



# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 29, 2022 – 01:50 pm BST

PDB ID : 7AZO  
Title : 70S thermus thermophilus ribosome with bound antibiotic lead SEQ-977  
Authors : Jenner, L.B.; Yusupov, M.; Yusupova, G.  
Deposited on : 2020-11-17  
Resolution : 3.30 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](mailto: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>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.4, CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.31.2  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0267  
CCP4 : 7.1.010 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

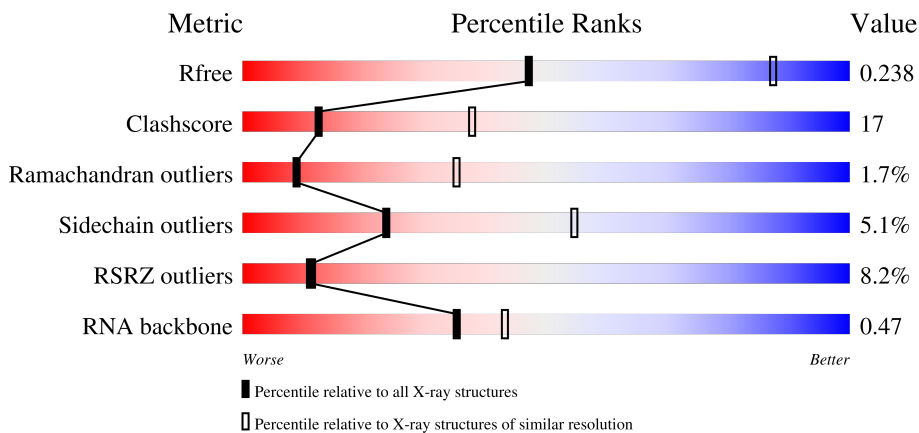
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)
RNA backbone	3102	1117 (3.70-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . 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	16SA	1512	<div style="display: flex; align-items: center;"> <div style="width: 10%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 72%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 24%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">72%      24%      •</p>
1	16SB	1512	<div style="display: flex; align-items: center;"> <div style="width: 71%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 25%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">71%      25%      •</p>
2	S2A	256	<div style="display: flex; align-items: center;"> <div style="width: 16%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 50%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 38%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">16%      50%      38%      5%      7%</p>
2	S2B	256	<div style="display: flex; align-items: center;"> <div style="width: 27%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 45%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 44%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 5%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: grey;"></div> </div> <p style="margin-left: 20px;">27%      45%      44%      •      7%</p>

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Mol	Chain	Length	Quality of chain
3	S3A	239	14% 57% 26% 14%
3	S3B	239	15% 46% 35% 5% 14%
4	S4A	209	2% 58% 40% 1% 1%
4	S4B	209	7% 68% 30% 1% 1%
5	S5A	162	2% 65% 28% 7%
5	S5B	162	7% 61% 31% 7%
6	S6A	101	5% 63% 35% 1% 1%
6	S6B	101	5% 66% 32% 1% 1%
7	S7A	156	14% 72% 26% 1% 2%
7	S7B	156	33% 71% 28% 1% 2%
8	S8A	138	1% 58% 40% 1% 1%
8	S8B	138	1% 63% 33% 1% 1%
9	S9A	128	14% 59% 40% 1% 2%
9	S9B	128	9% 56% 39% 1% 2%
10	S10A	105	14% 91% 6% 1% 1%
10	S10B	105	5% 86% 9% 6%
11	S11A	129	7% 87% 10%
11	S11B	129	15% 90% 9%
12	S12A	132	12% 91% 5% 1% 1%
12	S12B	132	17% 87% 7% 5%
13	S13A	126	6% 86% 9% 6%
13	S13B	126	17% 90% 6% 1% 1%
14	S14A	61	8% 87% 11% 1% 1%
14	S14B	61	11% 90% 7% 1% 1%
15	S15A	89	3% 96% 1% 1% 1%

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Mol	Chain	Length	Quality of chain
15	S15B	89	2% 94% ..
16	S16A	88	11% 89% 6% 6%
16	S16B	88	93% 5%
17	S17A	105	2% 90% 6% 5%
17	S17B	105	13% 91% 5%
18	S18A	88	5% 80% 19%
18	S18B	88	14% 77% 20%
19	S19A	93	19% 81% 10% 10%
19	S19B	93	24% 85% 8% 8%
20	S20A	106	17% 88% 6% 7%
20	S20B	106	12% 89% 7%
21	THXA	27	89% 11%
21	THXB	27	4% 85% 7% 7%
22	ASIA	76	13% 32% 57% 12%
23	PSIA	76	3% 57% 37% 7%
23	PSIB	76	49% 45% 7%
24	ESIA	76	5% 51% 43% 5%
24	ESIB	76	% 66% 30% .
25	MRNA	30	17% 73% 23% .
25	MRNB	30	7% 60% 30% 10%
26	TRNA	76	45% 43% 42% 11% .
27	23SA	2911	% 72% 24% ..
27	23SB	2911	% 69% 26% ..
28	5SA	124	% 56% 27% 13% ..
28	5SB	124	% 40% 36% 19% ..

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Mol	Chain	Length	Quality of chain
29	L2A	276	73% 24% ..
29	L2B	276	71% 26% ..
30	L3A	206	75% 23% ..
30	L3B	206	68% 29% ..
31	L4A	210	60% 35% ..
31	L4B	210	58% 38% .
32	L5A	182	63% 32% ..
32	L5B	182	59% 35% 6% .
33	L6A	180	50% 42% . 5%
33	L6B	180	46% 46% 5% .
34	L9A	148	47% 43% 8% ..
34	L9B	148	52% 41% 6% .
35	L13A	140	94% ..
35	L13B	140	96% ..
36	L14A	122	96% .
36	L14B	122	93% 7% .
37	L15A	150	87% 11% .
37	L15B	150	88% 11% .
38	L16A	141	91% 9%
38	L16B	141	91% 9%
39	L17A	118	98% .
39	L17B	118	97% .
40	L18A	112	95% 5%
40	L18B	112	91% 7% ..
41	L19A	146	88% 5% 6%

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Mol	Chain	Length	Quality of chain
41	L19B	146	5% 90% 6%
42	L20A	118	3% 95% ..
42	L20B	118	23% 91% 8% .
43	L21A	101	12% 90% 9% .
43	L21B	101	52% 86% 13% .
44	L22A	113	7% 96% .
44	L22B	113	2% 96% .
45	L23A	96	3% 96% ..
45	L23B	96	9% 95% ..
46	L24A	110	6% 90% 6% ..
46	L24B	110	24% 89% 6% ..
47	L25A	206	32% 80% 6% . 13%
47	L25B	206	29% 79% 7% 15%
48	L27A	85	11% 95% ..
48	L27B	85	6% 92% 7% .
49	L28A	98	7% 94% 5% .
49	L28B	98	9% 96% ..
50	L29A	72	4% 92% ..
50	L29B	72	8% 96% ..
51	L30A	60	5% 95% ..
51	L30B	60	23% 95% ..
52	L31A	71	56% 85% 15%
52	L31B	71	85% 89% 10% .
53	L32A	60	12% 88% 5% 7%
53	L32B	60	10% 83% 10% 7%

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Mol	Chain	Length	Quality of chain
54	L33A	54	76% 67% 17% 17%
54	L33B	54	63% 72% 11% 17%
55	L34A	49	2% 94% . .
55	L34B	49	2% 94% 6%
56	L35A	65	3% 89% 9% .
56	L35B	65	15% 94% 5% .
57	ASIB	76	3% 39% 58% .

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
26	PSU	TRNA	32	-	-	-	X
26	MIA	TRNA	37	-	-	-	X
26	4SU	TRNA	8	-	-	-	X
58	MG	16SA	2213	-	-	-	X
58	MG	16SA	2218	-	-	-	X
58	MG	16SA	2235	-	-	-	X
58	MG	16SA	2237	-	-	-	X
58	MG	16SA	2244	-	-	-	X
58	MG	16SA	2245	-	-	-	X
58	MG	16SA	2258	-	-	-	X
58	MG	16SB	2282	-	-	-	X
58	MG	16SB	2288	-	-	-	X
58	MG	16SB	2298	-	-	-	X
58	MG	16SB	2302	-	-	-	X
58	MG	16SB	2310	-	-	-	X
58	MG	16SB	2318	-	-	-	X
58	MG	16SB	2321	-	-	-	X
58	MG	16SB	2333	-	-	-	X
58	MG	23SA	3013	-	-	-	X
58	MG	23SA	3015	-	-	-	X
58	MG	23SA	3025	-	-	-	X
58	MG	23SA	3037	-	-	-	X
58	MG	23SA	3051	-	-	-	X
58	MG	23SA	3059	-	-	-	X
58	MG	23SA	3067	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	23SA	3086	-	-	-	X
58	MG	23SA	3087	-	-	-	X
58	MG	23SA	3094	-	-	-	X
58	MG	23SA	3096	-	-	-	X
58	MG	23SA	3097	-	-	-	X
58	MG	23SA	3101	-	-	-	X
58	MG	23SA	3107	-	-	-	X
58	MG	23SA	3124	-	-	-	X
58	MG	23SA	3137	-	-	-	X
58	MG	23SA	3149	-	-	-	X
58	MG	23SA	3152	-	-	-	X
58	MG	23SA	3154	-	-	-	X
58	MG	23SA	3158	-	-	-	X
58	MG	23SA	3159	-	-	-	X
58	MG	23SA	3167	-	-	-	X
58	MG	23SA	3172	-	-	-	X
58	MG	23SA	3175	-	-	-	X
58	MG	23SA	3177	-	-	-	X
58	MG	23SB	3210	-	-	-	X
58	MG	23SB	3246	-	-	-	X
58	MG	23SB	3260	-	-	-	X
58	MG	23SB	3265	-	-	-	X
58	MG	23SB	3272	-	-	-	X
58	MG	23SB	3276	-	-	-	X
58	MG	23SB	3281	-	-	-	X
58	MG	23SB	3284	-	-	-	X
58	MG	23SB	3286	-	-	-	X
58	MG	23SB	3309	-	-	-	X
58	MG	23SB	3310	-	-	-	X
58	MG	23SB	3317	-	-	-	X
58	MG	23SB	3318	-	-	-	X
58	MG	23SB	3328	-	-	-	X
58	MG	5SA	203	-	-	-	X
58	MG	L30A	101	-	-	-	X
59	OHX	S4A	301	-	-	X	-
60	K	23SA	3594	-	-	-	X



## 2 Entry composition

There are 62 unique types of molecules in this entry. The entry contains 306403 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
			Total	C	N	O	P			
1	16SA	1512	Total 32509	C 14478	N 6016	O 10503	P 1512	0	0	0
1	16SB	1508	Total 32429	C 14442	N 6008	O 10471	P 1508	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	S2A	237	Total 1924	C 1228	N 344	O 347	S 5	0	0	0
2	S2B	237	Total 1924	C 1228	N 344	O 347	S 5	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	S3A	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0
3	S3B	206	Total 1612	C 1016	N 314	O 281	S 1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	S4A	208	Total 1702	C 1066	N 339	O 290	S 7	0	0	0
4	S4B	208	Total 1702	C 1066	N 339	O 290	S 7	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	S5A	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	S5B	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	S6A	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
6	S6B	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	S7A	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			
7	S7B	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	S8A	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
8	S8B	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	S9A	127	Total	C	N	O	0	0	0
			1009	639	197	173			
9	S9B	127	Total	C	N	O	0	0	0
			1009	639	197	173			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	S10A	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	S10B	99	801	504	157	139	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	S11A	116	864	537	164	160	3	0	0	0
11	S11B	117	873	543	166	161	3	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	S12A	125	977	615	196	164	2	0	0	0
12	S12B	125	977	615	196	164	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	S13A	119	946	585	195	164	2	0	0	0
13	S13B	121	964	597	199	166	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	S14A	60	491	312	104	71	4	0	0	0
14	S14B	59	486	309	103	70	4	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	S15A	88	733	459	147	125	2	0	0	0
15	S15B	88	733	459	147	125	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	S16A	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
16	S16B	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	S17A	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	S17B	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	S18A	71	Total	C	N	O	0	0	0
			584	373	116	95			
18	S18B	70	Total	C	N	O	0	0	0
			573	367	112	94			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S19A	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	S19B	86	Total	C	N	O	S	0	0	0
			684	436	126	120	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	S20A	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			
20	S20B	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	THXA	24	Total	C	N	O	0	0	0
			208	128	50	30			
21	THXB	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called Phe-tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
22	ASIA	76	Total	C	N	O	P	S	0	0	0
			1628	731	290	530	75	2			

- Molecule 23 is a RNA chain called Phe-tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	PSIA	76	Total	C	N	O	P	S	0	0	0
			1635	735	291	532	75	2			
23	PSIB	76	Total	C	N	O	P	S	0	0	0
			1635	735	291	532	75	2			

- Molecule 24 is a RNA chain called Phe-tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	ESIA	76	Total	C	N	O	P	S	0	0	0
			1626	729	290	531	75	1			
24	ESIB	76	Total	C	N	O	P	S	0	0	0
			1626	729	290	531	75	1			

- Molecule 25 is a RNA chain called RNA (30-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	MRNA	30	Total	C	N	O	P	0	0	0
			621	279	88	225	29			
25	MRNB	30	Total	C	N	O	P	0	0	0
			621	279	88	225	29			

- Molecule 26 is a RNA chain called Phe-tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	TRNA	73	Total	C	N	O	P	S	0	0	0
			1565	702	279	510	72	2			

- Molecule 27 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
27	23SA	2889	Total 62225	C 27699	N 11629	O 20008	P 2889	0	0	0
27	23SB	2873	Total 61886	C 27548	N 11574	O 19891	P 2873	0	0	0

- Molecule 28 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
28	5SA	122	Total 2617	C 1166	N 486	O 844	P 121	0	0	0
28	5SB	121	Total 2598	C 1156	N 481	O 840	P 121	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	L2A	272	Total 2115	C 1335	N 420	O 357	S 3	0	0	0
29	L2B	272	Total 2115	C 1335	N 420	O 357	S 3	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	L3A	204	Total 1563	C 988	N 299	O 270	S 6	0	0	0
30	L3B	204	Total 1563	C 988	N 299	O 270	S 6	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	L4A	202	Total 1585	C 1011	N 297	O 275	S 2	0	0	0
31	L4B	202	Total 1585	C 1011	N 297	O 275	S 2	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	L5A	181	Total 1473	C 942	N 268	O 259	S 4	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	L5B	181	1473	942	268	259	4	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	L6A	171	1316	835	247	233	1	0	0	0
33	L6B	173	1327	842	249	235	1	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	L9A	145	1131	723	200	207	1	0	0	0
34	L9B	146	1136	726	201	208	1	0	0	0

- Molecule 35 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	L13A	138	1104	712	206	182	4	0	0	0
35	L13B	138	1104	712	206	182	4	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	L14A	122	932	588	171	169	4	0	0	0
36	L14B	122	932	588	171	169	4	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
37	L15A	150	1144	712	232	197	3	0	0	0
37	L15B	150	1144	712	232	197	3	0	0	0

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
38	L16A	141	1121	715	212	187	7	0	0	0
38	L16B	141	1121	715	212	187	7	0	0	0

- Molecule 39 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
39	L17A	118	967	604	203	159	1	0	0	0
39	L17B	118	967	604	203	159	1	0	0	0

- Molecule 40 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
40	L18A	112	889	561	177	150	1	0	0	0
40	L18B	111	881	556	176	149		0	0	0

- Molecule 41 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
41	L19A	137	1141	710	234	196	1	0	0	0
41	L19B	137	1141	710	234	196	1	0	0	0

- Molecule 42 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	L20A	117	963	610	202	150	1	0	0	0
42	L20B	117	963	610	202	150	1	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L21.



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	L21A	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
43	L21B	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 44 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	L22A	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			
44	L22B	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

- Molecule 45 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	L23A	93	Total	C	N	O	S	0	0	0
			738	480	133	124	1			
45	L23B	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

- Molecule 46 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	L24A	108	Total	C	N	O	S	0	0	0
			824	528	153	138	5			
46	L24B	106	Total	C	N	O	S	0	0	0
			775	494	147	129	5			

- Molecule 47 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	L25A	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			
47	L25B	176	Total	C	N	O	S	0	0	0
			1404	897	252	252	3			

- Molecule 48 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	L27A	84	Total	C	N	O	S	0	0	0
			661	410	140	110	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	L27B	84	661	410	140	110	1	0	0	0

- Molecule 49 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
49	L28A	97	762	481	150	130	1	0	0	0
49	L28B	97	762	481	150	130	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	L29A	69	583	363	117	101	2	0	0	0
50	L29B	71	590	367	119	103	1	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
51	L30A	59	468	298	90	80	0	0	0
51	L30B	59	468	298	90	80	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	L31A	71	580	364	108	103	5	0	0	0
52	L31B	71	580	364	108	103	5	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
53	L32A	56	434	272	87	70	5	0	0	0
53	L32B	56	434	272	87	70	5	0	0	0

- Molecule 54 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
54	L33A	45	389	241	79	65	4	0	0	0
54	L33B	45	389	241	79	65	4	0	0	0

- Molecule 55 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
55	L34A	48	418	257	104	55	2	0	0	0
55	L34B	49	429	263	108	56	2	0	0	0

- Molecule 56 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
56	L35A	64	516	331	102	81	2	0	0	0
56	L35B	64	516	331	102	81	2	0	0	0

- Molecule 57 is a RNA chain called Phe-tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	N	O	P	S			
57	ASIB	76	1627	730	290	531	75	1	0	0	0

- Molecule 58 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

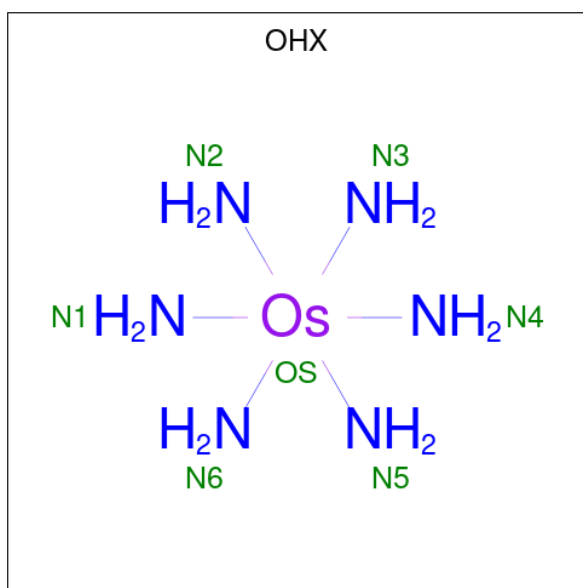
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	16SA	92	Total	Mg	0	0
			92	92		
58	S4A	1	Total	Mg	0	0
			1	1		
58	PSIA	2	Total	Mg	0	0
			2	2		
58	23SA	332	Total	Mg	0	0
			332	332		
58	5SA	6	Total	Mg	0	0
			6	6		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	L3A	2	Total Mg 2 2	0	0
58	L4A	2	Total Mg 2 2	0	0
58	L5A	1	Total Mg 1 1	0	0
58	L15A	2	Total Mg 2 2	0	0
58	L23A	1	Total Mg 1 1	0	0
58	L27A	2	Total Mg 2 2	0	0
58	L30A	1	Total Mg 1 1	0	0
58	L32A	1	Total Mg 1 1	0	0
58	L33A	1	Total Mg 1 1	0	0
58	L34A	1	Total Mg 1 1	0	0
58	L35A	1	Total Mg 1 1	0	0
58	16SB	85	Total Mg 86 86	0	1
58	S5B	1	Total Mg 1 1	0	0
58	PSIB	3	Total Mg 3 3	0	0
58	23SB	240	Total Mg 241 241	0	1
58	5SB	4	Total Mg 4 4	0	0
58	L3B	2	Total Mg 2 2	0	0
58	L4B	1	Total Mg 1 1	0	0
58	L5B	1	Total Mg 1 1	0	0
58	L15B	1	Total Mg 1 1	0	0
58	L35B	2	Total Mg 2 2	0	0

- Molecule 59 is osmium (III) hexammine (three-letter code: OHX) (formula:  $H_{12}N_6Os$ ).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		
59	16SA	1	Total	N	Os	0	0
			7	6	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	N	Os		
59	16SA	1	7	6	1	0	0
59	16SA	1	7	6	1	0	0
59	16SA	1	7	6	1	0	0
59	16SA	1	7	6	1	0	0
59	16SA	1	7	6	1	0	0
59	16SA	1	7	6	1	0	0
59	S4A	1	7	6	1	0	0
59	S10A	1	7	6	1	0	0
59	S19A	1	7	6	1	0	0
59	ASIA	1	7	6	1	0	0
59	ASIA	1	7	6	1	0	0
59	ASIA	1	7	6	1	0	0
59	PSIA	1	7	6	1	0	0
59	ESIA	1	7	6	1	0	0
59	MRNA	1	7	6	1	0	0
59	TRNA	1	7	6	1	0	0
59	TRNA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	N	Os		
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	23SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	N	Os		
59	5SA	1	7	6	1	0	0
59	5SA	1	7	6	1	0	0
59	L4A	1	7	6	1	0	0
59	L15A	1	7	6	1	0	0
59	L17A	1	7	6	1	0	0
59	L19A	1	7	6	1	0	0
59	L20A	1	7	6	1	0	0
59	L27A	1	7	6	1	0	0
59	L27A	1	7	6	1	0	0
59	L28A	1	7	6	1	0	0
59	L35A	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	N	Os		
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	16SB	1	7	6	1	0	0
59	S4B	1	7	6	1	0	0
59	S14B	1	7	6	1	0	0
59	ASIB	1	7	6	1	0	0
59	ASIB	1	7	6	1	0	0
59	ASIB	1	7	6	1	0	0
59	PSIB	1	7	6	1	0	0
59	PSIB	1	7	6	1	0	0
59	ESIB	1	7	6	1	0	0
59	MRNB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	N	Os		
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	23SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	5SB	1	7	6	1	0	0
59	L4B	1	7	6	1	0	0
59	L17B	1	7	6	1	0	0
59	L20B	1	7	6	1	0	0
59	L35B	1	7	6	1	0	0

- Molecule 60 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	16SA	46	Total	K	0	0
			46	46		

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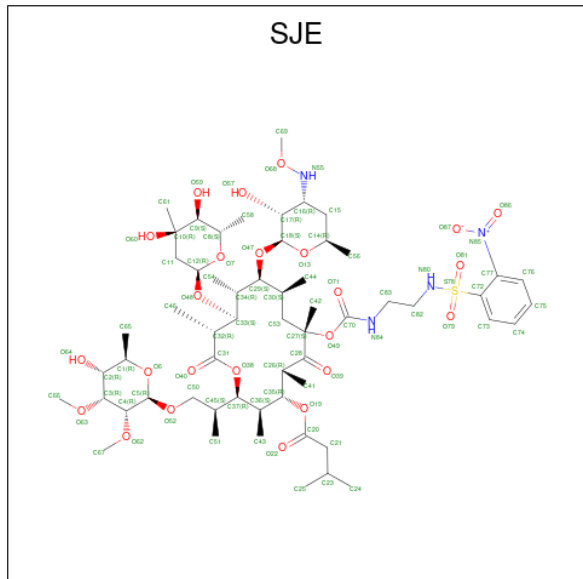
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	S6A	1	Total K 1 1	0	0
60	S13A	1	Total K 1 1	0	0
60	S20A	1	Total K 1 1	0	0
60	PSIA	2	Total K 2 2	0	0
60	23SA	102	Total K 102 102	0	0
60	5SA	2	Total K 2 2	0	0
60	L2A	1	Total K 1 1	0	0
60	L3A	1	Total K 1 1	0	0
60	L4A	1	Total K 1 1	0	0
60	L5A	1	Total K 1 1	0	0
60	16SB	35	Total K 35 35	0	0
60	S4B	1	Total K 1 1	0	0
60	S6B	1	Total K 1 1	0	0
60	S13B	1	Total K 1 1	0	0
60	S14B	1	Total K 1 1	0	0
60	S20B	1	Total K 1 1	0	0
60	23SB	81	Total K 81 81	0	0
60	5SB	1	Total K 1 1	0	0
60	L2B	1	Total K 1 1	0	0
60	L3B	1	Total K 1 1	0	0
60	L4B	1	Total K 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	L5B	1	Total K 1 1	0	0
60	L15B	1	Total K 1 1	0	0
60	L16B	1	Total K 1 1	0	0

- Molecule 61 is (2R,3S,4R,5R,7S,9S,10S,11R,12S,13R)-12-(((2R,4R,5S,6S)-4,5-dihydroxy-4,6-dimethyltetrahydro-2H-pyran-2-yl)oxy)-2-((S)-1-(((2R,3R,4R,5R,6R)-5-hydroxy-3,4-dimethoxy-6-methyltetrahydro-2H-pyran-2-yl)oxy)propan-2-yl)-10-(((2S,3R,4R,6R)-3-hydroxy-4-(methoxyamino)-6-methyltetrahydro-2H-pyran-2-yl)oxy)-3,5,7,9,11,13-hexamethyl-7-((2-((2-nitrophenyl)sulfonamido)ethyl)carbamoyl)oxy)-6,14-dioxooxacyclotetradecan-4-yl 3-methylbutanoate (three-letter code: SJE) (formula: C<sub>58</sub>H<sub>96</sub>N<sub>4</sub>O<sub>24</sub>S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	23SA	1	Total C N O S 87 58 4 24 1	0	0
61	23SB	1	Total C N O S 87 58 4 24 1	0	0

- Molecule 62 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	16SA	172	Total O 172 172	0	0
62	S4A	3	Total O 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	S5A	1	Total O 1 1	0	0
62	S12A	1	Total O 1 1	0	0
62	S13A	1	Total O 1 1	0	0
62	S14A	1	Total O 1 1	0	0
62	S16A	1	Total O 1 1	0	0
62	THXA	3	Total O 3 3	0	0
62	PSIA	7	Total O 7 7	0	0
62	ESIA	1	Total O 1 1	0	0
62	23SA	788	Total O 788 788	0	0
62	5SA	14	Total O 14 14	0	0
62	L2A	10	Total O 10 10	0	0
62	L3A	7	Total O 7 7	0	0
62	L4A	6	Total O 6 6	0	0
62	L15A	9	Total O 9 9	0	0
62	L16A	1	Total O 1 1	0	0
62	L17A	2	Total O 2 2	0	0
62	L18A	2	Total O 2 2	0	0
62	L19A	1	Total O 1 1	0	0
62	L23A	1	Total O 1 1	0	0
62	L27A	3	Total O 3 3	0	0
62	L30A	1	Total O 1 1	0	0

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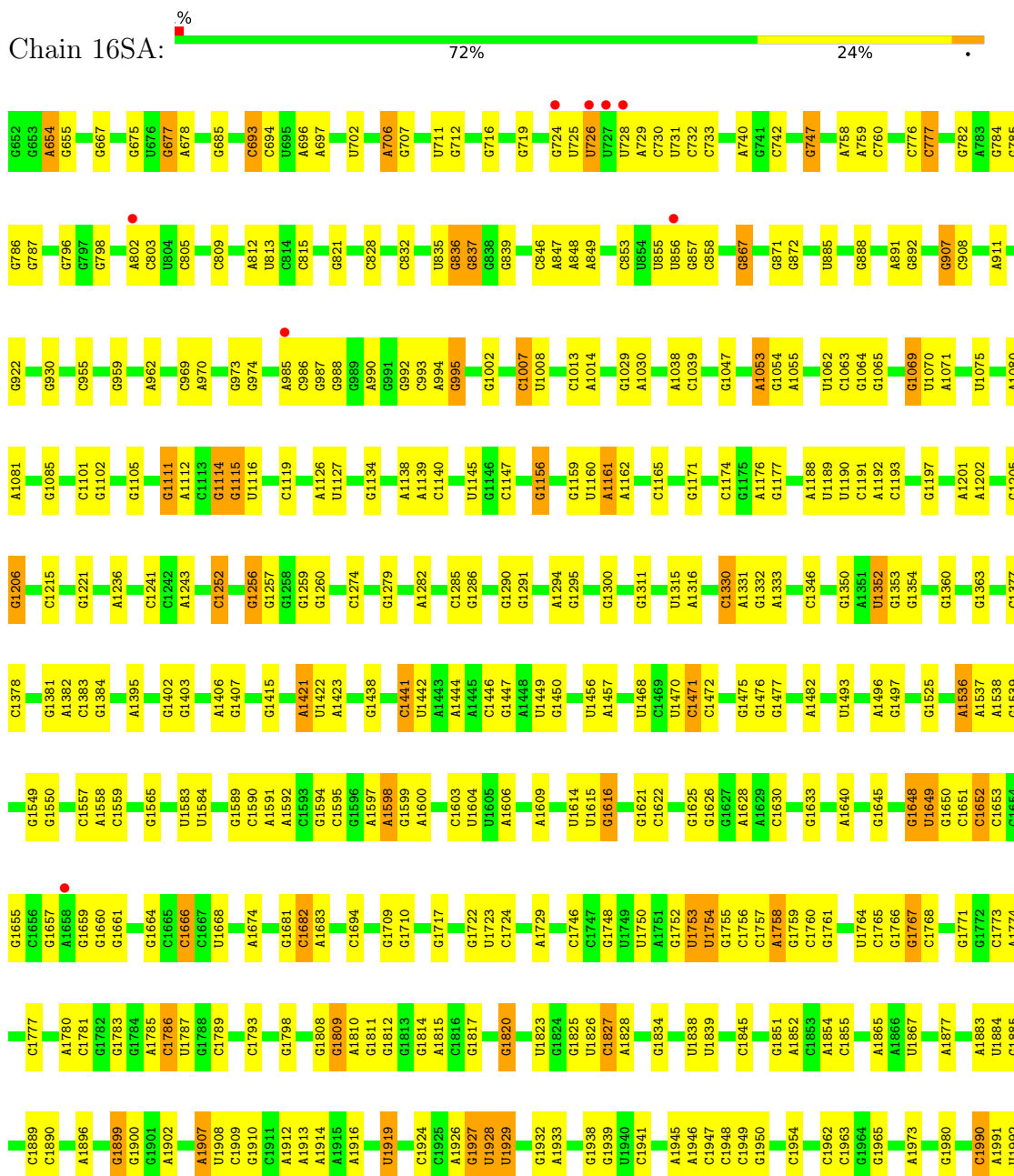
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	L34A	1	Total O 1 1	0	0
62	L35A	1	Total O 1 1	0	0
62	16SB	157	Total O 157 157	0	0
62	S4B	2	Total O 2 2	0	0
62	S5B	1	Total O 1 1	0	0
62	S9B	1	Total O 1 1	0	0
62	S12B	2	Total O 2 2	0	0
62	S14B	2	Total O 2 2	0	0
62	23SB	519	Total O 519 519	0	0
62	5SB	5	Total O 5 5	0	0
62	L2B	12	Total O 12 12	0	0
62	L3B	6	Total O 6 6	0	0
62	L4B	1	Total O 1 1	0	0
62	L15B	7	Total O 7 7	0	0
62	L19B	1	Total O 1 1	0	0
62	L27B	2	Total O 2 2	0	0
62	L28B	1	Total O 1 1	0	0
62	L30B	1	Total O 1 1	0	0
62	L35B	6	Total O 6 6	0	0

### 3 Residue-property plots [i](#)

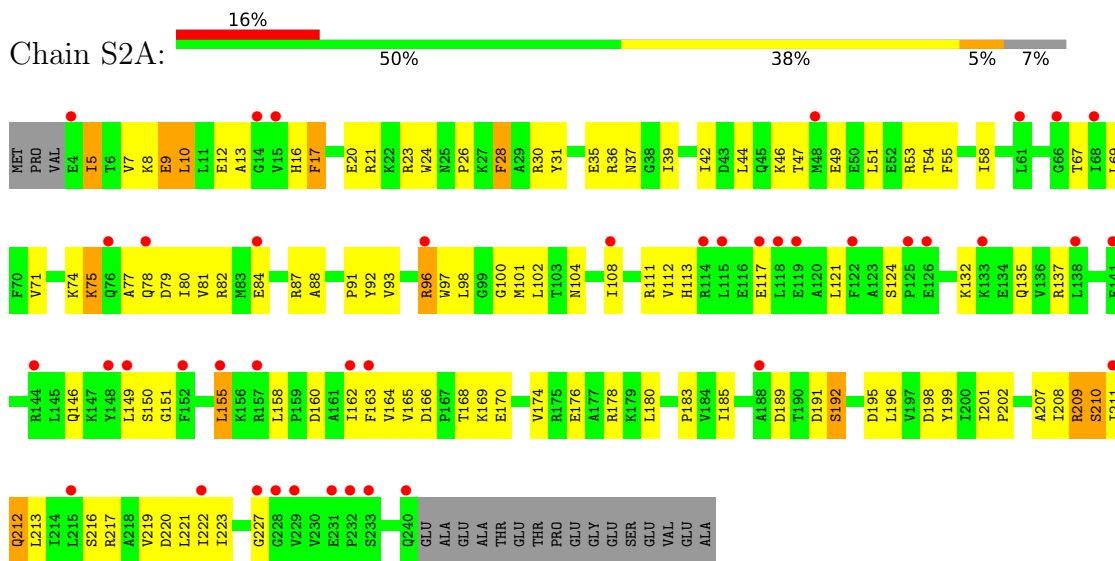
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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

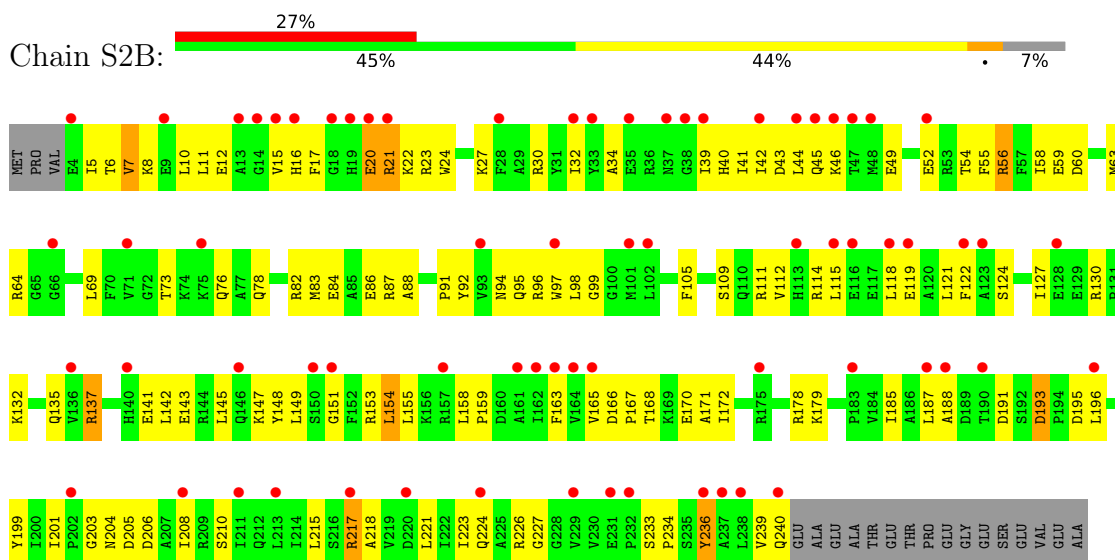




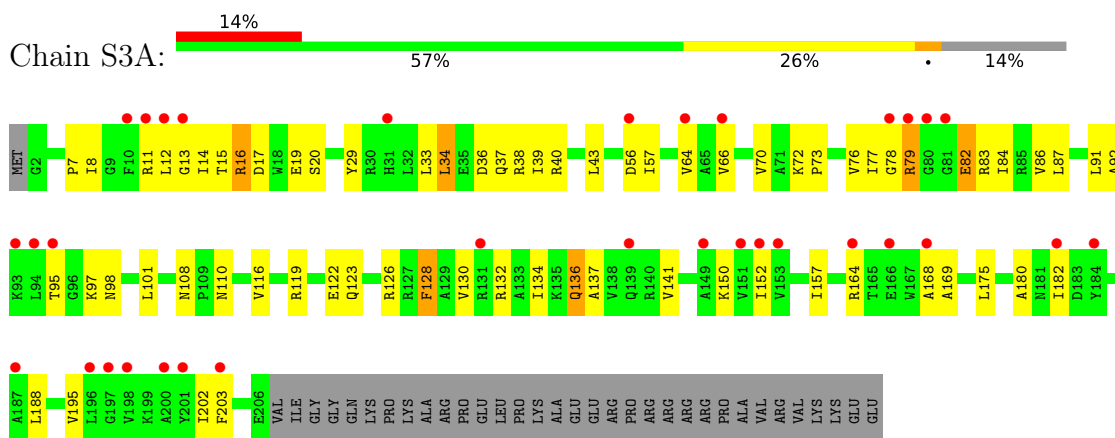




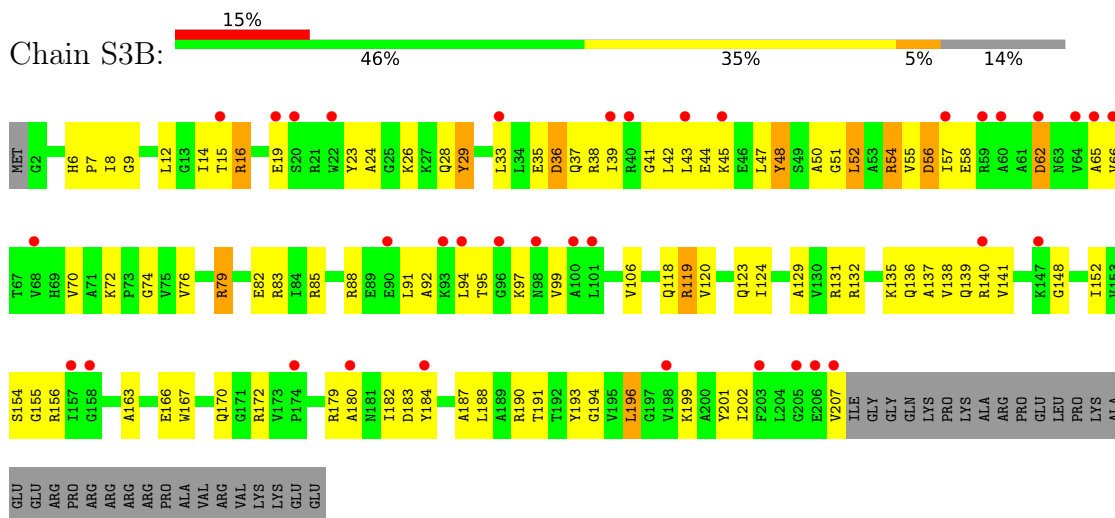
• Molecule 2: 30S ribosomal protein S2



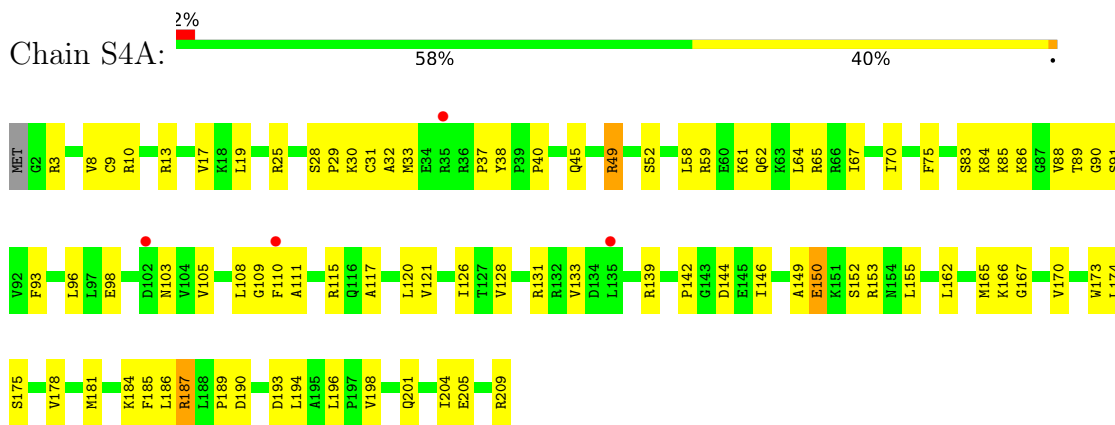
• Molecule 3: 30S ribosomal protein S3



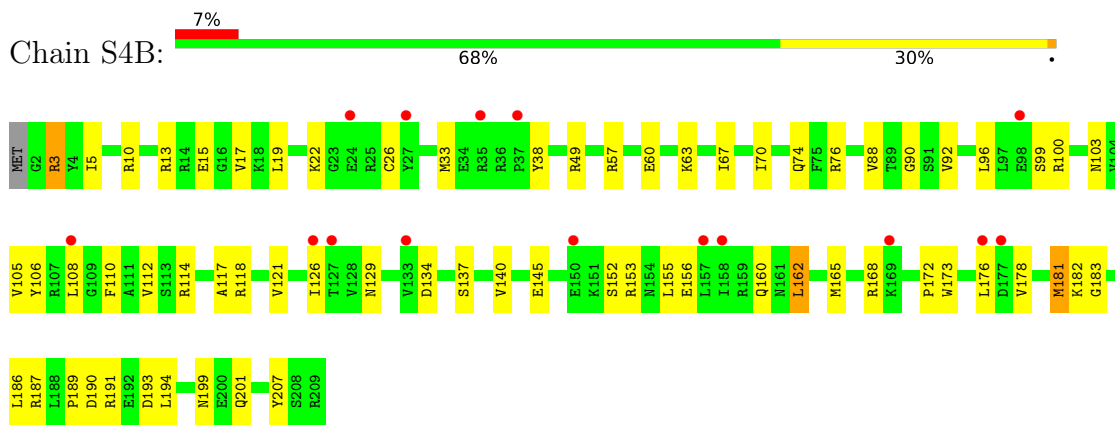
• Molecule 3: 30S ribosomal protein S3



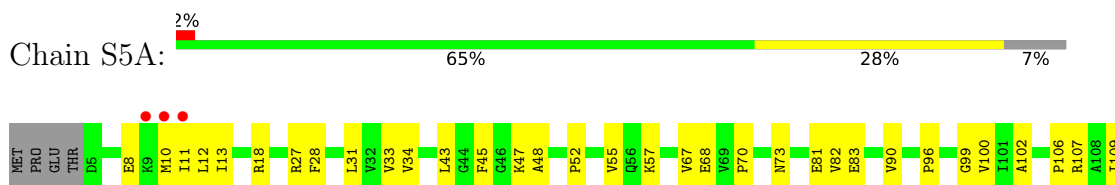
• Molecule 4: 30S ribosomal protein S4



• Molecule 4: 30S ribosomal protein S4



• Molecule 5: 30S ribosomal protein S5

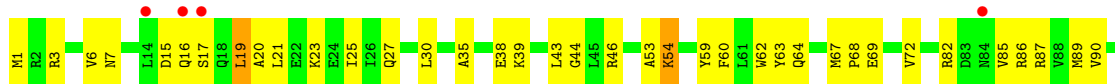




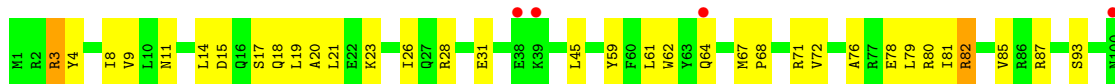
• Molecule 5: 30S ribosomal protein S5



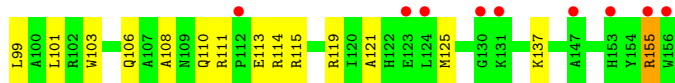
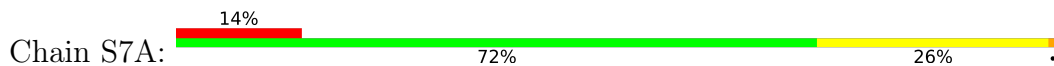
• Molecule 6: 30S ribosomal protein S6



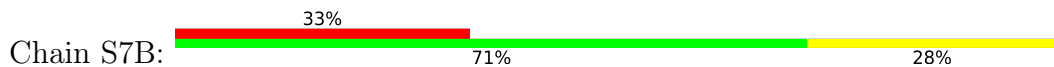
• Molecule 6: 30S ribosomal protein S6

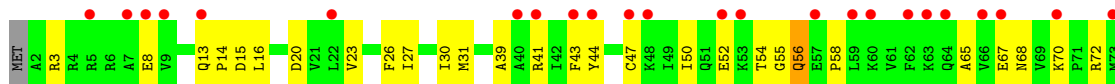


• Molecule 7: 30S ribosomal protein S7

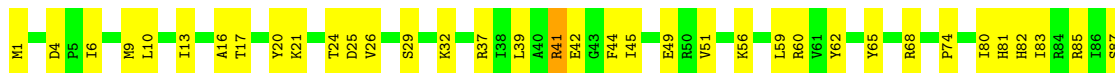


• Molecule 7: 30S ribosomal protein S7

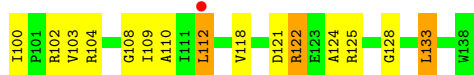




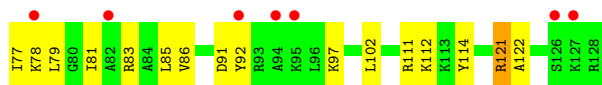
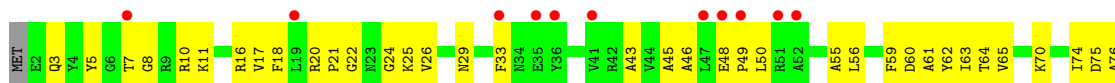
• Molecule 8: 30S ribosomal protein S8



• Molecule 8: 30S ribosomal protein S8



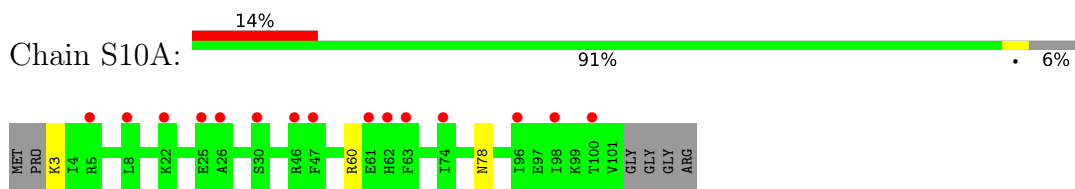
• Molecule 9: 30S ribosomal protein S9



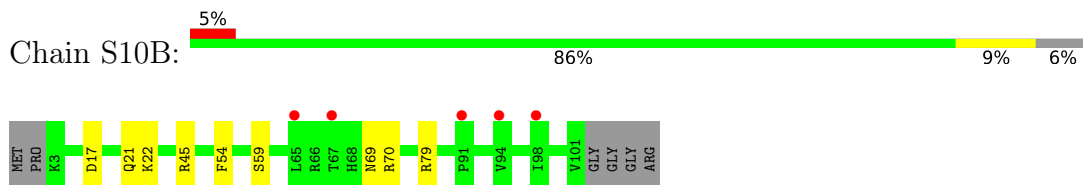
• Molecule 9: 30S ribosomal protein S9



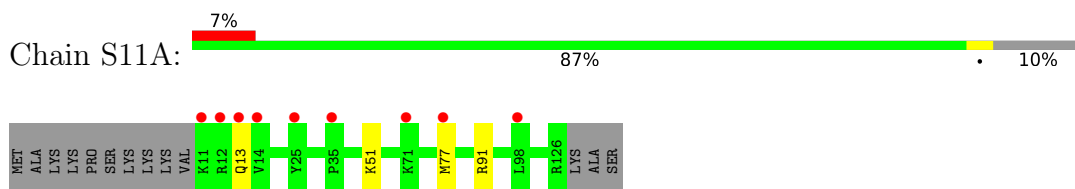
- Molecule 10: 30S ribosomal protein S10



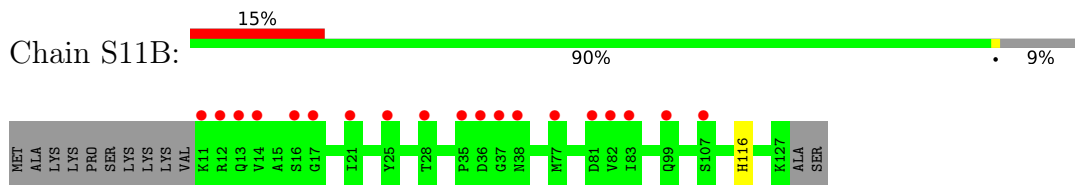
- Molecule 10: 30S ribosomal protein S10



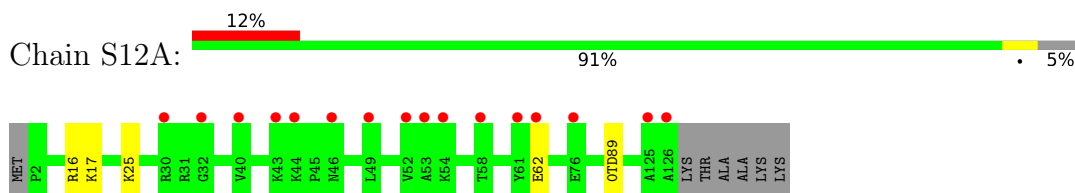
- Molecule 11: 30S ribosomal protein S11



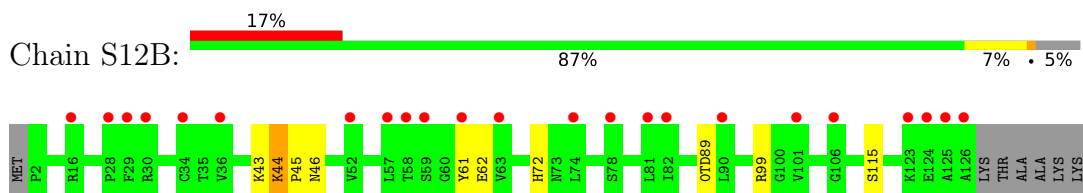
- Molecule 11: 30S ribosomal protein S11



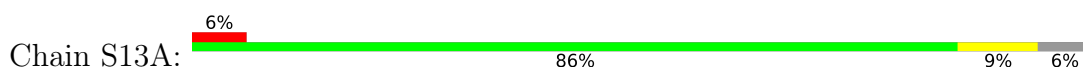
- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

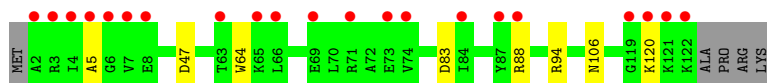


- Molecule 13: 30S ribosomal protein S13

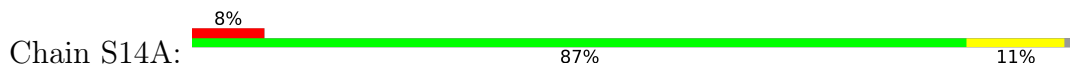




- Molecule 13: 30S ribosomal protein S13



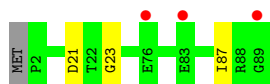
- Molecule 14: 30S ribosomal protein S14 type Z



- Molecule 14: 30S ribosomal protein S14 type Z



- Molecule 15: 30S ribosomal protein S15



- Molecule 15: 30S ribosomal protein S15



- Molecule 16: 30S ribosomal protein S16



- Molecule 16: 30S ribosomal protein S16

Chain S16B:  93% 5%



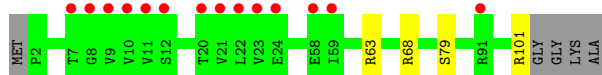
• Molecule 17: 30S ribosomal protein S17

Chain S17A:  90% 6% 5%




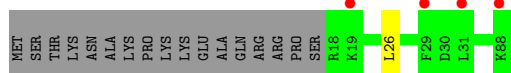
• Molecule 17: 30S ribosomal protein S17

Chain S17B:  91% 5%




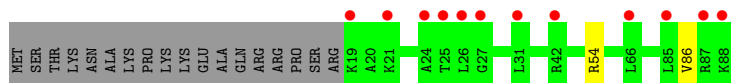
• Molecule 18: 30S ribosomal protein S18

Chain S18A:  80% 19%




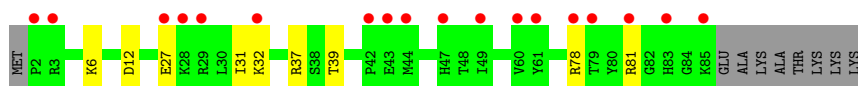
• Molecule 18: 30S ribosomal protein S18

Chain S18B:  77% 20%




• Molecule 19: 30S ribosomal protein S19

Chain S19A:  81% 10% 10%

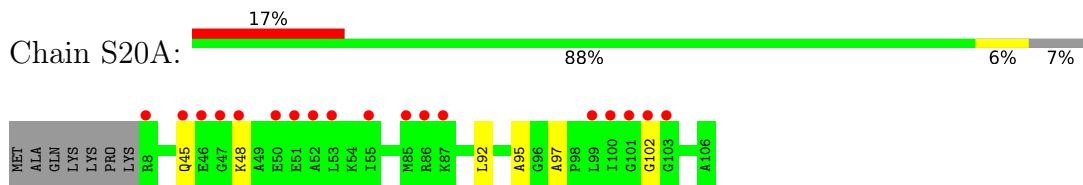


• Molecule 19: 30S ribosomal protein S19

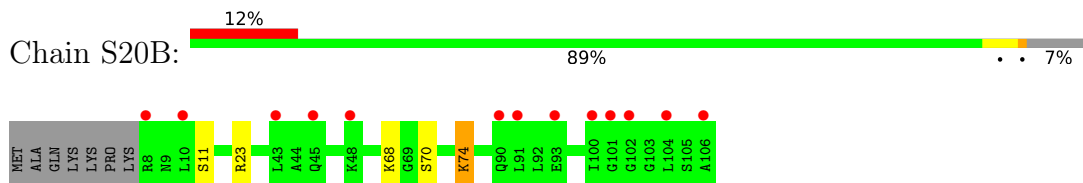
Chain S19B:  85% 8% 8%



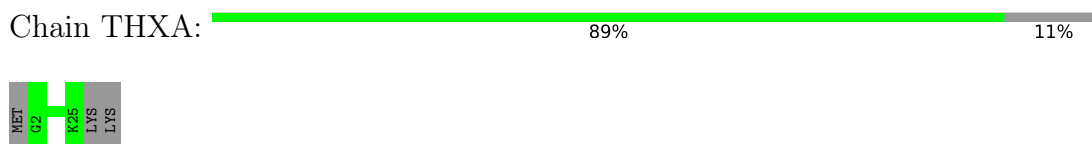
- Molecule 20: 30S ribosomal protein S20



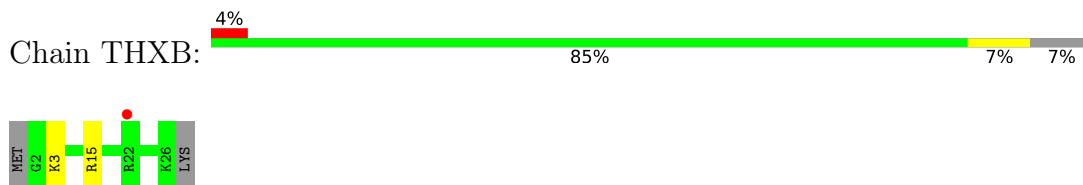
- Molecule 20: 30S ribosomal protein S20



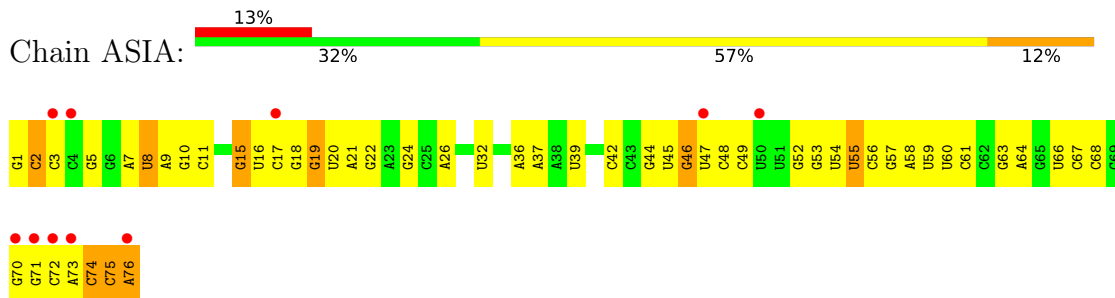
- Molecule 21: 30S ribosomal protein Thx



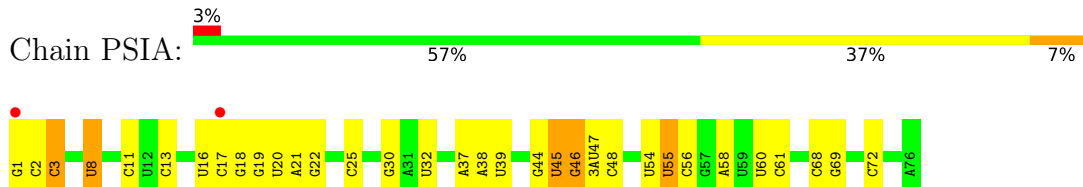
- Molecule 21: 30S ribosomal protein Thx



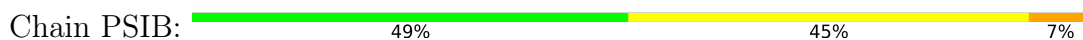
- Molecule 22: Phe-tRNA



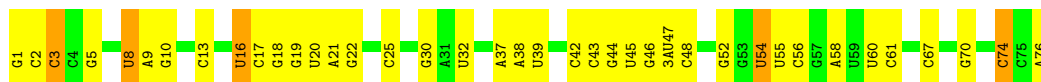
- Molecule 23: Phe-tRNA



- Molecule 23: Phe-tRNA



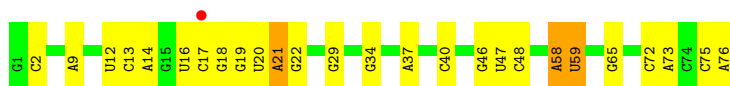
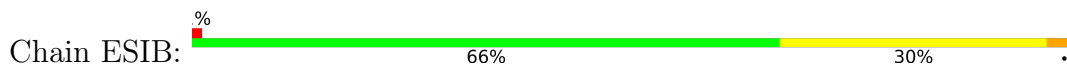




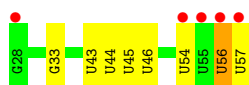
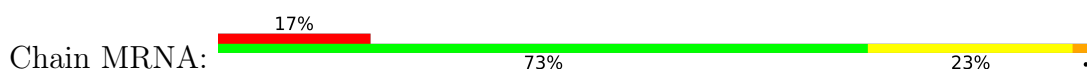
• Molecule 24: Phe-tRNA



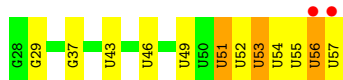
• Molecule 24: Phe-tRNA



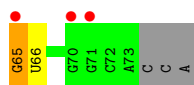
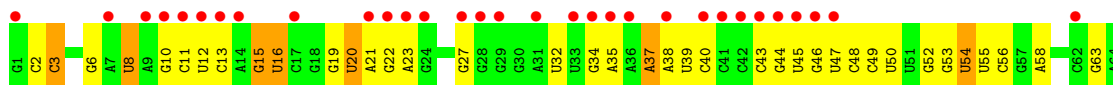
• Molecule 25: RNA (30-MER)



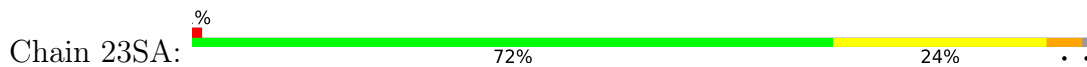
• Molecule 25: RNA (30-MER)



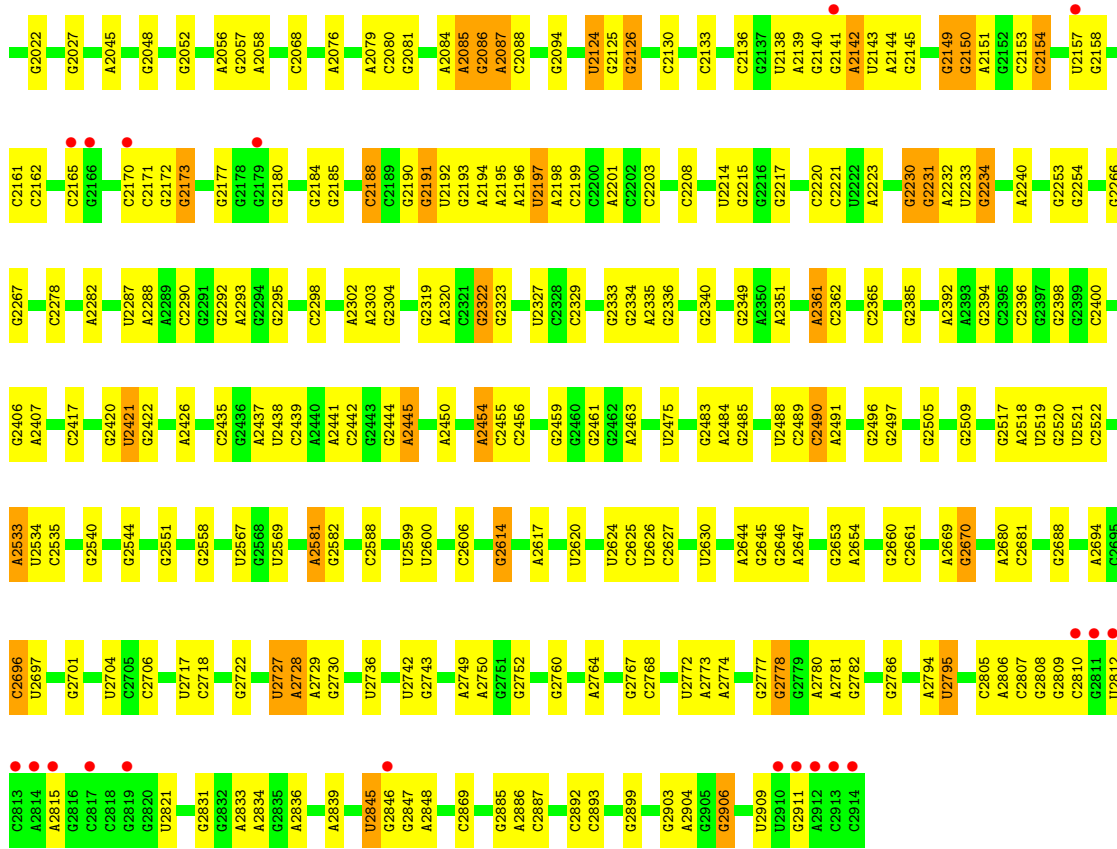
• Molecule 26: Phe-tRNA



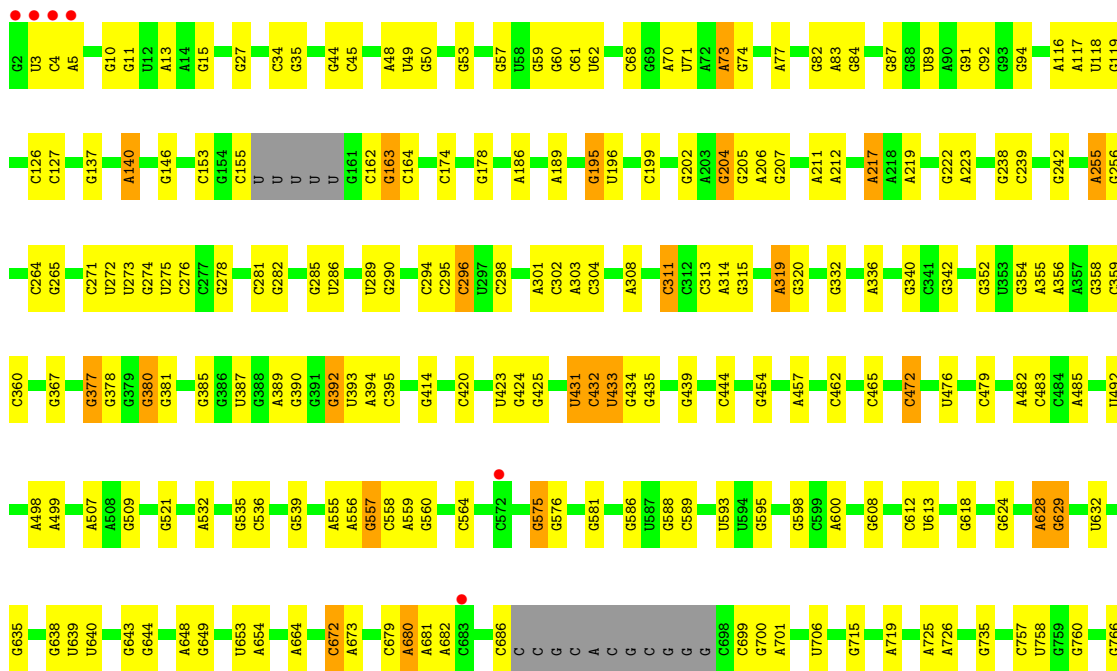
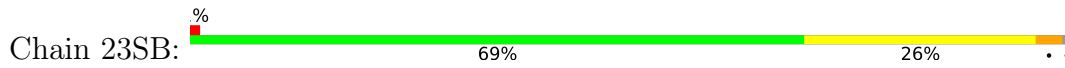
• Molecule 27: 23S rRNA



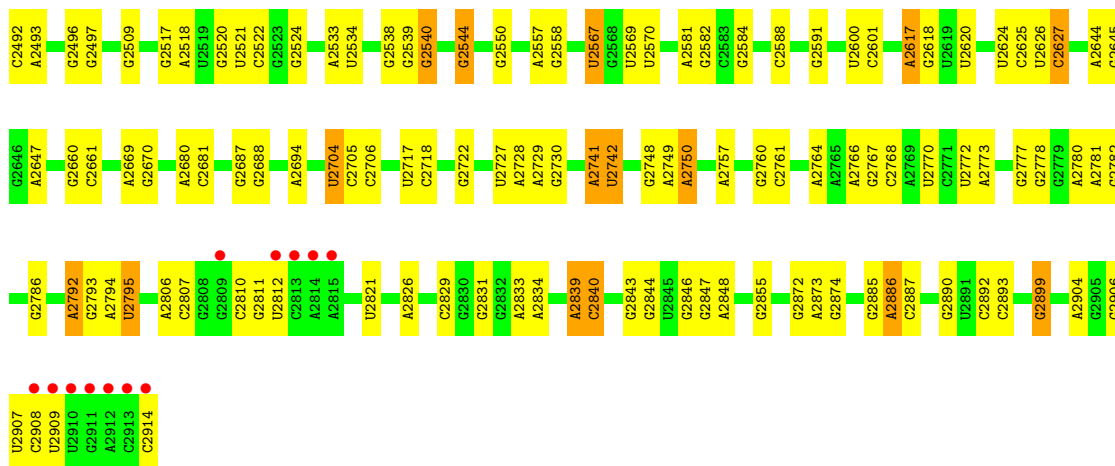




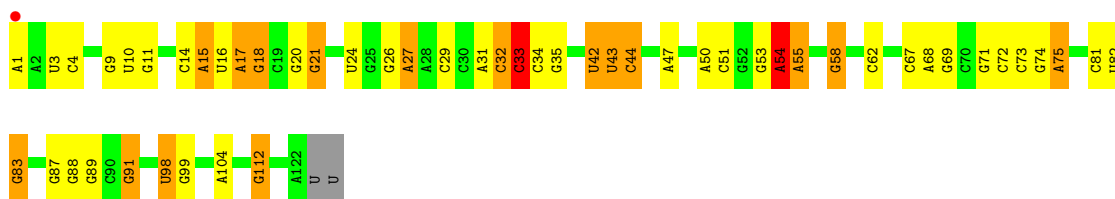
• Molecule 27: 23S rRNA



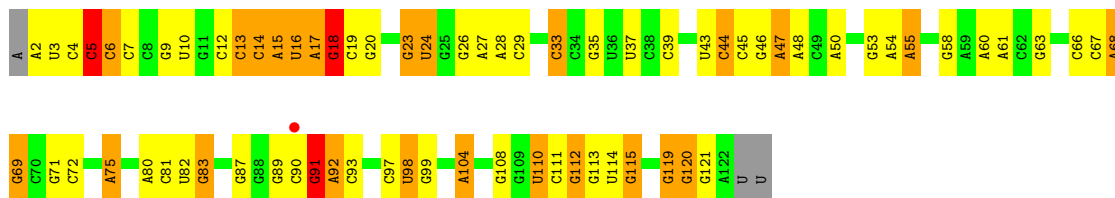
C2362	G2362	G2014	A1604	G1515	G1381	G1231	A1134	A1044	C933	C769
G2363	G2156	G2017	G1605	G1516	G1382	G1232	G1135	A1045	C934	C770
C2364	U2157	G2018	A1608	C1517	U1390	G1239	A1136	A1058	C935	A771
C2365	G2158	U2018	G1609	C1518	A1391	G1240	G1137	G1059	A936	G772
G2387	C2161	C2021	G1610	A1521	C1394	G1243	U1138	U1060	C937	C779
G2387	C2162	A2045	A1616	A1524	C1394	C1244	G1139	C1061	C938	C795
G2398	C2170	G2048	A1619	C1524	A1398	G1245	C	G1065	C941	C795
G2398	C2171	G2048	A1619	G1525	A1398	A1252	U	G1070	C942	C807
G2400	G2172	G2052	U1628	A1526	U1401	A1253	A	U1071	U943	C807
G2406	G2173	G2052	A1629	A1527	U1408	G1254	A	G1072	C945	U811
A2407	G2174	A2056	A1630	G1528	A1409	A1258	U	G1073	C946	U811
G2417	G2184	G2057	G1631	G1530	A1409	U1259	C	U1074	A947	A823
G2418	C2188	A2058	C1634	U1531	A1414	G1260	G1148	A1075	A948	A824
U2421	G2191	C2061	A1635	G1532	G1417	U1266	U1153	G1079	C952	G825
G2425	U2192	C2068	A1636	A1534	U1421	G1267	G1154	A1080	U953	A831
A2426	G2193	A2076	A1637	G1535	U1428	A1268	U1159	U1081	G954	A832
A2429	G2194	A2079	C1647	U1537	A1428	C1269	G1160	G1084	A958	A833
G2430	A2195	C2080	A1657	G1538	A1433	G1272	G1161	G1085	A959	A834
C2431	U2196	G2081	A1658	A1539	A1433	G1277	G1170	G1086	C963	A838
G2437	G2197	A2084	C1659	C1542	C1435	G1280	A1176	G1092	A965	C839
U2438	C2200	A2085	A1663	A1545	G1437	G1285	A1177	G1093	A966	C840
C2439	G2204	C2086	C1664	C1548	G1437	G1285	U1178	A1093	C967	G841
A2440	A1962	A2087	A1665	A1548	C1456	A1291	G1179	A1094	G975	A849
A2441	A1963	C2088	A1666	C1551	G1463	U1289	U1181	G1095	G978	G854
G2442	U1964	G2094	A1667	C1554	U1464	A1302	C1183	A1096	G979	G854
G2443	C1967	G2118	G1671	A1557	G1465	A1303	G1187	G1097	C861	C861
G2444	C1972	G2118	G1679	C1558	G1466	U1304	G1187	G1103	A868	A868
A2445	G1973	U2124	U1689	A1559	G1467	G1305	U1190	G1104	U875	U875
A2450	G1974	G2125	C1690	A1562	U1476	A1314	A1191	U1108	U876	U876
A2454	G1975	G2126	C1698	C1564	C1477	U1322	A1192	U1109	U877	U877
C2455	U1980	U2127	C1698	U1565	U1477	A1321	C1196	G	G851	G851
C2456	U1981	C2128	C1698	U1565	U1477	U1322	A1205	U	C895	C895
G2461	U1981	C2133	A1702	G1574	C1486	U1322	A1205	U	U896	U896
G2462	A1985	U2134	G1703	U1574	C1486	G1329	G1212	C	U1005	U1005
A2463	C1986	G2135	A1704	A1577	A1494	A1329	G1217	A	A1006	A1006
G2470	C1987	C2136	U1721	A1577	C1495	A1335	G1218	A	A1007	A1007
U2475	U1988	G2137	U1721	G1583	C1496	A1335	G1219	A	C1008	C1008
A2484	G1989	A2139	G1724	U1584	A1499	U1349	G1220	A	C1017	C1017
A2485	C1992	G2140	A1863	A1585	A1499	A1350	G1221	C	G1021	G1021
A2485	A1995	G2141	G1745	C1586	G1500	A1350	G1221	A	U920	U920
C2486	A1996	A2142	G1746	U1587	C1501	G1358	A1222	G	G1026	G1026
G2487	A1997	U2143	G1747	G1588	C1502	G1358	G1223	C	G1027	G1027
U2488	A1997	G2148	A1748	G1589	G1505	U1362	A1225	C	A1028	A1028
C2489	G2005	G2148	G1749	U1592	G1505	C1363	A1225	C	A927	A927
C2490	C2006	A2151	A1750	C1592	C1508	G1368	C1227	A	A1031	A1031
A2491	C2007	G2152	A1751	A1594	G1509	G1368	C1228	A	A1038	A1038
	G2253	C2153	C1758		A1510	U1378	A1230	A	C1039	C1039



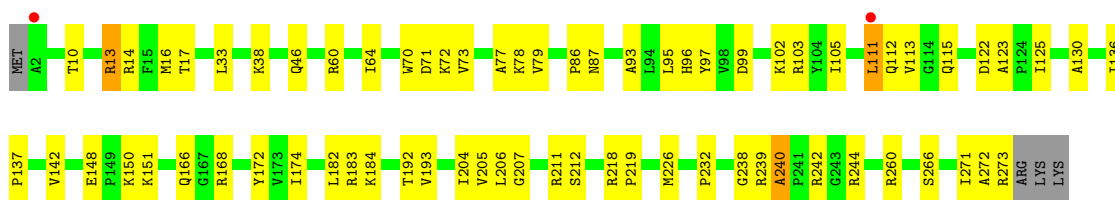
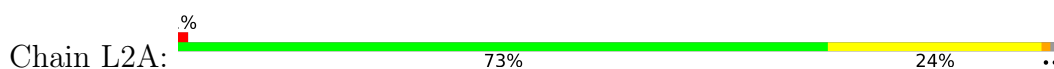
• Molecule 28: 5S rRNA



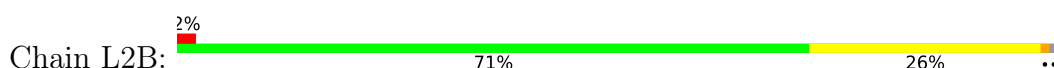
• Molecule 28: 5S rRNA

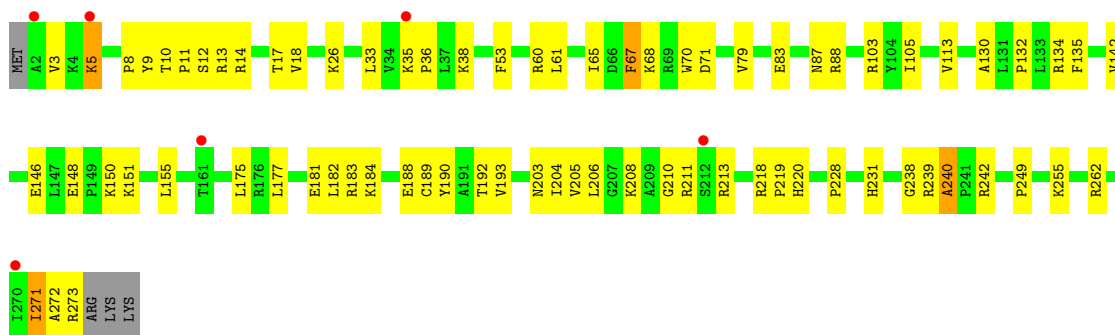


• Molecule 29: 50S ribosomal protein L2

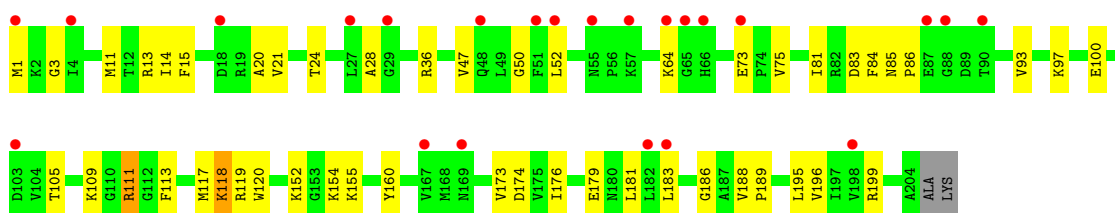
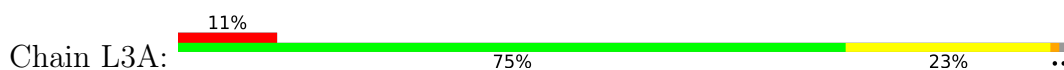


• Molecule 29: 50S ribosomal protein L2

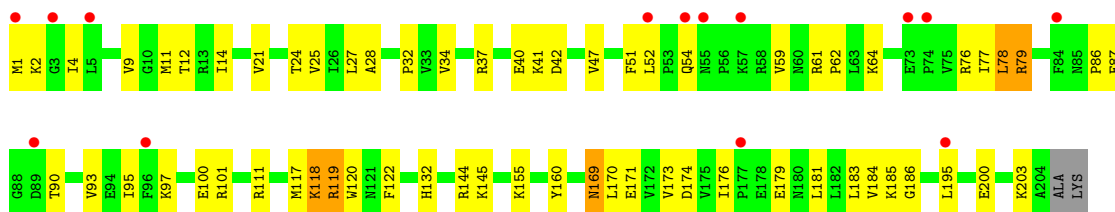




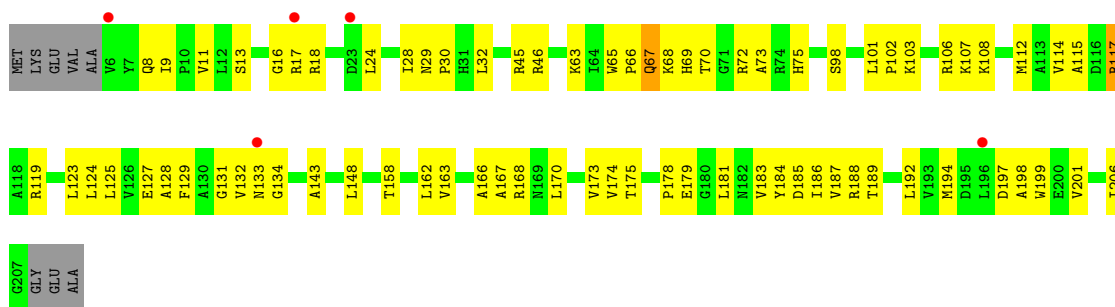
- Molecule 30: 50S ribosomal protein L3



- Molecule 30: 50S ribosomal protein L3

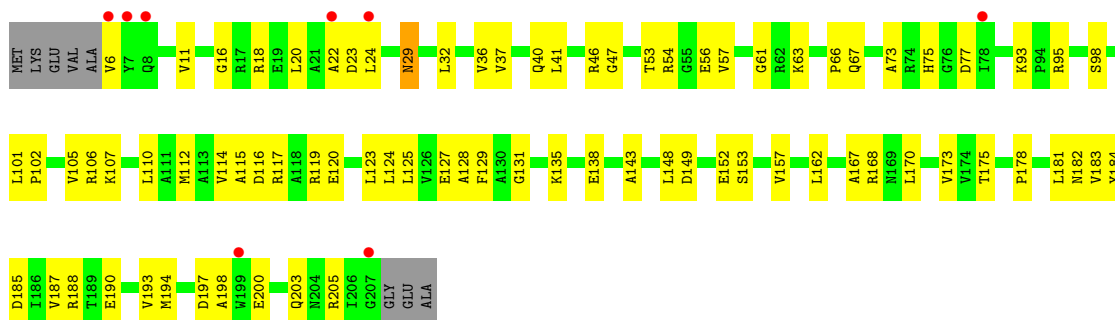


- Molecule 31: 50S ribosomal protein L4

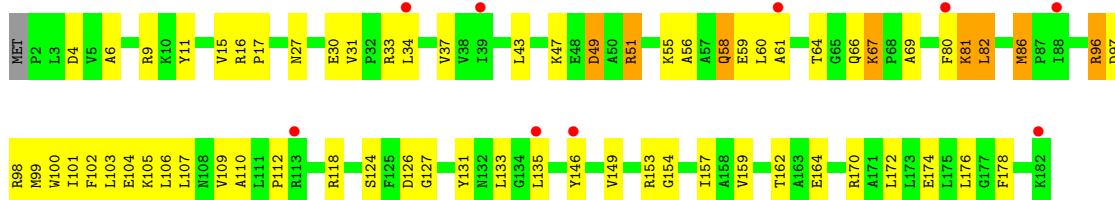


- Molecule 31: 50S ribosomal protein L4

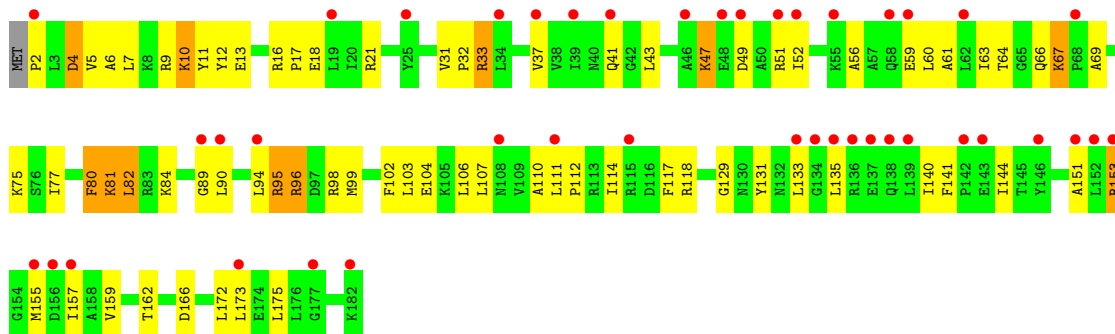




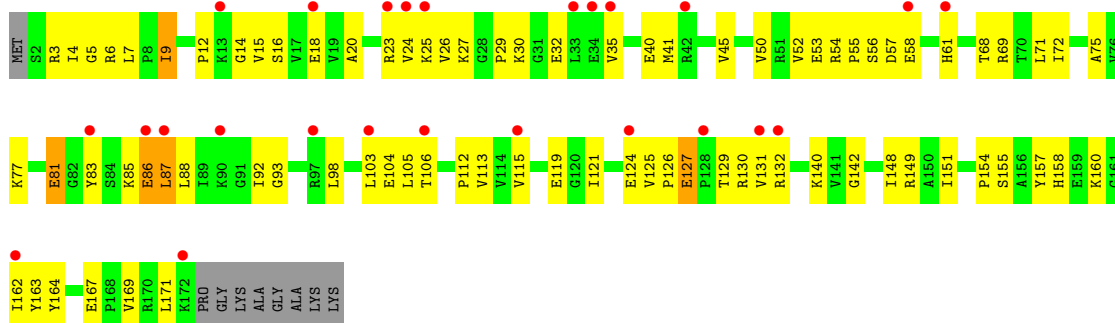
- Molecule 32: 50S ribosomal protein L5



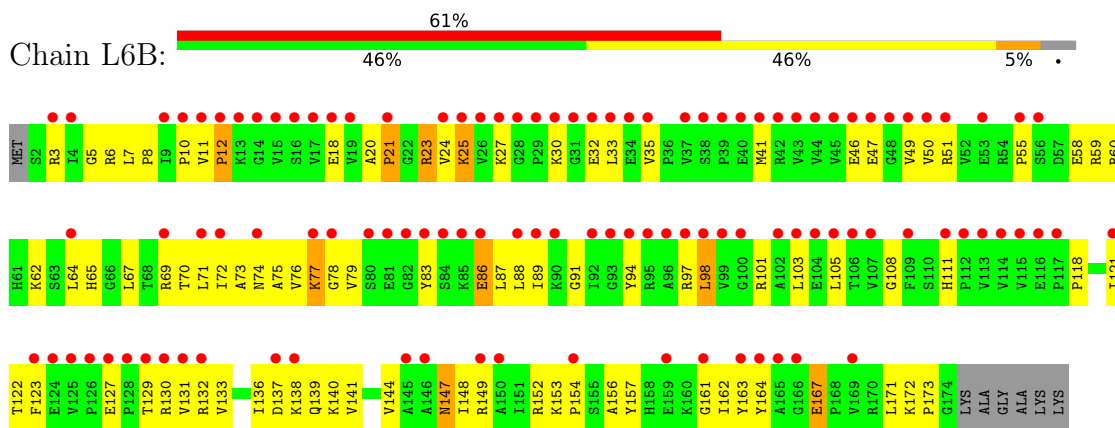
- Molecule 32: 50S ribosomal protein L5



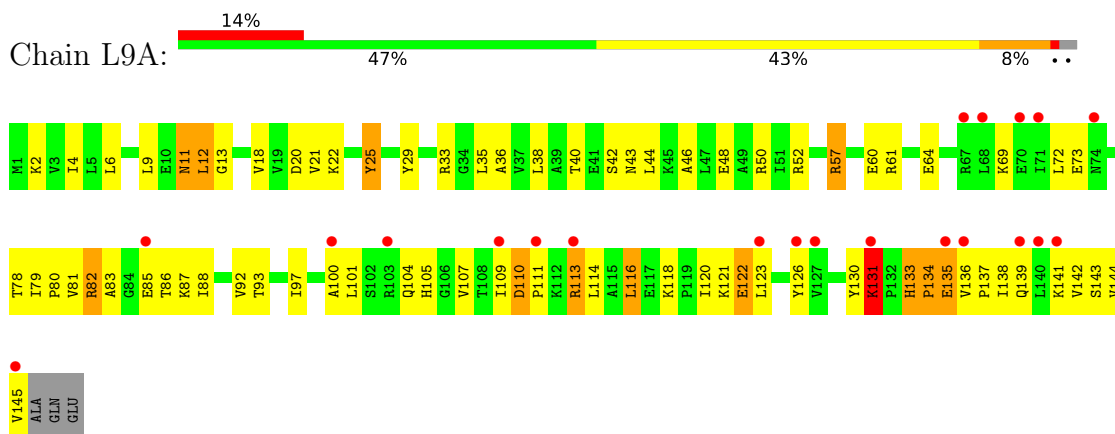
- Molecule 33: 50S ribosomal protein L6



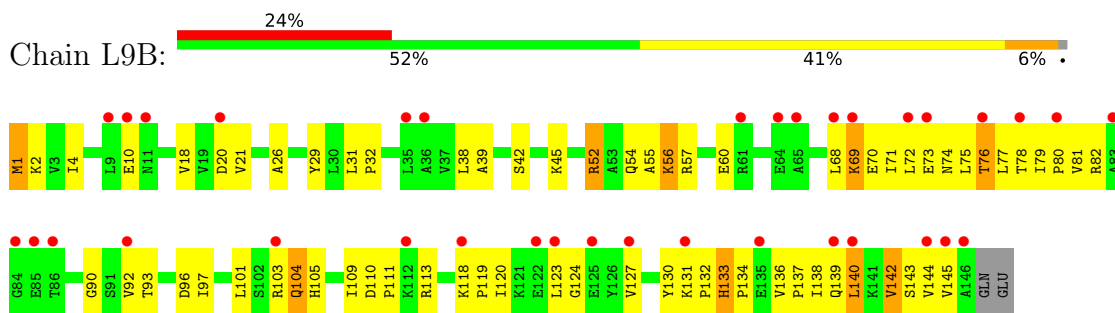
- Molecule 33: 50S ribosomal protein L6



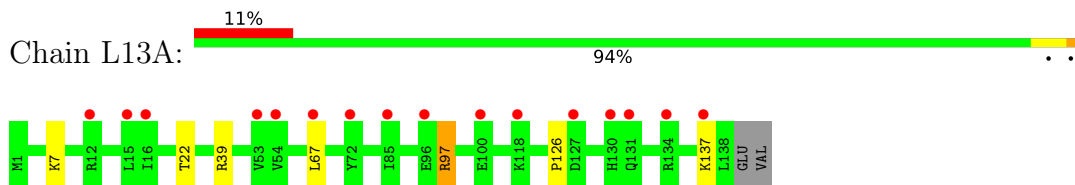
- Molecule 34: 50S ribosomal protein L9



- Molecule 34: 50S ribosomal protein L9



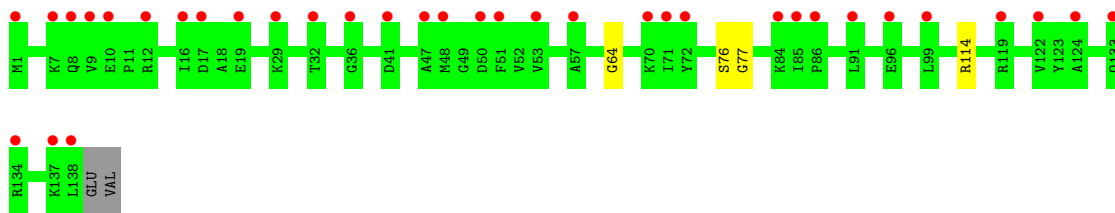
- Molecule 35: 50S ribosomal protein L13



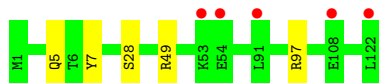
- Molecule 35: 50S ribosomal protein L13



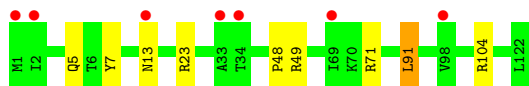




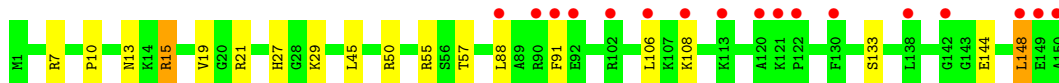
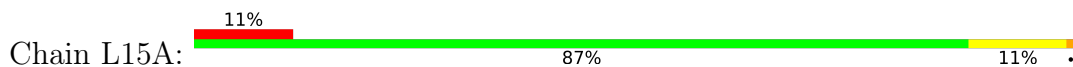
- Molecule 36: 50S ribosomal protein L14



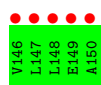
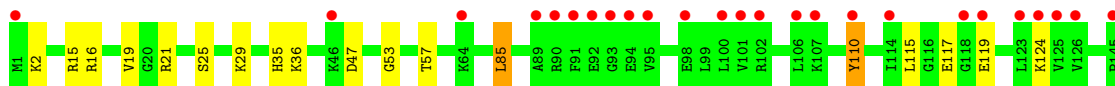
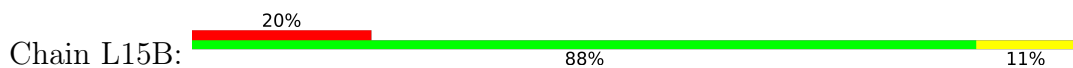
- Molecule 36: 50S ribosomal protein L14



- Molecule 37: 50S ribosomal protein L15



- Molecule 37: 50S ribosomal protein L15



- Molecule 38: 50S ribosomal protein L16



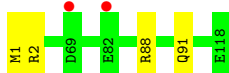
- Molecule 38: 50S ribosomal protein L16



- Molecule 39: 50S ribosomal protein L17



- Molecule 39: 50S ribosomal protein L17



- Molecule 40: 50S ribosomal protein L18



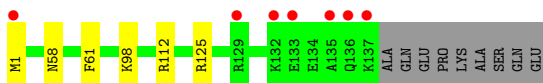
- Molecule 40: 50S ribosomal protein L18



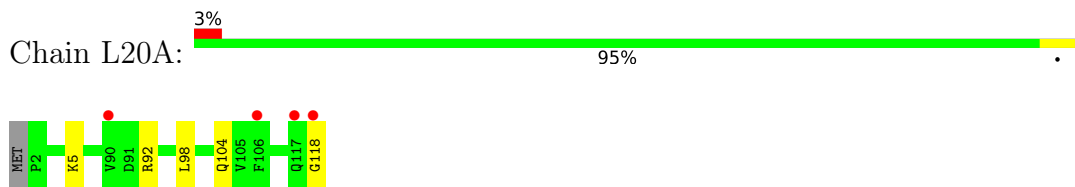
- Molecule 41: 50S ribosomal protein L19



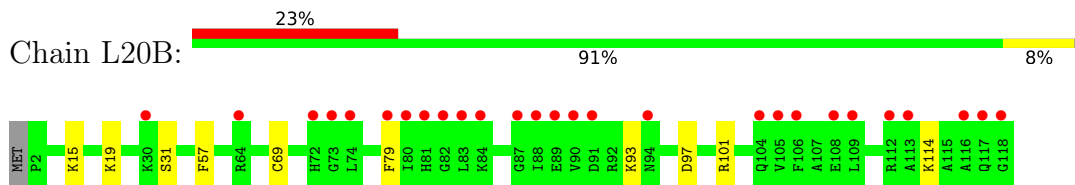
- Molecule 41: 50S ribosomal protein L19



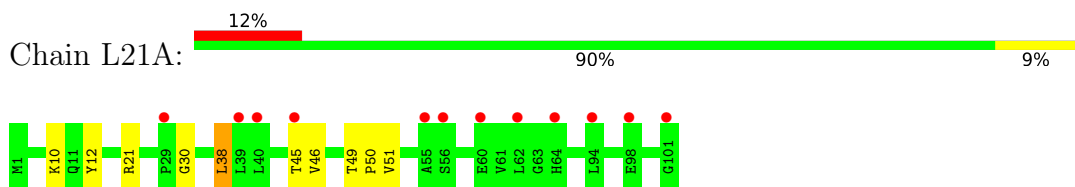
- Molecule 42: 50S ribosomal protein L20



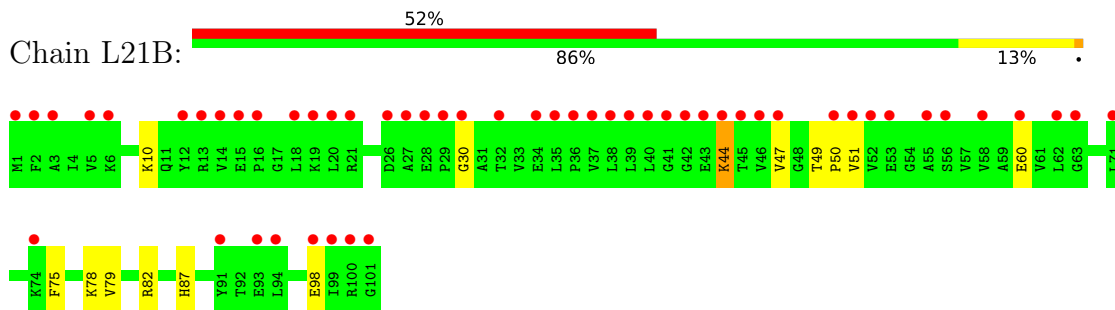
- Molecule 42: 50S ribosomal protein L20



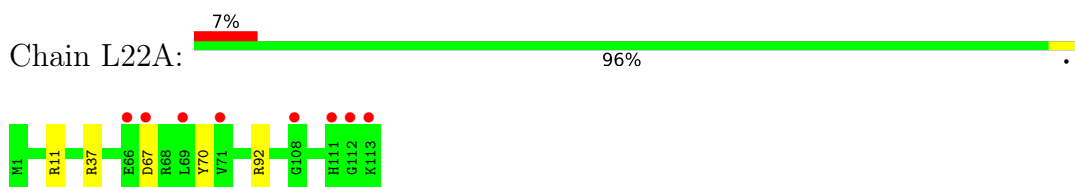
- Molecule 43: 50S ribosomal protein L21



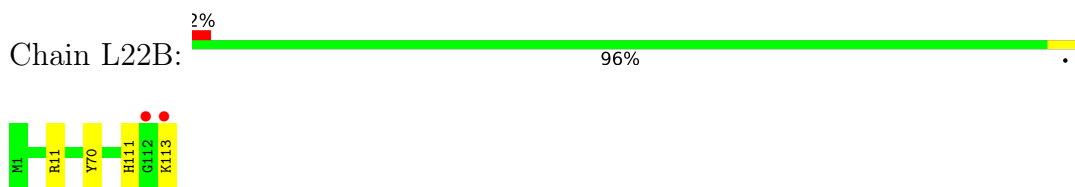
- Molecule 43: 50S ribosomal protein L21



- Molecule 44: 50S ribosomal protein L22

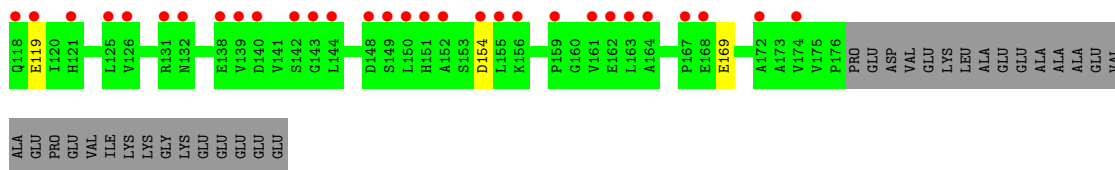


- Molecule 44: 50S ribosomal protein L22

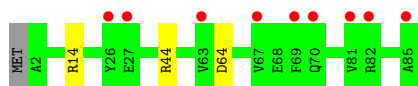


- Molecule 45: 50S ribosomal protein L23





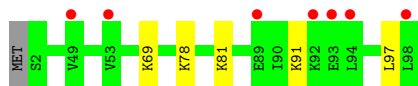
- Molecule 48: 50S ribosomal protein L27



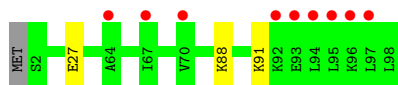
- Molecule 48: 50S ribosomal protein L27



- Molecule 49: 50S ribosomal protein L28



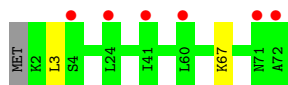
- Molecule 49: 50S ribosomal protein L28



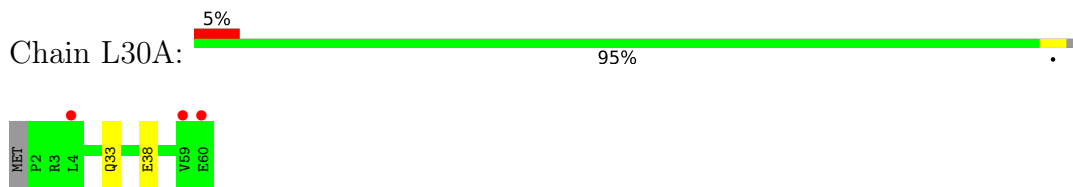
- Molecule 50: 50S ribosomal protein L29



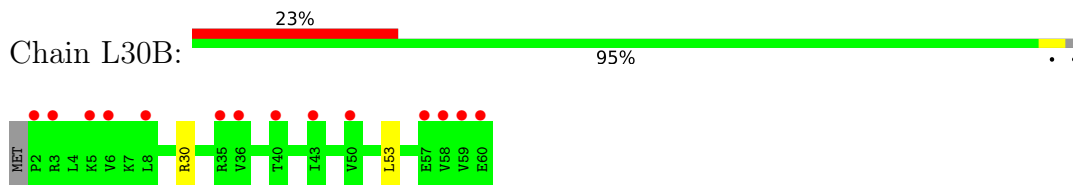
- Molecule 50: 50S ribosomal protein L29



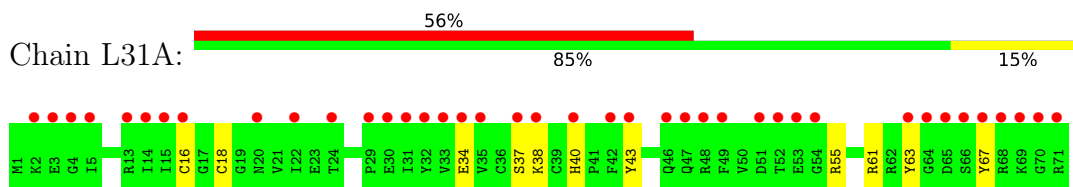
- Molecule 51: 50S ribosomal protein L30



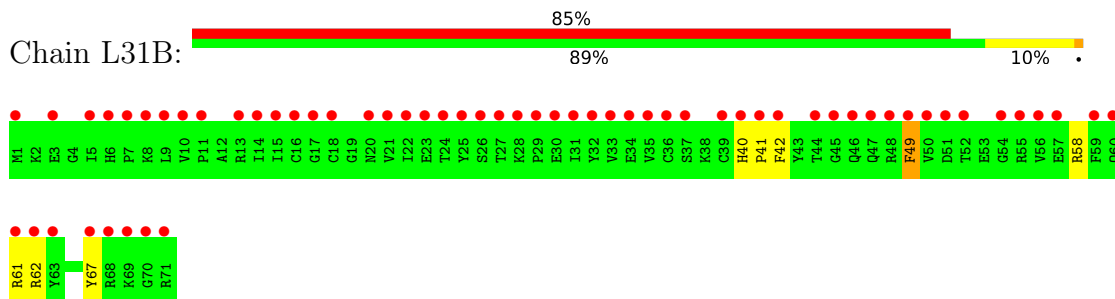
- Molecule 51: 50S ribosomal protein L30



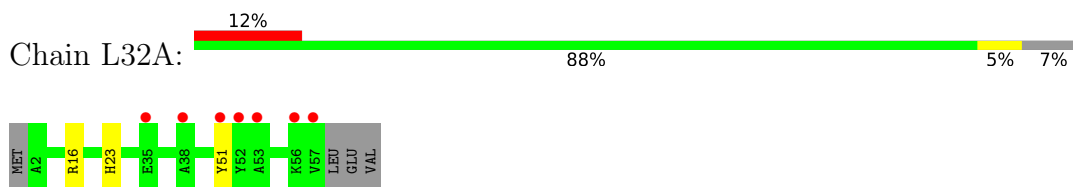
- Molecule 52: 50S ribosomal protein L31



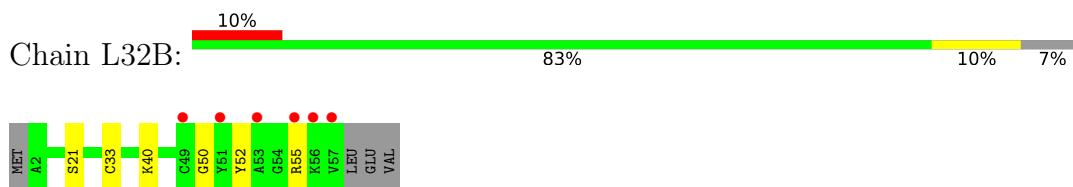
- Molecule 52: 50S ribosomal protein L31



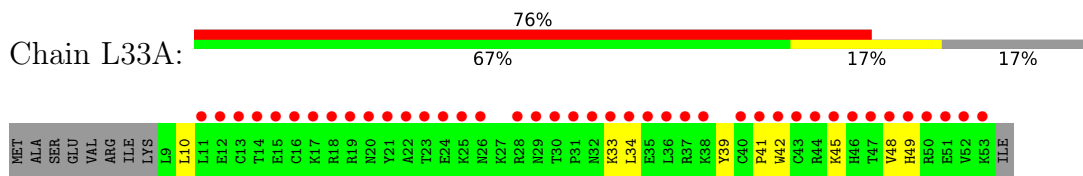
- Molecule 53: 50S ribosomal protein L32



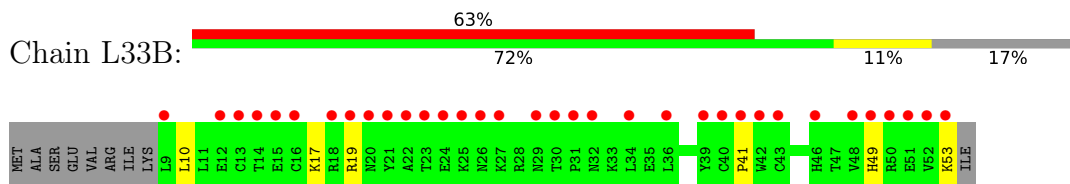
- Molecule 53: 50S ribosomal protein L32



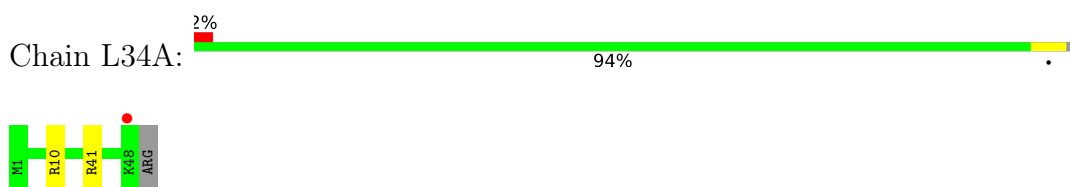
- Molecule 54: 50S ribosomal protein L33



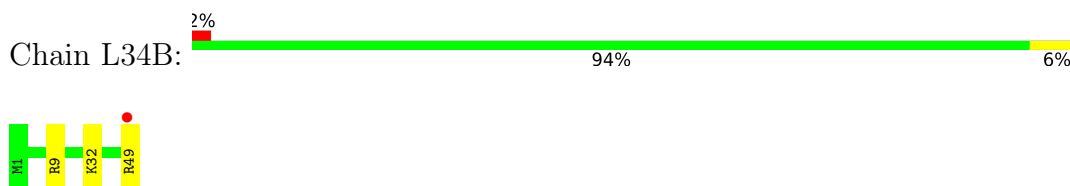
- Molecule 54: 50S ribosomal protein L33



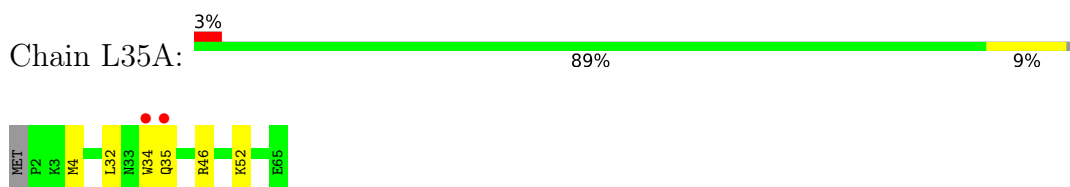
- Molecule 55: 50S ribosomal protein L34



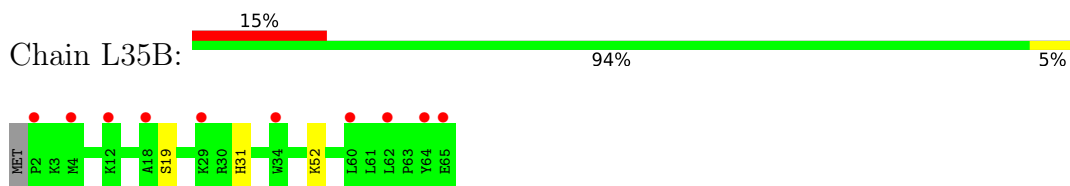
- Molecule 55: 50S ribosomal protein L34



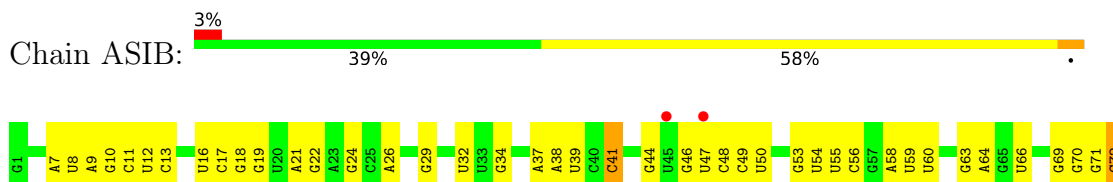
- Molecule 56: 50S ribosomal protein L35



- Molecule 56: 50S ribosomal protein L35



- Molecule 57: Phe-tRNA



A73  
C74  
C75  
A76



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	209.77Å 446.87Å 616.97Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	253.87 – 3.30 253.87 – 3.30	Depositor EDS
% Data completeness (in resolution range)	100.0 (253.87-3.30) 100.0 (253.87-3.30)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.15 (at 3.33Å)	Xtrriage
Refinement program	PHENIX 1.18.2_3874	Depositor
R, $R_{free}$	0.214 , 0.238 0.214 , 0.238	Depositor DCC
$R_{free}$ test set	25661 reflections (2.98%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	93.1	Xtrriage
Anisotropy	0.299	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	(Not available) , (Not available)	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.42$ , $\langle L^2 \rangle = 0.25$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	306403	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	94.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.41% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 3AU, UR3, G7M, H2U, OMG, K, 2MG, OMC, MIA, MG, OMU, 0TD, 4OC, SJE, 2MA, M2G, 5MC, 5MU, 4SU, MA6, OHX, PSU

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	16SA	0.48	2/36088 (0.0%)	1.19	254/56320 (0.5%)
1	16SB	0.46	0/35999	1.19	261/56180 (0.5%)
2	S2A	0.34	0/1959	0.68	0/2642
2	S2B	0.31	0/1959	0.66	0/2642
3	S3A	0.33	0/1629	0.70	0/2195
3	S3B	0.30	0/1636	0.68	1/2205 (0.0%)
4	S4A	0.35	0/1732	0.71	0/2318
4	S4B	0.32	0/1732	0.66	0/2318
5	S5A	0.34	0/1171	0.69	0/1576
5	S5B	0.32	0/1171	0.66	0/1576
6	S6A	0.32	0/855	0.67	0/1154
6	S6B	0.33	0/855	0.63	0/1154
7	S7A	0.35	0/1275	0.67	0/1709
7	S7B	0.31	0/1275	0.62	0/1709
8	S8A	0.32	0/1135	0.69	0/1527
8	S8B	0.29	0/1135	0.65	0/1527
9	S9A	0.35	0/1028	0.71	1/1379 (0.1%)
9	S9B	0.34	0/1028	0.75	2/1379 (0.1%)
10	S10A	0.32	0/814	0.66	0/1095
10	S10B	0.31	0/814	0.70	0/1095
11	S11A	0.31	0/879	0.59	0/1187
11	S11B	0.29	0/888	0.60	0/1198
12	S12A	0.35	0/982	0.72	0/1313
12	S12B	0.32	0/982	0.68	1/1313 (0.1%)
13	S13A	0.31	0/956	0.71	0/1281
13	S13B	0.28	0/974	0.66	0/1303
14	S14A	0.41	0/500	0.76	1/664 (0.2%)
14	S14B	0.35	0/495	0.72	0/657
15	S15A	0.31	0/744	0.65	0/992
15	S15B	0.28	0/744	0.60	0/992
16	S16A	0.32	0/716	0.70	0/963

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
16	S16B	0.32	0/721	0.65	0/970
17	S17A	0.33	0/847	0.68	0/1131
17	S17B	0.30	0/847	0.63	0/1131
18	S18A	0.32	0/589	0.74	0/782
18	S18B	0.31	0/578	0.71	0/768
19	S19A	0.33	0/689	0.81	1/926 (0.1%)
19	S19B	0.32	0/698	0.69	0/938
20	S20A	0.35	0/764	0.74	0/1007
20	S20B	0.29	0/764	0.65	0/1007
21	THXA	0.30	0/212	0.76	0/277
21	THXB	0.29	0/221	0.75	0/288
22	ASIA	0.52	0/1647	1.44	33/2565 (1.3%)
23	PSIA	0.53	0/1602	1.27	6/2493 (0.2%)
23	PSIB	0.52	0/1602	1.21	13/2493 (0.5%)
24	ESIA	0.50	0/1783	1.20	15/2776 (0.5%)
24	ESIB	0.45	0/1783	1.14	8/2776 (0.3%)
25	MRNA	0.38	0/689	1.04	3/1069 (0.3%)
25	MRNB	0.41	0/689	1.15	8/1069 (0.7%)
26	TRNA	0.44	0/1560	1.16	6/2431 (0.2%)
27	23SA	0.53	3/69430 (0.0%)	1.20	471/108380 (0.4%)
27	23SB	0.52	10/69052 (0.0%)	1.20	514/107791 (0.5%)
28	5SA	0.51	1/2928 (0.0%)	1.21	19/4568 (0.4%)
28	5SB	0.53	0/2906	1.32	36/4533 (0.8%)
29	L2A	0.36	0/2165	0.72	1/2919 (0.0%)
29	L2B	0.36	0/2165	0.70	0/2919
30	L3A	0.34	0/1596	0.64	0/2153
30	L3B	0.33	0/1596	0.63	1/2153 (0.0%)
31	L4A	0.41	0/1620	0.69	0/2194
31	L4B	0.33	0/1620	0.67	0/2194
32	L5A	0.32	0/1498	0.67	0/2016
32	L5B	0.31	0/1498	0.65	0/2016
33	L6A	0.35	0/1341	0.73	1/1813 (0.1%)
33	L6B	0.31	0/1353	0.72	1/1830 (0.1%)
34	L9A	0.32	0/1146	0.78	1/1551 (0.1%)
34	L9B	0.32	0/1151	0.68	1/1558 (0.1%)
35	L13A	0.34	0/1131	0.70	0/1525
35	L13B	0.29	0/1131	0.65	0/1525
36	L14A	0.37	0/942	0.69	0/1269
36	L14B	0.37	0/942	0.67	1/1269 (0.1%)
37	L15A	0.39	0/1161	0.87	2/1544 (0.1%)
37	L15B	0.36	0/1161	0.81	1/1544 (0.1%)
38	L16A	0.34	0/1142	0.67	0/1527
38	L16B	0.34	0/1142	0.67	0/1527

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
39	L17A	0.31	0/981	0.72	0/1312
39	L17B	0.34	0/981	0.69	0/1312
40	L18A	0.32	0/899	0.82	0/1197
40	L18B	0.33	0/891	0.74	1/1187 (0.1%)
41	L19A	0.35	0/1155	0.72	0/1542
41	L19B	0.32	0/1155	0.70	0/1542
42	L20A	0.36	0/981	0.71	1/1306 (0.1%)
42	L20B	0.32	0/981	0.67	0/1306
43	L21A	0.36	0/789	0.82	2/1057 (0.2%)
43	L21B	0.39	0/789	0.76	0/1057
44	L22A	0.36	0/910	0.67	0/1220
44	L22B	0.34	0/910	0.65	0/1220
45	L23A	0.39	0/752	0.67	0/1009
45	L23B	0.35	0/756	0.61	0/1014
46	L24A	0.35	0/837	0.70	0/1118
46	L24B	0.33	0/787	0.66	0/1056
47	L25A	0.33	0/1460	0.72	2/1982 (0.1%)
47	L25B	0.30	0/1435	0.70	0/1947
48	L27A	0.38	0/670	0.73	0/892
48	L27B	0.36	0/670	0.69	0/892
49	L28A	0.36	0/769	0.68	0/1022
49	L28B	0.37	0/769	0.76	0/1022
50	L29A	0.31	0/585	0.68	0/773
50	L29B	0.31	0/592	0.65	0/784
51	L30A	0.33	0/473	0.69	0/635
51	L30B	0.32	0/473	0.71	1/635 (0.2%)
52	L31A	0.35	0/593	0.72	0/795
52	L31B	0.33	0/593	0.70	0/795
53	L32A	0.39	0/448	0.67	0/606
53	L32B	0.33	0/448	0.68	0/606
54	L33A	0.37	0/396	0.91	1/529 (0.2%)
54	L33B	0.44	0/396	0.97	1/529 (0.2%)
55	L34A	0.35	0/426	0.77	0/561
55	L34B	0.36	0/437	0.78	0/575
56	L35A	0.31	0/524	0.64	0/691
56	L35B	0.30	0/524	0.66	0/691
57	ASIB	0.45	0/1717	1.24	11/2674 (0.4%)
All	All	0.46	16/323204 (0.0%)	1.09	1684/483869 (0.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
34	L9A	0	2

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	23SA	2086	G	O3'-P	-11.54	1.47	1.61
1	16SA	1717	G	C6-N1	7.25	1.44	1.39
27	23SB	2127	U	C2-N3	7.24	1.42	1.37
27	23SB	2087	A	O3'-P	-7.19	1.52	1.61
27	23SB	44	G	C6-N1	7.04	1.44	1.39
27	23SA	1924	G	N9-C4	-6.82	1.32	1.38
27	23SA	2087	A	O3'-P	-6.17	1.53	1.61
27	23SB	760	G	C6-N1	5.87	1.43	1.39
27	23SB	1065	G	C6-N1	5.75	1.43	1.39
27	23SB	332	G	C8-N7	-5.61	1.27	1.30
27	23SB	2088	C	O3'-P	-5.47	1.54	1.61
1	16SA	798	G	C6-N1	5.43	1.43	1.39
27	23SB	1924	G	N9-C4	-5.36	1.33	1.38
27	23SB	380	G	C6-N1	5.19	1.43	1.39
27	23SB	377	G	C6-O6	5.19	1.28	1.24
28	5SA	20	G	C6-N1	5.00	1.43	1.39

All (1684) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1291	A	N1-C2-N3	-30.14	114.23	129.30
27	23SB	1291	A	C2-N3-C4	19.13	120.17	110.60
27	23SA	1924	G	N3-C4-N9	-14.88	117.07	126.00
1	16SA	1717	G	C5-C6-O6	-14.08	120.15	128.60
1	16SA	1717	G	N3-C2-N2	-14.08	110.05	119.90
1	16SA	1717	G	N1-C6-O6	13.55	128.03	119.90
27	23SA	1663	A	O5'-P-OP1	-13.50	93.55	105.70
27	23SB	1065	G	N3-C2-N2	-13.25	110.62	119.90
27	23SB	1291	A	C6-N1-C2	13.09	126.45	118.60
1	16SA	798	G	N3-C2-N2	-12.74	110.98	119.90
27	23SB	44	G	C5-C6-O6	-12.42	121.15	128.60
27	23SB	44	G	N3-C2-N2	-12.37	111.24	119.90
27	23SB	44	G	N1-C6-O6	12.18	127.21	119.90
27	23SA	1924	G	N3-C4-C5	11.93	134.56	128.60
27	23SA	700	G	C5-C6-O6	-11.69	121.59	128.60
27	23SB	332	G	N9-C4-C5	-11.66	100.74	105.40
27	23SA	995	G	O5'-P-OP1	-11.49	95.36	105.70
1	16SB	1900	G	N3-C2-N2	-11.35	111.95	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1924	G	N3-C4-N9	-11.31	119.21	126.00
27	23SA	882	U	O5'-P-OP1	-11.14	95.67	105.70
1	16SA	654	A	O5'-P-OP2	-11.13	95.68	105.70
1	16SA	1682	C	C2-N1-C1'	11.01	130.91	118.80
27	23SB	2840	C	C2-N1-C1'	10.97	130.87	118.80
27	23SB	1212	G	N3-C2-N2	-10.79	112.34	119.90
22	ASIA	71	G	C5-C6-O6	-10.71	122.18	128.60
1	16SB	1616	G	C6-C5-N7	-10.66	124.00	130.40
28	5SA	20	G	N3-C2-N2	-10.55	112.51	119.90
27	23SA	1988	U	N1-C2-O2	10.51	130.16	122.80
27	23SB	2127	U	C2-N3-C4	-10.49	120.71	127.00
27	23SB	2207	G	N3-C2-N2	-10.46	112.58	119.90
27	23SB	760	G	N3-C2-N2	-10.44	112.59	119.90
22	ASIA	71	G	N1-C6-O6	10.40	126.14	119.90
27	23SA	700	G	N1-C6-O6	10.33	126.10	119.90
27	23SB	1240	G	N1-C6-O6	-10.32	113.71	119.90
27	23SB	332	G	C5-C6-O6	-10.14	122.52	128.60
27	23SB	2445	A	O5'-P-OP2	-10.11	96.60	105.70
28	5SA	20	G	C5-C6-O6	-10.09	122.55	128.60
27	23SA	836	U	O5'-P-OP1	-10.09	96.62	105.70
27	23SB	420	C	O5'-P-OP1	-9.98	96.72	105.70
27	23SB	380	G	C5-C6-O6	-9.97	122.62	128.60
1	16SA	1584	U	C2-N3-C4	-9.93	121.05	127.00
27	23SA	1228	C	C2-N1-C1'	9.90	129.69	118.80
25	MRNB	56	U	C2-N1-C1'	9.81	129.47	117.70
1	16SA	1584	U	N1-C2-N3	9.72	120.73	114.90
27	23SA	1988	U	N3-C2-O2	-9.69	115.42	122.20
1	16SA	1682	C	C6-N1-C1'	-9.69	109.18	120.80
1	16SA	1919	U	O5'-P-OP2	-9.59	97.07	105.70
27	23SA	789	U	O5'-P-OP2	-9.57	97.09	105.70
1	16SB	785	G	N3-C2-N2	-9.55	113.21	119.90
27	23SA	2490	C	N1-C2-O2	9.54	124.63	118.90
1	16SB	1899	G	N1-C6-O6	9.51	125.61	119.90
27	23SB	2840	C	C5-C6-N1	9.51	125.75	121.00
27	23SA	1924	G	N3-C2-N2	-9.49	113.26	119.90
1	16SA	867	G	C5-C6-O6	-9.43	122.94	128.60
27	23SB	2829	C	C6-N1-C2	-9.41	116.54	120.30
27	23SA	1924	G	C8-N9-C1'	9.34	139.14	127.00
27	23SA	2490	C	C2-N1-C1'	9.34	129.07	118.80
22	ASIA	71	G	C4-C5-N7	9.33	114.53	110.80
27	23SA	1155	G	N3-C2-N2	-9.33	113.37	119.90
27	23SB	53	G	N3-C2-N2	-9.33	113.37	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	557	G	N1-C6-O6	9.32	125.49	119.90
27	23SB	332	G	C8-N9-C4	9.32	110.13	106.40
27	23SB	332	G	N3-C4-N9	9.32	131.59	126.00
27	23SA	1466	C	C6-N1-C2	-9.30	116.58	120.30
27	23SA	2483	G	O4'-C1'-N9	9.26	115.61	108.20
27	23SB	760	G	C5-C6-O6	-9.23	123.06	128.60
1	16SB	1653	C	C5-C4-N4	-9.14	113.80	120.20
27	23SA	2521	U	N3-C2-O2	-9.14	115.81	122.20
1	16SA	1826	U	O5'-P-OP1	-9.13	97.48	105.70
27	23SB	1039	C	C6-N1-C2	-9.06	116.67	120.30
27	23SA	1924	G	C4-N9-C1'	-9.06	114.72	126.50
1	16SA	867	G	N1-C6-O6	9.03	125.32	119.90
27	23SB	1924	G	N3-C4-C5	9.02	133.11	128.60
27	23SA	395	C	C2-N1-C1'	9.02	128.72	118.80
1	16SB	1616	G	C4-C5-N7	9.02	114.41	110.80
27	23SB	294	C	C6-N1-C2	-8.95	116.72	120.30
27	23SB	557	G	C6-C5-N7	-8.94	125.04	130.40
22	ASIA	71	G	N9-C4-C5	-8.92	101.83	105.40
27	23SA	1110	G	N3-C4-N9	-8.92	120.65	126.00
1	16SA	1471	C	N3-C4-N4	8.90	124.23	118.00
27	23SB	849	A	O5'-P-OP1	-8.86	97.72	105.70
1	16SB	1187	G	O5'-P-OP1	-8.86	97.73	105.70
27	23SB	332	G	C5-C6-N1	8.86	115.93	111.50
27	23SA	2521	U	N1-C2-O2	8.83	128.98	122.80
27	23SA	1532	G	C5-C6-O6	-8.81	123.31	128.60
1	16SB	1757	C	C2-N1-C1'	8.81	128.49	118.80
27	23SA	1228	C	N3-C4-N4	8.78	124.14	118.00
1	16SA	1621	G	N3-C2-N2	-8.77	113.76	119.90
27	23SB	264	C	N1-C2-O2	-8.75	113.65	118.90
27	23SA	2435	C	O5'-P-OP1	-8.70	97.87	105.70
27	23SA	929	G	N3-C4-N9	-8.68	120.79	126.00
27	23SB	1065	G	C5-C6-O6	-8.61	123.44	128.60
28	5SB	69	G	N1-C6-O6	8.60	125.06	119.90
27	23SB	1689	U	O5'-P-OP2	-8.60	97.96	105.70
27	23SB	392	G	N9-C4-C5	8.60	108.84	105.40
1	16SB	1104	G	C5-C6-O6	8.59	133.75	128.60
27	23SB	380	G	N3-C2-N2	-8.56	113.91	119.90
27	23SB	557	G	C5-C6-O6	-8.55	123.47	128.60
27	23SA	1228	C	C6-N1-C1'	-8.54	110.55	120.80
1	16SA	798	G	N9-C4-C5	8.54	108.82	105.40
22	ASIA	71	G	C6-C5-N7	-8.54	125.28	130.40
1	16SA	787	G	N1-C6-O6	-8.51	114.79	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1882	A	O5'-P-OP1	-8.51	98.04	105.70
27	23SA	1532	G	N1-C6-O6	8.49	125.00	119.90
1	16SB	1771	G	C6-C5-N7	8.49	135.49	130.40
1	16SB	1899	G	C4-C5-N7	8.49	114.19	110.80
27	23SA	2086	G	P-O3'-C3'	8.48	129.88	119.70
27	23SA	2421	U	C2-N1-C1'	8.48	127.87	117.70
1	16SB	940	G	C5-C6-O6	-8.48	123.51	128.60
1	16SB	1837	C	C2-N1-C1'	8.46	128.11	118.80
27	23SB	2843	G	N3-C2-N2	-8.45	113.98	119.90
1	16SB	1899	G	C5-C6-O6	-8.45	123.53	128.60
27	23SA	1155	G	N9-C4-C5	8.43	108.77	105.40
1	16SB	1562	G	N3-C2-N2	-8.42	114.01	119.90
1	16SB	1771	G	N3-C4-N9	-8.39	120.97	126.00
1	16SB	1900	G	N9-C4-C5	8.38	108.75	105.40
27	23SB	202	G	N3-C2-N2	-8.38	114.03	119.90
1	16SB	1899	G	C6-C5-N7	-8.37	125.38	130.40
24	ESIB	59	U	O5'-P-OP1	-8.37	98.17	105.70
1	16SA	1929	U	C2-N1-C1'	8.36	127.73	117.70
27	23SA	255	A	O4'-C1'-N9	8.36	114.89	108.20
27	23SA	2162	C	C6-N1-C2	-8.36	116.96	120.30
27	23SB	1551	C	C5-C6-N1	8.35	125.18	121.00
27	23SA	2087	A	O5'-P-OP2	-8.32	98.21	105.70
1	16SA	716	G	O4'-C1'-N9	8.31	114.85	108.20
27	23SA	1462	G	N3-C2-N2	-8.31	114.08	119.90
27	23SA	2417	C	C5-C6-N1	8.30	125.15	121.00
27	23SB	2211	G	N3-C2-N2	-8.30	114.09	119.90
28	5SB	69	G	C5-C6-O6	-8.29	123.62	128.60
27	23SB	2617	A	O5'-P-OP1	-8.28	98.25	105.70
27	23SB	352	G	N3-C2-N2	-8.26	114.12	119.90
1	16SA	796	G	N3-C2-N2	-8.25	114.13	119.90
28	5SA	20	G	N1-C6-O6	8.25	124.85	119.90
27	23SB	380	G	N1-C6-O6	8.24	124.84	119.90
1	16SB	2140	G	O5'-P-OP1	-8.23	98.29	105.70
1	16SA	1471	C	C2-N1-C1'	8.23	127.85	118.80
57	ASIB	72	C	N3-C2-O2	-8.21	116.16	121.90
27	23SB	1021	G	C4-N9-C1'	-8.20	115.84	126.50
27	23SA	700	G	C6-C5-N7	-8.19	125.49	130.40
54	L33B	10	LEU	CB-CG-CD2	-8.19	97.08	111.00
27	23SB	2840	C	C6-N1-C2	-8.16	117.03	120.30
27	23SA	2483	G	C4-N9-C1'	8.14	137.09	126.50
27	23SB	195	G	P-O3'-C3'	8.13	129.46	119.70
27	23SA	2647	A	O5'-P-OP1	-8.12	98.39	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	377	G	C4-C5-N7	-8.12	107.55	110.80
1	16SB	1653	C	N3-C4-N4	8.11	123.68	118.00
27	23SB	2127	U	N1-C2-O2	-8.10	117.13	122.80
27	23SA	2154	C	N3-C4-N4	-8.10	112.33	118.00
1	16SB	1616	G	N9-C4-C5	-8.09	102.17	105.40
1	16SB	736	G	N3-C2-N2	-8.09	114.24	119.90
1	16SA	1717	G	N1-C2-N2	8.06	123.46	116.20
27	23SA	1808	C	N3-C2-O2	-8.06	116.25	121.90
22	ASIA	19	G	N9-C4-C5	8.06	108.62	105.40
27	23SA	2022	G	O5'-P-OP2	-8.06	98.44	105.70
27	23SA	2869	C	C6-N1-C2	-8.04	117.08	120.30
27	23SB	423	U	O4'-C1'-N1	8.02	114.61	108.20
27	23SA	946	C	N1-C2-O2	8.00	123.70	118.90
27	23SA	1907	C	C6-N1-C2	-8.00	117.10	120.30
1	16SA	1621	G	N9-C4-C5	8.00	108.60	105.40
1	16SB	1616	G	N3-C4-N9	8.00	130.80	126.00
27	23SA	2177	G	C6-C5-N7	-7.99	125.61	130.40
1	16SA	1717	G	C6-N1-C2	-7.97	120.32	125.10
27	23SB	942	C	C6-N1-C2	-7.94	117.12	120.30
27	23SB	1533	G	C6-C5-N7	-7.93	125.64	130.40
28	5SA	32	C	C6-N1-C2	-7.93	117.13	120.30
27	23SA	2177	G	C5-C6-O6	-7.90	123.86	128.60
1	16SA	867	G	N9-C4-C5	-7.89	102.25	105.40
1	16SB	1771	G	N9-C4-C5	7.89	108.56	105.40
1	16SA	1352	U	C2-N1-C1'	7.87	127.15	117.70
27	23SB	624	G	C6-C5-N7	7.87	135.12	130.40
27	23SB	1065	G	N1-C6-O6	7.87	124.62	119.90
27	23SB	2328	C	N3-C2-O2	-7.85	116.40	121.90
27	23SB	1065	G	C6-N1-C2	-7.84	120.39	125.10
27	23SB	163	G	C5-C6-O6	-7.84	123.90	128.60
27	23SB	1634	C	C2-N1-C1'	7.84	127.42	118.80
27	23SA	929	G	N3-C2-N2	-7.83	114.42	119.90
23	PSIB	5	G	N1-C6-O6	7.82	124.59	119.90
27	23SA	206	A	OP2-P-O3'	7.81	122.38	105.20
27	23SB	1562	C	C6-N1-C2	-7.81	117.18	120.30
27	23SB	2829	C	N3-C4-C5	-7.80	118.78	121.90
27	23SA	395	C	C5-C6-N1	7.80	124.90	121.00
27	23SB	1084	G	N3-C2-N2	-7.80	114.44	119.90
27	23SB	760	G	N1-C6-O6	7.80	124.58	119.90
1	16SA	1286	G	N3-C2-N2	-7.79	114.45	119.90
27	23SB	1363	C	C2-N1-C1'	7.77	127.35	118.80
27	23SB	2128	C	C6-N1-C2	-7.77	117.19	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SB	1621	G	N3-C2-N2	-7.77	114.46	119.90
28	5SA	21	G	C4-C5-N7	7.76	113.91	110.80
27	23SB	146	G	N9-C4-C5	7.76	108.51	105.40
1	16SA	693	C	C6-N1-C2	7.75	123.40	120.30
27	23SB	557	G	C4-C5-N7	7.75	113.90	110.80
1	16SA	1221	G	C5-C6-O6	-7.75	123.95	128.60
27	23SB	1021	G	C8-N9-C1'	7.75	137.07	127.00
27	23SB	942	C	C2-N1-C1'	7.73	127.31	118.80
27	23SA	2505	G	C6-C5-N7	-7.73	125.76	130.40
33	L6B	98	LEU	CA-CB-CG	7.72	133.05	115.30
27	23SA	2333	G	O4'-C1'-N9	7.72	114.37	108.20
27	23SB	285	G	N1-C6-O6	-7.69	115.29	119.90
27	23SB	146	G	C4-C5-N7	-7.68	107.73	110.80
1	16SA	1421	A	O4'-C1'-N9	7.67	114.34	108.20
1	16SB	1647	G	C4-C5-N7	7.67	113.87	110.80
1	16SA	1817	G	N9-C4-C5	-7.67	102.33	105.40
1	16SA	798	G	N1-C2-N2	7.66	123.09	116.20
27	23SB	1551	C	C2-N1-C1'	7.65	127.21	118.80
28	5SA	21	G	C6-C5-N7	-7.65	125.81	130.40
14	S14A	27	CYS	CA-CB-SG	7.64	127.76	114.00
27	23SB	942	C	C5-C6-N1	7.63	124.82	121.00
27	23SB	2322	G	O4'-C1'-N9	7.63	114.31	108.20
27	23SB	332	G	C4-C5-N7	7.61	113.84	110.80
1	16SB	1899	G	N9-C4-C5	-7.60	102.36	105.40
27	23SB	1924	G	C8-N9-C1'	7.60	136.88	127.00
27	23SB	2840	C	C6-N1-C1'	-7.59	111.69	120.80
27	23SB	1079	G	N3-C2-N2	-7.58	114.59	119.90
27	23SA	1744	C	P-O3'-C3'	7.58	128.79	119.70
27	23SB	2886	A	N7-C8-N9	7.58	117.59	113.80
27	23SB	392	G	C4-C5-N7	-7.56	107.77	110.80
1	16SA	1929	U	N1-C2-O2	7.56	128.09	122.80
43	L21A	38	LEU	CA-CB-CG	7.55	132.68	115.30
27	23SA	1228	C	C5-C4-N4	-7.54	114.92	120.20
1	16SA	805	C	C6-N1-C2	-7.54	117.28	120.30
27	23SA	2130	C	N1-C2-O2	-7.53	114.38	118.90
27	23SB	2318	G	N3-C2-N2	-7.53	114.63	119.90
1	16SA	867	G	C4-C5-N7	7.52	113.81	110.80
27	23SB	2207	G	N9-C4-C5	7.52	108.41	105.40
27	23SB	2128	C	C2-N1-C1'	7.51	127.06	118.80
1	16SB	1919	U	O5'-P-OP1	-7.51	98.94	105.70
1	16SB	1647	G	C6-C5-N7	-7.50	125.90	130.40
1	16SB	1771	G	N1-C6-O6	-7.50	115.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	1381	G	C4-N9-C1'	7.50	136.25	126.50
27	23SB	2213	C	C2-N1-C1'	-7.50	110.55	118.80
27	23SA	1101	C	C2-N1-C1'	7.49	127.04	118.80
28	5SA	21	G	N1-C6-O6	7.49	124.40	119.90
27	23SB	392	G	N3-C2-N2	-7.48	114.67	119.90
26	TRNA	3	C	N3-C4-N4	7.47	123.23	118.00
27	23SA	2017	G	C2'-C3'-O3'	7.46	125.92	109.50
27	23SA	2322	G	O4'-C1'-N9	7.46	114.17	108.20
1	16SB	1937	G	N3-C2-N2	-7.46	114.68	119.90
27	23SA	1110	G	C2-N3-C4	-7.45	108.17	111.90
1	16SA	1820	G	O5'-P-OP1	-7.45	99.00	105.70
1	16SB	1616	G	N1-C6-O6	7.43	124.36	119.90
27	23SB	385	G	N3-C2-N2	-7.43	114.70	119.90
22	ASIA	19	G	N3-C2-N2	-7.42	114.71	119.90
27	23SA	1924	G	N9-C4-C5	7.41	108.36	105.40
1	16SA	1793	C	N1-C2-O2	-7.41	114.45	118.90
27	23SA	2177	G	N1-C6-O6	7.41	124.35	119.90
27	23SB	1972	C	C2-N1-C1'	7.41	126.95	118.80
1	16SB	787	G	N3-C2-N2	-7.40	114.72	119.90
27	23SB	2317	G	N9-C4-C5	7.39	108.36	105.40
27	23SB	1924	G	C4-N9-C1'	-7.37	116.91	126.50
27	23SB	1637	C	C2-N1-C1'	7.36	126.90	118.80
27	23SB	2647	A	O5'-P-OP2	-7.36	99.07	105.70
27	23SB	903	G	N3-C2-N2	-7.36	114.75	119.90
1	16SA	1471	C	C5-C6-N1	7.36	124.68	121.00
1	16SA	1013	C	C2-N1-C1'	7.36	126.89	118.80
26	TRNA	3	C	C2-N1-C1'	7.35	126.88	118.80
27	23SB	2184	G	C2-N3-C4	-7.34	108.23	111.90
27	23SA	699	C	N3-C4-N4	7.33	123.13	118.00
27	23SB	2184	G	O4'-C1'-N9	-7.33	102.33	108.20
22	ASIA	56	C	N1-C2-O2	7.33	123.30	118.90
27	23SB	581	G	N7-C8-N9	7.33	116.77	113.10
27	23SA	1955	G	O5'-P-OP2	-7.33	99.11	105.70
27	23SA	2483	G	C8-N9-C1'	-7.33	117.48	127.00
1	16SB	959	G	N3-C2-N2	-7.32	114.77	119.90
1	16SB	785	G	C6-N1-C2	-7.32	120.71	125.10
27	23SA	2177	G	N3-C4-N9	7.32	130.39	126.00
27	23SA	2808	G	N3-C2-N2	-7.31	114.78	119.90
23	PSIB	1	G	N3-C4-N9	7.30	130.38	126.00
27	23SB	285	G	C5-C6-O6	7.29	132.97	128.60
1	16SB	1748	G	C6-C5-N7	7.29	134.77	130.40
27	23SB	1349	U	P-O3'-C3'	7.29	128.44	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	700	G	C4-C5-N7	7.28	113.71	110.80
27	23SB	27	G	N3-C4-N9	-7.28	121.63	126.00
27	23SB	629	G	C5-C6-O6	-7.28	124.23	128.60
1	16SA	1786	C	C2-N1-C1'	7.28	126.81	118.80
27	23SA	700	G	N3-C4-N9	7.28	130.37	126.00
1	16SA	1403	G	N3-C2-N2	-7.28	114.81	119.90
27	23SB	1784	G	C6-C5-N7	7.28	134.76	130.40
1	16SA	1927	G	C4-N9-C1'	-7.27	117.05	126.50
27	23SB	1039	C	N3-C4-C5	-7.27	118.99	121.90
1	16SB	1554	C	N1-C2-O2	-7.27	114.54	118.90
27	23SA	1217	G	C6-C5-N7	-7.26	126.04	130.40
27	23SA	965	A	C2-N3-C4	-7.25	106.97	110.60
29	L2A	111	LEU	CA-CB-CG	7.25	131.97	115.30
1	16SB	1939	G	N3-C2-N2	-7.25	114.83	119.90
27	23SA	2417	C	C6-N1-C2	-7.24	117.40	120.30
27	23SA	2173	G	N1-C6-O6	7.23	124.24	119.90
27	23SB	1663	A	O4'-C1'-N9	7.23	113.99	108.20
27	23SB	1291	A	C4-C5-C6	-7.23	113.39	117.00
1	16SA	1221	G	N3-C2-N2	-7.23	114.84	119.90
1	16SB	1754	U	N3-C2-O2	-7.23	117.14	122.20
24	ESIA	6	G	N3-C2-N2	-7.21	114.85	119.90
27	23SB	44	G	C6-N1-C2	-7.21	120.78	125.10
27	23SA	98	U	C5-C6-N1	7.20	126.30	122.70
27	23SB	1955	G	O5'-P-OP1	-7.19	99.23	105.70
24	ESIB	29	G	N3-C2-N2	-7.18	114.87	119.90
25	MRNB	56	U	C6-N1-C1'	-7.17	111.16	121.20
27	23SA	2162	C	N3-C2-O2	-7.17	116.88	121.90
43	L21A	49	THR	C-N-CD	-7.17	104.83	120.60
1	16SB	1252	C	C2-N1-C1'	7.17	126.69	118.80
27	23SB	1280	G	N3-C4-N9	-7.17	121.70	126.00
22	ASIA	56	C	N3-C2-O2	-7.16	116.89	121.90
1	16SB	2023	C	C2-N1-C1'	7.15	126.66	118.80
27	23SA	1780	G	N3-C2-N2	-7.15	114.90	119.90
1	16SB	1752	G	N3-C2-N2	-7.14	114.90	119.90
1	16SA	1119	C	C2-N1-C1'	7.14	126.66	118.80
27	23SA	1924	G	C2-N3-C4	-7.14	108.33	111.90
27	23SB	1721	U	C5-C4-O4	7.14	130.18	125.90
27	23SB	1808	C	N3-C2-O2	-7.13	116.91	121.90
1	16SB	1471	C	C6-N1-C2	-7.13	117.45	120.30
27	23SB	294	C	N3-C4-C5	-7.13	119.05	121.90
27	23SB	1065	G	N1-C2-N2	7.13	122.61	116.20
1	16SB	1647	G	N9-C4-C5	-7.11	102.56	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1924	G	N3-C2-N2	-7.11	114.93	119.90
27	23SA	1733	C	C6-N1-C2	-7.10	117.46	120.30
27	23SA	1975	G	C6-C5-N7	-7.09	126.15	130.40
1	16SB	872	G	N3-C2-N2	-7.08	114.94	119.90
27	23SB	757	C	C2-N1-C1'	7.07	126.58	118.80
28	5SB	18	G	N9-C4-C5	7.07	108.23	105.40
1	16SA	1851	G	N3-C2-N2	-7.06	114.96	119.90
27	23SA	2774	A	N1-C6-N6	-7.06	114.37	118.60
27	23SA	279	G	N1-C6-O6	-7.04	115.67	119.90
27	23SB	2211	G	N3-C4-N9	-7.04	121.78	126.00
1	16SB	733	C	C2-N1-C1'	7.04	126.54	118.80
28	5SB	23	G	C6-C5-N7	7.04	134.62	130.40
27	23SB	2127	U	N1-C2-N3	7.04	119.12	114.90
27	23SA	895	C	C2'-C3'-O3'	7.02	124.95	109.50
1	16SA	1928	U	N3-C2-O2	-7.02	117.29	122.20
27	23SB	1721	U	N3-C4-O4	-7.02	114.49	119.40
27	23SB	311	C	C2-N1-C1'	7.01	126.51	118.80
27	23SB	1589	G	N3-C2-N2	-7.01	114.99	119.90
27	23SB	2213	C	C6-N1-C1'	7.00	129.20	120.80
1	16SA	1115	G	O4'-C1'-N9	7.00	113.80	108.20
1	16SB	826	C	C2-N1-C1'	7.00	126.50	118.80
27	23SB	1231	G	N3-C2-N2	-7.00	115.00	119.90
27	23SB	1212	G	N3-C4-N9	-6.99	121.81	126.00
27	23SB	1634	C	N1-C2-O2	6.97	123.08	118.90
1	16SA	1748	G	C6-C5-N7	6.97	134.58	130.40
1	16SB	1781	C	C6-N1-C2	-6.97	117.51	120.30
27	23SA	1988	U	C2-N1-C1'	6.96	126.06	117.70
57	ASIB	55	U	N3-C4-O4	-6.96	114.53	119.40
1	16SB	1754	U	C2-N1-C1'	6.96	126.05	117.70
27	23SA	1975	G	C4-N9-C1'	6.95	135.54	126.50
27	23SA	1907	C	C2-N1-C1'	6.95	126.44	118.80
1	16SB	2085	G	C4-C5-N7	6.94	113.58	110.80
1	16SA	1938	G	N3-C2-N2	-6.93	115.05	119.90
22	ASIA	56	C	C2-N1-C1'	6.92	126.42	118.80
28	5SB	33	C	N1-C2-O2	6.92	123.05	118.90
1	16SA	1809	G	C4-N9-C1'	-6.92	117.51	126.50
27	23SA	928	G	C4-C5-N7	6.92	113.57	110.80
27	23SA	1532	G	C6-C5-N7	-6.91	126.25	130.40
27	23SA	1975	G	O4'-C1'-N9	6.91	113.73	108.20
27	23SA	91	G	N3-C4-N9	-6.91	121.85	126.00
22	ASIA	19	G	N3-C4-N9	-6.91	121.86	126.00
27	23SA	2490	C	N3-C2-O2	-6.90	117.07	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1501	C	N1-C2-O2	-6.90	114.76	118.90
27	23SA	1228	C	C5-C6-N1	6.89	124.44	121.00
27	23SB	1212	G	C4-C5-N7	-6.88	108.05	110.80
27	23SA	1381	G	C6-C5-N7	-6.87	126.28	130.40
27	23SA	725	A	C2-N3-C4	-6.87	107.17	110.60
1	16SA	730	C	C6-N1-C2	-6.86	117.56	120.30
1	16SA	1990	C	C6-N1-C2	-6.85	117.56	120.30
27	23SB	2127	U	C5-C4-O4	-6.85	121.79	125.90
27	23SA	1562	C	C2-N1-C1'	6.84	126.33	118.80
27	23SA	1956	U	N3-C2-O2	-6.84	117.41	122.20
27	23SA	2154	C	N3-C2-O2	-6.84	117.11	121.90
1	16SB	733	C	C5-C4-N4	-6.84	115.41	120.20
27	23SB	575	G	C5-C6-O6	-6.84	124.50	128.60
27	23SB	624	G	N3-C4-N9	-6.84	121.89	126.00
27	23SB	425	G	N3-C2-N2	-6.84	115.11	119.90
27	23SA	725	A	O4'-C1'-N9	6.83	113.67	108.20
27	23SB	760	G	N1-C2-N2	6.83	122.35	116.20
1	16SA	1471	C	C5-C4-N4	-6.82	115.42	120.20
27	23SB	1329	G	N9-C4-C5	-6.82	102.67	105.40
1	16SA	1927	G	C8-N9-C1'	6.82	135.87	127.00
24	ESIA	65	G	C4-C5-N7	6.82	113.53	110.80
27	23SB	44	G	N1-C2-N2	6.82	122.34	116.20
1	16SA	1748	G	N1-C6-O6	-6.82	115.81	119.90
27	23SB	2207	G	N3-C4-N9	-6.82	121.91	126.00
1	16SB	1748	G	N1-C6-O6	-6.81	115.81	119.90
27	23SA	952	C	C2-N1-C1'	6.80	126.28	118.80
27	23SA	2490	C	C6-N1-C1'	-6.80	112.64	120.80
27	23SB	895	C	N3-C2-O2	-6.79	117.15	121.90
1	16SA	2126	A	P-O3'-C3'	6.78	127.84	119.70
27	23SA	118	U	C4-C5-C6	6.78	123.77	119.70
27	23SA	395	C	C6-N1-C2	-6.78	117.59	120.30
22	ASIA	75	C	C6-N1-C2	-6.78	117.59	120.30
27	23SA	2505	G	C4-C5-N7	6.78	113.51	110.80
1	16SA	1867	U	N1-C2-O2	6.76	127.53	122.80
1	16SA	1928	U	C2-N1-C1'	6.76	125.81	117.70
27	23SA	725	A	C5-N7-C8	-6.76	100.52	103.90
27	23SB	1280	G	C6-C5-N7	6.76	134.46	130.40
28	5SA	20	G	C6-N1-C2	-6.75	121.05	125.10
1	16SA	798	G	N3-C4-N9	-6.75	121.95	126.00
27	23SA	1363	C	C2-N1-C1'	6.75	126.23	118.80
1	16SB	1257	G	N3-C2-N2	-6.75	115.18	119.90
27	23SA	1217	G	N1-C6-O6	6.74	123.95	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	2287	U	N3-C4-O4	-6.74	114.68	119.40
27	23SB	377	G	C5-C6-O6	6.74	132.64	128.60
27	23SB	153	C	C2-N1-C1'	6.74	126.21	118.80
22	ASIA	71	G	N3-C4-N9	6.73	130.04	126.00
25	MRNB	53	U	O4'-C1'-N1	6.73	113.59	108.20
28	5SB	18	G	C8-N9-C4	-6.73	103.71	106.40
27	23SA	2535	C	O5'-P-OP1	6.73	118.78	110.70
1	16SA	1441	C	P-O3'-C3'	6.73	127.77	119.70
23	PSIB	5	G	C5-C6-O6	-6.73	124.56	128.60
27	23SA	2173	G	C6-C5-N7	-6.73	126.36	130.40
27	23SB	2317	G	C6-C5-N7	6.72	134.44	130.40
27	23SA	2184	G	C5-C6-O6	-6.72	124.57	128.60
27	23SB	1532	G	C4-C5-N7	6.72	113.49	110.80
27	23SB	2492	C	C6-N1-C2	-6.72	117.61	120.30
27	23SA	2165	C	N1-C2-O2	-6.71	114.88	118.90
37	L15A	45	LEU	CB-CG-CD2	-6.71	99.60	111.00
27	23SA	91	G	C6-C5-N7	6.70	134.42	130.40
27	23SA	2180	G	N9-C4-C5	6.70	108.08	105.40
1	16SB	814	C	C6-N1-C2	-6.68	117.63	120.30
28	5SB	69	G	C6-C5-N7	-6.68	126.39	130.40
28	5SB	119	G	N3-C2-N2	-6.68	115.22	119.90
27	23SB	281	C	C2-N1-C1'	6.67	126.14	118.80
27	23SB	1533	G	C4-C5-N7	6.67	113.47	110.80
1	16SB	1030	A	O5'-P-OP2	-6.67	99.69	105.70
22	ASIA	19	G	C8-N9-C1'	6.67	135.67	127.00
25	MRNA	56	U	C2-N1-C1'	6.67	125.70	117.70
27	23SB	1021	G	N3-C4-N9	-6.67	122.00	126.00
22	ASIA	75	C	C5-C6-N1	6.67	124.33	121.00
27	23SA	2533	A	C4-N9-C1'	6.67	138.30	126.30
27	23SA	269	G	N3-C2-N2	-6.66	115.23	119.90
27	23SA	1532	G	N9-C4-C5	-6.66	102.73	105.40
27	23SB	1362	U	C2-N1-C1'	6.66	125.69	117.70
27	23SA	2234	G	C6-C5-N7	6.66	134.40	130.40
28	5SA	54	A	O4'-C1'-N9	6.66	113.52	108.20
27	23SA	988	A	O5'-P-OP1	-6.65	99.71	105.70
27	23SB	377	G	C5-C6-N1	-6.65	108.17	111.50
28	5SB	46	G	C6-C5-N7	6.65	134.39	130.40
1	16SB	1471	C	C5-C6-N1	6.63	124.32	121.00
1	16SB	2085	G	C6-C5-N7	-6.63	126.42	130.40
27	23SB	1065	G	N9-C4-C5	6.63	108.05	105.40
1	16SB	1069	G	N3-C4-N9	-6.63	122.02	126.00
27	23SB	624	G	C4-C5-N7	-6.63	108.15	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SA	1929	U	N3-C2-O2	-6.63	117.56	122.20
1	16SA	871	G	C6-C5-N7	6.63	134.38	130.40
27	23SA	1894	G	C6-C5-N7	6.62	134.37	130.40
27	23SB	1227	C	C2-N1-C1'	6.62	126.09	118.80
27	23SB	1665	A	O4'-C1'-N9	6.61	113.49	108.20
28	5SB	120	G	N3-C2-N2	-6.61	115.27	119.90
1	16SB	2085	G	N9-C4-C5	-6.61	102.75	105.40
27	23SB	392	G	N3-C4-N9	-6.61	122.03	126.00
27	23SB	367	G	N3-C2-N2	-6.61	115.27	119.90
24	ESIA	3	C	C6-N1-C2	-6.61	117.66	120.30
27	23SA	2752	G	C6-C5-N7	6.60	134.36	130.40
1	16SA	1621	G	C4-C5-N7	-6.59	108.16	110.80
27	23SB	377	G	N9-C4-C5	6.59	108.03	105.40
27	23SA	1421	U	C2-N3-C4	6.59	130.95	127.00
27	23SB	881	G	O5'-P-OP2	6.58	118.60	110.70
42	L20A	98	LEU	CA-CB-CG	6.58	130.44	115.30
27	23SA	267	C	C6-N1-C2	-6.58	117.67	120.30
27	23SA	1435	C	C6-N1-C2	-6.58	117.67	120.30
1	16SB	1757	C	C6-N1-C2	-6.58	117.67	120.30
25	MRNB	56	U	N1-C2-O2	6.58	127.40	122.80
1	16SA	796	G	N9-C4-C5	6.57	108.03	105.40
1	16SA	798	G	C5-C6-O6	-6.57	124.66	128.60
1	16SA	1928	U	N1-C2-O2	6.57	127.40	122.80
27	23SA	1157	C	P-O3'-C3'	6.57	127.58	119.70
27	23SA	877	U	C2-N1-C1'	6.56	125.57	117.70
27	23SA	2014	G	N3-C2-N2	-6.56	115.31	119.90
1	16SA	1855	C	N3-C2-O2	-6.55	117.31	121.90
27	23SA	700	G	N9-C4-C5	-6.55	102.78	105.40
1	16SB	1065	G	N3-C2-N2	-6.55	115.31	119.90
27	23SB	454	G	N9-C4-C5	-6.55	102.78	105.40
27	23SB	1545	A	N7-C8-N9	6.55	117.07	113.80
57	ASIB	41	C	C6-N1-C2	-6.54	117.68	120.30
27	23SB	311	C	C6-N1-C2	-6.53	117.69	120.30
27	23SB	1212	G	N1-C2-N2	6.53	122.08	116.20
28	5SB	23	G	N9-C4-C5	6.53	108.01	105.40
27	23SA	186	A	O4'-C1'-N9	6.53	113.42	108.20
1	16SB	997	A	O5'-P-OP2	-6.52	99.83	105.70
27	23SA	1466	C	C5-C6-N1	6.52	124.26	121.00
1	16SA	805	C	C2-N1-C1'	6.51	125.97	118.80
1	16SB	1346	C	N1-C2-O2	6.51	122.81	118.90
1	16SA	1748	G	N9-C4-C5	6.51	108.00	105.40
27	23SB	2322	G	C4-N9-C1'	6.51	134.97	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SA	1781	C	C6-N1-C2	-6.51	117.70	120.30
27	23SA	2696	C	P-O3'-C3'	6.51	127.51	119.70
27	23SB	1924	G	C2-N3-C4	-6.51	108.65	111.90
27	23SB	146	G	N3-C4-N9	-6.50	122.10	126.00
27	23SB	2211	G	C6-C5-N7	6.50	134.30	130.40
27	23SA	1924	G	C6-C5-N7	6.50	134.30	130.40
27	23SA	2505	G	C4-N9-C1'	6.50	134.95	126.50
27	23SA	2177	G	C4-C5-N7	6.50	113.40	110.80
27	23SA	928	G	C6-C5-N7	-6.49	126.50	130.40
27	23SB	2237	G	N3-C2-N2	-6.49	115.36	119.90
27	23SA	1808	C	N1-C2-O2	6.49	122.79	118.90
1	16SA	2007	G	N3-C2-N2	-6.49	115.36	119.90
1	16SA	871	G	N9-C4-C5	6.48	107.99	105.40
1	16SB	1562	G	N9-C4-C5	6.48	107.99	105.40
27	23SB	2184	G	C5-C6-N1	-6.48	108.26	111.50
27	23SB	2795	U	C2-N1-C1'	6.48	125.47	117.70
27	23SA	118	U	N3-C2-O2	-6.48	117.67	122.20
1	16SB	677	G	N3-C4-C5	6.48	131.84	128.60
1	16SB	1647	G	O4'-C1'-N9	6.47	113.38	108.20
27	23SB	53	G	N9-C4-C5	6.47	107.99	105.40
27	23SA	98	U	C2-N1-C1'	6.47	125.47	117.70
27	23SB	454	G	C4-C5-N7	6.47	113.39	110.80
1	16SB	777	C	C2-N1-C1'	6.47	125.91	118.80
27	23SB	629	G	N1-C6-O6	6.46	123.77	119.90
27	23SA	1101	C	C6-N1-C1'	-6.45	113.06	120.80
27	23SB	2211	G	N9-C4-C5	6.45	107.98	105.40
1	16SB	1973	A	P-O3'-C3'	6.45	127.44	119.70
1	16SA	1748	G	C4-C5-N7	-6.44	108.22	110.80
1	16SB	1653	C	N1-C2-O2	-6.44	115.04	118.90
1	16SB	1771	G	C4-C5-N7	-6.44	108.22	110.80
27	23SA	48	A	O5'-P-OP2	-6.44	99.91	105.70
22	ASIA	67	C	N3-C4-N4	6.44	122.51	118.00
23	PSIA	45	U	O4'-C1'-N1	6.44	113.35	108.20
27	23SA	1465	G	O4'-C1'-N9	6.43	113.35	108.20
1	16SB	785	G	C5-C6-O6	-6.43	124.74	128.60
27	23SB	1551	C	C6-N1-C2	-6.43	117.73	120.30
1	16SA	837	G	N3-C4-N9	6.43	129.86	126.00
1	16SB	1982	G	N3-C2-N2	-6.43	115.40	119.90
27	23SB	2341	C	C6-N1-C2	-6.43	117.73	120.30
27	23SB	1972	C	C5-C6-N1	6.42	124.21	121.00
27	23SB	2761	C	OP1-P-O3'	6.42	119.32	105.20
26	TRNA	3	C	C5-C4-N4	-6.41	115.71	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	2292	G	N3-C2-N2	-6.41	115.41	119.90
1	16SA	1471	C	C6-N1-C1'	-6.41	113.11	120.80
1	16SA	1648	G	O4'-C1'-N9	6.41	113.32	108.20
27	23SB	557	G	C8-N9-C1'	-6.41	118.67	127.00
1	16SA	730	C	C5-C4-N4	6.40	124.68	120.20
27	23SA	1217	G	C5-C6-O6	-6.40	124.76	128.60
1	16SB	871	G	N3-C2-N2	-6.40	115.42	119.90
1	16SB	1748	G	C4-C5-N7	-6.40	108.24	110.80
1	16SA	796	G	N3-C4-N9	-6.39	122.17	126.00
1	16SB	1985	U	C2-N3-C4	-6.39	123.17	127.00
1	16SA	1606	A	N1-C2-N3	6.39	132.49	129.30
27	23SB	1252	A	C2-N3-C4	-6.38	107.41	110.60
1	16SB	2013	G	C4-C5-N7	6.38	113.35	110.80
27	23SB	557	G	C4-N9-C1'	6.38	134.79	126.50
27	23SA	1883	G	N3-C2-N2	-6.38	115.44	119.90
27	23SB	2128	C	N1-C2-O2	6.38	122.73	118.90
1	16SA	798	G	C6-N1-C2	-6.38	121.27	125.10
1	16SA	805	C	C5-C6-N1	6.38	124.19	121.00
1	16SA	907	G	O4'-C1'-N9	-6.37	103.10	108.20
1	16SB	754	G	N3-C4-C5	-6.37	125.41	128.60
1	16SA	1616	G	N3-C4-N9	6.37	129.82	126.00
1	16SB	786	G	C6-C5-N7	6.37	134.22	130.40
1	16SB	1606	A	N1-C2-N3	6.37	132.48	129.30
27	23SA	216	G	O4'-C1'-N9	6.36	113.29	108.20
1	16SB	1837	C	N1-C2-O2	6.35	122.71	118.90
27	23SB	295	C	C2-N1-C1'	6.34	125.78	118.80
27	23SA	1652	A	O5'-P-OP1	-6.34	100.00	105.70
27	23SB	295	C	C6-N1-C1'	-6.34	113.19	120.80
27	23SB	1509	G	N3-C2-N2	-6.34	115.46	119.90
27	23SB	1817	A	O5'-P-OP1	6.34	118.31	110.70
27	23SB	1038	A	O5'-P-OP2	-6.34	100.00	105.70
1	16SB	986	C	C2-N1-C1'	6.33	125.77	118.80
1	16SA	667	G	O5'-P-OP1	-6.33	100.01	105.70
28	5SB	113	G	C6-C5-N7	6.33	134.19	130.40
1	16SA	1867	U	C2-N1-C1'	6.32	125.29	117.70
1	16SB	1900	G	N1-C2-N2	6.32	121.89	116.20
27	23SB	2211	G	C4-N9-C1'	-6.32	118.28	126.50
27	23SA	1381	G	C8-N9-C1'	-6.32	118.78	127.00
27	23SB	2211	G	C8-N9-C1'	6.32	135.21	127.00
40	L18B	56	LEU	CA-CB-CG	6.32	129.83	115.30
1	16SA	1477	G	N3-C2-N2	-6.31	115.48	119.90
27	23SA	2154	C	N3-C4-C5	6.31	124.42	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	5SB	91	G	C4-N9-C1'	6.31	134.71	126.50
27	23SA	1532	G	C4-C5-N7	6.31	113.32	110.80
27	23SB	1381	G	C4-N9-C1'	6.31	134.70	126.50
27	23SA	2133	C	N1-C2-O2	-6.30	115.12	118.90
1	16SB	1928	U	C2-N1-C1'	6.30	125.26	117.70
27	23SB	1456	C	C2-N1-C1'	6.30	125.73	118.80
1	16SA	1177	G	C6-C5-N7	-6.30	126.62	130.40
27	23SA	2533	A	C6-C5-N7	-6.30	127.89	132.30
27	23SA	2454	A	P-O3'-C3'	6.29	127.25	119.70
27	23SB	2357	C	C6-N1-C2	-6.29	117.78	120.30
27	23SA	1128	A	N9-C4-C5	-6.29	103.28	105.80
1	16SA	2073	G	C6-C5-N7	-6.29	126.63	130.40
27	23SA	1744	C	C2-N1-C1'	6.29	125.72	118.80
27	23SB	725	A	O4'-C1'-N9	6.29	113.23	108.20
27	23SA	2459	G	O5'-P-OP2	-6.28	100.05	105.70
27	23SB	204	G	O4'-C1'-N9	6.28	113.22	108.20
27	23SA	929	G	N9-C4-C5	6.28	107.91	105.40
1	16SB	1319	G	O4'-C1'-N9	6.27	113.22	108.20
57	ASIB	34	G	C4-N9-C1'	6.27	134.66	126.50
1	16SA	1899	G	C6-C5-N7	-6.27	126.64	130.40
27	23SA	1460	C	C2-N1-C1'	6.27	125.70	118.80
1	16SA	867	G	C6-C5-N7	-6.26	126.64	130.40
1	16SA	1899	G	N3-C4-N9	6.26	129.76	126.00
22	ASIA	19	G	C4-N9-C1'	-6.26	118.36	126.50
27	23SA	1505	G	O5'-P-OP2	-6.26	100.07	105.70
27	23SA	1532	G	N3-C4-N9	6.26	129.75	126.00
27	23SB	1939	C	C6-N1-C2	-6.26	117.80	120.30
27	23SA	1635	A	O5'-P-OP1	-6.25	100.07	105.70
27	23SA	1110	G	N3-C4-C5	6.25	131.72	128.60
28	5SA	67	C	N3-C4-N4	-6.25	113.63	118.00
57	ASIB	7	A	O4'-C1'-N9	-6.25	103.20	108.20
1	16SB	1771	G	C5-C6-O6	6.24	132.35	128.60
1	16SA	1682	C	N1-C2-O2	6.24	122.64	118.90
1	16SA	955	C	C2-N1-C1'	6.24	125.66	118.80
27	23SA	1533	G	N9-C4-C5	-6.24	102.91	105.40
27	23SA	2845	U	C2-N1-C1'	6.24	125.18	117.70
1	16SA	1851	G	N9-C4-C5	6.23	107.89	105.40
24	ESIA	28	G	C2-N3-C4	-6.23	108.78	111.90
27	23SA	877	U	N1-C2-O2	6.23	127.16	122.80
27	23SA	2533	A	N7-C8-N9	6.23	116.92	113.80
57	ASIB	41	C	C2-N1-C1'	6.22	125.64	118.80
27	23SA	2180	G	N3-C4-N9	-6.22	122.27	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SB	1757	C	N3-C4-C5	-6.22	119.41	121.90
1	16SA	1817	G	C8-N9-C4	6.21	108.89	106.40
1	16SB	2140	G	O5'-P-OP2	6.21	118.16	110.70
1	16SA	1221	G	N1-C6-O6	6.21	123.63	119.90
27	23SA	2396	C	N1-C2-O2	-6.21	115.17	118.90
27	23SB	2617	A	O5'-P-OP2	6.21	118.15	110.70
22	ASIA	2	C	N1-C2-O2	6.21	122.62	118.90
1	16SB	1924	C	P-O3'-C3'	6.20	127.14	119.70
1	16SA	2073	G	N3-C4-N9	6.20	129.72	126.00
1	16SB	1837	C	C6-N1-C1'	-6.20	113.37	120.80
27	23SB	1285	G	N1-C6-O6	-6.20	116.18	119.90
1	16SB	1616	G	C4-N9-C1'	6.19	134.55	126.50
1	16SA	1584	U	N3-C2-O2	-6.19	117.87	122.20
27	23SB	423	U	O5'-P-OP2	-6.19	100.13	105.70
27	23SA	228	C	C6-N1-C2	-6.19	117.82	120.30
1	16SB	1296	G	N3-C2-N2	-6.19	115.57	119.90
27	23SA	2630	U	O5'-P-OP1	-6.19	100.13	105.70
27	23SB	557	G	N9-C4-C5	-6.19	102.92	105.40
1	16SA	839	G	N3-C2-N2	-6.18	115.57	119.90
1	16SB	831	C	N1-C2-O2	-6.18	115.19	118.90
1	16SB	1754	U	N1-C2-O2	6.18	127.13	122.80
1	16SB	1963	C	P-O3'-C3'	6.18	127.12	119.70
1	16SA	787	G	C5-C6-O6	6.18	132.31	128.60
1	16SB	899	G	N3-C2-N2	-6.18	115.57	119.90
27	23SB	2488	U	C2-N1-C1'	6.18	125.12	117.70
1	16SA	1007	C	P-O3'-C3'	6.18	127.11	119.70
27	23SA	1217	G	C4-N9-C1'	6.18	134.53	126.50
28	5SB	91	G	C8-N9-C1'	-6.18	118.97	127.00
27	23SA	220	U	O5'-P-OP2	-6.17	100.14	105.70
27	23SB	629	G	N3-C4-N9	6.17	129.71	126.00
27	23SB	1882	A	O5'-P-OP2	6.17	118.11	110.70
1	16SA	1899	G	C4-C5-N7	6.17	113.27	110.80
28	5SB	72	C	C6-N1-C2	-6.17	117.83	120.30
27	23SA	605	C	C6-N1-C2	-6.16	117.83	120.30
27	23SB	992	A	O4'-C1'-N9	6.16	113.13	108.20
1	16SB	1069	G	C8-N9-C1'	6.16	135.01	127.00
1	16SB	1583	U	C2-N1-C1'	6.16	125.09	117.70
22	ASIA	67	C	C5-C4-N4	-6.16	115.89	120.20
24	ESIA	65	G	N9-C4-C5	-6.16	102.94	105.40
27	23SB	895	C	N1-C2-O2	6.16	122.60	118.90
27	23SB	1562	C	C5-C6-N1	6.16	124.08	121.00
27	23SB	1959	C	O5'-P-OP2	-6.16	100.16	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SA	995	G	C6-C5-N7	-6.15	126.71	130.40
27	23SA	57	G	O5'-P-OP2	-6.15	100.17	105.70
27	23SB	1634	C	C6-N1-C1'	-6.15	113.42	120.80
1	16SB	1900	G	C6-N1-C2	-6.15	121.41	125.10
27	23SB	285	G	C6-C5-N7	6.14	134.09	130.40
27	23SB	352	G	N9-C4-C5	6.14	107.86	105.40
1	16SA	1793	C	C2-N3-C4	-6.14	116.83	119.90
27	23SA	945	C	C5-C6-N1	6.14	124.07	121.00
22	ASIA	57	G	O4'-C1'-N9	6.14	113.11	108.20
1	16SB	1467	G	C6-C5-N7	6.13	134.08	130.40
28	5SB	23	G	C4-C5-N7	-6.13	108.35	110.80
27	23SA	1956	U	N1-C2-O2	6.13	127.09	122.80
27	23SA	1833	G	P-O3'-C3'	6.13	127.05	119.70
37	L15A	88	LEU	CA-CB-CG	6.13	129.39	115.30
27	23SB	2128	C	C5-C6-N1	6.12	124.06	121.00
27	23SB	462	C	C6-N1-C2	-6.12	117.85	120.30
1	16SA	716	G	C4-N9-C1'	6.12	134.46	126.50
27	23SB	1679	G	N3-C2-N2	-6.12	115.62	119.90
27	23SA	395	C	C6-N1-C1'	-6.12	113.46	120.80
27	23SB	153	C	C6-N1-C1'	-6.12	113.46	120.80
27	23SA	2333	G	C4-N9-C1'	6.11	134.45	126.50
1	16SB	1827	C	P-O3'-C3'	6.11	127.04	119.70
27	23SB	265	G	C6-C5-N7	6.11	134.07	130.40
1	16SB	1105	G	N9-C4-C5	-6.11	102.95	105.40
27	23SA	160	U	N1-C2-O2	6.11	127.08	122.80
1	16SA	1616	G	C6-C5-N7	-6.11	126.74	130.40
1	16SB	754	G	P-O3'-C3'	6.11	127.03	119.70
27	23SA	164	C	C6-N1-C2	-6.10	117.86	120.30
27	23SA	2150	G	N3-C4-N9	-6.10	122.34	126.00
1	16SA	1584	U	C5-C6-N1	-6.10	119.65	122.70
1	16SA	1817	G	C4-C5-N7	6.10	113.24	110.80
27	23SA	760	G	C6-C5-N7	6.10	134.06	130.40
27	23SA	2646	G	C6-C5-N7	6.10	134.06	130.40
27	23SA	699	C	C5-C4-N4	-6.09	115.94	120.20
27	23SB	53	G	C4-C5-N7	-6.09	108.36	110.80
1	16SB	1402	G	N9-C4-C5	6.09	107.83	105.40
27	23SB	2355	G	C6-C5-N7	6.09	134.05	130.40
28	5SA	33	C	C6-N1-C2	-6.09	117.87	120.30
27	23SB	2139	A	O4'-C1'-N9	6.09	113.07	108.20
1	16SA	836	G	P-O3'-C3'	6.08	126.99	119.70
1	16SA	1899	G	N9-C4-C5	-6.08	102.97	105.40
1	16SB	1554	C	C2-N3-C4	-6.08	116.86	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	PSIB	5	G	N3-C2-N2	-6.07	115.65	119.90
27	23SB	2890	G	N3-C2-N2	-6.07	115.65	119.90
1	16SB	733	C	C6-N1-C1'	-6.07	113.52	120.80
1	16SB	1867	U	P-O3'-C3'	6.07	126.98	119.70
27	23SA	929	G	C8-N9-C1'	6.06	134.88	127.00
1	16SB	940	G	N9-C4-C5	-6.06	102.97	105.40
27	23SB	91	G	C6-N1-C2	-6.06	121.46	125.10
27	23SB	1532	G	N1-C6-O6	6.06	123.54	119.90
27	23SA	2133	C	C2-N3-C4	-6.06	116.87	119.90
1	16SB	1513	G	O4'-C1'-N9	6.05	113.04	108.20
27	23SA	832	A	C5-N7-C8	-6.05	100.87	103.90
27	23SA	946	C	N3-C2-O2	-6.05	117.66	121.90
27	23SA	800	A	O5'-P-OP1	-6.05	100.25	105.70
27	23SB	931	G	C6-C5-N7	6.05	134.03	130.40
27	23SB	255	A	O4'-C1'-N9	6.05	113.04	108.20
27	23SB	359	C	C6-N1-C2	-6.05	117.88	120.30
27	23SA	725	A	N7-C8-N9	6.04	116.82	113.80
27	23SA	2505	G	N7-C8-N9	6.04	116.12	113.10
1	16SA	1330	C	P-O3'-C3'	6.04	126.95	119.70
27	23SA	1421	U	C5-C6-N1	6.04	125.72	122.70
27	23SA	2173	G	C4-C5-N7	6.04	113.22	110.80
27	23SB	360	C	C6-N1-C2	-6.04	117.88	120.30
27	23SB	1808	C	N1-C2-O2	6.04	122.53	118.90
27	23SA	1362	U	C2-N1-C1'	6.04	124.95	117.70
27	23SA	1734	C	C6-N1-C2	-6.04	117.88	120.30
27	23SB	378	G	N9-C4-C5	-6.04	102.98	105.40
27	23SB	91	G	N3-C2-N2	-6.04	115.67	119.90
27	23SA	699	C	C2-N1-C1'	6.03	125.44	118.80
1	16SA	1767	G	P-O3'-C3'	6.03	126.94	119.70
27	23SB	2492	C	C2-N1-C1'	6.03	125.44	118.80
27	23SB	285	G	C4-C5-N7	-6.03	108.39	110.80
27	23SA	1700	G	C6-C5-N7	6.03	134.01	130.40
27	23SB	2317	G	N1-C6-O6	-6.03	116.28	119.90
27	23SB	380	G	C6-N1-C2	-6.02	121.48	125.10
27	23SB	2204	C	N3-C4-N4	6.02	122.22	118.00
27	23SB	1097	C	N1-C2-O2	6.02	122.51	118.90
27	23SB	2470	G	N3-C2-N2	-6.02	115.68	119.90
1	16SB	1616	G	C8-N9-C1'	-6.02	119.17	127.00
27	23SB	1536	G	C6-C5-N7	6.02	134.01	130.40
1	16SB	2075	C	C2-N3-C4	-6.02	116.89	119.90
27	23SB	1017	C	C6-N1-C2	-6.02	117.89	120.30
27	23SB	875	U	OP1-P-O3'	6.02	118.43	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1593	C	C2-N1-C1'	6.02	125.42	118.80
27	23SA	1936	PSU	OP2-P-O3'	6.01	118.42	105.20
27	23SB	1391	A	C2-N3-C4	-6.01	107.59	110.60
1	16SB	2023	C	C6-N1-C1'	-6.01	113.59	120.80
27	23SB	146	G	N3-C2-N2	-6.01	115.69	119.90
27	23SB	454	G	C6-C5-N7	-6.01	126.80	130.40
27	23SB	2454	A	P-O3'-C3'	6.01	126.91	119.70
1	16SA	1257	G	N3-C2-N2	-6.00	115.70	119.90
27	23SA	2454	A	C8-N9-C4	-6.00	103.40	105.80
27	23SB	715	G	N3-C2-N2	-6.00	115.70	119.90
1	16SA	1538	A	N1-C6-N6	-5.99	115.00	118.60
27	23SB	1533	G	N9-C4-C5	-5.99	103.00	105.40
1	16SA	858	C	N3-C4-N4	5.99	122.19	118.00
1	16SA	1910	G	C6-C5-N7	5.99	134.00	130.40
9	S9A	85	LEU	CA-CB-CG	5.99	129.08	115.30
1	16SB	778	G	C6-C5-N7	-5.99	126.81	130.40
27	23SB	162	C	C5-C4-N4	-5.99	116.01	120.20
27	23SA	1110	G	N3-C2-N2	-5.99	115.71	119.90
28	5SA	21	G	N9-C4-C5	-5.99	103.01	105.40
1	16SA	1809	G	C8-N9-C1'	5.98	134.78	127.00
27	23SA	420	C	C2-N1-C1'	5.98	125.38	118.80
1	16SB	1095	C	C2-N1-C1'	5.98	125.38	118.80
1	16SB	826	C	C6-N1-C2	-5.98	117.91	120.30
27	23SB	202	G	C4-C5-N7	-5.97	108.41	110.80
27	23SA	945	C	C5-C4-N4	-5.97	116.02	120.20
27	23SA	1748	A	C6-C5-N7	-5.97	128.12	132.30
1	16SB	778	G	C4-C5-N7	5.97	113.19	110.80
1	16SB	1974	G	OP1-P-O3'	5.97	118.33	105.20
1	16SA	1352	U	C6-N1-C1'	-5.97	112.85	121.20
1	16SA	1660	G	C4-C5-N7	5.97	113.19	110.80
27	23SA	1217	G	C8-N9-C1'	-5.96	119.25	127.00
1	16SB	1899	G	N3-C4-N9	5.96	129.58	126.00
27	23SA	160	U	C2-N1-C1'	5.96	124.85	117.70
1	16SA	805	C	C5-C4-N4	5.96	124.37	120.20
1	16SA	1752	G	C6-N1-C2	-5.96	121.53	125.10
27	23SA	1155	G	C6-N1-C2	-5.96	121.52	125.10
27	23SB	1021	G	C6-C5-N7	5.96	133.97	130.40
27	23SB	2886	A	C5-N7-C8	-5.96	100.92	103.90
27	23SB	1277	G	N3-C2-N2	-5.96	115.73	119.90
22	ASIA	19	G	C6-N1-C2	-5.96	121.53	125.10
27	23SA	2322	G	C4-N9-C1'	5.95	134.24	126.50
27	23SB	1518	C	O5'-P-OP1	5.95	117.84	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	2421	U	O5'-P-OP1	-5.95	100.34	105.70
27	23SB	1545	A	C8-N9-C4	-5.95	103.42	105.80
1	16SB	720	C	N3-C4-N4	5.95	122.16	118.00
28	5SB	68	A	C4-N9-C1'	5.94	137.00	126.30
1	16SA	2073	G	C5-C6-O6	-5.94	125.03	128.60
27	23SA	1813	U	O4'-C1'-N1	5.94	112.95	108.20
1	16SA	1352	U	N1-C2-O2	5.94	126.96	122.80
1	16SB	1279	G	N3-C2-N2	-5.94	115.74	119.90
27	23SA	1110	G	N1-C2-N3	5.93	127.46	123.90
1	16SA	871	G	N3-C4-N9	-5.93	122.44	126.00
27	23SA	909	U	C4-C5-C6	5.93	123.26	119.70
27	23SB	1748	A	O4'-C1'-N9	5.93	112.94	108.20
1	16SB	1928	U	N1-C2-O2	5.93	126.95	122.80
27	23SB	2647	A	O5'-P-OP1	5.93	117.81	110.70
27	23SB	1240	G	C5-C6-O6	5.93	132.16	128.60
28	5SB	68	A	P-O3'-C3'	5.93	126.81	119.70
1	16SA	1929	U	C5-C6-N1	5.92	125.66	122.70
27	23SB	92	C	C2-N1-C1'	5.92	125.31	118.80
1	16SB	1116	U	O5'-P-OP1	-5.92	100.38	105.70
1	16SB	2085	G	N1-C6-O6	5.92	123.45	119.90
27	23SA	2220	C	OP2-P-O3'	5.91	118.21	105.20
27	23SB	178	G	C6-C5-N7	5.91	133.95	130.40
22	ASIA	19	G	C4-C5-N7	-5.91	108.44	110.80
27	23SA	2421	U	P-O3'-C3'	5.91	126.79	119.70
1	16SB	784	G	C6-C5-N7	5.91	133.95	130.40
27	23SB	2017	G	P-O3'-C3'	5.91	126.79	119.70
27	23SA	2142	A	O4'-C1'-N9	5.91	112.92	108.20
28	5SA	20	G	N1-C2-N2	5.91	121.52	116.20
24	ESIB	58	A	OP1-P-O3'	5.91	118.19	105.20
27	23SA	2505	G	C5-N7-C8	-5.90	101.35	104.30
27	23SB	278	G	N3-C2-N2	-5.90	115.77	119.90
27	23SB	1363	C	C6-N1-C1'	-5.90	113.72	120.80
27	23SB	1906	C	C6-N1-C2	-5.90	117.94	120.30
27	23SA	832	A	C4-C5-N7	5.90	113.65	110.70
1	16SB	1985	U	N1-C2-N3	5.90	118.44	114.90
28	5SB	69	G	N9-C4-C5	-5.90	103.04	105.40
27	23SA	1537	G	N3-C2-N2	-5.89	115.78	119.90
27	23SA	114	C	N1-C2-O2	-5.88	115.37	118.90
27	23SA	2845	U	P-O3'-C3'	5.88	126.76	119.70
27	23SB	1790	G	N9-C4-C5	5.88	107.75	105.40
1	16SA	1660	G	N9-C4-C5	-5.88	103.05	105.40
27	23SB	87	G	C4-C5-N7	5.88	113.15	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	378	G	C4-C5-N7	5.88	113.15	110.80
27	23SB	2899	G	N3-C2-N2	-5.88	115.78	119.90
28	5SB	46	G	N3-C4-N9	-5.88	122.47	126.00
27	23SA	2521	U	C2-N1-C1'	5.88	124.75	117.70
1	16SB	1069	G	C4-N9-C1'	-5.88	118.86	126.50
27	23SB	2844	G	C6-C5-N7	5.88	133.93	130.40
1	16SA	1002	G	C6-C5-N7	-5.88	126.88	130.40
27	23SA	91	G	N9-C4-C5	5.88	107.75	105.40
1	16SB	1330	C	P-O3'-C3'	5.87	126.75	119.70
27	23SB	1329	G	C4-C5-N7	5.87	113.15	110.80
27	23SB	2207	G	C4-C5-N7	-5.87	108.45	110.80
1	16SA	1286	G	N9-C4-C5	5.87	107.75	105.40
27	23SB	1252	A	P-O3'-C3'	5.87	126.74	119.70
27	23SA	2445	A	C2-N3-C4	-5.86	107.67	110.60
27	23SB	1280	G	N9-C4-C5	5.86	107.75	105.40
27	23SB	1381	G	C8-N9-C1'	-5.86	119.38	127.00
1	16SA	1753	U	OP1-P-O3'	5.86	118.08	105.20
1	16SB	1900	G	N3-C4-N9	-5.86	122.49	126.00
1	16SA	828	C	N1-C2-O2	-5.85	115.39	118.90
27	23SB	87	G	C6-C5-N7	-5.85	126.89	130.40
1	16SB	1786	C	C2-N1-C1'	5.85	125.23	118.80
27	23SB	367	G	C6-N1-C2	-5.85	121.59	125.10
1	16SB	1206	G	C6-C5-N7	5.85	133.91	130.40
27	23SB	1494	A	O4'-C1'-N9	5.85	112.88	108.20
1	16SA	1565	G	O5'-P-OP2	-5.84	100.44	105.70
27	23SA	100	G	C4-C5-N7	5.84	113.14	110.80
27	23SA	1695	G	P-O3'-C3'	5.84	126.71	119.70
27	23SB	2328	C	C6-N1-C2	-5.84	117.96	120.30
1	16SB	1367	C	C6-N1-C2	-5.84	117.96	120.30
1	16SA	798	G	C4-C5-N7	-5.84	108.46	110.80
1	16SA	1013	C	C6-N1-C1'	-5.84	113.79	120.80
27	23SB	1532	G	N9-C4-C5	-5.84	103.06	105.40
23	PSIB	1	G	C6-C5-N7	-5.84	126.90	130.40
27	23SB	174	C	C6-N1-C2	-5.83	117.97	120.30
27	23SA	160	U	N3-C2-O2	-5.83	118.12	122.20
1	16SA	1666	C	C5-C4-N4	-5.83	116.12	120.20
27	23SA	2133	C	C2-N1-C1'	-5.83	112.39	118.80
27	23SB	73	A	N9-C4-C5	-5.83	103.47	105.80
27	23SB	624	G	C5-C6-O6	5.83	132.09	128.60
27	23SB	877	U	C2-N1-C1'	5.83	124.69	117.70
27	23SA	839	C	O5'-P-OP2	-5.82	100.46	105.70
27	23SA	279	G	C6-C5-N7	5.82	133.89	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	140	A	O4'-C1'-N9	5.82	112.86	108.20
27	23SA	1155	G	C8-N9-C4	-5.82	104.07	106.40
1	16SB	733	C	N3-C4-N4	5.82	122.07	118.00
27	23SA	835	C	C6-N1-C2	5.82	122.63	120.30
27	23SB	53	G	N1-C2-N2	5.81	121.43	116.20
1	16SA	1475	G	N3-C2-N2	-5.81	115.83	119.90
27	23SB	1975	G	O4'-C1'-N9	5.81	112.85	108.20
1	16SB	1616	G	C5-C6-O6	-5.80	125.12	128.60
1	16SA	1069	G	P-O3'-C3'	5.80	126.66	119.70
1	16SA	1472	C	C6-N1-C2	-5.80	117.98	120.30
27	23SA	424	G	N3-C2-N2	-5.80	115.84	119.90
1	16SB	959	G	C5-C6-O6	-5.80	125.12	128.60
1	16SB	1757	C	C6-N1-C1'	-5.80	113.84	120.80
27	23SA	2221	C	C6-N1-C2	-5.79	117.98	120.30
1	16SB	940	G	C4-C5-N7	5.79	113.12	110.80
1	16SA	1354	G	C6-C5-N7	5.79	133.87	130.40
27	23SA	535	G	C4-N9-C1'	5.78	134.01	126.50
27	23SB	2204	C	C5-C4-N4	-5.78	116.16	120.20
27	23SA	2126	G	C6-C5-N7	5.78	133.87	130.40
22	ASIA	1	G	N9-C4-C5	-5.77	103.09	105.40
23	PSIA	3	C	C6-N1-C2	-5.77	117.99	120.30
1	16SA	1456	U	C2-N1-C1'	5.77	124.62	117.70
27	23SA	1469	U	P-O3'-C3'	5.77	126.62	119.70
1	16SB	1206	G	C4-C5-N7	-5.77	108.49	110.80
27	23SB	432	C	C6-N1-C2	-5.77	117.99	120.30
27	23SB	1212	G	N9-C4-C5	5.76	107.70	105.40
27	23SA	928	G	N9-C4-C5	-5.76	103.10	105.40
1	16SB	1243	A	N9-C4-C5	-5.76	103.50	105.80
27	23SB	2544	G	C4-N9-C1'	5.76	133.99	126.50
28	5SB	120	G	N3-C4-N9	-5.76	122.54	126.00
1	16SA	1649	U	P-O3'-C3'	5.76	126.61	119.70
27	23SA	1748	A	O4'-C1'-N9	5.76	112.81	108.20
27	23SB	1465	G	C4-N9-C1'	-5.76	119.02	126.50
57	ASIB	72	C	N1-C2-O2	5.75	122.35	118.90
27	23SB	1381	G	C5-N7-C8	-5.75	101.42	104.30
1	16SA	846	C	N1-C2-O2	5.75	122.35	118.90
27	23SA	255	A	N9-C4-C5	5.75	108.10	105.80
1	16SB	1316	A	P-O3'-C3'	5.75	126.60	119.70
27	23SB	2128	C	C5-C4-N4	5.75	124.23	120.20
27	23SB	2887	C	C2-N1-C1'	5.75	125.13	118.80
1	16SA	1114	G	P-O3'-C3'	5.75	126.60	119.70
57	ASIB	34	G	C8-N9-C1'	-5.75	119.53	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	2317	G	C4-C5-N7	-5.75	108.50	110.80
28	5SB	69	G	C4-C5-N7	5.75	113.10	110.80
27	23SA	2361	A	P-O3'-C3'	5.75	126.59	119.70
22	ASIA	56	C	C6-N1-C2	-5.74	118.00	120.30
27	23SA	2535	C	O5'-P-OP2	-5.74	100.53	105.70
1	16SB	785	G	C4-C5-N7	-5.74	108.50	110.80
1	16SB	826	C	C5-C6-N1	5.74	123.87	121.00
27	23SB	2357	C	C2-N1-C1'	5.74	125.11	118.80
27	23SA	1577	A	O4'-C1'-N9	5.74	112.79	108.20
27	23SB	555	A	N1-C2-N3	5.74	132.17	129.30
27	23SB	903	G	N9-C4-C5	5.74	107.69	105.40
28	5SB	6	C	C2-N1-C1'	5.74	125.11	118.80
1	16SA	846	C	C2-N1-C1'	5.73	125.11	118.80
27	23SB	1975	G	C4-N9-C1'	5.73	133.95	126.50
1	16SB	1276	C	N1-C2-O2	-5.73	115.46	118.90
27	23SB	153	C	C5-C4-N4	-5.73	116.19	120.20
27	23SB	2207	G	N1-C2-N2	5.73	121.35	116.20
27	23SB	725	A	C5-N7-C8	-5.72	101.04	103.90
57	ASIB	55	U	N1-C2-O2	5.72	126.80	122.80
23	PSIB	74	C	N1-C2-O2	5.72	122.33	118.90
27	23SB	557	G	N3-C4-N9	5.72	129.43	126.00
27	23SB	1562	C	C2-N1-C1'	5.72	125.09	118.80
27	23SA	1217	G	C4-C5-N7	5.72	113.09	110.80
1	16SA	1171	G	N3-C2-N2	-5.72	115.90	119.90
27	23SA	1421	U	N1-C2-N3	-5.72	111.47	114.90
27	23SA	2173	G	C5-C6-O6	-5.72	125.17	128.60
24	ESIA	49	C	N3-C4-N4	-5.71	114.00	118.00
22	ASIA	19	G	C6-C5-N7	5.71	133.83	130.40
27	23SB	1939	C	C2-N1-C1'	5.71	125.08	118.80
28	5SB	23	G	N1-C6-O6	-5.71	116.47	119.90
1	16SB	1735	C	N1-C2-O2	5.71	122.33	118.90
27	23SA	2208	C	C6-N1-C2	-5.71	118.02	120.30
1	16SB	1434	C	N1-C2-O2	5.71	122.32	118.90
1	16SB	2085	G	C5-C6-O6	-5.71	125.18	128.60
27	23SB	1906	C	C2-N1-C1'	5.71	125.08	118.80
27	23SA	929	G	C4-N9-C1'	-5.70	119.08	126.50
22	ASIA	1	G	C4-C5-N7	5.70	113.08	110.80
27	23SB	2886	A	C8-N9-C4	-5.70	103.52	105.80
36	L14B	91	LEU	CA-CB-CG	5.70	128.41	115.30
28	5SB	23	G	N3-C4-N9	-5.70	122.58	126.00
26	TRNA	3	C	C6-N1-C1'	-5.69	113.97	120.80
27	23SA	48	A	N7-C8-N9	-5.69	110.95	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	202	G	N9-C4-C5	5.69	107.68	105.40
28	5SB	5	C	C2-N1-C1'	5.69	125.06	118.80
57	ASIB	29	G	C6-C5-N7	5.69	133.81	130.40
27	23SB	1924	G	N9-C4-C5	5.68	107.67	105.40
27	23SB	2839	A	O5'-P-OP2	-5.68	100.58	105.70
27	23SA	2287	U	C5-C4-O4	5.68	129.31	125.90
27	23SB	2216	G	P-O3'-C3'	5.68	126.52	119.70
27	23SA	1217	G	N3-C4-N9	5.68	129.41	126.00
1	16SB	1748	G	N9-C4-C5	5.68	107.67	105.40
27	23SB	2301	A	O5'-P-OP1	-5.68	100.59	105.70
27	23SA	218	A	OP1-P-O3'	5.68	117.69	105.20
27	23SB	1421	U	C2-N3-C4	5.68	130.41	127.00
27	23SB	1465	G	C6-C5-N7	5.68	133.81	130.40
27	23SA	278	G	C6-C5-N7	5.67	133.81	130.40
27	23SB	1515	G	C6-C5-N7	5.67	133.80	130.40
27	23SB	1758	C	C6-N1-C2	-5.67	118.03	120.30
27	23SA	1899	G	O4'-C1'-N9	-5.67	103.66	108.20
27	23SB	264	C	C2-N3-C4	-5.67	117.06	119.90
37	L15B	85	LEU	CA-CB-CG	5.67	128.35	115.30
27	23SA	2322	G	C8-N9-C1'	-5.67	119.63	127.00
1	16SB	814	C	C2-N1-C1'	5.67	125.04	118.80
23	PSIA	1	G	C4-N9-C1'	5.67	133.87	126.50
27	23SB	87	G	N9-C4-C5	-5.67	103.13	105.40
27	23SB	1790	G	N3-C4-N9	-5.67	122.60	126.00
27	23SA	391	G	C6-C5-N7	5.67	133.80	130.40
27	23SB	27	G	N9-C4-C5	5.67	107.67	105.40
27	23SB	628	A	P-O3'-C3'	5.66	126.50	119.70
1	16SA	1758	A	O4'-C1'-N9	-5.66	103.67	108.20
27	23SB	581	G	C4-N9-C1'	5.66	133.86	126.50
1	16SA	1626	G	C5-C6-O6	-5.66	125.20	128.60
1	16SA	1777	C	N1-C2-O2	5.66	122.30	118.90
27	23SB	392	G	C8-N9-C4	-5.66	104.14	106.40
1	16SA	706	A	P-O3'-C3'	5.66	126.49	119.70
1	16SB	1079	G	C5-C6-O6	-5.66	125.21	128.60
27	23SA	73	A	C2-N3-C4	-5.66	107.77	110.60
1	16SB	736	G	C6-N1-C2	-5.65	121.71	125.10
27	23SA	204	G	O4'-C1'-N9	5.65	112.72	108.20
1	16SB	2066	G	C6-C5-N7	-5.65	127.01	130.40
1	16SB	1905	U	O5'-P-OP2	-5.65	100.62	105.70
27	23SB	281	C	N1-C2-O2	5.65	122.29	118.90
27	23SA	1588	G	C5-C6-O6	-5.65	125.21	128.60
27	23SA	2173	G	N9-C4-C5	-5.65	103.14	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	2670	G	C4-N9-C1'	-5.64	119.16	126.50
27	23SB	1103	G	C8-N9-C1'	-5.64	119.67	127.00
23	PSIB	3	C	N1-C2-O2	5.64	122.28	118.90
27	23SA	1158	G	C4-N9-C1'	-5.64	119.17	126.50
27	23SA	1010	U	O5'-P-OP2	-5.64	100.63	105.70
27	23SA	1907	C	C5-C6-N1	5.64	123.82	121.00
1	16SB	1827	C	N1-C2-O2	5.64	122.28	118.90
1	16SA	846	C	C6-N1-C2	-5.63	118.05	120.30
1	16SB	1769	C	C6-N1-C1'	5.63	127.56	120.80
1	16SB	1928	U	N3-C2-O2	-5.63	118.26	122.20
27	23SB	2211	G	N1-C2-N2	5.63	121.27	116.20
27	23SB	2229	C	N3-C4-N4	-5.63	114.06	118.00
27	23SB	2431	C	C6-N1-C2	-5.63	118.05	120.30
1	16SB	1634	G	N3-C2-N2	-5.63	115.96	119.90
27	23SA	2184	G	N1-C6-O6	5.63	123.28	119.90
27	23SB	1227	C	C6-N1-C1'	-5.63	114.05	120.80
27	23SA	100	G	N9-C4-C5	-5.62	103.15	105.40
34	L9A	133	HIS	C-N-CD	-5.62	108.22	120.60
27	23SB	2437	A	P-O3'-C3'	5.62	126.45	119.70
27	23SB	629	G	C6-C5-N7	-5.62	127.03	130.40
27	23SB	1784	G	N1-C6-O6	-5.62	116.53	119.90
1	16SA	796	G	C6-C5-N7	5.62	133.77	130.40
1	16SA	1933	A	N7-C8-N9	5.62	116.61	113.80
1	16SB	1845	C	C2-N1-C1'	5.62	124.98	118.80
27	23SB	433	U	N1-C2-O2	5.62	126.73	122.80
28	5SB	33	C	C2-N1-C1'	5.62	124.98	118.80
27	23SB	877	U	N1-C2-O2	5.61	126.73	122.80
27	23SB	772	G	C6-C5-N7	5.61	133.77	130.40
27	23SA	1697	G	O4'-C1'-N9	-5.61	103.71	108.20
27	23SB	1496	C	C6-N1-C2	-5.61	118.06	120.30
27	23SB	1505	G	O5'-P-OP2	5.61	117.43	110.70
27	23SA	1159	A	O4'-C1'-N9	5.61	112.69	108.20
27	23SA	400	G	OP2-P-O3'	5.61	117.53	105.20
27	23SB	462	C	N3-C4-N4	-5.60	114.08	118.00
27	23SB	1532	G	C6-C5-N7	-5.60	127.04	130.40
27	23SB	295	C	N3-C4-N4	5.60	121.92	118.00
27	23SB	1089	C	C6-N1-C2	-5.60	118.06	120.30
27	23SA	539	G	O4'-C1'-N9	5.60	112.68	108.20
1	16SA	1752	G	N3-C2-N2	-5.60	115.98	119.90
27	23SA	1158	G	O4'-C1'-N9	5.60	112.68	108.20
1	16SB	1900	G	C4-C5-N7	-5.60	108.56	110.80
27	23SB	2014	G	N3-C2-N2	-5.60	115.98	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	2461	G	N1-C6-O6	-5.60	116.54	119.90
28	5SB	46	G	N9-C4-C5	5.60	107.64	105.40
27	23SA	535	G	C8-N9-C1'	-5.60	119.72	127.00
27	23SA	465	C	N3-C2-O2	-5.59	117.98	121.90
1	16SB	1319	G	C4-N9-C1'	5.59	133.77	126.50
1	16SB	1777	C	C6-N1-C2	-5.59	118.06	120.30
1	16SB	2092	G	C5-C6-O6	-5.59	125.24	128.60
27	23SB	1809	U	C5-C4-O4	-5.59	122.54	125.90
27	23SB	772	G	N1-C6-O6	-5.59	116.54	119.90
27	23SA	2808	G	N3-C4-N9	-5.59	122.64	126.00
27	23SA	2906	G	O4'-C1'-N9	5.59	112.67	108.20
27	23SB	2886	A	N1-C2-N3	5.59	132.10	129.30
1	16SB	1769	C	N3-C2-O2	-5.59	117.99	121.90
1	16SA	1177	G	N3-C4-N9	5.59	129.35	126.00
27	23SA	2533	A	C8-N9-C1'	-5.59	117.64	127.70
1	16SB	1224	G	N3-C4-N9	5.59	129.35	126.00
27	23SA	2027	G	C5-N7-C8	-5.59	101.51	104.30
27	23SB	360	C	C2-N1-C1'	5.59	124.94	118.80
27	23SB	1084	G	N3-C4-N9	-5.59	122.65	126.00
1	16SA	1085	G	C6-C5-N7	5.58	133.75	130.40
12	S12B	44	LYS	C-N-CD	-5.58	108.32	120.60
24	ESIA	28	G	C6-C5-N7	-5.58	127.05	130.40
27	23SA	1833	G	O4'-C1'-N9	-5.58	103.74	108.20
1	16SA	2125	A	C6-C5-N7	-5.58	128.40	132.30
27	23SA	1608	A	P-O3'-C3'	5.58	126.39	119.70
27	23SB	1796	A	OP2-P-O3'	5.58	117.47	105.20
27	23SB	2742	U	O4'-C1'-N1	5.58	112.66	108.20
28	5SB	108	G	N3-C2-N2	-5.58	116.00	119.90
24	ESIA	6	G	C6-N1-C2	-5.57	121.76	125.10
27	23SB	27	G	N3-C2-N2	-5.57	116.00	119.90
27	23SB	1818	A	O5'-P-OP2	-5.57	100.68	105.70
24	ESIA	65	G	C6-C5-N7	-5.57	127.06	130.40
27	23SA	2085	A	P-O3'-C3'	5.57	126.38	119.70
1	16SA	2125	A	N1-C6-N6	5.57	121.94	118.60
27	23SA	555	A	P-O3'-C3'	5.57	126.38	119.70
1	16SB	654	A	O5'-P-OP1	-5.57	100.69	105.70
27	23SB	465	C	N1-C2-O2	5.57	122.24	118.90
1	16SA	1402	G	O5'-P-OP2	-5.56	100.69	105.70
1	16SA	2098	G	N1-C6-O6	-5.56	116.56	119.90
27	23SA	2180	G	N3-C2-N2	-5.56	116.00	119.90
27	23SA	2385	G	N3-C2-N2	-5.56	116.00	119.90
27	23SB	2293	A	O4'-C1'-N9	5.56	112.65	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SA	742	C	N1-C2-O2	-5.56	115.56	118.90
1	16SB	1845	C	C6-N1-C2	-5.56	118.08	120.30
23	PSIB	10	G	N1-C6-O6	5.56	123.24	119.90
27	23SB	1097	C	C2-N1-C1'	5.56	124.92	118.80
1	16SB	1887	C	C6-N1-C2	-5.55	118.08	120.30
27	23SB	296	C	C2-N1-C1'	5.55	124.91	118.80
27	23SB	1139	G	N3-C4-N9	-5.55	122.67	126.00
27	23SB	2322	G	C8-N9-C1'	-5.55	119.78	127.00
27	23SA	2177	G	N9-C4-C5	-5.55	103.18	105.40
27	23SA	2728	A	N7-C8-N9	5.55	116.58	113.80
1	16SB	785	G	N1-C2-N2	5.55	121.20	116.20
27	23SB	2442	C	N1-C2-O2	-5.55	115.57	118.90
27	23SA	2184	G	N9-C4-C5	-5.55	103.18	105.40
27	23SB	1703	G	P-O3'-C3'	5.55	126.36	119.70
27	23SB	2124	U	C2-N1-C1'	5.55	124.36	117.70
27	23SB	2730	G	C6-C5-N7	-5.55	127.07	130.40
1	16SA	1536	A	P-O3'-C3'	5.55	126.36	119.70
27	23SA	1110	G	N9-C4-C5	5.55	107.62	105.40
27	23SB	760	G	C6-N1-C2	-5.54	121.78	125.10
1	16SA	796	G	N1-C2-N2	5.54	121.19	116.20
1	16SB	1536	A	P-O3'-C3'	5.54	126.35	119.70
1	16SB	1603	C	C6-N1-C2	-5.54	118.08	120.30
27	23SB	769	C	C6-N1-C2	-5.54	118.08	120.30
1	16SA	1221	G	C6-N1-C2	-5.54	121.78	125.10
22	ASIA	74	C	O4'-C1'-N1	5.54	112.63	108.20
27	23SA	2361	A	OP2-P-O3'	5.54	117.38	105.20
28	5SA	67	C	C5-C4-N4	5.54	124.08	120.20
1	16SB	1571	C	C6-N1-C2	-5.54	118.09	120.30
24	ESIB	21	A	C2-N3-C4	5.54	113.37	110.60
27	23SB	431	U	P-O3'-C3'	5.53	126.34	119.70
1	16SA	776	C	C2-N1-C1'	5.53	124.88	118.80
27	23SA	1975	G	N7-C8-N9	5.53	115.86	113.10
1	16SB	1771	G	N3-C2-N2	-5.53	116.03	119.90
1	16SB	1949	C	N1-C2-O2	5.53	122.22	118.90
28	5SA	21	G	C5-N7-C8	-5.53	101.54	104.30
1	16SB	1297	G	C6-C5-N7	5.53	133.72	130.40
1	16SB	2094	G	N3-C2-N2	-5.53	116.03	119.90
27	23SA	1975	G	C8-N9-C1'	-5.53	119.82	127.00
27	23SB	2890	G	C4-C5-N7	-5.52	108.59	110.80
27	23SA	1069	A	C2-N3-C4	-5.52	107.84	110.60
1	16SB	2092	G	N3-C2-N2	-5.52	116.03	119.90
28	5SB	68	A	C8-N9-C1'	-5.52	117.76	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	2278	C	N1-C2-O2	-5.52	115.59	118.90
1	16SB	1562	G	C6-N1-C2	-5.52	121.79	125.10
28	5SB	12	C	C2-N1-C1'	5.52	124.87	118.80
27	23SA	1381	G	N3-C4-N9	5.52	129.31	126.00
24	ESIA	3	C	C5-C6-N1	5.52	123.76	121.00
1	16SA	702	U	C5-C4-O4	-5.51	122.59	125.90
27	23SA	1163	G	C6-C5-N7	5.51	133.71	130.40
27	23SA	1562	C	C6-N1-C2	-5.51	118.09	120.30
27	23SB	2540	G	N3-C4-N9	-5.51	122.69	126.00
1	16SA	858	C	C2-N1-C1'	5.51	124.86	118.80
27	23SA	2647	A	O5'-P-OP2	5.51	117.31	110.70
1	16SA	907	G	C4-N9-C1'	5.51	133.66	126.50
1	16SB	809	C	C6-N1-C2	-5.50	118.10	120.30
27	23SA	2490	C	C5-C6-N1	5.50	123.75	121.00
1	16SB	2007	G	N1-C6-O6	-5.50	116.60	119.90
1	16SB	1786	C	N1-C2-O2	5.50	122.20	118.90
27	23SB	2184	G	C6-C5-N7	-5.50	127.10	130.40
27	23SB	2741	A	P-O3'-C3'	5.50	126.30	119.70
51	L30B	53	LEU	CA-CB-CG	5.50	127.95	115.30
1	16SA	2121	UR3	P-O3'-C3'	5.50	126.30	119.70
47	L25A	59	LEU	CA-CB-CG	5.50	127.95	115.30
1	16SA	785	G	N9-C4-C5	-5.50	103.20	105.40
27	23SB	1548	C	O5'-P-OP2	-5.50	100.75	105.70
1	16SA	798	G	N1-C6-O6	5.49	123.19	119.90
1	16SB	1536	A	OP2-P-O3'	5.49	117.28	105.20
27	23SB	576	G	N3-C2-N2	-5.49	116.06	119.90
1	16SB	1912	A	P-O3'-C3'	5.49	126.29	119.70
22	ASIA	74	C	C2-N1-C1'	5.48	124.83	118.80
27	23SB	1545	A	O4'-C1'-N9	5.48	112.58	108.20
1	16SA	677	G	P-O3'-C3'	5.48	126.28	119.70
25	MRNA	56	U	N1-C2-O2	5.48	126.63	122.80
27	23SA	2130	C	C2-N1-C1'	-5.48	112.78	118.80
1	16SA	777	C	C5-C4-N4	-5.47	116.37	120.20
24	ESIA	28	G	C5-C6-N1	-5.47	108.76	111.50
27	23SB	975	G	N3-C2-N2	-5.47	116.07	119.90
27	23SA	206	A	OP1-P-O3'	-5.47	93.16	105.20
1	16SB	1104	G	N1-C6-O6	-5.47	116.62	119.90
1	16SB	1756	C	C6-N1-C2	-5.47	118.11	120.30
1	16SA	1939	G	C2-N3-C4	5.47	114.64	111.90
27	23SA	809	G	C6-C5-N7	5.47	133.68	130.40
27	23SA	1210	C	N1-C2-O2	-5.47	115.62	118.90
1	16SB	1002	G	C4-C5-N7	5.47	112.99	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1065	G	C4-C5-N7	-5.47	108.61	110.80
1	16SA	1724	C	C6-N1-C2	-5.47	118.11	120.30
27	23SA	42	G	N1-C6-O6	-5.47	116.62	119.90
27	23SB	629	G	N9-C4-C5	-5.47	103.21	105.40
1	16SA	1616	G	C4-N9-C1'	5.47	133.61	126.50
27	23SA	2180	G	C4-C5-N7	-5.47	108.61	110.80
1	16SA	1013	C	N1-C2-O2	5.46	122.18	118.90
1	16SA	1621	G	C6-N1-C2	-5.46	121.82	125.10
27	23SA	1021	G	C4-N9-C1'	-5.46	119.40	126.50
23	PSIB	1	G	N9-C4-C5	-5.46	103.22	105.40
27	23SB	1196	C	N1-C2-O2	-5.46	115.62	118.90
27	23SB	1381	G	C6-C5-N7	-5.46	127.12	130.40
27	23SA	699	C	C5-C6-N1	5.46	123.73	121.00
27	23SA	2736	U	N3-C4-O4	5.46	123.22	119.40
23	PSIB	10	G	O5'-P-OP1	-5.46	100.79	105.70
27	23SB	1217	G	C5-C6-O6	-5.46	125.33	128.60
27	23SA	221	C	C2-N1-C1'	5.46	124.80	118.80
1	16SA	1753	U	P-O3'-C3'	5.46	126.25	119.70
1	16SB	1781	C	C5-C6-N1	5.45	123.73	121.00
27	23SB	1239	G	N9-C4-C5	-5.45	103.22	105.40
27	23SA	1762	C	C6-N1-C2	-5.45	118.12	120.30
1	16SB	1467	G	N1-C6-O6	-5.45	116.63	119.90
27	23SB	2231	G	OP2-P-O3'	5.45	117.19	105.20
27	23SB	1766	G	C4-N9-C1'	5.45	133.58	126.50
27	23SA	648	A	C2-N3-C4	-5.45	107.88	110.60
1	16SA	2080	G	C6-C5-N7	5.44	133.66	130.40
27	23SA	1765	G	N1-C6-O6	5.44	123.17	119.90
27	23SA	2533	A	N9-C1'-C2'	-5.44	106.01	112.00
27	23SB	319	A	P-O3'-C3'	5.44	126.23	119.70
27	23SB	1637	C	C6-N1-C1'	-5.44	114.27	120.80
27	23SB	2570	U	C5-C4-O4	-5.44	122.64	125.90
1	16SA	871	G	C4-C5-N7	-5.44	108.62	110.80
1	16SA	1346	C	C6-N1-C2	-5.44	118.12	120.30
27	23SB	465	C	N3-C2-O2	-5.44	118.09	121.90
27	23SA	465	C	N1-C2-O2	5.43	122.16	118.90
1	16SA	747	G	C4-N9-C1'	5.43	133.56	126.50
27	23SA	1155	G	N3-C4-N9	-5.43	122.74	126.00
27	23SB	140	A	N7-C8-N9	5.43	116.52	113.80
27	23SA	1358	G	N9-C4-C5	-5.43	103.23	105.40
1	16SB	1562	G	N3-C4-N9	-5.43	122.74	126.00
27	23SB	1154	G	N3-C4-N9	5.43	129.26	126.00
1	16SA	1777	C	N3-C2-O2	-5.43	118.10	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	140	A	C5-N7-C8	-5.43	101.19	103.90
27	23SB	2750	A	C8-N9-C4	-5.43	103.63	105.80
24	ESIA	6	G	N9-C4-C5	5.43	107.57	105.40
1	16SA	1330	C	OP2-P-O3'	5.42	117.14	105.20
27	23SB	575	G	N1-C6-O6	5.42	123.16	119.90
27	23SA	1553	C	C2-N1-C1'	5.42	124.77	118.80
27	23SA	2869	C	N3-C4-C5	-5.42	119.73	121.90
27	23SB	2750	A	N7-C8-N9	5.42	116.51	113.80
27	23SB	195	G	OP2-P-O3'	5.42	117.12	105.20
27	23SB	1972	C	C6-N1-C2	-5.42	118.13	120.30
27	23SA	1809	U	C5-C4-O4	-5.42	122.65	125.90
27	23SA	1924	G	N1-C2-N2	5.42	121.08	116.20
27	23SA	2505	G	C8-N9-C1'	-5.42	119.96	127.00
27	23SA	1665	A	O4'-C1'-N9	5.41	112.53	108.20
27	23SB	1765	G	N3-C2-N2	-5.41	116.11	119.90
27	23SB	2742	U	C2-N1-C1'	5.41	124.20	117.70
1	16SB	1769	C	C5-C4-N4	5.41	123.99	120.20
1	16SB	1949	C	N3-C2-O2	-5.41	118.11	121.90
27	23SA	2154	C	N1-C2-O2	5.41	122.14	118.90
28	5SA	21	G	O4'-C1'-N9	-5.41	103.87	108.20
27	23SA	2911	G	C6-C5-N7	5.41	133.64	130.40
27	23SA	1238	G	O4'-C1'-N9	-5.41	103.88	108.20
25	MRNB	51	U	N3-C4-O4	-5.41	115.62	119.40
27	23SB	444	C	C6-N1-C1'	-5.41	114.31	120.80
1	16SA	1855	C	N1-C2-O2	5.40	122.14	118.90
9	S9B	19	LEU	CB-CG-CD2	-5.40	101.82	111.00
27	23SA	1058	A	O5'-P-OP2	-5.40	100.84	105.70
1	16SB	1003	G	C5-C6-O6	5.40	131.84	128.60
1	16SB	806	G	C6-C5-N7	5.40	133.64	130.40
1	16SB	2066	G	N9-C4-C5	-5.40	103.24	105.40
1	16SA	1598	A	O4'-C1'-N9	-5.39	103.88	108.20
1	16SA	1622	C	C6-N1-C2	-5.39	118.14	120.30
1	16SB	1562	G	N1-C2-N2	5.39	121.06	116.20
1	16SA	846	C	N3-C2-O2	-5.39	118.12	121.90
27	23SA	2191	G	N3-C4-N9	-5.39	122.77	126.00
1	16SB	1741	C	N1-C2-O2	-5.39	115.67	118.90
27	23SB	2162	C	C2-N1-C1'	5.39	124.73	118.80
1	16SA	796	G	C8-N9-C1'	5.39	134.01	127.00
27	23SB	2278	C	N1-C2-O2	-5.39	115.67	118.90
1	16SA	1300	G	C6-C5-N7	-5.39	127.17	130.40
27	23SA	432	C	P-O3'-C3'	5.39	126.16	119.70
27	23SA	2909	U	N3-C4-O4	5.38	123.17	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SB	1282	A	O4'-C1'-N9	5.38	112.51	108.20
27	23SA	1753	G	N9-C4-C5	-5.38	103.25	105.40
1	16SB	777	C	C5-C6-N1	5.38	123.69	121.00
27	23SA	2126	G	N3-C4-N9	-5.38	122.77	126.00
27	23SB	586	G	N1-C6-O6	5.38	123.13	119.90
27	23SB	2162	C	N1-C2-O2	5.38	122.13	118.90
27	23SB	2899	G	C6-N1-C2	-5.38	121.87	125.10
27	23SA	2752	G	N9-C4-C5	5.38	107.55	105.40
1	16SB	1434	C	N3-C2-O2	-5.38	118.14	121.90
27	23SB	2128	C	N3-C2-O2	-5.38	118.14	121.90
27	23SB	1190	U	N1-C2-O2	5.38	126.56	122.80
27	23SA	1820	A	N7-C8-N9	5.37	116.49	113.80
1	16SB	1554	C	C2-N1-C1'	-5.37	112.89	118.80
1	16SA	1252	C	N3-C4-N4	5.37	121.76	118.00
1	16SA	1352	U	O4'-C1'-N1	-5.37	103.90	108.20
27	23SA	1258	A	P-O3'-C3'	5.37	126.14	119.70
27	23SB	1784	G	C4-C5-N7	-5.37	108.65	110.80
27	23SA	766	G	O5'-P-OP2	-5.37	100.87	105.70
1	16SB	1499	G	N3-C2-N2	-5.36	116.15	119.90
1	16SB	2013	G	C6-C5-N7	-5.36	127.18	130.40
1	16SA	786	G	N3-C2-N2	-5.36	116.15	119.90
1	16SB	1781	C	C2-N1-C1'	5.36	124.70	118.80
27	23SB	680	A	OP2-P-O3'	5.36	116.99	105.20
27	23SA	750	G	O4'-C1'-N9	-5.36	103.91	108.20
1	16SB	1079	G	C4-C5-N7	5.36	112.94	110.80
1	16SA	2098	G	C5-C6-O6	5.36	131.81	128.60
27	23SB	785	C	C6-N1-C2	-5.36	118.16	120.30
27	23SA	2483	G	C6-C5-N7	-5.35	127.19	130.40
27	23SA	2177	G	C4-N9-C1'	5.35	133.46	126.50
27	23SB	2127	U	C4-C5-C6	5.35	122.91	119.70
27	23SA	4	C	C6-N1-C2	-5.35	118.16	120.30
27	23SA	992	A	P-O3'-C3'	5.35	126.12	119.70
27	23SB	11	G	O4'-C1'-N9	5.35	112.48	108.20
27	23SB	2005	G	C4-C5-N7	5.35	112.94	110.80
27	23SB	2540	G	N9-C4-C5	5.35	107.54	105.40
1	16SA	1867	U	C6-N1-C1'	-5.35	113.72	121.20
27	23SB	624	G	N1-C6-O6	-5.35	116.69	119.90
27	23SB	1220	G	P-O3'-C3'	5.35	126.11	119.70
27	23SA	50	G	N1-C6-O6	-5.34	116.69	119.90
27	23SB	1574	G	N1-C6-O6	-5.34	116.69	119.90
27	23SA	929	G	C6-C5-N7	5.34	133.60	130.40
27	23SB	1391	A	O4'-C1'-N9	5.34	112.47	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	140	A	C5-N7-C8	-5.34	101.23	103.90
27	23SA	1155	G	N1-C2-N2	5.34	121.00	116.20
1	16SA	777	C	C6-N1-C1'	-5.34	114.40	120.80
27	23SA	2421	U	C6-N1-C1'	-5.34	113.73	121.20
27	23SB	1103	G	C4-N9-C1'	5.34	133.44	126.50
27	23SA	2188	C	O5'-P-OP2	-5.33	100.90	105.70
27	23SB	2328	C	N1-C2-O2	5.33	122.10	118.90
27	23SA	909	U	N3-C2-O2	-5.33	118.47	122.20
27	23SA	2808	G	N9-C4-C5	5.33	107.53	105.40
9	S9B	19	LEU	CA-CB-CG	5.33	127.56	115.30
27	23SB	766	G	O5'-P-OP1	-5.33	100.90	105.70
27	23SA	1765	G	C6-C5-N7	-5.33	127.20	130.40
27	23SA	2778	G	C4-N9-C1'	5.33	133.42	126.50
1	16SB	1495	A	P-O3'-C3'	5.33	126.09	119.70
27	23SB	2890	G	N3-C4-N9	-5.33	122.81	126.00
23	PSIA	68	C	C2-N1-C1'	-5.32	112.95	118.80
1	16SB	1616	G	C5-N7-C8	-5.32	101.64	104.30
28	5SB	18	G	N3-C4-N9	-5.32	122.81	126.00
1	16SA	1752	G	N9-C4-C5	5.32	107.53	105.40
27	23SA	840	C	C6-N1-C2	5.32	122.43	120.30
27	23SB	2361	A	C8-N9-C4	5.32	107.93	105.80
1	16SA	815	C	N3-C4-N4	5.31	121.72	118.00
27	23SB	2538	G	C4-C5-N7	-5.31	108.67	110.80
27	23SA	2599	U	C2-N1-C1'	5.31	124.07	117.70
27	23SA	373	G	N9-C4-C5	5.31	107.52	105.40
1	16SB	1505	C	N3-C2-O2	-5.31	118.19	121.90
27	23SA	1702	A	P-O3'-C3'	5.30	126.06	119.70
27	23SA	2752	G	C4-C5-N7	-5.30	108.68	110.80
1	16SB	1735	C	N3-C2-O2	-5.30	118.19	121.90
27	23SB	358	G	C6-C5-N7	-5.30	127.22	130.40
27	23SA	2805	C	O4'-C1'-N1	5.30	112.44	108.20
27	23SA	92	C	N1-C2-O2	-5.30	115.72	118.90
27	23SA	100	G	C5-C6-N1	5.30	114.15	111.50
27	23SA	1703	G	C8-N9-C4	-5.30	104.28	106.40
27	23SB	1554	C	C2-N1-C1'	-5.30	112.97	118.80
27	23SA	276	C	C5-C6-N1	5.30	123.65	121.00
27	23SA	530	A	P-O3'-C3'	5.30	126.06	119.70
27	23SA	1478	G	C4-N9-C1'	5.30	133.39	126.50
27	23SB	2792	A	P-O3'-C3'	5.30	126.06	119.70
27	23SA	929	G	N1-C2-N2	5.29	120.97	116.20
27	23SA	1492	G	C4-C5-N7	-5.29	108.68	110.80
27	23SA	2333	G	N7-C8-N9	5.29	115.75	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	PSIB	74	C	N3-C2-O2	-5.29	118.19	121.90
1	16SA	1621	G	N3-C4-N9	-5.29	122.83	126.00
27	23SB	672	C	O4'-C1'-N1	5.29	112.43	108.20
27	23SB	2855	G	C6-C5-N7	5.29	133.57	130.40
27	23SB	1026	G	C6-C5-N7	5.29	133.57	130.40
1	16SA	1438	G	N3-C4-N9	-5.29	122.83	126.00
27	23SA	1363	C	C6-N1-C1'	-5.29	114.45	120.80
24	ESIB	29	G	C5-C6-O6	-5.29	125.43	128.60
27	23SB	1820	A	C6-C5-N7	-5.29	128.60	132.30
27	23SB	2874	G	N3-C4-N9	5.29	129.17	126.00
27	23SA	2126	G	N3-C4-C5	5.29	131.24	128.60
27	23SB	992	A	C6-C5-N7	-5.29	128.60	132.30
1	16SA	1771	G	C6-C5-N7	5.28	133.57	130.40
27	23SA	1252	A	C2-N3-C4	-5.28	107.96	110.60
27	23SA	2333	G	C8-N9-C4	-5.28	104.29	106.40
27	23SB	2344	G	N9-C4-C5	-5.28	103.29	105.40
27	23SA	1703	G	N3-C4-C5	-5.28	125.96	128.60
1	16SA	1827	C	P-O3'-C3'	5.28	126.04	119.70
47	L25A	5	LEU	CA-CB-CG	5.28	127.44	115.30
1	16SB	784	G	N3-C4-N9	-5.28	122.83	126.00
1	16SB	788	G	N1-C6-O6	-5.28	116.73	119.90
27	23SB	1551	C	C6-N1-C1'	-5.28	114.46	120.80
27	23SA	1155	G	C4-C5-N7	-5.28	108.69	110.80
28	5SA	21	G	C8-N9-C1'	-5.28	120.14	127.00
1	16SB	1518	G	C6-C5-N7	5.28	133.56	130.40
23	PSIB	1	G	C4-C5-N7	5.28	112.91	110.80
1	16SA	1477	G	C6-N1-C2	-5.27	121.94	125.10
22	ASIA	56	C	N3-C4-N4	-5.27	114.31	118.00
27	23SA	1784	G	C6-C5-N7	5.27	133.56	130.40
27	23SB	1973	G	C4-N9-C1'	5.27	133.35	126.50
27	23SA	2230	G	N3-C4-C5	-5.27	125.97	128.60
1	16SA	1929	U	C6-N1-C1'	-5.27	113.83	121.20
27	23SA	267	C	C5-C4-N4	5.27	123.89	120.20
27	23SA	1975	G	C4-C5-N7	5.27	112.91	110.80
22	ASIA	68	C	O4'-C1'-N1	5.27	112.41	108.20
27	23SB	1869	G	N3-C4-N9	5.27	129.16	126.00
28	5SB	6	C	N3-C4-N4	-5.27	114.31	118.00
27	23SA	823	A	C2-N3-C4	-5.26	107.97	110.60
27	23SB	73	A	C2-N3-C4	-5.26	107.97	110.60
27	23SB	1434	G	N3-C2-N2	-5.26	116.22	119.90
1	16SA	837	G	N9-C4-C5	-5.26	103.30	105.40
27	23SA	2197	U	O5'-P-OP1	-5.26	100.97	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	ASIA	56	C	C5-C4-N4	5.26	123.88	120.20
27	23SB	1975	G	N7-C8-N9	5.26	115.73	113.10
27	23SA	555	A	C2-N3-C4	-5.25	107.97	110.60
27	23SA	278	G	N1-C6-O6	-5.25	116.75	119.90
27	23SA	1765	G	C5-C6-O6	-5.25	125.45	128.60
27	23SB	624	G	N9-C4-C5	5.25	107.50	105.40
27	23SB	757	C	C6-N1-C1'	-5.25	114.50	120.80
27	23SB	946	C	O4'-C1'-N1	5.25	112.40	108.20
27	23SB	1229	C	N1-C2-O2	5.25	122.05	118.90
27	23SA	295	C	C6-N1-C2	-5.25	118.20	120.30
27	23SA	639	U	C2-N1-C1'	5.25	124.00	117.70
27	23SA	2180	G	C8-N9-C1'	5.25	133.83	127.00
27	23SA	2727	U	P-O3'-C3'	5.25	126.00	119.70
27	23SA	2165	C	C2-N1-C1'	-5.25	113.03	118.80
1	16SA	1161	A	O4'-C1'-N9	5.25	112.40	108.20
27	23SA	204	G	N1-C6-O6	-5.25	116.75	119.90
27	23SA	1258	A	C3'-C2'-C1'	5.25	105.70	101.50
27	23SB	2617	A	N1-C6-N6	5.25	121.75	118.60
1	16SB	1105	G	C4-C5-N7	5.24	112.90	110.80
1	16SB	1252	C	C6-N1-C1'	-5.24	114.51	120.80
27	23SB	1973	G	O4'-C1'-N9	-5.24	104.01	108.20
27	23SB	2057	G	C8-N9-C4	5.24	108.50	106.40
27	23SA	1252	A	N1-C2-N3	5.24	131.92	129.30
27	23SA	1363	C	C5-C4-N4	-5.23	116.54	120.20
1	16SA	693	C	C2-N1-C1'	-5.23	113.05	118.80
27	23SA	757	C	C2-N1-C1'	5.23	124.55	118.80
1	16SB	1643	C	N1-C2-N3	5.23	122.86	119.20
27	23SB	586	G	N3-C2-N2	-5.23	116.24	119.90
27	23SB	1973	G	C8-N9-C1'	-5.23	120.20	127.00
27	23SA	2231	G	C8-N9-C1'	-5.23	120.20	127.00
27	23SB	593	U	C5-C4-O4	-5.23	122.76	125.90
27	23SA	1703	G	C4-N9-C1'	5.23	133.30	126.50
27	23SA	2461	G	N3-C2-N2	-5.23	116.24	119.90
27	23SA	280	G	C5-C6-N1	-5.22	108.89	111.50
27	23SA	348	G	C4-C5-N7	5.22	112.89	110.80
27	23SA	1158	G	C8-N9-C1'	5.22	133.79	127.00
27	23SB	2235	G	N1-C6-O6	5.22	123.03	119.90
1	16SA	1415	G	N3-C2-N2	-5.22	116.24	119.90
1	16SA	1754	U	N3-C2-O2	-5.22	118.54	122.20
27	23SB	472	C	C6-N1-C2	5.22	122.39	120.30
1	16SB	1677	U	P-O3'-C3'	5.22	125.97	119.70
27	23SB	217	A	N7-C8-N9	5.22	116.41	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	2730	G	C4-C5-N7	5.22	112.89	110.80
1	16SB	1577	G	N3-C2-N2	-5.22	116.25	119.90
27	23SA	1445	U	N1-C2-O2	5.22	126.45	122.80
27	23SA	2845	U	C6-N1-C1'	-5.22	113.90	121.20
1	16SB	680	C	N1-C2-O2	-5.22	115.77	118.90
27	23SB	1231	G	N1-C2-N2	5.21	120.89	116.20
27	23SB	1266	C	C6-N1-C2	-5.21	118.21	120.30
27	23SB	1465	G	N3-C4-N9	-5.21	122.87	126.00
1	16SA	777	C	C2-N1-C1'	5.21	124.53	118.80
1	16SA	1621	G	C6-C5-N7	5.21	133.53	130.40
1	16SB	1002	G	C6-C5-N7	-5.21	127.27	130.40
27	23SA	725	A	C5-C6-N1	-5.21	115.09	117.70
1	16SB	1257	G	N9-C4-C5	5.21	107.48	105.40
27	23SB	877	U	N3-C2-O2	-5.21	118.55	122.20
27	23SA	685	G	N3-C4-N9	-5.21	122.88	126.00
27	23SB	832	A	N1-C6-N6	5.21	121.72	118.60
27	23SB	1097	C	C6-N1-C1'	-5.21	114.56	120.80
27	23SB	1190	U	C6-N1-C1'	-5.21	113.91	121.20
1	16SA	716	G	C8-N9-C1'	-5.20	120.24	127.00
1	16SA	1274	C	C6-N1-C2	-5.20	118.22	120.30
27	23SB	2061	C	C6-N1-C2	-5.20	118.22	120.30
27	23SA	2606	C	C6-N1-C2	-5.20	118.22	120.30
27	23SB	1465	G	N3-C2-N2	-5.20	116.26	119.90
27	23SB	2425	G	C6-N1-C2	-5.20	121.98	125.10
1	16SA	974	G	N3-C2-N2	-5.20	116.26	119.90
1	16SA	955	C	C5-C6-N1	5.20	123.60	121.00
27	23SB	672	C	OP1-P-O3'	5.20	116.63	105.20
1	16SB	830	C	C6-N1-C2	-5.20	118.22	120.30
1	16SB	1330	C	OP2-P-O3'	5.20	116.63	105.20
27	23SB	1509	G	N9-C4-C5	5.20	107.48	105.40
27	23SB	2524	G	C6-C5-N7	5.20	133.52	130.40
27	23SA	833	A	O4'-C1'-N9	5.19	112.35	108.20
27	23SA	1744	C	C6-N1-C1'	-5.19	114.57	120.80
27	23SB	1381	G	N7-C8-N9	5.19	115.70	113.10
1	16SA	1002	G	N9-C4-C5	-5.19	103.32	105.40
27	23SA	1584	U	N3-C2-O2	-5.19	118.57	122.20
23	PSIB	10	G	C5-C6-O6	-5.19	125.49	128.60
27	23SB	2207	G	C6-N1-C2	-5.19	121.99	125.10
27	23SB	2627	C	O5'-P-OP1	-5.19	101.03	105.70
27	23SB	1381	G	C4-C5-N7	5.19	112.88	110.80
26	TRNA	65	G	P-O3'-C3'	5.19	125.92	119.70
27	23SB	1162	G	C6-C5-N7	5.19	133.51	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1820	A	N7-C8-N9	5.19	116.39	113.80
1	16SA	1899	G	C8-N9-C1'	-5.19	120.26	127.00
27	23SB	199	C	C6-N1-C2	-5.18	118.23	120.30
1	16SA	1311	G	C6-C5-N7	5.18	133.51	130.40
27	23SA	952	C	C6-N1-C1'	-5.18	114.58	120.80
27	23SA	1465	G	C8-N9-C1'	5.18	133.74	127.00
27	23SA	1562	C	C5-C6-N1	5.18	123.59	121.00
27	23SA	929	G	N3-C4-C5	5.18	131.19	128.60
27	23SA	1425	C	O5'-P-OP2	-5.18	101.04	105.70
1	16SB	1769	C	C2-N1-C1'	-5.18	113.10	118.80
27	23SB	1608	A	P-O3'-C3'	5.18	125.92	119.70
27	23SA	1583	G	N3-C4-C5	-5.18	126.01	128.60
1	16SB	814	C	N1-C2-O2	5.18	122.01	118.90
27	23SB	380	G	N1-C2-N2	5.18	120.86	116.20
27	23SB	1955	G	P-O3'-C3'	5.17	125.91	119.70
27	23SA	2173	G	C8-N9-C1'	-5.17	120.28	127.00
1	16SB	1643	C	N3-C2-O2	-5.17	118.28	121.90
27	23SB	61	C	N1-C2-O2	-5.17	115.80	118.90
27	23SA	941	C	N3-C2-O2	-5.17	118.28	121.90
1	16SB	1773	C	P-O3'-C3'	5.17	125.91	119.70
27	23SB	992	A	C4-N9-C1'	5.17	135.61	126.30
1	16SA	1616	G	C8-N9-C1'	-5.17	120.28	127.00
27	23SA	1445	U	C2-N1-C1'	5.17	123.90	117.70
1	16SB	788	G	C6-C5-N7	5.17	133.50	130.40
23	PSIA	72	C	O4'-C1'-N1	5.17	112.33	108.20
27	23SB	163	G	N3-C4-N9	5.17	129.10	126.00
1	16SA	1215	C	C6-N1-C2	5.16	122.36	120.30
1	16SA	2073	G	N3-C4-C5	-5.16	126.02	128.60
27	23SB	581	G	C6-C5-N7	-5.16	127.30	130.40
24	ESIA	20	U	N3-C2-O2	-5.16	118.59	122.20
27	23SA	348	G	N9-C4-C5	-5.16	103.34	105.40
27	23SA	667	C	C6-N1-C2	-5.16	118.23	120.30
27	23SB	629	G	C8-N9-C1'	-5.16	120.29	127.00
27	23SB	2355	G	C4-C5-N7	-5.16	108.74	110.80
27	23SA	42	G	C6-C5-N7	5.16	133.50	130.40
1	16SB	1105	G	C6-C5-N7	-5.16	127.31	130.40
27	23SB	2229	C	C5-C4-N4	5.16	123.81	120.20
27	23SB	2318	G	N1-C2-N2	5.16	120.84	116.20
27	23SA	1101	C	C5-C6-N1	5.16	123.58	121.00
27	23SA	2533	A	C5-N7-C8	-5.16	101.32	103.90
1	16SB	1769	C	N3-C4-N4	-5.16	114.39	118.00
27	23SB	462	C	C5-C4-N4	5.16	123.81	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	295	C	C5-C4-N4	-5.15	116.59	120.20
27	23SA	1070	G	C8-N9-C4	-5.15	104.34	106.40
27	23SA	877	U	C6-N1-C1'	-5.15	113.99	121.20
27	23SA	1462	G	C5-C6-O6	-5.15	125.51	128.60
19	S19A	39	THR	O-C-N	-5.15	114.47	122.70
27	23SA	928	G	N1-C6-O6	5.14	122.98	119.90
1	16SA	1206	G	C6-C5-N7	5.14	133.49	130.40
27	23SB	2742	U	C6-N1-C1'	-5.14	114.00	121.20
1	16SB	878	C	N1-C2-O2	-5.14	115.82	118.90
22	ASIA	15	G	O5'-P-OP2	-5.14	101.08	105.70
24	ESIA	6	G	C4-C5-N7	-5.14	108.75	110.80
1	16SB	1971	C	N3-C4-N4	-5.14	114.40	118.00
1	16SA	1256	G	N3-C2-N2	-5.14	116.31	119.90
1	16SA	1300	G	C4-C5-N7	5.14	112.86	110.80
27	23SA	782	G	N3-C4-N9	5.14	129.08	126.00
1	16SA	1114	G	C4-N9-C1'	5.13	133.18	126.50
1	16SB	1785	A	OP2-P-O3'	5.13	116.50	105.20
3	S3B	94	LEU	CA-CB-CG	5.13	127.11	115.30
27	23SB	1525	G	C4-N9-C1'	5.13	133.17	126.50
1	16SA	1291	G	O4'-C1'-N9	5.13	112.30	108.20
28	5SB	33	C	N3-C2-O2	-5.13	118.31	121.90
27	23SB	1515	G	C4-C5-N7	-5.12	108.75	110.80
23	PSIA	1	G	C8-N9-C1'	-5.12	120.34	127.00
1	16SA	1111	G	P-O3'-C3'	5.12	125.85	119.70
27	23SA	640	U	N3-C2-O2	-5.12	118.62	122.20
27	23SA	1927	C	C4-C5-C6	5.12	119.96	117.40
27	23SA	1346	C	OP2-P-O3'	-5.12	93.94	105.20
1	16SB	1889	C	C5-C4-N4	5.12	123.78	120.20
1	16SA	1783	G	C6-C5-N7	5.12	133.47	130.40
27	23SB	163	G	N1-C6-O6	5.12	122.97	119.90
27	23SA	1435	C	C2-N1-C1'	5.11	124.42	118.80
27	23SA	2581	A	P-O3'-C3'	5.11	125.84	119.70
27	23SA	2909	U	C5-C4-O4	-5.11	122.83	125.90
27	23SB	444	C	C2-N1-C1'	5.11	124.42	118.80
27	23SB	2492	C	N3-C4-C5	-5.11	119.85	121.90
28	5SB	6	C	C5-C4-N4	5.11	123.78	120.20
1	16SA	858	C	C5-C4-N4	-5.11	116.62	120.20
1	16SA	1907	A	O4'-C1'-N9	5.11	112.29	108.20
27	23SA	1584	U	N1-C2-O2	5.11	126.38	122.80
27	23SA	1700	G	N3-C4-N9	-5.11	122.93	126.00
27	23SA	2614	G	C4-C5-N7	-5.11	108.76	110.80
1	16SB	675	G	C4-C5-N7	-5.11	108.76	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	1955	G	O5'-P-OP2	5.11	116.83	110.70
27	23SB	2340	G	N3-C2-N2	-5.11	116.32	119.90
27	23SA	555	A	C4-N9-C1'	-5.11	117.11	126.30
1	16SB	1562	G	C4-C5-N7	-5.11	108.76	110.80
27	23SA	2599	U	N3-C2-O2	-5.11	118.63	122.20
28	5SA	88	G	C6-C5-N7	5.11	133.46	130.40
27	23SA	2150	G	C4-N9-C1'	-5.10	119.86	126.50
1	16SB	784	G	C4-C5-N7	-5.10	108.76	110.80
24	ESIA	20	U	N1-C2-O2	5.10	126.37	122.80
27	23SA	1517	C	N1-C2-O2	5.10	121.96	118.90
1	16SB	1653	C	N3-C2-O2	5.10	125.47	121.90
27	23SB	153	C	N3-C4-N4	5.10	121.57	118.00
27	23SB	1972	C	C6-N1-C1'	-5.10	114.68	120.80
1	16SA	1177	G	N9-C4-C5	-5.10	103.36	105.40
27	23SA	832	A	C6-C5-N7	-5.10	128.73	132.30
27	23SA	2149	G	C5-C6-O6	-5.10	125.54	128.60
1	16SB	2075	C	N1-C2-N3	5.10	122.77	119.20
1	16SA	1867	U	N3-C2-O2	-5.10	118.63	122.20
27	23SB	840	C	C6-N1-C2	5.10	122.34	120.30
27	23SA	1593	C	N1-C2-O2	5.09	121.96	118.90
27	23SB	903	G	N3-C4-N9	-5.09	122.94	126.00
27	23SB	576	G	C5-C6-O6	-5.09	125.55	128.60
26	TRNA	15	G	N1-C6-O6	-5.09	116.85	119.90
1	16SB	1647	G	N1-C6-O6	5.09	122.95	119.90
27	23SA	1124	C	C5-C4-N4	5.09	123.76	120.20
1	16SB	1827	C	OP2-P-O3'	5.09	116.39	105.20
1	16SA	805	C	N1-C2-O2	5.08	121.95	118.90
27	23SB	576	G	C6-N1-C2	-5.08	122.05	125.10
27	23SA	278	G	N9-C4-C5	5.08	107.43	105.40
1	16SB	830	C	C2-N1-C1'	5.08	124.39	118.80
27	23SB	2886	A	C2-N3-C4	-5.08	108.06	110.60
1	16SB	675	G	N9-C4-C5	5.08	107.43	105.40
1	16SB	1963	C	OP2-P-O3'	5.08	116.38	105.20
1	16SA	1053	A	P-O3'-C3'	5.08	125.80	119.70
1	16SA	1252	C	C5-C4-N4	-5.08	116.65	120.20
27	23SA	2190	G	C4-N9-C1'	5.08	133.10	126.50
54	L33A	10	LEU	CA-CB-CG	5.08	126.98	115.30
1	16SB	1002	G	N9-C4-C5	-5.08	103.37	105.40
1	16SB	778	G	N9-C4-C5	-5.08	103.37	105.40
27	23SB	2304	G	N1-C6-O6	-5.08	116.85	119.90
25	MRNA	56	U	C5-C6-N1	5.08	125.24	122.70
27	23SA	2124	U	N3-C2-O2	-5.08	118.65	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SA	2278	C	C6-N1-C2	-5.08	118.27	120.30
27	23SB	377	G	C8-N9-C4	-5.07	104.37	106.40
27	23SB	2318	G	N3-C4-N9	-5.07	122.96	126.00
27	23SB	725	A	N7-C8-N9	5.07	116.34	113.80
30	L3B	78	LEU	CA-CB-CG	5.07	126.97	115.30
27	23SA	1021	G	C6-C5-N7	5.07	133.44	130.40
1	16SB	969	C	P-O3'-C3'	5.07	125.78	119.70
27	23SB	1766	G	C8-N9-C1'	-5.07	120.41	127.00
1	16SA	730	C	N3-C4-N4	-5.07	114.45	118.00
1	16SA	1786	C	C6-N1-C2	-5.07	118.27	120.30
1	16SA	2125	A	C4-C5-N7	5.07	113.23	110.70
27	23SA	48	A	C8-N9-C4	5.07	107.83	105.80
27	23SA	1755	G	C6-C5-N7	5.07	133.44	130.40
27	23SA	2162	C	C5-C4-N4	5.07	123.75	120.20
25	MRNB	56	U	C5-C6-N1	5.07	125.23	122.70
27	23SB	2538	G	C6-C5-N7	5.07	133.44	130.40
27	23SA	226	C	N3-C4-C5	-5.07	119.87	121.90
1	16SB	677	G	N3-C4-N9	-5.07	122.96	126.00
27	23SB	2192	U	C2-N1-C1'	5.07	123.78	117.70
1	16SA	1621	G	N1-C2-N2	5.06	120.76	116.20
1	16SB	1837	C	C6-N1-C2	-5.06	118.28	120.30
33	L6A	9	ILE	CG1-CB-CG2	-5.06	100.27	111.40
27	23SB	581	G	C8-N9-C4	-5.06	104.38	106.40
27	23SB	769	C	C2-N1-C1'	5.06	124.37	118.80
27	23SA	1157	C	OP1-P-O3'	5.06	116.33	105.20
25	MRNB	53	U	P-O3'-C3'	5.06	125.77	119.70
27	23SA	681	A	O5'-P-OP2	-5.06	101.15	105.70
1	16SB	1718	U	C6-N1-C2	-5.06	117.97	121.00
27	23SB	2162	C	C6-N1-C1'	-5.06	114.73	120.80
27	23SA	2795	U	N3-C2-O2	-5.05	118.66	122.20
1	16SB	1643	C	C2-N3-C4	-5.05	117.37	119.90
27	23SB	2210	C	N1-C2-O2	-5.05	115.87	118.90
27	23SA	1231	G	N1-C6-O6	-5.05	116.87	119.90
24	ESIB	21	A	O4'-C1'-N9	-5.05	104.16	108.20
27	23SB	2540	G	C6-C5-N7	5.05	133.43	130.40
27	23SA	1462	G	C6-N1-C2	-5.05	122.07	125.10
1	16SB	814	C	N3-C2-O2	-5.05	118.36	121.90
27	23SA	1478	G	N3-C4-C5	-5.05	126.08	128.60
1	16SB	706	A	O4'-C1'-N9	5.05	112.24	108.20
1	16SB	1963	C	C6-N1-C2	-5.05	118.28	120.30
57	ASIB	41	C	C5-C6-N1	5.05	123.53	121.00
1	16SB	1621	G	N9-C4-C5	5.05	107.42	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SA	1241	C	C2-N1-C1'	5.05	124.35	118.80
28	5SA	62	C	C2-N1-C1'	5.05	124.35	118.80
1	16SB	815	C	C2-N1-C1'	5.05	124.35	118.80
27	23SB	557	G	C5-N7-C8	-5.05	101.78	104.30
1	16SA	1793	C	C5-C4-N4	-5.04	116.67	120.20
27	23SA	832	A	N1-C6-N6	5.04	121.63	118.60
27	23SA	1545	A	C8-N9-C4	-5.04	103.78	105.80
1	16SB	1079	G	C6-C5-N7	-5.04	127.37	130.40
1	16SB	1545	G	N3-C2-N2	-5.04	116.37	119.90
27	23SB	2704	U	P-O3'-C3'	5.04	125.75	119.70
27	23SA	965	A	C5-C6-N1	-5.04	115.18	117.70
1	16SB	784	G	N9-C4-C5	5.04	107.42	105.40
22	ASIA	76	A	O4'-C1'-N9	5.04	112.23	108.20
1	16SA	1899	G	C4-N9-C1'	5.04	133.05	126.50
1	16SB	2078	C	P-O3'-C3'	5.04	125.74	119.70
27	23SB	2538	G	N3-C2-N2	-5.04	116.38	119.90
1	16SA	1652	C	C6-N1-C2	-5.03	118.29	120.30
27	23SA	1685	G	C4-C5-N7	5.03	112.81	110.80
27	23SA	2133	C	C6-N1-C1'	5.03	126.84	120.80
27	23SA	2887	C	C2-N1-C1'	5.03	124.34	118.80
27	23SB	2319	G	N1-C6-O6	-5.03	116.88	119.90
27	23SA	1767	G	C6-C5-N7	5.03	133.42	130.40
24	ESIB	29	G	C6-N1-C2	-5.03	122.08	125.10
1	16SA	1471	C	C2-N3-C4	5.03	122.42	119.90
27	23SA	1079	G	N3-C2-N2	-5.03	116.38	119.90
25	MRNB	53	U	OP1-P-O3'	5.03	116.27	105.20
34	L9B	140	LEU	CA-CB-CG	5.03	126.87	115.30
1	16SA	675	G	N3-C2-N2	-5.03	116.38	119.90
27	23SA	1200	G	N3-C4-N9	-5.03	122.98	126.00
27	23SA	2490	C	C6-N1-C2	-5.03	118.29	120.30
27	23SA	1341	U	C5-C4-O4	-5.02	122.89	125.90
27	23SA	432	C	C2-N1-C1'	5.02	124.33	118.80
1	16SB	1971	C	C5-C4-N4	5.02	123.72	120.20
27	23SA	1582	C	C2-N1-C1'	5.02	124.32	118.80
1	16SA	654	A	O5'-P-OP1	5.02	116.72	110.70
1	16SA	730	C	N1-C2-O2	5.02	121.91	118.90
1	16SB	849	A	O4'-C1'-N9	5.02	112.22	108.20
27	23SB	378	G	C6-C5-N7	-5.02	127.39	130.40
27	23SB	1190	U	C2-N1-C1'	5.02	123.72	117.70
27	23SB	1280	G	C4-C5-N7	-5.02	108.79	110.80
27	23SA	1069	A	C5-N7-C8	-5.02	101.39	103.90
1	16SB	1562	G	C6-C5-N7	5.02	133.41	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SB	1973	A	OP2-P-O3'	5.02	116.23	105.20
1	16SA	747	G	C8-N9-C1'	-5.01	120.48	127.00
1	16SA	1119	C	C6-N1-C1'	-5.01	114.78	120.80
1	16SA	1817	G	C5-C6-O6	-5.01	125.59	128.60
1	16SA	2073	G	N1-C6-O6	5.01	122.91	119.90
27	23SB	1509	G	C6-N1-C2	-5.01	122.09	125.10
27	23SA	537	C	C6-N1-C2	-5.01	118.30	120.30
24	ESIB	29	G	N9-C4-C5	5.01	107.41	105.40
27	23SB	332	G	N3-C2-N2	5.01	123.41	119.90
27	23SB	433	U	N3-C2-O2	-5.01	118.69	122.20
1	16SA	1682	C	C5-C6-N1	5.01	123.50	121.00
27	23SA	1765	G	N3-C4-N9	5.01	129.00	126.00
1	16SB	1889	C	C6-N1-C2	-5.01	118.30	120.30
1	16SA	839	G	N9-C4-C5	5.01	107.40	105.40
1	16SA	803	C	C2-N1-C1'	5.01	124.31	118.80
1	16SB	1319	G	C8-N9-C1'	-5.01	120.49	127.00
27	23SB	1975	G	C8-N9-C4	-5.01	104.40	106.40
27	23SB	2890	G	C5-C6-N1	-5.01	109.00	111.50
27	23SA	46	C	N1-C2-O2	-5.00	115.90	118.90
27	23SA	1598	C	C6-N1-C2	-5.00	118.30	120.30
27	23SB	1486	C	C2-N1-C1'	5.00	124.31	118.80
27	23SA	1502	C	C2-N1-C1'	5.00	124.30	118.80
27	23SA	2551	G	C6-C5-N7	5.00	133.40	130.40
1	16SB	907	G	C8-N9-C1'	-5.00	120.50	127.00
27	23SB	2333	G	C4-N9-C1'	5.00	133.00	126.50
1	16SA	1285	C	N1-C2-O2	-5.00	115.90	118.90
27	23SB	2231	G	P-O3'-C3'	5.00	125.70	119.70
28	5SB	53	G	N1-C6-O6	-5.00	116.90	119.90

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
34	L9A	110	ASP	Peptide
34	L9A	131	LYS	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	16SA	32509	0	0	0	10
1	16SB	32429	0	0	0	0
2	S2A	1924	0	1975	82	0
2	S2B	1924	0	1975	101	0
3	S3A	1605	0	1668	47	0
3	S3B	1612	0	1677	62	0
4	S4A	1702	0	1767	69	0
4	S4B	1702	0	1764	43	0
5	S5A	1155	0	1213	27	0
5	S5B	1155	0	1212	31	0
6	S6A	842	0	857	26	0
6	S6B	842	0	857	22	0
7	S7A	1256	0	1296	28	0
7	S7B	1256	0	1296	26	0
8	S8A	1115	0	1177	42	0
8	S8B	1115	0	1177	42	0
9	S9A	1009	0	1037	40	0
9	S9B	1009	0	1037	49	0
10	S10A	801	0	0	0	0
10	S10B	801	0	0	0	0
11	S11A	864	0	0	0	0
11	S11B	873	0	0	0	0
12	S12A	977	0	0	0	0
12	S12B	977	0	0	0	0
13	S13A	946	0	0	0	0
13	S13B	964	0	0	0	0
14	S14A	491	0	0	0	0
14	S14B	486	0	0	0	0
15	S15A	733	0	0	0	0
15	S15B	733	0	0	0	0
16	S16A	700	0	0	0	0
16	S16B	705	0	0	0	0
17	S17A	834	0	0	0	0
17	S17B	834	0	0	0	0
18	S18A	584	0	0	0	0
18	S18B	573	0	0	0	0
19	S19A	674	0	0	0	0
19	S19B	684	0	0	0	0
20	S20A	762	0	0	0	0
20	S20B	762	0	0	0	0
21	THXA	208	0	0	0	0
21	THXB	217	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	ASIA	1628	0	0	0	0
23	PSIA	1635	0	0	0	0
23	PSIB	1635	0	0	0	0
24	ESIA	1626	0	0	0	0
24	ESIB	1626	0	0	0	0
25	MRNA	621	0	0	0	0
25	MRNB	621	0	0	0	0
26	TRNA	1565	0	0	0	3
27	23SA	62225	0	0	0	1
27	23SB	61886	0	0	0	2
28	5SA	2617	0	1327	33	0
28	5SB	2598	0	1316	45	0
29	L2A	2115	0	2195	48	0
29	L2B	2115	0	2195	50	0
30	L3A	1563	0	1629	29	0
30	L3B	1563	0	1629	51	0
31	L4A	1585	0	1632	57	0
31	L4B	1585	0	1632	55	0
32	L5A	1473	0	1535	46	0
32	L5B	1473	0	1535	56	0
33	L6A	1316	0	1395	71	0
33	L6B	1327	0	1405	67	10
34	L9A	1131	0	1218	100	0
34	L9B	1136	0	1223	50	0
35	L13A	1104	0	0	0	0
35	L13B	1104	0	0	0	0
36	L14A	932	0	0	0	0
36	L14B	932	0	0	0	0
37	L15A	1144	0	0	0	0
37	L15B	1144	0	0	0	1
38	L16A	1121	0	0	0	0
38	L16B	1121	0	0	0	0
39	L17A	967	0	0	0	0
39	L17B	967	0	0	0	0
40	L18A	889	0	0	0	0
40	L18B	881	0	0	0	0
41	L19A	1141	0	0	0	0
41	L19B	1141	0	0	0	0
42	L20A	963	0	0	0	2
42	L20B	963	0	0	0	0
43	L21A	778	0	0	0	1
43	L21B	778	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	L22A	899	0	0	0	0
44	L22B	899	0	0	0	0
45	L23A	738	0	0	0	0
45	L23B	742	0	0	0	0
46	L24A	824	0	0	0	0
46	L24B	775	0	0	0	0
47	L25A	1428	0	0	0	0
47	L25B	1404	0	0	0	0
48	L27A	661	0	0	0	0
48	L27B	661	0	0	0	0
49	L28A	762	0	0	0	0
49	L28B	762	0	0	0	0
50	L29A	583	0	0	0	0
50	L29B	590	0	0	0	0
51	L30A	468	0	0	0	0
51	L30B	468	0	0	0	0
52	L31A	580	0	0	0	0
52	L31B	580	0	0	0	0
53	L32A	434	0	0	0	0
53	L32B	434	0	0	0	0
54	L33A	389	0	0	0	0
54	L33B	389	0	0	0	0
55	L34A	418	0	0	0	0
55	L34B	429	0	0	0	0
56	L35A	516	0	0	0	0
56	L35B	516	0	0	0	0
57	ASIB	1627	0	0	0	0
58	16SA	92	0	0	0	0
58	16SB	86	0	0	0	0
58	23SA	332	0	0	0	0
58	23SB	241	0	0	0	0
58	5SA	6	0	0	0	0
58	5SB	4	0	0	0	0
58	L15A	2	0	0	0	0
58	L15B	1	0	0	0	0
58	L23A	1	0	0	0	0
58	L27A	2	0	0	0	0
58	L30A	1	0	0	0	0
58	L32A	1	0	0	0	0
58	L33A	1	0	0	0	0
58	L34A	1	0	0	0	0
58	L35A	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	L35B	2	0	0	0	0
58	L3A	2	0	0	0	0
58	L3B	2	0	0	0	0
58	L4A	2	0	0	0	0
58	L4B	1	0	0	0	0
58	L5A	1	0	0	0	0
58	L5B	1	0	0	0	0
58	PSIA	2	0	0	0	0
58	PSIB	3	0	0	0	0
58	S4A	1	0	0	0	0
58	S5B	1	0	0	0	0
59	16SA	574	0	0	0	0
59	16SB	546	0	0	0	0
59	23SA	1435	0	0	0	2
59	23SB	1393	0	0	0	0
59	5SA	77	0	0	0	0
59	5SB	77	0	0	0	0
59	ASIA	21	0	0	0	0
59	ASIB	21	0	0	0	0
59	ESIA	7	0	0	0	0
59	ESIB	7	0	0	0	0
59	L15A	7	0	0	0	0
59	L17A	7	0	0	0	0
59	L17B	7	0	0	0	0
59	L19A	7	0	0	0	0
59	L20A	7	0	0	0	0
59	L20B	7	0	0	0	0
59	L27A	14	0	0	0	0
59	L28A	7	0	0	0	0
59	L35A	7	0	0	0	0
59	L35B	7	0	0	0	0
59	L4A	7	0	0	0	0
59	L4B	7	0	0	0	0
59	MRNA	7	0	0	0	0
59	MRNB	7	0	0	0	0
59	PSIA	7	0	0	0	0
59	PSIB	14	0	0	0	0
59	S10A	7	0	0	0	0
59	S14B	7	0	0	0	0
59	S19A	7	0	0	0	0
59	S4A	7	0	0	5	0
59	S4B	7	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	TRNA	14	0	0	0	0
60	16SA	46	0	0	0	0
60	16SB	35	0	0	0	0
60	23SA	102	0	0	0	0
60	23SB	81	0	0	0	0
60	5SA	2	0	0	0	0
60	5SB	1	0	0	0	0
60	L15B	1	0	0	0	0
60	L16B	1	0	0	0	0
60	L2A	1	0	0	0	0
60	L2B	1	0	0	0	0
60	L3A	1	0	0	0	0
60	L3B	1	0	0	0	0
60	L4A	1	0	0	0	0
60	L4B	1	0	0	0	0
60	L5A	1	0	0	0	0
60	L5B	1	0	0	0	0
60	PSIA	2	0	0	0	0
60	S13A	1	0	0	0	0
60	S13B	1	0	0	0	0
60	S14B	1	0	0	0	0
60	S20A	1	0	0	0	0
60	S20B	1	0	0	0	0
60	S4B	1	0	0	0	0
60	S6A	1	0	0	0	0
60	S6B	1	0	0	0	0
61	23SA	87	0	0	0	0
61	23SB	87	0	0	0	0
62	16SA	172	0	0	0	0
62	16SB	157	0	0	0	0
62	23SA	788	0	0	0	0
62	23SB	519	0	0	0	0
62	5SA	14	0	0	3	0
62	5SB	5	0	0	2	0
62	ESIA	1	0	0	0	0
62	L15A	9	0	0	0	0
62	L15B	7	0	0	0	0
62	L16A	1	0	0	0	0
62	L17A	2	0	0	0	0
62	L18A	2	0	0	0	0
62	L19A	1	0	0	0	0
62	L19B	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	L23A	1	0	0	0	0
62	L27A	3	0	0	0	0
62	L27B	2	0	0	0	0
62	L28B	1	0	0	0	0
62	L2A	10	0	0	3	0
62	L2B	12	0	0	1	0
62	L30A	1	0	0	0	0
62	L30B	1	0	0	0	0
62	L34A	1	0	0	0	0
62	L35A	1	0	0	0	0
62	L35B	6	0	0	0	0
62	L3A	7	0	0	0	0
62	L3B	6	0	0	1	0
62	L4A	6	0	0	0	0
62	L4B	1	0	0	0	0
62	PSIA	7	0	0	0	0
62	S12A	1	0	0	0	0
62	S12B	2	0	0	0	0
62	S13A	1	0	0	0	0
62	S14A	1	0	0	0	0
62	S14B	2	0	0	0	0
62	S16A	1	0	0	0	0
62	S4A	3	0	0	0	0
62	S4B	2	0	0	0	0
62	S5A	1	0	0	0	0
62	S5B	1	0	0	0	0
62	S9B	1	0	0	0	0
62	THXA	3	0	0	0	0
All	All	306403	0	43851	1471	16

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 17.

All (1471) 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)
34:L9A:114:LEU:CD1	34:L9A:130:TYR:HD1	1.38	1.37
9:S9B:58:HIS:O	9:S9B:59:PHE:CD1	1.79	1.36
34:L9A:69:LYS:HG3	34:L9A:136:VAL:CG2	1.61	1.28
34:L9A:114:LEU:CD1	34:L9A:130:TYR:CD1	2.19	1.24
34:L9A:73:GLU:HG3	34:L9A:136:VAL:CG2	1.68	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:L9A:114:LEU:HD13	34:L9A:130:TYR:CD1	1.78	1.14
34:L9A:114:LEU:HD11	34:L9A:130:TYR:HD1	1.13	1.13
2:S2A:168:THR:HG22	2:S2A:192:SER:HB3	1.28	1.13
34:L9A:69:LYS:HG3	34:L9A:136:VAL:CB	1.78	1.12
33:L6B:10:PRO:HG2	33:L6B:50:VAL:O	1.50	1.09
34:L9A:73:GLU:HG3	34:L9A:136:VAL:HG22	1.08	1.08
34:L9A:136:VAL:HG22	34:L9A:137:PRO:HD2	1.35	1.06
34:L9A:73:GLU:CG	34:L9A:136:VAL:HG22	1.86	1.05
33:L6B:10:PRO:HG2	33:L6B:50:VAL:HG13	1.36	1.04
33:L6A:87:LEU:O	33:L6A:87:LEU:HD12	1.57	1.03
34:L9A:73:GLU:CG	34:L9A:137:PRO:HD2	1.88	1.02
34:L9A:69:LYS:HG3	34:L9A:136:VAL:HB	1.37	1.01
34:L9A:69:LYS:CG	34:L9A:136:VAL:CG2	2.38	1.01
31:L4A:65:TRP:CZ3	31:L4A:72:ARG:HB3	2.00	0.96
34:L9A:133:HIS:HB2	34:L9A:134:PRO:HD2	1.49	0.95
29:L2A:60:ARG:HD3	29:L2A:86:PRO:HB2	1.46	0.94
33:L6A:87:LEU:HD11	33:L6A:131:VAL:CG1	1.98	0.93
2:S2B:69:LEU:HD13	2:S2B:159:PRO:HG3	1.50	0.93
33:L6B:10:PRO:CG	33:L6B:50:VAL:HG13	1.96	0.93
9:S9B:58:HIS:O	9:S9B:59:PHE:HD1	1.39	0.93
9:S9B:24:GLY:N	9:S9B:60:ASP:OD1	2.02	0.93
29:L2B:182:LEU:H	29:L2B:272:ALA:HB3	1.35	0.92
3:S3B:50:ALA:HB2	3:S3B:76:VAL:HG11	1.52	0.92
34:L9A:73:GLU:CG	34:L9A:136:VAL:CG2	2.47	0.91
34:L9A:69:LYS:HG3	34:L9A:136:VAL:HG23	1.51	0.90
34:L9A:136:VAL:HG22	34:L9A:137:PRO:CD	2.01	0.90
32:L5B:64:THR:HG23	32:L5B:66:GLN:H	1.35	0.90
4:S4A:96:LEU:HG	4:S4A:139:ARG:HH22	1.37	0.88
29:L2A:242:ARG:O	62:L2A:401:HOH:O	1.92	0.88
32:L5B:67:LYS:CD	32:L5B:67:LYS:H	1.87	0.88
31:L4A:65:TRP:CH2	31:L4A:72:ARG:HB3	2.09	0.87
31:L4B:167:ALA:HB1	31:L4B:173:VAL:HG11	1.55	0.87
34:L9A:114:LEU:HD13	34:L9A:130:TYR:CE1	2.10	0.86
28:5SB:54:A:O2'	28:5SB:55:A:N7	2.08	0.86
9:S9B:4:TYR:HE2	9:S9B:88:TYR:HB2	1.38	0.86
33:L6A:87:LEU:CD1	33:L6A:131:VAL:HG12	2.06	0.85
2:S2B:32:ILE:HD11	2:S2B:40:HIS:CD2	2.11	0.85
33:L6B:10:PRO:CG	33:L6B:50:VAL:O	2.24	0.84
2:S2B:55:PHE:CE1	2:S2B:221:LEU:HD22	2.12	0.84
33:L6A:86:GLU:O	33:L6A:87:LEU:HG	1.78	0.84
33:L6B:10:PRO:CB	33:L6B:50:VAL:HG13	2.08	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:L9A:109:ILE:HB	34:L9A:130:TYR:OH	1.78	0.84
28:5SB:17:A:H5'	28:5SB:18:G:H8	1.43	0.83
2:S2B:132:LYS:HA	2:S2B:135:GLN:HB2	1.60	0.83
30:L3B:9:VAL:HG11	30:L3B:27:LEU:HD23	1.59	0.83
28:5SA:75:A:OP2	62:5SA:302:HOH:O	1.97	0.83
7:S7A:106:GLN:O	7:S7A:110:GLN:NE2	2.12	0.82
32:L5B:67:LYS:H	32:L5B:67:LYS:HD3	1.42	0.82
31:L4A:63:LYS:NZ	31:L4A:75:HIS:O	2.12	0.82
2:S2B:20:GLU:HB3	2:S2B:23:ARG:HB2	1.62	0.82
3:S3B:42:LEU:HA	3:S3B:45:LYS:HE3	1.59	0.82
9:S9B:4:TYR:CE2	9:S9B:88:TYR:HB2	2.13	0.82
28:5SA:82:U:H2'	28:5SA:83:G:H21	1.43	0.82
31:L4B:127:GLU:O	31:L4B:129:PHE:N	2.11	0.82
2:S2B:127:ILE:O	2:S2B:135:GLN:NE2	2.13	0.81
28:5SB:17:A:H5'	28:5SB:18:G:C8	2.16	0.81
31:L4A:103:LYS:HA	31:L4A:106:ARG:HD3	1.62	0.80
34:L9A:73:GLU:HG3	34:L9A:137:PRO:HD2	1.64	0.80
33:L6A:41:MET:HG3	33:L6A:54:ARG:HA	1.62	0.80
34:L9A:69:LYS:CG	34:L9A:136:VAL:HG23	2.07	0.80
30:L3B:47:VAL:HG11	30:L3B:86:PRO:HD2	1.63	0.80
29:L2A:142:VAL:HG23	29:L2A:193:VAL:HA	1.63	0.79
2:S2A:82:ARG:NH2	2:S2A:92:TYR:OH	2.17	0.78
9:S9B:28:VAL:HG22	9:S9B:63:ILE:HB	1.65	0.78
34:L9A:114:LEU:HD12	34:L9A:130:TYR:HA	1.65	0.78
33:L6A:87:LEU:HD11	33:L6A:131:VAL:HG12	1.61	0.78
7:S7A:91:VAL:HG23	7:S7A:96:GLN:HG2	1.66	0.78
31:L4A:65:TRP:HB3	31:L4A:66:PRO:HD2	1.67	0.77
34:L9A:73:GLU:HG2	34:L9A:137:PRO:HD2	1.67	0.77
34:L9A:144:VAL:HG22	34:L9A:145:VAL:HG23	1.66	0.77
28:5SA:54:A:O2'	28:5SA:55:A:N7	2.18	0.77
5:S5A:152:ARG:NH2	8:S8A:107:LEU:O	2.18	0.77
34:L9A:116:LEU:O	34:L9A:116:LEU:HD12	1.84	0.77
31:L4A:127:GLU:O	31:L4A:129:PHE:N	2.17	0.76
8:S8A:42:GLU:HG3	8:S8A:109:ILE:HD12	1.65	0.76
4:S4B:191:ARG:NH1	4:S4B:191:ARG:O	2.15	0.76
8:S8B:17:THR:O	8:S8B:78:GLN:NE2	2.18	0.76
2:S2A:178:ARG:HH21	8:S8A:74:PRO:HG3	1.49	0.76
33:L6A:171:LEU:N	33:L6A:171:LEU:HD12	2.01	0.76
4:S4A:90:GLY:HA3	4:S4A:204:ILE:HD11	1.68	0.76
9:S9A:83:ARG:HA	9:S9A:86:VAL:HG12	1.67	0.76
34:L9A:69:LYS:HG3	34:L9A:136:VAL:HG21	1.66	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S3A:188:LEU:HD11	3:S3A:195:VAL:HG13	1.68	0.75
4:S4A:33:MET:HE2	4:S4A:37:PRO:HA	1.69	0.75
6:S6B:28:ARG:NH2	6:S6B:31:GLU:OE1	2.20	0.74
28:5SB:91:G:N2	28:5SB:92:A:N1	2.29	0.74
2:S2B:16:HIS:HB3	2:S2B:210:SER:HB2	1.68	0.74
33:L6A:157:TYR:C	33:L6A:171:LEU:HD23	2.08	0.74
33:L6B:86:GLU:HA	33:L6B:132:ARG:HB2	1.69	0.74
34:L9A:109:ILE:CB	34:L9A:130:TYR:OH	2.37	0.73
7:S7B:16:LEU:HD11	9:S9B:42:ARG:HA	1.71	0.73
33:L6B:41:MET:HG2	33:L6B:55:PRO:HD3	1.69	0.73
30:L3A:36:ARG:NH1	30:L3A:85:ASN:OD1	2.21	0.73
33:L6B:27:LYS:HA	33:L6B:32:GLU:HB3	1.69	0.73
29:L2B:228:PRO:O	62:L2B:402:HOH:O	2.07	0.73
5:S5B:78:HIS:HB2	8:S8B:104:ARG:HD2	1.70	0.72
29:L2A:206:LEU:HD22	29:L2A:211:ARG:HG2	1.70	0.72
33:L6A:119:GLU:O	33:L6A:140:LYS:NZ	2.20	0.72
28:5SB:17:A:H1'	28:5SB:112:G:C5	2.24	0.72
2:S2B:137:ARG:NH1	2:S2B:137:ARG:O	2.22	0.72
5:S5B:102:ALA:HB1	5:S5B:106:PRO:HG2	1.70	0.72
8:S8A:129:VAL:HG23	8:S8A:130:GLY:H	1.53	0.72
29:L2A:182:LEU:H	29:L2A:272:ALA:HB3	1.54	0.71
34:L9A:69:LYS:CG	34:L9A:136:VAL:HG21	2.18	0.71
29:L2A:232:PRO:O	62:L2A:402:HOH:O	2.07	0.71
9:S9B:55:ALA:HB1	9:S9B:59:PHE:CD2	2.25	0.71
33:L6A:124:GLU:HG2	33:L6A:126:PRO:HD3	1.72	0.71
8:S8B:39:LEU:HD12	8:S8B:44:PHE:CB	2.19	0.71
33:L6B:130:ARG:O	33:L6B:131:VAL:HG23	1.89	0.71
31:L4A:65:TRP:HB3	31:L4A:66:PRO:CD	2.20	0.71
33:L6B:33:LEU:HD21	33:L6B:136:ILE:HG22	1.73	0.71
33:L6A:3:ARG:HG3	33:L6A:6:ARG:H	1.56	0.71
31:L4B:197:ASP:HA	31:L4B:200:GLU:HB2	1.71	0.71
29:L2A:182:LEU:HB2	29:L2A:271:ILE:HG13	1.72	0.71
34:L9A:114:LEU:HD11	34:L9A:130:TYR:CD1	2.06	0.71
30:L3B:11:MET:HG2	30:L3B:24:THR:HG22	1.71	0.71
33:L6B:23:ARG:HG3	33:L6B:25:LYS:HE3	1.71	0.71
28:5SA:27:A:OP1	62:5SA:303:HOH:O	2.09	0.71
9:S9A:121:ARG:NH1	9:S9A:122:ALA:O	2.24	0.70
9:S9B:28:VAL:HA	9:S9B:63:ILE:O	1.91	0.70
29:L2A:95:LEU:HD11	29:L2A:97:TYR:CE2	2.26	0.70
29:L2A:96:HIS:HD2	29:L2A:102:LYS:HG2	1.56	0.70
33:L6A:87:LEU:HD11	33:L6A:131:VAL:HG11	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:S9B:19:LEU:HD21	9:S9B:84:ALA:HB1	1.72	0.70
2:S2B:223:ILE:HA	2:S2B:226:ARG:HG2	1.72	0.69
28:5SB:82:U:H2'	28:5SB:83:G:H21	1.56	0.69
2:S2B:215:LEU:HA	2:S2B:218:ALA:HB3	1.74	0.69
7:S7B:23:VAL:HG13	7:S7B:43:PHE:HE2	1.56	0.69
7:S7A:38:LEU:O	7:S7A:42:ILE:HG13	1.93	0.69
9:S9B:4:TYR:CE2	9:S9B:88:TYR:CG	2.80	0.69
30:L3A:111:ARG:HG3	30:L3A:160:TYR:CD2	2.27	0.69
34:L9A:73:GLU:OE2	34:L9A:137:PRO:CD	2.41	0.69
5:S5B:100:VAL:HG23	5:S5B:107:ARG:HH21	1.58	0.69
28:5SB:75:A:OP2	62:5SB:301:HOH:O	2.10	0.69
34:L9A:69:LYS:CG	34:L9A:136:VAL:HB	2.21	0.69
34:L9B:68:LEU:HA	34:L9B:71:ILE:HG22	1.73	0.69
5:S5A:68:GLU:HG2	5:S5A:70:PRO:HD3	1.74	0.69
33:L6B:10:PRO:HB2	33:L6B:50:VAL:CG1	2.22	0.68
29:L2A:136:ILE:O	29:L2A:168:ARG:NH2	2.25	0.68
29:L2B:142:VAL:HG23	29:L2B:193:VAL:HA	1.75	0.68
33:L6B:73:ALA:O	33:L6B:77:LYS:N	2.23	0.68
4:S4A:13:ARG:NH1	4:S4A:38:TYR:O	2.26	0.68
9:S9A:16:ARG:O	9:S9A:63:ILE:HA	1.94	0.68
9:S9B:46:ALA:HA	9:S9B:78:LYS:HE3	1.76	0.68
33:L6A:18:GLU:HB2	33:L6A:25:LYS:HB2	1.76	0.68
28:5SA:11:G:O2'	62:5SA:304:HOH:O	2.12	0.68
31:L4A:185:ASP:OD1	31:L4A:188:ARG:NH1	2.27	0.68
2:S2A:5:ILE:HD12	2:S2A:221:LEU:HD23	1.75	0.67
34:L9A:73:GLU:HG3	34:L9A:136:VAL:HG21	1.70	0.67
7:S7B:68:ASN:ND2	7:S7B:128:ALA:O	2.28	0.67
8:S8B:29:SER:HB3	8:S8B:32:LYS:HG3	1.76	0.67
30:L3A:117:MET:O	30:L3A:118:LYS:HB3	1.93	0.67
2:S2A:12:GLU:O	2:S2A:16:HIS:HB2	1.94	0.67
2:S2A:77:ALA:HB2	2:S2A:211:ILE:HD13	1.76	0.67
31:L4A:133:ASN:HA	31:L4A:162:LEU:HD22	1.76	0.67
3:S3B:135:LYS:O	3:S3B:139:GLN:NE2	2.27	0.67
9:S9B:10:ARG:HD3	9:S9B:75:ASP:HB3	1.75	0.67
30:L3B:28:ALA:HB3	30:L3B:93:VAL:HG12	1.76	0.67
30:L3B:34:VAL:HG21	30:L3B:78:LEU:HD11	1.76	0.67
3:S3B:91:LEU:O	3:S3B:95:THR:OG1	2.08	0.67
33:L6A:157:TYR:O	33:L6A:171:LEU:HD23	1.94	0.67
7:S7B:8:GLU:OE1	7:S7B:8:GLU:N	2.21	0.67
2:S2B:32:ILE:HD11	2:S2B:40:HIS:HD2	1.60	0.67
3:S3B:120:VAL:HG13	3:S3B:124:ILE:HD13	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:L2B:8:PRO:HB3	29:L2B:14:ARG:HB3	1.77	0.67
9:S9A:61:ALA:HB1	9:S9A:63:ILE:HD13	1.77	0.67
33:L6A:87:LEU:HB2	33:L6A:163:TYR:O	1.94	0.67
9:S9B:19:LEU:HD21	9:S9B:84:ALA:CB	2.23	0.67
30:L3B:119:ARG:HD3	30:L3B:160:TYR:HB2	1.77	0.67
3:S3A:84:ILE:HG13	3:S3A:101:LEU:HD22	1.77	0.66
33:L6A:113:VAL:HG11	33:L6A:151:ILE:HD13	1.76	0.66
3:S3B:119:ARG:HH22	3:S3B:140:ARG:HG3	1.60	0.66
9:S9B:58:HIS:C	9:S9B:59:PHE:CD1	2.67	0.66
3:S3A:8:ILE:HG23	3:S3A:16:ARG:HG2	1.78	0.66
33:L6B:157:TYR:HA	33:L6B:171:LEU:HG	1.78	0.66
6:S6A:62:TRP:CH2	6:S6A:64:GLN:HB2	2.31	0.66
2:S2B:223:ILE:O	2:S2B:227:GLY:N	2.28	0.66
7:S7B:113:GLU:HG3	7:S7B:119:ARG:HA	1.77	0.66
32:L5A:49:ASP:OD1	32:L5A:51:ARG:HG3	1.96	0.66
7:S7A:113:GLU:HB2	7:S7A:119:ARG:HG2	1.78	0.66
3:S3B:9:GLY:HA2	3:S3B:12:LEU:HG	1.78	0.66
3:S3B:155:GLY:HA2	3:S3B:163:ALA:HB1	1.77	0.66
4:S4B:13:ARG:NH1	4:S4B:38:TYR:O	2.29	0.66
5:S5B:34:VAL:HG11	5:S5B:63:ARG:HG2	1.78	0.66
34:L9B:113:ARG:HD2	34:L9B:131:LYS:HD2	1.78	0.66
32:L5A:97:ASP:H	32:L5A:100:TRP:HD1	1.44	0.65
9:S9B:44:VAL:O	9:S9B:51:ARG:NH2	2.25	0.65
34:L9A:73:GLU:OE2	34:L9A:137:PRO:HD3	1.97	0.65
34:L9A:29:TYR:O	34:L9A:33:ARG:HG2	1.96	0.65
2:S2A:20:GLU:HB3	2:S2A:23:ARG:HG3	1.79	0.65
2:S2A:92:TYR:CZ	2:S2A:151:GLY:HA3	2.32	0.65
29:L2A:226:MET:O	62:L2A:403:HOH:O	2.12	0.65
32:L5A:27:ASN:HB3	32:L5A:30:GLU:HG3	1.79	0.65
3:S3A:150:LYS:HE2	3:S3A:152:ILE:HD11	1.77	0.65
5:S5B:152:ARG:O	8:S8B:64:LYS:NZ	2.23	0.65
2:S2A:53:ARG:NH2	2:S2A:198:ASP:O	2.29	0.65
28:5SA:17:A:H5'	28:5SA:18:G:C8	2.32	0.65
6:S6B:15:ASP:HB2	6:S6B:18:GLN:H	1.61	0.65
8:S8B:69:ARG:NH1	8:S8B:75:ARG:O	2.29	0.65
29:L2B:206:LEU:O	29:L2B:211:ARG:HD3	1.97	0.65
34:L9B:54:GLN:HA	34:L9B:57:ARG:HB2	1.78	0.65
34:L9B:76:THR:HA	34:L9B:139:GLN:HB2	1.78	0.65
33:L6A:7:LEU:HD22	33:L6A:69:ARG:HH21	1.62	0.65
3:S3B:136:GLN:O	3:S3B:140:ARG:HG2	1.97	0.65
9:S9B:96:LEU:HD12	9:S9B:101:PHE:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:L6B:77:LYS:HE2	33:L6B:138:LYS:HB2	1.80	0.64
33:L6B:98:LEU:HD21	33:L6B:105:LEU:HB3	1.78	0.64
29:L2A:70:TRP:O	29:L2A:73:VAL:HG23	1.96	0.64
34:L9A:86:THR:H	34:L9A:123:LEU:HD12	1.62	0.64
8:S8B:39:LEU:HD12	8:S8B:44:PHE:HB3	1.78	0.64
34:L9A:79:ILE:HD12	34:L9A:80:PRO:HD2	1.78	0.64
34:L9A:40:THR:HG22	34:L9A:42:SER:H	1.61	0.64
4:S4B:187:ARG:NH2	4:S4B:193:ASP:OD2	2.30	0.64
32:L5B:47:LYS:HD2	32:L5B:81:LYS:HB2	1.78	0.64
5:S5B:142:LEU:O	5:S5B:143:ARG:NH1	2.31	0.64
33:L6B:8:PRO:HG2	33:L6B:69:ARG:HG2	1.80	0.64
28:5SA:43:U:C5	32:L5A:69:ALA:HB1	2.33	0.64
2:S2B:153:ARG:O	2:S2B:155:LEU:N	2.31	0.64
32:L5B:151:ALA:O	32:L5B:153:ARG:NH1	2.30	0.64
33:L6B:10:PRO:CB	33:L6B:50:VAL:CG1	2.75	0.64
34:L9B:118:LYS:HG2	34:L9B:119:PRO:HD2	1.79	0.64
28:5SB:17:A:H3'	28:5SB:18:G:H5'	1.79	0.64
2:S2A:87:ARG:NH1	2:S2A:220:ASP:OD1	2.31	0.63
34:L9A:85:GLU:OE2	34:L9A:86:THR:OG1	2.11	0.63
3:S3B:138:VAL:HG11	3:S3B:170:GLN:HG3	1.81	0.63
30:L3A:28:ALA:HB3	30:L3A:93:VAL:HG12	1.79	0.63
28:5SB:44:C:O3'	32:L5B:67:LYS:HE2	1.97	0.63
31:L4A:117:ARG:NH2	31:L4A:189:THR:O	2.32	0.63
7:S7B:113:GLU:HB2	7:S7B:119:ARG:HG3	1.80	0.63
9:S9B:71:SER:HA	9:S9B:74:ILE:HD12	1.79	0.63
9:S9A:7:THR:O	9:S9A:83:ARG:HD2	1.98	0.63
9:S9B:17:VAL:HG21	9:S9B:80:GLY:HA3	1.79	0.63
30:L3A:97:LYS:N	30:L3A:100:GLU:OE2	2.27	0.63
31:L4A:65:TRP:HZ3	31:L4A:73:ALA:O	1.82	0.63
30:L3B:54:GLN:HG2	30:L3B:59:VAL:HG23	1.80	0.63
34:L9A:133:HIS:CB	34:L9A:134:PRO:HD2	2.18	0.63
4:S4A:167:GLY:HA3	29:L2B:135:PHE:CE1	2.34	0.62
8:S8A:49:GLU:HG2	8:S8A:62:TYR:HE2	1.63	0.62
29:L2A:130:ALA:HB2	29:L2A:192:THR:HG22	1.79	0.62
8:S8B:42:GLU:HG3	8:S8B:109:ILE:HD12	1.81	0.62
32:L5B:6:ALA:HB3	32:L5B:104:GLU:OE2	1.99	0.62
34:L9B:81:VAL:HG13	34:L9B:144:VAL:H	1.63	0.62
6:S6A:27:GLN:HA	6:S6A:30:LEU:HD12	1.81	0.62
29:L2A:71:ASP:OD1	29:L2A:103:ARG:NH2	2.32	0.62
33:L6A:45:VAL:HA	33:L6A:50:VAL:HG12	1.80	0.62
34:L9A:72:LEU:HD13	34:L9A:107:VAL:HG11	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S3B:95:THR:HG22	3:S3B:97:LYS:HG2	1.81	0.62
2:S2A:178:ARG:HH22	8:S8A:68:ARG:HH22	1.46	0.62
2:S2B:172:ILE:H	2:S2B:172:ILE:HD12	1.64	0.62
4:S4B:100:ARG:HE	4:S4B:137:SER:HA	1.62	0.62
33:L6A:88:LEU:N	33:L6A:88:LEU:HD12	2.14	0.62
34:L9A:92:VAL:HG13	34:L9A:120:ILE:HG23	1.80	0.62
2:S2B:178:ARG:NH1	2:S2B:196:LEU:O	2.29	0.62
7:S7B:54:THR:O	7:S7B:56:GLN:N	2.32	0.62
28:5SB:2:A:C8	28:5SB:3:U:C5	2.88	0.62
29:L2B:5:LYS:H	29:L2B:5:LYS:HD2	1.64	0.62
9:S9A:46:ALA:HB2	9:S9A:74:ILE:HG23	1.79	0.62
30:L3A:47:VAL:HG11	30:L3A:86:PRO:HD2	1.82	0.62
3:S3B:74:GLY:O	3:S3B:79:ARG:NH2	2.32	0.62
33:L6B:70:THR:HG22	33:L6B:74:ASN:ND2	2.15	0.62
31:L4B:24:LEU:HD23	31:L4B:115:ALA:HA	1.80	0.62
30:L3A:174:ASP:HB3	30:L3A:183:LEU:HD22	1.82	0.62
33:L6A:130:ARG:HG2	33:L6A:130:ARG:HH11	1.64	0.62
32:L5B:43:LEU:HD21	32:L5B:153:ARG:HD2	1.82	0.62
34:L9A:109:ILE:HD12	34:L9A:111:PRO:HB3	1.80	0.62
4:S4B:152:SER:HA	4:S4B:155:LEU:HD23	1.82	0.62
31:L4B:143:ALA:HB1	31:L4B:148:LEU:HB2	1.81	0.62
9:S9B:110:GLU:HG2	9:S9B:119:ALA:HB1	1.80	0.62
31:L4B:124:LEU:HB3	31:L4B:193:VAL:HG22	1.82	0.62
29:L2A:70:TRP:CH2	29:L2A:150:LYS:HA	2.34	0.61
32:L5A:37:VAL:HG22	32:L5A:159:VAL:HG12	1.82	0.61
34:L9A:69:LYS:CE	34:L9A:136:VAL:HG23	2.30	0.61
2:S2B:119:GLU:HA	2:S2B:122:PHE:HB2	1.82	0.61
33:L6B:10:PRO:HG2	33:L6B:50:VAL:CG1	2.22	0.61
29:L2A:96:HIS:CD2	29:L2A:102:LYS:HG2	2.35	0.61
28:5SB:104:A:N7	62:5SB:302:HOH:O	2.31	0.61
29:L2B:242:ARG:H	29:L2B:242:ARG:HD2	1.65	0.61
34:L9A:123:LEU:HD23	34:L9A:142:VAL:HG12	1.80	0.61
2:S2B:5:ILE:HG12	2:S2B:55:PHE:CD1	2.35	0.61
29:L2B:71:ASP:N	29:L2B:71:ASP:OD1	2.31	0.61
33:L6A:87:LEU:HD12	33:L6A:131:VAL:HG12	1.81	0.61
3:S3A:73:PRO:HA	3:S3A:76:VAL:HG22	1.83	0.61
9:S9B:4:TYR:CE2	9:S9B:88:TYR:CB	2.84	0.61
28:5SB:24:U:H3	28:5SB:63:G:H1	1.48	0.61
2:S2B:54:THR:HG23	2:S2B:199:TYR:HB3	1.82	0.61
5:S5B:144:THR:N	5:S5B:147:ASP:OD1	2.34	0.61
33:L6B:33:LEU:HB2	33:L6B:75:ALA:HB1	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S5A:90:VAL:O	5:S5A:120:THR:HA	1.99	0.61
33:L6A:98:LEU:HD22	33:L6A:125:VAL:HB	1.83	0.61
30:L3B:176:ILE:HD12	30:L3B:181:LEU:HD23	1.81	0.61
28:5SB:15:A:O2'	28:5SB:17:A:O5'	2.19	0.60
34:L9B:2:LYS:HG3	34:L9B:39:ALA:HB3	1.83	0.60
7:S7B:27:ILE:HA	7:S7B:30:ILE:HD12	1.83	0.60
33:L6B:25:LYS:N	33:L6B:25:LYS:HD2	2.16	0.60
8:S8B:124:ALA:O	8:S8B:128:GLY:N	2.35	0.60
33:L6B:20:ALA:HB1	33:L6B:23:ARG:NH1	2.17	0.60
34:L9B:4:ILE:HG12	34:L9B:18:VAL:HG22	1.82	0.60
7:S7A:49:ILE:O	7:S7A:53:LYS:HB3	2.02	0.60
31:L4A:101:LEU:HD12	31:L4A:102:PRO:HD2	1.83	0.60
2:S2B:97:TRP:HZ3	2:S2B:99:GLY:HA2	1.67	0.60
9:S9B:18:PHE:O	9:S9B:62:TYR:N	2.32	0.60
34:L9B:79:ILE:HG12	34:L9B:104:GLN:OE1	2.02	0.60
33:L6A:87:LEU:CB	33:L6A:163:TYR:O	2.50	0.60
29:L2B:26:LYS:HB3	29:L2B:83:GLU:HG2	1.84	0.60
31:L4B:107:LYS:NZ	31:L4B:205:ARG:O	2.27	0.60
34:L9A:87:LYS:HA	34:L9A:122:GLU:HA	1.83	0.60
3:S3A:116:VAL:HG21	3:S3A:202:ILE:HD11	1.82	0.60
30:L3A:24:THR:HG22	30:L3A:186:GLY:O	2.02	0.60
33:L6A:4:ILE:O	33:L6A:69:ARG:HG2	2.01	0.60
33:L6A:115:VAL:HG11	33:L6A:148:ILE:HD11	1.84	0.60
29:L2B:35:LYS:HG3	29:L2B:36:PRO:HD2	1.83	0.60
30:L3B:87:GLU:H	30:L3B:87:GLU:CD	2.05	0.60
30:L3B:117:MET:O	30:L3B:118:LYS:HG2	2.01	0.60
34:L9B:123:LEU:HA	34:L9B:142:VAL:HG11	1.84	0.60
34:L9A:73:GLU:CD	34:L9A:136:VAL:CG2	2.70	0.60
8:S8A:29:SER:HB3	8:S8A:32:LYS:HG3	1.83	0.59
2:S2A:67:THR:HG21	2:S2A:155:LEU:HD11	1.82	0.59
32:L5A:43:LEU:HD21	32:L5A:153:ARG:HD2	1.84	0.59
9:S9B:19:LEU:HA	9:S9B:61:ALA:HA	1.84	0.59
30:L3A:11:MET:HG2	30:L3A:24:THR:HB	1.83	0.59
34:L9A:40:THR:HB	34:L9A:43:ASN:H	1.67	0.59
2:S2B:178:ARG:NH2	8:S8B:74:PRO:HG3	2.17	0.59
33:L6B:6:ARG:C	33:L6B:8:PRO:HD3	2.22	0.59
4:S4A:128:VAL:HB	4:S4A:133:VAL:HG21	1.84	0.59
7:S7A:20:ASP:OD2	7:S7A:23:VAL:N	2.34	0.59
2:S2B:73:THR:HB	2:S2B:96:ARG:H	1.68	0.59
2:S2B:178:ARG:NH2	8:S8B:68:ARG:HH22	2.01	0.59
29:L2B:12:SER:HB2	29:L2B:208:LYS:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S4B:22:LYS:HB2	4:S4B:26:CYS:SG	2.41	0.59
34:L9B:82:ARG:HH11	34:L9B:90:GLY:HA3	1.67	0.59
4:S4B:191:ARG:NH1	4:S4B:194:LEU:O	2.33	0.59
31:L4B:11:VAL:HG22	31:L4B:125:LEU:HB2	1.84	0.59
6:S6A:82:ARG:HB2	6:S6A:85:VAL:HG23	1.85	0.59
5:S5B:31:LEU:HD11	5:S5B:43:LEU:HD11	1.83	0.59
9:S9B:4:TYR:CE2	9:S9B:88:TYR:CD1	2.91	0.59
32:L5B:64:THR:OG1	32:L5B:94:LEU:HD13	2.03	0.59
4:S4A:61:LYS:HE3	4:S4A:65:ARG:HD3	1.83	0.59
9:S9A:10:ARG:HG3	9:S9A:10:ARG:O	2.03	0.59
2:S2B:137:ARG:C	2:S2B:137:ARG:HH11	2.06	0.59
29:L2A:17:THR:HB	29:L2A:205:VAL:H	1.66	0.58
29:L2A:166:GLN:HB2	29:L2A:174:ILE:HG22	1.85	0.58
6:S6B:17:SER:O	6:S6B:21:LEU:HD23	2.02	0.58
34:L9B:56:LYS:O	34:L9B:60:GLU:N	2.35	0.58
30:L3A:119:ARG:HD3	30:L3A:160:TYR:HB2	1.84	0.58
34:L9A:131:LYS:HA	34:L9A:131:LYS:HE3	1.84	0.58
4:S4B:60:GLU:OE2	4:S4B:199:ASN:N	2.33	0.58
28:5SB:89:G:N2	28:5SB:92:A:OP2	2.36	0.58
29:L2B:182:LEU:N	29:L2B:272:ALA:HB3	2.12	0.58
30:L3B:14:ILE:HD11	30:L3B:173:VAL:HG11	1.85	0.58
4:S4A:98:GLU:OE2	4:S4A:103:ASN:ND2	2.32	0.58
28:5SA:17:A:H1'	28:5SA:112:G:C8	2.38	0.58
6:S6B:9:VAL:HB	6:S6B:87:ARG:HB2	1.85	0.58
31:L4B:40:GLN:NE2	31:L4B:182:ASN:HB2	2.18	0.58
34:L9A:109:ILE:CA	34:L9A:130:TYR:OH	2.51	0.58
31:L4B:184:TYR:CE2	31:L4B:188:ARG:HD2	2.38	0.58
33:L6B:78:GLY:HA3	33:L6B:136:ILE:O	2.02	0.58
28:5SA:42:U:H1'	28:5SA:47:A:H61	1.68	0.58
33:L6A:3:ARG:HD3	33:L6A:5:GLY:H	1.66	0.58
3:S3B:44:GLU:HA	3:S3B:52:LEU:HD11	1.85	0.58
3:S3A:83:ARG:O	3:S3A:86:VAL:HG22	2.04	0.58
31:L4A:9:ILE:HD11	31:L4A:125:LEU:HG	1.86	0.58
29:L2B:17:THR:HG22	29:L2B:205:VAL:H	1.67	0.58
32:L5B:4:ASP:OD2	32:L5B:9:ARG:NH1	2.37	0.58
32:L5B:66:GLN:OE1	32:L5B:98:ARG:NH1	2.35	0.58
5:S5A:8:GLU:HG2	5:S5A:34:VAL:HG22	1.86	0.58
9:S9A:77:ILE:O	9:S9A:81:ILE:HG12	2.04	0.58
2:S2B:5:ILE:HG12	2:S2B:55:PHE:HD1	1.69	0.58
9:S9B:58:HIS:O	9:S9B:59:PHE:CE1	2.49	0.58
29:L2B:238:GLY:O	29:L2B:240:ALA:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S2A:9:GLU:N	2:S2A:9:GLU:OE1	2.37	0.58
3:S3A:36:ASP:HA	3:S3A:39:ILE:HD12	1.85	0.58
8:S8B:103:VAL:HG21	8:S8B:110:ALA:HB2	1.86	0.58
31:L4B:117:ARG:NH1	31:L4B:120:GLU:OE2	2.37	0.58
30:L3B:77:ILE:HG12	30:L3B:195:LEU:HD22	1.86	0.58
2:S2A:7:VAL:HA	2:S2A:217:ARG:HH21	1.69	0.58
4:S4A:105:VAL:HG13	4:S4A:110:PHE:HB2	1.84	0.58
5:S5A:142:LEU:O	5:S5A:143:ARG:NH1	2.31	0.58
8:S8A:9:MET:HG3	8:S8A:26:VAL:HG11	1.86	0.58
29:L2A:16:MET:HG3	29:L2A:207:GLY:HA3	1.85	0.58
33:L6A:87:LEU:HA	33:L6A:164:TYR:HA	1.86	0.58
4:S4B:176:LEU:HG	4:S4B:178:VAL:HG22	1.85	0.58
6:S6B:3:ARG:HG3	6:S6B:93:SER:HB3	1.86	0.58
7:S7A:23:VAL:HG13	7:S7A:43:PHE:CE2	2.39	0.57
31:L4A:28:ILE:HD13	31:L4A:30:PRO:HD3	1.86	0.57
33:L6A:26:VAL:HG21	33:L6A:75:ALA:HB1	1.86	0.57
33:L6A:24:VAL:HG22	33:L6A:35:VAL:HB	1.85	0.57
9:S9B:13:ALA:HB2	9:S9B:68:GLY:HA3	1.85	0.57
31:L4B:149:ASP:N	31:L4B:149:ASP:OD1	2.38	0.57
5:S5B:74:GLY:O	5:S5B:115:VAL:HG23	2.04	0.57
5:S5B:81:GLU:HB3	5:S5B:90:VAL:HG12	1.86	0.57
9:S9B:55:ALA:CB	9:S9B:59:PHE:CD2	2.86	0.57
32:L5B:37:VAL:HG23	32:L5B:99:MET:HE3	1.85	0.57
2:S2A:17:PHE:HD2	2:S2A:44:LEU:HD11	1.69	0.57
3:S3A:11:ARG:O	3:S3A:13:GLY:N	2.38	0.57
3:S3A:20:SER:HB3	3:S3A:40:ARG:HH22	1.67	0.57
4:S4A:201:GLN:O	4:S4A:205:GLU:HG3	2.03	0.57
29:L2A:10:THR:HG23	29:L2A:13:ARG:HB2	1.86	0.57
31:L4A:63:LYS:HE3	31:L4A:67:GLN:HB3	1.87	0.57
32:L5A:124:SER:HB2	32:L5A:131:TYR:CE1	2.40	0.57
2:S2B:236:TYR:HB3	2:S2B:239:VAL:HB	1.87	0.57
3:S3B:50:ALA:HB2	3:S3B:76:VAL:CG1	2.31	0.57
7:S7B:50:ILE:HB	7:S7B:58:PRO:HG3	1.86	0.57
6:S6A:53:ALA:O	6:S6A:54:LYS:HG2	2.05	0.57
9:S9A:70:LYS:O	9:S9A:74:ILE:HG13	2.05	0.57
31:L4A:65:TRP:CB	31:L4A:66:PRO:CD	2.82	0.57
4:S4A:196:LEU:CD1	4:S4A:198:VAL:HB	2.35	0.57
28:5SA:42:U:H3'	28:5SA:43:U:C5'	2.35	0.57
28:5SA:82:U:H2'	28:5SA:83:G:N2	2.16	0.57
29:L2A:10:THR:CG2	29:L2A:13:ARG:HB2	2.35	0.57
8:S8B:49:GLU:HG2	8:S8B:62:TYR:HE2	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:L3B:24:THR:HG23	30:L3B:186:GLY:O	2.05	0.57
34:L9B:78:THR:HG21	34:L9B:140:LEU:HD13	1.86	0.57
29:L2A:112:GLN:H	29:L2A:115:GLN:HE21	1.53	0.57
2:S2B:105:PHE:O	2:S2B:109:SER:N	2.37	0.57
4:S4B:121:VAL:HG22	4:S4B:126:ILE:HG13	1.87	0.56
29:L2B:70:TRP:CH2	29:L2B:150:LYS:HA	2.39	0.56
2:S2A:17:PHE:HB3	2:S2A:44:LEU:HD21	1.87	0.56
4:S4A:109:GLY:HA3	4:S4A:165:MET:SD	2.45	0.56
9:S9A:21:PRO:HA	9:S9A:59:PHE:HA	1.86	0.56
33:L6A:3:ARG:HH11	33:L6A:54:ARG:HH12	1.53	0.56
34:L9A:61:ARG:HH21	34:L9A:64:GLU:HG3	1.70	0.56
5:S5B:48:ALA:HB2	5:S5B:57:LYS:HD3	1.86	0.56
6:S6B:20:ALA:HA	6:S6B:23:LYS:HB2	1.88	0.56
32:L5B:67:LYS:HD3	32:L5B:67:LYS:N	2.17	0.56
2:S2A:80:ILE:HD11	2:S2A:208:ILE:HG23	1.87	0.56
31:L4B:23:ASP:OD1	31:L4B:203:GLN:NE2	2.38	0.56
31:L4B:157:VAL:HB	31:L4B:194:MET:HG2	1.88	0.56
2:S2A:31:TYR:HB3	2:S2A:42:ILE:HD11	1.88	0.56
2:S2A:223:ILE:O	2:S2A:227:GLY:N	2.36	0.56
9:S9A:8:GLY:HA3	9:S9A:76:ALA:O	2.05	0.56
31:L4A:184:TYR:O	31:L4A:188:ARG:HB2	2.06	0.56
34:L9A:113:ARG:HD3	34:L9A:113:ARG:N	2.21	0.56
34:L9A:136:VAL:CG2	34:L9A:137:PRO:CD	2.80	0.56
2:S2B:78:GLN:O	2:S2B:94:ASN:ND2	2.32	0.56
34:L9B:42:SER:HA	34:L9B:45:LYS:HE3	1.86	0.56
9:S9A:3:GLN:HB3	9:S9A:20:ARG:HG2	1.86	0.56
28:5SA:31:A:H2'	28:5SA:32:C:O4'	2.06	0.56
33:L6A:127:GLU:O	33:L6A:129:THR:N	2.39	0.56
3:S3B:152:ILE:HB	3:S3B:199:LYS:HB2	1.88	0.56
9:S9B:74:ILE:O	9:S9B:78:LYS:NZ	2.38	0.56
2:S2A:168:THR:OG1	2:S2A:169:LYS:N	2.39	0.56
3:S3A:130:VAL:O	3:S3A:134:ILE:HG12	2.06	0.56
9:S9A:25:LYS:HB2	9:S9A:60:ASP:OD2	2.06	0.56
32:L5A:146:TYR:O	32:L5A:149:VAL:HG22	2.05	0.56
4:S4A:153:ARG:NE	4:S4A:181:MET:SD	2.63	0.56
4:S4A:187:ARG:NH2	4:S4A:190:ASP:H	2.03	0.56
9:S9A:8:GLY:HA2	9:S9A:79:LEU:HD12	1.88	0.56
2:S2A:92:TYR:CE1	2:S2A:151:GLY:HA3	2.41	0.56
31:L4A:123:LEU:HD12	31:L4A:124:LEU:H	1.70	0.56
33:L6A:30:LYS:HD2	33:L6A:81:GLU:H	1.71	0.56
34:L9A:21:VAL:HG21	34:L9A:25:TYR:HD2	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:5SB:4:C:H2'	28:5SB:5:C:C6	2.41	0.56
28:5SB:16:U:O2'	28:5SB:110:U:O2'	2.13	0.56
30:L3B:9:VAL:CG1	30:L3B:27:LEU:HD23	2.34	0.56
30:L3B:132:HIS:NE2	62:L3B:401:HOH:O	2.33	0.56
34:L9A:79:ILE:HG22	34:L9A:141:LYS:O	2.05	0.55
2:S2B:55:PHE:CD1	2:S2B:221:LEU:HD22	2.40	0.55
31:L4B:135:LYS:HB3	31:L4B:138:GLU:HG3	1.88	0.55
31:L4A:67:GLN:HG3	31:L4A:67:GLN:O	2.04	0.55
5:S5B:105:VAL:HG21	5:S5B:128:PRO:HB3	1.87	0.55
8:S8B:13:ILE:O	8:S8B:17:THR:HG23	2.06	0.55
28:5SB:17:A:H3'	28:5SB:18:G:C5'	2.37	0.55
3:S3B:156:ARG:NH1	3:S3B:193:TYR:O	2.39	0.55
9:S9B:125:TYR:HD1	9:S9B:126:SER:N	2.05	0.55
31:L4B:123:LEU:HD12	31:L4B:124:LEU:H	1.71	0.55
3:S3A:122:GLU:O	3:S3A:126:ARG:HG2	2.07	0.55
5:S5A:48:ALA:HB2	5:S5A:57:LYS:HD3	1.88	0.55
33:L6A:87:LEU:O	33:L6A:87:LEU:CD1	2.46	0.55
3:S3B:19:GLU:HA	3:S3B:54:ARG:HH12	1.71	0.55
28:5SB:4:C:H2'	28:5SB:5:C:H6	1.72	0.55
33:L6B:138:LYS:HA	33:L6B:141:VAL:HG12	1.88	0.55
34:L9B:82:ARG:NH2	34:L9B:96:ASP:OD2	2.39	0.55
30:L3A:195:LEU:HD12	30:L3A:196:VAL:H	1.72	0.55
31:L4A:167:ALA:HB1	31:L4A:173:VAL:HG11	1.88	0.55
34:L9B:70:GLU:O	34:L9B:74:ASN:ND2	2.40	0.55
34:L9B:93:THR:O	34:L9B:97:ILE:HG13	2.06	0.55
2:S2A:28:PHE:HE2	2:S2A:42:ILE:HD12	1.71	0.55
3:S3A:78:GLY:C	3:S3A:79:ARG:HD3	2.27	0.55
34:L9A:113:ARG:O	34:L9A:131:LYS:HD3	2.05	0.55
6:S6A:15:ASP:OD2	6:S6A:17:SER:HB2	2.06	0.55
8:S8B:17:THR:HG22	8:S8B:63:LEU:HD23	1.88	0.55
33:L6B:10:PRO:HG2	33:L6B:50:VAL:C	2.25	0.55
2:S2A:93:VAL:HG11	2:S2A:97:TRP:HA	1.89	0.55
8:S8A:51:VAL:HG21	8:S8A:60:ARG:HG2	1.89	0.55
2:S2A:79:ASP:O	2:S2A:82:ARG:HB3	2.07	0.55
4:S4A:88:VAL:O	4:S4A:89:THR:HB	2.06	0.55
8:S8A:10:LEU:HD22	8:S8A:83:ILE:HD11	1.89	0.55
8:S8B:44:PHE:HD1	8:S8B:80:ILE:HG12	1.71	0.55
32:L5B:49:ASP:HB3	32:L5B:52:ILE:HG22	1.88	0.55
33:L6B:46:GLU:HB3	33:L6B:49:VAL:HG23	1.87	0.55
4:S4A:196:LEU:HD12	4:S4A:198:VAL:HB	1.88	0.55
34:L9A:4:ILE:HG12	34:L9A:18:VAL:HG22	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S4B:173:TRP:CD2	4:S4B:189:PRO:HB3	2.42	0.55
7:S7B:44:TYR:HA	7:S7B:47:CYS:HB3	1.88	0.55
4:S4A:150:GLU:C	4:S4A:152:SER:H	2.09	0.54
5:S5A:102:ALA:HB1	5:S5A:106:PRO:HG2	1.89	0.54
3:S3B:58:GLU:HB3	3:S3B:65:ALA:HB3	1.89	0.54
2:S2A:168:THR:HG21	2:S2A:191:ASP:HB3	1.89	0.54
3:S3A:137:ALA:O	3:S3A:141:VAL:HG23	2.07	0.54
7:S7A:91:VAL:CG2	7:S7A:96:GLN:HG2	2.37	0.54
8:S8A:124:ALA:O	8:S8A:128:GLY:N	2.39	0.54
3:S3B:37:GLN:O	3:S3B:41:GLY:N	2.35	0.54
33:L6B:87:LEU:HB3	33:L6B:162:ILE:HG22	1.89	0.54
3:S3A:70:VAL:HG12	3:S3A:72:LYS:H	1.73	0.54
32:L5A:11:TYR:HA	32:L5A:15:VAL:HB	1.88	0.54
4:S4B:57:ARG:HH22	5:S5B:107:ARG:HD3	1.72	0.54
5:S5B:33:VAL:HG11	5:S5B:109:ILE:HA	1.89	0.54
28:5SA:98:U:H2'	28:5SA:99:G:H8	1.71	0.54
7:S7A:15:ASP:OD1	7:S7A:44:TYR:OH	2.25	0.54
34:L9A:88:ILE:HG12	34:L9A:122:GLU:N	2.22	0.54
6:S6B:15:ASP:O	6:S6B:19:LEU:N	2.35	0.54
28:5SB:47:A:OP2	32:L5B:96:ARG:NH1	2.39	0.54
8:S8B:99:GLU:OE1	8:S8B:99:GLU:N	2.40	0.54
34:L9B:124:GLY:H	34:L9B:142:VAL:HG11	1.72	0.54
3:S3A:188:LEU:CD1	3:S3A:195:VAL:HG13	2.37	0.54
5:S5A:96:PRO:HA	5:S5A:117:ASP:OD2	2.08	0.54
3:S3B:47:LEU:HB3	3:S3B:52:LEU:HD13	1.89	0.54
34:L9B:75:LEU:HD21	34:L9B:105:HIS:CE1	2.43	0.54
2:S2A:87:ARG:HH11	2:S2A:219:VAL:HB	1.72	0.54
30:L3B:179:GLU:HB3	30:L3B:181:LEU:HB2	1.90	0.54
34:L9B:52:ARG:HA	34:L9B:55:ALA:HB3	1.89	0.54
3:S3A:182:ILE:HG13	3:S3A:203:PHE:HD1	1.73	0.54
5:S5A:52:PRO:HA	5:S5A:55:VAL:HG12	1.89	0.54
8:S8A:13:ILE:O	8:S8A:17:THR:HG23	2.08	0.54
8:S8B:122:ARG:NH1	8:S8B:122:ARG:HB2	2.23	0.54
28:5SB:39:C:N3	28:5SB:50:A:O2'	2.37	0.54
5:S5A:100:VAL:O	5:S5A:107:ARG:NH2	2.41	0.53
7:S7A:5:ARG:HB3	7:S7A:7:ALA:H	1.74	0.53
31:L4A:29:ASN:HB3	31:L4A:112:MET:HE1	1.90	0.53
33:L6B:76:VAL:HA	33:L6B:79:VAL:HG22	1.90	0.53
3:S3A:57:ILE:HG12	3:S3A:66:VAL:HG22	1.89	0.53
8:S8A:97:VAL:HG23	8:S8A:100:ILE:HD12	1.88	0.53
2:S2B:187:LEU:HD11	2:S2B:204:ASN:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S3A:7:PRO:O	3:S3A:11:ARG:HG2	2.07	0.53
4:S4A:49:ARG:H	4:S4A:49:ARG:HD3	1.72	0.53
30:L3A:176:ILE:HB	30:L3A:181:LEU:HB2	1.89	0.53
34:L9A:6:LEU:H	34:L9A:36:ALA:HA	1.73	0.53
33:L6B:46:GLU:OE1	33:L6B:51:ARG:NH1	2.41	0.53
4:S4B:162:LEU:HD13	4:S4B:181:MET:HE2	1.89	0.53
8:S8B:44:PHE:CD1	8:S8B:80:ILE:HG12	2.44	0.53
28:5SB:47:A:C4	28:5SB:48:A:C8	2.97	0.53
2:S2A:54:THR:HG21	2:S2A:201:ILE:HD11	1.90	0.53
8:S8A:83:ILE:HG13	8:S8A:137:VAL:HG22	1.89	0.53
30:L3B:120:TRP:CG	30:L3B:155:LYS:HB3	2.44	0.53
30:L3B:170:LEU:HD23	30:L3B:184:VAL:HB	1.91	0.53
3:S3A:95:THR:HG23	3:S3A:97:LYS:HE2	1.89	0.53
30:L3A:179:GLU:HB3	30:L3A:181:LEU:HD13	1.91	0.53
33:L6A:85:LYS:HE3	33:L6A:142:GLY:HA2	1.90	0.53
34:L9A:11:ASN:O	34:L9A:12:LEU:HB2	2.09	0.53
34:L9A:135:GLU:OE1	34:L9A:135:GLU:N	2.41	0.53
34:L9B:38:LEU:H	34:L9B:38:LEU:HD12	1.74	0.53
3:S3B:14:ILE:O	3:S3B:15:THR:HG22	2.08	0.53
5:S5B:100:VAL:HG23	5:S5B:107:ARG:NH2	2.24	0.53
33:L6B:10:PRO:HB2	33:L6B:50:VAL:HG12	1.90	0.53
34:L9A:110:ASP:N	34:L9A:130:TYR:OH	2.42	0.53
3:S3B:118:GLN:HG3	3:S3B:187:ALA:HB2	1.91	0.53
2:S2A:69:LEU:HB3	2:S2A:162:ILE:HG22	1.90	0.53
5:S5A:45:PHE:CE2	5:S5A:47:LYS:HD2	2.44	0.53
33:L6A:103:LEU:HB3	33:L6A:115:VAL:HB	1.90	0.53
2:S2B:59:GLU:HB2	2:S2B:221:LEU:HD21	1.90	0.53
4:S4A:88:VAL:HG12	4:S4A:91:SER:H	1.74	0.52
28:5SA:16:U:H4'	28:5SA:17:A:OP2	2.09	0.52
9:S9B:4:TYR:CZ	9:S9B:88:TYR:CG	2.97	0.52
31:L4B:153:SER:OG	31:L4B:190:GLU:HG3	2.09	0.52
5:S5A:28:PHE:O	5:S5A:47:LYS:HA	2.09	0.52
6:S6A:6:VAL:HG22	6:S6A:90:VAL:HG22	1.91	0.52
33:L6A:41:MET:HA	33:L6A:53:GLU:O	2.08	0.52
2:S2B:7:VAL:HG22	2:S2B:8:LYS:H	1.75	0.52
30:L3B:120:TRP:CD1	30:L3B:155:LYS:HB3	2.45	0.52
5:S5A:18:ARG:NH2	5:S5A:27:ARG:HE	2.08	0.52
31:L4A:107:LYS:HE3	31:L4A:206:ILE:HD12	1.91	0.52
33:L6A:131:VAL:HG22	33:L6A:132:ARG:H	1.75	0.52
28:5SB:15:A:N1	28:5SB:71:G:O2'	2.32	0.52
28:5SB:19:C:H2'	28:5SB:20:G:O4'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S5A:31:LEU:HD22	5:S5A:43:LEU:HD11	1.90	0.52
2:S2B:121:LEU:HA	2:S2B:124:SER:HB3	1.91	0.52
3:S3B:91:LEU:HB3	3:S3B:99:VAL:HG11	1.92	0.52
8:S8B:97:VAL:HA	8:S8B:100:ILE:HD11	1.91	0.52
5:S5A:81:GLU:HG2	5:S5A:90:VAL:HG22	1.91	0.52
6:S6A:67:MET:HB2	6:S6A:68:PRO:HD2	1.92	0.52
31:L4A:65:TRP:CZ3	31:L4A:73:ALA:O	2.62	0.52
32:L5A:55:LYS:O	32:L5A:58:GLN:HG3	2.09	0.52
34:L9A:25:TYR:HE1	34:L9A:29:TYR:CD2	2.28	0.52
34:L9A:93:THR:O	34:L9A:97:ILE:HG13	2.09	0.52
2:S2B:165:VAL:HA	2:S2B:187:LEU:HB3	1.90	0.52
30:L3B:174:ASP:HB3	30:L3B:183:LEU:HD22	1.91	0.52
31:L4B:185:ASP:HA	31:L4B:188:ARG:HD3	1.91	0.52
33:L6B:69:ARG:NH1	33:L6B:73:ALA:HB2	2.24	0.52
4:S4B:117:ALA:O	4:S4B:121:VAL:HG23	2.10	0.52
9:S9B:19:LEU:HD23	9:S9B:19:LEU:H	1.74	0.52
34:L9B:124:GLY:H	34:L9B:142:VAL:CG1	2.22	0.52
4:S4A:13:ARG:HB2	4:S4A:40:PRO:HD3	1.92	0.52
9:S9A:46:ALA:HA	9:S9A:78:LYS:HB2	1.92	0.52
31:L4B:22:ALA:HB1	31:L4B:24:LEU:HD13	1.92	0.52
34:L9B:144:VAL:HG22	34:L9B:145:VAL:H	1.75	0.52
29:L2A:260:ARG:HH22	29:L2A:266:SER:HG	1.55	0.52
31:L4A:125:LEU:HA	31:L4A:194:MET:O	2.10	0.52
32:L5A:4:ASP:OD2	32:L5A:9:ARG:NH1	2.43	0.52
32:L5A:66:GLN:OE1	32:L5A:98:ARG:NH1	2.43	0.52
33:L6A:154:PRO:HB3	33:L6A:163:TYR:CE2	2.45	0.52
4:S4B:106:TYR:HE1	4:S4B:112:VAL:O	1.93	0.52
29:L2A:77:ALA:HB2	29:L2A:97:TYR:CD1	2.44	0.52
33:L6A:164:TYR:N	33:L6A:167:GLU:OE1	2.40	0.52
3:S3B:50:ALA:HB1	3:S3B:70:VAL:HG11	1.91	0.52
8:S8B:12:ARG:NH1	8:S8B:27:PRO:HD3	2.25	0.52
32:L5B:7:LEU:HA	32:L5B:10:LYS:HB3	1.91	0.52
32:L5B:37:VAL:O	32:L5B:94:LEU:HD23	2.09	0.52
4:S4A:166:LYS:HG3	4:S4A:178:VAL:HG11	1.91	0.51
3:S3A:123:GLN:O	3:S3A:128:PHE:HB2	2.10	0.51
4:S4A:142:PRO:HB3	4:S4A:186:LEU:O	2.10	0.51
6:S6A:16:GLN:HA	6:S6A:19:LEU:HB3	1.90	0.51
4:S4A:65:ARG:NH1	4:S4A:70:ILE:O	2.43	0.51
28:5SA:34:C:C2	28:5SA:53:G:N2	2.77	0.51
31:L4A:11:VAL:HG22	31:L4A:125:LEU:HB2	1.92	0.51
31:L4A:65:TRP:CZ3	31:L4A:72:ARG:CB	2.86	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S6B:79:LEU:O	6:S6B:85:VAL:HG11	2.11	0.51
3:S3A:11:ARG:HH21	3:S3A:180:ALA:HB3	1.75	0.51
3:S3A:134:ILE:HG22	3:S3A:168:ALA:HB3	1.92	0.51
34:L9A:82:ARG:HH21	34:L9A:145:VAL:HG13	1.75	0.51
5:S5B:72:GLN:O	5:S5B:75:THR:HG22	2.10	0.51
7:S7B:31:MET:HA	7:S7B:39:ALA:HB2	1.92	0.51
31:L4B:178:PRO:HB3	31:L4B:198:ALA:CB	2.40	0.51
33:L6B:122:THR:HG22	33:L6B:123:PHE:H	1.74	0.51
2:S2A:84:GLU:HB3	2:S2A:219:VAL:HG21	1.93	0.51
3:S3A:87:LEU:O	3:S3A:91:LEU:HG	2.10	0.51
28:5SA:50:A:H2'	28:5SA:51:C:C6	2.46	0.51
3:S3B:88:ARG:HA	3:S3B:91:LEU:HD12	1.91	0.51
3:S3B:179:ARG:HD2	3:S3B:207:VAL:H	1.76	0.51
30:L3B:1:MET:N	30:L3B:200:GLU:HG2	2.26	0.51
31:L4B:129:PHE:O	31:L4B:131:GLY:N	2.40	0.51
3:S3A:150:LYS:HG3	3:S3A:169:ALA:HB2	1.92	0.51
2:S2B:8:LYS:HE3	2:S2B:11:LEU:HD22	1.93	0.51
2:S2B:167:PRO:O	2:S2B:171:ALA:HB2	2.10	0.51
6:S6B:67:MET:HB2	6:S6B:68:PRO:HD2	1.92	0.51
30:L3B:40:GLU:HG3	30:L3B:41:LYS:N	2.26	0.51
34:L9B:133:HIS:ND1	34:L9B:134:PRO:HD3	2.26	0.51
7:S7A:26:PHE:O	7:S7A:30:ILE:HG13	2.11	0.51
31:L4A:129:PHE:O	31:L4A:131:GLY:N	2.38	0.51
3:S3B:188:LEU:O	3:S3B:190:ARG:NH1	2.44	0.51
34:L9A:46:ALA:O	34:L9A:50:ARG:HD3	2.11	0.51
34:L9A:69:LYS:HG2	34:L9A:136:VAL:CG2	2.38	0.51
2:S2B:178:ARG:HH21	8:S8B:74:PRO:HG3	1.76	0.51
5:S5A:81:GLU:CG	5:S5A:90:VAL:HG22	2.41	0.51
7:S7A:29:LYS:HG3	7:S7A:101:LEU:HD13	1.92	0.51
28:5SA:89:G:C2	28:5SA:91:G:H5''	2.45	0.51
34:L9A:57:ARG:NH1	34:L9A:61:ARG:HD2	2.26	0.51
2:S2B:22:LYS:HA	2:S2B:24:TRP:HD1	1.76	0.51
33:L6B:87:LEU:HD22	33:L6B:149:ARG:HG3	1.93	0.51
2:S2A:165:VAL:HG23	2:S2A:166:ASP:H	1.76	0.51
2:S2B:21:ARG:HA	2:S2B:39:ILE:HA	1.93	0.51
8:S8B:104:ARG:HB3	8:S8B:108:GLY:H	1.75	0.51
29:L2A:232:PRO:HB3	29:L2A:244:ARG:NH1	2.26	0.50
8:S8A:81:HIS:HB2	8:S8A:138:TRP:CZ3	2.46	0.50
34:L9A:2:LYS:HE3	34:L9A:20:ASP:HB3	1.93	0.50
2:S2A:46:LYS:HA	2:S2A:49:GLU:HB2	1.93	0.50
9:S9A:16:ARG:HB2	9:S9A:64:THR:HB	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:L4A:134:GLY:HA2	31:L4A:166:ALA:HB2	1.92	0.50
34:L9A:114:LEU:CD1	34:L9A:130:TYR:HA	2.38	0.50
29:L2B:134:ARG:HG3	29:L2B:135:PHE:CE1	2.46	0.50
32:L5B:114:ILE:HD13	32:L5B:140:ILE:HG21	1.93	0.50
4:S4A:173:TRP:CD2	4:S4A:189:PRO:HB3	2.47	0.50
4:S4A:175:SER:HB3	4:S4A:184:LYS:HB2	1.93	0.50
9:S9A:97:LYS:HB2	9:S9A:102:LEU:HD12	1.93	0.50
2:S2B:137:ARG:HH12	2:S2B:141:GLU:N	2.08	0.50
2:S2B:137:ARG:HH12	2:S2B:141:GLU:H	1.60	0.50
32:L5B:106:LEU:HD12	32:L5B:110:ALA:HB3	1.94	0.50
33:L6B:87:LEU:HA	33:L6B:163:TYR:O	2.11	0.50
34:L9B:109:ILE:HB	34:L9B:130:TYR:OH	2.12	0.50
2:S2B:92:TYR:CE2	2:S2B:151:GLY:HA3	2.46	0.50
8:S8B:87:SER:HB2	8:S8B:93:VAL:HB	1.92	0.50
32:L5B:18:GLU:HG2	32:L5B:175:LEU:HD13	1.93	0.50
32:L5B:80:PHE:O	32:L5B:82:LEU:HB2	2.11	0.50
34:L9B:81:VAL:HA	34:L9B:143:SER:HB2	1.93	0.50
3:S3A:79:ARG:NH2	3:S3A:82:GLU:HG3	2.27	0.50
9:S9A:65:VAL:HG21	9:S9A:77:ILE:HD11	1.94	0.50
31:L4A:178:PRO:HG2	31:L4A:179:GLU:OE2	2.11	0.50
4:S4B:3:ARG:NH2	4:S4B:5:ILE:HG13	2.26	0.50
5:S5B:35:GLY:HA3	5:S5B:112:LEU:HB3	1.94	0.50
30:L3B:14:ILE:HG13	30:L3B:21:VAL:HG13	1.94	0.50
5:S5A:33:VAL:HG11	5:S5A:109:ILE:HA	1.93	0.50
7:S7A:38:LEU:HD12	7:S7A:41:ARG:HD2	1.94	0.50
33:L6A:15:VAL:HG12	33:L6A:29:PRO:HD2	1.92	0.50
30:L3B:9:VAL:HG22	30:L3B:25:VAL:O	2.11	0.50
3:S3A:14:ILE:HG12	3:S3A:15:THR:OG1	2.12	0.50
9:S9A:26:VAL:HB	9:S9A:33:PHE:HB2	1.94	0.50
33:L6A:54:ARG:NE	33:L6A:57:ASP:OD1	2.40	0.50
33:L6A:171:LEU:N	33:L6A:171:LEU:CD1	2.73	0.50
2:S2B:64:ARG:HD2	2:S2B:64:ARG:O	2.11	0.50
2:S2B:221:LEU:HG	2:S2B:221:LEU:O	2.11	0.50
3:S3B:28:GLN:OE1	3:S3B:28:GLN:N	2.45	0.50
8:S8A:4:ASP:OD2	8:S8A:85:ARG:NH1	2.45	0.50
8:S8A:37:ARG:O	8:S8A:41:ARG:HB2	2.12	0.50
4:S4B:3:ARG:O	4:S4B:5:ILE:HD12	2.12	0.50
29:L2B:10:THR:OG1	29:L2B:13:ARG:HB2	2.12	0.50
32:L5B:59:GLU:HG3	32:L5B:144:ILE:HD11	1.94	0.50
29:L2A:33:LEU:O	29:L2A:64:ILE:HG22	2.12	0.49
32:L5A:107:LEU:HD22	32:L5A:178:PHE:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S3B:6:HIS:HD2	3:S3B:8:ILE:H	1.58	0.49
33:L6B:20:ALA:HB3	33:L6B:23:ARG:O	2.12	0.49
2:S2A:5:ILE:CD1	2:S2A:221:LEU:HD23	2.41	0.49
2:S2A:24:TRP:CZ3	2:S2A:26:PRO:HA	2.47	0.49
8:S8A:21:LYS:O	8:S8A:65:TYR:OH	2.23	0.49
8:S8A:44:PHE:HB3	8:S8A:80:ILE:HD11	1.94	0.49
8:S8A:121:ASP:OD1	8:S8A:121:ASP:N	2.45	0.49
31:L4A:181:LEU:HD22	31:L4A:186:ILE:HD11	1.93	0.49
2:S2A:10:LEU:O	2:S2A:13:ALA:N	2.34	0.49
8:S8B:122:ARG:HA	8:S8B:125:ARG:HB2	1.93	0.49
9:S9B:17:VAL:HA	9:S9B:63:ILE:HG23	1.93	0.49
30:L3B:169:ASN:HD22	30:L3B:203:LYS:HB2	1.77	0.49
6:S6A:62:TRP:C	6:S6A:63:TYR:HD1	2.16	0.49
8:S8A:6:ILE:HB	8:S8A:85:ARG:NH1	2.28	0.49
9:S9B:63:ILE:HD11	9:S9B:81:ILE:HD11	1.93	0.49
32:L5B:102:PHE:HE1	32:L5B:141:PHE:HE1	1.60	0.49
2:S2B:76:GLN:O	2:S2B:208:ILE:HG12	2.11	0.49
33:L6B:148:ILE:H	33:L6B:148:ILE:HD12	1.77	0.49
2:S2A:71:VAL:HG12	2:S2A:93:VAL:HB	1.94	0.49
9:S9A:3:GLN:OE1	9:S9A:20:ARG:NH1	2.45	0.49
31:L4A:127:GLU:C	31:L4A:129:PHE:H	2.14	0.49
31:L4A:197:ASP:O	31:L4A:198:ALA:HB3	2.12	0.49
34:L9A:38:LEU:HD12	34:L9A:40:THR:OG1	2.11	0.49
34:L9A:81:VAL:HG21	34:L9A:88:ILE:HD12	1.93	0.49
9:S9B:99:LEU:HB3	9:S9B:101:PHE:CE2	2.47	0.49
34:L9B:31:LEU:HD21	34:L9B:38:LEU:HG	1.94	0.49
34:L9B:81:VAL:HA	34:L9B:143:SER:CB	2.41	0.49
6:S6A:21:LEU:O	6:S6A:25:ILE:HG12	2.13	0.49
7:S7A:65:ALA:O	7:S7A:69:VAL:HG23	2.13	0.49
29:L2A:148:GLU:HB2	29:L2A:151:LYS:HD2	1.95	0.49
33:L6A:83:TYR:HD2	33:L6A:132:ARG:HH12	1.61	0.49
34:L9A:92:VAL:CG1	34:L9A:120:ILE:HG23	2.43	0.49
3:S3B:199:LYS:HB3	3:S3B:201:TYR:HE1	1.78	0.49
29:L2B:105:ILE:HD11	29:L2B:192:THR:HG21	1.94	0.49
31:L4B:167:ALA:HA	31:L4B:170:LEU:HD23	1.95	0.49
5:S5A:67:VAL:HG21	5:S5A:140:ARG:HA	1.95	0.49
2:S2B:88:ALA:O	2:S2B:226:ARG:NH1	2.46	0.49
28:5SB:111:C:H5'	28:5SB:112:G:H5'	1.95	0.49
29:L2B:65:ILE:HD11	29:L2B:67:PHE:CZ	2.48	0.49
31:L4B:24:LEU:HD21	31:L4B:114:VAL:HG12	1.95	0.49
31:L4B:185:ASP:OD1	31:L4B:188:ARG:NH1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S4A:9:CYS:HB3	4:S4A:32:ALA:HB3	1.94	0.49
4:S4A:58:LEU:O	4:S4A:62:GLN:HG2	2.13	0.49
8:S8A:121:ASP:HB2	8:S8A:125:ARG:NH2	2.28	0.49
29:L2A:95:LEU:CD1	29:L2A:97:TYR:CE2	2.95	0.49
29:L2A:125:ILE:HD12	29:L2A:137:PRO:HD3	1.95	0.49
32:L5A:170:ARG:HE	32:L5A:174:GLU:CG	2.25	0.49
33:L6A:45:VAL:HG23	33:L6A:50:VAL:HG12	1.95	0.49
2:S2B:145:LEU:O	2:S2B:149:LEU:HB2	2.13	0.49
6:S6B:4:TYR:CZ	6:S6B:72:VAL:HG11	2.47	0.49
8:S8B:39:LEU:CD1	8:S8B:44:PHE:CB	2.91	0.49
31:L4B:110:LEU:HD11	31:L4B:181:LEU:HB3	1.95	0.49
31:L4B:197:ASP:N	31:L4B:197:ASP:OD1	2.45	0.49
32:L5B:6:ALA:O	32:L5B:10:LYS:N	2.25	0.49
29:L2A:72:LYS:NZ	29:L2A:99:ASP:OD2	2.45	0.49
31:L4A:11:VAL:HB	31:L4A:18:ARG:HG3	1.94	0.49
4:S4B:103:ASN:OD1	4:S4B:114:ARG:NH2	2.45	0.49
33:L6B:76:VAL:O	33:L6B:79:VAL:HG22	2.13	0.49
4:S4A:25:ARG:HG3	4:S4A:30:LYS:HG3	1.95	0.48
7:S7A:27:ILE:HA	7:S7A:30:ILE:HD12	1.95	0.48
8:S8A:39:LEU:HB3	8:S8A:45:ILE:HG12	1.94	0.48
4:S4B:165:MET:SD	4:S4B:168:ARG:NH1	2.85	0.48
5:S5B:51:VAL:O	5:S5B:55:VAL:HG23	2.13	0.48
29:L2B:17:THR:HG23	29:L2B:204:ILE:HA	1.95	0.48
32:L5B:61:ALA:HA	32:L5B:66:GLN:O	2.12	0.48
4:S4A:187:ARG:NH2	4:S4A:189:PRO:HA	2.28	0.48
9:S9A:29:ASN:OD1	9:S9A:64:THR:HA	2.14	0.48
30:L3A:97:LYS:O	30:L3A:100:GLU:HG3	2.12	0.48
29:L2B:148:GLU:HB2	29:L2B:151:LYS:HD2	1.95	0.48
32:L5B:56:ALA:HB2	32:L5B:153:ARG:HE	1.79	0.48
2:S2A:37:ASN:C	2:S2A:39:ILE:H	2.16	0.48
31:L4A:143:ALA:HB1	31:L4A:148:LEU:HB2	1.96	0.48
34:L9A:60:GLU:O	34:L9A:64:GLU:HG2	2.13	0.48
4:S4B:105:VAL:HG13	4:S4B:110:PHE:HB2	1.94	0.48
7:S7B:26:PHE:CE2	7:S7B:30:ILE:HD11	2.48	0.48
29:L2B:132:PRO:HD3	29:L2B:190:TYR:CE2	2.48	0.48
29:L2B:242:ARG:HD2	29:L2B:242:ARG:N	2.27	0.48
33:L6B:18:GLU:O	33:L6B:24:VAL:HG23	2.12	0.48
2:S2A:158:LEU:HD12	2:S2A:158:LEU:O	2.13	0.48
7:S7A:13:GLN:O	7:S7A:24:THR:HG21	2.14	0.48
9:S9A:48:GLU:N	9:S9A:49:PRO:HD2	2.28	0.48
31:L4A:168:ARG:HG3	31:L4A:175:THR:HG21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S2B:52:GLU:HB3	2:S2B:56:ARG:HH21	1.78	0.48
31:L4B:101:LEU:O	31:L4B:106:ARG:NH1	2.45	0.48
2:S2A:44:LEU:O	2:S2A:47:THR:HB	2.14	0.48
2:S2A:219:VAL:O	2:S2A:223:ILE:HG13	2.12	0.48
32:L5A:131:TYR:HB3	32:L5A:159:VAL:HG22	1.93	0.48
2:S2B:27:LYS:HB2	2:S2B:193:ASP:HB2	1.95	0.48
3:S3B:44:GLU:HA	3:S3B:52:LEU:HD21	1.94	0.48
2:S2A:132:LYS:HA	2:S2A:135:GLN:HB2	1.96	0.48
4:S4A:65:ARG:HG2	4:S4A:75:PHE:CE2	2.48	0.48
6:S6A:20:ALA:HA	6:S6A:23:LYS:HB2	1.94	0.48
6:S6A:86:ARG:O	6:S6A:87:ARG:HG2	2.13	0.48
31:L4A:24:LEU:HD21	31:L4A:114:VAL:HG12	1.95	0.48
33:L6A:20:ALA:HB3	33:L6A:23:ARG:HG3	1.94	0.48
33:L6A:88:LEU:N	33:L6A:88:LEU:CD1	2.76	0.48
2:S2B:60:ASP:HA	2:S2B:63:MET:HE2	1.96	0.48
9:S9B:45:ALA:HA	9:S9B:51:ARG:HH12	1.77	0.48
30:L3B:11:MET:CG	30:L3B:24:THR:HG22	2.41	0.48
34:L9A:69:LYS:HG2	34:L9A:136:VAL:HG21	1.94	0.48
2:S2B:82:ARG:O	2:S2B:86:GLU:HG3	2.13	0.48
5:S5B:76:ILE:HD13	5:S5B:118:ILE:HD13	1.94	0.48
30:L3B:77:ILE:HD11	30:L3B:79:ARG:NH2	2.29	0.48
2:S2A:47:THR:O	2:S2A:51:LEU:HG	2.14	0.48
2:S2B:12:GLU:HG2	2:S2B:12:GLU:O	2.14	0.48
9:S9B:28:VAL:HG11	9:S9B:65:VAL:HG12	1.95	0.48
29:L2B:210:GLY:O	29:L2B:213:ARG:N	2.47	0.48
30:L3B:2:LYS:NZ	30:L3B:95:ILE:O	2.36	0.48
34:L9B:71:ILE:HG23	34:L9B:72:LEU:HG	1.95	0.48
34:L9B:127:VAL:HA	34:L9B:138:ILE:O	2.13	0.48
4:S4A:31:CYS:SG	4:S4A:33:MET:HB2	2.54	0.48
31:L4A:24:LEU:HD23	31:L4A:115:ALA:HA	1.95	0.48
32:L5A:106:LEU:HD12	32:L5A:110:ALA:HB3	1.95	0.48
2:S2B:154:LEU:O	2:S2B:155:LEU:HD22	2.14	0.48
2:S2B:185:ILE:HG22	2:S2B:199:TYR:HB2	1.96	0.48
3:S3B:29:TYR:HE1	3:S3B:33:LEU:HD22	1.79	0.48
29:L2B:18:VAL:HG23	29:L2B:211:ARG:NH2	2.28	0.48
34:L9B:92:VAL:HB	34:L9B:120:ILE:HB	1.95	0.48
4:S4A:196:LEU:O	4:S4A:198:VAL:N	2.43	0.47
6:S6A:43:LEU:H	6:S6A:43:LEU:HD12	1.79	0.47
6:S6A:44:GLY:HA2	6:S6A:59:TYR:CE1	2.48	0.47
32:L5A:16:ARG:HB3	32:L5A:17:PRO:HD3	1.96	0.47
6:S6B:82:ARG:HB2	6:S6B:85:VAL:HG23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:L6B:35:VAL:HG11	33:L6B:71:LEU:HB3	1.95	0.47
34:L9B:143:SER:OG	34:L9B:144:VAL:N	2.47	0.47
2:S2A:71:VAL:HG23	2:S2A:164:VAL:HG13	1.96	0.47
4:S4A:33:MET:CE	4:S4A:37:PRO:HA	2.41	0.47
32:L5A:47:LYS:HD3	32:L5A:81:LYS:HB2	1.96	0.47
32:L5A:55:LYS:HE3	32:L5A:59:GLU:OE2	2.14	0.47
7:S7B:26:PHE:CD2	7:S7B:30:ILE:HD11	2.49	0.47
6:S6A:69:GLU:O	6:S6A:72:VAL:HG12	2.14	0.47
33:L6A:12:PRO:C	33:L6A:14:GLY:H	2.17	0.47
7:S7B:79:ARG:HG2	7:S7B:84:ASN:HB2	1.95	0.47
31:L4B:16:GLY:O	31:L4B:18:ARG:N	2.42	0.47
32:L5B:32:PRO:HB2	32:L5B:172:LEU:HD22	1.94	0.47
4:S4A:108:LEU:HD11	4:S4A:174:LEU:HD22	1.97	0.47
4:S4A:117:ALA:O	4:S4A:121:VAL:HG23	2.15	0.47
34:L9A:88:ILE:O	34:L9A:121:LYS:HE3	2.14	0.47
30:L3B:21:VAL:HG23	30:L3B:185:LYS:HD3	1.96	0.47
32:L5B:41:GLN:O	32:L5B:89:GLY:HA2	2.15	0.47
28:5SA:98:U:H2'	28:5SA:99:G:C8	2.49	0.47
32:L5A:34:LEU:HB2	32:L5A:172:LEU:HD21	1.97	0.47
3:S3B:6:HIS:CD2	3:S3B:7:PRO:HD2	2.50	0.47
4:S4B:99:SER:O	4:S4B:140:VAL:HG23	2.14	0.47
28:5SB:13:C:H3'	28:5SB:14:C:C5	2.50	0.47
28:5SB:82:U:H2'	28:5SB:83:G:N2	2.27	0.47
30:L3B:51:PHE:HB3	30:L3B:77:ILE:CG2	2.44	0.47
30:L3B:144:ARG:HB3	30:L3B:145:LYS:H	1.54	0.47
31:L4B:56:GLU:OE2	31:L4B:93:LYS:NZ	2.40	0.47
9:S9A:10:ARG:HD3	9:S9A:75:ASP:HB2	1.97	0.47
9:S9A:45:ALA:O	9:S9A:78:LYS:HE3	2.14	0.47
28:5SA:42:U:H1'	28:5SA:47:A:N6	2.29	0.47
33:L6A:9:ILE:HG22	33:L6A:69:ARG:NE	2.30	0.47
34:L9A:69:LYS:HE3	34:L9A:136:VAL:HG23	1.96	0.47
2:S2B:73:THR:OG1	2:S2B:170:GLU:OE2	2.20	0.47
9:S9B:4:TYR:O	9:S9B:18:PHE:HA	2.14	0.47
33:L6B:154:PRO:HA	33:L6B:161:GLY:HA3	1.96	0.47
3:S3A:119:ARG:O	3:S3A:123:GLN:HG3	2.15	0.47
7:S7A:23:VAL:HG13	7:S7A:43:PHE:HE2	1.79	0.47
31:L4A:29:ASN:H	31:L4A:112:MET:HE3	1.79	0.47
33:L6A:16:SER:O	33:L6A:26:VAL:O	2.32	0.47
33:L6A:121:ILE:HG12	33:L6A:140:LYS:HD3	1.95	0.47
2:S2B:86:GLU:C	2:S2B:88:ALA:H	2.17	0.47
2:S2B:158:LEU:H	2:S2B:158:LEU:HD12	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S2B:215:LEU:HD13	2:S2B:218:ALA:HB3	1.96	0.47
3:S3B:62:ASP:O	3:S3B:97:LYS:HB2	2.15	0.47
28:5SB:47:A:H8	28:5SB:47:A:OP1	1.98	0.47
29:L2B:183:ARG:HG3	29:L2B:184:LYS:N	2.30	0.47
30:L3B:97:LYS:N	30:L3B:100:GLU:OE2	2.47	0.47
33:L6B:7:LEU:HB3	33:L6B:65:HIS:HE1	1.78	0.47
8:S8A:97:VAL:HA	8:S8A:100:ILE:HG13	1.96	0.47
30:L3A:120:TRP:CD1	30:L3A:155:LYS:HB3	2.50	0.47
2:S2A:42:ILE:CD1	2:S2A:202:PRO:HB2	2.45	0.47
3:S3A:19:GLU:O	3:S3A:56:ASP:HA	2.15	0.47
5:S5A:52:PRO:O	5:S5A:55:VAL:HG12	2.15	0.47
8:S8A:104:ARG:O	8:S8A:107:LEU:HB2	2.15	0.47
9:S9A:48:GLU:HB2	9:S9A:78:LYS:HE2	1.97	0.47
29:L2A:111:LEU:HA	29:L2A:115:GLN:NE2	2.30	0.47
32:L5A:60:LEU:O	32:L5A:64:THR:HG23	2.15	0.47
2:S2B:143:GLU:O	2:S2B:147:LYS:HB2	2.14	0.47
29:L2B:53:PHE:CE2	29:L2B:220:HIS:ND1	2.83	0.47
31:L4B:66:PRO:O	31:L4B:67:GLN:HB3	2.14	0.47
31:L4A:178:PRO:HB3	31:L4A:198:ALA:HB1	1.96	0.47
33:L6A:169:VAL:HG22	33:L6A:171:LEU:HD11	1.97	0.47
31:L4B:6:VAL:HG21	31:L4B:119:ARG:HG3	1.97	0.47
31:L4B:123:LEU:HD12	31:L4B:124:LEU:N	2.30	0.47
32:L5B:129:GLY:HA2	32:L5B:166:ASP:HA	1.96	0.47
3:S3A:73:PRO:O	3:S3A:76:VAL:HG22	2.15	0.46
3:S3A:91:LEU:HD11	3:S3A:101:LEU:HD12	1.96	0.46
4:S4A:25:ARG:NH2	4:S4A:30:LYS:HB2	2.30	0.46
31:L4A:16:GLY:O	31:L4A:18:ARG:N	2.44	0.46
31:L4A:183:VAL:O	31:L4A:187:VAL:HG23	2.15	0.46
34:L9A:82:ARG:HE	34:L9A:145:VAL:HG22	1.79	0.46
8:S8B:39:LEU:HD12	8:S8B:44:PHE:HB2	1.96	0.46
34:L9B:79:ILE:N	34:L9B:80:PRO:HD3	2.30	0.46
2:S2A:112:VAL:HG22	2:S2A:149:LEU:HD13	1.97	0.46
2:S2B:17:PHE:CE2	2:S2B:44:LEU:HB3	2.50	0.46
8:S8B:39:LEU:CD1	8:S8B:44:PHE:HB2	2.45	0.46
31:L4B:181:LEU:HD23	31:L4B:181:LEU:HA	1.82	0.46
2:S2A:96:ARG:HD2	2:S2A:96:ARG:N	2.30	0.46
2:S2B:15:VAL:HG23	2:S2B:16:HIS:CE1	2.50	0.46
5:S5B:147:ASP:O	5:S5B:151:LEU:HD23	2.16	0.46
7:S7B:74:GLU:O	7:S7B:88:PRO:HA	2.15	0.46
9:S9B:26:VAL:HG13	9:S9B:61:ALA:HB3	1.97	0.46
30:L3B:4:ILE:HD13	30:L3B:28:ALA:HB1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:L6B:89:ILE:HG22	33:L6B:94:TYR:CD2	2.50	0.46
34:L9B:2:LYS:HA	34:L9B:20:ASP:HA	1.96	0.46
3:S3A:79:ARG:O	3:S3A:79:ARG:HG2	2.16	0.46
4:S4A:190:ASP:HB2	4:S4A:193:ASP:OD1	2.16	0.46
29:L2A:172:TYR:HB3	29:L2A:184:LYS:HB3	1.97	0.46
29:L2A:238:GLY:O	29:L2A:240:ALA:N	2.49	0.46
6:S6B:76:ALA:O	6:S6B:80:ARG:HG3	2.15	0.46
29:L2B:155:LEU:HD23	29:L2B:177:LEU:HD22	1.97	0.46
3:S3A:64:VAL:HG12	3:S3A:66:VAL:HG23	1.98	0.46
4:S4A:108:LEU:HB3	4:S4A:110:PHE:CD1	2.50	0.46
4:S4A:108:LEU:HB3	4:S4A:110:PHE:CE1	2.51	0.46
34:L9A:33:ARG:HB2	34:L9A:35:LEU:HG	1.97	0.46
3:S3B:8:ILE:HG23	3:S3B:16:ARG:HG2	1.97	0.46
9:S9B:16:ARG:HB3	9:S9B:64:THR:HG22	1.98	0.46
33:L6B:74:ASN:HA	33:L6B:77:LYS:HB3	1.97	0.46
2:S2A:98:LEU:O	2:S2A:101:MET:HB2	2.14	0.46
7:S7A:24:THR:HA	7:S7A:27:ILE:HD12	1.97	0.46
2:S2B:30:ARG:H	2:S2B:30:ARG:HG3	1.38	0.46
3:S3B:16:ARG:HH22	3:S3B:183:ASP:HA	1.79	0.46
4:S4B:145:GLU:OE2	4:S4B:182:LYS:HD2	2.16	0.46
7:S7B:3:ARG:H	7:S7B:3:ARG:HG3	1.57	0.46
29:L2B:218:ARG:HB3	29:L2B:219:PRO:HD2	1.96	0.46
32:L5B:111:LEU:HB2	32:L5B:112:PRO:HD3	1.96	0.46
2:S2A:113:HIS:O	2:S2A:117:GLU:HG3	2.16	0.46
34:L9A:135:GLU:H	34:L9A:135:GLU:CD	2.19	0.46
3:S3B:180:ALA:HB1	3:S3B:182:ILE:HG13	1.98	0.46
8:S8B:1:MET:SD	8:S8B:1:MET:N	2.88	0.46
2:S2A:168:THR:HG22	2:S2A:192:SER:CB	2.20	0.46
4:S4A:64:LEU:HD22	4:S4A:198:VAL:HG11	1.96	0.46
32:L5A:96:ARG:O	32:L5A:98:ARG:N	2.46	0.46
32:L5A:102:PHE:HA	32:L5A:105:LYS:HE2	1.98	0.46
3:S3B:129:ALA:HB3	3:S3B:132:ARG:HB3	1.96	0.46
3:S3B:182:ILE:HA	3:S3B:202:ILE:O	2.16	0.46
4:S4B:17:VAL:O	4:S4B:19:LEU:HD13	2.15	0.46
6:S6B:3:ARG:HB3	6:S6B:3:ARG:CZ	2.44	0.46
29:L2B:18:VAL:HA	29:L2B:211:ARG:HH22	1.80	0.46
31:L4B:63:LYS:NZ	31:L4B:67:GLN:HB2	2.31	0.46
6:S6A:3:ARG:HD3	6:S6A:38:GLU:OE1	2.16	0.46
7:S7B:65:ALA:HA	7:S7B:128:ALA:HA	1.98	0.46
29:L2A:93:ALA:HB3	29:L2A:105:ILE:HG22	1.96	0.46
29:L2A:112:GLN:H	29:L2A:115:GLN:NE2	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:L2A:130:ALA:HA	29:L2A:192:THR:HA	1.97	0.46
29:L2A:218:ARG:HB3	29:L2A:219:PRO:HD2	1.97	0.46
33:L6A:87:LEU:CD1	33:L6A:131:VAL:CG1	2.72	0.46
2:S2B:55:PHE:HA	2:S2B:58:ILE:HG12	1.98	0.46
5:S5B:70:PRO:HB3	5:S5B:144:THR:CG2	2.46	0.46
7:S7B:100:ALA:O	7:S7B:104:LEU:HD23	2.16	0.46
32:L5B:60:LEU:O	32:L5B:64:THR:HG22	2.16	0.46
34:L9B:97:ILE:O	34:L9B:101:LEU:HD23	2.15	0.46
2:S2A:88:ALA:HB2	2:S2A:219:VAL:CG1	2.47	0.45
2:S2A:100:GLY:O	2:S2A:104:ASN:N	2.38	0.45
3:S3A:76:VAL:O	3:S3A:83:ARG:HG2	2.16	0.45
4:S4A:83:SER:HA	4:S4A:89:THR:HG23	1.98	0.45
7:S7A:111:ARG:NH1	7:S7A:113:GLU:OE2	2.48	0.45
29:L2A:77:ALA:CB	29:L2A:95:LEU:HD13	2.46	0.45
30:L3A:1:MET:HB3	30:L3A:83:ASP:O	2.15	0.45
33:L6A:9:ILE:HD13	33:L6A:9:ILE:HG21	1.66	0.45
2:S2B:73:THR:HB	2:S2B:96:ARG:N	2.30	0.45
4:S4B:153:ARG:NH1	4:S4B:181:MET:HG3	2.31	0.45
5:S5B:42:GLY:HA3	5:S5B:65:ASN:O	2.16	0.45
6:S6B:45:LEU:HG	6:S6B:59:TYR:HD1	1.80	0.45
7:S7B:76:ARG:N	7:S7B:87:VAL:O	2.46	0.45
28:5SB:60:A:H5'	28:5SB:61:A:OP2	2.15	0.45
30:L3B:122:PHE:CZ	30:L3B:155:LYS:HB2	2.51	0.45
33:L6B:91:GLY:HA3	33:L6B:94:TYR:CD2	2.51	0.45
34:L9B:29:TYR:O	34:L9B:32:PRO:HD2	2.17	0.45
32:L5A:60:LEU:HD23	32:L5A:60:LEU:HA	1.76	0.45
3:S3B:191:THR:OG1	3:S3B:194:GLY:O	2.34	0.45
5:S5B:129:ILE:H	5:S5B:129:ILE:HD12	1.81	0.45
32:L5B:103:LEU:O	32:L5B:107:LEU:HG	2.16	0.45
7:S7A:121:ALA:O	7:S7A:125:MET:HG3	2.16	0.45
7:S7A:155:ARG:HD3	7:S7A:155:ARG:N	2.30	0.45
31:L4A:8:GLN:OE1	31:L4A:8:GLN:N	2.39	0.45
33:L6A:26:VAL:HG21	33:L6A:75:ALA:CB	2.46	0.45
4:S4B:88:VAL:O	4:S4B:90:GLY:N	2.48	0.45
9:S9B:49:PRO:O	9:S9B:53:VAL:HG22	2.16	0.45
29:L2B:17:THR:HG22	29:L2B:205:VAL:HB	1.98	0.45
31:L4B:29:ASN:H	31:L4B:112:MET:CE	2.30	0.45
33:L6B:30:LYS:HB3	33:L6B:79:VAL:HA	1.97	0.45
34:L9B:1:MET:HB3	34:L9B:21:VAL:O	2.16	0.45
34:L9B:69:LYS:HG2	34:L9B:136:VAL:HB	1.98	0.45
34:L9B:77:LEU:HD12	34:L9B:104:GLN:HE22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S2A:160:ASP:O	2:S2A:183:PRO:HD2	2.17	0.45
8:S8A:82:HIS:HE1	8:S8A:136:GLU:HG3	1.82	0.45
8:S8A:103:VAL:HG21	8:S8A:110:ALA:HB2	1.99	0.45
29:L2A:60:ARG:HD3	29:L2A:86:PRO:CB	2.32	0.45
30:L3A:50:GLY:HA3	30:L3A:75:VAL:HG21	1.99	0.45
2:S2B:187:LEU:HD11	2:S2B:204:ASN:H	1.82	0.45
34:L9B:76:THR:HG22	34:L9B:139:GLN:OE1	2.16	0.45
2:S2A:108:ILE:O	2:S2A:112:VAL:HG23	2.16	0.45
4:S4A:111:ALA:HB2	4:S4A:120:LEU:CD1	2.47	0.45
8:S8A:44:PHE:CD1	8:S8A:80:ILE:HG12	2.51	0.45
29:L2A:17:THR:HG22	29:L2A:204:ILE:HA	1.98	0.45
33:L6A:105:LEU:HD23	33:L6A:105:LEU:H	1.82	0.45
4:S4B:110:PHE:N	4:S4B:110:PHE:CD1	2.85	0.45
6:S6B:45:LEU:H	6:S6B:45:LEU:HD12	1.82	0.45
8:S8B:20:TYR:HA	8:S8B:65:TYR:CE2	2.51	0.45
29:L2B:175:LEU:HD23	29:L2B:175:LEU:HA	1.78	0.45
33:L6B:72:ILE:O	33:L6B:76:VAL:HG23	2.16	0.45
4:S4A:13:ARG:HA	4:S4A:33:MET:HE3	1.97	0.45
7:S7A:99:LEU:HD22	7:S7A:103:TRP:CZ2	2.52	0.45
31:L4A:174:VAL:HG22	31:L4A:189:THR:HG21	1.98	0.45
3:S3B:120:VAL:HA	3:S3B:123:GLN:HB2	1.98	0.45
31:L4B:152:GLU:HA	31:L4B:190:GLU:OE2	2.16	0.45
4:S4A:93:PHE:O	4:S4A:96:LEU:HB2	2.17	0.45
4:S4A:111:ALA:HB2	4:S4A:120:LEU:HD11	1.99	0.45
34:L9A:48:GLU:O	34:L9A:52:ARG:HG2	2.16	0.45
2:S2B:205:ASP:OD1	2:S2B:206:ASP:N	2.50	0.45
4:S4B:129:ASN:OD1	4:S4B:145:GLU:N	2.36	0.45
5:S5B:41:VAL:HG13	5:S5B:113:ALA:HA	1.97	0.45
28:5SB:45:C:P	32:L5B:67:LYS:HE2	2.56	0.45
30:L3B:171:GLU:OE1	30:L3B:185:LYS:HE3	2.16	0.45
31:L4B:162:LEU:H	31:L4B:162:LEU:HD12	1.82	0.45
33:L6B:21:PRO:HD2	33:L6B:23:ARG:HH12	1.81	0.45
2:S2A:132:LYS:HG2	2:S2A:135:GLN:OE1	2.17	0.45
6:S6A:54:LYS:HE2	6:S6A:54:LYS:HB3	1.49	0.45
29:L2A:183:ARG:HH12	29:L2A:266:SER:HB2	1.81	0.45
2:S2B:82:ARG:HB2	2:S2B:94:ASN:HD22	1.82	0.45
28:5SB:44:C:H4'	32:L5B:67:LYS:HG2	1.99	0.45
33:L6B:91:GLY:HA3	33:L6B:94:TYR:CG	2.51	0.45
2:S2A:36:ARG:HD3	2:S2A:36:ARG:HA	1.76	0.45
2:S2A:91:PRO:HG3	2:S2A:155:LEU:HG	1.98	0.45
9:S9A:10:ARG:NH2	9:S9A:11:LYS:HE3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:5SA:33:C:C2	28:5SA:34:C:C5	3.05	0.45
32:L5A:16:ARG:NH1	32:L5A:31:VAL:HG11	2.32	0.45
33:L6A:121:ILE:HD13	33:L6A:121:ILE:HA	1.80	0.45
4:S4B:92:VAL:O	4:S4B:96:LEU:HD13	2.17	0.45
28:5SB:97:C:H2'	28:5SB:98:U:C6	2.51	0.45
29:L2B:3:VAL:HG21	29:L2B:203:ASN:HB2	1.99	0.45
29:L2B:9:TYR:CD1	29:L2B:10:THR:HG23	2.52	0.45
8:S8A:87:SER:HB2	8:S8A:93:VAL:HB	1.99	0.45
28:5SA:42:U:H3'	28:5SA:43:U:H5''	1.99	0.45
30:L3A:111:ARG:HG3	30:L3A:160:TYR:HD2	1.81	0.45
2:S2B:83:MET:CE	2:S2B:84:GLU:HG2	2.47	0.45
2:S2B:166:ASP:C	2:S2B:168:THR:H	2.20	0.45
34:L9B:78:THR:HB	34:L9B:80:PRO:HD3	1.99	0.45
2:S2A:8:LYS:HD3	2:S2A:10:LEU:HB2	1.99	0.44
3:S3A:34:LEU:O	3:S3A:38:ARG:HG3	2.16	0.44
9:S9A:50:LEU:HD22	9:S9A:55:ALA:HB3	1.98	0.44
30:L3A:15:PHE:CE1	30:L3A:20:ALA:HB2	2.52	0.44
33:L6A:154:PRO:HD3	33:L6A:162:ILE:O	2.17	0.44
2:S2B:188:ALA:O	2:S2B:203:GLY:N	2.50	0.44
5:S5B:76:ILE:HG23	5:S5B:77:PRO:HD2	1.99	0.44
4:S4A:150:GLU:C	4:S4A:152:SER:N	2.71	0.44
8:S8A:20:TYR:HA	8:S8A:65:TYR:CE2	2.52	0.44
8:S8A:25:ASP:HA	8:S8A:59:LEU:O	2.17	0.44
30:L3A:109:LYS:HG3	30:L3A:111:ARG:CZ	2.46	0.44
34:L9A:38:LEU:CD1	34:L9A:40:THR:OG1	2.65	0.44
34:L9A:92:VAL:HG13	34:L9A:120:ILE:CG2	2.46	0.44
3:S3B:119:ARG:NH2	3:S3B:140:ARG:HG3	2.29	0.44
3:S3B:156:ARG:HD2	3:S3B:193:TYR:CD1	2.52	0.44
28:5SB:35:G:H5'	32:L5B:2:PRO:HD3	2.00	0.44
33:L6B:149:ARG:HD2	33:L6B:164:TYR:HE1	1.83	0.44
34:L9B:130:TYR:HB3	34:L9B:136:VAL:CG1	2.48	0.44
4:S4A:8:VAL:HG21	4:S4A:115:ARG:CZ	2.46	0.44
28:5SA:47:A:OP1	32:L5A:96:ARG:NH1	2.50	0.44
3:S3B:56:ASP:O	3:S3B:66:VAL:HA	2.16	0.44
9:S9B:24:GLY:CA	9:S9B:60:ASP:OD1	2.64	0.44
34:L9B:130:TYR:HB3	34:L9B:136:VAL:HG13	1.99	0.44
3:S3A:108:ASN:OD1	3:S3A:110:ASN:HB2	2.18	0.44
4:S4A:8:VAL:HG21	4:S4A:115:ARG:NH2	2.33	0.44
28:5SA:17:A:H1'	28:5SA:112:G:N9	2.32	0.44
31:L4A:119:ARG:HG2	31:L4A:119:ARG:O	2.16	0.44
33:L6A:55:PRO:HD2	33:L6A:61:HIS:ND1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:L9A:73:GLU:CD	34:L9A:137:PRO:HD2	2.37	0.44
7:S7B:13:GLN:HG2	7:S7B:14:PRO:HD2	1.98	0.44
8:S8B:38:ILE:HD11	8:S8B:118:VAL:O	2.17	0.44
28:5SB:16:U:O2'	28:5SB:17:A:OP1	2.35	0.44
30:L3B:101:ARG:NH1	30:L3B:171:GLU:HB2	2.32	0.44
2:S2A:54:THR:O	2:S2A:58:ILE:HG13	2.18	0.44
4:S4A:166:LYS:HD2	29:L2B:188:GLU:OE2	2.16	0.44
9:S9A:43:ALA:HA	9:S9A:74:ILE:HD13	1.98	0.44
7:S7B:15:ASP:HB3	7:S7B:20:ASP:H	1.82	0.44
2:S2A:16:HIS:CD2	2:S2A:209:ARG:HB2	2.53	0.44
2:S2A:21:ARG:HE	2:S2A:21:ARG:HB3	1.54	0.44
4:S4A:85:LYS:O	59:S4A:301:OHX:N6	2.48	0.44
28:5SA:73:C:C2	28:5SA:74:G:C8	3.06	0.44
29:L2A:78:LYS:HB2	29:L2A:78:LYS:HE3	1.67	0.44
31:L4A:63:LYS:CE	31:L4A:67:GLN:HB3	2.47	0.44
33:L6A:86:GLU:C	33:L6A:87:LEU:HG	2.34	0.44
34:L9A:109:ILE:HA	34:L9A:130:TYR:OH	2.17	0.44
2:S2B:82:ARG:HG3	2:S2B:92:TYR:OH	2.18	0.44
2:S2B:187:LEU:HD22	2:S2B:201:ILE:O	2.18	0.44
3:S3B:70:VAL:O	3:S3B:106:VAL:N	2.36	0.44
8:S8B:20:TYR:HA	8:S8B:65:TYR:CZ	2.53	0.44
30:L3B:119:ARG:CD	30:L3B:160:TYR:HB2	2.47	0.44
33:L6B:121:ILE:HD13	33:L6B:121:ILE:HA	1.90	0.44
7:S7A:16:LEU:HD11	9:S9A:45:ALA:HB2	1.99	0.44
28:5SA:82:U:C2	28:5SA:83:G:N2	2.86	0.44
33:L6A:68:THR:O	33:L6A:72:ILE:HG12	2.17	0.44
34:L9A:21:VAL:HG22	34:L9A:22:LYS:H	1.82	0.44
2:S2B:7:VAL:HG13	2:S2B:8:LYS:N	2.33	0.44
2:S2B:112:VAL:O	2:S2B:115:LEU:HB3	2.17	0.44
28:5SB:6:C:H2'	28:5SB:7:C:O4'	2.17	0.44
29:L2B:17:THR:CG2	29:L2B:205:VAL:H	2.30	0.44
2:S2A:55:PHE:HD1	2:S2A:221:LEU:HG	1.82	0.44
4:S4A:170:VAL:HG13	4:S4A:174:LEU:HB2	1.99	0.44
9:S9A:18:PHE:HD2	9:S9A:62:TYR:HD2	1.65	0.44
5:S5B:71:LEU:HD23	5:S5B:71:LEU:HA	1.81	0.44
7:S7B:111:ARG:HD2	7:S7B:123:GLU:OE1	2.18	0.44
29:L2B:79:VAL:HG12	29:L2B:113:VAL:HA	1.99	0.44
32:L5B:94:LEU:HD23	32:L5B:94:LEU:H	1.83	0.44
32:L5B:173:LEU:HD23	32:L5B:173:LEU:HA	1.81	0.44
2:S2A:209:ARG:HE	2:S2A:209:ARG:HB3	1.34	0.44
4:S4A:19:LEU:HD12	4:S4A:67:ILE:CG1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:S5A:100:VAL:HG22	5:S5A:118:ILE:HG22	2.00	0.44
31:L4A:179:GLU:CD	31:L4A:179:GLU:H	2.21	0.44
4:S4B:162:LEU:HD13	4:S4B:181:MET:CE	2.47	0.44
9:S9B:42:ARG:HH11	9:S9B:71:SER:HB2	1.83	0.44
9:S9B:89:ASN:O	9:S9B:92:TYR:HB2	2.18	0.44
28:5SB:66:C:H2'	28:5SB:67:C:C6	2.53	0.44
31:L4B:61:GLY:HA2	31:L4B:77:ASP:HB3	1.99	0.44
31:L4B:183:VAL:O	31:L4B:187:VAL:HG23	2.18	0.44
2:S2A:209:ARG:O	2:S2A:213:LEU:HG	2.18	0.43
4:S4A:86:LYS:HD2	59:S4A:301:OHX:N2	2.33	0.43
4:S4A:152:SER:HA	4:S4A:155:LEU:HG	2.00	0.43
4:S4A:187:ARG:HH21	4:S4A:190:ASP:H	1.66	0.43
5:S5A:147:ASP:HA	5:S5A:150:ARG:NH1	2.33	0.43
31:L4A:198:ALA:HA	31:L4A:201:VAL:HB	1.99	0.43
33:L6A:35:VAL:HG11	33:L6A:71:LEU:HB3	1.99	0.43
34:L9A:110:ASP:H	34:L9A:130:TYR:HH	1.62	0.43
2:S2B:34:ALA:O	2:S2B:41:ILE:HB	2.18	0.43
3:S3B:92:ALA:HB2	3:S3B:99:VAL:HG22	1.98	0.43
4:S4B:70:ILE:CG1	4:S4B:74:GLN:HG3	2.48	0.43
6:S6B:68:PRO:HG2	6:S6B:71:ARG:HG3	2.00	0.43
8:S8B:11:THR:HG23	8:S8B:14:ARG:NH1	2.33	0.43
32:L5B:75:LYS:HE2	32:L5B:75:LYS:HB3	1.82	0.43
33:L6B:139:GLN:O	33:L6B:139:GLN:NE2	2.50	0.43
2:S2A:97:TRP:HH2	2:S2A:176:GLU:CD	2.22	0.43
6:S6A:30:LEU:HD11	6:S6A:63:TYR:CE2	2.52	0.43
9:S9A:8:GLY:O	9:S9A:76:ALA:HB1	2.18	0.43
30:L3A:173:VAL:N	30:L3A:183:LEU:O	2.49	0.43
32:L5A:82:LEU:HD23	32:L5A:82:LEU:HA	1.87	0.43
9:S9B:32:ASP:OD1	9:S9B:33:PHE:N	2.50	0.43
28:5SB:44:C:O4'	32:L5B:69:ALA:HB2	2.18	0.43
31:L4B:40:GLN:HE22	31:L4B:182:ASN:HB2	1.81	0.43
2:S2A:51:LEU:HA	2:S2A:54:THR:HB	1.99	0.43
7:S7A:115:ARG:O	7:S7A:119:ARG:HG3	2.18	0.43
3:S3B:36:ASP:OD1	3:S3B:57:ILE:HG21	2.17	0.43
29:L2B:61:LEU:HD12	29:L2B:61:LEU:HA	1.90	0.43
32:L5B:135:LEU:HD22	32:L5B:140:ILE:HD11	1.99	0.43
3:S3A:15:THR:O	3:S3A:15:THR:HG22	2.18	0.43
5:S5A:11:ILE:HG13	5:S5A:31:LEU:HB3	2.00	0.43
6:S6A:19:LEU:HD11	6:S6A:59:TYR:CG	2.53	0.43
34:L9A:21:VAL:HG21	34:L9A:25:TYR:CD2	2.51	0.43
28:5SB:4:C:C2	28:5SB:5:C:C5	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:L3B:171:GLU:HB3	30:L3B:185:LYS:HB3	1.99	0.43
33:L6B:156:ALA:O	33:L6B:171:LEU:HA	2.19	0.43
2:S2A:146:GLN:O	2:S2A:150:SER:HB3	2.18	0.43
6:S6A:16:GLN:H	6:S6A:16:GLN:CD	2.21	0.43
6:S6A:30:LEU:HB3	6:S6A:35:ALA:HB3	1.99	0.43
6:S6A:89:MET:HB2	6:S6A:89:MET:HE3	1.93	0.43
34:L9A:109:ILE:HG22	34:L9A:130:TYR:CZ	2.54	0.43
2:S2B:179:LYS:HE3	2:S2B:179:LYS:HB2	1.83	0.43
3:S3B:19:GLU:HA	3:S3B:54:ARG:NH1	2.33	0.43
4:S4B:190:ASP:O	4:S4B:194:LEU:HD22	2.19	0.43
28:5SB:119:G:H2'	28:5SB:120:G:O4'	2.17	0.43
34:L9B:97:ILE:HG22	34:L9B:101:LEU:HD23	2.00	0.43
4:S4A:17:VAL:O	4:S4A:19:LEU:HD22	2.18	0.43
4:S4A:89:THR:OG1	59:S4A:301:OHX:N1	2.51	0.43
4:S4A:105:VAL:HG21	4:S4A:126:ILE:HG13	2.00	0.43
8:S8A:6:ILE:O	8:S8A:10:LEU:HG	2.18	0.43
28:5SA:71:G:H2'	28:5SA:72:C:H6	1.84	0.43
29:L2A:70:TRP:CZ2	29:L2A:150:LYS:HD3	2.54	0.43
30:L3A:1:MET:O	30:L3A:84:PHE:HB2	2.18	0.43
34:L9A:83:ALA:HB2	34:L9A:143:SER:O	2.18	0.43
2:S2B:6:THR:OG1	2:S2B:217:ARG:HG2	2.17	0.43
7:S7B:70:LYS:HG2	7:S7B:96:GLN:HB3	1.99	0.43
31:L4B:32:LEU:O	31:L4B:36:VAL:HG23	2.18	0.43
31:L4B:168:ARG:HG3	31:L4B:175:THR:HG21	2.01	0.43
32:L5B:135:LEU:HD11	32:L5B:155:MET:HG2	2.01	0.43
2:S2A:87:ARG:HD3	2:S2A:223:ILE:HD11	2.01	0.43
4:S4A:194:LEU:HD12	4:S4A:194:LEU:HA	1.66	0.43
5:S5A:82:VAL:HG21	5:S5A:138:ALA:HA	2.00	0.43
9:S9A:22:GLY:O	9:S9A:24:GLY:N	2.47	0.43
32:L5A:133:LEU:CD2	32:L5A:157:ILE:HB	2.48	0.43
34:L9A:100:ALA:O	34:L9A:104:GLN:HB3	2.19	0.43
2:S2B:43:ASP:OD1	2:S2B:44:LEU:N	2.52	0.43
2:S2B:46:LYS:HA	2:S2B:49:GLU:HG2	2.00	0.43
2:S2B:221:LEU:HD12	2:S2B:224:GLN:CG	2.49	0.43
3:S3B:35:GLU:HA	3:S3B:38:ARG:HE	1.82	0.43
3:S3A:77:ILE:HG23	3:S3A:84:ILE:HG22	2.01	0.43
4:S4A:28:SER:HB3	4:S4A:29:PRO:HD2	2.00	0.43
4:S4A:142:PRO:HA	4:S4A:185:PHE:HD1	1.84	0.43
5:S5A:83:GLU:O	5:S5A:83:GLU:HG3	2.17	0.43
28:5SA:17:A:H5'	28:5SA:18:G:H8	1.78	0.43
31:L4A:178:PRO:HB3	31:L4A:198:ALA:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:L6A:56:SER:OG	33:L6A:58:GLU:HG2	2.18	0.43
34:L9A:72:LEU:HD21	34:L9A:138:ILE:HD12	2.01	0.43
3:S3B:23:TYR:CG	3:S3B:24:ALA:N	2.86	0.43
7:S7B:23:VAL:O	7:S7B:27:ILE:HG13	2.19	0.43
2:S2A:16:HIS:HB3	2:S2A:210:SER:OG	2.19	0.43
8:S8A:51:VAL:HG11	8:S8A:60:ARG:HG3	2.01	0.43
9:S9A:91:ASP:OD1	9:S9A:91:ASP:N	2.49	0.43
29:L2A:70:TRP:CE2	29:L2A:150:LYS:HD3	2.53	0.43
32:L5A:6:ALA:HB3	32:L5A:104:GLU:OE1	2.18	0.43
2:S2B:73:THR:HG21	2:S2B:97:TRP:H	1.82	0.43
3:S3B:33:LEU:HA	3:S3B:36:ASP:HB2	1.99	0.43
4:S4B:172:PRO:HB2	4:S4B:187:ARG:HH22	1.84	0.43
28:5SB:13:C:H3'	28:5SB:14:C:C6	2.53	0.43
29:L2B:130:ALA:HA	29:L2B:192:THR:HA	2.00	0.43
29:L2B:146:GLU:HB2	29:L2B:189:CYS:HB3	2.01	0.43
30:L3B:40:GLU:HG3	30:L3B:41:LYS:H	1.84	0.43
33:L6B:46:GLU:HG2	33:L6B:47:GLU:H	1.83	0.43
33:L6B:137:ASP:HB3	33:L6B:140:LYS:HE3	2.00	0.43
3:S3A:175:LEU:H	3:S3A:175:LEU:HD12	1.84	0.43
32:L5A:56:ALA:HB2	32:L5A:153:ARG:CZ	2.48	0.43
33:L6A:41:MET:HB3	33:L6A:52:VAL:HG23	2.01	0.43
34:L9A:88:ILE:HG12	34:L9A:122:GLU:H	1.83	0.43
3:S3B:6:HIS:CD2	3:S3B:8:ILE:HG12	2.54	0.43
31:L4B:54:ARG:O	31:L4B:57:VAL:HG12	2.19	0.43
2:S2A:75:LYS:HA	2:S2A:78:GLN:HB2	2.00	0.42
3:S3A:39:ILE:O	3:S3A:43:LEU:HG	2.19	0.42
6:S6A:46:ARG:HB3	6:S6A:60:PHE:CE1	2.54	0.42
9:S9A:63:ILE:CG2	9:S9A:65:VAL:HG23	2.49	0.42
28:5SA:1:A:H2'	28:5SA:1:A:N3	2.34	0.42
4:S4B:63:LYS:O	4:S4B:67:ILE:HG13	2.19	0.42
32:L5B:67:LYS:H	32:L5B:67:LYS:HD2	1.78	0.42
33:L6B:60:ARG:O	33:L6B:64:LEU:HG	2.19	0.42
2:S2A:212:GLN:OE1	2:S2A:216:SER:HB2	2.18	0.42
3:S3A:83:ARG:O	3:S3A:83:ARG:HG3	2.17	0.42
4:S4A:144:ASP:O	4:S4A:146:ILE:HD12	2.20	0.42
30:L3A:14:ILE:HG13	30:L3A:21:VAL:HG13	2.00	0.42
32:L5A:33:ARG:O	32:L5A:162:THR:HG23	2.20	0.42
34:L9A:135:GLU:N	34:L9A:135:GLU:CD	2.73	0.42
3:S3B:36:ASP:HA	3:S3B:39:ILE:HD12	2.01	0.42
30:L3B:11:MET:O	30:L3B:12:THR:HG23	2.20	0.42
30:L3B:32:PRO:HA	30:L3B:90:THR:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:L6B:172:LYS:H	33:L6B:173:PRO:HA	1.84	0.42
6:S6A:30:LEU:HD11	6:S6A:63:TYR:HE2	1.84	0.42
30:L3A:73:GLU:OE1	30:L3A:73:GLU:N	2.48	0.42
32:L5A:81:LYS:HD3	32:L5A:81:LYS:H	1.85	0.42
32:L5A:81:LYS:HD3	32:L5A:81:LYS:N	2.34	0.42
32:L5A:99:MET:HE3	32:L5A:99:MET:HB2	1.91	0.42
32:L5A:109:VAL:C	32:L5A:112:PRO:HD2	2.39	0.42
32:L5A:126:ASP:OD1	32:L5A:126:ASP:N	2.52	0.42
34:L9A:73:GLU:CD	34:L9A:136:VAL:HG22	2.35	0.42
2:S2B:17:PHE:HB3	2:S2B:42:ILE:HG23	2.01	0.42
2:S2B:178:ARG:HH12	2:S2B:196:LEU:C	2.21	0.42
8:S8B:100:ILE:O	8:S8B:125:ARG:NH1	2.47	0.42
9:S9B:128:ARG:HA	9:S9B:128:ARG:HD3	1.85	0.42
29:L2B:255:LYS:HA	29:L2B:255:LYS:HD2	1.77	0.42
32:L5B:13:GLU:O	32:L5B:17:PRO:HG3	2.19	0.42
32:L5B:41:GLN:N	32:L5B:90:LEU:O	2.50	0.42
3:S3A:132:ARG:O	3:S3A:136:GLN:HB3	2.19	0.42
31:L4A:46:ARG:HA	31:L4A:46:ARG:HD2	1.87	0.42
34:L9A:46:ALA:CB	34:L9A:50:ARG:HH11	2.32	0.42
2:S2B:32:ILE:HD11	2:S2B:40:HIS:NE2	2.33	0.42
3:S3B:148:GLY:HA3	3:S3B:172:ARG:O	2.19	0.42
3:S3B:154:SER:O	3:S3B:196:LEU:HB2	2.20	0.42
7:S7B:52:GLU:H	7:S7B:52:GLU:HG2	1.65	0.42
29:L2B:182:LEU:H	29:L2B:272:ALA:CB	2.18	0.42
29:L2B:182:LEU:HB3	29:L2B:271:ILE:HG13	2.00	0.42
4:S4A:149:ALA:O	4:S4A:153:ARG:HG2	2.19	0.42
5:S5A:99:GLY:O	5:S5A:117:ASP:HA	2.19	0.42
8:S8A:20:TYR:HD1	8:S8A:65:TYR:CD2	2.38	0.42
28:5SA:15:A:O2'	28:5SA:17:A:O5'	2.36	0.42
30:L3A:105:THR:OG1	30:L3A:199:ARG:NH2	2.52	0.42
34:L9A:101:LEU:HD12	34:L9A:105:HIS:HB2	2.02	0.42
2:S2B:95:GLN:HG2	2:S2B:148:TYR:CE1	2.54	0.42
3:S3B:82:GLU:H	3:S3B:85:ARG:NH1	2.18	0.42
3:S3B:166:GLU:HG3	3:S3B:167:TRP:H	1.84	0.42
4:S4B:156:GLU:O	4:S4B:160:GLN:HG3	2.19	0.42
8:S8B:100:ILE:HD12	8:S8B:125:ARG:HG3	2.00	0.42
8:S8B:121:ASP:OD1	8:S8B:121:ASP:N	2.52	0.42
33:L6B:87:LEU:N	33:L6B:131:VAL:O	2.47	0.42
6:S6A:1:MET:HG2	6:S6A:68:PRO:HA	2.02	0.42
7:S7A:155:ARG:HD3	7:S7A:155:ARG:H	1.85	0.42
9:S9A:83:ARG:HA	9:S9A:86:VAL:CG1	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:L4A:123:LEU:HD13	31:L4A:192:LEU:HB3	2.02	0.42
32:L5A:118:ARG:HA	32:L5A:118:ARG:HE	1.84	0.42
34:L9A:25:TYR:CE1	34:L9A:29:TYR:HD2	2.38	0.42
4:S4B:108:LEU:HD23	4:S4B:110:PHE:CZ	2.54	0.42
31:L4B:102:PRO:HB2	31:L4B:105:VAL:HG23	2.01	0.42
2:S2A:37:ASN:O	2:S2A:39:ILE:N	2.47	0.42
8:S8A:49:GLU:HG2	8:S8A:62:TYR:CE2	2.50	0.42
9:S9A:5:TYR:HA	9:S9A:17:VAL:O	2.20	0.42
2:S2B:73:THR:HG21	2:S2B:97:TRP:N	2.35	0.42
2:S2B:91:PRO:HA	2:S2B:154:LEU:HD12	2.02	0.42
7:S7B:15:ASP:OD1	7:S7B:16:LEU:N	2.48	0.42
30:L3B:61:ARG:HB2	30:L3B:62:PRO:HD3	2.01	0.42
31:L4B:117:ARG:HA	31:L4B:117:ARG:HD3	1.69	0.42
32:L5B:106:LEU:HA	32:L5B:110:ALA:HB3	2.01	0.42
34:L9B:110:ASP:N	34:L9B:130:TYR:OH	2.30	0.42
3:S3A:20:SER:HB2	3:S3A:57:ILE:HB	2.01	0.42
6:S6A:39:LYS:HB2	6:S6A:64:GLN:HB3	2.02	0.42
29:L2A:46:GLN:H	29:L2A:46:GLN:HG3	1.63	0.42
33:L6A:40:GLU:H	33:L6A:40:GLU:HG3	1.45	0.42
8:S8B:89:PRO:HA	8:S8B:92:ARG:HH11	1.85	0.42
9:S9B:19:LEU:HD23	9:S9B:19:LEU:N	2.34	0.42
28:5SB:114:U:H2'	28:5SB:115:G:H5''	2.02	0.42
30:L3B:171:GLU:O	30:L3B:184:VAL:HA	2.19	0.42
30:L3B:181:LEU:HA	30:L3B:181:LEU:HD12	1.68	0.42
32:L5B:95:ARG:HE	32:L5B:95:ARG:HB3	1.68	0.42
33:L6B:164:TYR:HB2	33:L6B:167:GLU:HG3	2.02	0.42
34:L9B:111:PRO:C	34:L9B:113:ARG:H	2.22	0.42
2:S2B:44:LEU:HD12	2:S2B:45:GLN:N	2.34	0.42
2:S2B:114:ARG:O	2:S2B:118:LEU:HG	2.20	0.42
6:S6B:15:ASP:HB2	6:S6B:18:GLN:HB2	2.02	0.42
2:S2A:97:TRP:HZ2	2:S2A:102:LEU:HD13	1.85	0.42
2:S2A:195:ASP:O	8:S8A:68:ARG:NH2	2.53	0.42
3:S3A:157:ILE:HG21	3:S3A:164:ARG:HH21	1.85	0.42
34:L9A:78:THR:HG22	34:L9A:141:LYS:HB2	2.01	0.42
2:S2B:91:PRO:HG3	2:S2B:154:LEU:HB2	2.02	0.42
2:S2B:221:LEU:HD12	2:S2B:224:GLN:NE2	2.34	0.42
9:S9B:96:LEU:O	9:S9B:100:GLY:N	2.52	0.42
29:L2B:231:HIS:CD2	29:L2B:249:PRO:HG3	2.55	0.42
32:L5B:133:LEU:HD11	32:L5B:157:ILE:HD12	2.01	0.42
2:S2A:170:GLU:O	2:S2A:174:VAL:HG23	2.20	0.41
8:S8A:16:ALA:HB2	8:S8A:24:THR:HG21	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:S8A:104:ARG:HB2	8:S8A:108:GLY:H	1.84	0.41
28:5SA:3:U:H2'	28:5SA:4:C:C6	2.55	0.41
29:L2A:60:ARG:HD2	29:L2A:87:ASN:ND2	2.35	0.41
32:L5A:97:ASP:HA	32:L5A:100:TRP:HB2	2.02	0.41
32:L5A:99:MET:HG3	32:L5A:100:TRP:N	2.35	0.41
33:L6A:158:HIS:C	33:L6A:160:LYS:H	2.24	0.41
3:S3B:33:LEU:HD12	3:S3B:36:ASP:HB3	2.02	0.41
4:S4B:15:GLU:HG2	4:S4B:63:LYS:HG3	2.02	0.41
6:S6B:78:GLU:HA	6:S6B:81:ILE:HD11	2.02	0.41
30:L3B:64:LYS:HB2	30:L3B:64:LYS:HE2	1.94	0.41
31:L4B:20:LEU:HD12	31:L4B:20:LEU:HA	1.92	0.41
5:S5A:127:ASN:HA	5:S5A:128:PRO:HD3	1.95	0.41
9:S9A:92:TYR:HD1	9:S9A:92:TYR:HA	1.73	0.41
32:L5A:135:LEU:O	32:L5A:154:GLY:HA3	2.20	0.41
32:L5A:176:LEU:HD23	32:L5A:176:LEU:HA	1.86	0.41
2:S2B:10:LEU:HD22	2:S2B:10:LEU:H	1.86	0.41
2:S2B:178:ARG:NH2	8:S8B:68:ARG:NH2	2.68	0.41
29:L2B:60:ARG:HD3	29:L2B:87:ASN:ND2	2.34	0.41
29:L2B:181:GLU:HA	29:L2B:272:ALA:HB3	2.03	0.41
31:L4A:65:TRP:HZ3	31:L4A:73:ALA:C	2.23	0.41
33:L6A:12:PRO:HG2	33:L6A:15:VAL:HG22	2.03	0.41
2:S2B:15:VAL:HG23	2:S2B:16:HIS:ND1	2.35	0.41
3:S3B:19:GLU:HG2	3:S3B:55:VAL:O	2.21	0.41
4:S4B:70:ILE:HG13	4:S4B:74:GLN:HG3	2.02	0.41
5:S5B:78:HIS:CE1	5:S5B:143:ARG:H	2.39	0.41
8:S8B:4:ASP:HB3	8:S8B:7:ALA:HB3	2.03	0.41
30:L3B:101:ARG:CZ	30:L3B:171:GLU:HB2	2.51	0.41
32:L5B:33:ARG:NH2	32:L5B:162:THR:HG21	2.36	0.41
8:S8A:87:SER:HA	8:S8A:93:VAL:HG23	2.03	0.41
30:L3A:188:VAL:HG13	30:L3A:189:PRO:HD2	2.02	0.41
31:L4A:167:ALA:HA	31:L4A:170:LEU:HD23	2.03	0.41
31:L4A:181:LEU:HD23	31:L4A:181:LEU:HA	1.89	0.41
33:L6A:27:LYS:HA	33:L6A:32:GLU:HB3	2.03	0.41
33:L6A:125:VAL:HG22	33:L6A:131:VAL:HG23	2.01	0.41
2:S2B:111:ARG:HD3	2:S2B:111:ARG:HA	1.73	0.41
9:S9B:53:VAL:HG13	9:S9B:95:LYS:HD3	2.02	0.41
29:L2B:68:LYS:HD2	29:L2B:70:TRP:CZ2	2.55	0.41
31:L4B:129:PHE:C	31:L4B:131:GLY:H	2.21	0.41
33:L6B:5:GLY:O	33:L6B:8:PRO:HG3	2.21	0.41
30:L3A:3:GLY:HA3	30:L3A:81:ILE:HD13	2.03	0.41
30:L3A:111:ARG:HG2	30:L3A:160:TYR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:L4A:132:VAL:HG12	31:L4A:163:VAL:HG22	2.03	0.41
2:S2B:118:LEU:HB2	2:S2B:142:LEU:HD12	2.01	0.41
2:S2B:239:VAL:HG12	2:S2B:240:GLN:HG3	2.02	0.41
4:S4B:74:GLN:H	4:S4B:74:GLN:HG2	1.50	0.41
4:S4B:121:VAL:HG12	4:S4B:134:ASP:HA	2.02	0.41
6:S6B:11:ASN:O	6:S6B:14:LEU:HD12	2.20	0.41
28:5SB:3:U:H2'	28:5SB:4:C:C6	2.56	0.41
33:L6B:172:LYS:N	33:L6B:173:PRO:HA	2.35	0.41
2:S2A:101:MET:HA	2:S2A:108:ILE:HG13	2.02	0.41
8:S8A:98:LYS:HE2	8:S8A:98:LYS:HB2	1.98	0.41
29:L2A:79:VAL:HG12	29:L2A:113:VAL:HA	2.03	0.41
32:L5A:34:LEU:HD11	32:L5A:103:LEU:CD1	2.51	0.41
33:L6A:88:LEU:CD1	33:L6A:88:LEU:H	2.34	0.41
34:L9A:40:THR:O	34:L9A:44:LEU:HB2	2.20	0.41
4:S4B:108:LEU:HD21	4:S4B:183:GLY:HA3	2.03	0.41
8:S8B:122:ARG:HB2	8:S8B:122:ARG:CZ	2.51	0.41
28:5SB:28:A:H2'	28:5SB:29:C:C6	2.55	0.41
29:L2B:11:PRO:O	29:L2B:12:SER:OG	2.22	0.41
29:L2B:33:LEU:HA	29:L2B:33:LEU:HD23	1.87	0.41
3:S3A:33:LEU:O	3:S3A:37:GLN:HG2	2.21	0.41
4:S4A:89:THR:OG1	59:S4A:301:OHX:N4	2.54	0.41
5:S5A:12:LEU:HD22	5:S5A:13:ILE:N	2.36	0.41
7:S7A:46:ALA:O	7:S7A:50:ILE:HG12	2.21	0.41
9:S9A:17:VAL:HG11	9:S9A:81:ILE:HA	2.03	0.41
32:L5A:164:GLU:H	32:L5A:164:GLU:HG2	1.53	0.41
2:S2B:233:SER:HB2	2:S2B:234:PRO:HD2	2.03	0.41
4:S4B:76:ARG:HD3	4:S4B:207:TYR:CE1	2.55	0.41
5:S5B:12:LEU:O	5:S5B:30:ALA:HA	2.20	0.41
6:S6B:8:ILE:HG21	6:S6B:26:ILE:CD1	2.50	0.41
30:L3B:97:LYS:O	30:L3B:100:GLU:HG3	2.21	0.41
33:L6B:144:VAL:O	33:L6B:147:ASN:HB2	2.20	0.41
2:S2A:87:ARG:NH1	2:S2A:216:SER:O	2.53	0.41
4:S4A:89:THR:OG1	59:S4A:301:OHX:N6	2.54	0.41
31:L4A:68:LYS:C	31:L4A:70:THR:H	2.24	0.41
2:S2B:69:LEU:HG	2:S2B:91:PRO:HB2	2.01	0.41
4:S4B:63:LYS:HE3	4:S4B:63:LYS:HB2	1.88	0.41
31:L4B:73:ALA:HB3	31:L4B:75:HIS:CE1	2.55	0.41
32:L5B:84:LYS:HE2	32:L5B:84:LYS:HB3	1.93	0.41
33:L6B:149:ARG:HD2	33:L6B:164:TYR:CE1	2.55	0.41
34:L9B:42:SER:HA	34:L9B:45:LYS:HG2	2.03	0.41
2:S2A:87:ARG:O	2:S2A:87:ARG:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S2A:176:GLU:O	2:S2A:180:LEU:HD12	2.21	0.41
2:S2A:189:ASP:OD1	2:S2A:189:ASP:N	2.43	0.41
4:S4A:162:LEU:HD11	4:S4A:181:MET:HB3	2.03	0.41
28:5SA:81:C:H2'	28:5SA:82:U:O4'	2.21	0.41
34:L9A:73:GLU:CD	34:L9A:136:VAL:HG23	2.40	0.41
2:S2B:98:LEU:HD23	2:S2B:98:LEU:HA	1.71	0.41
3:S3B:137:ALA:O	3:S3B:141:VAL:HG23	2.21	0.41
4:S4B:173:TRP:O	4:S4B:186:LEU:HB2	2.21	0.41
5:S5B:131:ILE:HD13	5:S5B:131:ILE:HA	1.90	0.41
8:S8B:25:ASP:N	8:S8B:25:ASP:OD1	2.54	0.41
8:S8B:112:LEU:HB3	8:S8B:133:LEU:HA	2.03	0.41
32:L5B:60:LEU:HD12	32:L5B:63:ILE:HD11	2.02	0.41
33:L6B:123:PHE:CE2	33:L6B:133:VAL:HG23	2.56	0.41
34:L9B:26:ALA:O	34:L9B:31:LEU:HB2	2.21	0.41
34:L9B:73:GLU:OE1	34:L9B:137:PRO:HD2	2.20	0.41
34:L9B:75:LEU:O	34:L9B:77:LEU:N	2.54	0.41
2:S2A:31:TYR:C	2:S2A:42:ILE:HG13	2.41	0.41
2:S2A:222:ILE:H	2:S2A:222:ILE:HG13	1.69	0.41
8:S8A:103:VAL:CG2	8:S8A:110:ALA:HB2	2.51	0.41
9:S9A:60:ASP:OD1	9:S9A:61:ALA:N	2.55	0.41
28:5SA:26:G:N7	28:5SA:58:G:H2'	2.36	0.41
5:S5B:79:GLU:HG3	5:S5B:93:PRO:HD2	2.02	0.41
6:S6B:8:ILE:HB	6:S6B:61:LEU:HB2	2.03	0.41
28:5SB:23:G:H2'	28:5SB:24:U:O4'	2.21	0.41
31:L4B:46:ARG:HD2	31:L4B:46:ARG:HA	1.91	0.41
31:L4B:47:GLY:HA3	31:L4B:95:ARG:O	2.21	0.41
32:L5B:11:TYR:HD2	32:L5B:12:TYR:CD1	2.39	0.41
32:L5B:77:ILE:HB	32:L5B:82:LEU:HD12	2.03	0.41
32:L5A:101:ILE:O	32:L5A:105:LYS:HG3	2.21	0.40
28:5SB:47:A:C5	28:5SB:48:A:N7	2.89	0.40
30:L3B:27:LEU:HD22	30:L3B:181:LEU:CD1	2.51	0.40
33:L6B:58:GLU:O	33:L6B:62:LYS:HG3	2.22	0.40
4:S4A:13:ARG:HA	4:S4A:33:MET:CE	2.52	0.40
31:L4A:29:ASN:HB3	31:L4A:32:LEU:HB3	2.04	0.40
31:L4A:125:LEU:HD11	31:L4A:199:TRP:CD2	2.56	0.40
33:L6A:106:THR:HG22	33:L6A:112:PRO:HB3	2.02	0.40
31:L4B:40:GLN:OE1	31:L4B:183:VAL:HG22	2.21	0.40
32:L5B:43:LEU:HD12	32:L5B:43:LEU:HA	1.83	0.40
32:L5B:80:PHE:O	32:L5B:81:LYS:C	2.58	0.40
2:S2A:77:ALA:O	2:S2A:81:VAL:HG23	2.21	0.40
3:S3A:72:LYS:O	3:S3A:76:VAL:HG13	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:S4A:13:ARG:NH2	4:S4A:40:PRO:HA	2.36	0.40
7:S7A:108:ALA:O	7:S7A:111:ARG:HG3	2.21	0.40
8:S8A:9:MET:SD	8:S8A:26:VAL:HG21	2.61	0.40
28:5SA:44:C:H4'	32:L5A:67:LYS:HD2	2.04	0.40
30:L3A:14:ILE:HD12	30:L3A:15:PHE:N	2.35	0.40
2:S2B:27:LYS:HE2	2:S2B:195:ASP:OD2	2.21	0.40
3:S3B:36:ASP:OD1	3:S3B:57:ILE:HD13	2.20	0.40
5:S5B:67:VAL:HG21	5:S5B:140:ARG:HA	2.04	0.40
6:S6B:62:TRP:CH2	6:S6B:64:GLN:HB2	2.56	0.40
9:S9B:4:TYR:CD2	9:S9B:88:TYR:CD1	3.10	0.40
31:L4B:37:VAL:O	31:L4B:41:LEU:HG	2.21	0.40
4:S4A:59:ARG:NH2	4:S4A:62:GLN:HG3	2.36	0.40
9:S9A:18:PHE:HB2	9:S9A:62:TYR:O	2.22	0.40
29:L2A:112:GLN:O	29:L2A:115:GLN:HG2	2.22	0.40
33:L6A:126:PRO:O	33:L6A:127:GLU:C	2.60	0.40
28:5SB:80:A:H2'	28:5SB:81:C:O4'	2.21	0.40
30:L3B:54:GLN:HB2	30:L3B:76:ARG:HG2	2.03	0.40
31:L4B:53:THR:HG23	31:L4B:56:GLU:OE2	2.21	0.40
31:L4B:116:ASP:OD1	31:L4B:119:ARG:NH2	2.46	0.40
32:L5B:16:ARG:NH2	32:L5B:31:VAL:HB	2.36	0.40
32:L5B:131:TYR:O	32:L5B:159:VAL:HG22	2.22	0.40
33:L6B:11:VAL:HA	33:L6B:12:PRO:HD3	1.76	0.40
2:S2A:185:ILE:HA	2:S2A:199:TYR:O	2.22	0.40
3:S3A:92:ALA:HA	3:S3A:95:THR:O	2.22	0.40
7:S7A:26:PHE:CE2	7:S7A:30:ILE:HD11	2.57	0.40
32:L5A:61:ALA:HA	32:L5A:66:GLN:O	2.22	0.40
2:S2B:56:ARG:HB3	2:S2B:56:ARG:NH1	2.36	0.40
3:S3B:48:TYR:O	3:S3B:51:GLY:N	2.53	0.40
30:L3B:37:ARG:HA	30:L3B:42:ASP:OD2	2.22	0.40
30:L3B:77:ILE:HD12	30:L3B:77:ILE:HA	1.81	0.40
31:L4B:63:LYS:HZ1	31:L4B:67:GLN:HB2	1.86	0.40

All (16) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:16SA:726:U:C5	33:L6B:129:THR:N[3_555]	1.30	0.90
42:L20A:118:GLY:N	59:23SA:3304:OHX:N2[4_465]	1.35	0.85
1:16SA:726:U:C4	33:L6B:130:ARG:N[3_555]	1.52	0.68
1:16SA:726:U:O4	33:L6B:130:ARG:CB[3_555]	1.64	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:TRNA:37:MIA:N3	27:23SB:1291:A:C2[2_464]	1.79	0.41
26:TRNA:37:MIA:N6	37:L15B:2:LYS:NZ[2_464]	1.80	0.40
1:16SA:726:U:O4	33:L6B:130:ARG:CG[3_555]	1.87	0.33
1:16SA:726:U:O4	33:L6B:130:ARG:N[3_555]	1.90	0.30
1:16SA:726:U:C6	33:L6B:129:THR:N[3_555]	2.01	0.19
1:16SA:726:U:N3	33:L6B:130:ARG:N[3_555]	2.10	0.10
1:16SA:726:U:C5	33:L6B:130:ARG:N[3_555]	2.11	0.09
42:L20A:118:GLY:CA	59:23SA:3304:OHX:N2[4_465]	2.14	0.06
1:16SA:726:U:O4	33:L6B:130:ARG:CA[3_555]	2.17	0.03
1:16SA:726:U:C5	33:L6B:129:THR:CA[3_555]	2.17	0.03
26:TRNA:37:MIA:N3	27:23SB:1291:A:N1[2_464]	2.18	0.02
27:23SA:1331:U:OP1	43:L21A:45:THR:CG2[4_565]	2.19	0.01

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	S2A	235/256 (92%)	196 (83%)	35 (15%)	4 (2%)	9	35
2	S2B	235/256 (92%)	193 (82%)	36 (15%)	6 (3%)	5	27
3	S3A	203/239 (85%)	177 (87%)	24 (12%)	2 (1%)	15	46
3	S3B	204/239 (85%)	181 (89%)	23 (11%)	0	100	100
4	S4A	206/209 (99%)	186 (90%)	20 (10%)	0	100	100
4	S4B	206/209 (99%)	189 (92%)	17 (8%)	0	100	100
5	S5A	149/162 (92%)	141 (95%)	8 (5%)	0	100	100
5	S5B	149/162 (92%)	140 (94%)	9 (6%)	0	100	100
6	S6A	99/101 (98%)	96 (97%)	3 (3%)	0	100	100
6	S6B	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
7	S7A	153/156 (98%)	142 (93%)	11 (7%)	0	100	100
7	S7B	153/156 (98%)	141 (92%)	11 (7%)	1 (1%)	22	54

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	S8A	136/138 (99%)	124 (91%)	11 (8%)	1 (1%)	22	54
8	S8B	136/138 (99%)	126 (93%)	9 (7%)	1 (1%)	22	54
9	S9A	125/128 (98%)	108 (86%)	16 (13%)	1 (1%)	19	51
9	S9B	125/128 (98%)	109 (87%)	16 (13%)	0	100	100
10	S10A	97/105 (92%)	86 (89%)	11 (11%)	0	100	100
10	S10B	97/105 (92%)	83 (86%)	12 (12%)	2 (2%)	7	31
11	S11A	114/129 (88%)	106 (93%)	8 (7%)	0	100	100
11	S11B	115/129 (89%)	105 (91%)	10 (9%)	0	100	100
12	S12A	122/132 (92%)	106 (87%)	15 (12%)	1 (1%)	19	51
12	S12B	122/132 (92%)	108 (88%)	12 (10%)	2 (2%)	9	36
13	S13A	117/126 (93%)	97 (83%)	16 (14%)	4 (3%)	3	22
13	S13B	119/126 (94%)	95 (80%)	20 (17%)	4 (3%)	3	22
14	S14A	58/61 (95%)	50 (86%)	5 (9%)	3 (5%)	2	13
14	S14B	57/61 (93%)	47 (82%)	7 (12%)	3 (5%)	2	12
15	S15A	86/89 (97%)	81 (94%)	3 (4%)	2 (2%)	6	29
15	S15B	86/89 (97%)	82 (95%)	3 (4%)	1 (1%)	13	42
16	S16A	81/88 (92%)	78 (96%)	3 (4%)	0	100	100
16	S16B	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
17	S17A	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
17	S17B	98/105 (93%)	92 (94%)	6 (6%)	0	100	100
18	S18A	69/88 (78%)	62 (90%)	7 (10%)	0	100	100
18	S18B	68/88 (77%)	61 (90%)	6 (9%)	1 (2%)	10	38
19	S19A	82/93 (88%)	64 (78%)	18 (22%)	0	100	100
19	S19B	84/93 (90%)	65 (77%)	17 (20%)	2 (2%)	6	28
20	S20A	97/106 (92%)	84 (87%)	9 (9%)	4 (4%)	3	17
20	S20B	97/106 (92%)	81 (84%)	13 (13%)	3 (3%)	4	23
21	THXA	22/27 (82%)	20 (91%)	2 (9%)	0	100	100
21	THXB	23/27 (85%)	20 (87%)	2 (9%)	1 (4%)	2	16
29	L2A	270/276 (98%)	244 (90%)	22 (8%)	4 (2%)	10	38
29	L2B	270/276 (98%)	244 (90%)	23 (8%)	3 (1%)	14	45
30	L3A	202/206 (98%)	188 (93%)	12 (6%)	2 (1%)	15	46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	L3B	202/206 (98%)	188 (93%)	12 (6%)	2 (1%)	15	46
31	L4A	200/210 (95%)	183 (92%)	15 (8%)	2 (1%)	15	46
31	L4B	200/210 (95%)	182 (91%)	17 (8%)	1 (0%)	29	61
32	L5A	179/182 (98%)	153 (86%)	20 (11%)	6 (3%)	3	22
32	L5B	179/182 (98%)	154 (86%)	20 (11%)	5 (3%)	5	25
33	L6A	169/180 (94%)	140 (83%)	24 (14%)	5 (3%)	4	24
33	L6B	171/180 (95%)	133 (78%)	31 (18%)	7 (4%)	3	17
34	L9A	143/148 (97%)	117 (82%)	19 (13%)	7 (5%)	2	14
34	L9B	144/148 (97%)	119 (83%)	22 (15%)	3 (2%)	7	31
35	L13A	136/140 (97%)	116 (85%)	16 (12%)	4 (3%)	4	24
35	L13B	136/140 (97%)	119 (88%)	15 (11%)	2 (2%)	10	38
36	L14A	120/122 (98%)	112 (93%)	5 (4%)	3 (2%)	5	27
36	L14B	120/122 (98%)	107 (89%)	11 (9%)	2 (2%)	9	35
37	L15A	148/150 (99%)	119 (80%)	21 (14%)	8 (5%)	2	12
37	L15B	148/150 (99%)	113 (76%)	25 (17%)	10 (7%)	1	8
38	L16A	139/141 (99%)	116 (84%)	19 (14%)	4 (3%)	4	24
38	L16B	139/141 (99%)	113 (81%)	22 (16%)	4 (3%)	4	24
39	L17A	116/118 (98%)	103 (89%)	12 (10%)	1 (1%)	17	48
39	L17B	116/118 (98%)	105 (90%)	11 (10%)	0	100	100
40	L18A	110/112 (98%)	89 (81%)	19 (17%)	2 (2%)	8	35
40	L18B	109/112 (97%)	89 (82%)	20 (18%)	0	100	100
41	L19A	135/146 (92%)	119 (88%)	15 (11%)	1 (1%)	22	54
41	L19B	135/146 (92%)	118 (87%)	17 (13%)	0	100	100
42	L20A	115/118 (98%)	107 (93%)	8 (7%)	0	100	100
42	L20B	115/118 (98%)	104 (90%)	9 (8%)	2 (2%)	9	35
43	L21A	99/101 (98%)	86 (87%)	9 (9%)	4 (4%)	3	18
43	L21B	99/101 (98%)	78 (79%)	15 (15%)	6 (6%)	1	10
44	L22A	111/113 (98%)	104 (94%)	7 (6%)	0	100	100
44	L22B	111/113 (98%)	100 (90%)	11 (10%)	0	100	100
45	L23A	91/96 (95%)	86 (94%)	5 (6%)	0	100	100
45	L23B	92/96 (96%)	86 (94%)	6 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	L24A	106/110 (96%)	85 (80%)	15 (14%)	6 (6%)	1	11
46	L24B	104/110 (94%)	83 (80%)	15 (14%)	6 (6%)	1	11
47	L25A	177/206 (86%)	137 (77%)	33 (19%)	7 (4%)	3	18
47	L25B	174/206 (84%)	135 (78%)	35 (20%)	4 (2%)	6	29
48	L27A	82/85 (96%)	73 (89%)	9 (11%)	0	100	100
48	L27B	82/85 (96%)	70 (85%)	11 (13%)	1 (1%)	13	42
49	L28A	95/98 (97%)	84 (88%)	9 (10%)	2 (2%)	7	31
49	L28B	95/98 (97%)	81 (85%)	13 (14%)	1 (1%)	14	45
50	L29A	67/72 (93%)	61 (91%)	6 (9%)	0	100	100
50	L29B	69/72 (96%)	64 (93%)	5 (7%)	0	100	100
51	L30A	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
51	L30B	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
52	L31A	69/71 (97%)	45 (65%)	20 (29%)	4 (6%)	1	11
52	L31B	69/71 (97%)	44 (64%)	21 (30%)	4 (6%)	1	11
53	L32A	54/60 (90%)	45 (83%)	9 (17%)	0	100	100
53	L32B	54/60 (90%)	50 (93%)	3 (6%)	1 (2%)	8	34
54	L33A	43/54 (80%)	27 (63%)	12 (28%)	4 (9%)	0	4
54	L33B	43/54 (80%)	31 (72%)	8 (19%)	4 (9%)	0	4
55	L34A	46/49 (94%)	44 (96%)	2 (4%)	0	100	100
55	L34B	47/49 (96%)	44 (94%)	3 (6%)	0	100	100
56	L35A	62/65 (95%)	57 (92%)	4 (6%)	1 (2%)	9	36
56	L35B	62/65 (95%)	56 (90%)	6 (10%)	0	100	100
All	All	11387/12054 (94%)	9944 (87%)	1249 (11%)	194 (2%)	9	35

All (194) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	S2A	10	LEU
3	S3A	12	LEU
12	S12A	62	GLU
13	S13A	67	GLU
13	S13A	101	GLN
29	L2A	123	ALA
30	L3A	118	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	L4A	128	ALA
32	L5A	96	ARG
33	L6A	127	GLU
34	L9A	134	PRO
35	L13A	97	ARG
35	L13A	137	LYS
36	L14A	97	ARG
37	L15A	7	ARG
37	L15A	10	PRO
37	L15A	15	ARG
37	L15A	57	THR
37	L15A	106	LEU
37	L15A	148	LEU
38	L16A	105	GLU
38	L16A	139	GLU
40	L18A	3	ARG
43	L21A	38	LEU
43	L21A	50	PRO
46	L24A	81	LYS
46	L24A	90	LEU
46	L24A	92	ASN
47	L25A	109	ALA
52	L31A	37	SER
54	L33A	45	LYS
54	L33A	48	VAL
54	L33A	49	HIS
2	S2B	20	GLU
2	S2B	154	LEU
7	S7B	55	GLY
12	S12B	45	PRO
13	S13B	83	ASP
13	S13B	106	ASN
14	S14B	17	LYS
15	S15B	88	ARG
19	S19B	45	VAL
20	S20B	68	LYS
20	S20B	70	SER
20	S20B	74	LYS
21	THXB	3	LYS
29	L2B	239	ARG
31	L4B	128	ALA
32	L5B	5	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	L5B	81	LYS
33	L6B	12	PRO
34	L9B	142	VAL
35	L13B	77	GLY
37	L15B	15	ARG
37	L15B	53	GLY
37	L15B	110	TYR
38	L16B	105	GLU
38	L16B	139	GLU
42	L20B	93	LYS
43	L21B	44	LYS
43	L21B	50	PRO
46	L24B	57	GLN
46	L24B	81	LYS
47	L25B	60	GLU
47	L25B	63	ASP
49	L28B	91	LYS
52	L31B	67	TYR
54	L33B	19	ARG
2	S2A	207	ALA
13	S13A	14	ARG
14	S14A	24	CYS
20	S20A	48	LYS
20	S20A	102	GLY
29	L2A	239	ARG
32	L5A	49	ASP
32	L5A	82	LEU
34	L9A	13	GLY
34	L9A	122	GLU
35	L13A	22	THR
36	L14A	49	ARG
37	L15A	29	LYS
38	L16A	90	VAL
43	L21A	46	VAL
47	L25A	59	LEU
47	L25A	63	ASP
47	L25A	111	VAL
2	S2B	87	ARG
10	S10B	54	PHE
12	S12B	62	GLU
14	S14B	14	PRO
14	S14B	29	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	L5B	96	ARG
32	L5B	117	PHE
33	L6B	103	LEU
33	L6B	118	PRO
35	L13B	64	GLY
36	L14B	48	PRO
37	L15B	16	ARG
37	L15B	19	VAL
37	L15B	29	LYS
37	L15B	36	LYS
38	L16B	90	VAL
42	L20B	101	ARG
43	L21B	47	VAL
43	L21B	79	VAL
53	L32B	50	GLY
54	L33B	49	HIS
14	S14A	16	PHE
15	S15A	23	GLY
29	L2A	122	ASP
31	L4A	69	HIS
32	L5A	81	LYS
32	L5A	127	GLY
33	L6A	93	GLY
37	L15A	19	VAL
41	L19A	124	ASP
43	L21A	30	GLY
47	L25A	13	GLU
47	L25A	159	PRO
49	L28A	91	LYS
56	L35A	32	LEU
2	S2B	191	ASP
10	S10B	17	ASP
13	S13B	5	ALA
13	S13B	120	LYS
30	L3B	118	LYS
32	L5B	82	LEU
33	L6B	21	PRO
34	L9B	76	THR
36	L14B	5	GLN
37	L15B	57	THR
43	L21B	30	GLY
48	L27B	3	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
54	L33B	17	LYS
2	S2A	5	ILE
2	S2A	155	LEU
9	S9A	56	LEU
20	S20A	95	ALA
29	L2A	240	ALA
30	L3A	52	LEU
33	L6A	87	LEU
33	L6A	92	ILE
34	L9A	11	ASN
34	L9A	118	LYS
46	L24A	54	LYS
46	L24A	91	GLU
52	L31A	40	HIS
29	L2B	240	ALA
30	L3B	52	LEU
33	L6B	108	GLY
33	L6B	127	GLU
46	L24B	76	CYS
46	L24B	96	ILE
47	L25B	13	GLU
47	L25B	61	LEU
3	S3A	82	GLU
15	S15A	87	ILE
20	S20A	97	ALA
32	L5A	86	MET
33	L6A	81	GLU
38	L16A	11	LYS
39	L17A	117	VAL
52	L31A	34	GLU
54	L33A	41	PRO
2	S2B	7	VAL
2	S2B	130	ARG
37	L15B	47	ASP
37	L15B	119	GLU
46	L24B	56	PRO
52	L31B	41	PRO
52	L31B	42	PHE
52	L31B	49	PHE
8	S8A	129	VAL
14	S14A	52	GLN
34	L9A	12	LEU

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Mol	Chain	Res	Type
34	L9A	131	LYS
36	L14A	5	GLN
40	L18A	94	TYR
46	L24A	76	CYS
49	L28A	97	LEU
52	L31A	43	TYR
8	S8B	133	LEU
19	S19B	41	VAL
33	L6B	3	ARG
38	L16B	11	LYS
43	L21B	87	HIS
13	S13A	4	ILE
29	L2B	271	ILE
46	L24B	51	VAL
47	L25A	61	LEU
54	L33B	41	PRO
35	L13A	126	PRO
18	S18B	86	VAL
34	L9B	132	PRO

### 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	S2A	205/220 (93%)	187 (91%)	18 (9%)	10	33
2	S2B	205/220 (93%)	198 (97%)	7 (3%)	37	65
3	S3A	159/188 (85%)	151 (95%)	8 (5%)	24	55
3	S3B	160/188 (85%)	143 (89%)	17 (11%)	6	25
4	S4A	180/181 (99%)	170 (94%)	10 (6%)	21	52
4	S4B	180/181 (99%)	172 (96%)	8 (4%)	28	59
5	S5A	116/123 (94%)	113 (97%)	3 (3%)	46	71
5	S5B	116/123 (94%)	111 (96%)	5 (4%)	29	59
6	S6A	90/90 (100%)	87 (97%)	3 (3%)	38	66

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	S6B	90/90 (100%)	88 (98%)	2 (2%)	52	74
7	S7A	126/127 (99%)	121 (96%)	5 (4%)	31	61
7	S7B	126/127 (99%)	119 (94%)	7 (6%)	21	52
8	S8A	119/119 (100%)	112 (94%)	7 (6%)	19	49
8	S8B	119/119 (100%)	112 (94%)	7 (6%)	19	49
9	S9A	98/99 (99%)	94 (96%)	4 (4%)	30	61
9	S9B	98/99 (99%)	88 (90%)	10 (10%)	7	27
10	S10A	89/92 (97%)	86 (97%)	3 (3%)	37	65
10	S10B	89/92 (97%)	82 (92%)	7 (8%)	12	37
11	S11A	88/99 (89%)	84 (96%)	4 (4%)	27	58
11	S11B	89/99 (90%)	88 (99%)	1 (1%)	73	85
12	S12A	103/108 (95%)	100 (97%)	3 (3%)	42	69
12	S12B	103/108 (95%)	96 (93%)	7 (7%)	16	44
13	S13A	95/101 (94%)	88 (93%)	7 (7%)	13	40
13	S13B	97/101 (96%)	93 (96%)	4 (4%)	30	61
14	S14A	49/50 (98%)	46 (94%)	3 (6%)	18	48
14	S14B	49/50 (98%)	48 (98%)	1 (2%)	55	76
15	S15A	79/80 (99%)	78 (99%)	1 (1%)	69	82
15	S15B	79/80 (99%)	76 (96%)	3 (4%)	33	62
16	S16A	72/74 (97%)	67 (93%)	5 (7%)	15	44
16	S16B	72/74 (97%)	70 (97%)	2 (3%)	43	70
17	S17A	95/97 (98%)	89 (94%)	6 (6%)	18	47
17	S17B	95/97 (98%)	91 (96%)	4 (4%)	30	60
18	S18A	62/77 (80%)	61 (98%)	1 (2%)	62	79
18	S18B	61/77 (79%)	60 (98%)	1 (2%)	62	79
19	S19A	73/80 (91%)	65 (89%)	8 (11%)	6	24
19	S19B	73/80 (91%)	68 (93%)	5 (7%)	16	44
20	S20A	76/82 (93%)	74 (97%)	2 (3%)	46	71
20	S20B	76/82 (93%)	73 (96%)	3 (4%)	32	62
21	THXA	19/22 (86%)	19 (100%)	0	100	100
21	THXB	20/22 (91%)	19 (95%)	1 (5%)	24	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
29	L2A	214/218 (98%)	209 (98%)	5 (2%)	50	73
29	L2B	214/218 (98%)	207 (97%)	7 (3%)	38	66
30	L3A	165/166 (99%)	159 (96%)	6 (4%)	35	63
30	L3B	165/166 (99%)	161 (98%)	4 (2%)	49	73
31	L4A	161/166 (97%)	153 (95%)	8 (5%)	24	55
31	L4B	161/166 (97%)	159 (99%)	2 (1%)	71	83
32	L5A	155/156 (99%)	150 (97%)	5 (3%)	39	67
32	L5B	155/156 (99%)	144 (93%)	11 (7%)	14	42
33	L6A	143/148 (97%)	138 (96%)	5 (4%)	36	64
33	L6B	144/148 (97%)	129 (90%)	15 (10%)	7	25
34	L9A	122/124 (98%)	113 (93%)	9 (7%)	13	40
34	L9B	122/124 (98%)	114 (93%)	8 (7%)	16	46
35	L13A	117/119 (98%)	113 (97%)	4 (3%)	37	65
35	L13B	117/119 (98%)	115 (98%)	2 (2%)	60	78
36	L14A	100/100 (100%)	98 (98%)	2 (2%)	55	76
36	L14B	100/100 (100%)	93 (93%)	7 (7%)	15	43
37	L15A	116/116 (100%)	105 (90%)	11 (10%)	8	29
37	L15B	116/116 (100%)	108 (93%)	8 (7%)	15	44
38	L16A	111/111 (100%)	102 (92%)	9 (8%)	11	36
38	L16B	111/111 (100%)	103 (93%)	8 (7%)	14	41
39	L17A	101/101 (100%)	100 (99%)	1 (1%)	76	86
39	L17B	101/101 (100%)	97 (96%)	4 (4%)	31	61
40	L18A	88/88 (100%)	84 (96%)	4 (4%)	27	58
40	L18B	87/88 (99%)	78 (90%)	9 (10%)	7	26
41	L19A	120/127 (94%)	113 (94%)	7 (6%)	20	50
41	L19B	120/127 (94%)	114 (95%)	6 (5%)	24	55
42	L20A	93/94 (99%)	90 (97%)	3 (3%)	39	67
42	L20B	93/94 (99%)	85 (91%)	8 (9%)	10	35
43	L21A	82/82 (100%)	78 (95%)	4 (5%)	25	56
43	L21B	82/82 (100%)	73 (89%)	9 (11%)	6	24
44	L22A	92/92 (100%)	87 (95%)	5 (5%)	22	53

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	L22B	92/92 (100%)	88 (96%)	4 (4%)	29	59
45	L23A	76/78 (97%)	75 (99%)	1 (1%)	69	82
45	L23B	76/78 (97%)	73 (96%)	3 (4%)	32	62
46	L24A	89/91 (98%)	84 (94%)	5 (6%)	21	52
46	L24B	79/91 (87%)	76 (96%)	3 (4%)	33	62
47	L25A	158/179 (88%)	150 (95%)	8 (5%)	24	54
47	L25B	155/179 (87%)	145 (94%)	10 (6%)	17	46
48	L27A	66/67 (98%)	63 (96%)	3 (4%)	27	58
48	L27B	66/67 (98%)	61 (92%)	5 (8%)	13	39
49	L28A	82/83 (99%)	79 (96%)	3 (4%)	34	63
49	L28B	82/83 (99%)	80 (98%)	2 (2%)	49	73
50	L29A	65/67 (97%)	62 (95%)	3 (5%)	27	58
50	L29B	64/67 (96%)	62 (97%)	2 (3%)	40	67
51	L30A	51/52 (98%)	49 (96%)	2 (4%)	32	62
51	L30B	51/52 (98%)	50 (98%)	1 (2%)	55	76
52	L31A	63/63 (100%)	56 (89%)	7 (11%)	6	23
52	L31B	63/63 (100%)	58 (92%)	5 (8%)	12	37
53	L32A	48/52 (92%)	45 (94%)	3 (6%)	18	47
53	L32B	48/52 (92%)	43 (90%)	5 (10%)	7	25
54	L33A	44/52 (85%)	40 (91%)	4 (9%)	9	31
54	L33B	44/52 (85%)	43 (98%)	1 (2%)	50	73
55	L34A	41/42 (98%)	39 (95%)	2 (5%)	25	56
55	L34B	42/42 (100%)	39 (93%)	3 (7%)	14	42
56	L35A	54/55 (98%)	49 (91%)	5 (9%)	9	30
56	L35B	54/55 (98%)	51 (94%)	3 (6%)	21	52
All	All	9611/9996 (96%)	9119 (95%)	492 (5%)	24	54

All (492) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	S2A	9	GLU
2	S2A	17	PHE
2	S2A	28	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	S2A	30	ARG
2	S2A	35	GLU
2	S2A	74	LYS
2	S2A	75	LYS
2	S2A	96	ARG
2	S2A	111	ARG
2	S2A	121	LEU
2	S2A	124	SER
2	S2A	137	ARG
2	S2A	163	PHE
2	S2A	192	SER
2	S2A	196	LEU
2	S2A	209	ARG
2	S2A	210	SER
2	S2A	212	GLN
3	S3A	16	ARG
3	S3A	17	ASP
3	S3A	29	TYR
3	S3A	34	LEU
3	S3A	79	ARG
3	S3A	98	ASN
3	S3A	128	PHE
3	S3A	136	GLN
4	S4A	3	ARG
4	S4A	10	ARG
4	S4A	45	GLN
4	S4A	49	ARG
4	S4A	52	SER
4	S4A	84	LYS
4	S4A	131	ARG
4	S4A	150	GLU
4	S4A	187	ARG
4	S4A	209	ARG
5	S5A	10	MET
5	S5A	73	ASN
5	S5A	155	GLU
6	S6A	7	ASN
6	S6A	19	LEU
6	S6A	54	LYS
7	S7A	78	ARG
7	S7A	94	ARG
7	S7A	114	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	S7A	137	LYS
7	S7A	155	ARG
8	S8A	1	MET
8	S8A	41	ARG
8	S8A	56	LYS
8	S8A	88	LYS
8	S8A	91	ARG
8	S8A	104	ARG
8	S8A	112	LEU
9	S9A	111	ARG
9	S9A	112	LYS
9	S9A	114	TYR
9	S9A	121	ARG
10	S10A	3	LYS
10	S10A	60	ARG
10	S10A	78	ASN
11	S11A	13	GLN
11	S11A	51	LYS
11	S11A	77	MET
11	S11A	91	ARG
12	S12A	16	ARG
12	S12A	17	LYS
12	S12A	25	LYS
13	S13A	48	LEU
13	S13A	64	TRP
13	S13A	65	LYS
13	S13A	69	GLU
13	S13A	106	ASN
13	S13A	110	ARG
13	S13A	111	LYS
14	S14A	23	ARG
14	S14A	35	ARG
14	S14A	41	ARG
15	S15A	21	ASP
16	S16A	8	ARG
16	S16A	26	ARG
16	S16A	43	LYS
16	S16A	72	ARG
16	S16A	75	ARG
17	S17A	52	LYS
17	S17A	68	ARG
17	S17A	70	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	S17A	78	GLU
17	S17A	91	ARG
17	S17A	101	ARG
18	S18A	26	LEU
19	S19A	6	LYS
19	S19A	12	ASP
19	S19A	27	GLU
19	S19A	31	ILE
19	S19A	32	LYS
19	S19A	37	ARG
19	S19A	78	ARG
19	S19A	81	ARG
20	S20A	45	GLN
20	S20A	92	LEU
29	L2A	13	ARG
29	L2A	14	ARG
29	L2A	38	LYS
29	L2A	212	SER
29	L2A	273	ARG
30	L3A	13	ARG
30	L3A	64	LYS
30	L3A	111	ARG
30	L3A	113	PHE
30	L3A	152	LYS
30	L3A	154	LYS
31	L4A	13	SER
31	L4A	17	ARG
31	L4A	45	ARG
31	L4A	67	GLN
31	L4A	98	SER
31	L4A	108	LYS
31	L4A	117	ARG
31	L4A	158	THR
32	L5A	51	ARG
32	L5A	58	GLN
32	L5A	67	LYS
32	L5A	80	PHE
32	L5A	86	MET
33	L6A	77	LYS
33	L6A	86	GLU
33	L6A	104	GLU
33	L6A	149	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	L6A	155	SER
34	L9A	9	LEU
34	L9A	25	TYR
34	L9A	57	ARG
34	L9A	82	ARG
34	L9A	113	ARG
34	L9A	116	LEU
34	L9A	126	TYR
34	L9A	135	GLU
34	L9A	139	GLN
35	L13A	7	LYS
35	L13A	39	ARG
35	L13A	67	LEU
35	L13A	97	ARG
36	L14A	7	TYR
36	L14A	28	SER
37	L15A	13	ASN
37	L15A	15	ARG
37	L15A	21	ARG
37	L15A	27	HIS
37	L15A	50	ARG
37	L15A	55	ARG
37	L15A	91	PHE
37	L15A	108	LYS
37	L15A	133	SER
37	L15A	144	GLU
37	L15A	148	LEU
38	L16A	10	ARG
38	L16A	14	ARG
38	L16A	25	ASP
38	L16A	26	TYR
38	L16A	45	GLN
38	L16A	58	PHE
38	L16A	59	ARG
38	L16A	89	ASN
38	L16A	101	ARG
39	L17A	105	ARG
40	L18A	15	ARG
40	L18A	58	LEU
40	L18A	61	ASN
40	L18A	89	ARG
41	L19A	1	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	L19A	51	ARG
41	L19A	58	ASN
41	L19A	74	ARG
41	L19A	96	ARG
41	L19A	111	ARG
41	L19A	112	ARG
42	L20A	5	LYS
42	L20A	92	ARG
42	L20A	104	GLN
43	L21A	10	LYS
43	L21A	12	TYR
43	L21A	21	ARG
43	L21A	51	VAL
44	L22A	11	ARG
44	L22A	37	ARG
44	L22A	67	ASP
44	L22A	70	TYR
44	L22A	92	ARG
45	L23A	64	LYS
46	L24A	6	HIS
46	L24A	81	LYS
46	L24A	92	ASN
46	L24A	101	LYS
46	L24A	102	CYS
47	L25A	1	MET
47	L25A	6	LYS
47	L25A	49	ARG
47	L25A	63	ASP
47	L25A	72	ARG
47	L25A	77	ASP
47	L25A	81	ARG
47	L25A	132	ASN
48	L27A	14	ARG
48	L27A	44	ARG
48	L27A	64	ASP
49	L28A	69	LYS
49	L28A	78	LYS
49	L28A	81	LYS
50	L29A	8	LYS
50	L29A	17	SER
50	L29A	28	LYS
51	L30A	33	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	L30A	38	GLU
52	L31A	16	CYS
52	L31A	18	CYS
52	L31A	38	LYS
52	L31A	55	ARG
52	L31A	61	ARG
52	L31A	63	TYR
52	L31A	67	TYR
53	L32A	16	ARG
53	L32A	23	HIS
53	L32A	51	TYR
54	L33A	33	LYS
54	L33A	34	LEU
54	L33A	39	TYR
54	L33A	42	TRP
55	L34A	10	ARG
55	L34A	41	ARG
56	L35A	4	MET
56	L35A	34	TRP
56	L35A	35	GLN
56	L35A	46	ARG
56	L35A	52	LYS
2	S2B	21	ARG
2	S2B	56	ARG
2	S2B	137	ARG
2	S2B	163	PHE
2	S2B	193	ASP
2	S2B	217	ARG
2	S2B	236	TYR
3	S3B	16	ARG
3	S3B	26	LYS
3	S3B	29	TYR
3	S3B	36	ASP
3	S3B	43	LEU
3	S3B	48	TYR
3	S3B	52	LEU
3	S3B	54	ARG
3	S3B	56	ASP
3	S3B	62	ASP
3	S3B	72	LYS
3	S3B	79	ARG
3	S3B	83	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	S3B	119	ARG
3	S3B	131	ARG
3	S3B	184	TYR
3	S3B	196	LEU
4	S4B	3	ARG
4	S4B	10	ARG
4	S4B	33	MET
4	S4B	49	ARG
4	S4B	118	ARG
4	S4B	162	LEU
4	S4B	181	MET
4	S4B	201	GLN
5	S5B	24	ARG
5	S5B	26	PHE
5	S5B	107	ARG
5	S5B	126	ARG
5	S5B	137	GLU
6	S6B	3	ARG
6	S6B	82	ARG
7	S7B	41	ARG
7	S7B	56	GLN
7	S7B	67	GLU
7	S7B	72	ARG
7	S7B	85	TYR
7	S7B	140	ASP
7	S7B	156	TRP
8	S8B	1	MET
8	S8B	25	ASP
8	S8B	77	GLU
8	S8B	84	ARG
8	S8B	102	ARG
8	S8B	112	LEU
8	S8B	122	ARG
9	S9B	10	ARG
9	S9B	20	ARG
9	S9B	71	SER
9	S9B	95	LYS
9	S9B	97	LYS
9	S9B	107	ARG
9	S9B	113	LYS
9	S9B	118	LYS
9	S9B	121	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	S9B	125	TYR
10	S10B	21	GLN
10	S10B	22	LYS
10	S10B	45	ARG
10	S10B	59	SER
10	S10B	69	ASN
10	S10B	70	ARG
10	S10B	79	ARG
11	S11B	116	HIS
12	S12B	43	LYS
12	S12B	44	LYS
12	S12B	46	ASN
12	S12B	61	TYR
12	S12B	72	HIS
12	S12B	99	ARG
12	S12B	115	SER
13	S13B	47	ASP
13	S13B	64	TRP
13	S13B	88	ARG
13	S13B	94	ARG
14	S14B	35	ARG
15	S15B	10	LYS
15	S15B	21	ASP
15	S15B	63	ARG
16	S16B	43	LYS
16	S16B	82	GLN
17	S17B	63	ARG
17	S17B	68	ARG
17	S17B	79	SER
17	S17B	101	ARG
18	S18B	54	ARG
19	S19B	29	ARG
19	S19B	32	LYS
19	S19B	64	GLU
19	S19B	80	TYR
19	S19B	83	HIS
20	S20B	11	SER
20	S20B	23	ARG
20	S20B	74	LYS
21	THXB	15	ARG
29	L2B	5	LYS
29	L2B	38	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	L2B	67	PHE
29	L2B	88	ARG
29	L2B	103	ARG
29	L2B	262	ARG
29	L2B	273	ARG
30	L3B	79	ARG
30	L3B	111	ARG
30	L3B	119	ARG
30	L3B	169	ASN
31	L4B	29	ASN
31	L4B	98	SER
32	L5B	4	ASP
32	L5B	10	LYS
32	L5B	21	ARG
32	L5B	33	ARG
32	L5B	47	LYS
32	L5B	51	ARG
32	L5B	67	LYS
32	L5B	80	PHE
32	L5B	95	ARG
32	L5B	118	ARG
32	L5B	153	ARG
33	L6B	23	ARG
33	L6B	25	LYS
33	L6B	59	ARG
33	L6B	67	LEU
33	L6B	77	LYS
33	L6B	83	TYR
33	L6B	86	GLU
33	L6B	88	LEU
33	L6B	97	ARG
33	L6B	101	ARG
33	L6B	111	HIS
33	L6B	147	ASN
33	L6B	152	ARG
33	L6B	153	LYS
33	L6B	167	GLU
34	L9B	1	MET
34	L9B	10	GLU
34	L9B	52	ARG
34	L9B	56	LYS
34	L9B	69	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	L9B	103	ARG
34	L9B	104	GLN
34	L9B	133	HIS
35	L13B	76	SER
35	L13B	114	ARG
36	L14B	7	TYR
36	L14B	13	ASN
36	L14B	23	ARG
36	L14B	49	ARG
36	L14B	71	ARG
36	L14B	91	LEU
36	L14B	104	ARG
37	L15B	21	ARG
37	L15B	25	SER
37	L15B	35	HIS
37	L15B	85	LEU
37	L15B	110	TYR
37	L15B	115	LEU
37	L15B	117	GLU
37	L15B	124	LYS
38	L16B	10	ARG
38	L16B	14	ARG
38	L16B	25	ASP
38	L16B	26	TYR
38	L16B	45	GLN
38	L16B	59	ARG
38	L16B	89	ASN
38	L16B	101	ARG
39	L17B	1	MET
39	L17B	2	ARG
39	L17B	88	ARG
39	L17B	91	GLN
40	L18B	15	ARG
40	L18B	20	ARG
40	L18B	25	ARG
40	L18B	30	ARG
40	L18B	34	HIS
40	L18B	56	LEU
40	L18B	75	GLU
40	L18B	89	ARG
40	L18B	110	LEU
41	L19B	1	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	L19B	58	ASN
41	L19B	61	PHE
41	L19B	98	LYS
41	L19B	112	ARG
41	L19B	125	ARG
42	L20B	15	LYS
42	L20B	19	LYS
42	L20B	31	SER
42	L20B	57	PHE
42	L20B	69	CYS
42	L20B	79	PHE
42	L20B	97	ASP
42	L20B	114	LYS
43	L21B	10	LYS
43	L21B	44	LYS
43	L21B	49	THR
43	L21B	51	VAL
43	L21B	60	GLU
43	L21B	75	PHE
43	L21B	78	LYS
43	L21B	82	ARG
43	L21B	98	GLU
44	L22B	11	ARG
44	L22B	70	TYR
44	L22B	111	HIS
44	L22B	113	LYS
45	L23B	62	LYS
45	L23B	64	LYS
45	L23B	76	ARG
46	L24B	43	ASN
46	L24B	55	TYR
46	L24B	81	LYS
47	L25B	2	GLU
47	L25B	31	ARG
47	L25B	32	HIS
47	L25B	34	ASN
47	L25B	76	LEU
47	L25B	87	ASP
47	L25B	94	GLU
47	L25B	119	GLU
47	L25B	154	ASP
47	L25B	169	GLU

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Mol	Chain	Res	Type
48	L27B	4	LYS
48	L27B	5	LYS
48	L27B	25	ARG
48	L27B	35	ASN
48	L27B	64	ASP
49	L28B	27	GLU
49	L28B	88	LYS
50	L29B	3	LEU
50	L29B	67	LYS
51	L30B	30	ARG
52	L31B	40	HIS
52	L31B	49	PHE
52	L31B	58	ARG
52	L31B	61	ARG
52	L31B	62	ARG
53	L32B	21	SER
53	L32B	33	CYS
53	L32B	40	LYS
53	L32B	52	TYR
53	L32B	55	ARG
54	L33B	53	LYS
55	L34B	9	ARG
55	L34B	32	LYS
55	L34B	49	ARG
56	L35B	19	SER
56	L35B	31	HIS
56	L35B	52	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	16SA	1508/1512 (99%)	317 (21%)	47 (3%)
1	16SB	1504/1512 (99%)	336 (22%)	46 (3%)
22	ASIA	74/76 (97%)	42 (56%)	1 (1%)
23	PSIA	73/76 (96%)	24 (32%)	2 (2%)
23	PSIB	73/76 (96%)	29 (39%)	2 (2%)
24	ESIA	74/76 (97%)	34 (45%)	2 (2%)
24	ESIB	74/76 (97%)	23 (31%)	2 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
25	MRNA	29/30 (96%)	7 (24%)	2 (6%)
25	MRNB	29/30 (96%)	11 (37%)	2 (6%)
26	TRNA	71/76 (93%)	34 (47%)	3 (4%)
27	23SA	2883/2911 (99%)	632 (21%)	70 (2%)
27	23SB	2867/2911 (98%)	658 (22%)	64 (2%)
28	5SA	121/124 (97%)	27 (22%)	1 (0%)
28	5SB	120/124 (96%)	34 (28%)	4 (3%)
57	ASIB	74/76 (97%)	38 (51%)	2 (2%)
All	All	9574/9686 (98%)	2246 (23%)	250 (2%)

All (2246) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	16SA	654	A
1	16SA	655	G
1	16SA	678	A
1	16SA	685	G
1	16SA	693	C
1	16SA	694	C
1	16SA	697	A
1	16SA	707	G
1	16SA	711	U
1	16SA	712	G
1	16SA	719	G
1	16SA	724	G
1	16SA	725	U
1	16SA	726	U
1	16SA	728	U
1	16SA	729	A
1	16SA	732	C
1	16SA	733	C
1	16SA	740	A
1	16SA	747	G
1	16SA	759	A
1	16SA	760	C
1	16SA	777	C
1	16SA	782	G
1	16SA	784	G
1	16SA	802	A
1	16SA	809	C
1	16SA	812	A
1	16SA	813	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	821	G
1	16SA	832	C
1	16SA	835	U
1	16SA	836	G
1	16SA	837	G
1	16SA	847	A
1	16SA	848	A
1	16SA	849	A
1	16SA	853	C
1	16SA	855	U
1	16SA	856	U
1	16SA	857	G
1	16SA	867	G
1	16SA	872	G
1	16SA	885	U
1	16SA	888	G
1	16SA	892	G
1	16SA	907	G
1	16SA	908	C
1	16SA	911	A
1	16SA	922	G
1	16SA	930	G
1	16SA	959	G
1	16SA	962	A
1	16SA	969	C
1	16SA	970	A
1	16SA	973	G
1	16SA	985	A
1	16SA	986	C
1	16SA	987	G
1	16SA	988	G
1	16SA	990	A
1	16SA	992	G
1	16SA	993	C
1	16SA	994	A
1	16SA	995	G
1	16SA	1008	U
1	16SA	1014	A
1	16SA	1029	G
1	16SA	1030	A
1	16SA	1038	A
1	16SA	1039	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	1047	G
1	16SA	1053	A
1	16SA	1054	G
1	16SA	1055	A
1	16SA	1062	U
1	16SA	1063	C
1	16SA	1064	G
1	16SA	1065	G
1	16SA	1070	U
1	16SA	1071	A
1	16SA	1075	U
1	16SA	1080	A
1	16SA	1081	A
1	16SA	1101	C
1	16SA	1102	G
1	16SA	1105	G
1	16SA	1112	A
1	16SA	1115	G
1	16SA	1116	U
1	16SA	1126	A
1	16SA	1127	U
1	16SA	1134	G
1	16SA	1138	A
1	16SA	1139	A
1	16SA	1140	C
1	16SA	1147	C
1	16SA	1156	G7M
1	16SA	1160	U
1	16SA	1161	A
1	16SA	1162	A
1	16SA	1165	C
1	16SA	1174	C
1	16SA	1176	A
1	16SA	1188	A
1	16SA	1190	U
1	16SA	1191	C
1	16SA	1192	A
1	16SA	1193	C
1	16SA	1197	G
1	16SA	1201	A
1	16SA	1202	A
1	16SA	1205	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	1206	G
1	16SA	1236	A
1	16SA	1243	A
1	16SA	1252	C
1	16SA	1256	G
1	16SA	1259	G
1	16SA	1260	G
1	16SA	1279	G
1	16SA	1282	A
1	16SA	1290	G
1	16SA	1294	A
1	16SA	1295	G
1	16SA	1316	A
1	16SA	1330	C
1	16SA	1331	A
1	16SA	1332	G
1	16SA	1333	A
1	16SA	1350	G
1	16SA	1352	U
1	16SA	1353	G
1	16SA	1360	G
1	16SA	1363	G
1	16SA	1377	C
1	16SA	1378	C
1	16SA	1382	A
1	16SA	1383	C
1	16SA	1384	G
1	16SA	1395	A
1	16SA	1406	A
1	16SA	1407	G
1	16SA	1421	A
1	16SA	1422	U
1	16SA	1423	A
1	16SA	1442	U
1	16SA	1444	A
1	16SA	1446	C
1	16SA	1447	G
1	16SA	1449	U
1	16SA	1450	G
1	16SA	1457	A
1	16SA	1468	U
1	16SA	1470	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	1471	C
1	16SA	1476	G
1	16SA	1482	A
1	16SA	1493	U
1	16SA	1496	A
1	16SA	1497	G
1	16SA	1525	G
1	16SA	1536	A
1	16SA	1537	A
1	16SA	1539	G
1	16SA	1549	G
1	16SA	1550	G
1	16SA	1557	C
1	16SA	1558	A
1	16SA	1559	C
1	16SA	1583	U
1	16SA	1591	A
1	16SA	1592	A
1	16SA	1594	G
1	16SA	1595	C
1	16SA	1597	A
1	16SA	1598	A
1	16SA	1599	G
1	16SA	1600	A
1	16SA	1603	C
1	16SA	1604	U
1	16SA	1609	A
1	16SA	1614	U
1	16SA	1615	U
1	16SA	1616	G
1	16SA	1625	G
1	16SA	1628	A
1	16SA	1630	C
1	16SA	1633	G
1	16SA	1640	A
1	16SA	1645	G
1	16SA	1648	G
1	16SA	1649	U
1	16SA	1650	G
1	16SA	1652	C
1	16SA	1653	C
1	16SA	1655	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	1657	G
1	16SA	1659	G
1	16SA	1661	G
1	16SA	1664	G
1	16SA	1666	C
1	16SA	1668	U
1	16SA	1674	A
1	16SA	1681	G
1	16SA	1682	C
1	16SA	1683	A
1	16SA	1694	C
1	16SA	1709	G
1	16SA	1710	G
1	16SA	1722	G
1	16SA	1723	U
1	16SA	1729	A
1	16SA	1746	C
1	16SA	1750	U
1	16SA	1753	U
1	16SA	1754	U
1	16SA	1755	G
1	16SA	1756	C
1	16SA	1757	C
1	16SA	1758	A
1	16SA	1759	G
1	16SA	1760	C
1	16SA	1761	G
1	16SA	1764	U
1	16SA	1765	C
1	16SA	1766	G
1	16SA	1767	G
1	16SA	1768	C
1	16SA	1774	A
1	16SA	1780	A
1	16SA	1785	A
1	16SA	1786	C
1	16SA	1787	U
1	16SA	1789	C
1	16SA	1798	G
1	16SA	1808	G
1	16SA	1809	G
1	16SA	1810	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	1811	G
1	16SA	1812	G
1	16SA	1814	G
1	16SA	1815	A
1	16SA	1820	G
1	16SA	1823	U
1	16SA	1825	G
1	16SA	1827	C
1	16SA	1828	A
1	16SA	1839	U
1	16SA	1845	C
1	16SA	1852	A
1	16SA	1854	A
1	16SA	1865	A
1	16SA	1877	A
1	16SA	1883	A
1	16SA	1884	U
1	16SA	1885	G
1	16SA	1889	C
1	16SA	1890	C
1	16SA	1896	A
1	16SA	1899	G
1	16SA	1900	G
1	16SA	1902	A
1	16SA	1907	A
1	16SA	1908	U
1	16SA	1909	C
1	16SA	1913	A
1	16SA	1914	A
1	16SA	1916	A
1	16SA	1919	U
1	16SA	1924	C
1	16SA	1926	A
1	16SA	1927	G
1	16SA	1928	U
1	16SA	1929	U
1	16SA	1932	G
1	16SA	1941	C
1	16SA	1945	A
1	16SA	1946	A
1	16SA	1947	C
1	16SA	1948	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	1949	C
1	16SA	1950	G
1	16SA	1954	C
1	16SA	1962	C
1	16SA	1963	C
1	16SA	1965	G
1	16SA	1973	A
1	16SA	1980	G
1	16SA	1990	C
1	16SA	1991	A
1	16SA	1992	U
1	16SA	1996	G
1	16SA	1998	G
1	16SA	2026	A
1	16SA	2047	G
1	16SA	2070	G
1	16SA	2071	G
1	16SA	2072	A
1	16SA	2073	G
1	16SA	2077	A
1	16SA	2078	C
1	16SA	2079	G
1	16SA	2080	G
1	16SA	2092	G
1	16SA	2110	G
1	16SA	2115	A
1	16SA	2120	G
1	16SA	2122	A
1	16SA	2125	A
1	16SA	2127	G
1	16SA	2129	U
1	16SA	2140	G
1	16SA	2143	G
1	16SA	2152	G
1	16SA	2153	G
1	16SA	2154	A
22	ASIA	2	C
22	ASIA	3	C
22	ASIA	5	G
22	ASIA	7	A
22	ASIA	8	4SU
22	ASIA	9	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	ASIA	10	G
22	ASIA	11	C
22	ASIA	15	G
22	ASIA	16	U
22	ASIA	17	C
22	ASIA	18	G
22	ASIA	19	G
22	ASIA	20	U
22	ASIA	21	A
22	ASIA	22	G
22	ASIA	24	G
22	ASIA	26	A
22	ASIA	36	A
22	ASIA	42	C
22	ASIA	44	G
22	ASIA	45	U
22	ASIA	46	G7M
22	ASIA	47	U
22	ASIA	48	C
22	ASIA	49	C
22	ASIA	52	G
22	ASIA	53	G
22	ASIA	55	PSU
22	ASIA	58	A
22	ASIA	59	U
22	ASIA	60	U
22	ASIA	61	C
22	ASIA	63	G
22	ASIA	64	A
22	ASIA	66	U
22	ASIA	70	G
22	ASIA	72	C
22	ASIA	73	A
22	ASIA	74	C
22	ASIA	75	C
22	ASIA	76	A
23	PSIA	2	C
23	PSIA	3	C
23	PSIA	8	4SU
23	PSIA	11	C
23	PSIA	13	C
23	PSIA	17	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	PSIA	18	G
23	PSIA	19	G
23	PSIA	20	U
23	PSIA	21	A
23	PSIA	22	G
23	PSIA	25	C
23	PSIA	30	G
23	PSIA	38	A
23	PSIA	44	G
23	PSIA	45	U
23	PSIA	46	G7M
23	PSIA	48	C
23	PSIA	55	PSU
23	PSIA	56	C
23	PSIA	58	A
23	PSIA	60	U
23	PSIA	61	C
23	PSIA	69	G
24	ESIA	2	C
24	ESIA	3	C
24	ESIA	7	A
24	ESIA	8	U
24	ESIA	9	A
24	ESIA	10	G
24	ESIA	13	C
24	ESIA	14	A
24	ESIA	16	U
24	ESIA	17	C
24	ESIA	18	G
24	ESIA	19	G
24	ESIA	20	U
24	ESIA	21	A
24	ESIA	22	G
24	ESIA	30	G
24	ESIA	38	A
24	ESIA	42	C
24	ESIA	45	U
24	ESIA	46	G
24	ESIA	47	U
24	ESIA	48	C
24	ESIA	49	C
24	ESIA	53	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	ESIA	55	U
24	ESIA	56	C
24	ESIA	58	A
24	ESIA	59	U
24	ESIA	63	G
24	ESIA	65	G
24	ESIA	66	U
24	ESIA	72	C
24	ESIA	73	A
24	ESIA	76	A
25	MRNA	33	G
25	MRNA	43	U
25	MRNA	45	U
25	MRNA	46	U
25	MRNA	54	U
25	MRNA	56	U
25	MRNA	57	U
26	TRNA	2	C
26	TRNA	3	C
26	TRNA	6	G
26	TRNA	8	4SU
26	TRNA	10	G
26	TRNA	11	C
26	TRNA	12	U
26	TRNA	13	C
26	TRNA	15	G
26	TRNA	16	H2U
26	TRNA	19	G
26	TRNA	20	H2U
26	TRNA	21	A
26	TRNA	22	G
26	TRNA	23	A
26	TRNA	27	G
26	TRNA	35	A
26	TRNA	38	A
26	TRNA	40	C
26	TRNA	43	C
26	TRNA	44	G
26	TRNA	45	U
26	TRNA	46	G
26	TRNA	47	U
26	TRNA	48	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	TRNA	49	C
26	TRNA	50	U
26	TRNA	52	G
26	TRNA	53	G
26	TRNA	54	5MU
26	TRNA	56	C
26	TRNA	58	A
26	TRNA	63	G
26	TRNA	66	U
27	23SA	3	U
27	23SA	4	C
27	23SA	5	A
27	23SA	10	G
27	23SA	15	G
27	23SA	34	C
27	23SA	35	G
27	23SA	45	C
27	23SA	48	A
27	23SA	57	G
27	23SA	59	G
27	23SA	60	G
27	23SA	62	U
27	23SA	70	A
27	23SA	71	U
27	23SA	73	A
27	23SA	74	G
27	23SA	77	A
27	23SA	82	G
27	23SA	83	A
27	23SA	89	U
27	23SA	100	G
27	23SA	116	A
27	23SA	117	A
27	23SA	118	U
27	23SA	129	G
27	23SA	137	G
27	23SA	140	A
27	23SA	155	C
27	23SA	157	U
27	23SA	158	U
27	23SA	160	U
27	23SA	186	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	189	A
27	23SA	204	G
27	23SA	205	G
27	23SA	206	A
27	23SA	207	G
27	23SA	211	A
27	23SA	212	A
27	23SA	213	A
27	23SA	217	A
27	23SA	218	A
27	23SA	219	A
27	23SA	220	U
27	23SA	222	G
27	23SA	229	U
27	23SA	238	G
27	23SA	239	C
27	23SA	242	G
27	23SA	255	A
27	23SA	256	G
27	23SA	259	U
27	23SA	272	U
27	23SA	273	U
27	23SA	274	G
27	23SA	276	C
27	23SA	289	U
27	23SA	290	G
27	23SA	297	U
27	23SA	298	C
27	23SA	304	C
27	23SA	324	A
27	23SA	336	A
27	23SA	337	G
27	23SA	340	G
27	23SA	354	G
27	23SA	355	A
27	23SA	367	G
27	23SA	377	G
27	23SA	388	G
27	23SA	393	U
27	23SA	394	A
27	23SA	395	C
27	23SA	400	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	401	U
27	23SA	414	G
27	23SA	424	G
27	23SA	432	C
27	23SA	433	U
27	23SA	439	G
27	23SA	457	A
27	23SA	472	C
27	23SA	476	U
27	23SA	479	C
27	23SA	482	A
27	23SA	483	C
27	23SA	485	A
27	23SA	492	U
27	23SA	498	A
27	23SA	499	A
27	23SA	507	A
27	23SA	509	G
27	23SA	521	G
27	23SA	531	U
27	23SA	532	A
27	23SA	535	G
27	23SA	536	C
27	23SA	539	G
27	23SA	555	A
27	23SA	556	A
27	23SA	557	G
27	23SA	558	C
27	23SA	559	A
27	23SA	560	G
27	23SA	563	A
27	23SA	564	C
27	23SA	565	G
27	23SA	572	C
27	23SA	575	G
27	23SA	580	U
27	23SA	581	G
27	23SA	588	G
27	23SA	589	C
27	23SA	595	G
27	23SA	598	G
27	23SA	600	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	612	C
27	23SA	613	U
27	23SA	617	G
27	23SA	618	G
27	23SA	628	A
27	23SA	632	U
27	23SA	635	G
27	23SA	640	U
27	23SA	641	G
27	23SA	643	G
27	23SA	644	G
27	23SA	647	G
27	23SA	648	A
27	23SA	649	G
27	23SA	654	A
27	23SA	664	A
27	23SA	672	C
27	23SA	673	A
27	23SA	681	A
27	23SA	682	A
27	23SA	684	G
27	23SA	699	C
27	23SA	700	G
27	23SA	701	A
27	23SA	706	U
27	23SA	717	G
27	23SA	719	A
27	23SA	726	A
27	23SA	735	G
27	23SA	750	G
27	23SA	758	U
27	23SA	779	C
27	23SA	811	U
27	23SA	824	G
27	23SA	825	G
27	23SA	831	A
27	23SA	833	A
27	23SA	834	G
27	23SA	838	A
27	23SA	839	C
27	23SA	841	G
27	23SA	842	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	854	G
27	23SA	861	C
27	23SA	868	A
27	23SA	876	U
27	23SA	877	U
27	23SA	895	C
27	23SA	896	U
27	23SA	897	G
27	23SA	908	G
27	23SA	926	U
27	23SA	927	A
27	23SA	928	G
27	23SA	929	G
27	23SA	930	G
27	23SA	931	G
27	23SA	932	G
27	23SA	933	C
27	23SA	934	C
27	23SA	935	C
27	23SA	936	A
27	23SA	937	C
27	23SA	938	C
27	23SA	939	A
27	23SA	940	G
27	23SA	941	C
27	23SA	944	A
27	23SA	945	C
27	23SA	946	C
27	23SA	947	A
27	23SA	948	A
27	23SA	952	C
27	23SA	954	G
27	23SA	958	A
27	23SA	959	A
27	23SA	963	C
27	23SA	965	A
27	23SA	967	G
27	23SA	978	G
27	23SA	979	G
27	23SA	985	G
27	23SA	988	A
27	23SA	992	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	993	G
27	23SA	1000	A
27	23SA	1006	A
27	23SA	1008	C
27	23SA	1021	G
27	23SA	1031	A
27	23SA	1038	A
27	23SA	1039	C
27	23SA	1044	A
27	23SA	1059	G
27	23SA	1060	U
27	23SA	1061	C
27	23SA	1070	G
27	23SA	1071	U
27	23SA	1073	G
27	23SA	1074	U
27	23SA	1075	A
27	23SA	1081	U
27	23SA	1093	A
27	23SA	1095	G
27	23SA	1098	A
27	23SA	1106	U
27	23SA	1108	U
27	23SA	1109	U
27	23SA	1110	G
27	23SA	1119	G
27	23SA	1122	G
27	23SA	1124	C
27	23SA	1125	A
27	23SA	1126	U
27	23SA	1127	C
27	23SA	1130	U
27	23SA	1131	U
27	23SA	1132	A
27	23SA	1133	A
27	23SA	1134	A
27	23SA	1135	G
27	23SA	1136	A
27	23SA	1138	U
27	23SA	1139	G
27	23SA	1158	G
27	23SA	1159	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	1160	G
27	23SA	1170	G
27	23SA	1177	A
27	23SA	1178	U
27	23SA	1179	G
27	23SA	1183	C
27	23SA	1184	G
27	23SA	1186	G
27	23SA	1187	G
27	23SA	1190	U
27	23SA	1191	A
27	23SA	1192	A
27	23SA	1198	G
27	23SA	1205	A
27	23SA	1206	G
27	23SA	1208	U
27	23SA	1217	G
27	23SA	1221	G
27	23SA	1223	U
27	23SA	1224	G
27	23SA	1225	A
27	23SA	1227	C
27	23SA	1228	C
27	23SA	1243	G
27	23SA	1245	G
27	23SA	1252	A
27	23SA	1253	U
27	23SA	1254	G
27	23SA	1259	U
27	23SA	1268	A
27	23SA	1269	C
27	23SA	1276	G
27	23SA	1302	A
27	23SA	1305	G
27	23SA	1314	A
27	23SA	1318	A
27	23SA	1320	G
27	23SA	1321	A
27	23SA	1322	U
27	23SA	1335	A
27	23SA	1349	U
27	23SA	1350	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	1358	G
27	23SA	1362	U
27	23SA	1363	C
27	23SA	1368	G
27	23SA	1378	U
27	23SA	1390	U
27	23SA	1394	C
27	23SA	1398	A
27	23SA	1401	U
27	23SA	1408	A
27	23SA	1409	A
27	23SA	1414	A
27	23SA	1428	A
27	23SA	1433	A
27	23SA	1434	G
27	23SA	1435	C
27	23SA	1437	G
27	23SA	1460	C
27	23SA	1465	G
27	23SA	1466	C
27	23SA	1468	A
27	23SA	1469	U
27	23SA	1470	G
27	23SA	1477	C
27	23SA	1486	C
27	23SA	1494	A
27	23SA	1499	A
27	23SA	1500	G
27	23SA	1502	C
27	23SA	1508	C
27	23SA	1509	G
27	23SA	1511	G
27	23SA	1517	C
27	23SA	1521	A
27	23SA	1524	C
27	23SA	1525	G
27	23SA	1526	C
27	23SA	1529	G
27	23SA	1531	U
27	23SA	1532	G
27	23SA	1534	G
27	23SA	1535	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	1536	G
27	23SA	1542	C
27	23SA	1546	U
27	23SA	1554	C
27	23SA	1555	C
27	23SA	1557	A
27	23SA	1558	C
27	23SA	1559	A
27	23SA	1563	U
27	23SA	1564	C
27	23SA	1574	G
27	23SA	1582	C
27	23SA	1583	G
27	23SA	1584	U
27	23SA	1586	C
27	23SA	1587	G
27	23SA	1592	A
27	23SA	1593	C
27	23SA	1594	A
27	23SA	1604	A
27	23SA	1605	G
27	23SA	1608	A
27	23SA	1609	G
27	23SA	1610	G
27	23SA	1616	A
27	23SA	1619	A
27	23SA	1628	U
27	23SA	1629	A
27	23SA	1635	A
27	23SA	1642	G
27	23SA	1647	C
27	23SA	1657	A
27	23SA	1659	A
27	23SA	1660	C
27	23SA	1666	C
27	23SA	1667	A
27	23SA	1696	C
27	23SA	1698	C
27	23SA	1703	G
27	23SA	1704	A
27	23SA	1724	G
27	23SA	1745	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	1751	A
27	23SA	1753	G
27	23SA	1766	G
27	23SA	1769	G
27	23SA	1770	A
27	23SA	1771	U
27	23SA	1772	G
27	23SA	1773	A
27	23SA	1776	C
27	23SA	1784	G
27	23SA	1787	G
27	23SA	1792	G
27	23SA	1794	A
27	23SA	1796	A
27	23SA	1797	G
27	23SA	1798	G
27	23SA	1807	A
27	23SA	1814	A
27	23SA	1816	C
27	23SA	1821	A
27	23SA	1825	A
27	23SA	1832	U
27	23SA	1833	G
27	23SA	1834	C
27	23SA	1835	G
27	23SA	1850	G
27	23SA	1854	U
27	23SA	1863	A
27	23SA	1873	G
27	23SA	1880	G
27	23SA	1881	A
27	23SA	1882	A
27	23SA	1892	G
27	23SA	1899	G
27	23SA	1903	G
27	23SA	1907	C
27	23SA	1913	G
27	23SA	1914	A
27	23SA	1925	A
27	23SA	1931	G
27	23SA	1939	C
27	23SA	1954	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	1955	G
27	23SA	1959	C
27	23SA	1961	A
27	23SA	1962	A
27	23SA	1963	A
27	23SA	1964	5MU
27	23SA	1965	U
27	23SA	1980	U
27	23SA	1985	A
27	23SA	1988	U
27	23SA	1989	G
27	23SA	1992	C
27	23SA	1994	A
27	23SA	1995	A
27	23SA	1996	A
27	23SA	1997	A
27	23SA	2007	C
27	23SA	2017	G
27	23SA	2018	U
27	23SA	2045	A
27	23SA	2048	G
27	23SA	2052	G
27	23SA	2056	A
27	23SA	2057	G
27	23SA	2058	A
27	23SA	2068	C
27	23SA	2076	A
27	23SA	2079	A
27	23SA	2080	C
27	23SA	2081	G
27	23SA	2084	A
27	23SA	2085	A
27	23SA	2086	G
27	23SA	2087	A
27	23SA	2088	C
27	23SA	2094	G
27	23SA	2124	U
27	23SA	2125	G
27	23SA	2126	G
27	23SA	2136	C
27	23SA	2138	U
27	23SA	2139	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	2140	G
27	23SA	2141	G
27	23SA	2142	A
27	23SA	2143	U
27	23SA	2144	A
27	23SA	2145	G
27	23SA	2150	G
27	23SA	2151	A
27	23SA	2153	C
27	23SA	2154	C
27	23SA	2157	U
27	23SA	2158	G
27	23SA	2161	C
27	23SA	2170	C
27	23SA	2171	C
27	23SA	2172	G
27	23SA	2173	G
27	23SA	2185	G
27	23SA	2188	C
27	23SA	2191	G
27	23SA	2193	G
27	23SA	2194	A
27	23SA	2195	A
27	23SA	2196	A
27	23SA	2197	U
27	23SA	2198	A
27	23SA	2199	C
27	23SA	2201	A
27	23SA	2203	C
27	23SA	2214	U
27	23SA	2215	G
27	23SA	2217	G
27	23SA	2223	A
27	23SA	2230	G
27	23SA	2231	G
27	23SA	2232	A
27	23SA	2233	U
27	23SA	2234	G
27	23SA	2240	A
27	23SA	2253	G
27	23SA	2254	G
27	23SA	2267	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	2282	A
27	23SA	2288	A
27	23SA	2290	C
27	23SA	2293	A
27	23SA	2295	G
27	23SA	2298	C
27	23SA	2302	A
27	23SA	2303	A
27	23SA	2304	G
27	23SA	2319	G
27	23SA	2320	A
27	23SA	2322	G
27	23SA	2323	G
27	23SA	2327	U
27	23SA	2329	C
27	23SA	2334	G
27	23SA	2335	A
27	23SA	2336	G
27	23SA	2340	G
27	23SA	2349	G
27	23SA	2351	A
27	23SA	2361	A
27	23SA	2362	C
27	23SA	2365	C
27	23SA	2392	A
27	23SA	2394	G
27	23SA	2398	G
27	23SA	2400	C
27	23SA	2406	G
27	23SA	2407	A
27	23SA	2421	U
27	23SA	2422	G
27	23SA	2426	A
27	23SA	2437	A
27	23SA	2438	U
27	23SA	2439	C
27	23SA	2441	A
27	23SA	2442	C
27	23SA	2444	G
27	23SA	2445	A
27	23SA	2450	A
27	23SA	2454	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	2455	C
27	23SA	2456	C
27	23SA	2463	A
27	23SA	2475	U
27	23SA	2484	A
27	23SA	2485	G
27	23SA	2488	U
27	23SA	2489	C
27	23SA	2490	C
27	23SA	2491	A
27	23SA	2497	G
27	23SA	2509	G
27	23SA	2517	G
27	23SA	2519	U
27	23SA	2520	G
27	23SA	2522	C
27	23SA	2533	A
27	23SA	2534	U
27	23SA	2540	G
27	23SA	2544	G
27	23SA	2558	G
27	23SA	2569	U
27	23SA	2581	A
27	23SA	2582	G
27	23SA	2588	C
27	23SA	2600	U
27	23SA	2614	G
27	23SA	2617	A
27	23SA	2624	U
27	23SA	2625	C
27	23SA	2626	U
27	23SA	2627	C
27	23SA	2644	A
27	23SA	2645	G
27	23SA	2653	G
27	23SA	2654	A
27	23SA	2661	C
27	23SA	2669	A
27	23SA	2670	G
27	23SA	2680	A
27	23SA	2681	C
27	23SA	2688	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	2694	A
27	23SA	2697	U
27	23SA	2701	G
27	23SA	2704	U
27	23SA	2706	C
27	23SA	2717	U
27	23SA	2718	C
27	23SA	2722	G
27	23SA	2727	U
27	23SA	2728	A
27	23SA	2729	A
27	23SA	2730	G
27	23SA	2742	U
27	23SA	2743	G
27	23SA	2749	A
27	23SA	2750	A
27	23SA	2760	G
27	23SA	2764	A
27	23SA	2767	G
27	23SA	2768	C
27	23SA	2773	A
27	23SA	2777	G
27	23SA	2778	G
27	23SA	2780	A
27	23SA	2781	A
27	23SA	2782	G
27	23SA	2786	G
27	23SA	2794	A
27	23SA	2795	U
27	23SA	2806	A
27	23SA	2807	C
27	23SA	2809	G
27	23SA	2810	C
27	23SA	2812	U
27	23SA	2815	A
27	23SA	2821	U
27	23SA	2831	G
27	23SA	2833	A
27	23SA	2834	A
27	23SA	2836	A
27	23SA	2839	A
27	23SA	2845	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	2846	G
27	23SA	2847	G
27	23SA	2848	A
27	23SA	2885	G
27	23SA	2886	A
27	23SA	2892	C
27	23SA	2893	C
27	23SA	2899	G
27	23SA	2903	G
27	23SA	2904	A
27	23SA	2906	G
28	5SA	9	G
28	5SA	10	U
28	5SA	14	C
28	5SA	15	A
28	5SA	17	A
28	5SA	18	G
28	5SA	21	G
28	5SA	24	U
28	5SA	27	A
28	5SA	29	C
28	5SA	33	C
28	5SA	35	G
28	5SA	42	U
28	5SA	43	U
28	5SA	44	C
28	5SA	54	A
28	5SA	55	A
28	5SA	58	G
28	5SA	68	A
28	5SA	69	G
28	5SA	75	A
28	5SA	83	G
28	5SA	87	G
28	5SA	91	G
28	5SA	98	U
28	5SA	104	A
28	5SA	112	G
1	16SB	654	A
1	16SB	655	G
1	16SB	678	A
1	16SB	685	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	687	G
1	16SB	693	C
1	16SB	694	C
1	16SB	697	A
1	16SB	700	C
1	16SB	710	G
1	16SB	711	U
1	16SB	712	G
1	16SB	719	G
1	16SB	722	G
1	16SB	723	G
1	16SB	729	A
1	16SB	730	C
1	16SB	732	C
1	16SB	733	C
1	16SB	735	U
1	16SB	740	A
1	16SB	747	G
1	16SB	755	A
1	16SB	759	A
1	16SB	760	C
1	16SB	771	C
1	16SB	777	C
1	16SB	803	C
1	16SB	809	C
1	16SB	814	C
1	16SB	822	U
1	16SB	826	C
1	16SB	832	C
1	16SB	834	U
1	16SB	835	U
1	16SB	836	G
1	16SB	837	G
1	16SB	840	U
1	16SB	841	G
1	16SB	847	A
1	16SB	848	A
1	16SB	849	A
1	16SB	854	U
1	16SB	855	U
1	16SB	856	U
1	16SB	857	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	872	G
1	16SB	885	U
1	16SB	888	G
1	16SB	892	G
1	16SB	907	G
1	16SB	908	C
1	16SB	920	A
1	16SB	921	C
1	16SB	922	G
1	16SB	930	G
1	16SB	959	G
1	16SB	962	A
1	16SB	969	C
1	16SB	970	A
1	16SB	973	G
1	16SB	986	C
1	16SB	987	G
1	16SB	988	G
1	16SB	991	G
1	16SB	992	G
1	16SB	993	C
1	16SB	994	A
1	16SB	995	G
1	16SB	997	A
1	16SB	1008	U
1	16SB	1013	C
1	16SB	1029	G
1	16SB	1030	A
1	16SB	1038	A
1	16SB	1039	C
1	16SB	1047	G
1	16SB	1050	G
1	16SB	1053	A
1	16SB	1054	G
1	16SB	1055	A
1	16SB	1063	C
1	16SB	1064	G
1	16SB	1065	G
1	16SB	1070	U
1	16SB	1071	A
1	16SB	1075	U
1	16SB	1080	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	1082	C
1	16SB	1092	A
1	16SB	1100	A
1	16SB	1101	C
1	16SB	1102	G
1	16SB	1105	G
1	16SB	1112	A
1	16SB	1115	G
1	16SB	1116	U
1	16SB	1126	A
1	16SB	1127	U
1	16SB	1134	G
1	16SB	1138	A
1	16SB	1139	A
1	16SB	1140	C
1	16SB	1147	C
1	16SB	1156	G7M
1	16SB	1159	G
1	16SB	1160	U
1	16SB	1161	A
1	16SB	1162	A
1	16SB	1165	C
1	16SB	1174	C
1	16SB	1176	A
1	16SB	1188	A
1	16SB	1190	U
1	16SB	1191	C
1	16SB	1192	A
1	16SB	1193	C
1	16SB	1197	G
1	16SB	1198	C
1	16SB	1201	A
1	16SB	1202	A
1	16SB	1205	G
1	16SB	1206	G
1	16SB	1225	C
1	16SB	1236	A
1	16SB	1243	A
1	16SB	1251	A
1	16SB	1252	C
1	16SB	1256	G
1	16SB	1259	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	1260	G
1	16SB	1279	G
1	16SB	1282	A
1	16SB	1290	G
1	16SB	1294	A
1	16SB	1295	G
1	16SB	1316	A
1	16SB	1317	G
1	16SB	1330	C
1	16SB	1331	A
1	16SB	1332	G
1	16SB	1333	A
1	16SB	1350	G
1	16SB	1352	U
1	16SB	1353	G
1	16SB	1360	G
1	16SB	1363	G
1	16SB	1377	C
1	16SB	1378	C
1	16SB	1381	G
1	16SB	1382	A
1	16SB	1383	C
1	16SB	1384	G
1	16SB	1395	A
1	16SB	1406	A
1	16SB	1407	G
1	16SB	1415	G
1	16SB	1421	A
1	16SB	1422	U
1	16SB	1423	A
1	16SB	1444	A
1	16SB	1445	A
1	16SB	1446	C
1	16SB	1450	G
1	16SB	1457	A
1	16SB	1468	U
1	16SB	1470	U
1	16SB	1471	C
1	16SB	1476	G
1	16SB	1482	A
1	16SB	1493	U
1	16SB	1495	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	1496	A
1	16SB	1497	G
1	16SB	1536	A
1	16SB	1537	A
1	16SB	1549	G
1	16SB	1550	G
1	16SB	1557	C
1	16SB	1558	A
1	16SB	1559	C
1	16SB	1583	U
1	16SB	1584	U
1	16SB	1591	A
1	16SB	1592	A
1	16SB	1594	G
1	16SB	1595	C
1	16SB	1597	A
1	16SB	1598	A
1	16SB	1599	G
1	16SB	1600	A
1	16SB	1601	A
1	16SB	1603	C
1	16SB	1604	U
1	16SB	1609	A
1	16SB	1614	U
1	16SB	1615	U
1	16SB	1616	G
1	16SB	1629	A
1	16SB	1630	C
1	16SB	1633	G
1	16SB	1640	A
1	16SB	1645	G
1	16SB	1647	G
1	16SB	1648	G
1	16SB	1649	U
1	16SB	1650	G
1	16SB	1652	C
1	16SB	1653	C
1	16SB	1654	C
1	16SB	1655	G
1	16SB	1657	G
1	16SB	1659	G
1	16SB	1661	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	1663	A
1	16SB	1664	G
1	16SB	1668	U
1	16SB	1674	A
1	16SB	1678	G
1	16SB	1681	G
1	16SB	1682	C
1	16SB	1683	A
1	16SB	1694	C
1	16SB	1710	G
1	16SB	1722	G
1	16SB	1723	U
1	16SB	1727	G
1	16SB	1729	A
1	16SB	1745	G
1	16SB	1750	U
1	16SB	1752	G
1	16SB	1753	U
1	16SB	1755	G
1	16SB	1756	C
1	16SB	1757	C
1	16SB	1758	A
1	16SB	1759	G
1	16SB	1764	U
1	16SB	1765	C
1	16SB	1766	G
1	16SB	1767	G
1	16SB	1768	C
1	16SB	1774	A
1	16SB	1780	A
1	16SB	1782	G
1	16SB	1785	A
1	16SB	1786	C
1	16SB	1787	U
1	16SB	1788	G
1	16SB	1789	C
1	16SB	1798	G
1	16SB	1808	G
1	16SB	1810	A
1	16SB	1811	G
1	16SB	1812	G
1	16SB	1814	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	1817	G
1	16SB	1820	G
1	16SB	1823	U
1	16SB	1825	G
1	16SB	1827	C
1	16SB	1828	A
1	16SB	1834	2MG
1	16SB	1838	U
1	16SB	1839	U
1	16SB	1840	A
1	16SB	1841	C
1	16SB	1845	C
1	16SB	1852	A
1	16SB	1854	A
1	16SB	1865	A
1	16SB	1868	G
1	16SB	1882	G
1	16SB	1883	A
1	16SB	1884	U
1	16SB	1885	G
1	16SB	1887	C
1	16SB	1891	C
1	16SB	1894	C
1	16SB	1899	G
1	16SB	1900	G
1	16SB	1905	U
1	16SB	1907	A
1	16SB	1908	U
1	16SB	1912	A
1	16SB	1913	A
1	16SB	1914	A
1	16SB	1916	A
1	16SB	1919	U
1	16SB	1924	C
1	16SB	1925	C
1	16SB	1926	A
1	16SB	1927	G
1	16SB	1928	U
1	16SB	1930	C
1	16SB	1932	G
1	16SB	1933	A
1	16SB	1941	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	1945	A
1	16SB	1946	A
1	16SB	1947	C
1	16SB	1948	C
1	16SB	1949	C
1	16SB	1954	C
1	16SB	1958	G
1	16SB	1962	C
1	16SB	1963	C
1	16SB	1964	G
1	16SB	1965	G
1	16SB	1973	A
1	16SB	1974	G
1	16SB	1980	G
1	16SB	1990	C
1	16SB	1992	U
1	16SB	1996	G
1	16SB	1998	G
1	16SB	2025	C
1	16SB	2047	G
1	16SB	2070	G
1	16SB	2071	G
1	16SB	2072	A
1	16SB	2073	G
1	16SB	2076	U
1	16SB	2077	A
1	16SB	2078	C
1	16SB	2079	G
1	16SB	2110	G
1	16SB	2115	A
1	16SB	2122	A
1	16SB	2129	U
1	16SB	2140	G
1	16SB	2143	G
1	16SB	2152	G
1	16SB	2153	G
1	16SB	2160	U
1	16SB	2161	C
57	ASIB	8	U
57	ASIB	9	A
57	ASIB	10	G
57	ASIB	11	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	ASIB	12	U
57	ASIB	13	C
57	ASIB	16	U
57	ASIB	17	C
57	ASIB	18	G
57	ASIB	19	G
57	ASIB	21	A
57	ASIB	22	G
57	ASIB	24	G
57	ASIB	26	A
57	ASIB	38	A
57	ASIB	41	C
57	ASIB	44	G
57	ASIB	46	G
57	ASIB	47	U
57	ASIB	48	C
57	ASIB	49	C
57	ASIB	50	U
57	ASIB	53	G
57	ASIB	56	C
57	ASIB	58	A
57	ASIB	59	U
57	ASIB	60	U
57	ASIB	63	G
57	ASIB	64	A
57	ASIB	66	U
57	ASIB	69	G
57	ASIB	70	G
57	ASIB	71	G
57	ASIB	72	C
57	ASIB	73	A
57	ASIB	74	C
57	ASIB	75	C
57	ASIB	76	A
23	PSIB	2	C
23	PSIB	3	C
23	PSIB	8	4SU
23	PSIB	9	A
23	PSIB	13	C
23	PSIB	16	H2U
23	PSIB	17	C
23	PSIB	18	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	PSIB	19	G
23	PSIB	20	U
23	PSIB	21	A
23	PSIB	22	G
23	PSIB	25	C
23	PSIB	30	G
23	PSIB	38	A
23	PSIB	42	C
23	PSIB	43	C
23	PSIB	44	G
23	PSIB	45	U
23	PSIB	48	C
23	PSIB	52	G
23	PSIB	54	5MU
23	PSIB	56	C
23	PSIB	58	A
23	PSIB	61	C
23	PSIB	67	C
23	PSIB	70	G
23	PSIB	74	C
23	PSIB	76	A
24	ESIB	2	C
24	ESIB	9	A
24	ESIB	12	U
24	ESIB	13	C
24	ESIB	14	A
24	ESIB	16	U
24	ESIB	17	C
24	ESIB	18	G
24	ESIB	19	G
24	ESIB	20	U
24	ESIB	21	A
24	ESIB	22	G
24	ESIB	34	G
24	ESIB	40	C
24	ESIB	46	G
24	ESIB	48	C
24	ESIB	58	A
24	ESIB	59	U
24	ESIB	65	G
24	ESIB	72	C
24	ESIB	73	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	ESIB	75	C
24	ESIB	76	A
25	MRNB	29	G
25	MRNB	37	G
25	MRNB	43	U
25	MRNB	46	U
25	MRNB	49	U
25	MRNB	51	U
25	MRNB	52	U
25	MRNB	54	U
25	MRNB	55	U
25	MRNB	56	U
25	MRNB	57	U
27	23SB	3	U
27	23SB	4	C
27	23SB	5	A
27	23SB	10	G
27	23SB	13	A
27	23SB	15	G
27	23SB	34	C
27	23SB	35	G
27	23SB	45	C
27	23SB	48	A
27	23SB	49	U
27	23SB	50	G
27	23SB	57	G
27	23SB	59	G
27	23SB	60	G
27	23SB	62	U
27	23SB	68	C
27	23SB	70	A
27	23SB	71	U
27	23SB	73	A
27	23SB	74	G
27	23SB	77	A
27	23SB	82	G
27	23SB	83	A
27	23SB	84	G
27	23SB	89	U
27	23SB	94	G
27	23SB	116	A
27	23SB	117	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	118	U
27	23SB	119	G
27	23SB	127	C
27	23SB	137	G
27	23SB	140	A
27	23SB	155	C
27	23SB	163	G
27	23SB	164	C
27	23SB	186	A
27	23SB	189	A
27	23SB	196	U
27	23SB	204	G
27	23SB	205	G
27	23SB	206	A
27	23SB	207	G
27	23SB	211	A
27	23SB	212	A
27	23SB	217	A
27	23SB	219	A
27	23SB	222	G
27	23SB	223	A
27	23SB	238	G
27	23SB	239	C
27	23SB	242	G
27	23SB	255	A
27	23SB	256	G
27	23SB	271	C
27	23SB	272	U
27	23SB	273	U
27	23SB	274	G
27	23SB	275	U
27	23SB	276	C
27	23SB	282	G
27	23SB	286	U
27	23SB	289	U
27	23SB	290	G
27	23SB	296	C
27	23SB	298	C
27	23SB	301	A
27	23SB	302	C
27	23SB	303	A
27	23SB	304	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	308	A
27	23SB	311	C
27	23SB	313	C
27	23SB	314	A
27	23SB	315	G
27	23SB	320	G
27	23SB	336	A
27	23SB	340	G
27	23SB	342	G
27	23SB	354	G
27	23SB	355	A
27	23SB	356	A
27	23SB	377	G
27	23SB	380	G
27	23SB	381	G
27	23SB	387	U
27	23SB	389	A
27	23SB	390	G
27	23SB	392	G
27	23SB	393	U
27	23SB	394	A
27	23SB	395	C
27	23SB	414	G
27	23SB	424	G
27	23SB	432	C
27	23SB	433	U
27	23SB	434	G
27	23SB	435	G
27	23SB	439	G
27	23SB	457	A
27	23SB	472	C
27	23SB	476	U
27	23SB	479	C
27	23SB	482	A
27	23SB	483	C
27	23SB	485	A
27	23SB	492	U
27	23SB	498	A
27	23SB	499	A
27	23SB	507	A
27	23SB	509	G
27	23SB	521	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	532	A
27	23SB	535	G
27	23SB	536	C
27	23SB	539	G
27	23SB	556	A
27	23SB	557	G
27	23SB	558	C
27	23SB	559	A
27	23SB	560	G
27	23SB	564	C
27	23SB	575	G
27	23SB	588	G
27	23SB	589	C
27	23SB	595	G
27	23SB	598	G
27	23SB	600	A
27	23SB	608	G
27	23SB	613	U
27	23SB	618	G
27	23SB	628	A
27	23SB	629	G
27	23SB	632	U
27	23SB	635	G
27	23SB	638	G
27	23SB	639	U
27	23SB	640	U
27	23SB	643	G
27	23SB	644	G
27	23SB	648	A
27	23SB	649	G
27	23SB	653	U
27	23SB	654	A
27	23SB	664	A
27	23SB	672	C
27	23SB	673	A
27	23SB	679	C
27	23SB	680	A
27	23SB	681	A
27	23SB	682	A
27	23SB	686	C
27	23SB	699	C
27	23SB	700	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	701	A
27	23SB	706	U
27	23SB	719	A
27	23SB	726	A
27	23SB	735	G
27	23SB	758	U
27	23SB	771	A
27	23SB	779	C
27	23SB	807	C
27	23SB	811	U
27	23SB	824	G
27	23SB	825	G
27	23SB	831	A
27	23SB	833	A
27	23SB	834	G
27	23SB	838	A
27	23SB	839	C
27	23SB	841	G
27	23SB	842	A
27	23SB	854	G
27	23SB	861	C
27	23SB	868	A
27	23SB	876	U
27	23SB	877	U
27	23SB	895	C
27	23SB	896	U
27	23SB	908	G
27	23SB	914	C
27	23SB	920	U
27	23SB	927	A
27	23SB	928	G
27	23SB	932	G
27	23SB	934	C
27	23SB	935	C
27	23SB	936	A
27	23SB	937	C
27	23SB	938	C
27	23SB	942	C
27	23SB	944	A
27	23SB	945	C
27	23SB	947	A
27	23SB	949	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	952	C
27	23SB	954	G
27	23SB	958	A
27	23SB	963	C
27	23SB	965	A
27	23SB	967	G
27	23SB	978	G
27	23SB	979	G
27	23SB	985	G
27	23SB	988	A
27	23SB	992	A
27	23SB	993	G
27	23SB	1000	A
27	23SB	1005	U
27	23SB	1006	A
27	23SB	1008	C
27	23SB	1021	G
27	23SB	1028	A
27	23SB	1031	A
27	23SB	1038	A
27	23SB	1039	C
27	23SB	1044	A
27	23SB	1058	A
27	23SB	1059	G
27	23SB	1060	U
27	23SB	1061	C
27	23SB	1070	G
27	23SB	1071	U
27	23SB	1073	G
27	23SB	1074	U
27	23SB	1075	A
27	23SB	1081	U
27	23SB	1085	G
27	23SB	1086	C
27	23SB	1092	G
27	23SB	1093	A
27	23SB	1094	A
27	23SB	1095	G
27	23SB	1096	A
27	23SB	1102	A
27	23SB	1104	G
27	23SB	1108	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	1110	G
27	23SB	1128	A
27	23SB	1133	A
27	23SB	1134	A
27	23SB	1135	G
27	23SB	1136	A
27	23SB	1138	U
27	23SB	1139	G
27	23SB	1153	U
27	23SB	1159	A
27	23SB	1160	G
27	23SB	1170	G
27	23SB	1176	A
27	23SB	1177	A
27	23SB	1178	U
27	23SB	1179	G
27	23SB	1183	C
27	23SB	1184	G
27	23SB	1187	G
27	23SB	1191	A
27	23SB	1192	A
27	23SB	1205	A
27	23SB	1218	G
27	23SB	1221	G
27	23SB	1222	A
27	23SB	1223	U
27	23SB	1224	G
27	23SB	1225	A
27	23SB	1226	C
27	23SB	1228	C
27	23SB	1243	G
27	23SB	1245	G
27	23SB	1253	U
27	23SB	1254	G
27	23SB	1258	A
27	23SB	1259	U
27	23SB	1260	G
27	23SB	1268	A
27	23SB	1269	C
27	23SB	1272	G
27	23SB	1302	A
27	23SB	1304	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	1305	G
27	23SB	1314	A
27	23SB	1318	A
27	23SB	1320	G
27	23SB	1321	A
27	23SB	1322	U
27	23SB	1335	A
27	23SB	1349	U
27	23SB	1350	A
27	23SB	1358	G
27	23SB	1362	U
27	23SB	1363	C
27	23SB	1368	G
27	23SB	1378	U
27	23SB	1390	U
27	23SB	1394	C
27	23SB	1398	A
27	23SB	1401	U
27	23SB	1408	A
27	23SB	1409	A
27	23SB	1414	A
27	23SB	1417	G
27	23SB	1428	A
27	23SB	1433	A
27	23SB	1434	G
27	23SB	1435	C
27	23SB	1437	G
27	23SB	1456	C
27	23SB	1463	G
27	23SB	1465	G
27	23SB	1466	C
27	23SB	1468	A
27	23SB	1469	U
27	23SB	1470	G
27	23SB	1477	C
27	23SB	1486	C
27	23SB	1494	A
27	23SB	1499	A
27	23SB	1500	G
27	23SB	1502	C
27	23SB	1508	C
27	23SB	1510	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	1511	G
27	23SB	1516	G
27	23SB	1521	A
27	23SB	1524	C
27	23SB	1525	G
27	23SB	1526	C
27	23SB	1528	G
27	23SB	1529	G
27	23SB	1531	U
27	23SB	1532	G
27	23SB	1535	A
27	23SB	1536	G
27	23SB	1537	G
27	23SB	1539	A
27	23SB	1542	C
27	23SB	1548	C
27	23SB	1551	C
27	23SB	1554	C
27	23SB	1557	A
27	23SB	1558	C
27	23SB	1559	A
27	23SB	1564	C
27	23SB	1565	U
27	23SB	1577	A
27	23SB	1583	G
27	23SB	1584	U
27	23SB	1586	C
27	23SB	1587	G
27	23SB	1592	A
27	23SB	1593	C
27	23SB	1594	A
27	23SB	1604	A
27	23SB	1605	G
27	23SB	1608	A
27	23SB	1609	G
27	23SB	1610	G
27	23SB	1616	A
27	23SB	1619	A
27	23SB	1628	U
27	23SB	1629	A
27	23SB	1631	G
27	23SB	1635	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	1637	C
27	23SB	1647	C
27	23SB	1657	A
27	23SB	1659	A
27	23SB	1660	C
27	23SB	1667	A
27	23SB	1671	G
27	23SB	1690	C
27	23SB	1698	C
27	23SB	1703	G
27	23SB	1704	A
27	23SB	1724	G
27	23SB	1746	G
27	23SB	1750	A
27	23SB	1751	A
27	23SB	1766	G
27	23SB	1769	G
27	23SB	1770	A
27	23SB	1771	U
27	23SB	1772	G
27	23SB	1776	C
27	23SB	1790	G
27	23SB	1792	G
27	23SB	1794	A
27	23SB	1796	A
27	23SB	1797	G
27	23SB	1798	G
27	23SB	1807	A
27	23SB	1813	U
27	23SB	1814	A
27	23SB	1816	C
27	23SB	1821	A
27	23SB	1825	A
27	23SB	1832	U
27	23SB	1834	C
27	23SB	1835	G
27	23SB	1850	G
27	23SB	1854	U
27	23SB	1863	A
27	23SB	1869	G
27	23SB	1873	G
27	23SB	1880	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	1881	A
27	23SB	1882	A
27	23SB	1892	G
27	23SB	1903	G
27	23SB	1907	C
27	23SB	1913	G
27	23SB	1914	A
27	23SB	1925	A
27	23SB	1931	G
27	23SB	1939	C
27	23SB	1941	A
27	23SB	1954	G
27	23SB	1955	G
27	23SB	1956	U
27	23SB	1959	C
27	23SB	1961	A
27	23SB	1962	A
27	23SB	1963	A
27	23SB	1964	5MU
27	23SB	1973	G
27	23SB	1980	U
27	23SB	1981	U
27	23SB	1985	A
27	23SB	1988	U
27	23SB	1989	G
27	23SB	1992	C
27	23SB	1995	A
27	23SB	1996	A
27	23SB	1997	A
27	23SB	2007	C
27	23SB	2018	U
27	23SB	2021	C
27	23SB	2045	A
27	23SB	2048	G
27	23SB	2052	G
27	23SB	2056	A
27	23SB	2058	A
27	23SB	2068	C
27	23SB	2076	A
27	23SB	2079	A
27	23SB	2080	C
27	23SB	2081	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	2084	A
27	23SB	2085	A
27	23SB	2086	G
27	23SB	2087	A
27	23SB	2094	G
27	23SB	2118	G
27	23SB	2124	U
27	23SB	2125	G
27	23SB	2126	G
27	23SB	2133	C
27	23SB	2135	G
27	23SB	2136	C
27	23SB	2138	U
27	23SB	2139	A
27	23SB	2140	G
27	23SB	2141	G
27	23SB	2142	A
27	23SB	2143	U
27	23SB	2148	G
27	23SB	2151	A
27	23SB	2152	G
27	23SB	2153	C
27	23SB	2156	G
27	23SB	2157	U
27	23SB	2158	G
27	23SB	2161	C
27	23SB	2172	G
27	23SB	2173	G
27	23SB	2174	G
27	23SB	2188	C
27	23SB	2191	G
27	23SB	2194	A
27	23SB	2196	A
27	23SB	2197	U
27	23SB	2198	A
27	23SB	2199	C
27	23SB	2203	C
27	23SB	2214	U
27	23SB	2215	G
27	23SB	2217	G
27	23SB	2219	G
27	23SB	2223	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	2230	G
27	23SB	2231	G
27	23SB	2232	A
27	23SB	2233	U
27	23SB	2234	G
27	23SB	2236	G
27	23SB	2240	A
27	23SB	2241	C
27	23SB	2253	G
27	23SB	2254	G
27	23SB	2260	U
27	23SB	2261	G
27	23SB	2267	G
27	23SB	2282	A
27	23SB	2288	A
27	23SB	2290	C
27	23SB	2295	G
27	23SB	2298	C
27	23SB	2302	A
27	23SB	2303	A
27	23SB	2304	G
27	23SB	2319	G
27	23SB	2320	A
27	23SB	2322	G
27	23SB	2323	G
27	23SB	2325	A
27	23SB	2327	U
27	23SB	2329	C
27	23SB	2334	G
27	23SB	2335	A
27	23SB	2336	G
27	23SB	2340	G
27	23SB	2349	G
27	23SB	2351	A
27	23SB	2361	A
27	23SB	2362	C
27	23SB	2364	G
27	23SB	2365	C
27	23SB	2387	G
27	23SB	2394	G
27	23SB	2398	G
27	23SB	2400	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	2406	G
27	23SB	2407	A
27	23SB	2417	C
27	23SB	2418	C
27	23SB	2421	U
27	23SB	2426	A
27	23SB	2429	G
27	23SB	2438	U
27	23SB	2439	C
27	23SB	2440	A
27	23SB	2441	A
27	23SB	2444	G
27	23SB	2445	A
27	23SB	2450	A
27	23SB	2454	A
27	23SB	2455	C
27	23SB	2456	C
27	23SB	2462	G
27	23SB	2463	A
27	23SB	2475	U
27	23SB	2484	A
27	23SB	2485	G
27	23SB	2487	G
27	23SB	2488	U
27	23SB	2489	C
27	23SB	2490	C
27	23SB	2491	A
27	23SB	2493	A
27	23SB	2497	G
27	23SB	2509	G
27	23SB	2517	G
27	23SB	2520	G
27	23SB	2521	U
27	23SB	2522	C
27	23SB	2533	A
27	23SB	2534	U
27	23SB	2539	G
27	23SB	2540	G
27	23SB	2544	G
27	23SB	2550	G
27	23SB	2557	A
27	23SB	2558	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	2567	OMU
27	23SB	2569	U
27	23SB	2581	A
27	23SB	2582	G
27	23SB	2584	G
27	23SB	2588	C
27	23SB	2591	G
27	23SB	2600	U
27	23SB	2601	C
27	23SB	2617	A
27	23SB	2618	G
27	23SB	2624	U
27	23SB	2625	C
27	23SB	2626	U
27	23SB	2627	C
27	23SB	2644	A
27	23SB	2645	G
27	23SB	2660	G
27	23SB	2661	C
27	23SB	2669	A
27	23SB	2670	G
27	23SB	2680	A
27	23SB	2681	C
27	23SB	2687	G
27	23SB	2688	G
27	23SB	2694	A
27	23SB	2704	U
27	23SB	2705	C
27	23SB	2706	C
27	23SB	2717	U
27	23SB	2718	C
27	23SB	2722	G
27	23SB	2727	U
27	23SB	2728	A
27	23SB	2729	A
27	23SB	2742	U
27	23SB	2748	G
27	23SB	2749	A
27	23SB	2750	A
27	23SB	2757	A
27	23SB	2760	G
27	23SB	2764	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SB	2766	A
27	23SB	2767	G
27	23SB	2768	C
27	23SB	2770	U
27	23SB	2773	A
27	23SB	2777	G
27	23SB	2778	G
27	23SB	2780	A
27	23SB	2781	A
27	23SB	2782	G
27	23SB	2786	G
27	23SB	2793	G
27	23SB	2794	A
27	23SB	2795	U
27	23SB	2806	A
27	23SB	2807	C
27	23SB	2810	C
27	23SB	2811	G
27	23SB	2812	U
27	23SB	2821	U
27	23SB	2826	A
27	23SB	2831	G
27	23SB	2833	A
27	23SB	2834	A
27	23SB	2839	A
27	23SB	2840	C
27	23SB	2846	G
27	23SB	2847	G
27	23SB	2848	A
27	23SB	2873	A
27	23SB	2885	G
27	23SB	2886	A
27	23SB	2892	C
27	23SB	2893	C
27	23SB	2899	G
27	23SB	2904	A
27	23SB	2906	G
27	23SB	2907	U
27	23SB	2908	C
27	23SB	2909	U
27	23SB	2914	C
28	5SB	5	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	5SB	9	G
28	5SB	10	U
28	5SB	14	C
28	5SB	15	A
28	5SB	16	U
28	5SB	17	A
28	5SB	18	G
28	5SB	24	U
28	5SB	26	G
28	5SB	27	A
28	5SB	33	C
28	5SB	37	U
28	5SB	43	U
28	5SB	44	C
28	5SB	47	A
28	5SB	55	A
28	5SB	58	G
28	5SB	68	A
28	5SB	69	G
28	5SB	75	A
28	5SB	83	G
28	5SB	87	G
28	5SB	90	C
28	5SB	91	G
28	5SB	92	A
28	5SB	93	C
28	5SB	98	U
28	5SB	99	G
28	5SB	104	A
28	5SB	110	U
28	5SB	112	G
28	5SB	115	G
28	5SB	121	G

All (250) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	677	G
1	16SA	696	A
1	16SA	706	A
1	16SA	731	U
1	16SA	758	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SA	836	G
1	16SA	891	A
1	16SA	907	G
1	16SA	969	C
1	16SA	1007	C
1	16SA	1053	A
1	16SA	1063	C
1	16SA	1069	G
1	16SA	1070	U
1	16SA	1111	G
1	16SA	1114	G
1	16SA	1115	G
1	16SA	1138	A
1	16SA	1159	G
1	16SA	1161	A
1	16SA	1189	U
1	16SA	1315	U
1	16SA	1330	C
1	16SA	1332	G
1	16SA	1377	C
1	16SA	1381	G
1	16SA	1422	U
1	16SA	1441	C
1	16SA	1536	A
1	16SA	1615	U
1	16SA	1649	U
1	16SA	1651	C
1	16SA	1753	U
1	16SA	1767	G
1	16SA	1773	C
1	16SA	1785	A
1	16SA	1810	A
1	16SA	1827	C
1	16SA	1838	U
1	16SA	1912	A
1	16SA	1927	G
1	16SA	1928	U
1	16SA	1932	G
1	16SA	1946	A
1	16SA	1949	C
1	16SA	2078	C
1	16SA	2126	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	ASIA	10	G
23	PSIA	46	G7M
23	PSIA	60	U
24	ESIA	9	A
24	ESIA	45	U
25	MRNA	44	U
25	MRNA	56	U
26	TRNA	20	H2U
26	TRNA	34	G
26	TRNA	65	G
27	23SA	34	C
27	23SA	186	A
27	23SA	218	A
27	23SA	219	A
27	23SA	355	A
27	23SA	400	G
27	23SA	423	U
27	23SA	432	C
27	23SA	530	A
27	23SA	539	G
27	23SA	555	A
27	23SA	557	G
27	23SA	580	U
27	23SA	612	C
27	23SA	672	C
27	23SA	680	A
27	23SA	700	G
27	23SA	734	A
27	23SA	823	A
27	23SA	895	C
27	23SA	896	U
27	23SA	929	G
27	23SA	992	A
27	23SA	1070	G
27	23SA	1074	U
27	23SA	1105	A
27	23SA	1133	A
27	23SA	1157	C
27	23SA	1189	U
27	23SA	1226	C
27	23SA	1252	A
27	23SA	1258	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	23SA	1469	U
27	23SA	1476	A
27	23SA	1608	A
27	23SA	1657	A
27	23SA	1695	G
27	23SA	1702	A
27	23SA	1703	G
27	23SA	1744	C
27	23SA	1770	A
27	23SA	1833	G
27	23SA	1853	A
27	23SA	1924	G
27	23SA	1964	5MU
27	23SA	2017	G
27	23SA	2085	A
27	23SA	2149	G
27	23SA	2192	U
27	23SA	2231	G
27	23SA	2322	G
27	23SA	2335	A
27	23SA	2361	A
27	23SA	2420	G
27	23SA	2421	U
27	23SA	2437	A
27	23SA	2441	A
27	23SA	2454	A
27	23SA	2496	G
27	23SA	2533	A
27	23SA	2581	A
27	23SA	2653	G
27	23SA	2660	G
27	23SA	2696	C
27	23SA	2727	U
27	23SA	2742	U
27	23SA	2767	G
27	23SA	2772	U
27	23SA	2806	A
27	23SA	2845	U
28	5SA	68	A
1	16SB	728	U
1	16SB	754	G
1	16SB	758	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	821	G
1	16SB	853	C
1	16SB	855	U
1	16SB	891	A
1	16SB	920	A
1	16SB	969	C
1	16SB	1053	A
1	16SB	1063	C
1	16SB	1070	U
1	16SB	1138	A
1	16SB	1161	A
1	16SB	1189	U
1	16SB	1315	U
1	16SB	1316	A
1	16SB	1330	C
1	16SB	1332	G
1	16SB	1377	C
1	16SB	1381	G
1	16SB	1422	U
1	16SB	1495	A
1	16SB	1536	A
1	16SB	1583	U
1	16SB	1615	U
1	16SB	1651	C
1	16SB	1677	U
1	16SB	1754	U
1	16SB	1765	C
1	16SB	1785	A
1	16SB	1817	G
1	16SB	1827	C
1	16SB	1867	U
1	16SB	1883	A
1	16SB	1907	A
1	16SB	1908	U
1	16SB	1912	A
1	16SB	1924	C
1	16SB	1927	G
1	16SB	1932	G
1	16SB	1946	A
1	16SB	1949	C
1	16SB	1963	C
1	16SB	1973	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	16SB	2078	C
57	ASIB	10	G
57	ASIB	69	G
23	PSIB	8	4SU
23	PSIB	60	U
24	ESIB	47	U
24	ESIB	58	A
25	MRNB	53	U
25	MRNB	56	U
27	23SB	34	C
27	23SB	48	A
27	23SB	49	U
27	23SB	126	C
27	23SB	195	G
27	23SB	301	A
27	23SB	302	C
27	23SB	303	A
27	23SB	319	A
27	23SB	355	A
27	23SB	431	U
27	23SB	557	G
27	23SB	612	C
27	23SB	680	A
27	23SB	700	G
27	23SB	823	A
27	23SB	876	U
27	23SB	895	C
27	23SB	926	U
27	23SB	935	C
27	23SB	937	C
27	23SB	941	C
27	23SB	1133	A
27	23SB	1191	A
27	23SB	1220	G
27	23SB	1252	A
27	23SB	1258	A
27	23SB	1349	U
27	23SB	1350	A
27	23SB	1476	A
27	23SB	1608	A
27	23SB	1657	A
27	23SB	1702	A

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Mol	Chain	Res	Type
27	23SB	1703	G
27	23SB	1745	G
27	23SB	1814	A
27	23SB	1853	A
27	23SB	1880	G
27	23SB	1924	G
27	23SB	1940	5MU
27	23SB	1955	G
27	23SB	2017	G
27	23SB	2087	A
27	23SB	2135	G
27	23SB	2170	C
27	23SB	2216	G
27	23SB	2230	G
27	23SB	2231	G
27	23SB	2335	A
27	23SB	2350	A
27	23SB	2437	A
27	23SB	2454	A
27	23SB	2462	G
27	23SB	2496	G
27	23SB	2617	A
27	23SB	2660	G
27	23SB	2704	U
27	23SB	2741	A
27	23SB	2742	U
27	23SB	2748	G
27	23SB	2772	U
27	23SB	2792	A
27	23SB	2806	A
27	23SB	2872	G
28	5SB	13	C
28	5SB	16	U
28	5SB	26	G
28	5SB	68	A

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

87 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
27	PSU	23SB	1936	27	18,21,22	1.14	1 (5%)	22,30,33	1.52	3 (13%)
22	PSU	ASIA	39	22	18,21,22	1.13	1 (5%)	22,30,33	1.58	3 (13%)
27	PSU	23SB	1942	27	18,21,22	1.13	1 (5%)	22,30,33	1.64	4 (18%)
22	5MU	ASIA	54	22	19,22,23	3.84	5 (26%)	28,32,35	3.25	10 (35%)
23	4SU	PSIB	8	58,23	18,21,22	1.87	5 (27%)	26,30,33	2.91	6 (23%)
23	3AU	PSIA	47	23	24,28,29	2.80	8 (33%)	33,40,43	1.54	6 (18%)
1	UR3	16SB	2121	1	19,22,23	2.86	7 (36%)	26,32,35	1.46	3 (11%)
27	OMG	23SA	2266	23,27,60	18,26,27	5.17	9 (50%)	19,38,41	3.73	7 (36%)
27	2MA	23SA	2518	27,60	17,25,26	2.16	6 (35%)	17,37,40	1.27	2 (11%)
26	4SU	TRNA	8	26	18,21,22	1.79	3 (16%)	26,30,33	2.40	5 (19%)
1	4OC	16SA	2030	1	20,23,24	3.10	8 (40%)	26,32,35	0.88	1 (3%)
1	2MG	16SB	1834	1	18,26,27	2.71	7 (38%)	16,38,41	1.35	4 (25%)
57	5MU	ASIB	54	57	19,22,23	3.89	5 (26%)	28,32,35	3.16	8 (28%)
22	MIA	ASIA	37	22	24,31,32	2.30	4 (16%)	26,44,47	3.21	11 (42%)
24	MIA	ESIA	37	24	24,31,32	2.42	4 (16%)	26,44,47	3.21	9 (34%)
1	5MC	16SA	2032	1	18,22,23	3.82	7 (38%)	26,32,35	0.89	2 (7%)
23	5MU	PSIB	54	23	19,22,23	3.90	5 (26%)	28,32,35	3.07	9 (32%)
23	PSU	PSIA	32	23	18,21,22	1.03	1 (5%)	22,30,33	1.59	3 (13%)
23	H2U	PSIB	16	23	18,21,22	2.05	4 (22%)	21,30,33	1.86	5 (23%)
27	5MC	23SA	1967	27	18,22,23	3.74	7 (38%)	26,32,35	1.17	1 (3%)
1	5MC	16SA	1590	1	18,22,23	3.74	7 (38%)	26,32,35	1.07	1 (3%)
22	PSU	ASIA	55	22	18,21,22	1.04	1 (5%)	22,30,33	1.71	4 (18%)
1	MA6	16SA	2142	1	19,26,27	1.01	2 (10%)	18,38,41	2.92	2 (11%)
26	PSU	TRNA	39	26	18,21,22	1.14	1 (5%)	22,30,33	1.80	5 (22%)
1	G7M	16SA	1156	60,1	20,26,27	4.72	6 (30%)	17,39,42	1.05	1 (5%)
1	4OC	16SB	2030	58,1	20,23,24	2.85	8 (40%)	26,32,35	1.41	4 (15%)
26	PSU	TRNA	32	26	18,21,22	1.14	1 (5%)	22,30,33	1.72	4 (18%)
23	G7M	PSIA	46	23	20,26,27	4.69	5 (25%)	17,39,42	1.13	1 (5%)
23	3AU	PSIB	47	23	24,28,29	2.84	8 (33%)	33,40,43	1.96	8 (24%)
26	5MU	TRNA	54	26	19,22,23	3.92	5 (26%)	28,32,35	3.20	9 (32%)
27	OMG	23SB	2266	23,27,60	18,26,27	5.25	9 (50%)	19,38,41	3.80	7 (36%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
23	G7M	PSIB	46	23	20,26,27	4.78	5 (25%)	17,39,42	1.13	1 (5%)
26	PSU	TRNA	55	26	18,21,22	1.09	1 (5%)	22,30,33	1.77	4 (18%)
23	PSU	PSIB	55	23	18,21,22	1.11	1 (5%)	22,30,33	1.67	3 (13%)
27	5MU	23SA	1940	27	19,22,23	4.11	5 (26%)	28,32,35	3.47	10 (35%)
12	0TD	S12A	89	12	7,9,10	1.48	1 (14%)	6,11,13	1.87	1 (16%)
23	PSU	PSIA	39	23	18,21,22	1.06	1 (5%)	22,30,33	1.65	3 (13%)
12	0TD	S12B	89	12,1	7,9,10	1.56	1 (14%)	6,11,13	1.99	2 (33%)
23	MIA	PSIA	37	23	24,31,32	2.32	3 (12%)	26,44,47	2.51	10 (38%)
24	MIA	ESIB	37	24	24,31,32	2.43	4 (16%)	26,44,47	4.25	11 (42%)
27	PSU	23SA	1936	27	18,21,22	1.05	1 (5%)	22,30,33	1.81	4 (18%)
27	PSU	23SB	2620	27	18,21,22	1.18	1 (5%)	22,30,33	1.76	3 (13%)
1	MA6	16SB	2141	1	19,26,27	1.02	1 (5%)	18,38,41	2.46	2 (11%)
22	G7M	ASIA	46	22	20,26,27	4.73	5 (25%)	17,39,42	1.06	1 (5%)
27	5MU	23SB	1940	27	19,22,23	3.98	5 (26%)	28,32,35	3.32	9 (32%)
1	MA6	16SA	2141	1	19,26,27	1.03	2 (10%)	18,38,41	2.74	2 (11%)
1	PSU	16SB	1145	58,1	18,21,22	1.11	1 (5%)	22,30,33	1.67	3 (13%)
27	5MC	23SB	1987	27,60	18,22,23	3.79	7 (38%)	26,32,35	0.92	1 (3%)
1	5MC	16SB	1590	1	18,22,23	3.84	7 (38%)	26,32,35	1.00	1 (3%)
26	H2U	TRNA	16	26	18,21,22	2.02	4 (22%)	21,30,33	2.07	5 (23%)
1	MA6	16SB	2142	1	19,26,27	1.01	2 (10%)	18,38,41	2.88	2 (11%)
1	5MC	16SB	2028	1	18,22,23	3.80	7 (38%)	26,32,35	1.21	3 (11%)
27	OMC	23SA	1945	27,60	19,22,23	1.73	4 (21%)	26,31,34	0.82	0
27	OMU	23SB	2567	58,27	19,22,23	2.98	8 (42%)	26,31,34	1.83	5 (19%)
27	PSU	23SA	2620	27	18,21,22	1.14	1 (5%)	22,30,33	1.82	4 (18%)
27	2MA	23SB	2518	58,27,60	17,25,26	2.12	5 (29%)	17,37,40	1.32	3 (17%)
1	G7M	16SB	1156	60,1	20,26,27	4.73	5 (25%)	17,39,42	1.07	1 (5%)
23	5MU	PSIA	54	23	19,22,23	3.79	5 (26%)	28,32,35	3.16	7 (25%)
1	5MC	16SB	2035	1	18,22,23	3.86	7 (38%)	26,32,35	1.10	3 (11%)
23	H2U	PSIA	16	23	18,21,22	2.01	4 (22%)	21,30,33	2.06	5 (23%)
1	2MG	16SA	1834	60,1	18,26,27	2.63	7 (38%)	16,38,41	1.33	3 (18%)
27	OMU	23SA	2567	58,27	19,22,23	2.93	8 (42%)	26,31,34	1.85	5 (19%)
1	M2G	16SA	1589	1	20,27,28	3.74	7 (35%)	22,40,43	1.55	4 (18%)
57	MIA	ASIB	37	57	24,31,32	2.32	4 (16%)	26,44,47	3.06	10 (38%)
22	PSU	ASIA	32	22	18,21,22	1.11	1 (5%)	22,30,33	1.53	4 (18%)
1	PSU	16SA	1145	58,1	18,21,22	1.14	1 (5%)	22,30,33	1.70	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
23	PSU	PSIB	32	23	18,21,22	1.03	1 (5%)	22,30,33	1.69	4 (18%)
57	PSU	ASIB	32	57	18,21,22	1.02	1 (5%)	22,30,33	1.68	4 (18%)
23	MIA	PSIB	37	23	24,31,32	2.33	4 (16%)	26,44,47	2.83	11 (42%)
27	5MC	23SB	1967	27	18,22,23	3.81	7 (38%)	26,32,35	1.06	3 (11%)
27	OMC	23SB	1945	27	19,22,23	1.80	4 (21%)	26,31,34	0.92	1 (3%)
1	5MC	16SA	2035	1	18,22,23	3.73	7 (38%)	26,32,35	1.07	1 (3%)
1	5MC	16SA	2028	1	18,22,23	3.81	7 (38%)	26,32,35	1.09	1 (3%)
1	M2G	16SB	1589	1	20,27,28	3.92	7 (35%)	22,40,43	1.24	4 (18%)
27	5MU	23SA	1964	27,60	19,22,23	3.78	5 (26%)	28,32,35	3.39	10 (35%)
22	4SU	ASIA	8	22	18,21,22	1.81	4 (22%)	26,30,33	2.36	5 (19%)
23	PSU	PSIB	39	23	18,21,22	1.11	1 (5%)	22,30,33	1.63	4 (18%)
1	5MC	16SB	2032	1	18,22,23	3.87	7 (38%)	26,32,35	0.94	2 (7%)
27	5MU	23SB	1964	27,60	19,22,23	3.81	5 (26%)	28,32,35	3.29	9 (32%)
23	PSU	PSIA	55	23	18,21,22	1.21	1 (5%)	22,30,33	1.65	4 (18%)
1	UR3	16SA	2121	1	19,22,23	2.81	8 (42%)	26,32,35	1.52	3 (11%)
23	4SU	PSIA	8	23	18,21,22	1.77	3 (16%)	26,30,33	2.51	5 (19%)
57	PSU	ASIB	39	57	18,21,22	1.11	1 (5%)	22,30,33	1.68	4 (18%)
27	PSU	23SA	1942	27	18,21,22	1.03	1 (5%)	22,30,33	1.79	4 (18%)
26	MIA	TRNA	37	27,26,37	24,31,32	2.59	5 (20%)	26,44,47	3.55	8 (30%)
26	H2U	TRNA	20	26,28	18,21,22	2.27	4 (22%)	21,30,33	1.84	5 (23%)
27	5MC	23SA	1987	27,60	18,22,23	3.71	7 (38%)	26,32,35	0.96	1 (3%)

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
27	PSU	23SB	1936	27	-	0/7/25/26	0/2/2/2
22	PSU	ASIA	39	22	-	0/7/25/26	0/2/2/2
27	PSU	23SB	1942	27	-	0/7/25/26	0/2/2/2
22	5MU	ASIA	54	22	-	0/7/25/26	0/2/2/2
23	4SU	PSIB	8	58,23	-	2/7/25/26	0/2/2/2
23	3AU	PSIA	47	23	-	7/16/34/35	0/2/2/2
1	UR3	16SB	2121	1	-	0/7/25/26	0/2/2/2
27	OMG	23SA	2266	23,27,60	-	1/5/27/28	0/3/3/3
27	2MA	23SA	2518	27,60	-	1/3/25/26	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	4SU	TRNA	8	26	-	2/7/25/26	0/2/2/2
1	4OC	16SA	2030	1	-	2/9/29/30	0/2/2/2
1	2MG	16SB	1834	1	-	2/5/27/28	0/3/3/3
57	5MU	ASIB	54	57	-	0/7/25/26	0/2/2/2
22	MIA	ASIA	37	22	-	6/11/33/34	0/3/3/3
24	MIA	ESIA	37	24	-	7/11/33/34	0/3/3/3
1	5MC	16SA	2032	1	-	0/7/25/26	0/2/2/2
23	5MU	PSIB	54	23	-	2/7/25/26	0/2/2/2
23	PSU	PSIA	32	23	-	0/7/25/26	0/2/2/2
23	H2U	PSIB	16	23	-	0/7/38/39	0/2/2/2
27	5MC	23SA	1967	27	-	0/7/25/26	0/2/2/2
1	5MC	16SA	1590	1	-	0/7/25/26	0/2/2/2
22	PSU	ASIA	55	22	-	3/7/25/26	0/2/2/2
1	MA6	16SA	2142	1	-	3/7/29/30	0/3/3/3
26	PSU	TRNA	39	26	-	0/7/25/26	0/2/2/2
1	G7M	16SA	1156	60,1	-	2/3/25/26	0/3/3/3
1	4OC	16SB	2030	58,1	-	2/9/29/30	0/2/2/2
26	PSU	TRNA	32	26	-	0/7/25/26	0/2/2/2
23	G7M	PSIA	46	23	-	2/3/25/26	0/3/3/3
23	3AU	PSIB	47	23	-	7/16/34/35	0/2/2/2
26	5MU	TRNA	54	26	-	2/7/25/26	0/2/2/2
27	OMG	23SB	2266	23,27,60	-	1/5/27/28	0/3/3/3
23	G7M	PSIB	46	23	-	0/3/25/26	0/3/3/3
26	PSU	TRNA	55	26	-	0/7/25/26	0/2/2/2
23	PSU	PSIB	55	23	-	0/7/25/26	0/2/2/2
27	5MU	23SA	1940	27	-	3/7/25/26	0/2/2/2
12	0TD	S12A	89	12	-	2/7/12/14	-
23	PSU	PSIA	39	23	-	0/7/25/26	0/2/2/2
12	0TD	S12B	89	12,1	-	3/7/12/14	-
23	MIA	PSIA	37	23	-	5/11/33/34	0/3/3/3
24	MIA	ESIB	37	24	-	6/11/33/34	0/3/3/3
27	PSU	23SA	1936	27	-	0/7/25/26	0/2/2/2
27	PSU	23SB	2620	27	-	0/7/25/26	0/2/2/2
1	MA6	16SB	2141	1	-	0/7/29/30	0/3/3/3
22	G7M	ASIA	46	22	-	2/3/25/26	0/3/3/3
27	5MU	23SB	1940	27	-	0/7/25/26	0/2/2/2
1	MA6	16SA	2141	1	-	0/7/29/30	0/3/3/3
1	PSU	16SB	1145	58,1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	5MC	23SB	1987	27,60	-	0/7/25/26	0/2/2/2
1	5MC	16SB	1590	1	-	0/7/25/26	0/2/2/2
26	H2U	TRNA	16	26	-	3/7/38/39	0/2/2/2
1	MA6	16SB	2142	1	-	3/7/29/30	0/3/3/3
1	5MC	16SB	2028	1	-	0/7/25/26	0/2/2/2
27	OMC	23SA	1945	27,60	-	1/9/27/28	0/2/2/2
27	OMU	23SB	2567	58,27	-	2/9/27/28	0/2/2/2
27	PSU	23SA	2620	27	-	0/7/25/26	0/2/2/2
27	2MA	23SB	2518	58,27,60	-	3/3/25/26	0/3/3/3
1	G7M	16SB	1156	60,1	-	2/3/25/26	0/3/3/3
23	5MU	PSIA	54	23	-	0/7/25/26	0/2/2/2
1	5MC	16SB	2035	1	-	0/7/25/26	0/2/2/2
23	H2U	PSIA	16	23	-	0/7/38/39	0/2/2/2
1	2MG	16SA	1834	60,1	-	0/5/27/28	0/3/3/3
27	OMU	23SA	2567	58,27	-	0/9/27/28	0/2/2/2
1	M2G	16SA	1589	1	-	0/7/29/30	0/3/3/3
57	MIA	ASIB	37	57	-	3/11/33/34	0/3/3/3
22	PSU	ASIA	32	22	-	0/7/25/26	0/2/2/2
1	PSU	16SA	1145	58,1	-	0/7/25/26	0/2/2/2
23	PSU	PSIB	32	23	-	0/7/25/26	0/2/2/2
57	PSU	ASIB	32	57	-	0/7/25/26	0/2/2/2
23	MIA	PSIB	37	23	-	6/11/33/34	0/3/3/3
27	5MC	23SB	1967	27	-	0/7/25/26	0/2/2/2
27	OMC	23SB	1945	27	-	1/9/27/28	0/2/2/2
1	5MC	16SA	2035	1	-	0/7/25/26	0/2/2/2
1	5MC	16SA	2028	1	-	0/7/25/26	0/2/2/2
1	M2G	16SB	1589	1	-	0/7/29/30	0/3/3/3
27	5MU	23SA	1964	27,60	-	2/7/25/26	0/2/2/2
22	4SU	ASIA	8	22	-	1/7/25/26	0/2/2/2
23	PSU	PSIB	39	23	-	0/7/25/26	0/2/2/2
1	5MC	16SB	2032	1	-	0/7/25/26	0/2/2/2
27	5MU	23SB	1964	27,60	-	2/7/25/26	0/2/2/2
23	PSU	PSIA	55	23	-	3/7/25/26	0/2/2/2
1	UR3	16SA	2121	1	-	0/7/25/26	0/2/2/2
23	4SU	PSIA	8	23	-	0/7/25/26	0/2/2/2
57	PSU	ASIB	39	57	-	0/7/25/26	0/2/2/2
27	PSU	23SA	1942	27	-	0/7/25/26	0/2/2/2
26	MIA	TRNA	37	27,26,37	-	5/11/33/34	0/3/3/3
26	H2U	TRNA	20	26,28	-	5/7/38/39	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
27	5MC	23SA	1987	27,60	-	0/7/25/26	0/2/2/2

All (373) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	PSIB	46	G7M	C8-N7	17.49	1.65	1.33
22	ASIA	46	G7M	C8-N7	17.30	1.64	1.33
1	16SB	1156	G7M	C8-N7	17.25	1.64	1.33
23	PSIA	46	G7M	C8-N7	17.15	1.64	1.33
1	16SA	1156	G7M	C8-N7	17.09	1.64	1.33
27	23SB	2266	OMG	C8-N7	-15.02	1.09	1.35
27	23SA	2266	OMG	C8-N7	-14.83	1.09	1.35
27	23SA	1940	5MU	C2-N1	13.35	1.59	1.38
1	16SB	1589	M2G	C2-N3	13.00	1.46	1.30
27	23SB	1940	5MU	C2-N1	12.81	1.59	1.38
26	TRNA	54	5MU	C2-N1	12.72	1.58	1.38
23	PSIB	54	5MU	C2-N1	12.71	1.58	1.38
57	ASIB	54	5MU	C2-N1	12.58	1.58	1.38
27	23SB	1964	5MU	C2-N1	12.22	1.58	1.38
23	PSIA	54	5MU	C2-N1	12.17	1.58	1.38
22	ASIA	54	5MU	C2-N1	12.10	1.57	1.38
1	16SA	1589	M2G	C2-N3	12.04	1.45	1.30
27	23SA	1964	5MU	C2-N1	11.99	1.57	1.38
1	16SB	2035	5MC	C6-C5	9.79	1.50	1.34
1	16SB	2032	5MC	C6-C5	9.64	1.50	1.34
27	23SB	1987	5MC	C6-C5	9.59	1.50	1.34
27	23SB	2266	OMG	C4-N3	9.57	1.60	1.37
1	16SA	2028	5MC	C6-C5	9.54	1.50	1.34
27	23SA	1987	5MC	C6-C5	9.54	1.50	1.34
1	16SB	1590	5MC	C6-C5	9.43	1.50	1.34
1	16SA	1590	5MC	C6-C5	9.42	1.50	1.34
1	16SA	2032	5MC	C6-C5	9.39	1.50	1.34
27	23SB	1967	5MC	C6-C5	9.39	1.50	1.34
1	16SA	2035	5MC	C6-C5	9.38	1.50	1.34
1	16SB	2028	5MC	C6-C5	9.36	1.50	1.34
27	23SA	2266	OMG	C4-N3	9.32	1.60	1.37
27	23SB	2266	OMG	C6-N1	-9.19	1.24	1.37
27	23SA	1967	5MC	C6-C5	9.10	1.49	1.34
27	23SA	2266	OMG	C6-N1	-9.05	1.24	1.37
23	PSIB	47	3AU	C2-N1	8.73	1.51	1.38
24	ESIB	37	MIA	C13-C14	8.60	1.57	1.32
57	ASIB	37	MIA	C13-C14	8.48	1.56	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	PSIB	37	MIA	C13-C14	8.47	1.56	1.32
24	ESIA	37	MIA	C13-C14	8.45	1.56	1.32
23	PSIA	37	MIA	C13-C14	8.42	1.56	1.32
26	TRNA	37	MIA	C13-C14	8.41	1.56	1.32
22	ASIA	37	MIA	C13-C14	8.41	1.56	1.32
23	PSIA	47	3AU	C2-N1	8.02	1.50	1.38
23	PSIB	46	G7M	C5-C4	-7.80	1.23	1.39
1	16SA	1156	G7M	C5-C4	-7.72	1.23	1.39
1	16SA	1156	G7M	C8-N9	7.65	1.47	1.33
1	16SB	1156	G7M	C5-C4	-7.61	1.23	1.39
1	16SB	1156	G7M	C8-N9	7.43	1.46	1.33
22	ASIA	46	G7M	C8-N9	7.42	1.46	1.33
22	ASIA	46	G7M	C5-C4	-7.40	1.24	1.39
1	16SB	1590	5MC	C4-N3	7.37	1.46	1.34
23	PSIB	46	G7M	C8-N9	7.37	1.46	1.33
1	16SA	2028	5MC	C4-N3	7.34	1.46	1.34
1	16SB	2121	UR3	C2-N1	7.31	1.49	1.38
1	16SA	2121	UR3	C2-N1	7.31	1.49	1.38
27	23SA	1967	5MC	C4-N3	7.30	1.46	1.34
23	PSIA	46	G7M	C5-C4	-7.30	1.24	1.39
23	PSIA	46	G7M	C8-N9	7.26	1.46	1.33
1	16SB	2032	5MC	C4-N3	7.25	1.46	1.34
1	16SB	1589	M2G	C2-N2	7.20	1.49	1.35
1	16SB	2028	5MC	C4-N3	7.20	1.46	1.34
1	16SA	2032	5MC	C4-N3	7.19	1.46	1.34
27	23SB	1967	5MC	C4-N3	7.18	1.46	1.34
27	23SA	2266	OMG	C5-C4	7.13	1.61	1.43
1	16SA	1589	M2G	C2-N2	7.12	1.48	1.35
27	23SB	2266	OMG	C5-C4	7.10	1.61	1.43
1	16SA	1590	5MC	C4-N3	7.04	1.46	1.34
26	TRNA	20	H2U	C2-N1	7.02	1.45	1.35
1	16SA	2030	4OC	C4-N3	7.01	1.45	1.32
1	16SB	2035	5MC	C4-N3	6.93	1.45	1.34
27	23SB	2567	OMU	C2-N3	6.91	1.50	1.38
27	23SB	1987	5MC	C4-N3	6.90	1.45	1.34
27	23SA	2567	OMU	C2-N1	6.86	1.49	1.38
27	23SA	1987	5MC	C4-N3	6.67	1.45	1.34
27	23SB	1967	5MC	C2-N3	6.65	1.49	1.36
1	16SA	2035	5MC	C4-N3	6.65	1.45	1.34
1	16SA	2032	5MC	C2-N3	6.65	1.49	1.36
27	23SA	2567	OMU	C2-N3	6.58	1.49	1.38
1	16SB	2032	5MC	C2-N3	6.58	1.49	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	16SB	1590	5MC	C2-N3	6.55	1.49	1.36
1	16SA	2028	5MC	C2-N3	6.50	1.49	1.36
27	23SB	1940	5MU	C4-N3	-6.48	1.26	1.38
27	23SA	1940	5MU	C4-N3	-6.47	1.26	1.38
1	16SB	2121	UR3	C6-C5	6.44	1.50	1.35
23	PSIA	54	5MU	C4-N3	-6.42	1.26	1.38
1	16SB	2028	5MC	C2-N3	6.41	1.49	1.36
27	23SB	2567	OMU	C2-N1	6.40	1.48	1.38
1	16SB	2035	5MC	C2-N3	6.39	1.49	1.36
27	23SA	1964	5MU	C4-N3	-6.38	1.27	1.38
27	23SB	1964	5MU	C4-N3	-6.38	1.27	1.38
26	TRNA	54	5MU	C4-N3	-6.36	1.27	1.38
1	16SB	1834	2MG	C2-N2	6.35	1.47	1.33
27	23SA	1967	5MC	C2-N3	6.34	1.49	1.36
23	PSIA	47	3AU	C2-N3	6.32	1.49	1.38
1	16SA	2121	UR3	C6-C5	6.30	1.49	1.35
22	ASIA	54	5MU	C4-N3	-6.28	1.27	1.38
23	PSIA	47	3AU	C6-C5	6.27	1.49	1.35
23	PSIB	47	3AU	C6-C5	6.26	1.49	1.35
1	16SA	1834	2MG	C2-N2	6.22	1.47	1.33
1	16SA	1590	5MC	C2-N3	6.21	1.49	1.36
1	16SA	2030	4OC	C6-C5	6.21	1.49	1.35
27	23SB	1987	5MC	C2-N3	6.19	1.48	1.36
27	23SA	1987	5MC	C2-N3	6.18	1.48	1.36
1	16SA	2035	5MC	C2-N3	6.17	1.48	1.36
23	PSIB	54	5MU	C4-N3	-6.14	1.27	1.38
1	16SB	2030	4OC	C4-N3	6.13	1.43	1.32
27	23SA	1940	5MU	C6-N1	6.09	1.48	1.38
57	ASIB	54	5MU	C4-N3	-6.03	1.27	1.38
1	16SA	2030	4OC	C2-N3	5.96	1.48	1.36
1	16SB	2030	4OC	C6-C5	5.88	1.48	1.35
24	ESIA	37	MIA	C6-N6	5.87	1.45	1.34
27	23SA	2518	2MA	C2-N3	5.82	1.43	1.31
23	PSIB	54	5MU	C2-N3	5.82	1.48	1.38
57	ASIB	54	5MU	C2-N3	5.81	1.48	1.38
23	PSIA	16	H2U	C2-N1	5.81	1.43	1.35
27	23SB	1940	5MU	C6-N1	5.81	1.48	1.38
23	PSIB	16	H2U	C2-N1	5.78	1.43	1.35
26	TRNA	37	MIA	C6-N6	5.77	1.45	1.34
57	ASIB	54	5MU	C6-N1	5.76	1.47	1.38
24	ESIB	37	MIA	C6-N6	5.76	1.45	1.34
23	PSIB	47	3AU	C2-N3	5.75	1.48	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	TRNA	16	H2U	C2-N1	5.74	1.43	1.35
27	23SA	1940	5MU	C2-N3	5.68	1.48	1.38
1	16SB	1589	M2G	C4-N3	5.66	1.51	1.37
22	ASIA	54	5MU	C6-N1	5.65	1.47	1.38
27	23SB	2567	OMU	C6-C5	5.65	1.48	1.35
27	23SB	1964	5MU	C2-N3	5.63	1.48	1.38
22	ASIA	54	5MU	C2-N3	5.63	1.48	1.38
26	TRNA	54	5MU	C6-N1	5.62	1.47	1.38
27	23SB	1940	5MU	C2-N3	5.60	1.47	1.38
26	TRNA	54	5MU	C2-N3	5.59	1.47	1.38
27	23SA	2567	OMU	C6-C5	5.59	1.48	1.35
23	PSIB	37	MIA	C6-N6	5.58	1.44	1.34
23	PSIB	54	5MU	C6-N1	5.57	1.47	1.38
27	23SB	2518	2MA	C2-N3	5.56	1.43	1.31
1	16SB	2121	UR3	C2-N3	5.55	1.49	1.39
23	PSIA	54	5MU	C6-N1	5.44	1.47	1.38
23	PSIA	37	MIA	C6-N6	5.41	1.44	1.34
57	ASIB	37	MIA	C6-N6	5.41	1.44	1.34
27	23SA	1964	5MU	C6-N1	5.36	1.47	1.38
27	23SA	1964	5MU	C2-N3	5.33	1.47	1.38
26	TRNA	8	4SU	C5-C4	5.30	1.49	1.42
1	16SB	2030	4OC	C2-N3	5.24	1.47	1.36
23	PSIA	54	5MU	C2-N3	5.22	1.47	1.38
22	ASIA	37	MIA	C6-N6	5.21	1.44	1.34
27	23SB	1964	5MU	C6-N1	5.20	1.46	1.38
23	PSIA	8	4SU	C5-C4	5.20	1.49	1.42
22	ASIA	8	4SU	C5-C4	5.16	1.49	1.42
1	16SA	2121	UR3	C2-N3	5.13	1.48	1.39
26	TRNA	37	MIA	C2-S10	5.11	1.80	1.75
1	16SA	1589	M2G	C4-N3	5.07	1.49	1.37
1	16SB	1834	2MG	C4-N3	5.06	1.49	1.37
22	ASIA	54	5MU	C4-C5	5.05	1.53	1.44
27	23SB	1987	5MC	C4-N4	5.03	1.47	1.34
1	16SB	2032	5MC	C6-N1	5.02	1.46	1.38
1	16SB	1590	5MC	C4-N4	5.02	1.47	1.34
1	16SA	1590	5MC	C4-N4	5.01	1.47	1.34
1	16SA	2028	5MC	C4-N4	5.00	1.47	1.34
27	23SB	1967	5MC	C4-N4	4.96	1.47	1.34
1	16SB	2035	5MC	C4-N4	4.96	1.47	1.34
27	23SA	1967	5MC	C4-N4	4.95	1.47	1.34
1	16SB	2032	5MC	C4-N4	4.95	1.47	1.34
1	16SB	1834	2MG	C2-N1	4.94	1.44	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	23SA	1964	5MU	C4-C5	4.94	1.53	1.44
27	23SB	1987	5MC	C6-N1	4.91	1.46	1.38
1	16SA	2035	5MC	C6-N1	4.90	1.46	1.38
1	16SA	2035	5MC	C4-N4	4.89	1.46	1.34
27	23SA	1987	5MC	C4-N4	4.88	1.46	1.34
1	16SB	2035	5MC	C6-N1	4.87	1.46	1.38
1	16SA	1834	2MG	C4-N3	4.87	1.49	1.37
1	16SA	2032	5MC	C6-N1	4.85	1.46	1.38
1	16SB	2028	5MC	C4-N4	4.84	1.46	1.34
27	23SB	1940	5MU	C4-C5	4.83	1.52	1.44
1	16SA	2032	5MC	C4-N4	4.83	1.46	1.34
1	16SB	1590	5MC	C6-N1	4.82	1.46	1.38
26	TRNA	54	5MU	C4-C5	4.78	1.52	1.44
27	23SA	1940	5MU	C4-C5	4.77	1.52	1.44
23	PSIA	54	5MU	C4-C5	4.71	1.52	1.44
27	23SB	1967	5MC	C6-N1	4.71	1.46	1.38
1	16SB	2028	5MC	C2-N1	4.70	1.50	1.40
1	16SA	1834	2MG	C2-N1	4.70	1.44	1.36
27	23SA	1987	5MC	C6-N1	4.69	1.46	1.38
27	23SB	1964	5MU	C4-C5	4.69	1.52	1.44
23	PSIA	46	G7M	C4-N3	4.63	1.48	1.37
23	PSIB	8	4SU	C5-C4	4.62	1.48	1.42
57	ASIB	54	5MU	C4-C5	4.62	1.52	1.44
27	23SA	1967	5MC	C2-N1	4.61	1.50	1.40
1	16SA	2028	5MC	C6-N1	4.58	1.45	1.38
27	23SB	2518	2MA	C4-N3	4.58	1.48	1.37
1	16SB	2028	5MC	C6-N1	4.57	1.45	1.38
1	16SB	2035	5MC	C2-N1	4.54	1.49	1.40
1	16SA	1590	5MC	C6-N1	4.52	1.45	1.38
22	ASIA	46	G7M	C4-N3	4.52	1.48	1.37
27	23SB	1967	5MC	C2-N1	4.48	1.49	1.40
27	23SA	2518	2MA	C4-N3	4.45	1.48	1.37
23	PSIB	54	5MU	C4-C5	4.42	1.52	1.44
1	16SA	1589	M2G	C2-N1	4.39	1.47	1.36
23	PSIB	46	G7M	C4-N3	4.38	1.48	1.37
1	16SB	2032	5MC	C2-N1	4.35	1.49	1.40
1	16SA	2030	4OC	C4-N4	4.35	1.44	1.35
1	16SA	2032	5MC	C2-N1	4.35	1.49	1.40
1	16SB	1156	G7M	C4-N3	4.33	1.47	1.37
1	16SB	1589	M2G	C2-N1	4.32	1.47	1.36
27	23SA	1967	5MC	C6-N1	4.32	1.45	1.38
1	16SA	2035	5MC	C2-N1	4.29	1.49	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	23SB	1945	OMC	C2-N3	4.29	1.45	1.36
27	23SB	1945	OMC	C4-N4	4.27	1.44	1.33
1	16SB	1590	5MC	C2-N1	4.27	1.49	1.40
27	23SA	1945	OMC	C2-N3	4.25	1.45	1.36
26	TRNA	20	H2U	C2-N3	4.23	1.45	1.38
1	16SA	1156	G7M	C4-N3	4.21	1.47	1.37
27	23SA	1987	5MC	C2-N1	4.19	1.49	1.40
24	ESIB	37	MIA	C2-S10	4.18	1.79	1.75
27	23SB	1987	5MC	C2-N1	4.15	1.49	1.40
23	PSIB	16	H2U	C2-N3	4.13	1.45	1.38
1	16SB	2030	4OC	C2-N1	4.12	1.48	1.40
27	23SB	2567	OMU	C4-N3	4.11	1.45	1.38
26	TRNA	16	H2U	C2-N3	4.10	1.45	1.38
24	ESIA	37	MIA	C2-S10	4.08	1.79	1.75
23	PSIB	8	4SU	C2-N1	4.06	1.45	1.38
27	23SA	1945	OMC	C4-N4	4.04	1.43	1.33
1	16SA	1590	5MC	C2-N1	4.00	1.48	1.40
23	PSIA	55	PSU	C6-C5	3.99	1.40	1.35
1	16SB	2030	4OC	C5-C4	3.98	1.49	1.40
1	16SA	2028	5MC	C2-N1	3.91	1.48	1.40
23	PSIA	16	H2U	C2-N3	3.89	1.44	1.38
27	23SB	1945	OMC	C5-C4	3.89	1.51	1.42
1	16SB	1589	M2G	C5-C6	3.89	1.55	1.47
26	TRNA	32	PSU	C6-C5	3.87	1.39	1.35
1	16SA	1589	M2G	C6-N1	3.87	1.43	1.37
1	16SA	2030	4OC	C5-C4	3.85	1.49	1.40
26	TRNA	39	PSU	C6-C5	3.85	1.39	1.35
22	ASIA	32	PSU	C6-C5	3.84	1.39	1.35
1	16SA	1145	PSU	C6-C5	3.84	1.39	1.35
27	23SB	1936	PSU	C6-C5	3.82	1.39	1.35
1	16SA	1589	M2G	C5-C6	3.80	1.55	1.47
22	ASIA	8	4SU	C2-N1	3.80	1.44	1.38
26	TRNA	8	4SU	C2-N1	3.79	1.44	1.38
27	23SB	1942	PSU	C6-C5	3.78	1.39	1.35
1	16SA	2030	4OC	C2-N1	3.78	1.48	1.40
23	PSIA	37	MIA	C2-S10	3.77	1.78	1.75
1	16SB	1834	2MG	C6-N1	3.76	1.43	1.37
27	23SB	2620	PSU	C6-C5	3.75	1.39	1.35
22	ASIA	39	PSU	C6-C5	3.72	1.39	1.35
23	PSIA	8	4SU	C2-N1	3.71	1.44	1.38
23	PSIB	39	PSU	C6-C5	3.71	1.39	1.35
27	23SA	2567	OMU	C4-N3	3.69	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	16SB	1589	M2G	C6-N1	3.67	1.43	1.37
23	PSIA	47	3AU	C4-N3	3.65	1.46	1.40
23	PSIB	55	PSU	C6-C5	3.65	1.39	1.35
27	23SA	2266	OMG	C5-C6	-3.64	1.40	1.47
26	TRNA	55	PSU	C6-C5	3.62	1.39	1.35
1	16SB	1145	PSU	C6-C5	3.60	1.39	1.35
22	ASIA	37	MIA	C2-S10	3.60	1.78	1.75
27	23SB	2266	OMG	C5-C6	-3.59	1.40	1.47
23	PSIB	16	H2U	C4-N3	3.57	1.43	1.37
57	ASIB	39	PSU	C6-C5	3.54	1.39	1.35
27	23SA	1945	OMC	C5-C4	3.53	1.51	1.42
57	ASIB	37	MIA	C2-S10	3.52	1.78	1.75
23	PSIB	47	3AU	C4-N3	3.50	1.45	1.40
27	23SA	2620	PSU	C6-C5	3.49	1.39	1.35
22	ASIA	55	PSU	C6-C5	3.48	1.39	1.35
26	TRNA	16	H2U	C4-N3	3.47	1.43	1.37
1	16SA	1834	2MG	C6-N1	3.45	1.43	1.37
26	TRNA	20	H2U	C4-N3	3.45	1.43	1.37
27	23SA	1936	PSU	C6-C5	3.38	1.39	1.35
26	TRNA	37	MIA	C2-N3	3.35	1.39	1.34
23	PSIA	16	H2U	C4-N3	3.34	1.43	1.37
23	PSIA	32	PSU	C6-C5	3.30	1.39	1.35
27	23SA	1942	PSU	C6-C5	3.30	1.39	1.35
1	16SA	1834	2MG	C5-C6	3.28	1.54	1.47
23	PSIA	39	PSU	C6-C5	3.28	1.39	1.35
1	16SB	2030	4OC	C4-N4	3.27	1.42	1.35
1	16SB	1834	2MG	C5-C6	3.27	1.54	1.47
23	PSIB	37	MIA	C2-S10	3.24	1.78	1.75
1	16SB	2035	5MC	O2-C2	-3.24	1.17	1.23
57	ASIB	32	PSU	C6-C5	3.24	1.39	1.35
23	PSIB	8	4SU	C4-N3	3.23	1.41	1.37
23	PSIB	32	PSU	C6-C5	3.16	1.39	1.35
1	16SA	2030	4OC	C6-N1	3.15	1.45	1.38
1	16SA	1590	5MC	O2-C2	-3.14	1.17	1.23
27	23SB	1987	5MC	O2-C2	-3.08	1.18	1.23
23	PSIB	46	G7M	C2-N2	3.06	1.41	1.34
1	16SB	1156	G7M	C2-N2	3.05	1.41	1.34
22	ASIA	46	G7M	C2-N2	3.05	1.41	1.34
1	16SA	2035	5MC	O2-C2	-3.04	1.18	1.23
23	PSIA	46	G7M	C2-N2	3.03	1.41	1.34
1	16SA	1156	G7M	C2-N2	3.03	1.41	1.34
1	16SB	2028	5MC	O2-C2	-3.02	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	16SB	1590	5MC	O2-C2	-3.02	1.18	1.23
1	16SA	2030	4OC	O2-C2	-2.99	1.18	1.23
1	16SB	2030	4OC	C6-N1	2.99	1.45	1.38
1	16SA	2121	UR3	C6-N1	2.99	1.45	1.38
1	16SA	2028	5MC	O2-C2	-2.96	1.18	1.23
1	16SB	2032	5MC	O2-C2	-2.96	1.18	1.23
1	16SB	2121	UR3	C6-N1	2.93	1.45	1.38
27	23SB	2567	OMU	O4-C4	-2.89	1.18	1.24
23	PSIA	47	3AU	C6-N1	2.88	1.45	1.38
27	23SA	2567	OMU	O4-C4	-2.85	1.19	1.24
1	16SA	1834	2MG	O6-C6	-2.80	1.17	1.23
23	PSIB	47	3AU	C6-N1	2.79	1.44	1.38
1	16SA	2032	5MC	O2-C2	-2.76	1.18	1.23
27	23SB	1967	5MC	O2-C2	-2.76	1.18	1.23
23	PSIA	16	H2U	C6-N1	-2.72	1.42	1.47
27	23SA	2266	OMG	C2-N2	2.72	1.40	1.34
1	16SB	1834	2MG	O6-C6	-2.71	1.17	1.23
27	23SB	2266	OMG	O6-C6	-2.71	1.17	1.23
1	16SA	1834	2MG	C5-C4	-2.71	1.36	1.43
27	23SB	2266	OMG	C2-N3	2.70	1.39	1.33
27	23SB	2266	OMG	C2-N2	2.68	1.40	1.34
22	ASIA	8	4SU	C6-N1	2.66	1.44	1.38
23	PSIA	8	4SU	C6-N1	2.66	1.44	1.38
26	TRNA	8	4SU	C6-N1	2.65	1.44	1.38
27	23SA	2266	OMG	O6-C6	-2.65	1.17	1.23
27	23SA	1967	5MC	O2-C2	-2.64	1.18	1.23
27	23SB	2567	OMU	C6-N1	2.63	1.44	1.38
1	16SA	1589	M2G	C5-C4	-2.62	1.36	1.43
27	23SB	2518	2MA	C2-N1	2.61	1.44	1.36
27	23SA	2518	2MA	C5-C4	-2.59	1.36	1.43
27	23SA	1987	5MC	O2-C2	-2.59	1.18	1.23
26	TRNA	16	H2U	C6-N1	-2.58	1.42	1.47
1	16SB	1834	2MG	C5-C4	-2.58	1.36	1.43
27	23SA	2518	2MA	C2-N1	2.57	1.44	1.36
23	PSIB	16	H2U	C6-N1	-2.55	1.42	1.47
27	23SA	2567	OMU	C6-N1	2.52	1.44	1.38
1	16SA	2141	MA6	C5-C4	-2.50	1.34	1.40
23	PSIB	8	4SU	C2-N3	2.50	1.42	1.38
27	23SB	2567	OMU	O2-C2	-2.49	1.18	1.23
27	23SB	2266	OMG	C2-N1	-2.48	1.31	1.37
1	16SB	2142	MA6	C5-C4	-2.47	1.34	1.40
1	16SA	2142	MA6	C5-C4	-2.46	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	ESIB	37	MIA	C6-N1	2.45	1.36	1.32
1	16SB	2030	4OC	O2-C2	-2.45	1.19	1.23
27	23SA	2567	OMU	C5-C4	2.45	1.49	1.43
26	TRNA	20	H2U	C6-N1	-2.44	1.42	1.47
1	16SB	2141	MA6	C5-C4	-2.43	1.34	1.40
27	23SA	2266	OMG	C2-N3	2.41	1.39	1.33
24	ESIA	37	MIA	C6-N1	2.39	1.36	1.32
23	PSIB	47	3AU	O4-C4	-2.38	1.18	1.23
23	PSIB	8	4SU	C6-N1	2.38	1.43	1.38
23	PSIB	47	3AU	C5-C4	2.36	1.49	1.43
27	23SB	2518	2MA	C5-C4	-2.36	1.37	1.43
23	PSIA	47	3AU	C5-C4	2.31	1.49	1.43
27	23SB	2567	OMU	C5-C4	2.30	1.48	1.43
23	PSIA	47	3AU	O4-C4	-2.29	1.18	1.23
27	23SA	2567	OMU	O2-C2	-2.28	1.18	1.23
1	16SA	2121	UR3	C5-C4	2.28	1.49	1.43
1	16SA	2121	UR3	O4-C4	-2.25	1.18	1.23
23	PSIB	37	MIA	C6-N1	2.24	1.35	1.32
27	23SB	2518	2MA	C6-N1	2.23	1.42	1.38
23	PSIB	47	3AU	O2-C2	-2.22	1.18	1.22
1	16SB	2121	UR3	O4-C4	-2.19	1.18	1.23
22	ASIA	37	MIA	C6-N1	2.18	1.35	1.32
1	16SB	2121	UR3	C5-C4	2.18	1.49	1.43
1	16SB	2121	UR3	C4-N3	2.18	1.45	1.40
1	16SA	1156	G7M	C6-N1	-2.15	1.34	1.37
27	23SA	2266	OMG	C2-N1	-2.15	1.32	1.37
27	23SA	2518	2MA	C6-N1	2.14	1.42	1.38
1	16SB	1589	M2G	C5-C4	-2.12	1.37	1.43
27	23SA	1945	OMC	C6-N1	2.12	1.43	1.38
23	PSIA	47	3AU	O2-C2	-2.07	1.18	1.22
27	23SB	1945	OMC	C6-N1	2.06	1.43	1.38
1	16SA	2121	UR3	C4-N3	2.05	1.45	1.40
27	23SA	2518	2MA	CM2-C2	2.05	1.54	1.49
12	S12B	89	0TD	OD1-CG	2.04	1.28	1.22
1	16SA	2141	MA6	C2-N3	2.04	1.35	1.32
1	16SA	2142	MA6	C2-N3	2.04	1.35	1.32
26	TRNA	37	MIA	C8-N7	-2.03	1.31	1.34
1	16SA	2121	UR3	O2-C2	-2.03	1.18	1.22
57	ASIB	37	MIA	C6-N1	2.03	1.35	1.32
1	16SB	2142	MA6	C2-N3	2.02	1.35	1.32
12	S12A	89	0TD	CB-CG	2.00	1.55	1.52
22	ASIA	8	4SU	C2-N3	2.00	1.41	1.38

All (380) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	ESIB	37	MIA	C11-S10-C2	15.35	113.73	102.27
27	23SA	1940	5MU	C5-C4-N3	11.38	125.02	115.31
24	ESIB	37	MIA	C12-C13-C14	-10.88	105.97	127.14
23	PSIA	54	5MU	C5-C4-N3	10.88	124.59	115.31
27	23SA	1964	5MU	C5-C4-N3	10.87	124.58	115.31
24	ESIA	37	MIA	C11-S10-C2	10.71	110.27	102.27
1	16SA	2142	MA6	N1-C6-N6	-10.63	105.87	117.06
57	ASIB	54	5MU	C5-C4-N3	10.54	124.31	115.31
1	16SB	2142	MA6	N1-C6-N6	-10.45	106.06	117.06
22	ASIA	54	5MU	C5-C4-N3	10.45	124.23	115.31
26	TRNA	54	5MU	C5-C4-N3	10.42	124.20	115.31
27	23SB	2266	OMG	C8-N7-C5	10.23	122.48	102.99
27	23SA	2266	OMG	C8-N7-C5	10.15	122.31	102.99
23	PSIB	54	5MU	C5-C4-N3	10.08	123.91	115.31
1	16SA	2141	MA6	N1-C6-N6	-9.95	106.59	117.06
27	23SB	1940	5MU	C5-C4-N3	9.86	123.73	115.31
22	ASIA	37	MIA	C12-C13-C14	-9.71	108.24	127.14
27	23SB	1964	5MU	C5-C4-N3	9.61	123.52	115.31
27	23SB	2266	OMG	C5-C6-N1	9.33	130.42	113.95
23	PSIB	37	MIA	C12-C13-C14	-9.32	109.01	127.14
27	23SA	2266	OMG	C5-C6-N1	8.92	129.70	113.95
26	TRNA	37	MIA	C12-C13-C14	-8.86	109.89	127.14
57	ASIB	37	MIA	C11-S10-C2	8.77	108.81	102.27
23	PSIB	8	4SU	C4-N3-C2	-8.66	118.93	127.34
26	TRNA	37	MIA	C11-S10-C2	8.65	108.73	102.27
57	ASIB	37	MIA	C12-C13-C14	-8.58	110.45	127.14
26	TRNA	37	MIA	C1'-N9-C4	8.57	141.69	126.64
22	ASIA	37	MIA	C11-S10-C2	8.55	108.65	102.27
23	PSIA	8	4SU	C4-N3-C2	-8.50	119.08	127.34
1	16SB	2141	MA6	N1-C6-N6	-8.48	108.14	117.06
26	TRNA	8	4SU	C4-N3-C2	-7.90	119.67	127.34
22	ASIA	8	4SU	C4-N3-C2	-7.69	119.87	127.34
24	ESIA	37	MIA	C12-C13-C14	-7.62	112.31	127.14
27	23SA	1940	5MU	C4-N3-C2	-6.98	118.31	127.35
23	PSIB	8	4SU	C5-C4-S4	-6.95	115.51	124.47
26	TRNA	8	4SU	C5-C4-N3	6.83	121.03	114.69
27	23SA	1964	5MU	C4-N3-C2	-6.82	118.52	127.35
27	23SB	1964	5MU	C6-C5-C4	6.74	123.67	118.03
23	PSIA	37	MIA	C12-C13-C14	-6.74	114.02	127.14
27	23SA	1964	5MU	C5-C6-N1	-6.72	116.43	123.34
27	23SB	1964	5MU	C4-N3-C2	-6.56	118.86	127.35
23	PSIA	16	H2U	C4-N3-C2	-6.53	120.38	125.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	PSIA	54	5MU	C5-C6-N1	-6.44	116.71	123.34
22	ASIA	54	5MU	C4-N3-C2	-6.44	119.02	127.35
23	PSIA	8	4SU	C5-C4-N3	6.35	120.58	114.69
26	TRNA	16	H2U	C4-N3-C2	-6.34	120.53	125.79
27	23SB	1940	5MU	C4-N3-C2	-6.27	119.24	127.35
26	TRNA	54	5MU	C4-N3-C2	-6.18	119.35	127.35
27	23SB	1940	5MU	C6-C5-C4	6.11	123.14	118.03
27	23SB	1964	5MU	C5-C6-N1	-6.10	117.06	123.34
27	23SB	2266	OMG	O6-C6-N1	-6.08	113.46	120.65
57	ASIB	54	5MU	C4-N3-C2	-6.05	119.52	127.35
27	23SA	1940	5MU	C5-C6-N1	-6.04	117.13	123.34
22	ASIA	8	4SU	C5-C4-N3	6.01	120.27	114.69
27	23SA	1964	5MU	C6-C5-C4	5.99	123.04	118.03
27	23SA	1940	5MU	C6-C5-C4	5.97	123.02	118.03
27	23SA	2567	OMU	C4-N3-C2	-5.96	118.72	126.58
22	ASIA	54	5MU	C5-C6-N1	-5.95	117.21	123.34
23	PSIA	54	5MU	C4-N3-C2	-5.89	119.73	127.35
1	16SB	2141	MA6	N3-C2-N1	-5.74	119.71	128.68
1	16SB	2142	MA6	N3-C2-N1	-5.72	119.74	128.68
23	PSIB	54	5MU	C4-N3-C2	-5.69	119.98	127.35
23	PSIB	47	3AU	C1'-N1-C2	5.68	126.57	116.99
26	TRNA	54	5MU	C6-C5-C4	5.66	122.77	118.03
27	23SB	2567	OMU	C4-N3-C2	-5.64	119.14	126.58
26	TRNA	54	5MU	C5-C6-N1	-5.63	117.55	123.34
23	PSIB	54	5MU	O4-C4-C5	-5.63	118.38	124.90
1	16SA	2142	MA6	N3-C2-N1	-5.61	119.91	128.68
22	ASIA	54	5MU	C6-C5-C4	5.56	122.68	118.03
1	16SA	2141	MA6	N3-C2-N1	-5.53	120.04	128.68
23	PSIB	8	4SU	C5-C4-N3	5.45	119.75	114.69
23	PSIB	47	3AU	O2-C2-N3	-5.40	114.48	121.99
27	23SB	1940	5MU	C5-C6-N1	-5.39	117.79	123.34
26	TRNA	37	MIA	C15-C14-C13	-5.39	107.07	122.65
23	PSIB	16	H2U	C4-N3-C2	-5.36	121.34	125.79
27	23SA	2266	OMG	O6-C6-N1	-5.35	114.33	120.65
57	ASIB	54	5MU	O4-C4-C5	-5.30	118.76	124.90
27	23SA	1940	5MU	O4-C4-C5	-5.28	118.78	124.90
26	TRNA	37	MIA	C2-N3-C4	5.26	122.58	115.32
57	ASIB	54	5MU	C5-C6-N1	-5.19	118.00	123.34
23	PSIA	54	5MU	C6-C5-C4	5.17	122.35	118.03
57	ASIB	54	5MU	C6-C5-C4	5.12	122.31	118.03
26	TRNA	20	H2U	C4-N3-C2	-5.10	121.56	125.79
23	PSIA	37	MIA	C11-S10-C2	5.05	106.04	102.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	ESIB	37	MIA	C16-C14-C13	-4.99	108.23	122.65
27	23SB	1964	5MU	O4-C4-C5	-4.93	119.19	124.90
1	16SA	2121	UR3	C4-N3-C2	-4.88	119.97	124.56
22	ASIA	37	MIA	C16-C14-C13	-4.86	108.60	122.65
26	TRNA	54	5MU	O4-C4-C5	-4.85	119.28	124.90
24	ESIA	37	MIA	C16-C14-C13	-4.84	108.64	122.65
27	23SA	1964	5MU	O4-C4-C5	-4.72	119.43	124.90
57	ASIB	37	MIA	C15-C14-C13	-4.69	109.08	122.65
27	23SB	1940	5MU	O4-C4-C5	-4.69	119.47	124.90
23	PSIB	37	MIA	C16-C14-C13	-4.68	109.11	122.65
23	PSIA	54	5MU	O4-C4-C5	-4.68	119.48	124.90
27	23SB	2620	PSU	C4-N3-C2	-4.66	119.63	126.34
23	PSIB	54	5MU	C6-C5-C4	4.66	121.92	118.03
26	TRNA	55	PSU	C4-N3-C2	-4.65	119.64	126.34
27	23SA	1936	PSU	N1-C2-N3	4.64	120.39	115.13
26	TRNA	39	PSU	N1-C2-N3	4.63	120.38	115.13
27	23SB	1940	5MU	C6-N1-C2	-4.61	116.62	121.30
22	ASIA	37	MIA	C15-C14-C13	-4.61	109.33	122.65
23	PSIB	8	4SU	S4-C4-N3	4.60	124.74	120.21
27	23SA	2620	PSU	N1-C2-N3	4.60	120.34	115.13
27	23SA	2620	PSU	C4-N3-C2	-4.56	119.77	126.34
1	16SB	1145	PSU	C4-N3-C2	-4.56	119.78	126.34
26	TRNA	39	PSU	C4-N3-C2	-4.54	119.80	126.34
27	23SB	1940	5MU	C5M-C5-C6	-4.54	116.78	122.85
23	PSIA	37	MIA	C15-C14-C13	-4.54	109.53	122.65
22	ASIA	54	5MU	C5M-C5-C6	-4.54	116.79	122.85
23	PSIB	54	5MU	C6-N1-C2	-4.54	116.70	121.30
1	16SA	1589	M2G	N1-C2-N2	4.53	121.89	118.04
23	PSIB	55	PSU	C4-N3-C2	-4.53	119.82	126.34
22	ASIA	8	4SU	C5-C4-S4	-4.52	118.65	124.47
27	23SA	1936	PSU	C4-N3-C2	-4.51	119.84	126.34
27	23SA	1942	PSU	C4-N3-C2	-4.51	119.84	126.34
1	16SA	1145	PSU	N1-C2-N3	4.50	120.23	115.13
26	TRNA	55	PSU	N1-C2-N3	4.48	120.21	115.13
27	23SA	1942	PSU	N1-C2-N3	4.46	120.19	115.13
27	23SA	1964	5MU	C5M-C5-C6	-4.45	116.90	122.85
22	ASIA	54	5MU	O4-C4-C5	-4.45	119.75	124.90
26	TRNA	54	5MU	C5M-C5-C6	-4.44	116.92	122.85
23	PSIB	37	MIA	C15-C14-C13	-4.44	109.82	122.65
23	PSIA	39	PSU	C4-N3-C2	-4.43	119.95	126.34
23	PSIA	8	4SU	C5-C4-S4	-4.41	118.78	124.47
22	ASIA	55	PSU	N1-C2-N3	4.38	120.09	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	TRNA	32	PSU	C4-N3-C2	-4.38	120.03	126.34
27	23SB	1942	PSU	C4-N3-C2	-4.37	120.05	126.34
23	PSIA	55	PSU	N1-C2-N3	4.36	120.07	115.13
22	ASIA	39	PSU	C4-N3-C2	-4.33	120.10	126.34
57	ASIB	32	PSU	C4-N3-C2	-4.32	120.11	126.34
26	TRNA	32	PSU	N1-C2-N3	4.32	120.02	115.13
27	23SA	2567	OMU	N3-C2-N1	4.31	120.61	114.89
27	23SA	2266	OMG	O6-C6-C5	-4.30	115.97	124.37
23	PSIB	32	PSU	N1-C2-N3	4.30	120.00	115.13
57	ASIB	39	PSU	C4-N3-C2	-4.29	120.15	126.34
23	PSIB	32	PSU	C4-N3-C2	-4.28	120.17	126.34
23	PSIA	32	PSU	C4-N3-C2	-4.28	120.18	126.34
1	16SB	2030	4OC	CM4-N4-C4	-4.27	114.10	122.45
57	ASIB	32	PSU	N1-C2-N3	4.25	119.94	115.13
23	PSIA	54	5MU	C5M-C5-C6	-4.24	117.18	122.85
23	PSIB	39	PSU	C4-N3-C2	-4.24	120.23	126.34
27	23SB	2266	OMG	O6-C6-C5	-4.23	116.12	124.37
22	ASIA	55	PSU	C4-N3-C2	-4.21	120.28	126.34
1	16SB	1145	PSU	N1-C2-N3	4.19	119.88	115.13
23	PSIB	54	5MU	C5M-C5-C6	-4.16	117.30	122.85
23	PSIB	8	4SU	N3-C2-N1	4.16	120.41	114.89
26	TRNA	8	4SU	C5-C4-S4	-4.15	119.12	124.47
27	23SB	1964	5MU	C5M-C5-C6	-4.15	117.31	122.85
57	ASIB	54	5MU	C5M-C5-C6	-4.14	117.31	122.85
23	PSIB	39	PSU	N1-C2-N3	4.13	119.81	115.13
27	23SB	1936	PSU	C4-N3-C2	-4.13	120.39	126.34
27	23SB	1942	PSU	N1-C2-N3	4.12	119.80	115.13
27	23SB	2620	PSU	N1-C2-N3	4.11	119.78	115.13
23	PSIB	55	PSU	N1-C2-N3	4.11	119.78	115.13
24	ESIB	37	MIA	C15-C14-C13	-4.10	110.80	122.65
23	PSIA	39	PSU	N1-C2-N3	4.09	119.77	115.13
1	16SA	1145	PSU	C4-N3-C2	-4.09	120.44	126.34
27	23SA	1940	5MU	C5M-C5-C6	-4.08	117.40	122.85
1	16SA	1590	5MC	C5-C6-N1	-4.08	119.14	123.34
27	23SA	1940	5MU	C6-N1-C2	-4.05	117.19	121.30
23	PSIA	8	4SU	N3-C2-N1	4.05	120.27	114.89
57	ASIB	37	MIA	C16-C14-C13	-4.03	110.99	122.65
57	ASIB	39	PSU	N1-C2-N3	4.02	119.69	115.13
24	ESIA	37	MIA	C15-C14-C13	-4.00	111.09	122.65
23	PSIA	32	PSU	N1-C2-N3	3.99	119.65	115.13
24	ESIB	37	MIA	C12-N6-C6	-3.96	116.67	122.55
23	PSIA	16	H2U	C5-C4-N3	3.95	121.09	116.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	16SA	2028	5MC	C5-C6-N1	-3.95	119.27	123.34
26	TRNA	37	MIA	C16-C14-C13	-3.92	111.31	122.65
12	S12B	89	0TD	OD2-CG-CB	3.91	121.59	113.15
23	PSIB	54	5MU	C5-C6-N1	-3.90	119.32	123.34
22	ASIA	32	PSU	N1-C2-N3	3.89	119.54	115.13
27	23SB	2567	OMU	N3-C2-N1	3.87	120.03	114.89
1	16SB	2121	UR3	C4-N3-C2	-3.86	120.93	124.56
23	PSIB	47	3AU	C6-N1-C2	-3.85	118.34	121.79
23	PSIA	55	PSU	C4-N3-C2	-3.85	120.79	126.34
23	PSIA	47	3AU	C1'-N1-C2	3.84	123.48	116.99
22	ASIA	32	PSU	C4-N3-C2	-3.84	120.80	126.34
23	PSIB	37	MIA	C12-N6-C6	-3.82	116.88	122.55
27	23SB	1964	5MU	C6-N1-C2	-3.79	117.46	121.30
23	PSIB	37	MIA	C11-S10-C2	3.78	105.09	102.27
26	TRNA	16	H2U	C5-C4-N3	3.78	120.89	116.65
22	ASIA	39	PSU	N1-C2-N3	3.76	119.39	115.13
24	ESIB	37	MIA	C2-N3-C4	3.73	120.46	115.32
27	23SA	1967	5MC	C5-C6-N1	-3.73	119.50	123.34
23	PSIA	37	MIA	C2-N3-C4	3.70	120.42	115.32
23	PSIB	16	H2U	C5-C4-N3	3.67	120.78	116.65
23	PSIA	37	MIA	C16-C14-C13	-3.67	112.05	122.65
27	23SA	1987	5MC	C5-C6-N1	-3.63	119.61	123.34
1	16SB	2028	5MC	C5-C6-N1	-3.62	119.61	123.34
24	ESIA	37	MIA	C5-C6-N1	-3.61	117.81	120.81
23	PSIB	8	4SU	O2-C2-N1	-3.60	118.00	122.79
27	23SB	1936	PSU	N1-C2-N3	3.59	119.20	115.13
22	ASIA	8	4SU	N3-C2-N1	3.59	119.65	114.89
22	ASIA	37	MIA	C2-N3-C4	3.59	120.27	115.32
1	16SA	2035	5MC	C5-C6-N1	-3.56	119.67	123.34
27	23SA	2266	OMG	N2-C2-N1	3.56	124.29	116.71
57	ASIB	37	MIA	C2-N3-C4	3.55	120.22	115.32
27	23SA	2567	OMU	C5-C4-N3	3.49	120.07	114.84
27	23SB	2567	OMU	C5-C4-N3	3.49	120.07	114.84
26	TRNA	54	5MU	C6-N1-C2	-3.49	117.76	121.30
23	PSIB	37	MIA	C2-N3-C4	3.47	120.11	115.32
23	PSIB	47	3AU	C4-N3-C2	-3.47	120.28	124.63
23	PSIA	37	MIA	C12-N6-C6	-3.46	117.42	122.55
57	ASIB	54	5MU	C6-N1-C2	-3.45	117.81	121.30
26	TRNA	20	H2U	C5-C6-N1	3.45	122.97	111.61
27	23SB	1940	5MU	N3-C2-N1	3.42	119.43	114.89
27	23SB	1964	5MU	N3-C2-N1	3.42	119.42	114.89
27	23SB	2518	2MA	C5-C6-N1	3.41	119.91	114.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	TRNA	20	H2U	C5-C4-N3	3.41	120.48	116.65
1	16SB	1590	5MC	C5-C6-N1	-3.39	119.85	123.34
26	TRNA	16	H2U	N3-C2-N1	3.38	120.23	116.65
24	ESIA	37	MIA	C2-N3-C4	3.35	119.94	115.32
27	23SA	1940	5MU	N3-C2-N1	3.34	119.33	114.89
23	PSIA	16	H2U	N3-C2-N1	3.34	120.19	116.65
23	PSIB	16	H2U	C5-C6-N1	3.33	122.58	111.61
12	S12A	89	0TD	OD2-CG-CB	3.31	120.30	113.15
23	PSIB	37	MIA	C4-C5-N7	-3.30	105.97	109.40
27	23SA	2518	2MA	C5-C6-N1	3.27	119.66	114.02
26	TRNA	8	4SU	N3-C2-N1	3.23	119.18	114.89
1	16SB	1834	2MG	C5-C6-N1	3.21	119.61	113.95
23	PSIA	47	3AU	C4-N3-C2	-3.20	120.62	124.63
22	ASIA	54	5MU	C6-N1-C2	-3.19	118.07	121.30
27	23SA	1942	PSU	O2-C2-N1	-3.18	119.29	122.79
27	23SA	1936	PSU	O2-C2-N1	-3.15	119.32	122.79
23	PSIA	55	PSU	C6-N1-C2	-3.14	119.47	122.68
1	16SA	1834	2MG	C5-C6-N1	3.13	119.48	113.95
23	PSIA	47	3AU	C6-N1-C2	-3.11	119.00	121.79
27	23SB	2567	OMU	O4-C4-C5	-3.10	119.70	125.16
1	16SB	2121	UR3	C1'-N1-C2	3.08	122.19	116.99
27	23SB	2266	OMG	N2-C2-N1	3.06	123.23	116.71
1	16SB	2030	4OC	C2'-C1'-N1	-3.02	108.36	114.22
1	16SB	2121	UR3	C6-N1-C2	-3.02	119.08	121.79
1	16SA	1156	G7M	C2-N1-C6	-3.02	119.54	125.10
1	16SB	1589	M2G	C5-C6-N1	3.01	119.28	113.95
26	TRNA	20	H2U	N3-C2-N1	3.00	119.82	116.65
26	TRNA	16	H2U	C5-C6-N1	3.00	121.48	111.61
23	PSIA	46	G7M	C2-N1-C6	-2.99	119.58	125.10
22	ASIA	37	MIA	C12-N6-C6	-2.98	118.12	122.55
1	16SA	1589	M2G	C5-C6-N1	2.98	119.22	113.95
23	PSIB	46	G7M	C2-N1-C6	-2.96	119.65	125.10
27	23SB	1967	5MC	C5-C6-N1	-2.96	120.30	123.34
57	ASIB	37	MIA	C1'-N9-C4	2.96	131.83	126.64
1	16SA	1145	PSU	C6-N1-C2	-2.95	119.67	122.68
22	ASIA	54	5MU	N3-C2-N1	2.94	118.79	114.89
23	PSIA	16	H2U	C5-C6-N1	2.93	121.26	111.61
23	PSIB	47	3AU	C5-C4-N3	2.90	119.32	115.50
23	PSIA	47	3AU	C5-C4-N3	2.90	119.32	115.50
1	16SB	1156	G7M	C2-N1-C6	-2.85	119.84	125.10
22	ASIA	46	G7M	C2-N1-C6	-2.84	119.87	125.10
23	PSIA	47	3AU	O2-C2-N3	-2.82	118.08	121.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	23SB	2567	OMU	O2-C2-N1	-2.80	119.07	122.79
57	ASIB	39	PSU	O2-C2-N1	-2.79	119.71	122.79
27	23SB	2518	2MA	C8-N7-C5	2.79	108.31	102.99
27	23SA	1964	5MU	N3-C2-N1	2.79	118.59	114.89
27	23SB	1987	5MC	C5-C6-N1	-2.78	120.48	123.34
22	ASIA	55	PSU	O2-C2-N1	-2.78	119.73	122.79
24	ESIB	37	MIA	C5-C6-N1	-2.78	118.50	120.81
26	TRNA	32	PSU	O2-C2-N1	-2.78	119.73	122.79
23	PSIA	55	PSU	O2-C2-N1	-2.77	119.74	122.79
22	ASIA	54	5MU	O2-C2-N1	-2.76	119.11	122.79
26	TRNA	39	PSU	O2-C2-N1	-2.73	119.79	122.79
27	23SB	1964	5MU	O2-C2-N1	-2.73	119.16	122.79
27	23SA	2266	OMG	C2-N1-C6	2.72	130.09	125.10
26	TRNA	55	PSU	O2-C2-N1	-2.69	119.83	122.79
1	16SA	1834	2MG	C8-N7-C5	2.68	108.10	102.99
57	ASIB	37	MIA	C5-C6-N1	-2.67	118.59	120.81
26	TRNA	37	MIA	C16-C14-C15	-2.67	108.70	114.60
1	16SB	1834	2MG	C8-N7-C5	2.67	108.07	102.99
26	TRNA	16	H2U	O2-C2-N1	-2.66	119.76	123.11
1	16SB	1589	M2G	C2-N1-C6	-2.65	119.31	123.71
23	PSIB	16	H2U	N3-C2-N1	2.65	119.45	116.65
24	ESIA	37	MIA	C4-C5-N7	-2.64	106.65	109.40
23	PSIB	47	3AU	C1'-N1-C6	-2.64	115.08	120.84
23	PSIB	54	5MU	C1'-N1-C2	2.64	122.34	117.57
1	16SA	1589	M2G	C8-N7-C5	2.63	108.00	102.99
26	TRNA	54	5MU	N3-C2-N1	2.62	118.37	114.89
1	16SB	2035	5MC	C5-C6-N1	-2.59	120.68	123.34
24	ESIB	37	MIA	C16-C14-C15	-2.58	108.90	114.60
57	ASIB	32	PSU	O2-C2-N1	-2.58	119.95	122.79
24	ESIB	37	MIA	N3-C2-N1	-2.57	122.25	126.98
27	23SA	2567	OMU	O4-C4-C5	-2.56	120.65	125.16
1	16SA	1589	M2G	C2-N1-C6	-2.56	119.46	123.71
27	23SA	1964	5MU	O2-C2-N1	-2.55	119.40	122.79
23	PSIA	37	MIA	C4-C5-N7	-2.55	106.75	109.40
22	ASIA	55	PSU	C6-N1-C2	-2.53	120.09	122.68
23	PSIB	37	MIA	C16-C14-C15	-2.53	109.01	114.60
27	23SA	1936	PSU	C6-N1-C2	-2.52	120.11	122.68
24	ESIB	37	MIA	C4-C5-N7	-2.51	106.78	109.40
24	ESIA	37	MIA	C2-N1-C6	2.49	121.65	117.19
22	ASIA	37	MIA	C4-C5-N7	-2.49	106.80	109.40
27	23SB	2266	OMG	C2-N1-C6	2.49	129.68	125.10
23	PSIB	37	MIA	C5-C6-N1	-2.49	118.74	120.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	ESIA	37	MIA	N3-C2-N1	-2.48	122.42	126.98
23	PSIB	39	PSU	O2-C2-N1	-2.48	120.06	122.79
1	16SB	1589	M2G	C8-N7-C5	2.47	107.70	102.99
23	PSIB	32	PSU	C6-N1-C2	-2.46	120.16	122.68
27	23SA	2620	PSU	C6-C5-C4	2.46	119.92	118.20
23	PSIB	47	3AU	C10-N3-C4	2.45	121.97	117.14
27	23SB	2620	PSU	O2-C2-N1	-2.45	120.10	122.79
23	PSIB	32	PSU	O2-C2-N1	-2.45	120.10	122.79
23	PSIB	54	5MU	N3-C2-N1	2.44	118.13	114.89
27	23SA	1964	5MU	C6-N1-C2	-2.43	118.83	121.30
22	ASIA	37	MIA	N3-C2-N1	-2.41	122.54	126.98
23	PSIA	37	MIA	C5-C6-N1	-2.41	118.81	120.81
27	23SA	2620	PSU	C6-N1-C2	-2.40	120.22	122.68
27	23SB	2266	OMG	N1-C2-N3	-2.40	118.84	123.32
27	23SB	1940	5MU	O3'-C3'-C2'	2.40	119.57	111.82
57	ASIB	54	5MU	N3-C2-N1	2.39	118.06	114.89
22	ASIA	32	PSU	C6-N1-C2	-2.39	120.24	122.68
27	23SA	1940	5MU	C1'-N1-C2	2.37	121.87	117.57
57	ASIB	37	MIA	C4-C5-N7	-2.37	106.93	109.40
1	16SB	1834	2MG	CM2-N2-C2	-2.36	118.64	123.86
27	23SB	1936	PSU	O2-C2-N1	-2.35	120.20	122.79
27	23SA	2266	OMG	N1-C2-N3	-2.35	118.93	123.32
27	23SB	1942	PSU	O2-C2-N1	-2.34	120.21	122.79
23	PSIA	37	MIA	N3-C2-N1	-2.34	122.68	126.98
26	TRNA	20	H2U	O2-C2-N3	-2.33	117.15	121.50
22	ASIA	8	4SU	C1'-N1-C2	2.32	121.78	117.57
23	PSIA	16	H2U	O2-C2-N1	-2.31	120.21	123.11
22	ASIA	37	MIA	C5-C6-N1	-2.31	118.89	120.81
23	PSIB	16	H2U	O2-C2-N1	-2.31	120.21	123.11
1	16SB	2032	5MC	C5-C6-N1	-2.30	120.97	123.34
1	16SA	2121	UR3	C1'-N1-C2	2.30	120.87	116.99
23	PSIA	8	4SU	O2-C2-N1	-2.27	119.77	122.79
12	S12B	89	0TD	OD1-CG-CB	-2.27	117.70	122.44
57	ASIB	32	PSU	C6-N1-C2	-2.26	120.37	122.68
1	16SA	2030	4OC	C6-C5-C4	2.26	119.73	116.96
24	ESIB	37	MIA	C2-N1-C6	2.26	121.23	117.19
23	PSIB	37	MIA	N3-C2-N1	-2.26	122.83	126.98
26	TRNA	39	PSU	C6-C5-C4	2.26	119.78	118.20
23	PSIB	55	PSU	O2-C2-N1	-2.24	120.33	122.79
23	PSIA	32	PSU	O2-C2-N1	-2.22	120.34	122.79
26	TRNA	32	PSU	C6-N1-C2	-2.22	120.41	122.68
23	PSIB	39	PSU	C6-N1-C2	-2.22	120.42	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	PSIA	39	PSU	O2-C2-N1	-2.21	120.36	122.79
27	23SA	1942	PSU	C6-N1-C2	-2.21	120.42	122.68
1	16SB	2035	5MC	C5-C4-N3	-2.21	119.29	121.67
1	16SB	2028	5MC	C1'-N1-C6	-2.21	117.45	121.12
1	16SB	2030	4OC	C5-C6-N1	-2.21	118.11	121.81
27	23SA	2518	2MA	C8-N7-C5	2.19	107.17	102.99
22	ASIA	39	PSU	O2-C2-N1	-2.19	120.38	122.79
23	PSIA	54	5MU	O4-C4-N3	-2.19	115.93	120.12
1	16SA	1145	PSU	O4'-C1'-C2'	2.18	108.22	105.14
57	ASIB	37	MIA	C16-C14-C15	-2.17	109.81	114.60
26	TRNA	8	4SU	C1'-N1-C2	2.17	121.50	117.57
26	TRNA	39	PSU	C6-N1-C2	-2.17	120.47	122.68
57	ASIB	39	PSU	C6-N1-C2	-2.17	120.47	122.68
27	23SB	1945	OMC	O2-C2-N3	-2.17	118.81	122.33
27	23SA	1964	5MU	O4-C4-N3	-2.16	115.98	120.12
1	16SA	2121	UR3	C6-N1-C2	-2.14	119.87	121.79
1	16SB	2028	5MC	CM5-C5-C6	-2.14	119.99	122.85
1	16SA	2032	5MC	C5-C6-N1	-2.14	121.14	123.34
22	ASIA	54	5MU	O4-C4-N3	-2.13	116.03	120.12
27	23SA	2567	OMU	O2-C2-N1	-2.13	119.96	122.79
1	16SA	1834	2MG	CM2-N2-C2	-2.12	119.19	123.86
1	16SB	2035	5MC	O2-C2-N3	-2.11	118.89	122.33
1	16SB	2030	4OC	O2-C2-N3	-2.10	118.92	122.33
27	23SB	1967	5MC	CM5-C5-C6	-2.09	120.06	122.85
1	16SB	2032	5MC	C5-C4-N3	-2.09	119.42	121.67
26	TRNA	54	5MU	C1'-N1-C2	2.09	121.35	117.57
26	TRNA	37	MIA	N3-C2-N1	-2.09	123.14	126.98
57	ASIB	37	MIA	N3-C2-N1	-2.08	123.15	126.98
22	ASIA	37	MIA	C16-C14-C15	-2.08	110.01	114.60
1	16SB	1145	PSU	O4'-C1'-C2'	2.08	108.08	105.14
1	16SB	1834	2MG	O6-C6-C5	-2.08	120.32	124.37
22	ASIA	32	PSU	O2-C2-N1	-2.08	120.50	122.79
1	16SA	2032	5MC	CM5-C5-C6	-2.07	120.08	122.85
26	TRNA	55	PSU	C6-N1-C2	-2.06	120.58	122.68
27	23SB	1967	5MC	C5-C4-N3	-2.05	119.47	121.67
27	23SA	1940	5MU	O4-C4-N3	-2.05	116.19	120.12
27	23SB	2518	2MA	CM2-C2-N1	2.03	120.76	116.23
23	PSIA	47	3AU	O31-C13-C12	2.03	120.30	113.38
22	ASIA	37	MIA	C2-N1-C6	2.03	120.82	117.19
23	PSIA	37	MIA	C2-N1-C6	2.02	120.81	117.19
27	23SB	1942	PSU	C6-N1-C2	-2.01	120.62	122.68
1	16SB	1589	M2G	O6-C6-C5	-2.01	120.44	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	PSIB	37	MIA	C2-N1-C6	2.01	120.79	117.19
23	PSIB	47	3AU	O31-C13-O30	-2.01	119.53	124.09

There are no chirality outliers.

All (117) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	16SA	1156	G7M	O4'-C4'-C5'-O5'
1	16SA	1156	G7M	C3'-C4'-C5'-O5'
1	16SA	2142	MA6	O4'-C4'-C5'-O5'
12	S12A	89	0TD	CG-CB-SB-CSB
22	ASIA	37	MIA	O4'-C4'-C5'-O5'
22	ASIA	37	MIA	C12-C13-C14-C15
22	ASIA	37	MIA	C12-C13-C14-C16
26	TRNA	8	4SU	C3'-C4'-C5'-O5'
26	TRNA	8	4SU	O4'-C4'-C5'-O5'
26	TRNA	16	H2U	O4'-C4'-C5'-O5'
26	TRNA	16	H2U	C3'-C4'-C5'-O5'
26	TRNA	20	H2U	O4'-C4'-C5'-O5'
26	TRNA	20	H2U	C3'-C4'-C5'-O5'
26	TRNA	37	MIA	N1-C2-S10-C11
26	TRNA	37	MIA	N3-C2-S10-C11
26	TRNA	37	MIA	C12-C13-C14-C15
26	TRNA	37	MIA	C12-C13-C14-C16
26	TRNA	54	5MU	C3'-C4'-C5'-O5'
26	TRNA	54	5MU	O4'-C4'-C5'-O5'
1	16SB	1156	G7M	C3'-C4'-C5'-O5'
1	16SB	1834	2MG	O4'-C4'-C5'-O5'
1	16SB	1834	2MG	C3'-C4'-C5'-O5'
1	16SB	2142	MA6	O4'-C4'-C5'-O5'
23	PSIA	37	MIA	O4'-C4'-C5'-O5'
23	PSIA	37	MIA	C3'-C4'-C5'-O5'
23	PSIA	37	MIA	C12-C13-C14-C15
23	PSIB	37	MIA	C12-C13-C14-C15
23	PSIB	37	MIA	C12-C13-C14-C16
23	PSIA	47	3AU	N3-C10-C11-C12
23	PSIA	47	3AU	C10-C11-C12-C13
23	PSIA	47	3AU	C10-C11-C12-N40
23	PSIA	47	3AU	C3'-C4'-C5'-O5'
23	PSIA	47	3AU	O4'-C4'-C5'-O5'
23	PSIB	47	3AU	C2'-C1'-N1-C2
23	PSIB	54	5MU	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
23	PSIB	54	5MU	O4'-C4'-C5'-O5'
24	ESIA	37	MIA	N1-C2-S10-C11
24	ESIA	37	MIA	N3-C2-S10-C11
24	ESIA	37	MIA	C12-C13-C14-C15
24	ESIA	37	MIA	C12-C13-C14-C16
24	ESIB	37	MIA	O4'-C4'-C5'-O5'
24	ESIB	37	MIA	C3'-C4'-C5'-O5'
24	ESIB	37	MIA	N1-C2-S10-C11
24	ESIB	37	MIA	N3-C2-S10-C11
24	ESIB	37	MIA	C12-C13-C14-C16
27	23SA	2266	OMG	C1'-C2'-O2'-CM2
27	23SB	2266	OMG	C1'-C2'-O2'-CM2
57	ASIB	37	MIA	C12-C13-C14-C15
26	TRNA	20	H2U	C2'-C1'-N1-C2
1	16SA	2142	MA6	C3'-C4'-C5'-O5'
22	ASIA	37	MIA	C3'-C4'-C5'-O5'
1	16SB	1156	G7M	O4'-C4'-C5'-O5'
1	16SB	2142	MA6	C3'-C4'-C5'-O5'
23	PSIB	8	4SU	C3'-C4'-C5'-O5'
23	PSIB	8	4SU	O4'-C4'-C5'-O5'
23	PSIB	47	3AU	C3'-C4'-C5'-O5'
23	PSIB	47	3AU	O4'-C4'-C5'-O5'
24	ESIA	37	MIA	C3'-C4'-C5'-O5'
27	23SB	1964	5MU	O4'-C4'-C5'-O5'
27	23SB	2518	2MA	O4'-C4'-C5'-O5'
23	PSIB	47	3AU	C2'-C1'-N1-C6
1	16SA	2030	4OC	O4'-C4'-C5'-O5'
22	ASIA	46	G7M	C3'-C4'-C5'-O5'
1	16SB	2030	4OC	O4'-C4'-C5'-O5'
27	23SB	1964	5MU	C3'-C4'-C5'-O5'
26	TRNA	20	H2U	C2'-C1'-N1-C6
23	PSIA	55	PSU	C3'-C4'-C5'-O5'
27	23SB	2567	OMU	C3'-C4'-C5'-O5'
1	16SA	2030	4OC	C3'-C4'-C5'-O5'
22	ASIA	55	PSU	C3'-C4'-C5'-O5'
27	23SA	1940	5MU	C3'-C4'-C5'-O5'
27	23SB	2518	2MA	C3'-C4'-C5'-O5'
22	ASIA	55	PSU	O4'-C4'-C5'-O5'
27	23SB	2567	OMU	O4'-C4'-C5'-O5'
1	16SB	2030	4OC	C3'-C4'-C5'-O5'
26	TRNA	16	H2U	C4'-C5'-O5'-P
26	TRNA	37	MIA	C4'-C5'-O5'-P

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Mol	Chain	Res	Type	Atoms
23	PSIA	55	PSU	O4'-C4'-C5'-O5'
22	ASIA	46	G7M	O4'-C4'-C5'-O5'
24	ESIA	37	MIA	O4'-C4'-C5'-O5'
27	23SA	1940	5MU	O4'-C4'-C5'-O5'
57	ASIB	37	MIA	N3-C2-S10-C11
23	PSIA	55	PSU	C4'-C5'-O5'-P
12	S12B	89	0TD	SB-CB-CG-OD1
23	PSIB	37	MIA	C3'-C4'-C5'-O5'
23	PSIB	47	3AU	C11-C12-C13-O31
23	PSIB	47	3AU	C4'-C5'-O5'-P
24	ESIB	37	MIA	C4'-C5'-O5'-P
23	PSIA	46	G7M	O4'-C4'-C5'-O5'
23	PSIB	47	3AU	C11-C12-C13-O30
22	ASIA	37	MIA	N3-C2-S10-C11
23	PSIA	37	MIA	N3-C2-S10-C11
22	ASIA	8	4SU	C4'-C5'-O5'-P
1	16SA	2142	MA6	C4'-C5'-O5'-P
57	ASIB	37	MIA	N1-C2-S10-C11
27	23SA	1964	5MU	O4'-C4'-C5'-O5'
1	16SB	2142	MA6	C4'-C5'-O5'-P
24	ESIA	37	MIA	N6-C12-C13-C14
22	ASIA	37	MIA	N1-C2-S10-C11
23	PSIA	37	MIA	N1-C2-S10-C11
23	PSIB	37	MIA	N3-C2-S10-C11
22	ASIA	55	PSU	O4'-C1'-C5'-C4
23	PSIA	47	3AU	C2'-C1'-N1-C6
12	S12B	89	0TD	CA-CB-SB-CSB
23	PSIA	47	3AU	C2'-C1'-N1-C2
23	PSIA	46	G7M	C3'-C4'-C5'-O5'
27	23SA	1964	5MU	C3'-C4'-C5'-O5'
23	PSIB	37	MIA	N1-C2-S10-C11
27	23SA	1945	OMC	C2'-C1'-N1-C2
26	TRNA	20	H2U	C4'-C5'-O5'-P
27	23SA	2518	2MA	C4'-C5'-O5'-P
23	PSIB	37	MIA	O4'-C4'-C5'-O5'
12	S12B	89	0TD	CG-CB-SB-CSB
12	S12A	89	0TD	SB-CB-CG-OD1
27	23SB	1945	OMC	C2'-C1'-N1-C2
27	23SA	1940	5MU	C2'-C1'-N1-C2
27	23SB	2518	2MA	C4'-C5'-O5'-P

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
26	TRNA	37	MIA	0	3

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 1698 ligands modelled in this entry, 1077 are monoatomic - leaving 621 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	OHX	16SA	2285	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3120	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2298	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3311	-	0,6,6	-	-	-	-	-
59	OHX	5SA	209	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2302	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3033	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3207	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3112	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3252	-	0,6,6	-	-	-	-	-
59	OHX	PSIB	102	-	0,6,6	-	-	-	-	-
59	OHX	5SB	208	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3114	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2240	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3155	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2292	-	0,6,6	-	-	-	-	-
59	OHX	ESIB	101	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3048	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3288	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3323	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3141	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3324	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SB	3133	-	0,6,6	-	-	-		
59	OHX	23SA	3359	-	0,6,6	-	-	-		
59	OHX	16SA	2277	-	0,6,6	-	-	-		
59	OHX	23SB	3180	-	0,6,6	-	-	-		
59	OHX	23SB	3137	-	0,6,6	-	-	-		
59	OHX	23SA	3205	-	0,6,6	-	-	-		
59	OHX	23SA	3258	-	0,6,6	-	-	-		
59	OHX	23SA	3245	-	0,6,6	-	-	-		
59	OHX	16SA	2336	-	0,6,6	-	-	-		
59	OHX	23SA	3248	-	0,6,6	-	-	-		
59	OHX	23SB	3187	-	0,6,6	-	-	-		
59	OHX	23SB	3182	27	0,6,6	-	-	-		
59	OHX	23SA	3232	-	0,6,6	-	-	-		
59	OHX	23SA	3220	-	0,6,6	-	-	-		
59	OHX	16SA	2331	-	0,6,6	-	-	-		
59	OHX	23SA	3215	-	0,6,6	-	-	-		
59	OHX	23SB	3103	-	0,6,6	-	-	-		
59	OHX	23SA	3238	-	0,6,6	-	-	-		
59	OHX	23SB	3091	-	0,6,6	-	-	-		
59	OHX	S4B	301	-	0,6,6	-	-	-		
59	OHX	23SA	3229	-	0,6,6	-	-	-		
59	OHX	23SB	3164	-	0,6,6	-	-	-		
59	OHX	16SA	2340	-	0,6,6	-	-	-		
59	OHX	23SA	3210	-	0,6,6	-	-	-		
61	SJE	23SA	3640	-	87,91,91	4.12	25 (28%)	117,134,134	2.02	28 (23%)
59	OHX	16SA	2305	-	0,6,6	-	-	-		
59	OHX	23SA	3336	-	0,6,6	-	-	-		
59	OHX	16SA	2335	-	0,6,6	-	-	-		
59	OHX	23SA	3296	-	0,6,6	-	-	-		
59	OHX	23SB	3177	-	0,6,6	-	-	-		
59	OHX	23SB	3126	-	0,6,6	-	-	-		
59	OHX	16SB	2202	-	0,6,6	-	-	-		
59	OHX	16SB	2203	-	0,6,6	-	-	-		
59	OHX	23SB	3064	-	0,6,6	-	-	-		
59	OHX	16SB	2255	-	0,6,6	-	-	-		
59	OHX	23SA	3308	-	0,6,6	-	-	-		
59	OHX	16SA	2315	-	0,6,6	-	-	-		
59	OHX	L4B	301	-	0,6,6	-	-	-		
59	OHX	16SA	2287	-	0,6,6	-	-	-		
59	OHX	16SA	2267	-	0,6,6	-	-	-		
59	OHX	16SB	2209	-	0,6,6	-	-	-		
59	OHX	23SB	3068	-	0,6,6	-	-	-		
59	OHX	16SA	2264	-	0,6,6	-	-	-		



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SA	2308	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3338	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2323	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2226	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2229	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3161	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2211	-	0,6,6	-	-	-	-	-
59	OHX	TRNA	102	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2288	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2206	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3043	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2295	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3100	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3250	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3184	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2321	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3199	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2253	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2259	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3061	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3102	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3142	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3079	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3213	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3239	-	0,6,6	-	-	-	-	-
59	OHX	L27A	103	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3256	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2269	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3181	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3235	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3298	-	0,6,6	-	-	-	-	-
59	OHX	5SA	207	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3159	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2249	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3106	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3348	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3178	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3035	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3028	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3255	-	0,6,6	-	-	-	-	-
59	OHX	S10A	201	1	0,6,6	-	-	-	-	-
59	OHX	16SA	2328	-	0,6,6	-	-	-	-	-
59	OHX	L27A	102	-	0,6,6	-	-	-	-	-



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SA	3278	-	0,6,6	-	-	-	-	-
59	OHX	5SA	205	-	0,6,6	-	-	-	-	-
59	OHX	ASIB	101	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3352	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3066	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3247	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2267	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2271	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2257	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2207	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3188	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3273	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3343	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3189	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3041	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3184	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3270	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3198	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3113	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2210	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3134	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2233	-	0,6,6	-	-	-	-	-
59	OHX	5SA	211	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2222	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2296	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3178	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2294	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3167	-	0,6,6	-	-	-	-	-
59	OHX	ASIA	102	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3054	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3230	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3304	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2270	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3067	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3274	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2262	-	0,6,6	-	-	-	-	-
59	OHX	TRNA	101	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2256	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3053	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3023	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3057	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3151	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3263	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SB	2244	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2266	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3072	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3069	-	0,6,6	-	-	-	-	-
59	OHX	L20A	201	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3179	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3006	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3080	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3225	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3168	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2286	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2281	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3021	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3076	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2216	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2224	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3031	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3297	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2213	-	0,6,6	-	-	-	-	-
59	OHX	ASIB	102	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3315	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3337	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3374	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3289	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3267	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3138	27	0,6,6	-	-	-	-	-
59	OHX	5SB	209	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3269	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3203	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3381	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3246	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2241	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2212	-	0,6,6	-	-	-	-	-
59	OHX	5SB	204	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2311	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3157	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3344	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3280	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2273	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3144	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3285	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3200	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3128	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SA	2329	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2334	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2280	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2221	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3002	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3290	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3111	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2235	-	0,6,6	-	-	-	-	-
59	OHX	5SB	203	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3322	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3219	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3340	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3254	-	0,6,6	-	-	-	-	-
59	OHX	L15A	201	-	0,6,6	-	-	-	-	-
59	OHX	5SA	213	-	0,6,6	-	-	-	-	-
59	OHX	S14B	101	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2319	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3051	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3180	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3148	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2275	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2258	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3190	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3158	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3003	27	0,6,6	-	-	-	-	-
59	OHX	23SA	3279	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3185	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3300	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3301	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3233	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2261	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3019	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3361	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3305	-	0,6,6	-	-	-	-	-
59	OHX	ASIA	103	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3016	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3105	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3195	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3147	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3101	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2228	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3243	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3149	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SB	2277	-	0,6,6	-	-	-		
59	OHX	5SA	206	-	0,6,6	-	-	-		
59	OHX	16SB	2254	-	0,6,6	-	-	-		
59	OHX	23SA	3277	-	0,6,6	-	-	-		
59	OHX	23SB	3139	-	0,6,6	-	-	-		
59	OHX	16SA	2324	-	0,6,6	-	-	-		
59	OHX	23SB	3115	-	0,6,6	-	-	-		
59	OHX	16SA	2283	-	0,6,6	-	-	-		
59	OHX	16SB	2278	-	0,6,6	-	-	-		
59	OHX	23SB	3165	-	0,6,6	-	-	-		
59	OHX	23SB	3056	-	0,6,6	-	-	-		
59	OHX	23SB	3034	-	0,6,6	-	-	-		
61	SJE	23SB	3521	-	87,91,91	4.10	23 (26%)	117,134,134	1.99	22 (18%)
59	OHX	16SA	2313	-	0,6,6	-	-	-		
59	OHX	23SB	3093	-	0,6,6	-	-	-		
59	OHX	16SB	2245	1	0,6,6	-	-	-		
59	OHX	16SA	2317	-	0,6,6	-	-	-		
59	OHX	16SB	2246	-	0,6,6	-	-	-		
59	OHX	23SB	3042	-	0,6,6	-	-	-		
59	OHX	16SA	2322	-	0,6,6	-	-	-		
59	OHX	23SB	3070	-	0,6,6	-	-	-		
59	OHX	5SB	201	-	0,6,6	-	-	-		
59	OHX	23SA	3346	-	0,6,6	-	-	-		
59	OHX	23SA	3283	-	0,6,6	-	-	-		
59	OHX	5SB	207	-	0,6,6	-	-	-		
59	OHX	23SA	3221	-	0,6,6	-	-	-		
59	OHX	16SB	2274	-	0,6,6	-	-	-		
59	OHX	23SA	3375	-	0,6,6	-	-	-		
59	OHX	23SA	3206	-	0,6,6	-	-	-		
59	OHX	23SA	3363	-	0,6,6	-	-	-		
59	OHX	23SB	3145	-	0,6,6	-	-	-		
59	OHX	23SA	3197	-	0,6,6	-	-	-		
59	OHX	23SA	3334	-	0,6,6	-	-	-		
59	OHX	23SB	3132	-	0,6,6	-	-	-		
59	OHX	23SB	3020	-	0,6,6	-	-	-		
59	OHX	23SB	3197	-	0,6,6	-	-	-		
59	OHX	23SA	3371	-	0,6,6	-	-	-		
59	OHX	23SA	3227	-	0,6,6	-	-	-		
59	OHX	23SB	3084	-	0,6,6	-	-	-		
59	OHX	16SA	2316	-	0,6,6	-	-	-		
59	OHX	23SA	3342	-	0,6,6	-	-	-		
59	OHX	MRNB	101	-	0,6,6	-	-	-		
59	OHX	23SA	3309	-	0,6,6	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SB	3122	-	0,6,6	-	-	-	-	-
59	OHX	5SA	214	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2341	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3223	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3350	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3014	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2223	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3146	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3332	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3282	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3216	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3325	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3362	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2263	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2297	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2237	1	0,6,6	-	-	-	-	-
59	OHX	23SA	3366	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3116	27	0,6,6	-	-	-	-	-
59	OHX	23SB	3052	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3040	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2338	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3335	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3005	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3330	-	0,6,6	-	-	-	-	-
59	OHX	5SB	211	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2325	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3172	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3253	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3313	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3328	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3094	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3109	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2299	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2274	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3355	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3240	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2291	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3001	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3266	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3370	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3078	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3121	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2314	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SB	2218	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3188	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3108	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3013	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3287	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3183	27	0,6,6	-	-	-	-	-
59	OHX	23SB	3107	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3193	-	0,6,6	-	-	-	-	-
59	OHX	MRNA	101	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3306	-	0,6,6	-	-	-	-	-
59	OHX	S4A	301	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2219	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3368	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3265	-	0,6,6	-	-	-	-	-
59	OHX	L19A	201	41	0,6,6	-	-	-	-	-
59	OHX	16SA	2327	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3249	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3302	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3356	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3364	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2201	1	0,6,6	-	-	-	-	-
59	OHX	L28A	101	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2337	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3194	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3260	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3299	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3065	62	0,6,6	-	-	-	-	-
59	OHX	23SB	3082	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2333	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3191	27	0,6,6	-	-	-	-	-
59	OHX	23SB	3015	27	0,6,6	-	-	-	-	-
59	OHX	S19A	101	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3073	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3365	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2268	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3170	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3186	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3089	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2272	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3153	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3242	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3262	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3217	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SB	2247	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3124	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3050	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2227	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2230	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3045	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3024	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3088	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3379	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3130	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3055	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3373	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3382	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3135	-	0,6,6	-	-	-	-	-
59	OHX	ASIB	103	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3030	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3046	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3320	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3286	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3212	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3123	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2234	1	0,6,6	-	-	-	-	-
59	OHX	23SB	3092	-	0,6,6	-	-	-	-	-
59	OHX	L17B	201	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3354	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3189	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3310	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2269	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3090	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2304	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3098	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2289	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2265	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3380	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3218	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2272	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2264	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3075	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3095	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3195	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2262	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3378	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3281	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SA	3192	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3010	-	0,6,6	-	-	-	-	-
59	OHX	5SA	212	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3026	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2320	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3317	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2266	1	0,6,6	-	-	-	-	-
59	OHX	16SB	2261	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3284	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3303	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3226	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3353	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3331	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3029	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2306	1	0,6,6	-	-	-	-	-
59	OHX	23SA	3319	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3011	-	0,6,6	-	-	-	-	-
59	OHX	5SB	206	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3119	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2310	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2232	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2276	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3231	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3214	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2252	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3347	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2300	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3156	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3174	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3096	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3316	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3196	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3326	27	0,6,6	-	-	-	-	-
59	OHX	23SB	3060	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3182	27	0,6,6	-	-	-	-	-
59	OHX	23SA	3275	-	0,6,6	-	-	-	-	-
59	OHX	PSIB	101	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2307	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3293	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2231	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3097	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2290	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3127	-	0,6,6	-	-	-	-	-



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SA	3236	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3169	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2260	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3032	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2243	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3131	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3125	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3143	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3369	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3044	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3341	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3271	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2312	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3183	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2238	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3367	-	0,6,6	-	-	-	-	-
59	OHX	L35B	101	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3237	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3292	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3204	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2339	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3187	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2330	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3004	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2270	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2239	1	0,6,6	-	-	-	-	-
59	OHX	23SA	3272	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2268	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3194	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3191	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2271	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3291	27	0,6,6	-	-	-	-	-
59	OHX	23SA	3349	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2273	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3017	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3208	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3186	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3025	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3037	-	0,6,6	-	-	-	-	-
59	OHX	ESIA	101	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3339	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3357	27	0,6,6	-	-	-	-	-
59	OHX	16SA	2265	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	16SB	2215	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2282	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3062	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3209	-	0,6,6	-	-	-	-	-
59	OHX	L17A	201	-	0,6,6	-	-	-	-	-
59	OHX	5SA	204	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3083	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3022	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3181	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3162	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2278	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3063	-	0,6,6	-	-	-	-	-
59	OHX	L20B	201	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3268	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3261	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3276	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3039	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3176	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2293	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3377	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3163	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3234	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3294	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3318	27	0,6,6	-	-	-	-	-
59	OHX	23SB	3071	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2248	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3150	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3140	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3307	-	0,6,6	-	-	-	-	-
59	OHX	5SA	210	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2217	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3047	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3376	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3333	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3360	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2284	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3009	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3329	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3327	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3117	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3224	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2318	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2214	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SA	3211	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3154	27	0,6,6	-	-	-	-	-
59	OHX	16SA	2276	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3259	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2205	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3166	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3160	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3222	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3074	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3012	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2275	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3110	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3129	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3007	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3179	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3251	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2208	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3008	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2332	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3257	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3104	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3193	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3199	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3059	-	0,6,6	-	-	-	-	-
59	OHX	PSIA	102	23	0,6,6	-	-	-	-	-
59	OHX	23SA	3314	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3018	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3345	-	0,6,6	-	-	-	-	-
59	OHX	5SA	208	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2303	-	0,6,6	-	-	-	-	-
59	OHX	ASIA	101	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3312	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2279	-	0,6,6	-	-	-	-	-
59	OHX	L4A	302	-	0,6,6	-	-	-	-	-
59	OHX	5SB	202	-	0,6,6	-	-	-	-	-
59	OHX	L35A	102	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2250	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2242	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3295	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3086	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3085	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3264	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3173	-	0,6,6	-	-	-	-	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
59	OHX	23SA	3244	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2301	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3202	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2225	-	0,6,6	-	-	-	-	-
59	OHX	16SA	2326	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3190	27	0,6,6	-	-	-	-	-
59	OHX	23SB	3027	-	0,6,6	-	-	-	-	-
59	OHX	5SB	210	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2220	-	0,6,6	-	-	-	-	-
59	OHX	5SB	205	28	0,6,6	-	-	-	-	-
59	OHX	16SA	2309	1	0,6,6	-	-	-	-	-
59	OHX	16SB	2263	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2251	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3036	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3099	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2204	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3077	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3372	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2236	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3136	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3196	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3118	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3087	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3321	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3228	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3081	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3152	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3049	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3171	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3058	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3198	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3185	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3038	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3351	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3201	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3358	-	0,6,6	-	-	-	-	-
59	OHX	23SA	3241	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3175	-	0,6,6	-	-	-	-	-
59	OHX	16SB	2260	-	0,6,6	-	-	-	-	-
59	OHX	23SB	3192	-	0,6,6	-	-	-	-	-

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
61	SJE	23SA	3640	-	-	40/101/161/161	0/5/5/5
61	SJE	23SB	3521	-	-	41/101/161/161	0/5/5/5

All (48) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	23SA	3640	SJE	O81-S78	20.69	1.67	1.43
61	23SB	3521	SJE	O79-S78	20.54	1.66	1.43
61	23SB	3521	SJE	O81-S78	20.44	1.66	1.43
61	23SA	3640	SJE	O79-S78	20.23	1.66	1.43
61	23SB	3521	SJE	O86-N85	11.19	1.41	1.22
61	23SA	3640	SJE	O86-N85	11.11	1.41	1.22
61	23SB	3521	SJE	S78-N80	10.10	1.77	1.61
61	23SA	3640	SJE	S78-N80	10.09	1.77	1.61
61	23SA	3640	SJE	C72-S78	7.59	1.88	1.77
61	23SA	3640	SJE	C70-N84	7.30	1.50	1.34
61	23SB	3521	SJE	C70-N84	7.24	1.50	1.34
61	23SB	3521	SJE	C72-S78	7.13	1.87	1.77
61	23SB	3521	SJE	O49-C70	6.57	1.48	1.34
61	23SA	3640	SJE	O49-C70	6.54	1.47	1.34
61	23SB	3521	SJE	C61-C10	5.74	1.62	1.52
61	23SA	3640	SJE	C61-C10	5.71	1.62	1.52
61	23SA	3640	SJE	O38-C31	5.69	1.47	1.34
61	23SB	3521	SJE	O38-C31	5.45	1.47	1.34
61	23SA	3640	SJE	C77-C72	4.62	1.43	1.40
61	23SB	3521	SJE	C77-C72	4.27	1.43	1.40
61	23SB	3521	SJE	O19-C20	3.71	1.44	1.34
61	23SA	3640	SJE	O19-C20	3.58	1.44	1.34
61	23SA	3640	SJE	C21-C20	3.55	1.57	1.50
61	23SB	3521	SJE	C21-C20	3.34	1.57	1.50
61	23SA	3640	SJE	C15-C16	-3.30	1.48	1.53
61	23SB	3521	SJE	C15-C16	-3.06	1.48	1.53
61	23SB	3521	SJE	C11-C10	-3.05	1.47	1.53
61	23SB	3521	SJE	C10-C9	-2.92	1.47	1.53
61	23SA	3640	SJE	C11-C10	-2.86	1.48	1.53
61	23SA	3640	SJE	O63-C3	2.84	1.49	1.42
61	23SB	3521	SJE	O38-C37	-2.82	1.40	1.44
61	23SA	3640	SJE	O19-C35	-2.81	1.40	1.44
61	23SA	3640	SJE	O6-C5	2.80	1.49	1.41
61	23SB	3521	SJE	O19-C35	-2.77	1.40	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	23SB	3521	SJE	O6-C5	2.72	1.48	1.41
61	23SA	3640	SJE	C83-N84	2.54	1.52	1.46
61	23SA	3640	SJE	O38-C37	-2.46	1.41	1.44
61	23SA	3640	SJE	O49-C27	-2.42	1.43	1.46
61	23SA	3640	SJE	C10-C9	-2.27	1.48	1.53
61	23SB	3521	SJE	C83-N84	2.25	1.51	1.46
61	23SB	3521	SJE	O7-C12	2.24	1.47	1.42
61	23SB	3521	SJE	O49-C27	-2.22	1.43	1.46
61	23SB	3521	SJE	C53-C30	2.19	1.57	1.54
61	23SB	3521	SJE	O63-C3	2.19	1.48	1.42
61	23SA	3640	SJE	C53-C30	2.16	1.57	1.54
61	23SA	3640	SJE	C3-C4	-2.13	1.47	1.52
61	23SA	3640	SJE	C77-N85	2.09	1.49	1.45
61	23SA	3640	SJE	O7-C12	2.06	1.47	1.42

All (50) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	23SA	3640	SJE	O81-S78-O79	-10.60	106.52	119.55
61	23SB	3521	SJE	O81-S78-O79	-9.38	108.02	119.55
61	23SA	3640	SJE	O49-C70-N84	6.47	119.59	109.99
61	23SB	3521	SJE	C18-C17-C16	6.16	119.28	109.19
61	23SB	3521	SJE	O49-C70-N84	6.05	118.97	109.99
61	23SB	3521	SJE	O19-C20-C21	5.43	121.44	111.46
61	23SA	3640	SJE	C72-S78-N80	5.39	114.83	107.82
61	23SB	3521	SJE	O6-C1-C2	4.81	118.16	109.52
61	23SB	3521	SJE	C72-S78-N80	4.64	113.84	107.82
61	23SA	3640	SJE	O19-C20-C21	4.51	119.74	111.46
61	23SB	3521	SJE	O71-C70-N84	-4.26	118.43	124.96
61	23SA	3640	SJE	O71-C70-N84	-4.17	118.57	124.96
61	23SA	3640	SJE	O13-C14-C15	4.09	115.40	109.14
61	23SA	3640	SJE	O6-C1-C2	3.75	116.25	109.52
61	23SA	3640	SJE	C3-C2-C1	3.72	118.19	110.12
61	23SB	3521	SJE	C10-C11-C12	-3.48	108.15	114.82
61	23SB	3521	SJE	O48-C33-C34	3.36	112.27	108.22
61	23SB	3521	SJE	C3-C2-C1	3.30	117.29	110.12
61	23SB	3521	SJE	O13-C18-C17	3.19	117.10	110.35
61	23SA	3640	SJE	C65-C1-C2	-3.07	107.41	113.07
61	23SA	3640	SJE	C56-C14-C15	-3.06	108.59	113.40
61	23SB	3521	SJE	O38-C31-C32	3.04	118.23	111.56
61	23SB	3521	SJE	O7-C8-C9	3.00	115.39	110.03
61	23SA	3640	SJE	C58-C8-C9	-2.89	107.64	112.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	23SA	3640	SJE	O81-S78-C72	2.84	112.33	107.66
61	23SB	3521	SJE	C58-C8-C9	-2.80	107.79	112.57
61	23SA	3640	SJE	C32-C33-C34	-2.78	104.99	113.05
61	23SA	3640	SJE	C18-C17-C16	2.78	113.73	109.19
61	23SA	3640	SJE	O6-C1-C65	2.78	112.69	106.70
61	23SA	3640	SJE	C10-C11-C12	-2.76	109.52	114.82
61	23SB	3521	SJE	C15-C16-C17	2.74	115.68	109.72
61	23SA	3640	SJE	C35-O19-C20	-2.72	113.01	117.53
61	23SA	3640	SJE	O48-C33-C34	2.66	111.43	108.22
61	23SB	3521	SJE	O22-C20-C21	-2.65	118.88	124.73
61	23SA	3640	SJE	C44-C30-C53	-2.62	106.50	112.45
61	23SB	3521	SJE	C56-C14-C15	-2.60	109.32	113.40
61	23SB	3521	SJE	O47-C29-C34	2.57	111.32	108.22
61	23SA	3640	SJE	C41-C26-C35	-2.56	107.11	112.92
61	23SA	3640	SJE	C45-C37-C36	-2.55	107.49	114.29
61	23SB	3521	SJE	C32-C33-C34	-2.48	105.86	113.05
61	23SA	3640	SJE	O38-C31-C32	2.47	116.98	111.56
61	23SB	3521	SJE	C83-N84-C70	-2.46	117.95	121.89
61	23SB	3521	SJE	C77-C72-S78	-2.44	121.40	124.39
61	23SB	3521	SJE	C30-C29-C34	-2.36	108.00	114.29
61	23SA	3640	SJE	C74-C73-C72	2.30	122.97	118.78
61	23SA	3640	SJE	C75-C76-C77	2.25	122.45	118.61
61	23SA	3640	SJE	C15-C16-C17	2.16	114.41	109.72
61	23SA	3640	SJE	C73-C72-C77	-2.11	117.85	119.91
61	23SA	3640	SJE	O49-C70-O71	-2.08	121.83	125.62
61	23SA	3640	SJE	C30-C29-C34	-2.02	108.89	114.29

There are no chirality outliers.

All (81) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
61	23SA	3640	SJE	C21-C20-O19-C35
61	23SA	3640	SJE	O22-C20-O19-C35
61	23SA	3640	SJE	C28-C26-C35-O19
61	23SA	3640	SJE	C41-C26-C35-O19
61	23SA	3640	SJE	C42-C27-C28-C26
61	23SA	3640	SJE	O49-C27-C28-O39
61	23SA	3640	SJE	C28-C27-C53-C30
61	23SA	3640	SJE	C42-C27-C53-C30
61	23SA	3640	SJE	O49-C27-C53-C30
61	23SA	3640	SJE	C34-C29-C30-C53
61	23SA	3640	SJE	O47-C29-C30-C53

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Mol	Chain	Res	Type	Atoms
61	23SA	3640	SJE	C30-C29-C34-C33
61	23SA	3640	SJE	C30-C29-C34-C54
61	23SA	3640	SJE	O47-C29-C34-C33
61	23SA	3640	SJE	O19-C35-C36-C43
61	23SA	3640	SJE	C73-C72-S78-N80
61	23SA	3640	SJE	C82-N80-S78-C72
61	23SA	3640	SJE	C82-N80-S78-O79
61	23SB	3521	SJE	C11-C12-O48-C33
61	23SB	3521	SJE	C21-C20-O19-C35
61	23SB	3521	SJE	O22-C20-O19-C35
61	23SB	3521	SJE	C28-C26-C35-O19
61	23SB	3521	SJE	C41-C26-C35-O19
61	23SB	3521	SJE	C42-C27-C28-C26
61	23SB	3521	SJE	O49-C27-C28-O39
61	23SB	3521	SJE	C28-C27-C53-C30
61	23SB	3521	SJE	C42-C27-C53-C30
61	23SB	3521	SJE	O49-C27-C53-C30
61	23SB	3521	SJE	C34-C29-C30-C53
61	23SB	3521	SJE	O47-C29-C30-C53
61	23SB	3521	SJE	C30-C29-C34-C33
61	23SB	3521	SJE	C30-C29-C34-C54
61	23SB	3521	SJE	O47-C29-C34-C33
61	23SB	3521	SJE	C72-C77-N85-O86
61	23SB	3521	SJE	C76-C77-N85-O86
61	23SB	3521	SJE	C82-N80-S78-C72
61	23SB	3521	SJE	C82-N80-S78-O79
61	23SA	3640	SJE	O71-C70-O49-C27
61	23SB	3521	SJE	O71-C70-O49-C27
61	23SA	3640	SJE	N84-C70-O49-C27
61	23SB	3521	SJE	N84-C70-O49-C27
61	23SA	3640	SJE	C73-C72-S78-O79
61	23SB	3521	SJE	C73-C72-S78-O79
61	23SB	3521	SJE	C73-C72-S78-N80
61	23SB	3521	SJE	O47-C29-C34-C54
61	23SB	3521	SJE	O7-C12-O48-C33
61	23SA	3640	SJE	C77-C72-S78-O79
61	23SB	3521	SJE	C77-C72-S78-O79
61	23SB	3521	SJE	O19-C35-C36-C43
61	23SA	3640	SJE	C26-C35-C36-C43
61	23SA	3640	SJE	C77-C72-S78-N80
61	23SA	3640	SJE	C76-C77-N85-O86
61	23SA	3640	SJE	C73-C72-S78-O81

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Mol	Chain	Res	Type	Atoms
61	23SA	3640	SJE	O47-C29-C34-C54
61	23SB	3521	SJE	C73-C72-S78-O81
61	23SA	3640	SJE	C11-C12-O48-C33
61	23SB	3521	SJE	C77-C72-S78-N80
61	23SA	3640	SJE	C4-C5-O52-C50
61	23SB	3521	SJE	C26-C35-C36-C43
61	23SA	3640	SJE	O7-C12-O48-C33
61	23SA	3640	SJE	O6-C5-O52-C50
61	23SA	3640	SJE	C77-C72-S78-O81
61	23SB	3521	SJE	C28-C26-C35-C36
61	23SA	3640	SJE	O19-C35-C36-C37
61	23SB	3521	SJE	C77-C72-S78-O81
61	23SA	3640	SJE	O47-C29-C30-C44
61	23SB	3521	SJE	O47-C29-C30-C44
61	23SA	3640	SJE	C28-C26-C35-C36
61	23SB	3521	SJE	C4-C5-O52-C50
61	23SB	3521	SJE	C82-N80-S78-O81
61	23SA	3640	SJE	C72-C77-N85-O86
61	23SB	3521	SJE	O19-C35-C36-C37
61	23SB	3521	SJE	O6-C5-O52-C50
61	23SA	3640	SJE	C34-C29-C30-C44
61	23SB	3521	SJE	C34-C29-C30-C44
61	23SB	3521	SJE	C20-C21-C23-C24
61	23SA	3640	SJE	C46-C32-C33-C34
61	23SB	3521	SJE	C41-C26-C35-C36
61	23SA	3640	SJE	C82-N80-S78-O81
61	23SA	3640	SJE	C41-C26-C35-C36
61	23SB	3521	SJE	O13-C18-O47-C29

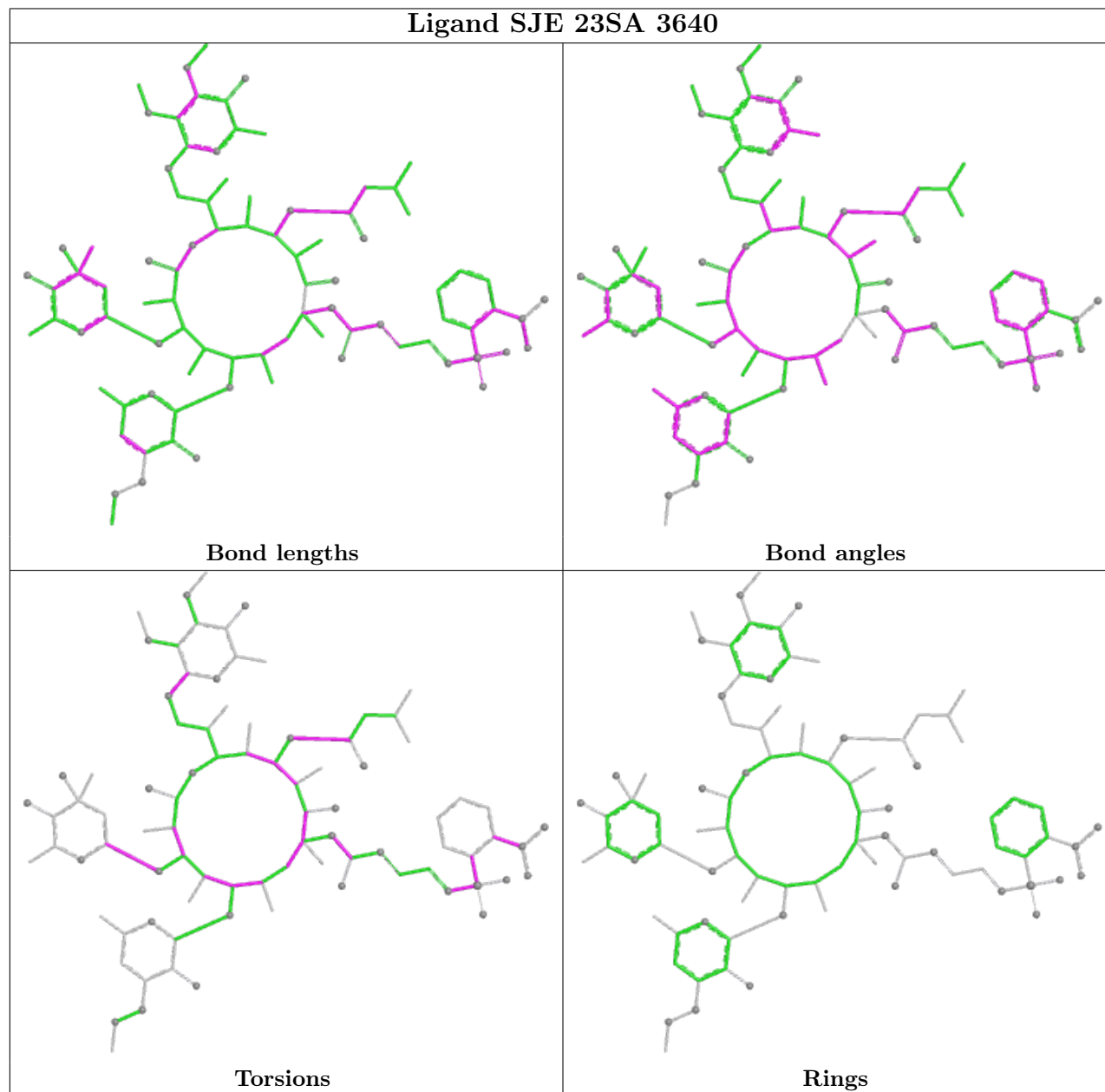
There are no ring outliers.

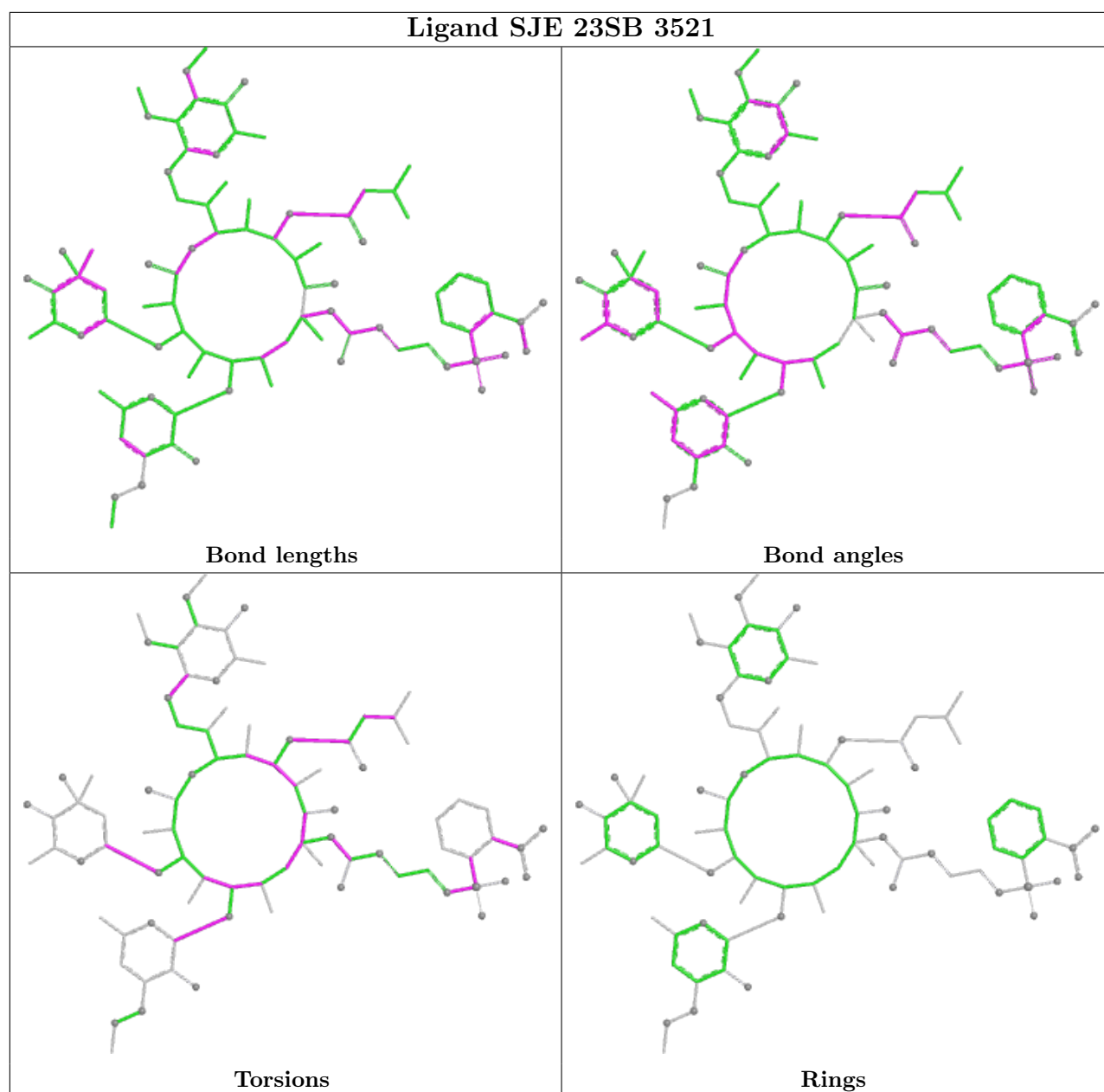
2 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	23SA	3304	OHX	0	2
59	S4A	301	OHX	5	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be

highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





## 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 i

### 6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	16SA	1500/1512 (99%)	-0.35	9 (0%) <span style="border: 1px solid blue; padding: 2px;">89</span> <span style="border: 1px solid blue; padding: 2px;">90</span>	45, 89, 170, 260	0
1	16SB	1496/1512 (98%)	-0.50	4 (0%) <span style="border: 1px solid blue; padding: 2px;">94</span> <span style="border: 1px solid blue; padding: 2px;">94</span>	57, 100, 164, 267	0
2	S2A	237/256 (92%)	0.94	42 (17%) <span style="border: 1px solid red; padding: 2px;">1</span> <span style="border: 1px solid red; padding: 2px;">1</span>	91, 125, 164, 178	0
2	S2B	237/256 (92%)	1.57	70 (29%) <span style="border: 1px solid red; padding: 2px;">0</span> <span style="border: 1px solid red; padding: 2px;">0</span>	105, 153, 186, 205	0
3	S3A	205/239 (85%)	1.05	33 (16%) <span style="border: 1px solid red; padding: 2px;">1</span> <span style="border: 1px solid red; padding: 2px;">2</span>	80, 100, 141, 168	0
3	S3B	206/239 (86%)	0.86	36 (17%) <span style="border: 1px solid red; padding: 2px;">1</span> <span style="border: 1px solid red; padding: 2px;">1</span>	104, 128, 157, 161	0
4	S4A	208/209 (99%)	-0.03	4 (1%) <span style="border: 1px solid blue; padding: 2px;">66</span> <span style="border: 1px solid blue; padding: 2px;">65</span>	75, 97, 119, 128	0
4	S4B	208/209 (99%)	0.54	15 (7%) <span style="border: 1px solid red; padding: 2px;">15</span> <span style="border: 1px solid red; padding: 2px;">15</span>	79, 96, 117, 138	0
5	S5A	151/162 (93%)	0.33	4 (2%) <span style="border: 1px solid blue; padding: 2px;">56</span> <span style="border: 1px solid blue; padding: 2px;">53</span>	65, 87, 108, 132	0
5	S5B	151/162 (93%)	0.39	12 (7%) <span style="border: 1px solid red; padding: 2px;">12</span> <span style="border: 1px solid red; padding: 2px;">12</span>	86, 105, 123, 151	0
6	S6A	101/101 (100%)	0.71	5 (4%) <span style="border: 1px solid red; padding: 2px;">28</span> <span style="border: 1px solid red; padding: 2px;">27</span>	70, 91, 107, 124	0
6	S6B	101/101 (100%)	0.55	5 (4%) <span style="border: 1px solid red; padding: 2px;">28</span> <span style="border: 1px solid red; padding: 2px;">27</span>	73, 94, 109, 132	0
7	S7A	155/156 (99%)	0.93	22 (14%) <span style="border: 1px solid red; padding: 2px;">2</span> <span style="border: 1px solid red; padding: 2px;">2</span>	90, 105, 129, 138	0
7	S7B	155/156 (99%)	1.79	52 (33%) <span style="border: 1px solid red; padding: 2px;">0</span> <span style="border: 1px solid red; padding: 2px;">0</span>	30, 115, 151, 175	0
8	S8A	138/138 (100%)	0.12	1 (0%) <span style="border: 1px solid blue; padding: 2px;">87</span> <span style="border: 1px solid blue; padding: 2px;">88</span>	75, 92, 104, 114	0
8	S8B	138/138 (100%)	0.14	2 (1%) <span style="border: 1px solid blue; padding: 2px;">75</span> <span style="border: 1px solid blue; padding: 2px;">75</span>	83, 104, 115, 125	0
9	S9A	127/128 (99%)	0.70	18 (14%) <span style="border: 1px solid red; padding: 2px;">2</span> <span style="border: 1px solid red; padding: 2px;">2</span>	72, 121, 140, 144	0
9	S9B	127/128 (99%)	0.40	11 (8%) <span style="border: 1px solid red; padding: 2px;">10</span> <span style="border: 1px solid red; padding: 2px;">10</span>	77, 136, 152, 156	0
10	S10A	99/105 (94%)	0.78	15 (15%) <span style="border: 1px solid red; padding: 2px;">2</span> <span style="border: 1px solid red; padding: 2px;">2</span>	72, 124, 151, 154	0
10	S10B	99/105 (94%)	0.44	5 (5%) <span style="border: 1px solid red; padding: 2px;">28</span> <span style="border: 1px solid red; padding: 2px;">26</span>	104, 144, 159, 166	0
11	S11A	116/129 (89%)	0.71	9 (7%) <span style="border: 1px solid red; padding: 2px;">13</span> <span style="border: 1px solid red; padding: 2px;">12</span>	63, 90, 113, 142	0
11	S11B	117/129 (90%)	0.99	19 (16%) <span style="border: 1px solid red; padding: 2px;">1</span> <span style="border: 1px solid red; padding: 2px;">2</span>	76, 97, 122, 156	0
12	S12A	124/132 (93%)	1.11	16 (12%) <span style="border: 1px solid red; padding: 2px;">3</span> <span style="border: 1px solid red; padding: 2px;">3</span>	57, 66, 98, 162	0
12	S12B	124/132 (93%)	1.06	23 (18%) <span style="border: 1px solid red; padding: 2px;">1</span> <span style="border: 1px solid red; padding: 2px;">1</span>	69, 86, 112, 167	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	S13A	119/126 (94%)	0.63	7 (5%) 22 22	77, 113, 129, 138	0
13	S13B	121/126 (96%)	0.86	21 (17%) 1 1	100, 138, 150, 159	0
14	S14A	60/61 (98%)	0.27	5 (8%) 11 11	78, 90, 103, 117	0
14	S14B	59/61 (96%)	0.75	7 (11%) 4 4	106, 119, 143, 146	0
15	S15A	88/89 (98%)	0.26	3 (3%) 45 43	65, 84, 108, 115	0
15	S15B	88/89 (98%)	0.38	2 (2%) 60 59	73, 96, 112, 119	0
16	S16A	83/88 (94%)	0.40	10 (12%) 4 3	86, 98, 118, 146	0
16	S16B	84/88 (95%)	0.08	0 100 100	79, 88, 106, 144	0
17	S17A	100/105 (95%)	0.37	2 (2%) 65 64	74, 90, 101, 104	0
17	S17B	100/105 (95%)	0.62	14 (14%) 2 2	80, 97, 114, 126	0
18	S18A	71/88 (80%)	0.34	4 (5%) 24 23	72, 88, 121, 148	0
18	S18B	70/88 (79%)	0.86	12 (17%) 1 1	80, 97, 125, 148	0
19	S19A	84/93 (90%)	1.08	18 (21%) 0 1	30, 114, 133, 139	0
19	S19B	86/93 (92%)	1.25	22 (25%) 0 0	125, 151, 177, 188	0
20	S20A	99/106 (93%)	0.89	18 (18%) 1 1	58, 105, 133, 139	0
20	S20B	99/106 (93%)	0.69	13 (13%) 3 3	60, 103, 127, 133	0
21	THXA	24/27 (88%)	-0.29	0 100 100	92, 102, 114, 129	0
21	THXB	25/27 (92%)	0.02	1 (4%) 38 36	113, 127, 143, 148	0
22	ASIA	69/76 (90%)	0.56	10 (14%) 2 2	71, 185, 223, 237	0
23	PSIA	67/76 (88%)	-0.05	2 (2%) 50 49	62, 86, 106, 154	0
23	PSIB	67/76 (88%)	-0.42	0 100 100	73, 103, 134, 167	0
24	ESIA	75/76 (98%)	0.22	4 (5%) 26 24	61, 191, 216, 221	0
24	ESIB	75/76 (98%)	-0.09	1 (1%) 77 77	72, 196, 221, 233	0
25	MRNA	30/30 (100%)	0.55	5 (16%) 1 1	60, 150, 238, 250	0
25	MRNB	30/30 (100%)	0.15	2 (6%) 17 17	79, 168, 237, 243	0
26	TRNA	65/76 (85%)	2.79	34 (52%) 0 0	106, 176, 202, 216	0
27	23SA	2878/2911 (98%)	-0.07	36 (1%) 77 77	33, 60, 190, 262	0
27	23SB	2862/2911 (98%)	-0.19	24 (0%) 86 86	40, 76, 213, 270	0
28	5SA	122/124 (98%)	-0.16	1 (0%) 86 86	57, 76, 92, 167	0
28	5SB	121/124 (97%)	-0.27	1 (0%) 86 86	80, 105, 137, 192	0
29	L2A	272/276 (98%)	0.28	2 (0%) 87 88	35, 52, 68, 81	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
29	L2B	272/276 (98%)	0.37	6 (2%) 62 60	41, 62, 81, 92	0
30	L3A	204/206 (99%)	0.82	23 (11%) 5 5	41, 68, 95, 114	0
30	L3B	204/206 (99%)	0.59	14 (6%) 16 16	49, 86, 115, 128	0
31	L4A	202/210 (96%)	0.26	5 (2%) 57 54	35, 64, 94, 117	0
31	L4B	202/210 (96%)	0.48	8 (3%) 38 36	48, 85, 113, 129	0
32	L5A	181/182 (99%)	0.47	9 (4%) 28 27	70, 87, 114, 130	0
32	L5B	181/182 (99%)	1.31	42 (23%) 0 1	100, 119, 142, 152	0
33	L6A	171/180 (95%)	0.99	25 (14%) 2 2	30, 94, 113, 136	0
33	L6B	173/180 (96%)	3.92	109 (63%) 0 0	154, 201, 242, 260	0
34	L9A	145/148 (97%)	0.72	21 (14%) 2 2	61, 116, 131, 146	0
34	L9B	146/148 (98%)	1.03	35 (23%) 0 0	75, 116, 137, 150	0
35	L13A	138/140 (98%)	0.78	16 (11%) 4 4	51, 70, 102, 112	0
35	L13B	138/140 (98%)	1.34	35 (25%) 0 0	68, 101, 130, 136	0
36	L14A	122/122 (100%)	0.64	5 (4%) 37 35	44, 62, 75, 84	0
36	L14B	122/122 (100%)	0.75	7 (5%) 23 23	62, 81, 101, 112	0
37	L15A	150/150 (100%)	0.72	17 (11%) 5 5	38, 69, 99, 141	0
37	L15B	150/150 (100%)	1.16	30 (20%) 1 1	49, 95, 127, 145	0
38	L16A	141/141 (100%)	0.78	14 (9%) 7 7	48, 66, 89, 120	0
38	L16B	141/141 (100%)	0.93	22 (15%) 2 2	58, 73, 93, 123	0
39	L17A	118/118 (100%)	0.15	0 100 100	49, 66, 85, 94	0
39	L17B	118/118 (100%)	0.30	2 (1%) 70 68	57, 75, 94, 111	0
40	L18A	112/112 (100%)	0.75	11 (9%) 7 7	57, 72, 99, 115	0
40	L18B	111/112 (99%)	0.38	11 (9%) 7 7	73, 104, 141, 150	0
41	L19A	137/146 (93%)	0.55	9 (6%) 18 18	56, 73, 129, 158	0
41	L19B	137/146 (93%)	0.46	7 (5%) 28 26	72, 90, 167, 185	0
42	L20A	117/118 (99%)	0.11	4 (3%) 45 43	43, 60, 88, 115	0
42	L20B	117/118 (99%)	1.19	27 (23%) 0 1	57, 94, 136, 149	0
43	L21A	101/101 (100%)	0.79	12 (11%) 4 4	44, 81, 98, 110	0
43	L21B	101/101 (100%)	2.42	53 (52%) 0 0	58, 112, 128, 142	0
44	L22A	113/113 (100%)	0.73	8 (7%) 16 16	43, 57, 88, 128	0
44	L22B	113/113 (100%)	0.42	2 (1%) 68 67	52, 65, 114, 147	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
45	L23A	93/96 (96%)	0.30	3 (3%) 47 46	44, 57, 75, 98	0
45	L23B	94/96 (97%)	0.49	9 (9%) 8 8	58, 73, 98, 121	0
46	L24A	108/110 (98%)	0.47	7 (6%) 18 18	61, 87, 135, 151	0
46	L24B	106/110 (96%)	1.02	26 (24%) 0 0	66, 99, 145, 153	0
47	L25A	179/206 (86%)	1.94	65 (36%) 0 0	70, 104, 181, 189	0
47	L25B	176/206 (85%)	1.66	60 (34%) 0 0	107, 145, 224, 228	0
48	L27A	84/85 (98%)	0.76	9 (10%) 6 5	45, 59, 84, 104	0
48	L27B	84/85 (98%)	0.53	5 (5%) 21 21	63, 79, 100, 128	0
49	L28A	97/98 (98%)	0.65	7 (7%) 15 15	43, 63, 110, 132	0
49	L28B	97/98 (98%)	0.74	9 (9%) 8 9	52, 75, 118, 132	0
50	L29A	69/72 (95%)	0.47	3 (4%) 35 34	50, 66, 81, 105	0
50	L29B	71/72 (98%)	0.62	6 (8%) 10 10	70, 89, 109, 138	0
51	L30A	59/60 (98%)	0.49	3 (5%) 28 26	48, 66, 96, 115	0
51	L30B	59/60 (98%)	1.53	14 (23%) 0 1	69, 90, 130, 146	0
52	L31A	71/71 (100%)	2.65	40 (56%) 0 0	95, 137, 172, 175	0
52	L31B	71/71 (100%)	4.13	60 (84%) 0 0	123, 160, 188, 194	0
53	L32A	56/60 (93%)	0.68	7 (12%) 3 3	38, 70, 126, 133	0
53	L32B	56/60 (93%)	0.65	6 (10%) 6 5	47, 78, 139, 150	0
54	L33A	45/54 (83%)	5.81	41 (91%) 0 0	106, 130, 157, 160	0
54	L33B	45/54 (83%)	3.37	34 (75%) 0 0	129, 157, 182, 188	0
55	L34A	48/49 (97%)	-0.01	1 (2%) 63 62	37, 42, 57, 78	0
55	L34B	49/49 (100%)	0.09	1 (2%) 65 64	42, 51, 97, 109	0
56	L35A	64/65 (98%)	0.66	2 (3%) 49 48	38, 54, 71, 93	0
56	L35B	64/65 (98%)	1.03	10 (15%) 2 2	30, 70, 91, 116	0
57	ASIB	72/76 (94%)	0.00	2 (2%) 53 51	98, 216, 254, 258	0
All	All	21108/21740 (97%)	0.37	1732 (8%) 11 11	30, 88, 176, 270	0

All (1732) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
12	S12A	126	ALA	21.6
52	L31A	52	THR	16.0
33	L6B	97	ARG	15.7

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Mol	Chain	Res	Type	RSRZ
33	L6B	96	ALA	15.0
26	TRNA	44	G	13.9
33	L6B	12	PRO	13.7
33	L6B	81	GLU	13.6
27	23SB	2913	C	13.6
33	L6B	47	GLU	13.1
33	L6B	49	VAL	12.8
50	L29B	72	ALA	12.5
54	L33A	18	ARG	12.5
33	L6B	95	ARG	12.5
52	L31B	52	THR	12.5
2	S2B	37	ASN	12.4
54	L33A	49	HIS	11.9
33	L6B	83	TYR	11.8
33	L6B	88	LEU	11.6
33	L6B	84	SER	11.5
27	23SB	2912	A	11.5
54	L33A	19	ARG	11.3
47	L25A	113	ALA	11.2
33	L6B	33	LEU	11.0
33	L6B	48	GLY	10.9
7	S7B	80	VAL	10.8
54	L33A	43	CYS	10.6
19	S19B	88	LYS	10.5
33	L6B	11	VAL	10.3
54	L33A	20	ASN	10.3
54	L33A	14	THR	10.3
7	S7B	81	GLY	10.2
33	L6B	124	GLU	10.1
33	L6B	98	LEU	9.9
26	TRNA	33	U	9.8
33	L6B	113	VAL	9.6
27	23SB	2911	G	9.6
33	L6B	45	VAL	9.5
54	L33A	22	ALA	9.5
11	S11A	11	LYS	9.4
26	TRNA	34	G	9.3
27	23SA	2913	C	9.3
32	L5B	182	LYS	9.2
51	L30B	2	PRO	9.1
37	L15A	149	GLU	9.1
2	S2B	237	ALA	9.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	L6B	13	LYS	8.9
33	L6B	106	THR	8.9
43	L21B	1	MET	8.9
12	S12B	125	ALA	8.7
33	L6B	17	VAL	8.6
44	L22A	113	LYS	8.4
33	L6B	29	PRO	8.4
43	L21B	36	PRO	8.4
52	L31A	65	ASP	8.4
35	L13B	133	GLN	8.3
26	TRNA	22	G	8.2
37	L15B	150	ALA	8.1
54	L33A	45	LYS	8.1
47	L25A	119	GLU	8.1
11	S11B	12	ARG	8.0
54	L33A	42	TRP	8.0
52	L31B	17	GLY	7.9
27	23SB	2	G	7.9
26	TRNA	43	C	7.7
54	L33A	41	PRO	7.7
42	L20B	89	GLU	7.7
37	L15B	148	LEU	7.7
2	S2B	19	HIS	7.6
37	L15B	149	GLU	7.6
54	L33A	16	CYS	7.6
41	L19A	137	LYS	7.6
33	L6B	15	VAL	7.5
33	L6B	32	GLU	7.4
19	S19B	84	GLY	7.4
52	L31B	30	GLU	7.3
27	23SA	937	C	7.3
47	L25A	1	MET	7.3
33	L6B	129	THR	7.3
47	L25B	113	ALA	7.3
47	L25B	149	SER	7.3
37	L15A	150	ALA	7.3
27	23SB	3	U	7.2
52	L31A	68	ARG	7.2
54	L33A	51	GLU	7.2
54	L33A	24	GLU	7.2
54	L33B	13	CYS	7.2
3	S3A	80	GLY	7.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	L25A	140	ASP	7.1
27	23SB	2914	C	7.1
33	L6B	16	SER	7.1
11	S11B	13	GLN	7.1
52	L31B	42	PHE	7.0
33	L6B	127	GLU	7.0
54	L33A	15	GLU	7.0
54	L33A	50	ARG	7.0
52	L31A	71	ARG	7.0
54	L33A	32	ASN	7.0
54	L33B	50	ARG	7.0
12	S12B	126	ALA	7.0
33	L6B	102	ALA	7.0
33	L6B	126	PRO	7.0
52	L31B	51	ASP	6.9
33	L6B	115	VAL	6.9
43	L21B	101	GLY	6.9
7	S7B	82	GLY	6.9
44	L22B	113	LYS	6.8
19	S19B	89	ALA	6.8
33	L6B	114	VAL	6.8
33	L6B	82	GLY	6.8
52	L31B	9	LEU	6.8
52	L31B	31	ILE	6.8
19	S19B	87	ALA	6.7
37	L15B	110	TYR	6.7
6	S6B	101	ALA	6.7
52	L31B	40	HIS	6.7
25	MRNB	57	U	6.7
43	L21B	99	ILE	6.7
54	L33A	40	CYS	6.7
33	L6B	46	GLU	6.7
54	L33A	29	ASN	6.7
52	L31A	47	GLN	6.7
48	L27A	85	ALA	6.7
47	L25B	119	GLU	6.6
33	L6B	28	GLY	6.6
52	L31B	34	GLU	6.6
3	S3B	60	ALA	6.6
47	L25A	107	THR	6.6
24	ESIB	17	C	6.6
54	L33A	23	THR	6.6

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Mol	Chain	Res	Type	RSRZ
7	S7B	63	LYS	6.5
40	L18B	108	GLY	6.5
2	S2A	15	VAL	6.5
33	L6B	26	VAL	6.4
45	L23B	92	LEU	6.4
33	L6B	125	VAL	6.4
52	L31B	29	PRO	6.4
2	S2B	14	GLY	6.4
26	TRNA	23	A	6.4
20	S20A	100	ILE	6.4
33	L6B	30	LYS	6.3
47	L25A	106	GLY	6.3
33	L6B	51	ARG	6.3
27	23SB	4	C	6.3
43	L21B	56	SER	6.2
13	S13B	121	LYS	6.2
1	16SA	727	U	6.2
32	L5B	152	LEU	6.2
54	L33B	42	TRP	6.2
26	TRNA	45	U	6.2
52	L31B	47	GLN	6.1
52	L31B	71	ARG	6.1
26	TRNA	46	G	6.1
52	L31B	24	THR	6.1
43	L21B	14	VAL	6.1
46	L24B	58	GLY	6.0
52	L31B	8	LYS	6.0
7	S7A	78	ARG	6.0
34	L9A	113	ARG	6.0
27	23SA	681	A	6.0
54	L33B	23	THR	6.0
53	L32A	52	TYR	6.0
52	L31B	63	TYR	6.0
28	5SA	1	A	6.0
54	L33B	14	THR	6.0
13	S13B	4	ILE	6.0
52	L31B	28	LYS	5.9
33	L6B	27	LYS	5.9
2	S2A	228	GLY	5.9
47	L25A	173	ALA	5.8
47	L25A	104	PHE	5.8
33	L6B	163	TYR	5.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S2B	38	GLY	5.8
47	L25A	115	GLY	5.8
19	S19A	61	TYR	5.8
7	S7A	79	ARG	5.8
26	TRNA	24	G	5.8
27	23SB	572	C	5.8
33	L6B	130	ARG	5.8
7	S7B	78	ARG	5.8
54	L33A	52	VAL	5.7
33	L6B	44	VAL	5.7
54	L33A	46	HIS	5.7
43	L21A	45	THR	5.7
52	L31A	31	ILE	5.7
2	S2B	232	PRO	5.7
43	L21B	38	LEU	5.7
52	L31A	32	TYR	5.6
54	L33A	47	THR	5.6
54	L33A	44	ARG	5.6
33	L6B	39	PRO	5.6
35	L13B	1	MET	5.5
47	L25A	7	ALA	5.5
33	L6B	85	LYS	5.5
2	S2B	18	GLY	5.5
33	L6B	132	ARG	5.5
33	L6B	105	LEU	5.5
32	L5B	155	MET	5.5
43	L21B	47	VAL	5.5
47	L25A	116	VAL	5.5
19	S19A	3	ARG	5.5
52	L31B	7	PRO	5.5
11	S11A	12	ARG	5.4
43	L21B	100	ARG	5.4
54	L33B	12	GLU	5.4
33	L6B	165	ALA	5.4
52	L31B	35	VAL	5.4
52	L31A	49	PHE	5.4
18	S18B	88	LYS	5.4
26	TRNA	47	U	5.4
52	L31B	67	TYR	5.4
54	L33B	51	GLU	5.4
2	S2B	238	LEU	5.3
47	L25B	172	ALA	5.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	S20A	101	GLY	5.3
51	L30A	60	GLU	5.3
27	23SA	2812	U	5.3
3	S3B	206	GLU	5.3
2	S2B	187	LEU	5.3
52	L31B	21	VAL	5.3
43	L21B	45	THR	5.3
30	L3A	87	GLU	5.3
54	L33B	9	LEU	5.3
52	L31B	37	SER	5.3
33	L6B	131	VAL	5.3
52	L31B	11	PRO	5.3
54	L33B	52	VAL	5.3
25	MRNA	56	U	5.3
32	L5B	41	GLN	5.3
52	L31A	63	TYR	5.3
27	23SB	2157	U	5.2
13	S13B	84	ILE	5.2
33	L6B	169	VAL	5.2
43	L21B	5	VAL	5.2
33	L6A	83	TYR	5.2
43	L21B	12	TYR	5.2
7	S7B	156	TRP	5.2
33	L6B	55	PRO	5.2
33	L6B	166	GLY	5.2
27	23SB	2812	U	5.2
54	L33A	25	LYS	5.2
47	L25B	159	PRO	5.2
54	L33A	21	TYR	5.1
7	S7A	156	TRP	5.1
12	S12A	58	THR	5.1
52	L31A	3	GLU	5.1
37	L15A	121	LYS	5.1
33	L6B	86	GLU	5.1
47	L25A	117	LEU	5.1
54	L33A	48	VAL	5.1
37	L15A	90	ARG	5.1
20	S20B	102	GLY	5.1
52	L31B	32	TYR	5.0
7	S7B	155	ARG	5.0
2	S2B	39	ILE	5.0
2	S2B	165	VAL	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	L9B	146	ALA	5.0
42	L20B	87	GLY	5.0
19	S19B	85	LYS	5.0
49	L28A	93	GLU	5.0
54	L33A	30	THR	5.0
13	S13A	119	GLY	5.0
27	23SB	2910	U	5.0
33	L6B	80	SER	4.9
47	L25A	105	VAL	4.9
54	L33A	13	CYS	4.9
41	L19B	136	GLN	4.9
11	S11B	35	PRO	4.9
47	L25A	149	SER	4.9
2	S2B	146	GLN	4.9
34	L9A	103	ARG	4.9
52	L31B	50	VAL	4.9
2	S2A	118	LEU	4.9
52	L31A	67	TYR	4.9
7	S7B	153	HIS	4.9
47	L25B	150	LEU	4.9
54	L33B	30	THR	4.9
32	L5B	142	PRO	4.9
2	S2B	32	ILE	4.9
54	L33A	31	PRO	4.9
33	L6B	19	VAL	4.9
32	L5B	39	ILE	4.9
2	S2A	114	ARG	4.9
2	S2B	231	GLU	4.9
54	L33B	49	HIS	4.9
54	L33B	31	PRO	4.9
41	L19B	133	GLU	4.8
42	L20B	118	GLY	4.8
47	L25B	1	MET	4.8
27	23SA	2911	G	4.8
9	S9A	95	LYS	4.8
33	L6B	56	SER	4.8
15	S15A	89	GLY	4.8
11	S11B	11	LYS	4.8
33	L6A	34	GLU	4.8
25	MRNB	56	U	4.8
47	L25A	179	ASP	4.8
18	S18B	25	THR	4.8

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Mol	Chain	Res	Type	RSRZ
52	L31A	33	VAL	4.8
13	S13B	120	LYS	4.7
37	L15B	94	GLU	4.7
52	L31B	22	ILE	4.7
12	S12B	29	PHE	4.7
2	S2B	4	GLU	4.7
53	L32A	57	VAL	4.7
9	S9A	52	ALA	4.7
33	L6B	112	PRO	4.7
2	S2B	15	VAL	4.7
33	L6B	89	ILE	4.7
27	23SA	2813	C	4.7
19	S19B	82	GLY	4.7
49	L28B	93	GLU	4.7
52	L31B	14	ILE	4.7
19	S19A	44	MET	4.7
47	L25A	97	GLU	4.7
33	L6B	92	ILE	4.7
2	S2B	33	TYR	4.7
55	L34B	49	ARG	4.7
47	L25A	121	HIS	4.7
37	L15A	92	GLU	4.7
2	S2B	122	PHE	4.6
49	L28A	98	LEU	4.6
52	L31B	44	THR	4.6
3	S3B	57	ILE	4.6
49	L28A	92	LYS	4.6
54	L33A	37	ARG	4.6
7	S7B	67	GLU	4.6
51	L30B	60	GLU	4.6
33	L6B	128	PRO	4.6
7	S7B	83	ALA	4.6
7	S7B	127	ALA	4.6
2	S2A	229	VAL	4.6
20	S20B	100	ILE	4.5
52	L31B	18	CYS	4.5
52	L31B	20	ASN	4.5
43	L21B	3	ALA	4.5
7	S7B	154	TYR	4.5
50	L29B	71	ASN	4.5
27	23SB	5	A	4.5
2	S2B	128	GLU	4.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	L25B	156	LYS	4.5
27	23SB	2813	C	4.5
33	L6B	34	GLU	4.4
38	L16B	68	ILE	4.4
12	S12A	125	ALA	4.4
13	S13A	120	LYS	4.4
2	S2A	232	PRO	4.4
25	MRNA	55	U	4.4
20	S20B	101	GLY	4.4
32	L5B	52	ILE	4.4
37	L15B	93	GLY	4.4
22	ASIA	71	G	4.4
47	L25B	112	ARG	4.4
7	S7B	113	GLU	4.4
37	L15B	98	GLU	4.4
44	L22A	111	HIS	4.4
27	23SA	2912	A	4.4
33	L6B	24	VAL	4.4
33	L6B	99	VAL	4.4
52	L31B	33	VAL	4.4
33	L6B	123	PHE	4.4
32	L5B	146	TYR	4.4
42	L20A	118	GLY	4.4
43	L21B	44	LYS	4.4
33	L6B	38	SER	4.4
42	L20B	94	ASN	4.4
47	L25A	38	TYR	4.4
7	S7B	124	LEU	4.4
43	L21B	93	GLU	4.4
48	L27B	85	ALA	4.4
43	L21B	46	VAL	4.3
7	S7B	79	ARG	4.3
5	S5A	10	MET	4.3
46	L24B	62	GLU	4.3
42	L20B	90	VAL	4.3
7	S7B	77	SER	4.3
52	L31B	54	GLY	4.3
52	L31A	34	GLU	4.3
35	L13B	36	GLY	4.3
19	S19B	83	HIS	4.3
38	L16B	141	GLN	4.3
6	S6A	101	ALA	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
14	S14B	39	LEU	4.3
32	L5B	62	LEU	4.3
34	L9B	123	LEU	4.3
49	L28B	95	LEU	4.3
52	L31B	15	ILE	4.3
32	L5B	68	PRO	4.3
51	L30B	5	LYS	4.3
35	L13A	96	GLU	4.3
2	S2A	188	ALA	4.3
33	L6B	25	LYS	4.3
19	S19B	30	LEU	4.3
52	L31B	25	TYR	4.2
7	S7B	59	LEU	4.2
14	S14B	52	GLN	4.2
52	L31B	10	VAL	4.2
33	L6B	74	ASN	4.2
31	L4B	7	TYR	4.2
26	TRNA	36	A	4.2
33	L6B	50	VAL	4.2
52	L31B	36	CYS	4.2
33	L6B	72	ILE	4.2
7	S7B	8	GLU	4.2
52	L31B	3	GLU	4.2
52	L31B	68	ARG	4.2
37	L15B	101	VAL	4.2
54	L33B	24	GLU	4.2
13	S13B	8	GLU	4.2
47	L25B	93	ASP	4.2
32	L5B	138	GLN	4.2
54	L33A	34	LEU	4.2
33	L6B	100	GLY	4.2
18	S18A	88	LYS	4.2
43	L21A	101	GLY	4.2
52	L31A	13	ARG	4.1
43	L21B	35	LEU	4.1
27	23SA	700	G	4.1
35	L13B	10	GLU	4.1
30	L3B	54	GLN	4.1
13	S13B	7	VAL	4.1
26	TRNA	21	A	4.1
33	L6B	116	GLU	4.1
2	S2B	196	LEU	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	L6A	131	VAL	4.1
33	L6B	42	ARG	4.1
35	L13B	119	ARG	4.1
47	L25A	148	ASP	4.1
44	L22A	112	GLY	4.1
2	S2B	20	GLU	4.1
37	L15A	148	LEU	4.1
37	L15B	89	ALA	4.1
52	L31B	62	ARG	4.1
7	S7B	120	ILE	4.1
27	23SA	158	U	4.1
28	5SB	90	C	4.1
47	L25B	151	HIS	4.1
10	S10A	100	THR	4.1
54	L33B	20	ASN	4.1
27	23SA	2914	C	4.1
27	23SB	937	C	4.1
7	S7A	85	TYR	4.1
42	L20B	81	HIS	4.1
13	S13A	6	GLY	4.1
32	L5B	51	ARG	4.1
33	L6B	35	VAL	4.1
47	L25B	106	GLY	4.1
43	L21B	19	LYS	4.0
2	S2B	116	GLU	4.0
32	L5B	58	GLN	4.0
34	L9B	131	LYS	4.0
47	L25B	143	GLY	4.0
7	S7A	13	GLN	4.0
26	TRNA	70	G	4.0
47	L25A	96	VAL	4.0
26	TRNA	11	C	4.0
40	L18B	56	LEU	4.0
43	L21B	26	ASP	4.0
43	L21B	71	LEU	4.0
47	L25B	148	ASP	4.0
56	L35B	64	TYR	4.0
54	L33B	26	ASN	4.0
47	L25A	150	LEU	4.0
47	L25A	163	LEU	4.0
22	ASIA	17	C	4.0
43	L21B	15	GLU	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
54	L33A	26	ASN	4.0
2	S2A	125	PRO	4.0
38	L16B	104	PHE	4.0
43	L21B	43	GLU	4.0
37	L15A	142	GLY	4.0
47	L25B	144	LEU	4.0
52	L31B	6	HIS	4.0
12	S12B	82	ILE	4.0
33	L6B	43	VAL	4.0
52	L31A	30	GLU	4.0
7	S7A	84	ASN	4.0
14	S14B	10	ALA	4.0
20	S20A	87	LYS	3.9
48	L27A	69	PHE	3.9
7	S7B	44	TYR	3.9
43	L21A	56	SER	3.9
33	L6A	25	LYS	3.9
54	L33B	41	PRO	3.9
43	L21B	34	GLU	3.9
54	L33A	35	GLU	3.9
47	L25A	102	LEU	3.9
33	L6A	18	GLU	3.9
54	L33A	12	GLU	3.9
35	L13B	51	PHE	3.9
52	L31A	43	TYR	3.9
30	L3B	3	GLY	3.9
5	S5A	9	LYS	3.9
37	L15B	92	GLU	3.9
52	L31B	16	CYS	3.9
42	L20B	104	GLN	3.9
34	L9B	145	VAL	3.9
26	TRNA	35	A	3.9
32	L5B	115	ARG	3.9
32	L5B	55	LYS	3.9
33	L6B	104	GLU	3.9
2	S2A	148	TYR	3.9
12	S12B	61	TYR	3.9
30	L3B	55	ASN	3.9
25	MRNA	54	U	3.9
38	L16B	37	LEU	3.9
46	L24B	26	LYS	3.9
32	L5B	49	ASP	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S2B	229	VAL	3.8
2	S2A	126	GLU	3.8
12	S12B	34	CYS	3.8
2	S2B	48	MET	3.8
3	S3A	79	ARG	3.8
15	S15A	76	GLU	3.8
19	S19A	49	ILE	3.8
34	L9A	140	LEU	3.8
30	L3B	57	LYS	3.8
43	L21B	13	ARG	3.8
34	L9B	80	PRO	3.8
43	L21B	18	LEU	3.8
53	L32B	49	CYS	3.8
24	ESIA	12	U	3.8
22	ASIA	73	A	3.8
36	L14B	13	ASN	3.8
9	S9B	90	PRO	3.8
3	S3B	205	GLY	3.8
52	L31A	69	LYS	3.8
54	L33A	17	LYS	3.8
34	L9B	140	LEU	3.8
3	S3B	64	VAL	3.8
47	L25A	114	GLY	3.8
52	L31B	45	GLY	3.8
47	L25B	107	THR	3.8
19	S19B	47	HIS	3.8
34	L9B	64	GLU	3.8
54	L33B	53	LYS	3.8
27	23SA	2165	C	3.8
51	L30B	6	VAL	3.8
42	L20B	117	GLN	3.8
47	L25B	51	ALA	3.8
32	L5B	108	ASN	3.8
18	S18B	42	ARG	3.8
52	L31B	39	CYS	3.8
2	S2B	13	ALA	3.7
53	L32A	56	LYS	3.7
41	L19A	1	MET	3.7
17	S17B	24	GLU	3.7
56	L35B	65	GLU	3.7
33	L6B	117	PRO	3.7
54	L33B	34	LEU	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	L25B	161	VAL	3.7
3	S3A	12	LEU	3.7
35	L13B	12	ARG	3.7
42	L20B	112	ARG	3.7
5	S5A	155	GLU	3.7
33	L6A	86	GLU	3.7
34	L9B	135	GLU	3.7
11	S11B	16	SER	3.7
32	L5B	157	ILE	3.7
43	L21B	32	THR	3.7
43	L21B	53	GLU	3.7
31	L4B	6	VAL	3.7
47	L25A	95	PRO	3.7
16	S16A	36	ILE	3.7
47	L25A	155	LEU	3.7
11	S11B	14	VAL	3.7
33	L6A	58	GLU	3.7
2	S2B	163	PHE	3.7
42	L20B	88	ILE	3.7
42	L20B	83	LEU	3.7
49	L28A	94	LEU	3.7
54	L33B	40	CYS	3.7
20	S20A	55	ILE	3.7
2	S2A	76	GLN	3.6
13	S13B	87	TYR	3.6
26	TRNA	41	C	3.6
27	23SA	4	C	3.6
40	L18B	75	GLU	3.6
47	L25B	2	GLU	3.6
52	L31A	20	ASN	3.6
12	S12B	36	VAL	3.6
37	L15B	95	VAL	3.6
37	L15B	124	LYS	3.6
2	S2B	45	GLN	3.6
3	S3B	39	ILE	3.6
47	L25A	172	ALA	3.6
26	TRNA	42	C	3.6
46	L24B	40	GLU	3.6
33	L6B	103	LEU	3.6
46	L24B	80	GLY	3.6
26	TRNA	9	A	3.6
2	S2B	35	GLU	3.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
13	S13B	2	ALA	3.6
42	L20B	109	LEU	3.6
1	16SA	726	U	3.6
27	23SA	1147	G	3.6
43	L21B	91	TYR	3.6
33	L6B	21	PRO	3.6
33	L6B	18	GLU	3.6
4	S4B	126	ILE	3.6
33	L6B	121	ILE	3.6
7	S7B	116	ALA	3.5
38	L16B	40	ALA	3.5
10	S10A	62	HIS	3.5
2	S2B	240	GLN	3.5
27	23SA	2170	C	3.5
19	S19B	86	GLU	3.5
3	S3B	94	LEU	3.5
11	S11A	13	GLN	3.5
52	L31B	13	ARG	3.5
43	L21B	27	ALA	3.5
34	L9B	92	VAL	3.5
35	L13A	134	ARG	3.5
52	L31B	70	GLY	3.5
3	S3B	184	TYR	3.5
18	S18B	87	ARG	3.5
27	23SA	2817	C	3.5
34	L9A	70	GLU	3.5
54	L33B	43	CYS	3.5
19	S19A	43	GLU	3.5
32	L5B	59	GLU	3.5
31	L4A	23	ASP	3.5
16	S16A	83	GLU	3.5
13	S13B	5	ALA	3.5
12	S12B	124	GLU	3.5
52	L31B	56	VAL	3.5
12	S12B	16	ARG	3.5
33	L6B	109	PHE	3.5
46	L24A	104	GLY	3.5
47	L25A	98	MET	3.5
27	23SA	2	G	3.5
42	L20B	113	ALA	3.5
34	L9B	76	THR	3.5
54	L33B	21	TYR	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	S10A	46	ARG	3.5
47	L25B	131	ARG	3.5
47	L25B	155	LEU	3.5
57	ASIB	45	U	3.4
20	S20B	10	LEU	3.4
27	23SA	944	A	3.4
46	L24A	58	GLY	3.4
34	L9A	135	GLU	3.4
3	S3B	98	ASN	3.4
54	L33B	32	ASN	3.4
37	L15B	145	PRO	3.4
43	L21B	62	LEU	3.4
33	L6B	90	LYS	3.4
34	L9B	112	LYS	3.4
32	L5B	133	LEU	3.4
38	L16B	33	GLY	3.4
32	L5B	137	GLU	3.4
34	L9B	68	LEU	3.4
47	L25B	126	VAL	3.4
19	S19A	27	GLU	3.4
56	L35B	12	LYS	3.4
35	L13B	72	TYR	3.4
42	L20B	108	GLU	3.4
46	L24A	101	LYS	3.4
22	ASIA	3	C	3.4
54	L33B	27	LYS	3.4
41	L19A	134	GLU	3.4
10	S10B	67	THR	3.4
7	S7B	85	TYR	3.4
53	L32B	51	TYR	3.4
3	S3B	65	ALA	3.4
35	L13B	85	ILE	3.4
41	L19A	38	ASN	3.4
10	S10A	47	PHE	3.4
27	23SA	2814	A	3.4
33	L6B	137	ASP	3.4
34	L9A	123	LEU	3.4
3	S3B	19	GLU	3.4
37	L15B	119	GLU	3.4
33	L6A	13	LYS	3.4
37	L15B	123	LEU	3.3
52	L31A	48	ARG	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S2B	97	TRP	3.3
30	L3B	74	PRO	3.3
47	L25B	9	TYR	3.3
33	L6B	31	GLY	3.3
37	L15B	106	LEU	3.3
53	L32A	53	ALA	3.3
2	S2A	222	ILE	3.3
41	L19B	129	ARG	3.3
35	L13B	41	ASP	3.3
3	S3A	151	VAL	3.3
19	S19A	29	ARG	3.3
53	L32B	55	ARG	3.3
43	L21A	60	GLU	3.3
46	L24B	42	VAL	3.3
34	L9B	10	GLU	3.3
34	L9B	72	LEU	3.3
54	L33A	53	LYS	3.3
33	L6B	14	GLY	3.3
35	L13A	127	ASP	3.3
46	L24B	107	ASP	3.3
2	S2A	231	GLU	3.3
19	S19B	50	ALA	3.3
20	S20A	103	GLY	3.3
47	L25B	154	ASP	3.3
19	S19B	28	LYS	3.3
26	TRNA	12	U	3.3
9	S9A	126	SER	3.3
43	L21B	52	VAL	3.3
32	L5B	156	ASP	3.3
33	L6B	93	GLY	3.3
27	23SB	2909	U	3.3
9	S9A	127	LYS	3.3
10	S10A	98	ILE	3.3
34	L9A	67	ARG	3.3
11	S11B	25	TYR	3.3
33	L6B	37	VAL	3.3
43	L21B	2	PHE	3.3
47	L25A	128	VAL	3.3
55	L34A	48	LYS	3.3
34	L9B	61	ARG	3.3
40	L18A	60	GLY	3.3
54	L33A	36	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
47	L25B	4	ARG	3.2
47	L25B	67	LEU	3.2
33	L6B	40	GLU	3.2
14	S14B	13	THR	3.2
20	S20A	102	GLY	3.2
20	S20B	104	LEU	3.2
2	S2A	122	PHE	3.2
35	L13B	50	ASP	3.2
47	L25A	122	ARG	3.2
12	S12A	61	TYR	3.2
3	S3B	15	THR	3.2
12	S12B	58	THR	3.2
9	S9B	91	ASP	3.2
7	S7B	48	LYS	3.2
2	S2A	138	LEU	3.2
3	S3B	40	ARG	3.2
42	L20A	117	GLN	3.2
26	TRNA	40	C	3.2
51	L30B	36	VAL	3.2
2	S2B	236	TYR	3.2
35	L13B	8	GLN	3.2
35	L13B	70	LYS	3.2
7	S7B	64	GLN	3.2
46	L24B	59	GLY	3.2
41	L19A	136	GLN	3.2
37	L15B	126	VAL	3.2
3	S3B	158	GLY	3.2
35	L13B	138	LEU	3.2
30	L3A	18	ASP	3.2
33	L6B	94	TYR	3.2
36	L14A	108	GLU	3.2
43	L21B	6	LYS	3.2
47	L25B	152	ALA	3.2
47	L25A	151	HIS	3.2
26	TRNA	13	C	3.1
3	S3B	96	GLY	3.1
2	S2B	21	ARG	3.1
12	S12B	101	VAL	3.1
30	L3A	183	LEU	3.1
33	L6A	87	LEU	3.1
45	L23A	1	MET	3.1
32	L5B	151	ALA	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	L25B	139	VAL	3.1
3	S3A	184	TYR	3.1
32	L5B	90	LEU	3.1
33	L6A	115	VAL	3.1
34	L9A	68	LEU	3.1
52	L31A	51	ASP	3.1
38	L16A	104	PHE	3.1
2	S2B	217	ARG	3.1
5	S5B	13	ILE	3.1
34	L9B	11	ASN	3.1
47	L25B	68	PRO	3.1
20	S20A	51	GLU	3.1
2	S2B	211	ILE	3.1
52	L31A	40	HIS	3.1
47	L25A	177	PRO	3.1
2	S2A	115	LEU	3.1
44	L22A	69	LEU	3.1
3	S3A	164	ARG	3.1
7	S7B	66	VAL	3.1
17	S17B	91	ARG	3.1
30	L3A	66	HIS	3.1
9	S9B	49	PRO	3.1
33	L6B	71	LEU	3.1
34	L9B	35	LEU	3.1
7	S7B	41	ARG	3.1
33	L6B	146	ALA	3.1
2	S2A	152	PHE	3.1
2	S2B	208	ILE	3.1
7	S7B	119	ARG	3.1
20	S20B	106	ALA	3.1
41	L19B	135	ALA	3.1
33	L6B	164	TYR	3.1
2	S2B	183	PRO	3.1
53	L32B	53	ALA	3.1
37	L15B	46	LYS	3.1
52	L31B	55	ARG	3.1
47	L25A	93	ASP	3.0
6	S6A	16	GLN	3.0
46	L24A	57	GLN	3.0
3	S3A	198	VAL	3.0
15	S15B	2	PRO	3.0
27	23SB	1225	A	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S2A	78	GLN	3.0
42	L20B	91	ASP	3.0
12	S12B	57	LEU	3.0
33	L6B	41	MET	3.0
38	L16B	1	MET	3.0
54	L33B	36	LEU	3.0
2	S2B	123	ALA	3.0
43	L21B	55	ALA	3.0
43	L21B	16	PRO	3.0
47	L25A	108	PRO	3.0
31	L4B	8	GLN	3.0
43	L21B	20	LEU	3.0
4	S4B	169	LYS	3.0
49	L28B	96	LYS	3.0
52	L31A	4	GLY	3.0
2	S2A	117	GLU	3.0
2	S2A	141	GLU	3.0
5	S5B	155	GLU	3.0
19	S19A	2	PRO	3.0
47	L25A	118	GLN	3.0
12	S12A	53	ALA	3.0
33	L6A	42	ARG	3.0
52	L31A	70	GLY	3.0
2	S2B	101	MET	3.0
32	L5B	135	LEU	3.0
6	S6B	38	GLU	3.0
54	L33B	16	CYS	3.0
46	L24B	75	ILE	3.0
54	L33B	39	TYR	3.0
43	L21A	40	LEU	3.0
43	L21B	40	LEU	3.0
43	L21B	50	PRO	3.0
7	S7A	123	GLU	3.0
11	S11B	21	ILE	3.0
17	S17A	36	ILE	3.0
20	S20A	99	LEU	3.0
13	S13B	122	LYS	3.0
47	L25B	28	MET	3.0
11	S11B	17	GLY	3.0
52	L31A	54	GLY	3.0
19	S19A	79	THR	3.0
27	23SA	2166	G	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	S7B	87	VAL	3.0
17	S17B	10	VAL	3.0
20	S20A	52	ALA	3.0
47	L25B	96	VAL	3.0
54	L33B	22	ALA	3.0
2	S2B	224	GLN	3.0
16	S16A	82	GLN	3.0
35	L13A	130	HIS	3.0
37	L15A	120	ALA	2.9
47	L25B	81	ARG	2.9
25	MRNA	57	U	2.9
2	S2B	220	ASP	2.9
10	S10A	22	LYS	2.9
7	S7B	123	GLU	2.9
11	S11B	28	THR	2.9
33	L6A	132	ARG	2.9
43	L21B	60	GLU	2.9
6	S6A	14	LEU	2.9
9	S9B	55	ALA	2.9
51	L30A	4	LEU	2.9
38	L16B	65	PHE	2.9
41	L19A	45	PHE	2.9
7	S7A	155	ARG	2.9
53	L32B	56	LYS	2.9
6	S6B	64	GLN	2.9
13	S13B	65	LYS	2.9
30	L3A	1	MET	2.9
54	L33B	25	LYS	2.9
3	S3B	207	VAL	2.9
33	L6B	9	ILE	2.9
47	L25A	88	PHE	2.9
10	S10A	61	GLU	2.9
27	23SA	2910	U	2.9
35	L13B	9	VAL	2.9
43	L21A	64	HIS	2.9
52	L31B	26	SER	2.9
19	S19B	80	TYR	2.9
34	L9B	122	GLU	2.9
2	S2B	164	VAL	2.9
3	S3B	157	ILE	2.9
47	L25B	163	LEU	2.9
48	L27B	84	LEU	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
52	L31A	22	ILE	2.9
33	L6A	172	LYS	2.9
34	L9B	86	THR	2.9
38	L16A	37	LEU	2.9
49	L28B	94	LEU	2.9
10	S10B	91	PRO	2.9
52	L31A	37	SER	2.9
34	L9A	139	GLN	2.9
43	L21B	51	VAL	2.9
47	L25A	146	ILE	2.9
12	S12A	44	LYS	2.9
50	L29A	15	LYS	2.9
26	TRNA	31	A	2.9
46	L24B	25	GLY	2.9
47	L25A	170	THR	2.9
52	L31A	64	GLY	2.9
8	S8B	112	LEU	2.9
38	L16A	1	MET	2.9
7	S7A	90	GLU	2.9
2	S2A	14	GLY	2.9
10	S10A	30	SER	2.9
44	L22B	112	GLY	2.9
38	L16B	66	ILE	2.9
7	S7B	86	GLN	2.9
7	S7B	57	GLU	2.9
34	L9B	103	ARG	2.9
47	L25A	103	ARG	2.9
47	L25B	49	ARG	2.9
47	L25A	156	LYS	2.9
3	S3B	68	VAL	2.9
9	S9B	50	LEU	2.9
30	L3A	4	ILE	2.9
2	S2B	47	THR	2.9
11	S11B	99	GLN	2.9
52	L31B	46	GLN	2.9
40	L18B	107	GLU	2.9
38	L16B	100	GLY	2.9
2	S2A	240	GLN	2.8
3	S3A	95	THR	2.8
12	S12A	30	ARG	2.8
7	S7B	60	LYS	2.8
32	L5B	46	ALA	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	L6B	3	ARG	2.8
47	L25A	2	GLU	2.8
47	L25A	73	GLN	2.8
26	TRNA	27	G	2.8
47	L25B	33	LEU	2.8
20	S20B	93	GLU	2.8
31	L4B	22	ALA	2.8
54	L33A	11	LEU	2.8
33	L6B	4	ILE	2.8
37	L15A	102	ARG	2.8
3	S3B	59	ARG	2.8
27	23SA	2810	C	2.8
43	L21A	29	PRO	2.8
34	L9B	125	GLU	2.8
2	S2B	150	SER	2.8
27	23SB	2814	A	2.8
20	S20A	86	ARG	2.8
3	S3A	203	PHE	2.8
11	S11B	77	MET	2.8
37	L15B	91	PHE	2.8
11	S11A	25	TYR	2.8
31	L4B	207	GLY	2.8
35	L13B	134	ARG	2.8
3	S3A	153	VAL	2.8
26	TRNA	65	G	2.8
41	L19A	133	GLU	2.8
9	S9B	52	ALA	2.8
49	L28B	64	ALA	2.8
12	S12B	74	LEU	2.8
2	S2B	28	PHE	2.8
37	L15B	125	VAL	2.8
2	S2B	188	ALA	2.8
3	S3B	93	LYS	2.8
35	L13B	86	PRO	2.8
18	S18B	24	ALA	2.8
42	L20B	64	ARG	2.8
32	L5B	134	GLY	2.8
11	S11A	71	LYS	2.8
14	S14B	11	LYS	2.8
30	L3B	177	PRO	2.8
50	L29A	50	ILE	2.8
41	L19A	129	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
51	L30B	3	ARG	2.8
19	S19A	47	HIS	2.8
33	L6B	111	HIS	2.8
27	23SA	703	A	2.8
56	L35B	34	TRP	2.8
19	S19B	29	ARG	2.8
30	L3A	57	LYS	2.8
56	L35B	4	MET	2.8
7	S7B	84	ASN	2.8
27	23SB	1558	C	2.8
13	S13B	119	GLY	2.8
42	L20B	82	GLY	2.8
52	L31B	61	ARG	2.8
1	16SA	2077	A	2.8
7	S7A	153	HIS	2.8
12	S12B	63	VAL	2.8
20	S20A	48	LYS	2.8
30	L3A	64	LYS	2.8
42	L20B	106	PHE	2.8
54	L33B	48	VAL	2.8
5	S5B	109	ILE	2.7
2	S2B	118	LEU	2.7
56	L35B	62	LEU	2.7
35	L13B	124	ALA	2.7
47	L25B	31	ARG	2.7
51	L30B	40	THR	2.7
19	S19B	78	ARG	2.7
54	L33B	18	ARG	2.7
52	L31B	27	THR	2.7
46	L24B	106	LEU	2.7
47	L25A	70	LEU	2.7
52	L31B	69	LYS	2.7
34	L9B	83	ALA	2.7
19	S19A	85	LYS	2.7
22	ASIA	70	G	2.7
47	L25A	133	ILE	2.7
2	S2A	149	LEU	2.7
13	S13B	66	LEU	2.7
30	L3A	27	LEU	2.7
36	L14A	53	LYS	2.7
37	L15B	107	LYS	2.7
46	L24B	101	LYS	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	L25B	82	ARG	2.7
47	L25B	118	GLN	2.7
10	S10A	74	ILE	2.7
13	S13B	3	ARG	2.7
47	L25A	49	ARG	2.7
7	S7A	12	LEU	2.7
18	S18B	85	LEU	2.7
35	L13B	99	LEU	2.7
52	L31A	66	SER	2.7
3	S3A	13	GLY	2.7
3	S3A	81	GLY	2.7
30	L3B	52	LEU	2.7
7	S7A	130	GLY	2.7
10	S10A	26	ALA	2.7
51	L30B	57	GLU	2.7
43	L21A	94	LEU	2.7
7	S7B	5	ARG	2.7
7	S7B	62	PHE	2.7
48	L27B	4	LYS	2.7
16	S16A	51	VAL	2.7
2	S2B	161	ALA	2.7
47	L25B	14	LYS	2.7
3	S3A	10	PHE	2.7
17	S17B	11	VAL	2.7
35	L13A	100	GLU	2.7
42	L20B	72	HIS	2.7
7	S7A	147	ALA	2.7
38	L16B	36	ALA	2.7
2	S2A	133	LYS	2.7
19	S19A	28	LYS	2.7
4	S4A	35	ARG	2.7
37	L15A	91	PHE	2.7
20	S20A	85	MET	2.7
2	S2B	102	LEU	2.6
7	S7A	16	LEU	2.6
47	L25B	102	LEU	2.6
46	L24A	108	THR	2.6
4	S4B	150	GLU	2.6
52	L31B	57	GLU	2.6
17	S17B	22	LEU	2.6
37	L15B	147	LEU	2.6
30	L3A	51	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
5	S5B	105	VAL	2.6
18	S18B	27	GLY	2.6
33	L6A	24	VAL	2.6
52	L31A	53	GLU	2.6
9	S9A	51	ARG	2.6
26	TRNA	7	A	2.6
45	L23B	21	PHE	2.6
43	L21B	30	GLY	2.6
43	L21B	42	GLY	2.6
4	S4B	127	THR	2.6
32	L5B	153	ARG	2.6
34	L9B	78	THR	2.6
40	L18B	2	ALA	2.6
52	L31A	14	ILE	2.6
22	ASIA	4	C	2.6
42	L20B	73	GLY	2.6
47	L25A	72	ARG	2.6
54	L33B	15	GLU	2.6
40	L18A	4	LEU	2.6
47	L25B	164	ALA	2.6
7	S7B	47	CYS	2.6
46	L24B	23	ARG	2.6
27	23SA	699	C	2.6
45	L23B	11	PRO	2.6
3	S3A	94	LEU	2.6
32	L5B	34	LEU	2.6
3	S3A	200	ALA	2.6
7	S7A	53	LYS	2.6
34	L9A	74	ASN	2.6
47	L25A	79	ARG	2.6
34	L9B	144	VAL	2.6
41	L19A	21	GLU	2.6
5	S5B	56	GLN	2.6
35	L13A	131	GLN	2.6
35	L13B	29	LYS	2.6
1	16SB	1660	G	2.6
7	S7B	94	ARG	2.6
27	23SA	2179	G	2.6
4	S4B	98	GLU	2.6
43	L21B	58	VAL	2.6
32	L5B	139	LEU	2.6
9	S9B	75	ASP	2.6

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Mol	Chain	Res	Type	RSRZ
52	L31A	42	PHE	2.6
2	S2B	66	GLY	2.6
47	L25A	127	LYS	2.6
52	L31B	41	PRO	2.6
33	L6B	64	LEU	2.6
37	L15B	102	ARG	2.6
51	L30B	43	ILE	2.6
46	L24B	57	GLN	2.6
40	L18B	55	ALA	2.6
4	S4B	24	GLU	2.6
6	S6B	39	LYS	2.6
29	L2B	5	LYS	2.6
44	L22A	66	GLU	2.6
47	L25B	168	GLU	2.6
52	L31B	23	GLU	2.6
35	L13B	122	VAL	2.6
35	L13A	15	LEU	2.6
3	S3A	139	GLN	2.6
31	L4B	199	TRP	2.6
34	L9B	139	GLN	2.6
52	L31B	49	PHE	2.6
27	23SA	2157	U	2.6
56	L35B	29	LYS	2.6
12	S12B	78	SER	2.6
20	S20B	8	ARG	2.6
47	L25A	123	ASP	2.6
4	S4B	108	LEU	2.6
37	L15A	88	LEU	2.6
43	L21B	94	LEU	2.6
13	S13B	63	THR	2.6
35	L13A	85	ILE	2.6
52	L31A	5	ILE	2.6
34	L9A	131	LYS	2.5
46	L24B	48	ALA	2.5
46	L24B	81	LYS	2.5
7	S7B	74	GLU	2.5
17	S17B	58	GLU	2.5
48	L27A	26	TYR	2.5
3	S3A	197	GLY	2.5
9	S9A	49	PRO	2.5
10	S10A	96	ILE	2.5
11	S11B	36	ASP	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
23	PSIA	1	G	2.5
27	23SA	2811	G	2.5
2	S2A	4	GLU	2.5
16	S16A	76	GLN	2.5
31	L4B	24	LEU	2.5
37	L15B	64	LYS	2.5
40	L18B	57	LYS	2.5
3	S3A	56	ASP	2.5
45	L23B	28	PHE	2.5
20	S20A	45	GLN	2.5
47	L25A	11	GLU	2.5
25	MRNA	28	G	2.5
27	23SA	2819	G	2.5
2	S2A	215	LEU	2.5
3	S3B	43	LEU	2.5
33	L6A	33	LEU	2.5
45	L23B	1	MET	2.5
52	L31B	1	MET	2.5
1	16SA	728	U	2.5
16	S16A	66	PRO	2.5
19	S19A	42	PRO	2.5
49	L28A	89	GLU	2.5
52	L31A	29	PRO	2.5
13	S13B	6	GLY	2.5
22	ASIA	76	A	2.5
38	L16B	19	GLY	2.5
38	L16B	63	LYS	2.5
47	L25A	126	VAL	2.5
33	L6B	149	ARG	2.5
17	S17B	12	SER	2.5
16	S16A	35	LYS	2.5
47	L25B	83	PRO	2.5
22	ASIA	47	U	2.5
9	S9B	56	LEU	2.5
46	L24B	108	THR	2.5
26	TRNA	38	A	2.5
27	23SA	698	C	2.5
29	L2B	270	ILE	2.5
35	L13A	16	ILE	2.5
42	L20B	80	ILE	2.5
52	L31B	5	ILE	2.5
47	L25B	138	GLU	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	S4B	177	ASP	2.5
7	S7B	9	VAL	2.5
43	L21B	63	GLY	2.5
44	L22A	67	ASP	2.5
46	L24A	107	ASP	2.5
50	L29B	4	SER	2.5
2	S2B	113	HIS	2.5
7	S7A	124	LEU	2.5
10	S10A	8	LEU	2.5
16	S16A	19	ILE	2.5
18	S18A	29	PHE	2.5
34	L9A	109	ILE	2.5
42	L20A	106	PHE	2.5
18	S18B	21	LYS	2.5
33	L6B	159	GLU	2.5
2	S2A	96	ARG	2.5
10	S10B	94	VAL	2.5
42	L20B	105	VAL	2.5
2	S2B	44	LEU	2.5
4	S4B	133	VAL	2.5
11	S11A	98	LEU	2.5
35	L13B	91	LEU	2.5
36	L14B	33	ALA	2.5
40	L18B	74	ALA	2.5
43	L21B	41	GLY	2.5
47	L25B	21	ALA	2.5
2	S2B	190	THR	2.5
33	L6A	97	ARG	2.5
20	S20B	43	LEU	2.5
38	L16A	32	TYR	2.5
49	L28A	53	VAL	2.5
51	L30B	59	VAL	2.5
38	L16B	39	PRO	2.5
52	L31B	60	GLN	2.5
33	L6A	61	HIS	2.5
12	S12A	62	GLU	2.5
13	S13A	81	LEU	2.5
18	S18B	26	LEU	2.5
47	L25B	69	THR	2.5
7	S7B	76	ARG	2.5
11	S11B	107	SER	2.5
19	S19A	83	HIS	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S2A	227	GLY	2.4
38	L16A	27	VAL	2.4
52	L31A	2	LYS	2.4
7	S7B	128	ALA	2.4
7	S7A	51	GLN	2.4
33	L6B	69	ARG	2.4
37	L15B	114	ILE	2.4
47	L25A	66	SER	2.4
29	L2A	111	LEU	2.4
31	L4A	6	VAL	2.4
40	L18B	58	LEU	2.4
44	L22A	108	GLY	2.4
19	S19A	81	ARG	2.4
33	L6A	106	THR	2.4
32	L5A	39	ILE	2.4
6	S6A	17	SER	2.4
29	L2A	2	ALA	2.4
20	S20B	90	GLN	2.4
3	S3A	196	LEU	2.4
35	L13B	48	MET	2.4
35	L13A	54	VAL	2.4
38	L16A	24	GLY	2.4
47	L25A	24	LEU	2.4
32	L5A	80	PHE	2.4
15	S15B	87	ILE	2.4
36	L14B	34	THR	2.4
18	S18B	31	LEU	2.4
7	S7B	40	ALA	2.4
53	L32A	38	ALA	2.4
2	S2A	68	ILE	2.4
9	S9A	7	THR	2.4
17	S17A	98	LEU	2.4
47	L25A	76	LEU	2.4
34	L9B	84	GLY	2.4
37	L15B	118	GLY	2.4
1	16SB	1468	U	2.4
45	L23B	91	ALA	2.4
43	L21A	98	GLU	2.4
3	S3B	198	VAL	2.4
12	S12B	52	VAL	2.4
20	S20A	47	GLY	2.4
37	L15B	1	MET	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
9	S9B	37	PHE	2.4
47	L25A	89	PHE	2.4
5	S5B	117	ASP	2.4
29	L2B	2	ALA	2.4
56	L35A	34	TRP	2.4
57	ASIB	47	U	2.4
22	ASIA	72	C	2.4
1	16SB	1663	A	2.4
9	S9B	109	VAL	2.4
47	L25B	125	LEU	2.4
6	S6A	84	ASN	2.4
33	L6B	154	PRO	2.4
3	S3A	166	GLU	2.4
33	L6A	124	GLU	2.4
35	L13A	12	ARG	2.4
46	L24B	29	GLU	2.4
46	L24B	64	GLU	2.4
47	L25B	121	HIS	2.4
53	L32A	51	TYR	2.4
3	S3B	147	LYS	2.4
24	ESIA	13	C	2.4
40	L18A	52	SER	2.4
42	L20B	74	LEU	2.4
54	L33A	38	LYS	2.4
3	S3B	203	PHE	2.4
38	L16B	20	ALA	2.4
27	23SA	1583	G	2.4
33	L6A	162	ILE	2.4
37	L15A	108	LYS	2.4
47	L25B	140	ASP	2.4
50	L29B	60	LEU	2.4
34	L9A	127	VAL	2.4
5	S5B	6	PHE	2.4
36	L14B	1	MET	2.4
9	S9A	92	TYR	2.4
30	L3A	169	ASN	2.4
53	L32A	35	GLU	2.4
33	L6B	107	VAL	2.4
7	S7B	125	MET	2.4
10	S10A	5	ARG	2.4
47	L25A	80	ARG	2.4
9	S9A	48	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
18	S18B	19	LYS	2.4
38	L16B	105	GLU	2.4
48	L27A	27	GLU	2.4
17	S17B	59	ILE	2.4
30	L3A	55	ASN	2.4
30	L3A	90	THR	2.4
32	L5A	34	LEU	2.4
4	S4B	35	ARG	2.3
30	L3A	88	GLY	2.3
39	L17B	69	ASP	2.3
42	L20B	79	PHE	2.3
46	L24B	60	PHE	2.3
7	S7A	77	SER	2.3
19	S19A	32	LYS	2.3
32	L5B	143	GLU	2.3
43	L21B	28	GLU	2.3
56	L35B	2	PRO	2.3
6	S6B	100	ASN	2.3
12	S12A	46	ASN	2.3
31	L4A	17	ARG	2.3
12	S12A	43	LYS	2.3
14	S14A	52	GLN	2.3
32	L5A	182	LYS	2.3
54	L33A	33	LYS	2.3
14	S14B	44	LEU	2.3
30	L3B	5	LEU	2.3
30	L3B	195	LEU	2.3
31	L4B	78	ILE	2.3
33	L6B	145	ALA	2.3
30	L3A	167	VAL	2.3
26	TRNA	1	G	2.3
27	23SB	683	C	2.3
41	L19B	1	MET	2.3
2	S2B	175	ARG	2.3
40	L18A	58	LEU	2.3
3	S3A	93	LYS	2.3
14	S14A	51	GLY	2.3
30	L3A	65	GLY	2.3
34	L9A	136	VAL	2.3
52	L31A	35	VAL	2.3
7	S7B	52	GLU	2.3
13	S13B	69	GLU	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
47	L25A	28	MET	2.3
52	L31A	24	THR	2.3
2	S2A	155	LEU	2.3
3	S3A	201	TYR	2.3
12	S12A	49	LEU	2.3
18	S18B	66	LEU	2.3
50	L29B	24	LEU	2.3
3	S3B	174	PRO	2.3
17	S17B	9	VAL	2.3
19	S19B	41	VAL	2.3
29	L2B	35	LYS	2.3
32	L5B	2	PRO	2.3
46	L24B	82	PRO	2.3
33	L6B	53	GLU	2.3
20	S20B	45	GLN	2.3
5	S5A	11	ILE	2.3
45	L23B	18	TYR	2.3
17	S17B	8	GLY	2.3
19	S19B	42	PRO	2.3
7	S7A	73	MET	2.3
30	L3B	73	GLU	2.3
54	L33B	29	ASN	2.3
3	S3A	168	ALA	2.3
3	S3B	100	ALA	2.3
32	L5A	146	TYR	2.3
3	S3B	90	GLU	2.3
12	S12B	30	ARG	2.3
43	L21B	98	GLU	2.3
30	L3A	52	LEU	2.3
49	L28B	67	ILE	2.3
49	L28B	97	LEU	2.3
7	S7B	145	ALA	2.3
9	S9A	33	PHE	2.3
47	L25A	174	VAL	2.3
2	S2B	151	GLY	2.3
3	S3A	131	ARG	2.3
13	S13A	11	ARG	2.3
2	S2A	233	SER	2.3
35	L13A	118	LYS	2.3
7	S7B	13	GLN	2.3
47	L25A	144	LEU	2.3
47	L25B	91	LEU	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
14	S14A	57	ARG	2.3
17	S17B	21	VAL	2.3
32	L5A	61	ALA	2.3
26	TRNA	14	A	2.3
26	TRNA	29	G	2.3
30	L3B	89	ASP	2.3
34	L9A	141	LYS	2.3
33	L6A	128	PRO	2.3
20	S20B	91	LEU	2.3
2	S2B	157	ARG	2.3
19	S19B	57	HIS	2.3
3	S3B	66	VAL	2.3
32	L5B	136	ARG	2.3
2	S2A	66	GLY	2.3
23	PSIA	17	C	2.3
26	TRNA	62	C	2.3
1	16SA	1658	A	2.3
4	S4B	176	LEU	2.3
5	S5B	152	ARG	2.3
10	S10B	98	ILE	2.3
50	L29B	41	ILE	2.3
30	L3A	198	VAL	2.3
32	L5B	25	TYR	2.3
34	L9B	20	ASP	2.3
43	L21B	39	LEU	2.3
47	L25B	95	PRO	2.3
3	S3A	152	ILE	2.3
38	L16A	65	PHE	2.3
40	L18B	79	ALA	2.3
47	L25A	50	GLN	2.3
47	L25A	164	ALA	2.3
13	S13B	73	GLU	2.2
47	L25B	162	GLU	2.2
12	S12B	90	LEU	2.2
35	L13B	137	LYS	2.2
38	L16B	103	MET	2.2
19	S19B	61	TYR	2.2
33	L6B	150	ALA	2.2
34	L9A	126	TYR	2.2
48	L27A	70	GLN	2.2
49	L28A	49	VAL	2.2
2	S2B	9	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
39	L17B	82	GLU	2.2
7	S7B	73	MET	2.2
9	S9A	19	LEU	2.2
43	L21B	29	PRO	2.2
45	L23B	89	ILE	2.2
53	L32B	57	VAL	2.2
42	L20B	116	ALA	2.2
47	L25B	55	HIS	2.2
7	S7B	43	PHE	2.2
24	ESIA	14	A	2.2
11	S11B	82	VAL	2.2
42	L20A	90	VAL	2.2
26	TRNA	28	G	2.2
35	L13B	96	GLU	2.2
38	L16A	107	ALA	2.2
56	L35B	18	ALA	2.2
26	TRNA	17	C	2.2
27	23SB	2908	C	2.2
3	S3A	182	ILE	2.2
37	L15A	130	PHE	2.2
4	S4B	37	PRO	2.2
7	S7A	131	LYS	2.2
11	S11A	35	PRO	2.2
17	S17B	7	THR	2.2
27	23SA	1146	A	2.2
35	L13B	19	GLU	2.2
52	L31B	48	ARG	2.2
38	L16A	141	GLN	2.2
5	S5B	43	LEU	2.2
32	L5B	173	LEU	2.2
29	L2B	212	SER	2.2
2	S2B	93	VAL	2.2
4	S4B	158	ILE	2.2
51	L30B	58	VAL	2.2
2	S2B	75	LYS	2.2
7	S7A	112	PRO	2.2
31	L4A	133	ASN	2.2
33	L6B	161	GLY	2.2
37	L15A	122	PRO	2.2
40	L18A	105	ALA	2.2
43	L21A	62	LEU	2.2
38	L16B	41	TRP	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
8	S8A	95	VAL	2.2
12	S12A	52	VAL	2.2
19	S19B	49	ILE	2.2
33	L6A	90	LYS	2.2
43	L21B	21	ARG	2.2
47	L25B	174	VAL	2.2
27	23SA	2141	G	2.2
12	S12B	28	PRO	2.2
46	L24B	65	ALA	2.2
36	L14A	122	LEU	2.2
21	THXB	22	ARG	2.2
33	L6B	138	LYS	2.2
9	S9A	35	GLU	2.2
17	S17B	23	VAL	2.2
34	L9B	127	VAL	2.2
35	L13B	16	ILE	2.2
47	L25B	105	VAL	2.2
35	L13A	72	TYR	2.2
35	L13B	47	ALA	2.2
35	L13B	57	ALA	2.2
1	16SA	724	G	2.2
12	S12B	123	LYS	2.2
16	S16A	80	PHE	2.2
2	S2B	52	GLU	2.2
13	S13B	74	VAL	2.2
16	S16A	4	ILE	2.2
12	S12B	59	SER	2.2
27	23SA	5	A	2.2
2	S2B	213	LEU	2.2
4	S4B	157	LEU	2.2
37	L15A	106	LEU	2.2
40	L18A	100	ALA	2.2
30	L3A	103	ASP	2.2
34	L9A	111	PRO	2.2
41	L19B	132	LYS	2.2
19	S19B	27	GLU	2.2
30	L3B	1	MET	2.2
35	L13A	53	VAL	2.2
36	L14B	2	ILE	2.2
38	L16A	103	MET	2.2
38	L16B	97	VAL	2.2
43	L21B	37	VAL	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	S3A	78	GLY	2.2
12	S12B	106	GLY	2.2
3	S3B	140	ARG	2.2
4	S4A	135	LEU	2.2
10	S10B	65	LEU	2.2
30	L3A	182	LEU	2.2
35	L13B	7	LYS	2.2
35	L13B	17	ASP	2.2
11	S11B	38	ASN	2.2
15	S15A	83	GLU	2.2
29	L2B	161	THR	2.2
47	L25A	162	GLU	2.2
3	S3A	11	ARG	2.2
3	S3B	101	LEU	2.2
43	L21B	74	LYS	2.2
52	L31A	46	GLN	2.2
11	S11B	81	ASP	2.2
1	16SB	1053	A	2.2
2	S2A	84	GLU	2.2
3	S3B	62	ASP	2.2
40	L18A	82	ILE	2.2
44	L22A	71	VAL	2.2
35	L13B	32	THR	2.2
35	L13B	84	LYS	2.2
54	L33A	28	ARG	2.2
12	S12B	81	LEU	2.1
37	L15B	100	LEU	2.1
3	S3B	180	ALA	2.1
2	S2A	163	PHE	2.1
4	S4A	110	PHE	2.1
27	23SA	34	C	2.1
47	L25A	153	SER	2.1
35	L13B	53	VAL	2.1
45	L23A	89	ILE	2.1
49	L28B	70	VAL	2.1
24	ESIA	6	G	2.1
14	S14A	59	ALA	2.1
27	23SB	1094	A	2.1
47	L25B	76	LEU	2.1
48	L27B	21	LEU	2.1
13	S13A	98	VAL	2.1
30	L3A	73	GLU	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	L9A	85	GLU	2.1
34	L9A	145	VAL	2.1
41	L19B	137	LYS	2.1
42	L20B	30	LYS	2.1
1	16SA	856	U	2.1
32	L5B	89	GLY	2.1
33	L6B	78	GLY	2.1
38	L16B	79	LEU	2.1
2	S2B	140	HIS	2.1
7	S7B	53	LYS	2.1
8	S8B	77	GLU	2.1
9	S9A	78	LYS	2.1
34	L9B	69	LYS	2.1
38	L16A	91	GLU	2.1
31	L4A	196	LEU	2.1
2	S2B	16	HIS	2.1
20	S20A	8	ARG	2.1
33	L6A	23	ARG	2.1
49	L28B	92	LYS	2.1
52	L31B	59	PHE	2.1
2	S2A	119	GLU	2.1
2	S2B	119	GLU	2.1
3	S3A	66	VAL	2.1
48	L27A	63	VAL	2.1
51	L30A	59	VAL	2.1
1	16SA	802	A	2.1
7	S7B	22	LEU	2.1
14	S14B	38	GLY	2.1
32	L5B	19	LEU	2.1
32	L5B	94	LEU	2.1
20	S20B	48	LYS	2.1
34	L9B	36	ALA	2.1
10	S10A	25	GLU	2.1
12	S12A	40	VAL	2.1
19	S19A	60	VAL	2.1
19	S19B	79	THR	2.1
20	S20A	50	GLU	2.1
33	L6A	35	VAL	2.1
34	L9A	71	ILE	2.1
52	L31A	16	CYS	2.1
56	L35A	35	GLN	2.1
2	S2A	48	MET	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	S7B	7	ALA	2.1
26	TRNA	10	G	2.1
2	S2B	136	VAL	2.1
9	S9A	41	VAL	2.1
36	L14B	98	VAL	2.1
38	L16B	106	VAL	2.1
45	L23A	93	GLU	2.1
5	S5B	10	MET	2.1
11	S11A	77	MET	2.1
32	L5A	135	LEU	2.1
40	L18A	108	GLY	2.1
48	L27B	7	LEU	2.1
51	L30B	8	LEU	2.1
3	S3B	20	SER	2.1
9	S9A	82	ALA	2.1
27	23SA	2815	A	2.1
27	23SB	2815	A	2.1
32	L5A	88	ILE	2.1
38	L16A	41	TRP	2.1
7	S7A	86	GLN	2.1
11	S11B	37	GLY	2.1
27	23SA	2846	G	2.1
27	23SB	2809	G	2.1
32	L5B	177	GLY	2.1
33	L6B	10	PRO	2.1
34	L9B	85	GLU	2.1
37	L15B	146	VAL	2.1
3	S3A	31	HIS	2.1
2	S2B	115	LEU	2.1
13	S13B	88	ARG	2.1
47	L25A	120	ILE	2.1
52	L31A	15	ILE	2.1
27	23SA	3	U	2.1
34	L9B	9	LEU	2.1
47	L25A	101	PRO	2.1
2	S2B	46	LYS	2.1
34	L9A	100	ALA	2.1
2	S2B	71	VAL	2.1
4	S4A	102	ASP	2.1
11	S11B	83	ILE	2.1
47	L25B	142	SER	2.1
35	L13A	67	LEU	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	L16B	17	LEU	2.1
30	L3A	48	GLN	2.1
10	S10A	63	PHE	2.1
34	L9B	73	GLU	2.1
42	L20B	84	LYS	2.1
46	L24B	77	PRO	2.1
46	L24B	78	ALA	2.1
47	L25B	167	PRO	2.1
9	S9B	30	GLY	2.1
40	L18A	53	SER	2.1
40	L18A	84	GLN	2.1
18	S18A	19	LYS	2.1
9	S9A	36	TYR	2.1
20	S20A	46	GLU	2.1
22	ASIA	50	U	2.1
50	L29A	69	ARG	2.1
5	S5B	55	VAL	2.1
9	S9A	94	ALA	2.1
51	L30B	50	VAL	2.1
32	L5B	111	LEU	2.1
33	L6A	103	LEU	2.1
5	S5B	66	MET	2.1
13	S13B	71	ARG	2.0
14	S14A	58	LYS	2.0
54	L33B	46	HIS	2.1
19	S19A	78	ARG	2.0
48	L27A	82	ARG	2.0
27	23SB	1224	G	2.0
2	S2A	61	LEU	2.0
2	S2B	202	PRO	2.0
20	S20A	53	LEU	2.0
35	L13B	71	ILE	2.0
36	L14B	69	ILE	2.0
7	S7B	70	LYS	2.0
2	S2A	144	ARG	2.0
30	L3B	84	PHE	2.0
46	L24A	109	GLU	2.0
3	S3A	149	ALA	2.0
13	S13A	2	ALA	2.0
43	L21A	55	ALA	2.0
46	L24B	3	VAL	2.0
48	L27A	67	VAL	2.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	S2B	42	ILE	2.0
3	S3B	33	LEU	2.0
12	S12A	32	GLY	2.0
36	L14A	91	LEU	2.0
37	L15A	138	LEU	2.0
35	L13A	137	LYS	2.0
40	L18A	83	LYS	2.0
2	S2A	157	ARG	2.0
1	16SA	985	A	2.0
11	S11A	14	VAL	2.0
2	S2A	108	ILE	2.0
18	S18A	31	LEU	2.0
34	L9B	65	ALA	2.0
33	L6B	77	LYS	2.0
37	L15A	113	LYS	2.0
38	L16A	42	ILE	2.0
45	L23B	79	ALA	2.0
30	L3A	29	GLY	2.0
32	L5A	113	ARG	2.0
47	L25B	132	ASN	2.0
12	S12A	76	GLU	2.0
32	L5B	48	GLU	2.0
36	L14A	54	GLU	2.0
38	L16A	105	GLU	2.0
3	S3B	22	TRP	2.0
2	S2A	162	ILE	2.0
2	S2A	211	ILE	2.0
3	S3A	187	ALA	2.0
9	S9A	47	LEU	2.0
12	S12A	54	LYS	2.0
46	L24B	24	VAL	2.0
40	L18B	78	LEU	2.0
43	L21A	39	LEU	2.0
47	L25B	79	ARG	2.0
56	L35B	60	LEU	2.0
17	S17B	20	THR	2.0
3	S3B	45	LYS	2.0
34	L9B	118	LYS	2.0
48	L27A	81	VAL	2.0
52	L31A	38	LYS	2.0
2	S2B	162	ILE	2.0
51	L30B	35	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
54	L33B	19	ARG	2.0
26	TRNA	71	G	2.0
30	L3B	96	PHE	2.0
3	S3A	64	VAL	2.0
4	S4B	27	TYR	2.0
32	L5B	37	VAL	2.0
37	L15B	90	ARG	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<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
23	H2U	PSIB	16	20/21	0.64	0.19	109,134,154,162	0
22	4SU	ASIA	8	20/21	0.65	0.16	200,203,207,208	0
26	MIA	TRNA	37	29/30	0.69	0.70	115,135,154,162	0
26	PSU	TRNA	32	20/21	0.69	0.63	182,188,194,195	0
57	5MU	ASIB	54	21/22	0.69	0.17	145,183,189,193	0
22	PSU	ASIA	55	20/21	0.73	0.21	146,160,172,173	0
26	4SU	TRNA	8	20/21	0.77	0.51	169,174,178,181	0
26	H2U	TRNA	20	20/21	0.78	0.23	145,163,173,181	0
26	PSU	TRNA	55	20/21	0.79	0.25	143,151,170,173	0
23	PSU	PSIB	55	20/21	0.80	0.15	100,105,112,112	0
26	5MU	TRNA	54	21/22	0.80	0.37	151,158,162,164	0
26	H2U	TRNA	16	20/21	0.81	0.34	145,157,174,175	0
23	4SU	PSIB	8	20/21	0.82	0.14	101,106,116,120	0
23	3AU	PSIB	47	27/28	0.82	0.16	127,146,156,158	0
22	G7M	ASIA	46	24/25	0.83	0.17	201,205,216,222	0
26	PSU	TRNA	39	20/21	0.84	0.43	134,167,176,179	0
24	MIA	ESIA	37	29/30	0.84	0.24	120,144,148,150	0
23	H2U	PSIA	16	20/21	0.84	0.20	91,111,134,148	0
22	5MU	ASIA	54	21/22	0.85	0.21	113,137,147,148	0
23	G7M	PSIB	46	24/25	0.86	0.16	109,119,139,142	0
23	3AU	PSIA	47	27/28	0.86	0.24	94,118,133,135	0
22	PSU	ASIA	39	20/21	0.86	0.21	77,88,95,99	0
23	5MU	PSIB	54	21/22	0.89	0.14	102,108,115,117	0
24	MIA	ESIB	37	29/30	0.89	0.34	130,151,154,154	0
57	PSU	ASIB	39	20/21	0.89	0.14	102,120,127,130	0
12	0TD	S12A	89	10/11	0.89	0.31	59,65,68,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
23	PSU	PSIA	55	20/21	0.90	0.14	84,89,100,103	0
1	2MG	16SB	1834	24/25	0.91	0.14	111,120,124,126	0
12	0TD	S12B	89	10/11	0.91	0.30	82,85,91,98	0
22	PSU	ASIA	32	20/21	0.91	0.16	82,90,97,98	0
27	5MU	23SB	1940	21/22	0.92	0.13	85,92,102,106	0
1	PSU	16SB	1145	20/21	0.92	0.15	85,90,95,97	0
1	PSU	16SA	1145	20/21	0.92	0.19	69,74,79,81	0
1	M2G	16SB	1589	25/26	0.93	0.14	81,91,96,102	0
1	4OC	16SB	2030	22/23	0.93	0.16	68,75,81,95	0
57	PSU	ASIB	32	20/21	0.93	0.14	111,121,129,135	0
23	G7M	PSIA	46	24/25	0.93	0.14	77,88,112,114	0
23	5MU	PSIA	54	21/22	0.93	0.15	88,91,100,107	0
23	PSU	PSIB	39	20/21	0.94	0.14	80,86,90,93	0
27	PSU	23SB	1936	20/21	0.94	0.13	72,79,83,85	0
23	4SU	PSIA	8	20/21	0.94	0.16	72,75,81,83	0
27	PSU	23SB	1942	20/21	0.94	0.13	76,81,86,87	0
1	5MC	16SB	1590	21/22	0.94	0.13	83,90,96,102	0
57	MIA	ASIB	37	29/30	0.94	0.16	83,96,107,111	0
1	5MC	16SB	2035	21/22	0.94	0.15	64,69,73,76	0
1	G7M	16SB	1156	24/25	0.94	0.18	78,83,90,91	0
27	PSU	23SA	1936	20/21	0.95	0.18	57,59,62,70	0
1	M2G	16SA	1589	25/26	0.95	0.17	59,65,72,74	0
27	5MU	23SA	1940	21/22	0.95	0.19	60,67,75,81	0
23	PSU	PSIB	32	20/21	0.95	0.14	86,91,97,102	0
23	MIA	PSIB	37	29/30	0.95	0.19	82,87,100,103	0
27	5MU	23SB	1964	21/22	0.95	0.18	55,59,67,70	0
27	5MC	23SA	1967	21/22	0.95	0.18	51,55,61,69	0
27	5MC	23SB	1987	21/22	0.95	0.18	57,67,74,81	0
27	OMG	23SB	2266	24/25	0.95	0.19	53,58,63,65	0
27	OMU	23SB	2567	21/22	0.95	0.20	57,64,67,71	0
27	PSU	23SB	2620	20/21	0.95	0.18	48,54,60,64	0
1	2MG	16SA	1834	24/25	0.95	0.14	77,83,87,89	0
1	5MC	16SB	2028	21/22	0.95	0.16	78,84,87,90	0
1	4OC	16SA	2030	22/23	0.95	0.22	56,60,64,67	0
1	5MC	16SB	2032	21/22	0.95	0.18	63,69,74,76	0
1	5MC	16SA	2028	21/22	0.96	0.20	54,65,68,71	0
23	PSU	PSIA	39	20/21	0.96	0.16	59,66,69,69	0
27	5MC	23SA	1987	21/22	0.96	0.19	46,50,55,59	0
1	5MC	16SA	1590	21/22	0.96	0.17	65,69,73,81	0
22	MIA	ASIA	37	29/30	0.96	0.20	64,70,77,79	0
27	OMU	23SA	2567	21/22	0.96	0.20	42,48,52,58	0
1	G7M	16SA	1156	24/25	0.96	0.21	58,67,71,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
27	PSU	23SA	2620	20/21	0.96	0.18	44,47,53,57	0
1	UR3	16SB	2121	21/22	0.96	0.19	59,66,70,72	0
23	PSU	PSIA	32	20/21	0.96	0.14	67,71,75,79	0
1	MA6	16SB	2141	24/25	0.96	0.16	68,74,77,79	0
23	MIA	PSIA	37	29/30	0.96	0.20	57,65,80,85	0
27	OMC	23SB	1945	21/22	0.96	0.15	69,77,79,81	0
27	OMC	23SA	1945	21/22	0.97	0.20	53,55,58,61	0
27	2MA	23SB	2518	23/24	0.97	0.20	45,48,52,53	0
1	UR3	16SA	2121	21/22	0.97	0.21	51,54,60,68	0
27	5MU	23SA	1964	21/22	0.97	0.19	38,44,49,54	0
1	MA6	16SB	2142	24/25	0.97	0.18	65,71,74,77	0
1	5MC	16SA	2032	21/22	0.97	0.22	51,53,60,61	0
27	5MC	23SB	1967	21/22	0.97	0.15	66,73,78,88	0
27	PSU	23SA	1942	20/21	0.97	0.19	57,63,68,68	0
1	5MC	16SA	2035	21/22	0.97	0.21	45,54,59,62	0
27	OMG	23SA	2266	24/25	0.97	0.18	40,45,49,51	0
1	MA6	16SA	2142	24/25	0.98	0.19	49,52,54,59	0
1	MA6	16SA	2141	24/25	0.98	0.17	49,52,55,56	0
27	2MA	23SA	2518	23/24	0.98	0.22	34,40,44,50	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, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	16SA	2245	1/1	0.15	0.57	71,71,71,71	0
60	K	16SB	2364	1/1	0.15	0.22	132,132,132,132	0
58	MG	23SA	3159	1/1	0.27	0.67	83,83,83,83	0
58	MG	23SA	3100	1/1	0.27	0.29	66,66,66,66	0
60	K	23SB	3519	1/1	0.29	0.17	119,119,119,119	0
58	MG	23SA	3127	1/1	0.31	0.32	107,107,107,107	0
58	MG	23SB	3310	1/1	0.32	0.53	79,79,79,79	0
58	MG	23SA	3177	1/1	0.33	0.62	91,91,91,91	0
58	MG	23SB	3386	1/1	0.36	0.10	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	K	23SA	3539	1/1	0.37	0.20	125,125,125,125	0
58	MG	23SA	3015	1/1	0.43	0.66	91,91,91,91	0
60	K	23SA	3594	1/1	0.45	1.60	127,127,127,127	0
58	MG	16SA	2239	1/1	0.46	0.21	84,84,84,84	0
60	K	L15B	202	1/1	0.46	0.16	96,96,96,96	0
58	MG	23SA	3484	1/1	0.47	0.14	84,84,84,84	0
58	MG	23SA	3101	1/1	0.48	0.42	73,73,73,73	0
58	MG	23SA	3152	1/1	0.48	0.45	95,95,95,95	0
60	K	23SA	3634	1/1	0.49	0.28	104,104,104,104	0
58	MG	23SA	3154	1/1	0.49	0.41	59,59,59,59	0
58	MG	16SA	2368	1/1	0.52	0.12	91,91,91,91	0
58	MG	16SA	2258	1/1	0.53	0.42	95,95,95,95	0
58	MG	23SA	3124	1/1	0.53	0.51	72,72,72,72	0
58	MG	23SA	3088	1/1	0.54	0.31	72,72,72,72	0
58	MG	23SB	3433	1/1	0.54	0.13	106,106,106,106	0
58	MG	5SB	213	1/1	0.54	0.14	79,79,79,79	0
58	MG	23SB	3236	1/1	0.55	0.34	58,58,58,58	0
58	MG	23SA	3175	1/1	0.56	0.45	52,52,52,52	0
58	MG	23SB	3314	1/1	0.57	0.29	89,89,89,89	0
58	MG	23SA	3499	1/1	0.58	0.28	56,56,56,56	0
58	MG	16SB	2358	1/1	0.58	0.09	105,105,105,105	0
58	MG	16SA	2353	1/1	0.59	0.12	138,138,138,138	0
58	MG	23SA	3096	1/1	0.60	0.80	70,70,70,70	0
58	MG	23SA	3167	1/1	0.60	0.46	77,77,77,77	0
58	MG	16SA	2248	1/1	0.60	0.35	83,83,83,83	0
58	MG	23SA	3137	1/1	0.60	0.41	89,89,89,89	0
58	MG	23SB	3322	1/1	0.60	0.29	72,72,72,72	0
58	MG	16SA	2213	1/1	0.60	0.41	103,103,103,103	0
58	MG	23SA	3122	1/1	0.60	0.33	57,57,57,57	0
58	MG	23SB	3315	1/1	0.61	0.26	58,58,58,58	0
58	MG	23SA	3063	1/1	0.61	0.23	66,66,66,66	0
58	MG	23SB	3272	1/1	0.61	0.41	57,57,57,57	0
58	MG	23SA	3149	1/1	0.61	0.55	66,66,66,66	0
60	K	23SB	3515	1/1	0.61	0.10	88,88,88,88	0
58	MG	23SA	3477	1/1	0.61	0.17	90,90,90,90	0
60	K	16SA	2408	1/1	0.61	0.23	89,89,89,89	0
60	K	23SB	3475	1/1	0.62	0.15	90,90,90,90	0
58	MG	23SB	3399	1/1	0.62	0.18	88,88,88,88	0
59	OHX	23SB	3192	7/7	0.63	0.17	169,174,178,271	0
58	MG	16SA	2244	1/1	0.63	0.44	62,62,62,62	0
58	MG	16SB	2363	1/1	0.63	0.10	89,89,89,89	0
58	MG	16SA	2218	1/1	0.63	0.58	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	16SB	2327	1/1	0.63	0.24	93,93,93,93	0
58	MG	23SA	3524	1/1	0.64	0.14	113,113,113,113	0
58	MG	16SB	2282	1/1	0.64	0.47	83,83,83,83	0
60	K	23SA	3560	1/1	0.64	0.17	89,89,89,89	0
58	MG	23SA	3037	1/1	0.64	0.51	88,88,88,88	0
58	MG	23SA	3013	1/1	0.64	0.63	69,69,69,69	0
60	K	16SA	2376	1/1	0.65	0.21	106,106,106,106	0
58	MG	23SB	3304	1/1	0.65	0.33	68,68,68,68	0
58	MG	23SB	3318	1/1	0.65	1.00	88,88,88,88	0
58	MG	23SA	3059	1/1	0.65	0.48	77,77,77,77	0
60	K	23SA	3562	1/1	0.65	0.14	80,80,80,80	0
58	MG	23SA	3170	1/1	0.65	0.15	69,69,69,69	0
58	MG	23SA	3531	1/1	0.66	0.15	69,69,69,69	0
58	MG	23SB	3268	1/1	0.66	0.26	66,66,66,66	0
58	MG	16SA	2252	1/1	0.66	0.25	86,86,86,86	0
60	K	16SA	2403	1/1	0.66	0.20	84,84,84,84	0
58	MG	16SB	2316	1/1	0.66	0.30	80,80,80,80	0
58	MG	23SB	3313	1/1	0.67	0.21	48,48,48,48	0
58	MG	23SB	3328	1/1	0.67	0.56	102,102,102,102	0
58	MG	23SB	3331	1/1	0.67	0.23	58,58,58,58	0
60	K	16SA	2379	1/1	0.67	0.20	111,111,111,111	0
58	MG	23SB	3212	1/1	0.67	0.21	83,83,83,83	0
58	MG	L32A	101	1/1	0.67	0.36	67,67,67,67	0
58	MG	23SB	3429	1/1	0.67	0.22	93,93,93,93	0
58	MG	16SB	2336	1/1	0.67	0.12	105,105,105,105	0
58	MG	23SB	3276	1/1	0.68	0.46	82,82,82,82	0
58	MG	23SB	3286	1/1	0.68	0.43	65,65,65,65	0
58	MG	L3B	302	1/1	0.68	0.17	50,50,50,50	0
58	MG	16SA	2250	1/1	0.68	0.29	114,114,114,114	0
58	MG	23SA	3437	1/1	0.68	0.33	67,67,67,67	0
58	MG	23SB	3311	1/1	0.68	0.32	75,75,75,75	0
58	MG	16SA	2243	1/1	0.69	0.26	89,89,89,89	0
58	MG	23SA	3401	1/1	0.69	0.13	63,63,63,63	0
58	MG	23SB	3284	1/1	0.69	0.48	69,69,69,69	0
58	MG	16SB	2344	1/1	0.69	0.18	107,107,107,107	0
58	MG	23SA	3537	1/1	0.69	0.17	72,72,72,72	0
60	K	S20B	201	1/1	0.70	0.22	121,121,121,121	0
60	K	23SB	3448	1/1	0.70	0.29	104,104,104,104	0
59	OHX	23SB	3177	7/7	0.70	0.17	117,128,145,232	0
58	MG	23SA	3158	1/1	0.70	0.53	77,77,77,77	0
58	MG	23SA	3097	1/1	0.70	0.53	50,50,50,50	0
58	MG	16SB	2333	1/1	0.70	0.40	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SB	3316	1/1	0.71	0.24	62,62,62,62	0
58	MG	16SA	2242	1/1	0.71	0.16	93,93,93,93	0
59	OHX	16SA	2315	7/7	0.71	0.27	101,111,120,229	0
60	K	16SB	2379	1/1	0.71	0.16	121,121,121,121	0
58	MG	23SA	3172	1/1	0.71	0.47	58,58,58,58	0
60	K	23SA	3575	1/1	0.72	0.18	68,68,68,68	0
59	OHX	23SA	3352	7/7	0.72	0.25	140,147,169,246	0
58	MG	23SA	3067	1/1	0.72	0.43	71,71,71,71	0
58	MG	23SA	3071	1/1	0.72	0.34	77,77,77,77	0
58	MG	23SA	3011	1/1	0.72	0.31	42,42,42,42	0
58	MG	23SA	3094	1/1	0.72	0.44	55,55,55,55	0
58	MG	16SA	2237	1/1	0.72	0.61	62,62,62,62	0
58	MG	16SA	2222	1/1	0.72	0.36	74,74,74,74	0
58	MG	23SB	3317	1/1	0.72	0.46	78,78,78,78	0
58	MG	23SB	3292	1/1	0.72	0.28	57,57,57,57	0
58	MG	23SA	3140	1/1	0.72	0.28	61,61,61,61	0
58	MG	23SA	3086	1/1	0.73	0.45	71,71,71,71	0
58	MG	23SA	3513	1/1	0.73	0.10	84,84,84,84	0
58	MG	L5B	201	1/1	0.73	0.10	122,122,122,122	0
60	K	16SB	2393	1/1	0.73	0.15	96,96,96,96	0
58	MG	S5B	201	1/1	0.73	0.20	96,96,96,96	0
58	MG	23SB	3388	1/1	0.74	0.19	38,38,38,38	0
58	MG	23SA	3068	1/1	0.74	0.23	64,64,64,64	0
58	MG	23SB	3417	1/1	0.74	0.09	84,84,84,84	0
58	MG	23SB	3309	1/1	0.74	0.45	77,77,77,77	0
58	MG	23SA	3044	1/1	0.74	0.32	65,65,65,65	0
58	MG	23SB	3281	1/1	0.74	0.41	77,77,77,77	0
60	K	PSIA	105	1/1	0.74	0.13	100,100,100,100	0
58	MG	23SA	3445	1/1	0.74	0.24	43,43,43,43	0
58	MG	23SA	3519	1/1	0.74	0.08	94,94,94,94	0
58	MG	23SB	3360	1/1	0.74	0.33	111,111,111,111	0
58	MG	16SA	2214	1/1	0.74	0.26	76,76,76,76	0
58	MG	23SB	3416	1/1	0.75	0.11	98,98,98,98	0
58	MG	23SA	3120	1/1	0.75	0.33	67,67,67,67	0
58	MG	23SB	3419	1/1	0.75	0.37	99,99,99,99	0
58	MG	23SA	3516	1/1	0.75	0.18	84,84,84,84	0
58	MG	16SA	2235	1/1	0.75	0.42	80,80,80,80	0
58	MG	23SB	3434	1/1	0.75	0.12	96,96,96,96	0
58	MG	23SA	3512	1/1	0.75	0.09	45,45,45,45	0
58	MG	16SB	2288	1/1	0.75	0.40	70,70,70,70	0
60	K	23SB	3501	1/1	0.75	0.18	84,84,84,84	0
58	MG	23SB	3295	1/1	0.75	0.35	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SB	3297	1/1	0.75	0.23	68,68,68,68	0
58	MG	16SB	2302	1/1	0.75	0.52	66,66,66,66	0
58	MG	23SB	3246	1/1	0.76	0.52	57,57,57,57	0
60	K	16SA	2383	1/1	0.76	0.16	123,123,123,123	0
58	MG	L30A	101	1/1	0.76	0.47	54,54,54,54	0
58	MG	23SB	3389	1/1	0.76	0.15	54,54,54,54	0
60	K	PSIA	104	1/1	0.76	0.19	80,80,80,80	0
58	MG	16SB	2347	1/1	0.76	0.14	92,92,92,92	0
58	MG	23SA	3025	1/1	0.76	0.45	64,64,64,64	0
60	K	23SB	3486	1/1	0.76	0.09	73,73,73,73	0
58	MG	16SB	2321	1/1	0.76	0.46	73,73,73,73	0
58	MG	L33A	101	1/1	0.76	0.23	95,95,95,95	0
58	MG	23SA	3121	1/1	0.76	0.38	54,54,54,54	0
58	MG	23SA	3421	1/1	0.76	0.16	63,63,63,63	0
58	MG	23SB	3366	1/1	0.77	0.20	39,39,39,39	0
58	MG	23SB	3327	1/1	0.77	0.15	59,59,59,59	0
60	K	23SB	3447	1/1	0.77	0.10	97,97,97,97	0
58	MG	16SB	2310	1/1	0.77	0.50	75,75,75,75	0
60	K	16SA	2384	1/1	0.77	0.30	106,106,106,106	0
58	MG	L23A	101	1/1	0.77	0.17	60,60,60,60	0
60	K	23SB	3494	1/1	0.77	0.13	109,109,109,109	0
59	OHX	23SA	3365	7/7	0.77	0.12	184,185,193,269	0
60	K	23SA	3636	1/1	0.77	0.21	85,85,85,85	0
58	MG	23SB	3349	1/1	0.77	0.12	71,71,71,71	0
58	MG	16SB	2330	1/1	0.77	0.19	93,93,93,93	0
58	MG	23SB	3428	1/1	0.78	0.19	84,84,84,84	0
59	OHX	23SB	3126	7/7	0.78	0.29	110,115,124,217	0
58	MG	23SB	3377	1/1	0.78	0.12	47,47,47,47	0
58	MG	16SB	2318	1/1	0.78	0.48	65,65,65,65	0
58	MG	16SA	2355	1/1	0.78	0.20	51,51,51,51	0
60	K	23SA	3563	1/1	0.78	0.12	83,83,83,83	0
58	MG	23SB	3210	1/1	0.78	0.40	60,60,60,60	0
58	MG	16SB	2323	1/1	0.78	0.28	92,92,92,92	0
60	K	23SA	3599	1/1	0.78	0.11	66,66,66,66	0
58	MG	23SB	3308	1/1	0.78	0.23	73,73,73,73	0
58	MG	23SA	3461	1/1	0.78	0.20	44,44,44,44	0
58	MG	16SA	2345	1/1	0.78	0.10	89,89,89,89	0
58	MG	23SA	3118	1/1	0.79	0.39	59,59,59,59	0
58	MG	23SB	3397	1/1	0.79	0.06	59,59,59,59	0
58	MG	23SA	3051	1/1	0.79	0.44	53,53,53,53	0
60	K	23SA	3632	1/1	0.79	0.22	116,116,116,116	0
58	MG	16SB	2298	1/1	0.79	0.58	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	5SB	208	7/7	0.79	0.14	98,111,123,206	0
58	MG	23SA	3064	1/1	0.79	0.30	55,55,55,55	0
58	MG	16SA	2241	1/1	0.79	0.31	81,81,81,81	0
58	MG	23SA	3479	1/1	0.79	0.14	76,76,76,76	0
58	MG	5SA	203	1/1	0.79	0.41	79,79,79,79	0
58	MG	L5A	301	1/1	0.79	0.31	67,67,67,67	0
58	MG	23SA	3402	1/1	0.79	0.26	49,49,49,49	0
60	K	16SA	2418	1/1	0.79	0.33	97,97,97,97	0
60	K	23SB	3480	1/1	0.79	0.14	80,80,80,80	0
58	MG	23SB	3439	1/1	0.79	0.10	87,87,87,87	0
60	K	23SB	3492	1/1	0.79	0.11	146,146,146,146	0
58	MG	23SA	3107	1/1	0.79	0.42	37,37,37,37	0
58	MG	23SB	3260	1/1	0.79	0.40	63,63,63,63	0
60	K	23SB	3502	1/1	0.79	0.19	97,97,97,97	0
58	MG	23SB	3265	1/1	0.79	0.41	57,57,57,57	0
58	MG	23SA	3427	1/1	0.79	0.21	53,53,53,53	0
58	MG	23SA	3433	1/1	0.79	0.13	77,77,77,77	0
60	K	5SA	219	1/1	0.80	0.04	72,72,72,72	0
60	K	L3A	303	1/1	0.80	0.22	88,88,88,88	0
59	OHX	23SA	3308	7/7	0.80	0.15	78,95,108,232	0
58	MG	23SB	3258	1/1	0.80	0.23	72,72,72,72	0
58	MG	23SB	3293	1/1	0.80	0.41	71,71,71,71	0
60	K	16SB	2395	1/1	0.80	0.15	103,103,103,103	0
59	OHX	16SB	2242	7/7	0.80	0.13	140,145,168,211	0
59	OHX	16SB	2262	7/7	0.80	0.20	158,164,176,252	0
58	MG	23SA	3443	1/1	0.80	0.28	32,32,32,32	0
60	K	23SB	3473	1/1	0.80	0.11	108,108,108,108	0
60	K	23SA	3549	1/1	0.80	0.18	104,104,104,104	0
58	MG	23SA	3087	1/1	0.80	0.44	61,61,61,61	0
58	MG	23SA	3162	1/1	0.80	0.33	62,62,62,62	0
58	MG	23SA	3155	1/1	0.80	0.31	55,55,55,55	0
58	MG	23SB	3227	1/1	0.80	0.17	76,76,76,76	0
58	MG	23SA	3387	1/1	0.80	0.11	55,55,55,55	0
58	MG	23SA	3040	1/1	0.80	0.32	55,55,55,55	0
58	MG	23SB	3253	1/1	0.80	0.85	78,78,78,78	0
60	K	16SA	2385	1/1	0.80	0.33	107,107,107,107	0
60	K	16SA	2395	1/1	0.80	0.13	105,105,105,105	0
58	MG	16SB	2362	1/1	0.81	0.09	113,113,113,113	0
58	MG	5SA	216	1/1	0.81	0.16	67,67,67,67	0
59	OHX	23SB	3185	7/7	0.81	0.28	130,138,151,236	0
58	MG	16SA	2226	1/1	0.81	0.24	78,78,78,78	0
58	MG	S4A	302	1/1	0.81	0.11	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	L27A	101	1/1	0.81	0.37	35,35,35,35	0
58	MG	23SB	3224	1/1	0.81	0.24	68,68,68,68	0
58	MG	16SB	2304[A]	1/1	0.81	0.50	59,59,59,59	1
58	MG	16SB	2304[B]	1/1	0.81	0.50	56,56,56,56	1
58	MG	23SA	3141	1/1	0.81	0.45	60,60,60,60	0
58	MG	23SB	3252	1/1	0.81	0.20	68,68,68,68	0
58	MG	23SA	3168	1/1	0.81	0.44	89,89,89,89	0
58	MG	23SB	3257	1/1	0.81	0.29	62,62,62,62	0
60	K	23SB	3509	1/1	0.81	0.44	102,102,102,102	0
60	K	16SA	2415	1/1	0.81	0.14	89,89,89,89	0
60	K	23SB	3516	1/1	0.81	0.23	77,77,77,77	0
58	MG	23SA	3082	1/1	0.81	0.39	50,50,50,50	0
58	MG	23SB	3423	1/1	0.81	0.10	73,73,73,73	0
60	K	23SA	3584	1/1	0.82	0.14	85,85,85,85	0
60	K	23SA	3588	1/1	0.82	0.68	70,70,70,70	0
59	OHX	23SB	3179	7/7	0.82	0.28	154,162,169,245	0
59	OHX	23SB	3183	7/7	0.82	0.23	148,155,160,237	0
58	MG	23SA	3482	1/1	0.82	0.22	66,66,66,66	0
58	MG	16SA	2256	1/1	0.82	0.15	72,72,72,72	0
59	OHX	23SB	3195	7/7	0.82	0.16	182,185,190,255	0
58	MG	23SA	3047	1/1	0.82	0.30	52,52,52,52	0
58	MG	16SB	2306	1/1	0.82	0.25	56,56,56,56	0
58	MG	23SB	3431	1/1	0.82	0.15	113,113,113,113	0
58	MG	23SA	3156	1/1	0.82	0.38	69,69,69,69	0
58	MG	23SA	3036	1/1	0.82	0.35	53,53,53,53	0
58	MG	16SA	2357	1/1	0.82	0.11	63,63,63,63	0
58	MG	PSIB	105	1/1	0.82	0.27	78,78,78,78	0
58	MG	23SB	3383	1/1	0.82	0.14	77,77,77,77	0
58	MG	23SB	3384	1/1	0.82	0.14	70,70,70,70	0
58	MG	23SB	3269	1/1	0.82	0.35	50,50,50,50	0
58	MG	23SA	3095	1/1	0.82	0.45	67,67,67,67	0
60	K	23SB	3476	1/1	0.82	0.50	77,77,77,77	0
59	OHX	23SA	3311	7/7	0.82	0.22	99,101,117,228	0
59	OHX	23SA	3346	7/7	0.82	0.19	143,147,162,241	0
58	MG	23SA	3077	1/1	0.82	0.44	48,48,48,48	0
60	K	23SA	3542	1/1	0.82	0.15	105,105,105,105	0
60	K	23SA	3548	1/1	0.82	0.67	100,100,100,100	0
58	MG	23SB	3396	1/1	0.82	0.11	55,55,55,55	0
60	K	23SA	3550	1/1	0.82	0.44	81,81,81,81	0
58	MG	23SB	3279	1/1	0.82	0.27	82,82,82,82	0
58	MG	23SA	3526	1/1	0.82	0.21	76,76,76,76	0
58	MG	PSIA	101	1/1	0.82	0.47	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3481	1/1	0.82	0.10	55,55,55,55	0
58	MG	16SA	2347	1/1	0.83	0.08	78,78,78,78	0
59	OHX	23SB	3186	7/7	0.83	0.32	122,128,152,228	0
58	MG	23SB	3209	1/1	0.83	0.54	63,63,63,63	0
58	MG	23SB	3430	1/1	0.83	0.10	70,70,70,70	0
58	MG	23SA	3136	1/1	0.83	0.31	77,77,77,77	0
58	MG	23SB	3335	1/1	0.83	0.13	51,51,51,51	0
58	MG	23SB	3336	1/1	0.83	0.15	64,64,64,64	0
60	K	16SA	2380	1/1	0.83	0.14	91,91,91,91	0
58	MG	5SA	217	1/1	0.83	0.18	85,85,85,85	0
58	MG	23SA	3483	1/1	0.83	0.07	92,92,92,92	0
58	MG	23SA	3007	1/1	0.83	0.38	61,61,61,61	0
58	MG	23SA	3164	1/1	0.83	0.46	61,61,61,61	0
60	K	S4B	302	1/1	0.83	0.16	115,115,115,115	0
59	OHX	16SA	2292	7/7	0.83	0.21	88,100,116,196	0
60	K	23SB	3446	1/1	0.83	0.09	85,85,85,85	0
58	MG	16SB	2325	1/1	0.83	0.15	92,92,92,92	0
59	OHX	TRNA	102	7/7	0.83	0.29	125,127,144,247	0
58	MG	23SA	3034	1/1	0.83	0.35	60,60,60,60	0
58	MG	23SA	3434	1/1	0.83	0.25	102,102,102,102	0
59	OHX	23SA	3317	7/7	0.83	0.19	107,109,120,235	0
58	MG	23SA	3109	1/1	0.83	0.61	55,55,55,55	0
58	MG	16SA	2249	1/1	0.83	0.42	77,77,77,77	0
58	MG	16SB	2342	1/1	0.83	0.15	98,98,98,98	0
58	MG	23SA	3057	1/1	0.83	0.21	44,44,44,44	0
60	K	23SB	3499	1/1	0.83	0.13	85,85,85,85	0
58	MG	16SB	2292	1/1	0.83	0.39	59,59,59,59	0
60	K	23SA	3553	1/1	0.83	0.18	92,92,92,92	0
58	MG	16SA	2215	1/1	0.83	0.56	58,58,58,58	0
59	OHX	23SB	3165	7/7	0.83	0.12	146,151,160,234	0
58	MG	23SA	3060	1/1	0.83	0.42	63,63,63,63	0
58	MG	23SA	3532	1/1	0.83	0.17	100,100,100,100	0
58	MG	23SA	3099	1/1	0.83	0.34	80,80,80,80	0
59	OHX	23SA	3380	7/7	0.84	0.21	101,108,113,232	0
59	OHX	5SA	213	7/7	0.84	0.35	118,123,145,229	0
59	OHX	L28A	101	7/7	0.84	0.38	84,89,95,234	0
58	MG	16SB	2360	1/1	0.84	0.08	95,95,95,95	0
59	OHX	16SB	2253	7/7	0.84	0.19	122,127,146,233	0
58	MG	16SB	2361	1/1	0.84	0.12	122,122,122,122	0
59	OHX	16SB	2272	7/7	0.84	0.18	140,141,165,247	0
59	OHX	23SB	3063	7/7	0.84	0.15	90,104,112,182	0
58	MG	23SB	3266	1/1	0.84	0.21	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SB	3267	1/1	0.84	0.17	63,63,63,63	0
60	K	23SA	3608	1/1	0.84	0.17	80,80,80,80	0
58	MG	23SB	3422	1/1	0.84	0.12	72,72,72,72	0
58	MG	16SB	2317	1/1	0.84	0.16	98,98,98,98	0
58	MG	23SA	3111	1/1	0.84	0.55	56,56,56,56	0
58	MG	23SA	3497	1/1	0.84	0.10	81,81,81,81	0
58	MG	23SB	3273	1/1	0.84	0.52	51,51,51,51	0
58	MG	23SA	3452	1/1	0.84	0.23	40,40,40,40	0
60	K	16SB	2370	1/1	0.84	0.12	135,135,135,135	0
58	MG	23SB	3277	1/1	0.84	0.21	41,41,41,41	0
60	K	16SB	2384	1/1	0.84	0.13	98,98,98,98	0
59	OHX	23SB	3196	7/7	0.84	0.19	157,162,174,238	0
58	MG	16SB	2324	1/1	0.84	0.18	86,86,86,86	0
58	MG	23SA	3501	1/1	0.84	0.07	66,66,66,66	0
60	K	16SA	2377	1/1	0.84	0.11	101,101,101,101	0
58	MG	5SB	212	1/1	0.84	0.21	103,103,103,103	0
58	MG	16SB	2326	1/1	0.84	0.51	78,78,78,78	0
58	MG	5SB	214	1/1	0.84	0.49	56,56,56,56	0
60	K	23SB	3461	1/1	0.84	0.10	67,67,67,67	0
58	MG	23SA	3115	1/1	0.84	0.48	91,91,91,91	0
58	MG	23SB	3290	1/1	0.84	0.34	47,47,47,47	0
60	K	16SA	2389	1/1	0.84	0.17	82,82,82,82	0
58	MG	23SA	3070	1/1	0.84	0.33	58,58,58,58	0
58	MG	23SA	3515	1/1	0.84	0.10	101,101,101,101	0
59	OHX	16SA	2330	7/7	0.84	0.19	153,156,163,230	0
58	MG	23SB	3239	1/1	0.84	0.32	50,50,50,50	0
60	K	23SB	3498	1/1	0.84	0.16	108,108,108,108	0
58	MG	16SA	2223	1/1	0.84	0.25	102,102,102,102	0
58	MG	16SA	2367	1/1	0.84	0.23	83,83,83,83	0
58	MG	23SB	3307	1/1	0.84	0.45	71,71,71,71	0
58	MG	23SA	3438	1/1	0.84	0.12	88,88,88,88	0
60	K	23SA	3541	1/1	0.84	0.19	102,102,102,102	0
58	MG	16SB	2315	1/1	0.84	0.36	85,85,85,85	0
59	OHX	23SA	3363	7/7	0.84	0.30	109,126,158,239	0
58	MG	16SA	2202	1/1	0.84	0.29	57,57,57,57	0
58	MG	23SA	3020	1/1	0.85	0.51	32,32,32,32	0
58	MG	16SB	2311	1/1	0.85	0.40	84,84,84,84	0
60	K	23SA	3635	1/1	0.85	0.13	69,69,69,69	0
58	MG	16SA	2253	1/1	0.85	0.41	50,50,50,50	0
60	K	23SA	3638	1/1	0.85	0.22	104,104,104,104	0
59	OHX	23SA	3353	7/7	0.85	0.23	128,135,151,244	0
59	OHX	23SA	3354	7/7	0.85	0.32	110,114,141,218	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SB	3361	1/1	0.85	0.21	51,51,51,51	0
60	K	16SB	2367	1/1	0.85	0.15	115,115,115,115	0
58	MG	23SB	3362	1/1	0.85	0.12	49,49,49,49	0
60	K	16SB	2372	1/1	0.85	0.07	105,105,105,105	0
58	MG	16SA	2369	1/1	0.85	0.08	120,120,120,120	0
59	OHX	5SA	209	7/7	0.85	0.17	81,100,111,199	0
60	K	16SB	2387	1/1	0.85	0.31	93,93,93,93	0
58	MG	16SB	2350	1/1	0.85	0.15	99,99,99,99	0
58	MG	23SA	3495	1/1	0.85	0.17	67,67,67,67	0
58	MG	23SA	3080	1/1	0.85	0.20	57,57,57,57	0
58	MG	23SA	3114	1/1	0.85	0.33	55,55,55,55	0
58	MG	16SA	2221	1/1	0.85	0.38	62,62,62,62	0
58	MG	23SA	3116	1/1	0.85	0.26	62,62,62,62	0
58	MG	23SB	3391	1/1	0.85	0.15	71,71,71,71	0
59	OHX	23SB	3104	7/7	0.85	0.15	111,116,130,225	0
58	MG	L4B	302	1/1	0.85	1.39	94,94,94,94	0
58	MG	23SA	3053	1/1	0.85	0.34	33,33,33,33	0
59	OHX	23SB	3176	7/7	0.85	0.21	143,147,163,222	0
58	MG	L35B	103	1/1	0.85	0.44	82,82,82,82	0
58	MG	L3A	301	1/1	0.85	0.32	57,57,57,57	0
59	OHX	16SA	2300	7/7	0.85	0.15	104,105,114,228	0
59	OHX	16SA	2310	7/7	0.85	0.13	109,114,122,197	0
58	MG	16SA	2247	1/1	0.85	0.22	66,66,66,66	0
58	MG	23SB	3407	1/1	0.85	0.15	51,51,51,51	0
59	OHX	ASIA	102	7/7	0.85	0.13	113,120,131,219	0
58	MG	23SA	3151	1/1	0.85	0.29	59,59,59,59	0
60	K	23SB	3504	1/1	0.85	0.12	87,87,87,87	0
60	K	23SA	3595	1/1	0.85	0.30	71,71,71,71	0
58	MG	23SB	3333	1/1	0.85	0.18	42,42,42,42	0
58	MG	16SB	2309	1/1	0.85	0.27	77,77,77,77	0
60	K	23SA	3626	1/1	0.85	0.11	69,69,69,69	0
60	K	23SB	3520	1/1	0.85	0.09	107,107,107,107	0
60	K	L3B	303	1/1	0.85	0.14	98,98,98,98	0
60	K	23SA	3629	1/1	0.85	0.11	65,65,65,65	0
59	OHX	16SB	2266	7/7	0.86	0.15	135,142,152,217	0
58	MG	23SA	3163	1/1	0.86	0.24	45,45,45,45	0
59	OHX	23SB	3035	7/7	0.86	0.18	65,93,108,150	0
58	MG	23SA	3110	1/1	0.86	0.25	109,109,109,109	0
59	OHX	23SB	3089	7/7	0.86	0.20	106,112,116,216	0
58	MG	23SA	3441	1/1	0.86	0.15	43,43,43,43	0
59	OHX	23SB	3119	7/7	0.86	0.15	86,94,113,210	0
60	K	23SA	3603	1/1	0.86	0.16	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3139	1/1	0.86	0.37	58,58,58,58	0
59	OHX	23SB	3150	7/7	0.86	0.14	134,143,159,230	0
59	OHX	23SB	3151	7/7	0.86	0.18	135,140,158,248	0
60	K	23SA	3631	1/1	0.86	0.17	78,78,78,78	0
58	MG	23SB	3303	1/1	0.86	0.21	66,66,66,66	0
59	OHX	23SB	3171	7/7	0.86	0.20	129,131,134,212	0
58	MG	L35B	102	1/1	0.86	0.19	91,91,91,91	0
58	MG	23SA	3517	1/1	0.86	0.05	82,82,82,82	0
58	MG	23SB	3254	1/1	0.86	0.30	46,46,46,46	0
58	MG	16SB	2301	1/1	0.86	0.41	68,68,68,68	0
58	MG	16SA	2351	1/1	0.86	0.13	103,103,103,103	0
58	MG	23SB	3390	1/1	0.86	0.16	44,44,44,44	0
58	MG	16SA	2372	1/1	0.86	0.07	92,92,92,92	0
59	OHX	16SA	2337	7/7	0.86	0.10	197,199,204,249	0
58	MG	23SA	3147	1/1	0.86	0.23	76,76,76,76	0
59	OHX	23SB	3199	7/7	0.86	0.21	100,103,106,239	0
58	MG	16SB	2357	1/1	0.86	0.07	96,96,96,96	0
59	OHX	23SA	3221	7/7	0.86	0.16	73,86,105,162	0
60	K	16SB	2388	1/1	0.86	0.10	119,119,119,119	0
59	OHX	23SA	3255	7/7	0.86	0.16	131,151,160,208	0
59	OHX	23SA	3295	7/7	0.86	0.16	103,109,114,228	0
58	MG	23SA	3476	1/1	0.86	0.15	51,51,51,51	0
58	MG	16SA	2255	1/1	0.86	0.27	82,82,82,82	0
59	OHX	23SA	3312	7/7	0.86	0.34	74,87,95,219	0
58	MG	23SA	3072	1/1	0.86	0.26	68,68,68,68	0
58	MG	16SA	2228	1/1	0.86	0.50	64,64,64,64	0
59	OHX	23SA	3347	7/7	0.86	0.16	126,132,144,218	0
58	MG	23SA	3079	1/1	0.86	0.47	76,76,76,76	0
60	K	16SA	2405	1/1	0.86	0.16	115,115,115,115	0
58	MG	16SA	2246	1/1	0.86	0.45	100,100,100,100	0
58	MG	23SA	3411	1/1	0.86	0.17	43,43,43,43	0
58	MG	23SB	3426	1/1	0.86	0.07	70,70,70,70	0
60	K	23SB	3487	1/1	0.86	0.09	65,65,65,65	0
60	K	16SA	2420	1/1	0.86	0.10	99,99,99,99	0
60	K	S20A	201	1/1	0.86	0.20	123,123,123,123	0
58	MG	16SA	2362	1/1	0.86	0.20	93,93,93,93	0
59	OHX	23SA	3377	7/7	0.86	0.19	145,154,161,239	0
58	MG	23SB	3280	1/1	0.86	0.23	59,59,59,59	0
60	K	23SA	3540	1/1	0.86	0.16	79,79,79,79	0
59	OHX	23SA	3381	7/7	0.86	0.29	74,88,105,228	0
58	MG	23SA	3103	1/1	0.86	0.57	85,85,85,85	0
58	MG	23SB	3282	1/1	0.86	0.20	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	16SA	2230	1/1	0.86	0.38	60,60,60,60	0
58	MG	16SA	2209	1/1	0.86	0.22	86,86,86,86	0
59	OHX	16SB	2250	7/7	0.86	0.16	110,121,130,223	0
58	MG	23SB	3358	1/1	0.86	0.12	47,47,47,47	0
58	MG	23SA	3509	1/1	0.86	0.11	52,52,52,52	0
58	MG	23SA	3106	1/1	0.87	0.43	60,60,60,60	0
59	OHX	23SA	3373	7/7	0.87	0.38	92,109,134,230	0
58	MG	23SB	3324	1/1	0.87	0.14	58,58,58,58	0
59	OHX	5SB	209	7/7	0.87	0.17	121,127,134,216	0
58	MG	16SB	2320	1/1	0.87	0.25	62,62,62,62	0
58	MG	23SB	3232	1/1	0.87	0.29	60,60,60,60	0
59	OHX	23SA	3382	7/7	0.87	0.31	86,97,101,238	0
58	MG	23SB	3299	1/1	0.87	0.35	68,68,68,68	0
58	MG	23SB	3235	1/1	0.87	0.36	59,59,59,59	0
58	MG	23SA	3032	1/1	0.87	0.26	49,49,49,49	0
58	MG	23SB	3414	1/1	0.87	0.12	83,83,83,83	0
60	K	16SA	2387	1/1	0.87	0.15	93,93,93,93	0
59	OHX	16SB	2246	7/7	0.87	0.12	104,108,114,227	0
58	MG	23SA	3014	1/1	0.87	0.49	70,70,70,70	0
58	MG	23SB	3345	1/1	0.87	0.10	65,65,65,65	0
59	OHX	16SB	2261	7/7	0.87	0.16	136,151,159,251	0
58	MG	16SA	2342	1/1	0.87	0.10	85,85,85,85	0
60	K	16SB	2390	1/1	0.87	0.16	96,96,96,96	0
59	OHX	16SA	2340	7/7	0.87	0.14	102,105,115,209	0
60	K	16SA	2416	1/1	0.87	0.12	86,86,86,86	0
58	MG	23SB	3355	1/1	0.87	0.14	65,65,65,65	0
60	K	S14B	102	1/1	0.87	0.14	116,116,116,116	0
58	MG	23SA	3487	1/1	0.87	0.19	40,40,40,40	0
58	MG	23SA	3045	1/1	0.87	0.33	44,44,44,44	0
58	MG	23SB	3427	1/1	0.87	0.15	49,49,49,49	0
59	OHX	23SB	3095	7/7	0.87	0.21	94,97,104,213	0
59	OHX	23SA	3257	7/7	0.87	0.13	134,139,144,224	0
60	K	23SB	3462	1/1	0.87	0.27	102,102,102,102	0
58	MG	23SA	3429	1/1	0.87	0.21	60,60,60,60	0
59	OHX	23SA	3304	7/7	0.87	0.26	109,115,118,229	0
59	OHX	23SB	3148	7/7	0.87	0.14	111,126,143,215	0
59	OHX	23SA	3307	7/7	0.87	0.16	108,113,123,223	0
58	MG	23SB	3312	1/1	0.87	0.32	41,41,41,41	0
59	OHX	23SB	3163	7/7	0.87	0.22	127,143,150,243	0
58	MG	23SA	3462	1/1	0.87	0.18	51,51,51,51	0
58	MG	23SA	3153	1/1	0.87	0.28	51,51,51,51	0
58	MG	23SA	3535	1/1	0.87	0.22	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SA	3339	7/7	0.87	0.33	99,120,146,218	0
59	OHX	23SB	3178	7/7	0.87	0.36	103,113,139,232	0
58	MG	23SB	3288	1/1	0.87	0.17	72,72,72,72	0
59	OHX	23SB	3180	7/7	0.87	0.34	104,121,149,231	0
58	MG	23SB	3437	1/1	0.87	0.43	86,86,86,86	0
58	MG	23SB	3385	1/1	0.87	0.11	82,82,82,82	0
58	MG	23SA	3065	1/1	0.87	0.32	56,56,56,56	0
59	OHX	23SB	3189	7/7	0.87	0.20	147,159,176,238	0
58	MG	23SB	3387	1/1	0.87	0.08	53,53,53,53	0
60	K	23SA	3623	1/1	0.87	0.08	80,80,80,80	0
58	MG	23SA	3391	1/1	0.87	0.18	37,37,37,37	0
58	MG	23SB	3233	1/1	0.88	0.32	41,41,41,41	0
58	MG	16SA	2364	1/1	0.88	0.10	86,86,86,86	0
58	MG	23SA	3399	1/1	0.88	0.15	37,37,37,37	0
58	MG	23SA	3050	1/1	0.88	0.30	58,58,58,58	0
60	K	23SA	3564	1/1	0.88	0.14	72,72,72,72	0
58	MG	16SA	2371	1/1	0.88	0.08	100,100,100,100	0
59	OHX	23SB	3140	7/7	0.88	0.40	108,117,123,240	0
58	MG	23SA	3035	1/1	0.88	0.31	52,52,52,52	0
60	K	23SA	3591	1/1	0.88	0.21	66,66,66,66	0
58	MG	23SA	3119	1/1	0.88	0.21	61,61,61,61	0
58	MG	23SA	3054	1/1	0.88	0.32	51,51,51,51	0
59	OHX	23SB	3154	7/7	0.88	0.24	165,172,176,225	0
59	OHX	23SA	3272	7/7	0.88	0.16	84,96,103,208	0
58	MG	16SA	2365	1/1	0.88	0.15	53,53,53,53	0
60	K	23SA	3610	1/1	0.88	0.14	62,62,62,62	0
60	K	23SA	3611	1/1	0.88	0.31	118,118,118,118	0
60	K	23SA	3622	1/1	0.88	0.13	61,61,61,61	0
59	OHX	23SB	3170	7/7	0.88	0.27	132,138,158,216	0
59	OHX	23SA	3301	7/7	0.88	0.12	121,123,127,230	0
58	MG	16SB	2281	1/1	0.88	0.26	81,81,81,81	0
58	MG	16SB	2335	1/1	0.88	0.15	74,74,74,74	0
58	MG	23SB	3261	1/1	0.88	0.22	52,52,52,52	0
58	MG	23SA	3078	1/1	0.88	0.27	50,50,50,50	0
58	MG	23SA	3102	1/1	0.88	0.51	45,45,45,45	0
58	MG	16SB	2291	1/1	0.88	0.34	73,73,73,73	0
59	OHX	23SB	3184	7/7	0.88	0.17	116,132,141,221	0
60	K	5SA	218	1/1	0.88	0.05	79,79,79,79	0
59	OHX	23SA	3318	7/7	0.88	0.17	138,157,165,234	0
58	MG	23SB	3320	1/1	0.88	0.30	112,112,112,112	0
59	OHX	23SA	3341	7/7	0.88	0.16	113,122,146,225	0
60	K	16SB	2366	1/1	0.88	0.15	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3161	1/1	0.88	0.55	88,88,88,88	0
60	K	16SB	2368	1/1	0.88	0.06	103,103,103,103	0
59	OHX	23SB	3193	7/7	0.88	0.17	132,147,161,243	0
58	MG	16SB	2348	1/1	0.88	0.12	56,56,56,56	0
60	K	16SB	2374	1/1	0.88	0.13	94,94,94,94	0
60	K	16SB	2375	1/1	0.88	0.11	106,106,106,106	0
60	K	16SB	2377	1/1	0.88	0.07	82,82,82,82	0
58	MG	23SB	3326	1/1	0.88	0.16	58,58,58,58	0
59	OHX	23SB	3197	7/7	0.88	0.27	100,101,110,231	0
58	MG	16SB	2294	1/1	0.88	0.28	77,77,77,77	0
59	OHX	5SB	205	7/7	0.88	0.12	120,123,130,211	0
58	MG	23SA	3126	1/1	0.88	0.19	62,62,62,62	0
59	OHX	23SA	3362	7/7	0.88	0.32	102,109,127,232	0
58	MG	16SA	2366	1/1	0.88	0.08	107,107,107,107	0
58	MG	23SA	3130	1/1	0.88	0.36	61,61,61,61	0
60	K	S13B	201	1/1	0.88	0.14	139,139,139,139	0
59	OHX	23SA	3367	7/7	0.88	0.31	122,139,164,218	0
59	OHX	23SA	3368	7/7	0.88	0.26	115,130,133,209	0
58	MG	23SA	3135	1/1	0.88	0.17	55,55,55,55	0
58	MG	23SA	3446	1/1	0.88	0.17	43,43,43,43	0
58	MG	23SB	3337	1/1	0.88	0.16	48,48,48,48	0
58	MG	16SA	2207	1/1	0.88	0.36	42,42,42,42	0
58	MG	23SA	3062	1/1	0.88	0.35	61,61,61,61	0
60	K	23SB	3466	1/1	0.88	0.11	68,68,68,68	0
60	K	23SB	3467	1/1	0.88	0.35	106,106,106,106	0
58	MG	23SA	3043	1/1	0.88	0.34	57,57,57,57	0
58	MG	23SA	3534	1/1	0.88	0.06	55,55,55,55	0
59	OHX	5SA	214	7/7	0.88	0.20	138,149,161,234	0
58	MG	16SB	2313	1/1	0.88	0.23	142,142,142,142	0
59	OHX	16SB	2214	7/7	0.88	0.12	116,119,134,169	0
58	MG	23SA	3022	1/1	0.88	0.40	40,40,40,40	0
60	K	16SA	2417	1/1	0.88	0.08	81,81,81,81	0
58	MG	23SB	3220	1/1	0.88	0.09	72,72,72,72	0
58	MG	16SA	2363	1/1	0.88	0.08	72,72,72,72	0
58	MG	23SB	3373	1/1	0.88	0.10	48,48,48,48	0
59	OHX	16SB	2260	7/7	0.88	0.10	145,153,160,239	0
58	MG	23SB	3375	1/1	0.88	0.15	66,66,66,66	0
58	MG	23SB	3294	1/1	0.88	0.20	55,55,55,55	0
60	K	23SB	3505	1/1	0.88	0.09	75,75,75,75	0
58	MG	23SA	3384	1/1	0.88	0.22	43,43,43,43	0
60	K	23SB	3511	1/1	0.88	0.08	119,119,119,119	0
58	MG	23SA	3113	1/1	0.88	0.38	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	ASIB	103	7/7	0.88	0.16	124,130,147,238	0
60	K	23SB	3517	1/1	0.88	0.14	103,103,103,103	0
60	K	23SA	3545	1/1	0.88	0.40	103,103,103,103	0
59	OHX	PSIB	102	7/7	0.88	0.10	143,157,164,248	0
60	K	5SB	216	1/1	0.88	0.05	101,101,101,101	0
59	OHX	16SA	2316	7/7	0.88	0.15	114,126,153,236	0
59	OHX	16SA	2323	7/7	0.88	0.10	162,167,181,233	0
59	OHX	23SB	3087	7/7	0.89	0.18	86,94,99,175	0
58	MG	PSIB	104	1/1	0.89	0.55	79,79,79,79	0
60	K	23SA	3574	1/1	0.89	0.14	52,52,52,52	0
58	MG	16SA	2220	1/1	0.89	0.34	47,47,47,47	0
60	K	23SA	3580	1/1	0.89	0.08	39,39,39,39	0
60	K	16SB	2398	1/1	0.89	0.15	101,101,101,101	0
58	MG	23SA	3148	1/1	0.89	0.30	64,64,64,64	0
59	OHX	23SB	3110	7/7	0.89	0.18	104,110,117,225	0
59	OHX	23SB	3117	7/7	0.89	0.20	88,92,98,197	0
59	OHX	23SA	3258	7/7	0.89	0.14	90,100,113,211	0
60	K	23SB	3443	1/1	0.89	0.32	110,110,110,110	0
59	OHX	23SB	3121	7/7	0.89	0.11	95,102,110,221	0
58	MG	23SA	3410	1/1	0.89	0.11	57,57,57,57	0
59	OHX	23SB	3132	7/7	0.89	0.16	105,111,127,226	0
59	OHX	23SB	3135	7/7	0.89	0.21	81,95,103,232	0
59	OHX	23SA	3274	7/7	0.89	0.14	95,102,117,215	0
59	OHX	23SA	3288	7/7	0.89	0.18	82,88,106,207	0
58	MG	23SA	3440	1/1	0.89	0.15	88,88,88,88	0
60	K	23SB	3470	1/1	0.89	0.26	78,78,78,78	0
60	K	16SA	2398	1/1	0.89	0.10	67,67,67,67	0
58	MG	23SB	3350	1/1	0.89	0.15	37,37,37,37	0
59	OHX	16SA	2290	7/7	0.89	0.15	82,92,113,204	0
58	MG	16SA	2219	1/1	0.89	0.18	74,74,74,74	0
58	MG	23SA	3414	1/1	0.89	0.10	50,50,50,50	0
59	OHX	23SB	3166	7/7	0.89	0.33	91,100,114,205	0
59	OHX	16SA	2309	7/7	0.89	0.14	132,139,149,214	0
58	MG	23SB	3306	1/1	0.89	0.20	65,65,65,65	0
59	OHX	16SB	2222	7/7	0.89	0.14	108,112,124,190	0
58	MG	23SB	3392	1/1	0.89	0.15	52,52,52,52	0
58	MG	23SA	3150	1/1	0.89	0.65	60,60,60,60	0
58	MG	23SA	3171	1/1	0.89	0.20	49,49,49,49	0
59	OHX	16SA	2328	7/7	0.89	0.24	143,155,166,234	0
60	K	16SB	2365	1/1	0.89	0.15	126,126,126,126	0
59	OHX	23SA	3343	7/7	0.89	0.23	93,117,131,217	0
58	MG	23SB	3435	1/1	0.89	0.10	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SA	2332	7/7	0.89	0.47	133,137,152,236	0
59	OHX	16SB	2263	7/7	0.89	0.11	157,159,167,234	0
59	OHX	23SA	3349	7/7	0.89	0.36	115,126,155,229	0
58	MG	23SA	3392	1/1	0.89	0.13	52,52,52,52	0
58	MG	23SA	3489	1/1	0.89	0.21	36,36,36,36	0
58	MG	L4A	303	1/1	0.89	0.08	73,73,73,73	0
59	OHX	23SA	3360	7/7	0.89	0.24	90,94,110,208	0
60	K	L5B	202	1/1	0.89	0.16	110,110,110,110	0
58	MG	16SA	2344	1/1	0.89	0.09	82,82,82,82	0
61	SJE	23SA	3640	87/87	0.89	0.38	44,53,86,93	0
59	OHX	16SB	2257	7/7	0.90	0.18	149,153,169,230	0
59	OHX	23SA	3291	7/7	0.90	0.10	126,133,145,190	0
58	MG	23SA	3169	1/1	0.90	0.44	82,82,82,82	0
58	MG	23SA	3138	1/1	0.90	0.30	46,46,46,46	0
60	K	23SA	3639	1/1	0.90	0.09	80,80,80,80	0
59	OHX	L35B	101	7/7	0.90	0.15	120,126,131,191	0
58	MG	23SB	3370	1/1	0.90	0.17	49,49,49,49	0
58	MG	23SB	3436	1/1	0.90	0.14	94,94,94,94	0
58	MG	23SB	3372	1/1	0.90	0.10	50,50,50,50	0
59	OHX	16SB	2275	7/7	0.90	0.21	115,137,163,225	0
58	MG	23SA	3474	1/1	0.90	0.15	59,59,59,59	0
58	MG	16SA	2203	1/1	0.90	0.48	60,60,60,60	0
59	OHX	MRNB	101	7/7	0.90	0.13	144,148,154,235	0
58	MG	23SB	3206	1/1	0.90	0.46	34,34,34,34	0
58	MG	23SB	3208	1/1	0.90	0.40	52,52,52,52	0
58	MG	23SA	3518	1/1	0.90	0.13	61,61,61,61	0
58	MG	16SA	2234	1/1	0.90	0.40	83,83,83,83	0
58	MG	23SA	3478	1/1	0.90	0.15	50,50,50,50	0
58	MG	23SA	3089	1/1	0.90	0.28	77,77,77,77	0
58	MG	23SA	3529	1/1	0.90	0.16	42,42,42,42	0
59	OHX	16SA	2281	7/7	0.90	0.11	106,115,123,199	0
58	MG	23SA	3176	1/1	0.90	0.61	63,63,63,63	0
58	MG	16SB	2297	1/1	0.90	0.48	64,64,64,64	0
59	OHX	16SA	2293	7/7	0.90	0.16	92,98,111,198	0
59	OHX	23SA	3359	7/7	0.90	0.11	128,136,163,233	0
58	MG	23SA	3090	1/1	0.90	0.28	49,49,49,49	0
59	OHX	23SB	3138	7/7	0.90	0.13	150,164,170,228	0
58	MG	23SA	3533	1/1	0.90	0.13	49,49,49,49	0
59	OHX	23SB	3141	7/7	0.90	0.16	98,103,118,228	0
58	MG	23SA	3061	1/1	0.90	0.43	83,83,83,83	0
60	K	23SB	3442	1/1	0.90	0.14	112,112,112,112	0
59	OHX	23SB	3149	7/7	0.90	0.17	111,128,143,208	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SA	3364	7/7	0.90	0.19	96,103,122,203	0
58	MG	16SB	2343	1/1	0.90	0.23	148,148,148,148	0
58	MG	23SA	3128	1/1	0.90	0.24	62,62,62,62	0
60	K	23SB	3456	1/1	0.90	0.06	75,75,75,75	0
59	OHX	23SB	3157	7/7	0.90	0.27	120,135,155,223	0
58	MG	23SB	3403	1/1	0.90	0.11	52,52,52,52	0
59	OHX	23SA	3369	7/7	0.90	0.19	125,136,152,237	0
58	MG	23SA	3105	1/1	0.90	0.24	59,59,59,59	0
59	OHX	23SA	3374	7/7	0.90	0.22	123,128,153,223	0
58	MG	16SA	2361	1/1	0.90	0.10	75,75,75,75	0
59	OHX	23SB	3172	7/7	0.90	0.35	120,133,146,238	0
59	OHX	23SB	3174	7/7	0.90	0.32	128,128,151,234	0
58	MG	23SB	3343	1/1	0.90	0.08	65,65,65,65	0
60	K	23SB	3485	1/1	0.90	0.17	72,72,72,72	0
59	OHX	16SA	2333	7/7	0.90	0.11	128,146,168,234	0
60	K	23SA	3581	1/1	0.90	0.21	72,72,72,72	0
58	MG	23SB	3344	1/1	0.90	0.11	50,50,50,50	0
58	MG	23SA	3393	1/1	0.90	0.11	54,54,54,54	0
60	K	23SA	3590	1/1	0.90	0.19	67,67,67,67	0
58	MG	23SB	3347	1/1	0.90	0.11	65,65,65,65	0
58	MG	23SA	3165	1/1	0.90	0.57	62,62,62,62	0
58	MG	23SB	3424	1/1	0.90	0.16	71,71,71,71	0
60	K	23SB	3503	1/1	0.90	0.14	72,72,72,72	0
58	MG	23SA	3006	1/1	0.90	0.36	50,50,50,50	0
59	OHX	16SB	2217	7/7	0.90	0.13	95,102,111,201	0
60	K	23SA	3605	1/1	0.90	0.10	74,74,74,74	0
58	MG	16SB	2359	1/1	0.90	0.11	103,103,103,103	0
60	K	23SB	3512	1/1	0.90	0.08	79,79,79,79	0
59	OHX	23SB	3191	7/7	0.90	0.21	112,116,127,213	0
58	MG	23SB	3357	1/1	0.90	0.09	65,65,65,65	0
60	K	23SA	3612	1/1	0.90	0.09	73,73,73,73	0
60	K	23SA	3615	1/1	0.90	0.21	69,69,69,69	0
58	MG	23SA	3030	1/1	0.90	0.56	51,51,51,51	0
59	OHX	23SB	3194	7/7	0.90	0.31	133,151,170,230	0
58	MG	23SA	3406	1/1	0.90	0.07	63,63,63,63	0
59	OHX	16SB	2251	7/7	0.90	0.15	125,131,136,216	0
58	MG	23SA	3456	1/1	0.90	0.17	50,50,50,50	0
59	OHX	23SB	3198	7/7	0.90	0.28	107,108,121,238	0
58	MG	23SA	3160	1/1	0.91	0.15	55,55,55,55	0
60	K	23SA	3618	1/1	0.91	0.11	62,62,62,62	0
58	MG	23SB	3432	1/1	0.91	0.11	46,46,46,46	0
58	MG	23SA	3049	1/1	0.91	0.40	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	16SB	2337	1/1	0.91	0.13	100,100,100,100	0
60	K	23SA	3627	1/1	0.91	0.11	67,67,67,67	0
58	MG	16SA	2360	1/1	0.91	0.17	72,72,72,72	0
58	MG	16SB	2299	1/1	0.91	0.29	50,50,50,50	0
58	MG	23SA	3496	1/1	0.91	0.07	63,63,63,63	0
58	MG	23SA	3420	1/1	0.91	0.22	57,57,57,57	0
59	OHX	5SB	203	7/7	0.91	0.15	102,107,119,182	0
58	MG	23SA	3085	1/1	0.91	0.37	52,52,52,52	0
58	MG	23SA	3424	1/1	0.91	0.19	36,36,36,36	0
59	OHX	ASIB	102	7/7	0.91	0.12	152,174,187,224	0
59	OHX	5SB	210	7/7	0.91	0.22	125,130,151,226	0
58	MG	23SB	3378	1/1	0.91	0.13	70,70,70,70	0
59	OHX	23SA	3320	7/7	0.91	0.22	94,95,109,191	0
59	OHX	23SA	3336	7/7	0.91	0.24	112,116,141,218	0
58	MG	23SB	3381	1/1	0.91	0.17	49,49,49,49	0
58	MG	16SB	2354	1/1	0.91	0.10	102,102,102,102	0
60	K	16SA	2382	1/1	0.91	0.11	88,88,88,88	0
59	OHX	23SA	3342	7/7	0.91	0.33	87,93,102,203	0
58	MG	23SA	3463	1/1	0.91	0.15	60,60,60,60	0
58	MG	23SA	3510	1/1	0.91	0.17	75,75,75,75	0
58	MG	L3A	302	1/1	0.91	0.11	39,39,39,39	0
60	K	16SA	2388	1/1	0.91	0.33	79,79,79,79	0
59	OHX	16SA	2278	7/7	0.91	0.14	100,115,119,183	0
60	K	16SA	2391	1/1	0.91	0.17	86,86,86,86	0
59	OHX	23SB	3112	7/7	0.91	0.09	104,112,119,206	0
60	K	16SA	2396	1/1	0.91	0.12	103,103,103,103	0
58	MG	23SA	3465	1/1	0.91	0.18	53,53,53,53	0
60	K	16SA	2401	1/1	0.91	0.18	63,63,63,63	0
60	K	16SA	2402	1/1	0.91	0.26	89,89,89,89	0
58	MG	16SA	2348	1/1	0.91	0.12	58,58,58,58	0
60	K	16SA	2404	1/1	0.91	0.15	114,114,114,114	0
58	MG	23SA	3004	1/1	0.91	0.52	35,35,35,35	0
60	K	16SA	2406	1/1	0.91	0.12	87,87,87,87	0
59	OHX	23SB	3122	7/7	0.91	0.40	93,97,102,223	0
59	OHX	23SA	3357	7/7	0.91	0.21	156,158,169,238	0
59	OHX	23SB	3131	7/7	0.91	0.17	114,116,124,216	0
58	MG	16SA	2350	1/1	0.91	0.13	89,89,89,89	0
59	OHX	16SA	2299	7/7	0.91	0.13	107,114,116,211	0
59	OHX	23SB	3136	7/7	0.91	0.19	97,102,117,216	0
58	MG	23SB	3323	1/1	0.91	0.34	45,45,45,45	0
60	K	23SB	3451	1/1	0.91	0.11	67,67,67,67	0
60	K	23SB	3453	1/1	0.91	0.09	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SB	3139	7/7	0.91	0.26	90,97,109,222	0
59	OHX	16SA	2307	7/7	0.91	0.23	106,110,119,215	0
58	MG	23SA	3123	1/1	0.91	0.28	57,57,57,57	0
60	K	23SB	3465	1/1	0.91	0.22	75,75,75,75	0
59	OHX	23SB	3144	7/7	0.91	0.16	103,111,118,233	0
59	OHX	23SB	3145	7/7	0.91	0.21	106,124,142,220	0
60	K	23SB	3468	1/1	0.91	0.10	97,97,97,97	0
60	K	23SB	3469	1/1	0.91	0.14	64,64,64,64	0
58	MG	23SB	3393	1/1	0.91	0.12	70,70,70,70	0
60	K	23SB	3472	1/1	0.91	0.28	77,77,77,77	0
58	MG	23SA	3396	1/1	0.91	0.15	34,34,34,34	0
58	MG	16SA	2251	1/1	0.91	0.39	60,60,60,60	0
58	MG	23SB	3202	1/1	0.91	0.36	51,51,51,51	0
59	OHX	16SA	2325	7/7	0.91	0.26	137,144,157,243	0
59	OHX	23SB	3155	7/7	0.91	0.27	136,149,154,230	0
58	MG	23SA	3009	1/1	0.91	0.35	40,40,40,40	0
59	OHX	23SB	3159	7/7	0.91	0.20	124,131,146,207	0
60	K	23SB	3489	1/1	0.91	0.16	65,65,65,65	0
60	K	23SB	3491	1/1	0.91	0.14	68,68,68,68	0
58	MG	16SB	2322	1/1	0.91	0.15	99,99,99,99	0
58	MG	23SA	3145	1/1	0.91	0.19	70,70,70,70	0
60	K	23SB	3497	1/1	0.91	0.11	48,48,48,48	0
58	MG	16SB	2284	1/1	0.91	0.18	84,84,84,84	0
58	MG	23SB	3287	1/1	0.91	0.20	61,61,61,61	0
58	MG	23SA	3528	1/1	0.91	0.17	42,42,42,42	0
58	MG	16SB	2289	1/1	0.91	0.14	89,89,89,89	0
58	MG	16SB	2290	1/1	0.91	0.44	79,79,79,79	0
60	K	23SA	3586	1/1	0.91	0.14	73,73,73,73	0
58	MG	23SA	3092	1/1	0.91	0.12	60,60,60,60	0
60	K	23SB	3508	1/1	0.91	0.19	76,76,76,76	0
58	MG	23SB	3231	1/1	0.91	0.20	51,51,51,51	0
58	MG	16SB	2331	1/1	0.91	0.42	55,55,55,55	0
58	MG	16SB	2332	1/1	0.91	0.15	92,92,92,92	0
60	K	23SB	3514	1/1	0.91	0.40	95,95,95,95	0
59	OHX	16SB	2228	7/7	0.91	0.15	99,100,112,192	0
60	K	23SA	3597	1/1	0.91	0.12	87,87,87,87	0
59	OHX	23SB	3181	7/7	0.91	0.18	118,141,152,230	0
59	OHX	16SB	2236	7/7	0.91	0.13	104,107,118,194	0
59	OHX	16SB	2239	7/7	0.91	0.10	116,122,133,205	0
58	MG	23SB	3298	1/1	0.91	0.27	55,55,55,55	0
60	K	23SA	3609	1/1	0.91	0.08	71,71,71,71	0
60	K	L4B	303	1/1	0.91	0.08	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SB	2244	7/7	0.91	0.20	99,108,114,225	0
58	MG	23SA	3485	1/1	0.91	0.12	51,51,51,51	0
59	OHX	23SA	3284	7/7	0.91	0.16	84,87,97,215	0
58	MG	16SA	2224	1/1	0.92	0.30	73,73,73,73	0
59	OHX	23SB	3067	7/7	0.92	0.10	79,95,108,174	0
58	MG	23SB	3251	1/1	0.92	0.48	54,54,54,54	0
59	OHX	23SB	3088	7/7	0.92	0.10	110,117,123,193	0
58	MG	23SA	3117	1/1	0.92	0.11	81,81,81,81	0
59	OHX	23SA	3345	7/7	0.92	0.34	107,120,136,224	0
59	OHX	23SB	3096	7/7	0.92	0.17	128,134,148,208	0
58	MG	23SA	3132	1/1	0.92	0.23	57,57,57,57	0
59	OHX	16SA	2295	7/7	0.92	0.11	97,101,119,212	0
59	OHX	23SB	3111	7/7	0.92	0.12	103,108,114,205	0
60	K	16SA	2394	1/1	0.92	0.06	75,75,75,75	0
58	MG	23SB	3398	1/1	0.92	0.20	46,46,46,46	0
59	OHX	23SA	3350	7/7	0.92	0.15	121,138,153,230	0
58	MG	23SA	3052	1/1	0.92	0.51	40,40,40,40	0
58	MG	23SB	3255	1/1	0.92	0.41	50,50,50,50	0
59	OHX	16SA	2308	7/7	0.92	0.11	110,118,129,200	0
60	K	16SB	2378	1/1	0.92	0.11	94,94,94,94	0
58	MG	23SA	3511	1/1	0.92	0.10	36,36,36,36	0
58	MG	23SB	3408	1/1	0.92	0.23	51,51,51,51	0
58	MG	23SB	3413	1/1	0.92	0.16	42,42,42,42	0
58	MG	PSIA	103	1/1	0.92	0.08	83,83,83,83	0
60	K	16SB	2389	1/1	0.92	0.07	82,82,82,82	0
58	MG	23SA	3002	1/1	0.92	0.31	58,58,58,58	0
60	K	16SA	2411	1/1	0.92	0.39	82,82,82,82	0
60	K	16SB	2394	1/1	0.92	0.12	92,92,92,92	0
58	MG	23SB	3351	1/1	0.92	0.09	53,53,53,53	0
59	OHX	16SA	2326	7/7	0.92	0.13	127,136,164,238	0
58	MG	23SB	3418	1/1	0.92	0.10	51,51,51,51	0
60	K	S6B	201	1/1	0.92	0.11	85,85,85,85	0
58	MG	23SB	3305	1/1	0.92	0.24	65,65,65,65	0
60	K	16SA	2419	1/1	0.92	0.20	95,95,95,95	0
58	MG	23SB	3420	1/1	0.92	0.17	62,62,62,62	0
60	K	S6A	201	1/1	0.92	0.14	82,82,82,82	0
59	OHX	23SA	3370	7/7	0.92	0.41	94,101,133,213	0
59	OHX	23SB	3146	7/7	0.92	0.21	98,108,114,209	0
59	OHX	23SA	3371	7/7	0.92	0.12	130,141,155,222	0
58	MG	23SB	3356	1/1	0.92	0.15	39,39,39,39	0
60	K	23SB	3449	1/1	0.92	0.11	63,63,63,63	0
59	OHX	16SA	2336	7/7	0.92	0.14	106,114,119,210	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3400	1/1	0.92	0.19	69,69,69,69	0
58	MG	23SB	3262[A]	1/1	0.92	0.43	55,55,55,55	1
59	OHX	S4A	301	7/7	0.92	0.10	118,122,140,210	0
60	K	23SA	3547	1/1	0.92	0.10	72,72,72,72	0
60	K	23SB	3464	1/1	0.92	0.09	53,53,53,53	0
58	MG	23SB	3262[B]	1/1	0.92	0.43	59,59,59,59	1
59	OHX	23SB	3158	7/7	0.92	0.11	105,107,121,203	0
59	OHX	5SA	208	7/7	0.92	0.20	98,106,114,218	0
59	OHX	23SB	3161	7/7	0.92	0.29	142,150,169,244	0
58	MG	23SA	3066	1/1	0.92	0.41	59,59,59,59	0
59	OHX	23SA	3195	7/7	0.92	0.17	71,86,93,123	0
59	OHX	23SA	3212	7/7	0.92	0.20	51,57,86,140	0
58	MG	23SA	3055	1/1	0.92	0.39	51,51,51,51	0
59	OHX	16SB	2207	7/7	0.92	0.16	89,95,104,159	0
59	OHX	23SA	3239	7/7	0.92	0.14	95,99,109,191	0
60	K	23SB	3479	1/1	0.92	0.12	76,76,76,76	0
59	OHX	23SA	3252	7/7	0.92	0.17	83,84,115,187	0
60	K	23SB	3481	1/1	0.92	0.12	105,105,105,105	0
60	K	23SB	3483	1/1	0.92	0.12	69,69,69,69	0
60	K	23SB	3484	1/1	0.92	0.14	80,80,80,80	0
58	MG	23SB	3365	1/1	0.92	0.10	45,45,45,45	0
60	K	23SA	3583	1/1	0.92	0.22	65,65,65,65	0
59	OHX	16SB	2224	7/7	0.92	0.12	97,105,114,200	0
58	MG	16SA	2238	1/1	0.92	0.26	118,118,118,118	0
60	K	23SA	3587	1/1	0.92	0.16	91,91,91,91	0
58	MG	23SB	3203	1/1	0.92	0.32	40,40,40,40	0
58	MG	23SA	3442	1/1	0.92	0.13	48,48,48,48	0
58	MG	23SB	3271	1/1	0.92	0.41	46,46,46,46	0
59	OHX	23SA	3275	7/7	0.92	0.14	100,110,119,213	0
58	MG	16SB	2308	1/1	0.92	0.56	59,59,59,59	0
58	MG	23SA	3523	1/1	0.92	0.11	70,70,70,70	0
58	MG	23SA	3407	1/1	0.92	0.10	48,48,48,48	0
58	MG	16SB	2341	1/1	0.92	0.07	130,130,130,130	0
59	OHX	16SB	2256	7/7	0.92	0.16	125,127,138,219	0
59	OHX	23SA	3298	7/7	0.92	0.18	95,100,108,219	0
58	MG	23SB	3382	1/1	0.92	0.12	61,61,61,61	0
58	MG	16SA	2374	1/1	0.92	0.20	73,73,73,73	0
58	MG	16SB	2312	1/1	0.92	0.15	71,71,71,71	0
58	MG	23SA	3125	1/1	0.92	0.40	62,62,62,62	0
58	MG	16SB	2345	1/1	0.92	0.16	64,64,64,64	0
60	K	23SA	3616	1/1	0.92	0.12	42,42,42,42	0
58	MG	23SA	3451	1/1	0.92	0.10	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SB	2274	7/7	0.92	0.15	131,136,142,211	0
58	MG	16SA	2211	1/1	0.92	0.27	70,70,70,70	0
59	OHX	16SB	2277	7/7	0.92	0.12	99,106,111,245	0
58	MG	L15B	201	1/1	0.92	0.21	58,58,58,58	0
59	OHX	23SA	3319	7/7	0.92	0.19	82,85,93,207	0
58	MG	23SA	3416	1/1	0.92	0.13	63,63,63,63	0
58	MG	16SB	2351	1/1	0.92	0.14	68,68,68,68	0
58	MG	23SA	3008	1/1	0.92	0.28	73,73,73,73	0
59	OHX	23SB	3036	7/7	0.92	0.14	113,117,131,172	0
61	SJE	23SB	3521	87/87	0.92	0.38	48,59,87,95	0
58	MG	23SB	3346	1/1	0.93	0.15	56,56,56,56	0
58	MG	23SA	3486	1/1	0.93	0.20	42,42,42,42	0
58	MG	5SA	202	1/1	0.93	0.11	67,67,67,67	0
60	K	23SA	3614	1/1	0.93	0.13	65,65,65,65	0
58	MG	23SA	3076	1/1	0.93	0.26	57,57,57,57	0
59	OHX	16SB	2235	7/7	0.93	0.10	105,111,120,212	0
58	MG	16SB	2319	1/1	0.93	0.49	57,57,57,57	0
60	K	23SA	3621	1/1	0.93	0.20	77,77,77,77	0
59	OHX	16SB	2238	7/7	0.93	0.10	124,131,141,228	0
59	OHX	23SB	3182	7/7	0.93	0.16	190,192,204,241	0
60	K	23SA	3625	1/1	0.93	0.18	83,83,83,83	0
58	MG	23SB	3352	1/1	0.93	0.13	47,47,47,47	0
58	MG	23SB	3354	1/1	0.93	0.11	77,77,77,77	0
59	OHX	16SB	2243	7/7	0.93	0.09	115,117,121,193	0
58	MG	16SA	2240	1/1	0.93	0.57	70,70,70,70	0
59	OHX	23SB	3188	7/7	0.93	0.11	134,155,164,228	0
58	MG	23SA	3490	1/1	0.93	0.15	42,42,42,42	0
59	OHX	16SB	2249	7/7	0.93	0.31	102,104,116,221	0
59	OHX	23SA	3270	7/7	0.93	0.13	109,117,127,194	0
58	MG	23SA	3493	1/1	0.93	0.13	44,44,44,44	0
58	MG	23SA	3494	1/1	0.93	0.10	48,48,48,48	0
58	MG	16SA	2232	1/1	0.93	0.49	66,66,66,66	0
58	MG	23SB	3230	1/1	0.93	0.27	66,66,66,66	0
59	OHX	16SB	2259	7/7	0.93	0.11	145,150,156,224	0
58	MG	23SA	3173	1/1	0.93	0.35	59,59,59,59	0
58	MG	L15A	202	1/1	0.93	0.34	59,59,59,59	0
59	OHX	23SA	3292	7/7	0.93	0.14	68,81,98,170	0
59	OHX	5SB	204	7/7	0.93	0.12	98,106,120,191	0
58	MG	16SA	2358	1/1	0.93	0.15	48,48,48,48	0
59	OHX	5SB	207	7/7	0.93	0.18	115,121,127,222	0
58	MG	23SB	3300	1/1	0.93	0.21	67,67,67,67	0
58	MG	23SA	3498	1/1	0.93	0.19	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SB	2273	7/7	0.93	0.26	129,146,161,233	0
60	K	16SB	2376	1/1	0.93	0.06	75,75,75,75	0
59	OHX	L20B	201	7/7	0.93	0.17	88,95,110,186	0
59	OHX	23SA	3302	7/7	0.93	0.12	83,91,106,208	0
58	MG	23SA	3450	1/1	0.93	0.13	56,56,56,56	0
60	K	16SB	2382	1/1	0.93	0.12	94,94,94,94	0
59	OHX	16SB	2276	7/7	0.93	0.13	131,137,146,224	0
59	OHX	23SA	3306	7/7	0.93	0.10	100,113,126,199	0
58	MG	23SB	3237	1/1	0.93	0.23	73,73,73,73	0
58	MG	23SA	3500	1/1	0.93	0.21	49,49,49,49	0
58	MG	23SA	3018	1/1	0.93	0.35	30,30,30,30	0
58	MG	23SB	3248	1/1	0.93	0.47	44,44,44,44	0
58	MG	23SA	3504	1/1	0.93	0.07	67,67,67,67	0
58	MG	23SA	3507	1/1	0.93	0.09	55,55,55,55	0
60	K	16SB	2397	1/1	0.93	0.09	97,97,97,97	0
59	OHX	23SB	3043	7/7	0.93	0.12	81,88,108,166	0
59	OHX	23SB	3048	7/7	0.93	0.11	111,117,132,161	0
59	OHX	23SB	3061	7/7	0.93	0.13	100,105,115,190	0
59	OHX	16SA	2271	7/7	0.93	0.15	80,94,97,147	0
58	MG	23SA	3142	1/1	0.93	0.32	36,36,36,36	0
59	OHX	23SB	3077	7/7	0.93	0.13	87,95,105,161	0
60	K	23SB	3441	1/1	0.93	0.10	88,88,88,88	0
59	OHX	23SB	3081	7/7	0.93	0.12	100,106,119,201	0
59	OHX	16SA	2279	7/7	0.93	0.09	118,121,129,197	0
60	K	23SB	3444	1/1	0.93	0.06	84,84,84,84	0
60	K	23SB	3445	1/1	0.93	0.18	66,66,66,66	0
58	MG	23SA	3112	1/1	0.93	0.18	60,60,60,60	0
59	OHX	16SA	2288	7/7	0.93	0.10	90,100,106,201	0
58	MG	23SA	3459	1/1	0.93	0.11	66,66,66,66	0
58	MG	23SB	3256	1/1	0.93	0.22	47,47,47,47	0
59	OHX	23SB	3099	7/7	0.93	0.21	87,101,111,219	0
59	OHX	23SB	3101	7/7	0.93	0.13	104,111,115,185	0
60	K	23SB	3454	1/1	0.93	0.13	74,74,74,74	0
60	K	23SB	3455	1/1	0.93	0.10	61,61,61,61	0
58	MG	23SA	3460	1/1	0.93	0.22	38,38,38,38	0
60	K	16SA	2412	1/1	0.93	0.12	92,92,92,92	0
60	K	16SA	2413	1/1	0.93	0.09	84,84,84,84	0
60	K	16SA	2414	1/1	0.93	0.13	100,100,100,100	0
58	MG	23SA	3419	1/1	0.93	0.08	64,64,64,64	0
59	OHX	16SA	2296	7/7	0.93	0.12	87,99,108,193	0
59	OHX	16SA	2297	7/7	0.93	0.09	114,122,131,209	0
59	OHX	23SB	3113	7/7	0.93	0.12	112,115,125,216	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3385	1/1	0.93	0.16	41,41,41,41	0
58	MG	16SA	2359	1/1	0.93	0.19	62,62,62,62	0
59	OHX	23SB	3120	7/7	0.93	0.29	94,104,115,226	0
58	MG	23SA	3422	1/1	0.93	0.17	63,63,63,63	0
58	MG	23SA	3469	1/1	0.93	0.17	40,40,40,40	0
58	MG	23SA	3472	1/1	0.93	0.21	39,39,39,39	0
59	OHX	23SB	3127	7/7	0.93	0.12	109,115,122,246	0
59	OHX	23SB	3129	7/7	0.93	0.13	103,109,115,227	0
58	MG	23SA	3522	1/1	0.93	0.07	73,73,73,73	0
59	OHX	16SA	2311	7/7	0.93	0.10	102,108,117,196	0
59	OHX	23SA	3361	7/7	0.93	0.16	86,117,130,220	0
59	OHX	16SA	2314	7/7	0.93	0.24	119,126,128,235	0
58	MG	23SA	3390	1/1	0.93	0.13	38,38,38,38	0
58	MG	23SA	3083	1/1	0.93	0.26	41,41,41,41	0
59	OHX	16SA	2319	7/7	0.93	0.17	131,143,148,232	0
60	K	23SA	3552	1/1	0.93	0.28	83,83,83,83	0
59	OHX	16SA	2321	7/7	0.93	0.19	157,159,162,233	0
58	MG	23SA	3069	1/1	0.93	0.26	70,70,70,70	0
59	OHX	16SA	2324	7/7	0.93	0.19	131,145,160,226	0
58	MG	23SA	3430	1/1	0.93	0.06	74,74,74,74	0
58	MG	16SA	2370	1/1	0.93	0.10	102,102,102,102	0
60	K	23SB	3500	1/1	0.93	0.09	80,80,80,80	0
60	K	23SA	3566	1/1	0.93	0.09	51,51,51,51	0
59	OHX	23SA	3372	7/7	0.93	0.21	103,116,140,217	0
58	MG	23SB	3410	1/1	0.93	0.08	75,75,75,75	0
59	OHX	16SA	2329	7/7	0.93	0.11	144,149,154,226	0
59	OHX	23SB	3152	7/7	0.93	0.30	103,105,129,194	0
58	MG	23SA	3530	1/1	0.93	0.16	57,57,57,57	0
59	OHX	16SA	2331	7/7	0.93	0.17	155,162,169,236	0
59	OHX	23SB	3156	7/7	0.93	0.10	125,130,147,212	0
58	MG	23SA	3395	1/1	0.93	0.19	34,34,34,34	0
58	MG	23SB	3415	1/1	0.93	0.14	46,46,46,46	0
60	K	23SA	3589	1/1	0.93	0.09	85,85,85,85	0
59	OHX	16SA	2334	7/7	0.93	0.12	161,169,178,239	0
58	MG	23SA	3023	1/1	0.93	0.52	77,77,77,77	0
60	K	23SA	3592	1/1	0.93	0.10	67,67,67,67	0
59	OHX	23SB	3162	7/7	0.93	0.26	129,137,145,231	0
59	OHX	5SA	212	7/7	0.93	0.33	89,95,109,210	0
58	MG	23SB	3338	1/1	0.93	0.08	48,48,48,48	0
58	MG	16SA	2257	1/1	0.93	0.32	54,54,54,54	0
59	OHX	23SB	3167	7/7	0.93	0.21	121,136,143,203	0
59	OHX	16SA	2341	7/7	0.93	0.17	135,136,149,239	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	K	L16B	201	1/1	0.93	0.15	92,92,92,92	0
58	MG	23SA	3439	1/1	0.93	0.17	38,38,38,38	0
58	MG	23SA	3073	1/1	0.93	0.20	42,42,42,42	0
58	MG	23SB	3275	1/1	0.94	0.31	65,65,65,65	0
58	MG	23SA	3024	1/1	0.94	0.33	45,45,45,45	0
60	K	23SA	3606	1/1	0.94	0.12	57,57,57,57	0
58	MG	23SB	3425	1/1	0.94	0.23	84,84,84,84	0
58	MG	23SA	3038	1/1	0.94	0.30	45,45,45,45	0
59	OHX	23SA	3209	7/7	0.94	0.17	76,90,103,134	0
59	OHX	23SB	3168	7/7	0.94	0.27	123,133,154,222	0
59	OHX	16SB	2227	7/7	0.94	0.18	115,116,122,221	0
58	MG	16SA	2254	1/1	0.94	0.55	67,67,67,67	0
58	MG	23SB	3348	1/1	0.94	0.21	75,75,75,75	0
59	OHX	23SB	3173	7/7	0.94	0.14	97,115,128,200	0
58	MG	L15A	203	1/1	0.94	0.16	65,65,65,65	0
60	K	23SA	3620	1/1	0.94	0.18	70,70,70,70	0
58	MG	23SA	3041	1/1	0.94	0.30	32,32,32,32	0
58	MG	23SA	3027	1/1	0.94	0.21	45,45,45,45	0
59	OHX	16SB	2240	7/7	0.94	0.08	120,126,130,218	0
58	MG	23SB	3283	1/1	0.94	0.33	72,72,72,72	0
58	MG	L27A	104	1/1	0.94	0.11	65,65,65,65	0
58	MG	23SA	3447	1/1	0.94	0.12	34,34,34,34	0
58	MG	23SA	3423	1/1	0.94	0.11	50,50,50,50	0
60	K	23SA	3630	1/1	0.94	0.15	80,80,80,80	0
59	OHX	16SB	2248	7/7	0.94	0.16	123,130,136,226	0
58	MG	23SB	3215	1/1	0.94	0.27	37,37,37,37	0
58	MG	23SB	3289	1/1	0.94	0.23	72,72,72,72	0
59	OHX	23SA	3279	7/7	0.94	0.19	92,97,106,198	0
59	OHX	16SB	2252	7/7	0.94	0.17	109,120,138,208	0
60	K	23SA	3637	1/1	0.94	0.32	60,60,60,60	0
58	MG	23SA	3397	1/1	0.94	0.16	46,46,46,46	0
58	MG	16SB	2279	1/1	0.94	0.21	68,68,68,68	0
58	MG	23SA	3520	1/1	0.94	0.16	79,79,79,79	0
58	MG	23SB	3364	1/1	0.94	0.14	65,65,65,65	0
58	MG	23SB	3228	1/1	0.94	0.31	43,43,43,43	0
58	MG	23SA	3157	1/1	0.94	0.33	39,39,39,39	0
58	MG	23SB	3369	1/1	0.94	0.13	46,46,46,46	0
58	MG	23SB	3296	1/1	0.94	0.40	72,72,72,72	0
59	OHX	16SB	2264	7/7	0.94	0.25	140,157,163,237	0
58	MG	23SA	3428	1/1	0.94	0.14	78,78,78,78	0
60	K	16SB	2369	1/1	0.94	0.22	82,82,82,82	0
59	OHX	16SB	2271	7/7	0.94	0.10	156,167,170,247	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3458	1/1	0.94	0.15	55,55,55,55	0
58	MG	23SA	3144	1/1	0.94	0.41	52,52,52,52	0
59	OHX	5SB	206	7/7	0.94	0.22	120,123,129,223	0
59	OHX	16SA	2275	7/7	0.94	0.12	80,83,104,161	0
58	MG	23SA	3527	1/1	0.94	0.18	42,42,42,42	0
58	MG	23SB	3302	1/1	0.94	0.32	49,49,49,49	0
59	OHX	23SA	3314	7/7	0.94	0.18	95,99,111,204	0
60	K	16SB	2380	1/1	0.94	0.11	91,91,91,91	0
60	K	16SB	2381	1/1	0.94	0.14	100,100,100,100	0
59	OHX	S4B	301	7/7	0.94	0.09	116,119,128,186	0
59	OHX	16SA	2280	7/7	0.94	0.12	100,102,112,186	0
60	K	16SA	2375	1/1	0.94	0.09	101,101,101,101	0
58	MG	23SA	3492	1/1	0.94	0.09	52,52,52,52	0
59	OHX	16SA	2284	7/7	0.94	0.13	132,148,162,222	0
60	K	16SA	2378	1/1	0.94	0.26	93,93,93,93	0
60	K	16SB	2392	1/1	0.94	0.11	117,117,117,117	0
59	OHX	ESIB	101	7/7	0.94	0.08	150,166,173,207	0
58	MG	23SA	3017	1/1	0.94	0.23	73,73,73,73	0
59	OHX	23SA	3323	7/7	0.94	0.13	84,89,105,197	0
59	OHX	23SA	3324	7/7	0.94	0.15	85,91,107,225	0
59	OHX	23SA	3326	7/7	0.94	0.14	138,143,162,229	0
58	MG	23SA	3431	1/1	0.94	0.11	79,79,79,79	0
59	OHX	23SB	3049	7/7	0.94	0.12	92,103,111,173	0
59	OHX	23SB	3050	7/7	0.94	0.15	74,79,98,166	0
59	OHX	23SB	3052	7/7	0.94	0.21	91,95,101,175	0
59	OHX	23SB	3058	7/7	0.94	0.14	80,87,94,165	0
59	OHX	23SA	3338	7/7	0.94	0.15	138,150,158,232	0
59	OHX	23SB	3062	7/7	0.94	0.08	100,103,111,185	0
58	MG	23SB	3241	1/1	0.94	0.19	50,50,50,50	0
59	OHX	23SA	3340	7/7	0.94	0.08	133,146,163,217	0
58	MG	23SB	3245	1/1	0.94	0.33	45,45,45,45	0
59	OHX	23SB	3079	7/7	0.94	0.11	94,98,106,173	0
58	MG	16SB	2339	1/1	0.94	0.09	124,124,124,124	0
59	OHX	23SB	3085	7/7	0.94	0.15	105,109,112,199	0
58	MG	23SB	3247	1/1	0.94	0.18	45,45,45,45	0
58	MG	23SA	3146	1/1	0.94	0.41	48,48,48,48	0
58	MG	23SB	3249	1/1	0.94	0.19	56,56,56,56	0
59	OHX	23SB	3093	7/7	0.94	0.22	93,100,110,208	0
58	MG	16SA	2349	1/1	0.94	0.07	82,82,82,82	0
59	OHX	23SA	3348	7/7	0.94	0.15	138,148,158,224	0
59	OHX	16SA	2302	7/7	0.94	0.10	105,107,113,183	0
59	OHX	16SA	2303	7/7	0.94	0.09	117,118,127,222	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SA	2306	7/7	0.94	0.14	109,111,118,204	0
59	OHX	23SB	3106	7/7	0.94	0.17	100,119,134,193	0
59	OHX	23SB	3107	7/7	0.94	0.20	102,114,119,205	0
59	OHX	23SB	3108	7/7	0.94	0.16	95,101,104,191	0
58	MG	23SA	3436	1/1	0.94	0.12	80,80,80,80	0
58	MG	16SB	2300	1/1	0.94	0.51	48,48,48,48	0
58	MG	23SA	3466	1/1	0.94	0.07	57,57,57,57	0
60	K	23SB	3471	1/1	0.94	0.25	106,106,106,106	0
59	OHX	23SA	3358	7/7	0.94	0.34	129,130,145,238	0
58	MG	23SB	3394	1/1	0.94	0.13	73,73,73,73	0
58	MG	23SB	3395	1/1	0.94	0.15	43,43,43,43	0
59	OHX	16SA	2313	7/7	0.94	0.09	110,116,122,207	0
60	K	23SB	3477	1/1	0.94	0.08	60,60,60,60	0
58	MG	23SA	3467	1/1	0.94	0.15	41,41,41,41	0
58	MG	16SB	2303	1/1	0.94	0.26	61,61,61,61	0
60	K	23SA	3544	1/1	0.94	0.10	91,91,91,91	0
59	OHX	23SB	3124	7/7	0.94	0.28	83,94,106,213	0
59	OHX	23SB	3125	7/7	0.94	0.24	90,93,105,217	0
58	MG	16SB	2349	1/1	0.94	0.24	90,90,90,90	0
59	OHX	16SA	2318	7/7	0.94	0.16	113,116,137,211	0
58	MG	23SA	3108	1/1	0.94	0.97	46,46,46,46	0
60	K	23SB	3488	1/1	0.94	0.09	85,85,85,85	0
58	MG	23SB	3401	1/1	0.94	0.06	70,70,70,70	0
59	OHX	16SA	2322	7/7	0.94	0.10	118,126,134,205	0
60	K	23SA	3554	1/1	0.94	0.23	87,87,87,87	0
60	K	23SB	3493	1/1	0.94	0.21	98,98,98,98	0
60	K	23SA	3557	1/1	0.94	0.23	84,84,84,84	0
60	K	23SB	3496	1/1	0.94	0.19	85,85,85,85	0
58	MG	5SA	201	1/1	0.94	0.31	67,67,67,67	0
58	MG	23SA	3470	1/1	0.94	0.14	53,53,53,53	0
58	MG	16SB	2355	1/1	0.94	0.08	90,90,90,90	0
58	MG	16SB	2307	1/1	0.94	0.51	61,61,61,61	0
60	K	23SA	3565	1/1	0.94	0.16	46,46,46,46	0
58	MG	23SB	3411	1/1	0.94	0.11	41,41,41,41	0
60	K	23SA	3568	1/1	0.94	0.11	58,58,58,58	0
60	K	23SA	3570	1/1	0.94	0.06	51,51,51,51	0
60	K	23SA	3572	1/1	0.94	0.13	51,51,51,51	0
58	MG	23SB	3412	1/1	0.94	0.10	56,56,56,56	0
58	MG	23SB	3263	1/1	0.94	0.52	56,56,56,56	0
58	MG	16SA	2236	1/1	0.94	0.19	99,99,99,99	0
58	MG	5SA	215	1/1	0.94	0.15	64,64,64,64	0
60	K	23SB	3513	1/1	0.94	0.06	127,127,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	5SA	206	7/7	0.94	0.15	91,97,113,184	0
59	OHX	5SA	207	7/7	0.94	0.12	97,103,109,176	0
58	MG	23SA	3505	1/1	0.94	0.17	40,40,40,40	0
58	MG	16SA	2346	1/1	0.94	0.14	70,70,70,70	0
59	OHX	5SA	211	7/7	0.94	0.14	101,107,113,190	0
58	MG	23SA	3475	1/1	0.94	0.05	64,64,64,64	0
58	MG	16SA	2216	1/1	0.94	0.38	46,46,46,46	0
60	K	L2B	301	1/1	0.94	0.09	62,62,62,62	0
58	MG	16SB	2314	1/1	0.94	0.36	99,99,99,99	0
59	OHX	L15A	201	7/7	0.94	0.20	84,91,102,193	0
59	OHX	L20A	201	7/7	0.94	0.13	80,91,102,185	0
59	OHX	L27A	102	7/7	0.94	0.17	86,89,102,190	0
59	OHX	23SB	3160	7/7	0.94	0.21	120,142,146,214	0
58	MG	PSIB	103	1/1	0.94	0.26	52,52,52,52	0
60	K	23SA	3601	1/1	0.94	0.07	55,55,55,55	0
59	OHX	23SA	3305	7/7	0.95	0.15	97,104,122,196	0
58	MG	23SA	3166	1/1	0.95	0.27	38,38,38,38	0
58	MG	23SA	3473	1/1	0.95	0.07	67,67,67,67	0
60	K	23SA	3617	1/1	0.95	0.23	74,74,74,74	0
59	OHX	16SA	2304	7/7	0.95	0.13	88,96,98,193	0
59	OHX	16SA	2305	7/7	0.95	0.13	133,141,150,228	0
59	OHX	16SB	2258	7/7	0.95	0.11	144,147,157,204	0
58	MG	16SB	2305	1/1	0.95	0.47	67,67,67,67	0
58	MG	23SA	3506	1/1	0.95	0.10	39,39,39,39	0
59	OHX	23SA	3315	7/7	0.95	0.18	98,100,118,232	0
58	MG	16SA	2201	1/1	0.95	0.33	73,73,73,73	0
58	MG	23SA	3508	1/1	0.95	0.11	38,38,38,38	0
58	MG	23SB	3353	1/1	0.95	0.14	57,57,57,57	0
59	OHX	16SB	2265	7/7	0.95	0.14	110,127,139,201	0
58	MG	16SB	2352	1/1	0.95	0.09	73,73,73,73	0
59	OHX	16SB	2268	7/7	0.95	0.22	123,133,154,220	0
59	OHX	16SB	2269	7/7	0.95	0.10	146,151,156,215	0
59	OHX	23SA	3321	7/7	0.95	0.13	77,81,92,196	0
58	MG	16SB	2353	1/1	0.95	0.16	76,76,76,76	0
58	MG	23SA	3417	1/1	0.95	0.14	58,58,58,58	0
58	MG	16SA	2204	1/1	0.95	0.28	52,52,52,52	0
59	OHX	23SA	3327	7/7	0.95	0.36	88,96,114,211	0
59	OHX	23SA	3330	7/7	0.95	0.08	112,118,131,203	0
59	OHX	23SA	3333	7/7	0.95	0.24	101,104,130,208	0
59	OHX	16SB	2278	7/7	0.95	0.13	112,116,120,223	0
60	K	L5A	302	1/1	0.95	0.24	83,83,83,83	0
59	OHX	23SA	3334	7/7	0.95	0.12	99,115,137,214	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SB	3301	1/1	0.95	0.25	75,75,75,75	0
58	MG	23SA	3444	1/1	0.95	0.23	29,29,29,29	0
59	OHX	PSIB	101	7/7	0.95	0.13	104,107,121,137	0
58	MG	23SA	3028	1/1	0.95	0.42	41,41,41,41	0
59	OHX	16SA	2320	7/7	0.95	0.23	99,106,126,191	0
58	MG	16SA	2210	1/1	0.95	0.24	46,46,46,46	0
59	OHX	5SB	211	7/7	0.95	0.28	134,145,159,239	0
60	K	16SB	2373	1/1	0.95	0.12	93,93,93,93	0
58	MG	23SA	3394	1/1	0.95	0.12	71,71,71,71	0
58	MG	23SA	3449	1/1	0.95	0.14	44,44,44,44	0
59	OHX	23SA	3344	7/7	0.95	0.24	95,121,141,216	0
58	MG	23SA	3019	1/1	0.95	0.14	35,35,35,35	0
58	MG	23SB	3368	1/1	0.95	0.07	47,47,47,47	0
58	MG	23SA	3056	1/1	0.95	0.21	48,48,48,48	0
58	MG	23SA	3425	1/1	0.95	0.08	61,61,61,61	0
58	MG	23SA	3453	1/1	0.95	0.13	34,34,34,34	0
59	OHX	23SB	3059	7/7	0.95	0.09	91,101,107,175	0
58	MG	L35A	101	1/1	0.95	0.24	51,51,51,51	0
60	K	16SB	2386	1/1	0.95	0.04	94,94,94,94	0
58	MG	23SA	3454	1/1	0.95	0.12	54,54,54,54	0
58	MG	16SB	2280	1/1	0.95	0.26	59,59,59,59	0
59	OHX	23SB	3064	7/7	0.95	0.20	77,82,98,167	0
59	OHX	23SB	3066	7/7	0.95	0.13	94,102,114,188	0
60	K	16SB	2391	1/1	0.95	0.10	87,87,87,87	0
58	MG	16SA	2225	1/1	0.95	0.28	50,50,50,50	0
59	OHX	23SA	3355	7/7	0.95	0.25	117,125,148,217	0
59	OHX	23SA	3356	7/7	0.95	0.10	111,129,143,223	0
58	MG	23SB	3204	1/1	0.95	0.36	54,54,54,54	0
60	K	16SB	2396	1/1	0.95	0.24	92,92,92,92	0
59	OHX	16SA	2335	7/7	0.95	0.30	127,136,156,226	0
59	OHX	23SB	3086	7/7	0.95	0.12	85,86,104,167	0
60	K	16SA	2399	1/1	0.95	0.06	65,65,65,65	0
60	K	16SA	2400	1/1	0.95	0.07	89,89,89,89	0
58	MG	23SA	3174	1/1	0.95	0.31	53,53,53,53	0
58	MG	23SA	3491	1/1	0.95	0.12	43,43,43,43	0
59	OHX	16SA	2339	7/7	0.95	0.16	93,98,102,201	0
59	OHX	23SB	3092	7/7	0.95	0.11	78,84,94,180	0
58	MG	23SA	3001	1/1	0.95	0.42	34,34,34,34	0
59	OHX	23SB	3094	7/7	0.95	0.10	107,111,129,187	0
58	MG	23SB	3319	1/1	0.95	0.27	83,83,83,83	0
58	MG	16SA	2205	1/1	0.95	0.34	51,51,51,51	0
59	OHX	S10A	201	7/7	0.95	0.22	106,108,115,206	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SB	3100	7/7	0.95	0.12	90,93,100,175	0
59	OHX	23SA	3366	7/7	0.95	0.14	99,105,125,207	0
59	OHX	ASIA	101	7/7	0.95	0.11	100,111,125,168	0
60	K	23SB	3450	1/1	0.95	0.08	72,72,72,72	0
58	MG	23SB	3211	1/1	0.95	0.13	52,52,52,52	0
59	OHX	ASIA	103	7/7	0.95	0.07	142,155,169,215	0
59	OHX	ESIA	101	7/7	0.95	0.13	144,159,173,194	0
59	OHX	TRNA	101	7/7	0.95	0.18	135,137,154,191	0
58	MG	23SA	3084	1/1	0.95	0.15	64,64,64,64	0
60	K	23SB	3457	1/1	0.95	0.11	63,63,63,63	0
58	MG	23SA	3432	1/1	0.95	0.11	67,67,67,67	0
59	OHX	23SA	3200	7/7	0.95	0.18	62,89,92,138	0
60	K	23SB	3463	1/1	0.95	0.12	83,83,83,83	0
59	OHX	23SB	3114	7/7	0.95	0.26	96,100,108,207	0
59	OHX	23SB	3116	7/7	0.95	0.17	126,131,140,206	0
59	OHX	23SA	3376	7/7	0.95	0.15	121,128,151,229	0
59	OHX	23SB	3118	7/7	0.95	0.22	114,118,121,225	0
58	MG	23SA	3404	1/1	0.95	0.20	45,45,45,45	0
58	MG	23SB	3278	1/1	0.95	0.20	45,45,45,45	0
58	MG	23SB	3223	1/1	0.95	0.24	79,79,79,79	0
59	OHX	23SA	3224	7/7	0.95	0.13	86,94,104,168	0
59	OHX	23SB	3123	7/7	0.95	0.14	105,108,120,206	0
59	OHX	23SA	3225	7/7	0.95	0.11	96,99,104,174	0
59	OHX	23SA	3237	7/7	0.95	0.11	79,89,105,162	0
59	OHX	16SA	2272	7/7	0.95	0.12	96,111,118,140	0
59	OHX	23SA	3245	7/7	0.95	0.15	86,96,104,177	0
60	K	23SB	3478	1/1	0.95	0.24	94,94,94,94	0
59	OHX	5SA	210	7/7	0.95	0.14	81,88,100,168	0
59	OHX	16SA	2274	7/7	0.95	0.14	93,97,105,164	0
58	MG	23SB	3330	1/1	0.95	0.47	54,54,54,54	0
58	MG	23SA	3383	1/1	0.95	0.16	39,39,39,39	0
58	MG	16SB	2296	1/1	0.95	0.32	71,71,71,71	0
59	OHX	23SA	3259	7/7	0.95	0.18	90,96,110,189	0
59	OHX	23SA	3260	7/7	0.95	0.20	71,90,98,175	0
58	MG	23SA	3098	1/1	0.95	0.18	54,54,54,54	0
59	OHX	L27A	103	7/7	0.95	0.43	108,119,145,199	0
59	OHX	23SB	3142	7/7	0.95	0.17	136,146,149,236	0
59	OHX	23SB	3143	7/7	0.95	0.35	101,107,113,221	0
58	MG	23SA	3409	1/1	0.95	0.16	42,42,42,42	0
59	OHX	L35A	102	7/7	0.95	0.13	94,106,113,166	0
59	OHX	16SA	2283	7/7	0.95	0.09	101,107,114,179	0
58	MG	16SA	2373	1/1	0.95	0.18	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SA	3278	7/7	0.95	0.10	85,98,101,210	0
60	K	23SA	3582	1/1	0.95	0.14	53,53,53,53	0
59	OHX	16SB	2220	7/7	0.95	0.11	98,104,110,191	0
58	MG	23SB	3285	1/1	0.95	0.47	77,77,77,77	0
59	OHX	23SA	3281	7/7	0.95	0.12	76,91,95,177	0
59	OHX	16SB	2226	7/7	0.95	0.09	117,119,123,191	0
59	OHX	23SA	3283	7/7	0.95	0.14	106,113,119,187	0
59	OHX	16SA	2289	7/7	0.95	0.10	89,94,104,178	0
59	OHX	16SB	2232	7/7	0.95	0.07	126,132,138,218	0
59	OHX	23SA	3285	7/7	0.95	0.18	90,99,105,205	0
58	MG	23SB	3400	1/1	0.95	0.07	84,84,84,84	0
60	K	23SA	3593	1/1	0.95	0.09	69,69,69,69	0
58	MG	23SA	3536	1/1	0.95	0.19	36,36,36,36	0
58	MG	23SA	3386	1/1	0.95	0.17	47,47,47,47	0
60	K	23SA	3596	1/1	0.95	0.06	59,59,59,59	0
59	OHX	23SA	3294	7/7	0.95	0.09	85,97,105,191	0
60	K	23SA	3598	1/1	0.95	0.21	58,58,58,58	0
59	OHX	16SB	2241	7/7	0.95	0.10	97,104,110,191	0
59	OHX	23SB	3164	7/7	0.95	0.10	124,135,157,228	0
58	MG	23SB	3404	1/1	0.95	0.16	37,37,37,37	0
58	MG	23SB	3405	1/1	0.95	0.15	53,53,53,53	0
59	OHX	23SA	3299	7/7	0.95	0.10	69,80,102,183	0
60	K	23SA	3607	1/1	0.95	0.15	59,59,59,59	0
58	MG	23SB	3406	1/1	0.95	0.21	68,68,68,68	0
59	OHX	16SB	2247	7/7	0.95	0.12	100,103,110,200	0
58	MG	23SA	3502	1/1	0.95	0.20	32,32,32,32	0
59	OHX	23SA	3303	7/7	0.95	0.10	91,92,104,183	0
58	MG	23SA	3503	1/1	0.95	0.05	70,70,70,70	0
60	K	23SA	3613	1/1	0.95	0.16	91,91,91,91	0
58	MG	16SB	2285	1/1	0.96	0.17	65,65,65,65	0
58	MG	23SA	3415	1/1	0.96	0.12	67,67,67,67	0
58	MG	16SA	2206	1/1	0.96	0.57	40,40,40,40	0
58	MG	23SA	3039	1/1	0.96	0.26	30,30,30,30	0
59	OHX	23SB	3053	7/7	0.96	0.13	92,97,113,157	0
59	OHX	23SB	3055	7/7	0.96	0.14	65,81,87,153	0
59	OHX	23SB	3057	7/7	0.96	0.10	96,99,115,167	0
59	OHX	23SA	3379	7/7	0.96	0.10	102,114,136,186	0
59	OHX	23SA	3287	7/7	0.96	0.08	97,100,105,189	0
58	MG	23SB	3234	1/1	0.96	0.31	55,55,55,55	0
60	K	23SA	3633	1/1	0.96	0.29	77,77,77,77	0
59	OHX	23SA	3290	7/7	0.96	0.11	83,93,105,198	0
59	OHX	5SA	205	7/7	0.96	0.13	75,95,106,138	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3488	1/1	0.96	0.12	49,49,49,49	0
58	MG	23SA	3418	1/1	0.96	0.17	36,36,36,36	0
59	OHX	23SA	3293	7/7	0.96	0.17	70,76,97,195	0
59	OHX	23SB	3068	7/7	0.96	0.16	87,92,101,181	0
59	OHX	23SB	3074	7/7	0.96	0.19	82,94,96,173	0
59	OHX	23SB	3076	7/7	0.96	0.26	109,111,118,213	0
60	K	L2A	301	1/1	0.96	0.15	47,47,47,47	0
58	MG	16SB	2356	1/1	0.96	0.17	78,78,78,78	0
60	K	L4A	304	1/1	0.96	0.08	77,77,77,77	0
58	MG	23SB	3332	1/1	0.96	0.21	67,67,67,67	0
59	OHX	23SB	3080	7/7	0.96	0.12	95,105,112,179	0
58	MG	23SA	3029	1/1	0.96	0.27	37,37,37,37	0
59	OHX	23SB	3082	7/7	0.96	0.15	79,84,97,168	0
59	OHX	23SB	3084	7/7	0.96	0.08	94,97,110,191	0
59	OHX	16SA	2327	7/7	0.96	0.12	134,143,149,217	0
59	OHX	23SA	3300	7/7	0.96	0.15	99,105,112,220	0
58	MG	23SB	3334	1/1	0.96	0.08	58,58,58,58	0
58	MG	23SA	3075	1/1	0.96	0.44	61,61,61,61	0
58	MG	23SA	3021	1/1	0.96	0.29	40,40,40,40	0
59	OHX	23SB	3090	7/7	0.96	0.09	110,117,123,191	0
60	K	16SA	2386	1/1	0.96	0.25	117,117,117,117	0
58	MG	23SA	3468	1/1	0.96	0.21	36,36,36,36	0
58	MG	16SA	2229	1/1	0.96	0.34	71,71,71,71	0
58	MG	23SB	3340	1/1	0.96	0.14	45,45,45,45	0
58	MG	23SA	3129	1/1	0.96	0.13	54,54,54,54	0
59	OHX	16SA	2265	7/7	0.96	0.13	104,105,123,150	0
59	OHX	23SB	3097	7/7	0.96	0.18	82,88,95,172	0
59	OHX	16SB	2209	7/7	0.96	0.10	90,99,108,137	0
60	K	16SB	2383	1/1	0.96	0.07	92,92,92,92	0
59	OHX	23SA	3310	7/7	0.96	0.19	99,106,111,224	0
58	MG	23SA	3521	1/1	0.96	0.07	58,58,58,58	0
59	OHX	23SB	3102	7/7	0.96	0.20	108,115,119,215	0
58	MG	16SA	2343	1/1	0.96	0.12	73,73,73,73	0
59	OHX	16SB	2221	7/7	0.96	0.06	108,115,121,190	0
59	OHX	16SA	2338	7/7	0.96	0.26	96,105,108,199	0
58	MG	23SA	3131	1/1	0.96	0.30	63,63,63,63	0
59	OHX	23SB	3109	7/7	0.96	0.09	118,119,125,207	0
59	OHX	23SA	3316	7/7	0.96	0.14	90,97,113,204	0
58	MG	23SA	3104	1/1	0.96	0.23	63,63,63,63	0
60	K	16SA	2410	1/1	0.96	0.08	77,77,77,77	0
58	MG	16SB	2334	1/1	0.96	0.12	68,68,68,68	0
59	OHX	16SB	2229	7/7	0.96	0.10	111,112,116,211	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SB	2231	7/7	0.96	0.12	94,98,110,186	0
59	OHX	23SB	3115	7/7	0.96	0.21	98,104,112,200	0
58	MG	23SB	3402	1/1	0.96	0.12	45,45,45,45	0
59	OHX	16SB	2233	7/7	0.96	0.09	93,102,105,189	0
59	OHX	16SB	2234	7/7	0.96	0.12	117,118,120,196	0
58	MG	23SA	3525	1/1	0.96	0.19	40,40,40,40	0
59	OHX	S19A	101	7/7	0.96	0.09	115,125,129,181	0
59	OHX	16SB	2237	7/7	0.96	0.12	109,114,118,214	0
58	MG	23SA	3091	1/1	0.96	0.25	66,66,66,66	0
58	MG	16SA	2233	1/1	0.96	0.20	71,71,71,71	0
59	OHX	23SA	3325	7/7	0.96	0.16	89,95,103,220	0
58	MG	23SB	3205	1/1	0.96	0.25	54,54,54,54	0
60	K	23SA	3538	1/1	0.96	0.16	63,63,63,63	0
58	MG	23SB	3259	1/1	0.96	0.40	35,35,35,35	0
58	MG	16SB	2338	1/1	0.96	0.10	86,86,86,86	0
59	OHX	23SA	3331	7/7	0.96	0.12	91,98,108,201	0
59	OHX	23SB	3130	7/7	0.96	0.10	106,117,124,209	0
59	OHX	16SB	2245	7/7	0.96	0.10	100,107,114,181	0
59	OHX	23SA	3332	7/7	0.96	0.10	98,103,115,190	0
58	MG	23SB	3207	1/1	0.96	0.21	47,47,47,47	0
58	MG	23SA	3408	1/1	0.96	0.08	45,45,45,45	0
59	OHX	23SB	3137	7/7	0.96	0.20	99,103,110,209	0
60	K	23SB	3458	1/1	0.96	0.06	72,72,72,72	0
58	MG	16SB	2340	1/1	0.96	0.16	64,64,64,64	0
59	OHX	23SA	3201	7/7	0.96	0.18	79,87,98,127	0
59	OHX	23SA	3205	7/7	0.96	0.20	38,59,83,130	0
59	OHX	16SA	2294	7/7	0.96	0.15	89,94,99,207	0
60	K	23SA	3556	1/1	0.96	0.10	60,60,60,60	0
59	OHX	23SA	3210	7/7	0.96	0.15	57,67,87,122	0
60	K	23SA	3558	1/1	0.96	0.27	55,55,55,55	0
59	OHX	16SB	2254	7/7	0.96	0.16	100,105,128,186	0
58	MG	23SA	3389	1/1	0.96	0.14	41,41,41,41	0
58	MG	23SB	3264	1/1	0.96	0.18	55,55,55,55	0
58	MG	L34A	101	1/1	0.96	0.43	50,50,50,50	0
58	MG	23SA	3010	1/1	0.96	0.33	39,39,39,39	0
59	OHX	23SA	3230	7/7	0.96	0.14	67,77,97,168	0
58	MG	23SB	3363	1/1	0.96	0.15	47,47,47,47	0
60	K	23SA	3569	1/1	0.96	0.13	46,46,46,46	0
59	OHX	16SA	2301	7/7	0.96	0.18	107,112,121,213	0
59	OHX	23SA	3241	7/7	0.96	0.14	65,85,97,158	0
59	OHX	23SB	3153	7/7	0.96	0.33	123,135,155,235	0
58	MG	23SA	3480	1/1	0.96	0.09	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	K	23SA	3576	1/1	0.96	0.15	39,39,39,39	0
60	K	23SA	3578	1/1	0.96	0.11	54,54,54,54	0
60	K	23SA	3579	1/1	0.96	0.14	60,60,60,60	0
59	OHX	23SA	3351	7/7	0.96	0.11	116,125,140,218	0
59	OHX	23SA	3246	7/7	0.96	0.12	88,94,111,180	0
59	OHX	16SB	2267	7/7	0.96	0.16	109,115,145,208	0
59	OHX	23SA	3250	7/7	0.96	0.16	58,64,77,149	0
58	MG	23SB	3218	1/1	0.96	0.23	56,56,56,56	0
60	K	23SB	3490	1/1	0.96	0.11	84,84,84,84	0
59	OHX	23SA	3253	7/7	0.96	0.09	106,111,120,187	0
58	MG	23SB	3219	1/1	0.96	0.27	61,61,61,61	0
58	MG	23SB	3421	1/1	0.96	0.04	96,96,96,96	0
58	MG	23SB	3367	1/1	0.96	0.16	49,49,49,49	0
58	MG	23SB	3270	1/1	0.96	0.38	43,43,43,43	0
58	MG	23SA	3048	1/1	0.96	0.25	33,33,33,33	0
59	OHX	23SA	3261	7/7	0.96	0.17	78,81,93,181	0
59	OHX	23SA	3262	7/7	0.96	0.12	81,85,101,178	0
59	OHX	23SA	3264	7/7	0.96	0.11	98,101,114,196	0
59	OHX	23SB	3169	7/7	0.96	0.28	104,124,127,192	0
58	MG	16SB	2346	1/1	0.96	0.08	84,84,84,84	0
58	MG	23SA	3457	1/1	0.96	0.20	37,37,37,37	0
59	OHX	23SA	3273	7/7	0.96	0.12	85,96,99,180	0
58	MG	23SA	3413	1/1	0.96	0.12	55,55,55,55	0
58	MG	16SA	2354	1/1	0.96	0.12	68,68,68,68	0
60	K	23SA	3602	1/1	0.96	0.10	67,67,67,67	0
60	K	23SB	3510	1/1	0.96	0.14	75,75,75,75	0
59	OHX	23SB	3175	7/7	0.96	0.07	138,142,159,216	0
60	K	23SA	3604	1/1	0.96	0.22	58,58,58,58	0
59	OHX	23SA	3277	7/7	0.96	0.15	76,84,101,204	0
59	OHX	23SB	3012	7/7	0.96	0.16	71,76,93,139	0
59	OHX	23SB	3019	7/7	0.96	0.15	68,75,83,123	0
59	OHX	23SB	3020	7/7	0.96	0.17	89,94,103,130	0
59	OHX	23SB	3022	7/7	0.96	0.14	92,97,106,138	0
59	OHX	23SB	3032	7/7	0.96	0.11	86,101,105,158	0
58	MG	23SB	3376	1/1	0.96	0.09	50,50,50,50	0
58	MG	23SB	3229	1/1	0.96	0.40	44,44,44,44	0
59	OHX	23SB	3039	7/7	0.96	0.11	92,95,103,158	0
59	OHX	23SB	3041	7/7	0.96	0.13	82,86,98,151	0
59	OHX	23SA	3280	7/7	0.96	0.24	90,100,112,211	0
59	OHX	23SB	3187	7/7	0.96	0.27	134,143,152,229	0
59	OHX	23SB	3045	7/7	0.96	0.12	84,95,110,160	0
59	OHX	23SB	3046	7/7	0.96	0.12	64,76,84,147	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
60	K	23SA	3619	1/1	0.96	0.14	81,81,81,81	0
59	OHX	23SB	3190	7/7	0.96	0.37	112,126,151,218	0
59	OHX	23SA	3309	7/7	0.97	0.11	85,88,102,183	0
59	OHX	23SA	3196	7/7	0.97	0.17	70,74,94,114	0
59	OHX	16SB	2225	7/7	0.97	0.08	94,95,103,163	0
59	OHX	23SA	3199	7/7	0.97	0.14	65,73,83,129	0
59	OHX	23SB	3091	7/7	0.97	0.09	81,89,94,189	0
58	MG	23SB	3214	1/1	0.97	0.20	48,48,48,48	0
60	K	16SA	2381	1/1	0.97	0.16	109,109,109,109	0
58	MG	23SB	3374	1/1	0.97	0.16	48,48,48,48	0
58	MG	23SA	3388	1/1	0.97	0.12	33,33,33,33	0
59	OHX	23SA	3208	7/7	0.97	0.13	72,79,94,145	0
59	OHX	16SA	2298	7/7	0.97	0.13	80,87,106,181	0
58	MG	23SA	3093	1/1	0.97	0.09	77,77,77,77	0
59	OHX	23SB	3098	7/7	0.97	0.10	97,101,109,177	0
59	OHX	23SA	3211	7/7	0.97	0.12	61,66,83,132	0
58	MG	16SB	2328	1/1	0.97	0.14	58,58,58,58	0
59	OHX	23SA	3214	7/7	0.97	0.12	62,70,75,153	0
60	K	16SA	2393	1/1	0.97	0.08	80,80,80,80	0
59	OHX	23SA	3322	7/7	0.97	0.17	88,102,106,193	0
59	OHX	23SB	3103	7/7	0.97	0.15	67,90,98,176	0
59	OHX	23SA	3217	7/7	0.97	0.14	80,82,89,137	0
60	K	16SA	2397	1/1	0.97	0.15	62,62,62,62	0
59	OHX	23SA	3218	7/7	0.97	0.10	78,86,101,146	0
60	K	16SB	2371	1/1	0.97	0.12	99,99,99,99	0
59	OHX	23SA	3219	7/7	0.97	0.11	82,94,104,144	0
59	OHX	23SA	3220	7/7	0.97	0.13	85,86,101,146	0
58	MG	16SA	2259	1/1	0.97	0.27	47,47,47,47	0
59	OHX	23SA	3328	7/7	0.97	0.11	93,96,104,189	0
59	OHX	23SA	3222	7/7	0.97	0.09	99,103,115,175	0
59	OHX	23SA	3223	7/7	0.97	0.12	81,87,101,144	0
58	MG	23SB	3379	1/1	0.97	0.11	41,41,41,41	0
58	MG	23SB	3380	1/1	0.97	0.13	39,39,39,39	0
59	OHX	23SA	3226	7/7	0.97	0.15	71,76,95,148	0
60	K	16SA	2409	1/1	0.97	0.12	81,81,81,81	0
59	OHX	23SA	3335	7/7	0.97	0.14	83,87,102,172	0
59	OHX	23SA	3227	7/7	0.97	0.15	77,84,88,170	0
59	OHX	23SA	3337	7/7	0.97	0.20	109,123,134,204	0
58	MG	23SB	3222	1/1	0.97	0.17	64,64,64,64	0
59	OHX	23SA	3233	7/7	0.97	0.11	83,89,99,153	0
59	OHX	23SA	3235	7/7	0.97	0.12	75,87,106,150	0
59	OHX	16SB	2255	7/7	0.97	0.12	133,135,154,207	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SA	3236	7/7	0.97	0.11	76,86,90,178	0
58	MG	23SA	3435	1/1	0.97	0.07	75,75,75,75	0
58	MG	23SA	3012	1/1	0.97	0.16	91,91,91,91	0
59	OHX	23SA	3240	7/7	0.97	0.10	69,78,93,170	0
58	MG	23SB	3225	1/1	0.97	0.20	39,39,39,39	0
59	OHX	23SB	3128	7/7	0.97	0.15	108,110,117,202	0
59	OHX	23SA	3242	7/7	0.97	0.15	54,62,72,135	0
59	OHX	23SA	3243	7/7	0.97	0.10	79,89,95,159	0
58	MG	16SA	2352	1/1	0.97	0.07	62,62,62,62	0
58	MG	23SB	3341	1/1	0.97	0.13	53,53,53,53	0
59	OHX	23SB	3133	7/7	0.97	0.11	96,99,110,198	0
59	OHX	23SA	3248	7/7	0.97	0.09	84,89,103,166	0
58	MG	23SB	3342	1/1	0.97	0.19	46,46,46,46	0
60	K	23SA	3543	1/1	0.97	0.15	86,86,86,86	0
58	MG	23SA	3005	1/1	0.97	0.28	54,54,54,54	0
59	OHX	16SA	2312	7/7	0.97	0.23	92,98,105,188	0
60	K	23SA	3546	1/1	0.97	0.41	94,94,94,94	0
59	OHX	23SA	3254	7/7	0.97	0.09	74,86,94,175	0
59	OHX	16SB	2270	7/7	0.97	0.24	116,127,150,209	0
58	MG	23SA	3081	1/1	0.97	0.42	50,50,50,50	0
59	OHX	23SA	3256	7/7	0.97	0.17	72,85,91,147	0
58	MG	16SA	2231	1/1	0.97	0.37	57,57,57,57	0
58	MG	23SA	3026	1/1	0.97	0.30	52,52,52,52	0
58	MG	23SB	3438	1/1	0.97	0.14	45,45,45,45	0
59	OHX	16SA	2317	7/7	0.97	0.22	112,120,138,202	0
60	K	23SB	3452	1/1	0.97	0.14	84,84,84,84	0
58	MG	23SA	3514	1/1	0.97	0.12	51,51,51,51	0
58	MG	23SA	3016	1/1	0.97	0.18	59,59,59,59	0
58	MG	16SA	2212	1/1	0.97	0.24	55,55,55,55	0
60	K	23SA	3561	1/1	0.97	0.21	75,75,75,75	0
59	OHX	S14B	101	7/7	0.97	0.07	121,125,132,169	0
59	OHX	ASIB	101	7/7	0.97	0.07	114,126,131,187	0
59	OHX	23SA	3266	7/7	0.97	0.18	81,85,97,177	0
59	OHX	23SA	3268	7/7	0.97	0.17	80,89,92,148	0
58	MG	16SA	2208	1/1	0.97	0.24	77,77,77,77	0
60	K	23SA	3567	1/1	0.97	0.10	46,46,46,46	0
58	MG	5SB	215	1/1	0.97	0.05	88,88,88,88	0
58	MG	23SB	3200	1/1	0.97	0.27	39,39,39,39	0
58	MG	23SB	3201	1/1	0.97	0.32	72,72,72,72	0
60	K	23SA	3571	1/1	0.97	0.06	38,38,38,38	0
58	MG	23SB	3274	1/1	0.97	0.41	57,57,57,57	0
59	OHX	23SB	3016	7/7	0.97	0.14	91,93,102,122	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SB	3018	7/7	0.97	0.15	53,69,86,133	0
59	OHX	23SA	3276	7/7	0.97	0.17	87,98,104,204	0
58	MG	16SA	2356	1/1	0.97	0.14	67,67,67,67	0
60	K	23SB	3474	1/1	0.97	0.12	63,63,63,63	0
58	MG	23SB	3240	1/1	0.97	0.32	54,54,54,54	0
59	OHX	23SB	3024	7/7	0.97	0.12	69,75,81,158	0
59	OHX	23SB	3027	7/7	0.97	0.12	78,82,92,125	0
59	OHX	23SB	3030	7/7	0.97	0.11	80,86,109,145	0
59	OHX	23SB	3031	7/7	0.97	0.11	88,95,98,151	0
58	MG	23SA	3058	1/1	0.97	0.17	53,53,53,53	0
59	OHX	23SA	3375	7/7	0.97	0.13	102,110,125,192	0
58	MG	23SB	3242	1/1	0.97	0.32	39,39,39,39	0
59	OHX	16SA	2266	7/7	0.97	0.14	89,99,109,141	0
59	OHX	23SA	3378	7/7	0.97	0.26	81,87,102,184	0
59	OHX	23SA	3282	7/7	0.97	0.20	101,104,113,206	0
58	MG	23SB	3244	1/1	0.97	0.31	43,43,43,43	0
58	MG	23SB	3359	1/1	0.97	0.09	66,66,66,66	0
59	OHX	16SA	2273	7/7	0.97	0.09	96,101,112,163	0
59	OHX	23SA	3286	7/7	0.97	0.28	75,84,102,179	0
58	MG	23SA	3403	1/1	0.97	0.10	33,33,33,33	0
59	OHX	23SB	3051	7/7	0.97	0.11	94,102,104,171	0
58	MG	16SB	2293	1/1	0.97	0.32	48,48,48,48	0
59	OHX	23SA	3289	7/7	0.97	0.10	72,79,86,180	0
60	K	23SB	3495	1/1	0.97	0.08	73,73,73,73	0
58	MG	23SA	3448	1/1	0.97	0.10	40,40,40,40	0
60	K	23SA	3600	1/1	0.97	0.17	68,68,68,68	0
58	MG	23SA	3426	1/1	0.97	0.14	42,42,42,42	0
58	MG	23SB	3409	1/1	0.97	0.06	58,58,58,58	0
58	MG	23SB	3321	1/1	0.97	0.23	39,39,39,39	0
59	OHX	23SB	3060	7/7	0.97	0.09	95,99,105,180	0
58	MG	23SA	3031	1/1	0.97	0.27	58,58,58,58	0
58	MG	23SB	3250	1/1	0.97	0.35	41,41,41,41	0
59	OHX	23SA	3297	7/7	0.97	0.10	97,99,109,183	0
59	OHX	16SA	2285	7/7	0.97	0.07	123,129,131,218	0
60	K	23SB	3507	1/1	0.97	0.19	72,72,72,72	0
59	OHX	16SA	2286	7/7	0.97	0.17	75,88,94,169	0
59	OHX	16SA	2287	7/7	0.97	0.09	96,103,109,167	0
58	MG	23SA	3143	1/1	0.97	0.24	69,69,69,69	0
59	OHX	23SB	3069	7/7	0.97	0.12	98,105,118,189	0
59	OHX	23SB	3070	7/7	0.97	0.13	81,89,95,163	0
59	OHX	23SB	3071	7/7	0.97	0.08	85,94,100,182	0
59	OHX	23SB	3073	7/7	0.97	0.10	89,100,113,186	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	23SA	3074	1/1	0.97	0.12	72,72,72,72	0
59	OHX	5SB	201	7/7	0.97	0.11	103,112,120,159	0
59	OHX	16SB	2203	7/7	0.97	0.12	91,94,102,133	0
60	K	23SB	3518	1/1	0.97	0.13	86,86,86,86	0
58	MG	23SA	3046	1/1	0.97	0.33	52,52,52,52	0
59	OHX	23SB	3078	7/7	0.97	0.11	115,122,131,189	0
59	OHX	16SA	2291	7/7	0.97	0.11	91,96,102,165	0
59	OHX	16SB	2211	7/7	0.97	0.13	101,114,117,162	0
59	OHX	MRNA	101	7/7	0.97	0.08	109,113,121,212	0
58	MG	16SA	2227	1/1	0.97	0.26	56,56,56,56	0
59	OHX	23SB	3083	7/7	0.97	0.08	110,114,121,181	0
59	OHX	16SB	2219	7/7	0.97	0.09	103,105,116,174	0
60	K	23SA	3628	1/1	0.97	0.37	83,83,83,83	0
58	MG	23SB	3371	1/1	0.97	0.10	39,39,39,39	0
58	MG	23SB	3329	1/1	0.97	0.37	64,64,64,64	0
59	OHX	23SA	3206	7/7	0.98	0.13	74,75,95,140	0
60	K	23SA	3559	1/1	0.98	0.40	82,82,82,82	0
60	K	16SB	2385	1/1	0.98	0.07	92,92,92,92	0
59	OHX	23SA	3265	7/7	0.98	0.17	83,93,109,192	0
59	OHX	23SA	3207	7/7	0.98	0.10	73,78,88,136	0
59	OHX	16SA	2270	7/7	0.98	0.12	108,118,121,150	0
59	OHX	23SA	3269	7/7	0.98	0.18	86,89,103,177	0
58	MG	23SB	3213	1/1	0.98	0.22	40,40,40,40	0
59	OHX	L19A	201	7/7	0.98	0.14	85,89,97,137	0
59	OHX	23SA	3271	7/7	0.98	0.11	70,73,91,159	0
58	MG	23SA	3133	1/1	0.98	0.25	48,48,48,48	0
58	MG	23SA	3464	1/1	0.98	0.13	37,37,37,37	0
58	MG	23SB	3216	1/1	0.98	0.19	42,42,42,42	0
58	MG	23SB	3238	1/1	0.98	0.25	46,46,46,46	0
59	OHX	23SA	3215	7/7	0.98	0.11	81,87,93,144	0
59	OHX	16SB	2204	7/7	0.98	0.12	86,96,104,143	0
60	K	23SA	3573	1/1	0.98	0.06	63,63,63,63	0
59	OHX	23SA	3216	7/7	0.98	0.08	85,94,99,152	0
59	OHX	16SB	2208	7/7	0.98	0.15	79,80,93,120	0
59	OHX	16SA	2276	7/7	0.98	0.09	93,96,108,169	0
59	OHX	16SB	2210	7/7	0.98	0.12	96,101,107,163	0
60	K	23SB	3440	1/1	0.98	0.07	94,94,94,94	0
58	MG	23SA	3134	1/1	0.98	0.26	74,74,74,74	0
59	OHX	16SB	2213	7/7	0.98	0.12	123,129,137,180	0
59	OHX	5SB	202	7/7	0.98	0.14	96,105,116,131	0
59	OHX	23SB	3105	7/7	0.98	0.15	88,96,107,174	0
58	MG	23SB	3325	1/1	0.98	0.18	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SB	2215	7/7	0.98	0.10	92,100,110,164	0
60	K	23SA	3585	1/1	0.98	0.09	54,54,54,54	0
59	OHX	23SB	3008	7/7	0.98	0.12	89,94,103,131	0
59	OHX	16SB	2216	7/7	0.98	0.07	98,101,113,179	0
59	OHX	23SB	3013	7/7	0.98	0.13	86,91,94,110	0
59	OHX	23SB	3015	7/7	0.98	0.12	103,106,113,117	0
58	MG	L4A	301	1/1	0.98	0.26	48,48,48,48	0
59	OHX	23SB	3017	7/7	0.98	0.14	83,87,98,124	0
59	OHX	L17B	201	7/7	0.98	0.14	72,77,87,116	0
59	OHX	16SB	2218	7/7	0.98	0.10	95,98,107,169	0
58	MG	16SA	2217	1/1	0.98	0.23	40,40,40,40	0
59	OHX	16SA	2282	7/7	0.98	0.09	84,85,91,155	0
59	OHX	23SB	3021	7/7	0.98	0.12	68,77,87,136	0
60	K	23SB	3459	1/1	0.98	0.12	56,56,56,56	0
60	K	23SB	3460	1/1	0.98	0.11	61,61,61,61	0
58	MG	23SB	3221	1/1	0.98	0.16	47,47,47,47	0
59	OHX	23SB	3023	7/7	0.98	0.11	75,79,88,131	0
58	MG	23SA	3042	1/1	0.98	0.27	47,47,47,47	0
59	OHX	23SB	3025	7/7	0.98	0.11	87,93,101,135	0
59	OHX	23SB	3026	7/7	0.98	0.10	83,92,104,131	0
59	OHX	16SB	2223	7/7	0.98	0.06	110,112,122,172	0
59	OHX	23SB	3028	7/7	0.98	0.11	85,85,101,143	0
59	OHX	23SB	3029	7/7	0.98	0.11	91,95,103,141	0
58	MG	23SA	3033	1/1	0.98	0.41	74,74,74,74	0
58	MG	16SB	2295	1/1	0.98	0.35	66,66,66,66	0
58	MG	23SA	3003	1/1	0.98	0.28	60,60,60,60	0
59	OHX	23SB	3033	7/7	0.98	0.10	79,88,93,147	0
59	OHX	23SB	3034	7/7	0.98	0.09	90,91,105,156	0
59	OHX	23SA	3228	7/7	0.98	0.12	70,82,89,143	0
60	K	16SA	2392	1/1	0.98	0.06	88,88,88,88	0
59	OHX	23SA	3229	7/7	0.98	0.10	81,96,99,154	0
59	OHX	23SB	3037	7/7	0.98	0.09	97,101,106,155	0
59	OHX	23SB	3134	7/7	0.98	0.10	82,85,92,165	0
59	OHX	23SB	3038	7/7	0.98	0.09	82,91,105,153	0
58	MG	L3B	301	1/1	0.98	0.22	40,40,40,40	0
59	OHX	16SB	2230	7/7	0.98	0.10	126,136,146,203	0
60	K	23SB	3482	1/1	0.98	0.10	66,66,66,66	0
59	OHX	23SA	3231	7/7	0.98	0.13	79,87,94,150	0
59	OHX	23SB	3044	7/7	0.98	0.14	69,77,95,151	0
59	OHX	23SA	3232	7/7	0.98	0.10	78,84,95,161	0
58	MG	23SB	3226	1/1	0.98	0.32	60,60,60,60	0
59	OHX	23SB	3047	7/7	0.98	0.10	74,90,94,149	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SA	3234	7/7	0.98	0.10	91,94,101,156	0
59	OHX	23SA	3296	7/7	0.98	0.10	94,97,113,192	0
58	MG	23SA	3412	1/1	0.98	0.16	40,40,40,40	0
58	MG	16SB	2283	1/1	0.98	0.24	48,48,48,48	0
59	OHX	23SB	3147	7/7	0.98	0.12	109,122,129,186	0
58	MG	23SA	3471	1/1	0.98	0.10	53,53,53,53	0
59	OHX	23SA	3238	7/7	0.98	0.12	64,65,76,149	0
59	OHX	23SB	3054	7/7	0.98	0.13	89,95,100,168	0
58	MG	16SB	2329	1/1	0.98	0.11	63,63,63,63	0
59	OHX	23SB	3056	7/7	0.98	0.09	95,102,108,155	0
59	OHX	23SA	3180	7/7	0.98	0.20	70,70,90,126	0
59	OHX	23SA	3182	7/7	0.98	0.16	81,85,100,104	0
59	OHX	23SA	3187	7/7	0.98	0.14	61,66,83,110	0
59	OHX	23SA	3190	7/7	0.98	0.15	79,85,92,109	0
59	OHX	23SA	3191	7/7	0.98	0.13	79,89,101,127	0
59	OHX	23SA	3192	7/7	0.98	0.17	68,74,81,100	0
59	OHX	23SA	3247	7/7	0.98	0.17	85,87,97,160	0
60	K	S13A	201	1/1	0.98	0.12	108,108,108,108	0
60	K	23SB	3506	1/1	0.98	0.16	75,75,75,75	0
59	OHX	23SA	3193	7/7	0.98	0.15	66,70,81,129	0
59	OHX	23SB	3065	7/7	0.98	0.10	86,93,109,147	0
59	OHX	23SA	3249	7/7	0.98	0.10	81,94,100,157	0
59	OHX	23SA	3194	7/7	0.98	0.14	71,75,90,126	0
59	OHX	23SA	3251	7/7	0.98	0.07	99,104,112,176	0
59	OHX	23SA	3313	7/7	0.98	0.11	67,73,83,167	0
58	MG	23SA	3405	1/1	0.98	0.22	46,46,46,46	0
59	OHX	16SA	2264	7/7	0.98	0.13	96,101,107,133	0
59	OHX	23SB	3072	7/7	0.98	0.09	81,88,103,161	0
59	OHX	23SA	3197	7/7	0.98	0.16	73,80,93,129	0
59	OHX	23SA	3198	7/7	0.98	0.14	58,71,88,129	0
59	OHX	23SB	3075	7/7	0.98	0.11	84,93,98,173	0
58	MG	16SB	2286	1/1	0.98	0.20	77,77,77,77	0
58	MG	16SB	2287	1/1	0.98	0.25	103,103,103,103	0
59	OHX	16SA	2267	7/7	0.98	0.12	85,94,97,129	0
59	OHX	5SA	204	7/7	0.98	0.15	79,82,94,113	0
60	K	23SA	3551	1/1	0.98	0.12	80,80,80,80	0
59	OHX	23SA	3202	7/7	0.98	0.14	55,70,77,136	0
59	OHX	23SA	3203	7/7	0.98	0.14	77,78,101,130	0
59	OHX	23SA	3204	7/7	0.98	0.15	66,71,91,123	0
60	K	23SA	3555	1/1	0.98	0.28	71,71,71,71	0
59	OHX	16SA	2269	7/7	0.98	0.11	81,87,100,141	0
59	OHX	23SA	3263	7/7	0.98	0.12	64,70,95,142	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	23SA	3329	7/7	0.99	0.12	90,93,105,166	0
60	K	23SA	3577	1/1	0.99	0.11	45,45,45,45	0
59	OHX	16SA	2261	7/7	0.99	0.15	71,82,87,97	0
59	OHX	23SA	3213	7/7	0.99	0.14	74,78,90,126	0
59	OHX	L4B	301	7/7	0.99	0.20	48,52,62,94	0
59	OHX	16SA	2262	7/7	0.99	0.14	62,71,88,103	0
59	OHX	16SB	2212	7/7	0.99	0.09	96,100,102,148	0
59	OHX	16SA	2263	7/7	0.99	0.13	80,83,92,128	0
58	MG	23SA	3455	1/1	0.99	0.26	51,51,51,51	0
59	OHX	PSIA	102	7/7	0.99	0.11	94,95,102,131	0
58	MG	23SB	3217	1/1	0.99	0.17	48,48,48,48	0
59	OHX	16SA	2277	7/7	0.99	0.07	94,95,103,165	0
58	MG	23SB	3339	1/1	0.99	0.10	47,47,47,47	0
58	MG	23SA	3398	1/1	0.99	0.14	35,35,35,35	0
59	OHX	23SB	3040	7/7	0.99	0.14	68,76,88,142	0
59	OHX	23SA	3267	7/7	0.99	0.15	91,99,103,186	0
59	OHX	23SB	3042	7/7	0.99	0.07	101,107,110,164	0
59	OHX	23SA	3244	7/7	0.99	0.10	76,82,89,144	0
59	OHX	23SA	3178	7/7	0.99	0.24	43,55,71,95	0
59	OHX	23SA	3179	7/7	0.99	0.24	41,50,60,111	0
59	OHX	23SB	3001	7/7	0.99	0.21	59,64,68,112	0
59	OHX	23SB	3002	7/7	0.99	0.20	66,72,95,109	0
59	OHX	23SB	3003	7/7	0.99	0.15	75,81,93,98	0
60	K	16SA	2390	1/1	0.99	0.22	67,67,67,67	0
59	OHX	23SB	3004	7/7	0.99	0.13	64,70,79,95	0
59	OHX	23SB	3005	7/7	0.99	0.15	74,76,93,97	0
59	OHX	23SB	3006	7/7	0.99	0.13	70,76,84,116	0
59	OHX	23SB	3007	7/7	0.99	0.14	85,90,107,121	0
59	OHX	L4A	302	7/7	0.99	0.30	37,47,53,146	0
59	OHX	23SB	3009	7/7	0.99	0.12	75,77,79,117	0
59	OHX	23SB	3010	7/7	0.99	0.16	79,84,90,126	0
59	OHX	23SB	3011	7/7	0.99	0.14	74,84,94,103	0
59	OHX	16SA	2268	7/7	0.99	0.09	96,97,109,142	0
59	OHX	L17A	201	7/7	0.99	0.15	63,68,78,121	0
59	OHX	23SB	3014	7/7	0.99	0.12	74,88,94,117	0
59	OHX	23SA	3181	7/7	0.99	0.17	55,67,74,94	0
58	MG	23SB	3243	1/1	0.99	0.43	30,30,30,30	0
59	OHX	23SA	3183	7/7	0.99	0.15	63,65,71,97	0
59	OHX	23SA	3185	7/7	0.99	0.16	69,73,78,116	0
59	OHX	23SA	3186	7/7	0.99	0.14	62,68,77,96	0
60	K	16SA	2407	1/1	0.99	0.09	75,75,75,75	0
58	MG	23SB	3291	1/1	0.99	0.13	79,79,79,79	0

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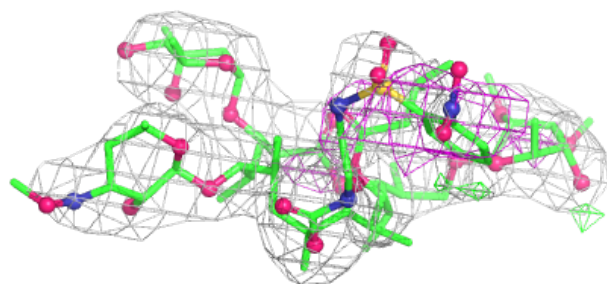
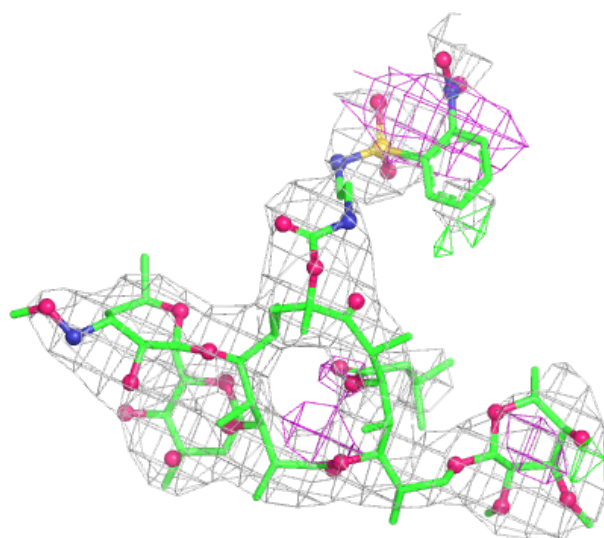
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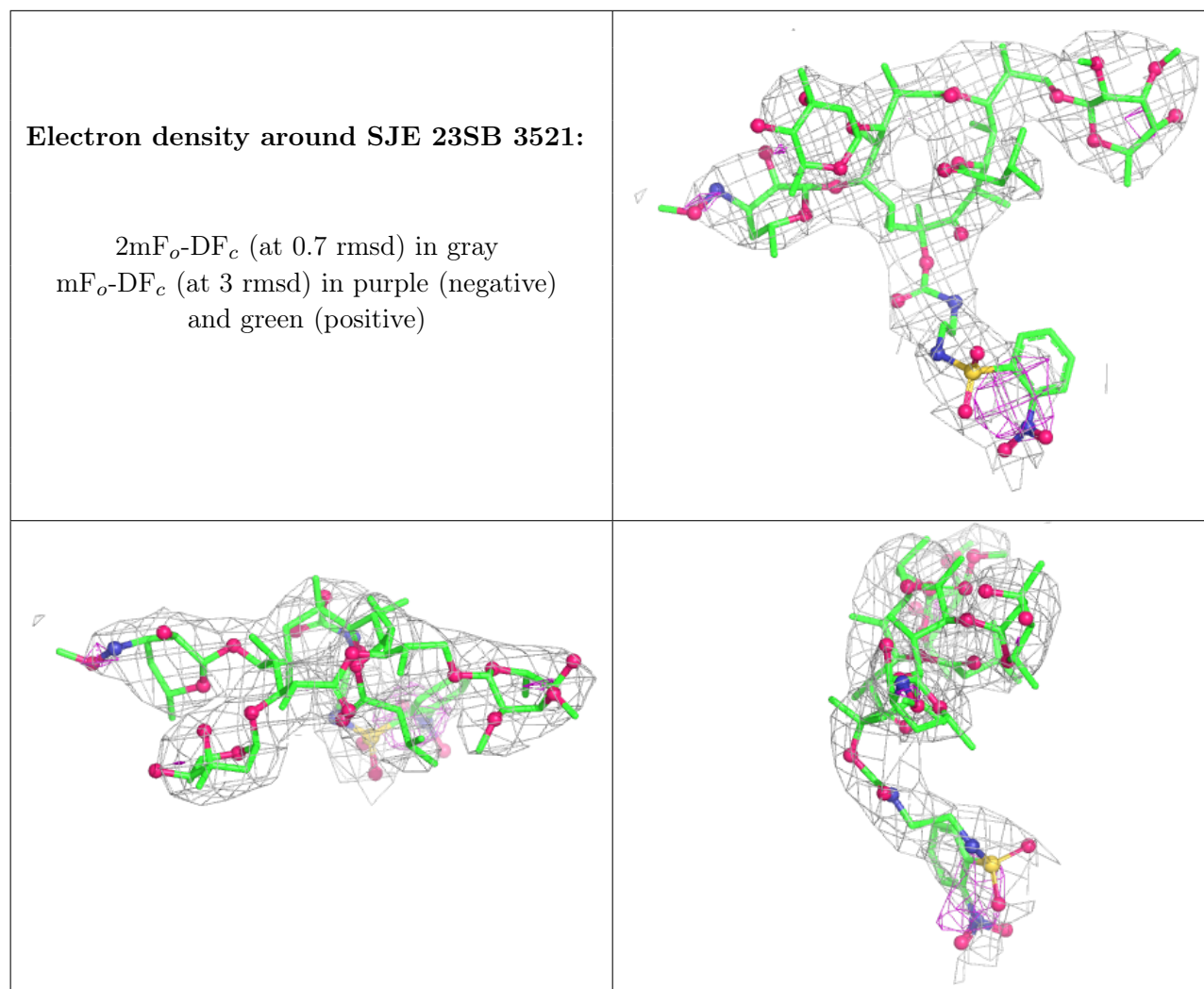
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
59	OHX	16SB	2201	7/7	0.99	0.13	81,88,90,106	0
59	OHX	16SB	2202	7/7	0.99	0.15	86,91,97,124	0
59	OHX	23SA	3188	7/7	0.99	0.12	58,67,76,91	0
59	OHX	23SA	3189	7/7	0.99	0.17	60,72,78,115	0
59	OHX	16SB	2205	7/7	0.99	0.14	105,111,117,152	0
59	OHX	16SB	2206	7/7	0.99	0.10	95,98,106,125	0
60	K	23SA	3624	1/1	0.99	0.19	60,60,60,60	0
59	OHX	16SA	2260	7/7	0.99	0.16	68,70,81,89	0
59	OHX	23SA	3184	7/7	1.00	0.12	57,62,65,92	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

**Electron density around SJE 23SA 3640:**

2mF<sub>o</sub>-DF<sub>c</sub> (at 0.7 rmsd) in gray  
 mF<sub>o</sub>-DF<sub>c</sub> (at 3 rmsd) in purple (negative)  
 and green (positive)





## 6.5 Other polymers [i](#)

There are no such residues in this entry.