2	-5.17	118.23	120.30
32	RA	2480	C	N1-C2-O2	5.17	122.00	118.90
32	YA	1947	C	N1-C2-O2	5.17	122.00	118.90
1	QA	1325	C	C6-N1-C2	-5.17	118.23	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	RA	1313	U	C6-N1-C1'	-5.17	113.97	121.20
32	YA	797	C	C5-C6-N1	5.17	123.58	121.00
32	YA	1385	G	C6-C5-N7	5.17	133.50	130.40
32	RA	1488	G	C4-N9-C1'	5.17	133.21	126.50
1	QA	936	C	N1-C2-O2	5.16	122.00	118.90
32	RA	2791	C	N3-C2-O2	-5.16	118.28	121.90
1	XA	1303	C	N1-C2-O2	5.16	122.00	118.90
32	YA	1385	G	N3-C4-N9	-5.16	122.90	126.00
32	YA	2853	C	C6-N1-C2	-5.16	118.23	120.30
32	RA	2343	C	C6-N1-C2	-5.16	118.23	120.30
32	YA	41	C	C6-N1-C2	-5.16	118.23	120.30
32	YA	1742	C	C6-N1-C2	-5.16	118.23	120.30
1	QA	560	U	C3'-C2'-C1'	5.16	105.63	101.50
32	RA	857	C	C2-N1-C1'	5.16	124.48	118.80
32	RA	1502	C	C5-C6-N1	5.16	123.58	121.00
1	XA	1381	U	N3-C2-O2	-5.16	118.59	122.20
32	YA	1950	G	C4-N9-C1'	5.16	133.21	126.50
32	YA	2217	G	C4'-C3'-O3'	5.16	123.32	113.00
32	YA	2592	G	C6-C5-N7	-5.16	127.31	130.40
32	YA	2447	G	P-O3'-C3'	5.16	125.89	119.70
32	RA	1559	G	P-O3'-C3'	5.15	125.88	119.70
32	RA	2873	A	C5-N7-C8	-5.15	101.32	103.90
1	QA	488	C	C6-N1-C2	-5.15	118.24	120.30
1	QA	1346	A	P-O3'-C3'	5.15	125.88	119.70
32	RA	153	C	C6-N1-C2	-5.15	118.24	120.30
32	RA	1830	C	N1-C2-O2	5.15	121.99	118.90
32	RA	2791	C	N3-C4-N4	-5.15	114.39	118.00
32	YA	783	A	N7-C8-N9	5.15	116.38	113.80
1	XA	4	U	C2-N1-C1'	5.15	123.88	117.70
1	XA	792	A	P-O3'-C3'	5.15	125.88	119.70
32	RA	269	U	C2-N1-C1'	5.15	123.88	117.70
32	RA	1640	C	C5-C6-N1	5.15	123.57	121.00
1	QA	283	C	N1-C2-O2	5.15	121.99	118.90
1	QA	1128	C	C2-N3-C4	5.15	122.47	119.90
32	RA	2108	C	C6-N1-C2	-5.15	118.24	120.30
32	RA	288	C	C5-C6-N1	5.14	123.57	121.00
32	RA	2254	C	N3-C2-O2	-5.14	118.30	121.90
32	RA	2794	C	C5-C6-N1	5.14	123.57	121.00
32	RA	1514	U	N1-C2-O2	5.14	126.40	122.80
32	YA	2096	U	N3-C2-O2	-5.14	118.60	122.20
32	YA	2159	G	N3-C4-N9	-5.14	122.92	126.00
1	QA	545	C	C6-N1-C2	-5.13	118.25	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1290	G	N3-C4-C5	-5.13	126.03	128.60
32	YA	1909	C	C6-N1-C2	-5.13	118.25	120.30
1	QA	1100	C	C6-N1-C1'	5.13	126.96	120.80
21	XW	75	C	C6-N1-C2	-5.13	118.25	120.30
32	YA	1505	C	C5-C6-N1	5.13	123.56	121.00
32	YA	1804	C	C6-N1-C2	-5.13	118.25	120.30
32	RA	39	C	C5-C6-N1	5.12	123.56	121.00
32	RA	90	U	N3-C2-O2	-5.12	118.61	122.20
32	RA	243	U	N3-C2-O2	-5.12	118.61	122.20
32	RA	2726	U	N1-C2-O2	5.12	126.39	122.80
32	RA	758	C	C5-C6-N1	5.12	123.56	121.00
32	YA	270(U)	C	N1-C2-O2	5.12	121.97	118.90
32	RA	512	G	C4-N9-C1'	-5.12	119.84	126.50
32	YA	343	C	C5-C6-N1	5.12	123.56	121.00
32	RA	2174	C	N1-C2-O2	5.12	121.97	118.90
32	RA	2678	C	C5-C6-N1	5.12	123.56	121.00
1	XA	75	C	C5-C6-N1	5.12	123.56	121.00
32	YA	270(Z)	U	C2-N1-C1'	-5.12	111.56	117.70
32	RA	1914	C	C6-N1-C1'	-5.12	114.66	120.80
1	XA	1301	U	C6-N1-C1'	-5.12	114.04	121.20
32	YA	1950	G	O4'-C1'-N9	5.12	112.29	108.20
32	RA	2456	C	C6-N1-C2	-5.12	118.25	120.30
32	YA	269	U	C5-C6-N1	5.12	125.26	122.70
32	RA	1159	U	N1-C2-O2	5.11	126.38	122.80
32	RA	2467	C	C6-N1-C1'	5.11	126.94	120.80
1	XA	37	U	N3-C2-O2	-5.11	118.62	122.20
32	YA	867	C	N1-C2-O2	5.11	121.97	118.90
1	XA	1190	G	P-O3'-C3'	5.11	125.83	119.70
32	YA	2874	C	C6-N1-C2	-5.11	118.26	120.30
37	YH	126	PRO	N-CA-C	-5.11	98.81	112.10
1	XA	1498	U	P-O3'-C3'	5.11	125.83	119.70
32	RA	2703	C	N1-C2-O2	5.11	121.96	118.90
1	XA	1407	C	N1-C2-O2	5.11	121.96	118.90
32	RA	624	C	C5-C6-N1	5.10	123.55	121.00
32	RA	1899	G	N1-C2-N2	-5.10	111.61	116.20
32	YA	2205	C	C6-N1-C2	-5.10	118.26	120.30
32	RA	93	C	N1-C2-O2	5.10	121.96	118.90
32	RA	1686	C	C5-C6-N1	5.10	123.55	121.00
32	RA	1775	U	C5-C4-O4	-5.10	122.84	125.90
1	QA	174	C	C6-N1-C2	-5.10	118.26	120.30
32	YA	512	G	P-O3'-C3'	5.10	125.82	119.70
1	QA	1028(B)	C	C5-C6-N1	5.10	123.55	121.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	XV	32	C	N1-C2-O2	5.10	121.96	118.90
32	YA	1170	G	C6-C5-N7	-5.10	127.34	130.40
32	RA	487	C	N1-C2-O2	5.10	121.96	118.90
1	XA	848	C	N1-C2-O2	5.09	121.96	118.90
1	QA	496	A	C2-N3-C4	5.09	113.15	110.60
32	RA	2189	U	N1-C2-O2	5.09	126.36	122.80
32	RA	2260	C	C6-N1-C2	-5.09	118.26	120.30
1	XA	186	C	N1-C2-O2	5.09	121.95	118.90
32	RA	2712	U	N3-C2-O2	-5.09	118.64	122.20
34	RD	35	LYS	CB-CG-CD	5.09	124.83	111.60
1	XA	341	C	C6-N1-C2	-5.09	118.26	120.30
32	YA	1781	C	C2-N1-C1'	5.09	124.40	118.80
32	YA	2205	C	C5-C6-N1	5.09	123.55	121.00
32	RA	1950	G	C8-N9-C1'	-5.09	120.39	127.00
32	YA	1958	C	C5-C6-N1	5.08	123.54	121.00
32	RA	529	A	C8-N9-C4	-5.08	103.77	105.80
32	RA	2244	U	N3-C4-O4	5.08	122.96	119.40
32	YA	2814	C	N3-C2-O2	-5.08	118.34	121.90
1	XA	1535	C	C5-C6-N1	5.08	123.54	121.00
1	XA	749	C	C5-C6-N1	5.08	123.54	121.00
1	QA	1514	C	C5-C6-N1	5.08	123.54	121.00
32	YA	2139	C	C6-N1-C2	-5.08	118.27	120.30
32	YA	2584	U	N1-C2-O2	5.08	126.35	122.80
32	YA	2103	C	C5-C6-N1	5.08	123.54	121.00
1	QA	191(F)	U	N3-C2-O2	-5.07	118.65	122.20
1	QA	1157	A	C4-N9-C1'	5.07	135.43	126.30
32	RA	965	C	C6-N1-C2	-5.07	118.27	120.30
32	RA	1179	C	N1-C2-O2	5.07	121.94	118.90
32	YA	2318	G	O4'-C1'-N9	5.07	112.26	108.20
32	YA	2416	C	C6-N1-C2	-5.07	118.27	120.30
32	RA	1404	C	C6-N1-C2	-5.07	118.27	120.30
32	RA	2568	C	C6-N1-C2	-5.07	118.27	120.30
32	YA	1264	G	C8-N9-C4	-5.07	104.37	106.40
1	QA	1028	C	N3-C2-O2	-5.07	118.35	121.90
32	RA	2307	G	O4'-C1'-N9	5.07	112.25	108.20
32	RA	343	C	C6-N1-C2	-5.07	118.27	120.30
32	RA	1385	G	C6-C5-N7	5.07	133.44	130.40
32	RA	537	C	C2-N1-C1'	5.07	124.37	118.80
32	YA	1092	C	C6-N1-C2	-5.07	118.27	120.30
32	YA	1294	U	C5-C6-N1	5.07	125.23	122.70
1	QA	1528	U	P-O3'-C3'	5.06	125.78	119.70
1	XA	810	C	C6-N1-C2	-5.06	118.28	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1262	C	C5-C6-N1	5.06	123.53	121.00
38	RI	131	LYS	C-N-CD	-5.06	109.47	120.60
1	XA	1395	C	N3-C2-O2	-5.06	118.36	121.90
1	XA	818	G	P-O3'-C3'	5.06	125.77	119.70
32	RA	1947	C	C6-N1-C2	-5.06	118.28	120.30
32	YA	930	U	N1-C2-O2	5.06	126.34	122.80
32	YA	1575	C	C6-N1-C2	-5.06	118.28	120.30
32	YA	2779	U	O4'-C1'-N1	5.06	112.25	108.20
32	RA	2804	C	N1-C2-O2	5.06	121.93	118.90
32	YA	288	C	N1-C2-O2	5.06	121.93	118.90
1	XA	1147	C	N1-C2-O2	5.05	121.93	118.90
32	YA	665	C	C6-N1-C2	-5.05	118.28	120.30
32	YA	878	A	O5'-P-OP1	5.05	116.77	110.70
32	YA	2143	C	C6-N1-C2	-5.05	118.28	120.30
1	QA	547	A	P-O3'-C3'	5.05	125.76	119.70
21	QW	68	C	C6-N1-C2	-5.05	118.28	120.30
32	RA	104	U	N1-C2-O2	5.05	126.33	122.80
32	RA	105	C	C2-N1-C1'	5.05	124.36	118.80
37	RH	82	GLY	N-CA-C	5.05	125.73	113.10
32	YA	2096	U	N1-C2-O2	5.05	126.34	122.80
32	RA	2208	U	N1-C2-O2	5.05	126.33	122.80
21	XW	68	C	N1-C2-O2	5.05	121.93	118.90
32	RA	934	G	N3-C4-N9	5.05	129.03	126.00
32	RA	1788	C	C5-C6-N1	5.05	123.52	121.00
32	RA	2792	G	N9-C4-C5	-5.05	103.38	105.40
1	XA	1006	C	C5-C6-N1	5.05	123.52	121.00
32	YA	2720	U	C2-N3-C4	5.05	130.03	127.00
34	YD	21	PHE	CB-CA-C	-5.04	100.31	110.40
32	RA	1766	U	N3-C2-O2	-5.04	118.67	122.20
32	YA	2287	A	C8-N9-C1'	5.04	136.78	127.70
32	YA	2559	C	N3-C2-O2	-5.04	118.37	121.90
32	YA	2712	U	O4'-C1'-N1	5.04	112.23	108.20
32	YA	883	G	P-O3'-C3'	5.04	125.75	119.70
32	RA	1786	A	C4-N9-C1'	5.04	135.37	126.30
32	YA	851	U	N3-C2-O2	-5.04	118.67	122.20
32	RA	613	U	C2-N1-C1'	5.04	123.75	117.70
32	RA	755	C	C6-N1-C2	-5.04	118.28	120.30
32	YA	2064	C	C6-N1-C2	-5.04	118.28	120.30
32	YA	2420	C	C5-C6-N1	5.04	123.52	121.00
32	RA	1698	A	O4'-C1'-N9	5.04	112.23	108.20
1	QA	1395	C	N3-C2-O2	-5.04	118.38	121.90
32	RA	708	C	C2-N1-C1'	5.04	124.34	118.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	137	C	C6-N1-C2	-5.04	118.29	120.30
1	XA	1065	U	P-O3'-C3'	5.04	125.74	119.70
32	YA	1385	G	C8-N9-C1'	5.04	133.55	127.00
32	YA	2658	C	N1-C2-O2	5.04	121.92	118.90
32	YA	234	C	C6-N1-C2	-5.03	118.29	120.30
1	XA	1383	C	N3-C2-O2	-5.03	118.38	121.90
32	YA	265	A	N1-C6-N6	-5.03	115.58	118.60
32	RA	143	C	N1-C2-O2	5.03	121.92	118.90
1	XA	924	C	C6-N1-C2	-5.02	118.29	120.30
33	YB	60	C	C6-N1-C2	-5.02	118.29	120.30
1	QA	1002	G	N3-C4-N9	5.02	129.01	126.00
32	RA	960	A	N1-C6-N6	5.02	121.61	118.60
1	XA	1031	G	C4-N9-C1'	5.02	133.03	126.50
32	YA	2287	A	N3-C4-C5	5.02	130.32	126.80
32	RA	2896	C	C6-N1-C2	-5.02	118.29	120.30
32	YA	856	C	N3-C2-O2	-5.02	118.39	121.90
32	YA	1786	A	C4-N9-C1'	5.02	135.33	126.30
32	YA	1992	G	P-O3'-C3'	5.02	125.72	119.70
1	QA	1007	C	C5-C6-N1	5.01	123.51	121.00
1	QA	1128	C	N3-C4-C5	-5.01	119.89	121.90
32	RA	2128	C	C5-C6-N1	5.01	123.51	121.00
32	RA	2712	U	C6-N1-C1'	-5.01	114.18	121.20
1	QA	307	C	C6-N1-C2	-5.01	118.30	120.30
32	RA	2474	C	C2-N1-C1'	5.01	124.31	118.80
32	RA	90	U	P-O3'-C3'	5.01	125.71	119.70
1	XA	1263	C	N1-C2-O2	5.01	121.91	118.90
32	YA	69	C	C2-N1-C1'	5.01	124.31	118.80
32	RA	1011	G	C4-N9-C1'	-5.01	119.99	126.50
32	RA	2052	G	N1-C6-O6	5.01	122.91	119.90
53	Y8	62	LEU	CA-CB-CG	-5.01	103.78	115.30
32	YA	797	C	C6-N1-C2	-5.01	118.30	120.30
32	RA	2667	C	N3-C2-O2	-5.01	118.39	121.90
32	YA	2584	U	C6-N1-C2	-5.01	118.00	121.00
1	QA	497	U	N3-C2-O2	-5.01	118.69	122.20
32	YA	2174	C	N3-C2-O2	-5.01	118.39	121.90
32	YA	2730	C	N1-C2-O2	5.01	121.90	118.90
1	XA	1439	C	C5-C6-N1	5.00	123.50	121.00
1	XA	186(F)	C	C6-N1-C2	-5.00	118.30	120.30
35	YE	51	PHE	O-C-N	5.00	130.71	122.70
1	QA	1300	G	C4-N9-C1'	-5.00	120.00	126.50

There are no chirality outliers.

All (7) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	QB	12	GLU	Mainchain
51	QL	46	LYS	Peptide
53	R8	51	ALA	Peptide
41	RP	11	GLY	Mainchain
24	Y0	8	GLY	Mainchain
32	YA	1162	G	Sidechain
37	YH	13	LYS	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32452	0	16381	373	0
1	XA	32389	0	16350	345	0
2	QB	1907	0	1958	287	0
2	XB	1915	0	1969	18	0
3	QC	1605	0	1668	24	0
3	XC	1605	0	1668	13	0
4	QD	1703	0	1763	29	0
4	XD	1703	0	1763	37	0
5	QE	1155	0	1213	8	0
5	XE	1155	0	1213	10	0
6	QF	843	0	857	6	0
6	XF	843	0	857	12	0
7	QG	1257	0	1296	9	0
7	XG	1257	0	1296	13	0
8	QH	1108	0	1165	16	0
8	XH	1108	0	1165	16	0
9	QI	1010	0	1037	24	0
9	XI	998	0	1024	20	0
10	QJ	801	0	849	13	0
10	XJ	777	0	816	21	0
11	QK	885	0	904	11	0
11	XK	864	0	881	11	0
12	QM	955	0	1021	22	0
12	XM	946	0	1008	15	0
13	QN	492	0	529	11	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	XN	492	0	529	4	0
14	QO	734	0	771	8	0
14	XO	729	0	768	7	0
15	QP	705	0	725	4	0
15	XP	705	0	725	5	0
16	QQ	834	0	904	10	0
16	XQ	834	0	904	7	0
17	QR	574	0	644	4	0
17	XR	574	0	644	4	0
18	QS	665	0	686	44	0
18	XS	656	0	666	73	0
19	QT	763	0	861	6	0
19	XT	763	0	861	18	0
20	QU	217	0	234	4	0
20	XU	217	0	234	1	0
21	QV	1640	0	837	11	0
21	QW	1640	0	837	28	0
21	XV	1640	0	837	15	0
21	XW	1640	0	837	22	0
22	QX	435	0	225	19	0
22	XX	435	0	225	12	0
23	QY	723	0	713	91	0
23	QZ	723	0	713	104	0
23	XY	723	0	713	59	0
23	XZ	723	0	713	81	0
24	R0	643	0	667	9	0
24	Y0	648	0	672	15	0
25	R2	581	0	629	11	0
25	Y2	581	0	629	5	0
26	R3	469	0	518	2	0
26	Y3	469	0	518	5	0
27	R4	565	0	559	15	0
27	Y4	565	0	557	10	0
28	R5	459	0	476	9	0
28	Y5	459	0	480	11	0
29	R6	453	0	473	17	0
29	Y6	453	0	473	4	0
30	R7	409	0	454	4	0
30	Y7	418	0	467	6	0
31	R9	307	0	335	5	0
31	Y9	307	0	335	8	0
32	RA	62266	0	31390	616	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	YA	61921	0	31212	693	0
33	RB	2576	0	1305	32	0
33	YB	2576	0	1305	22	0
34	RD	2115	0	2194	46	0
34	YD	2135	0	2220	165	0
35	RE	1568	0	1634	50	0
35	YE	1559	0	1618	225	0
36	RG	1474	0	1535	28	0
36	YG	1474	0	1535	22	0
37	RH	1336	0	1418	38	0
37	YH	1330	0	1407	191	0
38	RI	1136	0	1223	23	0
38	YI	1136	0	1223	7	0
39	RN	1104	0	1180	12	0
39	YN	1104	0	1180	10	0
40	RO	933	0	996	17	0
40	YO	933	0	996	14	0
41	RP	1145	0	1228	75	0
41	YP	1135	0	1212	193	0
42	RQ	1122	0	1179	29	0
42	YQ	1122	0	1179	172	0
43	RR	960	0	1021	12	0
43	YR	960	0	1021	8	0
44	RS	882	0	943	13	0
44	YS	882	0	943	17	0
45	RT	1141	0	1202	23	0
45	YT	1141	0	1202	41	0
46	RU	964	0	1022	22	0
46	YU	964	0	1021	30	0
47	RV	779	0	852	9	0
47	YV	779	0	852	88	0
48	RW	900	0	964	14	0
48	YW	900	0	964	11	0
49	RX	725	0	778	9	0
49	YX	725	0	778	8	0
50	RY	818	0	913	13	0
50	YY	818	0	913	16	0
51	QL	975	0	1062	40	0
51	XL	956	0	1046	15	0
52	R1	737	0	813	36	0
52	Y1	729	0	802	7	0
53	R8	517	0	582	65	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	Y8	517	0	582	31	0
54	RF	1585	0	1632	82	0
54	YF	1585	0	1632	24	0
55	RZ	1461	0	1493	107	0
55	YZ	1461	0	1493	106	0
56	ZA	74	0	51	15	0
56	ZB	74	0	51	14	0
57	QA	94	0	0	0	0
57	QD	2	0	0	0	0
57	QE	1	0	0	0	0
57	QF	1	0	0	0	0
57	QV	3	0	0	0	0
57	QX	1	0	0	0	0
57	R0	1	0	0	0	0
57	R8	1	0	0	0	0
57	RA	302	0	0	0	0
57	RB	3	0	0	0	0
57	RD	1	0	0	0	0
57	RE	1	0	0	0	0
57	RN	1	0	0	0	0
57	RO	1	0	0	0	0
57	RP	2	0	0	0	0
57	RQ	2	0	0	0	0
57	RR	2	0	0	0	0
57	RY	1	0	0	0	0
57	XA	116	0	0	0	0
57	XD	1	0	0	0	0
57	XE	1	0	0	0	0
57	XF	1	0	0	0	0
57	XL	1	0	0	0	0
57	XM	1	0	0	0	0
57	XV	3	0	0	0	0
57	Y0	2	0	0	0	0
57	Y3	1	0	0	0	0
57	Y9	1	0	0	0	0
57	YA	326	0	0	0	0
57	YB	5	0	0	0	0
57	YD	5	0	0	0	0
57	YE	5	0	0	0	0
57	YF	1	0	0	0	0
57	YG	1	0	0	0	0
57	YO	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	YQ	3	0	0	0	0
57	YV	1	0	0	0	0
58	QD	8	0	0	0	0
58	XD	8	0	0	0	0
59	QN	1	0	0	0	0
59	R4	1	0	0	0	0
59	R5	1	0	0	0	0
59	R6	1	0	0	0	0
59	R9	1	0	0	0	0
59	XN	1	0	0	0	0
59	Y4	1	0	0	0	0
59	Y6	1	0	0	0	0
All	All	298432	0	202696	4712	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (4712) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:64:ILE:CD1	55:YZ:178:GLU:HG3	1.19	1.65
37:YH:123:PHE:CE1	37:YH:133:VAL:HG12	1.26	1.62
37:YH:5:GLY:HA3	37:YH:65:HIS:CE1	1.22	1.59
41:YP:100:LEU:CD1	41:YP:112:LEU:HD11	1.37	1.55
54:RF:9:ILE:HD11	54:RF:125:LEU:CD1	1.39	1.51
23:QY:44:LYS:CD	51:QL:50:SER:HB2	1.35	1.50
8:QH:74:PRO:CA	8:QH:74:PRO:N	1.68	1.47
41:YP:138:LEU:CD2	41:YP:145:PRO:HB3	1.43	1.44
18:XS:59:PRO:CA	18:XS:59:PRO:N	1.70	1.44
23:QZ:44:LYS:NZ	23:QZ:59:ARG:HD3	1.30	1.42
54:RF:25:PRO:N	54:RF:25:PRO:CA	1.69	1.41
37:YH:5:GLY:CA	37:YH:65:HIS:HE1	1.34	1.40
32:YA:2572:A:C8	35:YE:144:ARG:HD3	1.54	1.39
41:YP:100:LEU:HD12	41:YP:112:LEU:CD1	1.48	1.39
34:YD:29:PRO:CA	34:YD:29:PRO:N	1.70	1.38
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	1.40	1.36
37:YH:5:GLY:CA	37:YH:65:HIS:CE1	2.05	1.36
23:XZ:4:ILE:HD12	23:XZ:76:LEU:CD2	1.56	1.34
18:QS:41:VAL:CG1	18:QS:67:VAL:HA	1.58	1.33
23:QY:44:LYS:HD3	51:QL:50:SER:CB	1.60	1.31
42:YQ:64:ILE:CD1	55:YZ:178:GLU:CG	2.07	1.30

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XS:42:PRO:CA	18:XS:42:PRO:N	1.70	1.30
34:YD:123:ALA:CB	34:YD:131:LEU:HD11	1.61	1.30
32:YA:2682:U:C6	35:YE:11:MET:HE2	1.67	1.29
33:RB:75:G:H21	55:RZ:85:HIS:CE1	1.53	1.26
37:YH:123:PHE:CE1	37:YH:133:VAL:CG1	2.17	1.25
37:YH:153:LYS:CG	37:YH:154:PRO:HD2	1.67	1.25
32:YA:1162:G:H1'	47:YV:23:GLU:OE2	1.31	1.25
32:YA:2682:U:C6	35:YE:11:MET:CE	2.20	1.24
32:YA:2572:A:C8	35:YE:144:ARG:CD	2.19	1.23
42:YQ:60:ARG:CA	55:YZ:179:ASP:HA	1.69	1.22
23:QZ:44:LYS:HZ1	23:QZ:59:ARG:CD	1.55	1.19
23:QZ:44:LYS:NZ	23:QZ:59:ARG:CD	2.06	1.19
41:YP:127:ALA:C	41:YP:148:LEU:CB	2.11	1.19
2:QB:222:ILE:O	2:QB:226:ARG:HG2	1.39	1.19
42:YQ:60:ARG:HA	55:YZ:179:ASP:HA	1.24	1.18
2:QB:15:VAL:CG2	2:QB:209:ARG:NH2	2.07	1.17
42:YQ:79:LEU:O	42:YQ:80:GLU:HG2	1.45	1.17
55:RZ:144:LEU:HD21	55:RZ:150:LEU:HG	1.23	1.16
37:YH:5:GLY:HA3	37:YH:65:HIS:ND1	1.57	1.16
37:YH:123:PHE:HE1	37:YH:133:VAL:CG1	1.55	1.16
41:YP:19:VAL:CG2	41:YP:31:ALA:HB1	1.75	1.16
2:QB:8:LYS:HB3	2:QB:11:LEU:CD1	1.76	1.15
41:YP:138:LEU:HD23	41:YP:145:PRO:HB3	1.16	1.15
56:ZA:75:C:H5''	56:ZA:75:C:H6	1.10	1.15
42:YQ:59:ARG:O	42:YQ:60:ARG:HG2	1.47	1.15
2:QB:136:VAL:HA	2:QB:139:LYS:CD	1.77	1.14
18:XS:41:VAL:HG22	18:XS:42:PRO:HD2	1.23	1.14
23:QY:5:TRP:HB2	23:QZ:3:LEU:HB2	1.15	1.14
22:XX:19:A2M:H2	23:XY:51:ASN:ND2	1.61	1.14
42:YQ:64:ILE:HD13	55:YZ:178:GLU:HG3	1.19	1.14
18:XS:12:ASP:OD1	18:XS:37:ARG:HD2	1.44	1.14
23:QY:3:LEU:HD11	23:QY:35:ARG:HH21	1.03	1.13
32:RA:306:U:H2'	32:RA:307:G:C8	1.82	1.13
18:QS:41:VAL:HG11	18:QS:67:VAL:HG13	1.29	1.13
34:YD:123:ALA:HB3	34:YD:131:LEU:CD1	1.78	1.12
18:QS:41:VAL:HB	18:QS:42:PRO:HD3	1.21	1.12
2:QB:91:PRO:CG	2:QB:154:LEU:HB2	1.78	1.12
1:QA:1099:G:C5'	2:QB:96:ARG:HH22	1.61	1.12
37:YH:107:VAL:HG12	37:YH:152:ARG:CD	1.80	1.12
2:QB:91:PRO:HG3	2:QB:154:LEU:CB	1.80	1.12
32:YA:2682:U:C5	35:YE:11:MET:CE	2.32	1.11

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YH:153:LYS:HG2	37:YH:154:PRO:HD2	1.31	1.11
47:YV:5:VAL:HG11	47:YV:57:VAL:HG21	1.32	1.11
23:QZ:44:LYS:HE2	23:QZ:59:ARG:HG2	1.12	1.11
41:RP:64:LYS:HB2	53:R8:25:MET:HG3	1.12	1.11
42:YQ:78:PRO:HG2	42:YQ:81:VAL:HG21	1.33	1.11
2:QB:71:VAL:HG21	2:QB:97:TRP:HZ3	1.04	1.11
2:QB:71:VAL:HG21	2:QB:97:TRP:CZ3	1.84	1.10
35:YE:47:VAL:HG23	35:YE:49:LEU:CD1	1.80	1.10
37:YH:118:PRO:HG2	37:YH:121:ILE:HG13	1.32	1.10
23:QY:44:LYS:CD	51:QL:50:SER:CB	2.23	1.10
35:YE:28:ALA:HB3	35:YE:180:ASN:HB3	1.17	1.10
1:QA:1099:G:C5'	2:QB:96:ARG:NH2	2.13	1.10
23:XY:17:GLN:NE2	23:XZ:28:ASN:HD21	1.47	1.09
37:YH:7:LEU:HD23	37:YH:8:PRO:HD2	1.28	1.09
18:QS:41:VAL:HG23	18:QS:42:PRO:HD2	1.18	1.09
41:YP:127:ALA:C	41:YP:148:LEU:HB2	1.69	1.09
32:YA:2749:A:H4'	37:YH:62:LYS:HB3	1.20	1.09
2:QB:156:LYS:HA	2:QB:156:LYS:HE2	1.34	1.09
1:QA:1099:G:H5'	2:QB:96:ARG:HH22	1.13	1.09
2:QB:136:VAL:HA	2:QB:139:LYS:HD2	1.25	1.08
53:Y8:12:LYS:HB3	41:YP:68:GLN:NE2	1.69	1.08
34:YD:76:PRO:HB2	34:YD:116:GLN:HE21	0.97	1.08
42:YQ:64:ILE:HD12	55:YZ:178:GLU:CG	1.77	1.08
32:RA:2584:U:H5'	56:ZB:76:PPU:H103	1.34	1.08
1:QA:1099:G:H5'	2:QB:96:ARG:NH2	1.67	1.08
41:YP:19:VAL:HG21	41:YP:31:ALA:HB1	1.36	1.07
41:YP:9:ASN:ND2	41:YP:12:ALA:HB2	1.67	1.07
54:RF:9:ILE:HD11	54:RF:125:LEU:CG	1.83	1.07
2:QB:87:ARG:NH1	2:QB:233:SER:CB	2.17	1.07
37:YH:153:LYS:CG	37:YH:154:PRO:CD	2.31	1.07
34:YD:96:HIS:NE2	34:YD:102:LYS:HE2	1.67	1.07
35:YE:37:ARG:HA	35:YE:42:ASP:OD2	1.53	1.07
41:YP:127:ALA:O	41:YP:148:LEU:CB	2.03	1.07
42:YQ:60:ARG:HB2	55:YZ:179:ASP:OD1	1.51	1.07
2:QB:136:VAL:O	2:QB:139:LYS:HG3	1.54	1.07
2:QB:80:ILE:H	2:QB:80:ILE:HD12	1.20	1.07
35:RE:61:ARG:H	35:RE:62:PRO:HD2	1.08	1.07
2:QB:8:LYS:CB	2:QB:11:LEU:HD13	1.83	1.07
2:QB:115:LEU:HB2	2:QB:145:LEU:HD21	1.34	1.06
34:YD:96:HIS:HE2	34:YD:102:LYS:HE2	1.16	1.06
32:YA:1812:A:H1'	34:YD:45:ASN:ND2	1.70	1.06

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2731:G:H5''	35:YE:203:LYS:HE2	1.37	1.06
34:YD:76:PRO:CB	34:YD:116:GLN:HE21	1.67	1.06
35:YE:48:GLN:HE21	35:YE:78:LEU:HD13	1.14	1.06
23:QZ:44:LYS:HE2	23:QZ:59:ARG:CG	1.85	1.06
23:XZ:4:ILE:HD12	23:XZ:76:LEU:HD23	1.35	1.06
23:XZ:4:ILE:HD12	23:XZ:76:LEU:HD21	1.35	1.06
35:YE:1:MET:HE3	35:YE:1:MET:HA	1.33	1.06
54:RF:9:ILE:CD1	54:RF:125:LEU:CD1	2.34	1.06
23:XZ:30:LEU:CD1	23:XZ:60:ILE:HG12	1.86	1.05
41:RP:64:LYS:HZ1	53:R8:29:LYS:HG2	1.18	1.05
41:YP:138:LEU:HD21	41:YP:145:PRO:HB3	1.33	1.05
2:QB:87:ARG:HH11	2:QB:233:SER:CB	1.70	1.05
54:RF:9:ILE:CD1	54:RF:125:LEU:HD11	1.87	1.05
32:YA:1812:A:H1'	34:YD:45:ASN:HD21	1.13	1.05
41:YP:127:ALA:C	41:YP:148:LEU:HB3	1.75	1.05
23:QZ:44:LYS:CE	23:QZ:59:ARG:HD3	1.87	1.05
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.20	1.04
35:YE:47:VAL:CG2	35:YE:49:LEU:HD11	1.86	1.04
37:YH:153:LYS:HG3	37:YH:154:PRO:HD2	1.37	1.04
41:RP:64:LYS:HZ3	53:R8:29:LYS:HD2	1.21	1.04
2:QB:158:LEU:H	2:QB:158:LEU:HD12	1.17	1.04
18:QS:41:VAL:HB	18:QS:42:PRO:CD	1.87	1.03
32:YA:2208:U:H1'	34:YD:151:LYS:HE2	1.37	1.03
24:Y0:5:LYS:HD3	42:YQ:80:GLU:HG3	1.37	1.03
32:YA:811:U:H2'	41:YP:21:ARG:O	1.58	1.03
42:YQ:60:ARG:N	55:YZ:180:VAL:HG23	1.74	1.03
2:QB:118:LEU:HD21	2:QB:142:LEU:HB2	1.40	1.03
32:YA:2682:U:C5	35:YE:11:MET:HE1	1.92	1.03
34:YD:155:LEU:HD23	34:YD:177:LEU:CD2	1.89	1.03
41:YP:75:ILE:HD12	41:YP:75:ILE:H	1.20	1.02
42:YQ:60:ARG:HA	55:YZ:179:ASP:CA	1.88	1.02
32:YA:2255:G:N2	42:YQ:85:LYS:NZ	2.07	1.02
35:YE:51:PHE:HB3	35:YE:77:ILE:HD11	1.36	1.02
2:QB:15:VAL:HG21	2:QB:209:ARG:NH2	1.72	1.02
37:YH:107:VAL:HG12	37:YH:152:ARG:HD2	1.40	1.02
46:YU:92:ARG:HB3	47:YV:11:GLN:OE1	1.58	1.02
32:YA:2255:G:H22	42:YQ:85:LYS:NZ	1.57	1.01
41:YP:138:LEU:CD2	41:YP:145:PRO:CB	2.37	1.01
32:RA:574:C:N3	35:RE:145:LYS:NZ	2.08	1.01
12:XM:86:CYS:SG	18:XS:73:GLU:OE2	2.19	1.01
32:YA:2682:U:C5	35:YE:11:MET:HE2	1.95	1.01

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:15:VAL:HG22	2:QB:209:ARG:NH2	1.74	1.01
2:QB:21:ARG:HB3	2:QB:39:ILE:HD13	1.42	1.01
23:XY:17:GLN:NE2	23:XZ:28:ASN:ND2	2.09	1.00
37:YH:152:ARG:O	37:YH:162:ILE:HD13	1.62	1.00
1:XA:1014:A:H4'	18:XS:14:HIS:ND1	1.76	1.00
23:XY:67:VAL:HG23	23:XY:78:ALA:HB3	1.40	1.00
42:YQ:131:ILE:HD12	42:YQ:131:ILE:H	1.25	1.00
23:XY:17:GLN:HE22	23:XZ:28:ASN:ND2	1.60	1.00
2:QB:87:ARG:NH1	2:QB:233:SER:HB2	1.75	0.99
23:XZ:37:THR:HG21	23:XZ:40:GLU:HB2	1.44	0.99
53:Y8:12:LYS:CB	41:YP:68:GLN:NE2	2.25	0.99
35:RE:146:THR:HB	35:RE:147:PRO:HD3	1.40	0.99
54:RF:9:ILE:CD1	54:RF:125:LEU:HG	1.93	0.99
37:YH:94:TYR:HE1	37:YH:107:VAL:C	1.64	0.98
2:QB:60:ASP:O	2:QB:64:ARG:HD2	1.62	0.98
23:XZ:69:ALA:HB3	23:XZ:76:LEU:HB2	1.43	0.98
45:YT:133:GLU:HA	45:YT:137:LYS:HE2	1.43	0.98
1:XA:1318:A:H5''	18:XS:3:ARG:HH22	1.22	0.98
37:YH:153:LYS:HG3	37:YH:154:PRO:CD	1.89	0.98
37:YH:5:GLY:C	37:YH:65:HIS:HE1	1.66	0.98
32:RA:2112:G:H21	32:RA:2169:A:N6	1.61	0.98
33:RB:75:G:H21	55:RZ:85:HIS:HE1	1.00	0.98
32:YA:636:G:N7	41:YP:113:LYS:NZ	2.10	0.98
18:QS:41:VAL:HG11	18:QS:67:VAL:CG1	1.94	0.97
41:YP:128:HIS:ND1	41:YP:148:LEU:HD23	1.79	0.97
23:XZ:27:ILE:O	23:XZ:31:ILE:HG13	1.65	0.97
35:YE:174:ASP:OD1	35:YE:175:VAL:N	1.98	0.97
18:QS:41:VAL:HG13	18:QS:67:VAL:HA	1.45	0.97
41:YP:128:HIS:N	41:YP:148:LEU:HB3	1.78	0.97
18:QS:41:VAL:CG2	18:QS:42:PRO:HD2	1.95	0.97
23:XZ:30:LEU:HD12	23:XZ:60:ILE:HG12	1.46	0.97
47:YV:49:THR:O	47:YV:49:THR:HG23	1.65	0.97
23:XZ:51:ASN:OD1	23:XZ:52:LEU:HG	1.65	0.97
32:YA:2530:A:N7	37:YH:172:LYS:NZ	2.13	0.96
2:QB:136:VAL:HA	2:QB:139:LYS:CG	1.95	0.96
23:QY:10:TRP:CD2	23:QZ:3:LEU:CD1	2.49	0.96
41:RP:64:LYS:HZ1	53:R8:29:LYS:CG	1.77	0.96
35:YE:47:VAL:HG23	35:YE:49:LEU:HD11	0.97	0.96
2:QB:71:VAL:HG22	2:QB:93:VAL:HG12	1.47	0.96
2:QB:15:VAL:HG22	2:QB:209:ARG:HH21	1.29	0.96
32:RA:1464:C:HO2'	32:RA:1528:A:H8	1.05	0.96

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YE:101:ARG:HG2	35:YE:169:ASN:OD1	1.65	0.95
2:QB:71:VAL:HB	2:QB:164:VAL:HG12	1.48	0.95
32:YA:252:G:OP2	41:YP:50:ARG:NH2	2.00	0.95
54:RF:9:ILE:HD11	54:RF:125:LEU:HD11	0.97	0.95
2:QB:194:PRO:HB3	2:QB:200:ILE:HD12	1.47	0.95
42:YQ:64:ILE:HD13	55:YZ:178:GLU:CG	1.85	0.95
32:RA:306:U:H2'	32:RA:307:G:H8	1.18	0.94
42:YQ:59:ARG:O	42:YQ:60:ARG:CG	2.14	0.94
55:RZ:48:PHE:HE1	55:RZ:71:VAL:HG21	1.33	0.94
56:ZA:75:C:C6	56:ZA:75:C:H5''	2.02	0.94
2:QB:60:ASP:HB3	2:QB:64:ARG:HH11	1.17	0.94
1:QA:1099:G:H5''	2:QB:96:ARG:NH2	1.83	0.94
34:YD:26:LYS:HE2	34:YD:28:GLU:O	1.68	0.94
35:YE:28:ALA:HB3	35:YE:180:ASN:CB	1.97	0.94
34:YD:26:LYS:HD3	34:YD:83:GLU:OE2	1.68	0.94
47:YV:39:LEU:HD23	47:YV:40:LEU:N	1.82	0.94
32:YA:1817:G:OP1	34:YD:88:ARG:NH2	2.01	0.94
32:YA:2255:G:N2	42:YQ:85:LYS:HZ1	1.64	0.94
18:QS:41:VAL:CB	18:QS:42:PRO:CD	2.44	0.93
53:R8:57:ARG:NH1	53:R8:57:ARG:HB3	1.83	0.93
18:QS:41:VAL:CG1	18:QS:67:VAL:CA	2.45	0.93
54:RF:9:ILE:CD1	54:RF:125:LEU:CG	2.45	0.93
45:YT:133:GLU:CA	45:YT:137:LYS:HE2	1.98	0.93
32:RA:2701:C:H3'	32:RA:2702:U:H5''	1.51	0.93
32:YA:1798:U:H5	34:YD:274:ARG:NH1	1.67	0.93
42:YQ:66:ILE:H	42:YQ:66:ILE:HD12	1.33	0.93
41:RP:9:ASN:OD1	54:RF:31:HIS:CE1	2.22	0.93
1:XA:992:U:C2	1:XA:1043:C:N4	2.36	0.93
23:QZ:3:LEU:HD21	23:QZ:31:ILE:HD11	1.49	0.93
41:RP:49:ARG:O	53:R8:57:ARG:NE	2.02	0.93
37:YH:107:VAL:HG12	37:YH:152:ARG:HD3	1.51	0.93
37:YH:94:TYR:HE1	37:YH:108:GLY:N	1.67	0.93
32:YA:1162:G:C1'	47:YV:23:GLU:OE2	2.16	0.93
23:QZ:60:ILE:HD12	23:QZ:60:ILE:H	1.34	0.92
53:R8:57:ARG:HH11	53:R8:57:ARG:HB3	1.34	0.92
35:YE:28:ALA:N	35:YE:180:ASN:O	2.02	0.92
23:QZ:16:TRP:HZ3	23:QZ:27:ILE:HD11	1.34	0.92
32:YA:905:U:O2	42:YQ:29:PHE:HZ	1.51	0.92
34:YD:242:ARG:H	34:YD:242:ARG:HD2	1.35	0.92
34:YD:76:PRO:HB2	34:YD:116:GLN:NE2	1.83	0.92
37:YH:123:PHE:CD1	37:YH:133:VAL:HG12	2.05	0.92

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Y8:15:LYS:HB2	41:YP:65:ARG:NH2	1.85	0.92
2:QB:71:VAL:HG22	2:QB:93:VAL:CG1	1.99	0.91
23:XY:1:MET:CE	23:XY:35:ARG:HA	2.00	0.91
23:QY:3:LEU:HD11	23:QY:35:ARG:NH2	1.84	0.91
37:YH:118:PRO:HG2	37:YH:121:ILE:CG1	2.00	0.91
23:XZ:37:THR:CG2	23:XZ:40:GLU:O	2.17	0.91
32:YA:1812:A:C1'	34:YD:45:ASN:HD21	1.82	0.91
2:QB:95:GLN:HA	2:QB:95:GLN:HE21	1.32	0.91
41:YP:98:GLU:O	41:YP:101:VAL:HG12	1.70	0.91
18:QS:41:VAL:CB	18:QS:42:PRO:HD3	1.99	0.91
34:YD:155:LEU:HD23	34:YD:177:LEU:HD22	1.50	0.91
54:RF:9:ILE:HD12	54:RF:125:LEU:HG	1.49	0.91
42:YQ:60:ARG:HB2	55:YZ:179:ASP:CG	1.90	0.91
23:XY:17:GLN:HE22	23:XZ:28:ASN:HD21	0.93	0.91
42:YQ:60:ARG:C	55:YZ:178:GLU:O	2.10	0.91
37:RH:23:ARG:HE	37:RH:25:LYS:NZ	1.68	0.91
23:XZ:4:ILE:CD1	23:XZ:76:LEU:CD2	2.47	0.91
32:YA:1812:A:C1'	34:YD:45:ASN:ND2	2.34	0.90
32:YA:906:G:O2'	42:YQ:67:ARG:NH2	2.04	0.90
34:YD:111:LEU:HD12	34:YD:115:GLN:NE2	1.85	0.90
35:YE:7:VAL:HG13	35:YE:51:PHE:CZ	2.05	0.90
52:R1:86:SER:N	52:R1:87:PRO:HD3	1.84	0.90
54:YF:187:VAL:HG12	41:YP:3:LEU:CD1	2.00	0.90
41:YP:92:GLU:OE1	41:YP:121:LYS:NZ	2.03	0.90
46:YU:92:ARG:HG2	47:YV:11:GLN:OE1	1.71	0.90
18:QS:41:VAL:HG23	18:QS:42:PRO:CD	2.01	0.90
32:RA:2053:G:O6	32:RA:2614:A:H2	1.53	0.90
33:RB:75:G:N2	55:RZ:85:HIS:CE1	2.37	0.90
37:YH:152:ARG:O	37:YH:162:ILE:CD1	2.17	0.90
32:YA:637:A:C8	41:YP:117:GLU:OE2	2.25	0.90
2:QB:219:VAL:O	2:QB:222:ILE:CG1	2.19	0.90
1:XA:1014:A:H4'	18:XS:14:HIS:CE1	2.07	0.90
32:RA:586:A:H5'	54:RF:89:VAL:HG11	1.53	0.89
18:QS:41:VAL:HG11	18:QS:67:VAL:HA	1.54	0.89
45:YT:133:GLU:HB2	45:YT:137:LYS:CE	2.02	0.89
42:YQ:60:ARG:CB	55:YZ:180:VAL:H	1.86	0.89
18:XS:41:VAL:HG22	18:XS:42:PRO:CD	2.01	0.89
41:YP:9:ASN:HD21	41:YP:12:ALA:HB2	1.36	0.89
41:YP:19:VAL:HG23	41:YP:31:ALA:HB1	1.50	0.89
51:QL:126:LYS:C	51:QL:128:ALA:H	1.74	0.89
23:QY:3:LEU:CD1	23:QY:35:ARG:HH21	1.84	0.89

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:91:PRO:HG2	2:QB:155:LEU:CB	2.02	0.89
2:QB:71:VAL:HG13	2:QB:93:VAL:CG1	2.01	0.89
41:YP:128:HIS:CA	41:YP:148:LEU:HB3	2.03	0.89
32:YA:1901:A:OP2	34:YD:255:LYS:NZ	2.05	0.89
1:XA:339:C:OP2	40:YO:97:ARG:NH1	2.04	0.89
41:YP:127:ALA:O	41:YP:148:LEU:HB2	1.69	0.89
34:YD:123:ALA:HB3	34:YD:131:LEU:HD11	0.89	0.89
32:YA:1425:G:OP2	34:YD:31:LYS:NZ	2.05	0.89
32:YA:910:A:C5	42:YQ:13:GLN:HG3	2.08	0.89
23:XZ:37:THR:CG2	23:XZ:40:GLU:HB2	2.02	0.88
35:YE:2:LYS:HB2	35:YE:95:ILE:HD12	1.55	0.88
37:YH:153:LYS:HG2	37:YH:154:PRO:CD	1.98	0.88
37:YH:5:GLY:HA2	37:YH:69:ARG:HG3	1.55	0.88
42:YQ:64:ILE:HD12	55:YZ:178:GLU:HG3	0.90	0.88
37:YH:7:LEU:HD23	37:YH:8:PRO:CD	2.03	0.88
47:YV:21:ARG:HD3	47:YV:91:TYR:CE1	2.07	0.88
32:YA:2777:G:H5''	32:YA:2778:A:H5'	1.54	0.88
35:YE:203:LYS:O	35:YE:204:ALA:O	1.90	0.88
46:YU:92:ARG:CB	47:YV:11:GLN:OE1	2.21	0.88
23:QY:1:MET:N	23:QZ:7:GLU:CG	2.37	0.88
34:YD:120:GLY:O	34:YD:131:LEU:HG	1.72	0.88
37:YH:4:ILE:HG22	37:YH:69:ARG:HD2	1.56	0.88
46:YU:92:ARG:CG	47:YV:11:GLN:OE1	2.20	0.88
23:XZ:37:THR:HG21	23:XZ:40:GLU:CB	2.04	0.88
32:YA:2681:C:OP2	35:YE:109:LYS:NZ	2.06	0.88
23:QY:10:TRP:O	23:QY:14:LEU:HG	1.74	0.88
41:RP:64:LYS:HZ3	53:R8:29:LYS:CD	1.86	0.88
37:YH:169:VAL:HG23	37:YH:169:VAL:O	1.70	0.88
2:QB:23:ARG:HB2	2:QB:23:ARG:HH11	1.38	0.87
2:QB:21:ARG:HB3	2:QB:39:ILE:CD1	2.03	0.87
41:RP:64:LYS:CG	53:R8:30:ARG:HH21	1.87	0.87
23:XY:35:ARG:HH12	23:XZ:10:TRP:HD1	1.20	0.87
32:RA:2571:C:H5'	32:RA:2572:A:H5''	1.56	0.87
35:YE:178:GLU:OE1	35:YE:178:GLU:N	2.08	0.87
42:YQ:60:ARG:CB	55:YZ:179:ASP:OD1	2.22	0.87
2:QB:15:VAL:HG21	2:QB:209:ARG:CZ	2.03	0.87
35:RE:61:ARG:H	35:RE:62:PRO:CD	1.87	0.87
47:YV:34:GLU:OE1	47:YV:34:GLU:N	2.08	0.87
37:YH:94:TYR:CE1	37:YH:107:VAL:C	2.48	0.87
37:YH:60:ARG:HH11	37:YH:60:ARG:HG3	1.36	0.87
2:QB:71:VAL:CG2	2:QB:97:TRP:HZ3	1.86	0.87

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RP:64:LYS:NZ	53:R8:29:LYS:HG2	1.90	0.87
23:XY:62:GLU:N	23:XY:62:GLU:OE1	2.08	0.87
53:Y8:12:LYS:CA	41:YP:68:GLN:HE22	1.87	0.87
32:YA:2406:U:C4	41:YP:72:PRO:HG2	2.09	0.87
42:YQ:79:LEU:C	42:YQ:80:GLU:HG2	1.95	0.87
42:YQ:108:GLY:HA3	55:YZ:116:VAL:HG11	1.57	0.87
42:YQ:60:ARG:C	55:YZ:179:ASP:HA	1.94	0.87
18:XS:10:PHE:HE2	18:XS:37:ARG:HD3	1.39	0.87
32:YA:2757:A:N1	37:YH:67:LEU:HD12	1.89	0.87
35:YE:101:ARG:NH1	35:YE:169:ASN:O	2.07	0.87
35:YE:1:MET:HA	35:YE:1:MET:CE	2.05	0.87
41:YP:138:LEU:HD21	41:YP:145:PRO:CB	2.03	0.87
23:QY:8:GLU:N	23:QY:8:GLU:OE1	2.08	0.86
32:RA:2777:G:H5''	32:RA:2778:A:H5'	1.55	0.86
41:RP:64:LYS:NZ	53:R8:29:LYS:CG	2.39	0.86
32:YA:2141:G:H1	32:YA:2150:U:H3	1.22	0.86
32:YA:864:G:N7	42:YQ:22:LYS:NZ	2.22	0.86
32:YA:862:G:OP1	42:YQ:18:LYS:NZ	2.09	0.86
55:RZ:70:LEU:HD13	55:RZ:91:LEU:CD2	2.05	0.86
22:XX:19:A2M:C2	23:XY:51:ASN:ND2	2.38	0.86
41:YP:138:LEU:HD23	41:YP:145:PRO:CB	2.04	0.86
32:YA:1243:G:O2'	41:YP:7:ARG:NH2	2.07	0.86
23:QZ:20:ASP:CG	23:QZ:23:ILE:HG12	1.96	0.86
33:RB:75:G:N2	55:RZ:85:HIS:HE1	1.73	0.86
42:YQ:141:GLN:N	42:YQ:141:GLN:OE1	2.08	0.86
33:YB:90:C:OP2	42:YQ:16:ARG:NH1	2.09	0.86
18:QS:41:VAL:CG2	18:QS:42:PRO:CD	2.53	0.86
52:R1:83:GLU:N	52:R1:83:GLU:OE1	2.08	0.86
37:RH:23:ARG:HD2	37:RH:34:GLU:OE2	1.74	0.86
41:RP:58:THR:HG21	53:R8:54:GLU:OE1	1.76	0.86
41:RP:15:ARG:O	41:RP:15:ARG:HD3	1.76	0.86
42:YQ:108:GLY:HA3	55:YZ:116:VAL:CG1	2.05	0.86
55:RZ:48:PHE:CE1	55:RZ:71:VAL:HG21	2.11	0.85
2:QB:21:ARG:CB	2:QB:39:ILE:HD13	2.06	0.85
32:RA:2469:A:O2'	42:RQ:56:ARG:HD3	1.76	0.85
32:YA:637:A:H8	41:YP:117:GLU:OE2	1.58	0.85
35:YE:48:GLN:NE2	35:YE:78:LEU:HD13	1.90	0.85
23:QZ:44:LYS:CE	23:QZ:59:ARG:CD	2.53	0.85
23:XZ:37:THR:HG22	23:XZ:40:GLU:H	1.39	0.85
53:Y8:59:LYS:HG2	41:YP:49:ARG:HH11	1.41	0.85
37:YH:149:ARG:HD2	37:YH:164:TYR:CZ	2.12	0.85

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2485:G:H5''	42:YQ:46:GLN:HE21	1.39	0.85
53:Y8:12:LYS:HA	41:YP:68:GLN:HE22	1.39	0.85
42:YQ:24:GLY:O	42:YQ:102:VAL:HG12	1.75	0.85
32:YA:2255:G:H22	42:YQ:85:LYS:HZ2	1.18	0.85
2:QB:115:LEU:HB2	2:QB:145:LEU:CD2	2.06	0.85
32:RA:2245:U:H5'	32:RA:2246:G:H5'	1.58	0.85
23:XZ:63:GLU:OE1	23:XZ:63:GLU:N	2.08	0.85
34:YD:274:ARG:O	34:YD:275:LYS:HB2	1.75	0.85
35:RE:61:ARG:N	35:RE:62:PRO:HD2	1.92	0.85
55:RZ:69:THR:HG22	55:RZ:90:VAL:HA	1.59	0.84
18:XS:10:PHE:CE2	18:XS:37:ARG:HD3	2.11	0.84
32:YA:196:A:OP2	41:YP:46:LYS:NZ	2.10	0.84
34:YD:96:HIS:CD2	34:YD:102:LYS:HE2	2.12	0.84
37:YH:12:PRO:O	37:YH:15:VAL:HG12	1.77	0.84
42:YQ:136:ALA:HA	42:YQ:139:GLU:CD	1.96	0.84
52:R1:70:VAL:O	52:R1:74:VAL:HG23	1.78	0.84
35:YE:104:VAL:HG11	35:YE:188:VAL:HG21	1.59	0.84
41:YP:45:LEU:H	41:YP:45:LEU:HD12	1.41	0.84
42:YQ:60:ARG:HA	55:YZ:180:VAL:N	1.91	0.84
23:QY:1:MET:H2	23:QZ:7:GLU:HG3	1.41	0.84
55:RZ:144:LEU:HD21	55:RZ:150:LEU:CG	2.07	0.84
37:YH:5:GLY:HA2	37:YH:69:ARG:CG	2.06	0.84
37:RH:23:ARG:HE	37:RH:25:LYS:HZ1	1.20	0.84
55:RZ:107:THR:HB	55:RZ:111:VAL:HG11	1.56	0.84
1:QA:218:C:H5'	1:QA:466:C:H42	1.43	0.84
2:QB:61:LEU:CD1	2:QB:66:GLY:HA3	2.08	0.84
35:YE:47:VAL:HG13	35:YE:84:PHE:O	1.78	0.84
41:YP:19:VAL:HG23	41:YP:31:ALA:CB	2.07	0.84
41:YP:99:LEU:HD12	41:YP:99:LEU:O	1.76	0.84
2:QB:219:VAL:O	2:QB:222:ILE:HG13	1.78	0.83
1:QA:957:U:H3'	23:QZ:36:ARG:HH12	1.41	0.83
34:YD:29:PRO:HB2	34:YD:34:VAL:HG11	1.58	0.83
32:YA:1798:U:C5	34:YD:274:ARG:NH1	2.45	0.83
41:YP:52:GLU:OE1	41:YP:58:THR:HG23	1.78	0.83
42:YQ:79:LEU:O	42:YQ:80:GLU:CG	2.25	0.83
32:YA:2749:A:H4'	37:YH:62:LYS:CB	2.05	0.83
41:YP:128:HIS:HA	41:YP:148:LEU:HB3	1.59	0.83
22:XX:20:A2M:HM'2	22:XX:21:OMU:P	2.18	0.83
1:XA:992:U:N3	1:XA:1043:C:N4	2.25	0.83
22:XX:20:A2M:HM'2	22:XX:21:OMU:OP2	1.79	0.83
53:Y8:12:LYS:HB3	41:YP:68:GLN:HE21	1.43	0.83

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:660:G:H21	41:RP:12:ALA:HA	1.43	0.83
32:YA:2731:G:C5'	35:YE:203:LYS:HE2	2.07	0.83
32:YA:2682:U:H6	35:YE:11:MET:HE2	1.42	0.83
32:RA:2787:C:O3'	35:RE:61:ARG:NH1	2.12	0.82
1:XA:1318:A:H5''	18:XS:3:ARG:NH2	1.94	0.82
42:YQ:61:GLY:HA2	55:YZ:177:PRO:HB2	1.61	0.82
32:RA:662:G:H5''	41:RP:17:LYS:HG2	1.60	0.82
1:XA:1318:A:OP1	18:XS:7:LYS:NZ	2.12	0.82
35:YE:5:LEU:HD23	35:YE:77:ILE:CD1	2.10	0.82
2:QB:8:LYS:HB3	2:QB:11:LEU:HD13	0.88	0.82
32:RA:2051:A:H2	32:RA:2052:G:O6	1.62	0.82
37:YH:31:GLY:O	37:YH:79:VAL:HG11	1.78	0.82
41:YP:71:VAL:HG13	41:YP:72:PRO:HD3	1.61	0.82
42:YQ:141:GLN:HE22	55:YZ:76:LEU:HD13	1.43	0.82
53:Y8:27:THR:CG2	41:YP:62:LEU:HD23	2.10	0.81
23:QY:44:LYS:HD2	51:QL:50:SER:HB2	1.61	0.81
32:YA:1187:G:H5''	47:YV:81:TYR:CE1	2.13	0.81
55:YZ:52:SER:HB3	55:YZ:54:HIS:CD2	2.15	0.81
32:YA:286:C:H2'	32:YA:287:C:H5'	1.63	0.81
42:YQ:24:GLY:HA3	42:YQ:101:ARG:NH1	1.96	0.81
24:Y0:5:LYS:HD3	42:YQ:80:GLU:CG	2.11	0.81
2:QB:165:VAL:HG23	2:QB:211:ILE:CD1	2.09	0.81
32:YA:827:U:H5'	32:YA:828:U:H5'	1.63	0.81
23:QY:10:TRP:CG	23:QZ:3:LEU:CD1	2.63	0.81
23:QZ:3:LEU:C	23:QZ:4:ILE:HD12	2.01	0.81
2:QB:51:LEU:HD23	2:QB:201:ILE:HG21	1.61	0.81
55:RZ:10:ARG:HD3	55:RZ:38:TYR:HB3	1.62	0.81
55:RZ:98:MET:O	55:RZ:125:LEU:HD12	1.81	0.81
1:XA:1320:C:O2	18:XS:36:ARG:NH2	2.14	0.81
34:YD:37:LEU:HD22	34:YD:87:ASN:ND2	1.94	0.81
47:YV:89:GLN:HE21	47:YV:89:GLN:HA	1.45	0.81
34:YD:142:VAL:HG23	34:YD:192:THR:O	1.81	0.81
41:YP:19:VAL:CG2	41:YP:31:ALA:CB	2.59	0.81
2:QB:91:PRO:HG2	2:QB:155:LEU:HB2	1.62	0.80
33:RB:3:C:H6	33:RB:3:C:H5''	1.46	0.80
41:RP:64:LYS:NZ	53:R8:29:LYS:HD2	1.95	0.80
32:YA:806:C:O2	32:YA:2444:G:O2'	1.98	0.80
32:YA:811:U:C2'	41:YP:21:ARG:O	2.29	0.80
54:YF:187:VAL:CG1	41:YP:3:LEU:HD12	2.11	0.80
46:YU:87:GLY:O	47:YV:49:THR:HA	1.80	0.80
32:RA:2882:A:OP1	43:RR:96:ARG:NH1	2.13	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YE:34:VAL:HG12	35:YE:66:HIS:CE1	2.17	0.80
23:QY:44:LYS:CG	51:QL:50:SER:HB2	2.12	0.80
35:YE:23:VAL:HG12	35:YE:184:VAL:C	2.00	0.80
41:YP:127:ALA:O	41:YP:148:LEU:N	2.14	0.80
42:YQ:64:ILE:CD1	55:YZ:178:GLU:CB	2.59	0.80
2:QB:77:ALA:CB	2:QB:211:ILE:HD13	2.12	0.80
24:Y0:7:LEU:HB3	42:YQ:85:LYS:HG3	1.64	0.80
37:YH:9:ILE:HB	37:YH:50:VAL:HG13	1.64	0.80
23:QZ:44:LYS:HZ1	23:QZ:59:ARG:HD3	0.71	0.80
23:XY:1:MET:HE1	23:XY:35:ARG:HA	1.63	0.80
34:YD:76:PRO:CB	34:YD:116:GLN:NE2	2.43	0.80
1:QA:830:G:O3'	2:QB:22:LYS:NZ	2.15	0.80
32:YA:2572:A:C8	35:YE:144:ARG:CG	2.64	0.79
35:YE:51:PHE:H	35:YE:75:VAL:CG1	1.95	0.79
23:QY:7:GLU:HG3	23:QY:8:GLU:CD	2.01	0.79
32:RA:2053:G:O6	32:RA:2614:A:C2	2.34	0.79
32:RA:676:A:H8	32:RA:2069:G:H21	1.30	0.79
23:XY:83:HIS:O	23:XY:84:TYR:OXT	2.00	0.79
2:QB:219:VAL:O	2:QB:222:ILE:HG12	1.83	0.79
32:RA:306:U:C2'	32:RA:307:G:C8	2.65	0.79
34:YD:155:LEU:HD23	34:YD:177:LEU:HD21	1.63	0.79
35:YE:8:LYS:NZ	35:YE:192:ASN:OD1	2.14	0.79
23:QZ:16:TRP:CZ3	23:QZ:27:ILE:HD11	2.18	0.79
35:YE:101:ARG:HH11	35:YE:101:ARG:HG3	1.48	0.79
37:YH:4:ILE:O	37:YH:69:ARG:HG3	1.82	0.79
34:YD:25:THR:HG21	34:YD:113:VAL:HG21	1.65	0.79
32:RA:308:G:H2'	32:RA:329:G:N2	1.98	0.79
45:YT:133:GLU:CB	45:YT:137:LYS:CE	2.59	0.79
35:YE:34:VAL:HG12	35:YE:66:HIS:HE1	1.48	0.79
35:YE:51:PHE:H	35:YE:75:VAL:HG11	1.48	0.79
34:YD:215:LEU:HD12	34:YD:217:ARG:HH21	1.48	0.78
42:YQ:141:GLN:NE2	55:YZ:76:LEU:HD13	1.97	0.78
47:YV:52:VAL:HG11	47:YV:55:ALA:HB3	1.65	0.78
32:RA:306:U:C2'	32:RA:307:G:H8	1.96	0.78
21:XV:76:A:H2	24:Y0:2:ALA:HA	1.48	0.78
23:QY:10:TRP:CG	23:QZ:3:LEU:HD11	2.18	0.78
31:R9:29:ASN:HD21	31:R9:32:HIS:CE1	2.01	0.78
23:XY:42:LYS:O	23:XY:58:ARG:NH1	2.16	0.78
32:YA:955:C:OP1	42:YQ:87:LYS:NZ	2.16	0.78
32:RA:2583:G:N3	56:ZB:76:PPU:H2	1.98	0.78
2:QB:60:ASP:CB	2:QB:64:ARG:NH1	2.36	0.78

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:60:ARG:O	55:YZ:179:ASP:HA	1.83	0.78
2:QB:158:LEU:H	2:QB:158:LEU:CD1	1.95	0.78
29:R6:8:LYS:NZ	53:R8:34:TRP:CZ3	2.51	0.78
23:XZ:37:THR:HB	23:XZ:40:GLU:O	1.84	0.78
54:YF:187:VAL:CG1	41:YP:3:LEU:CD1	2.62	0.78
37:YH:9:ILE:HB	37:YH:50:VAL:O	1.82	0.78
32:RA:448:U:H1'	54:RF:84:VAL:HG21	1.64	0.78
42:YQ:116:GLU:O	42:YQ:120:ILE:HG13	1.84	0.78
55:YZ:30:ASN:HB2	55:YZ:90:VAL:HG13	1.66	0.78
56:ZA:75:C:H6	56:ZA:75:C:C5'	1.93	0.78
55:RZ:7:ALA:HB3	55:RZ:61:LEU:HB3	1.65	0.78
32:RA:2112:G:H21	32:RA:2169:A:H61	1.29	0.77
37:YH:31:GLY:O	37:YH:79:VAL:CG1	2.32	0.77
2:QB:23:ARG:CB	2:QB:23:ARG:HH11	1.96	0.77
21:XV:76:A:C2	24:Y0:2:ALA:HA	2.20	0.77
2:QB:219:VAL:HA	2:QB:222:ILE:CD1	2.14	0.77
35:YE:31:CYS:HB3	35:YE:50:GLY:O	1.85	0.77
41:RP:64:LYS:HG2	53:R8:30:ARG:HH21	1.48	0.77
2:QB:10:LEU:O	2:QB:10:LEU:HD23	1.85	0.77
2:QB:115:LEU:HD13	2:QB:145:LEU:HD23	1.66	0.77
18:QS:41:VAL:HG11	18:QS:67:VAL:CA	2.10	0.77
56:ZA:76:PPU:N7	56:ZA:76:PPU:H102	1.99	0.77
2:QB:51:LEU:HD23	2:QB:201:ILE:CG2	2.14	0.77
18:XS:22:LEU:O	18:XS:26:GLY:HA3	1.83	0.77
1:XA:1313:U:O4	18:XS:2:PRO:CD	2.33	0.77
41:YP:91:PHE:HD1	41:YP:95:VAL:HG22	1.49	0.77
18:QS:9:VAL:CG2	27:R4:63:TYR:HD1	1.97	0.77
32:RA:2834:G:OP1	35:RE:58:ARG:NH1	2.17	0.77
37:RH:3:ARG:HH21	37:RH:8:PRO:HG3	1.50	0.77
41:RP:64:LYS:HB2	53:R8:25:MET:CG	2.05	0.77
47:YV:28:GLU:HG2	47:YV:29:PRO:HD2	1.64	0.77
55:YZ:109:ALA:HB3	55:YZ:145:GLU:HG2	1.67	0.77
22:QX:12:A:H3'	22:QX:13:A:H5''	1.67	0.77
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.18	0.77
32:YA:2638:G:P	35:YE:82:ARG:HH12	2.07	0.77
32:YA:883:G:O2'	32:YA:884:C:O5'	2.03	0.77
41:YP:128:HIS:CE1	41:YP:148:LEU:CD2	2.68	0.77
32:YA:2451:A:C6	56:ZA:76:PPU:HE2	2.20	0.77
2:QB:71:VAL:HG13	2:QB:93:VAL:HG13	1.66	0.77
2:QB:7:VAL:HA	2:QB:217:ARG:HH12	1.49	0.77
23:XZ:51:ASN:OD1	23:XZ:52:LEU:N	2.17	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YP:128:HIS:ND1	41:YP:148:LEU:CD2	2.48	0.77
2:QB:60:ASP:HB3	2:QB:64:ARG:HH12	1.46	0.77
1:XA:1314:C:OP2	18:XS:4:SER:OG	2.02	0.77
28:Y5:55:ARG:NH1	28:Y5:57:VAL:HG13	2.00	0.77
32:YA:676:A:H8	32:YA:2069:G:H21	1.34	0.77
54:YF:187:VAL:HG11	41:YP:3:LEU:HD12	1.67	0.77
2:QB:85:ALA:HB1	2:QB:92:TYR:HB3	1.66	0.76
32:YA:974:G:O2'	32:YA:975:G:N7	2.17	0.76
35:YE:24:THR:HG21	35:YE:188:VAL:HG12	1.65	0.76
54:YF:187:VAL:HG12	41:YP:3:LEU:HD13	1.64	0.76
32:YA:1567:A:OP2	34:YD:84:TYR:OH	2.03	0.76
42:YQ:60:ARG:HB3	55:YZ:180:VAL:H	1.50	0.76
2:QB:21:ARG:HB2	2:QB:38:GLY:O	1.86	0.76
1:XA:973:G:H3'	1:XA:974:A:H5''	1.66	0.76
37:YH:5:GLY:CA	37:YH:69:ARG:HG3	2.16	0.76
23:QZ:44:LYS:HZ3	23:QZ:59:ARG:NE	1.83	0.76
45:YT:11:GLU:OE2	35:YE:181:LEU:HD13	1.84	0.76
18:QS:40:ILE:HD12	18:QS:40:ILE:O	1.86	0.76
41:RP:64:LYS:CB	53:R8:25:MET:HG3	2.06	0.76
32:YA:910:A:N7	42:YQ:13:GLN:HG3	2.00	0.76
42:YQ:116:GLU:OE1	42:YQ:119:ARG:HD3	1.86	0.76
45:YT:133:GLU:HA	45:YT:137:LYS:CE	2.14	0.76
2:QB:136:VAL:CA	2:QB:139:LYS:CG	2.64	0.76
51:QL:126:LYS:O	51:QL:128:ALA:N	2.19	0.76
23:QY:51:ASN:C	23:QY:52:LEU:HD12	2.06	0.76
1:XA:1086:U:H3	1:XA:1099:G:H22	1.31	0.76
41:YP:57:THR:O	41:YP:61:ARG:HG3	1.83	0.76
32:RA:2584:U:C5'	56:ZB:76:PPU:H103	2.15	0.76
23:QY:42:LYS:O	23:QY:58:ARG:NH1	2.17	0.76
23:XZ:17:GLN:HA	23:XZ:24:VAL:HG21	1.66	0.76
42:YQ:60:ARG:HA	55:YZ:179:ASP:C	2.05	0.76
2:QB:135:GLN:O	2:QB:139:LYS:HG2	1.85	0.75
2:QB:87:ARG:HH11	2:QB:233:SER:HB2	1.37	0.75
32:YA:2275:C:O2	42:YQ:85:LYS:NZ	2.15	0.75
41:YP:114:ILE:HD11	41:YP:127:ALA:HB2	1.68	0.75
47:YV:99:ILE:O	47:YV:99:ILE:HD12	1.84	0.75
1:QA:1221:G:OP1	1:QA:1321:C:N4	2.19	0.75
2:QB:165:VAL:CG2	2:QB:211:ILE:HD12	2.15	0.75
18:QS:41:VAL:HG12	18:QS:67:VAL:HA	1.66	0.75
32:RA:660:G:N2	41:RP:12:ALA:HA	2.00	0.75
37:YH:162:ILE:HD12	37:YH:162:ILE:N	2.01	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YE:4:ILE:HG22	35:YE:96:PHE:HE2	1.51	0.75
2:QB:91:PRO:HG2	2:QB:155:LEU:HB3	1.66	0.75
23:QZ:44:LYS:HZ3	23:QZ:59:ARG:HE	1.30	0.75
37:RH:23:ARG:NE	37:RH:25:LYS:NZ	2.35	0.75
37:YH:3:ARG:HB2	37:YH:3:ARG:NH2	2.01	0.75
53:Y8:59:LYS:HG2	41:YP:49:ARG:NH1	2.01	0.75
55:RZ:70:LEU:HD13	55:RZ:91:LEU:HD21	1.67	0.75
34:YD:46:GLN:HE21	34:YD:46:GLN:HA	1.52	0.75
35:YE:7:VAL:HG13	35:YE:51:PHE:HZ	1.48	0.75
37:YH:111:HIS:ND1	37:YH:112:PRO:O	2.19	0.75
46:YU:92:ARG:NH1	47:YV:11:GLN:H	1.84	0.75
45:YT:136:GLN:O	45:YT:137:LYS:HG3	1.85	0.74
2:QB:165:VAL:HG23	2:QB:211:ILE:HD12	1.68	0.74
2:QB:219:VAL:HA	2:QB:222:ILE:HD11	1.68	0.74
2:QB:41:ILE:HD12	2:QB:41:ILE:O	1.87	0.74
1:QA:1494:G:OP1	23:QY:49:LYS:NZ	2.19	0.74
18:XS:22:LEU:O	18:XS:26:GLY:CA	2.34	0.74
34:YD:111:LEU:CD1	34:YD:115:GLN:NE2	2.50	0.74
32:YA:2572:A:N9	35:YE:144:ARG:HD3	2.00	0.74
41:YP:128:HIS:CE1	41:YP:148:LEU:HD21	2.22	0.74
32:RA:306:U:C6	32:RA:307:G:N7	2.55	0.74
32:YA:1728:G:N7	32:YA:1731:G:N2	2.35	0.74
35:YE:4:ILE:CG2	35:YE:96:PHE:HE2	2.00	0.74
41:YP:114:ILE:HD11	41:YP:127:ALA:CB	2.17	0.74
32:RA:2059:A:O2'	54:RF:69:HIS:ND1	2.20	0.74
32:RA:974:G:O2'	32:RA:975:G:N7	2.21	0.74
23:XZ:42:LYS:O	23:XZ:58:ARG:NH1	2.21	0.74
2:QB:136:VAL:CA	2:QB:139:LYS:HD2	2.13	0.74
32:RA:309:G:H8	32:RA:309:G:OP1	1.70	0.74
22:XX:19:A2M:H2	23:XY:51:ASN:HD22	1.49	0.74
32:YA:905:U:O2	42:YQ:29:PHE:CZ	2.40	0.74
32:RA:2811:G:N2	32:RA:2891:G:H1'	2.03	0.74
32:YA:2162:G:O2'	32:YA:2173:A:OP2	2.05	0.74
32:RA:536:A:H4'	46:RU:57:PHE:HZ	1.53	0.74
45:YT:133:GLU:CB	45:YT:137:LYS:HE2	2.17	0.74
2:QB:71:VAL:HG13	2:QB:93:VAL:HG11	1.68	0.74
33:RB:30:C:H1'	33:RB:57:A:H61	1.53	0.73
23:XZ:23:ILE:O	23:XZ:27:ILE:HG13	1.88	0.73
35:YE:54:GLN:HE21	35:YE:54:GLN:HA	1.51	0.73
37:YH:118:PRO:CG	37:YH:121:ILE:HG13	2.16	0.73
41:YP:75:ILE:CD1	41:YP:75:ILE:H	2.00	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YP:9:ASN:HD22	41:YP:12:ALA:HB2	1.53	0.73
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.69	0.73
23:XZ:68:TYR:HB2	23:XZ:75:LEU:HD11	1.70	0.73
53:Y8:12:LYS:CA	41:YP:68:GLN:NE2	2.51	0.73
2:QB:9:GLU:HB3	2:QB:48:MET:SD	2.28	0.73
52:R1:86:SER:N	52:R1:87:PRO:CD	2.50	0.73
32:RA:2432:A:C6	52:R1:33:LYS:HB3	2.23	0.73
32:YA:666:G:H4'	41:YP:47:ASP:OD2	1.87	0.73
56:ZA:76:PPU:H5''	56:ZA:76:PPU:O	1.88	0.73
2:QB:170:GLU:O	2:QB:174:VAL:HG23	1.89	0.73
2:QB:95:GLN:HA	2:QB:95:GLN:NE2	2.03	0.73
23:QY:44:LYS:HD2	51:QL:50:SER:CB	2.15	0.73
32:RA:1102:C:H2'	32:RA:1103:A:H8	1.54	0.73
34:YD:17:THR:HB	34:YD:205:VAL:H	1.54	0.73
2:QB:185:ILE:HA	2:QB:199:TYR:O	1.88	0.73
32:RA:1980:G:O2'	32:RA:1982:C:OP2	2.05	0.73
34:YD:231:HIS:ND1	34:YD:232:PRO:HD2	2.04	0.73
35:YE:51:PHE:N	35:YE:75:VAL:HG11	2.03	0.73
37:YH:109:PHE:CE1	37:YH:152:ARG:NH1	2.56	0.73
32:RA:330:A:H2	32:RA:1210:A:HO2'	1.37	0.73
55:RZ:98:MET:O	55:RZ:125:LEU:HA	1.89	0.73
55:RZ:181:GLU:HB2	55:RZ:183:LEU:HD22	1.71	0.73
1:XA:1322:C:OP1	18:XS:78:ARG:NH2	2.21	0.73
23:QZ:2:LYS:HG3	23:QZ:4:ILE:HD11	1.71	0.73
47:YV:89:GLN:NE2	47:YV:89:GLN:HA	2.01	0.73
41:YP:127:ALA:CA	41:YP:148:LEU:HB2	2.18	0.73
2:QB:23:ARG:NH1	2:QB:23:ARG:HB2	2.04	0.72
41:RP:68:GLN:HG2	53:R8:12:LYS:HD2	1.69	0.72
54:RF:64:ILE:HD11	54:RF:75:HIS:HB2	1.71	0.72
18:XS:41:VAL:CG2	18:XS:42:PRO:HD2	2.11	0.72
52:Y1:87:PRO:HA	52:Y1:90:ILE:HG22	1.71	0.72
32:YA:587:C:O2	41:YP:33:ARG:NH2	2.22	0.72
2:QB:238:LEU:HD23	2:QB:238:LEU:O	1.88	0.72
32:RA:2031:A:O2'	32:RA:2454:G:N2	2.22	0.72
35:YE:47:VAL:HG11	35:YE:86:PRO:HD2	1.71	0.72
1:QA:1086:U:H3	1:QA:1099:G:H22	1.36	0.72
23:QY:10:TRP:CD2	23:QZ:3:LEU:HD13	2.24	0.72
23:QZ:52:LEU:HD12	23:QZ:52:LEU:N	2.04	0.72
23:XY:3:LEU:CD2	23:XY:5:TRP:HE1	2.02	0.72
37:YH:123:PHE:HZ	37:YH:144:VAL:HG11	1.54	0.72
42:YQ:131:ILE:HD12	42:YQ:131:ILE:N	2.03	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.71	0.72
1:XA:1224:G:O2'	18:XS:78:ARG:NH2	2.23	0.72
23:XZ:30:LEU:HD11	23:XZ:60:ILE:HA	1.71	0.72
32:YA:1243:G:O3'	41:YP:7:ARG:NH2	2.22	0.72
2:QB:165:VAL:CG2	2:QB:211:ILE:CD1	2.67	0.72
29:R6:8:LYS:NZ	53:R8:34:TRP:CH2	2.57	0.72
23:XZ:69:ALA:N	23:XZ:76:LEU:O	2.21	0.72
41:RP:49:ARG:HA	53:R8:57:ARG:CG	2.18	0.72
1:XA:559:A:H4'	1:XA:560:U:H3'	1.69	0.72
23:XY:1:MET:HE2	23:XY:35:ARG:HA	1.70	0.72
41:YP:121:LYS:HG3	41:YP:122:PRO:HD2	1.70	0.72
41:YP:75:ILE:N	41:YP:75:ILE:HD12	2.01	0.72
23:QY:1:MET:H2	23:QZ:7:GLU:CG	2.00	0.72
1:QA:957:U:O5'	23:QZ:36:ARG:NH1	2.23	0.72
32:RA:259:G:H21	32:RA:621:A:H8	1.36	0.72
18:XS:12:ASP:OD1	18:XS:37:ARG:CD	2.32	0.72
35:YE:73:GLU:HG2	35:YE:74:PRO:HD2	1.71	0.72
42:YQ:75:THR:HG23	42:YQ:88:GLY:O	1.90	0.72
32:RA:2401:U:H3	32:RA:2415:G:H1	1.36	0.72
47:YV:35:LEU:N	47:YV:35:LEU:HD12	2.05	0.72
2:QB:136:VAL:CA	2:QB:139:LYS:HG2	2.19	0.72
2:QB:172:ILE:H	2:QB:172:ILE:CD1	1.98	0.71
1:QA:1492:A:C2	22:QX:22:C:N3	2.57	0.71
4:XD:154:ASN:O	4:XD:159:ARG:HG3	1.89	0.71
21:XV:76:A:O3'	32:YA:2602:A:N6	2.23	0.71
37:YH:136:ILE:N	37:YH:136:ILE:HD12	2.05	0.71
46:YU:109:LEU:HD21	47:YV:47:VAL:HG11	1.72	0.71
34:YD:169:GLU:O	34:YD:169:GLU:HG3	1.89	0.71
35:YE:7:VAL:HG13	35:YE:51:PHE:CE2	2.25	0.71
2:QB:87:ARG:NH1	2:QB:233:SER:HB3	2.05	0.71
23:QZ:8:GLU:OE1	23:QZ:8:GLU:N	2.18	0.71
1:QA:1128:C:H4'	9:QI:16:ARG:HH22	1.53	0.71
2:QB:9:GLU:OE1	2:QB:9:GLU:N	2.23	0.71
34:YD:18:VAL:CG2	34:YD:211:ARG:HH22	2.03	0.71
51:QL:126:LYS:C	51:QL:128:ALA:N	2.42	0.71
37:RH:69:ARG:HH11	37:RH:69:ARG:HG2	1.55	0.71
32:YA:2572:A:H8	35:YE:144:ARG:HD3	1.48	0.71
47:YV:80:GLN:OE1	47:YV:80:GLN:HA	1.91	0.71
2:QB:71:VAL:HG11	2:QB:97:TRP:CE3	2.25	0.71
37:RH:69:ARG:NH1	37:RH:69:ARG:HG2	2.05	0.71
55:RZ:70:LEU:CD1	55:RZ:91:LEU:CD2	2.68	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YH:4:ILE:C	37:YH:69:ARG:HG3	2.10	0.71
1:QA:1318:A:H4'	18:QS:11:VAL:HG11	1.71	0.71
23:QZ:44:LYS:NZ	23:QZ:59:ARG:NE	2.36	0.71
32:RA:2051:A:C2	32:RA:2052:G:O6	2.44	0.71
35:YE:73:GLU:OE1	35:YE:74:PRO:O	2.07	0.71
1:QA:664:G:H22	1:QA:741:G:H1	1.38	0.71
32:YA:2635:C:O2'	35:YE:80:GLU:OE2	2.08	0.71
41:YP:127:ALA:HA	41:YP:148:LEU:HD22	1.73	0.71
47:YV:21:ARG:HD3	47:YV:91:TYR:CD1	2.25	0.71
23:QY:10:TRP:CD1	23:QY:14:LEU:HD11	2.25	0.71
41:RP:64:LYS:NZ	53:R8:29:LYS:CD	2.49	0.71
55:RZ:76:LEU:O	55:RZ:76:LEU:HD12	1.91	0.71
42:YQ:60:ARG:CA	55:YZ:180:VAL:H	2.03	0.71
55:YZ:85:HIS:CE1	55:YZ:87:ASP:OD1	2.43	0.71
2:QB:158:LEU:N	2:QB:158:LEU:HD12	2.01	0.71
32:RA:587:C:OP2	41:RP:21:ARG:NH1	2.24	0.71
32:YA:277:C:H3'	32:YA:278:A:H8	1.54	0.71
37:YH:133:VAL:HG21	37:YH:145:ALA:HB2	1.73	0.71
34:RD:39:LYS:HE2	34:RD:60:ARG:HB2	1.73	0.70
32:YA:2701:C:H3'	32:YA:2702:U:H5''	1.72	0.70
32:YA:811:U:OP2	41:YP:29:LYS:N	2.21	0.70
34:YD:18:VAL:HG22	34:YD:211:ARG:HH22	1.56	0.70
42:YQ:64:ILE:N	42:YQ:64:ILE:HD12	2.04	0.70
1:QA:579:G:H5'	1:QA:728:A:H1'	1.74	0.70
18:QS:81:ARG:NH2	23:QZ:36:ARG:CD	2.54	0.70
32:YA:2572:A:N7	35:YE:144:ARG:HG2	2.06	0.70
34:YD:37:LEU:HD22	34:YD:87:ASN:HD21	1.54	0.70
45:YT:133:GLU:HB2	45:YT:137:LYS:HE2	1.73	0.70
23:QZ:44:LYS:HE2	23:QZ:59:ARG:CD	2.18	0.70
38:RI:27:ARG:HD3	52:R1:71:TYR:OH	1.91	0.70
34:RD:36:PRO:HD3	34:RD:63:ARG:HA	1.72	0.70
37:RH:7:LEU:N	37:RH:8:PRO:CD	2.54	0.70
55:RZ:141:VAL:HG12	55:RZ:143:GLY:H	1.57	0.70
55:RZ:157:LEU:HD11	55:RZ:163:LEU:HG	1.73	0.70
35:YE:47:VAL:O	35:YE:49:LEU:CD1	2.39	0.70
42:YQ:63:LYS:NZ	55:YZ:175:VAL:HG11	2.06	0.70
2:QB:115:LEU:CB	2:QB:145:LEU:HD21	2.17	0.70
23:QY:7:GLU:HG3	23:QY:8:GLU:OE1	1.91	0.70
32:RA:993:G:OP1	46:RU:50:ARG:NH2	2.23	0.70
55:RZ:124:ILE:HD11	55:RZ:165:VAL:HG21	1.73	0.70
2:QB:77:ALA:CB	2:QB:211:ILE:CD1	2.69	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R3:29:ARG:NH1	32:RA:1184:G:OP1	2.25	0.70
55:YZ:54:HIS:HB3	55:YZ:101:PRO:HD3	1.73	0.70
32:RA:996:A:OP2	46:RU:92:ARG:NH1	2.25	0.70
24:Y0:55:ARG:NH1	32:YA:2364:C:OP1	2.25	0.70
42:YQ:66:ILE:N	42:YQ:66:ILE:HD12	2.05	0.70
18:QS:81:ARG:NH2	23:QZ:36:ARG:HD2	2.07	0.70
34:YD:96:HIS:HE2	34:YD:102:LYS:CE	2.01	0.70
42:YQ:24:GLY:HA3	42:YQ:101:ARG:HH12	1.55	0.70
55:YZ:72:ARG:HG2	55:YZ:72:ARG:HH11	1.57	0.70
42:YQ:78:PRO:HG2	42:YQ:81:VAL:CG2	2.19	0.70
55:YZ:72:ARG:NH1	55:YZ:72:ARG:HG2	2.06	0.70
23:QZ:4:ILE:N	23:QZ:4:ILE:HD12	2.07	0.70
37:YH:103:LEU:HG	37:YH:105:LEU:HD11	1.73	0.70
23:QZ:59:ARG:O	23:QZ:59:ARG:HG3	1.90	0.70
32:RA:321:G:C4	54:RF:165:ARG:NH2	2.53	0.70
2:QB:136:VAL:O	2:QB:139:LYS:CG	2.38	0.69
2:QB:166:ASP:OD1	2:QB:167:PRO:HD2	1.91	0.69
35:YE:178:GLU:CD	35:YE:178:GLU:H	1.95	0.69
37:YH:67:LEU:HD23	37:YH:71:LEU:HD23	1.74	0.69
1:XA:358:U:C6	1:XA:358:U:H5''	2.27	0.69
1:XA:1313:U:O4	18:XS:2:PRO:HD3	1.91	0.69
32:YA:1080:C:N4	32:YA:1088:A:OP1	2.25	0.69
34:YD:142:VAL:CG2	34:YD:192:THR:O	2.40	0.69
34:YD:80:ALA:HB2	34:YD:96:HIS:ND1	2.07	0.69
2:QB:136:VAL:HA	2:QB:139:LYS:HG2	1.72	0.69
2:QB:80:ILE:H	2:QB:80:ILE:CD1	1.97	0.69
23:QY:44:LYS:HD3	51:QL:50:SER:HB2	0.72	0.69
55:RZ:53:ILE:HD11	55:RZ:72:ARG:HA	1.74	0.69
23:XZ:62:GLU:N	23:XZ:62:GLU:OE2	2.19	0.69
41:YP:121:LYS:CG	41:YP:122:PRO:HD2	2.22	0.69
32:RA:2032:G:O2'	35:RE:145:LYS:HE2	1.92	0.69
32:YA:642:G:N2	32:YA:645:C:OP2	2.23	0.69
34:YD:64:ILE:O	34:YD:64:ILE:HD12	1.92	0.69
2:QB:172:ILE:N	2:QB:172:ILE:HD12	2.01	0.69
2:QB:209:ARG:HB3	2:QB:209:ARG:CZ	2.21	0.69
1:XA:1040:U:H6	1:XA:1040:U:H5''	1.58	0.69
1:XA:1502:A:H2	1:XA:1505:G:H1	1.41	0.69
1:XA:191(E):G:C6	1:XA:191(F):U:O4	2.45	0.69
32:YA:1667:G:O2'	32:YA:1669:A:N6	2.25	0.69
35:YE:109:LYS:O	35:YE:111:ARG:NH1	2.25	0.69
37:YH:27:LYS:HG2	37:YH:32:GLU:HG2	1.73	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:727:A:OP1	32:RA:1431:U:O2'	2.10	0.69
32:RA:2306:C:H5'	32:RA:2307:G:H5''	1.74	0.69
32:RA:67:U:H3	32:RA:74:A:H2	1.41	0.69
23:QZ:43:GLY:O	23:QZ:58:ARG:HA	1.93	0.69
1:XA:422:C:O2'	1:XA:423:G:N2	2.24	0.69
23:XZ:60:ILE:HD11	23:XZ:66:LEU:HD12	1.74	0.69
23:XZ:27:ILE:HG12	23:XZ:60:ILE:HD13	1.75	0.69
37:YH:149:ARG:HD2	37:YH:164:TYR:CE2	2.27	0.69
41:YP:45:LEU:N	41:YP:45:LEU:HD12	2.07	0.69
1:QA:437:U:HO2'	4:QD:123:HIS:HD1	1.33	0.69
51:QL:117:ARG:HB2	51:QL:122:THR:HB	1.74	0.69
1:XA:544:G:OP1	4:XD:59:ARG:NH2	2.25	0.69
53:Y8:15:LYS:HB2	41:YP:65:ARG:HH22	1.56	0.69
34:YD:35:LYS:HZ2	34:YD:62:TYR:HD2	1.41	0.69
2:QB:155:LEU:HD11	2:QB:159:PRO:HA	1.74	0.69
51:QL:60:LEU:HD12	51:QL:62:SER:H	1.56	0.69
37:RH:17:VAL:HG21	37:RH:45:VAL:HG21	1.74	0.69
18:XS:43:GLU:N	18:XS:43:GLU:OE1	2.25	0.69
34:YD:96:HIS:CD2	34:YD:102:LYS:HG2	2.27	0.69
37:YH:105:LEU:HB2	37:YH:113:VAL:CG1	2.23	0.69
32:YA:2275:C:C2	42:YQ:85:LYS:NZ	2.61	0.69
2:QB:7:VAL:HA	2:QB:217:ARG:NH1	2.07	0.69
23:XZ:37:THR:CB	23:XZ:40:GLU:O	2.41	0.69
32:YA:2305:A:H5''	36:YG:134:GLY:HA3	1.74	0.69
37:YH:5:GLY:C	37:YH:65:HIS:CE1	2.54	0.69
37:YH:4:ILE:HG22	37:YH:69:ARG:CD	2.22	0.69
2:QB:11:LEU:HD12	2:QB:11:LEU:N	2.08	0.69
2:QB:95:GLN:HE21	2:QB:95:GLN:CA	2.02	0.69
41:RP:64:LYS:HG3	53:R8:30:ARG:HH21	1.55	0.69
32:RA:2393:A:H4'	41:RP:62:LEU:H	1.56	0.69
35:YE:9:VAL:HB	35:YE:25:VAL:HG23	1.75	0.69
41:YP:86:LYS:HB3	41:YP:118:GLY:HA3	1.74	0.69
55:RZ:53:ILE:HD11	55:RZ:72:ARG:HD2	1.75	0.68
23:XZ:62:GLU:H	23:XZ:62:GLU:CD	1.97	0.68
21:XV:76:A:H2	24:Y0:2:ALA:CA	2.06	0.68
41:YP:79:ARG:HB2	41:YP:110:TYR:HD1	1.58	0.68
1:QA:971:G:N2	1:QA:1363:A:OP2	2.26	0.68
2:QB:34:ALA:O	2:QB:41:ILE:HG13	1.92	0.68
55:RZ:119:GLU:N	55:RZ:119:GLU:OE1	2.24	0.68
23:XZ:4:ILE:CD1	23:XZ:76:LEU:HD21	2.20	0.68
1:QA:191:G:O2'	19:QT:101:GLY:O	2.11	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:1365:A:O2'	52:R1:11:ARG:NH2	2.24	0.68
32:RA:2701:C:H3'	32:RA:2702:U:C5'	2.21	0.68
32:RA:654(D):G:H1	32:RA:654(Q):C:H42	1.41	0.68
32:RA:996:A:H4'	46:RU:92:ARG:HD2	1.75	0.68
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.57	0.68
23:XY:28:ASN:O	23:XY:32:LYS:HG2	1.94	0.68
23:XZ:33:ASP:OD2	23:XZ:42:LYS:HG3	1.93	0.68
37:YH:105:LEU:HD12	37:YH:105:LEU:N	2.08	0.68
18:QS:41:VAL:HG11	18:QS:67:VAL:CB	2.22	0.68
21:QW:71:C:O2'	32:RA:1851:U:O2'	2.11	0.68
23:QZ:60:ILE:HD12	23:QZ:64:HIS:O	1.93	0.68
32:RA:1490:A:O2'	34:RD:99:ASP:OD1	2.12	0.68
41:RP:60:MET:HA	53:R8:13:ARG:CZ	2.23	0.68
29:Y6:13:CYS:HB3	29:Y6:16:CYS:SG	2.32	0.68
32:YA:620:G:H4'	32:YA:621:A:H5''	1.76	0.68
33:YB:119:A:H8	33:YB:119:A:H5''	1.58	0.68
35:YE:111:ARG:HD3	35:YE:160:TYR:CE2	2.28	0.68
47:YV:5:VAL:HG11	47:YV:57:VAL:CG2	2.18	0.68
23:QZ:44:LYS:CE	23:QZ:59:ARG:CG	2.68	0.68
23:XY:61:THR:HG22	23:XY:63:GLU:H	1.57	0.68
23:XZ:4:ILE:CD1	23:XZ:76:LEU:HD23	2.19	0.68
32:YA:1980:G:O2'	32:YA:1982:C:OP2	2.11	0.68
32:YA:286:C:C2'	32:YA:287:C:H5'	2.24	0.68
42:YQ:118:LEU:HD12	42:YQ:131:ILE:HG23	1.76	0.68
55:YZ:13:GLU:N	55:YZ:13:GLU:OE1	2.26	0.68
2:QB:77:ALA:HB1	2:QB:211:ILE:HD13	1.75	0.68
32:YA:1247:A:OP1	54:YF:95:ARG:NH2	2.27	0.68
37:RH:164:TYR:HB2	37:RH:167:GLU:HB2	1.76	0.68
34:YD:165:ILE:HG12	34:YD:175:LEU:HD21	1.76	0.68
55:YZ:128:VAL:HB	55:YZ:161:VAL:HG23	1.76	0.68
23:XZ:6:SER:N	23:XZ:9:SER:OG	2.25	0.68
37:YH:94:TYR:CE1	37:YH:108:GLY:N	2.58	0.68
2:QB:80:ILE:N	2:QB:80:ILE:HD12	2.01	0.67
32:RA:1300:U:H4'	32:RA:1301:A:H5'	1.74	0.67
34:RD:33:LEU:HD12	34:RD:34:VAL:HG23	1.75	0.67
37:RH:7:LEU:H	37:RH:8:PRO:HD3	1.58	0.67
50:RY:83:THR:OG1	50:RY:100:ALA:HB3	1.93	0.67
24:Y0:39:ARG:HH21	32:YA:2355:C:H1'	1.59	0.67
41:YP:33:ARG:HG2	41:YP:40:SER:HA	1.77	0.67
2:QB:54:THR:HG21	2:QB:201:ILE:HG12	1.75	0.67
32:RA:117:G:OP2	32:RA:119:A:O2'	2.10	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2882:A:OP1	43:YR:96:ARG:NH1	2.27	0.67
35:YE:97:LYS:O	35:YE:100:GLU:HB2	1.93	0.67
41:YP:127:ALA:O	41:YP:148:LEU:HB3	1.81	0.67
42:YQ:54:MET:HE3	42:YQ:118:LEU:HD23	1.75	0.67
32:RA:2119:A:N6	32:RA:2170:A:N7	2.43	0.67
54:RF:45:ARG:HD2	54:RF:97:TYR:CD2	2.30	0.67
37:RH:23:ARG:CD	37:RH:25:LYS:HZ3	2.08	0.67
41:RP:62:LEU:HD23	53:R8:27:THR:HG22	1.76	0.67
1:XA:4:U:O2	8:XH:105:ARG:NH2	2.27	0.67
53:Y8:15:LYS:CB	41:YP:65:ARG:NH2	2.57	0.67
37:YH:46:GLU:HG2	37:YH:49:VAL:O	1.93	0.67
42:YQ:137:TYR:HB3	55:YZ:76:LEU:HD21	1.77	0.67
55:YZ:85:HIS:HE1	55:YZ:87:ASP:OD1	1.76	0.67
2:QB:154:LEU:HD23	2:QB:154:LEU:N	2.09	0.67
2:QB:232:PRO:O	2:QB:233:SER:HB3	1.94	0.67
32:RA:1568:G:H5''	34:RD:61:LEU:HD23	1.76	0.67
32:RA:306:U:C4	32:RA:307:G:C6	2.83	0.67
32:RA:309:G:H5'	32:RA:329:G:C6	2.30	0.67
32:RA:321:G:C5	54:RF:165:ARG:NH2	2.61	0.67
5:XE:102:ALA:HB1	5:XE:106:PRO:HG2	1.76	0.67
53:Y8:61:LEU:HD12	32:YA:593:G:H4'	1.76	0.67
41:YP:91:PHE:CD1	41:YP:95:VAL:HG22	2.29	0.67
2:QB:209:ARG:HG2	2:QB:209:ARG:HH11	1.60	0.67
5:QE:107:ARG:O	5:QE:111:GLU:HB2	1.93	0.67
23:QY:3:LEU:CD1	23:QY:35:ARG:NH2	2.50	0.67
23:QY:5:TRP:CD1	23:QZ:5:TRP:CD1	2.82	0.67
23:QZ:66:LEU:C	23:QZ:66:LEU:HD23	2.15	0.67
42:RQ:55:VAL:HG22	55:RZ:178:GLU:HG2	1.76	0.67
12:XM:87:TYR:HB3	18:XS:73:GLU:HG3	1.77	0.67
23:XZ:66:LEU:C	23:XZ:66:LEU:HD23	2.15	0.67
2:QB:55:PHE:HA	2:QB:58:ILE:HD12	1.75	0.67
23:QZ:60:ILE:N	23:QZ:60:ILE:HD12	2.07	0.67
33:RB:104:A:OP1	55:RZ:72:ARG:NH2	2.28	0.67
32:YA:2720:U:H3	32:YA:2873:A:H2	1.43	0.67
32:YA:727:A:OP1	32:YA:1431:U:O2'	2.13	0.67
37:YH:154:PRO:HB3	37:YH:163:TYR:CE1	2.30	0.67
42:YQ:60:ARG:CA	55:YZ:180:VAL:N	2.58	0.67
47:YV:38:LEU:HD12	47:YV:38:LEU:N	2.10	0.67
1:QA:339:C:OP2	40:RO:97:ARG:NH1	2.28	0.67
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.76	0.67
1:XA:1001:G:H3'	1:XA:1001:G:C8	2.29	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1313:U:O4	18:XS:2:PRO:HD2	1.93	0.67
23:XZ:37:THR:HG22	23:XZ:40:GLU:N	2.10	0.67
32:YA:775:G:N2	32:YA:793:A:O2'	2.27	0.67
41:YP:149:GLU:HA	41:YP:149:GLU:OE1	1.92	0.67
42:YQ:139:GLU:HG2	55:YZ:122:ARG:HD3	1.76	0.67
2:QB:84:GLU:OE1	2:QB:219:VAL:HG11	1.95	0.67
37:RH:18:GLU:HB2	37:RH:25:LYS:O	1.95	0.67
1:XA:618:C:H5'	1:XA:619:U:H5''	1.76	0.67
1:XA:1311:G:OP1	27:Y4:61:ARG:NH2	2.26	0.67
1:QA:673:G:H2'	1:QA:674:G:C8	2.30	0.67
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.77	0.67
34:RD:8:PRO:HB3	34:RD:14:ARG:HB3	1.77	0.67
50:RY:57:GLN:HA	50:RY:57:GLN:OE1	1.94	0.67
32:YA:2358:G:H22	41:YP:55:ARG:HH22	1.40	0.67
47:YV:95:LEU:HD23	47:YV:96:ILE:O	1.94	0.67
2:QB:85:ALA:CB	2:QB:92:TYR:HB3	2.25	0.66
22:QX:13:A:O2'	22:QX:15:A:OP2	2.13	0.66
32:YA:2730:C:O2'	35:YE:168:MET:O	2.13	0.66
46:YU:109:LEU:CD2	47:YV:47:VAL:HG11	2.25	0.66
1:QA:537:G:H5''	51:QL:113:ARG:HH12	1.60	0.66
23:QY:52:LEU:HD12	23:QY:52:LEU:N	2.11	0.66
34:YD:46:GLN:HA	34:YD:46:GLN:NE2	2.10	0.66
54:RF:25:PRO:HD2	54:RF:115:ALA:HB2	1.77	0.66
40:RO:104:ARG:HH21	45:RT:34:VAL:HG11	1.59	0.66
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.28	0.66
1:XA:998(A):C:O5'	1:XA:998(A):C:H6	1.78	0.66
37:YH:107:VAL:CG1	37:YH:152:ARG:CD	2.68	0.66
55:YZ:10:ARG:HB3	55:YZ:38:TYR:HD2	1.60	0.66
52:R1:80:LEU:C	52:R1:80:LEU:HD12	2.14	0.66
52:R1:87:PRO:O	52:R1:91:LYS:N	2.24	0.66
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.76	0.66
37:YH:103:LEU:HG	37:YH:105:LEU:CD1	2.26	0.66
37:YH:153:LYS:HG3	37:YH:154:PRO:HD3	1.73	0.66
42:YQ:116:GLU:OE1	42:YQ:116:GLU:HA	1.95	0.66
54:RF:143:ALA:HB1	54:RF:148:LEU:HB2	1.77	0.66
34:YD:154:LYS:HB2	34:YD:155:LEU:HD12	1.78	0.66
37:YH:3:ARG:HH21	37:YH:3:ARG:CG	2.08	0.66
46:YU:90:VAL:HG11	47:YV:39:LEU:HB2	1.76	0.66
18:QS:9:VAL:HG21	27:R4:63:TYR:HD1	1.58	0.66
34:YD:183:ARG:NH1	34:YD:266:SER:OG	2.28	0.66
35:YE:101:ARG:HH11	35:YE:101:ARG:CG	2.08	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YE:50:GLY:HA2	35:YE:78:LEU:HD23	1.76	0.66
47:YV:40:LEU:C	47:YV:40:LEU:HD23	2.16	0.66
2:QB:118:LEU:CD2	2:QB:142:LEU:HB2	2.19	0.66
2:QB:72:GLY:HA2	2:QB:165:VAL:HG12	1.78	0.66
23:QZ:3:LEU:CD2	23:QZ:31:ILE:HD11	2.25	0.66
1:XA:937:A:C2	1:XA:1379:G:O6	2.48	0.66
55:YZ:13:GLU:HB3	55:YZ:18:LEU:HD21	1.78	0.66
32:RA:768:G:O2'	32:RA:1379:A:N6	2.28	0.66
1:QA:960:U:O2	1:QA:960:U:H2'	1.96	0.66
5:QE:110:LEU:HD13	5:QE:118:ILE:HD13	1.77	0.66
32:RA:2618:G:H21	35:RE:150:VAL:HG21	1.61	0.66
23:XZ:20:ASP:OD1	23:XZ:23:ILE:HG12	1.95	0.66
33:YB:33:G:H5'	36:YG:2:PRO:HG3	1.77	0.66
37:YH:107:VAL:O	37:YH:152:ARG:HD2	1.96	0.66
42:YQ:64:ILE:HD11	55:YZ:178:GLU:CB	2.25	0.66
2:QB:47:THR:HA	2:QB:202:PRO:HG2	1.76	0.66
4:QD:60:GLU:HG2	4:QD:202:LEU:HB2	1.77	0.66
35:YE:54:GLN:HB2	35:YE:76:ARG:CG	2.25	0.66
37:YH:123:PHE:HZ	37:YH:144:VAL:CG1	2.08	0.66
52:R1:85:LEU:C	52:R1:87:PRO:HD3	2.15	0.65
32:RA:2729:G:H1'	35:RE:187:ALA:HB2	1.78	0.65
55:RZ:10:ARG:HB3	55:RZ:38:TYR:HD2	1.62	0.65
37:YH:105:LEU:HB2	37:YH:113:VAL:HG12	1.77	0.65
37:YH:94:TYR:CD1	37:YH:107:VAL:HA	2.30	0.65
41:YP:68:GLN:HA	41:YP:68:GLN:OE1	1.95	0.65
2:QB:21:ARG:HD3	2:QB:39:ILE:HD11	1.78	0.65
18:XS:41:VAL:HG12	18:XS:44:MET:HG3	1.77	0.65
32:YA:831:G:H2'	32:YA:831:G:OP2	1.96	0.65
35:YE:28:ALA:CB	35:YE:180:ASN:HB3	2.10	0.65
35:YE:23:VAL:HG12	35:YE:184:VAL:O	1.95	0.65
37:YH:3:ARG:HH21	37:YH:3:ARG:HG2	1.60	0.65
2:QB:209:ARG:HB3	2:QB:209:ARG:NH1	2.11	0.65
23:XY:35:ARG:NH1	23:XZ:10:TRP:HD1	1.94	0.65
53:Y8:27:THR:HG22	41:YP:62:LEU:HD23	1.77	0.65
29:R6:23:THR:HG21	32:RA:2286:A:H61	1.61	0.65
32:RA:654(A):G:OP2	32:RA:654(A):G:H8	1.79	0.65
32:YA:2358:G:N2	41:YP:55:ARG:HH22	1.95	0.65
41:YP:84:ASN:CG	41:YP:117:GLU:HB2	2.17	0.65
42:YQ:59:ARG:C	55:YZ:180:VAL:HG23	2.16	0.65
55:YZ:52:SER:HB3	55:YZ:54:HIS:HD2	1.61	0.65
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.96	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:2438:U:O3'	32:RA:2439:A:H3'	1.97	0.65
32:YA:2429:G:O6	41:YP:61:ARG:NH2	2.29	0.65
55:RZ:70:LEU:CD1	55:RZ:91:LEU:HD22	2.27	0.65
1:QA:674:G:H2'	1:QA:675:A:H8	1.62	0.65
21:QW:28:C:H42	21:QW:42:G:H1	1.42	0.65
41:RP:9:ASN:OD1	54:RF:31:HIS:ND1	2.29	0.65
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.29	0.65
32:YA:1019:U:OP1	32:YA:1035:U:O2'	2.13	0.65
32:YA:1837:C:O2	32:YA:1927:A:H2	1.79	0.65
2:QB:77:ALA:HB2	2:QB:211:ILE:CD1	2.26	0.65
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.61	0.65
37:RH:3:ARG:NH2	37:RH:8:PRO:HG3	2.11	0.65
37:RH:9:ILE:HD12	37:RH:9:ILE:C	2.15	0.65
55:RZ:183:LEU:C	55:RZ:183:LEU:HD23	2.17	0.65
55:RZ:53:ILE:HG13	55:RZ:71:VAL:O	1.96	0.65
1:XA:1014:A:C4'	18:XS:14:HIS:ND1	2.57	0.65
33:YB:80:U:H2'	33:YB:81:G:H21	1.60	0.65
35:YE:19:ARG:HB3	35:YE:19:ARG:NH1	2.11	0.65
32:YA:587:C:C2	41:YP:33:ARG:NH2	2.64	0.65
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.45	0.65
32:YA:1042:G:H1	32:YA:1113:U:H3	1.45	0.65
35:YE:37:ARG:CA	35:YE:42:ASP:OD2	2.41	0.65
35:YE:81:ILE:HD12	35:YE:81:ILE:N	2.11	0.65
2:QB:209:ARG:CG	2:QB:209:ARG:HH11	2.10	0.64
51:QL:36:VAL:HG22	51:QL:82:VAL:HG12	1.79	0.64
32:RA:616:A:H4'	54:RF:182:ASN:ND2	2.12	0.64
1:XA:427:U:OP1	4:XD:13:ARG:NH2	2.29	0.64
18:XS:81:ARG:O	18:XS:81:ARG:HG3	1.96	0.64
32:YA:2033:A:O2'	32:YA:2035:G:OP2	2.14	0.64
32:YA:2731:G:H5''	35:YE:203:LYS:CE	2.22	0.64
32:YA:2795:G:H21	32:YA:2801:A:H62	1.43	0.64
32:YA:631:A:H1'	41:YP:66:GLY:HA2	1.80	0.64
42:YQ:58:PHE:CZ	42:YQ:106:VAL:HG21	2.32	0.64
21:QV:76:A:N6	32:RA:2450:A:O2'	2.30	0.64
35:RE:143:ASN:HD22	35:RE:147:PRO:HG2	1.62	0.64
32:RA:536:A:H4'	46:RU:57:PHE:CZ	2.33	0.64
45:YT:133:GLU:HB2	45:YT:137:LYS:HE3	1.79	0.64
46:YU:87:GLY:O	47:YV:49:THR:CA	2.45	0.64
47:YV:52:VAL:CG1	47:YV:55:ALA:HB3	2.26	0.64
32:YA:2572:A:C8	35:YE:144:ARG:NE	2.64	0.64
32:YA:587:C:N3	41:YP:33:ARG:NH2	2.42	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:422:C:O2'	1:QA:423:G:N2	2.30	0.64
32:RA:1667:G:O2'	32:RA:1669:A:N6	2.31	0.64
42:RQ:66:ILE:HA	42:RQ:104:PHE:HA	1.78	0.64
55:RZ:98:MET:C	55:RZ:125:LEU:HD12	2.16	0.64
1:XA:790:A:OP1	21:XV:38:A:O2'	2.15	0.64
21:XW:71:C:O2'	32:YA:1851:U:O2'	2.08	0.64
34:YD:155:LEU:HD12	34:YD:155:LEU:N	2.12	0.64
32:YA:586:A:H5'	54:YF:89:VAL:HG21	1.79	0.64
37:YH:167:GLU:OE1	37:YH:167:GLU:HA	1.97	0.64
41:YP:138:LEU:HD21	41:YP:145:PRO:CA	2.27	0.64
47:YV:16:PRO:HA	47:YV:96:ILE:HG22	1.79	0.64
1:QA:831:U:P	2:QB:22:LYS:NZ	2.71	0.64
23:QY:10:TRP:CD2	23:QZ:3:LEU:HD11	2.30	0.64
52:R1:88:LYS:O	52:R1:93:GLU:HG2	1.98	0.64
35:RE:10:GLY:HA3	45:RT:8:LYS:HE2	1.80	0.64
18:XS:49:ILE:HD13	18:XS:71:LEU:HD23	1.80	0.64
32:YA:1105:U:H2'	32:YA:1106:G:H8	1.62	0.64
34:YD:53:PHE:CD1	34:YD:219:PRO:O	2.50	0.64
37:YH:136:ILE:HD12	37:YH:136:ILE:H	1.61	0.64
37:YH:60:ARG:CG	37:YH:60:ARG:HH11	2.09	0.64
2:QB:80:ILE:HG22	2:QB:215:LEU:HD12	1.79	0.64
2:QB:69:LEU:CD2	2:QB:71:VAL:HG23	2.27	0.64
32:RA:2816:C:O2	32:RA:2883:A:O2'	2.15	0.64
23:XZ:3:LEU:N	23:XZ:3:LEU:HD12	2.11	0.64
42:YQ:23:GLY:O	42:YQ:101:ARG:NH1	2.30	0.64
47:YV:40:LEU:HD23	47:YV:41:GLY:N	2.12	0.64
1:QA:544:G:OP1	4:QD:59:ARG:NH2	2.31	0.64
18:QS:50:ALA:HB1	18:QS:57:HIS:HB3	1.79	0.64
32:RA:308:G:H3'	32:RA:309:G:C8	2.33	0.64
35:RE:146:THR:HB	35:RE:147:PRO:CD	2.20	0.64
32:YA:287:C:O2'	32:YA:288:C:O5'	2.15	0.64
2:QB:168:THR:HG21	2:QB:191:ASP:OD1	1.98	0.64
2:QB:61:LEU:HD12	2:QB:66:GLY:HA3	1.80	0.64
2:QB:71:VAL:CG2	2:QB:97:TRP:CZ3	2.71	0.64
2:QB:178:ARG:HH22	8:QH:74:PRO:HB3	1.61	0.64
23:QY:44:LYS:HD3	51:QL:50:SER:CA	2.27	0.64
23:QZ:20:ASP:CB	23:QZ:23:ILE:HG12	2.28	0.64
32:RA:27:G:N2	32:RA:513:A:OP2	2.30	0.64
1:XA:358:U:H6	1:XA:358:U:C5'	2.10	0.64
1:XA:818:G:O2'	1:XA:820:U:OP2	2.12	0.64
23:XY:3:LEU:HD21	23:XY:5:TRP:NE1	2.13	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y1:87:PRO:HA	52:Y1:90:ILE:CG2	2.27	0.64
32:YA:1798:U:H5	34:YD:274:ARG:HH12	1.45	0.64
32:YA:571:A:H5'	32:YA:2030:A:H62	1.63	0.64
35:YE:32:PRO:HA	35:YE:89:ASP:O	1.98	0.64
2:QB:220:ASP:O	2:QB:223:ILE:CG1	2.45	0.64
34:YD:164:GLN:OE1	34:YD:176:ARG:NH2	2.23	0.64
35:YE:172:VAL:HG13	35:YE:182:LEU:HD11	1.80	0.64
55:YZ:10:ARG:HD3	55:YZ:38:TYR:HB3	1.80	0.64
12:QM:58:GLU:O	12:QM:62:ASN:HB2	1.99	0.63
23:QY:21:LYS:HE3	23:QY:25:LYS:HE3	1.79	0.63
34:RD:31:LYS:HB3	34:RD:35:LYS:HG3	1.79	0.63
18:XS:66:MET:HB2	18:XS:74:PHE:CZ	2.32	0.63
42:YQ:140:ALA:HB2	55:YZ:53:ILE:HD11	1.79	0.63
1:XA:1128:C:H1'	1:XA:1146:A:H61	1.63	0.63
1:XA:356:A:N3	1:XA:368:U:O2'	2.29	0.63
37:YH:103:LEU:HB3	37:YH:115:VAL:HG12	1.79	0.63
37:YH:4:ILE:O	37:YH:69:ARG:NE	2.31	0.63
41:YP:52:GLU:OE1	41:YP:58:THR:CG2	2.45	0.63
41:YP:9:ASN:ND2	41:YP:9:ASN:O	2.31	0.63
2:QB:163:PHE:HA	2:QB:185:ILE:O	1.99	0.63
2:QB:71:VAL:HG22	2:QB:93:VAL:HG11	1.81	0.63
32:RA:1827:C:OP2	34:RD:222:ARG:NH1	2.31	0.63
45:RT:36:GLU:HG3	45:RT:41:ARG:HE	1.63	0.63
51:XL:53:ARG:NH1	51:XL:92:ASP:OD2	2.32	0.63
35:YE:111:ARG:CD	35:YE:160:TYR:CE2	2.81	0.63
55:YZ:53:ILE:HD12	55:YZ:53:ILE:H	1.63	0.63
35:YE:46:ALA:HB2	35:YE:82:ARG:HA	1.79	0.63
4:QD:169:LYS:HB2	6:XF:21:LEU:HD21	1.81	0.63
32:RA:1270:C:H5''	32:RA:1271:G:H5'	1.80	0.63
35:RE:17:ASP:O	35:RE:19:ARG:N	2.32	0.63
35:RE:60:ASN:HB2	35:RE:62:PRO:HD2	1.79	0.63
42:YQ:38:GLU:HB2	42:YQ:127:ILE:HB	1.80	0.63
37:RH:23:ARG:HD2	37:RH:25:LYS:HZ3	1.64	0.63
1:XA:971:G:N2	1:XA:1363:A:OP2	2.31	0.63
32:YA:2306:C:H5'	32:YA:2307:G:H5''	1.80	0.63
1:QA:1101:A:N6	2:QB:176:GLU:OE2	2.32	0.63
27:R4:36:CYS:SG	27:R4:37:SER:N	2.72	0.63
41:RP:49:ARG:HA	53:R8:57:ARG:HG2	1.79	0.63
32:RA:1024:G:H3'	32:RA:1025:G:H5''	1.79	0.63
32:RA:1342:A:H2	32:RA:1602:U:H3	1.46	0.63
23:QY:55:PHE:CD1	23:QY:69:ALA:HB2	2.34	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:RZ:144:LEU:HD11	55:RZ:150:LEU:HD11	1.79	0.63
55:RZ:182:LYS:O	55:RZ:182:LYS:HG2	1.99	0.63
4:XD:154:ASN:HA	4:XD:159:ARG:HE	1.63	0.63
2:QB:11:LEU:HD12	2:QB:11:LEU:H	1.63	0.63
2:QB:77:ALA:HB1	2:QB:211:ILE:CD1	2.29	0.63
32:YA:1139:G:O2'	32:YA:1143:A:N6	2.31	0.63
32:YA:414:C:O2	32:YA:1864:U:O2'	2.17	0.63
35:YE:122:PHE:HZ	35:YE:155:LYS:HB2	1.64	0.63
35:YE:54:GLN:NE2	35:YE:76:ARG:HG2	2.14	0.63
41:YP:98:GLU:O	41:YP:101:VAL:CG1	2.44	0.63
32:YA:996:A:H1'	47:YV:9:GLY:O	1.99	0.63
48:YW:88:ARG:HB2	48:YW:92:ARG:HB2	1.81	0.63
1:QA:1028(B):C:H3'	1:QA:1029:G:H4'	1.81	0.62
51:QL:127:GLU:HA	51:QL:127:GLU:OE1	1.98	0.62
32:RA:443:A:H2'	54:RF:45:ARG:HH12	1.64	0.62
32:RA:608:A:OP1	54:RF:100:THR:HG21	1.99	0.62
45:RT:66:VAL:HA	45:RT:71:GLY:HA2	1.81	0.62
55:RZ:144:LEU:HD11	55:RZ:150:LEU:CD1	2.29	0.62
10:XJ:38:ILE:HB	10:XJ:71:LEU:HB3	1.81	0.62
32:YA:389:G:H1	41:YP:71:VAL:HG12	1.64	0.62
1:QA:924:C:O2'	1:QA:1502:A:N6	2.31	0.62
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.20	0.62
23:QY:7:GLU:CG	23:QY:8:GLU:OE1	2.47	0.62
32:RA:2788:C:O2'	32:RA:2809:A:N3	2.31	0.62
1:XA:31:G:O2'	1:XA:48:C:N4	2.32	0.62
3:XC:14:ILE:HG22	3:XC:15:THR:HG23	1.81	0.62
32:YA:987:G:O2'	32:YA:1000:A:N3	2.31	0.62
32:YA:2296:U:OP2	44:YS:9:ARG:NH1	2.31	0.62
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.28	0.62
52:R1:18:ILE:HG12	52:R1:37:ILE:HG12	1.81	0.62
32:RA:2517:C:O2'	32:RA:2518:A:H3'	1.99	0.62
38:RI:123:LEU:HD22	38:RI:143:SER:HB2	1.81	0.62
23:XY:67:VAL:CG2	23:XY:78:ALA:HB3	2.23	0.62
32:YA:345:A:O2'	32:YA:346:A:N7	2.31	0.62
32:YA:2208:U:C1'	34:YD:151:LYS:HE2	2.23	0.62
1:QA:855:G:OP2	1:QA:871:U:N3	2.28	0.62
2:QB:213:LEU:HD23	2:QB:213:LEU:C	2.19	0.62
32:RA:1817:G:OP1	34:RD:88:ARG:NH2	2.33	0.62
55:RZ:61:LEU:HB2	55:RZ:62:PRO:HD2	1.81	0.62
55:RZ:80:ARG:HD2	55:RZ:82:ARG:HD2	1.82	0.62
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.34	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:993:G:OP1	46:YU:50:ARG:NH2	2.31	0.62
55:YZ:180:VAL:O	55:YZ:183:LEU:HG	1.99	0.62
1:QA:957:U:H3'	23:QZ:36:ARG:NH1	2.12	0.62
29:R6:13:CYS:HB3	29:R6:16:CYS:SG	2.39	0.62
1:XA:1040:U:H6	1:XA:1040:U:C5'	2.12	0.62
1:XA:1313:U:OP1	18:XS:5:LEU:HB2	2.00	0.62
1:XA:578:C:O2'	1:XA:728:A:N3	2.30	0.62
1:XA:674:G:H2'	1:XA:675:A:H8	1.65	0.62
33:YB:119:A:C8	33:YB:119:A:H5''	2.34	0.62
42:YQ:75:THR:HG23	42:YQ:88:GLY:C	2.20	0.62
34:YD:24:ILE:CD1	34:YD:84:TYR:HB2	2.28	0.62
32:YA:956:G:H5''	42:YQ:77:LYS:HD2	1.80	0.62
1:QA:1224:G:O2'	1:QA:1322:C:OP1	2.18	0.62
52:R1:58:ILE:HD11	52:R1:86:SER:HB2	1.81	0.62
32:YA:252:G:P	41:YP:50:ARG:HH22	2.22	0.62
41:YP:117:GLU:HA	41:YP:117:GLU:OE1	1.98	0.62
18:XS:64:GLU:N	18:XS:64:GLU:OE1	2.22	0.62
23:XY:39:PHE:HZ	32:YA:1914:C:H5''	1.65	0.62
35:YE:175:VAL:C	35:YE:176:ILE:HD13	2.20	0.62
35:YE:96:PHE:HA	35:YE:100:GLU:OE1	2.00	0.62
32:YA:598:G:O2'	41:YP:9:ASN:OD1	2.16	0.62
47:YV:72:VAL:HG13	47:YV:85:LYS:HB3	1.81	0.62
21:QV:76:A:O3'	32:RA:2602:A:N6	2.33	0.62
55:RZ:70:LEU:CD1	55:RZ:91:LEU:HD21	2.29	0.62
1:XA:1292:U:OP2	7:XG:41:ARG:NH1	2.33	0.62
10:XJ:51:ARG:HB2	10:XJ:60:ARG:HA	1.81	0.62
34:YD:37:LEU:CD2	34:YD:87:ASN:ND2	2.63	0.62
35:YE:175:VAL:O	35:YE:176:ILE:HD13	2.00	0.62
2:QB:91:PRO:HG3	2:QB:154:LEU:HB2	0.85	0.62
18:QS:81:ARG:HH22	23:QZ:36:ARG:CD	2.12	0.62
23:QY:1:MET:N	23:QZ:7:GLU:HG2	2.14	0.62
37:RH:23:ARG:CD	37:RH:34:GLU:OE2	2.46	0.62
41:RP:49:ARG:CA	53:R8:57:ARG:HG2	2.30	0.62
1:XA:1306:A:N6	1:XA:1331:G:O2'	2.33	0.62
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.18	0.62
32:YA:2023:G:OP2	32:YA:2617:C:H4'	1.99	0.62
35:YE:2:LYS:HG3	35:YE:96:PHE:CE1	2.35	0.62
41:YP:90:ARG:HG3	41:YP:91:PHE:HD2	1.65	0.62
32:RA:2432:A:C8	52:R1:33:LYS:NZ	2.65	0.61
18:XS:12:ASP:OD2	18:XS:35:SER:CB	2.48	0.61
32:YA:906:G:HO2'	42:YQ:67:ARG:NH2	1.96	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:YZ:99:TYR:CE1	55:YZ:125:LEU:HB2	2.34	0.61
2:QB:71:VAL:CG2	2:QB:93:VAL:CG1	2.77	0.61
23:QY:39:PHE:CZ	23:QY:70:VAL:HG21	2.35	0.61
32:YA:1812:A:H2'	32:YA:1813:G:H8	1.64	0.61
32:YA:1816:G:N7	34:YD:35:LYS:NZ	2.44	0.61
32:YA:273(E):U:H3	32:YA:363(A):A:H61	1.49	0.61
35:YE:119:ARG:NH1	35:YE:156:MET:O	2.32	0.61
21:XV:64:G:H4'	42:YQ:10:ARG:HH22	1.65	0.61
1:QA:977:A:N6	1:QA:1224:G:OP1	2.31	0.61
2:QB:142:LEU:HD23	2:QB:142:LEU:O	1.99	0.61
18:QS:9:VAL:HG21	27:R4:63:TYR:CD1	2.35	0.61
23:QY:10:TRP:CE3	23:QZ:3:LEU:HD13	2.36	0.61
32:RA:1899:G:H21	32:RA:1902:C:N4	1.97	0.61
35:RE:146:THR:CB	35:RE:147:PRO:HD3	2.22	0.61
55:RZ:78:LYS:H	55:RZ:78:LYS:CD	2.13	0.61
28:Y5:55:ARG:NH1	28:Y5:57:VAL:CG1	2.63	0.61
34:YD:215:LEU:CD1	34:YD:217:ARG:HH21	2.13	0.61
47:YV:5:VAL:CG1	47:YV:57:VAL:HG21	2.18	0.61
42:YQ:60:ARG:CB	55:YZ:179:ASP:HA	2.30	0.61
23:QZ:4:ILE:HG21	23:QZ:76:LEU:CD2	2.30	0.61
32:RA:2720:U:H3	32:RA:2873:A:H2	1.49	0.61
32:YA:1568:G:P	34:YD:63:ARG:HH22	2.23	0.61
23:QY:1:MET:O	23:QY:2:LYS:HB2	2.00	0.61
32:RA:958:U:OP2	42:RQ:14:ARG:NH1	2.33	0.61
55:RZ:152:ALA:N	55:RZ:169:GLU:O	2.33	0.61
55:RZ:70:LEU:HD13	55:RZ:91:LEU:CD1	2.31	0.61
1:XA:1039:C:H2'	1:XA:1040:U:H5''	1.82	0.61
1:XA:677:U:H3	1:XA:713:G:H22	1.48	0.61
1:XA:714:G:H2'	1:XA:715:A:C8	2.35	0.61
32:YA:956:G:OP2	42:YQ:14:ARG:NH2	2.33	0.61
35:YE:101:ARG:CG	35:YE:169:ASN:OD1	2.45	0.61
2:QB:215:LEU:O	2:QB:219:VAL:HG12	1.99	0.61
35:YE:51:PHE:HB3	35:YE:77:ILE:CD1	2.23	0.61
41:YP:102:ARG:O	41:YP:103:ALA:HB3	2.01	0.61
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.81	0.61
1:XA:1422:G:H5'	40:YO:48:PRO:HB3	1.82	0.61
1:XA:946:A:H2'	1:XA:947:G:C8	2.34	0.61
23:XZ:44:LYS:N	23:XZ:44:LYS:HD2	2.16	0.61
1:QA:1001:G:H2'	1:QA:1002:G:C8	2.36	0.61
1:QA:1033:G:O2'	1:QA:1034:G:OP1	2.16	0.61
1:QA:1252:A:H61	1:QA:1285:A:H61	1.47	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.36	0.61
23:QZ:4:ILE:CG2	23:QZ:76:LEU:HD23	2.31	0.61
55:RZ:138:GLU:HG3	55:RZ:138:GLU:O	2.01	0.61
18:XS:41:VAL:CG2	18:XS:42:PRO:CD	2.77	0.61
53:Y8:12:LYS:HG2	41:YP:68:GLN:CD	2.21	0.61
32:YA:906:G:O5'	42:YQ:26:TYR:OH	2.17	0.61
35:YE:54:GLN:NE2	35:YE:54:GLN:HA	2.15	0.61
2:QB:194:PRO:HB3	2:QB:200:ILE:CD1	2.26	0.61
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.82	0.61
38:RI:92:VAL:O	38:RI:92:VAL:HG12	2.01	0.61
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	1.83	0.61
23:XZ:37:THR:HG22	23:XZ:40:GLU:O	2.00	0.61
32:YA:2472:G:H5'	32:YA:2473:U:H5''	1.82	0.61
35:YE:111:ARG:CD	35:YE:160:TYR:CD2	2.83	0.61
55:RZ:75:ASN:O	55:RZ:84:GLU:N	2.34	0.61
1:XA:1217:C:H5''	13:YN:9:LYS:HD2	1.82	0.61
32:YA:2657:A:O3'	37:YH:160:LYS:NZ	2.34	0.61
2:QB:219:VAL:HG23	2:QB:222:ILE:HD11	1.83	0.60
32:RA:530:G:O2'	32:RA:532:A:N7	2.34	0.60
37:RH:69:ARG:HH11	37:RH:69:ARG:C	2.04	0.60
55:RZ:56:VAL:HG22	55:RZ:70:LEU:HD11	1.82	0.60
23:XY:32:LYS:NZ	23:XY:35:ARG:HH11	1.99	0.60
32:YA:2438:U:O3'	32:YA:2439:A:H3'	2.01	0.60
34:YD:146:GLU:O	34:YD:189:CYS:HB3	2.00	0.60
41:YP:81:GLN:OE1	41:YP:106:LEU:HG	2.00	0.60
32:YA:907:U:OP1	42:YQ:24:GLY:N	2.33	0.60
47:YV:95:LEU:C	47:YV:95:LEU:HD23	2.21	0.60
3:XC:150:LYS:HE3	3:XC:167:TRP:HE1	1.65	0.60
23:XY:3:LEU:HD21	23:XY:5:TRP:HE1	1.65	0.60
32:YA:389:G:N1	41:YP:71:VAL:HG12	2.16	0.60
35:YE:51:PHE:N	35:YE:75:VAL:CG1	2.63	0.60
35:YE:51:PHE:O	35:YE:77:ILE:HG13	2.00	0.60
1:QA:427:U:OP1	4:QD:13:ARG:NH2	2.34	0.60
51:QL:26:ALA:HA	51:QL:64:TYR:HD2	1.66	0.60
55:RZ:126:VAL:HG12	55:RZ:163:LEU:HD23	1.83	0.60
23:XZ:37:THR:HG21	23:XZ:40:GLU:O	1.98	0.60
32:YA:27:G:N2	32:YA:513:A:OP2	2.34	0.60
34:YD:35:LYS:HB2	34:YD:36:PRO:HD2	1.83	0.60
35:YE:7:VAL:CG1	35:YE:51:PHE:CE2	2.84	0.60
11:QK:18:ARG:HG2	11:QK:81:ASP:HB2	1.81	0.60
32:RA:651:G:OP2	53:R8:21:LYS:NZ	2.34	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:956:G:O2'	42:RQ:82:ARG:NH2	2.33	0.60
32:YA:1681:G:O2'	32:YA:1762:A:O2'	2.17	0.60
32:YA:2638:G:HO2'	32:YA:2639:A:H8	1.50	0.60
32:YA:626:U:O4	41:YP:81:GLN:NE2	2.34	0.60
35:YE:70:ALA:HB3	35:YE:72:VAL:HG12	1.84	0.60
41:YP:100:LEU:HD12	41:YP:112:LEU:HD11	0.64	0.60
56:ZB:76:PPU:N7	56:ZB:76:PPU:H93	2.15	0.60
1:XA:448:A:OP2	1:XA:485:G:N2	2.34	0.60
32:YA:2572:A:N7	35:YE:145:LYS:HB2	2.17	0.60
32:YA:531:C:OP1	32:YA:561:G:N1	2.34	0.60
34:YD:133:LEU:HD12	34:YD:185:VAL:HG12	1.83	0.60
34:YD:12:SER:HB3	34:YD:208:LYS:HB3	1.83	0.60
32:YA:1243:G:C2'	41:YP:7:ARG:HH22	2.14	0.60
1:QA:954:G:H21	1:QA:1227:A:H62	1.48	0.60
52:R1:81:LYS:HG2	52:R1:81:LYS:O	2.01	0.60
25:R2:47:ASN:O	25:R2:48:HIS:ND1	2.34	0.60
32:RA:2112:G:N2	32:RA:2169:A:H61	1.98	0.60
32:RA:877:U:H2'	32:RA:878:A:H5''	1.84	0.60
50:RY:99:CYS:HB3	50:RY:103:GLY:H	1.66	0.60
32:YA:1675:C:O2	35:YE:128:SER:OG	2.20	0.60
1:QA:745:C:OP1	1:QA:851:G:O2'	2.19	0.60
1:QA:1060:C:H5'	13:QN:45:ARG:HH12	1.67	0.60
32:RA:243:U:OP2	53:R8:8:LYS:NZ	2.25	0.60
32:RA:655:A:H4'	32:RA:656:G:H5'	1.84	0.60
55:RZ:101:PRO:HG2	55:RZ:135:GLU:O	2.01	0.60
35:YE:172:VAL:CG1	35:YE:182:LEU:HD11	2.30	0.60
37:YH:107:VAL:O	37:YH:107:VAL:HG12	2.02	0.60
23:QY:1:MET:H1	23:QZ:7:GLU:CD	2.04	0.60
23:QZ:60:ILE:CD1	23:QZ:64:HIS:O	2.48	0.60
33:RB:33:G:H5'	36:RG:2:PRO:HG3	1.83	0.60
23:XY:1:MET:HE3	23:XY:35:ARG:HG2	1.84	0.60
1:QA:619:U:N3	4:QD:134:ASP:OD1	2.33	0.60
32:RA:323:G:H2'	54:RF:169:ASN:OD1	2.02	0.60
1:XA:543:C:OP2	4:XD:10:ARG:NH1	2.34	0.60
10:XJ:6:ILE:HD12	10:XJ:98:ILE:HG22	1.83	0.60
32:YA:2748:A:H8	37:YH:63:SER:HA	1.66	0.60
37:YH:97:ARG:O	37:YH:103:LEU:HD12	2.01	0.60
23:QZ:20:ASP:HB3	23:QZ:23:ILE:HG12	1.84	0.60
53:Y8:15:LYS:HB2	41:YP:65:ARG:HH21	1.66	0.60
32:RA:10:G:N2	32:RA:2802:G:OP1	2.34	0.59
37:RH:69:ARG:HH11	37:RH:69:ARG:CG	2.14	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RQ:65:PHE:HB2	42:RQ:105:GLU:HB3	1.83	0.59
3:XC:19:GLU:HG2	3:XC:54:ARG:HE	1.66	0.59
11:XK:83:ILE:HG12	11:XK:109:VAL:HB	1.83	0.59
15:XP:45:THR:HG22	15:XP:47:ASP:H	1.67	0.59
23:XY:17:GLN:NE2	23:XZ:24:VAL:HG12	2.16	0.59
50:YY:90:LEU:HB2	50:YY:92:ASN:OD1	2.02	0.59
25:R2:10:LEU:HD21	25:R2:14:ARG:HH21	1.67	0.59
40:RO:104:ARG:NH2	45:RT:43:GLN:OE1	2.35	0.59
50:RY:83:THR:OG1	50:RY:84:ARG:N	2.35	0.59
1:XA:1157:A:O2'	1:XA:1158:C:O5'	2.18	0.59
30:Y7:9:ARG:NE	32:YA:1310:G:OP2	2.33	0.59
32:YA:1899:G:N3	32:YA:1899:G:H2'	2.17	0.59
28:Y5:19:ARG:HG3	32:YA:2046:G:H5'	1.83	0.59
32:YA:636:G:C8	41:YP:113:LYS:NZ	2.68	0.59
35:YE:49:LEU:HD12	35:YE:49:LEU:N	2.17	0.59
37:YH:107:VAL:CG1	37:YH:152:ARG:HD2	2.25	0.59
45:YT:127:ALA:O	45:YT:131:ALA:CB	2.51	0.59
40:YO:104:ARG:NH2	45:YT:43:GLN:OE1	2.36	0.59
41:RP:59:LEU:HD21	53:R8:10:ALA:HB2	1.83	0.59
41:RP:49:ARG:O	53:R8:57:ARG:HG2	2.02	0.59
31:R9:30:PRO:HB2	32:RA:2527:C:H5'	1.85	0.59
55:RZ:78:LYS:HD2	55:RZ:78:LYS:N	2.16	0.59
1:XA:6:G:H4'	1:XA:298:A:H4'	1.83	0.59
1:XA:358:U:C6	1:XA:358:U:C5'	2.86	0.59
34:YD:111:LEU:CD1	34:YD:115:GLN:HE21	2.15	0.59
35:YE:54:GLN:HE21	35:YE:76:ARG:CG	2.15	0.59
43:YR:86:ARG:NH2	43:YR:118:GLU:OXT	2.34	0.59
55:YZ:72:ARG:HH11	55:YZ:72:ARG:CG	2.14	0.59
37:RH:23:ARG:NE	37:RH:25:LYS:HZ1	1.94	0.59
1:XA:1125:U:O4	10:XJ:5:ARG:NH1	2.35	0.59
35:YE:201:THR:HG22	35:YE:203:LYS:H	1.68	0.59
35:YE:37:ARG:CD	35:YE:42:ASP:OD2	2.51	0.59
1:XA:1001:G:C3'	1:XA:1001:G:C8	2.86	0.59
1:XA:1363:A:H4'	1:XA:1364:U:H5''	1.84	0.59
1:XA:579:G:H5'	1:XA:728:A:H1'	1.82	0.59
27:Y4:16:CYS:SG	27:Y4:17:GLY:N	2.76	0.59
2:QB:165:VAL:HG23	2:QB:211:ILE:HD11	1.84	0.59
2:QB:18:GLY:HA2	2:QB:40:HIS:O	2.01	0.59
23:QY:10:TRP:CD1	23:QZ:3:LEU:HD11	2.37	0.59
47:YV:23:GLU:HA	47:YV:23:GLU:OE1	2.02	0.59
23:QY:1:MET:O	23:QY:73:ASP:O	2.21	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:308:G:H2'	32:RA:308:G:N3	2.16	0.59
32:RA:442:G:H1'	54:RF:48:THR:HG21	1.85	0.59
33:RB:80:U:H2'	33:RB:81:G:H21	1.67	0.59
42:RQ:30:GLY:H	42:RQ:105:GLU:CD	2.06	0.59
19:XT:89:ARG:HD2	19:XT:104:LEU:HD21	1.85	0.59
23:XZ:26:LYS:O	23:XZ:30:LEU:HG	2.03	0.59
50:YY:102:CYS:SG	50:YY:103:GLY:N	2.76	0.59
23:QY:5:TRP:HD1	23:QZ:5:TRP:CD1	2.21	0.59
32:RA:2328:A:H2'	32:RA:2329:G:C8	2.38	0.59
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.67	0.59
11:XK:18:ARG:HB3	11:XK:33:THR:HG23	1.84	0.59
37:YH:111:HIS:HB2	37:YH:112:PRO:HD2	1.85	0.59
37:YH:115:VAL:HG21	37:YH:148:ILE:HG12	1.85	0.59
23:QZ:60:ILE:CD1	23:QZ:64:HIS:C	2.71	0.59
32:RA:2468:G:H3'	32:RA:2476:A:H2	1.68	0.59
32:RA:308:G:C2'	32:RA:329:G:N2	2.65	0.59
32:RA:521:G:H2'	32:RA:522:G:H8	1.68	0.59
37:RH:69:ARG:NH1	37:RH:69:ARG:O	2.36	0.59
53:Y8:15:LYS:CB	41:YP:65:ARG:HH22	2.14	0.59
32:YA:352:G:O2'	32:YA:353:G:OP1	2.19	0.59
32:YA:481:G:O2'	32:YA:506:G:N2	2.35	0.59
39:YN:15:LEU:HD22	39:YN:134:ARG:HB2	1.84	0.59
41:YP:71:VAL:HG13	41:YP:72:PRO:CD	2.31	0.59
55:YZ:103:ARG:HG2	55:YZ:136:PHE:HB2	1.85	0.59
21:QW:51:C:H42	21:QW:63:G:H1	1.51	0.59
32:RA:2343:C:HO2'	32:RA:2373:G:HO2'	1.43	0.59
40:RO:2:ILE:HB	40:RO:33:ALA:HB3	1.83	0.59
55:RZ:117:LEU:HA	55:RZ:174:VAL:HG12	1.84	0.59
32:RA:1639:U:H2'	32:RA:1640:C:H5"	1.84	0.58
32:RA:306:U:C5	32:RA:307:G:C6	2.91	0.58
24:Y0:77:ARG:NH2	32:YA:857:C:OP2	2.35	0.58
53:Y8:58:ILE:HG23	41:YP:49:ARG:HD2	1.85	0.58
32:YA:953:A:O2'	32:YA:954:G:H5'	2.03	0.58
34:YD:24:ILE:HD11	34:YD:84:TYR:HB2	1.84	0.58
32:YA:2572:A:C8	35:YE:144:ARG:HG2	2.36	0.58
35:YE:111:ARG:HD2	35:YE:160:TYR:CD2	2.38	0.58
32:YA:811:U:C3'	41:YP:21:ARG:O	2.50	0.58
41:YP:97:PRO:HA	41:YP:112:LEU:HD12	1.85	0.58
1:XA:126:G:OP1	1:XA:605:U:O2'	2.17	0.58
1:XA:991:U:O4	1:XA:1212:U:O2'	2.13	0.58
12:XM:87:TYR:H	18:XS:73:GLU:HG2	1.68	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2114:A:N1	32:YA:2170:A:N6	2.51	0.58
34:YD:96:HIS:HD2	34:YD:102:LYS:HG2	1.66	0.58
35:YE:5:LEU:HD23	35:YE:77:ILE:HD11	1.85	0.58
41:YP:71:VAL:CG1	41:YP:72:PRO:HD3	2.29	0.58
1:QA:413:G:N2	1:QA:429:U:OP2	2.37	0.58
2:QB:10:LEU:C	2:QB:10:LEU:HD23	2.24	0.58
2:QB:115:LEU:CD1	2:QB:145:LEU:HD23	2.33	0.58
32:RA:1754:C:OP1	45:RT:96:ARG:NH1	2.36	0.58
32:RA:2051:A:N3	32:RA:2052:G:N7	2.52	0.58
32:RA:2751:G:N2	32:RA:2751:G:OP1	2.32	0.58
32:RA:2313:C:H5''	36:RG:91:ARG:HD3	1.85	0.58
32:YA:698:C:O2'	32:YA:734:A:N6	2.35	0.58
32:YA:996:A:H4'	46:YU:92:ARG:HD2	1.84	0.58
37:YH:143:GLN:NE2	37:YH:147:ASN:OD1	2.36	0.58
50:YY:91:GLU:HA	50:YY:91:GLU:OE1	2.04	0.58
2:QB:60:ASP:O	2:QB:64:ARG:CD	2.46	0.58
32:RA:859:G:N2	32:RA:917:A:OP2	2.32	0.58
34:RD:260:ARG:HH12	34:RD:267:SER:HG	1.51	0.58
32:RA:2310:A:N6	36:RG:79:ASN:OD1	2.37	0.58
32:YA:2642:G:H5'	39:YN:78:TYR:CD2	2.37	0.58
1:QA:279:A:OP2	16:QQ:95:TYR:OH	2.14	0.58
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.84	0.58
18:QS:41:VAL:CG1	18:QS:67:VAL:HG13	2.20	0.58
32:RA:2147:G:H2'	32:RA:2148:G:C8	2.38	0.58
55:RZ:120:ILE:H	55:RZ:172:ALA:HA	1.68	0.58
35:YE:104:VAL:CG1	35:YE:188:VAL:HG21	2.31	0.58
41:YP:99:LEU:HD12	41:YP:99:LEU:C	2.24	0.58
42:YQ:60:ARG:O	55:YZ:179:ASP:CA	2.50	0.58
49:RX:21:PHE:HE1	49:RX:92:LEU:HB3	1.68	0.58
37:YH:43:VAL:HA	37:YH:52:VAL:HG12	1.86	0.58
2:QB:11:LEU:H	2:QB:11:LEU:CD1	2.16	0.58
2:QB:220:ASP:O	2:QB:223:ILE:HG13	2.03	0.58
27:R4:23:GLU:O	27:R4:25:TYR:N	2.36	0.58
32:RA:1812:A:H4'	34:RD:46:GLN:HE22	1.68	0.58
32:RA:1882:C:H3'	32:RA:1883:G:H8	1.67	0.58
1:XA:1440:C:O2'	1:XA:1442:G:N2	2.37	0.58
8:XH:17:THR:O	8:XH:78:GLN:NE2	2.37	0.58
32:YA:352:G:HO2'	32:YA:353:G:P	2.26	0.58
32:YA:642:G:H21	32:YA:646:A:H2	1.52	0.58
2:QB:238:LEU:C	2:QB:238:LEU:HD23	2.23	0.58
2:QB:71:VAL:CG1	2:QB:93:VAL:CG1	2.79	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:84:A:N6	32:RA:102:G:O2'	2.35	0.58
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.85	0.58
35:YE:4:ILE:HG22	35:YE:96:PHE:CE2	2.36	0.58
1:QA:7:G:H5'	1:QA:298:A:O4'	2.03	0.58
2:QB:69:LEU:HD22	2:QB:71:VAL:HG23	1.85	0.58
32:RA:2642:G:H5'	39:RN:78:TYR:CD2	2.37	0.58
32:RA:2659:G:N2	32:RA:2662:A:OP2	2.37	0.58
32:RA:270(B):A:H5'	32:RA:270(C):C:OP2	2.04	0.58
22:XX:20:A2M:O3'	22:XX:20:A2M:HM'2	2.02	0.58
32:YA:2610:C:H4'	32:YA:2611:U:OP2	2.02	0.58
35:YE:104:VAL:HG11	35:YE:188:VAL:CG2	2.34	0.58
35:YE:37:ARG:HD3	35:YE:42:ASP:OD2	2.02	0.58
41:YP:90:ARG:HG3	41:YP:91:PHE:CD2	2.38	0.58
23:QY:8:GLU:CD	23:QY:8:GLU:H	2.04	0.58
21:XW:71:C:H2'	21:XW:72:A:C8	2.39	0.58
31:Y9:33:LYS:NZ	32:YA:2743:C:OP1	2.37	0.58
34:YD:108:PRO:HD2	34:YD:111:LEU:CD2	2.34	0.58
41:YP:79:ARG:HB2	41:YP:110:TYR:CD1	2.39	0.58
45:YT:133:GLU:CB	45:YT:137:LYS:NZ	2.67	0.58
55:YZ:1:MET:CG	55:YZ:2:GLU:N	2.65	0.58
1:QA:618:C:H5'	1:QA:619:U:H5''	1.86	0.57
1:QA:971:G:H5''	1:QA:972:C:H5''	1.86	0.57
32:RA:2130:U:O2	32:RA:2133:G:O2'	2.22	0.57
37:RH:23:ARG:NE	37:RH:25:LYS:HZ3	2.02	0.57
1:XA:1182:G:H4'	1:XA:1183:A:H5'	1.84	0.57
21:XW:76:A:O2'	32:YA:2394:C:N3	2.35	0.57
32:YA:953:A:C2'	32:YA:954:G:H5'	2.34	0.57
34:YD:123:ALA:O	34:YD:131:LEU:HD21	2.03	0.57
1:QA:677:U:O2	1:QA:777:A:O2'	2.20	0.57
29:R6:10:LEU:HD13	29:R6:19:ARG:HG2	1.87	0.57
32:RA:1353:A:H2'	32:RA:1354:A:C8	2.39	0.57
9:XI:10:ARG:NH1	9:XI:75:ASP:OD2	2.37	0.57
34:YD:242:ARG:HD2	34:YD:242:ARG:N	2.14	0.57
37:YH:92:ILE:HD12	37:YH:92:ILE:N	2.18	0.57
41:YP:39:LYS:O	41:YP:39:LYS:HG3	2.03	0.57
45:YT:136:GLN:O	45:YT:137:LYS:CG	2.51	0.57
2:QB:213:LEU:HD23	2:QB:213:LEU:O	2.03	0.57
2:QB:220:ASP:O	2:QB:223:ILE:HG12	2.04	0.57
6:QF:20:ALA:HA	6:QF:23:LYS:HE2	1.86	0.57
23:QY:5:TRP:HB2	23:QZ:3:LEU:CB	2.10	0.57
18:QS:81:ARG:HH22	23:QZ:36:ARG:HD2	1.64	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:845:G:H4'	32:RA:846:C:OP1	2.04	0.57
41:RP:6:LEU:HB3	54:RF:34:TRP:HD1	1.69	0.57
10:XJ:10:GLY:HA3	10:XJ:16:LEU:HD21	1.86	0.57
21:XW:21:A:H61	21:XW:46:G:H2'	1.68	0.57
35:YE:73:GLU:OE2	35:YE:74:PRO:HG2	2.03	0.57
32:RA:2209:C:O2'	32:RA:2211:G:N2	2.37	0.57
23:XY:39:PHE:CZ	32:YA:1914:C:H5''	2.39	0.57
32:YA:2392:A:H2	32:YA:2424:C:H42	1.52	0.57
32:YA:321:G:O2'	32:YA:340:A:N3	2.37	0.57
37:YH:107:VAL:O	37:YH:152:ARG:CD	2.52	0.57
37:YH:118:PRO:O	37:YH:121:ILE:HB	2.03	0.57
37:YH:154:PRO:HB3	37:YH:163:TYR:CZ	2.39	0.57
37:YH:50:VAL:HG13	37:YH:50:VAL:O	2.04	0.57
41:YP:100:LEU:CD1	41:YP:112:LEU:CD1	2.33	0.57
47:YV:57:VAL:O	47:YV:57:VAL:HG23	2.05	0.57
2:QB:61:LEU:HD11	2:QB:66:GLY:HA3	1.84	0.57
32:RA:1666:G:N3	40:RO:3:GLN:NE2	2.51	0.57
32:RA:994:C:OP1	46:RU:53:ARG:NH2	2.37	0.57
23:XY:6:SER:N	23:XY:9:SER:OG	2.37	0.57
32:YA:2286:A:H4'	32:YA:2287:A:O4'	2.03	0.57
32:YA:2679:A:H5'	35:YE:165:VAL:HG11	1.86	0.57
32:YA:495:G:N3	48:YW:61:ASN:ND2	2.52	0.57
32:YA:259:G:H21	32:YA:621:A:H8	1.51	0.57
37:YH:152:ARG:O	37:YH:162:ILE:HD12	2.04	0.57
33:RB:3:C:C6	33:RB:3:C:H5''	2.36	0.57
55:RZ:53:ILE:CD1	55:RZ:72:ARG:HA	2.33	0.57
1:XA:1166:G:N2	1:XA:1170:A:OP2	2.32	0.57
23:XZ:6:SER:HG	23:XZ:9:SER:CB	2.16	0.57
55:YZ:179:ASP:OD1	55:YZ:180:VAL:N	2.38	0.57
32:RA:2451:A:C2	56:ZB:76:PPU:HD2	2.39	0.57
1:QA:971:G:C5	1:QA:1365:G:H5'	2.39	0.57
9:QI:128:ARG:NH2	21:QV:33:U:OP2	2.37	0.57
23:QZ:60:ILE:HD13	23:QZ:64:HIS:HB2	1.86	0.57
23:QZ:16:TRP:CZ3	23:QZ:80:CYS:O	2.58	0.57
30:R7:7:PRO:HB2	32:RA:1309:G:H4'	1.85	0.57
32:RA:2688:U:OP1	32:RA:2713:A:N6	2.38	0.57
32:RA:960:A:H61	42:RQ:82:ARG:HH12	1.53	0.57
54:RF:6:VAL:HG22	54:RF:6:VAL:O	2.04	0.57
21:XW:2:G:H2'	21:XW:3:C:O4'	2.05	0.57
23:XY:3:LEU:CD2	23:XY:5:TRP:NE1	2.66	0.57
30:Y7:24:THR:HG23	30:Y7:27:GLY:H	1.69	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YO:87:ILE:HD12	40:YO:91:LEU:HA	1.87	0.57
41:YP:71:VAL:N	41:YP:72:PRO:HD2	2.19	0.57
56:ZB:75:C:H6	56:ZB:75:C:O5'	1.88	0.57
1:QA:581:G:O3'	14:QO:64:ARG:NH2	2.38	0.57
1:XA:1250:A:N3	1:XA:1370:G:O2'	2.37	0.57
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.85	0.57
23:XY:51:ASN:O	23:XY:52:LEU:HD23	2.05	0.57
32:YA:273(F):C:H3'	32:YA:274:G:H5''	1.87	0.57
32:YA:277:C:H3'	32:YA:278:A:C8	2.39	0.57
32:YA:994:C:OP1	46:YU:53:ARG:NH2	2.38	0.57
41:YP:128:HIS:N	41:YP:148:LEU:CB	2.51	0.57
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.37	0.57
41:RP:60:MET:HA	53:R8:13:ARG:NH1	2.20	0.57
32:RA:1202:C:O2'	54:RF:184:TYR:OH	2.21	0.57
32:RA:1991:U:H2'	32:RA:1992:G:H5''	1.86	0.57
32:YA:1363:C:O2'	32:YA:1809:A:N3	2.33	0.57
32:YA:2208:U:H1'	34:YD:151:LYS:CE	2.25	0.57
32:YA:2328:A:H2'	32:YA:2329:G:C8	2.40	0.57
34:YD:133:LEU:HD13	34:YD:175:LEU:HD11	1.87	0.57
54:YF:116:ASP:OD1	54:YF:119:ARG:NH2	2.37	0.57
2:QB:20:GLU:HB3	2:QB:23:ARG:HG3	1.87	0.57
11:QK:86:GLY:O	11:QK:91:ARG:NH1	2.38	0.57
32:RA:2134:A:N6	32:RA:2157:G:O2'	2.38	0.57
32:RA:896:A:N3	55:RZ:146:ILE:HD13	2.20	0.57
54:RF:70:THR:HG23	54:RF:72:ARG:H	1.69	0.57
41:RP:52:GLU:HG3	41:RP:57:THR:HA	1.86	0.57
1:XA:976:G:N2	1:XA:1362(A):C:OP2	2.29	0.57
10:XJ:45:ARG:HB3	10:XJ:65:LEU:HB3	1.85	0.57
32:YA:859:G:N2	32:YA:917:A:OP2	2.38	0.57
34:YD:165:ILE:HA	34:YD:175:LEU:HD23	1.87	0.57
34:YD:222:ARG:HH12	34:YD:224:ALA:HB3	1.70	0.57
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.40	0.56
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	1.87	0.56
4:QD:60:GLU:OE2	4:QD:199:ASN:N	2.36	0.56
32:RA:481:G:O2'	32:RA:506:G:N2	2.38	0.56
35:YE:111:ARG:HD3	35:YE:160:TYR:CD2	2.39	0.56
37:YH:126:PRO:HD2	37:YH:130:ARG:O	2.05	0.56
32:YA:2377:A:H4'	44:YS:111:GLU:HB3	1.86	0.56
47:YV:25:LEU:HD12	47:YV:94:LEU:HD11	1.86	0.56
1:QA:1422:G:O3'	40:RO:49:ARG:NH1	2.37	0.56
1:QA:1314:C:N4	18:QS:2:PRO:O	2.38	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1182:G:O2'	1:XA:1183:A:OP2	2.22	0.56
1:XA:413:G:N2	1:XA:429:U:OP2	2.38	0.56
4:XD:62:GLN:HE22	4:XD:65:ARG:HH21	1.53	0.56
2:QB:71:VAL:HG11	2:QB:97:TRP:HE3	1.67	0.56
32:RA:1139:G:O2'	32:RA:1143:A:N6	2.36	0.56
32:RA:1902:C:OP1	34:RD:242:ARG:NH2	2.32	0.56
32:RA:807:U:O2'	32:RA:2060:A:N1	2.35	0.56
32:RA:2296:U:OP2	44:RS:9:ARG:NH1	2.38	0.56
5:XE:75:THR:OG1	5:XE:76:ILE:N	2.38	0.56
27:Y4:25:TYR:HB2	36:YG:101:ILE:HD13	1.87	0.56
32:YA:1842:G:O2'	34:YD:253:GLN:OE1	2.20	0.56
34:YD:29:PRO:HB3	34:YD:63:ARG:HE	1.70	0.56
1:QA:1005:A:O2'	1:QA:1037:C:O2	2.20	0.56
2:QB:67:THR:HG22	2:QB:155:LEU:HD22	1.86	0.56
10:QJ:3:LYS:N	10:QJ:74:ILE:O	2.38	0.56
1:XA:1255:G:OP1	10:XJ:45:ARG:NH2	2.38	0.56
32:YA:2304:G:H22	32:YA:2312:U:H3	1.53	0.56
32:YA:877:U:O2'	32:YA:878:A:OP1	2.22	0.56
34:YD:232:PRO:HB3	34:YD:244:ARG:NH2	2.21	0.56
3:QC:150:LYS:HE3	3:QC:167:TRP:HE1	1.70	0.56
23:QZ:62:GLU:O	23:QZ:65:ARG:NH1	2.18	0.56
52:R1:56:GLN:OE1	52:R1:56:GLN:N	2.38	0.56
1:XA:191(E):G:C6	1:XA:191(F):U:C4	2.94	0.56
1:XA:31:G:HO2'	1:XA:48:C:N4	2.04	0.56
32:YA:287:C:C2'	32:YA:288:C:O5'	2.54	0.56
35:YE:2:LYS:HA	35:YE:84:PHE:CE1	2.40	0.56
41:YP:29:LYS:HG2	41:YP:30:THR:H	1.70	0.56
21:XV:64:G:H4'	42:YQ:10:ARG:NH2	2.20	0.56
55:YZ:23:LYS:HE2	55:YZ:38:TYR:HE1	1.71	0.56
23:QY:36:ARG:HB3	23:QY:36:ARG:NH1	2.21	0.56
32:RA:2335:A:O2'	32:RA:2336:A:H2'	2.05	0.56
1:XA:518:C:H5''	1:XA:519:C:C6	2.40	0.56
34:YD:69:ARG:HE	34:YD:130:ALA:HB2	1.71	0.56
35:YE:47:VAL:O	35:YE:49:LEU:HD13	2.06	0.56
37:YH:19:VAL:HG11	37:YH:45:VAL:HG13	1.86	0.56
37:YH:80:SER:OG	37:YH:81:GLU:N	2.38	0.56
26:R3:10:LYS:HB3	26:R3:53:LEU:HD23	1.88	0.56
1:XA:262:A:H5''	19:XT:76:ALA:HB2	1.87	0.56
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.87	0.56
1:XA:925:G:H1	1:XA:1391:U:H3	1.53	0.56
7:XG:94:ARG:NH1	7:XG:98:SER:OG	2.39	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XO:17:ARG:NH1	14:XO:26:GLU:OE2	2.38	0.56
23:XZ:34:THR:HG22	23:XZ:58:ARG:NE	2.20	0.56
32:YA:2010:G:H5''	48:YW:42:ARG:HB2	1.86	0.56
35:YE:46:ALA:CB	35:YE:82:ARG:HA	2.35	0.56
47:YV:18:LEU:HD23	47:YV:18:LEU:C	2.25	0.56
1:QA:1266:G:N2	1:QA:1269:A:OP2	2.39	0.56
32:RA:2867:G:OP2	45:RT:119:LYS:NZ	2.29	0.56
18:XS:25:LYS:O	18:XS:25:LYS:HG3	2.06	0.56
20:XU:6:ARG:HH21	20:XU:15:ARG:HE	1.52	0.56
35:YE:54:GLN:HB2	35:YE:76:ARG:HG2	1.86	0.56
37:YH:125:VAL:HG13	37:YH:130:ARG:O	2.06	0.56
1:QA:1031:G:H21	1:QA:1032:A:H1'	1.69	0.56
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.41	0.56
23:XY:32:LYS:HZ1	23:XY:35:ARG:HH11	1.51	0.56
28:Y5:55:ARG:HH12	28:Y5:57:VAL:CG1	2.19	0.56
32:YA:1270:C:H5''	32:YA:1271:G:H5'	1.86	0.56
32:YA:2115:G:OP1	32:YA:2167:U:N3	2.35	0.56
41:YP:121:LYS:CE	41:YP:123:LEU:HD11	2.36	0.56
42:YQ:64:ILE:HD11	55:YZ:178:GLU:HB2	1.88	0.56
47:YV:52:VAL:CG1	47:YV:52:VAL:O	2.53	0.56
2:QB:165:VAL:CG2	2:QB:211:ILE:HD11	2.36	0.56
23:QZ:69:ALA:HB3	23:QZ:76:LEU:HB2	1.88	0.56
32:RA:2844:G:H3'	32:RA:2845:G:H8	1.71	0.56
38:RI:79:ILE:HB	38:RI:142:VAL:HG11	1.86	0.56
41:RP:134:ALA:O	41:RP:138:LEU:HB2	2.06	0.56
55:RZ:50:GLN:N	55:RZ:50:GLN:OE1	2.38	0.56
32:YA:2572:A:N7	35:YE:144:ARG:CD	2.64	0.56
55:YZ:4:ARG:HG2	55:YZ:58:VAL:HB	1.88	0.56
1:QA:261:U:OP2	19:QT:79:ARG:NH2	2.39	0.56
2:QB:118:LEU:HD21	2:QB:142:LEU:CB	2.27	0.56
32:RA:512:G:OP1	32:RA:1234:U:O2'	2.21	0.56
36:RG:29:TRP:O	36:RG:33:ARG:NH1	2.39	0.56
55:RZ:78:LYS:H	55:RZ:78:LYS:HD2	1.69	0.56
23:XY:35:ARG:NH1	23:XZ:10:TRP:CD1	2.72	0.56
32:YA:219:G:N3	32:YA:234:C:O2'	2.35	0.56
32:YA:996:A:OP2	46:YU:92:ARG:NH1	2.39	0.56
41:YP:100:LEU:O	41:YP:105:LEU:HB2	2.05	0.56
32:YA:1243:G:C3'	41:YP:7:ARG:HH22	2.19	0.56
1:QA:422:C:HO2'	1:QA:423:G:N2	2.03	0.55
32:RA:581:C:H2'	32:RA:582:G:H8	1.70	0.55
32:RA:24:G:O2'	48:RW:78:GLU:O	2.24	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:250:A:H4'	1:XA:251:G:O5'	2.06	0.55
23:XY:37:THR:OG1	23:XY:40:GLU:O	2.23	0.55
32:YA:2508:G:H1	32:YA:2580:U:H3	1.54	0.55
34:YD:64:ILE:C	34:YD:64:ILE:HD12	2.26	0.55
41:YP:29:LYS:HG2	41:YP:30:THR:N	2.21	0.55
50:YY:83:THR:OG1	50:YY:84:ARG:N	2.40	0.55
8:QH:106:GLY:O	8:QH:122:ARG:NH2	2.38	0.55
1:QA:1350:A:N7	9:QI:118:LYS:NZ	2.54	0.55
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.88	0.55
11:QK:109:VAL:HG12	17:QR:86:VAL:HA	1.88	0.55
28:R5:19:ARG:HG3	32:RA:2046:G:H5'	1.88	0.55
32:RA:448:U:H1'	54:RF:84:VAL:CG2	2.36	0.55
42:RQ:67:ARG:O	42:RQ:101:ARG:NH2	2.39	0.55
45:RT:28:VAL:HG23	45:RT:88:ILE:HA	1.89	0.55
51:XL:44:THR:HG21	23:XY:40:GLU:HB3	1.89	0.55
18:XS:14:HIS:O	18:XS:18:LYS:HG3	2.05	0.55
1:QA:56:U:H2'	1:QA:57:G:H8	1.71	0.55
1:QA:708:C:H2'	1:QA:709:G:H8	1.71	0.55
3:QC:157:ILE:HD13	3:QC:166:GLU:HG2	1.88	0.55
21:QW:48:C:H5''	21:QW:49:G:H5''	1.89	0.55
29:R6:8:LYS:NZ	53:R8:34:TRP:CE3	2.67	0.55
53:R8:33:ASN:HA	53:R8:36:LYS:HD2	1.89	0.55
41:RP:49:ARG:HH12	53:R8:4:MET:CE	2.18	0.55
32:RA:1838:C:H4'	32:RA:1839:G:H8	1.71	0.55
8:XH:10:LEU:HD22	8:XH:83:ILE:HD11	1.87	0.55
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.88	0.55
2:QB:69:LEU:CD2	2:QB:71:VAL:CG2	2.83	0.55
23:QY:10:TRP:CG	23:QZ:3:LEU:HD12	2.41	0.55
32:RA:1681:G:O2'	32:RA:1762:A:O2'	2.21	0.55
32:RA:307:G:N2	32:RA:310:A:OP2	2.38	0.55
23:XY:7:GLU:HA	23:XZ:35:ARG:HH22	1.71	0.55
32:YA:1842:G:C4	32:YA:1901:A:C2	2.94	0.55
32:YA:637:A:H2'	41:YP:117:GLU:OE2	2.07	0.55
32:YA:829:A:N7	32:YA:2248:C:H5'	2.21	0.55
34:YD:80:ALA:CB	34:YD:96:HIS:ND1	2.68	0.55
35:YE:143:ASN:N	35:YE:143:ASN:HD22	2.05	0.55
42:YQ:54:MET:CE	42:YQ:118:LEU:HD23	2.36	0.55
46:YU:95:LEU:HD13	47:YV:4:ILE:HD13	1.88	0.55
1:QA:578:C:O2'	1:QA:728:A:N3	2.35	0.55
5:QE:102:ALA:HB1	5:QE:106:PRO:HG2	1.89	0.55
24:R0:11:ARG:O	24:R0:14:ARG:NH2	2.39	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:18:C:O2'	32:RA:553:U:OP1	2.23	0.55
32:RA:2134:A:OP2	32:RA:2157:G:N2	2.30	0.55
38:RI:24:GLY:O	38:RI:28:ASN:HB2	2.06	0.55
45:RT:16:ARG:HH21	45:RT:19:LEU:HD21	1.70	0.55
32:YA:1798:U:H5	34:YD:274:ARG:CZ	2.20	0.55
32:YA:569:U:O2'	32:YA:983:A:N1	2.39	0.55
37:YH:136:ILE:H	37:YH:136:ILE:CD1	2.19	0.55
41:YP:57:THR:OG1	41:YP:60:MET:HG2	2.07	0.55
21:QW:63:G:H2'	21:QW:64:G:C8	2.41	0.55
29:R6:16:CYS:HB3	29:R6:43:CYS:SG	2.47	0.55
35:RE:56:PRO:HD2	35:RE:58:ARG:HE	1.69	0.55
1:XA:811:C:O2'	1:XA:901:A:N1	2.40	0.55
37:YH:4:ILE:HG21	37:YH:70:THR:HG23	1.87	0.55
42:YQ:136:ALA:HA	42:YQ:139:GLU:OE2	2.05	0.55
43:YR:28:LEU:HD23	43:YR:48:VAL:HG21	1.88	0.55
47:YV:79:VAL:O	47:YV:79:VAL:HG22	2.07	0.55
53:R8:22:VAL:HG13	53:R8:50:LEU:HB2	1.89	0.55
1:XA:108:G:H5'	1:XA:109:A:H5''	1.89	0.55
53:Y8:62:LEU:HD13	32:YA:242:G:H5''	1.89	0.55
35:YE:50:GLY:CA	35:YE:75:VAL:HG11	2.36	0.55
1:QA:755:G:OP2	14:QO:65:ARG:HD2	2.07	0.55
32:RA:539:G:H2'	32:RA:540:G:H8	1.71	0.55
33:RB:37:C:O2	44:RS:95:HIS:NE2	2.37	0.55
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.88	0.55
9:XI:3:GLN:OE1	9:XI:20:ARG:NH2	2.40	0.55
23:XZ:37:THR:CG2	23:XZ:40:GLU:CB	2.76	0.55
32:YA:1607:C:N4	32:YA:1622:G:OP2	2.35	0.55
32:YA:2667:C:N3	37:YH:110:SER:OG	2.32	0.55
28:Y5:25:LEU:HG	48:YW:19:LEU:HD23	1.88	0.55
1:QA:1005:A:H2	1:QA:1025:U:H1'	1.72	0.55
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.22	0.55
2:QB:156:LYS:CA	2:QB:156:LYS:HE2	2.24	0.55
37:RH:18:GLU:HA	37:RH:18:GLU:OE2	2.07	0.55
32:RA:309:G:H5''	50:RY:18:GLY:HA2	1.89	0.55
42:RQ:20:ALA:CB	55:RZ:79:ARG:NH2	2.70	0.55
1:XA:181:G:O2'	1:XA:182:U:O5'	2.19	0.55
32:YA:1846:G:H5'	32:YA:1847:A:OP2	2.07	0.55
35:YE:50:GLY:HA2	35:YE:78:LEU:CD2	2.37	0.55
42:YQ:114:ALA:O	42:YQ:118:LEU:HG	2.06	0.55
42:YQ:58:PHE:HE1	42:YQ:117:ALA:HB2	1.71	0.55
1:QA:1128:C:H1'	1:QA:1146:A:H61	1.72	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:165:VAL:HG21	2:QB:211:ILE:HD12	1.89	0.55
1:QA:831:U:P	2:QB:22:LYS:HZ3	2.28	0.55
18:QS:41:VAL:CG2	18:QS:42:PRO:HD3	2.31	0.55
32:RA:2591:C:H2'	32:RA:2592:G:C8	2.41	0.55
34:RD:25:THR:OG1	34:RD:26:LYS:N	2.40	0.55
18:XS:64:GLU:CD	18:XS:64:GLU:H	2.10	0.55
22:XX:19:A2M:C2	23:XY:51:ASN:CG	2.75	0.55
29:Y6:10:LEU:HG	29:Y6:54:ILE:HD12	1.87	0.55
35:YE:97:LYS:N	35:YE:100:GLU:OE1	2.35	0.55
33:YB:45:A:OP2	36:YG:96:ARG:NH2	2.40	0.55
37:YH:94:TYR:CE1	37:YH:107:VAL:HA	2.42	0.55
55:YZ:108:PRO:HG3	55:YZ:141:VAL:HB	1.89	0.55
53:R8:57:ARG:CB	53:R8:57:ARG:HH11	2.13	0.54
54:RF:9:ILE:HD12	54:RF:123:LEU:CD2	2.37	0.54
32:RA:1652:A:OP1	43:RR:8:ARG:NH1	2.40	0.54
1:XA:1178:G:H5''	9:XI:93:ARG:HH22	1.71	0.54
1:XA:316:G:OP1	1:XA:351:G:O2'	2.20	0.54
1:XA:890:G:O2'	1:XA:906:G:O6	2.25	0.54
25:Y2:22:GLU:OE2	25:Y2:68:ARG:NH2	2.40	0.54
32:YA:807:U:O2'	32:YA:2060:A:N1	2.39	0.54
32:YA:2255:G:C2	42:YQ:85:LYS:NZ	2.59	0.54
33:YB:1:U:H2'	33:YB:1:U:O2	2.06	0.54
35:YE:2:LYS:HA	35:YE:84:PHE:CD1	2.42	0.54
9:QI:17:VAL:HG12	9:QI:63:ILE:HD12	1.88	0.54
41:RP:49:ARG:NH1	53:R8:4:MET:CE	2.70	0.54
32:RA:1210:A:H5''	32:RA:1211:U:H3'	1.90	0.54
32:RA:848:G:H2'	32:RA:849:A:C8	2.42	0.54
32:RA:309:G:H5''	50:RY:18:GLY:C	2.28	0.54
1:XA:1119:C:OP2	9:XI:9:ARG:NH2	2.36	0.54
1:XA:254:G:O2'	16:XQ:16:GLN:O	2.26	0.54
32:YA:2867:G:OP2	45:YT:119:LYS:NZ	2.28	0.54
32:YA:603:A:N6	32:YA:625:G:O2'	2.41	0.54
32:YA:955:C:H5'	42:YQ:87:LYS:NZ	2.22	0.54
35:YE:179:GLU:HA	35:YE:179:GLU:OE1	2.06	0.54
35:YE:23:VAL:HA	35:YE:184:VAL:O	2.06	0.54
37:YH:45:VAL:HG23	37:YH:45:VAL:O	2.07	0.54
1:QA:689:C:OP2	11:QK:55:LYS:NZ	2.37	0.54
8:QH:9:MET:HG3	8:QH:26:VAL:HG11	1.90	0.54
23:QY:7:GLU:CG	23:QY:8:GLU:CD	2.75	0.54
31:R9:6:SER:OG	31:R9:6:SER:O	2.24	0.54
32:RA:1386:C:OP2	32:RA:1396:U:N3	2.40	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:1939:U:OP1	32:RA:2604:U:O2'	2.21	0.54
32:RA:642:G:H21	32:RA:646:A:H2	1.55	0.54
37:RH:3:ARG:HH21	37:RH:8:PRO:CG	2.20	0.54
1:XA:967:C:H4'	9:XI:125:TYR:HE1	1.72	0.54
32:YA:196:A:H62	32:YA:831:G:H21	1.55	0.54
32:YA:2148:G:H2'	32:YA:2149:G:H8	1.72	0.54
34:YD:28:GLU:OE1	34:YD:29:PRO:HD2	2.07	0.54
41:YP:132:LYS:O	41:YP:136:GLU:HG3	2.08	0.54
1:QA:1127:G:H2'	1:QA:1128:C:C6	2.43	0.54
1:QA:501:C:H2'	1:QA:502:G:H8	1.72	0.54
1:QA:545:C:OP1	4:QD:61:LYS:NZ	2.41	0.54
1:QA:624:C:H2'	1:QA:625:G:H8	1.71	0.54
51:QL:32:PHE:HE1	51:QL:86:ARG:HG3	1.72	0.54
32:RA:1403:C:H5''	32:RA:1471:A:H1'	1.89	0.54
32:RA:2312:U:O2	36:RG:40:ASN:ND2	2.40	0.54
43:RR:86:ARG:NH2	43:RR:118:GLU:OXT	2.40	0.54
32:RA:17:G:H4'	46:RU:25:TRP:HE1	1.73	0.54
55:RZ:105:VAL:HG12	55:RZ:105:VAL:O	2.08	0.54
1:XA:99:C:H2'	1:XA:101:A:C8	2.42	0.54
32:YA:1386:C:OP2	32:YA:1396:U:N3	2.35	0.54
32:YA:1675:C:N3	35:YE:128:SER:OG	2.37	0.54
34:YD:148:GLU:HB2	34:YD:151:LYS:HG3	1.88	0.54
35:YE:7:VAL:CG1	35:YE:51:PHE:CZ	2.87	0.54
37:YH:157:TYR:CE1	37:YH:172:LYS:HG3	2.42	0.54
37:YH:19:VAL:HG13	37:YH:45:VAL:CG1	2.37	0.54
41:YP:113:LYS:HA	41:YP:129:ALA:O	2.07	0.54
32:YA:2255:G:N2	42:YQ:85:LYS:CE	2.69	0.54
1:QA:976:G:O5'	1:QA:1358:U:O2'	2.24	0.54
2:QB:33:TYR:HD2	2:QB:41:ILE:HD11	1.73	0.54
3:QC:19:GLU:HG2	3:QC:54:ARG:HE	1.71	0.54
5:QE:75:THR:OG1	5:QE:76:ILE:N	2.37	0.54
1:QA:377:G:OP1	15:QP:3:LYS:HD2	2.07	0.54
23:QZ:43:GLY:HA3	23:QZ:58:ARG:HB3	1.89	0.54
52:R1:20:ARG:HG2	52:R1:34:THR:HA	1.90	0.54
32:RA:2859:G:H2'	32:RA:2860:A:C8	2.43	0.54
54:RF:195:ASP:OD1	54:RF:196:LEU:N	2.41	0.54
32:RA:2198:A:OP1	38:RI:33:ARG:NH2	2.40	0.54
45:RT:49:VAL:HG12	45:RT:63:VAL:HG22	1.88	0.54
55:RZ:75:ASN:OD1	55:RZ:75:ASN:N	2.41	0.54
32:YA:2529:G:H5''	32:YA:2530:A:H5''	1.89	0.54
32:YA:321:G:OP2	54:YF:135:LYS:HD3	2.08	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:119:ARG:HG3	42:YQ:120:ILE:N	2.22	0.54
46:YU:90:VAL:HG22	47:YV:38:LEU:HB3	1.89	0.54
21:QW:62:C:H2'	21:QW:63:G:H8	1.73	0.54
32:RA:2873:A:H8	43:RR:6:SER:H	1.54	0.54
4:XD:154:ASN:HB3	4:XD:159:ARG:NH2	2.22	0.54
32:YA:2210:G:H3'	32:YA:2211:G:C8	2.42	0.54
33:YB:2:C:H2'	33:YB:3:C:C6	2.43	0.54
35:YE:143:ASN:H	35:YE:143:ASN:HD22	1.56	0.54
35:YE:54:GLN:HB2	35:YE:76:ARG:HG3	1.88	0.54
32:YA:2749:A:C4'	37:YH:62:LYS:HB3	2.15	0.54
41:YP:127:ALA:O	41:YP:148:LEU:CA	2.56	0.54
2:QB:136:VAL:C	2:QB:139:LYS:HG3	2.27	0.54
9:QI:63:ILE:HG21	9:QI:77:ILE:HD12	1.89	0.54
32:RA:1782:C:H1'	32:RA:2609:U:H5''	1.89	0.54
32:RA:840:C:H2'	32:RA:841:A:H8	1.73	0.54
35:RE:59:VAL:HG13	35:RE:59:VAL:O	2.07	0.54
44:RS:18:ILE:HG13	44:RS:88:ASP:HA	1.90	0.54
55:RZ:121:HIS:HE1	55:RZ:169:GLU:OE1	1.91	0.54
32:YA:781:A:OP1	34:YD:218:ARG:NH2	2.41	0.54
35:YE:19:ARG:CB	35:YE:19:ARG:HH11	2.21	0.54
42:YQ:104:PHE:HE2	42:YQ:125:LEU:HD11	1.73	0.54
42:YQ:66:ILE:O	42:YQ:66:ILE:CD1	2.55	0.54
1:QA:501:C:H1'	1:QA:549:C:H1'	1.88	0.54
2:QB:219:VAL:HA	2:QB:222:ILE:CG1	2.37	0.54
2:QB:77:ALA:HA	2:QB:80:ILE:HD13	1.89	0.54
4:QD:4:TYR:OH	4:QD:10:ARG:NH2	2.41	0.54
27:R4:14:ILE:HG23	27:R4:21:VAL:HG13	1.89	0.54
32:RA:323:G:C8	54:RF:171:PRO:HG3	2.43	0.54
32:RA:589:C:H2'	32:RA:590:A:C8	2.43	0.54
1:XA:186(A):C:OP1	19:XT:82:SER:OG	2.17	0.54
34:YD:274:ARG:O	34:YD:275:LYS:CB	2.52	0.54
34:YD:63:ARG:NH1	34:YD:86:PRO:HD2	2.23	0.54
36:YG:113:ARG:NH2	36:YG:139:LEU:O	2.40	0.54
45:YT:7:ILE:CG2	35:YE:181:LEU:HD21	2.37	0.54
46:YU:109:LEU:HD21	47:YV:47:VAL:CG1	2.36	0.54
9:QI:121:ARG:NH1	9:QI:122:ALA:O	2.40	0.54
51:QL:26:ALA:HA	51:QL:64:TYR:CD2	2.43	0.54
32:RA:833:U:O2	41:RP:55:ARG:NH1	2.39	0.54
55:RZ:99:TYR:CE2	55:RZ:125:LEU:HD13	2.43	0.54
14:XO:7:GLU:OE2	14:XO:38:ARG:NH2	2.41	0.54
24:Y0:27:GLU:HG3	24:Y0:68:GLU:HA	1.89	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2635:C:H5''	35:YE:78:LEU:O	2.08	0.54
37:YH:107:VAL:CG1	37:YH:152:ARG:HD3	2.31	0.54
37:YH:67:LEU:CD2	37:YH:71:LEU:HD23	2.38	0.54
41:YP:106:LEU:CD1	41:YP:112:LEU:HG	2.38	0.54
45:YT:133:GLU:HB3	45:YT:137:LYS:NZ	2.23	0.54
1:QA:1300:G:O2'	1:QA:1301:U:O5'	2.25	0.54
1:QA:1364:U:O2'	1:QA:1365:G:OP1	2.22	0.54
1:QA:403:C:OP2	4:QD:74:GLN:NE2	2.35	0.54
10:QJ:81:THR:O	10:QJ:85:LEU:HB2	2.07	0.54
1:QA:522:C:H41	51:QL:53:ARG:HH22	1.56	0.54
23:QY:51:ASN:CG	23:QY:52:LEU:HD12	2.27	0.54
32:RA:679:C:H2'	32:RA:680:G:H8	1.72	0.54
32:RA:918:A:N3	33:RB:80:U:O2'	2.40	0.54
54:RF:155:LEU:HB2	54:RF:189:THR:HG21	1.89	0.54
46:RU:58:ARG:HH11	46:RU:93:LYS:HE2	1.72	0.54
1:XA:1040:U:C6	1:XA:1040:U:H5''	2.40	0.54
14:XO:70:LEU:HD11	14:XO:77:ARG:HD2	1.90	0.54
18:XS:16:LEU:HD22	18:XS:20:LEU:HG	1.89	0.54
29:Y6:13:CYS:CB	29:Y6:16:CYS:SG	2.92	0.54
42:YQ:60:ARG:O	55:YZ:178:GLU:O	2.24	0.54
42:YQ:63:LYS:HA	55:YZ:178:GLU:HG2	1.90	0.54
23:QY:83:HIS:O	23:QY:84:TYR:OXT	2.26	0.53
32:RA:2112:G:N2	32:RA:2169:A:C6	2.76	0.53
32:RA:2675:A:H61	32:RA:2732:G:H1	1.56	0.53
34:RD:182:LEU:H	34:RD:272:ALA:HB3	1.73	0.53
55:RZ:24:LEU:HD21	55:RZ:86:VAL:HG12	1.90	0.53
28:Y5:16:ARG:NH2	32:YA:517:C:OP1	2.38	0.53
32:YA:2335:A:O2'	32:YA:2336:A:O5'	2.26	0.53
37:YH:97:ARG:HD3	37:YH:99:VAL:CG2	2.38	0.53
42:YQ:108:GLY:HA3	55:YZ:116:VAL:CB	2.38	0.53
48:YW:92:ARG:NH2	48:YW:94:ASP:OD1	2.41	0.53
52:R1:85:LEU:C	52:R1:87:PRO:CD	2.76	0.53
28:R5:16:ARG:NH2	32:RA:517:C:OP1	2.39	0.53
32:RA:782:A:O2'	34:RD:225:ALA:O	2.26	0.53
1:XA:405:U:O4	4:XD:2:GLY:N	2.41	0.53
32:YA:1024:G:H3'	32:YA:1025:G:H5''	1.89	0.53
32:YA:1769:G:O2'	32:YA:1958:C:OP1	2.24	0.53
32:YA:811:U:H3'	41:YP:21:ARG:O	2.07	0.53
32:YA:848:G:H2'	32:YA:849:A:C8	2.43	0.53
34:YD:218:ARG:HB3	34:YD:219:PRO:CD	2.38	0.53
41:YP:128:HIS:N	41:YP:148:LEU:HD23	2.23	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:35:VAL:HG21	42:YQ:130:LYS:HE3	1.90	0.53
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.44	0.53
1:QA:1494:G:P	23:QY:49:LYS:NZ	2.81	0.53
10:QJ:54:PHE:HD2	10:QJ:55:LYS:HD3	1.73	0.53
23:QY:3:LEU:HD21	23:QY:31:ILE:HG21	1.89	0.53
30:R7:28:ARG:NH2	32:RA:1368:G:OP1	2.41	0.53
32:RA:2571:C:N4	32:RA:2574:G:C8	2.76	0.53
32:RA:2820:A:O2'	32:RA:2821:A:OP1	2.23	0.53
32:RA:928:G:H5'	32:RA:929:G:OP2	2.08	0.53
44:RS:26:LEU:HB3	44:RS:87:PHE:HA	1.90	0.53
32:YA:1779:U:OP2	32:YA:1784:A:N6	2.38	0.53
37:YH:107:VAL:HG11	37:YH:152:ARG:HB3	1.89	0.53
41:YP:130:PHE:CG	41:YP:135:LEU:HD23	2.43	0.53
42:YQ:131:ILE:CD1	42:YQ:131:ILE:H	2.05	0.53
47:YV:35:LEU:HB2	47:YV:57:VAL:CG2	2.38	0.53
1:QA:1031:G:N2	1:QA:1032:A:N3	2.57	0.53
1:QA:1422:G:H5''	40:RO:48:PRO:HB3	1.90	0.53
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.73	0.53
2:QB:87:ARG:HH12	2:QB:233:SER:HB3	1.73	0.53
1:QA:963:G:H21	10:QJ:55:LYS:HG2	1.73	0.53
25:R2:36:ARG:NH2	49:RX:8:ILE:O	2.41	0.53
32:RA:579:G:O2'	32:RA:2019:A:OP1	2.25	0.53
32:RA:627:A:H4'	32:RA:628:G:H5'	1.90	0.53
23:XY:48:LEU:HD21	23:XY:57:SER:HB3	1.91	0.53
32:YA:512:G:HO2'	32:YA:513:A:P	2.30	0.53
32:YA:1818:U:O2'	34:YD:154:LYS:O	2.20	0.53
34:YD:162:SER:HB3	34:YD:195:ALA:CB	2.38	0.53
32:YA:2306:C:N4	36:YG:42:GLY:O	2.35	0.53
36:YG:82:LEU:HD11	36:YG:88:ILE:HG21	1.89	0.53
39:YN:6:PRO:HG3	39:YN:41:ASP:HB2	1.89	0.53
33:YB:37:C:O2	44:YS:95:HIS:NE2	2.40	0.53
2:QB:136:VAL:C	2:QB:139:LYS:CG	2.76	0.53
3:QC:157:ILE:HD12	3:QC:164:ARG:HB2	1.91	0.53
54:RF:136:THR:HG23	54:RF:170:LEU:HD11	1.91	0.53
1:XA:186(B):C:H2'	1:XA:186(C):G:C8	2.43	0.53
10:XJ:13:HIS:HA	10:XJ:16:LEU:HB2	1.90	0.53
1:XA:972:C:O2'	10:XJ:55:LYS:O	2.27	0.53
32:YA:1212:G:O2'	32:YA:1237:A:N6	2.41	0.53
34:YD:72:LYS:HD3	34:YD:75:ILE:HD12	1.90	0.53
35:YE:56:PRO:O	35:YE:58:ARG:N	2.41	0.53
41:YP:100:LEU:HD13	41:YP:112:LEU:HD11	1.70	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:65:PHE:HB2	42:YQ:105:GLU:HB2	1.90	0.53
3:QC:11:ARG:NH2	3:QC:177:THR:O	2.41	0.53
1:QA:405:U:O4	4:QD:2:GLY:N	2.42	0.53
1:QA:33:A:N3	51:QL:32:PHE:HE2	2.07	0.53
23:QZ:1:MET:HE1	23:QZ:75:LEU:HD21	1.90	0.53
28:R5:36:CYS:SG	28:R5:49:CYS:HB3	2.49	0.53
32:RA:2109:U:H2'	32:RA:2110:G:C8	2.44	0.53
27:R4:2:LYS:HD3	33:RB:40:U:H5	1.73	0.53
32:RA:2788:C:P	35:RE:61:ARG:HH12	2.30	0.53
54:RF:25:PRO:N	54:RF:25:PRO:C	2.57	0.53
37:RH:23:ARG:CD	37:RH:25:LYS:NZ	2.71	0.53
41:RP:64:LYS:HG2	53:R8:30:ARG:NH2	2.19	0.53
12:XM:14:ARG:NH2	12:XM:16:ASP:OD2	2.41	0.53
32:YA:1255:U:H5''	32:YA:1256:G:H5''	1.90	0.53
32:YA:2059:A:H5'	32:YA:2060:A:OP2	2.08	0.53
32:YA:2246:G:H2'	32:YA:2247:A:H8	1.73	0.53
32:YA:2711:A:H5''	32:YA:2712:U:H5'	1.89	0.53
37:YH:33:LEU:C	37:YH:33:LEU:HD23	2.29	0.53
37:YH:98:LEU:O	37:YH:98:LEU:HD12	2.07	0.53
46:YU:92:ARG:HB3	47:YV:11:GLN:CD	2.25	0.53
1:QA:243:A:H4'	1:QA:244:U:O5'	2.08	0.53
1:QA:414:A:OP2	1:QA:428:G:N2	2.38	0.53
2:QB:88:ALA:HB2	2:QB:219:VAL:HG23	1.91	0.53
2:QB:219:VAL:HA	2:QB:222:ILE:HG12	1.90	0.53
2:QB:45:GLN:O	2:QB:49:GLU:HG3	2.09	0.53
4:QD:62:GLN:HE22	4:QD:65:ARG:HH21	1.57	0.53
1:QA:1119:C:OP2	9:QL:9:ARG:NH2	2.42	0.53
23:QY:39:PHE:CE1	23:QY:70:VAL:HG21	2.43	0.53
1:XA:664:G:H22	1:XA:741:G:H1	1.57	0.53
4:XD:175:SER:HB3	4:XD:184:LYS:HB2	1.89	0.53
32:YA:1462:C:H4'	32:YA:2703:C:H5'	1.90	0.53
32:YA:589:C:H2'	32:YA:590:A:H8	1.72	0.53
54:YF:154:VAL:HG12	54:YF:191:ARG:HB3	1.89	0.53
41:YP:95:VAL:HG12	41:YP:125:VAL:HG23	1.91	0.53
47:YV:1:MET:HA	47:YV:1:MET:HE2	1.89	0.53
18:QS:9:VAL:CG2	27:R4:63:TYR:CD1	2.87	0.53
32:RA:1689:A:H62	32:RA:1698:A:H2	1.56	0.53
32:RA:2805:G:H2'	32:RA:2807:G:C8	2.44	0.53
1:XA:673:G:H2'	1:XA:674:G:C8	2.43	0.53
1:XA:924:C:O2'	1:XA:1502:A:N6	2.39	0.53
4:XD:15:GLU:OE2	4:XD:59:ARG:NH1	2.42	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YH:103:LEU:HD13	37:YH:125:VAL:HG21	1.89	0.53
1:QA:1251:A:N3	1:QA:1369:C:O2'	2.37	0.53
1:QA:811:C:O2'	1:QA:901:A:N1	2.41	0.53
2:QB:71:VAL:HA	2:QB:93:VAL:CG1	2.38	0.53
21:QV:17(A):U:O2'	21:QV:18:G:OP1	2.26	0.53
32:RA:1779:U:OP2	32:RA:1784:A:N6	2.39	0.53
1:XA:34:C:H2'	1:XA:35:G:H8	1.74	0.53
18:XS:12:ASP:OD2	18:XS:35:SER:HB3	2.08	0.53
1:XA:191(G):G:O2'	19:XT:101:GLY:O	2.24	0.53
32:YA:1056:G:H4'	32:YA:1086:A:H1'	1.91	0.53
32:YA:1427:A:H4'	32:YA:1428:C:O5'	2.08	0.53
32:YA:2207:C:H2'	32:YA:2208:U:H6	1.74	0.53
33:YB:90:C:OP1	42:YQ:17:LEU:N	2.40	0.53
35:YE:134:ILE:HD12	35:YE:134:ILE:C	2.30	0.53
42:YQ:136:ALA:O	42:YQ:139:GLU:HB2	2.09	0.53
49:YX:55:ASN:HB2	49:YX:80:ILE:HG23	1.91	0.53
1:QA:1541:U:OP1	17:QR:55:ARG:NH2	2.30	0.53
1:QA:946:A:H2'	1:QA:947:G:C8	2.44	0.53
2:QB:84:GLU:HG3	2:QB:215:LEU:HB3	1.91	0.53
8:QH:10:LEU:HD22	8:QH:83:ILE:HD11	1.91	0.53
32:RA:1824:G:N3	34:RD:254:THR:OG1	2.41	0.53
32:RA:589:C:H2'	32:RA:590:A:H8	1.72	0.53
54:RF:176:LEU:HD21	54:RF:181:LEU:HA	1.90	0.53
45:RT:27:THR:HG22	45:RT:48:ILE:HG12	1.90	0.53
23:XY:62:GLU:H	23:XY:62:GLU:CD	2.03	0.53
32:YA:336:C:O2'	50:YY:35:TYR:OH	2.27	0.53
32:YA:845:G:H21	32:YA:933:A:H61	1.55	0.53
34:YD:26:LYS:HB3	34:YD:83:GLU:HG2	1.91	0.53
42:YQ:29:PHE:O	42:YQ:65:PHE:CE2	2.62	0.53
50:YY:92:ASN:OD1	50:YY:92:ASN:N	2.37	0.53
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.73	0.52
1:QA:217:C:O2'	1:QA:466:C:N4	2.41	0.52
7:QG:35:LYS:HB3	7:QG:38:LEU:HD13	1.90	0.52
25:R2:28:LYS:HD2	25:R2:53:LEU:HD11	1.91	0.52
32:RA:2010:G:H5''	48:RW:42:ARG:HB2	1.92	0.52
32:RA:698:C:O2'	32:RA:734:A:N6	2.40	0.52
54:RF:113:ALA:HB2	54:RF:183:VAL:HG23	1.91	0.52
55:RZ:103:ARG:CZ	55:RZ:136:PHE:HE1	2.22	0.52
32:YA:1678:G:N2	32:YA:1990:C:O2	2.42	0.52
37:YH:133:VAL:HG21	37:YH:145:ALA:CB	2.38	0.52
39:YN:22:THR:OG1	39:YN:23:LEU:N	2.42	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1372:U:H5''	9:QI:71:SER:HB3	1.91	0.52
2:QB:21:ARG:HD3	2:QB:39:ILE:CD1	2.39	0.52
8:QH:74:PRO:C	8:QH:74:PRO:N	2.56	0.52
23:QY:4:ILE:HA	23:QZ:3:LEU:O	2.09	0.52
32:RA:29:U:H5''	46:RU:7:GLY:HA2	1.90	0.52
32:RA:614:U:H5''	32:RA:615:G:OP1	2.09	0.52
1:XA:1268:A:N3	1:XA:1326:C:O2'	2.39	0.52
49:YX:53:LYS:NZ	49:YX:55:ASN:OD1	2.43	0.52
2:QB:220:ASP:HA	2:QB:223:ILE:HD11	1.91	0.52
2:QB:69:LEU:HD23	2:QB:69:LEU:C	2.30	0.52
4:QD:57:ARG:HB3	4:QD:206:PHE:HB2	1.92	0.52
23:QY:51:ASN:CG	23:QY:52:LEU:CD1	2.77	0.52
23:QY:10:TRP:CE3	23:QZ:3:LEU:CD1	2.92	0.52
25:R2:22:GLU:OE2	25:R2:68:ARG:NH2	2.43	0.52
1:XA:1157:A:HO2'	1:XA:1158:C:P	2.32	0.52
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.44	0.52
8:XH:34:GLU:OE1	8:XH:37:ARG:NH2	2.43	0.52
12:XM:91:ARG:HB2	12:XM:98:VAL:HG12	1.91	0.52
13:XN:26:ARG:HD3	13:XN:43:CYS:HB3	1.91	0.52
32:YA:734:A:O2'	32:YA:1635:G:H5'	2.08	0.52
32:YA:1728:G:N7	32:YA:1731:G:C2	2.77	0.52
32:YA:2103:C:H2'	32:YA:2104:G:H8	1.74	0.52
32:YA:286:C:C3'	32:YA:287:C:H5'	2.40	0.52
32:YA:327:G:N2	50:YY:70:SER:OG	2.42	0.52
32:YA:67:U:H3	32:YA:74:A:H2	1.56	0.52
36:YG:170:ARG:NH2	36:YG:182:LYS:O	2.42	0.52
37:YH:157:TYR:OH	37:YH:172:LYS:HE3	2.09	0.52
45:YT:16:ARG:HH21	45:YT:19:LEU:HD21	1.74	0.52
47:YV:76:LYS:HB3	47:YV:79:VAL:HG11	1.91	0.52
2:QB:60:ASP:CB	2:QB:64:ARG:HH11	2.06	0.52
35:RE:66:HIS:HB3	35:RE:68:ALA:HB2	1.90	0.52
1:XA:501:C:OP1	51:XL:117:ARG:NH2	2.39	0.52
1:XA:5:U:H5''	1:XA:6:G:C5	2.44	0.52
19:XT:42:GLN:NE2	19:XT:45:GLN:OE1	2.43	0.52
23:XY:52:LEU:HB3	23:XY:55:PHE:HB2	1.92	0.52
32:YA:2335:A:O2'	32:YA:2336:A:H2'	2.08	0.52
32:YA:263:C:H2'	32:YA:264:C:O4'	2.09	0.52
32:YA:871:U:H5'	42:YQ:5:ARG:NH2	2.24	0.52
35:YE:67:PHE:CE1	35:YE:78:LEU:HD11	2.45	0.52
37:YH:7:LEU:CD2	37:YH:8:PRO:HD2	2.20	0.52
32:YA:536:A:H4'	46:YU:57:PHE:HZ	1.73	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1130:A:O2'	9:QL:3:GLN:OE1	2.28	0.52
1:QA:765:G:N2	1:QA:813:U:OP2	2.43	0.52
2:QB:93:VAL:HG13	2:QB:93:VAL:O	2.10	0.52
32:RA:578:A:OP1	32:RA:1255:U:O2'	2.17	0.52
10:XJ:48:THR:HG23	10:XJ:62:HIS:HB3	1.90	0.52
32:YA:1830:C:H2'	32:YA:1831:G:H8	1.73	0.52
35:YE:5:LEU:N	35:YE:5:LEU:CD1	2.73	0.52
37:YH:146:ALA:HA	37:YH:164:TYR:OH	2.09	0.52
37:YH:5:GLY:N	37:YH:69:ARG:HG3	2.25	0.52
1:QA:250:A:H4'	1:QA:251:G:O5'	2.08	0.52
1:QA:689:C:H3'	1:QA:690:G:H21	1.74	0.52
11:QK:32:ILE:HG23	11:QK:40:ILE:HB	1.91	0.52
29:R6:37:ARG:HA	29:R6:48:VAL:HA	1.92	0.52
42:RQ:24:GLY:H	42:RQ:101:ARG:HD2	1.74	0.52
1:XA:45:U:H2'	1:XA:46:G:C8	2.45	0.52
1:XA:501:C:H2'	1:XA:502:G:C8	2.45	0.52
1:XA:624:C:H2'	1:XA:625:G:H8	1.74	0.52
34:YD:95:LEU:HD11	34:YD:105:ILE:HD13	1.90	0.52
34:YD:18:VAL:HG22	34:YD:211:ARG:NH2	2.24	0.52
34:YD:33:LEU:HD22	34:YD:64:ILE:HD11	1.91	0.52
35:YE:73:GLU:CG	35:YE:74:PRO:HD2	2.39	0.52
1:QA:1182:G:H4'	1:QA:1183:A:H5'	1.91	0.52
34:RD:85:ASP:OD2	34:RD:88:ARG:NH1	2.41	0.52
35:RE:38:THR:OG1	35:RE:40:GLU:OE1	2.28	0.52
55:RZ:110:GLY:O	55:RZ:115:GLY:N	2.40	0.52
1:XA:1127:G:H2'	1:XA:1128:C:C6	2.45	0.52
1:XA:715:A:H2'	1:XA:716:A:C8	2.44	0.52
21:XW:18:G:O6	21:XW:56:C:N4	2.43	0.52
32:YA:550:G:O2'	32:YA:1220:A:N3	2.38	0.52
32:YA:1802:A:H2'	32:YA:1803:A:C8	2.45	0.52
32:YA:2123:G:H2'	32:YA:2124:G:C8	2.44	0.52
32:YA:181:A:H1'	32:YA:435:C:H5'	1.92	0.52
35:YE:55:ASN:HB3	35:YE:58:ARG:CZ	2.39	0.52
1:QA:34:C:H2'	1:QA:35:G:H8	1.74	0.52
2:QB:11:LEU:CD1	2:QB:11:LEU:N	2.73	0.52
2:QB:115:LEU:CB	2:QB:145:LEU:CD2	2.81	0.52
2:QB:156:LYS:CE	2:QB:156:LYS:HA	2.15	0.52
2:QB:209:ARG:NH1	2:QB:209:ARG:CB	2.73	0.52
1:QA:754:C:P	14:QO:72:ARG:HH22	2.33	0.52
25:R2:47:ASN:HD21	32:RA:94:G:H21	1.58	0.52
32:RA:2183:C:H2'	32:RA:2184:G:H8	1.74	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RD:146:GLU:HB2	34:RD:189:CYS:HB3	1.92	0.52
1:XA:662:G:H2'	1:XA:663:A:C8	2.45	0.52
40:YO:2:ILE:HB	40:YO:33:ALA:HB3	1.91	0.52
32:YA:2393:A:O2'	41:YP:60:MET:O	2.25	0.52
1:QA:1256:A:OP2	3:QC:26:LYS:NZ	2.27	0.52
2:QB:28:PHE:CE1	2:QB:189:ASP:O	2.62	0.52
23:QY:60:ILE:HD12	23:QY:80:CYS:O	2.09	0.52
32:RA:527:C:N4	32:RA:2779:U:OP2	2.43	0.52
37:RH:23:ARG:HD2	37:RH:25:LYS:NZ	2.24	0.52
41:RP:1:MET:HG3	54:RF:116:ASP:OD2	2.10	0.52
41:RP:63:PRO:HB3	53:R8:13:ARG:HG3	1.92	0.52
1:XA:1014:A:C8	18:XS:34:TRP:CZ3	2.98	0.52
1:XA:1101:A:N6	2:XB:176:GLU:OE2	2.43	0.52
1:XA:191(E):G:H2'	1:XA:191(F):U:C6	2.45	0.52
1:XA:279:A:OP2	16:XQ:95:TYR:OH	2.20	0.52
1:XA:401:C:O2'	1:XA:621:A:N3	2.38	0.52
4:XD:154:ASN:HA	4:XD:159:ARG:NE	2.25	0.52
34:YD:259:THR:OG1	34:YD:259:THR:O	2.28	0.52
37:YH:3:ARG:NH2	37:YH:3:ARG:CB	2.73	0.52
42:YQ:60:ARG:CB	55:YZ:180:VAL:N	2.67	0.52
32:YA:2451:A:N1	56:ZA:76:PPU:HE2	2.24	0.52
2:QB:118:LEU:HD12	2:QB:118:LEU:O	2.10	0.52
8:XH:79:VAL:HG13	8:XH:80:ILE:HG13	1.92	0.52
18:XS:59:PRO:C	18:XS:59:PRO:N	2.58	0.52
21:XW:50:U:H3	21:XW:64:G:H1	1.56	0.52
32:YA:2255:G:N1	42:YQ:85:LYS:NZ	2.58	0.52
34:YD:222:ARG:NH1	34:YD:224:ALA:HB3	2.25	0.52
1:QA:552:U:H2'	1:QA:553:A:H8	1.75	0.51
2:QB:219:VAL:C	2:QB:222:ILE:HG12	2.30	0.51
32:RA:1571:A:H2'	32:RA:1572:A:C8	2.45	0.51
32:RA:306:U:C5	32:RA:307:G:O6	2.64	0.51
34:RD:17:THR:HB	34:RD:205:VAL:H	1.74	0.51
1:XA:1224:G:HO2'	18:XS:78:ARG:NH2	2.08	0.51
32:YA:2789:C:O2'	32:YA:2893:G:N2	2.41	0.51
32:YA:604:G:P	41:YP:90:ARG:HH12	2.32	0.51
32:YA:74:A:H4'	32:YA:75:G:O5'	2.10	0.51
37:YH:153:LYS:HG2	37:YH:154:PRO:N	2.23	0.51
49:YX:72:LYS:NZ	49:YX:75:ASP:OD1	2.43	0.51
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.93	0.51
2:QB:28:PHE:O	2:QB:32:ILE:HG13	2.10	0.51
2:QB:71:VAL:CG1	2:QB:93:VAL:HG11	2.38	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:58:PRO:HB2	11:QK:93:GLN:HG3	1.92	0.51
32:RA:1070:A:H5'	32:RA:1071:G:H5''	1.91	0.51
32:RA:1478:G:H2'	32:RA:1479:G:H8	1.75	0.51
54:RF:133:ASN:OD1	54:RF:133:ASN:N	2.43	0.51
36:RG:16:ARG:NH2	36:RG:28:VAL:O	2.39	0.51
38:RI:93:THR:OG1	38:RI:94:ALA:N	2.43	0.51
41:RP:68:GLN:CG	53:R8:12:LYS:CD	2.88	0.51
45:RT:51:ARG:HG2	45:RT:98:LYS:HE3	1.93	0.51
11:XK:33:THR:OG1	11:XK:34:ASP:N	2.44	0.51
12:XM:3:ARG:HD3	12:XM:7:VAL:HA	1.91	0.51
16:XQ:66:SER:O	16:XQ:70:ARG:NH1	2.43	0.51
23:XZ:30:LEU:HD13	23:XZ:60:ILE:HG12	1.87	0.51
32:YA:1826:G:O2'	34:YD:242:ARG:NH2	2.42	0.51
47:YV:35:LEU:CD1	47:YV:35:LEU:N	2.73	0.51
55:YZ:9:TYR:HE1	55:YZ:35:ARG:HG2	1.74	0.51
2:QB:74:LYS:HB2	2:QB:77:ALA:HB3	1.93	0.51
23:QZ:2:LYS:HE2	23:QZ:74:SER:HB3	1.92	0.51
32:RA:1802:A:H2'	32:RA:1803:A:C8	2.45	0.51
32:RA:458:G:N2	32:RA:470:A:OP2	2.35	0.51
32:RA:68:G:N2	32:RA:74:A:OP2	2.44	0.51
35:RE:76:ARG:HB3	35:RE:195:LEU:HD22	1.92	0.51
32:YA:1353:A:H2'	32:YA:1354:A:C8	2.46	0.51
32:YA:2287:A:H62	32:YA:2344:U:H3	1.57	0.51
32:YA:2848:G:O2'	32:YA:2849:U:O5'	2.28	0.51
32:YA:668:G:H2'	32:YA:670:A:H62	1.76	0.51
34:YD:45:ASN:ND2	34:YD:45:ASN:H	2.06	0.51
34:YD:88:ARG:HH11	34:YD:88:ARG:HG3	1.75	0.51
41:YP:79:ARG:CB	41:YP:110:TYR:HD1	2.23	0.51
21:QW:56:C:H2'	21:QW:57:A:H8	1.75	0.51
23:QY:52:LEU:N	23:QY:52:LEU:CD1	2.73	0.51
23:QZ:4:ILE:N	23:QZ:4:ILE:CD1	2.73	0.51
32:RA:2130:U:H3	32:RA:2158:A:H1'	1.75	0.51
32:RA:2304:G:H1	32:RA:2312:U:H3	1.58	0.51
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.92	0.51
1:XA:1104:G:O5'	2:XB:111:ARG:HD2	2.11	0.51
31:Y9:27:CYS:SG	31:Y9:28:GLU:N	2.84	0.51
26:Y3:29:ARG:NH1	32:YA:1184:G:OP1	2.41	0.51
32:YA:2191:G:O2'	32:YA:2192:G:OP1	2.25	0.51
32:YA:2291:U:OP1	32:YA:2380:C:O2'	2.28	0.51
32:YA:2572:A:C5	35:YE:144:ARG:NE	2.70	0.51
32:YA:589:C:H2'	32:YA:590:A:C8	2.46	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:820:A:H4'	32:YA:836:G:N2	2.26	0.51
32:YA:1997:G:H5'	35:YE:117:MET:CE	2.40	0.51
35:YE:19:ARG:CB	35:YE:19:ARG:NH1	2.73	0.51
38:YI:100:ALA:O	38:YI:104:GLN:CB	2.59	0.51
41:YP:114:ILE:HG13	41:YP:130:PHE:CE1	2.46	0.51
42:YQ:60:ARG:N	55:YZ:180:VAL:CG2	2.61	0.51
45:YT:127:ALA:O	45:YT:131:ALA:HB3	2.10	0.51
1:QA:592:G:H2'	1:QA:593:G:H8	1.75	0.51
51:QL:47:LYS:HB3	51:QL:48:PRO:HD3	1.92	0.51
23:QY:1:MET:HG2	23:QY:1:MET:O	2.11	0.51
32:RA:2246:G:H2'	32:RA:2247:A:C8	2.46	0.51
34:RD:24:ILE:HD11	34:RD:84:TYR:HB2	1.93	0.51
32:RA:2635:C:OP1	35:RE:79:ARG:NH2	2.44	0.51
39:RN:30:ILE:HG23	39:RN:52:VAL:HG11	1.91	0.51
33:RB:8:U:O3'	44:RS:25:ARG:NH2	2.42	0.51
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.46	0.51
1:XA:261:U:OP2	19:XT:79:ARG:NH2	2.43	0.51
23:XZ:15:TYR:CZ	23:XZ:19:THR:HG21	2.46	0.51
32:YA:1171:G:O2'	32:YA:1173:G:O5'	2.26	0.51
32:YA:2183:C:H2'	32:YA:2184:G:H8	1.74	0.51
32:YA:84:A:N1	32:YA:98:G:O2'	2.35	0.51
34:YD:77:ALA:HB2	34:YD:97:TYR:CD1	2.46	0.51
37:YH:105:LEU:N	37:YH:105:LEU:CD1	2.73	0.51
37:YH:55:PRO:HG2	37:YH:61:HIS:HD2	1.74	0.51
41:YP:95:VAL:CG1	41:YP:125:VAL:HG23	2.40	0.51
41:YP:1:MET:HG2	41:YP:1:MET:O	2.11	0.51
55:YZ:111:VAL:HA	55:YZ:115:GLY:O	2.11	0.51
32:YA:896:A:H1'	55:YZ:176:PRO:HG3	1.92	0.51
2:QB:7:VAL:HG23	2:QB:217:ARG:NH1	2.26	0.51
9:QI:10:ARG:NH1	9:QI:75:ASP:OD1	2.44	0.51
52:R1:53:VAL:HG12	52:R1:53:VAL:O	2.11	0.51
32:RA:476:G:N1	32:RA:479:A:OP2	2.40	0.51
32:RA:2032:G:H1'	35:RE:145:LYS:CE	2.41	0.51
12:XM:98:VAL:HG23	12:XM:99:ARG:HD2	1.92	0.51
32:YA:1187:G:H5''	47:YV:81:TYR:HE1	1.73	0.51
35:YE:104:VAL:CG1	35:YE:188:VAL:CG2	2.88	0.51
35:YE:54:GLN:NE2	35:YE:76:ARG:CG	2.72	0.51
41:YP:22:GLY:O	41:YP:28:GLY:HA3	2.11	0.51
47:YV:57:VAL:O	47:YV:57:VAL:CG2	2.57	0.51
1:QA:1001:G:H2'	1:QA:1002:G:H8	1.75	0.51
4:QD:15:GLU:OE2	4:QD:59:ARG:NH1	2.43	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:QW:71:C:H2'	21:QW:72:A:C8	2.46	0.51
29:R6:7:ILE:HD13	29:R6:27:LYS:HD3	1.93	0.51
32:RA:1427:A:H4'	32:RA:1428:C:O5'	2.08	0.51
32:RA:2679:A:H5'	35:RE:165:VAL:HG11	1.92	0.51
49:RX:27:THR:HG22	49:RX:80:ILE:HB	1.93	0.51
49:RX:55:ASN:HB2	49:RX:80:ILE:HG23	1.93	0.51
1:XA:1003:G:H3'	1:XA:1004:A:H8	1.76	0.51
1:XA:938:A:H8	1:XA:938:A:O5'	1.94	0.51
1:XA:999:U:H2'	1:XA:1000:A:C8	2.45	0.51
10:XJ:44:VAL:HG22	10:XJ:66:ARG:HG2	1.92	0.51
18:XS:63:THR:OG1	18:XS:65:ASN:OD1	2.28	0.51
52:Y1:83:GLU:HG2	52:Y1:85:LEU:H	1.75	0.51
32:YA:2809:A:H2'	32:YA:2810:A:C8	2.45	0.51
30:Y7:37:LYS:NZ	32:YA:468:G:OP2	2.41	0.51
32:YA:458:G:O2'	32:YA:469:G:O6	2.28	0.51
33:YB:116:G:H3'	33:YB:116:G:C8	2.46	0.51
33:YB:116:G:H8	33:YB:116:G:O5'	1.94	0.51
34:YD:42:GLY:CA	34:YD:51:VAL:HG13	2.40	0.51
35:YE:101:ARG:C	35:YE:201:THR:HG1	2.11	0.51
42:YQ:63:LYS:HZ1	55:YZ:175:VAL:HG11	1.75	0.51
33:YB:75:G:H21	55:YZ:85:HIS:CE1	2.28	0.51
1:QA:1108:G:H5'	3:QC:176:HIS:CD2	2.45	0.51
1:QA:522:C:H41	51:QL:53:ARG:NH2	2.09	0.51
2:QB:67:THR:HG21	2:QB:155:LEU:HD13	1.93	0.51
23:QY:1:MET:O	23:QY:74:SER:HA	2.11	0.51
32:RA:1388:G:HO2'	32:RA:1525:G:HO2'	1.59	0.51
54:RF:75:HIS:HB3	54:RF:83:PHE:HZ	1.75	0.51
36:RG:37:VAL:HG13	36:RG:159:VAL:HG12	1.92	0.51
41:RP:101:VAL:HG21	41:RP:108:LYS:HG3	1.93	0.51
30:Y7:11:LYS:HE2	32:YA:686:G:H5''	1.92	0.51
32:YA:2364:C:H2'	32:YA:2365:G:O4'	2.10	0.51
35:YE:81:ILE:N	35:YE:81:ILE:CD1	2.73	0.51
37:YH:136:ILE:N	37:YH:136:ILE:CD1	2.73	0.51
37:YH:3:ARG:HB2	37:YH:3:ARG:CZ	2.41	0.51
37:YH:41:MET:HE3	37:YH:42:ARG:H	1.76	0.51
47:YV:39:LEU:C	47:YV:39:LEU:HD23	2.31	0.51
1:QA:1137:C:H4'	1:QA:1138:G:O5'	2.11	0.51
3:QC:14:ILE:HG22	3:QC:15:THR:HG23	1.93	0.51
5:QE:81:GLU:HG2	5:QE:90:VAL:HG22	1.92	0.51
51:QL:71:PRO:HB2	51:QL:120:TYR:HE1	1.76	0.51
23:QY:36:ARG:CB	23:QY:36:ARG:NH1	2.74	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:2696:U:H2'	32:RA:2697:G:C8	2.46	0.51
32:RA:2848:G:O2'	32:RA:2867:G:N2	2.44	0.51
32:RA:2853:C:H2'	32:RA:2854:G:H8	1.75	0.51
44:RS:11:LYS:O	44:RS:15:ARG:HB2	2.10	0.51
55:RZ:61:LEU:HG	55:RZ:65:GLN:O	2.09	0.51
55:RZ:76:LEU:HB3	55:RZ:83:PRO:HA	1.93	0.51
1:XA:1236:A:H4'	1:XA:1304:G:H4'	1.93	0.51
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.93	0.51
1:XA:192:U:O3'	19:XT:57:ARG:HD2	2.11	0.51
23:XY:3:LEU:HD23	23:XY:5:TRP:HE1	1.75	0.51
32:YA:127:A:H5''	32:YA:128:C:C6	2.46	0.51
32:YA:530:G:O2'	32:YA:532:A:N7	2.43	0.51
41:YP:121:LYS:HD3	41:YP:123:LEU:CD1	2.41	0.51
42:YQ:102:VAL:O	42:YQ:102:VAL:HG13	2.10	0.51
42:YQ:58:PHE:CE1	42:YQ:117:ALA:CB	2.94	0.51
42:YQ:132:VAL:CG1	42:YQ:133:ARG:N	2.73	0.51
1:QA:1192:C:OP2	3:QC:4:LYS:NZ	2.35	0.51
2:QB:8:LYS:CB	2:QB:11:LEU:CD1	2.64	0.51
1:QA:490:G:OP2	4:QD:132:ARG:NH2	2.43	0.51
10:QJ:59:SER:OG	10:QJ:59:SER:O	2.28	0.51
23:QY:5:TRP:CD1	23:QZ:5:TRP:NE1	2.79	0.51
32:RA:521:G:H2'	32:RA:522:G:C8	2.46	0.51
38:RI:38:LEU:HG	38:RI:40:THR:HG23	1.93	0.51
42:RQ:43:THR:HG22	42:RQ:94:VAL:HG12	1.93	0.51
43:RR:104:ARG:HG3	43:RR:107:ASP:HB3	1.93	0.51
1:XA:1522:U:H2'	1:XA:1523:G:H8	1.76	0.51
1:XA:501:C:H2'	1:XA:502:G:H8	1.76	0.51
17:XR:70:ILE:O	17:XR:74:ARG:HB2	2.11	0.51
23:XY:1:MET:CE	23:XY:35:ARG:HG2	2.41	0.51
34:YD:155:LEU:CD1	34:YD:155:LEU:N	2.73	0.51
32:YA:2571:C:O2'	35:YE:146:THR:O	2.20	0.51
35:YE:48:GLN:C	35:YE:49:LEU:HD12	2.30	0.51
42:YQ:125:LEU:HD12	42:YQ:129:THR:HG21	1.93	0.51
1:QA:401:C:O2'	1:QA:621:A:N3	2.36	0.50
2:QB:194:PRO:CB	2:QB:200:ILE:HD12	2.32	0.50
1:QA:1314:C:OP2	18:QS:4:SER:OG	2.29	0.50
28:R5:4:HIS:O	32:RA:2056:G:N2	2.44	0.50
48:RW:24:ILE:HD13	48:RW:36:LEU:HD11	1.93	0.50
32:YA:2327:A:H2'	32:YA:2328:A:C8	2.46	0.50
35:YE:144:ARG:HG2	35:YE:145:LYS:N	2.26	0.50
2:QB:163:PHE:HD1	2:QB:185:ILE:HG23	1.76	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:QZ:20:ASP:OD2	23:QZ:23:ILE:HD11	2.11	0.50
32:RA:2880:C:O3'	43:RR:90:ARG:NH1	2.45	0.50
1:XA:1001:G:H3'	1:XA:1001:G:H8	1.73	0.50
1:XA:1032(A):G:H2'	1:XA:1032(B):G:H8	1.76	0.50
32:YA:270(B):A:H5'	32:YA:270(C):C:OP2	2.10	0.50
42:YQ:62:GLY:O	55:YZ:178:GLU:N	2.31	0.50
1:QA:1128:C:O2'	1:QA:1129:C:OP1	2.28	0.50
1:QA:677:U:H3	1:QA:713:G:H22	1.59	0.50
3:QC:124:ILE:HD12	3:QC:130:VAL:HG22	1.94	0.50
18:QS:49:ILE:HD11	18:QS:71:LEU:HD21	1.93	0.50
32:RA:1142(A):A:O2'	32:RA:1143:A:H2'	2.11	0.50
32:RA:1542:G:O6	32:RA:1543:A:N6	2.44	0.50
32:RA:2081:C:H2'	32:RA:2082:A:H8	1.76	0.50
41:RP:8:PRO:HD3	54:RF:34:TRP:NE1	2.26	0.50
46:RU:90:VAL:HG22	47:RV:39:LEU:HD23	1.93	0.50
1:XA:1025:U:H2'	1:XA:1026:G:C8	2.46	0.50
1:XA:17:U:H2'	1:XA:18:C:C6	2.46	0.50
9:XI:110:GLU:OE2	9:XI:113:LYS:NZ	2.45	0.50
18:XS:22:LEU:HA	18:XS:26:GLY:HA2	1.94	0.50
23:XZ:32:LYS:HG2	23:XZ:36:ARG:HE	1.76	0.50
26:Y3:15:TYR:O	26:Y3:20:LYS:NZ	2.44	0.50
32:YA:1657:C:H2'	32:YA:1658:C:C6	2.46	0.50
32:YA:2577:A:H5''	32:YA:2578:G:H5'	1.94	0.50
35:YE:61:ARG:O	35:YE:65:GLY:N	2.37	0.50
47:YV:28:GLU:OE1	47:YV:29:PRO:O	2.29	0.50
1:QA:971:G:H22	1:QA:1363:A:H5'	1.77	0.50
2:QB:102:LEU:N	2:QB:102:LEU:HD12	2.27	0.50
2:QB:75:LYS:HA	2:QB:78:GLN:OE1	2.10	0.50
1:QA:545:C:H5'	4:QD:72:GLU:HG3	1.93	0.50
32:RA:299:A:N3	32:RA:319:C:O2'	2.40	0.50
32:RA:309:G:H4'	32:RA:329:G:C5	2.46	0.50
32:RA:309:G:H5''	50:RY:18:GLY:CA	2.41	0.50
36:RG:114:ILE:HD11	36:RG:140:ILE:HD13	1.93	0.50
41:RP:68:GLN:HG2	53:R8:12:LYS:CD	2.39	0.50
1:XA:191(E):G:N1	1:XA:191(F):U:C4	2.80	0.50
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.77	0.50
32:YA:1454:U:O2'	32:YA:1455:G:N7	2.41	0.50
32:YA:2777:G:OP2	32:YA:2781:A:O2'	2.24	0.50
54:YF:122:LYS:HB3	54:YF:191:ARG:HG3	1.92	0.50
37:YH:4:ILE:HG21	37:YH:70:THR:CG2	2.41	0.50
42:YQ:68:ILE:HG23	42:YQ:103:MET:HA	1.94	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YR:45:ARG:HH21	43:YR:97:VAL:HG21	1.76	0.50
1:QA:923:A:O2'	1:QA:1399:C:OP2	2.24	0.50
1:QA:421:U:O2	3:QC:127:ARG:NH1	2.45	0.50
23:QZ:1:MET:HE3	23:QZ:75:LEU:HD11	1.94	0.50
39:RN:16:ILE:HG21	39:RN:26:LEU:HD11	1.92	0.50
1:XA:599:C:O2'	8:XH:129:VAL:O	2.28	0.50
32:YA:1000:A:H3'	32:YA:1001:A:H8	1.76	0.50
32:YA:608:A:H2'	32:YA:609:A:C8	2.47	0.50
32:YA:1818:U:O4	34:YD:154:LYS:HD2	2.12	0.50
42:YQ:118:LEU:HD12	42:YQ:131:ILE:CG2	2.42	0.50
42:YQ:58:PHE:CE1	42:YQ:117:ALA:HB2	2.46	0.50
1:QA:514:C:H2'	1:QA:515:G:H8	1.76	0.50
2:QB:74:LYS:HD3	2:QB:165:VAL:HG21	1.93	0.50
16:QQ:83:ASP:OD1	16:QQ:83:ASP:N	2.45	0.50
21:QW:20:U:H3'	21:QW:21:A:H5''	1.94	0.50
21:QW:50:U:H3	21:QW:64:G:H1	1.59	0.50
23:QZ:4:ILE:HB	23:QZ:76:LEU:HD23	1.94	0.50
53:R8:57:ARG:O	53:R8:61:LEU:HD12	2.12	0.50
32:RA:2328:A:H2'	32:RA:2329:G:H8	1.76	0.50
32:RA:306:U:C5	32:RA:307:G:C5	2.99	0.50
32:RA:616:A:H4'	54:RF:182:ASN:HD22	1.76	0.50
1:XA:1305:G:HO2'	1:XA:1306:A:H8	1.59	0.50
41:YP:128:HIS:CG	41:YP:148:LEU:HD23	2.46	0.50
44:YS:67:ARG:O	44:YS:71:ARG:HG3	2.12	0.50
46:YU:92:ARG:NH2	47:YV:11:GLN:O	2.45	0.50
55:YZ:117:LEU:HD21	55:YZ:141:VAL:HG11	1.94	0.50
32:RA:1889:A:N3	32:RA:2086:U:O2'	2.44	0.50
32:RA:2375:G:N2	32:RA:2378:A:OP2	2.42	0.50
34:RD:35:LYS:HA	34:RD:35:LYS:HE3	1.94	0.50
36:RG:139:LEU:HD11	36:RG:149:VAL:HG11	1.94	0.50
6:XF:68:PRO:HG3	6:XF:71:ARG:HH21	1.76	0.50
10:XJ:64:GLU:OE2	10:XJ:66:ARG:NE	2.43	0.50
21:XW:17:C:OP2	21:XW:60:U:O2'	2.22	0.50
32:YA:2074:U:H2'	32:YA:2075:U:C6	2.47	0.50
35:YE:122:PHE:CZ	35:YE:155:LYS:HB2	2.45	0.50
37:YH:60:ARG:CG	37:YH:60:ARG:NH1	2.72	0.50
37:YH:28:GLY:HA3	37:YH:79:VAL:HB	1.94	0.50
41:YP:19:VAL:HB	41:YP:27:HIS:O	2.11	0.50
44:YS:84:GLN:HA	44:YS:109:GLY:HA2	1.93	0.50
1:QA:157:G:H1	1:QA:164:U:H3	1.60	0.50
1:QA:501:C:H2'	1:QA:502:G:C8	2.47	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:662:G:H2'	1:QA:663:A:C8	2.47	0.50
2:QB:220:ASP:HA	2:QB:223:ILE:HG12	1.93	0.50
6:QF:37:VAL:HA	6:QF:65:VAL:HG12	1.94	0.50
21:QW:30:G:H2'	21:QW:31:G:H8	1.76	0.50
32:RA:2472:G:H5'	32:RA:2473:U:H5''	1.94	0.50
32:RA:2583:G:N3	56:ZB:76:PPU:C2	2.72	0.50
32:RA:309:G:N3	32:RA:329:G:O2'	2.43	0.50
1:XA:243:A:H4'	1:XA:244:U:O5'	2.11	0.50
4:XD:88:VAL:HG13	5:XE:97:GLY:HA3	1.94	0.50
32:YA:1652:A:OP1	43:YR:8:ARG:NH1	2.40	0.50
32:YA:631:A:N3	32:YA:2415:G:O2'	2.38	0.50
35:YE:36:ARG:NH2	35:YE:86:PRO:O	2.28	0.50
38:YI:4:ILE:HG12	38:YI:18:VAL:HG22	1.94	0.50
2:QB:232:PRO:O	2:QB:233:SER:CB	2.59	0.50
32:RA:1265:A:OP1	32:RA:1265:A:H8	1.93	0.50
32:RA:2186:G:H2'	32:RA:2187:G:H8	1.76	0.50
32:RA:971:C:O2'	32:RA:983:A:N3	2.37	0.50
54:RF:110:LEU:HD11	54:RF:181:LEU:HG	1.93	0.50
41:RP:68:GLN:CG	53:R8:12:LYS:HD2	2.38	0.50
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.73	0.50
32:YA:2030:A:H4'	32:YA:2031:A:H8	1.77	0.50
32:YA:2485:G:H5''	42:YQ:46:GLN:NE2	2.20	0.50
32:YA:2572:A:N7	35:YE:144:ARG:NE	2.59	0.50
35:YE:54:GLN:NE2	35:YE:54:GLN:CA	2.75	0.50
37:YH:104:GLU:C	37:YH:105:LEU:HD12	2.31	0.50
1:QA:1177:G:H2'	1:QA:1178:G:C4	2.46	0.49
1:QA:1493:A:O2'	22:QX:20:A2M:H8	2.12	0.49
2:QB:231:GLU:HB2	2:QB:232:PRO:HD2	1.94	0.49
25:R2:17:SER:OG	25:R2:20:GLU:OE1	2.29	0.49
32:RA:1800:C:H42	32:RA:1817:G:H22	1.60	0.49
32:RA:2291:U:O2'	32:RA:2374:C:O2	2.29	0.49
55:RZ:181:GLU:H	55:RZ:181:GLU:CD	2.14	0.49
55:RZ:5:LEU:HG	55:RZ:47:VAL:HG11	1.94	0.49
55:RZ:78:LYS:CD	55:RZ:78:LYS:N	2.73	0.49
1:XA:1287:A:H2'	1:XA:1288:A:C8	2.46	0.49
11:XK:87:THR:HA	11:XK:91:ARG:HD2	1.94	0.49
23:XY:37:THR:OG1	23:XY:37:THR:O	2.30	0.49
32:YA:140:A:H8	32:YA:1408:C:HO2'	1.59	0.49
32:YA:2422:A:H4'	32:YA:2423:U:OP1	2.10	0.49
35:YE:77:ILE:HG21	35:YE:195:LEU:CD1	2.41	0.49
42:YQ:136:ALA:HA	42:YQ:139:GLU:CG	2.40	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD3	2.47	0.49
1:QA:1226:C:OP2	12:QM:103:THR:HG21	2.12	0.49
1:QA:1248:A:OP2	20:QU:26:LYS:NZ	2.43	0.49
32:RA:1332:G:N2	32:RA:1609:A:H2'	2.27	0.49
32:RA:39:C:O2	54:RF:46:ARG:NH2	2.44	0.49
32:RA:840:C:H2'	32:RA:841:A:C8	2.47	0.49
32:RA:872:A:H4'	42:RQ:66:ILE:HD11	1.94	0.49
32:RA:887:A:H2'	32:RA:888:C:H5'	1.93	0.49
34:RD:142:VAL:HG23	34:RD:193:VAL:HA	1.94	0.49
55:RZ:53:ILE:HG13	55:RZ:71:VAL:C	2.32	0.49
1:XA:1266:G:N2	1:XA:1269:A:OP2	2.39	0.49
1:XA:657:G:H4'	14:XO:28:GLN:HG2	1.94	0.49
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.45	0.49
7:XG:27:ILE:HA	7:XG:30:ILE:HD12	1.93	0.49
32:YA:807:U:OP2	41:YP:41:ARG:NH2	2.37	0.49
34:YD:7:LYS:O	34:YD:9:TYR:CD2	2.65	0.49
35:YE:101:ARG:O	35:YE:201:THR:OG1	2.21	0.49
32:YA:1675:C:C2	35:YE:128:SER:OG	2.65	0.49
32:YA:39:C:O2	54:YF:46:ARG:NH2	2.45	0.49
37:YH:123:PHE:CZ	37:YH:144:VAL:HG11	2.42	0.49
40:YO:97:ARG:H	40:YO:117:LEU:HD22	1.76	0.49
1:QA:1068:G:H8	1:QA:1068:G:OP2	1.95	0.49
1:QA:267:C:OP2	16:QQ:67:LYS:HD2	2.12	0.49
23:QZ:60:ILE:H	23:QZ:60:ILE:CD1	1.99	0.49
32:RA:2564:A:OP1	32:RA:2648:C:H4'	2.12	0.49
32:RA:619:G:O6	54:RF:103:LYS:NZ	2.42	0.49
46:RU:50:ARG:O	46:RU:54:LYS:NZ	2.45	0.49
1:XA:1068:G:H8	1:XA:1068:G:OP2	1.94	0.49
1:XA:992:U:C4	1:XA:1043:C:N4	2.79	0.49
4:XD:109:GLY:HA3	4:XD:165:MET:HG3	1.94	0.49
51:XL:117:ARG:HB3	51:XL:122:THR:HB	1.92	0.49
23:XZ:27:ILE:HG22	23:XZ:31:ILE:HD11	1.94	0.49
32:YA:2729:G:H5''	35:YE:185:LYS:NZ	2.27	0.49
35:YE:30:PRO:HG3	35:YE:92:THR:HG22	1.94	0.49
37:YH:103:LEU:CG	37:YH:105:LEU:HD11	2.42	0.49
37:YH:19:VAL:CG1	37:YH:45:VAL:HG13	2.42	0.49
55:YZ:1:MET:HG2	55:YZ:2:GLU:N	2.27	0.49
1:QA:1289:A:OP1	20:QU:9:ARG:NH2	2.40	0.49
1:QA:957:U:OP2	23:QZ:36:ARG:NE	2.46	0.49
2:QB:7:VAL:HG11	2:QB:51:LEU:HD13	1.93	0.49
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.95	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:1900:A:H1'	32:RA:1970:A:H2'	1.93	0.49
32:RA:2362:G:OP1	53:R8:44:LYS:NZ	2.36	0.49
33:RB:48:A:OP2	44:RS:30:ARG:NH2	2.45	0.49
35:RE:9:VAL:HB	35:RE:25:VAL:HG23	1.93	0.49
37:RH:9:ILE:HB	37:RH:69:ARG:HG2	1.92	0.49
42:RQ:58:PHE:HD2	42:RQ:61:GLY:HA3	1.78	0.49
28:R5:25:LEU:HG	48:RW:19:LEU:HD23	1.93	0.49
1:XA:1033:G:O2'	1:XA:1034:G:OP1	2.27	0.49
1:XA:960:U:H4'	1:XA:961:U:O5'	2.13	0.49
2:XB:61:LEU:HG	2:XB:66:GLY:HA3	1.94	0.49
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.78	0.49
51:XL:88:GLY:H	51:XL:98:TYR:HA	1.78	0.49
23:XY:61:THR:HG23	23:XY:62:GLU:OE1	2.11	0.49
32:YA:1168:G:H2'	32:YA:1169:G:C8	2.47	0.49
32:YA:2246:G:H2'	32:YA:2247:A:C8	2.47	0.49
32:YA:265:A:O2'	32:YA:266:G:H4'	2.13	0.49
32:YA:729:G:O2'	32:YA:763:G:H4'	2.13	0.49
33:YB:119:A:OP1	33:YB:119:A:H4'	2.12	0.49
54:YF:143:ALA:HB1	54:YF:148:LEU:HB2	1.94	0.49
42:YQ:75:THR:CG2	42:YQ:88:GLY:O	2.57	0.49
55:YZ:72:ARG:NH2	55:YZ:97:GLU:O	2.44	0.49
29:R6:53:LYS:H	29:R6:53:LYS:HD2	1.78	0.49
32:RA:1000:A:H2'	32:RA:1001:A:C8	2.46	0.49
32:RA:2148:G:H2'	32:RA:2149:G:H8	1.77	0.49
32:RA:2197:U:O2'	32:RA:2198:A:H5''	2.12	0.49
32:RA:2286:A:H4'	32:RA:2287:A:O4'	2.12	0.49
32:RA:2583:G:H21	56:ZB:76:PPU:C2	2.22	0.49
32:RA:2540:C:O2'	32:RA:2740:A:N3	2.32	0.49
32:RA:2851:A:O2'	43:RR:64:ARG:NH2	2.46	0.49
1:XA:701:C:OP1	1:XA:702:A:O2'	2.22	0.49
1:XA:985:C:H2'	1:XA:986:A:C8	2.48	0.49
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.94	0.49
32:YA:600:G:N2	32:YA:605:C:O3'	2.46	0.49
35:YE:49:LEU:CD1	35:YE:49:LEU:N	2.76	0.49
37:YH:58:GLU:HB3	37:YH:61:HIS:ND1	2.28	0.49
42:YQ:27:VAL:H	42:YQ:138:ASP:HB2	1.77	0.49
44:YS:106:ARG:O	44:YS:110:LEU:HD13	2.12	0.49
44:YS:26:LEU:HB3	44:YS:87:PHE:HA	1.95	0.49
1:QA:630:G:H3'	1:QA:631:G:H8	1.78	0.49
32:RA:1930:G:H1'	32:RA:1931:U:OP2	2.12	0.49
32:RA:2304:G:H22	32:RA:2312:U:H3	1.59	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:248:G:H5'	32:RA:250:G:N7	2.27	0.49
1:XA:824:C:H2'	1:XA:825:G:H8	1.77	0.49
23:XY:2:LYS:HD2	23:XZ:4:ILE:CG2	2.43	0.49
32:YA:1142:U:H5''	32:YA:1142(A):A:C8	2.47	0.49
53:Y8:12:LYS:NZ	32:YA:249:C:O2	2.41	0.49
32:YA:2844:G:H3'	32:YA:2845:G:H8	1.77	0.49
35:YE:54:GLN:NE2	35:YE:76:ARG:HD2	2.28	0.49
37:YH:159:GLU:HG3	37:YH:171:LEU:HD11	1.93	0.49
37:YH:48:GLY:O	37:YH:49:VAL:HG23	2.13	0.49
50:YY:8:LYS:HD3	50:YY:97:ARG:HH21	1.77	0.49
1:QA:41:G:H2'	1:QA:42:G:H8	1.78	0.49
1:QA:713:G:H2'	1:QA:714:G:C8	2.47	0.49
1:QA:985:C:H2'	1:QA:986:A:H8	1.77	0.49
2:QB:27:LYS:HD3	2:QB:195:ASP:OD2	2.12	0.49
23:QZ:20:ASP:CG	23:QZ:23:ILE:CG1	2.75	0.49
23:QZ:37:THR:HB	23:QZ:40:GLU:HB2	1.95	0.49
32:RA:1105:U:H2'	32:RA:1106:G:C8	2.48	0.49
32:RA:1311:G:O2'	32:RA:1313:U:O4	2.31	0.49
32:RA:1688:U:O2	32:RA:1700:A:H5'	2.12	0.49
32:RA:463:G:N2	32:RA:466:A:OP2	2.44	0.49
32:RA:873:G:O3'	42:RQ:63:LYS:NZ	2.41	0.49
32:RA:837:C:N3	32:RA:941:A:N6	2.60	0.49
33:RB:24:G:H1'	33:RB:27:C:H41	1.77	0.49
48:RW:57:ASN:O	48:RW:61:ASN:HB2	2.13	0.49
55:RZ:139:VAL:O	55:RZ:139:VAL:HG23	2.12	0.49
1:XA:45:U:H2'	1:XA:46:G:H8	1.78	0.49
32:YA:2701:C:H3'	32:YA:2702:U:C5'	2.40	0.49
32:YA:877:U:H2'	32:YA:878:A:H5''	1.95	0.49
32:YA:969:U:H2'	32:YA:970:C:C6	2.47	0.49
32:YA:2682:U:C4	35:YE:11:MET:HE1	2.43	0.49
36:YG:40:ASN:ND2	36:YG:90:LEU:O	2.45	0.49
32:YA:2873:A:H8	43:YR:6:SER:H	1.60	0.49
44:YS:40:ILE:HG13	44:YS:47:THR:HG23	1.94	0.49
2:QB:92:TYR:CD1	2:QB:92:TYR:C	2.86	0.49
23:QY:3:LEU:HD21	23:QY:31:ILE:CG2	2.43	0.49
41:RP:62:LEU:HD23	53:R8:27:THR:CG2	2.40	0.49
32:RA:2591:C:H2'	32:RA:2592:G:H8	1.78	0.49
45:RT:39:ARG:HH22	45:RT:41:ARG:HD3	1.76	0.49
7:XG:116:ALA:HA	7:XG:119:ARG:HE	1.78	0.49
1:XA:376:G:H5''	15:XP:5:ARG:HB2	1.94	0.49
23:XZ:25:LYS:O	23:XZ:29:GLU:HG3	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YD:44:ASN:HB3	34:YD:50:THR:HG21	1.95	0.49
34:YD:42:GLY:HA2	34:YD:51:VAL:HG13	1.95	0.49
37:YH:139:GLN:HG3	37:YH:140:LYS:N	2.27	0.49
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.94	0.49
3:QC:90:GLU:HA	3:QC:93:LYS:HG3	1.94	0.49
1:QA:406:G:H5'	4:QD:5:ILE:HD13	1.94	0.49
8:QH:12:ARG:HD2	8:QH:26:VAL:HG12	1.95	0.49
51:QL:33:ARG:NH2	51:QL:61:THR:OG1	2.46	0.49
23:QY:83:HIS:CE1	23:QY:84:TYR:CD2	3.00	0.49
24:R0:27:GLU:HG3	24:R0:68:GLU:HA	1.95	0.49
32:RA:1057:A:H2'	32:RA:1058:G:H8	1.78	0.49
32:RA:197:A:H62	32:RA:2430:A:H2'	1.78	0.49
32:RA:2776:A:H4'	32:RA:2777:G:O5'	2.13	0.49
32:RA:363(B):G:H2'	32:RA:363(C):G:C8	2.48	0.49
54:RF:126:VAL:HG11	54:RF:142:TRP:HZ2	1.77	0.49
54:RF:64:ILE:HG21	54:RF:78:ILE:HD11	1.94	0.49
32:RA:662:G:OP1	41:RP:15:ARG:NH2	2.45	0.49
1:XA:1355:G:H2'	1:XA:1356:G:H8	1.78	0.49
1:XA:859:A:OP2	1:XA:869:G:N2	2.43	0.49
26:Y3:10:LYS:HB3	26:Y3:53:LEU:HD23	1.94	0.49
32:YA:1657:C:H2'	32:YA:1658:C:H6	1.76	0.49
34:YD:85:ASP:OD1	34:YD:86:PRO:HD2	2.13	0.49
35:YE:134:ILE:HD12	35:YE:134:ILE:O	2.13	0.49
35:YE:143:ASN:N	35:YE:143:ASN:ND2	2.60	0.49
37:YH:60:ARG:NH1	37:YH:60:ARG:HG3	2.16	0.49
41:YP:121:LYS:HG2	41:YP:123:LEU:HG	1.95	0.49
42:YQ:11:LYS:HE2	42:YQ:88:GLY:O	2.12	0.49
42:YQ:118:LEU:CD1	42:YQ:131:ILE:HG23	2.43	0.49
24:Y0:7:LEU:HG	42:YQ:81:VAL:HG13	1.93	0.49
1:QA:781:A:O2'	1:QA:1522:U:O2	2.31	0.49
1:QA:309:G:O2'	1:QA:607:A:N1	2.45	0.49
1:QA:953:G:N7	12:QM:104:ARG:NH2	2.61	0.49
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.93	0.49
32:RA:380:U:H2'	32:RA:381:G:H8	1.77	0.49
32:RA:414:C:H2'	32:RA:415:A:C8	2.48	0.49
54:RF:72:ARG:HG2	54:RF:73:ALA:H	1.77	0.49
39:RN:73:THR:HB	39:RN:82:LEU:HD11	1.94	0.49
1:XA:1064:G:H1'	1:XA:1066:C:C6	2.48	0.49
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.47	0.49
23:XY:27:ILE:O	23:XY:31:ILE:HG13	2.13	0.49
32:YA:582:G:H2'	32:YA:583:G:H8	1.77	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YD:165:ILE:HG23	34:YD:173:VAL:CG1	2.43	0.49
35:YE:176:ILE:HB	35:YE:181:LEU:HB2	1.95	0.49
35:YE:67:PHE:O	35:YE:70:ALA:O	2.30	0.49
40:YO:80:ASP:OD2	45:YT:64:ARG:NH2	2.41	0.49
47:YV:93:GLU:O	47:YV:94:LEU:HD23	2.13	0.49
1:QA:973:G:H3'	1:QA:974:A:H5''	1.94	0.48
18:QS:68:GLY:H	27:R4:55:ARG:HD3	1.78	0.48
33:RB:14:U:OP2	33:RB:70:C:O2'	2.31	0.48
55:RZ:29:TYR:HB3	55:RZ:34:ASN:CG	2.33	0.48
23:XZ:60:ILE:HG13	23:XZ:66:LEU:HB2	1.95	0.48
25:Y2:17:SER:OG	25:Y2:20:GLU:OE1	2.30	0.48
31:Y9:13:LYS:HE2	31:Y9:28:GLU:HG3	1.95	0.48
53:Y8:12:LYS:CG	41:YP:68:GLN:NE2	2.76	0.48
1:QA:17:U:H2'	1:QA:18:C:C6	2.47	0.48
1:QA:957:U:OP2	23:QZ:36:ARG:CZ	2.61	0.48
2:QB:101:MET:HA	2:QB:108:ILE:HD12	1.95	0.48
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.78	0.48
1:QA:974:A:P	13:QN:29:ARG:HH21	2.35	0.48
15:QP:18:ARG:HA	15:QP:38:TYR:HA	1.95	0.48
1:QA:1535:C:N4	22:QX:9:G:O6	2.46	0.48
32:RA:1171:G:O2'	32:RA:1173:G:O5'	2.25	0.48
32:RA:1486:A:H2'	32:RA:1487:G:H8	1.77	0.48
32:RA:2853:C:H2'	32:RA:2854:G:C8	2.48	0.48
33:RB:1:U:H2'	33:RB:2:C:C6	2.48	0.48
35:RE:34:VAL:HG21	35:RE:78:LEU:HD22	1.95	0.48
32:RA:960:A:H61	42:RQ:82:ARG:NH1	2.10	0.48
45:RT:92:GLY:O	45:RT:120:ARG:NH2	2.46	0.48
1:XA:1137:C:H4'	1:XA:1138:G:O5'	2.12	0.48
1:XA:407:G:H2'	1:XA:408:A:H8	1.78	0.48
1:XA:4:U:H1'	8:XH:102:ARG:HH12	1.79	0.48
1:XA:64:G:N2	1:XA:68:G:O6	2.39	0.48
3:XC:157:ILE:HD13	3:XC:166:GLU:HG2	1.95	0.48
9:XI:9:ARG:HG2	9:XI:14:VAL:HG12	1.95	0.48
32:YA:1812:A:O4'	34:YD:45:ASN:ND2	2.46	0.48
53:Y8:46:ARG:NH2	32:YA:631:A:OP1	2.46	0.48
35:YE:28:ALA:HB3	35:YE:180:ASN:CA	2.42	0.48
35:YE:54:GLN:HE21	35:YE:54:GLN:CA	2.16	0.48
37:YH:169:VAL:CG2	37:YH:169:VAL:O	2.43	0.48
37:YH:3:ARG:HB3	37:YH:6:ARG:HB3	1.95	0.48
42:YQ:6:ARG:HG2	42:YQ:7:MET:N	2.28	0.48
56:ZA:76:PPU:H8	56:ZA:76:PPU:O5'	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.48	0.48
2:QB:25:ASN:OD1	2:QB:26:PRO:HD2	2.13	0.48
2:QB:82:ARG:O	2:QB:86:GLU:HB2	2.13	0.48
4:QD:109:GLY:HA3	4:QD:165:MET:HG2	1.95	0.48
53:R8:29:LYS:O	53:R8:33:ASN:ND2	2.37	0.48
32:RA:128:C:H2'	32:RA:129:C:C6	2.48	0.48
39:RN:63:THR:OG1	39:RN:64:GLY:N	2.47	0.48
45:RT:31:SER:OG	45:RT:85:LYS:NZ	2.45	0.48
23:XZ:8:GLU:CD	23:XZ:8:GLU:H	2.17	0.48
25:Y2:14:ARG:NH1	25:Y2:66:GLU:OE1	2.46	0.48
32:YA:1426:G:OP2	32:YA:1427:A:O2'	2.24	0.48
32:YA:2100:G:H1	32:YA:2189:U:H3	1.60	0.48
34:YD:123:ALA:HB3	34:YD:131:LEU:CG	2.41	0.48
1:QA:1033:G:HO2'	1:QA:1034:G:P	2.37	0.48
1:QA:186(B):C:H2'	1:QA:186(C):G:H8	1.78	0.48
1:QA:35:G:H2'	1:QA:36:C:C6	2.48	0.48
1:QA:427:U:OP2	1:QA:428:G:O2'	2.25	0.48
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.94	0.48
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.78	0.48
12:QM:59:TYR:O	12:QM:63:THR:OG1	2.29	0.48
1:QA:1340:A:HO2'	21:QV:31:G:HO2'	1.61	0.48
22:QX:12:A:H3'	22:QX:13:A:C5'	2.40	0.48
32:RA:667:U:O2	53:R8:2:PRO:HD2	2.13	0.48
28:R5:19:ARG:NH2	32:RA:1264:G:OP1	2.30	0.48
32:RA:1728:G:H8	32:RA:1732:A:H62	1.62	0.48
32:RA:2291:U:H2'	32:RA:2292:C:C6	2.48	0.48
34:RD:124:PRO:O	34:RD:129:ASN:ND2	2.46	0.48
38:RI:30:LEU:HB3	38:RI:36:ALA:HB3	1.95	0.48
55:RZ:108:PRO:O	55:RZ:111:VAL:HG12	2.13	0.48
1:XA:148:G:H2'	1:XA:149:A:C8	2.48	0.48
1:XA:757:U:H2'	1:XA:758:G:O4'	2.13	0.48
1:XA:835:U:OP1	17:XR:64:ARG:NH2	2.43	0.48
1:XA:1492:A:C4	51:XL:47:LYS:HE3	2.48	0.48
30:Y7:7:PRO:HB2	32:YA:1309:G:H4'	1.96	0.48
32:YA:2094:G:H5'	38:YI:25:TYR:CD1	2.48	0.48
32:YA:2469:A:N3	32:YA:2469:A:O4'	2.46	0.48
32:YA:536:A:H4'	46:YU:57:PHE:CZ	2.47	0.48
34:YD:242:ARG:CD	34:YD:242:ARG:H	2.15	0.48
35:YE:7:VAL:CG1	35:YE:51:PHE:HE2	2.26	0.48
36:YG:47:LYS:HD3	36:YG:81:LYS:HB2	1.95	0.48
1:QA:1202:G:O4'	13:QN:29:ARG:NH1	2.46	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.96	0.48
3:QC:19:GLU:O	3:QC:40:ARG:NH2	2.45	0.48
23:QZ:48:LEU:HG	23:QZ:52:LEU:HB2	1.95	0.48
32:RA:2809:A:H2'	32:RA:2810:A:C8	2.49	0.48
32:RA:581:C:H2'	32:RA:582:G:C8	2.48	0.48
33:RB:44:G:O2'	33:RB:47:C:N4	2.45	0.48
1:XA:1256:A:H5'	1:XA:1257:U:OP1	2.12	0.48
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.48	0.48
1:XA:54:C:N4	1:XA:353:A:OP2	2.44	0.48
32:YA:247:G:H4'	32:YA:386:G:C5	2.49	0.48
34:YD:133:LEU:HD12	34:YD:185:VAL:CG1	2.43	0.48
32:YA:2681:C:P	35:YE:109:LYS:NZ	2.86	0.48
33:YB:105:G:H5''	55:YZ:31:ARG:HD3	1.95	0.48
32:RA:2506:U:O4'	56:ZB:76:PPU:HD1	2.14	0.48
1:QA:1001:G:H4'	1:QA:1001:G:OP1	2.13	0.48
1:QA:1008:C:H3'	1:QA:1009:G:H5''	1.96	0.48
1:QA:1510:U:H2'	1:QA:1511:G:H8	1.79	0.48
1:QA:952:U:H2'	1:QA:953:G:H8	1.78	0.48
1:QA:985:C:H2'	1:QA:986:A:C8	2.49	0.48
2:QB:155:LEU:HD11	2:QB:159:PRO:CA	2.42	0.48
2:QB:231:GLU:HB2	2:QB:232:PRO:CD	2.43	0.48
9:QI:10:ARG:HD3	9:QI:75:ASP:HB3	1.96	0.48
23:QY:16:TRP:CE2	23:QY:23:ILE:HG21	2.49	0.48
32:RA:1032:A:H2	32:RA:1122:G:H22	1.62	0.48
32:RA:1316:U:H2'	32:RA:1317:A:H8	1.78	0.48
32:RA:1800:C:H42	32:RA:1817:G:N2	2.11	0.48
32:RA:2144:U:O2'	32:RA:2145:C:O5'	2.25	0.48
32:RA:851:U:H2'	32:RA:852:G:H8	1.78	0.48
51:XL:46:LYS:HG2	51:XL:47:LYS:H	1.78	0.48
21:XW:1:C:H2'	21:XW:2:G:H8	1.77	0.48
24:Y0:8:GLY:O	42:YQ:85:LYS:HE3	2.13	0.48
32:YA:1025:G:OP1	32:YA:1025:G:H8	1.95	0.48
32:YA:1140:C:OP1	39:YN:23:LEU:HB3	2.14	0.48
37:YH:71:LEU:HD12	37:YH:72:ILE:HG23	1.95	0.48
37:YH:94:TYR:CE1	37:YH:107:VAL:CA	2.97	0.48
41:YP:127:ALA:N	41:YP:148:LEU:HB2	2.29	0.48
42:YQ:112:GLU:HA	42:YQ:112:GLU:OE1	2.14	0.48
44:YS:31:SER:HG	44:YS:34:HIS:H	1.61	0.48
47:YV:49:THR:CG2	47:YV:49:THR:O	2.32	0.48
55:YZ:1:MET:O	55:YZ:3:TYR:CD2	2.67	0.48
1:QA:28:G:O2'	1:QA:296:U:OP1	2.25	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:45:U:H2'	1:QA:46:G:C8	2.47	0.48
32:RA:1171:G:O2'	32:RA:1173:G:O4'	2.32	0.48
32:RA:141:A:H8	32:RA:1595:G:H21	1.62	0.48
32:RA:247:G:H4'	32:RA:386:G:C5	2.49	0.48
32:RA:608:A:H2'	32:RA:609:A:C8	2.48	0.48
32:RA:1789:A:OP1	34:RD:222:ARG:HG3	2.13	0.48
23:XY:69:ALA:O	23:XY:75:LEU:HD12	2.14	0.48
52:Y1:69:LYS:O	52:Y1:73:LEU:HG	2.12	0.48
32:YA:1250:G:OP2	41:YP:21:ARG:NE	2.46	0.48
32:YA:1791:A:OP2	32:YA:1791:A:H8	1.96	0.48
32:YA:2820:A:O2'	32:YA:2821:A:OP1	2.25	0.48
32:YA:2853:C:H2'	32:YA:2854:G:H8	1.79	0.48
32:YA:392:C:H5''	32:YA:409:C:H5''	1.94	0.48
34:YD:206:LEU:HG	34:YD:211:ARG:HD2	1.94	0.48
37:YH:137:ASP:OD1	37:YH:138:LYS:N	2.46	0.48
37:YH:157:TYR:CE1	37:YH:172:LYS:HE3	2.49	0.48
37:YH:83:TYR:CZ	37:YH:138:LYS:HB2	2.49	0.48
46:YU:91:ASP:HA	46:YU:95:LEU:HB2	1.95	0.48
1:QA:920:U:H2'	1:QA:921:U:C6	2.48	0.48
9:QI:31:GLN:HE21	9:QI:35:GLU:HG2	1.79	0.48
10:QJ:50:ILE:HD13	13:QN:41:ARG:HH11	1.78	0.48
23:QY:37:THR:OG1	23:QY:40:GLU:O	2.31	0.48
32:RA:1657:C:H4'	35:RE:133:LYS:HB3	1.95	0.48
32:RA:2181:G:H2'	32:RA:2182:G:H8	1.78	0.48
32:RA:1783:A:H5'	32:RA:2608:G:H4'	1.95	0.48
32:RA:2712:U:OP1	32:RA:2714:G:H4'	2.13	0.48
32:RA:574:C:C2	35:RE:145:LYS:NZ	2.73	0.48
36:RG:144:ILE:HG22	36:RG:146:TYR:H	1.79	0.48
21:QV:19:G:N2	36:RG:78:SER:OG	2.45	0.48
1:XA:1000:A:H2'	1:XA:1000:A:N3	2.27	0.48
21:XW:23:C:H2'	21:XW:24:U:H6	1.78	0.48
52:Y1:10:LYS:NZ	52:Y1:65:SER:OG	2.46	0.48
32:YA:612:G:O2'	32:YA:616:A:N1	2.35	0.48
35:YE:144:ARG:HG2	35:YE:145:LYS:H	1.77	0.48
39:YN:133:GLN:HG2	39:YN:135:PRO:HD3	1.96	0.48
47:YV:61:VAL:HA	47:YV:94:LEU:HD23	1.95	0.48
1:QA:216:G:H2'	1:QA:217:C:C6	2.49	0.48
2:QB:121:LEU:HD21	2:QB:130:ARG:NH2	2.29	0.48
16:QQ:66:SER:O	16:QQ:70:ARG:NH1	2.47	0.48
23:QY:10:TRP:HB2	23:QZ:3:LEU:HD12	1.94	0.48
32:RA:309:G:O4'	32:RA:309:G:P	2.72	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RD:148:GLU:HB2	34:RD:151:LYS:HD2	1.95	0.48
35:RE:16:ARG:NH1	35:RE:173:VAL:O	2.46	0.48
38:RI:100:ALA:O	38:RI:104:GLN:HB3	2.13	0.48
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.14	0.48
1:XA:1504:G:OP1	1:XA:1507:A:H4'	2.14	0.48
1:XA:186(C):G:H2'	1:XA:186(D):C:H6	1.77	0.48
1:XA:713:G:H2'	1:XA:714:G:C8	2.48	0.48
1:XA:728:A:H2'	1:XA:729:A:H8	1.79	0.48
1:XA:992:U:O2'	1:XA:993:G:OP2	2.30	0.48
2:XB:84:GLU:OE2	2:XB:233:SER:OG	2.28	0.48
4:XD:166:LYS:HG3	4:XD:178:VAL:HG11	1.96	0.48
23:XY:6:SER:HG	23:XY:9:SER:CB	2.26	0.48
52:Y1:17:SER:HB2	52:Y1:40:ARG:HD2	1.95	0.48
32:YA:2591:C:H2'	32:YA:2592:G:H8	1.79	0.48
32:YA:637:A:H8	41:YP:117:GLU:CD	2.15	0.48
54:YF:60:SER:OG	54:YF:61:GLY:N	2.46	0.48
37:YH:103:LEU:HB3	37:YH:115:VAL:CG1	2.44	0.48
37:YH:157:TYR:CZ	37:YH:172:LYS:HE3	2.49	0.48
37:YH:31:GLY:O	37:YH:79:VAL:HG12	2.10	0.48
37:YH:55:PRO:HG2	37:YH:61:HIS:CD2	2.49	0.48
1:QA:272:C:H2'	1:QA:273:A:H8	1.77	0.48
10:QJ:30:SER:O	10:QJ:30:SER:OG	2.31	0.48
21:QW:36:U:H2'	21:QW:37:A:C8	2.49	0.48
21:QW:41:C:H2'	21:QW:42:G:C8	2.49	0.48
23:QY:1:MET:N	23:QZ:7:GLU:CD	2.64	0.48
23:QY:4:ILE:HB	23:QY:76:LEU:HA	1.96	0.48
52:R1:85:LEU:CD2	52:R1:85:LEU:N	2.77	0.48
32:RA:1543:A:H2'	32:RA:1544:C:H5''	1.96	0.48
32:RA:1940:U:O2	32:RA:1942:C:N4	2.47	0.48
32:RA:2211:G:H3'	32:RA:2212:A:C2	2.49	0.48
32:RA:442:G:N3	54:RF:48:THR:HG21	2.28	0.48
32:RA:629:G:N3	32:RA:639:U:O2'	2.46	0.48
34:RD:35:LYS:HB3	34:RD:36:PRO:HD2	1.94	0.48
1:XA:130:A:N6	1:XA:233:C:O2	2.47	0.48
4:XD:13:ARG:HH21	4:XD:40:PRO:HB3	1.79	0.48
32:YA:2102:U:H2'	32:YA:2103:C:C6	2.49	0.48
35:YE:110:GLY:HA2	35:YE:161:GLY:HA3	1.96	0.48
27:Y4:26:SER:OG	36:YG:143:GLU:OE2	2.30	0.48
41:YP:97:PRO:HG3	41:YP:148:LEU:HD22	1.96	0.48
32:YA:2470:G:H5'	42:YQ:56:ARG:NH2	2.29	0.48
1:QA:208:U:O2'	1:QA:209:U:OP1	2.28	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:363:A:C6	51:QL:31:PRO:HD2	2.49	0.47
2:QB:71:VAL:CG2	2:QB:93:VAL:HG12	2.31	0.47
29:R6:24:GLU:OE2	32:RA:2285:C:N4	2.38	0.47
41:RP:60:MET:C	53:R8:13:ARG:NH1	2.67	0.47
32:RA:1858:G:O2'	32:RA:1884:A:N6	2.47	0.47
32:RA:2059:A:H5'	32:RA:2060:A:OP2	2.14	0.47
32:RA:2211:G:N3	32:RA:2211:G:H2'	2.29	0.47
37:RH:9:ILE:HG23	37:RH:9:ILE:O	2.13	0.47
32:RA:956:G:OP2	42:RQ:14:ARG:NH2	2.47	0.47
32:RA:2334:G:N2	44:RS:16:ASN:OD1	2.41	0.47
44:RS:5:THR:OG1	44:RS:6:ALA:N	2.46	0.47
1:XA:1033:G:H2'	1:XA:1034:G:C8	2.49	0.47
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.49	0.47
2:XB:17:PHE:HA	2:XB:204:ASN:HD22	1.78	0.47
32:YA:1102:C:H2'	32:YA:1103:A:H8	1.79	0.47
32:YA:2293:C:O2'	44:YS:93:LYS:NZ	2.47	0.47
32:YA:2298:A:H62	32:YA:2318:G:H8	1.62	0.47
32:YA:2731:G:H4'	35:YE:203:LYS:HE2	1.96	0.47
37:YH:162:ILE:HD12	37:YH:162:ILE:H	1.78	0.47
38:YI:100:ALA:O	38:YI:104:GLN:HB2	2.14	0.47
42:YQ:57:HIS:NE2	42:YQ:116:GLU:HG3	2.29	0.47
1:QA:1000:A:H3'	1:QA:1001:G:H5''	1.96	0.47
1:QA:280:C:N3	16:QQ:39:SER:OG	2.41	0.47
1:QA:6:G:H4'	1:QA:298:A:H4'	1.95	0.47
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.95	0.47
18:QS:41:VAL:HG12	18:QS:67:VAL:HG22	1.96	0.47
23:QZ:66:LEU:O	23:QZ:66:LEU:HD23	2.13	0.47
23:QZ:4:ILE:HG21	23:QZ:76:LEU:HD23	1.96	0.47
32:RA:2102:U:H2'	32:RA:2103:C:C6	2.49	0.47
32:RA:289:A:H5'	32:RA:290:G:OP2	2.13	0.47
32:RA:755:C:H2'	32:RA:756:C:C6	2.49	0.47
33:RB:48:A:H2'	33:RB:49:C:C6	2.49	0.47
32:RA:1792:G:H5'	34:RD:205:VAL:HG13	1.96	0.47
32:RA:905:U:O2	42:RQ:29:PHE:HZ	1.97	0.47
42:RQ:27:VAL:CG1	42:RQ:30:GLY:O	2.62	0.47
32:RA:1649:G:O2'	43:RR:107:ASP:OD1	2.15	0.47
1:XA:1323:G:H2'	1:XA:1324:A:C8	2.49	0.47
2:XB:80:ILE:HD13	2:XB:212:GLN:HB2	1.96	0.47
4:XD:100:ARG:NH2	4:XD:136:PRO:O	2.46	0.47
18:XS:14:HIS:H	18:XS:14:HIS:CD2	2.32	0.47
18:XS:12:ASP:HB3	18:XS:14:HIS:NE2	2.28	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:1131:G:HO2'	32:YA:1132:A:H8	1.61	0.47
32:YA:2217:G:H21	34:YD:151:LYS:HE3	1.79	0.47
21:XV:76:A:N6	32:YA:2450:A:O2'	2.47	0.47
32:YA:2816:C:O2	32:YA:2883:A:O2'	2.25	0.47
32:YA:297:C:H2'	32:YA:298:G:O4'	2.14	0.47
54:YF:36:VAL:HG23	54:YF:183:VAL:HG21	1.96	0.47
41:YP:126:VAL:HG12	41:YP:148:LEU:HD13	1.96	0.47
44:YS:5:THR:OG1	44:YS:6:ALA:N	2.47	0.47
21:QW:14:A:H8	21:QW:14:A:OP1	1.97	0.47
23:QZ:16:TRP:HZ3	23:QZ:27:ILE:CD1	2.17	0.47
52:R1:16:ASN:HB3	52:R1:37:ILE:HG23	1.95	0.47
32:RA:1636:C:H2'	32:RA:1637:A:C8	2.50	0.47
32:RA:2061:G:H5''	32:RA:2503:A:C2	2.48	0.47
32:RA:2811:G:H22	32:RA:2891:G:H1'	1.78	0.47
1:XA:1040:U:C6	1:XA:1040:U:C3'	2.97	0.47
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.49	0.47
1:XA:269:C:H2'	1:XA:270:A:C8	2.48	0.47
23:XY:27:ILE:HG12	23:XY:60:ILE:HD13	1.96	0.47
32:YA:414:C:H2'	32:YA:415:A:H8	1.78	0.47
34:YD:254:THR:O	34:YD:254:THR:OG1	2.30	0.47
41:YP:121:LYS:HE2	41:YP:123:LEU:HD11	1.96	0.47
1:QA:1099:G:H5'	2:QB:96:ARG:CZ	2.42	0.47
1:QA:1351:U:H3	1:QA:1371:G:H1	1.60	0.47
1:QA:359:U:H2'	1:QA:360:A:H8	1.80	0.47
2:QB:220:ASP:HA	2:QB:223:ILE:CD1	2.44	0.47
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.94	0.47
12:QM:11:ARG:O	12:QM:13:LYS:N	2.46	0.47
32:RA:128:C:O2'	32:RA:129:C:OP1	2.30	0.47
32:RA:177:G:H3'	32:RA:178:G:H8	1.79	0.47
32:RA:919:G:N2	32:RA:2269:A:OP2	2.42	0.47
32:RA:2393:A:OP1	41:RP:62:LEU:HD21	2.14	0.47
32:RA:2836:U:H2'	32:RA:2837:G:C8	2.50	0.47
24:R0:7:LEU:HD13	42:RQ:83:MET:HG2	1.95	0.47
19:XT:54:LYS:HZ1	19:XT:100:ILE:HG12	1.79	0.47
32:YA:1636:C:H2'	32:YA:1637:A:C8	2.49	0.47
32:YA:679:C:H2'	32:YA:680:G:H8	1.79	0.47
37:YH:162:ILE:N	37:YH:162:ILE:CD1	2.73	0.47
38:YI:30:LEU:HB3	38:YI:36:ALA:HB3	1.96	0.47
41:YP:18:ARG:NH2	41:YP:21:ARG:HE	2.13	0.47
47:YV:33:VAL:HG12	47:YV:34:GLU:N	2.30	0.47
1:QA:1104:G:H4'	2:QB:111:ARG:HD3	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:194:LEU:HG	4:QD:196:LEU:HG	1.97	0.47
1:QA:409:G:OP1	4:QD:25:ARG:N	2.43	0.47
32:RA:660:G:H21	41:RP:12:ALA:CA	2.19	0.47
32:RA:679:C:H2'	32:RA:680:G:C8	2.49	0.47
42:RQ:30:GLY:HA2	42:RQ:107:ALA:HB2	1.96	0.47
48:RW:88:ARG:HB2	48:RW:92:ARG:HB2	1.97	0.47
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.96	0.47
18:XS:42:PRO:C	18:XS:42:PRO:N	2.61	0.47
32:YA:17:G:H4'	46:YU:25:TRP:HE1	1.77	0.47
32:YA:242:G:O2'	32:YA:254:G:O6	2.30	0.47
32:YA:2740:A:H2'	32:YA:2741:A:C8	2.50	0.47
37:YH:114:VAL:O	37:YH:114:VAL:HG13	2.15	0.47
53:Y8:10:ALA:HB2	41:YP:59:LEU:HD21	1.95	0.47
45:YT:102:ILE:HA	45:YT:105:LEU:HD23	1.95	0.47
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.49	0.47
1:QA:359:U:H2'	1:QA:360:A:C8	2.50	0.47
1:QA:436:C:H2'	1:QA:437:U:C6	2.50	0.47
2:QB:168:THR:HG22	2:QB:192:SER:HB2	1.97	0.47
23:QZ:60:ILE:HD13	23:QZ:64:HIS:CB	2.44	0.47
23:QZ:4:ILE:CG2	23:QZ:76:LEU:CD2	2.92	0.47
32:RA:306:U:C4	32:RA:307:G:C5	3.02	0.47
54:RF:126:VAL:HG11	54:RF:142:TRP:CZ2	2.49	0.47
39:RN:22:THR:OG1	39:RN:23:LEU:N	2.45	0.47
55:RZ:10:ARG:HG3	55:RZ:10:ARG:O	2.14	0.47
1:XA:728:A:H2'	1:XA:729:A:C8	2.49	0.47
9:XI:5:TYR:HE1	9:XI:16:ARG:HB2	1.79	0.47
18:XS:49:ILE:CD1	18:XS:71:LEU:HD23	2.42	0.47
32:YA:1113:U:H2'	32:YA:1114:G:H8	1.80	0.47
32:YA:2125:G:H8	32:YA:2125:G:O5'	1.98	0.47
32:YA:1049:C:N4	32:YA:2751:G:O6	2.48	0.47
41:YP:88:LEU:CD2	41:YP:100:LEU:HD21	2.44	0.47
47:YV:52:VAL:HG13	47:YV:52:VAL:O	2.14	0.47
32:RA:2584:U:H4'	56:ZB:76:PPU:H92	1.96	0.47
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.49	0.47
1:QA:1347:G:HO2'	1:QA:1348:U:P	2.37	0.47
1:QA:64:G:OP1	1:QA:382:A:N6	2.41	0.47
2:QB:28:PHE:CD2	2:QB:190:THR:HA	2.49	0.47
9:QI:9:ARG:H	9:QI:79:LEU:HD23	1.80	0.47
10:QJ:78:ASN:O	10:QJ:81:THR:OG1	2.30	0.47
1:QA:1310:G:OP2	12:QM:88:ARG:NH2	2.48	0.47
21:QW:6:G:H2'	21:QW:7:G:C8	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R1:44:PRO:HG2	52:R1:46:LEU:HD13	1.96	0.47
32:RA:577:G:O2'	32:RA:1254:A:OP1	2.33	0.47
32:RA:2610:C:H4'	32:RA:2611:U:OP2	2.15	0.47
32:RA:362:U:H5'	32:RA:363:G:OP2	2.14	0.47
32:RA:414:C:H2'	32:RA:415:A:H8	1.79	0.47
46:RU:6:THR:OG1	46:RU:7:GLY:N	2.48	0.47
55:RZ:145:GLU:HG2	55:RZ:148:ASP:OD2	2.14	0.47
1:XA:56:U:H2'	1:XA:57:G:C8	2.49	0.47
22:XX:12:A:H3'	22:XX:13:A:H5''	1.96	0.47
32:YA:532:A:N1	32:YA:2035:G:N2	2.63	0.47
32:YA:2446:G:N2	32:YA:2449:U:O2	2.42	0.47
32:YA:2591:C:H2'	32:YA:2592:G:C8	2.49	0.47
32:YA:2638:G:OP1	35:YE:82:ARG:NH2	2.37	0.47
32:YA:2725:A:O2'	32:YA:2726:U:O5'	2.27	0.47
32:YA:414:C:H2'	32:YA:415:A:C8	2.50	0.47
32:YA:587:C:H4'	32:YA:588:U:O5'	2.14	0.47
32:YA:782:A:H5'	32:YA:783:A:C2	2.49	0.47
32:YA:839:U:H3	32:YA:939:G:H1	1.62	0.47
34:YD:37:LEU:CD2	34:YD:87:ASN:HD21	2.24	0.47
32:YA:2618:G:H21	35:YE:150:VAL:HG21	1.79	0.47
47:YV:99:ILE:C	47:YV:99:ILE:HD12	2.34	0.47
32:YA:1399:C:P	49:YX:25:LYS:HZ1	2.38	0.47
32:YA:138:G:N2	49:YX:44:GLU:OE1	2.48	0.47
2:QB:57:PHE:CD1	2:QB:199:TYR:CE2	3.03	0.47
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HD22	1.96	0.47
12:QM:86:CYS:SG	12:QM:87:TYR:N	2.88	0.47
22:QX:19:A2M:N7	23:QY:50:HIS:NE2	2.62	0.47
32:RA:2246:G:H2'	32:RA:2247:A:H8	1.79	0.47
32:RA:270(B):A:H5''	32:RA:270(C):C:H5	1.79	0.47
32:RA:582:G:H2'	32:RA:583:G:H8	1.80	0.47
40:RO:19:ILE:HG22	40:RO:43:VAL:HA	1.95	0.47
42:RQ:118:LEU:HD12	42:RQ:131:ILE:HG23	1.97	0.47
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.50	0.47
1:XA:998:G:H2'	1:XA:998(A):C:C6	2.49	0.47
2:XB:47:THR:HA	2:XB:202:PRO:HG2	1.97	0.47
1:XA:1322:C:P	18:XS:78:ARG:HH22	2.37	0.47
23:XZ:15:TYR:CE1	23:XZ:19:THR:HG21	2.50	0.47
32:YA:1177:A:HO2'	32:YA:1178:C:H5	1.63	0.47
32:YA:2489:G:N2	32:YA:2491:U:O4	2.41	0.47
32:YA:38:A:H2'	32:YA:39:C:C6	2.49	0.47
34:YD:43:ARG:NH2	34:YD:49:ILE:HD11	2.29	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YG:59:GLU:OE1	36:YG:153:ARG:NH2	2.47	0.47
45:YT:62:THR:HG22	45:YT:75:ILE:HG12	1.96	0.47
47:YV:25:LEU:CD1	47:YV:94:LEU:HD11	2.44	0.47
50:YY:28:LYS:N	50:YY:38:ILE:O	2.46	0.47
1:QA:1355:G:H2'	1:QA:1356:G:H8	1.80	0.47
2:QB:21:ARG:O	2:QB:21:ARG:HG3	2.15	0.47
2:QB:56:ARG:O	2:QB:59:GLU:HG2	2.14	0.47
2:QB:74:LYS:HD3	2:QB:165:VAL:CG2	2.45	0.47
32:RA:1230:C:H2'	32:RA:1231:G:H8	1.80	0.47
32:RA:1790:C:H5''	32:RA:1791:A:OP1	2.14	0.47
32:RA:2392:A:H2	32:RA:2424:C:H42	1.63	0.47
32:RA:536:A:H2'	32:RA:537:C:C6	2.50	0.47
32:RA:587:C:H4'	32:RA:588:U:O5'	2.13	0.47
32:RA:675:A:N3	32:RA:2443:C:O2'	2.43	0.47
32:RA:686:G:H21	32:RA:788:A:H61	1.62	0.47
32:RA:2681:C:H5'	35:RE:11:MET:SD	2.55	0.47
54:RF:32:LEU:O	54:RF:36:VAL:HG23	2.14	0.47
32:RA:468:G:H5''	54:RF:60:SER:HB3	1.97	0.47
32:RA:1754:C:P	45:RT:96:ARG:HH12	2.38	0.47
2:XB:230:VAL:HG23	2:XB:231:GLU:HG2	1.97	0.47
32:YA:1085:A:HO2'	32:YA:1086:A:P	2.38	0.47
32:YA:675:A:N3	32:YA:2443:C:O2'	2.40	0.47
32:YA:2633:G:O2'	35:YE:63:LEU:HD11	2.15	0.47
41:YP:79:ARG:CB	41:YP:110:TYR:CD1	2.98	0.47
41:YP:124:LYS:HG3	41:YP:124:LYS:O	2.15	0.47
41:YP:19:VAL:HG23	41:YP:31:ALA:HB2	1.96	0.47
1:QA:1127:G:H22	1:QA:1145:C:H1'	1.80	0.47
1:QA:31:G:O2'	1:QA:48:C:N4	2.47	0.47
1:QA:406:G:H2'	1:QA:407:G:H8	1.79	0.47
1:QA:537:G:H5''	51:QL:113:ARG:NH1	2.29	0.47
2:QB:78:GLN:O	2:QB:81:VAL:CG2	2.63	0.47
4:QD:127:THR:HA	4:QD:132:ARG:HA	1.97	0.47
23:QY:44:LYS:HD2	51:QL:50:SER:OG	2.14	0.47
13:QN:23:ARG:NH1	13:QN:28:GLY:O	2.47	0.47
23:QZ:2:LYS:CE	23:QZ:74:SER:HB3	2.45	0.47
29:R6:6:ARG:NH1	32:RA:2285:C:OP2	2.47	0.47
32:RA:2680:C:H5'	35:RE:189:PRO:HA	1.97	0.47
32:RA:2820:A:HO2'	32:RA:2821:A:P	2.36	0.47
32:RA:443:A:C2	54:RF:45:ARG:NH2	2.83	0.47
35:RE:19:ARG:HG2	40:RO:72:PRO:HB2	1.97	0.47
46:RU:92:ARG:NH2	47:RV:11:GLN:O	2.48	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:RV:43:GLU:HG3	47:RV:44:LYS:H	1.80	0.47
48:RW:86:LEU:HD22	48:RW:96:ILE:HD11	1.97	0.47
42:RQ:20:ALA:HB2	55:RZ:79:ARG:NH2	2.30	0.47
1:XA:1071:C:H2'	1:XA:1072:G:H8	1.80	0.47
4:XD:10:ARG:HG3	4:XD:40:PRO:HG3	1.97	0.47
32:YA:1405:U:H2'	32:YA:1406:U:H6	1.79	0.47
32:YA:539:G:H2'	32:YA:540:G:H8	1.80	0.47
37:YH:149:ARG:CD	37:YH:164:TYR:CE2	2.96	0.47
37:YH:5:GLY:HA2	37:YH:69:ARG:CB	2.44	0.47
41:YP:91:PHE:CE1	41:YP:99:LEU:HG	2.50	0.47
1:QA:115:G:H4'	1:QA:116:A:O5'	2.15	0.47
2:QB:149:LEU:HD22	2:QB:152:PHE:HB3	1.97	0.47
29:R6:8:LYS:NZ	53:R8:34:TRP:CZ2	2.77	0.47
32:RA:1139:G:H21	32:RA:1143:A:H8	1.61	0.47
30:R7:9:ARG:NE	32:RA:1310:G:OP2	2.42	0.47
32:RA:2103:C:H2'	32:RA:2104:G:H8	1.79	0.47
47:RV:24:LYS:HA	47:RV:92:THR:HG23	1.96	0.47
1:XA:382:A:H2'	1:XA:383:A:C8	2.50	0.47
23:XZ:44:LYS:HA	23:XZ:44:LYS:HE3	1.97	0.47
32:YA:2134:A:OP2	32:YA:2157:G:N2	2.47	0.47
34:YD:63:ARG:NH1	34:YD:86:PRO:CD	2.78	0.47
37:YH:19:VAL:CG1	37:YH:45:VAL:CG1	2.92	0.47
32:YA:2748:A:O2'	37:YH:66:GLY:HA3	2.15	0.47
47:YV:39:LEU:HD23	47:YV:40:LEU:H	1.72	0.47
1:QA:269:C:H2'	1:QA:270:A:H8	1.80	0.46
1:QA:603:U:H2'	1:QA:604:G:H8	1.80	0.46
2:QB:35:GLU:HG3	2:QB:35:GLU:O	2.15	0.46
11:QK:127:LYS:HG3	22:QX:10:G:H5'	1.97	0.46
14:QO:39:LEU:HD11	14:QO:52:SER:HB3	1.97	0.46
21:QW:69:C:H2'	21:QW:70:G:C8	2.50	0.46
52:R1:8:SER:HB3	52:R1:66:HIS:CG	2.50	0.46
32:RA:71:A:H5''	32:RA:73:A:C8	2.50	0.46
1:XA:1497:G:H1'	1:XA:1518:A:H2	1.80	0.46
1:XA:403:C:OP2	4:XD:74:GLN:NE2	2.48	0.46
9:XI:8:GLY:O	9:XI:15:ALA:N	2.47	0.46
32:YA:2447:G:O6	32:YA:2504:U:O4	2.33	0.46
36:YG:29:TRP:O	36:YG:33:ARG:NH1	2.48	0.46
37:YH:114:VAL:O	37:YH:114:VAL:CG1	2.63	0.46
37:YH:67:LEU:O	37:YH:67:LEU:HD23	2.15	0.46
41:YP:91:PHE:HE1	41:YP:99:LEU:HG	1.80	0.46
44:YS:18:ILE:HG13	44:YS:88:ASP:HA	1.96	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:YZ:118:GLN:HB3	55:YZ:173:ALA:HB3	1.97	0.46
1:QA:922:G:H2'	1:QA:923:A:C8	2.51	0.46
2:QB:69:LEU:HB3	2:QB:162:ILE:CD1	2.45	0.46
2:QB:78:GLN:O	2:QB:81:VAL:HG23	2.15	0.46
13:QN:37:PHE:HB3	13:QN:39:LEU:HD12	1.96	0.46
32:RA:2429:G:N7	41:RP:56:SER:OG	2.48	0.46
36:RG:107:LEU:HD23	36:RG:111:LEU:HD12	1.98	0.46
1:XA:1372:U:H2'	1:XA:1373:G:O4'	2.13	0.46
1:XA:272:C:H2'	1:XA:273:A:H8	1.80	0.46
1:XA:56:U:H2'	1:XA:57:G:H8	1.78	0.46
32:YA:1316:U:H2'	32:YA:1317:A:H8	1.78	0.46
32:YA:172:C:H2'	32:YA:173:G:C8	2.50	0.46
32:YA:2751:G:O4'	37:YH:2:SER:HB2	2.15	0.46
37:YH:54:ARG:HH21	37:YH:62:LYS:HG2	1.80	0.46
37:YH:84:SER:HA	37:YH:133:VAL:O	2.14	0.46
39:YN:16:ILE:HG21	39:YN:26:LEU:HD11	1.98	0.46
32:YA:2563:U:H4'	40:YO:28:SER:HA	1.98	0.46
42:YQ:66:ILE:N	42:YQ:66:ILE:CD1	2.73	0.46
47:YV:70:ILE:O	47:YV:70:ILE:HG23	2.15	0.46
47:YV:61:VAL:HA	47:YV:94:LEU:CD2	2.45	0.46
32:YA:329:G:OP2	50:YY:71:LYS:HD2	2.15	0.46
1:QA:1355:G:H2'	1:QA:1356:G:C8	2.50	0.46
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.50	0.46
1:QA:806:C:H2'	1:QA:807:A:H8	1.80	0.46
51:QL:35:GLY:HA2	51:QL:60:LEU:HA	1.97	0.46
32:RA:1416:G:H2'	32:RA:1417:C:C6	2.50	0.46
32:RA:2052:G:C6	32:RA:2053:G:N7	2.84	0.46
32:RA:2432:A:C4	52:R1:33:LYS:HG3	2.50	0.46
32:RA:2526:G:H1	32:RA:2537:U:H3	1.63	0.46
34:RD:36:PRO:HB3	34:RD:61:LEU:HB3	1.97	0.46
35:RE:36:ARG:NH1	35:RE:85:ASN:OD1	2.48	0.46
38:RI:64:GLU:OE1	38:RI:67:ARG:NH2	2.48	0.46
38:RI:72:LEU:HD21	38:RI:138:ILE:HD12	1.96	0.46
1:QA:1432:G:OP1	45:RT:108:ARG:N	2.49	0.46
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	1.97	0.46
1:XA:194:C:P	19:XT:61:SER:HG	2.38	0.46
23:XZ:44:LYS:H	23:XZ:44:LYS:HD2	1.80	0.46
24:Y0:8:GLY:O	42:YQ:85:LYS:CE	2.63	0.46
32:YA:1073:A:H2'	32:YA:1074:G:C8	2.50	0.46
32:YA:1085:A:O2'	32:YA:1086:A:OP1	2.28	0.46
32:YA:572:A:H61	32:YA:2029:G:H21	1.63	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:812:C:H5''	32:YA:1250:G:O2'	2.15	0.46
32:YA:971:C:H2'	32:YA:972:G:O4'	2.15	0.46
34:YD:108:PRO:HD2	34:YD:111:LEU:HD22	1.96	0.46
34:YD:215:LEU:CD1	34:YD:217:ARG:NH2	2.78	0.46
34:YD:218:ARG:HB3	34:YD:219:PRO:HD2	1.96	0.46
34:YD:85:ASP:HB2	34:YD:92:ILE:HD13	1.97	0.46
35:YE:169:ASN:HB2	35:YE:203:LYS:HD2	1.97	0.46
35:YE:38:THR:OG1	35:YE:41:LYS:HB3	2.14	0.46
37:YH:20:ALA:HB3	37:YH:23:ARG:O	2.16	0.46
41:YP:120:ALA:HB2	41:YP:137:LYS:HB3	1.98	0.46
2:QB:155:LEU:HD21	2:QB:159:PRO:HB3	1.96	0.46
2:QB:71:VAL:CB	2:QB:93:VAL:CG1	2.94	0.46
21:QW:67:C:H2'	21:QW:68:C:C6	2.51	0.46
32:RA:2267:A:H5''	32:RA:2268:A:H5'	1.97	0.46
32:RA:443:A:H5''	32:RA:444:C:OP1	2.15	0.46
37:RH:24:VAL:HG22	37:RH:35:VAL:HB	1.97	0.46
9:XI:28:VAL:HG12	9:XI:63:ILE:HB	1.97	0.46
1:XA:755:G:OP2	14:XO:65:ARG:HD2	2.16	0.46
21:XW:66:C:H2'	21:XW:67:C:H6	1.81	0.46
23:XZ:3:LEU:CD1	23:XZ:3:LEU:N	2.78	0.46
23:XZ:12:ASP:HB3	23:XZ:81:ARG:HB3	1.97	0.46
31:Y9:2:LYS:HA	31:Y9:2:LYS:HD2	1.76	0.46
35:YE:42:ASP:N	35:YE:42:ASP:OD1	2.46	0.46
36:YG:68:PRO:HB3	36:YG:92:VAL:HB	1.97	0.46
45:YT:133:GLU:CA	45:YT:137:LYS:CE	2.76	0.46
56:ZA:75:C:C4	56:ZA:76:PPU:H103	2.51	0.46
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.47	0.46
1:QA:269:C:H2'	1:QA:270:A:C8	2.49	0.46
1:QA:748:C:H4'	1:QA:749:C:O5'	2.15	0.46
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.97	0.46
6:QF:15:ASP:N	6:QF:15:ASP:OD1	2.49	0.46
1:QA:599:C:O2'	8:QH:129:VAL:O	2.27	0.46
23:QZ:20:ASP:HB3	23:QZ:23:ILE:CG1	2.45	0.46
28:R5:16:ARG:NH1	28:R5:17:ASP:OD1	2.49	0.46
32:RA:1286:A:H2'	32:RA:1288:U:OP2	2.16	0.46
54:RF:126:VAL:HG21	54:RF:142:TRP:HH2	1.78	0.46
54:RF:39:TRP:O	54:RF:43:LYS:HB2	2.14	0.46
39:RN:54:VAL:HB	39:RN:122:VAL:HG22	1.96	0.46
6:XF:61:LEU:HD23	6:XF:63:TYR:HE2	1.79	0.46
28:Y5:3:LYS:HD3	32:YA:2611:U:O4	2.15	0.46
32:YA:2645:G:H4'	32:YA:2732:G:O2'	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:286:C:H2'	32:YA:287:C:C5'	2.40	0.46
32:YA:2629:A:N6	32:YA:2895:U:O2	2.49	0.46
35:YE:168:MET:SD	35:YE:203:LYS:NZ	2.89	0.46
42:YQ:66:ILE:HD13	42:YQ:66:ILE:O	2.16	0.46
56:ZA:75:C:C5	56:ZA:76:PPU:H103	2.50	0.46
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.80	0.46
1:QA:1316:G:N2	1:QA:1319:A:OP2	2.42	0.46
1:QA:708:C:H2'	1:QA:709:G:C8	2.50	0.46
9:QI:5:TYR:HE1	9:QI:16:ARG:HB3	1.79	0.46
12:QM:83:ASP:H	12:QM:93:ARG:NH2	2.13	0.46
21:QV:8:U:H1'	21:QV:48:C:H1'	1.97	0.46
32:RA:1598:C:O3'	49:RX:35:THR:OG1	2.34	0.46
32:RA:29:U:H2'	32:RA:30:G:C8	2.50	0.46
32:RA:760:G:H2'	32:RA:761:A:O4'	2.16	0.46
35:RE:68:ALA:O	35:RE:70:ALA:N	2.43	0.46
40:RO:64:ARG:HB2	40:RO:83:ALA:HB3	1.98	0.46
47:RV:40:LEU:HD11	47:RV:47:VAL:HG12	1.98	0.46
2:XB:118:LEU:HD11	2:XB:138:LEU:HD12	1.96	0.46
2:XB:9:GLU:O	2:XB:13:ALA:N	2.41	0.46
1:XA:1279:A:OP1	10:XJ:9:ARG:NH1	2.49	0.46
15:XP:22:THR:OG1	15:XP:23:ASP:N	2.49	0.46
26:Y3:29:ARG:HH12	32:YA:1184:G:P	2.38	0.46
28:Y5:29:THR:OG1	32:YA:2814:C:O2'	2.21	0.46
32:YA:1385:G:O2'	32:YA:1386:C:O5'	2.32	0.46
32:YA:2011:U:OP2	48:YW:16:LYS:NZ	2.40	0.46
32:YA:2805:G:H2'	32:YA:2807:G:C8	2.50	0.46
35:YE:101:ARG:C	35:YE:201:THR:OG1	2.54	0.46
37:YH:13:LYS:HA	37:YH:14:GLY:HA2	1.66	0.46
47:YV:76:LYS:O	47:YV:79:VAL:HG12	2.16	0.46
42:YQ:63:LYS:HZ2	55:YZ:175:VAL:HG11	1.78	0.46
55:YZ:39:VAL:CG2	55:YZ:44:PHE:HB2	2.45	0.46
1:QA:782:A:H62	1:QA:800:G:H21	1.63	0.46
2:QB:112:VAL:HG22	2:QB:149:LEU:HD13	1.97	0.46
15:QP:22:THR:OG1	15:QP:23:ASP:N	2.47	0.46
21:QW:67:C:H2'	21:QW:68:C:H6	1.80	0.46
33:RB:57:A:O4'	36:RG:27:ASN:ND2	2.47	0.46
36:RG:77:ILE:HG22	36:RG:79:ASN:H	1.81	0.46
37:RH:43:VAL:HG22	37:RH:52:VAL:HG12	1.98	0.46
37:RH:9:ILE:HB	37:RH:69:ARG:CG	2.45	0.46
40:RO:77:ILE:HB	45:RT:74:ARG:HH11	1.81	0.46
32:RA:1262:A:OP2	48:RW:97:LYS:NZ	2.49	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:RZ:70:LEU:HD13	55:RZ:91:LEU:HD11	1.98	0.46
1:XA:1354:C:H2'	1:XA:1355:G:H8	1.81	0.46
32:YA:1354:A:H2'	32:YA:1355:G:O4'	2.15	0.46
32:YA:922:U:H2'	32:YA:923:C:C6	2.51	0.46
40:YO:19:ILE:HG22	40:YO:43:VAL:HA	1.98	0.46
47:YV:27:ALA:O	47:YV:64:HIS:HE1	1.98	0.46
47:YV:33:VAL:CG1	47:YV:34:GLU:N	2.79	0.46
47:YV:99:ILE:O	47:YV:99:ILE:CD1	2.60	0.46
48:YW:24:ILE:HD13	48:YW:36:LEU:HD11	1.98	0.46
1:QA:254:G:O2'	16:QQ:16:GLN:O	2.33	0.46
1:QA:624:C:H2'	1:QA:625:G:C8	2.48	0.46
2:QB:167:PRO:HG3	2:QB:188:ALA:HB2	1.96	0.46
2:QB:60:ASP:C	2:QB:64:ARG:HD2	2.34	0.46
21:QV:23:C:H2'	21:QV:24:U:C6	2.51	0.46
32:RA:1609:A:H1'	32:RA:1616:A:O4'	2.15	0.46
32:RA:2037:G:H2'	32:RA:2038:G:C8	2.51	0.46
32:RA:299:A:N1	32:RA:322:A:O2'	2.44	0.46
33:RB:2:C:H2'	33:RB:3:C:H5''	1.97	0.46
33:RB:3:C:H6	33:RB:3:C:C5'	2.23	0.46
1:QA:1423:G:OP1	40:RO:49:ARG:NH2	2.49	0.46
41:RP:15:ARG:C	41:RP:15:ARG:HD3	2.27	0.46
55:RZ:139:VAL:HG21	55:RZ:155:LEU:HD23	1.98	0.46
42:RQ:55:VAL:CG2	55:RZ:178:GLU:HG2	2.44	0.46
1:XA:778:G:H21	11:XK:120:ARG:HG3	1.80	0.46
4:XD:189:PRO:HB2	4:XD:194:LEU:HD11	1.97	0.46
1:XA:545:C:H5'	4:XD:72:GLU:HG3	1.97	0.46
12:XM:59:TYR:O	12:XM:63:THR:OG1	2.26	0.46
18:XS:37:ARG:HG3	18:XS:38:SER:N	2.31	0.46
21:XW:16:C:H4'	21:XW:60:U:H4'	1.98	0.46
23:XZ:37:THR:CG2	23:XZ:40:GLU:CA	2.93	0.46
28:Y5:41:PRO:O	28:Y5:44:THR:OG1	2.31	0.46
32:YA:1286:A:H2'	32:YA:1288:U:OP2	2.16	0.46
32:YA:1571:A:H2'	32:YA:1572:A:C8	2.51	0.46
32:YA:2685:G:P	45:YT:51:ARG:HH22	2.39	0.46
32:YA:2698:U:H2'	32:YA:2699:C:C6	2.51	0.46
37:YH:103:LEU:HD13	37:YH:125:VAL:CG2	2.45	0.46
47:YV:1:MET:CE	47:YV:1:MET:HA	2.45	0.46
55:YZ:5:LEU:HB3	55:YZ:59:LEU:HD23	1.97	0.46
1:QA:1100:C:O2'	1:QA:1102:A:OP1	2.33	0.46
1:QA:1494:G:H5'	23:QY:47:PRO:HB2	1.97	0.46
1:QA:390:C:H2'	1:QA:391:G:C8	2.51	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:219:VAL:CA	2:QB:222:ILE:HG12	2.46	0.46
2:QB:220:ASP:HA	2:QB:223:ILE:CG1	2.46	0.46
27:R4:37:SER:OG	27:R4:38:LYS:N	2.49	0.46
32:RA:875:G:H4'	55:RZ:170:THR:HG21	1.98	0.46
55:RZ:67:LEU:O	55:RZ:69:THR:HG23	2.16	0.46
1:XA:191(E):G:C2	1:XA:191(F):U:N3	2.84	0.46
17:XR:44:LEU:HD21	17:XR:74:ARG:HH21	1.81	0.46
23:XZ:60:ILE:CD1	23:XZ:66:LEU:HB2	2.46	0.46
32:YA:151:C:H2'	32:YA:152:G:H8	1.81	0.46
32:YA:1790:C:H5''	32:YA:1791:A:OP1	2.16	0.46
31:Y9:22:ARG:NH2	32:YA:2741:A:OP1	2.32	0.46
32:YA:303:U:H2'	32:YA:304:G:H8	1.81	0.46
35:YE:48:GLN:NE2	35:YE:78:LEU:CD1	2.72	0.46
40:YO:68:GLU:HG3	40:YO:78:ARG:HD3	1.98	0.46
42:YQ:108:GLY:HA3	55:YZ:116:VAL:HB	1.98	0.46
55:YZ:68:PRO:O	55:YZ:91:LEU:HD13	2.15	0.46
1:QA:552:U:H2'	1:QA:553:A:C8	2.51	0.46
1:QA:979:C:H42	13:QN:18:VAL:HG12	1.81	0.46
3:QC:47:LEU:HD11	3:QC:87:LEU:HD21	1.98	0.46
7:QG:143:ARG:NH1	21:QW:41:C:O3'	2.48	0.46
23:QZ:40:GLU:O	23:QZ:58:ARG:NH2	2.49	0.46
32:RA:2130:U:O4	32:RA:2158:A:O2'	2.24	0.46
32:RA:320:A:C5	54:RF:136:THR:HG21	2.51	0.46
1:XA:973:G:C1'	10:XJ:55:LYS:HD2	2.46	0.46
13:XN:29:ARG:HD3	13:XN:40:CYS:HB2	1.97	0.46
19:XT:74:LYS:HD3	19:XT:74:LYS:HA	1.73	0.46
32:YA:1188:U:H4'	47:YV:79:VAL:HG23	1.97	0.46
32:YA:1600:C:OP1	49:YX:58:HIS:NE2	2.38	0.46
35:YE:7:VAL:HG22	35:YE:27:LEU:HB3	1.97	0.46
35:YE:93:VAL:O	35:YE:93:VAL:HG22	2.16	0.46
32:YA:627:A:H62	41:YP:117:GLU:HG2	1.81	0.46
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.52	0.45
1:QA:406:G:H2'	1:QA:407:G:C8	2.50	0.45
21:QW:62:C:H2'	21:QW:63:G:C8	2.51	0.45
22:QX:21:OMU:OP2	23:QY:65:ARG:NH2	2.44	0.45
18:QS:67:VAL:HB	27:R4:55:ARG:HD3	1.99	0.45
32:RA:1364:G:H5''	52:R1:2:SER:HA	1.97	0.45
32:RA:2047:U:H2'	32:RA:2048:G:H8	1.80	0.45
32:RA:2141:G:N2	32:RA:2150:U:O2	2.45	0.45
32:RA:703:U:H2'	32:RA:704:G:O4'	2.17	0.45
35:RE:114:ALA:HB3	35:RE:160:TYR:HB3	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RP:15:ARG:HE	41:RP:15:ARG:HA	1.81	0.45
1:XA:745:C:OP1	1:XA:851:G:O2'	2.33	0.45
34:YD:142:VAL:HG23	34:YD:192:THR:C	2.37	0.45
34:YD:253:GLN:HE21	34:YD:253:GLN:HB3	1.54	0.45
32:YA:603:A:O3'	41:YP:90:ARG:NH1	2.50	0.45
47:YV:6:LYS:O	47:YV:7:THR:HG23	2.16	0.45
1:QA:1337:G:H5''	1:QA:1338:G:OP1	2.17	0.45
1:QA:1504:G:OP1	1:QA:1507:A:H4'	2.17	0.45
2:QB:16:HIS:O	2:QB:16:HIS:CG	2.70	0.45
51:QL:45:PRO:HB3	51:QL:53:ARG:NH1	2.32	0.45
21:QW:56:C:H2'	21:QW:57:A:C8	2.51	0.45
23:QZ:3:LEU:HD21	23:QZ:31:ILE:CD1	2.35	0.45
32:RA:2103:C:H2'	32:RA:2104:G:C8	2.51	0.45
32:RA:2236:C:H2'	32:RA:2237:G:O4'	2.16	0.45
36:RG:106:LEU:HA	36:RG:110:ALA:HB3	1.98	0.45
14:XO:79:ARG:HA	14:XO:82:ILE:HG12	1.98	0.45
1:XA:265:G:H5'	16:XQ:64:PRO:O	2.15	0.45
18:XS:12:ASP:HB3	18:XS:14:HIS:CE1	2.52	0.45
32:YA:2159:G:H2'	32:YA:2160:G:C8	2.52	0.45
32:YA:2183:C:H2'	32:YA:2184:G:C8	2.51	0.45
32:YA:997:G:OP1	46:YU:93:LYS:HB2	2.16	0.45
32:YA:1500:G:O2'	34:YD:100:GLY:O	2.26	0.45
32:YA:1425:G:P	34:YD:31:LYS:HZ1	2.28	0.45
35:YE:101:ARG:CG	35:YE:101:ARG:NH1	2.72	0.45
32:YA:442:G:H1'	54:YF:48:THR:HG21	1.98	0.45
42:YQ:132:VAL:HG12	42:YQ:133:ARG:N	2.31	0.45
48:YW:22:ASP:OD1	48:YW:25:ARG:NH1	2.45	0.45
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.50	0.45
1:QA:1427:U:H2'	1:QA:1428:A:H8	1.81	0.45
8:QH:17:THR:O	8:QH:78:GLN:NE2	2.42	0.45
32:RA:1056:G:H4'	32:RA:1086:A:H1'	1.98	0.45
32:RA:1543:A:H1'	32:RA:1545:A:O4'	2.17	0.45
32:RA:729:G:O2'	32:RA:763:G:H4'	2.15	0.45
32:RA:874:G:O2'	55:RZ:120:ILE:HD11	2.16	0.45
54:RF:40:GLN:NE2	54:RF:182:ASN:HB2	2.32	0.45
37:RH:7:LEU:H	37:RH:8:PRO:CD	2.18	0.45
41:RP:49:ARG:HA	53:R8:57:ARG:HG3	1.95	0.45
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.51	0.45
1:XA:452:A:O2'	1:XA:453:A:O4'	2.31	0.45
1:XA:674:G:H2'	1:XA:675:A:C8	2.48	0.45
1:XA:701:C:O2'	1:XA:702:A:OP2	2.26	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:7:G:H5'	1:XA:298:A:O4'	2.16	0.45
18:XS:16:LEU:CD2	18:XS:20:LEU:HG	2.46	0.45
12:XM:87:TYR:CB	18:XS:73:GLU:HG3	2.45	0.45
19:XT:53:LEU:HD12	19:XT:100:ILE:HG23	1.97	0.45
32:YA:2103:C:H2'	32:YA:2104:G:C8	2.51	0.45
32:YA:2225:A:H4'	32:YA:2226:C:O5'	2.15	0.45
32:YA:2712:U:OP1	32:YA:2714:G:H4'	2.16	0.45
36:YG:9:ARG:O	36:YG:13:GLU:HG2	2.16	0.45
32:YA:2683:C:OP1	45:YT:53:ARG:NH2	2.49	0.45
50:YY:30:VAL:HG22	50:YY:37:VAL:HG12	1.97	0.45
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.45
23:QY:60:ILE:CD1	23:QY:80:CYS:O	2.64	0.45
32:RA:969:U:H2'	32:RA:970:C:C6	2.52	0.45
54:RF:64:ILE:H	54:RF:64:ILE:HG13	1.45	0.45
37:RH:88:LEU:HA	37:RH:130:ARG:HA	1.99	0.45
55:RZ:54:HIS:HB3	55:RZ:101:PRO:HD3	1.97	0.45
42:RQ:20:ALA:HB3	55:RZ:79:ARG:NH2	2.31	0.45
1:XA:1124:G:O2'	1:XA:1125:U:O5'	2.32	0.45
1:XA:985:C:H2'	1:XA:986:A:H8	1.80	0.45
9:XI:10:ARG:HE	9:XI:105:ASP:HB2	1.82	0.45
23:XY:10:TRP:NE1	23:XY:14:LEU:HD11	2.31	0.45
32:YA:1342:A:H2	32:YA:1602:U:H3	1.64	0.45
32:YA:1762:A:H4'	32:YA:1763:G:OP2	2.15	0.45
32:YA:2037:G:H2'	32:YA:2038:G:C8	2.52	0.45
32:YA:2682:U:C6	35:YE:11:MET:HE1	2.21	0.45
32:YA:286:C:C2'	32:YA:287:C:C5'	2.94	0.45
32:YA:781:A:P	34:YD:218:ARG:HH22	2.40	0.45
32:YA:2731:G:C4'	35:YE:203:LYS:HE2	2.45	0.45
37:YH:157:TYR:HE1	37:YH:172:LYS:HG3	1.77	0.45
32:YA:2584:U:H5'	56:ZA:76:PPU:H93	1.97	0.45
1:QA:1167:A:H2'	1:QA:1169:A:C8	2.52	0.45
1:QA:218:C:H5'	1:QA:466:C:N4	2.22	0.45
1:QA:56:U:H2'	1:QA:57:G:C8	2.50	0.45
1:QA:971:G:H2'	1:QA:1365:G:H4'	1.97	0.45
2:QB:80:ILE:CG2	2:QB:215:LEU:HD12	2.45	0.45
1:QA:957:U:C3'	23:QZ:36:ARG:HH12	2.21	0.45
32:RA:1812:A:H2'	32:RA:1813:G:H8	1.81	0.45
32:RA:2347:C:H2'	32:RA:2348:U:C6	2.52	0.45
32:RA:309:G:C8	32:RA:309:G:OP1	2.61	0.45
55:RZ:132:ASN:OD1	55:RZ:132:ASN:O	2.35	0.45
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Y9:15:LYS:HD3	31:Y9:15:LYS:HA	1.74	0.45
32:YA:818:G:N1	32:YA:1188:U:OP2	2.42	0.45
32:YA:1405:U:H2'	32:YA:1406:U:C6	2.51	0.45
32:YA:222:A:N1	32:YA:233:A:H5''	2.31	0.45
33:YB:116:G:C3'	33:YB:116:G:C8	3.00	0.45
37:YH:139:GLN:CD	37:YH:139:GLN:C	2.75	0.45
32:YA:631:A:C1'	41:YP:66:GLY:HA2	2.45	0.45
41:YP:96:THR:HB	41:YP:98:GLU:OE1	2.16	0.45
47:YV:16:PRO:HA	47:YV:96:ILE:CG2	2.43	0.45
55:YZ:108:PRO:HB3	55:YZ:144:LEU:HB2	1.97	0.45
7:QG:69:VAL:HG21	7:QG:104:LEU:HD21	1.99	0.45
23:QY:68:TYR:HD1	23:QY:75:LEU:HD11	1.82	0.45
32:RA:2364:C:H2'	32:RA:2365:G:O4'	2.16	0.45
32:RA:2404:C:H2'	32:RA:2405:G:O4'	2.17	0.45
32:RA:38:A:H2'	32:RA:39:C:C6	2.51	0.45
54:RF:53:THR:O	54:RF:57:VAL:HG23	2.17	0.45
38:RI:116:LEU:HD11	38:RI:120:ILE:HG23	1.97	0.45
28:Y5:47:PRO:O	28:Y5:60:VAL:HG11	2.16	0.45
32:YA:1385:G:HO2'	32:YA:1386:C:P	2.39	0.45
32:YA:1816:G:O6	34:YD:35:LYS:HE2	2.17	0.45
54:YF:182:ASN:N	54:YF:182:ASN:OD1	2.50	0.45
37:YH:3:ARG:NH2	37:YH:3:ARG:CG	2.72	0.45
1:QA:986:A:N3	18:QS:52:TYR:OH	2.40	0.45
8:QH:19:VAL:HG13	8:QH:21:LYS:HG3	1.98	0.45
24:R0:18:ALA:HB1	32:RA:2271:G:OP1	2.15	0.45
31:R9:3:VAL:HG21	32:RA:2539:C:H4'	1.98	0.45
32:RA:1174:A:H62	32:RA:1177:A:H4'	1.82	0.45
32:RA:1638:C:O2	32:RA:2698:U:O2'	2.31	0.45
32:RA:1694:C:H4'	32:RA:1695:G:O5'	2.16	0.45
32:RA:2031:A:N3	32:RA:2455:G:O2'	2.37	0.45
32:RA:2432:A:C6	52:R1:33:LYS:CB	2.97	0.45
32:RA:2685:G:H1'	32:RA:2726:U:H5	1.82	0.45
34:RD:123:ALA:HB3	34:RD:131:LEU:HG	1.98	0.45
1:XA:1119:C:H2'	1:XA:1120:G:H8	1.81	0.45
1:XA:1157:A:H61	1:XA:1178:G:H21	1.65	0.45
1:XA:41:G:H2'	1:XA:42:G:C8	2.51	0.45
12:XM:87:TYR:H	18:XS:73:GLU:CG	2.30	0.45
21:XW:24:U:H2'	21:XW:25:C:C6	2.52	0.45
23:XY:61:THR:HB	23:XY:64:HIS:HB2	1.98	0.45
53:Y8:29:LYS:O	53:Y8:31:HIS:N	2.42	0.45
32:YA:2068:U:H3	32:YA:2430:A:H2	1.63	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:1:MET:HE3	42:YQ:45:GLN:HG3	1.98	0.45
42:YQ:60:ARG:O	55:YZ:178:GLU:C	2.55	0.45
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.52	0.45
1:QA:345:C:O2'	1:QA:346:G:N3	2.47	0.45
2:QB:71:VAL:CG1	2:QB:97:TRP:HE3	2.27	0.45
23:QZ:84:TYR:CD1	23:QZ:84:TYR:OXT	2.70	0.45
52:R1:89:GLU:O	52:R1:93:GLU:HB2	2.17	0.45
32:RA:1079:C:N4	32:RA:1088:A:OP1	2.50	0.45
32:RA:491:G:O6	48:RW:49:LYS:NZ	2.42	0.45
32:RA:820:A:H4'	32:RA:836:G:N2	2.31	0.45
55:RZ:108:PRO:HB3	55:RZ:144:LEU:HB2	1.99	0.45
55:RZ:121:HIS:CE1	55:RZ:169:GLU:OE1	2.69	0.45
55:RZ:34:ASN:OD1	55:RZ:35:ARG:N	2.49	0.45
1:XA:560:U:H4'	1:XA:561:U:O5'	2.16	0.45
3:XC:152:ILE:HG12	3:XC:167:TRP:HD1	1.80	0.45
1:XA:1376:U:P	7:XG:94:ARG:HH12	2.40	0.45
9:XI:25:LYS:N	9:XI:60:ASP:OD1	2.50	0.45
21:XW:68:C:H2'	21:XW:69:C:C6	2.52	0.45
22:XX:5:A:H2'	22:XX:6:G:C8	2.52	0.45
32:YA:1882:C:H5'	32:YA:1883:G:OP2	2.16	0.45
32:YA:2168:G:N1	32:YA:2170:A:OP2	2.49	0.45
32:YA:380:U:H2'	32:YA:381:G:H8	1.81	0.45
32:YA:627:A:H4'	32:YA:628:G:H5'	1.98	0.45
35:YE:108:SER:HB3	35:YE:165:VAL:HG21	1.98	0.45
55:YZ:99:TYR:HA	55:YZ:124:ILE:O	2.17	0.45
42:YQ:61:GLY:N	55:YZ:178:GLU:O	2.49	0.45
1:QA:485:G:HO2'	1:QA:486:U:P	2.40	0.45
2:QB:69:LEU:HD23	2:QB:70:PHE:N	2.32	0.45
51:QL:101:VAL:HG13	51:QL:104:VAL:HG11	1.99	0.45
19:QT:71:THR:HG22	19:QT:72:LEU:HG	1.99	0.45
21:QW:22:G:H2'	21:QW:23:C:C6	2.52	0.45
23:QY:36:ARG:HH11	23:QY:36:ARG:CB	2.28	0.45
32:RA:2396:G:H4'	52:R1:25:LYS:HG3	1.99	0.45
32:RA:1156:A:OP1	46:RU:55:ARG:NH1	2.40	0.45
32:RA:2130:U:O3'	32:RA:2131:G:H4'	2.17	0.45
32:RA:2515:C:H2'	32:RA:2516:G:H8	1.82	0.45
32:RA:336:C:O2'	50:RY:35:TYR:OH	2.35	0.45
32:RA:2635:C:O2'	35:RE:80:GLU:OE2	2.30	0.45
48:RW:22:ASP:OD1	48:RW:25:ARG:NH1	2.49	0.45
1:XA:1172:C:H2'	1:XA:1173:G:H8	1.81	0.45
1:XA:191(E):G:C2	1:XA:191(F):U:C4	3.05	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:216:G:H2'	1:XA:217:C:C6	2.52	0.45
1:XA:269:C:H2'	1:XA:270:A:H8	1.82	0.45
1:XA:410:G:H2'	1:XA:429:U:C5	2.52	0.45
4:XD:154:ASN:CB	4:XD:159:ARG:NH2	2.80	0.45
11:XK:52:GLY:H	11:XK:55:LYS:HE2	1.82	0.45
32:YA:1000:A:H3'	32:YA:1001:A:C8	2.51	0.45
32:YA:1230:C:H2'	32:YA:1231:G:C8	2.52	0.45
32:YA:1592:C:H2'	32:YA:1593:G:H8	1.82	0.45
32:YA:2121:G:H2'	32:YA:2122:U:C6	2.52	0.45
32:YA:218:A:C2	32:YA:235:U:H4'	2.52	0.45
32:YA:637:A:C2'	41:YP:117:GLU:OE2	2.64	0.45
35:YE:24:THR:HG21	35:YE:188:VAL:CG1	2.43	0.45
54:YF:117:ARG:HD3	54:YF:117:ARG:HA	1.85	0.45
37:YH:118:PRO:HD2	37:YH:121:ILE:HG21	1.99	0.45
55:YZ:111:VAL:HG22	55:YZ:115:GLY:O	2.17	0.45
55:YZ:128:VAL:HG23	55:YZ:160:GLY:O	2.17	0.45
55:YZ:72:ARG:HA	55:YZ:72:ARG:HD3	1.57	0.45
1:QA:539:A:H2'	1:QA:540:G:C8	2.52	0.45
1:QA:64:G:H5''	1:QA:65:U:OP1	2.17	0.45
2:QB:160:ASP:O	2:QB:183:PRO:HD2	2.17	0.45
29:R6:8:LYS:NZ	53:R8:34:TRP:CD2	2.85	0.45
41:RP:49:ARG:NH1	53:R8:4:MET:HE1	2.31	0.45
32:RA:1165:U:H2'	32:RA:1166:C:C6	2.52	0.45
32:RA:2773:C:OP1	35:RE:166:THR:OG1	2.33	0.45
32:RA:2779:U:H2'	32:RA:2779:U:H6	1.68	0.45
1:QA:1443:G:N2	32:RA:2863:C:O3'	2.49	0.45
33:RB:50:G:OP1	44:RS:63:THR:HG23	2.17	0.45
34:RD:148:GLU:OE1	34:RD:151:LYS:NZ	2.40	0.45
54:RF:157:VAL:O	54:RF:194:MET:HA	2.17	0.45
55:RZ:28:MET:HA	55:RZ:88:PHE:O	2.17	0.45
1:XA:1027:C:H2'	1:XA:1028:C:C6	2.52	0.45
1:XA:1124:G:HO2'	1:XA:1125:U:P	2.40	0.45
1:XA:35:G:H2'	1:XA:36:C:C6	2.51	0.45
32:YA:1070:A:H5'	32:YA:1071:G:H5''	1.98	0.45
32:YA:1230:C:H2'	32:YA:1231:G:H8	1.82	0.45
32:YA:1464:C:HO2'	32:YA:1528:A:H8	1.61	0.45
32:YA:1639:U:H2'	32:YA:1640:C:H5''	1.98	0.45
32:YA:2306:C:C5'	32:YA:2307:G:H5''	2.46	0.45
32:YA:2845:G:H2'	32:YA:2846:G:C8	2.52	0.45
32:YA:627:A:N6	41:YP:117:GLU:HG2	2.32	0.45
32:YA:740:U:H2'	32:YA:741:G:C8	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YD:154:LYS:HB2	34:YD:155:LEU:CD1	2.47	0.45
34:YD:231:HIS:CE1	34:YD:232:PRO:HD2	2.51	0.45
36:YG:161:THR:HG22	36:YG:163:ALA:H	1.81	0.45
32:YA:908:C:OP1	42:YQ:22:LYS:HB3	2.17	0.45
44:YS:18:ILE:HG21	44:YS:88:ASP:HA	1.99	0.45
45:YT:66:VAL:HA	45:YT:71:GLY:HA2	1.99	0.45
42:YQ:60:ARG:HB3	55:YZ:179:ASP:OD1	2.15	0.45
1:QA:148:G:H2'	1:QA:149:A:C8	2.52	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.98	0.44
32:RA:151:C:H2'	32:RA:152:G:H8	1.82	0.44
32:RA:59:U:H3	32:RA:68:G:H1	1.66	0.44
32:RA:639:U:H2'	32:RA:640:C:C6	2.52	0.44
32:RA:877:U:O2'	32:RA:878:A:OP1	2.29	0.44
37:RH:11:VAL:HG23	37:RH:11:VAL:O	2.17	0.44
44:RS:25:ARG:HB3	44:RS:40:ILE:HG23	2.00	0.44
1:XA:1014:A:C5'	18:XS:14:HIS:ND1	2.80	0.44
1:XA:1316:G:N2	1:XA:1319:A:OP2	2.47	0.44
1:XA:689:C:H3'	1:XA:690:G:H21	1.83	0.44
1:XA:922:G:H2'	1:XA:923:A:C8	2.52	0.44
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.82	0.44
18:XS:27:GLU:HG3	18:XS:29:ARG:CZ	2.47	0.44
32:YA:2001:A:H2'	32:YA:2002:G:C8	2.52	0.44
31:Y9:30:PRO:HB2	32:YA:2527:C:H5'	1.98	0.44
32:YA:289:A:H3'	32:YA:290:G:H8	1.83	0.44
35:YE:101:ARG:NH1	35:YE:169:ASN:OD1	2.50	0.44
35:YE:21:VAL:O	35:YE:21:VAL:HG23	2.17	0.44
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.52	0.44
1:QA:45:U:H2'	1:QA:46:G:H8	1.82	0.44
1:QA:518:C:H5''	1:QA:519:C:C6	2.52	0.44
2:QB:10:LEU:C	2:QB:10:LEU:CD2	2.86	0.44
1:QA:1505:G:O2'	22:QX:12:A:N7	2.49	0.44
32:RA:2183:C:H2'	32:RA:2184:G:C8	2.51	0.44
32:RA:2243:U:H2'	32:RA:2244:U:C6	2.52	0.44
32:RA:2845:G:H2'	32:RA:2846:G:H8	1.81	0.44
32:RA:673:C:H5''	54:RF:81:PRO:HD2	2.00	0.44
23:XY:60:ILE:HD11	23:XY:66:LEU:HB2	1.99	0.44
32:YA:1818:U:H2'	34:YD:157:ARG:CG	2.46	0.44
28:Y5:12:SER:OG	32:YA:2021:C:OP1	2.27	0.44
32:YA:299:A:N1	32:YA:322:A:O2'	2.46	0.44
32:YA:301:G:HO2'	32:YA:302:C:H6	1.64	0.44
32:YA:581:C:H2'	32:YA:582:G:C8	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:84:A:OP2	50:YY:8:LYS:HD2	2.17	0.44
33:YB:24:G:H1'	33:YB:27:C:N4	2.33	0.44
35:YE:28:ALA:CB	35:YE:180:ASN:O	2.65	0.44
41:YP:121:LYS:HG2	41:YP:122:PRO:HD2	1.98	0.44
56:ZA:76:PPU:C10	56:ZA:76:PPU:N7	2.72	0.44
1:QA:1219:U:H2'	1:QA:1220:G:C8	2.53	0.44
1:QA:1256:A:H5'	1:QA:1257:U:OP1	2.17	0.44
1:QA:559:A:OP1	5:QE:126:ARG:NH2	2.49	0.44
1:QA:831:U:P	2:QB:22:LYS:HZ1	2.40	0.44
2:QB:71:VAL:HA	2:QB:93:VAL:HG12	1.98	0.44
23:QY:10:TRP:CH2	23:QZ:5:TRP:HZ2	2.36	0.44
23:QZ:80:CYS:O	23:QZ:80:CYS:SG	2.75	0.44
25:R2:47:ASN:N	25:R2:47:ASN:OD1	2.50	0.44
32:RA:1085:A:O2'	32:RA:1086:A:OP1	2.31	0.44
32:RA:2023:G:OP2	32:RA:2617:C:H4'	2.16	0.44
32:RA:2197:U:H2'	32:RA:2224:G:H1	1.82	0.44
32:RA:2351:G:HO2'	32:RA:2352:A:H8	1.62	0.44
32:RA:330:A:H2	32:RA:1210:A:O2'	1.96	0.44
35:RE:117:MET:HG2	35:RE:117:MET:O	2.17	0.44
55:RZ:103:ARG:HG2	55:RZ:136:PHE:HD1	1.83	0.44
1:XA:1176:A:H2'	1:XA:1177:G:H5'	1.98	0.44
1:XA:1318:A:H4'	18:XS:10:PHE:CD2	2.53	0.44
1:XA:628:G:H2'	1:XA:629:G:C8	2.52	0.44
5:XE:107:ARG:O	5:XE:111:GLU:HB2	2.18	0.44
19:XT:26:ASN:HA	19:XT:29:LYS:HG2	1.99	0.44
21:XW:43:A:H2'	21:XW:44:A:C8	2.52	0.44
32:YA:2291:U:H2'	32:YA:2292:C:C6	2.52	0.44
54:YF:63:LYS:NZ	54:YF:75:HIS:O	2.39	0.44
37:YH:67:LEU:HD23	37:YH:67:LEU:C	2.38	0.44
40:YO:22:ILE:HD11	40:YO:42:SER:HB2	2.00	0.44
42:YQ:60:ARG:CA	55:YZ:180:VAL:HG23	2.45	0.44
1:QA:1414:U:H2'	1:QA:1415:G:H8	1.82	0.44
1:QA:1502:A:H2	1:QA:1505:G:H1	1.65	0.44
1:QA:22:G:H2'	1:QA:23:C:C6	2.53	0.44
2:QB:209:ARG:CG	2:QB:209:ARG:NH1	2.72	0.44
2:QB:21:ARG:HB3	2:QB:39:ILE:HD12	1.94	0.44
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.82	0.44
1:QA:1225:A:OP1	12:QM:102:ARG:HD3	2.17	0.44
21:QW:60:U:H4'	21:QW:61:C:OP1	2.17	0.44
22:QX:21:OMU:OP2	23:QY:65:ARG:NE	2.47	0.44
32:RA:2529:G:H5'	32:RA:2530:A:O5'	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RG:15:VAL:HG21	36:RG:176:LEU:HD22	1.99	0.44
36:RG:17:PRO:HA	36:RG:20:ILE:HD12	1.98	0.44
38:RI:125:GLU:HG3	38:RI:141:LYS:HD2	1.99	0.44
39:RN:23:LEU:HD13	39:RN:60:ILE:HD12	1.99	0.44
41:RP:29:LYS:HE3	41:RP:29:LYS:HB3	1.78	0.44
48:RW:9:TYR:H	48:RW:102:HIS:CE1	2.35	0.44
55:RZ:29:TYR:O	55:RZ:29:TYR:CD1	2.70	0.44
55:RZ:38:TYR:O	55:RZ:38:TYR:CD1	2.70	0.44
1:XA:1059:C:O2'	10:XJ:53:PRO:HD3	2.17	0.44
1:XA:1137:C:H1'	1:XA:1138:G:OP2	2.18	0.44
1:XA:524:G:H2'	1:XA:525:C:C6	2.52	0.44
1:XA:701:C:O2	1:XA:703:G:N1	2.51	0.44
1:XA:703:G:H4'	1:XA:704:A:O5'	2.17	0.44
32:YA:1796:U:H2'	32:YA:1797:C:C6	2.52	0.44
32:YA:2064:C:H2'	32:YA:2065:C:C6	2.52	0.44
32:YA:2086:U:H2'	32:YA:2087:G:C8	2.52	0.44
32:YA:2215:G:H2'	32:YA:2216:G:H8	1.82	0.44
32:YA:2637:U:H5''	35:YE:82:ARG:NH1	2.32	0.44
37:YH:105:LEU:O	37:YH:113:VAL:HG12	2.17	0.44
49:YX:54:VAL:HG22	49:YX:81:VAL:HG23	1.98	0.44
1:QA:1028:C:H2'	1:QA:1028(A):C:C6	2.52	0.44
1:QA:736:C:H2'	1:QA:737:A:C8	2.53	0.44
21:QV:1:C:O2'	21:QV:2:G:OP2	2.29	0.44
23:QY:1:MET:CG	23:QY:1:MET:O	2.66	0.44
23:QY:36:ARG:HB3	23:QY:36:ARG:CZ	2.47	0.44
23:QZ:66:LEU:C	23:QZ:66:LEU:CD2	2.85	0.44
53:R8:46:ARG:HH12	53:R8:47:LYS:HE2	1.82	0.44
32:RA:1380:G:O2'	32:RA:1569:A:N6	2.51	0.44
32:RA:1869:G:H5'	32:RA:1870:C:OP2	2.18	0.44
32:RA:2677:G:H2'	32:RA:2678:C:C6	2.52	0.44
32:RA:814:C:H41	41:RP:25:SER:HA	1.82	0.44
32:RA:2312:U:OP2	36:RG:74:LYS:HE2	2.17	0.44
39:RN:26:LEU:O	39:RN:30:ILE:HG12	2.17	0.44
40:RO:78:ARG:NE	45:RT:73:GLU:OE1	2.51	0.44
1:XA:186(C):G:H2'	1:XA:186(D):C:C6	2.51	0.44
6:XF:37:VAL:HA	6:XF:65:VAL:HG12	1.99	0.44
8:XH:4:ASP:HB2	8:XH:89:PRO:HG3	1.99	0.44
51:XL:104:VAL:HG12	51:XL:105:TYR:H	1.81	0.44
23:XY:63:GLU:O	23:XY:83:HIS:HB2	2.17	0.44
32:YA:1265:A:H8	32:YA:1265:A:OP1	2.01	0.44
32:YA:1797:C:O2'	34:YD:259:THR:CG2	2.66	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2638:G:OP2	35:YE:82:ARG:NH1	2.44	0.44
32:YA:2693:A:H2'	32:YA:2694:G:H8	1.82	0.44
32:YA:287:C:H2'	32:YA:288:C:H6	1.82	0.44
32:YA:845:G:OP2	32:YA:845:G:H8	2.01	0.44
32:YA:883:G:O2'	32:YA:884:C:P	2.76	0.44
32:YA:859:G:HO2'	32:YA:916:G:H1	1.66	0.44
32:YA:1813:G:H1'	34:YD:50:THR:OG1	2.18	0.44
34:YD:37:LEU:HD13	34:YD:62:TYR:HB2	1.99	0.44
32:YA:2469:A:C2'	42:YQ:56:ARG:HH21	2.30	0.44
44:YS:27:SER:HA	44:YS:88:ASP:HB3	1.99	0.44
55:YZ:95:PRO:HA	55:YZ:129:SER:HA	1.99	0.44
1:QA:1126:U:N3	1:QA:1281:U:O4'	2.51	0.44
1:QA:1318:A:O2'	18:QS:37:ARG:HD3	2.18	0.44
1:QA:518:C:H4'	1:QA:519:C:O5'	2.17	0.44
1:QA:1494:G:P	23:QY:49:LYS:HZ3	2.41	0.44
32:RA:1210:A:H5'	32:RA:1212:G:O4'	2.18	0.44
32:RA:1523:U:H2'	32:RA:1524:G:C8	2.53	0.44
32:RA:1682:G:OP1	32:RA:1699:G:N1	2.50	0.44
32:RA:1992:G:N2	32:RA:1996:C:O2'	2.49	0.44
32:RA:2446:G:H2'	32:RA:2447:G:H5''	2.00	0.44
32:RA:2451:A:N3	56:ZB:76:PPU:HD2	2.33	0.44
34:RD:39:LYS:HE3	34:RD:39:LYS:HB3	1.82	0.44
35:RE:68:ALA:HB1	35:RE:71:GLY:HA2	1.99	0.44
54:RF:39:TRP:CD1	54:RF:101:LEU:HB2	2.52	0.44
54:RF:126:VAL:HG21	54:RF:142:TRP:CH2	2.53	0.44
54:RF:51:THR:OG1	54:RF:91:GLY:HA3	2.16	0.44
41:RP:15:ARG:NE	41:RP:15:ARG:HA	2.32	0.44
46:RU:90:VAL:HG11	47:RV:40:LEU:HD13	2.00	0.44
49:RX:87:GLN:O	49:RX:88:LYS:HD3	2.17	0.44
1:XA:45:U:OP1	1:XA:307:C:O2'	2.28	0.44
32:YA:1528:A:OP2	32:YA:1542:G:N1	2.51	0.44
32:YA:774:A:O2'	32:YA:775:G:O5'	2.35	0.44
35:YE:119:ARG:NH1	35:YE:120:TRP:HE1	2.16	0.44
54:YF:65:TRP:NE1	54:YF:73:ALA:O	2.46	0.44
41:YP:113:LYS:HG3	41:YP:129:ALA:HB3	1.98	0.44
47:YV:29:PRO:HB3	47:YV:63:GLY:HA2	2.00	0.44
47:YV:40:LEU:C	47:YV:40:LEU:CD2	2.86	0.44
48:YW:57:ASN:O	48:YW:61:ASN:HB2	2.18	0.44
55:YZ:38:TYR:O	55:YZ:38:TYR:CD1	2.70	0.44
1:QA:1040:U:H2'	1:QA:1041:A:C8	2.53	0.44
1:QA:1314:C:H2'	1:QA:1315:U:H6	1.83	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:28:PHE:CD2	2:QB:28:PHE:O	2.70	0.44
1:QA:407:G:OP1	4:QD:115:ARG:NH1	2.51	0.44
32:RA:1153:C:H2'	32:RA:1154:G:O4'	2.18	0.44
32:RA:2335:A:HO2'	32:RA:2336:A:H2'	1.81	0.44
32:RA:922:U:H2'	32:RA:923:C:C6	2.52	0.44
32:RA:2305:A:H5''	36:RG:134:GLY:HA3	1.99	0.44
41:RP:101:VAL:HB	41:RP:106:LEU:HB3	1.98	0.44
41:RP:131:SER:OG	41:RP:132:LYS:N	2.51	0.44
45:RT:120:ARG:HA	45:RT:123:GLN:HB2	1.99	0.44
55:RZ:181:GLU:HB2	55:RZ:183:LEU:CD2	2.43	0.44
1:XA:1432:G:OP1	45:YT:108:ARG:HB2	2.18	0.44
4:XD:152:SER:HB2	4:XD:155:LEU:HD11	1.99	0.44
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	2.00	0.44
21:XW:14:A:N7	21:XW:22:G:N2	2.64	0.44
32:YA:581:C:H2'	32:YA:582:G:H8	1.82	0.44
34:YD:123:ALA:HA	34:YD:124:PRO:HD3	1.91	0.44
32:YA:2680:C:OP2	35:YE:111:ARG:NH2	2.50	0.44
35:YE:54:GLN:NE2	35:YE:58:ARG:HH21	2.16	0.44
42:YQ:58:PHE:CE2	42:YQ:106:VAL:CG2	3.00	0.44
42:YQ:58:PHE:CE2	42:YQ:106:VAL:HG21	2.52	0.44
45:YT:126:ALA:O	45:YT:130:ALA:HB3	2.18	0.44
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.83	0.44
1:QA:262:A:H2'	1:QA:263:A:C8	2.53	0.44
7:QG:116:ALA:O	7:QG:120:ILE:HG12	2.18	0.44
1:QA:1187:G:O2'	13:QN:61:TRP:OXT	2.26	0.44
18:QS:41:VAL:CG1	18:QS:67:VAL:CB	2.92	0.44
23:QZ:52:LEU:N	23:QZ:52:LEU:CD1	2.76	0.44
32:RA:1629:U:H2'	32:RA:1630:G:C8	2.53	0.44
32:RA:2444:G:OP1	54:RF:68:LYS:HD3	2.17	0.44
32:RA:2051:A:H5'	32:RA:2578:G:O4'	2.18	0.44
36:RG:170:ARG:NH2	36:RG:182:LYS:O	2.39	0.44
36:RG:73:ALA:HB2	36:RG:82:LEU:HD11	2.00	0.44
38:RI:144:VAL:HG13	38:RI:145:VAL:HG22	1.99	0.44
49:RX:72:LYS:NZ	49:RX:75:ASP:OD1	2.51	0.44
1:XA:406:G:H21	4:XD:119:GLN:HE22	1.65	0.44
10:XJ:24:VAL:HG13	10:XJ:34:VAL:HG21	1.99	0.44
27:Y4:34:GLU:HG2	27:Y4:35:VAL:HG23	2.00	0.44
32:YA:1791:A:H3'	32:YA:1792:G:H8	1.83	0.44
32:YA:2746:U:H4'	37:YH:139:GLN:HA	1.99	0.44
32:YA:307:G:H21	32:YA:330:A:H62	1.65	0.44
32:YA:779:U:OP1	34:YD:49:ILE:HG13	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YD:18:VAL:HG23	34:YD:211:ARG:HH22	1.81	0.44
33:YB:56:G:H5'	36:YG:27:ASN:HD21	1.83	0.44
37:YH:96:ALA:HB1	37:YH:103:LEU:HD11	1.99	0.44
37:YH:107:VAL:HG11	37:YH:152:ARG:CB	2.47	0.44
37:YH:19:VAL:CG1	37:YH:43:VAL:CG2	2.95	0.44
41:YP:106:LEU:HD13	41:YP:112:LEU:HG	2.00	0.44
45:YT:19:LEU:HD22	45:YT:86:ILE:HG22	1.99	0.44
55:YZ:9:TYR:CE1	55:YZ:35:ARG:HG2	2.52	0.44
1:QA:1354:C:H2'	1:QA:1355:G:H8	1.83	0.44
1:QA:1371:G:O3'	9:QL:69:GLY:HA3	2.17	0.44
1:QA:526:C:OP2	51:QL:91:LYS:HE2	2.18	0.44
1:QA:60:A:H4'	1:QA:61:G:O5'	2.18	0.44
1:QA:948:C:H2'	1:QA:949:A:H8	1.83	0.44
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	2.00	0.44
4:QD:82:ALA:HB1	4:QD:92:VAL:HG13	1.98	0.44
23:QZ:16:TRP:CE2	23:QZ:23:ILE:HG21	2.53	0.44
32:RA:2092:U:H4'	32:RA:2093:G:O5'	2.18	0.44
32:RA:2401:U:O4	32:RA:2415:G:O6	2.36	0.44
32:RA:813:U:H2'	32:RA:814:C:C6	2.53	0.44
32:RA:813:U:H2'	32:RA:814:C:H6	1.81	0.44
54:RF:9:ILE:O	54:RF:9:ILE:HG13	2.16	0.44
36:RG:161:THR:HG22	36:RG:163:ALA:H	1.83	0.44
37:RH:9:ILE:HG21	37:RH:52:VAL:HG22	2.00	0.44
41:RP:49:ARG:HH12	53:R8:4:MET:HE2	1.82	0.44
55:RZ:98:MET:N	55:RZ:125:LEU:HD12	2.33	0.44
33:RB:104:A:H4'	55:RZ:89:PHE:CE1	2.52	0.44
1:XA:1247:U:H3	1:XA:1290:G:H1	1.66	0.44
1:XA:359:U:H2'	1:XA:360:A:C8	2.52	0.44
32:YA:576:U:H2'	32:YA:577:G:C8	2.53	0.44
45:YT:82:LEU:CD2	35:YE:18:ASP:OD1	2.66	0.44
37:YH:103:LEU:CD1	37:YH:125:VAL:HG21	2.48	0.44
45:YT:7:ILE:HG21	35:YE:181:LEU:HD21	2.00	0.44
32:YA:2451:A:N3	56:ZA:76:PPU:HD2	2.33	0.44
1:QA:751:U:H2'	1:QA:752:G:O4'	2.18	0.43
1:QA:995:C:H2'	1:QA:996:A:H8	1.82	0.43
13:QN:27:CYS:HB3	13:QN:43:CYS:SG	2.58	0.43
32:RA:184:C:H2'	32:RA:185:U:C6	2.53	0.43
32:RA:2115:G:N7	32:RA:2117:A:H5''	2.33	0.43
32:RA:2144:U:H4'	32:RA:2145:C:OP1	2.16	0.43
32:RA:635:C:O2'	32:RA:639:U:OP1	2.35	0.43
1:XA:1404:C:H2'	1:XA:1405:G:C8	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:335:C:H2'	1:XA:336:C:H6	1.83	0.43
7:XG:116:ALA:O	7:XG:120:ILE:HG12	2.18	0.43
9:XI:63:ILE:HG21	9:XI:77:ILE:HG12	2.00	0.43
32:YA:1845:G:OP1	34:YD:258:LYS:NZ	2.43	0.43
32:YA:2144:U:H4'	32:YA:2145:C:OP1	2.17	0.43
32:YA:826:U:OP1	32:YA:2428:G:H3'	2.17	0.43
32:YA:1027:A:C2	32:YA:2488:A:H5'	2.53	0.43
32:YA:297:C:OP1	50:YY:87:LYS:NZ	2.43	0.43
32:YA:2758:A:C5	37:YH:67:LEU:HD11	2.53	0.43
37:YH:92:ILE:CD1	37:YH:92:ILE:N	2.81	0.43
45:YT:136:GLN:C	45:YT:137:LYS:HG3	2.37	0.43
1:QA:1128:C:H4'	9:QI:16:ARG:NH2	2.28	0.43
1:QA:1055:A:N7	1:QA:1200:C:N4	2.65	0.43
1:QA:1210:C:O2'	1:QA:1213:A:O2'	2.29	0.43
1:QA:176:C:H2'	1:QA:177:C:H6	1.83	0.43
1:QA:299:G:H2'	1:QA:300:A:C8	2.53	0.43
2:QB:156:LYS:CA	2:QB:156:LYS:CE	2.91	0.43
4:QD:63:LYS:HE3	4:QD:198:VAL:HG12	1.99	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HG13	2.19	0.43
32:RA:1266:G:O6	48:RW:13:SER:OG	2.30	0.43
32:RA:300:A:OP1	50:RY:86:ARG:NH2	2.51	0.43
32:RA:590:A:H2'	32:RA:591:C:C6	2.54	0.43
33:RB:60:C:H2'	33:RB:61:G:H8	1.83	0.43
41:RP:14:LYS:O	41:RP:14:LYS:HG3	2.17	0.43
46:RU:91:ASP:HA	46:RU:95:LEU:HB2	1.99	0.43
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.35	0.43
1:XA:1308:U:H2'	1:XA:1309:G:H8	1.83	0.43
1:XA:440:A:H3'	1:XA:442:C:H6	1.82	0.43
1:XA:998(A):C:H2'	1:XA:999:U:C5	2.53	0.43
4:XD:9:CYS:O	4:XD:13:ARG:HB2	2.17	0.43
6:XF:28:ARG:NH1	6:XF:31:GLU:OE1	2.51	0.43
7:XG:91:VAL:HG23	7:XG:96:GLN:HG3	2.00	0.43
1:XA:707:C:H4'	11:XK:20:TYR:CD2	2.53	0.43
18:XS:27:GLU:HG3	18:XS:29:ARG:NH1	2.33	0.43
21:XW:1:C:H2'	21:XW:2:G:C8	2.51	0.43
22:XX:5:A:H2'	22:XX:6:G:H8	1.82	0.43
32:YA:1113:U:H2'	32:YA:1114:G:C8	2.53	0.43
32:YA:1316:U:H2'	32:YA:1317:A:C8	2.53	0.43
32:YA:1403:C:H5''	32:YA:1471:A:H1'	1.99	0.43
32:YA:2734:A:H5'	32:YA:2735:G:OP2	2.18	0.43
32:YA:859:G:O2'	32:YA:860:U:P	2.75	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YB:66:A:H61	33:YB:107:U:H2'	1.83	0.43
32:YA:270(N):G:OP1	38:YI:57:ARG:NH1	2.51	0.43
42:YQ:58:PHE:HE1	42:YQ:117:ALA:CB	2.31	0.43
47:YV:37:VAL:CG2	47:YV:57:VAL:HG13	2.48	0.43
55:YZ:23:LYS:HE2	55:YZ:38:TYR:CE1	2.52	0.43
1:QA:436:C:H2'	1:QA:437:U:H6	1.84	0.43
2:QB:126:GLU:OE1	2:QB:126:GLU:HA	2.18	0.43
8:QH:91:ARG:HB2	51:QL:7:ILE:HG13	2.00	0.43
12:QM:66:LEU:HB3	12:QM:67:GLU:H	1.53	0.43
52:R1:17:SER:HB2	52:R1:40:ARG:HD2	2.00	0.43
32:RA:1486:A:H2'	32:RA:1487:G:C8	2.53	0.43
32:RA:306:U:C5	32:RA:307:G:N7	2.85	0.43
35:RE:68:ALA:C	35:RE:70:ALA:H	2.22	0.43
50:RY:28:LYS:N	50:RY:38:ILE:O	2.51	0.43
1:XA:1391:U:H2'	1:XA:1392:G:H8	1.80	0.43
1:XA:1512:U:H2'	1:XA:1513:A:H8	1.82	0.43
1:XA:1512:U:H2'	1:XA:1513:A:C8	2.53	0.43
1:XA:464:G:C6	1:XA:466:C:H5'	2.54	0.43
25:Y2:15:LYS:HD3	25:Y2:15:LYS:HA	1.85	0.43
32:YA:2150:U:H2'	32:YA:2151:G:C8	2.53	0.43
32:YA:2208:U:H2'	32:YA:2209:C:C6	2.52	0.43
32:YA:2572:A:C2'	35:YE:144:ARG:HD3	2.48	0.43
32:YA:2689:U:H4'	32:YA:2690:C:O5'	2.17	0.43
32:YA:690:G:H2'	32:YA:691:C:C6	2.53	0.43
39:YN:63:THR:OG1	39:YN:64:GLY:N	2.51	0.43
53:Y8:30:ARG:HH21	41:YP:63:PRO:HB2	1.83	0.43
1:QA:1290:G:H5'	7:QG:38:LEU:HD11	1.99	0.43
1:QA:1347:G:O2'	1:QA:1348:U:P	2.76	0.43
1:QA:524:G:H2'	1:QA:525:C:C6	2.53	0.43
2:QB:102:LEU:N	2:QB:102:LEU:CD1	2.81	0.43
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.48	0.43
6:QF:36:ARG:NH2	6:QF:66:GLU:OE1	2.48	0.43
12:QM:87:TYR:HB2	18:QS:73:GLU:HA	2.00	0.43
52:R1:85:LEU:HD22	52:R1:85:LEU:N	2.32	0.43
27:R4:16:CYS:SG	27:R4:17:GLY:N	2.92	0.43
32:RA:1057:A:H2'	32:RA:1058:G:C8	2.53	0.43
32:RA:2219:G:OP1	34:RD:172:TYR:OH	2.30	0.43
32:RA:2318:G:OP2	32:RA:2318:G:N2	2.51	0.43
29:R6:54:ILE:HD11	32:RA:2420:C:H5'	2.00	0.43
34:RD:153:ALA:O	34:RD:157:ARG:NH1	2.51	0.43
32:RA:1568:G:P	34:RD:63:ARG:HH22	2.42	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RE:52:LEU:O	35:RE:74:PRO:HA	2.19	0.43
54:RF:133:ASN:O	54:RF:138:GLU:OE1	2.36	0.43
54:RF:39:TRP:HD1	54:RF:99:TYR:CE1	2.36	0.43
41:RP:49:ARG:HH12	53:R8:4:MET:HE1	1.83	0.43
55:RZ:10:ARG:HE	55:RZ:26:GLY:H	1.67	0.43
55:RZ:68:PRO:O	55:RZ:91:LEU:HB2	2.18	0.43
1:XA:1343:G:H2'	1:XA:1344:C:H6	1.82	0.43
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.83	0.43
51:XL:111:LYS:HA	51:XL:111:LYS:HD3	1.77	0.43
1:XA:1229:A:O2'	21:XV:30:G:OP1	2.33	0.43
53:Y8:15:LYS:N	41:YP:65:ARG:HH22	2.16	0.43
32:YA:1022:G:O2'	32:YA:1023:U:OP2	2.31	0.43
32:YA:1518:C:H2'	32:YA:1519:G:H8	1.82	0.43
32:YA:2515:C:H2'	32:YA:2516:G:H8	1.84	0.43
32:YA:65:C:O2'	32:YA:456:C:N3	2.36	0.43
32:YA:639:U:H2'	32:YA:640:C:C6	2.54	0.43
32:YA:196:A:H5''	41:YP:46:LYS:HZ3	1.83	0.43
1:QA:41:G:H2'	1:QA:42:G:C8	2.53	0.43
1:QA:606:G:H21	1:QA:632:A:H2	1.67	0.43
1:QA:908:A:H2'	1:QA:909:A:C8	2.52	0.43
2:QB:188:ALA:O	2:QB:203:GLY:O	2.37	0.43
1:QA:1305:G:OP1	20:QU:2:GLY:N	2.51	0.43
23:QZ:34:THR:O	23:QZ:37:THR:C	2.56	0.43
23:QZ:44:LYS:O	23:QZ:45:PRO:C	2.56	0.43
32:RA:2432:A:C5	52:R1:33:LYS:HG3	2.54	0.43
32:RA:2212:A:H1'	32:RA:2215:G:C5	2.53	0.43
34:RD:72:LYS:HG3	34:RD:97:TYR:HE2	1.83	0.43
38:RI:81:VAL:HG12	38:RI:143:SER:CB	2.48	0.43
55:RZ:122:ARG:HD3	55:RZ:122:ARG:HA	1.66	0.43
1:XA:1040:U:C6	1:XA:1040:U:C4'	3.01	0.43
1:XA:1371:G:O3'	9:XI:69:GLY:HA3	2.18	0.43
1:XA:1239:A:O2'	7:XG:114:ARG:O	2.31	0.43
8:XH:9:MET:HG3	8:XH:26:VAL:HG11	1.99	0.43
32:YA:1587:A:H2'	32:YA:1588:C:C6	2.53	0.43
32:YA:2030:A:H4'	32:YA:2031:A:C8	2.53	0.43
32:YA:2287:A:O2'	32:YA:2288:A:O5'	2.33	0.43
32:YA:2572:A:H2'	35:YE:144:ARG:HD3	2.00	0.43
32:YA:2649:U:H2'	32:YA:2650:U:C6	2.54	0.43
32:YA:2688:U:OP1	32:YA:2713:A:N6	2.50	0.43
32:YA:839:U:H1'	32:YA:1191:G:H1'	2.00	0.43
46:YU:105:VAL:HG21	47:YV:39:LEU:HD21	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:142:LEU:C	2:QB:142:LEU:CD2	2.85	0.43
18:QS:10:PHE:HE2	18:QS:16:LEU:HD13	1.83	0.43
32:RA:1316:U:H2'	32:RA:1317:A:C8	2.53	0.43
32:RA:1488:G:H5'	32:RA:1489:U:OP2	2.19	0.43
38:RI:100:ALA:O	38:RI:104:GLN:CB	2.66	0.43
40:RO:107:ARG:NH1	45:RT:36:GLU:OE1	2.51	0.43
1:XA:135:C:H2'	1:XA:136:C:H5'	2.00	0.43
7:XG:15:ASP:HB3	7:XG:19:GLY:H	1.83	0.43
51:XL:53:ARG:HG3	51:XL:93:LEU:HD21	2.01	0.43
16:XQ:86:GLU:O	16:XQ:90:ILE:HG12	2.19	0.43
32:YA:99:U:H1'	32:YA:102:G:C2	2.54	0.43
32:YA:1057:A:H2'	32:YA:1058:G:C8	2.53	0.43
32:YA:2291:U:O2'	32:YA:2374:C:O2	2.37	0.43
32:YA:248:G:H5'	32:YA:250:G:N7	2.32	0.43
32:YA:404:C:H4'	32:YA:405:U:H5''	1.99	0.43
32:YA:949:C:H2'	32:YA:950:G:H8	1.83	0.43
35:YE:4:ILE:HG13	35:YE:31:CYS:SG	2.58	0.43
41:YP:71:VAL:CG1	41:YP:72:PRO:CD	2.92	0.43
32:YA:2255:G:H1	42:YQ:85:LYS:NZ	2.17	0.43
45:YT:133:GLU:HA	45:YT:137:LYS:NZ	2.33	0.43
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.54	0.43
1:QA:126:G:C6	1:QA:236:G:O6	2.71	0.43
1:QA:1356:G:H2'	1:QA:1357:A:H8	1.84	0.43
21:QW:30:G:H2'	21:QW:31:G:C8	2.52	0.43
32:RA:1339:G:H5''	49:RX:16:LYS:HD3	2.00	0.43
32:RA:710:G:H2'	32:RA:711:G:H8	1.83	0.43
42:RQ:21:THR:HB	42:RQ:22:LYS:H	1.70	0.43
55:RZ:155:LEU:HD12	55:RZ:163:LEU:HD11	2.01	0.43
55:RZ:76:LEU:HA	55:RZ:83:PRO:HA	2.00	0.43
1:XA:407:G:H2'	1:XA:408:A:C8	2.53	0.43
1:XA:41:G:H2'	1:XA:42:G:H8	1.83	0.43
10:XJ:87:THR:OG1	10:XJ:88:LEU:N	2.52	0.43
18:XS:27:GLU:HG3	18:XS:29:ARG:HD3	2.01	0.43
23:XY:35:ARG:NH2	23:XZ:10:TRP:CD1	2.86	0.43
23:XZ:48:LEU:HD13	23:XZ:52:LEU:HB3	2.00	0.43
53:Y8:29:LYS:HB2	53:Y8:33:ASN:HD21	1.83	0.43
32:YA:1226:G:OP1	47:YV:86:GLY:HA3	2.19	0.43
32:YA:1430:C:H2'	32:YA:1431:U:C6	2.54	0.43
32:YA:1796:U:H2'	32:YA:1797:C:H6	1.83	0.43
32:YA:1814:G:OP2	32:YA:1815:A:O2'	2.28	0.43
32:YA:2180:U:H2'	32:YA:2181:G:C8	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YH:7:LEU:HB3	37:YH:69:ARG:HH21	1.83	0.43
41:YP:97:PRO:HG3	41:YP:148:LEU:CD2	2.48	0.43
42:YQ:57:HIS:NE2	42:YQ:116:GLU:CG	2.81	0.43
32:YA:2873:A:H8	43:YR:6:SER:N	2.16	0.43
50:YY:47:LYS:NZ	50:YY:48:ALA:O	2.46	0.43
1:QA:1300:G:HO2'	1:QA:1301:U:P	2.41	0.43
1:QA:859:A:OP2	1:QA:869:G:N1	2.42	0.43
1:QA:908:A:H2'	1:QA:909:A:H8	1.82	0.43
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.19	0.43
2:QB:69:LEU:HB3	2:QB:162:ILE:HD13	2.01	0.43
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB2	2.01	0.43
12:QM:108:ARG:HH21	12:QM:114:ARG:HD3	1.84	0.43
18:QS:32:LYS:HD2	18:QS:50:ALA:HB3	2.01	0.43
1:QA:966:G:C2	21:QV:34:C:H5'	2.54	0.43
23:QY:10:TRP:CH2	23:QZ:5:TRP:CZ2	3.07	0.43
52:R1:14:VAL:HG22	52:R1:41:ARG:HD2	2.01	0.43
52:R1:69:LYS:O	52:R1:73:LEU:HG	2.18	0.43
28:R5:41:PRO:O	28:R5:44:THR:OG1	2.34	0.43
32:RA:1151:G:H5''	46:RU:81:HIS:CE1	2.54	0.43
32:RA:1224:G:H5'	32:RA:1225:C:OP2	2.18	0.43
32:RA:1681:G:OP2	32:RA:1681:G:H8	2.01	0.43
32:RA:2025:C:H2'	32:RA:2026:C:C6	2.54	0.43
32:RA:2129:C:H3'	32:RA:2130:U:C5'	2.49	0.43
32:RA:602:G:C2	32:RA:654(V):A:N6	2.87	0.43
32:RA:764:A:H5'	34:RD:210:GLY:HA2	2.00	0.43
32:RA:855:G:H1	32:RA:922:U:H3	1.65	0.43
36:RG:33:ARG:H	36:RG:162:THR:HG22	1.84	0.43
49:RX:25:LYS:HB3	49:RX:80:ILE:HD11	2.00	0.43
32:RA:336:C:H4'	50:RY:6:HIS:CE1	2.53	0.43
1:XA:1028(B):C:H3'	1:XA:1029:G:H4'	2.01	0.43
3:XC:20:SER:OG	3:XC:22:TRP:NE1	2.51	0.43
4:XD:94:LEU:HA	4:XD:94:LEU:HD23	1.92	0.43
11:XK:86:GLY:H	11:XK:112:THR:HG23	1.83	0.43
1:XA:1331:G:OP2	12:XM:23:TYR:HD1	2.02	0.43
18:XS:49:ILE:HD13	18:XS:71:LEU:CD2	2.48	0.43
32:YA:1032:A:H2	32:YA:1122:G:H22	1.67	0.43
32:YA:1496:A:H8	32:YA:1577:C:HO2'	1.67	0.43
32:YA:2191:G:HO2'	32:YA:2192:G:P	2.39	0.43
34:YD:7:LYS:O	34:YD:9:TYR:N	2.42	0.43
35:YE:77:ILE:HD12	35:YE:77:ILE:O	2.18	0.43
36:YG:32:PRO:HB2	36:YG:172:LEU:HD22	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YQ:84:GLY:O	42:YQ:85:LYS:HB2	2.19	0.43
45:YT:133:GLU:HA	45:YT:137:LYS:HZ3	1.82	0.43
47:YV:27:ALA:O	47:YV:64:HIS:CE1	2.71	0.43
32:YA:2451:A:C4	56:ZA:76:PPU:HD2	2.54	0.43
1:QA:1145:C:H4'	1:QA:1146:A:C8	2.53	0.43
1:QA:1065:U:O5'	1:QA:1190:G:N2	2.51	0.43
9:QI:77:ILE:O	9:QI:81:ILE:HG12	2.18	0.43
13:QN:42:ILE:O	13:QN:46:GLU:HG3	2.18	0.43
19:QT:29:LYS:O	19:QT:33:ILE:HG12	2.19	0.43
32:RA:1655:A:H4'	35:RE:115:GLY:H	1.84	0.43
32:RA:1769:G:O2'	32:RA:1958:C:OP1	2.28	0.43
32:RA:997:G:OP1	46:RU:93:LYS:HB2	2.19	0.43
41:RP:18:ARG:HH21	41:RP:32:THR:HG21	1.84	0.43
1:XA:1033:G:H2'	1:XA:1034:G:H8	1.83	0.43
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.19	0.43
1:XA:1355:G:H2'	1:XA:1356:G:C8	2.52	0.43
1:XA:1427:U:H2'	1:XA:1428:A:H8	1.84	0.43
32:YA:1168:G:H2'	32:YA:1169:G:H8	1.84	0.43
32:YA:1352:U:O2'	32:YA:1570:A:N3	2.49	0.43
32:YA:2064:C:H2'	32:YA:2065:C:H6	1.84	0.43
32:YA:2128:C:H2'	32:YA:2129:C:C6	2.53	0.43
32:YA:2572:A:N7	35:YE:144:ARG:CG	2.72	0.43
32:YA:532:A:OP1	32:YA:561:G:N2	2.50	0.43
32:YA:571:A:O2'	47:YV:78:LYS:HE2	2.18	0.43
32:YA:900:A:N3	32:YA:900:A:H2'	2.33	0.43
32:YA:2748:A:C8	37:YH:63:SER:HA	2.51	0.43
1:QA:323:U:H2'	1:QA:324:G:O4'	2.19	0.43
1:QA:754:C:OP1	14:QO:72:ARG:NH2	2.50	0.43
2:QB:16:HIS:ND1	2:QB:16:HIS:C	2.72	0.43
2:QB:71:VAL:CG2	2:QB:93:VAL:HG11	2.46	0.43
9:QI:97:LYS:HB3	9:QI:97:LYS:HE3	1.80	0.43
12:QM:11:ARG:HA	12:QM:11:ARG:HD3	1.84	0.43
32:RA:987:G:O2'	32:RA:1000:A:N3	2.43	0.43
32:RA:839:U:H1'	32:RA:1191:G:H1'	2.01	0.43
32:RA:2154:G:H2'	32:RA:2155:G:H8	1.84	0.43
32:RA:2790:A:C2'	32:RA:2791:C:H5'	2.49	0.43
32:RA:959:A:H62	42:RQ:82:ARG:HH21	1.65	0.43
21:XV:23:C:H2'	21:XV:24:U:C6	2.54	0.43
21:XW:36:U:H2'	21:XW:37:A:H8	1.84	0.43
32:YA:1075:C:H2'	32:YA:1076:C:H6	1.84	0.43
32:YA:1262:A:OP2	48:YW:97:LYS:NZ	2.48	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:2148:G:H2'	32:YA:2149:G:C8	2.51	0.43
32:YA:2217:G:H2'	32:YA:2218:G:H8	1.84	0.43
32:YA:918:A:N3	33:YB:80:U:O2'	2.44	0.43
35:YE:188:VAL:HG23	35:YE:189:PRO:HD2	2.00	0.43
35:YE:87:GLU:OE1	35:YE:87:GLU:N	2.44	0.43
37:YH:146:ALA:O	37:YH:149:ARG:HB3	2.19	0.43
42:YQ:17:LEU:HB3	42:YQ:39:PRO:HB3	2.01	0.43
1:QA:125:U:H2'	1:QA:126:G:C8	2.53	0.42
2:QB:80:ILE:HG12	2:QB:212:GLN:HG3	2.01	0.42
2:QB:219:VAL:CA	2:QB:222:ILE:HD11	2.46	0.42
4:QD:61:LYS:HB3	4:QD:61:LYS:HE3	1.84	0.42
11:QK:34:ASP:OD1	11:QK:38:ASN:N	2.51	0.42
22:QX:21:OMU:H5''	23:QY:59:ARG:NH2	2.34	0.42
32:RA:1245:G:OP1	41:RP:13:ASN:ND2	2.51	0.42
32:RA:1303:G:H5''	32:RA:1643:G:H1'	2.00	0.42
32:RA:2306:C:N4	36:RG:42:GLY:O	2.52	0.42
32:RA:380:U:H5'	52:R1:18:ILE:HD12	2.00	0.42
32:RA:734:A:O2'	32:RA:1635:G:H5'	2.19	0.42
35:RE:64:LYS:O	35:RE:66:HIS:N	2.48	0.42
46:RU:91:ASP:O	46:RU:95:LEU:N	2.52	0.42
55:RZ:124:ILE:HD12	55:RZ:124:ILE:HA	1.90	0.42
1:XA:299:G:H2'	1:XA:300:A:C8	2.54	0.42
1:XA:403:C:H2'	1:XA:404:U:H6	1.84	0.42
1:XA:563:A:H2'	1:XA:567:G:C8	2.54	0.42
4:XD:50:ARG:HD2	4:XD:51:PRO:HD2	2.01	0.42
1:XA:1178:G:OP2	9:XI:93:ARG:NH2	2.52	0.42
32:YA:693:C:O2'	32:YA:1353:A:N3	2.48	0.42
32:YA:1557:C:OP2	32:YA:1558:A:O2'	2.23	0.42
32:YA:2147:G:H2'	32:YA:2148:G:C8	2.54	0.42
32:YA:2315:G:OP1	36:YG:36:LYS:NZ	2.33	0.42
32:YA:2441:C:OP2	32:YA:2586:C:O2'	2.37	0.42
32:YA:2836:U:H2'	32:YA:2837:G:C8	2.54	0.42
32:YA:305:U:H2'	32:YA:306:U:C6	2.54	0.42
32:YA:671:C:H2'	32:YA:672:C:C6	2.53	0.42
35:YE:132:HIS:O	35:YE:134:ILE:HG23	2.19	0.42
35:YE:56:PRO:C	35:YE:58:ARG:N	2.72	0.42
35:YE:84:PHE:CE2	35:YE:86:PRO:HD3	2.54	0.42
39:YN:26:LEU:O	39:YN:30:ILE:HG13	2.19	0.42
32:RA:2583:G:O2'	56:ZB:76:PPU:H102	2.19	0.42
2:QB:213:LEU:C	2:QB:213:LEU:CD2	2.85	0.42
2:QB:21:ARG:CB	2:QB:39:ILE:CD1	2.82	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:74:LYS:NZ	2:QB:206:ASP:HA	2.34	0.42
14:QO:87:ILE:HG22	14:QO:88:ARG:H	1.84	0.42
24:R0:36:ILE:HA	24:R0:60:PHE:HA	2.01	0.42
29:R6:8:LYS:NZ	53:R8:34:TRP:CE2	2.88	0.42
32:RA:1181:C:H2'	32:RA:1182:A:C8	2.54	0.42
32:RA:2176:A:H2'	32:RA:2177:C:C6	2.54	0.42
32:RA:2068:U:H3	32:RA:2430:A:H2	1.67	0.42
32:RA:30:G:H2'	32:RA:31:C:C6	2.54	0.42
32:RA:519:U:H2'	32:RA:520:G:H8	1.84	0.42
1:XA:1392:G:N2	1:XA:1502:A:H8	2.16	0.42
1:XA:937:A:C2	1:XA:1379:G:C6	3.06	0.42
4:XD:184:LYS:HB3	4:XD:184:LYS:HE3	1.73	0.42
18:XS:50:ALA:HB1	18:XS:57:HIS:HB3	2.01	0.42
32:YA:1054:A:H2'	32:YA:1055:G:C8	2.54	0.42
32:YA:1153:C:H2'	32:YA:1154:G:O4'	2.19	0.42
32:YA:2804:C:H2'	32:YA:2805:G:O4'	2.19	0.42
32:YA:389:G:C6	41:YP:71:VAL:HG12	2.53	0.42
32:YA:919:G:N2	32:YA:2269:A:OP2	2.53	0.42
41:YP:84:ASN:OD1	41:YP:117:GLU:HB2	2.18	0.42
1:QA:1100:C:H6	1:QA:1100:C:OP2	2.03	0.42
22:QX:19:A2M:H4'	22:QX:20:A2M:N3	2.33	0.42
24:R0:19:LYS:HA	24:R0:19:LYS:HD3	1.85	0.42
32:RA:1637:A:H4'	32:RA:2711:A:O2'	2.19	0.42
32:RA:1800:C:N4	32:RA:1817:G:H22	2.16	0.42
32:RA:2030:A:H4'	32:RA:2031:A:C8	2.54	0.42
32:RA:2111:C:C2	32:RA:2118:U:H1'	2.54	0.42
32:RA:675:A:H4'	54:RF:67:GLN:OE1	2.18	0.42
35:RE:92:THR:OG1	35:RE:93:VAL:N	2.53	0.42
54:RF:80:ALA:HB3	54:RF:83:PHE:CD2	2.54	0.42
1:XA:1221:G:OP1	1:XA:1321:C:N4	2.36	0.42
1:XA:1438:G:OP1	19:XT:34:LYS:HD3	2.19	0.42
6:XF:61:LEU:HD23	6:XF:63:TYR:CE2	2.54	0.42
12:XM:52:GLU:HG2	12:XM:55:ARG:HH21	1.84	0.42
32:YA:1311:G:O2'	32:YA:1313:U:O4	2.31	0.42
32:YA:151:C:H2'	32:YA:152:G:C8	2.53	0.42
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.19	0.42
1:QA:714:G:H2'	1:QA:715:A:C8	2.54	0.42
2:QB:135:GLN:C	2:QB:139:LYS:HG2	2.39	0.42
19:QT:26:ASN:HB2	19:QT:71:THR:HG23	2.02	0.42
32:RA:2074:U:H2'	32:RA:2075:U:C6	2.54	0.42
32:RA:2171:A:O2'	32:RA:2172:U:O4'	2.35	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:2748:A:O2'	37:RH:66:GLY:HA3	2.19	0.42
32:RA:350:U:H2'	32:RA:351:G:O4'	2.20	0.42
32:RA:932:G:H4'	32:RA:933:A:O5'	2.19	0.42
33:RB:24:G:H1'	33:RB:27:C:N4	2.34	0.42
34:RD:27:THR:HG21	34:RD:83:GLU:HG2	2.00	0.42
47:RV:45:THR:OG1	47:RV:45:THR:O	2.34	0.42
55:RZ:10:ARG:HG2	55:RZ:37:VAL:C	2.40	0.42
1:XA:1348:U:H3	1:XA:1374:A:H2	1.66	0.42
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.54	0.42
3:XC:43:LEU:O	3:XC:47:LEU:HB2	2.18	0.42
12:XM:66:LEU:HB3	12:XM:67:GLU:H	1.64	0.42
23:XZ:37:THR:HG21	23:XZ:40:GLU:CA	2.48	0.42
53:Y8:29:LYS:HG3	53:Y8:30:ARG:H	1.84	0.42
32:YA:1794:U:H2'	32:YA:1795:C:H6	1.83	0.42
32:YA:582:G:H2'	32:YA:583:G:C8	2.55	0.42
34:YD:136:ILE:HG22	34:YD:140:THR:OG1	2.19	0.42
42:YQ:60:ARG:CA	55:YZ:179:ASP:CA	2.57	0.42
51:QL:88:GLY:O	51:QL:99:HIS:ND1	2.50	0.42
32:RA:651:G:OP2	53:R8:21:LYS:CE	2.67	0.42
32:RA:1571:A:H2'	32:RA:1572:A:H8	1.84	0.42
54:RF:161:GLU:HG2	54:RF:165:ARG:HD2	2.02	0.42
36:RG:63:ILE:HG22	36:RG:143:GLU:HB2	2.01	0.42
40:RO:8:LEU:HB2	40:RO:19:ILE:HG13	2.01	0.42
1:XA:950:U:OP2	12:XM:102:ARG:HD2	2.20	0.42
32:YA:1578:U:C2'	32:YA:1579:A:H5'	2.50	0.42
32:YA:180:G:N2	32:YA:215:G:O6	2.53	0.42
32:YA:2680:C:H1'	35:YE:187:ALA:CB	2.50	0.42
32:YA:953:A:H2'	32:YA:954:G:H5'	2.00	0.42
32:YA:1818:U:H2'	34:YD:157:ARG:HG2	2.02	0.42
34:YD:155:LEU:CD2	34:YD:177:LEU:HD21	2.41	0.42
32:YA:2680:C:H1'	35:YE:187:ALA:HB1	2.00	0.42
54:YF:70:THR:HG23	54:YF:72:ARG:H	1.85	0.42
40:YO:102:VAL:HG23	40:YO:121:VAL:HG13	2.00	0.42
41:YP:121:LYS:HD3	41:YP:123:LEU:HD11	2.01	0.42
42:YQ:32:TYR:OH	42:YQ:111:GLU:HB2	2.20	0.42
47:YV:34:GLU:C	47:YV:35:LEU:HD12	2.39	0.42
1:QA:1007:C:H3'	1:QA:1008:C:H5"	2.02	0.42
1:QA:1296:C:H5'	12:QM:14:ARG:HD2	2.01	0.42
1:QA:17:U:H2'	1:QA:18:C:H6	1.84	0.42
1:QA:954:G:O6	12:QM:104:ARG:NH1	2.52	0.42
32:RA:1101:U:H2'	32:RA:1102:C:H6	1.84	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:1889:A:H2'	32:RA:1890:A:C8	2.54	0.42
32:RA:2419:U:OP1	53:R8:41:ILE:CD1	2.68	0.42
32:RA:2441:C:OP2	32:RA:2586:C:O2'	2.37	0.42
32:RA:309:G:C8	32:RA:309:G:P	3.13	0.42
38:RI:83:ALA:HA	38:RI:89:TYR:CD2	2.55	0.42
38:RI:93:THR:HG23	38:RI:96:ASP:H	1.85	0.42
40:RO:104:ARG:HH11	40:RO:121:VAL:HG12	1.84	0.42
55:RZ:29:TYR:HA	55:RZ:34:ASN:HA	2.00	0.42
55:RZ:48:PHE:CE1	55:RZ:52:SER:HA	2.54	0.42
1:XA:781:A:O2'	1:XA:1522:U:O2	2.36	0.42
1:XA:619:U:N3	4:XD:134:ASP:OD1	2.37	0.42
4:XD:57:ARG:HB3	4:XD:206:PHE:HB2	2.01	0.42
51:XL:17:LYS:HA	51:XL:17:LYS:HD3	1.84	0.42
19:XT:29:LYS:O	19:XT:33:ILE:HG12	2.19	0.42
32:YA:2455:G:H2'	32:YA:2456:C:C6	2.54	0.42
32:YA:2853:C:H2'	32:YA:2854:G:C8	2.54	0.42
32:YA:1790:C:O2'	34:YD:209:ALA:HB2	2.19	0.42
35:YE:80:GLU:C	35:YE:81:ILE:HD12	2.40	0.42
37:YH:35:VAL:HG21	37:YH:71:LEU:HD13	2.01	0.42
40:YO:73:ASP:HA	35:YE:20:ALA:H	1.85	0.42
56:ZB:74:C:H2'	56:ZB:75:C:H5'	2.02	0.42
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.54	0.42
1:QA:360:A:H2'	1:QA:361:G:C8	2.55	0.42
1:QA:827:U:H3	1:QA:872:A:H62	1.67	0.42
2:QB:79:ASP:OD1	2:QB:79:ASP:N	2.52	0.42
2:QB:8:LYS:HD2	2:QB:8:LYS:HA	1.88	0.42
2:QB:71:VAL:CG1	2:QB:97:TRP:CE3	3.00	0.42
51:QL:46:LYS:HG2	51:QL:47:LYS:H	1.84	0.42
27:R4:28:LYS:HE2	27:R4:28:LYS:HB3	1.89	0.42
32:RA:392:C:H5''	32:RA:409:C:H5''	2.02	0.42
32:RA:710:G:H2'	32:RA:711:G:C8	2.54	0.42
34:RD:108:PRO:HB3	34:RD:143:HIS:CE1	2.53	0.42
47:RV:62:LEU:HB2	47:RV:93:GLU:HB3	2.01	0.42
55:RZ:44:PHE:CD2	55:RZ:44:PHE:C	2.92	0.42
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.54	0.42
1:XA:1273:G:H3'	1:XA:1274:G:H8	1.85	0.42
1:XA:908:A:H2'	1:XA:909:A:C8	2.55	0.42
32:YA:1275:A:N1	32:YA:1295:C:O2'	2.50	0.42
32:YA:184:C:H2'	32:YA:185:U:C6	2.55	0.42
34:YD:204:ILE:O	34:YD:204:ILE:HG13	2.20	0.42
34:YD:88:ARG:NH1	34:YD:88:ARG:HG3	2.33	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YH:75:ALA:O	37:YH:79:VAL:HG22	2.19	0.42
42:YQ:37:LEU:HB2	42:YQ:128:LYS:O	2.19	0.42
47:YV:35:LEU:HB2	47:YV:57:VAL:HG22	2.02	0.42
49:YX:34:ALA:O	49:YX:77:LYS:NZ	2.41	0.42
4:QD:9:CYS:O	4:QD:13:ARG:HB2	2.19	0.42
23:QY:36:ARG:HH11	23:QY:36:ARG:HB2	1.85	0.42
32:RA:1230:C:H2'	32:RA:1231:G:C8	2.55	0.42
32:RA:1550:C:H5'	32:RA:1733:G:N2	2.35	0.42
32:RA:1605:C:H2'	32:RA:1606:G:O4'	2.20	0.42
32:RA:1935:G:H1'	32:RA:1964:G:N2	2.35	0.42
32:RA:2447:G:H4'	32:RA:2448:A:O5'	2.20	0.42
32:RA:2649:U:H2'	32:RA:2650:U:C6	2.54	0.42
32:RA:2873:A:H8	43:RR:6:SER:N	2.17	0.42
37:RH:4:ILE:HB	37:RH:6:ARG:HD3	2.01	0.42
41:RP:52:GLU:OE2	41:RP:55:ARG:NH2	2.53	0.42
1:XA:186(F):C:H2'	1:XA:187:C:O4'	2.20	0.42
1:XA:1108:G:H5'	3:XC:176:HIS:CD2	2.55	0.42
51:XL:56:ALA:HB2	51:XL:70:ILE:HD11	2.02	0.42
1:XA:110:C:O2'	15:XP:25:ARG:O	2.36	0.42
1:XA:1313:U:P	18:XS:5:LEU:HB2	2.60	0.42
1:XA:1320:C:H5'	18:XS:70:LYS:HG3	2.01	0.42
21:XV:50:U:H2'	21:XV:51:C:C6	2.55	0.42
23:XZ:66:LEU:CD2	23:XZ:66:LEU:C	2.85	0.42
32:YA:1042:G:H2'	32:YA:1043:C:C6	2.55	0.42
32:YA:1411:C:H2'	32:YA:1412:A:H8	1.85	0.42
32:YA:2062:A:N7	32:YA:2503:A:N6	2.57	0.42
32:YA:2405:G:O2'	32:YA:2412:A:N6	2.53	0.42
32:YA:2820:A:HO2'	32:YA:2821:A:P	2.42	0.42
32:YA:303:U:H2'	32:YA:304:G:C8	2.55	0.42
32:YA:338:G:OP1	50:YY:4:LYS:NZ	2.52	0.42
33:YB:31:C:H2'	33:YB:53:A:H61	1.84	0.42
35:YE:188:VAL:CG2	35:YE:189:PRO:HD2	2.48	0.42
32:YA:811:U:H5''	41:YP:23:PRO:HD3	2.02	0.42
44:YS:11:LYS:O	44:YS:15:ARG:HB2	2.20	0.42
1:QA:1177:G:H2'	1:QA:1178:G:N3	2.35	0.42
1:QA:1266:G:H2'	1:QA:1268:A:OP2	2.20	0.42
1:QA:410:G:H21	1:QA:432:A:H62	1.68	0.42
1:QA:67:C:H2'	1:QA:68:G:C8	2.55	0.42
2:QB:71:VAL:HA	2:QB:93:VAL:HG13	2.02	0.42
3:QC:120:VAL:O	3:QC:124:ILE:HG12	2.20	0.42
4:QD:3:ARG:HH22	4:QD:115:ARG:HH11	1.68	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:94:ARG:NH1	7:QG:98:SER:OG	2.53	0.42
12:QM:49:THR:HG22	12:QM:51:ALA:H	1.84	0.42
16:QQ:74:LEU:HA	16:QQ:74:LEU:HD12	1.92	0.42
17:QR:32:ARG:HA	17:QR:69:THR:HG21	2.02	0.42
18:QS:81:ARG:NH2	23:QZ:36:ARG:HD3	2.32	0.42
32:RA:99:U:H1'	32:RA:102:G:C2	2.54	0.42
34:RD:13:ARG:HD2	34:RD:13:ARG:HA	1.88	0.42
32:RA:1566:A:OP1	34:RD:211:ARG:NE	2.52	0.42
54:RF:24:LEU:HD23	54:RF:115:ALA:HA	2.02	0.42
54:RF:153:SER:HB2	54:RF:190:GLU:H	1.83	0.42
36:RG:38:VAL:HG22	36:RG:93:THR:HG23	2.02	0.42
38:RI:88:ILE:HD12	38:RI:121:LYS:HA	2.01	0.42
32:RA:2039:C:OP1	39:RN:109:LYS:NZ	2.53	0.42
44:RS:44:LYS:HE3	44:RS:44:LYS:HB2	1.88	0.42
1:XA:1003:G:H2'	1:XA:1004:A:O4'	2.20	0.42
2:XB:28:PHE:HD1	2:XB:194:PRO:HD3	1.85	0.42
8:XH:56:LYS:HA	8:XH:56:LYS:HD3	1.93	0.42
27:Y4:20:ASN:ND2	27:Y4:36:CYS:SG	2.93	0.42
31:Y9:9:ARG:HB3	31:Y9:9:ARG:HE	1.59	0.42
32:YA:1518:C:H2'	32:YA:1519:G:C8	2.55	0.42
32:YA:1629:U:H2'	32:YA:1630:G:C8	2.54	0.42
32:YA:2735:G:H2'	32:YA:2736:G:H8	1.84	0.42
32:YA:2762:G:H5'	32:YA:2763:G:OP2	2.19	0.42
32:YA:2849:U:OP1	45:YT:95:ARG:NH1	2.53	0.42
42:YQ:115:MET:HG2	42:YQ:131:ILE:HG21	2.01	0.42
32:YA:536:A:OP1	46:YU:53:ARG:NH1	2.53	0.42
1:QA:148:G:H2'	1:QA:149:A:H8	1.84	0.42
1:QA:1492:A:C2	22:QX:22:C:C4	3.07	0.42
1:QA:831:U:C5'	2:QB:22:LYS:HZ1	2.32	0.42
2:QB:139:LYS:O	2:QB:143:GLU:HG3	2.20	0.42
2:QB:24:TRP:CG	2:QB:24:TRP:O	2.72	0.42
3:QC:9:GLY:HA2	3:QC:12:LEU:HG	2.02	0.42
8:QH:51:VAL:HG21	8:QH:60:ARG:HG3	2.01	0.42
12:QM:91:ARG:HB2	12:QM:98:VAL:HG12	2.02	0.42
1:QA:657:G:H4'	14:QO:28:GLN:HG2	2.02	0.42
32:RA:1105:U:H2'	32:RA:1106:G:H8	1.83	0.42
32:RA:1405:U:H2'	32:RA:1406:U:H6	1.84	0.42
32:RA:1523:U:H2'	32:RA:1524:G:H8	1.85	0.42
32:RA:2168:G:H21	32:RA:2169:A:H2	1.68	0.42
32:RA:2776:A:OP1	32:RA:2776:A:H3'	2.20	0.42
33:RB:5:C:OP1	33:RB:61:G:O2'	2.30	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RE:73:GLU:HA	35:RE:74:PRO:HD2	1.64	0.42
37:RH:23:ARG:HE	37:RH:25:LYS:HZ3	1.56	0.42
44:RS:30:ARG:HD2	44:RS:97:ARG:HD3	2.01	0.42
46:RU:84:LYS:HA	46:RU:84:LYS:HD3	1.83	0.42
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.55	0.42
1:XA:1300:G:O2'	1:XA:1301:U:P	2.78	0.42
1:XA:1346:A:H1'	1:XA:1347:G:OP2	2.20	0.42
1:XA:359:U:H2'	1:XA:360:A:H8	1.84	0.42
5:XE:143:ARG:NE	8:XH:77:GLU:OE2	2.48	0.42
23:XZ:44:LYS:N	23:XZ:44:LYS:CD	2.83	0.42
29:Y6:11:LEU:HB2	29:Y6:21:TYR:HB2	2.02	0.42
32:YA:1022:G:N2	32:YA:1023:U:O4	2.50	0.42
32:YA:1075:C:H2'	32:YA:1076:C:C6	2.55	0.42
32:YA:1488:G:H5'	32:YA:1489:U:OP2	2.19	0.42
32:YA:2224:G:OP1	34:YD:268:ARG:NH1	2.53	0.42
32:YA:2329:G:H2'	32:YA:2330:G:H8	1.84	0.42
32:YA:2648:C:H2'	32:YA:2649:U:C6	2.55	0.42
32:YA:2747:G:H21	32:YA:2757:A:H62	1.68	0.42
32:YA:30:G:H2'	32:YA:31:C:C6	2.55	0.42
26:Y3:15:TYR:OH	33:YB:84:C:OP1	2.33	0.42
32:YA:1797:C:O2'	34:YD:259:THR:HG22	2.20	0.42
35:YE:146:THR:HA	35:YE:147:PRO:C	2.40	0.42
35:YE:14:ILE:HG22	35:YE:21:VAL:HG23	2.02	0.42
35:YE:55:ASN:HB3	35:YE:58:ARG:NH2	2.35	0.42
36:YG:166:ASP:OD1	36:YG:166:ASP:N	2.53	0.42
37:YH:26:VAL:HG21	37:YH:75:ALA:CB	2.49	0.42
38:YI:80:PRO:HB2	38:YI:146:ALA:HB2	2.01	0.42
53:Y8:12:LYS:HG2	41:YP:68:GLN:NE2	2.35	0.42
55:YZ:124:ILE:HD11	55:YZ:171:ILE:HD12	2.02	0.42
1:QA:237:C:H2'	1:QA:238:G:C8	2.54	0.41
1:QA:666:G:H5'	1:QA:726:C:H1'	2.01	0.41
1:QA:743:U:H2'	1:QA:744:C:C6	2.55	0.41
2:QB:187:LEU:HD12	2:QB:201:ILE:O	2.19	0.41
51:QL:117:ARG:HH21	51:QL:124:LYS:HD3	1.85	0.41
12:QM:12:ASN:HB3	12:QM:46:LYS:HE3	2.02	0.41
17:QR:47:THR:O	17:QR:83:GLU:N	2.53	0.41
23:QZ:4:ILE:CB	23:QZ:76:LEU:HD23	2.50	0.41
32:RA:1558:A:H1'	32:RA:1559:G:OP2	2.20	0.41
32:RA:218:A:C2	32:RA:235:U:H4'	2.55	0.41
32:RA:2689:U:H4'	32:RA:2690:C:O5'	2.20	0.41
32:RA:2693:A:H2'	32:RA:2694:G:H8	1.83	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:1651:G:H5'	43:RR:39:PRO:HG2	2.02	0.41
1:XA:743:U:H2'	1:XA:744:C:C6	2.54	0.41
1:XA:920:U:H2'	1:XA:921:U:C6	2.55	0.41
1:XA:973:G:H1'	10:XJ:55:LYS:HD2	2.02	0.41
9:XI:16:ARG:NH1	9:XI:64:THR:OG1	2.52	0.41
18:XS:11:VAL:HG11	18:XS:16:LEU:HB2	2.02	0.41
18:XS:58:VAL:HA	18:XS:59:PRO:HD2	1.86	0.41
21:XW:3:C:H2'	21:XW:4:G:H8	1.84	0.41
27:Y4:14:ILE:HB	27:Y4:22:ILE:HB	2.01	0.41
32:YA:2267:A:H5''	32:YA:2268:A:H5'	2.01	0.41
32:YA:270(F):U:H2'	32:YA:270(G):C:C6	2.55	0.41
34:YD:133:LEU:CD1	34:YD:185:VAL:CG1	2.98	0.41
35:YE:128:SER:OG	35:YE:129:HIS:N	2.53	0.41
45:YT:7:ILE:O	45:YT:11:GLU:OE1	2.38	0.41
32:YA:85:G:OP2	50:YY:9:LYS:HB2	2.20	0.41
1:QA:745:C:H2'	1:QA:746:A:C8	2.54	0.41
1:QA:972:C:H4'	10:QJ:57:LYS:HB2	2.02	0.41
16:QQ:28:PRO:HA	16:QQ:35:VAL:HA	2.02	0.41
12:QM:84:ILE:HD13	18:QS:65:ASN:HD21	1.85	0.41
22:QX:19:A2M:H2	23:QY:51:ASN:ND2	2.35	0.41
52:R1:3:LYS:O	52:R1:12:PRO:HD3	2.19	0.41
32:RA:2572:A:OP2	32:RA:2572:A:H8	2.03	0.41
32:RA:394:A:H2'	32:RA:395:U:O4'	2.20	0.41
32:RA:576:U:H2'	32:RA:577:G:C8	2.55	0.41
32:RA:654(G):C:N4	32:RA:654(O):G:O6	2.53	0.41
32:RA:2208:U:O2'	34:RD:150:LYS:O	2.37	0.41
54:RF:152:GLU:OE1	54:RF:191:ARG:HD2	2.20	0.41
36:RG:19:LEU:HD23	36:RG:19:LEU:HA	1.92	0.41
46:RU:75:ASN:HB2	46:RU:78:THR:HG23	2.01	0.41
1:XA:186(A):C:O2'	19:XT:89:ARG:HD3	2.20	0.41
1:XA:194:C:OP1	19:XT:61:SER:OG	2.38	0.41
1:XA:768:A:N3	1:XA:1512:U:O2'	2.50	0.41
16:XQ:28:PRO:HA	16:XQ:35:VAL:HA	2.01	0.41
16:XQ:45:HIS:CD2	16:XQ:47:PRO:HG3	2.56	0.41
6:XF:99:ALA:HB2	17:XR:31:LEU:HD22	2.02	0.41
32:YA:749:C:H5'	32:YA:1271:G:H1'	2.02	0.41
32:YA:1681:G:H8	32:YA:1681:G:OP2	2.03	0.41
32:YA:2329:G:H2'	32:YA:2330:G:C8	2.55	0.41
32:YA:781:A:P	34:YD:218:ARG:NH2	2.93	0.41
34:YD:162:SER:HB3	34:YD:195:ALA:HB1	2.01	0.41
45:YT:7:ILE:HG23	35:YE:181:LEU:HD11	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YT:82:LEU:HD21	35:YE:18:ASP:OD1	2.20	0.41
41:YP:127:ALA:HA	41:YP:148:LEU:CD2	2.47	0.41
44:YS:30:ARG:HD2	44:YS:97:ARG:HD3	2.01	0.41
55:YZ:3:TYR:CE2	55:YZ:51:ALA:HB2	2.55	0.41
1:QA:603:U:H2'	1:QA:604:G:C8	2.55	0.41
1:QA:674:G:H2'	1:QA:675:A:C8	2.49	0.41
11:QK:33:THR:OG1	11:QK:34:ASP:N	2.53	0.41
21:QV:50:U:H2'	21:QV:51:C:C6	2.54	0.41
23:QZ:38:PRO:HG2	23:QZ:39:PHE:CD2	2.55	0.41
32:RA:1264:G:H3'	32:RA:1265:A:H5''	2.01	0.41
32:RA:570:G:H2'	32:RA:2030:A:C5	2.55	0.41
32:RA:2415:G:O3'	41:RP:66:GLY:HA3	2.20	0.41
32:RA:2475:C:H2'	32:RA:2477:C:OP1	2.21	0.41
32:RA:2022:U:O2'	32:RA:2617:C:H5'	2.21	0.41
32:RA:845:G:H8	32:RA:845:G:OP2	2.02	0.41
32:RA:2619:C:H5''	35:RE:152:LYS:HA	2.02	0.41
54:RF:25:PRO:HG2	54:RF:112:MET:HA	2.01	0.41
1:XA:177:C:H2'	1:XA:178:C:H6	1.85	0.41
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD23	1.86	0.41
4:XD:74:GLN:OE1	4:XD:100:ARG:NH1	2.52	0.41
32:YA:1174:A:H62	32:YA:1177:A:H4'	1.84	0.41
32:YA:1358:G:O2'	32:YA:1359:A:H5''	2.19	0.41
32:YA:2243:U:H2'	32:YA:2244:U:C6	2.55	0.41
32:YA:2074:U:HO2'	32:YA:2597:G:HO2'	1.62	0.41
32:YA:851:U:H2'	32:YA:852:G:H8	1.86	0.41
37:YH:96:ALA:O	37:YH:128:PRO:HB3	2.20	0.41
37:YH:97:ARG:HD3	37:YH:99:VAL:HG22	2.01	0.41
55:YZ:58:VAL:HA	55:YZ:67:LEU:O	2.20	0.41
1:QA:407:G:H2'	1:QA:408:A:H8	1.85	0.41
1:QA:918:A:H2'	1:QA:919:A:C8	2.55	0.41
2:QB:115:LEU:HD13	2:QB:145:LEU:CD2	2.44	0.41
3:QC:190:ARG:HA	3:QC:195:VAL:HG22	2.01	0.41
16:QQ:53:LEU:HD12	16:QQ:85:VAL:HG11	2.02	0.41
32:RA:1003:G:O2'	32:RA:1010:A:N1	2.49	0.41
32:RA:550:G:O2'	32:RA:1220:A:N3	2.42	0.41
32:RA:2191:G:O2'	32:RA:2192:G:OP1	2.34	0.41
32:RA:2469:A:H2	32:RA:2481:G:H21	1.67	0.41
32:RA:2692:C:H2'	32:RA:2693:A:H8	1.86	0.41
32:RA:29:U:H2'	32:RA:30:G:H8	1.84	0.41
32:RA:380:U:H2'	32:RA:381:G:C8	2.54	0.41
32:RA:527:C:H4'	32:RA:528:A:O4'	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RB:44:G:H1'	33:RB:47:C:H42	1.85	0.41
32:RA:1788:C:OP1	34:RD:222:ARG:NH2	2.53	0.41
54:RF:116:ASP:O	54:RF:119:ARG:HB3	2.20	0.41
54:RF:110:LEU:HD22	54:RF:205:ARG:HH11	1.85	0.41
38:RI:86:THR:HG22	38:RI:122:GLU:HG3	2.03	0.41
41:RP:115:LEU:HA	41:RP:134:ALA:HB2	2.02	0.41
48:RW:71:VAL:HA	48:RW:107:LEU:HD23	2.02	0.41
1:XA:34:C:H2'	1:XA:35:G:C8	2.55	0.41
1:XA:436:C:H2'	1:XA:437:U:C6	2.55	0.41
1:XA:877:C:OP1	8:XH:88:LYS:HE3	2.21	0.41
1:XA:973:G:O4'	10:XJ:55:LYS:HD2	2.19	0.41
23:XZ:16:TRP:CE3	23:XZ:16:TRP:HA	2.54	0.41
23:XZ:17:GLN:HA	23:XZ:24:VAL:CG2	2.42	0.41
27:Y4:2:LYS:HB3	27:Y4:5:ILE:HG12	2.02	0.41
32:YA:1141:U:O2'	32:YA:1142:U:OP2	2.25	0.41
30:Y7:5:TRP:HD1	32:YA:1612:C:O3'	2.04	0.41
32:YA:2155:G:H2'	32:YA:2156:G:O4'	2.20	0.41
32:YA:226:G:H21	32:YA:228:A:H62	1.68	0.41
32:YA:2674:G:H2'	32:YA:2675:A:C8	2.56	0.41
32:YA:2712:U:O2'	32:YA:2712(A):A:C8	2.72	0.41
32:YA:2773:C:OP1	35:YE:166:THR:OG1	2.39	0.41
32:YA:29:U:H2'	32:YA:30:G:C8	2.54	0.41
32:YA:380:U:H2'	32:YA:381:G:C8	2.55	0.41
32:YA:630:G:N2	32:YA:633:A:OP2	2.45	0.41
32:YA:955:C:H5'	42:YQ:87:LYS:HZ1	1.85	0.41
34:YD:107:ALA:HA	34:YD:108:PRO:HD3	1.81	0.41
37:YH:19:VAL:O	37:YH:19:VAL:HG23	2.20	0.41
39:YN:10:GLU:HA	39:YN:11:PRO:HD3	1.95	0.41
42:YQ:39:PRO:HD3	42:YQ:99:PRO:HG3	2.02	0.41
48:YW:45:TYR:CZ	48:YW:49:LYS:HD2	2.55	0.41
55:YZ:111:VAL:HG21	55:YZ:117:LEU:HB2	2.02	0.41
1:QA:1032:A:N6	32:YA:2167:U:H4'	2.35	0.41
1:QA:1359:C:OP1	13:QN:22:THR:OG1	2.24	0.41
1:QA:455:C:H2'	1:QA:456:C:H6	1.86	0.41
1:QA:731:G:OP1	1:QA:766:A:H1'	2.19	0.41
2:QB:74:LYS:HB3	2:QB:74:LYS:HE2	1.80	0.41
3:QC:95:THR:HG22	3:QC:97:LYS:H	1.84	0.41
1:QA:1236:A:OP1	20:QU:3:LYS:HG3	2.20	0.41
21:QW:16:C:H5''	21:QW:60:U:H1'	2.02	0.41
22:QX:9:G:HO2'	22:QX:10:G:H8	1.66	0.41
27:R4:69:LYS:HG3	27:R4:69:LYS:O	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RP:62:LEU:CD2	53:R8:27:THR:HG22	2.49	0.41
32:RA:1186:G:H2'	32:RA:1187:G:O4'	2.20	0.41
32:RA:1231:G:H2'	32:RA:1232:G:H8	1.85	0.41
32:RA:263:C:H2'	32:RA:264:C:O4'	2.21	0.41
32:RA:631:A:N3	32:RA:2415:G:O2'	2.42	0.41
32:RA:635:C:H2'	32:RA:636:G:O4'	2.21	0.41
32:RA:755:C:H2'	32:RA:756:C:H6	1.85	0.41
33:RB:79:C:H2'	33:RB:80:U:O4'	2.20	0.41
34:RD:25:THR:O	34:RD:27:THR:N	2.53	0.41
1:XA:444:C:H2'	1:XA:445:G:H8	1.86	0.41
1:XA:555:C:H2'	1:XA:556:C:C6	2.55	0.41
1:XA:748:C:H1'	1:XA:749:C:OP2	2.20	0.41
1:XA:97:U:H2'	1:XA:99:C:C6	2.56	0.41
2:XB:51:LEU:HD23	2:XB:51:LEU:HA	1.93	0.41
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.20	0.41
1:XA:974:A:OP2	13:XN:41:ARG:NH1	2.53	0.41
25:Y2:4:SER:OG	25:Y2:5:GLU:N	2.54	0.41
32:YA:1024:G:C3'	32:YA:1025:G:H5''	2.51	0.41
32:YA:2313:C:H5''	36:YG:91:ARG:HD3	2.03	0.41
34:YD:249:PRO:HD2	34:YD:250:TRP:CE3	2.56	0.41
35:YE:56:PRO:O	35:YE:59:VAL:N	2.24	0.41
37:YH:68:THR:O	37:YH:71:LEU:HG	2.20	0.41
41:YP:57:THR:OG1	41:YP:60:MET:CG	2.68	0.41
41:YP:9:ASN:C	41:YP:9:ASN:ND2	2.73	0.41
42:YQ:26:TYR:HB2	42:YQ:138:ASP:HB2	2.03	0.41
42:YQ:69:PHE:HA	42:YQ:70:PRO:HD3	1.93	0.41
45:YT:106:SER:HA	45:YT:110:ILE:HD11	2.03	0.41
46:YU:109:LEU:HD23	47:YV:47:VAL:HG11	2.01	0.41
1:QA:1376:U:H2'	1:QA:1377:A:H8	1.86	0.41
1:QA:1497:G:H1'	1:QA:1518:A:H2	1.84	0.41
1:QA:201:C:H4'	1:QA:208:U:OP1	2.21	0.41
1:QA:222:U:H2'	1:QA:223:U:C6	2.56	0.41
1:QA:947:G:O3'	12:QM:109:THR:OG1	2.37	0.41
2:QB:141:GLU:O	2:QB:144:ARG:HG3	2.21	0.41
24:R0:24:LYS:HD3	24:R0:24:LYS:HA	1.88	0.41
32:RA:1417:C:H2'	32:RA:1418:G:O4'	2.20	0.41
32:RA:1791:A:H3'	32:RA:1792:G:H8	1.85	0.41
32:RA:2674:G:H2'	32:RA:2675:A:H8	1.85	0.41
32:RA:270:A:OP2	32:RA:270(Y):G:N2	2.53	0.41
28:R5:52:TYR:OH	32:RA:2883:A:OP1	2.31	0.41
32:RA:338:G:OP1	50:RY:4:LYS:NZ	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:57:C:H2'	32:RA:58:G:O4'	2.20	0.41
32:RA:639:U:H2'	32:RA:640:C:H6	1.85	0.41
34:RD:94:LEU:HD13	34:RD:104:TYR:HE1	1.86	0.41
54:RF:24:LEU:HB3	54:RF:115:ALA:HB2	2.02	0.41
38:RI:12:LEU:HD23	38:RI:12:LEU:HA	1.91	0.41
40:RO:24:VAL:HG13	40:RO:33:ALA:HB2	2.02	0.41
32:RA:25:U:H5'	48:RW:79:GLY:HA2	2.02	0.41
1:XA:751:U:H2'	1:XA:752:G:O4'	2.20	0.41
1:XA:953:G:H2'	1:XA:954:G:O4'	2.20	0.41
18:XS:72:GLY:O	18:XS:74:PHE:N	2.53	0.41
24:Y0:4:LYS:HD2	42:YQ:82:ARG:NH1	2.36	0.41
32:YA:2645:G:H3'	32:YA:2646:C:C5'	2.51	0.41
32:YA:2779:U:H1'	32:YA:2781:A:C5	2.56	0.41
54:YF:196:LEU:HA	54:YF:196:LEU:HD13	1.96	0.41
36:YG:16:ARG:O	36:YG:20:ILE:HG12	2.20	0.41
37:YH:5:GLY:HA2	37:YH:69:ARG:HB2	2.01	0.41
47:YV:12:TYR:O	47:YV:14:VAL:HG13	2.20	0.41
1:QA:1323:G:H2'	1:QA:1324:A:C8	2.56	0.41
2:QB:167:PRO:HG2	2:QB:192:SER:CB	2.51	0.41
23:QY:69:ALA:O	23:QY:75:LEU:HD12	2.21	0.41
27:R4:24:THR:O	27:R4:26:SER:N	2.53	0.41
32:RA:1204:A:H1'	32:RA:1206:G:C8	2.56	0.41
45:RT:62:THR:HG22	45:RT:75:ILE:HG12	2.02	0.41
1:XA:1084:G:H5'	1:XA:1102:A:OP2	2.20	0.41
1:XA:1376:U:OP1	7:XG:94:ARG:NH1	2.37	0.41
3:XC:130:VAL:HG21	3:XC:157:ILE:HG23	2.03	0.41
5:XE:81:GLU:HG2	5:XE:90:VAL:HG12	2.03	0.41
6:XF:21:LEU:O	6:XF:25:ILE:HG13	2.20	0.41
9:XI:10:ARG:HD3	9:XI:75:ASP:HB3	2.02	0.41
21:XV:71:C:H2'	21:XV:72:A:H8	1.85	0.41
22:XX:7:G:H2'	22:XX:8:A:O4'	2.19	0.41
23:XY:17:GLN:NE2	23:XZ:24:VAL:CG1	2.81	0.41
27:Y4:28:LYS:HA	27:Y4:29:PRO:HD3	1.96	0.41
32:YA:1329:U:H5''	32:YA:1330:C:H5	1.86	0.41
32:YA:289:A:H5'	32:YA:290:G:OP2	2.21	0.41
32:YA:603:A:H1'	32:YA:604:G:OP2	2.21	0.41
32:YA:752:A:H2'	32:YA:752:A:H8	1.75	0.41
34:YD:125:ILE:HG22	34:YD:125:ILE:O	2.20	0.41
34:YD:232:PRO:HB3	34:YD:244:ARG:CZ	2.50	0.41
35:YE:54:GLN:HE21	35:YE:76:ARG:HG2	1.78	0.41
1:QA:1128:C:OP1	9:QI:66:ARG:NH2	2.54	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:21:G:H2'	1:QA:22:G:C8	2.55	0.41
1:QA:440:A:H3'	1:QA:442:C:H6	1.86	0.41
1:QA:62:U:OP1	1:QA:385:C:O2'	2.38	0.41
19:QT:38:LYS:NZ	19:QT:42:GLN:OE1	2.51	0.41
21:QW:50:U:H2'	21:QW:51:C:C6	2.56	0.41
23:QY:16:TRP:HH2	23:QY:81:ARG:HA	1.85	0.41
24:R0:48:GLY:O	24:R0:80:HIS:ND1	2.54	0.41
32:RA:1270:C:C5'	32:RA:1271:G:H5'	2.51	0.41
32:RA:2211:G:H3'	32:RA:2212:A:N3	2.35	0.41
32:RA:2389:G:H5''	32:RA:2390:U:O4'	2.21	0.41
32:RA:2724:C:H2'	32:RA:2725:A:C8	2.56	0.41
32:RA:539:G:H2'	32:RA:540:G:C8	2.52	0.41
35:RE:50:GLY:HA3	35:RE:74:PRO:HG3	2.02	0.41
36:RG:120:LEU:HB2	36:RG:180:PHE:HD1	1.86	0.41
41:RP:59:LEU:HD13	53:R8:58:ILE:HD13	2.01	0.41
1:XA:1033:G:HO2'	1:XA:1034:G:P	2.40	0.41
1:XA:1241:G:H2'	1:XA:1242:C:H6	1.86	0.41
1:XA:464:G:N2	1:XA:467:G:N7	2.69	0.41
4:XD:57:ARG:NH2	4:XD:205:GLU:OE2	2.47	0.41
12:XM:3:ARG:HA	12:XM:9:ILE:HG22	2.02	0.41
23:XZ:41:GLY:HA3	23:XZ:58:ARG:HH22	1.85	0.41
27:Y4:62:ARG:HG2	27:Y4:62:ARG:H	1.69	0.41
32:YA:1315:C:O2'	32:YA:1392:A:N3	2.47	0.41
32:YA:2331:G:O2'	32:YA:2336:A:N1	2.41	0.41
32:YA:262:A:N3	32:YA:430:G:O2'	2.43	0.41
32:YA:970:C:H2'	32:YA:971:C:C6	2.55	0.41
35:YE:23:VAL:HG13	35:YE:185:LYS:HA	2.03	0.41
41:YP:130:PHE:CB	41:YP:135:LEU:HD23	2.51	0.41
42:YQ:1:MET:SD	42:YQ:1:MET:O	2.79	0.41
43:YR:99:LYS:HE2	43:YR:99:LYS:HB2	1.95	0.41
32:YA:2318:G:H22	44:YS:2:ALA:HA	1.85	0.41
56:ZB:76:PPU:C9	56:ZB:76:PPU:N7	2.84	0.41
1:QA:1437:C:H2'	1:QA:1438:G:H8	1.86	0.41
1:QA:186(B):C:H2'	1:QA:186(C):G:C8	2.55	0.41
2:QB:155:LEU:HD21	2:QB:159:PRO:HG3	2.03	0.41
1:QA:778:G:O2'	11:QK:120:ARG:O	2.35	0.41
1:QA:1492:A:H2'	23:QY:46:GLU:OE2	2.21	0.41
23:QY:7:GLU:HG2	23:QY:8:GLU:OE1	2.20	0.41
32:RA:177:G:OP2	32:RA:177:G:N2	2.40	0.41
32:RA:1818:U:H2'	34:RD:157:ARG:HG2	2.02	0.41
32:RA:2849:U:O2'	32:RA:2850:A:P	2.79	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:297:C:OP1	50:RY:87:LYS:NZ	2.46	0.41
32:RA:352:G:O2'	32:RA:353:G:OP1	2.34	0.41
33:RB:4:C:H2'	33:RB:5:C:C6	2.56	0.41
35:RE:5:LEU:HD21	35:RE:79:ARG:HB2	2.01	0.41
1:XA:958:A:N3	1:XA:985:C:O2'	2.42	0.41
1:XA:983:A:H5''	1:XA:984:C:OP2	2.20	0.41
52:Y1:86:SER:O	52:Y1:90:ILE:HG22	2.20	0.41
53:Y8:3:LYS:HE3	53:Y8:3:LYS:HB2	1.83	0.41
32:YA:1628:G:H2'	32:YA:1629:U:C6	2.56	0.41
32:YA:194:G:H2'	32:YA:195:A:O4'	2.21	0.41
32:YA:1799:G:O6	34:YD:178:PRO:HD2	2.20	0.41
37:YH:125:VAL:HG13	37:YH:131:VAL:HG22	2.02	0.41
41:YP:100:LEU:HD23	41:YP:100:LEU:HA	1.88	0.41
42:YQ:16:ARG:HH11	42:YQ:16:ARG:HG3	1.84	0.41
42:YQ:2:LEU:HD13	42:YQ:47:ILE:CG2	2.51	0.41
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.56	0.41
1:QA:345:C:O2'	1:QA:346:G:H5''	2.21	0.41
2:QB:140:HIS:O	2:QB:144:ARG:HG2	2.20	0.41
4:QD:67:ILE:HD13	4:QD:196:LEU:HD22	2.03	0.41
8:QH:104:ARG:HH11	8:QH:138:TRP:HB2	1.86	0.41
23:QZ:66:LEU:O	23:QZ:66:LEU:CD2	2.69	0.41
29:R6:11:LEU:HB2	29:R6:21:TYR:HB2	2.01	0.41
32:RA:249:C:O2	53:R8:12:LYS:NZ	2.51	0.41
32:RA:582:G:H2'	32:RA:583:G:C8	2.56	0.41
32:RA:661:C:H2'	32:RA:662:G:C8	2.56	0.41
32:RA:704:G:H1'	32:RA:727:A:N6	2.36	0.41
32:RA:637:A:OP2	41:RP:115:LEU:HB2	2.21	0.41
55:RZ:119:GLU:HB2	55:RZ:122:ARG:HE	1.86	0.41
55:RZ:141:VAL:HG12	55:RZ:143:GLY:N	2.32	0.41
1:XA:1172:C:H2'	1:XA:1173:G:C8	2.55	0.41
4:XD:108:LEU:HD21	4:XD:183:GLY:HA3	2.03	0.41
9:XI:25:LYS:HD3	9:XI:26:VAL:H	1.85	0.41
19:XT:48:LYS:HG3	19:XT:51:GLU:HG2	2.03	0.41
21:XV:19:G:H3'	21:XV:20:U:H5	1.85	0.41
21:XV:76:A:H2	24:Y0:2:ALA:CB	2.34	0.41
23:XY:61:THR:CG2	23:XY:62:GLU:N	2.83	0.41
23:XZ:48:LEU:CD1	23:XZ:52:LEU:HB3	2.51	0.41
32:YA:1902:C:OP1	34:YD:242:ARG:HD3	2.21	0.41
32:YA:2175:C:H2'	32:YA:2176:A:H8	1.86	0.41
32:YA:536:A:H2'	32:YA:537:C:C6	2.56	0.41
34:YD:15:PHE:O	34:YD:205:VAL:CG1	2.69	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YH:139:GLN:OE1	37:YH:139:GLN:O	2.39	0.41
42:YQ:64:ILE:HD13	55:YZ:178:GLU:CD	2.39	0.41
47:YV:22:VAL:HG12	47:YV:23:GLU:N	2.36	0.41
47:YV:66:ARG:HA	47:YV:90:PRO:HA	2.03	0.41
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.29	0.41
1:QA:1130:A:N6	1:QA:1144:G:H21	2.19	0.41
1:QA:1149:C:H2'	1:QA:1150:U:C6	2.56	0.41
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.56	0.41
1:QA:1346:A:H1'	1:QA:1347:G:OP2	2.21	0.41
1:QA:279:A:H5''	1:QA:281:G:O4'	2.21	0.41
1:QA:599:C:H2'	1:QA:600:C:H6	1.86	0.41
1:QA:950:U:H2'	1:QA:951:G:C8	2.56	0.41
2:QB:51:LEU:CD2	2:QB:201:ILE:CG2	2.93	0.41
2:QB:68:ILE:O	2:QB:90:MET:HB3	2.21	0.41
2:QB:69:LEU:HD22	2:QB:71:VAL:CG2	2.48	0.41
8:QH:97:VAL:HG21	8:QH:128:GLY:HA2	2.01	0.41
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.20	0.41
9:QI:7:THR:H	9:QI:83:ARG:HD2	1.86	0.41
12:QM:108:ARG:HE	12:QM:114:ARG:HD3	1.84	0.41
1:QA:750:G:N3	14:QO:23:GLY:HA3	2.36	0.41
41:RP:60:MET:CA	53:R8:13:ARG:NH1	2.84	0.41
32:RA:1205:U:C4	54:RF:171:PRO:HA	2.56	0.41
32:RA:1273:U:O2	32:RA:2002:G:O2'	2.36	0.41
32:RA:249:C:P	32:RA:2394:C:HO2'	2.44	0.41
32:RA:2543:G:H2'	32:RA:2544:G:C8	2.56	0.41
38:RI:31:LEU:HD21	38:RI:38:LEU:HD22	2.02	0.41
41:RP:49:ARG:O	53:R8:57:ARG:CD	2.67	0.41
45:RT:3:ARG:O	45:RT:7:ILE:HG12	2.21	0.41
1:XA:1006:C:O2'	1:XA:1007:C:OP1	2.30	0.41
1:XA:522:C:OP2	51:XL:69:TYR:OH	2.33	0.41
1:XA:553:A:H2'	1:XA:554:C:C6	2.55	0.41
1:XA:592:G:H2'	1:XA:593:G:H8	1.86	0.41
1:XA:978:A:OP2	1:XA:1362(A):C:N4	2.52	0.41
5:XE:154:GLY:HA2	8:XH:64:LYS:HD3	2.02	0.41
1:XA:468:A:H5''	15:XP:80:PHE:HB3	2.02	0.41
18:XS:69:HIS:HB2	18:XS:74:PHE:CE2	2.56	0.41
18:XS:72:GLY:C	18:XS:74:PHE:N	2.75	0.41
32:YA:1165:U:H2'	32:YA:1166:C:C6	2.55	0.41
32:YA:121:G:H4'	32:YA:149:A:H5'	2.03	0.41
32:YA:2564:A:OP1	32:YA:2648:C:H4'	2.21	0.41
32:YA:512:G:O2'	32:YA:513:A:OP2	2.36	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YA:604:G:OP1	41:YP:90:ARG:NH2	2.41	0.41
32:YA:760:G:H2'	32:YA:761:A:O4'	2.20	0.41
42:YQ:47:ILE:HD12	42:YQ:70:PRO:HG3	2.03	0.41
46:YU:61:TRP:HB3	46:YU:93:LYS:O	2.20	0.41
1:QA:108:G:OP2	1:QA:108:G:N2	2.53	0.40
1:QA:1099:G:H5''	2:QB:96:ARG:HH21	1.75	0.40
1:QA:1264:C:H2'	1:QA:1265:G:H8	1.86	0.40
1:QA:132:C:H5'	1:QA:262:A:O2'	2.21	0.40
1:QA:736:C:H2'	1:QA:737:A:H8	1.86	0.40
2:QB:67:THR:CG2	2:QB:155:LEU:HD22	2.50	0.40
3:QC:131:ARG:NH1	3:QC:167:TRP:O	2.48	0.40
21:QW:55:U:H2'	21:QW:56:C:H3'	2.03	0.40
52:R1:80:LEU:O	52:R1:80:LEU:HD12	2.20	0.40
32:RA:2648:C:H2'	32:RA:2649:U:C6	2.56	0.40
34:RD:245:PRO:HA	34:RD:246:PRO:HD3	1.93	0.40
39:RN:34:LEU:HD23	39:RN:34:LEU:HA	1.94	0.40
1:XA:1344:C:H1'	1:XA:1349:A:H4'	2.03	0.40
1:XA:1398:A:H5'	1:XA:1401:G:H4'	2.02	0.40
5:XE:105:VAL:HG11	5:XE:128:PRO:HB3	2.03	0.40
19:XT:51:GLU:HA	19:XT:54:LYS:HG2	2.01	0.40
21:XV:65:C:H2'	21:XV:66:C:H6	1.86	0.40
21:XW:16:C:H5''	21:XW:17:C:OP2	2.21	0.40
23:XZ:30:LEU:CD1	23:XZ:60:ILE:HA	2.45	0.40
32:YA:1171:G:O2'	32:YA:1173:G:O4'	2.37	0.40
32:YA:1697:G:OP2	32:YA:1698:A:O2'	2.20	0.40
32:YA:181:A:H3'	32:YA:182:A:H8	1.86	0.40
32:YA:583:G:OP2	46:YU:10:ARG:NH1	2.42	0.40
32:YA:78:A:H2'	32:YA:79:G:H8	1.86	0.40
55:YZ:108:PRO:HD2	55:YZ:111:VAL:HB	2.03	0.40
55:YZ:30:ASN:C	55:YZ:32:HIS:N	2.73	0.40
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.43	0.40
1:QA:1126:U:H4'	1:QA:1127:G:N7	2.36	0.40
1:QA:1280:A:H5'	1:QA:1281:U:OP2	2.21	0.40
1:QA:142:G:H2'	1:QA:143:A:C8	2.57	0.40
2:QB:20:GLU:HG3	2:QB:23:ARG:NE	2.36	0.40
2:QB:80:ILE:O	2:QB:84:GLU:HG2	2.21	0.40
1:QA:35:G:N2	51:QL:118:SER:OG	2.53	0.40
23:QY:10:TRP:NE1	23:QY:14:LEU:HD11	2.37	0.40
32:RA:1311:G:H21	32:RA:1603:A:H62	1.69	0.40
32:RA:2038:G:H2'	32:RA:2039:C:O4'	2.21	0.40
32:RA:2161:C:H2'	32:RA:2162:G:H8	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:2197:U:H6	32:RA:2197:U:O5'	2.04	0.40
32:RA:2298:A:H62	32:RA:2318:G:H8	1.68	0.40
32:RA:2446:G:N2	32:RA:2449:U:O2	2.54	0.40
47:RV:62:LEU:HD11	47:RV:95:LEU:HB2	2.04	0.40
42:RQ:63:LYS:HD2	55:RZ:175:VAL:HG21	2.03	0.40
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.56	0.40
11:XK:91:ARG:O	11:XK:95:ILE:HG12	2.21	0.40
51:XL:52:LEU:HA	51:XL:52:LEU:HD23	1.94	0.40
18:XS:12:ASP:OD2	18:XS:35:SER:HB2	2.20	0.40
22:XX:19:A2M:C2	23:XY:51:ASN:CB	3.00	0.40
23:XY:48:LEU:HD12	23:XY:52:LEU:HD12	2.03	0.40
32:YA:1423:G:H2'	32:YA:1424:G:H8	1.86	0.40
32:YA:1637:A:H4'	32:YA:2711:A:O2'	2.21	0.40
32:YA:1641:A:H2'	32:YA:1642:G:O4'	2.21	0.40
32:YA:1932:A:H2'	32:YA:1933:G:O4'	2.21	0.40
32:YA:1266:G:O2'	32:YA:2012:G:O6	2.25	0.40
32:YA:455:C:N3	32:YA:473:G:H5'	2.36	0.40
32:YA:841:A:H2'	32:YA:842:G:H8	1.86	0.40
35:YE:116:VAL:HG22	35:YE:122:PHE:CG	2.56	0.40
37:YH:46:GLU:OE2	37:YH:49:VAL:CG1	2.69	0.40
40:YO:25:LEU:HB2	40:YO:38:VAL:HG13	2.02	0.40
45:YT:120:ARG:HA	45:YT:123:GLN:HB2	2.02	0.40
1:QA:516:U:O2'	1:QA:519:C:N3	2.49	0.40
1:QA:1125:U:O4	10:QJ:5:ARG:NH1	2.55	0.40
51:QL:84:LEU:HD23	51:QL:101:VAL:HG11	2.04	0.40
12:QM:99:ARG:HB2	12:QM:101:GLN:HE22	1.85	0.40
15:QP:69:THR:O	15:QP:72:ARG:HG2	2.21	0.40
22:QX:22:C:O2'	22:QX:22:C:O2	2.24	0.40
23:QY:57:SER:HG	23:QY:84:TYR:HE1	1.69	0.40
24:R0:5:LYS:HE2	24:R0:5:LYS:HB3	1.87	0.40
53:R8:33:ASN:OD1	53:R8:36:LYS:NZ	2.34	0.40
53:R8:37:SER:OG	53:R8:40:GLU:N	2.43	0.40
32:RA:309:G:H8	32:RA:309:G:P	2.44	0.40
32:RA:443:A:H2'	54:RF:45:ARG:NH1	2.35	0.40
25:R2:47:ASN:ND2	32:RA:94:G:H21	2.18	0.40
33:RB:1:U:H2'	33:RB:2:C:H6	1.86	0.40
43:RR:75:LEU:HA	43:RR:78:LYS:HB3	2.02	0.40
43:RR:56:LYS:NZ	43:RR:90:ARG:O	2.54	0.40
46:RU:61:TRP:HB3	46:RU:93:LYS:O	2.20	0.40
55:RZ:7:ALA:N	55:RZ:60:GLU:O	2.51	0.40
1:XA:1198:G:H2'	1:XA:1199:U:C6	2.57	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:17:U:H2'	1:XA:18:C:H6	1.86	0.40
1:XA:186(A):C:H2'	1:XA:186(B):C:C6	2.56	0.40
1:XA:430:A:OP2	4:XD:8:VAL:HG12	2.22	0.40
1:XA:768:A:H4'	1:XA:1523:G:N2	2.36	0.40
1:XA:429:U:O2'	4:XD:22:LYS:NZ	2.55	0.40
6:XF:28:ARG:NH2	6:XF:32:ASN:OD1	2.54	0.40
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.29	0.40
11:XK:124:LYS:H	11:XK:124:LYS:HG2	1.74	0.40
51:XL:19:ARG:HE	51:XL:19:ARG:HB3	1.61	0.40
14:XO:29:VAL:O	14:XO:33:THR:OG1	2.35	0.40
21:XW:9:G:O2'	21:XW:10:G:N7	2.54	0.40
23:XY:61:THR:HG22	23:XY:62:GLU:N	2.36	0.40
53:Y8:27:THR:HG1	32:YA:2361:A:P	2.45	0.40
32:YA:1794:U:H2'	32:YA:1795:C:C6	2.56	0.40
32:YA:1918:A:O2'	32:YA:1920:C:N4	2.54	0.40
32:YA:679:C:H2'	32:YA:680:G:C8	2.57	0.40
32:YA:680:G:H2'	32:YA:681:G:C8	2.56	0.40
32:YA:852:G:H2'	32:YA:853:G:H8	1.86	0.40
34:YD:108:PRO:HD2	34:YD:111:LEU:HD23	2.01	0.40
34:YD:121:PRO:HB3	34:YD:135:PHE:CE2	2.57	0.40
34:YD:206:LEU:HA	34:YD:211:ARG:HD2	2.03	0.40
35:YE:84:PHE:CD2	35:YE:86:PRO:HD3	2.56	0.40
35:YE:9:VAL:HB	35:YE:25:VAL:CG2	2.47	0.40
54:YF:167:ALA:HA	54:YF:170:LEU:HD13	2.04	0.40
37:YH:3:ARG:HH21	37:YH:3:ARG:CB	2.34	0.40
42:YQ:39:PRO:HG3	42:YQ:99:PRO:HD3	2.04	0.40
46:YU:98:LEU:HD13	46:YU:105:VAL:HG13	2.04	0.40
47:YV:38:LEU:CD1	47:YV:38:LEU:N	2.80	0.40
55:YZ:52:SER:OG	55:YZ:53:ILE:HD12	2.21	0.40
1:QA:1145:C:H5''	1:QA:1146:A:OP1	2.22	0.40
1:QA:411:A:H62	1:QA:413:G:H21	1.69	0.40
1:QA:428:G:H4'	1:QA:429:U:O5'	2.21	0.40
1:QA:555:C:H2'	1:QA:556:C:C6	2.57	0.40
2:QB:86:GLU:HA	2:QB:86:GLU:OE1	2.22	0.40
7:QG:111:ARG:NH1	7:QG:126:ASP:OD2	2.52	0.40
1:QA:1403:C:N4	22:QX:18:G:OP1	2.53	0.40
23:QY:12:ASP:HB3	23:QY:81:ARG:HB2	2.02	0.40
25:R2:21:LEU:HD23	25:R2:21:LEU:HA	1.89	0.40
30:R7:11:LYS:HE2	32:RA:686:G:OP1	2.22	0.40
32:RA:1408:C:H2'	32:RA:1409:C:C6	2.56	0.40
32:RA:667:U:H2'	32:RA:668:G:O4'	2.20	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RA:93:C:H3'	32:RA:94:G:H8	1.86	0.40
32:RA:2638:G:OP1	35:RE:82:ARG:NH2	2.55	0.40
54:RF:113:ALA:CB	54:RF:183:VAL:HG23	2.51	0.40
39:RN:53:VAL:HG11	39:RN:128:HIS:CE1	2.57	0.40
1:XA:583:A:N6	1:XA:758:G:O2'	2.55	0.40
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.21	0.40
7:XG:24:THR:HA	7:XG:27:ILE:HD12	2.02	0.40
18:XS:50:ALA:HA	18:XS:58:VAL:O	2.21	0.40
18:XS:64:GLU:N	18:XS:64:GLU:CD	2.73	0.40
21:XW:23:C:H2'	21:XW:24:U:C6	2.55	0.40
32:YA:1005:C:H2'	32:YA:1006:C:C6	2.56	0.40
32:YA:2165:G:H2'	32:YA:2166:G:C2	2.56	0.40
32:YA:29:U:H2'	32:YA:30:G:H8	1.87	0.40
34:YD:136:ILE:HA	34:YD:137:PRO:HD3	1.96	0.40
35:YE:111:ARG:HD3	35:YE:160:TYR:HE2	1.83	0.40
32:YA:674:G:H1'	54:YF:74:ARG:HD3	2.04	0.40
37:YH:87:LEU:HD21	37:YH:164:TYR:CD1	2.56	0.40
1:QA:1286:A:H8	1:QA:1287:A:H4'	1.85	0.40
1:QA:35:G:N3	51:QL:118:SER:OG	2.52	0.40
1:QA:700:G:H4'	1:QA:704:A:H1'	2.02	0.40
1:QA:737:A:H2'	1:QA:738:C:C6	2.57	0.40
2:QB:158:LEU:HA	2:QB:159:PRO:HD3	1.76	0.40
16:QQ:36:ILE:HG21	51:QL:11:VAL:HG11	2.02	0.40
21:QW:41:C:H2'	21:QW:42:G:H8	1.86	0.40
22:QX:5:A:H2'	22:QX:6:G:C8	2.57	0.40
25:R2:29:LYS:HE3	25:R2:57:ILE:HG21	2.03	0.40
31:R9:24:TYR:CE1	31:R9:35:ARG:HG3	2.57	0.40
32:RA:1212:G:H2'	32:RA:1236:G:H22	1.86	0.40
32:RA:1385:G:O2'	32:RA:1386:C:O5'	2.37	0.40
32:RA:2233:U:H2'	32:RA:2234:G:C8	2.56	0.40
32:RA:2345:G:N3	32:RA:2381:C:H2'	2.36	0.40
32:RA:270(F):U:H2'	32:RA:270(G):C:C6	2.56	0.40
42:RQ:137:TYR:CD1	55:RZ:48:PHE:CE2	3.10	0.40
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.57	0.40
1:XA:1330:U:H3'	1:XA:1331:G:O4'	2.22	0.40
1:XA:580:U:H2'	1:XA:581:G:O4'	2.22	0.40
1:XA:627:G:H2'	1:XA:628:G:H8	1.87	0.40
1:XA:67:C:H2'	1:XA:68:G:C8	2.56	0.40
1:XA:909:A:N3	1:XA:1413:A:O2'	2.40	0.40
1:XA:976:G:OP2	1:XA:1358:U:O2'	2.34	0.40
5:XE:127:ASN:O	5:XE:131:ILE:HG12	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1376:U:P	7:XG:94:ARG:HH22	2.44	0.40
10:XJ:34:VAL:HG12	10:XJ:74:ILE:HG22	2.04	0.40
23:XZ:20:ASP:CG	23:XZ:23:ILE:HG12	2.41	0.40
23:XY:14:LEU:HD22	23:XZ:28:ASN:ND2	2.37	0.40
23:XZ:48:LEU:HB3	23:XZ:52:LEU:HB2	2.03	0.40
32:YA:1434:A:H61	32:YA:1558:A:N6	2.19	0.40
32:YA:2389:G:H5''	32:YA:2390:U:O4'	2.21	0.40
32:YA:2647:U:H2'	32:YA:2648:C:C6	2.56	0.40
32:YA:2737:G:H2'	32:YA:2738:A:C8	2.56	0.40
32:YA:828:U:H3'	32:YA:828:U:O2	2.21	0.40
41:YP:121:LYS:CD	41:YP:123:LEU:HD11	2.51	0.40
32:YA:862:G:P	42:YQ:18:LYS:NZ	2.93	0.40
32:YA:2469:A:H2'	42:YQ:56:ARG:HH21	1.86	0.40
42:YQ:68:ILE:HG21	42:YQ:103:MET:HG2	2.03	0.40
32:YA:1754:C:OP1	45:YT:96:ARG:NH1	2.55	0.40
55:YZ:124:ILE:HD13	55:YZ:124:ILE:HA	1.89	0.40
32:YA:2507:C:O2'	56:ZA:75:C:O2	2.31	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	233/256 (91%)	212 (91%)	18 (8%)	3 (1%)	12	41
2	XB	234/256 (91%)	208 (89%)	25 (11%)	1 (0%)	34	67
3	QC	203/239 (85%)	190 (94%)	13 (6%)	0	100	100
3	XC	203/239 (85%)	193 (95%)	10 (5%)	0	100	100
4	QD	206/209 (99%)	191 (93%)	13 (6%)	2 (1%)	15	47
4	XD	206/209 (99%)	191 (93%)	13 (6%)	2 (1%)	15	47
5	QE	149/162 (92%)	139 (93%)	9 (6%)	1 (1%)	22	56

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	XE	149/162 (92%)	140 (94%)	8 (5%)	1 (1%)	22	56
6	QF	99/101 (98%)	99 (100%)	0	0	100	100
6	XF	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
7	QG	153/156 (98%)	148 (97%)	5 (3%)	0	100	100
7	XG	153/156 (98%)	143 (94%)	10 (6%)	0	100	100
8	QH	135/138 (98%)	130 (96%)	5 (4%)	0	100	100
8	XH	135/138 (98%)	130 (96%)	5 (4%)	0	100	100
9	QI	125/128 (98%)	114 (91%)	10 (8%)	1 (1%)	19	52
9	XI	124/128 (97%)	114 (92%)	10 (8%)	0	100	100
10	QJ	97/105 (92%)	88 (91%)	9 (9%)	0	100	100
10	XJ	94/105 (90%)	85 (90%)	8 (8%)	1 (1%)	14	46
11	QK	117/129 (91%)	109 (93%)	8 (7%)	0	100	100
11	XK	114/129 (88%)	104 (91%)	10 (9%)	0	100	100
12	QM	118/126 (94%)	101 (86%)	13 (11%)	4 (3%)	3	22
12	XM	117/126 (93%)	99 (85%)	17 (14%)	1 (1%)	17	50
13	QN	58/61 (95%)	52 (90%)	5 (9%)	1 (2%)	9	36
13	XN	58/61 (95%)	53 (91%)	4 (7%)	1 (2%)	9	36
14	QO	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
14	XO	85/89 (96%)	83 (98%)	2 (2%)	0	100	100
15	QP	82/88 (93%)	77 (94%)	5 (6%)	0	100	100
15	XP	82/88 (93%)	80 (98%)	2 (2%)	0	100	100
16	QQ	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
16	XQ	98/105 (93%)	94 (96%)	4 (4%)	0	100	100
17	QR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
17	XR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
18	QS	81/93 (87%)	68 (84%)	12 (15%)	1 (1%)	13	43
18	XS	81/93 (87%)	73 (90%)	6 (7%)	2 (2%)	5	28
19	QT	97/106 (92%)	87 (90%)	10 (10%)	0	100	100
19	XT	97/106 (92%)	88 (91%)	9 (9%)	0	100	100
20	QU	23/27 (85%)	23 (100%)	0	0	100	100
20	XU	23/27 (85%)	23 (100%)	0	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
23	QY	82/84 (98%)	78 (95%)	4 (5%)	0	100	100
23	QZ	82/84 (98%)	76 (93%)	6 (7%)	0	100	100
23	XY	82/84 (98%)	78 (95%)	4 (5%)	0	100	100
23	XZ	82/84 (98%)	79 (96%)	3 (4%)	0	100	100
24	R0	79/85 (93%)	73 (92%)	4 (5%)	2 (2%)	5	28
24	Y0	80/85 (94%)	77 (96%)	3 (4%)	0	100	100
25	R2	67/72 (93%)	61 (91%)	5 (8%)	1 (2%)	10	39
25	Y2	67/72 (93%)	64 (96%)	3 (4%)	0	100	100
26	R3	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
26	Y3	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
27	R4	67/71 (94%)	46 (69%)	17 (25%)	4 (6%)	1	10
27	Y4	67/71 (94%)	53 (79%)	13 (19%)	1 (2%)	10	39
28	R5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
28	Y5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
29	R6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
29	Y6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
30	R7	45/49 (92%)	45 (100%)	0	0	100	100
30	Y7	46/49 (94%)	46 (100%)	0	0	100	100
31	R9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
31	Y9	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
34	RD	270/276 (98%)	237 (88%)	26 (10%)	7 (3%)	5	27
34	YD	272/276 (99%)	261 (96%)	11 (4%)	0	100	100
35	RE	203/206 (98%)	159 (78%)	34 (17%)	10 (5%)	2	14
35	YE	202/206 (98%)	190 (94%)	9 (4%)	3 (2%)	10	39
36	RG	179/182 (98%)	153 (86%)	24 (13%)	2 (1%)	14	46
36	YG	179/182 (98%)	149 (83%)	29 (16%)	1 (1%)	25	59
37	RH	172/180 (96%)	145 (84%)	20 (12%)	7 (4%)	3	17
37	YH	172/180 (96%)	163 (95%)	7 (4%)	2 (1%)	13	43
38	RI	144/148 (97%)	115 (80%)	24 (17%)	5 (4%)	3	21
38	YI	144/148 (97%)	119 (83%)	21 (15%)	4 (3%)	5	25
39	RN	136/140 (97%)	115 (85%)	18 (13%)	3 (2%)	6	31

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	YN	136/140 (97%)	119 (88%)	15 (11%)	2 (2%)	10	39
40	RO	120/122 (98%)	112 (93%)	8 (7%)	0	100	100
40	YO	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
41	RP	148/150 (99%)	112 (76%)	32 (22%)	4 (3%)	5	26
41	YP	147/150 (98%)	137 (93%)	8 (5%)	2 (1%)	11	40
42	RQ	139/141 (99%)	115 (83%)	22 (16%)	2 (1%)	11	40
42	YQ	139/141 (99%)	134 (96%)	4 (3%)	1 (1%)	22	56
43	RR	115/118 (98%)	106 (92%)	8 (7%)	1 (1%)	17	50
43	YR	115/118 (98%)	107 (93%)	7 (6%)	1 (1%)	17	50
44	RS	109/112 (97%)	91 (84%)	18 (16%)	0	100	100
44	YS	109/112 (97%)	91 (84%)	17 (16%)	1 (1%)	17	50
45	RT	135/146 (92%)	118 (87%)	15 (11%)	2 (2%)	10	39
45	YT	135/146 (92%)	114 (84%)	19 (14%)	2 (2%)	10	39
46	RU	115/118 (98%)	108 (94%)	6 (5%)	1 (1%)	17	50
46	YU	115/118 (98%)	107 (93%)	7 (6%)	1 (1%)	17	50
47	RV	99/101 (98%)	82 (83%)	16 (16%)	1 (1%)	15	47
47	YV	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
48	RW	111/113 (98%)	105 (95%)	5 (4%)	1 (1%)	17	50
48	YW	111/113 (98%)	102 (92%)	8 (7%)	1 (1%)	17	50
49	RX	90/96 (94%)	87 (97%)	3 (3%)	0	100	100
49	YX	90/96 (94%)	86 (96%)	4 (4%)	0	100	100
50	RY	105/110 (96%)	99 (94%)	6 (6%)	0	100	100
50	YY	105/110 (96%)	100 (95%)	5 (5%)	0	100	100
51	QL	123/132 (93%)	109 (89%)	13 (11%)	1 (1%)	19	52
51	XL	120/132 (91%)	100 (83%)	19 (16%)	1 (1%)	19	52
52	R1	92/98 (94%)	86 (94%)	4 (4%)	2 (2%)	6	31
52	Y1	91/98 (93%)	81 (89%)	10 (11%)	0	100	100
53	R8	62/65 (95%)	55 (89%)	7 (11%)	0	100	100
53	Y8	62/65 (95%)	47 (76%)	12 (19%)	3 (5%)	2	14
54	RF	200/210 (95%)	196 (98%)	3 (2%)	1 (0%)	29	62
54	YF	200/210 (95%)	185 (92%)	13 (6%)	2 (1%)	15	47

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
55	RZ	181/206 (88%)	171 (94%)	9 (5%)	1 (1%)	25	59
55	YZ	181/206 (88%)	175 (97%)	6 (3%)	0	100	100
All	All	11786/12464 (95%)	10743 (91%)	935 (8%)	108 (1%)	17	50

All (108) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	QM	12	ASN
18	QS	41	VAL
27	R4	24	THR
27	R4	25	TYR
34	RD	25	THR
34	RD	28	GLU
35	RE	18	ASP
35	RE	61	ARG
35	RE	69	LYS
41	RP	108	LYS
45	RT	124	ASP
46	RU	92	ARG
53	Y8	29	LYS
53	Y8	30	ARG
53	Y8	61	LEU
44	YS	110	LEU
45	YT	124	ASP
46	YU	92	ARG
41	YP	39	LYS
37	YH	126	PRO
55	RZ	53	ILE
9	QI	45	ALA
13	QN	17	LYS
37	RH	87	LEU
39	RN	22	THR
41	RP	12	ALA
41	RP	57	THR
42	RQ	78	PRO
45	RT	123	GLN
10	XJ	54	PHE
13	XN	17	LYS
38	YI	10	GLU
38	YI	15	VAL
39	YN	22	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
45	YT	123	GLN
42	YQ	27	VAL
54	RF	25	PRO
51	QL	127	GLU
4	QD	155	LEU
12	QM	15	VAL
24	R0	47	PRO
27	R4	26	SER
34	RD	26	LYS
35	RE	60	ASN
36	RG	117	PHE
37	RH	86	GLU
38	RI	11	ASN
38	RI	15	VAL
39	RN	96	GLU
42	RQ	22	LYS
43	RR	4	LEU
4	XD	155	LEU
4	XD	156	GLU
27	Y4	47	GLN
36	YG	81	LYS
38	YI	11	ASN
43	YR	4	LEU
18	XS	73	GLU
2	QB	233	SER
25	R2	47	ASN
35	RE	78	LEU
35	RE	83	ASP
36	RG	81	LYS
37	RH	10	PRO
37	RH	15	VAL
38	RI	145	VAL
2	XB	208	ILE
12	XM	12	ASN
54	YF	67	GLN
35	YE	30	PRO
35	YE	52	LEU
52	R1	57	GLU
2	QB	207	ALA
4	QD	156	GLU
12	QM	14	ARG
12	QM	67	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
24	R0	49	LYS
27	R4	42	PHE
35	RE	64	LYS
35	RE	73	GLU
35	RE	82	ARG
37	RH	11	VAL
37	RH	12	PRO
38	RI	10	GLU
41	RP	13	ASN
48	RW	66	GLU
54	YF	129	PHE
48	YW	66	GLU
41	YP	145	PRO
18	XS	59	PRO
5	QE	74	GLY
34	RD	34	VAL
35	RE	74	PRO
5	XE	74	GLY
51	XL	105	TYR
39	YN	96	GLU
38	RI	16	GLY
47	RV	50	PRO
38	YI	16	GLY
34	RD	243	GLY
37	RH	9	ILE
52	R1	86	SER
2	QB	230	VAL
34	RD	29	PRO
39	RN	36	GLY
34	RD	36	PRO
37	YH	117	PRO
35	YE	29	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	203/220 (92%)	180 (89%)	23 (11%)	6	22
2	XB	204/220 (93%)	202 (99%)	2 (1%)	76	85
3	QC	159/188 (85%)	159 (100%)	0	100	100
3	XC	159/188 (85%)	159 (100%)	0	100	100
4	QD	180/181 (99%)	179 (99%)	1 (1%)	86	91
4	XD	180/181 (99%)	180 (100%)	0	100	100
5	QE	116/123 (94%)	115 (99%)	1 (1%)	78	87
5	XE	116/123 (94%)	114 (98%)	2 (2%)	60	78
6	QF	90/90 (100%)	88 (98%)	2 (2%)	52	74
6	XF	90/90 (100%)	88 (98%)	2 (2%)	52	74
7	QG	126/127 (99%)	125 (99%)	1 (1%)	81	89
7	XG	126/127 (99%)	124 (98%)	2 (2%)	62	79
8	QH	118/119 (99%)	117 (99%)	1 (1%)	81	89
8	XH	118/119 (99%)	116 (98%)	2 (2%)	60	78
9	QI	98/99 (99%)	98 (100%)	0	100	100
9	XI	97/99 (98%)	95 (98%)	2 (2%)	53	75
10	QJ	89/92 (97%)	89 (100%)	0	100	100
10	XJ	86/92 (94%)	85 (99%)	1 (1%)	71	83
11	QK	90/99 (91%)	90 (100%)	0	100	100
11	XK	88/99 (89%)	87 (99%)	1 (1%)	73	84
12	QM	96/101 (95%)	96 (100%)	0	100	100
12	XM	95/101 (94%)	95 (100%)	0	100	100
13	QN	49/50 (98%)	49 (100%)	0	100	100
13	XN	49/50 (98%)	49 (100%)	0	100	100
14	QO	79/80 (99%)	79 (100%)	0	100	100
14	XO	79/80 (99%)	79 (100%)	0	100	100
15	QP	72/74 (97%)	72 (100%)	0	100	100
15	XP	72/74 (97%)	71 (99%)	1 (1%)	67	81
16	QQ	95/97 (98%)	95 (100%)	0	100	100
16	XQ	95/97 (98%)	95 (100%)	0	100	100
17	QR	61/77 (79%)	61 (100%)	0	100	100
17	XR	61/77 (79%)	61 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	QS	72/80 (90%)	69 (96%)	3 (4%)	30	59
18	XS	69/80 (86%)	62 (90%)	7 (10%)	7	27
19	QT	76/82 (93%)	76 (100%)	0	100	100
19	XT	76/82 (93%)	75 (99%)	1 (1%)	69	82
20	QU	20/22 (91%)	20 (100%)	0	100	100
20	XU	20/22 (91%)	19 (95%)	1 (5%)	24	55
23	QY	78/78 (100%)	77 (99%)	1 (1%)	69	82
23	QZ	78/78 (100%)	72 (92%)	6 (8%)	13	38
23	XY	78/78 (100%)	78 (100%)	0	100	100
23	XZ	78/78 (100%)	77 (99%)	1 (1%)	69	82
24	R0	65/67 (97%)	63 (97%)	2 (3%)	40	67
24	Y0	65/67 (97%)	64 (98%)	1 (2%)	65	80
25	R2	64/67 (96%)	64 (100%)	0	100	100
25	Y2	64/67 (96%)	64 (100%)	0	100	100
26	R3	51/52 (98%)	50 (98%)	1 (2%)	55	76
26	Y3	51/52 (98%)	50 (98%)	1 (2%)	55	76
27	R4	62/63 (98%)	59 (95%)	3 (5%)	25	56
27	Y4	62/63 (98%)	62 (100%)	0	100	100
28	R5	51/52 (98%)	51 (100%)	0	100	100
28	Y5	51/52 (98%)	50 (98%)	1 (2%)	55	76
29	R6	51/52 (98%)	51 (100%)	0	100	100
29	Y6	51/52 (98%)	51 (100%)	0	100	100
30	R7	40/42 (95%)	40 (100%)	0	100	100
30	Y7	41/42 (98%)	41 (100%)	0	100	100
31	R9	34/34 (100%)	34 (100%)	0	100	100
31	Y9	34/34 (100%)	34 (100%)	0	100	100
34	RD	214/218 (98%)	213 (100%)	1 (0%)	88	93
34	YD	216/218 (99%)	212 (98%)	4 (2%)	57	76
35	RE	165/166 (99%)	161 (98%)	4 (2%)	49	72
35	YE	164/166 (99%)	158 (96%)	6 (4%)	34	62
36	RG	155/156 (99%)	153 (99%)	2 (1%)	69	82

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	YG	155/156 (99%)	154 (99%)	1 (1%)	86	91
37	RH	145/148 (98%)	140 (97%)	5 (3%)	37	64
37	YH	144/148 (97%)	136 (94%)	8 (6%)	21	52
38	RI	122/124 (98%)	122 (100%)	0	100	100
38	YI	122/124 (98%)	122 (100%)	0	100	100
39	RN	117/119 (98%)	117 (100%)	0	100	100
39	YN	117/119 (98%)	117 (100%)	0	100	100
40	RO	100/100 (100%)	100 (100%)	0	100	100
40	YO	100/100 (100%)	100 (100%)	0	100	100
41	RP	116/116 (100%)	115 (99%)	1 (1%)	78	87
41	YP	115/116 (99%)	104 (90%)	11 (10%)	8	29
42	RQ	111/111 (100%)	111 (100%)	0	100	100
42	YQ	111/111 (100%)	104 (94%)	7 (6%)	18	47
43	RR	100/101 (99%)	100 (100%)	0	100	100
43	YR	100/101 (99%)	100 (100%)	0	100	100
44	RS	87/88 (99%)	87 (100%)	0	100	100
44	YS	87/88 (99%)	87 (100%)	0	100	100
45	RT	120/127 (94%)	120 (100%)	0	100	100
45	YT	120/127 (94%)	118 (98%)	2 (2%)	60	78
46	RU	93/94 (99%)	93 (100%)	0	100	100
46	YU	93/94 (99%)	93 (100%)	0	100	100
47	RV	82/82 (100%)	80 (98%)	2 (2%)	49	72
47	YV	82/82 (100%)	81 (99%)	1 (1%)	71	83
48	RW	92/92 (100%)	91 (99%)	1 (1%)	73	84
48	YW	92/92 (100%)	92 (100%)	0	100	100
49	RX	74/78 (95%)	74 (100%)	0	100	100
49	YX	74/78 (95%)	74 (100%)	0	100	100
50	RY	88/91 (97%)	87 (99%)	1 (1%)	73	84
50	YY	88/91 (97%)	87 (99%)	1 (1%)	73	84
51	QL	104/109 (95%)	102 (98%)	2 (2%)	57	76
51	XL	103/109 (94%)	103 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
52	R1	79/83 (95%)	79 (100%)	0	100	100
52	Y1	78/83 (94%)	75 (96%)	3 (4%)	33	62
53	R8	54/55 (98%)	54 (100%)	0	100	100
53	Y8	54/55 (98%)	54 (100%)	0	100	100
54	RF	161/166 (97%)	159 (99%)	2 (1%)	71	83
54	YF	161/166 (97%)	160 (99%)	1 (1%)	86	91
55	RZ	162/179 (90%)	155 (96%)	7 (4%)	29	59
55	YZ	162/179 (90%)	160 (99%)	2 (1%)	71	83
All	All	9997/10378 (96%)	9849 (98%)	148 (2%)	65	80

All (148) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	15	VAL
2	QB	16	HIS
2	QB	17	PHE
2	QB	19	HIS
2	QB	20	GLU
2	QB	23	ARG
2	QB	55	PHE
2	QB	60	ASP
2	QB	79	ASP
2	QB	95	GLN
2	QB	134	GLU
2	QB	144	ARG
2	QB	154	LEU
2	QB	156	LYS
2	QB	158	LEU
2	QB	168	THR
2	QB	172	ILE
2	QB	197	VAL
2	QB	200	ILE
2	QB	201	ILE
2	QB	205	ASP
2	QB	209	ARG
2	QB	221	LEU
4	QD	61	LYS
5	QE	24	ARG
6	QF	71	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	QF	80	ARG
7	QG	72	ARG
8	QH	91	ARG
18	QS	41	VAL
18	QS	44	MET
18	QS	83	HIS
23	QY	16	TRP
23	QZ	1	MET
23	QZ	17	GLN
23	QZ	31	ILE
23	QZ	34	THR
23	QZ	48	LEU
23	QZ	60	ILE
24	R0	7	LEU
24	R0	35	ASN
26	R3	30	ARG
27	R4	36	CYS
27	R4	46	GLN
27	R4	69	LYS
34	RD	242	ARG
35	RE	58	ARG
35	RE	61	ARG
35	RE	78	LEU
35	RE	144	ARG
36	RG	33	ARG
36	RG	118	ARG
37	RH	7	LEU
37	RH	9	ILE
37	RH	11	VAL
37	RH	50	VAL
37	RH	69	ARG
41	RP	15	ARG
47	RV	37	VAL
47	RV	40	LEU
48	RW	113	LYS
50	RY	51	VAL
2	XB	64	ARG
2	XB	190	THR
5	XE	24	ARG
5	XE	73	ASN
6	XF	71	ARG
6	XF	80	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	XG	89	MET
7	XG	156	TRP
8	XH	98	LYS
8	XH	103	VAL
9	XI	28	VAL
9	XI	102	LEU
10	XJ	79	ARG
11	XK	12	ARG
15	XP	25	ARG
19	XT	72	LEU
20	XU	26	LYS
23	XZ	63	GLU
24	Y0	14	ARG
52	Y1	75	GLU
52	Y1	78	LYS
52	Y1	90	ILE
26	Y3	30	ARG
28	Y5	57	VAL
54	YF	65	TRP
36	YG	33	ARG
45	YT	58	ASN
45	YT	112	ARG
50	YY	92	ASN
41	YP	2	LYS
41	YP	9	ASN
41	YP	45	LEU
41	YP	46	LYS
41	YP	47	ASP
41	YP	52	GLU
41	YP	75	ILE
41	YP	99	LEU
41	YP	112	LEU
41	YP	124	LYS
41	YP	149	GLU
34	YD	23	GLU
34	YD	45	ASN
34	YD	51	VAL
34	YD	253	GLN
42	YQ	1	MET
42	YQ	16	ARG
42	YQ	21	THR
42	YQ	26	TYR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
42	YQ	29	PHE
42	YQ	66	ILE
42	YQ	131	ILE
37	YH	3	ARG
37	YH	35	VAL
37	YH	60	ARG
37	YH	69	ARG
37	YH	76	VAL
37	YH	79	VAL
37	YH	133	VAL
37	YH	139	GLN
47	YV	72	VAL
35	YE	5	LEU
35	YE	23	VAL
35	YE	31	CYS
35	YE	42	ASP
35	YE	101	ARG
35	YE	143	ASN
18	XS	14	HIS
18	XS	16	LEU
18	XS	49	ILE
18	XS	56	GLN
18	XS	64	GLU
18	XS	77	THR
18	XS	83	HIS
54	RF	9	ILE
54	RF	133	ASN
55	RZ	53	ILE
55	RZ	75	ASN
55	RZ	76	LEU
55	RZ	85	HIS
55	RZ	131	ARG
55	RZ	181	GLU
55	RZ	183	LEU
55	YZ	1	MET
55	YZ	72	ARG
51	QL	126	LYS
51	QL	127	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	204	ASN
4	QD	42	GLN
4	QD	161	ASN
9	QI	31	GLN
23	QY	17	GLN
23	QZ	17	GLN
34	RD	46	GLN
35	RE	143	ASN
40	RO	3	GLN
23	XY	17	GLN
23	XY	51	ASN
45	YT	58	ASN
41	YP	68	GLN
34	YD	45	ASN
34	YD	46	GLN
34	YD	87	ASN
34	YD	115	GLN
34	YD	116	GLN
34	YD	253	GLN
37	YH	65	HIS
47	YV	64	HIS
47	YV	89	GLN
35	YE	48	GLN
35	YE	54	GLN
35	YE	66	HIS
35	YE	129	HIS
55	YZ	30	ASN
55	YZ	34	ASN
55	YZ	54	HIS
55	YZ	85	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1508/1521 (99%)	308 (20%)	50 (3%)
1	XA	1505/1521 (98%)	301 (20%)	48 (3%)
21	QV	77/77 (100%)	7 (9%)	2 (2%)
21	QW	76/77 (98%)	14 (18%)	1 (1%)
21	XV	77/77 (100%)	7 (9%)	1 (1%)
21	XW	76/77 (98%)	15 (19%)	1 (1%)
22	QX	19/22 (86%)	9 (47%)	1 (5%)
22	XX	19/22 (86%)	7 (36%)	2 (10%)

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
32	RA	2888/2915 (99%)	598 (20%)	47 (1%)
32	YA	2872/2915 (98%)	580 (20%)	42 (1%)
33	RB	119/124 (95%)	26 (21%)	1 (0%)
33	YB	119/124 (95%)	21 (17%)	1 (0%)
56	ZA	1/3 (33%)	1 (100%)	0
56	ZB	1/3 (33%)	0	0
All	All	9357/9478 (98%)	1894 (20%)	197 (2%)

All (1894) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	4	U
1	QA	5	U
1	QA	6	G
1	QA	9	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	48	C
1	QA	51	A
1	QA	61	G
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	79	G
1	QA	80	G
1	QA	90	C
1	QA	92	G
1	QA	93	U
1	QA	101	A
1	QA	116	A
1	QA	121	C
1	QA	130	A
1	QA	182	U
1	QA	184	G
1	QA	186	C
1	QA	188	U
1	QA	189	U
1	QA	190	G
1	QA	191(A)	G
1	QA	191(D)	U
1	QA	191(E)	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	195	A
1	QA	197	A
1	QA	198	G
1	QA	201	C
1	QA	208	U
1	QA	209	U
1	QA	210	U
1	QA	216	G
1	QA	231	G
1	QA	244	U
1	QA	247	G
1	QA	251	G
1	QA	266	G
1	QA	267	C
1	QA	270	A
1	QA	280	C
1	QA	281	G
1	QA	289	G
1	QA	315	A
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	345	C
1	QA	346	G
1	QA	347	G
1	QA	350	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	422	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	423	G
1	QA	424	G
1	QA	429	U
1	QA	430	A
1	QA	439	A
1	QA	442	C
1	QA	452	A
1	QA	466	C
1	QA	467	G
1	QA	478	A
1	QA	482	A
1	QA	485	G
1	QA	486	U
1	QA	494	U
1	QA	495	A
1	QA	496	A
1	QA	497	U
1	QA	505	G
1	QA	510	A
1	QA	511	C
1	QA	518	C
1	QA	519	C
1	QA	527	G
1	QA	530	G
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	547	A
1	QA	548	G
1	QA	559	A
1	QA	561	U
1	QA	564	C
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	579	G
1	QA	594	G
1	QA	596	C
1	QA	618	C
1	QA	623	C
1	QA	630	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	653	A
1	QA	665	A
1	QA	686	U
1	QA	688	G
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	724	G
1	QA	731	G
1	QA	734	G
1	QA	749	C
1	QA	755	G
1	QA	760	G
1	QA	777	A
1	QA	786	G
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	813	U
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	819	A
1	QA	821	G
1	QA	828	A
1	QA	841	U
1	QA	842	C
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	872	A
1	QA	884	U
1	QA	889	A
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	961	U
1	QA	968	A
1	QA	969	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	972	C
1	QA	974	A
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	980	C
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	999	U
1	QA	1000	A
1	QA	1001	G
1	QA	1002	G
1	QA	1003	G
1	QA	1005	A
1	QA	1006	C
1	QA	1007	C
1	QA	1008	C
1	QA	1009	G
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1029	G
1	QA	1030	C
1	QA	1031	G
1	QA	1032	A
1	QA	1032(A)	G
1	QA	1033	G
1	QA	1034	G
1	QA	1036	G
1	QA	1039	C
1	QA	1046	A
1	QA	1053	G
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1067	A
1	QA	1068	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	1081	G
1	QA	1094	G
1	QA	1095	U
1	QA	1100	C
1	QA	1101	A
1	QA	1117	G
1	QA	1118	C
1	QA	1124	G
1	QA	1125	U
1	QA	1129	C
1	QA	1130	A
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1176	A
1	QA	1177	G
1	QA	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1187	G
1	QA	1196	U
1	QA	1197	G
1	QA	1200	C
1	QA	1201	A
1	QA	1211	U
1	QA	1212	U
1	QA	1213	A
1	QA	1224	G
1	QA	1225	A
1	QA	1227	A
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	1257	U
1	QA	1258	G
1	QA	1260	C
1	QA	1270	C
1	QA	1273	G
1	QA	1278	U
1	QA	1280	A
1	QA	1285	A
1	QA	1286	A
1	QA	1287	A
1	QA	1288	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1303	C
1	QA	1305	G
1	QA	1318	A
1	QA	1319	A
1	QA	1320	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1334	G
1	QA	1335	C
1	QA	1338	G
1	QA	1346	A
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1364	U
1	QA	1365	G
1	QA	1368	G
1	QA	1397	C
1	QA	1398	A
1	QA	1406	U
1	QA	1419	G
1	QA	1442	G
1	QA	1443	G
1	QA	1446	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	1450	U
1	QA	1451	A
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1487	G
1	QA	1493	A
1	QA	1494	G
1	QA	1499	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1507	A
1	QA	1517	G
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
1	QA	1532	U
1	QA	1533	C
1	QA	1534	A
1	QA	1536	C
1	QA	1537	U
1	QA	1538	C
1	QA	1540	U
1	QA	1541	U
21	QV	2	G
21	QV	17(A)	U
21	QV	18	G
21	QV	20	U
21	QV	47	U
21	QV	49	G
21	QV	76	A
21	QW	2	G
21	QW	8	U
21	QW	14	A
21	QW	17	C
21	QW	17(A)	U
21	QW	18	G
21	QW	20	U
21	QW	21	A
21	QW	22	G
21	QW	47	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	QW	48	C
21	QW	55	U
21	QW	56	C
21	QW	61	C
22	QX	4	A
22	QX	8	A
22	QX	9	G
22	QX	11	U
22	QX	12	A
22	QX	13	A
22	QX	19	A2M
22	QX	21	OMU
22	QX	22	C
32	RA	9	U
32	RA	15	G
32	RA	28	A
32	RA	34	C
32	RA	35	G
32	RA	46	C
32	RA	49	A
32	RA	58	G
32	RA	60	G
32	RA	68	G
32	RA	69	C
32	RA	71	A
32	RA	74	A
32	RA	75	G
32	RA	83	G
32	RA	91	A
32	RA	95	G
32	RA	99	U
32	RA	101	G
32	RA	102	G
32	RA	118	A
32	RA	120	U
32	RA	129	C
32	RA	137	C
32	RA	138	G
32	RA	139	G
32	RA	140	A
32	RA	141	A
32	RA	144	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	153	C
32	RA	154	G
32	RA	155	C
32	RA	174	C
32	RA	175	G
32	RA	196	A
32	RA	199	A
32	RA	215	G
32	RA	216	A
32	RA	221	A
32	RA	222	A
32	RA	228	A
32	RA	229	A
32	RA	233	A
32	RA	248	G
32	RA	249	C
32	RA	252	G
32	RA	265	A
32	RA	266	G
32	RA	270(K)	C
32	RA	270(L)	U
32	RA	270(M)	U
32	RA	270(O)	U
32	RA	270(P)	C
32	RA	270(Z)	U
32	RA	271(C)	U
32	RA	271(D)	G
32	RA	273(D)	C
32	RA	274	G
32	RA	275	G
32	RA	278	A
32	RA	279	C
32	RA	283	A
32	RA	288	C
32	RA	289	A
32	RA	308	G
32	RA	309	G
32	RA	311	A
32	RA	324	A
32	RA	329	G
32	RA	330	A
32	RA	332	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	338	G
32	RA	339	U
32	RA	345	A
32	RA	352	G
32	RA	353	G
32	RA	356	G
32	RA	358	U
32	RA	363(A)	A
32	RA	363(E)	U
32	RA	363(F)	A
32	RA	364	C
32	RA	372	G
32	RA	373	U
32	RA	386	G
32	RA	388	G
32	RA	395	U
32	RA	405	U
32	RA	411	G
32	RA	412	A
32	RA	428	A
32	RA	443	A
32	RA	444	C
32	RA	448	U
32	RA	457	A
32	RA	470	A
32	RA	481	G
32	RA	494	G
32	RA	505	A
32	RA	508	G
32	RA	509	C
32	RA	510	C
32	RA	512	G
32	RA	531	C
32	RA	532	A
32	RA	533	G
32	RA	537	C
32	RA	563	G
32	RA	573	G
32	RA	575	A
32	RA	586	A
32	RA	588	U
32	RA	603	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	604	G
32	RA	607	U
32	RA	614	U
32	RA	615	G
32	RA	617	G
32	RA	620	G
32	RA	621	A
32	RA	622	G
32	RA	627	A
32	RA	634	C
32	RA	637	A
32	RA	645	C
32	RA	646	A
32	RA	651	G
32	RA	654	A
32	RA	654(A)	G
32	RA	654(B)	C
32	RA	654(F)	C
32	RA	654(G)	C
32	RA	654(O)	G
32	RA	654(Q)	C
32	RA	654(R)	C
32	RA	654(S)	G
32	RA	654(T)	C
32	RA	686	G
32	RA	708	C
32	RA	722	A
32	RA	730	C
32	RA	753	C
32	RA	764	A
32	RA	775	G
32	RA	782	A
32	RA	784	A
32	RA	785	G
32	RA	789	A
32	RA	792	G
32	RA	805	G
32	RA	812	C
32	RA	819	A
32	RA	827	U
32	RA	828	U
32	RA	846	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	856	C
32	RA	857	C
32	RA	859	G
32	RA	860	U
32	RA	866	A
32	RA	872	A
32	RA	878	A
32	RA	879	G
32	RA	881	G
32	RA	882	G
32	RA	883	G
32	RA	884	C
32	RA	886	C
32	RA	888	C
32	RA	889	C
32	RA	890	A
32	RA	892	G
32	RA	894	C
32	RA	895	U
32	RA	896	A
32	RA	897	C
32	RA	900	A
32	RA	901	A
32	RA	906	G
32	RA	910	A
32	RA	917	A
32	RA	919	G
32	RA	928	G
32	RA	932	G
32	RA	941	A
32	RA	945	A
32	RA	946	G
32	RA	961	C
32	RA	973	A
32	RA	974	G
32	RA	983	A
32	RA	989	G
32	RA	990	A
32	RA	991	C
32	RA	996	A
32	RA	1005	C
32	RA	1012	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	1013	C
32	RA	1015	G
32	RA	1017	G
32	RA	1022	G
32	RA	1023	U
32	RA	1025	G
32	RA	1026	U
32	RA	1027	A
32	RA	1033	U
32	RA	1034	G
32	RA	1044	G
32	RA	1045	A
32	RA	1046	A
32	RA	1047	G
32	RA	1049	C
32	RA	1061	U
32	RA	1070	A
32	RA	1071	G
32	RA	1073	A
32	RA	1086	A
32	RA	1087	G
32	RA	1088	A
32	RA	1089	G
32	RA	1095	A
32	RA	1096	A
32	RA	1105	U
32	RA	1111	A
32	RA	1122	G
32	RA	1130	U
32	RA	1135	C
32	RA	1136	G
32	RA	1139	G
32	RA	1141	U
32	RA	1143	A
32	RA	1155	A
32	RA	1156	A
32	RA	1170	G
32	RA	1171	G
32	RA	1173	G
32	RA	1174	A
32	RA	1175	U
32	RA	1176	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	1177	A
32	RA	1178	C
32	RA	1180	C
32	RA	1195	G
32	RA	1197	G
32	RA	1203	G
32	RA	1204	A
32	RA	1205	U
32	RA	1211	U
32	RA	1212	G
32	RA	1220	A
32	RA	1221	C
32	RA	1236	G
32	RA	1250	G
32	RA	1253	A
32	RA	1255	U
32	RA	1256	G
32	RA	1265	A
32	RA	1271	G
32	RA	1272	A
32	RA	1281	G
32	RA	1286	A
32	RA	1287	A
32	RA	1300	U
32	RA	1301	A
32	RA	1303	G
32	RA	1308	A
32	RA	1311	G
32	RA	1312	U
32	RA	1314	C
32	RA	1319	G
32	RA	1329	U
32	RA	1341	U
32	RA	1342	A
32	RA	1343	G
32	RA	1352	U
32	RA	1359	A
32	RA	1365	A
32	RA	1368	G
32	RA	1379	A
32	RA	1380	G
32	RA	1384	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	1385	G
32	RA	1392	A
32	RA	1395	A
32	RA	1405	U
32	RA	1406	U
32	RA	1407	C
32	RA	1408	C
32	RA	1415	U
32	RA	1416	G
32	RA	1419	A
32	RA	1420	U
32	RA	1421	G
32	RA	1428	C
32	RA	1437	C
32	RA	1444(A)	A
32	RA	1449	A
32	RA	1449(A)	G
32	RA	1453	A
32	RA	1454	U
32	RA	1455	G
32	RA	1460	A
32	RA	1461	G
32	RA	1467	C
32	RA	1471	A
32	RA	1475	G
32	RA	1476	C
32	RA	1482	U
32	RA	1483	G
32	RA	1488	G
32	RA	1490	A
32	RA	1493	C
32	RA	1505	C
32	RA	1509	C
32	RA	1510	A
32	RA	1515	C
32	RA	1520	U
32	RA	1522	G
32	RA	1523	U
32	RA	1526	G
32	RA	1535	U
32	RA	1536	A
32	RA	1537	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	1543	A
32	RA	1544	C
32	RA	1545	A
32	RA	1547	C
32	RA	1554	A
32	RA	1558	A
32	RA	1559	G
32	RA	1560	G
32	RA	1566	A
32	RA	1569	A
32	RA	1578	U
32	RA	1585	C
32	RA	1586	A
32	RA	1588	C
32	RA	1592	C
32	RA	1594	G
32	RA	1598	C
32	RA	1608	A
32	RA	1616	A
32	RA	1640	C
32	RA	1648	C
32	RA	1654	A
32	RA	1667	G
32	RA	1668	A
32	RA	1674	G
32	RA	1695	G
32	RA	1696	G
32	RA	1698	A
32	RA	1699	G
32	RA	1700	A
32	RA	1701	A
32	RA	1725	G
32	RA	1728	G
32	RA	1729	A
32	RA	1730	U
32	RA	1731	G
32	RA	1743	G
32	RA	1756	G
32	RA	1762	A
32	RA	1763	G
32	RA	1764	G
32	RA	1769	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	1773	A
32	RA	1780	A
32	RA	1791	A
32	RA	1800	C
32	RA	1801	G
32	RA	1816	G
32	RA	1820	U
32	RA	1828	G
32	RA	1829	A
32	RA	1835	G
32	RA	1847	A
32	RA	1853	A
32	RA	1858	G
32	RA	1869	G
32	RA	1872	A
32	RA	1878	G
32	RA	1880	C
32	RA	1881	C
32	RA	1882	C
32	RA	1888	G
32	RA	1889	A
32	RA	1901	A
32	RA	1903	G
32	RA	1906	G
32	RA	1910	G
32	RA	1912	A
32	RA	1914	C
32	RA	1929	G
32	RA	1930	G
32	RA	1931	U
32	RA	1936	A
32	RA	1938	A
32	RA	1948	G
32	RA	1949	G
32	RA	1955	U
32	RA	1963	U
32	RA	1967	C
32	RA	1970	A
32	RA	1971	A
32	RA	1972	A
32	RA	1982	C
32	RA	1992	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	1993	U
32	RA	2021	C
32	RA	2022	U
32	RA	2023	G
32	RA	2026	C
32	RA	2027	G
32	RA	2031	A
32	RA	2032	G
32	RA	2033	A
32	RA	2043	C
32	RA	2052	G
32	RA	2053	G
32	RA	2055	C
32	RA	2056	G
32	RA	2059	A
32	RA	2060	A
32	RA	2061	G
32	RA	2062	A
32	RA	2069	G
32	RA	2092	U
32	RA	2093	G
32	RA	2108	C
32	RA	2111	C
32	RA	2112	G
32	RA	2113	U
32	RA	2114	A
32	RA	2116	G
32	RA	2117	A
32	RA	2119	A
32	RA	2120	G
32	RA	2124	G
32	RA	2126	A
32	RA	2128	C
32	RA	2130	U
32	RA	2131	G
32	RA	2132	U
32	RA	2140	C
32	RA	2145	C
32	RA	2147	G
32	RA	2148	G
32	RA	2161	C
32	RA	2165	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	2167	U
32	RA	2168	G
32	RA	2169	A
32	RA	2171	A
32	RA	2173	A
32	RA	2178	C
32	RA	2190	G
32	RA	2192	G
32	RA	2198	A
32	RA	2210	G
32	RA	2211	G
32	RA	2212	A
32	RA	2213	U
32	RA	2215	G
32	RA	2225	A
32	RA	2226	C
32	RA	2238	G
32	RA	2239	G
32	RA	2243	U
32	RA	2246	G
32	RA	2266	A
32	RA	2275	C
32	RA	2283	C
32	RA	2287	A
32	RA	2305	A
32	RA	2306	C
32	RA	2307	G
32	RA	2308	G
32	RA	2309	A
32	RA	2310	A
32	RA	2312	U
32	RA	2316	C
32	RA	2319	G
32	RA	2320	A
32	RA	2325	G
32	RA	2334	G
32	RA	2347	C
32	RA	2350	C
32	RA	2354	G
32	RA	2379	G
32	RA	2382	G
32	RA	2383	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	2385	C
32	RA	2392	A
32	RA	2394	C
32	RA	2402	C
32	RA	2406	U
32	RA	2410	G
32	RA	2423	U
32	RA	2424	C
32	RA	2425	A
32	RA	2429	G
32	RA	2430	A
32	RA	2435	A
32	RA	2439	A
32	RA	2440	C
32	RA	2441	C
32	RA	2445	G
32	RA	2448	A
32	RA	2450	A
32	RA	2469	A
32	RA	2470	G
32	RA	2472	G
32	RA	2475	C
32	RA	2476	A
32	RA	2482	G
32	RA	2502	G
32	RA	2505	G
32	RA	2517	C
32	RA	2518	A
32	RA	2519	U
32	RA	2529	G
32	RA	2535	G
32	RA	2542	A
32	RA	2543	G
32	RA	2554	U
32	RA	2566	A
32	RA	2567	G
32	RA	2569	G
32	RA	2570	G
32	RA	2572	A
32	RA	2574	G
32	RA	2578	G
32	RA	2586	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	2602	A
32	RA	2609	U
32	RA	2610	C
32	RA	2611	U
32	RA	2612	C
32	RA	2615	U
32	RA	2629	A
32	RA	2630	G
32	RA	2642	G
32	RA	2646	C
32	RA	2654	A
32	RA	2655	G
32	RA	2665	A
32	RA	2673	G
32	RA	2682	U
32	RA	2689	U
32	RA	2690	C
32	RA	2691	C
32	RA	2702	U
32	RA	2703	C
32	RA	2712	U
32	RA	2713	A
32	RA	2714	G
32	RA	2725	A
32	RA	2733	A
32	RA	2744	G
32	RA	2748	A
32	RA	2752	C
32	RA	2758	A
32	RA	2762	G
32	RA	2765	A
32	RA	2766	G
32	RA	2777	G
32	RA	2778	A
32	RA	2779	U
32	RA	2780	G
32	RA	2789	C
32	RA	2790	A
32	RA	2791	C
32	RA	2797	U
32	RA	2799	A
32	RA	2807	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	2808	U
32	RA	2818	G
32	RA	2820	A
32	RA	2821	A
32	RA	2827	C
32	RA	2832	U
32	RA	2833	G
32	RA	2834	G
32	RA	2835	A
32	RA	2847	U
32	RA	2849	U
32	RA	2850	A
32	RA	2860	A
32	RA	2867	G
32	RA	2872	G
32	RA	2873	A
32	RA	2874	C
32	RA	2876	G
32	RA	2877	G
32	RA	2879	C
32	RA	2880	C
32	RA	2893	G
32	RA	2897	U
33	RB	2	C
33	RB	3	C
33	RB	8	U
33	RB	12	C
33	RB	13	A
33	RB	15	A
33	RB	16	G
33	RB	19	G
33	RB	25	A
33	RB	27	C
33	RB	42	C
33	RB	44	G
33	RB	45	A
33	RB	47	C
33	RB	52	A
33	RB	53	A
33	RB	67	G
33	RB	73	A
33	RB	81	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
33	RB	88	C
33	RB	89	G
33	RB	92	G
33	RB	101	A
33	RB	108	C
33	RB	109	G
33	RB	118	G
1	XA	4	U
1	XA	5	U
1	XA	6	G
1	XA	7	G
1	XA	9	G
1	XA	22	G
1	XA	32	A
1	XA	39	G
1	XA	48	C
1	XA	51	A
1	XA	54	C
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	75	C
1	XA	76	G
1	XA	78	G
1	XA	79	G
1	XA	91	C
1	XA	93	U
1	XA	101	A
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	129(A)	G
1	XA	130	A
1	XA	151	A
1	XA	163	C
1	XA	169	C
1	XA	182	U
1	XA	185	A
1	XA	186	C
1	XA	188	U
1	XA	189	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	190	G
1	XA	191(A)	G
1	XA	191(D)	U
1	XA	195	A
1	XA	197	A
1	XA	198	G
1	XA	201	C
1	XA	208	U
1	XA	209	U
1	XA	210	U
1	XA	216	G
1	XA	231	G
1	XA	244	U
1	XA	247	G
1	XA	251	G
1	XA	266	G
1	XA	267	C
1	XA	268	C
1	XA	270	A
1	XA	280	C
1	XA	281	G
1	XA	289	G
1	XA	316	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	332	G
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	350	G
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	358	U
1	XA	359	U
1	XA	367	U
1	XA	368	U
1	XA	372	C
1	XA	373	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	384	G
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	411	A
1	XA	412	A
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	439	A
1	XA	442	C
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	496	A
1	XA	497	U
1	XA	505	G
1	XA	511	C
1	XA	518	C
1	XA	521	G
1	XA	527	G
1	XA	530	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	560	U
1	XA	561	U
1	XA	564	C
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	596	C
1	XA	630	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	653	A
1	XA	665	A
1	XA	686	U
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	721	G
1	XA	723	U
1	XA	724	G
1	XA	731	G
1	XA	734	G
1	XA	749	C
1	XA	755	G
1	XA	760	G
1	XA	773	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	801	U
1	XA	812	C
1	XA	813	U
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	820	U
1	XA	821	G
1	XA	828	A
1	XA	841	U
1	XA	842	C
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	870	U
1	XA	874	G
1	XA	914	A
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	960	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	961	U
1	XA	968	A
1	XA	969	A
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	980	C
1	XA	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	999	U
1	XA	1000	A
1	XA	1001	G
1	XA	1005	A
1	XA	1006	C
1	XA	1007	C
1	XA	1008	C
1	XA	1009	G
1	XA	1020	U
1	XA	1024	G
1	XA	1026	G
1	XA	1029	G
1	XA	1031	G
1	XA	1032	A
1	XA	1032(A)	G
1	XA	1033	G
1	XA	1034	G
1	XA	1036	G
1	XA	1038	C
1	XA	1039	C
1	XA	1040	U
1	XA	1042	G
1	XA	1054	C
1	XA	1055	A
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1068	G
1	XA	1081	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	1082	G
1	XA	1086	U
1	XA	1094	G
1	XA	1101	A
1	XA	1118	C
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1140	C
1	XA	1146	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1191	A
1	XA	1196	U
1	XA	1198	G
1	XA	1212	U
1	XA	1224	G
1	XA	1225	A
1	XA	1226	C
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1270	C
1	XA	1273	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	1278	U
1	XA	1280	A
1	XA	1281	U
1	XA	1287	A
1	XA	1290	G
1	XA	1297	C
1	XA	1301	U
1	XA	1303	C
1	XA	1305	G
1	XA	1319	A
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1331	G
1	XA	1346	A
1	XA	1347	G
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1370	G
1	XA	1397	C
1	XA	1398	A
1	XA	1419	G
1	XA	1422	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1450	U
1	XA	1451	A
1	XA	1452	C
1	XA	1453	G
1	XA	1487	G
1	XA	1491	G
1	XA	1492	A
1	XA	1493	A
1	XA	1494	G
1	XA	1499	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	1506	U
1	XA	1517	G
1	XA	1519	A
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
1	XA	1531	A
1	XA	1532	U
1	XA	1533	C
1	XA	1534	A
1	XA	1535	C
1	XA	1537	U
1	XA	1540	U
1	XA	1541	U
21	XV	2	G
21	XV	18	G
21	XV	20	U
21	XV	46	G
21	XV	47	U
21	XV	49	G
21	XV	76	A
21	XW	8	U
21	XW	13	C
21	XW	14	A
21	XW	15	G
21	XW	18	G
21	XW	20	U
21	XW	21	A
21	XW	22	G
21	XW	46	G
21	XW	47	U
21	XW	48	C
21	XW	55	U
21	XW	57	A
21	XW	61	C
21	XW	72	A
22	XX	5	A
22	XX	11	U
22	XX	12	A
22	XX	13	A
22	XX	14	A
22	XX	19	A2M

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	XX	21	OMU
32	YA	9	U
32	YA	46	C
32	YA	51	G
32	YA	55	G
32	YA	58	G
32	YA	69	C
32	YA	71	A
32	YA	74	A
32	YA	75	G
32	YA	83	G
32	YA	91	A
32	YA	93	C
32	YA	95	G
32	YA	99	U
32	YA	101	G
32	YA	102	G
32	YA	118	A
32	YA	120	U
32	YA	138	G
32	YA	139	G
32	YA	140	A
32	YA	154	G
32	YA	172	C
32	YA	175	G
32	YA	177	G
32	YA	181	A
32	YA	182	A
32	YA	196	A
32	YA	199	A
32	YA	215	G
32	YA	216	A
32	YA	221	A
32	YA	222	A
32	YA	223	A
32	YA	229	A
32	YA	233	A
32	YA	248	G
32	YA	249	C
32	YA	252	G
32	YA	265	A
32	YA	266	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	270(B)	A
32	YA	270(K)	C
32	YA	270(M)	U
32	YA	270(N)	G
32	YA	270(O)	U
32	YA	270(P)	C
32	YA	270(Z)	U
32	YA	271(C)	U
32	YA	271(D)	G
32	YA	273(C)	C
32	YA	273(D)	C
32	YA	274	G
32	YA	278	A
32	YA	279	C
32	YA	283	A
32	YA	287	C
32	YA	288	C
32	YA	289	A
32	YA	290	G
32	YA	311	A
32	YA	316	C
32	YA	317	G
32	YA	324	A
32	YA	329	G
32	YA	330	A
32	YA	332	A
32	YA	345	A
32	YA	352	G
32	YA	353	G
32	YA	356	G
32	YA	363	G
32	YA	363(A)	A
32	YA	363(E)	U
32	YA	363(F)	A
32	YA	372	G
32	YA	373	U
32	YA	380	U
32	YA	386	G
32	YA	395	U
32	YA	405	U
32	YA	406	G
32	YA	407	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	411	G
32	YA	412	A
32	YA	428	A
32	YA	444	C
32	YA	448	U
32	YA	456	C
32	YA	457	A
32	YA	470	A
32	YA	479	A
32	YA	481	G
32	YA	494	G
32	YA	505	A
32	YA	508	G
32	YA	509	C
32	YA	512	G
32	YA	513	A
32	YA	531	C
32	YA	532	A
32	YA	533	G
32	YA	563	G
32	YA	569	U
32	YA	573	G
32	YA	575	A
32	YA	588	U
32	YA	603	A
32	YA	604	G
32	YA	607	U
32	YA	613	U
32	YA	614	U
32	YA	615	G
32	YA	617	G
32	YA	622	G
32	YA	624	C
32	YA	627	A
32	YA	637	A
32	YA	645	C
32	YA	646	A
32	YA	668	G
32	YA	669	G
32	YA	670	A
32	YA	686	G
32	YA	708	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	717	G
32	YA	722	A
32	YA	730	C
32	YA	752	A
32	YA	753	C
32	YA	764	A
32	YA	765	G
32	YA	775	G
32	YA	776	G
32	YA	782	A
32	YA	784	A
32	YA	785	G
32	YA	789	A
32	YA	790	C
32	YA	791	C
32	YA	792	G
32	YA	793	A
32	YA	805	G
32	YA	811	U
32	YA	812	C
32	YA	819	A
32	YA	827	U
32	YA	828	U
32	YA	831	G
32	YA	832	G
32	YA	846	C
32	YA	848	G
32	YA	856	C
32	YA	857	C
32	YA	860	U
32	YA	862	G
32	YA	866	A
32	YA	869	G
32	YA	878	A
32	YA	879	G
32	YA	881	G
32	YA	882	G
32	YA	883	G
32	YA	884	C
32	YA	886	C
32	YA	889	C
32	YA	890	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	894	C
32	YA	896	A
32	YA	897	C
32	YA	904	C
32	YA	906	G
32	YA	907	U
32	YA	910	A
32	YA	914	C
32	YA	917	A
32	YA	919	G
32	YA	928	G
32	YA	932	G
32	YA	938	G
32	YA	941	A
32	YA	945	A
32	YA	946	G
32	YA	953	A
32	YA	957	A
32	YA	959	A
32	YA	961	C
32	YA	968	G
32	YA	974	G
32	YA	980	A
32	YA	983	A
32	YA	989	G
32	YA	990	A
32	YA	991	C
32	YA	996	A
32	YA	1000	A
32	YA	1005	C
32	YA	1012	U
32	YA	1013	C
32	YA	1022	G
32	YA	1023	U
32	YA	1025	G
32	YA	1026	U
32	YA	1027	A
32	YA	1033	U
32	YA	1044	G
32	YA	1045	A
32	YA	1046	A
32	YA	1047	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	1049	C
32	YA	1051	G
32	YA	1053	C
32	YA	1060	U
32	YA	1061	U
32	YA	1064	C
32	YA	1070	A
32	YA	1071	G
32	YA	1073	A
32	YA	1079	C
32	YA	1086	A
32	YA	1087	G
32	YA	1088	A
32	YA	1089	G
32	YA	1095	A
32	YA	1096	A
32	YA	1099	G
32	YA	1105	U
32	YA	1122	G
32	YA	1126	A
32	YA	1128	A
32	YA	1135	C
32	YA	1136	G
32	YA	1139	G
32	YA	1142	U
32	YA	1171	G
32	YA	1173	G
32	YA	1174	A
32	YA	1175	U
32	YA	1177	A
32	YA	1178	C
32	YA	1180	C
32	YA	1195	G
32	YA	1204	A
32	YA	1205	U
32	YA	1210	A
32	YA	1212	G
32	YA	1220	A
32	YA	1236	G
32	YA	1247	A
32	YA	1248	G
32	YA	1253	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	1255	U
32	YA	1256	G
32	YA	1262	A
32	YA	1265	A
32	YA	1272	A
32	YA	1281	G
32	YA	1286	A
32	YA	1287	A
32	YA	1300	U
32	YA	1301	A
32	YA	1308	A
32	YA	1314	C
32	YA	1319	G
32	YA	1324	G
32	YA	1325	G
32	YA	1329	U
32	YA	1352	U
32	YA	1359	A
32	YA	1360	A
32	YA	1368	G
32	YA	1378	A
32	YA	1380	G
32	YA	1384	A
32	YA	1385	G
32	YA	1391	U
32	YA	1407	C
32	YA	1408	C
32	YA	1415	U
32	YA	1416	G
32	YA	1419	A
32	YA	1420	U
32	YA	1421	G
32	YA	1428	C
32	YA	1434	A
32	YA	1436	G
32	YA	1437	C
32	YA	1444(A)	A
32	YA	1449	A
32	YA	1449(A)	G
32	YA	1455	G
32	YA	1458	C
32	YA	1459	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	1460	A
32	YA	1461	G
32	YA	1467	C
32	YA	1471	A
32	YA	1475	G
32	YA	1478	G
32	YA	1482	U
32	YA	1483	G
32	YA	1485	G
32	YA	1488	G
32	YA	1490	A
32	YA	1493	C
32	YA	1508	A
32	YA	1509	C
32	YA	1510	A
32	YA	1514	U
32	YA	1515	C
32	YA	1519	G
32	YA	1521	G
32	YA	1522	G
32	YA	1526	G
32	YA	1534	G
32	YA	1535	U
32	YA	1536	A
32	YA	1537	C
32	YA	1538	G
32	YA	1540	G
32	YA	1543	A
32	YA	1545	A
32	YA	1547	C
32	YA	1554	A
32	YA	1558	A
32	YA	1559	G
32	YA	1566	A
32	YA	1569	A
32	YA	1578	U
32	YA	1579	A
32	YA	1581	G
32	YA	1585	C
32	YA	1586	A
32	YA	1598	C
32	YA	1608	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	1616	A
32	YA	1618	A
32	YA	1640	C
32	YA	1648	C
32	YA	1654	A
32	YA	1667	G
32	YA	1668	A
32	YA	1674	G
32	YA	1675	C
32	YA	1695	G
32	YA	1696	G
32	YA	1700	A
32	YA	1703	G
32	YA	1725	G
32	YA	1729	A
32	YA	1731	G
32	YA	1734	C
32	YA	1743	G
32	YA	1754	C
32	YA	1756	G
32	YA	1758	G
32	YA	1762	A
32	YA	1763	G
32	YA	1764	G
32	YA	1773	A
32	YA	1780	A
32	YA	1782	C
32	YA	1791	A
32	YA	1800	C
32	YA	1801	G
32	YA	1802	A
32	YA	1816	G
32	YA	1820	U
32	YA	1829	A
32	YA	1835	G
32	YA	1847	A
32	YA	1858	G
32	YA	1869	G
32	YA	1870	C
32	YA	1872	A
32	YA	1878	G
32	YA	1881	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	1882	C
32	YA	1888	G
32	YA	1889	A
32	YA	1900	A
32	YA	1905	C
32	YA	1906	G
32	YA	1912	A
32	YA	1913	A
32	YA	1914	C
32	YA	1916	A
32	YA	1929	G
32	YA	1930	G
32	YA	1936	A
32	YA	1938	A
32	YA	1948	G
32	YA	1955	U
32	YA	1963	U
32	YA	1964	G
32	YA	1966	A
32	YA	1967	C
32	YA	1970	A
32	YA	1971	A
32	YA	1972	A
32	YA	1980	G
32	YA	1982	C
32	YA	1993	U
32	YA	2020	A
32	YA	2021	C
32	YA	2023	G
32	YA	2026	C
32	YA	2027	G
32	YA	2031	A
32	YA	2032	G
32	YA	2033	A
32	YA	2043	C
32	YA	2055	C
32	YA	2056	G
32	YA	2059	A
32	YA	2060	A
32	YA	2061	G
32	YA	2062	A
32	YA	2069	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	2111	C
32	YA	2112	G
32	YA	2113	U
32	YA	2114	A
32	YA	2116	G
32	YA	2117	A
32	YA	2120	G
32	YA	2123	G
32	YA	2126	A
32	YA	2127	G
32	YA	2128	C
32	YA	2130	U
32	YA	2131	G
32	YA	2132	U
32	YA	2134	A
32	YA	2137	C
32	YA	2140	C
32	YA	2145	C
32	YA	2161	C
32	YA	2165	G
32	YA	2166	G
32	YA	2167	U
32	YA	2168	G
32	YA	2169	A
32	YA	2171	A
32	YA	2173	A
32	YA	2186	G
32	YA	2190	G
32	YA	2191	G
32	YA	2192	G
32	YA	2198	A
32	YA	2210	G
32	YA	2212	A
32	YA	2215	G
32	YA	2225	A
32	YA	2226	C
32	YA	2238	G
32	YA	2239	G
32	YA	2251	G
32	YA	2266	A
32	YA	2275	C
32	YA	2283	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	2287	A
32	YA	2305	A
32	YA	2306	C
32	YA	2307	G
32	YA	2308	G
32	YA	2309	A
32	YA	2310	A
32	YA	2316	C
32	YA	2319	G
32	YA	2320	A
32	YA	2325	G
32	YA	2327	A
32	YA	2334	G
32	YA	2342	C
32	YA	2345	G
32	YA	2347	C
32	YA	2350	C
32	YA	2377	A
32	YA	2382	G
32	YA	2383	G
32	YA	2385	C
32	YA	2392	A
32	YA	2402	C
32	YA	2403	C
32	YA	2406	U
32	YA	2410	G
32	YA	2423	U
32	YA	2424	C
32	YA	2425	A
32	YA	2429	G
32	YA	2430	A
32	YA	2435	A
32	YA	2439	A
32	YA	2440	C
32	YA	2441	C
32	YA	2448	A
32	YA	2450	A
32	YA	2469	A
32	YA	2470	G
32	YA	2472	G
32	YA	2474	C
32	YA	2475	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	2476	A
32	YA	2482	G
32	YA	2498	C
32	YA	2502	G
32	YA	2505	G
32	YA	2518	A
32	YA	2535	G
32	YA	2543	G
32	YA	2554	U
32	YA	2566	A
32	YA	2567	G
32	YA	2569	G
32	YA	2573	C
32	YA	2586	C
32	YA	2602	A
32	YA	2609	U
32	YA	2611	U
32	YA	2612	C
32	YA	2615	U
32	YA	2629	A
32	YA	2630	G
32	YA	2645	G
32	YA	2646	C
32	YA	2654	A
32	YA	2655	G
32	YA	2665	A
32	YA	2673	G
32	YA	2689	U
32	YA	2690	C
32	YA	2702	U
32	YA	2703	C
32	YA	2712	U
32	YA	2713	A
32	YA	2714	G
32	YA	2725	A
32	YA	2726	U
32	YA	2733	A
32	YA	2734	A
32	YA	2744	G
32	YA	2748	A
32	YA	2750	A
32	YA	2751	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	2752	C
32	YA	2754	U
32	YA	2758	A
32	YA	2762	G
32	YA	2766	G
32	YA	2771	C
32	YA	2777	G
32	YA	2778	A
32	YA	2779	U
32	YA	2780	G
32	YA	2789	C
32	YA	2790	A
32	YA	2791	C
32	YA	2807	G
32	YA	2820	A
32	YA	2821	A
32	YA	2827	C
32	YA	2828	C
32	YA	2833	G
32	YA	2834	G
32	YA	2835	A
32	YA	2845	G
32	YA	2846	G
32	YA	2849	U
32	YA	2850	A
32	YA	2860	A
32	YA	2872	G
32	YA	2873	A
32	YA	2879	C
32	YA	2880	C
32	YA	2892	A
32	YA	2893	G
32	YA	2894	G
32	YA	2896	C
32	YA	2897	U
33	YB	3	C
33	YB	8	U
33	YB	9	G
33	YB	12	C
33	YB	13	A
33	YB	14	U
33	YB	15	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
33	YB	22	U
33	YB	25	A
33	YB	32	C
33	YB	42	C
33	YB	44	G
33	YB	45	A
33	YB	53	A
33	YB	67	G
33	YB	73	A
33	YB	81	G
33	YB	88	C
33	YB	109	G
33	YB	118	G
33	YB	119	A
56	ZA	75	C

All (197) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	5	U
1	QA	31	G
1	QA	60	A
1	QA	64	G
1	QA	115	G
1	QA	181	G
1	QA	197	A
1	QA	201	C
1	QA	208	U
1	QA	243	A
1	QA	250	A
1	QA	279	A
1	QA	328	C
1	QA	352	C
1	QA	410	G
1	QA	428	G
1	QA	429	U
1	QA	484	G
1	QA	485	G
1	QA	496	A
1	QA	518	C
1	QA	547	A
1	QA	560	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	QA	687	A
1	QA	748	C
1	QA	792	A
1	QA	812	C
1	QA	841	U
1	QA	913	A
1	QA	960	U
1	QA	992	U
1	QA	999	U
1	QA	1006	C
1	QA	1033	G
1	QA	1038	C
1	QA	1064	G
1	QA	1065	U
1	QA	1067	A
1	QA	1128	C
1	QA	1137	C
1	QA	1139	G
1	QA	1182	G
1	QA	1200	C
1	QA	1224	G
1	QA	1300	G
1	QA	1346	A
1	QA	1347	G
1	QA	1498	U
1	QA	1528	U
1	QA	1532	U
21	QV	1	C
21	QV	17(A)	U
21	QW	60	U
22	QX	11	U
32	RA	27	G
32	RA	90	U
32	RA	119	A
32	RA	128	C
32	RA	195	A
32	RA	227	A
32	RA	352	G
32	RA	372	G
32	RA	387	U
32	RA	404	C
32	RA	587	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	RA	603	A
32	RA	752	A
32	RA	845	G
32	RA	856	C
32	RA	859	G
32	RA	877	U
32	RA	1022	G
32	RA	1085	A
32	RA	1171	G
32	RA	1204	A
32	RA	1300	U
32	RA	1341	U
32	RA	1342	A
32	RA	1427	A
32	RA	1558	A
32	RA	1559	G
32	RA	1653	G
32	RA	1694	C
32	RA	1819	A
32	RA	1930	G
32	RA	1992	G
32	RA	2092	U
32	RA	2144	U
32	RA	2191	G
32	RA	2211	G
32	RA	2311	A
32	RA	2422	A
32	RA	2439	A
32	RA	2447	G
32	RA	2481	G
32	RA	2518	A
32	RA	2610	C
32	RA	2689	U
32	RA	2776	A
32	RA	2849	U
32	RA	2859	G
33	RB	66	A
1	XA	5	U
1	XA	31	G
1	XA	60	A
1	XA	92	G
1	XA	115	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	181	G
1	XA	197	A
1	XA	201	C
1	XA	243	A
1	XA	250	A
1	XA	279	A
1	XA	315	A
1	XA	328	C
1	XA	358	U
1	XA	410	G
1	XA	428	G
1	XA	429	U
1	XA	547	A
1	XA	560	U
1	XA	687	A
1	XA	703	G
1	XA	748	C
1	XA	792	A
1	XA	812	C
1	XA	818	G
1	XA	913	A
1	XA	960	U
1	XA	992	U
1	XA	1004	A
1	XA	1006	C
1	XA	1033	G
1	XA	1038	C
1	XA	1054	C
1	XA	1065	U
1	XA	1067	A
1	XA	1124	G
1	XA	1125	U
1	XA	1137	C
1	XA	1139	G
1	XA	1157	A
1	XA	1182	G
1	XA	1190	G
1	XA	1211	U
1	XA	1300	G
1	XA	1319	A
1	XA	1346	A
1	XA	1498	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	XA	1532	U
21	XV	1	C
21	XW	60	U
22	XX	10	G
22	XX	12	A
32	YA	74	A
32	YA	119	A
32	YA	352	G
32	YA	372	G
32	YA	512	G
32	YA	587	C
32	YA	603	A
32	YA	752	A
32	YA	774	A
32	YA	811	U
32	YA	856	C
32	YA	859	G
32	YA	877	U
32	YA	883	G
32	YA	1022	G
32	YA	1085	A
32	YA	1141	U
32	YA	1171	G
32	YA	1379	A
32	YA	1427	A
32	YA	1558	A
32	YA	1653	G
32	YA	1694	C
32	YA	1762	A
32	YA	1801	G
32	YA	1819	A
32	YA	1992	G
32	YA	2144	U
32	YA	2166	G
32	YA	2191	G
32	YA	2211	G
32	YA	2225	A
32	YA	2422	A
32	YA	2439	A
32	YA	2447	G
32	YA	2481	G
32	YA	2610	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	YA	2689	U
32	YA	2776	A
32	YA	2848	G
32	YA	2849	U
32	YA	2859	G
33	YB	66	A

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

8 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
22	A2M	QX	19	22	18,25,26	1.04	1 (5%)	18,36,39	1.29	2 (11%)
22	A2M	QX	20	22	18,25,26	1.09	1 (5%)	18,36,39	1.17	2 (11%)
22	A2M	XX	19	22	18,25,26	0.96	1 (5%)	18,36,39	1.31	2 (11%)
22	A2M	XX	20	22	18,25,26	0.97	1 (5%)	18,36,39	1.23	2 (11%)
22	OMU	QX	21	1,22	14,22,23	1.66	2 (14%)	14,31,34	1.45	2 (14%)
22	OMU	XX	21	1,22	14,22,23	0.78	1 (7%)	14,31,34	0.79	0
56	PPU	ZA	76	32,56	32,40,41	1.30	5 (15%)	33,57,60	1.49	6 (18%)
56	PPU	ZB	76	32,56	32,40,41	0.82	1 (3%)	33,57,60	1.47	6 (18%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	A2M	QX	19	22	-	0/5/27/28	0/3/3/3
22	A2M	QX	20	22	-	2/5/27/28	0/3/3/3
22	A2M	XX	19	22	-	2/5/27/28	0/3/3/3
22	A2M	XX	20	22	-	2/5/27/28	0/3/3/3

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	OMU	QX	21	1,22	-	4/7/27/28	0/2/2/2
22	OMU	XX	21	1,22	-	2/7/27/28	0/2/2/2
56	PPU	ZA	76	32,56	-	5/21/43/44	0/4/4/4
56	PPU	ZB	76	32,56	-	6/21/43/44	0/4/4/4

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	QX	21	OMU	C6-N1	-4.02	1.30	1.35
22	QX	21	OMU	C2-N3	-3.20	1.31	1.38
22	QX	20	A2M	C5-C4	2.58	1.47	1.40
22	QX	19	A2M	C5-C4	2.55	1.47	1.40
56	ZA	76	PPU	C2'-C1'	-2.40	1.50	1.53
56	ZA	76	PPU	C4-N3	-2.32	1.32	1.35
22	XX	20	A2M	C5-C4	2.27	1.46	1.40
56	ZA	76	PPU	O-C	-2.25	1.18	1.23
22	XX	19	A2M	C5-C4	2.24	1.46	1.40
56	ZB	76	PPU	C5-C4	2.22	1.46	1.40
56	ZA	76	PPU	C2'-C3'	-2.18	1.50	1.53
22	XX	21	OMU	C2-N3	-2.01	1.34	1.38
56	ZA	76	PPU	C3'-N3'	-2.00	1.42	1.45

All (22) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	ZA	76	PPU	N1-C6-N6	4.20	121.48	117.06
56	ZA	76	PPU	C10-N6-C6	-3.55	108.77	119.51
56	ZB	76	PPU	N1-C6-N6	3.50	120.74	117.06
22	XX	19	A2M	N3-C2-N1	-3.50	123.21	128.68
56	ZB	76	PPU	C10-N6-C6	-3.44	109.10	119.51
56	ZB	76	PPU	C9-N6-C6	-3.32	109.45	119.51
56	ZA	76	PPU	N3-C2-N1	-3.21	123.67	128.68
56	ZB	76	PPU	N3-C2-N1	-3.15	123.75	128.68
22	XX	20	A2M	N3-C2-N1	-3.12	123.80	128.68
22	QX	21	OMU	O3'-C3'-C4'	-2.93	102.57	111.05
22	QX	19	A2M	C4-C5-N7	-2.90	106.38	109.40
56	ZB	76	PPU	C4-C5-N7	-2.73	106.56	109.40
22	QX	21	OMU	O4'-C1'-C2'	-2.68	101.94	106.59
56	ZA	76	PPU	C3'-N3'-C	-2.67	119.18	123.21
22	QX	20	A2M	C4-C5-N7	-2.66	106.62	109.40
56	ZA	76	PPU	C9-N6-C6	-2.63	111.55	119.51

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	QX	19	A2M	N3-C2-N1	-2.61	124.60	128.68
22	QX	20	A2M	N3-C2-N1	-2.60	124.62	128.68
22	XX	20	A2M	C4-C5-N7	-2.55	106.74	109.40
22	XX	19	A2M	C4-C5-N7	-2.44	106.86	109.40
56	ZA	76	PPU	CA-C-N3'	2.21	119.22	116.15
56	ZB	76	PPU	C10-N6-C9	-2.07	109.44	116.12

There are no chirality outliers.

All (23) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	QX	21	OMU	C2'-C1'-N1-C6
22	QX	21	OMU	O4'-C1'-N1-C6
22	XX	21	OMU	C3'-C4'-C5'-O5'
22	XX	21	OMU	O4'-C4'-C5'-O5'
56	ZA	76	PPU	C4'-C3'-N3'-C
56	ZA	76	PPU	C5-C6-N6-C10
56	ZB	76	PPU	C5-C6-N6-C9
56	ZB	76	PPU	C5-C6-N6-C10
22	QX	21	OMU	C3'-C4'-C5'-O5'
22	QX	21	OMU	O4'-C4'-C5'-O5'
56	ZB	76	PPU	N1-C6-N6-C10
56	ZB	76	PPU	CE2-CZ-OC-CM
56	ZB	76	PPU	CE1-CZ-OC-CM
56	ZA	76	PPU	O4'-C4'-C5'-O5'
22	XX	20	A2M	O4'-C4'-C5'-O5'
22	QX	20	A2M	O4'-C4'-C5'-O5'
56	ZB	76	PPU	N-CA-CB-CG
22	XX	19	A2M	O4'-C4'-C5'-O5'
56	ZA	76	PPU	C2'-C3'-N3'-C
56	ZA	76	PPU	C3'-C4'-C5'-O5'
22	XX	20	A2M	C3'-C4'-C5'-O5'
22	QX	20	A2M	C3'-C4'-C5'-O5'
22	XX	19	A2M	C3'-C4'-C5'-O5'

There are no ring outliers.

8 monomers are involved in 38 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	QX	19	A2M	3	0
22	QX	20	A2M	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	XX	19	A2M	5	0
22	XX	20	A2M	3	0
22	QX	21	OMU	3	0
22	XX	21	OMU	2	0
56	ZA	76	PPU	11	0
56	ZB	76	PPU	12	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 906 ligands modelled in this entry, 904 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
58	SF4	QD	301	4	0,12,12	0.00	-	-		
58	SF4	XD	301	4	0,12,12	0.00	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	SF4	QD	301	4	-	-	0/6/5/5
58	SF4	XD	301	4	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

6.3 Carbohydrates ⓘ

EDS failed to run properly - this section is therefore empty.

6.4 Ligands ⓘ

EDS failed to run properly - this section is therefore empty.

6.5 Other polymers ⓘ

EDS failed to run properly - this section is therefore empty.