Full wwPDB X-ray Structure Validation Report ⓘ

Nov 7, 2023 – 09:04 AM EST

PDB ID	:	4YBB
Title	:	High-resolution structure of the Escherichia coli ribosome
Authors	:	Noeske, J.; Wasserman, M.R.; Terry, D.S.; Altman, R.B.; Blanchard, S.C.; Cate, J.H.D.
Deposited on	:	2015-02-18
Resolution	:	2.10 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 types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

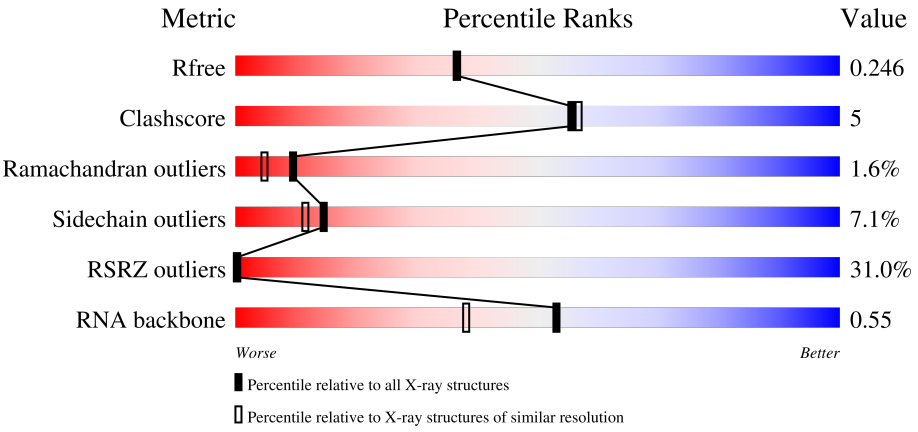
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.10 Å.

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



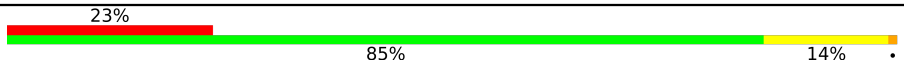
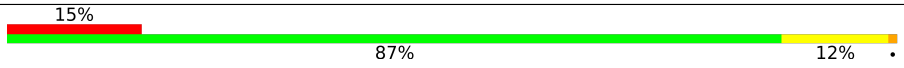
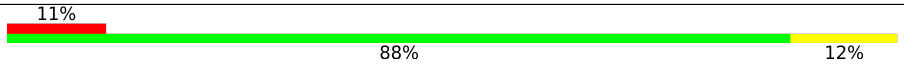
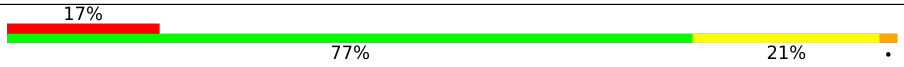
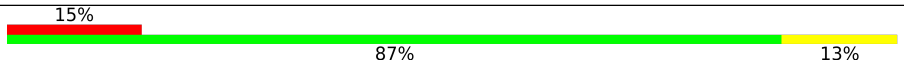
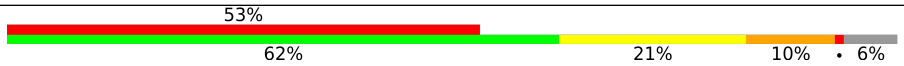
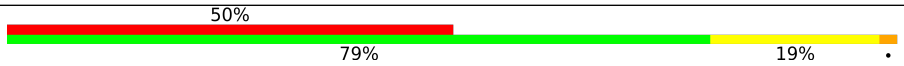
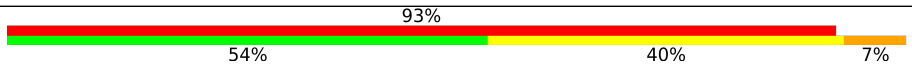
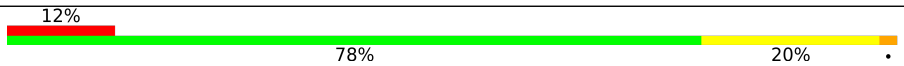
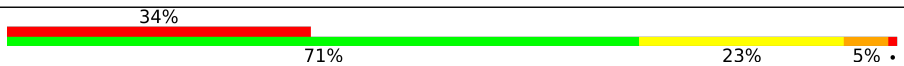
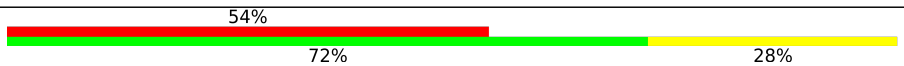
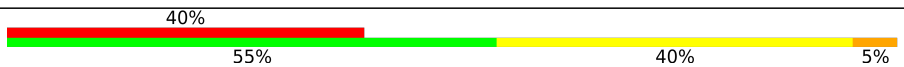
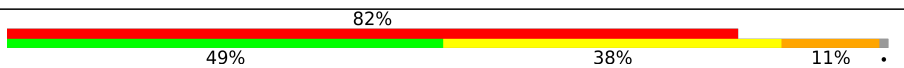
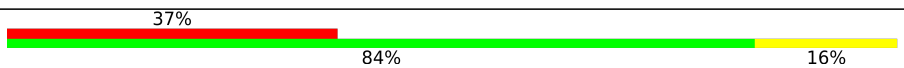
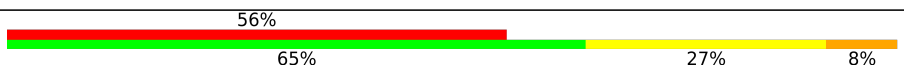
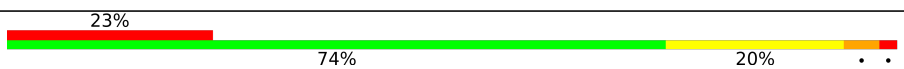
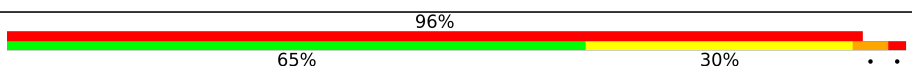
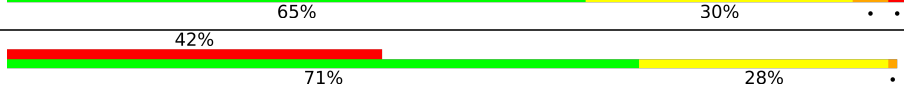
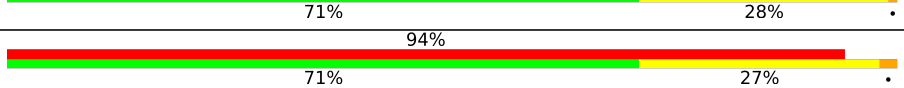
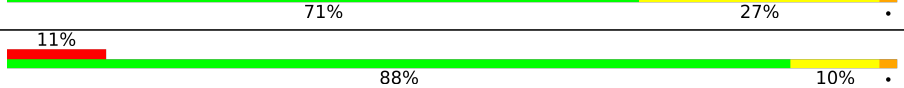
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	5197 (2.10-2.10)
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)
RNA backbone	3102	1000 (2.54-1.66)

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 of 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1534	4% 73% 22% 5%
1	BA	1534	14% 69% 24% 6%
2	AB	224	67% 82% 16%
2	BB	224	74% 79% 19%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
3	AC	206	
3	BC	206	
4	AD	205	
4	BD	205	
5	AE	155	
5	BE	155	
6	AF	106	
6	BF	106	
7	AG	151	
7	BG	151	
8	AH	129	
8	BH	129	
9	AI	127	
9	BI	127	
10	AJ	99	
10	BJ	99	
11	AK	117	
11	BK	117	
12	AL	123	
12	BL	123	
13	AM	114	
13	BM	114	
14	AN	100	
14	BN	100	
15	AO	88	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
15	BO	88	44% 61% 26% 9%
16	AP	82	24% 90% 7%
16	BP	82	72% 77% 17% 6%
17	AQ	80	21% 82% 18%
17	BQ	80	66% 50% 39% 10%
18	AR	55	35% 85% 15%
18	BR	55	25% 67% 27%
19	AS	79	54% 78% 19%
19	BS	79	91% 70% 16% 14%
20	AT	86	20% 81% 19%
20	BT	86	80% 70% 21% 8%
21	AU	56	48% 75% 23%
21	BU	56	43% 82% 16%
22	CA	2904	13% 71% 22% 5%
23	CB	120	22% 82% 13%
23	DB	120	84% 14%
24	CC	271	52% 73% 23%
24	DC	271	30% 92% 8%
25	CD	209	63% 78% 18%
26	CE	201	78% 73% 22%
26	DE	201	16% 96%
27	CF	177	98% 71% 25%
27	DF	177	13% 83% 16%
28	CG	176	90% 78% 19%
28	DG	176	9% 90% 9%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
29	CH	149	79% 72% 23% 5%
29	DH	149	70% 81% 17%
30	CJ	134	100% 75% 24%
30	DJ	134	97% 77% 22%
31	CK	142	62% 78% 18%
31	DK	142	21% 93% 7%
32	CL	123	44% 72% 24%
32	DL	123	10% 87% 11%
33	CM	144	85% 75% 20%
33	DM	144	29% 87% 13%
34	CN	136	43% 88% 10%
34	DN	136	6% 90% 9%
35	CO	125	65% 71% 18% 6%
35	DO	125	28% 90% 9%
36	CP	117	93% 74% 22%
36	DP	117	2% 91% 8%
37	CQ	114	68% 83% 15%
37	DQ	114	17% 89% 10%
38	CR	117	62% 78% 20%
38	DR	117	40% 91% 9%
39	CS	103	70% 79% 18%
39	DS	103	13% 88% 12%
40	CT	110	69% 83% 13% 5%
40	DT	110	25% 95% 5%
41	CU	93	91% 77% 13% 9%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
41	DU	93	6% 85% 12%
42	CV	102	95% 57% 37% 5%
42	DV	102	4% 92% 7%
43	CW	94	67% 77% 21%
43	DW	94	2% 94% 6%
44	CX	76	68% 83% 16%
44	DX	76	21% 93% 5%
45	CY	77	57% 78% 18%
45	DY	77	8% 95% 5%
46	CZ	62	90% 71% 23% 6%
46	DZ	62	6% 90% 10%
47	C0	58	50% 84% 10% 5%
47	D0	58	29% 93% 5%
48	C1	56	84% 75% 20% 5%
48	D1	56	34% 86% 14%
49	C2	51	80% 76% 22%
49	D2	51	16% 82% 18%
50	C3	46	72% 63% 30% 7%
50	D3	46	30% 87% 13%
51	C4	64	73% 75% 23%
51	D4	64	48% 91% 9%
52	C5	38	76% 71% 26%
52	D5	38	8% 100%
53	DA	2903	5% 69% 24% 6%
54	DD	209	31% 90% 10%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
55	DI	135	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	MG	AA	1609	-	-	-	X
56	MG	AA	1610	-	-	-	X
56	MG	AA	1613	-	-	-	X
56	MG	AA	1616	-	-	-	X
56	MG	AA	1621	-	-	-	X
56	MG	AA	1623	-	-	-	X
56	MG	AA	1654	-	-	-	X
56	MG	BA	1623	-	-	-	X
56	MG	BA	1624	-	-	-	X
56	MG	CA	3005	-	-	-	X
56	MG	CA	3006	-	-	-	X
56	MG	CA	3025	-	-	-	X
56	MG	CA	3036	-	-	-	X
56	MG	CA	3037	-	-	-	X
56	MG	CA	3059	-	-	-	X
56	MG	CA	3061	-	-	-	X
56	MG	CA	3066	-	-	-	X
56	MG	CA	3073	-	-	-	X
56	MG	CA	3111	-	-	-	X
56	MG	CA	3112	-	-	-	X
56	MG	CA	3116	-	-	-	X
56	MG	DA	3035	-	-	-	X
56	MG	DA	3109	-	-	-	X
56	MG	DA	3122	-	-	-	X
56	MG	DA	3137	-	-	-	X
56	MG	DA	3153	-	-	-	X
56	MG	DA	3182	-	-	-	X
56	MG	DB	208	-	-	-	X
57	PG4	DA	3193	-	-	X	-
57	PG4	DR	202	-	-	X	-
58	MPD	DE	301	-	-	-	X
58	MPD	DN	201	-	-	X	-
59	PUT	DA	3223	-	-	X	-
61	PEG	D3	102	-	-	X	-
61	PEG	DP	201	-	-	X	-

2 Entry composition (i)

There are 69 unique types of molecules in this entry. The entry contains 295060 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	AA	1534	Total	C	N	O	P	0	0	0
			32930	14694	6041	10661	1534			
1	BA	1533	Total	C	N	O	P	0	0	0
			32908	14684	6036	10655	1533			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	224	Total	C	N	O	S	0	0	0
			1753	1109	315	321	8			
2	BB	224	Total	C	N	O	S	0	0	0
			1753	1109	315	321	8			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	BC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	155	Total	C	N	O	S	0	0	0
			1144	711	216	211	6			
5	BE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	106	Total	C	N	O	S	0	0	0
			862	545	156	154	7			
6	BF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			
7	BG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
8	BH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
9	BI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	99	Total	C	N	O	S	0	0	0
			796	498	152	145	1			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	BJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
11	BK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	123	Total	C	N	O	S	0	0	0
			957	591	196	165	5			
12	BL	123	Total	C	N	O	S	0	0	0
			957	591	196	165	5			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			
13	BM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	100	Total	C	N	O	S	0	0	0
			805	499	164	139	3			
14	BN	100	Total	C	N	O	S	0	0	0
			805	499	164	139	3			

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
16	BP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	BQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	BR	55	Total	C	N	O	0	0	0
			456	288	86	82			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			
19	BS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	86	Total	C	N	O	S	0	0	0
			670	414	138	115	3			
20	BT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	56	Total	C	N	O	S	0	0	0
			465	290	96	78	1			
21	BU	56	Total	C	N	O	S	0	0	0
			465	290	96	78	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	CA	2898	Total	C	N	O	P	0	0	0
			62229	27768	11448	20115	2898			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CA	2798	U	UNK	conflict	GB 731469900
CA	2800	A	UNK	conflict	GB 731469900

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	CB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
23	DB	120	Total	C	N	O	P	0	0	0
			2569	1144	468	837	120			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	CC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	CD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	CE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
26	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	CF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			
27	DF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	CG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
28	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	CH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	CJ	134	Total	C	N	O	S	0	0	0
			979	619	169	185	6			
30	DJ	134	Total	C	N	O	S	0	0	0
			979	619	169	185	6			

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	CK	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	DK	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	CL	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
32	DL	123	Total	C	N	O	S	0	0	0
			946	593	181	166	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	CM	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			
33	DM	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	CN	136	Total	C	N	O	S	0	0	0
			1075	686	205	178	6			
34	DN	136	Total	C	N	O	S	0	2	0
			1092	696	211	179	6			

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	CO	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
35	DO	125	Total	C	N	O	S	0	0	0
			993	613	202	173	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	CP	116	Total	C	N	O		0	0	0
			892	552	178	162				
36	DP	117	Total	C	N	O	S	0	0	0
			900	557	179	163	1			

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	CQ	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
37	DQ	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	CR	117	Total	C	N	O	0	0	0
			947	604	192	151			
38	DR	117	Total	C	N	O	0	0	0
			947	604	192	151			

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	CS	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DS	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	CT	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DT	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	CU	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DU	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	CV	102	Total 780	C 492	N 146	O 142	0	0	0
42	DV	102	Total 780	C 492	N 146	O 142	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	CW	94	Total 753	C 479	N 137	O 134	S 3	0	0	0
43	DW	94	Total 753	C 479	N 137	O 134	S 3	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	CX	75	Total 569	C 353	N 113	O 102	S 1	0	0	0
44	DX	76	Total 591	C 365	N 121	O 104	S 1	0	1	0

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	CY	77	Total 625	C 388	N 129	O 106	S 2	0	0	0
45	DY	77	Total 625	C 388	N 129	O 106	S 2	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	CZ	62	Total 501	C 308	N 98	O 94	S 1	0	0	0
46	DZ	62	Total 501	C 308	N 98	O 94	S 1	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	C0	58	Total 449	C 281	N 87	O 79	S 2	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	D0	58	Total	C	N	O	S	0	2	0
			463	290	90	81	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	C1	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
48	D1	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	C2	50	Total	C	N	O	0	0	0
			409	263	75	71			
49	D2	51	Total	C	N	O	0	0	0
			414	266	76	72			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	C3	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
50	D3	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	C4	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
51	D4	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	C5	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
52	D5	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 53 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	DA	2897	Total	C	N	O	P	0	8	0
			62361	27827	11476	20154	2904			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DA	2798	U	UNK	conflict	GB 731469900
DA	2800	A	UNK	conflict	GB 731469900

- Molecule 54 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	DD	209	Total	C	N	O	S	0	1	0
			1576	986	290	296	4			

- Molecule 55 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	DI	135	Total	C	N	O	S	0	0	0
			1023	649	179	192	3			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
DI	85	VAL	SER	conflict	UNP P0A7J3
DI	86	THR	MET	conflict	UNP P0A7J3

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

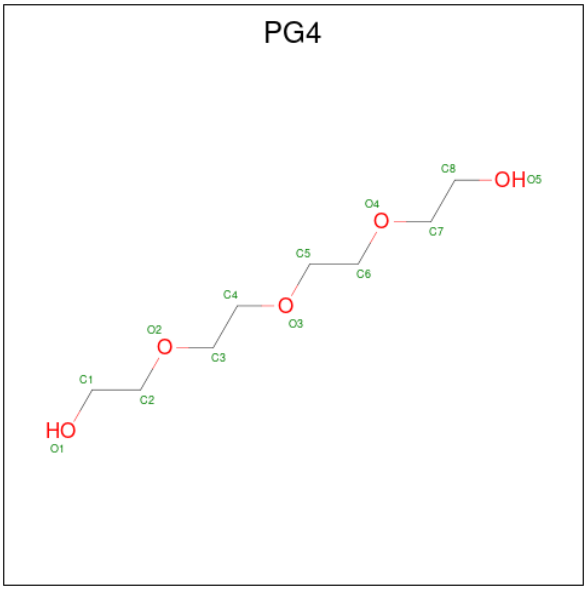
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	70	Total	Mg	0	0
			70	70		
56	BA	41	Total	Mg	0	0
			41	41		
56	CA	155	Total	Mg	0	0
			155	155		
56	CB	3	Total	Mg	0	0
			3	3		
56	C3	1	Total	Mg	0	0
			1	1		

Continued on next page...

Continued from previous page...

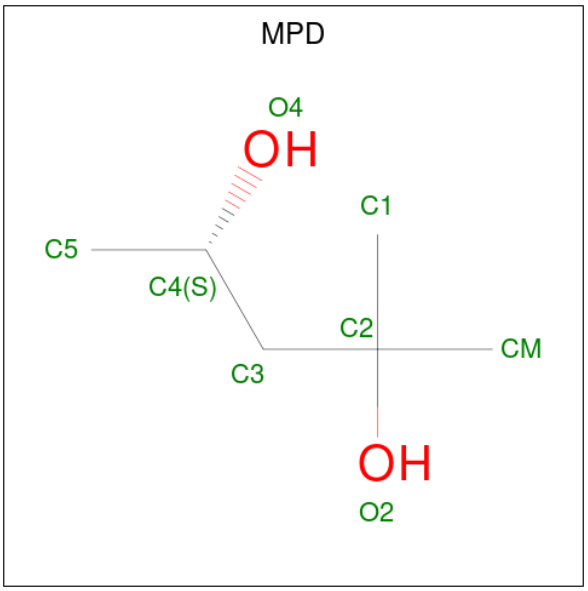
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DA	183	Total Mg 183 183	0	0
56	DB	9	Total Mg 9 9	0	0
56	DR	1	Total Mg 1 1	0	0

- Molecule 57 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: $C_8H_{18}O_5$).



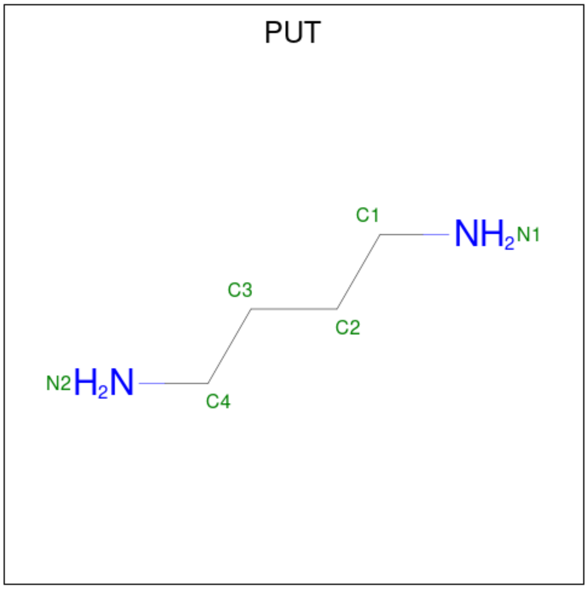
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	1	Total C O 13 8 5	0	0
57	BA	1	Total C O 13 8 5	0	0
57	DA	1	Total C O 13 8 5	0	0
57	DA	1	Total C O 13 8 5	0	0
57	DQ	1	Total C O 13 8 5	0	0
57	DR	1	Total C O 13 8 5	0	0
57	DS	1	Total C O 13 8 5	0	0

- Molecule 58 is (4S)-2-METHYL-2,4-PENTANEDIOL (three-letter code: MPD) (formula: $C_6H_{14}O_2$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
58	AA	1	Total	C	O	0	0
			8	6	2		
58	AA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DA	1	Total	C	O	0	0
			8	6	2		
58	DE	1	Total	C	O	0	0
			8	6	2		
58	DE	1	Total	C	O	0	0
			8	6	2		
58	DK	1	Total	C	O	0	0
			8	6	2		
58	DN	1	Total	C	O	0	0
			8	6	2		
58	DS	1	Total	C	O	0	0
			8	6	2		
58	DT	1	Total	C	O	0	0
			8	6	2		
58	DT	1	Total	C	O	0	0
			8	6	2		

- Molecule 59 is 1,4-DIAMINOBUTANE (three-letter code: PUT) (formula: $C_4H_{12}N_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AA	1	Total C N 6 4 2	0	0
59	AA	1	Total C N 6 4 2	0	0
59	AA	1	Total C N 6 4 2	0	0
59	AA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0

Continued on next page...

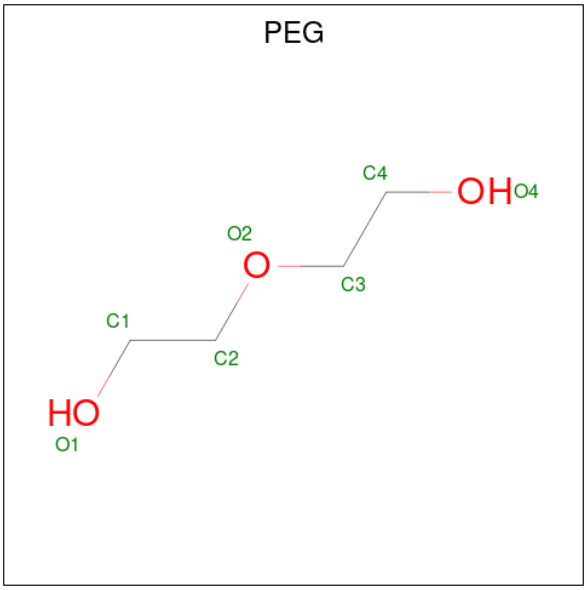
Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	DA	1	Total C N 6 4 2	0	0
59	DA	1	Total C N 6 4 2	0	0
59	DM	1	Total C N 6 4 2	0	0

- Molecule 60 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AB	1	Total Zn 1 1	0	0
60	C5	1	Total Zn 1 1	0	0
60	D5	1	Total Zn 1 1	0	0

- Molecule 61 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: $C_4H_{10}O_3$).



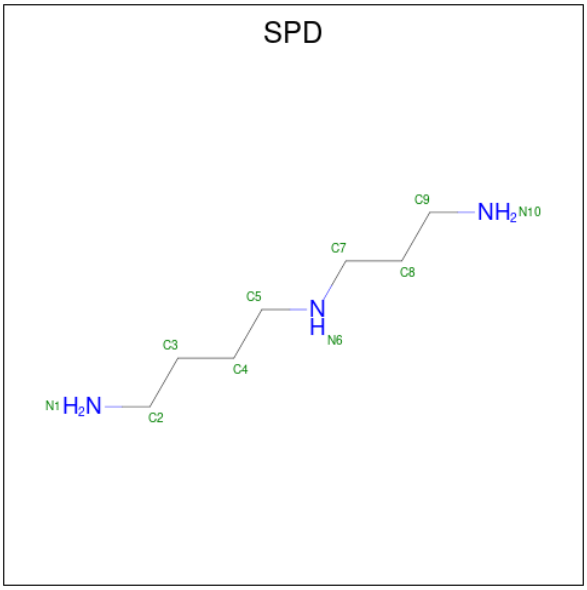
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AL	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DA	1	Total C O 7 4 3	0	0
61	DL	1	Total C O 7 4 3	0	0
61	DP	1	Total C O 7 4 3	0	0
61	DQ	1	Total C O 7 4 3	0	0
61	D3	1	Total C O 7 4 3	0	0

- Molecule 62 is SPERMIDINE (three-letter code: SPD) (formula: $C_7H_{19}N_3$).



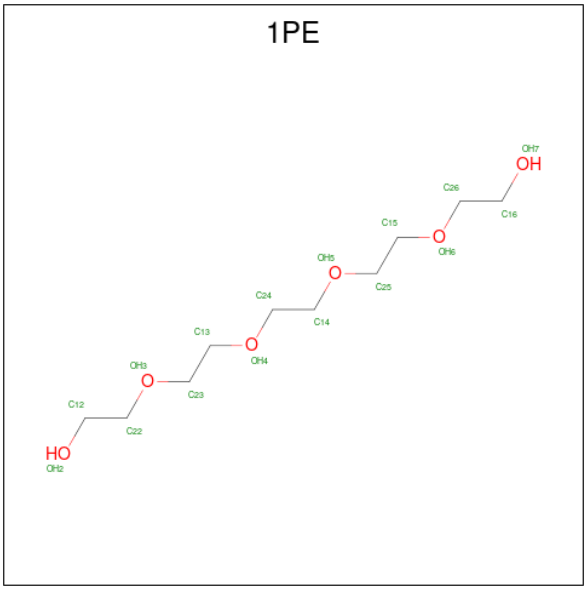
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DA	1	Total C N 10 7 3	0	0
62	DA	1	Total C N 10 7 3	0	0
62	DA	1	Total C N 10 7 3	0	0

Continued on next page...

Continued from previous page...

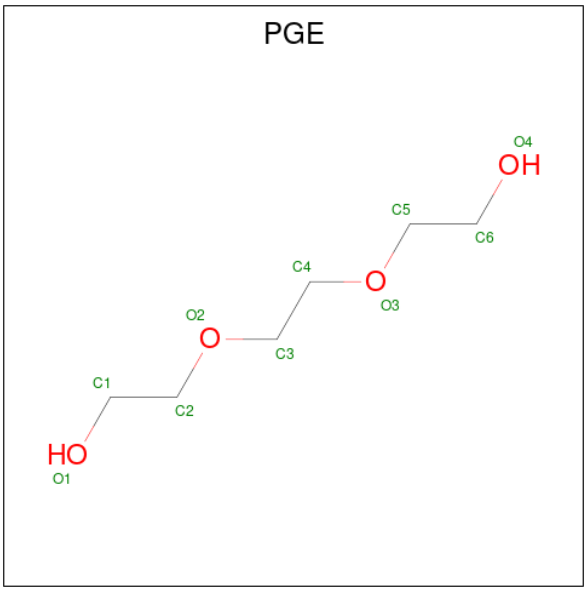
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DA	1	Total C N 10 7 3	0	0

- Molecule 63 is PENTAETHYLENE GLYCOL (three-letter code: 1PE) (formula: $C_{10}H_{22}O_6$).



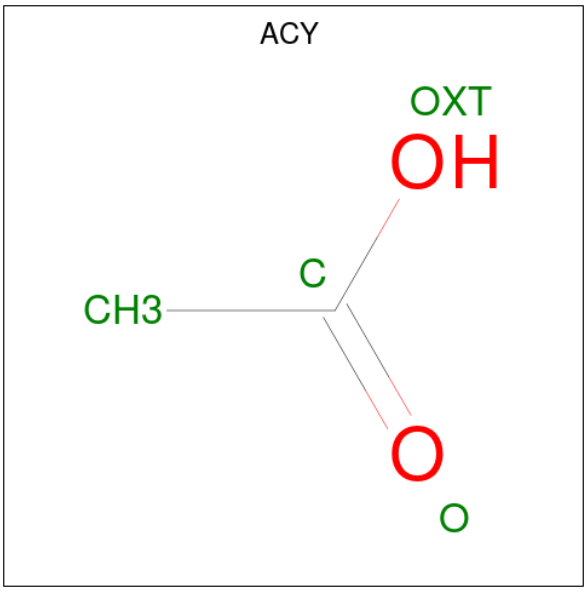
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	DA	1	Total C O 16 10 6	0	0
63	DA	1	Total C O 16 10 6	0	0

- Molecule 64 is TRIETHYLENE GLYCOL (three-letter code: PGE) (formula: $C_6H_{14}O_4$).



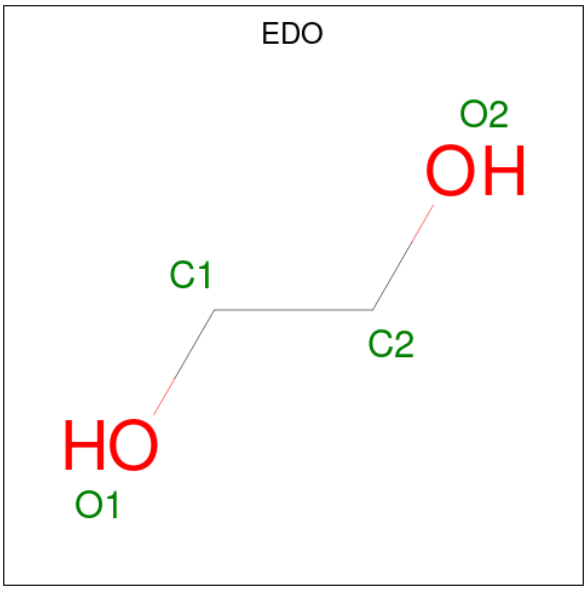
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
64	DA	1	Total C O 10 6 4	0	0
64	DA	1	Total C O 10 6 4	0	0
64	DA	1	Total C O 10 6 4	0	0
64	DA	1	Total C O 10 6 4	0	0
64	DA	1	Total C O 10 6 4	0	0
64	DS	1	Total C O 10 6 4	0	0
64	DU	1	Total C O 10 6 4	0	0
64	D1	1	Total C O 10 6 4	0	0
64	D3	1	Total C O 10 6 4	0	0

- Molecule 65 is ACETIC ACID (three-letter code: ACY) (formula: $C_2H_4O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	DA	1	Total C O 4 2 2	0	0
65	DA	1	Total C O 4 2 2	0	0
65	DA	1	Total C O 4 2 2	0	0

- Molecule 66 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



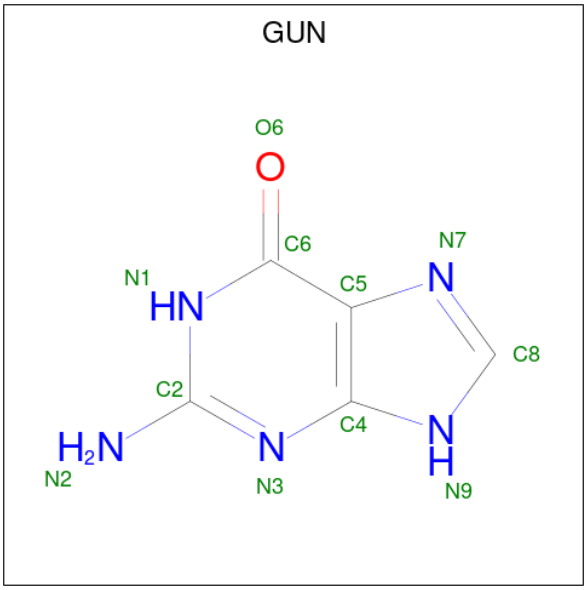
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
66	DA	1	Total C O 4 2 2	0	0

Continued on next page...

Continued from previous page...

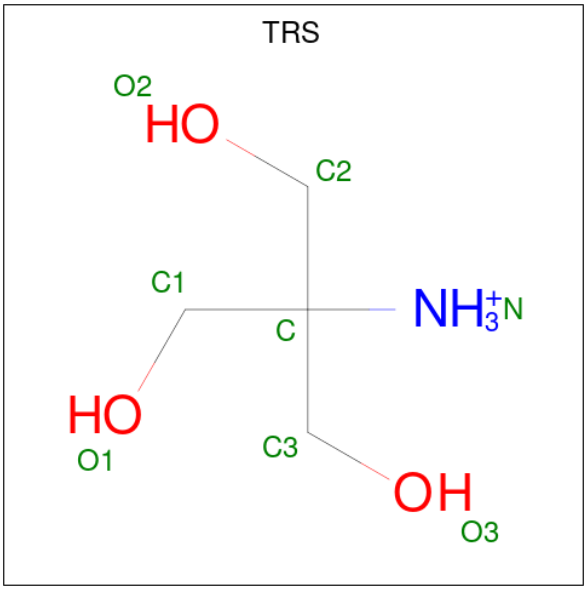
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
66	DA	1	Total C O 4 2 2	0	0
66	DA	1	Total C O 4 2 2	0	0
66	DA	1	Total C O 4 2 2	0	0
66	DA	1	Total C O 4 2 2	0	0
66	DA	1	Total C O 4 2 2	0	0
66	DB	1	Total C O 4 2 2	0	0
66	DB	1	Total C O 4 2 2	0	0
66	DB	1	Total C O 4 2 2	0	0
66	DR	1	Total C O 4 2 2	0	0
66	D0	1	Total C O 4 2 2	0	0
66	D1	1	Total C O 4 2 2	0	0

- Molecule 67 is GUANINE (three-letter code: GUN) (formula: $C_5H_5N_5O$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
67	DA	1	Total C N O 11 5 5 1	0	0

- Molecule 68 is 2-AMINO-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (three-letter code: TRS) (formula: $C_4H_{12}NO_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
68	DA	1	Total C N O 8 4 1 3	0	0

- Molecule 69 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AA	509	Total O 509 509	0	0
69	AC	6	Total O 6 6	0	0
69	AD	2	Total O 2 2	0	0
69	AE	5	Total O 5 5	0	0
69	AF	1	Total O 1 1	0	0
69	AG	1	Total O 1 1	0	0
69	AH	1	Total O 1 1	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AJ	2	Total O 2 2	0	0
69	AK	6	Total O 6 6	0	0
69	AL	10	Total O 10 10	0	0
69	AM	4	Total O 4 4	0	0
69	AN	6	Total O 6 6	0	0
69	AO	2	Total O 2 2	0	0
69	AP	2	Total O 2 2	0	0
69	AS	1	Total O 1 1	0	0
69	AT	2	Total O 2 2	0	0
69	AU	2	Total O 2 2	0	0
69	BA	286	Total O 286 286	0	0
69	BD	12	Total O 12 12	0	0
69	BE	1	Total O 1 1	0	0
69	BF	2	Total O 2 2	0	0
69	BL	5	Total O 5 5	0	0
69	BN	3	Total O 3 3	0	0
69	BO	1	Total O 1 1	0	0
69	BP	3	Total O 3 3	0	0
69	BT	5	Total O 5 5	0	0
69	BU	2	Total O 2 2	0	0
69	CA	692	Total O 692 692	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	CB	13	Total O 13 13	0	0
69	CC	8	Total O 8 8	0	0
69	CD	6	Total O 6 6	0	0
69	CE	6	Total O 6 6	0	0
69	CK	1	Total O 1 1	0	0
69	CL	1	Total O 1 1	0	0
69	CM	5	Total O 5 5	0	0
69	CO	1	Total O 1 1	0	0
69	CS	1	Total O 1 1	0	0
69	CU	2	Total O 2 2	0	0
69	CV	2	Total O 2 2	0	0
69	CW	1	Total O 1 1	0	0
69	CY	1	Total O 1 1	0	0
69	C3	2	Total O 2 2	0	0
69	C4	1	Total O 1 1	0	0
69	DA	4815	Total O 4815 4815	0	0
69	DB	209	Total O 209 209	0	0
69	DC	106	Total O 106 106	0	0
69	DD	103	Total O 103 103	0	0
69	DE	62	Total O 62 62	0	0
69	DF	14	Total O 14 14	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	DG	6	Total O 6 6	0	0
69	DH	2	Total O 2 2	0	0
69	DK	59	Total O 59 59	0	0
69	DL	45	Total O 45 45	0	0
69	DM	67	Total O 67 67	0	0
69	DN	74	Total O 74 74	0	0
69	DO	42	Total O 42 42	0	0
69	DP	37	Total O 37 37	0	0
69	DQ	27	Total O 27 27	0	0
69	DR	67	Total O 67 67	0	0
69	DS	50	Total O 50 50	0	0
69	DT	61	Total O 61 61	0	0
69	DU	19	Total O 19 19	0	0
69	DV	22	Total O 22 22	0	0
69	DW	32	Total O 32 32	0	0
69	DX	30	Total O 30 30	0	0
69	DY	10	Total O 10 10	0	0
69	DZ	8	Total O 8 8	0	0
69	D0	25	Total O 25 25	0	0
69	D1	47	Total O 47 47	0	0
69	D2	9	Total O 9 9	0	0

Continued on next page...

Continued from previous page...

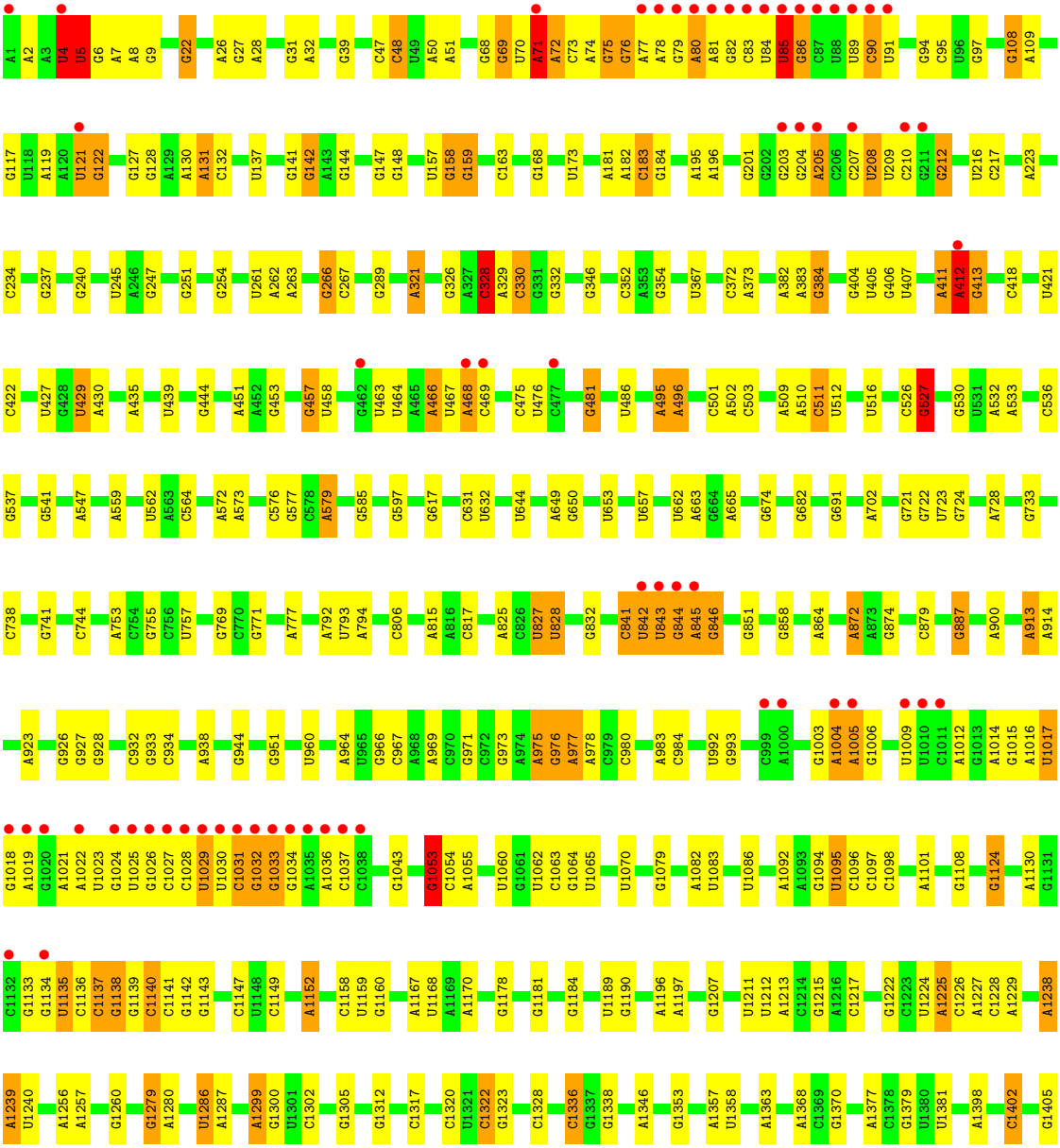
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	D3	25	Total O 25 25	0	0
69	D4	38	Total O 38 38	0	0
69	D5	14	Total O 14 14	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide 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 and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

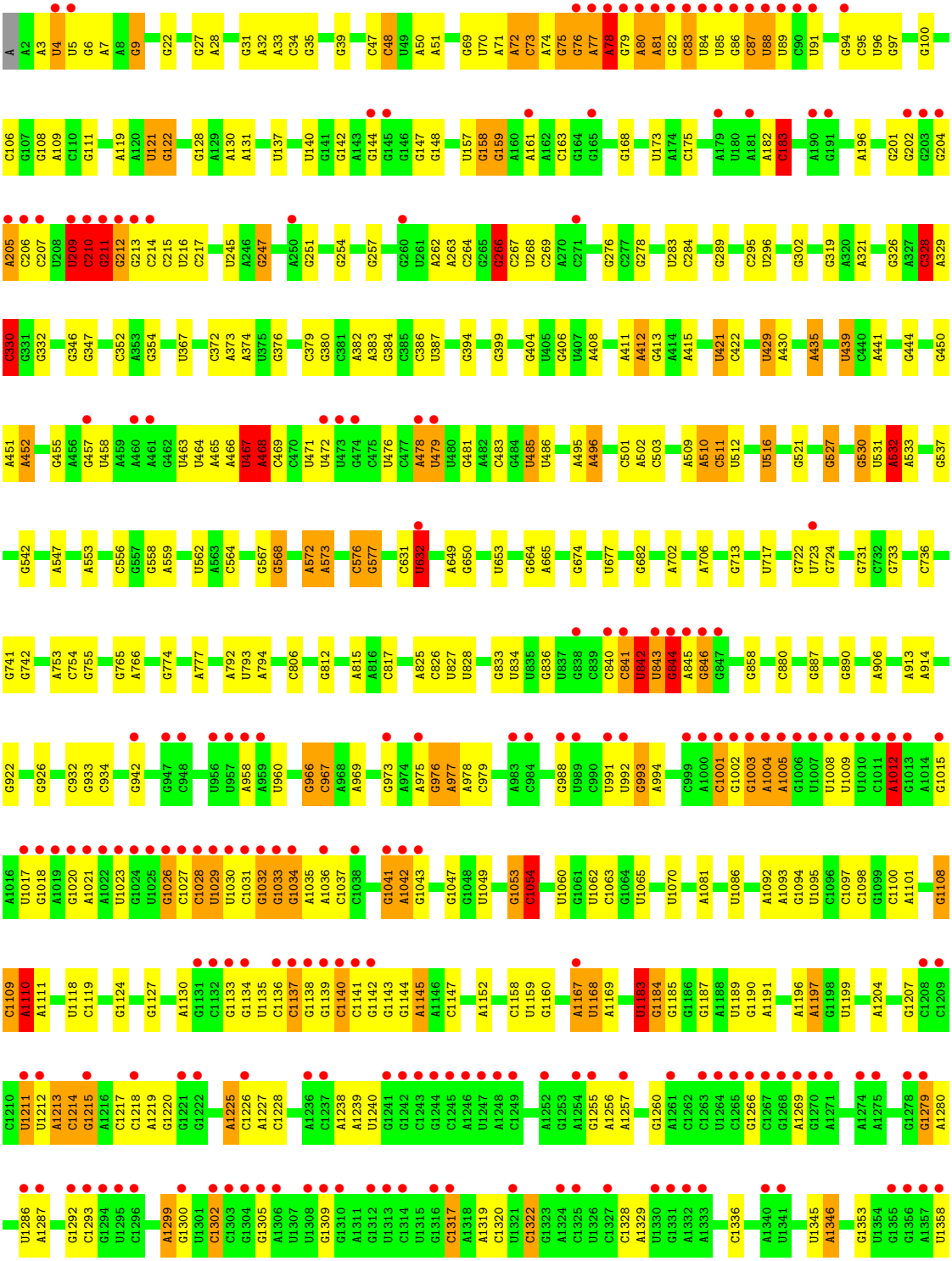
- Molecule 1: 16S rRNA

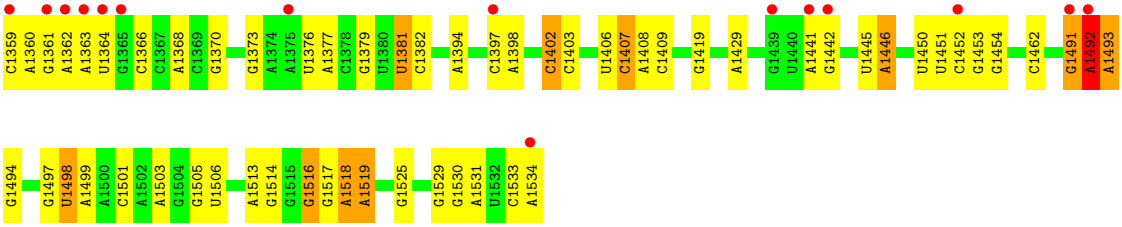
Chain AA:



• Molecule 1: 16S rRNA

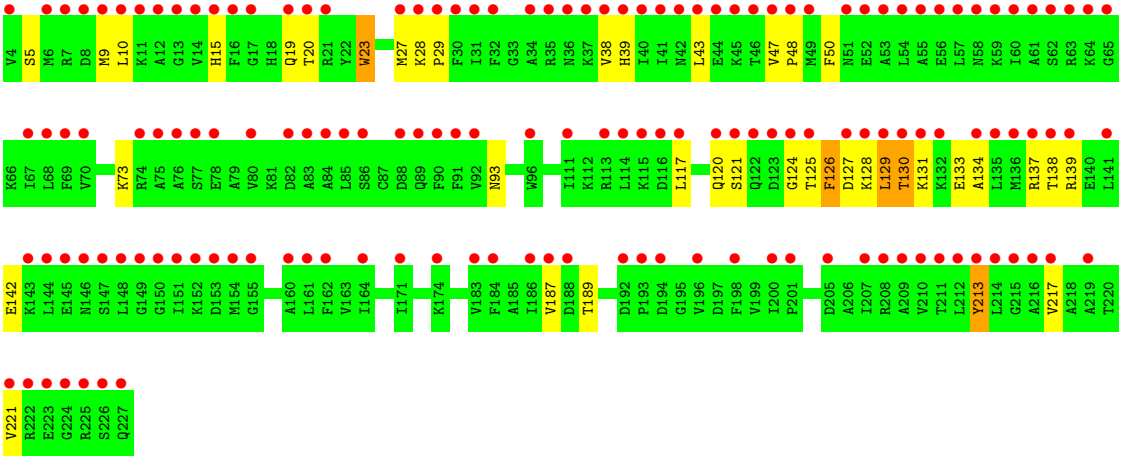
Chain BA:





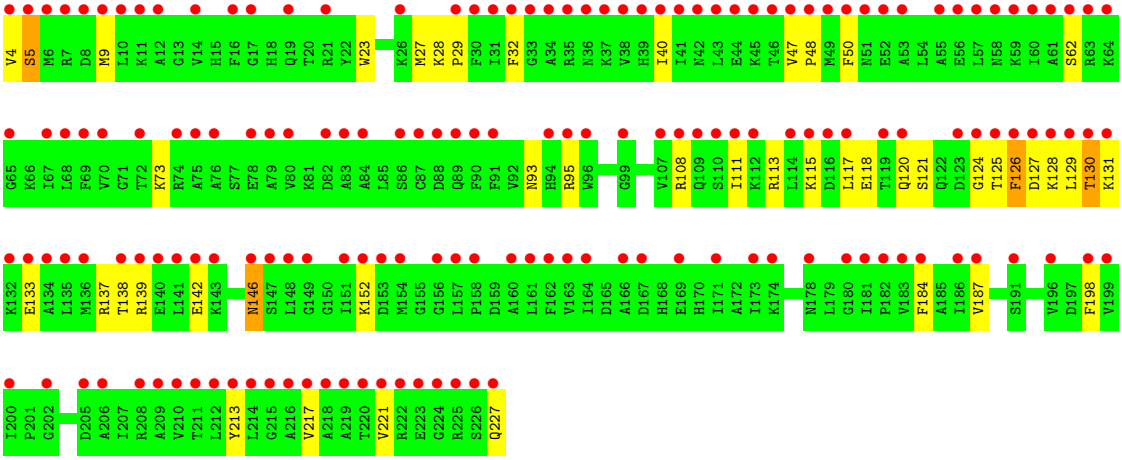
• Molecule 2: 30S ribosomal protein S2

Chain AB:



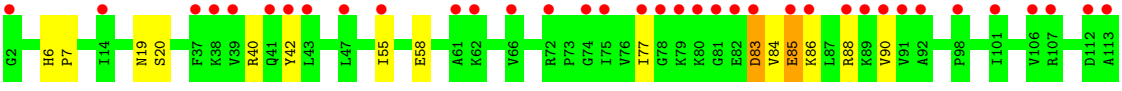
• Molecule 2: 30S ribosomal protein S2

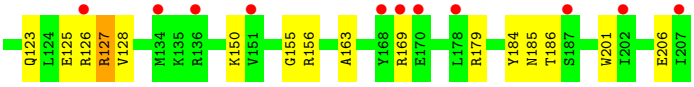
Chain BB:



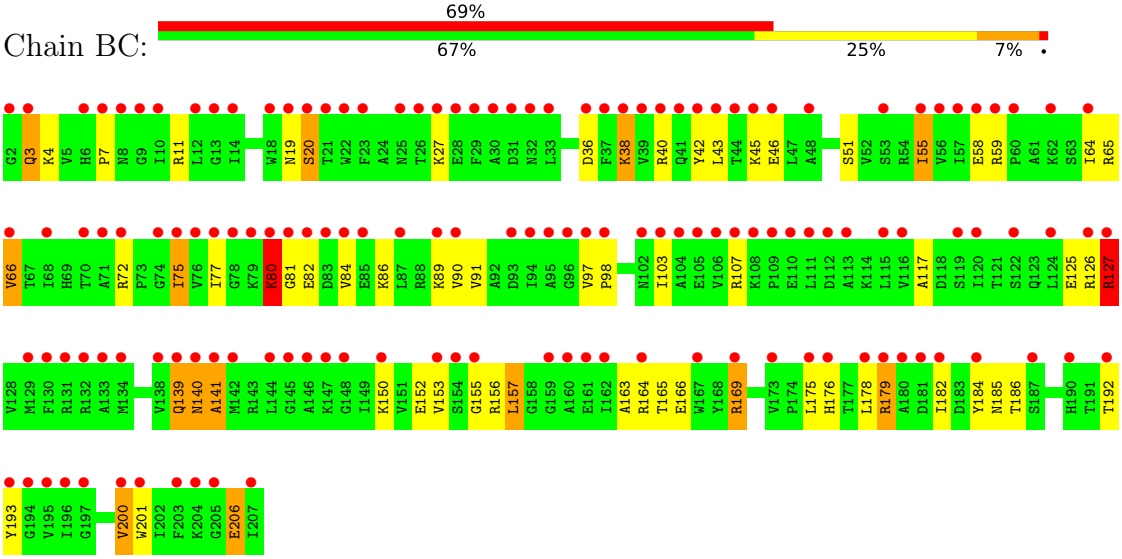
• Molecule 3: 30S ribosomal protein S3

Chain AC:

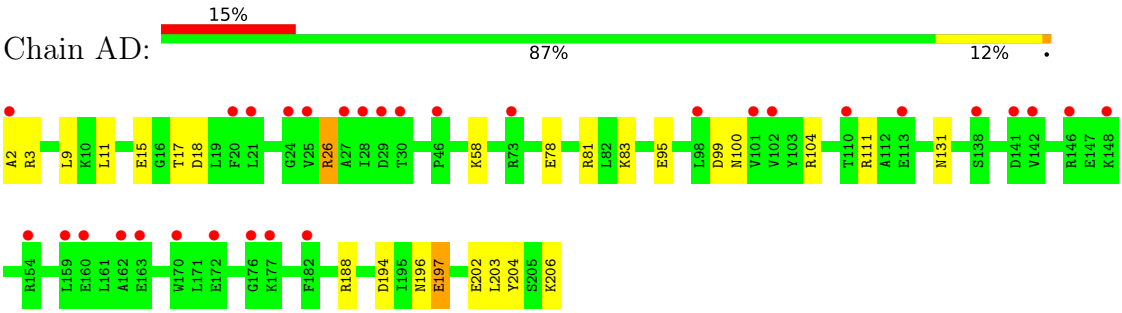




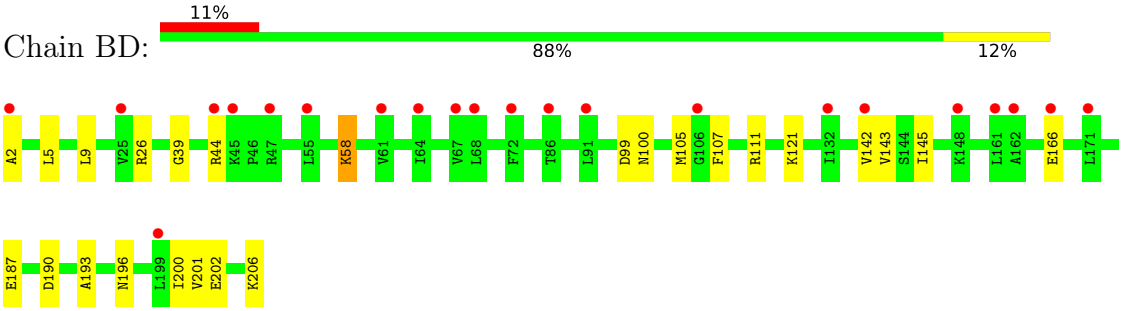
• Molecule 3: 30S ribosomal protein S3



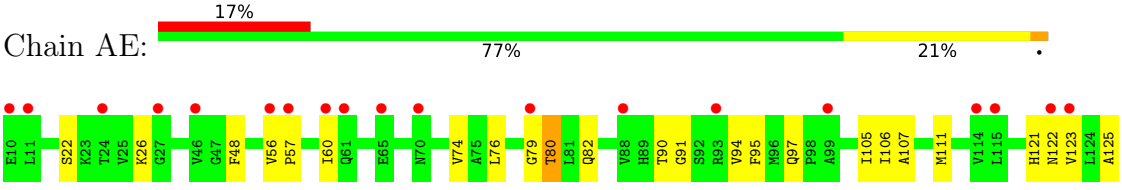
• Molecule 4: 30S ribosomal protein S4



• Molecule 4: 30S ribosomal protein S4

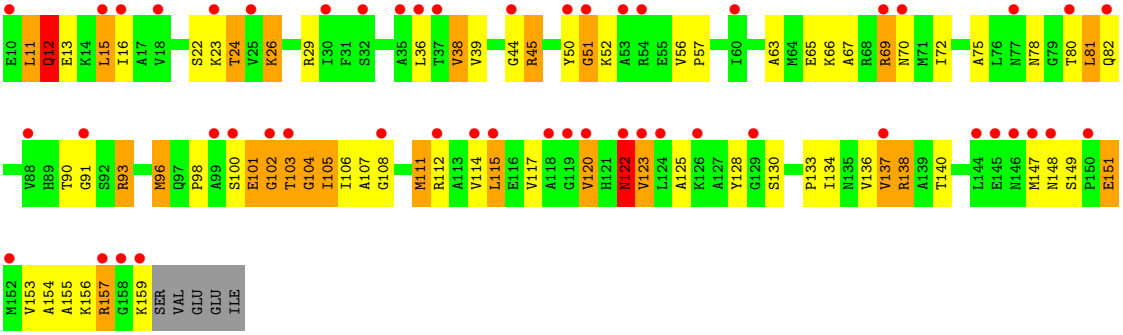


• Molecule 5: 30S ribosomal protein S5



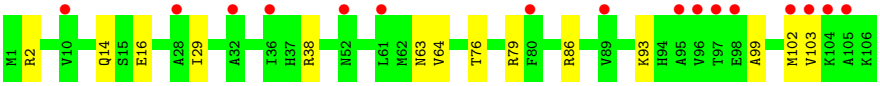
• Molecule 5: 30S ribosomal protein S5

Chain BE:



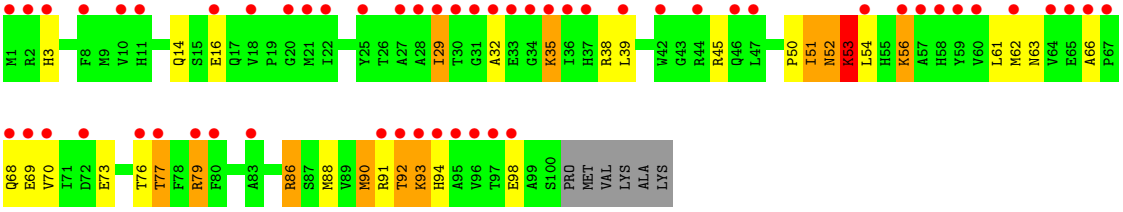
• Molecule 6: 30S ribosomal protein S6

Chain AF:



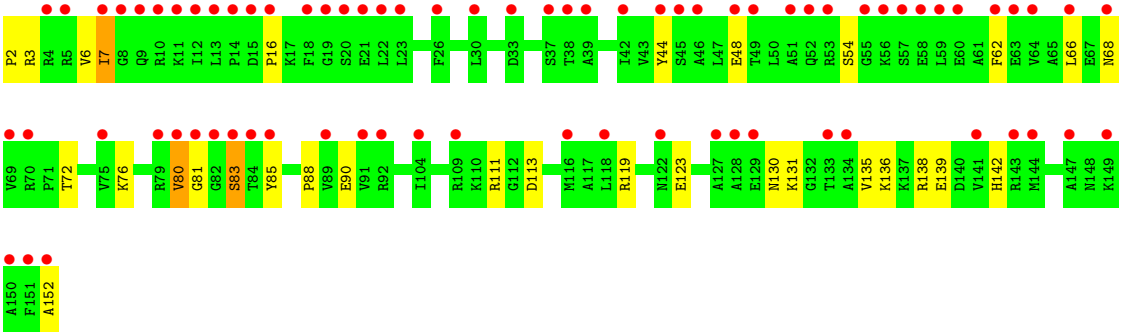
• Molecule 6: 30S ribosomal protein S6

Chain BF:



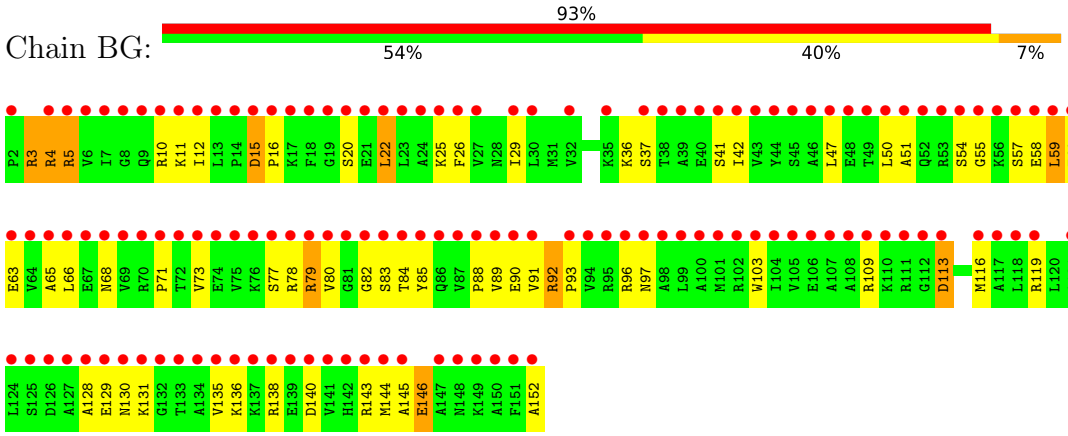
• Molecule 7: 30S ribosomal protein S7

Chain AG:



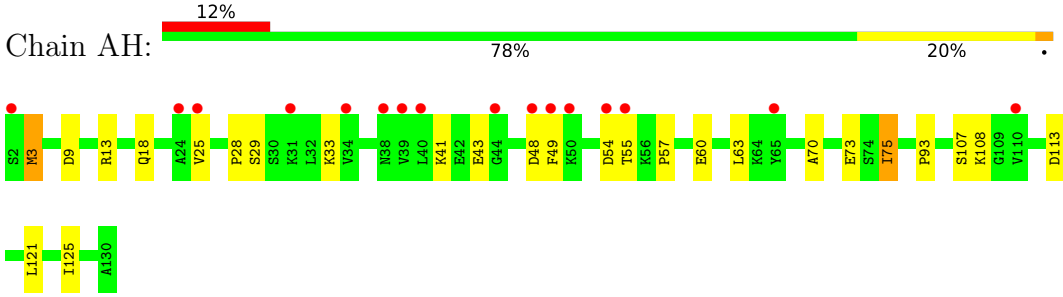
• Molecule 7: 30S ribosomal protein S7

Chain BG:



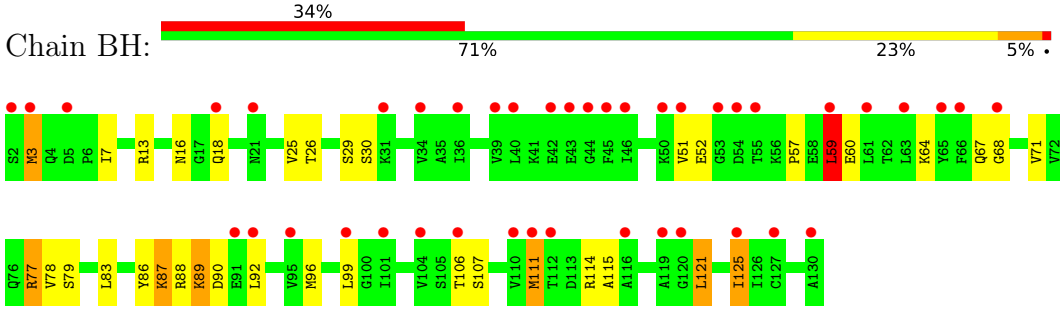
• Molecule 8: 30S ribosomal protein S8

Chain AH:



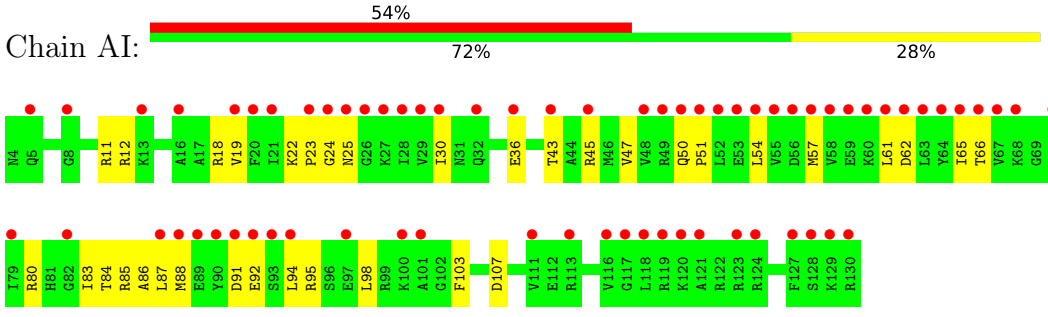
• Molecule 8: 30S ribosomal protein S8

Chain BH:



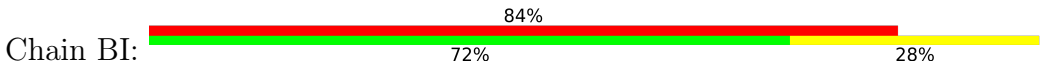
• Molecule 9: 30S ribosomal protein S9

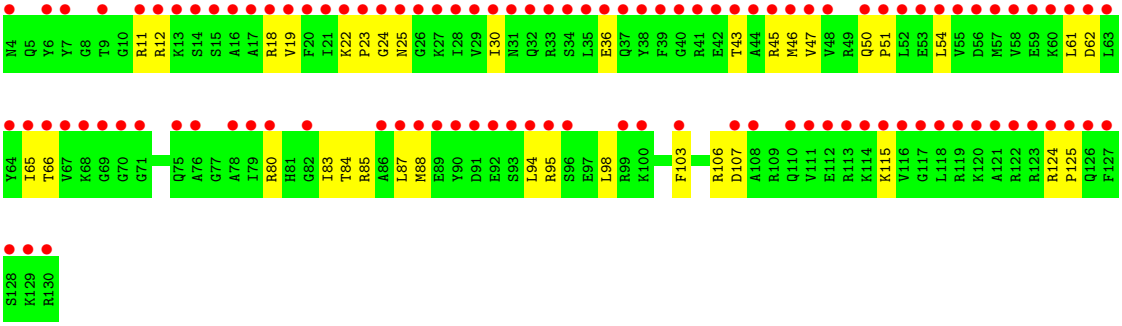
Chain AI:



• Molecule 9: 30S ribosomal protein S9

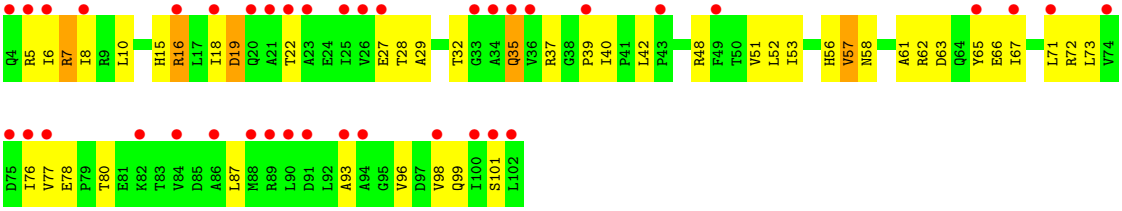
Chain BI:





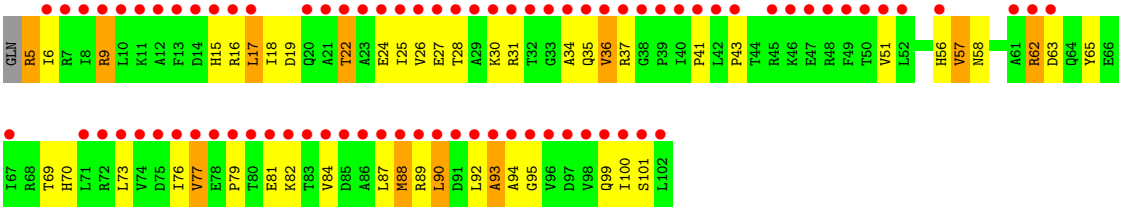
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



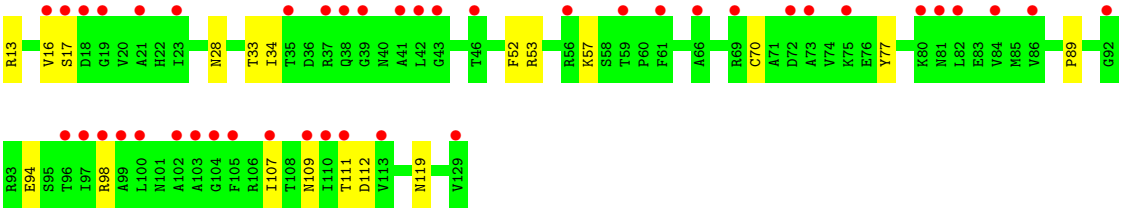
• Molecule 10: 30S ribosomal protein S10

Chain BJ:



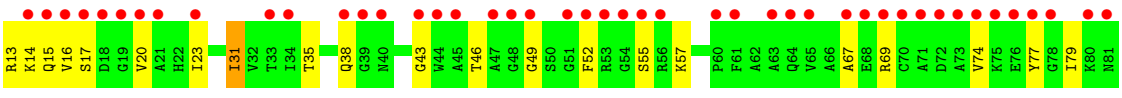
• Molecule 11: 30S ribosomal protein S11

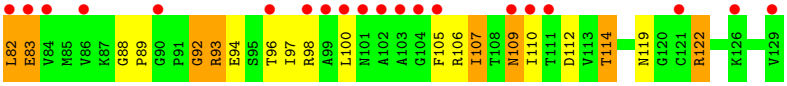
Chain AK:



• Molecule 11: 30S ribosomal protein S11

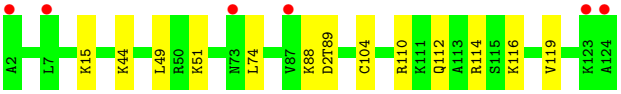
Chain BK:





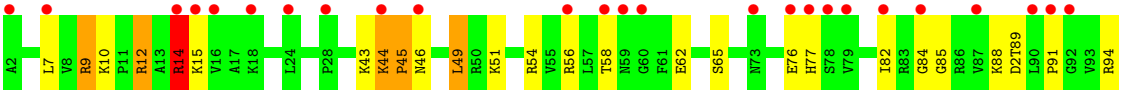
• Molecule 12: 30S ribosomal protein S12

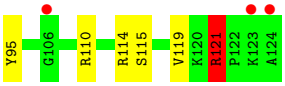
Chain AL:



• Molecule 12: 30S ribosomal protein S12

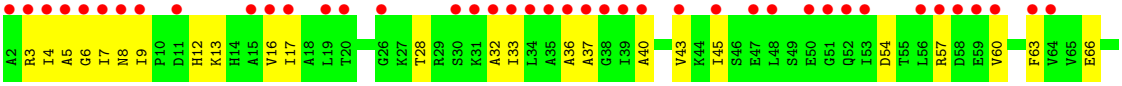
Chain BL:

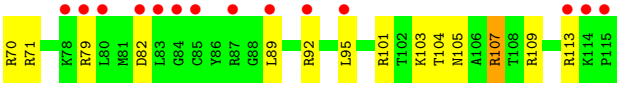




• Molecule 13: 30S ribosomal protein S13

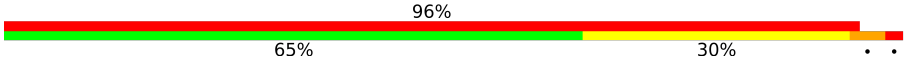
Chain AM:

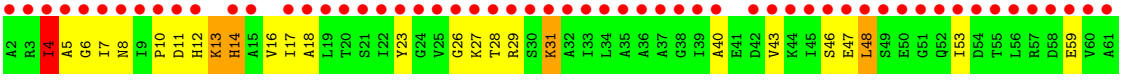


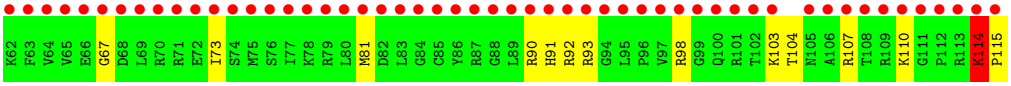


• Molecule 13: 30S ribosomal protein S13

Chain BM:

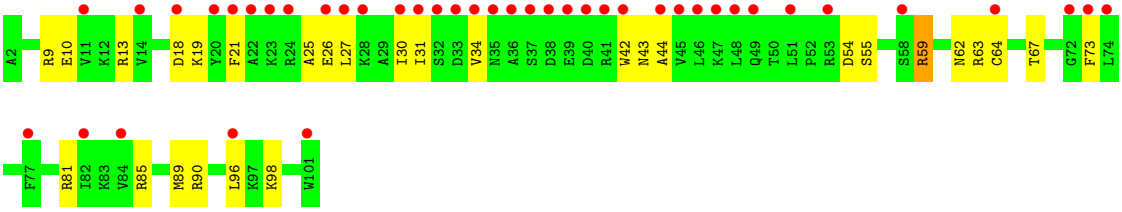




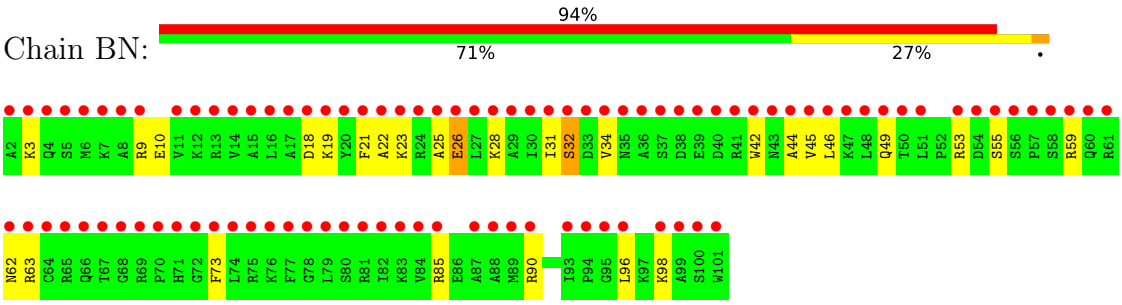


• Molecule 14: 30S ribosomal protein S14

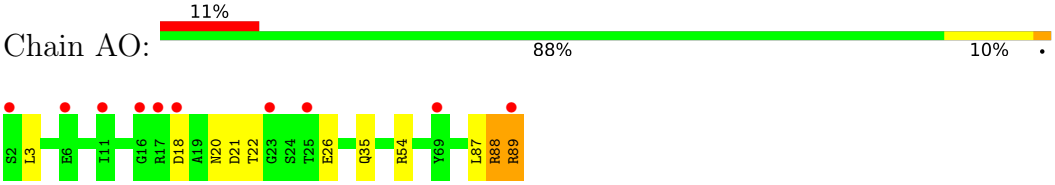
Chain AN:



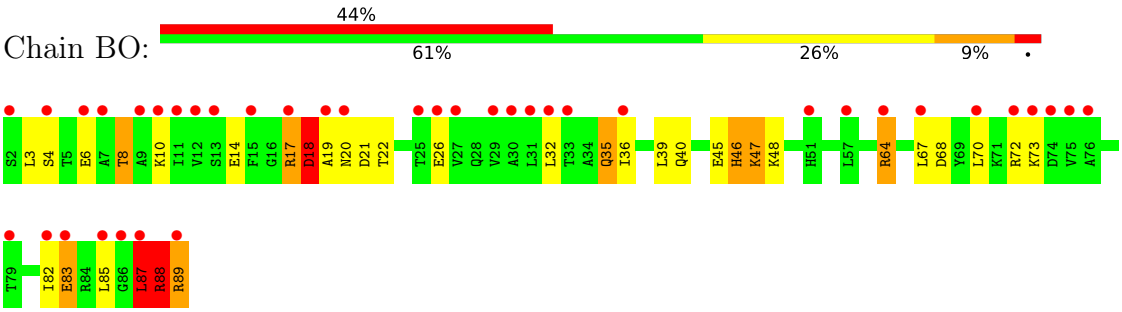
• Molecule 14: 30S ribosomal protein S14



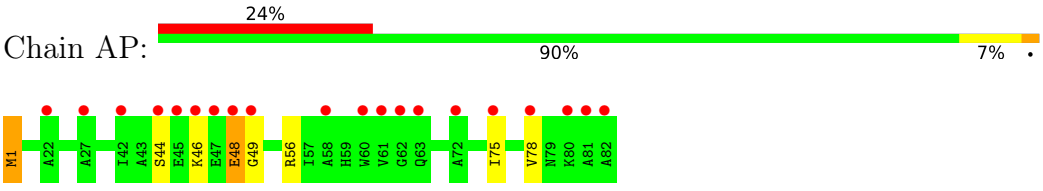
• Molecule 15: 30S ribosomal protein S15



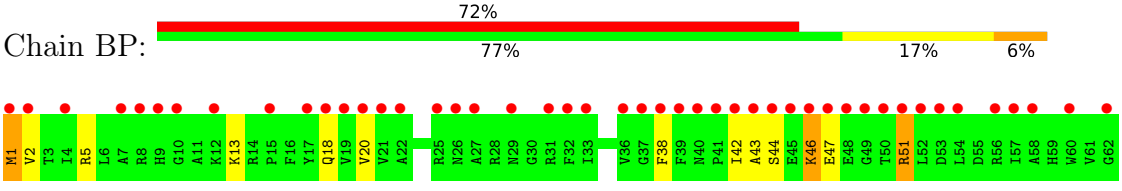
• Molecule 15: 30S ribosomal protein S15

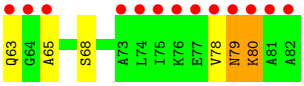


• Molecule 16: 30S ribosomal protein S16



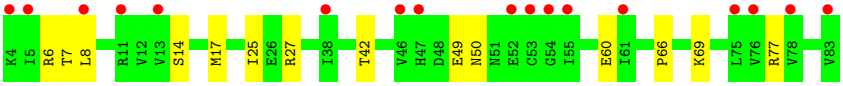
• Molecule 16: 30S ribosomal protein S16





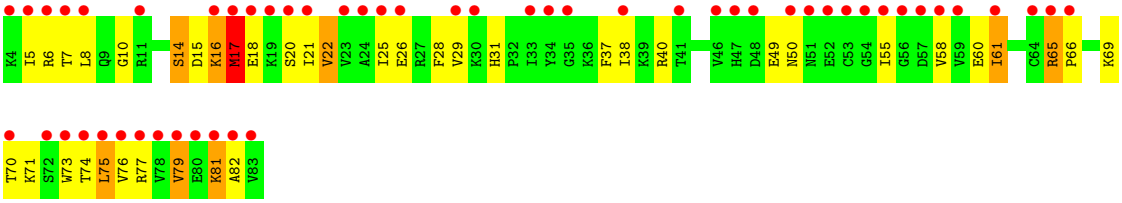
• Molecule 17: 30S ribosomal protein S17

Chain AQ:



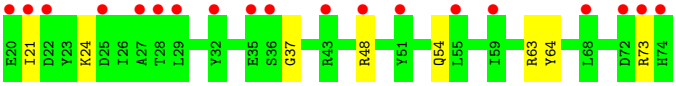
• Molecule 17: 30S ribosomal protein S17

Chain BQ:



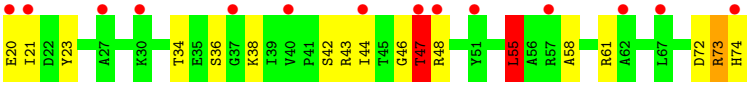
• Molecule 18: 30S ribosomal protein S18

Chain AR:



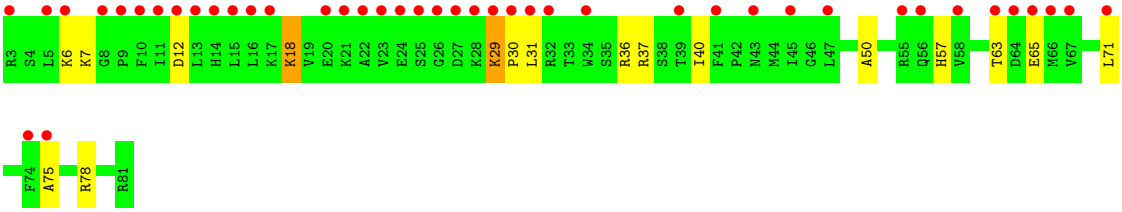
• Molecule 18: 30S ribosomal protein S18

Chain BR:



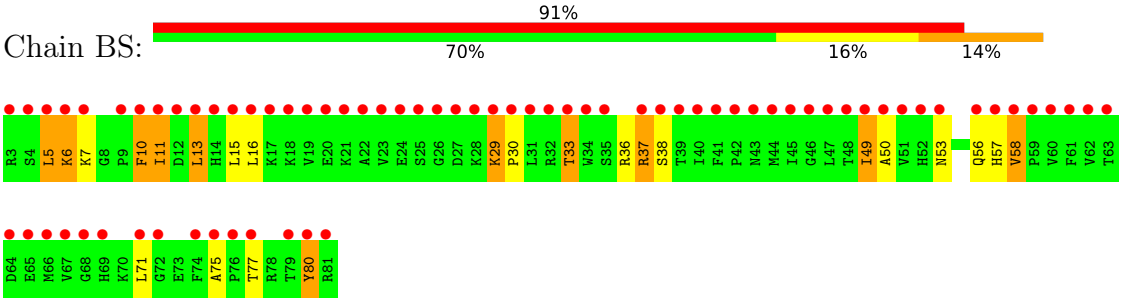
• Molecule 19: 30S ribosomal protein S19

Chain AS:



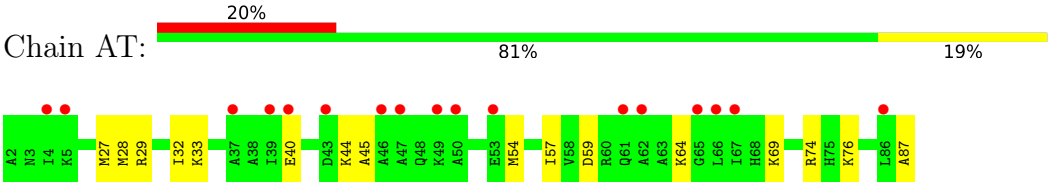
• Molecule 19: 30S ribosomal protein S19

Chain BS:



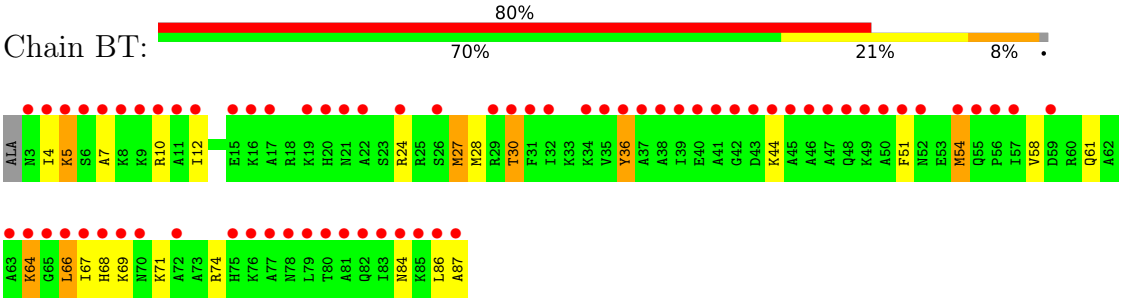
• Molecule 20: 30S ribosomal protein S20

Chain AT:



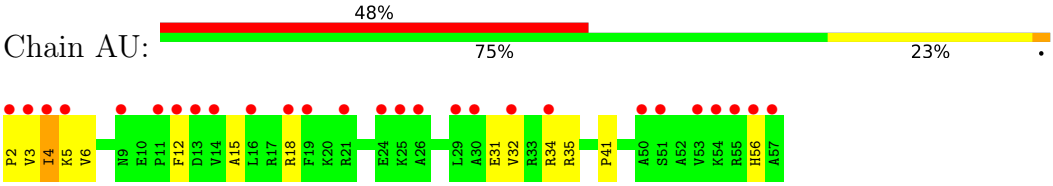
• Molecule 20: 30S ribosomal protein S20

Chain BT:



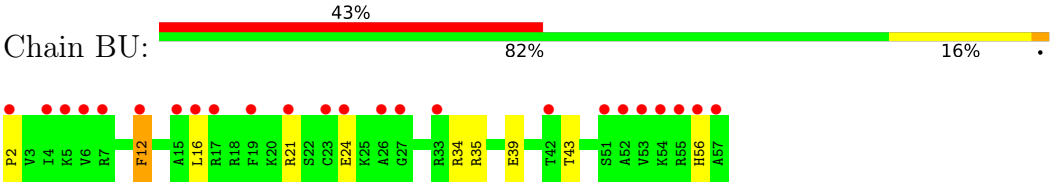
• Molecule 21: 30S ribosomal protein S21

Chain AU:



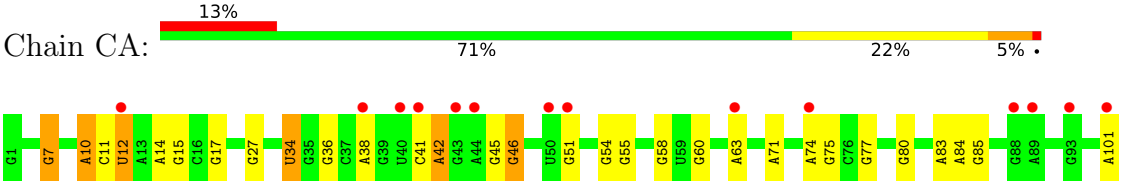
• Molecule 21: 30S ribosomal protein S21

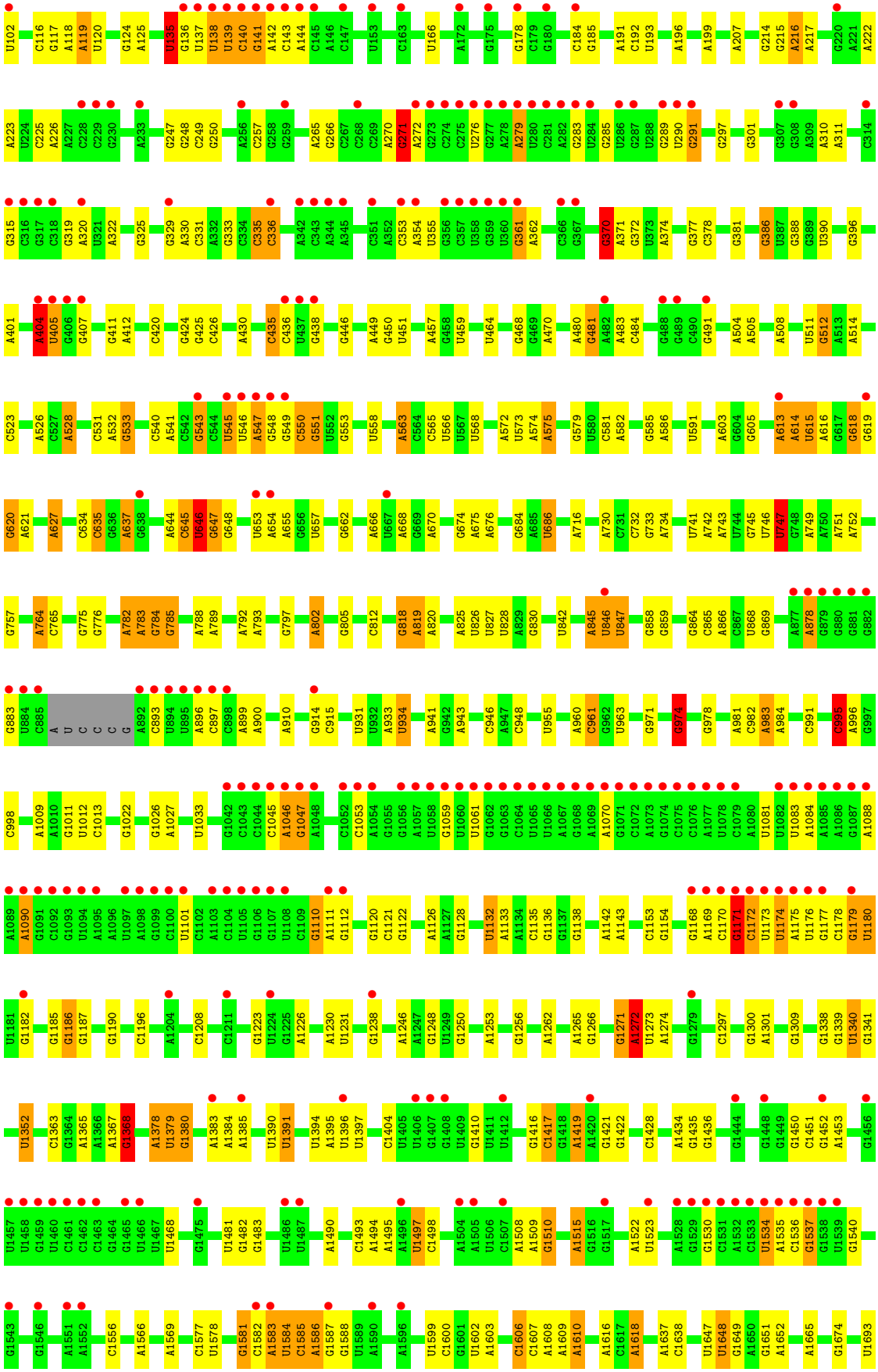
Chain BU:

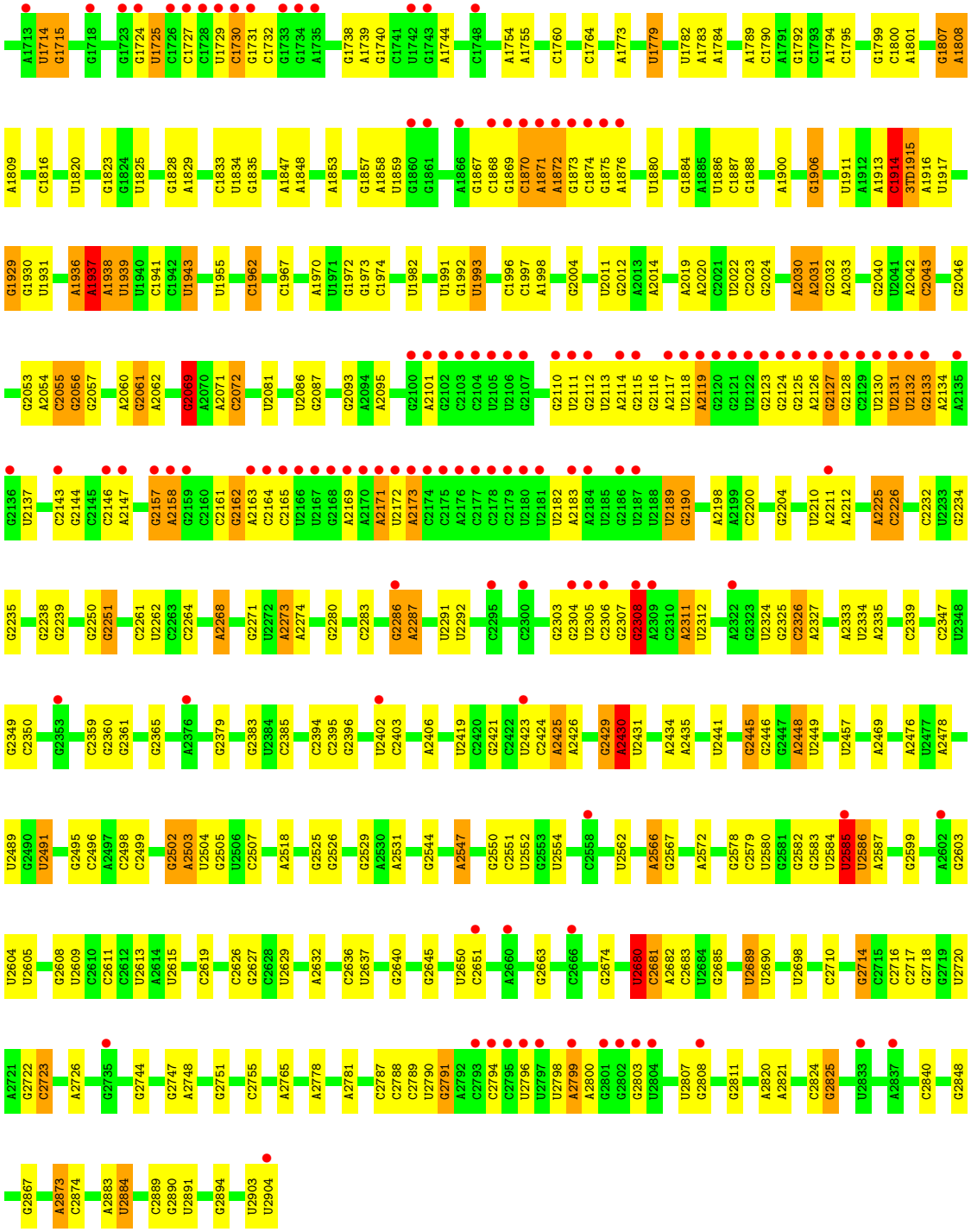


• Molecule 22: 23S rRNA

Chain CA:

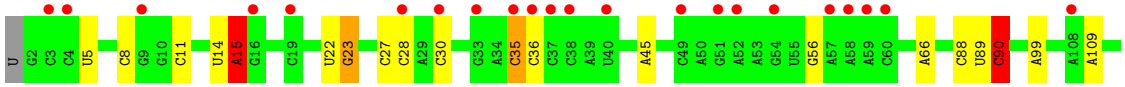


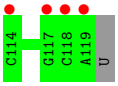

U102 C116 G117 A118 A119 U120 G124 A125 U135 G136 U137 U138 U139 C140 G141 A142 C143 A144 C145 A146 C147 U153 C163 U166 A172 G175 G178 C179 G180 C184 G185 A191 C192 U193 A196 A199 A207 G214 G215 A216 A217 G220 A221 A222
A223 U224 C225 A226 A227 C228 C229 G230 A233 G247 G248 C249 G250 A256 C257 G258 G259 A265 C266 C267 C268 C269 A270 G271 A272 G273 C274 C275 U276 G277 A278 A279 U280 C281 A282 G283 U284 G285 U286 G287 U288 G289 U290 G291 G297 G301 G307 G308 A309 A310 A311 G314
G315 C316 G317 C318 G319 A320 U321 A322 G326 G329 A330 C331 A332 G333 C334 C335 C336 A342 C343 A344 A345 C351 A352 C353 A354 U355 G356 C357 U358 G359 U360 G361 A362 G366 G367 G370 A371 G372 U373 A374 G377 C378 G381 G386 U387 G388 G389 U390 G396
A401 A404 U405 G406 G407 G411 A412 C420 G424 G425 C426 A430 C435 C436 U437 G438 G446 A449 G450 U451 A457 G458 U459 U464 G468 G469 A470 A480 G481 A482 A483 C484 G488 G489 C490 G491 A504 A505 A508 U511 G512 A513 A514
C523 A526 C527 A528 C531 A532 G533 C540 A541 C542 G543 C544 U545 U546 A547 G548 G549 C550 G551 U552 G553 U558 A563 C564 C565 U566 U567 U568 A572 U573 A574 A575 G579 U580 C581 A582 G585 A586 U591 A603 G604 G605 A613 A614 U615 A616 G617 G618 G619
G620 A621 A627 C634 C635 G636 A637 G638 A644 C645 U646 G647 G648 U653 A654 A655 G656 U657 G662 A666 U667 A668 G669 A670 G674 A675 A676 G684 A685 U686 A716 A730 C731 C732 G733 A734 U741 A742 A743 U744 G745 U746 U747 G748 A749 A750 A751 A752
G757 A764 C765 G775 G776 A782 A783 G784 G785 A788 A789 A792 A793 G797 A802 G805 C812 G818 A819 A820 A825 U826 U827 U828 A829 G830 U842 A845 U846 U847 G858 G859 G864 C865 A866 C867 U868 G869 A877 A878 G879 G880 G881 G882
G883 U884 C885 A U C C C G A892 C893 U894 U895 A896 C897 C898 A899 A900 A910 G914 C915 U931 U932 A933 U934 A941 G942 A943 C946 A947 C948 U955 A960 C961 G962 U963 G971 G974 G978 A981 C982 A983 A984 C991 C995 A996 G997
C998 A1009 A1010 G1011 U1012 C1013 G1022 G1026 A1027 U1033 G1042 C1043 C1044 C1045 A1046 G1047 A1048 C1052 C1053 A1054 G1055 G1056 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 U1065 U1066 A1067 G1068 A1069 A1070 G1071 C1072 A1073 G1074 C1075 C1076 A1077 U1078 C1079 A1080 U1081 U1082 U1083 A1084 A1085 A1086 G1087 A1088
A1089 A1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 A1098 G1099 C1100 U1101 C1102 A1103 C1104 U1105 G1106 G1107 U1108 C1109 G1110 A1111 G1112 G1120 C1121 G1122 A1126 A1127 G1128 U1132 A1133 A1134 C1135 G1136 G1137 G1138 A1142 A1143 C1153 G1154 G1168 A1169 C1170 G1171 C1172 U1173 U1174 A1175 U1176 G1177 C1178 G1179 U1180
U1181 G1182 G1185 G1186 G1187 G1190 C1196 A1204 C1208 C1211 G1223 U1224 G1225 A1226 A1230 U1231 G1238 A1246 A1247 G1248 U1249 G1250 A1253 G1256 A1262 A1265 G1266 G1271 A1272 U1273 A1274 G1279 C1297 G1300 A1301 G1309 G1338 G1339 U1340 G1341
U1352 C1363 G1364 A1365 A1366 A1367 G1368 A1378 U1379 G1380 A1383 A1384 A1385 U1390 U1391 U1394 A1395 U1396 U1397 C1404 U1405 U1406 G1407 G1408 U1409 G1410 U1411 U1412 G1416 C1417 G1418 A1419 A1420 G1421 G1422 C1428 A1434 G1435 G1436 G1444 G1448 G1449 G1450 C1451 G1452 A1453 G1456
U1457 U1458 G1459 U1460 C1461 C1462 C1463 G1464 G1465 U1466 U1467 U1468 G1475 U1481 G1482 G1483 U1486 U1487 A1490 C1493 A1494 A1495 A1496 U1497 C1498 A1504 A1505 U1506 C1507 A1508 A1509 G1510 A1515 G1516 G1517 A1522 U1523 A1528 G1529 G1530 C1531 A1532 C1533 U1534 A1535 C1536 G1537 G1538 U1539 G1540
G1543 G1546 A1551 A1552 C1556 A1566 A1569 C1577 U1578 G1581 C1582 A1583 U1584 C1585 A1586 G1587 G1588 U1589 A1590 A1596 U1599 C1600 G1601 U1602 A1603 C1606 C1607 A1608 A1609 A1610 A1616 C1617 A1618 A1637 C1638 U1647 U1648 G1649 A1650 G1651 A1652 A1665 G1674 U1693



• Molecule 23: 5S rRNA

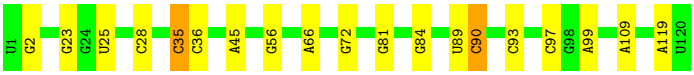
Chain CB:





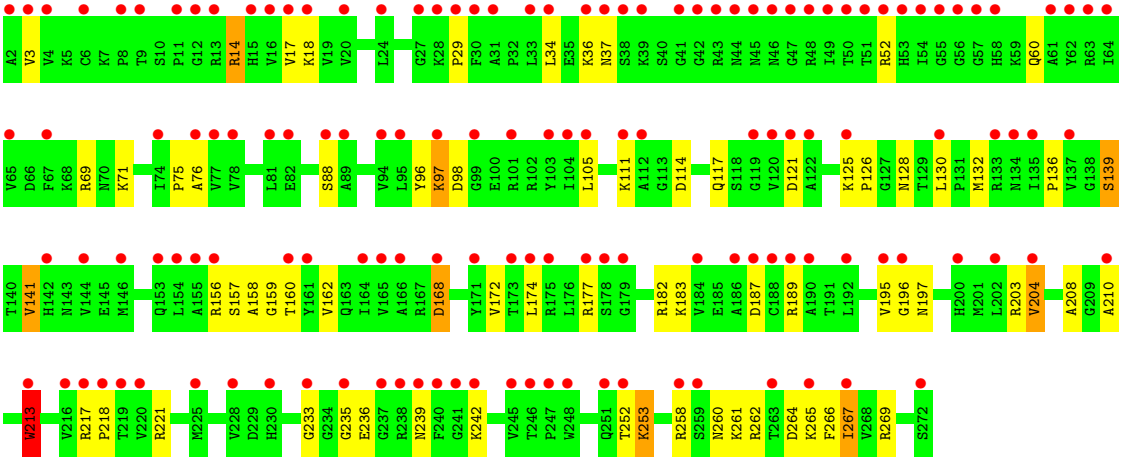
• Molecule 23: 5S rRNA

Chain DB:



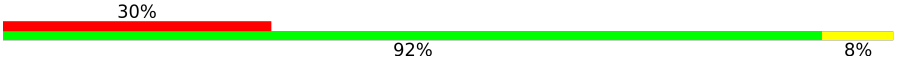
• Molecule 24: 50S ribosomal protein L2

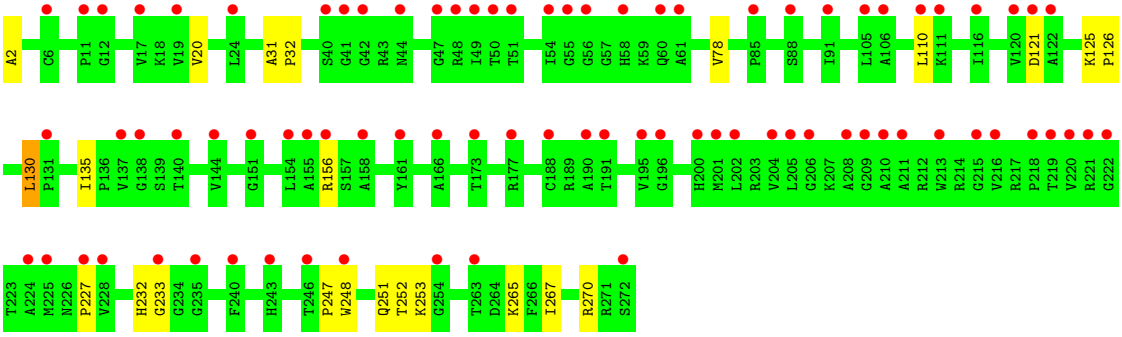
Chain CC:



• Molecule 24: 50S ribosomal protein L2

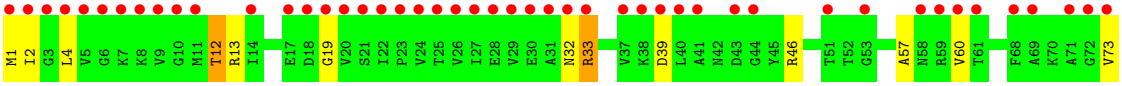
Chain DC:

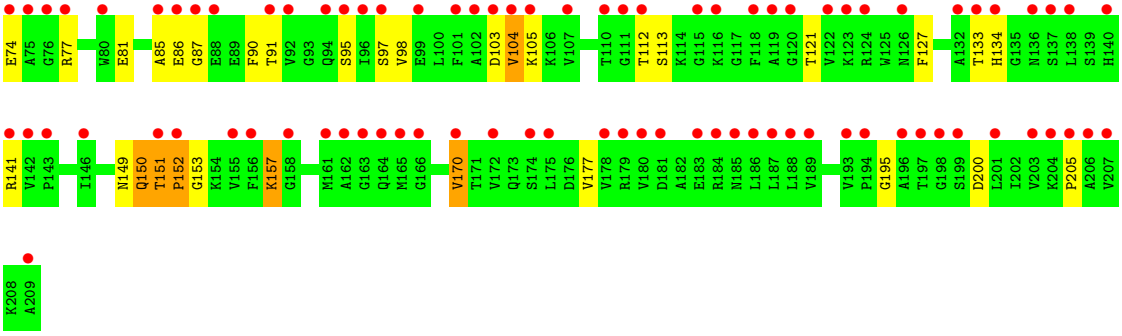




• Molecule 25: 50S ribosomal protein L3

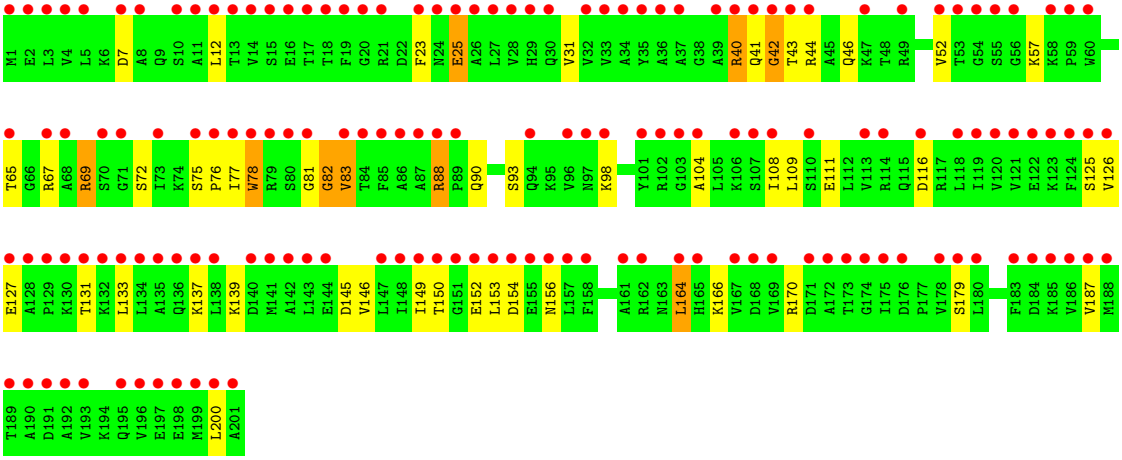
Chain CD:





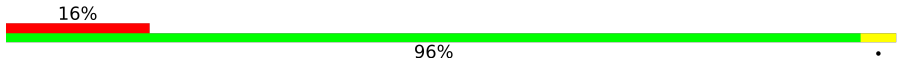
• Molecule 26: 50S ribosomal protein L4

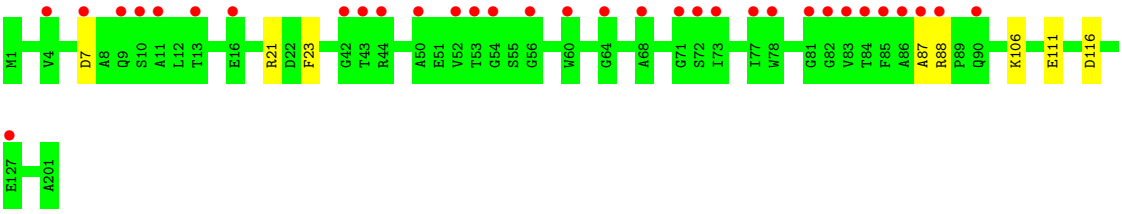
Chain CE:



• Molecule 26: 50S ribosomal protein L4

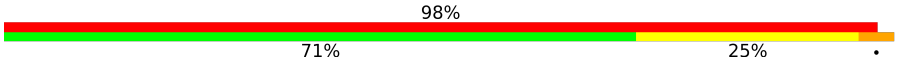
Chain DE:

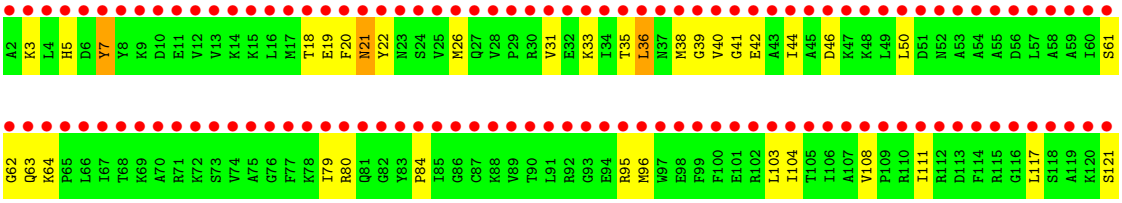


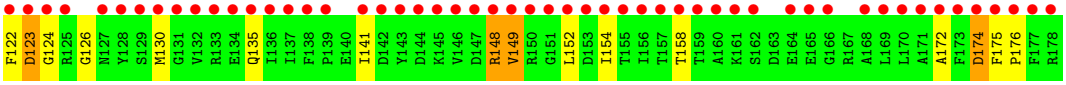


• Molecule 27: 50S ribosomal protein L5

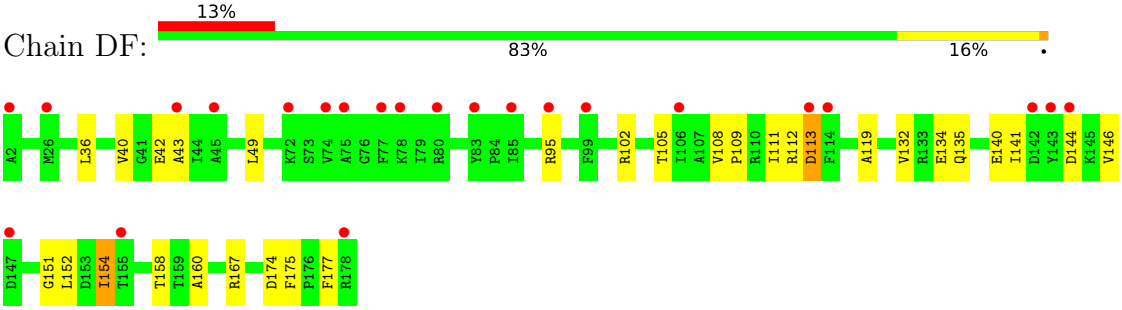
Chain CF:



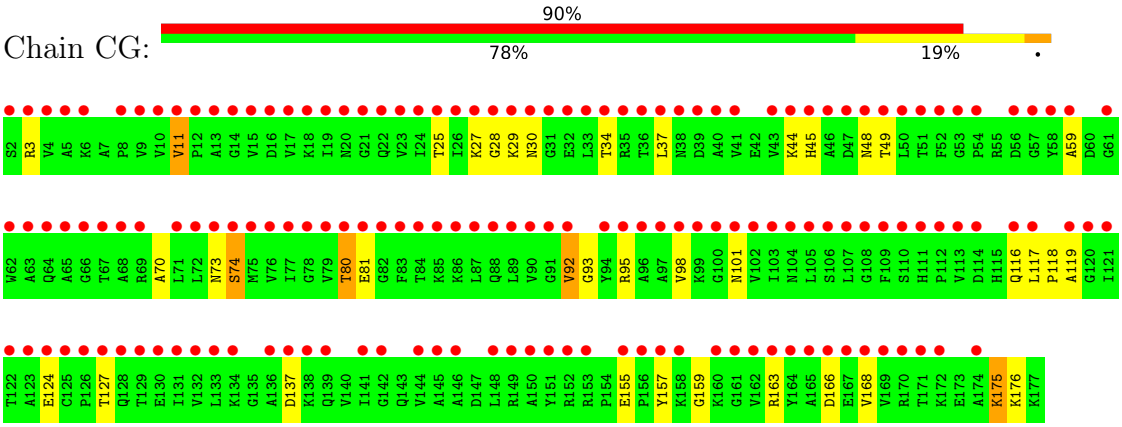




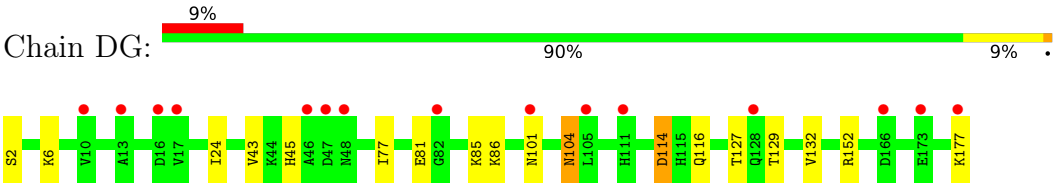
• Molecule 27: 50S ribosomal protein L5



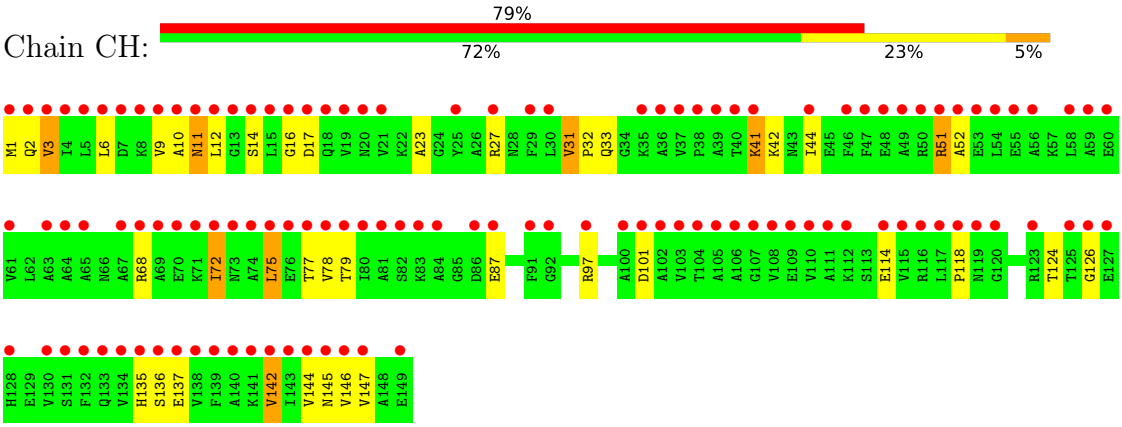
• Molecule 28: 50S ribosomal protein L6



• Molecule 28: 50S ribosomal protein L6

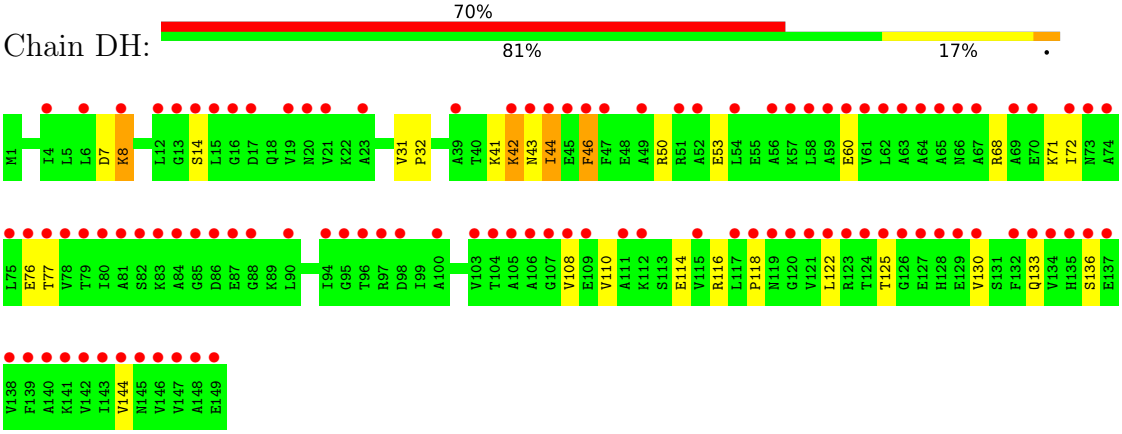


• Molecule 29: 50S ribosomal protein L9



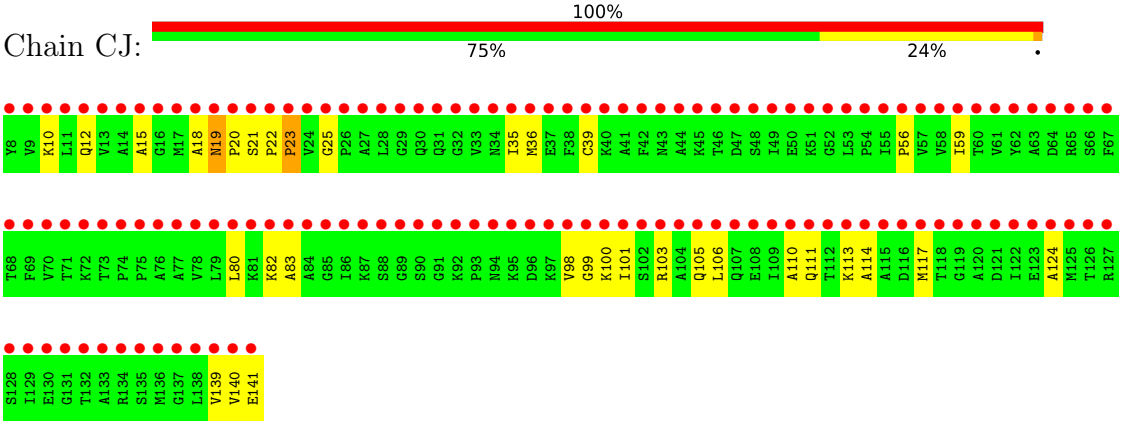
• Molecule 29: 50S ribosomal protein L9

Chain DH:



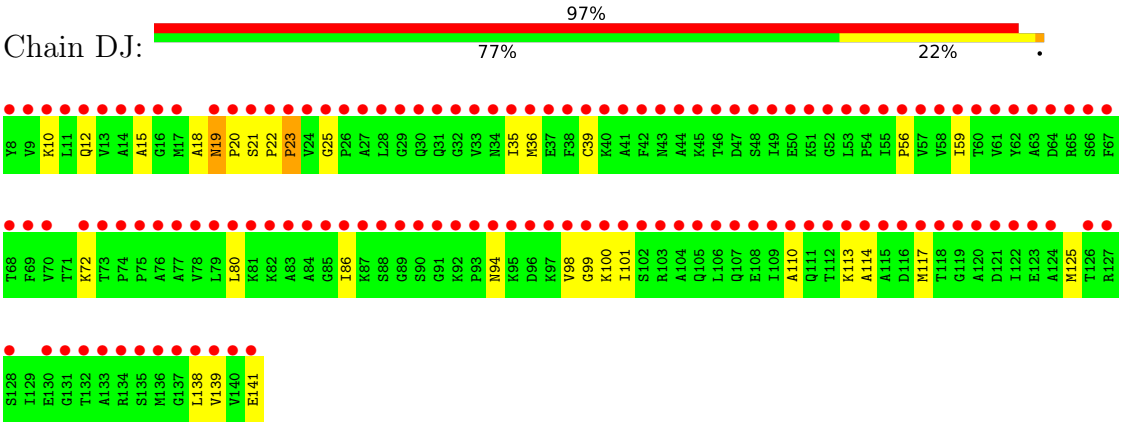
• Molecule 30: 50S ribosomal protein L11

Chain CJ:



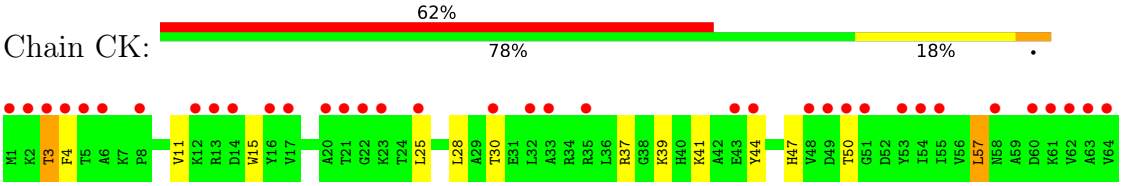
• Molecule 30: 50S ribosomal protein L11

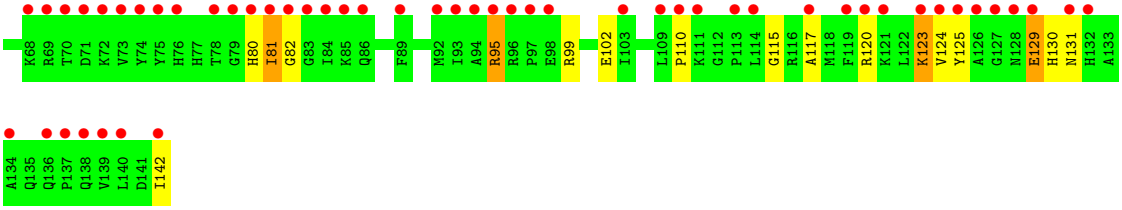
Chain DJ:



• Molecule 31: 50S ribosomal protein L13

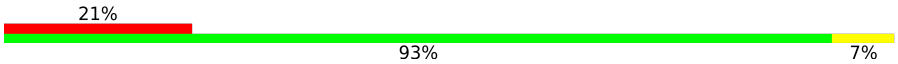
Chain CK:

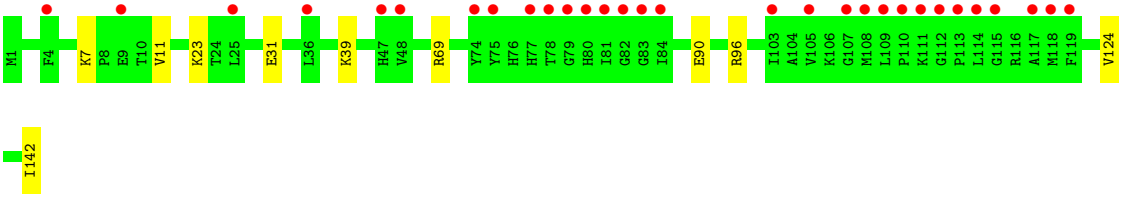




• Molecule 31: 50S ribosomal protein L13

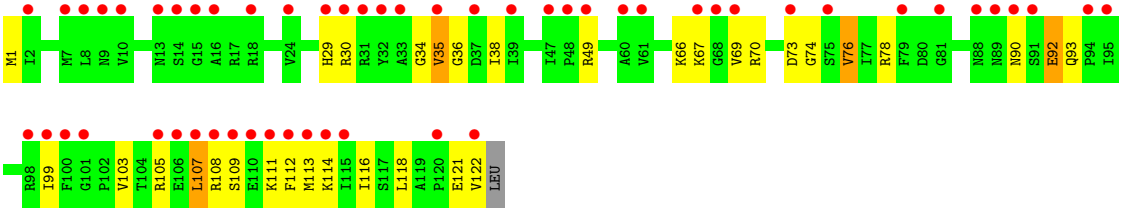
Chain DK:





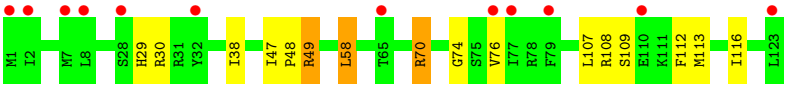
• Molecule 32: 50S ribosomal protein L14

Chain CL:



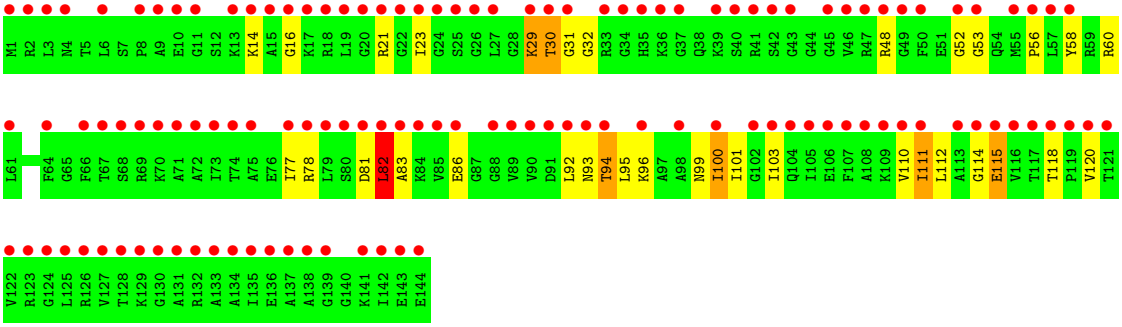
• Molecule 32: 50S ribosomal protein L14

Chain DL:



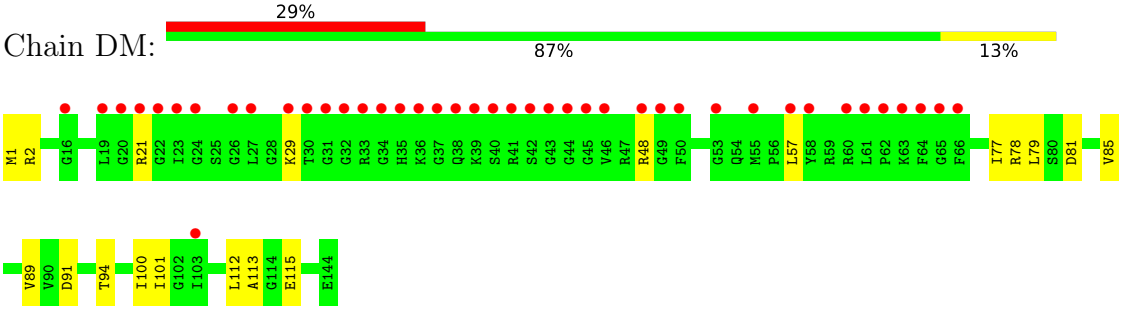
• Molecule 33: 50S ribosomal protein L15

Chain CM:



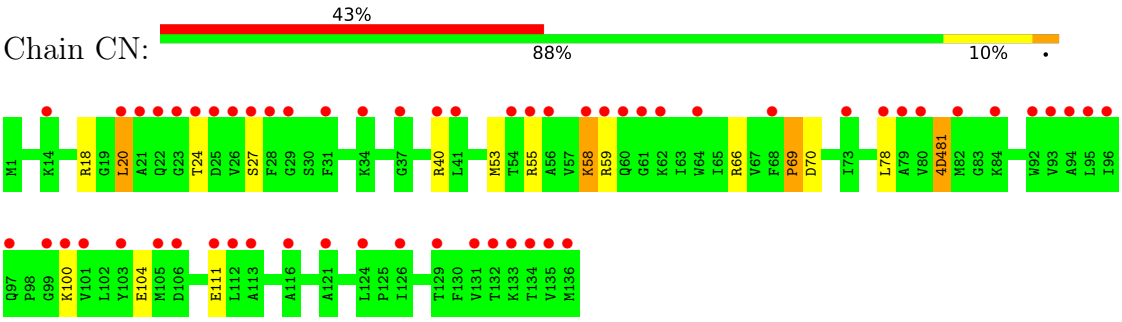
• Molecule 33: 50S ribosomal protein L15

Chain DM:



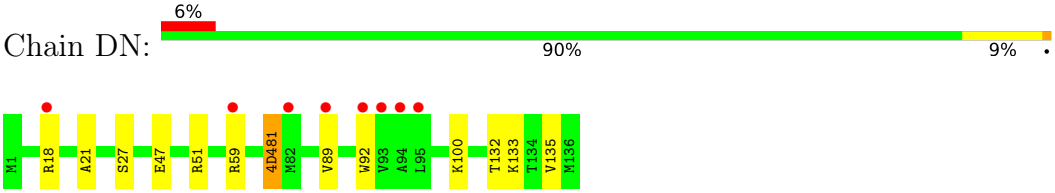
• Molecule 34: 50S ribosomal protein L16

Chain CN:



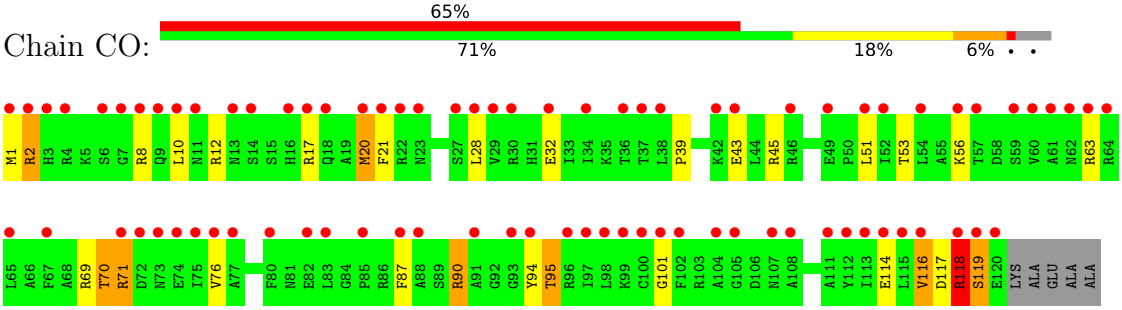
• Molecule 34: 50S ribosomal protein L16

Chain DN:



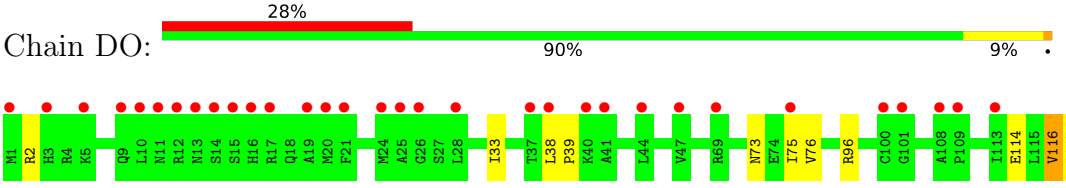
• Molecule 35: 50S ribosomal protein L17

Chain CO:



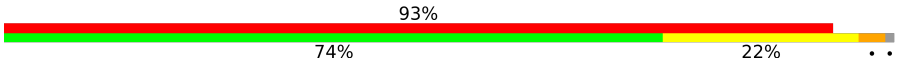
• Molecule 35: 50S ribosomal protein L17

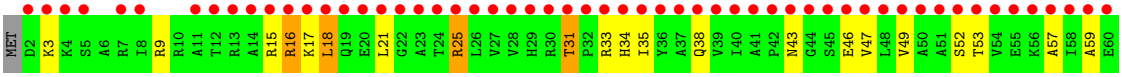
Chain DO:

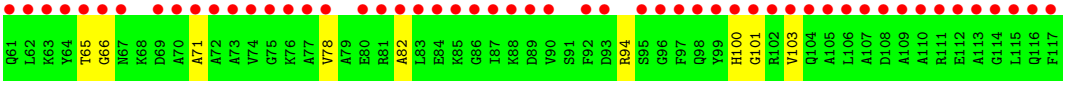


• Molecule 36: 50S ribosomal protein L18

Chain CP:

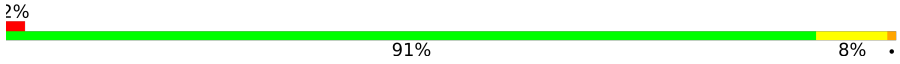






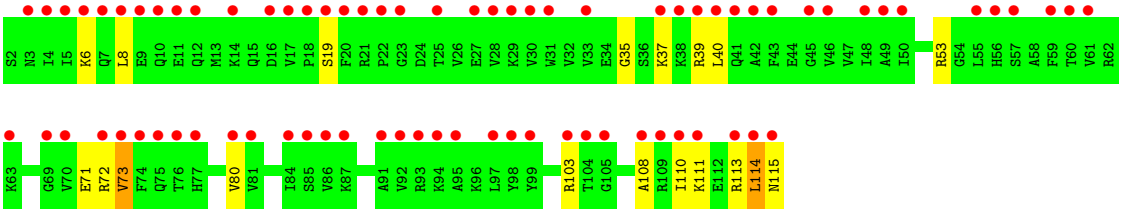
• Molecule 36: 50S ribosomal protein L18

Chain DP:



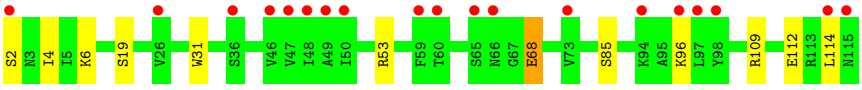
• Molecule 37: 50S ribosomal protein L19

Chain CQ:



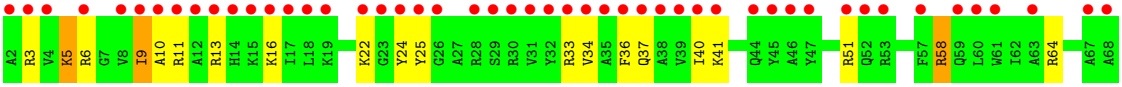
• Molecule 37: 50S ribosomal protein L19

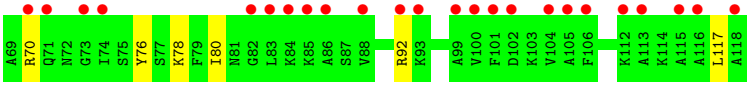
Chain DQ:



• Molecule 38: 50S ribosomal protein L20

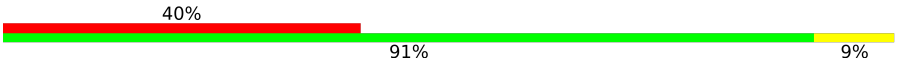
Chain CR:

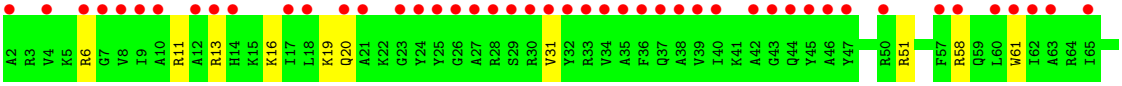




• Molecule 38: 50S ribosomal protein L20

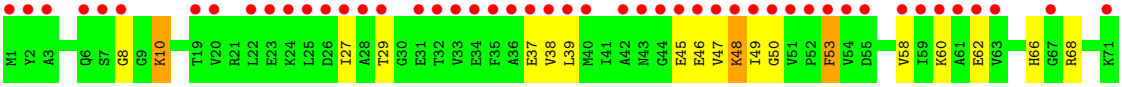
Chain DR:

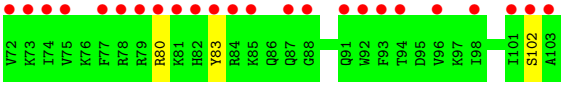




• Molecule 39: 50S ribosomal protein L21

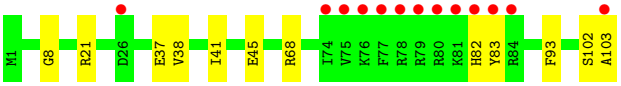
Chain CS:





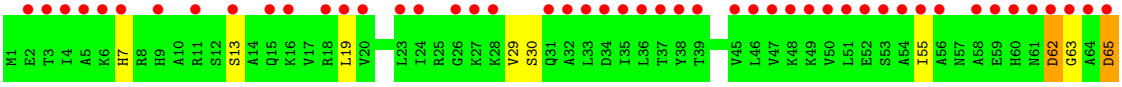
• Molecule 39: 50S ribosomal protein L21

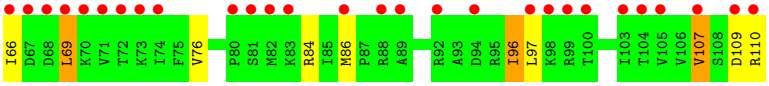
Chain DS:



• Molecule 40: 50S ribosomal protein L22

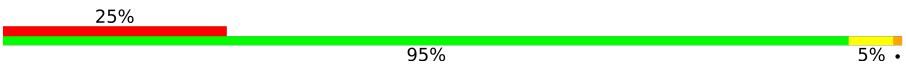
Chain CT:

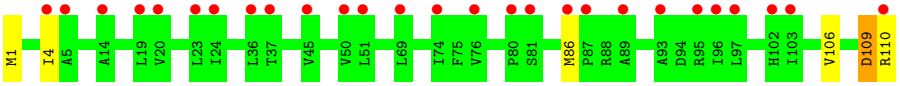




• Molecule 40: 50S ribosomal protein L22

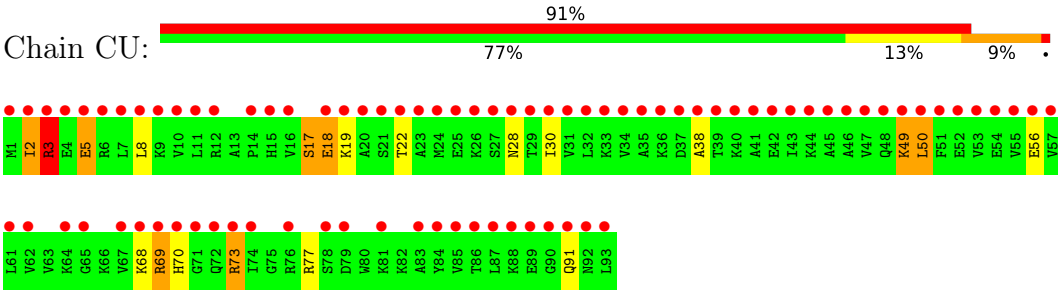
Chain DT:





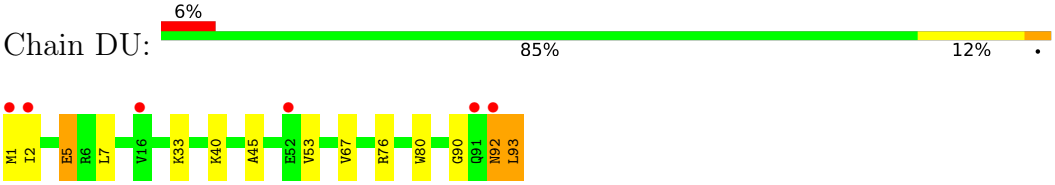
• Molecule 41: 50S ribosomal protein L23

Chain CU:



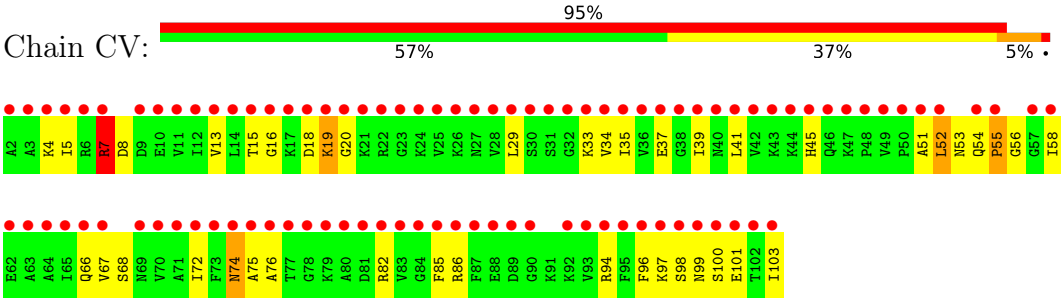
• Molecule 41: 50S ribosomal protein L23

Chain DU:



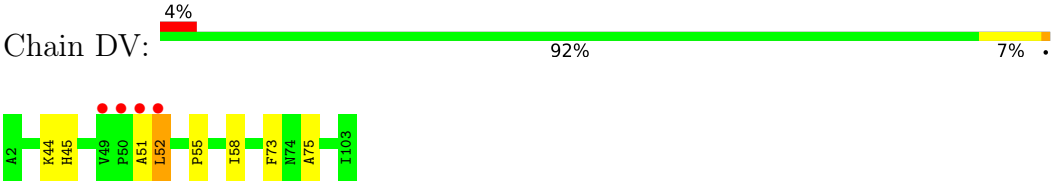
• Molecule 42: 50S ribosomal protein L24

Chain CV:



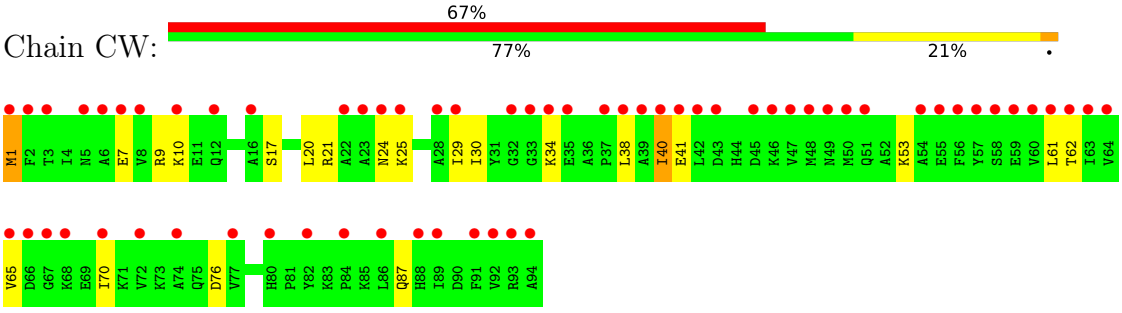
• Molecule 42: 50S ribosomal protein L24

Chain DV:



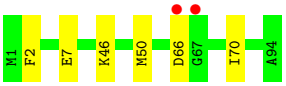
• Molecule 43: 50S ribosomal protein L25

Chain CW:



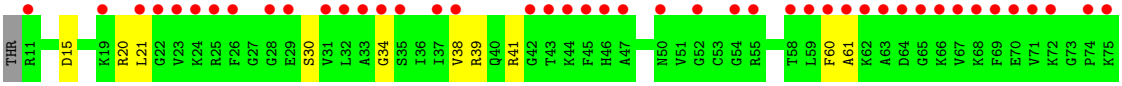
• Molecule 43: 50S ribosomal protein L25

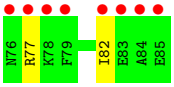
Chain DW:



• Molecule 44: 50S ribosomal protein L27

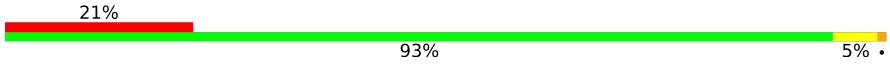
Chain CX:

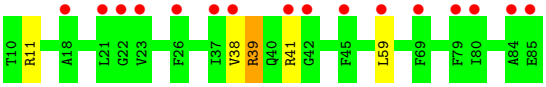




• Molecule 44: 50S ribosomal protein L27

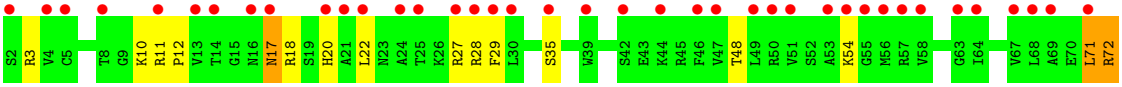
Chain DX:

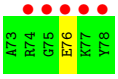




• Molecule 45: 50S ribosomal protein L28

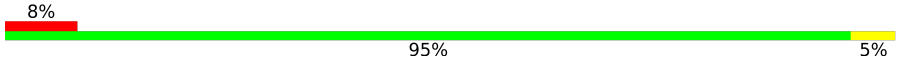
Chain CY:

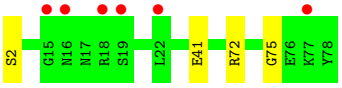




• Molecule 45: 50S ribosomal protein L28

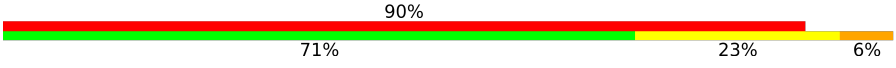
Chain DY:

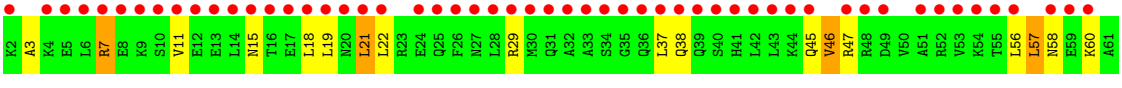




• Molecule 46: 50S ribosomal protein L29

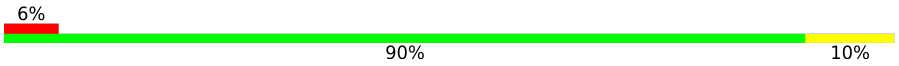
Chain CZ:





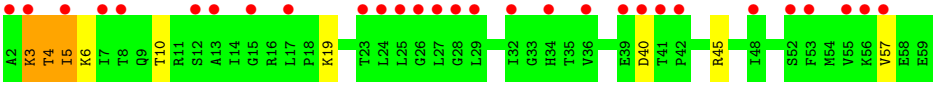
• Molecule 46: 50S ribosomal protein L29

Chain DZ:



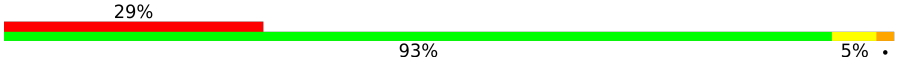
• Molecule 47: 50S ribosomal protein L30

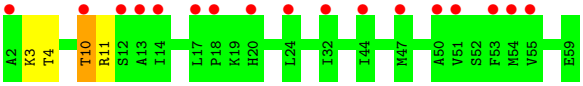
Chain C0:



• Molecule 47: 50S ribosomal protein L30

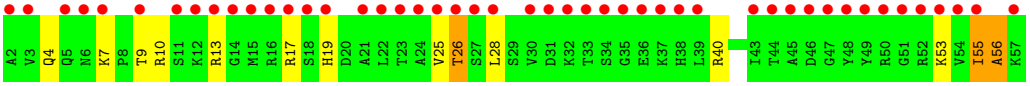
Chain D0:





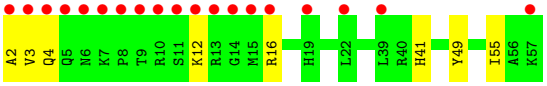
• Molecule 48: 50S ribosomal protein L32

Chain C1:



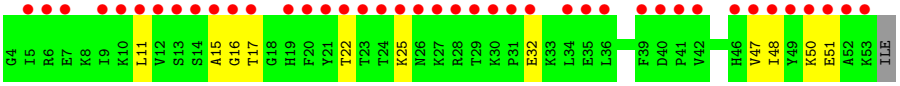
• Molecule 48: 50S ribosomal protein L32

Chain D1:



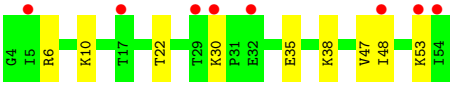
• Molecule 49: 50S ribosomal protein L33

Chain C2:



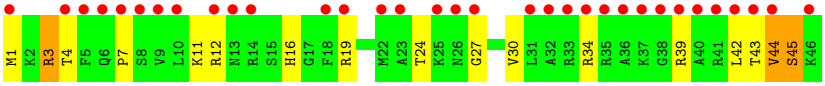
• Molecule 49: 50S ribosomal protein L33

Chain D2:



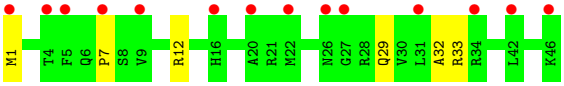
• Molecule 50: 50S ribosomal protein L34

Chain C3:



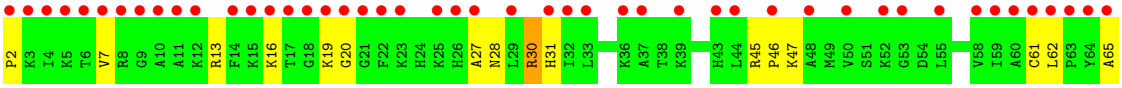
• Molecule 50: 50S ribosomal protein L34

Chain D3:



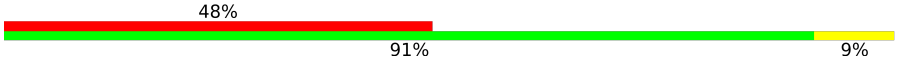
• Molecule 51: 50S ribosomal protein L35

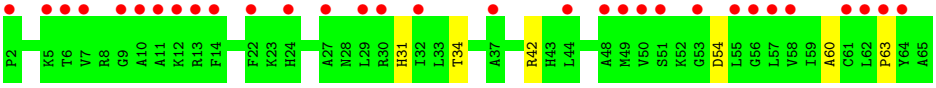
Chain C4:



• Molecule 51: 50S ribosomal protein L35

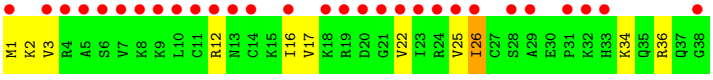
Chain D4:





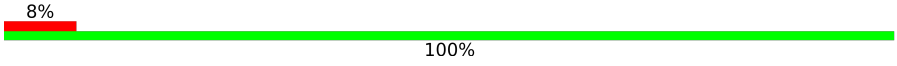
• Molecule 52: 50S ribosomal protein L36

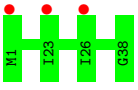
Chain C5:



• Molecule 52: 50S ribosomal protein L36

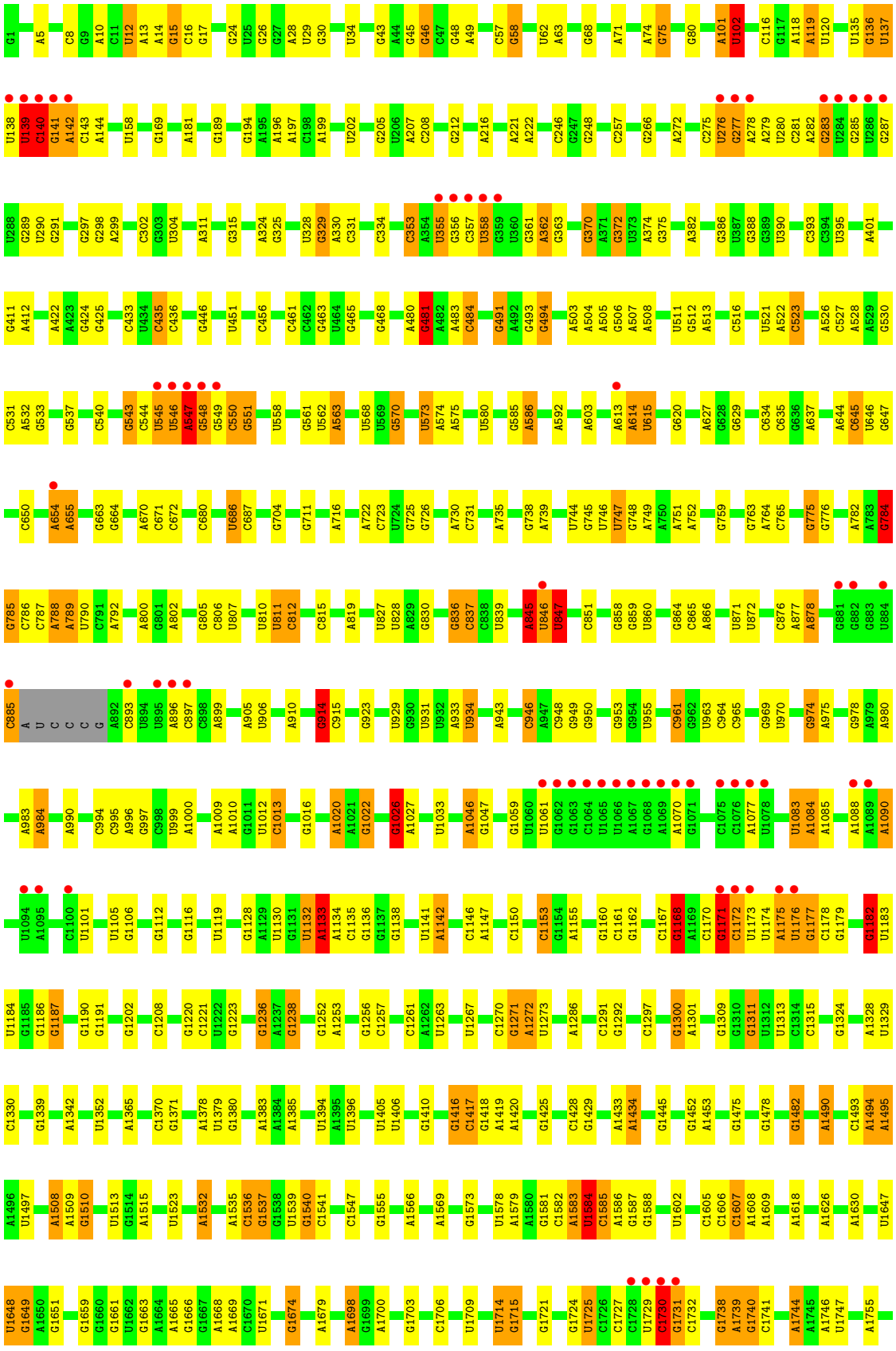
Chain D5:

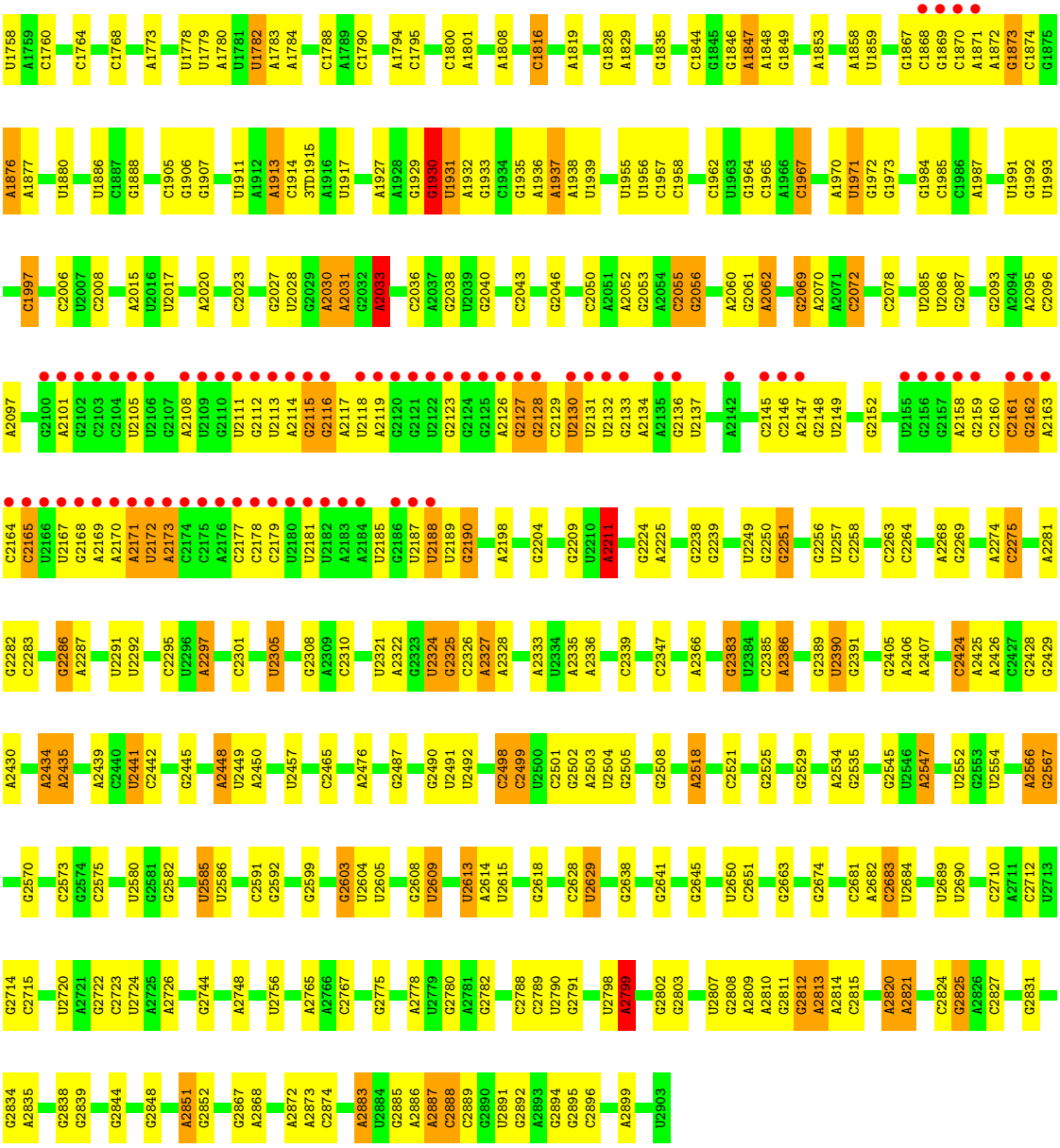




• Molecule 53: 23S rRNA

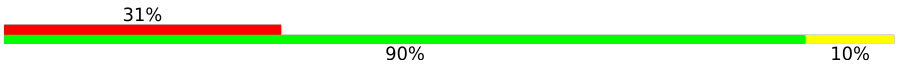
Chain DA:

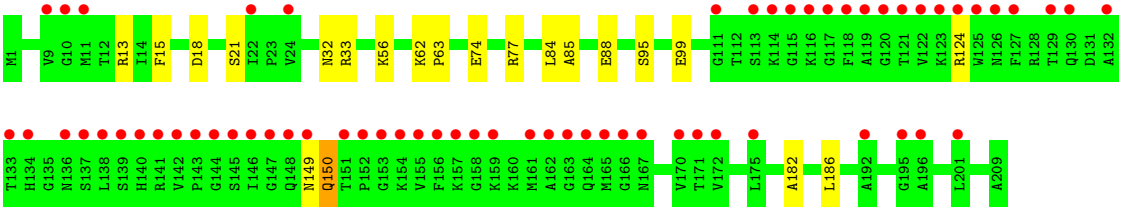




• Molecule 54: 50S ribosomal protein L3

Chain DD:





• Molecule 55: 50S ribosomal protein L10

Chain DI:


A2 L3 N4 L5 Q6 A10 I11 V12 A13 E14 V15 S16 E17 V18 A19 K20 G21 A22 L23 S24 A25 V26 V27 A28 D29 S30 R31 G32 V33 T34 V35 D36 K37 M38 T39 E40 L41 R42 K43 A44 G45 R46 E47 A48 G49 V50 Y51 M52 R53 V54 T58 L59 L60 R61 R62 A63 V64 E65
G66 T67 P68 F69 E70 C71 L72 K73 D74 A75 F76 T80 L81 I82 A83 Y84 V85 T86 E87 H88 P89 G90 A91 A92 A93 R94 L95 F96 K97 E98 P99 A100 K101 A102 N103 A104 K105 F106 E107 V108 K109 A110 A111 A112 F113 E114 G115 E116 L117 I118 P119 A120 S121 Q122 I123 D124 R125 L126 A127
T128 L129 P130 T131 Y132 E133 E134 A135 I136

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	212.17Å 433.89Å 624.25Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.39 – 2.10 69.39 – 2.10	Depositor EDS
% Data completeness (in resolution range)	93.0 (69.39-2.10) 93.0 (69.39-2.10)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.99 (at 2.10Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.218 , 0.234 0.234 , 0.246	Depositor DCC
R_{free} test set	10048 reflections (0.33%)	wwPDB-VP
Wilson B-factor (Å^2)	52.5	Xtriage
Anisotropy	0.173	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 51.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	295060	wwPDB-VP
Average B, all atoms (Å^2)	94.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.61% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ 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: 5MU, D2T, PUT, 1MG, TRS, OMC, 3TD, MEQ, PGE, ACY, OMG, OMU, 2MA, 2MG, UR3, 6MZ, 4OC, MPD, ZN, PEG, G7M, EDO, 4D4, 5MC, SPD, PSU, 1PE, MA6, PG4, H2U, MG, GUN

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	AA	0.58	0/36593	0.98	33/57081 (0.1%)
1	BA	0.52	0/36568	1.03	90/57042 (0.2%)
2	AB	0.36	0/1784	0.55	0/2403
2	BB	0.39	0/1784	0.59	0/2403
3	AC	0.39	0/1652	0.55	0/2225
3	BC	0.42	0/1652	0.76	0/2225
4	AD	0.37	0/1665	0.53	0/2227
4	BD	0.43	0/1665	0.57	0/2227
5	AE	0.48	0/1157	0.61	0/1557
5	BE	0.56	0/1118	1.07	4/1504 (0.3%)
6	AF	0.43	0/881	0.56	0/1189
6	BF	0.47	0/835	0.90	2/1128 (0.2%)
7	AG	0.35	0/1196	0.51	0/1602
7	BG	0.41	0/1196	0.83	1/1602 (0.1%)
8	AH	0.43	0/989	0.58	0/1326
8	BH	0.38	0/989	0.82	3/1326 (0.2%)
9	AI	0.37	0/1034	0.60	0/1375
9	BI	0.33	0/1034	0.60	0/1375
10	AJ	0.57	0/806	0.68	0/1089
10	BJ	0.73	0/797	0.66	0/1077
11	AK	0.39	0/893	0.54	0/1205
11	BK	0.45	0/893	0.86	0/1205
12	AL	0.49	0/960	0.65	0/1286
12	BL	0.53	0/960	0.93	3/1286 (0.2%)
13	AM	0.38	0/893	0.63	0/1193
13	BM	0.35	0/893	0.90	0/1193
14	AN	0.40	0/817	0.60	0/1088
14	BN	0.49	0/817	0.70	0/1088
15	AO	0.42	0/722	0.52	0/964
15	BO	0.43	0/722	0.88	1/964 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
16	AP	0.40	0/659	0.59	0/884
16	BP	0.48	0/659	0.89	0/884
17	AQ	0.44	0/658	0.61	0/881
17	BQ	0.43	0/658	0.82	0/881
18	AR	0.41	0/463	0.55	0/621
18	BR	0.45	0/463	0.98	1/621 (0.2%)
19	AS	0.37	0/653	0.56	0/877
19	BS	0.43	0/653	0.85	1/877 (0.1%)
20	AT	0.40	0/676	0.53	0/895
20	BT	0.40	0/671	0.82	1/888 (0.1%)
21	AU	0.53	0/472	0.57	0/627
21	BU	0.46	0/472	0.60	0/627
22	CA	0.51	3/69165 (0.0%)	1.00	108/107896 (0.1%)
23	CB	0.41	0/2828	0.90	2/4410 (0.0%)
23	DB	0.79	0/2872	1.12	7/4478 (0.2%)
24	CC	0.40	0/2122	0.76	2/2852 (0.1%)
24	DC	0.57	0/2122	0.71	0/2852
25	CD	0.40	0/1586	0.71	0/2134
26	CE	0.37	0/1571	0.71	2/2113 (0.1%)
26	DE	0.58	0/1571	0.66	0/2113
27	CF	0.33	0/1435	0.75	0/1926
27	DF	0.46	0/1435	0.63	0/1926
28	CG	0.39	0/1343	0.50	0/1816
28	DG	0.53	0/1343	0.61	0/1816
29	CH	0.38	0/1121	0.56	0/1515
29	DH	0.39	0/1121	0.54	0/1515
30	CJ	0.44	0/993	0.63	0/1341
30	DJ	0.48	0/993	0.66	0/1341
31	CK	0.35	0/1152	0.50	0/1551
31	DK	0.69	0/1152	0.75	0/1551
32	CL	0.39	0/947	0.73	0/1268
32	DL	0.64	0/955	0.79	2/1279 (0.2%)
33	CM	0.40	0/1062	0.89	2/1413 (0.1%)
33	DM	0.64	0/1062	0.71	0/1413
34	CN	0.34	0/1081	0.64	0/1443
34	DN	0.64	0/1092	0.73	0/1457
35	CO	0.40	0/973	0.74	1/1301 (0.1%)
35	DO	0.69	0/1006	0.79	1/1345 (0.1%)
36	CP	0.33	0/902	0.68	0/1209
36	DP	0.50	0/910	0.62	0/1219
37	CQ	0.37	0/929	0.71	1/1242 (0.1%)
37	DQ	0.65	0/929	0.68	0/1242
38	CR	0.39	0/960	0.68	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DR	0.74	0/960	0.75	0/1278
39	CS	0.37	0/829	0.73	0/1107
39	DS	0.77	0/829	0.76	1/1107 (0.1%)
40	CT	0.40	0/864	0.75	0/1156
40	DT	0.72	0/864	0.75	0/1156
41	CU	0.39	0/745	0.94	5/994 (0.5%)
41	DU	0.59	0/745	0.72	0/994
42	CV	0.40	0/788	0.87	0/1051
42	DV	0.55	0/788	0.70	0/1051
43	CW	0.29	0/766	0.61	0/1025
43	DW	0.64	0/766	0.67	0/1025
44	CX	0.38	0/576	0.68	0/762
44	DX	0.68	0/598	0.78	2/790 (0.3%)
45	CY	0.36	0/635	0.67	0/848
45	DY	0.58	0/635	0.70	0/848
46	CZ	0.34	0/502	0.77	0/667
46	DZ	0.54	0/502	0.58	0/667
47	C0	0.34	0/453	0.69	0/605
47	D0	0.65	0/467	0.71	0/623
48	C1	0.42	0/450	0.73	0/599
48	D1	0.65	0/450	0.73	0/599
49	C2	0.43	0/416	0.71	0/554
49	D2	0.60	0/421	0.66	0/561
50	C3	0.46	0/380	0.81	0/498
50	D3	0.66	0/380	0.84	0/498
51	C4	0.37	0/513	0.70	0/676
51	D4	0.56	0/513	0.64	0/676
52	C5	0.38	0/303	0.98	1/397 (0.3%)
52	D5	0.62	0/303	0.81	0/397
53	DA	1.00	34/69295 (0.0%)	1.31	473/108100 (0.4%)
54	DD	0.72	0/1576	0.76	2/2119 (0.1%)
55	DI	0.42	0/1037	0.60	0/1402
All	All	0.65	37/309204 (0.0%)	1.02	752/462103 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	BA	0	1
6	BF	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
24	DC	0	1
25	CD	0	1
30	CJ	0	1
30	DJ	0	1
32	CL	0	1
47	C0	0	1
47	D0	0	1
55	DI	0	1
All	All	0	10

All (37) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	CA	1936	A	N9-C4	-9.34	1.32	1.37
53	DA	463	G	C8-N7	6.92	1.35	1.30
53	DA	1330	C	C4-C5	-6.51	1.37	1.43
53	DA	465	G	C6-N1	-6.50	1.35	1.39
53	DA	1679	A	N7-C5	-6.28	1.35	1.39
53	DA	2269	G	C8-N7	6.27	1.34	1.30
53	DA	800	A	C5-C4	-6.17	1.34	1.38
53	DA	680	C	N1-C6	-5.92	1.33	1.37
53	DA	654	A	N9-C4	5.83	1.41	1.37
53	DA	788	A	N3-C4	-5.74	1.31	1.34
53	DA	516	C	P-OP2	-5.69	1.39	1.49
53	DA	1607	C	P-O5'	-5.63	1.54	1.59
53	DA	1847	A	N9-C4	5.57	1.41	1.37
53	DA	573	U	P-OP2	-5.56	1.39	1.49
53	DA	2641	G	C8-N7	5.55	1.34	1.30
53	DA	527	C	N1-C6	-5.49	1.33	1.37
53	DA	2892	G	P-O5'	-5.43	1.54	1.59
22	CA	528	A	N9-C4	-5.35	1.34	1.37
53	DA	1147	A	C6-N1	-5.32	1.31	1.35
53	DA	819	A	C6-N1	-5.29	1.31	1.35
53	DA	2641	G	N3-C4	-5.26	1.31	1.35
53	DA	2040	G	C6-N1	-5.25	1.35	1.39
53	DA	2052	A	N9-C4	-5.25	1.34	1.37
22	CA	1132	U	O3'-P	5.24	1.67	1.61
53	DA	2249	U	C2-N3	-5.24	1.34	1.37
53	DA	586	A	N3-C4	-5.23	1.31	1.34
53	DA	2499	C	P-OP1	-5.22	1.40	1.49
53	DA	2336	A	N3-C4	-5.19	1.31	1.34
53	DA	30	G	N3-C4	-5.18	1.31	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	DA	1671	U	C2-N3	-5.16	1.34	1.37
53	DA	2442	C	C4-C5	-5.12	1.38	1.43
53	DA	2053	G	O3'-P	-5.12	1.55	1.61
53	DA	1666	G	N9-C4	5.10	1.42	1.38
53	DA	1263	U	C2-N3	-5.09	1.34	1.37
53	DA	1937	A	N3-C4	-5.08	1.31	1.34
53	DA	1844	C	N1-C6	-5.07	1.34	1.37
53	DA	1992	G	N7-C5	-5.04	1.36	1.39

All (752) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	1997	C	O5'-P-OP2	-13.03	93.98	105.70
53	DA	574	A	O5'-P-OP1	-12.59	94.37	105.70
53	DA	914	G	N1-C6-O6	12.55	127.43	119.90
22	CA	963	U	O5'-P-OP2	-12.45	94.50	105.70
22	CA	948	C	O5'-P-OP1	-11.07	95.74	105.70
53	DA	2499	C	N1-C2-O2	-10.91	112.35	118.90
53	DA	751	A	O5'-P-OP1	-10.83	95.95	105.70
53	DA	570	G	C5-C6-O6	-10.70	122.18	128.60
53	DA	512	G	O4'-C1'-N9	10.69	116.75	108.20
1	BA	330	C	O4'-C1'-N1	10.34	116.47	108.20
22	CA	2250	G	O4'-C1'-N9	-10.33	99.94	108.20
53	DA	570	G	C4-C5-N7	10.17	114.87	110.80
22	CA	1936	A	C2-N3-C4	-10.09	105.55	110.60
53	DA	2813	A	N1-C6-N6	10.06	124.64	118.60
53	DA	847	U	O5'-P-OP2	-9.90	96.79	105.70
1	BA	412	A	O4'-C1'-N9	9.85	116.08	108.20
53	DA	2448	A	O5'-P-OP2	-9.79	96.89	105.70
5	BE	104	GLY	N-CA-C	9.67	137.28	113.10
53	DA	1987	A	O5'-P-OP2	-9.66	97.01	105.70
53	DA	963	U	O5'-P-OP2	-9.57	97.08	105.70
53	DA	1663	G	O5'-P-OP2	-9.54	97.12	105.70
1	AA	117	G	O5'-P-OP2	-9.50	97.15	105.70
1	BA	558	G	O5'-P-OP1	-9.50	97.15	105.70
53	DA	29	U	O5'-P-OP2	-9.44	97.21	105.70
53	DA	574	A	O5'-P-OP2	9.36	121.94	110.70
53	DA	1648	U	O5'-P-OP1	-9.10	97.51	105.70
53	DA	2450	A	O5'-P-OP2	-9.06	97.55	105.70
53	DA	1935	G	O5'-P-OP2	-8.98	97.61	105.70
22	CA	1936	A	N3-C4-N9	-8.96	120.23	127.40
53	DA	802	A	O5'-P-OP1	-8.93	97.67	105.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	1272	A	O5'-P-OP1	-8.89	97.70	105.70
53	DA	914	G	C5-C6-O6	-8.88	123.27	128.60
53	DA	738	G	O5'-P-OP2	-8.85	97.74	105.70
53	DA	329	G	O5'-P-OP2	-8.72	97.85	105.70
1	BA	632	U	N3-C2-O2	-8.67	116.13	122.20
53	DA	1134	A	O5'-P-OP1	-8.67	97.90	105.70
22	CA	1936	A	N3-C4-C5	8.57	132.80	126.80
53	DA	465	G	N3-C2-N2	8.57	125.90	119.90
53	DA	1010	A	O5'-P-OP2	-8.57	97.99	105.70
53	DA	2848	G	O4'-C1'-N9	8.53	115.02	108.20
53	DA	1965	C	O5'-P-OP2	-8.45	98.09	105.70
53	DA	1026	G	O5'-P-OP1	-8.40	98.14	105.70
53	DA	1605	C	N1-C2-O2	-8.38	113.88	118.90
22	CA	752	A	O4'-C1'-N9	8.30	114.84	108.20
22	CA	2250	G	C4-N9-C1'	8.27	137.25	126.50
53	DA	2275	C	O5'-P-OP2	-8.24	98.29	105.70
1	BA	209	U	C2-N1-C1'	8.23	127.58	117.70
53	DA	1272	A	O5'-P-OP1	-8.23	98.29	105.70
41	CU	3	ARG	NE-CZ-NH1	8.15	124.38	120.30
1	BA	632	U	N1-C2-O2	8.15	128.50	122.80
53	DA	2645	G	O4'-C1'-N9	8.14	114.72	108.20
1	BA	1397	C	C2-N1-C1'	8.12	127.73	118.80
53	DA	1779	U	N1-C2-O2	-8.11	117.12	122.80
53	DA	974	G	C5-C6-O6	8.08	133.45	128.60
1	BA	330	C	C2-N1-C1'	-8.07	109.92	118.80
12	BL	14	ARG	CG-CD-NE	8.06	128.73	111.80
53	DA	570	G	C6-C5-N7	-8.05	125.57	130.40
53	DA	465	G	C5-C6-O6	8.04	133.42	128.60
22	CA	2326	C	P-O3'-C3'	8.02	129.33	119.70
53	DA	914	G	C6-C5-N7	-8.01	125.59	130.40
53	DA	2868	A	O5'-P-OP2	-7.99	98.51	105.70
53	DA	463	G	N9-C4-C5	7.91	108.56	105.40
53	DA	570	G	N1-C6-O6	7.91	124.64	119.90
53	DA	763	G	O5'-P-OP1	-7.86	98.63	105.70
53	DA	1434	A	O4'-C1'-N9	7.84	114.47	108.20
1	BA	1110	A	O4'-C1'-N9	-7.83	101.94	108.20
53	DA	739	A	N1-C6-N6	7.78	123.27	118.60
53	DA	672	C	N3-C4-C5	7.75	125.00	121.90
1	BA	452	A	O4'-C1'-N9	-7.75	102.00	108.20
53	DA	1847	A	N7-C8-N9	7.74	117.67	113.80
53	DA	570	G	C5-N7-C8	-7.68	100.46	104.30
12	BL	85	GLY	N-CA-C	-7.66	93.95	113.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	1134	A	OP1-P-OP2	7.64	131.06	119.60
1	BA	207	C	C6-N1-C2	-7.63	117.25	120.30
53	DA	1997	C	O5'-P-OP1	7.63	119.86	110.70
53	DA	1630	A	O5'-P-OP2	-7.62	98.84	105.70
22	CA	1171	G	O4'-C1'-N9	7.62	114.29	108.20
41	CU	3	ARG	N-CA-C	-7.59	90.52	111.00
1	BA	330	C	C6-N1-C1'	7.51	129.81	120.80
53	DA	1328	A	O5'-P-OP2	-7.51	98.94	105.70
1	BA	1042	A	O5'-P-OP2	-7.50	98.95	105.70
1	BA	1001	C	C6-N1-C2	-7.48	117.31	120.30
53	DA	704	G	O4'-C1'-N9	7.48	114.18	108.20
22	CA	481	G	O4'-C1'-N9	7.47	114.17	108.20
53	DA	2820	A	C8-N9-C4	7.45	108.78	105.80
22	CA	528	A	C2-N3-C4	-7.45	106.88	110.60
22	CA	2425	A	P-O3'-C3'	7.42	128.60	119.70
44	DX	39	ARG	NE-CZ-NH1	7.42	124.01	120.30
53	DA	12	U	C2-N1-C1'	7.42	126.60	117.70
53	DA	1584	U	N1-C2-O2	7.40	127.98	122.80
53	DA	481	G	O4'-C1'-N9	7.40	114.12	108.20
53	DA	807	U	N3-C4-O4	7.36	124.55	119.40
53	DA	465	G	N1-C2-N2	-7.35	109.58	116.20
53	DA	1584	U	C2-N1-C1'	7.35	126.52	117.70
1	BA	211	G	C4-N9-C1'	7.34	136.04	126.50
22	CA	943	A	O5'-P-OP2	-7.34	99.10	105.70
39	DS	68	ARG	NE-CZ-NH1	-7.33	116.63	120.30
22	CA	995	C	O4'-C1'-N1	-7.33	102.34	108.20
1	BA	183	C	C2-N1-C1'	7.32	126.85	118.80
53	DA	1784	A	N1-C6-N6	7.32	122.99	118.60
1	BA	467	U	C2-N1-C1'	7.30	126.47	117.70
53	DA	1271	G	OP1-P-OP2	-7.30	108.64	119.60
53	DA	116	C	N3-C4-N4	-7.29	112.90	118.00
53	DA	2813	A	C5-C6-N6	-7.28	117.88	123.70
22	CA	511	U	O5'-P-OP2	-7.27	99.16	105.70
33	CM	52	GLY	N-CA-C	-7.25	94.98	113.10
53	DA	140	C	C6-N1-C2	-7.24	117.41	120.30
53	DA	2046	G	C2-N3-C4	-7.23	108.29	111.90
53	DA	731	C	O5'-P-OP2	-7.20	99.22	105.70
53	DA	2036	C	O5'-P-OP2	-7.19	99.23	105.70
1	BA	576	C	O5'-P-OP2	-7.18	99.23	105.70
53	DA	1220	G	N1-C2-N2	-7.18	109.74	116.20
1	BA	532	A	N1-C6-N6	7.17	122.90	118.60
22	CA	2072	C	O5'-P-OP2	-7.17	99.25	105.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	12	U	C6-N1-C2	-7.17	116.70	121.00
53	DA	2490	G	O5'-P-OP2	-7.15	99.26	105.70
53	DA	463	G	C8-N9-C4	-7.14	103.54	106.40
53	DA	946	C	N1-C2-O2	-7.12	114.63	118.90
53	DA	181	A	N9-C4-C5	7.12	108.65	105.80
53	DA	2575	C	N1-C2-O2	7.10	123.16	118.90
53	DA	1937	A	O4'-C1'-N9	7.08	113.86	108.20
1	BA	632	U	C2-N1-C1'	7.08	126.19	117.70
53	DA	102	U	C2-N1-C1'	7.08	126.19	117.70
1	BA	4	U	C2-N1-C1'	7.06	126.17	117.70
22	CA	900	A	O4'-C1'-N9	7.04	113.83	108.20
53	DA	139	U	N1-C2-O2	7.03	127.72	122.80
53	DA	2263	C	N3-C4-C5	7.02	124.71	121.90
53	DA	2883	A	O5'-P-OP2	-7.02	99.38	105.70
53	DA	2641	G	C5-C6-O6	7.00	132.80	128.60
22	CA	1378	A	P-O3'-C3'	6.99	128.09	119.70
53	DA	2641	G	N3-C4-N9	-6.98	121.81	126.00
53	DA	1286	A	O5'-P-OP2	-6.98	99.42	105.70
53	DA	2407	A	O5'-P-OP1	-6.98	99.42	105.70
53	DA	1668	A	O5'-P-OP2	-6.97	99.43	105.70
53	DA	1768	C	O5'-P-OP2	-6.97	99.43	105.70
53	DA	1706	C	O4'-C1'-N1	6.96	113.77	108.20
22	CA	2225	A	P-O3'-C3'	6.96	128.06	119.70
53	DA	208	C	O5'-P-OP2	-6.96	99.44	105.70
53	DA	672	C	C5-C4-N4	-6.94	115.34	120.20
1	BA	792	A	O4'-C1'-N9	6.92	113.74	108.20
53	DA	570	G	N9-C4-C5	-6.91	102.64	105.40
53	DA	2820	A	N1-C6-N6	6.91	122.74	118.60
22	CA	757	G	N3-C4-C5	6.89	132.04	128.60
53	DA	1602	U	N3-C4-O4	-6.89	114.58	119.40
1	AA	4	U	C2-N1-C1'	6.88	125.95	117.70
1	AA	1279	G	C4-N9-C1'	6.87	135.43	126.50
53	DA	1297	C	N3-C2-O2	-6.87	117.09	121.90
53	DA	671	C	C6-N1-C2	-6.87	117.55	120.30
8	BH	68	GLY	N-CA-C	-6.86	95.95	113.10
53	DA	1171	G	C8-N9-C4	-6.85	103.66	106.40
1	BA	1109	C	P-O3'-C3'	6.84	127.91	119.70
53	DA	950	G	O5'-P-OP2	-6.83	99.55	105.70
22	CA	34	U	C5'-C4'-O4'	-6.81	100.93	109.10
53	DA	1155	A	N1-C6-N6	-6.81	114.51	118.60
20	BT	66	LEU	CA-CB-CG	6.81	130.95	115.30
53	DA	2056	G	O4'-C1'-N9	-6.78	102.78	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	887	G	O5'-P-OP2	-6.78	99.60	105.70
53	DA	1270	C	O5'-P-OP2	-6.74	99.63	105.70
53	DA	2808	G	O5'-P-OP2	-6.74	99.64	105.70
53	DA	2681	C	O5'-P-OP2	-6.73	99.64	105.70
1	AA	330	C	C2-N3-C4	6.72	123.26	119.90
53	DA	1162	G	O5'-P-OP2	-6.67	99.69	105.70
1	BA	573	A	O4'-C1'-N9	-6.67	102.86	108.20
1	BA	842	U	C5-C6-N1	6.67	126.03	122.70
53	DA	101	A	O4'-C1'-N9	6.66	113.53	108.20
1	BA	1012	A	N3-C4-N9	-6.66	122.08	127.40
22	CA	140	C	N1-C2-O2	6.65	122.89	118.90
53	DA	2033	A	O5'-P-OP1	-6.65	99.71	105.70
53	DA	2638	G	O4'-C1'-N9	6.65	113.52	108.20
53	DA	1819	A	N1-C6-N6	6.64	122.58	118.60
53	DA	984	A	O4'-C1'-N9	6.64	113.51	108.20
1	BA	1167	A	C8-N9-C4	-6.61	103.15	105.80
53	DA	830	G	O5'-P-OP1	-6.61	99.75	105.70
1	BA	573	A	O5'-P-OP1	-6.60	99.76	105.70
53	DA	2889	C	N1-C2-O2	-6.58	114.95	118.90
53	DA	2618	G	N3-C2-N2	-6.58	115.29	119.90
53	DA	2712	C	N3-C4-C5	6.58	124.53	121.90
22	CA	2884	U	N3-C2-O2	-6.57	117.60	122.20
53	DA	26	G	C2-N3-C4	-6.57	108.61	111.90
53	DA	2815	C	N1-C2-O2	-6.57	114.96	118.90
22	CA	545	U	N3-C2-O2	-6.56	117.61	122.20
22	CA	646	U	P-O3'-C3'	6.54	127.55	119.70
53	DA	751	A	O5'-P-OP2	6.54	118.55	110.70
53	DA	1967	C	N3-C4-C5	-6.54	119.29	121.90
15	BO	87	LEU	CA-CB-CG	6.53	130.33	115.30
53	DA	116	C	C5-C4-N4	6.53	124.77	120.20
53	DA	2390	U	O5'-P-OP2	-6.53	99.82	105.70
1	AA	330	C	C5-C6-N1	6.53	124.26	121.00
32	DL	70	ARG	NE-CZ-NH2	-6.52	117.04	120.30
53	DA	807	U	C5-C4-O4	-6.51	121.99	125.90
53	DA	181	A	C8-N9-C4	-6.50	103.20	105.80
53	DA	1847	A	C8-N9-C4	-6.49	103.20	105.80
53	DA	1311	G	O4'-C1'-N9	6.48	113.39	108.20
22	CA	2250	G	C8-N9-C1'	-6.48	118.58	127.00
53	DA	2249	U	C4-C5-C6	-6.48	115.81	119.70
53	DA	1788	C	C5-C4-N4	-6.48	115.67	120.20
6	BF	92	THR	N-CA-C	6.46	128.46	111.00
22	CA	2585	U	C5'-C4'-O4'	-6.46	101.34	109.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	1779	U	N3-C2-O2	6.46	126.72	122.20
53	DA	12	U	N3-C2-O2	-6.46	117.68	122.20
53	DA	1020	A	N1-C6-N6	6.45	122.47	118.60
53	DA	978	G	N3-C2-N2	6.45	124.42	119.90
53	DA	1300	G	O5'-P-OP2	-6.44	99.90	105.70
53	DA	1171	G	C4-N9-C1'	6.44	134.87	126.50
1	BA	328	C	C2-N1-C1'	6.43	125.88	118.80
22	CA	2250	G	N7-C8-N9	6.42	116.31	113.10
53	DA	1261	C	O5'-P-OP2	-6.42	99.92	105.70
53	DA	2008	C	O5'-P-OP2	-6.42	99.92	105.70
53	DA	2424	C	N3-C4-N4	-6.42	113.51	118.00
23	DB	97	C	N1-C2-O2	-6.40	115.06	118.90
53	DA	1009	A	OP1-P-OP2	-6.40	110.00	119.60
53	DA	2027	G	N1-C6-O6	-6.39	116.06	119.90
23	DB	81	G	C5-C6-O6	-6.39	124.76	128.60
53	DA	139	U	N3-C2-O2	-6.39	117.73	122.20
53	DA	1257	C	C6-N1-C2	6.38	122.85	120.30
53	DA	202	U	N3-C2-O2	-6.37	117.74	122.20
53	DA	1313	U	C2-N1-C1'	6.37	125.34	117.70
53	DA	299	A	O5'-P-OP2	-6.35	99.98	105.70
1	BA	183	C	N1-C2-O2	6.35	122.71	118.90
53	DA	2518	A	OP2-P-O3'	6.34	119.15	105.20
1	BA	532	A	C5-C6-N6	-6.33	118.64	123.70
1	AA	1053	G	OP2-P-O3'	6.32	119.11	105.20
53	DA	181	A	N1-C6-N6	-6.31	114.81	118.60
1	BA	328	C	C6-N1-C2	-6.29	117.78	120.30
53	DA	914	G	C4-C5-N7	6.29	113.32	110.80
53	DA	1311	G	N1-C6-O6	6.29	123.67	119.90
22	CA	2250	G	C6-C5-N7	-6.28	126.63	130.40
1	BA	1397	C	N1-C2-O2	6.27	122.66	118.90
22	CA	2566	A	O4'-C1'-N9	6.27	113.21	108.20
19	BS	10	PHE	CB-CG-CD1	-6.26	116.42	120.80
53	DA	748	G	O4'-C1'-N9	6.25	113.20	108.20
53	DA	1190	G	N3-C4-C5	6.24	131.72	128.60
53	DA	670	A	O4'-C1'-N9	-6.24	103.21	108.20
22	CA	1174	U	N3-C2-O2	-6.24	117.83	122.20
1	AA	579	A	O5'-P-OP2	-6.23	100.09	105.70
53	DA	1709	U	C5-C4-O4	-6.23	122.16	125.90
22	CA	1584	U	C2-N1-C1'	6.22	125.17	117.70
53	DA	1784	A	C5-C6-N6	-6.22	118.72	123.70
1	BA	78	A	C8-N9-C4	-6.22	103.31	105.80
53	DA	2614	A	N1-C6-N6	6.21	122.33	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	783	A	N1-C6-N6	6.21	122.33	118.60
7	BG	54	SER	N-CA-C	-6.20	94.25	111.00
53	DA	1330	C	N3-C4-N4	6.20	122.34	118.00
22	CA	2585	U	N1-C1'-C2'	-6.19	105.19	112.00
53	DA	997	G	C5-C6-O6	6.19	132.31	128.60
53	DA	1297	C	N1-C2-O2	6.18	122.61	118.90
53	DA	1709	U	N3-C4-O4	6.18	123.73	119.40
1	BA	553	A	O5'-P-OP2	-6.18	100.14	105.70
22	CA	140	C	P-O3'-C3'	6.17	127.10	119.70
41	CU	3	ARG	NE-CZ-NH2	-6.17	117.22	120.30
22	CA	2689	U	O4'-C1'-N1	-6.16	103.28	108.20
23	CB	15	A	P-O3'-C3'	6.16	127.09	119.70
53	DA	1828	G	O5'-P-OP2	-6.16	100.16	105.70
53	DA	1208	C	N3-C2-O2	-6.15	117.59	121.90
22	CA	528	A	C5-C6-N1	-6.15	114.63	117.70
53	DA	2820	A	C2-N3-C4	-6.14	107.53	110.60
53	DA	2715	C	C6-N1-C2	-6.13	117.85	120.30
53	DA	17	G	N3-C4-C5	6.12	131.66	128.60
52	C5	12	ARG	CG-CD-NE	-6.12	98.95	111.80
22	CA	1943	U	C2-N3-C4	6.11	130.67	127.00
1	AA	330	C	C6-N1-C2	-6.11	117.86	120.30
53	DA	2050	C	N3-C4-C5	6.11	124.34	121.90
53	DA	528	A	O5'-P-OP1	6.10	118.02	110.70
22	CA	2430	A	O4'-C1'-N9	6.10	113.08	108.20
53	DA	334	C	C6-N1-C2	6.09	122.74	120.30
53	DA	2448	A	O5'-P-OP1	-6.09	100.22	105.70
1	AA	971	G	O4'-C1'-N9	6.09	113.07	108.20
53	DA	2301	C	C6-N1-C2	-6.08	117.87	120.30
53	DA	370	G	O5'-P-OP2	-6.08	100.23	105.70
53	DA	1116	G	N1-C6-O6	-6.06	116.26	119.90
53	DA	687	C	O5'-P-OP2	-6.06	100.25	105.70
1	AA	321	A	O5'-P-OP2	-6.05	100.25	105.70
53	DA	752	A	N9-C4-C5	6.05	108.22	105.80
22	CA	793	A	O5'-P-OP2	-6.04	100.26	105.70
53	DA	1985	C	O5'-P-OP2	-6.04	100.26	105.70
53	DA	194	G	N3-C4-C5	6.03	131.62	128.60
53	DA	2835	A	O4'-C1'-N9	-6.03	103.37	108.20
22	CA	1607	C	O4'-C1'-N1	-6.03	103.38	108.20
53	DA	140	C	N3-C2-O2	-6.03	117.68	121.90
53	DA	2813	A	C5-N7-C8	-6.03	100.89	103.90
1	AA	328	C	N1-C2-O2	6.03	122.52	118.90
53	DA	1153	C	N1-C2-O2	6.03	122.52	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	844	G	C2-N3-C4	6.01	114.91	111.90
53	DA	2028	U	C5-C4-O4	-6.00	122.30	125.90
1	AA	330	C	C2-N1-C1'	6.00	125.40	118.80
53	DA	328	U	OP1-P-O3'	6.00	118.41	105.20
1	BA	211	G	C8-N9-C1'	-6.00	119.20	127.00
53	DA	2006	C	N1-C2-O2	6.00	122.50	118.90
22	CA	1914	C	N1-C2-O2	5.99	122.50	118.90
53	DA	1666	G	N1-C6-O6	-5.99	116.31	119.90
53	DA	1116	G	C5-C6-O6	5.98	132.19	128.60
53	DA	246	C	O5'-P-OP2	-5.98	100.32	105.70
22	CA	2308	G	O4'-C1'-N9	5.98	112.98	108.20
53	DA	2824	C	C6-N1-C2	-5.97	117.91	120.30
22	CA	1584	U	N3-C2-O2	-5.97	118.02	122.20
22	CA	1828	G	O5'-P-OP2	-5.97	100.33	105.70
35	DO	2	ARG	NE-CZ-NH2	-5.97	117.32	120.30
1	BA	576	C	O5'-P-OP1	5.96	117.85	110.70
53	DA	2641	G	N1-C6-O6	-5.96	116.32	119.90
1	BA	1003	G	C4-N9-C1'	5.95	134.24	126.50
53	DA	465	G	N1-C6-O6	-5.95	116.33	119.90
22	CA	783	A	N7-C8-N9	5.95	116.78	113.80
22	CA	12	U	N3-C2-O2	-5.95	118.03	122.20
22	CA	793	A	C8-N9-C4	5.95	108.18	105.80
22	CA	1807	G	O4'-C1'-N9	5.94	112.95	108.20
22	CA	135	U	C2-N1-C1'	5.94	124.83	117.70
53	DA	1223	G	C8-N9-C4	5.94	108.78	106.40
53	DA	2820	A	OP1-P-O3'	5.92	118.23	105.20
1	AA	872	A	O4'-C1'-N9	5.92	112.94	108.20
22	CA	635	C	C6-N1-C2	-5.92	117.93	120.30
53	DA	2821	A	N9-C4-C5	-5.92	103.43	105.80
22	CA	783	A	C8-N9-C4	-5.91	103.44	105.80
53	DA	744	U	N3-C4-O4	5.91	123.53	119.40
53	DA	1630	A	N1-C6-N6	-5.90	115.06	118.60
1	BA	496	A	O4'-C1'-N9	5.90	112.92	108.20
22	CA	1584	U	N1-C2-O2	5.89	126.93	122.80
53	DA	1236	G	O4'-C1'-N9	5.89	112.91	108.20
1	BA	573	A	P-O3'-C3'	5.89	126.76	119.70
1	BA	1054	C	C6-N1-C2	-5.88	117.95	120.30
53	DA	1339	G	C5-C6-O6	-5.88	125.07	128.60
1	BA	27	G	N1-C6-O6	5.88	123.42	119.90
22	CA	38	A	O5'-P-OP2	-5.87	100.42	105.70
22	CA	528	A	O4'-C1'-N9	-5.86	103.51	108.20
53	DA	1429	G	C5-C6-O6	5.86	132.12	128.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	2585	U	O4'-C1'-N1	-5.86	103.51	108.20
53	DA	1238	G	O5'-P-OP2	-5.86	100.43	105.70
53	DA	923	G	N1-C6-O6	-5.85	116.39	119.90
53	DA	2629	U	O5'-P-OP2	-5.85	100.44	105.70
1	AA	328	C	N3-C2-O2	-5.84	117.81	121.90
53	DA	1190	G	C2-N3-C4	-5.84	108.98	111.90
22	CA	1943	U	C5-C4-O4	5.84	129.40	125.90
1	BA	1397	C	C6-N1-C2	-5.83	117.97	120.30
53	DA	140	C	N1-C2-O2	5.83	122.40	118.90
53	DA	999	U	C5-C4-O4	5.83	129.40	125.90
53	DA	2027	G	C5-C6-N1	5.83	114.41	111.50
53	DA	592	A	C6-N1-C2	-5.82	115.11	118.60
24	CC	213	TRP	CA-CB-CG	5.82	124.76	113.70
22	CA	140	C	N3-C2-O2	-5.82	117.83	121.90
1	BA	183	C	C6-N1-C1'	-5.82	113.82	120.80
53	DA	484	C	N1-C2-O2	5.81	122.39	118.90
53	DA	1394	U	O4'-C1'-N1	-5.81	103.55	108.20
53	DA	1425	G	C8-N9-C4	-5.81	104.08	106.40
53	DA	102	U	N3-C2-O2	-5.81	118.14	122.20
53	DA	521	U	C6-N1-C2	-5.80	117.52	121.00
53	DA	1133	A	O4'-C1'-N9	5.80	112.84	108.20
18	BR	55	LEU	CA-CB-CG	5.79	128.63	115.30
53	DA	784	G	OP1-P-O3'	5.79	117.95	105.20
53	DA	1584	U	C6-N1-C1'	-5.79	113.09	121.20
53	DA	2282	G	O4'-C1'-N9	5.79	112.83	108.20
1	BA	209	U	N1-C2-O2	5.79	126.85	122.80
53	DA	1187	G	N1-C6-O6	-5.79	116.43	119.90
1	BA	485	U	C2-N1-C1'	5.79	124.64	117.70
1	BA	530	G	C4-N9-C1'	5.79	134.02	126.50
22	CA	545	U	C2-N1-C1'	5.77	124.63	117.70
53	DA	1679	A	O5'-P-OP2	-5.77	100.51	105.70
53	DA	1984	G	O5'-P-OP2	-5.76	100.52	105.70
1	BA	468	A	N7-C8-N9	5.75	116.68	113.80
53	DA	212	G	N9-C4-C5	5.75	107.70	105.40
53	DA	2813	A	C4-C5-N7	5.75	113.58	110.70
1	BA	1001	C	C5-C6-N1	5.75	123.88	121.00
1	AA	1279	G	N7-C8-N9	5.74	115.97	113.10
1	AA	330	C	N1-C2-O2	5.74	122.34	118.90
53	DA	655	A	N1-C6-N6	-5.74	115.16	118.60
53	DA	1329	U	N3-C4-O4	5.74	123.42	119.40
53	DA	1780	A	OP1-P-OP2	-5.74	111.00	119.60
53	DA	914	G	OP2-P-O3'	5.73	117.81	105.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	BF	35	LYS	CA-CB-CG	5.73	126.00	113.40
22	CA	2585	U	N3-C2-O2	-5.72	118.19	122.20
53	DA	13	A	OP1-P-O3'	5.72	117.79	105.20
22	CA	12	U	C6-N1-C2	-5.72	117.57	121.00
53	DA	181	A	C5-C6-N6	5.71	128.27	123.70
53	DA	446	G	N1-C6-O6	5.71	123.33	119.90
53	DA	8	C	N1-C2-O2	-5.71	115.47	118.90
1	BA	1012	A	C8-N9-C4	-5.71	103.52	105.80
22	CA	818	G	P-O3'-C3'	5.71	126.55	119.70
53	DA	395	U	O4'-C1'-N1	5.71	112.76	108.20
22	CA	1368	G	C8-N9-C4	-5.70	104.12	106.40
53	DA	205	G	O4'-C1'-N9	5.70	112.76	108.20
53	DA	1671	U	N3-C4-O4	-5.70	115.41	119.40
53	DA	1220	G	C2-N3-C4	-5.70	109.05	111.90
1	AA	412	A	N9-C1'-C2'	5.69	121.40	114.00
22	CA	2250	G	C8-N9-C4	-5.69	104.12	106.40
53	DA	1965	C	O5'-P-OP1	5.69	117.53	110.70
53	DA	547	A	C8-N9-C4	-5.69	103.53	105.80
22	CA	613	A	O4'-C1'-N9	-5.69	103.65	108.20
53	DA	2465	C	O5'-P-OP2	-5.68	100.58	105.70
53	DA	1182	G	N3-C4-C5	-5.68	125.76	128.60
22	CA	1265	A	O5'-P-OP2	-5.68	100.59	105.70
53	DA	914	G	C5-N7-C8	-5.68	101.46	104.30
53	DA	2258	C	N1-C2-O2	5.68	122.31	118.90
22	CA	1174	U	N1-C2-O2	5.67	126.77	122.80
24	CC	196	GLY	N-CA-C	5.67	127.29	113.10
22	CA	764	A	N1-C6-N6	-5.67	115.20	118.60
23	DB	81	G	C4-C5-N7	5.67	113.07	110.80
37	CQ	114	LEU	CA-CB-CG	5.67	128.34	115.30
53	DA	13	A	C6-N1-C2	-5.67	115.20	118.60
53	DA	102	U	N1-C2-O2	5.67	126.77	122.80
53	DA	2336	A	C6-N1-C2	-5.67	115.20	118.60
53	DA	1936	A	C8-N9-C4	5.66	108.07	105.80
53	DA	2027	G	C2-N3-C4	5.66	114.73	111.90
53	DA	1171	G	N3-C4-C5	-5.66	125.77	128.60
53	DA	1221	C	N3-C4-C5	5.66	124.16	121.90
22	CA	2848	G	N1-C6-O6	-5.65	116.51	119.90
53	DA	2815	C	N3-C2-O2	5.65	125.86	121.90
53	DA	511	U	O5'-P-OP2	-5.64	100.62	105.70
53	DA	2211	A	N1-C6-N6	5.64	121.98	118.60
53	DA	775	G	O4'-C1'-N9	5.64	112.71	108.20
1	AA	1279	G	C8-N9-C1'	-5.63	119.68	127.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	802	A	O5'-P-OP1	-5.63	100.64	105.70
1	BA	1531	A	N1-C6-N6	5.62	121.97	118.60
1	AA	85	U	C2-N1-C1'	5.61	124.43	117.70
53	DA	923	G	C5-C6-O6	5.61	131.97	128.60
53	DA	975	A	N1-C6-N6	-5.61	115.23	118.60
53	DA	997	G	N3-C4-N9	-5.60	122.64	126.00
22	CA	2723	C	C6-N1-C2	-5.60	118.06	120.30
53	DA	851	C	O5'-P-OP2	-5.60	100.66	105.70
53	DA	1649	G	O5'-P-OP1	-5.59	100.67	105.70
1	BA	209	U	C6-N1-C1'	-5.59	113.37	121.20
53	DA	2072	C	N1-C2-O2	5.59	122.25	118.90
1	BA	1110	A	O5'-C5'-C4'	5.58	122.31	111.70
53	DA	463	G	N3-C4-N9	-5.58	122.65	126.00
53	DA	789	A	C6-N1-C2	-5.58	115.25	118.60
5	BE	123	VAL	CB-CA-C	-5.58	100.80	111.40
53	DA	2825	G	C4-N9-C1'	5.58	133.75	126.50
53	DA	2439	A	N1-C6-N6	5.57	121.94	118.60
53	DA	491	G	N9-C4-C5	5.56	107.63	105.40
53	DA	461	C	C6-N1-C2	-5.56	118.08	120.30
53	DA	1573	G	C2-N3-C4	-5.56	109.12	111.90
53	DA	2405	G	O4'-C1'-N9	5.56	112.65	108.20
1	BA	441	A	O5'-P-OP2	5.56	117.37	110.70
53	DA	1936	A	N9-C4-C5	-5.55	103.58	105.80
22	CA	2680	U	P-O3'-C3'	5.55	126.36	119.70
26	CE	40	ARG	CG-CD-NE	5.55	123.45	111.80
53	DA	2508	G	O5'-P-OP2	-5.55	100.71	105.70
53	DA	2834	G	N1-C6-O6	-5.55	116.57	119.90
1	BA	573	A	OP2-P-O3'	5.55	117.41	105.20
53	DA	2888[A]	C	C6-N1-C2	-5.54	118.08	120.30
53	DA	2888[B]	C	C6-N1-C2	-5.54	118.08	120.30
53	DA	2250	G	C8-N9-C4	-5.54	104.18	106.40
53	DA	974	G	N1-C6-O6	-5.54	116.58	119.90
22	CA	1352	U	O4'-C1'-N1	5.53	112.63	108.20
53	DA	1958	C	N3-C4-N4	5.53	121.87	118.00
53	DA	1153	C	N3-C2-O2	-5.53	118.03	121.90
53	DA	2799	A	C5-C6-N6	-5.52	119.28	123.70
53	DA	2807	U	O5'-P-OP2	-5.52	100.73	105.70
53	DA	837	C	N3-C4-C5	5.52	124.11	121.90
53	DA	1730	C	C6-N1-C2	-5.52	118.09	120.30
44	DX	39	ARG	NE-CZ-NH2	-5.52	117.54	120.30
53	DA	1730	C	N3-C2-O2	-5.51	118.04	121.90
53	DA	494	G	N3-C4-C5	5.51	131.36	128.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	800	A	O4'-C1'-N9	-5.51	103.79	108.20
53	DA	2615	U	O5'-P-OP1	-5.51	100.74	105.70
33	CM	114	GLY	N-CA-C	5.51	126.88	113.10
53	DA	786	C	N3-C4-C5	5.50	124.10	121.90
53	DA	526	A	OP2-P-O3'	5.50	117.29	105.20
1	BA	1110	A	C4-N9-C1'	5.50	136.19	126.30
53	DA	2386	A	N9-C4-C5	5.49	108.00	105.80
53	DA	2297	A	O5'-P-OP1	-5.49	100.76	105.70
53	DA	1370	C	O5'-P-OP2	-5.49	100.76	105.70
32	DL	58	LEU	CA-CB-CG	5.49	127.92	115.30
1	BA	1032	G	C4-N9-C1'	5.49	133.63	126.50
53	DA	1022	G	C4-C5-N7	-5.49	108.61	110.80
53	DA	2038	G	O5'-P-OP2	-5.49	100.76	105.70
53	DA	1171	G	N7-C8-N9	5.48	115.84	113.10
53	DA	1371	G	C8-N9-C4	5.48	108.59	106.40
53	DA	1626	A	C8-N9-C4	-5.48	103.61	105.80
53	DA	2448	A	OP1-P-OP2	5.47	127.81	119.60
23	DB	81	G	C6-C5-N7	-5.47	127.11	130.40
53	DA	1291	C	O5'-P-OP2	-5.47	100.78	105.70
53	DA	1958	C	C5-C4-N4	-5.47	116.37	120.20
1	BA	399	G	C8-N9-C4	-5.47	104.21	106.40
53	DA	836	G	OP2-P-O3'	5.47	117.23	105.20
53	DA	2426	A	N9-C4-C5	-5.47	103.61	105.80
53	DA	978	G	C4-C5-N7	5.46	112.98	110.80
53	DA	545	U	C5-C6-N1	5.46	125.43	122.70
53	DA	2683	C	N1-C2-O2	-5.46	115.62	118.90
53	DA	2807	U	OP1-P-OP2	5.46	127.79	119.60
1	AA	183	C	C6-N1-C2	-5.46	118.12	120.30
22	CA	757	G	N3-C4-N9	-5.46	122.72	126.00
53	DA	16	C	O5'-P-OP2	-5.46	100.79	105.70
53	DA	1160	G	N3-C4-N9	-5.46	122.72	126.00
22	CA	1648	U	O5'-P-OP1	-5.46	100.79	105.70
53	DA	1671	U	N3-C2-O2	-5.46	118.38	122.20
22	CA	2884	U	N1-C2-O2	5.45	126.62	122.80
22	CA	1937	A	O4'-C1'-N9	5.45	112.56	108.20
22	CA	2714	G	O5'-P-OP2	-5.45	100.79	105.70
53	DA	1150	C	C6-N1-C2	5.45	122.48	120.30
53	DA	2070	A	N1-C6-N6	-5.45	115.33	118.60
53	DA	994	C	N3-C4-N4	-5.45	114.19	118.00
53	DA	1182	G	C8-N9-C4	-5.45	104.22	106.40
23	CB	90	C	C6-N1-C2	-5.45	118.12	120.30
53	DA	2585	U	OP1-P-O3'	5.43	117.16	105.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	2501	C	C5-C6-N1	5.43	123.72	121.00
54	DD	77	ARG	NE-CZ-NH1	-5.43	117.58	120.30
53	DA	2281	A	N1-C6-N6	5.43	121.86	118.60
22	CA	370	G	O5'-P-OP2	-5.42	100.82	105.70
53	DA	2844	G	C2-N3-C4	-5.42	109.19	111.90
1	BA	1397	C	C6-N1-C1'	-5.42	114.30	120.80
53	DA	1147	A	N1-C6-N6	-5.41	115.35	118.60
53	DA	1602	U	N1-C2-O2	5.41	126.59	122.80
53	DA	2715	C	O5'-P-OP2	-5.41	100.83	105.70
53	DA	2767	C	C6-N1-C2	-5.40	118.14	120.30
1	AA	1418	A	C8-N9-C4	-5.40	103.64	105.80
53	DA	1971	U	O5'-P-OP1	5.40	117.18	110.70
1	BA	205	A	C8-N9-C4	-5.40	103.64	105.80
1	BA	922	G	C8-N9-C4	-5.40	104.24	106.40
1	AA	412	A	O4'-C1'-N9	5.40	112.52	108.20
1	AA	22	G	O5'-P-OP2	-5.39	100.85	105.70
1	BA	1183	U	C5'-C4'-C3'	-5.39	107.37	116.00
53	DA	1602	U	C5-C4-O4	5.39	129.13	125.90
53	DA	2790	U	O5'-P-OP2	-5.39	100.85	105.70
53	DA	1022	G	C5-C6-O6	5.39	131.83	128.60
53	DA	759	G	C4-C5-N7	5.39	112.95	110.80
53	DA	1778	U	OP1-P-OP2	5.39	127.68	119.60
22	CA	545	U	P-O3'-C3'	5.38	126.16	119.70
53	DA	212	G	C8-N9-C4	-5.38	104.25	106.40
53	DA	1324	G	O4'-C1'-N9	5.38	112.51	108.20
53	DA	1659	G	N3-C4-N9	-5.38	122.77	126.00
53	DA	2799	A	N1-C6-N6	5.38	121.83	118.60
53	DA	810	U	N1-C2-O2	5.38	126.56	122.80
53	DA	324	A	O5'-P-OP2	-5.37	100.86	105.70
53	DA	670	A	O5'-P-OP2	-5.37	100.86	105.70
53	DA	744	U	C5-C6-N1	5.37	125.39	122.70
53	DA	2599	G	C4-C5-N7	5.37	112.95	110.80
53	DA	1973	G	O5'-P-OP2	-5.37	100.87	105.70
1	AA	71	A	N1-C6-N6	5.37	121.82	118.60
53	DA	788	A	C8-N9-C4	-5.37	103.65	105.80
1	BA	1279	G	C4-N9-C1'	5.36	133.47	126.50
53	DA	1508	A	C5-N7-C8	-5.36	101.22	103.90
53	DA	1782	U	O5'-P-OP1	-5.36	100.88	105.70
53	DA	43	G	N3-C2-N2	-5.36	116.15	119.90
53	DA	1329	U	N1-C2-O2	-5.35	119.05	122.80
22	CA	135	U	O4'-C1'-N1	-5.35	103.92	108.20
22	CA	545	U	N1-C2-O2	5.35	126.54	122.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	1679	A	C4-C5-C6	5.34	119.67	117.00
53	DA	2780	G	C2-N3-C4	-5.34	109.23	111.90
22	CA	2395	C	C6-N1-C2	-5.34	118.16	120.30
53	DA	663	G	N1-C2-N2	5.34	121.00	116.20
53	DA	2250	G	N7-C8-N9	5.33	115.77	113.10
53	DA	523	C	O5'-P-OP2	-5.33	100.90	105.70
53	DA	1584	U	N3-C2-O2	-5.33	118.47	122.20
53	DA	1016	G	C5-C6-O6	5.33	131.80	128.60
22	CA	1914	C	N3-C2-O2	-5.33	118.17	121.90
53	DA	2789	C	OP2-P-O3'	5.33	116.92	105.20
53	DA	735	A	C5-C6-N6	-5.32	119.44	123.70
53	DA	537	G	C4-C5-N7	5.32	112.93	110.80
53	DA	806	C	N3-C2-O2	-5.32	118.18	121.90
53	DA	2839	G	O5'-P-OP2	-5.32	100.91	105.70
53	DA	1315	C	N1-C2-O2	5.32	122.09	118.90
22	CA	961	C	O4'-C1'-N1	-5.31	103.95	108.20
53	DA	304	U	O5'-P-OP2	-5.31	100.92	105.70
53	DA	2614	A	C5-C6-N6	-5.31	119.45	123.70
22	CA	1606	C	O4'-C1'-N1	5.31	112.45	108.20
53	DA	2710	C	C5-C4-N4	5.31	123.92	120.20
53	DA	24	G	O5'-P-OP2	-5.31	100.92	105.70
53	DA	68	G	C5-C6-O6	-5.31	125.42	128.60
53	DA	1329	U	C5-C4-O4	-5.31	122.72	125.90
53	DA	2430[A]	A	O5'-P-OP2	-5.29	100.93	105.70
53	DA	2430[B]	A	O5'-P-OP2	-5.29	100.93	105.70
8	BH	67	GLN	N-CA-C	-5.29	96.71	111.00
53	DA	2820	A	N9-C4-C5	-5.29	103.68	105.80
53	DA	815	C	O5'-P-OP2	-5.29	100.94	105.70
22	CA	995	C	C2-N1-C1'	5.29	124.62	118.80
1	BA	844	G	O4'-C1'-N9	-5.29	103.97	108.20
22	CA	1936	A	N1-C2-N3	5.29	131.94	129.30
53	DA	2046	G	N1-C2-N2	-5.29	111.44	116.20
1	BA	210	C	C6-N1-C2	-5.29	118.19	120.30
22	CA	1272	A	O4'-C1'-N9	-5.28	103.97	108.20
53	DA	1330	C	C5-C4-N4	-5.28	116.50	120.20
1	BA	209	U	N3-C2-O2	-5.28	118.50	122.20
53	DA	885	C	C6-N1-C2	-5.28	118.19	120.30
53	DA	2264	C	N3-C4-N4	-5.28	114.30	118.00
1	BA	1012	A	O4'-C1'-N9	5.28	112.42	108.20
53	DA	1602	U	O4'-C1'-N1	5.28	112.42	108.20
53	DA	2825	G	N3-C4-C5	-5.28	125.96	128.60
53	DA	2366	A	O5'-P-OP2	-5.27	100.95	105.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	2820	A	N3-C4-C5	5.27	130.49	126.80
53	DA	570	G	OP2-P-O3'	5.27	116.79	105.20
53	DA	949	G	OP1-P-OP2	5.27	127.50	119.60
1	BA	1364	U	C2-N1-C1'	5.26	124.01	117.70
1	BA	266	G	O4'-C1'-N9	-5.26	103.99	108.20
1	BA	577	G	OP1-P-O3'	5.26	116.76	105.20
1	BA	1397	C	N3-C2-O2	-5.26	118.22	121.90
53	DA	964	C	C2-N3-C4	5.26	122.53	119.90
53	DA	513	A	OP2-P-O3'	5.25	116.76	105.20
26	CE	88	ARG	CA-CB-CG	5.25	124.95	113.40
53	DA	997	G	N1-C6-O6	-5.25	116.75	119.90
41	CU	3	ARG	CB-CA-C	5.24	120.88	110.40
53	DA	990	A	OP1-P-OP2	-5.24	111.74	119.60
54	DD	124	ARG	NE-CZ-NH2	-5.24	117.68	120.30
53	DA	2613	U	N3-C2-O2	-5.24	118.53	122.20
53	DA	2263	C	N3-C4-N4	-5.23	114.34	118.00
53	DA	208	C	N1-C2-O2	5.23	122.04	118.90
53	DA	26	G	N3-C4-C5	5.23	131.22	128.60
53	DA	2723	C	C6-N1-C2	-5.23	118.21	120.30
1	BA	1211	U	P-O3'-C3'	5.23	125.97	119.70
22	CA	512	G	O4'-C1'-N9	5.23	112.38	108.20
5	BE	15	LEU	CA-CB-CG	5.23	127.32	115.30
53	DA	1000	A	C8-N9-C4	5.22	107.89	105.80
53	DA	2274	A	OP2-P-O3'	5.22	116.69	105.20
53	DA	586	A	N9-C4-C5	5.22	107.89	105.80
53	DA	2295	C	O5'-P-OP2	-5.22	101.00	105.70
53	DA	2570	G	N1-C6-O6	-5.22	116.77	119.90
53	DA	1661	G	N9-C4-C5	5.21	107.49	105.40
53	DA	2851	A	O5'-P-OP2	-5.21	101.01	105.70
53	DA	207	A	OP2-P-O3'	5.21	116.67	105.20
1	BA	330	C	N3-C2-O2	-5.21	118.25	121.90
53	DA	1026	G	O5'-P-OP2	5.21	116.95	110.70
53	DA	2802	G	N3-C4-N9	-5.21	122.87	126.00
53	DA	1022	G	N9-C4-C5	5.21	107.48	105.40
53	DA	1202	G	N1-C6-O6	-5.20	116.78	119.90
41	CU	3	ARG	CA-CB-CG	5.20	124.84	113.40
53	DA	2756	U	C5-C4-O4	5.20	129.02	125.90
53	DA	422	A	O5'-P-OP2	5.20	116.94	110.70
53	DA	570	G	N3-C4-N9	5.19	129.12	126.00
53	DA	1146	C	O5'-P-OP2	-5.19	101.03	105.70
53	DA	522	A	C5-N7-C8	-5.19	101.30	103.90
53	DA	2582	G	N3-C2-N2	5.19	123.53	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	1779	U	N1-C2-N3	5.19	118.02	114.90
53	DA	965	C	N3-C4-C5	5.19	123.98	121.90
53	DA	1669	A	C6-N1-C2	-5.19	115.48	118.60
1	AA	792	A	O4'-C1'-N9	5.19	112.35	108.20
53	DA	980	A	O5'-P-OP1	-5.19	101.03	105.70
53	DA	1020	A	N9-C4-C5	-5.19	103.72	105.80
23	DB	99	A	C2-N3-C4	-5.19	108.00	110.60
53	DA	563	A	O5'-P-OP1	-5.19	101.03	105.70
53	DA	946	C	C6-N1-C2	-5.19	118.22	120.30
53	DA	562	U	N3-C2-O2	-5.18	118.57	122.20
22	CA	818	G	O3'-P-O5'	5.18	113.85	104.00
53	DA	28	A	OP2-P-O3'	5.18	116.60	105.20
53	DA	995	C	O4'-C1'-N1	-5.18	104.06	108.20
53	DA	784	G	P-O3'-C3'	5.18	125.91	119.70
53	DA	1698	A	C6-C5-N7	-5.18	128.68	132.30
53	DA	2810	A	O5'-P-OP2	-5.18	101.04	105.70
53	DA	1760	C	C6-N1-C2	5.18	122.37	120.30
53	DA	2499	C	N1-C2-N3	5.18	122.82	119.20
53	DA	1888	G	O5'-P-OP2	-5.17	101.04	105.70
1	AA	328	C	C2-N1-C1'	5.17	124.49	118.80
53	DA	2814	A	OP1-P-OP2	5.17	127.36	119.60
1	BA	330	C	N3-C4-N4	-5.17	114.38	118.00
1	BA	73	C	O4'-C1'-N1	5.17	112.33	108.20
53	DA	1168	G	C2-N3-C4	-5.16	109.32	111.90
53	DA	1252	G	O5'-P-OP1	-5.16	101.05	105.70
53	DA	1930	G	N3-C4-N9	-5.16	122.90	126.00
1	BA	1492	A	P-O3'-C3'	5.16	125.89	119.70
1	BA	452	A	C5-N7-C8	-5.16	101.32	103.90
22	CA	404	A	P-O3'-C3'	5.16	125.89	119.70
22	CA	2585	U	N1-C2-O2	5.16	126.41	122.80
53	DA	2724	U	O5'-P-OP2	-5.16	101.06	105.70
5	BE	122	ASN	N-CA-C	5.16	124.92	111.00
22	CA	271	G	P-O3'-C3'	5.16	125.89	119.70
22	CA	1730	C	C6-N1-C2	-5.16	118.24	120.30
53	DA	2062	A	OP2-P-O3'	5.16	116.54	105.20
53	DA	2756	U	N3-C2-O2	-5.16	118.59	122.20
53	DA	1927	A	N1-C6-N6	-5.15	115.51	118.60
1	BA	842	U	C6-N1-C2	-5.15	117.91	121.00
53	DA	494	G	C8-N9-C4	5.15	108.46	106.40
1	AA	1286	U	C2-N1-C1'	5.14	123.87	117.70
1	BA	328	C	N3-C2-O2	-5.14	118.30	121.90
53	DA	1220	G	N3-C2-N2	5.14	123.50	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	BA	1168	U	C5-C6-N1	5.14	125.27	122.70
53	DA	970	U	O5'-P-OP2	-5.14	101.07	105.70
53	DA	2435	A	O5'-P-OP1	-5.14	101.07	105.70
12	BL	121	ARG	NE-CZ-NH1	5.14	122.87	120.30
53	DA	1659	G	C8-N9-C1'	5.14	133.68	127.00
1	BA	1003	G	C8-N9-C1'	-5.13	120.33	127.00
1	BA	1322	C	C2-N1-C1'	5.13	124.45	118.80
22	CA	653	U	C5-C6-N1	5.13	125.27	122.70
1	BA	1322	C	N1-C2-O2	5.13	121.98	118.90
53	DA	2020	A	OP2-P-O3'	5.13	116.49	105.20
53	DA	929	U	N1-C2-O2	-5.13	119.21	122.80
53	DA	845	A	N1-C6-N6	5.12	121.67	118.60
53	DA	2812	G	N3-C4-C5	5.12	131.16	128.60
53	DA	1788	C	N3-C4-N4	5.12	121.58	118.00
53	DA	1849	G	N3-C2-N2	-5.11	116.32	119.90
53	DA	2838	G	OP2-P-O3'	5.11	116.45	105.20
53	DA	433	C	N1-C2-O2	-5.11	115.83	118.90
53	DA	298	G	C5-C6-O6	-5.11	125.54	128.60
53	DA	503	A	C8-N9-C4	-5.11	103.76	105.80
53	DA	2487	G	OP2-P-O3'	5.11	116.43	105.20
53	DA	2439	A	C4-C5-C6	5.10	119.55	117.00
53	DA	465	G	C6-N1-C2	5.10	128.16	125.10
53	DA	752	A	N1-C6-N6	-5.10	115.54	118.60
1	AA	5	U	C5-C6-N1	5.09	125.25	122.70
53	DA	202	U	C5-C4-O4	5.09	128.95	125.90
53	DA	372	G	O5'-P-OP2	5.09	116.81	110.70
22	CA	140	C	C2-N1-C1'	5.09	124.40	118.80
22	CA	2071	A	O3'-P-O5'	-5.09	94.33	104.00
53	DA	561	G	C5-N7-C8	-5.09	101.76	104.30
53	DA	1160	G	N9-C4-C5	5.09	107.44	105.40
53	DA	2775	G	OP2-P-O3'	5.09	116.39	105.20
53	DA	8	C	C6-N1-C2	-5.08	118.27	120.30
22	CA	185	G	C8-N9-C4	-5.08	104.37	106.40
53	DA	969	G	N9-C4-C5	-5.08	103.37	105.40
53	DA	1429	G	N1-C6-O6	-5.08	116.85	119.90
53	DA	1936	A	O4'-C1'-N9	5.08	112.26	108.20
8	BH	59	LEU	CA-CB-CG	5.08	126.97	115.30
53	DA	2391	G	O4'-C1'-N9	5.08	112.26	108.20
53	DA	2448	A	N9-C4-C5	5.08	107.83	105.80
35	CO	101	GLY	N-CA-C	5.07	125.78	113.10
53	DA	943	A	C2-N3-C4	-5.07	108.06	110.60
53	DA	1651	G	C8-N9-C4	-5.07	104.37	106.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	2429[A]	G	C4-N9-C1'	-5.07	119.91	126.50
53	DA	2429[B]	G	C4-N9-C1'	-5.07	119.91	126.50
53	DA	2492	U	C5-C6-N1	5.07	125.24	122.70
1	AA	858	G	N3-C4-N9	5.07	129.04	126.00
1	BA	530	G	C8-N9-C1'	-5.07	120.41	127.00
22	CA	60	G	C4-N9-C1'	-5.07	119.91	126.50
53	DA	811	U	C5-C4-O4	5.07	128.94	125.90
1	BA	572	A	O3'-P-O5'	5.06	113.61	104.00
22	CA	757	G	N1-C6-O6	5.06	122.94	119.90
53	DA	837	C	C2-N3-C4	-5.06	117.37	119.90
53	DA	969	G	C4-C5-N7	5.06	112.82	110.80
53	DA	2887[A]	A	N1-C6-N6	5.06	121.63	118.60
53	DA	2887[B]	A	N1-C6-N6	5.06	121.63	118.60
22	CA	1340	U	C2-N1-C1'	5.05	123.76	117.70
22	CA	974	G	C4-C5-N7	5.05	112.82	110.80
53	DA	1328	A	OP2-P-O3'	5.05	116.31	105.20
53	DA	2684	U	C6-N1-C2	-5.05	117.97	121.00
53	DA	1674	G	O4'-C1'-N9	-5.05	104.16	108.20
1	AA	1222	G	C5-C6-O6	-5.05	125.57	128.60
53	DA	102	U	C6-N1-C1'	-5.05	114.13	121.20
23	DB	93	C	N3-C4-C5	5.05	123.92	121.90
53	DA	506	G	C2-N3-C4	-5.04	109.38	111.90
53	DA	468	G	C2-N3-C4	-5.04	109.38	111.90
1	AA	1279	G	C6-C5-N7	-5.04	127.38	130.40
53	DA	1267	U	N1-C2-O2	-5.04	119.28	122.80
1	BA	27	G	C5-C6-O6	-5.03	125.58	128.60
1	BA	468	A	C8-N9-C4	-5.03	103.79	105.80
53	DA	1698	A	N1-C6-N6	5.03	121.62	118.60
53	DA	749	A	O5'-P-OP2	-5.03	101.17	105.70
53	DA	1930	G	N3-C2-N2	-5.03	116.38	119.90
1	BA	211	G	N3-C4-C5	-5.03	126.09	128.60
53	DA	1816	C	N1-C2-O2	-5.03	115.88	118.90
22	CA	135	U	C5-C6-N1	5.02	125.21	122.70
53	DA	2684	U	O5'-P-OP2	-5.02	101.18	105.70
53	DA	663	G	N3-C2-N2	-5.02	116.38	119.90
22	CA	741	U	N3-C2-O2	5.02	125.72	122.20
53	DA	1605	C	N3-C2-O2	5.02	125.41	121.90
53	DA	2810	A	OP1-P-OP2	5.02	127.13	119.60
1	BA	479	U	C5-C6-N1	5.02	125.21	122.70
53	DA	1905	C	N3-C4-N4	-5.02	114.49	118.00
53	DA	2782	G	C4-N9-C1'	5.02	133.02	126.50
53	DA	2008	C	N3-C4-N4	5.01	121.51	118.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	2055	C	N1-C2-O2	-5.01	115.89	118.90
53	DA	1964	G	O4'-C1'-N9	-5.01	104.19	108.20
53	DA	1208	C	N1-C2-O2	5.01	121.91	118.90
1	BA	1499	A	N1-C6-N6	5.01	121.60	118.60
23	DB	72	G	C2-N3-C4	-5.00	109.40	111.90
53	DA	530	G	N1-C6-O6	5.00	122.90	119.90
53	DA	1790	C	N3-C4-N4	5.00	121.50	118.00
53	DA	2722	G	N3-C2-N2	-5.00	116.40	119.90

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	BA	702	A	Sidechain
6	BF	90	MET	Peptide
47	C0	3	LYS	Peptide
25	CD	151	THR	Peptide
30	CJ	98	VAL	Peptide
32	CL	34	GLY	Peptide
47	D0	3[B]	LYS	Peptide
24	DC	232	HIS	Peptide
55	DI	67	THR	Peptide
30	DJ	98	VAL	Peptide

5.2 Too-close contacts (i)

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	AA	32930	0	16591	191	0
1	BA	32908	0	16580	233	0
2	AB	1753	0	1780	26	0
2	BB	1753	0	1780	28	0
3	AC	1625	0	1696	15	0
3	BC	1625	0	1696	35	0
4	AD	1643	0	1707	20	0
4	BD	1643	0	1707	17	0
5	AE	1144	0	1185	28	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	BE	1105	0	1148	59	0
6	AF	862	0	864	9	0
6	BF	817	0	808	22	0
7	AG	1182	0	1238	21	0
7	BG	1182	0	1238	33	0
8	AH	979	0	1031	18	0
8	BH	979	0	1031	18	0
9	AI	1022	0	1070	27	0
9	BI	1022	0	1070	24	0
10	AJ	796	0	836	40	0
10	BJ	787	0	828	20	0
11	AK	877	0	887	14	0
11	BK	877	0	887	28	0
12	AL	957	0	1017	9	0
12	BL	957	0	1017	21	0
13	AM	884	0	941	33	0
13	BM	884	0	941	24	0
14	AN	805	0	844	28	0
14	BN	805	0	844	40	0
15	AO	714	0	734	8	0
15	BO	714	0	734	23	0
16	AP	649	0	666	5	0
16	BP	649	0	666	10	0
17	AQ	649	0	691	9	0
17	BQ	649	0	691	21	0
18	AR	456	0	478	6	0
18	BR	456	0	478	13	0
19	AS	638	0	665	15	0
19	BS	638	0	665	28	0
20	AT	670	0	719	12	0
20	BT	665	0	714	13	0
21	AU	465	0	491	9	0
21	BU	465	0	491	8	0
22	CA	62229	0	31319	410	0
23	CB	2529	0	1281	12	0
23	DB	2569	0	1301	9	0
24	CC	2083	0	2154	37	0
24	DC	2083	0	2154	15	0
25	CD	1565	0	1616	30	0
26	CE	1552	0	1619	26	0
26	DE	1552	0	1619	3	0
27	CF	1411	0	1444	22	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	DF	1411	0	1444	19	0
28	CG	1323	0	1371	9	0
28	DG	1323	0	1371	6	0
29	CH	1110	0	1148	13	0
29	DH	1110	0	1148	13	0
30	CJ	979	0	1028	24	0
30	DJ	979	0	1028	28	0
31	CK	1129	0	1162	16	0
31	DK	1129	0	1162	5	0
32	CL	938	0	1012	21	0
32	DL	946	0	1023	11	0
33	CM	1053	0	1129	31	0
33	DM	1053	0	1129	11	0
34	CN	1075	0	1155	6	0
34	DN	1092	0	1179	10	0
35	CO	960	0	1000	17	0
35	DO	993	0	1034	6	0
36	CP	892	0	923	15	0
36	DP	900	0	935	9	0
37	CQ	917	0	962	7	0
37	DQ	917	0	962	9	0
38	CR	947	0	1019	23	0
38	DR	947	0	1019	12	0
39	CS	816	0	839	9	0
39	DS	816	0	839	7	0
40	CT	857	0	922	6	0
40	DT	857	0	922	3	0
41	CU	739	0	807	18	0
41	DU	739	0	807	12	0
42	CV	780	0	831	26	0
42	DV	780	0	831	4	0
43	CW	753	0	780	7	0
43	DW	753	0	780	2	0
44	CX	569	0	581	7	0
44	DX	591	0	606	4	0
45	CY	625	0	652	11	0
45	DY	625	0	652	2	0
46	CZ	501	0	531	10	0
46	DZ	501	0	531	4	0
47	C0	449	0	488	2	0
47	D0	463	0	504	1	0
48	C1	444	0	458	12	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	D1	444	0	458	6	0
49	C2	409	0	440	6	0
49	D2	414	0	442	8	0
50	C3	377	0	418	14	0
50	D3	377	0	418	7	0
51	C4	504	0	572	10	0
51	D4	504	0	572	5	0
52	C5	302	0	340	7	0
52	D5	302	0	340	0	0
53	DA	62361	0	31381	308	0
54	DD	1576	0	1627	14	0
55	DI	1023	0	1052	20	0
56	AA	70	0	0	0	0
56	BA	41	0	0	0	0
56	C3	1	0	0	0	0
56	CA	155	0	0	0	0
56	CB	3	0	0	0	0
56	DA	183	0	0	0	0
56	DB	9	0	0	0	0
56	DR	1	0	0	0	0
57	AA	13	0	18	1	0
57	BA	13	0	18	2	0
57	DA	26	0	36	8	0
57	DQ	13	0	18	3	0
57	DR	13	0	18	10	0
57	DS	13	0	18	2	0
58	AA	16	0	28	0	0
58	DA	40	0	70	5	0
58	DE	16	0	28	0	0
58	DK	8	0	14	0	0
58	DN	8	0	14	6	0
58	DS	8	0	14	0	0
58	DT	16	0	28	0	0
59	AA	24	0	48	1	0
59	DA	66	0	132	16	0
59	DM	6	0	12	0	0
60	AB	1	0	0	0	0
60	C5	1	0	0	0	0
60	D5	1	0	0	0	0
61	AL	7	0	10	0	0
61	D3	7	0	10	5	0
61	DA	42	0	60	3	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	DL	7	0	10	0	0
61	DP	7	0	10	4	0
61	DQ	7	0	10	1	0
62	DA	40	0	76	7	0
63	DA	32	0	44	4	0
64	D1	10	0	14	0	0
64	D3	10	0	14	0	0
64	DA	50	0	70	3	0
64	DS	10	0	14	0	0
64	DU	10	0	14	1	0
65	DA	12	0	9	1	0
66	D0	4	0	6	0	0
66	D1	4	0	6	0	0
66	DA	24	0	36	11	0
66	DB	12	0	18	1	0
66	DR	4	0	6	0	0
67	DA	11	0	5	1	0
68	DA	8	0	12	0	0
69	AA	509	0	0	9	0
69	AC	6	0	0	0	0
69	AD	2	0	0	0	0
69	AE	5	0	0	0	0
69	AF	1	0	0	0	0
69	AG	1	0	0	0	0
69	AH	1	0	0	0	0
69	AJ	2	0	0	0	0
69	AK	6	0	0	0	0
69	AL	10	0	0	1	0
69	AM	4	0	0	0	0
69	AN	6	0	0	2	0
69	AO	2	0	0	0	0
69	AP	2	0	0	2	0
69	AS	1	0	0	0	0
69	AT	2	0	0	0	0
69	AU	2	0	0	0	0
69	BA	286	0	0	16	0
69	BD	12	0	0	0	0
69	BE	1	0	0	0	0
69	BF	2	0	0	0	0
69	BL	5	0	0	1	0
69	BN	3	0	0	0	0
69	BO	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	BP	3	0	0	1	0
69	BT	5	0	0	0	0
69	BU	2	0	0	0	0
69	C3	2	0	0	1	0
69	C4	1	0	0	0	0
69	CA	692	0	0	56	0
69	CB	13	0	0	1	0
69	CC	8	0	0	0	0
69	CD	6	0	0	0	0
69	CE	6	0	0	2	0
69	CK	1	0	0	0	0
69	CL	1	0	0	1	0
69	CM	5	0	0	0	0
69	CO	1	0	0	0	0
69	CS	1	0	0	0	0
69	CU	2	0	0	1	0
69	CV	2	0	0	0	0
69	CW	1	0	0	0	0
69	CY	1	0	0	0	0
69	D0	25	0	0	0	0
69	D1	47	0	0	3	0
69	D2	9	0	0	1	0
69	D3	25	0	0	0	0
69	D4	38	0	0	2	0
69	D5	14	0	0	0	0
69	DA	4815	0	0	46	0
69	DB	209	0	0	2	0
69	DC	106	0	0	2	0
69	DD	103	0	0	1	0
69	DE	62	0	0	0	0
69	DF	14	0	0	1	0
69	DG	6	0	0	0	0
69	DH	2	0	0	0	0
69	DK	59	0	0	1	0
69	DL	45	0	0	1	0
69	DM	67	0	0	0	0
69	DN	74	0	0	0	0
69	DO	42	0	0	0	0
69	DP	37	0	0	1	0
69	DQ	27	0	0	2	0
69	DR	67	0	0	1	0
69	DS	50	0	0	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	DT	61	0	0	0	0
69	DU	19	0	0	0	0
69	DV	22	0	0	0	0
69	DW	32	0	0	1	0
69	DX	30	0	0	2	0
69	DY	10	0	0	1	0
69	DZ	8	0	0	0	0
All	All	295060	0	194384	2370	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 5.

All (2370) 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)
14:BN:26:GLU:OE2	14:BN:26:GLU:N	1.97	0.96
1:BA:1518:MA6:H103	1:BA:1519:MA6:H102	1.44	0.94
14:AN:64:CYS:SG	69:AN:204:HOH:O	2.25	0.94
1:AA:1518:MA6:H103	1:AA:1519:MA6:H102	1.50	0.94
22:CA:1652:A:OP1	35:CO:8:ARG:NH2	2.04	0.90
14:BN:23:LYS:N	14:BN:26:GLU:OE1	2.04	0.90
22:CA:789:A:N1	69:CA:3287:HOH:O	2.06	0.89
1:AA:702:A:N6	53:DA:1846:G:O2'	2.05	0.89
53:DA:2885[B]:G:OP1	67:DA:3212:GUN:N2	2.06	0.89
11:AK:94:GLU:OE2	11:AK:98:ARG:NH2	2.06	0.89
5:BE:102:GLY:O	5:BE:104:GLY:N	2.05	0.88
53:DA:2116:G:O6	53:DA:2171:A:N6	2.06	0.88
11:AK:13:ARG:NH2	11:AK:77:TYR:OH	2.07	0.88
1:AA:1130:A:OP1	9:AI:18:ARG:NH1	2.07	0.87
22:CA:878:A:N6	22:CA:899:A:O2'	2.07	0.86
22:CA:2429:G:OP2	69:CA:3861:HOH:O	1.91	0.86
1:BA:140:U:O2	1:BA:183:C:N4	2.10	0.85
22:CA:2430:A:OP2	69:CA:3861:HOH:O	1.94	0.85
62:DA:3225:SPD:H52	62:DA:3225:SPD:H92	1.59	0.85
53:DA:1508:A:O2'	53:DA:1509:A:O4'	1.95	0.84
22:CA:459:U:O2'	41:CU:73:ARG:NH2	2.10	0.84
1:BA:978:A:OP2	1:BA:1362:A:N6	2.10	0.84
53:DA:141:G:OP2	53:DA:142:A:N6	2.11	0.84
22:CA:2579:C:OP1	69:CA:3871:HOH:O	1.96	0.83
53:DA:480:A:OP2	42:DV:44:LYS:NZ	2.12	0.83
1:BA:1147:C:O2	9:BI:18:ARG:NH2	2.14	0.81

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:CE:170:ARG:NH1	26:CE:179:SER:OG	2.13	0.81
14:BN:26:GLU:CD	14:BN:26:GLU:H	1.84	0.81
13:BM:11:ASP:OD1	13:BM:12:HIS:N	2.14	0.81
14:AN:67:THR:N	69:AN:204:HOH:O	2.15	0.80
22:CA:2210:U:O2	69:CA:3787:HOH:O	1.99	0.80
1:AA:127:G:O2'	17:AQ:6:ARG:NH1	2.15	0.79
22:CA:734:A:N3	69:CA:3705:HOH:O	2.14	0.79
53:DA:2224:G:OP1	24:DC:265:LYS:NZ	2.15	0.79
38:DR:19:LYS:HD3	57:DR:202:PG4:H22	1.64	0.79
22:CA:250:G:OP2	51:C4:13:ARG:NH1	2.14	0.79
4:AD:100:ASN:OD1	4:AD:111:ARG:NH1	2.16	0.79
24:CC:258:ARG:NH1	24:CC:264:ASP:OD1	2.16	0.78
22:CA:1154:G:OP2	38:CR:58:ARG:NH1	2.16	0.78
9:BI:12:ARG:NH2	9:BI:107:ASP:OD2	2.16	0.78
22:CA:2640:G:OP1	31:CK:95:ARG:NH1	2.17	0.78
38:DR:20:GLN:HG2	57:DR:202:PG4:H51	1.64	0.78
7:AG:68:ASN:O	7:AG:138:ARG:NH1	2.17	0.78
4:BD:100:ASN:OD1	4:BD:111:ARG:NH1	2.16	0.78
22:CA:1508:A:O2'	22:CA:1509:A:O4'	2.01	0.78
5:BE:151:GLU:O	5:BE:154:ALA:HB3	1.84	0.77
15:BO:18:ASP:OD1	15:BO:19:ALA:N	2.17	0.77
16:BP:1:MET:SD	16:BP:1:MET:N	2.53	0.77
53:DA:1236:G:N7	59:DA:3189:PUT:H41	2.00	0.77
1:AA:1147:C:O2	9:AI:18:ARG:NH2	2.18	0.76
1:BA:742:G:O6	69:BA:1865:HOH:O	2.03	0.76
1:BA:842:U:H3'	1:BA:843:U:C5'	2.16	0.76
63:DA:3203:1PE:H221	69:DA:3975:HOH:O	1.86	0.76
1:BA:1026:G:N1	1:BA:1035:A:N1	2.34	0.76
22:CA:2262:U:OP1	44:CX:41:ARG:NH2	2.19	0.76
25:CD:12:THR:OG1	25:CD:13:ARG:N	2.17	0.76
7:AG:111:ARG:NH1	7:AG:123:GLU:OE2	2.19	0.75
23:DB:90:C:OP2	69:DB:319:HOH:O	2.04	0.75
39:DS:37:GLU:O	69:DS:319:HOH:O	2.03	0.75
1:AA:1134:G:N2	1:AA:1140:C:N3	2.34	0.75
22:CA:77:G:O2'	46:CZ:7:ARG:NH2	2.20	0.75
22:CA:2032:G:N7	69:CA:3866:HOH:O	2.20	0.74
53:DA:1311:G:N7	69:DA:6065:HOH:O	2.20	0.74
3:AC:40:ARG:NH1	3:AC:55:ILE:O	2.21	0.74
1:BA:836:G:N7	69:BA:1920:HOH:O	2.21	0.74
1:BA:1130:A:OP1	9:BI:18:ARG:NH1	2.21	0.74
16:BP:42:ILE:O	16:BP:44:SER:N	2.20	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:319:G:N7	69:BA:1722:HOH:O	2.20	0.73
13:AM:82:ASP:OD2	27:DF:112:ARG:NH2	2.20	0.73
22:CA:2134:A:N6	22:CA:2157:G:O2'	2.21	0.73
53:DA:2827:C:O2	66:DA:3198:EDO:H21	1.89	0.72
24:DC:251:GLN:NE2	69:DC:406:HOH:O	2.21	0.72
38:DR:19:LYS:HD3	57:DR:202:PG4:H41	1.71	0.72
1:BA:516:PSU:O2	69:BA:1970:HOH:O	2.07	0.72
22:CA:1588:G:N3	69:CA:3746:HOH:O	2.22	0.72
1:BA:1109:C:H2'	1:BA:1110:A:H5"	1.72	0.71
16:BP:46:LYS:HD3	16:BP:47:GLU:H	1.54	0.71
22:CA:2685:G:OP1	32:CL:78:ARG:NH2	2.22	0.71
22:CA:820:A:N1	69:CA:3772:HOH:O	2.23	0.71
66:DA:3198:EDO:H12	64:DA:3204:PGE:H32	1.72	0.71
22:CA:732:C:OP2	69:CA:3273:HOH:O	2.09	0.71
1:BA:1279:G:OP1	10:BJ:9:ARG:NH2	2.24	0.71
8:BH:77:ARG:NE	8:BH:79:SER:O	2.24	0.71
53:DA:1027:A:N3	69:DA:6955:HOH:O	2.23	0.71
53:DA:2428:G:OP2	59:DA:3224:PUT:H11	1.89	0.71
9:AI:12:ARG:NH2	9:AI:107:ASP:OD2	2.24	0.70
1:BA:1204:A:OP2	69:BA:1817:HOH:O	2.09	0.70
12:BL:14:ARG:HA	12:BL:14:ARG:HH11	1.56	0.70
22:CA:568:U:H1'	22:CA:2030:6MZ:H9C1	1.73	0.70
22:CA:1825:U:OP2	69:CA:3822:HOH:O	2.09	0.70
41:DU:2:ILE:HG22	41:DU:7:LEU:HD21	1.73	0.70
30:DJ:113:LYS:O	30:DJ:117:MET:N	2.23	0.70
22:CA:1602:U:O4	69:CA:3603:HOH:O	2.08	0.70
1:BA:1266:G:N2	1:BA:1269:A:OP2	2.24	0.70
1:BA:1518:MA6:H103	1:BA:1519:MA6:C10	2.20	0.70
22:CA:616:A:OP2	69:CA:3263:HOH:O	2.08	0.70
22:CA:2495:G:N7	69:CA:3681:HOH:O	2.23	0.70
1:AA:1486:G:OP2	69:AA:1925:HOH:O	2.08	0.70
22:CA:978:G:N7	69:CA:3501:HOH:O	2.24	0.70
1:AA:1518:MA6:H103	1:AA:1519:MA6:C10	2.21	0.70
5:BE:66:LYS:O	5:BE:70:ASN:ND2	2.25	0.70
19:BS:36:ARG:NH2	19:BS:75:ALA:O	2.25	0.70
22:CA:581:C:OP2	38:CR:33:ARG:NE	2.25	0.69
22:CA:686:U:OP2	69:CA:3607:HOH:O	2.08	0.69
1:BA:9:G:H5'	5:BE:108:GLY:HA3	1.74	0.69
22:CA:2134:A:OP2	22:CA:2157:G:N2	2.24	0.69
22:CA:2268:A:OP1	69:CA:3440:HOH:O	2.09	0.69
21:AU:31:GLU:OE2	21:AU:34:ARG:NH2	2.25	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:842:U:H3'	1:BA:843:U:H5'	1.74	0.69
57:DR:202:PG4:H62	69:DR:359:HOH:O	1.92	0.69
53:DA:568:U:H1'	53:DA:2030:6MZ:H9C1	1.74	0.69
1:AA:964:A:OP1	69:AA:2195:HOH:O	2.11	0.69
24:CC:69:ARG:O	24:CC:189:ARG:NH2	2.26	0.69
30:CJ:113:LYS:O	30:CJ:117:MET:N	2.26	0.69
41:CU:3:ARG:NH2	41:CU:5:GLU:OE2	2.27	0.68
53:DA:2609:U:C5	66:DA:3194:EDO:H12	2.28	0.68
37:DQ:68:GLU:OE2	69:DQ:307:HOH:O	2.10	0.68
11:BK:94:GLU:OE2	11:BK:98:ARG:NH2	2.25	0.68
53:DA:1311:G:O2'	69:DA:6066:HOH:O	2.09	0.68
1:AA:845:A:O3'	18:AR:48:ARG:NH2	2.25	0.68
22:CA:1962:5MC:HM53	69:CA:3753:HOH:O	1.93	0.68
53:DA:1176:U:H2'	53:DA:1177:G:C8	2.27	0.68
53:DA:2428:G:N7	59:DA:3224:PUT:N1	2.42	0.68
53:DA:2072:C:OP1	69:DA:3838:HOH:O	2.11	0.68
53:DA:2310:C:OP1	69:DA:3597:HOH:O	2.12	0.68
5:BE:38:VAL:HG13	5:BE:117:VAL:HG21	1.75	0.68
22:CA:2720:U:OP1	37:CQ:53:ARG:NH2	2.26	0.68
53:DA:1167:C:OP2	69:DA:4751:HOH:O	2.12	0.68
41:CU:5:GLU:HG3	46:CZ:22:LEU:HD13	1.75	0.68
23:DB:84:G:H21	66:DB:212:EDO:H11	1.59	0.68
29:DH:116:ARG:NH2	29:DH:133:GLN:OE1	2.27	0.68
1:BA:1376:U:O4	7:BG:10:ARG:NH1	2.27	0.67
32:CL:93:GLN:NE2	32:CL:111:LYS:O	2.27	0.67
22:CA:1998:A:OP2	25:CD:141:ARG:NH2	2.27	0.67
1:AA:738:C:OP1	6:AF:2:ARG:NH2	2.27	0.67
1:AA:980:C:O3'	14:AN:13:ARG:NH2	2.27	0.67
53:DA:2720:U:OP1	37:DQ:53:ARG:NH2	2.28	0.67
22:CA:1187:G:N7	69:CA:3493:HOH:O	2.27	0.67
5:BE:101:GLU:O	5:BE:103:THR:N	2.28	0.67
41:CU:28:ASN:ND2	41:CU:91:GLN:OE1	2.28	0.67
22:CA:591:U:H1'	51:C4:2:PRO:HD2	1.77	0.67
50:D3:32:ALA:CB	61:D3:102:PEG:H12	2.25	0.67
1:AA:453:G:N7	59:AA:1673:PUT:H42	2.10	0.67
13:AM:4:ILE:O	13:AM:6:GLY:N	2.28	0.67
1:BA:1360:A:N7	69:BA:1815:HOH:O	2.28	0.67
1:BA:439:U:H4'	4:BD:121:LYS:HD2	1.77	0.66
22:CA:1250:G:OP2	33:CM:21:ARG:NH2	2.28	0.66
1:AA:412:A:H1'	1:AA:413:G:H5'	1.75	0.66
1:AA:806:C:H4'	57:AA:1670:PG4:H11	1.76	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:2799:A:N7	69:DA:5142:HOH:O	2.28	0.66
3:AC:19:ASN:ND2	14:AN:90:ARG:O	2.28	0.66
7:AG:138:ARG:NH2	7:AG:139:GLU:OE2	2.29	0.66
53:DA:846:U:O2'	53:DA:847:U:OP2	2.11	0.66
1:AA:536:C:OP1	69:AA:1765:HOH:O	2.13	0.66
12:BL:49:LEU:O	69:BL:203:HOH:O	2.13	0.66
13:AM:4:ILE:O	13:AM:7:ILE:N	2.26	0.66
1:BA:1197:A:OP1	69:BA:1934:HOH:O	2.12	0.66
22:CA:733:G:OP1	69:CA:3711:HOH:O	2.14	0.66
22:CA:1385:A:O2'	22:CA:1396:U:O2	2.12	0.66
22:CA:2127:G:O2'	22:CA:2173:A:N3	2.29	0.66
28:DG:101:ASN:ND2	28:DG:116:GLN:OE1	2.28	0.66
1:AA:1486:G:OP1	69:AA:1920:HOH:O	2.13	0.66
22:CA:998:C:OP2	38:CR:58:ARG:NH2	2.28	0.66
22:CA:1378:A:O2'	22:CA:1380:G:N7	2.23	0.66
32:CL:38:ILE:O	69:CL:201:HOH:O	2.14	0.66
9:BI:22:LYS:O	9:BI:62:ASP:N	2.29	0.65
22:CA:1823:G:N7	69:CA:3872:HOH:O	2.29	0.65
35:CO:69:ARG:O	35:CO:71:ARG:N	2.29	0.65
22:CA:1417:C:OP1	69:CA:3746:HOH:O	2.13	0.65
1:BA:1033:G:N2	1:BA:1034:G:N3	2.45	0.65
53:DA:788:A:OP1	59:DA:3223:PUT:H42	1.97	0.65
53:DA:2127:G:O2'	53:DA:2128:G:O4'	2.13	0.65
3:AC:179:ARG:NH1	3:AC:206:GLU:OE1	2.29	0.65
22:CA:450:G:O6	69:CA:3238:HOH:O	2.11	0.65
25:CD:151:THR:O	25:CD:153:GLY:N	2.25	0.65
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.30	0.65
1:BA:450:G:O5'	69:BA:1918:HOH:O	2.14	0.65
1:BA:1361:G:N2	1:BA:1362:A:N7	2.45	0.65
53:DA:2017:U:O4	66:DA:3209:EDO:H22	1.97	0.65
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.29	0.65
22:CA:85:G:OP1	42:CV:7:ARG:N	2.28	0.65
50:C3:11:LYS:NZ	69:C3:201:HOH:O	2.29	0.65
1:AA:771:G:N7	69:AA:1798:HOH:O	2.30	0.65
1:BA:1028:C:O2'	1:BA:1029:U:O5'	2.13	0.65
28:DG:104:ASN:ND2	28:DG:114:ASP:OD1	2.30	0.65
1:BA:880:C:OP1	12:BL:9:ARG:NH2	2.30	0.65
1:BA:1220:G:OP1	19:BS:37:ARG:NH2	2.30	0.65
26:CE:125:SER:O	26:CE:137:LYS:NZ	2.29	0.65
64:DA:3218:PGE:O4	69:DA:7614:HOH:O	2.14	0.65
62:DA:3225:SPD:H92	62:DA:3225:SPD:C5	2.27	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.32	0.64
5:BE:104:GLY:HA3	5:BE:122:ASN:HA	1.79	0.64
22:CA:528:A:OP1	69:CA:3840:HOH:O	2.15	0.64
23:CB:5:U:O2'	23:CB:27:C:O2	2.16	0.64
53:DA:812:C:O2'	38:DR:13:ARG:NH1	2.30	0.64
44:DX:39:ARG:NH1	69:DX:124:HOH:O	2.30	0.64
11:AK:119:ASN:OD1	21:AU:35:ARG:NH1	2.31	0.64
2:BB:120:GLN:O	2:BB:125:THR:N	2.30	0.64
9:BI:84:THR:HG21	9:BI:103:PHE:HB3	1.79	0.64
22:CA:2430:A:OP1	69:CA:3859:HOH:O	2.15	0.64
53:DA:2209:G:N3	69:DA:5103:HOH:O	2.30	0.64
9:AI:22:LYS:O	9:AI:62:ASP:N	2.29	0.64
25:CD:85:ALA:O	25:CD:87:GLY:N	2.28	0.64
26:CE:76:PRO:HA	26:CE:82:GLY:HA2	1.80	0.64
30:DJ:100:LYS:CB	30:DJ:141:GLU:HB2	2.27	0.64
53:DA:2033:A:H5'	69:DA:4744:HOH:O	1.97	0.64
8:AH:54:ASP:OD1	8:AH:55:THR:N	2.30	0.64
30:CJ:100:LYS:CB	30:CJ:141:GLU:HB2	2.28	0.64
53:DA:139:U:O4	41:DU:2:ILE:HG13	1.98	0.64
1:BA:415:A:O2'	53:DA:2152:G:N2	2.30	0.63
53:DA:2127:G:O2'	53:DA:2128:G:O5'	2.15	0.63
1:AA:845:A:O2'	18:AR:48:ARG:NH2	2.31	0.63
3:BC:139:GLN:O	3:BC:141:ALA:N	2.31	0.63
53:DA:136:G:H1	53:DA:143:C:N4	1.96	0.63
1:BA:1183:U:O2'	1:BA:1185:G:OP2	2.16	0.63
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.16	0.63
19:AS:36:ARG:NH2	19:AS:75:ALA:O	2.32	0.63
47:C0:40:ASP:OD1	47:C0:45:ARG:NH1	2.32	0.63
38:DR:20:GLN:HG3	57:DR:202:PG4:H42	1.80	0.63
5:BE:154:ALA:HA	5:BE:157:ARG:HB3	1.81	0.63
1:BA:1328:C:H5"	13:BM:28:THR:HG21	1.80	0.63
42:CV:74:ASN:O	42:CV:76:ALA:N	2.31	0.63
53:DA:1061:U:OP2	30:DJ:10:LYS:NZ	2.31	0.63
1:AA:405:U:OP2	4:AD:3:ARG:NH1	2.32	0.63
37:CQ:113:ARG:O	37:CQ:115:ASN:N	2.31	0.63
1:BA:263:A:OP1	20:BT:74:ARG:NH1	2.31	0.62
22:CA:2031:A:C6	22:CA:2498:OMC:H1'	2.34	0.62
22:CA:528:A:C2	22:CA:2043:C:H4'	2.34	0.62
1:BA:1187:G:H5'	9:BI:115:LYS:HE3	1.82	0.62
19:BS:29:LYS:HB3	19:BS:30:PRO:HD2	1.82	0.62
22:CA:2498:OMC:HM22	22:CA:2499:C:H5'	1.82	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:CE:23:PHE:CD1	26:CE:111:GLU:HG3	2.35	0.62
46:CZ:45:GLN:O	46:CZ:47:ARG:N	2.28	0.62
30:DJ:100:LYS:HB2	30:DJ:141:GLU:HB2	1.82	0.62
41:DU:1:MET:HE3	41:DU:1:MET:H1	1.64	0.62
27:CF:7:TYR:OH	27:CF:172:ALA:O	2.17	0.62
53:DA:878:A:N6	53:DA:899:A:O2'	2.32	0.62
2:BB:133:GLU:OE2	2:BB:137:ARG:NH1	2.33	0.62
4:BD:202:GLU:OE2	5:BE:112:ARG:NH1	2.33	0.62
28:CG:159:GLY:O	28:CG:163:ARG:NH1	2.33	0.62
30:CJ:110:ALA:O	30:CJ:114:ALA:N	2.33	0.62
22:CA:297:G:H5"	42:CV:85:PHE:HB2	1.81	0.61
1:BA:465:A:H2'	1:BA:466:A:C8	2.34	0.61
28:CG:11:VAL:O	28:CG:48:ASN:ND2	2.33	0.61
25:CD:103:ASP:O	25:CD:105:LYS:N	2.29	0.61
33:CM:93:ASN:OD1	33:CM:94:THR:N	2.32	0.61
5:AE:79:GLY:O	5:AE:121:HIS:N	2.28	0.61
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.35	0.61
53:DA:1186:G:OP1	69:DA:3652:HOH:O	2.16	0.61
1:AA:411:A:OP2	4:AD:26:ARG:NH2	2.33	0.61
24:CC:136:PRO:O	24:CC:139:SER:OG	2.17	0.61
27:CF:61:SER:O	27:CF:63:GLN:N	2.34	0.61
30:DJ:110:ALA:O	30:DJ:114:ALA:N	2.34	0.61
53:DA:456:C:OP1	69:DA:4875:HOH:O	2.16	0.61
1:BA:531:U:H4'	1:BA:532:A:H4'	1.83	0.61
22:CA:2307:G:H4'	22:CA:2308:G:O5'	2.01	0.61
2:AB:120:GLN:O	2:AB:125:THR:N	2.34	0.60
1:BA:1492:A:OP2	1:BA:1493:A:N6	2.35	0.60
10:BJ:65:TYR:HB2	14:BN:96:LEU:HD11	1.83	0.60
41:CU:3:ARG:HG2	41:CU:3:ARG:HH11	1.66	0.60
53:DA:545:U:H2'	53:DA:546:U:O3'	2.01	0.60
1:AA:8:A:N6	4:AD:202:GLU:O	2.34	0.60
13:AM:3:ARG:O	13:AM:57:ARG:NH2	2.33	0.60
11:BK:92:GLY:O	11:BK:94:GLU:N	2.32	0.60
7:AG:90:GLU:N	7:AG:90:GLU:OE2	2.34	0.60
53:DA:1013:C:OP2	69:DA:5610:HOH:O	2.16	0.60
53:DA:1172:C:N4	53:DA:1173:U:O2	2.35	0.60
9:AI:95:ARG:O	9:AI:98:LEU:N	2.35	0.60
5:BE:111:MET:HG3	5:BE:140:THR:HG21	1.82	0.60
17:AQ:60:GLU:OE1	17:AQ:77:ARG:NE	2.33	0.60
22:CA:2171:A:O2'	22:CA:2173:A:OP1	2.19	0.60
4:BD:99:ASP:OD1	4:BD:100:ASN:N	2.35	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DO:114:GLU:OE2	35:DO:118:ARG:NH2	2.33	0.60
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE1	2.36	0.60
20:BT:67:ILE:HG13	20:BT:71:LYS:HD3	1.84	0.60
53:DA:2609:U:C6	66:DA:3194:EDO:H12	2.36	0.60
12:AL:110:ARG:NH1	12:AL:112:GLN:O	2.34	0.60
1:AA:844:G:H2'	1:AA:844:G:N3	2.16	0.60
9:AI:88:MET:SD	9:AI:95:ARG:HG2	2.42	0.60
1:BA:846:G:OP1	18:BR:48:ARG:NH2	2.33	0.60
22:CA:2131:U:H5'	22:CA:2132:U:H5"	1.84	0.60
36:CP:17:LYS:HE2	36:CP:17:LYS:HA	1.84	0.60
52:C5:26:ILE:H	52:C5:26:ILE:HD13	1.66	0.60
14:AN:31:ILE:HA	14:AN:34:VAL:HG23	1.84	0.59
1:BA:537:G:OP1	12:BL:110:ARG:NH2	2.34	0.59
45:DY:72:ARG:O	45:DY:75:GLY:N	2.28	0.59
1:AA:1178:G:N2	1:AA:1181:G:OP2	2.34	0.59
15:BO:64:ARG:NH1	15:BO:68:ASP:OD1	2.35	0.59
22:CA:605:G:N3	22:CA:657:U:O2'	2.34	0.59
1:AA:427:U:O2'	1:AA:541:G:OP1	2.21	0.59
1:AA:1228:C:P	13:AM:107:ARG:HH22	2.26	0.59
5:AE:161:VAL:HG12	5:AE:162:GLU:H	1.67	0.59
11:AK:112:ASP:HB3	21:AU:2:PRO:HG2	1.83	0.59
1:BA:1060:U:OP1	14:BN:85:ARG:NH2	2.36	0.59
5:BE:45:ARG:HA	5:BE:72:ILE:O	2.01	0.59
23:CB:30:C:OP1	36:CP:3:LYS:NZ	2.35	0.59
25:CD:149:ASN:OD1	25:CD:150:GLN:N	2.35	0.59
53:DA:297:G:OP2	69:DA:7999:HOH:O	2.16	0.59
53:DA:558:U:OP2	69:DA:5211:HOH:O	2.15	0.59
1:BA:476:U:O4	69:BA:1912:HOH:O	2.17	0.59
16:BP:78:VAL:O	16:BP:79:ASN:HB2	2.01	0.59
22:CA:207:A:OP2	69:CA:3827:HOH:O	2.16	0.59
53:DA:141:G:H2'	53:DA:142:A:C2	2.37	0.59
1:BA:1492:A:H2'	22:CA:1913:A:C6	2.38	0.59
22:CA:1368:G:N7	69:CA:3533:HOH:O	2.31	0.59
55:DI:132:TYR:N	55:DI:133:GLU:HB2	2.16	0.59
8:BH:3:MET:N	8:BH:3:MET:SD	2.75	0.59
22:CA:826:U:O2'	33:CM:53:GLY:HA3	2.03	0.59
36:DP:68:LYS:HB3	61:DP:201:PEG:H22	1.84	0.59
5:BE:157:ARG:O	5:BE:159:LYS:N	2.34	0.59
1:AA:80:A:C2	1:AA:90:C:N3	2.71	0.59
5:BE:154:ALA:C	5:BE:156:LYS:H	2.07	0.59
22:CA:1534:U:O2'	22:CA:1537:G:O6	2.20	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:1171:G:C4	53:DA:1172:C:N4	2.71	0.59
53:DA:711:G:OP1	69:DA:5064:HOH:O	2.16	0.58
53:DA:787:C:OP1	59:DA:3223:PUT:N1	2.36	0.58
53:DA:2683:C:O2	32:DL:70:ARG:NH2	2.30	0.58
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.37	0.58
1:BA:1493:A:OP2	1:BA:1493:A:C8	2.56	0.58
7:BG:68:ASN:O	7:BG:138:ARG:NH1	2.36	0.58
29:DH:41:LYS:HA	29:DH:44:ILE:HG23	1.84	0.58
3:BC:126:ARG:O	3:BC:127:ARG:HB2	2.03	0.58
53:DA:1119:U:OP2	69:DA:5002:HOH:O	2.16	0.58
47:D0:10:THR:HG22	47:D0:11:ARG:HG3	1.85	0.58
22:CA:646:U:C5'	22:CA:647:G:H5"	2.33	0.58
27:CF:122:PHE:O	27:CF:124:GLY:N	2.35	0.58
53:DA:1292:G:N3	69:DA:6760:HOH:O	2.31	0.58
23:DB:23:G:O6	69:DB:304:HOH:O	2.17	0.58
4:AD:78:GLU:OE2	4:AD:81:ARG:NH2	2.36	0.58
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.85	0.58
8:BH:64:LYS:HB3	8:BH:71:VAL:HG21	1.86	0.58
9:BI:88:MET:SD	9:BI:95:ARG:HG2	2.44	0.58
13:BM:4:ILE:O	13:BM:6:GLY:N	2.36	0.58
1:BA:521:G:OP1	69:BA:1874:HOH:O	2.17	0.58
5:BE:100:SER:O	5:BE:122:ASN:ND2	2.37	0.58
15:BO:17:ARG:N	15:BO:17:ARG:HD3	2.19	0.58
53:DA:15:G:OP2	69:DA:5595:HOH:O	2.16	0.58
53:DA:2886[B]:A:N3	53:DA:2886[B]:A:H2'	2.17	0.58
51:D4:63:PRO:O	69:D4:128:HOH:O	2.17	0.58
22:CA:666:A:H4'	33:CM:48:ARG:HD2	1.86	0.58
22:CA:784:G:H5'	22:CA:785:G:OP1	2.04	0.58
26:CE:41:GLN:O	26:CE:43:THR:N	2.30	0.58
8:AH:113:ASP:OD1	8:AH:117:ARG:NH2	2.37	0.58
1:BA:991:U:H4'	1:BA:992:U:H5"	1.86	0.58
5:BE:156:LYS:HD2	8:BH:71:VAL:HG13	1.85	0.58
53:DA:2674:G:H4'	32:DL:30:ARG:HD2	1.85	0.58
10:AJ:48:ARG:NH1	10:AJ:66:GLU:OE1	2.37	0.58
53:DA:2275:C:C6	57:DA:3193:PG4:H41	2.38	0.58
53:DA:2872:A:N7	69:DA:4918:HOH:O	2.32	0.58
7:BG:92:ARG:HB3	7:BG:93:PRO:HD2	1.86	0.57
53:DA:948:C:O2'	63:DA:3203:1PE:H241	2.04	0.57
53:DA:1171:G:H2'	53:DA:1172:C:C4	2.39	0.57
27:DF:158:THR:HG22	27:DF:160:ALA:H	1.69	0.57
55:DI:103:ASN:O	55:DI:105:LYS:N	2.37	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DQ:31:TRP:CD1	57:DQ:202:PG4:H31	2.39	0.57
1:AA:691:G:O6	11:AK:57:LYS:NZ	2.33	0.57
1:BA:1329:A:H5"	13:BM:26:GLY:H	1.69	0.57
53:DA:1171:G:H2'	53:DA:1172:C:C5	2.39	0.57
53:DA:1665:A:OP1	69:DA:4215:HOH:O	2.17	0.57
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.85	0.57
1:BA:825:A:O2'	8:BH:13:ARG:NH1	2.37	0.57
22:CA:1779:U:H5	22:CA:1784:A:N7	2.02	0.57
53:DA:1698:A:OP2	59:DA:3213:PUT:H22	2.05	0.57
53:DA:2831:G:OP1	54:DD:56:LYS:NZ	2.36	0.57
22:CA:396:G:H1'	45:CY:29:PHE:HB3	1.84	0.57
22:CA:1143:A:OP2	69:CA:3517:HOH:O	2.17	0.57
33:CM:29:LYS:O	33:CM:31:GLY:N	2.37	0.57
54:DD:149:ASN:OD1	54:DD:150[B]:MEQ:N	2.36	0.57
13:BM:81:MET:O	13:BM:92:ARG:NH2	2.37	0.57
22:CA:1754:A:N1	22:CA:2716:C:O2'	2.35	0.57
30:CJ:100:LYS:HA	30:CJ:139:VAL:O	2.04	0.57
32:CL:107:LEU:O	32:CL:109:SER:N	2.37	0.57
53:DA:2286:G:OP2	49:D2:6:ARG:NH2	2.37	0.57
1:BA:100:G:OP2	69:BA:1869:HOH:O	2.17	0.57
35:CO:45:ARG:HG2	35:CO:95:THR:HG21	1.86	0.57
53:DA:136:G:C2	53:DA:144:A:C2	2.92	0.57
28:DG:127:THR:HG22	28:DG:129:THR:H	1.70	0.57
1:AA:207:C:N4	1:AA:212:G:O6	2.37	0.57
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.37	0.57
18:AR:37:GLY:O	18:AR:63:ARG:NH2	2.35	0.57
25:CD:151:THR:HG22	25:CD:152:PRO:N	2.19	0.57
1:BA:1109:C:C2'	1:BA:1110:A:H5"	2.35	0.57
14:BN:49:GLN:NE2	19:BS:10:PHE:CE2	2.73	0.57
53:DA:585:G:N7	38:DR:6:ARG:NH1	2.48	0.57
12:BL:7:LEU:HD22	12:BL:12:ARG:HD2	1.87	0.57
22:CA:2550:G:O6	22:CA:2551:C:N4	2.38	0.57
53:DA:142:A:H2'	53:DA:143:C:C6	2.40	0.57
53:DA:1172:C:C4	53:DA:1173:U:H1'	2.39	0.57
53:DA:2257:U:O2	57:DA:3193:PG4:H71	2.04	0.57
53:DA:2434:A:N7	69:DA:6970:HOH:O	2.32	0.57
53:DA:2441:U:O2'	62:DA:3225:SPD:H91	2.04	0.57
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.05	0.56
14:BN:21:PHE:C	14:BN:26:GLU:OE1	2.44	0.56
1:BA:483:C:O2	16:BP:13:LYS:NZ	2.38	0.56
1:BA:1317:C:H2'	14:BN:49:GLN:HE21	1.70	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:357:C:H2'	53:DA:358:U:C6	2.41	0.56
53:DA:1020:A:C2	53:DA:1141:U:C2	2.93	0.56
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.70	0.56
46:CZ:7:ARG:HG2	46:CZ:56:LEU:HD13	1.87	0.56
1:AA:261:U:OP2	20:AT:74:ARG:NH2	2.38	0.56
22:CA:2004:G:OP2	69:CA:3658:HOH:O	2.18	0.56
48:D1:16:ARG:O	69:D1:208:HOH:O	2.17	0.56
1:AA:203:G:N2	1:AA:204:G:O6	2.39	0.56
13:BM:93:ARG:NH2	19:BS:80:TYR:OH	2.39	0.56
36:CP:33:ARG:O	36:CP:34:HIS:HB2	2.05	0.56
53:DA:544:C:H3'	53:DA:545:U:C2	2.41	0.56
53:DA:1478:G:H1	53:DA:1513:U:H3	1.54	0.56
11:BK:119:ASN:OD1	21:BU:35:ARG:NH1	2.36	0.56
22:CA:2469:A:O2'	34:CN:55:ARG:NH2	2.35	0.56
62:DA:3225:SPD:H82	69:DA:5539:HOH:O	2.06	0.56
22:CA:192:C:O2'	22:CA:802:A:N3	2.34	0.56
45:DY:41:GLU:N	69:DY:102:HOH:O	2.39	0.56
1:BA:840:C:C5	1:BA:842:U:H5'	2.41	0.56
3:BC:179:ARG:HD2	3:BC:206:GLU:HB2	1.88	0.56
6:BF:3:HIS:HB2	6:BF:92:THR:HG23	1.87	0.56
24:CC:260:ASN:O	24:CC:262:ARG:N	2.39	0.56
26:CE:52:VAL:HG21	26:CE:81:GLY:CA	2.35	0.56
30:CJ:100:LYS:HB2	30:CJ:141:GLU:HB2	1.88	0.56
42:CV:74:ASN:C	42:CV:76:ALA:H	2.10	0.56
53:DA:788:A:H3'	59:DA:3223:PUT:H41	1.88	0.56
1:AA:1135:U:N3	1:AA:1137:C:O2	2.40	0.56
1:BA:81:A:N7	1:BA:83:C:N4	2.54	0.56
1:BA:1189:U:OP1	14:BN:98:LYS:NZ	2.39	0.56
1:BA:404:G:N7	4:BD:2:ALA:HB3	2.21	0.55
24:CC:158:ALA:HB1	24:CC:197:ASN:HB3	1.87	0.55
30:DJ:19:ASN:HA	30:DJ:39:CYS:SG	2.46	0.55
22:CA:526:A:OP1	69:CA:3842:HOH:O	2.18	0.55
22:CA:614:A:O2'	22:CA:615:U:OP2	2.25	0.55
39:DS:21:ARG:HH21	57:DS:202:PG4:H71	1.71	0.55
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	1.87	0.55
1:BA:451:A:H2'	69:BA:1918:HOH:O	2.06	0.55
18:BR:42:SER:O	18:BR:46:GLY:N	2.40	0.55
36:CP:52:SER:OG	36:CP:53:THR:N	2.39	0.55
10:AJ:7:ARG:HG2	10:AJ:101:SER:HB2	1.87	0.55
5:BE:26:LYS:HA	5:BE:26:LYS:HE3	1.87	0.55
8:BH:88:ARG:O	8:BH:89:LYS:HB3	2.06	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DJ:100:LYS:HA	30:DJ:139:VAL:O	2.06	0.55
46:CZ:11:VAL:O	46:CZ:15:ASN:ND2	2.39	0.55
7:BG:90:GLU:N	7:BG:90:GLU:OE1	2.40	0.55
22:CA:370:G:N7	69:CA:3474:HOH:O	2.33	0.55
38:CR:9:ILE:C	38:CR:9:ILE:HD12	2.27	0.55
23:DB:2:G:C2	23:DB:119:A:C2	2.95	0.55
54:DD:149:ASN:OD1	54:DD:150[A]:MEQ:N	2.36	0.55
1:BA:1366:C:O2'	10:BJ:62:ARG:NH2	2.38	0.55
7:BG:37:SER:O	7:BG:41:SER:OG	2.24	0.55
22:CA:1993:U:H4'	25:CD:133:THR:HG22	1.88	0.55
22:CA:2359:C:O2	33:CM:60:ARG:NH2	2.39	0.55
1:AA:842:U:H3'	1:AA:843:U:C5'	2.37	0.55
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.25	0.55
6:AF:16:GLU:HG2	4:BD:193:ALA:HA	1.87	0.55
1:BA:394:G:OP2	69:BA:1887:HOH:O	2.18	0.55
32:CL:70:ARG:NH1	32:CL:74:GLY:O	2.40	0.55
33:CM:111:ILE:HG22	33:CM:112:LEU:N	2.21	0.55
35:CO:56:LYS:NZ	35:CO:87:PHE:O	2.39	0.55
53:DA:1847:A:P	53:DA:1847:A:H8	2.30	0.55
48:D1:12:LYS:NZ	69:D1:240:HOH:O	2.38	0.55
1:BA:6:G:O6	5:BE:100:SER:N	2.22	0.55
22:CA:1170:C:H2'	22:CA:1171:G:H8	1.72	0.55
22:CA:2507:C:OP1	69:CA:3600:HOH:O	2.18	0.55
28:CG:70:ALA:O	28:CG:74:SER:OG	2.25	0.55
53:DA:282:A:H2'	53:DA:283:G:C8	2.42	0.55
53:DA:2031:A:C6	53:DA:2498:OMC:H1'	2.42	0.55
32:DL:107:LEU:O	32:DL:109:SER:N	2.40	0.55
7:BG:16:PRO:HB3	9:BI:43:THR:HG23	1.88	0.54
22:CA:301:G:OP2	42:CV:82:ARG:NH1	2.40	0.54
22:CA:1394:U:H4'	22:CA:1603:A:H4'	1.89	0.54
53:DA:189:G:N7	66:DA:3197:EDO:H21	2.22	0.54
53:DA:1171:G:N3	53:DA:1179:G:N2	2.56	0.54
1:AA:1217:C:P	14:AN:9:ARG:HH21	2.29	0.54
1:AA:1226:C:N4	13:AM:103:LYS:HE3	2.22	0.54
2:AB:27:MET:HE1	2:AB:187:VAL:HG12	1.88	0.54
13:AM:6:GLY:CA	13:AM:66:GLU:HG3	2.37	0.54
7:BG:113:ASP:OD2	7:BG:122:ASN:ND2	2.40	0.54
22:CA:1941:C:OP2	69:CA:3788:HOH:O	2.18	0.54
22:CA:2334:U:O4	36:CP:16:ARG:NH2	2.40	0.54
22:CA:2360:G:H1'	33:CM:60:ARG:HD3	1.88	0.54
26:CE:98:LYS:NZ	69:CE:303:HOH:O	2.40	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DM:85:VAL:HB	33:DM:94:THR:CG2	2.37	0.54
29:CH:79:THR:HA	29:CH:145:ASN:HB2	1.88	0.54
50:C3:44:VAL:HG13	50:C3:45:SER:H	1.72	0.54
14:BN:53:ARG:HH22	19:BS:37:ARG:NH2	2.06	0.54
22:CA:550:C:H2'	22:CA:551:G:H5"	1.90	0.54
53:DA:142:A:C5	53:DA:143:C:C4	2.95	0.54
55:DI:22:ALA:HA	55:DI:86:THR:HA	1.88	0.54
1:BA:1134:G:N2	1:BA:1140:C:N3	2.56	0.54
22:CA:585:G:N7	38:CR:6:ARG:NH1	2.50	0.54
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.42	0.54
22:CA:430:A:N7	69:CA:3729:HOH:O	2.34	0.54
40:CT:84:ARG:HB2	40:CT:96:ILE:HG12	1.88	0.54
41:CU:69:ARG:NH1	41:CU:69:ARG:HB3	2.23	0.54
53:DA:953:G:OP2	34:DN:18[B]:ARG:NH1	2.41	0.54
10:AJ:40:ILE:CG1	10:AJ:73:LEU:HB3	2.37	0.54
8:BH:106:THR:HG21	8:BH:121:LEU:HD13	1.89	0.54
22:CA:139:U:O2'	22:CA:141:G:N1	2.36	0.54
53:DA:2297:A:H5"	53:DA:2297:A:C8	2.42	0.54
42:DV:45:HIS:CD2	42:DV:58:ILE:HD13	2.43	0.54
1:AA:1189:U:OP1	14:AN:98:LYS:NZ	2.38	0.54
27:DF:119:ALA:O	27:DF:167:ARG:NH1	2.41	0.54
55:DI:131:THR:OG1	55:DI:133:GLU:O	2.19	0.54
1:AA:407:U:OP1	4:AD:3:ARG:NH2	2.40	0.54
15:BO:89:ARG:NH1	22:CA:716:A:OP1	2.41	0.54
22:CA:2189:U:H2'	22:CA:2190:G:H5'	1.90	0.54
11:AK:16:VAL:HG23	11:AK:17:SER:H	1.72	0.54
1:BA:1217:C:OP2	14:BN:9:ARG:NH2	2.33	0.54
23:CB:90:C:H6	23:CB:90:C:H5"	1.72	0.54
53:DA:550:C:H2'	53:DA:551:G:H5"	1.89	0.54
36:DP:68:LYS:HE3	61:DP:201:PEG:H41	1.89	0.54
50:D3:29:GLN:HG2	61:D3:102:PEG:H21	1.91	0.54
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.90	0.53
1:BA:1144:G:N2	1:BA:1145:A:C2	2.76	0.53
12:BL:65:SER:HB2	12:BL:82:ILE:HD11	1.89	0.53
22:CA:582:A:N7	69:CA:3262:HOH:O	2.34	0.53
22:CA:1170:C:H2'	22:CA:1171:G:C8	2.42	0.53
53:DA:551:G:H5'	53:DA:551:G:H8	1.73	0.53
53:DA:2172:U:H4'	53:DA:2173:A:H5'	1.90	0.53
34:DN:89:VAL:CG1	58:DN:201:MPD:HM3	2.38	0.53
1:AA:951:G:OP2	13:AM:101:ARG:NH2	2.41	0.53
13:AM:79:ARG:NH1	27:DF:113:ASP:OD1	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:196:A:OP1	20:BT:64:LYS:NZ	2.40	0.53
22:CA:184:C:O2'	22:CA:217:A:N3	2.35	0.53
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.90	0.53
1:AA:843:U:OP1	1:AA:846:G:N2	2.42	0.53
9:AI:85:ARG:HA	9:AI:88:MET:HE3	1.90	0.53
13:AM:8:ASN:OD1	13:AM:9:ILE:N	2.42	0.53
11:BK:83:GLU:OE2	11:BK:109:ASN:ND2	2.41	0.53
22:CA:1993:U:H4'	25:CD:133:THR:CG2	2.38	0.53
23:CB:35:C:C2'	23:CB:36:C:H5'	2.38	0.53
48:C1:55:ILE:HG22	48:C1:56:ALA:N	2.23	0.53
53:DA:2383:G:O6	69:DA:4990:HOH:O	2.18	0.53
1:AA:617:G:O2'	69:AA:1936:HOH:O	2.18	0.53
1:BA:35:G:N3	12:BL:115:SER:OG	2.42	0.53
1:BA:72:A:C6	1:BA:73:C:N3	2.76	0.53
6:BF:50:PRO:CD	18:BR:74:HIS:HB3	2.39	0.53
17:BQ:60:GLU:OE2	17:BQ:77:ARG:NH1	2.42	0.53
22:CA:2127:G:N2	22:CA:2161:C:O2	2.40	0.53
1:BA:374:A:H5"	1:BA:452:A:N1	2.23	0.53
53:DA:142:A:O2'	53:DA:143:C:O4'	2.25	0.53
10:AJ:40:ILE:HG12	10:AJ:73:LEU:HB3	1.89	0.53
1:BA:774:G:H21	57:BA:1642:PG4:H52	1.74	0.53
22:CA:528:A:C2	22:CA:2042:A:H2'	2.43	0.53
22:CA:1419:A:O2'	22:CA:1421:G:N7	2.32	0.53
27:DF:112:ARG:NH1	27:DF:134:GLU:OE2	2.41	0.53
1:AA:404:G:N7	4:AD:2:ALA:HB3	2.23	0.53
5:AE:149:SER:HB3	5:AE:152:MET:CG	2.39	0.53
14:BN:25:ALA:HA	14:BN:28:LYS:HG2	1.90	0.53
1:AA:526:C:C2'	1:AA:527:G7M:H5'	2.39	0.53
14:BN:28:LYS:O	14:BN:31:ILE:HG22	2.09	0.53
19:BS:10:PHE:CD2	19:BS:11:ILE:N	2.77	0.53
53:DA:45:G:H5"	53:DA:46:G:H5'	1.89	0.53
1:AA:1379:G:N7	7:AG:2:PRO:HB2	2.24	0.53
26:CE:152:GLU:O	26:CE:154:ASP:N	2.42	0.53
49:C2:25:LYS:NZ	49:C2:32:GLU:O	2.36	0.53
29:DH:68:ARG:NH2	29:DH:114:GLU:OE1	2.42	0.53
22:CA:45:G:H5"	22:CA:46:G:H5'	1.92	0.52
53:DA:1046:A:H4'	55:DI:58:THR:HG21	1.91	0.52
38:DR:58:ARG:HA	38:DR:61:TRP:CE3	2.44	0.52
1:AA:938:A:H5'	7:AG:76:LYS:NZ	2.23	0.52
1:AA:1124:G:H5'	10:AJ:37:ARG:HH11	1.73	0.52
15:AO:20:ASN:O	15:AO:22:THR:N	2.41	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:264:C:O2'	17:BQ:66:PRO:O	2.26	0.52
2:BB:126:PHE:C	2:BB:128:LYS:H	2.10	0.52
7:BG:109:ARG:O	7:BG:119:ARG:NH2	2.42	0.52
7:BG:130:ASN:HA	7:BG:135:VAL:HG11	1.91	0.52
20:BT:44:LYS:HD3	20:BT:87:ALA:HA	1.90	0.52
22:CA:2526:G:O2'	52:C5:1:MET:HB3	2.09	0.52
46:CZ:7:ARG:O	46:CZ:60:LYS:NZ	2.42	0.52
53:DA:550:C:C2'	53:DA:551:G:H5"	2.39	0.52
1:BA:216:U:H5"	1:BA:464:U:H4'	1.91	0.52
22:CA:1808:A:O2'	45:CY:3:ARG:NH1	2.42	0.52
30:CJ:100:LYS:HB3	30:CJ:141:GLU:HB2	1.89	0.52
53:DA:141:G:H3'	53:DA:142:A:C5	2.44	0.52
53:DA:1170:C:H2'	53:DA:1171:G:C8	2.44	0.52
34:DN:89:VAL:HG12	58:DN:201:MPD:HM3	1.90	0.52
1:AA:1032:G:H2'	1:AA:1033:G:H4'	1.90	0.52
1:BA:87:C:H2'	1:BA:88:U:C6	2.43	0.52
6:BF:51:ILE:C	6:BF:53:LYS:H	2.12	0.52
11:BK:112:ASP:HB3	21:BU:2:PRO:HG2	1.90	0.52
22:CA:797:G:N7	69:CA:3296:HOH:O	2.34	0.52
22:CA:1869:G:H3'	22:CA:1870:C:H5'	1.92	0.52
41:CU:60:THR:O	69:CU:102:HOH:O	2.19	0.52
52:C5:22:VAL:HG11	52:C5:36:ARG:HG3	1.90	0.52
53:DA:543:G:H5"	53:DA:543:G:H8	1.74	0.52
53:DA:1536:C:H4'	53:DA:1537:G:H5"	1.91	0.52
1:AA:418:C:N4	69:AA:1753:HOH:O	2.43	0.52
13:AM:12:HIS:HA	13:AM:45:ILE:CG1	2.39	0.52
22:CA:1789:A:OP2	24:CC:221:ARG:NH1	2.41	0.52
33:CM:29:LYS:O	33:CM:30:THR:OG1	2.25	0.52
41:CU:49:LYS:HD3	41:CU:49:LYS:N	2.24	0.52
53:DA:1105:U:H2'	53:DA:1106:G:H8	1.75	0.52
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.43	0.52
5:BE:101:GLU:O	5:BE:102:GLY:C	2.48	0.52
7:BG:15:ASP:HB2	7:BG:20:SER:H	1.75	0.52
7:BG:83:SER:HB3	7:BG:85:TYR:CZ	2.45	0.52
22:CA:1011:G:OP2	38:CR:70:ARG:NH1	2.42	0.52
7:BG:88:PRO:HD2	7:BG:152:ALA:HA	1.91	0.52
22:CA:842:U:O4	69:CA:3496:HOH:O	2.18	0.52
53:DA:1869:G:C2	53:DA:1873:G:C6	2.98	0.52
53:DA:2256:G:N2	57:DA:3193:PG4:H61	2.25	0.52
63:DA:3185:1PE:H222	69:DA:6271:HOH:O	2.09	0.52
31:DK:96:ARG:NH2	69:DK:319:HOH:O	2.24	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:85:ARG:HA	9:AI:88:MET:CE	2.39	0.52
13:AM:12:HIS:ND1	13:AM:45:ILE:HG13	2.24	0.52
1:BA:374:A:H5"	1:BA:452:A:C2	2.44	0.52
3:BC:40:ARG:HG2	3:BC:55:ILE:HG12	1.90	0.52
5:BE:114:VAL:HG22	5:BE:115:LEU:HD13	1.92	0.52
7:BG:59:LEU:HD23	7:BG:59:LEU:H	1.75	0.52
10:BJ:57:VAL:HG22	10:BJ:58:ASN:H	1.74	0.52
11:BK:88:GLY:H	11:BK:114:THR:HG22	1.74	0.52
22:CA:388:G:N7	22:CA:390:U:H2'	2.25	0.52
53:DA:1433:A:O2'	53:DA:1434:A:H5'	2.10	0.52
53:DA:2256:G:H21	57:DA:3193:PG4:H31	1.75	0.52
58:DN:201:MPD:HM2	58:DN:201:MPD:O4	2.08	0.52
39:DS:82:HIS:NE2	69:DS:341:HOH:O	2.33	0.52
1:AA:1428:A:H2'	1:AA:1429:A:O4'	2.10	0.52
15:AO:26:GLU:OE1	15:AO:26:GLU:N	2.35	0.52
1:BA:79:G:H2'	1:BA:80:A:O4'	2.10	0.52
5:BE:154:ALA:O	5:BE:157:ARG:N	2.43	0.52
22:CA:139:U:HO2'	22:CA:141:G:H1	1.55	0.52
22:CA:1915:3TD:H2'	22:CA:1916:A:O4'	2.10	0.52
24:CC:252:THR:HG22	24:CC:253:LYS:H	1.73	0.52
32:CL:121:GLU:HG2	32:CL:122:VAL:HG23	1.91	0.52
35:CO:2:ARG:O	35:CO:2:ARG:HD3	2.10	0.52
53:DA:278:A:C2	53:DA:362:A:C8	2.98	0.52
1:AA:412:A:H1'	1:AA:413:G:C5'	2.39	0.52
1:AA:1060:U:H4'	10:AJ:53:ILE:HG23	1.91	0.52
17:BQ:14:SER:HB3	17:BQ:22:VAL:HG13	1.92	0.52
22:CA:1582:C:N4	22:CA:1583:A:C6	2.78	0.52
31:CK:99:ARG:NH1	31:CK:102:GLU:OE1	2.43	0.52
42:CV:61:LYS:HA	42:CV:61:LYS:HE3	1.92	0.52
53:DA:62:U:O4'	58:DA:3205:MPD:H31	2.10	0.52
50:D3:32:ALA:HB2	61:D3:102:PEG:H12	1.91	0.52
8:AH:48:ASP:OD1	8:AH:49:PHE:N	2.38	0.51
1:BA:1309:G:OP2	13:BM:98:ARG:NE	2.39	0.51
5:BE:104:GLY:HA3	5:BE:122:ASN:CA	2.40	0.51
14:BN:18:ASP:OD1	14:BN:19:LYS:N	2.43	0.51
22:CA:2061:G:H5"	22:CA:2503:2MA:HM22	1.92	0.51
27:CF:108:VAL:HG11	27:CF:176:PRO:HG2	1.92	0.51
27:CF:108:VAL:HG13	27:CF:111:ILE:HD12	1.92	0.51
53:DA:614:A:O2'	53:DA:615:U:OP2	2.26	0.51
41:DU:33:LYS:HG3	41:DU:80:TRP:CE3	2.45	0.51
1:AA:157:U:C2'	1:AA:158:G:H5'	2.40	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:181:A:N6	1:AA:195:A:OP2	2.43	0.51
2:AB:126:PHE:C	2:AB:128:LYS:H	2.13	0.51
14:AN:42:TRP:HD1	14:AN:44:ALA:N	2.09	0.51
1:BA:531:U:H4'	1:BA:532:A:C5'	2.40	0.51
3:BC:72:ARG:HB3	3:BC:75:ILE:CG2	2.40	0.51
3:BC:80:LYS:HA	3:BC:80:LYS:HE3	1.92	0.51
22:CA:1367:A:OP1	69:CA:3534:HOH:O	2.19	0.51
22:CA:1847:A:HO2'	22:CA:1848:A:H8	1.55	0.51
22:CA:1900:A:O2'	69:CA:3824:HOH:O	2.19	0.51
22:CA:2081:U:OP1	45:CY:17:ASN:ND2	2.41	0.51
24:CC:111:LYS:NZ	24:CC:114:ASP:OD1	2.41	0.51
53:DA:1418:G:H2'	53:DA:1579:A:N6	2.26	0.51
53:DA:2324:U:H3'	53:DA:2325:G:C5'	2.40	0.51
53:DA:2603:G:OP2	69:DA:4829:HOH:O	2.19	0.51
1:BA:1226:C:N4	13:BM:103:LYS:HE3	2.25	0.51
1:BA:1406:U:H2'	1:BA:1407:5MC:H5'	1.91	0.51
3:BC:117:ALA:HB2	3:BC:200:VAL:CG1	2.40	0.51
5:BE:93:ARG:HG3	5:BE:128:TYR:HB2	1.93	0.51
22:CA:2550:G:C6	22:CA:2551:C:C4	2.97	0.51
53:DA:2251:OMG:OP1	34:DN:81[A]:4D4:NH2	2.34	0.51
41:DU:80:TRP:HB3	64:DU:101:PGE:H32	1.92	0.51
1:AA:216:U:H2'	1:AA:217:C:C6	2.46	0.51
1:AA:741:G:OP1	15:AO:35:GLN:NE2	2.43	0.51
3:BC:42:TYR:CZ	3:BC:90:VAL:HG21	2.46	0.51
22:CA:381:G:OP1	45:CY:18:ARG:NH2	2.37	0.51
22:CA:1792:G:H5'	24:CC:204:VAL:HG23	1.93	0.51
22:CA:2611:C:OP2	69:CA:3871:HOH:O	2.19	0.51
57:DA:3193:PG4:H12	69:DA:6907:HOH:O	2.10	0.51
1:BA:31:G:O2'	1:BA:48:C:N4	2.43	0.51
1:BA:467:U:H3'	1:BA:468:A:H5"	1.93	0.51
22:CA:2264:C:N4	44:CX:15:ASP:OD2	2.43	0.51
24:CC:210:ALA:HA	24:CC:213:TRP:CE2	2.45	0.51
58:DA:3211:MPD:O4	58:DA:3211:MPD:O2	2.28	0.51
1:AA:121:U:H5"	1:AA:122:G:OP2	2.11	0.51
1:AA:1016:A:N3	1:AA:1016:A:H2'	2.26	0.51
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.40	0.51
7:AG:88:PRO:HG2	7:AG:152:ALA:HB2	1.93	0.51
10:AJ:15:HIS:CE1	10:AJ:16:ARG:HD3	2.46	0.51
13:AM:12:HIS:HA	13:AM:45:ILE:HG12	1.93	0.51
22:CA:2306:C:N4	27:CF:39:GLY:O	2.44	0.51
45:CY:10:LYS:HE3	45:CY:54:LYS:HD3	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:C1:53:LYS:HE3	48:C1:56:ALA:HA	1.93	0.51
53:DA:287:G:H1	53:DA:353:C:H42	1.58	0.51
53:DA:784:G:H5'	53:DA:785:G:OP1	2.10	0.51
53:DA:789:A:OP1	59:DA:3223:PUT:H11	2.10	0.51
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.92	0.51
5:BE:133:PRO:O	5:BE:137:VAL:HG12	2.10	0.51
22:CA:1172:C:H2'	22:CA:1173:U:O4'	2.10	0.51
42:CV:18:ASP:O	42:CV:20:GLY:N	2.44	0.51
47:C0:5:ILE:HG13	47:C0:6:LYS:N	2.25	0.51
27:DF:102:ARG:NH1	69:DF:206:HOH:O	2.43	0.51
1:AA:411:A:P	4:AD:26:ARG:HH22	2.33	0.51
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.26	0.51
1:BA:966:2MG:H2'	1:BA:967:5MC:C6	2.45	0.51
22:CA:2286:G:H4'	22:CA:2287:A:O5'	2.11	0.51
24:DC:78:VAL:HG21	24:DC:110:LEU:HD21	1.93	0.51
1:AA:722:G:H3'	1:AA:722:G:N3	2.25	0.51
10:AJ:6:ILE:HG13	10:AJ:76:ILE:HB	1.91	0.51
14:AN:27:LEU:O	14:AN:31:ILE:HG12	2.11	0.51
16:AP:56:ARG:NH1	69:AP:102:HOH:O	2.43	0.51
19:AS:29:LYS:HB3	19:AS:30:PRO:CD	2.41	0.51
3:BC:55:ILE:CD1	3:BC:66:VAL:HG13	2.41	0.51
15:BO:45:GLU:HG2	15:BO:46:HIS:H	1.75	0.51
35:CO:90:ARG:CZ	35:CO:116:VAL:HG11	2.41	0.51
48:C1:55:ILE:HG22	48:C1:56:ALA:H	1.75	0.51
53:DA:1171:G:C2	53:DA:1179:G:C2	2.99	0.51
23:DB:35:C:H2'	23:DB:36:C:H5'	1.92	0.51
2:AB:117:LEU:HA	2:AB:120:GLN:HG2	1.93	0.50
22:CA:138:U:OP2	22:CA:139:U:H5'	2.10	0.50
24:CC:235:GLY:HA3	24:CC:239:ASN:HB2	1.92	0.50
26:CE:81:GLY:N	69:CE:301:HOH:O	2.44	0.50
1:BA:202:G:HO2'	1:BA:468:A:H8	1.59	0.50
1:BA:257:G:O6	69:BA:1714:HOH:O	2.19	0.50
1:BA:1406:U:C2'	1:BA:1407:5MC:H5'	2.42	0.50
2:BB:9:MET:CE	2:BB:50:PHE:HD2	2.24	0.50
5:BE:105:ILE:HG23	5:BE:105:ILE:O	2.11	0.50
6:BF:50:PRO:HD3	18:BR:74:HIS:HB3	1.93	0.50
22:CA:579:G:O2'	22:CA:2019:A:OP1	2.29	0.50
22:CA:2496:C:OP2	34:CN:81:4D4:H8	2.10	0.50
26:CE:41:GLN:C	26:CE:43:THR:H	2.15	0.50
39:CS:49:ILE:HG22	39:CS:53:PHE:C	2.31	0.50
16:AP:46:LYS:NZ	69:AP:101:HOH:O	2.44	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CA:646:U:H5'	22:CA:647:G:H5"	1.92	0.50
32:CL:1:MET:HB2	32:CL:67:LYS:HG3	1.93	0.50
53:DA:1913:A:OP1	53:DA:1913:A:H4'	2.12	0.50
4:AD:99:ASP:OD1	4:AD:100:ASN:N	2.45	0.50
1:BA:991:U:H4'	1:BA:992:U:C5'	2.41	0.50
1:BA:1462:C:O2'	37:CQ:111:LYS:NZ	2.44	0.50
4:BD:201:VAL:HG11	5:BE:103:THR:HB	1.92	0.50
15:BO:67:LEU:HD22	15:BO:88:ARG:HH22	1.77	0.50
22:CA:981:A:OP2	22:CA:982:C:N4	2.40	0.50
24:CC:17:VAL:HB	24:CC:204:VAL:HG13	1.93	0.50
53:DA:1059:G:H4'	30:DJ:117:MET:HE2	1.93	0.50
53:DA:2116:G:N7	53:DA:2165:C:N4	2.57	0.50
1:AA:841:C:C5	1:AA:843:U:H5'	2.47	0.50
8:AH:18:GLN:CG	8:AH:70:ALA:HB1	2.42	0.50
13:AM:16:VAL:HG12	13:AM:17:ILE:HD12	1.93	0.50
7:BG:57:SER:OG	7:BG:58:GLU:N	2.44	0.50
10:BJ:81:GLU:HA	10:BJ:84:VAL:HG12	1.92	0.50
13:BM:10:PRO:HB2	13:BM:18:ALA:HB1	1.94	0.50
20:BT:27:MET:HG3	20:BT:28:MET:N	2.27	0.50
22:CA:1665:A:H5"	32:CL:66:LYS:HG2	1.92	0.50
53:DA:1090:A:N1	53:DA:1101:U:O2	2.45	0.50
54:DD:18:ASP:HB2	57:DQ:202:PG4:H82	1.93	0.50
2:AB:130:THR:O	2:AB:131:LYS:HB2	2.10	0.50
1:BA:1183:U:O2'	1:BA:1184:G:O5'	2.30	0.50
7:BG:51:ALA:O	7:BG:55:GLY:N	2.36	0.50
22:CA:971:G:OP2	22:CA:974:G:N2	2.44	0.50
22:CA:1390:U:H2'	22:CA:1391:U:H5'	1.94	0.50
30:CJ:19:ASN:N	30:CJ:20:PRO:HD2	2.26	0.50
38:CR:22:LYS:HE2	38:CR:22:LYS:HA	1.93	0.50
53:DA:2325:G:C6	53:DA:2326:C:N4	2.79	0.50
53:DA:2887[B]:A:H2'	53:DA:2888[B]:C:O4'	2.11	0.50
66:DA:3210:EDO:H21	38:DR:16:LYS:HG3	1.94	0.50
29:DH:7:ASP:OD1	29:DH:8:LYS:N	2.44	0.50
31:DK:23:LYS:HE2	31:DK:142:ILE:OXT	2.12	0.50
1:AA:204:G:C3'	1:AA:205:A:H5"	2.42	0.50
1:BA:147:G:N2	1:BA:175:C:O2	2.45	0.50
1:BA:276:G:OP1	17:BQ:14:SER:OG	2.21	0.50
2:BB:130:THR:O	2:BB:131:LYS:HB2	2.11	0.50
6:BF:52:ASN:O	6:BF:53:LYS:HB2	2.12	0.50
22:CA:662:G:O3'	33:CM:16:GLY:HA2	2.11	0.50
22:CA:1422:G:N2	22:CA:1577:C:H1'	2.27	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CD:112:THR:O	25:CD:195:GLY:HA2	2.12	0.50
38:CR:9:ILE:HD12	38:CR:10:ALA:N	2.27	0.50
53:DA:664:G:OP2	69:DA:5108:HOH:O	2.19	0.50
53:DA:1172:C:C5	53:DA:1173:U:N1	2.80	0.50
53:DA:1758:U:OP2	69:DA:4561:HOH:O	2.19	0.50
30:DJ:100:LYS:HB3	30:DJ:141:GLU:HB2	1.93	0.50
33:DM:79:LEU:HD11	33:DM:112:LEU:HD12	1.94	0.50
50:D3:12:ARG:HG2	50:D3:12:ARG:HH21	1.77	0.50
53:DA:1420:A:C8	53:DA:2211:A:N6	2.80	0.50
32:DL:70:ARG:NH1	32:DL:74:GLY:O	2.45	0.50
1:AA:109:A:C6	1:AA:326:G:C6	3.00	0.50
1:BA:1047:G:HO2'	1:BA:1215:G:HO2'	1.56	0.50
3:BC:3:GLN:OE1	3:BC:3:GLN:N	2.45	0.50
22:CA:1515:A:HO2'	22:CA:1556:C:HO2'	1.60	0.50
32:CL:78:ARG:NH1	37:CQ:71:GLU:OE2	2.45	0.50
13:AM:95:LEU:C	13:AM:109:ARG:HG2	2.32	0.49
16:AP:1:MET:SD	16:AP:1:MET:N	2.64	0.49
1:BA:1491:G:C6	1:BA:1492:A:C6	3.00	0.49
42:CV:7:ARG:NH2	42:CV:8:ASP:OD1	2.40	0.49
53:DA:142:A:H1'	41:DU:1:MET:HE1	1.92	0.49
32:DL:70:ARG:HD3	32:DL:76:VAL:HG22	1.93	0.49
1:BA:1373:G:H5"	7:BG:36:LYS:HB2	1.93	0.49
22:CA:335:C:O2'	22:CA:336:C:OP1	2.25	0.49
41:CU:5:GLU:CG	46:CZ:22:LEU:HD13	2.42	0.49
53:DA:2813:A:H2	53:DA:2887[B]:A:N1	2.10	0.49
1:AA:266:G:H3'	17:AQ:69:LYS:HB2	1.95	0.49
1:AA:1016:A:N1	1:AA:1017:U:O2'	2.44	0.49
10:AJ:76:ILE:CD1	10:AJ:87:LEU:HD11	2.42	0.49
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.93	0.49
1:BA:674:G:N2	1:BA:717:U:O2	2.45	0.49
22:CA:1262:A:C2	48:C1:7:LYS:HD2	2.47	0.49
45:CY:11:ARG:HG2	45:CY:12:PRO:HD2	1.94	0.49
32:DL:113:MET:CE	32:DL:116:ILE:HD11	2.41	0.49
1:AA:457:G:N2	1:AA:476:U:O2	2.45	0.49
20:AT:44:LYS:HG3	20:AT:45:ALA:N	2.27	0.49
3:BC:7:PRO:O	3:BC:11:ARG:HG3	2.12	0.49
8:BH:59:LEU:HD12	8:BH:60:GLU:N	2.26	0.49
15:BO:45:GLU:O	15:BO:47:LYS:N	2.44	0.49
17:BQ:81:LYS:HD3	17:BQ:81:LYS:N	2.27	0.49
22:CA:1340:U:C5	22:CA:1603:A:C8	3.00	0.49
32:CL:99:ILE:HD13	32:CL:118:LEU:HB2	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:2:SER:OG	28:DG:6:LYS:NZ	2.44	0.49
33:DM:91:ASP:H	33:DM:94:THR:HB	1.78	0.49
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.48	0.49
5:AE:156:LYS:NZ	8:AH:73:GLU:OE1	2.45	0.49
6:AF:29:ILE:HD13	6:AF:64:VAL:HG11	1.93	0.49
1:BA:842:U:N3	1:BA:844:G:H5'	2.27	0.49
11:BK:43:GLY:HA3	11:BK:74:VAL:HG12	1.95	0.49
22:CA:2130:U:O2'	22:CA:2133:G:O2'	2.31	0.49
35:CO:28:LEU:O	35:CO:32:GLU:N	2.40	0.49
29:DH:41:LYS:HA	29:DH:44:ILE:CG2	2.42	0.49
41:DU:2:ILE:HG21	41:DU:45:ALA:HB1	1.94	0.49
1:AA:147:G:H2'	1:AA:148:G:C8	2.47	0.49
1:BA:79:G:N2	1:BA:91:U:N3	2.59	0.49
1:BA:842:U:C2	1:BA:844:G:H5'	2.48	0.49
12:BL:82:ILE:HG12	12:BL:95:TYR:HB3	1.93	0.49
22:CA:550:C:C2'	22:CA:551:G:H5"	2.42	0.49
36:CP:49:VAL:HG21	36:CP:82:ALA:HA	1.94	0.49
36:DP:31:THR:HG22	36:DP:34:HIS:H	1.77	0.49
12:BL:121:ARG:HG2	12:BL:121:ARG:HH11	1.77	0.49
40:CT:96:ILE:H	40:CT:96:ILE:HD13	1.77	0.49
53:DA:2886[A]:A:C5	53:DA:2887[A]:A:N7	2.81	0.49
8:AH:9:ASP:OD1	8:AH:13:ARG:HD2	2.12	0.49
10:AJ:53:ILE:HG13	14:AN:85:ARG:CZ	2.42	0.49
1:BA:842:U:H3'	1:BA:843:U:H5"	1.95	0.49
1:BA:1381:U:C5	1:BA:1382:C:C5	3.01	0.49
2:BB:120:GLN:HG3	2:BB:121:SER:N	2.28	0.49
6:BF:39:LEU:HD13	6:BF:62:MET:HG3	1.93	0.49
22:CA:374:A:C2	22:CA:401:A:C4	3.01	0.49
27:CF:135:GLN:OE1	27:CF:135:GLN:N	2.46	0.49
53:DA:933:A:H5'	53:DA:934:U:OP2	2.12	0.49
53:DA:1083:U:H4'	55:DI:42:ARG:NH1	2.28	0.49
53:DA:1724:G:C2'	53:DA:1725:U:H5'	2.42	0.49
61:DQ:201:PEG:H22	69:DQ:313:HOH:O	2.12	0.49
1:AA:71:A:O2'	1:AA:72:A:OP2	2.27	0.49
1:AA:526:C:H2'	1:AA:527:G7M:H5'	1.93	0.49
1:BA:664:G:H22	1:BA:741:G:H1	1.61	0.49
1:BA:976:G:OP2	1:BA:1358:U:O2'	2.30	0.49
11:BK:67:ALA:HB2	11:BK:96:THR:HG23	1.94	0.49
22:CA:982:C:H5"	22:CA:983:A:OP1	2.13	0.49
36:CP:31:THR:HG22	36:CP:33:ARG:N	2.28	0.49
53:DA:374:A:C2	53:DA:401:A:C4	3.01	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DR:20:GLN:CG	57:DR:202:PG4:H42	2.43	0.49
1:AA:184:G:O2'	20:AT:69:LYS:NZ	2.36	0.49
6:AF:86:ARG:NH1	18:AR:64:TYR:O	2.46	0.49
19:BS:15:LEU:HD13	19:BS:33:THR:HG21	1.95	0.49
22:CA:2055:C:H5'	22:CA:2056:G:OP1	2.13	0.49
26:CE:127:GLU:O	26:CE:156:ASN:ND2	2.46	0.49
53:DA:644:A:H2'	53:DA:645:C:O4'	2.12	0.49
54:DD:13:ARG:NH1	69:DD:479:HOH:O	2.41	0.49
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.77	0.48
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.28	0.48
6:AF:76:THR:O	6:AF:79:ARG:N	2.44	0.48
1:BA:958:A:N6	19:BS:77:THR:O	2.46	0.48
1:BA:1516:2MG:N2	1:BA:1519:MA6:OP2	2.43	0.48
22:CA:627:A:OP1	33:CM:78:ARG:NH1	2.39	0.48
31:CK:81:ILE:HG12	31:CK:82:GLY:N	2.27	0.48
51:C4:62:LEU:HB3	51:C4:65:ALA:HB2	1.95	0.48
53:DA:1026:G:H2'	53:DA:1027:A:C8	2.48	0.48
1:AA:975:A:H8	1:AA:1357:A:HO2'	1.61	0.48
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.48	0.48
1:BA:754:C:OP1	15:BO:72:ARG:NH2	2.47	0.48
1:BA:933:G:N7	7:BG:3:ARG:NH2	2.62	0.48
5:BE:106:ILE:O	5:BE:106:ILE:HG13	2.13	0.48
7:BG:79:ARG:HA	7:BG:83:SER:O	2.13	0.48
11:BK:16:VAL:HG13	11:BK:17:SER:N	2.29	0.48
11:BK:16:VAL:HG13	11:BK:17:SER:H	1.78	0.48
11:BK:107:ILE:HD11	11:BK:110:ILE:HG12	1.95	0.48
13:BM:31:LYS:HA	13:BM:31:LYS:HE3	1.93	0.48
14:BN:10:GLU:HG3	14:BN:63:ARG:HD2	1.95	0.48
14:BN:32:SER:HA	14:BN:42:TRP:CZ2	2.48	0.48
15:BO:4:SER:O	15:BO:8:THR:HG23	2.13	0.48
15:BO:18:ASP:OD1	15:BO:20:ASN:N	2.28	0.48
22:CA:377:G:C6	22:CA:378:C:C4	3.00	0.48
35:CO:53:THR:HG1	35:CO:94:TYR:HH	1.61	0.48
53:DA:580:U:O3'	38:DR:31:VAL:HG13	2.13	0.48
24:DC:130:LEU:CD1	24:DC:135:ILE:HG13	2.43	0.48
1:AA:131:A:H2'	1:AA:132:C:C6	2.49	0.48
2:AB:15:HIS:HB3	2:AB:43:LEU:HD11	1.95	0.48
2:AB:120:GLN:HG3	2:AB:121:SER:N	2.29	0.48
1:BA:380:G:N2	1:BA:383:A:OP2	2.45	0.48
1:BA:890:G:O2'	1:BA:906:A:N6	2.47	0.48
6:BF:73:GLU:O	6:BF:77:THR:OG1	2.31	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BR:34:THR:HG22	18:BR:38:LYS:HB2	1.95	0.48
19:BS:11:ILE:HB	19:BS:38:SER:HB3	1.95	0.48
19:BS:50:ALA:HB1	19:BS:57:HIS:HB3	1.94	0.48
22:CA:1309:G:H4'	50:C3:7:PRO:HB2	1.95	0.48
29:CH:75:LEU:O	29:CH:77:THR:N	2.44	0.48
32:CL:35:VAL:HG22	32:CL:69:VAL:HG12	1.94	0.48
33:CM:82:LEU:HD23	33:CM:83:ALA:N	2.28	0.48
51:C4:45:ARG:N	51:C4:46:PRO:HD2	2.29	0.48
53:DA:1172:C:C5	53:DA:1173:U:C2	3.02	0.48
1:AA:383:A:C5	1:AA:384:G:H1'	2.49	0.48
1:AA:429:U:H5'	4:AD:9:LEU:HD12	1.95	0.48
1:BA:841:C:H5'	1:BA:842:U:OP2	2.13	0.48
1:BA:1302:C:C5	13:BM:17:ILE:HD11	2.49	0.48
3:BC:45:LYS:HG3	3:BC:46:GLU:N	2.28	0.48
12:BL:56:ARG:HG3	12:BL:62:GLU:HB2	1.95	0.48
14:BN:28:LYS:HA	14:BN:31:ILE:HG22	1.96	0.48
22:CA:618:G:O6	69:CA:3267:HOH:O	2.19	0.48
22:CA:991:C:H5'	22:CA:1186:G:H5'	1.95	0.48
22:CA:1638:C:O2	22:CA:2698:U:O2'	2.24	0.48
24:CC:160:THR:HG22	24:CC:177:ARG:HG2	1.94	0.48
59:DA:3214:PUT:H32	69:DA:8098:HOH:O	2.14	0.48
14:AN:10:GLU:HG3	14:AN:63:ARG:HD2	1.96	0.48
8:BH:29:SER:HB3	8:BH:57:PRO:HB2	1.95	0.48
22:CA:1616:A:O2'	69:CA:3372:HOH:O	2.20	0.48
22:CA:2489:U:HO2'	22:CA:2491:U:H5	1.61	0.48
22:CA:2599:G:N7	24:CC:236:GLU:HB2	2.28	0.48
22:CA:2604:U:O2	69:CA:3811:HOH:O	2.16	0.48
29:DH:42:LYS:HG2	29:DH:43:ASN:N	2.28	0.48
1:AA:900:A:OP2	69:AA:2151:HOH:O	2.20	0.48
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.78	0.48
1:AA:1137:C:H1'	1:AA:1138:G:N2	2.28	0.48
13:AM:40:ALA:HB3	13:AM:43:VAL:CG2	2.43	0.48
5:BE:81:LEU:CD1	5:BE:120:VAL:HG11	2.43	0.48
5:BE:81:LEU:O	5:BE:98:PRO:HB3	2.13	0.48
12:BL:14:ARG:HH11	12:BL:14:ARG:CA	2.26	0.48
19:BS:10:PHE:CG	19:BS:11:ILE:N	2.82	0.48
36:CP:43:ASN:ND2	36:CP:46:GLU:OE1	2.42	0.48
43:CW:38:LEU:HG	43:CW:40:ILE:HD13	1.95	0.48
53:DA:2086:U:H2'	53:DA:2087:G:C8	2.49	0.48
23:DB:90:C:H5"	23:DB:90:C:H6	1.77	0.48
2:AB:133:GLU:OE2	2:AB:137:ARG:NH1	2.39	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:376:G:H5"	16:BP:5:ARG:HB2	1.96	0.48
14:BN:31:ILE:HA	14:BN:34:VAL:HG23	1.94	0.48
14:BN:45:VAL:HG12	19:BS:10:PHE:HE1	1.79	0.48
27:CF:42:GLU:OE1	27:CF:148:ARG:NH2	2.47	0.48
39:CS:39:LEU:O	39:CS:49:ILE:HG23	2.14	0.48
34:DN:47:GLU:OE2	34:DN:51:ARG:NE	2.46	0.48
1:AA:1016:A:C2	1:AA:1017:U:H4'	2.48	0.48
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.44	0.48
1:BA:510:A:C5'	1:BA:511:C:P	3.01	0.48
22:CA:1714:U:H5"	22:CA:1715:G:H5'	1.95	0.48
28:CG:80:THR:CG2	28:CG:81:GLU:N	2.77	0.48
53:DA:837:C:N4	69:DA:6883:HOH:O	2.47	0.48
1:AA:1003:G:N2	1:AA:1004:A:O2'	2.46	0.48
5:AE:162:GLU:HG3	5:AE:163:GLU:N	2.28	0.48
13:AM:107:ARG:HH21	13:AM:113:ARG:HB3	1.79	0.48
1:BA:159:G:N2	1:BA:161:A:H3'	2.29	0.48
6:BF:86:ARG:HH11	6:BF:86:ARG:CG	2.27	0.48
10:BJ:17:LEU:HD11	10:BJ:94:ALA:HB3	1.95	0.48
22:CA:1339:G:N2	22:CA:1603:A:N3	2.62	0.48
27:CF:38:MET:HG2	27:CF:152:LEU:HB3	1.96	0.48
53:DA:137:U:H2'	53:DA:140:C:C1'	2.44	0.48
53:DA:1342:A:OP1	41:DU:40:LYS:NZ	2.40	0.48
27:DF:40:VAL:HG11	27:DF:43:ALA:HB2	1.95	0.48
55:DI:66:GLY:O	55:DI:67:THR:CB	2.62	0.48
4:AD:17:THR:HG22	4:AD:18:ASP:N	2.29	0.48
1:BA:1492:A:N7	1:BA:1493:A:C2	2.82	0.48
19:BS:29:LYS:CB	19:BS:30:PRO:HD2	2.44	0.48
22:CA:563:A:N3	38:CR:37:GLN:NE2	2.61	0.48
22:CA:818:G:O2'	22:CA:819:A:O4'	2.27	0.48
22:CA:2020:A:H5'	48:C1:9:THR:CG2	2.44	0.48
42:CV:54:GLN:N	42:CV:55:PRO:HD3	2.28	0.48
53:DA:2251:OMG:HM23	53:DA:2251:OMG:H1'	1.67	0.48
30:DJ:21:SER:HB3	30:DJ:22:PRO:HD3	1.96	0.48
5:AE:94:VAL:HG22	5:AE:111:MET:CE	2.44	0.47
1:BA:121:U:H5"	1:BA:122:G:OP2	2.14	0.47
1:BA:205:A:N1	1:BA:206:C:N4	2.62	0.47
14:BN:42:TRP:CE2	14:BN:44:ALA:HB3	2.49	0.47
22:CA:17:G:H4'	38:CR:25:TYR:CE2	2.48	0.47
22:CA:1339:G:OP1	41:CU:17:SER:OG	2.30	0.47
22:CA:1497:U:OP2	22:CA:1498:C:N4	2.46	0.47
27:CF:20:PHE:HB2	27:CF:22:TYR:CE1	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CH:51:ARG:HG3	29:CH:52:ALA:N	2.28	0.47
38:CR:78:LYS:HE2	38:CR:117:LEU:HD21	1.95	0.47
42:CV:74:ASN:O	42:CV:74:ASN:ND2	2.44	0.47
53:DA:811:U:H2'	33:DM:21:ARG:HA	1.96	0.47
53:DA:1105:U:H2'	53:DA:1106:G:C8	2.49	0.47
53:DA:2305:U:C2	27:DF:151:GLY:HA3	2.48	0.47
53:DA:2609:U:H5	66:DA:3194:EDO:H12	1.74	0.47
58:DA:3205:MPD:C5	58:DA:3205:MPD:HM2	2.44	0.47
1:AA:1429:A:O2'	53:DA:1703:G:O3'	2.32	0.47
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.14	0.47
53:DA:2291:U:H2'	53:DA:2292:U:C6	2.49	0.47
53:DA:2813:A:H2	53:DA:2887[B]:A:C6	2.31	0.47
1:AA:913:A:OP1	12:AL:88:LYS:NZ	2.47	0.47
11:AK:16:VAL:HG23	11:AK:17:SER:N	2.28	0.47
22:CA:223:A:O2'	22:CA:420:C:O2	2.30	0.47
22:CA:249:C:H5'	22:CA:2394:C:O2'	2.13	0.47
22:CA:2200:C:O2	22:CA:2226:C:N4	2.47	0.47
31:CK:37:ARG:NH2	31:CK:44:TYR:OH	2.47	0.47
53:DA:545:U:H3'	53:DA:546:U:H4'	1.95	0.47
30:DJ:22:PRO:HB2	30:DJ:23:PRO:HD3	1.96	0.47
1:AA:159:G:H8	1:AA:159:G:H5"	1.79	0.47
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.96	0.47
14:AN:42:TRP:CD1	14:AN:43:ASN:N	2.83	0.47
5:BE:26:LYS:HE3	5:BE:26:LYS:CA	2.44	0.47
5:BE:81:LEU:HB3	5:BE:147:MET:SD	2.54	0.47
22:CA:118:A:N3	22:CA:178:G:H1'	2.29	0.47
26:CE:52:VAL:HG21	26:CE:81:GLY:HA2	1.95	0.47
42:CV:13:VAL:HG21	42:CV:39:ILE:CG2	2.44	0.47
45:CY:72:ARG:HB2	45:CY:72:ARG:CZ	2.45	0.47
53:DA:1847:A:H8	53:DA:1847:A:O5'	1.98	0.47
53:DA:2162:G:H5"	53:DA:2171:A:H2'	1.95	0.47
53:DA:2534:A:H2'	53:DA:2535:G:O5'	2.14	0.47
1:AA:26:A:H2'	1:AA:27:G:H5'	1.95	0.47
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.95	0.47
13:AM:33:ILE:HD11	13:AM:63:PHE:CE1	2.50	0.47
1:BA:411:A:P	4:BD:26:ARG:HH12	2.38	0.47
1:BA:455:G:C2	1:BA:478:A:C2	3.02	0.47
22:CA:558:U:H1'	31:CK:47:HIS:HB3	1.96	0.47
33:CM:29:LYS:C	33:CM:31:GLY:H	2.17	0.47
53:DA:1378:A:O2'	53:DA:1380:G:N7	2.47	0.47
53:DA:1582:C:C4	53:DA:1583:A:C2	3.02	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:1971:U:OP2	53:DA:1971:U:H4'	2.14	0.47
23:DB:28:C:OP1	36:DP:31:THR:HG21	2.15	0.47
29:DH:43:ASN:O	29:DH:46:PHE:HB3	2.15	0.47
55:DI:68:PRO:HD2	55:DI:69:PHE:CE2	2.49	0.47
9:BI:36:GLU:HA	9:BI:45:ARG:HE	1.79	0.47
22:CA:647:G:N2	22:CA:2350:C:O3'	2.48	0.47
22:CA:820:A:N6	69:CA:3772:HOH:O	2.43	0.47
22:CA:1178:C:C2	22:CA:1179:G:N7	2.82	0.47
39:CS:8:GLY:O	39:CS:10:LYS:NZ	2.39	0.47
53:DA:289:G:H2'	53:DA:290:U:O4'	2.14	0.47
53:DA:871:U:H2'	53:DA:872:U:C6	2.50	0.47
59:DA:3222:PUT:H41	59:DA:3222:PUT:H11	1.47	0.47
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.96	0.47
1:AA:207:C:H2'	1:AA:208:U:C2	2.49	0.47
1:AA:944:G:N1	1:AA:1338:G:OP2	2.41	0.47
1:AA:1228:C:P	13:AM:107:ARG:NH2	2.88	0.47
2:AB:20:THR:HG22	2:AB:39:HIS:CE1	2.50	0.47
5:AE:80:THR:OG1	5:AE:122:ASN:O	2.32	0.47
6:AF:14:GLN:NE2	4:BD:166:GLU:OE1	2.48	0.47
15:AO:89:ARG:NH1	53:DA:716:A:P	2.88	0.47
15:AO:89:ARG:NH1	53:DA:716:A:OP1	2.48	0.47
18:AR:21:ILE:HG21	18:AR:54:GLN:HB3	1.95	0.47
1:BA:765:G:C6	1:BA:812:G:C4	3.02	0.47
7:BG:4:ARG:HG3	7:BG:5:ARG:N	2.29	0.47
7:BG:42:ILE:HG21	7:BG:116:MET:HG3	1.96	0.47
13:BM:93:ARG:NH2	19:BS:80:TYR:CE1	2.82	0.47
22:CA:621:A:OP2	33:CM:99:ASN:ND2	2.45	0.47
22:CA:818:G:H2'	22:CA:819:A:H5"	1.97	0.47
22:CA:2019:A:H4'	38:CR:34:VAL:HG21	1.96	0.47
22:CA:2379:G:H4'	36:CP:21:LEU:HD11	1.97	0.47
22:CA:2674:G:H4'	32:CL:30:ARG:HD2	1.97	0.47
23:CB:23:G:O6	69:CB:304:HOH:O	2.19	0.47
29:CH:68:ARG:NH1	29:CH:114:GLU:OE1	2.48	0.47
35:CO:8:ARG:HB3	35:CO:10:LEU:HG	1.95	0.47
36:CP:34:HIS:N	36:CP:65:THR:O	2.47	0.47
53:DA:281:C:H2'	53:DA:282:A:C8	2.50	0.47
53:DA:493:G:H2'	53:DA:494:G:O4'	2.14	0.47
53:DA:1171:G:N3	53:DA:1179:G:C2	2.83	0.47
53:DA:1171:G:H3'	53:DA:1172:C:C5	2.50	0.47
53:DA:1475:G:H5'	69:DA:4930:HOH:O	2.14	0.47
53:DA:1714:U:H5"	53:DA:1715:G:H5'	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:2286:G:OP1	49:D2:30:LYS:NZ	2.37	0.47
53:DA:2498:OMC:HM22	53:DA:2499:C:O4'	2.15	0.47
59:DA:3222:PUT:H42	69:DL:343:HOH:O	2.13	0.47
30:DJ:19:ASN:N	30:DJ:20:PRO:HD2	2.29	0.47
8:AH:108:LYS:HG3	8:AH:121:LEU:HD11	1.97	0.47
9:AI:19:VAL:HG13	9:AI:65:ILE:HG22	1.97	0.47
10:AJ:7:ARG:CG	10:AJ:101:SER:HB2	2.44	0.47
1:BA:1394:A:C5	1:BA:1501:C:H4'	2.49	0.47
2:BB:217:VAL:O	2:BB:221:VAL:HG23	2.15	0.47
3:BC:7:PRO:HG2	3:BC:184:TYR:CG	2.50	0.47
4:BD:107:PHE:CG	4:BD:145:ILE:HD11	2.50	0.47
13:BM:14:HIS:HB2	13:BM:17:ILE:HD12	1.97	0.47
22:CA:1246:A:O2'	26:CE:40:ARG:NH2	2.47	0.47
22:CA:1581:G:C6	22:CA:1582:C:C4	3.03	0.47
24:CC:260:ASN:C	24:CC:262:ARG:H	2.18	0.47
29:CH:72:ILE:HG23	29:CH:142:VAL:HG22	1.97	0.47
41:CU:8:LEU:O	46:CZ:29:ARG:NH1	2.46	0.47
42:CV:39:ILE:HG22	42:CV:39:ILE:O	2.14	0.47
49:C2:11:LEU:HA	49:C2:50:LYS:O	2.15	0.47
53:DA:1133:A:N3	59:DA:3214:PUT:H22	2.30	0.47
53:DA:1309:G:H4'	50:D3:7:PRO:HB2	1.96	0.47
55:DI:29:ASP:OD1	55:DI:30:SER:N	2.48	0.47
30:DJ:12:GLN:HA	30:DJ:56:PRO:HA	1.97	0.47
30:DJ:113:LYS:O	30:DJ:117:MET:HG2	2.15	0.47
33:DM:57:LEU:HD22	51:D4:54:ASP:HB3	1.97	0.47
1:AA:76:G:H2'	1:AA:76:G:N3	2.29	0.47
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.96	0.47
5:BE:136:VAL:O	5:BE:138:ARG:N	2.47	0.47
11:BK:49:GLY:O	11:BK:69:ARG:NH2	2.48	0.47
11:BK:97:ILE:HD11	21:BU:16:LEU:HG	1.96	0.47
13:BM:8:ASN:O	13:BM:10:PRO:HD2	2.15	0.47
17:BQ:10:GLY:HA3	17:BQ:25:ILE:HD13	1.97	0.47
22:CA:574:A:H4'	22:CA:575:A:C5'	2.45	0.47
22:CA:668:A:H2'	22:CA:670:A:H62	1.80	0.47
33:CM:77:ILE:HG23	33:CM:100:ILE:HD11	1.96	0.47
53:DA:1555:G:OP1	59:DA:3220:PUT:H41	2.13	0.47
1:AA:75:G:C2	1:AA:76:G:H1'	2.50	0.47
1:AA:451:A:H61	1:AA:481:G:H5'	1.80	0.47
2:AB:129:LEU:HD22	2:AB:134:ALA:HB2	1.97	0.47
3:AC:185:ASN:OD1	3:AC:186:THR:N	2.45	0.47
1:BA:1053:G:N7	1:BA:1199:U:H3'	2.30	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1345:U:H4'	1:BA:1346:A:H5'	1.97	0.47
1:BA:1376:U:H2'	1:BA:1377:A:C8	2.50	0.47
2:BB:117:LEU:HA	2:BB:120:GLN:HG2	1.97	0.47
3:BC:19:ASN:ND2	14:BN:90:ARG:O	2.47	0.47
12:BL:14:ARG:NH1	12:BL:15:LYS:H	2.13	0.47
13:BM:114:LYS:CB	13:BM:115:PRO:HD3	2.45	0.47
22:CA:135:U:H3	22:CA:144:A:H61	1.61	0.47
22:CA:514:A:N3	22:CA:581:C:O2'	2.41	0.47
22:CA:545:U:H2'	22:CA:547:A:H5'	1.96	0.47
22:CA:751:A:C6	22:CA:789:A:C6	3.03	0.47
22:CA:1061:U:OP2	30:CJ:10:LYS:NZ	2.48	0.47
29:CH:135:HIS:CG	29:CH:136:SER:H	2.32	0.47
32:CL:38:ILE:HD11	32:CL:112:PHE:CZ	2.50	0.47
53:DA:137:U:H5"	53:DA:140:C:C4	2.50	0.47
53:DA:435:C:H2'	53:DA:436:C:H5'	1.96	0.47
28:DG:86:LYS:HG2	28:DG:132:VAL:HG22	1.97	0.47
38:DR:19:LYS:CD	57:DR:202:PG4:H41	2.43	0.47
1:AA:109:A:H2'	1:AA:326:G:N2	2.31	0.46
1:AA:1464:U:P	37:DQ:109:ARG:HH12	2.38	0.46
6:AF:102:MET:CE	18:AR:24:LYS:HB3	2.45	0.46
2:BB:28:LYS:N	2:BB:29:PRO:CD	2.78	0.46
3:BC:185:ASN:OD1	3:BC:186:THR:N	2.47	0.46
14:BN:32:SER:HB2	14:BN:42:TRP:NE1	2.30	0.46
22:CA:1081:U:H4'	30:CJ:124:ALA:HB1	1.96	0.46
22:CA:1585:C:C2'	22:CA:1586:A:H5'	2.45	0.46
22:CA:1869:G:H3'	22:CA:1870:C:C5'	2.45	0.46
42:CV:4:LYS:O	42:CV:94:ARG:NH2	2.42	0.46
53:DA:137:U:C6	53:DA:140:C:H1'	2.51	0.46
51:D4:42:ARG:NH2	69:D4:113:HOH:O	2.48	0.46
1:AA:1229:A:OP2	13:AM:113:ARG:NH1	2.48	0.46
8:AH:3:MET:SD	8:AH:3:MET:N	2.73	0.46
10:AJ:35:GLN:HG3	10:AJ:78:GLU:HG2	1.98	0.46
14:AN:21:PHE:HA	14:AN:25:ALA:CB	2.45	0.46
19:AS:7:LYS:H	19:AS:7:LYS:HD2	1.79	0.46
7:BG:50:LEU:CD1	7:BG:61:ALA:HB1	2.45	0.46
14:BN:42:TRP:NE1	14:BN:44:ALA:HB3	2.30	0.46
15:BO:20:ASN:O	15:BO:22:THR:N	2.46	0.46
53:DA:545:U:H6	53:DA:548:G:P	2.38	0.46
53:DA:1700:A:N1	69:DA:6711:HOH:O	2.36	0.46
24:DC:227:PRO:HA	24:DC:233:GLY:HA2	1.96	0.46
30:DJ:20:PRO:HB2	30:DJ:23:PRO:HD2	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DQ:112:GLU:HG2	37:DQ:114:LEU:HG	1.96	0.46
41:DU:92:ASN:O	41:DU:93:LEU:HB2	2.16	0.46
7:AG:62:PHE:HE2	7:AG:66:LEU:HD22	1.81	0.46
10:AJ:42:LEU:HB2	10:AJ:71:LEU:HB3	1.96	0.46
1:BA:677:U:H3	1:BA:713:G:H22	1.62	0.46
5:BE:11:LEU:HG	5:BE:12:GLN:N	2.30	0.46
10:BJ:5:ARG:HB3	10:BJ:77:VAL:HG13	1.97	0.46
11:BK:14:LYS:O	11:BK:15:GLN:HB3	2.16	0.46
11:BK:98:ARG:HA	21:BU:12:PHE:CZ	2.51	0.46
19:BS:30:PRO:HB2	19:BS:50:ALA:HB2	1.97	0.46
22:CA:223:A:N1	22:CA:407:G:O2'	2.41	0.46
29:CH:31:VAL:HB	29:CH:32:PRO:HD3	1.97	0.46
30:CJ:19:ASN:HA	30:CJ:39:CYS:SG	2.55	0.46
53:DA:1161:C:O2'	39:DS:8:GLY:HA2	2.14	0.46
66:DA:3198:EDO:H12	64:DA:3204:PGE:C3	2.42	0.46
42:DV:73:PHE:CE2	42:DV:75:ALA:HA	2.51	0.46
48:D1:2:ALA:N	69:D1:204:HOH:O	2.48	0.46
1:AA:468:A:C8	1:AA:469:C:C6	3.03	0.46
1:AA:1018:G:N3	1:AA:1018:G:H2'	2.30	0.46
10:AJ:22:THR:CG2	10:AJ:39:PRO:HB3	2.46	0.46
1:BA:502:A:H2'	1:BA:503:C:O4'	2.15	0.46
22:CA:846:U:O2'	22:CA:847:U:P	2.74	0.46
22:CA:2271:G:O6	69:CA:3441:HOH:O	2.21	0.46
22:CA:2790:U:H4'	22:CA:2791:G:OP1	2.15	0.46
24:CC:233:GLY:H	24:CC:242:LYS:HE3	1.81	0.46
40:CT:62:ASP:N	40:CT:62:ASP:OD1	2.49	0.46
53:DA:483:A:H2'	53:DA:484:C:H5'	1.96	0.46
53:DA:961:C:H5'	63:DA:3203:1PE:H222	1.98	0.46
53:DA:2256:G:N3	57:DA:3193:PG4:H31	2.29	0.46
54:DD:99:GLU:HG2	54:DD:182:ALA:HB2	1.98	0.46
49:D2:22:THR:OG1	51:D4:34:THR:OG1	2.26	0.46
1:AA:1152:A:H5"	10:AJ:15:HIS:HB2	1.97	0.46
1:AA:1492:A:H4'	12:AL:44:LYS:HE2	1.97	0.46
9:AI:19:VAL:HG11	9:AI:83:ILE:HA	1.98	0.46
13:AM:6:GLY:HA3	13:AM:66:GLU:HG3	1.97	0.46
13:AM:54:ASP:HA	13:AM:57:ARG:HD2	1.98	0.46
1:BA:1299:A:H2'	1:BA:1299:A:N3	2.31	0.46
6:BF:76:THR:O	6:BF:79:ARG:N	2.47	0.46
16:BP:79:ASN:O	16:BP:80:LYS:HG3	2.15	0.46
22:CA:747:5MU:O2	22:CA:2014:A:H1'	2.15	0.46
22:CA:1808:A:N1	45:CY:28:ARG:HD2	2.31	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CD:121:THR:HB	25:CD:127:PHE:CD2	2.51	0.46
50:C3:43:THR:OG1	50:C3:44:VAL:N	2.48	0.46
55:DI:54:VAL:HG22	55:DI:81:LEU:HD13	1.96	0.46
1:AA:1134:G:H2'	1:AA:1135:U:C6	2.51	0.46
13:BM:93:ARG:NH2	19:BS:80:TYR:HE1	2.13	0.46
14:BN:22:ALA:C	14:BN:26:GLU:OE1	2.53	0.46
22:CA:1820:U:C4	24:CC:159:GLY:HA3	2.50	0.46
22:CA:1853:A:N6	22:CA:1888:G:O2'	2.48	0.46
23:CB:8:C:O3'	36:CP:25:ARG:NH1	2.48	0.46
24:CC:117:GLN:N	24:CC:128:ASN:OD1	2.48	0.46
24:CC:217:ARG:HB3	24:CC:218:PRO:HD2	1.97	0.46
25:CD:113:SER:HB3	25:CD:170:VAL:HG21	1.98	0.46
29:CH:1:MET:SD	29:CH:27:ARG:NH1	2.89	0.46
32:CL:76:VAL:HG22	37:CQ:73:VAL:HG23	1.97	0.46
53:DA:845:A:H5'	53:DA:846:U:OP2	2.15	0.46
34:DN:21:ALA:HB1	34:DN:100:LYS:HG3	1.98	0.46
1:AA:254:G:H4'	17:AQ:17:MET:HE2	1.98	0.46
3:AC:123:GLN:HG2	3:AC:128:VAL:HG21	1.97	0.46
7:AG:83:SER:HB2	7:AG:85:TYR:CE2	2.51	0.46
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.84	0.46
5:BE:81:LEU:HD12	5:BE:120:VAL:HG11	1.97	0.46
7:BG:16:PRO:HB2	9:BI:46:MET:SD	2.56	0.46
14:BN:45:VAL:HG12	19:BS:10:PHE:CE1	2.50	0.46
42:CV:51:ALA:O	42:CV:52:LEU:HB2	2.16	0.46
50:C3:30:VAL:O	50:C3:34:ARG:HG3	2.15	0.46
53:DA:1738:G:HO2'	53:DA:1739:A:H8	1.63	0.46
55:DI:82:ILE:HD12	55:DI:84:TYR:CE2	2.51	0.46
2:AB:126:PHE:CG	2:AB:127:ASP:N	2.84	0.46
14:AN:21:PHE:HB2	14:AN:55:SER:O	2.16	0.46
20:AT:44:LYS:HB3	20:AT:87:ALA:HB3	1.98	0.46
1:BA:532:A:N3	1:BA:532:A:H2'	2.30	0.46
1:BA:1004:A:C2	1:BA:1026:G:C2	3.04	0.46
5:BE:56:VAL:N	5:BE:57:PRO:HD2	2.31	0.46
12:BL:43:LYS:HD2	12:BL:91:PRO:HG3	1.97	0.46
22:CA:533:G:H5'	38:CR:24:TYR:CE1	2.51	0.46
22:CA:1274:A:N3	22:CA:1297:C:H1'	2.30	0.46
22:CA:1783:A:H5'	22:CA:2608:G:H4'	1.97	0.46
25:CD:97:SER:OG	25:CD:98:VAL:N	2.49	0.46
25:CD:149:ASN:O	25:CD:151:THR:O	2.33	0.46
27:CF:40:VAL:HG11	27:CF:50:LEU:HD13	1.98	0.46
42:CV:13:VAL:HG21	42:CV:39:ILE:HG23	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:139:U:O2'	53:DA:141:G:N1	2.44	0.46
53:DA:1585:C:H2'	53:DA:1586:A:O4'	2.15	0.46
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	1.97	0.46
1:BA:510:A:H5"	1:BA:511:C:OP2	2.16	0.46
2:BB:62:SER:HB2	2:BB:227:GLN:HG3	1.97	0.46
5:BE:154:ALA:O	5:BE:156:LYS:N	2.36	0.46
14:BN:23:LYS:C	14:BN:26:GLU:OE2	2.54	0.46
15:BO:89:ARG:HH12	22:CA:716:A:P	2.39	0.46
18:BR:34:THR:CG2	18:BR:38:LYS:HB2	2.45	0.46
22:CA:749:A:H4'	22:CA:1271:G:N3	2.30	0.46
22:CA:1794:A:H2'	22:CA:1795:C:C6	2.51	0.46
22:CA:1982:U:OP1	69:CA:3704:HOH:O	2.21	0.46
50:C3:3:ARG:NE	50:C3:3:ARG:HA	2.31	0.46
55:DI:50:VAL:HG22	55:DI:85:VAL:HG13	1.98	0.46
1:AA:872:A:C8	1:AA:874:G:C8	3.04	0.46
5:AE:94:VAL:HG22	5:AE:111:MET:HE3	1.98	0.46
14:AN:18:ASP:OD1	14:AN:19:LYS:N	2.49	0.46
1:BA:1108:G:H5"	3:BC:176:HIS:CE1	2.51	0.46
4:BD:187:GLU:N	4:BD:190:ASP:OD2	2.41	0.46
7:BG:130:ASN:O	7:BG:130:ASN:ND2	2.48	0.46
9:BI:23:PRO:HA	9:BI:61:LEU:HA	1.98	0.46
9:BI:85:ARG:HA	9:BI:88:MET:CE	2.46	0.46
11:BK:112:ASP:OD1	11:BK:114:THR:HG23	2.16	0.46
15:BO:26:GLU:OE1	15:BO:26:GLU:N	2.44	0.46
22:CA:1170:C:N4	22:CA:1171:G:O6	2.49	0.46
30:CJ:22:PRO:HB2	30:CJ:23:PRO:HD3	1.98	0.46
32:CL:103:VAL:O	32:CL:122:VAL:HB	2.16	0.46
33:CM:94:THR:CG2	33:CM:95:LEU:N	2.79	0.46
39:CS:48:LYS:H	39:CS:48:LYS:HE2	1.81	0.46
44:CX:21:LEU:HA	44:CX:39:ARG:HB2	1.98	0.46
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.50	0.46
55:DI:132:TYR:HB3	55:DI:133:GLU:HG2	1.98	0.46
30:DJ:35:ILE:CG2	30:DJ:36:MET:N	2.79	0.46
34:DN:92:TRP:HE1	58:DN:201:MPD:HM1	1.81	0.46
46:DZ:11:VAL:O	46:DZ:15:ASN:ND2	2.49	0.46
3:AC:77:ILE:HA	3:AC:84:VAL:CG2	2.47	0.45
8:AH:28:PRO:O	8:AH:33:LYS:NZ	2.38	0.45
10:AJ:6:ILE:CG1	10:AJ:76:ILE:HB	2.46	0.45
11:AK:111:THR:HG23	21:AU:3:VAL:HG22	1.98	0.45
1:BA:157:U:C2'	1:BA:158:G:H5'	2.46	0.45
1:BA:1110:A:H5'	1:BA:1110:A:H8	1.81	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1119:C:OP2	9:BI:11:ARG:NH1	2.48	0.45
3:BC:64:ILE:HD13	3:BC:91:VAL:CG1	2.46	0.45
9:BI:19:VAL:HG11	9:BI:83:ILE:HA	1.98	0.45
11:BK:13:ARG:HG3	11:BK:77:TYR:HE1	1.80	0.45
22:CA:483:A:H2'	22:CA:484:C:H5'	1.98	0.45
24:CC:125:LYS:HB2	24:CC:126:PRO:HD2	1.98	0.45
26:CE:145:ASP:HA	26:CE:166:LYS:HB3	1.98	0.45
51:C4:27:ALA:O	51:C4:28:ASN:HB2	2.16	0.45
37:DQ:2:SER:O	37:DQ:6:LYS:HB2	2.16	0.45
39:DS:41:ILE:HD13	39:DS:103:ALA:HA	1.97	0.45
1:BA:1093:A:OP1	7:BG:4:ARG:NH2	2.48	0.45
13:BM:13:LYS:O	13:BM:14:HIS:CG	2.70	0.45
14:BN:42:TRP:CD1	14:BN:45:VAL:HG23	2.51	0.45
22:CA:1363:C:O2'	22:CA:1809:A:N3	2.40	0.45
22:CA:2544:G:H5'	22:CA:2645:G:C2	2.50	0.45
22:CA:2722:G:H2'	22:CA:2723:C:C6	2.51	0.45
23:CB:11:C:O2'	23:CB:15:A:N6	2.48	0.45
53:DA:142:A:C5	53:DA:143:C:N4	2.84	0.45
53:DA:1583:A:O2'	53:DA:1584:U:O5'	2.30	0.45
53:DA:2224:G:P	24:DC:265:LYS:NZ	2.89	0.45
30:DJ:86:ILE:HD13	30:DJ:138:LEU:HD21	1.97	0.45
1:AA:1170:A:H5'	2:AB:139:ARG:NH2	2.30	0.45
2:AB:10:LEU:HD12	2:AB:15:HIS:ND1	2.31	0.45
3:AC:150:LYS:HB3	3:AC:169:ARG:CG	2.46	0.45
7:AG:44:TYR:O	7:AG:48:GLU:N	2.40	0.45
1:BA:840:C:H2'	1:BA:841:C:C5'	2.46	0.45
1:BA:1003:G:H21	1:BA:1005:A:H5'	1.81	0.45
10:BJ:92:LEU:O	10:BJ:93:ALA:HB2	2.16	0.45
20:BT:5:LYS:HD3	20:BT:7:ALA:H	1.80	0.45
21:BU:21:ARG:HA	21:BU:24:GLU:HB3	1.98	0.45
22:CA:846:U:H1'	22:CA:847:U:C5	2.51	0.45
22:CA:1724:G:C2'	22:CA:1725:U:H5'	2.47	0.45
22:CA:2133:G:H2'	22:CA:2157:G:H22	1.82	0.45
22:CA:2261:C:C2	22:CA:2280:G:N2	2.84	0.45
23:CB:14:U:H3'	23:CB:15:A:H5'	1.98	0.45
26:CE:23:PHE:CE2	26:CE:25:GLU:HG2	2.51	0.45
41:CU:2:ILE:HG12	41:CU:3:ARG:N	2.32	0.45
53:DA:846:U:O2'	53:DA:847:U:P	2.74	0.45
53:DA:2189:U:H2'	53:DA:2190:G:O4'	2.16	0.45
53:DA:2321:U:H5'	53:DA:2322:A:OP2	2.16	0.45
66:DA:3210:EDO:O1	57:DR:202:PG4:H32	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:140:GLU:OE1	27:DF:140:GLU:N	2.49	0.45
37:DQ:4:ILE:H	37:DQ:4:ILE:HD12	1.82	0.45
1:AA:657:U:O2	15:AO:22:THR:HG23	2.16	0.45
1:AA:1423:G:OP1	32:DL:49:ARG:NH2	2.49	0.45
1:BA:833:G:C6	1:BA:834:U:C4	3.04	0.45
1:BA:1097:C:H4'	2:BB:139:ARG:HH21	1.81	0.45
16:BP:2:VAL:HG13	16:BP:65:ALA:HA	1.98	0.45
17:BQ:61:ILE:HG13	17:BQ:73:TRP:HE3	1.82	0.45
22:CA:637:A:P	33:CM:112:LEU:HB3	2.56	0.45
22:CA:1047:G:N2	22:CA:1110:G:O2'	2.50	0.45
22:CA:2024:G:C4	22:CA:2040:G:N2	2.84	0.45
53:DA:2886[A]:A:H2'	53:DA:2887[A]:A:H8	1.81	0.45
58:DA:3205:MPD:HM2	58:DA:3205:MPD:H52	1.98	0.45
24:DC:2:ALA:N	24:DC:20:VAL:O	2.49	0.45
55:DI:132:TYR:H	55:DI:133:GLU:HB2	1.82	0.45
1:AA:1312:G:C5'	19:AS:6:LYS:HE2	2.47	0.45
1:BA:77:A:H2'	1:BA:78:A:C8	2.52	0.45
1:BA:501:C:OP1	12:BL:114:ARG:NH2	2.50	0.45
1:BA:1041:G:H2'	1:BA:1042:A:C8	2.51	0.45
6:BF:88:MET:SD	6:BF:90:MET:HE2	2.56	0.45
13:BM:48:LEU:HD22	13:BM:53:ILE:HG12	1.99	0.45
22:CA:27:G:C2	22:CA:512:G:N3	2.85	0.45
22:CA:644:A:H2'	22:CA:645:C:O4'	2.16	0.45
22:CA:1906:G:C8	22:CA:1929:G:H2'	2.52	0.45
22:CA:2807:U:C4	22:CA:2808:G:N7	2.84	0.45
24:CC:210:ALA:HA	24:CC:213:TRP:NE1	2.32	0.45
53:DA:1171:G:C4	53:DA:1179:G:N2	2.84	0.45
53:DA:1539:U:H2'	53:DA:1540:G:H8	1.80	0.45
53:DA:1853:A:N1	53:DA:2087:G:H1'	2.31	0.45
55:DI:85:VAL:HG22	55:DI:92:ALA:HB2	1.98	0.45
55:DI:119:PRO:HG2	55:DI:122:GLN:HB2	1.98	0.45
44:DX:39:ARG:HD3	69:DX:101:HOH:O	2.16	0.45
1:AA:405:U:O4	4:AD:2:ALA:N	2.50	0.45
7:AG:16:PRO:HB3	9:AI:43:THR:HG23	1.98	0.45
1:BA:96:U:O2'	1:BA:97:G:H5'	2.17	0.45
1:BA:464:U:N3	1:BA:467:U:OP2	2.37	0.45
1:BA:542:G:H5'	4:BD:39:GLY:HA3	1.98	0.45
1:BA:1309:G:H1'	13:BM:73:ILE:HG23	1.99	0.45
5:BE:134:ILE:HD12	5:BE:134:ILE:H	1.82	0.45
7:BG:26:PHE:CD2	7:BG:62:PHE:HE2	2.35	0.45
14:BN:23:LYS:O	14:BN:26:GLU:OE2	2.35	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:BP:46:LYS:HD3	16:BP:47:GLU:N	2.26	0.45
23:CB:28:C:P	36:CP:31:THR:HG21	2.57	0.45
53:DA:1846:G:H2'	53:DA:1847:A:C8	2.52	0.45
54:DD:85:ALA:H	54:DD:88:GLU:HG3	1.82	0.45
32:DL:47:ILE:HB	32:DL:48:PRO:HD2	1.98	0.45
33:DM:81:ASP:HB3	33:DM:100:ILE:HD13	1.98	0.45
1:AA:5:U:H3'	1:AA:5:U:H6	1.81	0.45
1:AA:1031:C:O2'	1:AA:1032:G:OP2	2.26	0.45
1:AA:1079:G:H5'	5:AE:134:ILE:CD1	2.46	0.45
1:AA:1097:C:H4'	2:AB:139:ARG:HH21	1.81	0.45
10:AJ:67:ILE:HG13	14:AN:96:LEU:HD13	1.99	0.45
21:AU:6:VAL:HG22	21:AU:15:ALA:HB1	1.99	0.45
1:BA:247:G:C6	1:BA:278:G:C2	3.05	0.45
1:BA:1402:4OC:HM22	1:BA:1403:C:H5'	1.98	0.45
5:BE:153:VAL:O	5:BE:156:LYS:HB2	2.17	0.45
22:CA:2114:A:N6	22:CA:2119:A:N7	2.65	0.45
29:CH:41:LYS:HA	29:CH:44:ILE:HD13	1.99	0.45
39:CS:27:ILE:O	39:CS:66:HIS:NE2	2.49	0.45
40:CT:29:VAL:CG1	40:CT:55:ILE:HD11	2.46	0.45
42:CV:45:HIS:HD2	42:CV:58:ILE:HG23	1.82	0.45
53:DA:48:G:N2	53:DA:49:A:N1	2.64	0.45
53:DA:836:G:OP1	69:DA:8111:HOH:O	2.21	0.45
5:AE:161:VAL:O	5:AE:164:ILE:N	2.47	0.45
5:BE:148:ASN:ND2	5:BE:153:VAL:HG12	2.31	0.45
6:BF:91:ARG:HG3	6:BF:93:LYS:NZ	2.32	0.45
8:BH:7:ILE:HB	8:BH:77:ARG:NH1	2.32	0.45
22:CA:457:A:N1	22:CA:470:A:H5"	2.31	0.45
53:DA:1746:A:H2'	53:DA:1747:U:C6	2.52	0.45
53:DA:2256:G:H21	57:DA:3193:PG4:C3	2.29	0.45
35:DO:73:ASN:HA	35:DO:76:VAL:HG13	1.99	0.45
8:AH:25:VAL:HG22	8:AH:63:LEU:HD21	1.99	0.45
10:AJ:5:ARG:HG2	10:AJ:77:VAL:HA	1.99	0.45
1:BA:842:U:O5'	1:BA:842:U:H6	2.00	0.45
2:BB:124:GLY:O	2:BB:125:THR:HG22	2.16	0.45
7:BG:50:LEU:HD13	7:BG:61:ALA:HB1	1.98	0.45
11:BK:23:ILE:HD11	11:BK:93:ARG:HA	1.98	0.45
42:CV:5:ILE:HD12	42:CV:67:VAL:HG12	1.98	0.45
32:DL:113:MET:HE1	32:DL:116:ILE:HD11	1.99	0.45
35:DO:38:LEU:HB3	35:DO:39:PRO:HD3	1.98	0.45
36:DP:31:THR:HG22	36:DP:33:ARG:H	1.81	0.45
1:AA:7:A:O2'	5:AE:106:ILE:HD11	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:31:G:O2'	1:AA:48:C:N4	2.50	0.45
7:AG:111:ARG:O	7:AG:119:ARG:NH2	2.48	0.45
1:BA:731:G:H5'	1:BA:766:A:H4'	1.98	0.45
16:BP:38:PHE:CE2	16:BP:51:ARG:HB3	2.52	0.45
22:CA:17:G:H4'	38:CR:25:TYR:HE2	1.81	0.45
22:CA:193:U:H5	69:CA:3617:HOH:O	1.99	0.45
22:CA:1250:G:C5'	38:CR:6:ARG:HD3	2.47	0.45
22:CA:1509:A:O2'	22:CA:1510:G:OP2	2.32	0.45
22:CA:2046:G:H1'	48:C1:19:HIS:CD2	2.52	0.45
22:CA:2291:U:H2'	22:CA:2292:U:C6	2.52	0.45
22:CA:2303:G:H1'	27:CF:123:ASP:HB3	1.99	0.45
22:CA:2572:A:C8	25:CD:150:GLN:HB3	2.52	0.45
22:CA:2584:U:H2'	22:CA:2585:U:H5'	1.99	0.45
27:CF:40:VAL:HG13	27:CF:41:GLY:N	2.32	0.45
30:CJ:18:ALA:C	30:CJ:20:PRO:HD2	2.38	0.45
51:C4:7:VAL:HB	51:C4:61:CYS:HB3	1.99	0.45
53:DA:1932:A:H2'	53:DA:1933:G:O4'	2.17	0.45
62:DA:3225:SPD:C5	62:DA:3225:SPD:C9	2.94	0.45
34:DN:132:THR:HG22	34:DN:133:LYS:N	2.32	0.45
1:AA:1029:U:O2'	1:AA:1032:G:N1	2.49	0.44
4:AD:58:LYS:HD2	4:AD:204:TYR:OH	2.16	0.44
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HD3	1.97	0.44
1:BA:722:G:N3	1:BA:722:G:H3'	2.32	0.44
5:BE:50:TYR:O	5:BE:63:ALA:HB2	2.17	0.44
6:BF:32:ALA:HB2	6:BF:70:VAL:HG11	1.99	0.44
8:BH:86:TYR:C	8:BH:87:LYS:HD2	2.37	0.44
10:BJ:15:HIS:HB3	10:BJ:70:HIS:NE2	2.31	0.44
22:CA:1248:G:C2	38:CR:3:ARG:HD2	2.52	0.44
25:CD:133:THR:HG23	25:CD:134:HIS:N	2.32	0.44
38:CR:58:ARG:HG3	38:CR:92:ARG:HD2	1.98	0.44
43:CW:29:ILE:HG12	43:CW:30:ILE:N	2.31	0.44
50:C3:44:VAL:HG22	50:C3:45:SER:N	2.32	0.44
53:DA:629:G:H4'	53:DA:650:C:O2	2.17	0.44
53:DA:1587:G:O2'	53:DA:1588:G:H5'	2.17	0.44
53:DA:2078:C:OP1	69:DA:6791:HOH:O	2.21	0.44
2:AB:121:SER:HA	2:AB:126:PHE:CE2	2.53	0.44
2:AB:217:VAL:O	2:AB:221:VAL:HG23	2.17	0.44
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	2.00	0.44
5:AE:74:VAL:HG22	5:AE:76:LEU:HD23	1.99	0.44
5:AE:105:ILE:HG23	5:AE:123:VAL:HG23	2.00	0.44
6:BF:3:HIS:CD2	6:BF:94:HIS:HA	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BG:79:ARG:HG2	7:BG:84:THR:HA	1.99	0.44
22:CA:543:G:H8	22:CA:543:G:H5"	1.82	0.44
22:CA:1937:A:O2'	22:CA:1939:5MU:H71	2.18	0.44
22:CA:2502:G:C5'	22:CA:2503:2MA:H5"	2.47	0.44
24:CC:37:ASN:HB3	24:CC:60:GLN:O	2.17	0.44
24:CC:141:VAL:O	24:CC:162:VAL:N	2.43	0.44
35:CO:114:GLU:HB2	35:CO:118:ARG:HD2	1.99	0.44
41:CU:17:SER:O	41:CU:19:LYS:N	2.38	0.44
50:C3:12:ARG:HG2	50:C3:12:ARG:HH21	1.82	0.44
53:DA:57:C:H2'	53:DA:58:G:O4'	2.18	0.44
27:DF:132:VAL:HG22	27:DF:152:LEU:HB3	2.00	0.44
41:DU:53:VAL:HG11	41:DU:92:ASN:HB3	1.99	0.44
49:D2:47:VAL:CG1	49:D2:48:ILE:N	2.80	0.44
1:AA:158:G:H2'	1:AA:159:G:H5"	1.99	0.44
17:AQ:8:LEU:HD13	17:AQ:25:ILE:HG13	1.99	0.44
20:AT:27:MET:CE	20:AT:57:ILE:HG12	2.48	0.44
1:BA:977:A:O2'	1:BA:979:C:OP2	2.34	0.44
3:BC:153:VAL:HG23	3:BC:157:LEU:HD21	1.99	0.44
5:BE:107:ALA:HB2	5:BE:125:ALA:HB3	1.99	0.44
17:BQ:65:ARG:H	17:BQ:65:ARG:HD2	1.83	0.44
22:CA:225:C:H2'	22:CA:226:A:O4'	2.17	0.44
22:CA:247:G:H4'	22:CA:386:G:C5	2.52	0.44
22:CA:320:A:H4'	22:CA:322:A:N7	2.33	0.44
22:CA:449:A:OP2	69:CA:3239:HOH:O	2.20	0.44
22:CA:1581:G:C5	22:CA:1582:C:C5	3.05	0.44
22:CA:2133:G:N2	22:CA:2158:A:C6	2.86	0.44
22:CA:2619:C:OP1	25:CD:157:LYS:NZ	2.44	0.44
33:CM:81:ASP:O	33:CM:83:ALA:N	2.50	0.44
33:CM:100:ILE:HG12	33:CM:101:ILE:HG23	2.00	0.44
53:DA:481:G:C4	53:DA:507:A:C2	3.06	0.44
53:DA:2813:A:H2	53:DA:2887[B]:A:N6	2.16	0.44
61:DA:3201:PEG:H32	69:DA:3916:HOH:O	2.17	0.44
54:DD:13:ARG:HD3	54:DD:21:SER:OG	2.17	0.44
29:DH:116:ARG:NH2	29:DH:133:GLN:HB3	2.32	0.44
35:DO:116:VAL:HG12	35:DO:117:ASP:N	2.32	0.44
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.17	0.44
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.81	0.44
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.52	0.44
11:AK:34:ILE:HG12	11:AK:70:CYS:SG	2.58	0.44
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.46	0.44
9:BI:50:GLN:N	9:BI:51:PRO:HD2	2.33	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BT:51:PHE:HA	20:BT:54:MET:HG2	1.98	0.44
33:CM:96:LYS:HD3	33:CM:103:ILE:HA	2.00	0.44
53:DA:1867:G:O2'	53:DA:1868:C:H5'	2.17	0.44
53:DA:2386:A:N3	44:DX:41[A]:ARG:HG3	2.32	0.44
30:DJ:18:ALA:C	30:DJ:20:PRO:HD2	2.37	0.44
41:DU:67:VAL:HG22	41:DU:76:ARG:HG3	1.99	0.44
1:AA:495:A:C2	1:AA:496:A:C6	3.05	0.44
10:AJ:10:LEU:CD2	10:AJ:98:VAL:HG12	2.48	0.44
1:BA:216:U:H2'	1:BA:217:C:C6	2.53	0.44
1:BA:266:G:H3'	17:BQ:69:LYS:HB2	1.97	0.44
1:BA:977:A:H2'	1:BA:978:A:H5"	2.00	0.44
1:BA:1169:A:O2'	2:BB:139:ARG:NH2	2.50	0.44
1:BA:1219:A:OP1	14:BN:53:ARG:HD2	2.18	0.44
2:BB:146:ASN:OD1	2:BB:146:ASN:N	2.50	0.44
5:BE:24:THR:HA	5:BE:29:ARG:HA	1.99	0.44
22:CA:674:G:H1'	26:CE:69:ARG:CD	2.48	0.44
22:CA:1450:G:O6	22:CA:1451:C:N4	2.51	0.44
22:CA:1887:C:OP2	69:CA:3696:HOH:O	2.21	0.44
22:CA:2349:G:OP1	51:C4:45:ARG:NH2	2.44	0.44
24:CC:71:LYS:NZ	24:CC:98:ASP:OD2	2.51	0.44
53:DA:280:U:H2'	53:DA:281:C:C6	2.53	0.44
53:DA:2628:C:H5"	59:DA:3195:PUT:H32	1.99	0.44
30:DJ:20:PRO:HB2	30:DJ:23:PRO:CG	2.47	0.44
36:DP:68:LYS:CE	61:DP:201:PEG:H41	2.47	0.44
3:AC:156:ARG:H	3:AC:163:ALA:HA	1.83	0.44
9:AI:36:GLU:HA	9:AI:45:ARG:HE	1.83	0.44
14:AN:30:ILE:O	14:AN:34:VAL:HG23	2.17	0.44
1:BA:1026:G:O6	1:BA:1035:A:N6	2.50	0.44
1:BA:1525:G:OP1	11:BK:122:ARG:NH2	2.50	0.44
3:BC:65:ARG:O	3:BC:66:VAL:O	2.34	0.44
3:BC:155:GLY:HA2	3:BC:163:ALA:HB1	2.00	0.44
11:BK:13:ARG:NH1	11:BK:77:TYR:OH	2.51	0.44
20:BT:67:ILE:CG1	20:BT:71:LYS:HD3	2.47	0.44
22:CA:2680:U:O2'	22:CA:2681:C:P	2.76	0.44
23:CB:22:U:H2'	23:CB:23:G:C8	2.52	0.44
30:CJ:35:ILE:CG2	30:CJ:36:MET:N	2.81	0.44
53:DA:2327:A:H2'	53:DA:2328:A:C8	2.52	0.44
53:DA:2812:G:H2'	53:DA:2813:A:O4'	2.18	0.44
40:DT:110:ARG:CG	40:DT:110:ARG:OXT	2.66	0.44
1:AA:843:U:H3	2:BB:115:LYS:HD3	1.82	0.44
5:AE:132:ASN:OD1	5:AE:134:ILE:HG22	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:110:ARG:HB2	12:AL:119:VAL:HG21	1.98	0.44
13:AM:66:GLU:OE1	13:AM:70:ARG:NH2	2.48	0.44
1:BA:1225:A:H2'	1:BA:1226:C:C5	2.52	0.44
3:BC:40:ARG:HG2	3:BC:55:ILE:CG1	2.48	0.44
5:BE:90:THR:HG22	5:BE:91:GLY:N	2.33	0.44
18:BR:34:THR:HG23	18:BR:36:SER:H	1.82	0.44
53:DA:1783:A:H5'	53:DA:2608:G:H4'	1.99	0.44
53:DA:1847:A:HO2'	53:DA:1848:A:H8	1.63	0.44
33:DM:77:ILE:HD11	33:DM:101:ILE:CG2	2.48	0.44
1:AA:85:U:H6	1:AA:86:G:N1	2.15	0.44
1:AA:1322:C:P	19:AS:78:ARG:HH22	2.40	0.44
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.53	0.44
3:AC:6:HIS:CG	14:AN:89:MET:HB3	2.52	0.44
10:AJ:29:ALA:HA	10:AJ:32:THR:HG22	2.00	0.44
17:AQ:49:GLU:O	17:AQ:50:ASN:HB2	2.18	0.44
6:BF:53:LYS:HA	6:BF:53:LYS:NZ	2.33	0.44
22:CA:12:U:O2	22:CA:12:U:H2'	2.18	0.44
22:CA:118:A:C8	22:CA:119:A:C8	3.06	0.44
22:CA:2307:G:N2	22:CA:2312:U:C4	2.86	0.44
22:CA:2582:G:C2	22:CA:2583:G:C8	3.06	0.44
27:CF:103:LEU:O	27:CF:108:VAL:HG23	2.17	0.44
53:DA:1416:G:C4	53:DA:1417:C:C5	3.06	0.44
53:DA:1721:G:H1'	53:DA:1739:A:N6	2.33	0.44
27:DF:158:THR:CG2	27:DF:160:ALA:H	2.30	0.44
1:AA:237:G:OP1	17:AQ:42:THR:OG1	2.30	0.44
7:AG:72:THR:HG22	7:AG:142:HIS:NE2	2.33	0.44
20:AT:44:LYS:HG3	20:AT:45:ALA:H	1.83	0.44
1:BA:263:A:P	20:BT:74:ARG:NH1	2.91	0.44
1:BA:1217:C:P	14:BN:9:ARG:HH21	2.38	0.44
1:BA:1450:U:O2'	1:BA:1451:U:H2'	2.17	0.44
3:BC:38:LYS:HD3	3:BC:38:LYS:N	2.33	0.44
13:BM:40:ALA:HB3	13:BM:43:VAL:HG13	2.00	0.44
13:BM:46:SER:O	13:BM:47:GLU:HB3	2.18	0.44
14:BN:46:LEU:HD22	19:BS:13:LEU:HD23	2.00	0.44
22:CA:396:G:C1'	45:CY:29:PHE:HB3	2.47	0.44
22:CA:2683:C:H4'	25:CD:13:ARG:NH1	2.33	0.44
24:CC:182:ARG:NH2	24:CC:183:LYS:O	2.51	0.44
53:DA:1494:A:C2	53:DA:1495:A:C4	3.05	0.44
53:DA:1494:A:HO2'	53:DA:1495:A:P	2.41	0.44
53:DA:2813:A:H2	53:DA:2887[B]:A:H61	1.63	0.44
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	2.00	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DJ:80:LEU:CD2	30:DJ:101:ILE:HD13	2.48	0.44
38:DR:20:GLN:HG3	57:DR:202:PG4:H31	1.98	0.44
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.18	0.43
3:AC:83:ASP:HA	3:AC:86:LYS:HG2	1.99	0.43
4:AD:188:ARG:NH2	4:AD:197:GLU:OE2	2.48	0.43
10:AJ:28:THR:O	10:AJ:32:THR:HG22	2.18	0.43
13:AM:4:ILE:CG2	13:AM:60:VAL:HG11	2.48	0.43
17:AQ:7:THR:HG21	17:AQ:60:GLU:CG	2.48	0.43
6:BF:88:MET:SD	6:BF:90:MET:CE	3.06	0.43
6:BF:91:ARG:CG	6:BF:93:LYS:NZ	2.80	0.43
22:CA:468:G:N7	50:C3:39:ARG:NH2	2.63	0.43
22:CA:1090:A:N1	22:CA:1101:U:O2	2.51	0.43
22:CA:2030:6MZ:H9C2	69:CA:3585:HOH:O	2.17	0.43
27:CF:33:LYS:HA	27:CF:96:MET:SD	2.58	0.43
27:CF:44:ILE:HG21	27:CF:79:ILE:HG22	2.00	0.43
36:CP:31:THR:HG22	36:CP:33:ARG:H	1.83	0.43
52:C5:1:MET:HB3	52:C5:34:LYS:HE2	2.00	0.43
53:DA:1490:A:N6	69:DA:5107:HOH:O	2.36	0.43
53:DA:1539:U:C2	53:DA:1540:G:C8	3.06	0.43
24:DC:130:LEU:HD11	24:DC:135:ILE:CG1	2.47	0.43
24:DC:156:ARG:NH2	69:DC:393:HOH:O	2.49	0.43
36:DP:100:HIS:CG	36:DP:101:GLY:N	2.86	0.43
41:DU:5:GLU:HG2	46:DZ:22:LEU:HD13	1.99	0.43
1:AA:1014:A:OP1	19:AS:18:LYS:NZ	2.51	0.43
8:AH:41:LYS:HD2	8:AH:48:ASP:HA	2.00	0.43
1:BA:83:C:O2'	1:BA:86:G:O6	2.36	0.43
1:BA:993:G:O2'	1:BA:994:A:N7	2.50	0.43
1:BA:1127:G:H1	1:BA:1145:A:H61	1.65	0.43
12:BL:45:PRO:HD2	12:BL:46:ASN:H	1.84	0.43
14:BN:26:GLU:N	14:BN:26:GLU:CD	2.61	0.43
27:CF:126:GLY:O	27:CF:158:THR:HG21	2.17	0.43
48:C1:25:VAL:HG13	48:C1:26:THR:N	2.33	0.43
53:DA:5:A:C2	53:DA:2899:A:C2	3.06	0.43
53:DA:1187:G:H5"	39:DS:83:TYR:CE1	2.53	0.43
53:DA:2161:C:H4'	53:DA:2173:A:P	2.58	0.43
1:AA:464:U:C2	1:AA:466:A:H5"	2.53	0.43
8:AH:93:PRO:HG3	8:AH:125:ILE:HD13	2.00	0.43
14:AN:21:PHE:CD1	14:AN:55:SER:HB3	2.52	0.43
1:BA:268:U:H2'	1:BA:269:C:C6	2.53	0.43
1:BA:1359:C:O2'	1:BA:1361:G:N7	2.52	0.43
2:BB:4:VAL:HG12	2:BB:5:SER:N	2.33	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BE:36:LEU:HD21	5:BE:137:VAL:HG11	2.00	0.43
10:BJ:19:ASP:HA	10:BJ:22:THR:HB	2.00	0.43
22:CA:1509:A:N3	22:CA:1510:G:C8	2.86	0.43
22:CA:2578:G:OP1	69:CA:3833:HOH:O	2.21	0.43
29:CH:126:GLY:O	29:CH:146:VAL:N	2.48	0.43
43:CW:21:ARG:NH2	43:CW:87:GLN:O	2.47	0.43
59:DA:3195:PUT:H21	69:DA:5561:HOH:O	2.18	0.43
27:DF:135:GLN:N	27:DF:135:GLN:OE1	2.48	0.43
30:DJ:99:GLY:O	30:DJ:139:VAL:HG22	2.17	0.43
61:DP:201:PEG:H22	61:DP:201:PEG:H42	1.54	0.43
39:DS:93:PHE:HB3	57:DS:202:PG4:H51	1.99	0.43
1:AA:75:G:C4	1:AA:76:G:C8	3.06	0.43
2:AB:9:MET:CE	2:AB:50:PHE:HD2	2.31	0.43
2:AB:27:MET:HE2	2:AB:189:THR:HA	2.01	0.43
5:AE:95:PHE:CZ	5:AE:97:GLN:HG3	2.54	0.43
12:AL:116:LYS:NZ	69:AL:304:HOH:O	2.45	0.43
1:BA:532:A:H61	3:BC:193:TYR:HD2	1.66	0.43
2:BB:32:PHE:N	2:BB:40:ILE:O	2.52	0.43
2:BB:121:SER:HA	2:BB:126:PHE:CE2	2.53	0.43
2:BB:126:PHE:CG	2:BB:127:ASP:N	2.86	0.43
11:BK:106:ARG:HG2	11:BK:106:ARG:HH11	1.84	0.43
12:BL:51:LYS:HD2	12:BL:51:LYS:N	2.33	0.43
14:BN:62:ASN:HB3	14:BN:73:PHE:CD2	2.53	0.43
17:BQ:69:LYS:O	17:BQ:71:LYS:N	2.51	0.43
19:BS:49:ILE:HD13	19:BS:71:LEU:HD22	1.98	0.43
22:CA:125:A:OP2	50:C3:19:ARG:NH2	2.44	0.43
22:CA:572:A:OP2	39:CS:80:ARG:NH2	2.39	0.43
22:CA:666:A:C5'	33:CM:48:ARG:HD2	2.48	0.43
22:CA:1045:C:H4'	22:CA:1046:A:H5'	2.00	0.43
22:CA:1185:G:H5"	22:CA:1186:G:OP2	2.17	0.43
22:CA:1435:G:O2'	22:CA:1436:G:H5'	2.19	0.43
22:CA:2161:C:O2'	22:CA:2173:A:OP2	2.36	0.43
22:CA:2751:G:C2	28:CG:3:ARG:NH1	2.87	0.43
53:DA:388:G:N7	53:DA:390:U:H2'	2.33	0.43
53:DA:2886[A]:A:C6	53:DA:2887[A]:A:C5	3.06	0.43
1:BA:302:G:N3	1:BA:556:C:H4'	2.34	0.43
1:BA:1408:A:C2	1:BA:1494:G:C4	3.07	0.43
22:CA:782:A:H5'	22:CA:783:A:C2	2.53	0.43
22:CA:868:U:C4	22:CA:869:G:N7	2.86	0.43
22:CA:2889:C:N4	22:CA:2890:G:C6	2.87	0.43
31:CK:57:LEU:HD23	31:CK:129:GLU:HA	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:CO:20:MET:HG3	35:CO:21:PHE:N	2.32	0.43
50:C3:24:THR:HG23	50:C3:27:GLY:H	1.83	0.43
53:DA:1183:U:H2'	53:DA:1184:U:C6	2.54	0.43
53:DA:1847:A:P	53:DA:1847:A:C8	3.10	0.43
53:DA:2788:C:O2'	53:DA:2809:A:N3	2.45	0.43
54:DD:33:ARG:NH2	54:DD:74:GLU:O	2.51	0.43
49:D2:35:GLU:OE2	49:D2:48:ILE:HD11	2.18	0.43
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.34	0.43
9:AI:24:GLY:H	9:AI:61:LEU:HA	1.84	0.43
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.19	0.43
1:BA:81:A:C2	1:BA:89:U:O2	2.72	0.43
1:BA:844:G:H3'	1:BA:844:G:N3	2.33	0.43
5:BE:44:GLY:O	5:BE:45:ARG:O	2.35	0.43
8:BH:29:SER:OG	8:BH:30:SER:N	2.51	0.43
9:BI:85:ARG:HA	9:BI:88:MET:HE3	2.01	0.43
10:BJ:6:ILE:HB	10:BJ:76:ILE:O	2.19	0.43
11:BK:98:ARG:HG2	21:BU:12:PHE:HZ	1.83	0.43
22:CA:55:G:C2	22:CA:116:C:C2	3.06	0.43
22:CA:2086:U:H2'	22:CA:2087:G:C8	2.53	0.43
22:CA:2716:C:O2'	22:CA:2717:C:H5'	2.19	0.43
29:CH:23:ALA:O	29:CH:27:ARG:N	2.49	0.43
31:CK:4:PHE:O	38:CR:64:ARG:NH2	2.49	0.43
53:DA:141:G:H3'	53:DA:142:A:C4	2.54	0.43
53:DA:876:C:H2'	53:DA:877:A:O4'	2.19	0.43
53:DA:1385:A:O2'	53:DA:1396:U:O2	2.33	0.43
53:DA:1540:G:H2'	53:DA:1541:C:C6	2.54	0.43
59:DA:3195:PUT:H41	69:DA:5231:HOH:O	2.17	0.43
55:DI:64:VAL:HG13	55:DI:69:PHE:HB2	2.01	0.43
1:AA:475:C:H2'	1:AA:476:U:O4'	2.19	0.43
1:AA:502:A:H2'	1:AA:503:C:O4'	2.18	0.43
8:AH:75:ILE:O	8:AH:75:ILE:HG23	2.19	0.43
1:BA:429:U:H5'	4:BD:9:LEU:HD12	2.00	0.43
1:BA:1190:G:H5'	3:BC:176:HIS:NE2	2.33	0.43
1:BA:1191:A:H5"	3:BC:4:LYS:HE3	2.01	0.43
5:BE:75:ALA:O	5:BE:82:GLN:NE2	2.52	0.43
14:BN:49:GLN:OE1	19:BS:10:PHE:CZ	2.72	0.43
17:BQ:28:PHE:HD2	17:BQ:37:PHE:HB3	1.82	0.43
17:BQ:49:GLU:O	17:BQ:50:ASN:HB2	2.19	0.43
22:CA:1871:A:O2'	22:CA:1872:A:C8	2.72	0.43
22:CA:1973:G:C6	22:CA:1974:C:C4	3.07	0.43
22:CA:2840:C:H5"	35:CO:53:THR:OG1	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CB:35:C:H2'	23:CB:36:C:H5'	2.00	0.43
27:CF:50:LEU:CD2	27:CF:84:PRO:HB2	2.49	0.43
30:CJ:21:SER:HB3	30:CJ:22:PRO:HD3	1.99	0.43
45:CY:71:LEU:HD13	45:CY:76:GLU:HB3	1.99	0.43
53:DA:570:G:H2'	53:DA:2030:6MZ:N7	2.34	0.43
53:DA:914:G:C8	53:DA:914:G:H3'	2.53	0.43
53:DA:2116:G:C6	53:DA:2171:A:N6	2.84	0.43
30:DJ:56:PRO:HG2	30:DJ:72:LYS:HB2	2.01	0.43
48:D1:3:VAL:HG22	48:D1:4:GLN:N	2.34	0.43
1:AA:1464:U:OP2	37:DQ:109:ARG:NH1	2.52	0.43
11:AK:107:ILE:HG13	21:AU:12:PHE:CE2	2.54	0.43
13:AM:107:ARG:HG2	13:AM:107:ARG:HH11	1.83	0.43
1:BA:86:G:H1'	1:BA:87:C:C6	2.54	0.43
1:BA:386:C:C4	1:BA:387:U:C5	3.06	0.43
1:BA:451:A:N1	69:BA:1879:HOH:O	2.37	0.43
1:BA:1144:G:H5"	1:BA:1145:A:OP2	2.19	0.43
5:BE:16:ILE:HD12	5:BE:16:ILE:N	2.34	0.43
12:BL:14:ARG:NH1	12:BL:15:LYS:HE2	2.33	0.43
22:CA:36:G:N3	22:CA:450:G:O2'	2.51	0.43
22:CA:335:C:HO2'	22:CA:336:C:P	2.41	0.43
22:CA:619:G:OP2	22:CA:620:G:N2	2.49	0.43
22:CA:1390:U:C2'	22:CA:1391:U:H5'	2.49	0.43
22:CA:1915:3TD:H10A	22:CA:1916:A:C4	2.53	0.43
22:CA:2419:U:H5"	49:C2:22:THR:HG21	2.01	0.43
22:CA:2680:U:HO2'	22:CA:2681:C:C5'	2.32	0.43
24:CC:182:ARG:NH2	24:CC:266:PHE:HB3	2.34	0.43
25:CD:33:ARG:NH2	25:CD:74:GLU:O	2.52	0.43
30:CJ:80:LEU:CD2	30:CJ:101:ILE:HD13	2.49	0.43
53:DA:1539:U:H2'	53:DA:1540:G:C8	2.54	0.43
53:DA:1930:G:O2'	53:DA:1931:U:OP2	2.37	0.43
29:DH:71:LYS:HB3	29:DH:108:VAL:HG22	2.00	0.43
31:DK:69:ARG:O	31:DK:90:GLU:HB2	2.19	0.43
1:AA:141:G:H2'	1:AA:142:G:H5"	2.01	0.43
7:AG:80:VAL:HG12	7:AG:81:GLY:N	2.34	0.43
7:AG:135:VAL:HG23	7:AG:136:LYS:N	2.33	0.43
9:AI:50:GLN:N	9:AI:51:PRO:HD2	2.34	0.43
9:AI:91:ASP:O	9:AI:92:GLU:CB	2.67	0.43
1:BA:209:U:H4'	1:BA:210:C:OP2	2.19	0.43
1:BA:1498:UR3:O4'	1:BA:1519:MA6:H2	2.19	0.43
3:BC:20:SER:OG	3:BC:36:ASP:OD2	2.36	0.43
7:BG:71:PRO:HG3	7:BG:103:TRP:CH2	2.54	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BJ:26:VAL:HG13	10:BJ:36:VAL:HG11	2.01	0.43
17:BQ:74:THR:HG22	17:BQ:75:LEU:N	2.34	0.43
18:BR:72:ASP:O	18:BR:73:ARG:HD2	2.19	0.43
22:CA:10:A:C2	22:CA:2800:A:C4	3.07	0.43
22:CA:1179:G:C5	22:CA:1180:U:H1'	2.52	0.43
24:CC:97:LYS:HD3	24:CC:97:LYS:N	2.34	0.43
25:CD:151:THR:C	25:CD:153:GLY:N	2.71	0.43
30:CJ:83:ALA:O	30:CJ:105:GLN:NE2	2.51	0.43
34:CN:66:ARG:NH1	34:CN:104:GLU:OE1	2.52	0.43
46:CZ:21:LEU:CD1	46:CZ:46:VAL:HG13	2.49	0.43
53:DA:1433:A:C2'	53:DA:1434:A:H5'	2.48	0.43
53:DA:2895:G:H2'	53:DA:2896:C:C6	2.54	0.43
30:DJ:20:PRO:HB2	30:DJ:23:PRO:HG2	2.00	0.43
1:AA:1152:A:H5"	10:AJ:15:HIS:CD2	2.54	0.43
1:AA:1328:C:H5"	13:AM:28:THR:HG21	1.99	0.43
2:AB:19:GLN:HA	2:AB:38:VAL:HA	2.01	0.43
2:AB:129:LEU:O	2:AB:130:THR:CB	2.67	0.43
4:AD:95:GLU:OE2	4:AD:104:ARG:CZ	2.67	0.43
5:AE:94:VAL:HG13	5:AE:111:MET:CE	2.49	0.43
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.19	0.43
9:AI:24:GLY:N	9:AI:61:LEU:HA	2.34	0.43
10:AJ:22:THR:HG21	10:AJ:39:PRO:CB	2.49	0.43
13:AM:89:LEU:HD23	13:AM:92:ARG:HH21	1.84	0.43
1:BA:214:C:C4	1:BA:215:C:C5	3.07	0.43
22:CA:51:G:N3	22:CA:119:A:C2	2.86	0.43
22:CA:319:G:C4	22:CA:333:G:N2	2.87	0.43
22:CA:825:A:H2'	22:CA:826:U:O4'	2.18	0.43
22:CA:1027:A:N7	22:CA:1126:A:C2	2.86	0.43
22:CA:2478:A:OP2	52:C5:2:LYS:NZ	2.51	0.43
22:CA:2502:G:H5"	22:CA:2503:2MA:H5"	2.01	0.43
22:CA:2632:A:C2	22:CA:2787:C:C2	3.07	0.43
23:CB:35:C:O2'	23:CB:36:C:H5'	2.19	0.43
30:CJ:111:GLN:O	30:CJ:114:ALA:HB3	2.19	0.43
31:CK:120:ARG:O	31:CK:123:LYS:NZ	2.49	0.43
33:CM:56:PRO:HB2	33:CM:58:TYR:CE1	2.54	0.43
53:DA:864:G:C6	53:DA:865:C:N4	2.87	0.43
53:DA:1141:U:H4'	53:DA:1142:A:O4'	2.19	0.43
30:DJ:114:ALA:CB	30:DJ:125:MET:SD	3.07	0.43
50:D3:29:GLN:HG2	61:D3:102:PEG:H32	2.01	0.43
1:AA:501:C:OP1	12:AL:114:ARG:NH2	2.52	0.42
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.18	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:53:ILE:HG22	10:AJ:61:ALA:O	2.18	0.42
5:BE:154:ALA:C	5:BE:156:LYS:N	2.73	0.42
10:BJ:5:ARG:HH21	10:BJ:79:PRO:HG3	1.85	0.42
17:BQ:15:ASP:HA	17:BQ:21:ILE:HD12	2.00	0.42
17:BQ:31:HIS:HB2	17:BQ:38:ILE:CD1	2.49	0.42
22:CA:166:U:OP2	69:CA:3785:HOH:O	2.22	0.42
22:CA:446:G:OP1	38:CR:5:LYS:NZ	2.52	0.42
22:CA:1790:C:O2'	24:CC:208:ALA:HB2	2.18	0.42
22:CA:2304:G:O2'	27:CF:130:MET:O	2.37	0.42
24:CC:17:VAL:HB	24:CC:204:VAL:CG1	2.49	0.42
51:C4:16:LYS:HE2	51:C4:20:GLY:HA2	2.01	0.42
52:C5:16:ILE:HD13	52:C5:25:VAL:HG22	2.01	0.42
53:DA:2566:A:H4'	53:DA:2567:G:H5"	2.01	0.42
54:DD:84:LEU:HD22	54:DD:88:GLU:HB3	2.00	0.42
27:DF:42:GLU:HG2	27:DF:49:LEU:HD23	2.01	0.42
36:DP:83:LEU:HD11	36:DP:113:ALA:O	2.19	0.42
2:AB:47:VAL:N	2:AB:48:PRO:HD2	2.35	0.42
1:BA:295:C:C4	1:BA:296:U:C4	3.07	0.42
4:BD:105:MET:SD	4:BD:143:VAL:HG13	2.59	0.42
14:BN:32:SER:HB2	14:BN:42:TRP:HE1	1.84	0.42
22:CA:1009:A:N3	22:CA:1153:C:O2'	2.44	0.42
22:CA:1338:G:H5"	41:CU:17:SER:HB2	2.00	0.42
22:CA:1509:A:O2'	22:CA:1510:G:P	2.76	0.42
22:CA:1936:A:H2	22:CA:1943:U:H3	1.61	0.42
22:CA:2032:G:N3	25:CD:150:GLN:HG2	2.33	0.42
22:CA:2056:G:C2	22:CA:2057:G:C8	3.07	0.42
22:CA:2307:G:H22	22:CA:2311:A:H2'	1.84	0.42
24:CC:121:ASP:N	24:CC:121:ASP:OD1	2.51	0.42
26:CE:75:SER:OG	26:CE:77:ILE:HG12	2.18	0.42
43:CW:1:MET:HA	43:CW:1:MET:CE	2.49	0.42
53:DA:1740:G:H2'	53:DA:1741:C:O4'	2.20	0.42
1:AA:157:U:H2'	1:AA:158:G:H5'	2.01	0.42
1:AA:196:A:OP1	20:AT:64:LYS:NZ	2.47	0.42
1:AA:1405:G:O4'	1:AA:1519:MA6:H4'	2.20	0.42
10:AJ:93:ALA:HB3	10:AJ:96:VAL:HG23	2.01	0.42
13:AM:32:ALA:O	13:AM:36:ALA:N	2.47	0.42
1:BA:973:G:H1'	10:BJ:56:HIS:HD2	1.84	0.42
19:BS:29:LYS:HB3	19:BS:30:PRO:CD	2.49	0.42
22:CA:124:G:C5	50:C3:19:ARG:NH1	2.87	0.42
22:CA:191:A:H2'	22:CA:192:C:C6	2.54	0.42
22:CA:846:U:H1'	22:CA:847:U:H5	1.84	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CA:1341:G:OP1	22:CA:1397:U:N3	2.47	0.42
22:CA:2531:A:H5'	28:CG:157:TYR:CZ	2.54	0.42
22:CA:2788:C:H2'	22:CA:2789:C:C6	2.55	0.42
26:CE:77:ILE:HG13	26:CE:78:TRP:HE3	1.84	0.42
41:CU:69:ARG:NE	41:CU:69:ARG:O	2.52	0.42
48:C1:13:ARG:HD2	48:C1:17:ARG:NH2	2.35	0.42
53:DA:914:G:C8	53:DA:914:G:C3'	3.02	0.42
27:DF:141:ILE:HG23	27:DF:146:VAL:CG1	2.50	0.42
50:D3:33:ARG:HG2	61:D3:102:PEG:H42	2.01	0.42
1:AA:1082:A:H2'	1:AA:1083:U:O4'	2.20	0.42
8:AH:29:SER:HB3	8:AH:57:PRO:HB2	2.00	0.42
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.50	0.42
1:BA:213:G:N7	1:BA:214:C:C4	2.87	0.42
1:BA:1319:A:OP2	19:BS:5:LEU:CD1	2.68	0.42
1:BA:1361:G:H2'	1:BA:1362:A:H5'	2.01	0.42
6:BF:38:ARG:NH1	6:BF:61:LEU:HD21	2.34	0.42
11:BK:82:LEU:CD2	11:BK:82:LEU:N	2.83	0.42
13:BM:12:HIS:O	13:BM:13:LYS:HG3	2.19	0.42
20:BT:27:MET:O	20:BT:30:THR:OG1	2.31	0.42
22:CA:270:A:OP1	22:CA:271:G:H2'	2.20	0.42
22:CA:290:U:C2	22:CA:291:G:C8	3.07	0.42
22:CA:634:C:H2'	22:CA:635:C:C6	2.55	0.42
22:CA:830:G:C4	22:CA:2448:A:C5	3.08	0.42
22:CA:1867:G:O2'	22:CA:1868:C:H5'	2.19	0.42
22:CA:1867:G:O6	22:CA:1875:G:N2	2.52	0.42
30:CJ:12:GLN:HA	30:CJ:56:PRO:HA	2.02	0.42
32:CL:35:VAL:HG12	32:CL:36:GLY:N	2.35	0.42
53:DA:158:U:H1'	53:DA:169:G:N2	2.33	0.42
53:DA:1172:C:N4	53:DA:1173:U:C2	2.87	0.42
53:DA:1609:A:N6	69:DA:5835:HOH:O	2.52	0.42
1:AA:1431:A:C6	1:AA:1432:G:C6	3.08	0.42
2:AB:124:GLY:O	2:AB:125:THR:HG22	2.19	0.42
4:AD:11:LEU:O	4:AD:15:GLU:HG2	2.20	0.42
4:AD:58:LYS:HD3	4:AD:203:LEU:HD23	2.00	0.42
1:BA:109:A:H2'	1:BA:326:G:N2	2.35	0.42
1:BA:511:C:H5'	4:BD:44:ARG:NH1	2.35	0.42
2:BB:27:MET:CE	2:BB:187:VAL:HG12	2.50	0.42
3:BC:150:LYS:HB2	3:BC:169:ARG:CG	2.49	0.42
11:BK:20:VAL:N	11:BK:35:THR:O	2.52	0.42
18:BR:20:GLU:HA	18:BR:55:LEU:HD13	2.01	0.42
22:CA:41:C:H2'	22:CA:42:A:O4'	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CA:845:A:H3'	22:CA:845:A:N3	2.35	0.42
22:CA:1434:A:O2'	22:CA:1435:G:O4'	2.28	0.42
22:CA:1938:A:OP2	69:CA:3666:HOH:O	2.21	0.42
22:CA:2143:C:H2'	22:CA:2144:G:O4'	2.20	0.42
22:CA:2234:G:C6	22:CA:2235:G:N7	2.87	0.42
22:CA:2547:A:H4'	32:CL:29:HIS:NE2	2.35	0.42
33:CM:77:ILE:O	33:CM:110:VAL:O	2.37	0.42
53:DA:137:U:C6	53:DA:140:C:C6	3.06	0.42
53:DA:686:U:H2'	53:DA:788:A:N1	2.34	0.42
29:DH:72:ILE:HD11	29:DH:110:VAL:HG21	2.00	0.42
30:DJ:86:ILE:CD1	30:DJ:138:LEU:HD21	2.49	0.42
35:DO:96:ARG:HD2	35:DO:114:GLU:OE1	2.19	0.42
42:DV:51:ALA:O	42:DV:52:LEU:CB	2.68	0.42
1:AA:585:G:N3	1:AA:879:C:H4'	2.34	0.42
12:AL:49:LEU:O	12:AL:51:LYS:NZ	2.48	0.42
13:AM:103:LYS:HG2	13:AM:104:THR:HG23	2.01	0.42
3:BC:51:SER:OG	3:BC:72:ARG:NH1	2.52	0.42
3:BC:97:VAL:HB	3:BC:98:PRO:HD2	2.02	0.42
9:BI:80:ARG:O	9:BI:84:THR:HG23	2.19	0.42
11:BK:17:SER:HA	11:BK:79:ILE:HA	2.00	0.42
11:BK:97:ILE:HD11	21:BU:16:LEU:CG	2.50	0.42
14:BN:31:ILE:HG23	14:BN:42:TRP:CH2	2.55	0.42
22:CA:1120:G:C6	22:CA:1121:C:C4	3.07	0.42
22:CA:1196:C:H1'	22:CA:1226:A:C4	2.54	0.42
22:CA:1638:C:H4'	22:CA:2710:C:O2	2.20	0.42
22:CA:2020:A:H5'	48:C1:9:THR:HG21	2.02	0.42
22:CA:2636:C:H2'	22:CA:2637:U:C6	2.54	0.42
22:CA:2824:C:C4	22:CA:2825:G:C5	3.08	0.42
24:CC:168:ASP:OD1	24:CC:168:ASP:N	2.53	0.42
31:CK:110:PRO:O	31:CK:115:GLY:HA3	2.19	0.42
32:CL:108:ARG:HH12	37:CQ:35:GLY:N	2.17	0.42
41:CU:3:ARG:CZ	41:CU:5:GLU:HB2	2.49	0.42
42:CV:34:VAL:HG13	42:CV:67:VAL:HG22	2.02	0.42
53:DA:382:A:C2	53:DA:393:C:C2	3.07	0.42
53:DA:1405:U:H2'	53:DA:1406:U:C6	2.54	0.42
53:DA:1416:G:HO2'	53:DA:1417:C:P	2.42	0.42
53:DA:1482:G:H1'	53:DA:1509:A:H61	1.83	0.42
53:DA:1583:A:HO2'	53:DA:1584:U:P	2.42	0.42
23:DB:35:C:C2'	23:DB:36:C:H5'	2.50	0.42
30:DJ:18:ALA:O	30:DJ:19:ASN:CB	2.67	0.42
43:DW:46:LYS:NZ	69:DW:124:HOH:O	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1064:G:H1'	1:AA:1190:G:N2	2.35	0.42
1:BA:147:G:H2'	1:BA:148:G:C8	2.54	0.42
1:BA:1100:C:OP2	2:BB:95:ARG:HD3	2.20	0.42
4:BD:58:LYS:HA	4:BD:200:ILE:HG12	2.01	0.42
5:BE:96:MET:CE	5:BE:115:LEU:HD11	2.50	0.42
22:CA:289:G:H2'	22:CA:290:U:O4'	2.19	0.42
22:CA:526:A:N6	22:CA:2626:C:H4'	2.34	0.42
22:CA:1914:C:C2'	22:CA:1915:3TD:H5'A	2.50	0.42
22:CA:2189:U:H2'	22:CA:2190:G:C5'	2.49	0.42
22:CA:2273:A:H2'	22:CA:2274:A:C8	2.54	0.42
22:CA:2360:G:C1'	33:CM:60:ARG:HD3	2.49	0.42
22:CA:2550:G:C5	22:CA:2551:C:C5	3.07	0.42
28:CG:101:ASN:OD1	28:CG:116:GLN:NE2	2.49	0.42
39:CS:37:GLU:HB3	39:CS:53:PHE:CE1	2.54	0.42
41:CU:2:ILE:CG1	41:CU:3:ARG:N	2.83	0.42
53:DA:136:G:N1	53:DA:143:C:N4	2.65	0.42
53:DA:483:A:C2'	53:DA:484:C:H5'	2.50	0.42
53:DA:1715:G:N2	53:DA:1744:A:OP2	2.40	0.42
53:DA:1868:C:H2'	53:DA:1869:G:O4'	2.19	0.42
31:DK:7:LYS:O	31:DK:11:VAL:HG23	2.19	0.42
1:AA:2:A:O2'	4:AD:83:LYS:NZ	2.43	0.42
10:AJ:5:ARG:HH21	10:AJ:77:VAL:HG22	1.85	0.42
12:AL:74:LEU:HD21	12:AL:104:CYS:SG	2.60	0.42
1:BA:632:U:H2'	1:BA:632:U:O2	2.20	0.42
1:BA:1118:U:H5"	9:BI:106:ARG:HG3	2.02	0.42
2:BB:27:MET:HE1	2:BB:187:VAL:O	2.20	0.42
5:BE:65:GLU:OE1	5:BE:69:ARG:NH2	2.50	0.42
5:BE:115:LEU:HB3	5:BE:120:VAL:HG23	2.00	0.42
7:BG:22:LEU:HA	7:BG:25:LYS:HE2	2.01	0.42
7:BG:145:ALA:O	7:BG:146:GLU:CG	2.68	0.42
8:BH:78:VAL:HG11	8:BH:125:ILE:HD11	2.01	0.42
15:BO:32:LEU:O	15:BO:36:ILE:HG13	2.20	0.42
22:CA:933:A:H5'	22:CA:934:U:OP2	2.20	0.42
22:CA:995:C:N3	31:CK:3:THR:N	2.67	0.42
22:CA:1262:A:H2	48:C1:7:LYS:HD2	1.84	0.42
22:CA:1384:A:O2'	22:CA:1404:C:O2	2.37	0.42
22:CA:2232:C:P	45:CY:27:ARG:HH12	2.42	0.42
24:CC:76:ALA:HB2	24:CC:96:TYR:CD1	2.55	0.42
40:CT:69:LEU:HB3	40:CT:107:VAL:HG22	2.00	0.42
46:CZ:11:VAL:HG13	46:CZ:57:LEU:HD11	2.01	0.42
53:DA:277:G:O2'	53:DA:278:A:OP2	2.37	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:1132:U:H3'	53:DA:1133:A:H5"	2.02	0.42
53:DA:1532:A:H5"	53:DA:1532:A:H8	1.85	0.42
53:DA:1956:U:H2'	53:DA:1957:C:H5'	2.01	0.42
1:AA:923:A:OP1	5:AE:26:LYS:HG2	2.20	0.42
1:AA:1377:A:N3	7:AG:2:PRO:HG3	2.35	0.42
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	2.02	0.42
9:AI:30:ILE:HA	9:AI:65:ILE:HG13	2.02	0.42
1:BA:408:A:C2	1:BA:435:A:C2	3.08	0.42
3:BC:164:ARG:NH1	3:BC:166:GLU:OE1	2.53	0.42
11:BK:31:ILE:HB	11:BK:46:THR:HG22	2.02	0.42
22:CA:435:C:H2'	22:CA:436:C:H5'	2.00	0.42
22:CA:551:G:H5'	22:CA:551:G:H8	1.84	0.42
22:CA:675:A:C6	22:CA:676:A:C6	3.08	0.42
22:CA:820:A:C6	69:CA:3772:HOH:O	2.72	0.42
22:CA:1352:U:OP2	69:CA:3353:HOH:O	2.22	0.42
22:CA:1992:G:N2	22:CA:1996:C:O2'	2.53	0.42
22:CA:2127:G:N3	22:CA:2162:G:N7	2.68	0.42
30:CJ:99:GLY:O	30:CJ:139:VAL:HG22	2.20	0.42
42:CV:86:ARG:HH12	42:CV:100:SER:HB3	1.85	0.42
42:CV:96:PHE:CE1	42:CV:103:ILE:HG13	2.54	0.42
53:DA:2095:A:H2'	53:DA:2096:C:O4'	2.20	0.42
48:D1:41:HIS:HA	48:D1:49:TYR:OH	2.20	0.42
5:AE:107:ALA:HB2	5:AE:125:ALA:HB3	2.02	0.42
11:AK:28:ASN:O	11:AK:57:LYS:HD3	2.20	0.42
13:AM:12:HIS:HA	13:AM:45:ILE:HG13	2.02	0.42
13:AM:33:ILE:O	13:AM:37:ALA:N	2.46	0.42
1:BA:1049:U:H2'	14:BN:3:LYS:HE3	2.00	0.42
1:BA:1137:C:H1'	1:BA:1138:G:N2	2.35	0.42
3:BC:155:GLY:O	3:BC:157:LEU:N	2.53	0.42
3:BC:178:LEU:H	3:BC:178:LEU:HD22	1.85	0.42
9:BI:24:GLY:N	9:BI:61:LEU:HA	2.35	0.42
10:BJ:35:GLN:HG3	10:BJ:36:VAL:N	2.35	0.42
22:CA:335:C:O2'	22:CA:336:C:P	2.77	0.42
22:CA:335:C:H5"	42:CV:82:ARG:HD3	2.01	0.42
22:CA:1272:A:C5	22:CA:1618:6MZ:H1'	2.54	0.42
22:CA:1637:A:H5'	22:CA:1760:C:O2'	2.20	0.42
24:CC:75:PRO:HB2	24:CC:97:LYS:CE	2.50	0.42
26:CE:42:GLY:HA3	26:CE:90:GLN:O	2.19	0.42
27:CF:122:PHE:C	27:CF:124:GLY:H	2.23	0.42
49:C2:48:ILE:H	49:C2:48:ILE:HD12	1.84	0.42
53:DA:141:G:H2'	53:DA:142:A:N3	2.33	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:860:U:OP1	62:DA:3187:SPD:H92	2.20	0.42
53:DA:2188:U:H2'	53:DA:2189:U:O4'	2.19	0.42
24:DC:247:PRO:HD2	24:DC:248:TRP:CE3	2.54	0.42
40:DT:1:MET:N	40:DT:109:ASP:OD1	2.49	0.42
44:DX:38:VAL:HG12	44:DX:59:LEU:HB2	2.02	0.42
1:AA:933:G:O6	7:AG:3:ARG:NH1	2.49	0.41
1:AA:1152:A:H5'	10:AJ:72:ARG:HH22	1.85	0.41
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.53	0.41
1:BA:1001:C:H2'	1:BA:1002:G:H8	1.84	0.41
1:BA:1213:A:O2'	1:BA:1214:C:H5"	2.19	0.41
1:BA:1317:C:C2'	14:BN:49:GLN:HE21	2.33	0.41
18:BR:43:ARG:HG2	18:BR:44:ILE:H	1.85	0.41
22:CA:214:G:HO2'	22:CA:216:A:HO2'	1.58	0.41
22:CA:2586:U:H2'	22:CA:2587:A:O4'	2.20	0.41
22:CA:2615:U:C2	48:C1:4:GLN:HA	2.55	0.41
31:CK:125:TYR:CE2	31:CK:130:HIS:HA	2.55	0.41
40:CT:84:ARG:HB2	40:CT:96:ILE:CD1	2.50	0.41
43:CW:24:ASN:O	43:CW:24:ASN:ND2	2.53	0.41
52:C5:17:VAL:CG1	52:C5:26:ILE:HD12	2.50	0.41
53:DA:75:G:H4'	46:DZ:48:ARG:NH2	2.35	0.41
53:DA:1175:A:N3	53:DA:1175:A:H2'	2.35	0.41
53:DA:1876:A:H2'	53:DA:1877:A:O4'	2.20	0.41
58:DA:3190:MPD:H52	58:DA:3190:MPD:C1	2.50	0.41
54:DD:186:LEU:HD21	37:DQ:4:ILE:HG21	2.01	0.41
40:DT:4:ILE:HG12	40:DT:106:VAL:HG22	2.02	0.41
46:DZ:2:LYS:O	46:DZ:3:ALA:HB3	2.20	0.41
1:AA:457:G:O6	1:AA:475:C:N4	2.45	0.41
1:AA:744:C:O2'	1:AA:851:G:N2	2.48	0.41
1:AA:1402:4OC:HM42	1:AA:1500:A:H61	1.85	0.41
7:AG:6:VAL:HG12	7:AG:7:ILE:N	2.35	0.41
10:AJ:35:GLN:HB2	10:AJ:77:VAL:HB	2.01	0.41
19:AS:63:THR:HG22	19:AS:65:GLU:H	1.84	0.41
20:AT:28:MET:HE2	20:AT:32:ILE:HD11	2.02	0.41
20:AT:29:ARG:O	20:AT:33:LYS:HG3	2.20	0.41
1:BA:374:A:OP1	1:BA:452:A:N1	2.53	0.41
6:BF:92:THR:HG22	6:BF:93:LYS:N	2.35	0.41
15:BO:45:GLU:HG2	15:BO:46:HIS:N	2.35	0.41
17:BQ:16:LYS:O	17:BQ:17:MET:SD	2.78	0.41
18:BR:46:GLY:O	18:BR:47:THR:O	2.38	0.41
21:BU:39:GLU:HG2	21:BU:43:THR:HB	2.02	0.41
22:CA:674:G:H1'	26:CE:69:ARG:NE	2.34	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CA:684:G:OP1	50:C3:16:HIS:ND1	2.44	0.41
22:CA:818:G:C2'	22:CA:819:A:H5"	2.51	0.41
22:CA:1059:G:H4'	30:CJ:117:MET:HE2	2.02	0.41
22:CA:2445:2MG:HM21	22:CA:2449:U:O4	2.20	0.41
26:CE:83:VAL:O	26:CE:83:VAL:HG12	2.20	0.41
32:CL:92:GLU:O	32:CL:93:GLN:HB2	2.19	0.41
53:DA:523:C:H4'	53:DA:540:C:O2	2.20	0.41
53:DA:1084:A:C6	53:DA:1085:A:C6	3.08	0.41
53:DA:2114:A:OP2	53:DA:2115:G:C6	2.73	0.41
53:DA:2129:C:N4	53:DA:2130:U:O4	2.54	0.41
53:DA:2547:A:H4'	32:DL:29:HIS:NE2	2.35	0.41
24:DC:130:LEU:HD11	24:DC:135:ILE:HG13	2.02	0.41
31:DK:31:GLU:HG3	31:DK:142:ILE:HG13	2.03	0.41
1:AA:68:G:C5	1:AA:69:G:H1'	2.55	0.41
1:AA:757:U:O2'	1:AA:879:C:O2	2.34	0.41
6:AF:99:ALA:HB1	6:AF:103:VAL:HB	2.01	0.41
11:AK:89:PRO:HG3	21:AU:32:VAL:HG11	2.02	0.41
13:AM:107:ARG:NH2	13:AM:113:ARG:HB3	2.35	0.41
1:BA:532:A:N6	3:BC:193:TYR:HB3	2.36	0.41
2:BB:184:PHE:CE2	2:BB:198:PHE:CD1	3.08	0.41
8:BH:111:MET:HB2	8:BH:115:ALA:HB3	2.02	0.41
14:BN:53:ARG:NH2	19:BS:37:ARG:NH2	2.68	0.41
19:BS:53:ASN:ND2	19:BS:56:GLN:O	2.53	0.41
22:CA:250:G:P	51:C4:13:ARG:HH12	2.41	0.41
22:CA:279:A:H61	22:CA:361:G:H1'	1.85	0.41
22:CA:2747:G:O6	22:CA:2755:C:H5"	2.20	0.41
25:CD:104:VAL:O	25:CD:105:LYS:HB3	2.20	0.41
26:CE:7:ASP:N	26:CE:7:ASP:OD1	2.53	0.41
30:CJ:106:LEU:HD11	30:CJ:140:VAL:HG11	2.02	0.41
31:CK:80:HIS:HB3	31:CK:81:ILE:HG22	2.02	0.41
33:CM:111:ILE:CG2	33:CM:112:LEU:N	2.83	0.41
34:CN:69:PRO:O	34:CN:70:ASP:HB3	2.19	0.41
35:CO:12:ARG:O	35:CO:17:ARG:NH2	2.53	0.41
37:CQ:103:ARG:HB3	37:CQ:108:ALA:HB2	2.02	0.41
43:CW:21:ARG:HA	43:CW:25:LYS:O	2.19	0.41
53:DA:846:U:HO2'	53:DA:847:U:P	2.40	0.41
53:DA:2521:C:C2	53:DA:2545:G:N2	2.88	0.41
53:DA:2886[B]:A:H3'	53:DA:2887[B]:A:C5'	2.51	0.41
24:DC:267:ILE:HD13	24:DC:270:ARG:HH11	1.85	0.41
54:DD:13:ARG:HD2	54:DD:15:PHE:CZ	2.55	0.41
27:DF:175:PHE:HD2	27:DF:177:PHE:CZ	2.38	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DI:51:TYR:OH	55:DI:53:ARG:NH1	2.53	0.41
1:AA:674:G:H3'	69:AA:1910:HOH:O	2.20	0.41
1:AA:842:U:H3'	1:AA:843:U:H4'	2.02	0.41
1:AA:1417:G:C6	1:AA:1482:G:C6	3.08	0.41
14:AN:54:ASP:OD1	14:AN:59:ARG:NE	2.47	0.41
1:BA:33:A:H2'	1:BA:34:C:C6	2.55	0.41
1:BA:254:G:H4'	17:BQ:20:SER:HB2	2.01	0.41
1:BA:296:U:O2'	1:BA:556:C:O2	2.34	0.41
1:BA:421:U:H3'	1:BA:421:U:H6	1.85	0.41
1:BA:451:A:H5"	69:BP:101:HOH:O	2.21	0.41
1:BA:1012:A:N1	1:BA:1018:G:O6	2.53	0.41
4:BD:105:MET:SD	4:BD:143:VAL:CG1	3.09	0.41
15:BO:40:GLN:HA	15:BO:40:GLN:NE2	2.36	0.41
22:CA:1248:G:C5	38:CR:3:ARG:HB2	2.56	0.41
22:CA:1583:A:H1'	22:CA:1585:C:N4	2.36	0.41
22:CA:1599:U:C4	22:CA:1600:C:N4	2.89	0.41
25:CD:77:ARG:NH2	25:CD:200:ASP:OD1	2.44	0.41
33:CM:95:LEU:HD22	33:CM:100:ILE:HD13	2.03	0.41
42:CV:52:LEU:HD23	42:CV:52:LEU:HA	1.92	0.41
44:CX:61:ALA:CB	44:CX:82:ILE:HD12	2.50	0.41
53:DA:275:C:H3'	53:DA:276:U:H5"	2.02	0.41
53:DA:547:A:C8	53:DA:547:A:H3'	2.54	0.41
53:DA:1794:A:H2'	53:DA:1795:C:C6	2.55	0.41
53:DA:2886[A]:A:C4	53:DA:2887[A]:A:C8	3.09	0.41
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	2.02	0.41
34:DN:92:TRP:NE1	58:DN:201:MPD:HM1	2.36	0.41
14:AN:62:ASN:HB3	14:AN:73:PHE:CD2	2.56	0.41
19:AS:40:ILE:HD11	19:AS:71:LEU:HD23	2.03	0.41
1:BA:209:U:H2'	1:BA:209:U:O2	2.20	0.41
5:BE:156:LYS:O	5:BE:159:LYS:NZ	2.53	0.41
10:BJ:57:VAL:HG13	10:BJ:58:ASN:N	2.35	0.41
12:BL:84:GLY:HA2	12:BL:95:TYR:HA	2.02	0.41
20:BT:54:MET:HE3	20:BT:58:VAL:HB	2.02	0.41
22:CA:11:C:H2'	22:CA:12:U:H5'	2.02	0.41
22:CA:1609:A:O2'	22:CA:1610:A:H5'	2.21	0.41
29:CH:11:ASN:OD1	29:CH:11:ASN:N	2.53	0.41
36:CP:15:ARG:HA	36:CP:18:LEU:HD22	2.01	0.41
42:CV:82:ARG:HB2	42:CV:97:LYS:HG3	2.02	0.41
53:DA:141:G:C2'	53:DA:142:A:C4	3.04	0.41
53:DA:435:C:C2'	53:DA:436:C:H5'	2.50	0.41
53:DA:1153:C:OP2	69:DA:3826:HOH:O	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:DA:3202:ACY:H1	69:DA:7057:HOH:O	2.21	0.41
26:DE:87:ALA:O	26:DE:88:ARG:HD3	2.21	0.41
29:DH:133:GLN:HE21	29:DH:136:SER:HA	1.84	0.41
55:DI:96:PHE:O	55:DI:100:ALA:N	2.53	0.41
33:DM:1:MET:O	33:DM:2:ARG:HD2	2.20	0.41
36:DP:16:ARG:NH2	69:DP:314:HOH:O	2.42	0.41
49:D2:38:LYS:NZ	69:D2:102:HOH:O	2.46	0.41
49:D2:47:VAL:HG12	49:D2:48:ILE:N	2.35	0.41
1:AA:510:A:H5"	1:AA:511:C:P	2.61	0.41
11:AK:109:ASN:ND2	21:AU:5:LYS:HB3	2.36	0.41
14:AN:54:ASP:HA	14:AN:59:ARG:HD3	2.02	0.41
16:AP:75:ILE:HA	16:AP:78:VAL:HG12	2.01	0.41
1:BA:471:U:H2'	1:BA:472:U:C6	2.56	0.41
1:BA:567:G:H2'	1:BA:568:G:O4'	2.19	0.41
1:BA:977:A:C2'	1:BA:978:A:H5"	2.51	0.41
1:BA:1255:G:C6	1:BA:1279:G:C8	3.08	0.41
2:BB:113:ARG:CZ	2:BB:117:LEU:HD21	2.50	0.41
5:BE:133:PRO:HA	5:BE:136:VAL:HG12	2.02	0.41
8:BH:96:MET:HB3	8:BH:99:LEU:HB2	2.03	0.41
15:BO:82:ILE:HG13	15:BO:83:GLU:N	2.35	0.41
19:BS:58:VAL:HG11	19:BS:75:ALA:HA	2.02	0.41
22:CA:404:A:H1'	22:CA:405:U:OP2	2.21	0.41
22:CA:864:G:C6	22:CA:865:C:N4	2.89	0.41
22:CA:1434:A:H2'	22:CA:1435:G:H8	1.85	0.41
22:CA:1833:C:C4	22:CA:1834:U:C4	3.09	0.41
22:CA:2394:C:OP2	51:C4:30:ARG:HD3	2.21	0.41
25:CD:1:MET:HB3	25:CD:205:PRO:HG2	2.01	0.41
42:CV:33:LYS:HE2	42:CV:66:GLN:NE2	2.35	0.41
53:DA:1020:A:N6	69:DA:6936:HOH:O	2.48	0.41
53:DA:1869:G:N1	53:DA:1873:G:C6	2.89	0.41
53:DA:2591:C:H2'	53:DA:2592:G:C8	2.55	0.41
57:DA:3217:PG4:H32	57:DA:3217:PG4:H51	1.58	0.41
27:DF:108:VAL:HG13	27:DF:111:ILE:HD12	2.03	0.41
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.84	0.41
30:DJ:117:MET:CE	30:DJ:117:MET:HA	2.51	0.41
1:AA:579:A:O2'	15:AO:54:ARG:NH1	2.53	0.41
1:AA:597:G:C2	1:AA:644:U:C2	3.09	0.41
1:AA:1224:U:H3'	1:AA:1225:A:H5'	2.03	0.41
5:AE:57:PRO:HA	5:AE:60:ILE:CG1	2.51	0.41
9:AI:54:LEU:HD12	9:AI:54:LEU:N	2.36	0.41
1:BA:1361:G:H2'	1:BA:1362:A:C5'	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:47:VAL:N	2:BB:48:PRO:HD2	2.35	0.41
6:BF:38:ARG:HB3	6:BF:63:ASN:HB2	2.03	0.41
22:CA:7:G:H4'	31:CK:15:TRP:CH2	2.56	0.41
22:CA:42:A:C2	22:CA:438:G:C2	3.09	0.41
22:CA:1914:C:C2	22:CA:1915:3TD:N1	2.89	0.41
22:CA:2251:OMG:HM23	22:CA:2251:OMG:H1'	1.59	0.41
22:CA:2445:2MG:HM23	22:CA:2446:G:H1'	2.02	0.41
24:CC:267:ILE:N	24:CC:267:ILE:CD1	2.83	0.41
31:CK:117:ALA:HA	31:CK:120:ARG:HD2	2.02	0.41
33:CM:23:ILE:H	33:CM:23:ILE:HD12	1.86	0.41
34:CN:58:LYS:N	34:CN:58:LYS:HD3	2.35	0.41
41:CU:50:LEU:HD13	41:CU:50:LEU:N	2.36	0.41
50:C3:44:VAL:O	50:C3:45:SER:CB	2.69	0.41
53:DA:1509:A:O2'	53:DA:1510:G:P	2.79	0.41
1:AA:328:C:O2	1:AA:328:C:H2'	2.21	0.41
1:AA:1079:G:H5'	5:AE:134:ILE:HD13	2.03	0.41
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.54	0.41
1:AA:1449:C:C2	1:AA:1455:G:C2	3.08	0.41
9:AI:80:ARG:O	9:AI:84:THR:HG23	2.20	0.41
11:AK:52:PHE:O	11:AK:53:ARG:HD2	2.21	0.41
19:AS:6:LYS:HD3	19:AS:6:LYS:HA	1.88	0.41
21:AU:4:ILE:HG23	21:AU:18:ARG:NH1	2.36	0.41
5:BE:50:TYR:O	5:BE:51:GLY:O	2.38	0.41
5:BE:115:LEU:CA	5:BE:120:VAL:HG23	2.50	0.41
9:BI:30:ILE:HA	9:BI:65:ILE:HG13	2.02	0.41
13:BM:103:LYS:HG2	13:BM:104:THR:HG23	2.02	0.41
22:CA:54:G:C6	22:CA:117:G:N2	2.89	0.41
22:CA:742:A:H2'	22:CA:743:A:C8	2.55	0.41
22:CA:2796:U:H3	22:CA:2799:A:N6	2.19	0.41
25:CD:57:ALA:O	25:CD:60:VAL:HG12	2.21	0.41
26:CE:46:GLN:CB	26:CE:83:VAL:HG11	2.51	0.41
35:CO:43:GLU:OE1	35:CO:43:GLU:HA	2.21	0.41
35:CO:116:VAL:HG12	35:CO:117:ASP:N	2.35	0.41
42:CV:16:GLY:O	42:CV:18:ASP:N	2.49	0.41
53:DA:102:U:O2	53:DA:102:U:H2'	2.20	0.41
53:DA:1178:C:C2'	53:DA:1179:G:H5'	2.51	0.41
53:DA:1417:C:H2'	53:DA:1418:G:O4'	2.20	0.41
53:DA:2015:A:H1'	61:DA:3227:PEG:H42	2.03	0.41
53:DA:2162:G:OP1	53:DA:2171:A:H2'	2.20	0.41
54:DD:62:LYS:N	54:DD:63:PRO:CD	2.83	0.41
29:DH:130:VAL:HG21	29:DH:144:VAL:HG21	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:108:G:C5'	1:AA:108:G:N3	2.84	0.41
1:AA:864:A:H4'	5:AE:90:THR:HG23	2.03	0.41
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.56	0.41
1:AA:1312:G:H5'	19:AS:6:LYS:CE	2.51	0.41
5:AE:162:GLU:HG2	8:AH:114:ARG:NH2	2.36	0.41
7:AG:131:LYS:HA	7:AG:135:VAL:HG21	2.02	0.41
13:AM:6:GLY:HA2	13:AM:66:GLU:HG3	2.01	0.41
16:AP:48:GLU:HG2	16:AP:49:GLY:H	1.85	0.41
19:AS:12:ASP:OD1	19:AS:37:ARG:NH2	2.54	0.41
19:AS:31:LEU:HD12	19:AS:31:LEU:N	2.36	0.41
20:AT:59:ASP:OD1	20:AT:76:LYS:NZ	2.47	0.41
1:BA:205:A:C2	1:BA:206:C:C5	3.08	0.41
1:BA:211:G:N2	1:BA:212:G:H1'	2.36	0.41
1:BA:502:A:OP1	12:BL:115:SER:HB3	2.21	0.41
1:BA:826:C:O2	8:BH:16:ASN:ND2	2.54	0.41
1:BA:1062:U:H2'	1:BA:1063:C:C6	2.56	0.41
3:BC:77:ILE:HA	3:BC:84:VAL:CG2	2.51	0.41
5:BE:13:GLU:CB	5:BE:39:VAL:HG12	2.51	0.41
6:BF:29:ILE:HG23	6:BF:66:ALA:HB2	2.03	0.41
6:BF:53:LYS:HA	6:BF:53:LYS:HZ2	1.86	0.41
7:BG:65:ALA:HA	7:BG:128:ALA:HA	2.03	0.41
10:BJ:18:ILE:HD12	10:BJ:70:HIS:HB2	2.03	0.41
10:BJ:87:LEU:HD13	10:BJ:88:MET:N	2.35	0.41
12:BL:76:GLU:O	12:BL:77:HIS:HB2	2.21	0.41
12:BL:110:ARG:HB2	12:BL:119:VAL:HG21	2.03	0.41
15:BO:3:LEU:HD13	15:BO:35:GLN:HE21	1.86	0.41
15:BO:17:ARG:HD3	15:BO:17:ARG:H	1.83	0.41
15:BO:46:HIS:O	15:BO:48:LYS:N	2.48	0.41
15:BO:87:LEU:O	15:BO:88:ARG:CB	2.69	0.41
17:BQ:6:ARG:CZ	17:BQ:6:ARG:HB3	2.51	0.41
19:BS:80:TYR:O	19:BS:80:TYR:CG	2.74	0.41
20:BT:36:TYR:CD1	20:BT:36:TYR:C	2.93	0.41
22:CA:464:U:C6	22:CA:788:A:C2	3.09	0.41
22:CA:676:A:H2	22:CA:2069:G7M:N3	2.19	0.41
22:CA:1187:G:H5"	39:CS:83:TYR:CE2	2.56	0.41
22:CA:1379:U:H4'	22:CA:1380:G:OP1	2.21	0.41
22:CA:1693:U:O2'	24:CC:14:ARG:NH2	2.54	0.41
22:CA:1847:A:O2'	22:CA:1848:A:H8	2.03	0.41
22:CA:2032:G:C2	25:CD:150:GLN:HG2	2.56	0.41
22:CA:2053:G:N2	22:CA:2054:A:H1'	2.36	0.41
22:CA:2061:G:H5"	22:CA:2503:2MA:CM2	2.50	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CA:2271:G:H5”	44:CX:20:ARG:HE	1.86	0.41
22:CA:2360:G:O4’	33:CM:60:ARG:NH2	2.50	0.41
22:CA:2396:G:C2	22:CA:2421:G:C2	3.09	0.41
22:CA:2550:G:C6	22:CA:2551:C:N4	2.89	0.41
22:CA:2650:U:O2’	22:CA:2651:C:H5’	2.21	0.41
26:CE:108:ILE:HG13	26:CE:109:LEU:N	2.36	0.41
27:CF:36:LEU:N	27:CF:36:LEU:HD13	2.35	0.41
28:CG:175:LYS:HG2	28:CG:176:LYS:H	1.85	0.41
31:CK:41:LYS:NZ	31:CK:50:THR:O	2.50	0.41
32:CL:113:MET:SD	32:CL:116:ILE:HD11	2.61	0.41
49:C2:15:ALA:C	49:C2:17:THR:H	2.24	0.41
53:DA:118:A:C8	53:DA:119:A:C8	3.09	0.41
53:DA:355:U:H2’	53:DA:356:G:C8	2.56	0.41
53:DA:722:A:H2’	53:DA:723:C:O4’	2.20	0.41
53:DA:1077:A:H4’	30:DJ:94:ASN:HB2	2.03	0.41
53:DA:1607:C:OP1	69:DA:5123:HOH:O	2.22	0.41
58:DN:201:MPD:O4	58:DN:201:MPD:CM	2.69	0.41
49:D2:10:LYS:HE3	49:D2:53:LYS:O	2.21	0.41
1:AA:4:U:C2’	1:AA:5:U:OP2	2.69	0.41
1:AA:263:A:P	20:AT:74:ARG:HH11	2.43	0.41
2:AB:23:TRP:HB3	2:AB:39:HIS:CD2	2.56	0.41
3:AC:85:GLU:HB2	3:AC:88:ARG:NH2	2.35	0.41
15:AO:87:LEU:O	15:AO:88:ARG:CB	2.68	0.41
1:BA:106:C:O2	1:BA:379:C:H4’	2.21	0.41
1:BA:1409:C:H5”	22:CA:1915:3TD:H10B	2.03	0.41
1:BA:1513:A:H2’	1:BA:1514:G:C8	2.56	0.41
2:BB:138:THR:O	2:BB:142:GLU:N	2.44	0.41
5:BE:39:VAL:HG22	5:BE:67:ALA:HB1	2.02	0.41
7:BG:131:LYS:O	7:BG:131:LYS:HG3	2.19	0.41
9:BI:54:LEU:HD12	9:BI:54:LEU:N	2.36	0.41
22:CA:1223:G:P	39:CS:68:ARG:HH12	2.43	0.41
22:CA:1248:G:C4	38:CR:3:ARG:HD2	2.56	0.41
22:CA:2011:U:H2’	22:CA:2012:G:O4’	2.21	0.41
22:CA:2547:A:C2	22:CA:2562:U:C2	3.09	0.41
26:CE:131:THR:HB	26:CE:164:LEU:HD22	2.02	0.41
30:CJ:20:PRO:HB2	30:CJ:23:PRO:HD2	2.03	0.41
30:CJ:113:LYS:O	30:CJ:117:MET:HG2	2.21	0.41
38:CR:76:TYR:CZ	38:CR:80:ILE:HG13	2.56	0.41
53:DA:374:A:H2’	53:DA:375:G:H5’	2.03	0.41
33:DM:48:ARG:HD2	51:D4:60:ALA:O	2.20	0.41
33:DM:78:ARG:HG2	33:DM:113:ALA:HB3	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:108:G:N3	1:AA:108:G:H5'	2.36	0.40
1:AA:501:C:H2'	1:AA:502:A:C8	2.55	0.40
1:AA:827:U:H5"	1:AA:828:U:OP2	2.21	0.40
5:AE:82:GLN:CD	5:AE:150:PRO:HD3	2.41	0.40
8:AH:18:GLN:HG3	8:AH:70:ALA:CB	2.52	0.40
9:AI:30:ILE:HB	9:AI:65:ILE:HD11	2.03	0.40
1:BA:75:G:C6	1:BA:76:G:C5	3.09	0.40
1:BA:1004:A:C6	1:BA:1005:A:C6	3.09	0.40
1:BA:1053:G:P	1:BA:1054:C:H3'	2.61	0.40
1:BA:1218:C:H2'	1:BA:1219:A:C8	2.55	0.40
2:BB:108:ARG:HA	2:BB:111:ILE:HG12	2.03	0.40
2:BB:118:GLU:OE2	2:BB:152:LYS:NZ	2.37	0.40
8:BH:89:LYS:HA	8:BH:92:LEU:HG	2.03	0.40
9:BI:95:ARG:O	9:BI:98:LEU:N	2.54	0.40
10:BJ:27:GLU:HA	10:BJ:30:LYS:HE2	2.03	0.40
13:BM:13:LYS:O	13:BM:14:HIS:ND1	2.55	0.40
14:BN:21:PHE:HB2	14:BN:55:SER:O	2.21	0.40
17:BQ:14:SER:C	17:BQ:17:MET:HE1	2.42	0.40
17:BQ:58:VAL:HB	17:BQ:79:VAL:O	2.21	0.40
20:BT:61:GLN:HA	20:BT:61:GLN:OE1	2.21	0.40
22:CA:565:C:H2'	22:CA:566:U:O4'	2.21	0.40
22:CA:1857:G:O2'	22:CA:1884:G:N2	2.53	0.40
22:CA:2796:U:H3	22:CA:2799:A:H61	1.68	0.40
24:CC:29:PRO:HG2	24:CC:34:LEU:HD11	2.03	0.40
25:CD:2:ILE:HD13	25:CD:90:PHE:CZ	2.56	0.40
28:CG:93:GLY:HA2	28:CG:95:ARG:HH12	1.86	0.40
53:DA:1182:G:H2'	53:DA:1183:U:O4'	2.22	0.40
53:DA:1445:G:N2	53:DA:1547:C:C2	2.89	0.40
53:DA:2389:G:H5"	53:DA:2390:U:O4'	2.21	0.40
66:DA:3210:EDO:O1	57:DR:202:PG4:C3	2.69	0.40
23:DB:90:C:H5'	34:DN:18[A]:ARG:HG2	2.02	0.40
33:DM:89:VAL:O	33:DM:94:THR:HG21	2.20	0.40
1:AA:841:C:C6	1:AA:843:U:H5'	2.55	0.40
1:BA:148:G:N3	1:BA:1446:A:H2	2.19	0.40
1:BA:328:C:H2'	1:BA:328:C:O2	2.21	0.40
1:BA:450:G:P	69:BA:1918:HOH:O	2.77	0.40
1:BA:806:C:O4'	57:BA:1642:PG4:H72	2.21	0.40
17:BQ:8:LEU:HD13	17:BQ:73:TRP:CZ3	2.56	0.40
22:CA:541:A:C2	22:CA:553:G:C2	3.09	0.40
22:CA:1468:U:H2'	22:CA:1522:A:N6	2.36	0.40
24:CC:132:MET:CE	24:CC:172:VAL:HG21	2.51	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CJ:101:ILE:O	30:CJ:141:GLU:N	2.54	0.40
33:CM:82:LEU:HG	33:CM:120:VAL:HG21	2.03	0.40
36:CP:35:ILE:HG21	36:CP:71:ALA:HA	2.03	0.40
53:DA:2650:U:O2'	53:DA:2651:C:H5'	2.21	0.40
62:DA:3183:SPD:H42	69:DA:6984:HOH:O	2.20	0.40
26:DE:21:ARG:HD3	26:DE:106:LYS:HB3	2.03	0.40
1:AA:579:A:H5'	1:AA:728:A:H1'	2.02	0.40
1:AA:983:A:H5"	1:AA:984:C:OP2	2.21	0.40
1:AA:1053:G:H5"	1:AA:1055:A:OP1	2.21	0.40
1:AA:1239:A:H62	1:AA:1299:A:N6	2.19	0.40
9:AI:83:ILE:HG22	9:AI:87:LEU:HD13	2.04	0.40
1:BA:1081:A:H5'	5:BE:23:LYS:HG3	2.03	0.40
1:BA:1402:4OC:O2	1:BA:1402:4OC:H2'	2.22	0.40
5:BE:102:GLY:C	5:BE:104:GLY:N	2.70	0.40
6:BF:45:ARG:O	6:BF:56:LYS:HA	2.21	0.40
8:BH:96:MET:HB3	8:BH:96:MET:HE2	1.93	0.40
18:BR:23:TYR:HA	18:BR:58:ALA:HB1	2.03	0.40
22:CA:310:A:H5"	42:CV:15:THR:HG22	2.03	0.40
22:CA:1170:C:C2	22:CA:1171:G:N7	2.89	0.40
22:CA:1190:G:OP1	33:CM:32:GLY:HA2	2.21	0.40
22:CA:2636:C:H4'	25:CD:81:GLU:CD	2.41	0.40
25:CD:104:VAL:CG2	25:CD:105:LYS:N	2.84	0.40
26:CE:31:VAL:HG21	26:CE:104:ALA:CB	2.51	0.40
29:CH:145:ASN:HB3	29:CH:147:VAL:HG23	2.03	0.40
31:CK:11:VAL:HG11	31:CK:50:THR:HA	2.03	0.40
34:CN:20:LEU:HD22	34:CN:20:LEU:N	2.35	0.40
38:CR:36:PHE:CE1	38:CR:40:ILE:HD11	2.56	0.40
48:C1:25:VAL:HG13	48:C1:26:THR:H	1.86	0.40
53:DA:634:C:H2'	53:DA:635:C:C6	2.56	0.40
53:DA:725:G:C6	53:DA:726:G:N1	2.90	0.40
53:DA:2534:A:C2'	53:DA:2535:G:O5'	2.70	0.40
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.55	0.40
27:DF:36:LEU:HD22	27:DF:154:ILE:HD13	2.03	0.40
55:DI:38:MET:O	55:DI:41:LEU:N	2.53	0.40
43:DW:2:PHE:HB3	43:DW:50:MET:HE1	2.03	0.40
1:AA:7:A:H3'	5:AE:106:ILE:HD13	2.02	0.40
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.84	0.40
1:BA:158:G:H2'	1:BA:159:G:H5"	2.03	0.40
1:BA:736:C:OP1	18:BR:61:ARG:HD2	2.21	0.40
5:BE:81:LEU:CD1	5:BE:81:LEU:N	2.84	0.40
7:BG:91:VAL:O	7:BG:96:ARG:NH2	2.55	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BI:83:ILE:O	9:BI:87:LEU:HD13	2.22	0.40
9:BI:124:ARG:HG3	9:BI:125:PRO:HD2	2.02	0.40
15:BO:10:LYS:O	15:BO:14:GLU:HG3	2.21	0.40
19:BS:13:LEU:HD22	19:BS:16:LEU:HD23	2.03	0.40
22:CA:662:G:O2'	33:CM:14:LYS:HD3	2.22	0.40
22:CA:1651:G:H4'	35:CO:39:PRO:HG2	2.03	0.40
22:CA:1914:C:H2'	22:CA:1915:3TD:H5'A	2.02	0.40
22:CA:2365:G:H4'	44:CX:60:PHE:CE2	2.57	0.40
22:CA:2627:G:O2'	22:CA:2781:A:N1	2.41	0.40
25:CD:19:GLY:O	32:CL:73:ASP:HB3	2.22	0.40
44:CX:34:GLY:N	44:CX:61:ALA:O	2.42	0.40
53:DA:839:U:H1'	53:DA:1191:G:H1'	2.03	0.40
61:DA:3200:PEG:H11	61:DA:3200:PEG:H32	1.70	0.40
54:DD:18:ASP:HA	57:DQ:202:PG4:H42	2.02	0.40
32:DL:38:ILE:HD11	32:DL:112:PHE:HZ	1.86	0.40
35:DO:33:ILE:HD11	48:D1:55:ILE:CD1	2.51	0.40
1:AA:182:A:N1	1:AA:223:A:O2'	2.53	0.40
1:AA:234:C:H4'	17:AQ:66:PRO:HG3	2.03	0.40
1:AA:662:U:H2'	1:AA:663:A:C8	2.56	0.40
1:AA:977:A:H2'	1:AA:978:A:H5"	2.04	0.40
1:AA:1449:C:H2'	1:AA:1450:U:H5'	2.03	0.40
2:AB:138:THR:O	2:AB:142:GLU:N	2.42	0.40
7:AG:113:ASP:HB2	7:AG:119:ARG:HG3	2.03	0.40
9:AI:57:MET:HG3	9:AI:61:LEU:H	1.85	0.40
9:AI:83:ILE:O	9:AI:86:ALA:N	2.55	0.40
14:AN:26:GLU:O	14:AN:30:ILE:HG13	2.22	0.40
1:BA:111:G:O6	1:BA:330:C:N4	2.55	0.40
1:BA:283:U:C4	1:BA:284:C:C4	3.09	0.40
1:BA:706:A:H1'	11:BK:31:ILE:HD11	2.04	0.40
1:BA:1111:A:O5'	1:BA:1111:A:H8	2.04	0.40
1:BA:1492:A:C5	1:BA:1493:A:C2	3.10	0.40
3:BC:11:ARG:HH21	3:BC:182:ILE:HG13	1.87	0.40
10:BJ:28:THR:HG23	10:BJ:31:ARG:NH2	2.36	0.40
15:BO:67:LEU:CD2	15:BO:88:ARG:HH22	2.35	0.40
22:CA:523:C:H4'	22:CA:540:C:O2	2.21	0.40
22:CA:2680:U:H2'	22:CA:2681:C:C6	2.56	0.40
22:CA:2873:A:H4'	69:CA:3662:HOH:O	2.22	0.40
27:CF:21:ASN:O	27:CF:21:ASN:ND2	2.47	0.40
35:CO:17:ARG:O	35:CO:21:PHE:HD1	2.04	0.40
43:CW:9:ARG:NH2	43:CW:17:SER:OG	2.55	0.40
49:C2:50:LYS:O	49:C2:51:GLU:HB3	2.22	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DA:362:A:H3'	53:DA:363:G:H8	1.86	0.40
53:DA:905:A:C6	53:DA:906:U:C5	3.09	0.40
53:DA:1167:C:H2'	53:DA:1168:G:H5"	2.04	0.40
53:DA:1730:C:O2'	53:DA:1731:G:O5'	2.40	0.40
53:DA:2851:A:H2'	53:DA:2852:G:O4'	2.22	0.40
27:DF:158:THR:HG22	27:DF:160:ALA:N	2.34	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	AB	222/224 (99%)	209 (94%)	11 (5%)	2 (1%)	17 12
2	BB	222/224 (99%)	209 (94%)	11 (5%)	2 (1%)	17 12
3	AC	204/206 (99%)	193 (95%)	10 (5%)	1 (0%)	29 26
3	BC	204/206 (99%)	186 (91%)	10 (5%)	8 (4%)	3 1
4	AD	203/205 (99%)	199 (98%)	4 (2%)	0	100 100
4	BD	203/205 (99%)	199 (98%)	4 (2%)	0	100 100
5	AE	153/155 (99%)	145 (95%)	8 (5%)	0	100 100
5	BE	148/155 (96%)	122 (82%)	14 (10%)	12 (8%)	1 0
6	AF	104/106 (98%)	96 (92%)	8 (8%)	0	100 100
6	BF	98/106 (92%)	83 (85%)	12 (12%)	3 (3%)	4 1
7	AG	149/151 (99%)	138 (93%)	10 (7%)	1 (1%)	22 18
7	BG	149/151 (99%)	131 (88%)	15 (10%)	3 (2%)	7 3
8	AH	127/129 (98%)	119 (94%)	8 (6%)	0	100 100
8	BH	127/129 (98%)	117 (92%)	9 (7%)	1 (1%)	19 15
9	AI	125/127 (98%)	111 (89%)	13 (10%)	1 (1%)	19 15

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	BI	125/127 (98%)	111 (89%)	13 (10%)	1 (1%)	19 15
10	AJ	97/99 (98%)	88 (91%)	8 (8%)	1 (1%)	15 11
10	BJ	96/99 (97%)	63 (66%)	22 (23%)	11 (12%)	0 0
11	AK	115/117 (98%)	104 (90%)	11 (10%)	0	100 100
11	BK	115/117 (98%)	100 (87%)	11 (10%)	4 (4%)	3 1
12	AL	120/123 (98%)	111 (92%)	9 (8%)	0	100 100
12	BL	120/123 (98%)	110 (92%)	8 (7%)	2 (2%)	9 4
13	AM	112/114 (98%)	101 (90%)	8 (7%)	3 (3%)	5 1
13	BM	112/114 (98%)	95 (85%)	10 (9%)	7 (6%)	1 0
14	AN	98/100 (98%)	91 (93%)	7 (7%)	0	100 100
14	BN	98/100 (98%)	92 (94%)	6 (6%)	0	100 100
15	AO	86/88 (98%)	80 (93%)	3 (4%)	3 (4%)	3 1
15	BO	86/88 (98%)	79 (92%)	2 (2%)	5 (6%)	1 0
16	AP	80/82 (98%)	73 (91%)	6 (8%)	1 (1%)	12 7
16	BP	80/82 (98%)	66 (82%)	11 (14%)	3 (4%)	3 1
17	AQ	78/80 (98%)	73 (94%)	5 (6%)	0	100 100
17	BQ	78/80 (98%)	64 (82%)	10 (13%)	4 (5%)	2 0
18	AR	53/55 (96%)	51 (96%)	1 (2%)	1 (2%)	8 3
18	BR	53/55 (96%)	47 (89%)	5 (9%)	1 (2%)	8 3
19	AS	77/79 (98%)	69 (90%)	7 (9%)	1 (1%)	12 7
19	BS	77/79 (98%)	65 (84%)	9 (12%)	3 (4%)	3 1
20	AT	84/86 (98%)	83 (99%)	1 (1%)	0	100 100
20	BT	83/86 (96%)	77 (93%)	3 (4%)	3 (4%)	3 1
21	AU	54/56 (96%)	53 (98%)	1 (2%)	0	100 100
21	BU	54/56 (96%)	52 (96%)	2 (4%)	0	100 100
24	CC	269/271 (99%)	251 (93%)	15 (6%)	3 (1%)	14 9
24	DC	269/271 (99%)	253 (94%)	15 (6%)	1 (0%)	34 32
25	CD	207/209 (99%)	193 (93%)	11 (5%)	3 (1%)	11 6
26	CE	199/201 (99%)	186 (94%)	9 (4%)	4 (2%)	7 3
26	DE	199/201 (99%)	195 (98%)	4 (2%)	0	100 100
27	CF	175/177 (99%)	155 (89%)	14 (8%)	6 (3%)	3 1

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
27	DF	175/177 (99%)	165 (94%)	10 (6%)	0	100 100
28	CG	174/176 (99%)	135 (78%)	33 (19%)	6 (3%)	3 1
28	DG	174/176 (99%)	167 (96%)	7 (4%)	0	100 100
29	CH	147/149 (99%)	116 (79%)	22 (15%)	9 (6%)	1 0
29	DH	147/149 (99%)	129 (88%)	16 (11%)	2 (1%)	11 6
30	CJ	132/134 (98%)	117 (89%)	11 (8%)	4 (3%)	4 1
30	DJ	132/134 (98%)	117 (89%)	11 (8%)	4 (3%)	4 1
31	CK	140/142 (99%)	127 (91%)	11 (8%)	2 (1%)	11 6
31	DK	140/142 (99%)	136 (97%)	4 (3%)	0	100 100
32	CL	120/123 (98%)	112 (93%)	7 (6%)	1 (1%)	19 15
32	DL	121/123 (98%)	116 (96%)	4 (3%)	1 (1%)	19 15
33	CM	142/144 (99%)	128 (90%)	8 (6%)	6 (4%)	3 0
33	DM	142/144 (99%)	138 (97%)	3 (2%)	1 (1%)	22 18
34	CN	133/136 (98%)	125 (94%)	7 (5%)	1 (1%)	19 15
34	DN	134/136 (98%)	128 (96%)	6 (4%)	0	100 100
35	CO	118/125 (94%)	110 (93%)	5 (4%)	3 (2%)	5 2
35	DO	123/125 (98%)	116 (94%)	7 (6%)	0	100 100
36	CP	114/117 (97%)	105 (92%)	4 (4%)	5 (4%)	2 0
36	DP	115/117 (98%)	112 (97%)	3 (3%)	0	100 100
37	CQ	112/114 (98%)	104 (93%)	7 (6%)	1 (1%)	17 12
37	DQ	112/114 (98%)	107 (96%)	5 (4%)	0	100 100
38	CR	115/117 (98%)	114 (99%)	1 (1%)	0	100 100
38	DR	115/117 (98%)	114 (99%)	1 (1%)	0	100 100
39	CS	101/103 (98%)	93 (92%)	5 (5%)	3 (3%)	4 1
39	DS	101/103 (98%)	98 (97%)	3 (3%)	0	100 100
40	CT	108/110 (98%)	101 (94%)	4 (4%)	3 (3%)	5 1
40	DT	108/110 (98%)	105 (97%)	3 (3%)	0	100 100
41	CU	91/93 (98%)	81 (89%)	7 (8%)	3 (3%)	4 1
41	DU	91/93 (98%)	83 (91%)	7 (8%)	1 (1%)	14 9
42	CV	100/102 (98%)	81 (81%)	11 (11%)	8 (8%)	1 0
42	DV	100/102 (98%)	96 (96%)	3 (3%)	1 (1%)	15 11

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	CW	92/94 (98%)	86 (94%)	6 (6%)	0	100	100
43	DW	92/94 (98%)	87 (95%)	5 (5%)	0	100	100
44	CX	73/76 (96%)	72 (99%)	1 (1%)	0	100	100
44	DX	75/76 (99%)	74 (99%)	1 (1%)	0	100	100
45	CY	75/77 (97%)	72 (96%)	3 (4%)	0	100	100
45	DY	75/77 (97%)	72 (96%)	3 (4%)	0	100	100
46	CZ	60/62 (97%)	52 (87%)	5 (8%)	3 (5%)	2	0
46	DZ	60/62 (97%)	59 (98%)	1 (2%)	0	100	100
47	C0	56/58 (97%)	51 (91%)	4 (7%)	1 (2%)	8	4
47	D0	57/58 (98%)	54 (95%)	2 (4%)	1 (2%)	8	4
48	C1	54/56 (96%)	48 (89%)	4 (7%)	2 (4%)	3	1
48	D1	54/56 (96%)	52 (96%)	2 (4%)	0	100	100
49	C2	48/51 (94%)	41 (85%)	6 (12%)	1 (2%)	7	3
49	D2	49/51 (96%)	47 (96%)	2 (4%)	0	100	100
50	C3	44/46 (96%)	40 (91%)	2 (4%)	2 (4%)	2	0
50	D3	44/46 (96%)	43 (98%)	1 (2%)	0	100	100
51	C4	62/64 (97%)	59 (95%)	3 (5%)	0	100	100
51	D4	62/64 (97%)	59 (95%)	3 (5%)	0	100	100
52	C5	36/38 (95%)	34 (94%)	2 (6%)	0	100	100
52	D5	36/38 (95%)	35 (97%)	1 (3%)	0	100	100
54	DD	206/209 (99%)	199 (97%)	7 (3%)	0	100	100
55	DI	133/135 (98%)	107 (80%)	19 (14%)	7 (5%)	2	0
All	All	11407/11629 (98%)	10507 (92%)	713 (6%)	187 (2%)	9	5

All (187) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	130	THR
3	AC	127	ARG
9	AI	25	ASN
10	AJ	57	VAL
13	AM	5	ALA
2	BB	130	THR
3	BC	66	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	BC	127	ARG
3	BC	139	GLN
3	BC	140	ASN
5	BE	24	THR
5	BE	45	ARG
5	BE	51	GLY
5	BE	102	GLY
5	BE	103	THR
5	BE	123	VAL
6	BF	53	LYS
6	BF	98	GLU
9	BI	25	ASN
10	BJ	93	ALA
11	BK	52	PHE
12	BL	44	LYS
13	BM	5	ALA
13	BM	14	HIS
16	BP	43	ALA
16	BP	79	ASN
16	BP	80	LYS
17	BQ	17	MET
18	BR	47	THR
19	BS	5	LEU
25	CD	152	PRO
26	CE	42	GLY
26	CE	153	LEU
27	CF	62	GLY
27	CF	123	ASP
28	CG	119	ALA
29	CH	3	VAL
29	CH	9	VAL
29	CH	10	ALA
29	CH	137	GLU
30	CJ	15	ALA
30	CJ	19	ASN
31	CK	81	ILE
33	CM	82	LEU
33	CM	86	GLU
33	CM	111	ILE
35	CO	70	THR
36	CP	59	ALA
37	CQ	114	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
40	CT	65	ASP
41	CU	17	SER
42	CV	7	ARG
46	CZ	3	ALA
48	C1	56	ALA
50	C3	44	VAL
55	DI	67	THR
55	DI	104	ALA
55	DI	106	PHE
30	DJ	15	ALA
30	DJ	19	ASN
42	DV	52	LEU
13	AM	13	LYS
15	AO	88	ARG
3	BC	81	GLY
3	BC	141	ALA
3	BC	156	ARG
5	BE	111	MET
5	BE	155	ALA
5	BE	157	ARG
6	BF	52	ASN
7	BG	146	GLU
8	BH	89	LYS
10	BJ	17	LEU
10	BJ	41	PRO
10	BJ	57	VAL
10	BJ	89	ARG
10	BJ	90	LEU
11	BK	89	PRO
11	BK	93	ARG
13	BM	4	ILE
13	BM	67	GLY
15	BO	88	ARG
17	BQ	70	THR
19	BS	6	LYS
20	BT	68	HIS
24	CC	253	LYS
25	CD	104	VAL
26	CE	82	GLY
27	CF	121	SER
27	CF	149	VAL
28	CG	92	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	CG	175	LYS
29	CH	16	GLY
30	CJ	25	GLY
31	CK	25	LEU
32	CL	35	VAL
33	CM	30	THR
35	CO	119	SER
36	CP	101	GLY
39	CS	29	THR
40	CT	62	ASP
40	CT	63	GLY
41	CU	18	GLU
41	CU	38	ALA
42	CV	19	LYS
42	CV	52	LEU
42	CV	75	ALA
42	CV	99	ASN
50	C3	45	SER
24	DC	253	LYS
29	DH	118	PRO
55	DI	108	VAL
30	DJ	25	GLY
32	DL	108	ARG
2	AB	126	PHE
16	AP	48	GLU
18	AR	73	ARG
5	BE	138	ARG
10	BJ	43	PRO
10	BJ	95	GLY
11	BK	92	GLY
13	BM	114	LYS
15	BO	18	ASP
15	BO	46	HIS
15	BO	47	LYS
25	CD	86	GLU
28	CG	118	PRO
29	CH	2	GLN
29	CH	118	PRO
30	CJ	23	PRO
33	CM	29	LYS
33	CM	115	GLU
34	CN	69	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	CP	57	ALA
36	CP	66	GLY
39	CS	53	PHE
42	CV	55	PRO
42	CV	98	SER
46	CZ	37	LEU
47	C0	4	THR
55	DI	124	ASP
30	DJ	23	PRO
47	D0	4	THR
7	AG	80	VAL
15	AO	18	ASP
15	AO	21	ASP
2	BB	126	PHE
3	BC	80	LYS
10	BJ	36	VAL
10	BJ	101	SER
27	CF	174	ASP
27	CF	175	PHE
29	CH	33	GLN
35	CO	118	ARG
36	CP	100	HIS
48	C1	55	ILE
55	DI	130	PRO
13	AM	105	ASN
5	BE	12	GLN
7	BG	80	VAL
7	BG	82	GLY
15	BO	21	ASP
17	BQ	18	GLU
28	CG	59	ALA
29	CH	31	VAL
49	C2	16	GLY
55	DI	68	PRO
33	DM	29	LYS
19	AS	29	LYS
10	BJ	34	ALA
13	BM	13	LYS
17	BQ	82	ALA
20	BT	4	ILE
20	BT	5	LYS
24	CC	261	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
42	CV	56	GLY
29	DH	122	LEU
19	BS	29	LYS
28	CG	28	GLY
24	CC	3	VAL
12	BL	45	PRO
13	BM	7	ILE
39	CS	50	GLY
46	CZ	46	VAL
5	BE	137	VAL
26	CE	83	VAL
41	DU	90	GLY

5.3.2 Protein sidechains (i)

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	AB	186/186 (100%)	180 (97%)	6 (3%)	39 41
2	BB	186/186 (100%)	179 (96%)	7 (4%)	33 34
3	AC	170/170 (100%)	164 (96%)	6 (4%)	36 38
3	BC	170/170 (100%)	142 (84%)	28 (16%)	2 1
4	AD	172/172 (100%)	167 (97%)	5 (3%)	42 46
4	BD	172/172 (100%)	167 (97%)	5 (3%)	42 46
5	AE	118/118 (100%)	112 (95%)	6 (5%)	24 22
5	BE	113/118 (96%)	92 (81%)	21 (19%)	1 1
6	AF	92/92 (100%)	91 (99%)	1 (1%)	73 79
6	BF	87/92 (95%)	73 (84%)	14 (16%)	2 1
7	AG	124/124 (100%)	121 (98%)	3 (2%)	49 53
7	BG	124/124 (100%)	97 (78%)	27 (22%)	1 0
8	AH	104/104 (100%)	100 (96%)	4 (4%)	33 34
8	BH	104/104 (100%)	87 (84%)	17 (16%)	2 1

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
9	AI	105/105 (100%)	102 (97%)	3 (3%)	42 46
9	BI	105/105 (100%)	102 (97%)	3 (3%)	42 46
10	AJ	87/87 (100%)	81 (93%)	6 (7%)	15 12
10	BJ	86/87 (99%)	68 (79%)	18 (21%)	1 0
11	AK	90/90 (100%)	89 (99%)	1 (1%)	73 79
11	BK	90/90 (100%)	78 (87%)	12 (13%)	4 2
12	AL	102/102 (100%)	101 (99%)	1 (1%)	76 82
12	BL	102/102 (100%)	91 (89%)	11 (11%)	6 3
13	AM	92/92 (100%)	90 (98%)	2 (2%)	52 57
13	BM	92/92 (100%)	79 (86%)	13 (14%)	3 1
14	AN	83/83 (100%)	82 (99%)	1 (1%)	71 77
14	BN	83/83 (100%)	80 (96%)	3 (4%)	35 36
15	AO	76/76 (100%)	74 (97%)	2 (3%)	46 50
15	BO	76/76 (100%)	62 (82%)	14 (18%)	1 1
16	AP	65/65 (100%)	63 (97%)	2 (3%)	40 43
16	BP	65/65 (100%)	58 (89%)	7 (11%)	6 3
17	AQ	74/74 (100%)	72 (97%)	2 (3%)	44 48
17	BQ	74/74 (100%)	58 (78%)	16 (22%)	1 0
18	AR	48/48 (100%)	48 (100%)	0	100 100
18	BR	48/48 (100%)	44 (92%)	4 (8%)	11 7
19	AS	70/70 (100%)	69 (99%)	1 (1%)	67 73
19	BS	70/70 (100%)	61 (87%)	9 (13%)	4 2
20	AT	65/65 (100%)	63 (97%)	2 (3%)	40 43
20	BT	65/65 (100%)	53 (82%)	12 (18%)	1 1
21	AU	48/48 (100%)	45 (94%)	3 (6%)	18 15
21	BU	48/48 (100%)	45 (94%)	3 (6%)	18 15
24	CC	216/216 (100%)	194 (90%)	22 (10%)	7 4
24	DC	216/216 (100%)	214 (99%)	2 (1%)	78 84
25	CD	164/164 (100%)	151 (92%)	13 (8%)	12 9
26	CE	165/165 (100%)	144 (87%)	21 (13%)	4 2
26	DE	165/165 (100%)	163 (99%)	2 (1%)	71 77

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
27	CF	148/148 (100%)	127 (86%)	21 (14%)	3 1
27	DF	148/148 (100%)	142 (96%)	6 (4%)	30 31
28	CG	137/137 (100%)	115 (84%)	22 (16%)	2 1
28	DG	137/137 (100%)	129 (94%)	8 (6%)	20 17
29	CH	114/114 (100%)	96 (84%)	18 (16%)	2 1
29	DH	114/114 (100%)	103 (90%)	11 (10%)	8 5
30	CJ	104/104 (100%)	101 (97%)	3 (3%)	42 46
30	DJ	104/104 (100%)	103 (99%)	1 (1%)	76 82
31	CK	116/116 (100%)	105 (90%)	11 (10%)	8 5
31	DK	116/116 (100%)	114 (98%)	2 (2%)	60 67
32	CL	103/104 (99%)	96 (93%)	7 (7%)	16 13
32	DL	104/104 (100%)	102 (98%)	2 (2%)	57 63
33	CM	103/103 (100%)	97 (94%)	6 (6%)	20 17
33	DM	103/103 (100%)	102 (99%)	1 (1%)	76 82
34	CN	108/108 (100%)	97 (90%)	11 (10%)	7 4
34	DN	109/108 (101%)	106 (97%)	3 (3%)	43 47
35	CO	100/102 (98%)	87 (87%)	13 (13%)	4 2
35	DO	102/102 (100%)	100 (98%)	2 (2%)	55 60
36	CP	86/87 (99%)	76 (88%)	10 (12%)	5 3
36	DP	87/87 (100%)	85 (98%)	2 (2%)	50 55
37	CQ	99/99 (100%)	89 (90%)	10 (10%)	7 4
37	DQ	99/99 (100%)	95 (96%)	4 (4%)	31 32
38	CR	89/89 (100%)	81 (91%)	8 (9%)	9 6
38	DR	89/89 (100%)	87 (98%)	2 (2%)	52 57
39	CS	84/84 (100%)	74 (88%)	10 (12%)	5 2
39	DS	84/84 (100%)	81 (96%)	3 (4%)	35 36
40	CT	93/93 (100%)	79 (85%)	14 (15%)	3 1
40	DT	93/93 (100%)	91 (98%)	2 (2%)	52 57
41	CU	80/80 (100%)	66 (82%)	14 (18%)	2 1
41	DU	80/80 (100%)	77 (96%)	3 (4%)	33 34
42	CV	83/83 (100%)	71 (86%)	12 (14%)	3 1

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
42	DV	83/83 (100%)	82 (99%)	1 (1%)	71 77
43	CW	78/78 (100%)	65 (83%)	13 (17%)	2 1
43	DW	78/78 (100%)	75 (96%)	3 (4%)	33 34
44	CX	56/58 (97%)	53 (95%)	3 (5%)	22 20
44	DX	58/58 (100%)	57 (98%)	1 (2%)	60 67
45	CY	67/67 (100%)	60 (90%)	7 (10%)	7 4
45	DY	67/67 (100%)	66 (98%)	1 (2%)	65 71
46	CZ	54/54 (100%)	47 (87%)	7 (13%)	4 2
46	DZ	54/54 (100%)	54 (100%)	0	100 100
47	C0	48/48 (100%)	42 (88%)	6 (12%)	4 2
47	D0	49/48 (102%)	48 (98%)	1 (2%)	55 60
48	C1	47/47 (100%)	43 (92%)	4 (8%)	10 7
48	D1	47/47 (100%)	47 (100%)	0	100 100
49	C2	45/46 (98%)	44 (98%)	1 (2%)	52 57
49	D2	45/46 (98%)	45 (100%)	0	100 100
50	C3	38/38 (100%)	34 (90%)	4 (10%)	7 4
50	D3	38/38 (100%)	37 (97%)	1 (3%)	46 50
51	C4	51/51 (100%)	47 (92%)	4 (8%)	12 9
51	D4	51/51 (100%)	50 (98%)	1 (2%)	55 60
52	C5	34/34 (100%)	32 (94%)	2 (6%)	19 17
52	D5	34/34 (100%)	34 (100%)	0	100 100
54	DD	163/163 (100%)	161 (99%)	2 (1%)	71 77
55	DI	103/103 (100%)	100 (97%)	3 (3%)	42 46
All	All	9461/9478 (100%)	8793 (93%)	668 (7%)	14 11

All (668) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	5	SER
2	AB	23	TRP
2	AB	73	LYS
2	AB	93	ASN
2	AB	129	LEU
2	AB	213	TYR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	AC	20	SER
3	AC	58	GLU
3	AC	83	ASP
3	AC	85	GLU
3	AC	125	GLU
3	AC	201	TRP
4	AD	26	ARG
4	AD	131	ASN
4	AD	194	ASP
4	AD	196	ASN
4	AD	197	GLU
5	AE	22	SER
5	AE	48	PHE
5	AE	80	THR
5	AE	130	SER
5	AE	152	MET
5	AE	163	GLU
6	AF	93	LYS
7	AG	7	ILE
7	AG	54	SER
7	AG	83	SER
8	AH	3	MET
8	AH	60	GLU
8	AH	75	ILE
8	AH	107	SER
9	AI	47	VAL
9	AI	66	THR
9	AI	94	LEU
10	AJ	7	ARG
10	AJ	16	ARG
10	AJ	19	ASP
10	AJ	27	GLU
10	AJ	35	GLN
10	AJ	80	THR
11	AK	33	THR
12	AL	15	LYS
13	AM	71	ARG
13	AM	107	ARG
14	AN	59	ARG
15	AO	3	LEU
15	AO	89	ARG
16	AP	1	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
16	AP	44	SER
17	AQ	14	SER
17	AQ	27	ARG
19	AS	18	LYS
20	AT	40	GLU
20	AT	54	MET
21	AU	4	ILE
21	AU	41	PRO
21	AU	56	HIS
2	BB	5	SER
2	BB	23	TRP
2	BB	73	LYS
2	BB	93	ASN
2	BB	129	LEU
2	BB	146	ASN
2	BB	213	TYR
3	BC	3	GLN
3	BC	20	SER
3	BC	27	LYS
3	BC	38	LYS
3	BC	43	LEU
3	BC	55	ILE
3	BC	58	GLU
3	BC	59	ARG
3	BC	75	ILE
3	BC	80	LYS
3	BC	82	GLU
3	BC	86	LYS
3	BC	89	LYS
3	BC	103	ILE
3	BC	107	ARG
3	BC	125	GLU
3	BC	127	ARG
3	BC	140	ASN
3	BC	152	GLU
3	BC	157	LEU
3	BC	165	THR
3	BC	169	ARG
3	BC	175	LEU
3	BC	179	ARG
3	BC	192	THR
3	BC	200	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	BC	201	TRP
3	BC	206	GLU
4	BD	5	LEU
4	BD	58	LYS
4	BD	142	VAL
4	BD	196	ASN
4	BD	206	LYS
5	BE	11	LEU
5	BE	12	GLN
5	BE	15	LEU
5	BE	22	SER
5	BE	26	LYS
5	BE	38	VAL
5	BE	52	LYS
5	BE	69	ARG
5	BE	78	ASN
5	BE	80	THR
5	BE	81	LEU
5	BE	93	ARG
5	BE	96	MET
5	BE	101	GLU
5	BE	105	ILE
5	BE	115	LEU
5	BE	120	VAL
5	BE	122	ASN
5	BE	130	SER
5	BE	149	SER
5	BE	151	GLU
6	BF	14	GLN
6	BF	16	GLU
6	BF	29	ILE
6	BF	35	LYS
6	BF	51	ILE
6	BF	53	LYS
6	BF	54	LEU
6	BF	56	LYS
6	BF	68	GLN
6	BF	69	GLU
6	BF	77	THR
6	BF	79	ARG
6	BF	86	ARG
6	BF	93	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
7	BG	3	ARG
7	BG	4	ARG
7	BG	5	ARG
7	BG	11	LYS
7	BG	12	ILE
7	BG	15	ASP
7	BG	22	LEU
7	BG	29	ILE
7	BG	47	LEU
7	BG	59	LEU
7	BG	60	GLU
7	BG	63	GLU
7	BG	66	LEU
7	BG	73	VAL
7	BG	77	SER
7	BG	78	ARG
7	BG	79	ARG
7	BG	89	VAL
7	BG	92	ARG
7	BG	97	ASN
7	BG	113	ASP
7	BG	123	GLU
7	BG	129	GLU
7	BG	136	LYS
7	BG	140	ASP
7	BG	143	ARG
7	BG	144	MET
8	BH	3	MET
8	BH	18	GLN
8	BH	25	VAL
8	BH	26	THR
8	BH	51	VAL
8	BH	52	GLU
8	BH	59	LEU
8	BH	75	ILE
8	BH	77	ARG
8	BH	83	LEU
8	BH	87	LYS
8	BH	90	ASP
8	BH	107	SER
8	BH	111	MET
8	BH	114	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
8	BH	121	LEU
8	BH	125	ILE
9	BI	47	VAL
9	BI	66	THR
9	BI	94	LEU
10	BJ	5	ARG
10	BJ	9	ARG
10	BJ	16	ARG
10	BJ	22	THR
10	BJ	24	GLU
10	BJ	25	ILE
10	BJ	37	ARG
10	BJ	51	VAL
10	BJ	62	ARG
10	BJ	63	ASP
10	BJ	69	THR
10	BJ	73	LEU
10	BJ	77	VAL
10	BJ	82	LYS
10	BJ	88	MET
10	BJ	90	LEU
10	BJ	99	GLN
10	BJ	100	ILE
11	BK	31	ILE
11	BK	38	GLN
11	BK	55	SER
11	BK	57	LYS
11	BK	82	LEU
11	BK	83	GLU
11	BK	100	LEU
11	BK	105	PHE
11	BK	107	ILE
11	BK	109	ASN
11	BK	114	THR
11	BK	122	ARG
12	BL	9	ARG
12	BL	10	LYS
12	BL	12	ARG
12	BL	14	ARG
12	BL	44	LYS
12	BL	49	LEU
12	BL	54	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
12	BL	58	THR
12	BL	88	LYS
12	BL	94	ARG
12	BL	121	ARG
13	BM	4	ILE
13	BM	16	VAL
13	BM	23	TYR
13	BM	27	LYS
13	BM	29	ARG
13	BM	31	LYS
13	BM	48	LEU
13	BM	59	GLU
13	BM	90	ARG
13	BM	91	HIS
13	BM	107	ARG
13	BM	110	LYS
13	BM	114	LYS
14	BN	26	GLU
14	BN	32	SER
14	BN	59	ARG
15	BO	6	GLU
15	BO	8	THR
15	BO	17	ARG
15	BO	18	ASP
15	BO	35	GLN
15	BO	39	LEU
15	BO	64	ARG
15	BO	70	LEU
15	BO	73	LYS
15	BO	83	GLU
15	BO	85	LEU
15	BO	87	LEU
15	BO	88	ARG
15	BO	89	ARG
16	BP	1	MET
16	BP	18	GLN
16	BP	20	VAL
16	BP	46	LYS
16	BP	51	ARG
16	BP	63	GLN
16	BP	68	SER
17	BQ	5	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	BQ	7	THR
17	BQ	14	SER
17	BQ	16	LYS
17	BQ	17	MET
17	BQ	22	VAL
17	BQ	26	GLU
17	BQ	29	VAL
17	BQ	40	ARG
17	BQ	55	ILE
17	BQ	61	ILE
17	BQ	65	ARG
17	BQ	75	LEU
17	BQ	76	VAL
17	BQ	79	VAL
17	BQ	81	LYS
18	BR	21	ILE
18	BR	47	THR
18	BR	55	LEU
18	BR	73	ARG
19	BS	6	LYS
19	BS	7	LYS
19	BS	11	ILE
19	BS	13	LEU
19	BS	33	THR
19	BS	37	ARG
19	BS	49	ILE
19	BS	58	VAL
19	BS	80	TYR
20	BT	10	ARG
20	BT	12	ILE
20	BT	24	ARG
20	BT	27	MET
20	BT	30	THR
20	BT	36	TYR
20	BT	54	MET
20	BT	64	LYS
20	BT	66	LEU
20	BT	69	LYS
20	BT	84	ASN
20	BT	86	LEU
21	BU	12	PHE
21	BU	34	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	BU	56	HIS
24	CC	14	ARG
24	CC	18	LYS
24	CC	36	LYS
24	CC	52	ARG
24	CC	88	SER
24	CC	97	LYS
24	CC	105	LEU
24	CC	130	LEU
24	CC	139	SER
24	CC	141	VAL
24	CC	156	ARG
24	CC	157	SER
24	CC	168	ASP
24	CC	174	LEU
24	CC	187	ASP
24	CC	195	VAL
24	CC	203	ARG
24	CC	204	VAL
24	CC	213	TRP
24	CC	265	LYS
24	CC	267	ILE
24	CC	269	ARG
25	CD	4	LEU
25	CD	12	THR
25	CD	32	ASN
25	CD	33	ARG
25	CD	39	ASP
25	CD	46	ARG
25	CD	73	VAL
25	CD	91	THR
25	CD	95	SER
25	CD	150	GLN
25	CD	157	LYS
25	CD	170	VAL
25	CD	177	VAL
26	CE	12	LEU
26	CE	25	GLU
26	CE	44	ARG
26	CE	57	LYS
26	CE	65	THR
26	CE	67	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	CE	69	ARG
26	CE	72	SER
26	CE	78	TRP
26	CE	88	ARG
26	CE	93	SER
26	CE	116	ASP
26	CE	126	VAL
26	CE	133	LEU
26	CE	139	LYS
26	CE	146	VAL
26	CE	149	ILE
26	CE	150	THR
26	CE	164	LEU
26	CE	187	VAL
26	CE	200	LEU
27	CF	3	LYS
27	CF	5	HIS
27	CF	7	TYR
27	CF	18	THR
27	CF	19	GLU
27	CF	21	ASN
27	CF	26	MET
27	CF	31	VAL
27	CF	35	THR
27	CF	36	LEU
27	CF	46	ASP
27	CF	64	LYS
27	CF	80	ARG
27	CF	95	ARG
27	CF	104	ILE
27	CF	117	LEU
27	CF	141	ILE
27	CF	148	ARG
27	CF	149	VAL
27	CF	154	ILE
27	CF	174	ASP
28	CG	11	VAL
28	CG	25	THR
28	CG	27	LYS
28	CG	29	LYS
28	CG	30	ASN
28	CG	34	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	CG	37	LEU
28	CG	44	LYS
28	CG	45	HIS
28	CG	49	THR
28	CG	73	ASN
28	CG	74	SER
28	CG	80	THR
28	CG	92	VAL
28	CG	98	VAL
28	CG	117	LEU
28	CG	124	GLU
28	CG	127	THR
28	CG	137	ASP
28	CG	155	GLU
28	CG	166	ASP
28	CG	168	VAL
29	CH	3	VAL
29	CH	6	LEU
29	CH	11	ASN
29	CH	12	LEU
29	CH	14	SER
29	CH	17	ASP
29	CH	41	LYS
29	CH	42	LYS
29	CH	51	ARG
29	CH	72	ILE
29	CH	75	LEU
29	CH	78	VAL
29	CH	87	GLU
29	CH	97	ARG
29	CH	101	ASP
29	CH	124	THR
29	CH	142	VAL
29	CH	144	VAL
30	CJ	59	ILE
30	CJ	82	LYS
30	CJ	103	ARG
31	CK	3	THR
31	CK	28	LEU
31	CK	30	THR
31	CK	39	LYS
31	CK	57	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
31	CK	95	ARG
31	CK	123	LYS
31	CK	124	VAL
31	CK	129	GLU
31	CK	131	ASN
31	CK	142	ILE
32	CL	49	ARG
32	CL	76	VAL
32	CL	90	ASN
32	CL	92	GLU
32	CL	105	ARG
32	CL	107	LEU
32	CL	114	LYS
33	CM	82	LEU
33	CM	92	LEU
33	CM	94	THR
33	CM	100	ILE
33	CM	115	GLU
33	CM	118	THR
34	CN	18	ARG
34	CN	20	LEU
34	CN	24	THR
34	CN	27	SER
34	CN	40	ARG
34	CN	53	MET
34	CN	58	LYS
34	CN	59	ARG
34	CN	78	LEU
34	CN	100	LYS
34	CN	111	GLU
35	CO	1	MET
35	CO	2	ARG
35	CO	20	MET
35	CO	51	LEU
35	CO	63	ARG
35	CO	70	THR
35	CO	71	ARG
35	CO	76	VAL
35	CO	90	ARG
35	CO	95	THR
35	CO	116	VAL
35	CO	118	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
35	CO	119	SER
36	CP	9	ARG
36	CP	16	ARG
36	CP	18	LEU
36	CP	25	ARG
36	CP	31	THR
36	CP	38	GLN
36	CP	47	VAL
36	CP	78	VAL
36	CP	94	ARG
36	CP	103	VAL
37	CQ	6	LYS
37	CQ	8	LEU
37	CQ	19	SER
37	CQ	37	LYS
37	CQ	39	ARG
37	CQ	40	LEU
37	CQ	72	ARG
37	CQ	73	VAL
37	CQ	80	VAL
37	CQ	110	ILE
38	CR	5	LYS
38	CR	9	ILE
38	CR	11	ARG
38	CR	13	ARG
38	CR	16	LYS
38	CR	41	LYS
38	CR	51	ARG
38	CR	58	ARG
39	CS	10	LYS
39	CS	38	VAL
39	CS	45	GLU
39	CS	46	GLU
39	CS	47	VAL
39	CS	48	LYS
39	CS	58	VAL
39	CS	60	LYS
39	CS	62	GLU
39	CS	102	SER
40	CT	7	HIS
40	CT	13	SER
40	CT	19	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
40	CT	30	SER
40	CT	65	ASP
40	CT	66	ILE
40	CT	69	LEU
40	CT	76	VAL
40	CT	86	MET
40	CT	96	ILE
40	CT	97	LEU
40	CT	107	VAL
40	CT	109	ASP
40	CT	110	ARG
41	CU	2	ILE
41	CU	3	ARG
41	CU	5	GLU
41	CU	18	GLU
41	CU	22	THR
41	CU	30	ILE
41	CU	49	LYS
41	CU	50	LEU
41	CU	56	GLU
41	CU	68	LYS
41	CU	69	ARG
41	CU	70	HIS
41	CU	73	ARG
41	CU	77	ARG
42	CV	7	ARG
42	CV	19	LYS
42	CV	29	LEU
42	CV	35	ILE
42	CV	37	GLU
42	CV	41	LEU
42	CV	53	ASN
42	CV	61	LYS
42	CV	68	SER
42	CV	72	ILE
42	CV	74	ASN
42	CV	101	GLU
43	CW	1	MET
43	CW	7	GLU
43	CW	10	LYS
43	CW	20	LEU
43	CW	34	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
43	CW	40	ILE
43	CW	41	GLU
43	CW	53	LYS
43	CW	61	LEU
43	CW	62	THR
43	CW	65	VAL
43	CW	70	ILE
43	CW	76	ASP
44	CX	30	SER
44	CX	38	VAL
44	CX	77	ARG
45	CY	17	ASN
45	CY	20	HIS
45	CY	22	LEU
45	CY	35	SER
45	CY	48	THR
45	CY	71	LEU
45	CY	72	ARG
46	CZ	7	ARG
46	CZ	18	LEU
46	CZ	19	LEU
46	CZ	21	LEU
46	CZ	38	GLN
46	CZ	57	LEU
46	CZ	58	ASN
47	C0	3	LYS
47	C0	4	THR
47	C0	5	ILE
47	C0	10	THR
47	C0	19	LYS
47	C0	57	VAL
48	C1	10	ARG
48	C1	26	THR
48	C1	28	LEU
48	C1	40	ARG
49	C2	47	VAL
50	C3	1	MET
50	C3	3	ARG
50	C3	4	THR
50	C3	42	LEU
51	C4	19	LYS
51	C4	30	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
51	C4	31	HIS
51	C4	47	LYS
52	C5	3	VAL
52	C5	26	ILE
24	DC	130	LEU
24	DC	252	THR
54	DD	32	ASN
54	DD	95	SER
26	DE	7	ASP
26	DE	116	ASP
27	DF	95	ARG
27	DF	105	THR
27	DF	113	ASP
27	DF	144	ASP
27	DF	154	ILE
27	DF	174	ASP
28	DG	45	HIS
28	DG	77	ILE
28	DG	81	GLU
28	DG	85	LYS
28	DG	104	ASN
28	DG	114	ASP
28	DG	152	ARG
28	DG	177	LYS
29	DH	8	LYS
29	DH	14	SER
29	DH	42	LYS
29	DH	44	ILE
29	DH	46	PHE
29	DH	50	ARG
29	DH	53	GLU
29	DH	60	GLU
29	DH	76	GLU
29	DH	77	THR
29	DH	125	THR
55	DI	16	SER
55	DI	71	CYS
55	DI	105	LYS
30	DJ	59	ILE
31	DK	39	LYS
31	DK	124	VAL
32	DL	49	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
32	DL	58	LEU
33	DM	115	GLU
34	DN	27	SER
34	DN	59	ARG
34	DN	135	VAL
35	DO	75	ILE
35	DO	116	VAL
36	DP	31	THR
36	DP	78	VAL
37	DQ	19	SER
37	DQ	68	GLU
37	DQ	85	SER
37	DQ	96	LYS
38	DR	11	ARG
38	DR	51	ARG
39	DS	38	VAL
39	DS	45	GLU
39	DS	102	SER
40	DT	86	MET
40	DT	109	ASP
41	DU	5	GLU
41	DU	92	ASN
41	DU	93	LEU
42	DV	55	PRO
43	DW	7	GLU
43	DW	66	ASP
43	DW	70	ILE
44	DX	11	ARG
45	DY	2	SER
47	D0	10	THR
50	D3	1	MET
51	D4	31	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
7	AG	52	GLN
26	CE	115	GLN
30	CJ	31	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1530/1534 (99%)	258 (16%)	9 (0%)
1	BA	1529/1534 (99%)	267 (17%)	10 (0%)
22	CA	2892/2904 (99%)	414 (14%)	32 (1%)
23	CB	117/120 (97%)	11 (9%)	0
23	DB	119/120 (99%)	8 (6%)	0
53	DA	2883/2903 (99%)	377 (13%)	26 (0%)
All	All	9070/9115 (99%)	1335 (14%)	77 (0%)

All (1335) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	22	G
1	AA	28	A
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	69	G
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	78	A
1	AA	79	G
1	AA	80	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	119	A
1	AA	121	U
1	AA	122	G
1	AA	128	G
1	AA	130	A
1	AA	131	A
1	AA	137	U
1	AA	142	G
1	AA	144	G
1	AA	158	G
1	AA	159	G
1	AA	163	C
1	AA	168	G
1	AA	173	U
1	AA	183	C
1	AA	201	G
1	AA	205	A
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	212	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	346	G
1	AA	352	C
1	AA	354	G
1	AA	367	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	439	U
1	AA	444	G
1	AA	457	G
1	AA	458	U
1	AA	463	U
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	481	G
1	AA	486	U
1	AA	495	A
1	AA	496	A
1	AA	509	A
1	AA	511	C
1	AA	512	U
1	AA	527	G7M
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	577	G
1	AA	631	C
1	AA	632	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	AA	649	A
1	AA	650	G
1	AA	653	U
1	AA	665	A
1	AA	682	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	733	G
1	AA	753	A
1	AA	755	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	815	A
1	AA	817	C
1	AA	827	U
1	AA	828	U
1	AA	832	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	887	G
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	960	U
1	AA	969	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1005	A
1	AA	1009	U
1	AA	1012	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	AA	1015	G
1	AA	1017	U
1	AA	1019	A
1	AA	1021	A
1	AA	1022	A
1	AA	1023	U
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1043	G
1	AA	1053	G
1	AA	1054	C
1	AA	1065	U
1	AA	1070	U
1	AA	1086	U
1	AA	1092	A
1	AA	1094	G
1	AA	1095	U
1	AA	1098	C
1	AA	1101	A
1	AA	1108	G
1	AA	1124	G
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1152	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1167	A
1	AA	1168	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1212	U
1	AA	1213	A
1	AA	1215	G
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1256	A
1	AA	1257	A
1	AA	1260	G
1	AA	1279	G
1	AA	1280	A
1	AA	1286	U
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1336	C
1	AA	1346	A
1	AA	1353	G
1	AA	1363	A
1	AA	1368	A
1	AA	1370	G
1	AA	1381	U
1	AA	1398	A
1	AA	1429	A
1	AA	1441	A
1	AA	1442	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	AA	1445	U
1	AA	1446	A
1	AA	1450	U
1	AA	1451	U
1	AA	1453	G
1	AA	1454	G
1	AA	1492	A
1	AA	1493	A
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	BA	3	A
1	BA	4	U
1	BA	5	U
1	BA	7	A
1	BA	9	G
1	BA	22	G
1	BA	28	A
1	BA	32	A
1	BA	39	G
1	BA	47	C
1	BA	48	C
1	BA	50	A
1	BA	51	A
1	BA	69	G
1	BA	70	U
1	BA	71	A
1	BA	72	A
1	BA	74	A
1	BA	75	G
1	BA	76	G
1	BA	77	A
1	BA	78	A
1	BA	80	A
1	BA	81	A
1	BA	82	G
1	BA	83	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	BA	84	U
1	BA	85	U
1	BA	87	C
1	BA	88	U
1	BA	94	G
1	BA	95	C
1	BA	108	G
1	BA	119	A
1	BA	121	U
1	BA	122	G
1	BA	128	G
1	BA	130	A
1	BA	131	A
1	BA	137	U
1	BA	142	G
1	BA	144	G
1	BA	158	G
1	BA	159	G
1	BA	163	C
1	BA	168	G
1	BA	173	U
1	BA	182	A
1	BA	183	C
1	BA	201	G
1	BA	204	G
1	BA	209	U
1	BA	210	C
1	BA	211	G
1	BA	212	G
1	BA	245	U
1	BA	247	G
1	BA	251	G
1	BA	262	A
1	BA	266	G
1	BA	267	C
1	BA	289	G
1	BA	321	A
1	BA	328	C
1	BA	329	A
1	BA	330	C
1	BA	332	G
1	BA	346	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	BA	347	G
1	BA	352	C
1	BA	354	G
1	BA	367	U
1	BA	372	C
1	BA	373	A
1	BA	382	A
1	BA	384	G
1	BA	406	G
1	BA	412	A
1	BA	413	G
1	BA	421	U
1	BA	422	C
1	BA	429	U
1	BA	430	A
1	BA	435	A
1	BA	439	U
1	BA	444	G
1	BA	457	G
1	BA	458	U
1	BA	463	U
1	BA	467	U
1	BA	468	A
1	BA	469	C
1	BA	478	A
1	BA	479	U
1	BA	481	G
1	BA	485	U
1	BA	486	U
1	BA	495	A
1	BA	496	A
1	BA	509	A
1	BA	510	A
1	BA	511	C
1	BA	512	U
1	BA	527	G7M
1	BA	530	G
1	BA	532	A
1	BA	533	A
1	BA	547	A
1	BA	559	A
1	BA	562	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	BA	564	C
1	BA	568	G
1	BA	572	A
1	BA	573	A
1	BA	576	C
1	BA	577	G
1	BA	631	C
1	BA	632	U
1	BA	649	A
1	BA	650	G
1	BA	653	U
1	BA	665	A
1	BA	682	G
1	BA	723	U
1	BA	724	G
1	BA	733	G
1	BA	753	A
1	BA	755	G
1	BA	777	A
1	BA	793	U
1	BA	794	A
1	BA	815	A
1	BA	817	C
1	BA	827	U
1	BA	828	U
1	BA	841	C
1	BA	842	U
1	BA	843	U
1	BA	844	G
1	BA	845	A
1	BA	846	G
1	BA	858	G
1	BA	887	G
1	BA	913	A
1	BA	914	A
1	BA	926	G
1	BA	932	C
1	BA	934	C
1	BA	942	G
1	BA	960	U
1	BA	969	A
1	BA	975	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	BA	976	G
1	BA	977	A
1	BA	988	G
1	BA	993	G
1	BA	1004	A
1	BA	1005	A
1	BA	1008	U
1	BA	1009	U
1	BA	1012	A
1	BA	1015	G
1	BA	1017	U
1	BA	1020	G
1	BA	1021	A
1	BA	1023	U
1	BA	1026	G
1	BA	1027	C
1	BA	1028	C
1	BA	1029	U
1	BA	1030	U
1	BA	1031	C
1	BA	1032	G
1	BA	1033	G
1	BA	1034	G
1	BA	1036	A
1	BA	1037	C
1	BA	1041	G
1	BA	1043	G
1	BA	1053	G
1	BA	1054	C
1	BA	1065	U
1	BA	1070	U
1	BA	1086	U
1	BA	1092	A
1	BA	1094	G
1	BA	1095	U
1	BA	1098	C
1	BA	1101	A
1	BA	1108	G
1	BA	1110	A
1	BA	1124	G
1	BA	1133	G
1	BA	1135	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	BA	1136	C
1	BA	1137	C
1	BA	1139	G
1	BA	1140	C
1	BA	1141	C
1	BA	1142	G
1	BA	1143	G
1	BA	1145	A
1	BA	1152	A
1	BA	1158	C
1	BA	1159	U
1	BA	1160	G
1	BA	1167	A
1	BA	1168	U
1	BA	1183	U
1	BA	1184	G
1	BA	1196	A
1	BA	1197	A
1	BA	1212	U
1	BA	1213	A
1	BA	1214	C
1	BA	1215	G
1	BA	1225	A
1	BA	1227	A
1	BA	1228	C
1	BA	1238	A
1	BA	1239	A
1	BA	1240	U
1	BA	1256	A
1	BA	1257	A
1	BA	1260	G
1	BA	1280	A
1	BA	1286	U
1	BA	1287	A
1	BA	1292	G
1	BA	1293	C
1	BA	1299	A
1	BA	1300	G
1	BA	1302	C
1	BA	1305	G
1	BA	1317	C
1	BA	1320	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	BA	1322	C
1	BA	1336	C
1	BA	1346	A
1	BA	1353	G
1	BA	1363	A
1	BA	1368	A
1	BA	1370	G
1	BA	1379	G
1	BA	1381	U
1	BA	1398	A
1	BA	1419	G
1	BA	1429	A
1	BA	1441	A
1	BA	1442	G
1	BA	1445	U
1	BA	1446	A
1	BA	1452	C
1	BA	1453	G
1	BA	1454	G
1	BA	1491	G
1	BA	1492	A
1	BA	1493	A
1	BA	1497	G
1	BA	1503	A
1	BA	1505	G
1	BA	1506	U
1	BA	1517	G
1	BA	1529	G
1	BA	1530	G
1	BA	1533	C
1	BA	1534	A
22	CA	7	G
22	CA	10	A
22	CA	14	A
22	CA	15	G
22	CA	34	U
22	CA	42	A
22	CA	46	G
22	CA	58	G
22	CA	63	A
22	CA	71	A
22	CA	74	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	75	G
22	CA	80	G
22	CA	83	A
22	CA	84	A
22	CA	101	A
22	CA	102	U
22	CA	119	A
22	CA	120	U
22	CA	135	U
22	CA	136	G
22	CA	137	U
22	CA	138	U
22	CA	139	U
22	CA	140	C
22	CA	141	G
22	CA	142	A
22	CA	143	C
22	CA	196	A
22	CA	215	G
22	CA	216	A
22	CA	222	A
22	CA	248	G
22	CA	257	C
22	CA	265	A
22	CA	266	G
22	CA	272	A
22	CA	276	U
22	CA	279	A
22	CA	283	G
22	CA	285	G
22	CA	291	G
22	CA	311	A
22	CA	315	G
22	CA	325	G
22	CA	329	G
22	CA	330	A
22	CA	331	C
22	CA	336	C
22	CA	353	C
22	CA	354	A
22	CA	355	U
22	CA	361	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	362	A
22	CA	370	G
22	CA	371	A
22	CA	372	G
22	CA	386	G
22	CA	404	A
22	CA	405	U
22	CA	411	G
22	CA	412	A
22	CA	424	G
22	CA	425	G
22	CA	426	C
22	CA	435	C
22	CA	451	U
22	CA	480	A
22	CA	481	G
22	CA	491	G
22	CA	504	A
22	CA	505	A
22	CA	508	A
22	CA	531	C
22	CA	532	A
22	CA	533	G
22	CA	543	G
22	CA	546	U
22	CA	547	A
22	CA	548	G
22	CA	549	G
22	CA	550	C
22	CA	551	G
22	CA	563	A
22	CA	573	U
22	CA	575	A
22	CA	586	A
22	CA	603	A
22	CA	613	A
22	CA	614	A
22	CA	615	U
22	CA	618	G
22	CA	620	G
22	CA	627	A
22	CA	637	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	645	C
22	CA	646	U
22	CA	647	G
22	CA	648	G
22	CA	654	A
22	CA	655	A
22	CA	686	U
22	CA	730	A
22	CA	747	5MU
22	CA	764	A
22	CA	765	C
22	CA	775	G
22	CA	776	G
22	CA	782	A
22	CA	784	G
22	CA	785	G
22	CA	792	A
22	CA	805	G
22	CA	812	C
22	CA	819	A
22	CA	827	U
22	CA	828	U
22	CA	845	A
22	CA	846	U
22	CA	847	U
22	CA	858	G
22	CA	859	G
22	CA	866	A
22	CA	878	A
22	CA	883	G
22	CA	893	C
22	CA	896	A
22	CA	897	C
22	CA	910	A
22	CA	914	G
22	CA	915	C
22	CA	931	U
22	CA	934	U
22	CA	941	A
22	CA	946	C
22	CA	961	C
22	CA	974	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	983	A
22	CA	995	C
22	CA	996	A
22	CA	1012	U
22	CA	1013	C
22	CA	1022	G
22	CA	1026	G
22	CA	1033	U
22	CA	1046	A
22	CA	1047	G
22	CA	1053	C
22	CA	1070	A
22	CA	1083	U
22	CA	1084	A
22	CA	1088	A
22	CA	1090	A
22	CA	1110	G
22	CA	1111	A
22	CA	1112	G
22	CA	1122	G
22	CA	1132	U
22	CA	1133	A
22	CA	1135	C
22	CA	1136	G
22	CA	1138	G
22	CA	1142	A
22	CA	1168	G
22	CA	1169	A
22	CA	1171	G
22	CA	1172	C
22	CA	1174	U
22	CA	1175	A
22	CA	1176	U
22	CA	1177	G
22	CA	1179	G
22	CA	1180	U
22	CA	1182	G
22	CA	1186	G
22	CA	1208	C
22	CA	1230	A
22	CA	1231	U
22	CA	1238	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	1253	A
22	CA	1256	G
22	CA	1266	G
22	CA	1271	G
22	CA	1272	A
22	CA	1273	U
22	CA	1300	G
22	CA	1301	A
22	CA	1365	A
22	CA	1368	G
22	CA	1379	U
22	CA	1380	G
22	CA	1383	A
22	CA	1391	U
22	CA	1395	A
22	CA	1410	G
22	CA	1416	G
22	CA	1417	C
22	CA	1419	A
22	CA	1428	C
22	CA	1452	G
22	CA	1453	A
22	CA	1481	U
22	CA	1482	G
22	CA	1483	G
22	CA	1490	A
22	CA	1493	C
22	CA	1494	A
22	CA	1495	A
22	CA	1497	U
22	CA	1510	G
22	CA	1515	A
22	CA	1523	U
22	CA	1530	G
22	CA	1534	U
22	CA	1535	A
22	CA	1536	C
22	CA	1537	G
22	CA	1540	G
22	CA	1566	A
22	CA	1569	A
22	CA	1578	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	1581	G
22	CA	1583	A
22	CA	1584	U
22	CA	1585	C
22	CA	1586	A
22	CA	1587	G
22	CA	1606	C
22	CA	1608	A
22	CA	1610	A
22	CA	1647	U
22	CA	1648	U
22	CA	1649	G
22	CA	1674	G
22	CA	1714	U
22	CA	1715	G
22	CA	1725	U
22	CA	1727	C
22	CA	1729	U
22	CA	1730	C
22	CA	1731	G
22	CA	1732	C
22	CA	1738	G
22	CA	1739	A
22	CA	1740	G
22	CA	1744	A
22	CA	1755	A
22	CA	1764	C
22	CA	1773	A
22	CA	1782	U
22	CA	1799	G
22	CA	1800	C
22	CA	1801	A
22	CA	1807	G
22	CA	1808	A
22	CA	1816	C
22	CA	1829	A
22	CA	1858	A
22	CA	1859	U
22	CA	1870	C
22	CA	1871	A
22	CA	1872	A
22	CA	1873	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	1874	C
22	CA	1876	A
22	CA	1880	U
22	CA	1886	U
22	CA	1906	G
22	CA	1914	C
22	CA	1929	G
22	CA	1930	G
22	CA	1931	U
22	CA	1937	A
22	CA	1938	A
22	CA	1955	U
22	CA	1967	C
22	CA	1970	A
22	CA	1972	G
22	CA	1991	U
22	CA	1993	U
22	CA	1997	C
22	CA	2022	U
22	CA	2023	C
22	CA	2031	A
22	CA	2033	A
22	CA	2043	C
22	CA	2055	C
22	CA	2056	G
22	CA	2060	A
22	CA	2061	G
22	CA	2062	A
22	CA	2069	G7M
22	CA	2072	C
22	CA	2093	G
22	CA	2095	A
22	CA	2101	A
22	CA	2110	G
22	CA	2111	U
22	CA	2112	G
22	CA	2113	U
22	CA	2115	G
22	CA	2116	G
22	CA	2117	A
22	CA	2118	U
22	CA	2119	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	2123	G
22	CA	2124	G
22	CA	2125	G
22	CA	2126	A
22	CA	2127	G
22	CA	2128	G
22	CA	2131	U
22	CA	2132	U
22	CA	2133	G
22	CA	2137	U
22	CA	2147	A
22	CA	2157	G
22	CA	2158	A
22	CA	2163	A
22	CA	2164	C
22	CA	2165	C
22	CA	2169	A
22	CA	2171	A
22	CA	2172	U
22	CA	2173	A
22	CA	2182	U
22	CA	2183	A
22	CA	2189	U
22	CA	2190	G
22	CA	2198	A
22	CA	2204	G
22	CA	2211	A
22	CA	2212	A
22	CA	2225	A
22	CA	2226	C
22	CA	2238	G
22	CA	2239	G
22	CA	2268	A
22	CA	2273	A
22	CA	2283	C
22	CA	2286	G
22	CA	2287	A
22	CA	2305	U
22	CA	2308	G
22	CA	2311	A
22	CA	2325	G
22	CA	2327	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	2333	A
22	CA	2335	A
22	CA	2339	C
22	CA	2347	C
22	CA	2361	G
22	CA	2383	G
22	CA	2385	C
22	CA	2402	U
22	CA	2403	C
22	CA	2406	A
22	CA	2423	U
22	CA	2424	C
22	CA	2425	A
22	CA	2426	A
22	CA	2429	G
22	CA	2430	A
22	CA	2431	U
22	CA	2434	A
22	CA	2435	A
22	CA	2441	U
22	CA	2448	A
22	CA	2476	A
22	CA	2491	U
22	CA	2502	G
22	CA	2505	G
22	CA	2518	A
22	CA	2525	G
22	CA	2529	G
22	CA	2547	A
22	CA	2554	U
22	CA	2566	A
22	CA	2567	G
22	CA	2585	U
22	CA	2586	U
22	CA	2603	G
22	CA	2609	U
22	CA	2613	U
22	CA	2629	U
22	CA	2663	G
22	CA	2681	C
22	CA	2682	A
22	CA	2689	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	2690	U
22	CA	2714	G
22	CA	2718	G
22	CA	2726	A
22	CA	2744	G
22	CA	2748	A
22	CA	2765	A
22	CA	2778	A
22	CA	2791	G
22	CA	2794	C
22	CA	2798	U
22	CA	2799	A
22	CA	2803	G
22	CA	2811	G
22	CA	2820	A
22	CA	2821	A
22	CA	2825	G
22	CA	2867	G
22	CA	2874	C
22	CA	2883	A
22	CA	2884	U
22	CA	2891	U
22	CA	2894	G
22	CA	2903	U
22	CA	2904	U
23	CB	15	A
23	CB	23	G
23	CB	35	C
23	CB	45	A
23	CB	56	G
23	CB	66	A
23	CB	88	C
23	CB	89	U
23	CB	90	C
23	CB	99	A
23	CB	109	A
53	DA	10	A
53	DA	12	U
53	DA	14	A
53	DA	15	G
53	DA	34	U
53	DA	46	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	58	G
53	DA	63	A
53	DA	71	A
53	DA	74	A
53	DA	75	G
53	DA	80	G
53	DA	101	A
53	DA	102	U
53	DA	119	A
53	DA	120	U
53	DA	135	U
53	DA	136	G
53	DA	137	U
53	DA	138	U
53	DA	139	U
53	DA	140	C
53	DA	141	G
53	DA	142	A
53	DA	196	A
53	DA	216	A
53	DA	221	A
53	DA	222	A
53	DA	248	G
53	DA	257	C
53	DA	266	G
53	DA	272	A
53	DA	276	U
53	DA	277	G
53	DA	279	A
53	DA	283	G
53	DA	285	G
53	DA	291	G
53	DA	302	C
53	DA	311	A
53	DA	315	G
53	DA	325	G
53	DA	329	G
53	DA	330	A
53	DA	331	C
53	DA	353	C
53	DA	355	U
53	DA	358	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	361	G
53	DA	362	A
53	DA	370	G
53	DA	372	G
53	DA	386	G
53	DA	411	G
53	DA	412	A
53	DA	424	G
53	DA	425	G
53	DA	435	C
53	DA	451	U
53	DA	481	G
53	DA	491	G
53	DA	504	A
53	DA	505	A
53	DA	508	A
53	DA	531	C
53	DA	532	A
53	DA	533	G
53	DA	543	G
53	DA	546	U
53	DA	547	A
53	DA	548	G
53	DA	549	G
53	DA	550	C
53	DA	551	G
53	DA	563	A
53	DA	573	U
53	DA	575	A
53	DA	586	A
53	DA	603	A
53	DA	613	A
53	DA	614	A
53	DA	615	U
53	DA	620	G
53	DA	627	A
53	DA	637	A
53	DA	645	C
53	DA	646	U
53	DA	647	G
53	DA	654	A
53	DA	655	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	686	U
53	DA	730	A
53	DA	747	5MU
53	DA	764	A
53	DA	765	C
53	DA	775	G
53	DA	776	G
53	DA	782	A
53	DA	784	G
53	DA	785	G
53	DA	790	U
53	DA	792	A
53	DA	805	G
53	DA	812	C
53	DA	827	U
53	DA	828	U
53	DA	845	A
53	DA	846	U
53	DA	847	U
53	DA	858	G
53	DA	859	G
53	DA	866	A
53	DA	878	A
53	DA	885	C
53	DA	893	C
53	DA	896	A
53	DA	897	C
53	DA	910	A
53	DA	914	G
53	DA	915	C
53	DA	931	U
53	DA	934	U
53	DA	946	C
53	DA	961	C
53	DA	974	G
53	DA	983	A
53	DA	996	A
53	DA	1012	U
53	DA	1013	C
53	DA	1022	G
53	DA	1026	G
53	DA	1033	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	1046	A
53	DA	1047	G
53	DA	1070	A
53	DA	1083	U
53	DA	1084	A
53	DA	1088	A
53	DA	1090	A
53	DA	1112	G
53	DA	1130	U
53	DA	1132	U
53	DA	1133	A
53	DA	1135	C
53	DA	1136	G
53	DA	1138	G
53	DA	1142	A
53	DA	1168	G
53	DA	1171	G
53	DA	1172	C
53	DA	1174	U
53	DA	1175	A
53	DA	1176	U
53	DA	1177	G
53	DA	1182	G
53	DA	1238	G
53	DA	1253	A
53	DA	1256	G
53	DA	1271	G
53	DA	1272	A
53	DA	1273	U
53	DA	1300	G
53	DA	1301	A
53	DA	1352	U
53	DA	1365	A
53	DA	1379	U
53	DA	1383	A
53	DA	1410	G
53	DA	1416	G
53	DA	1417	C
53	DA	1419	A
53	DA	1428	C
53	DA	1452	G
53	DA	1453	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	1482	G
53	DA	1490	A
53	DA	1493	C
53	DA	1494	A
53	DA	1495	A
53	DA	1497	U
53	DA	1510	G
53	DA	1515	A
53	DA	1523	U
53	DA	1532	A
53	DA	1535	A
53	DA	1536	C
53	DA	1537	G
53	DA	1540	G
53	DA	1566	A
53	DA	1569	A
53	DA	1578	U
53	DA	1581	G
53	DA	1583	A
53	DA	1584	U
53	DA	1585	C
53	DA	1606	C
53	DA	1608	A
53	DA	1647	U
53	DA	1648	U
53	DA	1649	G
53	DA	1674	G
53	DA	1714	U
53	DA	1715	G
53	DA	1725	U
53	DA	1727	C
53	DA	1729	U
53	DA	1730	C
53	DA	1731	G
53	DA	1732	C
53	DA	1738	G
53	DA	1739	A
53	DA	1740	G
53	DA	1744	A
53	DA	1755	A
53	DA	1764	C
53	DA	1773	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	1782	U
53	DA	1800	C
53	DA	1801	A
53	DA	1808	A
53	DA	1816	C
53	DA	1829	A
53	DA	1858	A
53	DA	1859	U
53	DA	1870	C
53	DA	1871	A
53	DA	1872	A
53	DA	1873	G
53	DA	1874	C
53	DA	1876	A
53	DA	1880	U
53	DA	1886	U
53	DA	1906	G
53	DA	1907	G
53	DA	1913	A
53	DA	1914	C
53	DA	1929	G
53	DA	1930	G
53	DA	1931	U
53	DA	1937	A
53	DA	1938	A
53	DA	1955	U
53	DA	1967	C
53	DA	1970	A
53	DA	1972	G
53	DA	1991	U
53	DA	1993	U
53	DA	1997	C
53	DA	2023	C
53	DA	2031	A
53	DA	2033	A
53	DA	2043	C
53	DA	2055	C
53	DA	2056	G
53	DA	2060	A
53	DA	2061	G
53	DA	2062	A
53	DA	2069	G7M

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	2085	U
53	DA	2093	G
53	DA	2097	A
53	DA	2101	A
53	DA	2105	U
53	DA	2108	A
53	DA	2111	U
53	DA	2112	G
53	DA	2113	U
53	DA	2115	G
53	DA	2116	G
53	DA	2117	A
53	DA	2118	U
53	DA	2119	A
53	DA	2123	G
53	DA	2126	A
53	DA	2127	G
53	DA	2128	G
53	DA	2131	U
53	DA	2132	U
53	DA	2133	G
53	DA	2134	A
53	DA	2136	G
53	DA	2137	U
53	DA	2145	C
53	DA	2146	C
53	DA	2147	A
53	DA	2148	G
53	DA	2149	U
53	DA	2159	G
53	DA	2160	C
53	DA	2161	C
53	DA	2162	G
53	DA	2163	A
53	DA	2164	C
53	DA	2165	C
53	DA	2167	U
53	DA	2168	G
53	DA	2169	A
53	DA	2170	A
53	DA	2171	A
53	DA	2172	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	2173	A
53	DA	2177	C
53	DA	2178	C
53	DA	2179	C
53	DA	2181	U
53	DA	2185	U
53	DA	2187	U
53	DA	2188	U
53	DA	2190	G
53	DA	2198	A
53	DA	2204	G
53	DA	2211	A
53	DA	2225	A
53	DA	2238	G
53	DA	2239	G
53	DA	2268	A
53	DA	2283	C
53	DA	2286	G
53	DA	2287	A
53	DA	2305	U
53	DA	2308	G
53	DA	2325	G
53	DA	2327	A
53	DA	2333	A
53	DA	2335	A
53	DA	2339	C
53	DA	2347	C
53	DA	2383	G
53	DA	2385	C
53	DA	2406	A
53	DA	2424	C
53	DA	2425	A
53	DA	2434	A
53	DA	2435	A
53	DA	2441	U
53	DA	2448	A
53	DA	2476	A
53	DA	2491	U
53	DA	2502	G
53	DA	2505	G
53	DA	2518	A
53	DA	2525	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	DA	2529	G
53	DA	2547	A
53	DA	2554	U
53	DA	2566	A
53	DA	2567	G
53	DA	2573	C
53	DA	2585	U
53	DA	2586	U
53	DA	2603	G
53	DA	2609	U
53	DA	2613	U
53	DA	2629	U
53	DA	2663	G
53	DA	2682	A
53	DA	2689	U
53	DA	2690	U
53	DA	2714	G
53	DA	2726	A
53	DA	2744	G
53	DA	2748	A
53	DA	2765	A
53	DA	2778	A
53	DA	2791	G
53	DA	2798	U
53	DA	2799	A
53	DA	2803	G
53	DA	2811	G
53	DA	2820	A
53	DA	2821	A
53	DA	2825	G
53	DA	2867	G
53	DA	2874	C
53	DA	2883	A
53	DA	2891	U
53	DA	2894	G
23	DB	25	U
23	DB	35	C
23	DB	45	A
23	DB	56	G
23	DB	66	A
23	DB	89	U
23	DB	90	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
23	DB	109	A

All (77) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	209	U
1	AA	412	A
1	AA	429	U
1	AA	653	U
1	AA	793	U
1	AA	1024	G
1	AA	1031	C
1	AA	1211	U
1	BA	4	U
1	BA	83	C
1	BA	209	U
1	BA	429	U
1	BA	653	U
1	BA	793	U
1	BA	1028	C
1	BA	1183	U
1	BA	1211	U
1	BA	1493	A
22	CA	199	A
22	CA	271	G
22	CA	335	C
22	CA	404	A
22	CA	627	A
22	CA	645	C
22	CA	647	G
22	CA	764	A
22	CA	776	G
22	CA	784	G
22	CA	846	U
22	CA	960	A
22	CA	984	A
22	CA	1128	G
22	CA	1142	A
22	CA	1379	U
22	CA	1647	U
22	CA	1730	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	CA	1738	G
22	CA	2118	U
22	CA	2146	C
22	CA	2162	G
22	CA	2225	A
22	CA	2286	G
22	CA	2324	U
22	CA	2326	C
22	CA	2406	A
22	CA	2425	A
22	CA	2585	U
22	CA	2680	U
22	CA	2873	A
22	CA	2903	U
53	DA	199	A
53	DA	627	A
53	DA	645	C
53	DA	764	A
53	DA	776	G
53	DA	784	G
53	DA	846	U
53	DA	859	G
53	DA	984	A
53	DA	1046	A
53	DA	1128	G
53	DA	1142	A
53	DA	1253	A
53	DA	1494	A
53	DA	1647	U
53	DA	1730	C
53	DA	1738	G
53	DA	1929	G
53	DA	2118	U
53	DA	2127	G
53	DA	2130	U
53	DA	2158	A
53	DA	2324	U
53	DA	2406	A
53	DA	2585	U
53	DA	2873	A

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

75 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	6MZ	CA	2030	22	18,25,26	0.94	1 (5%)	16,36,39	2.56	5 (31%)
53	6MZ	DA	1618	53	18,25,26	0.92	1 (5%)	16,36,39	2.20	4 (25%)
1	5MC	AA	1407	1	18,22,23	1.06	1 (5%)	26,32,35	1.14	2 (7%)
1	2MG	BA	1207	1	18,26,27	0.82	0	16,38,41	1.18	2 (12%)
1	PSU	AA	516	1,56	18,21,22	0.94	2 (11%)	22,30,33	1.87	3 (13%)
1	MA6	AA	1519	1	19,26,27	0.96	0	18,38,41	1.48	3 (16%)
22	OMU	CA	2552	22	19,22,23	1.15	3 (15%)	26,31,34	1.71	5 (19%)
53	2MG	DA	1835	53	18,26,27	0.71	1 (5%)	16,38,41	1.32	4 (25%)
53	1MG	DA	745	53	18,26,27	0.82	0	19,39,42	0.90	2 (10%)
53	PSU	DA	955	53	18,21,22	1.13	1 (5%)	22,30,33	1.50	3 (13%)
1	2MG	BA	966	1	18,26,27	0.93	1 (5%)	16,38,41	1.19	2 (12%)
22	5MU	CA	747	22	19,22,23	1.33	4 (21%)	28,32,35	2.33	6 (21%)
22	PSU	CA	2457	22	18,21,22	1.02	1 (5%)	22,30,33	1.88	5 (22%)
34	4D4	CN	81	34	9,11,12	2.06	2 (22%)	8,13,15	1.25	1 (12%)
22	2MG	CA	2445	22	18,26,27	0.94	1 (5%)	16,38,41	1.07	2 (12%)
53	2MG	DA	2445	53	18,26,27	1.24	1 (5%)	16,38,41	0.84	1 (6%)
1	2MG	AA	1207	1	18,26,27	0.84	1 (5%)	16,38,41	1.25	4 (25%)
22	PSU	CA	1917	22	18,21,22	1.04	1 (5%)	22,30,33	1.58	3 (13%)
1	UR3	AA	1498	1	19,22,23	0.97	1 (5%)	26,32,35	1.63	4 (15%)
53	PSU	DA	746	56,53	18,21,22	1.24	4 (22%)	22,30,33	2.04	5 (22%)
53	PSU	DA	1917	53	18,21,22	1.02	2 (11%)	22,30,33	1.75	5 (22%)
53	OMU	DA	2552	53	19,22,23	1.19	3 (15%)	26,31,34	1.74	6 (23%)
53	PSU	DA	2605	53	18,21,22	0.96	1 (5%)	22,30,33	1.66	3 (13%)
54	MEQ	DD	150[A]	54	8,9,10	0.92	0	5,10,12	1.40	2 (40%)
34	4D4	DN	81[A]	-	9,11,12	2.01	2 (22%)	8,13,15	0.86	0
53	H2U	DA	2449	53	18,21,22	1.28	2 (11%)	21,30,33	1.90	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	PSU	CA	2580	22	18,21,22	1.04	2 (11%)	22,30,33	1.85	6 (27%)
53	3TD	DA	1915	53	18,22,23	1.58	3 (16%)	22,32,35	2.01	2 (9%)
1	2MG	AA	966	1	18,26,27	0.87	0	16,38,41	1.27	3 (18%)
1	2MG	BA	1516	1	18,26,27	0.90	1 (5%)	16,38,41	1.41	3 (18%)
1	MA6	BA	1518	1	19,26,27	1.01	1 (5%)	18,38,41	1.27	2 (11%)
22	OMG	CA	2251	22	18,26,27	0.92	0	19,38,41	1.28	4 (21%)
1	5MC	BA	967	1	18,22,23	0.98	2 (11%)	26,32,35	1.08	2 (7%)
22	5MC	CA	1962	22	18,22,23	0.95	2 (11%)	26,32,35	1.20	2 (7%)
1	MA6	BA	1519	1	19,26,27	1.06	2 (10%)	18,38,41	1.57	3 (16%)
53	PSU	DA	2580	53	18,21,22	0.81	1 (5%)	22,30,33	1.51	5 (22%)
53	PSU	DA	1911	53	18,21,22	0.97	1 (5%)	22,30,33	1.77	4 (18%)
53	6MZ	DA	2030	53	18,25,26	0.78	0	16,36,39	2.55	5 (31%)
53	PSU	DA	2457	53	18,21,22	0.88	1 (5%)	22,30,33	1.43	3 (13%)
22	6MZ	CA	1618	22	18,25,26	1.01	1 (5%)	16,36,39	2.40	4 (25%)
53	PSU	DA	2604	53	18,21,22	1.06	1 (5%)	22,30,33	1.63	5 (22%)
53	PSU	DA	2504	53	18,21,22	0.91	0	22,30,33	1.54	3 (13%)
1	5MC	AA	967	1	18,22,23	1.01	1 (5%)	26,32,35	1.12	2 (7%)
22	2MG	CA	1835	22	18,26,27	0.93	1 (5%)	16,38,41	1.08	2 (12%)
22	PSU	CA	955	22	18,21,22	0.94	1 (5%)	22,30,33	1.69	3 (13%)
22	2MA	CA	2503	22	17,25,26	1.13	2 (11%)	17,37,40	0.96	2 (11%)
1	5MC	BA	1407	1	18,22,23	1.07	2 (11%)	26,32,35	1.14	3 (11%)
22	OMC	CA	2498	22,56	19,22,23	0.83	0	26,31,34	0.85	0
53	5MU	DA	747	53	19,22,23	1.50	4 (21%)	28,32,35	2.29	6 (21%)
1	2MG	AA	1516	1	18,26,27	0.79	1 (5%)	16,38,41	1.37	3 (18%)
53	2MA	DA	2503	56,53	17,25,26	0.88	0	17,37,40	1.13	2 (11%)
1	MA6	AA	1518	1	19,26,27	0.97	1 (5%)	18,38,41	1.19	3 (16%)
22	PSU	CA	2504	22	18,21,22	1.03	2 (11%)	22,30,33	1.82	5 (22%)
1	4OC	BA	1402	1	20,23,24	0.82	0	26,32,35	1.05	2 (7%)
53	OMC	DA	2498	56,53	19,22,23	0.92	1 (5%)	26,31,34	1.08	1 (3%)
1	4OC	AA	1402	1	20,23,24	0.78	0	26,32,35	0.95	1 (3%)
54	MEQ	DD	150[B]	54	8,9,10	1.20	1 (12%)	5,10,12	1.01	0
22	1MG	CA	745	22	18,26,27	0.82	0	19,39,42	1.12	2 (10%)
22	5MU	CA	1939	22	19,22,23	1.34	3 (15%)	28,32,35	2.07	6 (21%)
53	5MU	DA	1939	53	19,22,23	1.39	4 (21%)	28,32,35	1.95	6 (21%)
34	4D4	DN	81[B]	-	9,11,12	1.94	2 (22%)	8,13,15	0.99	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	UR3	BA	1498	1	19,22,23	1.03	0	26,32,35	1.42	2 (7%)
12	D2T	AL	89	12	7,9,10	1.50	1 (14%)	6,11,13	1.54	2 (33%)
1	G7M	BA	527	1	20,26,27	1.41	2 (10%)	17,39,42	0.78	0
22	PSU	CA	746	22,56	18,21,22	1.19	1 (5%)	22,30,33	1.92	5 (22%)
53	OMG	DA	2251	53	18,26,27	0.87	1 (5%)	19,38,41	1.24	3 (15%)
1	G7M	AA	527	1	20,26,27	1.16	2 (10%)	17,39,42	1.00	0
22	G7M	CA	2069	22	20,26,27	1.25	1 (5%)	17,39,42	0.70	0
22	PSU	CA	2605	22	18,21,22	0.93	2 (11%)	22,30,33	1.86	4 (18%)
53	G7M	DA	2069	53	20,26,27	1.09	1 (5%)	17,39,42	0.65	0
1	PSU	BA	516	1	18,21,22	0.98	2 (11%)	22,30,33	1.69	5 (22%)
53	5MC	DA	1962	53	18,22,23	1.01	2 (11%)	26,32,35	1.30	4 (15%)
12	D2T	BL	89	12	7,9,10	0.99	0	6,11,13	2.15	3 (50%)
22	3TD	CA	1915	22	18,22,23	1.59	3 (16%)	22,32,35	1.97	4 (18%)
22	PSU	CA	1911	22	18,21,22	1.08	1 (5%)	22,30,33	1.70	4 (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 Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	6MZ	CA	2030	22	-	2/5/27/28	0/3/3/3
53	6MZ	DA	1618	53	-	0/5/27/28	0/3/3/3
1	5MC	AA	1407	1	-	0/7/25/26	0/2/2/2
1	2MG	BA	1207	1	-	0/5/27/28	0/3/3/3
1	PSU	AA	516	1,56	-	0/7/25/26	0/2/2/2
1	MA6	AA	1519	1	-	1/7/29/30	0/3/3/3
22	OMU	CA	2552	22	-	1/9/27/28	0/2/2/2
53	2MG	DA	1835	53	-	0/5/27/28	0/3/3/3
53	1MG	DA	745	53	-	0/3/25/26	0/3/3/3
53	PSU	DA	955	53	-	0/7/25/26	0/2/2/2
1	2MG	BA	966	1	-	0/5/27/28	0/3/3/3
22	5MU	CA	747	22	-	0/7/25/26	0/2/2/2
22	PSU	CA	2457	22	-	0/7/25/26	0/2/2/2
34	4D4	CN	81	34	-	5/11/12/14	-
22	2MG	CA	2445	22	-	0/5/27/28	0/3/3/3
53	2MG	DA	2445	53	-	0/5/27/28	0/3/3/3
1	2MG	AA	1207	1	-	0/5/27/28	0/3/3/3
22	PSU	CA	1917	22	-	0/7/25/26	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	UR3	AA	1498	1	-	0/7/25/26	0/2/2/2
53	PSU	DA	746	56,53	-	1/7/25/26	0/2/2/2
53	PSU	DA	1917	53	-	0/7/25/26	0/2/2/2
53	OMU	DA	2552	53	-	0/9/27/28	0/2/2/2
53	PSU	DA	2605	53	-	0/7/25/26	0/2/2/2
54	MEQ	DD	150[A]	54	-	2/8/9/11	-
34	4D4	DN	81[A]	-	-	0/11/12/14	-
53	H2U	DA	2449	53	-	0/7/38/39	0/2/2/2
22	PSU	CA	2580	22	-	0/7/25/26	0/2/2/2
53	3TD	DA	1915	53	-	0/7/25/26	0/2/2/2
1	2MG	AA	966	1	-	2/5/27/28	0/3/3/3
1	2MG	BA	1516	1	-	0/5/27/28	0/3/3/3
1	MA6	BA	1518	1	-	2/7/29/30	0/3/3/3
22	OMG	CA	2251	22	-	1/5/27/28	0/3/3/3
1	5MC	BA	967	1	-	0/7/25/26	0/2/2/2
22	5MC	CA	1962	22	-	0/7/25/26	0/2/2/2
1	MA6	BA	1519	1	-	2/7/29/30	0/3/3/3
53	PSU	DA	2580	53	-	0/7/25/26	0/2/2/2
53	PSU	DA	1911	53	-	0/7/25/26	0/2/2/2
53	6MZ	DA	2030	53	-	2/5/27/28	0/3/3/3
53	PSU	DA	2457	53	-	0/7/25/26	0/2/2/2
22	6MZ	CA	1618	22	-	0/5/27/28	0/3/3/3
53	PSU	DA	2604	53	-	0/7/25/26	0/2/2/2
53	PSU	DA	2504	53	-	0/7/25/26	0/2/2/2
1	5MC	AA	967	1	-	0/7/25/26	0/2/2/2
22	2MG	CA	1835	22	-	2/5/27/28	0/3/3/3
22	PSU	CA	955	22	-	0/7/25/26	0/2/2/2
22	2MA	CA	2503	22	-	2/3/25/26	0/3/3/3
1	5MC	BA	1407	1	-	0/7/25/26	0/2/2/2
22	OMC	CA	2498	22,56	-	0/9/27/28	0/2/2/2
53	5MU	DA	747	53	-	1/7/25/26	0/2/2/2
1	2MG	AA	1516	1	-	0/5/27/28	0/3/3/3
53	2MA	DA	2503	56,53	-	2/3/25/26	0/3/3/3
1	MA6	AA	1518	1	-	0/7/29/30	0/3/3/3
22	PSU	CA	2504	22	-	0/7/25/26	0/2/2/2
1	4OC	BA	1402	1	-	3/9/29/30	0/2/2/2
53	OMC	DA	2498	56,53	-	1/9/27/28	0/2/2/2
1	4OC	AA	1402	1	-	0/9/29/30	0/2/2/2
54	MEQ	DD	150[B]	54	-	3/8/9/11	-
22	1MG	CA	745	22	-	0/3/25/26	0/3/3/3

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	5MU	CA	1939	22	-	0/7/25/26	0/2/2/2
53	5MU	DA	1939	53	-	0/7/25/26	0/2/2/2
34	4D4	DN	81[B]	-	-	5/11/12/14	-
1	UR3	BA	1498	1	-	0/7/25/26	0/2/2/2
12	D2T	AL	89	12	-	1/7/12/14	-
1	G7M	BA	527	1	-	2/3/25/26	0/3/3/3
22	PSU	CA	746	22,56	-	1/7/25/26	0/2/2/2
53	OMG	DA	2251	53	-	0/5/27/28	0/3/3/3
1	G7M	AA	527	1	-	0/3/25/26	0/3/3/3
22	G7M	CA	2069	22	-	1/3/25/26	0/3/3/3
22	PSU	CA	2605	22	-	0/7/25/26	0/2/2/2
53	G7M	DA	2069	53	-	2/3/25/26	0/3/3/3
1	PSU	BA	516	1	-	0/7/25/26	0/2/2/2
53	5MC	DA	1962	53	-	0/7/25/26	0/2/2/2
12	D2T	BL	89	12	-	4/7/12/14	-
22	3TD	CA	1915	22	-	2/7/25/26	0/2/2/2
22	PSU	CA	1911	22	-	0/7/25/26	0/2/2/2

All (100) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	CN	81	4D4	CZ-NE	4.59	1.42	1.33
34	DN	81[A]	4D4	CZ-NE	4.44	1.42	1.33
34	DN	81[B]	4D4	CZ-NE	4.33	1.41	1.33
53	DA	1915	3TD	C6-C5	3.99	1.40	1.35
22	CA	2069	G7M	C5-C4	3.84	1.46	1.39
22	CA	746	PSU	C6-C5	3.81	1.39	1.35
53	DA	747	5MU	C4-N3	-3.71	1.31	1.38
22	CA	1911	PSU	C6-C5	3.65	1.39	1.35
22	CA	1915	3TD	C10-N3	3.60	1.53	1.47
53	DA	2449	H2U	C2-N1	3.58	1.40	1.35
22	CA	1917	PSU	C6-C5	3.53	1.39	1.35
1	BA	527	G7M	C6-N1	-3.45	1.32	1.37
22	CA	1939	5MU	C6-C5	3.40	1.40	1.34
53	DA	955	PSU	C6-C5	3.39	1.39	1.35
1	BA	527	G7M	C5-C4	3.33	1.45	1.39
53	DA	1915	3TD	C10-N3	3.32	1.53	1.47
53	DA	1911	PSU	C6-C5	3.18	1.39	1.35
1	BA	1407	5MC	C6-C5	3.18	1.39	1.34
22	CA	1915	3TD	C6-C5	3.07	1.38	1.35
53	DA	1917	PSU	C6-C5	3.05	1.38	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	DA	2604	PSU	C4-C5	-3.04	1.35	1.44
1	AA	1407	5MC	C6-C5	3.03	1.39	1.34
1	AA	967	5MC	C6-C5	3.03	1.39	1.34
53	DA	747	5MU	C6-C5	3.01	1.39	1.34
22	CA	2580	PSU	C6-C5	3.00	1.38	1.35
22	CA	2504	PSU	C6-C5	2.91	1.38	1.35
53	DA	2445	2MG	C6-N1	-2.89	1.33	1.37
1	BA	967	5MC	C6-C5	2.88	1.39	1.34
22	CA	2503	2MA	C2-N3	2.85	1.37	1.31
53	DA	2069	G7M	C5-C4	2.84	1.44	1.39
1	AA	527	G7M	C5-C4	2.83	1.44	1.39
34	CN	81	4D4	CZ-NH2	2.81	1.43	1.32
53	DA	1962	5MC	C6-C5	2.72	1.39	1.34
53	DA	1939	5MU	C6-N1	-2.72	1.33	1.38
22	CA	2457	PSU	C6-C5	2.71	1.38	1.35
12	AL	89	D2T	CB-SB	2.71	1.85	1.82
53	DA	1915	3TD	C4-N3	-2.69	1.34	1.40
53	DA	747	5MU	C6-N1	-2.67	1.33	1.38
53	DA	1939	5MU	C6-C5	2.64	1.38	1.34
22	CA	747	5MU	C6-C5	2.60	1.38	1.34
22	CA	2030	6MZ	C5-C4	2.60	1.47	1.40
1	AA	516	PSU	C6-C5	2.60	1.38	1.35
22	CA	1618	6MZ	C5-C4	2.59	1.47	1.40
22	CA	747	5MU	C4-C5	2.59	1.49	1.44
1	BA	516	PSU	C6-C5	2.59	1.38	1.35
1	BA	966	2MG	C6-N1	-2.59	1.34	1.37
53	DA	2605	PSU	C4-C5	-2.58	1.36	1.44
53	DA	1939	5MU	C4-N3	-2.57	1.34	1.38
22	CA	955	PSU	C6-C5	2.56	1.38	1.35
34	DN	81[A]	4D4	CZ-NH2	2.53	1.42	1.32
22	CA	1915	3TD	C4-N3	-2.53	1.35	1.40
54	DD	150[B]	MEQ	OE1-CD	2.53	1.28	1.23
53	DA	2457	PSU	C4-C5	-2.53	1.37	1.44
22	CA	1939	5MU	C4-C5	2.44	1.48	1.44
34	DN	81[B]	4D4	CZ-NH2	2.44	1.42	1.32
53	DA	1962	5MC	C6-N1	-2.41	1.33	1.38
22	CA	2605	PSU	C6-C5	2.38	1.38	1.35
53	DA	2552	OMU	C4-N3	-2.37	1.34	1.38
53	DA	1939	5MU	C2-N3	-2.35	1.33	1.38
1	AA	527	G7M	C6-N1	-2.35	1.34	1.37
22	CA	2552	OMU	C4-N3	-2.35	1.34	1.38
1	AA	1518	MA6	C5-C4	2.34	1.47	1.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	DA	2552	OMU	C2-N3	-2.34	1.33	1.38
22	CA	1962	5MC	C6-C5	2.33	1.38	1.34
1	BA	1518	MA6	C5-C4	2.32	1.47	1.40
53	DA	746	PSU	C4-C5	-2.32	1.37	1.44
53	DA	1618	6MZ	C5-C4	2.32	1.47	1.40
53	DA	2449	H2U	C4-N3	-2.30	1.33	1.37
22	CA	1962	5MC	C6-N1	-2.28	1.34	1.38
22	CA	2605	PSU	C4-C5	-2.27	1.37	1.44
22	CA	2504	PSU	C4-C5	-2.24	1.37	1.44
22	CA	1835	2MG	C6-N1	-2.24	1.34	1.37
1	BA	1516	2MG	C6-N1	-2.24	1.34	1.37
22	CA	2580	PSU	C4-C5	-2.20	1.37	1.44
1	AA	516	PSU	C4-C5	-2.19	1.37	1.44
53	DA	2498	OMC	C6-N1	-2.17	1.32	1.38
1	AA	1207	2MG	C6-N1	-2.17	1.34	1.37
53	DA	2580	PSU	C4-C5	-2.17	1.38	1.44
53	DA	746	PSU	C2'-C1'	-2.16	1.50	1.53
22	CA	2503	2MA	C5-C4	2.15	1.48	1.43
53	DA	2552	OMU	C5-C4	-2.15	1.38	1.43
1	BA	1519	MA6	C5-C4	2.15	1.46	1.40
53	DA	746	PSU	O4'-C1'	-2.15	1.40	1.43
22	CA	747	5MU	C6-N1	-2.14	1.34	1.38
53	DA	2251	OMG	C6-N1	-2.13	1.34	1.37
1	BA	1519	MA6	C6-N1	2.12	1.36	1.33
1	BA	516	PSU	C4-C5	-2.12	1.38	1.44
53	DA	1835	2MG	C6-N1	-2.11	1.34	1.37
53	DA	747	5MU	C4-C5	2.10	1.48	1.44
1	BA	967	5MC	C6-N1	-2.09	1.34	1.38
53	DA	746	PSU	C6-C5	2.08	1.37	1.35
1	AA	1516	2MG	C6-N1	-2.05	1.34	1.37
22	CA	1939	5MU	C4-N3	-2.05	1.35	1.38
53	DA	1917	PSU	C4-C5	-2.04	1.38	1.44
22	CA	2552	OMU	C2-N1	2.03	1.41	1.38
22	CA	2445	2MG	C6-N1	-2.02	1.34	1.37
22	CA	2552	OMU	C6-C5	2.02	1.39	1.35
1	BA	1407	5MC	C6-N1	-2.01	1.34	1.38
1	AA	1498	UR3	C6-C5	2.01	1.39	1.35
22	CA	747	5MU	C2-N3	-2.00	1.34	1.38

All (227) bond angle outliers are listed below:

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	2030	6MZ	C2-N1-C6	7.96	123.41	116.59
22	CA	2030	6MZ	C2-N1-C6	7.71	123.20	116.59
53	DA	1915	3TD	N1-C2-N3	7.68	122.20	116.14
22	CA	1915	3TD	N1-C2-N3	7.15	121.78	116.14
22	CA	1618	6MZ	C2-N1-C6	6.67	122.31	116.59
53	DA	1618	6MZ	C2-N1-C6	6.57	122.22	116.59
1	AA	1498	UR3	C4-N3-C2	-5.96	118.95	124.56
53	DA	2449	H2U	C4-N3-C2	-5.93	120.87	125.79
22	CA	747	5MU	C4-N3-C2	-5.91	119.69	127.35
53	DA	747	5MU	N3-C2-N1	5.85	122.65	114.89
53	DA	746	PSU	N1-C2-N3	5.85	121.75	115.13
53	DA	747	5MU	C4-N3-C2	-5.67	120.01	127.35
1	BA	1498	UR3	C4-N3-C2	-5.31	119.56	124.56
22	CA	746	PSU	N1-C2-N3	5.20	121.02	115.13
53	DA	1939	5MU	N3-C2-N1	5.16	121.74	114.89
53	DA	1911	PSU	C4-N3-C2	-5.14	118.93	126.34
22	CA	747	5MU	N3-C2-N1	5.04	121.58	114.89
22	CA	1939	5MU	N3-C2-N1	5.03	121.57	114.89
22	CA	1939	5MU	C4-N3-C2	-4.94	120.95	127.35
53	DA	747	5MU	O2-C2-N1	-4.91	116.27	122.79
1	AA	516	PSU	C4-N3-C2	-4.89	119.30	126.34
22	CA	747	5MU	O4-C4-C5	-4.85	119.28	124.90
22	CA	955	PSU	C4-N3-C2	-4.84	119.36	126.34
53	DA	2605	PSU	C4-N3-C2	-4.81	119.41	126.34
22	CA	747	5MU	C5-C4-N3	4.80	119.41	115.31
53	DA	746	PSU	C4-N3-C2	-4.75	119.50	126.34
22	CA	2605	PSU	C4-N3-C2	-4.73	119.53	126.34
53	DA	2552	OMU	C4-N3-C2	-4.70	120.38	126.58
22	CA	2457	PSU	N1-C2-N3	4.66	120.41	115.13
22	CA	2504	PSU	C4-N3-C2	-4.66	119.63	126.34
22	CA	2580	PSU	C4-N3-C2	-4.63	119.67	126.34
22	CA	1911	PSU	C4-N3-C2	-4.62	119.69	126.34
22	CA	747	5MU	C5-C6-N1	-4.61	118.59	123.34
22	CA	746	PSU	C4-N3-C2	-4.57	119.75	126.34
22	CA	2457	PSU	C4-N3-C2	-4.56	119.77	126.34
53	DA	1939	5MU	C4-N3-C2	-4.56	121.45	127.35
22	CA	2552	OMU	C4-N3-C2	-4.54	120.59	126.58
53	DA	2604	PSU	C4-N3-C2	-4.45	119.92	126.34
22	CA	2580	PSU	N1-C2-N3	4.40	120.12	115.13
22	CA	2605	PSU	N1-C2-N3	4.39	120.11	115.13
53	DA	747	5MU	C5-C4-N3	4.39	119.06	115.31

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	2504	PSU	N1-C2-N3	4.39	120.10	115.13
22	CA	1939	5MU	O2-C2-N1	-4.31	117.06	122.79
53	DA	1917	PSU	N1-C2-N3	4.30	120.00	115.13
1	AA	516	PSU	O2-C2-N1	-4.29	118.07	122.79
1	AA	516	PSU	N1-C2-N3	4.29	119.99	115.13
22	CA	1939	5MU	C5-C4-N3	4.28	118.97	115.31
53	DA	1917	PSU	C4-N3-C2	-4.26	120.20	126.34
22	CA	1911	PSU	N1-C2-N3	4.23	119.93	115.13
53	DA	1911	PSU	N1-C2-N3	4.23	119.92	115.13
22	CA	1917	PSU	C4-N3-C2	-4.23	120.25	126.34
1	BA	516	PSU	C4-N3-C2	-4.20	120.29	126.34
22	CA	1939	5MU	O4-C4-C5	-4.11	120.14	124.90
53	DA	2457	PSU	C4-N3-C2	-4.10	120.44	126.34
22	CA	2552	OMU	N3-C2-N1	4.09	120.32	114.89
53	DA	2552	OMU	N3-C2-N1	4.08	120.31	114.89
1	BA	516	PSU	N1-C2-N3	4.07	119.74	115.13
22	CA	955	PSU	N1-C2-N3	4.06	119.73	115.13
22	CA	747	5MU	O2-C2-N1	-4.02	117.44	122.79
53	DA	2504	PSU	C4-N3-C2	-4.00	120.58	126.34
22	CA	1917	PSU	N1-C2-N3	3.96	119.62	115.13
53	DA	2030	6MZ	N3-C2-N1	-3.93	122.54	128.68
1	BA	1519	MA6	N3-C2-N1	-3.90	122.58	128.68
53	DA	2605	PSU	N1-C2-N3	3.90	119.54	115.13
22	CA	1618	6MZ	C9-N6-C6	-3.87	119.54	122.87
22	CA	1915	3TD	C4-N3-C2	-3.87	120.41	124.61
53	DA	1939	5MU	O4-C4-C5	-3.87	120.42	124.90
22	CA	1962	5MC	C5-C6-N1	-3.87	119.36	123.34
22	CA	2552	OMU	C5-C4-N3	3.78	120.49	114.84
53	DA	2580	PSU	C4-N3-C2	-3.77	120.91	126.34
22	CA	2030	6MZ	C9-N6-C6	-3.73	119.66	122.87
53	DA	1915	3TD	C4-N3-C2	-3.63	120.67	124.61
12	BL	89	D2T	OD1-CG-CB	-3.61	114.88	122.44
1	BA	1518	MA6	N3-C2-N1	-3.61	123.04	128.68
53	DA	2552	OMU	C5-C4-N3	3.59	120.21	114.84
1	AA	1519	MA6	N3-C2-N1	-3.58	123.09	128.68
1	BA	1519	MA6	N1-C6-N6	3.57	120.81	117.06
1	AA	967	5MC	C5-C6-N1	-3.56	119.67	123.34
53	DA	2504	PSU	N1-C2-N3	3.51	119.11	115.13
53	DA	1939	5MU	O2-C2-N1	-3.51	118.13	122.79
22	CA	1618	6MZ	N3-C2-N1	-3.46	123.26	128.68
53	DA	747	5MU	C5-C6-N1	-3.46	119.78	123.34
1	BA	967	5MC	C5-C6-N1	-3.43	119.81	123.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	955	PSU	C4-N3-C2	-3.43	121.40	126.34
22	CA	2030	6MZ	N3-C2-N1	-3.41	123.34	128.68
53	DA	2449	H2U	N3-C2-N1	3.41	120.25	116.65
22	CA	1618	6MZ	C4-C5-N7	-3.40	105.86	109.40
1	AA	1407	5MC	C5-C4-N3	-3.38	118.03	121.67
53	DA	955	PSU	N1-C2-N3	3.36	118.94	115.13
1	BA	1407	5MC	C5-C6-N1	-3.36	119.88	123.34
53	DA	747	5MU	O4-C4-C5	-3.33	121.04	124.90
22	CA	2457	PSU	C6-C5-C4	3.32	120.52	118.20
53	DA	1962	5MC	C5-C4-N3	-3.30	118.11	121.67
1	AA	1407	5MC	C5-C6-N1	-3.27	119.97	123.34
22	CA	2030	6MZ	C4-C5-N7	-3.27	106.00	109.40
53	DA	1939	5MU	C5-C4-N3	3.23	118.07	115.31
22	CA	2605	PSU	C6-C5-C4	3.22	120.45	118.20
53	DA	2498	OMC	C2'-C1'-N1	-3.22	107.98	114.22
53	DA	1618	6MZ	C9-N6-C6	-3.21	120.11	122.87
53	DA	746	PSU	C6-N1-C2	-3.20	119.41	122.68
1	AA	1519	MA6	C4-C5-N7	-3.17	106.10	109.40
53	DA	1835	2MG	C5-C6-N1	3.11	119.45	113.95
53	DA	2580	PSU	O2-C2-N1	-3.10	119.38	122.79
53	DA	1962	5MC	C5-C6-N1	-3.10	120.15	123.34
1	AA	1498	UR3	C3U-N3-C2	3.06	122.68	117.31
34	CN	81	4D4	CB-CA-C	-3.05	106.89	111.77
1	AA	1498	UR3	C1'-N1-C2	3.03	122.11	116.99
53	DA	1618	6MZ	C4-C5-N7	-3.03	106.25	109.40
22	CA	2552	OMU	O4-C4-C5	-3.01	119.86	125.16
53	DA	2552	OMU	O2-C2-N1	-3.00	118.80	122.79
53	DA	1962	5MC	CM5-C5-C6	-2.99	118.86	122.85
53	DA	1917	PSU	O2-C2-N1	-2.98	119.51	122.79
22	CA	745	1MG	C5-C6-N1	2.97	118.36	113.90
22	CA	746	PSU	C6-C5-C4	2.96	120.27	118.20
53	DA	2449	H2U	C5-C4-N3	2.96	119.97	116.65
22	CA	1939	5MU	C5-C6-N1	-2.93	120.33	123.34
53	DA	2030	6MZ	C1'-N9-C4	-2.92	121.51	126.64
53	DA	1618	6MZ	N3-C2-N1	-2.92	124.12	128.68
53	DA	746	PSU	O2-C2-N1	-2.90	119.60	122.79
1	AA	1518	MA6	N3-C2-N1	-2.90	124.15	128.68
1	BA	516	PSU	O2-C2-N1	-2.88	119.62	122.79
1	BA	1407	5MC	C5-C4-N3	-2.86	118.59	121.67
1	BA	1402	4OC	C6-C5-C4	2.83	120.43	116.96
1	AA	1516	2MG	O6-C6-C5	-2.81	118.88	124.37
53	DA	2604	PSU	N1-C2-N3	2.81	118.31	115.13

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	BA	1516	2MG	CM2-N2-C2	-2.80	117.68	123.86
1	BA	1518	MA6	C4-C5-N7	-2.77	106.51	109.40
1	AA	1516	2MG	C5-C6-N1	2.75	118.81	113.95
53	DA	2552	OMU	O4-C4-C5	-2.75	120.32	125.16
53	DA	1911	PSU	O2-C2-N1	-2.71	119.80	122.79
1	BA	1516	2MG	C8-N7-C5	2.69	108.12	102.99
22	CA	2457	PSU	O2-C2-N1	-2.68	119.84	122.79
53	DA	2604	PSU	O2-C2-N1	-2.67	119.85	122.79
53	DA	2030	6MZ	C4-C5-N7	-2.65	106.64	109.40
53	DA	2503	2MA	C8-N7-C5	2.65	108.03	102.99
53	DA	2457	PSU	N1-C2-N3	2.62	118.09	115.13
1	BA	1207	2MG	C8-N7-C5	2.60	107.95	102.99
22	CA	2504	PSU	C6-N1-C2	-2.60	120.02	122.68
53	DA	2449	H2U	O2-C2-N1	-2.58	119.87	123.11
53	DA	1939	5MU	C5-C6-N1	-2.57	120.69	123.34
53	DA	2445	2MG	C8-N7-C5	2.56	107.87	102.99
53	DA	2030	6MZ	C9-N6-C6	-2.55	120.68	122.87
22	CA	2030	6MZ	C1'-N9-C4	-2.54	122.18	126.64
12	BL	89	D2T	CB-CA-N	2.54	114.50	109.10
1	BA	1519	MA6	C4-C5-N7	-2.53	106.76	109.40
53	DA	2457	PSU	O2-C2-N1	-2.53	120.00	122.79
1	BA	1498	UR3	C1'-N1-C2	2.53	121.25	116.99
1	BA	966	2MG	C8-N7-C5	2.53	107.80	102.99
22	CA	746	PSU	C6-N1-C2	-2.53	120.10	122.68
22	CA	745	1MG	C8-N7-C5	2.52	107.80	102.99
1	BA	1516	2MG	C5-C6-N1	2.51	118.39	113.95
53	DA	2604	PSU	O4-C4-C5	-2.51	117.48	124.05
22	CA	2580	PSU	O4'-C1'-C2'	2.51	108.68	105.14
22	CA	2504	PSU	O2-C2-N1	-2.50	120.04	122.79
1	AA	1402	4OC	CM4-N4-C4	-2.50	117.57	122.45
1	BA	1207	2MG	C5-C6-N1	2.48	118.34	113.95
22	CA	2605	PSU	O2-C2-N1	-2.45	120.09	122.79
1	BA	966	2MG	C5-C6-N1	2.45	118.28	113.95
12	BL	89	D2T	OD2-CG-CB	2.45	118.44	113.15
22	CA	1917	PSU	O2-C2-N1	-2.45	120.10	122.79
53	DA	1835	2MG	O6-C6-C5	-2.43	119.62	124.37
22	CA	2251	OMG	C5-C6-N1	2.42	118.23	113.95
22	CA	2504	PSU	C6-C5-C4	2.42	119.89	118.20
53	DA	955	PSU	C6-N1-C2	-2.42	120.21	122.68
1	AA	966	2MG	CM2-N2-C2	-2.41	118.54	123.86
12	AL	89	D2T	OD1-CG-CB	-2.40	117.40	122.44
53	DA	2503	2MA	C5-C6-N1	2.40	118.15	114.02

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	CA	2580	PSU	O2-C2-N1	-2.39	120.16	122.79
22	CA	2503	2MA	C8-N7-C5	2.39	107.55	102.99
22	CA	746	PSU	O2-C2-N1	-2.39	120.16	122.79
22	CA	2457	PSU	C6-N1-C2	-2.38	120.25	122.68
1	AA	1519	MA6	C1'-N9-C4	-2.37	122.47	126.64
53	DA	2605	PSU	O2-C2-N1	-2.37	120.18	122.79
53	DA	2504	PSU	O2-C2-N1	-2.37	120.18	122.79
53	DA	1917	PSU	C6-C5-C4	2.37	119.86	118.20
22	CA	2251	OMG	O6-C6-C5	-2.34	119.80	124.37
1	AA	1207	2MG	CM2-N2-C2	-2.34	118.69	123.86
22	CA	1835	2MG	C5-C6-N1	2.32	118.05	113.95
22	CA	1911	PSU	O2-C2-N1	-2.32	120.24	122.79
22	CA	2445	2MG	C8-N7-C5	2.32	107.40	102.99
22	CA	2580	PSU	C6-C5-C4	2.31	119.81	118.20
53	DA	1835	2MG	CM2-N2-C2	-2.31	118.76	123.86
22	CA	955	PSU	O2-C2-N1	-2.31	120.25	122.79
1	BA	967	5MC	C5-C4-N3	-2.31	119.19	121.67
1	AA	1498	UR3	C6-N1-C2	-2.30	119.73	121.79
53	DA	1917	PSU	C6-N1-C2	-2.29	120.34	122.68
1	AA	1518	MA6	C4-C5-N7	-2.29	107.01	109.40
53	DA	745	1MG	C8-N7-C5	2.29	107.35	102.99
22	CA	1962	5MC	C5-C4-N3	-2.27	119.22	121.67
1	AA	966	2MG	C8-N7-C5	2.27	107.32	102.99
53	DA	745	1MG	C5-C6-N1	2.26	117.29	113.90
53	DA	2251	OMG	C5-C6-N1	2.25	117.93	113.95
22	CA	2552	OMU	O2-C2-N1	-2.25	119.79	122.79
1	AA	1207	2MG	C8-N7-C5	2.24	107.26	102.99
53	DA	2604	PSU	C5-C4-N3	2.22	121.60	116.58
22	CA	1915	3TD	O4'-C1'-C2'	2.22	108.27	105.14
54	DD	150[A]	MEQ	OE1-CD-CG	-2.21	117.97	122.02
1	BA	516	PSU	C6-C5-C4	2.21	119.74	118.20
1	AA	966	2MG	O6-C6-C5	-2.20	120.08	124.37
22	CA	2251	OMG	C8-N7-C5	2.20	107.17	102.99
53	DA	1835	2MG	C8-N7-C5	2.20	107.17	102.99
12	AL	89	D2T	CB-CA-N	2.19	113.77	109.10
1	AA	1207	2MG	C5-C6-N1	2.19	117.82	113.95
53	DA	2251	OMG	O6-C6-C5	-2.19	120.09	124.37
53	DA	2251	OMG	C8-N7-C5	2.18	107.15	102.99
22	CA	2251	OMG	CM2-O2'-C2'	-2.18	108.80	114.52
1	BA	516	PSU	C6-N1-C2	-2.18	120.45	122.68
1	AA	1207	2MG	O6-C6-C5	-2.16	120.14	124.37
22	CA	1835	2MG	C8-N7-C5	2.15	107.08	102.99

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	DA	2580	PSU	C6-C5-C4	-2.14	116.70	118.20
22	CA	2580	PSU	C6-N1-C2	-2.14	120.50	122.68
53	DA	1962	5MC	O2-C2-N3	-2.13	118.86	122.33
1	AA	1516	2MG	C8-N7-C5	2.13	107.05	102.99
1	BA	1407	5MC	CM5-C5-C6	-2.13	120.01	122.85
53	DA	746	PSU	C6-C5-C4	2.11	119.68	118.20
53	DA	1911	PSU	C5-C4-N3	2.11	121.35	116.58
54	DD	150[A]	MEQ	CG-CD-NE2	2.11	119.21	116.29
22	CA	1915	3TD	C5-C6-N1	-2.10	118.95	122.11
1	AA	967	5MC	C5-C4-N3	-2.09	119.42	121.67
53	DA	2580	PSU	N1-C2-N3	2.09	117.50	115.13
53	DA	2580	PSU	O4'-C1'-C2'	2.07	108.07	105.14
22	CA	2445	2MG	CM2-N2-C2	-2.06	119.31	123.86
1	BA	1402	4OC	CM2-O2'-C2'	-2.05	109.14	114.52
22	CA	2503	2MA	C5-C6-N1	2.03	117.53	114.02
22	CA	1911	PSU	C6-N1-C2	-2.03	120.61	122.68
1	AA	1518	MA6	N1-C6-N6	2.03	119.19	117.06
53	DA	2552	OMU	C5-C6-N1	-2.01	118.44	121.81

There are no chirality outliers.

All (53) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	AA	966	2MG	N1-C2-N2-CM2
1	AA	966	2MG	N3-C2-N2-CM2
1	BA	527	G7M	O4'-C4'-C5'-O5'
1	BA	527	G7M	C3'-C4'-C5'-O5'
12	BL	89	D2T	CA-CB-SB-CB1
12	BL	89	D2T	CA-CB-CG-OD1
12	BL	89	D2T	CA-CB-CG-OD2
22	CA	2251	OMG	C1'-C2'-O2'-CM2
34	CN	81	4D4	N-CA-CB-CG
34	CN	81	4D4	OB-CB-CG-CD
53	DA	2030	6MZ	O4'-C4'-C5'-O5'
54	DD	150[B]	MEQ	CG-CD-NE2-CE
54	DD	150[B]	MEQ	OE1-CD-NE2-CE
34	DN	81[B]	4D4	CA-CB-CG-CD
54	DD	150[A]	MEQ	OE1-CD-CG-CB
54	DD	150[A]	MEQ	NE2-CD-CG-CB
1	BA	1519	MA6	O4'-C4'-C5'-O5'
53	DA	2030	6MZ	C3'-C4'-C5'-O5'
34	DN	81[B]	4D4	OB-CB-CG-CD

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
54	DD	150[B]	MEQ	CA-CB-CG-CD
22	CA	1835	2MG	O4'-C4'-C5'-O5'
1	BA	1402	4OC	O4'-C4'-C5'-O5'
22	CA	1835	2MG	C3'-C4'-C5'-O5'
22	CA	2030	6MZ	O4'-C4'-C5'-O5'
1	BA	1518	MA6	O4'-C4'-C5'-O5'
1	BA	1519	MA6	C3'-C4'-C5'-O5'
12	AL	89	D2T	CG-CB-SB-CB1
34	DN	81[B]	4D4	NE-CD-CG-CB
53	DA	2503	2MA	C4'-C5'-O5'-P
1	AA	1519	MA6	O4'-C4'-C5'-O5'
34	DN	81[B]	4D4	CG-CD-NE-CZ
53	DA	2069	G7M	C4'-C5'-O5'-P
53	DA	2069	G7M	O4'-C4'-C5'-O5'
34	CN	81	4D4	CA-CB-CG-CD
22	CA	2030	6MZ	C3'-C4'-C5'-O5'
1	BA	1402	4OC	C2'-C1'-N1-C2
1	BA	1402	4OC	C3'-C4'-C5'-O5'
22	CA	1915	3TD	O4'-C4'-C5'-O5'
22	CA	2069	G7M	O4'-C4'-C5'-O5'
12	BL	89	D2T	CG-CB-SB-CB1
22	CA	746	PSU	O4'-C1'-C5-C6
53	DA	746	PSU	O4'-C1'-C5-C6
22	CA	2503	2MA	C4'-C5'-O5'-P
22	CA	1915	3TD	C3'-C4'-C5'-O5'
22	CA	2503	2MA	O4'-C4'-C5'-O5'
34	CN	81	4D4	C-CA-CB-CG
22	CA	2552	OMU	C3'-C2'-O2'-CM2
1	BA	1518	MA6	C3'-C4'-C5'-O5'
53	DA	2503	2MA	O4'-C4'-C5'-O5'
34	CN	81	4D4	O-C-CA-CB
34	DN	81[B]	4D4	O-C-CA-CB
53	DA	2498	OMC	C4'-C5'-O5'-P
53	DA	747	5MU	C3'-C4'-C5'-O5'

There are no ring outliers.

31 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	CA	2030	6MZ	2	0
1	AA	1519	MA6	3	0
1	BA	966	2MG	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	CA	747	5MU	1	0
34	CN	81	4D4	1	0
22	CA	2445	2MG	2	0
54	DD	150[A]	MEQ	1	0
34	DN	81[A]	4D4	1	0
1	BA	1516	2MG	1	0
1	BA	1518	MA6	2	0
22	CA	2251	OMG	1	0
1	BA	967	5MC	1	0
22	CA	1962	5MC	1	0
1	BA	1519	MA6	4	0
53	DA	2030	6MZ	2	0
22	CA	1618	6MZ	1	0
22	CA	2503	2MA	4	0
1	BA	1407	5MC	2	0
22	CA	2498	OMC	2	0
1	AA	1518	MA6	2	0
1	BA	1402	4OC	2	0
53	DA	2498	OMC	2	0
1	AA	1402	4OC	1	0
54	DD	150[B]	MEQ	1	0
22	CA	1939	5MU	1	0
1	BA	1498	UR3	1	0
53	DA	2251	OMG	2	0
1	AA	527	G7M	2	0
22	CA	2069	G7M	1	0
1	BA	516	PSU	1	0
22	CA	1915	3TD	6	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 546 ligands modelled in this entry, 466 are monoatomic - leaving 80 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	$\#\|Z\| > 2$
59	PUT	DA	3223	-	5,5,5	0.32	0	4,4,4	0.42	0
61	PEG	DQ	201	-	6,6,6	1.00	0	5,5,5	0.47	0
58	MPD	DE	301	-	7,7,7	0.60	0	9,10,10	0.74	0
57	PG4	DS	202	-	12,12,12	0.76	0	11,11,11	0.33	0
58	MPD	DN	201	-	7,7,7	0.53	0	9,10,10	0.88	0
61	PEG	DA	3199	-	6,6,6	0.91	0	5,5,5	0.58	0
58	MPD	DE	302	-	7,7,7	0.51	0	9,10,10	0.58	0
66	EDO	DA	3216	-	3,3,3	0.40	0	2,2,2	0.34	0
57	PG4	BA	1642	-	12,12,12	0.79	0	11,11,11	0.43	0
62	SPD	DA	3207	-	9,9,9	0.50	0	8,8,8	0.66	0
66	EDO	DA	3209	-	3,3,3	0.39	0	2,2,2	0.29	0
58	MPD	DA	3208	-	7,7,7	0.50	0	9,10,10	0.37	0
64	PGE	DA	3215	-	9,9,9	0.92	0	8,8,8	0.31	0
67	GUN	DA	3212	-	7,12,12	1.42	1 (14%)	8,17,17	1.86	2 (25%)
58	MPD	DA	3205	-	7,7,7	0.73	0	9,10,10	1.21	1 (11%)
65	ACY	DA	3191	-	3,3,3	0.85	0	3,3,3	0.79	0
66	EDO	DB	212	-	3,3,3	0.35	0	2,2,2	0.44	0
58	MPD	AA	1671	-	7,7,7	0.52	0	9,10,10	0.60	0
61	PEG	DP	201	-	6,6,6	0.98	0	5,5,5	0.41	0
59	PUT	AA	1673	-	5,5,5	0.23	0	4,4,4	0.50	0
63	1PE	DA	3203	-	15,15,15	0.65	0	14,14,14	0.33	0
61	PEG	DA	3200	-	6,6,6	1.06	0	5,5,5	0.53	0
58	MPD	DK	201	-	7,7,7	0.52	0	9,10,10	0.78	0
64	PGE	DA	3186	-	9,9,9	0.92	0	8,8,8	0.30	0
59	PUT	AA	1674	-	5,5,5	0.22	0	4,4,4	0.54	0
58	MPD	DA	3211	-	7,7,7	0.49	0	9,10,10	0.98	1 (11%)
57	PG4	DQ	202	-	12,12,12	0.66	0	11,11,11	0.56	0
61	PEG	DA	3219	-	6,6,6	1.02	0	5,5,5	0.44	0
64	PGE	DA	3226	-	9,9,9	0.96	0	8,8,8	0.25	0
57	PG4	DA	3193	-	12,12,12	0.79	0	11,11,11	0.60	0
64	PGE	D3	101	-	9,9,9	0.91	0	8,8,8	0.37	0
58	MPD	DT	202	-	7,7,7	0.51	0	9,10,10	0.61	0
59	PUT	DM	201	-	5,5,5	0.26	0	4,4,4	0.67	0
58	MPD	DT	201	-	7,7,7	0.81	0	9,10,10	1.13	1 (11%)
62	SPD	DA	3187	-	9,9,9	0.42	0	8,8,8	0.93	0
61	PEG	DA	3228	-	6,6,6	1.04	0	5,5,5	0.18	0
61	PEG	DL	201	-	6,6,6	0.86	0	5,5,5	0.55	0
66	EDO	DA	3194	-	3,3,3	0.32	0	2,2,2	0.46	0
59	PUT	DA	3222	-	5,5,5	0.22	0	4,4,4	0.43	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
59	PUT	AA	1672	-	5,5,5	0.22	0	4,4,4	0.56	0
58	MPD	DS	203	-	7,7,7	0.96	1 (14%)	9,10,10	0.58	0
66	EDO	DR	203	-	3,3,3	0.32	0	2,2,2	0.38	0
59	PUT	DA	3189	-	5,5,5	0.31	0	4,4,4	0.41	0
59	PUT	DA	3224	-	5,5,5	0.23	0	4,4,4	0.72	0
59	PUT	DA	3184	-	5,5,5	0.29	0	4,4,4	0.32	0
65	ACY	DA	3202	-	3,3,3	0.90	0	3,3,3	0.63	0
61	PEG	AL	201	-	6,6,6	0.96	0	5,5,5	0.44	0
68	TRS	DA	3221	-	7,7,7	0.32	0	9,9,9	0.65	0
61	PEG	DA	3227	-	6,6,6	0.96	0	5,5,5	0.42	0
58	MPD	DA	3190	-	7,7,7	0.63	0	9,10,10	0.67	0
63	1PE	DA	3185	-	15,15,15	0.55	0	14,14,14	0.49	0
62	SPD	DA	3183	-	9,9,9	0.42	0	8,8,8	0.78	0
59	PUT	DA	3206	-	5,5,5	0.29	0	4,4,4	0.53	0
66	EDO	DB	211	-	3,3,3	0.39	0	2,2,2	0.48	0
61	PEG	D3	102	-	6,6,6	0.99	0	5,5,5	0.40	0
66	EDO	DA	3197	-	3,3,3	0.29	0	2,2,2	0.54	0
66	EDO	DA	3198	-	3,3,3	0.36	0	2,2,2	0.37	0
64	PGE	DS	201	-	9,9,9	0.95	0	8,8,8	0.32	0
59	PUT	DA	3220	-	5,5,5	0.19	0	4,4,4	0.48	0
58	MPD	DA	3192	-	7,7,7	0.37	0	9,10,10	1.43	1 (11%)
59	PUT	AA	1675	-	5,5,5	0.28	0	4,4,4	0.35	0
59	PUT	DA	3214	-	5,5,5	0.24	0	4,4,4	0.44	0
64	PGE	DA	3204	-	9,9,9	0.96	0	8,8,8	0.55	0
64	PGE	D1	102	-	9,9,9	1.04	0	8,8,8	0.31	0
59	PUT	DA	3188	-	5,5,5	0.19	0	4,4,4	0.29	0
66	EDO	DB	210	-	3,3,3	0.30	0	2,2,2	0.74	0
57	PG4	DA	3217	-	12,12,12	0.74	0	11,11,11	0.54	0
59	PUT	DA	3195	-	5,5,5	0.26	0	4,4,4	0.38	0
57	PG4	AA	1670	-	12,12,12	0.80	0	11,11,11	0.41	0
65	ACY	DA	3196	-	3,3,3	0.94	0	3,3,3	0.85	0
66	EDO	D0	101	-	3,3,3	0.38	0	2,2,2	0.43	0
66	EDO	DA	3210	-	3,3,3	0.34	0	2,2,2	0.47	0
64	PGE	DA	3218	-	9,9,9	0.83	0	8,8,8	0.39	0
61	PEG	DA	3201	-	6,6,6	1.03	0	5,5,5	0.49	0
66	EDO	D1	101	-	3,3,3	0.28	0	2,2,2	0.41	0
57	PG4	DR	202	-	12,12,12	0.84	0	11,11,11	0.43	0
58	MPD	AA	1676	-	7,7,7	0.68	0	9,10,10	0.59	0
64	PGE	DU	101	-	9,9,9	0.96	0	8,8,8	0.44	0
62	SPD	DA	3225	-	9,9,9	0.56	0	8,8,8	1.09	1 (12%)
59	PUT	DA	3213	-	5,5,5	0.26	0	4,4,4	0.23	0

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
59	PUT	DA	3223	-	-	1/3/3/3	-
61	PEG	DQ	201	-	-	2/4/4/4	-
58	MPD	DE	301	-	-	1/5/5/5	-
57	PG4	DS	202	-	-	3/10/10/10	-
58	MPD	DN	201	-	-	3/5/5/5	-
61	PEG	DA	3199	-	-	2/4/4/4	-
58	MPD	DE	302	-	-	1/5/5/5	-
66	EDO	DA	3216	-	-	1/1/1/1	-
57	PG4	BA	1642	-	-	2/10/10/10	-
62	SPD	DA	3207	-	-	5/7/7/7	-
66	EDO	DA	3209	-	-	1/1/1/1	-
58	MPD	DA	3208	-	-	0/5/5/5	-
64	PGE	DA	3215	-	-	3/7/7/7	-
67	GUN	DA	3212	-	-	-	0/2/2/2
58	MPD	DA	3205	-	-	2/5/5/5	-
66	EDO	DB	212	-	-	0/1/1/1	-
58	MPD	AA	1671	-	-	2/5/5/5	-
61	PEG	DP	201	-	-	4/4/4/4	-
59	PUT	AA	1673	-	-	0/3/3/3	-
63	1PE	DA	3203	-	-	6/13/13/13	-
61	PEG	DA	3200	-	-	2/4/4/4	-
58	MPD	DK	201	-	-	0/5/5/5	-
64	PGE	DA	3186	-	-	2/7/7/7	-
59	PUT	AA	1674	-	-	1/3/3/3	-
58	MPD	DA	3211	-	-	3/5/5/5	-
57	PG4	DQ	202	-	-	0/10/10/10	-
61	PEG	DA	3219	-	-	1/4/4/4	-
64	PGE	DA	3226	-	-	4/7/7/7	-
57	PG4	DA	3193	-	-	7/10/10/10	-
64	PGE	D3	101	-	-	3/7/7/7	-
58	MPD	DT	202	-	-	2/5/5/5	-
59	PUT	DM	201	-	-	3/3/3/3	-
58	MPD	DT	201	-	-	2/5/5/5	-
62	SPD	DA	3187	-	-	0/7/7/7	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
61	PEG	DA	3228	-	-	1/4/4/4	-
61	PEG	DL	201	-	-	3/4/4/4	-
66	EDO	DA	3194	-	-	0/1/1/1	-
59	PUT	DA	3222	-	-	2/3/3/3	-
59	PUT	AA	1672	-	-	0/3/3/3	-
58	MPD	DS	203	-	-	0/5/5/5	-
66	EDO	DR	203	-	-	1/1/1/1	-
59	PUT	DA	3189	-	-	0/3/3/3	-
59	PUT	DA	3224	-	-	0/3/3/3	-
59	PUT	DA	3184	-	-	1/3/3/3	-
61	PEG	AL	201	-	-	2/4/4/4	-
68	TRS	DA	3221	-	-	5/9/9/9	-
61	PEG	DA	3227	-	-	3/4/4/4	-
58	MPD	DA	3190	-	-	2/5/5/5	-
63	1PE	DA	3185	-	-	7/13/13/13	-
62	SPD	DA	3183	-	-	3/7/7/7	-
59	PUT	DA	3206	-	-	1/3/3/3	-
66	EDO	DB	211	-	-	1/1/1/1	-
61	PEG	D3	102	-	-	3/4/4/4	-
66	EDO	DA	3197	-	-	1/1/1/1	-
66	EDO	DA	3198	-	-	0/1/1/1	-
64	PGE	DS	201	-	-	2/7/7/7	-
59	PUT	DA	3220	-	-	0/3/3/3	-
58	MPD	DA	3192	-	-	3/5/5/5	-
59	PUT	AA	1675	-	-	2/3/3/3	-
59	PUT	DA	3214	-	-	1/3/3/3	-
64	PGE	DA	3204	-	-	5/7/7/7	-
64	PGE	D1	102	-	-	2/7/7/7	-
59	PUT	DA	3188	-	-	0/3/3/3	-
66	EDO	DB	210	-	-	1/1/1/1	-
57	PG4	DA	3217	-	-	5/10/10/10	-
59	PUT	DA	3195	-	-	2/3/3/3	-
57	PG4	AA	1670	-	-	6/10/10/10	-
66	EDO	D0	101	-	-	1/1/1/1	-
66	EDO	DA	3210	-	-	0/1/1/1	-
64	PGE	DA	3218	-	-	3/7/7/7	-
61	PEG	DA	3201	-	-	3/4/4/4	-
66	EDO	D1	101	-	-	0/1/1/1	-

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	PG4	DR	202	-	-	5/10/10/10	-
58	MPD	AA	1676	-	-	1/5/5/5	-
64	PGE	DU	101	-	-	2/7/7/7	-
62	SPD	DA	3225	-	-	2/7/7/7	-
59	PUT	DA	3213	-	-	0/3/3/3	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	DS	203	MPD	O2-C2	-2.09	1.39	1.44
67	DA	3212	GUN	C2-N3	2.01	1.38	1.33

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	DA	3192	MPD	CM-C2-C1	-3.53	103.22	110.57
67	DA	3212	GUN	C8-N7-C5	3.32	109.31	102.99
67	DA	3212	GUN	C5-C6-N1	2.94	119.14	113.95
58	DA	3205	MPD	CM-C2-C1	2.83	116.47	110.57
62	DA	3225	SPD	C7-C8-C9	-2.47	105.22	114.28
58	DA	3211	MPD	CM-C2-C1	-2.43	105.52	110.57
58	DT	201	MPD	O2-C2-C3	-2.01	102.26	109.80

There are no chirality outliers.

All (151) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	AA	1671	MPD	C2-C3-C4-O4
58	DA	3190	MPD	C2-C3-C4-O4
58	DA	3192	MPD	O2-C2-C3-C4
58	DA	3192	MPD	CM-C2-C3-C4
58	DN	201	MPD	O2-C2-C3-C4
58	DN	201	MPD	CM-C2-C3-C4
58	DT	202	MPD	C2-C3-C4-O4
68	DA	3221	TRS	N-C-C1-O1
61	DA	3199	PEG	C4-C3-O2-C2
63	DA	3203	1PE	C15-C25-OH5-C14
61	DP	201	PEG	C4-C3-O2-C2
57	DA	3217	PG4	C3-C4-O3-C5
57	DR	202	PG4	C5-C6-O4-C7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
64	DA	3204	PGE	C1-C2-O2-C3
57	DR	202	PG4	O2-C3-C4-O3
63	DA	3203	1PE	OH4-C13-C23-OH3
64	DA	3215	PGE	O2-C3-C4-O3
62	DA	3207	SPD	C3-C4-C5-N6
57	DA	3193	PG4	O2-C3-C4-O3
63	DA	3203	1PE	OH6-C15-C25-OH5
62	DA	3225	SPD	C3-C4-C5-N6
57	DR	202	PG4	O3-C5-C6-O4
59	DA	3222	PUT	C1-C2-C3-C4
63	DA	3185	1PE	OH4-C13-C23-OH3
62	DA	3207	SPD	C8-C7-N6-C5
64	DA	3204	PGE	O2-C3-C4-O3
64	D3	101	PGE	O2-C3-C4-O3
61	D3	102	PEG	O1-C1-C2-O2
64	DA	3204	PGE	O3-C5-C6-O4
64	DA	3226	PGE	O1-C1-C2-O2
64	DU	101	PGE	O1-C1-C2-O2
66	DB	211	EDO	O1-C1-C2-O2
62	DA	3207	SPD	C4-C5-N6-C7
57	DA	3193	PG4	O4-C7-C8-O5
61	DA	3201	PEG	O2-C3-C4-O4
61	DL	201	PEG	O2-C3-C4-O4
61	DP	201	PEG	O1-C1-C2-O2
63	DA	3185	1PE	OH2-C12-C22-OH3
63	DA	3203	1PE	OH2-C12-C22-OH3
64	DA	3186	PGE	O3-C5-C6-O4
64	DA	3215	PGE	O3-C5-C6-O4
64	DU	101	PGE	O3-C5-C6-O4
57	DA	3217	PG4	O3-C5-C6-O4
64	DS	201	PGE	O2-C3-C4-O3
61	DA	3227	PEG	O2-C3-C4-O4
61	DP	201	PEG	O2-C3-C4-O4
62	DA	3183	SPD	C8-C7-N6-C5
57	AA	1670	PG4	O2-C3-C4-O3
57	AA	1670	PG4	O1-C1-C2-O2
61	AL	201	PEG	O1-C1-C2-O2
61	DA	3199	PEG	O1-C1-C2-O2
61	DA	3219	PEG	O2-C3-C4-O4
66	DA	3216	EDO	O1-C1-C2-O2
66	DB	210	EDO	O1-C1-C2-O2
66	D0	101	EDO	O1-C1-C2-O2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
57	BA	1642	PG4	O3-C5-C6-O4
62	DA	3183	SPD	C2-C3-C4-C5
62	DA	3207	SPD	C2-C3-C4-C5
59	AA	1675	PUT	C1-C2-C3-C4
59	AA	1674	PUT	C1-C2-C3-C4
57	DS	202	PG4	O3-C5-C6-O4
61	DA	3200	PEG	C1-C2-O2-C3
57	AA	1670	PG4	O4-C7-C8-O5
61	DA	3201	PEG	O1-C1-C2-O2
61	DL	201	PEG	O1-C1-C2-O2
59	DA	3206	PUT	C1-C2-C3-C4
59	DA	3214	PUT	C1-C2-C3-C4
61	DQ	201	PEG	O1-C1-C2-O2
64	DA	3226	PGE	O3-C5-C6-O4
59	DA	3195	PUT	C2-C3-C4-N2
64	DS	201	PGE	C6-C5-O3-C4
58	AA	1676	MPD	O2-C2-C3-C4
59	AA	1675	PUT	C2-C3-C4-N2
57	DA	3217	PG4	C6-C5-O3-C4
61	DA	3227	PEG	C1-C2-O2-C3
61	D3	102	PEG	C1-C2-O2-C3
63	DA	3185	1PE	C12-C22-OH3-C23
63	DA	3185	1PE	C16-C26-OH6-C15
61	DA	3201	PEG	C1-C2-O2-C3
63	DA	3185	1PE	C24-C14-OH5-C25
64	DA	3226	PGE	C1-C2-O2-C3
57	DA	3193	PG4	C3-C4-O3-C5
64	D1	102	PGE	C3-C4-O3-C5
57	DR	202	PG4	C6-C5-O3-C4
61	DA	3227	PEG	O1-C1-C2-O2
57	DA	3193	PG4	C4-C3-O2-C2
68	DA	3221	TRS	C1-C-C2-O2
61	D3	102	PEG	C4-C3-O2-C2
58	DA	3190	MPD	C2-C3-C4-C5
58	DA	3205	MPD	C2-C3-C4-C5
58	DE	301	MPD	C2-C3-C4-C5
58	DT	202	MPD	C2-C3-C4-C5
63	DA	3185	1PE	C23-C13-OH4-C24
57	AA	1670	PG4	C3-C4-O3-C5
57	DS	202	PG4	O4-C7-C8-O5
64	DA	3186	PGE	O1-C1-C2-O2
64	D3	101	PGE	O3-C5-C6-O4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
57	AA	1670	PG4	C5-C6-O4-C7
59	DA	3195	PUT	N1-C1-C2-C3
59	DM	201	PUT	N1-C1-C2-C3
63	DA	3203	1PE	C13-C23-OH3-C22
57	DA	3217	PG4	O1-C1-C2-O2
61	DA	3200	PEG	O2-C3-C4-O4
58	DA	3211	MPD	CM-C2-C3-C4
58	DN	201	MPD	C1-C2-C3-C4
61	DQ	201	PEG	C4-C3-O2-C2
57	DA	3193	PG4	C1-C2-O2-C3
64	D3	101	PGE	O1-C1-C2-O2
64	DA	3218	PGE	C4-C3-O2-C2
57	AA	1670	PG4	O3-C5-C6-O4
57	DA	3193	PG4	C8-C7-O4-C6
59	DA	3222	PUT	C2-C3-C4-N2
59	DM	201	PUT	C1-C2-C3-C4
62	DA	3183	SPD	C3-C4-C5-N6
61	DL	201	PEG	C4-C3-O2-C2
64	DA	3218	PGE	C1-C2-O2-C3
59	DA	3223	PUT	C1-C2-C3-C4
66	DR	203	EDO	O1-C1-C2-O2
61	DA	3228	PEG	C1-C2-O2-C3
64	DA	3204	PGE	C4-C3-O2-C2
68	DA	3221	TRS	C3-C-C2-O2
57	DA	3193	PG4	C6-C5-O3-C4
63	DA	3203	1PE	OH5-C14-C24-OH4
57	DA	3217	PG4	O2-C3-C4-O3
64	DA	3215	PGE	C4-C3-O2-C2
58	DA	3211	MPD	O2-C2-C3-C4
58	DT	201	MPD	O2-C2-C3-C4
61	AL	201	PEG	C1-C2-O2-C3
63	DA	3185	1PE	C13-C23-OH3-C22
62	DA	3225	SPD	C8-C7-N6-C5
66	DA	3197	EDO	O1-C1-C2-O2
66	DA	3209	EDO	O1-C1-C2-O2
64	DA	3218	PGE	O2-C3-C4-O3
57	DR	202	PG4	C4-C3-O2-C2
59	DA	3184	PUT	C2-C3-C4-N2
68	DA	3221	TRS	N-C-C2-O2
68	DA	3221	TRS	C1-C-C3-O3
64	DA	3204	PGE	O1-C1-C2-O2
58	AA	1671	MPD	C2-C3-C4-C5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
58	DT	201	MPD	C2-C3-C4-C5
61	DP	201	PEG	C1-C2-O2-C3
64	DA	3226	PGE	O2-C3-C4-O3
57	DS	202	PG4	C4-C3-O2-C2
57	BA	1642	PG4	C5-C6-O4-C7
59	DM	201	PUT	C2-C3-C4-N2
62	DA	3207	SPD	N1-C2-C3-C4
58	DA	3192	MPD	C2-C3-C4-O4
58	DA	3205	MPD	C2-C3-C4-O4
58	DA	3211	MPD	C2-C3-C4-O4
58	DE	302	MPD	C2-C3-C4-O4
64	D1	102	PGE	O2-C3-C4-O3

There are no ring outliers.

42 monomers are involved in 92 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	DA	3223	PUT	4	0
61	DQ	201	PEG	1	0
57	DS	202	PG4	2	0
58	DN	201	MPD	6	0
57	BA	1642	PG4	2	0
66	DA	3209	EDO	1	0
67	DA	3212	GUN	1	0
58	DA	3205	MPD	3	0
66	DB	212	EDO	1	0
61	DP	201	PEG	4	0
59	AA	1673	PUT	1	0
63	DA	3203	1PE	3	0
61	DA	3200	PEG	1	0
58	DA	3211	MPD	1	0
57	DQ	202	PG4	3	0
57	DA	3193	PG4	7	0
62	DA	3187	SPD	1	0
66	DA	3194	EDO	3	0
59	DA	3222	PUT	2	0
59	DA	3189	PUT	1	0
59	DA	3224	PUT	2	0
65	DA	3202	ACY	1	0
61	DA	3227	PEG	1	0
58	DA	3190	MPD	1	0
63	DA	3185	1PE	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
62	DA	3183	SPD	1	0
61	D3	102	PEG	5	0
66	DA	3197	EDO	1	0
66	DA	3198	EDO	3	0
59	DA	3220	PUT	1	0
59	DA	3214	PUT	2	0
64	DA	3204	PGE	2	0
57	DA	3217	PG4	1	0
59	DA	3195	PUT	3	0
57	AA	1670	PG4	1	0
66	DA	3210	EDO	3	0
64	DA	3218	PGE	1	0
61	DA	3201	PEG	1	0
57	DR	202	PG4	10	0
64	DU	101	PGE	1	0
62	DA	3225	SPD	5	0
59	DA	3213	PUT	1	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1523/1534 (99%)	-0.02	66 (4%) 35 41	50, 82, 132, 172	0
1	BA	1522/1534 (99%)	0.66	214 (14%) 2 3	64, 105, 192, 222	0
2	AB	224/224 (100%)	3.36	150 (66%) 0 0	74, 117, 124, 132	0
2	BB	224/224 (100%)	4.11	165 (73%) 0 0	74, 114, 123, 130	0
3	AC	206/206 (100%)	1.40	47 (22%) 0 0	77, 88, 100, 105	0
3	BC	206/206 (100%)	3.45	142 (68%) 0 0	99, 117, 150, 166	0
4	AD	205/205 (100%)	1.02	31 (15%) 2 3	70, 91, 116, 125	0
4	BD	205/205 (100%)	1.15	22 (10%) 6 7	64, 76, 86, 91	0
5	AE	155/155 (100%)	1.14	26 (16%) 1 2	68, 79, 89, 95	0
5	BE	150/155 (96%)	1.90	51 (34%) 0 0	77, 91, 103, 114	0
6	AF	106/106 (100%)	0.92	16 (15%) 2 3	65, 92, 100, 102	0
6	BF	100/106 (94%)	2.80	56 (56%) 0 0	92, 104, 113, 117	0
7	AG	151/151 (100%)	2.56	75 (49%) 0 0	90, 117, 127, 132	0
7	BG	151/151 (100%)	7.07	140 (92%) 0 0	111, 153, 177, 185	0
8	AH	129/129 (100%)	1.01	16 (12%) 4 5	69, 82, 95, 103	0
8	BH	129/129 (100%)	1.79	44 (34%) 0 0	72, 111, 132, 139	0
9	AI	127/127 (100%)	2.75	69 (54%) 0 0	81, 111, 124, 130	0
9	BI	127/127 (100%)	5.52	107 (84%) 0 0	130, 152, 171, 177	0
10	AJ	99/99 (100%)	2.20	40 (40%) 0 0	60, 70, 76, 77	0
10	BJ	98/99 (98%)	5.53	81 (82%) 0 0	69, 76, 80, 81	0
11	AK	117/117 (100%)	1.75	43 (36%) 0 0	60, 90, 104, 108	0
11	BK	117/117 (100%)	2.48	65 (55%) 0 0	75, 102, 115, 118	0
12	AL	122/123 (99%)	0.63	6 (4%) 29 35	55, 67, 77, 88	0
12	BL	122/123 (99%)	1.47	28 (22%) 0 0	72, 84, 92, 94	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	2.88	55 (48%)	0	0	84, 112, 124, 128	0
13	BM	114/114 (100%)	8.99	110 (96%)	0	0	190, 219, 233, 235	0
14	AN	100/100 (100%)	2.41	42 (42%)	0	0	80, 100, 134, 140	0
14	BN	100/100 (100%)	7.37	94 (94%)	0	0	126, 174, 220, 227	0
15	AO	88/88 (100%)	0.86	10 (11%)	5	6	69, 82, 93, 98	0
15	BO	88/88 (100%)	2.12	39 (44%)	0	0	80, 105, 118, 125	0
16	AP	82/82 (100%)	1.71	20 (24%)	0	0	70, 85, 104, 113	0
16	BP	82/82 (100%)	3.16	59 (71%)	0	0	84, 106, 122, 126	0
17	AQ	80/80 (100%)	1.19	17 (21%)	0	0	69, 83, 96, 101	0
17	BQ	80/80 (100%)	3.38	53 (66%)	0	0	89, 120, 129, 133	0
18	AR	55/55 (100%)	1.59	19 (34%)	0	0	79, 86, 96, 98	0
18	BR	55/55 (100%)	1.45	14 (25%)	0	0	83, 90, 98, 100	0
19	AS	79/79 (100%)	2.76	43 (54%)	0	0	91, 110, 123, 127	0
19	BS	79/79 (100%)	9.30	72 (91%)	0	0	199, 217, 228, 231	0
20	AT	86/86 (100%)	1.37	17 (19%)	1	1	58, 84, 101, 107	0
20	BT	85/86 (98%)	4.45	69 (81%)	0	0	107, 131, 142, 144	0
21	AU	56/56 (100%)	2.63	27 (48%)	0	0	67, 80, 103, 113	0
21	BU	56/56 (100%)	2.13	24 (42%)	0	0	65, 85, 106, 113	0
22	CA	2876/2904 (99%)	0.87	378 (13%)	3	4	77, 118, 180, 217	0
23	CB	118/120 (98%)	1.22	26 (22%)	0	0	108, 157, 167, 168	0
23	DB	120/120 (100%)	-0.17	0	100	100	37, 58, 73, 81	0
24	CC	271/271 (100%)	2.24	140 (51%)	0	0	83, 107, 126, 131	0
24	DC	271/271 (100%)	1.59	82 (30%)	0	0	35, 59, 71, 78	0
25	CD	209/209 (100%)	2.90	131 (62%)	0	0	87, 108, 121, 126	0
26	CE	201/201 (100%)	4.77	156 (77%)	0	0	90, 157, 187, 196	0
26	DE	201/201 (100%)	0.90	33 (16%)	1	2	33, 57, 72, 78	0
27	CF	177/177 (100%)	9.35	173 (97%)	0	0	167, 172, 174, 176	0
27	DF	177/177 (100%)	1.11	23 (12%)	3	4	58, 75, 91, 94	0
28	CG	176/176 (100%)	5.70	158 (89%)	0	0	108, 120, 130, 134	0
28	DG	176/176 (100%)	0.70	15 (8%)	10	13	49, 62, 71, 75	0
29	CH	149/149 (100%)	4.22	118 (79%)	0	0	96, 121, 141, 223	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
29	DH	149/149 (100%)	4.22	104 (69%) 0 0	65, 128, 133, 154	0
30	CJ	134/134 (100%)	13.05	134 (100%) 0 0	202, 219, 225, 228	0
30	DJ	134/134 (100%)	10.30	130 (97%) 0 0	155, 183, 202, 208	0
31	CK	142/142 (100%)	2.76	88 (61%) 0 0	98, 110, 115, 120	0
31	DK	142/142 (100%)	1.25	30 (21%) 1 0	33, 41, 51, 60	0
32	CL	122/123 (99%)	2.35	54 (44%) 0 0	94, 107, 113, 114	0
32	DL	123/123 (100%)	0.93	12 (9%) 7 10	37, 48, 59, 68	0
33	CM	144/144 (100%)	4.30	122 (84%) 0 0	100, 137, 162, 166	0
33	DM	144/144 (100%)	1.28	42 (29%) 0 0	28, 53, 69, 73	0
34	CN	135/136 (99%)	2.41	58 (42%) 0 0	95, 122, 142, 150	0
34	DN	135/136 (99%)	0.77	8 (5%) 22 27	36, 44, 57, 63	0
35	CO	120/125 (96%)	3.08	81 (67%) 0 0	103, 120, 137, 142	0
35	DO	125/125 (100%)	1.50	35 (28%) 0 0	35, 44, 60, 69	0
36	CP	116/117 (99%)	6.39	109 (93%) 0 0	146, 155, 162, 164	0
36	DP	117/117 (100%)	0.53	2 (1%) 70 74	49, 59, 69, 73	0
37	CQ	114/114 (100%)	3.07	77 (67%) 0 0	110, 116, 124, 131	0
37	DQ	114/114 (100%)	1.07	19 (16%) 1 2	40, 52, 63, 73	0
38	CR	117/117 (100%)	2.64	73 (62%) 0 0	100, 115, 126, 128	0
38	DR	117/117 (100%)	1.73	47 (40%) 0 0	30, 40, 49, 64	0
39	CS	103/103 (100%)	3.58	72 (69%) 0 0	103, 125, 133, 137	0
39	DS	103/103 (100%)	1.05	13 (12%) 3 5	29, 48, 59, 73	0
40	CT	110/110 (100%)	3.09	76 (69%) 0 0	91, 121, 146, 150	0
40	DT	110/110 (100%)	1.44	27 (24%) 0 0	33, 39, 52, 68	0
41	CU	93/93 (100%)	5.73	85 (91%) 0 0	117, 149, 169, 176	0
41	DU	93/93 (100%)	0.80	6 (6%) 18 23	41, 57, 76, 83	0
42	CV	102/102 (100%)	7.95	97 (95%) 0 0	151, 176, 205, 210	0
42	DV	102/102 (100%)	0.57	4 (3%) 39 45	48, 60, 69, 80	0
43	CW	94/94 (100%)	3.86	63 (67%) 0 0	129, 148, 161, 165	0
43	DW	94/94 (100%)	0.59	2 (2%) 63 68	40, 54, 65, 71	0
44	CX	75/76 (98%)	3.54	52 (69%) 0 0	109, 118, 122, 126	0
44	DX	76/76 (100%)	1.36	16 (21%) 1 0	36, 46, 59, 65	0

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	CY	77/77 (100%)	2.62	44 (57%) 0 0	99, 116, 133, 135	0
45	DY	77/77 (100%)	0.88	6 (7%) 13 17	42, 59, 73, 78	0
46	CZ	62/62 (100%)	5.30	56 (90%) 0 0	158, 174, 193, 199	0
46	DZ	62/62 (100%)	0.69	4 (6%) 18 23	56, 66, 81, 82	0
47	C0	58/58 (100%)	2.42	29 (50%) 0 0	119, 130, 142, 143	0
47	D0	58/58 (100%)	1.47	17 (29%) 0 0	35, 42, 53, 56	0
48	C1	56/56 (100%)	3.83	47 (83%) 0 0	92, 123, 140, 144	0
48	D1	56/56 (100%)	1.56	19 (33%) 0 0	27, 44, 58, 64	0
49	C2	50/51 (98%)	3.68	41 (82%) 0 0	113, 122, 128, 132	0
49	D2	51/51 (100%)	0.96	8 (15%) 2 2	50, 59, 66, 67	0
50	C3	46/46 (100%)	3.51	33 (71%) 0 0	95, 108, 115, 117	0
50	D3	46/46 (100%)	1.57	14 (30%) 0 0	35, 44, 53, 62	0
51	C4	64/64 (100%)	3.54	47 (73%) 0 0	109, 119, 126, 127	0
51	D4	64/64 (100%)	2.05	31 (48%) 0 0	39, 45, 51, 57	0
52	C5	38/38 (100%)	3.16	29 (76%) 0 0	106, 114, 120, 125	0
52	D5	38/38 (100%)	0.88	3 (7%) 12 16	42, 48, 58, 63	0
53	DA	2873/2903 (98%)	0.32	136 (4%) 31 37	30, 49, 130, 199	0
54	DD	208/209 (99%)	1.41	64 (30%) 0 0	29, 44, 58, 63	0
55	DI	135/135 (100%)	6.03	119 (88%) 0 0	89, 123, 152, 159	1 (0%)
All	All	20634/20744 (99%)	1.90	6402 (31%) 0 0	27, 96, 176, 235	1 (0%)

All (6402) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	CJ	32	GLY	68.6
30	CJ	8	TYR	53.9
30	CJ	9	VAL	46.3
30	CJ	26	PRO	36.1
30	CJ	11	LEU	31.6
14	BN	34	VAL	31.0
7	BG	62	PHE	30.2
14	BN	21	PHE	30.0
30	CJ	13	VAL	29.3
30	CJ	42	PHE	29.2
30	CJ	31	GLN	29.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
30	DJ	99	GLY	28.9
30	CJ	63	ALA	28.6
30	CJ	67	PHE	27.6
27	CF	156	ILE	27.3
30	CJ	62	TYR	26.3
27	CF	76	GLY	26.0
30	DJ	80	LEU	25.1
42	CV	26	LYS	25.0
13	BM	75	MET	24.9
41	CU	1	MET	24.4
30	DJ	67	PHE	24.1
42	CV	25	VAL	23.8
55	DI	123	ILE	23.8
30	CJ	69	PHE	23.5
30	CJ	99	GLY	23.3
7	BG	87	VAL	22.5
30	DJ	100	LYS	22.4
13	BM	80	LEU	22.3
30	DJ	98	VAL	22.2
30	CJ	80	LEU	22.1
19	BS	74	PHE	22.0
30	CJ	10	LYS	21.9
42	CV	12	ILE	21.8
9	BI	38	TYR	21.7
30	DJ	138	LEU	21.7
13	BM	5	ALA	21.4
30	CJ	27	ALA	21.1
19	BS	68	GLY	21.1
27	CF	97	TRP	21.1
30	CJ	35	ILE	21.0
7	BG	66	LEU	20.9
27	CF	152	LEU	20.9
46	CZ	11	VAL	20.9
42	CV	62	GLU	20.8
13	BM	40	ALA	20.7
14	BN	74	LEU	20.6
30	DJ	94	ASN	20.6
19	BS	15	LEU	20.6
13	BM	30	SER	20.5
13	BM	84	GLY	20.5
27	CF	58	ALA	20.4
30	CJ	33	VAL	20.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	BN	57	PRO	20.2
42	CV	50	PRO	20.0
30	CJ	22	PRO	19.9
30	DJ	96	ASP	19.8
30	DJ	40	LYS	19.8
27	CF	155	THR	19.6
9	BI	58	VAL	19.3
30	DJ	85	GLY	19.3
13	BM	109	ARG	19.3
13	BM	85	CYS	19.2
19	BS	46	GLY	19.2
7	BG	51	ALA	19.1
30	DJ	49	ILE	19.0
55	DI	131	THR	19.0
30	DJ	48	SER	19.0
27	CF	169	LEU	19.0
30	CJ	75	PRO	19.0
42	CV	29	LEU	18.9
14	BN	31	ILE	18.9
14	BN	25	ALA	18.8
2	BB	135	LEU	18.8
13	BM	106	ALA	18.7
30	CJ	17	MET	18.7
30	CJ	30	GLN	18.6
30	CJ	44	ALA	18.5
30	CJ	56	PRO	18.5
30	CJ	21	SER	18.4
30	CJ	12	GLN	18.4
27	CF	113	ASP	18.3
42	CV	28	VAL	18.3
51	C4	21	GLY	18.2
19	BS	61	PHE	18.2
27	CF	57	LEU	18.0
43	CW	94	ALA	18.0
30	CJ	20	PRO	17.9
30	CJ	73	THR	17.9
27	CF	28	VAL	17.8
30	CJ	59	ILE	17.8
14	BN	43	ASN	17.8
55	DI	121	SER	17.7
30	CJ	34	ASN	17.7
14	BN	28	LYS	17.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
9	BI	71	GLY	17.5
27	CF	136	ILE	17.5
14	AN	21	PHE	17.4
30	DJ	139	VAL	17.4
7	BG	152	ALA	17.4
55	DI	84	TYR	17.4
30	CJ	25	GLY	17.3
43	CW	57	TYR	17.3
42	CV	39	ILE	17.3
19	BS	12	ASP	17.1
30	CJ	57	VAL	17.1
30	CJ	29	GLY	17.1
9	BI	40	GLY	17.0
30	DJ	106	LEU	16.9
30	CJ	58	VAL	16.9
30	CJ	64	ASP	16.9
36	CP	59	ALA	16.8
30	DJ	93	PRO	16.8
19	BS	66	MET	16.8
30	DJ	87	LYS	16.8
27	CF	4	LEU	16.8
14	BN	30	ILE	16.7
26	CE	119	ILE	16.7
19	BS	22	ALA	16.7
27	CF	117	LEU	16.7
14	BN	36	ALA	16.7
19	BS	27	ASP	16.6
27	CF	100	PHE	16.6
27	CF	40	VAL	16.6
14	BN	58	SER	16.5
13	BM	6	GLY	16.5
14	BN	42	TRP	16.5
42	CV	37	GLU	16.5
30	CJ	140	VAL	16.5
55	DI	129	LEU	16.5
30	DJ	114	ALA	16.3
27	CF	120	LYS	16.3
30	DJ	89	GLY	16.3
27	CF	87	CYS	16.3
7	BG	59	LEU	16.2
10	BJ	77	VAL	16.2
42	CV	51	ALA	16.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
19	BS	30	PRO	16.2
30	DJ	140	VAL	16.1
27	CF	172	ALA	16.1
42	CV	30	SER	16.0
42	CV	87	PHE	16.0
26	CE	158	PHE	15.9
7	BG	50	LEU	15.9
30	DJ	103	ARG	15.9
14	BN	33	ASP	15.9
19	BS	69	HIS	15.8
7	BG	98	ALA	15.8
30	DJ	88	SER	15.8
2	BB	40	ILE	15.8
55	DI	130	PRO	15.8
30	CJ	139	VAL	15.7
19	BS	67	VAL	15.7
9	BI	47	VAL	15.7
55	DI	117	LEU	15.6
26	CE	131	THR	15.6
30	DJ	110	ALA	15.6
27	CF	159	THR	15.6
36	CP	58	ILE	15.5
42	CV	36	VAL	15.5
13	BM	32	ALA	15.5
28	CG	168	VAL	15.4
30	DJ	116	ASP	15.4
19	BS	11	ILE	15.4
27	CF	55	ALA	15.3
27	CF	59	ALA	15.3
27	CF	116	GLY	15.3
19	BS	29	LYS	15.3
46	CZ	6	LEU	15.2
27	CF	8	TYR	15.2
28	CG	52	PHE	15.2
20	BT	79	LEU	15.2
19	BS	60	VAL	15.2
27	CF	128	TYR	15.2
30	CJ	76	ALA	15.1
29	DH	74	ALA	15.1
27	CF	154	ILE	15.0
7	BG	134	ALA	15.0
36	CP	101	GLY	14.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
9	BI	59	GLU	14.9
30	DJ	38	PHE	14.9
30	CJ	60	THR	14.9
30	DJ	133	ALA	14.8
27	CF	22	TYR	14.8
19	BS	26	GLY	14.8
30	DJ	36	MET	14.8
30	DJ	86	ILE	14.8
27	CF	106	ILE	14.7
7	BG	133	THR	14.7
30	DJ	53	LEU	14.6
26	CE	12	LEU	14.6
14	BN	18	ASP	14.6
13	BM	39	ILE	14.6
9	BI	128	SER	14.6
13	BM	28	THR	14.6
30	DJ	68	THR	14.6
26	CE	121	VAL	14.5
9	BI	37	GLN	14.5
27	CF	176	PRO	14.5
26	CE	164	LEU	14.5
7	BG	141	VAL	14.4
27	CF	54	ALA	14.4
14	BN	22	ALA	14.4
55	DI	106	PHE	14.4
30	DJ	9	VAL	14.3
30	CJ	36	MET	14.2
30	CJ	23	PRO	14.2
27	CF	7	TYR	14.2
27	CF	37	ASN	14.2
42	CV	31	SER	14.2
42	CV	52	LEU	14.2
27	CF	32	GLU	14.2
30	DJ	115	ALA	14.2
13	BM	51	GLY	14.1
30	DJ	42	PHE	14.1
10	BJ	87	LEU	14.1
39	CS	103	ALA	14.1
27	CF	34	ILE	14.1
13	BM	10	PRO	14.0
28	CG	10	VAL	14.0
7	AG	52	GLN	14.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	BB	215	GLY	14.0
27	CF	65	PRO	14.0
13	BM	96	PRO	14.0
26	CE	33	VAL	13.9
30	CJ	38	PHE	13.9
13	BM	65	VAL	13.9
30	DJ	39	CYS	13.9
19	BS	28	LYS	13.9
27	CF	13	VAL	13.7
13	BM	45	ILE	13.7
30	DJ	137	GLY	13.7
30	DJ	33	VAL	13.7
41	CU	83	ALA	13.7
30	CJ	68	THR	13.7
7	BG	79	ARG	13.6
42	CV	13	VAL	13.6
7	BG	5	ARG	13.6
30	DJ	69	PHE	13.6
19	BS	25	SER	13.6
30	CJ	109	ILE	13.5
28	CG	150	ALA	13.5
43	CW	58	SER	13.5
7	BG	27	VAL	13.5
30	CJ	61	VAL	13.5
30	DJ	22	PRO	13.5
13	BM	67	GLY	13.5
13	BM	77	ILE	13.4
19	BS	58	VAL	13.4
26	CE	126	VAL	13.4
27	CF	143	TYR	13.4
13	BM	83	LEU	13.4
55	DI	128	THR	13.4
27	CF	12	VAL	13.3
30	DJ	52	GLY	13.3
7	BG	46	ALA	13.3
41	CU	71	GLY	13.2
28	CG	40	ALA	13.2
13	BM	61	ALA	13.2
26	CE	127	GLU	13.2
30	DJ	101	ILE	13.2
30	CJ	71	THR	13.2
36	CP	22	GLY	13.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	CM	92	LEU	13.1
27	CF	79	ILE	13.1
30	CJ	14	ALA	13.0
55	DI	127	ALA	13.0
30	DJ	135	SER	13.0
19	BS	59	PRO	13.0
32	CL	111	LYS	13.0
42	CV	32	GLY	13.0
13	BM	2	ALA	13.0
27	CF	151	GLY	13.0
9	AI	130	ARG	13.0
33	CM	90	VAL	12.9
33	CM	82	LEU	12.9
3	BC	193	TYR	12.9
30	DJ	102	SER	12.9
27	CF	38	MET	12.9
10	BJ	86	ALA	12.8
30	CJ	106	LEU	12.8
13	AM	33	ILE	12.8
30	DJ	76	ALA	12.8
26	CE	13	THR	12.8
30	CJ	65	ARG	12.8
20	BT	4	ILE	12.8
28	CG	83	PHE	12.7
42	CV	40	ASN	12.7
27	CF	109	PRO	12.7
14	BN	32	SER	12.7
29	CH	139	PHE	12.7
3	BC	29	PHE	12.7
30	DJ	47	ASP	12.7
55	DI	124	ASP	12.6
42	CV	75	ALA	12.6
26	CE	128	ALA	12.6
30	DJ	55	ILE	12.6
13	BM	31	LYS	12.6
14	BN	35	ASN	12.6
13	AM	19	LEU	12.6
30	CJ	41	ALA	12.5
14	BN	8	ALA	12.5
27	CF	133	ARG	12.4
30	CJ	138	LEU	12.4
10	BJ	100	ILE	12.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	BB	67	ILE	12.4
19	BS	48	THR	12.4
9	BI	69	GLY	12.4
28	CG	91	GLY	12.4
29	DH	139	PHE	12.4
30	CJ	97	LYS	12.4
30	CJ	101	ILE	12.4
30	DJ	13	VAL	12.3
30	DJ	45	LYS	12.3
30	DJ	120	ALA	12.3
10	BJ	26	VAL	12.3
29	CH	104	THR	12.3
48	C1	54	VAL	12.3
7	BG	103	TRP	12.3
29	CH	13	GLY	12.3
27	CF	130	MET	12.2
30	DJ	91	GLY	12.2
19	BS	13	LEU	12.2
36	CP	19	GLN	12.2
33	CM	89	VAL	12.2
2	AB	136	MET	12.2
28	CG	11	VAL	12.2
30	CJ	70	VAL	12.2
42	CV	63	ALA	12.2
30	DJ	122	ILE	12.2
22	CA	138	U	12.2
30	DJ	92	LYS	12.2
13	BM	22	ILE	12.1
29	CH	10	ALA	12.1
13	BM	36	ALA	12.1
36	CP	97	PHE	12.1
2	BB	186	ILE	12.0
36	CP	21	LEU	12.0
29	DH	63	ALA	12.0
13	BM	46	SER	12.0
7	BG	65	ALA	12.0
13	BM	63	PHE	12.0
43	CW	23	ALA	12.0
3	BC	28	GLU	12.0
7	BG	88	PRO	12.0
13	BM	4	ILE	11.9
7	BG	129	GLU	11.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	BN	27	LEU	11.9
41	CU	53	VAL	11.9
7	BG	52	GLN	11.9
26	CE	15	SER	11.9
36	CP	109	ALA	11.9
30	DJ	34	ASN	11.9
14	BN	56	SER	11.9
48	C1	34	SER	11.9
28	CG	33	LEU	11.8
13	BM	97	VAL	11.8
28	CG	102	VAL	11.8
19	BS	32	ARG	11.8
34	CN	136	MET	11.8
7	BG	85	TYR	11.8
28	CG	156	PRO	11.8
30	DJ	28	LEU	11.8
34	CN	21	ALA	11.8
27	CF	114	PHE	11.8
19	BS	49	ILE	11.8
27	CF	147	ASP	11.8
36	CP	100	HIS	11.8
30	CJ	16	GLY	11.7
20	BT	81	ALA	11.7
28	CG	92	VAL	11.7
36	CP	39	VAL	11.7
3	BC	78	GLY	11.7
28	CG	161	GLY	11.7
44	CX	22	GLY	11.7
13	BM	7	ILE	11.7
30	CJ	117	MET	11.7
2	BB	64	LYS	11.7
13	BM	64	VAL	11.7
27	CF	111	ILE	11.7
36	CP	117	PHE	11.6
30	DJ	107	GLN	11.6
41	CU	89	GLU	11.6
25	CD	74	GLU	11.6
19	BS	42	PRO	11.6
2	AB	117	LEU	11.6
30	CJ	119	GLY	11.5
30	DJ	95	LYS	11.5
36	CP	40	ILE	11.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
13	BM	74	SER	11.5
7	BG	44	TYR	11.4
25	CD	186	LEU	11.4
27	CF	75	ALA	11.4
13	BM	108	THR	11.4
12	BL	16	VAL	11.4
27	CF	93	GLY	11.3
13	BM	113	ARG	11.3
30	CJ	114	ALA	11.3
7	BG	61	ALA	11.3
55	DI	104	ALA	11.3
30	DJ	66	SER	11.3
7	BG	75	VAL	11.3
55	DI	132	TYR	11.3
55	DI	94	ARG	11.3
29	DH	75	LEU	11.3
30	DJ	79	LEU	11.3
19	BS	51	VAL	11.3
27	CF	45	ALA	11.3
36	CP	4	LYS	11.3
27	CF	10	ASP	11.3
28	CG	157	TYR	11.3
19	BS	76	PRO	11.2
13	BM	48	LEU	11.2
9	BI	67	VAL	11.2
27	CF	138	PHE	11.2
2	AB	111	ILE	11.2
16	BP	52	LEU	11.2
27	CF	170	LEU	11.2
42	CV	20	GLY	11.2
30	DJ	41	ALA	11.2
29	DH	126	GLY	11.1
30	DJ	37	GLU	11.1
42	CV	35	ILE	11.1
2	BB	32	PHE	11.1
7	BG	49	THR	11.1
46	CZ	33	ALA	11.1
13	BM	55	THR	11.1
29	CH	15	LEU	11.1
41	CU	55	VAL	11.1
13	BM	68	ASP	11.1
30	DJ	62	TYR	11.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	BG	45	SER	11.1
41	CU	45	ALA	11.1
55	DI	40	GLU	11.0
30	CJ	110	ALA	11.0
30	CJ	51	LYS	11.0
29	DH	80	ILE	11.0
39	CS	27	ILE	11.0
42	CV	76	ALA	11.0
9	BI	75	GLN	11.0
33	CM	116	VAL	11.0
36	CP	49	VAL	11.0
19	BS	65	GLU	11.0
19	BS	39	THR	11.0
55	DI	136	ILE	11.0
7	BG	83	SER	10.9
42	CV	71	ALA	10.9
27	CF	112	ARG	10.9
6	BF	80	PHE	10.9
30	CJ	87	LYS	10.9
27	CF	95	ARG	10.9
27	CF	68	THR	10.9
30	CJ	118	THR	10.9
55	DI	35	VAL	10.9
33	CM	114	GLY	10.8
41	CU	8	LEU	10.8
27	CF	173	PHE	10.8
13	BM	29	ARG	10.8
29	CH	130	VAL	10.8
7	BG	15	ASP	10.8
30	CJ	96	ASP	10.8
9	BI	130	ARG	10.7
27	CF	83	TYR	10.7
55	DI	113	PHE	10.7
12	BL	15	LYS	10.7
17	BQ	83	VAL	10.7
27	CF	171	ALA	10.7
30	CJ	120	ALA	10.7
27	CF	142	ASP	10.7
13	BM	62	LYS	10.7
7	BG	132	GLY	10.7
13	AM	5	ALA	10.7
20	BT	51	PHE	10.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	82	GLY	10.7
52	C5	21	GLY	10.7
27	CF	27	GLN	10.7
29	CH	14	SER	10.6
44	CX	63	ALA	10.6
20	BT	36	TYR	10.6
16	AP	45	GLU	10.6
49	D2	5	ILE	10.6
28	CG	2	SER	10.6
16	BP	81	ALA	10.6
30	DJ	54	PRO	10.6
2	BB	219	ALA	10.6
7	BG	135	VAL	10.6
9	BI	48	VAL	10.6
27	CF	135	GLN	10.5
16	BP	47	GLU	10.5
13	BM	89	LEU	10.5
30	CJ	79	LEU	10.5
20	BT	80	THR	10.5
10	BJ	20	GLN	10.5
19	BS	63	THR	10.5
42	CV	38	GLY	10.5
33	CM	144	GLU	10.5
2	BB	16	PHE	10.5
17	BQ	78	VAL	10.5
42	CV	21	LYS	10.5
7	BG	72	THR	10.4
27	CF	39	GLY	10.4
29	DH	146	VAL	10.4
28	CG	84	THR	10.4
28	CG	169	VAL	10.4
13	BM	93	ARG	10.4
30	DJ	131	GLY	10.4
27	CF	86	GLY	10.4
41	CU	50	LEU	10.4
42	CV	41	LEU	10.4
27	CF	107	ALA	10.4
28	CG	76	VAL	10.4
31	CK	97	PRO	10.4
30	DJ	44	ALA	10.4
30	CJ	24	VAL	10.3
30	CJ	129	ILE	10.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
30	DJ	141	GLU	10.3
30	DJ	19	ASN	10.3
14	BN	37	SER	10.3
13	BM	35	ALA	10.3
41	CU	74	ILE	10.3
26	CE	8	ALA	10.3
39	CS	51	VAL	10.3
30	DJ	30	GLN	10.3
25	CD	185	ASN	10.3
30	CJ	113	LYS	10.2
2	BB	226	SER	10.2
19	AS	5	LEU	10.2
44	CX	32	LEU	10.2
2	AB	60	ILE	10.2
30	DJ	90	SER	10.2
30	DJ	58	VAL	10.2
12	BL	124	ALA	10.2
26	CE	190	ALA	10.2
7	BG	78	ARG	10.2
19	BS	38	SER	10.2
36	CP	110	ALA	10.2
42	CV	43	LYS	10.2
46	CZ	5	GLU	10.2
41	CU	73	ARG	10.2
39	CS	50	GLY	10.1
27	CF	35	THR	10.1
27	CF	50	LEU	10.1
27	CF	43	ALA	10.1
30	CJ	128	SER	10.1
14	BN	15	ALA	10.1
7	BG	10	ARG	10.1
13	BM	71	ARG	10.1
27	CF	6	ASP	10.1
30	DJ	65	ARG	10.1
30	DJ	27	ALA	10.1
13	BM	23	TYR	10.1
33	CM	79	LEU	10.1
7	BG	77	SER	10.1
28	CG	78	GLY	10.0
30	DJ	43	ASN	10.0
28	CG	128	GLN	10.0
51	C4	58	VAL	10.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
55	DI	118	ILE	10.0
36	CP	82	ALA	10.0
27	CF	103	LEU	10.0
41	CU	69	ARG	10.0
7	BG	102	ARG	10.0
13	BM	26	GLY	10.0
27	CF	25	VAL	10.0
22	CA	1068	G	10.0
13	BM	58	ASP	10.0
33	CM	117	THR	10.0
36	CP	71	ALA	10.0
46	CZ	63	ALA	10.0
37	CQ	4	ILE	10.0
27	CF	96	MET	10.0
50	C3	36	ALA	9.9
3	BC	192	THR	9.9
22	CA	1067	A	9.9
36	CP	78	VAL	9.9
7	BG	25	LYS	9.9
14	BN	29	ALA	9.9
29	DH	81	ALA	9.9
30	DJ	51	LYS	9.9
10	BJ	99	GLN	9.9
26	CE	136	GLN	9.9
13	BM	60	VAL	9.9
2	BB	4	VAL	9.9
19	BS	57	HIS	9.9
14	BN	24	ARG	9.9
13	BM	9	ILE	9.9
27	CF	108	VAL	9.8
30	CJ	112	THR	9.8
19	BS	17	LYS	9.8
48	C1	44	THR	9.8
46	CZ	56	LEU	9.8
13	BM	94	GLY	9.8
28	CG	103	ILE	9.8
19	BS	18	LYS	9.8
27	CF	105	THR	9.8
28	CG	80	THR	9.8
30	CJ	43	ASN	9.8
10	BJ	8	ILE	9.8
2	BB	30	PHE	9.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	1175	A	9.7
10	AJ	6	ILE	9.7
19	BS	45	ILE	9.7
27	CF	51	ASP	9.7
55	DI	105	LYS	9.7
30	DJ	23	PRO	9.7
28	CG	58	TYR	9.7
2	BB	12	ALA	9.7
7	BG	150	ALA	9.7
29	CH	105	ALA	9.7
7	BG	125	SER	9.7
7	BG	86	GLN	9.6
30	CJ	28	LEU	9.6
14	BN	4	GLN	9.6
13	BM	17	ILE	9.6
29	DH	105	ALA	9.6
36	CP	50	ALA	9.6
41	CU	43	ILE	9.6
27	CF	11	GLU	9.6
35	CO	76	VAL	9.6
13	BM	37	ALA	9.6
7	AG	5	ARG	9.6
55	DI	126	LEU	9.6
7	BG	17	LYS	9.6
10	BJ	28	THR	9.5
13	BM	69	LEU	9.5
26	CE	143	LEU	9.5
47	C0	2	ALA	9.5
13	AM	114	LYS	9.5
46	CZ	60	LYS	9.5
55	DI	21	GLY	9.5
29	DH	77	THR	9.5
29	DH	76	GLU	9.5
34	CN	22	GLN	9.5
27	CF	115	ARG	9.5
14	BN	60	GLN	9.5
9	BI	39	PHE	9.5
27	CF	122	PHE	9.5
19	BS	24	GLU	9.5
45	CY	20	HIS	9.5
30	DJ	14	ALA	9.5
55	DI	100	ALA	9.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
26	CE	183	PHE	9.4
55	DI	119	PRO	9.4
10	BJ	17	LEU	9.4
28	CG	68	ALA	9.4
27	CF	56	ASP	9.4
28	CG	45	HIS	9.4
27	CF	66	LEU	9.4
27	CF	77	PHE	9.4
41	CU	51	PHE	9.4
14	BN	41	ARG	9.4
30	CJ	92	LYS	9.4
19	BS	40	ILE	9.4
22	CA	613	A	9.4
7	BG	64	VAL	9.4
28	CG	165	ALA	9.4
6	BF	54	LEU	9.4
7	BG	73	VAL	9.4
27	CF	157	THR	9.3
35	CO	63	ARG	9.3
9	BI	54	LEU	9.3
9	BI	127	PHE	9.3
30	CJ	15	ALA	9.3
7	BG	118	LEU	9.3
7	BG	80	VAL	9.3
49	C2	53	LYS	9.3
26	CE	3	LEU	9.3
3	BC	122	SER	9.3
36	CP	103	VAL	9.3
36	CP	60	GLU	9.3
2	BB	63	ARG	9.3
29	DH	137	GLU	9.3
30	CJ	88	SER	9.3
30	CJ	95	LYS	9.3
28	CG	17	VAL	9.3
2	BB	217	VAL	9.2
7	BG	104	ILE	9.2
5	BE	99	ALA	9.2
7	BG	76	LYS	9.2
2	BB	130	THR	9.2
3	BC	37	PHE	9.2
30	CJ	66	SER	9.2
2	AB	7	ARG	9.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	CP	20	GLU	9.2
9	BI	57	MET	9.2
19	BS	3	ARG	9.2
10	BJ	97	ASP	9.2
46	CZ	30	MET	9.2
19	BS	47	LEU	9.2
27	CF	104	ILE	9.2
32	CL	88	ASN	9.2
36	CP	54	VAL	9.2
2	AB	225	ARG	9.2
30	CJ	124	ALA	9.1
35	CO	119	SER	9.1
7	BG	124	LEU	9.1
17	BQ	74	THR	9.1
27	CF	80	ARG	9.1
30	CJ	94	ASN	9.1
9	BI	118	LEU	9.1
46	CZ	22	LEU	9.1
10	BJ	88	MET	9.1
26	CE	172	ALA	9.1
7	BG	8	GLY	9.1
30	DJ	132	THR	9.1
51	C4	20	GLY	9.1
29	DH	138	VAL	9.1
30	CJ	136	MET	9.1
30	CJ	98	VAL	9.0
14	BN	40	ASP	9.0
30	DJ	121	ASP	9.0
7	BG	84	THR	9.0
3	BC	53	SER	9.0
26	CE	19	PHE	9.0
41	CU	57	VAL	9.0
26	CE	173	THR	9.0
55	DI	38	MET	9.0
28	CG	105	LEU	9.0
28	CG	112	PRO	8.9
55	DI	101	LYS	8.9
12	AL	124	ALA	8.9
10	BJ	36	VAL	8.9
13	AM	4	ILE	8.9
22	CA	1093	G	8.9
31	CK	127	GLY	8.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
13	BM	86	TYR	8.9
9	BI	44	ALA	8.9
48	C1	3	VAL	8.9
9	BI	68	LYS	8.9
39	CS	43	ASN	8.9
2	AB	139	ARG	8.9
13	BM	90	ARG	8.9
19	BS	64	ASP	8.9
42	CV	49	VAL	8.9
9	AI	90	TYR	8.9
10	BJ	38	GLY	8.9
2	AB	58	ASN	8.9
36	CP	67	ASN	8.9
10	BJ	91	ASP	8.9
25	CD	73	VAL	8.9
7	BG	112	GLY	8.8
29	CH	140	ALA	8.8
41	CU	6	ARG	8.8
10	BJ	102	LEU	8.8
43	CW	34	LYS	8.8
30	CJ	133	ALA	8.8
16	BP	80	LYS	8.8
42	CV	33	LYS	8.8
43	CW	92	VAL	8.8
29	DH	65	ALA	8.8
42	CV	6	ARG	8.8
20	BT	85	LYS	8.8
36	CP	61	GLN	8.7
19	BS	31	LEU	8.7
42	CV	59	VAL	8.7
42	CV	77	THR	8.7
55	DI	50	VAL	8.7
55	DI	66	GLY	8.7
9	BI	110	GLN	8.7
19	BS	14	HIS	8.7
25	CD	14	ILE	8.7
17	BQ	82	ALA	8.7
29	DH	124	THR	8.7
26	CE	118	LEU	8.7
13	BM	12	HIS	8.7
20	BT	34	LYS	8.7
38	CR	15	LYS	8.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
10	BJ	34	ALA	8.7
40	CT	37	THR	8.7
19	BS	23	VAL	8.7
55	DI	64	VAL	8.7
3	BC	181	ASP	8.7
16	AP	47	GLU	8.7
42	CV	73	PHE	8.7
1	BA	1031	C	8.6
13	BM	43	VAL	8.6
13	BM	8	ASN	8.6
36	CP	47	VAL	8.6
30	CJ	121	ASP	8.6
10	BJ	74	VAL	8.6
42	CV	74	ASN	8.6
30	DJ	21	SER	8.6
30	DJ	97	LYS	8.6
55	DI	97	LYS	8.6
41	CU	37	ASP	8.6
11	BK	16	VAL	8.6
3	BC	146	ALA	8.5
20	BT	49	LYS	8.5
35	CO	100	CYS	8.5
37	CQ	43	PHE	8.5
41	CU	10	VAL	8.5
7	BG	94	VAL	8.5
42	CV	17	LYS	8.5
55	DI	92	ALA	8.5
13	AM	9	ILE	8.5
14	AN	51	LEU	8.5
33	CM	108	ALA	8.5
1	AA	1030	U	8.5
3	BC	145	GLY	8.5
10	BJ	40	ILE	8.5
30	CJ	78	VAL	8.5
42	CV	85	PHE	8.4
13	BM	11	ASP	8.4
2	AB	135	LEU	8.4
2	BB	117	LEU	8.4
14	BN	17	ALA	8.4
33	CM	122	VAL	8.4
13	BM	79	ARG	8.4
27	CF	52	ASN	8.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	BB	126	PHE	8.4
33	CM	73	ILE	8.4
7	BG	145	ALA	8.4
30	CJ	84	ALA	8.4
2	AB	49	MET	8.4
32	CL	89	ASN	8.4
29	CH	17	ASP	8.4
20	BT	77	ALA	8.4
26	CE	11	ALA	8.4
27	CF	137	ILE	8.4
19	BS	62	VAL	8.4
30	DJ	134	ARG	8.4
30	DJ	124	ALA	8.4
44	CX	50	ASN	8.4
14	AN	46	LEU	8.4
42	CV	98	SER	8.4
13	AM	3	ARG	8.4
26	CE	104	ALA	8.4
2	BB	31	ILE	8.4
25	CD	8	LYS	8.4
9	BI	42	GLU	8.4
30	DJ	78	VAL	8.4
41	CU	47	VAL	8.4
33	CM	81	ASP	8.3
33	CM	121	THR	8.3
2	BB	11	LYS	8.3
20	BT	46	ALA	8.3
46	DZ	63	ALA	8.3
30	CJ	131	GLY	8.3
55	DI	47	GLU	8.3
42	CV	27	ASN	8.3
27	CF	48	LYS	8.3
41	CU	88	LYS	8.3
29	CH	108	VAL	8.3
22	CA	1535	A	8.3
27	CF	20	PHE	8.3
39	CS	37	GLU	8.3
10	BJ	76	ILE	8.3
13	BM	19	LEU	8.3
36	CP	62	LEU	8.3
42	CV	65	ILE	8.3
30	DJ	126	THR	8.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	AN	36	ALA	8.3
30	CJ	100	LYS	8.3
3	BC	107	ARG	8.3
2	BB	57	LEU	8.3
37	CQ	92	VAL	8.3
55	DI	27	VAL	8.3
30	CJ	83	ALA	8.3
2	BB	139	ARG	8.3
13	BM	82	ASP	8.2
10	BJ	92	LEU	8.2
25	CD	96	ILE	8.2
27	CF	90	THR	8.2
36	CP	64	TYR	8.2
32	CL	91	SER	8.2
26	CE	124	PHE	8.2
49	C2	36	LEU	8.2
44	CX	33	ALA	8.2
39	CS	63	VAL	8.2
14	BN	53	ARG	8.2
27	CF	118	SER	8.2
26	CE	1	MET	8.2
26	CE	122	GLU	8.2
27	CF	129	SER	8.2
27	CF	92	ARG	8.2
36	CP	51	ALA	8.2
29	DH	95	GLY	8.2
39	CS	32	THR	8.2
55	DI	120	ALA	8.2
2	AB	57	LEU	8.2
27	CF	85	ILE	8.2
28	CG	121	ILE	8.2
29	DH	143	ILE	8.2
7	BG	20	SER	8.2
27	CF	31	VAL	8.2
10	AJ	93	ALA	8.1
1	BA	1021	A	8.1
46	CZ	58	ASN	8.1
36	CP	70	ALA	8.1
36	CP	116	GLN	8.1
28	CG	77	ILE	8.1
29	DH	61	VAL	8.1
17	BQ	70	THR	8.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
42	CV	80	ALA	8.1
25	CD	95	SER	8.1
27	CF	15	LYS	8.1
10	BJ	52	LEU	8.1
13	BM	34	LEU	8.1
33	CM	142	ILE	8.1
41	CU	2	ILE	8.1
7	AG	20	SER	8.1
50	C3	1	MET	8.1
31	CK	128	ASN	8.1
46	CZ	15	ASN	8.1
26	CE	138	LEU	8.1
28	CG	107	LEU	8.1
6	BF	70	VAL	8.1
19	BS	21	LYS	8.1
30	DJ	105	GLN	8.1
7	BG	57	SER	8.1
2	BB	210	VAL	8.1
41	CU	67	VAL	8.1
28	CG	59	ALA	8.0
42	CV	60	GLU	8.0
19	BS	16	LEU	8.0
10	BJ	45	ARG	8.0
30	DJ	15	ALA	8.0
55	DI	71	CYS	8.0
27	CF	91	LEU	8.0
28	CG	131	ILE	8.0
19	BS	19	VAL	8.0
28	CG	132	VAL	8.0
29	CH	3	VAL	8.0
29	DH	44	ILE	8.0
30	CJ	89	GLY	8.0
29	DH	56	ALA	8.0
30	CJ	50	GLU	8.0
30	CJ	104	ALA	8.0
25	CD	92	VAL	7.9
27	CF	141	ILE	7.9
29	CH	125	THR	7.9
27	CF	153	ASP	7.9
36	CP	80	GLU	7.9
42	CV	70	VAL	7.9
28	CG	69	ARG	7.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
40	CT	110	ARG	7.9
28	CG	25	THR	7.9
26	CE	98	LYS	7.9
10	BJ	90	LEU	7.9
34	CN	41	LEU	7.9
2	AB	14	VAL	7.9
2	BB	80	VAL	7.9
26	CE	14	VAL	7.9
26	CE	140	ASP	7.9
27	CF	14	LYS	7.9
33	CM	93	ASN	7.9
28	CG	171	THR	7.9
30	CJ	115	ALA	7.9
1	BA	1032	G	7.9
30	DJ	46	THR	7.9
29	DH	107	GLY	7.9
28	CG	51	THR	7.9
30	CJ	126	THR	7.9
2	AB	6	MET	7.9
19	AS	8	GLY	7.9
21	AU	3	VAL	7.8
10	BJ	101	SER	7.8
9	BI	26	GLY	7.8
46	CZ	37	LEU	7.8
29	DH	147	VAL	7.8
29	CH	47	PHE	7.8
31	CK	137	PRO	7.8
26	CE	133	LEU	7.8
9	BI	126	GLN	7.8
29	CH	16	GLY	7.8
43	CW	67	GLY	7.8
20	BT	9	LYS	7.8
2	AB	42	ASN	7.8
14	BN	51	LEU	7.8
36	CP	12	THR	7.8
43	CW	28	ALA	7.8
3	BC	77	ILE	7.8
27	CF	102	ARG	7.8
13	AM	48	LEU	7.8
3	AC	82	GLU	7.8
29	CH	107	GLY	7.8
28	CG	101	ASN	7.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
40	CT	65	ASP	7.8
46	CZ	4	LYS	7.8
29	CH	145	ASN	7.7
19	BS	80	TYR	7.7
9	AI	53	GLU	7.7
22	CA	1870	C	7.7
6	AF	97	THR	7.7
53	DA	2110	G	7.7
40	CT	68	ASP	7.7
26	CE	165	HIS	7.7
51	C4	22	PHE	7.7
26	CE	134	LEU	7.7
28	CG	148	LEU	7.7
28	CG	9	VAL	7.7
19	AS	11	ILE	7.7
55	DI	45	GLY	7.7
10	BJ	21	ALA	7.7
37	CQ	85	SER	7.7
22	CA	1536	C	7.7
13	BM	25	VAL	7.7
27	CF	99	PHE	7.7
16	AP	81	ALA	7.7
19	BS	50	ALA	7.7
40	CT	54	ALA	7.7
30	DJ	123	GLU	7.6
30	CJ	86	ILE	7.6
21	AU	12	PHE	7.6
2	BB	33	GLY	7.6
27	CF	174	ASP	7.6
36	CP	75	GLY	7.6
36	CP	25	ARG	7.6
6	BF	92	THR	7.6
7	AG	46	ALA	7.6
14	AN	39	GLU	7.6
14	BN	16	LEU	7.6
34	CN	60	GLN	7.6
26	CE	189	THR	7.6
30	CJ	46	THR	7.6
30	CJ	135	SER	7.6
55	DI	82	ILE	7.6
16	BP	45	GLU	7.6
7	BG	101	MET	7.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
55	DI	67	THR	7.6
34	CN	131	VAL	7.6
33	CM	124	GLY	7.6
14	AN	30	ILE	7.6
7	BG	131	LYS	7.6
9	AI	129	LYS	7.6
3	BC	102	ASN	7.6
36	CP	69	ASP	7.6
48	C1	39	LEU	7.6
40	CT	66	ILE	7.6
42	CV	96	PHE	7.6
30	CJ	85	GLY	7.5
33	CM	83	ALA	7.5
9	BI	119	ARG	7.5
46	CZ	40	SER	7.5
7	AG	49	THR	7.5
26	CE	153	LEU	7.5
36	CP	105	ALA	7.5
44	CX	47	ALA	7.5
39	CS	59	ILE	7.5
7	BG	18	PHE	7.5
9	BI	66	THR	7.5
19	BS	44	MET	7.5
32	CL	110	GLU	7.5
3	BC	138	VAL	7.5
10	AJ	26	VAL	7.5
29	CH	144	VAL	7.5
42	CV	82	ARG	7.5
30	CJ	39	CYS	7.5
33	CM	137	ALA	7.5
27	CF	162	SER	7.5
27	CF	89	VAL	7.5
53	DA	1172	C	7.5
25	CD	71	ALA	7.5
29	CH	135	HIS	7.5
36	CP	41	ALA	7.5
41	CU	70	HIS	7.5
30	CJ	137	GLY	7.4
13	BM	33	ILE	7.4
14	AN	37	SER	7.4
7	BG	107	ALA	7.4
7	BG	81	GLY	7.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	79	VAL	7.4
28	CG	106	SER	7.4
38	CR	101	PHE	7.4
2	BB	123	ASP	7.4
27	CF	132	VAL	7.4
26	CE	199	MET	7.4
29	CH	74	ALA	7.4
33	CM	61	LEU	7.4
14	BN	14	VAL	7.4
29	CH	142	VAL	7.4
30	CJ	82	LYS	7.4
22	CA	1092	C	7.4
25	CD	184	ARG	7.4
13	AM	36	ALA	7.4
3	AC	75	ILE	7.4
25	CD	86	GLU	7.4
30	DJ	12	GLN	7.4
14	BN	38	ASP	7.4
28	CG	125	CYS	7.4
29	DH	140	ALA	7.4
19	BS	56	GLN	7.4
10	BJ	27	GLU	7.3
27	CF	16	LEU	7.3
41	CU	72	GLN	7.3
28	CG	113	VAL	7.3
10	BJ	93	ALA	7.3
28	CG	98	VAL	7.3
7	BG	111	ARG	7.3
9	BI	129	LYS	7.3
2	BB	225	ARG	7.3
49	C2	27	LYS	7.3
31	CK	55	ILE	7.3
28	CG	46	ALA	7.3
29	CH	49	ALA	7.3
30	CJ	18	ALA	7.3
55	DI	75	ALA	7.3
27	CF	146	VAL	7.3
2	BB	65	GLY	7.3
22	CA	1537	G	7.3
34	CN	59	ARG	7.3
53	DA	2121	G	7.3
27	CF	158	THR	7.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
10	BJ	85	ASP	7.3
29	DH	135	HIS	7.3
2	AB	12	ALA	7.2
27	CF	119	ALA	7.2
36	CP	106	LEU	7.2
9	AI	93	SER	7.2
27	CF	134	GLU	7.2
22	CA	281	C	7.2
27	CF	2	ALA	7.2
55	DI	91	ALA	7.2
14	BN	73	PHE	7.2
9	BI	116	VAL	7.2
28	CG	30	ASN	7.2
29	CH	20	ASN	7.2
27	DF	83	TYR	7.2
14	BN	55	SER	7.2
40	CT	63	GLY	7.2
2	AB	114	LEU	7.2
44	CX	79	PHE	7.2
27	CF	17	MET	7.2
39	CS	88	GLY	7.2
36	CP	32	PRO	7.2
26	CE	137	LYS	7.2
9	AI	54	LEU	7.2
13	BM	101	ARG	7.2
14	BN	75	ARG	7.2
19	BS	71	LEU	7.2
36	CP	74	VAL	7.2
13	BM	24	GLY	7.2
51	C4	52	LYS	7.2
7	BG	122	ASN	7.2
6	BF	79	ARG	7.2
2	AB	31	ILE	7.2
30	CJ	130	GLU	7.2
36	CP	63	LYS	7.2
27	CF	60	ILE	7.1
27	CF	63	GLN	7.1
18	AR	73	ARG	7.1
44	CX	46	HIS	7.1
30	CJ	134	ARG	7.1
47	C0	32	ILE	7.1
2	AB	10	LEU	7.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
11	BK	55	SER	7.1
41	CU	91	GLN	7.1
43	CW	22	ALA	7.1
55	DI	88	HIS	7.1
7	BG	109	ARG	7.1
41	CU	28	ASN	7.1
39	CS	49	ILE	7.1
30	DJ	20	PRO	7.1
39	CS	22	LEU	7.1
7	BG	6	VAL	7.1
33	CM	85	VAL	7.1
1	BA	1020	G	7.1
13	BM	53	ILE	7.1
26	CE	77	ILE	7.1
27	CF	18	THR	7.1
30	DJ	8	TYR	7.1
42	CV	5	ILE	7.1
42	CV	58	ILE	7.1
10	BJ	75	ASP	7.1
37	CQ	16	ASP	7.1
29	CH	115	VAL	7.1
36	CP	76	LYS	7.1
2	BB	161	LEU	7.1
6	BF	66	ALA	7.1
2	AB	90	PHE	7.1
19	AS	41	PHE	7.1
55	DI	76	PHE	7.1
19	AS	13	LEU	7.0
3	BC	80	LYS	7.0
35	CO	29	VAL	7.0
55	DI	12	VAL	7.0
3	BC	98	PRO	7.0
10	BJ	56	HIS	7.0
17	BQ	50	ASN	7.0
30	CJ	45	LYS	7.0
2	AB	214	LEU	7.0
10	BJ	98	VAL	7.0
30	CJ	93	PRO	7.0
36	CP	66	GLY	7.0
30	DJ	108	GLU	7.0
2	AB	75	ALA	7.0
2	BB	212	LEU	7.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
20	BT	50	ALA	7.0
29	DH	127	GLU	7.0
2	BB	216	ALA	7.0
3	BC	27	LYS	7.0
42	CV	24	LYS	7.0
3	BC	196	ILE	7.0
22	CA	1094	U	7.0
29	CH	12	LEU	7.0
27	CF	84	PRO	7.0
8	BH	111	MET	7.0
29	CH	9	VAL	7.0
20	BT	24	ARG	7.0
9	BI	43	THR	7.0
30	CJ	37	GLU	7.0
17	BQ	17	MET	7.0
30	DJ	50	GLU	7.0
55	DI	48	ALA	6.9
29	CH	141	LYS	6.9
9	BI	52	LEU	6.9
42	CV	67	VAL	6.9
28	CG	104	ASN	6.9
55	DI	89	PRO	6.9
13	BM	81	MET	6.9
33	CM	3	LEU	6.9
43	CW	89	ILE	6.9
33	CM	4	ASN	6.9
35	CO	62	ASN	6.9
9	BI	53	GLU	6.9
33	CM	15	ALA	6.9
2	BB	124	GLY	6.9
10	BJ	33	GLY	6.9
24	CC	34	LEU	6.9
30	CJ	40	LYS	6.9
30	CJ	49	ILE	6.9
42	CV	83	VAL	6.9
14	BN	39	GLU	6.9
2	BB	198	PHE	6.9
14	BN	44	ALA	6.9
30	DJ	104	ALA	6.9
10	BJ	95	GLY	6.9
2	BB	62	SER	6.9
3	BC	62	LYS	6.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	CM	19	LEU	6.9
27	CF	44	ILE	6.9
11	AK	113	VAL	6.9
34	CN	135	VAL	6.9
44	CX	83	GLU	6.9
1	BA	211	G	6.9
2	AB	134	ALA	6.9
27	CF	33	LYS	6.9
30	DJ	81	LYS	6.9
36	CP	111	ARG	6.8
42	CV	101	GLU	6.8
43	CW	33	GLY	6.8
55	DI	26	VAL	6.8
2	BB	218	ALA	6.8
13	BM	52	GLN	6.8
7	AG	48	GLU	6.8
27	CF	164	GLU	6.8
27	CF	21	ASN	6.8
9	AI	65	ILE	6.8
26	CE	175	ILE	6.8
30	CJ	77	ALA	6.8
7	BG	58	GLU	6.8
27	CF	110	ARG	6.8
46	CZ	59	GLU	6.8
2	BB	220	THR	6.8
46	CZ	36	GLN	6.8
29	DH	123	ARG	6.8
46	CZ	21	LEU	6.8
1	BA	1030	U	6.8
2	AB	47	VAL	6.8
55	DI	22	ALA	6.8
30	DJ	136	MET	6.8
29	DH	66	ASN	6.8
29	DH	96	THR	6.8
38	CR	71	GLN	6.8
26	CE	5	LEU	6.8
27	CF	49	LEU	6.8
41	DU	1	MET	6.8
20	BT	3	ASN	6.8
2	BB	74	ARG	6.8
29	DH	132	PHE	6.8
42	CV	19	LYS	6.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	AN	40	ASP	6.8
36	CP	29	HIS	6.8
26	CE	201	ALA	6.8
46	CZ	32	ALA	6.8
29	DH	108	VAL	6.8
36	CP	65	THR	6.8
9	BI	27	LYS	6.8
22	CA	885	C	6.8
14	AN	49	GLN	6.7
19	BS	41	PHE	6.8
14	BN	2	ALA	6.7
9	AI	88	MET	6.7
5	BE	23	LYS	6.7
29	DH	83	LYS	6.7
53	DA	2163	A	6.7
30	CJ	55	ILE	6.7
10	BJ	80	THR	6.7
29	DH	125	THR	6.7
30	CJ	141	GLU	6.7
9	BI	7	TYR	6.7
14	BN	19	LYS	6.7
29	DH	67	ALA	6.7
6	BF	20	GLY	6.7
24	CC	237	GLY	6.7
2	AB	130	THR	6.7
17	AQ	83	VAL	6.7
27	CF	144	ASP	6.7
22	CA	2121	G	6.7
2	AB	35	ARG	6.7
28	CG	13	ALA	6.7
55	DI	49	GLY	6.7
10	BJ	39	PRO	6.7
41	CU	46	ALA	6.7
41	CU	90	GLY	6.7
51	C4	18	GLY	6.7
19	BS	53	ASN	6.7
24	CC	33	LEU	6.7
36	CP	53	THR	6.7
21	AU	53	VAL	6.7
24	CC	77	VAL	6.7
27	CF	47	LYS	6.7
36	CP	56	LYS	6.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
20	BT	7	ALA	6.7
37	CQ	91	ALA	6.7
7	BG	97	ASN	6.7
9	BI	34	SER	6.7
28	CG	49	THR	6.7
36	CP	3	LYS	6.7
2	BB	84	ALA	6.7
10	AJ	86	ALA	6.7
9	BI	14	SER	6.6
2	BB	213	TYR	6.6
11	AK	96	THR	6.6
36	CP	38	GLN	6.6
41	CU	11	LEU	6.6
2	BB	41	ILE	6.6
14	BN	82	ILE	6.6
1	BA	1025	U	6.6
28	CG	20	ASN	6.6
2	BB	82	ASP	6.6
27	CF	94	GLU	6.6
55	DI	98	GLU	6.6
32	CL	112	PHE	6.6
43	CW	56	PHE	6.6
7	BG	30	LEU	6.6
9	BI	6	TYR	6.6
40	CT	36	LEU	6.6
50	C3	42	LEU	6.6
10	BJ	96	VAL	6.6
48	C1	25	VAL	6.6
13	AM	39	ILE	6.6
2	BB	206	ALA	6.6
2	BB	69	PHE	6.6
33	CM	107	PHE	6.6
2	BB	37	LYS	6.6
2	BB	128	LYS	6.6
47	C0	24	LEU	6.6
37	CQ	17	VAL	6.6
24	CC	31	ALA	6.6
51	C4	60	ALA	6.6
30	DJ	31	GLN	6.6
37	CQ	7	GLN	6.6
9	BI	62	ASP	6.6
27	CF	29	PRO	6.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	CM	123	ARG	6.6
1	BA	82	G	6.6
3	AC	39	VAL	6.6
3	BC	56	VAL	6.6
29	DH	134	VAL	6.6
30	CJ	48	SER	6.6
30	DJ	24	VAL	6.6
31	CK	1	MET	6.6
31	CK	129	GLU	6.6
24	CC	27	GLY	6.6
37	CQ	3	ASN	6.6
10	BJ	16	ARG	6.6
15	BO	89	ARG	6.6
52	C5	33	HIS	6.6
55	DI	72	LEU	6.6
26	CE	28	VAL	6.6
9	BI	21	ILE	6.6
30	DJ	29	GLY	6.6
28	CG	122	THR	6.6
41	CU	60	THR	6.6
53	DA	2168	G	6.6
13	BM	44	LYS	6.5
10	AJ	34	ALA	6.5
29	CH	63	ALA	6.5
3	BC	84	VAL	6.5
25	CD	10	GLY	6.5
17	BQ	61	ILE	6.5
25	CD	25	THR	6.5
48	C1	33	THR	6.5
21	AU	2	PRO	6.5
29	CH	136	SER	6.5
27	CF	26	MET	6.5
27	CF	64	LYS	6.5
28	CG	97	ALA	6.5
35	CO	28	LEU	6.5
36	CP	57	ALA	6.5
11	BK	44	TRP	6.5
39	CS	20	VAL	6.5
1	BA	1024	G	6.5
9	AI	28	ILE	6.5
10	BJ	37	ARG	6.5
33	CM	102	GLY	6.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
37	CQ	23	GLY	6.5
42	CV	95	PHE	6.5
17	BQ	7	THR	6.5
49	C2	29	THR	6.5
19	BS	4	SER	6.5
29	CH	143	ILE	6.5
33	CM	78	ARG	6.5
9	AI	97	GLU	6.5
9	BI	61	LEU	6.5
7	BG	56	LYS	6.5
24	CC	242	LYS	6.5
2	BB	125	THR	6.5
24	CC	120	VAL	6.5
33	CM	68	SER	6.5
42	CV	48	PRO	6.5
3	BC	162	ILE	6.5
9	BI	92	GLU	6.5
5	BE	146	ASN	6.5
7	AG	151	PHE	6.5
15	BO	15	PHE	6.5
42	CV	9	ASP	6.5
30	DJ	75	PRO	6.5
39	CS	33	VAL	6.5
6	BF	94	HIS	6.4
36	CP	72	ALA	6.4
7	AG	83	SER	6.4
46	CZ	10	SER	6.4
11	BK	52	PHE	6.4
22	CA	2170	A	6.4
36	CP	85	LYS	6.4
9	AI	58	VAL	6.4
20	BT	65	GLY	6.4
48	C1	35	GLY	6.4
2	BB	164	ILE	6.4
8	BH	46	ILE	6.4
55	DI	11	ILE	6.4
28	CG	73	ASN	6.4
26	CE	196	VAL	6.4
13	AM	53	ILE	6.4
14	BN	20	TYR	6.4
43	CW	48	MET	6.4
25	CD	31	ALA	6.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
29	DH	104	THR	6.4
20	BT	86	LEU	6.4
36	CP	83	LEU	6.4
30	DJ	113	LYS	6.4
7	BG	43	VAL	6.4
7	BG	148	ASN	6.4
16	BP	78	VAL	6.4
40	CT	107	VAL	6.4
31	CK	125	TYR	6.4
22	CA	1460	U	6.4
28	CG	95	ARG	6.4
2	BB	116	ASP	6.4
4	AD	27	ALA	6.4
30	DJ	128	SER	6.4
26	CE	129	PRO	6.4
49	C2	31	PRO	6.4
3	BC	85	GLU	6.4
7	BG	123	GLU	6.4
37	CQ	25	THR	6.4
17	BQ	75	LEU	6.4
42	DV	52	LEU	6.4
10	AJ	77	VAL	6.4
29	CH	147	VAL	6.4
41	CU	62	VAL	6.4
50	C3	22	MET	6.4
10	BJ	6	ILE	6.4
34	CN	54	THR	6.3
3	AC	83	ASP	6.3
9	AI	29	VAL	6.3
35	CO	73	ASN	6.3
28	CG	170	ARG	6.3
44	CX	55	ARG	6.3
55	DI	20	LYS	6.3
6	BF	69	GLU	6.3
29	CH	131	SER	6.3
2	BB	156	GLY	6.3
8	BH	44	GLY	6.3
10	BJ	61	ALA	6.3
29	DH	52	ALA	6.3
31	CK	126	ALA	6.3
5	BE	157	ARG	6.3
24	CC	245	VAL	6.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
44	CX	60	PHE	6.3
1	BA	1361	G	6.3
26	CE	34	ALA	6.3
29	DH	49	ALA	6.3
55	DI	96	PHE	6.3
52	C5	20	ASP	6.3
3	BC	103	ILE	6.3
19	AS	9	PRO	6.3
3	BC	104	ALA	6.3
13	BM	18	ALA	6.3
29	DH	58	LEU	6.3
22	CA	2119	A	6.3
55	DI	122	GLN	6.3
53	DA	2166	U	6.3
33	CM	91	ASP	6.3
20	BT	41	ALA	6.3
22	CA	2120	G	6.3
2	BB	208	ARG	6.3
27	CF	145	LYS	6.2
55	DI	134	GLU	6.2
39	CS	36	ALA	6.2
53	DA	2114	A	6.2
4	BD	47	ARG	6.2
6	BF	31	GLY	6.2
27	CF	42	GLU	6.2
43	CW	32	GLY	6.2
2	BB	49	MET	6.2
27	CF	81	GLN	6.2
36	CP	73	ALA	6.2
22	CA	1053	C	6.2
26	CE	20	GLY	6.2
2	AB	221	VAL	6.2
26	CE	120	VAL	6.2
41	CU	85	VAL	6.2
6	BF	91	ARG	6.2
10	BJ	29	ALA	6.2
35	CO	59	SER	6.2
11	BK	51	GLY	6.2
1	BA	1244	G	6.2
7	BG	99	LEU	6.2
9	BI	94	LEU	6.2
53	DA	2165	C	6.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	65	ALA	6.2
29	DH	59	ALA	6.2
43	CW	6	ALA	6.2
55	DI	135	ALA	6.2
28	CG	116	GLN	6.2
7	AG	56	LYS	6.2
9	BI	63	LEU	6.2
36	CP	99	TYR	6.2
55	DI	73	LYS	6.2
2	BB	136	MET	6.2
22	CA	2169	A	6.2
9	BI	56	ASP	6.2
2	AB	62	SER	6.2
26	CE	88	ARG	6.2
30	DJ	59	ILE	6.2
30	CJ	54	PRO	6.2
39	CS	52	PRO	6.2
7	BG	23	LEU	6.2
29	DH	145	ASN	6.2
43	CW	42	LEU	6.2
9	BI	55	VAL	6.2
2	BB	35	ARG	6.2
22	CA	228	C	6.2
53	DA	2146	C	6.2
27	CF	165	GLU	6.2
2	BB	134	ALA	6.2
20	BT	87	ALA	6.2
22	CA	2184	A	6.2
29	CH	132	PHE	6.2
38	CR	10	ALA	6.2
26	CE	178	VAL	6.1
30	DJ	73	THR	6.1
40	CT	39	THR	6.1
13	BM	3	ARG	6.1
22	CA	1107	G	6.1
7	BG	19	GLY	6.1
47	C0	26	GLY	6.1
37	CQ	73	VAL	6.1
26	CE	26	ALA	6.1
36	CP	107	ALA	6.1
55	DI	87	GLU	6.1
22	CA	1171	G	6.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
49	C2	23	THR	6.1
55	DI	16	SER	6.1
22	CA	2178	C	6.1
11	BK	65	VAL	6.1
31	CK	96	ARG	6.1
36	CP	37	ALA	6.1
42	CV	3	ALA	6.1
43	CW	60	VAL	6.1
30	CJ	74	PRO	6.1
24	CC	64	ILE	6.1
3	BC	127	ARG	6.1
10	BJ	94	ALA	6.1
7	BG	105	VAL	6.1
35	CO	94	TYR	6.1
26	CE	150	THR	6.1
46	CZ	55	THR	6.1
8	BH	54	ASP	6.1
46	CZ	29	ARG	6.1
26	CE	37	ALA	6.1
35	CO	77	ALA	6.1
49	C2	34	LEU	6.1
49	C2	52	ALA	6.1
26	CE	191	ASP	6.1
30	CJ	103	ARG	6.1
19	BS	52	HIS	6.0
2	AB	74	ARG	6.0
33	CM	126	ARG	6.0
1	BA	1033	G	6.0
7	AG	80	VAL	6.0
2	AB	215	GLY	6.0
19	BS	43	ASN	6.0
35	CO	27	SER	6.0
50	C3	37	LYS	6.0
1	BA	207	C	6.0
7	BG	151	PHE	6.0
49	C2	5	ILE	6.0
9	BI	108	ALA	6.0
27	DF	113	ASP	6.0
25	CD	187	LEU	6.0
19	BS	33	THR	6.0
29	CH	77	THR	6.0
21	BU	27	GLY	6.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
26	CE	187	VAL	6.0
41	CU	68	LYS	6.0
44	CX	75	LYS	6.0
49	C2	47	VAL	6.0
22	CA	1095	A	6.0
53	DA	2101	A	6.0
43	CW	82	TYR	6.0
8	AH	54	ASP	6.0
27	CF	67	ILE	6.0
6	BF	76	THR	6.0
29	CH	120	GLY	6.0
30	CJ	53	LEU	6.0
51	C4	62	LEU	6.0
29	DH	142	VAL	6.0
40	CT	99	ARG	6.0
53	DA	2105	U	6.0
50	C3	7	PRO	6.0
11	BK	71	ALA	6.0
50	C3	27	GLY	6.0
46	CZ	18	LEU	6.0
4	AD	160	GLU	6.0
2	BB	14	VAL	6.0
26	CE	4	VAL	6.0
41	CU	16	VAL	6.0
55	DI	52	MET	6.0
20	AT	47	ALA	6.0
21	BU	15	ALA	6.0
25	CD	199	SER	6.0
52	C5	6	SER	6.0
3	BC	110	GLU	6.0
10	BJ	89	ARG	6.0
20	BT	32	ILE	6.0
26	CE	2	GLU	6.0
27	CF	46	ASP	6.0
2	AB	43	LEU	6.0
7	BG	144	MET	6.0
14	BN	72	GLY	5.9
16	BP	44	SER	5.9
13	BM	56	LEU	5.9
42	CV	14	LEU	5.9
11	BK	74	VAL	5.9
14	AN	47	LYS	5.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
29	DH	64	ALA	5.9
24	CC	213	TRP	5.9
5	BE	159	LYS	5.9
28	CG	86	LYS	5.9
13	BM	95	LEU	5.9
27	CF	150	ARG	5.9
3	BC	39	VAL	5.9
22	CA	1172	C	5.9
31	CK	17	VAL	5.9
33	CM	46	VAL	5.9
42	CV	2	ALA	5.9
10	BJ	32	THR	5.9
25	CD	151	THR	5.9
28	CG	94	TYR	5.9
2	BB	109	GLN	5.9
30	DJ	35	ILE	5.9
42	CV	72	ILE	5.9
28	CG	57	GLY	5.9
7	AG	91	VAL	5.9
43	CW	72	VAL	5.9
13	AM	31	LYS	5.9
44	CX	61	ALA	5.9
37	DQ	115	ASN	5.9
5	BE	10	GLU	5.9
25	CD	72	GLY	5.9
7	BG	54	SER	5.9
32	CL	75	SER	5.9
36	CP	35	ILE	5.9
11	BK	73	ALA	5.9
14	AN	22	ALA	5.9
22	CA	1087	G	5.9
30	DJ	112	THR	5.9
26	CE	7	ASP	5.9
9	AI	60	LYS	5.9
13	BM	38	GLY	5.9
2	AB	186	ILE	5.9
10	BJ	35	GLN	5.9
33	CM	100	ILE	5.9
36	CP	18	LEU	5.9
20	BT	43	ASP	5.9
22	CA	2106	U	5.9
32	CL	35	VAL	5.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
41	CU	58	VAL	5.9
47	C0	55	VAL	5.9
55	DI	107	GLU	5.9
27	CF	9	LYS	5.9
25	CD	6	GLY	5.8
30	DJ	74	PRO	5.8
42	CV	78	GLY	5.8
7	AG	13	LEU	5.8
14	AN	27	LEU	5.8
28	CG	56	ASP	5.8
38	CR	35	ALA	5.8
1	BA	1245	C	5.8
25	CD	155	VAL	5.8
27	CF	82	GLY	5.8
33	CM	130	GLY	5.8
35	CO	9	GLN	5.8
30	CJ	90	SER	5.8
9	AI	59	GLU	5.8
42	CV	18	ASP	5.8
9	BI	90	TYR	5.8
21	AU	57	ALA	5.8
26	CE	142	ALA	5.8
1	BA	1534	A	5.8
27	CF	149	VAL	5.8
2	BB	6	MET	5.8
26	CE	41	GLN	5.8
21	AU	4	ILE	5.8
28	CG	34	THR	5.8
38	CR	29	SER	5.8
41	CU	21	SER	5.8
36	CP	108	ASP	5.8
1	BA	1359	C	5.8
10	BJ	31	ARG	5.8
19	AS	65	GLU	5.8
36	CP	81	ARG	5.8
27	CF	78	LYS	5.8
43	CW	68	LYS	5.8
7	AG	18	PHE	5.8
13	AM	37	ALA	5.8
25	CD	158	GLY	5.8
27	CF	177	PHE	5.8
10	BJ	41	PRO	5.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
10	BJ	67	ILE	5.8
13	AM	20	THR	5.8
20	BT	57	ILE	5.8
29	DH	118	PRO	5.8
35	CO	10	LEU	5.8
22	CA	1071	G	5.8
28	CG	85	LYS	5.8
7	BG	121	ALA	5.8
2	BB	44	GLU	5.8
41	CU	87	LEU	5.8
17	BQ	59	VAL	5.8
27	CF	74	VAL	5.8
33	CM	120	VAL	5.8
55	DI	18	VAL	5.8
22	CA	878	A	5.7
42	CV	45	HIS	5.7
10	BJ	23	ALA	5.7
36	CP	14	ALA	5.7
1	BA	1243	C	5.7
2	BB	138	THR	5.7
41	CU	29	THR	5.7
9	BI	64	TYR	5.7
36	CP	112	GLU	5.7
17	BQ	56	GLY	5.7
36	CP	88	LYS	5.7
9	BI	50	GLN	5.7
9	BI	16	ALA	5.7
10	BJ	79	PRO	5.7
11	BK	47	ALA	5.7
13	AM	34	LEU	5.7
51	C4	29	LEU	5.7
9	BI	120	LYS	5.7
38	CR	84	LYS	5.7
41	CU	22	THR	5.7
7	BG	149	LYS	5.7
55	DI	43	LYS	5.7
28	CG	48	ASN	5.7
9	BI	20	PHE	5.7
26	CE	200	LEU	5.7
29	DH	88	GLY	5.7
38	CR	30	ARG	5.7
40	CT	92	ARG	5.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
42	CV	86	ARG	5.7
3	BC	42	TYR	5.7
17	BQ	20	SER	5.7
14	BN	23	LYS	5.7
28	CG	129	THR	5.7
10	BJ	9	ARG	5.7
29	CH	27	ARG	5.7
41	CU	76	ARG	5.7
2	AB	151	ILE	5.7
47	C0	3	LYS	5.7
16	BP	60	TRP	5.7
26	CE	169	VAL	5.7
1	AA	86	G	5.7
26	CE	135	ALA	5.7
28	CG	111	HIS	5.7
17	BQ	81	LYS	5.7
1	AA	1026	G	5.7
1	BA	1304	G	5.7
19	AS	16	LEU	5.7
10	BJ	25	ILE	5.7
29	CH	11	ASN	5.7
29	DH	144	VAL	5.7
55	DI	125	ARG	5.7
26	CE	16	GLU	5.6
30	DJ	84	ALA	5.6
51	C4	15	LYS	5.6
9	BI	91	ASP	5.6
2	AB	129	LEU	5.6
46	CZ	8	GLU	5.6
51	C4	2	PRO	5.6
3	BC	130	PHE	5.6
10	AJ	18	ILE	5.6
9	AI	48	VAL	5.6
22	CA	1059	G	5.6
30	DJ	83	ALA	5.6
50	C3	32	ALA	5.6
34	CN	23	GLY	5.6
53	DA	2175	C	5.6
7	BG	53	ARG	5.6
44	CX	25	ARG	5.6
17	BQ	51	ASN	5.6
37	CQ	8	LEU	5.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
6	BF	28	ALA	5.6
26	CE	167	VAL	5.6
27	CF	53	ALA	5.6
34	CN	61	GLY	5.6
13	AM	52	GLN	5.6
50	C3	33	ARG	5.6
2	AB	226	SER	5.6
1	BA	1013	G	5.6
11	BK	75	LYS	5.6
53	DA	1065	U	5.6
28	CG	87	LEU	5.6
29	DH	12	LEU	5.6
3	AC	78	GLY	5.6
17	BQ	55	ILE	5.6
35	CO	111	ALA	5.6
39	CS	93	PHE	5.6
30	CJ	123	GLU	5.6
22	CA	1170	C	5.6
3	BC	147	LYS	5.6
30	CJ	127	ARG	5.6
7	BG	108	ALA	5.6
11	BK	63	ALA	5.6
16	BP	54	LEU	5.6
29	CH	6	LEU	5.6
40	CT	3	THR	5.6
1	BA	1019	A	5.6
15	BO	11	ILE	5.6
26	CE	149	ILE	5.6
33	CM	77	ILE	5.6
39	CS	38	VAL	5.6
53	DA	1077	A	5.6
9	BI	22	LYS	5.6
14	BN	69	ARG	5.6
30	CJ	111	GLN	5.6
3	BC	148	GLY	5.6
27	CF	62	GLY	5.6
22	CA	2177	C	5.6
31	CK	131	ASN	5.6
53	DA	2174	C	5.6
2	BB	184	PHE	5.6
15	BO	82	ILE	5.6
19	AS	10	PHE	5.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
27	CF	175	PHE	5.6
35	CO	102	PHE	5.6
42	CV	42	VAL	5.6
13	BM	54	ASP	5.5
26	CE	40	ARG	5.5
27	CF	41	GLY	5.5
2	BB	58	ASN	5.5
20	BT	84	ASN	5.5
48	C1	24	ALA	5.5
41	CU	26	LYS	5.5
3	BC	144	LEU	5.5
13	BM	57	ARG	5.5
41	CU	34	VAL	5.5
22	CA	1084	A	5.5
28	CG	151	TYR	5.5
33	CM	80	SER	5.5
19	BS	81	ARG	5.5
42	CV	22	ARG	5.5
55	DI	83	ALA	5.5
10	BJ	24	GLU	5.5
43	CW	1	MET	5.5
30	DJ	10	LYS	5.5
46	CZ	54	LYS	5.5
1	BA	85	U	5.5
2	AB	55	ALA	5.5
2	BB	211	THR	5.5
10	BJ	81	GLU	5.5
2	AB	124	GLY	5.5
42	CV	84	GLY	5.5
36	CP	28	VAL	5.5
20	BT	82	GLN	5.5
41	CU	5	GLU	5.5
43	CW	43	ASP	5.5
2	AB	77	SER	5.5
26	CE	10	SER	5.5
28	CG	74	SER	5.5
55	DI	133	GLU	5.5
9	BI	86	ALA	5.5
28	CG	99	LYS	5.5
35	CO	85	PRO	5.5
22	CA	318	C	5.5
7	AG	59	LEU	5.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
26	CE	157	LEU	5.5
2	AB	187	VAL	5.5
9	BI	79	ILE	5.5
25	CD	104	VAL	5.5
29	DH	136	SER	5.5
41	CU	36	LYS	5.5
49	C2	30	LYS	5.5
10	BJ	12	ALA	5.5
11	BK	70	CYS	5.5
28	CG	12	PRO	5.5
28	CG	108	GLY	5.5
28	CG	117	LEU	5.5
13	BM	76	SER	5.5
45	CY	67	VAL	5.4
4	BD	44	ARG	5.4
15	BO	33	THR	5.4
27	CF	23	ASN	5.4
30	CJ	132	THR	5.4
2	BB	39	HIS	5.4
29	CH	92	GLY	5.4
22	CA	2168	G	5.4
8	AH	2	SER	5.4
1	BA	1022	A	5.4
7	BG	4	ARG	5.4
22	CA	41	C	5.4
22	CA	316	C	5.4
25	CD	20	VAL	5.4
44	CX	31	VAL	5.4
25	CD	118	PHE	5.4
21	AU	5	LYS	5.4
29	CH	36	ALA	5.4
35	CO	57	THR	5.4
42	CV	61	LYS	5.4
7	AG	45	SER	5.4
55	DI	115	GLY	5.4
16	AP	82	ALA	5.4
21	BU	57	ALA	5.4
29	CH	81	ALA	5.4
19	BS	37	ARG	5.4
16	AP	46	LYS	5.4
43	CW	84	PRO	5.4
55	DI	114	GLU	5.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	BB	111	ILE	5.4
26	CE	17	THR	5.4
28	CG	41	VAL	5.4
29	DH	16	GLY	5.4
9	BI	23	PRO	5.4
10	BJ	10	LEU	5.4
5	BE	103	THR	5.4
43	CW	8	VAL	5.4
44	CX	84	ALA	5.4
25	CD	11	MET	5.4
26	CE	108	ILE	5.4
29	CH	72	ILE	5.4
41	CU	27	SER	5.4
32	CL	68	GLY	5.4
9	AI	32	GLN	5.4
9	AI	63	LEU	5.4
9	BI	87	LEU	5.4
16	AP	72	ALA	5.4
22	CA	882	G	5.4
22	CA	2125	G	5.4
29	CH	59	ALA	5.4
29	CH	65	ALA	5.4
53	DA	654	A	5.4
30	CJ	102	SER	5.3
34	CN	80	VAL	5.3
42	CV	11	VAL	5.3
50	C3	6	GLN	5.3
55	DI	68	PRO	5.3
40	CT	67	ASP	5.3
20	AT	46	ALA	5.3
20	AT	66	LEU	5.3
32	CL	90	ASN	5.3
29	CH	138	VAL	5.3
38	CR	39	VAL	5.3
22	CA	2104	C	5.3
22	CA	1083	U	5.3
28	CG	14	GLY	5.3
2	BB	8	ASP	5.3
30	CJ	47	ASP	5.3
1	BA	206	C	5.3
3	BC	44	THR	5.3
3	BC	119	SER	5.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
26	CE	18	THR	5.3
30	CJ	125	MET	5.3
28	CG	4	VAL	5.3
13	BM	111	GLY	5.3
7	AG	26	PHE	5.3
14	AN	42	TRP	5.3
37	CQ	84	ILE	5.3
48	C1	46	ASP	5.3
49	C2	48	ILE	5.3
33	CM	129	LYS	5.3
19	AS	22	ALA	5.3
20	AT	50	ALA	5.3
43	CW	54	ALA	5.3
9	AI	24	GLY	5.3
26	CE	154	ASP	5.3
26	CE	174	GLY	5.3
9	AI	55	VAL	5.3
22	CA	2128	G	5.3
52	C5	13	ASN	5.3
2	AB	32	PHE	5.3
2	BB	7	ARG	5.3
41	DU	52	GLU	5.3
53	DA	2135	A	5.3
39	CS	91	GLN	5.3
1	BA	5	U	5.3
38	CR	23	GLY	5.3
9	BI	4	ASN	5.3
49	C2	21	TYR	5.3
28	CG	130	GLU	5.3
7	AG	109	ARG	5.3
44	CX	71	VAL	5.3
7	BG	9	GLN	5.3
30	CJ	122	ILE	5.3
4	AD	20	PHE	5.3
13	AM	58	ASP	5.3
6	BF	93	LYS	5.2
7	BG	91	VAL	5.2
1	BA	1247	U	5.2
2	AB	82	ASP	5.2
51	C4	59	ILE	5.2
33	CM	74	THR	5.2
51	C4	37	ALA	5.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
9	BI	45	ARG	5.2
22	CA	1176	U	5.2
2	AB	131	LYS	5.2
36	CP	115	LEU	5.2
18	AR	32	TYR	5.2
11	AK	110	ILE	5.2
14	BN	81	ARG	5.2
46	CZ	47	ARG	5.2
53	DA	1175	A	5.2
13	AM	40	ALA	5.2
7	BG	116	MET	5.2
2	AB	11	LYS	5.2
2	AB	45	LYS	5.2
27	CF	161	LYS	5.2
28	CG	172	LYS	5.2
41	CU	39	THR	5.2
1	BA	1362	A	5.2
3	BC	203	PHE	5.2
28	CG	37	LEU	5.2
26	CE	151	GLY	5.2
10	AJ	36	VAL	5.2
13	AM	16	VAL	5.2
17	BQ	79	VAL	5.2
38	CR	104	VAL	5.2
17	BQ	48	ASP	5.2
10	AJ	89	ARG	5.2
42	CV	79	LYS	5.2
1	BA	210	C	5.2
1	BA	1287	A	5.2
2	AB	227	GLN	5.2
22	CA	1076	C	5.2
36	CP	34	HIS	5.2
46	CZ	20	ASN	5.2
25	CD	198	GLY	5.2
9	BI	111	VAL	5.2
20	BT	38	ALA	5.2
29	DH	97	ARG	5.2
13	AM	85	CYS	5.2
28	CG	22	GLN	5.2
20	BT	70	ASN	5.2
51	C4	14	PHE	5.2
28	CG	28	GLY	5.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
29	DH	117	LEU	5.2
33	CM	57	LEU	5.2
35	CO	38	LEU	5.2
41	CU	40	LYS	5.2
11	AK	102	ALA	5.1
18	BR	20	GLU	5.1
29	DH	78	VAL	5.1
45	CY	21	ALA	5.1
2	AB	13	GLY	5.1
36	CP	114	GLY	5.1
39	CS	26	ASP	5.1
1	BA	1138	G	5.1
28	CG	153	ARG	5.1
48	C1	52	ARG	5.1
11	BK	15	GLN	5.1
13	BM	100	GLN	5.1
14	BN	49	GLN	5.1
30	CJ	107	GLN	5.1
15	BO	79	THR	5.1
8	BH	39	VAL	5.1
24	CC	29	PRO	5.1
28	CG	96	ALA	5.1
22	CA	2112	G	5.1
12	BL	60	GLY	5.1
34	CN	37	GLY	5.1
1	BA	204	G	5.1
13	AM	8	ASN	5.1
26	CE	24	ASN	5.1
37	CQ	57	SER	5.1
2	BB	187	VAL	5.1
6	BF	96	VAL	5.1
19	BS	20	GLU	5.1
43	CW	64	VAL	5.1
55	DI	116	GLU	5.1
45	CY	78	TYR	5.1
7	AG	42	ILE	5.1
17	AQ	5	ILE	5.1
20	BT	8	LYS	5.1
16	BP	50	THR	5.1
26	CE	67	ARG	5.1
27	CF	71	ARG	5.1
28	CG	50	LEU	5.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
29	CH	97	ARG	5.1
33	CM	16	GLY	5.1
46	CZ	31	GLN	5.1
53	DA	1064	C	5.1
7	AG	149	LYS	5.1
31	CK	68	LYS	5.1
45	DY	77	LYS	5.1
25	CD	30	GLU	5.1
43	CW	91	PHE	5.1
2	BB	108	ARG	5.1
9	BI	113	ARG	5.1
13	BM	20	THR	5.1
7	BG	13	LEU	5.1
14	BN	46	LEU	5.1
14	BN	47	LYS	5.1
18	AR	20	GLU	5.1
33	CM	106	GLU	5.1
41	CU	4	GLU	5.1
22	CA	1868	C	5.1
26	CE	21	ARG	5.1
33	CM	69	ARG	5.1
52	C5	12	ARG	5.1
53	DA	2111	U	5.1
26	CE	73	ILE	5.1
33	CM	135	ILE	5.1
6	AF	105	ALA	5.1
14	BN	48	LEU	5.1
22	CA	2179	C	5.1
21	BU	53	VAL	5.0
7	BG	37	SER	5.0
22	CA	2105	U	5.0
7	AG	21	GLU	5.0
13	BM	73	ILE	5.0
17	AQ	55	ILE	5.0
28	CG	120	GLY	5.0
24	CC	112	ALA	5.0
55	DI	99	PHE	5.0
2	BB	127	ASP	5.0
7	AG	23	LEU	5.0
9	BI	123	ARG	5.0
30	CJ	19	ASN	5.0
24	CC	28	LYS	5.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	158	LYS	5.0
31	CK	139	VAL	5.0
41	CU	52	GLU	5.0
41	CU	54	GLU	5.0
13	AM	115	PRO	5.0
26	CE	103	GLY	5.0
30	DJ	119	GLY	5.0
3	AC	168	TYR	5.0
22	CA	1871	A	5.0
28	CG	62	TRP	5.0
31	CK	79	GLY	5.0
14	AN	33	ASP	5.0
33	CM	30	THR	5.0
41	CU	79	ASP	5.0
46	CZ	49	ASP	5.0
20	BT	22	ALA	5.0
29	DH	84	ALA	5.0
37	CQ	5	ILE	5.0
22	CA	491	G	5.0
53	DA	2115	G	5.0
37	CQ	59	PHE	5.0
22	CA	1406	U	5.0
18	AR	74	HIS	5.0
26	CE	147	LEU	5.0
26	CE	179	SER	5.0
50	C3	31	LEU	5.0
2	AB	152	LYS	5.0
19	AS	30	PRO	5.0
25	CD	115	GLY	5.0
35	CO	46	ARG	5.0
22	CA	883	G	5.0
53	DA	283	G	5.0
29	CH	56	ALA	5.0
33	CM	134	ALA	5.0
7	BG	7	ILE	5.0
29	DH	133	GLN	5.0
45	CY	58	VAL	5.0
22	CA	2180	U	5.0
53	DA	2120	G	5.0
39	CS	25	LEU	4.9
20	BT	64	LYS	4.9
35	CO	56	LYS	4.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
53	DA	2103	C	4.9
36	CP	90	VAL	4.9
37	CQ	60	THR	4.9
9	BI	36	GLU	4.9
15	AO	17	ARG	4.9
36	CP	113	ALA	4.9
2	AB	224	GLY	4.9
13	AM	7	ILE	4.9
29	DH	72	ILE	4.9
42	CV	103	ILE	4.9
17	BQ	16	LYS	4.9
2	AB	141	LEU	4.9
28	CG	162	VAL	4.9
2	AB	53	ALA	4.9
53	DA	2113	U	4.9
26	CE	55	SER	4.9
45	CY	55	GLY	4.9
7	AG	7	ILE	4.9
45	CY	76	GLU	4.9
1	BA	948	C	4.9
3	BC	40	ARG	4.9
27	CF	178	ARG	4.9
34	CN	55	ARG	4.9
2	BB	91	PHE	4.9
3	BC	31	ASP	4.9
10	AJ	75	ASP	4.9
29	DH	86	ASP	4.9
41	CU	32	LEU	4.9
43	CW	51	GLN	4.9
1	AA	82	G	4.9
28	CG	127	THR	4.9
33	CM	98	ALA	4.9
3	AC	81	GLY	4.9
7	BG	82	GLY	4.9
22	CA	2158	A	4.9
12	BL	14	ARG	4.9
11	AK	97	ILE	4.9
32	CL	115	ILE	4.9
16	BP	76	LYS	4.9
2	AB	162	PHE	4.9
3	BC	32	ASN	4.9
3	BC	70	THR	4.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	BG	48	GLU	4.9
14	BN	67	THR	4.9
15	BO	83	GLU	4.9
29	DH	73	ASN	4.9
40	CT	69	LEU	4.9
34	CN	56	ALA	4.9
17	BQ	54	GLY	4.9
21	BU	33	ARG	4.9
27	DF	80	ARG	4.9
36	CP	16	ARG	4.9
26	CE	171	ASP	4.9
29	CH	86	ASP	4.9
49	D2	53	LYS	4.9
48	C1	55	ILE	4.9
42	CV	69	ASN	4.9
39	CS	1	MET	4.9
2	BB	55	ALA	4.9
2	BB	166	ALA	4.9
5	BE	91	GLY	4.9
14	AN	44	ALA	4.9
19	BS	75	ALA	4.9
53	DA	2164	C	4.9
19	AS	14	HIS	4.9
9	BI	65	ILE	4.9
50	C3	14	ARG	4.9
8	BH	55	THR	4.9
13	BM	78	LYS	4.9
15	AO	16	GLY	4.9
46	CZ	16	THR	4.9
28	CG	18	LYS	4.9
2	BB	53	ALA	4.8
29	CH	52	ALA	4.8
30	DJ	111	GLN	4.9
49	C2	32	GLU	4.8
29	CH	110	VAL	4.8
30	DJ	61	VAL	4.8
22	CA	275	C	4.8
14	AN	26	GLU	4.8
29	DH	149	GLU	4.8
46	CZ	24	GLU	4.8
23	CB	37	C	4.8
15	BO	7	ALA	4.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
55	DI	25	ALA	4.8
8	BH	66	PHE	4.8
10	AJ	49	PHE	4.8
28	CG	164	TYR	4.8
2	BB	199	VAL	4.8
9	BI	31	ASN	4.8
3	BC	164	ARG	4.8
7	BG	70	ARG	4.8
14	BN	84	VAL	4.8
17	BQ	23	VAL	4.8
24	CC	204	VAL	4.8
31	CK	62	VAL	4.8
7	BG	137	LYS	4.8
1	AA	1027	C	4.8
16	BP	48	GLU	4.8
49	C2	35	GLU	4.8
1	AA	79	G	4.8
13	BM	99	GLY	4.8
20	BT	78	ASN	4.8
14	BN	79	LEU	4.8
29	CH	51	ARG	4.8
33	CM	115	GLU	4.8
35	CO	74	GLU	4.8
29	DH	85	GLY	4.8
26	CE	188	MET	4.8
51	C4	23	LYS	4.8
21	BU	7	ARG	4.8
3	BC	8	ASN	4.8
25	CD	85	ALA	4.8
2	BB	214	LEU	4.8
3	BC	33	LEU	4.8
35	CO	80	PHE	4.8
50	C3	5	PHE	4.8
28	CG	23	VAL	4.8
37	CQ	80	VAL	4.8
36	CP	84	GLU	4.8
29	CH	84	ALA	4.8
30	CJ	116	ASP	4.8
2	BB	157	LEU	4.8
13	AM	83	LEU	4.8
37	CQ	40	LEU	4.8
7	BG	139	GLU	4.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
9	AI	89	GLU	4.8
44	CX	77	ARG	4.8
8	AH	24	ALA	4.8
10	AJ	94	ALA	4.8
11	BK	21	ALA	4.8
7	AG	11	LYS	4.8
22	CA	914	G	4.8
46	CZ	41	HIS	4.8
28	CG	167	GLU	4.8
42	CV	100	SER	4.8
2	BB	221	VAL	4.7
32	CL	69	VAL	4.7
38	CR	8	VAL	4.7
39	CS	96	VAL	4.7
45	CY	13	VAL	4.7
14	BN	70	PRO	4.7
53	DA	1063	G	4.7
17	BQ	57	ASP	4.7
34	CN	106	ASP	4.7
1	BA	1265	C	4.7
42	CV	97	LYS	4.7
2	AB	44	GLU	4.7
3	BC	180	ALA	4.7
32	CL	16	ALA	4.7
7	AG	8	GLY	4.7
22	CA	1523	U	4.7
29	CH	75	LEU	4.7
8	AH	48	ASP	4.7
29	CH	149	GLU	4.7
52	C5	22	VAL	4.7
29	DH	128	HIS	4.7
49	C2	24	THR	4.7
3	AC	42	TYR	4.7
13	AM	35	ALA	4.7
48	D1	2	ALA	4.7
1	BA	1006	G	4.7
22	CA	2175	C	4.7
2	BB	60	ILE	4.7
33	CM	143	GLU	4.7
28	CG	39	ASP	4.7
1	AA	1025	U	4.7
19	AS	47	LEU	4.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
40	CT	97	LEU	4.7
27	CF	30	ARG	4.7
11	AK	86	VAL	4.7
25	CD	156	PHE	4.7
31	CK	3	THR	4.7
53	DA	1069	A	4.7
2	AB	147	SER	4.7
1	BA	1356	G	4.7
22	CA	317	G	4.7
14	AN	31	ILE	4.7
21	AU	55	ARG	4.7
28	CG	26	ILE	4.7
33	CM	132	ARG	4.7
3	BC	129	MET	4.7
25	CD	40	LEU	4.7
36	CP	48	LEU	4.7
41	CU	7	LEU	4.7
14	BN	50	THR	4.7
7	BG	26	PHE	4.7
9	BI	117	GLY	4.7
29	CH	64	ALA	4.7
31	CK	75	TYR	4.7
10	BJ	48	ARG	4.7
3	AC	80	LYS	4.7
13	BM	115	PRO	4.7
27	CF	3	LYS	4.7
1	AA	83	C	4.7
37	CQ	9	GLU	4.7
22	CA	2176	A	4.7
55	DI	86	THR	4.7
9	BI	82	GLY	4.7
25	CD	163	GLY	4.7
28	CG	110	SER	4.7
2	BB	107	VAL	4.7
13	AM	60	VAL	4.7
26	CE	36	ALA	4.7
37	CQ	20	PHE	4.7
37	CQ	30	VAL	4.7
40	CT	5	ALA	4.7
3	BC	79	LYS	4.7
12	BL	44	LYS	4.7
14	BN	26	GLU	4.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
39	CS	46	GLU	4.7
41	DU	91	GLN	4.7
43	CW	7	GLU	4.7
1	BA	79	G	4.7
7	BG	71	PRO	4.7
28	CG	126	PRO	4.7
11	AK	23	ILE	4.6
22	CA	2174	C	4.6
30	CJ	52	GLY	4.6
7	BG	47	LEU	4.6
26	CE	125	SER	4.6
22	CA	1169	A	4.6
29	CH	67	ALA	4.6
36	CP	55	GLU	4.6
40	CT	59	GLU	4.6
2	AB	69	PHE	4.6
48	C1	51	GLY	4.6
2	AB	138	THR	4.6
7	BG	60	GLU	4.6
17	AQ	52	GLU	4.6
26	CE	80	SER	4.6
30	DJ	60	THR	4.6
31	CK	21	THR	4.6
33	CM	118	THR	4.6
53	DA	138	U	4.6
7	BG	29	ILE	4.6
32	CL	2	ILE	4.6
2	AB	34	ALA	4.6
11	AK	103	ALA	4.6
13	AM	32	ALA	4.6
29	CH	106	ALA	4.6
10	AJ	98	VAL	4.6
24	CC	94	VAL	4.6
40	CT	45	VAL	4.6
1	BA	1246	A	4.6
21	AU	19	PHE	4.6
50	C3	18	PHE	4.6
5	BE	70	ASN	4.6
7	BG	130	ASN	4.6
28	CG	32	GLU	4.6
39	CS	44	GLY	4.6
44	CX	54	GLY	4.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
9	BI	93	SER	4.6
29	CH	79	THR	4.6
3	BC	55	ILE	4.6
22	CA	2117	A	4.6
40	CT	35	ILE	4.6
53	DA	2158	A	4.6
15	BO	67	LEU	4.6
28	CG	136	ALA	4.6
12	BL	123	LYS	4.6
21	BU	56	HIS	4.6
46	CZ	9	LYS	4.6
14	BN	61	ARG	4.6
27	DF	77	PHE	4.6
45	CY	46	PHE	4.6
49	C2	16	GLY	4.6
2	AB	9	MET	4.6
6	BF	1	MET	4.6
36	CP	45	SER	4.6
7	AG	85	TYR	4.6
2	AB	143	LYS	4.6
22	CA	2305	U	4.6
2	BB	75	ALA	4.6
30	DJ	64	ASP	4.6
32	CL	60	ALA	4.6
33	CM	71	ALA	4.6
34	CN	111	GLU	4.6
40	CT	32	ALA	4.6
55	DI	59	LEU	4.6
9	BI	51	PRO	4.6
4	AD	101	VAL	4.6
26	CE	56	GLY	4.6
1	BA	1293	C	4.6
26	CE	198	GLU	4.6
7	AG	79	ARG	4.6
29	DH	17	ASP	4.6
36	CP	30	ARG	4.6
10	BJ	15	HIS	4.6
2	BB	182	PRO	4.6
5	AE	164	ILE	4.6
9	AI	50	GLN	4.6
1	BA	191	G	4.6
6	BF	39	LEU	4.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
20	BT	42	GLY	4.6
7	AG	64	VAL	4.6
34	CN	27	SER	4.6
16	BP	39	PHE	4.6
15	AO	18	ASP	4.6
28	CG	16	ASP	4.6
36	CP	102	ARG	4.6
13	BM	102	THR	4.6
22	CA	1044	C	4.6
30	DJ	118	THR	4.6
48	C1	26	THR	4.6
36	CP	44	GLY	4.5
2	BB	43	LEU	4.5
33	CM	27	LEU	4.5
43	CW	61	LEU	4.5
15	AO	2	SER	4.5
28	CG	137	ASP	4.5
36	CP	2	ASP	4.5
41	CU	3	ARG	4.5
3	AC	90	VAL	4.5
6	AF	96	VAL	4.5
26	DE	4	VAL	4.5
54	DD	142	VAL	4.5
40	CT	49	LYS	4.5
44	CX	68	LYS	4.5
16	BP	73	ALA	4.5
35	CO	88	ALA	4.5
37	CQ	98	TYR	4.5
2	AB	123	ASP	4.5
22	CA	2107	G	4.5
26	CE	102	ARG	4.5
28	CG	47	ASP	4.5
53	DA	2133	G	4.5
2	AB	67	ILE	4.5
2	BB	200	ILE	4.5
55	DI	103	ASN	4.5
7	BG	63	GLU	4.5
24	CC	265	LYS	4.5
26	CE	193	VAL	4.5
34	CN	101	VAL	4.5
38	CR	34	VAL	4.5
39	CS	72	VAL	4.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
29	CH	91	PHE	4.5
33	CM	67	THR	4.5
8	AH	44	GLY	4.5
11	BK	103	ALA	4.5
19	AS	64	ASP	4.5
11	BK	77	TYR	4.5
11	AK	80	LYS	4.5
28	CG	29	LYS	4.5
50	C3	25	LYS	4.5
22	CA	344	A	4.5
52	C5	16	ILE	4.5
22	CA	361	G	4.5
1	BA	1027	C	4.5
21	AU	21	ARG	4.5
53	DA	2178	C	4.5
31	CK	83	GLY	4.5
34	CN	25	ASP	4.5
2	BB	5	SER	4.5
3	AC	41	GLN	4.5
22	CA	654	A	4.5
22	CA	1066	U	4.5
22	CA	2101	A	4.5
2	AB	85	LEU	4.5
9	AI	52	LEU	4.5
31	CK	93	ILE	4.5
54	DD	161	MET	4.5
35	CO	2	ARG	4.5
25	CD	181	ASP	4.5
2	BB	17	GLY	4.5
7	AG	19	GLY	4.5
13	AM	63	PHE	4.5
15	BO	76	ALA	4.5
22	CA	2115	G	4.5
29	DH	69	ALA	4.5
43	CW	74	ALA	4.5
48	C1	27	SER	4.5
53	DA	2172	U	4.5
2	AB	137	ARG	4.5
22	CA	142	A	4.5
41	CU	15	HIS	4.5
32	CL	32	TYR	4.5
36	CP	36	TYR	4.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	BG	22	LEU	4.5
43	CW	38	LEU	4.5
46	CZ	28	LEU	4.5
28	CG	31	GLY	4.5
15	BO	12	VAL	4.5
28	CG	90	VAL	4.5
44	CX	38	VAL	4.5
24	CC	61	ALA	4.5
28	CG	145	ALA	4.5
29	DH	100	ALA	4.5
14	BN	9	ARG	4.5
47	C0	56	LYS	4.5
41	CU	24	MET	4.4
22	CA	2122	U	4.4
34	CN	20	LEU	4.4
41	CU	14	PRO	4.4
54	DD	146	ILE	4.4
25	CD	180	VAL	4.4
29	CH	78	VAL	4.4
31	CK	124	VAL	4.4
40	CT	50	VAL	4.4
51	D4	7	VAL	4.4
2	AB	84	ALA	4.4
5	BE	53	ALA	4.4
20	AT	62	ALA	4.4
21	AU	50	ALA	4.4
22	CA	881	G	4.4
22	CA	2159	G	4.4
25	CD	183	GLU	4.4
28	CG	35	ARG	4.4
38	CR	11	ARG	4.4
1	BA	983	A	4.4
2	AB	16	PHE	4.4
3	BC	41	GLN	4.4
22	CA	896	A	4.4
9	AI	26	GLY	4.4
3	BC	204	LYS	4.4
17	BQ	41	THR	4.4
20	BT	40	GLU	4.4
22	CA	549	G	4.4
22	CA	1056	G	4.4
41	CU	49	LYS	4.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
43	CW	35	GLU	4.4
47	C0	41	THR	4.4
22	CA	280	U	4.4
7	BG	126	ASP	4.4
21	AU	14	VAL	4.4
26	CE	113	VAL	4.4
38	CR	116	ALA	4.4
55	DI	111	ALA	4.4
25	CD	68	PHE	4.4
13	BM	47	GLU	4.4
30	CJ	91	GLY	4.4
53	DA	277	G	4.4
38	CR	85	LYS	4.4
8	BH	127	CYS	4.4
2	AB	68	LEU	4.4
29	CH	54	LEU	4.4
53	DA	2181	U	4.4
8	AH	65	TYR	4.4
26	CE	35	TYR	4.4
28	CG	174	ALA	4.4
9	AI	67	VAL	4.4
13	AM	43	VAL	4.4
25	CD	60	VAL	4.4
30	DJ	57	VAL	4.4
14	BN	83	LYS	4.4
29	CH	41	LYS	4.4
29	DH	129	GLU	4.4
3	BC	131	ARG	4.4
7	BG	55	GLY	4.4
10	BJ	7	ARG	4.4
40	CT	13	SER	4.4
40	CT	62	ASP	4.4
3	BC	167	TRP	4.4
53	DA	2132	U	4.4
1	BA	1132	C	4.4
3	BC	30	ALA	4.4
15	BO	87	LEU	4.4
27	CF	160	ALA	4.4
3	AC	101	ILE	4.4
35	CO	112	TYR	4.4
10	AJ	5	ARG	4.4
13	BM	105	ASN	4.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	879	G	4.4
7	BG	2	PRO	4.4
27	CF	98	GLU	4.4
28	CG	124	GLU	4.4
14	AN	23	LYS	4.4
15	AO	89	ARG	4.4
18	AR	27	ALA	4.4
28	CG	152	ARG	4.4
9	BI	35	LEU	4.4
27	CF	127	ASN	4.4
46	CZ	42	LEU	4.4
3	BC	207	ILE	4.4
6	BF	29	ILE	4.4
6	BF	18	VAL	4.4
16	BP	20	VAL	4.4
22	CA	1211	C	4.4
24	CC	78	VAL	4.4
28	CG	64	GLN	4.4
3	BC	46	GLU	4.4
19	AS	21	LYS	4.4
20	BT	56	PRO	4.4
27	CF	61	SER	4.4
42	CV	55	PRO	4.4
22	CA	547	A	4.4
3	BC	132	ARG	4.4
29	CH	116	ARG	4.4
50	C3	35	ARG	4.4
1	AA	1031	C	4.3
22	CA	893	C	4.3
11	BK	38	GLN	4.3
24	CC	56	GLY	4.3
11	BK	80	LYS	4.3
25	CD	201	LEU	4.3
27	CF	124	GLY	4.3
29	CH	126	GLY	4.3
29	CH	133	GLN	4.3
55	DI	74	ASP	4.3
1	BA	1441	A	4.3
3	BC	153	VAL	4.3
25	CD	26	VAL	4.3
2	AB	154	MET	4.3
22	CA	2146	C	4.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	BC	26	THR	4.3
53	DA	1089	A	4.3
3	AC	89	LYS	4.3
14	AN	18	ASP	4.3
42	CV	44	LYS	4.3
25	CD	41	ALA	4.3
30	DJ	63	ALA	4.3
31	CK	94	ALA	4.3
54	DD	132	ALA	4.3
29	CH	38	PRO	4.3
26	CE	186	VAL	4.3
34	CN	105	MET	4.3
22	CA	279	A	4.3
2	BB	131	LYS	4.3
12	AL	123	LYS	4.3
30	CJ	105	GLN	4.3
33	CM	84	LYS	4.3
9	AI	91	ASP	4.3
1	BA	1270	G	4.3
13	AM	6	GLY	4.3
1	AA	78	A	4.3
13	BM	92	ARG	4.3
3	BC	20	SER	4.3
11	AK	17	SER	4.3
9	AI	61	LEU	4.3
10	BJ	43	PRO	4.3
11	BK	76	GLU	4.3
28	CG	133	LEU	4.3
28	CG	75	MET	4.3
39	CS	60	LYS	4.3
9	AI	30	ILE	4.3
29	CH	80	ILE	4.3
31	CK	54	ILE	4.3
22	CA	1174	U	4.3
22	CA	1057	A	4.3
6	AF	32	ALA	4.3
4	AD	163	GLU	4.3
3	AC	38	LYS	4.3
54	DD	143	PRO	4.3
25	CD	32	ASN	4.3
2	BB	205	ASP	4.3
29	DH	90	LEU	4.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
54	DD	138	LEU	4.3
14	BN	11	VAL	4.3
26	CE	83	VAL	4.3
34	CN	126	ILE	4.3
36	CP	7	ARG	4.3
46	CZ	35	GLY	4.3
28	CG	123	ALA	4.3
53	DA	2147	A	4.3
25	CD	101	PHE	4.3
10	AJ	91	ASP	4.3
27	CF	5	HIS	4.3
3	BC	12	LEU	4.3
7	AG	63	GLU	4.3
47	C0	25	LEU	4.3
55	DI	5	LEU	4.3
1	BA	1292	G	4.3
2	AB	128	LYS	4.3
6	AF	104	LYS	4.3
22	CA	356	G	4.3
22	CA	1098	A	4.3
30	CJ	81	LYS	4.3
2	AB	217	VAL	4.3
45	CY	4	VAL	4.3
24	CC	121	ASP	4.3
29	CH	69	ALA	4.3
13	BM	14	HIS	4.3
44	CX	70	GLU	4.2
27	CF	88	LYS	4.2
28	CG	6	LYS	4.2
45	CY	56	MET	4.2
3	BC	178	LEU	4.2
13	AM	56	LEU	4.2
37	CQ	105	GLY	4.2
10	BJ	83	THR	4.2
2	AB	8	ASP	4.2
22	CA	2167	U	4.2
22	CA	2402	U	4.2
26	CE	97	ASN	4.2
21	AU	56	HIS	4.2
39	DS	103	ALA	4.2
2	BB	158	PRO	4.2
21	AU	25	LYS	4.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	21	GLY	4.2
19	BS	77	THR	4.2
26	CE	156	ASN	4.2
9	BI	114	LYS	4.2
2	AB	164	ILE	4.2
32	CL	61	VAL	4.2
51	C4	4	ILE	4.2
1	BA	205	A	4.2
9	BI	70	GLY	4.2
22	CA	436	C	4.2
31	CK	92	MET	4.2
2	BB	56	GLU	4.2
13	BM	72	GLU	4.2
24	CC	67	PHE	4.2
29	DH	47	PHE	4.2
39	CS	34	GLU	4.2
2	BB	132	LYS	4.2
15	BO	10	LYS	4.2
17	BQ	73	TRP	4.2
49	C2	17	THR	4.2
1	AA	205	A	4.2
2	BB	222	ARG	4.2
15	BO	32	LEU	4.2
1	AA	87	C	4.2
14	BN	99	ALA	4.2
24	DC	17	VAL	4.2
53	DA	1730	C	4.2
26	CE	148	ILE	4.2
28	CG	63	ALA	4.2
44	CX	82	ILE	4.2
30	DJ	130	GLU	4.2
44	CX	85	GLU	4.2
37	CQ	63	LYS	4.2
48	C1	53	LYS	4.2
51	C4	64	TYR	4.2
9	BI	122	ARG	4.2
23	CB	118	C	4.2
43	CW	2	PHE	4.2
40	CT	100	THR	4.2
40	CT	51	LEU	4.2
17	BQ	4	LYS	4.2
20	BT	72	ALA	4.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
52	C5	7	VAL	4.2
3	BC	94	ILE	4.2
20	BT	83	ILE	4.2
37	CQ	110	ILE	4.2
1	BA	999	C	4.2
38	CR	26	GLY	4.2
20	BT	52	ASN	4.2
32	CL	13	ASN	4.2
53	DA	1176	U	4.2
29	DH	87	GLU	4.2
45	CY	35	SER	4.2
5	AE	115	LEU	4.2
5	BE	158	GLY	4.2
15	BO	75	VAL	4.2
32	CL	108	ARG	4.2
3	AC	77	ILE	4.2
31	DK	84	ILE	4.2
55	DI	4	ASN	4.2
33	CM	1	MET	4.2
1	BA	1302	C	4.2
14	BN	7	LYS	4.2
22	CA	139	U	4.2
17	BQ	34	TYR	4.2
22	CA	1074	G	4.1
22	CA	1873	G	4.1
53	DA	2176	A	4.1
24	DC	205	LEU	4.1
42	CV	99	ASN	4.1
44	CX	52	GLY	4.1
48	C1	2	ALA	4.1
1	BA	84	U	4.1
36	CP	104	GLN	4.1
40	CT	31	GLN	4.1
51	C4	19	LYS	4.1
1	BA	1355	G	4.1
14	BN	71	HIS	4.1
53	DA	1171	G	4.1
22	CA	1075	C	4.1
25	CD	61	THR	4.1
48	C1	23	THR	4.1
2	AB	63	ARG	4.1
3	AC	126	ARG	4.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	3	ARG	4.1
2	AB	150	GLY	4.1
3	BC	96	GLY	4.1
11	BK	61	PHE	4.1
45	CY	29	PHE	4.1
3	BC	38	LYS	4.1
17	AQ	4	LYS	4.1
38	CR	2	ALA	4.1
48	C1	32	LYS	4.1
1	BA	846	G	4.1
10	AJ	102	LEU	4.1
22	CA	1112	G	4.1
45	CY	30	LEU	4.1
2	BB	38	VAL	4.1
49	C2	12	VAL	4.1
50	C3	9	VAL	4.1
52	C5	25	VAL	4.1
10	AJ	100	ILE	4.1
22	CA	2904	U	4.1
2	BB	51	ASN	4.1
9	BI	25	ASN	4.1
14	BN	64	CYS	4.1
22	CA	1047	G	4.1
39	CS	67	GLY	4.1
1	BA	1226	C	4.1
9	BI	32	GLN	4.1
6	BF	8	PHE	4.1
15	BO	19	ALA	4.1
33	CM	66	PHE	4.1
34	CN	28	PHE	4.1
3	BC	111	LEU	4.1
14	BN	96	LEU	4.1
37	CQ	33	VAL	4.1
1	BA	1241	G	4.1
2	BB	151	ILE	4.1
39	CS	101	ILE	4.1
44	CX	62	LYS	4.1
37	DQ	66	ASN	4.1
54	DD	152	PRO	4.1
7	BG	24	ALA	4.1
1	AA	1020	G	4.1
1	BA	1142	G	4.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	AA	84	U	4.1
38	DR	18	LEU	4.1
5	BE	120	VAL	4.1
55	DI	85	VAL	4.1
6	BF	67	PRO	4.1
3	BC	155	GLY	4.1
20	AT	65	GLY	4.1
28	CG	24	ILE	4.1
34	CN	96	ILE	4.1
3	BC	105	GLU	4.1
53	DA	2156	G	4.1
29	DH	57	LYS	4.1
42	CV	92	LYS	4.1
11	BK	102	ALA	4.1
14	BN	101	TRP	4.1
48	C1	21	ALA	4.1
5	AE	123	VAL	4.1
24	CC	57	GLY	4.1
39	CS	45	GLU	4.1
48	D1	9	THR	4.1
3	BC	64	ILE	4.1
17	BQ	65	ARG	4.1
29	DH	112	LYS	4.1
38	DR	40	ILE	4.1
20	BT	63	ALA	4.1
55	DI	19	ALA	4.1
28	CG	88	GLN	4.0
31	CK	138	GLN	4.0
24	CC	239	ASN	4.0
24	DC	213	TRP	4.0
26	CE	141	MET	4.0
22	CA	137	U	4.0
13	AM	38	GLY	4.0
13	BM	88	GLY	4.0
19	AS	17	LYS	4.0
19	BS	5	LEU	4.0
25	CD	38	LYS	4.0
7	AG	4	ARG	4.0
26	CE	42	GLY	4.0
28	CG	149	ARG	4.0
29	CH	117	LEU	4.0
44	CX	34	GLY	4.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
45	CY	57	ARG	4.0
1	BA	1011	C	4.0
5	BE	80	THR	4.0
8	BH	104	VAL	4.0
33	CM	127	VAL	4.0
53	DA	2179	C	4.0
2	AB	200	ILE	4.0
5	BE	30	ILE	4.0
22	CA	1078	U	4.0
24	CC	74	ILE	4.0
7	BG	127	ALA	4.0
32	CL	109	SER	4.0
2	AB	132	LYS	4.0
9	BI	124	ARG	4.0
3	AC	74	GLY	4.0
2	AB	213	TYR	4.0
31	CK	53	TYR	4.0
1	BA	94	G	4.0
22	CA	1168	G	4.0
33	DM	30	THR	4.0
2	BB	47	VAL	4.0
7	AG	129	GLU	4.0
41	CU	78	SER	4.0
36	CP	87	ILE	4.0
3	BC	83	ASP	4.0
39	CS	55	ASP	4.0
9	BI	24	GLY	4.0
16	BP	49	GLY	4.0
25	CD	87	GLY	4.0
36	CP	46	GLU	4.0
53	DA	2167	U	4.0
2	BB	114	LEU	4.0
28	CG	67	THR	4.0
29	CH	46	PHE	4.0
30	CJ	72	LYS	4.0
54	DD	118	PHE	4.0
40	CT	61	ASN	4.0
4	AD	142	VAL	4.0
13	AM	57	ARG	4.0
19	AS	23	VAL	4.0
27	CF	125	ARG	4.0
36	CP	27	VAL	4.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
36	CP	52	SER	4.0
1	AA	1534	A	4.0
1	BA	1248	A	4.0
2	BB	76	ALA	4.0
9	AI	72	ILE	4.0
29	DH	39	ALA	4.0
33	CM	105	ILE	4.0
3	BC	74	GLY	4.0
6	BF	21	MET	4.0
27	CF	166	GLY	4.0
30	DJ	25	GLY	4.0
28	CG	139	GLN	4.0
18	BR	30	LYS	4.0
27	DF	72	LYS	4.0
1	AA	1032	G	4.0
1	BA	1000	A	4.0
1	BA	1357	A	4.0
6	BF	97	THR	4.0
22	CA	2157	G	4.0
29	DH	79	THR	4.0
45	CY	8	THR	4.0
2	AB	30	PHE	4.0
26	CE	114	ARG	4.0
45	CY	71	LEU	4.0
35	CO	72	ASP	4.0
46	CZ	17	GLU	4.0
54	DD	155	VAL	4.0
15	BO	9	ALA	4.0
33	CM	75	ALA	4.0
41	CU	23	ALA	4.0
55	DI	63	ALA	4.0
3	BC	205	GLY	4.0
16	BP	4	ILE	4.0
16	BP	75	ILE	4.0
21	AU	54	LYS	4.0
37	CQ	6	LYS	4.0
48	C1	37	LYS	4.0
1	AA	1	A	4.0
1	BA	1012	A	4.0
1	BA	1271	A	4.0
7	BG	16	PRO	4.0
22	CA	1538	G	4.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	AB	153	ASP	4.0
22	CA	1082	U	4.0
2	BB	142	GLU	4.0
37	DQ	114	LEU	4.0
2	BB	89	GLN	4.0
20	BT	16	LYS	4.0
41	CU	9	LYS	4.0
2	BB	224	GLY	4.0
29	CH	19	VAL	4.0
39	CS	61	ALA	4.0
48	D1	3	VAL	4.0
53	DA	141	G	4.0
53	DA	356	G	4.0
53	DA	2157	G	4.0
21	BU	55	ARG	4.0
29	CH	73	ASN	4.0
1	BA	1365	G	3.9
54	DD	121	THR	3.9
3	BC	13	GLY	3.9
4	BD	55	LEU	3.9
7	AG	82	GLY	3.9
15	BO	86	GLY	3.9
16	BP	58	ALA	3.9
25	CD	119	ALA	3.9
38	CR	99	ALA	3.9
6	BF	65	GLU	3.9
10	AJ	74	VAL	3.9
26	CE	25	GLU	3.9
29	DH	45	GLU	3.9
30	CJ	108	GLU	3.9
54	DD	122	VAL	3.9
48	C1	38	HIS	3.9
10	AJ	25	ILE	3.9
14	BN	93	ILE	3.9
22	CA	1091	G	3.9
38	CR	61	TRP	3.9
39	CS	94	THR	3.9
1	AA	412	A	3.9
1	BA	1303	C	3.9
16	AP	48	GLU	3.9
22	CA	2103	C	3.9
35	CO	71	ARG	3.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	BA	1266	G	3.9
3	BC	140	ASN	3.9
28	CG	71	LEU	3.9
36	CP	26	LEU	3.9
22	CA	1179	G	3.9
38	CR	113	ALA	3.9
55	DI	13	ALA	3.9
30	DJ	70	VAL	3.9
36	CP	98	GLN	3.9
42	CV	66	GLN	3.9
3	BC	120	ILE	3.9
43	CW	63	ILE	3.9
11	AK	59	THR	3.9
25	CD	197	THR	3.9
31	CK	13	ARG	3.9
50	C3	12	ARG	3.9
9	AI	117	GLY	3.9
33	CM	53	GLY	3.9
53	DA	139	U	3.9
53	DA	881	G	3.9
55	DI	90	GLY	3.9
40	CT	16	LYS	3.9
28	CG	166	ASP	3.9
41	CU	92	ASN	3.9
3	BC	60	PRO	3.9
5	BE	150	PRO	3.9
7	BG	128	ALA	3.9
16	BP	65	ALA	3.9
24	DC	211	ALA	3.9
33	DM	35	HIS	3.9
6	BF	10	VAL	3.9
17	BQ	58	VAL	3.9
25	CD	99	GLU	3.9
29	CH	21	VAL	3.9
31	CK	98	GLU	3.9
40	CT	105	VAL	3.9
53	DA	546	U	3.9
29	CH	82	SER	3.9
44	CX	35	SER	3.9
53	DA	2100	G	3.9
2	AB	208	ARG	3.9
38	CR	13	ARG	3.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	AB	40	ILE	3.9
2	BB	46	THR	3.9
9	AI	43	THR	3.9
9	BI	13	LYS	3.9
22	CA	282	A	3.9
53	DA	2126	A	3.9
40	CT	109	ASP	3.9
1	BA	1286	U	3.9
31	CK	136	GLN	3.9
33	CM	35	HIS	3.9
2	BB	34	ALA	3.9
22	CA	2124	G	3.9
9	AI	94	LEU	3.9
13	AM	80	LEU	3.9
18	BR	67	LEU	3.9
22	CA	342	A	3.9
22	CA	1054	A	3.9
53	DA	1067	A	3.9
24	CC	30	PHE	3.9
7	AG	69	VAL	3.9
31	CK	16	TYR	3.9
38	DR	24	TYR	3.9
38	DR	25	TYR	3.9
7	AG	81	GLY	3.9
17	AQ	54	GLY	3.9
8	BH	106	THR	3.9
34	CN	24	THR	3.9
35	CO	36	THR	3.9
39	CS	29	THR	3.9
26	DE	73	ILE	3.9
39	CS	74	ILE	3.9
53	DA	2125	G	3.9
1	BA	1325	C	3.9
7	BG	143	ARG	3.9
9	AI	27	LYS	3.9
9	AI	101	ALA	3.9
45	CY	77	LYS	3.9
2	BB	9	MET	3.9
2	AB	212	LEU	3.9
6	BF	72	ASP	3.9
24	CC	6	CYS	3.9
9	BI	112	GLU	3.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
11	AK	19	GLY	3.9
24	CC	144	VAL	3.9
31	CK	89	PHE	3.9
27	CF	101	GLU	3.9
28	CG	61	GLY	3.9
25	CD	112	THR	3.9
1	BA	1306	A	3.8
9	BI	17	ALA	3.8
38	DR	35	ALA	3.8
9	BI	96	SER	3.8
22	CA	2802	G	3.8
25	CD	21	SER	3.8
24	CC	105	LEU	3.8
43	CW	24	ASN	3.8
33	CM	26	GLY	3.8
1	AA	842	U	3.8
16	BP	56	ARG	3.8
38	CR	33	ARG	3.8
38	CR	47	TYR	3.8
38	DR	32	TYR	3.8
22	CA	884	U	3.8
43	CW	70	ILE	3.8
28	CG	119	ALA	3.8
33	CM	104	GLN	3.8
37	CQ	108	ALA	3.8
7	BG	35	LYS	3.8
13	AM	78	LYS	3.8
19	BS	72	GLY	3.8
54	DD	144	GLY	3.8
1	AA	1035	A	3.8
1	BA	90	C	3.8
9	AI	118	LEU	3.8
23	CB	30	C	3.8
35	CO	96	ARG	3.8
53	DA	2161	C	3.8
53	DA	2116	G	3.8
19	AS	39	THR	3.8
24	CC	3	VAL	3.8
26	CE	85	PHE	3.8
39	CS	19	THR	3.8
43	CW	3	THR	3.8
2	AB	201	PRO	3.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
29	CH	70	GLU	3.8
17	BQ	64	CYS	3.8
55	DI	51	TYR	3.8
1	BA	1314	C	3.8
7	AG	134	ALA	3.8
9	AI	25	ASN	3.8
11	BK	110	ILE	3.8
13	BM	114	LYS	3.8
46	CZ	34	SER	3.8
48	C1	18	SER	3.8
16	BP	43	ALA	3.8
50	C3	23	ALA	3.8
54	DD	119	ALA	3.8
2	BB	180	GLY	3.8
13	BM	98	ARG	3.8
5	BE	15	LEU	3.8
21	BU	16	LEU	3.8
1	BA	958	A	3.8
1	BA	1038	C	3.8
11	AK	111	THR	3.8
25	CD	133	THR	3.8
10	AJ	84	VAL	3.8
14	BN	94	PRO	3.8
28	CG	54	PRO	3.8
53	DA	1870	C	3.8
17	BQ	29	VAL	3.8
20	AT	5	LYS	3.8
29	DH	46	PHE	3.8
37	CQ	111	LYS	3.8
51	D4	50	VAL	3.8
1	BA	1312	G	3.8
3	BC	25	ASN	3.8
19	AS	43	ASN	3.8
36	CP	43	ASN	3.8
1	BA	843	U	3.8
9	AI	121	ALA	3.8
18	BR	51	TYR	3.8
32	CL	98	ARG	3.8
9	BI	46	MET	3.8
17	BQ	52	GLU	3.8
18	BR	21	ILE	3.8
23	CB	57	A	3.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
26	CE	180	LEU	3.8
32	CL	120	PRO	3.8
40	CT	33	LEU	3.8
2	AB	198	PHE	3.8
21	BU	12	PHE	3.8
22	CA	44	A	3.8
47	C0	52	SER	3.8
7	AG	152	ALA	3.8
11	AK	21	ALA	3.8
11	AK	41	ALA	3.8
11	BK	45	ALA	3.8
11	BK	78	GLY	3.8
32	CL	101	GLY	3.8
22	CA	1099	G	3.8
28	CG	19	ILE	3.8
2	BB	29	PRO	3.8
28	CG	36	THR	3.8
50	C3	26	ASN	3.8
3	BC	87	LEU	3.8
22	CA	1407	G	3.8
26	CE	32	VAL	3.8
38	CR	100	VAL	3.8
42	CV	34	VAL	3.8
44	CX	78	LYS	3.8
2	BB	61	ALA	3.8
14	BN	54	ASP	3.8
27	CF	168	ALA	3.8
29	CH	1	MET	3.8
38	CR	59	GLN	3.8
41	CU	41	ALA	3.8
13	AM	47	GLU	3.7
31	CK	84	ILE	3.7
39	CS	23	GLU	3.7
7	AG	70	ARG	3.7
22	CA	2803	G	3.7
1	BA	1330	U	3.7
2	BB	45	LYS	3.7
22	CA	1100	C	3.7
23	CB	49	C	3.7
49	C2	50	LYS	3.7
54	DD	147	GLY	3.7
2	AB	80	VAL	3.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	BC	116	VAL	3.7
28	CG	114	ASP	3.7
39	DS	75	VAL	3.7
24	CC	122	ALA	3.7
22	CA	1042	G	3.7
22	CA	140	C	3.7
10	BJ	11	LYS	3.7
55	DI	24	SER	3.7
39	CS	87	GLN	3.7
3	BC	175	LEU	3.7
40	CT	19	LEU	3.7
22	CA	1090	A	3.7
22	CA	2171	A	3.7
7	AG	144	MET	3.7
35	DO	1	MET	3.7
55	DI	62	ARG	3.7
3	AC	79	LYS	3.7
4	BD	45	LYS	3.7
9	AI	120	LYS	3.7
37	CQ	14	LYS	3.7
54	DD	156	PHE	3.7
12	BL	91	PRO	3.7
10	AJ	101	SER	3.7
16	BP	63	GLN	3.7
39	CS	102	SER	3.7
52	C5	28	SER	3.7
7	AG	58	GLU	3.7
11	BK	111	THR	3.7
11	AK	39	GLY	3.7
22	CA	1869	G	3.7
3	BC	108	LYS	3.7
11	AK	100	LEU	3.7
31	CK	12	LYS	3.7
32	CL	107	LEU	3.7
34	CN	95	LEU	3.7
35	CO	98	LEU	3.7
46	CZ	43	LEU	3.7
7	AG	75	VAL	3.7
14	AN	34	VAL	3.7
24	DC	220	VAL	3.7
38	DR	34	VAL	3.7
10	BJ	78	GLU	3.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
13	BM	59	GLU	3.7
35	CO	82	GLU	3.7
46	CZ	45	GLN	3.7
53	DA	2124	G	3.7
4	AD	138	SER	3.7
11	BK	17	SER	3.7
13	BM	21	SER	3.7
27	CF	24	SER	3.7
9	AI	82	GLY	3.7
55	DI	32	GLY	3.7
35	DO	121	LYS	3.7
1	AA	91	U	3.7
1	BA	1222	G	3.7
7	BG	90	GLU	3.7
22	CA	1723	G	3.7
11	AK	66	ALA	3.7
45	DY	22	LEU	3.7
55	DI	93	ALA	3.7
55	DI	95	LEU	3.7
2	BB	183	VAL	3.7
15	BO	27	VAL	3.7
24	DC	216	VAL	3.7
25	CD	9	VAL	3.7
28	CG	43	VAL	3.7
32	CL	122	VAL	3.7
36	CP	42	PRO	3.7
1	AA	1004	A	3.7
4	AD	176	GLY	3.7
11	BK	43	GLY	3.7
13	AM	51	GLY	3.7
29	CH	29	PHE	3.7
49	C2	28	ARG	3.7
22	CA	172	A	3.7
2	BB	72	THR	3.7
22	CA	283	G	3.7
15	AO	11	ILE	3.7
29	DH	43	ASN	3.7
31	CK	142	ILE	3.7
3	BC	115	LEU	3.7
10	AJ	23	ALA	3.7
16	AP	58	ALA	3.7
20	BT	37	ALA	3.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
21	AU	16	LEU	3.7
22	CA	1073	A	3.7
28	CG	72	LEU	3.7
33	DM	61	LEU	3.7
46	CZ	14	LEU	3.7
9	AI	128	SER	3.7
26	CE	89	PRO	3.7
32	CL	48	PRO	3.7
38	CR	28	ARG	3.7
54	DD	125	TRP	3.7
11	BK	48	GLY	3.7
22	CA	88	G	3.7
33	DM	37	GLY	3.7
52	C5	3	VAL	3.7
17	AQ	53	CYS	3.7
2	AB	91	PHE	3.7
20	BT	20	HIS	3.6
7	AG	9	GLN	3.6
10	AJ	76	ILE	3.6
33	DM	23	ILE	3.6
36	CP	93	ASP	3.6
41	CU	44	LYS	3.6
13	AM	79	ARG	3.6
22	CA	405	U	3.6
42	CV	94	ARG	3.6
21	BU	52	ALA	3.6
38	CR	115	ALA	3.6
53	DA	2136	G	3.6
19	AS	15	LEU	3.6
31	CK	110	PRO	3.6
35	DO	10	LEU	3.6
53	DA	2169	A	3.6
24	DC	144	VAL	3.6
29	CH	134	VAL	3.6
38	CR	4	VAL	3.6
29	CH	40	THR	3.6
51	D4	61	CYS	3.6
1	BA	460	A	3.6
22	CA	1089	A	3.6
22	CA	2164	C	3.6
43	CW	29	ILE	3.6
25	CD	162	ALA	3.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
32	CL	14	SER	3.6
2	BB	99	GLY	3.6
8	BH	120	GLY	3.6
39	DS	83	TYR	3.6
54	DD	117	GLY	3.6
31	CK	109	LEU	3.6
51	D4	62	LEU	3.6
1	BA	942	G	3.6
9	AI	116	VAL	3.6
17	BQ	46	VAL	3.6
40	CT	34	ASP	3.6
45	CY	47	VAL	3.6
19	AS	3	ARG	3.6
22	CA	1111	A	3.6
28	CG	81	GLU	3.6
41	CU	42	GLU	3.6
54	DD	127	PHE	3.6
2	AB	171	ILE	3.6
2	BB	160	ALA	3.6
7	AG	68	ASN	3.6
22	CA	136	G	3.6
22	CA	141	G	3.6
22	CA	178	G	3.6
22	CA	276	U	3.6
24	CC	111	LYS	3.6
24	DC	210	ALA	3.6
26	CE	59	PRO	3.6
33	CM	8	PRO	3.6
26	CE	168	ASP	3.6
37	DQ	98	TYR	3.6
10	BJ	47	GLU	3.6
13	BM	70	ARG	3.6
47	D0	17	LEU	3.6
22	CA	12	U	3.6
24	CC	228	VAL	3.6
31	CK	50	THR	3.6
1	BA	213	G	3.6
1	BA	1136	C	3.6
13	BM	27	LYS	3.6
13	BM	110	LYS	3.6
37	CQ	74	PHE	3.6
9	AI	57	MET	3.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
15	BO	20	ASN	3.6
33	CM	55	MET	3.6
7	BG	147	ALA	3.6
2	BB	87	CYS	3.6
2	BB	169	GLU	3.6
25	CD	179	ARG	3.6
31	DK	81	ILE	3.6
38	CR	40	ILE	3.6
39	CS	83	TYR	3.6
1	AA	1492	A	3.6
9	BI	19	VAL	3.6
24	CC	251	GLN	3.6
29	DH	130	VAL	3.6
39	CS	6	GLN	3.6
39	CS	54	VAL	3.6
8	BH	42	GLU	3.6
16	BP	40	ASN	3.6
26	CE	116	ASP	3.6
31	CK	60	ASP	3.6
31	CK	82	GLY	3.6
19	AS	74	PHE	3.6
1	BA	1254	A	3.6
25	CD	206	ALA	3.6
38	CR	86	ALA	3.6
1	BA	1279	G	3.6
53	DA	2109	U	3.6
14	BN	98	LYS	3.6
16	BP	42	ILE	3.6
24	CC	49	ILE	3.6
25	CD	27	ILE	3.6
25	CD	105	LYS	3.6
44	CX	21	LEU	3.6
52	C5	10	LEU	3.6
22	CA	1539	U	3.6
3	BC	197	GLY	3.6
9	BI	15	SER	3.6
33	CM	21	ARG	3.6
51	C4	7	VAL	3.6
55	DI	15	VAL	3.6
7	AG	14	PRO	3.6
2	BB	174	LYS	3.5
12	BL	2	ALA	3.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
25	CD	132	ALA	3.5
28	CG	138	LYS	3.5
37	CQ	42	ALA	3.5
22	CA	1105	U	3.5
34	CN	97	GLN	3.5
13	AM	50	GLU	3.5
22	CA	2799	A	3.5
37	CQ	27	GLU	3.5
39	CS	92	TRP	3.5
41	DU	2	ILE	3.5
1	BA	1491	G	3.5
22	CA	880	G	3.5
22	CA	1734	G	3.5
12	BL	56	ARG	3.5
14	AN	53	ARG	3.5
41	CU	61	LEU	3.5
2	AB	149	GLY	3.5
3	BC	194	GLY	3.5
29	DH	120	GLY	3.5
33	CM	42	SER	3.5
20	BT	76	LYS	3.5
28	CG	8	PRO	3.5
29	DH	19	VAL	3.5
29	DH	103	VAL	3.5
16	BP	82	ALA	3.5
26	CE	144	GLU	3.5
29	DH	109	GLU	3.5
31	CK	20	ALA	3.5
36	CP	11	ALA	3.5
39	CS	3	ALA	3.5
22	CA	315	G	3.5
53	DA	2162	G	3.5
3	BC	126	ARG	3.5
7	BG	140	ASP	3.5
16	BP	57	ILE	3.5
2	AB	20	THR	3.5
19	BS	79	THR	3.5
23	CB	114	C	3.5
26	CE	132	LYS	3.5
40	CT	24	ILE	3.5
24	DC	51	THR	3.5
43	CW	46	LYS	3.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
45	CY	54	LYS	3.5
24	DC	42	GLY	3.5
25	CD	166	GLY	3.5
37	CQ	114	LEU	3.5
38	CR	18	LEU	3.5
2	AB	56	GLU	3.5
19	AS	24	GLU	3.5
26	CE	29	HIS	3.5
33	CM	86	GLU	3.5
34	CN	103	TYR	3.5
35	CO	120	GLU	3.5
38	DR	45	TYR	3.5
41	CU	18	GLU	3.5
24	CC	184	VAL	3.5
48	C1	15	MET	3.5
49	C2	42	VAL	3.5
6	BF	83	ALA	3.5
22	CA	145	C	3.5
49	C2	6	ARG	3.5
27	CF	69	LYS	3.5
28	CG	38	ASN	3.5
2	BB	162	PHE	3.5
22	CA	2166	U	3.5
5	AE	10	GLU	3.5
5	BE	102	GLY	3.5
14	BN	95	GLY	3.5
18	AR	28	THR	3.5
19	AS	45	ILE	3.5
22	CA	406	G	3.5
33	CM	52	GLY	3.5
33	CM	128	THR	3.5
55	DI	17	GLU	3.5
20	BT	75	HIS	3.5
48	C1	19	HIS	3.5
27	CF	36	LEU	3.5
48	C1	22	LEU	3.5
55	DI	81	LEU	3.5
2	AB	59	LYS	3.5
6	BF	60	VAL	3.5
7	BG	138	ARG	3.5
29	DH	51	ARG	3.5
43	CW	50	MET	3.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	AB	88	ASP	3.5
29	CH	7	ASP	3.5
1	BA	1133	G	3.5
8	BH	73	GLU	3.5
22	CA	359	G	3.5
1	AA	85	U	3.5
2	AB	17	GLY	3.5
3	BC	9	GLY	3.5
5	AE	160	SER	3.5
16	BP	10	GLY	3.5
20	BT	26	SER	3.5
35	DO	14	SER	3.5
7	BG	96	ARG	3.5
7	BG	136	LYS	3.5
20	BT	67	ILE	3.5
29	DH	141	LYS	3.5
38	DR	17	ILE	3.5
40	CT	74	ILE	3.5
41	CU	30	ILE	3.5
48	C1	57	LYS	3.5
8	BH	63	LEU	3.5
11	BK	100	LEU	3.5
4	AD	25	VAL	3.5
8	BH	110	VAL	3.5
16	BP	21	VAL	3.5
22	CA	1876	A	3.5
37	CQ	46	VAL	3.5
29	DH	13	GLY	3.5
26	CE	123	LYS	3.5
51	C4	36	LYS	3.5
2	BB	50	PHE	3.5
11	BK	53	ARG	3.5
31	CK	49	ASP	3.5
33	DM	103	ILE	3.5
2	AB	209	ALA	3.5
20	BT	17	ALA	3.5
40	CT	58	ALA	3.5
2	AB	92	VAL	3.5
8	AH	110	VAL	3.5
10	BJ	84	VAL	3.5
2	AB	86	SER	3.5
25	CD	19	GLY	3.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	AC	107	ARG	3.5
22	CA	272	A	3.5
31	CK	95	ARG	3.5
3	BC	58	GLU	3.4
3	BC	112	ASP	3.4
9	AI	56	ASP	3.4
13	BM	50	GLU	3.4
33	CM	119	PRO	3.4
2	AB	36	ASN	3.4
9	AI	20	PHE	3.4
33	DM	64	PHE	3.4
45	CY	17	ASN	3.4
5	BE	152	MET	3.4
20	BT	48	GLN	3.4
28	CG	44	LYS	3.4
37	CQ	12	GLN	3.4
39	CS	40	MET	3.4
1	BA	1492	A	3.4
22	CA	2173	A	3.4
41	CU	19	LYS	3.4
51	C4	25	LYS	3.4
53	DA	882	G	3.4
2	AB	61	ALA	3.4
3	AC	43	LEU	3.4
6	BF	32	ALA	3.4
20	BT	47	ALA	3.4
38	CR	38	ALA	3.4
2	BB	140	GLU	3.4
6	BF	34	GLY	3.4
14	BN	63	ARG	3.4
35	CO	17	ARG	3.4
3	AC	106	VAL	3.4
8	BH	51	VAL	3.4
15	BO	4	SER	3.4
21	AU	51	SER	3.4
28	CG	15	VAL	3.4
7	BG	142	HIS	3.4
53	DA	357	C	3.4
2	AB	51	ASN	3.4
6	BF	30	THR	3.4
7	AG	38	THR	3.4
19	AS	34	TRP	3.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
53	DA	896	A	3.4
10	AJ	35	GLN	3.4
14	BN	12	LYS	3.4
28	CG	160	LYS	3.4
33	CM	141	LYS	3.4
36	CP	92	PHE	3.4
16	BP	51	ARG	3.4
1	AA	90	C	3.4
22	CA	1874	C	3.4
2	AB	54	LEU	3.4
14	AN	32	SER	3.4
24	CC	174	LEU	3.4
43	CW	16	ALA	3.4
49	C2	15	ALA	3.4
55	DI	29	ASP	3.4
25	CD	140	HIS	3.4
14	BN	62	ASN	3.4
24	CC	65	VAL	3.4
33	CM	109	LYS	3.4
38	CR	31	VAL	3.4
48	D1	8	PRO	3.4
22	CA	846	U	3.4
1	BA	1267	C	3.4
29	CH	109	GLU	3.4
47	C0	39	GLU	3.4
34	DN	59	ARG	3.4
8	AH	49	PHE	3.4
14	BN	77	PHE	3.4
24	CC	146	MET	3.4
28	CG	100	GLY	3.4
53	DA	2123	G	3.4
54	DD	153	GLY	3.4
3	AC	113	ALA	3.4
17	BQ	24	ALA	3.4
27	CF	70	ALA	3.4
43	CW	39	ALA	3.4
54	DD	145	SER	3.4
55	DI	102	ALA	3.4
1	BA	984	C	3.4
18	AR	35	GLU	3.4
26	CE	155	GLU	3.4
40	CT	80	PRO	3.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	AA	1493	A	3.4
54	DD	141	ARG	3.4
22	CA	438	G	3.4
3	BC	159	GLY	3.4
6	AF	102	MET	3.4
19	AS	28	LYS	3.4
2	AB	121	SER	3.4
25	CD	97	SER	3.4
2	BB	42	ASN	3.4
25	CD	134	HIS	3.4
29	CH	2	GLN	3.4
35	CO	114	GLU	3.4
35	DO	125	ALA	3.4
46	CZ	25	GLN	3.4
28	CG	89	LEU	3.4
47	C0	42	PRO	3.4
1	BA	1327	C	3.4
12	BL	58	THR	3.4
24	CC	50	THR	3.4
2	AB	127	ASP	3.4
10	BJ	14	ASP	3.4
22	CA	358	U	3.4
22	CA	1085	A	3.4
53	DA	1066	U	3.4
24	CC	179	GLY	3.4
19	BS	35	SER	3.4
29	CH	18	GLN	3.4
29	DH	14	SER	3.4
35	DO	9	GLN	3.4
1	BA	1001	C	3.4
2	AB	113	ARG	3.4
2	BB	209	ALA	3.4
16	BP	31	ARG	3.4
24	CC	48	ARG	3.4
33	CM	48	ARG	3.4
35	CO	22	ARG	3.4
38	CR	63	ALA	3.4
39	CS	42	ALA	3.4
1	BA	190	A	3.4
22	CA	2660	A	3.4
26	CE	76	PRO	3.4
8	BH	5	ASP	3.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	AN	96	LEU	3.4
20	AT	43	ASP	3.4
34	CN	124	LEU	3.4
47	C0	40	ASP	3.4
34	CN	129	THR	3.4
24	DC	204	VAL	3.4
29	CH	60	GLU	3.4
44	DX	85	GLU	3.4
14	BN	78	GLY	3.4
28	CG	66	GLY	3.4
53	DA	1068	G	3.4
53	DA	2127	G	3.4
38	CR	14	HIS	3.3
54	DD	140	HIS	3.3
26	CE	101	TYR	3.3
40	CT	38	TYR	3.3
29	CH	39	ALA	3.3
30	DJ	82	LYS	3.3
31	CK	2	LYS	3.3
31	CK	123	LYS	3.3
50	D3	46	LYS	3.3
9	BI	103	PHE	3.3
21	AU	13	ASP	3.3
24	CC	240	PHE	3.3
46	CZ	26	PHE	3.3
21	AU	24	GLU	3.3
33	CM	23	ILE	3.3
47	C0	7	ILE	3.3
29	DH	15	LEU	3.3
45	CY	49	LEU	3.3
22	CA	892	A	3.3
2	AB	70	VAL	3.3
21	BU	6	VAL	3.3
3	BC	142	MET	3.3
9	AI	100	LYS	3.3
1	BA	1028	C	3.3
1	BA	1296	C	3.3
22	CA	63	A	3.3
22	CA	2602	A	3.3
1	AA	1029	U	3.3
22	CA	895	U	3.3
22	CA	1101	U	3.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	1534	U	3.3
39	DS	77	PHE	3.3
4	AD	30	THR	3.3
14	AN	82	ILE	3.3
18	AR	59	ILE	3.3
29	CH	4	ILE	3.3
33	CM	31	GLY	3.3
35	CO	34	ILE	3.3
35	CO	52	ILE	3.3
43	CW	5	ASN	3.3
47	D0	32	ILE	3.3
2	BB	112	LYS	3.3
4	BD	68	LEU	3.3
7	AG	118	LEU	3.3
11	BK	82	LEU	3.3
14	AN	48	LEU	3.3
16	AP	80	LYS	3.3
41	CU	64	LYS	3.3
45	CY	44	LYS	3.3
2	AB	39	HIS	3.3
3	BC	6	HIS	3.3
11	AK	84	VAL	3.3
1	BA	1007	U	3.3
22	CA	546	U	3.3
23	CB	58	A	3.3
39	CS	47	VAL	3.3
24	CC	2	ALA	3.3
30	DJ	77	ALA	3.3
33	CM	72	ALA	3.3
35	CO	61	ALA	3.3
48	C1	45	ALA	3.3
22	CA	2793	C	3.3
24	CC	161	TYR	3.3
7	BG	119	ARG	3.3
11	BK	109	ASN	3.3
22	CA	1108	U	3.3
16	BP	77	GLU	3.3
20	BT	31	PHE	3.3
26	DE	53	THR	3.3
33	DM	49	GLY	3.3
29	CH	137	GLU	3.3
29	DH	60	GLU	3.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
45	CY	25	THR	3.3
33	CM	103	ILE	3.3
35	CO	83	LEU	3.3
51	D4	57	LEU	3.3
13	BM	42	ASP	3.3
3	BC	201	TRP	3.3
6	AF	95	ALA	3.3
20	BT	44	LYS	3.3
24	DC	122	ALA	3.3
34	CN	84	LYS	3.3
33	CM	2	ARG	3.3
53	DA	2112	G	3.3
2	BB	146	ASN	3.3
2	BB	223	GLU	3.3
15	BO	26	GLU	3.3
17	BQ	53	CYS	3.3
51	C4	61	CYS	3.3
4	AD	24	GLY	3.3
6	BF	59	TYR	3.3
24	DC	55	GLY	3.3
22	CA	1097	U	3.3
2	BB	110	SER	3.3
26	CE	75	SER	3.3
29	DH	82	SER	3.3
51	D4	6	THR	3.3
25	CD	94	GLN	3.3
2	BB	68	LEU	3.3
29	CH	44	ILE	3.3
31	CK	81	ILE	3.3
33	DM	55	MET	3.3
44	DX	21	LEU	3.3
1	BA	1026	G	3.3
22	CA	259	G	3.3
6	BF	2	ARG	3.3
31	CK	69	ARG	3.3
55	DI	42	ARG	3.3
42	DV	50	PRO	3.3
3	BC	71	ALA	3.3
28	DG	101	ASN	3.3
33	CM	113	ALA	3.3
33	CM	133	ALA	3.3
38	DR	61	TRP	3.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
32	CL	15	GLY	3.3
48	C1	31	ASP	3.3
49	C2	46	HIS	3.3
40	CT	15	GLN	3.3
54	DD	137	SER	3.3
2	AB	64	LYS	3.3
20	BT	69	LYS	3.3
31	CK	44	TYR	3.3
48	C1	12	LYS	3.3
5	BE	69	ARG	3.3
9	BI	18	ARG	3.3
9	BI	41	ARG	3.3
21	BU	19	PHE	3.3
29	CH	123	ARG	3.3
44	CX	26	PHE	3.3
38	DR	9	ILE	3.3
1	AA	845	A	3.3
1	BA	1274	A	3.3
12	AL	73	ASN	3.3
41	CU	59	ASN	3.3
43	CW	49	ASN	3.3
1	BA	1029	U	3.3
7	BG	32	VAL	3.3
24	DC	195	VAL	3.3
38	DR	10	ALA	3.3
3	AC	2	GLY	3.2
24	DC	215	GLY	3.2
27	CF	131	GLY	3.2
53	DA	549	G	3.2
27	DF	78	LYS	3.2
34	CN	58	LYS	3.2
7	AG	57	SER	3.2
8	BH	2	SER	3.2
11	BK	68	GLU	3.2
41	CU	86	THR	3.2
45	CY	50	ARG	3.2
1	BA	473	U	3.2
53	DA	1061	U	3.2
35	CO	1	MET	3.2
35	DO	13	ASN	3.2
35	DO	20	MET	3.2
1	BA	1310	G	3.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
3	BC	14	ILE	3.2
9	BI	28	ILE	3.2
33	CM	6	LEU	3.2
33	CM	125	LEU	3.2
48	C1	43	ILE	3.2
2	AB	205	ASP	3.2
15	BO	74	ASP	3.2
22	CA	1043	C	3.2
33	CM	14	LYS	3.2
44	CX	64	ASP	3.2
1	BA	1017	U	3.2
8	BH	130	ALA	3.2
24	DC	190	ALA	3.2
46	CZ	39	GLN	3.2
9	BI	89	GLU	3.2
26	DE	52	VAL	3.2
10	BJ	72	ARG	3.2
13	BM	87	ARG	3.2
13	BM	107	ARG	3.2
16	AP	44	SER	3.2
33	CM	33	ARG	3.2
37	CQ	72	ARG	3.2
1	BA	973	G	3.2
22	CA	1731	G	3.2
22	CA	2100	G	3.2
5	BE	122	ASN	3.2
22	CA	143	C	3.2
22	CA	1060	U	3.2
22	CA	1064	C	3.2
19	BS	6	LYS	3.2
20	BT	19	LYS	3.2
3	BC	36	ASP	3.2
2	AB	19	GLN	3.2
22	CA	144	A	3.2
22	CA	1872	A	3.2
22	CA	2309	A	3.2
2	BB	52	GLU	3.2
42	CV	54	GLN	3.2
31	CK	119	PHE	3.2
55	DI	69	PHE	3.2
2	BB	129	LEU	3.2
3	BC	81	GLY	3.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
26	CE	27	LEU	3.2
28	CG	141	ILE	3.2
40	DT	97	LEU	3.2
55	DI	23	LEU	3.2
3	BC	133	ALA	3.2
6	BF	3	HIS	3.2
20	BT	29	ARG	3.2
31	CK	117	ALA	3.2
40	CT	7	HIS	3.2
51	C4	10	ALA	3.2
1	BA	1255	G	3.2
5	BE	137	VAL	3.2
23	CB	117	G	3.2
35	CO	14	SER	3.2
44	CX	23	VAL	3.2
28	CG	134	LYS	3.2
45	CY	16	ASN	3.2
3	AC	170	GLU	3.2
18	AR	22	ASP	3.2
2	AB	27	MET	3.2
7	BG	14	PRO	3.2
35	CO	20	MET	3.2
11	AK	98	ARG	3.2
13	AM	26	GLY	3.2
17	AQ	11	ARG	3.2
31	DK	115	GLY	3.2
37	CQ	39	ARG	3.2
2	AB	83	ALA	3.2
24	CC	95	LEU	3.2
24	DC	154	LEU	3.2
11	BK	121	CYS	3.2
13	AM	15	ALA	3.2
13	BM	15	ALA	3.2
20	BT	12	ILE	3.2
40	CT	55	ILE	3.2
40	DT	89	ALA	3.2
1	BA	1009	U	3.2
13	BM	66	GLU	3.2
26	CE	197	GLU	3.2
32	CL	106	GLU	3.2
39	CS	62	GLU	3.2
44	CX	29	GLU	3.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
23	CB	38	C	3.2
9	BI	88	MET	3.2
22	CA	345	A	3.2
22	CA	2126	A	3.2
29	CH	68	ARG	3.2
33	DM	34	GLY	3.2
7	BG	110	LYS	3.2
49	C2	10	LYS	3.2
1	AA	1132	C	3.2
51	D4	64	TYR	3.2
3	BC	95	ALA	3.2
27	DF	45	ALA	3.2
47	D0	2[A]	ALA	3.2
18	AR	68	LEU	3.2
28	DG	105	LEU	3.2
47	C0	17	LEU	3.2
3	BC	3	GLN	3.2
8	BH	36	ILE	3.2
13	AM	45	ILE	3.2
37	CQ	48	ILE	3.2
38	CR	17	ILE	3.2
46	CZ	38	GLN	3.2
53	DA	2180	U	3.2
23	CB	108	A	3.2
19	AS	58	VAL	3.2
29	CH	61	VAL	3.2
35	CO	60	VAL	3.2
44	CX	67	VAL	3.2
2	AB	211	THR	3.2
10	AJ	22	THR	3.2
14	BN	65	ARG	3.2
15	BO	25	THR	3.2
46	CZ	7	ARG	3.2
49	C2	22	THR	3.2
8	BH	31	LYS	3.2
17	BQ	19	LYS	3.2
24	CC	119	GLY	3.2
28	DG	177	LYS	3.2
33	CM	17	LYS	3.2
33	DM	22	GLY	3.2
34	CN	100	LYS	3.2
39	DS	82	HIS	3.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
53	DA	884	U	3.2
1	BA	1236	A	3.2
33	DM	40	SER	3.2
2	BB	36	ASN	3.2
18	BR	62	ALA	3.2
29	DH	119	ASN	3.2
7	AG	62	PHE	3.2
20	BT	10	ARG	3.2
20	BT	66	LEU	3.2
29	DH	122	LEU	3.2
31	CK	32	LEU	3.2
34	CN	31	PHE	3.2
37	CQ	97	LEU	3.2
22	CA	1748	C	3.2
39	CS	77	PHE	3.2
8	AH	31	LYS	3.2
24	CC	219	THR	3.2
29	DH	121	VAL	3.2
1	BA	80	A	3.1
2	AB	145	GLU	3.1
1	BA	86	G	3.1
11	AK	104	GLY	3.1
35	CO	7	GLY	3.1
52	C5	38	GLY	3.1
53	DA	846	U	3.1
24	CC	45	ASN	3.1
36	CP	89	ASP	3.1
37	DQ	2	SER	3.1
49	C2	13	SER	3.1
20	AT	37	ALA	3.1
26	CE	87	ALA	3.1
22	CA	1583	A	3.1
31	CK	111	LYS	3.1
42	CV	4	LYS	3.1
13	AM	89	LEU	3.1
16	BP	74	LEU	3.1
22	CA	287	G	3.1
22	CA	1546	G	3.1
29	DH	70	GLU	3.1
32	CL	8	LEU	3.1
35	DO	21	PHE	3.1
55	DI	41	LEU	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	AB	125	THR	3.1
19	AS	63	THR	3.1
24	CC	54	ILE	3.1
24	DC	54	ILE	3.1
38	DR	65	ILE	3.1
6	BF	37	HIS	3.1
19	AS	26	GLY	3.1
25	CD	44	GLY	3.1
36	CP	96	GLY	3.1
26	CE	78	TRP	3.1
38	DR	31	VAL	3.1
53	DA	2104	C	3.1
19	AS	12	ASP	3.1
32	CL	7	MET	3.1
40	CT	82	MET	3.1
14	BN	13	ARG	3.1
23	CB	119	A	3.1
35	CO	6	SER	3.1
31	CK	85	LYS	3.1
55	DI	109	LYS	3.1
1	BA	1134	G	3.1
29	CH	53	GLU	3.1
43	CW	41	GLU	3.1
11	BK	67	ALA	3.1
26	CE	86	ALA	3.1
33	CM	131	ALA	3.1
54	DD	162	ALA	3.1
23	CB	19	C	3.1
53	DA	893	C	3.1
1	AA	89	U	3.1
2	BB	10	LEU	3.1
7	BG	38	THR	3.1
26	CE	30	GLN	3.1
29	CH	118	PRO	3.1
31	DK	75	TYR	3.1
36	CP	31	THR	3.1
53	DA	1173	U	3.1
24	DC	161	TYR	3.1
43	CW	80	HIS	3.1
43	CW	66	ASP	3.1
19	AS	32	ARG	3.1
14	BN	100	SER	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	273	G	3.1
22	CA	1529	G	3.1
25	CD	1	MET	3.1
25	CD	37	VAL	3.1
25	CD	58	ASN	3.1
54	DD	136	ASN	3.1
30	DJ	117	MET	3.1
41	CU	56	GLU	3.1
7	BG	117	ALA	3.1
11	AK	99	ALA	3.1
21	BU	23	CYS	3.1
38	CR	68	ALA	3.1
46	CZ	51	ALA	3.1
1	BA	988	G	3.1
1	BA	1452	C	3.1
6	BF	35	LYS	3.1
10	BJ	30	LYS	3.1
19	AS	6	LYS	3.1
22	CA	1106	G	3.1
25	CD	53	GLY	3.1
28	CG	27	LYS	3.1
38	DR	23	GLY	3.1
51	C4	43	HIS	3.1
53	DA	1731	G	3.1
55	DI	36	ASP	3.1
6	BF	77	THR	3.1
9	BI	11	ARG	3.1
33	CM	47	ARG	3.1
43	CW	62	THR	3.1
17	BQ	80	GLU	3.1
34	CN	78	LEU	3.1
35	CO	43	GLU	3.1
46	CZ	27	ASN	3.1
3	AC	187	SER	3.1
25	CD	137	SER	3.1
29	CH	25	TYR	3.1
7	BG	89	VAL	3.1
11	AK	129	VAL	3.1
54	DD	172	VAL	3.1
1	BA	1264	U	3.1
3	BC	18	TRP	3.1
20	BT	5	LYS	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
38	DR	21	ALA	3.1
51	C4	5	LYS	3.1
2	BB	133	GLU	3.1
11	BK	54	GLY	3.1
16	BP	62	GLY	3.1
24	DC	206	GLY	3.1
29	CH	55	GLU	3.1
38	DR	26	GLY	3.1
42	CV	88	GLU	3.1
55	DI	14	GLU	3.1
31	DK	77	HIS	3.1
5	AE	122	ASN	3.1
35	DO	100	CYS	3.1
53	DA	2170	A	3.1
24	CC	11	PRO	3.1
2	BB	119	THR	3.1
24	CC	246	THR	3.1
53	DA	358	U	3.1
2	BB	147	SER	3.1
6	AF	61	LEU	3.1
17	BQ	8	LEU	3.1
20	BT	6	SER	3.1
29	DH	54	LEU	3.1
1	AA	204	G	3.1
21	BU	4	ILE	3.1
26	CE	23	PHE	3.1
32	CL	47	ILE	3.1
3	BC	45	LYS	3.1
6	BF	46	GLN	3.1
7	BG	69	VAL	3.1
14	BN	3	LYS	3.1
27	DF	74	VAL	3.1
39	CS	75	VAL	3.1
40	CT	98	LYS	3.1
1	AA	1036	A	3.1
53	DA	1070	A	3.1
22	CA	2585	U	3.1
30	DJ	127	ARG	3.1
3	AC	92	ALA	3.1
5	BE	148	ASN	3.1
24	DC	56	GLY	3.1
45	CY	69	ALA	3.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	DG	48	ASN	3.1
54	DD	163	GLY	3.1
22	CA	1177	G	3.1
5	BE	100	SER	3.1
17	BQ	72	SER	3.1
27	CF	121	SER	3.1
3	AC	86	LYS	3.1
33	CM	29	LYS	3.1
43	CW	10	LYS	3.1
44	CX	19	LYS	3.1
5	AE	61	GLN	3.1
35	CO	115	LEU	3.1
3	BC	90	VAL	3.1
9	AI	21	ILE	3.1
31	CK	74	TYR	3.1
39	CS	78	ARG	3.1
7	BG	68	ASN	3.0
22	CA	1452	G	3.0
22	CA	2132	U	3.0
22	CA	2181	U	3.0
26	CE	71	GLY	3.0
39	CS	82	HIS	3.0
48	D1	6	ASN	3.0
22	CA	2135	A	3.0
3	BC	109	PRO	3.0
9	AI	23	PRO	3.0
25	CD	23	PRO	3.0
3	AC	62	LYS	3.0
43	CW	25	LYS	3.0
22	CA	1728	C	3.0
2	AB	21	ARG	3.0
5	BE	112	ARG	3.0
7	AG	10	ARG	3.0
32	CL	113	MET	3.0
1	BA	1018	G	3.0
10	AJ	71	LEU	3.0
3	BC	106	VAL	3.0
4	BD	61	VAL	3.0
7	AG	12	ILE	3.0
12	BL	87	VAL	3.0
14	BN	68	GLY	3.0
24	CC	220	VAL	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
24	DC	47	GLY	3.0
37	DQ	46	VAL	3.0
39	DS	74	ILE	3.0
11	AK	75	LYS	3.0
38	DR	76	TYR	3.0
31	CK	63	ALA	3.0
32	CL	33	ALA	3.0
34	CN	116	ALA	3.0
48	C1	7	LYS	3.0
7	BG	21	GLU	3.0
52	C5	5	ALA	3.0
37	DQ	36	SER	3.0
45	CY	42	SER	3.0
2	AB	194	ASP	3.0
3	BC	179	ARG	3.0
7	AG	84	THR	3.0
22	CA	1861	G	3.0
22	CA	2123	G	3.0
24	CC	9	THR	3.0
35	CO	37	THR	3.0
44	DX	41[A]	ARG	3.0
49	C2	40	ASP	3.0
21	AU	9	ASN	3.0
22	CA	1727	C	3.0
31	CK	140	LEU	3.0
35	DO	44	LEU	3.0
44	CX	44	LYS	3.0
52	C5	8	LYS	3.0
24	CC	55	GLY	3.0
48	C1	36	GLU	3.0
24	DC	6	CYS	3.0
24	DC	188	CYS	3.0
1	BA	161	A	3.0
3	AC	91	VAL	3.0
7	AG	141	VAL	3.0
26	DE	9	GLN	3.0
29	CH	111	ALA	3.0
34	CN	73	ILE	3.0
54	DD	148	GLN	3.0
1	BA	1278	G	3.0
9	BI	78	ALA	3.0
18	AR	51	TYR	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
24	CC	155	ALA	3.0
55	DI	33	VAL	3.0
25	CD	143	PRO	3.0
37	CQ	99	TYR	3.0
3	AC	136	ARG	3.0
7	BG	95	ARG	3.0
13	AM	30	SER	3.0
24	CC	252	THR	3.0
54	DD	151	THR	3.0
2	BB	152	LYS	3.0
2	AB	146	ASN	3.0
24	CC	37	ASN	3.0
30	DJ	17	MET	3.0
1	BA	81	A	3.0
1	BA	1252	A	3.0
1	BA	1308	U	3.0
1	BA	1139	G	3.0
1	BA	1316	G	3.0
2	BB	149	GLY	3.0
28	CG	53	GLY	3.0
35	CO	93	GLY	3.0
15	BO	70	LEU	3.0
51	D4	55	LEU	3.0
37	CQ	109	ARG	3.0
2	AB	193	PRO	3.0
9	AI	79	ILE	3.0
11	AK	107	ILE	3.0
17	AQ	61	ILE	3.0
20	BT	39	ILE	3.0
20	BT	45	ALA	3.0
24	CC	210	ALA	3.0
24	CC	216	VAL	3.0
24	DC	137	VAL	3.0
26	CE	70	SER	3.0
26	DE	11	ALA	3.0
27	DF	75	ALA	3.0
29	DH	4	ILE	3.0
36	CP	95	SER	3.0
44	DX	84	ALA	3.0
35	CO	87	PHE	3.0
38	DR	36	PHE	3.0
40	CT	103	ILE	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	BB	115	LYS	3.0
7	BG	106	GLU	3.0
9	BI	9	THR	3.0
31	CK	30	THR	3.0
1	BA	212	G	3.0
1	BA	1015	G	3.0
12	BL	46	ASN	3.0
22	CA	1459	G	3.0
41	DU	92	ASN	3.0
16	BP	1	MET	3.0
2	AB	65	GLY	3.0
24	DC	235	GLY	3.0
25	CD	3	GLY	3.0
33	DM	43	GLY	3.0
28	CG	163	ARG	3.0
31	CK	120	ARG	3.0
22	CA	2322	A	3.0
2	AB	48	PRO	3.0
40	CT	23	LEU	3.0
42	CV	47	LYS	3.0
4	BD	166	GLU	3.0
55	DI	3	LEU	3.0
48	D1	11	SER	3.0
55	DI	112	ALA	3.0
1	BA	1242	G	3.0
22	CA	1875	G	3.0
22	CA	2127	G	3.0
1	BA	1358	U	3.0
10	AJ	67	ILE	3.0
11	BK	23	ILE	3.0
35	DO	47	VAL	3.0
38	CR	106	PHE	3.0
42	DV	49	VAL	3.0
5	BE	50	TYR	3.0
44	CX	43	THR	3.0
52	C5	14	CYS	3.0
1	AA	1000	A	3.0
1	BA	975	A	3.0
39	CS	79	ARG	3.0
40	CT	26	GLY	3.0
42	CV	7	ARG	3.0
4	BD	148	LYS	3.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	CM	70	LYS	3.0
2	AB	223	GLU	3.0
20	AT	53	GLU	3.0
22	CA	180	G	3.0
53	DA	2102	G	3.0
7	BG	39	ALA	3.0
8	BH	59	LEU	3.0
11	AK	82	LEU	3.0
12	BL	90	LEU	3.0
29	DH	111	ALA	3.0
33	DM	57	LEU	3.0
38	CR	12	ALA	3.0
51	C4	27	ALA	3.0
1	AA	81	A	3.0
22	CA	1496	A	3.0
37	CQ	115	ASN	3.0
2	AB	89	GLN	3.0
17	AQ	46	VAL	2.9
22	CA	1065	U	2.9
26	CE	52	VAL	2.9
26	DE	85	PHE	2.9
30	DJ	109	ILE	2.9
5	BE	44	GLY	2.9
20	BT	15	GLU	2.9
29	CH	8	LYS	2.9
40	CT	48	LYS	2.9
33	CM	58	TYR	2.9
1	AA	1010	U	2.9
49	C2	41	PRO	2.9
2	AB	219	ALA	2.9
22	CA	336	C	2.9
22	CA	1533	C	2.9
36	CP	23	ALA	2.9
38	DR	42	ALA	2.9
21	AU	29	LEU	2.9
15	BO	6	GLU	2.9
22	CA	1724	G	2.9
24	CC	101	ARG	2.9
24	DC	105	LEU	2.9
26	CE	49	ARG	2.9
49	C2	11	LEU	2.9
29	CH	127	GLU	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
2	AB	192	ASP	2.9
3	BC	97	VAL	2.9
16	BP	9	HIS	2.9
24	CC	165	VAL	2.9
26	DE	13	THR	2.9
43	CW	45	ASP	2.9
54	DD	170	VAL	2.9
55	DI	54	VAL	2.9
11	BK	105	PHE	2.9
52	C5	23	ILE	2.9
25	CD	165	MET	2.9
31	DK	108	MET	2.9
7	AG	44	TYR	2.9
22	CA	2300	C	2.9
9	BI	125	PRO	2.9
14	BN	80	SER	2.9
21	BU	51	SER	2.9
26	CE	107	SER	2.9
35	DO	15	SER	2.9
54	DD	139	SER	2.9
29	CH	71	LYS	2.9
29	CH	83	LYS	2.9
1	BA	1340	A	2.9
32	DL	110	GLU	2.9
35	CO	104	ALA	2.9
36	CP	77	ALA	2.9
8	BH	40	LEU	2.9
22	CA	351	C	2.9
39	CS	8	GLY	2.9
45	DY	15	GLY	2.9
31	CK	78	THR	2.9
1	BA	957	U	2.9
25	CD	122	VAL	2.9
40	DT	50	VAL	2.9
7	BG	42	ILE	2.9
20	AT	4	ILE	2.9
22	CA	308	G	2.9
22	CA	548	G	2.9
54	DD	165	MET	2.9
8	BH	18	GLN	2.9
22	CA	2114	A	2.9
44	CX	69	PHE	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
48	D1	5	GLN	2.9
50	D3	5	PHE	2.9
3	BC	169	ARG	2.9
35	CO	4	ARG	2.9
35	CO	32	GLU	2.9
48	D1	10	ARG	2.9
55	DI	30	SER	2.9
1	AA	1037	C	2.9
1	BA	632	U	2.9
14	AN	38	ASP	2.9
35	DO	108	ALA	2.9
50	C3	40	ALA	2.9
24	CC	53	HIS	2.9
40	CT	9	HIS	2.9
44	CX	65	GLY	2.9
48	D1	14	GLY	2.9
51	C4	9	GLY	2.9
53	DA	2173	A	2.9
54	DD	166	GLY	2.9
2	BB	148	LEU	2.9
8	BH	99	LEU	2.9
11	AK	42	LEU	2.9
25	CD	4	LEU	2.9
26	CE	43	THR	2.9
42	CV	46	GLN	2.9
46	DZ	8	GLU	2.9
22	CA	1045	C	2.9
26	CE	96	VAL	2.9
29	CH	37	VAL	2.9
32	CL	9	ASN	2.9
3	BC	182	ILE	2.9
15	BO	13	SER	2.9
18	BR	44	ILE	2.9
44	CX	45	PHE	2.9
4	AD	29	ASP	2.9
22	CA	1063	G	2.9
1	AA	1009	U	2.9
33	DM	58	TYR	2.9
38	CR	45	TYR	2.9
6	BF	57	ALA	2.9
7	BG	100	ALA	2.9
11	AK	92	GLY	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
24	CC	248	TRP	2.9
25	CD	69	ALA	2.9
25	CD	102	ALA	2.9
27	DF	43	ALA	2.9
37	CQ	95	ALA	2.9
22	CA	163	C	2.9
38	CR	82	GLY	2.9
38	CR	112	LYS	2.9
40	CT	73	LYS	2.9
41	CU	25	GLU	2.9
5	AE	93	ARG	2.9
11	AK	37	ARG	2.9
40	CT	104	THR	2.9
42	CV	15	THR	2.9
5	AE	70	ASN	2.9
19	AS	31	LEU	2.9
34	DN	95	LEU	2.9
40	CT	46	LEU	2.9
45	CY	22	LEU	2.9
1	BA	250	A	2.9
1	BA	1212	U	2.9
22	CA	2183	A	2.9
22	CA	2423	U	2.9
35	DO	119	SER	2.9
2	BB	48	PRO	2.9
37	CQ	81	VAL	2.9
51	C4	63	PRO	2.9
22	CA	268	C	2.9
9	AI	36	GLU	2.9
1	AA	88	U	2.9
16	BP	64	GLY	2.9
42	CV	57	GLY	2.9
54	DD	134	HIS	2.9
6	BF	27	ALA	2.9
22	CA	1412	U	2.9
54	DD	158	GLY	2.9
17	BQ	6	ARG	2.9
40	DT	110	ARG	2.9
53	DA	548	G	2.9
22	CA	2129	C	2.9
24	CC	51	THR	2.9
2	BB	191	SER	2.9

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	BA	1010	U	2.9
6	BF	33	GLU	2.9
24	CC	82	GLU	2.9
52	C5	11	CYS	2.9
1	BA	461	A	2.8
6	BF	64	VAL	2.8
27	DF	85	ILE	2.8
33	CM	111	ILE	2.8
3	AC	37	PHE	2.8
5	BE	129	GLY	2.8
22	CA	147	C	2.8
22	CA	277	G	2.8
24	CC	99	GLY	2.8
33	CM	49	GLY	2.8
33	DM	65	GLY	2.8
22	CA	1486	U	2.8
24	CC	166	ALA	2.8
24	DC	166	ALA	2.8
29	DH	148	ALA	2.8
35	CO	23	ASN	2.8
51	C4	65	ALA	2.8
51	D4	10	ALA	2.8
54	DD	167	ASN	2.8
54	DD	192	ALA	2.8
13	AM	82	ASP	2.8
19	AS	27	ASP	2.8
8	BH	43	GLU	2.8
27	CF	19	GLU	2.8
39	CS	85	LYS	2.8
50	C3	43	THR	2.8
40	CT	81	SER	2.8
24	DC	201	MET	2.8
9	AI	51	PRO	2.8
1	BA	479	U	2.8
24	CC	24	LEU	2.8
25	CD	164	GLN	2.8
4	AD	73	ARG	2.8
3	AC	151	VAL	2.8
17	BQ	47	HIS	2.8
29	CH	128	HIS	2.8
32	CL	30	ARG	2.8
31	DK	48	VAL	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	DM	31	GLY	2.8
34	CN	26	VAL	2.8
51	C4	53	GLY	2.8
1	BA	1042	A	2.8
17	BQ	25	ILE	2.8
31	CK	58	ASN	2.8
7	AG	39	ALA	2.8
14	BN	76	LYS	2.8
25	CD	28	GLU	2.8
40	CT	64	ALA	2.8
55	DI	44	ALA	2.8
22	CA	898	C	2.8
32	DL	32	TYR	2.8
35	CO	18	GLN	2.8
38	DR	47	TYR	2.8
16	BP	15	PRO	2.8
21	AU	11	PRO	2.8
26	CE	79	ARG	2.8
31	CK	113	PRO	2.8
48	D1	15	MET	2.8
25	CD	141	ARG	2.8
43	CW	93	ARG	2.8
1	AA	1019	A	2.8
4	BD	199	LEU	2.8
5	BE	115	LEU	2.8
6	BF	11	HIS	2.8
22	CA	2797	U	2.8
30	DJ	11	LEU	2.8
31	CK	25	LEU	2.8
26	CE	81	GLY	2.8
38	DR	7	GLY	2.8
44	DX	42	GLY	2.8
54	DD	115	GLY	2.8
4	AD	170	TRP	2.8
7	BG	67	GLU	2.8
20	AT	49	LYS	2.8
9	AI	111	VAL	2.8
12	BL	79	VAL	2.8
14	AN	84	VAL	2.8
21	AU	32	VAL	2.8
23	CB	35	C	2.8
24	DC	228	VAL	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
35	CO	116	VAL	2.8
44	DX	23	VAL	2.8
3	AC	14	ILE	2.8
14	BN	88	ALA	2.8
38	DR	62	ILE	2.8
40	DT	103	ILE	2.8
19	AS	56	GLN	2.8
26	CE	110	SER	2.8
39	CS	7	SER	2.8
53	DA	2182	U	2.8
17	BQ	77	ARG	2.8
24	CC	173	THR	2.8
24	CC	177	ARG	2.8
24	DC	156	ARG	2.8
31	DK	78	THR	2.8
37	CQ	93	ARG	2.8
37	DQ	60	THR	2.8
45	CY	14	THR	2.8
47	C0	8	THR	2.8
50	C3	41	ARG	2.8
15	AO	69	TYR	2.8
22	CA	343	C	2.8
48	D1	7	LYS	2.8
1	BA	144	G	2.8
2	BB	167	ASP	2.8
11	BK	81	ASN	2.8
22	CA	2136	G	2.8
48	C1	14	GLY	2.8
51	D4	53	GLY	2.8
4	BD	171	LEU	2.8
10	BJ	73	LEU	2.8
22	CA	2172	U	2.8
39	CS	39	LEU	2.8
1	BA	1004	A	2.8
53	DA	2171	A	2.8
5	BE	123	VAL	2.8
15	BO	29	VAL	2.8
24	CC	17	VAL	2.8
7	AG	92	ARG	2.8
19	AS	75	ALA	2.8
26	DE	10	SER	2.8
32	CL	99	ILE	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
48	C1	50	ARG	2.8
51	C4	8	ARG	2.8
14	BN	5	SER	2.8
9	AI	66	THR	2.8
12	BL	18	LYS	2.8
21	BU	54	LYS	2.8
30	DJ	72	LYS	2.8
35	CO	49	GLU	2.8
54	DD	171	THR	2.8
35	CO	3	HIS	2.8
50	C3	13	ASN	2.8
53	DA	613	A	2.8
31	DK	79	GLY	2.8
33	CM	34	GLY	2.8
1	BA	214	C	2.8
1	BA	1397	C	2.8
2	AB	122	GLN	2.8
53	DA	545	U	2.8
47	C0	29	LEU	2.8
1	BA	1309	G	2.8
3	BC	76	VAL	2.8
5	BE	145	GLU	2.8
6	BF	56	LYS	2.8
9	BI	115	LYS	2.8
19	AS	20	GLU	2.8
16	AP	27	ALA	2.8
22	CA	2133	G	2.8
25	CD	24	VAL	2.8
25	CD	142	VAL	2.8
38	CR	41	LYS	2.8
51	D4	51	SER	2.8
6	AF	80	PHE	2.8
11	AK	105	PHE	2.8
22	CA	1052	C	2.8
22	CA	1582	C	2.8
37	CQ	22	PRO	2.8
40	CT	94	ASP	2.8
53	DA	1078	U	2.8
34	CN	68	PHE	2.8
34	DN	82	MET	2.8
51	D4	14	PHE	2.8
24	CC	233	GLY	2.8

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
44	DX	22	GLY	2.8
51	D4	56	GLY	2.8
1	BA	1003	G	2.8
9	BI	60	LYS	2.8
11	BK	14	LYS	2.8
22	CA	489	G	2.8
22	CA	2102	G	2.8
29	CH	112	LYS	2.8
34	CN	62	LYS	2.8
38	CR	32	TYR	2.8
51	D4	5	LYS	2.8
3	AC	178	LEU	2.8
22	CA	314	C	2.8
48	D1	22	LEU	2.8
26	CE	192	ALA	2.7
29	DH	23	ALA	2.7
41	CU	31	VAL	2.7
42	CV	81	ASP	2.7
43	CW	65	VAL	2.7
35	DO	11	ASN	2.7
3	BC	21	THR	2.7
51	C4	26	HIS	2.7
54	DD	129	THR	2.7
1	AA	1005	A	2.7
1	BA	1442	G	2.7
17	BQ	21	ILE	2.7
22	CA	74	A	2.7
22	CA	404	A	2.7
22	CA	1396	U	2.7
24	CC	164	ILE	2.7
29	DH	94	ILE	2.7
2	BB	143	LYS	2.7
3	BC	82	GLU	2.7
10	BJ	13	PHE	2.7
11	BK	98	ARG	2.7
16	BP	32	PHE	2.7
27	DF	95	ARG	2.7
33	DM	50	PHE	2.7
34	DN	18[A]	ARG	2.7
38	CR	36	PHE	2.7
38	CR	92	ARG	2.7
44	CX	11	ARG	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
52	C5	32	LYS	2.7
55	DI	61	ARG	2.7
1	AA	207	C	2.7
24	CC	178	SER	2.7
22	CA	320	A	2.7
44	CX	59	LEU	2.7
1	AA	844	G	2.7
2	AB	76	ALA	2.7
22	CA	307	G	2.7
24	CC	134	ASN	2.7
35	DO	19	ALA	2.7
38	DR	2	ALA	2.7
40	CT	89	ALA	2.7
52	C5	29	ALA	2.7
1	BA	1263	C	2.7
5	BE	88	VAL	2.7
9	AI	5	GLN	2.7
11	AK	38	GLN	2.7
2	BB	59	LYS	2.7
5	BE	126	LYS	2.7
14	AN	11	VAL	2.7
16	BP	36	VAL	2.7
34	DN	93	VAL	2.7
53	DA	1075	C	2.7
25	CD	77	ARG	2.7
26	CE	54	GLY	2.7
34	CN	99	GLY	2.7
20	AT	67	ILE	2.7
32	DL	77	ILE	2.7
40	CT	4	ILE	2.7
52	D5	26	ILE	2.7
31	CK	4	PHE	2.7
51	D4	22	PHE	2.7
22	CA	329	G	2.7
22	CA	2110	G	2.7
7	AG	37	SER	2.7
25	CD	18	ASP	2.7
22	CA	2118	U	2.7
29	DH	20	ASN	2.7
39	DS	81	LYS	2.7
40	CT	2	GLU	2.7
3	BC	43	LEU	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	AG	143	ARG	2.7
8	BH	119	ALA	2.7
25	CD	152	PRO	2.7
30	DJ	56	PRO	2.7
35	CO	118	ARG	2.7
38	DR	38	ALA	2.7
40	DT	87	PRO	2.7
50	C3	19	ARG	2.7
55	DI	46	ARG	2.7
53	DA	2183	A	2.7
8	AH	55	THR	2.7
26	CE	53	THR	2.7
28	CG	144	VAL	2.7
1	AA	1134	G	2.7
22	CA	1742	U	2.7
22	CA	2165	C	2.7
23	CB	54	G	2.7
53	DA	1062	G	2.7
53	DA	2155	U	2.7
24	CC	104	ILE	2.7
35	CO	113	ILE	2.7
7	BG	40	GLU	2.7
31	DK	119	PHE	2.7
33	CM	10	GLU	2.7
8	AH	50	LYS	2.7
25	CD	123	LYS	2.7
35	CO	21	PHE	2.7
35	CO	13	ASN	2.7
36	CP	5	SER	2.7
37	CQ	94	LYS	2.7
6	BF	44	ARG	2.7
9	BI	33	ARG	2.7
21	AU	34	ARG	2.7
21	BU	21	ARG	2.7
22	CA	2163	A	2.7
33	CM	41	ARG	2.7
38	CR	6	ARG	2.7
40	CT	88	ARG	2.7
45	CY	27	ARG	2.7
25	CD	80	TRP	2.7
26	CE	60	TRP	2.7
1	BA	83	C	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	BG	93	PRO	2.7
8	BH	53	GLY	2.7
10	AJ	39	PRO	2.7
22	CA	1072	C	2.7
31	CK	80	HIS	2.7
37	CQ	18	PRO	2.7
22	CA	2353	G	2.7
22	CA	2808	G	2.7
42	CV	64	ALA	2.7
47	C0	15	GLY	2.7
55	DI	110	ALA	2.7
29	CH	58	LEU	2.7
41	CU	93	LEU	2.7
11	AK	35	THR	2.7
31	CK	5	THR	2.7
2	BB	154	MET	2.7
5	AE	114	VAL	2.7
25	CD	170	VAL	2.7
37	CQ	28	VAL	2.7
4	AD	148	LYS	2.7
16	BP	46	LYS	2.7
22	CA	2147	A	2.7
29	DH	42	LYS	2.7
3	BC	57	ILE	2.7
22	CA	2795	C	2.7
32	CL	39	ILE	2.7
1	AA	462	G	2.7
1	BA	1043	G	2.7
11	AK	61	PHE	2.7
22	CA	93	G	2.7
22	CA	1444	G	2.7
22	CA	2735	G	2.7
38	DR	57	PHE	2.7
7	AG	16	PRO	2.7
22	CA	1729	U	2.7
24	CC	42	GLY	2.7
28	DG	82	GLY	2.7
47	C0	28	GLY	2.7
45	CY	24	ALA	2.7
34	CN	64	TRP	2.7
10	BJ	71	LEU	2.7
15	BO	85	LEU	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
17	AQ	75	LEU	2.7
24	DC	191	THR	2.7
29	DH	62	LEU	2.7
33	CM	94	THR	2.7
1	AA	1018	G	2.7
5	BE	54	ARG	2.7
8	BH	21	ASN	2.7
14	BN	85	ARG	2.7
17	BQ	11	ARG	2.7
22	CA	1530	G	2.7
24	CC	156	ARG	2.7
25	CD	193	VAL	2.7
26	CE	162	ARG	2.7
37	CQ	86	VAL	2.7
45	CY	74	ARG	2.7
48	C1	17	ARG	2.7
13	BM	49	SER	2.7
22	CA	2131	U	2.7
24	CC	272	SER	2.7
3	BC	75	ILE	2.7
15	BO	36	ILE	2.7
22	CA	1532	A	2.7
18	BR	74	HIS	2.7
35	DO	16	HIS	2.7
38	CR	9	ILE	2.7
44	DX	37	ILE	2.7
47	C0	5	ILE	2.7
10	AJ	33	GLY	2.7
11	AK	43	GLY	2.7
36	CP	17	LYS	2.7
37	CQ	29	LYS	2.7
43	CW	37	PRO	2.7
51	D4	2	PRO	2.7
1	BA	1364	U	2.7
9	BI	121	ALA	2.7
33	CM	138	ALA	2.7
35	CO	108	ALA	2.7
40	CT	56	ALA	2.7
2	AB	120	GLN	2.7
10	AJ	20	GLN	2.7
53	DA	285	G	2.7
53	DA	2128	G	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
5	AE	24	THR	2.7
14	BN	59	ARG	2.7
48	D1	13	ARG	2.7
2	AB	161	LEU	2.7
24	CC	202	LEU	2.7
25	CD	188	LEU	2.7
31	DK	109	LEU	2.7
32	DL	8	LEU	2.7
51	D4	44	LEU	2.7
22	CA	897	C	2.6
4	BD	25	VAL	2.6
5	BE	25	VAL	2.6
25	CD	29	VAL	2.6
29	CH	87	GLU	2.6
31	CK	73	VAL	2.6
37	DQ	26	VAL	2.6
48	C1	11	SER	2.6
2	AB	115	LYS	2.6
24	CC	188	CYS	2.6
35	CO	42	LYS	2.6
44	CX	72	LYS	2.6
1	BA	203	G	2.6
24	CC	241	GLY	2.6
24	DC	12	GLY	2.6
31	DK	107	GLY	2.6
4	AD	46	PRO	2.6
4	AD	141	ASP	2.6
10	AJ	8	ILE	2.6
16	BP	41	PRO	2.6
24	DC	218	PRO	2.6
51	C4	32	ILE	2.6
22	CA	1088	A	2.6
53	DA	2184	A	2.6
1	BA	1208	C	2.6
2	BB	83	ALA	2.6
24	DC	208	ALA	2.6
33	DM	66	PHE	2.6
46	CZ	52	ARG	2.6
47	C0	53	PHE	2.6
1	BA	1341	U	2.6
20	AT	40	GLU	2.6
25	CD	88	GLU	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	CM	136	GLU	2.6
19	AS	29	LYS	2.6
24	CC	38	SER	2.6
35	CO	65	LEU	2.6
51	C4	31	HIS	2.6
53	DA	2159	G	2.6
22	CA	1103	A	2.6
11	AK	16	VAL	2.6
13	AM	64	VAL	2.6
5	BE	119	GLY	2.6
11	BK	19	GLY	2.6
22	CA	437	U	2.6
43	CW	77	VAL	2.6
24	CC	196	GLY	2.6
31	CK	51	GLY	2.6
38	CR	102	ASP	2.6
41	CU	48	GLN	2.6
53	DA	897	C	2.6
9	AI	45	ARG	2.6
32	CL	31	ARG	2.6
11	BK	34	ILE	2.6
17	BQ	33	ILE	2.6
38	CR	74	ILE	2.6
10	AJ	21	ALA	2.6
24	CC	76	ALA	2.6
25	CD	209	ALA	2.6
51	D4	11	ALA	2.6
9	AI	68	LYS	2.6
13	BM	103	LYS	2.6
1	AA	1441	A	2.6
1	BA	1294	G	2.6
22	CA	1224	U	2.6
54	DD	154	LYS	2.6
7	AG	133	THR	2.6
14	BN	6	MET	2.6
34	CN	82	MET	2.6
50	C3	4	THR	2.6
8	BH	92	LEU	2.6
31	DK	36	LEU	2.6
43	CW	88	HIS	2.6
6	BF	68	GLN	2.6
3	BC	59	ARG	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
18	AR	43	ARG	2.6
24	CC	235	GLY	2.6
26	DE	56	GLY	2.6
54	DD	124	ARG	2.6
54	DD	195	GLY	2.6
1	BA	1313	U	2.6
5	AE	88	VAL	2.6
22	CA	1466	U	2.6
31	DK	74	TYR	2.6
33	DM	46	VAL	2.6
37	CQ	70	VAL	2.6
42	CV	93	VAL	2.6
43	CW	47	VAL	2.6
44	DX	38	VAL	2.6
48	C1	48	TYR	2.6
1	BA	1332	A	2.6
22	CA	1543	G	2.6
1	BA	840	C	2.6
53	DA	2177	C	2.6
4	BD	132	ILE	2.6
7	AG	128	ALA	2.6
15	BO	30	ALA	2.6
17	BQ	38	ILE	2.6
24	CC	190	ALA	2.6
26	CE	39	ALA	2.6
29	CH	102	ALA	2.6
37	CQ	49	ALA	2.6
40	DT	96	ILE	2.6
47	D0	14	ILE	2.6
52	C5	26	ILE	2.6
55	DI	10	ALA	2.6
22	CA	1061	U	2.6
54	DD	133	THR	2.6
16	AP	63	GLN	2.6
17	AQ	47	HIS	2.6
11	BK	90	GLY	2.6
13	AM	84	GLY	2.6
8	AH	40	LEU	2.6
16	BP	12	LYS	2.6
22	CA	291	G	2.6
50	C3	38	GLY	2.6
31	CK	61	LYS	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	DM	19	LEU	2.6
51	C4	12	LYS	2.6
53	DA	359	G	2.6
5	BE	18	VAL	2.6
14	BN	45	VAL	2.6
29	CH	146	VAL	2.6
41	DU	16	VAL	2.6
38	CR	25	TYR	2.6
3	BC	160	ALA	2.6
22	CA	101	A	2.6
25	CD	75	ALA	2.6
51	D4	37	ALA	2.6
2	BB	173	ILE	2.6
38	DR	37	GLN	2.6
3	AC	169	ARG	2.6
5	AE	162	GLU	2.6
6	AF	98	GLU	2.6
11	BK	56	ARG	2.6
15	BO	17	ARG	2.6
39	DS	78	ARG	2.6
41	CU	12	ARG	2.6
49	C2	9	ILE	2.6
1	BA	1321	U	2.6
24	DC	263	THR	2.6
34	CN	132	THR	2.6
2	AB	184	PHE	2.6
27	CF	72	LYS	2.6
29	DH	8	LYS	2.6
32	CL	79	PHE	2.6
38	CR	22	LYS	2.6
38	CR	93	LYS	2.6
39	CS	35	PHE	2.6
9	AI	8	GLY	2.6
12	BL	92	GLY	2.6
24	CC	41	GLY	2.6
1	BA	478	A	2.6
20	AT	86	LEU	2.6
33	CM	56	PRO	2.6
22	CA	653	U	2.6
1	BA	1305	G	2.6
29	DH	115	VAL	2.6
3	BC	161	GLU	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
16	BP	18	GLN	2.6
43	CW	12	GLN	2.6
7	AG	53	ARG	2.6
9	BI	80	ARG	2.6
24	CC	63	ARG	2.6
7	BG	41	SER	2.6
14	AN	58	SER	2.6
16	BP	27	ALA	2.6
33	DM	42	SER	2.6
28	DG	111	HIS	2.6
1	BA	1008	U	2.6
1	BA	1375	A	2.6
3	AC	207	ILE	2.6
24	CC	135	ILE	2.6
25	CD	2	ILE	2.6
26	DE	43	THR	2.6
37	DQ	48	ILE	2.6
3	BC	2	GLY	2.6
30	DJ	16	GLY	2.6
33	CM	45	GLY	2.6
33	DM	32	GLY	2.6
53	DA	355	U	2.6
35	CO	107	ASN	2.6
39	CS	53	PHE	2.6
53	DA	1728	C	2.6
1	AA	1033	G	2.6
1	BA	1268	G	2.6
21	BU	2	PRO	2.6
22	CA	2304	G	2.6
53	DA	2186	G	2.6
2	AB	78	GLU	2.6
29	CH	114	GLU	2.6
9	AI	62	ASP	2.5
11	AK	72	ASP	2.5
11	BK	72	ASP	2.5
14	BN	66	GLN	2.6
16	BP	25	ARG	2.5
24	CC	43	ARG	2.5
35	CO	30	ARG	2.5
39	CS	84	ARG	2.5
46	CZ	2	LYS	2.5
54	DD	123	LYS	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	BA	78	A	2.5
1	BA	179	A	2.5
2	AB	196	VAL	2.5
2	BB	70	VAL	2.5
37	DQ	47	VAL	2.5
1	BA	1137	C	2.5
6	BF	58	HIS	2.5
19	AS	25	SER	2.5
20	BT	68	HIS	2.5
24	CC	230	HIS	2.5
25	CD	174	SER	2.5
34	CN	121	ALA	2.5
10	AJ	65	TYR	2.5
1	BA	457	G	2.5
5	AE	79	GLY	2.5
26	DE	84	THR	2.5
47	D0	10	THR	2.5
50	D3	1	MET	2.5
48	C1	6	ASN	2.5
25	CD	17	GLU	2.5
2	BB	227	GLN	2.5
10	AJ	43	PRO	2.5
22	CA	89	A	2.5
22	CA	1385	A	2.5
26	CE	106	LYS	2.5
34	CN	133	LYS	2.5
38	CR	57	PHE	2.5
49	D2	30	LYS	2.5
5	BE	36	LEU	2.5
44	DX	59	LEU	2.5
22	CA	153	U	2.5
22	CA	289	G	2.5
22	CA	1743	G	2.5
22	CA	2111	U	2.5
8	AH	25	VAL	2.5
25	CD	189	VAL	2.5
55	DI	108	VAL	2.5
43	DW	67	GLY	2.5
11	AK	46	THR	2.5
14	BN	89	MET	2.5
36	CP	24	THR	2.5
55	DI	80	THR	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	BA	1140	C	2.5
2	AB	174	LYS	2.5
10	AJ	82	LYS	2.5
10	BJ	82	LYS	2.5
24	DC	111	LYS	2.5
32	CL	67	LYS	2.5
39	DS	76	LYS	2.5
53	DA	1076	C	2.5
19	AS	55	ARG	2.5
24	CC	153	GLN	2.5
28	DG	166	ASP	2.5
33	DM	21	ARG	2.5
33	DM	48	ARG	2.5
38	DR	28	ARG	2.5
17	BQ	5	ILE	2.5
32	DL	2	ILE	2.5
1	BA	202	G	2.5
1	BA	474	G	2.5
33	CM	50	PHE	2.5
44	DX	69	PHE	2.5
1	BA	1209	C	2.5
27	CF	73	SER	2.5
45	CY	2	SER	2.5
32	DL	123	LEU	2.5
35	DO	38	LEU	2.5
47	C0	34	HIS	2.5
5	BE	108	GLY	2.5
26	DE	50	ALA	2.5
26	DE	87	ALA	2.5
31	DK	112	GLY	2.5
33	CM	20	GLY	2.5
34	CN	113	ALA	2.5
35	DO	26	GLY	2.5
37	DQ	49	ALA	2.5
38	CR	67	ALA	2.5
48	C1	47	GLY	2.5
51	D4	27	ALA	2.5
2	BB	163	VAL	2.5
11	BK	86	VAL	2.5
25	CD	91	THR	2.5
39	DS	79	ARG	2.5
26	CE	176	ASP	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	DG	47	ASP	2.5
1	BA	1034	G	2.5
22	CA	1587	G	2.5
22	CA	1048	A	2.5
24	CC	103	TYR	2.5
49	C2	49	TYR	2.5
1	BA	91	U	2.5
22	CA	1531	C	2.5
31	DK	9	GLU	2.5
3	BC	154	SER	2.5
25	CD	116	LYS	2.5
47	C0	12	SER	2.5
1	AA	468	A	2.5
1	BA	89	U	2.5
1	BA	844	G	2.5
1	BA	1002	G	2.5
1	BA	1005	A	2.5
7	AG	22	LEU	2.5
18	AR	29	LEU	2.5
19	BS	34	TRP	2.5
24	CC	238	ARG	2.5
25	CD	175	LEU	2.5
35	CO	8	ARG	2.5
37	CQ	21	ARG	2.5
45	CY	11	ARG	2.5
50	D3	31	LEU	2.5
8	BH	116	ALA	2.5
24	DC	224	ALA	2.5
25	CD	39	ASP	2.5
32	CL	37	ASP	2.5
33	CM	9	ALA	2.5
5	AE	56	VAL	2.5
24	DC	173	THR	2.5
24	DC	225	MET	2.5
25	CD	172	VAL	2.5
31	DK	118	MET	2.5
34	CN	134	THR	2.5
38	DR	8	VAL	2.5
40	CT	72	THR	2.5
13	BM	112	PRO	2.5
8	BH	50	LYS	2.5
14	AN	28	LYS	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	2130	U	2.5
24	CC	62	TYR	2.5
31	CK	23	LYS	2.5
38	CR	24	TYR	2.5
1	BA	1167	A	2.5
3	BC	176	HIS	2.5
5	BE	60	ILE	2.5
8	BH	125	ILE	2.5
16	AP	75	ILE	2.5
17	AQ	38	ILE	2.5
22	CA	619	G	2.5
22	CA	1062	G	2.5
22	CA	1420	A	2.5
22	CA	1551	A	2.5
24	CC	44	ASN	2.5
24	DC	272	SER	2.5
39	CS	98	ILE	2.5
51	D4	32	ILE	2.5
4	AD	182	PHE	2.5
7	BG	113	ASP	2.5
33	CM	88	GLY	2.5
44	DX	45	PHE	2.5
24	DC	158	ALA	2.5
28	CG	5	ALA	2.5
44	DX	18	ALA	2.5
51	C4	33	LEU	2.5
39	CS	48	LYS	2.5
44	CX	24	LYS	2.5
20	BT	35	VAL	2.5
22	CA	1046	A	2.5
22	CA	2143	C	2.5
22	CA	2186	G	2.5
13	AM	87	ARG	2.5
24	DC	60	GLN	2.5
31	CK	86	GLN	2.5
1	BA	989	U	2.5
35	CO	16	HIS	2.5
37	CQ	113	ARG	2.5
3	BC	187	SER	2.5
50	C3	8	SER	2.5
32	CL	73	ASP	2.5
10	AJ	27	GLU	2.5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
31	DK	83	GLY	2.5
33	DM	44	GLY	2.5
49	C2	51	GLU	2.5
1	AA	1011	C	2.5
22	CA	1730	C	2.5
33	DM	29	LYS	2.5
53	DA	140	C	2.5
3	BC	113	ALA	2.5
18	BR	27	ALA	2.5
31	DK	117	ALA	2.5
10	AJ	90	LEU	2.4
25	CD	51	THR	2.4
37	CQ	55	LEU	2.4
48	C1	9	THR	2.4
52	C5	1	MET	2.4
2	AB	210	VAL	2.4
3	AC	88	ARG	2.4
20	AT	61	GLN	2.4
21	BU	17	ARG	2.4
24	DC	221	ARG	2.4
26	CE	195	GLN	2.4
37	CQ	41	GLN	2.4
40	CT	18	ARG	2.4
40	CT	71	VAL	2.4
2	AB	15	HIS	2.4
20	BT	21	ASN	2.4
24	DC	58	HIS	2.4
22	CA	1552	A	2.4
1	AA	4	U	2.4
22	CA	1462	C	2.4
9	BI	100	LYS	2.4
31	DK	82	GLY	2.4
33	DM	24	GLY	2.4
4	BD	64	ILE	2.4
1	BA	1275	A	2.4
1	BA	1324	A	2.4
2	AB	46	THR	2.4
24	DC	227	PRO	2.4
40	DT	80	PRO	2.4
3	BC	19	ASN	2.4
9	BI	107	ASP	2.4
11	BK	18	ASP	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
12	BL	73	ASN	2.4
47	C0	27	LEU	2.4
54	DD	126	ASN	2.4
12	BL	77	HIS	2.4
24	CC	58	HIS	2.4
31	CK	132	HIS	2.4
8	BH	34	VAL	2.4
32	CL	114	LYS	2.4
39	CS	24	LYS	2.4
51	C4	3	LYS	2.4
26	DE	64	GLY	2.4
45	CY	75	GLY	2.4
22	CA	278	A	2.4
1	BA	1141	C	2.4
53	DA	2145	C	2.4
2	AB	207	ILE	2.4
4	AD	28	ILE	2.4
5	AE	60	ILE	2.4
6	BF	98	GLU	2.4
8	BH	75	ILE	2.4
13	AM	59	GLU	2.4
31	CK	103	ILE	2.4
38	CR	3	ARG	2.4
3	BC	48	ALA	2.4
34	CN	94	ALA	2.4
38	DR	63	ALA	2.4
51	D4	48	ALA	2.4
22	CA	1458	U	2.4
25	CD	103	ASP	2.4
27	DF	147	ASP	2.4
35	DO	109	PRO	2.4
37	CQ	37	LYS	2.4
39	CS	73	LYS	2.4
41	CU	33	LYS	2.4
51	C4	39	LYS	2.4
54	DD	11	MET	2.4
10	BJ	49	PHE	2.4
53	DA	284	U	2.4
53	DA	1729	U	2.4
5	AE	11	LEU	2.4
24	CC	88	SER	2.4
24	CC	130	LEU	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	AA	1028	C	2.4
1	BA	841	C	2.4
22	CA	1086	A	2.4
22	CA	1735	A	2.4
2	BB	196	VAL	2.4
3	BC	66	VAL	2.4
25	CD	178	VAL	2.4
1	BA	4	U	2.4
10	AJ	4	GLN	2.4
18	BR	48	ARG	2.4
22	CA	545	U	2.4
22	CA	2796	U	2.4
23	CB	51	G	2.4
37	CQ	10	GLN	2.4
45	DY	18	ARG	2.4
55	DI	6	GLN	2.4
24	CC	18	LYS	2.4
2	BB	79	ALA	2.4
6	AF	36	ILE	2.4
12	AL	2	ALA	2.4
13	AM	2	ALA	2.4
22	CA	357	C	2.4
24	DC	106	ALA	2.4
26	CE	68	ALA	2.4
35	DO	25	ALA	2.4
38	CR	118	ALA	2.4
41	CU	20	ALA	2.4
10	AJ	88	MET	2.4
15	BO	51	HIS	2.4
19	AS	66	MET	2.4
45	CY	64	ILE	2.4
24	CC	263	THR	2.4
26	CE	65	THR	2.4
1	BA	992	U	2.4
18	AR	36	SER	2.4
35	CO	67	PHE	2.4
7	AG	60	GLU	2.4
7	BG	74	GLU	2.4
17	AQ	8	LEU	2.4
17	BQ	18	GLU	2.4
43	CW	86	LEU	2.4
3	AC	72	ARG	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
14	AN	24	ARG	2.4
24	CC	52	ARG	2.4
24	CC	4	VAL	2.4
24	CC	137	VAL	2.4
22	CA	184	C	2.4
22	CA	274	C	2.4
1	AA	843	U	2.4
3	BC	93	ASP	2.4
22	CA	290	U	2.4
22	CA	1487	U	2.4
22	CA	2833	U	2.4
7	AG	122	ASN	2.4
11	BK	101	ASN	2.4
24	CC	89	ALA	2.4
25	CD	196	ALA	2.4
27	DF	26	MET	2.4
31	DK	47	HIS	2.4
38	DR	12	ALA	2.4
51	C4	48	ALA	2.4
2	BB	171	ILE	2.4
3	BC	10	ILE	2.4
22	CA	1465	G	2.4
32	DL	7	MET	2.4
5	AE	128	TYR	2.4
16	BP	17	TYR	2.4
24	CC	259	SER	2.4
26	DE	77	ILE	2.4
37	CQ	19	SER	2.4
37	CQ	31	TRP	2.4
38	DR	29	SER	2.4
40	CT	52	GLU	2.4
9	AI	119	ARG	2.4
15	BO	64	ARG	2.4
21	AU	18	ARG	2.4
22	CA	1590	A	2.4
22	CA	2804	U	2.4
29	CH	50	ARG	2.4
32	CL	81	GLY	2.4
33	DM	33	ARG	2.4
35	DO	101	GLY	2.4
36	CP	86	GLY	2.4
37	CQ	45	GLY	2.4

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
38	DR	30	ARG	2.4
54	DD	130	GLN	2.4
24	CC	125	LYS	2.4
28	CG	109	PHE	2.4
50	D3	42	LEU	2.4
13	AM	11	ASP	2.4
24	CC	168	ASP	2.4
46	CZ	53	VAL	2.4
1	BA	1221	G	2.4
24	CC	8	PRO	2.4
39	CS	31	GLU	2.4
24	CC	15	HIS	2.4
5	BE	32	SER	2.4
5	BE	147	MET	2.4
6	BF	95	ALA	2.4
2	AB	222	ARG	2.4
9	AI	49	ARG	2.4
9	BI	99	ARG	2.4
15	BO	2	SER	2.4
15	BO	73	LYS	2.4
33	CM	13	LYS	2.4
37	DQ	65	SER	2.4
48	D1	16	ARG	2.4
51	C4	16	LYS	2.4
54	DD	159	LYS	2.4
26	DE	42	GLY	2.4
5	BE	16	ILE	2.4
9	BI	30	ILE	2.4
25	CD	22	ILE	2.4
35	CO	97	ILE	2.4
40	DT	74	ILE	2.4
43	CW	40	ILE	2.4
48	C1	49	TYR	2.4
53	DA	2131	U	2.4
18	AR	25	ASP	2.4
22	CA	488	G	2.4
22	CA	1383	A	2.3
22	CA	1733	G	2.4
22	CA	2801	G	2.4
43	DW	66	ASP	2.4
8	AH	38	ASN	2.3
2	AB	52	GLU	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
28	CG	155	GLU	2.3
29	CH	5	LEU	2.3
38	CR	60	LEU	2.3
48	D1	39	LEU	2.3
49	D2	32	GLU	2.3
13	BM	91	HIS	2.3
22	CA	1173	U	2.3
24	CC	200	HIS	2.3
26	CE	47	LYS	2.3
35	DO	40	LYS	2.3
37	CQ	38	LYS	2.3
33	DM	60	ARG	2.3
38	CR	51	ARG	2.3
38	CR	70	ARG	2.3
40	DT	102	HIS	2.3
7	AG	127	ALA	2.3
21	AU	26	ALA	2.3
21	AU	30	ALA	2.3
33	DM	16	GLY	2.3
33	DM	45	GLY	2.3
35	DO	24	MET	2.3
36	DP	57	ALA	2.3
1	BA	87	C	2.3
1	BA	1257	A	2.3
22	CA	1238	G	2.3
23	CB	52	A	2.3
46	DZ	62	GLY	2.3
7	BG	12	ILE	2.3
16	BP	26	ASN	2.3
22	CA	102	U	2.3
22	CA	360	U	2.3
24	DC	91	ILE	2.3
46	CZ	13	GLU	2.3
25	CD	204	LYS	2.3
34	CN	14	LYS	2.3
54	DD	157	LYS	2.3
2	BB	19	GLN	2.3
18	AR	55	LEU	2.3
24	DC	240	PHE	2.3
31	DK	4	PHE	2.3
47	D0	53	PHE	2.3
22	CA	1070	A	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	1713	A	2.3
12	BL	28	PRO	2.3
24	DC	200	HIS	2.3
22	CA	2286	G	2.3
25	CD	205	PRO	2.3
30	DJ	26	PRO	2.3
47	D0	18	PRO	2.3
24	CC	20	VAL	2.3
25	CD	107	VAL	2.3
25	CD	203	VAL	2.3
25	CD	207	VAL	2.3
28	DG	10	VAL	2.3
34	CN	93	VAL	2.3
3	BC	134	MET	2.3
16	AP	22	ALA	2.3
24	CC	47	GLY	2.3
26	DE	54	GLY	2.3
30	DJ	32	GLY	2.3
33	CM	25	SER	2.3
35	CO	91	ALA	2.3
18	BR	47	THR	2.3
26	CE	84	THR	2.3
28	DG	173	GLU	2.3
37	CQ	11	GLU	2.3
16	BP	79	ASN	2.3
25	CD	136	ASN	2.3
26	CE	185	LYS	2.3
31	CK	121	LYS	2.3
48	D1	57	LYS	2.3
10	AJ	16	ARG	2.3
15	BO	72	ARG	2.3
16	BP	33	ILE	2.3
24	DC	49	ILE	2.3
53	DA	1869	G	2.3
7	AG	66	LEU	2.3
27	DF	99	PHE	2.3
33	CM	64	PHE	2.3
34	CN	112	LEU	2.3
1	BA	271	C	2.3
1	BA	1023	U	2.3
1	BA	1363	A	2.3
3	BC	195	VAL	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
38	DR	4	VAL	2.3
42	CV	23	GLY	2.3
21	BU	5	LYS	2.3
22	CA	354	A	2.3
22	CA	1866	A	2.3
23	CB	40	U	2.3
9	AI	16	ALA	2.3
23	CB	59	A	2.3
51	D4	58	VAL	2.3
33	DM	39	LYS	2.3
35	DO	5	LYS	2.3
37	CQ	87	LYS	2.3
40	DT	93	ALA	2.3
29	CH	119	ASN	2.3
31	CK	70	THR	2.3
1	AA	1024	G	2.3
22	CA	175	G	2.3
22	CA	230	G	2.3
20	BT	55	GLN	2.3
24	CC	133	ARG	2.3
24	DC	177	ARG	2.3
38	CR	53	ARG	2.3
38	DR	58	ARG	2.3
13	AM	17	ILE	2.3
21	BU	24	GLU	2.3
26	DE	16	GLU	2.3
29	CH	76	GLU	2.3
44	DX	80	ILE	2.3
48	D1	19	HIS	2.3
22	CA	353	C	2.3
53	DA	142	A	2.3
24	CC	247	PRO	2.3
24	DC	11	PRO	2.3
27	DF	144	ASP	2.3
28	DG	16	ASP	2.3
8	BH	65	TYR	2.3
3	BC	124	LEU	2.3
4	AD	159	LEU	2.3
5	BE	124	LEU	2.3
7	AG	55	GLY	2.3
14	AN	74	LEU	2.3
19	AS	71	LEU	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
19	BS	10	PHE	2.3
22	CA	543	G	2.3
25	CD	138	LEU	2.3
31	CK	72	LYS	2.3
35	CO	54	LEU	2.3
35	CO	105	GLY	2.3
49	C2	25	LYS	2.3
54	DD	113	SER	2.3
37	DQ	59	PHE	2.3
25	CD	126	ASN	2.3
1	BA	991	U	2.3
5	BE	35	ALA	2.3
6	AF	89	VAL	2.3
9	AI	113	ARG	2.3
14	BN	87	ALA	2.3
16	BP	2	VAL	2.3
24	DC	219	THR	2.3
25	CD	124	ARG	2.3
26	DE	78	TRP	2.3
28	DG	13	ALA	2.3
31	CK	35	ARG	2.3
34	DN	94	ALA	2.3
35	DO	12	ARG	2.3
48	C1	30	VAL	2.3
35	DO	37	THR	2.3
37	CQ	104	THR	2.3
9	AI	92	GLU	2.3
22	CA	1726	C	2.3
23	CB	28	C	2.3
45	CY	5	CYS	2.3
3	BC	190	HIS	2.3
1	BA	1041	G	2.3
18	AR	72	ASP	2.3
49	C2	19	HIS	2.3
29	CH	35	LYS	2.3
33	CM	36	LYS	2.3
54	DD	116	LYS	2.3
5	AE	57	PRO	2.3
16	AP	42	ILE	2.3
24	CC	267	ILE	2.3
40	CT	53	SER	2.3
40	DT	4	ILE	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
47	C0	48	ILE	2.3
2	AB	155	GLY	2.3
26	DE	71	GLY	2.3
33	CM	11	GLY	2.3
44	CX	28	GLY	2.3
46	CZ	62	GLY	2.3
1	BA	1317	C	2.3
9	BI	12	ARG	2.3
13	AM	95	LEU	2.3
31	DK	114	LEU	2.3
35	CO	64	ARG	2.3
35	DO	69	ARG	2.3
41	CU	84	TYR	2.3
3	BC	141	ALA	2.3
4	BD	72	PHE	2.3
8	BH	45	PHE	2.3
11	AK	73	ALA	2.3
32	DL	79	PHE	2.3
40	DT	86	MET	2.3
45	CY	53	ALA	2.3
49	C2	39	PHE	2.3
2	AB	4	VAL	2.3
4	BD	67	VAL	2.3
8	AH	34	VAL	2.3
11	BK	96	THR	2.3
16	AP	78	VAL	2.3
18	BR	40	VAL	2.3
24	CC	16	VAL	2.3
24	DC	50	THR	2.3
24	DC	246	THR	2.3
31	DK	105	VAL	2.3
45	CY	51	VAL	2.3
51	C4	6	THR	2.3
2	AB	37	LYS	2.3
6	BF	42	TRP	2.3
1	AA	1022	A	2.3
53	DA	1088	A	2.3
1	BA	723	U	2.3
3	AC	98	PRO	2.3
50	D3	7	PRO	2.3
9	AI	70	GLY	2.3
26	DE	82	GLY	2.3

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
33	DM	53	GLY	2.3
34	CN	29	GLY	2.3
37	CQ	103	ARG	2.3
24	DC	116	ILE	2.3
36	CP	8	ILE	2.3
37	CQ	50	ILE	2.3
44	CX	37	ILE	2.3
1	BA	1215	G	2.2
3	AC	47	LEU	2.2
6	BF	62	MET	2.2
29	CH	30	LEU	2.2
31	CK	114	LEU	2.2
35	CO	99	LYS	2.2
39	CS	28	ALA	2.2
40	CT	70	LYS	2.2
40	DT	69	LEU	2.2
47	D0	47	MET	2.2
50	C3	10	LEU	2.2
50	D3	22	MET	2.2
51	C4	11	ALA	2.2
52	C5	18	LYS	2.2
1	AA	210	C	2.2
1	BA	956	U	2.2
3	BC	23	PHE	2.2
22	CA	894	U	2.2
22	CA	1069	A	2.2
22	CA	2794	C	2.2
47	C0	23	THR	2.2
49	D2	29	THR	2.2
3	BC	173	VAL	2.2
8	BH	95	VAL	2.2
29	CH	103	VAL	2.2
33	CM	110	VAL	2.2
37	CQ	61	VAL	2.2
40	DT	45	VAL	2.2
54	DD	9	VAL	2.2
40	CT	60	HIS	2.2
32	CL	49	ARG	2.2
33	DM	41	ARG	2.2
36	CP	33	ARG	2.2
24	CC	12	GLY	2.2
34	DN	92	TRP	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
51	D4	9	GLY	2.2
1	AA	203	G	2.2
22	CA	1408	G	2.2
1	BA	1211	U	2.2
1	AA	80	A	2.2
1	AA	1038	C	2.2
2	AB	28	LYS	2.2
22	CA	366	C	2.2
39	CS	71	LYS	2.2
40	CT	6	LYS	2.2
3	AC	55	ILE	2.2
25	CD	161	MET	2.2
26	CE	184	ASP	2.2
12	AL	7	LEU	2.2
15	BO	31	LEU	2.2
27	DF	2	ALA	2.2
29	DH	106	ALA	2.2
31	CK	33	ALA	2.2
35	DO	28	LEU	2.2
38	DR	60	LEU	2.2
40	DT	5	ALA	2.2
54	DD	196	ALA	2.2
54	DD	201	LEU	2.2
6	BF	16	GLU	2.2
11	BK	83	GLU	2.2
14	AN	20	TYR	2.2
26	CE	152	GLU	2.2
31	DK	80	HIS	2.2
8	AH	39	VAL	2.2
9	AI	123	ARG	2.2
14	BN	90	ARG	2.2
17	AQ	13	VAL	2.2
22	CA	1860	G	2.2
24	CC	195	VAL	2.2
36	CP	13	ARG	2.2
47	D0	51	VAL	2.2
51	C4	50	VAL	2.2
22	CA	482	A	2.2
24	CC	46	ASN	2.2
53	DA	2142	A	2.2
18	BR	37	GLY	2.2
24	DC	88	SER	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
24	DC	138	GLY	2.2
24	DC	151	GLY	2.2
40	CT	27	LYS	2.2
51	C4	46	PRO	2.2
22	CA	2187	U	2.2
1	BA	145	G	2.2
1	BA	1300	G	2.2
12	BL	76	GLU	2.2
22	CA	220	G	2.2
25	CD	146	ILE	2.2
32	CL	95	ILE	2.2
42	CV	10	GLU	2.2
3	AC	61	ALA	2.2
4	BD	2	ALA	2.2
16	BP	7	ALA	2.2
24	CC	186	ALA	2.2
26	CE	161	ALA	2.2
37	CQ	56	HIS	2.2
38	DR	44	GLN	2.2
41	CU	38	ALA	2.2
47	D0	13	ALA	2.2
47	D0	54	MET	2.2
4	AD	110	THR	2.2
4	BD	86	THR	2.2
24	CC	160	THR	2.2
51	D4	13	ARG	2.2
51	D4	24	HIS	2.2
2	AB	144	LEU	2.2
4	AD	98	LEU	2.2
4	BD	91	LEU	2.2
12	BL	24	LEU	2.2
11	BK	40	ASN	2.2
33	CM	39	LYS	2.2
45	DY	16	ASN	2.2
9	BI	29	VAL	2.2
11	BK	129	VAL	2.2
14	AN	45	VAL	2.2
14	AN	72	GLY	2.2
31	CK	64	VAL	2.2
32	CL	100	PHE	2.2
31	DK	110	PRO	2.2
32	DL	28	SER	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
34	DN	89	VAL	2.2
36	DP	97	PHE	2.2
24	DC	131	PRO	2.2
38	DR	39	VAL	2.2
54	DD	120	GLY	2.2
1	BA	76	G	2.2
2	BB	88	ASP	2.2
10	BJ	63	ASP	2.2
22	CA	1507	C	2.2
22	CA	367	G	2.2
22	CA	1077	A	2.2
22	CA	1182	G	2.2
22	CA	1456	G	2.2
23	CB	16	G	2.2
26	DE	7	ASP	2.2
53	DA	1071	G	2.2
55	DI	65	GLU	2.2
4	AD	146	ARG	2.2
10	BJ	62	ARG	2.2
26	CE	44	ARG	2.2
10	BJ	46	LYS	2.2
38	CR	19	LYS	2.2
40	CT	86	MET	2.2
47	D0	20	HIS	2.2
6	BF	36	ILE	2.2
7	AG	51	ALA	2.2
7	AG	104	ILE	2.2
11	BK	99	ALA	2.2
12	BL	59	ASN	2.2
24	DC	155	ALA	2.2
26	DE	68	ALA	2.2
27	DF	155	THR	2.2
35	CO	75	ILE	2.2
44	CX	76	ASN	2.2
47	D0	50	ALA	2.2
49	D2	54	ILE	2.2
7	AG	30	LEU	2.2
8	BH	68	GLY	2.2
10	BJ	42	LEU	2.2
12	BL	7	LEU	2.2
16	AP	62	GLY	2.2
17	BQ	35	GLY	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	1505	A	2.2
24	DC	196	GLY	2.2
24	DC	222	GLY	2.2
33	CM	24	GLY	2.2
40	DT	36	LEU	2.2
51	C4	55	LEU	2.2
1	BA	838	G	2.2
22	CA	2308	G	2.2
23	CB	9	G	2.2
23	CB	33	G	2.2
33	CM	40	SER	2.2
5	BE	114	VAL	2.2
7	AG	89	VAL	2.2
9	AI	19	VAL	2.2
11	BK	20	VAL	2.2
17	AQ	76	VAL	2.2
26	DE	83	VAL	2.2
28	DG	17	VAL	2.2
32	CL	10	VAL	2.2
42	CV	89	ASP	2.2
50	C3	44	VAL	2.2
4	AD	154	ARG	2.2
18	BR	57	ARG	2.2
24	CC	175	ARG	2.2
25	CD	7	LYS	2.2
32	CL	18	ARG	2.2
34	CN	40	ARG	2.2
48	C1	13	ARG	2.2
50	C3	46	LYS	2.2
1	BA	88	U	2.2
1	BA	1218	C	2.2
22	CA	1079	C	2.2
53	DA	276	U	2.2
37	CQ	77	HIS	2.2
16	BP	29	ASN	2.2
5	BE	118	ALA	2.2
22	CA	43	G	2.2
51	D4	49	MET	2.2
5	AE	65	GLU	2.2
15	AO	6	GLU	2.2
20	BT	30	THR	2.2
21	BU	42	THR	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
24	DC	140	THR	2.2
26	DE	86	ALA	2.2
49	D2	17	THR	2.2
55	DI	39	THR	2.2
37	CQ	69	GLY	2.2
2	AB	29	PRO	2.2
2	BB	153	ASP	2.2
6	BF	47	LEU	2.2
24	CC	154	LEU	2.2
24	DC	110	LEU	2.2
37	DQ	97	LEU	2.2
38	CR	83	LEU	2.2
47	D0	24	LEU	2.2
53	DA	2106	U	2.2
54	DD	175	LEU	2.2
55	DI	60	LEU	2.2
3	BC	72	ARG	2.2
24	CC	36	LYS	2.2
11	BK	64	GLN	2.2
22	CA	1504	A	2.2
24	CC	217	ARG	2.2
33	DM	36	LYS	2.2
38	CR	16	LYS	2.2
26	DE	90	GLN	2.2
50	C3	34	ARG	2.2
37	DQ	73	VAL	2.2
47	C0	36	VAL	2.2
49	C2	20	PHE	2.2
5	BE	77	ASN	2.2
24	CC	142	HIS	2.2
2	BB	78	GLU	2.2
43	CW	55	GLU	2.2
46	CZ	12	GLU	2.2
24	CC	225	MET	2.2
1	BA	1249	C	2.2
2	AB	160	ALA	2.2
2	AB	188	ASP	2.2
10	BJ	22	THR	2.2
10	BJ	50	THR	2.2
23	CB	3	C	2.2
23	CB	36	C	2.2
22	CA	38	A	2.2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
24	DC	233	GLY	2.2
29	DH	98	ASP	2.2
37	CQ	76	THR	2.2
50	D3	20	ALA	2.2
50	D3	27	GLY	2.2
3	BC	150	LYS	2.2
4	AD	177	LYS	2.2
24	DC	40	SER	2.2
26	CE	58	LYS	2.2
40	DT	81	SER	2.2
44	CX	66	LYS	2.2
53	DA	1871	A	2.2
2	BB	21	ARG	2.2
3	BC	139	GLN	2.1
9	BI	95	ARG	2.2
11	BK	69	ARG	2.2
16	BP	8	ARG	2.2
24	CC	189	ARG	2.2
38	CR	37	GLN	2.1
44	CX	74	PRO	2.2
48	C1	16	ARG	2.2
50	D3	34	ARG	2.2
5	AE	134	ILE	2.1
12	BL	82	ILE	2.1
18	AR	21	ILE	2.1
20	AT	39	ILE	2.1
35	DO	113	ILE	2.1
52	D5	23	ILE	2.1
1	BA	472	U	2.1
1	BA	1439	G	2.1
22	CA	1718	G	2.1
24	CC	81	LEU	2.1
40	DT	23	LEU	2.1
3	AC	66	VAL	2.1
4	BD	142	VAL	2.1
6	AF	52	ASN	2.1
17	BQ	76	VAL	2.1
26	DE	127	GLU	2.1
27	DF	114	PHE	2.1
29	DH	21	VAL	2.1
32	CL	24	VAL	2.1
1	AA	77	A	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	BA	1269	A	2.1
6	BF	25	TYR	2.1
14	AN	64	CYS	2.1
35	DO	3	HIS	2.1
49	C2	26	ASN	2.1
22	CA	256	A	2.1
11	BK	126	LYS	2.1
20	BT	54	MET	2.1
24	CC	187	ASP	2.1
37	DQ	96	LYS	2.1
39	DS	26	ASP	2.1
1	AA	211	G	2.1
1	BA	260	G	2.1
2	BB	86	SER	2.1
7	AG	150	ALA	2.1
11	AK	56	ARG	2.1
12	BL	106	GLY	2.1
20	BT	11	ALA	2.1
24	DC	41	GLY	2.1
31	CK	22	GLY	2.1
22	CA	51	G	2.1
34	CN	79	ALA	2.1
38	CR	46	ALA	2.1
38	CR	52	GLN	2.1
38	DR	46	ALA	2.1
40	DT	14	ALA	2.1
46	DZ	33	ALA	2.1
49	C2	14	SER	2.1
19	BS	9	PRO	2.1
32	CL	94	PRO	2.1
33	DM	62	PRO	2.1
1	BA	181	A	2.1
1	BA	1261	A	2.1
2	BB	181	ILE	2.1
53	DA	547	A	2.1
22	CA	667	U	2.1
2	BB	178	ASN	2.1
4	AD	21	LEU	2.1
4	BD	161	LEU	2.1
9	AI	87	LEU	2.1
46	CZ	19	LEU	2.1
51	D4	29	LEU	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
7	BG	11	LYS	2.1
52	C5	9	LYS	2.1
1	BA	165	G	2.1
1	BA	1131	G	2.1
2	BB	96	TRP	2.1
5	AE	46	VAL	2.1
14	AN	101	TRP	2.1
22	CA	1517	G	2.1
24	DC	248	TRP	2.1
25	CD	5	VAL	2.1
26	DE	60	TRP	2.1
34	CN	92	TRP	2.1
3	BC	184	TYR	2.1
13	AM	113	ARG	2.1
24	CC	13	ARG	2.1
24	CC	171	TYR	2.1
24	CC	258	ARG	2.1
25	CD	33	ARG	2.1
26	CE	94	GLN	2.1
36	CP	15	ARG	2.1
44	DX	26	PHE	2.1
39	CS	2	TYR	2.1
39	CS	80	ARG	2.1
51	D4	30	ARG	2.1
22	CA	2295	C	2.1
32	DL	1	MET	2.1
35	CO	101	GLY	2.1
41	CU	65	GLY	2.1
54	DD	111	GLY	2.1
22	CA	1204	A	2.1
6	AF	28	ALA	2.1
11	BK	33	THR	2.1
21	BU	26	ALA	2.1
28	DG	46	ALA	2.1
31	CK	6	ALA	2.1
24	CC	218	PRO	2.1
31	DK	113	PRO	2.1
1	BA	1331	G	2.1
22	CA	638	G	2.1
22	CA	1279	G	2.1
22	CA	1475	G	2.1
26	CE	130	LYS	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
34	CN	34	LYS	2.1
53	DA	287	G	2.1
1	BA	1237	C	2.1
2	AB	116	ASP	2.1
22	CA	40	U	2.1
22	CA	286	U	2.1
22	CA	2306	C	2.1
22	CA	2558	C	2.1
24	DC	121	ASP	2.1
53	DA	885	C	2.1
1	BA	77	A	2.1
22	CA	2837	A	2.1
38	DR	33	ARG	2.1
39	DS	80	ARG	2.1
50	C3	39	ARG	2.1
51	C4	44	LEU	2.1
38	CR	44	GLN	2.1
54	DD	164	GLN	2.1
3	AC	85	GLU	2.1
3	BC	200	VAL	2.1
5	AE	27	GLY	2.1
5	BE	51	GLY	2.1
6	AF	103	VAL	2.1
8	BH	91	GLU	2.1
16	BP	19	VAL	2.1
19	AS	67	VAL	2.1
24	DC	209	GLY	2.1
29	CH	48	GLU	2.1
38	CR	88	VAL	2.1
42	CV	16	GLY	2.1
42	CV	90	GLY	2.1
54	DD	10	GLY	2.1
1	BA	209	U	2.1
15	AO	25	THR	2.1
42	DV	51	ALA	2.1
40	CT	28	LYS	2.1
44	CX	58	THR	2.1
53	DA	286	U	2.1
17	BQ	30	LYS	2.1
11	AK	81	ASN	2.1
31	CK	71	ASP	2.1
14	AN	41	ARG	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
31	CK	76	HIS	2.1
32	CL	29	HIS	2.1
5	BE	82	GLN	2.1
28	DG	128	GLN	2.1
43	CW	59	GLU	2.1
48	C1	5	GLN	2.1
3	AC	202	ILE	2.1
3	BC	68	ILE	2.1
31	DK	103	ILE	2.1
2	BB	141	LEU	2.1
4	BD	106	GLY	2.1
8	BH	61	LEU	2.1
1	AA	469	C	2.1
1	AA	477	C	2.1
11	BK	49	GLY	2.1
24	DC	202	LEU	2.1
28	CG	142	GLY	2.1
31	DK	25	LEU	2.1
33	DM	20	GLY	2.1
33	DM	26	GLY	2.1
38	DR	43	GLY	2.1
45	CY	68	LEU	2.1
1	AA	1034	G	2.1
1	BA	847	G	2.1
53	DA	1100	C	2.1
1	BA	1036	A	2.1
2	AB	38	VAL	2.1
22	CA	1528	A	2.1
40	CT	47	VAL	2.1
40	CT	83	LYS	2.1
41	CU	81	LYS	2.1
47	D0	12	SER	2.1
24	DC	19	VAL	2.1
47	C0	57	VAL	2.1
50	D3	9	VAL	2.1
52	D5	1	MET	2.1
53	DA	1095	A	2.1
54	DD	114	LYS	2.1
3	BC	7	PRO	2.1
4	AD	162	ALA	2.1
4	BD	162	ALA	2.1
5	AE	99	ALA	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
5	BE	37	THR	2.1
7	AG	147	ALA	2.1
9	BI	76	ALA	2.1
14	AN	35	ASN	2.1
24	DC	61	ALA	2.1
31	CK	8	PRO	2.1
32	DL	65	THR	2.1
35	DO	41	ALA	2.1
40	DT	37	THR	2.1
41	CU	35	ALA	2.1
53	DA	1094	U	2.1
53	DA	2122	U	2.1
2	AB	96	TRP	2.1
2	BB	95	ARG	2.1
16	AP	60	TRP	2.1
27	CF	123	ASP	2.1
27	CF	148	ARG	2.1
31	CK	14	ASP	2.1
31	CK	43	GLU	2.1
33	CM	18	ARG	2.1
38	DR	50	ARG	2.1
40	DT	95	ARG	2.1
45	CY	28	ARG	2.1
45	CY	39	TRP	2.1
4	AD	172	GLU	2.1
22	CA	407	G	2.1
53	DA	278	A	2.1
2	BB	26	LYS	2.1
11	BK	104	GLY	2.1
15	AO	23	GLY	2.1
25	CD	111	GLY	2.1
25	CD	120	GLY	2.1
53	DA	2187	U	2.1
6	BF	22	ILE	2.1
26	DE	72	SER	2.1
29	DH	6	LEU	2.1
33	DM	27	LEU	2.1
35	CO	51	LEU	2.1
1	AA	999	C	2.1
4	AD	113	GLU	2.1
7	AG	33	ASP	2.1
10	BJ	51	VAL	2.1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
11	BK	84	VAL	2.1
12	AL	87	VAL	2.1
25	CD	194	PRO	2.1
13	AM	92	ARG	2.1
16	AP	61	VAL	2.1
27	DF	142	ASP	2.1
27	DF	178	ARG	2.1
29	CH	101	ASP	2.1
39	CS	58	VAL	2.1
39	DS	84	ARG	2.1
40	CT	20	VAL	2.1
2	AB	216	ALA	2.1
16	BP	22	ALA	2.1
28	CG	146	ALA	2.1
38	DR	27	ALA	2.1
1	BA	947	G	2.1
1	BA	959	A	2.1
22	CA	1596	A	2.1
48	D1	4	GLN	2.1
51	C4	17	THR	2.1
53	DA	2130	U	2.1
9	AI	64	TYR	2.1
31	DK	111	LYS	2.1
33	CM	96	LYS	2.1
48	D1	12	LYS	2.1
2	BB	202	GLY	2.1
5	AE	129	GLY	2.1
33	CM	22	GLY	2.1
38	CR	73	GLY	2.1
1	BA	1295	U	2.0
22	CA	229	C	2.1
22	CA	2651	C	2.1
12	BL	78	SER	2.0
53	DA	2188	U	2.0
22	CA	2211	A	2.0
22	CA	2376	A	2.0
3	AC	112	ASP	2.0
9	AI	124	ARG	2.0
16	BP	53	ASP	2.0
18	AR	48	ARG	2.0
20	BT	59	ASP	2.0
24	CC	192	LEU	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
25	CD	59	ARG	2.0
26	DE	88	ARG	2.0
37	DQ	50	ILE	2.0
47	D0	44	ILE	2.0
50	D3	26	ASN	2.0
52	C5	19	ARG	2.0
8	BH	3	MET	2.0
27	CF	139	PRO	2.0
33	DM	38	GLN	2.0
51	D4	63	PRO	2.0
3	BC	89	LYS	2.0
4	AD	2	ALA	2.0
4	AD	102	VAL	2.0
8	BH	112	THR	2.0
19	BS	7	LYS	2.0
24	CC	39	LYS	2.0
24	CC	97	LYS	2.0
31	CK	134	ALA	2.0
32	DL	76	VAL	2.0
33	DM	63	LYS	2.0
46	CZ	44	LYS	2.0
47	C0	13	ALA	2.0
50	D3	4	THR	2.0
51	D4	12	LYS	2.0
2	BB	90	PHE	2.0
9	AI	127	PHE	2.0
14	AN	73	PHE	2.0
22	CA	2666	C	2.0
44	DX	79	PHE	2.0
1	AA	71	A	2.0
5	AE	163	GLU	2.0
12	BL	84	GLY	2.0
25	CD	76	GLY	2.0
45	CY	63	GLY	2.0
3	BC	22	TRP	2.0
26	DE	44	ARG	2.0
32	CL	105	ARG	2.0
35	CO	11	ASN	2.0
38	DR	13	ARG	2.0
46	CZ	48	ARG	2.0
52	C5	24	ARG	2.0
22	CA	1058	U	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
38	DR	20	GLN	2.0
3	AC	134	MET	2.0
7	AG	116	MET	2.0
11	BK	60	PRO	2.0
17	BQ	66	PRO	2.0
22	CA	1104	C	2.0
24	DC	85	PRO	2.0
39	CS	81	LYS	2.0
27	DF	106	ILE	2.0
35	DO	75	ILE	2.0
53	DA	1868	C	2.0
2	AB	148	LEU	2.0
5	BE	144	LEU	2.0
2	BB	94	HIS	2.0
22	CA	877	A	2.0
40	DT	19	LEU	2.0
40	DT	51	LEU	2.0
24	DC	243	HIS	2.0
38	DR	14	HIS	2.0
50	D3	16	HIS	2.0
53	DA	2108	A	2.0
29	CH	100	ALA	2.0
42	CV	102	THR	2.0
6	AF	10	VAL	2.0
14	AN	14	VAL	2.0
17	AQ	78	VAL	2.0
17	BQ	26	GLU	2.0
24	DC	120	VAL	2.0
31	CK	48	VAL	2.0
40	DT	20	VAL	2.0
40	DT	76	VAL	2.0
54	DD	24	VAL	2.0
55	DI	70	GLU	2.0
7	AG	15	ASP	2.0
11	AK	69	ARG	2.0
11	BK	39	GLY	2.0
14	AN	77	PHE	2.0
16	BP	37	GLY	2.0
16	BP	38	PHE	2.0
26	DE	81	GLY	2.0
33	CM	37	GLY	2.0
44	CX	42	GLY	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
9	AI	13	LYS	2.0
11	AK	109	ASN	2.0
22	CA	1461	C	2.0
23	CB	4	C	2.0
24	DC	44	ASN	2.0
25	CD	43	ASP	2.0
52	C5	4	ARG	2.0
37	DQ	94	LYS	2.0
45	DY	19	SER	2.0
54	DD	149	ASN	2.0
1	BA	1333	A	2.0
22	CA	233	A	2.0
27	DF	143	TYR	2.0
53	DA	2119	A	2.0
1	AA	121	U	2.0
22	CA	1457	U	2.0
52	C5	31	PRO	2.0
53	DA	2118	U	2.0
22	CA	1448	G	2.0
49	C2	7	GLU	2.0
2	AB	41	ILE	2.0
8	BH	101	ILE	2.0
15	BO	57	LEU	2.0
24	DC	24	LEU	2.0
22	CA	1463	C	2.0
23	CB	60	C	2.0
25	CD	110	THR	2.0
38	CR	105	ALA	2.0
40	DT	24	ILE	2.0
48	C1	28	LEU	2.0
49	D2	48	ILE	2.0
54	DD	22	ILE	2.0
1	BA	845	A	2.0
2	AB	183	VAL	2.0
24	DC	48	ARG	2.0
35	DO	17	ARG	2.0
38	DR	6	ARG	2.0
40	CT	11	ARG	2.0
2	BB	120	GLN	2.0
11	AK	18	ASP	2.0
16	AP	49	GLY	2.0
22	CA	50	U	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
22	CA	284	U	2.0
24	DC	254	GLY	2.0
33	CM	43	GLY	2.0
33	CM	139	GLY	2.0
37	CQ	75	GLN	2.0
47	D0	55	VAL	2.0
53	DA	895	U	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	2MG	BA	1207	24/25	0.56	0.21	122,126,131,131	0
22	PSU	CA	1911	20/21	0.74	0.25	103,108,113,116	0
22	6MZ	CA	2030	23/24	0.75	0.30	93,99,101,102	0
22	2MA	CA	2503	23/24	0.78	0.22	87,90,92,94	0
22	6MZ	CA	1618	23/24	0.79	0.20	91,97,99,100	0
22	PSU	CA	746	20/21	0.79	0.21	88,91,95,95	0
22	3TD	CA	1915	21/22	0.81	0.33	109,112,115,116	0
1	5MC	BA	967	21/22	0.82	0.16	127,132,143,145	0
1	2MG	BA	966	24/25	0.82	0.17	128,136,145,147	0
22	PSU	CA	955	20/21	0.84	0.21	100,105,109,110	0
22	PSU	CA	1917	20/21	0.84	0.12	102,107,110,112	0
1	2MG	BA	1516	24/25	0.84	0.18	67,74,79,83	0
22	OMG	CA	2251	24/25	0.84	0.20	85,92,95,98	0
1	PSU	BA	516	20/21	0.84	0.14	73,79,89,91	0
1	5MC	BA	1407	21/22	0.85	0.17	86,91,95,96	0
22	G7M	CA	2069	24/25	0.85	0.23	88,94,96,100	0
22	1MG	CA	745	24/25	0.86	0.21	85,88,93,95	0
34	4D4	CN	81	12/13	0.86	0.19	94,97,99,100	0
1	4OC	BA	1402	22/23	0.87	0.20	82,86,90,90	0
22	5MU	CA	747	21/22	0.87	0.20	82,91,96,97	0
53	3TD	DA	1915	21/22	0.87	0.19	76,81,87,94	0
22	2MG	CA	2445	24/25	0.88	0.20	88,92,96,99	0
22	PSU	CA	2457	20/21	0.88	0.20	91,97,101,102	0
1	MA6	BA	1519	24/25	0.88	0.20	67,73,79,81	0
22	PSU	CA	2504	20/21	0.88	0.19	83,87,90,91	0
1	UR3	BA	1498	21/22	0.88	0.19	69,76,83,83	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	2MG	AA	1207	24/25	0.88	0.13	89,94,98,100	0
1	5MC	AA	967	21/22	0.89	0.21	70,76,83,84	0
22	OMC	CA	2498	21/22	0.89	0.23	90,97,99,102	0
53	PSU	DA	1917	20/21	0.89	0.10	63,72,79,84	0
54	MEQ	DD	150[A]	10/11	0.90	0.35	23,32,39,40	10
54	MEQ	DD	150[B]	10/11	0.90	0.35	28,32,38,39	10
22	OMU	CA	2552	21/22	0.91	0.25	80,85,87,87	0
22	PSU	CA	2605	20/21	0.91	0.18	71,79,82,83	0
22	5MU	CA	1939	21/22	0.91	0.15	70,78,83,83	0
53	PSU	DA	1911	20/21	0.91	0.12	69,74,80,80	0
22	2MG	CA	1835	24/25	0.92	0.19	74,82,84,86	0
1	G7M	BA	527	24/25	0.92	0.17	63,71,78,84	0
22	PSU	CA	2580	20/21	0.92	0.17	83,88,90,92	0
12	D2T	AL	89	10/11	0.92	0.13	59,65,70,77	0
1	MA6	BA	1518	24/25	0.92	0.16	68,73,78,85	0
22	5MC	CA	1962	21/22	0.93	0.15	73,78,80,83	0
1	G7M	AA	527	24/25	0.93	0.16	64,66,70,75	0
1	2MG	AA	966	24/25	0.93	0.16	69,75,80,83	0
34	4D4	DN	81[A]	12/13	0.93	0.25	33,38,42,43	9
34	4D4	DN	81[B]	12/13	0.93	0.25	33,36,40,41	9
1	2MG	AA	1516	24/25	0.94	0.15	47,53,60,67	0
12	D2T	BL	89	10/11	0.94	0.15	64,74,78,93	0
1	UR3	AA	1498	21/22	0.95	0.16	50,58,65,69	0
53	5MC	DA	1962	21/22	0.95	0.15	38,48,55,59	0
1	PSU	AA	516	20/21	0.95	0.13	68,75,81,81	0
53	2MG	DA	1835	24/25	0.95	0.17	45,50,57,57	0
1	4OC	AA	1402	22/23	0.95	0.16	59,62,68,70	0
1	5MC	AA	1407	21/22	0.95	0.13	51,59,62,63	0
53	G7M	DA	2069	24/25	0.96	0.26	34,38,43,43	0
53	PSU	DA	2605	20/21	0.96	0.20	38,45,49,50	0
53	5MU	DA	747	21/22	0.96	0.26	27,36,43,46	0
1	MA6	AA	1518	24/25	0.96	0.16	45,54,59,64	0
53	5MU	DA	1939	21/22	0.96	0.18	36,42,45,50	0
1	MA6	AA	1519	24/25	0.96	0.14	51,56,63,67	0
53	2MG	DA	2445	24/25	0.97	0.25	23,32,38,40	0
53	OMC	DA	2498	21/22	0.97	0.27	28,33,38,40	0
53	2MA	DA	2503	23/24	0.97	0.25	21,37,44,48	0
53	PSU	DA	2504	20/21	0.97	0.22	28,36,44,45	0
53	OMU	DA	2552	21/22	0.97	0.22	35,42,46,49	0
53	PSU	DA	2604	20/21	0.97	0.17	33,44,54,57	0
53	PSU	DA	955	20/21	0.97	0.21	28,33,40,40	0
53	6MZ	DA	1618	23/24	0.97	0.25	29,36,44,47	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
53	6MZ	DA	2030	23/24	0.97	0.28	22,30,36,42	0
53	PSU	DA	746	20/21	0.97	0.27	28,37,43,44	0
53	OMG	DA	2251	24/25	0.97	0.23	23,34,41,43	0
53	1MG	DA	745	24/25	0.98	0.28	25,34,41,44	0
53	PSU	DA	2580	20/21	0.98	0.25	27,32,38,42	0
53	H2U	DA	2449	20/21	0.98	0.25	26,32,38,42	0
53	PSU	DA	2457	20/21	0.98	0.23	31,36,43,45	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3036	1/1	-0.32	0.47	94,94,94,94	0
56	MG	CA	3006	1/1	-0.21	0.78	100,100,100,100	0
56	MG	C3	101	1/1	-0.17	0.23	97,97,97,97	0
56	MG	CA	3073	1/1	-0.09	0.44	93,93,93,93	0
56	MG	AA	1647	1/1	-0.04	0.14	82,82,82,82	0
56	MG	CA	3145	1/1	-0.01	0.15	90,90,90,90	0
56	MG	BA	1609	1/1	0.02	0.36	89,89,89,89	0
56	MG	CA	3079	1/1	0.02	0.17	94,94,94,94	0
56	MG	CA	3155	1/1	0.04	0.37	93,93,93,93	0
56	MG	BA	1625	1/1	0.05	0.10	89,89,89,89	0
56	MG	CA	3086	1/1	0.12	0.17	78,78,78,78	0
56	MG	CA	3037	1/1	0.12	0.50	102,102,102,102	0
56	MG	BA	1641	1/1	0.15	0.20	86,86,86,86	0
56	MG	BA	1630	1/1	0.18	0.39	98,98,98,98	0
56	MG	CA	3059	1/1	0.21	0.59	91,91,91,91	0
56	MG	CA	3089	1/1	0.22	0.19	80,80,80,80	0
56	MG	CA	3070	1/1	0.23	0.26	90,90,90,90	0
56	MG	AA	1630	1/1	0.23	0.25	86,86,86,86	0
56	MG	AA	1610	1/1	0.23	0.57	85,85,85,85	0
56	MG	BA	1627	1/1	0.23	0.25	83,83,83,83	0
56	MG	CA	3035	1/1	0.24	0.12	81,81,81,81	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3084	1/1	0.25	0.10	80,80,80,80	0
56	MG	DA	3126	1/1	0.37	0.25	75,75,75,75	0
56	MG	CA	3098	1/1	0.38	0.07	89,89,89,89	0
56	MG	CA	3080	1/1	0.40	0.15	88,88,88,88	0
56	MG	DA	3012	1/1	0.41	0.24	56,56,56,56	0
56	MG	DA	3003	1/1	0.41	0.09	75,75,75,75	0
56	MG	CA	3153	1/1	0.42	0.20	86,86,86,86	0
56	MG	CA	3066	1/1	0.42	0.52	85,85,85,85	0
56	MG	DA	3129	1/1	0.42	0.15	70,70,70,70	0
56	MG	DA	3065	1/1	0.44	0.16	70,70,70,70	0
56	MG	DA	3070	1/1	0.46	0.18	52,52,52,52	0
56	MG	CA	3083	1/1	0.46	0.31	93,93,93,93	0
56	MG	CA	3150	1/1	0.46	0.33	85,85,85,85	0
56	MG	CA	3018	1/1	0.47	0.17	79,79,79,79	0
56	MG	DA	3041	1/1	0.48	0.21	50,50,50,50	0
56	MG	CA	3075	1/1	0.49	0.20	92,92,92,92	0
56	MG	BA	1617	1/1	0.50	0.09	82,82,82,82	0
56	MG	AA	1616	1/1	0.50	0.79	83,83,83,83	0
56	MG	CA	3071	1/1	0.51	0.17	95,95,95,95	0
56	MG	CA	3140	1/1	0.53	0.30	76,76,76,76	0
56	MG	AA	1654	1/1	0.54	0.56	91,91,91,91	0
56	MG	CA	3010	1/1	0.54	0.20	77,77,77,77	0
56	MG	CA	3012	1/1	0.54	0.10	69,69,69,69	0
56	MG	CA	3068	1/1	0.54	0.13	85,85,85,85	0
56	MG	CB	203	1/1	0.55	0.10	90,90,90,90	0
56	MG	DA	3060	1/1	0.55	0.07	77,77,77,77	0
56	MG	CA	3003	1/1	0.55	0.06	80,80,80,80	0
56	MG	CA	3019	1/1	0.56	0.16	81,81,81,81	0
56	MG	CA	3116	1/1	0.56	0.41	75,75,75,75	0
56	MG	CA	3124	1/1	0.56	0.16	87,87,87,87	0
56	MG	CA	3074	1/1	0.57	0.30	91,91,91,91	0
56	MG	CA	3031	1/1	0.57	0.26	90,90,90,90	0
56	MG	CA	3090	1/1	0.57	0.15	80,80,80,80	0
56	MG	AA	1658	1/1	0.57	0.09	70,70,70,70	0
56	MG	BA	1620	1/1	0.57	0.08	78,78,78,78	0
56	MG	AA	1606	1/1	0.57	0.23	83,83,83,83	0
56	MG	BA	1616	1/1	0.57	0.09	86,86,86,86	0
59	PUT	AA	1675	6/6	0.57	0.17	65,66,71,72	0
56	MG	AA	1617	1/1	0.58	0.39	82,82,82,82	0
56	MG	BA	1607	1/1	0.58	0.16	84,84,84,84	0
56	MG	DA	3171	1/1	0.58	0.24	76,76,76,76	0
56	MG	CA	3103	1/1	0.58	0.09	86,86,86,86	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	PUT	DA	3222	6/6	0.58	0.26	62,64,65,68	0
56	MG	CA	3082	1/1	0.59	0.13	79,79,79,79	0
56	MG	CA	3047	1/1	0.59	0.11	77,77,77,77	0
56	MG	CA	3099	1/1	0.59	0.16	69,69,69,69	0
56	MG	AA	1623	1/1	0.59	0.46	71,71,71,71	0
56	MG	CA	3062	1/1	0.59	0.11	90,90,90,90	0
56	MG	CA	3042	1/1	0.59	0.19	70,70,70,70	0
56	MG	BA	1632	1/1	0.60	0.22	68,68,68,68	0
56	MG	CA	3030	1/1	0.60	0.21	74,74,74,74	0
66	EDO	DB	211	4/4	0.60	0.19	68,70,71,73	0
56	MG	CA	3051	1/1	0.61	0.11	71,71,71,71	0
56	MG	BA	1624	1/1	0.61	0.45	86,86,86,86	0
56	MG	DA	3178	1/1	0.62	0.09	79,79,79,79	0
56	MG	DA	3042	1/1	0.62	0.12	75,75,75,75	0
56	MG	AA	1603	1/1	0.63	0.32	82,82,82,82	0
56	MG	CA	3104	1/1	0.63	0.26	83,83,83,83	0
56	MG	CA	3078	1/1	0.63	0.07	85,85,85,85	0
56	MG	CA	3045	1/1	0.63	0.10	80,80,80,80	0
56	MG	CA	3039	1/1	0.63	0.08	81,81,81,81	0
56	MG	CA	3072	1/1	0.64	0.17	92,92,92,92	0
56	MG	CA	3004	1/1	0.64	0.37	95,95,95,95	0
56	MG	CB	201	1/1	0.65	0.33	91,91,91,91	0
56	MG	CA	3021	1/1	0.65	0.09	93,93,93,93	0
56	MG	DA	3061	1/1	0.65	0.16	60,60,60,60	0
56	MG	AA	1665	1/1	0.66	0.06	78,78,78,78	0
56	MG	AA	1656	1/1	0.66	0.09	67,67,67,67	0
56	MG	AA	1663	1/1	0.66	0.19	79,79,79,79	0
68	TRS	DA	3221	8/8	0.66	0.17	65,69,75,77	0
56	MG	AA	1609	1/1	0.67	0.41	79,79,79,79	0
56	MG	CA	3002	1/1	0.67	0.29	91,91,91,91	0
59	PUT	DA	3206	6/6	0.67	0.19	58,61,62,63	0
56	MG	CA	3147	1/1	0.67	0.18	55,55,55,55	1
59	PUT	DA	3223	6/6	0.67	0.35	46,49,51,53	0
61	PEG	DA	3227	7/7	0.67	0.38	57,59,71,73	0
56	MG	CA	3122	1/1	0.67	0.13	85,85,85,85	0
56	MG	AA	1604	1/1	0.67	0.37	73,73,73,73	0
56	MG	AA	1626	1/1	0.68	0.25	84,84,84,84	0
56	MG	CA	3052	1/1	0.68	0.10	79,79,79,79	0
56	MG	AA	1644	1/1	0.68	0.13	76,76,76,76	0
62	SPD	DA	3207	10/10	0.68	0.20	57,63,68,70	0
65	ACY	DA	3196	4/4	0.68	0.20	59,65,67,71	0
56	MG	CA	3081	1/1	0.68	0.09	83,83,83,83	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	BA	1612	1/1	0.68	0.13	77,77,77,77	0
56	MG	DA	3170	1/1	0.69	0.38	66,66,66,66	0
56	MG	CA	3061	1/1	0.69	0.44	86,86,86,86	0
56	MG	CA	3076	1/1	0.69	0.30	83,83,83,83	0
56	MG	DA	3137	1/1	0.69	0.72	56,56,56,56	1
56	MG	AA	1642	1/1	0.70	0.23	88,88,88,88	0
56	MG	AA	1629	1/1	0.70	0.19	67,67,67,67	0
56	MG	BA	1601	1/1	0.70	0.11	78,78,78,78	0
66	EDO	DB	212	4/4	0.70	0.23	59,60,64,64	0
56	MG	DA	3168	1/1	0.70	0.12	77,77,77,77	0
56	MG	DB	207	1/1	0.71	0.20	75,75,75,75	0
58	MPD	DN	201	8/8	0.71	0.31	57,63,66,71	0
56	MG	BA	1604	1/1	0.71	0.23	75,75,75,75	0
56	MG	CA	3005	1/1	0.71	0.46	96,96,96,96	0
56	MG	CA	3109	1/1	0.71	0.39	72,72,72,72	0
56	MG	AA	1621	1/1	0.71	0.46	79,79,79,79	0
56	MG	DA	3153	1/1	0.71	0.59	67,67,67,67	0
56	MG	CA	3020	1/1	0.71	0.23	83,83,83,83	0
56	MG	BA	1639	1/1	0.71	0.21	78,78,78,78	0
56	MG	CA	3132	1/1	0.71	0.34	80,80,80,80	0
56	MG	CA	3138	1/1	0.71	0.14	80,80,80,80	0
56	MG	DA	3180	1/1	0.71	0.20	78,78,78,78	0
56	MG	DA	3145	1/1	0.72	0.15	69,69,69,69	0
58	MPD	DT	201	8/8	0.72	0.36	55,63,66,73	0
64	PGE	DS	201	10/10	0.72	0.19	50,56,66,68	0
56	MG	CA	3154	1/1	0.72	0.22	90,90,90,90	0
56	MG	DA	3131	1/1	0.72	0.16	70,70,70,70	0
56	MG	AA	1661	1/1	0.72	0.25	79,79,79,79	0
58	MPD	DE	302	8/8	0.72	0.27	60,65,67,67	0
56	MG	CA	3026	1/1	0.73	0.09	75,75,75,75	0
56	MG	CA	3152	1/1	0.73	0.14	77,77,77,77	0
56	MG	DA	3077	1/1	0.73	0.07	70,70,70,70	0
56	MG	DA	3002	1/1	0.73	0.19	66,66,66,66	0
56	MG	DA	3128	1/1	0.73	0.33	74,74,74,74	0
56	MG	CA	3092	1/1	0.74	0.17	83,83,83,83	0
56	MG	AA	1632	1/1	0.74	0.06	79,79,79,79	0
56	MG	CA	3055	1/1	0.74	0.40	78,78,78,78	0
61	PEG	DQ	201	7/7	0.74	0.26	63,70,74,76	0
58	MPD	DA	3208	8/8	0.74	0.23	56,62,70,74	0
56	MG	CA	3058	1/1	0.74	0.09	76,76,76,76	0
56	MG	CA	3136	1/1	0.74	0.19	87,87,87,87	0
56	MG	DA	3009	1/1	0.74	0.09	59,59,59,59	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	1662	1/1	0.74	0.10	74,74,74,74	0
56	MG	BA	1610	1/1	0.74	0.07	69,69,69,69	0
56	MG	CA	3060	1/1	0.75	0.30	93,93,93,93	0
56	MG	DA	3109	1/1	0.75	0.72	88,88,88,88	0
56	MG	AA	1655	1/1	0.75	0.08	77,77,77,77	0
61	PEG	DA	3200	7/7	0.75	0.30	52,54,67,67	0
56	MG	AA	1659	1/1	0.75	0.07	68,68,68,68	0
56	MG	CA	3107	1/1	0.75	0.31	70,70,70,70	0
56	MG	BA	1605	1/1	0.75	0.26	81,81,81,81	0
56	MG	CA	3091	1/1	0.75	0.22	77,77,77,77	0
56	MG	DA	3141	1/1	0.75	0.30	73,73,73,73	0
66	EDO	DB	210	4/4	0.75	0.25	65,67,68,69	0
56	MG	CA	3007	1/1	0.75	0.17	82,82,82,82	0
56	MG	BA	1635	1/1	0.75	0.06	72,72,72,72	0
56	MG	DA	3166	1/1	0.75	0.18	73,73,73,73	0
56	MG	DA	3163	1/1	0.76	0.19	73,73,73,73	0
56	MG	DB	206	1/1	0.76	0.20	82,82,82,82	0
56	MG	AA	1664	1/1	0.76	0.10	78,78,78,78	0
56	MG	DA	3111	1/1	0.76	0.23	61,61,61,61	0
64	PGE	D1	102	10/10	0.76	0.36	61,66,71,74	0
56	MG	CA	3113	1/1	0.77	0.38	63,63,63,63	0
56	MG	CA	3049	1/1	0.77	0.16	64,64,64,64	0
56	MG	DA	3182	1/1	0.77	0.53	86,86,86,86	0
56	MG	BA	1626	1/1	0.77	0.29	80,80,80,80	0
56	MG	AA	1631	1/1	0.77	0.21	54,54,54,54	0
56	MG	CA	3033	1/1	0.77	0.26	90,90,90,90	0
56	MG	DA	3101	1/1	0.77	0.12	51,51,51,51	0
56	MG	AA	1613	1/1	0.77	0.62	80,80,80,80	0
56	MG	DA	3016	1/1	0.77	0.13	63,63,63,63	0
56	MG	DA	3122	1/1	0.77	0.49	77,77,77,77	0
56	MG	AA	1628	1/1	0.77	0.38	80,80,80,80	0
56	MG	CA	3112	1/1	0.77	0.52	81,81,81,81	0
58	MPD	DE	301	8/8	0.78	0.45	57,67,76,80	0
56	MG	BA	1619	1/1	0.78	0.07	66,66,66,66	0
56	MG	CA	3054	1/1	0.78	0.14	83,83,83,83	0
56	MG	BA	1623	1/1	0.78	0.57	86,86,86,86	0
56	MG	CA	3025	1/1	0.78	0.71	92,92,92,92	0
56	MG	DA	3035	1/1	0.78	0.41	38,38,38,38	0
56	MG	BA	1629	1/1	0.78	0.23	77,77,77,77	0
56	MG	DB	208	1/1	0.78	0.45	79,79,79,79	0
56	MG	CA	3087	1/1	0.78	0.14	83,83,83,83	0
61	PEG	DA	3219	7/7	0.78	0.28	61,66,70,73	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3096	1/1	0.79	0.11	92,92,92,92	0
56	MG	AA	1638	1/1	0.79	0.16	86,86,86,86	0
66	EDO	DA	3209	4/4	0.79	0.32	55,59,62,67	0
61	PEG	DP	201	7/7	0.79	0.14	61,65,67,67	0
56	MG	DA	3151	1/1	0.79	0.30	80,80,80,80	0
56	MG	CA	3011	1/1	0.79	0.07	78,78,78,78	0
56	MG	CA	3001	1/1	0.79	0.16	80,80,80,80	0
58	MPD	DA	3205	8/8	0.80	0.42	58,63,68,70	0
56	MG	DA	3050	1/1	0.80	0.09	55,55,55,55	0
56	MG	AA	1669	1/1	0.80	0.08	76,76,76,76	0
56	MG	BA	1611	1/1	0.80	0.16	64,64,64,64	0
56	MG	BA	1631	1/1	0.80	0.09	76,76,76,76	0
56	MG	CA	3111	1/1	0.80	0.55	77,77,77,77	0
56	MG	AA	1641	1/1	0.80	0.08	71,71,71,71	0
66	EDO	DA	3198	4/4	0.80	0.34	49,53,54,55	0
56	MG	CA	3009	1/1	0.80	0.23	78,78,78,78	0
56	MG	DA	3103	1/1	0.80	0.31	44,44,44,44	0
56	MG	AA	1653	1/1	0.80	0.08	63,63,63,63	0
56	MG	CA	3121	1/1	0.80	0.15	86,86,86,86	0
56	MG	DA	3156	1/1	0.80	0.45	74,74,74,74	0
56	MG	DA	3167	1/1	0.81	0.34	64,64,64,64	0
59	PUT	DA	3184	6/6	0.81	0.46	45,52,53,56	0
56	MG	DA	3119	1/1	0.81	0.32	66,66,66,66	0
56	MG	CA	3032	1/1	0.81	0.07	71,71,71,71	0
56	MG	AA	1634	1/1	0.81	0.07	78,78,78,78	0
56	MG	DA	3043	1/1	0.81	0.20	49,49,49,49	0
56	MG	CA	3034	1/1	0.81	0.06	82,82,82,82	0
56	MG	BA	1606	1/1	0.81	0.26	85,85,85,85	0
56	MG	BA	1633	1/1	0.81	0.30	85,85,85,85	0
56	MG	DA	3140	1/1	0.81	0.53	65,65,65,65	0
56	MG	AA	1636	1/1	0.81	0.13	81,81,81,81	0
57	PG4	DA	3193	13/13	0.81	0.23	52,56,66,66	0
57	PG4	DR	202	13/13	0.81	0.28	47,56,62,65	0
64	PGE	D3	101	10/10	0.81	0.20	58,65,67,68	0
56	MG	CA	3146	1/1	0.81	0.54	60,60,60,60	1
56	MG	BA	1613	1/1	0.81	0.08	65,65,65,65	0
56	MG	CA	3013	1/1	0.81	0.16	89,89,89,89	0
66	EDO	DA	3210	4/4	0.81	0.21	62,65,69,73	0
56	MG	DA	3013	1/1	0.81	0.27	52,52,52,52	0
56	MG	AA	1601	1/1	0.81	0.34	66,66,66,66	0
56	MG	CA	3102	1/1	0.81	0.07	78,78,78,78	0
59	PUT	AA	1672	6/6	0.81	0.40	63,63,66,70	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3038	1/1	0.82	0.18	44,44,44,44	0
56	MG	CA	3053	1/1	0.82	0.04	80,80,80,80	0
56	MG	CA	3067	1/1	0.82	0.20	84,84,84,84	0
56	MG	CA	3151	1/1	0.82	0.08	82,82,82,82	0
56	MG	DA	3147	1/1	0.82	0.42	73,73,73,73	0
56	MG	CA	3137	1/1	0.82	0.24	78,78,78,78	0
56	MG	CA	3085	1/1	0.82	0.14	78,78,78,78	0
59	PUT	DA	3195	6/6	0.82	0.18	39,46,50,57	0
56	MG	BA	1636	1/1	0.82	0.21	83,83,83,83	0
56	MG	BA	1614	1/1	0.82	0.13	77,77,77,77	0
56	MG	AA	1608	1/1	0.82	0.33	76,76,76,76	0
58	MPD	DA	3192	8/8	0.82	0.30	56,60,64,66	0
56	MG	DA	3130	1/1	0.82	0.73	77,77,77,77	0
67	GUN	DA	3212	11/11	0.82	0.15	52,58,63,69	0
56	MG	CB	202	1/1	0.82	0.29	86,86,86,86	0
56	MG	DA	3174	1/1	0.83	0.38	77,77,77,77	0
56	MG	DA	3177	1/1	0.83	0.53	75,75,75,75	0
56	MG	CA	3063	1/1	0.83	0.54	93,93,93,93	0
66	EDO	DA	3194	4/4	0.83	0.31	52,52,52,58	0
56	MG	CA	3064	1/1	0.83	0.15	75,75,75,75	0
56	MG	DA	3139	1/1	0.83	0.26	57,57,57,57	0
58	MPD	DK	201	8/8	0.83	0.13	60,66,71,73	0
56	MG	CA	3056	1/1	0.83	0.11	75,75,75,75	0
56	MG	DA	3085	1/1	0.83	0.30	44,44,44,44	0
56	MG	DA	3022	1/1	0.83	0.32	40,40,40,40	0
56	MG	AA	1614	1/1	0.83	0.18	75,75,75,75	0
56	MG	CA	3077	1/1	0.83	0.05	83,83,83,83	0
59	PUT	AA	1674	6/6	0.84	0.12	61,62,67,69	0
57	PG4	DA	3217	13/13	0.84	0.17	57,66,72,75	0
56	MG	DA	3125	1/1	0.84	0.42	69,69,69,69	0
56	MG	CA	3118	1/1	0.84	0.24	87,87,87,87	0
56	MG	CA	3125	1/1	0.84	0.09	84,84,84,84	0
56	MG	DA	3097	1/1	0.84	0.23	37,37,37,37	0
58	MPD	DA	3211	8/8	0.84	0.23	54,57,64,66	0
56	MG	CA	3128	1/1	0.84	0.48	82,82,82,82	0
56	MG	CA	3101	1/1	0.84	0.23	82,82,82,82	0
56	MG	CA	3135	1/1	0.84	0.25	83,83,83,83	0
56	MG	DA	3028	1/1	0.84	0.17	49,49,49,49	0
66	EDO	DR	203	4/4	0.84	0.21	53,54,57,60	0
56	MG	CA	3046	1/1	0.84	0.19	85,85,85,85	0
56	MG	DA	3008	1/1	0.84	0.15	55,55,55,55	0
56	MG	DA	3062	1/1	0.85	0.16	50,50,50,50	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
61	PEG	DA	3228	7/7	0.85	0.29	55,58,61,64	0
56	MG	DA	3004	1/1	0.85	0.08	66,66,66,66	0
56	MG	DA	3121	1/1	0.85	0.51	85,85,85,85	0
56	MG	DA	3181	1/1	0.85	0.50	79,79,79,79	0
56	MG	CA	3069	1/1	0.85	0.06	80,80,80,80	0
56	MG	AA	1640	1/1	0.85	0.22	65,65,65,65	0
56	MG	AA	1657	1/1	0.85	0.12	77,77,77,77	0
65	ACY	DA	3191	4/4	0.85	0.18	48,50,52,53	0
56	MG	DA	3092	1/1	0.85	0.29	39,39,39,39	0
57	PG4	BA	1642	13/13	0.85	0.18	52,61,66,69	0
56	MG	DA	3093	1/1	0.85	0.09	57,57,57,57	0
56	MG	CA	3038	1/1	0.85	0.11	78,78,78,78	0
56	MG	AA	1602	1/1	0.85	0.25	79,79,79,79	0
59	PUT	DA	3220	6/6	0.85	0.29	56,58,62,67	0
58	MPD	AA	1671	8/8	0.85	0.39	63,65,70,73	0
56	MG	CA	3017	1/1	0.85	0.10	82,82,82,82	0
61	PEG	DA	3199	7/7	0.85	0.20	49,56,67,67	0
56	MG	DA	3106	1/1	0.85	0.27	44,44,44,44	0
56	MG	CA	3129	1/1	0.85	0.27	84,84,84,84	0
56	MG	CA	3014	1/1	0.86	0.13	78,78,78,78	0
56	MG	DA	3143	1/1	0.86	0.12	77,77,77,77	0
56	MG	DA	3094	1/1	0.86	0.31	38,38,38,38	0
56	MG	CA	3015	1/1	0.86	0.28	76,76,76,76	0
56	MG	DA	3179	1/1	0.86	0.20	76,76,76,76	0
56	MG	CA	3016	1/1	0.86	0.06	71,71,71,71	0
56	MG	CA	3057	1/1	0.86	0.12	82,82,82,82	0
56	MG	CA	3105	1/1	0.86	0.53	68,68,68,68	0
56	MG	DA	3158	1/1	0.86	0.10	63,63,63,63	0
58	MPD	DT	202	8/8	0.86	0.20	65,66,75,75	0
56	MG	DA	3159	1/1	0.86	0.19	62,62,62,62	0
59	PUT	AA	1673	6/6	0.86	0.09	63,64,68,69	0
56	MG	DA	3162	1/1	0.86	0.19	69,69,69,69	0
57	PG4	AA	1670	13/13	0.86	0.19	52,62,68,68	0
56	MG	AA	1625	1/1	0.86	0.31	70,70,70,70	0
59	PUT	DA	3189	6/6	0.86	0.25	44,48,51,54	0
66	EDO	DA	3216	4/4	0.86	0.24	60,61,62,67	0
56	MG	CA	3142	1/1	0.86	0.31	69,69,69,69	0
56	MG	DA	3118	1/1	0.86	0.24	79,79,79,79	0
57	PG4	DQ	202	13/13	0.86	0.16	50,58,66,66	0
56	MG	DA	3021	1/1	0.86	0.22	36,36,36,36	0
57	PG4	DS	202	13/13	0.86	0.17	42,48,56,56	0
56	MG	DA	3120	1/1	0.86	0.97	75,75,75,75	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	CA	3141	1/1	0.87	0.33	77,77,77,77	0
64	PGE	DA	3226	10/10	0.87	0.19	59,63,67,69	0
58	MPD	DA	3190	8/8	0.87	0.21	55,64,69,72	0
56	MG	DA	3072	1/1	0.87	0.13	53,53,53,53	0
56	MG	CA	3093	1/1	0.87	0.07	91,91,91,91	0
56	MG	CA	3114	1/1	0.87	0.32	68,68,68,68	0
59	PUT	DA	3214	6/6	0.87	0.34	49,52,56,57	0
56	MG	CA	3095	1/1	0.87	0.21	71,71,71,71	0
56	MG	DA	3165	1/1	0.87	0.41	70,70,70,70	0
56	MG	AA	1651	1/1	0.87	0.10	69,69,69,69	0
56	MG	DA	3051	1/1	0.87	0.13	53,53,53,53	0
56	MG	AA	1646	1/1	0.87	0.18	59,59,59,59	0
61	PEG	DA	3201	7/7	0.87	0.24	53,56,63,66	0
56	MG	CA	3008	1/1	0.87	0.11	79,79,79,79	0
56	MG	DA	3149	1/1	0.87	0.18	62,62,62,62	0
56	MG	DA	3150	1/1	0.87	0.23	49,49,49,49	0
66	EDO	D0	101	4/4	0.87	0.33	61,63,66,68	0
56	MG	AA	1611	1/1	0.87	0.22	63,63,63,63	0
56	MG	CA	3041	1/1	0.87	0.06	72,72,72,72	0
56	MG	DA	3173	1/1	0.88	0.29	77,77,77,77	0
56	MG	BA	1621	1/1	0.88	0.17	54,54,54,54	0
56	MG	DA	3001	1/1	0.88	0.16	62,62,62,62	0
56	MG	DA	3161	1/1	0.88	0.31	71,71,71,71	0
56	MG	BA	1637	1/1	0.88	0.31	80,80,80,80	0
56	MG	CA	3139	1/1	0.88	0.22	71,71,71,71	0
56	MG	DA	3044	1/1	0.88	0.30	41,41,41,41	0
56	MG	DA	3076	1/1	0.88	0.09	67,67,67,67	0
56	MG	DB	204	1/1	0.88	0.22	57,57,57,57	0
56	MG	DA	3047	1/1	0.88	0.24	54,54,54,54	0
59	PUT	DA	3188	6/6	0.88	0.34	32,39,44,48	0
56	MG	AA	1650	1/1	0.88	0.03	63,63,63,63	0
56	MG	CA	3044	1/1	0.88	0.08	73,73,73,73	0
64	PGE	DA	3215	10/10	0.88	0.13	56,62,66,70	0
56	MG	AA	1618	1/1	0.88	0.55	78,78,78,78	0
59	PUT	DA	3213	6/6	0.88	0.20	49,55,55,58	0
56	MG	CA	3097	1/1	0.89	0.11	83,83,83,83	0
63	1PE	DA	3185	16/16	0.89	0.21	39,51,68,74	0
63	1PE	DA	3203	16/16	0.89	0.30	50,55,64,65	0
64	PGE	DA	3204	10/10	0.89	0.24	53,61,69,70	0
56	MG	DA	3172	1/1	0.89	0.28	73,73,73,73	0
56	MG	DA	3095	1/1	0.89	0.17	49,49,49,49	0
56	MG	AA	1633	1/1	0.89	0.13	72,72,72,72	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
64	PGE	DU	101	10/10	0.89	0.15	44,60,69,71	0
56	MG	DA	3175	1/1	0.89	0.25	72,72,72,72	0
56	MG	DA	3152	1/1	0.89	0.47	65,65,65,65	0
56	MG	CA	3027	1/1	0.89	0.43	97,97,97,97	0
56	MG	AA	1660	1/1	0.89	0.37	86,86,86,86	0
56	MG	DA	3104	1/1	0.89	0.20	44,44,44,44	0
56	MG	CA	3048	1/1	0.89	0.11	74,74,74,74	0
56	MG	DA	3136	1/1	0.89	0.41	74,74,74,74	0
56	MG	DB	203	1/1	0.89	0.14	51,51,51,51	0
56	MG	CA	3094	1/1	0.89	0.08	68,68,68,68	0
56	MG	AA	1648	1/1	0.89	0.16	56,56,56,56	0
56	MG	DA	3113	1/1	0.89	0.27	38,38,38,38	0
56	MG	DA	3079	1/1	0.89	0.11	55,55,55,55	0
56	MG	BA	1603	1/1	0.89	0.29	83,83,83,83	0
56	MG	DA	3057	1/1	0.89	0.27	40,40,40,40	0
66	EDO	D1	101	4/4	0.89	0.21	47,52,57,63	0
56	MG	DA	3005	1/1	0.89	0.16	72,72,72,72	0
61	PEG	D3	102	7/7	0.89	0.29	50,54,70,71	0
56	MG	CA	3023	1/1	0.90	0.10	75,75,75,75	0
56	MG	DA	3075	1/1	0.90	0.22	48,48,48,48	0
56	MG	DA	3026	1/1	0.90	0.32	50,50,50,50	0
56	MG	CA	3115	1/1	0.90	0.44	73,73,73,73	0
56	MG	DA	3160	1/1	0.90	0.47	71,71,71,71	0
56	MG	BA	1628	1/1	0.90	0.07	74,74,74,74	0
56	MG	AA	1612	1/1	0.90	0.25	70,70,70,70	0
56	MG	CA	3119	1/1	0.90	0.10	83,83,83,83	0
56	MG	DA	3164	1/1	0.90	0.32	70,70,70,70	0
56	MG	CA	3120	1/1	0.90	0.40	74,74,74,74	0
56	MG	AA	1649	1/1	0.90	0.23	64,64,64,64	0
56	MG	CA	3028	1/1	0.90	0.12	69,69,69,69	0
56	MG	DA	3096	1/1	0.90	0.24	69,69,69,69	0
65	ACY	DA	3202	4/4	0.90	0.55	53,59,61,64	0
56	MG	DA	3169	1/1	0.90	0.73	77,77,77,77	0
56	MG	AA	1666	1/1	0.90	0.11	73,73,73,73	0
56	MG	AA	1639	1/1	0.90	0.10	79,79,79,79	0
60	ZN	AB	301	1/1	0.90	0.42	140,140,140,140	0
60	ZN	C5	101	1/1	0.90	0.05	117,117,117,117	0
56	MG	CA	3149	1/1	0.90	0.15	69,69,69,69	0
56	MG	CA	3110	1/1	0.90	0.44	70,70,70,70	0
56	MG	DA	3058	1/1	0.90	0.28	38,38,38,38	0
56	MG	BA	1608	1/1	0.90	0.04	78,78,78,78	0
56	MG	CA	3130	1/1	0.90	0.14	78,78,78,78	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3015	1/1	0.90	0.21	54,54,54,54	0
56	MG	AA	1619	1/1	0.90	0.34	81,81,81,81	0
56	MG	AA	1620	1/1	0.90	0.65	72,72,72,72	0
56	MG	CA	3144	1/1	0.91	0.32	73,73,73,73	0
56	MG	BA	1638	1/1	0.91	0.30	75,75,75,75	0
56	MG	CA	3065	1/1	0.91	0.06	73,73,73,73	0
56	MG	DA	3052	1/1	0.91	0.11	41,41,41,41	0
56	MG	DA	3036	1/1	0.91	0.20	43,43,43,43	0
56	MG	CA	3123	1/1	0.91	0.22	75,75,75,75	0
62	SPD	DA	3225	10/10	0.91	0.31	34,45,52,63	0
56	MG	DA	3083	1/1	0.91	0.22	50,50,50,50	0
56	MG	AA	1624	1/1	0.91	0.66	80,80,80,80	0
59	PUT	DM	201	6/6	0.91	0.41	46,49,53,54	0
56	MG	DA	3018	1/1	0.91	0.26	54,54,54,54	0
56	MG	AA	1615	1/1	0.91	0.53	74,74,74,74	0
56	MG	DA	3115	1/1	0.91	0.21	56,56,56,56	0
56	MG	DA	3154	1/1	0.91	0.40	68,68,68,68	0
56	MG	CA	3127	1/1	0.91	0.24	84,84,84,84	0
56	MG	DB	205	1/1	0.91	0.44	74,74,74,74	0
56	MG	BA	1618	1/1	0.92	0.11	74,74,74,74	0
64	PGE	DA	3218	10/10	0.92	0.15	50,55,64,68	0
56	MG	CA	3134	1/1	0.92	0.15	79,79,79,79	0
56	MG	DA	3116	1/1	0.92	0.11	57,57,57,57	0
56	MG	AA	1622	1/1	0.92	0.37	74,74,74,74	0
56	MG	DA	3063	1/1	0.92	0.24	42,42,42,42	0
56	MG	CA	3022	1/1	0.92	0.28	78,78,78,78	0
56	MG	DA	3066	1/1	0.92	0.25	44,44,44,44	0
56	MG	DA	3069	1/1	0.92	0.24	53,53,53,53	0
56	MG	AA	1605	1/1	0.92	0.45	76,76,76,76	0
56	MG	CA	3088	1/1	0.92	0.19	68,68,68,68	0
56	MG	DB	209	1/1	0.92	0.25	69,69,69,69	0
56	MG	DR	201	1/1	0.92	0.80	66,66,66,66	0
56	MG	CA	3024	1/1	0.92	0.08	75,75,75,75	0
56	MG	DA	3053	1/1	0.92	0.28	38,38,38,38	0
56	MG	AA	1677	1/1	0.92	0.09	79,79,79,79	0
56	MG	CA	3131	1/1	0.92	0.20	79,79,79,79	0
62	SPD	DA	3183	10/10	0.92	0.19	42,51,57,57	0
56	MG	DA	3133	1/1	0.92	0.21	67,67,67,67	0
56	MG	DA	3176	1/1	0.92	0.38	70,70,70,70	0
56	MG	DA	3135	1/1	0.92	0.13	56,56,56,56	0
56	MG	DA	3080	1/1	0.92	0.08	61,61,61,61	0
58	MPD	AA	1676	8/8	0.92	0.26	60,66,72,76	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3040	1/1	0.93	0.17	48,48,48,48	0
56	MG	CA	3100	1/1	0.93	0.12	78,78,78,78	0
61	PEG	AL	201	7/7	0.93	0.14	57,64,71,73	0
56	MG	DA	3155	1/1	0.93	0.39	66,66,66,66	0
56	MG	DA	3127	1/1	0.93	0.50	65,65,65,65	0
56	MG	DA	3006	1/1	0.93	0.26	43,43,43,43	0
56	MG	DA	3087	1/1	0.93	0.28	31,31,31,31	0
56	MG	DA	3024	1/1	0.93	0.20	64,64,64,64	0
64	PGE	DA	3186	10/10	0.93	0.25	37,42,58,59	0
56	MG	CA	3117	1/1	0.93	0.45	79,79,79,79	0
61	PEG	DL	201	7/7	0.93	0.16	55,58,62,66	0
56	MG	DA	3019	1/1	0.94	0.29	34,34,34,34	0
58	MPD	DS	203	8/8	0.94	0.29	41,45,50,53	0
56	MG	DA	3132	1/1	0.94	0.25	71,71,71,71	0
56	MG	CA	3043	1/1	0.94	0.13	67,67,67,67	0
56	MG	DA	3117	1/1	0.94	0.32	54,54,54,54	0
56	MG	BA	1634	1/1	0.94	0.05	76,76,76,76	0
56	MG	DA	3059	1/1	0.94	0.24	42,42,42,42	0
56	MG	DA	3138	1/1	0.94	0.23	60,60,60,60	0
56	MG	CA	3133	1/1	0.94	0.31	75,75,75,75	0
56	MG	DA	3100	1/1	0.94	0.23	46,46,46,46	0
56	MG	AA	1643	1/1	0.94	0.10	66,66,66,66	0
56	MG	DA	3142	1/1	0.94	0.57	64,64,64,64	0
56	MG	DA	3045	1/1	0.94	0.25	44,44,44,44	0
56	MG	DA	3229	1/1	0.94	0.30	42,42,42,42	0
56	MG	AA	1627	1/1	0.94	0.41	80,80,80,80	0
56	MG	DA	3146	1/1	0.94	0.05	77,77,77,77	0
56	MG	BA	1615	1/1	0.94	0.10	62,62,62,62	0
56	MG	AA	1645	1/1	0.94	0.21	67,67,67,67	0
59	PUT	DA	3224	6/6	0.94	0.41	43,45,54,60	0
56	MG	DA	3090	1/1	0.94	0.30	42,42,42,42	0
56	MG	CA	3029	1/1	0.94	0.13	79,79,79,79	0
56	MG	DA	3081	1/1	0.95	0.21	52,52,52,52	0
56	MG	CA	3148	1/1	0.95	0.39	73,73,73,73	0
56	MG	DA	3064	1/1	0.95	0.31	41,41,41,41	0
56	MG	DA	3086	1/1	0.95	0.10	40,40,40,40	0
56	MG	CA	3143	1/1	0.95	0.06	74,74,74,74	0
56	MG	DA	3010	1/1	0.95	0.33	37,37,37,37	0
56	MG	AA	1667	1/1	0.95	0.14	57,57,57,57	0
56	MG	DA	3056	1/1	0.95	0.24	44,44,44,44	0
56	MG	DA	3071	1/1	0.95	0.36	37,37,37,37	0
66	EDO	DA	3197	4/4	0.95	0.29	56,58,62,65	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	AA	1652	1/1	0.95	0.26	49,49,49,49	0
56	MG	DA	3025	1/1	0.95	0.17	41,41,41,41	0
56	MG	CA	3108	1/1	0.95	0.36	65,65,65,65	0
62	SPD	DA	3187	10/10	0.95	0.29	36,43,46,47	0
56	MG	DB	201	1/1	0.95	0.12	62,62,62,62	0
56	MG	DA	3098	1/1	0.95	0.19	37,37,37,37	0
56	MG	DA	3099	1/1	0.95	0.16	60,60,60,60	0
56	MG	CA	3040	1/1	0.95	0.14	59,59,59,59	0
56	MG	DA	3148	1/1	0.95	0.14	66,66,66,66	0
56	MG	DA	3078	1/1	0.95	0.04	72,72,72,72	0
56	MG	DA	3033	1/1	0.95	0.35	47,47,47,47	0
56	MG	DA	3034	1/1	0.95	0.31	33,33,33,33	0
56	MG	AA	1635	1/1	0.96	0.13	74,74,74,74	0
56	MG	DA	3027	1/1	0.96	0.34	42,42,42,42	0
56	MG	DA	3073	1/1	0.96	0.28	38,38,38,38	0
56	MG	CA	3050	1/1	0.96	0.07	65,65,65,65	0
56	MG	DA	3029	1/1	0.96	0.25	41,41,41,41	0
56	MG	DA	3032	1/1	0.96	0.30	31,31,31,31	0
56	MG	CA	3106	1/1	0.96	0.46	67,67,67,67	0
56	MG	AA	1637	1/1	0.96	0.23	57,57,57,57	0
56	MG	CA	3126	1/1	0.96	0.26	74,74,74,74	0
56	MG	DA	3123	1/1	0.96	0.14	43,43,43,43	0
56	MG	DA	3144	1/1	0.96	0.10	69,69,69,69	0
56	MG	DA	3124	1/1	0.96	0.55	72,72,72,72	0
56	MG	BA	1640	1/1	0.96	0.35	79,79,79,79	0
56	MG	DA	3082	1/1	0.96	0.25	49,49,49,49	0
56	MG	DA	3102	1/1	0.96	0.35	35,35,35,35	0
56	MG	BA	1622	1/1	0.96	0.13	70,70,70,70	0
56	MG	DA	3084	1/1	0.96	0.23	48,48,48,48	0
56	MG	DA	3067	1/1	0.96	0.10	50,50,50,50	0
56	MG	DA	3055	1/1	0.96	0.19	36,36,36,36	0
56	MG	DA	3014	1/1	0.96	0.28	36,36,36,36	0
56	MG	AA	1668	1/1	0.97	0.15	60,60,60,60	0
56	MG	DA	3107	1/1	0.97	0.29	33,33,33,33	0
56	MG	DA	3157	1/1	0.97	0.24	65,65,65,65	0
56	MG	BA	1602	1/1	0.97	0.15	76,76,76,76	0
56	MG	DA	3089	1/1	0.97	0.27	32,32,32,32	0
56	MG	DA	3074	1/1	0.97	0.29	42,42,42,42	0
56	MG	DA	3091	1/1	0.97	0.31	36,36,36,36	0
56	MG	DA	3068	1/1	0.97	0.05	70,70,70,70	0
56	MG	DA	3037	1/1	0.97	0.26	37,37,37,37	0
56	MG	DA	3054	1/1	0.97	0.26	35,35,35,35	0

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	MG	DA	3030	1/1	0.97	0.28	34,34,34,34	0
56	MG	DA	3105	1/1	0.97	0.25	41,41,41,41	0
56	MG	DA	3114	1/1	0.98	0.20	35,35,35,35	0
56	MG	DA	3007	1/1	0.98	0.24	40,40,40,40	0
56	MG	AA	1607	1/1	0.98	0.31	76,76,76,76	0
56	MG	DA	3046	1/1	0.98	0.22	33,33,33,33	0
56	MG	DA	3011	1/1	0.98	0.38	33,33,33,33	0
56	MG	DA	3088	1/1	0.98	0.31	32,32,32,32	0
56	MG	DA	3048	1/1	0.98	0.32	35,35,35,35	0
56	MG	DB	202	1/1	0.98	0.22	40,40,40,40	0
56	MG	DA	3049	1/1	0.98	0.25	45,45,45,45	0
56	MG	DA	3134	1/1	0.98	0.07	65,65,65,65	0
56	MG	DA	3110	1/1	0.98	0.26	33,33,33,33	0
56	MG	DA	3031	1/1	0.98	0.24	34,34,34,34	0
56	MG	DA	3112	1/1	0.98	0.25	44,44,44,44	0
56	MG	DA	3023	1/1	0.98	0.27	41,41,41,41	0
60	ZN	D5	101	1/1	0.99	0.16	63,63,63,63	0
56	MG	DA	3039	1/1	0.99	0.20	39,39,39,39	0
56	MG	DA	3108	1/1	0.99	0.24	38,38,38,38	0
56	MG	DA	3017	1/1	0.99	0.28	36,36,36,36	0
56	MG	DA	3020	1/1	1.00	0.21	30,30,30,30	0

6.5 Other polymers (i)

There are no such residues in this entry.