Full wwPDB X-ray Structure Validation Report ⓘ

Mar 29, 2026 – 02:13 AM UTC

PDB ID	:	4V8I / pdb_00004v8i
Title	:	Crystal structure of YfiA bound to the 70S ribosome.
Authors	:	Polikanov, Y.S.; Blaha, G.M.; Steitz, T.A.
Deposited on	:	2011-12-12
Resolution	:	2.70 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

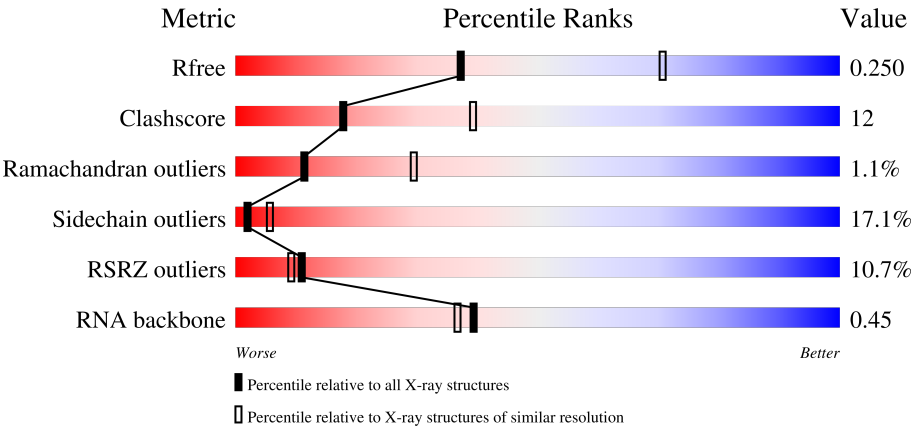
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.70 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}	180053	3538 (2.70-2.70)
Clashscore	190562	3843 (2.70-2.70)
Ramachandran outliers	187476	3778 (2.70-2.70)
Sidechain outliers	187428	3778 (2.70-2.70)
RSRZ outliers	180081	3538 (2.70-2.70)
RNA backbone	3983	1044 (2.90-2.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	4% 46% 39% 13% •
1	CA	1522	8% 41% 42% 15% •
2	AB	256	29% 45% 36% 8% 11%
2	CB	256	39% 46% 37% 8% 8%

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Mol	Chain	Length	Quality of chain
3	AC	239	5% 61% 20% 5% 14%
3	CC	239	24% 39% 35% 10% 14%
4	AD	209	52% 68% 22% 8%
4	CD	209	50% 59% 31% 9%
5	AE	162	4% 52% 33% 6% 9%
5	CE	162	12% 51% 33% 8% 9%
6	AF	101	6% 67% 24% 8%
6	CF	101	4% 69% 22% 7%
7	AG	156	4% 67% 27% 5%
7	CG	156	29% 54% 37% 8%
8	AH	138	6% 62% 30% 8%
8	CH	138	12% 60% 32% 8%
9	AI	128	27% 49% 39% 9%
9	CI	128	57% 44% 41% 11%
10	AJ	105	32% 40% 43% 7% 9%
10	CJ	105	70% 51% 26% 13% 9%
11	AK	129	10% 63% 23% 12%
11	CK	129	12% 60% 24% 12%
12	AL	132	26% 62% 24% 6% 8%
12	CL	132	36% 55% 33% 8%
13	AM	126	10% 44% 32% 10% 5% 10%
13	CM	126	44% 43% 29% 16% 11%
14	AN	61	18% 49% 41% 8%
14	CN	61	77% 34% 43% 18%
15	AO	89	7% 58% 33% 8%

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Mol	Chain	Length	Quality of chain
15	CO	89	4% 53% 38% 8%
16	AP	88	53% 48% 35% 8% 7%
16	CP	88	39% 38% 44% 10% 7%
17	AQ	105	12% 53% 32% 9% 6%
17	CQ	105	10% 57% 28% 10% 6%
18	AR	88	2% 48% 26% 23%
18	CR	88	6% 47% 27% 23%
19	AS	93	28% 49% 29% 8% 13%
19	CS	93	42% 44% 27% 13% 16%
20	AT	106	27% 57% 26% 7% 9%
20	CT	106	25% 58% 31% 8%
21	AU	27	22% 56% 22% 7% 15%
21	CU	27	70% 30% 37% 11% 7% 15%
22	AY	119	2% 52% 23% 20%
22	CY	119	22% 37% 32% 10% 21%
23	BA	2915	3% 59% 29% 8%
23	DA	2915	3% 54% 33% 9%
24	BB	122	3% 61% 31% 6%
24	DB	122	35% 48% 39% 12%
25	BD	276	% 66% 27% 5%
25	DD	276	67% 26% 5%
26	BE	206	% 60% 27% 10%
26	DE	206	% 61% 25% 11%
27	BF	210	3% 61% 27% 8%
27	DF	210	2% 62% 29% 5%

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Mol	Chain	Length	Quality of chain
28	BG	182	15% 60% 31% 7%
28	DG	182	62% 58% 34% 7%
29	BH	180	4% 65% 27%
29	DH	180	27% 66% 27%
30	BI	148	3% 51% 35% 10%
30	DI	148	9% 51% 32% 16%
31	BN	140	2% 59% 34% 6%
31	DN	140	% 57% 35% 7%
32	BO	122	76% 20%
32	DO	122	70% 26%
33	BP	150	64% 24% 11%
33	DP	150	5% 60% 25% 13%
34	BQ	141	67% 25% 8%
34	DQ	141	7% 62% 30% 7%
35	BR	118	61% 31% 7%
35	DR	118	% 63% 25% 11%
36	BS	112	9% 54% 31% 12%
36	DS	112	46% 54% 30% 13%
37	BT	146	7% 55% 27% 7% 10%
37	DT	146	3% 55% 27% 6% 11%
38	BU	118	% 75% 20%
38	DU	118	% 70% 25%
39	BV	101	2% 72% 20% 7%
39	DV	101	% 72% 19% 8%
40	BW	113	62% 31% 6%

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Mol	Chain	Length	Quality of chain
40	DW	113	2% 66% 26% 5%
41	BX	96	2% 75% 19% 5%
41	DX	96	% 71% 24%
42	BY	110	4% 66% 24% 7%
42	DY	110	16% 61% 30% 6%
43	BZ	206	4% 59% 26% 11%
43	DZ	206	17% 54% 33% 10%
44	B0	85	65% 22% 11%
44	D0	85	6% 60% 26% 5% 9%
45	B1	98	2% 68% 20% 9%
45	D1	98	3% 66% 21% 10%
46	B2	72	3% 60% 29% 8%
46	D2	72	6% 57% 35% 7%
47	B3	60	3% 78% 13% 7%
47	D3	60	3% 73% 20% 5%
48	B4	71	10% 41% 17% 6% 35%
48	D4	71	18% 42% 17% 35%
49	B5	60	2% 72% 18% 7%
49	D5	60	2% 73% 18% 7%
50	B6	54	56% 31% 9%
50	D6	54	56% 33% 6%
51	B7	49	2% 59% 29% 8%
51	D7	49	2% 73% 18% 6%
52	B8	65	2% 52% 34% 12%
52	D8	65	51% 35% 9%

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Mol	Chain	Length	Quality of chain
53	B9	37	5% 68% 16% 14%
53	D9	37	5% 73% 19% 5%

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
54	MG	AA	1621	-	-	-	X
54	MG	CA	1630	-	-	-	X
54	MG	DB	206	-	-	-	X

2 Entry composition (i)

There are 56 unique types of molecules in this entry. The entry contains 287173 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 Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1493	Total	C	N	O	P	0	0	0
			32102	14287	5955	10367	1493			
1	CA	1491	Total	C	N	O	P	0	0	0
			32056	14267	5945	10353	1491			

- Molecule 2 is a protein called 30S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	229	Total	C	N	O	S	0	0	0
			1777	1134	318	320	5			
2	CB	235	Total	C	N	O	S	0	0	1
			1817	1160	325	327	5			

- Molecule 3 is a protein called 30S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1450	906	279	264	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1453	908	280	264	1			

- Molecule 4 is a protein called 30S Ribosomal Protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1520	960	283	272	5			
4	CD	208	Total	C	N	O	S	0	0	0
			1537	968	287	276	6			

- Molecule 5 is a protein called 30S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	148	Total	C	N	O	S	0	0	0
			1105	699	204	198	4			
5	CE	148	Total	C	N	O	S	0	0	0
			1106	700	204	198	4			

- Molecule 6 is a protein called 30S Ribosomal Protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			781	495	137	146	3			
6	CF	99	Total	C	N	O	S	0	0	0
			776	492	135	146	3			

- Molecule 7 is a protein called 30S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1167	727	224	210	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1164	726	224	208	6			

- Molecule 8 is a protein called 30S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1045	665	188	190	2			
8	CH	138	Total	C	N	O	S	0	0	0
			1049	667	188	192	2			

- Molecule 9 is a protein called 30S Ribosomal Protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	125	Total	C	N	O	0	0	0
			852	533	163	156			
9	CI	125	Total	C	N	O	0	0	0
			849	531	161	157			

- Molecule 10 is a protein called 30S Ribosomal Protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	AJ	96	Total	C	N	O	0	0	0
			659	408	131	120			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	CJ	96	Total	C	N	O	0	0	0
			657	407	129	121			

- Molecule 11 is a protein called 30S Ribosomal Protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	114	Total	C	N	O	S	0	0	0
			828	516	155	154	3			
11	CK	114	Total	C	N	O	S	0	0	0
			828	516	155	154	3			

- Molecule 12 is a protein called 30S Ribosomal Protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	122	Total	C	N	O	S	0	0	0
			909	570	179	159	1			
12	CL	122	Total	C	N	O	S	0	0	0
			905	567	178	159	1			

- Molecule 13 is a protein called 30S Ribosomal Protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			801	494	164	142	1			
13	CM	112	Total	C	N	O	S	0	0	0
			784	486	159	138	1			

- Molecule 14 is a protein called 30S Ribosomal Protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			478	303	99	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			474	300	98	72	4			

- Molecule 15 is a protein called 30S Ribosomal Protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			724	453	143	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			724	453	143	126	2			

- Molecule 16 is a protein called 30S Ribosomal Protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			651	416	123	111	1			
16	CP	82	Total	C	N	O	S	0	0	0
			661	421	126	113	1			

- Molecule 17 is a protein called 30S Ribosomal Protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			819	525	150	142	2			

- Molecule 18 is a protein called 30S Ribosomal Protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	68	Total	C	N	O	0	0	0
			514	329	98	87			
18	CR	68	Total	C	N	O	0	0	0
			514	329	98	87			

- Molecule 19 is a protein called 30S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	81	Total	C	N	O	S	0	0	0
			560	351	108	99	2			
19	CS	78	Total	C	N	O	S	0	0	0
			549	345	106	96	2			

- Molecule 20 is a protein called 30S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	96	Total	C	N	O	S	0	0	0
			699	430	150	117	2			
20	CT	104	Total	C	N	O	S	0	0	0
			773	476	162	133	2			

- Molecule 21 is a protein called 30S Ribosomal Protein THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	23	Total 199	C 122	N 48	O 29	0	0	0
21	CU	23	Total 180	C 112	N 41	O 27	0	0	0

- Molecule 22 is a protein called Ribosome-associated inhibitor A.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AY	95	Total 754	C 472	N 142	O 137	S 3	0	0	0
22	CY	94	Total 739	C 461	N 138	O 137	S 3	0	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	114	HIS	-	expression tag	UNP P0AD49
AY	115	HIS	-	expression tag	UNP P0AD49
AY	116	HIS	-	expression tag	UNP P0AD49
AY	117	HIS	-	expression tag	UNP P0AD49
AY	118	HIS	-	expression tag	UNP P0AD49
AY	119	HIS	-	expression tag	UNP P0AD49
CY	114	HIS	-	expression tag	UNP P0AD49
CY	115	HIS	-	expression tag	UNP P0AD49
CY	116	HIS	-	expression tag	UNP P0AD49
CY	117	HIS	-	expression tag	UNP P0AD49
CY	118	HIS	-	expression tag	UNP P0AD49
CY	119	HIS	-	expression tag	UNP P0AD49

- Molecule 23 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BA	2827	Total 60898	C 27101	N 11400	O 19571	P 2826	0	0	0
23	DA	2798	Total 60264	C 26820	N 11274	O 19374	P 2796	0	0	0

- Molecule 24 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BB	120	Total 2573	C 1146	N 476	O 832	P 119	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	DB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 25 is a protein called 50S Ribosomal Protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			
25	DD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			

- Molecule 26 is a protein called 50S Ribosomal Protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	204	Total	C	N	O	S	0	0	0
			1555	982	297	270	6			
26	DE	204	Total	C	N	O	S	0	0	0
			1555	982	297	270	6			

- Molecule 27 is a protein called 50S Ribosomal Protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	203	Total	C	N	O	S	0	0	1
			1577	1004	298	273	2			
27	DF	203	Total	C	N	O	S	0	0	1
			1572	1003	298	269	2			

- Molecule 28 is a protein called 50S Ribosomal Protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	181	Total	C	N	O	S	0	0	0
			1368	879	242	244	3			
28	DG	181	Total	C	N	O	S	0	0	0
			1368	879	242	244	3			

- Molecule 29 is a protein called 50S Ribosomal Protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	174	Total	C	N	O	S	0	0	0
			1317	837	243	236	1			
29	DH	174	Total	C	N	O	S	0	0	0
			1317	837	243	236	1			

- Molecule 30 is a protein called 50S Ribosomal Protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	146	Total	C	N	O	S	0	0	0
			1043	672	180	190	1			
30	DI	146	Total	C	N	O	S	0	0	0
			1043	672	180	190	1			

- Molecule 31 is a protein called 50S Ribosomal Protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BN	140	Total	C	N	O	S	0	0	0
			1112	717	207	184	4			
31	DN	140	Total	C	N	O	S	0	0	0
			1112	717	207	184	4			

- Molecule 32 is a protein called 50S Ribosomal Protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BO	122	Total	C	N	O	S	0	0	0
			923	583	168	168	4			
32	DO	122	Total	C	N	O	S	0	0	0
			923	583	168	168	4			

- Molecule 33 is a protein called 50S Ribosomal Protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BP	149	Total	C	N	O	S	0	0	0
			1131	703	229	196	3			
33	DP	149	Total	C	N	O	S	0	0	0
			1131	703	229	196	3			

- Molecule 34 is a protein called 50S Ribosomal Protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
34	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 35 is a protein called 50S Ribosomal Protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
35	DR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 36 is a protein called 50S Ribosomal Protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BS	110	Total	C	N	O	0	0	0
			865	544	172	149			
36	DS	110	Total	C	N	O	0	0	0
			873	550	174	149			

- Molecule 37 is a protein called 50S Ribosomal Protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BT	131	Total	C	N	O	S	0	0	0
			1063	666	213	183	1			
37	DT	130	Total	C	N	O	S	0	0	0
			1058	663	212	182	1			

- Molecule 38 is a protein called 50S Ribosomal Protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
38	DU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 39 is a protein called 50S Ribosomal Protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			
39	DV	101	Total	C	N	O	S	0	0	0
			775	498	141	135	1			

- Molecule 40 is a protein called 50S Ribosomal Protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BW	112	Total	C	N	O	S	0	0	0
			881	554	172	153	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	DW	111	Total	C	N	O	S	0	0	0
			877	552	171	152	2			

- Molecule 41 is a protein called 50S Ribosomal Protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BX	95	Total	C	N	O	S	0	0	0
			742	483	134	124	1			
41	DX	95	Total	C	N	O	S	0	0	0
			732	477	130	124	1			

- Molecule 42 is a protein called 50S Ribosomal Protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BY	107	Total	C	N	O	S	0	0	0
			785	503	145	131	6			
42	DY	107	Total	C	N	O	S	0	0	0
			781	502	145	128	6			

- Molecule 43 is a protein called 50S Ribosomal Protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BZ	198	Total	C	N	O	S	0	0	0
			1522	972	269	279	2			
43	DZ	203	Total	C	N	O	S	0	0	0
			1528	973	268	284	3			

- Molecule 44 is a protein called 50S Ribosomal Protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	B0	76	Total	C	N	O	S	0	0	0
			594	368	125	100	1			
44	D0	77	Total	C	N	O	S	0	0	0
			607	376	126	104	1			

- Molecule 45 is a protein called 50S Ribosomal Protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	B1	97	Total	C	N	O	S	0	0	0
			745	469	144	131	1			
45	D1	97	Total	C	N	O	S	0	0	0
			745	469	144	131	1			

- Molecule 46 is a protein called 50S Ribosomal Protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			
46	D2	71	Total	C	N	O	S	0	0	0
			584	361	118	103	2			

- Molecule 47 is a protein called 50S Ribosomal Protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
47	B3	59	Total	C	N	O	0	0	0
			458	293	87	78			
47	D3	59	Total	C	N	O	0	0	0
			463	295	87	81			

- Molecule 48 is a protein called 50S Ribosomal Protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B4	46	Total	C	N	O	S	0	0	0
			349	223	57	64	5			
48	D4	46	Total	C	N	O	S	0	0	0
			349	223	57	64	5			

- Molecule 49 is a protein called 50S Ribosomal Protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B5	59	Total	C	N	O	S	0	0	0
			455	286	90	74	5			
49	D5	59	Total	C	N	O	S	0	0	0
			451	283	89	74	5			

- Molecule 50 is a protein called 50S Ribosomal Protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B6	53	Total	C	N	O	S	0	0	0
			449	278	90	77	4			
50	D6	53	Total	C	N	O	S	0	0	0
			437	272	84	77	4			

- Molecule 51 is a protein called 50S Ribosomal Protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B7	48	Total 418	C 257	N 104	O 55	S 2	0	0	0
51	D7	48	Total 402	C 248	N 97	O 55	S 2	0	0	0

- Molecule 52 is a protein called 50S Ribosomal Protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B8	64	Total 509	C 326	N 99	O 82	S 2	0	0	0
52	D8	64	Total 509	C 326	N 99	O 82	S 2	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B9	36	Total 297	C 182	N 66	O 46	S 3	0	0	0
53	D9	36	Total 297	C 182	N 66	O 46	S 3	0	0	0

- Molecule 54 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	217	Total 217	Mg 217	0	0
54	AD	2	Total 2	Mg 2	0	0
54	AE	1	Total 1	Mg 1	0	0
54	AF	1	Total 1	Mg 1	0	0
54	AI	1	Total 1	Mg 1	0	0
54	AL	1	Total 1	Mg 1	0	0
54	AM	2	Total 2	Mg 2	0	0
54	AP	1	Total 1	Mg 1	0	0
54	BA	729	Total 729	Mg 729	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	BB	19	Total Mg 19 19	0	0
54	BD	7	Total Mg 7 7	0	0
54	BE	6	Total Mg 6 6	0	0
54	BF	6	Total Mg 6 6	0	0
54	BG	1	Total Mg 1 1	0	0
54	BH	1	Total Mg 1 1	0	0
54	BN	2	Total Mg 2 2	0	0
54	BO	1	Total Mg 1 1	0	0
54	BP	2	Total Mg 2 2	0	0
54	BQ	5	Total Mg 5 5	0	0
54	BR	5	Total Mg 5 5	0	0
54	BS	1	Total Mg 1 1	0	0
54	BT	3	Total Mg 3 3	0	0
54	BU	3	Total Mg 3 3	0	0
54	BV	4	Total Mg 4 4	0	0
54	BW	1	Total Mg 1 1	0	0
54	BY	1	Total Mg 1 1	0	0
54	BZ	2	Total Mg 2 2	0	0
54	B0	4	Total Mg 4 4	0	0
54	B1	1	Total Mg 1 1	0	0
54	B2	2	Total Mg 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	B3	3	Total Mg 3 3	0	0
54	B5	1	Total Mg 1 1	0	0
54	B6	1	Total Mg 1 1	0	0
54	B7	1	Total Mg 1 1	0	0
54	B8	1	Total Mg 1 1	0	0
54	B9	3	Total Mg 3 3	0	0
54	CA	203	Total Mg 203 203	0	0
54	CE	1	Total Mg 1 1	0	0
54	CQ	1	Total Mg 1 1	0	0
54	DA	637	Total Mg 637 637	0	0
54	DB	10	Total Mg 10 10	0	0
54	DD	5	Total Mg 5 5	0	0
54	DE	3	Total Mg 3 3	0	0
54	DF	5	Total Mg 5 5	0	0
54	DO	3	Total Mg 3 3	0	0
54	DP	3	Total Mg 3 3	0	0
54	DQ	4	Total Mg 4 4	0	0
54	DR	2	Total Mg 2 2	0	0
54	DT	2	Total Mg 2 2	0	0
54	DW	1	Total Mg 1 1	0	0
54	D0	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	D1	1	Total Mg 1 1	0	0
54	D5	2	Total Mg 2 2	0	0
54	D7	2	Total Mg 2 2	0	0
54	D8	2	Total Mg 2 2	0	0
54	D9	1	Total Mg 1 1	0	0

- Molecule 55 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	AD	1	Total Zn 1 1	0	0
55	AN	1	Total Zn 1 1	0	0
55	BY	1	Total Zn 1 1	0	0
55	B4	1	Total Zn 1 1	0	0
55	B5	1	Total Zn 1 1	0	0
55	B6	1	Total Zn 1 1	0	0
55	B9	1	Total Zn 1 1	0	0
55	CD	1	Total Zn 1 1	0	0
55	CN	1	Total Zn 1 1	0	0
55	DY	1	Total Zn 1 1	0	0
55	D4	1	Total Zn 1 1	0	0
55	D5	1	Total Zn 1 1	0	0
55	D6	1	Total Zn 1 1	0	0
55	D9	1	Total Zn 1 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	AA	443	Total O 443 443	0	0
56	AD	3	Total O 3 3	0	0
56	AE	2	Total O 2 2	0	0
56	AF	2	Total O 2 2	0	0
56	AG	2	Total O 2 2	0	0
56	AJ	1	Total O 1 1	0	0
56	AK	1	Total O 1 1	0	0
56	AL	3	Total O 3 3	0	0
56	AM	1	Total O 1 1	0	0
56	AO	1	Total O 1 1	0	0
56	AP	1	Total O 1 1	0	0
56	AQ	3	Total O 3 3	0	0
56	AY	1	Total O 1 1	0	0
56	BA	1988	Total O 1988 1988	0	0
56	BB	43	Total O 43 43	0	0
56	BD	21	Total O 21 21	0	0
56	BE	18	Total O 18 18	0	0
56	BF	18	Total O 18 18	0	0
56	BG	2	Total O 2 2	0	0
56	BH	2	Total O 2 2	0	0
56	BN	7	Total O 7 7	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	BO	3	Total O 3 3	0	0
56	BP	20	Total O 20 20	0	0
56	BQ	9	Total O 9 9	0	0
56	BR	8	Total O 8 8	0	0
56	BS	2	Total O 2 2	0	0
56	BT	5	Total O 5 5	0	0
56	BU	9	Total O 9 9	0	0
56	BV	13	Total O 13 13	0	0
56	BW	6	Total O 6 6	0	0
56	BX	2	Total O 2 2	0	0
56	BY	2	Total O 2 2	0	0
56	BZ	2	Total O 2 2	0	0
56	B0	4	Total O 4 4	0	0
56	B1	5	Total O 5 5	0	0
56	B3	4	Total O 4 4	0	0
56	B5	5	Total O 5 5	0	0
56	B6	2	Total O 2 2	0	0
56	B7	5	Total O 5 5	0	0
56	B8	11	Total O 11 11	0	0
56	B9	1	Total O 1 1	0	0
56	CA	400	Total O 400 400	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	CD	2	Total O 2 2	0	0
56	CE	4	Total O 4 4	0	0
56	CF	1	Total O 1 1	0	0
56	CK	1	Total O 1 1	0	0
56	CL	2	Total O 2 2	0	0
56	CP	3	Total O 3 3	0	0
56	CQ	3	Total O 3 3	0	0
56	CR	1	Total O 1 1	0	0
56	CT	2	Total O 2 2	0	0
56	CU	1	Total O 1 1	0	0
56	DA	1496	Total O 1496 1496	0	0
56	DB	33	Total O 33 33	0	0
56	DD	17	Total O 17 17	0	0
56	DE	12	Total O 12 12	0	0
56	DF	10	Total O 10 10	0	0
56	DN	2	Total O 2 2	0	0
56	DO	7	Total O 7 7	0	0
56	DP	11	Total O 11 11	0	0
56	DQ	2	Total O 2 2	0	0
56	DR	5	Total O 5 5	0	0
56	DT	3	Total O 3 3	0	0

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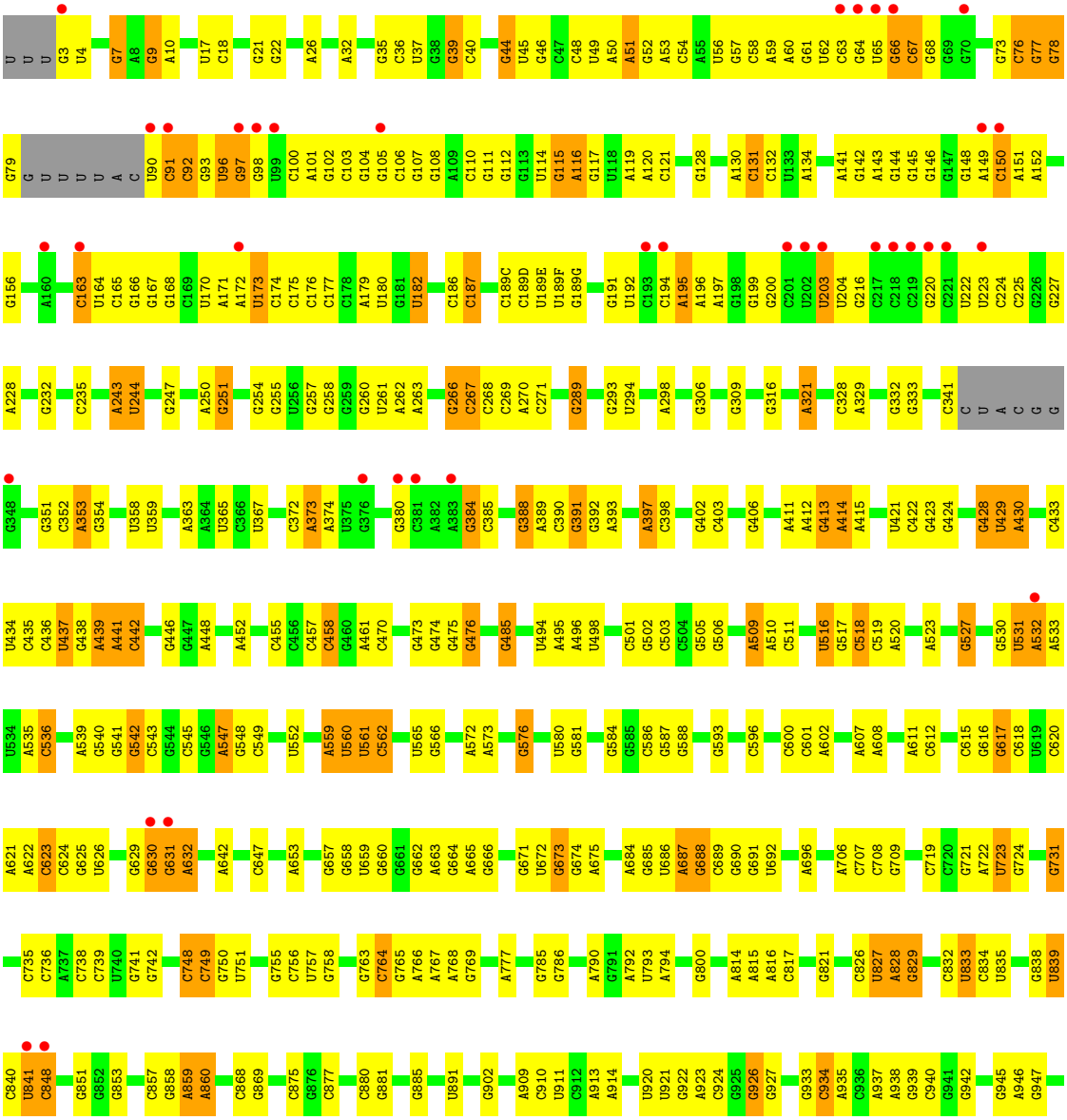
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	DU	1	Total O 1 1	0	0
56	DV	1	Total O 1 1	0	0
56	DW	4	Total O 4 4	0	0
56	DX	2	Total O 2 2	0	0
56	DY	2	Total O 2 2	0	0
56	D0	2	Total O 2 2	0	0
56	D1	3	Total O 3 3	0	0
56	D2	1	Total O 1 1	0	0
56	D3	1	Total O 1 1	0	0
56	D5	3	Total O 3 3	0	0
56	D6	3	Total O 3 3	0	0
56	D7	3	Total O 3 3	0	0
56	D8	6	Total O 6 6	0	0
56	D9	1	Total O 1 1	0	0

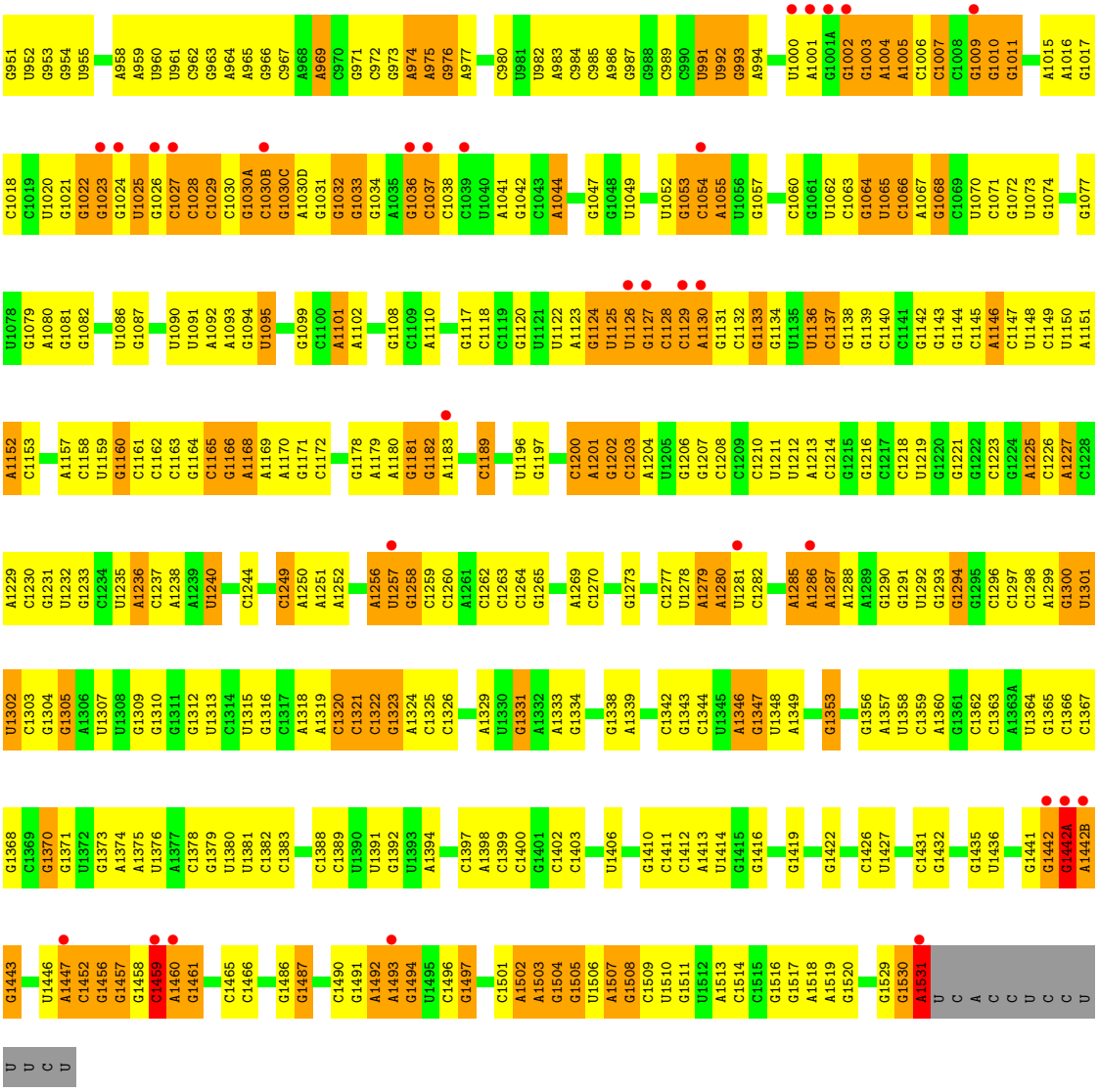
3 Residue-property plots (i)

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 Ribosomal RNA

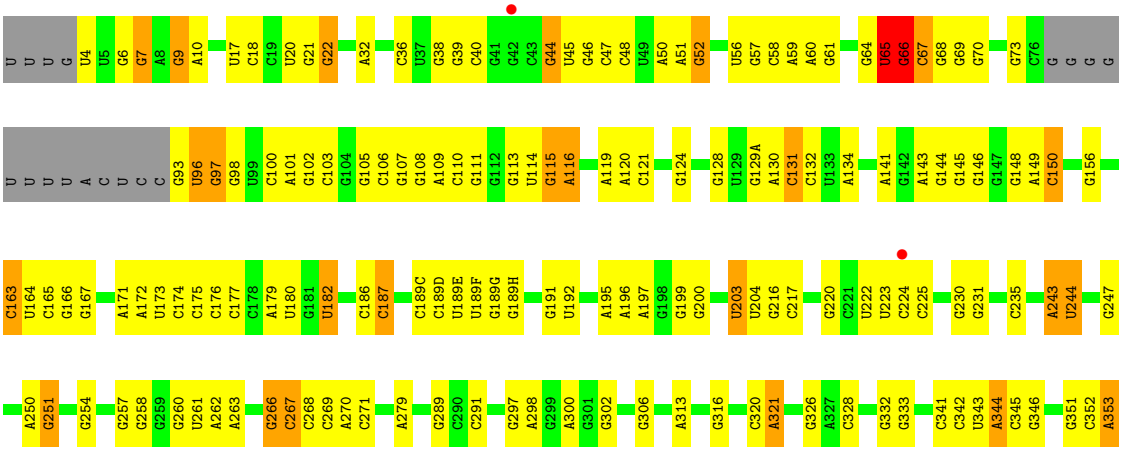
Chain AA:

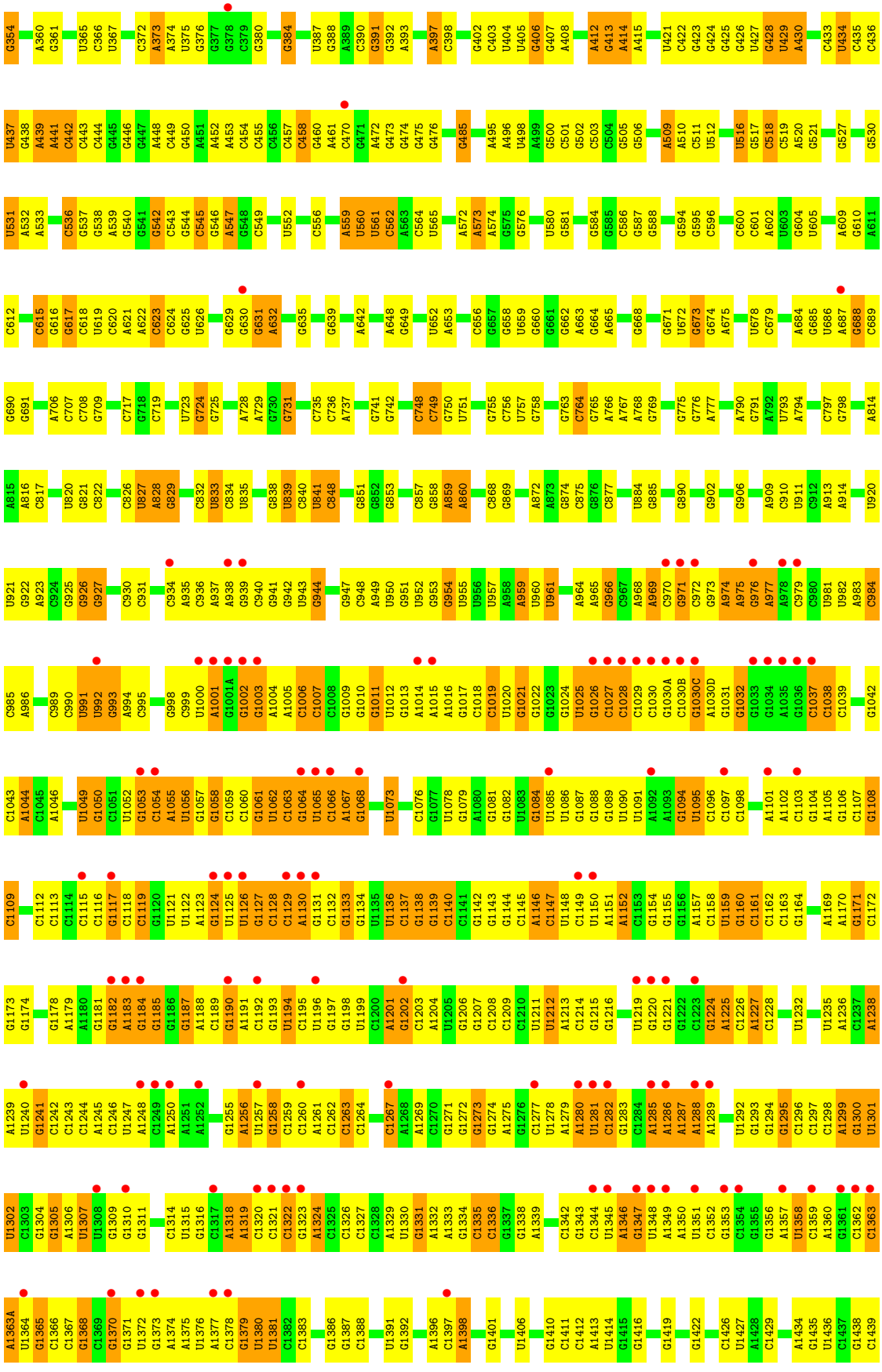


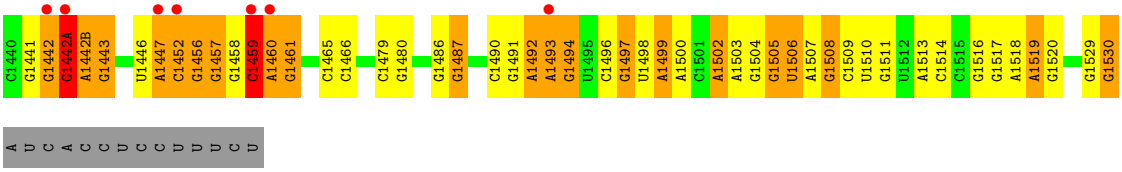


• Molecule 1: 16S Ribosomal RNA

Chain CA:

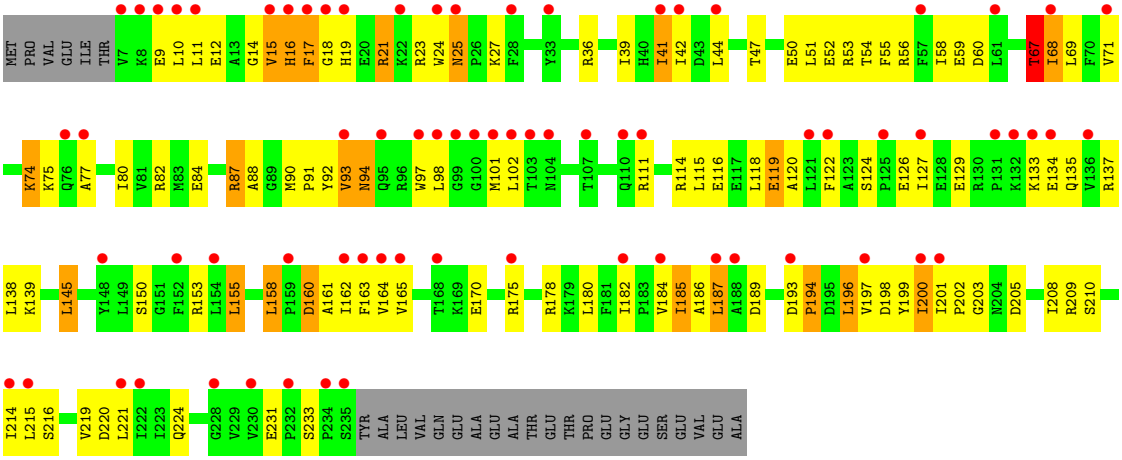






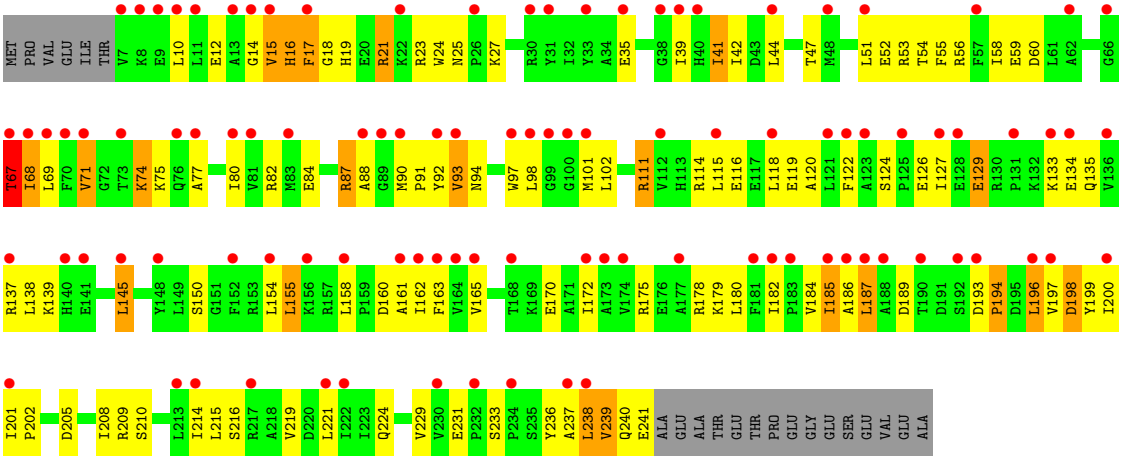
• Molecule 2: 30S Ribosomal Protein S2

Chain AB:



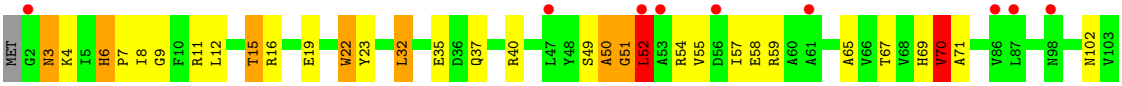
• Molecule 2: 30S Ribosomal Protein S2

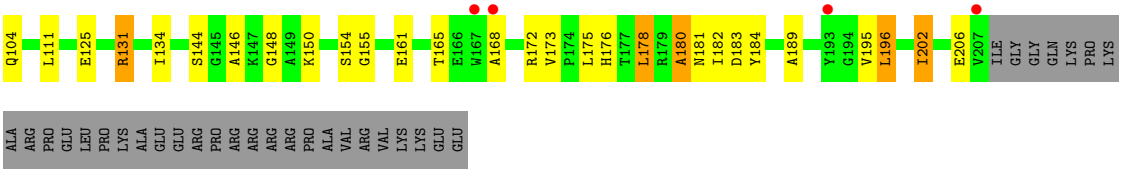
Chain CB:



• Molecule 3: 30S Ribosomal Protein S3

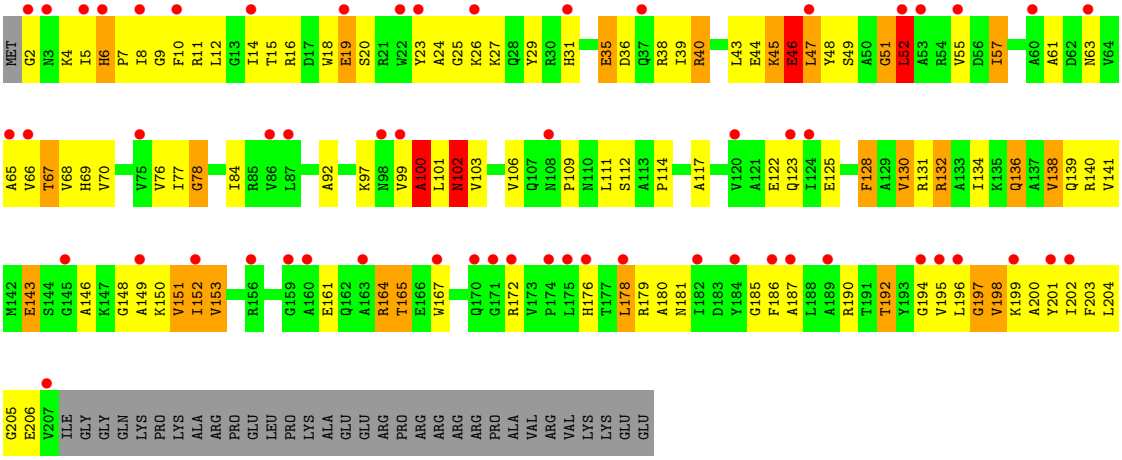
Chain AC:





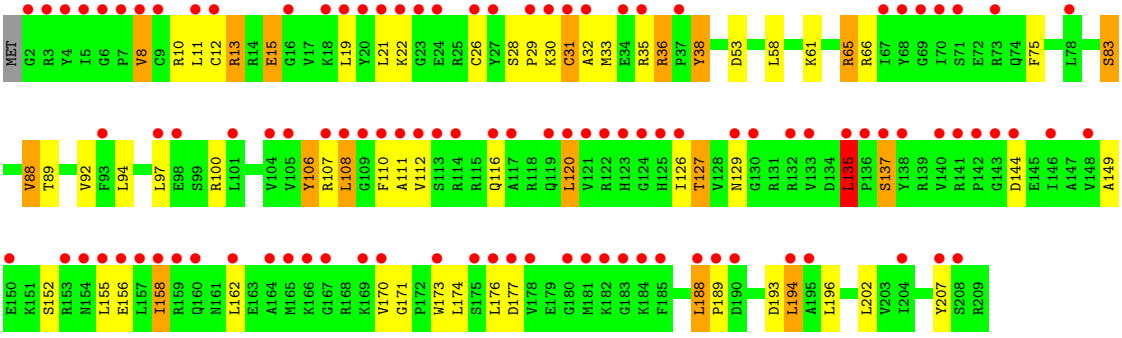
• Molecule 3: 30S Ribosomal Protein S3

Chain CC:



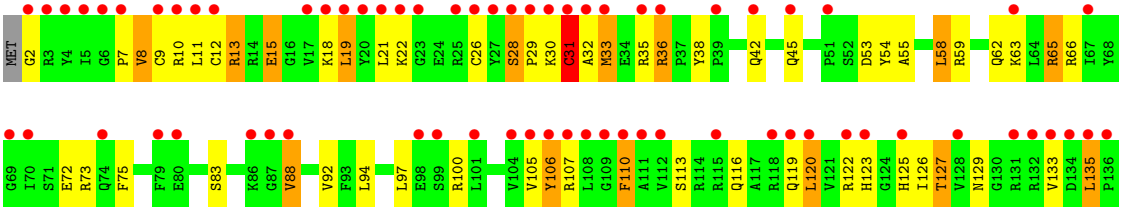
• Molecule 4: 30S Ribosomal Protein S4

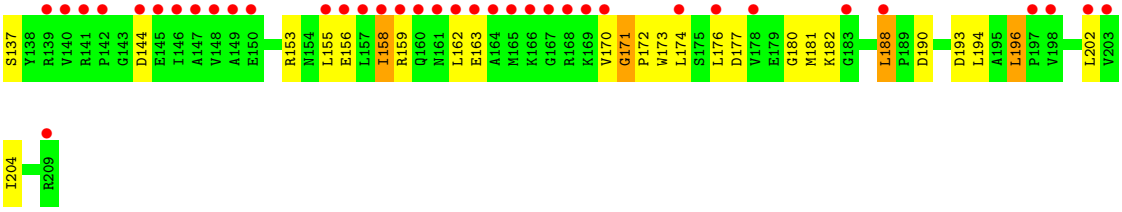
Chain AD:



• Molecule 4: 30S Ribosomal Protein S4

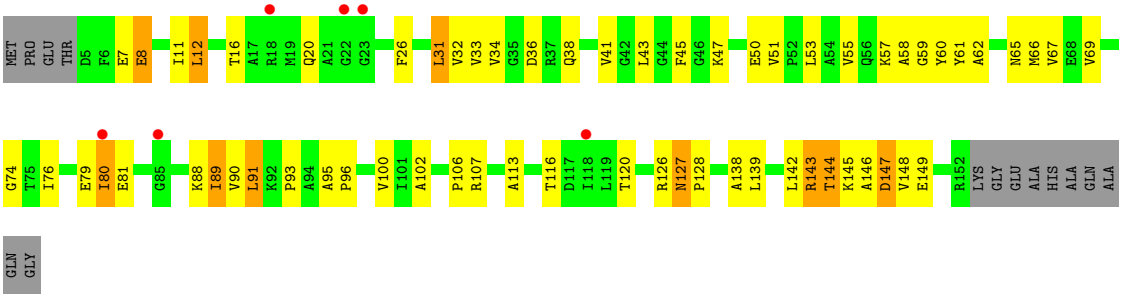
Chain CD:





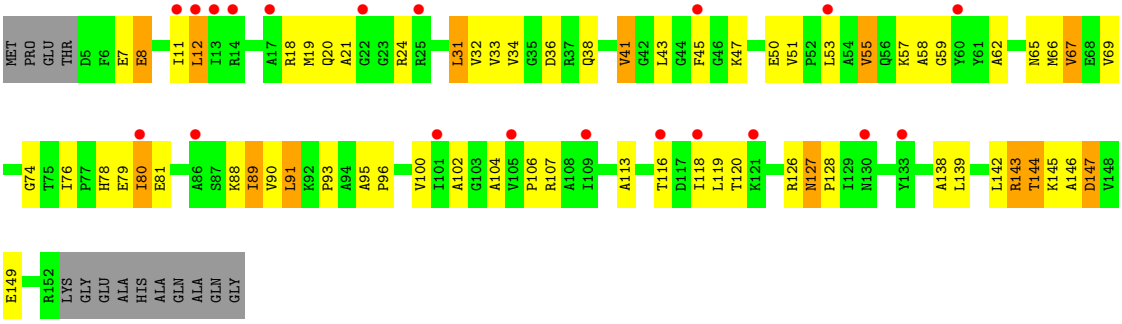
• Molecule 5: 30S Ribosomal Protein S5

Chain AE:



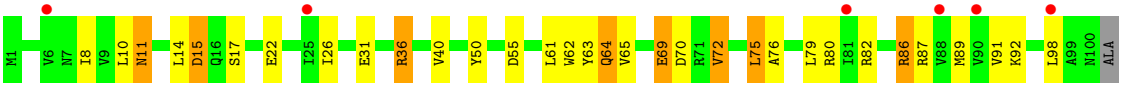
• Molecule 5: 30S Ribosomal Protein S5

Chain CE:



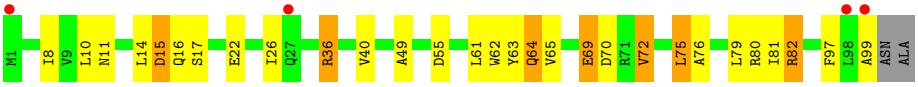
• Molecule 6: 30S Ribosomal Protein S6

Chain AF:



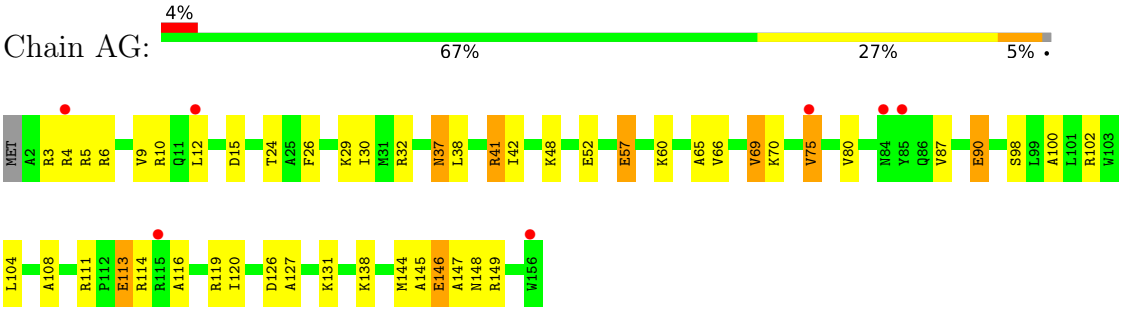
• Molecule 6: 30S Ribosomal Protein S6

Chain CF:



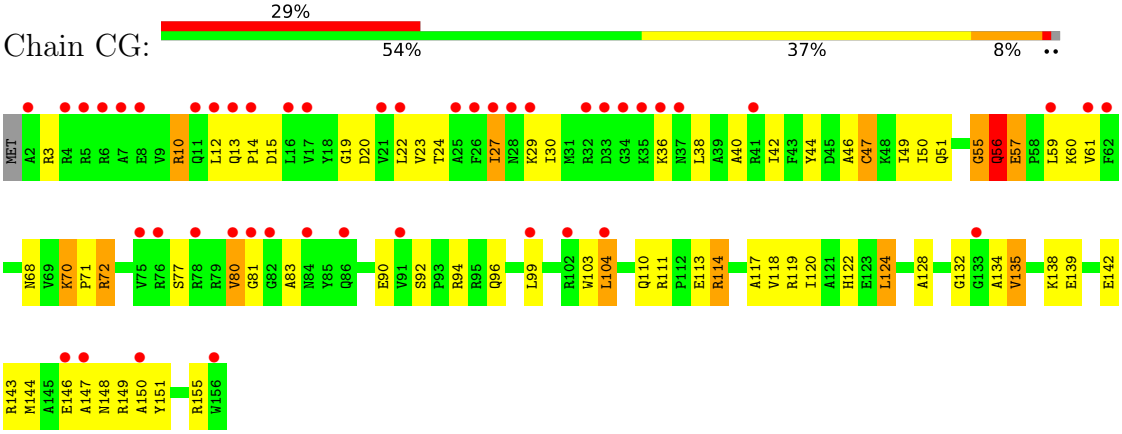
• Molecule 7: 30S Ribosomal Protein S7

Chain AG:



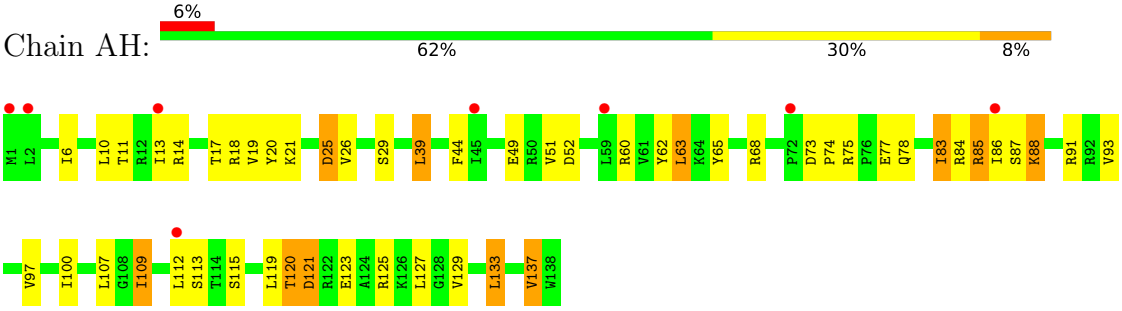
• Molecule 7: 30S Ribosomal Protein S7

Chain CG:



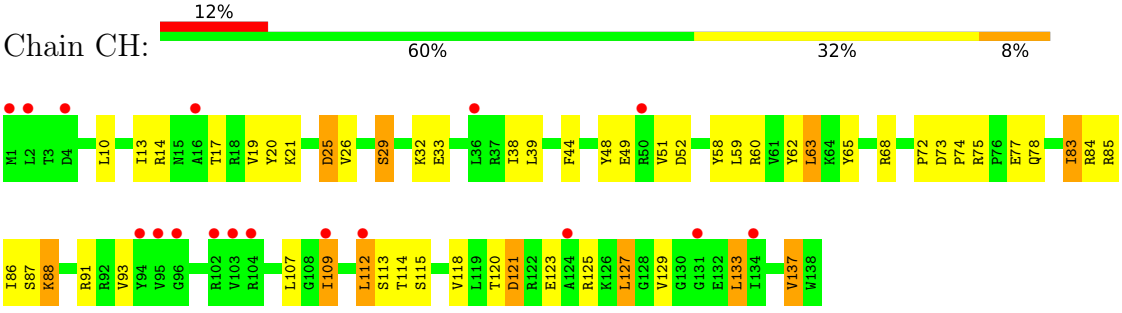
• Molecule 8: 30S Ribosomal Protein S8

Chain AH:



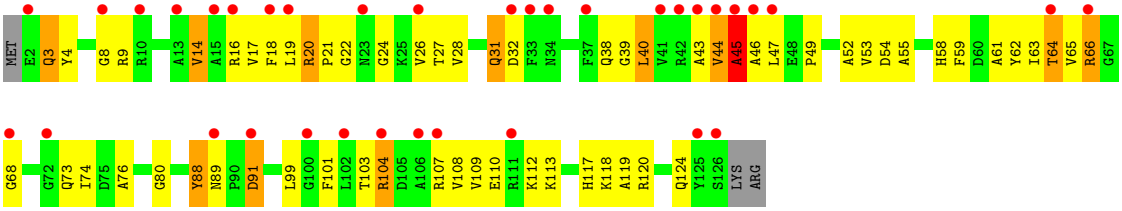
• Molecule 8: 30S Ribosomal Protein S8

Chain CH:

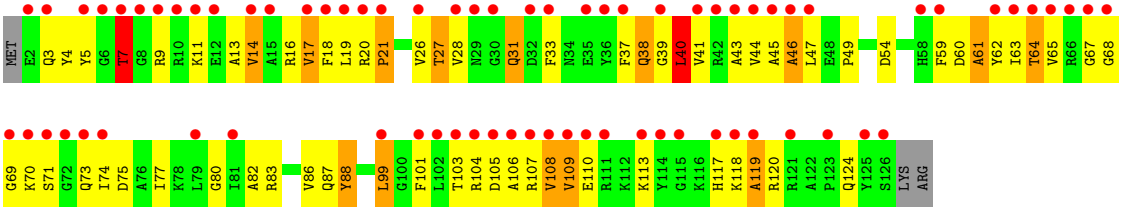


• Molecule 9: 30S Ribosomal Protein S9

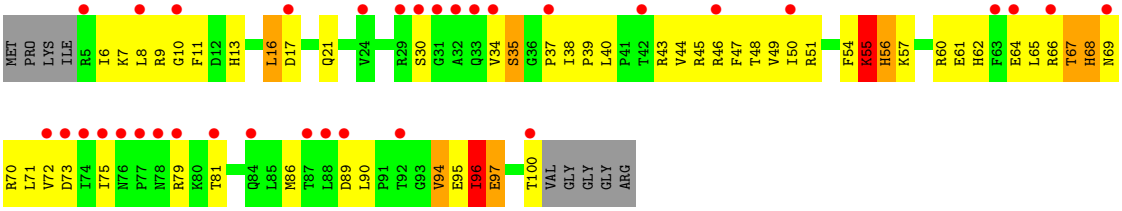
Chain AI:



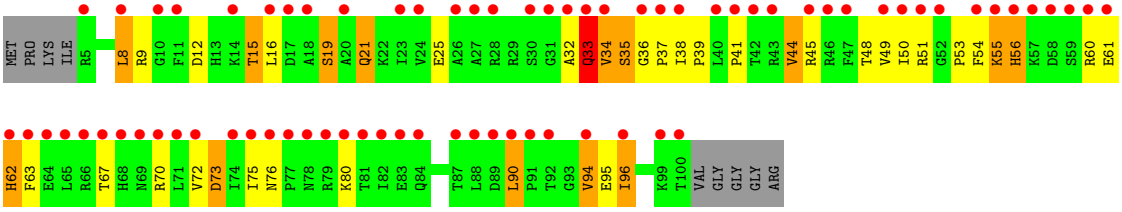
• Molecule 9: 30S Ribosomal Protein S9



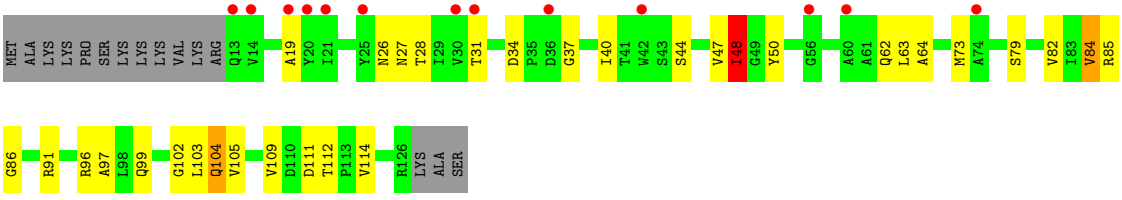
• Molecule 10: 30S Ribosomal Protein S10



• Molecule 10: 30S Ribosomal Protein S10



• Molecule 11: 30S Ribosomal Protein S11



• Molecule 11: 30S Ribosomal Protein S11

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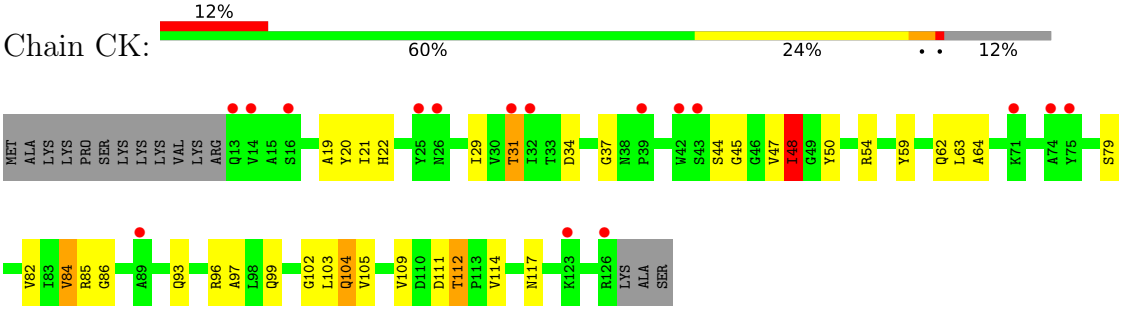

• Molecule 12: 30S Ribosomal Protein S12

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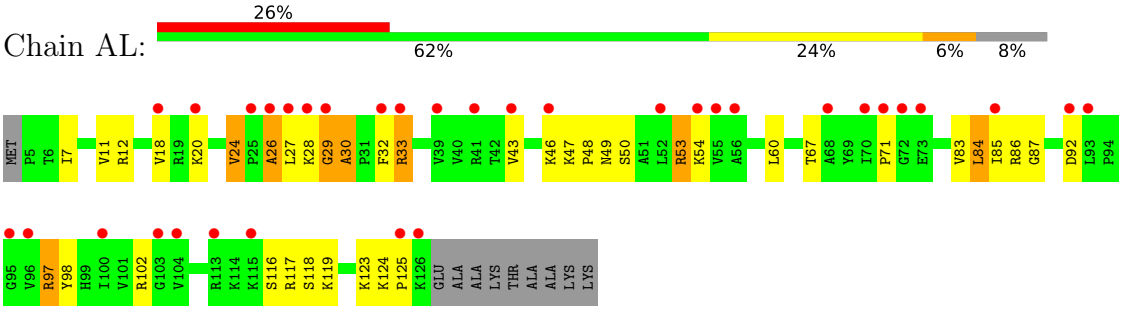

• Molecule 12: 30S Ribosomal Protein S12

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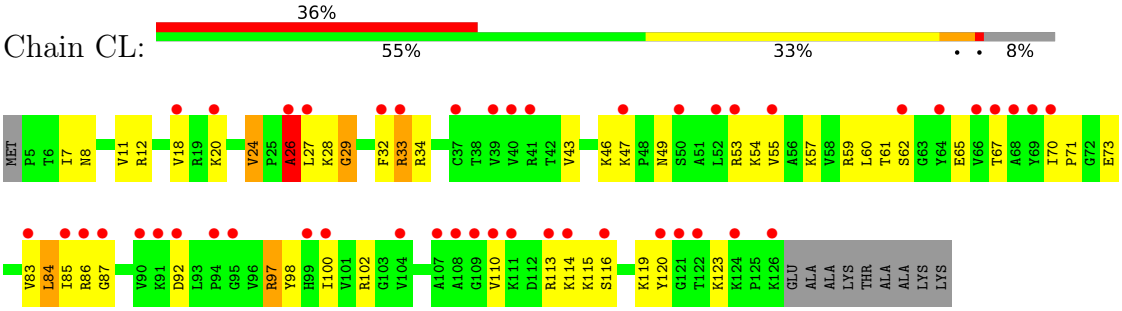

• Molecule 13: 30S Ribosomal Protein S13

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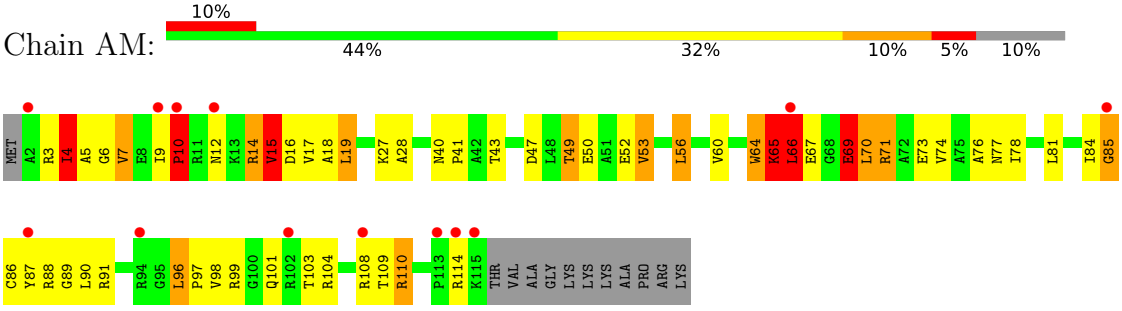

• Molecule 13: 30S Ribosomal Protein S13

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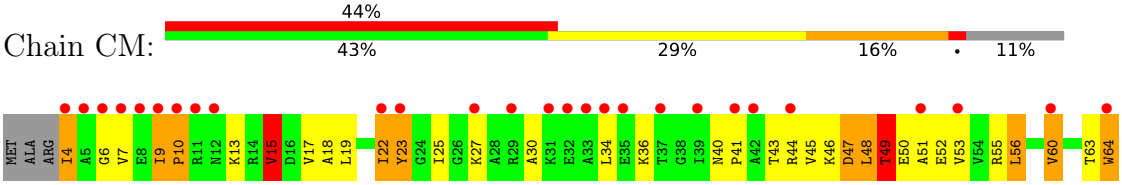
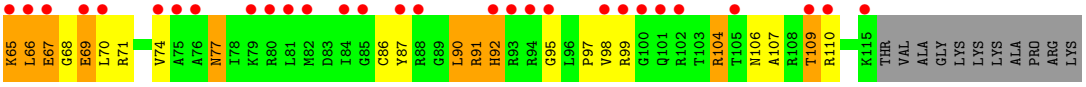
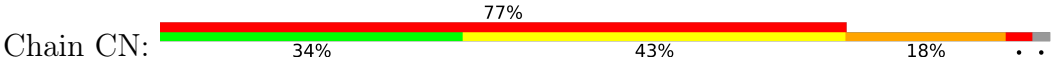
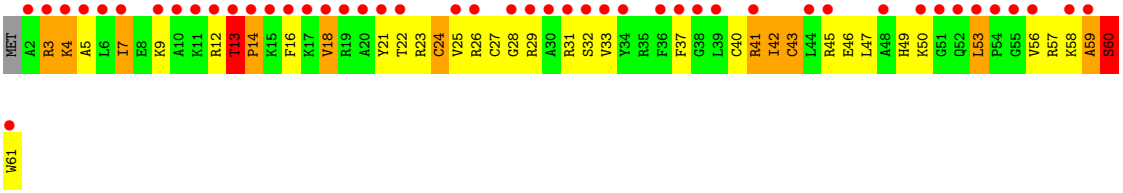




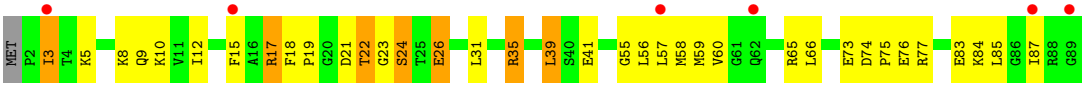
• Molecule 14: 30S Ribosomal Protein S14

• Molecule 14: 30S Ribosomal Protein S14

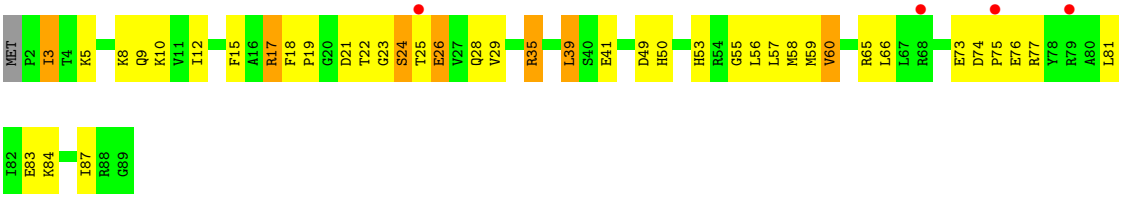




• Molecule 15: 30S Ribosomal Protein S15



• Molecule 15: 30S Ribosomal Protein S15



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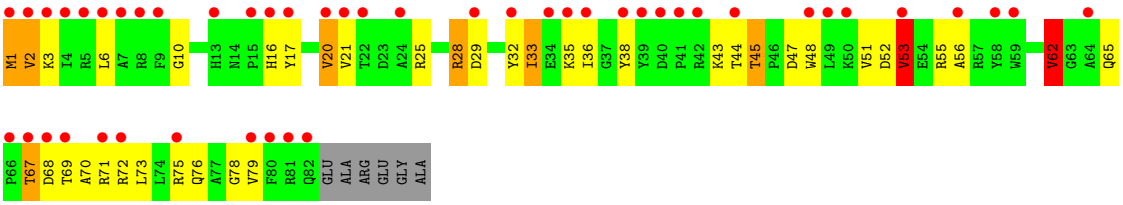
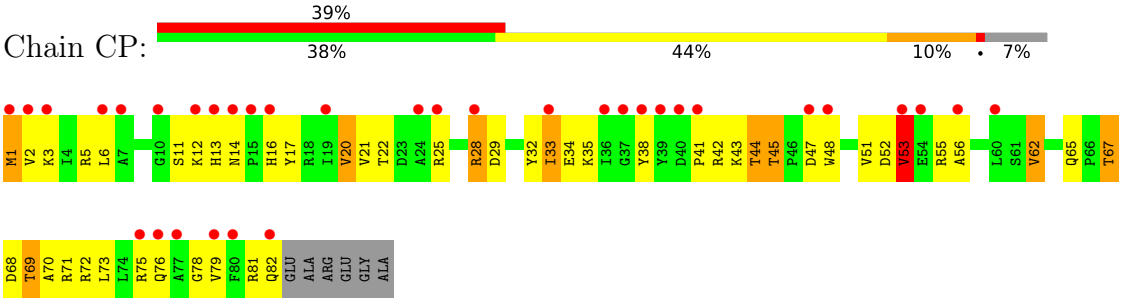


• Molecule 16: 30S Ribosomal Protein S16



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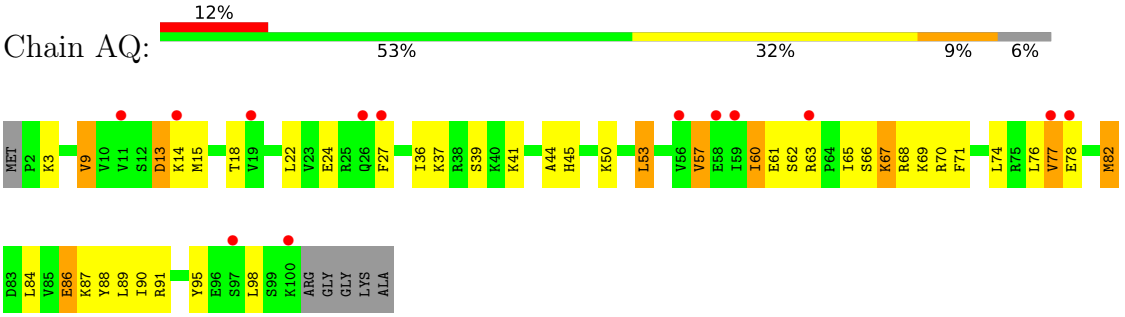

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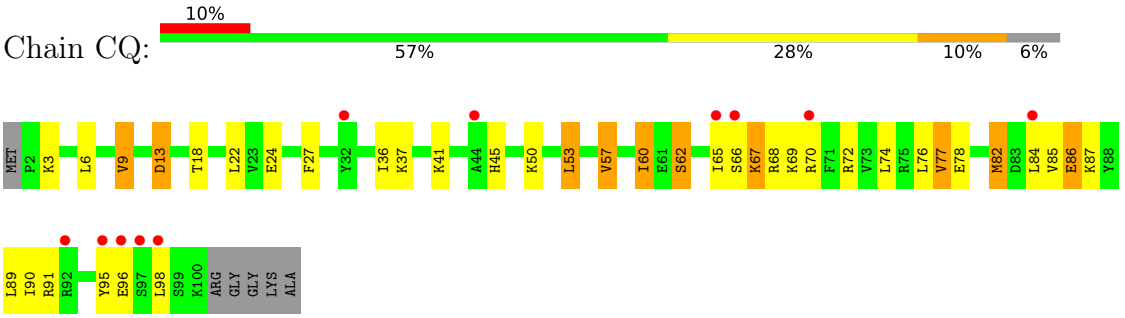
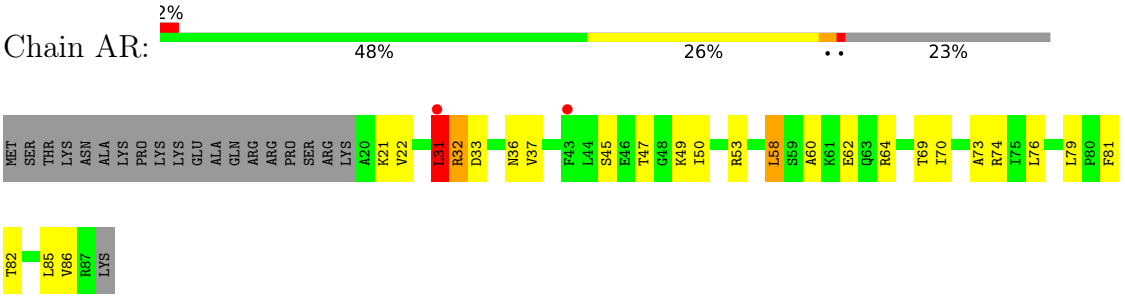


• Molecule 18: 30S Ribosomal Protein S18



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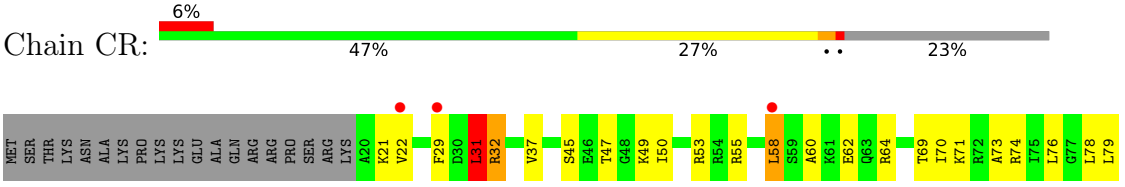

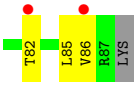

• Molecule 19: 30S Ribosomal Protein S19

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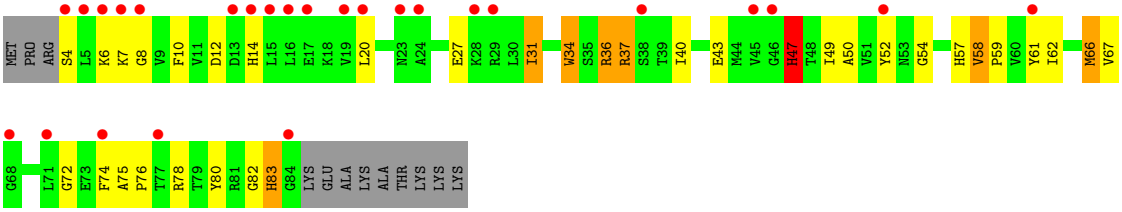

• Molecule 19: 30S Ribosomal Protein S19

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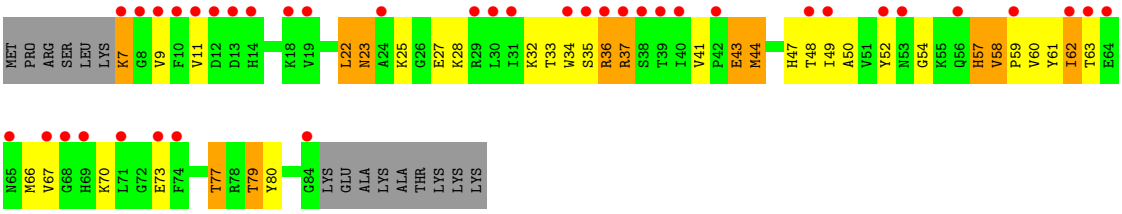
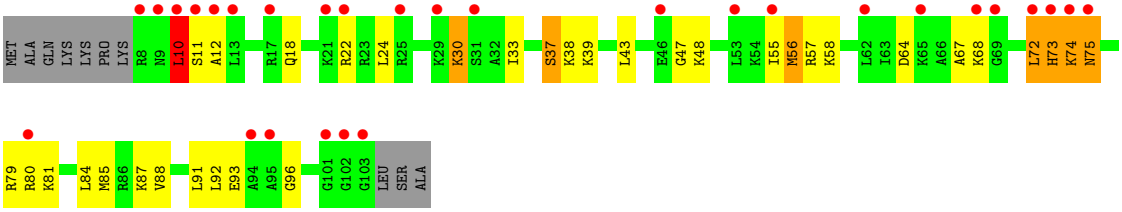


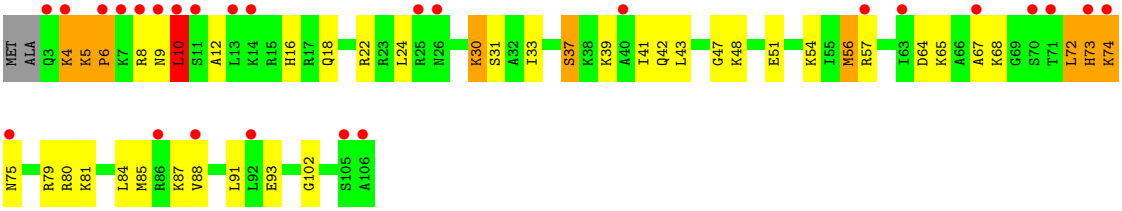
• Molecule 20: 30S Ribosomal Protein S20

Chain AT:



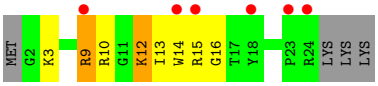
• Molecule 20: 30S Ribosomal Protein S20

Chain CT:



• Molecule 21: 30S Ribosomal Protein THX

Chain AU:



• Molecule 21: 30S Ribosomal Protein THX

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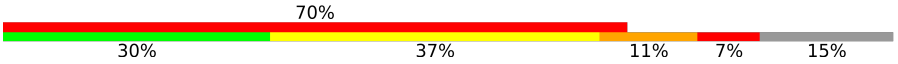
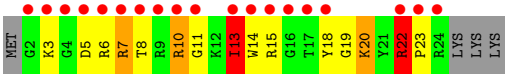
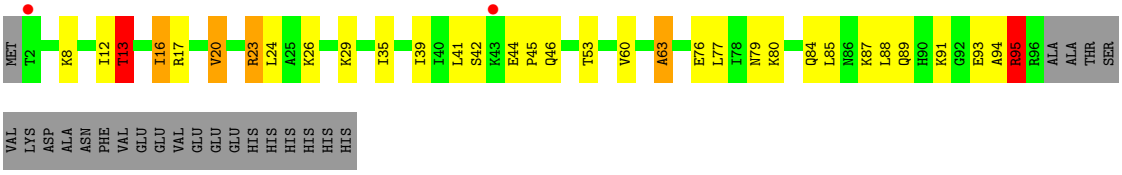




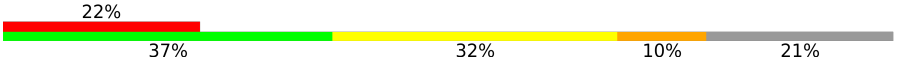
• Molecule 22: Ribosome-associated inhibitor A

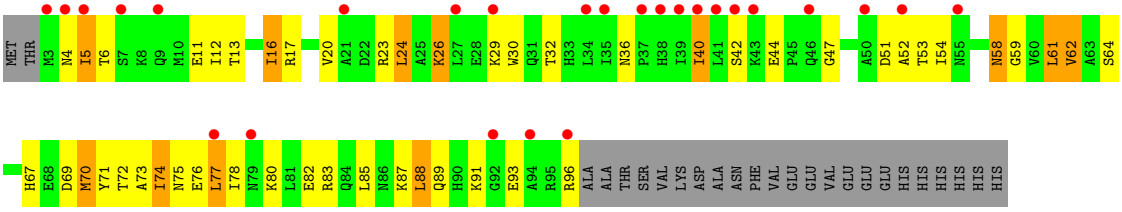
Chain AY:



• Molecule 22: Ribosome-associated inhibitor A

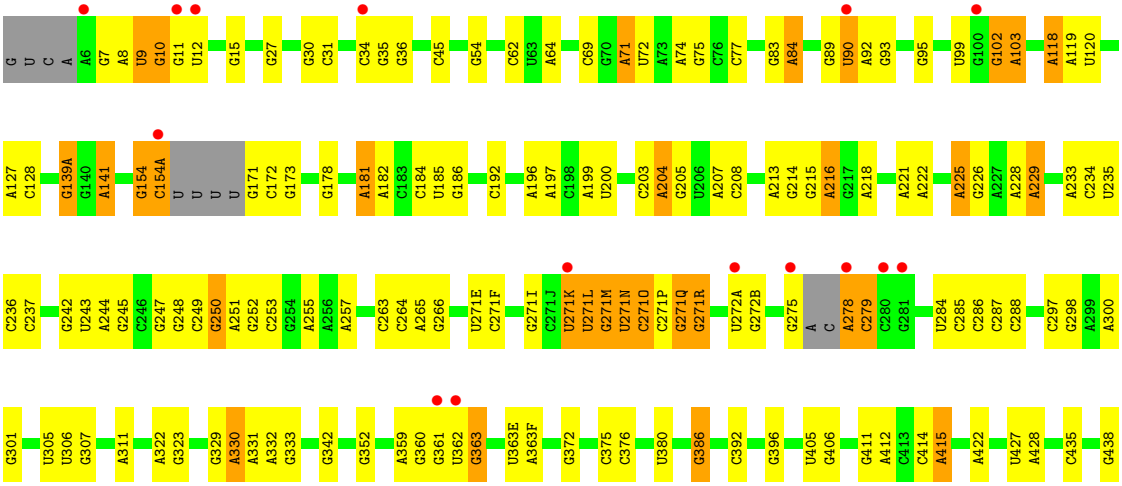
Chain CY:

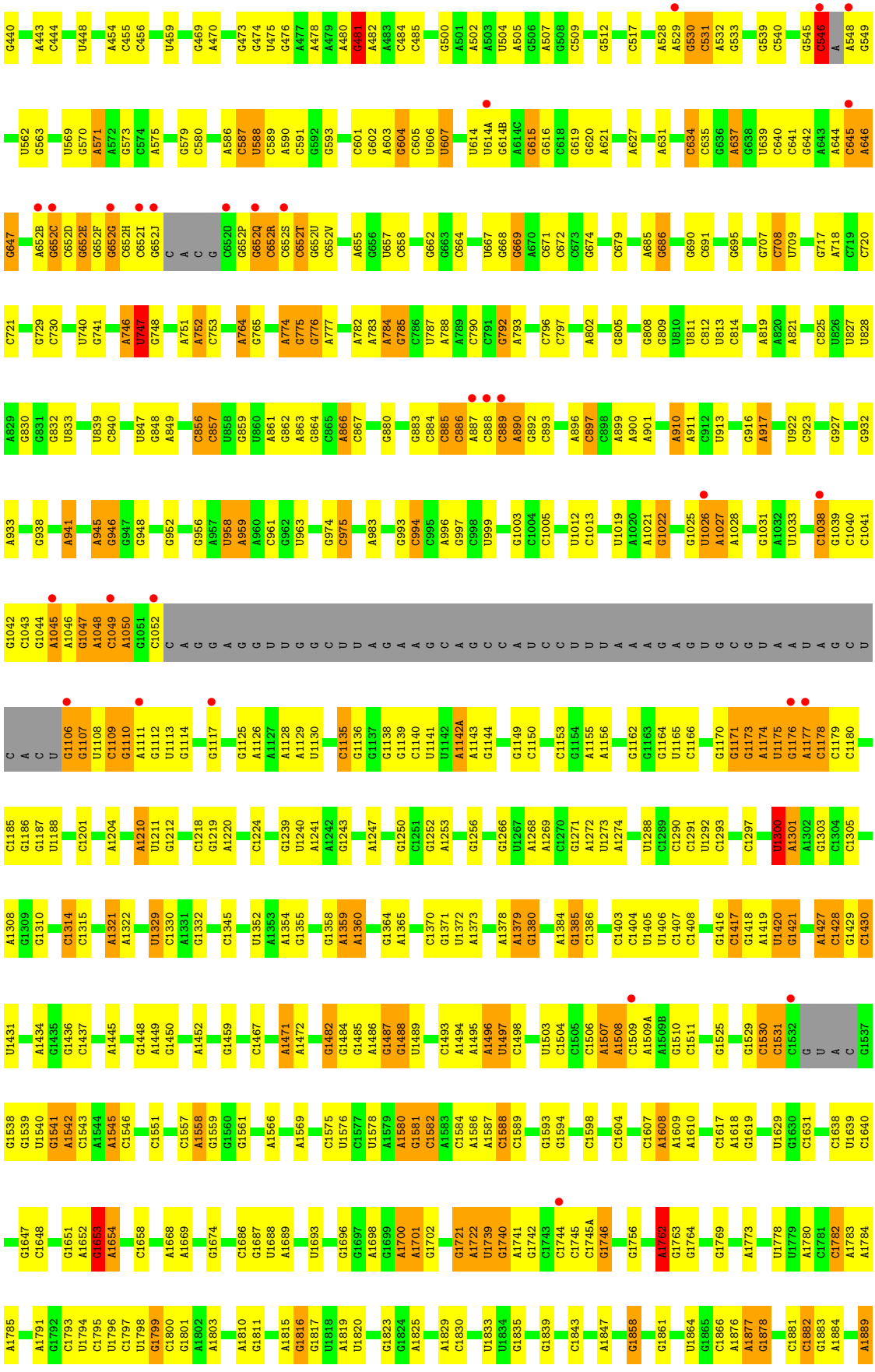


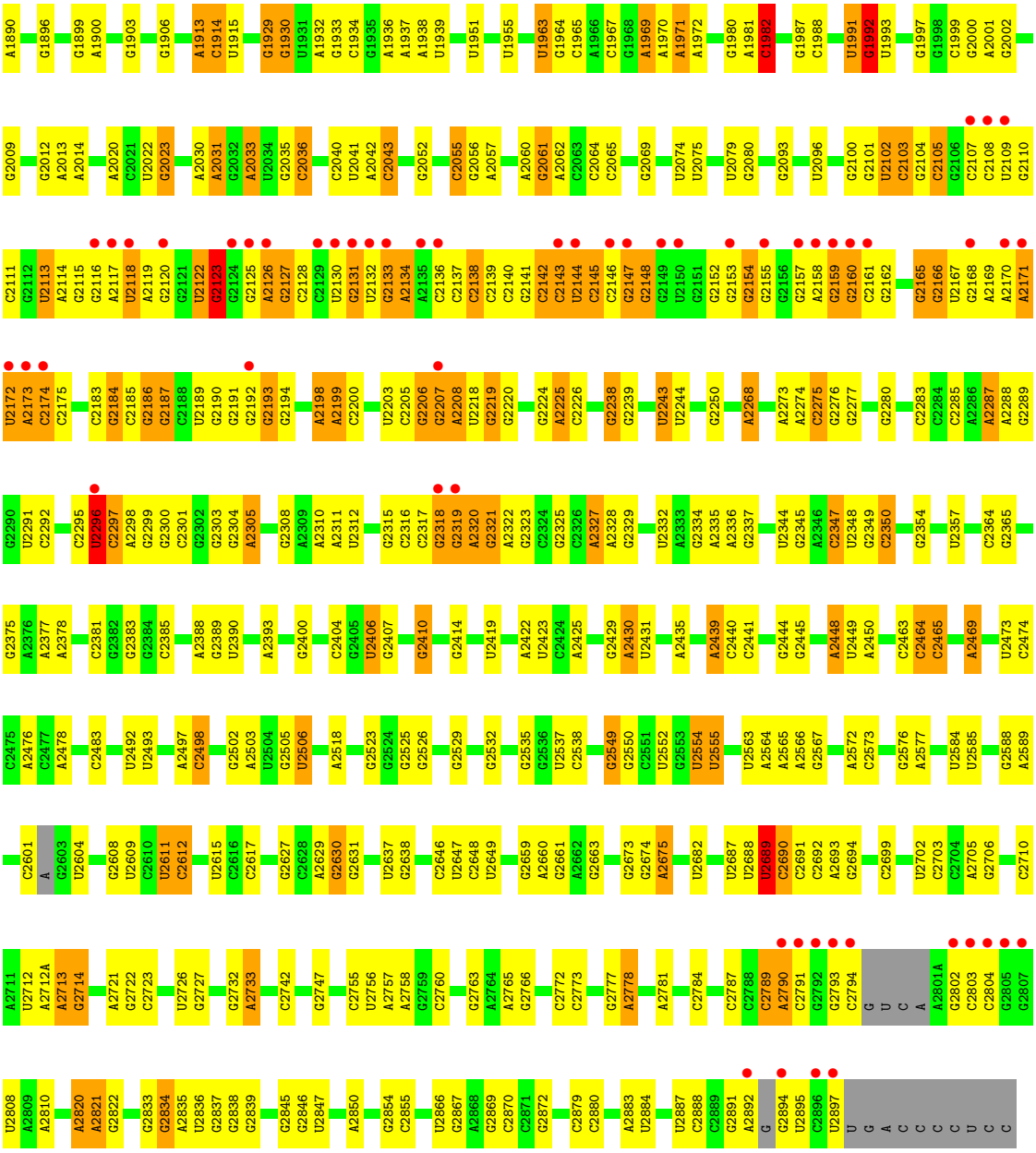


• Molecule 23: 23S Ribosomal RNA

Chain BA:

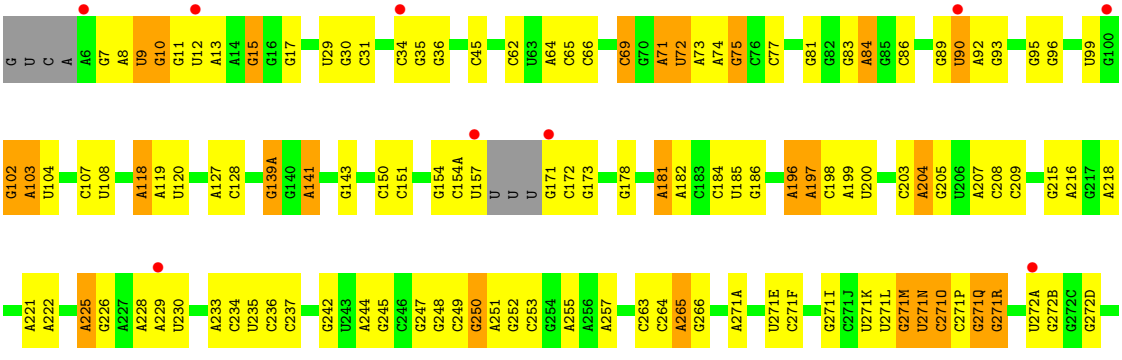


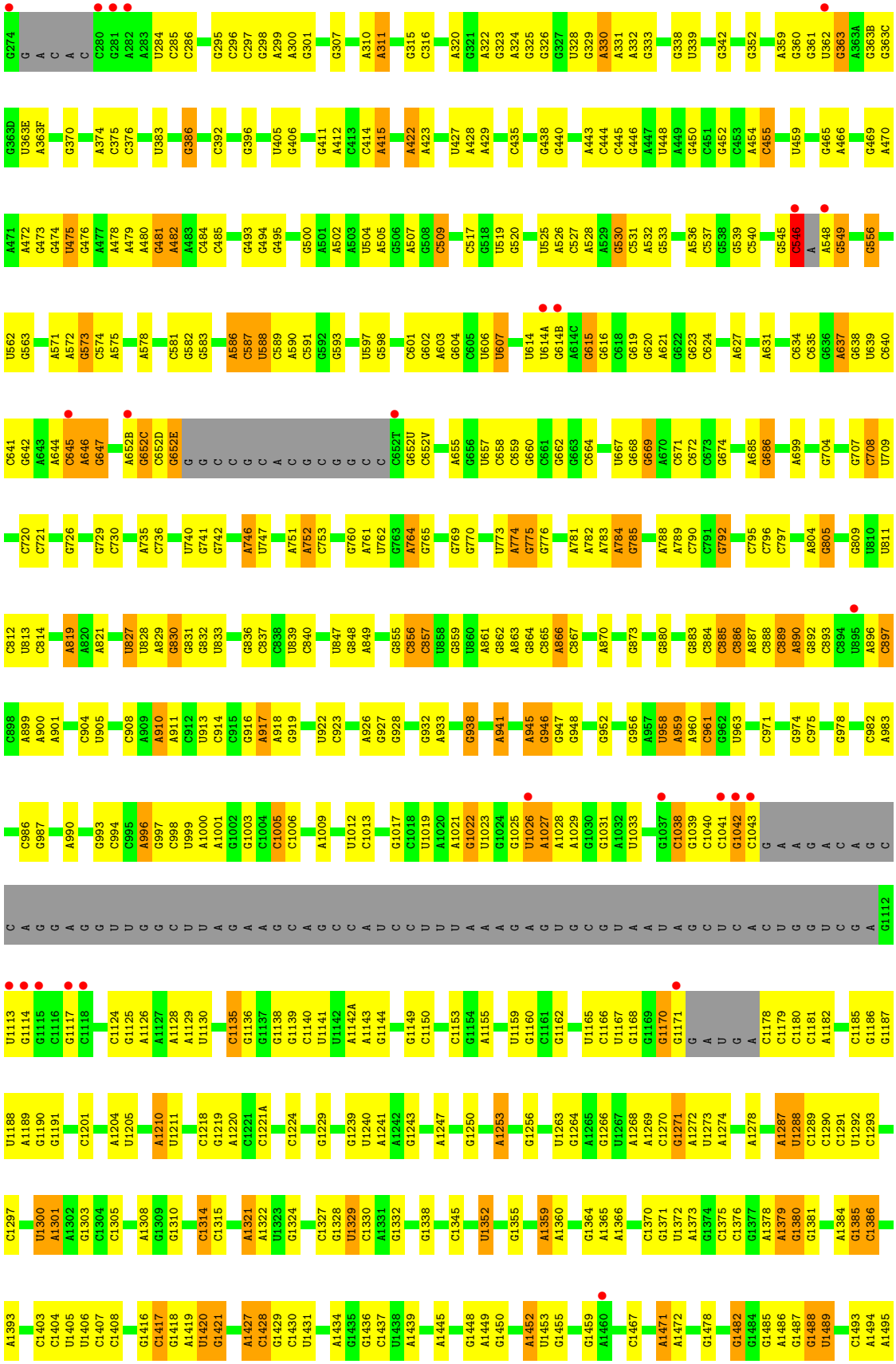


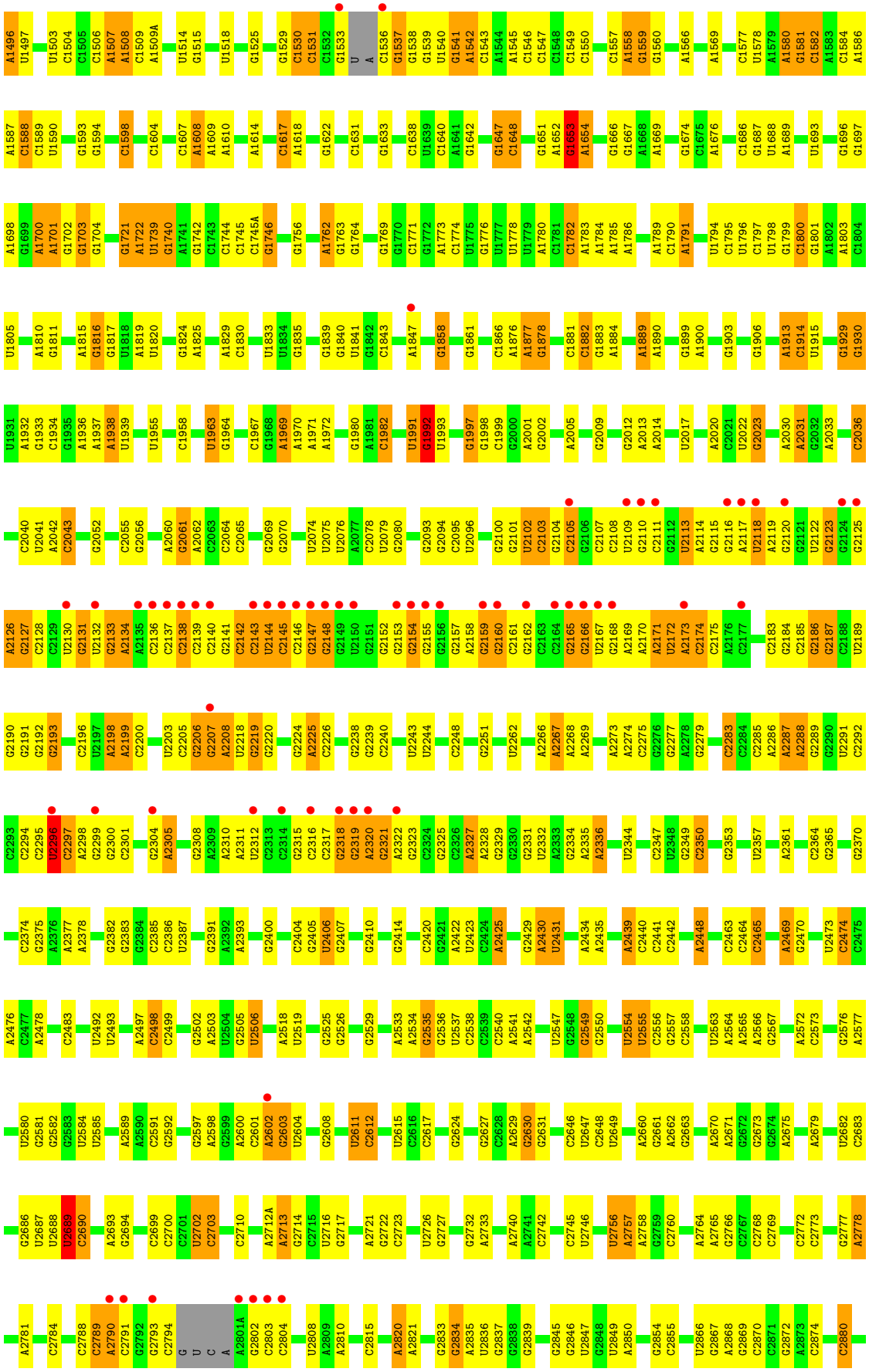


• Molecule 23: 23S Ribosomal RNA

Chain DA:



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A1587 C1588 C1589 U1590 G1593 G1594 C1598 C1604 C1607 A1608 A1609 A1610 A1614 C1617 A1618 G1622 C1631 G1633 C1638 U1639 C1640 A1641 G1642 G1647 C1648 G1651 A1652 G1653 A1654 G1666 G1667 A1668 A1669 G1674 C1675 A1676 C1686 G1687 U1688 A1689 U1693 G1696 G1697
A1698 G1699 A1700 A1701 G1702 G1703 G1704 G1721 A1722 U1739 G1740 A1741 G1742 C1743 C1744 C1745 C1745A G1746 G1756 A1762 G1763 G1764 G1769 G1770 C1771 G1772 A1773 C1774 U1775 G1776 U1777 U1778 U1779 A1780 C1781 C1782 A1783 A1784 A1785 A1786 A1789 C1790 A1791 U1794 C1795 U1796 C1797 U1798 G1799 C1800 G1801 A1802 A1803 C1804
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C2040 U2041 A2042 C2043 G2052 C2055 G2056 A2060 G2061 A2062 C2063 C2064 C2065 G2069 G2070 U2074 U2075 U2076 A2077 C2078 U2079 G2080 G2093 G2094 C2095 U2096 G2100 G2101 U2102 C2103 G2104 C2105 G2106 C2107 C2108 U2109 G2110 C2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2123 G2124 G2125
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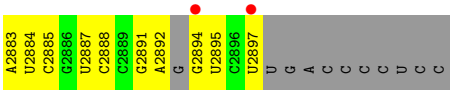
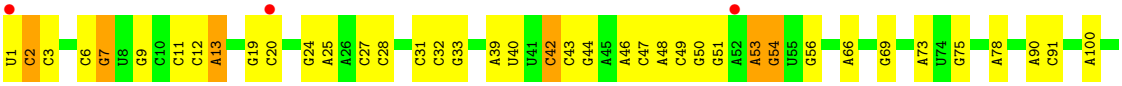
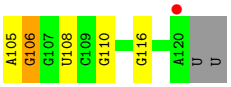


• Molecule 24: 5S Ribosomal RNA

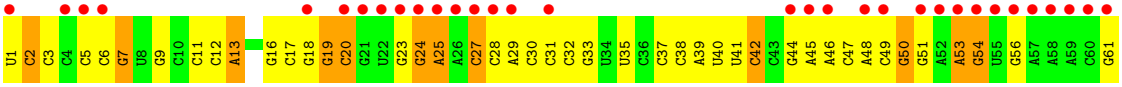
Chain BB:

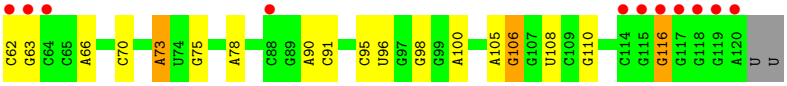




• Molecule 24: 5S Ribosomal RNA

Chain DB:



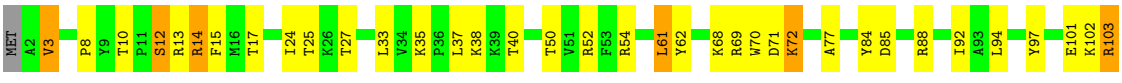


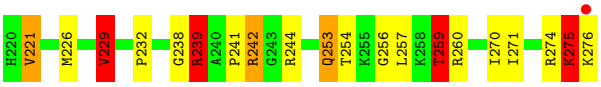
• Molecule 25: 50S Ribosomal Protein L2

Chain BD:

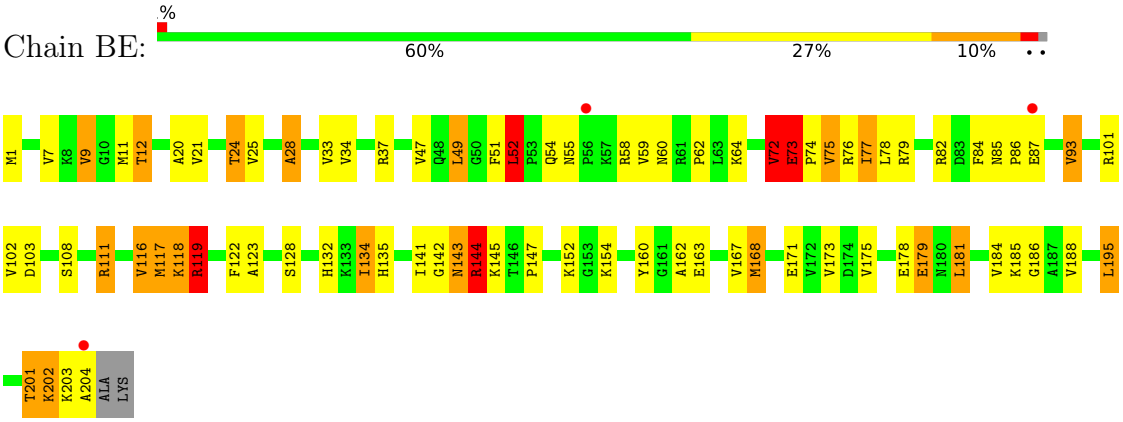
• Molecule 25: 50S Ribosomal Protein L2

Chain DD:

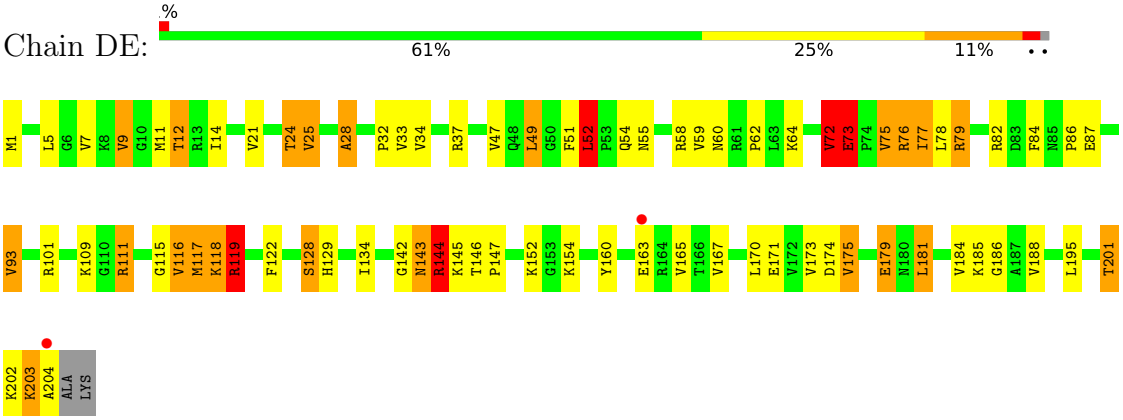




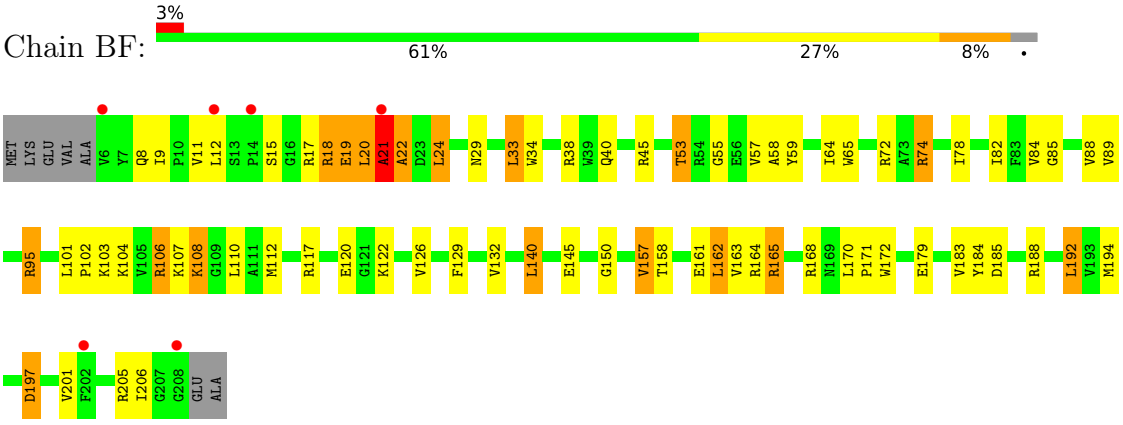
• Molecule 26: 50S Ribosomal Protein L3



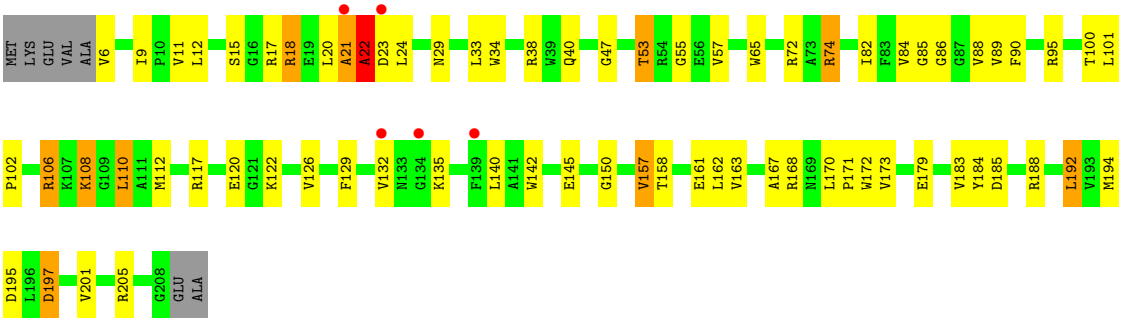
• Molecule 26: 50S Ribosomal Protein L3



• Molecule 27: 50S Ribosomal Protein L4

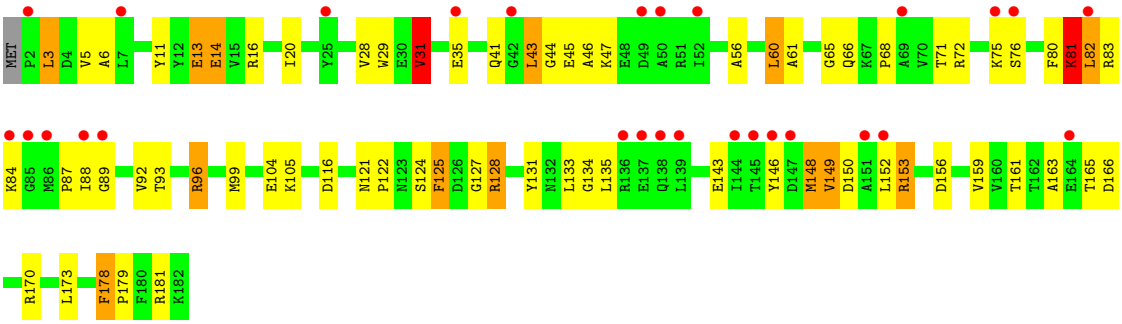


• Molecule 27: 50S Ribosomal Protein L4



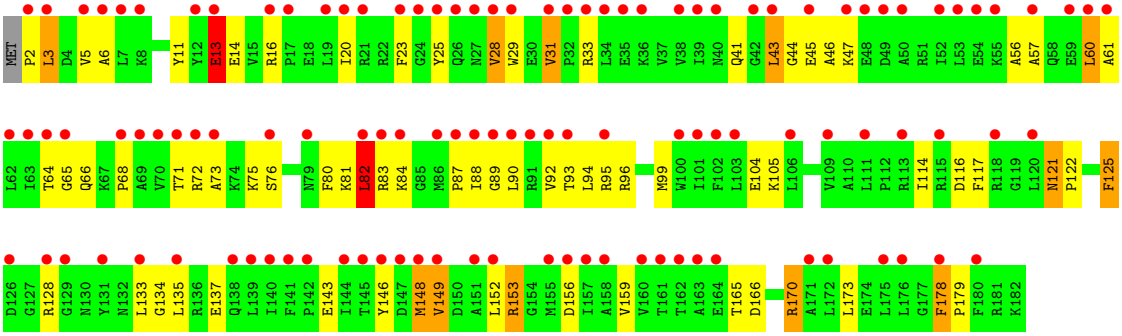
• Molecule 28: 50S Ribosomal Protein L5

Chain BG:



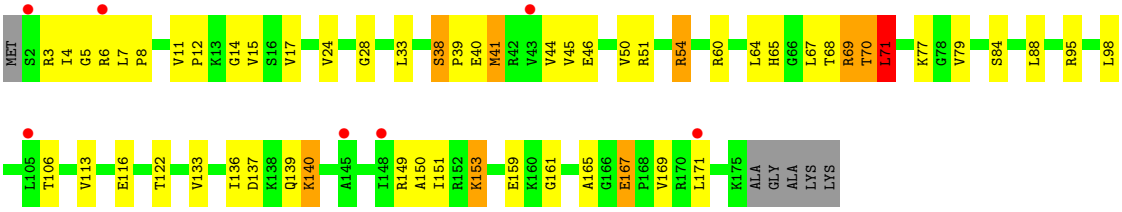
• Molecule 28: 50S Ribosomal Protein L5

Chain DG:



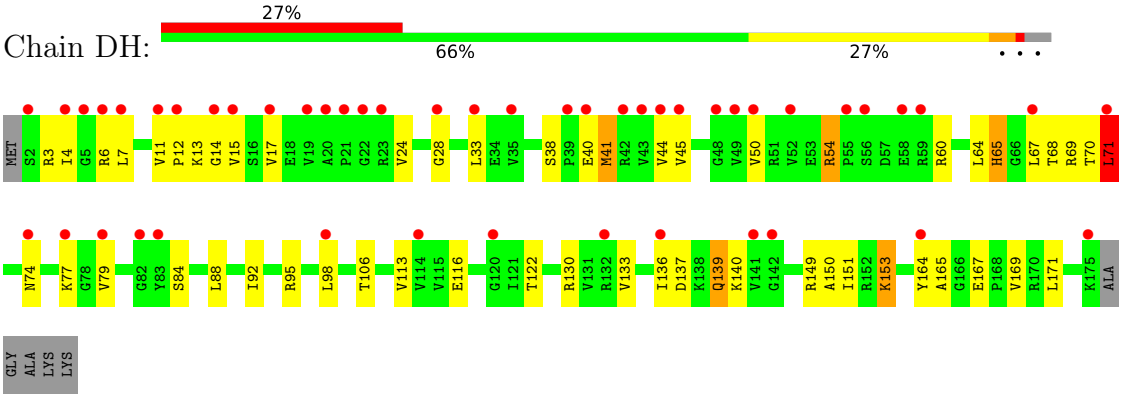
• Molecule 29: 50S Ribosomal Protein L6

Chain BH:



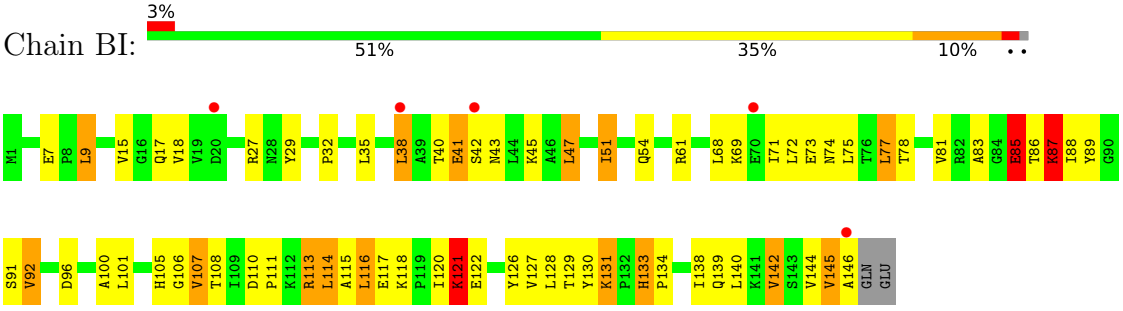
• Molecule 29: 50S Ribosomal Protein L6

Chain DH:



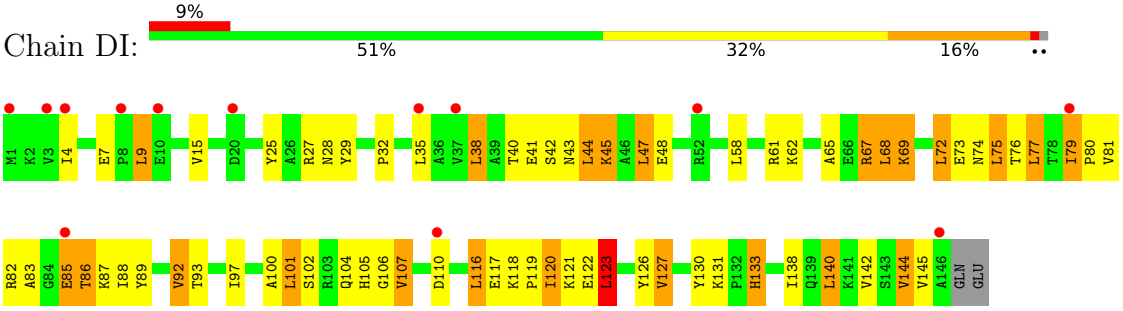
• Molecule 30: 50S Ribosomal Protein L9

Chain BI:



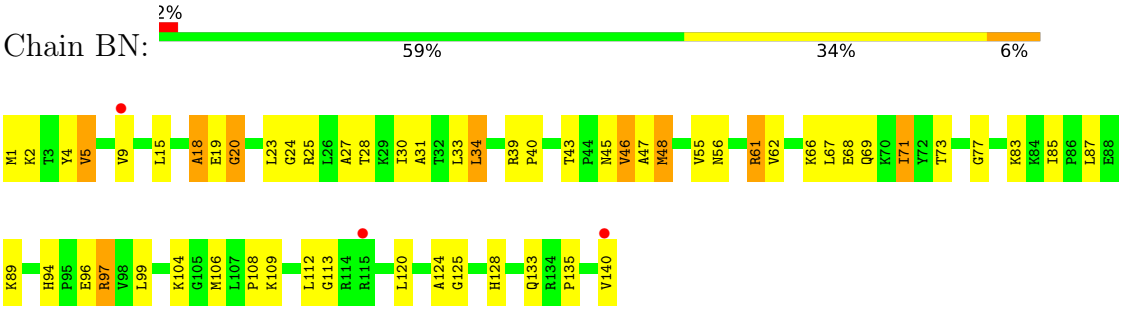
• Molecule 30: 50S Ribosomal Protein L9

Chain DI:



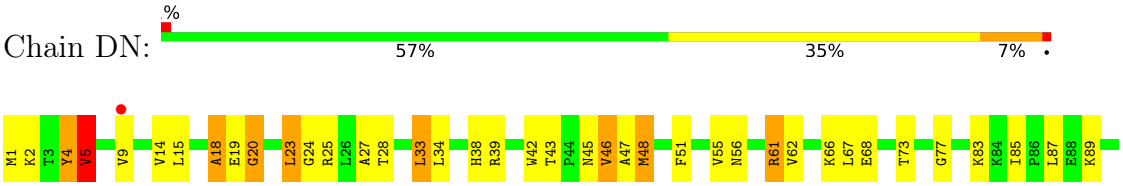
• Molecule 31: 50S Ribosomal Protein L13

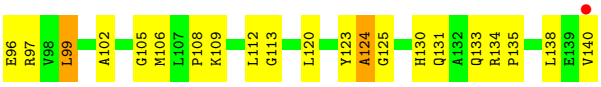
Chain BN:



• Molecule 31: 50S Ribosomal Protein L13

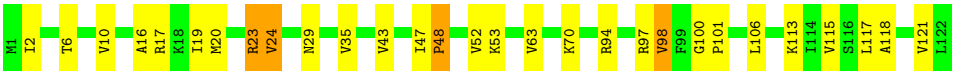
Chain DN:





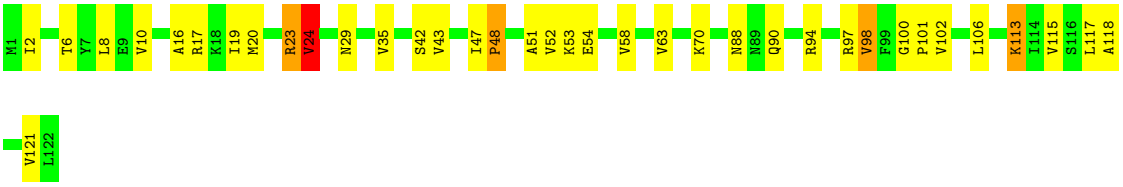
• Molecule 32: 50S Ribosomal Protein L14

Chain BO:



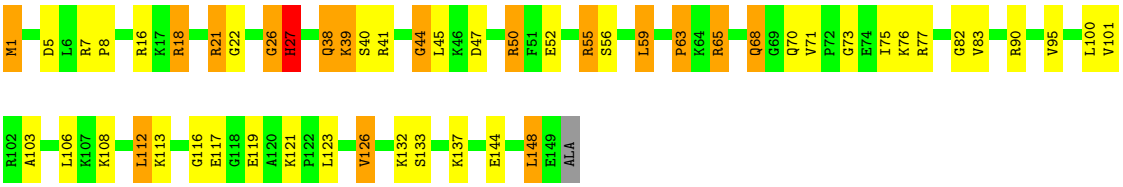
• Molecule 32: 50S Ribosomal Protein L14

Chain DO:



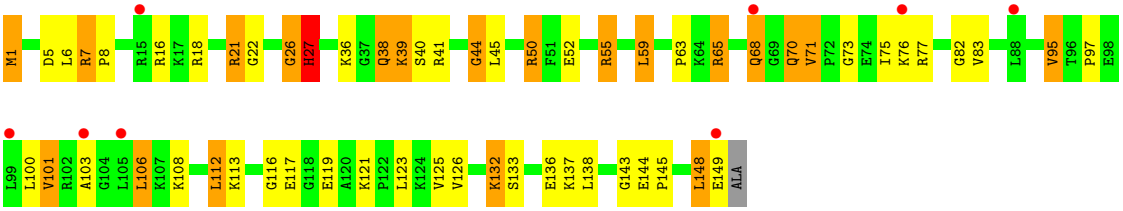
• Molecule 33: 50S Ribosomal Protein L15

Chain BP:



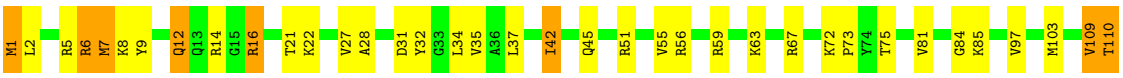
• Molecule 33: 50S Ribosomal Protein L15

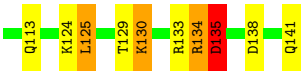
Chain DP:



• Molecule 34: 50S Ribosomal Protein L16

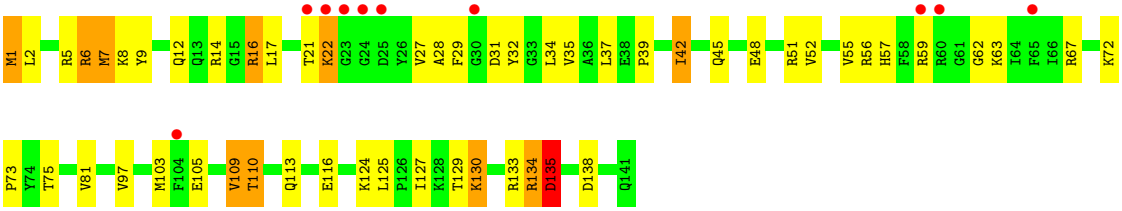
Chain BQ:





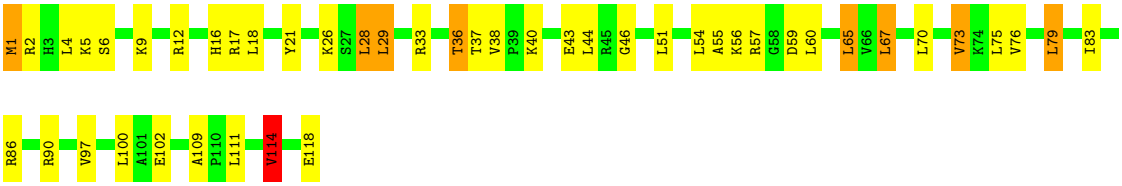
• Molecule 34: 50S Ribosomal Protein L16

Chain DQ:



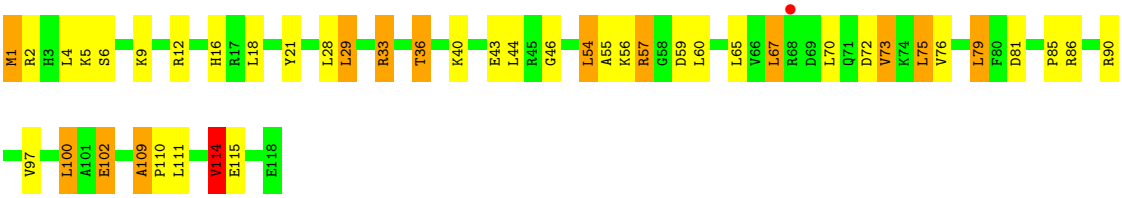
• Molecule 35: 50S Ribosomal Protein L17

Chain BR:



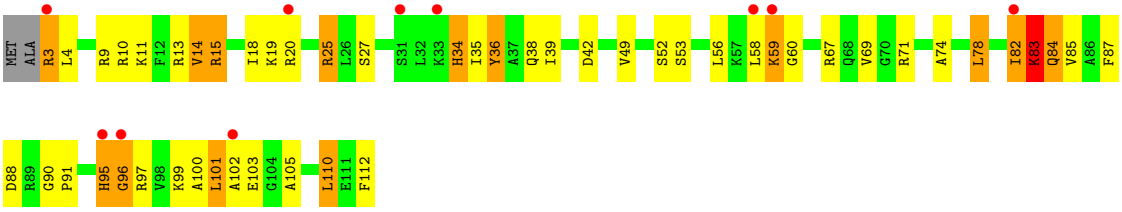
• Molecule 35: 50S Ribosomal Protein L17

Chain DR:



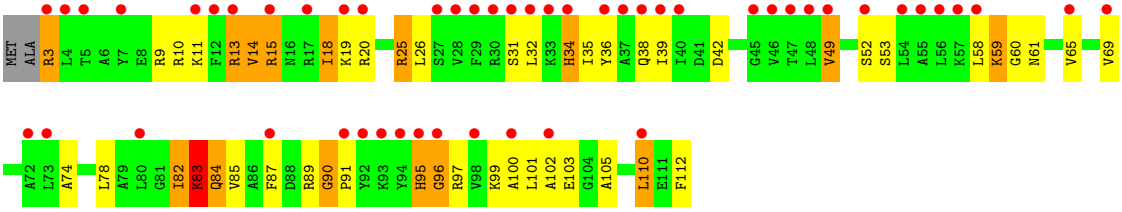
• Molecule 36: 50S Ribosomal Protein L18

Chain BS:

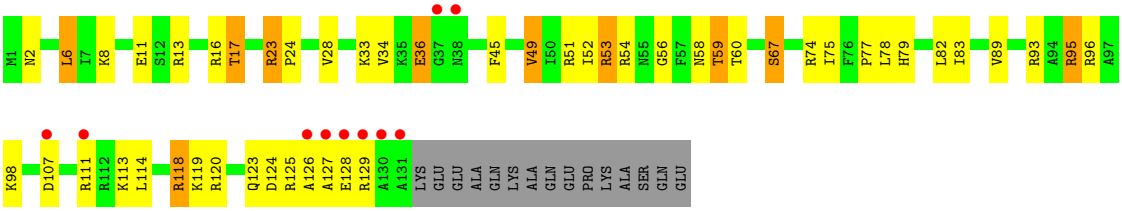


• Molecule 36: 50S Ribosomal Protein L18

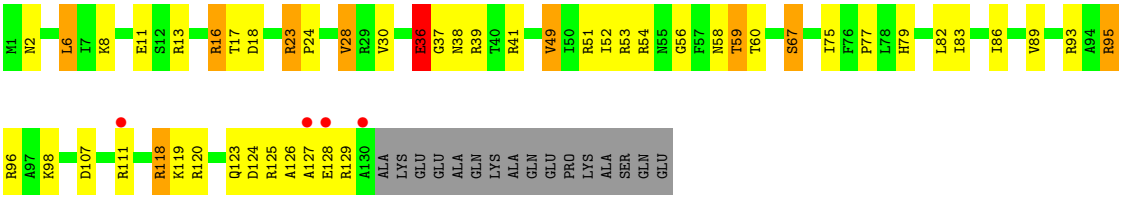
Chain DS:



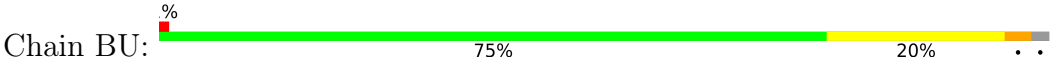
• Molecule 37: 50S Ribosomal Protein L19



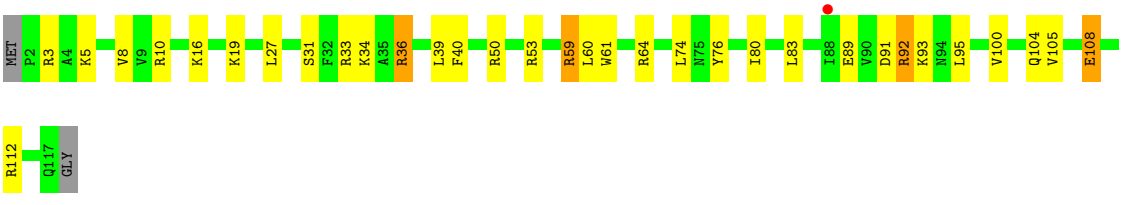
• Molecule 37: 50S Ribosomal Protein L19



• Molecule 38: 50S Ribosomal Protein L20

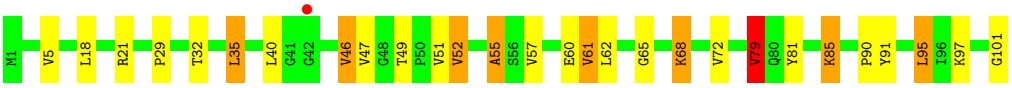


• Molecule 38: 50S Ribosomal Protein L20

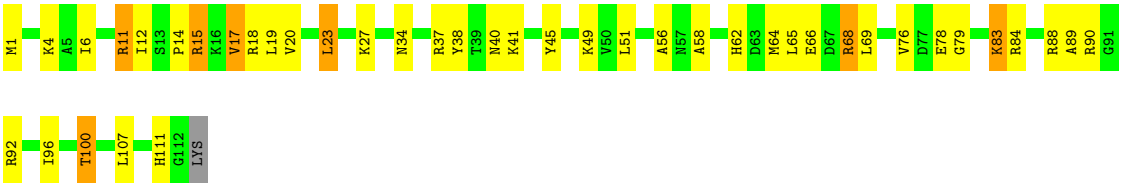


• Molecule 39: 50S Ribosomal Protein L21

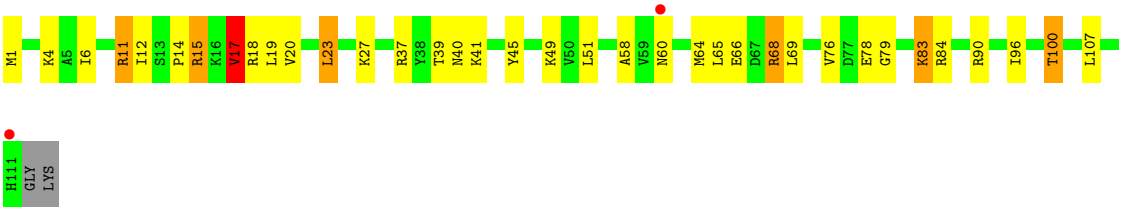
• Molecule 39: 50S Ribosomal Protein L21



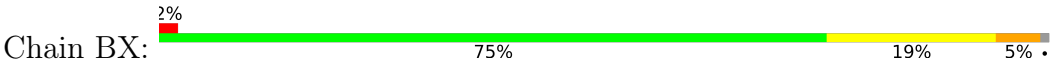
• Molecule 40: 50S Ribosomal Protein L22

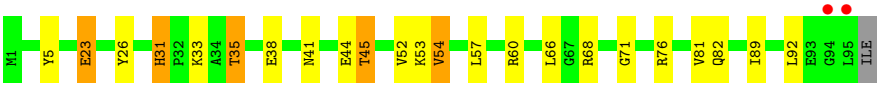


• Molecule 40: 50S Ribosomal Protein L22

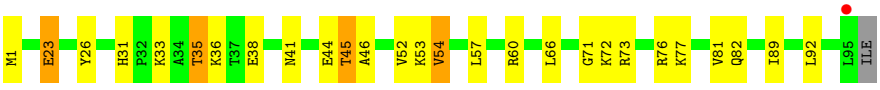


• Molecule 41: 50S Ribosomal Protein L23

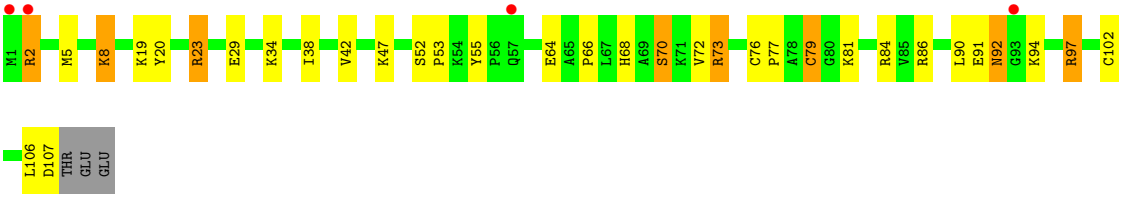




• Molecule 41: 50S Ribosomal Protein L23

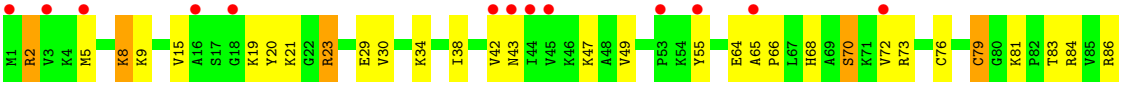


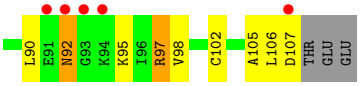
• Molecule 42: 50S Ribosomal Protein L24



• Molecule 42: 50S Ribosomal Protein L24

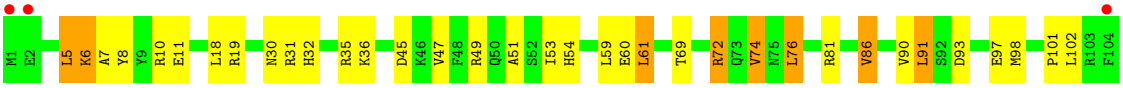
Chain DY:

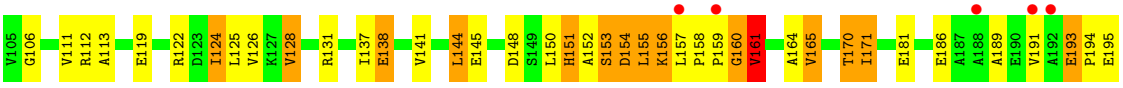


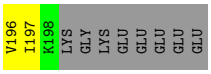


• Molecule 43: 50S Ribosomal Protein L25

Chain BZ:

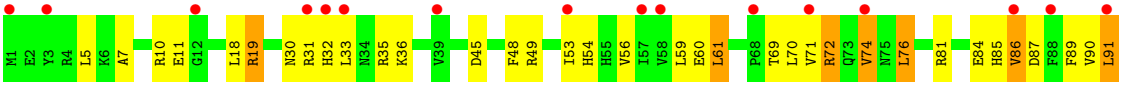


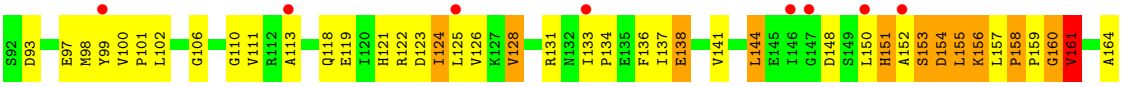


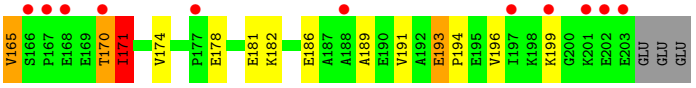


• Molecule 43: 50S Ribosomal Protein L25

Chain DZ:

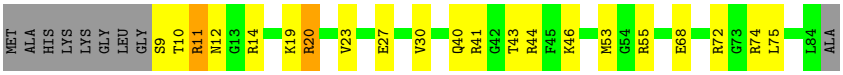






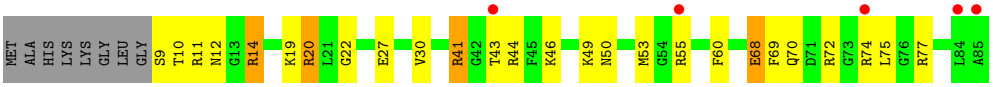
• Molecule 44: 50S Ribosomal Protein L27

Chain B0:



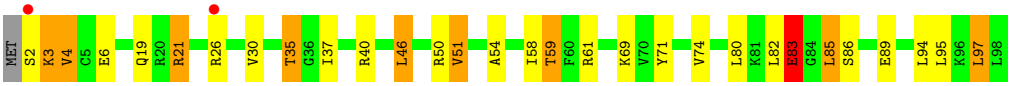
• Molecule 44: 50S Ribosomal Protein L27

Chain D0:



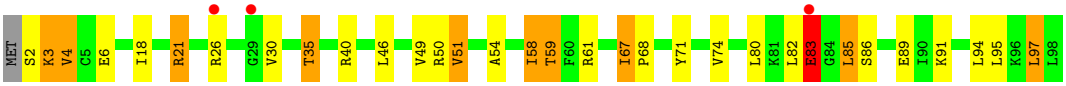
• Molecule 45: 50S Ribosomal Protein L28

Chain B1:



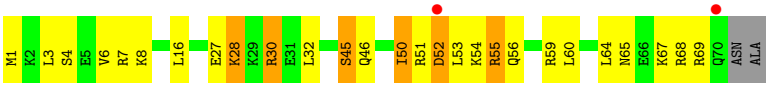
• Molecule 45: 50S Ribosomal Protein L28

Chain D1:



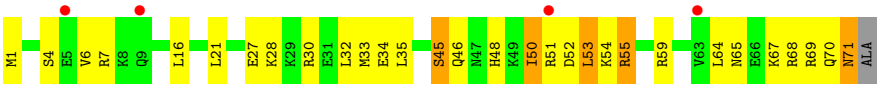
• Molecule 46: 50S Ribosomal Protein L29

Chain B2:



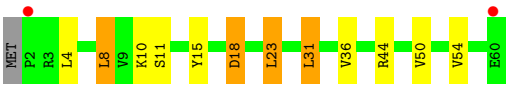
• Molecule 46: 50S Ribosomal Protein L29

Chain D2:



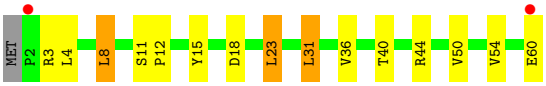
• Molecule 47: 50S Ribosomal Protein L30

Chain B3:



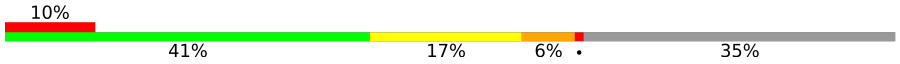
• Molecule 47: 50S Ribosomal Protein L30

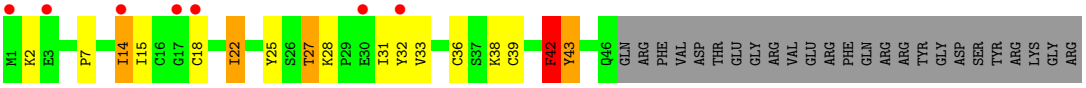
Chain D3:



• Molecule 48: 50S Ribosomal Protein L31

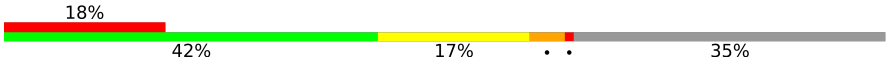
Chain B4:

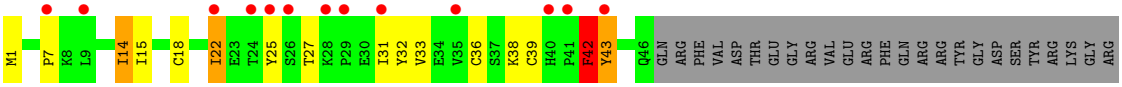




• Molecule 48: 50S Ribosomal Protein L31

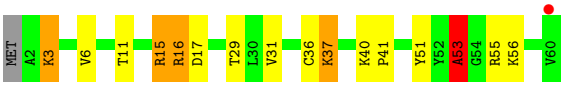
Chain D4:





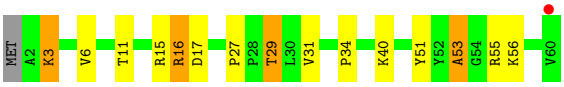
• Molecule 49: 50S Ribosomal Protein L32

Chain B5:



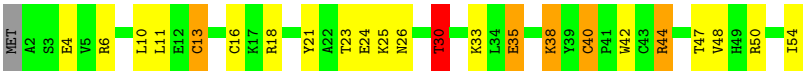
• Molecule 49: 50S Ribosomal Protein L32

Chain D5:



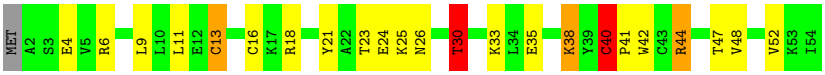
• Molecule 50: 50S Ribosomal Protein L33

Chain B6:



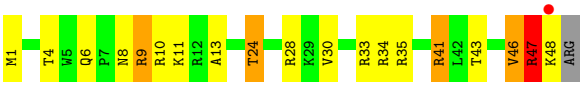
• Molecule 50: 50S Ribosomal Protein L33

Chain D6:



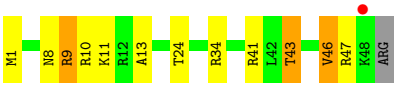
• Molecule 51: 50S Ribosomal Protein L34

Chain B7:



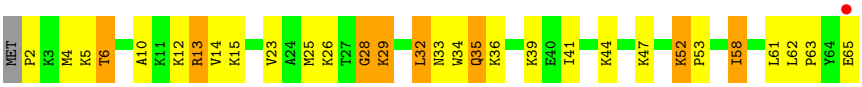
• Molecule 51: 50S Ribosomal Protein L34

Chain D7:



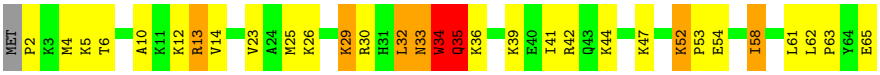
• Molecule 52: 50S Ribosomal Protein L35

Chain B8:



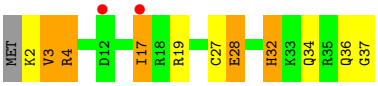
• Molecule 52: 50S Ribosomal Protein L35

Chain D8:



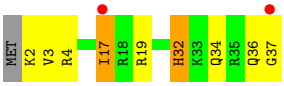
• Molecule 53: 50S ribosomal protein L36

Chain B9:



• Molecule 53: 50S ribosomal protein L36

Chain D9:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.63Å 449.30Å 620.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.71 – 2.70 49.71 – 2.70	Depositor EDS
% Data completeness (in resolution range)	98.4 (49.71-2.70) 98.4 (49.71-2.70)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.20 (at 2.69Å)	Xtriage
Refinement program	PHENIX 1.7.2_869	Depositor
R, R_{free}	0.217 , 0.254 0.213 , 0.250	Depositor DCC
R_{free} test set	78243 reflections (4.94%)	wwPDB-VP
Wilson B-factor (Å^2)	55.6	Xtriage
Anisotropy	0.155	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 46.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	287173	wwPDB-VP
Average B, all atoms (Å^2)	64.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.42% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.58	22/35935 (0.1%)	0.54	3/56084 (0.0%)
1	CA	0.56	21/35884 (0.1%)	0.54	4/56006 (0.0%)
2	AB	0.71	0/1811	1.14	12/2452 (0.5%)
2	CB	0.80	1/1852 (0.1%)	1.15	11/2510 (0.4%)
3	AC	0.82	0/1474	1.25	10/2003 (0.5%)
3	CC	0.88	0/1477	1.38	20/2006 (1.0%)
4	AD	0.84	2/1550 (0.1%)	1.29	13/2106 (0.6%)
4	CD	0.80	0/1567	1.27	12/2125 (0.6%)
5	AE	0.80	1/1121 (0.1%)	1.20	10/1517 (0.7%)
5	CE	0.81	0/1122	1.22	10/1518 (0.7%)
6	AF	0.76	0/794	1.11	3/1082 (0.3%)
6	CF	0.70	0/789	1.09	0/1074
7	AG	0.73	0/1186	1.17	9/1603 (0.6%)
7	CG	0.78	1/1183 (0.1%)	1.18	6/1599 (0.4%)
8	AH	0.70	0/1065	1.07	3/1445 (0.2%)
8	CH	0.68	0/1069	1.05	3/1450 (0.2%)
9	AI	0.81	0/867	1.31	8/1180 (0.7%)
9	CI	0.98	0/864	1.37	13/1177 (1.1%)
10	AJ	0.91	0/672	1.20	4/919 (0.4%)
10	CJ	1.05	0/670	1.36	7/917 (0.8%)
11	AK	0.78	0/843	1.21	4/1144 (0.3%)
11	CK	0.78	0/843	1.18	5/1144 (0.4%)
12	AL	0.88	0/925	1.23	8/1251 (0.6%)
12	CL	0.86	0/921	1.24	8/1247 (0.6%)
13	AM	0.89	0/811	1.37	13/1103 (1.2%)
13	CM	0.98	1/794 (0.1%)	1.45	13/1081 (1.2%)
14	AN	0.75	0/487	1.30	4/649 (0.6%)
14	CN	0.82	0/483	1.59	10/645 (1.6%)
15	AO	0.72	0/735	1.11	1/981 (0.1%)
15	CO	0.66	0/735	1.07	1/981 (0.1%)
16	AP	0.76	0/667	1.23	6/905 (0.7%)
16	CP	0.76	0/677	1.18	6/917 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.75	0/836	1.04	2/1117 (0.2%)
17	CQ	0.75	0/832	1.08	3/1113 (0.3%)
18	AR	0.70	0/519	1.18	3/699 (0.4%)
18	CR	0.67	0/519	1.12	2/699 (0.3%)
19	AS	0.81	0/574	1.42	7/781 (0.9%)
19	CS	0.86	0/563	1.40	9/766 (1.2%)
20	AT	0.78	1/701 (0.1%)	1.22	4/930 (0.4%)
20	CT	0.82	0/776	1.23	5/1026 (0.5%)
21	AU	0.63	0/203	1.00	0/266
21	CU	0.94	0/184	1.44	6/244 (2.5%)
22	AY	0.82	0/766	1.21	4/1034 (0.4%)
22	CY	0.87	0/751	1.14	4/1017 (0.4%)
23	BA	0.83	48/68200 (0.1%)	0.62	10/106454 (0.0%)
23	DA	0.66	11/67486 (0.0%)	0.59	6/105338 (0.0%)
24	BB	0.64	2/2878 (0.1%)	0.55	0/4490
24	DB	0.68	2/2878 (0.1%)	0.55	0/4490
25	BD	1.13	3/2186 (0.1%)	1.35	23/2944 (0.8%)
25	DD	0.95	0/2186	1.31	12/2944 (0.4%)
26	BE	1.10	4/1588 (0.3%)	1.35	20/2145 (0.9%)
26	DE	0.95	1/1588 (0.1%)	1.35	16/2145 (0.7%)
27	BF	1.05	0/1612	1.24	9/2184 (0.4%)
27	DF	0.88	0/1607	1.26	12/2178 (0.6%)
28	BG	0.70	0/1393	1.24	15/1892 (0.8%)
28	DG	0.79	0/1393	1.24	14/1892 (0.7%)
29	BH	0.89	0/1343	1.18	9/1820 (0.5%)
29	DH	0.74	0/1343	1.14	6/1820 (0.3%)
30	BI	0.83	0/1058	1.25	12/1449 (0.8%)
30	DI	0.84	0/1058	1.36	16/1449 (1.1%)
31	BN	1.07	2/1139 (0.2%)	1.39	14/1538 (0.9%)
31	DN	0.86	1/1139 (0.1%)	1.37	14/1538 (0.9%)
32	BO	1.07	0/933	1.25	7/1257 (0.6%)
32	DO	0.93	1/933 (0.1%)	1.24	10/1257 (0.8%)
33	BP	1.05	0/1148	1.31	14/1529 (0.9%)
33	DP	0.87	0/1148	1.29	14/1529 (0.9%)
34	BQ	1.07	0/1143	1.28	7/1527 (0.5%)
34	DQ	0.91	0/1143	1.26	4/1527 (0.3%)
35	BR	1.10	0/982	1.24	9/1312 (0.7%)
35	DR	0.88	0/982	1.19	5/1312 (0.4%)
36	BS	0.91	0/875	1.28	7/1168 (0.6%)
36	DS	0.88	0/883	1.27	6/1176 (0.5%)
37	BT	0.98	0/1077	1.31	7/1444 (0.5%)
37	DT	0.87	0/1072	1.29	6/1437 (0.4%)
38	BU	1.13	1/977 (0.1%)	1.18	3/1301 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DU	0.88	0/977	1.12	1/1301 (0.1%)
39	BV	1.05	0/782	1.24	4/1049 (0.4%)
39	DV	0.89	0/786	1.22	2/1053 (0.2%)
40	BW	1.25	1/891 (0.1%)	1.22	3/1197 (0.3%)
40	DW	1.03	0/887	1.18	4/1192 (0.3%)
41	BX	1.11	2/756 (0.3%)	1.20	1/1016 (0.1%)
41	DX	0.91	0/746	1.18	2/1005 (0.2%)
42	BY	0.94	0/798	1.35	11/1073 (1.0%)
42	DY	0.85	0/794	1.36	9/1067 (0.8%)
43	BZ	0.87	0/1555	1.29	16/2118 (0.8%)
43	DZ	0.86	0/1561	1.30	17/2131 (0.8%)
44	B0	0.98	0/602	1.17	3/804 (0.4%)
44	D0	0.91	0/615	1.19	4/820 (0.5%)
45	B1	1.06	2/752 (0.3%)	1.12	1/1003 (0.1%)
45	D1	0.90	1/752 (0.1%)	1.14	1/1003 (0.1%)
46	B2	0.98	0/590	1.17	5/781 (0.6%)
46	D2	0.81	0/586	1.18	4/779 (0.5%)
47	B3	0.99	0/463	1.14	2/623 (0.3%)
47	D3	0.88	0/468	1.16	2/628 (0.3%)
48	B4	0.70	0/358	1.18	2/487 (0.4%)
48	D4	0.84	0/358	1.12	2/487 (0.4%)
49	B5	1.22	3/469 (0.6%)	1.36	2/634 (0.3%)
49	D5	1.07	2/465 (0.4%)	1.28	1/630 (0.2%)
50	B6	1.04	0/456	1.30	4/609 (0.7%)
50	D6	0.90	0/444	1.25	4/595 (0.7%)
51	B7	1.27	2/426 (0.5%)	1.31	4/561 (0.7%)
51	D7	1.04	1/410 (0.2%)	1.22	4/543 (0.7%)
52	B8	1.17	0/516	1.29	5/679 (0.7%)
52	D8	0.96	0/516	1.34	6/679 (0.9%)
53	B9	1.44	5/300 (1.7%)	1.43	5/395 (1.3%)
53	D9	0.96	1/300 (0.3%)	1.33	2/395 (0.5%)
All	All	0.76	146/304847 (0.0%)	0.82	729/456336 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	AB	0	1
2	CB	0	2
3	AC	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	CC	0	3
4	AD	0	1
4	CD	0	1
9	AI	0	3
9	CI	0	1
10	AJ	0	3
10	CJ	0	2
12	CL	0	2
13	AM	0	2
13	CM	0	1
14	CN	0	2
18	AR	0	1
18	CR	0	1
23	BA	0	4
23	DA	0	1
25	BD	0	1
25	DD	0	1
26	BE	0	1
26	DE	0	1
27	BF	0	3
27	DF	0	2
28	BG	0	1
28	DG	0	1
29	BH	0	1
29	DH	0	1
30	BI	0	1
31	BN	0	1
31	DN	0	1
33	BP	0	2
33	DP	0	2
36	BS	0	1
36	DS	0	1
37	BT	0	1
37	DT	0	1
41	BX	0	1
41	DX	0	1
43	BZ	0	1
43	DZ	0	1
45	B1	0	1
45	D1	0	1
48	B4	0	1
48	D4	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
49	B5	0	1
49	D5	0	1
52	D8	0	1
All	All	0	68

All (146) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1459	C	C1'-N1	12.10	1.66	1.48
1	CA	1459	C	C1'-N1	11.66	1.66	1.48
23	DA	2123	G	P-OP2	-10.34	1.28	1.49
1	CA	66	G	P-OP2	-10.34	1.28	1.49
23	BA	2123	G	P-OP1	-10.21	1.28	1.49
23	BA	2243	U	P-OP2	-10.16	1.28	1.49
1	CA	52	G	P-OP1	-10.07	1.28	1.49
23	BA	272(A)	U	C1'-N1	9.48	1.62	1.48
1	AA	1459	C	N1-C2	9.39	1.58	1.40
23	BA	788	A	P-OP2	-9.23	1.30	1.49
1	CA	1459	C	N1-C2	8.99	1.58	1.40
23	BA	2057	A	P-OP2	-8.88	1.31	1.49
1	AA	52	G	P-OP2	-8.78	1.31	1.49
1	AA	66	G	P-OP1	-8.58	1.31	1.49
23	BA	679	C	P-OP2	-8.46	1.32	1.49
23	BA	1026	U	P-OP2	-8.40	1.32	1.49
23	BA	546	C	P-OP1	-8.23	1.32	1.49
23	DA	272(A)	U	C1'-N1	8.17	1.60	1.48
1	CA	542	G	P-OP2	-8.08	1.32	1.49
1	AA	187	C	P-OP2	-8.07	1.32	1.49
1	CA	187	C	P-OP1	-8.06	1.32	1.49
23	BA	2445	G	P-OP1	-8.05	1.32	1.49
1	AA	341	C	P-OP1	-8.02	1.32	1.49
1	CA	439	A	P-OP2	-7.96	1.33	1.49
23	DA	546	C	P-OP2	-7.95	1.33	1.49
53	B9	32	HIS	ND1-CE1	-7.86	1.24	1.32
53	B9	32	HIS	CD2-NE2	-7.81	1.29	1.37
23	BA	2450	A	P-OP2	-7.73	1.33	1.49
1	AA	615	C	P-OP2	-7.71	1.33	1.49
25	BD	138	VAL	CA-CB	7.69	1.61	1.54
1	CA	615	C	P-OP1	-7.63	1.33	1.49
1	AA	542	G	P-OP1	-7.56	1.33	1.49
1	AA	516	U	P-OP2	-7.45	1.34	1.49
31	DN	85	ILE	CA-CB	-7.44	1.47	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	516	U	P-OP1	-7.42	1.34	1.49
1	AA	1442(A)	G	P-OP1	-7.41	1.34	1.49
23	DA	1026	U	P-OP1	-7.37	1.34	1.49
1	CA	1442(A)	G	P-OP2	-7.36	1.34	1.49
23	BA	1762	A	P-OP1	-7.34	1.34	1.49
53	B9	32	HIS	CE1-NE2	7.30	1.39	1.32
23	BA	679	C	P-OP1	-7.29	1.34	1.49
1	AA	341	C	P-OP2	-7.27	1.34	1.49
23	BA	2143	C	P-OP1	-7.22	1.34	1.49
1	AA	542	G	P-OP2	-7.22	1.34	1.49
24	BB	27	C	P-OP1	-7.21	1.34	1.49
53	B9	32	HIS	CG-ND1	7.20	1.46	1.38
1	CA	439	A	P-OP1	-7.17	1.34	1.49
23	BA	808	G	P-OP2	-7.14	1.34	1.49
23	BA	2589	A	P-OP2	-7.14	1.34	1.49
1	AA	615	C	P-OP1	-7.13	1.34	1.49
1	AA	1442(A)	G	P-OP2	-7.10	1.34	1.49
1	CA	44	G	P-OP1	-7.08	1.34	1.49
23	DA	1762	A	P-OP1	-7.07	1.34	1.49
23	BA	2589	A	P-O5'	-7.01	1.49	1.59
1	CA	542	G	P-OP1	-6.99	1.34	1.49
23	BA	747	U	P-OP2	-6.95	1.35	1.49
1	CA	516	U	P-OP1	-6.94	1.35	1.49
1	AA	439	A	P-OP2	-6.91	1.35	1.49
24	BB	27	C	P-OP2	-6.87	1.35	1.49
31	BN	31	ALA	CA-CB	-6.85	1.42	1.53
23	BA	809	G	P-OP2	-6.84	1.35	1.49
1	CA	615	C	P-OP2	-6.83	1.35	1.49
1	CA	187	C	P-OP2	-6.81	1.35	1.49
1	CA	341	C	P-OP1	-6.81	1.35	1.49
1	CA	341	C	P-OP2	-6.75	1.35	1.49
1	AA	44	G	P-OP2	-6.69	1.35	1.49
23	BA	2143	C	P-OP2	-6.67	1.35	1.49
23	BA	2035	G	P-OP1	-6.66	1.35	1.49
23	BA	1762	A	P-OP2	-6.65	1.35	1.49
23	DA	2143	C	P-OP1	-6.65	1.35	1.49
1	AA	44	G	P-OP1	-6.62	1.35	1.49
23	BA	2450	A	P-OP1	-6.60	1.35	1.49
23	DA	2143	C	P-OP2	-6.60	1.35	1.49
23	BA	2057	A	P-OP1	-6.52	1.35	1.49
1	CA	516	U	P-OP2	-6.50	1.35	1.49
1	AA	187	C	P-OP1	-6.50	1.35	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	DB	27	C	P-OP2	-6.49	1.35	1.49
23	DA	1026	U	P-OP2	-6.48	1.35	1.49
24	DB	27	C	P-OP1	-6.48	1.35	1.49
26	BE	202	LYS	CA-C	6.46	1.60	1.52
23	BA	1026	U	P-OP1	-6.38	1.36	1.49
23	BA	2055	C	P-OP1	-6.36	1.36	1.49
1	AA	439	A	P-OP1	-6.36	1.36	1.49
23	BA	2444	G	O3'-P	-6.35	1.51	1.61
23	BA	809	G	P-OP1	-6.34	1.36	1.49
23	BA	1982	C	P-OP2	-6.23	1.36	1.49
26	BE	20	ALA	CA-CB	-6.21	1.44	1.53
23	BA	1982	C	P-OP1	-6.12	1.36	1.49
23	BA	571	A	P-OP2	-6.07	1.36	1.49
1	CA	1442(A)	G	N9-C4	6.05	1.50	1.38
1	CA	1442(A)	G	P-OP1	-6.02	1.36	1.49
23	DA	546	C	P-OP1	-5.98	1.36	1.49
41	BX	23	GLU	C-O	-5.95	1.17	1.23
1	CA	44	G	P-OP2	-5.92	1.37	1.49
23	BA	747	U	P-OP1	-5.88	1.37	1.49
23	DA	1762	A	P-OP2	-5.85	1.37	1.49
25	BD	209	ALA	CA-CB	-5.85	1.44	1.53
4	AD	12	CYS	CB-SG	5.82	2.00	1.81
49	D5	27	PRO	CA-C	5.79	1.55	1.51
23	BA	546	C	P-OP2	-5.76	1.37	1.49
23	BA	2589	A	P-OP1	-5.74	1.37	1.49
23	BA	1981	A	O3'-P	-5.74	1.52	1.61
49	B5	31	VAL	CA-CB	-5.73	1.48	1.55
53	D9	32	HIS	CD2-NE2	5.72	1.44	1.37
23	BA	2449	U	O3'-P	-5.71	1.52	1.61
13	CM	9	ILE	CA-CB	5.71	1.61	1.54
4	AD	12	CYS	CA-CB	5.69	1.62	1.53
23	BA	2450	A	P-O5'	-5.57	1.51	1.59
1	AA	1442(A)	G	N9-C4	5.55	1.49	1.38
23	BA	1782	C	P-OP1	-5.54	1.37	1.49
23	BA	2055	C	P-OP2	-5.53	1.37	1.49
23	BA	788	A	P-O5'	-5.50	1.51	1.59
32	DO	24	VAL	CA-CB	5.49	1.60	1.54
41	BX	31	HIS	CA-C	-5.47	1.47	1.53
53	B9	32	HIS	CB-CG	-5.47	1.42	1.50
1	AA	1531	A	C1'-N9	5.45	1.56	1.48
7	CG	80	VAL	CA-CB	5.45	1.59	1.54
26	BE	144	ARG	CA-C	-5.44	1.49	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	B7	13	ALA	CA-CB	-5.43	1.45	1.53
45	B1	46	LEU	CA-C	-5.38	1.46	1.52
23	DA	2689	U	C3'-O3'	5.37	1.51	1.43
23	BA	2445	G	P-OP2	-5.35	1.38	1.49
23	BA	808	G	P-OP1	-5.34	1.38	1.49
49	D5	31	VAL	CA-CB	-5.34	1.49	1.55
51	D7	13	ALA	CA-CB	-5.32	1.45	1.53
40	BW	56	ALA	C-O	-5.31	1.18	1.24
51	B7	41	ARG	C-O	-5.28	1.18	1.24
23	BA	787	U	O3'-P	-5.26	1.53	1.61
38	BU	46	ALA	CA-CB	-5.23	1.45	1.53
49	B5	41	PRO	CA-C	-5.18	1.47	1.52
23	BA	788	A	P-OP1	-5.15	1.38	1.49
5	AE	8	GLU	CA-C	5.13	1.58	1.53
23	BA	2588	G	O3'-P	-5.12	1.53	1.61
23	BA	2243	U	P-O5'	-5.11	1.52	1.59
23	BA	2689	U	C3'-O3'	5.10	1.50	1.43
26	DE	203	LYS	CA-C	5.09	1.59	1.52
45	B1	37	ILE	CA-CB	-5.08	1.47	1.54
49	B5	41	PRO	C-O	-5.08	1.18	1.24
23	BA	2033	A	P-OP1	-5.08	1.38	1.49
45	D1	67	ILE	CA-CB	-5.06	1.51	1.54
25	BD	104	TYR	CA-C	-5.05	1.46	1.52
26	BE	123	ALA	CA-CB	-5.04	1.44	1.53
23	BA	1300	U	C3'-O3'	5.02	1.50	1.43
2	CB	229	VAL	CA-CB	5.01	1.59	1.54
31	BN	85	ILE	CA-CB	-5.01	1.49	1.54
20	AT	10	LEU	CA-C	5.00	1.59	1.52

All (729) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	CN	13	THR	CA-C-N	15.03	138.63	119.84
14	CN	13	THR	C-N-CA	15.03	138.63	119.84
31	DN	46	VAL	N-CA-C	14.89	129.66	113.43
31	BN	46	VAL	N-CA-C	14.71	129.46	113.43
4	AD	31	CYS	N-CA-C	-12.15	97.98	112.92
27	BF	89	VAL	CA-C-N	-11.37	104.72	123.37
27	BF	89	VAL	C-N-CA	-11.37	104.72	123.37
19	AS	8	GLY	N-CA-C	-11.20	96.92	111.37
4	CD	31	CYS	N-CA-C	-11.19	99.16	112.92
37	BT	36	GLU	CA-C-N	-11.17	113.01	121.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	BT	36	GLU	C-N-CA	-11.17	113.01	121.61
31	DN	20	GLY	N-CA-C	-10.76	101.89	114.69
27	DF	20	LEU	N-CA-C	10.54	126.17	112.26
3	CC	78	GLY	N-CA-C	10.30	127.64	114.25
36	DS	90	GLY	CA-C-N	10.27	130.55	119.87
36	DS	90	GLY	C-N-CA	10.27	130.55	119.87
43	DZ	151	HIS	N-CA-C	9.86	126.51	113.30
50	B6	40	CYS	CA-C-N	9.80	130.06	119.87
50	B6	40	CYS	C-N-CA	9.80	130.06	119.87
46	B2	45	SER	N-CA-C	-9.65	97.53	110.55
34	BQ	134	ARG	N-CA-C	9.49	121.63	111.28
46	D2	45	SER	N-CA-C	-9.39	97.87	110.55
13	CM	9	ILE	CA-C-N	9.38	131.57	119.84
13	CM	9	ILE	C-N-CA	9.38	131.57	119.84
43	BZ	151	HIS	N-CA-C	9.31	125.77	113.30
12	AL	18	VAL	N-CA-C	9.25	119.30	110.42
12	CL	28	LYS	N-CA-C	-9.20	101.98	113.02
4	AD	12	CYS	N-CA-C	-9.13	100.28	111.33
27	DF	22	ALA	N-CA-C	9.13	130.25	110.80
12	AL	28	LYS	N-CA-C	-9.12	102.07	113.02
11	AK	40	ILE	N-CA-C	-8.98	103.14	111.67
31	BN	20	GLY	N-CA-C	-8.85	104.16	114.69
50	D6	40	CYS	CA-C-N	8.78	128.42	119.56
50	D6	40	CYS	C-N-CA	8.78	128.42	119.56
39	DV	79	VAL	CB-CA-C	8.71	120.52	110.93
39	BV	79	VAL	CB-CA-C	8.64	120.44	110.93
12	CL	18	VAL	N-CA-C	8.64	118.65	110.53
14	AN	60	SER	N-CA-C	8.60	120.97	110.91
33	DP	40	SER	N-CA-C	-8.56	102.61	113.23
37	DT	36	GLU	CA-C-N	-8.54	113.35	121.46
37	DT	36	GLU	C-N-CA	-8.54	113.35	121.46
28	DG	116	ASP	N-CA-C	8.50	122.41	112.72
7	CG	77	SER	N-CA-C	8.50	122.45	112.93
7	CG	147	ALA	N-CA-C	-8.50	101.53	112.23
9	AI	44	VAL	N-CA-C	8.48	120.26	112.29
26	DE	73	GLU	CA-C-N	8.48	130.44	119.84
26	DE	73	GLU	C-N-CA	8.48	130.44	119.84
33	BP	116	GLY	N-CA-C	8.41	126.33	115.32
26	BE	73	GLU	CA-C-N	8.40	130.34	119.84
26	BE	73	GLU	C-N-CA	8.40	130.34	119.84
23	BA	1992	G	C2'-C3'-O3'	8.39	122.09	109.50
9	CI	40	LEU	N-CA-C	8.38	120.72	110.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	DP	38	GLN	N-CA-C	-8.35	99.51	110.53
37	BT	127	ALA	N-CA-C	-8.32	93.13	107.61
14	AN	13	THR	CA-C-N	8.28	130.19	119.84
14	AN	13	THR	C-N-CA	8.28	130.19	119.84
20	CT	10	LEU	N-CA-C	8.25	128.38	110.80
36	BS	103	GLU	N-CA-C	-8.24	102.37	111.36
20	AT	10	LEU	N-CA-C	8.14	128.13	110.80
36	DS	103	GLU	N-CA-C	-8.13	102.50	111.36
36	BS	90	GLY	CA-C-N	8.12	128.32	119.87
36	BS	90	GLY	C-N-CA	8.12	128.32	119.87
3	CC	51	GLY	N-CA-C	8.06	120.84	110.20
36	BS	96	GLY	N-CA-C	-8.03	94.14	113.18
30	BI	131	LYS	CA-C-N	8.01	128.20	119.87
30	BI	131	LYS	C-N-CA	8.01	128.20	119.87
30	BI	54	GLN	N-CA-C	-8.00	100.93	111.24
53	B9	32	HIS	ND1-CG-CD2	-7.93	98.17	106.10
30	DI	79	ILE	N-CA-C	7.92	116.07	107.60
9	AI	91	ASP	N-CA-C	-7.90	103.22	113.17
3	AC	6	HIS	CA-C-N	7.86	127.50	119.56
3	AC	6	HIS	C-N-CA	7.86	127.50	119.56
19	CS	58	VAL	N-CA-C	7.86	115.70	107.76
34	DQ	134	ARG	N-CA-C	7.83	121.77	111.75
28	BG	116	ASP	N-CA-C	7.82	121.64	112.72
42	DY	92	ASN	N-CA-C	7.82	121.76	111.75
49	B5	53	ALA	N-CA-C	7.79	121.99	111.24
4	AD	171	GLY	CA-C-N	7.76	127.67	119.05
4	AD	171	GLY	C-N-CA	7.76	127.67	119.05
47	D3	11	SER	CA-C-N	7.76	127.39	119.56
47	D3	11	SER	C-N-CA	7.76	127.39	119.56
13	AM	40	ASN	CA-C-N	7.71	128.41	119.47
13	AM	40	ASN	C-N-CA	7.71	128.41	119.47
30	DI	131	LYS	CA-C-N	7.71	127.42	119.64
30	DI	131	LYS	C-N-CA	7.71	127.42	119.64
23	DA	1992	G	C2'-C3'-O3'	7.70	121.04	109.50
43	BZ	193	GLU	CA-C-N	-7.69	111.99	120.14
43	BZ	193	GLU	C-N-CA	-7.69	111.99	120.14
31	BN	23	LEU	CA-C-N	-7.67	111.26	122.46
31	BN	23	LEU	C-N-CA	-7.67	111.26	122.46
13	CM	46	LYS	N-CA-C	-7.67	103.18	112.54
5	AE	69	VAL	CA-C-N	7.66	129.42	119.84
5	AE	69	VAL	C-N-CA	7.66	129.42	119.84
5	AE	67	VAL	N-CA-C	7.64	118.44	108.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	CL	29	GLY	N-CA-C	-7.62	100.05	113.76
52	B8	13	ARG	N-CA-C	7.61	123.50	113.30
42	DY	2	ARG	NE-CZ-NH1	-7.61	113.89	121.50
52	D8	34	TRP	O-C-N	-7.61	112.47	122.59
5	CE	67	VAL	N-CA-C	7.60	118.38	108.35
26	BE	134	ILE	N-CA-C	7.59	119.41	112.43
3	CC	51	GLY	CA-C-N	7.55	135.96	121.54
3	CC	51	GLY	C-N-CA	7.55	135.96	121.54
5	CE	8	GLU	N-CA-C	7.53	119.72	110.91
52	B8	52	LYS	CA-C-N	-7.48	110.74	119.05
52	B8	52	LYS	C-N-CA	-7.48	110.74	119.05
42	BY	79	CYS	CB-CA-C	-7.47	98.85	110.81
47	B3	11	SER	CA-C-N	7.43	127.06	119.56
47	B3	11	SER	C-N-CA	7.43	127.06	119.56
37	DT	127	ALA	N-CA-C	-7.42	94.70	107.61
43	BZ	189	ALA	N-CA-C	7.41	117.79	108.45
4	AD	12	CYS	CA-CB-SG	7.41	131.44	114.40
43	DZ	189	ALA	N-CA-C	7.40	117.78	108.45
9	CI	3	GLN	N-CA-C	7.40	120.29	110.53
25	BD	239	ARG	N-CA-C	-7.39	95.06	110.80
19	CS	47	HIS	CB-CA-C	-7.37	106.02	116.34
32	DO	51	ALA	N-CA-C	-7.37	103.28	111.82
25	BD	15	PHE	N-CA-C	7.33	122.52	113.50
17	CQ	67	LYS	N-CA-C	-7.32	99.44	110.28
20	CT	5	LYS	CA-C-N	7.29	128.95	119.84
20	CT	5	LYS	C-N-CA	7.29	128.95	119.84
2	AB	24	TRP	N-CA-C	7.28	119.21	110.19
27	DF	89	VAL	CA-C-N	-7.25	111.67	122.83
27	DF	89	VAL	C-N-CA	-7.25	111.67	122.83
29	BH	54	ARG	CA-C-N	7.23	126.87	119.56
29	BH	54	ARG	C-N-CA	7.23	126.87	119.56
25	DD	239	ARG	N-CA-C	-7.22	95.43	110.80
18	AR	22	VAL	N-CA-C	7.21	118.00	110.72
52	D8	13	ARG	N-CA-C	7.20	122.95	113.30
16	AP	62	VAL	N-CA-C	-7.19	104.53	112.80
38	BU	89	GLU	N-CA-C	7.19	120.92	112.72
20	AT	74	LYS	CB-CA-C	-7.19	108.27	116.54
33	DP	22	GLY	CA-C-N	7.18	126.44	118.97
33	DP	22	GLY	C-N-CA	7.18	126.44	118.97
30	DI	120	ILE	CB-CA-C	-7.17	101.28	111.31
51	B7	47	ARG	N-CA-C	7.16	119.81	110.43
6	AF	11	ASN	CA-C-N	7.15	126.99	119.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	11	ASN	C-N-CA	7.15	126.99	119.05
3	CC	195	VAL	N-CA-C	7.15	118.33	108.89
43	DZ	193	GLU	CA-C-N	-7.15	112.27	119.99
43	DZ	193	GLU	C-N-CA	-7.15	112.27	119.99
4	CD	171	GLY	CA-C-N	7.15	126.98	119.05
4	CD	171	GLY	C-N-CA	7.15	126.98	119.05
43	BZ	74	VAL	CB-CA-C	-7.15	100.77	110.42
10	AJ	81	THR	N-CA-C	-7.14	104.04	112.89
5	AE	8	GLU	N-CA-C	7.14	119.26	110.91
26	DE	117	MET	N-CA-C	-7.13	98.94	110.20
52	D8	33	ASN	N-CA-C	7.12	121.97	113.28
48	B4	42	PHE	CA-C-N	7.11	134.49	121.70
48	B4	42	PHE	C-N-CA	7.11	134.49	121.70
31	BN	5	VAL	CA-C-N	7.10	127.07	119.76
31	BN	5	VAL	C-N-CA	7.10	127.07	119.76
32	BO	47	ILE	CA-C-N	7.10	126.62	119.24
32	BO	47	ILE	C-N-CA	7.10	126.62	119.24
35	DR	114	VAL	CB-CA-C	-7.09	100.13	110.63
29	BH	7	LEU	CA-C-N	-7.08	113.20	120.85
29	BH	7	LEU	C-N-CA	-7.08	113.20	120.85
43	DZ	53	ILE	N-CA-C	-7.08	105.83	112.83
13	CM	15	VAL	N-CA-C	7.06	117.82	110.62
19	CS	61	TYR	N-CA-C	7.06	120.77	112.72
26	BE	117	MET	N-CA-C	-7.05	98.55	109.76
18	AR	31	LEU	N-CA-C	-7.04	98.12	109.96
33	BP	44	GLY	CA-C-O	-7.01	115.34	122.56
3	CC	52	LEU	N-CA-C	7.01	125.72	110.80
31	DN	5	VAL	CA-C-N	7.00	126.98	119.76
31	DN	5	VAL	C-N-CA	7.00	126.98	119.76
46	D2	50	ILE	N-CA-C	-6.95	100.55	109.80
20	CT	72	LEU	N-CA-C	-6.94	99.00	110.17
33	BP	103	ALA	N-CA-C	-6.93	96.03	110.80
20	CT	74	LYS	CB-CA-C	-6.90	108.60	116.54
5	CE	69	VAL	CA-C-N	6.90	128.46	119.84
5	CE	69	VAL	C-N-CA	6.90	128.46	119.84
17	AQ	67	LYS	N-CA-C	-6.86	100.13	110.28
2	AB	196	LEU	N-CA-C	-6.85	104.92	113.28
48	D4	42	PHE	CA-C-N	6.85	134.03	121.70
48	D4	42	PHE	C-N-CA	6.85	134.03	121.70
7	CG	56	GLN	CB-CA-C	-6.84	106.86	115.89
2	AB	23	ARG	N-CA-C	-6.84	104.50	112.92
19	AS	27	GLU	N-CA-C	6.84	120.56	110.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	DE	143	ASN	CA-C-N	-6.82	112.77	121.98
26	DE	143	ASN	C-N-CA	-6.82	112.77	121.98
35	BR	114	VAL	CB-CA-C	-6.79	100.49	110.81
1	CA	1459	C	N3-C2-O2	-6.74	101.67	121.90
50	B6	30	THR	CA-C-N	6.73	126.36	119.56
50	B6	30	THR	C-N-CA	6.73	126.36	119.56
4	CD	13	ARG	N-CA-C	6.73	118.69	111.36
33	BP	22	GLY	CA-C-N	6.72	125.95	118.97
33	BP	22	GLY	C-N-CA	6.72	125.95	118.97
18	CR	31	LEU	N-CA-C	-6.71	98.68	109.96
31	BN	4	TYR	N-CA-C	6.71	119.20	111.02
19	CS	47	HIS	N-CA-C	6.71	117.93	108.00
42	DY	2	ARG	NE-CZ-NH2	6.71	125.24	119.20
7	AG	37	ASN	N-CA-C	-6.70	103.97	111.28
7	CG	70	LYS	CA-C-N	6.70	126.46	119.76
7	CG	70	LYS	C-N-CA	6.70	126.46	119.76
9	CI	20	ARG	CA-C-N	6.68	128.19	119.84
9	CI	20	ARG	C-N-CA	6.68	128.19	119.84
26	BE	28	ALA	CA-C-N	-6.68	111.38	121.87
26	BE	28	ALA	C-N-CA	-6.68	111.38	121.87
25	BD	260	ARG	N-CA-CB	6.68	119.79	110.17
8	AH	129	VAL	N-CA-C	6.67	118.66	109.46
33	DP	103	ALA	N-CA-C	-6.65	96.64	110.80
28	DG	178	PHE	CA-C-N	6.63	128.13	119.84
28	DG	178	PHE	C-N-CA	6.63	128.13	119.84
32	BO	29	ASN	N-CA-C	6.63	122.28	112.94
22	AY	63	ALA	N-CA-C	6.61	118.90	108.79
43	DZ	153	SER	N-CA-C	-6.61	104.16	111.36
2	AB	124	SER	CA-C-N	6.60	126.22	119.56
2	AB	124	SER	C-N-CA	6.60	126.22	119.56
3	AC	4	LYS	N-CA-C	6.59	119.93	110.24
44	D0	30	VAL	CB-CA-C	-6.59	102.88	111.25
30	DI	79	ILE	CA-C-N	6.59	127.57	120.13
30	DI	79	ILE	C-N-CA	6.59	127.57	120.13
34	BQ	28	ALA	N-CA-C	6.58	124.82	110.80
30	BI	113	ARG	N-CA-C	-6.58	105.25	113.28
32	DO	29	ASN	N-CA-C	6.58	122.21	112.94
21	CU	22	ARG	CA-C-N	6.58	126.76	120.31
21	CU	22	ARG	C-N-CA	6.58	126.76	120.31
25	BD	70	TRP	N-CA-C	-6.56	105.27	113.28
1	AA	1459	C	N3-C2-O2	-6.56	102.23	121.90
37	DT	125	ARG	CA-C-N	-6.56	113.16	122.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	DT	125	ARG	C-N-CA	-6.56	113.16	122.41
52	D8	35	GLN	N-CA-C	6.56	124.77	110.80
31	DN	4	TYR	N-CA-C	6.55	119.01	111.02
26	DE	134	ILE	N-CA-C	6.55	118.39	112.17
37	DT	53	ARG	CB-CA-C	-6.54	100.31	110.78
36	DS	96	GLY	N-CA-C	-6.53	97.72	113.18
19	AS	82	GLY	N-CA-C	6.52	119.79	110.46
19	CS	67	VAL	N-CA-C	6.50	117.18	110.36
1	CA	1459	C	C2-N1-C1'	6.49	138.28	118.80
29	DH	54	ARG	CA-C-N	6.49	126.11	119.56
29	DH	54	ARG	C-N-CA	6.49	126.11	119.56
31	BN	104	LYS	N-CA-C	-6.49	104.21	111.28
19	AS	58	VAL	CA-C-N	6.48	126.70	119.90
19	AS	58	VAL	C-N-CA	6.48	126.70	119.90
27	DF	90	PHE	N-CA-C	6.46	119.87	112.57
10	CJ	19	SER	N-CA-C	6.46	118.40	111.36
15	AO	22	THR	N-CA-C	6.45	121.42	112.45
25	DD	274	ARG	CA-C-N	6.45	133.31	121.70
25	DD	274	ARG	C-N-CA	6.45	133.31	121.70
14	CN	24	CYS	N-CA-C	-6.44	100.51	110.10
33	DP	44	GLY	CA-C-N	6.43	133.28	121.70
33	DP	44	GLY	C-N-CA	6.43	133.28	121.70
33	BP	40	SER	N-CA-C	-6.43	104.92	112.89
31	DN	124	ALA	N-CA-C	-6.42	98.71	108.67
13	AM	69	GLU	N-CA-C	-6.42	99.77	109.79
30	DI	67	ARG	N-CA-C	-6.42	105.31	113.02
31	BN	5	VAL	N-CA-C	6.42	122.74	108.88
43	BZ	153	SER	N-CA-C	-6.41	104.37	111.36
26	BE	119	ARG	N-CA-C	-6.40	102.99	111.24
22	CY	36	ASN	CA-C-N	6.39	126.61	119.90
22	CY	36	ASN	C-N-CA	6.39	126.61	119.90
51	D7	47	ARG	N-CA-C	6.39	118.80	110.43
3	AC	51	GLY	CA-C-N	6.38	133.74	121.54
3	AC	51	GLY	C-N-CA	6.38	133.74	121.54
23	DA	2296	U	C2-N1-C1'	-6.38	98.54	117.70
4	AD	38	TYR	CA-C-N	6.38	124.32	119.66
4	AD	38	TYR	C-N-CA	6.38	124.32	119.66
2	CB	67	THR	N-CA-C	6.37	119.49	110.50
43	BZ	195	GLU	N-CA-C	-6.37	100.13	110.20
43	BZ	160	GLY	CA-C-N	6.36	133.15	121.70
43	BZ	160	GLY	C-N-CA	6.36	133.15	121.70
28	BG	178	PHE	CA-C-N	6.36	127.79	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	BG	178	PHE	C-N-CA	6.36	127.79	119.84
27	DF	84	VAL	CA-C-N	-6.34	112.94	119.98
27	DF	84	VAL	C-N-CA	-6.34	112.94	119.98
26	DE	146	THR	CB-CA-C	-6.33	102.86	110.15
25	DD	70	TRP	N-CA-C	-6.30	105.59	113.28
17	CQ	9	VAL	CB-CA-C	-6.30	102.59	111.28
2	CB	196	LEU	N-CA-C	-6.30	105.60	113.28
42	BY	92	ASN	N-CA-C	6.29	119.80	111.75
31	DN	23	LEU	CA-C-N	-6.29	113.28	122.46
31	DN	23	LEU	C-N-CA	-6.29	113.28	122.46
1	AA	1459	C	C2-N1-C1'	6.28	137.62	118.80
3	AC	70	VAL	N-CA-C	6.28	116.66	107.75
19	AS	36	ARG	N-CA-C	-6.27	105.63	113.28
25	BD	274	ARG	CA-C-N	6.27	132.99	121.70
25	BD	274	ARG	C-N-CA	6.27	132.99	121.70
27	BF	84	VAL	CA-C-N	-6.27	112.31	120.14
27	BF	84	VAL	C-N-CA	-6.27	112.31	120.14
3	CC	194	GLY	N-CA-C	6.27	118.43	112.04
13	CM	67	GLU	N-CA-C	6.27	118.39	110.24
33	DP	36	LYS	CB-CA-C	-6.27	107.62	115.89
40	BW	62	HIS	N-CA-C	6.26	120.62	112.92
32	DO	47	ILE	CA-C-N	6.26	125.75	119.24
32	DO	47	ILE	C-N-CA	6.26	125.75	119.24
41	BX	23	GLU	O-C-N	-6.25	114.73	122.11
4	CD	12	CYS	N-CA-C	-6.25	103.61	111.11
5	AE	7	GLU	N-CA-C	6.24	119.37	111.69
26	BE	144	ARG	CB-CA-C	-6.24	102.73	115.28
38	BU	101	ARG	N-CA-C	6.24	119.06	111.82
44	B0	44	ARG	N-CA-C	-6.24	104.73	112.90
30	BI	71	ILE	N-CA-C	6.23	116.41	110.42
10	CJ	35	SER	N-CA-C	6.22	118.67	108.52
42	DY	2	ARG	N-CA-C	6.22	124.06	110.80
12	AL	20	LYS	N-CA-C	6.22	119.25	110.23
17	AQ	9	VAL	CB-CA-C	-6.21	103.06	111.63
9	CI	60	ASP	N-CA-C	-6.21	102.52	110.53
8	CH	88	LYS	CA-C-N	-6.21	112.61	119.19
8	CH	88	LYS	C-N-CA	-6.21	112.61	119.19
38	DU	89	GLU	N-CA-C	6.20	120.55	112.92
42	BY	102	CYS	N-CA-C	-6.20	100.12	109.79
52	D8	52	LYS	CA-C-N	-6.20	112.80	119.24
52	D8	52	LYS	C-N-CA	-6.20	112.80	119.24
2	CB	124	SER	CA-C-N	6.19	125.81	119.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	CB	124	SER	C-N-CA	6.19	125.81	119.56
38	BU	9	VAL	N-CA-C	6.19	116.35	110.53
25	DD	259	THR	N-CA-C	6.18	121.76	113.72
26	BE	201	THR	N-CA-C	6.18	119.43	109.79
10	CJ	75	ILE	N-CA-C	6.17	116.22	110.42
13	AM	4	ILE	CB-CA-C	-6.16	105.95	111.74
30	BI	83	ALA	N-CA-C	6.16	118.43	109.07
46	D2	27	GLU	N-CA-C	-6.15	104.50	111.14
26	DE	142	GLY	N-CA-C	6.14	121.04	111.08
35	BR	73	VAL	N-CA-C	6.14	116.80	110.36
29	DH	7	LEU	CA-C-N	-6.13	114.23	120.85
29	DH	7	LEU	C-N-CA	-6.13	114.23	120.85
14	CN	53	LEU	CA-C-N	6.13	126.33	119.90
14	CN	53	LEU	C-N-CA	6.13	126.33	119.90
26	DE	25	VAL	CB-CA-C	-6.13	103.31	110.91
46	B2	8	LYS	N-CA-C	-6.12	104.52	111.07
10	CJ	50	ILE	CB-CA-C	-6.12	102.14	111.69
12	CL	24	VAL	CA-C-N	-6.12	112.19	119.84
12	CL	24	VAL	C-N-CA	-6.12	112.19	119.84
3	CC	6	HIS	CA-C-N	6.12	126.23	119.87
3	CC	6	HIS	C-N-CA	6.12	126.23	119.87
12	AL	24	VAL	CA-C-N	-6.11	112.21	119.84
12	AL	24	VAL	C-N-CA	-6.11	112.21	119.84
4	CD	135	LEU	CA-C-N	6.10	126.55	119.47
4	CD	135	LEU	C-N-CA	6.10	126.55	119.47
9	AI	58	HIS	N-CA-C	-6.09	97.83	110.80
32	DO	100	GLY	CA-C-N	6.09	126.43	119.92
32	DO	100	GLY	C-N-CA	6.09	126.43	119.92
51	D7	46	VAL	N-CA-C	6.09	122.00	109.34
29	BH	167	GLU	N-CA-C	-6.08	101.98	109.65
9	CI	70	LYS	N-CA-C	6.08	117.60	110.97
20	AT	72	LEU	N-CA-C	-6.08	99.80	109.76
35	DR	9	LYS	N-CA-C	-6.08	104.94	112.72
25	BD	42	GLY	N-CA-C	-6.06	106.88	115.43
22	CY	59	GLY	N-CA-C	6.06	118.33	110.45
21	CU	8	THR	N-CA-C	6.06	117.78	109.18
4	AD	88	VAL	N-CA-C	6.05	116.82	107.99
44	D0	44	ARG	N-CA-C	-6.05	104.97	112.90
11	CK	117	ASN	N-CA-C	6.04	123.67	110.80
43	DZ	86	VAL	CB-CA-C	-6.04	101.62	110.62
16	CP	62	VAL	N-CA-C	-6.03	105.86	112.80
23	BA	2296	U	C2-N1-C1'	-6.02	99.64	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	DI	47	LEU	N-CA-C	-6.02	103.47	111.24
43	DZ	171	ILE	N-CA-CB	6.01	116.57	111.64
5	AE	113	ALA	N-CA-C	-6.01	105.71	113.16
25	DD	229	VAL	CB-CA-C	-6.00	104.17	112.04
26	BE	143	ASN	CA-C-N	-6.00	113.88	121.98
26	BE	143	ASN	C-N-CA	-6.00	113.88	121.98
4	AD	36	ARG	CA-C-N	-6.00	113.81	121.91
4	AD	36	ARG	C-N-CA	-6.00	113.81	121.91
25	DD	15	PHE	N-CA-C	5.99	120.86	113.50
33	DP	27	HIS	CB-CA-C	-5.98	98.51	110.42
35	DR	73	VAL	N-CA-C	5.98	116.64	110.36
9	AI	38	GLN	N-CA-C	-5.98	100.15	109.72
3	CC	102	ASN	N-CA-C	5.98	118.02	110.24
9	CI	46	ALA	N-CA-C	-5.98	105.99	113.28
12	AL	30	ALA	N-CA-C	-5.97	101.53	110.24
14	CN	12	ARG	N-CA-C	5.97	118.55	111.33
28	DG	81	LYS	CA-C-N	5.97	132.94	121.54
28	DG	81	LYS	C-N-CA	5.97	132.94	121.54
53	B9	32	HIS	CG-CD2-NE2	5.96	113.17	107.20
9	CI	17	VAL	N-CA-C	5.96	116.76	107.28
12	CL	70	ILE	CA-C-N	5.96	126.16	120.31
12	CL	70	ILE	C-N-CA	5.96	126.16	120.31
33	BP	38	GLN	N-CA-C	-5.96	102.67	110.53
3	CC	57	ILE	N-CA-C	5.95	117.23	107.24
42	BY	2	ARG	N-CA-C	5.94	123.45	110.80
11	CK	112	THR	CA-C-N	5.93	126.13	119.90
11	CK	112	THR	C-N-CA	5.93	126.13	119.90
51	D7	43	THR	CA-C-N	-5.93	113.86	119.85
51	D7	43	THR	C-N-CA	-5.93	113.86	119.85
43	BZ	197	ILE	N-CA-C	5.92	117.06	109.30
23	BA	1799	G	C2'-C3'-O3'	5.92	118.38	109.50
40	DW	17	VAL	CB-CA-C	-5.90	104.08	112.22
3	AC	22	TRP	N-CA-C	5.89	116.19	107.88
23	BA	1653	G	C2'-C3'-O3'	5.89	118.34	109.50
31	DN	45	ASN	CA-C-N	-5.89	114.73	122.16
31	DN	45	ASN	C-N-CA	-5.89	114.73	122.16
7	AG	69	VAL	CB-CA-C	5.89	116.29	111.05
33	BP	18	ARG	CA-C-N	-5.87	115.99	122.27
33	BP	18	ARG	C-N-CA	-5.87	115.99	122.27
22	AY	13	THR	N-CA-C	5.87	115.05	108.25
51	B7	6	GLN	CA-C-N	5.86	126.19	119.93
51	B7	6	GLN	C-N-CA	5.86	126.19	119.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	CM	68	GLY	N-CA-C	-5.85	107.00	114.37
25	BD	248	SER	CA-C-N	-5.85	113.79	119.87
25	BD	248	SER	C-N-CA	-5.85	113.79	119.87
46	B2	27	GLU	N-CA-C	-5.84	104.83	111.14
36	BS	34	HIS	N-CA-C	5.84	119.11	109.94
43	DZ	160	GLY	CA-C-N	5.84	132.21	121.70
43	DZ	160	GLY	C-N-CA	5.84	132.21	121.70
25	BD	220	HIS	CA-C-N	-5.84	115.57	123.10
25	BD	220	HIS	C-N-CA	-5.84	115.57	123.10
19	CS	25	LYS	N-CA-C	5.83	119.15	111.28
25	DD	40	THR	N-CA-C	5.83	120.56	112.45
42	DY	9	LYS	N-CA-C	-5.83	101.65	110.28
42	DY	79	CYS	CB-CA-C	-5.83	101.48	110.81
11	CK	102	GLY	N-CA-C	-5.82	106.50	114.64
43	DZ	74	VAL	CB-CA-C	-5.81	101.84	110.33
3	AC	50	ALA	N-CA-C	-5.81	98.43	110.80
34	DQ	28	ALA	N-CA-C	5.81	123.17	110.80
25	BD	72	LYS	CB-CA-C	-5.80	101.87	111.51
49	D5	3	LYS	N-CA-C	5.80	119.67	112.59
43	DZ	122	ARG	N-CA-C	-5.80	106.20	113.28
9	AI	3	GLN	N-CA-C	5.79	119.01	109.85
4	AD	13	ARG	N-CA-C	5.78	118.80	111.69
28	BG	45	GLU	N-CA-C	-5.78	106.08	113.01
23	BA	2296	U	N3-C4-O4	-5.77	102.08	119.40
27	DF	22	ALA	CB-CA-C	-5.77	98.94	110.42
13	AM	114	ARG	N-CA-C	5.76	119.44	110.17
2	CB	25	ASN	CA-C-N	5.76	127.04	119.84
2	CB	25	ASN	C-N-CA	5.76	127.04	119.84
7	AG	6	ARG	N-CA-C	5.76	122.74	114.39
36	BS	56	LEU	N-CA-C	-5.75	106.03	113.16
27	DF	20	LEU	CA-C-O	-5.75	113.59	120.55
46	B2	52	ASP	N-CA-C	-5.75	104.93	111.14
8	CH	129	VAL	N-CA-C	5.75	117.39	109.46
16	AP	65	GLN	CA-C-N	-5.74	114.84	120.52
16	AP	65	GLN	C-N-CA	-5.74	114.84	120.52
32	BO	48	PRO	CA-C-N	-5.74	115.08	123.00
32	BO	48	PRO	C-N-CA	-5.74	115.08	123.00
13	AM	15	VAL	N-CA-C	5.74	116.51	110.72
46	D2	52	ASP	N-CA-C	-5.73	104.41	111.40
5	AE	26	PHE	N-CA-C	5.72	118.99	110.52
30	BI	105	HIS	N-CA-C	-5.72	106.26	113.18
40	DW	60	ASN	N-CA-C	5.72	117.32	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AC	52	LEU	N-CA-C	5.71	122.96	110.80
14	CN	60	SER	N-CA-C	5.70	122.95	110.80
27	BF	22	ALA	N-CA-C	5.70	122.94	110.80
4	AD	135	LEU	CA-C-N	5.70	126.08	119.47
4	AD	135	LEU	C-N-CA	5.70	126.08	119.47
10	CJ	80	LYS	N-CA-C	-5.70	98.67	110.80
27	BF	59	TYR	N-CA-C	5.68	118.22	110.55
28	BG	125	PHE	CA-C-N	5.68	128.16	120.38
28	BG	125	PHE	C-N-CA	5.68	128.16	120.38
53	B9	19	ARG	N-CA-C	5.68	118.16	108.90
43	BZ	122	ARG	N-CA-C	-5.66	106.37	113.28
43	DZ	158	PRO	N-CA-C	-5.66	103.79	110.70
33	BP	27	HIS	CB-CA-C	-5.66	99.17	110.42
32	DO	42	SER	CA-C-N	-5.66	115.30	122.43
32	DO	42	SER	C-N-CA	-5.66	115.30	122.43
51	B7	46	VAL	N-CA-C	5.65	121.10	109.34
43	BZ	86	VAL	CB-CA-C	-5.65	102.20	110.62
4	CD	12	CYS	CA-CB-SG	5.65	127.39	114.40
16	CP	65	GLN	CA-C-N	-5.63	114.94	120.52
16	CP	65	GLN	C-N-CA	-5.63	114.94	120.52
13	CM	48	LEU	N-CA-C	5.63	120.14	113.16
27	DF	110	LEU	N-CA-C	-5.62	105.05	111.07
46	B2	50	ILE	N-CA-C	-5.62	102.33	109.58
25	BD	98	VAL	CA-C-N	5.61	129.58	120.60
25	BD	98	VAL	C-N-CA	5.61	129.58	120.60
34	BQ	12	GLN	N-CA-C	5.60	117.92	109.23
25	BD	41	GLY	N-CA-C	-5.60	107.91	115.36
9	CI	61	ALA	N-CA-C	5.60	118.55	108.48
50	D6	30	THR	CA-C-N	5.60	125.21	119.56
50	D6	30	THR	C-N-CA	5.60	125.21	119.56
2	CB	129	GLU	N-CA-C	-5.59	106.31	113.02
52	B8	33	ASN	N-CA-C	5.59	120.21	113.17
26	DE	144	ARG	CB-CA-C	-5.59	104.05	115.28
11	AK	48	ILE	CB-CA-C	-5.58	105.46	111.59
13	AM	9	ILE	CA-C-N	5.57	126.81	119.84
13	AM	9	ILE	C-N-CA	5.57	126.81	119.84
19	AS	6	LYS	N-CA-C	5.57	122.67	110.80
32	BO	100	GLY	CA-C-N	5.57	125.88	119.92
32	BO	100	GLY	C-N-CA	5.57	125.88	119.92
35	BR	109	ALA	CA-C-N	5.57	125.74	119.90
35	BR	109	ALA	C-N-CA	5.57	125.74	119.90
14	CN	13	THR	CB-CA-C	5.56	121.13	110.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	DF	86	GLY	N-CA-C	5.56	120.75	112.41
9	CI	7	THR	N-CA-C	5.55	117.82	107.99
31	BN	85	ILE	N-CA-C	5.54	116.46	107.71
36	BS	101	LEU	N-CA-C	-5.54	102.82	110.35
9	AI	22	GLY	N-CA-C	5.54	119.78	111.42
27	BF	95	ARG	N-CA-C	5.54	117.48	109.07
35	BR	83	ILE	N-CA-C	5.53	115.67	110.30
37	BT	125	ARG	CA-C-N	-5.53	114.61	122.41
37	BT	125	ARG	C-N-CA	-5.53	114.61	122.41
34	BQ	135	ASP	CB-CA-C	-5.53	99.42	110.42
30	BI	7	GLU	CA-C-N	-5.52	114.24	119.76
30	BI	7	GLU	C-N-CA	-5.52	114.24	119.76
2	AB	67	THR	N-CA-C	5.52	118.28	110.50
43	DZ	170	THR	CB-CA-C	5.52	118.75	109.48
36	DS	34	HIS	N-CA-C	5.52	118.61	109.94
35	BR	9	LYS	N-CA-C	-5.51	105.66	112.72
42	BY	2	ARG	NE-CZ-NH2	-5.51	114.24	119.20
13	AM	65	LYS	CA-C-N	5.51	131.62	121.70
13	AM	65	LYS	C-N-CA	5.51	131.62	121.70
26	DE	76	ARG	N-CA-C	5.50	119.98	113.16
34	DQ	135	ASP	N-CA-C	5.50	122.51	110.80
43	BZ	106	GLY	N-CA-C	5.50	117.17	111.95
43	BZ	170	THR	CB-CA-C	5.49	118.71	109.48
10	AJ	96	ILE	CB-CA-C	-5.49	103.69	111.21
23	DA	752	A	C2'-C3'-O3'	5.48	117.73	109.50
33	BP	126	VAL	CB-CA-C	-5.48	103.47	110.98
39	BV	55	ALA	N-CA-C	5.48	117.80	110.35
3	CC	153	VAL	N-CA-C	5.48	115.74	107.80
5	CE	7	GLU	N-CA-C	5.47	118.41	111.69
37	BT	53	ARG	CB-CA-C	-5.46	102.03	110.78
31	DN	85	ILE	N-CA-C	5.46	116.34	107.71
31	BN	45	ASN	CA-C-N	-5.46	115.28	122.16
31	BN	45	ASN	C-N-CA	-5.46	115.28	122.16
2	AB	25	ASN	CA-C-N	5.45	126.65	119.84
2	AB	25	ASN	C-N-CA	5.45	126.65	119.84
3	CC	172	ARG	N-CA-C	5.45	122.41	110.80
43	DZ	118	GLN	CA-C-N	-5.45	115.28	122.85
43	DZ	118	GLN	C-N-CA	-5.45	115.28	122.85
25	BD	230	ASP	N-CA-C	5.45	119.09	112.23
17	CQ	96	GLU	N-CA-C	-5.44	102.95	110.35
30	DI	28	ASN	N-CA-C	5.44	120.03	113.17
33	DP	116	GLY	N-CA-C	5.44	124.14	115.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	D0	60	PHE	N-CA-C	5.44	117.45	109.24
4	CD	36	ARG	CA-C-N	-5.43	114.57	121.91
4	CD	36	ARG	C-N-CA	-5.43	114.57	121.91
25	BD	70	TRP	CA-C-N	5.42	127.86	120.54
25	BD	70	TRP	C-N-CA	5.42	127.86	120.54
2	AB	41	ILE	N-CA-C	5.42	115.67	107.75
11	AK	50	TYR	N-CA-C	5.42	118.37	109.76
23	BA	1992	G	P-O3'-C3'	5.41	128.31	120.20
23	BA	752	A	C2'-C3'-O3'	5.40	117.60	109.50
4	CD	88	VAL	N-CA-C	5.40	115.88	107.99
22	CY	4	ASN	N-CA-C	5.40	117.89	108.76
26	DE	28	ALA	CA-C-N	-5.40	113.39	121.87
26	DE	28	ALA	C-N-CA	-5.40	113.39	121.87
1	CA	65	U	C2'-C3'-O3'	5.40	117.59	109.50
16	CP	45	THR	CA-C-N	5.39	126.58	119.84
16	CP	45	THR	C-N-CA	5.39	126.58	119.84
28	BG	31	VAL	CA-C-N	5.38	125.69	119.93
28	BG	31	VAL	C-N-CA	5.38	125.69	119.93
34	BQ	125	LEU	CA-C-N	5.38	125.09	119.82
34	BQ	125	LEU	C-N-CA	5.38	125.09	119.82
13	AM	12	ASN	N-CA-C	5.38	122.25	110.80
25	DD	27	THR	N-CA-C	5.38	119.53	112.92
53	D9	19	ARG	N-CA-C	5.38	117.67	108.90
25	BD	166	GLN	N-CA-C	5.37	119.94	112.90
30	BI	89	TYR	N-CA-C	-5.37	104.85	111.40
35	BR	36	THR	CB-CA-C	-5.36	100.74	113.02
20	AT	38	LYS	N-CA-C	-5.36	105.34	111.07
49	B5	3	LYS	N-CA-C	5.36	119.13	112.59
52	B8	28	GLY	N-CA-C	5.35	122.13	114.64
35	BR	28	LEU	N-CA-C	-5.35	105.36	111.14
43	DZ	106	GLY	N-CA-C	5.35	117.03	111.95
29	BH	161	GLY	N-CA-C	5.35	117.22	110.38
30	DI	123	LEU	N-CA-C	5.34	117.65	109.95
13	CM	90	LEU	N-CA-C	-5.34	103.57	110.19
53	B9	28	GLU	N-CA-C	-5.34	105.54	111.36
8	AH	88	LYS	CA-C-N	-5.33	114.18	119.56
8	AH	88	LYS	C-N-CA	-5.33	114.18	119.56
11	CK	48	ILE	CB-CA-C	-5.32	105.73	111.59
42	BY	53	PRO	CA-C-O	-5.32	115.39	121.56
5	CE	113	ALA	N-CA-C	-5.32	106.76	113.20
14	AN	3	ARG	N-CA-C	5.32	122.12	110.80
28	DG	137	GLU	N-CA-C	5.31	116.72	109.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	CC	197	GLY	N-CA-C	5.30	119.03	110.87
16	AP	44	THR	N-CA-C	-5.29	106.67	113.02
23	DA	1653	G	C2'-C3'-O3'	5.29	117.44	109.50
28	DG	14	GLU	CA-C-N	5.29	127.33	120.56
28	DG	14	GLU	C-N-CA	5.29	127.33	120.56
45	B1	37	ILE	CB-CA-C	-5.29	102.93	110.12
28	DG	125	PHE	CA-C-N	5.29	127.62	120.38
28	DG	125	PHE	C-N-CA	5.29	127.62	120.38
25	BD	40	THR	N-CA-C	5.29	119.80	112.45
13	CM	36	LYS	N-CA-C	5.28	119.34	113.01
25	BD	226	MET	N-CA-C	5.28	118.22	109.94
23	DA	2296	U	C6-N1-C1'	5.27	137.02	121.20
26	BE	85	ASN	CA-C-N	5.27	125.28	119.90
26	BE	85	ASN	C-N-CA	5.27	125.28	119.90
27	BF	9	ILE	N-CA-C	5.27	113.74	107.73
43	BZ	51	ALA	N-CA-C	5.27	117.02	111.28
26	BE	168	MET	N-CA-C	5.26	118.32	109.95
40	BW	34	ASN	N-CA-C	5.26	117.09	111.36
2	CB	172	ILE	CB-CA-C	-5.26	105.15	111.88
14	CN	16	PHE	N-CA-C	5.26	118.11	110.17
43	BZ	53	ILE	N-CA-C	-5.25	107.63	112.83
2	CB	23	ARG	N-CA-C	-5.25	106.46	112.92
26	BE	141	ILE	N-CA-C	5.25	117.22	112.29
37	BT	17	THR	N-CA-C	5.25	119.83	113.38
14	CN	46	GLU	N-CA-C	-5.25	105.64	111.36
21	CU	13	ILE	CB-CA-C	-5.25	105.15	112.02
30	BI	121	LYS	N-CA-C	5.24	119.83	113.38
45	D1	18	ILE	CB-CA-C	-5.24	103.98	111.31
28	BG	81	LYS	CA-C-N	5.23	131.53	121.54
28	BG	81	LYS	C-N-CA	5.23	131.53	121.54
6	AF	86	ARG	N-CA-C	5.23	119.93	113.50
53	B9	3	VAL	N-CA-C	5.23	115.59	107.28
25	DD	229	VAL	N-CA-CB	5.22	117.00	110.47
30	DI	7	GLU	CA-C-N	-5.22	114.54	119.76
30	DI	7	GLU	C-N-CA	-5.22	114.54	119.76
29	BH	38	SER	CA-C-N	5.22	124.94	119.82
29	BH	38	SER	C-N-CA	5.22	124.94	119.82
26	BE	142	GLY	N-CA-C	5.22	119.53	111.08
23	DA	2296	U	N3-C4-O4	-5.22	103.75	119.40
7	AG	4	ARG	CA-C-N	-5.21	114.76	121.79
7	AG	4	ARG	C-N-CA	-5.21	114.76	121.79
26	DE	201	THR	N-CA-C	5.21	117.91	109.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	CC	67	THR	N-CA-C	5.20	121.88	110.80
19	CS	27	GLU	N-CA-C	5.20	118.89	109.32
28	DG	82	LEU	N-CA-C	5.20	121.87	110.80
39	DV	55	ALA	N-CA-C	5.20	117.83	110.50
13	CM	69	GLU	N-CA-C	-5.20	99.73	110.80
19	CS	58	VAL	CA-C-N	5.20	126.33	119.84
19	CS	58	VAL	C-N-CA	5.20	126.33	119.84
18	CR	22	VAL	N-CA-C	5.19	118.40	111.44
39	BV	89	GLN	CA-C-N	-5.19	114.89	120.03
39	BV	89	GLN	C-N-CA	-5.19	114.89	120.03
33	DP	71	VAL	CB-CA-C	5.19	115.97	110.88
12	AL	119	LYS	N-CA-C	-5.19	103.19	110.50
16	AP	45	THR	CA-C-N	5.18	126.32	119.84
16	AP	45	THR	C-N-CA	5.18	126.32	119.84
32	DO	48	PRO	CA-C-N	-5.18	115.85	123.00
32	DO	48	PRO	C-N-CA	-5.18	115.85	123.00
9	CI	5	TYR	N-CA-C	5.17	117.25	109.23
7	AG	70	LYS	CA-C-N	5.17	125.97	120.13
7	AG	70	LYS	C-N-CA	5.17	125.97	120.13
34	BQ	135	ASP	N-CA-C	5.17	121.80	110.80
40	BW	111	HIS	N-CA-C	5.17	116.60	110.97
7	CG	132	GLY	N-CA-C	5.17	118.64	111.10
29	BH	159	GLU	N-CA-C	-5.16	98.27	107.98
21	CU	23	PRO	N-CA-C	5.16	119.42	111.57
30	DI	85	GLU	CB-CA-C	-5.16	110.21	117.23
13	CM	25	ILE	CB-CA-C	-5.16	104.53	110.41
15	CO	60	VAL	N-CA-C	-5.16	105.51	110.72
53	D9	3	VAL	N-CA-C	5.16	115.48	107.28
33	BP	44	GLY	CA-C-N	5.16	130.98	121.70
33	BP	44	GLY	C-N-CA	5.16	130.98	121.70
18	AR	81	PHE	N-CA-C	-5.15	105.21	112.12
28	DG	45	GLU	N-CA-C	-5.15	106.83	113.01
3	AC	146	ALA	N-CA-C	-5.15	99.83	110.80
28	BG	181	ARG	N-CA-C	-5.15	106.97	113.20
2	AB	160	ASP	N-CA-C	-5.15	106.69	113.17
42	BY	2	ARG	CD-NE-CZ	5.15	131.61	124.40
5	CE	127	ASN	CA-C-N	5.15	124.32	118.97
5	CE	127	ASN	C-N-CA	5.15	124.32	118.97
13	CM	63	THR	N-CA-C	5.15	117.30	111.02
41	DX	77	LYS	CA-C-N	-5.15	114.73	122.81
41	DX	77	LYS	C-N-CA	-5.15	114.73	122.81
26	BE	179	GLU	N-CA-C	5.14	119.65	113.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	BI	87	LYS	N-CA-C	-5.14	99.85	110.80
1	CA	1442(A)	G	C4-N9-C1'	5.14	141.92	126.50
26	DE	119	ARG	N-CA-C	-5.14	104.61	111.24
21	CU	6	ARG	N-CA-C	-5.14	103.70	110.43
44	B0	40	GLN	N-CA-C	5.13	116.64	108.79
26	DE	32	PRO	CA-C-O	-5.13	115.15	121.31
42	DY	83	THR	N-CA-C	5.13	116.87	109.07
5	CE	118	ILE	N-CA-C	5.13	115.12	108.35
13	AM	17	VAL	CB-CA-C	-5.12	105.31	112.02
11	AK	102	GLY	N-CA-C	-5.12	107.47	114.64
44	D0	22	GLY	N-CA-C	5.12	119.08	111.76
23	BA	481	G	C2'-C3'-O3'	5.12	117.18	109.50
44	B0	30	VAL	CB-CA-C	-5.12	104.75	111.25
30	DI	45	LYS	N-CA-C	-5.12	105.62	111.14
42	BY	52	SER	CA-C-N	-5.11	114.51	119.78
42	BY	52	SER	C-N-CA	-5.11	114.51	119.78
28	BG	127	GLY	N-CA-C	-5.11	107.61	114.25
26	BE	202	LYS	N-CA-C	5.11	116.85	108.52
31	BN	5	VAL	N-CA-CB	5.11	118.36	111.21
23	BA	1300	U	C4'-C3'-O3'	5.11	117.06	109.40
16	CP	44	THR	N-CA-C	-5.11	106.89	113.02
25	BD	229	VAL	CB-CA-C	-5.11	104.25	112.16
34	DQ	135	ASP	CB-CA-C	-5.10	100.27	110.42
40	DW	39	THR	CA-C-N	-5.10	114.17	122.34
40	DW	39	THR	C-N-CA	-5.10	114.17	122.34
23	BA	2296	U	C6-N1-C1'	5.10	136.50	121.20
42	DY	76	CYS	N-CA-C	5.10	116.08	109.65
1	AA	1442(A)	G	C4-N9-C1'	5.10	141.79	126.50
31	BN	71	ILE	N-CA-C	5.10	115.65	108.36
7	AG	145	ALA	N-CA-C	-5.10	99.95	110.80
12	CL	20	LYS	N-CA-C	5.09	117.27	110.35
3	CC	100	ALA	N-CA-C	5.09	118.52	112.72
3	CC	45	LYS	CA-C-N	-5.08	113.37	122.32
3	CC	45	LYS	C-N-CA	-5.08	113.37	122.32
35	BR	38	VAL	CB-CA-C	-5.08	108.87	113.70
42	BY	73	ARG	CA-C-N	-5.08	114.76	120.14
42	BY	73	ARG	C-N-CA	-5.08	114.76	120.14
9	CI	27	THR	N-CA-C	5.08	117.84	109.72
31	DN	134	ARG	CA-C-N	5.08	125.23	119.90
31	DN	134	ARG	C-N-CA	5.08	125.23	119.90
30	DI	133	HIS	CA-C-N	-5.07	115.34	120.21
30	DI	133	HIS	C-N-CA	-5.07	115.34	120.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	CE	11	ILE	N-CA-C	5.07	115.30	110.53
12	AL	29	GLY	N-CA-C	-5.07	101.18	113.18
33	DP	7	ARG	CA-C-N	5.06	124.97	119.85
33	DP	7	ARG	C-N-CA	5.06	124.97	119.85
13	AM	10	PRO	N-CA-C	5.06	122.89	112.47
13	CM	60	VAL	N-CA-C	5.05	116.51	111.00
2	CB	24	TRP	N-CA-C	5.05	116.45	110.19
4	CD	204	ILE	CB-CA-C	-5.05	105.42	112.04
3	CC	148	GLY	N-CA-C	5.05	118.43	110.91
7	AG	5	ARG	N-CA-C	5.05	116.17	108.30
26	BE	132	HIS	N-CA-C	5.04	117.55	107.62
27	BF	58	ALA	N-CA-C	5.04	119.06	113.01
9	AI	20	ARG	CA-C-N	5.04	124.80	119.76
9	AI	20	ARG	C-N-CA	5.04	124.80	119.76
22	AY	94	ALA	CA-C-N	5.04	131.16	121.54
22	AY	94	ALA	C-N-CA	5.04	131.16	121.54
2	AB	158	LEU	CA-C-N	5.04	125.03	119.89
2	AB	158	LEU	C-N-CA	5.04	125.03	119.89
42	DY	102	CYS	N-CA-C	-5.04	101.93	109.79
10	CJ	73	ASP	N-CA-C	5.04	117.65	109.24
5	AE	127	ASN	CA-C-N	5.03	124.20	118.97
5	AE	127	ASN	C-N-CA	5.03	124.20	118.97
28	DG	121	ASN	CA-C-N	5.03	125.11	119.87
28	DG	121	ASN	C-N-CA	5.03	125.11	119.87
5	AE	11	ILE	N-CA-C	5.03	115.26	110.53
10	CJ	44	VAL	N-CA-C	5.03	115.52	108.17
31	DN	51	PHE	N-CA-C	-5.03	101.04	109.24
25	BD	259	THR	N-CA-C	5.03	120.25	113.72
33	BP	63	PRO	CA-C-O	-5.03	115.73	121.86
36	DS	18	ILE	CB-CA-C	-5.03	105.54	111.97
28	BG	14	GLU	CA-C-N	5.02	126.99	120.56
28	BG	14	GLU	C-N-CA	5.02	126.99	120.56
3	CC	45	LYS	N-CA-C	-5.02	100.11	110.80
29	DH	38	SER	CA-C-N	5.02	124.68	119.56
29	DH	38	SER	C-N-CA	5.02	124.68	119.56
25	DD	260	ARG	N-CA-CB	5.02	117.92	110.29
33	DP	44	GLY	CA-C-O	-5.02	116.76	122.78
2	CB	41	ILE	N-CA-C	5.02	115.07	107.80
26	BE	102	VAL	N-CA-C	5.01	116.81	108.99
25	DD	256	GLY	N-CA-C	5.01	121.05	115.08
28	BG	96	ARG	CB-CA-C	-5.01	110.78	116.54
10	AJ	90	LEU	CA-C-N	5.01	139.03	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	AJ	90	LEU	C-N-CA	5.01	139.03	127.00
9	CI	39	GLY	N-CA-C	-5.01	101.31	113.18
35	DR	109	ALA	CA-C-N	5.01	125.24	119.83
35	DR	109	ALA	C-N-CA	5.01	125.24	119.83
27	DF	9	ILE	N-CA-C	5.00	113.43	107.73

There are no chirality outliers.

All (68) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	14	GLY	Peptide
3	AC	180	ALA	Peptide
3	AC	50	ALA	Peptide
4	AD	29	PRO	Peptide
9	AI	39	GLY	Peptide
9	AI	44	VAL	Peptide
9	AI	45	ALA	Peptide
10	AJ	79	ARG	Peptide
10	AJ	86	MET	Peptide
10	AJ	89	ASP	Peptide
13	AM	65	LYS	Peptide
13	AM	85	GLY	Peptide
18	AR	31	LEU	Peptide
45	B1	83	GLU	Peptide
48	B4	42	PHE	Peptide
49	B5	53	ALA	Peptide
23	BA	2375	G	Sidechain
23	BA	2464	C	Sidechain
23	BA	271(Q)	G	Sidechain
23	BA	512	G	Sidechain
25	BD	275	LYS	Peptide
26	BE	72	VAL	Peptide
27	BF	20	LEU	Mainchain
27	BF	21	ALA	Mainchain
27	BF	85	GLY	Peptide
28	BG	81	LYS	Peptide
29	BH	70	THR	Peptide
30	BI	85	GLU	Peptide
31	BN	124	ALA	Peptide
33	BP	26	GLY	Peptide
33	BP	44	GLY	Peptide
36	BS	83	LYS	Peptide

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Mol	Chain	Res	Type	Group
37	BT	126	ALA	Peptide
41	BX	23	GLU	Mainchain
43	BZ	159	PRO	Peptide
2	CB	14	GLY	Peptide
2	CB	237	ALA	Peptide
3	CC	100	ALA	Peptide
3	CC	46	GLU	Peptide
3	CC	78	GLY	Peptide
4	CD	29	PRO	Peptide
9	CI	38	GLN	Peptide
10	CJ	33	GLN	Peptide
10	CJ	90	LEU	Peptide
12	CL	26	ALA	Peptide
12	CL	87	GLY	Peptide
13	CM	65	LYS	Peptide
14	CN	13	THR	Peptide
14	CN	14	PRO	Peptide
18	CR	31	LEU	Peptide
45	D1	83	GLU	Peptide
48	D4	42	PHE	Peptide
49	D5	53	ALA	Peptide
52	D8	34	TRP	Mainchain
23	DA	271(Q)	G	Sidechain
25	DD	275	LYS	Peptide
26	DE	72	VAL	Peptide
27	DF	21	ALA	Mainchain
27	DF	85	GLY	Peptide
28	DG	13	GLU	Peptide
29	DH	70	THR	Peptide
31	DN	124	ALA	Peptide
33	DP	26	GLY	Peptide
33	DP	44	GLY	Peptide
36	DS	83	LYS	Peptide
37	DT	126	ALA	Peptide
41	DX	23	GLU	Mainchain
43	DZ	159	PRO	Peptide

5.2 Too-close contacts (i)

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

the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32102	0	16201	702	0
1	CA	32056	0	16179	905	0
2	AB	1777	0	1747	82	0
2	CB	1817	0	1785	82	0
3	AC	1450	0	1314	43	0
3	CC	1453	0	1320	80	0
4	AD	1520	0	1406	45	0
4	CD	1537	0	1430	89	0
5	AE	1105	0	1130	39	0
5	CE	1106	0	1132	41	0
6	AF	781	0	741	18	0
6	CF	776	0	733	20	0
7	AG	1167	0	1108	34	0
7	CG	1164	0	1106	49	0
8	AH	1045	0	1033	32	0
8	CH	1049	0	1037	34	0
9	AI	852	0	742	49	0
9	CI	849	0	735	56	0
10	AJ	659	0	552	40	0
10	CJ	657	0	547	38	0
11	AK	828	0	822	16	0
11	CK	828	0	822	24	0
12	AL	909	0	927	29	0
12	CL	905	0	916	30	0
13	AM	801	0	743	44	0
13	CM	784	0	730	41	0
14	AN	478	0	496	25	0
14	CN	474	0	485	36	0
15	AO	724	0	749	25	0
15	CO	724	0	749	31	0
16	AP	651	0	638	39	0
16	CP	661	0	653	51	0
17	AQ	823	0	891	28	0
17	CQ	819	0	880	26	0
18	AR	514	0	530	14	0
18	CR	514	0	530	20	0
19	AS	560	0	466	32	0
19	CS	549	0	468	28	0
20	AT	699	0	746	27	0
20	CT	773	0	836	34	0
21	AU	199	0	208	6	0
21	CU	180	0	173	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	AY	754	0	776	24	0
22	CY	739	0	740	38	0
23	BA	60898	0	30697	764	0
23	DA	60264	0	30391	919	0
24	BB	2573	0	1306	28	0
24	DB	2573	0	1306	51	0
25	BD	2136	0	2218	56	0
25	DD	2136	0	2218	63	0
26	BE	1555	0	1607	44	0
26	DE	1555	0	1607	48	0
27	BF	1577	0	1612	46	0
27	DF	1572	0	1613	44	0
28	BG	1368	0	1324	39	0
28	DG	1368	0	1324	54	0
29	BH	1317	0	1376	27	0
29	DH	1317	0	1376	24	0
30	BI	1043	0	1054	44	0
30	DI	1043	0	1054	52	0
31	BN	1112	0	1180	26	0
31	DN	1112	0	1180	29	0
32	BO	923	0	981	11	0
32	DO	923	0	981	16	0
33	BP	1131	0	1201	38	0
33	DP	1131	0	1201	45	0
34	BQ	1122	0	1179	27	0
34	DQ	1122	0	1179	32	0
35	BR	968	0	1033	26	0
35	DR	968	0	1033	31	0
36	BS	865	0	905	39	0
36	DS	873	0	927	49	0
37	BT	1063	0	1103	29	0
37	DT	1058	0	1098	33	0
38	BU	959	0	1019	11	0
38	DU	959	0	1019	23	0
39	BV	771	0	830	14	1
39	DV	775	0	841	16	0
40	BW	881	0	935	23	0
40	DW	877	0	932	18	0
41	BX	742	0	799	14	0
41	DX	732	0	777	17	0
42	BY	785	0	828	17	0
42	DY	781	0	829	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	BZ	1522	0	1511	54	0
43	DZ	1528	0	1476	62	0
44	B0	594	0	604	7	0
44	D0	607	0	622	17	0
45	B1	745	0	804	20	0
45	D1	745	0	804	22	0
46	B2	588	0	643	14	0
46	D2	584	0	623	18	0
47	B3	458	0	503	6	0
47	D3	463	0	507	8	0
48	B4	349	0	336	11	0
48	D4	349	0	336	13	0
49	B5	455	0	472	10	0
49	D5	451	0	461	11	0
50	B6	449	0	462	15	0
50	D6	437	0	440	15	0
51	B7	418	0	467	10	0
51	D7	402	0	434	4	0
52	B8	509	0	565	24	0
52	D8	509	0	565	29	0
53	B9	297	0	316	7	0
53	D9	297	0	316	6	0
54	AA	217	0	0	0	0
54	AD	2	0	0	0	0
54	AE	1	0	0	0	0
54	AF	1	0	0	0	0
54	AI	1	0	0	0	0
54	AL	1	0	0	0	0
54	AM	2	0	0	0	0
54	AP	1	0	0	0	0
54	B0	4	0	0	0	0
54	B1	1	0	0	0	0
54	B2	2	0	0	0	0
54	B3	3	0	0	0	0
54	B5	1	0	0	0	0
54	B6	1	0	0	0	0
54	B7	1	0	0	0	0
54	B8	1	0	0	0	0
54	B9	3	0	0	0	0
54	BA	729	0	0	0	0
54	BB	19	0	0	0	0
54	BD	7	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	BE	6	0	0	0	0
54	BF	6	0	0	0	0
54	BG	1	0	0	0	0
54	BH	1	0	0	0	0
54	BN	2	0	0	0	0
54	BO	1	0	0	0	0
54	BP	2	0	0	0	0
54	BQ	5	0	0	0	0
54	BR	5	0	0	0	0
54	BS	1	0	0	0	0
54	BT	3	0	0	0	0
54	BU	3	0	0	0	0
54	BV	4	0	0	0	0
54	BW	1	0	0	0	0
54	BY	1	0	0	0	0
54	BZ	2	0	0	0	0
54	CA	203	0	0	0	0
54	CE	1	0	0	0	0
54	CQ	1	0	0	0	0
54	D0	1	0	0	0	0
54	D1	1	0	0	0	0
54	D5	2	0	0	0	0
54	D7	2	0	0	0	0
54	D8	2	0	0	0	0
54	D9	1	0	0	0	0
54	DA	637	0	0	0	0
54	DB	10	0	0	0	0
54	DD	5	0	0	0	0
54	DE	3	0	0	0	0
54	DF	5	0	0	0	0
54	DO	3	0	0	0	0
54	DP	3	0	0	0	0
54	DQ	4	0	0	0	0
54	DR	2	0	0	0	0
54	DT	2	0	0	0	0
54	DW	1	0	0	0	0
55	AD	1	0	0	0	0
55	AN	1	0	0	0	0
55	B4	1	0	0	0	0
55	B5	1	0	0	0	0
55	B6	1	0	0	0	0
55	B9	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	BY	1	0	0	0	0
55	CD	1	0	0	0	0
55	CN	1	0	0	0	0
55	D4	1	0	0	0	0
55	D5	1	0	0	0	0
55	D6	1	0	0	0	0
55	D9	1	0	0	0	0
55	DY	1	0	0	0	0
56	AA	443	0	0	25	0
56	AD	3	0	0	2	0
56	AE	2	0	0	0	0
56	AF	2	0	0	0	0
56	AG	2	0	0	0	0
56	AJ	1	0	0	0	0
56	AK	1	0	0	0	0
56	AL	3	0	0	0	0
56	AM	1	0	0	0	0
56	AO	1	0	0	0	0
56	AP	1	0	0	0	0
56	AQ	3	0	0	0	0
56	AY	1	0	0	0	0
56	B0	4	0	0	0	0
56	B1	5	0	0	0	0
56	B3	4	0	0	0	0
56	B5	5	0	0	0	0
56	B6	2	0	0	0	0
56	B7	5	0	0	2	0
56	B8	11	0	0	1	0
56	B9	1	0	0	0	0
56	BA	1988	0	0	66	1
56	BB	43	0	0	1	0
56	BD	21	0	0	2	0
56	BE	18	0	0	1	0
56	BF	18	0	0	0	0
56	BG	2	0	0	0	0
56	BH	2	0	0	0	0
56	BN	7	0	0	0	0
56	BO	3	0	0	0	0
56	BP	20	0	0	0	0
56	BQ	9	0	0	0	0
56	BR	8	0	0	0	1
56	BS	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	BT	5	0	0	0	0
56	BU	9	0	0	0	0
56	BV	13	0	0	1	1
56	BW	6	0	0	0	0
56	BX	2	0	0	0	0
56	BY	2	0	0	0	0
56	BZ	2	0	0	0	0
56	CA	400	0	0	32	0
56	CD	2	0	0	1	0
56	CE	4	0	0	0	0
56	CF	1	0	0	0	0
56	CK	1	0	0	0	0
56	CL	2	0	0	0	0
56	CP	3	0	0	0	0
56	CQ	3	0	0	0	0
56	CR	1	0	0	1	0
56	CT	2	0	0	0	0
56	CU	1	0	0	1	0
56	D0	2	0	0	0	0
56	D1	3	0	0	0	0
56	D2	1	0	0	0	0
56	D3	1	0	0	1	0
56	D5	3	0	0	0	0
56	D6	3	0	0	0	0
56	D7	3	0	0	0	0
56	D8	6	0	0	0	0
56	D9	1	0	0	0	0
56	DA	1496	0	0	107	0
56	DB	33	0	0	6	0
56	DD	17	0	0	2	0
56	DE	12	0	0	0	0
56	DF	10	0	0	0	0
56	DN	2	0	0	0	0
56	DO	7	0	0	0	0
56	DP	11	0	0	0	0
56	DQ	2	0	0	1	0
56	DR	5	0	0	0	0
56	DT	3	0	0	0	0
56	DU	1	0	0	0	0
56	DV	1	0	0	0	0
56	DW	4	0	0	0	0
56	DX	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	DY	2	0	0	0	0
All	All	287173	0	187292	5699	2

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 12.

All (5699) 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)
23:BA:2296:U:O4	23:BA:2335:A:N6	1.59	1.34
23:DA:2296:U:O4	23:DA:2335:A:N6	1.59	1.33
1:CA:1164:G:H1	1:CA:1172:C:N4	1.45	1.15
23:BA:885:C:N4	23:BA:890:A:N6	1.97	1.13
1:AA:40:C:N4	1:AA:402:G:H1	1.47	1.12
1:CA:427:U:OP1	4:CD:13:ARG:NH2	1.82	1.11
23:BA:2322:A:H61	23:BA:2335:A:N6	1.48	1.11
23:DA:2322:A:H61	23:DA:2335:A:N6	1.49	1.08
23:DA:885:C:N4	23:DA:890:A:N6	2.02	1.08
23:DA:1783:A:OP1	56:DA:3853:HOH:O	1.74	1.04
23:BA:885:C:H42	23:BA:890:A:N6	1.50	1.03
1:CA:346:G:OP1	37:DT:41:ARG:NH2	1.91	1.03
23:DA:885:C:H42	23:DA:890:A:N6	1.54	1.02
23:DA:571:A:H5'	23:DA:2030:A:H62	1.24	1.00
23:BA:1019:U:HO2'	23:BA:1021:A:H2	1.01	0.99
45:B1:21:ARG:HG2	45:B1:21:ARG:HH11	1.28	0.99
23:DA:1204:A:H2	23:DA:1241:A:H62	1.08	0.99
41:BX:31:HIS:HD2	41:BX:33:LYS:H	1.10	0.98
1:CA:538:G:H5"	12:CL:114:LYS:HB2	1.43	0.97
1:CA:574:A:OP2	56:CA:1921:HOH:O	1.81	0.97
1:AA:1003:G:H1	1:AA:1037:C:H42	1.00	0.97
23:DA:1359:A:H61	23:DA:1372:U:H3	1.13	0.97
23:BA:1204:A:H2	23:BA:1241:A:H62	1.08	0.96
1:CA:1502:A:H2	1:CA:1505:G:H1	1.07	0.96
23:BA:975:C:O2	56:BA:5566:HOH:O	1.83	0.96
7:CG:113:GLU:HG2	7:CG:119:ARG:HG2	1.44	0.95
23:BA:2136:C:N4	23:BA:2155:G:H1	1.64	0.95
44:D0:11:ARG:O	44:D0:14:ARG:NH2	2.00	0.95
23:BA:2287:A:H62	23:BA:2344:U:H3	1.14	0.94
23:DA:2136:C:N4	23:DA:2155:G:H1	1.66	0.94
23:BA:1359:A:H61	23:BA:1372:U:H3	1.10	0.94
26:BE:47:VAL:HG21	26:BE:86:PRO:HD2	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:B0:11:ARG:O	44:B0:14:ARG:NH2	2.00	0.93
1:AA:1502:A:H2	1:AA:1505:G:H1	1.10	0.93
1:AA:1025:U:O2	1:AA:1036:G:O6	1.86	0.93
1:AA:40:C:N3	1:AA:402:G:N2	2.16	0.93
37:BT:16:ARG:NH2	37:BT:83:ILE:O	2.02	0.93
23:DA:1689:A:H62	23:DA:1698:A:H2	1.17	0.93
1:CA:1164:G:H1	1:CA:1172:C:H42	0.99	0.93
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.50	0.92
41:DX:31:HIS:HD2	41:DX:33:LYS:H	1.15	0.92
1:AA:1005:A:H1'	1:AA:1036:G:H22	1.36	0.91
1:CA:1244:C:H42	1:CA:1293:G:H1	1.01	0.91
1:CA:1164:G:N2	1:CA:1172:C:N3	2.17	0.91
45:D1:21:ARG:HG2	45:D1:21:ARG:HH11	1.36	0.90
23:BA:1530:C:O2'	23:BA:1531:C:O5'	1.88	0.90
1:CA:1128:C:O2'	1:CA:1130:A:N7	2.05	0.90
23:BA:1049:C:HO2'	23:BA:1050:A:H8	0.97	0.90
23:DA:2100:G:H1	23:DA:2189:U:H3	1.14	0.89
23:DA:2287:A:H62	23:DA:2344:U:H3	1.17	0.89
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.54	0.89
1:CA:1305:G:N2	1:CA:1331:G:O2'	2.04	0.89
2:CB:87:ARG:HE	2:CB:233:SER:HB2	1.38	0.88
23:DA:1332:G:OP1	56:DA:3803:HOH:O	1.91	0.88
23:BA:1798:U:H5'	25:BD:259:THR:HG22	1.56	0.88
1:AA:503:C:OP2	12:AL:116:SER:HB3	1.72	0.88
1:CA:573:A:OP2	56:CA:1921:HOH:O	1.90	0.88
1:AA:1054:C:N4	22:AY:46:GLN:OE1	2.08	0.87
23:DA:1530:C:O2'	23:DA:1531:C:O5'	1.91	0.87
1:CA:975:A:H4'	1:CA:976:G:H5"	1.56	0.87
37:BT:54:ARG:HA	37:BT:59:THR:HB	1.56	0.86
10:CJ:33:GLN:O	10:CJ:33:GLN:NE2	2.08	0.86
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.09	0.86
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.54	0.86
1:CA:1244:C:N4	1:CA:1293:G:H1	1.73	0.86
23:BA:2304:G:H1	23:BA:2312:U:H3	1.21	0.86
36:DS:82:ILE:HA	36:DS:83:LYS:HB2	1.58	0.86
1:CA:345:C:OP2	37:DT:39:ARG:NH2	2.09	0.86
43:DZ:160:GLY:HA2	43:DZ:161:VAL:HB	1.57	0.86
23:DA:2304:G:H1	23:DA:2312:U:H3	1.21	0.86
37:DT:54:ARG:HA	37:DT:59:THR:HB	1.58	0.86
23:DA:2624:G:N7	56:DA:5143:HOH:O	2.08	0.85
43:BZ:160:GLY:HA2	43:BZ:161:VAL:HB	1.55	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1689:A:H62	23:BA:1698:A:H2	1.19	0.85
30:BI:77:LEU:HB2	30:BI:142:VAL:HG12	1.58	0.85
26:DE:47:VAL:HG21	26:DE:86:PRO:HD2	1.56	0.85
23:BA:271(R):G:OP2	56:BA:5373:HOH:O	1.94	0.85
23:DA:1017:G:N7	56:DA:5106:HOH:O	2.09	0.85
23:DA:1798:U:H5'	25:DD:259:THR:HG22	1.58	0.85
23:DA:2206:G:H5'	23:DA:2207:G:N7	1.90	0.85
4:AD:106:TYR:HD2	4:AD:107:ARG:HG2	1.40	0.85
1:AA:1128:C:O2'	1:AA:1130:A:N7	2.10	0.85
23:BA:1359:A:N6	23:BA:1372:U:H3	1.75	0.85
23:BA:2100:G:H1	23:BA:2189:U:H3	1.21	0.85
2:AB:87:ARG:HE	2:AB:233:SER:HB2	1.40	0.85
1:AA:1003:G:H1	1:AA:1037:C:N4	1.74	0.84
3:AC:155:GLY:HA3	3:AC:196:LEU:HD12	1.58	0.84
23:BA:2123:G:H1	23:BA:2175:C:H42	1.24	0.84
23:BA:2206:G:H5'	23:BA:2207:G:N7	1.91	0.84
23:BA:2733:A:OP1	56:BA:5325:HOH:O	1.95	0.84
41:BX:31:HIS:CD2	41:BX:33:LYS:H	1.94	0.84
30:DI:110:ASP:N	30:DI:130:TYR:OH	2.10	0.84
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.10	0.84
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.43	0.83
1:AA:1503:A:C8	1:AA:1531:A:H8	1.95	0.83
1:CA:1366:C:O2'	10:CJ:60:ARG:NH1	2.11	0.83
23:BA:1741:A:N7	56:BA:5437:HOH:O	2.10	0.83
23:BA:885:C:N4	23:BA:890:A:H61	1.75	0.83
33:BP:1:MET:HE3	33:BP:5:ASP:HB2	1.61	0.83
23:DA:2499:C:OP2	56:DA:3847:HOH:O	1.97	0.83
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.61	0.83
1:CA:1030:C:N4	1:CA:1032:G:O6	2.12	0.83
23:DA:2283:C:OP2	56:DA:4881:HOH:O	1.97	0.83
1:AA:1179:A:H4'	9:AI:103:THR:HA	1.58	0.82
23:BA:571:A:H5'	23:BA:2030:A:H62	1.44	0.82
1:CA:426:G:OP1	4:CD:38:TYR:OH	1.96	0.82
23:BA:2036:C:H5'	23:BA:2036:C:H6	1.43	0.82
1:AA:1459:C:H41	1:AA:1461:G:N2	1.78	0.82
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.12	0.82
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.61	0.82
23:DA:990:A:OP2	56:DA:4578:HOH:O	1.96	0.82
23:DA:1784:A:OP2	56:DA:3853:HOH:O	1.96	0.82
23:BA:1890:A:OP2	56:BA:5282:HOH:O	1.97	0.82
22:AY:13:THR:HG23	22:AY:16:ILE:HG23	1.59	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1047:G:H2'	23:BA:1110:G:H22	1.45	0.82
23:DA:1359:A:N6	23:DA:1372:U:H3	1.77	0.82
4:CD:106:TYR:HD2	4:CD:107:ARG:HG2	1.45	0.82
23:DA:1381:G:N7	56:DA:3886:HOH:O	2.12	0.82
23:BA:587:C:OP2	33:BP:21:ARG:NH2	2.13	0.81
9:CI:18:PHE:HD1	9:CI:62:TYR:HD2	1.26	0.81
23:DA:2070:G:OP2	56:DA:4399:HOH:O	1.97	0.81
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.62	0.81
1:CA:1239:A:H2'	1:CA:1298:C:H42	1.42	0.81
41:DX:31:HIS:CD2	41:DX:33:LYS:H	1.98	0.81
23:BA:1315:C:OP2	56:BA:4713:HOH:O	1.98	0.81
1:AA:1353:G:OP1	21:AU:10:ARG:NH1	2.13	0.81
23:BA:2206:G:H3'	23:BA:2207:G:C8	2.15	0.81
23:BA:2322:A:N6	23:BA:2335:A:N6	2.28	0.81
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.60	0.81
17:CQ:53:LEU:HD23	17:CQ:82:MET:HE1	1.62	0.81
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.63	0.81
23:DA:83:G:N2	23:DA:103:A:OP2	2.13	0.81
23:DA:2322:A:N6	23:DA:2335:A:N6	2.29	0.81
23:BA:1506:C:H2'	23:BA:1507:A:H5'	1.63	0.81
23:DA:1427:A:H4'	23:DA:1428:C:O5'	1.79	0.81
23:BA:2268:A:OP1	56:BA:5088:HOH:O	1.98	0.80
23:BA:83:G:N2	23:BA:103:A:OP2	2.12	0.80
37:BT:118:ARG:HH11	37:BT:118:ARG:HG3	1.46	0.80
33:DP:1:MET:HE3	33:DP:5:ASP:HB2	1.63	0.80
23:DA:2079:U:OP1	45:D1:21:ARG:NH2	2.15	0.80
37:DT:118:ARG:HG3	37:DT:118:ARG:HH11	1.46	0.80
13:AM:65:LYS:HA	13:AM:66:LEU:HB2	1.64	0.80
23:DA:2036:C:H6	23:DA:2036:C:H5'	1.46	0.80
24:DB:48:A:H4'	36:DS:95:HIS:HD2	1.47	0.80
1:AA:39:G:O6	1:AA:403:C:N3	2.13	0.80
30:BI:107:VAL:HG12	30:BI:108:THR:H	1.45	0.80
1:CA:472:A:O2'	16:CP:82:GLN:N	2.13	0.80
23:BA:1581:G:OP2	56:BA:5383:HOH:O	1.99	0.80
23:DA:383:U:O4	56:DA:5039:HOH:O	1.99	0.80
23:DA:2375:G:H8	56:DA:5005:HOH:O	1.64	0.80
1:CA:1053:G:N2	56:CA:2243:HOH:O	2.14	0.80
23:DA:1506:C:H2'	23:DA:1507:A:H5'	1.64	0.80
23:DA:2123:G:H1	23:DA:2175:C:H42	1.26	0.80
1:CA:652:U:OP2	56:CA:1992:HOH:O	2.00	0.79
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1364:G:OP2	45:B1:3:LYS:HG2	1.82	0.79
23:DA:885:C:N4	23:DA:890:A:H61	1.80	0.79
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.63	0.79
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.63	0.79
38:DU:76:TYR:OH	38:DU:92:ARG:NH1	2.15	0.79
1:CA:1164:G:N1	1:CA:1172:C:N4	2.29	0.79
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.15	0.79
23:DA:2206:G:H3'	23:DA:2207:G:C8	2.17	0.79
28:DG:76:SER:HA	28:DG:83:ARG:HA	1.64	0.79
1:AA:987:G:H1	1:AA:1218:C:H42	1.31	0.79
23:DA:1771:C:OP1	56:DA:4365:HOH:O	1.99	0.79
1:AA:1442(A):G:C8	1:AA:1442(B):A:C2	2.70	0.79
14:CN:27:CYS:SG	14:CN:29:ARG:HB2	2.23	0.79
1:AA:1011:G:H1	1:AA:1018:C:H42	1.28	0.79
37:DT:95:ARG:HG2	37:DT:95:ARG:HH11	1.48	0.79
23:BA:956:G:OP2	34:BQ:14:ARG:NH2	2.16	0.79
22:CY:23:ARG:NH1	22:CY:75:ASN:OD1	2.16	0.79
23:DA:326:G:N7	56:DA:4245:HOH:O	2.14	0.79
24:DB:20:C:N4	24:DB:63:G:O6	2.16	0.79
2:AB:21:ARG:H	2:AB:21:ARG:HD2	1.48	0.78
28:DG:11:TYR:CZ	28:DG:16:ARG:HD3	2.17	0.78
19:AS:36:ARG:NH1	19:AS:52:TYR:O	2.16	0.78
23:BA:1762:A:H2'	56:BA:5422:HOH:O	1.82	0.78
37:BT:95:ARG:HG2	37:BT:95:ARG:HH11	1.46	0.78
3:AC:12:LEU:HD11	14:AN:51:GLY:HA2	1.65	0.78
22:CY:87:LYS:O	22:CY:91:LYS:HB2	1.84	0.78
33:BP:39:LYS:HB2	33:BP:45:LEU:HG	1.66	0.78
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.65	0.78
28:DG:56:ALA:HB2	28:DG:153:ARG:HE	1.47	0.78
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.65	0.78
23:DA:927:G:N7	56:DA:4500:HOH:O	2.15	0.78
1:AA:171:A:H2'	1:AA:172:A:C8	2.19	0.78
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.17	0.78
42:BY:23:ARG:HG2	42:BY:42:VAL:HG22	1.65	0.78
1:CA:1442:G:N7	1:CA:1442(A):G:C6	2.51	0.78
1:CA:1505:G:OP2	56:CA:1942:HOH:O	2.02	0.78
23:BA:1174:A:H5'	23:BA:1177:A:H61	1.48	0.78
18:CR:71:LYS:NZ	56:CR:101:HOH:O	2.16	0.78
23:DA:1403:C:H5"	23:DA:1471:A:H1'	1.63	0.78
24:DB:66:A:H61	24:DB:108:U:H2'	1.48	0.78
1:AA:102:G:O2'	1:AA:151:A:N3	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:56:ALA:HB2	28:BG:153:ARG:HE	1.49	0.77
1:CA:1123:A:H4'	10:CJ:37:PRO:HG2	1.67	0.77
23:DA:2533:A:OP2	56:DA:4662:HOH:O	2.00	0.77
1:AA:1441:G:H21	1:AA:1459:C:H6	1.29	0.77
1:AA:1442:G:N7	1:AA:1442(A):G:C6	2.51	0.77
23:BA:1604:C:OP2	56:BA:5259:HOH:O	2.01	0.77
1:CA:1459:C:H41	1:CA:1461:G:N2	1.81	0.77
1:CA:1499:A:OP2	56:CA:1942:HOH:O	2.02	0.77
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.49	0.77
23:BA:1109:C:H5	23:BA:1110:G:C6	2.02	0.77
1:CA:1151:A:H5'	10:CJ:41:PRO:HA	1.64	0.77
1:AA:49:U:O4	1:AA:365:U:H5	1.65	0.77
40:BW:14:PRO:HG2	40:BW:78:GLU:HG2	1.66	0.77
1:CA:1396:A:OP2	56:CA:2083:HOH:O	2.02	0.77
22:CY:53:THR:HG22	22:CY:62:VAL:HG12	1.64	0.77
1:AA:991:U:O2'	1:AA:992:U:OP2	2.03	0.77
1:CA:1442:G:N7	1:CA:1442(A):G:C5	2.53	0.77
10:AJ:48:THR:HG1	10:AJ:62:HIS:HD1	1.27	0.77
23:BA:2692:C:OP2	56:BA:5358:HOH:O	2.00	0.77
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.65	0.77
23:DA:1803:A:O2'	25:DD:259:THR:HG21	1.84	0.77
23:BA:999:U:OP2	56:BA:4736:HOH:O	2.02	0.77
23:DA:11:G:N7	56:DA:4491:HOH:O	2.18	0.77
1:CA:950:U:H1'	1:CA:971:G:N7	1.99	0.77
1:CA:986:A:H1'	19:CS:54:GLY:O	1.84	0.77
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.65	0.77
15:CO:17:ARG:HH11	15:CO:17:ARG:HG3	1.50	0.77
1:CA:1441:G:H21	1:CA:1459:C:H6	1.30	0.76
34:DQ:103:MET:HE1	34:DQ:125:LEU:HD13	1.65	0.76
23:BA:2464:C:H1'	56:BA:5224:HOH:O	1.85	0.76
23:BA:2721:A:N7	56:BA:4334:HOH:O	2.17	0.76
1:CA:1065:U:H6	1:CA:1190:G:H21	1.32	0.76
23:BA:889:C:HO2'	23:BA:890:A:H8	1.32	0.76
45:B1:82:LEU:HA	45:B1:85:LEU:HD23	1.67	0.76
23:DA:1375:C:H3'	56:DA:4028:HOH:O	1.86	0.76
25:DD:148:GLU:HB2	25:DD:151:LYS:HD2	1.67	0.76
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.18	0.76
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.20	0.76
1:AA:1442:G:N7	1:AA:1442(A):G:C5	2.54	0.76
23:BA:686:G:H5"	51:B7:11:LYS:HE2	1.66	0.76
1:CA:1295:G:H21	1:CA:1302:U:H3	1.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.65	0.76
23:DA:827:U:OP1	56:DA:4829:HOH:O	2.03	0.76
31:BN:56:ASN:H	31:BN:125:GLY:HA3	1.49	0.76
34:DQ:32:TYR:CE2	34:DQ:133:ARG:HG3	2.20	0.76
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.50	0.76
1:CA:353:A:H5'	1:CA:353:A:H8	1.49	0.76
1:AA:642:A:N3	8:AH:113:SER:OG	2.19	0.76
17:AQ:53:LEU:HD23	17:AQ:82:MET:HE1	1.66	0.76
1:CA:1441:G:H4'	1:CA:1442:G:N7	1.99	0.76
23:DA:587:C:OP2	33:DP:21:ARG:NH2	2.19	0.76
1:AA:1442(B):A:C2	37:BT:118:ARG:CZ	2.69	0.76
28:BG:76:SER:HA	28:BG:83:ARG:HA	1.68	0.76
1:AA:509:A:OP2	56:AA:2076:HOH:O	2.03	0.76
1:AA:1502:A:H2	1:AA:1505:G:N1	1.84	0.76
1:CA:992:U:O2'	1:CA:993:G:OP2	2.04	0.76
23:DA:1488:G:O6	56:DA:4595:HOH:O	2.01	0.76
1:CA:343:U:O2'	1:CA:344:A:OP2	2.04	0.75
1:AA:353:A:H8	1:AA:353:A:H5'	1.51	0.75
1:AA:1441:G:H4'	1:AA:1442:G:N7	2.01	0.75
23:DA:641:C:O2'	23:DA:2350:C:OP1	2.02	0.75
23:BA:1629:U:O4	56:BA:4614:HOH:O	2.05	0.75
1:CA:1026:G:H3'	1:CA:1027:C:H5"	1.68	0.75
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.68	0.75
27:BF:65:TRP:HH2	27:BF:72:ARG:HH21	1.33	0.75
23:DA:392:C:OP1	56:DA:4228:HOH:O	2.03	0.75
23:DA:1253:A:N7	56:DA:4833:HOH:O	2.19	0.75
42:DY:23:ARG:HG2	42:DY:42:VAL:HG22	1.69	0.75
24:BB:48:A:H4'	36:BS:95:HIS:HD2	1.52	0.75
24:DB:41:U:OP1	56:DB:319:HOH:O	2.04	0.75
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.67	0.75
1:CA:954:G:H21	1:CA:1227:A:N6	1.85	0.75
1:CA:1502:A:H2	1:CA:1505:G:N1	1.81	0.75
23:DA:527:C:H5	56:DA:5060:HOH:O	1.70	0.75
23:DA:2602:A:H4'	23:DA:2603:G:OP1	1.86	0.75
24:DB:6:C:H2'	24:DB:7:G:H5"	1.68	0.75
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.52	0.75
46:B2:51:ARG:HA	46:B2:54:LYS:HB2	1.69	0.75
1:CA:581:G:N7	56:CA:1958:HOH:O	2.20	0.75
31:DN:56:ASN:H	31:DN:125:GLY:HA3	1.51	0.75
23:BA:1047:G:O2'	23:BA:1048:A:O5'	2.05	0.74
1:CA:1348:U:H4'	9:CI:120:ARG:HG3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1459:C:C6	1:AA:1460:A:N7	2.55	0.74
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.20	0.74
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.68	0.74
23:BA:1355:G:OP1	25:BD:38:LYS:NZ	2.19	0.74
23:DA:495:G:N7	56:DA:4794:HOH:O	2.20	0.74
23:DA:1420:U:O2'	23:DA:1421:G:OP1	2.03	0.74
1:AA:1442:G:O2'	1:AA:1442(A):G:OP1	2.03	0.74
1:CA:1459:C:C6	1:CA:1460:A:N7	2.56	0.74
4:CD:15:GLU:HG3	4:CD:63:LYS:HG2	1.67	0.74
23:DA:1577:C:OP2	56:DA:4585:HOH:O	2.05	0.74
1:AA:1007:C:N3	1:AA:1022:G:O6	2.19	0.74
23:BA:570:G:O6	56:BA:4378:HOH:O	2.04	0.74
23:BA:2285:C:OP2	50:B6:6:ARG:NH1	2.21	0.74
1:CA:984:C:H2'	1:CA:985:C:H6	1.53	0.74
23:DA:2319:G:H22	36:DS:3:ARG:HE	1.35	0.74
24:BB:6:C:H2'	24:BB:7:G:H5"	1.67	0.74
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.20	0.74
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.53	0.74
23:DA:1364:G:OP2	45:D1:3:LYS:HG2	1.86	0.74
23:BA:1420:U:O2'	23:BA:1421:G:OP1	2.06	0.74
28:BG:11:TYR:CZ	28:BG:16:ARG:HD3	2.23	0.74
23:BA:213:A:OP2	56:BA:5443:HOH:O	2.05	0.74
23:BA:278:A:O2'	23:BA:279:C:OP1	2.03	0.74
33:BP:100:LEU:HD12	33:BP:112:LEU:HD11	1.69	0.74
26:BE:179:GLU:HB3	26:BE:181:LEU:HD22	1.70	0.74
45:D1:82:LEU:HA	45:D1:85:LEU:HD23	1.70	0.74
23:BA:1427:A:H4'	23:BA:1428:C:O5'	1.88	0.73
1:CA:642:A:N3	8:CH:113:SER:OG	2.21	0.73
2:CB:21:ARG:H	2:CB:21:ARG:HD2	1.52	0.73
23:DA:2820:A:OP2	35:DR:2:ARG:NH2	2.20	0.73
1:AA:1298:C:OP2	7:AG:114:ARG:NH2	2.21	0.73
23:BA:531:C:OP2	56:BA:4834:HOH:O	2.05	0.73
51:B7:48:LYS:NZ	56:B7:205:HOH:O	2.21	0.73
34:BQ:32:TYR:CE2	34:BQ:133:ARG:HG3	2.23	0.73
45:B1:54:ALA:HB1	45:B1:83:GLU:HG3	1.70	0.73
1:CA:1456:G:O2'	20:CT:39:LYS:NZ	2.21	0.73
26:DE:111:ARG:HG3	26:DE:160:TYR:CD1	2.23	0.73
1:AA:1459:C:N3	1:AA:1460:A:N6	2.36	0.73
23:BA:652(I):C:H2'	23:BA:652(J):G:C8	2.23	0.73
23:BA:2226:C:OP2	56:BA:5322:HOH:O	2.04	0.73
23:DA:1359:A:N1	23:DA:1372:U:O4	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2318:G:O2'	23:BA:2319:G:OP1	2.04	0.73
25:BD:148:GLU:HB2	25:BD:151:LYS:HD2	1.69	0.73
23:DA:938:G:OP2	52:D8:52:LYS:NZ	2.20	0.73
1:CA:425:G:H4'	4:CD:45:GLN:HE22	1.53	0.73
1:CA:673:G:H2'	1:CA:674:G:C8	2.24	0.73
23:DA:773:U:OP1	56:DA:4785:HOH:O	2.04	0.73
23:BA:2789:C:O2'	23:BA:2790:A:O2'	2.06	0.73
3:AC:15:THR:HG21	3:AC:181:ASN:HA	1.71	0.73
23:BA:690:G:OP1	56:BA:4114:HOH:O	2.07	0.73
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.89	0.73
23:DA:197:A:OP1	56:DA:3891:HOH:O	2.05	0.73
24:BB:66:A:H61	24:BB:108:U:H2'	1.54	0.73
37:DT:16:ARG:NH2	37:DT:83:ILE:O	2.22	0.73
3:AC:6:HIS:HD2	3:AC:8:ILE:H	1.34	0.73
45:D1:21:ARG:HG2	45:D1:21:ARG:NH1	2.03	0.73
1:AA:975:A:H4'	1:AA:976:G:H5"	1.71	0.72
23:BA:1048:A:OP2	23:BA:1109:C:N4	2.22	0.72
2:CB:15:VAL:HG23	2:CB:209:ARG:HG2	1.68	0.72
9:CI:21:PRO:HA	9:CI:59:PHE:HA	1.71	0.72
1:AA:316:G:OP2	1:AA:351:G:O2'	2.06	0.72
1:CA:1459:C:N3	1:CA:1460:A:N6	2.37	0.72
23:DA:2126:A:H4'	23:DA:2127:G:O5'	1.89	0.72
46:D2:70:GLN:NE2	46:D2:71:ASN:OD1	2.22	0.72
10:CJ:54:PHE:HD2	10:CJ:55:LYS:HG3	1.54	0.72
52:D8:34:TRP:O	52:D8:36:LYS:N	2.22	0.72
11:AK:86:GLY:N	11:AK:112:THR:OG1	2.20	0.72
13:CM:4:ILE:HG21	13:CM:9:ILE:HD12	1.70	0.72
23:DA:2207:G:O2'	23:DA:2208:A:OP1	2.07	0.72
24:DB:30:C:H5"	56:DB:327:HOH:O	1.87	0.72
27:BF:53:THR:HG22	27:BF:55:GLY:H	1.54	0.72
1:CA:921:U:O2	5:CE:19:MET:HB2	1.88	0.72
23:DA:1029:A:O2'	56:DA:4878:HOH:O	2.07	0.72
1:AA:1128:C:H5"	9:AI:16:ARG:HH12	1.55	0.72
23:BA:2820:A:OP2	35:BR:2:ARG:NH2	2.21	0.72
49:B5:16:ARG:HH11	49:B5:16:ARG:HG2	1.53	0.72
1:AA:289:G:OP2	56:AA:2109:HOH:O	2.07	0.72
1:CA:192:U:O4'	20:CT:102:GLY:HA2	1.90	0.72
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.72	0.72
1:AA:1226:C:H2'	13:AM:103:THR:HB	1.71	0.72
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.55	0.72
23:BA:2079:U:OP1	45:B1:21:ARG:NH2	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2145:C:O2'	23:DA:2147:G:N2	2.23	0.72
30:DI:69:LYS:HG2	30:DI:138:ILE:HG12	1.71	0.72
30:BI:92:VAL:HG13	30:BI:120:ILE:HB	1.72	0.72
23:DA:15:G:OP2	56:DA:4614:HOH:O	2.08	0.72
23:DA:1560:G:OP1	56:DA:4682:HOH:O	2.07	0.72
31:BN:24:GLY:HA2	31:BN:27:ALA:HB3	1.72	0.72
1:CA:222:U:H2'	1:CA:223:U:C6	2.25	0.72
23:DA:1352:U:OP2	56:DA:4027:HOH:O	2.07	0.72
23:DA:1798:U:C5'	25:DD:259:THR:HG22	2.19	0.72
36:DS:14:VAL:O	36:DS:18:ILE:HG12	1.90	0.72
1:AA:1002:G:H2'	1:AA:1003:G:O4'	1.90	0.71
23:BA:2126:A:H4'	23:BA:2127:G:O5'	1.88	0.71
47:B3:8:LEU:HD13	47:B3:31:LEU:HD23	1.72	0.71
1:CA:1348:U:H2'	1:CA:1349:A:H8	1.54	0.71
33:DP:59:LEU:HD11	52:D8:10:ALA:HB2	1.71	0.71
1:AA:222:U:H2'	1:AA:223:U:C6	2.25	0.71
1:AA:1025:U:C2	1:AA:1036:G:O6	2.44	0.71
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.24	0.71
23:DA:621:A:OP2	33:DP:108:LYS:NZ	2.22	0.71
23:DA:2584:U:O4	56:DA:3867:HOH:O	2.05	0.71
36:DS:34:HIS:ND1	36:DS:53:SER:OG	2.23	0.71
48:D4:7:PRO:HB2	48:D4:27:THR:HG21	1.71	0.71
20:AT:72:LEU:HD11	20:AT:80:ARG:HD2	1.71	0.71
1:AA:1309:G:OP1	13:AM:88:ARG:NH1	2.23	0.71
10:AJ:39:PRO:HA	10:AJ:70:ARG:HD3	1.70	0.71
23:DA:956:G:OP2	34:DQ:14:ARG:NH2	2.23	0.71
23:DA:1019:U:HO2'	23:DA:1021:A:H2	1.36	0.71
23:DA:1327:C:OP2	56:DA:4835:HOH:O	2.07	0.71
44:D0:10:THR:HG22	44:D0:12:ASN:H	1.55	0.71
49:D5:16:ARG:HG2	49:D5:16:ARG:HH11	1.54	0.71
26:BE:111:ARG:HG3	26:BE:160:TYR:CD1	2.26	0.71
1:CA:829:G:N7	56:CA:1976:HOH:O	2.23	0.71
2:CB:194:PRO:O	2:CB:196:LEU:N	2.23	0.71
1:AA:1086:U:H3	1:AA:1099:G:H22	1.38	0.71
52:B8:62:LEU:HB3	52:B8:65:GLU:HG2	1.71	0.71
1:CA:538:G:OP2	12:CL:115:LYS:HB2	1.91	0.71
23:DA:71:A:H3'	23:DA:71:A:OP2	1.90	0.71
30:DI:72:LEU:HD12	30:DI:138:ILE:HG21	1.73	0.71
39:DV:40:LEU:HB2	39:DV:46:VAL:HG13	1.71	0.71
1:AA:1305:G:N1	1:AA:1331:G:O2'	2.23	0.71
25:BD:238:GLY:O	25:BD:239:ARG:HB2	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:343:U:O2'	1:CA:345:C:N4	2.23	0.71
1:CA:986:A:N3	19:CS:52:TYR:OH	2.22	0.71
1:CA:1401:G:O6	22:CY:83:ARG:NH2	2.23	0.71
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.26	0.71
23:BA:2354:G:N7	56:BA:5461:HOH:O	2.23	0.71
48:B4:7:PRO:HB2	48:B4:27:THR:HG21	1.73	0.71
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.55	0.71
28:DG:72:ARG:HH12	28:DG:87:PRO:HG3	1.56	0.71
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.26	0.71
23:BA:1359:A:N1	23:BA:1372:U:O4	2.24	0.71
28:BG:41:GLN:HB3	28:BG:43:LEU:HD13	1.73	0.71
1:CA:1442(A):G:C8	1:CA:1442(B):A:C2	2.78	0.71
1:AA:67:C:H2'	1:AA:68:G:C8	2.26	0.71
23:DA:2136:C:H42	23:DA:2155:G:H1	1.39	0.71
25:DD:8:PRO:HB3	25:DD:14:ARG:HB2	1.72	0.71
28:DG:44:GLY:HA2	28:DG:88:ILE:HG22	1.73	0.71
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.55	0.70
23:DA:62:C:OP1	56:DA:4187:HOH:O	2.09	0.70
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.56	0.70
23:DA:948:G:OP1	56:DA:3795:HOH:O	2.09	0.70
24:DB:96:U:O4	56:DB:331:HOH:O	2.07	0.70
3:AC:35:GLU:OE2	3:AC:59:ARG:NH2	2.24	0.70
23:BA:2144:U:HO2'	23:BA:2147:G:H1	1.37	0.70
1:CA:171:A:H2'	1:CA:172:A:C8	2.26	0.70
1:CA:266:G:O2'	1:CA:267:C:OP2	2.08	0.70
1:CA:1367:C:H5'	10:CJ:60:ARG:HH11	1.55	0.70
27:DF:65:TRP:HH2	27:DF:72:ARG:HH21	1.38	0.70
23:BA:631:A:OP1	33:BP:65:ARG:NH1	2.24	0.70
25:BD:137:PRO:O	25:BD:140:THR:HG23	1.91	0.70
25:BD:239:ARG:N	56:BD:409:HOH:O	2.23	0.70
1:CA:1500:A:OP1	56:CA:1944:HOH:O	2.09	0.70
23:DA:1507:A:O2'	23:DA:1508:A:O5'	2.09	0.70
29:BH:33:LEU:HD21	29:BH:136:ILE:HG13	1.73	0.70
1:CA:735:C:H2'	1:CA:736:C:H6	1.56	0.70
1:AA:673:G:H2'	1:AA:674:G:C8	2.26	0.70
23:BA:2012:G:OP1	40:BW:11:ARG:NH2	2.25	0.70
1:CA:538:G:OP1	12:CL:115:LYS:N	2.24	0.70
1:CA:1004:A:H62	1:CA:1037:C:H3'	1.56	0.70
23:DA:2789:C:O2'	23:DA:2790:A:O2'	2.08	0.70
8:AH:121:ASP:HB2	8:AH:125:ARG:NH2	2.07	0.70
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1376:C:OP2	56:DA:4028:HOH:O	2.09	0.70
23:BA:71:A:OP2	23:BA:71:A:H3'	1.91	0.70
23:BA:652(R):C:O2'	23:BA:652(S):C:OP2	2.09	0.70
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.06	0.70
36:DS:96:GLY:N	36:DS:99:LYS:H	1.90	0.70
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.74	0.70
23:BA:833:U:O2	33:BP:55:ARG:NH2	2.25	0.70
1:CA:1442:G:O2'	1:CA:1442(A):G:OP1	2.09	0.70
1:AA:266:G:H5'	1:AA:268:C:H41	1.56	0.70
1:AA:664:G:H22	1:AA:741:G:H1	1.40	0.70
1:AA:1145:C:N4	56:AA:2285:HOH:O	2.24	0.70
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.74	0.70
1:AA:470:C:OP2	56:AA:2192:HOH:O	2.09	0.69
43:BZ:160:GLY:HA2	43:BZ:161:VAL:CB	2.21	0.69
1:CA:266:G:H5'	1:CA:268:C:H41	1.57	0.69
9:CI:40:LEU:HB3	9:CI:43:ALA:HB2	1.73	0.69
35:BR:55:ALA:HB2	35:BR:79:LEU:HD13	1.73	0.69
1:CA:437:U:H5"	4:CD:155:LEU:HD11	1.73	0.69
25:DD:239:ARG:N	56:DD:407:HOH:O	2.25	0.69
30:DI:102:SER:HA	30:DI:106:GLY:HA2	1.73	0.69
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.92	0.69
1:CA:446:G:N7	56:CA:2154:HOH:O	2.25	0.69
1:CA:595:G:O3'	56:CA:1979:HOH:O	2.09	0.69
13:AM:15:VAL:HG22	13:AM:43:THR:O	1.91	0.69
20:AT:73:HIS:HB3	20:AT:74:LYS:HG2	1.74	0.69
23:BA:1495:A:H2'	23:BA:1496:A:C8	2.27	0.69
23:BA:2104:G:N2	23:BA:2105:C:O2	2.25	0.69
23:BA:2145:C:O2'	23:BA:2147:G:N2	2.25	0.69
1:CA:920:U:H2'	1:CA:921:U:C6	2.27	0.69
23:DA:994:C:OP1	38:DU:53:ARG:NH2	2.25	0.69
1:AA:1003:G:N2	1:AA:1037:C:N3	2.40	0.69
1:CA:472:A:HO2'	16:CP:82:GLN:H	1.38	0.69
1:CA:1220:G:O2'	19:CS:52:TYR:O	2.11	0.69
23:BA:2207:G:O2'	23:BA:2208:A:OP1	2.07	0.69
6:CF:82:ARG:HH11	6:CF:82:ARG:HG3	1.57	0.69
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.75	0.69
1:AA:548:G:OP1	56:AA:2157:HOH:O	2.10	0.69
1:AA:785:G:N7	56:AA:1967:HOH:O	2.25	0.69
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HD3	1.75	0.69
23:BA:1798:U:C5'	25:BD:259:THR:HG22	2.22	0.69
44:B0:10:THR:HG22	44:B0:12:ASN:H	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:860:A:OP2	56:CA:1981:HOH:O	2.10	0.69
1:CA:1183:A:O2'	1:CA:1184:G:OP1	2.11	0.69
8:CH:73:ASP:OD2	8:CH:75:ARG:HD3	1.92	0.69
9:CI:16:ARG:HB2	9:CI:64:THR:HG23	1.74	0.69
30:DI:77:LEU:HD13	30:DI:79:ILE:HD11	1.75	0.69
36:DS:102:ALA:HB1	36:DS:112:PHE:HZ	1.58	0.69
52:D8:23:VAL:HG11	52:D8:47:LYS:HD3	1.75	0.69
1:AA:186:C:H2'	1:AA:187:C:H6	1.58	0.69
28:BG:72:ARG:HH12	28:BG:87:PRO:HG3	1.56	0.69
36:DS:58:LEU:HB2	36:DS:59:LYS:HB2	1.75	0.69
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.75	0.69
23:BA:641:C:O2'	23:BA:2350:C:OP1	2.08	0.69
23:BA:1783:A:OP1	56:BA:4053:HOH:O	2.10	0.69
1:CA:67:C:H2'	1:CA:68:G:C8	2.27	0.69
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.28	0.69
24:DB:35:U:OP2	56:DB:317:HOH:O	2.08	0.69
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.73	0.68
32:BO:98:VAL:HG13	32:BO:117:LEU:HB3	1.75	0.68
41:BX:35:THR:HG22	41:BX:38:GLU:H	1.58	0.68
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.28	0.68
23:DA:17:G:OP2	56:DA:4493:HOH:O	2.11	0.68
36:DS:95:HIS:C	36:DS:99:LYS:HB3	2.18	0.68
40:DW:14:PRO:HG2	40:DW:78:GLU:HG2	1.74	0.68
40:DW:18:ARG:NH1	40:DW:76:VAL:O	2.27	0.68
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.28	0.68
23:BA:2140:C:H2'	23:BA:2141:G:H8	1.59	0.68
23:BA:2304:G:H21	28:BG:156:ASP:CG	2.01	0.68
24:BB:106:G:H5'	43:BZ:31:ARG:HG2	1.75	0.68
1:CA:408:A:OP1	4:CD:113:SER:OG	2.11	0.68
1:CA:1329:A:OP2	21:CU:7:ARG:NH2	2.25	0.68
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.58	0.68
30:DI:93:THR:HG22	30:DI:119:PRO:HB3	1.75	0.68
34:DQ:127:ILE:O	56:DQ:301:HOH:O	2.11	0.68
2:AB:194:PRO:O	2:AB:196:LEU:N	2.26	0.68
14:AN:23:ARG:HD2	14:AN:28:GLY:O	1.92	0.68
23:BA:927:G:N7	56:BA:5196:HOH:O	2.25	0.68
23:BA:2659:G:O6	56:BA:5467:HOH:O	2.09	0.68
23:DA:1495:A:H2'	23:DA:1496:A:C8	2.28	0.68
25:DD:238:GLY:O	25:DD:239:ARG:HB2	1.92	0.68
23:DA:607:U:OP1	27:DF:102:PRO:HA	1.93	0.68
23:DA:1782:C:OP1	56:DA:3848:HOH:O	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DQ:51:ARG:NH2	43:DZ:186:GLU:OE1	2.26	0.68
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.58	0.68
23:BA:1403:C:H5"	23:BA:1471:A:H1'	1.74	0.68
23:BA:1507:A:O2'	23:BA:1508:A:O5'	2.12	0.68
23:BA:2127:G:O6	23:BA:2161:C:N3	2.26	0.68
23:BA:2448:A:OP1	56:BA:4378:HOH:O	2.11	0.68
1:CA:1378:C:H5	1:CA:1379:G:C4	2.10	0.68
9:CI:26:VAL:HG13	9:CI:61:ALA:HB3	1.74	0.68
1:CA:17:U:H2'	1:CA:18:C:C6	2.29	0.68
1:CA:1192:C:OP2	3:CC:4:LYS:NZ	2.25	0.68
7:CG:135:VAL:HA	7:CG:138:LYS:HB3	1.74	0.68
43:DZ:160:GLY:HA2	43:DZ:161:VAL:CB	2.23	0.68
45:D1:54:ALA:HB1	45:D1:83:GLU:HG3	1.76	0.68
1:AA:1108:G:O6	56:AA:2269:HOH:O	2.05	0.68
23:BA:2523:G:N7	56:BA:4579:HOH:O	2.26	0.68
23:BA:2845:G:O2'	23:BA:2846:G:H5'	1.94	0.68
1:CA:1255:G:OP1	10:CJ:45:ARG:NH2	2.25	0.68
23:DA:2448:A:OP2	56:DA:3847:HOH:O	2.11	0.68
29:DH:3:ARG:HD3	29:DH:54:ARG:HH12	1.59	0.68
23:BA:2114:A:O2'	23:BA:2167:U:O3'	2.11	0.68
43:BZ:158:PRO:O	43:BZ:161:VAL:HG11	1.94	0.68
3:CC:117:ALA:HB2	3:CC:200:ALA:HB2	1.76	0.68
23:DA:1023:U:OP2	56:DA:4989:HOH:O	2.10	0.68
33:DP:38:GLN:HA	33:DP:41:ARG:HG2	1.76	0.68
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.27	0.68
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.28	0.68
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.27	0.68
23:DA:2162:G:O3'	23:DA:2172:U:O2'	2.12	0.68
23:DA:2541:A:OP2	56:DA:4631:HOH:O	2.11	0.68
30:DI:104:GLN:C	30:DI:105:HIS:HD1	2.02	0.68
23:BA:1176:G:H1'	23:BA:1177:A:OP1	1.94	0.68
23:BA:2319:G:H22	36:BS:3:ARG:HE	1.39	0.68
1:CA:664:G:H22	1:CA:741:G:H1	1.40	0.68
23:DA:1430:C:H2'	23:DA:1431:U:C6	2.29	0.68
23:DA:2431:U:OP2	56:DA:4108:HOH:O	2.11	0.68
1:AA:1505:G:OP1	56:AA:2167:HOH:O	2.11	0.67
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.28	0.67
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.15	0.67
31:DN:47:ALA:HB2	31:DN:112:LEU:HD11	1.76	0.67
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.08	0.67
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.29	0.67
10:AJ:16:LEU:HD21	10:AJ:70:ARG:HG3	1.76	0.67
23:BA:1332:G:OP1	56:BA:4713:HOH:O	2.11	0.67
23:BA:2763:G:OP2	56:BA:4998:HOH:O	2.10	0.67
23:DA:2332:U:O2'	23:DA:2335:A:N3	2.22	0.67
1:AA:40:C:H42	1:AA:402:G:H1	0.73	0.67
23:BA:2123:G:H1	23:BA:2175:C:N4	1.91	0.67
28:BG:44:GLY:HA2	28:BG:88:ILE:HG22	1.75	0.67
2:CB:87:ARG:NE	2:CB:233:SER:HB2	2.10	0.67
5:CE:50:GLU:HB2	5:CE:53:LEU:HD13	1.75	0.67
1:AA:26:A:N1	56:AA:1989:HOH:O	2.28	0.67
1:AA:457:C:H2'	1:AA:458:C:H6	1.59	0.67
1:AA:934:C:OP1	56:AA:1933:HOH:O	2.12	0.67
23:BA:1803:A:O2'	25:BD:259:THR:HG21	1.94	0.67
29:BH:3:ARG:HD3	29:BH:54:ARG:HH12	1.59	0.67
1:CA:1226:C:N4	13:CM:104:ARG:HD3	2.09	0.67
1:CA:1508:G:OP1	56:CA:1944:HOH:O	2.11	0.67
30:DI:27:ARG:HD2	45:D1:71:TYR:CE1	2.29	0.67
1:AA:165:C:H2'	1:AA:166:G:C8	2.28	0.67
1:AA:1457:G:OP1	20:AT:39:LYS:NZ	2.28	0.67
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.75	0.67
23:BA:1793:C:OP1	56:BA:3801:HOH:O	2.11	0.67
1:CA:610:G:O6	56:CA:1937:HOH:O	2.08	0.67
2:CB:91:PRO:HG2	2:CB:155:LEU:HD23	1.76	0.67
23:DA:2140:C:H2'	23:DA:2141:G:H8	1.60	0.67
32:DO:2:ILE:HD12	32:DO:6:THR:HG21	1.77	0.67
33:BP:59:LEU:HD11	52:B8:10:ALA:HB2	1.74	0.67
36:BS:25:ARG:NH1	36:BS:42:ASP:OD2	2.28	0.67
36:BS:58:LEU:HB2	36:BS:59:LYS:HB2	1.76	0.67
1:CA:1352:C:OP1	21:CU:3:LYS:NZ	2.24	0.67
1:CA:1362:C:H2'	1:CA:1363:C:H5"	1.76	0.67
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.76	0.67
13:CM:69:GLU:HG3	13:CM:70:LEU:H	1.60	0.67
23:DA:1452:A:OP2	56:DA:4906:HOH:O	2.13	0.67
33:DP:39:LYS:HB2	33:DP:45:LEU:HG	1.77	0.67
1:AA:100:C:H2'	1:AA:101:A:C8	2.30	0.67
26:BE:54:GLN:HB2	26:BE:76:ARG:HB3	1.76	0.67
3:CC:114:PRO:HA	3:CC:185:GLY:HA3	1.76	0.67
11:CK:86:GLY:N	11:CK:112:THR:OG1	2.21	0.67
23:DA:2577:A:O4'	49:D5:3:LYS:HB2	1.94	0.67
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BQ:103:MET:HE1	34:BQ:125:LEU:HD13	1.77	0.67
1:CA:1004:A:N7	1:CA:1037:C:H2'	2.09	0.67
24:DB:66:A:N6	24:DB:108:U:H2'	2.10	0.67
23:BA:1174:A:H4'	23:BA:1175:U:OP1	1.94	0.67
1:AA:735:C:H2'	1:AA:736:C:H6	1.59	0.67
7:AG:146:GLU:O	7:AG:149:ARG:N	2.28	0.67
8:AH:73:ASP:OD2	8:AH:75:ARG:HD3	1.94	0.67
23:BA:2332:U:O2'	23:BA:2335:A:N3	2.28	0.67
1:CA:376:G:H5"	16:CP:5:ARG:HD2	1.77	0.67
9:CI:46:ALA:O	9:CI:49:PRO:HD2	1.94	0.67
14:CN:21:TYR:OH	14:CN:23:ARG:NH2	2.28	0.67
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.58	0.67
23:DA:139(A):G:N2	41:DX:44:GLU:OE1	2.28	0.67
23:DA:588:U:H2'	23:DA:589:C:C6	2.30	0.67
1:AA:1320:C:H6	1:AA:1320:C:H5'	1.60	0.66
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.77	0.66
23:BA:203:C:H3'	23:BA:204:A:H5"	1.76	0.66
1:CA:406:G:N3	4:CD:119:GLN:NE2	2.43	0.66
23:DA:330:A:HO2'	23:DA:331:A:H8	1.41	0.66
23:DA:1980:G:O2'	23:DA:1982:C:OP2	2.10	0.66
23:BA:2166:G:N2	23:BA:2172:U:O4	2.28	0.66
37:BT:95:ARG:HG2	37:BT:95:ARG:NH1	2.10	0.66
1:CA:344:A:H4'	1:CA:345:C:OP2	1.93	0.66
1:CA:412:A:O4'	4:CD:35:ARG:NH2	2.27	0.66
1:CA:436:C:H4'	4:CD:156:GLU:HB2	1.77	0.66
1:CA:1151:A:HO2'	1:CA:1152:A:H8	1.44	0.66
23:DA:1355:G:OP1	25:DD:38:LYS:NZ	2.24	0.66
45:D1:50:ARG:HG2	45:D1:59:THR:HG22	1.78	0.66
47:D3:8:LEU:HD13	47:D3:31:LEU:HD23	1.77	0.66
1:AA:1503:A:C8	1:AA:1531:A:C8	2.82	0.66
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.27	0.66
20:AT:43:LEU:O	20:AT:47:GLY:N	2.28	0.66
23:BA:2822:G:OP2	56:BA:4891:HOH:O	2.12	0.66
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.30	0.66
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.31	0.66
7:CG:150:ALA:HA	11:CK:59:TYR:HB3	1.77	0.66
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.92	0.66
23:DA:2589:A:OP1	56:DA:3769:HOH:O	2.14	0.66
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.30	0.66
56:AA:2229:HOH:O	11:AK:26:ASN:HB3	1.96	0.66
23:BA:2136:C:H42	23:BA:2155:G:H1	1.41	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:24:THR:HG22	26:BE:186:GLY:O	1.96	0.66
1:CA:1459:C:H2'	1:CA:1460:A:C8	2.30	0.66
41:DX:53:LYS:HB3	41:DX:82:GLN:HB3	1.78	0.66
6:AF:15:ASP:OD2	6:AF:17:SER:N	2.23	0.66
45:B1:21:ARG:HG2	45:B1:21:ARG:NH1	2.00	0.66
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.30	0.66
4:AD:106:TYR:CD2	4:AD:107:ARG:HG2	2.29	0.66
9:AI:66:ARG:HB2	9:AI:66:ARG:HH11	1.60	0.66
13:AM:70:LEU:O	13:AM:73:GLU:N	2.29	0.66
1:CA:976:G:H22	1:CA:1363(A):A:H2'	1.59	0.66
1:AA:1158:C:H5	1:AA:1181:G:H1	1.41	0.66
19:AS:31:ILE:HG23	19:AS:49:ILE:HG23	1.76	0.66
23:BA:301:G:OP2	42:BY:84:ARG:NH2	2.28	0.66
1:CA:1492:A:H5'	1:CA:1493:A:C8	2.30	0.66
34:DQ:135:ASP:OD2	43:DZ:49:ARG:NH2	2.28	0.66
1:AA:266:G:O2'	1:AA:267:C:OP2	2.10	0.66
13:AM:60:VAL:HG13	13:AM:64:TRP:HZ3	1.60	0.66
23:BA:271(M):G:O2'	23:BA:271(N):U:O5'	2.13	0.66
23:BA:948:G:OP1	56:BA:5120:HOH:O	2.14	0.66
23:DA:2127:G:O6	23:DA:2161:C:N3	2.28	0.66
1:AA:625:G:H4'	16:AP:16:HIS:CG	2.31	0.66
1:AA:1493:A:O2'	1:AA:1494:G:OP1	2.13	0.66
2:AB:87:ARG:NE	2:AB:233:SER:HB2	2.11	0.66
1:CA:300:A:O2'	1:CA:564:C:N3	2.29	0.66
1:CA:1441:G:H4'	1:CA:1442:G:C8	2.30	0.66
23:DA:631:A:OP1	33:DP:65:ARG:NH1	2.29	0.66
1:AA:73:G:H1	1:AA:96:U:H3	1.42	0.66
23:DA:1310:G:OP2	51:D7:9:ARG:NH1	2.26	0.66
23:DA:2123:G:H1	23:DA:2175:C:N4	1.94	0.66
1:AA:1456:G:O2'	20:AT:39:LYS:NZ	2.23	0.65
23:BA:2839:G:H5'	35:BR:46:GLY:HA2	1.78	0.65
1:CA:1162:C:H42	1:CA:1174:G:H1	1.44	0.65
13:CM:65:LYS:HA	13:CM:66:LEU:HB2	1.78	0.65
16:CP:51:VAL:HG12	16:CP:53:VAL:H	1.61	0.65
27:DF:53:THR:CG2	27:DF:55:GLY:H	2.09	0.65
5:AE:144:THR:OG1	5:AE:147:ASP:OD2	2.11	0.65
1:CA:1442:G:O2'	1:CA:1442(A):G:H5'	1.95	0.65
23:DA:2296:U:OP2	36:DS:9:ARG:NH2	2.28	0.65
40:DW:4:LYS:HE2	40:DW:6:ILE:HD11	1.78	0.65
1:AA:39:G:N1	1:AA:403:C:O2	2.18	0.65
1:AA:992:U:O2'	1:AA:993:G:O4'	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1055:A:O2'	3:AC:161:GLU:O	2.15	0.65
2:AB:19:HIS:ND1	2:AB:189:ASP:OD2	2.21	0.65
23:BA:1486:A:H2'	23:BA:1487:G:H8	1.60	0.65
23:BA:2646:C:OP1	56:BA:5325:HOH:O	2.13	0.65
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.31	0.65
3:CC:35:GLU:HA	3:CC:38:ARG:HD2	1.79	0.65
23:DA:1877:A:H5'	23:DA:1878:G:OP2	1.96	0.65
23:DA:2580:U:H5"	56:DA:3943:HOH:O	1.96	0.65
23:DA:2845:G:O2'	23:DA:2846:G:H5'	1.95	0.65
1:AA:171:A:H2'	1:AA:172:A:H8	1.60	0.65
1:AA:1164:G:H1	1:AA:1172:C:H42	1.44	0.65
23:BA:1484:G:O6	56:BA:4428:HOH:O	2.11	0.65
1:CA:428:G:H5"	4:CD:7:PRO:HB3	1.78	0.65
1:CA:990:C:N3	1:CA:1215:G:O6	2.29	0.65
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.31	0.65
23:DA:2327:A:H2'	23:DA:2328:A:C8	2.32	0.65
41:DX:35:THR:HG22	41:DX:38:GLU:H	1.62	0.65
2:AB:15:VAL:HG23	2:AB:209:ARG:HG2	1.77	0.65
42:BY:92:ASN:OD1	42:BY:94:LYS:HG3	1.96	0.65
1:CA:165:C:H2'	1:CA:166:G:C8	2.31	0.65
1:CA:1059:C:OP1	3:CC:199:LYS:NZ	2.27	0.65
3:CC:111:LEU:HD22	3:CC:146:ALA:HB2	1.77	0.65
23:DA:1542:A:OP2	56:DA:3765:HOH:O	2.15	0.65
36:DS:102:ALA:HA	36:DS:105:ALA:HB3	1.78	0.65
1:AA:509:A:OP2	56:AA:2075:HOH:O	2.15	0.65
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.32	0.65
23:BA:62:C:OP1	56:BA:3878:HOH:O	2.13	0.65
23:BA:2042:A:OP1	56:BA:4658:HOH:O	2.13	0.65
23:DA:1689:A:N6	23:DA:1698:A:H2	1.92	0.65
28:DG:41:GLN:HB3	28:DG:43:LEU:HD13	1.77	0.65
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	1.78	0.65
9:AI:3:GLN:OE1	9:AI:20:ARG:NH2	2.29	0.65
23:BA:330:A:H2	23:BA:1210:A:HO2'	1.44	0.65
23:BA:530:G:O4'	23:BA:530:G:N3	2.27	0.65
23:BA:1991:U:H2'	23:BA:1992:G:H5"	1.78	0.65
1:CA:186:C:H2'	1:CA:187:C:H6	1.61	0.65
1:CA:457:C:H2'	1:CA:458:C:H6	1.60	0.65
23:DA:253:C:OP2	52:D8:5:LYS:NZ	2.28	0.65
43:DZ:158:PRO:O	43:DZ:161:VAL:HG11	1.96	0.65
1:AA:815:A:N7	1:AA:1509:C:O2'	2.30	0.65
36:BS:15:ARG:O	36:BS:19:LYS:HG2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:584:G:H5'	17:CQ:91:ARG:HH22	1.62	0.65
1:CA:594:G:OP2	56:CA:2291:HOH:O	2.13	0.65
4:CD:188:LEU:HD23	4:CD:188:LEU:H	1.59	0.65
7:CG:27:ILE:HA	7:CG:30:ILE:HD12	1.77	0.65
17:CQ:22:LEU:HD13	17:CQ:41:LYS:HG2	1.78	0.65
20:CT:72:LEU:HD11	20:CT:80:ARG:HD2	1.79	0.65
23:DA:1642:G:N7	56:DA:4438:HOH:O	2.30	0.65
35:DR:55:ALA:HB2	35:DR:79:LEU:HD13	1.78	0.65
1:AA:243:A:H4'	1:AA:244:U:O5'	1.97	0.65
5:AE:102:ALA:O	5:AE:107:ARG:NH1	2.29	0.65
11:AK:86:GLY:H	11:AK:112:THR:HG1	1.44	0.65
23:BA:1040:C:H2'	23:BA:1041:C:O4'	1.97	0.65
23:BA:2127:G:N1	23:BA:2161:C:O2	2.30	0.65
36:BS:14:VAL:O	36:BS:18:ILE:HG12	1.97	0.65
36:BS:102:ALA:HA	36:BS:105:ALA:HB3	1.79	0.65
1:CA:984:C:H2'	1:CA:985:C:C6	2.30	0.65
23:DA:1778:U:H2'	23:DA:1784:A:N6	2.12	0.65
23:DA:2104:G:N2	23:DA:2105:C:O2	2.30	0.65
23:DA:2365:G:O6	52:D8:39:LYS:HE3	1.97	0.65
23:DA:2526:G:H21	53:D9:2:LYS:HD2	1.62	0.65
1:AA:608:A:OP2	56:AA:2171:HOH:O	2.15	0.65
13:AM:70:LEU:O	13:AM:74:VAL:N	2.27	0.65
23:BA:2646:C:OP2	23:BA:2732:G:O2'	2.14	0.65
1:CA:1030(A):G:N2	1:CA:1030(C):G:H3'	2.11	0.65
31:BN:47:ALA:HB2	31:BN:112:LEU:HD11	1.79	0.64
1:CA:1309:G:N7	13:CM:99:ARG:NH2	2.45	0.64
20:CT:73:HIS:HB3	20:CT:74:LYS:HG2	1.80	0.64
1:AA:814:A:OP2	56:AA:2194:HOH:O	2.14	0.64
1:AA:982:U:H5"	14:AN:6:LEU:HD21	1.80	0.64
1:AA:1442(B):A:H2	37:BT:118:ARG:CZ	2.06	0.64
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.33	0.64
27:BF:53:THR:CG2	27:BF:55:GLY:H	2.10	0.64
49:B5:16:ARG:NH1	49:B5:17:ASP:OD1	2.30	0.64
23:DA:668:G:H5'	23:DA:669:G:OP2	1.96	0.64
29:DH:33:LEU:HD21	29:DH:136:ILE:HG13	1.77	0.64
36:DS:15:ARG:O	36:DS:19:LYS:HG2	1.97	0.64
1:AA:1320:C:C4	19:AS:36:ARG:HB2	2.31	0.64
23:BA:141:A:H8	23:BA:1408:C:HO2'	1.42	0.64
23:BA:1434:A:H61	23:BA:1558:A:H62	1.43	0.64
23:BA:2206:G:O2'	23:BA:2207:G:OP1	2.16	0.64
23:BA:2349:G:H5'	23:BA:2350:C:OP2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:177:C:OP1	20:CT:65:LYS:NZ	2.25	0.64
23:DA:2810:A:N6	23:DA:2891:G:O2'	2.30	0.64
26:DE:77:ILE:HD12	26:DE:195:LEU:HD13	1.79	0.64
7:AG:90:GLU:H	7:AG:90:GLU:CD	2.04	0.64
3:CC:180:ALA:HA	3:CC:206:GLU:HA	1.79	0.64
1:AA:946:A:H2'	1:AA:947:G:C8	2.32	0.64
2:AB:21:ARG:HD2	2:AB:21:ARG:N	2.10	0.64
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.78	0.64
9:AI:45:ALA:HB3	9:AI:47:LEU:H	1.62	0.64
23:BA:1153:C:OP2	56:BA:4736:HOH:O	2.15	0.64
1:CA:1181:G:H2'	1:CA:1182:G:C5	2.33	0.64
1:CA:1188:A:H2'	1:CA:1189:C:O4'	1.98	0.64
23:DA:1250:G:N7	33:DP:18:ARG:NH2	2.45	0.64
1:AA:1011:G:H1	1:AA:1018:C:N4	1.94	0.64
23:BA:2114:A:H1'	23:BA:2168:G:H5'	1.78	0.64
1:CA:179:A:N7	56:CA:2203:HOH:O	2.30	0.64
1:CA:1060:C:H5'	14:CN:45:ARG:HH12	1.62	0.64
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.30	0.64
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.62	0.64
1:CA:954:G:H21	1:CA:1227:A:H62	1.42	0.64
23:DA:1420:U:HO2'	23:DA:1421:G:P	2.21	0.64
23:DA:2128:C:H42	23:DA:2160:G:H1	1.43	0.64
23:DA:2166:G:N2	23:DA:2172:U:O4	2.31	0.64
23:DA:2839:G:H5'	35:DR:46:GLY:HA2	1.79	0.64
26:DE:179:GLU:HB3	26:DE:181:LEU:HD22	1.79	0.64
2:AB:163:PHE:HA	2:AB:185:ILE:HG12	1.79	0.64
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.79	0.64
16:AP:20:VAL:HG21	16:AP:32:TYR:CD1	2.33	0.64
23:BA:1796:U:H2'	23:BA:1797:C:C6	2.32	0.64
1:CA:243:A:H4'	1:CA:244:U:O5'	1.96	0.64
1:CA:1318:A:H1'	19:CS:37:ARG:HH21	1.61	0.64
1:CA:1422:G:H5'	32:DO:48:PRO:HB3	1.79	0.64
37:DT:95:ARG:HG2	37:DT:95:ARG:NH1	2.12	0.64
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.30	0.64
23:BA:1896:G:N7	56:BA:5340:HOH:O	2.30	0.64
37:BT:24:PRO:HA	37:BT:49:VAL:HG22	1.80	0.64
23:DA:1352:U:P	56:DA:4027:HOH:O	2.55	0.64
43:DZ:158:PRO:HD2	43:DZ:161:VAL:HG21	1.79	0.64
1:AA:792:A:OP2	56:AA:1974:HOH:O	2.15	0.64
1:AA:1441:G:H4'	1:AA:1442:G:C8	2.33	0.64
23:BA:1689:A:N6	23:BA:1698:A:H2	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2337:G:OP1	56:BA:4363:HOH:O	2.15	0.64
1:CA:426:G:OP1	4:CD:36:ARG:NH1	2.31	0.64
23:DA:2127:G:N1	23:DA:2161:C:O2	2.29	0.64
23:DA:2353:G:N7	56:DA:4865:HOH:O	2.30	0.64
23:DA:2434:A:N7	56:DA:4106:HOH:O	2.30	0.64
1:AA:1442:G:O2'	1:AA:1442(A):G:H5'	1.98	0.63
14:AN:26:ARG:HD3	14:AN:43:CYS:HB3	1.80	0.63
23:BA:380:U:OP1	56:BA:4622:HOH:O	2.15	0.63
1:CA:1084:G:H5'	1:CA:1102:A:OP2	1.97	0.63
2:CB:21:ARG:HD2	2:CB:21:ARG:N	2.11	0.63
23:BA:885:C:H3'	23:BA:886:C:H5"	1.80	0.63
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.80	0.63
23:DA:1405:U:H2'	23:DA:1406:U:C6	2.33	0.63
27:DF:185:ASP:HA	27:DF:188:ARG:HD3	1.79	0.63
1:AA:920:U:H2'	1:AA:921:U:C6	2.33	0.63
13:AM:50:GLU:HA	13:AM:53:VAL:HB	1.81	0.63
23:BA:1420:U:HO2'	23:BA:1421:G:P	2.21	0.63
1:CA:1280:A:H5'	10:CJ:41:PRO:HD2	1.81	0.63
5:CE:51:VAL:O	5:CE:55:VAL:HG23	1.97	0.63
33:BP:38:GLN:HA	33:BP:41:ARG:HG2	1.80	0.63
2:CB:134:GLU:HA	2:CB:137:ARG:HE	1.64	0.63
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.80	0.63
7:CG:149:ARG:HD2	11:CK:59:TYR:CE1	2.34	0.63
22:CY:30:TRP:HD1	22:CY:89:GLN:HG3	1.64	0.63
26:DE:55:ASN:HB3	26:DE:58:ARG:HG3	1.81	0.63
1:CA:1170:A:N6	1:CA:1171:G:N3	2.45	0.63
3:CC:77:ILE:O	3:CC:84:ILE:N	2.31	0.63
23:DA:527:C:OP1	56:DA:4811:HOH:O	2.15	0.63
23:DA:2114:A:O2'	23:DA:2167:U:O3'	2.15	0.63
31:DN:24:GLY:HA2	31:DN:27:ALA:HB3	1.80	0.63
1:AA:1346:A:H2'	7:AG:10:ARG:HH22	1.62	0.63
23:DA:1153:C:OP1	38:DU:92:ARG:NH1	2.25	0.63
23:DA:2318:G:O2'	23:DA:2319:G:OP1	2.15	0.63
32:DO:98:VAL:HG13	32:DO:117:LEU:HB3	1.80	0.63
52:D8:29:LYS:HG2	52:D8:44:LYS:HB3	1.81	0.63
1:AA:17:U:H2'	1:AA:18:C:C6	2.33	0.63
1:AA:1108:G:H5'	3:AC:176:HIS:CD2	2.33	0.63
1:AA:1129:C:N4	1:AA:1134:G:N7	2.47	0.63
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.24	0.63
2:AB:98:LEU:HB2	2:AB:101:MET:HE3	1.81	0.63
16:AP:51:VAL:HG12	16:AP:53:VAL:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1300:U:H4'	23:BA:1301:A:H5'	1.81	0.63
1:CA:544:G:OP1	4:CD:62:GLN:NE2	2.19	0.63
1:CA:1170:A:C6	1:CA:1171:G:H1'	2.33	0.63
1:CA:1493:A:O2'	1:CA:1494:G:OP1	2.15	0.63
25:DD:137:PRO:O	25:DD:140:THR:HG23	1.99	0.63
33:DP:100:LEU:HD12	33:DP:112:LEU:HD11	1.81	0.63
23:BA:607:U:OP1	27:BF:102:PRO:HA	1.99	0.63
23:BA:668:G:H5'	23:BA:669:G:OP2	1.99	0.63
28:BG:82:LEU:H	28:BG:82:LEU:HD12	1.63	0.63
44:B0:27:GLU:HG3	44:B0:68:GLU:HA	1.80	0.63
1:CA:402:G:O2'	1:CA:620:C:N3	2.31	0.63
23:DA:271(E):U:H2'	23:DA:271(F):C:C6	2.34	0.63
4:AD:65:ARG:HG2	4:AD:75:PHE:CD1	2.34	0.63
1:CA:1030(A):G:N2	1:CA:1030(D):A:OP2	2.22	0.63
23:DA:885:C:H5"	56:DA:5037:HOH:O	1.99	0.63
23:DA:911:A:H2'	34:DQ:9:TYR:OH	1.98	0.63
23:DA:1038:C:H42	23:DA:1117:G:H1	1.46	0.63
23:DA:2134:A:H1'	23:DA:2159:G:H1'	1.81	0.63
23:DA:2577:A:H5'	49:D5:3:LYS:HD2	1.81	0.63
26:BE:47:VAL:HG12	26:BE:49:LEU:HD13	1.81	0.62
1:CA:73:G:H1	1:CA:96:U:H3	1.46	0.62
22:CY:54:ILE:HB	22:CY:61:LEU:HD12	1.81	0.62
26:DE:54:GLN:HB2	26:DE:76:ARG:HB3	1.80	0.62
38:DU:92:ARG:HA	38:DU:95:LEU:HB2	1.81	0.62
1:AA:1030(D):A:H2'	1:AA:1031:G:O4'	1.99	0.62
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.30	0.62
23:BA:1360:A:OP2	56:BA:5236:HOH:O	2.16	0.62
26:BE:77:ILE:HD12	26:BE:195:LEU:HD13	1.79	0.62
3:CC:100:ALA:O	3:CC:102:ASN:N	2.30	0.62
8:CH:121:ASP:HB2	8:CH:125:ARG:NH2	2.14	0.62
23:DA:2349:G:H5'	23:DA:2350:C:OP2	1.99	0.62
25:DD:71:ASP:HB3	25:DD:103:ARG:HH22	1.64	0.62
29:DH:41:MET:HE2	29:DH:65:HIS:HA	1.80	0.62
42:DY:90:LEU:HB3	42:DY:92:ASN:H	1.64	0.62
43:DZ:124:ILE:HG13	43:DZ:125:LEU:H	1.64	0.62
1:AA:446:G:O6	56:AA:2240:HOH:O	2.13	0.62
3:AC:6:HIS:NE2	3:AC:8:ILE:HB	2.14	0.62
27:BF:185:ASP:HA	27:BF:188:ARG:HD3	1.82	0.62
52:B8:23:VAL:HG11	52:B8:47:LYS:HD3	1.81	0.62
1:CA:838:G:H2'	1:CA:839:U:H5"	1.80	0.62
23:DA:2243:U:H2'	23:DA:2244:U:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.34	0.62
23:BA:1310:G:OP2	51:B7:9:ARG:NH1	2.32	0.62
23:BA:2128:C:H42	23:BA:2160:G:H1	1.46	0.62
40:BW:18:ARG:NH1	40:BW:76:VAL:O	2.32	0.62
1:CA:542:G:P	4:CD:10:ARG:HH22	2.22	0.62
23:DA:271(M):G:O2'	23:DA:271(N):U:O5'	2.15	0.62
23:DA:370:G:OP2	56:DA:4254:HOH:O	2.16	0.62
23:DA:1300:U:H4'	23:DA:1301:A:H5'	1.82	0.62
43:DZ:54:HIS:ND1	43:DZ:101:PRO:HG3	2.14	0.62
1:AA:1492:A:H5'	1:AA:1493:A:C8	2.34	0.62
23:BA:2136:C:N4	23:BA:2155:G:N1	2.45	0.62
2:CB:98:LEU:HB2	2:CB:101:MET:HE3	1.81	0.62
20:CT:30:LYS:HA	20:CT:33:ILE:HD12	1.82	0.62
20:CT:43:LEU:O	20:CT:47:GLY:N	2.31	0.62
23:DA:1379:A:H4'	23:DA:1380:G:OP2	2.00	0.62
1:AA:186:C:H2'	1:AA:187:C:C6	2.35	0.62
1:AA:473:G:H2'	1:AA:474:G:H8	1.63	0.62
23:BA:251:A:C5	23:BA:252:G:H1'	2.34	0.62
23:BA:1109:C:C5	23:BA:1110:G:C6	2.87	0.62
23:BA:1693:U:O2'	25:BD:14:ARG:NH2	2.32	0.62
23:BA:1877:A:H5'	23:BA:1878:G:OP2	1.98	0.62
23:BA:2113:U:H2'	23:BA:2114:A:O4'	1.99	0.62
23:BA:2894:G:H8	23:BA:2894:G:O5'	1.83	0.62
32:BO:2:ILE:HD12	32:BO:6:THR:HG21	1.80	0.62
1:CA:612:C:O2	1:CA:629:G:N2	2.32	0.62
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.81	0.62
3:CC:92:ALA:HB2	3:CC:99:VAL:H	1.63	0.62
23:DA:330:A:H2	23:DA:1210:A:H2'	1.63	0.62
23:DA:509:C:O3'	56:DA:3892:HOH:O	2.16	0.62
2:AB:134:GLU:HA	2:AB:137:ARG:HE	1.65	0.62
23:BA:1266:G:O5'	40:BW:15:ARG:NH2	2.32	0.62
24:BB:66:A:N6	24:BB:108:U:H2'	2.13	0.62
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.82	0.62
1:CA:920:U:H2'	1:CA:921:U:H6	1.64	0.62
1:CA:1129:C:N4	1:CA:1134:G:N7	2.48	0.62
1:CA:1226:C:H4'	19:CS:80:TYR:CZ	2.34	0.62
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	1.97	0.62
23:DA:2887:U:H2'	23:DA:2888:C:C6	2.34	0.62
1:AA:1318:A:H1'	19:AS:37:ARG:HH21	1.65	0.62
38:BU:76:TYR:OH	38:BU:92:ARG:NH1	2.32	0.62
1:CA:954:G:OP1	22:CY:17:ARG:NH2	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1448:G:H4'	23:DA:1542:A:OP1	2.00	0.62
23:DA:1531:C:H42	23:DA:1538:G:H1	1.46	0.62
23:DA:2285:C:OP2	50:D6:6:ARG:NH1	2.33	0.62
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.81	0.62
23:BA:2122:U:H2'	23:BA:2123:G:H8	1.65	0.62
23:BA:2349:G:H3'	23:BA:2350:C:H5"	1.82	0.62
23:DA:84:A:H5"	42:DY:8:LYS:HE3	1.82	0.62
23:DA:2113:U:H2'	23:DA:2114:A:O4'	2.00	0.62
23:DA:2777:G:H5"	23:DA:2778:A:H5'	1.82	0.62
46:D2:51:ARG:HA	46:D2:54:LYS:HB2	1.81	0.62
1:AA:1010:G:N2	1:AA:1020:U:H1'	2.15	0.62
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG12	1.82	0.62
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.81	0.62
21:CU:5:ASP:O	21:CU:11:GLY:HA3	1.99	0.62
23:DA:1364:G:OP1	45:D1:2:SER:HA	2.00	0.62
23:DA:2646:C:OP2	23:DA:2732:G:O2'	2.17	0.62
36:DS:96:GLY:HA2	36:DS:97:ARG:C	2.25	0.62
49:D5:51:TYR:CE1	49:D5:56:LYS:HG2	2.33	0.62
25:BD:8:PRO:HB3	25:BD:14:ARG:HB2	1.81	0.61
25:BD:221:VAL:HG22	25:BD:226:MET:HE3	1.81	0.61
1:CA:222:U:H2'	1:CA:223:U:H6	1.64	0.61
1:CA:1089:G:H1	1:CA:1096:C:H42	1.48	0.61
19:CS:43:GLU:H	19:CS:43:GLU:CD	2.05	0.61
23:DA:300:A:P	42:DY:86:ARG:HH22	2.23	0.61
27:DF:197:ASP:OD2	27:DF:197:ASP:N	2.32	0.61
42:DY:79:CYS:HB2	42:DY:81:LYS:H	1.64	0.61
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.83	0.61
1:CA:1316:G:N2	1:CA:1319:A:O5'	2.32	0.61
1:AA:1010:G:H2'	1:AA:1011:G:C8	2.34	0.61
2:AB:87:ARG:HE	2:AB:233:SER:CB	2.13	0.61
23:DA:833:U:O2	33:DP:55:ARG:NH2	2.33	0.61
23:DA:1633:G:OP2	56:DA:4052:HOH:O	2.16	0.61
23:DA:2198:A:H4'	23:DA:2199:A:OP1	2.00	0.61
37:DT:24:PRO:HD3	37:DT:52:ILE:HD12	1.82	0.61
23:BA:1531:C:H42	23:BA:1538:G:H1	1.47	0.61
23:BA:1778:U:H2'	23:BA:1784:A:N6	2.15	0.61
23:BA:2142:C:H2'	23:BA:2143:C:C6	2.35	0.61
23:BA:2577:A:H5'	49:B5:3:LYS:HD2	1.82	0.61
23:BA:2810:A:N6	23:BA:2891:G:O2'	2.32	0.61
42:BY:68:HIS:ND1	42:BY:70:SER:HB3	2.16	0.61
1:CA:405:U:O4	4:CD:2:GLY:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:430:A:OP1	4:CD:9:CYS:N	2.34	0.61
2:CB:236:TYR:CG	2:CB:239:VAL:HB	2.35	0.61
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.00	0.61
16:CP:48:TRP:CD1	16:CP:48:TRP:H	2.17	0.61
23:DA:300:A:OP2	42:DY:86:ARG:NH2	2.33	0.61
23:DA:1429:G:H2'	23:DA:1430:C:C6	2.34	0.61
26:DE:116:VAL:HG13	26:DE:122:PHE:HB2	1.81	0.61
1:AA:1009:G:H2'	1:AA:1010:G:O4'	2.00	0.61
23:BA:1047:G:H2'	23:BA:1110:G:N2	2.15	0.61
23:BA:2821:A:OP2	56:BA:4891:HOH:O	2.16	0.61
30:BI:38:LEU:HB3	30:BI:40:THR:HG23	1.80	0.61
7:CG:20:ASP:HB3	7:CG:23:VAL:HG23	1.81	0.61
13:CM:69:GLU:C	13:CM:71:ARG:H	2.08	0.61
4:AD:188:LEU:HD23	4:AD:188:LEU:H	1.65	0.61
7:AG:111:ARG:NH1	7:AG:113:GLU:OE2	2.33	0.61
25:BD:71:ASP:OD2	25:BD:103:ARG:NH2	2.32	0.61
1:CA:656:C:O2'	15:CO:28:GLN:NE2	2.19	0.61
4:CD:13:ARG:NH1	4:CD:38:TYR:O	2.32	0.61
9:CI:71:SER:O	9:CI:75:ASP:HB2	2.00	0.61
23:DA:764:A:H2	25:DD:219:PRO:HG3	1.64	0.61
23:DA:2686:G:H5'	56:DA:4444:HOH:O	2.00	0.61
23:DA:2894:G:H8	23:DA:2894:G:O5'	1.83	0.61
48:D4:42:PHE:HB3	48:D4:43:TYR:HB2	1.82	0.61
9:AI:21:PRO:HA	9:AI:59:PHE:HA	1.83	0.61
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.01	0.61
26:BE:152:LYS:HD2	31:BN:77:GLY:HA3	1.83	0.61
23:DA:2208:A:H1'	23:DA:2219:G:C4	2.36	0.61
23:DA:2497:A:H5"	56:DA:3898:HOH:O	2.00	0.61
25:DD:71:ASP:OD2	25:DD:103:ARG:NH2	2.33	0.61
26:DE:152:LYS:HD2	31:DN:77:GLY:HA3	1.82	0.61
19:AS:36:ARG:NH2	19:AS:75:ALA:O	2.32	0.61
29:BH:41:MET:HE2	29:BH:65:HIS:HA	1.81	0.61
1:CA:437:U:H5"	4:CD:155:LEU:HD21	1.82	0.61
1:CA:827:U:H5"	1:CA:828:A:OP2	2.00	0.61
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.35	0.61
1:CA:1238:A:N3	1:CA:1241:G:O2'	2.31	0.61
1:CA:1244:C:N3	1:CA:1293:G:N2	2.40	0.61
24:DB:106:G:H5'	43:DZ:31:ARG:HG2	1.82	0.61
5:AE:143:ARG:NH1	8:AH:77:GLU:OE1	2.34	0.61
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.66	0.61
23:BA:1045:A:H1'	23:BA:1047:G:C2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1429:G:H2'	23:BA:1430:C:C6	2.36	0.61
43:BZ:69:THR:HG22	43:BZ:90:VAL:HA	1.83	0.61
1:CA:664:G:P	18:CR:64:ARG:HH21	2.23	0.61
23:DA:301:G:OP2	42:DY:84:ARG:NH2	2.34	0.61
23:DA:1040:C:H2'	23:DA:1041:C:O4'	2.00	0.61
23:DA:1266:G:O5'	40:DW:15:ARG:NH2	2.33	0.61
1:AA:227:G:O2'	16:AP:62:VAL:HG22	2.01	0.61
4:AD:31:CYS:HB3	4:AD:33:MET:HB2	1.83	0.61
23:BA:1721:G:H5'	23:BA:1722:A:OP2	2.01	0.61
43:BZ:158:PRO:HD2	43:BZ:161:VAL:HG21	1.83	0.61
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.35	0.61
13:CM:49:THR:O	13:CM:51:ALA:N	2.34	0.61
23:DA:530:G:O4'	23:DA:530:G:N3	2.33	0.61
30:DI:41:GLU:HA	30:DI:44:LEU:HB2	1.82	0.61
52:D8:62:LEU:HB3	52:D8:65:GLU:HG2	1.83	0.61
1:AA:1029:C:O2	1:AA:1032:G:N1	2.34	0.60
1:AA:1259:C:N4	1:AA:1260:C:O2	2.34	0.60
23:BA:2327:A:H2'	23:BA:2328:A:C8	2.35	0.60
1:CA:1227:A:OP1	19:CS:80:TYR:OH	2.13	0.60
8:CH:87:SER:HA	8:CH:93:VAL:HG23	1.82	0.60
13:CM:48:LEU:O	13:CM:52:GLU:HB2	2.00	0.60
23:DA:945:A:C2	56:DA:4012:HOH:O	2.50	0.60
23:DA:2114:A:H1'	23:DA:2168:G:H5'	1.83	0.60
23:DA:2142:C:H2'	23:DA:2143:C:C6	2.36	0.60
26:DE:24:THR:HG22	26:DE:186:GLY:O	2.01	0.60
37:DT:24:PRO:HA	37:DT:49:VAL:HG22	1.82	0.60
1:AA:91:C:H2'	1:AA:92:C:C6	2.37	0.60
1:AA:612:C:O2	1:AA:629:G:N2	2.33	0.60
9:AI:53:VAL:O	9:AI:55:ALA:N	2.33	0.60
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.36	0.60
3:CC:70:VAL:O	3:CC:106:VAL:N	2.34	0.60
15:CO:24:SER:O	15:CO:24:SER:OG	2.19	0.60
23:DA:11:G:H2'	23:DA:12:U:H5'	1.82	0.60
27:DF:101:LEU:HD12	27:DF:102:PRO:HD2	1.82	0.60
1:AA:838:G:H2'	1:AA:839:U:H5"	1.84	0.60
2:AB:18:GLY:HA3	2:AB:41:ILE:HD13	1.81	0.60
9:AI:8:GLY:HA3	9:AI:76:ALA:O	2.01	0.60
28:BG:16:ARG:HH11	28:BG:16:ARG:HG3	1.66	0.60
6:AF:82:ARG:HH11	6:AF:82:ARG:HG3	1.66	0.60
23:BA:2014:A:OP1	56:BA:4152:HOH:O	2.16	0.60
25:BD:108:PRO:HB3	25:BD:143:HIS:CE1	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BR:102:GLU:OE2	40:BW:37:ARG:NH1	2.29	0.60
1:CA:1278:U:H5"	1:CA:1279:A:O4'	2.01	0.60
34:DQ:37:LEU:HD21	34:DQ:130:LYS:HE2	1.83	0.60
1:AA:262:A:H2'	1:AA:263:A:C8	2.36	0.60
1:AA:436:C:O2'	1:AA:437:U:OP2	2.18	0.60
1:AA:600:C:H2'	1:AA:601:C:C6	2.36	0.60
1:AA:828:A:H2'	1:AA:829:G:O4'	2.01	0.60
1:AA:1342:C:O2'	9:AI:124:GLN:HG2	2.00	0.60
17:AQ:18:THR:OG1	17:AQ:69:LYS:NZ	2.30	0.60
23:BA:639:U:H2'	23:BA:640:C:C6	2.36	0.60
23:BA:2208:A:H1'	23:BA:2219:G:C4	2.36	0.60
34:BQ:37:LEU:HD21	34:BQ:130:LYS:HE2	1.83	0.60
1:CA:437:U:O3'	4:CD:125:HIS:CE1	2.55	0.60
1:CA:538:G:H5"	12:CL:114:LYS:CB	2.25	0.60
21:CU:3:LYS:NZ	56:CU:101:HOH:O	2.34	0.60
25:DD:275:LYS:HG3	25:DD:276:LYS:HB2	1.83	0.60
27:DF:184:TYR:CD2	27:DF:188:ARG:HD2	2.36	0.60
33:DP:63:PRO:HG2	52:D8:25:MET:HB2	1.84	0.60
1:AA:67:C:H4'	1:AA:172:A:O4'	2.01	0.60
2:AB:67:THR:HA	2:AB:90:MET:HE2	1.84	0.60
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.83	0.60
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.67	0.60
23:BA:662:G:H5"	33:BP:16:ARG:HG2	1.83	0.60
23:BA:1250:G:N7	33:BP:18:ARG:NH2	2.49	0.60
23:BA:2162:G:O3'	23:BA:2172:U:O2'	2.14	0.60
1:CA:473:G:H2'	1:CA:474:G:H8	1.66	0.60
1:CA:791:G:N1	1:CA:1498:U:OP1	2.30	0.60
23:DA:2122:U:H2'	23:DA:2123:G:H8	1.66	0.60
43:DZ:152:ALA:HA	43:DZ:155:LEU:HD13	1.83	0.60
2:AB:69:LEU:HD13	2:AB:91:PRO:HB2	1.84	0.60
3:AC:6:HIS:CD2	3:AC:8:ILE:H	2.18	0.60
23:BA:517:C:OP1	49:B5:16:ARG:NH2	2.34	0.60
1:CA:1014:A:C2	1:CA:1219:U:H1'	2.37	0.60
13:CM:91:ARG:NH2	13:CM:97:PRO:O	2.35	0.60
24:DB:2:C:H2'	24:DB:3:C:C6	2.36	0.60
31:DN:15:LEU:HB2	31:DN:135:PRO:HB2	1.83	0.60
33:DP:126:VAL:HG12	33:DP:148:LEU:HD22	1.83	0.60
36:DS:11:LYS:O	36:DS:15:ARG:HB2	2.01	0.60
43:DZ:33:LEU:HD23	43:DZ:90:VAL:HG21	1.84	0.60
43:DZ:161:VAL:O	43:DZ:161:VAL:HG13	2.01	0.60
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1153:C:OP1	38:BU:92:ARG:NH1	2.31	0.60
23:BA:2023:G:H5'	23:BA:2617:C:H4'	1.82	0.60
23:BA:2887:U:H2'	23:BA:2888:C:C6	2.36	0.60
30:BI:27:ARG:HD2	45:B1:71:TYR:CE1	2.37	0.60
1:CA:143:A:H2	1:CA:220:G:H1	1.50	0.60
2:CB:69:LEU:HD13	2:CB:91:PRO:HB2	1.84	0.60
9:CI:17:VAL:HG21	9:CI:80:GLY:C	2.27	0.60
23:DA:830:G:H5'	56:DA:4014:HOH:O	2.01	0.60
23:BA:2134:A:H1'	23:BA:2159:G:H1'	1.83	0.60
56:BA:4878:HOH:O	26:BE:135:HIS:NE2	2.31	0.60
23:DA:760:G:OP2	56:DA:4042:HOH:O	2.16	0.60
23:DA:997:G:OP1	38:DU:92:ARG:HG2	2.01	0.60
23:DA:1796:U:H2'	23:DA:1797:C:C6	2.37	0.60
23:DA:2130:U:H1'	23:DA:2158:A:N1	2.16	0.60
23:DA:2833:G:H3'	23:DA:2834:G:H5"	1.84	0.60
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.02	0.60
20:AT:10:LEU:HD23	20:AT:12:ALA:H	1.66	0.60
23:BA:1021:A:H3'	23:BA:1021:A:C8	2.37	0.60
23:BA:1174:A:H1'	23:BA:1175:U:H5"	1.83	0.60
23:BA:2777:G:H5"	23:BA:2778:A:H5'	1.84	0.60
1:CA:353:A:H5'	1:CA:353:A:C8	2.35	0.60
1:CA:542:G:OP1	4:CD:10:ARG:NH1	2.35	0.60
1:CA:564:C:OP1	56:CA:1906:HOH:O	2.17	0.60
16:AP:20:VAL:HG23	16:AP:35:LYS:HA	1.83	0.59
22:AY:85:LEU:O	22:AY:89:GLN:HG2	2.02	0.59
25:BD:145:VAL:HG12	25:BD:146:GLU:O	2.02	0.59
36:BS:96:GLY:HA2	36:BS:97:ARG:C	2.27	0.59
42:BY:90:LEU:HB3	42:BY:92:ASN:H	1.66	0.59
1:CA:1157:A:H61	1:CA:1178:G:H21	1.47	0.59
1:CA:1172:C:H2'	1:CA:1173:G:H8	1.67	0.59
4:CD:65:ARG:HG2	4:CD:75:PHE:CD1	2.37	0.59
11:CK:79:SER:HA	11:CK:104:GLN:HB2	1.84	0.59
42:DY:38:ILE:HD11	42:DY:66:PRO:HG3	1.84	0.59
7:AG:37:ASN:OD1	9:AI:40:LEU:HA	2.02	0.59
23:BA:250:G:OP2	52:B8:13:ARG:NH2	2.36	0.59
23:BA:2833:G:H3'	23:BA:2834:G:H5"	1.85	0.59
37:BT:51:ARG:HG3	37:BT:98:LYS:HE3	1.83	0.59
37:BT:118:ARG:HG3	37:BT:118:ARG:NH1	2.14	0.59
1:CA:609:A:N7	56:CA:1938:HOH:O	2.32	0.59
1:CA:1089:G:C6	1:CA:1090:U:C4	2.90	0.59
3:CC:52:LEU:HB3	3:CC:70:VAL:HG13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:49:GLU:HG2	8:CH:62:TYR:HE2	1.67	0.59
23:DA:1778:U:OP2	56:DA:4370:HOH:O	2.17	0.59
23:BA:1047:G:H2'	23:BA:1110:G:H1	1.66	0.59
27:BF:197:ASP:OD2	27:BF:197:ASP:N	2.33	0.59
1:CA:149:A:HO2'	1:CA:150:C:H6	1.47	0.59
1:CA:957:U:H4'	19:CS:79:THR:HG23	1.83	0.59
1:CA:991:U:C4	1:CA:1212:U:H1'	2.37	0.59
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.37	0.59
25:DD:71:ASP:HB3	25:DD:103:ARG:NH2	2.17	0.59
1:AA:57:G:H2'	1:AA:58:C:C6	2.37	0.59
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.85	0.59
23:BA:1619:G:N7	56:BA:5539:HOH:O	2.32	0.59
30:BI:111:PRO:C	30:BI:113:ARG:H	2.08	0.59
1:CA:1136:U:H5"	1:CA:1137:C:C4	2.38	0.59
23:DA:1125:G:H5'	53:D9:37:GLY:HA2	1.84	0.59
23:DA:1929:G:H4'	23:DA:1930:G:OP1	2.01	0.59
43:DZ:69:THR:HG22	43:DZ:90:VAL:HA	1.85	0.59
44:D0:27:GLU:HG3	44:D0:68:GLU:HA	1.84	0.59
1:AA:131:C:H2'	1:AA:132:C:H6	1.67	0.59
1:AA:869:G:N7	56:AA:2196:HOH:O	2.32	0.59
9:AI:9:ARG:HG2	9:AI:14:VAL:HG13	1.85	0.59
23:BA:588:U:H2'	23:BA:589:C:C6	2.37	0.59
23:BA:2577:A:O4'	49:B5:3:LYS:HB2	2.03	0.59
30:BI:145:VAL:HG12	30:BI:146:ALA:H	1.67	0.59
33:BP:38:GLN:O	33:BP:39:LYS:CB	2.51	0.59
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.38	0.59
3:CC:11:ARG:HB3	3:CC:15:THR:H	1.66	0.59
7:CG:111:ARG:HB2	7:CG:119:ARG:HD2	1.84	0.59
9:CI:99:LEU:HB3	9:CI:101:PHE:CD1	2.37	0.59
23:DA:1019:U:O2'	23:DA:1021:A:H2	1.84	0.59
23:DA:1025:G:C4	23:DA:1135:C:H1'	2.37	0.59
23:DA:2304:G:H21	28:DG:156:ASP:CG	2.10	0.59
47:D3:23:LEU:HD13	47:D3:50:VAL:HG11	1.84	0.59
5:AE:79:GLU:HG3	5:AE:93:PRO:HD2	1.84	0.59
8:AH:87:SER:HA	8:AH:93:VAL:HG23	1.84	0.59
23:BA:1025:G:C4	23:BA:1135:C:H1'	2.37	0.59
30:BI:133:HIS:ND1	30:BI:134:PRO:O	2.35	0.59
35:BR:67:LEU:HD13	35:BR:76:VAL:HG21	1.85	0.59
1:CA:47:C:H42	1:CA:361:G:H1	1.50	0.59
1:CA:1401:G:OP1	22:CY:80:LYS:HE2	2.02	0.59
16:CP:75:ARG:O	16:CP:78:GLY:N	2.27	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:662:G:H5"	33:DP:16:ARG:HG2	1.84	0.59
23:DA:885:C:H3'	23:DA:886:C:H5"	1.83	0.59
23:DA:2074:U:H2'	23:DA:2075:U:C6	2.38	0.59
36:DS:82:ILE:CA	36:DS:83:LYS:HB2	2.31	0.59
1:AA:37:U:O2'	1:AA:547:A:N1	2.35	0.59
2:AB:194:PRO:C	2:AB:196:LEU:H	2.11	0.59
23:BA:11:G:H2'	23:BA:12:U:H5'	1.84	0.59
23:BA:1951:U:O4	56:BA:4257:HOH:O	2.14	0.59
24:BB:11:C:H3'	24:BB:12:C:C6	2.38	0.59
1:CA:1456:G:N2	20:CT:51:GLU:OE1	2.33	0.59
6:CF:15:ASP:OD2	6:CF:17:SER:N	2.24	0.59
22:CY:16:ILE:HB	22:CY:71:TYR:OH	2.03	0.59
36:DS:25:ARG:NH1	36:DS:42:ASP:OD2	2.36	0.59
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.38	0.59
1:AA:987:G:H1	1:AA:1218:C:N4	2.01	0.59
1:AA:1117:G:H4'	9:AI:104:ARG:NH1	2.16	0.59
1:CA:828:A:H2'	1:CA:829:G:O4'	2.03	0.59
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.37	0.59
1:CA:1348:U:H2'	1:CA:1349:A:C8	2.35	0.59
23:DA:95:G:O2'	46:D2:46:GLN:HA	2.03	0.59
23:DA:2168:G:H22	23:DA:2171:A:H2'	1.67	0.59
42:DY:68:HIS:ND1	42:DY:70:SER:HB3	2.17	0.59
10:AJ:9:ARG:HB2	10:AJ:95:GLU:HB3	1.85	0.59
23:BA:1882:C:H5'	23:BA:1883:G:OP2	2.02	0.59
1:CA:1259:C:N4	1:CA:1260:C:O2	2.35	0.59
6:CF:81:ILE:HD11	25:DD:125:ILE:HB	1.84	0.59
23:DA:203:C:H3'	23:DA:204:A:H5"	1.85	0.59
23:DA:1359:A:N3	23:DA:1359:A:H5'	2.17	0.59
50:D6:6:ARG:NH1	50:D6:26:ASN:HB2	2.17	0.59
1:AA:78:G:H1	1:AA:91:C:N4	2.01	0.59
1:AA:143:A:H2	1:AA:220:G:H1	1.51	0.59
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.83	0.59
23:BA:139(A):G:N2	41:BX:44:GLU:OE1	2.36	0.59
23:BA:271(E):U:H2'	23:BA:271(F):C:C6	2.38	0.59
23:BA:886:C:H2'	23:BA:887:A:H5"	1.85	0.59
27:BF:101:LEU:O	27:BF:106:ARG:NH1	2.33	0.59
33:BP:63:PRO:HG2	52:B8:25:MET:HB2	1.85	0.59
34:BQ:51:ARG:NH2	43:BZ:186:GLU:OE1	2.35	0.59
36:BS:95:HIS:C	36:BS:99:LYS:HB3	2.27	0.59
1:CA:100:C:H2'	1:CA:101:A:C8	2.37	0.59
2:CB:19:HIS:ND1	2:CB:189:ASP:OD2	2.25	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:55:LYS:HE3	10:CJ:56:HIS:CE1	2.37	0.59
16:CP:20:VAL:HG21	16:CP:32:TYR:CD1	2.38	0.59
23:DA:1991:U:H2'	23:DA:1992:G:H5"	1.83	0.59
1:AA:1300:G:O2'	1:AA:1301:U:O5'	2.21	0.58
23:BA:392:C:OP1	56:BA:4220:HOH:O	2.17	0.58
1:CA:59:A:H1'	1:CA:354:G:N2	2.18	0.58
1:CA:977:A:H2'	1:CA:977:A:N3	2.16	0.58
23:DA:928:G:O6	56:DA:5042:HOH:O	2.16	0.58
23:DA:1019:U:H3	23:DA:1142(A):A:H62	1.50	0.58
23:DA:1774:C:OP1	56:DA:3839:HOH:O	2.17	0.58
23:DA:2506:U:OP1	26:DE:144:ARG:NH2	2.36	0.58
23:BA:1448:G:H4'	23:BA:1542:A:OP1	2.03	0.58
23:BA:2295:C:C2'	23:BA:2296:U:H5'	2.32	0.58
23:BA:2572:A:N7	26:BE:144:ARG:HD2	2.18	0.58
1:CA:64:G:H4'	1:CA:65:U:H3'	1.85	0.58
1:CA:791:G:N2	1:CA:1497:G:O3'	2.34	0.58
1:CA:1321:C:H4'	13:CM:87:TYR:CE2	2.39	0.58
2:CB:87:ARG:HE	2:CB:233:SER:CB	2.13	0.58
3:CC:149:ALA:HA	3:CC:201:TYR:O	2.03	0.58
45:D1:6:GLU:HG3	45:D1:61:ARG:O	2.03	0.58
1:AA:1249:C:O2'	9:AI:73:GLN:NE2	2.37	0.58
4:AD:13:ARG:NH1	4:AD:38:TYR:O	2.35	0.58
4:AD:158:ILE:O	4:AD:162:LEU:N	2.36	0.58
23:BA:7:G:H2'	23:BA:8:A:O4'	2.03	0.58
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.34	0.58
26:DE:47:VAL:HG12	26:DE:49:LEU:HD13	1.85	0.58
1:AA:1047:G:H5"	14:AN:4:LYS:HD3	1.85	0.58
41:BX:31:HIS:HD2	41:BX:33:LYS:N	1.93	0.58
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.37	0.58
1:CA:544:G:OP2	4:CD:66:ARG:NH2	2.37	0.58
18:CR:47:THR:HG23	18:CR:49:LYS:HG3	1.84	0.58
23:DA:686:G:H5"	51:D7:11:LYS:HE2	1.84	0.58
23:DA:1022:G:H22	23:DA:1142(A):A:H2	1.47	0.58
1:AA:141:A:H1'	1:AA:182:U:O2	2.03	0.58
10:AJ:48:THR:HG1	10:AJ:62:HIS:CE1	2.21	0.58
23:BA:1430:C:H2'	23:BA:1431:U:C6	2.38	0.58
1:CA:826:C:H2'	1:CA:827:U:C6	2.37	0.58
1:CA:1067:A:O2'	1:CA:1068:G:OP2	2.15	0.58
1:CA:1068:G:N2	1:CA:1191:A:H1'	2.19	0.58
1:CA:1216:G:H5"	14:CN:5:ALA:HB2	1.85	0.58
23:DA:250:G:OP2	52:D8:13:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1439:A:OP1	56:DA:4342:HOH:O	2.17	0.58
1:AA:1126:U:OP2	1:AA:1281:U:H1'	2.03	0.58
4:AD:30:LYS:C	4:AD:32:ALA:H	2.09	0.58
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.86	0.58
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.38	0.58
3:CC:122:GLU:HA	3:CC:125:GLU:HG3	1.86	0.58
23:DA:251:A:C5	23:DA:252:G:H1'	2.38	0.58
28:DG:75:LYS:HA	28:DG:84:LYS:HE2	1.86	0.58
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.67	0.58
1:AA:1422:G:H5'	32:BO:48:PRO:HB3	1.86	0.58
23:BA:84:A:H5"	42:BY:8:LYS:HE3	1.85	0.58
36:BS:11:LYS:O	36:BS:15:ARG:HB2	2.03	0.58
36:BS:96:GLY:N	36:BS:99:LYS:H	2.02	0.58
45:B1:50:ARG:HG2	45:B1:59:THR:HG22	1.86	0.58
52:B8:23:VAL:CG1	52:B8:47:LYS:HD3	2.34	0.58
1:CA:1273:G:H5'	1:CA:1274:G:OP2	2.04	0.58
4:CD:158:ILE:O	4:CD:162:LEU:N	2.36	0.58
11:CK:85:ARG:HE	11:CK:111:ASP:HB3	1.69	0.58
23:DA:139(A):G:H22	41:DX:44:GLU:CD	2.11	0.58
23:DA:861:A:C2	23:DA:917:A:C4	2.91	0.58
23:DA:1430:C:H2'	23:DA:1431:U:H6	1.69	0.58
25:DD:275:LYS:HG3	25:DD:276:LYS:N	2.19	0.58
1:AA:664:G:P	18:AR:64:ARG:HH21	2.27	0.58
1:AA:1110:A:OP2	56:AA:2202:HOH:O	2.17	0.58
3:AC:51:GLY:HA3	3:AC:71:ALA:HB3	1.86	0.58
23:BA:2137:C:O2	23:BA:2137:C:H2'	2.02	0.58
23:BA:2243:U:H2'	23:BA:2244:U:C6	2.38	0.58
26:BE:118:LYS:O	56:BE:408:HOH:O	2.16	0.58
32:BO:16:ALA:HB2	32:BO:52:VAL:HG21	1.86	0.58
34:BQ:135:ASP:OD2	43:BZ:49:ARG:NH2	2.37	0.58
2:CB:194:PRO:C	2:CB:196:LEU:H	2.11	0.58
15:CO:5:LYS:O	15:CO:9:GLN:HG2	2.03	0.58
17:CQ:66:SER:O	17:CQ:70:ARG:NH1	2.37	0.58
23:DA:889:C:O2'	23:DA:890:A:H8	1.87	0.58
23:DA:2469:A:H4'	34:DQ:56:ARG:HG2	1.85	0.58
1:CA:1457:G:H2'	1:CA:1458:G:C8	2.39	0.58
5:CE:144:THR:OG1	5:CE:147:ASP:OD2	2.19	0.58
26:DE:203:LYS:CB	26:DE:204:ALA:HA	2.33	0.58
28:DG:96:ARG:N	28:DG:99:MET:HE2	2.19	0.58
36:DS:34:HIS:O	36:DS:97:ARG:NH2	2.37	0.58
1:AA:1292:U:O2'	1:AA:1293:G:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:87:ARG:HH21	2:AB:233:SER:HB2	1.66	0.58
5:AE:50:GLU:HB2	5:AE:53:LEU:HD13	1.84	0.58
23:BA:1379:A:H4'	23:BA:1380:G:OP2	2.02	0.58
2:CB:87:ARG:HD2	2:CB:219:VAL:HG11	1.86	0.58
21:CU:14:TRP:CE3	21:CU:15:ARG:HG3	2.39	0.58
23:DA:1204:A:H61	23:DA:1240:U:H2'	1.69	0.58
37:DT:118:ARG:HG3	37:DT:118:ARG:NH1	2.16	0.58
49:D5:16:ARG:NH1	49:D5:17:ASP:OD1	2.37	0.58
1:AA:91:C:O2'	1:AA:92:C:H5'	2.04	0.57
1:AA:228:A:H4'	16:AP:62:VAL:HG13	1.84	0.57
1:AA:434:U:H2'	1:AA:435:C:C6	2.39	0.57
43:BZ:161:VAL:HG13	43:BZ:161:VAL:O	2.04	0.57
1:CA:316:G:OP2	1:CA:351:G:O2'	2.22	0.57
3:CC:123:GLN:O	3:CC:128:PHE:HB2	2.03	0.57
23:DA:323:G:O2'	23:DA:1205:U:N3	2.34	0.57
23:DA:963:U:OP2	56:DA:3795:HOH:O	2.17	0.57
23:DA:1021:A:C8	23:DA:1021:A:H3'	2.39	0.57
23:DA:1494:A:O2'	23:DA:1495:A:H5'	2.04	0.57
25:DD:3:VAL:HG13	25:DD:17:THR:HB	1.86	0.57
1:AA:748:C:H4'	1:AA:749:C:O5'	2.03	0.57
1:AA:974:A:H8	1:AA:974:A:OP1	1.87	0.57
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.04	0.57
3:AC:58:GLU:HB2	3:AC:65:ALA:HB3	1.85	0.57
23:BA:642:G:H21	23:BA:646:A:H2	1.52	0.57
23:BA:1405:U:H2'	23:BA:1406:U:C6	2.39	0.57
1:CA:435:C:N4	1:CA:436:C:H41	2.02	0.57
1:CA:1011:G:H1	1:CA:1018:C:H42	1.52	0.57
1:CA:1441:G:O2'	1:CA:1459:C:N3	2.32	0.57
23:DA:639:U:H2'	23:DA:640:C:C6	2.39	0.57
23:DA:2023:G:H5'	23:DA:2617:C:H4'	1.87	0.57
23:DA:2136:C:N4	23:DA:2155:G:N1	2.46	0.57
23:DA:2136:C:N3	23:DA:2155:G:N2	2.45	0.57
27:DF:101:LEU:O	27:DF:106:ARG:NH1	2.29	0.57
41:DX:31:HIS:HD2	41:DX:33:LYS:N	1.95	0.57
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.03	0.57
23:BA:2287:A:N6	23:BA:2344:U:H3	1.95	0.57
1:CA:662:G:H2'	1:CA:663:A:C8	2.40	0.57
1:CA:763:G:H2'	1:CA:764:C:H6	1.69	0.57
19:CS:49:ILE:O	19:CS:60:VAL:N	2.31	0.57
23:DA:2439:A:H5'	23:DA:2439:A:C8	2.39	0.57
23:DA:2463:C:O2'	23:DA:2464:C:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:113:VAL:HG11	29:DH:151:ILE:HD13	1.86	0.57
1:AA:353:A:H5'	1:AA:353:A:C8	2.36	0.57
23:BA:621:A:OP2	33:BP:108:LYS:NZ	2.36	0.57
23:BA:911:A:H2'	34:BQ:9:TYR:OH	2.05	0.57
26:BE:143:ASN:HD22	26:BE:147:PRO:HD3	1.70	0.57
33:BP:126:VAL:HG12	33:BP:148:LEU:HD22	1.86	0.57
1:CA:922:G:N3	1:CA:1398:A:H2	2.02	0.57
1:CA:1414:U:H3	1:CA:1486:G:H1	1.52	0.57
23:DA:1330:C:OP1	56:DA:4713:HOH:O	2.17	0.57
23:DA:1434:A:H61	23:DA:1558:A:H62	1.51	0.57
23:DA:2115:G:O2'	23:DA:2166:G:N2	2.36	0.57
31:BN:96:GLU:CD	31:BN:96:GLU:H	2.11	0.57
13:CM:90:LEU:C	13:CM:92:HIS:H	2.12	0.57
21:CU:18:TYR:CD2	21:CU:22:ARG:HD2	2.39	0.57
23:DA:297:C:OP1	42:DY:95:LYS:NZ	2.37	0.57
23:DA:539:G:H2'	23:DA:540:C:H6	1.69	0.57
43:DZ:138:GLU:H	43:DZ:156:LYS:NZ	2.03	0.57
50:D6:11:LEU:HB2	50:D6:21:TYR:HB2	1.85	0.57
1:AA:1400:C:N3	22:AY:63:ALA:HA	2.18	0.57
23:BA:1385:G:N7	56:BA:5341:HOH:O	2.32	0.57
23:BA:1540:U:C2'	23:BA:1541:G:H5'	2.34	0.57
23:BA:2114:A:H3'	23:BA:2115:G:C8	2.38	0.57
43:BZ:124:ILE:HG13	43:BZ:125:LEU:H	1.69	0.57
50:B6:18:ARG:HG3	50:B6:42:TRP:CD1	2.40	0.57
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.05	0.57
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	1.85	0.57
23:DA:2519:U:OP2	56:DA:4630:HOH:O	2.17	0.57
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.68	0.57
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.87	0.57
23:BA:652(G):G:H2'	23:BA:652(H):C:C6	2.40	0.57
38:BU:92:ARG:HA	38:BU:95:LEU:HB2	1.85	0.57
47:B3:23:LEU:HD13	47:B3:50:VAL:HG11	1.87	0.57
1:CA:342:C:H5'	20:CT:4:LYS:HE2	1.86	0.57
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.86	0.57
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.87	0.57
23:DA:926:A:N7	56:DA:4496:HOH:O	2.33	0.57
23:DA:1622:G:OP2	56:DA:4063:HOH:O	2.18	0.57
23:DA:2611:U:H3'	23:DA:2611:U:OP2	2.05	0.57
26:DE:9:VAL:HG13	26:DE:25:VAL:O	2.04	0.57
38:DU:105:VAL:O	38:DU:108:GLU:HB2	2.04	0.57
48:D4:15:ILE:O	48:D4:32:TYR:HA	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:89:ASN:O	9:AI:91:ASP:N	2.38	0.57
18:AR:47:THR:HG23	18:AR:49:LYS:HG3	1.86	0.57
23:BA:729:G:C6	25:BD:208:LYS:HB2	2.40	0.57
23:BA:1106:G:H4'	23:BA:1107:G:OP2	2.05	0.57
23:BA:2130:U:H1'	23:BA:2158:A:N1	2.19	0.57
24:BB:7:G:N7	56:BB:336:HOH:O	2.33	0.57
24:BB:13:A:N1	24:BB:69:G:O2'	2.38	0.57
1:CA:539:A:H2'	1:CA:540:G:C8	2.39	0.57
1:CA:1157:A:H61	1:CA:1178:G:N2	2.03	0.57
1:CA:1163:C:H2'	1:CA:1164:G:H8	1.69	0.57
23:DA:83:G:N2	23:DA:102:G:H1'	2.20	0.57
23:DA:2137:C:O2	23:DA:2137:C:H2'	2.05	0.57
25:DD:221:VAL:HG22	25:DD:226:MET:HE3	1.85	0.57
35:DR:72:ASP:O	35:DR:76:VAL:HG23	2.04	0.57
1:AA:1065:U:H1'	1:AA:1066:C:OP2	2.05	0.57
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.38	0.57
12:AL:49:ASN:ND2	12:AL:92:ASP:OD2	2.37	0.57
26:BE:116:VAL:HG13	26:BE:122:PHE:HB2	1.87	0.57
52:B8:34:TRP:CG	52:B8:35:GLN:N	2.73	0.57
52:B8:34:TRP:CG	52:B8:35:GLN:H	2.23	0.57
1:CA:437:U:O2'	4:CD:125:HIS:HE1	1.87	0.57
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.37	0.57
2:CB:77:ALA:HB1	2:CB:165:VAL:HG11	1.87	0.57
9:CI:110:GLU:HG2	9:CI:119:ALA:HB1	1.87	0.57
24:DB:11:C:H3'	24:DB:12:C:C6	2.40	0.57
29:DH:137:ASP:HB3	29:DH:140:LYS:HB3	1.87	0.57
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.16	0.57
13:AM:65:LYS:HA	13:AM:66:LEU:CB	2.35	0.57
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.04	0.57
23:BA:2532:G:O6	56:BA:5019:HOH:O	2.15	0.57
26:BE:201:THR:OG1	26:BE:202:LYS:N	2.38	0.57
1:CA:404:U:C5'	4:CD:122:ARG:HD3	2.35	0.57
1:CA:748:C:H4'	1:CA:749:C:O5'	2.05	0.57
1:CA:859:A:H2'	1:CA:860:A:O4'	2.05	0.57
1:CA:1095:U:H5'	1:CA:1109:C:O2	2.04	0.57
1:CA:1244:C:H2'	1:CA:1245:A:H8	1.70	0.57
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.04	0.57
23:DA:945:A:H2	56:DA:4012:HOH:O	1.86	0.57
30:DI:123:LEU:HB2	30:DI:144:VAL:O	2.05	0.57
52:D8:32:LEU:O	52:D8:36:LYS:HE3	2.05	0.57
9:AI:27:THR:HG23	9:AI:31:GLN:H	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:12:U:H2'	23:BA:12:U:O2	2.04	0.56
23:BA:1173:G:O2'	23:BA:1174:A:O4'	2.22	0.56
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.04	0.56
3:CC:29:TYR:O	3:CC:29:TYR:HD2	1.87	0.56
23:DA:271(Q):G:O2'	23:DA:271(R):G:H8	1.88	0.56
23:DA:2152:G:H2'	23:DA:2153:G:C8	2.40	0.56
30:DI:67:ARG:O	30:DI:68:LEU:HD22	2.05	0.56
37:DT:60:THR:HG22	37:DT:77:PRO:HA	1.87	0.56
1:AA:933:G:OP2	7:AG:3:ARG:HB2	2.04	0.56
23:BA:1929:G:H4'	23:BA:1930:G:OP1	2.04	0.56
25:BD:275:LYS:HG3	25:BD:276:LYS:HB2	1.86	0.56
1:CA:826:C:H2'	1:CA:827:U:H6	1.71	0.56
1:CA:964:A:N3	1:CA:969:A:O2'	2.36	0.56
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.70	0.56
2:CB:18:GLY:HA3	2:CB:41:ILE:HD13	1.86	0.56
9:CI:45:ALA:HB1	9:CI:47:LEU:H	1.70	0.56
23:DA:644:A:H4'	23:DA:645:C:C5	2.41	0.56
23:DA:1494:A:H2'	23:DA:1495:A:C8	2.39	0.56
28:DG:179:PRO:HG3	48:D4:43:TYR:OH	2.05	0.56
43:DZ:7:ALA:HB3	43:DZ:61:LEU:HD12	1.85	0.56
50:D6:16:CYS:HB2	50:D6:18:ARG:NH1	2.20	0.56
1:AA:1189:C:P	10:AJ:51:ARG:HH22	2.28	0.56
1:AA:1269:A:H2	1:AA:1312:G:N3	2.02	0.56
6:AF:69:GLU:O	6:AF:72:VAL:HG13	2.05	0.56
10:AJ:48:THR:OG1	10:AJ:62:HIS:ND1	2.24	0.56
10:AJ:61:GLU:OE1	14:AN:58:LYS:NZ	2.33	0.56
23:BA:1218:C:H6	23:BA:1218:C:H5"	1.70	0.56
23:BA:1486:A:H2'	23:BA:1487:G:C8	2.40	0.56
23:BA:2168:G:H22	23:BA:2171:A:H2'	1.70	0.56
23:BA:2319:G:H22	36:BS:3:ARG:NE	2.04	0.56
29:BH:12:PRO:O	29:BH:14:GLY:HA2	2.05	0.56
34:BQ:12:GLN:HG2	34:BQ:73:PRO:HD2	1.87	0.56
34:BQ:110:THR:HG23	34:BQ:113:GLN:OE1	2.06	0.56
3:CC:150:LYS:HE3	3:CC:152:ILE:HD11	1.85	0.56
23:DA:330:A:H2	23:DA:1210:A:HO2'	1.52	0.56
23:DA:2295:C:C2'	23:DA:2296:U:H5'	2.34	0.56
43:DZ:128:VAL:HG23	43:DZ:161:VAL:H	1.70	0.56
1:AA:228:A:H4'	16:AP:62:VAL:CG1	2.36	0.56
23:BA:2328:A:H2'	23:BA:2329:G:C8	2.40	0.56
52:B8:29:LYS:HG2	52:B8:44:LYS:HB3	1.85	0.56
1:CA:342:C:N4	1:CA:343:U:O4	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:663:A:O3'	18:CR:64:ARG:NH2	2.37	0.56
4:CD:153:ARG:NH1	4:CD:180:GLY:O	2.28	0.56
5:CE:147:ASP:OD2	5:CE:147:ASP:N	2.38	0.56
23:DA:1486:A:H2'	23:DA:1487:G:H8	1.70	0.56
27:DF:120:GLU:HB2	27:DF:122:LYS:HG2	1.87	0.56
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.45	0.56
23:BA:2115:G:O2'	23:BA:2166:G:N2	2.38	0.56
23:BA:2526:G:H21	53:B9:2:LYS:HD2	1.70	0.56
24:BB:31:C:O2'	24:BB:53:A:N6	2.39	0.56
50:B6:16:CYS:SG	50:B6:18:ARG:HG2	2.46	0.56
1:CA:1161:C:H2'	1:CA:1162:C:H6	1.69	0.56
14:CN:29:ARG:NH1	14:CN:42:ILE:HD11	2.20	0.56
23:DA:271(Q):G:OP1	30:DI:42:SER:HB2	2.05	0.56
23:DA:1406:U:H2'	23:DA:1407:C:C6	2.41	0.56
24:DB:78:A:C2	24:DB:100:A:C4	2.93	0.56
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.05	0.56
23:BA:657:U:H2'	23:BA:658:C:C6	2.41	0.56
23:BA:2131:G:OP1	23:BA:2132:U:H3'	2.05	0.56
23:BA:2584:U:H2'	23:BA:2585:U:H2'	1.88	0.56
18:CR:58:LEU:HD12	18:CR:62:GLU:OE1	2.06	0.56
23:DA:69:C:N4	56:DA:4192:HOH:O	2.39	0.56
23:DA:1187:G:H5"	39:DV:81:TYR:CE2	2.40	0.56
34:DQ:110:THR:HG23	34:DQ:113:GLN:OE1	2.06	0.56
1:AA:1009:G:O6	1:AA:1020:U:O2	2.24	0.56
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.05	0.56
23:BA:997:G:OP1	38:BU:92:ARG:HG2	2.05	0.56
26:BE:28:ALA:HB3	26:BE:93:VAL:HG13	1.88	0.56
1:CA:186:C:H2'	1:CA:187:C:C6	2.40	0.56
1:CA:976:G:C8	1:CA:1362:C:N4	2.74	0.56
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.19	0.56
4:CD:110:PHE:H	4:CD:110:PHE:HD1	1.51	0.56
23:DA:2130:U:O2'	23:DA:2133:G:O2'	2.22	0.56
23:BA:2130:U:O2'	23:BA:2133:G:O2'	2.24	0.56
1:CA:403:C:P	4:CD:137:SER:HG	2.27	0.56
1:CA:1112:C:C2	3:CC:178:LEU:HB2	2.41	0.56
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.88	0.56
9:CI:33:PHE:O	9:CI:37:PHE:HB2	2.06	0.56
23:DA:7:G:H2'	23:DA:8:A:O4'	2.05	0.56
23:DA:141:A:C8	23:DA:1408:C:O2'	2.59	0.56
23:DA:539:G:H2'	23:DA:540:C:C6	2.40	0.56
23:DA:2111:C:H42	23:DA:2147:G:N2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DZ:45:ASP:OD2	43:DZ:49:ARG:NH1	2.39	0.56
1:AA:584:G:H5'	17:AQ:91:ARG:HH22	1.70	0.56
1:AA:826:C:H2'	1:AA:827:U:C6	2.41	0.56
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.06	0.56
23:BA:644:A:H4'	23:BA:645:C:C5	2.40	0.56
1:CA:833:U:H2'	1:CA:834:C:H6	1.71	0.56
1:CA:1061:G:O2'	1:CA:1062:U:OP1	2.23	0.56
2:CB:12:GLU:O	2:CB:16:HIS:ND1	2.39	0.56
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.87	0.56
23:DA:910:A:N1	23:DA:2277:G:H1'	2.21	0.56
23:BA:2473:U:O2	23:BA:2473:U:H2'	2.06	0.56
23:BA:2850:A:OP2	23:BA:2866:U:H5	1.89	0.56
51:B7:33:ARG:NH2	56:B7:203:HOH:O	2.38	0.56
1:CA:366:C:N3	56:CA:2160:HOH:O	2.33	0.56
1:CA:437:U:C5'	4:CD:155:LEU:HD21	2.35	0.56
1:CA:1366:C:HO2'	10:CJ:60:ARG:HH12	1.49	0.56
1:CA:1442(B):A:C2	37:DT:118:ARG:CZ	2.89	0.56
3:CC:18:TRP:HE1	14:CN:56:VAL:H	1.54	0.56
19:CS:32:LYS:HB3	19:CS:57:HIS:HD2	1.71	0.56
23:DA:141:A:H8	23:DA:1408:C:HO2'	1.52	0.56
23:DA:2723:C:OP2	26:DE:109:LYS:NZ	2.39	0.56
24:DB:44:G:C2	24:DB:48:A:C2	2.94	0.56
43:DZ:154:ASP:N	43:DZ:154:ASP:OD1	2.38	0.56
46:D2:4:SER:HA	46:D2:7:ARG:NH1	2.21	0.56
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.41	0.55
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.40	0.55
9:AI:112:LYS:HE2	9:AI:117:HIS:O	2.06	0.55
23:BA:2723:C:O3'	35:BR:1:MET:HE3	2.06	0.55
32:BO:23:ARG:HG3	32:BO:24:VAL:N	2.21	0.55
43:BZ:111:VAL:C	43:BZ:113:ALA:H	2.14	0.55
1:CA:46:G:O2'	1:CA:365:U:O2	2.24	0.55
1:CA:131:C:H2'	1:CA:132:C:H6	1.71	0.55
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.41	0.55
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.71	0.55
1:CA:1292:U:H2'	1:CA:1293:G:O4'	2.06	0.55
3:CC:153:VAL:HA	3:CC:197:GLY:O	2.05	0.55
16:CP:5:ARG:CZ	16:CP:22:THR:HG21	2.35	0.55
19:CS:32:LYS:HB3	19:CS:57:HIS:CD2	2.41	0.55
20:CT:47:GLY:HA2	20:CT:48:LYS:HB2	1.87	0.55
23:DA:652(C):G:N2	23:DA:652(V):C:O2	2.32	0.55
23:DA:886:C:H2'	23:DA:887:A:H5"	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2012:G:OP1	40:DW:11:ARG:NH2	2.38	0.55
1:AA:620:C:O4'	4:AD:135:LEU:HD23	2.07	0.55
1:AA:833:U:H2'	1:AA:834:C:H6	1.69	0.55
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.71	0.55
4:AD:31:CYS:C	4:AD:33:MET:H	2.14	0.55
18:AR:58:LEU:HD12	18:AR:62:GLU:OE1	2.06	0.55
23:BA:1178:C:H2'	23:BA:1179:C:C6	2.42	0.55
24:BB:2:C:H2'	24:BB:3:C:C6	2.41	0.55
36:BS:11:LYS:HG3	36:BS:91:PRO:HD3	1.88	0.55
39:BV:49:THR:O	39:BV:49:THR:HG22	2.06	0.55
49:B5:51:TYR:CE1	49:B5:56:LYS:HG2	2.42	0.55
1:CA:1255:G:O2'	1:CA:1258:G:O2'	2.21	0.55
13:CM:64:TRP:O	13:CM:66:LEU:HG	2.06	0.55
23:DA:873:G:N2	23:DA:905:U:C2	2.74	0.55
23:DA:1903:G:OP1	25:DD:241:PRO:HB2	2.06	0.55
25:DD:242:ARG:N	25:DD:242:ARG:HD3	2.20	0.55
27:DF:53:THR:HG23	27:DF:55:GLY:H	1.69	0.55
1:AA:663:A:O3'	18:AR:64:ARG:NH2	2.39	0.55
1:AA:1293:G:HO2'	1:AA:1294:G:H8	1.53	0.55
23:BA:1488:G:H8	23:BA:1488:G:H5"	1.72	0.55
23:BA:2152:G:H2'	23:BA:2153:G:C8	2.40	0.55
23:BA:2439:A:H5'	23:BA:2439:A:C8	2.42	0.55
40:BW:4:LYS:HE2	40:BW:6:ILE:HD11	1.88	0.55
48:B4:15:ILE:O	48:B4:32:TYR:HA	2.06	0.55
50:B6:35:GLU:HG3	50:B6:50:ARG:HG3	1.88	0.55
1:CA:600:C:H2'	1:CA:601:C:C6	2.40	0.55
1:CA:935:A:H5"	56:CA:2195:HOH:O	2.06	0.55
1:CA:1122:U:O4	1:CA:1123:A:N6	2.38	0.55
1:CA:1123:A:O2'	10:CJ:38:ILE:HG23	2.06	0.55
1:CA:1126:U:O2'	1:CA:1127:G:O5'	2.23	0.55
4:CD:31:CYS:C	4:CD:33:MET:H	2.13	0.55
22:CY:30:TRP:CD1	22:CY:89:GLN:HG3	2.41	0.55
23:DA:450:G:O6	56:DA:4160:HOH:O	2.18	0.55
23:DA:1540:U:O2'	23:DA:1541:G:H5'	2.06	0.55
23:DA:1540:U:C2'	23:DA:1541:G:H5'	2.36	0.55
23:DA:2206:G:O2'	23:DA:2207:G:OP1	2.21	0.55
23:DA:2887:U:H2'	23:DA:2888:C:H6	1.69	0.55
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.89	0.55
1:AA:1136:U:H5"	1:AA:1137:C:C4	2.41	0.55
23:BA:994:C:OP1	38:BU:53:ARG:NH2	2.38	0.55
29:BH:28:GLY:HA3	29:BH:79:VAL:HB	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:149:ARG:NH1	29:BH:167:GLU:OE1	2.40	0.55
37:BT:60:THR:HG22	37:BT:77:PRO:HA	1.89	0.55
43:BZ:138:GLU:H	43:BZ:156:LYS:NZ	2.04	0.55
1:CA:1330:U:H4'	13:CM:23:TYR:CE2	2.41	0.55
4:CD:155:LEU:HD23	4:CD:156:GLU:N	2.21	0.55
23:DA:2382:G:N7	56:DA:4415:HOH:O	2.32	0.55
23:DA:2572:A:N7	26:DE:144:ARG:HD2	2.20	0.55
23:DA:2784:C:H1'	26:DE:37:ARG:HH12	1.71	0.55
1:AA:131:C:H2'	1:AA:132:C:C6	2.41	0.55
2:AB:12:GLU:O	2:AB:16:HIS:ND1	2.37	0.55
23:BA:1204:A:H61	23:BA:1240:U:H2'	1.70	0.55
1:CA:938:A:C6	1:CA:939:G:C5	2.95	0.55
1:CA:1002:G:C2	1:CA:1003:G:H1'	2.41	0.55
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.70	0.55
23:DA:244:A:C2	23:DA:255:A:C4	2.94	0.55
23:DA:2357:U:OP1	44:D0:20:ARG:HD3	2.06	0.55
23:DA:2884:U:H1'	49:D5:53:ALA:HB2	1.87	0.55
23:BA:652(C):G:N2	23:BA:652(V):C:O2	2.35	0.55
28:BG:82:LEU:H	28:BG:82:LEU:CD1	2.18	0.55
31:BN:56:ASN:HA	31:BN:125:GLY:H	1.72	0.55
34:BQ:138:ASP:OD2	43:BZ:81:ARG:NH1	2.39	0.55
1:CA:1492:A:C5	23:DA:1913:A:H2	2.24	0.55
4:CD:100:ARG:HH12	4:CD:137:SER:HB3	1.71	0.55
14:CN:37:PHE:CE1	14:CN:53:LEU:HD13	2.42	0.55
23:DA:77:C:OP1	46:D2:59:ARG:HD3	2.06	0.55
23:DA:1178:C:H2'	23:DA:1179:C:H6	1.72	0.55
23:DA:2537:U:H2'	23:DA:2538:C:C6	2.41	0.55
27:DF:157:VAL:HB	27:DF:194:MET:HG2	1.88	0.55
28:DG:60:LEU:HB3	28:DG:68:PRO:HG3	1.89	0.55
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.88	0.55
23:BA:1688:U:H1'	23:BA:1701:A:C6	2.42	0.55
42:BY:23:ARG:NH1	42:BY:23:ARG:HB2	2.22	0.55
3:CC:122:GLU:O	3:CC:125:GLU:HB2	2.07	0.55
4:CD:106:TYR:CD2	4:CD:107:ARG:HG2	2.34	0.55
23:DA:271(Q):G:O2'	23:DA:271(R):G:C8	2.60	0.55
23:DA:330:A:H2	23:DA:1210:A:C2'	2.19	0.55
23:DA:1247:A:OP1	27:DF:95:ARG:NH2	2.40	0.55
9:AI:9:ARG:O	9:AI:104:ARG:HG3	2.07	0.55
23:BA:1288:U:H2'	56:BA:3930:HOH:O	2.06	0.55
23:BA:1654:A:OP1	35:BR:1:MET:HA	2.07	0.55
26:BE:203:LYS:CB	26:BE:204:ALA:HA	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:120:GLU:HB2	27:BF:122:LYS:HG2	1.89	0.55
36:BS:102:ALA:HB1	36:BS:112:PHE:HZ	1.72	0.55
1:CA:509:A:H5"	4:CD:55:ALA:HB2	1.87	0.55
1:CA:937:A:H1'	1:CA:1379:G:H22	1.70	0.55
5:CE:74:GLY:HA3	5:CE:116:THR:HG22	1.89	0.55
8:CH:121:ASP:OD1	8:CH:121:ASP:N	2.40	0.55
23:DA:2114:A:H3'	23:DA:2115:G:C8	2.42	0.55
35:DR:102:GLU:OE2	40:DW:37:ARG:NH1	2.33	0.55
49:D5:16:ARG:HG2	49:D5:16:ARG:NH1	2.22	0.55
1:AA:1181:G:H2'	1:AA:1182:G:C5	2.42	0.55
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.42	0.55
2:AB:87:ARG:HD2	2:AB:219:VAL:HG11	1.89	0.55
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.72	0.55
11:AK:19:ALA:HB3	11:AK:82:VAL:HG22	1.87	0.55
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	2.17	0.55
19:AS:34:TRP:HE3	19:AS:34:TRP:H	1.55	0.55
23:BA:359:A:H2'	23:BA:360:G:O4'	2.07	0.55
23:BA:1903:G:OP1	25:BD:241:PRO:HB2	2.07	0.55
23:BA:2879:C:O2'	56:BA:4930:HOH:O	2.18	0.55
33:BP:59:LEU:HD21	52:B8:10:ALA:HA	1.89	0.55
41:BX:41:ASN:O	41:BX:45:THR:HG23	2.06	0.55
50:B6:13:CYS:SG	50:B6:47:THR:HG21	2.46	0.55
1:CA:438:G:OP1	4:CD:125:HIS:NE2	2.37	0.55
23:DA:796:C:H2'	23:DA:797:C:C6	2.41	0.55
23:DA:1963:U:H4'	23:DA:1964:G:OP1	2.07	0.55
23:DA:2584:U:H2'	23:DA:2585:U:H2'	1.87	0.55
27:DF:17:ARG:O	27:DF:18:ARG:HB2	2.07	0.55
1:AA:671:G:H2'	1:AA:672:U:H6	1.72	0.55
1:AA:674:G:H2'	1:AA:675:A:C8	2.42	0.55
1:AA:763:G:H2'	1:AA:764:C:H6	1.72	0.55
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.89	0.55
9:AI:45:ALA:CB	9:AI:47:LEU:H	2.19	0.55
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.40	0.55
23:BA:2322:A:H2'	23:BA:2323:G:O4'	2.06	0.55
43:BZ:81:ARG:HG2	43:BZ:81:ARG:HH21	1.71	0.55
7:CG:135:VAL:O	7:CG:139:GLU:N	2.25	0.55
8:CH:17:THR:HG22	8:CH:63:LEU:HG	1.89	0.55
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG12	1.89	0.55
22:CY:54:ILE:HB	22:CY:61:LEU:CD1	2.37	0.55
23:DA:218:A:C2	23:DA:235:U:H4'	2.42	0.55
23:DA:1693:U:O2'	25:DD:14:ARG:NH2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2473:U:O2	23:DA:2473:U:H2'	2.07	0.55
31:DN:96:GLU:H	31:DN:96:GLU:CD	2.15	0.55
1:AA:78:G:N2	1:AA:91:C:N3	2.54	0.54
1:AA:176:C:H2'	1:AA:177:C:C6	2.42	0.54
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.22	0.54
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.40	0.54
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.42	0.54
13:AM:5:ALA:C	13:AM:7:VAL:H	2.15	0.54
20:AT:73:HIS:HB3	20:AT:74:LYS:HE2	1.89	0.54
23:BA:307:G:H21	23:BA:330:A:H62	1.55	0.54
23:BA:2469:A:H4'	34:BQ:56:ARG:HG2	1.88	0.54
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.08	0.54
1:CA:1060:C:O2'	1:CA:1061:G:H5'	2.07	0.54
1:CA:1221:G:O3'	19:CS:77:THR:OG1	2.24	0.54
3:CC:152:ILE:HB	3:CC:199:LYS:HB2	1.87	0.54
12:CL:49:ASN:ND2	12:CL:92:ASP:OD2	2.41	0.54
13:CM:15:VAL:HG23	13:CM:41:PRO:HA	1.88	0.54
31:DN:56:ASN:HA	31:DN:125:GLY:H	1.71	0.54
42:DY:23:ARG:NH1	42:DY:23:ARG:HB2	2.22	0.54
1:AA:222:U:H2'	1:AA:223:U:H6	1.67	0.54
1:AA:1024:G:H8	1:AA:1024:G:O5'	1.90	0.54
1:AA:1307:U:OP1	13:AM:101:GLN:NE2	2.33	0.54
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.08	0.54
7:AG:15:ASP:HB3	7:AG:24:THR:HG23	1.88	0.54
23:BA:889:C:O2'	23:BA:890:A:H8	1.90	0.54
23:BA:2506:U:OP1	26:BE:144:ARG:NH2	2.41	0.54
25:BD:242:ARG:HD3	25:BD:242:ARG:N	2.22	0.54
1:CA:57:G:H2'	1:CA:58:C:C6	2.42	0.54
1:CA:658:G:O4'	15:CO:22:THR:HB	2.07	0.54
1:CA:1220:G:H1'	19:CS:52:TYR:CD2	2.42	0.54
1:CA:1360:A:H8	1:CA:1360:A:OP1	1.89	0.54
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.42	0.54
7:CG:92:SER:O	7:CG:96:GLN:HG3	2.08	0.54
16:CP:72:ARG:HH11	16:CP:72:ARG:HG3	1.71	0.54
31:DN:102:ALA:O	31:DN:106:MET:HG3	2.07	0.54
43:DZ:128:VAL:HG23	43:DZ:161:VAL:N	2.23	0.54
1:AA:674:G:H2'	1:AA:675:A:H8	1.71	0.54
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.42	0.54
1:AA:1223:C:OP2	19:AS:78:ARG:NH2	2.40	0.54
1:AA:1442(A):G:N7	1:AA:1442(B):A:C2	2.76	0.54
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:77:C:OP1	46:B2:59:ARG:HD3	2.08	0.54
1:CA:1067:A:H8	1:CA:1067:A:O5'	1.90	0.54
11:CK:19:ALA:HB3	11:CK:82:VAL:HG22	1.88	0.54
23:DA:1290:C:H2'	23:DA:1291:C:H6	1.72	0.54
23:DA:2723:C:O3'	35:DR:1:MET:HE3	2.07	0.54
24:DB:90:A:N7	24:DB:91:C:H1'	2.22	0.54
27:DF:21:ALA:O	27:DF:22:ALA:HB2	2.06	0.54
1:AA:601:C:H2'	1:AA:602:A:H8	1.71	0.54
1:AA:1179:A:O3'	9:AI:103:THR:OG1	2.23	0.54
2:AB:17:PHE:HB3	2:AB:44:LEU:HD11	1.89	0.54
23:BA:1019:U:H3	23:BA:1142(A):A:H62	1.56	0.54
27:BF:157:VAL:HB	27:BF:194:MET:HG2	1.90	0.54
30:BI:29:TYR:O	30:BI:32:PRO:HD2	2.08	0.54
30:BI:106:GLY:HA2	30:BI:107:VAL:HB	1.89	0.54
43:BZ:152:ALA:HA	43:BZ:155:LEU:HD13	1.89	0.54
43:BZ:154:ASP:N	43:BZ:154:ASP:OD1	2.40	0.54
21:CU:18:TYR:HA	21:CU:22:ARG:HB3	1.90	0.54
23:DA:528:A:N1	23:DA:2042:A:H2'	2.22	0.54
23:DA:2463:C:C2'	23:DA:2464:C:H5'	2.36	0.54
24:DB:49:C:OP1	36:DS:97:ARG:N	2.39	0.54
1:AA:373:A:H2'	1:AA:374:A:H8	1.73	0.54
1:AA:662:G:H2'	1:AA:663:A:C8	2.42	0.54
1:AA:980:C:OP1	56:AA:2066:HOH:O	2.18	0.54
4:AD:155:LEU:HD23	4:AD:156:GLU:N	2.23	0.54
8:AH:17:THR:HG22	8:AH:63:LEU:HG	1.90	0.54
9:AI:43:ALA:O	9:AI:45:ALA:HB2	2.07	0.54
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.08	0.54
25:BD:275:LYS:HG3	25:BD:276:LYS:N	2.22	0.54
1:CA:171:A:H2'	1:CA:172:A:H8	1.71	0.54
1:CA:1029:C:H42	1:CA:1030:C:N4	2.05	0.54
1:CA:1342:C:H1'	9:CI:124:GLN:HE21	1.72	0.54
1:CA:1459:C:C5	1:CA:1460:A:N7	2.76	0.54
23:DA:1669:A:H5"	23:DA:2550:G:OP1	2.07	0.54
1:AA:57:G:H2'	1:AA:58:C:H6	1.73	0.54
1:AA:57:G:N2	1:AA:388:G:C6	2.76	0.54
1:AA:826:C:H2'	1:AA:827:U:H6	1.73	0.54
1:AA:1178:G:N2	1:AA:1181:G:OP2	2.40	0.54
10:AJ:45:ARG:HG2	10:AJ:47:PHE:CZ	2.41	0.54
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.89	0.54
23:BA:1187:G:H5"	39:BV:81:TYR:CE2	2.42	0.54
23:BA:1932:A:H2'	23:BA:1933:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:11:MET:HG2	26:BE:24:THR:HB	1.89	0.54
40:BW:40:ASN:O	40:BW:41:LYS:HG3	2.08	0.54
46:B2:45:SER:O	46:B2:46:GLN:HB2	2.06	0.54
1:CA:671:G:H2'	1:CA:672:U:H6	1.72	0.54
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.06	0.54
3:CC:181:ASN:HB3	3:CC:204:LEU:HB2	1.88	0.54
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	2.21	0.54
23:DA:1914:C:H2'	23:DA:1915:U:C6	2.42	0.54
23:DA:2001:A:H2'	23:DA:2002:G:C8	2.43	0.54
36:DS:96:GLY:H	36:DS:99:LYS:H	1.54	0.54
1:AA:228:A:O2'	16:AP:2:VAL:HG11	2.07	0.54
29:BH:67:LEU:O	29:BH:71:LEU:HB2	2.08	0.54
29:BH:137:ASP:HB3	29:BH:140:LYS:HB3	1.89	0.54
1:CA:407:G:H4'	4:CD:116:GLN:HA	1.89	0.54
1:CA:950:U:H2'	1:CA:951:G:H8	1.72	0.54
10:CJ:63:PHE:CD1	14:CN:58:LYS:HA	2.43	0.54
23:DA:2126:A:H1'	23:DA:2127:G:OP2	2.08	0.54
23:DA:2319:G:H22	36:DS:3:ARG:NE	2.03	0.54
23:DA:2867:G:OP2	37:DT:119:LYS:NZ	2.41	0.54
26:DE:28:ALA:HB3	26:DE:93:VAL:HG13	1.89	0.54
27:DF:129:PHE:CD2	27:DF:163:VAL:HG21	2.42	0.54
30:DI:69:LYS:HB3	30:DI:73:GLU:OE1	2.08	0.54
34:DQ:138:ASP:OD2	43:DZ:81:ARG:NH1	2.40	0.54
1:AA:1032:G:H2'	1:AA:1033:G:C8	2.43	0.54
19:AS:34:TRP:N	19:AS:34:TRP:CE3	2.76	0.54
23:BA:2304:G:O6	23:BA:2312:U:O4	2.26	0.54
1:CA:192:U:H4'	20:CT:57:ARG:HD2	1.90	0.54
1:CA:501:C:H2'	1:CA:502:G:C8	2.43	0.54
1:CA:952:U:H4'	1:CA:964:A:N1	2.23	0.54
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.38	0.54
1:CA:1367:C:H5'	10:CJ:60:ARG:NH1	2.22	0.54
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.08	0.54
23:DA:1529:G:C6	23:DA:1530:C:N4	2.76	0.54
23:DA:2693:A:H2'	23:DA:2694:G:H8	1.73	0.54
1:AA:1202:G:H2'	1:AA:1203:C:H5'	1.89	0.54
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.90	0.54
5:AE:36:ASP:OD2	5:AE:38:GLN:N	2.38	0.54
13:AM:15:VAL:O	13:AM:19:LEU:HD22	2.07	0.54
23:BA:300:A:OP2	42:BY:86:ARG:NH2	2.41	0.54
23:BA:2867:G:OP2	37:BT:119:LYS:NZ	2.41	0.54
36:BS:34:HIS:ND1	36:BS:53:SER:OG	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1013:G:H2'	1:CA:1015:A:OP2	2.08	0.54
1:CA:1190:G:OP1	3:CC:5:ILE:HB	2.08	0.54
19:CS:63:THR:OG1	19:CS:66:MET:HE3	2.08	0.54
23:DA:1843:C:H5'	25:DD:253:GLN:NE2	2.23	0.54
23:DA:1882:C:H5'	23:DA:1883:G:OP2	2.07	0.54
23:DA:2125:G:N2	23:DA:2172:U:H3'	2.23	0.54
30:DI:126:TYR:HB2	30:DI:142:VAL:HG23	1.89	0.54
1:AA:827:U:H5"	1:AA:828:A:OP2	2.07	0.54
1:AA:975:A:N6	1:AA:1367:C:O4'	2.41	0.54
3:AC:23:TYR:CD1	10:AJ:10:GLY:HA2	2.43	0.54
23:BA:2198:A:H4'	23:BA:2199:A:OP1	2.08	0.54
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.90	0.54
9:CI:59:PHE:HZ	9:CI:88:TYR:CD1	2.26	0.54
22:CY:52:ALA:HB2	22:CY:77:LEU:HD11	1.89	0.54
23:DA:359:A:H2'	23:DA:360:G:O4'	2.08	0.54
33:DP:143:GLY:O	33:DP:145:PRO:HD3	2.08	0.54
19:AS:49:ILE:HG13	19:AS:62:ILE:HD11	1.89	0.53
23:BA:1359:A:N3	23:BA:1359:A:H5'	2.23	0.53
23:BA:1364:G:OP1	45:B1:2:SER:HA	2.08	0.53
23:BA:1540:U:O2'	23:BA:1541:G:H5'	2.08	0.53
28:BG:75:LYS:HA	28:BG:84:LYS:HE2	1.90	0.53
51:B7:34:ARG:NH1	51:B7:41:ARG:O	2.41	0.53
1:CA:73:G:C6	1:CA:97:G:C6	2.96	0.53
1:CA:757:U:H2'	1:CA:758:G:O4'	2.08	0.53
1:CA:949:A:H61	1:CA:1232:U:H3	1.55	0.53
1:CA:1123:A:C2	10:CJ:39:PRO:HD2	2.44	0.53
1:CA:1201:A:O2'	1:CA:1202:G:OP2	2.18	0.53
2:CB:87:ARG:HH21	2:CB:233:SER:HB2	1.73	0.53
9:CI:9:ARG:O	9:CI:104:ARG:HG2	2.08	0.53
23:DA:12:U:O2	23:DA:12:U:H2'	2.07	0.53
23:DA:1288:U:C2	23:DA:1327:C:O2	2.61	0.53
23:DA:1488:G:H5"	23:DA:1488:G:H8	1.73	0.53
23:DA:1688:U:H1'	23:DA:1701:A:C6	2.42	0.53
23:DA:1817:G:OP1	25:DD:88:ARG:NH2	2.40	0.53
23:DA:2186:G:H2'	23:DA:2186:G:N3	2.23	0.53
23:DA:2329:G:H21	44:D0:41:ARG:HG3	1.72	0.53
34:DQ:6:ARG:HB3	43:DZ:194:PRO:HG2	1.90	0.53
1:AA:56:U:H2'	1:AA:57:G:C8	2.44	0.53
1:AA:833:U:H2'	1:AA:834:C:C6	2.43	0.53
1:AA:859:A:H2'	1:AA:860:A:O4'	2.08	0.53
1:AA:991:U:O5'	1:AA:991:U:H6	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.41	0.53
3:AC:51:GLY:O	3:AC:52:LEU:HD22	2.08	0.53
23:BA:1429:G:O2'	23:BA:1430:C:H5'	2.09	0.53
23:BA:1587:A:H2'	23:BA:1588:C:C6	2.42	0.53
23:BA:2464:C:O2'	23:BA:2465:C:H5"	2.09	0.53
23:BA:2627:G:O2'	23:BA:2781:A:N1	2.36	0.53
24:BB:90:A:N7	24:BB:91:C:H1'	2.22	0.53
26:BE:55:ASN:HB3	26:BE:58:ARG:HG3	1.90	0.53
27:BF:101:LEU:HD12	27:BF:102:PRO:HD2	1.89	0.53
1:CA:427:U:OP2	4:CD:36:ARG:NH2	2.36	0.53
1:CA:1118:C:OP1	9:CI:9:ARG:HD2	2.08	0.53
23:DA:2080:G:OP1	45:D1:35:THR:HG21	2.08	0.53
23:DA:2648:C:H2'	23:DA:2649:U:C6	2.44	0.53
24:DB:2:C:H2'	24:DB:3:C:H6	1.73	0.53
40:DW:40:ASN:O	40:DW:41:LYS:HG3	2.08	0.53
1:AA:601:C:H2'	1:AA:602:A:C8	2.43	0.53
1:AA:983:A:H2	1:AA:984:C:C6	2.26	0.53
25:BD:96:HIS:CD2	25:BD:102:LYS:HD3	2.44	0.53
30:BI:81:VAL:HG21	30:BI:88:ILE:HD13	1.89	0.53
1:CA:923:A:OP1	5:CE:21:ALA:HB2	2.09	0.53
23:DA:96:G:H4'	46:D2:48:HIS:CD2	2.44	0.53
23:DA:127:A:H5"	23:DA:128:C:C6	2.44	0.53
23:DA:729:G:C6	25:DD:208:LYS:HB2	2.43	0.53
23:DA:774:A:N3	23:DA:774:A:H2'	2.23	0.53
23:DA:1503:U:H2'	23:DA:1504:C:C6	2.43	0.53
23:DA:2850:A:OP2	23:DA:2866:U:H5	1.90	0.53
1:AA:49:U:O4	1:AA:365:U:C5	2.54	0.53
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.44	0.53
3:AC:32:LEU:HD13	3:AC:59:ARG:HH11	1.72	0.53
16:AP:1:MET:HE3	16:AP:3:LYS:HE3	1.90	0.53
27:BF:17:ARG:O	27:BF:18:ARG:HB2	2.08	0.53
31:BN:56:ASN:H	31:BN:125:GLY:CA	2.19	0.53
32:BO:63:VAL:HG12	32:BO:106:LEU:HD11	1.89	0.53
1:CA:940:C:H2'	1:CA:941:G:H8	1.73	0.53
1:CA:1030(A):G:N2	1:CA:1031:G:C6	2.77	0.53
2:CB:236:TYR:HA	2:CB:239:VAL:HG23	1.89	0.53
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.91	0.53
9:CI:14:VAL:O	9:CI:65:VAL:HG23	2.08	0.53
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	1.90	0.53
23:DA:1366:A:OP1	45:D1:3:LYS:NZ	2.39	0.53
23:DA:1429:G:O2'	23:DA:1430:C:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1530:C:HO2'	23:DA:1531:C:P	2.30	0.53
30:DI:27:ARG:HD2	45:D1:71:TYR:CZ	2.43	0.53
34:DQ:109:VAL:HG13	34:DQ:113:GLN:HB2	1.89	0.53
1:AA:1166:G:N2	1:AA:1169:A:H3'	2.24	0.53
1:AA:1319:A:O2'	1:AA:1323:G:N7	2.32	0.53
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.91	0.53
23:BA:1817:G:OP1	25:BD:88:ARG:NH2	2.41	0.53
43:BZ:124:ILE:HG13	43:BZ:125:LEU:N	2.23	0.53
1:CA:56:U:H2'	1:CA:57:G:C8	2.44	0.53
1:CA:141:A:H1'	1:CA:182:U:O2	2.09	0.53
1:CA:441:A:H3'	1:CA:442:C:C6	2.43	0.53
1:CA:1106:G:H2'	1:CA:1107:C:C6	2.44	0.53
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.44	0.53
1:CA:1372:U:H2'	1:CA:1373:G:O4'	2.08	0.53
10:CJ:33:GLN:HE21	10:CJ:33:GLN:C	2.11	0.53
17:CQ:76:LEU:HD11	17:CQ:78:GLU:O	2.09	0.53
23:DA:642:G:H21	23:DA:646:A:H2	1.57	0.53
23:DA:993:G:OP1	38:DU:50:ARG:NH2	2.40	0.53
23:DA:2131:G:OP1	23:DA:2132:U:H3'	2.08	0.53
33:DP:38:GLN:O	33:DP:39:LYS:CB	2.57	0.53
36:DS:96:GLY:HA2	36:DS:100:ALA:H	1.74	0.53
1:AA:67:C:H2'	1:AA:68:G:H8	1.73	0.53
1:AA:1258:G:H2'	1:AA:1259:C:H6	1.74	0.53
1:AA:1452:C:O2'	1:AA:1456:G:OP2	2.27	0.53
1:AA:1457:G:H2'	1:AA:1458:G:C8	2.44	0.53
3:AC:6:HIS:HD2	3:AC:8:ILE:N	2.04	0.53
23:BA:271(Q):G:O2'	23:BA:271(R):G:H8	1.90	0.53
23:BA:1021:A:H3'	23:BA:1021:A:H8	1.73	0.53
23:BA:2171:A:H4'	23:BA:2172:U:OP1	2.09	0.53
27:BF:184:TYR:CD2	27:BF:188:ARG:HD2	2.44	0.53
30:BI:77:LEU:CB	30:BI:142:VAL:HG12	2.34	0.53
1:CA:939:G:H2'	1:CA:940:C:C6	2.43	0.53
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.44	0.53
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.43	0.53
7:CG:57:GLU:HB3	7:CG:60:LYS:H	1.72	0.53
16:CP:34:GLU:OE1	16:CP:55:ARG:NH1	2.41	0.53
23:DA:1138:G:O2'	31:DN:105:GLY:HA3	2.09	0.53
23:DA:1800:C:OP2	25:DD:183:ARG:NH2	2.32	0.53
2:AB:120:ALA:C	2:AB:122:PHE:H	2.17	0.53
9:AI:24:GLY:HA2	9:AI:59:PHE:O	2.09	0.53
22:AY:23:ARG:NH1	22:AY:26:LYS:HD2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1047:G:C2'	23:BA:1110:G:H22	2.15	0.53
23:BA:1173:G:N2	23:BA:1176:G:OP2	2.42	0.53
25:BD:71:ASP:HB3	25:BD:103:ARG:HH22	1.74	0.53
2:CB:17:PHE:HB3	2:CB:44:LEU:HD11	1.90	0.53
2:CB:178:ARG:HH21	8:CH:74:PRO:HG3	1.73	0.53
3:CC:48:TYR:O	3:CC:51:GLY:N	2.41	0.53
7:CG:38:LEU:O	7:CG:42:ILE:HG13	2.09	0.53
23:DA:762:U:OP1	56:DA:3851:HOH:O	2.19	0.53
23:DA:1178:C:H2'	23:DA:1179:C:C6	2.43	0.53
23:DA:1530:C:H1'	23:DA:1531:C:OP1	2.09	0.53
29:DH:150:ALA:HA	29:DH:153:LYS:HD2	1.90	0.53
42:DY:20:TYR:CD2	42:DY:42:VAL:HG13	2.43	0.53
1:AA:270:A:H2'	1:AA:271:C:C6	2.43	0.53
23:BA:652(Q):G:H2'	23:BA:652(R):C:H5'	1.90	0.53
23:BA:1106:G:H8	23:BA:1106:G:OP2	1.91	0.53
1:CA:520:A:O2'	12:CL:73:GLU:OE1	2.17	0.53
1:CA:768:A:OP2	56:CA:2054:HOH:O	2.19	0.53
1:CA:991:U:C5	1:CA:1212:U:H1'	2.44	0.53
1:CA:1121:U:H2'	1:CA:1122:U:H5'	1.91	0.53
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.09	0.53
11:CK:85:ARG:HG2	11:CK:112:THR:HA	1.91	0.53
19:CS:22:LEU:HD13	19:CS:28:LYS:H	1.74	0.53
27:DF:184:TYR:CE2	27:DF:188:ARG:HD2	2.44	0.53
1:AA:1145:C:H4'	1:AA:1146:A:H5'	1.90	0.53
1:AA:1149:C:H2'	1:AA:1150:U:C6	2.43	0.53
1:AA:1223:C:P	19:AS:78:ARG:HH21	2.32	0.53
22:AY:23:ARG:HH12	22:AY:26:LYS:HD2	1.73	0.53
23:BA:1816:G:O6	25:BD:35:LYS:NZ	2.36	0.53
23:BA:2126:A:H1'	23:BA:2127:G:OP2	2.09	0.53
29:BH:150:ALA:HA	29:BH:153:LYS:HD2	1.89	0.53
1:CA:1015:A:H1'	1:CA:1219:U:H5'	1.90	0.53
1:CA:1122:U:H2'	1:CA:1123:A:C8	2.44	0.53
5:CE:79:GLU:HG3	5:CE:93:PRO:HD2	1.90	0.53
23:DA:1794:U:H2'	23:DA:1795:C:C6	2.44	0.53
23:DA:2144:U:O2'	23:DA:2147:G:N1	2.40	0.53
43:DZ:124:ILE:HG13	43:DZ:125:LEU:N	2.22	0.53
1:AA:66:G:O4'	1:AA:173:U:C4	2.62	0.53
1:AA:518:C:O2'	1:AA:530:G:N2	2.42	0.53
1:AA:1126:U:H6	1:AA:1280:A:N7	2.05	0.53
4:AD:129:ASN:HD21	4:AD:144:ASP:HA	1.74	0.53
8:AH:121:ASP:OD1	8:AH:121:ASP:N	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:652(D):C:H2'	23:BA:652(E):G:O4'	2.09	0.53
23:BA:1178:C:H2'	23:BA:1179:C:H6	1.73	0.53
23:BA:1507:A:O2'	23:BA:1508:A:H8	1.92	0.53
23:BA:2183:C:H2'	23:BA:2184:G:C8	2.44	0.53
23:BA:2483:C:N3	34:BQ:124:LYS:NZ	2.55	0.53
1:CA:1300:G:O2'	1:CA:1301:U:OP2	2.24	0.53
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.44	0.53
14:CN:59:ALA:HB1	14:CN:61:TRP:HZ3	1.74	0.53
23:DA:2022:U:O2'	23:DA:2617:C:H5'	2.09	0.53
23:DA:2328:A:H2'	23:DA:2329:G:C8	2.43	0.53
25:DD:108:PRO:HB3	25:DD:143:HIS:CE1	2.44	0.53
1:AA:539:A:H2'	1:AA:540:G:C8	2.44	0.52
23:BA:2186:G:N3	23:BA:2186:G:H2'	2.24	0.52
1:CA:1297:C:O3'	7:CG:114:ARG:NH2	2.40	0.52
2:CB:71:VAL:HG13	2:CB:93:VAL:CG2	2.39	0.52
2:CB:236:TYR:HA	2:CB:239:VAL:CG2	2.39	0.52
5:CE:102:ALA:O	5:CE:107:ARG:NH1	2.42	0.52
14:CN:29:ARG:HH21	14:CN:41:ARG:HG2	1.74	0.52
23:DA:1507:A:O2'	23:DA:1508:A:H8	1.92	0.52
23:DA:1810:A:H2'	23:DA:1811:G:O4'	2.09	0.52
23:DA:2464:C:O2'	23:DA:2465:C:H5"	2.07	0.52
33:DP:59:LEU:HD21	52:D8:10:ALA:HA	1.91	0.52
36:DS:96:GLY:N	36:DS:99:LYS:HB3	2.23	0.52
1:AA:814:A:H2'	1:AA:816:A:H5"	1.91	0.52
1:AA:986:A:H1'	19:AS:54:GLY:O	2.09	0.52
1:AA:1110:A:H8	1:AA:1110:A:O5'	1.92	0.52
22:AY:12:ILE:HG21	22:AY:17:ARG:HH21	1.74	0.52
23:BA:562:U:C4	23:BA:2036:C:O4'	2.62	0.52
30:BI:133:HIS:HD1	30:BI:134:PRO:N	2.07	0.52
48:B4:42:PHE:HB3	48:B4:43:TYR:HB2	1.90	0.52
1:CA:814:A:N7	1:CA:816:A:C4	2.77	0.52
20:CT:47:GLY:HA2	20:CT:48:LYS:CB	2.40	0.52
23:DA:1329:U:H5"	23:DA:1330:C:H5	1.74	0.52
13:AM:87:TYR:O	13:AM:90:LEU:N	2.43	0.52
23:BA:218:A:C2	23:BA:235:U:H4'	2.44	0.52
23:BA:674:G:H1'	27:BF:74:ARG:HD3	1.91	0.52
23:BA:2080:G:OP1	45:B1:35:THR:HG21	2.09	0.52
23:BA:2365:G:O6	52:B8:39:LYS:HE3	2.09	0.52
23:BA:2377:A:H2'	23:BA:2378:A:C8	2.45	0.52
27:BF:184:TYR:CE2	27:BF:188:ARG:HD2	2.45	0.52
31:BN:15:LEU:HB2	31:BN:135:PRO:HB2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1002:G:N3	1:CA:1003:G:H1'	2.25	0.52
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.45	0.52
2:CB:82:ARG:HG3	2:CB:92:TYR:OH	2.09	0.52
9:CI:18:PHE:HB2	9:CI:62:TYR:HB3	1.91	0.52
23:DA:657:U:H2'	23:DA:658:C:C6	2.44	0.52
23:DA:1403:C:C5'	23:DA:1471:A:H1'	2.35	0.52
23:DA:2171:A:H4'	23:DA:2172:U:OP1	2.09	0.52
23:DA:2183:C:H2'	23:DA:2184:G:C8	2.45	0.52
40:DW:66:GLU:HA	40:DW:69:LEU:HD12	1.91	0.52
43:DZ:10:ARG:HG3	43:DZ:36:LYS:HB3	1.90	0.52
50:D6:13:CYS:SG	50:D6:47:THR:HG21	2.49	0.52
1:AA:68:G:O4'	1:AA:171:A:H1'	2.10	0.52
1:AA:1414:U:H3	1:AA:1486:G:H1	1.55	0.52
2:AB:127:ILE:C	2:AB:129:GLU:H	2.18	0.52
5:AE:147:ASP:OD2	5:AE:147:ASP:N	2.41	0.52
23:BA:952:G:OP1	34:BQ:16:ARG:NH2	2.42	0.52
28:BG:96:ARG:N	28:BG:99:MET:HE2	2.24	0.52
1:CA:67:C:H2'	1:CA:68:G:H8	1.74	0.52
1:CA:450:G:H4'	16:CP:41:PRO:HB2	1.91	0.52
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.91	0.52
4:CD:129:ASN:HD21	4:CD:144:ASP:HA	1.75	0.52
7:CG:120:ILE:O	7:CG:124:LEU:HB2	2.10	0.52
22:CY:40:ILE:HG13	22:CY:51:ASP:HB2	1.91	0.52
23:DA:2166:G:H2'	23:DA:2167:U:O4'	2.10	0.52
23:DA:2361:A:N6	56:DA:4408:HOH:O	2.14	0.52
23:DA:2849:U:OP2	37:DT:95:ARG:NH1	2.42	0.52
23:DA:2880:C:O3'	35:DR:90:ARG:NH1	2.43	0.52
28:DG:16:ARG:HG3	28:DG:16:ARG:HH11	1.74	0.52
28:DG:16:ARG:HE	28:DG:31:VAL:HG21	1.74	0.52
30:DI:82:ARG:O	30:DI:89:TYR:HD1	1.91	0.52
32:DO:16:ALA:HB2	32:DO:52:VAL:HG21	1.91	0.52
35:DR:21:TYR:OH	35:DR:43:GLU:HG2	2.10	0.52
39:DV:35:LEU:HB2	39:DV:57:VAL:HG22	1.90	0.52
47:D3:4:LEU:O	47:D3:36:VAL:HA	2.09	0.52
1:AA:436:C:O2'	1:AA:437:U:P	2.68	0.52
1:AA:501:C:H2'	1:AA:502:G:C8	2.44	0.52
1:AA:618:C:N3	1:AA:622:A:N6	2.57	0.52
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	1.90	0.52
23:BA:2317:C:C4	23:BA:2318:G:N7	2.77	0.52
43:BZ:54:HIS:ND1	43:BZ:101:PRO:HG3	2.25	0.52
1:CA:947:G:O3'	13:CM:109:THR:OG1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1021:G:H2'	1:CA:1022:G:O4'	2.08	0.52
23:DA:784:A:C8	23:DA:792:G:C5	2.97	0.52
23:DA:839:U:H2'	23:DA:840:C:C6	2.44	0.52
23:DA:952:G:OP1	34:DQ:16:ARG:NH2	2.42	0.52
28:DG:61:ALA:O	28:DG:65:GLY:N	2.39	0.52
1:AA:664:G:N2	1:AA:741:G:H1	2.07	0.52
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.44	0.52
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.39	0.52
23:BA:1038:C:H42	23:BA:1117:G:H1	1.56	0.52
23:BA:1810:A:H2'	23:BA:1811:G:O4'	2.09	0.52
23:BA:2319:G:N1	36:BS:3:ARG:HA	2.25	0.52
25:BD:3:VAL:HG13	25:BD:17:THR:HB	1.92	0.52
29:BH:41:MET:HE2	29:BH:65:HIS:CA	2.39	0.52
33:BP:38:GLN:O	33:BP:39:LYS:HB3	2.10	0.52
34:BQ:6:ARG:HB3	43:BZ:194:PRO:HG2	1.90	0.52
43:BZ:137:ILE:HG23	43:BZ:156:LYS:HD2	1.91	0.52
50:B6:6:ARG:NH1	50:B6:26:ASN:HB2	2.24	0.52
1:CA:45:U:H2'	1:CA:46:G:C8	2.45	0.52
1:CA:393:A:OP2	16:CP:12:LYS:HD2	2.10	0.52
1:CA:1015:A:H2'	1:CA:1016:A:C8	2.45	0.52
1:CA:1151:A:N3	10:CJ:39:PRO:HG3	2.24	0.52
2:CB:127:ILE:C	2:CB:129:GLU:H	2.18	0.52
14:CN:37:PHE:CZ	14:CN:56:VAL:HG21	2.44	0.52
16:CP:68:ASP:O	16:CP:71:ARG:HG2	2.10	0.52
21:CU:10:ARG:HE	21:CU:13:ILE:HD12	1.75	0.52
23:DA:527:C:H4'	23:DA:528:A:O5'	2.10	0.52
23:DA:578:A:OP2	56:DA:3920:HOH:O	2.19	0.52
23:DA:1162:G:O2'	39:DV:90:PRO:HG2	2.09	0.52
23:DA:2406:U:H2'	23:DA:2406:U:OP2	2.10	0.52
43:DZ:81:ARG:HG2	43:DZ:81:ARG:HH21	1.75	0.52
19:AS:61:TYR:O	19:AS:66:MET:HE1	2.10	0.52
23:BA:90:U:O2'	23:BA:92:A:C8	2.62	0.52
23:BA:1176:G:H21	23:BA:1178:C:P	2.32	0.52
1:CA:131:C:H2'	1:CA:132:C:C6	2.45	0.52
1:CA:448:A:P	1:CA:485:G:H22	2.33	0.52
1:CA:1242:C:H2'	1:CA:1243:C:O4'	2.10	0.52
1:CA:1250:A:OP1	9:CI:67:GLY:N	2.42	0.52
17:CQ:18:THR:OG1	17:CQ:69:LYS:NZ	2.30	0.52
23:DA:2036:C:H5'	23:DA:2036:C:C6	2.35	0.52
26:DE:201:THR:OG1	26:DE:202:LYS:N	2.41	0.52
30:DI:62:LYS:HA	30:DI:65:ALA:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DZ:137:ILE:HG23	43:DZ:156:LYS:HD2	1.91	0.52
50:D6:16:CYS:SG	50:D6:18:ARG:HG2	2.49	0.52
1:AA:78:G:N1	1:AA:91:C:N4	2.58	0.52
23:BA:141:A:H8	23:BA:1408:C:O2'	1.93	0.52
23:BA:1243:G:O2'	33:BP:7:ARG:NH2	2.43	0.52
26:BE:1:MET:O	26:BE:1:MET:HE3	2.10	0.52
39:BV:23:GLU:OE1	56:BV:305:HOH:O	2.19	0.52
1:CA:40:C:H42	1:CA:402:G:H1	1.57	0.52
1:CA:509:A:C8	1:CA:509:A:H3'	2.44	0.52
1:CA:1127:G:O2'	1:CA:1147:C:N3	2.42	0.52
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.91	0.52
1:CA:1442:G:C8	1:CA:1442(A):G:C5	2.98	0.52
8:CH:13:ILE:O	8:CH:17:THR:HG23	2.10	0.52
23:DA:2839:G:C5'	35:DR:46:GLY:HA2	2.39	0.52
42:DY:43:ASN:OD1	42:DY:65:ALA:HB3	2.10	0.52
52:D8:34:TRP:CG	52:D8:35:GLN:N	2.77	0.52
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.27	0.52
1:AA:509:A:C8	1:AA:509:A:H3'	2.45	0.52
1:AA:1125:U:O5'	1:AA:1125:U:H6	1.93	0.52
15:AO:24:SER:O	15:AO:24:SER:OG	2.20	0.52
16:AP:72:ARG:HE	16:AP:73:LEU:HD23	1.74	0.52
23:BA:207:A:H2'	23:BA:208:C:O4'	2.08	0.52
23:BA:813:U:H2'	23:BA:814:C:C6	2.45	0.52
1:CA:939:G:H1	1:CA:1344:C:H42	1.57	0.52
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.90	0.52
7:CG:134:ALA:O	7:CG:138:LYS:N	2.34	0.52
7:CG:151:TYR:OH	11:CK:54:ARG:HG2	2.10	0.52
23:DA:330:A:H2	23:DA:1210:A:O2'	1.93	0.52
23:DA:821:A:H2'	23:DA:946:G:H5"	1.92	0.52
46:D2:71:ASN:OD1	46:D2:71:ASN:N	2.42	0.52
1:AA:1459:C:C5	1:AA:1460:A:N7	2.77	0.52
9:AI:18:PHE:HD1	9:AI:62:TYR:HD2	1.58	0.52
30:BI:96:ASP:O	30:BI:100:ALA:N	2.39	0.52
43:BZ:72:ARG:NH2	43:BZ:97:GLU:O	2.43	0.52
46:B2:1:MET:HE2	46:B2:6:VAL:HG22	1.92	0.52
1:CA:413:G:H22	1:CA:428:G:H1'	1.74	0.52
1:CA:875:C:O2'	8:CH:14:ARG:NH1	2.42	0.52
1:CA:1206:G:C6	1:CA:1207:G:C5	2.97	0.52
1:CA:1321:C:H6	1:CA:1322:C:H2'	1.74	0.52
22:CY:6:THR:O	22:CY:40:ILE:HA	2.10	0.52
22:CY:12:ILE:HG22	22:CY:13:THR:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2158:A:H4'	23:DA:2159:G:H5'	1.91	0.52
23:DA:2563:U:O2	23:DA:2565:A:H8	1.92	0.52
48:D4:14:ILE:HD12	48:D4:22:ILE:HD12	1.92	0.52
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.10	0.51
2:AB:114:ARG:HD3	2:AB:118:LEU:HG	1.92	0.51
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.26	0.51
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.09	0.51
23:BA:271(Q):G:O2'	23:BA:271(R):G:C8	2.62	0.51
23:BA:528:A:C2	23:BA:2043:C:H4'	2.45	0.51
23:BA:1021:A:H8	23:BA:1022:G:H5"	1.75	0.51
23:BA:2134:A:N3	23:BA:2159:G:O2'	2.40	0.51
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.44	0.51
1:CA:1107:C:C4	1:CA:1108:G:C8	2.97	0.51
43:DZ:125:LEU:HG	43:DZ:164:ALA:HB3	1.90	0.51
48:D4:14:ILE:O	48:D4:22:ILE:HG13	2.10	0.51
1:AA:688:G:H2'	1:AA:689:C:H6	1.76	0.51
1:AA:1443:G:O6	1:AA:1459:C:O2	2.29	0.51
7:AG:65:ALA:HB1	7:AG:127:ALA:HB3	1.92	0.51
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.10	0.51
20:AT:30:LYS:HA	20:AT:33:ILE:HD12	1.91	0.51
20:AT:67:ALA:HA	20:AT:72:LEU:O	2.10	0.51
23:BA:141:A:C8	23:BA:1408:C:O2'	2.61	0.51
23:BA:2125:G:N2	23:BA:2172:U:H3'	2.25	0.51
23:BA:2463:C:O2'	23:BA:2464:C:H5'	2.11	0.51
27:BF:11:VAL:HB	27:BF:18:ARG:HB3	1.92	0.51
30:BI:107:VAL:HG12	30:BI:108:THR:N	2.22	0.51
36:BS:10:ARG:O	36:BS:14:VAL:HG13	2.10	0.51
36:BS:101:LEU:O	36:BS:102:ALA:HB3	2.10	0.51
49:B5:16:ARG:HG2	49:B5:16:ARG:NH1	2.25	0.51
52:B8:32:LEU:O	52:B8:36:LYS:HE3	2.10	0.51
1:CA:376:G:H5"	16:CP:5:ARG:HB2	1.90	0.51
1:CA:413:G:N2	1:CA:428:G:H1'	2.25	0.51
1:CA:833:U:H2'	1:CA:834:C:C6	2.45	0.51
1:CA:1335:C:H5'	1:CA:1336:C:H5'	1.91	0.51
14:CN:60:SER:O	14:CN:60:SER:OG	2.29	0.51
23:DA:1021:A:H3'	23:DA:1021:A:H8	1.75	0.51
23:DA:1485:G:O2'	23:DA:1486:A:H5'	2.10	0.51
23:DA:1805:U:O2	25:DD:50:THR:HB	2.10	0.51
26:DE:12:THR:HG22	37:DT:58:ASN:OD1	2.10	0.51
46:D2:45:SER:O	46:D2:46:GLN:HB2	2.10	0.51
52:D8:23:VAL:CG1	52:D8:47:LYS:HD3	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1149:C:H2'	1:AA:1150:U:O4'	2.09	0.51
1:AA:1441:G:N3	1:AA:1459:C:C5	2.78	0.51
3:AC:11:ARG:HD3	3:AC:15:THR:HB	1.92	0.51
17:AQ:22:LEU:HD13	17:AQ:41:LYS:HG2	1.92	0.51
23:BA:1329:U:H5"	23:BA:1330:C:H5	1.76	0.51
23:BA:2147:G:H2'	23:BA:2148:G:O4'	2.10	0.51
30:BI:110:ASP:N	30:BI:130:TYR:OH	2.40	0.51
40:BW:45:TYR:CZ	40:BW:49:LYS:HE3	2.46	0.51
1:CA:412:A:N6	4:CD:35:ARG:HA	2.25	0.51
1:CA:674:G:H2'	1:CA:675:A:H8	1.75	0.51
1:CA:1349:A:C4	1:CA:1350:A:C8	2.98	0.51
4:CD:10:ARG:HG3	4:CD:11:LEU:HD12	1.91	0.51
4:CD:188:LEU:H	4:CD:188:LEU:CD2	2.23	0.51
6:CF:82:ARG:HG3	6:CF:82:ARG:NH1	2.20	0.51
7:CG:51:GLN:O	7:CG:55:GLY:HA2	2.10	0.51
10:CJ:55:LYS:HD2	10:CJ:56:HIS:H	1.76	0.51
13:CM:43:THR:HB	13:CM:47:ASP:HB2	1.92	0.51
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	1.91	0.51
23:DA:30:G:H2'	23:DA:31:C:C6	2.45	0.51
29:DH:12:PRO:O	29:DH:14:GLY:HA2	2.10	0.51
30:DI:38:LEU:HB3	30:DI:40:THR:HG23	1.91	0.51
41:DX:26:TYR:CE1	41:DX:89:ILE:HG13	2.44	0.51
1:AA:1305:G:N2	1:AA:1331:G:H1'	2.26	0.51
1:AA:1400:C:C2	22:AY:63:ALA:HA	2.46	0.51
2:AB:77:ALA:HB1	2:AB:165:VAL:HG11	1.91	0.51
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	1.92	0.51
16:AP:1:MET:HE2	16:AP:1:MET:N	2.26	0.51
23:BA:2357:U:OP1	44:B0:20:ARG:HD3	2.10	0.51
24:BB:105:A:OP1	43:BZ:72:ARG:NH1	2.42	0.51
40:BW:66:GLU:HA	40:BW:69:LEU:HD12	1.91	0.51
45:B1:6:GLU:HG3	45:B1:61:ARG:O	2.11	0.51
1:CA:994:A:N7	1:CA:1216:G:H4'	2.25	0.51
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.24	0.51
1:CA:1293:G:H2'	1:CA:1294:G:C8	2.45	0.51
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.90	0.51
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.44	0.51
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.75	0.51
22:CY:85:LEU:O	22:CY:89:GLN:HG2	2.10	0.51
23:DA:999:U:O2'	23:DA:1000:A:H5'	2.11	0.51
39:DV:60:GLU:HB2	39:DV:97:LYS:HE2	1.92	0.51
43:DZ:30:ASN:ND2	43:DZ:90:VAL:HB	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:731:G:H5'	1:AA:766:A:H4'	1.93	0.51
1:AA:1410:G:H2'	1:AA:1411:C:C6	2.44	0.51
23:BA:330:A:H2	23:BA:1210:A:H2'	1.75	0.51
23:BA:330:A:H2	23:BA:1210:A:O2'	1.92	0.51
23:BA:1914:C:H2'	23:BA:1915:U:C6	2.45	0.51
24:BB:6:C:C2'	24:BB:7:G:H5"	2.39	0.51
32:BO:98:VAL:HG22	32:BO:118:ALA:HA	1.92	0.51
1:CA:438:G:P	4:CD:125:HIS:HE2	2.34	0.51
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.40	0.51
4:CD:59:ARG:O	4:CD:63:LYS:HG3	2.10	0.51
11:CK:86:GLY:H	11:CK:112:THR:HG1	1.51	0.51
18:CR:31:LEU:O	18:CR:32:ARG:HB2	2.11	0.51
23:DA:848:G:C4	23:DA:933:A:H8	2.29	0.51
24:DB:11:C:OP2	24:DB:12:C:N4	2.28	0.51
24:DB:29:A:H2'	24:DB:30:C:C6	2.46	0.51
29:DH:41:MET:HE2	29:DH:65:HIS:CA	2.40	0.51
30:DI:92:VAL:HG22	30:DI:120:ILE:HB	1.91	0.51
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.46	0.51
23:BA:1109:C:H5	23:BA:1110:G:N1	2.08	0.51
23:BA:1721:G:H2'	23:BA:1740:G:O6	2.11	0.51
23:BA:2022:U:O2'	23:BA:2617:C:H5'	2.10	0.51
23:BA:2136:C:N3	23:BA:2155:G:N2	2.46	0.51
1:CA:47:C:N4	1:CA:361:G:H1	2.09	0.51
2:CB:184:VAL:HG12	2:CB:197:VAL:HG13	1.93	0.51
2:CB:238:LEU:HB2	2:CB:241:GLU:N	2.25	0.51
16:CP:51:VAL:HG12	16:CP:53:VAL:N	2.26	0.51
23:DA:886:C:OP1	23:DA:886:C:H4'	2.10	0.51
23:DA:2125:G:H21	23:DA:2126:A:N6	2.08	0.51
23:DA:2203:U:O2'	23:DA:2205:C:H5'	2.11	0.51
26:DE:12:THR:HG21	37:DT:11:GLU:OE2	2.11	0.51
1:AA:36:C:O2'	1:AA:501:C:OP1	2.29	0.51
1:AA:877:C:H5"	8:AH:88:LYS:HD3	1.93	0.51
1:AA:1164:G:H1	1:AA:1172:C:N4	2.08	0.51
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.74	0.51
1:AA:1443:G:O6	1:AA:1459:C:C2	2.63	0.51
4:AD:106:TYR:HA	4:AD:111:ALA:HB3	1.92	0.51
21:AU:3:LYS:HD3	21:AU:14:TRP:HD1	1.75	0.51
23:BA:652(Q):G:C2'	23:BA:652(R):C:H5'	2.41	0.51
23:BA:2784:C:H1'	26:BE:37:ARG:HH12	1.75	0.51
36:BS:82:ILE:HA	36:BS:83:LYS:CB	2.40	0.51
1:CA:149:A:O2'	1:CA:150:C:P	2.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:434:U:H2'	1:CA:435:C:C6	2.46	0.51
1:CA:1004:A:H5"	1:CA:1025:U:C4	2.46	0.51
1:CA:1452:C:O2'	1:CA:1456:G:OP2	2.27	0.51
2:CB:120:ALA:C	2:CB:122:PHE:H	2.18	0.51
9:CI:82:ALA:O	9:CI:86:VAL:HG13	2.10	0.51
13:CM:69:GLU:C	13:CM:71:ARG:N	2.69	0.51
31:DN:56:ASN:H	31:DN:125:GLY:CA	2.21	0.51
1:AA:757:U:H2'	1:AA:758:G:O4'	2.11	0.51
1:AA:1240:U:OP2	7:AG:116:ALA:N	2.32	0.51
3:AC:32:LEU:HD22	3:AC:59:ARG:HH12	1.75	0.51
18:AR:70:ILE:O	18:AR:74:ARG:HG3	2.11	0.51
37:BT:24:PRO:HD3	37:BT:52:ILE:HD12	1.93	0.51
41:BX:54:VAL:HG13	41:BX:81:VAL:HG12	1.93	0.51
1:CA:376:G:OP2	16:CP:67:THR:HG21	2.10	0.51
1:CA:940:C:H2'	1:CA:941:G:C8	2.46	0.51
1:CA:970:C:OP2	56:CA:2043:HOH:O	2.20	0.51
4:CD:22:LYS:HB2	4:CD:26:CYS:SG	2.50	0.51
20:CT:10:LEU:HD23	20:CT:12:ALA:H	1.76	0.51
23:DA:1721:G:N1	23:DA:1739:U:OP2	2.44	0.51
23:DA:2683:C:O2	32:DO:70:LYS:NZ	2.26	0.51
38:DU:76:TYR:CZ	38:DU:80:ILE:HG13	2.46	0.51
46:D2:16:LEU:O	46:D2:67:LYS:NZ	2.44	0.51
50:D6:18:ARG:HG3	50:D6:42:TRP:CD1	2.46	0.51
1:AA:104:G:H4'	1:AA:174:C:O4'	2.10	0.51
1:AA:166:G:H2'	1:AA:167:G:H8	1.76	0.51
1:AA:260:G:H2'	1:AA:261:U:C6	2.46	0.51
1:AA:1292:U:H2'	1:AA:1293:G:H8	1.75	0.51
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.11	0.51
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.11	0.51
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.11	0.51
17:AQ:95:TYR:O	17:AQ:98:LEU:HB2	2.11	0.51
18:AR:53:ARG:HH21	18:AR:60:ALA:H	1.57	0.51
20:AT:56:MET:HE2	20:AT:88:VAL:HG21	1.93	0.51
23:BA:616:G:H5'	27:BF:205:ARG:HD2	1.92	0.51
23:BA:2166:G:H2'	23:BA:2167:U:O4'	2.10	0.51
23:BA:2611:U:H3'	23:BA:2611:U:OP2	2.10	0.51
41:BX:53:LYS:HB3	41:BX:82:GLN:HB3	1.93	0.51
43:BZ:128:VAL:HG23	43:BZ:161:VAL:H	1.76	0.51
1:CA:392:G:H2'	1:CA:393:A:C8	2.46	0.51
1:CA:560:U:H4'	1:CA:561:U:O5'	2.11	0.51
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1326:C:H2'	1:CA:1327:C:O4'	2.11	0.51
1:CA:1343:G:C6	1:CA:1344:C:C4	2.98	0.51
1:CA:1376:U:P	7:CG:94:ARG:HH22	2.34	0.51
10:CJ:21:GLN:O	10:CJ:25:GLU:N	2.39	0.51
23:DA:1290:C:H2'	23:DA:1291:C:C6	2.46	0.51
23:DA:1654:A:OP1	35:DR:1:MET:HA	2.10	0.51
24:DB:42:C:O2	28:DG:93:THR:N	2.40	0.51
27:DF:53:THR:HG22	27:DF:55:GLY:H	1.75	0.51
34:DQ:12:GLN:HG2	34:DQ:73:PRO:HD2	1.93	0.51
43:DZ:101:PRO:O	43:DZ:102:LEU:HD12	2.11	0.51
50:D6:40:CYS:SG	50:D6:42:TRP:HB2	2.50	0.51
52:D8:61:LEU:C	52:D8:63:PRO:HD3	2.35	0.51
1:AA:1165:C:H2'	1:AA:1166:G:O4'	2.11	0.51
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.92	0.51
23:BA:1658:C:OP1	56:BA:4878:HOH:O	2.19	0.51
42:BY:97:ARG:HH11	42:BY:107:ASP:C	2.19	0.51
1:CA:545:C:H5"	4:CD:72:GLU:HG2	1.93	0.51
1:CA:1386:G:C2	1:CA:1387:G:C8	2.99	0.51
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.25	0.51
12:CL:7:ILE:O	12:CL:11:VAL:HG23	2.10	0.51
23:DA:455:C:N3	23:DA:472:A:H2'	2.25	0.51
23:DA:2109:U:H2'	23:DA:2110:G:C8	2.46	0.51
23:DA:2287:A:N6	23:DA:2344:U:H3	1.97	0.51
23:DA:2322:A:H2'	23:DA:2323:G:O4'	2.11	0.51
23:DA:2627:G:O2'	23:DA:2781:A:N1	2.34	0.51
24:DB:53:A:H2'	24:DB:54:G:O4'	2.11	0.51
1:AA:39:G:C6	1:AA:403:C:N3	2.78	0.50
1:AA:658:G:O4'	15:AO:22:THR:HB	2.11	0.50
1:AA:976:G:C8	1:AA:1362:C:N4	2.80	0.50
1:AA:1005:A:C1'	1:AA:1036:G:H22	2.18	0.50
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.41	0.50
2:AB:55:PHE:O	2:AB:59:GLU:N	2.38	0.50
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.10	0.50
23:BA:300:A:P	42:BY:86:ARG:HH22	2.34	0.50
23:BA:602:G:O2'	23:BA:655:A:N6	2.44	0.50
23:BA:2689:U:H4'	23:BA:2690:C:H5'	1.93	0.50
27:BF:179:GLU:CD	27:BF:179:GLU:H	2.19	0.50
1:CA:1170:A:C5	1:CA:1171:G:H1'	2.46	0.50
1:CA:1300:G:O2'	1:CA:1301:U:P	2.69	0.50
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.93	0.50
14:CN:26:ARG:HD2	14:CN:43:CYS:SG	2.50	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:90:U:O2'	23:DA:92:A:O4'	2.28	0.50
23:DA:660:G:N2	56:DA:3728:HOH:O	2.43	0.50
23:DA:1140:C:O3'	31:DN:25:ARG:NH1	2.43	0.50
23:DA:1166:C:H2'	23:DA:1167:U:C6	2.46	0.50
30:DI:81:VAL:HG22	30:DI:145:VAL:O	2.11	0.50
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.45	0.50
1:AA:1202:G:O4'	14:AN:29:ARG:NH1	2.44	0.50
5:AE:53:LEU:HD12	5:AE:53:LEU:H	1.76	0.50
10:AJ:7:LYS:H	10:AJ:97:GLU:HB3	1.76	0.50
13:AM:49:THR:O	13:AM:52:GLU:N	2.44	0.50
23:BA:185:U:H4'	23:BA:218:A:H4'	1.93	0.50
24:BB:11:C:H3'	24:BB:12:C:H6	1.76	0.50
40:BW:65:LEU:HD12	40:BW:68:ARG:HE	1.77	0.50
1:CA:798:G:N7	56:CA:2275:HOH:O	2.33	0.50
1:CA:1016:A:O5'	1:CA:1016:A:H8	1.95	0.50
1:CA:1028:C:H2'	1:CA:1029:C:H6	1.76	0.50
1:CA:1122:U:N3	1:CA:1123:A:C5	2.79	0.50
1:CA:1158:C:N3	1:CA:1181:G:N2	2.58	0.50
2:CB:74:LYS:NZ	2:CB:205:ASP:OD2	2.45	0.50
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.77	0.50
26:DE:11:MET:HG2	26:DE:24:THR:HB	1.93	0.50
27:DF:184:TYR:O	27:DF:188:ARG:HG3	2.11	0.50
29:DH:88:LEU:CD2	29:DH:165:ALA:HA	2.40	0.50
30:DI:72:LEU:C	30:DI:74:ASN:H	2.19	0.50
36:DS:102:ALA:HB1	36:DS:112:PHE:CZ	2.43	0.50
37:DT:120:ARG:HA	37:DT:123:GLN:HG2	1.92	0.50
38:DU:112:ARG:NH2	39:DV:47:VAL:HB	2.26	0.50
1:AA:116:A:OP2	1:AA:116:A:C8	2.65	0.50
1:AA:875:C:O2'	8:AH:14:ARG:NH1	2.44	0.50
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.47	0.50
2:AB:47:THR:O	2:AB:51:LEU:N	2.34	0.50
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.46	0.50
16:AP:52:ASP:HB3	16:AP:55:ARG:HB2	1.93	0.50
18:AR:31:LEU:O	18:AR:32:ARG:HB2	2.11	0.50
19:AS:47:HIS:HB2	19:AS:62:ILE:HD13	1.92	0.50
23:BA:1406:U:H2'	23:BA:1407:C:C6	2.46	0.50
23:BA:1815:A:OP2	25:BD:54:ARG:NH2	2.44	0.50
23:BA:2104:G:N7	23:BA:2186:G:N2	2.58	0.50
23:BA:2205:C:O2	23:BA:2220:G:C2	2.64	0.50
1:CA:101:A:O2'	1:CA:102:G:H5'	2.11	0.50
1:CA:196:A:OP1	20:CT:68:LYS:NZ	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:736:C:H2'	1:CA:737:A:C8	2.46	0.50
1:CA:834:C:H2'	1:CA:835:U:H6	1.77	0.50
1:CA:937:A:C5	1:CA:938:A:N7	2.79	0.50
1:CA:1281:U:H5"	1:CA:1282:C:OP2	2.11	0.50
1:CA:1321:C:C6	1:CA:1322:C:H2'	2.47	0.50
19:CS:52:TYR:HB2	19:CS:57:HIS:CE1	2.47	0.50
23:DA:71:A:H5"	23:DA:73:A:C8	2.46	0.50
23:DA:484:C:H2'	23:DA:485:C:C6	2.47	0.50
23:DA:528:A:C2	23:DA:2043:C:H4'	2.47	0.50
23:DA:2130:U:O2'	23:DA:2158:A:N6	2.43	0.50
23:DA:2273:A:H2'	23:DA:2274:A:C8	2.47	0.50
23:DA:2357:U:O2	56:DA:4411:HOH:O	2.19	0.50
30:DI:4:ILE:HD11	30:DI:44:LEU:HD12	1.92	0.50
33:DP:26:GLY:O	33:DP:27:HIS:CD2	2.64	0.50
43:DZ:72:ARG:NH2	43:DZ:97:GLU:O	2.43	0.50
48:D4:14:ILE:HG23	48:D4:31:ILE:HB	1.92	0.50
1:AA:1321:C:C3'	1:AA:1322:C:H5"	2.38	0.50
1:AA:1399:C:C2	1:AA:1502:A:N6	2.80	0.50
1:AA:1508:G:H2'	1:AA:1509:C:O4'	2.12	0.50
23:BA:322:A:OP1	27:BF:168:ARG:HD2	2.12	0.50
23:BA:330:A:HO2'	23:BA:331:A:H8	1.57	0.50
23:BA:1358:G:OP2	56:BA:4984:HOH:O	2.18	0.50
23:BA:2203:U:O2'	23:BA:2205:C:H5'	2.11	0.50
30:BI:126:TYR:HB2	30:BI:142:VAL:HG23	1.93	0.50
1:CA:270:A:H2'	1:CA:271:C:C6	2.47	0.50
1:CA:544:G:P	4:CD:62:GLN:HE21	2.32	0.50
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.94	0.50
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.46	0.50
1:CA:1352:C:N4	1:CA:1370:G:H1	2.08	0.50
10:CJ:51:ARG:NE	10:CJ:61:GLU:HB2	2.27	0.50
16:CP:6:LEU:HB3	16:CP:17:TYR:CD2	2.47	0.50
30:DI:116:LEU:HD22	30:DI:118:LYS:O	2.10	0.50
1:AA:624:C:H2'	1:AA:625:G:H8	1.77	0.50
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.11	0.50
9:AI:17:VAL:HG21	9:AI:80:GLY:HA3	1.93	0.50
13:AM:6:GLY:HA3	13:AM:67:GLU:HB2	1.92	0.50
13:AM:69:GLU:O	13:AM:71:ARG:N	2.44	0.50
16:AP:51:VAL:HG12	16:AP:53:VAL:N	2.27	0.50
17:AQ:76:LEU:HD11	17:AQ:78:GLU:O	2.12	0.50
23:BA:1794:U:H2'	23:BA:1795:C:C6	2.47	0.50
23:BA:2000:G:OP1	35:BR:5:LYS:NZ	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2317:C:C2	23:BA:2318:G:N7	2.80	0.50
36:BS:96:GLY:HA2	36:BS:100:ALA:H	1.76	0.50
39:BV:35:LEU:HB2	39:BV:57:VAL:HG22	1.92	0.50
1:CA:1025:U:H1'	1:CA:1026:G:N7	2.27	0.50
1:CA:1030:C:H2'	1:CA:1030(A):G:C8	2.45	0.50
1:CA:1310:G:H5'	13:CM:77:ASN:OD1	2.12	0.50
1:CA:1376:U:H2'	1:CA:1377:A:H8	1.76	0.50
2:CB:47:THR:O	2:CB:51:LEU:N	2.35	0.50
6:CF:15:ASP:OD2	6:CF:16:GLN:N	2.44	0.50
23:DA:1721:G:H2'	23:DA:1740:G:O6	2.11	0.50
23:DA:2143:C:N3	23:DA:2148:G:O6	2.45	0.50
24:DB:73:A:C4	24:DB:105:A:C2	3.00	0.50
27:DF:179:GLU:CD	27:DF:179:GLU:H	2.19	0.50
31:DN:42:TRP:HA	31:DN:48:MET:SD	2.51	0.50
40:DW:45:TYR:CZ	40:DW:49:LYS:HE3	2.46	0.50
40:DW:79:GLY:HA3	40:DW:100:THR:HG22	1.93	0.50
1:AA:519:C:OP2	12:AL:50:SER:OG	2.21	0.50
1:AA:631:G:H2'	1:AA:632:A:C8	2.46	0.50
1:AA:1023:G:H3'	1:AA:1024:G:C8	2.47	0.50
1:AA:1202:G:C1'	14:AN:29:ARG:HH11	2.24	0.50
1:AA:1292:U:H2'	1:AA:1293:G:C8	2.46	0.50
1:AA:1441:G:O2'	1:AA:1459:C:N3	2.32	0.50
4:AD:15:GLU:OE2	4:AD:66:ARG:NH1	2.45	0.50
18:AR:45:SER:OG	18:AR:47:THR:HG22	2.11	0.50
22:AY:16:ILE:O	22:AY:20:VAL:HG12	2.12	0.50
23:BA:154:G:H5'	23:BA:154(A):C:OP2	2.12	0.50
23:BA:1371:G:HO2'	23:BA:1372:U:H5	1.58	0.50
23:BA:1530:C:H1'	23:BA:1531:C:OP1	2.12	0.50
23:BA:2052:G:H4'	26:BE:143:ASN:O	2.11	0.50
50:B6:10:LEU:HG	50:B6:54:ILE:HG13	1.92	0.50
1:CA:59:A:H1'	1:CA:354:G:C2	2.47	0.50
1:CA:373:A:H2'	1:CA:374:A:H8	1.76	0.50
1:CA:1068:G:N7	1:CA:1094:G:C8	2.80	0.50
8:CH:33:GLU:HG3	8:CH:59:LEU:HD11	1.93	0.50
9:CI:118:LYS:O	9:CI:120:ARG:N	2.41	0.50
23:DA:1824:G:OP1	25:DD:52:ARG:NH1	2.42	0.50
1:AA:107:G:H2'	1:AA:108:G:O4'	2.12	0.50
2:AB:74:LYS:NZ	2:AB:205:ASP:OD2	2.45	0.50
2:AB:82:ARG:HG3	2:AB:92:TYR:OH	2.12	0.50
9:AI:19:LEU:O	9:AI:59:PHE:HB3	2.11	0.50
10:AJ:43:ARG:O	10:AJ:67:THR:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.85	0.50
23:BA:1049:C:O2'	23:BA:1050:A:H8	1.78	0.50
23:BA:2839:G:C5'	35:BR:46:GLY:HA2	2.42	0.50
25:BD:60:ARG:NH1	56:BD:418:HOH:O	2.27	0.50
1:CA:262:A:H2'	1:CA:263:A:C8	2.46	0.50
1:CA:926:G:C6	22:CY:87:LYS:HG3	2.46	0.50
1:CA:1206:G:H4'	3:CC:192:THR:O	2.12	0.50
1:CA:1298:C:P	7:CG:114:ARG:HH22	2.34	0.50
14:CN:47:LEU:HA	14:CN:50:LYS:HB2	1.93	0.50
23:DA:234:C:H2'	23:DA:235:U:H6	1.76	0.50
24:DB:42:C:O2	28:DG:92:VAL:HA	2.12	0.50
28:DG:3:LEU:HD13	48:D4:25:TYR:CE1	2.46	0.50
31:DN:123:TYR:OH	31:DN:130:HIS:NE2	2.39	0.50
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.10	0.50
1:AA:530:G:H3'	1:AA:531:U:C5'	2.42	0.50
1:AA:1442:G:C8	1:AA:1442(A):G:C5	3.00	0.50
2:AB:101:MET:C	2:AB:102:LEU:HD12	2.37	0.50
11:AK:85:ARG:HE	11:AK:111:ASP:HB3	1.77	0.50
23:BA:245:G:O5'	33:BP:73:GLY:HA2	2.11	0.50
23:BA:821:A:H2'	23:BA:946:G:H5"	1.93	0.50
23:BA:1045:A:N3	23:BA:1045:A:H2'	2.26	0.50
23:BA:1980:G:O2'	23:BA:1982:C:OP2	2.25	0.50
23:BA:2031:A:C6	23:BA:2498:C:H1'	2.47	0.50
23:BA:2125:G:H21	23:BA:2126:A:N6	2.10	0.50
23:BA:2336:A:H61	44:B0:43:THR:HG22	1.76	0.50
25:BD:69:ARG:NH2	25:BD:128:GLY:O	2.38	0.50
33:BP:82:GLY:HA2	33:BP:113:LYS:O	2.12	0.50
1:CA:176:C:H2'	1:CA:177:C:C6	2.47	0.50
3:CC:132:ARG:O	3:CC:136:GLN:HB2	2.12	0.50
22:CY:24:LEU:HD22	22:CY:78:ILE:HD11	1.93	0.50
23:DA:90:U:O2'	23:DA:92:A:C8	2.65	0.50
23:DA:652(D):C:H2'	23:DA:652(E):G:O4'	2.11	0.50
23:DA:1784:A:H4'	23:DA:1785:A:O5'	2.12	0.50
23:DA:2111:C:H42	23:DA:2147:G:H22	1.59	0.50
23:DA:2386:C:H2'	23:DA:2387:U:C6	2.47	0.50
24:DB:24:G:H4'	24:DB:25:A:C8	2.47	0.50
30:DI:101:LEU:HD23	30:DI:105:HIS:HB2	1.94	0.50
1:AA:309:G:O2'	1:AA:607:A:N1	2.43	0.50
1:AA:441:A:H3'	1:AA:442:C:C6	2.46	0.50
1:AA:474:G:H2'	1:AA:475:G:H8	1.77	0.50
1:AA:565:U:OP2	1:AA:566:G:O2'	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:182:ILE:HA	3:AC:202:ILE:O	2.12	0.50
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.47	0.50
23:BA:886:C:OP1	23:BA:886:C:H4'	2.12	0.50
23:BA:1403:C:C5'	23:BA:1471:A:H1'	2.41	0.50
23:BA:1417:C:H2'	23:BA:1418:G:O4'	2.11	0.50
23:BA:2158:A:H4'	23:BA:2159:G:H5'	1.93	0.50
39:BV:40:LEU:HB2	39:BV:46:VAL:HG13	1.94	0.50
1:CA:392:G:H2'	1:CA:393:A:H8	1.76	0.50
1:CA:1095:U:P	1:CA:1108:G:H1	2.33	0.50
1:CA:1226:C:N4	13:CM:104:ARG:HH11	2.09	0.50
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.93	0.50
23:DA:2316:C:H2'	23:DA:2317:C:C6	2.46	0.50
23:DA:2317:C:C4	23:DA:2318:G:N7	2.80	0.50
1:AA:1003:G:H5"	1:AA:1004:A:OP2	2.11	0.49
1:AA:1027:C:H2'	1:AA:1028:C:C5	2.47	0.49
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.92	0.49
7:AG:116:ALA:O	7:AG:120:ILE:HG12	2.12	0.49
8:AH:83:ILE:HB	8:AH:137:VAL:HG13	1.93	0.49
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.94	0.49
23:BA:1529:G:C6	23:BA:1530:C:N4	2.80	0.49
26:BE:9:VAL:HG13	26:BE:25:VAL:O	2.11	0.49
33:BP:121:LYS:HD3	33:BP:123:LEU:HD11	1.93	0.49
1:CA:622:A:C8	1:CA:623:C:C6	2.99	0.49
1:CA:1030(A):G:N3	1:CA:1030(C):G:C8	2.80	0.49
7:CG:113:GLU:CG	7:CG:119:ARG:HG2	2.31	0.49
9:CI:27:THR:HG1	9:CI:28:VAL:N	2.10	0.49
19:CS:41:VAL:O	19:CS:44:MET:HB2	2.12	0.49
23:DA:443:A:H1'	23:DA:1201:C:O4'	2.12	0.49
23:DA:870:A:C2	23:DA:908:C:C2	2.99	0.49
23:DA:1429:G:H2'	23:DA:1430:C:H6	1.77	0.49
23:DA:1932:A:H2'	23:DA:1933:G:O4'	2.11	0.49
23:DA:2128:C:N4	23:DA:2160:G:H1	2.09	0.49
25:DD:180:GLY:HA3	25:DD:275:LYS:HD3	1.94	0.49
27:DF:6:VAL:HG22	27:DF:23:ASP:H	1.76	0.49
48:D4:36:CYS:SG	48:D4:38:LYS:O	2.70	0.49
1:AA:428:G:O2'	1:AA:429:U:OP2	2.30	0.49
1:AA:800:G:O6	56:AA:2014:HOH:O	2.20	0.49
1:AA:955:U:O2'	19:AS:83:HIS:HD2	1.95	0.49
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.10	0.49
1:AA:1288:A:N1	1:AA:1371:G:H1'	2.27	0.49
23:BA:2036:C:H5'	23:BA:2036:C:C6	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:192:LEU:HD22	27:BF:194:MET:HE2	1.93	0.49
1:CA:618:C:N3	1:CA:622:A:N6	2.60	0.49
1:CA:763:G:H2'	1:CA:764:C:C6	2.47	0.49
1:CA:1371:G:O3'	9:CI:69:GLY:HA3	2.12	0.49
1:CA:1492:A:C5	23:DA:1913:A:C2	3.01	0.49
3:CC:179:ARG:HH21	3:CC:206:GLU:CD	2.21	0.49
13:CM:6:GLY:HA3	13:CM:22:ILE:HD13	1.93	0.49
22:CY:13:THR:O	22:CY:17:ARG:HG3	2.12	0.49
23:DA:207:A:H2'	23:DA:208:C:O4'	2.13	0.49
23:DA:1545:A:H2'	23:DA:1546:C:O4'	2.12	0.49
39:DV:5:VAL:HG11	39:DV:57:VAL:HG21	1.94	0.49
43:DZ:144:LEU:HD12	43:DZ:148:ASP:HB3	1.94	0.49
1:AA:684:A:H2'	1:AA:685:G:C8	2.47	0.49
1:AA:1320:C:H5'	1:AA:1320:C:C6	2.45	0.49
5:AE:74:GLY:HA3	5:AE:116:THR:HG22	1.94	0.49
10:AJ:11:PHE:O	10:AJ:68:HIS:NE2	2.44	0.49
10:AJ:54:PHE:C	10:AJ:55:LYS:O	2.54	0.49
22:AY:12:ILE:HD11	22:AY:16:ILE:HD11	1.93	0.49
23:BA:1300:U:H4'	23:BA:1301:A:C5'	2.41	0.49
23:BA:1652:A:O2'	23:BA:1653:G:H5'	2.12	0.49
23:BA:2305:A:H5"	28:BG:134:GLY:HA3	1.94	0.49
23:BA:2537:U:H2'	23:BA:2538:C:C6	2.48	0.49
27:BF:184:TYR:O	27:BF:188:ARG:HG3	2.12	0.49
29:BH:88:LEU:CD2	29:BH:165:ALA:HA	2.42	0.49
43:BZ:151:HIS:C	43:BZ:153:SER:H	2.20	0.49
1:CA:1123:A:N3	10:CJ:38:ILE:HG22	2.27	0.49
1:CA:1386:G:N3	1:CA:1387:G:C8	2.81	0.49
11:CK:34:ASP:OD2	11:CK:37:GLY:N	2.45	0.49
14:CN:4:LYS:HA	14:CN:7:ILE:HG22	1.94	0.49
18:CR:70:ILE:O	18:CR:74:ARG:HG3	2.12	0.49
20:CT:64:ASP:OD1	20:CT:81:LYS:NZ	2.42	0.49
22:CY:70:MET:O	22:CY:74:ILE:HG12	2.12	0.49
23:DA:674:G:H1'	27:DF:74:ARG:HD3	1.93	0.49
23:DA:2125:G:H21	23:DA:2126:A:H62	1.60	0.49
23:DA:2251:G:H5'	56:DA:4116:HOH:O	2.11	0.49
23:DA:2820:A:OP1	35:DR:4:LEU:HD23	2.12	0.49
24:DB:11:C:H3'	24:DB:12:C:H6	1.77	0.49
25:DD:238:GLY:N	56:DD:407:HOH:O	2.45	0.49
26:DE:111:ARG:HA	35:DR:1:MET:SD	2.53	0.49
31:DN:20:GLY:HA2	31:DN:61:ARG:HD3	1.95	0.49
37:DT:30:VAL:HG22	37:DT:86:ILE:HG12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DV:52:VAL:HG22	39:DV:55:ALA:HB3	1.94	0.49
1:AA:532:A:H2	1:AA:1206:G:H21	1.58	0.49
1:AA:1368:G:OP1	56:AA:2231:HOH:O	2.19	0.49
2:AB:210:SER:O	2:AB:214:ILE:HG12	2.12	0.49
3:AC:6:HIS:CD2	3:AC:9:GLY:H	2.30	0.49
9:AI:26:VAL:O	9:AI:32:ASP:HA	2.13	0.49
14:AN:4:LYS:O	14:AN:7:ILE:HG12	2.12	0.49
23:BA:243:U:OP1	52:B8:6:THR:OG1	2.27	0.49
23:BA:620:G:N3	23:BA:620:G:H5'	2.27	0.49
23:BA:796:C:H2'	23:BA:797:C:C6	2.47	0.49
23:BA:1503:U:H2'	23:BA:1504:C:C6	2.47	0.49
23:BA:1721:G:N1	23:BA:1739:U:OP2	2.45	0.49
23:BA:1963:U:H4'	23:BA:1964:G:OP1	2.12	0.49
23:BA:2463:C:C2'	23:BA:2464:C:H5'	2.42	0.49
24:BB:49:C:OP1	36:BS:97:ARG:N	2.44	0.49
32:BO:19:ILE:HG22	32:BO:43:VAL:HG22	1.94	0.49
1:CA:191:G:C6	1:CA:192:U:N3	2.81	0.49
1:CA:266:G:H5"	1:CA:267:C:C5	2.48	0.49
1:CA:600:C:C2	1:CA:639:G:C2	3.00	0.49
1:CA:1063:C:OP2	1:CA:1064:G:O2'	2.17	0.49
1:CA:1064:G:OP1	1:CA:1386:G:H4'	2.12	0.49
6:CF:75:LEU:O	6:CF:79:LEU:HG	2.13	0.49
10:CJ:35:SER:HB3	10:CJ:73:ASP:O	2.12	0.49
11:CK:99:GLN:HG2	11:CK:105:VAL:HG21	1.94	0.49
22:CY:78:ILE:O	22:CY:82:GLU:HG3	2.13	0.49
23:DA:586:A:N1	23:DA:809:G:O2'	2.41	0.49
23:DA:781:A:H2	23:DA:1776:G:N3	2.11	0.49
23:DA:1371:G:HO2'	23:DA:1372:U:H5	1.60	0.49
23:DA:1580:A:OP2	23:DA:1580:A:H8	1.94	0.49
23:DA:2205:C:O2	23:DA:2220:G:C2	2.65	0.49
23:DA:2320:A:H2'	23:DA:2320:A:N3	2.28	0.49
23:DA:2690:C:OP2	23:DA:2690:C:H6	1.94	0.49
28:DG:125:PHE:HB3	28:DG:166:ASP:OD2	2.13	0.49
1:AA:1256:A:H5'	1:AA:1258:G:C1'	2.42	0.49
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.78	0.49
1:AA:1370:G:C2	1:AA:1371:G:C8	3.00	0.49
2:AB:135:GLN:O	2:AB:138:LEU:N	2.44	0.49
6:AF:82:ARG:HG3	6:AF:82:ARG:NH1	2.26	0.49
11:AK:44:SER:OG	11:AK:47:VAL:HG23	2.12	0.49
23:BA:1185:C:H5"	23:BA:1186:G:OP1	2.12	0.49
23:BA:2648:C:H2'	23:BA:2649:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:12:THR:HG21	37:BT:11:GLU:OE2	2.12	0.49
26:BE:12:THR:HG22	37:BT:58:ASN:OD1	2.13	0.49
31:BN:18:ALA:O	31:BN:19:GLU:HB3	2.11	0.49
1:CA:403:C:OP1	4:CD:137:SER:OG	2.18	0.49
6:CF:69:GLU:O	6:CF:72:VAL:HG13	2.13	0.49
11:CK:44:SER:OG	11:CK:47:VAL:HG23	2.12	0.49
11:CK:48:ILE:O	11:CK:50:TYR:N	2.45	0.49
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.48	0.49
23:DA:1138:G:N3	31:DN:106:MET:HE2	2.28	0.49
23:DA:1815:A:OP2	25:DD:54:ARG:NH2	2.46	0.49
23:DA:2286:A:H4'	23:DA:2287:A:O4'	2.12	0.49
47:D3:8:LEU:HD13	47:D3:31:LEU:CD2	2.43	0.49
51:D7:34:ARG:NH1	51:D7:41:ARG:O	2.45	0.49
1:AA:1304:G:H1'	1:AA:1333:A:H61	1.77	0.49
1:AA:1503:A:N7	1:AA:1531:A:H8	2.10	0.49
16:AP:51:VAL:CG1	16:AP:53:VAL:H	2.25	0.49
23:BA:848:G:C4	23:BA:933:A:H8	2.30	0.49
23:BA:1268:A:H2'	23:BA:1269:A:O4'	2.12	0.49
24:BB:53:A:H2'	24:BB:54:G:O4'	2.12	0.49
26:BE:103:ASP:OD2	26:BE:168:MET:HE3	2.12	0.49
29:BH:40:GLU:OE1	29:BH:60:ARG:NH1	2.45	0.49
32:BO:101:PRO:HG3	37:BT:67:SER:OG	2.12	0.49
43:BZ:150:LEU:O	43:BZ:171:ILE:HG13	2.12	0.49
52:B8:61:LEU:C	52:B8:63:PRO:HD3	2.37	0.49
1:CA:719:C:C2	18:CR:50:ILE:HG12	2.48	0.49
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.42	0.49
1:CA:1004:A:H5"	1:CA:1025:U:O4	2.12	0.49
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.76	0.49
1:CA:1267:C:O2	1:CA:1267:C:H2'	2.12	0.49
2:CB:114:ARG:HD3	2:CB:118:LEU:HG	1.93	0.49
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.13	0.49
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.94	0.49
22:CY:44:GLU:HB3	22:CY:47:GLY:C	2.38	0.49
23:DA:2304:G:O6	23:DA:2312:U:O4	2.30	0.49
33:DP:121:LYS:HD3	33:DP:123:LEU:HD11	1.93	0.49
40:DW:83:LYS:O	40:DW:84:ARG:HD3	2.11	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.11	0.49
1:AA:939:G:H5"	7:AG:102:ARG:NH1	2.28	0.49
2:AB:87:ARG:NH2	2:AB:233:SER:HB2	2.28	0.49
3:AC:154:SER:HB3	3:AC:165:THR:HG23	1.94	0.49
7:AG:57:GLU:O	7:AG:60:LYS:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:69:VAL:CG1	7:AG:100:ALA:HA	2.42	0.49
23:BA:330:A:H2	23:BA:1210:A:C2'	2.26	0.49
23:BA:910:A:N1	23:BA:2277:G:H1'	2.28	0.49
25:BD:71:ASP:HB3	25:BD:103:ARG:NH2	2.27	0.49
25:BD:77:ALA:HB2	25:BD:97:TYR:CD2	2.48	0.49
37:BT:51:ARG:HG3	37:BT:98:LYS:CE	2.42	0.49
42:BY:23:ARG:HB2	42:BY:23:ARG:HH11	1.78	0.49
43:BZ:10:ARG:HG3	43:BZ:36:LYS:HB3	1.94	0.49
1:CA:189(F):U:C4	17:CQ:72:ARG:CZ	2.96	0.49
1:CA:302:G:N3	1:CA:556:C:H4'	2.27	0.49
1:CA:953:G:H4'	22:CY:6:THR:OG1	2.12	0.49
1:CA:974:A:P	14:CN:41:ARG:HH12	2.34	0.49
1:CA:1295:G:N2	1:CA:1302:U:H3	2.07	0.49
2:CB:53:ARG:HH12	2:CB:199:TYR:HA	1.77	0.49
3:CC:138:VAL:HG23	3:CC:151:VAL:HG23	1.93	0.49
4:CD:15:GLU:OE2	4:CD:66:ARG:NH1	2.46	0.49
22:CY:13:THR:H	22:CY:16:ILE:HG23	1.77	0.49
23:DA:35:G:H2'	23:DA:36:G:O4'	2.12	0.49
23:DA:198:C:H2'	56:DA:3760:HOH:O	2.13	0.49
23:DA:362:U:O2'	23:DA:363:G:H5"	2.12	0.49
23:DA:1268:A:C2	23:DA:2013:A:C4	3.00	0.49
23:DA:1287:A:H5"	23:DA:1288:U:OP2	2.13	0.49
23:DA:1803:A:H4'	25:DD:259:THR:HG23	1.94	0.49
31:DN:33:LEU:HD12	31:DN:38:HIS:CE1	2.47	0.49
1:AA:35:G:O2'	12:AL:118:SER:O	2.23	0.49
1:AA:73:G:C6	1:AA:97:G:C6	3.00	0.49
1:AA:763:G:H2'	1:AA:764:C:C6	2.48	0.49
8:AH:25:ASP:OD2	8:AH:60:ARG:HG3	2.13	0.49
16:AP:36:ILE:HD12	16:AP:56:ALA:HB2	1.94	0.49
20:AT:56:MET:HG3	20:AT:57:ARG:N	2.28	0.49
23:BA:271(Q):G:O2'	23:BA:271(R):G:P	2.70	0.49
23:BA:1545:A:H2'	23:BA:1546:C:O4'	2.13	0.49
23:BA:2001:A:H2'	23:BA:2002:G:C8	2.48	0.49
23:BA:2109:U:H2'	23:BA:2110:G:C8	2.48	0.49
34:BQ:34:LEU:HD11	34:BQ:129:THR:HB	1.95	0.49
36:BS:35:ILE:HD13	36:BS:101:LEU:HD12	1.95	0.49
1:CA:453:A:H4'	16:CP:72:ARG:HG2	1.94	0.49
1:CA:1306:A:H2'	1:CA:1307:U:O4'	2.12	0.49
1:CA:1493:A:HO2'	1:CA:1494:G:P	2.35	0.49
2:CB:68:ILE:HG12	2:CB:161:ALA:HB3	1.94	0.49
5:CE:12:LEU:HB3	5:CE:31:LEU:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:91:LEU:HD12	5:CE:120:THR:HG22	1.95	0.49
18:CR:45:SER:OG	18:CR:47:THR:HG22	2.13	0.49
22:CY:12:ILE:HG22	22:CY:16:ILE:HG23	1.94	0.49
23:DA:375:C:H2'	23:DA:376:C:C6	2.48	0.49
23:DA:616:G:H5'	27:DF:205:ARG:HD2	1.95	0.49
23:DA:1143:A:OP1	31:DN:25:ARG:NH2	2.45	0.49
23:DA:1604:C:OP2	56:DA:3805:HOH:O	2.20	0.49
23:DA:2321:G:H5"	23:DA:2322:A:OP2	2.13	0.49
56:DA:4969:HOH:O	25:DD:61:LEU:HD21	2.12	0.49
24:DB:23:G:O6	56:DB:322:HOH:O	2.19	0.49
24:DB:49:C:H2'	24:DB:50:G:C8	2.47	0.49
32:DO:19:ILE:HG22	32:DO:43:VAL:HG22	1.93	0.49
35:DR:56:LYS:NZ	35:DR:90:ARG:O	2.45	0.49
1:AA:45:U:H2'	1:AA:46:G:C8	2.47	0.49
1:AA:134:A:N6	16:AP:25:ARG:NH1	2.61	0.49
1:AA:266:G:H5"	1:AA:267:C:C5	2.47	0.49
1:AA:1003:G:N2	1:AA:1038:C:C4	2.80	0.49
1:AA:1079:G:C6	1:AA:1080:A:N6	2.80	0.49
23:BA:783:A:O2'	23:BA:785:G:OP1	2.26	0.49
23:BA:847:U:H5	23:BA:933:A:H62	1.57	0.49
23:BA:864:G:N2	23:BA:913:U:C2	2.81	0.49
23:BA:2122:U:H2'	23:BA:2123:G:C8	2.48	0.49
23:BA:2464:C:HO2'	23:BA:2465:C:H5"	1.77	0.49
45:B1:94:LEU:O	45:B1:97:LEU:HB2	2.13	0.49
48:B4:14:ILE:HD12	48:B4:22:ILE:HD12	1.93	0.49
1:CA:404:U:H5'	4:CD:122:ARG:HD3	1.95	0.49
1:CA:685:G:O2'	1:CA:686:U:H5'	2.13	0.49
1:CA:1381:U:O2	1:CA:1381:U:H2'	2.13	0.49
2:CB:135:GLN:O	2:CB:138:LEU:N	2.44	0.49
7:CG:51:GLN:HG3	7:CG:56:GLN:O	2.12	0.49
8:CH:44:PHE:HE2	8:CH:109:ILE:HD12	1.77	0.49
13:CM:49:THR:O	13:CM:52:GLU:N	2.46	0.49
17:CQ:95:TYR:O	17:CQ:98:LEU:HB2	2.12	0.49
23:DA:234:C:H2'	23:DA:235:U:C6	2.48	0.49
23:DA:1816:G:H8	25:DD:62:TYR:CZ	2.31	0.49
1:AA:1210:C:H2'	1:AA:1211:U:H5"	1.93	0.49
1:AA:1313:U:O4	19:AS:4:SER:HA	2.13	0.49
4:AD:94:LEU:HA	4:AD:97:LEU:HD12	1.95	0.49
23:BA:774:A:HO2'	23:BA:775:G:H8	1.58	0.49
23:BA:1021:A:H62	23:BA:1141:U:H3	1.61	0.49
23:BA:1113:U:H2'	23:BA:1114:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1506:C:C2'	23:BA:1507:A:H5'	2.39	0.49
23:BA:2138:C:H2'	23:BA:2139:C:C6	2.48	0.49
23:BA:2319:G:N2	36:BS:3:ARG:HB2	2.28	0.49
23:BA:2563:U:O2	23:BA:2565:A:H8	1.96	0.49
43:BZ:93:ASP:HB2	43:BZ:131:ARG:HH22	1.77	0.49
1:CA:165:C:H2'	1:CA:166:G:H8	1.77	0.49
1:CA:1162:C:N4	1:CA:1174:G:H1	2.09	0.49
6:CF:8:ILE:HD12	6:CF:26:ILE:HD13	1.93	0.49
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.95	0.49
23:DA:484:C:H2'	23:DA:485:C:H6	1.78	0.49
23:DA:1300:U:H4'	23:DA:1301:A:C5'	2.43	0.49
23:DA:2133:G:C2	23:DA:2157:G:H2'	2.47	0.49
23:DA:2404:C:O3'	33:DP:77:ARG:NH2	2.46	0.49
30:DI:85:GLU:HG3	30:DI:86:THR:H	1.78	0.49
52:D8:33:ASN:O	52:D8:34:TRP:O	2.30	0.49
1:AA:1277:C:HO2'	1:AA:1279:A:H1'	1.78	0.48
16:AP:1:MET:HE2	16:AP:1:MET:H1	1.78	0.48
20:AT:87:LYS:O	20:AT:91:LEU:HG	2.13	0.48
23:BA:90:U:O2'	23:BA:92:A:O4'	2.30	0.48
23:BA:372:G:OP2	45:B1:69:LYS:NZ	2.29	0.48
23:BA:839:U:H2'	23:BA:840:C:C6	2.48	0.48
23:BA:2321:G:H5"	23:BA:2322:A:OP2	2.13	0.48
24:BB:44:G:C2	24:BB:48:A:C2	3.01	0.48
46:B2:4:SER:HA	46:B2:7:ARG:NH1	2.28	0.48
1:CA:530:G:H3'	1:CA:531:U:C5'	2.43	0.48
1:CA:1316:G:H2'	1:CA:1318:A:OP2	2.13	0.48
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.27	0.48
8:CH:33:GLU:HG2	8:CH:48:TYR:CE1	2.48	0.48
14:CN:23:ARG:HD2	14:CN:28:GLY:C	2.38	0.48
23:DA:587:C:P	33:DP:21:ARG:HH22	2.36	0.48
23:DA:1607:C:H4'	23:DA:1608:A:O5'	2.13	0.48
35:DR:97:VAL:HG22	35:DR:114:VAL:HG13	1.94	0.48
1:AA:438:G:O2'	1:AA:494:U:O4	2.29	0.48
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.48	0.48
1:AA:1457:G:H2'	1:AA:1458:G:H8	1.78	0.48
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.48	0.48
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.95	0.48
5:AE:90:VAL:O	5:AE:120:THR:HA	2.14	0.48
16:AP:75:ARG:O	16:AP:78:GLY:N	2.34	0.48
23:BA:2296:U:OP2	36:BS:9:ARG:NH2	2.39	0.48
28:BG:43:LEU:HB2	28:BG:89:GLY:HA2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BP:26:GLY:O	33:BP:27:HIS:CD2	2.66	0.48
53:B9:27:CYS:SG	53:B9:28:GLU:N	2.86	0.48
1:CA:69:G:N3	1:CA:70:G:C8	2.81	0.48
1:CA:674:G:H2'	1:CA:675:A:C8	2.48	0.48
13:CM:65:LYS:NZ	13:CM:69:GLU:HG2	2.29	0.48
23:DA:562:U:C4	23:DA:2036:C:O4'	2.66	0.48
23:DA:1159:U:O2'	23:DA:1160:G:H5'	2.12	0.48
23:DA:1889:A:H2'	23:DA:1890:A:C8	2.48	0.48
23:DA:2336:A:H61	44:D0:43:THR:HG22	1.78	0.48
26:DE:59:VAL:O	26:DE:64:LYS:HE3	2.13	0.48
32:DO:23:ARG:HG3	32:DO:24:VAL:N	2.27	0.48
34:DQ:5:ARG:O	43:DZ:194:PRO:HD2	2.12	0.48
1:AA:738:C:H2'	1:AA:739:C:H6	1.79	0.48
1:AA:1093:A:O2'	1:AA:1095:U:OP1	2.28	0.48
5:AE:89:ILE:HD13	5:AE:90:VAL:H	1.78	0.48
11:AK:99:GLN:HG2	11:AK:105:VAL:HG11	1.96	0.48
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.95	0.48
23:BA:647:G:H8	23:BA:647:G:O5'	1.96	0.48
28:BG:16:ARG:HE	28:BG:31:VAL:HG21	1.77	0.48
28:BG:60:LEU:HB3	28:BG:68:PRO:HG3	1.95	0.48
31:BN:108:PRO:O	31:BN:113:GLY:HA3	2.13	0.48
37:BT:2:ASN:O	37:BT:6:LEU:HD22	2.13	0.48
43:BZ:7:ALA:HB3	43:BZ:61:LEU:HD12	1.94	0.48
1:CA:616:G:C2	1:CA:617:G:C8	3.00	0.48
1:CA:1508:G:H2'	1:CA:1509:C:O4'	2.13	0.48
2:CB:67:THR:HA	2:CB:90:MET:HE2	1.94	0.48
7:CG:44:TYR:HA	7:CG:47:CYS:HB2	1.96	0.48
22:CY:69:ASP:HB3	22:CY:72:THR:HB	1.95	0.48
23:DA:517:C:OP1	49:D5:16:ARG:NH2	2.45	0.48
23:DA:1268:A:H2'	23:DA:1269:A:O4'	2.13	0.48
23:DA:2576:G:H1'	56:DA:3845:HOH:O	2.13	0.48
24:DB:27:C:C4	24:DB:28:C:C4	3.00	0.48
30:DI:9:LEU:HD21	30:DI:35:LEU:HD13	1.96	0.48
1:AA:1049:U:OP1	14:AN:3:ARG:HB3	2.14	0.48
23:BA:11:G:C2'	23:BA:12:U:H5'	2.43	0.48
23:BA:27:G:O6	56:BA:4077:HOH:O	2.18	0.48
23:BA:784:A:C8	23:BA:792:G:C5	3.01	0.48
23:BA:811:U:O2'	33:BP:21:ARG:HG3	2.13	0.48
23:BA:1430:C:H2'	23:BA:1431:U:H6	1.77	0.48
23:BA:1858:G:H1'	23:BA:1884:A:N6	2.28	0.48
23:BA:2320:A:N3	23:BA:2320:A:H2'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:2:C:H2'	24:BB:3:C:H6	1.79	0.48
28:BG:179:PRO:HG3	48:B4:43:TYR:OH	2.13	0.48
52:B8:28:GLY:O	52:B8:36:LYS:NZ	2.46	0.48
1:CA:426:G:P	4:CD:36:ARG:NH1	2.86	0.48
1:CA:735:C:H2'	1:CA:736:C:C6	2.42	0.48
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.76	0.48
1:CA:1358:U:H2'	1:CA:1359:C:O4'	2.13	0.48
1:CA:1446:U:H4'	1:CA:1447:A:C5	2.48	0.48
23:DA:1165:U:H2'	23:DA:1166:C:C6	2.48	0.48
23:DA:1587:A:H2'	23:DA:1588:C:C6	2.49	0.48
23:DA:2173:A:H2'	23:DA:2174:C:H5'	1.95	0.48
27:DF:29:ASN:H	27:DF:112:MET:CE	2.27	0.48
31:DN:4:TYR:CD2	38:DU:100:VAL:HG11	2.49	0.48
37:DT:28:VAL:HG13	37:DT:86:ILE:HG23	1.96	0.48
1:AA:1346:A:C2'	7:AG:10:ARG:HH22	2.27	0.48
3:AC:52:LEU:HA	3:AC:70:VAL:HA	1.96	0.48
16:AP:68:ASP:O	16:AP:71:ARG:HG2	2.13	0.48
23:BA:764:A:H2	25:BD:219:PRO:HG3	1.78	0.48
23:BA:2130:U:O2'	23:BA:2158:A:N6	2.45	0.48
24:BB:42:C:O2	28:BG:92:VAL:HA	2.14	0.48
1:CA:130:A:O2'	1:CA:131:C:O5'	2.30	0.48
1:CA:148:G:O2'	1:CA:149:A:H5'	2.14	0.48
1:CA:601:C:H2'	1:CA:602:A:C8	2.49	0.48
1:CA:731:G:H5'	1:CA:766:A:H4'	1.94	0.48
1:CA:1060:C:C5	3:CC:2:GLY:HA3	2.48	0.48
1:CA:1064:G:O2'	1:CA:1065:U:OP2	2.31	0.48
1:CA:1112:C:H1'	3:CC:179:ARG:HG2	1.95	0.48
1:CA:1293:G:H2'	1:CA:1294:G:H8	1.77	0.48
2:CB:101:MET:C	2:CB:102:LEU:HD12	2.39	0.48
3:CC:25:GLY:O	3:CC:27:LYS:N	2.45	0.48
10:CJ:51:ARG:CZ	10:CJ:61:GLU:HB2	2.43	0.48
22:CY:12:ILE:HG22	22:CY:13:THR:N	2.27	0.48
23:DA:236:C:H2'	23:DA:237:C:C6	2.48	0.48
23:DA:774:A:HO2'	23:DA:775:G:H8	1.60	0.48
23:DA:996:A:H4'	38:DU:91:ASP:OD1	2.14	0.48
23:DA:1113:U:H2'	23:DA:1114:G:C8	2.48	0.48
23:DA:1581:G:H2'	23:DA:1582:C:O4'	2.12	0.48
23:DA:2138:C:H2'	23:DA:2139:C:C6	2.49	0.48
23:DA:2364:C:H2'	23:DA:2365:G:O4'	2.12	0.48
1:AA:110:C:H2'	1:AA:111:G:O4'	2.13	0.48
1:AA:973:G:H3'	1:AA:974:A:H5"	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.13	0.48
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.13	0.48
3:AC:150:LYS:HB2	3:AC:173:VAL:HG21	1.95	0.48
14:AN:3:ARG:O	14:AN:6:LEU:HB2	2.13	0.48
16:AP:21:VAL:O	16:AP:33:ILE:HG12	2.13	0.48
17:AQ:84:LEU:O	17:AQ:87:LYS:HB2	2.14	0.48
23:BA:528:A:N1	23:BA:2042:A:H2'	2.27	0.48
23:BA:1210:A:H5"	23:BA:1212:G:O4'	2.14	0.48
23:BA:1239:G:H2'	23:BA:1240:U:O4'	2.14	0.48
23:BA:1604:C:H5'	56:BA:3876:HOH:O	2.12	0.48
1:CA:9:G:H2'	1:CA:10:A:H8	1.78	0.48
1:CA:429:U:H5'	4:CD:9:CYS:HB2	1.95	0.48
1:CA:684:A:H2'	1:CA:685:G:C8	2.49	0.48
1:CA:939:G:H1	1:CA:1344:C:N4	2.11	0.48
1:CA:1087:G:C6	1:CA:1088:G:O6	2.66	0.48
1:CA:1150:U:O4	1:CA:1151:A:N6	2.46	0.48
1:CA:1163:C:C2	1:CA:1174:G:C2	3.02	0.48
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.94	0.48
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	1.96	0.48
8:CH:83:ILE:HB	8:CH:137:VAL:HG13	1.95	0.48
16:CP:51:VAL:CG1	16:CP:53:VAL:H	2.24	0.48
23:DA:866:A:O2'	23:DA:867:C:H5'	2.13	0.48
23:DA:2101:G:H2'	23:DA:2102:U:O4'	2.13	0.48
23:DA:2836:U:H2'	23:DA:2837:G:C8	2.48	0.48
28:DG:96:ARG:H	28:DG:99:MET:HE2	1.79	0.48
34:DQ:42:ILE:HD13	34:DQ:97:VAL:HG21	1.95	0.48
1:AA:102:G:H2'	1:AA:103:C:H6	1.79	0.48
1:AA:363:A:N7	12:AL:30:ALA:HB1	2.29	0.48
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.96	0.48
8:AH:44:PHE:HE2	8:AH:109:ILE:HD12	1.78	0.48
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.96	0.48
11:AK:85:ARG:HG2	11:AK:112:THR:HA	1.95	0.48
13:AM:66:LEU:H	13:AM:70:LEU:HB2	1.78	0.48
15:AO:18:PHE:CD1	15:AO:18:PHE:C	2.91	0.48
23:BA:185:U:H2'	23:BA:186:G:C8	2.49	0.48
43:BZ:111:VAL:HG12	43:BZ:112:ARG:N	2.28	0.48
44:B0:72:ARG:HB2	44:B0:75:LEU:HB2	1.96	0.48
1:CA:1043:C:H2'	1:CA:1044:A:O4'	2.13	0.48
1:CA:1144:G:N2	1:CA:1146:A:H62	2.12	0.48
12:CL:34:ARG:O	12:CL:61:THR:HG23	2.13	0.48
17:CQ:84:LEU:O	17:CQ:87:LYS:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1218:C:H6	23:DA:1218:C:H5"	1.79	0.48
23:DA:2052:G:H4'	26:DE:143:ASN:O	2.13	0.48
24:DB:33:G:H5'	28:DG:2:PRO:HD3	1.95	0.48
27:DF:150:GLY:HA2	27:DF:172:TRP:CD2	2.48	0.48
43:DZ:111:VAL:C	43:DZ:113:ALA:H	2.22	0.48
1:AA:149:A:O2'	1:AA:150:C:H6	1.97	0.48
1:AA:435:C:N4	1:AA:436:C:H41	2.11	0.48
1:AA:942:G:H21	9:AI:124:GLN:NE2	2.11	0.48
1:AA:1158:C:H5	1:AA:1181:G:H22	1.60	0.48
1:AA:1325:C:O2'	1:AA:1326:C:H5'	2.13	0.48
3:AC:16:ARG:NH1	3:AC:183:ASP:HA	2.29	0.48
13:AM:88:ARG:HG3	13:AM:98:VAL:HG13	1.95	0.48
23:BA:484:C:H2'	23:BA:485:C:C6	2.48	0.48
23:BA:664:C:H4'	23:BA:941:A:OP1	2.14	0.48
23:BA:2820:A:OP1	35:BR:4:LEU:HD23	2.14	0.48
23:BA:2869:G:H2'	23:BA:2870:C:O4'	2.14	0.48
45:B1:82:LEU:HA	45:B1:85:LEU:CD2	2.40	0.48
1:CA:57:G:H2'	1:CA:58:C:H6	1.78	0.48
1:CA:149:A:O2'	1:CA:150:C:H6	1.97	0.48
1:CA:659:U:H2'	1:CA:660:G:O4'	2.13	0.48
1:CA:976:G:P	14:CN:32:SER:H	2.37	0.48
9:CI:104:ARG:NH1	9:CI:105:ASP:O	2.43	0.48
14:CN:59:ALA:HB1	14:CN:61:TRP:CZ3	2.49	0.48
15:CO:21:ASP:OD2	15:CO:24:SER:HB3	2.14	0.48
23:DA:446:G:OP1	38:DU:3:ARG:NH1	2.47	0.48
23:DA:2377:A:H2'	23:DA:2378:A:C8	2.48	0.48
23:DA:2869:G:H2'	23:DA:2870:C:O4'	2.13	0.48
32:DO:101:PRO:HG3	37:DT:67:SER:OG	2.12	0.48
37:DT:51:ARG:HG3	37:DT:98:LYS:HE3	1.94	0.48
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.47	0.48
1:AA:392:G:H2'	1:AA:393:A:C8	2.48	0.48
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.96	0.48
1:AA:1003:G:N3	1:AA:1004:A:H1'	2.28	0.48
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.49	0.48
23:BA:375:C:H2'	23:BA:376:C:C6	2.49	0.48
23:BA:1031:G:H21	53:B9:36:GLN:HE22	1.61	0.48
23:BA:1378:A:OP1	51:B7:10:ARG:NH2	2.47	0.48
39:BV:52:VAL:HG22	39:BV:55:ALA:HB3	1.96	0.48
43:BZ:45:ASP:OD2	43:BZ:49:ARG:NH1	2.46	0.48
1:CA:425:G:H4'	4:CD:45:GLN:NE2	2.27	0.48
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1443:G:O6	1:CA:1459:C:O2	2.32	0.48
4:CD:30:LYS:C	4:CD:32:ALA:H	2.11	0.48
23:DA:226:G:H21	23:DA:228:A:H62	1.61	0.48
23:DA:2104:G:N7	23:DA:2186:G:N2	2.62	0.48
24:DB:6:C:C2'	24:DB:7:G:H5"	2.40	0.48
28:DG:43:LEU:HB2	28:DG:89:GLY:HA2	1.94	0.48
29:DH:67:LEU:O	29:DH:71:LEU:HB2	2.13	0.48
30:DI:77:LEU:CB	30:DI:142:VAL:HG12	2.43	0.48
44:D0:10:THR:HG22	44:D0:12:ASN:N	2.27	0.48
1:AA:659:U:H2'	1:AA:660:G:O4'	2.14	0.48
1:AA:1092:A:N3	1:AA:1183:A:N6	2.61	0.48
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.49	0.48
1:AA:1288:A:O3'	21:AU:10:ARG:NH2	2.47	0.48
3:AC:51:GLY:HA3	3:AC:71:ALA:CB	2.44	0.48
4:AD:65:ARG:HG2	4:AD:75:PHE:CE1	2.49	0.48
9:AI:99:LEU:HB3	9:AI:101:PHE:HD1	1.79	0.48
23:BA:1652:A:C2'	23:BA:1653:G:H5'	2.43	0.48
31:BN:24:GLY:HA2	31:BN:27:ALA:CB	2.42	0.48
31:BN:56:ASN:N	31:BN:125:GLY:HA3	2.25	0.48
50:B6:21:TYR:CE2	50:B6:38:LYS:HG2	2.49	0.48
1:CA:269:C:H2'	1:CA:270:A:C8	2.49	0.48
1:CA:393:A:OP1	16:CP:13:HIS:HE1	1.97	0.48
1:CA:436:C:O2'	1:CA:437:U:OP2	2.28	0.48
1:CA:438:G:H5'	4:CD:123:HIS:HB3	1.96	0.48
1:CA:938:A:N6	1:CA:939:G:C6	2.82	0.48
1:CA:959:A:O2'	1:CA:961:U:H5'	2.14	0.48
1:CA:1030(C):G:H2'	1:CA:1030(D):A:C8	2.49	0.48
1:CA:1235:U:O2'	1:CA:1305:G:O5'	2.32	0.48
3:CC:111:LEU:CD2	3:CC:146:ALA:HB2	2.44	0.48
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.96	0.48
23:DA:300:A:P	42:DY:86:ARG:NH2	2.86	0.48
23:DA:664:C:H4'	23:DA:941:A:OP1	2.14	0.48
23:DA:847:U:H5	23:DA:933:A:H62	1.59	0.48
35:DR:12:ARG:HG2	35:DR:16:HIS:ND1	2.29	0.48
36:DS:83:LYS:HB3	36:DS:84:GLN:O	2.14	0.48
50:D6:21:TYR:CE2	50:D6:38:LYS:HG2	2.49	0.48
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.49	0.47
1:AA:1144:G:N2	1:AA:1146:A:H62	2.12	0.47
10:AJ:16:LEU:HD23	10:AJ:17:ASP:N	2.28	0.47
10:AJ:68:HIS:H	10:AJ:68:HIS:CD2	2.32	0.47
20:AT:75:ASN:OD1	20:AT:75:ASN:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:284:U:H2'	23:BA:285:C:C6	2.49	0.47
23:BA:1165:U:H2'	23:BA:1166:C:C6	2.48	0.47
23:BA:1252:G:O4'	38:BU:33:ARG:HD2	2.14	0.47
23:BA:1588:C:H2'	23:BA:1589:C:H6	1.79	0.47
23:BA:1593:G:H2'	23:BA:1594:G:C8	2.49	0.47
23:BA:2165:G:H2'	23:BA:2166:G:C8	2.48	0.47
23:BA:2193:G:H2'	23:BA:2194:G:C8	2.49	0.47
34:BQ:5:ARG:O	43:BZ:194:PRO:HD2	2.14	0.47
42:BY:38:ILE:HD11	42:BY:66:PRO:HG3	1.95	0.47
43:BZ:125:LEU:HG	43:BZ:164:ALA:HB3	1.96	0.47
1:CA:545:C:H5"	4:CD:72:GLU:CB	2.44	0.47
1:CA:767:A:H2'	1:CA:768:A:O4'	2.14	0.47
1:CA:930:C:C2'	1:CA:931:C:H5'	2.44	0.47
1:CA:942:G:C2	1:CA:1342:C:C2	3.02	0.47
1:CA:1306:A:H2'	1:CA:1307:U:C6	2.49	0.47
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.49	0.47
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.14	0.47
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.96	0.47
7:CG:15:ASP:CB	7:CG:19:GLY:H	2.27	0.47
23:DA:478:A:N1	23:DA:500:G:H4'	2.29	0.47
23:DA:482:A:OP2	23:DA:507:A:N6	2.46	0.47
23:DA:2147:G:H2'	23:DA:2148:G:O4'	2.14	0.47
23:DA:2526:G:H5'	23:DA:2742:C:O2'	2.14	0.47
24:DB:45:A:O4'	28:DG:95:ARG:NH1	2.47	0.47
29:DH:139:GLN:HG3	29:DH:140:LYS:N	2.27	0.47
43:DZ:45:ASP:O	43:DZ:49:ARG:HG3	2.13	0.47
1:AA:269:C:H2'	1:AA:270:A:C8	2.49	0.47
1:AA:413:G:N2	1:AA:428:G:H1'	2.29	0.47
1:AA:1158:C:H5	1:AA:1181:G:N1	2.09	0.47
2:AB:71:VAL:HG13	2:AB:93:VAL:CG2	2.43	0.47
3:AC:131:ARG:NH1	5:AE:50:GLU:HG3	2.29	0.47
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.49	0.47
15:AO:21:ASP:OD2	15:AO:24:SER:HB3	2.14	0.47
19:AS:52:TYR:CE2	19:AS:54:GLY:HA2	2.50	0.47
21:AU:12:LYS:O	21:AU:16:GLY:N	2.46	0.47
23:BA:2040:C:H2'	23:BA:2041:U:O4'	2.14	0.47
23:BA:2317:C:N3	23:BA:2318:G:N7	2.61	0.47
27:BF:150:GLY:HA2	27:BF:172:TRP:CD2	2.49	0.47
47:B3:8:LEU:HD13	47:B3:31:LEU:CD2	2.42	0.47
1:CA:18:C:H4'	1:CA:1078:U:O2	2.14	0.47
1:CA:110:C:H2'	1:CA:111:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.32	0.47
1:CA:512:U:O2'	4:CD:42:GLN:NE2	2.44	0.47
1:CA:1321:C:C3'	1:CA:1322:C:H5"	2.44	0.47
1:CA:1441:G:N3	1:CA:1459:C:C5	2.82	0.47
2:CB:52:GLU:O	2:CB:56:ARG:HG2	2.13	0.47
2:CB:54:THR:O	2:CB:58:ILE:HG13	2.14	0.47
2:CB:55:PHE:O	2:CB:59:GLU:N	2.38	0.47
2:CB:210:SER:O	2:CB:214:ILE:HG12	2.14	0.47
4:CD:18:LYS:NZ	4:CD:31:CYS:HB3	2.29	0.47
14:CN:37:PHE:HZ	14:CN:56:VAL:HG21	1.78	0.47
23:DA:11:G:C2'	23:DA:12:U:H5'	2.43	0.47
23:DA:1028:A:N6	23:DA:1125:G:H2'	2.29	0.47
44:D0:72:ARG:HB2	44:D0:75:LEU:HB2	1.96	0.47
1:AA:1030(A):G:N2	1:AA:1032:G:O6	2.47	0.47
5:AE:66:MET:HE3	5:AE:66:MET:HB3	1.76	0.47
23:BA:1530:C:O2'	23:BA:1531:C:P	2.73	0.47
23:BA:2101:G:H2'	23:BA:2102:U:O4'	2.13	0.47
23:BA:2111:C:H42	23:BA:2147:G:N2	2.12	0.47
37:BT:120:ARG:HA	37:BT:123:GLN:HG2	1.95	0.47
1:CA:542:G:H2'	1:CA:543:C:H6	1.79	0.47
1:CA:947:G:H2'	1:CA:948:C:O4'	2.14	0.47
1:CA:1004:A:H5"	1:CA:1025:U:C5	2.49	0.47
1:CA:1330:U:H4'	13:CM:23:TYR:HE2	1.77	0.47
5:CE:36:ASP:OD2	5:CE:38:GLN:N	2.41	0.47
16:CP:5:ARG:HG3	16:CP:5:ARG:HH11	1.79	0.47
17:CQ:27:PHE:CE1	17:CQ:36:ILE:HD11	2.49	0.47
23:DA:89:G:H3'	23:DA:90:U:H5"	1.97	0.47
23:DA:593:G:C4'	52:D8:4:MET:HE2	2.45	0.47
23:DA:1376:C:OP2	56:DA:4026:HOH:O	2.20	0.47
23:DA:2315:G:C6	23:DA:2316:C:C4	3.02	0.47
24:DB:105:A:OP1	43:DZ:72:ARG:NH1	2.46	0.47
29:DH:17:VAL:HG21	29:DH:50:VAL:HG21	1.97	0.47
29:DH:28:GLY:HA3	29:DH:79:VAL:HB	1.95	0.47
43:DZ:150:LEU:O	43:DZ:171:ILE:HG13	2.14	0.47
1:AA:501:C:H1'	1:AA:549:C:H1'	1.96	0.47
1:AA:527:G:O2'	1:AA:535:A:N1	2.35	0.47
1:AA:687:A:O2'	1:AA:688:G:OP2	2.26	0.47
1:AA:1122:U:C4	1:AA:1123:A:N7	2.82	0.47
4:AD:110:PHE:HD1	4:AD:110:PHE:H	1.60	0.47
10:AJ:68:HIS:CD2	10:AJ:68:HIS:N	2.81	0.47
23:BA:1174:A:H1'	23:BA:1175:U:C5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1494:A:H2'	23:BA:1495:A:C8	2.49	0.47
24:BB:78:A:C2	24:BB:100:A:C4	3.02	0.47
1:CA:174:C:H2'	1:CA:175:C:H6	1.79	0.47
1:CA:516:U:C4	1:CA:517:G:C6	3.02	0.47
1:CA:664:G:N2	1:CA:741:G:H1	2.07	0.47
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.47	0.47
1:CA:1297:C:H4'	1:CA:1298:C:H5'	1.97	0.47
3:CC:130:VAL:HG12	3:CC:134:ILE:HD11	1.96	0.47
5:CE:89:ILE:HD13	5:CE:90:VAL:H	1.78	0.47
23:DA:620:G:N3	23:DA:620:G:H5'	2.29	0.47
23:DA:1588:C:H2'	23:DA:1589:C:C6	2.50	0.47
24:DB:116:G:H8	24:DB:116:G:OP2	1.97	0.47
25:DD:69:ARG:NH2	25:DD:128:GLY:O	2.40	0.47
32:DO:88:ASN:HD21	32:DO:90:GLN:HB2	1.79	0.47
36:DS:11:LYS:HG3	36:DS:91:PRO:HD3	1.97	0.47
1:AA:77:G:O6	1:AA:78:G:C6	2.68	0.47
1:AA:560:U:H4'	1:AA:561:U:O5'	2.15	0.47
1:AA:1365:G:C6	1:AA:1366:C:C4	3.03	0.47
2:AB:53:ARG:NH2	2:AB:198:ASP:O	2.37	0.47
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.13	0.47
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.26	0.47
13:AM:85:GLY:HA3	19:AS:74:PHE:CD1	2.50	0.47
17:AQ:88:TYR:HD2	17:AQ:89:LEU:HD23	1.79	0.47
23:BA:2303:G:O6	56:BA:4040:HOH:O	2.17	0.47
25:BD:108:PRO:HB3	25:BD:143:HIS:HE1	1.78	0.47
1:CA:413:G:N7	4:CD:35:ARG:NH2	2.62	0.47
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.29	0.47
1:CA:1292:U:H5'	9:CI:38:GLN:HE21	1.79	0.47
6:CF:36:ARG:CB	6:CF:36:ARG:HH11	2.27	0.47
12:CL:71:PRO:O	12:CL:102:ARG:NH1	2.47	0.47
23:DA:720:C:H2'	23:DA:721:C:C6	2.49	0.47
23:DA:1506:C:C2'	23:DA:1507:A:H5'	2.40	0.47
23:DA:2031:A:C6	23:DA:2498:C:H1'	2.49	0.47
23:DA:2076:U:O5'	23:DA:2076:U:H6	1.97	0.47
23:DA:2134:A:H62	23:DA:2157:G:H5'	1.79	0.47
28:DG:96:ARG:O	28:DG:99:MET:HB3	2.14	0.47
29:DH:11:VAL:HG21	29:DH:50:VAL:HG23	1.96	0.47
1:AA:380:G:N2	1:AA:384:G:C5	2.83	0.47
1:AA:765:G:H5"	1:AA:766:A:OP1	2.14	0.47
1:AA:1298:C:H4'	1:AA:1299:A:O4'	2.15	0.47
4:AD:89:THR:OG1	56:AD:403:HOH:O	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:139(A):G:H22	41:BX:44:GLU:CD	2.22	0.47
23:BA:2747:G:O6	23:BA:2755:C:H5"	2.13	0.47
25:BD:180:GLY:HA3	25:BD:275:LYS:HD3	1.96	0.47
26:BE:178:GLU:OE2	26:BE:178:GLU:N	2.41	0.47
30:BI:129:THR:HG22	30:BI:139:GLN:OE1	2.14	0.47
35:BR:37:THR:OG1	35:BR:40:LYS:HG3	2.15	0.47
1:CA:97:G:O2'	1:CA:98:G:H8	1.97	0.47
1:CA:750:G:H1'	15:CO:23:GLY:H	1.79	0.47
1:CA:1060:C:H2'	1:CA:1061:G:H8	1.79	0.47
9:CI:18:PHE:CD1	9:CI:62:TYR:HD2	2.17	0.47
12:CL:84:LEU:HD22	12:CL:85:ILE:H	1.80	0.47
15:CO:18:PHE:CD1	15:CO:18:PHE:C	2.92	0.47
23:DA:883:G:H1	23:DA:893:C:H42	1.63	0.47
23:DA:886:C:H5"	56:DA:5037:HOH:O	2.14	0.47
26:DE:5:LEU:HD11	26:DE:79:ARG:HB2	1.96	0.47
26:DE:28:ALA:HB3	26:DE:93:VAL:CG1	2.45	0.47
30:DI:40:THR:O	30:DI:44:LEU:N	2.48	0.47
1:AA:767:A:H2'	1:AA:768:A:O4'	2.15	0.47
1:AA:939:G:H5"	7:AG:102:ARG:CZ	2.44	0.47
1:AA:1072:G:C5	1:AA:1073:U:C4	3.03	0.47
1:AA:1442:G:O6	1:AA:1442(A):G:O6	2.33	0.47
1:AA:1446:U:O2'	1:AA:1447:A:H3'	2.15	0.47
10:AJ:6:ILE:HA	10:AJ:97:GLU:O	2.14	0.47
15:AO:17:ARG:HH11	15:AO:17:ARG:CG	2.26	0.47
16:AP:52:ASP:OD2	16:AP:55:ARG:HG2	2.14	0.47
19:AS:40:ILE:O	19:AS:67:VAL:HG13	2.15	0.47
22:AY:23:ARG:HH11	22:AY:23:ARG:HA	1.79	0.47
23:BA:652(I):C:H2'	23:BA:652(J):G:N7	2.28	0.47
23:BA:848:G:N9	23:BA:933:A:H8	2.13	0.47
23:BA:1047:G:H2'	23:BA:1110:G:N1	2.30	0.47
23:BA:1170:G:H5"	23:BA:1170:G:H8	1.80	0.47
23:BA:1268:A:C2	23:BA:2013:A:C4	3.03	0.47
23:BA:2128:C:N4	23:BA:2160:G:H1	2.12	0.47
23:BA:2134:A:H62	23:BA:2157:G:H5'	1.79	0.47
23:BA:2134:A:N6	23:BA:2157:G:H5'	2.30	0.47
23:BA:2169:A:H2'	23:BA:2170:A:C8	2.49	0.47
1:CA:360:A:N1	56:CA:1926:HOH:O	2.35	0.47
1:CA:449:C:O2	16:CP:42:ARG:HD2	2.15	0.47
1:CA:518:C:O2'	1:CA:530:G:N2	2.48	0.47
1:CA:604:G:C2	1:CA:635:G:C5	3.03	0.47
1:CA:631:G:H2'	1:CA:632:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:834:C:H2'	1:CA:835:U:C6	2.49	0.47
1:CA:857:C:H2'	1:CA:858:G:O4'	2.15	0.47
1:CA:977:A:C2	1:CA:1224:G:N7	2.82	0.47
1:CA:990:C:C2	1:CA:1216:G:C2	3.03	0.47
1:CA:1006:C:H2'	1:CA:1007:C:O4'	2.15	0.47
1:CA:1119:C:N3	1:CA:1154:G:O6	2.47	0.47
3:CC:12:LEU:HA	3:CC:16:ARG:O	2.15	0.47
3:CC:186:PHE:HA	3:CC:198:VAL:O	2.15	0.47
7:CG:99:LEU:HD22	7:CG:103:TRP:CZ2	2.49	0.47
9:CI:19:LEU:HB3	9:CI:59:PHE:CD1	2.50	0.47
15:CO:57:LEU:HD23	15:CO:57:LEU:HA	1.75	0.47
18:CR:53:ARG:HH21	18:CR:60:ALA:H	1.62	0.47
23:DA:9:U:O2'	23:DA:10:G:OP1	2.32	0.47
23:DA:284:U:H2'	23:DA:285:C:C6	2.50	0.47
23:DA:747:U:O2	23:DA:2014:A:H1'	2.14	0.47
23:DA:892:G:H8	23:DA:892:G:O5'	1.98	0.47
23:DA:1274:A:N3	23:DA:1297:C:H1'	2.30	0.47
23:DA:1278:A:OP1	35:DR:36:THR:HG23	2.13	0.47
23:DA:1494:A:C6	23:DA:1495:A:C6	3.03	0.47
23:DA:1588:C:H2'	23:DA:1589:C:H6	1.79	0.47
23:DA:2317:C:C2	23:DA:2318:G:N7	2.83	0.47
23:DA:2885:C:O2'	49:D5:34:PRO:HG3	2.15	0.47
26:DE:75:VAL:HG13	26:DE:77:ILE:H	1.79	0.47
30:DI:72:LEU:HA	30:DI:75:LEU:HD13	1.96	0.47
32:DO:43:VAL:HG12	32:DO:54:GLU:HA	1.95	0.47
43:DZ:125:LEU:HB3	43:DZ:165:VAL:HG12	1.97	0.47
47:D3:36:VAL:HG23	56:D3:101:HOH:O	2.15	0.47
1:AA:97:G:O2'	1:AA:98:G:H8	1.97	0.47
1:AA:390:C:H2'	1:AA:391:G:C8	2.50	0.47
1:AA:922:G:C6	1:AA:923:A:C6	3.02	0.47
1:AA:1259:C:C4	1:AA:1260:C:O2	2.68	0.47
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.50	0.47
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.15	0.47
9:AI:18:PHE:CD1	9:AI:62:TYR:HD2	2.33	0.47
23:BA:1580:A:H8	23:BA:1580:A:OP2	1.97	0.47
23:BA:1914:C:H2'	23:BA:1915:U:H6	1.80	0.47
23:BA:2134:A:C2	23:BA:2159:G:H4'	2.50	0.47
23:BA:2601:C:H3'	56:BA:5519:HOH:O	2.13	0.47
23:BA:2690:C:H6	23:BA:2690:C:OP2	1.97	0.47
48:B4:14:ILE:HG23	48:B4:31:ILE:HB	1.97	0.47
50:B6:16:CYS:HB2	50:B6:18:ARG:NH1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:199:G:O2'	1:CA:200:G:H5'	2.15	0.47
1:CA:321:A:C2	1:CA:333:G:C2	3.03	0.47
1:CA:387:U:OP1	56:CA:1903:HOH:O	2.20	0.47
3:CC:130:VAL:O	3:CC:132:ARG:N	2.42	0.47
4:CD:30:LYS:CB	4:CD:35:ARG:HD2	2.45	0.47
10:CJ:32:ALA:O	10:CJ:76:ASN:N	2.44	0.47
20:CT:33:ILE:O	20:CT:37:SER:OG	2.26	0.47
23:DA:263:C:H2'	23:DA:264:C:O4'	2.14	0.47
23:DA:438:G:H2'	23:DA:440:G:C8	2.50	0.47
23:DA:704:G:O2'	23:DA:726:G:N2	2.35	0.47
23:DA:1297:C:OP1	23:DA:2710:C:H4'	2.15	0.47
23:DA:1593:G:H2'	23:DA:1594:G:C8	2.50	0.47
23:DA:2017:U:OP1	56:DA:3921:HOH:O	2.20	0.47
23:DA:2317:C:N3	23:DA:2318:G:N7	2.63	0.47
30:DI:29:TYR:O	30:DI:32:PRO:HD2	2.15	0.47
1:AA:255:G:P	56:AA:2232:HOH:O	2.73	0.47
1:AA:448:A:P	1:AA:485:G:H22	2.37	0.47
1:AA:673:G:N2	1:AA:674:G:C2	2.83	0.47
1:AA:1021:G:N2	1:AA:1022:G:H1'	2.29	0.47
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.15	0.47
1:AA:1300:G:O2'	1:AA:1301:U:P	2.73	0.47
1:AA:1442(B):A:C2	37:BT:118:ARG:NH2	2.82	0.47
2:AB:52:GLU:O	2:AB:56:ARG:HG2	2.14	0.47
5:AE:12:LEU:HB3	5:AE:31:LEU:HB2	1.97	0.47
7:AG:75:VAL:HA	7:AG:87:VAL:O	2.15	0.47
11:AK:34:ASP:OD2	11:AK:37:GLY:N	2.48	0.47
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.50	0.47
12:AL:27:LEU:C	12:AL:29:GLY:H	2.23	0.47
16:AP:6:LEU:HB3	16:AP:17:TYR:HD2	1.79	0.47
23:BA:92:A:H2'	23:BA:93:G:O4'	2.15	0.47
23:BA:747:U:O2	23:BA:2014:A:H1'	2.14	0.47
23:BA:1171:G:H3'	23:BA:1173:G:H5'	1.96	0.47
43:BZ:128:VAL:HG23	43:BZ:161:VAL:N	2.30	0.47
1:CA:620:C:H2'	1:CA:621:A:O4'	2.15	0.47
1:CA:937:A:H1'	1:CA:1379:G:N2	2.30	0.47
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.97	0.47
1:CA:1310:G:H1	1:CA:1327:C:H42	1.62	0.47
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.78	0.47
7:CG:24:THR:O	7:CG:27:ILE:HG12	2.15	0.47
10:CJ:12:ASP:HB3	10:CJ:15:THR:HG23	1.97	0.47
23:DA:647:G:H8	23:DA:647:G:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1417:C:H2'	23:DA:1418:G:O4'	2.14	0.47
23:DA:2648:C:H2'	23:DA:2649:U:H6	1.79	0.47
25:DD:101:GLU:OE1	25:DD:103:ARG:HD3	2.15	0.47
47:D3:12:PRO:O	47:D3:15:TYR:HB2	2.15	0.47
53:D9:32:HIS:O	53:D9:34:GLN:HG3	2.14	0.47
1:AA:179:A:H2'	1:AA:180:U:H6	1.80	0.47
1:AA:502:G:OP1	12:AL:117:ARG:N	2.48	0.47
1:AA:620:C:H2'	1:AA:621:A:O4'	2.15	0.47
1:AA:954:G:O6	13:AM:104:ARG:NH1	2.48	0.47
1:AA:1124:G:O2'	1:AA:1126:U:O4	2.30	0.47
13:AM:4:ILE:HG12	13:AM:5:ALA:N	2.30	0.47
23:BA:263:C:H2'	23:BA:264:C:O4'	2.15	0.47
23:BA:459:U:OP2	23:BA:469:G:N1	2.39	0.47
23:BA:1176:G:N2	23:BA:1178:C:OP2	2.46	0.47
23:BA:2074:U:H2'	23:BA:2075:U:C6	2.50	0.47
23:BA:2137:C:C2	23:BA:2154:G:N2	2.83	0.47
23:BA:2224:G:H4'	23:BA:2226:C:C2	2.50	0.47
46:B2:16:LEU:O	46:B2:67:LYS:NZ	2.48	0.47
1:CA:129(A):G:C5	1:CA:189(H):G:H1'	2.50	0.47
1:CA:433:C:O2'	1:CA:434:U:H5'	2.15	0.47
1:CA:868:C:H2'	1:CA:869:G:O4'	2.15	0.47
1:CA:966:G:C4	22:CY:62:VAL:HG11	2.50	0.47
1:CA:971:G:N1	1:CA:1363(A):A:OP2	2.38	0.47
1:CA:1028:C:H2'	1:CA:1029:C:C6	2.50	0.47
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.80	0.47
9:CI:27:THR:O	9:CI:63:ILE:HB	2.15	0.47
9:CI:83:ARG:O	9:CI:86:VAL:HG22	2.16	0.47
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.15	0.47
23:DA:271(N):U:O2'	23:DA:271(O):C:H5'	2.15	0.47
23:DA:546:C:H6	23:DA:548:A:OP1	1.98	0.47
23:DA:740:U:H2'	23:DA:741:G:C8	2.50	0.47
23:DA:2136:C:C4	23:DA:2137:C:H5	2.33	0.47
23:DA:2349:G:H3'	23:DA:2350:C:H5"	1.96	0.47
25:DD:25:THR:HG21	25:DD:113:VAL:HG11	1.96	0.47
30:DI:101:LEU:O	30:DI:106:GLY:N	2.44	0.47
46:D2:1:MET:HE2	46:D2:6:VAL:HG22	1.97	0.47
1:AA:68:G:H5'	1:AA:171:A:O2'	2.15	0.46
1:AA:148:G:O2'	1:AA:149:A:H5'	2.15	0.46
1:AA:149:A:O2'	1:AA:150:C:P	2.71	0.46
1:AA:228:A:H5'	16:AP:62:VAL:CG2	2.44	0.46
1:AA:690:G:C6	1:AA:691:G:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1057:G:C4	1:AA:1204:A:C2	3.04	0.46
1:AA:1206:G:C6	1:AA:1207:G:C5	3.03	0.46
1:AA:1232:U:C4	1:AA:1233:G:N7	2.83	0.46
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.50	0.46
1:AA:1300:G:HO2'	1:AA:1301:U:P	2.37	0.46
1:AA:1446:U:H4'	1:AA:1447:A:C5	2.49	0.46
13:AM:81:LEU:O	13:AM:86:CYS:HB3	2.15	0.46
23:BA:1292:U:H2'	23:BA:1293:C:C6	2.50	0.46
23:BA:1783:A:H5'	23:BA:2608:G:H4'	1.97	0.46
23:BA:2884:U:H1'	49:B5:53:ALA:HB2	1.97	0.46
23:BA:2887:U:H2'	23:BA:2888:C:H6	1.79	0.46
26:BE:51:PHE:CD1	26:BE:52:LEU:HD22	2.50	0.46
40:BW:79:GLY:HA3	40:BW:100:THR:HG22	1.97	0.46
1:CA:561:U:HO2'	1:CA:562:C:P	2.37	0.46
1:CA:717:C:H6	1:CA:717:C:H5"	1.79	0.46
1:CA:1443:G:O6	1:CA:1459:C:C2	2.68	0.46
2:CB:53:ARG:NH2	2:CB:198:ASP:O	2.39	0.46
9:CI:44:VAL:HA	9:CI:45:ALA:HA	1.48	0.46
10:CJ:54:PHE:CD2	10:CJ:55:LYS:HG3	2.43	0.46
20:CT:73:HIS:HB3	20:CT:74:LYS:HE2	1.96	0.46
23:DA:141:A:H8	23:DA:1408:C:O2'	1.95	0.46
23:DA:271(P):C:H4'	30:DI:42:SER:O	2.15	0.46
23:DA:811:U:O2'	33:DP:21:ARG:HG3	2.14	0.46
23:DA:857:C:OP2	44:D0:77:ARG:NH2	2.48	0.46
23:DA:2554:U:H2'	23:DA:2555:U:C6	2.49	0.46
25:DD:148:GLU:OE1	25:DD:151:LYS:NZ	2.43	0.46
28:DG:28:VAL:O	28:DG:31:VAL:HG13	2.15	0.46
29:DH:13:LYS:HA	29:DH:14:GLY:HA2	1.63	0.46
30:DI:29:TYR:C	30:DI:32:PRO:HD2	2.40	0.46
36:DS:105:ALA:O	36:DS:110:LEU:HB2	2.15	0.46
39:DV:65:GLY:HA3	39:DV:91:TYR:CZ	2.50	0.46
1:AA:685:G:O2'	1:AA:686:U:H5'	2.15	0.46
4:AD:149:ALA:O	4:AD:152:SER:OG	2.19	0.46
20:AT:47:GLY:HA2	20:AT:48:LYS:CB	2.45	0.46
23:BA:1494:A:O2'	23:BA:1495:A:H5'	2.15	0.46
23:BA:1607:C:H4'	23:BA:1608:A:O5'	2.15	0.46
23:BA:2115:G:H21	23:BA:2171:A:N6	2.12	0.46
23:BA:2297:C:H1'	23:BA:2322:A:C2	2.50	0.46
28:BG:121:ASN:HA	28:BG:122:PRO:HD3	1.78	0.46
1:CA:973:G:C6	1:CA:974:A:N6	2.83	0.46
1:CA:1227:A:H3'	1:CA:1227:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1493:A:C2	23:DA:1913:A:C6	3.03	0.46
7:CG:111:ARG:HB3	7:CG:113:GLU:OE1	2.15	0.46
8:CH:19:VAL:HG23	8:CH:21:LYS:HD3	1.98	0.46
20:CT:5:LYS:HA	20:CT:6:PRO:HD2	1.66	0.46
23:DA:623:G:H2'	23:DA:624:C:C6	2.50	0.46
23:DA:904:C:H2'	23:DA:905:U:C6	2.50	0.46
23:DA:1939:U:OP1	23:DA:2604:U:O2'	2.30	0.46
28:DG:173:LEU:O	28:DG:178:PHE:HB2	2.15	0.46
30:DI:79:ILE:HA	30:DI:80:PRO:HD3	1.59	0.46
36:DS:59:LYS:HE2	36:DS:60:GLY:HA2	1.96	0.46
39:DV:49:THR:HG22	39:DV:49:THR:O	2.16	0.46
43:DZ:110:GLY:HA3	43:DZ:174:VAL:HG11	1.97	0.46
53:D9:17:ILE:HD12	53:D9:17:ILE:HA	1.78	0.46
1:AA:128:G:O2'	17:AQ:3:LYS:HE2	2.16	0.46
1:AA:688:G:H2'	1:AA:689:C:C6	2.50	0.46
1:AA:1009:G:O2'	1:AA:1010:G:H5'	2.15	0.46
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.15	0.46
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.50	0.46
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.49	0.46
2:AB:42:ILE:HG21	2:AB:202:PRO:O	2.15	0.46
2:AB:178:ARG:HH21	8:AH:74:PRO:HG3	1.80	0.46
7:AG:146:GLU:O	7:AG:148:ASN:N	2.48	0.46
8:AH:11:THR:HG23	8:AH:14:ARG:HH12	1.79	0.46
23:BA:539:G:H2'	23:BA:540:C:C6	2.51	0.46
23:BA:883:G:H1	23:BA:893:C:H42	1.63	0.46
23:BA:2173:A:H2'	23:BA:2174:C:H5'	1.97	0.46
1:CA:9:G:H2'	1:CA:10:A:C8	2.51	0.46
1:CA:224:C:H2'	1:CA:225:C:C6	2.50	0.46
3:CC:164:ARG:HG2	3:CC:165:THR:H	1.80	0.46
10:CJ:9:ARG:HA	10:CJ:16:LEU:HD11	1.97	0.46
14:CN:29:ARG:HH12	14:CN:42:ILE:HD11	1.80	0.46
15:CO:26:GLU:H	15:CO:26:GLU:HG2	1.26	0.46
20:CT:67:ALA:HA	20:CT:72:LEU:O	2.15	0.46
23:DA:65:C:H2'	23:DA:66:C:H6	1.80	0.46
23:DA:298:G:H5"	23:DA:299:A:OP1	2.16	0.46
23:DA:455:C:N3	23:DA:473:G:H5'	2.30	0.46
23:DA:2682:U:O2'	37:DT:58:ASN:ND2	2.47	0.46
25:DD:24:ILE:HD13	25:DD:84:TYR:HB2	1.97	0.46
27:DF:21:ALA:O	27:DF:22:ALA:CB	2.63	0.46
32:DO:98:VAL:HG22	32:DO:118:ALA:HA	1.98	0.46
1:AA:117:G:OP2	56:AA:2109:HOH:O	2.21	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:392:G:H2'	1:AA:393:A:H8	1.80	0.46
1:AA:433:C:O2'	1:AA:434:U:H5'	2.15	0.46
1:AA:947:G:O3'	13:AM:109:THR:OG1	2.32	0.46
1:AA:1256:A:H5"	1:AA:1257:U:OP1	2.16	0.46
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.15	0.46
2:AB:184:VAL:HG12	2:AB:197:VAL:HG13	1.98	0.46
3:AC:19:GLU:O	3:AC:40:ARG:NH2	2.48	0.46
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.16	0.46
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.98	0.46
23:BA:646:A:H2'	23:BA:647:G:O4'	2.16	0.46
23:BA:1816:G:H8	25:BD:62:TYR:CZ	2.33	0.46
23:BA:2836:U:C4	23:BA:2883:A:N6	2.84	0.46
33:BP:126:VAL:HG11	33:BP:148:LEU:HD13	1.97	0.46
49:B5:11:THR:HG23	49:B5:15:ARG:HB3	1.97	0.46
1:CA:601:C:H2'	1:CA:602:A:H8	1.79	0.46
1:CA:1096:C:C4	1:CA:1097:C:C5	3.04	0.46
1:CA:1333:A:H3'	1:CA:1334:G:H8	1.81	0.46
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.14	0.46
2:CB:47:THR:HA	2:CB:202:PRO:HG2	1.96	0.46
2:CB:82:ARG:HG3	2:CB:92:TYR:CZ	2.50	0.46
5:CE:81:GLU:HB3	5:CE:88:LYS:HE2	1.98	0.46
23:DA:143:G:H4'	41:DX:35:THR:HG21	1.97	0.46
23:DA:271(P):C:OP1	30:DI:45:LYS:HD2	2.15	0.46
23:DA:1221(A):C:C2	23:DA:1229:G:C2	3.04	0.46
23:DA:1243:G:O2'	33:DP:7:ARG:NH2	2.48	0.46
23:DA:1503:U:H2'	23:DA:1504:C:H6	1.77	0.46
23:DA:2115:G:H21	23:DA:2171:A:N6	2.11	0.46
23:DA:2836:U:C4	23:DA:2883:A:N6	2.83	0.46
25:DD:145:VAL:HG12	25:DD:146:GLU:O	2.15	0.46
26:DE:173:VAL:CG2	26:DE:185:LYS:HB2	2.44	0.46
27:DF:108:LYS:O	27:DF:112:MET:HG3	2.15	0.46
1:AA:130:A:O2'	1:AA:131:C:O5'	2.30	0.46
1:AA:149:A:O2'	1:AA:150:C:C6	2.68	0.46
1:AA:194:C:O3'	20:AT:68:LYS:HD2	2.16	0.46
1:AA:414:A:H2'	1:AA:415:A:H8	1.79	0.46
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.49	0.46
2:AB:53:ARG:HH12	2:AB:199:TYR:HA	1.80	0.46
4:AD:176:LEU:HD12	4:AD:177:ASP:H	1.79	0.46
10:AJ:61:GLU:OE2	14:AN:45:ARG:NE	2.44	0.46
23:BA:95:G:O2'	46:B2:46:GLN:HA	2.15	0.46
24:BB:32:C:C2	24:BB:51:G:N2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:3:LEU:HD13	48:B4:25:TYR:CE1	2.50	0.46
45:B1:3:LYS:HB3	45:B1:4:VAL:H	1.50	0.46
1:CA:179:A:H2'	1:CA:180:U:H6	1.80	0.46
1:CA:750:G:C2	15:CO:23:GLY:HA3	2.49	0.46
1:CA:1055:A:C2	1:CA:1056:U:H1'	2.50	0.46
1:CA:1263:C:O2'	1:CA:1264:C:H5'	2.16	0.46
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.34	0.46
20:CT:56:MET:HE2	20:CT:88:VAL:HG21	1.98	0.46
23:DA:171:G:H2'	23:DA:172:C:C6	2.51	0.46
23:DA:452:G:OP2	56:DA:4159:HOH:O	2.20	0.46
23:DA:848:G:H2'	23:DA:849:A:C8	2.50	0.46
23:DA:958:U:H5"	34:DQ:14:ARG:HD3	1.97	0.46
23:DA:1278:A:OP1	35:DR:36:THR:CG2	2.64	0.46
23:DA:1486:A:H2'	23:DA:1487:G:C8	2.48	0.46
23:DA:2469:A:H5"	23:DA:2470:G:OP2	2.16	0.46
41:DX:72:LYS:HE3	41:DX:73:ARG:O	2.14	0.46
1:AA:1293:G:O2'	1:AA:1294:G:H8	1.99	0.46
1:AA:1456:G:HO2'	20:AT:39:LYS:HZ2	1.55	0.46
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.14	0.46
3:AC:15:THR:CG2	3:AC:181:ASN:HA	2.43	0.46
10:AJ:35:SER:N	10:AJ:73:ASP:O	2.48	0.46
23:BA:271(N):U:O2'	23:BA:271(O):C:H5'	2.15	0.46
23:BA:910:A:H62	34:BQ:12:GLN:HA	1.80	0.46
23:BA:1274:A:N3	23:BA:1297:C:H1'	2.31	0.46
23:BA:1314:C:H6	23:BA:1314:C:H5'	1.81	0.46
23:BA:2295:C:O2'	23:BA:2296:U:H5'	2.15	0.46
45:B1:51:VAL:HG11	45:B1:74:VAL:HG21	1.98	0.46
47:B3:10:LYS:NZ	47:B3:15:TYR:OH	2.48	0.46
1:CA:36:C:OP1	12:CL:123:LYS:NZ	2.44	0.46
1:CA:116:A:C8	1:CA:116:A:OP2	2.69	0.46
1:CA:300:A:H1'	1:CA:565:U:O2	2.15	0.46
1:CA:719:C:O2'	18:CR:50:ILE:O	2.34	0.46
1:CA:944:G:N1	1:CA:1338:G:OP2	2.42	0.46
1:CA:1087:G:N1	1:CA:1088:G:C6	2.84	0.46
1:CA:1215:G:C6	1:CA:1216:G:C5	3.04	0.46
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.30	0.46
2:CB:186:ALA:O	2:CB:201:ILE:N	2.44	0.46
10:CJ:95:GLU:HG3	10:CJ:96:ILE:H	1.80	0.46
23:DA:848:G:N9	23:DA:933:A:H8	2.14	0.46
23:DA:1006:C:C2	23:DA:1138:G:N2	2.84	0.46
23:DA:1149:G:H2'	23:DA:1150:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1321:A:H2'	23:DA:1322:A:O4'	2.16	0.46
23:DA:2557:G:H2'	23:DA:2558:C:C6	2.51	0.46
28:DG:41:GLN:HE22	28:DG:153:ARG:HB3	1.79	0.46
35:DR:67:LEU:HD13	35:DR:76:VAL:HG21	1.98	0.46
36:DS:101:LEU:O	36:DS:102:ALA:HB3	2.15	0.46
1:AA:254:G:OP1	17:AQ:66:SER:OG	2.33	0.46
1:AA:542:G:H2'	1:AA:543:C:H6	1.80	0.46
1:AA:868:C:H2'	1:AA:869:G:O4'	2.16	0.46
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.16	0.46
2:AB:87:ARG:NH1	2:AB:220:ASP:OD1	2.24	0.46
2:AB:98:LEU:HD23	2:AB:98:LEU:HA	1.80	0.46
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.16	0.46
13:AM:66:LEU:O	13:AM:70:LEU:HB2	2.16	0.46
23:BA:443:A:H1'	23:BA:1201:C:O4'	2.15	0.46
29:BH:113:VAL:HG11	29:BH:151:ILE:HD13	1.98	0.46
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.30	0.46
1:CA:503:C:OP2	12:CL:116:SER:HB3	2.15	0.46
1:CA:757:U:OP1	1:CA:822:C:O2'	2.28	0.46
1:CA:983:A:H2	1:CA:984:C:C6	2.34	0.46
1:CA:1342:C:O2'	9:CI:124:GLN:HG3	2.15	0.46
2:CB:27:LYS:HD2	2:CB:193:ASP:OD1	2.15	0.46
22:CY:5:ILE:HG21	22:CY:20:VAL:HG11	1.97	0.46
23:DA:322:A:OP1	27:DF:168:ARG:HD2	2.16	0.46
23:DA:708:C:H5'	23:DA:709:U:OP2	2.16	0.46
23:DA:856:C:HO2'	23:DA:857:C:P	2.39	0.46
23:DA:1021:A:H8	23:DA:1022:G:H5"	1.79	0.46
23:DA:1540:U:H2'	23:DA:1541:G:O4'	2.15	0.46
23:DA:2687:U:OP2	56:DA:4444:HOH:O	2.20	0.46
29:DH:40:GLU:OE1	29:DH:60:ARG:NH1	2.47	0.46
30:DI:77:LEU:HB3	30:DI:142:VAL:HG12	1.98	0.46
37:DT:18:ASP:OD1	37:DT:18:ASP:N	2.45	0.46
42:DY:97:ARG:HH11	42:DY:107:ASP:C	2.23	0.46
43:DZ:121:HIS:HB3	43:DZ:123:ASP:O	2.16	0.46
1:AA:114:U:H2'	1:AA:115:G:C8	2.50	0.46
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.46	0.46
1:AA:1149:C:P	9:AI:9:ARG:HH21	2.39	0.46
1:AA:1200:C:O5'	1:AA:1201:A:H3'	2.16	0.46
9:AI:26:VAL:HG13	9:AI:61:ALA:HB3	1.98	0.46
23:BA:30:G:OP2	38:BU:5:LYS:HE2	2.15	0.46
23:BA:362:U:O2'	23:BA:363:G:H5"	2.16	0.46
23:BA:414:C:O2'	23:BA:415:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1143:A:OP1	31:BN:25:ARG:NH2	2.49	0.46
23:BA:1668:A:H4'	23:BA:1669:A:O5'	2.16	0.46
30:BI:77:LEU:HD23	30:BI:77:LEU:HA	1.74	0.46
36:BS:74:ALA:HA	36:BS:110:LEU:HD22	1.98	0.46
1:CA:838:G:C2'	1:CA:839:U:H5"	2.46	0.46
1:CA:942:G:H21	9:CI:124:GLN:NE2	2.13	0.46
1:CA:1009:G:C2	1:CA:1010:G:C8	3.04	0.46
1:CA:1065:U:H4'	1:CA:1066:C:O5'	2.15	0.46
1:CA:1102:A:H8	1:CA:1102:A:H5"	1.79	0.46
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.81	0.46
1:CA:1442:G:HO2'	1:CA:1442(A):G:P	2.31	0.46
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.15	0.46
20:CT:43:LEU:CD1	20:CT:51:GLU:HG2	2.46	0.46
22:CY:67:HIS:HB3	22:CY:73:ALA:HB2	1.97	0.46
23:DA:185:U:H2'	23:DA:186:G:C8	2.51	0.46
23:DA:864:G:C6	23:DA:865:C:N4	2.84	0.46
23:DA:1352:U:P	56:DA:4029:HOH:O	2.73	0.46
23:DA:1495:A:H2'	23:DA:1496:A:H8	1.81	0.46
23:DA:2134:A:N3	23:DA:2159:G:O2'	2.41	0.46
23:DA:2295:C:O2'	23:DA:2296:U:H5'	2.16	0.46
23:DA:2430:A:N3	23:DA:2430:A:H2'	2.30	0.46
23:DA:2693:A:H2'	23:DA:2694:G:C8	2.49	0.46
24:DB:61:G:C2	24:DB:62:C:C2	3.04	0.46
25:DD:3:VAL:O	25:DD:3:VAL:HG12	2.15	0.46
32:DO:115:VAL:HG13	32:DO:121:VAL:HG21	1.96	0.46
1:AA:174:C:H2'	1:AA:175:C:H6	1.79	0.46
1:AA:191:G:C6	1:AA:192:U:N3	2.84	0.46
1:AA:413:G:H22	1:AA:428:G:H1'	1.80	0.46
1:AA:969:A:OP1	10:AJ:55:LYS:NZ	2.44	0.46
1:AA:1120:G:H1	1:AA:1153:C:H42	1.64	0.46
2:AB:51:LEU:O	2:AB:55:PHE:HD2	1.99	0.46
9:AI:119:ALA:O	9:AI:120:ARG:HG3	2.15	0.46
22:AY:87:LYS:O	22:AY:91:LYS:HB2	2.14	0.46
23:BA:181:A:H1'	23:BA:435:C:H5'	1.98	0.46
23:BA:1701:A:H5"	23:BA:1702:G:OP2	2.16	0.46
26:BE:60:ASN:OD1	26:BE:62:PRO:HD2	2.16	0.46
31:BN:1:MET:O	31:BN:2:LYS:HB2	2.16	0.46
35:BR:65:LEU:HD12	35:BR:65:LEU:HA	1.77	0.46
39:BV:29:PRO:HA	39:BV:61:VAL:HG22	1.98	0.46
43:BZ:144:LEU:HD12	43:BZ:148:ASP:HB3	1.97	0.46
49:B5:36:CYS:O	49:B5:37:LYS:HD3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:624:C:H2'	1:CA:625:G:H8	1.81	0.46
1:CA:671:G:H2'	1:CA:672:U:C6	2.51	0.46
1:CA:1000:U:C2'	1:CA:1001:A:H5'	2.46	0.46
1:CA:1084:G:C5	1:CA:1085:U:C4	3.04	0.46
1:CA:1227:A:H3'	1:CA:1227:A:H8	1.80	0.46
1:CA:1271:G:H5'	1:CA:1314:C:H5"	1.97	0.46
1:CA:1323:G:H4'	1:CA:1363:C:N3	2.30	0.46
10:CJ:8:LEU:H	10:CJ:8:LEU:HG	1.59	0.46
23:DA:307:G:H21	23:DA:330:A:H62	1.62	0.46
23:DA:1009:A:O4'	38:DU:59:ARG:HG2	2.16	0.46
23:DA:1027:A:C6	23:DA:1126:A:C4	3.04	0.46
23:DA:1914:C:H2'	23:DA:1915:U:H6	1.79	0.46
23:DA:2297:C:H1'	23:DA:2322:A:C2	2.50	0.46
23:DA:2549:G:C8	23:DA:2549:G:H5"	2.51	0.46
23:DA:2581:G:H4'	23:DA:2582:G:C8	2.51	0.46
25:DD:12:SER:HB3	25:DD:208:LYS:HB3	1.98	0.46
31:DN:1:MET:O	31:DN:2:LYS:HB2	2.16	0.46
34:DQ:27:VAL:O	34:DQ:67:ARG:NH1	2.49	0.46
1:AA:90:U:H2'	1:AA:91:C:C6	2.51	0.46
1:AA:616:G:C2	1:AA:617:G:C8	3.03	0.46
1:AA:942:G:C2	1:AA:1342:C:C2	3.04	0.46
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.50	0.46
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	2.16	0.46
4:AD:100:ARG:HH12	4:AD:137:SER:HB3	1.81	0.46
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.80	0.46
23:BA:185:U:H2'	23:BA:186:G:H8	1.80	0.46
23:BA:645:C:O2	23:BA:645:C:H2'	2.14	0.46
23:BA:993:G:OP1	38:BU:50:ARG:NH2	2.46	0.46
23:BA:2133:G:C2	23:BA:2157:G:H2'	2.51	0.46
23:BA:2136:C:C4	23:BA:2137:C:H5	2.34	0.46
23:BA:2244:U:O2'	56:BA:5438:HOH:O	2.19	0.46
33:BP:59:LEU:HG	52:B8:58:ILE:HD13	1.97	0.46
35:BR:97:VAL:HG22	35:BR:114:VAL:HG13	1.97	0.46
1:CA:114:U:H2'	1:CA:115:G:C8	2.51	0.46
1:CA:177:C:P	20:CT:65:LYS:NZ	2.89	0.46
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.49	0.46
1:CA:343:U:H6	1:CA:343:U:H2'	1.49	0.46
1:CA:474:G:H2'	1:CA:475:G:H8	1.81	0.46
1:CA:688:G:H2'	1:CA:689:C:H6	1.80	0.46
1:CA:750:G:H21	15:CO:23:GLY:HA3	1.79	0.46
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1357:A:N7	1:CA:1358:U:C5	2.84	0.46
1:CA:1438:G:H2'	1:CA:1439:C:C6	2.51	0.46
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.16	0.46
3:CC:65:ALA:HA	3:CC:100:ALA:HB3	1.98	0.46
5:CE:8:GLU:HA	5:CE:33:VAL:O	2.15	0.46
5:CE:104:ALA:O	5:CE:107:ARG:HB3	2.16	0.46
11:CK:62:GLN:HG3	11:CK:97:ALA:HB2	1.98	0.46
20:CT:56:MET:HE1	20:CT:85:MET:HA	1.98	0.46
23:DA:1315:C:OP2	56:DA:3803:HOH:O	2.20	0.46
23:DA:1378:A:OP1	51:D7:10:ARG:NH2	2.49	0.46
23:DA:1488:G:H5"	23:DA:1488:G:C8	2.51	0.46
23:DA:1833:U:O2'	23:DA:1969:A:N1	2.34	0.46
23:DA:2555:U:H5"	23:DA:2556:C:OP2	2.16	0.46
23:DA:2661:G:H2'	23:DA:2662:A:C8	2.51	0.46
26:DE:128:SER:OG	26:DE:129:HIS:N	2.49	0.46
27:DF:150:GLY:HA2	27:DF:172:TRP:CE3	2.51	0.46
38:DU:76:TYR:HH	38:DU:92:ARG:NH1	2.14	0.46
43:DZ:144:LEU:HD21	43:DZ:150:LEU:HG	1.98	0.46
1:AA:434:U:H2'	1:AA:435:C:H6	1.81	0.45
1:AA:1130:A:C4	1:AA:1146:A:C2	3.04	0.45
1:AA:1152:A:H5'	10:AJ:13:HIS:CG	2.52	0.45
1:AA:1305:G:C2	1:AA:1331:G:O2'	2.69	0.45
2:AB:82:ARG:HG3	2:AB:92:TYR:CZ	2.51	0.45
15:AO:18:PHE:HB2	15:AO:19:PRO:HD2	1.98	0.45
23:BA:774:A:H2'	23:BA:774:A:N3	2.31	0.45
23:BA:1173:G:O2'	23:BA:1174:A:O5'	2.34	0.45
23:BA:1494:A:C6	23:BA:1495:A:C6	3.04	0.45
28:BG:149:VAL:HG22	28:BG:150:ASP:O	2.17	0.45
30:BI:9:LEU:HD21	30:BI:35:LEU:HD13	1.98	0.45
36:BS:34:HIS:O	36:BS:97:ARG:NH2	2.49	0.45
36:BS:101:LEU:HD23	36:BS:102:ALA:H	1.81	0.45
43:BZ:125:LEU:HB3	43:BZ:165:VAL:HG12	1.98	0.45
50:B6:35:GLU:CD	50:B6:50:ARG:HH11	2.23	0.45
1:CA:625:G:H2'	1:CA:626:U:H6	1.81	0.45
1:CA:708:C:H2'	1:CA:709:G:H8	1.81	0.45
1:CA:1208:C:H2'	1:CA:1209:C:H6	1.80	0.45
1:CA:1346:A:C5	7:CG:10:ARG:NH2	2.84	0.45
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.50	0.45
6:CF:61:LEU:HB3	6:CF:63:TYR:CE2	2.51	0.45
9:CI:26:VAL:HG22	9:CI:61:ALA:N	2.30	0.45
10:CJ:8:LEU:HD13	10:CJ:19:SER:OG	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:1:MET:HE2	16:CP:1:MET:N	2.31	0.45
23:DA:1003:G:N2	23:DA:1153:C:C2	2.84	0.45
23:DA:1327:C:P	56:DA:4835:HOH:O	2.74	0.45
23:DA:2110:G:OP1	23:DA:2118:U:N3	2.47	0.45
23:DA:2549:G:H5"	23:DA:2549:G:H8	1.81	0.45
26:DE:101:ARG:CZ	26:DE:171:GLU:HB2	2.46	0.45
27:DF:129:PHE:HB2	27:DF:132:VAL:HG22	1.98	0.45
28:DG:23:PHE:HB2	28:DG:25:TYR:CZ	2.51	0.45
28:DG:43:LEU:HD12	28:DG:43:LEU:HA	1.82	0.45
29:DH:84:SER:HA	29:DH:133:VAL:O	2.16	0.45
43:DZ:19:ARG:NH1	43:DZ:84:GLU:O	2.49	0.45
43:DZ:98:MET:HE2	43:DZ:100:VAL:HG22	1.96	0.45
1:AA:473:G:H2'	1:AA:474:G:C8	2.48	0.45
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.16	0.45
1:AA:1442(A):G:N7	1:AA:1442(B):A:N1	2.63	0.45
2:AB:68:ILE:HG12	2:AB:161:ALA:HB3	1.97	0.45
8:AH:19:VAL:HG23	8:AH:21:LYS:HD3	1.97	0.45
10:AJ:96:ILE:H	10:AJ:96:ILE:HD12	1.81	0.45
13:AM:87:TYR:C	13:AM:89:GLY:N	2.74	0.45
19:AS:37:ARG:H	19:AS:37:ARG:HG3	1.41	0.45
23:BA:236:C:H2'	23:BA:237:C:C6	2.51	0.45
23:BA:667:U:O2	52:B8:2:PRO:HD2	2.16	0.45
23:BA:866:A:O2'	23:BA:867:C:H5'	2.17	0.45
23:BA:1551:C:OP2	56:BA:5557:HOH:O	2.21	0.45
25:BD:10:THR:OG1	25:BD:13:ARG:HB2	2.16	0.45
27:BF:22:ALA:HB1	27:BF:24:LEU:HD22	1.98	0.45
43:BZ:35:ARG:HA	43:BZ:35:ARG:HD2	1.79	0.45
1:CA:390:C:H2'	1:CA:391:G:C8	2.52	0.45
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.50	0.45
1:CA:684:A:C6	1:CA:685:G:C6	3.05	0.45
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.17	0.45
1:CA:1206:G:C6	1:CA:1207:G:C6	3.04	0.45
1:CA:1305:G:O2'	1:CA:1331:G:N2	2.42	0.45
3:CC:46:GLU:CD	3:CC:46:GLU:H	2.24	0.45
13:CM:9:ILE:HA	13:CM:10:PRO:HD3	1.47	0.45
13:CM:49:THR:OG1	13:CM:52:GLU:HG3	2.17	0.45
16:CP:21:VAL:O	16:CP:33:ILE:HG12	2.17	0.45
16:CP:67:THR:H	16:CP:70:ALA:HB3	1.80	0.45
23:DA:855:G:H2'	23:DA:856:C:C6	2.51	0.45
23:DA:986:C:O2'	23:DA:987:G:H5'	2.16	0.45
23:DA:1166:C:H2'	23:DA:1167:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1647:G:P	23:DA:1647:G:H3'	2.56	0.45
23:DA:2319:G:N1	36:DS:3:ARG:HA	2.31	0.45
30:DI:97:ILE:O	30:DI:100:ALA:HB3	2.16	0.45
30:DI:140:LEU:HD23	30:DI:140:LEU:HA	1.70	0.45
32:DO:113:LYS:H	32:DO:113:LYS:HG2	1.43	0.45
36:DS:35:ILE:HD13	36:DS:101:LEU:HD12	1.97	0.45
41:DX:41:ASN:O	41:DX:45:THR:HG23	2.16	0.45
1:AA:841:U:C5	1:AA:848:C:H1'	2.52	0.45
1:AA:1227:A:C8	1:AA:1227:A:H3'	2.52	0.45
1:AA:1292:U:C2	1:AA:1293:G:N7	2.85	0.45
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.16	0.45
3:AC:178:LEU:HA	3:AC:178:LEU:HD13	1.63	0.45
12:AL:54:LYS:N	12:AL:54:LYS:HD2	2.31	0.45
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.16	0.45
23:BA:604:G:OP2	33:BP:90:ARG:NH1	2.50	0.45
23:BA:615:G:OP1	27:BF:40:GLN:NE2	2.47	0.45
23:BA:671:C:H2'	23:BA:672:C:C6	2.51	0.45
30:BI:47:LEU:HD23	30:BI:47:LEU:HA	1.76	0.45
37:BT:119:LYS:O	37:BT:123:GLN:HG2	2.17	0.45
51:B7:24:THR:O	51:B7:28:ARG:HG3	2.16	0.45
1:CA:6:G:C4	5:CE:119:LEU:HD11	2.51	0.45
1:CA:69:G:C2	1:CA:70:G:C8	3.04	0.45
1:CA:69:G:H2'	1:CA:70:G:H8	1.80	0.45
1:CA:797:C:O2'	1:CA:798:G:H5'	2.16	0.45
1:CA:1128:C:H5	1:CA:1139:G:HO2'	1.64	0.45
1:CA:1438:G:H2'	1:CA:1439:C:H6	1.82	0.45
2:CB:21:ARG:HB3	2:CB:39:ILE:HG12	1.98	0.45
8:CH:25:ASP:OD2	8:CH:60:ARG:HG3	2.16	0.45
12:CL:24:VAL:O	12:CL:26:ALA:N	2.48	0.45
16:CP:6:LEU:HB3	16:CP:17:TYR:HD2	1.80	0.45
17:CQ:66:SER:OG	17:CQ:67:LYS:O	2.34	0.45
23:DA:64:A:O3'	41:DX:71:GLY:HA3	2.16	0.45
23:DA:634:C:H2'	23:DA:635:C:C6	2.51	0.45
26:DE:143:ASN:HB2	26:DE:147:PRO:HD2	1.98	0.45
34:DQ:134:ARG:O	34:DQ:138:ASP:HB2	2.16	0.45
40:DW:65:LEU:HD12	40:DW:68:ARG:HE	1.79	0.45
1:AA:540:G:H2'	1:AA:541:G:O4'	2.16	0.45
3:AC:19:GLU:HG3	3:AC:40:ARG:NH2	2.32	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:CD1	2.51	0.45
15:AO:26:GLU:H	15:AO:26:GLU:HG2	1.31	0.45
15:AO:35:ARG:NH2	15:AO:59:MET:HE2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:60:ILE:HG12	17:AQ:61:GLU:N	2.30	0.45
22:AY:93:GLU:C	22:AY:95:ARG:H	2.22	0.45
23:BA:9:U:O2'	23:BA:10:G:OP1	2.31	0.45
23:BA:708:C:C6	23:BA:708:C:H5"	2.51	0.45
23:BA:1175:U:H4'	23:BA:1176:G:OP1	2.16	0.45
23:BA:1177:A:OP1	23:BA:1177:A:H3'	2.17	0.45
23:BA:1588:C:H2'	23:BA:1589:C:C6	2.51	0.45
23:BA:2789:C:O3'	23:BA:2790:A:H4'	2.17	0.45
25:BD:134:ARG:HD3	25:BD:135:PHE:CZ	2.52	0.45
27:BF:8:GLN:HB3	27:BF:19:GLU:CG	2.47	0.45
27:BF:20:LEU:O	27:BF:21:ALA:O	2.34	0.45
30:BI:130:TYR:HB3	30:BI:138:ILE:HB	1.99	0.45
1:CA:841:U:OP1	1:CA:841:U:H6	1.99	0.45
1:CA:941:G:C6	1:CA:1343:G:C6	3.05	0.45
1:CA:1452:C:HO2'	1:CA:1456:G:P	2.39	0.45
1:CA:1530:G:OP1	1:CA:1530:G:H4'	2.16	0.45
15:CO:24:SER:O	15:CO:26:GLU:N	2.50	0.45
17:CQ:60:ILE:O	17:CQ:62:SER:OG	2.34	0.45
23:DA:71:A:N7	41:DX:31:HIS:HE1	2.14	0.45
23:DA:118:A:N3	23:DA:178:G:H1'	2.31	0.45
23:DA:2713:A:H2'	23:DA:2713:A:N3	2.31	0.45
23:DA:2745:C:C4	23:DA:2746:U:C4	3.04	0.45
23:DA:2793:G:H2'	23:DA:2794:C:O4'	2.17	0.45
23:DA:2793:G:N2	23:DA:2804:C:H1'	2.31	0.45
24:DB:37:C:C5	24:DB:38:C:C4	3.05	0.45
1:AA:474:G:H2'	1:AA:475:G:C8	2.52	0.45
1:AA:622:A:C8	1:AA:623:C:C6	3.05	0.45
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.81	0.45
1:AA:1240:U:P	7:AG:116:ALA:HB2	2.56	0.45
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.52	0.45
5:AE:8:GLU:HA	5:AE:33:VAL:O	2.16	0.45
5:AE:31:LEU:HD23	5:AE:45:PHE:HB2	1.97	0.45
13:AM:96:LEU:HD13	13:AM:97:PRO:HD2	1.97	0.45
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.51	0.45
19:AS:36:ARG:NH2	19:AS:72:GLY:O	2.50	0.45
23:BA:83:G:N2	23:BA:102:G:H1'	2.31	0.45
23:BA:171:G:H2'	23:BA:172:C:C6	2.50	0.45
23:BA:481:G:C4	23:BA:507:A:C2	3.04	0.45
23:BA:2115:G:H21	23:BA:2171:A:H61	1.64	0.45
23:BA:2208:A:H1'	23:BA:2219:G:C5	2.52	0.45
26:BE:75:VAL:HG13	26:BE:77:ILE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:131:LYS:C	30:BI:133:HIS:H	2.25	0.45
1:CA:775:G:C2'	1:CA:776:G:H5'	2.47	0.45
1:CA:948:C:N4	56:CA:2018:HOH:O	2.49	0.45
1:CA:1149:C:O2'	1:CA:1280:A:N1	2.36	0.45
3:CC:130:VAL:HG12	3:CC:131:ARG:H	1.81	0.45
13:CM:70:LEU:O	13:CM:74:VAL:HG23	2.16	0.45
23:DA:646:A:H2'	23:DA:647:G:O4'	2.17	0.45
23:DA:1455:G:P	56:DA:4907:HOH:O	2.74	0.45
23:DA:1816:G:O6	25:DD:35:LYS:NZ	2.42	0.45
25:DD:10:THR:OG1	25:DD:13:ARG:HB2	2.16	0.45
27:DF:129:PHE:CE2	27:DF:163:VAL:HG11	2.52	0.45
28:DG:66:GLN:HG2	48:D4:1:MET:HE1	1.98	0.45
29:DH:149:ARG:NH1	29:DH:167:GLU:OE1	2.49	0.45
37:DT:23:ARG:HG3	37:DT:120:ARG:NH1	2.32	0.45
43:DZ:76:LEU:HD12	43:DZ:76:LEU:HA	1.81	0.45
1:AA:952:U:H4'	1:AA:964:A:N1	2.32	0.45
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.16	0.45
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.50	0.45
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.17	0.45
23:BA:244:A:C2	23:BA:255:A:C4	3.05	0.45
23:BA:414:C:H2'	23:BA:415:A:C8	2.51	0.45
23:BA:1581:G:H2'	23:BA:1582:C:O4'	2.17	0.45
23:BA:2291:U:H2'	23:BA:2292:C:C6	2.52	0.45
23:BA:2319:G:C2	36:BS:3:ARG:HA	2.51	0.45
37:BT:128:GLU:O	37:BT:129:ARG:C	2.59	0.45
1:CA:107:G:H2'	1:CA:108:G:O4'	2.17	0.45
1:CA:230:G:H2'	1:CA:231:G:O4'	2.17	0.45
1:CA:519:C:H2'	1:CA:520:A:C8	2.51	0.45
1:CA:942:G:H2'	1:CA:943:U:H6	1.82	0.45
1:CA:965:A:C2	1:CA:969:A:C2	3.05	0.45
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.32	0.45
1:CA:1277:C:C2'	1:CA:1278:U:H5'	2.46	0.45
4:CD:180:GLY:C	4:CD:182:LYS:N	2.75	0.45
6:CF:22:GLU:OE2	6:CF:82:ARG:HG2	2.17	0.45
7:CG:99:LEU:HB3	7:CG:103:TRP:CZ3	2.51	0.45
9:CI:99:LEU:HB3	9:CI:101:PHE:CE1	2.52	0.45
10:CJ:16:LEU:HA	10:CJ:16:LEU:HD23	1.75	0.45
23:DA:475:U:C4	23:DA:481:G:O6	2.69	0.45
23:DA:1204:A:N6	23:DA:1240:U:H2'	2.30	0.45
23:DA:1899:G:N3	23:DA:1899:G:H2'	2.31	0.45
23:DA:2208:A:H1'	23:DA:2219:G:C5	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2312:U:H5'	28:DG:88:ILE:HD11	1.99	0.45
23:DA:2327:A:H2'	23:DA:2328:A:H8	1.81	0.45
25:DD:68:LYS:O	25:DD:69:ARG:HB2	2.15	0.45
37:DT:2:ASN:O	37:DT:6:LEU:HD22	2.17	0.45
1:AA:671:G:H2'	1:AA:672:U:C6	2.50	0.45
1:AA:1318:A:H4'	19:AS:10:PHE:CZ	2.52	0.45
10:AJ:55:LYS:O	10:AJ:56:HIS:CB	2.65	0.45
13:AM:15:VAL:HG23	13:AM:41:PRO:HA	1.98	0.45
13:AM:108:ARG:HD3	13:AM:108:ARG:HA	1.76	0.45
19:AS:36:ARG:HB3	19:AS:72:GLY:HA3	1.99	0.45
22:AY:84:GLN:O	22:AY:88:LEU:HG	2.17	0.45
23:BA:1047:G:HO2'	23:BA:1048:A:P	2.37	0.45
23:BA:1125:G:H5'	53:B9:37:GLY:HA2	1.97	0.45
23:BA:1149:G:H2'	23:BA:1150:C:C6	2.52	0.45
23:BA:2110:G:OP1	23:BA:2118:U:N3	2.49	0.45
23:BA:2687:U:H2'	23:BA:2688:U:O4'	2.15	0.45
34:BQ:1:MET:HG2	34:BQ:2:LEU:H	1.82	0.45
40:BW:1:MET:HA	40:BW:1:MET:HE3	1.98	0.45
1:CA:1088:G:C6	1:CA:1089:G:N7	2.84	0.45
1:CA:1256:A:N6	1:CA:1278:U:H1'	2.22	0.45
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.51	0.45
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.50	0.45
13:CM:65:LYS:HA	13:CM:66:LEU:CB	2.45	0.45
16:CP:52:ASP:OD2	16:CP:55:ARG:HG2	2.16	0.45
23:DA:459:U:OP2	23:DA:469:G:N1	2.39	0.45
23:DA:1721:G:H5'	23:DA:1722:A:OP2	2.16	0.45
23:DA:1769:G:O2'	23:DA:1958:C:OP1	2.29	0.45
23:DA:2134:A:C2	23:DA:2159:G:H4'	2.51	0.45
26:DE:52:LEU:O	26:DE:76:ARG:N	2.38	0.45
30:DI:4:ILE:HD11	30:DI:44:LEU:CD1	2.47	0.45
31:DN:108:PRO:O	31:DN:113:GLY:HA3	2.16	0.45
36:DS:74:ALA:HA	36:DS:110:LEU:HD22	1.99	0.45
43:DZ:91:LEU:HD12	43:DZ:91:LEU:HA	1.75	0.45
44:D0:14:ARG:HB2	44:D0:14:ARG:HH11	1.82	0.45
46:D2:51:ARG:O	46:D2:55:ARG:HD2	2.17	0.45
1:AA:142:G:H2'	1:AA:143:A:H8	1.82	0.45
4:AD:162:LEU:HD23	4:AD:162:LEU:HA	1.83	0.45
5:AE:139:LEU:HD23	5:AE:142:LEU:HD11	1.98	0.45
13:AM:67:GLU:C	13:AM:69:GLU:H	2.25	0.45
13:AM:86:CYS:O	13:AM:86:CYS:SG	2.74	0.45
19:AS:20:LEU:HD21	19:AS:43:GLU:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2104:G:N2	23:BA:2105:C:C2	2.85	0.45
23:BA:2152:G:H2'	23:BA:2153:G:H8	1.82	0.45
23:BA:2172:U:H4'	23:BA:2173:A:OP2	2.16	0.45
28:BG:13:GLU:H	28:BG:13:GLU:HG3	1.55	0.45
30:BI:17:GLN:HG2	30:BI:18:VAL:N	2.32	0.45
1:CA:102:G:H2'	1:CA:103:C:H6	1.81	0.45
1:CA:750:G:N2	15:CO:23:GLY:HA3	2.32	0.45
1:CA:765:G:H5"	1:CA:766:A:OP1	2.17	0.45
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.51	0.45
1:CA:1187:G:OP1	9:CI:113:LYS:HE2	2.16	0.45
15:CO:18:PHE:HB2	15:CO:19:PRO:HD2	1.98	0.45
17:CQ:13:ASP:OD1	17:CQ:13:ASP:N	2.50	0.45
17:CQ:45:HIS:HB2	17:CQ:65:ILE:HD13	1.99	0.45
20:CT:87:LYS:O	20:CT:91:LEU:HG	2.16	0.45
23:DA:1239:G:H2'	23:DA:1240:U:O4'	2.17	0.45
23:DA:1507:A:O2'	23:DA:1508:A:C8	2.70	0.45
23:DA:2336:A:H61	44:D0:43:THR:CG2	2.30	0.45
28:DG:43:LEU:HB3	28:DG:44:GLY:H	1.54	0.45
30:DI:127:VAL:HA	30:DI:140:LEU:O	2.17	0.45
43:DZ:5:LEU:O	43:DZ:59:LEU:HA	2.17	0.45
43:DZ:141:VAL:O	43:DZ:144:LEU:HB2	2.17	0.45
45:D1:21:ARG:HH11	45:D1:21:ARG:CG	2.18	0.45
1:AA:21:G:H2'	1:AA:22:G:C8	2.52	0.45
1:AA:62:U:OP1	1:AA:385:C:O2'	2.32	0.45
1:AA:559:A:H4'	1:AA:560:U:H3'	1.99	0.45
1:AA:958:A:N3	1:AA:985:C:O2'	2.43	0.45
1:AA:967:C:O5'	1:AA:967:C:H6	1.99	0.45
17:AQ:13:ASP:OD1	17:AQ:13:ASP:N	2.50	0.45
20:AT:33:ILE:O	20:AT:37:SER:OG	2.30	0.45
23:BA:1049:C:O2'	23:BA:1050:A:P	2.75	0.45
23:BA:1204:A:N6	23:BA:1240:U:H2'	2.32	0.45
23:BA:1540:U:H2'	23:BA:1541:G:O4'	2.16	0.45
23:BA:2564:A:C2	23:BA:2647:U:H4'	2.51	0.45
23:BA:2772:C:H2'	23:BA:2773:C:C6	2.51	0.45
30:BI:29:TYR:C	30:BI:32:PRO:HD2	2.42	0.45
48:B4:36:CYS:SG	48:B4:38:LYS:O	2.75	0.45
1:CA:38:G:C2	1:CA:397:A:C2	3.05	0.45
1:CA:403:C:P	4:CD:137:SER:OG	2.75	0.45
1:CA:877:C:H5"	8:CH:88:LYS:HD3	1.99	0.45
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.51	0.45
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:36:ARG:HG2	4:CD:38:TYR:CZ	2.52	0.45
9:CI:28:VAL:N	9:CI:31:GLN:O	2.32	0.45
16:CP:53:VAL:O	16:CP:56:ALA:N	2.50	0.45
17:CQ:24:GLU:OE2	17:CQ:37:LYS:HD3	2.17	0.45
23:DA:919:G:N2	23:DA:2269:A:OP2	2.48	0.45
23:DA:1292:U:H2'	23:DA:1293:C:C6	2.52	0.45
23:DA:1530:C:O2'	23:DA:1531:C:P	2.75	0.45
23:DA:2815:C:H5'	49:D5:29:THR:HG21	1.99	0.45
23:DA:2854:G:H2'	23:DA:2855:C:C6	2.52	0.45
30:DI:120:ILE:HG21	30:DI:126:TYR:CE1	2.52	0.45
35:DR:109:ALA:HA	35:DR:110:PRO:HD2	1.83	0.45
52:D8:34:TRP:CD1	52:D8:35:GLN:H	2.35	0.45
1:AA:44:G:H2'	1:AA:45:U:O4'	2.16	0.45
1:AA:165:C:H2'	1:AA:166:G:H8	1.77	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.16	0.45
1:AA:790:A:C2	22:AY:29:LYS:HD3	2.52	0.45
8:AH:11:THR:HG23	8:AH:14:ARG:NH1	2.32	0.45
19:AS:58:VAL:HA	19:AS:59:PRO:HD3	1.72	0.45
23:BA:615:G:OP1	27:BF:40:GLN:HG2	2.17	0.45
23:BA:1021:A:C8	23:BA:1021:A:C3'	3.00	0.45
23:BA:1669:A:H5"	23:BA:2550:G:OP1	2.17	0.45
27:BF:140:LEU:HD13	27:BF:140:LEU:HA	1.85	0.45
34:BQ:109:VAL:HG13	34:BQ:113:GLN:HB2	1.98	0.45
34:BQ:134:ARG:O	34:BQ:138:ASP:HB2	2.17	0.45
43:BZ:111:VAL:HG12	43:BZ:112:ARG:H	1.82	0.45
1:CA:436:C:H1'	1:CA:437:U:H5'	1.99	0.45
7:CG:15:ASP:O	7:CG:19:GLY:N	2.49	0.45
9:CI:26:VAL:CG1	9:CI:61:ALA:HB3	2.45	0.45
16:CP:72:ARG:HE	16:CP:73:LEU:HD23	1.82	0.45
23:DA:13:A:N1	23:DA:525:U:H2'	2.31	0.45
23:DA:1124:C:H1'	53:D9:36:GLN:NE2	2.32	0.45
23:DA:1270:C:H5"	23:DA:1271:G:O5'	2.17	0.45
23:DA:2294:C:P	36:DS:89:ARG:HH22	2.39	0.45
25:DD:71:ASP:CB	25:DD:103:ARG:HH22	2.29	0.45
26:DE:51:PHE:CD1	26:DE:52:LEU:HD22	2.52	0.45
28:DG:44:GLY:C	28:DG:46:ALA:H	2.25	0.45
1:AA:195:A:C6	1:AA:196:A:N1	2.85	0.44
1:AA:373:A:C2	1:AA:374:A:C8	3.05	0.44
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.52	0.44
16:AP:71:ARG:O	16:AP:75:ARG:N	2.44	0.44
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HD12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:892:G:H8	23:BA:892:G:O5'	2.00	0.44
23:BA:897:C:H6	23:BA:897:C:O5'	2.01	0.44
23:BA:945:A:H2	56:BA:4190:HOH:O	1.98	0.44
23:BA:1019:U:O2'	23:BA:1021:A:H2	1.80	0.44
23:BA:1497:U:H5"	23:BA:1498:C:H5	1.82	0.44
23:BA:2064:C:H2'	23:BA:2065:C:C6	2.52	0.44
28:BG:44:GLY:C	28:BG:46:ALA:H	2.25	0.44
1:CA:21:G:H2'	1:CA:22:G:C8	2.52	0.44
1:CA:380:G:N2	1:CA:384:G:C5	2.84	0.44
1:CA:427:U:P	4:CD:13:ARG:HH22	2.39	0.44
1:CA:950:U:H2'	1:CA:951:G:C8	2.52	0.44
1:CA:1115:C:H1'	14:CN:61:TRP:O	2.16	0.44
1:CA:1151:A:C2	1:CA:1152:A:C5	3.04	0.44
1:CA:1261:A:H5'	1:CA:1283:G:O3'	2.18	0.44
1:CA:1392:G:H21	1:CA:1502:A:H8	1.65	0.44
3:CC:187:ALA:O	3:CC:198:VAL:HG23	2.16	0.44
5:CE:139:LEU:HD23	5:CE:142:LEU:HD11	1.99	0.44
7:CG:72:ARG:NH1	7:CG:142:GLU:OE1	2.50	0.44
8:CH:58:TYR:O	8:CH:59:LEU:HD23	2.17	0.44
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.52	0.44
23:DA:185:U:H4'	23:DA:218:A:H4'	1.99	0.44
23:DA:789:A:N1	56:DA:4269:HOH:O	2.36	0.44
23:DA:1549:C:H2'	23:DA:1550:C:C6	2.52	0.44
23:DA:2391:G:O6	23:DA:2425:A:H8	2.00	0.44
36:DS:39:ILE:HD12	36:DS:85:VAL:HG21	1.98	0.44
43:DZ:151:HIS:C	43:DZ:153:SER:H	2.24	0.44
1:AA:397:A:H3'	1:AA:397:A:N3	2.32	0.44
1:AA:576:G:O6	1:AA:880:C:O2'	2.31	0.44
1:AA:939:G:H2'	1:AA:940:C:C6	2.52	0.44
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.50	0.44
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.99	0.44
1:AA:1441:G:N2	1:AA:1459:C:C6	2.81	0.44
4:AD:10:ARG:HG3	4:AD:11:LEU:HD12	1.98	0.44
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	1.99	0.44
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	1.99	0.44
17:AQ:24:GLU:OE2	17:AQ:37:LYS:HD3	2.16	0.44
23:BA:184:C:H2'	23:BA:185:U:C6	2.53	0.44
23:BA:214:G:O2'	23:BA:216:A:O2'	2.25	0.44
23:BA:247:G:H4'	23:BA:386:G:C5	2.53	0.44
23:BA:252:G:P	33:BP:50:ARG:HH12	2.40	0.44
23:BA:848:G:H2'	23:BA:849:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:958:U:H5"	34:BQ:14:ARG:HD3	1.98	0.44
23:BA:1638:C:H4'	23:BA:2710:C:O2	2.17	0.44
23:BA:2147:G:H2'	23:BA:2148:G:C4'	2.47	0.44
23:BA:2713:A:H2'	23:BA:2713:A:N3	2.31	0.44
35:BR:26:LYS:HE2	35:BR:70:LEU:O	2.17	0.44
36:BS:59:LYS:HE2	36:BS:60:GLY:HA2	1.98	0.44
42:BY:76:CYS:HA	42:BY:77:PRO:HD3	1.90	0.44
43:BZ:144:LEU:HD21	43:BZ:150:LEU:HG	1.99	0.44
45:B1:85:LEU:HB3	45:B1:89:GLU:HG3	1.98	0.44
1:CA:690:G:C6	1:CA:691:G:C6	3.05	0.44
1:CA:922:G:N3	1:CA:1398:A:C2	2.82	0.44
1:CA:1103:C:N3	1:CA:1104:G:C8	2.85	0.44
1:CA:1116:C:H2'	1:CA:1117:G:H5"	1.97	0.44
3:CC:45:LYS:O	3:CC:47:LEU:N	2.48	0.44
9:CI:45:ALA:HB1	9:CI:47:LEU:N	2.31	0.44
23:DA:181:A:H1'	23:DA:435:C:H5'	1.98	0.44
24:DB:13:A:C2	24:DB:16:G:H1'	2.51	0.44
27:DF:47:GLY:HA3	27:DF:95:ARG:O	2.17	0.44
36:DS:97:ARG:O	36:DS:100:ALA:HB3	2.18	0.44
1:AA:77:G:O6	1:AA:78:G:N1	2.50	0.44
1:AA:814:A:N7	1:AA:816:A:C4	2.85	0.44
1:AA:858:G:O6	1:AA:869:G:H3'	2.17	0.44
1:AA:909:A:H2'	1:AA:910:C:O4'	2.18	0.44
1:AA:965:A:OP2	22:AY:8:LYS:NZ	2.51	0.44
17:AQ:88:TYR:CD2	17:AQ:89:LEU:HD23	2.53	0.44
23:BA:958:U:O2'	23:BA:959:A:OP2	2.35	0.44
23:BA:1803:A:H4'	25:BD:259:THR:HG23	1.98	0.44
23:BA:1866:C:H2'	23:BA:1876:A:O4'	2.17	0.44
23:BA:2308:G:O2'	23:BA:2310:A:N7	2.50	0.44
23:BA:2674:G:H2'	23:BA:2675:A:C8	2.52	0.44
1:CA:414:A:H2'	1:CA:415:A:H8	1.80	0.44
1:CA:719:C:O2	18:CR:50:ILE:HG12	2.17	0.44
1:CA:909:A:H2'	1:CA:910:C:O4'	2.16	0.44
1:CA:1372:U:C4	1:CA:1373:G:C4	3.06	0.44
2:CB:51:LEU:O	2:CB:55:PHE:HD2	2.00	0.44
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.17	0.44
20:CT:56:MET:HG3	20:CT:57:ARG:N	2.31	0.44
22:CY:26:LYS:HD3	22:CY:82:GLU:OE2	2.17	0.44
23:DA:526:A:H5"	23:DA:527:C:OP1	2.17	0.44
23:DA:887:A:H1'	23:DA:889:C:OP2	2.16	0.44
23:DA:1185:C:H5"	23:DA:1186:G:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1379:A:H8	23:DA:1379:A:O5'	2.00	0.44
23:DA:2564:A:C2	23:DA:2647:U:H4'	2.52	0.44
23:DA:2778:A:O2'	23:DA:2781:A:H5'	2.17	0.44
36:DS:101:LEU:HD23	36:DS:102:ALA:H	1.82	0.44
49:D5:11:THR:HG23	49:D5:15:ARG:HB3	1.98	0.44
1:AA:391:G:C6	1:AA:392:G:C5	3.05	0.44
1:AA:750:G:C2	15:AO:23:GLY:HA3	2.52	0.44
1:AA:951:G:C6	1:AA:1231:G:C6	3.05	0.44
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.52	0.44
3:AC:12:LEU:HD23	3:AC:12:LEU:HA	1.86	0.44
16:AP:67:THR:H	16:AP:70:ALA:HB3	1.82	0.44
23:BA:1530:C:H6	23:BA:1530:C:H2'	1.60	0.44
23:BA:1700:A:H2'	23:BA:1701:A:O5'	2.17	0.44
23:BA:2009:G:OP1	40:BW:41:LYS:HE2	2.18	0.44
23:BA:2722:G:H2'	23:BA:2723:C:C6	2.53	0.44
27:BF:129:PHE:HB2	27:BF:132:VAL:HG22	1.99	0.44
35:BR:21:TYR:OH	35:BR:43:GLU:HG2	2.17	0.44
35:BR:51:LEU:HD23	35:BR:51:LEU:HA	1.81	0.44
40:BW:83:LYS:O	40:BW:84:ARG:HD3	2.17	0.44
1:CA:105:G:H2'	1:CA:106:C:C6	2.53	0.44
1:CA:685:G:C2	1:CA:686:U:C4	3.05	0.44
1:CA:959:A:H2'	1:CA:960:U:H4'	2.00	0.44
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.35	0.44
1:CA:1321:C:H5"	1:CA:1322:C:H5"	1.99	0.44
2:CB:133:LYS:O	2:CB:137:ARG:HG3	2.18	0.44
3:CC:136:GLN:O	3:CC:139:GLN:N	2.51	0.44
4:CD:190:ASP:OD1	4:CD:190:ASP:N	2.50	0.44
5:CE:59:GLY:O	5:CE:62:ALA:HB3	2.17	0.44
8:CH:51:VAL:HG11	8:CH:60:ARG:HH11	1.81	0.44
9:CI:83:ARG:HA	9:CI:86:VAL:HG22	1.99	0.44
14:CN:7:ILE:HG12	14:CN:23:ARG:HG2	2.00	0.44
14:CN:23:ARG:HD3	14:CN:29:ARG:O	2.17	0.44
23:DA:242:G:C8	52:D8:5:LYS:HG2	2.52	0.44
23:DA:330:A:O2'	23:DA:331:A:C8	2.69	0.44
23:DA:593:G:H4'	52:D8:4:MET:HE2	1.98	0.44
23:DA:1783:A:H5'	23:DA:2608:G:H4'	1.98	0.44
23:DA:2134:A:N6	23:DA:2157:G:H5'	2.32	0.44
23:DA:2534:A:H3'	23:DA:2535:G:H5"	2.00	0.44
30:DI:83:ALA:HB1	30:DI:87:LYS:O	2.17	0.44
31:DN:18:ALA:O	31:DN:19:GLU:HB3	2.17	0.44
33:DP:6:LEU:HD23	33:DP:6:LEU:HA	1.87	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DQ:16:ARG:O	34:DQ:17:LEU:HD23	2.17	0.44
34:DQ:57:HIS:NE2	34:DQ:116:GLU:HB3	2.33	0.44
45:D1:51:VAL:HG11	45:D1:74:VAL:HG21	1.99	0.44
45:D1:82:LEU:HA	45:D1:85:LEU:CD2	2.42	0.44
1:AA:455:C:O5'	1:AA:455:C:H6	2.00	0.44
1:AA:625:G:H2'	1:AA:626:U:H6	1.82	0.44
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.82	0.44
6:AF:75:LEU:O	6:AF:79:LEU:HG	2.17	0.44
23:BA:1794:U:H2'	23:BA:1795:C:H6	1.82	0.44
23:BA:1864:U:OP1	23:BA:2410:G:O2'	2.31	0.44
23:BA:2172:U:H1'	23:BA:2173:A:OP1	2.18	0.44
23:BA:2793:G:H2'	23:BA:2794:C:O4'	2.17	0.44
32:BO:115:VAL:HG13	32:BO:121:VAL:HG21	2.00	0.44
38:BU:92:ARG:HG2	38:BU:92:ARG:H	1.74	0.44
46:B2:50:ILE:O	46:B2:51:ARG:HB3	2.17	0.44
1:CA:1279:A:H5"	1:CA:1280:A:OP1	2.18	0.44
4:CD:193:ASP:OD2	56:CD:401:HOH:O	2.21	0.44
7:CG:90:GLU:CD	7:CG:90:GLU:H	2.24	0.44
7:CG:111:ARG:NH1	7:CG:122:HIS:HB3	2.31	0.44
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	2.26	0.44
23:DA:764:A:N1	23:DA:1789:A:O2'	2.48	0.44
23:DA:769:G:O2'	23:DA:770:G:H5'	2.17	0.44
23:DA:830:G:H4'	23:DA:831:G:OP2	2.17	0.44
23:DA:864:G:N2	23:DA:913:U:C2	2.85	0.44
23:DA:1338:G:O2'	23:DA:1393:A:N1	2.49	0.44
23:DA:1745(A):C:H5'	23:DA:1746:G:OP2	2.17	0.44
23:DA:2122:U:H2'	23:DA:2123:G:C8	2.50	0.44
23:DA:2172:U:H4'	23:DA:2173:A:OP2	2.17	0.44
23:DA:2670:A:O2'	23:DA:2671:A:H5'	2.17	0.44
28:DG:3:LEU:H	28:DG:3:LEU:HG	1.67	0.44
28:DG:66:GLN:HE21	28:DG:66:GLN:HB3	1.67	0.44
32:DO:63:VAL:HG12	32:DO:106:LEU:HD11	1.98	0.44
35:DR:70:LEU:HA	35:DR:70:LEU:HD23	1.57	0.44
39:DV:29:PRO:HA	39:DV:61:VAL:HG22	2.00	0.44
1:AA:10:A:OP2	5:AE:126:ARG:HD2	2.17	0.44
1:AA:36:C:OP1	12:AL:123:LYS:NZ	2.50	0.44
1:AA:76:C:O2'	1:AA:77:G:OP1	2.30	0.44
1:AA:519:C:H2'	1:AA:520:A:C8	2.52	0.44
1:AA:1442(A):G:C5	1:AA:1442(B):A:C6	3.06	0.44
4:AD:94:LEU:O	4:AD:97:LEU:HB2	2.18	0.44
5:AE:57:LYS:HB3	5:AE:61:TYR:CE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:4:ILE:HG12	13:AM:5:ALA:H	1.81	0.44
23:BA:740:U:H2'	23:BA:741:G:C8	2.52	0.44
23:BA:1488:G:H5"	23:BA:1488:G:C8	2.51	0.44
23:BA:2096:U:H3	23:BA:2193:G:H1	1.66	0.44
26:BE:59:VAL:O	26:BE:64:LYS:HE3	2.18	0.44
26:BE:173:VAL:CG2	26:BE:185:LYS:HB2	2.48	0.44
27:BF:11:VAL:HB	27:BF:18:ARG:CB	2.48	0.44
30:BI:72:LEU:O	30:BI:74:ASN:N	2.51	0.44
30:BI:116:LEU:HD22	30:BI:118:LYS:O	2.18	0.44
34:BQ:27:VAL:O	34:BQ:67:ARG:NH1	2.51	0.44
1:CA:297:G:N2	1:CA:300:A:OP2	2.49	0.44
1:CA:586:C:C2'	1:CA:587:G:H5'	2.47	0.44
1:CA:1076:C:C2	1:CA:1082:G:N2	2.86	0.44
1:CA:1272:G:C6	1:CA:1273:G:C5	3.06	0.44
7:CG:40:ALA:HB3	9:CI:41:VAL:HG21	2.00	0.44
10:CJ:63:PHE:HD1	14:CN:57:ARG:O	2.01	0.44
13:CM:67:GLU:HA	13:CM:69:GLU:O	2.18	0.44
13:CM:90:LEU:C	13:CM:92:HIS:N	2.75	0.44
17:CQ:57:VAL:HA	17:CQ:77:VAL:HG23	1.98	0.44
23:DA:320:A:H4'	23:DA:322:A:N7	2.33	0.44
23:DA:493:G:H2'	23:DA:494:G:O4'	2.18	0.44
23:DA:720:C:H2'	23:DA:721:C:H6	1.82	0.44
23:DA:1022:G:N7	31:DN:66:LYS:HE2	2.33	0.44
23:DA:1559:G:OP2	56:DA:4887:HOH:O	2.20	0.44
23:DA:1866:C:H2'	23:DA:1876:A:O4'	2.17	0.44
23:DA:2009:G:OP1	40:DW:41:LYS:HE2	2.17	0.44
23:DA:2483:C:N3	34:DQ:124:LYS:NZ	2.62	0.44
25:DD:134:ARG:HD3	25:DD:135:PHE:CZ	2.51	0.44
31:DN:24:GLY:HA2	31:DN:27:ALA:CB	2.48	0.44
37:DT:119:LYS:O	37:DT:123:GLN:HG2	2.18	0.44
42:DY:23:ARG:HB2	42:DY:23:ARG:HH11	1.82	0.44
46:D2:65:ASN:OD1	46:D2:69:ARG:NH1	2.51	0.44
1:AA:67:C:H4'	1:AA:172:A:C4'	2.48	0.44
1:AA:832:C:O2'	1:AA:833:U:P	2.76	0.44
1:AA:1318:A:H4'	19:AS:10:PHE:CE1	2.52	0.44
13:AM:14:ARG:HH21	13:AM:16:ASP:CG	2.26	0.44
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD13	2.00	0.44
23:BA:579:G:H2'	23:BA:580:C:C6	2.53	0.44
23:BA:1297:C:OP1	23:BA:2710:C:H4'	2.18	0.44
23:BA:1379:A:O5'	23:BA:1379:A:H8	2.01	0.44
23:BA:1503:U:H2'	23:BA:1504:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1939:U:OP1	23:BA:2604:U:O2'	2.31	0.44
23:BA:2275:C:H6	23:BA:2275:C:H5'	1.81	0.44
29:BH:3:ARG:HG2	29:BH:6:ARG:HG2	1.99	0.44
35:BR:70:LEU:HD23	35:BR:70:LEU:HA	1.72	0.44
43:BZ:6:LYS:HD3	43:BZ:8:TYR:OH	2.17	0.44
1:CA:954:G:C5	1:CA:955:U:C4	3.06	0.44
1:CA:1012:U:H2'	1:CA:1013:G:O4'	2.16	0.44
1:CA:1124:G:H8	1:CA:1124:G:OP2	2.01	0.44
1:CA:1505:G:H4'	1:CA:1506:U:H5"	1.98	0.44
12:CL:27:LEU:CB	12:CL:33:ARG:HD3	2.48	0.44
14:CN:3:ARG:HE	14:CN:3:ARG:HB3	1.53	0.44
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.18	0.44
23:DA:330:A:O2'	23:DA:331:A:H8	1.96	0.44
23:DA:831:G:O2'	33:DP:38:GLN:HG2	2.18	0.44
23:DA:1005:C:H2'	23:DA:1006:C:C6	2.52	0.44
23:DA:1263:U:C4	23:DA:1264:G:C6	3.05	0.44
23:DA:2137:C:C2	23:DA:2154:G:N2	2.85	0.44
23:DA:2198:A:O2'	23:DA:2224:G:N2	2.50	0.44
23:DA:2630:G:H2'	23:DA:2631:G:O4'	2.18	0.44
37:DT:16:ARG:HB2	37:DT:79:HIS:ND1	2.32	0.44
42:DY:20:TYR:O	42:DY:21:LYS:C	2.61	0.44
46:D2:21:LEU:HD23	46:D2:21:LEU:HA	1.86	0.44
1:AA:64:G:H4'	1:AA:65:U:H3'	1.99	0.44
1:AA:891:U:OP1	56:AA:2083:HOH:O	2.21	0.44
2:AB:133:LYS:O	2:AB:137:ARG:HG3	2.17	0.44
9:AI:49:PRO:O	9:AI:52:ALA:HB3	2.17	0.44
10:AJ:47:PHE:CZ	14:AN:37:PHE:HE2	2.36	0.44
10:AJ:96:ILE:H	10:AJ:96:ILE:CD1	2.29	0.44
12:AL:71:PRO:O	12:AL:102:ARG:NH1	2.48	0.44
15:AO:31:LEU:HA	15:AO:31:LEU:HD23	1.58	0.44
23:BA:832:G:OP1	33:BP:38:GLN:O	2.36	0.44
23:BA:887:A:H1'	23:BA:889:C:OP2	2.18	0.44
23:BA:1188:U:H4'	39:BV:79:VAL:HG22	1.99	0.44
23:BA:2143:C:N3	23:BA:2148:G:O6	2.50	0.44
23:BA:2347:C:H2'	23:BA:2348:U:C6	2.53	0.44
25:BD:132:PRO:HD3	25:BD:190:TYR:CZ	2.53	0.44
26:BE:108:SER:O	26:BE:162:ALA:HA	2.17	0.44
26:BE:119:ARG:HG2	26:BE:160:TYR:CG	2.53	0.44
30:BI:81:VAL:O	30:BI:146:ALA:HA	2.17	0.44
33:BP:126:VAL:CG1	33:BP:148:LEU:HD13	2.48	0.44
52:B8:15:LYS:NZ	56:B8:210:HOH:O	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.53	0.44
1:CA:1347:G:H22	1:CA:1374:A:P	2.40	0.44
2:CB:42:ILE:HG21	2:CB:202:PRO:O	2.17	0.44
3:CC:141:VAL:HG11	3:CC:202:ILE:HG12	2.00	0.44
16:CP:1:MET:HE3	16:CP:3:LYS:HE3	1.99	0.44
23:DA:29:U:O5'	23:DA:29:U:H6	2.00	0.44
23:DA:328:U:H4'	42:DY:68:HIS:CG	2.52	0.44
23:DA:637:A:H8	33:DP:117:GLU:HG3	1.82	0.44
23:DA:2267:A:H2'	56:DA:4675:HOH:O	2.17	0.44
23:DA:2374:C:H3'	56:DA:5005:HOH:O	2.18	0.44
28:DG:6:ALA:HB3	28:DG:104:GLU:OE1	2.17	0.44
28:DG:64:THR:HB	28:DG:94:LEU:HD21	2.00	0.44
28:DG:173:LEU:C	28:DG:178:PHE:HB2	2.42	0.44
30:DI:62:LYS:HG2	30:DI:133:HIS:NE2	2.33	0.44
33:DP:138:LEU:HD12	33:DP:138:LEU:HA	1.85	0.44
45:D1:58:ILE:HD11	45:D1:91:LYS:HG3	1.99	0.44
1:AA:63:C:H4'	1:AA:380:G:H4'	1.99	0.44
1:AA:750:G:H21	15:AO:23:GLY:HA3	1.83	0.44
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.18	0.44
2:AB:180:LEU:C	2:AB:182:ILE:H	2.26	0.44
4:AD:83:SER:HA	56:AD:403:HOH:O	2.18	0.44
5:AE:81:GLU:HB3	5:AE:88:LYS:HE2	2.00	0.44
13:AM:96:LEU:O	13:AM:110:ARG:HD3	2.17	0.44
20:AT:64:ASP:CG	20:AT:81:LYS:HZ3	2.23	0.44
23:BA:590:A:H2'	23:BA:591:C:O4'	2.18	0.44
23:BA:1495:A:H2'	23:BA:1496:A:H8	1.78	0.44
23:BA:2630:G:H2'	23:BA:2631:G:O4'	2.17	0.44
26:BE:73:GLU:HA	26:BE:74:PRO:HD3	1.63	0.44
1:CA:128:G:O2'	17:CQ:3:LYS:HE2	2.18	0.44
1:CA:520:A:N1	1:CA:536:C:H1'	2.33	0.44
1:CA:619:U:O2	4:CD:133:VAL:HA	2.18	0.44
1:CA:685:G:N2	1:CA:686:U:C4	2.86	0.44
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.48	0.44
1:CA:724:G:C2	1:CA:725:G:C8	3.06	0.44
1:CA:820:U:H4'	1:CA:821:G:OP2	2.18	0.44
1:CA:927:G:N1	1:CA:1391:U:C2	2.85	0.44
1:CA:1006:C:C2'	1:CA:1007:C:H5'	2.48	0.44
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.53	0.44
1:CA:1426:C:H2'	1:CA:1427:U:C6	2.53	0.44
3:CC:181:ASN:O	3:CC:203:PHE:HA	2.18	0.44
12:CL:85:ILE:HA	12:CL:85:ILE:HD13	1.69	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:530:G:C5	23:DA:2022:U:H5"	2.53	0.44
23:DA:783:A:N3	23:DA:783:A:H2'	2.32	0.44
23:DA:804:A:H5"	23:DA:805:G:OP1	2.18	0.44
23:DA:2420:C:OP2	52:D8:33:ASN:HB2	2.17	0.44
24:DB:32:C:C2	24:DB:51:G:N2	2.86	0.44
26:DE:1:MET:O	26:DE:1:MET:HE3	2.18	0.44
36:DS:61:ASN:O	36:DS:65:VAL:HG23	2.18	0.44
37:DT:37:GLY:HA2	37:DT:38:ASN:HA	1.55	0.44
1:AA:380:G:C2	1:AA:384:G:C6	3.06	0.43
1:AA:624:C:H2'	1:AA:625:G:C8	2.53	0.43
1:AA:1031:G:H2'	1:AA:1032:G:O4'	2.18	0.43
1:AA:1055:A:N6	1:AA:1206:G:C5	2.86	0.43
22:AY:23:ARG:HH12	22:AY:26:LYS:CD	2.30	0.43
23:BA:234:C:H2'	23:BA:235:U:H6	1.83	0.43
23:BA:861:A:C2	23:BA:917:A:C4	3.06	0.43
23:BA:922:U:H2'	23:BA:923:C:C6	2.53	0.43
23:BA:1482:G:C6	23:BA:1507:A:C6	3.06	0.43
23:BA:1825:A:OP1	25:BD:249:PRO:HD3	2.18	0.43
23:BA:2389:G:H5"	23:BA:2390:U:O4'	2.18	0.43
30:BI:85:GLU:O	30:BI:86:THR:OG1	2.31	0.43
34:BQ:141:GLN:NE2	43:BZ:76:LEU:HD22	2.32	0.43
36:BS:87:PHE:CE1	36:BS:102:ALA:HB2	2.53	0.43
42:BY:20:TYR:CD2	42:BY:42:VAL:HG13	2.52	0.43
43:BZ:141:VAL:O	43:BZ:144:LEU:HB2	2.18	0.43
43:BZ:151:HIS:O	43:BZ:152:ALA:HB3	2.18	0.43
1:CA:56:U:H2'	1:CA:57:G:H8	1.82	0.43
1:CA:501:C:H1'	1:CA:549:C:H1'	2.00	0.43
1:CA:841:U:C5	1:CA:848:C:H1'	2.53	0.43
1:CA:1493:A:N3	23:DA:1913:A:C6	2.85	0.43
3:CC:11:ARG:O	3:CC:14:ILE:N	2.41	0.43
8:CH:112:LEU:HB3	8:CH:133:LEU:HA	2.00	0.43
19:CS:7:LYS:HA	19:CS:7:LYS:HD3	1.58	0.43
23:DA:185:U:H2'	23:DA:186:G:H8	1.83	0.43
23:DA:245:G:O5'	33:DP:73:GLY:HA2	2.18	0.43
23:DA:465:G:C6	23:DA:466:A:N6	2.86	0.43
23:DA:481:G:C4	23:DA:507:A:C2	3.06	0.43
23:DA:813:U:H2'	23:DA:814:C:C6	2.53	0.43
23:DA:1021:A:H62	23:DA:1141:U:H3	1.66	0.43
23:DA:1482:G:C6	23:DA:1507:A:C6	3.05	0.43
23:DA:1518:U:OP2	56:DA:4337:HOH:O	2.21	0.43
23:DA:2064:C:H2'	23:DA:2065:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DQ:1:MET:HG2	34:DQ:2:LEU:H	1.83	0.43
35:DR:67:LEU:HD13	35:DR:67:LEU:HA	1.73	0.43
50:D6:11:LEU:HD23	50:D6:11:LEU:HA	1.74	0.43
50:D6:25:LYS:HE3	50:D6:30:THR:O	2.17	0.43
1:AA:51:A:C2	1:AA:353:A:N1	2.86	0.43
1:AA:262:A:C6	1:AA:263:A:C6	3.05	0.43
1:AA:881:G:P	12:AL:12:ARG:HH22	2.41	0.43
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.50	0.43
1:AA:1244:C:C2	1:AA:1294:G:N2	2.85	0.43
2:AB:84:GLU:OE1	2:AB:216:SER:HA	2.18	0.43
4:AD:173:TRP:CE3	4:AD:193:ASP:HB3	2.54	0.43
4:AD:188:LEU:H	4:AD:188:LEU:CD2	2.27	0.43
8:AH:49:GLU:O	8:AH:51:VAL:HG13	2.17	0.43
15:AO:15:PHE:CE2	15:AO:84:LYS:HD2	2.52	0.43
22:AY:23:ARG:HA	22:AY:23:ARG:HD2	1.81	0.43
23:BA:478:A:N1	23:BA:500:G:H4'	2.33	0.43
23:BA:601:C:O2'	23:BA:605:C:H5"	2.17	0.43
23:BA:2275:C:H5'	23:BA:2275:C:C6	2.53	0.43
23:BA:2317:C:N4	23:BA:2318:G:O6	2.51	0.43
23:BA:2778:A:O2'	23:BA:2781:A:H5'	2.18	0.43
28:BG:125:PHE:HB3	28:BG:166:ASP:OD2	2.19	0.43
29:BH:84:SER:HA	29:BH:133:VAL:O	2.18	0.43
30:BI:106:GLY:HA2	30:BI:107:VAL:CB	2.47	0.43
40:BW:20:VAL:O	40:BW:23:LEU:HB2	2.17	0.43
43:BZ:138:GLU:H	43:BZ:156:LYS:HZ1	1.64	0.43
46:B2:60:LEU:HD23	46:B2:60:LEU:HA	1.81	0.43
53:B9:3:VAL:C	53:B9:4:ARG:HG3	2.42	0.43
1:CA:20:U:H2'	1:CA:21:G:O4'	2.18	0.43
1:CA:999:C:H2'	1:CA:1000:U:H6	1.83	0.43
1:CA:1321:C:H3'	1:CA:1322:C:H5"	2.01	0.43
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.83	0.43
2:CB:87:ARG:NH2	2:CB:233:SER:HB2	2.33	0.43
3:CC:125:GLU:OE1	3:CC:190:ARG:N	2.41	0.43
23:DA:11:G:H2'	23:DA:12:U:C5'	2.48	0.43
23:DA:325:G:O2'	23:DA:326:G:H5'	2.18	0.43
23:DA:927:G:H2'	23:DA:928:G:O4'	2.18	0.43
23:DA:1840:G:C6	23:DA:1841:U:C4	3.06	0.43
23:DA:2125:G:H22	23:DA:2172:U:H5"	1.82	0.43
23:DA:2279:G:O6	44:D0:14:ARG:HD2	2.18	0.43
23:DA:2298:A:H2'	23:DA:2299:G:O4'	2.19	0.43
23:DA:2300:G:C6	23:DA:2301:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2602:A:H1'	23:DA:2603:G:H5"	1.99	0.43
28:DG:148:MET:O	28:DG:149:VAL:HB	2.17	0.43
36:DS:26:LEU:HD22	36:DS:87:PHE:CE1	2.53	0.43
42:DY:98:VAL:HG12	42:DY:105:ALA:HA	1.99	0.43
43:DZ:93:ASP:HB2	43:DZ:131:ARG:HH22	1.83	0.43
46:D2:35:LEU:HD12	46:D2:53:LEU:HD12	2.00	0.43
1:AA:104:G:H4'	1:AA:174:C:C4'	2.49	0.43
1:AA:192:U:H4'	20:AT:57:ARG:HD2	2.00	0.43
1:AA:552:U:H4'	12:AL:87:GLY:O	2.17	0.43
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.17	0.43
1:AA:911:U:OP2	12:AL:97:ARG:NH1	2.52	0.43
1:AA:1053:G:H3'	1:AA:1054:C:H5'	1.99	0.43
1:AA:1281:U:H6	1:AA:1281:U:H2'	1.59	0.43
2:AB:189:ASP:OD1	2:AB:205:ASP:HB3	2.18	0.43
6:AF:8:ILE:HD12	6:AF:26:ILE:HD13	2.00	0.43
23:BA:1162:G:O2'	39:BV:90:PRO:HG2	2.18	0.43
23:BA:1539:G:H2'	23:BA:1540:U:O4'	2.19	0.43
23:BA:2111:C:H42	23:BA:2147:G:H22	1.66	0.43
23:BA:2125:G:H22	23:BA:2172:U:H5"	1.82	0.43
23:BA:2318:G:O2'	23:BA:2319:G:H5"	2.19	0.43
23:BA:2576:G:H1'	56:BA:5409:HOH:O	2.18	0.43
23:BA:2854:G:H2'	23:BA:2855:C:C6	2.52	0.43
27:BF:108:LYS:O	27:BF:112:MET:HG3	2.18	0.43
28:BG:148:MET:O	28:BG:149:VAL:HB	2.19	0.43
30:BI:111:PRO:C	30:BI:113:ARG:N	2.75	0.43
36:BS:78:LEU:HA	36:BS:82:ILE:O	2.18	0.43
36:BS:84:GLN:H	36:BS:84:GLN:HG2	1.48	0.43
37:BT:113:LYS:O	37:BT:114:LEU:HD23	2.19	0.43
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.53	0.43
1:CA:673:G:N2	1:CA:674:G:C2	2.86	0.43
1:CA:814:A:H2'	1:CA:816:A:H5"	1.99	0.43
7:CG:104:LEU:HD13	7:CG:104:LEU:HA	1.85	0.43
23:DA:65:C:H2'	23:DA:66:C:C6	2.53	0.43
23:DA:1270:C:O2'	23:DA:1648:C:OP2	2.34	0.43
23:DA:2152:G:H2'	23:DA:2153:G:H8	1.82	0.43
23:DA:2308:G:O2'	23:DA:2310:A:N7	2.51	0.43
1:AA:78:G:N2	1:AA:92:C:N3	2.67	0.43
1:AA:580:U:H2'	1:AA:581:G:O4'	2.19	0.43
1:AA:708:C:H2'	1:AA:709:G:H8	1.84	0.43
1:AA:841:U:H6	1:AA:841:U:OP1	2.01	0.43
1:AA:962:C:H2'	1:AA:963:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1004:A:N7	1:AA:1036:G:N1	2.67	0.43
1:AA:1029:C:N3	1:AA:1032:G:O6	2.51	0.43
1:AA:1054:C:H41	22:AY:45:PRO:HB2	1.84	0.43
1:AA:1530:G:OP1	1:AA:1530:G:H4'	2.18	0.43
4:AD:8:VAL:HG22	4:AD:21:LEU:CD1	2.48	0.43
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.84	0.43
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.99	0.43
23:BA:11:G:H2'	23:BA:12:U:C5'	2.48	0.43
23:BA:103:A:H8	23:BA:103:A:O5'	2.02	0.43
23:BA:601:C:O2	23:BA:605:C:H4'	2.18	0.43
23:BA:637:A:OP1	33:BP:133:SER:OG	2.30	0.43
23:BA:784:A:C5	25:BD:229:VAL:HG21	2.53	0.43
23:BA:2406:U:OP1	56:BA:4767:HOH:O	2.21	0.43
27:BF:129:PHE:CD2	27:BF:163:VAL:HG21	2.53	0.43
31:BN:48:MET:HE3	31:BN:48:MET:HB2	1.83	0.43
2:CB:193:ASP:C	2:CB:194:PRO:O	2.61	0.43
6:CF:99:ALA:HB3	18:CR:29:PHE:CE1	2.53	0.43
9:CI:62:TYR:O	9:CI:63:ILE:HG13	2.18	0.43
21:CU:18:TYR:HD2	21:CU:22:ARG:HD2	1.82	0.43
22:CY:29:LYS:HG3	22:CY:30:TRP:CE3	2.53	0.43
23:DA:184:C:H2'	23:DA:185:U:C6	2.53	0.43
23:DA:866:A:C6	23:DA:914:C:C5	3.06	0.43
23:DA:1598:C:H5'	41:DX:36:LYS:HB2	2.00	0.43
23:DA:2115:G:H21	23:DA:2171:A:H61	1.66	0.43
24:DB:48:A:H4'	36:DS:95:HIS:CD2	2.39	0.43
34:DQ:34:LEU:HD11	34:DQ:129:THR:HB	2.00	0.43
37:DT:56:GLY:O	37:DT:59:THR:HG23	2.18	0.43
39:DV:95:LEU:HD13	39:DV:97:LYS:HD3	2.00	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.54	0.43
1:AA:174:C:H2'	1:AA:175:C:C6	2.53	0.43
1:AA:199:G:O2'	1:AA:200:G:H5'	2.18	0.43
1:AA:1349:A:C2	1:AA:1374:A:C4	3.06	0.43
5:AE:59:GLY:O	5:AE:62:ALA:HB3	2.17	0.43
9:AI:89:ASN:C	9:AI:91:ASP:H	2.26	0.43
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB2	1.99	0.43
20:AT:18:GLN:O	20:AT:22:ARG:HG3	2.18	0.43
23:BA:297:C:H2'	23:BA:298:G:O4'	2.17	0.43
23:BA:1485:G:O2'	23:BA:1486:A:H5'	2.17	0.43
26:BE:101:ARG:CZ	26:BE:171:GLU:HB2	2.48	0.43
32:BO:70:LYS:HB3	32:BO:70:LYS:HE2	1.72	0.43
41:BX:26:TYR:CE1	41:BX:89:ILE:HG13	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:10:A:OP2	5:CE:126:ARG:HD2	2.17	0.43
1:CA:455:C:O5'	1:CA:455:C:H6	2.02	0.43
1:CA:622:A:C8	1:CA:623:C:C5	3.06	0.43
1:CA:832:C:O2'	1:CA:833:U:P	2.77	0.43
1:CA:1106:G:C6	1:CA:1107:C:C4	3.06	0.43
4:CD:22:LYS:O	4:CD:113:SER:HB3	2.18	0.43
13:CM:86:CYS:SG	19:CS:73:GLU:HB3	2.59	0.43
14:CN:27:CYS:C	14:CN:29:ARG:H	2.26	0.43
23:DA:574:C:O2	26:DE:145:LYS:NZ	2.51	0.43
23:DA:829:A:N7	23:DA:2248:C:H5'	2.34	0.43
23:DA:1405:U:H2'	23:DA:1406:U:H6	1.82	0.43
23:DA:1478:G:O2'	23:DA:1558:A:N1	2.52	0.43
23:DA:1652:A:C2'	23:DA:1653:G:H5'	2.49	0.43
23:DA:1803:A:H4'	25:DD:259:THR:CG2	2.48	0.43
23:DA:2287:A:O2'	23:DA:2288:A:H3'	2.19	0.43
23:DA:2317:C:N4	23:DA:2318:G:O6	2.51	0.43
23:DA:2464:C:O2'	23:DA:2465:C:P	2.76	0.43
23:DA:2679:A:H4'	26:DE:165:VAL:HG11	2.01	0.43
29:DH:164:TYR:HB2	29:DH:167:GLU:HB2	1.99	0.43
35:DR:33:ARG:NH1	35:DR:115:GLU:OE2	2.43	0.43
43:DZ:35:ARG:HA	43:DZ:35:ARG:HD2	1.71	0.43
1:AA:7:G:H5'	1:AA:298:A:O4'	2.18	0.43
1:AA:203:U:H2'	1:AA:203:U:OP2	2.19	0.43
1:AA:958:A:C6	1:AA:959:A:C6	3.06	0.43
7:AG:126:ASP:HB3	7:AG:131:LYS:O	2.19	0.43
23:BA:229:A:C8	23:BA:229:A:H3'	2.54	0.43
23:BA:708:C:H5"	23:BA:708:C:H6	1.83	0.43
23:BA:1796:U:H2'	23:BA:1797:C:H6	1.79	0.43
23:BA:1833:U:O2'	23:BA:1969:A:N1	2.47	0.43
29:BH:17:VAL:HG21	29:BH:50:VAL:HG21	1.99	0.43
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.18	0.43
1:CA:96:U:O2'	1:CA:97:G:P	2.77	0.43
1:CA:260:G:H2'	1:CA:261:U:C6	2.53	0.43
1:CA:991:U:O2'	1:CA:992:U:O5'	2.34	0.43
1:CA:1073:U:OP1	5:CE:57:LYS:HE3	2.19	0.43
1:CA:1446:U:O2'	1:CA:1447:A:H3'	2.18	0.43
12:CL:54:LYS:HD2	12:CL:54:LYS:N	2.34	0.43
19:CS:62:ILE:HA	19:CS:66:MET:SD	2.58	0.43
23:DA:72:U:OP1	41:DX:1:MET:N	2.52	0.43
23:DA:1701:A:H5"	23:DA:1702:G:OP2	2.18	0.43
23:DA:1858:G:H1'	23:DA:1884:A:N6	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2169:A:H2'	23:DA:2170:A:C8	2.53	0.43
29:DH:54:ARG:HD3	29:DH:65:HIS:ND1	2.34	0.43
29:DH:64:LEU:O	29:DH:68:THR:OG1	2.32	0.43
30:DI:25:TYR:HE2	30:DI:29:TYR:CD2	2.37	0.43
30:DI:72:LEU:HD23	30:DI:107:VAL:HG11	2.01	0.43
33:DP:70:GLN:O	33:DP:73:GLY:N	2.42	0.43
1:AA:101:A:O2'	1:AA:102:G:H5'	2.19	0.43
1:AA:659:U:C2'	1:AA:660:G:H5'	2.48	0.43
1:AA:926:G:C6	22:AY:87:LYS:HG3	2.54	0.43
1:AA:1041:A:H2'	1:AA:1042:G:O4'	2.19	0.43
1:AA:1158:C:C4	1:AA:1160:G:C5	3.06	0.43
1:AA:1285:A:O5'	1:AA:1285:A:H8	2.02	0.43
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.34	0.43
13:AM:3:ARG:HG3	13:AM:4:ILE:HB	2.00	0.43
23:BA:637:A:H8	33:BP:117:GLU:HG3	1.84	0.43
23:BA:2125:G:H21	23:BA:2126:A:H62	1.66	0.43
23:BA:2153:G:H2'	23:BA:2154:G:C8	2.53	0.43
23:BA:2207:G:HO2'	23:BA:2208:A:P	2.33	0.43
23:BA:2464:C:O2'	23:BA:2465:C:P	2.76	0.43
25:BD:17:THR:O	25:BD:211:ARG:NH2	2.50	0.43
27:BF:165:ARG:HG2	27:BF:168:ARG:HH21	1.84	0.43
28:BG:82:LEU:HB3	28:BG:83:ARG:H	1.65	0.43
40:BW:12:ILE:HD13	40:BW:17:VAL:HG13	2.01	0.43
43:BZ:30:ASN:ND2	43:BZ:90:VAL:HB	2.34	0.43
43:BZ:98:MET:O	43:BZ:125:LEU:HD12	2.18	0.43
47:B3:18:ASP:OD1	47:B3:18:ASP:N	2.44	0.43
1:CA:509:A:H5'	4:CD:54:TYR:CD2	2.53	0.43
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.49	0.43
1:CA:1339:A:O5'	1:CA:1339:A:H8	2.02	0.43
3:CC:164:ARG:HE	3:CC:164:ARG:HB3	1.51	0.43
3:CC:180:ALA:HB1	3:CC:203:PHE:CE1	2.53	0.43
7:CG:72:ARG:H	7:CG:72:ARG:HG2	1.58	0.43
7:CG:111:ARG:NH1	7:CG:113:GLU:OE2	2.46	0.43
10:CJ:36:GLY:O	10:CJ:38:ILE:N	2.51	0.43
23:DA:247:G:H4'	23:DA:386:G:C5	2.54	0.43
23:DA:918:A:H5"	24:DB:98:G:O2'	2.19	0.43
23:DA:1224:C:O2'	39:DV:85:LYS:HA	2.18	0.43
23:DA:1536:C:O2'	23:DA:1537:G:P	2.77	0.43
23:DA:1638:C:H4'	23:DA:2710:C:O2	2.19	0.43
23:DA:2591:C:H2'	23:DA:2592:G:C8	2.54	0.43
23:DA:2772:C:H2'	23:DA:2773:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:13:A:H2'	24:DB:70:C:O2'	2.17	0.43
24:DB:41:U:H5"	56:DB:319:HOH:O	2.17	0.43
28:DG:121:ASN:HA	28:DG:122:PRO:HD3	1.80	0.43
36:DS:10:ARG:O	36:DS:14:VAL:HG13	2.19	0.43
38:DU:59:ARG:CB	38:DU:59:ARG:HH11	2.32	0.43
40:DW:12:ILE:HD13	40:DW:17:VAL:HG13	2.00	0.43
43:DZ:134:PRO:HB2	43:DZ:136:PHE:O	2.19	0.43
1:AA:516:U:C4	1:AA:517:G:C6	3.06	0.43
1:AA:696:A:H1'	1:AA:786:G:O2'	2.19	0.43
1:AA:738:C:H2'	1:AA:739:C:C6	2.53	0.43
1:AA:984:C:H2'	1:AA:985:C:H6	1.83	0.43
1:AA:1029:C:O2	1:AA:1033:G:C6	2.72	0.43
1:AA:1126:U:O2	1:AA:1127:G:C5	2.72	0.43
23:BA:708:C:H5'	23:BA:709:U:OP2	2.18	0.43
23:BA:746:A:H2'	23:BA:2612:C:H5"	2.00	0.43
23:BA:1744:C:O2'	23:BA:1745:C:H5'	2.18	0.43
23:BA:1823:G:OP1	25:BD:54:ARG:NH1	2.51	0.43
23:BA:2123:G:N2	23:BA:2175:C:N3	2.60	0.43
23:BA:2316:C:H2'	23:BA:2317:C:C6	2.53	0.43
23:BA:2318:G:O2'	23:BA:2319:G:P	2.77	0.43
23:BA:2793:G:N2	23:BA:2804:C:H1'	2.33	0.43
24:BB:33:G:C2	24:BB:50:G:C2	3.06	0.43
24:BB:39:A:O2'	24:BB:46:A:N1	2.34	0.43
25:BD:238:GLY:O	25:BD:239:ARG:CB	2.59	0.43
28:BG:6:ALA:HB3	28:BG:104:GLU:OE1	2.19	0.43
30:BI:86:THR:O	30:BI:87:LYS:HB2	2.19	0.43
31:BN:109:LYS:HD2	31:BN:109:LYS:N	2.33	0.43
33:BP:133:SER:O	33:BP:137:LYS:HG3	2.19	0.43
37:BT:33:LYS:HG2	37:BT:34:VAL:N	2.33	0.43
1:CA:7:G:H5'	1:CA:298:A:O4'	2.18	0.43
1:CA:509:A:O4'	4:CD:58:LEU:HD12	2.18	0.43
1:CA:580:U:H2'	1:CA:581:G:O4'	2.19	0.43
1:CA:790:A:H61	1:CA:1498:U:P	2.42	0.43
1:CA:954:G:C6	1:CA:955:U:C4	3.07	0.43
1:CA:1375:A:H4'	7:CG:29:LYS:NZ	2.34	0.43
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.53	0.43
2:CB:98:LEU:HD23	2:CB:98:LEU:HA	1.76	0.43
7:CG:113:GLU:HG3	7:CG:118:VAL:HG12	2.00	0.43
23:DA:271(Q):G:O2'	23:DA:271(R):G:P	2.76	0.43
23:DA:323:G:C8	27:DF:171:PRO:HG3	2.53	0.43
23:DA:751:A:H5'	40:DW:90:ARG:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1188:U:H4'	39:DV:79:VAL:HG22	1.99	0.43
23:DA:1581:G:H5"	23:DA:1581:G:H8	1.84	0.43
23:DA:2295:C:H5	36:DS:13:ARG:NH2	2.16	0.43
23:DA:2331:G:O2'	44:D0:43:THR:HG22	2.19	0.43
23:DA:2611:U:H3'	23:DA:2611:U:P	2.58	0.43
25:DD:92:ILE:HD12	25:DD:104:TYR:CD2	2.54	0.43
26:DE:1:MET:O	26:DE:84:PHE:HB2	2.18	0.43
26:DE:14:ILE:HD11	26:DE:173:VAL:HG11	2.00	0.43
35:DR:75:LEU:O	35:DR:75:LEU:HD22	2.18	0.43
35:DR:81:ASP:O	35:DR:85:PRO:HG2	2.19	0.43
43:DZ:178:GLU:OE2	43:DZ:178:GLU:HA	2.18	0.43
52:D8:52:LYS:O	52:D8:53:PRO:C	2.61	0.43
1:AA:992:U:O4	1:AA:1044:A:N7	2.52	0.43
1:AA:1001:A:H8	1:AA:1001:A:O5'	2.02	0.43
1:AA:1353:G:C2	1:AA:1370:G:C2	3.07	0.43
1:AA:1442(A):G:O2'	1:AA:1442(B):A:H2'	2.18	0.43
2:AB:36:ARG:O	2:AB:39:ILE:N	2.51	0.43
2:AB:194:PRO:C	2:AB:196:LEU:N	2.74	0.43
6:AF:36:ARG:CB	6:AF:36:ARG:HH11	2.31	0.43
8:AH:119:LEU:HB3	8:AH:123:GLU:HB2	2.01	0.43
23:BA:476:G:H4'	23:BA:502:A:N1	2.34	0.43
23:BA:792:G:H5"	23:BA:793:A:H5'	1.99	0.43
23:BA:2238:G:H2'	23:BA:2238:G:N3	2.32	0.43
23:BA:2364:C:H2'	23:BA:2365:G:O4'	2.18	0.43
35:BR:2:ARG:NH1	35:BR:5:LYS:O	2.48	0.43
36:BS:27:SER:HA	36:BS:88:ASP:HB3	2.01	0.43
40:BW:14:PRO:HG2	40:BW:78:GLU:CG	2.44	0.43
43:BZ:31:ARG:H	43:BZ:31:ARG:HG3	1.36	0.43
1:CA:604:G:C2	1:CA:635:G:C4	3.07	0.43
1:CA:968:A:C8	1:CA:1062:U:H4'	2.54	0.43
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.18	0.43
1:CA:1088:G:C5	1:CA:1089:G:N7	2.87	0.43
1:CA:1104:G:C6	1:CA:1105:A:C5	3.07	0.43
1:CA:1287:A:C6	1:CA:1288:A:C6	3.07	0.43
4:CD:110:PHE:CD1	4:CD:110:PHE:N	2.81	0.43
23:DA:315:G:H2'	23:DA:316:C:C6	2.54	0.43
23:DA:735:A:H3'	23:DA:736:C:C6	2.54	0.43
23:DA:746:A:H2'	23:DA:2612:C:H5"	2.00	0.43
23:DA:832:G:OP1	33:DP:38:GLN:O	2.36	0.43
23:DA:886:C:H6	56:DA:5037:HOH:O	2.02	0.43
23:DA:978:G:C2	23:DA:986:C:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2061:G:H5”	23:DA:2503:A:C2	2.53	0.43
23:DA:2165:G:H2’	23:DA:2166:G:C8	2.54	0.43
27:DF:129:PHE:HB2	27:DF:132:VAL:CG2	2.49	0.43
43:DZ:85:HIS:HE1	43:DZ:87:ASP:OD2	2.01	0.43
1:AA:224:C:H2’	1:AA:225:C:C6	2.53	0.43
1:AA:523:A:H61	12:AL:53:ARG:NH1	2.17	0.43
1:AA:923:A:H2’	1:AA:924:C:O4’	2.18	0.43
1:AA:955:U:O2’	19:AS:83:HIS:CD2	2.72	0.43
1:AA:1142:G:H2’	1:AA:1143:G:O4’	2.18	0.43
1:AA:1285:A:H4’	1:AA:1286:A:C5’	2.49	0.43
1:AA:1309:G:OP2	13:AM:99:ARG:NH2	2.44	0.43
1:AA:1316:G:N2	1:AA:1318:A:H3’	2.34	0.43
4:AD:112:VAL:HG22	4:AD:116:GLN:CD	2.44	0.43
16:AP:1:MET:HE3	16:AP:3:LYS:CE	2.48	0.43
20:AT:55:ILE:O	20:AT:58:LYS:N	2.52	0.43
23:BA:226:G:H21	23:BA:228:A:H62	1.67	0.43
23:BA:455:C:N3	23:BA:473:G:H5’	2.34	0.43
23:BA:1557:C:H5”	23:BA:1558:A:OP2	2.19	0.43
36:BS:3:ARG:HG3	36:BS:4:LEU:N	2.27	0.43
50:B6:35:GLU:OE2	50:B6:50:ARG:HD3	2.19	0.43
1:CA:397:A:H3’	1:CA:397:A:N3	2.33	0.43
1:CA:436:C:O2’	1:CA:437:U:P	2.76	0.43
1:CA:516:U:C5	1:CA:517:G:C6	3.06	0.43
1:CA:1132:C:H2’	1:CA:1133:G:C8	2.53	0.43
1:CA:1492:A:OP1	12:CL:47:LYS:HE3	2.18	0.43
2:CB:56:ARG:O	2:CB:60:ASP:HB2	2.19	0.43
3:CC:24:ALA:HB3	3:CC:29:TYR:HB2	1.99	0.43
13:CM:66:LEU:N	13:CM:66:LEU:HD23	2.34	0.43
14:CN:41:ARG:HG3	14:CN:42:ILE:N	2.34	0.43
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HD12	2.00	0.43
23:DA:208:C:H2’	23:DA:209:C:C6	2.54	0.43
23:DA:1539:G:H2’	23:DA:1540:U:O4’	2.19	0.43
23:DA:1700:A:H2’	23:DA:1701:A:O5’	2.19	0.43
23:DA:2103:C:O2	23:DA:2187:G:C2	2.72	0.43
23:DA:2689:U:H4’	23:DA:2690:C:H5’	2.01	0.43
24:DB:31:C:O2’	24:DB:53:A:N6	2.52	0.43
31:DN:56:ASN:N	31:DN:125:GLY:HA3	2.28	0.43
41:DX:46:ALA:HB1	46:D2:33:MET:HE1	2.00	0.43
43:DZ:45:ASP:CG	43:DZ:49:ARG:HH11	2.27	0.43
45:D1:94:LEU:O	45:D1:97:LEU:HB2	2.19	0.43
1:AA:68:G:C4’	1:AA:171:A:H1’	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:857:C:H2'	1:AA:858:G:O4'	2.19	0.42
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.40	0.42
1:AA:1151:A:O2'	1:AA:1152:A:H8	2.02	0.42
1:AA:1492:A:C8	23:BA:1913:A:C2	3.07	0.42
2:AB:12:GLU:O	2:AB:16:HIS:HB2	2.18	0.42
2:AB:215:LEU:HA	2:AB:215:LEU:HD23	1.73	0.42
15:AO:85:LEU:HD23	15:AO:85:LEU:HA	1.86	0.42
23:BA:1003:G:N2	23:BA:1153:C:C2	2.87	0.42
23:BA:1048:A:O2'	23:BA:1049:C:H5"	2.19	0.42
23:BA:1140:C:O3'	31:BN:25:ARG:NH1	2.52	0.42
23:BA:1651:G:OP1	35:BR:40:LYS:HE3	2.18	0.42
23:BA:1843:C:H5'	25:BD:253:GLN:NE2	2.33	0.42
23:BA:1987:G:H2'	23:BA:1988:C:H6	1.84	0.42
23:BA:2430:A:H2'	23:BA:2430:A:N3	2.34	0.42
23:BA:2552:U:C2	23:BA:2554:U:H5'	2.54	0.42
25:BD:8:PRO:CB	25:BD:14:ARG:HB2	2.47	0.42
27:BF:33:LEU:HD12	27:BF:33:LEU:HA	1.81	0.42
28:BG:66:GLN:HE21	28:BG:66:GLN:HB3	1.64	0.42
35:BR:59:ASP:OD2	35:BR:59:ASP:N	2.48	0.42
38:BU:105:VAL:O	38:BU:108:GLU:HB2	2.18	0.42
39:BV:60:GLU:HB2	39:BV:97:LYS:HE2	2.01	0.42
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.19	0.42
1:CA:584:G:H5'	17:CQ:91:ARG:NH2	2.32	0.42
1:CA:1084:G:C6	1:CA:1085:U:C4	3.07	0.42
1:CA:1289:A:N1	1:CA:1371:G:O2'	2.39	0.42
1:CA:1516:G:N1	1:CA:1519:A:OP2	2.52	0.42
11:CK:20:TYR:HB2	11:CK:31:THR:HG23	2.01	0.42
16:CP:1:MET:HE3	16:CP:3:LYS:CE	2.48	0.42
23:DA:583:G:OP2	38:DU:10:ARG:HD2	2.19	0.42
23:DA:667:U:O2	52:D8:2:PRO:HD2	2.19	0.42
23:DA:783:A:O2'	23:DA:785:G:OP1	2.30	0.42
23:DA:1794:U:H2'	23:DA:1795:C:H6	1.83	0.42
24:DB:39:A:O2'	24:DB:46:A:N1	2.34	0.42
25:DD:72:LYS:HG3	25:DD:103:ARG:NH2	2.34	0.42
28:DG:16:ARG:HE	28:DG:31:VAL:CG2	2.31	0.42
35:DR:29:LEU:HD23	35:DR:70:LEU:HD11	2.01	0.42
37:DT:51:ARG:HG3	37:DT:98:LYS:CE	2.49	0.42
43:DZ:70:LEU:O	43:DZ:89:PHE:N	2.43	0.42
46:D2:53:LEU:HD23	46:D2:53:LEU:HA	1.90	0.42
1:AA:228:A:H5'	16:AP:62:VAL:HG22	2.00	0.42
1:AA:358:U:H2'	1:AA:359:U:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1063:C:H3'	1:AA:1064:G:H2'	2.01	0.42
1:AA:1124:G:H5'	10:AJ:35:SER:OG	2.19	0.42
1:AA:1300:G:C6	1:AA:1334:G:C5	3.07	0.42
1:AA:1375:A:C6	1:AA:1376:U:C4	3.07	0.42
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.20	0.42
2:AB:50:GLU:OE1	2:AB:200:ILE:HG12	2.19	0.42
3:AC:16:ARG:HH12	3:AC:183:ASP:HA	1.84	0.42
8:AH:21:LYS:O	8:AH:63:LEU:HD23	2.19	0.42
10:AJ:8:LEU:HA	10:AJ:95:GLU:O	2.18	0.42
15:AO:74:ASP:HA	15:AO:75:PRO:HD2	1.84	0.42
17:AQ:57:VAL:HA	17:AQ:77:VAL:HG23	2.00	0.42
23:BA:751:A:H5'	40:BW:90:ARG:HA	2.00	0.42
23:BA:963:U:OP2	56:BA:5120:HOH:O	2.20	0.42
23:BA:1176:G:H1'	23:BA:1177:A:P	2.60	0.42
23:BA:2693:A:H2'	23:BA:2694:G:H8	1.85	0.42
24:BB:28:C:OP1	36:BS:36:TYR:OH	2.34	0.42
35:BR:12:ARG:HG2	35:BR:16:HIS:ND1	2.33	0.42
40:BW:37:ARG:HD3	40:BW:38:TYR:CE2	2.54	0.42
1:CA:559:A:H4'	1:CA:560:U:H3'	2.01	0.42
1:CA:983:A:H1'	1:CA:1049:U:O2	2.18	0.42
1:CA:1138:G:O2'	1:CA:1140:C:OP1	2.30	0.42
1:CA:1147:C:H2'	9:CI:16:ARG:HH12	1.84	0.42
1:CA:1349:A:C2'	1:CA:1350:A:H8	2.28	0.42
9:CI:43:ALA:HA	9:CI:74:ILE:HG21	1.99	0.42
13:CM:69:GLU:O	13:CM:71:ARG:N	2.47	0.42
14:CN:40:CYS:SG	14:CN:43:CYS:HB2	2.58	0.42
23:DA:92:A:H2'	23:DA:93:G:O4'	2.19	0.42
23:DA:602:G:O2'	23:DA:655:A:N6	2.52	0.42
23:DA:708:C:C6	23:DA:708:C:H5"	2.54	0.42
23:DA:873:G:N2	23:DA:905:U:O2	2.52	0.42
23:DA:947:G:N2	23:DA:971:C:C2	2.87	0.42
23:DA:1482:G:O6	23:DA:1507:A:N6	2.52	0.42
23:DA:1999:C:H4'	23:DA:2723:C:O2	2.20	0.42
23:DA:2171:A:H1'	23:DA:2172:U:C6	2.54	0.42
23:DA:2405:G:OP1	33:DP:77:ARG:NH2	2.52	0.42
28:DG:68:PRO:HB2	28:DG:90:LEU:HB3	2.01	0.42
28:DG:114:ILE:HB	28:DG:117:PHE:HB2	2.02	0.42
29:DH:3:ARG:HG2	29:DH:6:ARG:HG2	2.00	0.42
30:DI:25:TYR:CE2	30:DI:29:TYR:CD2	3.07	0.42
30:DI:44:LEU:HD12	30:DI:44:LEU:HA	1.68	0.42
33:DP:38:GLN:O	33:DP:39:LYS:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DP:133:SER:O	33:DP:137:LYS:HG3	2.19	0.42
34:DQ:7:MET:HB2	34:DQ:7:MET:HE3	1.45	0.42
35:DR:59:ASP:OD2	35:DR:59:ASP:N	2.50	0.42
36:DS:102:ALA:HA	36:DS:105:ALA:CB	2.48	0.42
42:DY:5:MET:HG2	42:DY:30:VAL:HG11	2.01	0.42
1:AA:321:A:C2	1:AA:333:G:C2	3.07	0.42
1:AA:1080:A:H5"	5:AE:16:THR:HG21	2.02	0.42
1:AA:1400:C:O3'	22:AY:80:LYS:HD3	2.19	0.42
23:BA:305:U:H2'	23:BA:306:U:C6	2.54	0.42
23:BA:1321:A:H2'	23:BA:1322:A:O4'	2.19	0.42
23:BA:2300:G:C6	23:BA:2301:C:C4	3.07	0.42
23:BA:2784:C:H1'	26:BE:37:ARG:NH1	2.34	0.42
25:BD:68:LYS:O	25:BD:69:ARG:HB2	2.19	0.42
25:BD:80:ALA:HB3	25:BD:94:LEU:HD13	2.02	0.42
25:BD:130:ALA:C	25:BD:131:LEU:HD12	2.44	0.42
27:BF:104:LYS:O	27:BF:108:LYS:HB2	2.18	0.42
30:BI:128:LEU:HD23	30:BI:128:LEU:HA	1.90	0.42
39:BV:65:GLY:HA3	39:BV:91:TYR:CZ	2.54	0.42
1:CA:174:C:H2'	1:CA:175:C:C6	2.54	0.42
1:CA:617:G:H4'	16:CP:44:THR:O	2.18	0.42
1:CA:751:U:H4'	15:CO:24:SER:HB2	2.01	0.42
1:CA:979:C:H42	14:CN:18:VAL:HB	1.85	0.42
1:CA:1304:G:C6	1:CA:1305:G:N1	2.87	0.42
3:CC:66:VAL:O	3:CC:68:VAL:HG23	2.19	0.42
9:CI:67:GLY:O	9:CI:73:GLN:NE2	2.37	0.42
13:CM:48:LEU:O	13:CM:53:VAL:HG23	2.19	0.42
23:DA:478:A:N6	23:DA:502:A:H62	2.16	0.42
23:DA:525:U:H5'	23:DA:556:G:OP1	2.19	0.42
23:DA:572:A:H5"	23:DA:573:G:OP2	2.19	0.42
23:DA:615:G:OP1	27:DF:40:GLN:NE2	2.52	0.42
23:DA:958:U:O2'	23:DA:959:A:OP2	2.35	0.42
23:DA:1688:U:H5'	23:DA:1689:A:OP1	2.19	0.42
23:DA:2070:G:C2	23:DA:2442:C:C2	3.07	0.42
23:DA:2104:G:N3	23:DA:2104:G:H2'	2.34	0.42
23:DA:2318:G:O2'	23:DA:2319:G:H5"	2.19	0.42
24:DB:33:G:C2	24:DB:50:G:C2	3.08	0.42
25:DD:77:ALA:HB2	25:DD:97:TYR:CD2	2.54	0.42
27:DF:11:VAL:HB	27:DF:18:ARG:HB3	2.01	0.42
31:DN:48:MET:H	31:DN:48:MET:HG3	1.75	0.42
33:DP:136:GLU:O	33:DP:137:LYS:C	2.62	0.42
35:DR:2:ARG:NH1	35:DR:5:LYS:O	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DY:15:VAL:HG21	42:DY:42:VAL:HG11	2.01	0.42
46:D2:50:ILE:O	46:D2:51:ARG:HB3	2.19	0.42
1:AA:102:G:H2'	1:AA:103:C:C6	2.55	0.42
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.19	0.42
1:AA:1346:A:C8	1:AA:1348:U:C2	3.08	0.42
9:AI:27:THR:HG23	9:AI:31:GLN:N	2.35	0.42
17:AQ:44:ALA:HA	17:AQ:71:PHE:O	2.20	0.42
20:AT:72:LEU:HD23	20:AT:73:HIS:N	2.34	0.42
23:BA:323:G:C8	27:BF:171:PRO:HG3	2.54	0.42
23:BA:587:C:P	33:BP:21:ARG:HH22	2.39	0.42
23:BA:652(S):C:H3'	23:BA:652(T):C:C6	2.55	0.42
23:BA:717:G:H2'	23:BA:718:A:O4'	2.19	0.42
23:BA:1531:C:N4	23:BA:1538:G:H1	2.15	0.42
23:BA:2104:G:H2'	23:BA:2104:G:N3	2.34	0.42
23:BA:2173:A:C3'	23:BA:2174:C:H5'	2.49	0.42
29:BH:149:ARG:HH12	29:BH:167:GLU:CD	2.27	0.42
36:BS:102:ALA:HA	36:BS:105:ALA:CB	2.49	0.42
48:B4:15:ILE:HB	48:B4:32:TYR:CD2	2.54	0.42
1:CA:538:G:P	12:CL:115:LYS:H	2.41	0.42
1:CA:982:U:H6	1:CA:982:U:OP1	2.02	0.42
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.54	0.42
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.85	0.42
1:CA:1274:G:H21	1:CA:1275:A:H62	1.67	0.42
1:CA:1441:G:N2	1:CA:1459:C:C6	2.83	0.42
1:CA:1442(A):G:N7	1:CA:1442(B):A:C2	2.86	0.42
1:CA:1458:G:H5"	20:CT:31:SER:CB	2.50	0.42
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.83	0.42
4:CD:176:LEU:HD12	4:CD:177:ASP:H	1.85	0.42
23:DA:574:C:C2	26:DE:145:LYS:NZ	2.85	0.42
23:DA:1289:C:H2'	23:DA:1290:C:C6	2.54	0.42
23:DA:1666:G:O2'	23:DA:1667:G:H5'	2.20	0.42
23:DA:2005:A:OP1	56:DA:3823:HOH:O	2.22	0.42
23:DA:2492:U:H2'	23:DA:2493:U:H6	1.84	0.42
23:DA:2833:G:O2'	23:DA:2834:G:P	2.77	0.42
32:DO:102:VAL:HB	32:DO:106:LEU:HD12	2.01	0.42
43:DZ:54:HIS:CG	43:DZ:101:PRO:HG3	2.54	0.42
1:AA:1007:C:N3	1:AA:1022:G:C6	2.86	0.42
1:AA:1158:C:C4	1:AA:1160:G:C4	3.08	0.42
1:AA:1170:A:C8	1:AA:1171:G:C8	3.08	0.42
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.54	0.42
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:62:GLN:HG3	11:AK:97:ALA:HB2	2.01	0.42
23:BA:64:A:O3'	41:BX:71:GLY:HA3	2.20	0.42
23:BA:253:C:OP2	52:B8:5:LYS:NZ	2.40	0.42
23:BA:271(P):C:OP1	30:BI:45:LYS:HD3	2.19	0.42
23:BA:1027:A:C6	23:BA:1126:A:C4	3.07	0.42
23:BA:1507:A:O2'	23:BA:1508:A:C8	2.70	0.42
23:BA:1639:U:H4'	23:BA:2699:C:H4'	2.01	0.42
28:BG:146:TYR:O	28:BG:149:VAL:HG12	2.19	0.42
28:BG:173:LEU:O	28:BG:178:PHE:HB2	2.20	0.42
29:BH:11:VAL:HG21	29:BH:50:VAL:HG23	2.01	0.42
35:BR:56:LYS:NZ	35:BR:90:ARG:O	2.52	0.42
40:BW:88:ARG:HG3	40:BW:92:ARG:HH21	1.84	0.42
46:B2:65:ASN:OD1	46:B2:69:ARG:NH1	2.51	0.42
50:B6:11:LEU:HB2	50:B6:21:TYR:HB2	2.00	0.42
50:B6:44:ARG:HB3	50:B6:44:ARG:HH11	1.84	0.42
51:B7:30:VAL:O	51:B7:34:ARG:HG3	2.18	0.42
1:CA:921:U:O2'	5:CE:19:MET:O	2.33	0.42
1:CA:1097:C:H1'	1:CA:1169:A:C2	2.54	0.42
1:CA:1332:A:H8	1:CA:1332:A:O5'	2.02	0.42
1:CA:1456:G:N1	20:CT:51:GLU:OE1	2.51	0.42
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.87	0.42
3:CC:139:GLN:HG3	3:CC:143:GLU:OE1	2.20	0.42
4:CD:31:CYS:HB3	4:CD:33:MET:HB2	2.00	0.42
4:CD:159:ARG:O	4:CD:163:GLU:N	2.51	0.42
5:CE:31:LEU:HD23	5:CE:45:PHE:HB2	2.01	0.42
7:CG:13:GLN:HA	7:CG:14:PRO:HD3	1.86	0.42
15:CO:9:GLN:HA	15:CO:12:ILE:HD12	2.01	0.42
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.72	0.42
19:CS:22:LEU:O	19:CS:23:ASN:C	2.62	0.42
23:DA:479:A:N3	23:DA:481:G:H5"	2.34	0.42
23:DA:581:C:OP1	38:DU:33:ARG:HG3	2.20	0.42
23:DA:582:G:H2'	23:DA:583:G:C8	2.54	0.42
23:DA:645:C:O2	23:DA:645:C:H2'	2.18	0.42
23:DA:1406:U:H2'	23:DA:1407:C:H6	1.84	0.42
23:DA:2536:G:C6	23:DA:2537:U:C4	3.07	0.42
24:DB:17:C:H2'	24:DB:18:G:O4'	2.19	0.42
26:DE:144:ARG:HB3	26:DE:145:LYS:H	1.51	0.42
27:DF:195:ASP:HB3	27:DF:197:ASP:H	1.85	0.42
28:DG:82:LEU:HB3	28:DG:83:ARG:H	1.63	0.42
52:D8:54:GLU:O	52:D8:58:ILE:HG13	2.19	0.42
1:AA:373:A:N3	1:AA:374:A:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:520:A:N1	1:AA:536:C:H1'	2.35	0.42
1:AA:600:C:H2'	1:AA:601:C:H6	1.81	0.42
1:AA:1349:A:C2	1:AA:1374:A:C5	3.08	0.42
1:AA:1492:A:OP1	12:AL:47:LYS:HE3	2.19	0.42
2:AB:42:ILE:HD13	2:AB:203:GLY:HA2	2.02	0.42
2:AB:54:THR:HG23	2:AB:199:TYR:HB3	2.01	0.42
9:AI:88:TYR:CD2	9:AI:88:TYR:C	2.98	0.42
19:AS:12:ASP:OD1	19:AS:37:ARG:HD3	2.19	0.42
20:AT:92:LEU:O	20:AT:96:GLY:HA2	2.19	0.42
23:BA:234:C:H2'	23:BA:235:U:C6	2.55	0.42
23:BA:484:C:H2'	23:BA:485:C:H6	1.84	0.42
23:BA:1179:C:O2'	23:BA:1180:C:H5'	2.19	0.42
23:BA:1247:A:OP1	27:BF:95:ARG:NH2	2.48	0.42
23:BA:1405:U:H2'	23:BA:1406:U:H6	1.85	0.42
23:BA:1858:G:H8	23:BA:1858:G:OP2	2.03	0.42
24:BB:42:C:O2	28:BG:93:THR:N	2.45	0.42
28:BG:43:LEU:HD12	28:BG:43:LEU:HA	1.83	0.42
28:BG:161:THR:HG22	28:BG:163:ALA:H	1.84	0.42
30:BI:133:HIS:HD1	30:BI:133:HIS:C	2.27	0.42
40:BW:66:GLU:HA	40:BW:69:LEU:CD1	2.50	0.42
43:BZ:5:LEU:O	43:BZ:59:LEU:HA	2.20	0.42
1:CA:435:C:H42	1:CA:436:C:H41	1.67	0.42
1:CA:450:G:OP1	16:CP:43:LYS:NZ	2.53	0.42
1:CA:728:A:N1	1:CA:729:A:C6	2.88	0.42
1:CA:974:A:H8	1:CA:974:A:OP1	2.02	0.42
1:CA:990:C:O2	1:CA:1215:G:N1	2.37	0.42
1:CA:1112:C:O2	3:CC:179:ARG:HG2	2.18	0.42
1:CA:1163:C:N3	1:CA:1174:G:C2	2.88	0.42
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.20	0.42
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.55	0.42
1:CA:1429:C:O2'	23:DA:1704:G:H5'	2.20	0.42
2:CB:12:GLU:O	2:CB:16:HIS:HB2	2.20	0.42
2:CB:41:ILE:HD13	2:CB:41:ILE:HA	1.91	0.42
5:CE:41:VAL:HG23	5:CE:67:VAL:HG13	2.02	0.42
22:CY:58:ASN:HB2	22:CY:88:LEU:HD22	2.00	0.42
23:DA:590:A:H2'	23:DA:591:C:O4'	2.19	0.42
23:DA:2173:A:C3'	23:DA:2174:C:H5'	2.49	0.42
23:DA:2206:G:H3'	23:DA:2207:G:H8	1.78	0.42
23:DA:2312:U:H5'	28:DG:88:ILE:CD1	2.50	0.42
23:DA:2547:U:O2	32:DO:23:ARG:NH2	2.52	0.42
27:DF:192:LEU:HD22	27:DF:194:MET:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:11:TYR:OH	28:DG:33:ARG:HG3	2.19	0.42
37:DT:128:GLU:O	37:DT:129:ARG:C	2.62	0.42
45:D1:3:LYS:HB3	45:D1:4:VAL:H	1.49	0.42
52:D8:39:LYS:HA	52:D8:42:ARG:NH1	2.35	0.42
1:AA:945:G:C2	1:AA:946:A:C8	3.08	0.42
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.55	0.42
1:AA:1379:G:C6	1:AA:1380:U:C4	3.07	0.42
1:AA:1392:G:H8	1:AA:1392:G:O5'	2.03	0.42
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.19	0.42
2:AB:9:GLU:O	2:AB:11:LEU:N	2.53	0.42
5:AE:95:ALA:HB1	5:AE:96:PRO:HD2	2.01	0.42
9:AI:40:LEU:HD23	9:AI:40:LEU:H	1.84	0.42
10:AJ:50:ILE:HA	10:AJ:60:ARG:HG2	2.02	0.42
19:AS:20:LEU:HD21	19:AS:43:GLU:CG	2.50	0.42
23:BA:54:G:O2'	51:B7:35:ARG:HD3	2.20	0.42
23:BA:593:G:O4'	52:B8:4:MET:HE2	2.20	0.42
23:BA:1022:G:N7	31:BN:66:LYS:HE2	2.35	0.42
23:BA:1138:G:N3	31:BN:106:MET:HE2	2.34	0.42
23:BA:1496:A:H5"	23:BA:1497:U:OP1	2.20	0.42
23:BA:2153:G:H2'	23:BA:2154:G:H8	1.84	0.42
23:BA:2158:A:H1'	23:BA:2159:G:C8	2.54	0.42
23:BA:2787:C:H1'	26:BE:62:PRO:HG3	2.02	0.42
28:BG:124:SER:HB2	28:BG:131:TYR:CE1	2.55	0.42
29:BH:46:GLU:OE1	29:BH:51:ARG:NH2	2.42	0.42
30:BI:133:HIS:HA	30:BI:134:PRO:HD2	1.83	0.42
51:B7:47:ARG:HH11	51:B7:47:ARG:HG3	1.84	0.42
1:CA:474:G:H2'	1:CA:475:G:C8	2.55	0.42
1:CA:953:G:C2	1:CA:954:G:H1'	2.55	0.42
1:CA:1065:U:H3	1:CA:1109:C:H5"	1.84	0.42
1:CA:1220:G:H1'	19:CS:52:TYR:CE2	2.54	0.42
1:CA:1314:C:H2'	1:CA:1315:U:H6	1.85	0.42
1:CA:1442(A):G:C5	1:CA:1442(B):A:C6	3.07	0.42
1:CA:1443:G:N3	1:CA:1443:G:H2'	2.35	0.42
1:CA:1461:G:H8	1:CA:1461:G:O5'	2.03	0.42
3:CC:43:LEU:O	3:CC:47:LEU:HB2	2.19	0.42
11:CK:99:GLN:HG2	11:CK:105:VAL:HG11	2.01	0.42
23:DA:196:A:H62	33:DP:38:GLN:NE2	2.18	0.42
23:DA:311:A:C6	23:DA:328:U:C4	3.08	0.42
23:DA:438:G:H2'	23:DA:440:G:H8	1.84	0.42
23:DA:862:G:H2'	23:DA:863:A:O4'	2.19	0.42
23:DA:1271:G:N2	23:DA:1617:C:O4'	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1514:U:H2'	23:DA:1515:G:H8	1.84	0.42
23:DA:1651:G:OP1	35:DR:40:LYS:HE3	2.19	0.42
23:DA:2093:G:C6	23:DA:2225:A:C8	3.08	0.42
23:DA:2224:G:H4'	23:DA:2226:C:C2	2.54	0.42
23:DA:2291:U:H2'	23:DA:2292:C:C6	2.54	0.42
23:DA:2375:G:C8	56:DA:5005:HOH:O	2.51	0.42
28:DG:73:ALA:O	28:DG:84:LYS:HA	2.20	0.42
30:DI:75:LEU:C	30:DI:75:LEU:HD23	2.45	0.42
34:DQ:29:PHE:HB2	34:DQ:105:GLU:OE2	2.19	0.42
1:AA:97:G:O2'	1:AA:98:G:H5"	2.19	0.42
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.55	0.42
1:AA:1442:G:O2'	1:AA:1442(A):G:P	2.77	0.42
1:AA:1442(A):G:C4	1:AA:1442(B):A:C4	3.08	0.42
3:AC:54:ARG:HG2	3:AC:55:VAL:N	2.35	0.42
4:AD:22:LYS:HG3	4:AD:26:CYS:SG	2.59	0.42
6:AF:22:GLU:OE2	6:AF:82:ARG:HG2	2.20	0.42
6:AF:61:LEU:HB3	6:AF:63:TYR:CE2	2.54	0.42
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	2.02	0.42
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.92	0.42
23:BA:127:A:H5"	23:BA:128:C:C6	2.55	0.42
23:BA:546:C:H6	23:BA:548:A:OP1	2.03	0.42
23:BA:729:G:C5	25:BD:208:LYS:HB2	2.55	0.42
23:BA:1482:G:O6	23:BA:1507:A:N6	2.53	0.42
23:BA:1529:G:O2'	23:BA:1530:C:H5'	2.20	0.42
26:BE:144:ARG:HB3	26:BE:145:LYS:H	1.44	0.42
29:BH:64:LEU:O	29:BH:68:THR:OG1	2.31	0.42
30:BI:27:ARG:HD2	45:B1:71:TYR:CZ	2.54	0.42
43:BZ:93:ASP:HB2	43:BZ:131:ARG:NH2	2.34	0.42
1:CA:250:A:H4'	1:CA:251:G:O5'	2.19	0.42
1:CA:500:G:H2'	1:CA:501:C:C6	2.55	0.42
1:CA:573:A:P	56:CA:1921:HOH:O	2.72	0.42
1:CA:756:C:H2'	1:CA:757:U:O4'	2.20	0.42
1:CA:1490:C:H2'	1:CA:1491:G:O4'	2.19	0.42
1:CA:1492:A:N3	1:CA:1492:A:H2'	2.35	0.42
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.20	0.42
3:CC:40:ARG:O	3:CC:44:GLU:HB2	2.19	0.42
7:CG:70:LYS:HA	7:CG:71:PRO:HD2	1.81	0.42
7:CG:81:GLY:O	7:CG:83:ALA:N	2.53	0.42
13:CM:106:ASN:HB3	13:CM:107:ALA:H	1.38	0.42
19:CS:33:THR:HA	19:CS:34:TRP:CE3	2.55	0.42
19:CS:58:VAL:HA	19:CS:59:PRO:HD3	1.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:75:G:H4'	46:D2:55:ARG:NH1	2.34	0.42
23:DA:271(A):A:N1	23:DA:272(D):G:O2'	2.48	0.42
23:DA:297:C:H2'	23:DA:298:G:O4'	2.19	0.42
23:DA:1000:A:C6	23:DA:1001:A:C6	3.08	0.42
23:DA:1190:G:O2'	23:DA:1191:G:H5'	2.20	0.42
23:DA:1253:A:C5	56:DA:4833:HOH:O	2.68	0.42
23:DA:2172:U:H1'	23:DA:2173:A:OP1	2.20	0.42
30:DI:62:LYS:HE2	30:DI:133:HIS:NE2	2.35	0.42
36:DS:84:GLN:H	36:DS:84:GLN:HG2	1.48	0.42
38:DU:36:ARG:HD2	38:DU:40:PHE:CZ	2.55	0.42
1:AA:663:A:H2'	1:AA:664:G:O4'	2.20	0.42
1:AA:1366:C:O2'	1:AA:1367:C:H5'	2.19	0.42
8:AH:97:VAL:O	8:AH:100:ILE:HG13	2.20	0.42
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.47	0.42
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.19	0.42
23:BA:590:A:OP1	27:BF:95:ARG:NH1	2.53	0.42
23:BA:1224:C:O2'	39:BV:85:LYS:HA	2.20	0.42
23:BA:1784:A:H4'	23:BA:1785:A:O5'	2.20	0.42
23:BA:1858:G:H1'	23:BA:1884:A:H62	1.83	0.42
23:BA:1971:A:OP2	25:BD:242:ARG:NH2	2.53	0.42
25:BD:25:THR:HG21	25:BD:113:VAL:HG11	2.01	0.42
26:BE:101:ARG:O	26:BE:201:THR:HG22	2.19	0.42
28:BG:16:ARG:HE	28:BG:31:VAL:CG2	2.32	0.42
30:BI:114:LEU:HD12	30:BI:115:ALA:H	1.85	0.42
34:BQ:84:GLY:O	34:BQ:85:LYS:HB2	2.20	0.42
45:B1:19:GLN:CB	45:B1:35:THR:HG22	2.50	0.42
1:CA:279:A:OP2	17:CQ:95:TYR:OH	2.31	0.42
1:CA:391:G:C6	1:CA:392:G:C5	3.08	0.42
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.20	0.42
1:CA:1272:G:H5'	1:CA:1273:G:OP2	2.19	0.42
1:CA:1324:A:C4'	1:CA:1362:C:H4'	2.50	0.42
1:CA:1386:G:C2	1:CA:1387:G:N7	2.88	0.42
1:CA:1442:G:O6	1:CA:1442(A):G:O6	2.38	0.42
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.18	0.42
3:CC:92:ALA:HB1	3:CC:97:LYS:O	2.19	0.42
5:CE:78:HIS:CD2	5:CE:142:LEU:HD23	2.55	0.42
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.19	0.42
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG3	2.00	0.42
11:CK:22:HIS:HB3	11:CK:29:ILE:HB	2.02	0.42
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	2.02	0.42
23:DA:519:U:H2'	23:DA:520:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:760:G:H2'	23:DA:761:A:O4'	2.20	0.42
23:DA:1038:C:N4	23:DA:1117:G:H1	2.13	0.42
23:DA:1168:G:C2	23:DA:1182:A:C2	3.08	0.42
23:DA:1784:A:H4'	23:DA:1785:A:C5'	2.50	0.42
23:DA:2153:G:H2'	23:DA:2154:G:C8	2.55	0.42
23:DA:2318:G:N3	23:DA:2318:G:H2'	2.33	0.42
23:DA:2519:U:C6	23:DA:2542:A:N6	2.88	0.42
23:DA:2687:U:H2'	23:DA:2688:U:O4'	2.19	0.42
23:DA:2849:U:H4'	23:DA:2868:A:C2	2.55	0.42
27:DF:34:TRP:CE2	33:DP:8:PRO:HD3	2.55	0.42
27:DF:132:VAL:CG2	27:DF:163:VAL:HG22	2.50	0.42
33:DP:95:VAL:HG22	33:DP:125:VAL:HG12	2.02	0.42
34:DQ:103:MET:CE	34:DQ:125:LEU:HD13	2.41	0.42
1:AA:56:U:H2'	1:AA:57:G:H8	1.83	0.42
1:AA:947:G:N2	1:AA:1235:U:O2	2.53	0.42
1:AA:1226:C:H4'	19:AS:80:TYR:OH	2.19	0.42
1:AA:1442(A):G:C5	1:AA:1442(B):A:C5	3.08	0.42
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.20	0.42
3:AC:22:TRP:CH2	14:AN:54:PRO:HG2	2.54	0.42
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.20	0.42
4:AD:189:PRO:CB	4:AD:194:LEU:HD11	2.49	0.42
9:AI:19:LEU:HD23	9:AI:19:LEU:HA	1.68	0.42
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.19	0.42
13:AM:6:GLY:HA3	13:AM:67:GLU:HG3	2.02	0.42
23:BA:35:G:H2'	23:BA:36:G:O4'	2.19	0.42
23:BA:825:C:OP1	56:BA:4662:HOH:O	2.22	0.42
23:BA:862:G:H2'	23:BA:863:A:O4'	2.20	0.42
23:BA:1899:G:N3	23:BA:1899:G:H2'	2.34	0.42
23:BA:2406:U:H2'	23:BA:2406:U:OP2	2.19	0.42
23:BA:2660:A:H2'	23:BA:2661:G:O4'	2.20	0.42
33:BP:100:LEU:HA	33:BP:100:LEU:HD23	1.80	0.42
1:CA:109:A:H2'	1:CA:326:G:N2	2.34	0.42
1:CA:124:G:H4'	1:CA:291:C:O2'	2.18	0.42
1:CA:192:U:C4'	20:CT:102:GLY:HA2	2.50	0.42
1:CA:380:G:C2	1:CA:384:G:C6	3.08	0.42
1:CA:404:U:H2'	1:CA:405:U:H6	1.85	0.42
1:CA:604:G:H2'	1:CA:605:U:O4'	2.20	0.42
1:CA:1010:G:O6	1:CA:1019:C:N3	2.53	0.42
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.34	0.42
1:CA:1122:U:H2'	1:CA:1123:A:O4'	2.19	0.42
1:CA:1262:C:N3	1:CA:1273:G:N2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1316:G:H21	1:CA:1318:A:H3'	1.85	0.42
1:CA:1357:A:C8	1:CA:1358:U:C5	3.07	0.42
3:CC:61:ALA:C	3:CC:63:ASN:H	2.27	0.42
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	2.01	0.42
10:CJ:35:SER:OG	10:CJ:73:ASP:HB2	2.20	0.42
11:CK:62:GLN:NE2	11:CK:93:GLN:OE1	2.50	0.42
12:CL:27:LEU:C	12:CL:29:GLY:H	2.25	0.42
15:CO:24:SER:O	15:CO:25:THR:C	2.62	0.42
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.20	0.42
22:CY:58:ASN:H	22:CY:58:ASN:ND2	2.18	0.42
23:DA:1179:C:O2'	23:DA:1180:C:H5'	2.20	0.42
23:DA:1507:A:HO2'	23:DA:1508:A:P	2.40	0.42
23:DA:2153:G:H2'	23:DA:2154:G:H8	1.84	0.42
24:DB:31:C:H4'	28:DG:29:TRP:CH2	2.55	0.42
25:DD:17:THR:O	25:DD:211:ARG:NH2	2.51	0.42
25:DD:102:LYS:C	25:DD:103:ARG:HG2	2.44	0.42
26:DE:115:GLY:O	26:DE:119:ARG:HB2	2.20	0.42
28:DG:125:PHE:CZ	28:DG:170:ARG:HA	2.55	0.42
36:DS:83:LYS:HA	36:DS:83:LYS:HE2	2.02	0.42
1:AA:993:G:H4'	1:AA:994:A:OP2	2.19	0.41
1:AA:1005:A:O2'	1:AA:1036:G:N2	2.53	0.41
1:AA:1347:G:O2'	1:AA:1373:G:O6	2.36	0.41
2:AB:119:GLU:HG2	2:AB:153:ARG:HH22	1.85	0.41
3:AC:195:VAL:C	3:AC:196:LEU:HD13	2.44	0.41
4:AD:36:ARG:HG2	4:AD:38:TYR:CZ	2.54	0.41
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	2.01	0.41
17:AQ:13:ASP:O	17:AQ:15:MET:N	2.53	0.41
23:BA:71:A:N7	41:BX:31:HIS:HE1	2.18	0.41
23:BA:89:G:H3'	23:BA:90:U:H5"	2.03	0.41
23:BA:361:G:O2'	23:BA:362:U:H5'	2.20	0.41
23:BA:783:A:N3	23:BA:783:A:H2'	2.35	0.41
23:BA:1561:G:OP2	56:BA:4643:HOH:O	2.21	0.41
23:BA:1999:C:H4'	23:BA:2723:C:O2	2.20	0.41
23:BA:2554:U:H2'	23:BA:2555:U:C6	2.55	0.41
29:BH:71:LEU:HD12	29:BH:71:LEU:HA	1.74	0.41
30:BI:69:LYS:HG3	30:BI:138:ILE:HG12	2.02	0.41
43:BZ:101:PRO:O	43:BZ:102:LEU:HD12	2.20	0.41
47:B3:4:LEU:O	47:B3:36:VAL:HA	2.19	0.41
53:B9:17:ILE:HD12	53:B9:17:ILE:HA	1.77	0.41
1:CA:460:G:O6	1:CA:470:C:H5"	2.20	0.41
1:CA:911:U:OP2	12:CL:97:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:920:U:C2	1:CA:921:U:C5	3.08	0.41
1:CA:1004:A:C5'	1:CA:1025:U:C5	3.03	0.41
1:CA:1121:U:C4	1:CA:1122:U:C5	3.08	0.41
1:CA:1310:G:H2'	1:CA:1311:G:C8	2.55	0.41
1:CA:1442(A):G:C5	1:CA:1442(B):A:C5	3.08	0.41
1:CA:1452:C:H6	1:CA:1452:C:H2'	1.67	0.41
3:CC:36:ASP:OD1	3:CC:57:ILE:HG21	2.20	0.41
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.18	0.41
7:CG:72:ARG:HH12	7:CG:138:LYS:NZ	2.18	0.41
11:CK:48:ILE:HD11	11:CK:64:ALA:HA	2.01	0.41
12:CL:59:ARG:HG2	12:CL:65:GLU:HB2	2.01	0.41
23:DA:945:A:C4	23:DA:2448:A:C2	3.07	0.41
23:DA:1557:C:H5"	23:DA:1558:A:OP2	2.20	0.41
23:DA:2096:U:H3	23:DA:2193:G:H1	1.68	0.41
23:DA:2464:C:H1'	56:DA:4976:HOH:O	2.20	0.41
23:DA:2542:A:O4'	56:DA:4629:HOH:O	2.21	0.41
23:DA:2722:G:H2'	23:DA:2723:C:C6	2.54	0.41
23:DA:2740:A:C6	23:DA:2764:A:C8	3.08	0.41
25:DD:166:GLN:HB2	25:DD:174:ILE:HG22	2.02	0.41
25:DD:232:PRO:HB3	25:DD:244:ARG:CZ	2.50	0.41
26:DE:174:ASP:OD2	26:DE:175:VAL:N	2.52	0.41
26:DE:181:LEU:HD12	26:DE:181:LEU:HA	1.80	0.41
27:DF:167:ALA:HB1	27:DF:173:VAL:HG11	2.01	0.41
28:DG:146:TYR:O	28:DG:149:VAL:HG12	2.20	0.41
1:AA:1003:G:C6	1:AA:1004:A:C2	3.08	0.41
1:AA:1052:U:O4	1:AA:1200:C:C2	2.73	0.41
1:AA:1054:C:N4	22:AY:45:PRO:HB2	2.34	0.41
1:AA:1378:C:C5	1:AA:1379:G:C8	3.08	0.41
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.55	0.41
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.20	0.41
4:AD:173:TRP:NE1	4:AD:174:LEU:HG	2.35	0.41
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.88	0.41
7:AG:48:LYS:O	7:AG:52:GLU:HG2	2.20	0.41
8:AH:51:VAL:HG11	8:AH:60:ARG:HH11	1.85	0.41
12:AL:24:VAL:HG12	12:AL:26:ALA:HB2	2.02	0.41
14:AN:6:LEU:HD23	14:AN:23:ARG:HH12	1.84	0.41
23:BA:271(O):C:H2'	23:BA:271(P):C:C6	2.55	0.41
23:BA:2315:G:C6	23:BA:2316:C:C4	3.09	0.41
23:BA:2549:G:H5"	23:BA:2549:G:H8	1.85	0.41
30:BI:41:GLU:O	30:BI:42:SER:C	2.63	0.41
36:BS:96:GLY:N	36:BS:99:LYS:HB3	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:58:ALA:HB1	40:BW:64:MET:HB2	2.01	0.41
46:B2:28:LYS:HE3	46:B2:56:GLN:OE1	2.20	0.41
1:CA:163:C:H2'	1:CA:164:U:O4'	2.20	0.41
1:CA:203:U:H2'	1:CA:203:U:OP2	2.20	0.41
1:CA:429:U:H4'	1:CA:430:A:O5'	2.19	0.41
1:CA:472:A:O3'	16:CP:81:ARG:HA	2.19	0.41
1:CA:706:A:H2'	1:CA:707:C:H5'	2.02	0.41
1:CA:925:G:H1'	1:CA:1502:A:C4	2.55	0.41
1:CA:1038:C:H2'	1:CA:1039:C:O4'	2.20	0.41
1:CA:1060:C:C2'	1:CA:1061:G:H5'	2.50	0.41
1:CA:1090:U:H1'	1:CA:1170:A:H2	1.85	0.41
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.20	0.41
1:CA:1338:G:H2'	1:CA:1339:A:C8	2.55	0.41
4:CD:22:LYS:HG3	4:CD:26:CYS:SG	2.60	0.41
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.89	0.41
4:CD:173:TRP:NE1	4:CD:174:LEU:HG	2.35	0.41
5:CE:66:MET:HE3	5:CE:66:MET:HB3	1.78	0.41
11:CK:103:LEU:HD23	11:CK:103:LEU:HA	1.91	0.41
14:CN:5:ALA:O	14:CN:9:LYS:HB2	2.20	0.41
14:CN:29:ARG:HE	14:CN:40:CYS:HB2	1.85	0.41
23:DA:30:G:H2'	23:DA:31:C:H6	1.85	0.41
23:DA:89:G:H3'	23:DA:90:U:C5'	2.50	0.41
23:DA:1997:G:O2'	23:DA:1998:G:H5'	2.20	0.41
23:DA:2420:C:O5'	23:DA:2420:C:H6	2.03	0.41
24:DB:19:G:OP2	24:DB:19:G:H8	2.03	0.41
28:DG:11:TYR:O	28:DG:16:ARG:HG2	2.20	0.41
42:DY:97:ARG:H	42:DY:97:ARG:HG2	1.65	0.41
50:D6:40:CYS:HA	50:D6:41:PRO:HD3	1.70	0.41
1:AA:112:G:H4'	1:AA:389:A:H4'	2.02	0.41
1:AA:189(F):U:O2	17:AQ:63:ARG:NH2	2.53	0.41
1:AA:939:G:H5"	7:AG:102:ARG:NH2	2.35	0.41
1:AA:1005:A:C6	1:AA:1025:U:H1'	2.55	0.41
1:AA:1028:C:C2	1:AA:1033:G:N2	2.88	0.41
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.20	0.41
10:AJ:45:ARG:HB3	10:AJ:65:LEU:HB3	2.02	0.41
18:AR:33:ASP:OD1	18:AR:36:ASN:HB2	2.21	0.41
23:BA:1745(A):C:H5'	23:BA:1746:G:OP2	2.20	0.41
23:BA:2836:U:H2'	23:BA:2837:G:C8	2.55	0.41
24:BB:1:U:O2	24:BB:1:U:H2'	2.20	0.41
25:BD:92:ILE:HD12	25:BD:104:TYR:CD2	2.56	0.41
25:BD:130:ALA:HA	25:BD:192:THR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:134:ILE:C	26:BE:134:ILE:HD12	2.45	0.41
27:BF:34:TRP:CE2	33:BP:8:PRO:HD3	2.55	0.41
27:BF:164:ARG:O	27:BF:168:ARG:HB2	2.21	0.41
28:BG:105:LYS:NZ	48:B4:25:TYR:O	2.49	0.41
43:BZ:5:LEU:HD23	43:BZ:47:VAL:HG21	2.03	0.41
52:B8:52:LYS:O	52:B8:53:PRO:C	2.59	0.41
1:CA:97:G:O2'	1:CA:98:G:OP2	2.31	0.41
1:CA:222:U:C2	1:CA:223:U:C5	3.08	0.41
1:CA:1148:U:OP1	9:CI:7:THR:HG21	2.20	0.41
1:CA:1192:C:C5	1:CA:1193:G:C8	3.08	0.41
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.54	0.41
2:CB:180:LEU:HD23	2:CB:180:LEU:HA	1.85	0.41
3:CC:181:ASN:N	3:CC:205:GLY:O	2.52	0.41
23:DA:361:G:O2'	23:DA:362:U:H5'	2.21	0.41
23:DA:363(B):G:C4	23:DA:363(C):G:C8	3.09	0.41
23:DA:742:G:H4'	23:DA:1676:A:H5'	2.03	0.41
28:DG:13:GLU:H	28:DG:13:GLU:HG3	1.56	0.41
33:DP:126:VAL:HG11	33:DP:148:LEU:HD13	2.01	0.41
1:AA:3:G:H2'	1:AA:3:G:N3	2.36	0.41
1:AA:502:G:P	12:AL:116:SER:HA	2.60	0.41
1:AA:953:G:C4	1:AA:1229:A:C2	3.08	0.41
1:AA:1503:A:C5	1:AA:1531:A:H8	2.38	0.41
2:AB:50:GLU:CD	2:AB:200:ILE:HG12	2.45	0.41
2:AB:92:TYR:HE1	2:AB:94:ASN:HB2	1.85	0.41
10:AJ:46:ARG:NE	10:AJ:64:GLU:OE1	2.54	0.41
11:AK:73:MET:HE3	11:AK:103:LEU:HG	2.02	0.41
15:AO:57:LEU:HD23	15:AO:57:LEU:HA	1.84	0.41
23:BA:438:G:H2'	23:BA:440:G:C8	2.55	0.41
23:BA:634:C:H2'	23:BA:635:C:C6	2.55	0.41
23:BA:2173:A:N6	23:BA:2174:C:O2	2.53	0.41
30:BI:51:ILE:HD13	30:BI:51:ILE:HA	1.79	0.41
35:BR:29:LEU:HD23	35:BR:70:LEU:HD11	2.02	0.41
41:BX:5:TYR:CZ	46:B2:30:ARG:HB2	2.56	0.41
53:B9:32:HIS:O	53:B9:34:GLN:HG3	2.19	0.41
1:CA:373:A:C2	1:CA:374:A:C8	3.09	0.41
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.20	0.41
1:CA:537:G:H5"	12:CL:113:ARG:NH1	2.35	0.41
1:CA:1118:C:H2'	1:CA:1119:C:O4'	2.20	0.41
1:CA:1169:A:C2	1:CA:1170:A:C4	3.08	0.41
1:CA:1442:G:C2'	1:CA:1442(A):G:H5'	2.50	0.41
3:CC:6:HIS:CD2	3:CC:6:HIS:C	2.98	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:19:LEU:HD12	4:CD:19:LEU:HA	1.87	0.41
5:CE:53:LEU:H	5:CE:53:LEU:HD12	1.85	0.41
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.21	0.41
14:CN:29:ARG:NE	14:CN:40:CYS:HB2	2.36	0.41
19:CS:48:THR:HA	19:CS:60:VAL:O	2.21	0.41
23:DA:81:G:HO2'	23:DA:295:G:HO2'	1.67	0.41
23:DA:252:G:P	33:DP:50:ARG:HH12	2.42	0.41
23:DA:638:G:H2'	23:DA:639:U:O4'	2.20	0.41
23:DA:1614:A:P	23:DA:1614:A:H8	2.43	0.41
23:DA:2078:C:C4	23:DA:2079:U:C4	3.09	0.41
23:DA:2540:C:H2'	23:DA:2541:A:O4'	2.20	0.41
23:DA:2660:A:H2'	23:DA:2661:G:O4'	2.20	0.41
24:DB:1:U:O2	24:DB:1:U:H2'	2.21	0.41
24:DB:37:C:C5	24:DB:38:C:C5	3.09	0.41
35:DR:100:LEU:HD12	35:DR:100:LEU:HA	1.74	0.41
1:AA:105:G:H2'	1:AA:106:C:C6	2.56	0.41
1:AA:586:C:C2'	1:AA:587:G:H5'	2.51	0.41
1:AA:706:A:H2'	1:AA:707:C:H5'	2.02	0.41
1:AA:940:C:OP1	7:AG:29:LYS:NZ	2.53	0.41
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.21	0.41
2:AB:164:VAL:HB	2:AB:186:ALA:HB2	2.02	0.41
4:AD:155:LEU:HD23	4:AD:156:GLU:H	1.85	0.41
21:AU:3:LYS:HD3	21:AU:14:TRP:CD1	2.55	0.41
23:BA:118:A:N3	23:BA:178:G:H1'	2.35	0.41
23:BA:1354:A:H2'	23:BA:1355:G:O4'	2.20	0.41
23:BA:2280:G:O2'	23:BA:2388:A:N1	2.46	0.41
24:BB:31:C:H4'	28:BG:29:TRP:CH2	2.55	0.41
26:BE:47:VAL:HG23	26:BE:84:PHE:O	2.20	0.41
30:BI:72:LEU:C	30:BI:74:ASN:H	2.28	0.41
34:BQ:72:LYS:HA	34:BQ:73:PRO:HD3	1.87	0.41
50:B6:23:THR:OG1	50:B6:24:GLU:N	2.54	0.41
50:B6:25:LYS:HE3	50:B6:30:THR:O	2.21	0.41
1:CA:166:G:H2'	1:CA:167:G:H8	1.85	0.41
1:CA:343:U:HO2'	1:CA:344:A:P	2.36	0.41
1:CA:615:C:H2'	1:CA:616:G:O4'	2.20	0.41
1:CA:1288:A:H1'	1:CA:1352:C:O2'	2.21	0.41
1:CA:1296:C:H5'	1:CA:1297:C:OP2	2.20	0.41
1:CA:1370:G:N7	9:CI:109:VAL:HG11	2.35	0.41
2:CB:111:ARG:HH11	2:CB:111:ARG:HA	1.85	0.41
3:CC:9:GLY:HA3	14:CN:49:HIS:HA	2.01	0.41
3:CC:180:ALA:HB1	3:CC:203:PHE:HE1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:49:ALA:HB2	18:CR:78:LEU:O	2.21	0.41
7:CG:46:ALA:HB2	7:CG:117:ALA:O	2.20	0.41
11:CK:48:ILE:C	11:CK:50:TYR:H	2.28	0.41
18:CR:31:LEU:O	18:CR:31:LEU:HD23	2.20	0.41
23:DA:530:G:N1	56:DA:3959:HOH:O	2.36	0.41
23:DA:536:A:H2'	23:DA:537:C:C6	2.56	0.41
23:DA:1041:C:H5'	23:DA:1042:G:OP2	2.21	0.41
23:DA:1825:A:O4'	25:DD:254:THR:HG21	2.21	0.41
23:DA:2103:C:N3	23:DA:2104:G:N7	2.68	0.41
23:DA:2317:C:H2'	23:DA:2318:G:H5'	2.03	0.41
23:DA:2788:C:N4	23:DA:2789:C:N4	2.68	0.41
26:DE:117:MET:O	26:DE:118:LYS:HB3	2.21	0.41
38:DU:39:LEU:HD23	38:DU:39:LEU:HA	1.89	0.41
43:DZ:19:ARG:HE	43:DZ:19:ARG:HB2	1.74	0.41
45:D1:67:ILE:N	45:D1:68:PRO:HD2	2.34	0.41
1:AA:66:G:O4'	1:AA:173:U:C5	2.74	0.41
1:AA:73:G:C6	1:AA:76:C:C4	3.09	0.41
1:AA:293:G:C6	1:AA:294:U:C4	3.08	0.41
1:AA:429:U:H4'	1:AA:430:A:O5'	2.21	0.41
1:AA:532:A:H5'	56:AA:2283:HOH:O	2.19	0.41
1:AA:954:G:H2'	1:AA:955:U:O4'	2.20	0.41
2:AB:27:LYS:HD2	2:AB:193:ASP:OD1	2.21	0.41
2:AB:71:VAL:O	2:AB:165:VAL:HG23	2.20	0.41
9:AI:65:VAL:O	9:AI:66:ARG:HG3	2.21	0.41
12:AL:85:ILE:HD13	12:AL:85:ILE:HA	1.70	0.41
14:AN:40:CYS:SG	14:AN:43:CYS:CB	2.99	0.41
23:BA:690:G:H2'	23:BA:691:C:C6	2.56	0.41
23:BA:1510:G:H2'	23:BA:1511:C:C6	2.55	0.41
23:BA:2103:C:N3	23:BA:2104:G:N7	2.68	0.41
27:BF:150:GLY:HA2	27:BF:172:TRP:CE3	2.56	0.41
29:BH:8:PRO:O	29:BH:69:ARG:NH1	2.53	0.41
29:BH:38:SER:HA	29:BH:39:PRO:HD3	1.84	0.41
29:BH:140:LYS:HE3	29:BH:140:LYS:HB2	1.81	0.41
42:BY:79:CYS:HB2	42:BY:81:LYS:H	1.86	0.41
43:BZ:91:LEU:HD12	43:BZ:91:LEU:HA	1.84	0.41
1:CA:113:G:H2'	1:CA:114:U:C6	2.56	0.41
1:CA:1012:U:C4	1:CA:1013:G:C5	3.09	0.41
3:CC:52:LEU:HB2	3:CC:69:HIS:O	2.19	0.41
3:CC:139:GLN:O	3:CC:143:GLU:HB2	2.20	0.41
3:CC:151:VAL:HA	3:CC:199:LYS:O	2.21	0.41
4:CD:94:LEU:HA	4:CD:97:LEU:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:27:THR:HG1	9:CI:28:VAL:H	1.67	0.41
16:CP:52:ASP:HB3	16:CP:55:ARG:HB2	2.01	0.41
23:DA:225:A:O2'	23:DA:257:A:H4'	2.20	0.41
23:DA:476:G:H4'	23:DA:502:A:N1	2.36	0.41
23:DA:686:G:N2	23:DA:788:A:H61	2.18	0.41
23:DA:1142(A):A:C4	23:DA:1144:G:C8	3.08	0.41
23:DA:2262:U:H4'	23:DA:2328:A:C2	2.56	0.41
23:DA:2789:C:H5"	23:DA:2790:A:OP2	2.21	0.41
24:DB:29:A:OP2	36:DS:32:LEU:HD12	2.20	0.41
33:DP:82:GLY:HA2	33:DP:113:LYS:O	2.20	0.41
33:DP:132:LYS:HE2	33:DP:132:LYS:HB2	1.84	0.41
35:DR:54:LEU:O	35:DR:57:ARG:HB2	2.20	0.41
42:DY:5:MET:HE2	42:DY:5:MET:HB2	1.79	0.41
43:DZ:99:TYR:HA	43:DZ:124:ILE:O	2.20	0.41
44:D0:27:GLU:HB2	44:D0:69:PHE:HD1	1.85	0.41
1:AA:433:C:C2'	1:AA:434:U:H5'	2.51	0.41
1:AA:691:G:H2'	1:AA:692:U:C6	2.55	0.41
1:AA:756:C:H2'	1:AA:757:U:O4'	2.21	0.41
1:AA:954:G:OP1	22:AY:17:ARG:NH2	2.53	0.41
1:AA:1292:U:N3	1:AA:1293:G:N7	2.69	0.41
1:AA:1310:G:H5'	13:AM:77:ASN:ND2	2.35	0.41
1:AA:1493:A:C2	1:AA:1494:G:C8	3.08	0.41
5:AE:60:TYR:C	5:AE:60:TYR:CD1	2.98	0.41
6:AF:10:LEU:HD21	6:AF:61:LEU:HD22	2.03	0.41
22:AY:12:ILE:CG2	22:AY:17:ARG:HE	2.33	0.41
23:BA:569:U:C4	23:BA:570:G:C6	3.09	0.41
23:BA:1987:G:H2'	23:BA:1988:C:C6	2.55	0.41
23:BA:2171:A:H1'	23:BA:2172:U:C6	2.55	0.41
23:BA:2273:A:H2'	23:BA:2274:A:C8	2.56	0.41
23:BA:2404:C:O3'	33:BP:77:ARG:NH2	2.53	0.41
28:BG:61:ALA:O	28:BG:65:GLY:N	2.47	0.41
29:BH:5:GLY:HA2	29:BH:69:ARG:HB3	2.03	0.41
31:BN:69:GLN:O	31:BN:71:ILE:HD12	2.21	0.41
37:BT:23:ARG:HG3	37:BT:120:ARG:NH1	2.34	0.41
1:CA:22:G:H4'	1:CA:885:G:C8	2.55	0.41
1:CA:44:G:H2'	1:CA:45:U:O4'	2.21	0.41
1:CA:376:G:P	16:CP:67:THR:HG21	2.60	0.41
1:CA:648:A:H2'	1:CA:649:G:C8	2.56	0.41
1:CA:659:U:C2'	1:CA:660:G:H5'	2.51	0.41
1:CA:678:U:H2'	1:CA:679:C:C6	2.56	0.41
1:CA:975:A:H8	1:CA:975:A:H5'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1371:G:OP1	9:CI:11:LYS:O	2.39	0.41
6:CF:10:LEU:HD21	6:CF:61:LEU:HD22	2.02	0.41
8:CH:38:ILE:HD12	8:CH:118:VAL:HG12	2.03	0.41
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.20	0.41
20:CT:4:LYS:HA	20:CT:4:LYS:HD3	1.95	0.41
23:DA:30:G:OP2	38:DU:5:LYS:HE2	2.20	0.41
23:DA:86:C:H4'	23:DA:104:U:H1'	2.01	0.41
23:DA:338:G:H2'	23:DA:339:U:H6	1.85	0.41
23:DA:422:A:H2'	23:DA:423:A:C8	2.55	0.41
23:DA:671:C:H2'	23:DA:672:C:C6	2.55	0.41
23:DA:998:C:H3'	56:DA:4571:HOH:O	2.19	0.41
23:DA:1170:G:H5"	23:DA:1170:G:H8	1.85	0.41
23:DA:1452:A:O2'	23:DA:1453:U:H2'	2.20	0.41
23:DA:2094:G:C2	23:DA:2196:C:C2	3.09	0.41
23:DA:2305:A:H5"	28:DG:134:GLY:HA3	2.02	0.41
23:DA:2536:G:C5	23:DA:2537:U:C5	3.09	0.41
23:DA:2699:C:H2'	23:DA:2700:C:O4'	2.21	0.41
28:DG:105:LYS:NZ	48:D4:25:TYR:O	2.53	0.41
29:DH:71:LEU:HD12	29:DH:71:LEU:HA	1.68	0.41
39:DV:40:LEU:HD11	39:DV:101:GLY:HA2	2.02	0.41
43:DZ:98:MET:O	43:DZ:125:LEU:HD12	2.20	0.41
1:AA:163:C:H2'	1:AA:164:U:O4'	2.20	0.41
1:AA:270:A:H2'	1:AA:271:C:H6	1.86	0.41
1:AA:411:A:C6	1:AA:429:U:C4	3.09	0.41
1:AA:719:C:C2	18:AR:50:ILE:HG12	2.56	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41
1:AA:1250:A:H4'	9:AI:68:GLY:N	2.36	0.41
1:AA:1256:A:H5'	1:AA:1258:G:H1'	2.03	0.41
2:AB:56:ARG:O	2:AB:60:ASP:HB2	2.21	0.41
5:AE:57:LYS:HB3	5:AE:61:TYR:HE2	1.84	0.41
13:AM:65:LYS:O	13:AM:70:LEU:HG	2.20	0.41
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.20	0.41
23:BA:242:G:C8	52:B8:5:LYS:HG2	2.56	0.41
23:BA:287:C:H2'	23:BA:288:C:H6	1.86	0.41
23:BA:362:U:H6	23:BA:362:U:H2'	1.54	0.41
23:BA:748:G:C8	40:BW:89:ALA:HB1	2.55	0.41
23:BA:2250:G:OP2	23:BA:2275:C:H2'	2.20	0.41
23:BA:2682:U:O2'	37:BT:58:ASN:ND2	2.53	0.41
23:BA:2712:U:OP1	23:BA:2714:G:H4'	2.21	0.41
24:BB:43:C:OP1	48:B4:2:LYS:HB2	2.20	0.41
30:BI:91:SER:HB3	30:BI:121:LYS:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BP:68:GLN:HG3	52:B8:12:LYS:HG2	2.03	0.41
34:BQ:7:MET:HB2	34:BQ:7:MET:HE3	1.41	0.41
35:BR:67:LEU:HD13	35:BR:67:LEU:HA	1.87	0.41
37:BT:56:GLY:O	37:BT:59:THR:HG23	2.20	0.41
43:BZ:76:LEU:HD12	43:BZ:76:LEU:HA	1.83	0.41
43:BZ:145:GLU:H	43:BZ:148:ASP:HB2	1.85	0.41
1:CA:149:A:O2'	1:CA:150:C:C6	2.67	0.41
1:CA:200:G:H1	1:CA:217:C:H42	1.68	0.41
1:CA:538:G:P	12:CL:115:LYS:HB2	2.60	0.41
1:CA:546:G:OP1	4:CD:73:ARG:HB2	2.21	0.41
1:CA:741:G:H2'	1:CA:742:G:O4'	2.21	0.41
1:CA:936:C:H2'	1:CA:937:A:O4'	2.20	0.41
2:CB:71:VAL:HG13	2:CB:93:VAL:HG21	2.02	0.41
2:CB:111:ARG:HA	2:CB:111:ARG:HD3	1.83	0.41
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	2.02	0.41
7:CG:68:ASN:ND2	7:CG:128:ALA:O	2.53	0.41
12:CL:8:ASN:O	12:CL:12:ARG:HG3	2.21	0.41
16:CP:72:ARG:HG3	16:CP:72:ARG:NH1	2.36	0.41
23:DA:659:C:H4'	27:DF:100:THR:O	2.21	0.41
23:DA:699:A:C2	23:DA:1633:G:N3	2.89	0.41
23:DA:1180:C:H2'	23:DA:1181:C:H6	1.86	0.41
23:DA:1324:G:C5	23:DA:1328:G:O6	2.73	0.41
23:DA:1531:C:N4	23:DA:1538:G:H1	2.15	0.41
23:DA:1790:C:H2'	23:DA:1791:A:C5	2.56	0.41
23:DA:2600:A:O2'	23:DA:2601:C:H5'	2.21	0.41
23:DA:2768:C:H2'	23:DA:2769:C:O4'	2.19	0.41
25:DD:183:ARG:HG3	25:DD:270:ILE:HG12	2.03	0.41
26:DE:60:ASN:OD1	26:DE:62:PRO:HD2	2.21	0.41
33:DP:101:VAL:HA	33:DP:106:LEU:O	2.21	0.41
33:DP:126:VAL:CG1	33:DP:148:LEU:HD13	2.51	0.41
34:DQ:72:LYS:HA	34:DQ:73:PRO:HD3	1.89	0.41
36:DS:11:LYS:HD3	36:DS:15:ARG:NH1	2.35	0.41
43:DZ:152:ALA:N	43:DZ:171:ILE:HG12	2.35	0.41
44:D0:49:LYS:O	44:D0:50:ASN:HB2	2.20	0.41
47:D3:3:ARG:HD3	47:D3:60:GLU:OE1	2.21	0.41
48:D4:15:ILE:HB	48:D4:32:TYR:CD2	2.56	0.41
50:D6:23:THR:OG1	50:D6:24:GLU:N	2.54	0.41
1:AA:881:G:OP2	12:AL:12:ARG:NH2	2.53	0.41
1:AA:938:A:N6	1:AA:939:G:C6	2.89	0.41
1:AA:954:G:H21	1:AA:1227:A:H62	1.68	0.41
1:AA:984:C:H2'	1:AA:985:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:N7	1:AA:1216:G:H4'	2.36	0.41
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.55	0.41
2:AB:25:ASN:O	2:AB:27:LYS:N	2.53	0.41
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.35	0.41
9:AI:46:ALA:HB2	9:AI:74:ILE:HG22	2.02	0.41
12:AL:27:LEU:CB	12:AL:33:ARG:HD3	2.51	0.41
12:AL:32:PHE:HB3	12:AL:84:LEU:HD11	2.03	0.41
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.21	0.41
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.21	0.41
23:BA:271(K):U:H4'	23:BA:271(L):U:OP2	2.15	0.41
23:BA:330:A:O2'	23:BA:331:A:H8	2.03	0.41
23:BA:695:G:OP1	23:BA:1380:G:O2'	2.28	0.41
23:BA:1022:G:H22	23:BA:1142(A):A:H2	1.55	0.41
23:BA:1028:A:N6	23:BA:1125:G:H2'	2.35	0.41
23:BA:1177:A:H2'	23:BA:1177:A:OP2	2.21	0.41
23:BA:1686:C:C2'	23:BA:1687:G:H5'	2.51	0.41
23:BA:2093:G:C6	23:BA:2225:A:C8	3.08	0.41
23:BA:2118:U:O2'	23:BA:2119:A:H5"	2.21	0.41
23:BA:2464:C:O2'	23:BA:2465:C:H6	2.03	0.41
23:BA:2497:A:H5"	56:BA:4022:HOH:O	2.21	0.41
23:BA:2637:U:C2'	23:BA:2638:G:H5'	2.51	0.41
23:BA:2838:G:C6	23:BA:2839:G:C5	3.09	0.41
25:BD:24:ILE:HD13	25:BD:84:TYR:HB2	2.03	0.41
25:BD:183:ARG:HG3	25:BD:270:ILE:HG12	2.03	0.41
27:BF:64:ILE:HG21	27:BF:78:ILE:HG23	2.03	0.41
27:BF:103:LYS:HA	27:BF:106:ARG:HG2	2.03	0.41
27:BF:107:LYS:HE3	27:BF:206:ILE:C	2.46	0.41
31:BN:30:ILE:HG22	31:BN:34:LEU:HD22	2.02	0.41
35:BR:17:ARG:HH11	35:BR:17:ARG:HD2	1.63	0.41
37:BT:45:PHE:CE1	37:BT:74:ARG:HG3	2.56	0.41
46:B2:51:ARG:O	46:B2:55:ARG:HD2	2.21	0.41
1:CA:134:A:H61	16:CP:25:ARG:NH1	2.18	0.41
1:CA:428:G:HO2'	1:CA:429:U:P	2.44	0.41
1:CA:443:C:H2'	1:CA:444:C:H6	1.86	0.41
1:CA:473:G:H2'	1:CA:474:G:C8	2.51	0.41
1:CA:542:G:H2'	1:CA:543:C:C6	2.54	0.41
1:CA:561:U:O2'	1:CA:562:C:P	2.78	0.41
1:CA:872:A:C4	1:CA:874:G:N7	2.89	0.41
1:CA:890:G:O2'	1:CA:906:G:O6	2.36	0.41
1:CA:1055:A:O2'	3:CC:161:GLU:O	2.35	0.41
1:CA:1066:C:O2'	1:CA:1067:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1089:G:H1	1:CA:1096:C:N4	2.14	0.41
1:CA:1238:A:OP1	1:CA:1335:C:H1'	2.20	0.41
1:CA:1365:G:H5'	56:CA:2156:HOH:O	2.21	0.41
1:CA:1380:U:C2	7:CG:3:ARG:NH1	2.89	0.41
1:CA:1493:A:C2	1:CA:1494:G:C8	3.09	0.41
2:CB:71:VAL:HG13	2:CB:93:VAL:HG23	2.03	0.41
2:CB:180:LEU:C	2:CB:182:ILE:H	2.29	0.41
2:CB:185:ILE:HG22	2:CB:199:TYR:CD1	2.55	0.41
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.86	0.41
7:CG:49:ILE:C	7:CG:51:GLN:H	2.29	0.41
8:CH:21:LYS:O	8:CH:63:LEU:HD23	2.21	0.41
9:CI:74:ILE:HA	9:CI:77:ILE:HD12	2.03	0.41
9:CI:106:ALA:O	9:CI:108:VAL:HG23	2.20	0.41
13:CM:13:LYS:O	13:CM:18:ALA:HB2	2.21	0.41
15:CO:29:VAL:HG11	15:CO:81:LEU:HD21	2.03	0.41
15:CO:35:ARG:NH2	15:CO:59:MET:HE2	2.36	0.41
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.88	0.41
19:CS:35:SER:O	19:CS:37:ARG:N	2.54	0.41
20:CT:91:LEU:C	20:CT:93:GLU:N	2.78	0.41
21:CU:19:GLY:O	21:CU:20:LYS:C	2.64	0.41
22:CY:17:ARG:O	22:CY:20:VAL:HG12	2.21	0.41
22:CY:23:ARG:HG3	22:CY:78:ILE:HG13	2.03	0.41
23:DA:265:A:H1'	23:DA:266:G:O4'	2.21	0.41
23:DA:573:G:O2'	23:DA:574:C:H3'	2.20	0.41
23:DA:708:C:H5"	23:DA:708:C:H6	1.86	0.41
23:DA:886:C:H1'	23:DA:890:A:N6	2.36	0.41
23:DA:1021:A:C8	23:DA:1021:A:C3'	3.03	0.41
23:DA:1031:G:H21	53:D9:36:GLN:HE22	1.68	0.41
23:DA:1314:C:H5'	23:DA:1314:C:H6	1.86	0.41
23:DA:1549:C:H2'	23:DA:1550:C:H6	1.86	0.41
23:DA:1697:G:OP2	23:DA:1698:A:O2'	2.32	0.41
23:DA:1702:G:H2'	23:DA:1703:G:O4'	2.20	0.41
23:DA:2040:C:H2'	23:DA:2041:U:O4'	2.20	0.41
23:DA:2095:C:H2'	23:DA:2096:U:O4'	2.21	0.41
23:DA:2473:U:C2	23:DA:2474:C:C6	3.09	0.41
23:DA:2716:U:O2'	23:DA:2717:G:H5'	2.21	0.41
23:DA:2721:A:O2'	23:DA:2874:C:H5'	2.21	0.41
25:DD:33:LEU:HD23	25:DD:33:LEU:HA	1.86	0.41
26:DE:116:VAL:HG13	26:DE:122:PHE:CB	2.50	0.41
30:DI:85:GLU:CG	30:DI:86:THR:H	2.34	0.41
30:DI:88:ILE:HG22	30:DI:89:TYR:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DN:5:VAL:H	38:DU:64:ARG:HH22	1.68	0.41
36:DS:87:PHE:CE1	36:DS:102:ALA:HB2	2.56	0.41
37:DT:56:GLY:O	37:DT:59:THR:CG2	2.69	0.41
38:DU:61:TRP:CD2	38:DU:93:LYS:HA	2.56	0.41
39:DV:68:LYS:HE3	39:DV:68:LYS:HB3	1.70	0.41
44:D0:70:GLN:HG2	44:D0:72:ARG:HG2	2.03	0.41
45:D1:49:VAL:O	45:D1:59:THR:HA	2.20	0.41
48:D4:42:PHE:CB	48:D4:43:TYR:HB2	2.49	0.41
50:D6:9:LEU:HD21	50:D6:25:LYS:HB3	2.03	0.41
50:D6:44:ARG:HH11	50:D6:44:ARG:HB3	1.86	0.41
52:D8:34:TRP:CE2	52:D8:35:GLN:HB3	2.56	0.41
1:AA:9:G:H5"	5:AE:126:ARG:HD3	2.03	0.41
1:AA:53:A:N1	1:AA:54:C:C2	2.89	0.41
1:AA:142:G:H2'	1:AA:143:A:C8	2.56	0.41
1:AA:167:G:O2'	1:AA:168:G:H5'	2.20	0.41
1:AA:475:G:C2'	1:AA:476:G:H5'	2.51	0.41
1:AA:561:U:O2'	1:AA:562:C:P	2.80	0.41
1:AA:611:A:H2	1:AA:630:G:H22	1.69	0.41
1:AA:657:G:C2	1:AA:658:G:C8	3.08	0.41
1:AA:751:U:H4'	15:AO:24:SER:HB2	2.03	0.41
1:AA:834:C:H2'	1:AA:835:U:C6	2.56	0.41
1:AA:965:A:H5'	1:AA:969:A:O4'	2.21	0.41
1:AA:1091:U:C2	1:AA:1095:U:N3	2.89	0.41
3:AC:6:HIS:HA	3:AC:7:PRO:HD3	1.64	0.41
6:AF:86:ARG:O	6:AF:87:ARG:HG2	2.20	0.41
9:AI:16:ARG:HB2	9:AI:64:THR:CG2	2.51	0.41
19:AS:75:ALA:HA	19:AS:76:PRO:HD3	1.90	0.41
23:BA:30:G:H2'	23:BA:31:C:C6	2.56	0.41
23:BA:720:C:H2'	23:BA:721:C:C6	2.55	0.41
23:BA:857:C:H4'	44:B0:23:VAL:HG21	2.01	0.41
23:BA:2103:C:O2	23:BA:2187:G:C2	2.73	0.41
28:BG:128:ARG:HE	28:BG:128:ARG:HB2	1.57	0.41
31:BN:48:MET:H	31:BN:48:MET:HG3	1.58	0.41
33:BP:47:ASP:OD2	33:BP:50:ARG:NH2	2.53	0.41
35:BR:118:GLU:CD	35:BR:118:GLU:H	2.29	0.41
38:BU:58:ARG:HA	38:BU:61:TRP:CE3	2.56	0.41
42:BY:5:MET:HE2	42:BY:5:MET:HB2	1.81	0.41
1:CA:547:A:H5'	56:CA:2174:HOH:O	2.20	0.41
1:CA:977:A:N1	1:CA:1224:G:C8	2.89	0.41
1:CA:1187:G:H3'	1:CA:1188:A:H8	1.85	0.41
1:CA:1299:A:C6	1:CA:1301:U:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1338:G:C2	1:CA:1339:A:C4	3.09	0.41
1:CA:1338:G:C6	1:CA:1339:A:C6	3.09	0.41
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.86	0.41
7:CG:46:ALA:O	7:CG:50:ILE:N	2.48	0.41
8:CH:49:GLU:OE2	8:CH:62:TYR:OH	2.39	0.41
9:CI:37:PHE:HB3	9:CI:43:ALA:HB1	2.02	0.41
15:CO:15:PHE:CE2	15:CO:84:LYS:HD2	2.56	0.41
23:DA:83:G:H22	23:DA:102:G:H1'	1.84	0.41
23:DA:107:C:H2'	23:DA:108:U:H6	1.86	0.41
23:DA:414:C:O2'	23:DA:415:A:H5'	2.21	0.41
23:DA:784:A:C5	25:DD:229:VAL:HG21	2.56	0.41
23:DA:960:A:H5"	23:DA:961:C:OP2	2.21	0.41
23:DA:2147:G:H2'	23:DA:2148:G:C4'	2.51	0.41
23:DA:2158:A:H1'	23:DA:2159:G:C8	2.55	0.41
23:DA:2266:A:H4'	23:DA:2267:A:C4	2.55	0.41
23:DA:2316:C:H2'	23:DA:2317:C:H6	1.84	0.41
28:DG:57:ALA:HA	28:DG:68:PRO:HG2	2.01	0.41
31:DN:109:LYS:N	31:DN:109:LYS:HD2	2.35	0.41
37:DT:2:ASN:C	37:DT:2:ASN:OD1	2.64	0.41
40:DW:1:MET:HA	40:DW:1:MET:HE3	2.03	0.41
41:DX:54:VAL:HG13	41:DX:81:VAL:HG12	2.02	0.41
52:D8:30:ARG:HD3	52:D8:30:ARG:HA	1.82	0.41
1:AA:152:A:N6	1:AA:170:U:C2	2.89	0.40
1:AA:723:U:H6	1:AA:723:U:H2'	1.73	0.40
1:AA:785:G:C2'	1:AA:786:G:H5'	2.51	0.40
1:AA:1024:G:H8	1:AA:1024:G:P	2.44	0.40
1:AA:1030(B):C:H2'	1:AA:1030(C):G:H5'	2.03	0.40
4:AD:188:LEU:HA	4:AD:189:PRO:HD3	1.97	0.40
5:AE:143:ARG:HH11	5:AE:143:ARG:HD2	1.76	0.40
12:AL:7:ILE:HD13	12:AL:7:ILE:HA	1.88	0.40
20:AT:56:MET:HE1	20:AT:85:MET:HA	2.04	0.40
23:BA:1290:C:H2'	23:BA:1291:C:H6	1.85	0.40
23:BA:2345:G:N3	23:BA:2381:C:H2'	2.36	0.40
23:BA:2492:U:H2'	23:BA:2493:U:H6	1.86	0.40
23:BA:2705:A:H2'	23:BA:2706:G:O4'	2.21	0.40
26:BE:52:LEU:O	26:BE:76:ARG:N	2.45	0.40
26:BE:117:MET:O	26:BE:118:LYS:HB3	2.21	0.40
29:BH:70:THR:O	29:BH:71:LEU:C	2.63	0.40
31:BN:20:GLY:HA2	31:BN:61:ARG:HD3	2.04	0.40
36:BS:67:ARG:O	36:BS:71:ARG:HG3	2.21	0.40
1:CA:116:A:H61	1:CA:313:A:H1'	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:453:A:C6	1:CA:454:C:C4	3.09	0.40
1:CA:668:G:O4'	15:CO:49:ASP:HB2	2.20	0.40
1:CA:983:A:N3	1:CA:983:A:H3'	2.36	0.40
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.56	0.40
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.86	0.40
1:CA:1367:C:N3	1:CA:1368:G:C8	2.89	0.40
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.21	0.40
1:CA:1479:C:H2'	1:CA:1480:G:H8	1.85	0.40
3:CC:35:GLU:HG2	3:CC:36:ASP:N	2.35	0.40
5:CE:95:ALA:HB1	5:CE:96:PRO:HD2	2.02	0.40
12:CL:32:PHE:HB3	12:CL:84:LEU:HD11	2.03	0.40
15:CO:3:ILE:HD13	15:CO:3:ILE:H	1.85	0.40
23:DA:271(P):C:C2'	23:DA:271(Q):G:H5'	2.51	0.40
23:DA:296:C:O2'	23:DA:297:C:H5'	2.20	0.40
23:DA:445:C:O2'	23:DA:446:G:H5'	2.21	0.40
23:DA:597:U:H2'	23:DA:598:G:C8	2.56	0.40
23:DA:601:C:OP1	27:DF:108:LYS:HE3	2.20	0.40
23:DA:614:U:H2'	23:DA:614(A):U:O4'	2.21	0.40
23:DA:922:U:H2'	23:DA:923:C:C6	2.56	0.40
23:DA:1488:G:H5'	23:DA:1489:U:OP2	2.20	0.40
23:DA:1913:A:H3'	23:DA:1913:A:OP2	2.20	0.40
23:DA:2119:A:C6	23:DA:2170:A:C5	3.09	0.40
23:DA:2597:G:H2'	23:DA:2598:A:C8	2.56	0.40
23:DA:2702:U:H4'	23:DA:2703:C:OP1	2.22	0.40
31:DN:14:VAL:HG13	31:DN:138:LEU:HG	2.03	0.40
33:DP:97:PRO:HD3	33:DP:126:VAL:O	2.20	0.40
43:DZ:98:MET:HE3	43:DZ:99:TYR:O	2.21	0.40
1:AA:232:G:H1'	1:AA:262:A:N1	2.36	0.40
1:AA:593:G:C2	1:AA:647:C:O2	2.74	0.40
1:AA:1410:G:H2'	1:AA:1411:C:H6	1.85	0.40
1:AA:1503:A:N9	1:AA:1531:A:H8	2.19	0.40
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.85	0.40
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.21	0.40
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	2.03	0.40
12:AL:84:LEU:HD22	12:AL:85:ILE:H	1.84	0.40
23:BA:225:A:O2'	23:BA:257:A:H4'	2.22	0.40
23:BA:265:A:H1'	23:BA:266:G:O4'	2.21	0.40
23:BA:300:A:P	42:BY:86:ARG:NH2	2.94	0.40
23:BA:1558:A:N3	23:BA:1558:A:O4'	2.54	0.40
23:BA:1701:A:OP2	56:BA:5549:HOH:O	2.22	0.40
23:BA:2298:A:H2'	23:BA:2299:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:232:PRO:HB3	25:BD:244:ARG:CZ	2.51	0.40
27:BF:29:ASN:H	27:BF:112:MET:CE	2.34	0.40
29:BH:54:ARG:HD3	29:BH:65:HIS:ND1	2.35	0.40
31:BN:128:HIS:CD2	31:BN:128:HIS:H	2.39	0.40
33:BP:52:GLU:HB3	33:BP:55:ARG:HD2	2.03	0.40
36:BS:39:ILE:HD12	36:BS:85:VAL:HG21	2.02	0.40
39:BV:61:VAL:HG22	39:BV:61:VAL:O	2.21	0.40
43:BZ:160:GLY:CA	43:BZ:161:VAL:HB	2.38	0.40
45:B1:86:SER:O	45:B1:89:GLU:HG2	2.20	0.40
46:B2:3:LEU:HD23	46:B2:3:LEU:HA	1.87	0.40
1:CA:116:A:OP2	56:CA:1949:HOH:O	2.22	0.40
1:CA:1088:G:C6	1:CA:1089:G:C5	3.10	0.40
1:CA:1492:A:H3'	1:CA:1493:A:O4'	2.21	0.40
3:CC:19:GLU:HB2	3:CC:40:ARG:HH22	1.86	0.40
3:CC:52:LEU:CB	3:CC:70:VAL:HA	2.51	0.40
3:CC:109:PRO:O	3:CC:112:SER:HB3	2.22	0.40
4:CD:196:LEU:N	4:CD:196:LEU:HD12	2.36	0.40
5:CE:18:ARG:O	5:CE:24:ARG:HB2	2.22	0.40
11:CK:45:GLY:O	11:CK:50:TYR:HB2	2.21	0.40
13:CM:52:GLU:O	13:CM:56:LEU:HB2	2.20	0.40
15:CO:50:HIS:O	15:CO:53:HIS:HB3	2.21	0.40
17:CQ:85:VAL:O	17:CQ:89:LEU:HG	2.22	0.40
23:DA:729:G:C5	25:DD:208:LYS:HB2	2.56	0.40
23:DA:819:A:C4	23:DA:1189:A:C2	3.08	0.40
23:DA:1589:C:H2'	23:DA:1590:U:C6	2.57	0.40
23:DA:1786:A:H1'	23:DA:1938:A:N6	2.36	0.40
23:DA:2104:G:N2	23:DA:2105:C:C2	2.89	0.40
23:DA:2136:C:C5	23:DA:2137:C:H5	2.39	0.40
23:DA:2238:G:N3	23:DA:2238:G:H2'	2.36	0.40
26:DE:119:ARG:HG2	26:DE:160:TYR:HB2	2.02	0.40
31:DN:23:LEU:HD12	31:DN:99:LEU:HD23	2.02	0.40
34:DQ:48:GLU:O	34:DQ:52:VAL:HG23	2.21	0.40
35:DR:97:VAL:CG2	35:DR:114:VAL:HG13	2.51	0.40
38:DU:16:LYS:HE2	38:DU:16:LYS:HB3	1.66	0.40
44:D0:72:ARG:CB	44:D0:75:LEU:HB2	2.51	0.40
1:AA:40:C:C2	1:AA:402:G:N2	2.81	0.40
1:AA:1329:A:OP1	13:AM:28:ALA:HB3	2.22	0.40
1:AA:1492:A:N3	1:AA:1492:A:H2'	2.36	0.40
2:AB:12:GLU:C	2:AB:16:HIS:HD1	2.29	0.40
3:AC:125:GLU:HG2	3:AC:189:ALA:HB1	2.04	0.40
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:30:LYS:CB	4:AD:35:ARG:HD2	2.51	0.40
6:AF:50:TYR:OH	18:AR:74:ARG:O	2.36	0.40
7:AG:41:ARG:H	7:AG:41:ARG:HG3	1.43	0.40
10:AJ:55:LYS:HG2	10:AJ:56:HIS:N	2.36	0.40
12:AL:47:LYS:HA	12:AL:48:PRO:HA	1.80	0.40
23:BA:1164:G:H2'	23:BA:1165:U:C6	2.57	0.40
23:BA:1173:G:H2'	23:BA:1173:G:OP2	2.21	0.40
23:BA:2061:G:H5"	23:BA:2503:A:C2	2.57	0.40
23:BA:2526:G:H5'	23:BA:2742:C:O2'	2.21	0.40
25:BD:4:LYS:HG2	25:BD:18:VAL:CG2	2.51	0.40
27:BF:162:LEU:HD12	27:BF:162:LEU:HA	1.93	0.40
39:BV:5:VAL:HG11	39:BV:57:VAL:HG21	2.04	0.40
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.20	0.40
1:CA:926:G:O4'	22:CY:91:LYS:HE2	2.21	0.40
1:CA:1062:U:H2'	1:CA:1063:C:C5	2.56	0.40
1:CA:1442:G:C8	1:CA:1442(A):G:C4	3.10	0.40
4:CD:8:VAL:HG22	4:CD:21:LEU:CD1	2.51	0.40
7:CG:56:GLN:HB2	7:CG:57:GLU:H	1.59	0.40
7:CG:148:ASN:HD22	7:CG:151:TYR:HD1	1.66	0.40
11:CK:21:ILE:HB	11:CK:84:VAL:HG22	2.03	0.40
13:CM:30:ALA:O	13:CM:34:LEU:HG	2.21	0.40
13:CM:44:ARG:HB2	13:CM:47:ASP:OD2	2.21	0.40
15:CO:74:ASP:HA	15:CO:75:PRO:HD2	1.84	0.40
17:CQ:87:LYS:HA	17:CQ:87:LYS:HD3	1.82	0.40
23:DA:150:C:H2'	23:DA:151:C:C6	2.56	0.40
23:DA:836:G:C5	23:DA:837:C:C4	3.09	0.40
23:DA:1022:G:C5	23:DA:1140:C:C4	3.09	0.40
23:DA:1371:G:O6	56:DA:4328:HOH:O	2.22	0.40
23:DA:1686:C:H2'	23:DA:1687:G:O4'	2.21	0.40
23:DA:1744:C:O2'	23:DA:1745:C:H5'	2.22	0.40
33:DP:52:GLU:HB3	33:DP:55:ARG:HD2	2.03	0.40
34:DQ:39:PRO:HA	34:DQ:97:VAL:O	2.22	0.40
36:DS:90:GLY:HA3	36:DS:91:PRO:HD2	1.78	0.40
36:DS:110:LEU:HD12	36:DS:110:LEU:HA	2.01	0.40
40:DW:58:ALA:HB1	40:DW:64:MET:HB2	2.01	0.40
43:DZ:48:PHE:HE2	43:DZ:71:VAL:HG11	1.87	0.40
47:D3:8:LEU:HD23	47:D3:8:LEU:HA	1.81	0.40
1:AA:257:G:H2'	1:AA:258:G:O4'	2.21	0.40
1:AA:1004:A:N7	1:AA:1036:G:C2	2.90	0.40
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.22	0.40
1:AA:1380:U:C2	7:AG:3:ARG:NH1	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1452:C:HO2'	1:AA:1456:G:P	2.42	0.40
2:AB:21:ARG:HB3	2:AB:39:ILE:HG12	2.02	0.40
3:AC:150:LYS:HB2	3:AC:150:LYS:HE3	1.83	0.40
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.56	0.40
19:AS:74:PHE:CD2	19:AS:74:PHE:N	2.89	0.40
20:AT:10:LEU:CG	20:AT:11:SER:H	2.35	0.40
23:BA:192:C:O2'	23:BA:802:A:N3	2.51	0.40
23:BA:271(Q):G:O2'	23:BA:271(R):G:OP2	2.39	0.40
23:BA:593:G:C4'	52:B8:4:MET:HE2	2.51	0.40
23:BA:776:G:H4'	23:BA:777:A:O5'	2.21	0.40
23:BA:856:C:HO2'	23:BA:857:C:P	2.44	0.40
23:BA:1174:A:H5'	23:BA:1177:A:N6	2.26	0.40
23:BA:1575:C:H2'	23:BA:1576:U:C6	2.56	0.40
23:BA:1721:G:H8	23:BA:1741:A:H62	1.70	0.40
31:BN:39:ARG:HA	31:BN:40:PRO:HD3	1.96	0.40
34:BQ:42:ILE:HD13	34:BQ:97:VAL:HG21	2.04	0.40
1:CA:66:G:OP1	1:CA:66:G:H8	2.05	0.40
1:CA:257:G:H2'	1:CA:258:G:O4'	2.21	0.40
1:CA:930:C:H2'	1:CA:931:C:H5'	2.04	0.40
1:CA:953:G:C6	1:CA:954:G:C5	3.10	0.40
1:CA:1094:G:OP1	56:CA:2093:HOH:O	2.21	0.40
1:CA:1118:C:OP1	9:CI:9:ARG:NH1	2.36	0.40
1:CA:1150:U:C4	1:CA:1151:A:N7	2.90	0.40
1:CA:1189:C:H4'	3:CC:10:PHE:CE1	2.57	0.40
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.56	0.40
5:CE:90:VAL:O	5:CE:120:THR:HA	2.21	0.40
19:CS:66:MET:HE2	19:CS:66:MET:HB3	1.98	0.40
20:CT:41:ILE:HD12	20:CT:42:GLN:N	2.36	0.40
23:DA:374:A:H5'	56:DA:4884:HOH:O	2.20	0.40
23:DA:548:A:O2'	23:DA:549:G:OP1	2.37	0.40
23:DA:863:A:P	34:DQ:22:LYS:HG3	2.61	0.40
23:DA:982:C:H6	23:DA:982:C:O5'	2.04	0.40
23:DA:1385:G:H4'	23:DA:1386:C:OP1	2.22	0.40
23:DA:2295:C:OP1	36:DS:10:ARG:NH1	2.55	0.40
25:DD:132:PRO:HD3	25:DD:190:TYR:CZ	2.57	0.40
27:DF:129:PHE:HD1	27:DF:142:TRP:CE2	2.39	0.40
27:DF:132:VAL:HG23	27:DF:163:VAL:HG22	2.04	0.40
33:DP:68:GLN:HG3	52:D8:12:LYS:HG2	2.03	0.40
40:DW:20:VAL:O	40:DW:23:LEU:HB2	2.20	0.40
43:DZ:182:LYS:HE3	43:DZ:186:GLU:OE2	2.22	0.40
1:AA:735:C:H2'	1:AA:736:C:C6	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:954:G:C6	1:AA:955:U:N3	2.90	0.40
1:AA:1060:C:O2'	10:AJ:56:HIS:HD2	2.04	0.40
1:AA:1291:G:C5	1:AA:1292:U:C5	3.09	0.40
2:AB:92:TYR:CE1	2:AB:94:ASN:HB2	2.57	0.40
2:AB:193:ASP:C	2:AB:194:PRO:O	2.62	0.40
7:AG:29:LYS:HD3	7:AG:29:LYS:HA	1.96	0.40
8:AH:39:LEU:O	8:AH:44:PHE:N	2.53	0.40
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	2.04	0.40
15:AO:9:GLN:HA	15:AO:12:ILE:HD12	2.02	0.40
20:AT:91:LEU:C	20:AT:93:GLU:N	2.78	0.40
23:BA:443:A:N7	27:BF:45:ARG:HG2	2.37	0.40
23:BA:614:U:H2'	23:BA:614(A):U:O4'	2.22	0.40
23:BA:1889:A:H2'	23:BA:1890:A:C8	2.56	0.40
23:BA:2114:A:H3'	23:BA:2115:G:H8	1.84	0.40
23:BA:2318:G:H2'	23:BA:2318:G:N3	2.36	0.40
23:BA:2637:U:O2'	23:BA:2638:G:H5'	2.21	0.40
23:BA:2833:G:O2'	23:BA:2834:G:P	2.80	0.40
23:BA:2850:A:OP2	23:BA:2866:U:C5	2.72	0.40
30:BI:86:THR:HG22	30:BI:122:GLU:OE2	2.21	0.40
31:BN:94:HIS:HB3	31:BN:97:ARG:HD3	2.03	0.40
37:BT:16:ARG:HB2	37:BT:79:HIS:ND1	2.36	0.40
41:BX:33:LYS:HD3	41:BX:33:LYS:HA	1.88	0.40
1:CA:93:G:H1'	1:CA:96:U:H5'	2.04	0.40
1:CA:658:G:C6	1:CA:659:U:C4	3.09	0.40
1:CA:790:A:H1'	22:CY:29:LYS:O	2.21	0.40
1:CA:858:G:O6	1:CA:869:G:H3'	2.21	0.40
1:CA:1245:A:C6	1:CA:1246:C:C4	3.09	0.40
1:CA:1309:G:O3'	13:CM:77:ASN:ND2	2.54	0.40
1:CA:1356:G:N2	1:CA:1367:C:C2	2.89	0.40
2:CB:215:LEU:HD23	2:CB:215:LEU:HA	1.74	0.40
5:CE:89:ILE:HD13	5:CE:90:VAL:N	2.37	0.40
7:CG:148:ASN:C	7:CG:150:ALA:N	2.79	0.40
12:CL:27:LEU:CB	12:CL:62:SER:HB3	2.51	0.40
18:CR:53:ARG:C	18:CR:55:ARG:H	2.29	0.40
23:DA:228:A:H2'	23:DA:230:U:O4'	2.21	0.40
23:DA:250:G:P	52:D8:13:ARG:HH22	2.44	0.40
23:DA:795:C:H2'	23:DA:796:C:C6	2.57	0.40
23:DA:897:C:H6	23:DA:897:C:O5'	2.04	0.40
23:DA:2296:U:O2'	23:DA:2297:C:OP2	2.26	0.40
23:DA:2492:U:H2'	23:DA:2493:U:C6	2.56	0.40
23:DA:2756:U:H1'	23:DA:2757:A:H5"	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:95:C:H2'	24:DB:96:U:C6	2.57	0.40
25:DD:85:ASP:OD2	25:DD:88:ARG:NH1	2.43	0.40
25:DD:106:ILE:O	25:DD:108:PRO:HD3	2.20	0.40
26:DE:72:VAL:HA	26:DE:73:GLU:HB3	2.04	0.40
29:DH:71:LEU:O	29:DH:74:ASN:HB2	2.22	0.40
30:DI:68:LEU:HD13	30:DI:68:LEU:HA	1.49	0.40
42:DY:20:TYR:N	42:DY:20:TYR:CD1	2.89	0.40
43:DZ:56:VAL:HG23	43:DZ:133:ILE:HD13	2.04	0.40
45:D1:86:SER:O	45:D1:89:GLU:HG2	2.22	0.40

All (2) 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)
56:BR:308:HOH:O	56:BV:310:HOH:O[4_445]	2.03	0.17
39:BV:101:GLY:O	56:BA:5729:HOH:O[4_545]	2.17	0.03

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	227/256 (89%)	185 (82%)	40 (18%)	2 (1%)	14 35
2	CB	233/256 (91%)	187 (80%)	43 (18%)	3 (1%)	9 25
3	AC	204/239 (85%)	176 (86%)	28 (14%)	0	100 100
3	CC	204/239 (85%)	169 (83%)	31 (15%)	4 (2%)	6 16
4	AD	206/209 (99%)	186 (90%)	20 (10%)	0	100 100
4	CD	206/209 (99%)	182 (88%)	23 (11%)	1 (0%)	24 48
5	AE	146/162 (90%)	128 (88%)	17 (12%)	1 (1%)	18 41
5	CE	146/162 (90%)	130 (89%)	15 (10%)	1 (1%)	18 41

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	AF	98/101 (97%)	96 (98%)	2 (2%)	0	100 100
6	CF	97/101 (96%)	95 (98%)	2 (2%)	0	100 100
7	AG	153/156 (98%)	132 (86%)	20 (13%)	1 (1%)	18 41
7	CG	153/156 (98%)	130 (85%)	22 (14%)	1 (1%)	18 41
8	AH	136/138 (99%)	129 (95%)	7 (5%)	0	100 100
8	CH	136/138 (99%)	128 (94%)	8 (6%)	0	100 100
9	AI	123/128 (96%)	108 (88%)	13 (11%)	2 (2%)	7 20
9	CI	123/128 (96%)	104 (85%)	14 (11%)	5 (4%)	2 5
10	AJ	94/105 (90%)	72 (77%)	15 (16%)	7 (7%)	1 1
10	CJ	94/105 (90%)	72 (77%)	18 (19%)	4 (4%)	2 4
11	AK	112/129 (87%)	103 (92%)	9 (8%)	0	100 100
11	CK	112/129 (87%)	104 (93%)	8 (7%)	0	100 100
12	AL	120/132 (91%)	109 (91%)	10 (8%)	1 (1%)	16 37
12	CL	120/132 (91%)	109 (91%)	10 (8%)	1 (1%)	16 37
13	AM	112/126 (89%)	86 (77%)	22 (20%)	4 (4%)	2 6
13	CM	110/126 (87%)	86 (78%)	18 (16%)	6 (6%)	1 2
14	AN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	7 19
14	CN	58/61 (95%)	49 (84%)	5 (9%)	4 (7%)	1 1
15	AO	86/89 (97%)	81 (94%)	5 (6%)	0	100 100
15	CO	86/89 (97%)	79 (92%)	7 (8%)	0	100 100
16	AP	80/88 (91%)	74 (92%)	5 (6%)	1 (1%)	9 25
16	CP	80/88 (91%)	74 (92%)	5 (6%)	1 (1%)	9 25
17	AQ	97/105 (92%)	88 (91%)	8 (8%)	1 (1%)	12 32
17	CQ	97/105 (92%)	89 (92%)	8 (8%)	0	100 100
18	AR	66/88 (75%)	55 (83%)	11 (17%)	0	100 100
18	CR	66/88 (75%)	56 (85%)	10 (15%)	0	100 100
19	AS	79/93 (85%)	67 (85%)	11 (14%)	1 (1%)	9 25
19	CS	76/93 (82%)	57 (75%)	18 (24%)	1 (1%)	9 25
20	AT	94/106 (89%)	77 (82%)	17 (18%)	0	100 100
20	CT	102/106 (96%)	79 (78%)	20 (20%)	3 (3%)	3 9
21	AU	21/27 (78%)	20 (95%)	1 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
21	CU	21/27 (78%)	16 (76%)	5 (24%)	0	100 100
22	AY	93/119 (78%)	85 (91%)	7 (8%)	1 (1%)	11 29
22	CY	92/119 (77%)	87 (95%)	5 (5%)	0	100 100
25	BD	273/276 (99%)	262 (96%)	8 (3%)	3 (1%)	11 29
25	DD	273/276 (99%)	262 (96%)	8 (3%)	3 (1%)	11 29
26	BE	202/206 (98%)	191 (95%)	8 (4%)	3 (2%)	8 22
26	DE	202/206 (98%)	187 (93%)	12 (6%)	3 (2%)	8 22
27	BF	201/210 (96%)	189 (94%)	10 (5%)	2 (1%)	12 32
27	DF	201/210 (96%)	191 (95%)	8 (4%)	2 (1%)	12 32
28	BG	179/182 (98%)	149 (83%)	26 (14%)	4 (2%)	5 14
28	DG	179/182 (98%)	148 (83%)	29 (16%)	2 (1%)	11 29
29	BH	172/180 (96%)	161 (94%)	10 (6%)	1 (1%)	21 44
29	DH	172/180 (96%)	160 (93%)	9 (5%)	3 (2%)	7 19
30	BI	144/148 (97%)	116 (81%)	24 (17%)	4 (3%)	4 9
30	DI	144/148 (97%)	119 (83%)	22 (15%)	3 (2%)	5 15
31	BN	138/140 (99%)	125 (91%)	11 (8%)	2 (1%)	9 23
31	DN	138/140 (99%)	125 (91%)	11 (8%)	2 (1%)	9 23
32	BO	120/122 (98%)	118 (98%)	2 (2%)	0	100 100
32	DO	120/122 (98%)	118 (98%)	2 (2%)	0	100 100
33	BP	147/150 (98%)	132 (90%)	13 (9%)	2 (1%)	9 23
33	DP	147/150 (98%)	130 (88%)	15 (10%)	2 (1%)	9 23
34	BQ	139/141 (99%)	132 (95%)	6 (4%)	1 (1%)	18 41
34	DQ	139/141 (99%)	131 (94%)	6 (4%)	2 (1%)	9 23
35	BR	116/118 (98%)	114 (98%)	2 (2%)	0	100 100
35	DR	116/118 (98%)	115 (99%)	1 (1%)	0	100 100
36	BS	108/112 (96%)	99 (92%)	8 (7%)	1 (1%)	14 35
36	DS	108/112 (96%)	98 (91%)	9 (8%)	1 (1%)	14 35
37	BT	129/146 (88%)	125 (97%)	4 (3%)	0	100 100
37	DT	128/146 (88%)	124 (97%)	3 (2%)	1 (1%)	16 37
38	BU	114/118 (97%)	114 (100%)	0	0	100 100
38	DU	114/118 (97%)	114 (100%)	0	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	BV	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
39	DV	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
40	BW	110/113 (97%)	109 (99%)	1 (1%)	0	100	100
40	DW	109/113 (96%)	108 (99%)	1 (1%)	0	100	100
41	BX	93/96 (97%)	85 (91%)	8 (9%)	0	100	100
41	DX	93/96 (97%)	88 (95%)	4 (4%)	1 (1%)	11	29
42	BY	105/110 (96%)	93 (89%)	12 (11%)	0	100	100
42	DY	105/110 (96%)	97 (92%)	8 (8%)	0	100	100
43	BZ	196/206 (95%)	178 (91%)	14 (7%)	4 (2%)	6	16
43	DZ	201/206 (98%)	181 (90%)	15 (8%)	5 (2%)	4	11
44	B0	74/85 (87%)	72 (97%)	2 (3%)	0	100	100
44	D0	75/85 (88%)	71 (95%)	4 (5%)	0	100	100
45	B1	95/98 (97%)	92 (97%)	1 (1%)	2 (2%)	5	15
45	D1	95/98 (97%)	92 (97%)	1 (1%)	2 (2%)	5	15
46	B2	68/72 (94%)	64 (94%)	4 (6%)	0	100	100
46	D2	69/72 (96%)	65 (94%)	4 (6%)	0	100	100
47	B3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
47	D3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
48	B4	44/71 (62%)	35 (80%)	8 (18%)	1 (2%)	5	13
48	D4	44/71 (62%)	34 (77%)	10 (23%)	0	100	100
49	B5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
49	D5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
50	B6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
50	D6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
51	B7	46/49 (94%)	44 (96%)	1 (2%)	1 (2%)	5	14
51	D7	46/49 (94%)	44 (96%)	1 (2%)	1 (2%)	5	14
52	B8	62/65 (95%)	60 (97%)	1 (2%)	1 (2%)	7	20
52	D8	62/65 (95%)	59 (95%)	1 (2%)	2 (3%)	3	7
53	B9	34/37 (92%)	34 (100%)	0	0	100	100
53	D9	34/37 (92%)	34 (100%)	0	0	100	100
All	All	11568/12366 (94%)	10478 (91%)	965 (8%)	125 (1%)	11	29

All (125) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
10	AJ	56	HIS
13	AM	84	ILE
27	BF	21	ALA
28	BG	82	LEU
30	BI	107	VAL
33	BP	27	HIS
43	BZ	161	VAL
3	CC	26	LYS
3	CC	67	THR
3	CC	101	LEU
13	CM	7	VAL
13	CM	45	VAL
14	CN	13	THR
14	CN	14	PRO
20	CT	6	PRO
28	DG	82	LEU
33	DP	27	HIS
43	DZ	161	VAL
52	D8	34	TRP
52	D8	35	GLN
7	AG	147	ALA
10	AJ	55	LYS
10	AJ	57	LYS
13	AM	10	PRO
16	AP	53	VAL
19	AS	47	HIS
25	BD	239	ARG
27	BF	18	ARG
28	BG	149	VAL
29	BH	71	LEU
45	B1	3	LYS
10	CJ	94	VAL
13	CM	50	GLU
13	CM	95	GLY
16	CP	53	VAL
25	DD	239	ARG
27	DF	18	ARG
27	DF	22	ALA
28	DG	149	VAL
29	DH	71	LEU
9	AI	45	ALA
9	AI	54	ASP

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Mol	Chain	Res	Type
12	AL	26	ALA
22	AY	95	ARG
26	BE	118	LYS
28	BG	81	LYS
43	BZ	193	GLU
9	CI	54	ASP
12	CL	26	ALA
13	CM	10	PRO
14	CN	59	ALA
14	CN	60	SER
30	DI	122	GLU
31	DN	18	ALA
34	DQ	135	ASP
43	DZ	199	LYS
45	D1	3	LYS
2	AB	10	LEU
10	AJ	30	SER
10	AJ	94	VAL
25	BD	275	LYS
26	BE	52	LEU
30	BI	75	LEU
30	BI	87	LYS
31	BN	18	ALA
33	BP	39	LYS
34	BQ	135	ASP
36	BS	83	LYS
51	B7	46	VAL
9	CI	88	TYR
9	CI	119	ALA
19	CS	36	ARG
20	CT	8	ARG
20	CT	9	ASN
25	DD	275	LYS
26	DE	52	LEU
30	DI	117	GLU
33	DP	39	LYS
37	DT	36	GLU
41	DX	23	GLU
43	DZ	193	GLU
51	D7	46	VAL
5	AE	146	ALA
17	AQ	14	LYS

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Mol	Chain	Res	Type
45	B1	83	GLU
48	B4	28	LYS
52	B8	35	GLN
2	CB	10	LEU
5	CE	146	ALA
10	CJ	56	HIS
13	CM	49	THR
26	DE	118	LYS
29	DH	65	HIS
43	DZ	191	VAL
45	D1	83	GLU
13	AM	66	LEU
14	AN	59	ALA
28	BG	14	GLU
30	BI	73	GLU
31	BN	5	VAL
43	BZ	191	VAL
9	CI	103	THR
25	BD	3	VAL
2	CB	239	VAL
7	CG	55	GLY
9	CI	21	PRO
10	CJ	34	VAL
25	DD	3	VAL
34	DQ	62	GLY
36	DS	49	VAL
10	AJ	75	ILE
13	AM	7	VAL
26	BE	72	VAL
2	CB	194	PRO
3	CC	76	VAL
29	DH	92	ILE
43	DZ	157	LEU
43	BZ	157	LEU
26	DE	72	VAL
30	DI	107	VAL
31	DN	5	VAL
2	AB	194	PRO
10	AJ	34	VAL
4	CD	28	SER
10	CJ	90	LEU

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	177/220 (80%)	147 (83%)	30 (17%)	2 6
2	CB	181/220 (82%)	147 (81%)	34 (19%)	1 4
3	AC	114/188 (61%)	93 (82%)	21 (18%)	1 4
3	CC	114/188 (61%)	84 (74%)	30 (26%)	0 2
4	AD	139/181 (77%)	119 (86%)	20 (14%)	3 8
4	CD	142/181 (78%)	119 (84%)	23 (16%)	2 6
5	AE	108/123 (88%)	95 (88%)	13 (12%)	5 12
5	CE	108/123 (88%)	94 (87%)	14 (13%)	4 10
6	AF	77/90 (86%)	64 (83%)	13 (17%)	2 6
6	CF	75/90 (83%)	64 (85%)	11 (15%)	3 8
7	AG	104/127 (82%)	90 (86%)	14 (14%)	4 9
7	CG	103/127 (81%)	82 (80%)	21 (20%)	1 3
8	AH	103/119 (87%)	83 (81%)	20 (19%)	1 4
8	CH	104/119 (87%)	84 (81%)	20 (19%)	1 4
9	AI	62/99 (63%)	52 (84%)	10 (16%)	2 6
9	CI	62/99 (63%)	52 (84%)	10 (16%)	2 6
10	AJ	52/92 (56%)	42 (81%)	10 (19%)	1 4
10	CJ	52/92 (56%)	40 (77%)	12 (23%)	1 2
11	AK	81/99 (82%)	73 (90%)	8 (10%)	7 19
11	CK	81/99 (82%)	73 (90%)	8 (10%)	7 19
12	AL	92/109 (84%)	83 (90%)	9 (10%)	7 19
12	CL	91/109 (84%)	78 (86%)	13 (14%)	3 8
13	AM	63/101 (62%)	46 (73%)	17 (27%)	0 1
13	CM	62/101 (61%)	42 (68%)	20 (32%)	0 1
14	AN	46/50 (92%)	38 (83%)	8 (17%)	2 5
14	CN	45/50 (90%)	33 (73%)	12 (27%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
15	AO	77/80 (96%)	62 (80%)	15 (20%)	1 4
15	CO	77/80 (96%)	62 (80%)	15 (20%)	1 4
16	AP	63/74 (85%)	49 (78%)	14 (22%)	1 3
16	CP	65/74 (88%)	50 (77%)	15 (23%)	1 2
17	AQ	94/97 (97%)	83 (88%)	11 (12%)	5 13
17	CQ	93/97 (96%)	80 (86%)	13 (14%)	3 9
18	AR	49/77 (64%)	40 (82%)	9 (18%)	1 4
18	CR	49/77 (64%)	40 (82%)	9 (18%)	1 4
19	AS	43/80 (54%)	35 (81%)	8 (19%)	1 4
19	CS	44/80 (55%)	30 (68%)	14 (32%)	0 1
20	AT	62/82 (76%)	54 (87%)	8 (13%)	4 10
20	CT	72/82 (88%)	62 (86%)	10 (14%)	3 9
21	AU	18/22 (82%)	15 (83%)	3 (17%)	2 6
21	CU	14/22 (64%)	9 (64%)	5 (36%)	0 0
22	AY	82/104 (79%)	66 (80%)	16 (20%)	1 4
22	CY	79/104 (76%)	60 (76%)	19 (24%)	1 2
25	BD	215/218 (99%)	188 (87%)	27 (13%)	4 11
25	DD	215/218 (99%)	187 (87%)	28 (13%)	4 10
26	BE	163/166 (98%)	132 (81%)	31 (19%)	1 4
26	DE	163/166 (98%)	131 (80%)	32 (20%)	1 4
27	BF	158/166 (95%)	130 (82%)	28 (18%)	2 5
27	DF	157/166 (95%)	130 (83%)	27 (17%)	2 6
28	BG	128/156 (82%)	106 (83%)	22 (17%)	2 6
28	DG	128/156 (82%)	107 (84%)	21 (16%)	2 6
29	BH	141/148 (95%)	122 (86%)	19 (14%)	4 9
29	DH	141/148 (95%)	122 (86%)	19 (14%)	4 9
30	BI	100/124 (81%)	76 (76%)	24 (24%)	1 2
30	DI	100/124 (81%)	76 (76%)	24 (24%)	1 2
31	BN	117/119 (98%)	96 (82%)	21 (18%)	2 5
31	DN	117/119 (98%)	94 (80%)	23 (20%)	1 4
32	BO	98/100 (98%)	87 (89%)	11 (11%)	6 15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
32	DO	98/100 (98%)	85 (87%)	13 (13%)	4 10
33	BP	114/116 (98%)	93 (82%)	21 (18%)	1 4
33	DP	114/116 (98%)	93 (82%)	21 (18%)	1 4
34	BQ	111/111 (100%)	91 (82%)	20 (18%)	2 5
34	DQ	111/111 (100%)	91 (82%)	20 (18%)	2 5
35	BR	101/101 (100%)	81 (80%)	20 (20%)	1 4
35	DR	101/101 (100%)	80 (79%)	21 (21%)	1 3
36	BS	84/88 (96%)	67 (80%)	17 (20%)	1 4
36	DS	86/88 (98%)	67 (78%)	19 (22%)	1 3
37	BT	110/127 (87%)	88 (80%)	22 (20%)	1 4
37	DT	110/127 (87%)	89 (81%)	21 (19%)	1 4
38	BU	93/94 (99%)	78 (84%)	15 (16%)	2 6
38	DU	93/94 (99%)	80 (86%)	13 (14%)	3 9
39	BV	80/82 (98%)	66 (82%)	14 (18%)	2 5
39	DV	81/82 (99%)	67 (83%)	14 (17%)	2 5
40	BW	89/92 (97%)	77 (86%)	12 (14%)	4 9
40	DW	89/92 (97%)	77 (86%)	12 (14%)	4 9
41	BX	75/78 (96%)	65 (87%)	10 (13%)	4 10
41	DX	73/78 (94%)	64 (88%)	9 (12%)	4 12
42	BY	80/91 (88%)	65 (81%)	15 (19%)	1 4
42	DY	79/91 (87%)	64 (81%)	15 (19%)	1 4
43	BZ	159/179 (89%)	131 (82%)	28 (18%)	2 5
43	DZ	155/179 (87%)	129 (83%)	26 (17%)	2 6
44	B0	59/67 (88%)	50 (85%)	9 (15%)	3 7
44	D0	61/67 (91%)	51 (84%)	10 (16%)	2 6
45	B1	78/83 (94%)	63 (81%)	15 (19%)	1 4
45	D1	78/83 (94%)	63 (81%)	15 (19%)	1 4
46	B2	65/67 (97%)	57 (88%)	8 (12%)	4 12
46	D2	63/67 (94%)	54 (86%)	9 (14%)	3 8
47	B3	49/52 (94%)	43 (88%)	6 (12%)	5 12
47	D3	50/52 (96%)	43 (86%)	7 (14%)	3 9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
48	B4	39/63 (62%)	32 (82%)	7 (18%)	2 5
48	D4	39/63 (62%)	33 (85%)	6 (15%)	2 7
49	B5	50/52 (96%)	43 (86%)	7 (14%)	3 9
49	D5	49/52 (94%)	44 (90%)	5 (10%)	7 18
50	B6	50/52 (96%)	41 (82%)	9 (18%)	2 5
50	D6	48/52 (92%)	38 (79%)	10 (21%)	1 3
51	B7	41/42 (98%)	34 (83%)	7 (17%)	2 6
51	D7	38/42 (90%)	33 (87%)	5 (13%)	4 10
52	B8	52/55 (94%)	45 (86%)	7 (14%)	4 9
52	D8	52/55 (94%)	45 (86%)	7 (14%)	4 9
53	B9	32/34 (94%)	30 (94%)	2 (6%)	16 39
53	D9	32/34 (94%)	30 (94%)	2 (6%)	16 39
All	All	8871/10274 (86%)	7358 (83%)	1513 (17%)	2 6

All (1513) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	21	ARG
2	AB	67	THR
2	AB	68	ILE
2	AB	74	LYS
2	AB	75	LYS
2	AB	80	ILE
2	AB	87	ARG
2	AB	93	VAL
2	AB	94	ASN
2	AB	111	ARG
2	AB	119	GLU
2	AB	126	GLU
2	AB	139	LYS
2	AB	145	LEU
2	AB	150	SER
2	AB	155	LEU
2	AB	158	LEU
2	AB	160	ASP

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Mol	Chain	Res	Type
2	AB	170	GLU
2	AB	175	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	200	ILE
2	AB	208	ILE
2	AB	221	LEU
2	AB	224	GLN
2	AB	231	GLU
3	AC	3	ASN
3	AC	15	THR
3	AC	32	LEU
3	AC	37	GLN
3	AC	49	SER
3	AC	52	LEU
3	AC	57	ILE
3	AC	67	THR
3	AC	69	HIS
3	AC	70	VAL
3	AC	102	ASN
3	AC	104	GLN
3	AC	111	LEU
3	AC	131	ARG
3	AC	144	SER
3	AC	175	LEU
3	AC	178	LEU
3	AC	184	TYR
3	AC	196	LEU
3	AC	202	ILE
3	AC	206	GLU
4	AD	8	VAL
4	AD	15	GLU
4	AD	19	LEU
4	AD	28	SER
4	AD	53	ASP
4	AD	58	LEU
4	AD	65	ARG
4	AD	83	SER
4	AD	106	TYR
4	AD	108	LEU
4	AD	120	LEU
4	AD	127	THR

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Mol	Chain	Res	Type
4	AD	135	LEU
4	AD	137	SER
4	AD	158	ILE
4	AD	170	VAL
4	AD	188	LEU
4	AD	194	LEU
4	AD	196	LEU
4	AD	202	LEU
5	AE	12	LEU
5	AE	31	LEU
5	AE	34	VAL
5	AE	41	VAL
5	AE	47	LYS
5	AE	65	ASN
5	AE	76	ILE
5	AE	80	ILE
5	AE	89	ILE
5	AE	91	LEU
5	AE	143	ARG
5	AE	144	THR
5	AE	147	ASP
6	AF	15	ASP
6	AF	31	GLU
6	AF	36	ARG
6	AF	40	VAL
6	AF	55	ASP
6	AF	64	GLN
6	AF	65	VAL
6	AF	69	GLU
6	AF	70	ASP
6	AF	72	VAL
6	AF	75	LEU
6	AF	89	MET
6	AF	98	LEU
7	AG	9	VAL
7	AG	12	LEU
7	AG	32	ARG
7	AG	41	ARG
7	AG	57	GLU
7	AG	66	VAL
7	AG	75	VAL
7	AG	80	VAL

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Mol	Chain	Res	Type
7	AG	90	GLU
7	AG	98	SER
7	AG	104	LEU
7	AG	113	GLU
7	AG	144	MET
7	AG	146	GLU
8	AH	25	ASP
8	AH	26	VAL
8	AH	29	SER
8	AH	39	LEU
8	AH	52	ASP
8	AH	63	LEU
8	AH	78	GLN
8	AH	83	ILE
8	AH	84	ARG
8	AH	85	ARG
8	AH	91	ARG
8	AH	107	LEU
8	AH	109	ILE
8	AH	112	LEU
8	AH	115	SER
8	AH	120	THR
8	AH	121	ASP
8	AH	127	LEU
8	AH	133	LEU
8	AH	137	VAL
9	AI	14	VAL
9	AI	31	GLN
9	AI	40	LEU
9	AI	64	THR
9	AI	66	ARG
9	AI	88	TYR
9	AI	104	ARG
9	AI	107	ARG
9	AI	108	VAL
9	AI	109	VAL
10	AJ	16	LEU
10	AJ	21	GLN
10	AJ	35	SER
10	AJ	55	LYS
10	AJ	67	THR
10	AJ	68	HIS

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Mol	Chain	Res	Type
10	AJ	94	VAL
10	AJ	96	ILE
10	AJ	97	GLU
10	AJ	100	THR
11	AK	31	THR
11	AK	48	ILE
11	AK	63	LEU
11	AK	84	VAL
11	AK	96	ARG
11	AK	104	GLN
11	AK	109	VAL
11	AK	114	VAL
12	AL	33	ARG
12	AL	43	VAL
12	AL	46	LYS
12	AL	53	ARG
12	AL	60	LEU
12	AL	67	THR
12	AL	83	VAL
12	AL	84	LEU
12	AL	97	ARG
13	AM	4	ILE
13	AM	14	ARG
13	AM	15	VAL
13	AM	19	LEU
13	AM	27	LYS
13	AM	47	ASP
13	AM	49	THR
13	AM	53	VAL
13	AM	56	LEU
13	AM	64	TRP
13	AM	66	LEU
13	AM	69	GLU
13	AM	70	LEU
13	AM	71	ARG
13	AM	78	ILE
13	AM	96	LEU
13	AM	110	ARG
14	AN	8	GLU
14	AN	18	VAL
14	AN	22	THR
14	AN	24	CYS

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Mol	Chain	Res	Type
14	AN	25	VAL
14	AN	33	VAL
14	AN	44	LEU
14	AN	50	LYS
15	AO	3	ILE
15	AO	10	LYS
15	AO	17	ARG
15	AO	24	SER
15	AO	26	GLU
15	AO	35	ARG
15	AO	39	LEU
15	AO	41	GLU
15	AO	65	ARG
15	AO	66	LEU
15	AO	73	GLU
15	AO	76	GLU
15	AO	77	ARG
15	AO	83	GLU
15	AO	87	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	20	VAL
16	AP	28	ARG
16	AP	33	ILE
16	AP	38	TYR
16	AP	45	THR
16	AP	47	ASP
16	AP	53	VAL
16	AP	62	VAL
16	AP	67	THR
16	AP	69	THR
16	AP	76	GLN
16	AP	79	VAL
17	AQ	9	VAL
17	AQ	13	ASP
17	AQ	50	LYS
17	AQ	53	LEU
17	AQ	57	VAL
17	AQ	60	ILE
17	AQ	62	SER
17	AQ	74	LEU
17	AQ	77	VAL

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Mol	Chain	Res	Type
17	AQ	82	MET
17	AQ	86	GLU
18	AR	21	LYS
18	AR	31	LEU
18	AR	32	ARG
18	AR	37	VAL
18	AR	58	LEU
18	AR	76	LEU
18	AR	82	THR
18	AR	85	LEU
18	AR	86	VAL
19	AS	7	LYS
19	AS	14	HIS
19	AS	31	ILE
19	AS	34	TRP
19	AS	37	ARG
19	AS	47	HIS
19	AS	66	MET
19	AS	83	HIS
20	AT	10	LEU
20	AT	24	LEU
20	AT	30	LYS
20	AT	37	SER
20	AT	56	MET
20	AT	73	HIS
20	AT	75	ASN
20	AT	84	LEU
21	AU	9	ARG
21	AU	12	LYS
21	AU	15	ARG
22	AY	13	THR
22	AY	16	ILE
22	AY	20	VAL
22	AY	23	ARG
22	AY	24	LEU
22	AY	35	ILE
22	AY	39	ILE
22	AY	41	LEU
22	AY	42	SER
22	AY	44	GLU
22	AY	53	THR
22	AY	60	VAL

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Mol	Chain	Res	Type
22	AY	76	GLU
22	AY	77	LEU
22	AY	79	ASN
22	AY	95	ARG
25	BD	12	SER
25	BD	37	LEU
25	BD	38	LYS
25	BD	61	LEU
25	BD	72	LYS
25	BD	94	LEU
25	BD	103	ARG
25	BD	106	ILE
25	BD	111	LEU
25	BD	113	VAL
25	BD	138	VAL
25	BD	140	THR
25	BD	141	VAL
25	BD	154	LYS
25	BD	173	VAL
25	BD	192	THR
25	BD	193	VAL
25	BD	200	ASP
25	BD	211	ARG
25	BD	217	ARG
25	BD	221	VAL
25	BD	229	VAL
25	BD	242	ARG
25	BD	253	GLN
25	BD	257	LEU
25	BD	259	THR
25	BD	271	ILE
26	BE	7	VAL
26	BE	9	VAL
26	BE	12	THR
26	BE	21	VAL
26	BE	24	THR
26	BE	33	VAL
26	BE	34	VAL
26	BE	49	LEU
26	BE	52	LEU
26	BE	72	VAL
26	BE	73	GLU

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Mol	Chain	Res	Type
26	BE	75	VAL
26	BE	77	ILE
26	BE	78	LEU
26	BE	79	ARG
26	BE	82	ARG
26	BE	87	GLU
26	BE	93	VAL
26	BE	111	ARG
26	BE	116	VAL
26	BE	119	ARG
26	BE	128	SER
26	BE	144	ARG
26	BE	154	LYS
26	BE	163	GLU
26	BE	167	VAL
26	BE	175	VAL
26	BE	181	LEU
26	BE	184	VAL
26	BE	188	VAL
26	BE	195	LEU
27	BF	12	LEU
27	BF	15	SER
27	BF	19	GLU
27	BF	24	LEU
27	BF	33	LEU
27	BF	38	ARG
27	BF	53	THR
27	BF	57	VAL
27	BF	74	ARG
27	BF	82	ILE
27	BF	88	VAL
27	BF	106	ARG
27	BF	108	LYS
27	BF	110	LEU
27	BF	117	ARG
27	BF	126	VAL
27	BF	140	LEU
27	BF	145	GLU
27	BF	157	VAL
27	BF	158	THR
27	BF	161	GLU
27	BF	162	LEU

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Mol	Chain	Res	Type
27	BF	165	ARG
27	BF	170	LEU
27	BF	183	VAL
27	BF	192	LEU
27	BF	197	ASP
27	BF	201	VAL
28	BG	3	LEU
28	BG	5	VAL
28	BG	13	GLU
28	BG	20	ILE
28	BG	28	VAL
28	BG	31	VAL
28	BG	35	GLU
28	BG	43	LEU
28	BG	47	LYS
28	BG	60	LEU
28	BG	71	THR
28	BG	80	PHE
28	BG	128	ARG
28	BG	133	LEU
28	BG	135	LEU
28	BG	143	GLU
28	BG	148	MET
28	BG	152	LEU
28	BG	153	ARG
28	BG	159	VAL
28	BG	165	THR
28	BG	170	ARG
29	BH	4	ILE
29	BH	15	VAL
29	BH	24	VAL
29	BH	41	MET
29	BH	44	VAL
29	BH	45	VAL
29	BH	69	ARG
29	BH	71	LEU
29	BH	77	LYS
29	BH	95	ARG
29	BH	98	LEU
29	BH	106	THR
29	BH	116	GLU
29	BH	122	THR

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Mol	Chain	Res	Type
29	BH	139	GLN
29	BH	140	LYS
29	BH	153	LYS
29	BH	169	VAL
29	BH	171	LEU
30	BI	9	LEU
30	BI	15	VAL
30	BI	38	LEU
30	BI	41	GLU
30	BI	43	ASN
30	BI	47	LEU
30	BI	51	ILE
30	BI	61	ARG
30	BI	68	LEU
30	BI	77	LEU
30	BI	78	THR
30	BI	85	GLU
30	BI	92	VAL
30	BI	101	LEU
30	BI	114	LEU
30	BI	116	LEU
30	BI	117	GLU
30	BI	121	LYS
30	BI	127	VAL
30	BI	133	HIS
30	BI	140	LEU
30	BI	142	VAL
30	BI	144	VAL
30	BI	145	VAL
31	BN	9	VAL
31	BN	28	THR
31	BN	33	LEU
31	BN	34	LEU
31	BN	43	THR
31	BN	46	VAL
31	BN	48	MET
31	BN	55	VAL
31	BN	61	ARG
31	BN	62	VAL
31	BN	67	LEU
31	BN	68	GLU
31	BN	73	THR

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Mol	Chain	Res	Type
31	BN	83	LYS
31	BN	87	LEU
31	BN	89	LYS
31	BN	97	ARG
31	BN	99	LEU
31	BN	120	LEU
31	BN	133	GLN
31	BN	140	VAL
32	BO	10	VAL
32	BO	17	ARG
32	BO	20	MET
32	BO	23	ARG
32	BO	24	VAL
32	BO	35	VAL
32	BO	53	LYS
32	BO	94	ARG
32	BO	97	ARG
32	BO	98	VAL
32	BO	113	LYS
33	BP	1	MET
33	BP	21	ARG
33	BP	50	ARG
33	BP	55	ARG
33	BP	56	SER
33	BP	59	LEU
33	BP	65	ARG
33	BP	68	GLN
33	BP	70	GLN
33	BP	71	VAL
33	BP	75	ILE
33	BP	76	LYS
33	BP	83	VAL
33	BP	95	VAL
33	BP	101	VAL
33	BP	106	LEU
33	BP	112	LEU
33	BP	119	GLU
33	BP	132	LYS
33	BP	144	GLU
33	BP	148	LEU
34	BQ	1	MET
34	BQ	6	ARG

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Mol	Chain	Res	Type
34	BQ	7	MET
34	BQ	8	LYS
34	BQ	16	ARG
34	BQ	21	THR
34	BQ	22	LYS
34	BQ	31	ASP
34	BQ	35	VAL
34	BQ	42	ILE
34	BQ	45	GLN
34	BQ	55	VAL
34	BQ	59	ARG
34	BQ	63	LYS
34	BQ	75	THR
34	BQ	81	VAL
34	BQ	109	VAL
34	BQ	110	THR
34	BQ	130	LYS
34	BQ	135	ASP
35	BR	1	MET
35	BR	6	SER
35	BR	18	LEU
35	BR	28	LEU
35	BR	29	LEU
35	BR	33	ARG
35	BR	36	THR
35	BR	44	LEU
35	BR	54	LEU
35	BR	57	ARG
35	BR	60	LEU
35	BR	65	LEU
35	BR	67	LEU
35	BR	73	VAL
35	BR	75	LEU
35	BR	79	LEU
35	BR	86	ARG
35	BR	100	LEU
35	BR	111	LEU
35	BR	114	VAL
36	BS	3	ARG
36	BS	13	ARG
36	BS	14	VAL
36	BS	15	ARG

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Mol	Chain	Res	Type
36	BS	20	ARG
36	BS	25	ARG
36	BS	36	TYR
36	BS	38	GLN
36	BS	49	VAL
36	BS	52	SER
36	BS	59	LYS
36	BS	69	VAL
36	BS	78	LEU
36	BS	82	ILE
36	BS	84	GLN
36	BS	95	HIS
36	BS	110	LEU
37	BT	6	LEU
37	BT	8	LYS
37	BT	13	ARG
37	BT	17	THR
37	BT	23	ARG
37	BT	28	VAL
37	BT	36	GLU
37	BT	49	VAL
37	BT	53	ARG
37	BT	59	THR
37	BT	67	SER
37	BT	75	ILE
37	BT	78	LEU
37	BT	82	LEU
37	BT	89	VAL
37	BT	93	ARG
37	BT	95	ARG
37	BT	96	ARG
37	BT	107	ASP
37	BT	111	ARG
37	BT	118	ARG
37	BT	124	ASP
38	BU	8	VAL
38	BU	19	LYS
38	BU	27	LEU
38	BU	31	SER
38	BU	34	LYS
38	BU	36	ARG
38	BU	59	ARG

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Mol	Chain	Res	Type
38	BU	60	LEU
38	BU	74	LEU
38	BU	83	LEU
38	BU	85	LYS
38	BU	89	GLU
38	BU	92	ARG
38	BU	104	GLN
38	BU	108	GLU
39	BV	18	LEU
39	BV	21	ARG
39	BV	28	GLU
39	BV	32	THR
39	BV	35	LEU
39	BV	46	VAL
39	BV	52	VAL
39	BV	61	VAL
39	BV	62	LEU
39	BV	72	VAL
39	BV	79	VAL
39	BV	85	LYS
39	BV	89	GLN
39	BV	95	LEU
40	BW	11	ARG
40	BW	15	ARG
40	BW	17	VAL
40	BW	19	LEU
40	BW	23	LEU
40	BW	27	LYS
40	BW	51	LEU
40	BW	68	ARG
40	BW	83	LYS
40	BW	96	ILE
40	BW	100	THR
40	BW	107	LEU
41	BX	35	THR
41	BX	45	THR
41	BX	52	VAL
41	BX	54	VAL
41	BX	57	LEU
41	BX	60	ARG
41	BX	66	LEU
41	BX	68	ARG

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Mol	Chain	Res	Type
41	BX	76	ARG
41	BX	92	LEU
42	BY	2	ARG
42	BY	8	LYS
42	BY	19	LYS
42	BY	23	ARG
42	BY	29	GLU
42	BY	34	LYS
42	BY	47	LYS
42	BY	55	TYR
42	BY	64	GLU
42	BY	70	SER
42	BY	72	VAL
42	BY	73	ARG
42	BY	91	GLU
42	BY	97	ARG
42	BY	106	LEU
43	BZ	5	LEU
43	BZ	6	LYS
43	BZ	11	GLU
43	BZ	18	LEU
43	BZ	19	ARG
43	BZ	32	HIS
43	BZ	60	GLU
43	BZ	61	LEU
43	BZ	72	ARG
43	BZ	74	VAL
43	BZ	76	LEU
43	BZ	86	VAL
43	BZ	91	LEU
43	BZ	119	GLU
43	BZ	124	ILE
43	BZ	126	VAL
43	BZ	128	VAL
43	BZ	138	GLU
43	BZ	144	LEU
43	BZ	154	ASP
43	BZ	155	LEU
43	BZ	156	LYS
43	BZ	161	VAL
43	BZ	165	VAL
43	BZ	170	THR

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Mol	Chain	Res	Type
43	BZ	171	ILE
43	BZ	181	GLU
43	BZ	196	VAL
44	B0	9	SER
44	B0	11	ARG
44	B0	19	LYS
44	B0	20	ARG
44	B0	41	ARG
44	B0	46	LYS
44	B0	53	MET
44	B0	55	ARG
44	B0	74	ARG
45	B1	4	VAL
45	B1	21	ARG
45	B1	26	ARG
45	B1	30	VAL
45	B1	35	THR
45	B1	40	ARG
45	B1	46	LEU
45	B1	51	VAL
45	B1	58	ILE
45	B1	59	THR
45	B1	80	LEU
45	B1	83	GLU
45	B1	85	LEU
45	B1	95	LEU
45	B1	97	LEU
46	B2	28	LYS
46	B2	30	ARG
46	B2	32	LEU
46	B2	52	ASP
46	B2	53	LEU
46	B2	55	ARG
46	B2	64	LEU
46	B2	68	ARG
47	B3	8	LEU
47	B3	18	ASP
47	B3	23	LEU
47	B3	31	LEU
47	B3	44	ARG
47	B3	54	VAL
48	B4	14	ILE

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Mol	Chain	Res	Type
48	B4	18	CYS
48	B4	22	ILE
48	B4	27	THR
48	B4	33	VAL
48	B4	39	CYS
48	B4	43	TYR
49	B5	6	VAL
49	B5	15	ARG
49	B5	16	ARG
49	B5	29	THR
49	B5	37	LYS
49	B5	40	LYS
49	B5	55	ARG
50	B6	4	GLU
50	B6	13	CYS
50	B6	30	THR
50	B6	33	LYS
50	B6	35	GLU
50	B6	38	LYS
50	B6	40	CYS
50	B6	44	ARG
50	B6	48	VAL
51	B7	1	MET
51	B7	4	THR
51	B7	8	ASN
51	B7	9	ARG
51	B7	24	THR
51	B7	43	THR
51	B7	47	ARG
52	B8	6	THR
52	B8	14	VAL
52	B8	26	LYS
52	B8	29	LYS
52	B8	32	LEU
52	B8	41	ILE
52	B8	58	ILE
53	B9	4	ARG
53	B9	17	ILE
2	CB	15	VAL
2	CB	16	HIS
2	CB	17	PHE
2	CB	21	ARG

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Mol	Chain	Res	Type
2	CB	67	THR
2	CB	68	ILE
2	CB	71	VAL
2	CB	74	LYS
2	CB	75	LYS
2	CB	80	ILE
2	CB	87	ARG
2	CB	93	VAL
2	CB	94	ASN
2	CB	111	ARG
2	CB	126	GLU
2	CB	139	LYS
2	CB	145	LEU
2	CB	150	SER
2	CB	154	LEU
2	CB	155	LEU
2	CB	158	LEU
2	CB	160	ASP
2	CB	170	GLU
2	CB	175	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	198	ASP
2	CB	200	ILE
2	CB	208	ILE
2	CB	221	LEU
2	CB	224	GLN
2	CB	231	GLU
2	CB	238	LEU
2	CB	240	GLN
3	CC	8	ILE
3	CC	19	GLU
3	CC	20	SER
3	CC	31	HIS
3	CC	35	GLU
3	CC	40	ARG
3	CC	46	GLU
3	CC	47	LEU
3	CC	49	SER
3	CC	52	LEU
3	CC	55	VAL
3	CC	102	ASN

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Mol	Chain	Res	Type
3	CC	103	VAL
3	CC	128	PHE
3	CC	130	VAL
3	CC	132	ARG
3	CC	136	GLN
3	CC	138	VAL
3	CC	140	ARG
3	CC	143	GLU
3	CC	151	VAL
3	CC	152	ILE
3	CC	164	ARG
3	CC	165	THR
3	CC	167	TRP
3	CC	176	HIS
3	CC	178	LEU
3	CC	192	THR
3	CC	196	LEU
3	CC	198	VAL
4	CD	8	VAL
4	CD	15	GLU
4	CD	19	LEU
4	CD	28	SER
4	CD	31	CYS
4	CD	33	MET
4	CD	53	ASP
4	CD	58	LEU
4	CD	65	ARG
4	CD	83	SER
4	CD	105	VAL
4	CD	106	TYR
4	CD	110	PHE
4	CD	120	LEU
4	CD	127	THR
4	CD	135	LEU
4	CD	158	ILE
4	CD	170	VAL
4	CD	181	MET
4	CD	188	LEU
4	CD	194	LEU
4	CD	196	LEU
4	CD	202	LEU
5	CE	12	LEU

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Mol	Chain	Res	Type
5	CE	31	LEU
5	CE	34	VAL
5	CE	41	VAL
5	CE	47	LYS
5	CE	55	VAL
5	CE	65	ASN
5	CE	76	ILE
5	CE	80	ILE
5	CE	89	ILE
5	CE	91	LEU
5	CE	143	ARG
5	CE	144	THR
5	CE	147	ASP
6	CF	15	ASP
6	CF	36	ARG
6	CF	40	VAL
6	CF	55	ASP
6	CF	64	GLN
6	CF	65	VAL
6	CF	69	GLU
6	CF	70	ASP
6	CF	72	VAL
6	CF	75	LEU
6	CF	82	ARG
7	CG	10	ARG
7	CG	12	LEU
7	CG	22	LEU
7	CG	27	ILE
7	CG	36	LYS
7	CG	47	CYS
7	CG	56	GLN
7	CG	57	GLU
7	CG	59	LEU
7	CG	61	VAL
7	CG	72	ARG
7	CG	80	VAL
7	CG	104	LEU
7	CG	110	GLN
7	CG	114	ARG
7	CG	124	LEU
7	CG	135	VAL
7	CG	143	ARG

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Mol	Chain	Res	Type
7	CG	144	MET
7	CG	146	GLU
7	CG	155	ARG
8	CH	25	ASP
8	CH	26	VAL
8	CH	29	SER
8	CH	39	LEU
8	CH	52	ASP
8	CH	63	LEU
8	CH	78	GLN
8	CH	83	ILE
8	CH	84	ARG
8	CH	85	ARG
8	CH	91	ARG
8	CH	107	LEU
8	CH	109	ILE
8	CH	112	LEU
8	CH	114	THR
8	CH	115	SER
8	CH	121	ASP
8	CH	127	LEU
8	CH	133	LEU
8	CH	137	VAL
9	CI	7	THR
9	CI	14	VAL
9	CI	31	GLN
9	CI	40	LEU
9	CI	64	THR
9	CI	87	GLN
9	CI	99	LEU
9	CI	108	VAL
9	CI	109	VAL
9	CI	117	HIS
10	CJ	8	LEU
10	CJ	15	THR
10	CJ	21	GLN
10	CJ	33	GLN
10	CJ	34	VAL
10	CJ	44	VAL
10	CJ	49	VAL
10	CJ	55	LYS
10	CJ	62	HIS

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Mol	Chain	Res	Type
10	CJ	67	THR
10	CJ	94	VAL
10	CJ	96	ILE
11	CK	31	THR
11	CK	48	ILE
11	CK	63	LEU
11	CK	84	VAL
11	CK	96	ARG
11	CK	104	GLN
11	CK	109	VAL
11	CK	114	VAL
12	CL	33	ARG
12	CL	43	VAL
12	CL	46	LYS
12	CL	53	ARG
12	CL	55	VAL
12	CL	57	LYS
12	CL	60	LEU
12	CL	67	THR
12	CL	83	VAL
12	CL	84	LEU
12	CL	97	ARG
12	CL	100	ILE
12	CL	119	LYS
13	CM	4	ILE
13	CM	15	VAL
13	CM	17	VAL
13	CM	22	ILE
13	CM	23	TYR
13	CM	27	LYS
13	CM	40	ASN
13	CM	47	ASP
13	CM	49	THR
13	CM	55	ARG
13	CM	56	LEU
13	CM	60	VAL
13	CM	64	TRP
13	CM	66	LEU
13	CM	77	ASN
13	CM	91	ARG
13	CM	92	HIS
13	CM	104	ARG

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Mol	Chain	Res	Type
13	CM	109	THR
13	CM	110	ARG
14	CN	3	ARG
14	CN	4	LYS
14	CN	7	ILE
14	CN	18	VAL
14	CN	22	THR
14	CN	25	VAL
14	CN	31	ARG
14	CN	33	VAL
14	CN	41	ARG
14	CN	42	ILE
14	CN	43	CYS
14	CN	60	SER
15	CO	3	ILE
15	CO	10	LYS
15	CO	17	ARG
15	CO	24	SER
15	CO	26	GLU
15	CO	35	ARG
15	CO	39	LEU
15	CO	41	GLU
15	CO	65	ARG
15	CO	66	LEU
15	CO	73	GLU
15	CO	76	GLU
15	CO	77	ARG
15	CO	83	GLU
15	CO	87	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	11	SER
16	CP	20	VAL
16	CP	28	ARG
16	CP	33	ILE
16	CP	38	TYR
16	CP	45	THR
16	CP	47	ASP
16	CP	53	VAL
16	CP	62	VAL
16	CP	67	THR
16	CP	69	THR

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Mol	Chain	Res	Type
16	CP	76	GLN
16	CP	79	VAL
17	CQ	6	LEU
17	CQ	9	VAL
17	CQ	13	ASP
17	CQ	50	LYS
17	CQ	53	LEU
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	62	SER
17	CQ	68	ARG
17	CQ	74	LEU
17	CQ	77	VAL
17	CQ	82	MET
17	CQ	86	GLU
18	CR	21	LYS
18	CR	31	LEU
18	CR	32	ARG
18	CR	37	VAL
18	CR	58	LEU
18	CR	76	LEU
18	CR	82	THR
18	CR	85	LEU
18	CR	86	VAL
19	CS	7	LYS
19	CS	9	VAL
19	CS	11	VAL
19	CS	22	LEU
19	CS	23	ASN
19	CS	36	ARG
19	CS	37	ARG
19	CS	43	GLU
19	CS	44	MET
19	CS	57	HIS
19	CS	62	ILE
19	CS	70	LYS
19	CS	77	THR
19	CS	79	THR
20	CT	4	LYS
20	CT	10	LEU
20	CT	24	LEU
20	CT	30	LYS

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Mol	Chain	Res	Type
20	CT	37	SER
20	CT	54	LYS
20	CT	56	MET
20	CT	73	HIS
20	CT	75	ASN
20	CT	84	LEU
21	CU	7	ARG
21	CU	10	ARG
21	CU	13	ILE
21	CU	20	LYS
21	CU	22	ARG
22	CY	5	ILE
22	CY	11	GLU
22	CY	16	ILE
22	CY	24	LEU
22	CY	26	LYS
22	CY	32	THR
22	CY	40	ILE
22	CY	42	SER
22	CY	58	ASN
22	CY	61	LEU
22	CY	62	VAL
22	CY	64	SER
22	CY	70	MET
22	CY	74	ILE
22	CY	76	GLU
22	CY	77	LEU
22	CY	88	LEU
22	CY	93	GLU
22	CY	96	ARG
25	DD	12	SER
25	DD	14	ARG
25	DD	37	LEU
25	DD	61	LEU
25	DD	72	LYS
25	DD	94	LEU
25	DD	103	ARG
25	DD	106	ILE
25	DD	111	LEU
25	DD	113	VAL
25	DD	138	VAL
25	DD	140	THR

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Mol	Chain	Res	Type
25	DD	141	VAL
25	DD	154	LYS
25	DD	155	LEU
25	DD	173	VAL
25	DD	192	THR
25	DD	193	VAL
25	DD	200	ASP
25	DD	211	ARG
25	DD	217	ARG
25	DD	221	VAL
25	DD	229	VAL
25	DD	242	ARG
25	DD	253	GLN
25	DD	257	LEU
25	DD	259	THR
25	DD	271	ILE
26	DE	7	VAL
26	DE	9	VAL
26	DE	12	THR
26	DE	21	VAL
26	DE	24	THR
26	DE	33	VAL
26	DE	34	VAL
26	DE	49	LEU
26	DE	52	LEU
26	DE	72	VAL
26	DE	73	GLU
26	DE	75	VAL
26	DE	77	ILE
26	DE	78	LEU
26	DE	79	ARG
26	DE	82	ARG
26	DE	87	GLU
26	DE	93	VAL
26	DE	111	ARG
26	DE	116	VAL
26	DE	119	ARG
26	DE	128	SER
26	DE	144	ARG
26	DE	154	LYS
26	DE	163	GLU
26	DE	167	VAL

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Mol	Chain	Res	Type
26	DE	170	LEU
26	DE	175	VAL
26	DE	179	GLU
26	DE	181	LEU
26	DE	184	VAL
26	DE	188	VAL
27	DF	12	LEU
27	DF	15	SER
27	DF	24	LEU
27	DF	33	LEU
27	DF	38	ARG
27	DF	53	THR
27	DF	57	VAL
27	DF	74	ARG
27	DF	82	ILE
27	DF	88	VAL
27	DF	106	ARG
27	DF	108	LYS
27	DF	110	LEU
27	DF	117	ARG
27	DF	126	VAL
27	DF	135	LYS
27	DF	140	LEU
27	DF	145	GLU
27	DF	157	VAL
27	DF	158	THR
27	DF	161	GLU
27	DF	162	LEU
27	DF	170	LEU
27	DF	183	VAL
27	DF	192	LEU
27	DF	197	ASP
27	DF	201	VAL
28	DG	3	LEU
28	DG	5	VAL
28	DG	13	GLU
28	DG	20	ILE
28	DG	28	VAL
28	DG	31	VAL
28	DG	43	LEU
28	DG	47	LYS
28	DG	60	LEU

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Mol	Chain	Res	Type
28	DG	71	THR
28	DG	80	PHE
28	DG	128	ARG
28	DG	133	LEU
28	DG	135	LEU
28	DG	143	GLU
28	DG	148	MET
28	DG	152	LEU
28	DG	153	ARG
28	DG	159	VAL
28	DG	165	THR
28	DG	170	ARG
29	DH	4	ILE
29	DH	15	VAL
29	DH	24	VAL
29	DH	41	MET
29	DH	44	VAL
29	DH	45	VAL
29	DH	69	ARG
29	DH	71	LEU
29	DH	77	LYS
29	DH	95	ARG
29	DH	98	LEU
29	DH	106	THR
29	DH	116	GLU
29	DH	122	THR
29	DH	130	ARG
29	DH	139	GLN
29	DH	153	LYS
29	DH	169	VAL
29	DH	171	LEU
30	DI	9	LEU
30	DI	15	VAL
30	DI	38	LEU
30	DI	43	ASN
30	DI	44	LEU
30	DI	47	LEU
30	DI	48	GLU
30	DI	58	LEU
30	DI	61	ARG
30	DI	68	LEU
30	DI	69	LYS

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Mol	Chain	Res	Type
30	DI	72	LEU
30	DI	75	LEU
30	DI	76	THR
30	DI	77	LEU
30	DI	86	THR
30	DI	92	VAL
30	DI	101	LEU
30	DI	116	LEU
30	DI	121	LYS
30	DI	123	LEU
30	DI	127	VAL
30	DI	140	LEU
30	DI	144	VAL
31	DN	9	VAL
31	DN	28	THR
31	DN	33	LEU
31	DN	34	LEU
31	DN	39	ARG
31	DN	43	THR
31	DN	46	VAL
31	DN	48	MET
31	DN	55	VAL
31	DN	61	ARG
31	DN	62	VAL
31	DN	67	LEU
31	DN	68	GLU
31	DN	73	THR
31	DN	83	LYS
31	DN	87	LEU
31	DN	89	LYS
31	DN	97	ARG
31	DN	99	LEU
31	DN	120	LEU
31	DN	131	GLN
31	DN	133	GLN
31	DN	140	VAL
32	DO	8	LEU
32	DO	10	VAL
32	DO	17	ARG
32	DO	20	MET
32	DO	23	ARG
32	DO	24	VAL

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Mol	Chain	Res	Type
32	DO	35	VAL
32	DO	53	LYS
32	DO	58	VAL
32	DO	94	ARG
32	DO	97	ARG
32	DO	98	VAL
32	DO	113	LYS
33	DP	1	MET
33	DP	21	ARG
33	DP	50	ARG
33	DP	55	ARG
33	DP	59	LEU
33	DP	65	ARG
33	DP	68	GLN
33	DP	70	GLN
33	DP	71	VAL
33	DP	75	ILE
33	DP	76	LYS
33	DP	83	VAL
33	DP	95	VAL
33	DP	101	VAL
33	DP	106	LEU
33	DP	112	LEU
33	DP	119	GLU
33	DP	132	LYS
33	DP	144	GLU
33	DP	148	LEU
33	DP	149	GLU
34	DQ	1	MET
34	DQ	6	ARG
34	DQ	7	MET
34	DQ	8	LYS
34	DQ	16	ARG
34	DQ	21	THR
34	DQ	22	LYS
34	DQ	31	ASP
34	DQ	35	VAL
34	DQ	42	ILE
34	DQ	45	GLN
34	DQ	55	VAL
34	DQ	59	ARG
34	DQ	63	LYS

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Mol	Chain	Res	Type
34	DQ	75	THR
34	DQ	81	VAL
34	DQ	109	VAL
34	DQ	110	THR
34	DQ	130	LYS
34	DQ	135	ASP
35	DR	1	MET
35	DR	6	SER
35	DR	18	LEU
35	DR	28	LEU
35	DR	29	LEU
35	DR	33	ARG
35	DR	36	THR
35	DR	44	LEU
35	DR	54	LEU
35	DR	57	ARG
35	DR	60	LEU
35	DR	65	LEU
35	DR	67	LEU
35	DR	73	VAL
35	DR	75	LEU
35	DR	79	LEU
35	DR	86	ARG
35	DR	100	LEU
35	DR	102	GLU
35	DR	111	LEU
35	DR	114	VAL
36	DS	3	ARG
36	DS	13	ARG
36	DS	14	VAL
36	DS	15	ARG
36	DS	20	ARG
36	DS	25	ARG
36	DS	31	SER
36	DS	36	TYR
36	DS	38	GLN
36	DS	49	VAL
36	DS	52	SER
36	DS	59	LYS
36	DS	69	VAL
36	DS	78	LEU
36	DS	82	ILE

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Mol	Chain	Res	Type
36	DS	83	LYS
36	DS	84	GLN
36	DS	95	HIS
36	DS	110	LEU
37	DT	6	LEU
37	DT	8	LYS
37	DT	13	ARG
37	DT	16	ARG
37	DT	17	THR
37	DT	23	ARG
37	DT	28	VAL
37	DT	36	GLU
37	DT	49	VAL
37	DT	59	THR
37	DT	67	SER
37	DT	75	ILE
37	DT	82	LEU
37	DT	89	VAL
37	DT	93	ARG
37	DT	95	ARG
37	DT	96	ARG
37	DT	107	ASP
37	DT	111	ARG
37	DT	118	ARG
37	DT	124	ASP
38	DU	8	VAL
38	DU	19	LYS
38	DU	27	LEU
38	DU	31	SER
38	DU	34	LYS
38	DU	36	ARG
38	DU	59	ARG
38	DU	60	LEU
38	DU	74	LEU
38	DU	83	LEU
38	DU	92	ARG
38	DU	104	GLN
38	DU	108	GLU
39	DV	18	LEU
39	DV	21	ARG
39	DV	32	THR
39	DV	35	LEU

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Mol	Chain	Res	Type
39	DV	46	VAL
39	DV	51	VAL
39	DV	52	VAL
39	DV	61	VAL
39	DV	62	LEU
39	DV	68	LYS
39	DV	72	VAL
39	DV	79	VAL
39	DV	85	LYS
39	DV	95	LEU
40	DW	11	ARG
40	DW	15	ARG
40	DW	17	VAL
40	DW	19	LEU
40	DW	23	LEU
40	DW	27	LYS
40	DW	51	LEU
40	DW	68	ARG
40	DW	83	LYS
40	DW	96	ILE
40	DW	100	THR
40	DW	107	LEU
41	DX	35	THR
41	DX	45	THR
41	DX	52	VAL
41	DX	54	VAL
41	DX	57	LEU
41	DX	60	ARG
41	DX	66	LEU
41	DX	76	ARG
41	DX	92	LEU
42	DY	2	ARG
42	DY	8	LYS
42	DY	19	LYS
42	DY	23	ARG
42	DY	29	GLU
42	DY	34	LYS
42	DY	47	LYS
42	DY	49	VAL
42	DY	55	TYR
42	DY	64	GLU
42	DY	70	SER

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Mol	Chain	Res	Type
42	DY	72	VAL
42	DY	73	ARG
42	DY	97	ARG
42	DY	106	LEU
43	DZ	11	GLU
43	DZ	18	LEU
43	DZ	19	ARG
43	DZ	32	HIS
43	DZ	60	GLU
43	DZ	61	LEU
43	DZ	72	ARG
43	DZ	74	VAL
43	DZ	76	LEU
43	DZ	86	VAL
43	DZ	91	LEU
43	DZ	119	GLU
43	DZ	124	ILE
43	DZ	126	VAL
43	DZ	128	VAL
43	DZ	138	GLU
43	DZ	144	LEU
43	DZ	154	ASP
43	DZ	155	LEU
43	DZ	156	LYS
43	DZ	161	VAL
43	DZ	165	VAL
43	DZ	170	THR
43	DZ	171	ILE
43	DZ	181	GLU
43	DZ	196	VAL
44	D0	9	SER
44	D0	14	ARG
44	D0	19	LYS
44	D0	20	ARG
44	D0	41	ARG
44	D0	46	LYS
44	D0	53	MET
44	D0	55	ARG
44	D0	68	GLU
44	D0	74	ARG
45	D1	4	VAL
45	D1	21	ARG

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Mol	Chain	Res	Type
45	D1	26	ARG
45	D1	30	VAL
45	D1	35	THR
45	D1	40	ARG
45	D1	46	LEU
45	D1	51	VAL
45	D1	58	ILE
45	D1	59	THR
45	D1	80	LEU
45	D1	83	GLU
45	D1	85	LEU
45	D1	95	LEU
45	D1	97	LEU
46	D2	28	LYS
46	D2	30	ARG
46	D2	32	LEU
46	D2	34	GLU
46	D2	53	LEU
46	D2	55	ARG
46	D2	64	LEU
46	D2	68	ARG
46	D2	71	ASN
47	D3	8	LEU
47	D3	18	ASP
47	D3	23	LEU
47	D3	31	LEU
47	D3	40	THR
47	D3	44	ARG
47	D3	54	VAL
48	D4	14	ILE
48	D4	18	CYS
48	D4	22	ILE
48	D4	33	VAL
48	D4	39	CYS
48	D4	43	TYR
49	D5	6	VAL
49	D5	16	ARG
49	D5	29	THR
49	D5	40	LYS
49	D5	55	ARG
50	D6	4	GLU
50	D6	13	CYS

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Mol	Chain	Res	Type
50	D6	30	THR
50	D6	33	LYS
50	D6	35	GLU
50	D6	38	LYS
50	D6	40	CYS
50	D6	44	ARG
50	D6	48	VAL
50	D6	52	VAL
51	D7	1	MET
51	D7	8	ASN
51	D7	9	ARG
51	D7	24	THR
51	D7	43	THR
52	D8	6	THR
52	D8	14	VAL
52	D8	26	LYS
52	D8	29	LYS
52	D8	32	LEU
52	D8	41	ILE
52	D8	58	ILE
53	D9	4	ARG
53	D9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (91) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	146	GLN
3	AC	6	HIS
3	AC	176	HIS
4	AD	129	ASN
5	AE	141	GLN
6	AF	94	GLN
7	AG	28	ASN
7	AG	64	GLN
9	AI	31	GLN
9	AI	73	GLN
9	AI	124	GLN
10	AJ	56	HIS
11	AK	99	GLN
16	AP	16	HIS
19	AS	83	HIS

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Mol	Chain	Res	Type
22	AY	9	GLN
22	AY	58	ASN
22	AY	89	GLN
25	BD	126	GLN
25	BD	253	GLN
26	BE	143	ASN
26	BE	180	ASN
26	BE	192	ASN
27	BF	69	HIS
27	BF	169	ASN
28	BG	26	GLN
30	BI	74	ASN
33	BP	38	GLN
33	BP	70	GLN
34	BQ	12	GLN
34	BQ	45	GLN
34	BQ	141	GLN
35	BR	50	HIS
38	BU	94	ASN
40	BW	60	ASN
41	BX	31	HIS
41	BX	82	GLN
47	B3	32	GLN
53	B9	36	GLN
2	CB	40	HIS
3	CC	6	HIS
3	CC	31	HIS
3	CC	37	GLN
3	CC	118	GLN
3	CC	162	GLN
4	CD	42	GLN
4	CD	45	GLN
4	CD	129	ASN
5	CE	141	GLN
7	CG	56	GLN
7	CG	64	GLN
7	CG	106	GLN
7	CG	110	GLN
7	CG	148	ASN
9	CI	3	GLN
9	CI	38	GLN
9	CI	87	GLN

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Mol	Chain	Res	Type
9	CI	124	GLN
10	CJ	56	HIS
11	CK	99	GLN
13	CM	40	ASN
13	CM	92	HIS
14	CN	52	GLN
15	CO	28	GLN
16	CP	16	HIS
22	CY	9	GLN
22	CY	31	GLN
22	CY	33	HIS
22	CY	36	ASN
22	CY	38	HIS
22	CY	89	GLN
25	DD	126	GLN
25	DD	164	GLN
27	DF	69	HIS
27	DF	75	HIS
27	DF	169	ASN
28	DG	40	ASN
30	DI	43	ASN
33	DP	38	GLN
33	DP	70	GLN
34	DQ	45	GLN
35	DR	50	HIS
40	DW	60	ASN
41	DX	31	HIS
41	DX	82	GLN
47	D3	32	GLN
48	D4	46	GLN
49	D5	4	HIS
53	D9	20	HIS
53	D9	36	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1490/1522 (97%)	308 (20%)	32 (2%)
1	CA	1490/1522 (97%)	330 (22%)	34 (2%)
23	BA	2819/2915 (96%)	524 (18%)	72 (2%)
23	DA	2788/2915 (95%)	496 (17%)	64 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
24	BB	119/122 (97%)	19 (15%)	0
24	DB	119/122 (97%)	21 (17%)	0
All	All	8825/9118 (96%)	1698 (19%)	202 (2%)

All (1698) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	7	G
1	AA	9	G
1	AA	32	A
1	AA	39	G
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	59	A
1	AA	61	G
1	AA	67	C
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	91	C
1	AA	92	C
1	AA	93	G
1	AA	96	U
1	AA	97	G
1	AA	115	G
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	144	G
1	AA	145	G
1	AA	146	G
1	AA	150	C
1	AA	156	G
1	AA	163	C
1	AA	173	U
1	AA	182	U
1	AA	189(G)	G
1	AA	195	A

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Mol	Chain	Res	Type
1	AA	197	A
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	306	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	388	G
1	AA	391	G
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	437	U
1	AA	439	A
1	AA	441	A
1	AA	442	C

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Mol	Chain	Res	Type
1	AA	452	A
1	AA	458	C
1	AA	461	A
1	AA	476	G
1	AA	485	G
1	AA	495	A
1	AA	496	A
1	AA	498	U
1	AA	505	G
1	AA	506	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	536	C
1	AA	545	C
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	588	G
1	AA	596	C
1	AA	617	G
1	AA	623	C
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	653	A
1	AA	665	A
1	AA	666	G
1	AA	673	G
1	AA	687	A
1	AA	688	G
1	AA	723	U

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Mol	Chain	Res	Type
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	764	C
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	817	C
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	829	G
1	AA	833	U
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	851	G
1	AA	853	G
1	AA	859	A
1	AA	860	A
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	937	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	989	C
1	AA	992	U

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Mol	Chain	Res	Type
1	AA	993	G
1	AA	1000	U
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A
1	AA	1005	A
1	AA	1006	C
1	AA	1007	C
1	AA	1009	G
1	AA	1010	G
1	AA	1011	G
1	AA	1022	G
1	AA	1023	G
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1029	C
1	AA	1030	C
1	AA	1030(A)	G
1	AA	1030(B)	C
1	AA	1030(C)	G
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	G
1	AA	1037	C
1	AA	1044	A
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1081	G
1	AA	1082	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U

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Mol	Chain	Res	Type
1	AA	1127	G
1	AA	1128	C
1	AA	1129	C
1	AA	1130	A
1	AA	1133	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1146	A
1	AA	1147	C
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1166	G
1	AA	1168	A
1	AA	1180	A
1	AA	1181	G
1	AA	1182	G
1	AA	1189	C
1	AA	1196	U
1	AA	1197	G
1	AA	1200	C
1	AA	1201	A
1	AA	1202	G
1	AA	1203	C
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1225	A
1	AA	1227	A
1	AA	1230	C
1	AA	1236	A
1	AA	1238	A
1	AA	1240	U
1	AA	1249	C
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1270	C

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Mol	Chain	Res	Type
1	AA	1273	G
1	AA	1278	U
1	AA	1279	A
1	AA	1280	A
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1294	G
1	AA	1297	C
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1320	C
1	AA	1321	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1359	C
1	AA	1360	A
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1381	U
1	AA	1397	C
1	AA	1398	A
1	AA	1406	U
1	AA	1416	G
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G

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Mol	Chain	Res	Type
1	AA	1459	C
1	AA	1460	A
1	AA	1461	G
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1508	G
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
23	BA	10	G
23	BA	15	G
23	BA	34	C
23	BA	45	C
23	BA	69	C
23	BA	71	A
23	BA	72	U
23	BA	74	A
23	BA	75	G
23	BA	84	A
23	BA	90	U
23	BA	99	U
23	BA	102	G
23	BA	103	A
23	BA	118	A
23	BA	119	A
23	BA	120	U
23	BA	139(A)	G
23	BA	141	A
23	BA	154	G
23	BA	154(A)	C

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Mol	Chain	Res	Type
23	BA	173	G
23	BA	181	A
23	BA	182	A
23	BA	196	A
23	BA	197	A
23	BA	199	A
23	BA	200	U
23	BA	204	A
23	BA	205	G
23	BA	215	G
23	BA	216	A
23	BA	221	A
23	BA	222	A
23	BA	225	A
23	BA	229	A
23	BA	233	A
23	BA	248	G
23	BA	250	G
23	BA	271(I)	G
23	BA	271(K)	U
23	BA	271(L)	U
23	BA	271(M)	G
23	BA	271(N)	U
23	BA	271(O)	C
23	BA	271(R)	G
23	BA	272(B)	G
23	BA	275	G
23	BA	279	C
23	BA	286	C
23	BA	311	A
23	BA	329	G
23	BA	330	A
23	BA	332	A
23	BA	333	G
23	BA	342	G
23	BA	352	G
23	BA	363	G
23	BA	363(F)	A
23	BA	386	G
23	BA	396	G
23	BA	405	U
23	BA	406	G

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Mol	Chain	Res	Type
23	BA	411	G
23	BA	412	A
23	BA	415	A
23	BA	422	A
23	BA	427	U
23	BA	428	A
23	BA	444	C
23	BA	448	U
23	BA	454	A
23	BA	456	C
23	BA	470	A
23	BA	475	U
23	BA	480	A
23	BA	481	G
23	BA	482	A
23	BA	504	U
23	BA	505	A
23	BA	509	C
23	BA	529	A
23	BA	530	G
23	BA	531	C
23	BA	532	A
23	BA	533	G
23	BA	545	G
23	BA	546	C
23	BA	549	G
23	BA	563	G
23	BA	573	G
23	BA	575	A
23	BA	586	A
23	BA	587	C
23	BA	588	U
23	BA	603	A
23	BA	604	G
23	BA	606	U
23	BA	607	U
23	BA	614(B)	G
23	BA	615	G
23	BA	619	G
23	BA	627	A
23	BA	634	C
23	BA	637	A

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Mol	Chain	Res	Type
23	BA	645	C
23	BA	646	A
23	BA	647	G
23	BA	652(B)	A
23	BA	652(C)	G
23	BA	652(E)	G
23	BA	652(F)	G
23	BA	652(G)	G
23	BA	652(P)	G
23	BA	652(Q)	G
23	BA	652(R)	C
23	BA	652(T)	C
23	BA	652(U)	G
23	BA	669	G
23	BA	685	A
23	BA	686	G
23	BA	707	G
23	BA	708	C
23	BA	730	C
23	BA	746	A
23	BA	747	U
23	BA	752	A
23	BA	753	C
23	BA	764	A
23	BA	765	G
23	BA	774	A
23	BA	775	G
23	BA	776	G
23	BA	782	A
23	BA	784	A
23	BA	785	G
23	BA	790	C
23	BA	792	G
23	BA	805	G
23	BA	812	C
23	BA	819	A
23	BA	827	U
23	BA	828	U
23	BA	830	G
23	BA	857	C
23	BA	859	G
23	BA	866	A

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Mol	Chain	Res	Type
23	BA	880	G
23	BA	884	C
23	BA	885	C
23	BA	886	C
23	BA	888	C
23	BA	889	C
23	BA	890	A
23	BA	896	A
23	BA	897	C
23	BA	899	A
23	BA	900	A
23	BA	901	A
23	BA	910	A
23	BA	916	G
23	BA	917	A
23	BA	932	G
23	BA	938	G
23	BA	941	A
23	BA	945	A
23	BA	946	G
23	BA	958	U
23	BA	959	A
23	BA	961	C
23	BA	974	G
23	BA	975	C
23	BA	983	A
23	BA	994	C
23	BA	996	A
23	BA	1005	C
23	BA	1012	U
23	BA	1013	C
23	BA	1022	G
23	BA	1026	U
23	BA	1027	A
23	BA	1033	U
23	BA	1038	C
23	BA	1039	G
23	BA	1042	G
23	BA	1043	C
23	BA	1044	G
23	BA	1045	A
23	BA	1046	A

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Mol	Chain	Res	Type
23	BA	1047	G
23	BA	1048	A
23	BA	1049	C
23	BA	1050	A
23	BA	1052	C
23	BA	1107	G
23	BA	1108	U
23	BA	1109	C
23	BA	1110	G
23	BA	1111	A
23	BA	1112	G
23	BA	1128	A
23	BA	1129	A
23	BA	1130	U
23	BA	1135	C
23	BA	1136	G
23	BA	1139	G
23	BA	1144	G
23	BA	1155	A
23	BA	1156	A
23	BA	1171	G
23	BA	1173	G
23	BA	1174	A
23	BA	1175	U
23	BA	1176	G
23	BA	1177	A
23	BA	1178	C
23	BA	1210	A
23	BA	1211	U
23	BA	1219	G
23	BA	1220	A
23	BA	1253	A
23	BA	1256	G
23	BA	1271	G
23	BA	1272	A
23	BA	1273	U
23	BA	1300	U
23	BA	1301	A
23	BA	1303	G
23	BA	1305	C
23	BA	1308	A
23	BA	1314	C

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Mol	Chain	Res	Type
23	BA	1321	A
23	BA	1329	U
23	BA	1345	C
23	BA	1352	U
23	BA	1359	A
23	BA	1360	A
23	BA	1365	A
23	BA	1370	C
23	BA	1373	A
23	BA	1379	A
23	BA	1380	G
23	BA	1384	A
23	BA	1385	G
23	BA	1386	C
23	BA	1404	C
23	BA	1416	G
23	BA	1417	C
23	BA	1419	A
23	BA	1421	G
23	BA	1427	A
23	BA	1428	C
23	BA	1430	C
23	BA	1436	G
23	BA	1437	C
23	BA	1445	A
23	BA	1449	A
23	BA	1450	G
23	BA	1452	A
23	BA	1459	G
23	BA	1467	C
23	BA	1471	A
23	BA	1472	A
23	BA	1482	G
23	BA	1487	G
23	BA	1488	G
23	BA	1489	U
23	BA	1493	C
23	BA	1496	A
23	BA	1497	U
23	BA	1507	A
23	BA	1508	A
23	BA	1509	C

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Mol	Chain	Res	Type
23	BA	1509(A)	A
23	BA	1525	G
23	BA	1531	C
23	BA	1541	G
23	BA	1542	A
23	BA	1543	C
23	BA	1545	A
23	BA	1558	A
23	BA	1559	G
23	BA	1566	A
23	BA	1569	A
23	BA	1578	U
23	BA	1580	A
23	BA	1581	G
23	BA	1582	C
23	BA	1584	C
23	BA	1586	A
23	BA	1588	C
23	BA	1598	C
23	BA	1608	A
23	BA	1609	A
23	BA	1610	A
23	BA	1617	C
23	BA	1618	A
23	BA	1631	C
23	BA	1640	C
23	BA	1647	G
23	BA	1648	C
23	BA	1653	G
23	BA	1654	A
23	BA	1674	G
23	BA	1696	G
23	BA	1700	A
23	BA	1701	A
23	BA	1721	G
23	BA	1722	A
23	BA	1739	U
23	BA	1740	G
23	BA	1742	G
23	BA	1746	G
23	BA	1756	G
23	BA	1762	A

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Mol	Chain	Res	Type
23	BA	1763	G
23	BA	1764	G
23	BA	1769	G
23	BA	1773	A
23	BA	1780	A
23	BA	1782	C
23	BA	1791	A
23	BA	1799	G
23	BA	1800	C
23	BA	1801	G
23	BA	1816	G
23	BA	1820	U
23	BA	1829	A
23	BA	1830	C
23	BA	1835	G
23	BA	1839	G
23	BA	1847	A
23	BA	1858	G
23	BA	1861	G
23	BA	1877	A
23	BA	1878	G
23	BA	1881	C
23	BA	1882	C
23	BA	1889	A
23	BA	1900	A
23	BA	1906	G
23	BA	1913	A
23	BA	1914	C
23	BA	1929	G
23	BA	1930	G
23	BA	1934	C
23	BA	1936	A
23	BA	1937	A
23	BA	1938	A
23	BA	1955	U
23	BA	1963	U
23	BA	1965	C
23	BA	1967	C
23	BA	1969	A
23	BA	1970	A
23	BA	1971	A
23	BA	1972	A

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Mol	Chain	Res	Type
23	BA	1982	C
23	BA	1991	U
23	BA	1992	G
23	BA	1993	U
23	BA	1997	G
23	BA	2020	A
23	BA	2023	G
23	BA	2031	A
23	BA	2033	A
23	BA	2036	C
23	BA	2043	C
23	BA	2055	C
23	BA	2056	G
23	BA	2060	A
23	BA	2061	G
23	BA	2062	A
23	BA	2069	G
23	BA	2102	U
23	BA	2103	C
23	BA	2105	C
23	BA	2107	C
23	BA	2108	C
23	BA	2113	U
23	BA	2116	G
23	BA	2117	A
23	BA	2118	U
23	BA	2120	G
23	BA	2123	G
23	BA	2126	A
23	BA	2127	G
23	BA	2131	G
23	BA	2133	G
23	BA	2134	A
23	BA	2138	C
23	BA	2142	C
23	BA	2144	U
23	BA	2145	C
23	BA	2146	C
23	BA	2147	G
23	BA	2148	G
23	BA	2154	G
23	BA	2159	G

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Mol	Chain	Res	Type
23	BA	2160	G
23	BA	2165	G
23	BA	2166	G
23	BA	2172	U
23	BA	2173	A
23	BA	2174	C
23	BA	2184	G
23	BA	2185	C
23	BA	2186	G
23	BA	2187	G
23	BA	2190	G
23	BA	2191	G
23	BA	2192	G
23	BA	2193	G
23	BA	2198	A
23	BA	2199	A
23	BA	2200	C
23	BA	2206	G
23	BA	2207	G
23	BA	2208	A
23	BA	2218	U
23	BA	2219	G
23	BA	2225	A
23	BA	2238	G
23	BA	2239	G
23	BA	2268	A
23	BA	2275	C
23	BA	2276	G
23	BA	2283	C
23	BA	2287	A
23	BA	2289	G
23	BA	2296	U
23	BA	2297	C
23	BA	2305	A
23	BA	2311	A
23	BA	2318	G
23	BA	2319	G
23	BA	2320	A
23	BA	2321	G
23	BA	2325	G
23	BA	2327	A
23	BA	2334	G

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Mol	Chain	Res	Type
23	BA	2347	C
23	BA	2350	C
23	BA	2383	G
23	BA	2385	C
23	BA	2393	A
23	BA	2400	G
23	BA	2406	U
23	BA	2407	G
23	BA	2410	G
23	BA	2414	G
23	BA	2419	U
23	BA	2422	A
23	BA	2423	U
23	BA	2425	A
23	BA	2429	G
23	BA	2430	A
23	BA	2431	U
23	BA	2435	A
23	BA	2439	A
23	BA	2440	C
23	BA	2441	C
23	BA	2448	A
23	BA	2465	C
23	BA	2469	A
23	BA	2474	C
23	BA	2476	A
23	BA	2478	A
23	BA	2498	C
23	BA	2502	G
23	BA	2505	G
23	BA	2506	U
23	BA	2518	A
23	BA	2525	G
23	BA	2529	G
23	BA	2535	G
23	BA	2549	G
23	BA	2554	U
23	BA	2555	U
23	BA	2566	A
23	BA	2567	G
23	BA	2573	C
23	BA	2609	U

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Mol	Chain	Res	Type
23	BA	2611	U
23	BA	2612	C
23	BA	2615	U
23	BA	2629	A
23	BA	2630	G
23	BA	2663	G
23	BA	2673	G
23	BA	2675	A
23	BA	2689	U
23	BA	2690	C
23	BA	2691	C
23	BA	2702	U
23	BA	2703	C
23	BA	2712(A)	A
23	BA	2713	A
23	BA	2714	G
23	BA	2726	U
23	BA	2727	G
23	BA	2733	A
23	BA	2757	A
23	BA	2758	A
23	BA	2760	C
23	BA	2765	A
23	BA	2766	G
23	BA	2778	A
23	BA	2789	C
23	BA	2790	A
23	BA	2791	C
23	BA	2802	G
23	BA	2803	C
23	BA	2808	U
23	BA	2820	A
23	BA	2821	A
23	BA	2834	G
23	BA	2835	A
23	BA	2847	U
23	BA	2872	G
23	BA	2880	C
23	BA	2892	A
23	BA	2895	U
23	BA	2897	U
24	BB	2	C

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Mol	Chain	Res	Type
24	BB	7	G
24	BB	9	G
24	BB	13	A
24	BB	19	G
24	BB	20	C
24	BB	24	G
24	BB	25	A
24	BB	40	U
24	BB	42	C
24	BB	47	C
24	BB	53	A
24	BB	54	G
24	BB	56	G
24	BB	73	A
24	BB	75	G
24	BB	106	G
24	BB	110	G
24	BB	116	G
1	CA	7	G
1	CA	9	G
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	52	G
1	CA	61	G
1	CA	65	U
1	CA	66	G
1	CA	67	C
1	CA	96	U
1	CA	97	G
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	144	G
1	CA	145	G
1	CA	146	G

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Mol	Chain	Res	Type
1	CA	150	C
1	CA	156	G
1	CA	163	C
1	CA	173	U
1	CA	182	U
1	CA	189(G)	G
1	CA	195	A
1	CA	197	A
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	289	G
1	CA	306	G
1	CA	320	C
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	344	A
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	388	G
1	CA	391	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	424	G

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Mol	Chain	Res	Type
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	434	U
1	CA	437	U
1	CA	439	A
1	CA	441	A
1	CA	442	C
1	CA	452	A
1	CA	458	C
1	CA	461	A
1	CA	476	G
1	CA	485	G
1	CA	495	A
1	CA	496	A
1	CA	498	U
1	CA	505	G
1	CA	506	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	521	G
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	536	C
1	CA	545	C
1	CA	547	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	588	G
1	CA	596	C
1	CA	617	G
1	CA	623	C
1	CA	630	G

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Mol	Chain	Res	Type
1	CA	631	G
1	CA	632	A
1	CA	653	A
1	CA	665	A
1	CA	673	G
1	CA	687	A
1	CA	688	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	764	C
1	CA	777	A
1	CA	793	U
1	CA	794	A
1	CA	817	C
1	CA	827	U
1	CA	828	A
1	CA	829	G
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	851	G
1	CA	853	G
1	CA	859	A
1	CA	860	A
1	CA	884	U
1	CA	902	G
1	CA	913	A
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	944	G
1	CA	954	G
1	CA	959	A
1	CA	961	U
1	CA	966	G
1	CA	969	A

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Mol	Chain	Res	Type
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	981	U
1	CA	984	C
1	CA	989	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	995	C
1	CA	998	G
1	CA	1001	A
1	CA	1002	G
1	CA	1003	G
1	CA	1005	A
1	CA	1006	C
1	CA	1007	C
1	CA	1011	G
1	CA	1019	C
1	CA	1020	U
1	CA	1021	G
1	CA	1024	G
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030(B)	C
1	CA	1030(C)	G
1	CA	1032	G
1	CA	1037	C
1	CA	1038	C
1	CA	1042	G
1	CA	1044	A
1	CA	1046	A
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U

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Mol	Chain	Res	Type
1	CA	1057	G
1	CA	1058	G
1	CA	1062	U
1	CA	1063	C
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1073	U
1	CA	1081	G
1	CA	1084	G
1	CA	1086	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1108	G
1	CA	1109	C
1	CA	1113	C
1	CA	1117	G
1	CA	1119	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1128	C
1	CA	1129	C
1	CA	1130	A
1	CA	1133	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1146	A
1	CA	1147	C
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1171	G
1	CA	1182	G
1	CA	1184	G
1	CA	1185	G

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Mol	Chain	Res	Type
1	CA	1187	G
1	CA	1190	G
1	CA	1194	U
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1224	G
1	CA	1225	A
1	CA	1227	A
1	CA	1228	C
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1248	A
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1263	C
1	CA	1267	C
1	CA	1269	A
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1295	G
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1307	U
1	CA	1318	A
1	CA	1319	A

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Mol	Chain	Res	Type
1	CA	1320	C
1	CA	1322	C
1	CA	1324	A
1	CA	1331	G
1	CA	1335	C
1	CA	1336	C
1	CA	1345	U
1	CA	1346	A
1	CA	1347	G
1	CA	1358	U
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1365	G
1	CA	1368	G
1	CA	1370	G
1	CA	1379	G
1	CA	1380	U
1	CA	1381	U
1	CA	1383	C
1	CA	1397	C
1	CA	1398	A
1	CA	1406	U
1	CA	1416	G
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1459	C
1	CA	1460	A
1	CA	1461	G
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A

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Mol	Chain	Res	Type
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1508	G
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
23	DA	10	G
23	DA	15	G
23	DA	34	C
23	DA	45	C
23	DA	69	C
23	DA	71	A
23	DA	72	U
23	DA	74	A
23	DA	75	G
23	DA	84	A
23	DA	90	U
23	DA	99	U
23	DA	102	G
23	DA	103	A
23	DA	118	A
23	DA	119	A
23	DA	120	U
23	DA	139(A)	G
23	DA	141	A
23	DA	154	G
23	DA	154(A)	C
23	DA	157	U
23	DA	173	G
23	DA	181	A
23	DA	182	A
23	DA	196	A
23	DA	197	A
23	DA	199	A
23	DA	200	U
23	DA	204	A

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Mol	Chain	Res	Type
23	DA	205	G
23	DA	215	G
23	DA	216	A
23	DA	221	A
23	DA	222	A
23	DA	225	A
23	DA	229	A
23	DA	233	A
23	DA	248	G
23	DA	249	C
23	DA	250	G
23	DA	265	A
23	DA	271(I)	G
23	DA	271(K)	U
23	DA	271(L)	U
23	DA	271(M)	G
23	DA	271(N)	U
23	DA	271(O)	C
23	DA	271(R)	G
23	DA	272(B)	G
23	DA	286	C
23	DA	310	A
23	DA	311	A
23	DA	324	A
23	DA	329	G
23	DA	330	A
23	DA	332	A
23	DA	333	G
23	DA	342	G
23	DA	352	G
23	DA	363	G
23	DA	363(F)	A
23	DA	386	G
23	DA	396	G
23	DA	405	U
23	DA	406	G
23	DA	411	G
23	DA	412	A
23	DA	415	A
23	DA	422	A
23	DA	427	U
23	DA	428	A

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Mol	Chain	Res	Type
23	DA	429	A
23	DA	444	C
23	DA	448	U
23	DA	454	A
23	DA	455	C
23	DA	470	A
23	DA	475	U
23	DA	480	A
23	DA	481	G
23	DA	482	A
23	DA	504	U
23	DA	505	A
23	DA	509	C
23	DA	530	G
23	DA	531	C
23	DA	532	A
23	DA	533	G
23	DA	545	G
23	DA	546	C
23	DA	549	G
23	DA	556	G
23	DA	563	G
23	DA	573	G
23	DA	575	A
23	DA	586	A
23	DA	587	C
23	DA	588	U
23	DA	603	A
23	DA	604	G
23	DA	606	U
23	DA	607	U
23	DA	614(B)	G
23	DA	615	G
23	DA	619	G
23	DA	627	A
23	DA	637	A
23	DA	645	C
23	DA	646	A
23	DA	647	G
23	DA	652(B)	A
23	DA	652(C)	G
23	DA	652(E)	G

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Mol	Chain	Res	Type
23	DA	652(U)	G
23	DA	669	G
23	DA	685	A
23	DA	686	G
23	DA	707	G
23	DA	708	C
23	DA	730	C
23	DA	752	A
23	DA	753	C
23	DA	764	A
23	DA	765	G
23	DA	774	A
23	DA	775	G
23	DA	776	G
23	DA	782	A
23	DA	784	A
23	DA	785	G
23	DA	790	C
23	DA	792	G
23	DA	805	G
23	DA	812	C
23	DA	819	A
23	DA	827	U
23	DA	828	U
23	DA	830	G
23	DA	857	C
23	DA	859	G
23	DA	866	A
23	DA	880	G
23	DA	884	C
23	DA	885	C
23	DA	886	C
23	DA	888	C
23	DA	889	C
23	DA	890	A
23	DA	896	A
23	DA	897	C
23	DA	899	A
23	DA	900	A
23	DA	901	A
23	DA	910	A
23	DA	916	G

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Mol	Chain	Res	Type
23	DA	917	A
23	DA	932	G
23	DA	938	G
23	DA	941	A
23	DA	945	A
23	DA	946	G
23	DA	958	U
23	DA	959	A
23	DA	961	C
23	DA	974	G
23	DA	975	C
23	DA	983	A
23	DA	996	A
23	DA	1005	C
23	DA	1012	U
23	DA	1013	C
23	DA	1022	G
23	DA	1026	U
23	DA	1027	A
23	DA	1033	U
23	DA	1038	C
23	DA	1039	G
23	DA	1042	G
23	DA	1043	C
23	DA	1128	A
23	DA	1129	A
23	DA	1130	U
23	DA	1135	C
23	DA	1136	G
23	DA	1139	G
23	DA	1155	A
23	DA	1170	G
23	DA	1171	G
23	DA	1210	A
23	DA	1211	U
23	DA	1219	G
23	DA	1220	A
23	DA	1253	A
23	DA	1256	G
23	DA	1271	G
23	DA	1272	A
23	DA	1273	U

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Mol	Chain	Res	Type
23	DA	1287	A
23	DA	1288	U
23	DA	1300	U
23	DA	1301	A
23	DA	1303	G
23	DA	1305	C
23	DA	1308	A
23	DA	1314	C
23	DA	1321	A
23	DA	1329	U
23	DA	1345	C
23	DA	1352	U
23	DA	1359	A
23	DA	1360	A
23	DA	1365	A
23	DA	1370	C
23	DA	1373	A
23	DA	1380	G
23	DA	1384	A
23	DA	1385	G
23	DA	1386	C
23	DA	1404	C
23	DA	1416	G
23	DA	1417	C
23	DA	1419	A
23	DA	1421	G
23	DA	1427	A
23	DA	1428	C
23	DA	1436	G
23	DA	1437	C
23	DA	1445	A
23	DA	1449	A
23	DA	1450	G
23	DA	1452	A
23	DA	1459	G
23	DA	1467	C
23	DA	1471	A
23	DA	1472	A
23	DA	1482	G
23	DA	1488	G
23	DA	1489	U
23	DA	1493	C

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Mol	Chain	Res	Type
23	DA	1496	A
23	DA	1497	U
23	DA	1507	A
23	DA	1508	A
23	DA	1509	C
23	DA	1509(A)	A
23	DA	1525	G
23	DA	1531	C
23	DA	1533	G
23	DA	1537	G
23	DA	1541	G
23	DA	1542	A
23	DA	1543	C
23	DA	1547	C
23	DA	1558	A
23	DA	1559	G
23	DA	1566	A
23	DA	1569	A
23	DA	1578	U
23	DA	1580	A
23	DA	1581	G
23	DA	1582	C
23	DA	1584	C
23	DA	1586	A
23	DA	1588	C
23	DA	1598	C
23	DA	1608	A
23	DA	1609	A
23	DA	1610	A
23	DA	1617	C
23	DA	1618	A
23	DA	1631	C
23	DA	1640	C
23	DA	1647	G
23	DA	1648	C
23	DA	1653	G
23	DA	1654	A
23	DA	1674	G
23	DA	1696	G
23	DA	1700	A
23	DA	1701	A
23	DA	1703	G

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Mol	Chain	Res	Type
23	DA	1721	G
23	DA	1722	A
23	DA	1739	U
23	DA	1740	G
23	DA	1742	G
23	DA	1746	G
23	DA	1756	G
23	DA	1762	A
23	DA	1763	G
23	DA	1764	G
23	DA	1773	A
23	DA	1780	A
23	DA	1782	C
23	DA	1791	A
23	DA	1799	G
23	DA	1800	C
23	DA	1801	G
23	DA	1816	G
23	DA	1820	U
23	DA	1829	A
23	DA	1830	C
23	DA	1835	G
23	DA	1839	G
23	DA	1847	A
23	DA	1858	G
23	DA	1861	G
23	DA	1877	A
23	DA	1878	G
23	DA	1881	C
23	DA	1882	C
23	DA	1889	A
23	DA	1900	A
23	DA	1906	G
23	DA	1913	A
23	DA	1914	C
23	DA	1929	G
23	DA	1930	G
23	DA	1934	C
23	DA	1936	A
23	DA	1937	A
23	DA	1938	A
23	DA	1955	U

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Mol	Chain	Res	Type
23	DA	1963	U
23	DA	1967	C
23	DA	1969	A
23	DA	1970	A
23	DA	1971	A
23	DA	1972	A
23	DA	1982	C
23	DA	1991	U
23	DA	1992	G
23	DA	1993	U
23	DA	1997	G
23	DA	2020	A
23	DA	2023	G
23	DA	2031	A
23	DA	2033	A
23	DA	2036	C
23	DA	2043	C
23	DA	2055	C
23	DA	2056	G
23	DA	2060	A
23	DA	2061	G
23	DA	2062	A
23	DA	2069	G
23	DA	2102	U
23	DA	2103	C
23	DA	2105	C
23	DA	2107	C
23	DA	2108	C
23	DA	2113	U
23	DA	2116	G
23	DA	2117	A
23	DA	2118	U
23	DA	2120	G
23	DA	2126	A
23	DA	2127	G
23	DA	2131	G
23	DA	2133	G
23	DA	2134	A
23	DA	2138	C
23	DA	2142	C
23	DA	2144	U
23	DA	2145	C

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Mol	Chain	Res	Type
23	DA	2146	C
23	DA	2147	G
23	DA	2148	G
23	DA	2154	G
23	DA	2159	G
23	DA	2160	G
23	DA	2165	G
23	DA	2166	G
23	DA	2172	U
23	DA	2173	A
23	DA	2174	C
23	DA	2185	C
23	DA	2186	G
23	DA	2187	G
23	DA	2190	G
23	DA	2191	G
23	DA	2192	G
23	DA	2193	G
23	DA	2198	A
23	DA	2199	A
23	DA	2200	C
23	DA	2206	G
23	DA	2207	G
23	DA	2208	A
23	DA	2218	U
23	DA	2219	G
23	DA	2225	A
23	DA	2239	G
23	DA	2240	C
23	DA	2267	A
23	DA	2268	A
23	DA	2275	C
23	DA	2283	C
23	DA	2287	A
23	DA	2289	G
23	DA	2296	U
23	DA	2297	C
23	DA	2305	A
23	DA	2311	A
23	DA	2318	G
23	DA	2319	G
23	DA	2320	A

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Mol	Chain	Res	Type
23	DA	2321	G
23	DA	2325	G
23	DA	2327	A
23	DA	2334	G
23	DA	2336	A
23	DA	2347	C
23	DA	2350	C
23	DA	2370	G
23	DA	2383	G
23	DA	2385	C
23	DA	2393	A
23	DA	2400	G
23	DA	2406	U
23	DA	2407	G
23	DA	2410	G
23	DA	2414	G
23	DA	2422	A
23	DA	2423	U
23	DA	2425	A
23	DA	2429	G
23	DA	2430	A
23	DA	2431	U
23	DA	2435	A
23	DA	2439	A
23	DA	2440	C
23	DA	2441	C
23	DA	2448	A
23	DA	2465	C
23	DA	2469	A
23	DA	2474	C
23	DA	2476	A
23	DA	2478	A
23	DA	2498	C
23	DA	2502	G
23	DA	2505	G
23	DA	2506	U
23	DA	2518	A
23	DA	2525	G
23	DA	2529	G
23	DA	2535	G
23	DA	2549	G
23	DA	2554	U

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Mol	Chain	Res	Type
23	DA	2555	U
23	DA	2566	A
23	DA	2567	G
23	DA	2573	C
23	DA	2602	A
23	DA	2603	G
23	DA	2611	U
23	DA	2612	C
23	DA	2615	U
23	DA	2629	A
23	DA	2630	G
23	DA	2663	G
23	DA	2673	G
23	DA	2675	A
23	DA	2689	U
23	DA	2690	C
23	DA	2702	U
23	DA	2703	C
23	DA	2712(A)	A
23	DA	2713	A
23	DA	2714	G
23	DA	2726	U
23	DA	2727	G
23	DA	2733	A
23	DA	2757	A
23	DA	2758	A
23	DA	2760	C
23	DA	2765	A
23	DA	2766	G
23	DA	2778	A
23	DA	2789	C
23	DA	2790	A
23	DA	2791	C
23	DA	2802	G
23	DA	2803	C
23	DA	2808	U
23	DA	2820	A
23	DA	2821	A
23	DA	2834	G
23	DA	2835	A
23	DA	2847	U
23	DA	2872	G

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Mol	Chain	Res	Type
23	DA	2880	C
23	DA	2892	A
23	DA	2895	U
23	DA	2897	U
24	DB	2	C
24	DB	5	C
24	DB	7	G
24	DB	9	G
24	DB	13	A
24	DB	19	G
24	DB	20	C
24	DB	24	G
24	DB	25	A
24	DB	40	U
24	DB	42	C
24	DB	47	C
24	DB	50	G
24	DB	53	A
24	DB	54	G
24	DB	56	G
24	DB	73	A
24	DB	75	G
24	DB	106	G
24	DB	110	G
24	DB	116	G

All (202) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	60	A
1	AA	76	C
1	AA	115	G
1	AA	119	A
1	AA	189(E)	U
1	AA	243	A
1	AA	266	G
1	AA	428	G
1	AA	429	U
1	AA	495	A
1	AA	509	A
1	AA	560	U

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Mol	Chain	Res	Type
1	AA	561	U
1	AA	687	A
1	AA	748	C
1	AA	913	A
1	AA	991	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1126	U
1	AA	1129	C
1	AA	1136	U
1	AA	1165	C
1	AA	1201	A
1	AA	1285	A
1	AA	1300	G
1	AA	1442	G
1	AA	1456	G
1	AA	1493	A
1	AA	1530	G
23	BA	9	U
23	BA	71	A
23	BA	102	G
23	BA	196	A
23	BA	199	A
23	BA	215	G
23	BA	249	C
23	BA	271(K)	U
23	BA	271(M)	G
23	BA	278	A
23	BA	363(E)	U
23	BA	405	U
23	BA	474	G
23	BA	481	G
23	BA	587	C
23	BA	669	G
23	BA	685	A
23	BA	686	G
23	BA	746	A
23	BA	752	A
23	BA	764	A
23	BA	774	A
23	BA	827	U

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Mol	Chain	Res	Type
23	BA	856	C
23	BA	900	A
23	BA	945	A
23	BA	958	U
23	BA	974	G
23	BA	1026	U
23	BA	1047	G
23	BA	1049	C
23	BA	1106	G
23	BA	1108	U
23	BA	1142(A)	A
23	BA	1155	A
23	BA	1174	A
23	BA	1175	U
23	BA	1176	G
23	BA	1210	A
23	BA	1300	U
23	BA	1379	A
23	BA	1420	U
23	BA	1427	A
23	BA	1507	A
23	BA	1530	C
23	BA	1558	A
23	BA	1608	A
23	BA	1609	A
23	BA	1617	C
23	BA	1653	G
23	BA	1799	G
23	BA	1800	C
23	BA	1819	A
23	BA	1992	G
23	BA	2122	U
23	BA	2126	A
23	BA	2171	A
23	BA	2172	U
23	BA	2207	G
23	BA	2275	C
23	BA	2288	A
23	BA	2318	G
23	BA	2406	U
23	BA	2422	A
23	BA	2430	A

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Mol	Chain	Res	Type
23	BA	2439	A
23	BA	2689	U
23	BA	2726	U
23	BA	2756	U
23	BA	2778	A
23	BA	2789	C
23	BA	2802	G
1	CA	4	U
1	CA	60	A
1	CA	65	U
1	CA	115	G
1	CA	119	A
1	CA	189(E)	U
1	CA	243	A
1	CA	266	G
1	CA	353	A
1	CA	428	G
1	CA	429	U
1	CA	495	A
1	CA	509	A
1	CA	560	U
1	CA	561	U
1	CA	687	A
1	CA	748	C
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1049	U
1	CA	1061	G
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1129	C
1	CA	1136	U
1	CA	1183	A
1	CA	1201	A
1	CA	1256	A
1	CA	1300	G
1	CA	1442	G
1	CA	1456	G
1	CA	1493	A
23	DA	9	U

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Mol	Chain	Res	Type
23	DA	71	A
23	DA	102	G
23	DA	196	A
23	DA	199	A
23	DA	215	G
23	DA	249	C
23	DA	271(K)	U
23	DA	271(M)	G
23	DA	310	A
23	DA	363(E)	U
23	DA	405	U
23	DA	474	G
23	DA	481	G
23	DA	587	C
23	DA	669	G
23	DA	685	A
23	DA	746	A
23	DA	752	A
23	DA	764	A
23	DA	774	A
23	DA	827	U
23	DA	856	C
23	DA	859	G
23	DA	900	A
23	DA	958	U
23	DA	974	G
23	DA	1026	U
23	DA	1155	A
23	DA	1210	A
23	DA	1300	U
23	DA	1301	A
23	DA	1379	A
23	DA	1420	U
23	DA	1427	A
23	DA	1507	A
23	DA	1530	C
23	DA	1558	A
23	DA	1608	A
23	DA	1617	C
23	DA	1653	G
23	DA	1799	G
23	DA	1800	C

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Mol	Chain	Res	Type
23	DA	1819	A
23	DA	1913	A
23	DA	1992	G
23	DA	2126	A
23	DA	2171	A
23	DA	2172	U
23	DA	2207	G
23	DA	2288	A
23	DA	2318	G
23	DA	2406	U
23	DA	2422	A
23	DA	2430	A
23	DA	2439	A
23	DA	2602	A
23	DA	2611	U
23	DA	2689	U
23	DA	2726	U
23	DA	2756	U
23	DA	2778	A
23	DA	2789	C
23	DA	2802	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1945 ligands modelled in this entry, 1945 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1493/1522 (98%)	0.43	68 (4%) 37 34	37, 73, 129, 165	0
1	CA	1491/1522 (97%)	0.73	118 (7%) 18 16	40, 84, 135, 175	0
2	AB	229/256 (89%)	1.66	73 (31%) 1 1	76, 103, 123, 135	0
2	CB	235/256 (91%)	2.00	101 (42%) 0 0	80, 108, 127, 135	0
3	AC	206/239 (86%)	0.80	13 (6%) 26 23	62, 81, 98, 105	0
3	CC	206/239 (86%)	1.62	57 (27%) 1 1	85, 109, 122, 130	0
4	AD	208/209 (99%)	2.22	108 (51%) 0 0	64, 85, 105, 113	0
4	CD	208/209 (99%)	2.20	105 (50%) 0 0	68, 85, 103, 111	0
5	AE	148/162 (91%)	0.67	6 (4%) 41 37	59, 73, 86, 101	0
5	CE	148/162 (91%)	1.19	20 (13%) 7 6	62, 77, 91, 105	0
6	AF	100/101 (99%)	0.91	6 (6%) 27 24	61, 72, 85, 100	0
6	CF	99/101 (98%)	1.02	4 (4%) 42 38	62, 74, 86, 95	0
7	AG	155/156 (99%)	0.55	7 (4%) 38 34	64, 76, 91, 100	0
7	CG	155/156 (99%)	1.59	46 (29%) 1 1	86, 102, 111, 118	0
8	AH	138/138 (100%)	0.96	8 (5%) 29 25	61, 75, 83, 94	0
8	CH	138/138 (100%)	1.25	17 (12%) 8 7	64, 79, 87, 95	0
9	AI	125/128 (97%)	1.55	35 (28%) 1 1	64, 93, 106, 114	0
9	CI	125/128 (97%)	2.49	73 (58%) 0 0	89, 118, 126, 133	0
10	AJ	96/105 (91%)	1.70	34 (35%) 1 1	63, 96, 120, 124	0
10	CJ	96/105 (91%)	2.81	73 (76%) 0 0	95, 118, 135, 144	0
11	AK	114/129 (88%)	0.87	13 (11%) 10 8	50, 72, 91, 107	0
11	CK	114/129 (88%)	1.19	16 (14%) 6 5	54, 77, 95, 109	0
12	AL	122/132 (92%)	1.62	34 (27%) 1 1	54, 68, 82, 95	0
12	CL	122/132 (92%)	1.86	47 (38%) 1 0	55, 72, 85, 99	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/126 (90%)	1.00	13 (11%) 10 8	68, 82, 97, 102	0
13	CM	112/126 (88%)	2.12	56 (50%) 0 0	94, 117, 126, 134	0
14	AN	60/61 (98%)	1.29	11 (18%) 3 3	68, 79, 92, 102	0
14	CN	60/61 (98%)	2.81	47 (78%) 0 0	99, 110, 121, 128	0
15	AO	88/89 (98%)	0.83	6 (6%) 23 20	52, 73, 90, 94	0
15	CO	88/89 (98%)	0.81	4 (4%) 38 34	58, 77, 91, 96	0
16	AP	82/88 (93%)	2.11	47 (57%) 0 0	68, 82, 100, 110	0
16	CP	82/88 (93%)	1.80	34 (41%) 0 0	66, 79, 94, 103	0
17	AQ	99/105 (94%)	1.23	13 (13%) 7 6	57, 74, 87, 92	0
17	CQ	99/105 (94%)	1.12	11 (11%) 10 8	60, 75, 85, 94	0
18	AR	68/88 (77%)	0.79	2 (2%) 53 50	62, 73, 92, 96	0
18	CR	68/88 (77%)	0.94	5 (7%) 20 18	65, 76, 92, 96	0
19	AS	81/93 (87%)	1.50	26 (32%) 1 1	74, 89, 105, 128	0
19	CS	78/93 (83%)	2.16	39 (50%) 0 0	100, 118, 130, 133	0
20	AT	96/106 (90%)	1.77	29 (30%) 1 1	66, 82, 100, 106	0
20	CT	104/106 (98%)	1.67	26 (25%) 2 1	64, 83, 103, 119	0
21	AU	23/27 (85%)	1.54	6 (26%) 1 1	71, 80, 83, 90	0
21	CU	23/27 (85%)	3.09	19 (82%) 0 0	97, 106, 115, 119	0
22	AY	95/119 (79%)	0.42	2 (2%) 63 61	51, 64, 81, 92	0
22	CY	94/119 (78%)	1.56	26 (27%) 1 1	76, 95, 113, 120	0
23	BA	2827/2915 (96%)	-0.38	99 (3%) 47 43	24, 40, 120, 169	0
23	DA	2798/2915 (95%)	-0.18	98 (3%) 47 43	27, 46, 118, 170	0
24	BB	120/122 (98%)	0.28	4 (3%) 49 45	39, 65, 76, 119	0
24	DB	120/122 (98%)	1.63	43 (35%) 1 0	50, 81, 97, 130	0
25	BD	275/276 (99%)	-0.18	2 (0%) 84 83	24, 39, 51, 79	0
25	DD	275/276 (99%)	-0.18	1 (0%) 88 87	26, 43, 55, 84	0
26	BE	204/206 (99%)	-0.08	3 (1%) 72 70	24, 44, 64, 81	0
26	DE	204/206 (99%)	0.04	2 (0%) 79 78	27, 48, 69, 84	0
27	BF	203/210 (96%)	0.26	6 (2%) 52 49	25, 49, 82, 113	0
27	DF	203/210 (96%)	0.42	5 (2%) 58 55	28, 58, 84, 115	0
28	BG	181/182 (99%)	1.23	28 (15%) 5 4	64, 83, 108, 138	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	181/182 (99%)	2.41	113 (62%) 0 0	78, 96, 116, 140	0
29	BH	174/180 (96%)	0.77	7 (4%) 42 38	49, 64, 80, 92	0
29	DH	174/180 (96%)	1.58	48 (27%) 1 1	61, 78, 92, 101	0
30	BI	146/148 (98%)	0.71	5 (3%) 48 44	46, 75, 91, 98	0
30	DI	146/148 (98%)	0.93	13 (8%) 15 13	49, 81, 99, 107	0
31	BN	140/140 (100%)	0.18	3 (2%) 63 61	30, 44, 66, 83	0
31	DN	140/140 (100%)	0.31	2 (1%) 73 72	35, 52, 73, 86	0
32	BO	122/122 (100%)	-0.11	0 100 100	34, 43, 62, 65	0
32	DO	122/122 (100%)	-0.02	0 100 100	37, 47, 65, 68	0
33	BP	149/150 (99%)	0.27	0 100 100	25, 51, 77, 96	0
33	DP	149/150 (99%)	0.59	8 (5%) 31 27	30, 60, 87, 99	0
34	BQ	141/141 (100%)	0.21	0 100 100	31, 47, 59, 74	0
34	DQ	141/141 (100%)	0.67	10 (7%) 22 19	39, 55, 69, 79	0
35	BR	118/118 (100%)	-0.10	0 100 100	30, 38, 51, 62	0
35	DR	118/118 (100%)	0.11	1 (0%) 82 81	33, 42, 55, 67	0
36	BS	110/112 (98%)	0.77	10 (9%) 15 12	48, 62, 77, 85	0
36	DS	110/112 (98%)	2.01	51 (46%) 0 0	59, 74, 87, 93	0
37	BT	131/146 (89%)	0.16	10 (7%) 20 17	38, 46, 76, 103	0
37	DT	130/146 (89%)	0.26	4 (3%) 51 48	41, 50, 73, 105	0
38	BU	116/118 (98%)	-0.04	1 (0%) 81 80	28, 38, 53, 70	0
38	DU	116/118 (98%)	0.25	1 (0%) 81 80	33, 45, 61, 70	0
39	BV	101/101 (100%)	0.08	2 (1%) 65 62	27, 48, 67, 83	0
39	DV	101/101 (100%)	0.45	1 (0%) 79 78	32, 59, 76, 85	0
40	BW	112/113 (99%)	-0.20	0 100 100	28, 35, 52, 92	0
40	DW	111/113 (98%)	-0.11	2 (1%) 67 65	32, 40, 58, 85	0
41	BX	95/96 (98%)	0.14	2 (2%) 63 61	33, 43, 65, 84	0
41	DX	95/96 (98%)	0.49	1 (1%) 78 76	39, 50, 68, 89	0
42	BY	107/110 (97%)	0.56	4 (3%) 45 41	44, 55, 77, 88	0
42	DY	107/110 (97%)	1.20	18 (16%) 4 3	53, 63, 82, 91	0
43	BZ	198/206 (96%)	0.65	8 (4%) 42 38	48, 68, 91, 103	0
43	DZ	203/206 (98%)	1.39	35 (17%) 4 3	57, 78, 100, 126	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	B0	76/85 (89%)	0.09	0 100 100	37, 44, 57, 75	0
44	D0	77/85 (90%)	0.77	5 (6%) 25 22	44, 52, 67, 101	0
45	B1	97/98 (98%)	0.00	2 (2%) 63 61	31, 44, 74, 82	0
45	D1	97/98 (98%)	0.18	3 (3%) 51 48	33, 48, 78, 85	0
46	B2	70/72 (97%)	0.54	2 (2%) 53 50	42, 56, 67, 93	0
46	D2	71/72 (98%)	0.90	4 (5%) 30 26	51, 65, 76, 94	0
47	B3	59/60 (98%)	0.16	2 (3%) 48 44	33, 42, 66, 84	0
47	D3	59/60 (98%)	0.69	2 (3%) 48 44	39, 50, 76, 96	0
48	B4	46/71 (64%)	0.97	7 (15%) 5 4	73, 96, 111, 116	0
48	D4	46/71 (64%)	1.71	13 (28%) 1 1	89, 107, 118, 124	0
49	B5	59/60 (98%)	-0.17	1 (1%) 69 67	23, 38, 56, 68	0
49	D5	59/60 (98%)	-0.08	1 (1%) 69 67	27, 43, 61, 73	0
50	B6	53/54 (98%)	-0.10	0 100 100	40, 46, 59, 66	0
50	D6	53/54 (98%)	0.17	0 100 100	47, 52, 60, 70	0
51	B7	48/49 (97%)	-0.17	1 (2%) 63 61	26, 30, 50, 71	0
51	D7	48/49 (97%)	-0.11	1 (2%) 63 61	28, 33, 54, 82	0
52	B8	64/65 (98%)	0.02	1 (1%) 70 68	34, 38, 45, 57	0
52	D8	64/65 (98%)	0.22	0 100 100	38, 44, 50, 60	0
53	B9	36/37 (97%)	0.35	2 (5%) 30 26	38, 46, 57, 69	0
53	D9	36/37 (97%)	0.66	2 (5%) 30 26	45, 55, 66, 76	0
All	All	20617/21484 (95%)	0.52	2204 (10%) 11 9	23, 63, 117, 175	0

All (2204) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
9	AI	126	SER	8.4
8	CH	1	MET	7.9
2	CB	163	PHE	7.8
23	BA	2793	G	7.4
14	AN	2	ALA	7.2
20	AT	103	GLY	7.1
1	CA	1036	G	7.1
2	CB	70	PHE	6.8
4	AD	120	LEU	6.7
14	CN	2	ALA	6.7

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Mol	Chain	Res	Type	RSRZ
23	BA	2805	G	6.6
51	D7	48	LYS	6.6
13	CM	9	ILE	6.6
20	AT	10	LEU	6.5
9	CI	126	SER	6.4
23	BA	2133	G	6.4
7	CG	16	LEU	6.2
13	CM	102	ARG	6.1
20	CT	9	ASN	6.1
6	CF	99	ALA	6.0
36	DS	56	LEU	5.9
9	CI	66	ARG	5.9
4	AD	23	GLY	5.8
20	CT	8	ARG	5.8
22	CY	94	ALA	5.8
23	BA	2803	C	5.7
28	DG	17	PRO	5.7
4	AD	108	LEU	5.7
19	CS	11	VAL	5.7
23	BA	2792	G	5.6
19	CS	12	ASP	5.6
5	AE	85	GLY	5.6
9	CI	2	GLU	5.5
13	CM	6	GLY	5.5
1	CA	1030(B)	C	5.5
2	AB	101	MET	5.5
8	AH	1	MET	5.5
14	CN	55	GLY	5.5
10	CJ	54	PHE	5.5
38	BU	117	GLN	5.5
9	AI	44	VAL	5.5
4	AD	155	LEU	5.5
12	CL	69	TYR	5.5
9	CI	14	VAL	5.4
19	CS	71	LEU	5.4
4	CD	20	TYR	5.4
11	CK	123	LYS	5.4
2	CB	161	ALA	5.4
9	CI	9	ARG	5.4
9	CI	7	THR	5.3
4	CD	26	CYS	5.3
14	CN	30	ALA	5.3

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Mol	Chain	Res	Type	RSRZ
23	BA	2804	C	5.3
37	DT	130	ALA	5.3
19	CS	13	ASP	5.3
21	CU	14	TRP	5.3
2	AB	235	SER	5.2
20	CT	7	LYS	5.2
36	DS	33	LYS	5.2
7	CG	13	GLN	5.2
4	AD	30	LYS	5.2
9	CI	69	GLY	5.2
2	CB	97	TRP	5.2
46	B2	70	GLN	5.1
28	DG	160	VAL	5.1
20	CT	6	PRO	5.1
4	AD	181	MET	5.1
2	CB	188	ALA	5.1
4	CD	7	PRO	5.1
19	AS	5	LEU	5.1
10	CJ	20	ALA	5.0
23	BA	2130	U	5.0
4	CD	108	LEU	5.0
9	CI	42	ARG	5.0
23	DA	2296	U	5.0
10	CJ	47	PHE	5.0
1	CA	1459	C	5.0
9	CI	106	ALA	5.0
4	CD	19	LEU	5.0
10	AJ	66	ARG	5.0
7	CG	8	GLU	5.0
9	CI	36	TYR	4.9
36	DS	55	ALA	4.9
4	AD	24	GLU	4.9
10	CJ	77	PRO	4.9
4	CD	122	ARG	4.9
12	AL	28	LYS	4.9
13	CM	7	VAL	4.9
4	CD	35	ARG	4.9
21	CU	2	GLY	4.8
10	CJ	45	ARG	4.8
28	DG	2	PRO	4.8
28	DG	19	LEU	4.8
36	DS	52	SER	4.8

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Mol	Chain	Res	Type	RSRZ
2	CB	68	ILE	4.8
4	CD	157	LEU	4.8
4	CD	109	GLY	4.8
29	BH	2	SER	4.7
28	DG	146	TYR	4.7
23	DA	548	A	4.7
12	AL	26	ALA	4.7
1	AA	65	U	4.7
28	DG	35	GLU	4.7
14	CN	3	ARG	4.7
10	CJ	58	ASP	4.7
1	AA	91	C	4.7
4	AD	148	VAL	4.7
23	BA	272(A)	U	4.7
2	AB	97	TRP	4.6
12	CL	26	ALA	4.6
21	CU	10	ARG	4.6
4	AD	177	ASP	4.6
2	CB	165	VAL	4.6
22	CY	3	MET	4.6
23	BA	2794	C	4.6
10	CJ	65	LEU	4.6
12	AL	126	LYS	4.6
47	D3	2	PRO	4.6
14	CN	18	VAL	4.6
4	CD	4	TYR	4.6
28	DG	29	TRP	4.6
23	DA	272(A)	U	4.6
3	CC	175	LEU	4.6
8	CH	2	LEU	4.6
14	CN	33	VAL	4.6
13	CM	4	ILE	4.6
9	CI	15	ALA	4.6
10	CJ	90	LEU	4.6
20	AT	11	SER	4.6
4	AD	31	CYS	4.5
36	DS	7	TYR	4.5
1	CA	1219	U	4.5
9	CI	125	TYR	4.5
20	CT	106	ALA	4.5
8	CH	131	GLY	4.5
9	CI	109	VAL	4.5

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Mol	Chain	Res	Type	RSRZ
13	AM	87	TYR	4.5
3	CC	167	TRP	4.5
3	CC	2	GLY	4.5
28	DG	28	VAL	4.5
2	AB	201	ILE	4.5
4	AD	26	CYS	4.5
19	CS	68	GLY	4.5
9	AI	2	GLU	4.5
4	CD	158	ILE	4.4
10	CJ	23	ILE	4.4
23	BA	888	C	4.4
20	AT	95	ALA	4.4
23	BA	2132	U	4.4
19	AS	84	GLY	4.4
4	AD	150	GLU	4.4
1	AA	63	C	4.4
4	CD	161	ASN	4.4
19	AS	23	ASN	4.4
10	CJ	27	ALA	4.4
23	BA	2147	G	4.4
7	CG	78	ARG	4.4
13	CM	64	TRP	4.4
20	CT	11	SER	4.4
20	CT	73	HIS	4.4
4	CD	165	MET	4.4
2	CB	214	ILE	4.4
4	CD	162	LEU	4.3
2	CB	99	GLY	4.3
10	CJ	56	HIS	4.3
7	CG	5	ARG	4.3
21	CU	15	ARG	4.3
4	AD	104	VAL	4.3
4	AD	125	HIS	4.3
2	CB	133	LYS	4.3
9	CI	30	GLY	4.3
7	CG	59	LEU	4.3
12	AL	27	LEU	4.3
21	CU	6	ARG	4.3
10	CJ	37	PRO	4.3
12	AL	56	ALA	4.3
13	AM	2	ALA	4.3
9	CI	68	GLY	4.3

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Mol	Chain	Res	Type	RSRZ
4	CD	33	MET	4.3
1	CA	1286	A	4.3
20	CT	10	LEU	4.2
28	DG	155	MET	4.2
3	AC	167	TRP	4.2
10	CJ	59	SER	4.2
4	CD	3	ARG	4.2
36	DS	54	LEU	4.2
28	DG	25	TYR	4.2
10	AJ	30	SER	4.2
23	BA	2894	G	4.2
23	DA	2147	G	4.2
7	CG	21	VAL	4.2
9	CI	72	GLY	4.2
1	CA	1460	A	4.2
2	CB	187	LEU	4.2
21	CU	24	ARG	4.2
9	AI	46	ALA	4.1
13	CM	31	LYS	4.1
1	AA	1126	U	4.1
4	AD	175	SER	4.1
4	CD	141	ARG	4.1
23	DA	2117	A	4.1
24	DB	5	C	4.1
2	CB	101	MET	4.1
4	CD	169	LYS	4.1
43	DZ	201	LYS	4.1
48	B4	17	GLY	4.1
4	AD	5	ILE	4.1
4	AD	158	ILE	4.1
4	AD	157	LEU	4.1
16	CP	13	HIS	4.1
28	DG	176	LEU	4.1
12	CL	120	TYR	4.1
28	DG	54	GLU	4.1
10	CJ	46	ARG	4.1
11	CK	126	ARG	4.1
9	CI	64	THR	4.1
1	CA	1030(A)	G	4.0
4	CD	156	GLU	4.0
20	AT	101	GLY	4.0
10	CJ	71	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
12	CL	27	LEU	4.0
1	CA	938	A	4.0
2	CB	134	GLU	4.0
24	DB	23	G	4.0
9	CI	46	ALA	4.0
36	DS	39	ILE	4.0
21	CU	5	ASP	4.0
16	AP	80	PHE	4.0
6	AF	88	VAL	4.0
4	AD	22	LYS	4.0
20	CT	74	LYS	4.0
4	AD	12	CYS	4.0
4	CD	31	CYS	4.0
20	AT	102	GLY	4.0
1	CA	1442(A)	G	4.0
24	DB	117	G	4.0
24	DB	118	G	4.0
9	CI	11	LYS	4.0
36	DS	57	LYS	4.0
48	D4	7	PRO	4.0
23	BA	2117	A	4.0
24	BB	120	A	4.0
43	DZ	202	GLU	4.0
17	CQ	65	ILE	4.0
23	DA	2803	C	4.0
7	CG	34	GLY	4.0
2	AB	7	VAL	4.0
2	CB	190	THR	3.9
1	AA	1442(A)	G	3.9
4	CD	29	PRO	3.9
23	DA	2148	G	3.9
2	AB	99	GLY	3.9
23	BA	2158	A	3.9
10	CJ	89	ASP	3.9
28	DG	12	TYR	3.9
3	CC	87	LEU	3.9
28	DG	49	ASP	3.9
23	BA	1026	U	3.9
4	CD	166	LYS	3.9
48	D4	40	HIS	3.9
2	AB	93	VAL	3.9
42	DY	92	ASN	3.9

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Mol	Chain	Res	Type	RSRZ
11	CK	13	GLN	3.9
10	CJ	55	LYS	3.9
9	CI	115	GLY	3.9
24	DB	1	U	3.9
28	DG	89	GLY	3.9
2	CB	136	VAL	3.9
2	CB	164	VAL	3.9
9	CI	65	VAL	3.9
10	CJ	34	VAL	3.9
28	DG	68	PRO	3.8
23	DA	614(B)	G	3.8
29	DH	175	LYS	3.8
36	DS	11	LYS	3.8
1	CA	1377	A	3.8
10	CJ	38	ILE	3.8
28	DG	53	LEU	3.8
28	DG	69	ALA	3.8
1	CA	1281	U	3.8
16	AP	68	ASP	3.8
2	CB	31	TYR	3.8
10	CJ	64	GLU	3.8
12	CL	126	LYS	3.8
51	B7	48	LYS	3.8
23	BA	2116	G	3.8
23	BA	2807	G	3.8
14	CN	37	PHE	3.8
7	CG	80	VAL	3.8
4	CD	12	CYS	3.8
36	DS	3	ARG	3.8
14	CN	54	PRO	3.8
14	CN	15	LYS	3.8
2	CB	67	THR	3.8
36	DS	36	TYR	3.8
4	AD	19	LEU	3.8
36	DS	58	LEU	3.8
12	AL	95	GLY	3.8
10	CJ	66	ARG	3.8
14	CN	29	ARG	3.8
16	AP	8	ARG	3.8
19	CS	9	VAL	3.8
1	AA	1531	A	3.8
23	BA	652(J)	G	3.8

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Mol	Chain	Res	Type	RSRZ
4	AD	138	TYR	3.8
16	AP	17	TYR	3.8
4	CD	135	LEU	3.8
13	CM	66	LEU	3.8
36	DS	31	SER	3.8
19	AS	13	ASP	3.7
10	AJ	76	ASN	3.7
5	CE	12	LEU	3.7
10	AJ	32	ALA	3.7
10	CJ	32	ALA	3.7
23	BA	2129	C	3.7
24	DB	62	C	3.7
14	AN	12	ARG	3.7
4	AD	112	VAL	3.7
30	BI	70	GLU	3.7
2	AB	107	THR	3.7
10	CJ	40	LEU	3.7
28	DG	152	LEU	3.7
4	CD	5	ILE	3.7
28	DG	39	ILE	3.7
28	DG	88	ILE	3.7
23	BA	2892	A	3.7
24	DB	53	A	3.7
4	CD	18	LYS	3.7
36	BS	33	LYS	3.7
1	AA	98	G	3.7
12	CL	110	VAL	3.7
23	DA	1536	C	3.7
28	DG	13	GLU	3.7
11	CK	75	TYR	3.7
4	CD	25	ARG	3.7
16	AP	24	ALA	3.7
1	AA	1286	A	3.7
23	DA	2602	A	3.7
1	AA	90	U	3.7
2	AB	197	VAL	3.7
4	AD	188	LEU	3.7
19	CS	53	ASN	3.7
28	DG	52	ILE	3.7
9	AI	43	ALA	3.7
21	CU	11	GLY	3.7
2	CB	81	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
23	BA	6	A	3.6
28	DG	34	LEU	3.6
10	AJ	87	THR	3.6
2	CB	193	ASP	3.6
28	BG	49	ASP	3.6
28	DG	20	ILE	3.6
10	CJ	78	ASN	3.6
1	CA	1190	G	3.6
4	AD	153	ARG	3.6
26	DE	204	ALA	3.6
19	CS	35	SER	3.6
29	DH	2	SER	3.6
14	CN	14	PRO	3.6
31	DN	140	VAL	3.6
7	CG	12	LEU	3.6
14	CN	13	THR	3.6
23	DA	2801(A)	A	3.6
25	DD	276	LYS	3.6
20	AT	9	ASN	3.6
11	CK	42	TRP	3.6
4	AD	180	GLY	3.6
21	CU	16	GLY	3.6
12	AL	25	PRO	3.6
29	DH	45	VAL	3.6
10	CJ	67	THR	3.6
16	AP	69	THR	3.6
4	CD	144	ASP	3.6
9	AI	23	ASN	3.6
10	CJ	17	ASP	3.6
28	DG	79	ASN	3.6
19	CS	8	GLY	3.6
9	AI	125	TYR	3.6
14	CN	16	PHE	3.6
4	AD	194	LEU	3.6
13	CM	65	LYS	3.6
23	BA	1049	C	3.6
9	CI	103	THR	3.6
23	BA	2296	U	3.6
1	CA	1285	A	3.6
4	CD	110	PHE	3.6
13	CM	98	VAL	3.6
2	CB	98	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
4	AD	101	LEU	3.6
2	AB	182	ILE	3.5
13	CM	22	ILE	3.5
4	AD	2	GLY	3.5
4	CD	69	GLY	3.5
9	AI	106	ALA	3.5
42	DY	16	ALA	3.5
28	BG	25	TYR	3.5
20	AT	73	HIS	3.5
36	DS	5	THR	3.5
3	CC	3	ASN	3.5
7	CG	37	ASN	3.5
9	CI	32	ASP	3.5
2	CB	177	ALA	3.5
4	AD	189	PRO	3.5
23	DA	280	C	3.5
4	AD	110	PHE	3.5
9	CI	41	VAL	3.5
28	DG	90	LEU	3.5
10	CJ	70	ARG	3.5
36	DS	15	ARG	3.5
1	CA	1183	A	3.5
1	CA	1248	A	3.5
24	DB	26	A	3.5
24	DB	120	A	3.5
20	AT	74	LYS	3.5
2	CB	122	PHE	3.5
4	AD	135	LEU	3.5
28	DG	178	PHE	3.5
9	CI	117	HIS	3.5
23	BA	652(I)	C	3.5
4	CD	32	ALA	3.5
23	BA	2135	A	3.5
2	AB	131	PRO	3.5
3	AC	47	LEU	3.5
4	AD	162	LEU	3.5
16	AP	82	GLN	3.5
29	DH	52	VAL	3.5
12	AL	85	ILE	3.4
13	CM	87	TYR	3.4
20	AT	55	ILE	3.4
23	BA	2108	C	3.4

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Mol	Chain	Res	Type	RSRZ
16	AP	22	THR	3.4
4	CD	87	GLY	3.4
13	AM	12	ASN	3.4
10	CJ	91	PRO	3.4
23	BA	2159	G	3.4
23	BA	2160	G	3.4
16	CP	54	GLU	3.4
28	DG	59	GLU	3.4
4	CD	119	GLN	3.4
28	DG	138	GLN	3.4
36	DS	32	LEU	3.4
41	BX	95	LEU	3.4
9	AI	42	ARG	3.4
12	CL	55	VAL	3.4
2	CB	185	ILE	3.4
10	CJ	74	ILE	3.4
19	CS	31	ILE	3.4
21	CU	13	ILE	3.4
4	AD	9	CYS	3.4
12	AL	125	PRO	3.4
14	AN	59	ALA	3.4
28	DG	73	ALA	3.4
36	DS	96	GLY	3.4
10	AJ	33	GLN	3.4
14	CN	52	GLN	3.4
4	CD	140	VAL	3.4
1	AA	3	G	3.4
36	DS	93	LYS	3.4
9	CI	8	GLY	3.4
9	CI	39	GLY	3.4
2	AB	11	LEU	3.4
19	CS	65	ASN	3.4
29	DH	71	LEU	3.4
7	CG	76	ARG	3.4
22	CY	38	HIS	3.4
2	CB	148	TYR	3.4
4	AD	137	SER	3.4
14	CN	34	TYR	3.4
28	BG	146	TYR	3.4
36	DS	92	TYR	3.4
4	CD	11	LEU	3.4
9	CI	20	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
20	AT	12	ALA	3.4
12	CL	92	ASP	3.4
49	B5	60	VAL	3.4
4	AD	70	ILE	3.3
16	AP	38	TYR	3.3
11	CK	31	THR	3.3
2	CB	131	PRO	3.3
2	CB	183	PRO	3.3
3	CC	52	LEU	3.3
21	AU	24	ARG	3.3
41	DX	95	LEU	3.3
1	CA	1289	A	3.3
4	AD	111	ALA	3.3
23	BA	652(B)	A	3.3
26	BE	204	ALA	3.3
1	CA	1003	G	3.3
23	BA	1176	G	3.3
23	BA	2131	G	3.3
4	AD	170	VAL	3.3
4	CD	148	VAL	3.3
10	CJ	63	PHE	3.3
28	DG	147	ASP	3.3
31	DN	9	VAL	3.3
28	DG	157	ILE	3.3
28	DG	42	GLY	3.3
2	CB	22	LYS	3.3
4	AD	154	ASN	3.3
10	AJ	78	ASN	3.3
10	CJ	76	ASN	3.3
4	AD	178	VAL	3.3
29	DH	141	VAL	3.3
36	DS	29	PHE	3.3
1	AA	97	G	3.3
23	DA	1533	G	3.3
2	CB	168	THR	3.3
3	CC	23	TYR	3.3
7	CG	14	PRO	3.3
16	AP	39	TYR	3.3
18	AR	31	LEU	3.3
10	CJ	62	HIS	3.3
10	CJ	31	GLY	3.3
4	CD	164	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
16	CP	56	ALA	3.3
24	DB	55	U	3.3
1	AA	1459	C	3.3
2	AB	152	PHE	3.3
9	CI	105	ASP	3.3
9	CI	108	VAL	3.3
14	CN	25	VAL	3.3
28	DG	70	VAL	3.3
36	DS	46	VAL	3.3
1	AA	1447	A	3.3
9	CI	111	ARG	3.3
14	CN	19	ARG	3.3
20	AT	80	ARG	3.3
29	DH	83	TYR	3.3
9	CI	67	GLY	3.3
10	CJ	57	LYS	3.3
2	AB	136	VAL	3.3
2	AB	165	VAL	3.3
2	CB	80	ILE	3.3
10	CJ	24	VAL	3.3
23	DA	546	C	3.2
4	AD	173	TRP	3.2
2	AB	10	LEU	3.2
2	CB	238	LEU	3.2
37	BT	128	GLU	3.2
3	CC	6	HIS	3.2
10	AJ	100	THR	3.2
28	DG	55	LYS	3.2
4	CD	167	GLY	3.2
7	CG	82	GLY	3.2
12	CL	95	GLY	3.2
14	CN	21	TYR	3.2
22	CY	92	GLY	3.2
14	CN	20	ALA	3.2
23	BA	1106	G	3.2
3	CC	5	ILE	3.2
3	CC	66	VAL	3.2
10	AJ	75	ILE	3.2
10	CJ	49	VAL	3.2
2	CB	121	LEU	3.2
3	AC	52	LEU	3.2
12	AL	52	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
14	CN	58	LYS	3.2
16	AP	6	LEU	3.2
21	AU	23	PRO	3.2
28	DG	8	LYS	3.2
7	CG	11	GLN	3.2
10	CJ	42	THR	3.2
19	CS	56	GLN	3.2
19	CS	63	THR	3.2
7	CG	2	ALA	3.2
23	DA	2790	A	3.2
37	BT	130	ALA	3.2
2	CB	17	PHE	3.2
3	CC	98	ASN	3.2
10	AJ	89	ASP	3.2
1	AA	64	G	3.2
9	CI	104	ARG	3.2
21	CU	9	ARG	3.2
4	AD	21	LEU	3.2
22	CY	9	GLN	3.2
1	CA	1363	C	3.2
28	DG	50	ALA	3.2
4	AD	27	TYR	3.2
9	CI	81	ILE	3.2
28	DG	109	VAL	3.2
14	CN	6	LEU	3.2
43	DZ	203	GLU	3.2
4	AD	136	PRO	3.2
11	CK	39	PRO	3.2
28	BG	2	PRO	3.2
16	CP	48	TRP	3.2
28	DG	145	THR	3.2
4	AD	130	GLY	3.2
9	CI	71	SER	3.2
2	CB	200	ILE	3.2
2	CB	201	ILE	3.2
2	AB	163	PHE	3.2
4	AD	4	TYR	3.2
10	CJ	72	VAL	3.2
29	DH	50	VAL	3.2
31	BN	140	VAL	3.2
23	DA	2139	C	3.1
9	CI	10	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
2	AB	8	LYS	3.1
36	BS	59	LYS	3.1
42	DY	1	MET	3.1
2	CB	10	LEU	3.1
6	CF	98	LEU	3.1
28	BG	139	LEU	3.1
28	DG	133	LEU	3.1
4	CD	98	GLU	3.1
20	CT	3	GLN	3.1
10	CJ	81	THR	3.1
19	CS	48	THR	3.1
5	CE	22	GLY	3.1
34	DQ	30	GLY	3.1
9	CI	45	ALA	3.1
23	DA	614(A)	U	3.1
23	DA	2118	U	3.1
14	CN	36	PHE	3.1
1	CA	630	G	3.1
4	AD	73	ARG	3.1
29	DH	23	ARG	3.1
43	DZ	199	LYS	3.1
1	AA	218	C	3.1
9	CI	102	LEU	3.1
23	BA	652(S)	C	3.1
24	DB	27	C	3.1
9	CI	123	PRO	3.1
13	AM	10	PRO	3.1
7	CG	86	GLN	3.1
10	CJ	84	GLN	3.1
23	DA	229	A	3.1
10	AJ	92	THR	3.1
39	BV	101	GLY	3.1
2	AB	188	ALA	3.1
7	AG	156	TRP	3.1
12	CL	66	VAL	3.1
17	AQ	77	VAL	3.1
46	D2	63	VAL	3.1
1	AA	1000	U	3.1
1	CA	992	U	3.1
7	CG	102	ARG	3.1
20	AT	75	ASN	3.1
28	DG	27	ASN	3.1

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Mol	Chain	Res	Type	RSRZ
29	DH	74	ASN	3.1
2	CB	44	LEU	3.1
28	DG	120	LEU	3.1
11	AK	31	THR	3.1
23	DA	2137	C	3.1
10	CJ	10	GLY	3.1
1	CA	1035	A	3.1
14	CN	50	LYS	3.1
2	CB	71	VAL	3.1
12	CL	39	VAL	3.1
17	CQ	97	SER	3.1
4	CD	27	TYR	3.1
9	CI	62	TYR	3.1
19	CS	69	HIS	3.1
36	DS	34	HIS	3.1
10	CJ	33	GLN	3.1
1	AA	1001(A)	G	3.1
1	AA	1026	G	3.1
13	CM	95	GLY	3.1
23	BA	2157	G	3.1
23	DA	2154	G	3.1
3	CC	152	ILE	3.1
7	CG	27	ILE	3.1
28	BG	88	ILE	3.1
2	CB	217	ARG	3.1
4	CD	107	ARG	3.1
8	CH	104	ARG	3.1
1	CA	979	C	3.1
23	BA	2107	C	3.1
23	DA	2322	A	3.0
9	CI	79	LEU	3.0
36	DS	4	LEU	3.0
43	DZ	33	LEU	3.0
28	BG	35	GLU	3.0
4	CD	45	GLN	3.0
2	AB	133	LYS	3.0
14	CN	22	THR	3.0
10	CJ	50	ILE	3.0
15	AO	3	ILE	3.0
16	CP	10	GLY	3.0
42	BY	93	GLY	3.0
4	CD	209	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
4	CD	170	VAL	3.0
23	BA	275	G	3.0
23	BA	2318	G	3.0
23	DA	2894	G	3.0
24	DB	56	G	3.0
2	AB	187	LEU	3.0
4	AD	176	LEU	3.0
1	AA	1027	C	3.0
1	CA	1321	C	3.0
4	AD	20	TYR	3.0
9	AI	89	ASN	3.0
28	DG	131	TYR	3.0
1	AA	149	A	3.0
2	CB	76	GLN	3.0
6	CF	27	GLN	3.0
4	AD	166	LYS	3.0
3	CC	8	ILE	3.0
14	CN	38	GLY	3.0
53	D9	37	GLY	3.0
12	AL	68	ALA	3.0
28	DG	151	ALA	3.0
37	BT	131	ALA	3.0
3	AC	207	VAL	3.0
28	DG	92	VAL	3.0
42	DY	42	VAL	3.0
7	CG	156	TRP	3.0
48	D4	41	PRO	3.0
1	CA	1002	G	3.0
13	AM	115	LYS	3.0
24	DB	64	C	3.0
1	AA	1493	A	3.0
4	AD	141	ARG	3.0
9	AI	10	ARG	3.0
13	CM	88	ARG	3.0
21	AU	9	ARG	3.0
24	DB	46	A	3.0
21	CU	17	THR	3.0
43	DZ	12	GLY	3.0
14	CN	10	ALA	3.0
3	CC	120	VAL	3.0
3	CC	195	VAL	3.0
4	CD	104	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
19	CS	67	VAL	3.0
14	CN	53	LEU	3.0
4	AD	71	SER	3.0
10	CJ	68	HIS	3.0
36	BS	95	HIS	3.0
40	DW	111	HIS	3.0
42	DY	91	GLU	3.0
2	AB	232	PRO	3.0
22	CY	37	PRO	3.0
29	DH	21	PRO	3.0
2	AB	22	LYS	3.0
19	AS	7	LYS	3.0
12	CL	64	TYR	3.0
2	CB	39	ILE	3.0
29	DH	4	ILE	3.0
28	BG	42	GLY	3.0
29	DH	82	GLY	3.0
1	AA	380	G	3.0
1	CA	939	G	3.0
1	CA	1033	G	3.0
1	CA	1320	C	3.0
3	CC	163	ALA	3.0
23	DA	274	G	3.0
23	DA	2143	C	3.0
24	DB	6	C	3.0
28	DG	158	ALA	3.0
3	CC	55	VAL	3.0
8	CH	95	VAL	3.0
10	AJ	34	VAL	3.0
28	BG	82	LEU	2.9
28	DG	7	LEU	2.9
48	D4	9	LEU	2.9
2	CB	40	HIS	2.9
10	AJ	64	GLU	2.9
17	AQ	78	GLU	2.9
11	CK	43	SER	2.9
12	AL	115	LYS	2.9
3	AC	193	TYR	2.9
16	CP	39	TYR	2.9
10	CJ	43	ARG	2.9
13	CM	110	ARG	2.9
16	AP	71	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
2	CB	162	ILE	2.9
11	CK	32	ILE	2.9
12	CL	85	ILE	2.9
45	D1	29	GLY	2.9
2	AB	168	THR	2.9
10	CJ	87	THR	2.9
2	CB	123	ALA	2.9
4	AD	32	ALA	2.9
2	AB	230	VAL	2.9
4	CD	17	VAL	2.9
12	AL	32	PHE	2.9
29	DH	44	VAL	2.9
2	CB	221	LEU	2.9
4	CD	101	LEU	2.9
17	CQ	98	LEU	2.9
28	DG	175	LEU	2.9
36	DS	73	LEU	2.9
1	CA	1124	G	2.9
4	AD	98	GLU	2.9
9	CI	58	HIS	2.9
13	CM	8	GLU	2.9
16	AP	34	GLU	2.9
23	BA	281	G	2.9
23	BA	652(Q)	G	2.9
23	DA	2155	G	2.9
23	DA	2791	C	2.9
47	B3	60	GLU	2.9
4	CD	197	PRO	2.9
43	DZ	177	PRO	2.9
1	CA	1126	U	2.9
19	CS	38	SER	2.9
11	AK	13	GLN	2.9
4	CD	36	ARG	2.9
7	CG	84	ASN	2.9
12	CL	33	ARG	2.9
4	AD	144	ASP	2.9
7	CG	33	ASP	2.9
13	CM	23	TYR	2.9
48	D4	43	TYR	2.9
4	AD	126	ILE	2.9
4	CD	146	ILE	2.9
10	AJ	50	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
12	CL	122	THR	2.9
27	DF	21	ALA	2.9
8	CH	103	VAL	2.9
9	AI	47	LEU	2.9
4	CD	123	HIS	2.9
17	AQ	14	LYS	2.9
16	AP	41	PRO	2.9
47	B3	2	PRO	2.9
9	CI	3	GLN	2.9
17	AQ	26	GLN	2.9
1	AA	532	A	2.9
23	BA	2173	A	2.9
24	DB	57	A	2.9
24	DB	58	A	2.9
37	DT	111	ARG	2.9
1	AA	1257	U	2.9
1	AA	1281	U	2.9
1	CA	1257	U	2.9
23	BA	1117	G	2.9
24	DB	24	G	2.9
2	AB	193	ASP	2.9
4	CD	23	GLY	2.9
28	DG	65	GLY	2.9
13	CM	51	ALA	2.9
2	AB	17	PHE	2.9
2	AB	221	LEU	2.9
2	CB	11	LEU	2.9
5	CE	45	PHE	2.9
6	AF	98	LEU	2.9
9	CI	59	PHE	2.9
9	CI	70	LYS	2.9
12	CL	32	PHE	2.9
19	AS	28	LYS	2.9
19	AS	17	GLU	2.9
2	CB	232	PRO	2.9
3	CC	170	GLN	2.9
28	DG	40	ASN	2.9
5	CE	11	ILE	2.9
9	CI	63	ILE	2.9
48	D4	31	ILE	2.9
4	CD	134	ASP	2.9
12	AL	92	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	1460	A	2.9
1	CA	224	C	2.9
1	CA	1130	A	2.9
1	CA	1282	C	2.9
16	CP	38	TYR	2.9
23	DA	2145	C	2.9
23	DA	2150	U	2.9
1	AA	348	G	2.9
1	AA	1442	G	2.9
2	CB	186	ALA	2.9
2	CB	230	VAL	2.9
3	CC	207	VAL	2.9
13	CM	74	VAL	2.9
16	CP	53	VAL	2.9
23	DA	1115	G	2.9
23	DA	2125	G	2.9
43	BZ	191	VAL	2.9
43	DZ	71	VAL	2.9
17	CQ	96	GLU	2.8
43	DZ	168	GLU	2.8
28	DG	87	PRO	2.8
36	DS	91	PRO	2.8
4	AD	107	ARG	2.8
9	CI	107	ARG	2.8
10	CJ	5	ARG	2.8
5	CE	80	ILE	2.8
2	CB	8	LYS	2.8
2	CB	156	LYS	2.8
9	CI	5	TYR	2.8
9	CI	6	GLY	2.8
36	DS	45	GLY	2.8
37	BT	107	ASP	2.8
17	AQ	100	LYS	2.8
13	CM	75	ALA	2.8
16	CP	24	ALA	2.8
19	AS	71	LEU	2.8
20	AT	13	LEU	2.8
20	AT	72	LEU	2.8
14	AN	33	VAL	2.8
16	CP	2	VAL	2.8
1	CA	1101	A	2.8
1	AA	201	C	2.8

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Mol	Chain	Res	Type	RSRZ
9	CI	35	GLU	2.8
23	DA	652(B)	A	2.8
24	DB	25	A	2.8
23	BA	2146	C	2.8
21	CU	23	PRO	2.8
1	CA	1220	G	2.8
4	CD	168	ARG	2.8
23	DA	2318	G	2.8
28	DG	91	ARG	2.8
34	DQ	59	ARG	2.8
10	AJ	84	GLN	2.8
16	AP	48	TRP	2.8
14	CN	17	LYS	2.8
33	DP	76	LYS	2.8
2	AB	98	LEU	2.8
19	AS	20	LEU	2.8
28	BG	152	LEU	2.8
2	AB	28	PHE	2.8
27	DF	132	VAL	2.8
28	DG	102	PHE	2.8
28	DG	149	VAL	2.8
29	DH	11	VAL	2.8
34	DQ	65	PHE	2.8
34	DQ	104	PHE	2.8
4	AD	29	PRO	2.8
4	CD	39	PRO	2.8
23	DA	2312	U	2.8
24	DB	59	A	2.8
28	DG	26	GLN	2.8
4	AD	18	LYS	2.8
16	AP	59	TRP	2.8
16	CP	19	ILE	2.8
48	D4	22	ILE	2.8
13	CM	12	ASN	2.8
23	DA	281	G	2.8
23	DA	2319	G	2.8
24	DB	54	G	2.8
2	CB	154	LEU	2.8
4	CD	21	LEU	2.8
28	BG	89	GLY	2.8
28	DG	82	LEU	2.8
36	DS	48	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
2	AB	148	TYR	2.8
2	CB	15	VAL	2.8
9	AI	13	ALA	2.8
9	CI	44	VAL	2.8
12	CL	99	HIS	2.8
14	AN	18	VAL	2.8
14	CN	56	VAL	2.8
17	CQ	95	TYR	2.8
20	CT	67	ALA	2.8
4	AD	156	GLU	2.8
19	CS	64	GLU	2.8
28	BG	137	GLU	2.8
30	DI	37	VAL	2.8
31	BN	9	VAL	2.8
13	CM	41	PRO	2.8
19	CS	37	ARG	2.8
1	CA	1150	U	2.8
23	BA	12	U	2.8
1	AA	1001	A	2.8
14	CN	7	ILE	2.8
19	CS	49	ILE	2.8
1	CA	1129	C	2.8
20	CT	70	SER	2.8
23	BA	2136	C	2.8
10	AJ	69	ASN	2.8
5	AE	22	GLY	2.8
2	CB	173	ALA	2.8
3	CC	53	ALA	2.8
9	AI	15	ALA	2.8
9	CI	17	VAL	2.8
10	AJ	81	THR	2.8
12	CL	107	ALA	2.8
16	AP	79	VAL	2.8
28	DG	163	ALA	2.8
29	DH	17	VAL	2.8
29	DH	49	VAL	2.8
36	DS	69	VAL	2.8
37	BT	127	ALA	2.8
48	D4	24	THR	2.8
2	CB	57	PHE	2.8
2	CB	152	PHE	2.8
1	CA	1347	G	2.8

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Mol	Chain	Res	Type	RSRZ
20	AT	8	ARG	2.8
22	CY	96	ARG	2.8
23	DA	2124	G	2.8
24	DB	51	G	2.8
22	CY	43	LYS	2.7
42	DY	94	LYS	2.7
8	CH	109	ILE	2.7
28	BG	52	ILE	2.7
30	BI	42	SER	2.7
3	AC	2	GLY	2.7
24	DB	29	A	2.7
24	DB	48	A	2.7
36	BS	96	GLY	2.7
3	CC	31	HIS	2.7
28	BG	86	MET	2.7
1	CA	1066	C	2.7
2	CB	77	ALA	2.7
13	CM	35	GLU	2.7
4	AD	35	ARG	2.7
4	CD	118	ARG	2.7
7	CG	26	PHE	2.7
16	CP	79	VAL	2.7
23	DA	2146	C	2.7
28	DG	161	THR	2.7
28	DG	115	ARG	2.7
36	DS	65	VAL	2.7
10	CJ	41	PRO	2.7
1	CA	1221	G	2.7
1	CA	1373	G	2.7
1	CA	1442	G	2.7
23	DA	2153	G	2.7
23	DA	2159	G	2.7
24	DB	61	G	2.7
13	AM	9	ILE	2.7
2	AB	121	LEU	2.7
7	CG	99	LEU	2.7
9	CI	47	LEU	2.7
14	CN	39	LEU	2.7
2	AB	18	GLY	2.7
3	CC	171	GLY	2.7
4	CD	2	GLY	2.7
12	CL	62	SER	2.7

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Mol	Chain	Res	Type	RSRZ
16	AP	1	MET	2.7
39	DV	42	GLY	2.7
23	DA	362	U	2.7
29	DH	43	VAL	2.7
29	DH	132	ARG	2.7
43	BZ	2	GLU	2.7
4	CD	128	VAL	2.7
13	CM	105	THR	2.7
33	DP	103	ALA	2.7
10	AJ	77	PRO	2.7
23	DA	2320	A	2.7
24	DB	52	A	2.7
4	AD	116	GLN	2.7
43	DZ	99	TYR	2.7
1	AA	381	C	2.7
1	AA	1129	C	2.7
23	DA	2804	C	2.7
11	AK	21	ILE	2.7
12	CL	100	ILE	2.7
28	DG	144	ILE	2.7
29	DH	136	ILE	2.7
53	B9	17	ILE	2.7
9	CI	99	LEU	2.7
27	BF	12	LEU	2.7
44	D0	84	LEU	2.7
1	AA	630	G	2.7
1	CA	1117	G	2.7
4	AD	16	GLY	2.7
23	BA	2155	G	2.7
11	CK	26	ASN	2.7
12	CL	116	SER	2.7
3	CC	19	GLU	2.7
28	DG	33	ARG	2.7
2	AB	77	ALA	2.7
2	AB	122	PHE	2.7
2	AB	184	VAL	2.7
4	AD	140	VAL	2.7
5	CE	105	VAL	2.7
9	AI	33	PHE	2.7
9	CI	21	PRO	2.7
14	CN	4	LYS	2.7
20	AT	65	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
4	CD	42	GLN	2.7
3	CC	201	TYR	2.7
1	CA	1447	A	2.7
22	CY	40	ILE	2.7
28	BG	144	ILE	2.7
1	AA	1030(B)	C	2.7
1	CA	1037	C	2.7
1	CA	1277	C	2.7
23	BA	2896	C	2.7
24	DB	20	C	2.7
3	CC	178	LEU	2.7
14	CN	44	LEU	2.7
19	CS	30	LEU	2.7
22	CY	41	LEU	2.7
42	BY	1	MET	2.7
43	BZ	157	LEU	2.7
4	CD	183	GLY	2.7
8	CH	96	GLY	2.7
12	AL	41	ARG	2.7
19	AS	4	SER	2.7
42	DY	43	ASN	2.7
2	CB	88	ALA	2.7
3	CC	189	ALA	2.7
10	CJ	100	THR	2.7
11	AK	19	ALA	2.7
12	AL	55	VAL	2.7
16	AP	9	PHE	2.7
16	CP	80	PHE	2.7
19	CS	7	LYS	2.7
21	CU	8	THR	2.7
28	DG	71	THR	2.7
36	DS	100	ALA	2.7
4	CD	136	PRO	2.7
43	DZ	68	PRO	2.7
23	BA	2153	G	2.6
23	DA	1171	G	2.6
24	DB	21	G	2.6
23	DA	1113	U	2.6
22	CY	5	ILE	2.6
4	AD	78	LEU	2.6
33	DP	99	LEU	2.6
10	CJ	28	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
14	CN	45	ARG	2.6
36	BS	20	ARG	2.6
27	DF	134	GLY	2.6
29	DH	58	GLU	2.6
1	CA	1378	C	2.6
7	CG	28	ASN	2.6
12	CL	91	LYS	2.6
14	CN	11	LYS	2.6
23	BA	2791	C	2.6
23	DA	2138	C	2.6
24	DB	4	C	2.6
24	DB	114	C	2.6
4	CD	112	VAL	2.6
6	AF	6	VAL	2.6
29	DH	15	VAL	2.6
36	DS	27	SER	2.6
13	CM	10	PRO	2.6
30	DI	8	PRO	2.6
5	CE	60	TYR	2.6
13	CM	84	ILE	2.6
29	BH	148	ILE	2.6
1	CA	1030(C)	G	2.6
23	BA	652(G)	G	2.6
23	BA	2802	G	2.6
23	DA	2116	G	2.6
23	DA	2168	G	2.6
23	DA	2304	G	2.6
10	CJ	88	LEU	2.6
28	DG	139	LEU	2.6
12	CL	41	ARG	2.6
14	CN	26	ARG	2.6
16	AP	5	ARG	2.6
7	CG	133	GLY	2.6
9	CI	110	GLU	2.6
10	CJ	61	GLU	2.6
12	CL	109	GLY	2.6
21	CU	4	GLY	2.6
1	CA	1001	A	2.6
23	DA	2173	A	2.6
2	CB	93	VAL	2.6
4	AD	164	ALA	2.6
6	AF	90	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
13	CM	5	ALA	2.6
16	CP	7	ALA	2.6
19	AS	24	ALA	2.6
28	DG	5	VAL	2.6
36	DS	12	PHE	2.6
49	D5	60	VAL	2.6
29	DH	12	PRO	2.6
1	AA	163	C	2.6
1	CA	970	C	2.6
1	CA	1223	C	2.6
23	DA	2164	C	2.6
2	AB	214	ILE	2.6
4	AD	67	ILE	2.6
10	CJ	75	ILE	2.6
53	D9	17	ILE	2.6
2	CB	92	TYR	2.6
20	AT	53	LEU	2.6
28	DG	135	LEU	2.6
2	AB	175	ARG	2.6
10	CJ	51	ARG	2.6
10	CJ	60	ARG	2.6
17	AQ	63	ARG	2.6
20	AT	25	ARG	2.6
28	DG	118	ARG	2.6
43	DZ	31	ARG	2.6
1	CA	1348	U	2.6
16	CP	12	LYS	2.6
23	BA	2144	U	2.6
23	BA	2150	U	2.6
12	AL	29	GLY	2.6
12	AL	72	GLY	2.6
20	AT	69	GLY	2.6
1	CA	971	G	2.6
4	AD	133	VAL	2.6
4	CD	149	ALA	2.6
11	AK	60	ALA	2.6
28	DG	38	VAL	2.6
4	CD	74	GLN	2.6
2	AB	200	ILE	2.6
5	CE	13	ILE	2.6
12	CL	70	ILE	2.6
1	CA	1354	C	2.6

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Mol	Chain	Res	Type	RSRZ
23	BA	1052	C	2.6
28	DG	172	LEU	2.6
2	CB	137	ARG	2.6
4	AD	122	ARG	2.6
8	CH	94	TYR	2.6
9	CI	121	ARG	2.6
14	CN	41	ARG	2.6
16	AP	72	ARG	2.6
20	CT	86	ARG	2.6
28	DG	16	ARG	2.6
29	DH	59	ARG	2.6
19	CS	18	LYS	2.6
20	CT	14	LYS	2.6
2	CB	35	GLU	2.6
37	DT	128	GLU	2.6
10	AJ	10	GLY	2.6
19	CS	84	GLY	2.6
4	CD	9	CYS	2.6
4	AD	37	PRO	2.6
3	CC	63	ASN	2.6
4	AD	117	ALA	2.6
7	CG	25	ALA	2.6
12	CL	94	PRO	2.6
24	BB	1	U	2.6
17	AQ	27	PHE	2.6
18	CR	29	PHE	2.6
22	CY	52	ALA	2.6
28	DG	6	ALA	2.6
29	DH	39	PRO	2.6
42	DY	53	PRO	2.6
4	AD	185	PHE	2.6
9	CI	29	ASN	2.6
2	AB	103	THR	2.5
44	D0	43	THR	2.5
1	CA	1026	G	2.5
4	AD	190	ASP	2.5
23	BA	100	G	2.5
23	DA	2207	G	2.5
2	CB	127	ILE	2.5
4	AD	204	ILE	2.5
4	CD	70	ILE	2.5
5	AE	80	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
1	AA	1183	A	2.5
1	CA	1280	A	2.5
2	CB	196	LEU	2.5
4	CD	155	LEU	2.5
8	AH	112	LEU	2.5
23	BA	548	A	2.5
23	BA	2171	A	2.5
24	DB	45	A	2.5
5	CE	14	ARG	2.5
5	CE	25	ARG	2.5
8	CH	102	ARG	2.5
13	CM	94	ARG	2.5
16	AP	81	ARG	2.5
20	CT	25	ARG	2.5
21	CU	22	ARG	2.5
28	DG	128	ARG	2.5
2	CB	140	HIS	2.5
4	AD	123	HIS	2.5
30	DI	85	GLU	2.5
1	CA	1344	C	2.5
23	BA	652(O)	C	2.5
23	DA	1043	C	2.5
23	DA	1118	C	2.5
4	AD	6	GLY	2.5
10	AJ	31	GLY	2.5
12	AL	103	GLY	2.5
13	AM	85	GLY	2.5
13	CM	85	GLY	2.5
15	AO	89	GLY	2.5
29	DH	5	GLY	2.5
29	DH	22	GLY	2.5
4	AD	8	VAL	2.5
4	CD	133	VAL	2.5
28	DG	31	VAL	2.5
28	DG	32	PRO	2.5
3	AC	53	ALA	2.5
4	CD	160	GLN	2.5
10	CJ	26	ALA	2.5
19	CS	10	PHE	2.5
20	CT	40	ALA	2.5
1	AA	223	U	2.5
23	BA	2109	U	2.5

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Mol	Chain	Res	Type	RSRZ
23	DA	90	U	2.5
23	DA	2109	U	2.5
43	BZ	1	MET	2.5
19	CS	34	TRP	2.5
28	DG	156	ASP	2.5
4	AD	11	LEU	2.5
4	AD	97	LEU	2.5
4	AD	132	ARG	2.5
4	AD	182	LYS	2.5
7	CG	104	LEU	2.5
12	CL	52	LEU	2.5
12	CL	53	ARG	2.5
20	AT	29	LYS	2.5
20	AT	68	LYS	2.5
21	CU	3	LYS	2.5
36	DS	20	ARG	2.5
36	DS	80	LEU	2.5
23	BA	652(C)	G	2.5
23	BA	2319	G	2.5
23	DA	2156	G	2.5
3	CC	184	TYR	2.5
28	DG	45	GLU	2.5
4	AD	124	GLY	2.5
28	DG	129	GLY	2.5
4	AD	7	PRO	2.5
4	AD	121	VAL	2.5
2	AB	95	GLN	2.5
9	AI	45	ALA	2.5
28	BG	151	ALA	2.5
28	DG	23	PHE	2.5
43	DZ	152	ALA	2.5
23	BA	2143	C	2.5
24	DB	49	C	2.5
28	BG	76	SER	2.5
45	B1	2	SER	2.5
4	AD	146	ILE	2.5
12	CL	124	LYS	2.5
20	CT	4	LYS	2.5
21	AU	14	TRP	2.5
25	BD	276	LYS	2.5
1	AA	203	U	2.5
4	CD	159	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
4	CD	202	LEU	2.5
8	CH	36	LEU	2.5
12	AL	113	ARG	2.5
19	CS	36	ARG	2.5
22	CY	27	LEU	2.5
28	DG	106	LEU	2.5
9	CI	114	TYR	2.5
11	AK	25	TYR	2.5
4	CD	6	GLY	2.5
27	BF	208	GLY	2.5
37	BT	37	GLY	2.5
1	AA	66	G	2.5
1	AA	1009	G	2.5
1	CA	976	G	2.5
1	CA	1034	G	2.5
1	CA	1353	G	2.5
2	CB	7	VAL	2.5
4	CD	105	VAL	2.5
10	CJ	94	VAL	2.5
16	AP	2	VAL	2.5
23	BA	278	A	2.5
23	BA	2168	G	2.5
23	DA	171	G	2.5
29	BH	43	VAL	2.5
2	CB	62	ALA	2.5
8	CH	124	ALA	2.5
13	CM	33	ALA	2.5
28	BG	50	ALA	2.5
43	DZ	88	PHE	2.5
9	CI	113	LYS	2.5
34	DQ	22	LYS	2.5
37	BT	38	ASN	2.5
12	CL	50	SER	2.5
28	DG	62	LEU	2.5
33	DP	15	ARG	2.5
43	DZ	53	ILE	2.5
1	CA	1028	C	2.5
1	CA	1452	C	2.5
2	AB	16	HIS	2.5
19	CS	14	HIS	2.5
2	AB	9	GLU	2.5
4	AD	34	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
4	CD	163	GLU	2.5
26	BE	87	GLU	2.5
4	AD	143	GLY	2.5
4	AD	207	TYR	2.5
2	CB	83	MET	2.5
2	AB	71	VAL	2.5
13	CM	101	GLN	2.5
29	DH	79	VAL	2.5
13	CM	76	ALA	2.5
16	AP	7	ALA	2.5
30	DI	146	ALA	2.5
37	DT	127	ALA	2.5
13	CM	79	LYS	2.4
48	D4	28	LYS	2.4
9	AI	64	THR	2.4
28	DG	93	THR	2.4
1	CA	1250	A	2.4
1	CA	1349	A	2.4
13	CM	29	ARG	2.4
13	CM	93	ARG	2.4
13	CM	99	ARG	2.4
28	DG	95	ARG	2.4
42	BY	2	ARG	2.4
13	CM	81	LEU	2.4
16	AP	49	LEU	2.4
19	AS	16	LEU	2.4
20	AT	62	LEU	2.4
22	CY	39	ILE	2.4
36	BS	82	ILE	2.4
1	AA	1036	G	2.4
1	CA	378	G	2.4
1	CA	1202	G	2.4
1	AA	150	C	2.4
1	AA	219	C	2.4
1	AA	1039	C	2.4
1	CA	1097	C	2.4
1	CA	1149	C	2.4
23	DA	2136	C	2.4
24	DB	31	C	2.4
2	CB	66	GLY	2.4
4	AD	183	GLY	2.4
13	CM	82	MET	2.4

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Mol	Chain	Res	Type	RSRZ
14	CN	28	GLY	2.4
23	BA	90	U	2.4
23	BA	362	U	2.4
11	AK	20	TYR	2.4
19	AS	61	TYR	2.4
19	CS	52	TYR	2.4
48	D4	25	TYR	2.4
4	AD	119	GLN	2.4
4	CD	178	VAL	2.4
5	CE	121	LYS	2.4
9	CI	73	GLN	2.4
12	CL	18	VAL	2.4
12	CL	47	LYS	2.4
7	CG	7	ALA	2.4
28	DG	171	ALA	2.4
3	CC	172	ARG	2.4
4	CD	10	ARG	2.4
4	CD	132	ARG	2.4
10	CJ	79	ARG	2.4
13	AM	108	ARG	2.4
16	AP	42	ARG	2.4
2	AB	61	LEU	2.4
2	CB	172	ILE	2.4
4	CD	67	ILE	2.4
5	CE	118	ILE	2.4
7	CG	22	LEU	2.4
8	CH	134	ILE	2.4
9	AI	34	ASN	2.4
28	DG	103	LEU	2.4
42	DY	44	ILE	2.4
10	CJ	30	SER	2.4
1	CA	1014	A	2.4
23	DA	282	A	2.4
2	CB	141	GLU	2.4
10	CJ	83	GLU	2.4
1	CA	1001(A)	G	2.4
1	CA	1370	G	2.4
23	BA	2125	G	2.4
23	DA	1117	G	2.4
23	DA	2120	G	2.4
23	DA	2149	G	2.4
2	CB	48	MET	2.4

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Mol	Chain	Res	Type	RSRZ
2	AB	100	GLY	2.4
2	CB	38	GLY	2.4
29	DH	120	GLY	2.4
28	DG	84	LYS	2.4
1	CA	934	C	2.4
2	AB	164	VAL	2.4
4	AD	105	VAL	2.4
12	CL	90	VAL	2.4
22	CY	46	GLN	2.4
23	BA	1509	C	2.4
23	DA	34	C	2.4
23	DA	2111	C	2.4
43	DZ	58	VAL	2.4
23	BA	2172	U	2.4
48	B4	32	TYR	2.4
3	CC	160	ALA	2.4
4	CD	111	ALA	2.4
9	AI	37	PHE	2.4
27	DF	139	PHE	2.4
16	AP	75	ARG	2.4
16	CP	25	ARG	2.4
28	DG	61	ALA	2.4
31	BN	115	ARG	2.4
35	DR	68	ARG	2.4
18	CR	82	THR	2.4
28	DG	140	ILE	2.4
29	DH	33	LEU	2.4
30	DI	35	LEU	2.4
20	CT	26	ASN	2.4
19	AS	14	HIS	2.4
11	CK	16	SER	2.4
17	CQ	66	SER	2.4
20	AT	46	GLU	2.4
28	DG	100	TRP	2.4
46	D2	5	GLU	2.4
47	D3	60	GLU	2.4
2	CB	90	MET	2.4
1	CA	1092	A	2.4
11	CK	71	LYS	2.4
23	DA	1847	A	2.4
3	AC	86	VAL	2.4
17	AQ	56	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
36	DS	98	VAL	2.4
2	AB	57	PHE	2.4
3	CC	187	ALA	2.4
4	CD	106	TYR	2.4
5	CE	133	TYR	2.4
16	CP	77	ALA	2.4
19	CS	24	ALA	2.4
23	DA	2162	G	2.4
23	DA	2802	G	2.4
42	DY	55	TYR	2.4
2	AB	44	LEU	2.4
3	CC	196	LEU	2.4
1	AA	99	U	2.4
3	CC	202	ILE	2.4
5	AE	118	ILE	2.4
5	CE	101	ILE	2.4
7	AG	12	LEU	2.4
20	CT	13	LEU	2.4
43	DZ	150	LEU	2.4
1	AA	193	C	2.4
1	CA	1030	C	2.4
1	CA	1125	U	2.4
16	AP	44	THR	2.4
19	CS	39	THR	2.4
48	B4	14	ILE	2.4
23	BA	34	C	2.4
23	BA	1038	C	2.4
23	DA	2105	C	2.4
24	DB	88	C	2.4
8	CH	4	ASP	2.4
28	DG	126	ASP	2.4
2	AB	24	TRP	2.4
20	AT	21	LYS	2.4
2	AB	159	PRO	2.4
8	AH	72	PRO	2.4
10	AJ	37	PRO	2.4
9	AI	66	ARG	2.4
9	AI	104	ARG	2.4
12	AL	39	VAL	2.4
13	AM	94	ARG	2.4
18	CR	22	VAL	2.4
19	CS	29	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
1	CA	978	A	2.4
3	CC	65	ALA	2.4
2	CB	145	LEU	2.3
8	AH	59	LEU	2.3
22	AY	2	THR	2.3
1	AA	841	U	2.3
1	CA	1310	G	2.3
1	CA	1351	U	2.3
23	DA	895	U	2.3
23	DA	1042	G	2.3
23	DA	1114	G	2.3
24	DB	22	U	2.3
1	CA	1249	C	2.3
16	AP	29	ASP	2.3
22	AY	43	LYS	2.3
22	CY	42	SER	2.3
23	BA	280	C	2.3
23	DA	2140	C	2.3
23	DA	2177	C	2.3
30	BI	20	ASP	2.3
30	DI	20	ASP	2.3
46	B2	52	ASP	2.3
2	CB	26	PRO	2.3
3	CC	174	PRO	2.3
16	CP	41	PRO	2.3
3	CC	159	GLY	2.3
7	CG	81	GLY	2.3
9	AI	8	GLY	2.3
10	AJ	29	ARG	2.3
29	BH	6	ARG	2.3
4	AD	93	PHE	2.3
2	CB	115	LEU	2.3
3	AC	168	ALA	2.3
19	AS	74	PHE	2.3
4	CD	120	LEU	2.3
28	DG	3	LEU	2.3
29	BH	105	LEU	2.3
30	BI	38	LEU	2.3
30	BI	146	ALA	2.3
43	BZ	192	ALA	2.3
44	D0	85	ALA	2.3
2	AB	42	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
9	CI	74	ILE	2.3
13	CM	39	ILE	2.3
16	AP	4	ILE	2.3
43	DZ	133	ILE	2.3
36	DS	94	TYR	2.3
1	AA	1130	A	2.3
1	CA	1357	A	2.3
1	CA	1493	A	2.3
34	DQ	21	THR	2.3
13	CM	67	GLU	2.3
28	BG	84	LYS	2.3
1	CA	1065	U	2.3
3	AC	56	ASP	2.3
36	BS	31	SER	2.3
1	CA	1064	G	2.3
1	CA	1323	G	2.3
23	BA	2120	G	2.3
23	BA	2207	G	2.3
23	DA	2299	G	2.3
43	DZ	167	PRO	2.3
1	AA	194	C	2.3
1	CA	1027	C	2.3
1	CA	1362	C	2.3
2	AB	110	GLN	2.3
4	CD	139	ARG	2.3
9	AI	100	GLY	2.3
10	AJ	46	ARG	2.3
13	CM	11	ARG	2.3
13	CM	80	ARG	2.3
16	CP	76	GLN	2.3
23	BA	2161	C	2.3
24	DB	28	C	2.3
7	CG	91	VAL	2.3
12	AL	96	VAL	2.3
29	DH	114	VAL	2.3
3	AC	87	LEU	2.3
9	CI	119	ALA	2.3
11	CK	74	ALA	2.3
12	AL	93	LEU	2.3
20	AT	94	ALA	2.3
8	AH	45	ILE	2.3
10	CJ	96	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
16	AP	36	ILE	2.3
19	CS	40	ILE	2.3
36	DS	40	ILE	2.3
13	CM	92	HIS	2.3
28	DG	162	THR	2.3
43	DZ	170	THR	2.3
14	CN	9	LYS	2.3
16	CP	1	MET	2.3
5	CE	130	ASN	2.3
17	AQ	58	GLU	2.3
22	CY	55	ASN	2.3
20	AT	31	SER	2.3
14	CN	12	ARG	2.3
14	CN	61	TRP	2.3
28	DG	21	ARG	2.3
44	D0	74	ARG	2.3
12	CL	87	GLY	2.3
14	CN	51	GLY	2.3
42	DY	93	GLY	2.3
23	DA	2167	U	2.3
3	CC	86	VAL	2.3
13	CM	60	VAL	2.3
36	DS	49	VAL	2.3
43	DZ	39	VAL	2.3
48	D4	35	VAL	2.3
2	CB	69	LEU	2.3
3	CC	186	PHE	2.3
10	CJ	11	PHE	2.3
43	DZ	91	LEU	2.3
2	CB	13	ALA	2.3
2	CB	237	ALA	2.3
4	AD	195	ALA	2.3
5	CE	86	ALA	2.3
14	CN	5	ALA	2.3
27	BF	21	ALA	2.3
1	AA	1127	G	2.3
16	AP	16	HIS	2.3
23	BA	546	C	2.3
23	BA	2174	C	2.3
23	DA	2165	G	2.3
24	DB	116	G	2.3
30	DI	4	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
1	CA	1054	C	2.3
1	CA	1317	C	2.3
3	CC	199	LYS	2.3
7	CG	35	LYS	2.3
12	AL	54	LYS	2.3
13	CM	115	LYS	2.3
28	DG	86	MET	2.3
2	AB	33	TYR	2.3
9	CI	12	GLU	2.3
10	CJ	69	ASN	2.3
7	CG	4	ARG	2.3
9	AI	107	ARG	2.3
9	AI	111	ARG	2.3
28	BG	136	ARG	2.3
34	DQ	60	ARG	2.3
23	BA	1111	A	2.3
23	BA	2126	A	2.3
23	BA	2790	A	2.3
33	DP	68	GLN	2.3
36	DS	38	GLN	2.3
2	CB	89	GLY	2.3
4	AD	69	GLY	2.3
10	CJ	36	GLY	2.3
11	AK	56	GLY	2.3
41	BX	94	GLY	2.3
2	AB	215	LEU	2.3
2	CB	197	VAL	2.3
3	CC	99	VAL	2.3
4	CD	176	LEU	2.3
12	AL	43	VAL	2.3
28	DG	60	LEU	2.3
36	DS	110	LEU	2.3
7	CG	62	PHE	2.3
27	BF	202	PHE	2.3
1	CA	1364	U	2.2
2	AB	162	ILE	2.2
4	CD	147	ALA	2.2
11	AK	74	ALA	2.2
14	CN	59	ALA	2.2
22	CY	35	ILE	2.2
23	BA	2897	U	2.2
23	DA	2130	U	2.2

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Mol	Chain	Res	Type	RSRZ
23	DA	2132	U	2.2
36	DS	72	ALA	2.2
43	DZ	57	ILE	2.2
3	CC	26	LYS	2.2
4	AD	165	MET	2.2
4	CD	30	LYS	2.2
7	CG	36	LYS	2.2
33	DP	149	GLU	2.2
21	AU	18	TYR	2.2
1	AA	217	C	2.2
23	BA	889	C	2.2
24	BB	20	C	2.2
1	AA	376	G	2.2
1	AA	631	G	2.2
1	CA	1068	G	2.2
1	CA	1131	G	2.2
1	CA	1184	G	2.2
23	BA	361	G	2.2
23	DA	1037	G	2.2
5	AE	18	ARG	2.2
2	CB	125	PRO	2.2
2	CB	192	SER	2.2
4	AD	113	SER	2.2
4	CD	28	SER	2.2
17	AQ	97	SER	2.2
4	AD	167	GLY	2.2
19	AS	8	GLY	2.2
19	AS	46	GLY	2.2
28	DG	24	GLY	2.2
2	CB	118	LEU	2.2
7	CG	75	VAL	2.2
10	AJ	8	LEU	2.2
13	AM	66	LEU	2.2
13	CM	53	VAL	2.2
43	DZ	125	LEU	2.2
1	AA	160	A	2.2
2	AB	127	ILE	2.2
2	CB	181	PHE	2.2
4	AD	169	LYS	2.2
4	CD	22	LYS	2.2
4	CD	125	HIS	2.2
5	CE	109	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
6	AF	81	ILE	2.2
9	CI	37	PHE	2.2
8	CH	16	ALA	2.2
10	CJ	80	LYS	2.2
12	AL	100	ILE	2.2
15	AO	15	PHE	2.2
19	CS	62	ILE	2.2
28	DG	180	PHE	2.2
12	CL	68	ALA	2.2
22	CY	50	ALA	2.2
1	AA	202	U	2.2
1	CA	1000	U	2.2
1	CA	1372	U	2.2
48	B4	3	GLU	2.2
2	AB	111	ARG	2.2
20	AT	17	ARG	2.2
21	CU	7	ARG	2.2
36	DS	13	ARG	2.2
36	DS	17	ARG	2.2
2	AB	125	PRO	2.2
4	CD	142	PRO	2.2
15	CO	75	PRO	2.2
1	CA	1322	C	2.2
1	CA	1359	C	2.2
15	AO	62	GLN	2.2
23	DA	2314	C	2.2
24	DB	60	C	2.2
9	AI	32	ASP	2.2
10	AJ	73	ASP	2.2
1	AA	1002	G	2.2
1	CA	1361	G	2.2
12	CL	121	GLY	2.2
16	AP	40	ASP	2.2
16	CP	6	LEU	2.2
20	CT	92	LEU	2.2
23	DA	2166	G	2.2
24	DB	18	G	2.2
24	DB	119	G	2.2
42	DY	18	GLY	2.2
9	AI	19	LEU	2.2
10	CJ	16	LEU	2.2
33	DP	88	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
9	AI	41	VAL	2.2
12	CL	40	VAL	2.2
17	AQ	19	VAL	2.2
10	AJ	74	ILE	2.2
16	AP	13	HIS	2.2
16	CP	16	HIS	2.2
28	DG	141	PHE	2.2
30	DI	1	MET	2.2
43	DZ	146	ILE	2.2
28	DG	57	ALA	2.2
29	DH	20	ALA	2.2
2	CB	9	GLU	2.2
4	CD	80	GLU	2.2
15	CO	25	THR	2.2
23	DA	6	A	2.2
23	DA	1460	A	2.2
24	BB	52	A	2.2
1	CA	1196	U	2.2
4	CD	115	ARG	2.2
28	DG	83	ARG	2.2
37	BT	111	ARG	2.2
2	CB	33	TYR	2.2
3	CC	108	ASN	2.2
22	CY	4	ASN	2.2
2	AB	234	PRO	2.2
12	AL	71	PRO	2.2
4	AD	160	GLN	2.2
2	AB	228	GLY	2.2
12	AL	46	LYS	2.2
28	BG	85	GLY	2.2
28	DG	47	LYS	2.2
29	DH	98	LEU	2.2
2	CB	174	VAL	2.2
6	CF	1	MET	2.2
7	CG	61	VAL	2.2
9	CI	28	VAL	2.2
10	AJ	72	VAL	2.2
12	CL	104	VAL	2.2
17	AQ	11	VAL	2.2
19	CS	19	VAL	2.2
1	CA	1115	C	2.2
2	CB	222	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
10	CJ	82	ILE	2.2
11	AK	42	TRP	2.2
23	DA	645	C	2.2
23	DA	652(T)	C	2.2
3	AC	61	ALA	2.2
10	CJ	18	ALA	2.2
14	CN	48	ALA	2.2
17	CQ	44	ALA	2.2
23	DA	2160	G	2.2
24	DB	63	G	2.2
45	D1	83	GLU	2.2
28	DG	64	THR	2.2
4	AD	159	ARG	2.2
4	CD	131	ARG	2.2
10	AJ	79	ARG	2.2
12	AL	33	ARG	2.2
28	DG	72	ARG	2.2
48	B4	18	CYS	2.2
1	AA	383	A	2.2
2	CB	234	PRO	2.2
3	AC	98	ASN	2.2
19	AS	52	TYR	2.2
19	CS	59	PRO	2.2
20	CT	75	ASN	2.2
26	BE	56	PRO	2.2
28	DG	142	PRO	2.2
3	CC	123	GLN	2.2
12	CL	20	LYS	2.2
23	DA	12	U	2.2
23	DA	2897	U	2.2
28	DG	36	LYS	2.2
10	AJ	88	LEU	2.2
18	CR	58	LEU	2.2
19	AS	15	LEU	2.2
28	DG	43	LEU	2.2
9	AI	91	ASP	2.2
28	BG	147	ASP	2.2
53	B9	12	ASP	2.2
4	CD	99	SER	2.2
3	CC	124	ILE	2.2
3	CC	176	HIS	2.2
7	CG	17	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
9	CI	26	VAL	2.2
12	CL	83	VAL	2.2
16	AP	20	VAL	2.2
16	AP	53	VAL	2.2
19	AS	38	SER	2.2
28	DG	76	SER	2.2
42	DY	3	VAL	2.2
43	DZ	166	SER	2.2
16	CP	36	ILE	2.2
17	AQ	59	ILE	2.2
28	DG	63	ILE	2.2
9	AI	18	PHE	2.2
9	CI	18	PHE	2.2
10	AJ	63	PHE	2.2
43	BZ	104	PHE	2.2
36	BS	102	ALA	2.1
36	DS	37	ALA	2.1
37	BT	126	ALA	2.1
43	BZ	188	ALA	2.1
43	DZ	113	ALA	2.1
13	CM	69	GLU	2.1
26	DE	163	GLU	2.1
30	DI	10	GLU	2.1
1	CA	972	C	2.1
1	CA	1103	C	2.1
1	CA	1192	C	2.1
2	CB	30	ARG	2.1
4	AD	3	ARG	2.1
14	CN	31	ARG	2.1
15	CO	79	ARG	2.1
16	CP	28	ARG	2.1
19	AS	77	THR	2.1
20	AT	22	ARG	2.1
20	CT	57	ARG	2.1
23	BA	1744	C	2.1
30	DI	52	ARG	2.1
1	AA	220	G	2.1
1	AA	1023	G	2.1
23	BA	2149	G	2.1
23	DA	2110	G	2.1
24	DB	44	G	2.1
24	DB	115	G	2.1

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Mol	Chain	Res	Type	RSRZ
43	BZ	159	PRO	2.1
48	D4	29	PRO	2.1
4	AD	68	TYR	2.1
4	CD	63	LYS	2.1
12	CL	111	LYS	2.1
12	CL	114	LYS	2.1
14	AN	17	LYS	2.1
16	AP	3	LYS	2.1
16	CP	14	ASN	2.1
29	DH	77	LYS	2.1
40	DW	60	ASN	2.1
42	BY	57	GLN	2.1
2	AB	102	LEU	2.1
4	CD	174	LEU	2.1
10	CJ	8	LEU	2.1
22	CY	77	LEU	2.1
28	DG	148	MET	2.1
48	B4	1	MET	2.1
1	AA	172	A	2.1
1	AA	1442(B)	A	2.1
1	CA	687	A	2.1
4	AD	109	GLY	2.1
23	BA	887	A	2.1
23	BA	1045	A	2.1
23	BA	1177	A	2.1
25	BD	238	GLY	2.1
1	CA	1240	U	2.1
2	AB	19	HIS	2.1
8	AH	13	ILE	2.1
11	AK	14	VAL	2.1
14	AN	7	ILE	2.1
16	AP	21	VAL	2.1
23	BA	614(A)	U	2.1
27	DF	23	ASP	2.1
29	DH	35	VAL	2.1
30	DI	3	VAL	2.1
9	CI	43	ALA	2.1
28	BG	69	ALA	2.1
2	CB	128	GLU	2.1
3	CC	22	TRP	2.1
4	CD	145	GLU	2.1
28	DG	164	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
52	B8	65	GLU	2.1
7	CG	41	ARG	2.1
13	AM	114	ARG	2.1
13	CM	44	ARG	2.1
16	CP	75	ARG	2.1
17	CQ	92	ARG	2.1
28	DG	113	ARG	2.1
29	DH	6	ARG	2.1
44	D0	55	ARG	2.1
45	D1	26	ARG	2.1
10	CJ	92	THR	2.1
36	DS	47	THR	2.1
7	CG	29	LYS	2.1
16	AP	35	LYS	2.1
16	CP	3	LYS	2.1
22	CY	29	LYS	2.1
27	BF	14	PRO	2.1
29	DH	55	PRO	2.1
1	CA	1267	C	2.1
2	AB	76	GLN	2.1
3	CC	37	GLN	2.1
23	BA	645	C	2.1
3	CC	47	LEU	2.1
4	AD	129	ASN	2.1
5	CE	53	LEU	2.1
16	CP	60	LEU	2.1
22	CY	79	ASN	2.1
29	BH	171	LEU	2.1
36	BS	58	LEU	2.1
5	AE	23	GLY	2.1
9	AI	68	GLY	2.1
29	DH	28	GLY	2.1
39	BV	63	GLY	2.1
1	CA	42	G	2.1
2	AB	15	VAL	2.1
2	AB	68	ILE	2.1
2	CB	112	VAL	2.1
16	CP	33	ILE	2.1
16	CP	40	ASP	2.1
16	CP	47	ASP	2.1
19	AS	19	VAL	2.1
23	BA	11	G	2.1

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Mol	Chain	Res	Type	RSRZ
23	BA	2124	G	2.1
23	DA	100	G	2.1
42	DY	72	VAL	2.1
14	AN	16	PHE	2.1
1	CA	1085	U	2.1
1	CA	1252	A	2.1
7	AG	4	ARG	2.1
7	AG	115	ARG	2.1
7	CG	32	ARG	2.1
21	AU	15	ARG	2.1
29	DH	42	ARG	2.1
37	BT	129	ARG	2.1
2	CB	73	THR	2.1
5	CE	116	THR	2.1
12	CL	67	THR	2.1
16	AP	67	THR	2.1
4	CD	86	LYS	2.1
9	CI	118	LYS	2.1
28	BG	75	LYS	2.1
13	AM	113	PRO	2.1
16	AP	15	PRO	2.1
19	CS	42	PRO	2.1
43	DZ	1	MET	2.1
46	D2	9	GLN	2.1
2	AB	154	LEU	2.1
9	AI	102	LEU	2.1
28	DG	111	LEU	2.1
2	AB	104	ASN	2.1
7	AG	84	ASN	2.1
2	CB	100	GLY	2.1
3	CC	194	GLY	2.1
29	DH	142	GLY	2.1
34	DQ	23	GLY	2.1
1	CA	1029	C	2.1
2	CB	182	ILE	2.1
3	CC	14	ILE	2.1
3	CC	75	VAL	2.1
3	CC	182	ILE	2.1
4	CD	88	VAL	2.1
7	AG	75	VAL	2.1
8	AH	86	ILE	2.1
12	AL	104	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
15	AO	87	ILE	2.1
18	CR	86	VAL	2.1
20	CT	63	ILE	2.1
20	CT	88	VAL	2.1
23	BA	1532	C	2.1
23	DA	2316	C	2.1
29	DH	19	VAL	2.1
36	DS	28	VAL	2.1
42	DY	45	VAL	2.1
18	AR	43	PHE	2.1
19	CS	74	PHE	2.1
36	DS	87	PHE	2.1
3	CC	60	ALA	2.1
3	CC	149	ALA	2.1
4	CD	150	GLU	2.1
5	CE	17	ALA	2.1
7	CG	150	ALA	2.1
14	AN	3	ARG	2.1
14	AN	5	ALA	2.1
22	CY	7	SER	2.1
19	AS	29	ARG	2.1
22	CY	21	ALA	2.1
28	DG	48	GLU	2.1
42	DY	65	ALA	2.1
43	DZ	188	ALA	2.1
1	AA	70	G	2.1
1	AA	1024	G	2.1
1	CA	1182	G	2.1
1	CA	1288	A	2.1
4	AD	184	LYS	2.1
10	CJ	14	LYS	2.1
12	AL	20	LYS	2.1
19	AS	6	LYS	2.1
23	DA	2793	G	2.1
23	BA	271(K)	U	2.1
23	BA	2118	U	2.1
23	DA	1026	U	2.1
23	DA	2144	U	2.1
36	DS	19	LYS	2.1
42	DY	5	MET	2.1
28	BG	138	GLN	2.1
2	CB	213	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
9	CI	19	LEU	2.1
17	CQ	84	LEU	2.1
33	DP	105	LEU	2.1
2	AB	25	ASN	2.1
2	CB	14	GLY	2.1
12	CL	37	CYS	2.1
19	AS	68	GLY	2.1
43	DZ	147	GLY	2.1
2	AB	41	ILE	2.1
2	AB	222	ILE	2.1
12	AL	70	ILE	2.1
16	AP	58	TYR	2.1
21	CU	18	TYR	2.1
28	DG	101	ILE	2.1
4	CD	203	VAL	2.1
11	AK	30	VAL	2.1
12	AL	18	VAL	2.1
27	BF	6	VAL	2.1
43	DZ	74	VAL	2.1
9	CI	101	PHE	2.1
2	AB	134	GLU	2.0
4	AD	114	ARG	2.0
8	CH	50	ARG	2.0
10	AJ	5	ARG	2.0
11	CK	89	ALA	2.0
12	AL	73	GLU	2.0
13	AM	102	ARG	2.0
17	CQ	70	ARG	2.0
34	DQ	25	ASP	2.0
13	CM	32	GLU	2.0
28	BG	164	GLU	2.0
29	BH	145	ALA	2.0
29	DH	40	GLU	2.0
46	D2	51	ARG	2.0
14	CN	32	SER	2.0
16	AP	56	ALA	2.0
48	B4	30	GLU	2.0
4	AD	208	SER	2.0
29	DH	56	SER	2.0
1	AA	848	C	2.0
1	AA	1037	C	2.0
1	AA	1054	C	2.0

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Mol	Chain	Res	Type	RSRZ
1	CA	470	C	2.0
1	CA	1397	C	2.0
10	CJ	99	LYS	2.0
16	AP	50	LYS	2.0
23	DA	1041	C	2.0
10	AJ	42	THR	2.0
28	BG	145	THR	2.0
4	AD	142	PRO	2.0
4	CD	51	PRO	2.0
16	CP	15	PRO	2.0
1	CA	1308	U	2.0
8	CH	112	LEU	2.0
13	CM	34	LEU	2.0
13	CM	70	LEU	2.0
15	AO	57	LEU	2.0
22	CY	34	LEU	2.0
28	BG	7	LEU	2.0
29	DH	7	LEU	2.0
29	DH	67	LEU	2.0
1	AA	105	G	2.0
1	CA	1053	G	2.0
23	BA	2170	A	2.0
23	BA	2192	G	2.0
23	DA	2135	A	2.0
43	DZ	32	HIS	2.0
29	DH	14	GLY	2.0
29	DH	48	GLY	2.0
30	DI	79	ILE	2.0
38	DU	88	ILE	2.0
43	DZ	197	ILE	2.0
4	CD	198	VAL	2.0
7	AG	85	TYR	2.0
11	CK	14	VAL	2.0
11	CK	25	TYR	2.0
16	AP	32	TYR	2.0
17	CQ	32	TYR	2.0
29	DH	164	TYR	2.0
43	DZ	86	VAL	2.0
3	CC	10	PHE	2.0
3	CC	156	ARG	2.0
4	CD	79	PHE	2.0
7	CG	6	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
12	CL	86	ARG	2.0
7	CG	146	GLU	2.0
9	CI	33	PHE	2.0
36	BS	3	ARG	2.0
45	B1	26	ARG	2.0
7	CG	147	ALA	2.0
10	AJ	17	ASP	2.0
11	AK	36	ASP	2.0
19	CS	73	GLU	2.0
2	AB	132	LYS	2.0
12	CL	108	ALA	2.0
13	CM	27	LYS	2.0
13	CM	42	ALA	2.0
16	AP	64	ALA	2.0
30	DI	110	ASP	2.0
36	DS	102	ALA	2.0
42	DY	107	ASP	2.0
20	CT	105	SER	2.0
48	D4	26	SER	2.0
13	CM	37	THR	2.0
13	CM	109	THR	2.0
14	AN	61	TRP	2.0
16	AP	66	PRO	2.0
20	CT	71	THR	2.0
1	AA	221	C	2.0
1	CA	1260	C	2.0
2	CB	51	LEU	2.0
2	CB	158	LEU	2.0
4	CD	188	LEU	2.0
8	AH	2	LEU	2.0
16	CP	82	GLN	2.0
23	BA	154(A)	C	2.0
36	DS	95	HIS	2.0
1	CA	1345	U	2.0
23	DA	157	U	2.0
3	CC	145	GLY	2.0
6	AF	25	ILE	2.0
9	AI	72	GLY	2.0
10	CJ	52	GLY	2.0
13	CM	100	GLY	2.0
16	CP	37	GLY	2.0
34	DQ	24	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
1	CA	1015	A	2.0
9	AI	16	ARG	2.0
9	AI	26	VAL	2.0
10	AJ	24	VAL	2.0
12	CL	113	ARG	2.0
15	CO	68	ARG	2.0
19	AS	45	VAL	2.0
23	BA	529	A	2.0
36	DS	30	ARG	2.0
43	DZ	3	TYR	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides 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^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1675	1/1	0.17	0.27	106,106,106,106	0
54	MG	CA	1607	1/1	0.39	0.38	96,96,96,96	0
54	MG	BA	3605	1/1	0.41	0.24	89,89,89,89	0
54	MG	AA	1757	1/1	0.50	0.30	91,91,91,91	0
54	MG	CA	1653	1/1	0.54	0.22	85,85,85,85	0
54	MG	BA	3600	1/1	0.55	0.17	58,58,58,58	0
54	MG	CA	1777	1/1	0.56	0.18	130,130,130,130	0
54	MG	CA	1797	1/1	0.56	0.16	68,68,68,68	0
54	MG	BA	3530	1/1	0.57	0.27	95,95,95,95	0
54	MG	CA	1742	1/1	0.57	0.15	99,99,99,99	0
54	MG	DA	3547	1/1	0.57	0.17	89,89,89,89	0
54	MG	AA	1646	1/1	0.58	0.23	87,87,87,87	0
54	MG	DA	3410	1/1	0.60	0.18	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1762	1/1	0.60	0.25	86,86,86,86	0
54	MG	CA	1664	1/1	0.62	0.16	62,62,62,62	0
54	MG	DA	3399	1/1	0.62	0.20	80,80,80,80	0
54	MG	DA	3558	1/1	0.62	0.20	70,70,70,70	0
54	MG	DA	3614	1/1	0.62	0.40	92,92,92,92	0
54	MG	DA	3395	1/1	0.63	0.20	75,75,75,75	0
54	MG	BA	3560	1/1	0.63	0.22	93,93,93,93	0
54	MG	BA	3128	1/1	0.64	0.15	63,63,63,63	0
54	MG	DA	3565	1/1	0.66	0.14	62,62,62,62	0
54	MG	BA	3726	1/1	0.66	0.15	73,73,73,73	0
54	MG	DB	206	1/1	0.67	0.42	115,115,115,115	0
54	MG	CA	1629	1/1	0.68	0.37	81,81,81,81	0
54	MG	BA	3491	1/1	0.68	0.14	72,72,72,72	0
54	MG	BA	3683	1/1	0.68	0.14	95,95,95,95	0
54	MG	CA	1713	1/1	0.68	0.25	95,95,95,95	0
54	MG	CA	1781	1/1	0.69	0.20	100,100,100,100	0
54	MG	DA	3479	1/1	0.69	0.12	66,66,66,66	0
54	MG	DA	3486	1/1	0.69	0.19	44,44,44,44	0
54	MG	DA	3175	1/1	0.69	0.18	31,31,31,31	0
54	MG	BA	3537	1/1	0.70	0.28	66,66,66,66	0
54	MG	DA	3393	1/1	0.70	0.22	52,52,52,52	0
54	MG	DA	3347	1/1	0.71	0.17	87,87,87,87	0
54	MG	BA	3111	1/1	0.71	0.33	67,67,67,67	0
54	MG	DA	3573	1/1	0.71	0.22	68,68,68,68	0
54	MG	AA	1686	1/1	0.71	0.21	68,68,68,68	0
54	MG	DA	3632	1/1	0.71	0.12	72,72,72,72	0
54	MG	CA	1631	1/1	0.71	0.17	87,87,87,87	0
54	MG	AA	1698	1/1	0.72	0.29	78,78,78,78	0
54	MG	DA	3389	1/1	0.72	0.15	82,82,82,82	0
54	MG	CA	1715	1/1	0.72	0.26	85,85,85,85	0
54	MG	BA	3169	1/1	0.72	0.14	60,60,60,60	0
54	MG	AA	1756	1/1	0.72	0.16	107,107,107,107	0
54	MG	CA	1707	1/1	0.73	0.34	73,73,73,73	0
54	MG	DA	3554	1/1	0.73	0.16	70,70,70,70	0
54	MG	BA	3500	1/1	0.73	0.17	68,68,68,68	0
54	MG	CA	1624	1/1	0.73	0.24	65,65,65,65	0
54	MG	CA	1791	1/1	0.73	0.18	72,72,72,72	0
54	MG	CA	1719	1/1	0.73	0.33	90,90,90,90	0
54	MG	BA	3206	1/1	0.73	0.21	67,67,67,67	0
54	MG	CA	1746	1/1	0.73	0.13	113,113,113,113	0
54	MG	DA	3141	1/1	0.74	0.10	70,70,70,70	0
54	MG	DA	3159	1/1	0.74	0.12	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3517	1/1	0.74	0.14	91,91,91,91	0
54	MG	BA	3590	1/1	0.74	0.12	77,77,77,77	0
54	MG	CA	1604	1/1	0.74	0.26	70,70,70,70	0
54	MG	CA	1787	1/1	0.74	0.27	84,84,84,84	0
54	MG	AA	1714	1/1	0.74	0.13	58,58,58,58	0
54	MG	AA	1817	1/1	0.74	0.17	78,78,78,78	0
54	MG	DA	3404	1/1	0.74	0.19	62,62,62,62	0
54	MG	DA	3124	1/1	0.74	0.19	69,69,69,69	0
54	MG	AA	1794	1/1	0.75	0.15	111,111,111,111	0
54	MG	BA	3192	1/1	0.75	0.24	62,62,62,62	0
54	MG	BA	3510	1/1	0.75	0.17	77,77,77,77	0
54	MG	DA	3377	1/1	0.75	0.12	74,74,74,74	0
54	MG	DA	3388	1/1	0.75	0.22	73,73,73,73	0
54	MG	BA	3579	1/1	0.75	0.21	57,57,57,57	0
54	MG	BA	3003	1/1	0.75	0.26	68,68,68,68	0
54	MG	CA	1654	1/1	0.76	0.14	63,63,63,63	0
54	MG	DA	3316	1/1	0.76	0.10	87,87,87,87	0
54	MG	DA	3435	1/1	0.76	0.12	77,77,77,77	0
54	MG	DA	3466	1/1	0.76	0.14	65,65,65,65	0
54	MG	BA	3014	1/1	0.76	0.23	61,61,61,61	0
54	MG	DA	3359	1/1	0.76	0.23	69,69,69,69	0
54	MG	CA	1758	1/1	0.76	0.14	64,64,64,64	0
54	MG	DA	3559	1/1	0.77	0.16	76,76,76,76	0
54	MG	BA	3529	1/1	0.77	0.15	52,52,52,52	0
54	MG	AA	1621	1/1	0.77	0.41	63,63,63,63	0
54	MG	CA	1660	1/1	0.77	0.20	65,65,65,65	0
54	MG	AA	1797	1/1	0.77	0.14	106,106,106,106	0
54	MG	DA	3374	1/1	0.77	0.20	73,73,73,73	0
54	MG	CA	1720	1/1	0.78	0.26	84,84,84,84	0
54	MG	CA	1729	1/1	0.78	0.18	84,84,84,84	0
54	MG	AA	1613	1/1	0.78	0.38	77,77,77,77	0
54	MG	CA	1625	1/1	0.78	0.13	69,69,69,69	0
54	MG	AA	1769	1/1	0.78	0.11	69,69,69,69	0
54	MG	AA	1611	1/1	0.78	0.22	75,75,75,75	0
54	MG	BA	3020	1/1	0.78	0.18	69,69,69,69	0
54	MG	AA	1622	1/1	0.78	0.19	60,60,60,60	0
54	MG	D0	101	1/1	0.78	0.29	78,78,78,78	0
54	MG	D5	103	1/1	0.78	0.11	61,61,61,61	0
54	MG	CA	1647	1/1	0.79	0.19	103,103,103,103	0
54	MG	DA	3253	1/1	0.79	0.14	58,58,58,58	0
54	MG	BA	3715	1/1	0.79	0.12	88,88,88,88	0
54	MG	BA	3345	1/1	0.79	0.18	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3479	1/1	0.79	0.18	77,77,77,77	0
54	MG	DA	3371	1/1	0.79	0.21	76,76,76,76	0
54	MG	AA	1658	1/1	0.79	0.19	73,73,73,73	0
54	MG	BA	3205	1/1	0.79	0.10	67,67,67,67	0
54	MG	BA	3639	1/1	0.79	0.12	56,56,56,56	0
54	MG	CA	1626	1/1	0.79	0.37	86,86,86,86	0
54	MG	BA	3679	1/1	0.79	0.14	80,80,80,80	0
54	MG	DA	3618	1/1	0.79	0.17	93,93,93,93	0
54	MG	DA	3016	1/1	0.79	0.18	64,64,64,64	0
54	MG	CA	1630	1/1	0.79	0.46	78,78,78,78	0
54	MG	AD	302	1/1	0.79	0.27	73,73,73,73	0
54	MG	CA	1741	1/1	0.79	0.11	117,117,117,117	0
54	MG	DA	3292	1/1	0.80	0.14	59,59,59,59	0
54	MG	DA	3478	1/1	0.80	0.21	64,64,64,64	0
54	MG	CA	1616	1/1	0.80	0.26	71,71,71,71	0
54	MG	BA	3619	1/1	0.80	0.15	75,75,75,75	0
54	MG	DA	3536	1/1	0.80	0.14	76,76,76,76	0
54	MG	DA	3011	1/1	0.80	0.10	45,45,45,45	0
54	MG	DA	3014	1/1	0.80	0.41	73,73,73,73	0
54	MG	CA	1643	1/1	0.80	0.35	76,76,76,76	0
54	MG	DA	3050	1/1	0.80	0.17	52,52,52,52	0
54	MG	DA	3108	1/1	0.80	0.19	70,70,70,70	0
54	MG	CA	1645	1/1	0.80	0.21	69,69,69,69	0
54	MG	DA	3592	1/1	0.80	0.11	72,72,72,72	0
54	MG	BA	3499	1/1	0.80	0.19	35,35,35,35	0
54	MG	AA	1793	1/1	0.80	0.19	78,78,78,78	0
54	MG	DA	3624	1/1	0.80	0.10	56,56,56,56	0
54	MG	AA	1813	1/1	0.80	0.17	86,86,86,86	0
54	MG	DA	3196	1/1	0.80	0.23	37,37,37,37	0
54	MG	CA	1657	1/1	0.80	0.12	85,85,85,85	0
54	MG	DA	3264	1/1	0.80	0.10	91,91,91,91	0
54	MG	DA	3282	1/1	0.81	0.12	64,64,64,64	0
54	MG	DA	3283	1/1	0.81	0.13	51,51,51,51	0
54	MG	AA	1674	1/1	0.81	0.19	75,75,75,75	0
54	MG	CA	1739	1/1	0.81	0.27	76,76,76,76	0
54	MG	DA	3507	1/1	0.81	0.12	90,90,90,90	0
54	MG	DA	3337	1/1	0.81	0.15	65,65,65,65	0
54	MG	CA	1612	1/1	0.81	0.40	84,84,84,84	0
54	MG	CA	1637	1/1	0.81	0.21	98,98,98,98	0
54	MG	DA	3032	1/1	0.81	0.18	59,59,59,59	0
54	MG	CA	1684	1/1	0.81	0.29	82,82,82,82	0
54	MG	CA	1754	1/1	0.81	0.20	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1695	1/1	0.81	0.22	76,76,76,76	0
54	MG	DA	3136	1/1	0.81	0.55	62,62,62,62	0
54	MG	CA	1761	1/1	0.81	0.14	92,92,92,92	0
54	MG	AA	1694	1/1	0.81	0.14	76,76,76,76	0
54	MG	BA	3117	1/1	0.81	0.16	67,67,67,67	0
54	MG	BA	3719	1/1	0.81	0.13	83,83,83,83	0
54	MG	DA	3634	1/1	0.81	0.22	75,75,75,75	0
54	MG	BA	3577	1/1	0.81	0.14	59,59,59,59	0
54	MG	AA	1759	1/1	0.81	0.24	74,74,74,74	0
54	MG	DA	3463	1/1	0.81	0.19	67,67,67,67	0
54	MG	CA	1681	1/1	0.82	0.21	83,83,83,83	0
54	MG	DA	3020	1/1	0.82	0.24	66,66,66,66	0
54	MG	DA	3326	1/1	0.82	0.12	69,69,69,69	0
54	MG	BA	3197	1/1	0.82	0.14	58,58,58,58	0
54	MG	CA	1641	1/1	0.82	0.28	62,62,62,62	0
54	MG	DA	3497	1/1	0.82	0.12	40,40,40,40	0
54	MG	DA	3501	1/1	0.82	0.19	85,85,85,85	0
54	MG	CA	1697	1/1	0.82	0.15	95,95,95,95	0
54	MG	DA	3522	1/1	0.82	0.16	59,59,59,59	0
54	MG	DA	3530	1/1	0.82	0.12	66,66,66,66	0
54	MG	CA	1613	1/1	0.82	0.24	68,68,68,68	0
54	MG	BA	3612	1/1	0.82	0.17	58,58,58,58	0
54	MG	DA	3140	1/1	0.82	0.12	60,60,60,60	0
54	MG	BA	3591	1/1	0.82	0.11	104,104,104,104	0
54	MG	BA	3721	1/1	0.82	0.17	53,53,53,53	0
54	MG	BA	3624	1/1	0.82	0.18	36,36,36,36	0
54	MG	BR	204	1/1	0.82	0.11	49,49,49,49	0
54	MG	DA	3574	1/1	0.82	0.10	77,77,77,77	0
54	MG	CA	1736	1/1	0.82	0.15	94,94,94,94	0
54	MG	CA	1803	1/1	0.82	0.14	55,55,55,55	0
54	MG	BA	3592	1/1	0.82	0.15	62,62,62,62	0
54	MG	DA	3416	1/1	0.82	0.15	64,64,64,64	0
54	MG	DA	3432	1/1	0.82	0.16	67,67,67,67	0
54	MG	AA	1659	1/1	0.82	0.18	75,75,75,75	0
54	MG	DA	3439	1/1	0.82	0.23	57,57,57,57	0
54	MG	DB	208	1/1	0.82	0.14	96,96,96,96	0
54	MG	DQ	204	1/1	0.82	0.09	67,67,67,67	0
54	MG	DA	3446	1/1	0.82	0.12	68,68,68,68	0
54	MG	DA	3449	1/1	0.82	0.13	57,57,57,57	0
54	MG	CA	1776	1/1	0.83	0.16	76,76,76,76	0
54	MG	DA	3272	1/1	0.83	0.07	69,69,69,69	0
54	MG	CA	1627	1/1	0.83	0.16	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1667	1/1	0.83	0.21	84,84,84,84	0
54	MG	BA	3281	1/1	0.83	0.11	43,43,43,43	0
54	MG	BA	3314	1/1	0.83	0.11	39,39,39,39	0
54	MG	BA	3165	1/1	0.83	0.15	41,41,41,41	0
54	MG	BV	202	1/1	0.83	0.18	83,83,83,83	0
54	MG	DA	3523	1/1	0.83	0.11	73,73,73,73	0
54	MG	B6	102	1/1	0.83	0.15	69,69,69,69	0
54	MG	DA	3351	1/1	0.83	0.12	68,68,68,68	0
54	MG	DA	3013	1/1	0.83	0.23	60,60,60,60	0
54	MG	BA	3617	1/1	0.83	0.17	44,44,44,44	0
54	MG	CA	1722	1/1	0.83	0.14	58,58,58,58	0
54	MG	AA	1752	1/1	0.83	0.26	102,102,102,102	0
54	MG	CA	1650	1/1	0.83	0.28	65,65,65,65	0
54	MG	CA	1737	1/1	0.83	0.24	75,75,75,75	0
54	MG	CA	1652	1/1	0.83	0.15	88,88,88,88	0
54	MG	AA	1760	1/1	0.83	0.23	74,74,74,74	0
54	MG	DA	3134	1/1	0.83	0.31	71,71,71,71	0
54	MG	AA	1755	1/1	0.83	0.19	76,76,76,76	0
54	MG	BA	3677	1/1	0.83	0.14	72,72,72,72	0
54	MG	AA	1633	1/1	0.83	0.26	69,69,69,69	0
54	MG	BA	3501	1/1	0.83	0.12	51,51,51,51	0
54	MG	CA	1759	1/1	0.83	0.22	95,95,95,95	0
54	MG	DA	3185	1/1	0.83	0.17	47,47,47,47	0
54	MG	DD	303	1/1	0.83	0.15	53,53,53,53	0
54	MG	CA	1677	1/1	0.83	0.13	86,86,86,86	0
54	MG	DA	3247	1/1	0.83	0.17	73,73,73,73	0
54	MG	BA	3507	1/1	0.83	0.13	67,67,67,67	0
54	MG	CA	1606	1/1	0.84	0.34	83,83,83,83	0
54	MG	DA	3398	1/1	0.84	0.14	53,53,53,53	0
54	MG	DA	3543	1/1	0.84	0.09	54,54,54,54	0
54	MG	DA	3276	1/1	0.84	0.10	76,76,76,76	0
54	MG	DA	3551	1/1	0.84	0.12	69,69,69,69	0
54	MG	DA	3051	1/1	0.84	0.22	73,73,73,73	0
54	MG	AA	1649	1/1	0.84	0.15	71,71,71,71	0
54	MG	DA	3285	1/1	0.84	0.21	68,68,68,68	0
54	MG	CA	1786	1/1	0.84	0.26	83,83,83,83	0
54	MG	DA	3307	1/1	0.84	0.20	79,79,79,79	0
54	MG	AA	1652	1/1	0.84	0.17	63,63,63,63	0
54	MG	DA	3323	1/1	0.84	0.15	69,69,69,69	0
54	MG	DA	3606	1/1	0.84	0.14	82,82,82,82	0
54	MG	AA	1623	1/1	0.84	0.35	85,85,85,85	0
54	MG	BA	3260	1/1	0.84	0.22	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3152	1/1	0.84	0.13	48,48,48,48	0
54	MG	DA	3628	1/1	0.84	0.11	59,59,59,59	0
54	MG	DA	3149	1/1	0.84	0.20	46,46,46,46	0
54	MG	AA	1696	1/1	0.84	0.25	66,66,66,66	0
54	MG	DB	201	1/1	0.84	0.20	67,67,67,67	0
54	MG	BP	202	1/1	0.84	0.33	54,54,54,54	0
54	MG	BA	3626	1/1	0.84	0.13	68,68,68,68	0
54	MG	AA	1767	1/1	0.84	0.10	70,70,70,70	0
54	MG	DP	201	1/1	0.84	0.18	78,78,78,78	0
54	MG	BA	3671	1/1	0.84	0.12	50,50,50,50	0
54	MG	BA	3105	1/1	0.84	0.18	44,44,44,44	0
54	MG	DA	3038	1/1	0.84	0.13	85,85,85,85	0
54	MG	DA	3286	1/1	0.85	0.14	69,69,69,69	0
54	MG	BA	3287	1/1	0.85	0.15	44,44,44,44	0
54	MG	CA	1728	1/1	0.85	0.16	79,79,79,79	0
54	MG	BA	3716	1/1	0.85	0.11	54,54,54,54	0
54	MG	AA	1780	1/1	0.85	0.11	72,72,72,72	0
54	MG	AA	1721	1/1	0.85	0.23	77,77,77,77	0
54	MG	BA	3386	1/1	0.85	0.22	32,32,32,32	0
54	MG	DA	3338	1/1	0.85	0.22	67,67,67,67	0
54	MG	DA	3340	1/1	0.85	0.16	72,72,72,72	0
54	MG	DA	3341	1/1	0.85	0.11	60,60,60,60	0
54	MG	BB	205	1/1	0.85	0.13	48,48,48,48	0
54	MG	DA	3069	1/1	0.85	0.19	67,67,67,67	0
54	MG	DA	3086	1/1	0.85	0.14	54,54,54,54	0
54	MG	DA	3365	1/1	0.85	0.12	51,51,51,51	0
54	MG	BA	3469	1/1	0.85	0.12	65,65,65,65	0
54	MG	AA	1764	1/1	0.85	0.15	70,70,70,70	0
54	MG	CA	1750	1/1	0.85	0.13	88,88,88,88	0
54	MG	BA	3487	1/1	0.85	0.13	49,49,49,49	0
54	MG	DA	3579	1/1	0.85	0.12	52,52,52,52	0
54	MG	BZ	301	1/1	0.85	0.25	61,61,61,61	0
54	MG	DA	3594	1/1	0.85	0.11	62,62,62,62	0
54	MG	DA	3596	1/1	0.85	0.20	60,60,60,60	0
54	MG	AA	1796	1/1	0.85	0.14	100,100,100,100	0
54	MG	BA	3608	1/1	0.85	0.10	21,21,21,21	0
54	MG	BA	3189	1/1	0.85	0.17	71,71,71,71	0
54	MG	BA	3072	1/1	0.85	0.12	48,48,48,48	0
54	MG	BA	3073	1/1	0.85	0.23	74,74,74,74	0
54	MG	CA	1778	1/1	0.85	0.10	83,83,83,83	0
54	MG	BA	3088	1/1	0.85	0.11	42,42,42,42	0
54	MG	AA	1609	1/1	0.85	0.20	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3627	1/1	0.85	0.11	40,40,40,40	0
54	MG	AA	1603	1/1	0.85	0.13	62,62,62,62	0
54	MG	BA	3267	1/1	0.85	0.13	56,56,56,56	0
54	MG	DA	3281	1/1	0.85	0.14	85,85,85,85	0
54	MG	BA	3277	1/1	0.85	0.12	32,32,32,32	0
54	MG	AA	1777	1/1	0.85	0.09	100,100,100,100	0
54	MG	BA	3545	1/1	0.85	0.10	63,63,63,63	0
54	MG	BA	3309	1/1	0.86	0.10	69,69,69,69	0
54	MG	AA	1608	1/1	0.86	0.19	66,66,66,66	0
54	MG	BA	3532	1/1	0.86	0.16	31,31,31,31	0
54	MG	DA	3147	1/1	0.86	0.14	52,52,52,52	0
54	MG	DA	3436	1/1	0.86	0.23	77,77,77,77	0
54	MG	CA	1635	1/1	0.86	0.24	63,63,63,63	0
54	MG	BA	3322	1/1	0.86	0.10	54,54,54,54	0
54	MG	DA	3168	1/1	0.86	0.11	41,41,41,41	0
54	MG	DA	3459	1/1	0.86	0.14	90,90,90,90	0
54	MG	CA	1639	1/1	0.86	0.40	57,57,57,57	0
54	MG	BA	3334	1/1	0.86	0.10	39,39,39,39	0
54	MG	DA	3467	1/1	0.86	0.11	85,85,85,85	0
54	MG	AA	1723	1/1	0.86	0.18	82,82,82,82	0
54	MG	BA	3717	1/1	0.86	0.10	45,45,45,45	0
54	MG	BA	3564	1/1	0.86	0.10	67,67,67,67	0
54	MG	BA	3377	1/1	0.86	0.14	44,44,44,44	0
54	MG	CA	1768	1/1	0.86	0.23	95,95,95,95	0
54	MG	AA	1639	1/1	0.86	0.20	64,64,64,64	0
54	MG	DA	3519	1/1	0.86	0.10	61,61,61,61	0
54	MG	BA	3452	1/1	0.86	0.10	54,54,54,54	0
54	MG	BD	307	1/1	0.86	0.16	65,65,65,65	0
54	MG	CA	1779	1/1	0.86	0.10	116,116,116,116	0
54	MG	CA	1655	1/1	0.86	0.13	66,66,66,66	0
54	MG	DA	3542	1/1	0.86	0.16	65,65,65,65	0
54	MG	AA	1802	1/1	0.86	0.21	64,64,64,64	0
54	MG	CA	1659	1/1	0.86	0.12	89,89,89,89	0
54	MG	DA	3294	1/1	0.86	0.14	67,67,67,67	0
54	MG	DA	3306	1/1	0.86	0.21	68,68,68,68	0
54	MG	CA	1789	1/1	0.86	0.14	66,66,66,66	0
54	MG	DA	3308	1/1	0.86	0.10	70,70,70,70	0
54	MG	BA	3477	1/1	0.86	0.10	101,101,101,101	0
54	MG	DA	3318	1/1	0.86	0.20	75,75,75,75	0
54	MG	BA	3102	1/1	0.86	0.15	33,33,33,33	0
54	MG	AA	1704	1/1	0.86	0.16	75,75,75,75	0
54	MG	B0	103	1/1	0.86	0.18	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3106	1/1	0.86	0.13	48,48,48,48	0
54	MG	CA	1686	1/1	0.86	0.25	67,67,67,67	0
54	MG	DA	3597	1/1	0.86	0.14	73,73,73,73	0
54	MG	DA	3598	1/1	0.86	0.14	64,64,64,64	0
54	MG	CA	1602	1/1	0.86	0.28	70,70,70,70	0
54	MG	BA	3210	1/1	0.86	0.11	58,58,58,58	0
54	MG	AA	1630	1/1	0.86	0.18	76,76,76,76	0
54	MG	AA	1715	1/1	0.86	0.18	61,61,61,61	0
54	MG	DA	3626	1/1	0.86	0.18	75,75,75,75	0
54	MG	AA	1785	1/1	0.86	0.18	61,61,61,61	0
54	MG	BA	3150	1/1	0.86	0.14	70,70,70,70	0
54	MG	DA	3065	1/1	0.86	0.33	74,74,74,74	0
54	MG	BA	3511	1/1	0.86	0.12	72,72,72,72	0
54	MG	AA	1717	1/1	0.86	0.13	79,79,79,79	0
54	MG	DA	3090	1/1	0.86	0.15	45,45,45,45	0
54	MG	DA	3093	1/1	0.86	0.09	55,55,55,55	0
54	MG	BA	3640	1/1	0.86	0.14	55,55,55,55	0
54	MG	BA	3656	1/1	0.86	0.16	50,50,50,50	0
54	MG	DA	3130	1/1	0.86	0.24	49,49,49,49	0
54	MG	BA	3664	1/1	0.86	0.10	56,56,56,56	0
54	MG	D7	102	1/1	0.86	0.13	65,65,65,65	0
54	MG	AA	1762	1/1	0.87	0.24	78,78,78,78	0
54	MG	AA	1678	1/1	0.87	0.25	75,75,75,75	0
54	MG	DA	3198	1/1	0.87	0.14	52,52,52,52	0
54	MG	CA	1675	1/1	0.87	0.11	75,75,75,75	0
54	MG	CA	1785	1/1	0.87	0.16	84,84,84,84	0
54	MG	BA	3512	1/1	0.87	0.11	71,71,71,71	0
54	MG	CA	1603	1/1	0.87	0.46	83,83,83,83	0
54	MG	DA	3494	1/1	0.87	0.12	64,64,64,64	0
54	MG	AA	1632	1/1	0.87	0.14	64,64,64,64	0
54	MG	BA	3526	1/1	0.87	0.12	55,55,55,55	0
54	MG	DA	3505	1/1	0.87	0.16	66,66,66,66	0
54	MG	CA	1688	1/1	0.87	0.15	110,110,110,110	0
54	MG	DA	3514	1/1	0.87	0.13	92,92,92,92	0
54	MG	CA	1800	1/1	0.87	0.12	76,76,76,76	0
54	MG	BA	3327	1/1	0.87	0.12	69,69,69,69	0
54	MG	DA	3004	1/1	0.87	0.26	64,64,64,64	0
54	MG	AA	1605	1/1	0.87	0.27	62,62,62,62	0
54	MG	BA	3343	1/1	0.87	0.10	48,48,48,48	0
54	MG	CA	1709	1/1	0.87	0.21	76,76,76,76	0
54	MG	CA	1712	1/1	0.87	0.09	55,55,55,55	0
54	MG	BA	3666	1/1	0.87	0.12	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3028	1/1	0.87	0.20	62,62,62,62	0
54	MG	BA	3669	1/1	0.87	0.12	44,44,44,44	0
54	MG	BA	3174	1/1	0.87	0.16	73,73,73,73	0
54	MG	DA	3040	1/1	0.87	0.21	58,58,58,58	0
54	MG	AA	1695	1/1	0.87	0.12	57,57,57,57	0
54	MG	BA	3556	1/1	0.87	0.16	52,52,52,52	0
54	MG	BA	3059	1/1	0.87	0.15	54,54,54,54	0
54	MG	DA	3576	1/1	0.87	0.27	36,36,36,36	0
54	MG	BA	3709	1/1	0.87	0.09	47,47,47,47	0
54	MG	BA	3714	1/1	0.87	0.09	47,47,47,47	0
54	MG	AA	1736	1/1	0.87	0.15	67,67,67,67	0
54	MG	BA	3453	1/1	0.87	0.16	65,65,65,65	0
54	MG	DA	3100	1/1	0.87	0.23	56,56,56,56	0
54	MG	DA	3106	1/1	0.87	0.10	55,55,55,55	0
54	MG	AA	1740	1/1	0.87	0.23	70,70,70,70	0
54	MG	DA	3110	1/1	0.87	0.10	56,56,56,56	0
54	MG	AA	1606	1/1	0.87	0.14	63,63,63,63	0
54	MG	AA	1619	1/1	0.87	0.28	45,45,45,45	0
54	MG	BA	3228	1/1	0.87	0.12	44,44,44,44	0
54	MG	BA	3727	1/1	0.87	0.11	94,94,94,94	0
54	MG	BA	3595	1/1	0.87	0.19	78,78,78,78	0
54	MG	AA	1699	1/1	0.87	0.14	65,65,65,65	0
54	MG	DA	3635	1/1	0.87	0.13	54,54,54,54	0
54	MG	DA	3143	1/1	0.87	0.22	62,62,62,62	0
54	MG	BE	304	1/1	0.87	0.15	53,53,53,53	0
54	MG	AA	1700	1/1	0.87	0.30	69,69,69,69	0
54	MG	DB	210	1/1	0.87	0.10	82,82,82,82	0
54	MG	DA	3152	1/1	0.87	0.16	52,52,52,52	0
54	MG	DO	201	1/1	0.87	0.11	67,67,67,67	0
54	MG	AA	1620	1/1	0.87	0.26	61,61,61,61	0
54	MG	DA	3164	1/1	0.87	0.13	64,64,64,64	0
54	MG	AA	1805	1/1	0.87	0.18	82,82,82,82	0
54	MG	AA	1651	1/1	0.87	0.14	62,62,62,62	0
54	MG	D7	101	1/1	0.87	0.27	41,41,41,41	0
54	MG	DA	3178	1/1	0.87	0.10	42,42,42,42	0
54	MG	AA	1665	1/1	0.88	0.20	66,66,66,66	0
54	MG	DA	3148	1/1	0.88	0.14	55,55,55,55	0
54	MG	BF	305	1/1	0.88	0.27	29,29,29,29	0
54	MG	BN	201	1/1	0.88	0.09	57,57,57,57	0
54	MG	BA	3336	1/1	0.88	0.11	71,71,71,71	0
54	MG	BA	3615	1/1	0.88	0.22	60,60,60,60	0
54	MG	BA	3129	1/1	0.88	0.16	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1800	1/1	0.88	0.22	70,70,70,70	0
54	MG	BA	3621	1/1	0.88	0.13	35,35,35,35	0
54	MG	CA	1793	1/1	0.88	0.21	89,89,89,89	0
54	MG	BA	3513	1/1	0.88	0.12	46,46,46,46	0
54	MG	CA	1798	1/1	0.88	0.26	67,67,67,67	0
54	MG	DA	3222	1/1	0.88	0.17	37,37,37,37	0
54	MG	DA	3231	1/1	0.88	0.12	51,51,51,51	0
54	MG	DA	3496	1/1	0.88	0.16	38,38,38,38	0
54	MG	DA	3244	1/1	0.88	0.10	32,32,32,32	0
54	MG	DA	3500	1/1	0.88	0.16	56,56,56,56	0
54	MG	CA	1601	1/1	0.88	0.20	55,55,55,55	0
54	MG	CA	1692	1/1	0.88	0.14	64,64,64,64	0
54	MG	BA	3360	1/1	0.88	0.13	41,41,41,41	0
54	MG	BA	3235	1/1	0.88	0.14	45,45,45,45	0
54	MG	CA	1705	1/1	0.88	0.14	72,72,72,72	0
54	MG	DA	3279	1/1	0.88	0.14	66,66,66,66	0
54	MG	BA	3239	1/1	0.88	0.08	63,63,63,63	0
54	MG	BA	3432	1/1	0.88	0.16	68,68,68,68	0
54	MG	BA	3444	1/1	0.88	0.14	50,50,50,50	0
54	MG	DA	3023	1/1	0.88	0.37	68,68,68,68	0
54	MG	BA	3536	1/1	0.88	0.12	54,54,54,54	0
54	MG	DA	3288	1/1	0.88	0.11	51,51,51,51	0
54	MG	BA	3449	1/1	0.88	0.08	40,40,40,40	0
54	MG	DA	3037	1/1	0.88	0.12	52,52,52,52	0
54	MG	DA	3296	1/1	0.88	0.21	61,61,61,61	0
54	MG	DA	3297	1/1	0.88	0.09	49,49,49,49	0
54	MG	DA	3302	1/1	0.88	0.10	51,51,51,51	0
54	MG	AA	1779	1/1	0.88	0.13	68,68,68,68	0
54	MG	AA	1666	1/1	0.88	0.21	71,71,71,71	0
54	MG	DA	3042	1/1	0.88	0.17	50,50,50,50	0
54	MG	DA	3577	1/1	0.88	0.13	57,57,57,57	0
54	MG	BA	3672	1/1	0.88	0.15	69,69,69,69	0
54	MG	DA	3583	1/1	0.88	0.32	35,35,35,35	0
54	MG	BA	3458	1/1	0.88	0.09	45,45,45,45	0
54	MG	BA	3462	1/1	0.88	0.34	36,36,36,36	0
54	MG	BA	3569	1/1	0.88	0.09	67,67,67,67	0
54	MG	DA	3083	1/1	0.88	0.07	50,50,50,50	0
54	MG	BA	3684	1/1	0.88	0.20	64,64,64,64	0
54	MG	DA	3605	1/1	0.88	0.11	49,49,49,49	0
54	MG	BA	3702	1/1	0.88	0.10	66,66,66,66	0
54	MG	DA	3092	1/1	0.88	0.13	54,54,54,54	0
54	MG	BA	3570	1/1	0.88	0.08	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3348	1/1	0.88	0.09	87,87,87,87	0
54	MG	DA	3096	1/1	0.88	0.24	61,61,61,61	0
54	MG	AA	1753	1/1	0.88	0.17	71,71,71,71	0
54	MG	AA	1816	1/1	0.88	0.12	75,75,75,75	0
54	MG	AA	1635	1/1	0.88	0.18	77,77,77,77	0
54	MG	DA	3109	1/1	0.88	0.27	57,57,57,57	0
54	MG	BA	3306	1/1	0.88	0.10	61,61,61,61	0
54	MG	DA	3118	1/1	0.88	0.26	75,75,75,75	0
54	MG	AA	1654	1/1	0.88	0.12	77,77,77,77	0
54	MG	BA	3594	1/1	0.88	0.14	56,56,56,56	0
54	MG	DA	3133	1/1	0.88	0.33	50,50,50,50	0
54	MG	AA	1795	1/1	0.88	0.10	87,87,87,87	0
54	MG	BA	3201	1/1	0.88	0.17	57,57,57,57	0
54	MG	AA	1662	1/1	0.88	0.15	64,64,64,64	0
54	MG	BB	211	1/1	0.88	0.10	61,61,61,61	0
54	MG	DA	3415	1/1	0.88	0.10	53,53,53,53	0
54	MG	BA	3607	1/1	0.88	0.13	76,76,76,76	0
54	MG	DA	3428	1/1	0.88	0.10	36,36,36,36	0
54	MG	BA	3265	1/1	0.89	0.09	69,69,69,69	0
54	MG	DA	3293	1/1	0.89	0.14	85,85,85,85	0
54	MG	DA	3094	1/1	0.89	0.14	54,54,54,54	0
54	MG	BA	3153	1/1	0.89	0.10	36,36,36,36	0
54	MG	DA	3502	1/1	0.89	0.12	78,78,78,78	0
54	MG	CA	1774	1/1	0.89	0.18	73,73,73,73	0
54	MG	DA	3102	1/1	0.89	0.16	48,48,48,48	0
54	MG	DA	3509	1/1	0.89	0.11	70,70,70,70	0
54	MG	AA	1660	1/1	0.89	0.21	62,62,62,62	0
54	MG	CA	1663	1/1	0.89	0.13	75,75,75,75	0
54	MG	BA	3559	1/1	0.89	0.17	56,56,56,56	0
54	MG	B2	102	1/1	0.89	0.14	60,60,60,60	0
54	MG	BA	3461	1/1	0.89	0.08	62,62,62,62	0
54	MG	CA	1783	1/1	0.89	0.23	73,73,73,73	0
54	MG	DA	3538	1/1	0.89	0.23	60,60,60,60	0
54	MG	DA	3125	1/1	0.89	0.16	59,59,59,59	0
54	MG	DA	3328	1/1	0.89	0.09	52,52,52,52	0
54	MG	BA	3100	1/1	0.89	0.11	41,41,41,41	0
54	MG	BA	3467	1/1	0.89	0.09	63,63,63,63	0
54	MG	BA	3285	1/1	0.89	0.21	96,96,96,96	0
54	MG	DA	3555	1/1	0.89	0.23	63,63,63,63	0
54	MG	BA	3674	1/1	0.89	0.07	62,62,62,62	0
54	MG	BA	3574	1/1	0.89	0.11	41,41,41,41	0
54	MG	CA	1694	1/1	0.89	0.13	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1770	1/1	0.89	0.11	80,80,80,80	0
54	MG	CA	1610	1/1	0.89	0.23	67,67,67,67	0
54	MG	BA	3291	1/1	0.89	0.07	68,68,68,68	0
54	MG	CA	1801	1/1	0.89	0.17	88,88,88,88	0
54	MG	DA	3578	1/1	0.89	0.12	45,45,45,45	0
54	MG	AA	1725	1/1	0.89	0.18	62,62,62,62	0
54	MG	AA	1707	1/1	0.89	0.12	79,79,79,79	0
54	MG	BA	3704	1/1	0.89	0.16	70,70,70,70	0
54	MG	BA	3495	1/1	0.89	0.12	57,57,57,57	0
54	MG	BA	3015	1/1	0.89	0.21	32,32,32,32	0
54	MG	BA	3113	1/1	0.89	0.13	48,48,48,48	0
54	MG	AA	1644	1/1	0.89	0.12	58,58,58,58	0
54	MG	AA	1604	1/1	0.89	0.31	66,66,66,66	0
54	MG	BA	3606	1/1	0.89	0.12	63,63,63,63	0
54	MG	DA	3608	1/1	0.89	0.16	74,74,74,74	0
54	MG	DA	3212	1/1	0.89	0.07	32,32,32,32	0
54	MG	DA	3617	1/1	0.89	0.08	74,74,74,74	0
54	MG	DA	3413	1/1	0.89	0.19	78,78,78,78	0
54	MG	BA	3208	1/1	0.89	0.11	57,57,57,57	0
54	MG	DA	3228	1/1	0.89	0.13	60,60,60,60	0
54	MG	BA	3068	1/1	0.89	0.13	40,40,40,40	0
54	MG	DA	3235	1/1	0.89	0.11	58,58,58,58	0
54	MG	BA	3148	1/1	0.89	0.15	21,21,21,21	0
54	MG	BA	3149	1/1	0.89	0.10	24,24,24,24	0
54	MG	BA	3238	1/1	0.89	0.09	39,39,39,39	0
54	MG	DA	3047	1/1	0.89	0.11	52,52,52,52	0
54	MG	AA	1617	1/1	0.89	0.22	58,58,58,58	0
54	MG	BA	3248	1/1	0.89	0.13	30,30,30,30	0
54	MG	BA	3436	1/1	0.89	0.11	41,41,41,41	0
54	MG	BA	3251	1/1	0.89	0.08	24,24,24,24	0
54	MG	DA	3079	1/1	0.89	0.19	54,54,54,54	0
54	MG	DA	3469	1/1	0.89	0.16	56,56,56,56	0
54	MG	CA	1757	1/1	0.89	0.11	75,75,75,75	0
54	MG	AA	1641	1/1	0.89	0.11	62,62,62,62	0
54	MG	BQ	201	1/1	0.89	0.15	61,61,61,61	0
54	MG	BR	203	1/1	0.89	0.14	33,33,33,33	0
55	ZN	CD	301	1/1	0.89	0.24	93,93,93,93	0
54	MG	DA	3409	1/1	0.90	0.12	53,53,53,53	0
54	MG	BA	3242	1/1	0.90	0.08	45,45,45,45	0
54	MG	BA	3030	1/1	0.90	0.08	44,44,44,44	0
54	MG	BA	3144	1/1	0.90	0.14	51,51,51,51	0
54	MG	BA	3031	1/1	0.90	0.21	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3567	1/1	0.90	0.08	66,66,66,66	0
54	MG	BA	3033	1/1	0.90	0.19	31,31,31,31	0
54	MG	DA	3144	1/1	0.90	0.14	54,54,54,54	0
54	MG	BA	3056	1/1	0.90	0.07	32,32,32,32	0
54	MG	DA	3437	1/1	0.90	0.15	54,54,54,54	0
54	MG	AA	1693	1/1	0.90	0.20	72,72,72,72	0
54	MG	AA	1804	1/1	0.90	0.17	64,64,64,64	0
54	MG	AA	1732	1/1	0.90	0.29	68,68,68,68	0
54	MG	BA	3580	1/1	0.90	0.11	49,49,49,49	0
54	MG	DA	3462	1/1	0.90	0.14	63,63,63,63	0
54	MG	BA	3588	1/1	0.90	0.09	55,55,55,55	0
54	MG	AA	1645	1/1	0.90	0.10	54,54,54,54	0
54	MG	BA	3718	1/1	0.90	0.10	49,49,49,49	0
54	MG	BA	3288	1/1	0.90	0.13	44,44,44,44	0
54	MG	DA	3182	1/1	0.90	0.10	45,45,45,45	0
54	MG	AA	1791	1/1	0.90	0.13	68,68,68,68	0
54	MG	DA	3484	1/1	0.90	0.13	34,34,34,34	0
54	MG	DA	3193	1/1	0.90	0.09	66,66,66,66	0
54	MG	BA	3485	1/1	0.90	0.13	31,31,31,31	0
54	MG	DA	3495	1/1	0.90	0.08	34,34,34,34	0
54	MG	BA	3293	1/1	0.90	0.09	36,36,36,36	0
54	MG	DA	3200	1/1	0.90	0.07	34,34,34,34	0
54	MG	DA	3209	1/1	0.90	0.09	45,45,45,45	0
54	MG	BB	201	1/1	0.90	0.32	67,67,67,67	0
54	MG	BA	3299	1/1	0.90	0.09	44,44,44,44	0
54	MG	DA	3226	1/1	0.90	0.10	41,41,41,41	0
54	MG	CA	1799	1/1	0.90	0.15	99,99,99,99	0
54	MG	BA	3091	1/1	0.90	0.15	34,34,34,34	0
54	MG	BB	213	1/1	0.90	0.08	46,46,46,46	0
54	MG	BB	216	1/1	0.90	0.14	59,59,59,59	0
54	MG	BA	3307	1/1	0.90	0.12	46,46,46,46	0
54	MG	BE	301	1/1	0.90	0.21	43,43,43,43	0
54	MG	AA	1628	1/1	0.90	0.15	81,81,81,81	0
54	MG	AA	1741	1/1	0.90	0.16	58,58,58,58	0
54	MG	DA	3275	1/1	0.90	0.09	69,69,69,69	0
54	MG	AI	201	1/1	0.90	0.13	67,67,67,67	0
54	MG	CA	1689	1/1	0.90	0.07	90,90,90,90	0
54	MG	DA	3280	1/1	0.90	0.11	52,52,52,52	0
54	MG	DA	3550	1/1	0.90	0.09	51,51,51,51	0
54	MG	AA	1647	1/1	0.90	0.29	73,73,73,73	0
54	MG	DA	3024	1/1	0.90	0.23	64,64,64,64	0
54	MG	BA	3333	1/1	0.90	0.10	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3556	1/1	0.90	0.16	87,87,87,87	0
54	MG	BA	3108	1/1	0.90	0.24	51,51,51,51	0
54	MG	BA	3005	1/1	0.90	0.08	56,56,56,56	0
54	MG	DA	3563	1/1	0.90	0.20	57,57,57,57	0
54	MG	CA	1698	1/1	0.90	0.15	62,62,62,62	0
54	MG	DA	3569	1/1	0.90	0.11	60,60,60,60	0
54	MG	BT	202	1/1	0.90	0.18	52,52,52,52	0
54	MG	CA	1706	1/1	0.90	0.13	76,76,76,76	0
54	MG	DA	3575	1/1	0.90	0.11	98,98,98,98	0
54	MG	BA	3623	1/1	0.90	0.11	85,85,85,85	0
54	MG	BA	3112	1/1	0.90	0.17	52,52,52,52	0
54	MG	CA	1711	1/1	0.90	0.14	55,55,55,55	0
54	MG	DA	3054	1/1	0.90	0.13	46,46,46,46	0
54	MG	BA	3219	1/1	0.90	0.12	67,67,67,67	0
54	MG	DA	3591	1/1	0.90	0.16	39,39,39,39	0
54	MG	AA	1656	1/1	0.90	0.14	69,69,69,69	0
54	MG	DA	3077	1/1	0.90	0.08	42,42,42,42	0
54	MG	DA	3312	1/1	0.90	0.09	52,52,52,52	0
54	MG	BA	3633	1/1	0.90	0.19	25,25,25,25	0
54	MG	DA	3081	1/1	0.90	0.12	60,60,60,60	0
54	MG	BA	3635	1/1	0.90	0.10	72,72,72,72	0
54	MG	DA	3084	1/1	0.90	0.09	45,45,45,45	0
54	MG	BA	3375	1/1	0.90	0.13	61,61,61,61	0
54	MG	DA	3335	1/1	0.90	0.14	68,68,68,68	0
54	MG	DA	3616	1/1	0.90	0.08	63,63,63,63	0
54	MG	AA	1601	1/1	0.90	0.28	52,52,52,52	0
54	MG	DA	3091	1/1	0.90	0.43	38,38,38,38	0
54	MG	CA	1723	1/1	0.90	0.09	66,66,66,66	0
54	MG	DA	3625	1/1	0.90	0.14	76,76,76,76	0
54	MG	BA	3643	1/1	0.90	0.29	28,28,28,28	0
54	MG	BA	3653	1/1	0.90	0.09	58,58,58,58	0
54	MG	DA	3630	1/1	0.90	0.12	76,76,76,76	0
54	MG	DA	3095	1/1	0.90	0.23	65,65,65,65	0
54	MG	BA	3655	1/1	0.90	0.19	68,68,68,68	0
54	MG	CA	1609	1/1	0.90	0.38	77,77,77,77	0
54	MG	BA	3534	1/1	0.90	0.12	69,69,69,69	0
54	MG	DB	205	1/1	0.90	0.10	92,92,92,92	0
54	MG	BA	3657	1/1	0.90	0.09	91,91,91,91	0
54	MG	BA	3120	1/1	0.90	0.07	54,54,54,54	0
54	MG	BA	3387	1/1	0.90	0.13	27,27,27,27	0
54	MG	DA	3384	1/1	0.90	0.19	49,49,49,49	0
54	MG	DF	302	1/1	0.90	0.15	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1749	1/1	0.90	0.16	69,69,69,69	0
54	MG	CA	1621	1/1	0.90	0.21	87,87,87,87	0
54	MG	DA	3121	1/1	0.90	0.19	62,62,62,62	0
54	MG	DA	3122	1/1	0.90	0.16	58,58,58,58	0
54	MG	BA	3539	1/1	0.90	0.09	58,58,58,58	0
54	MG	CA	1756	1/1	0.90	0.11	77,77,77,77	0
54	MG	DA	3400	1/1	0.90	0.09	41,41,41,41	0
54	MG	AA	1689	1/1	0.90	0.17	56,56,56,56	0
54	MG	CA	1771	1/1	0.91	0.14	71,71,71,71	0
54	MG	CA	1773	1/1	0.91	0.10	89,89,89,89	0
54	MG	AA	1719	1/1	0.91	0.20	66,66,66,66	0
54	MG	DA	3418	1/1	0.91	0.07	48,48,48,48	0
54	MG	DA	3420	1/1	0.91	0.10	52,52,52,52	0
54	MG	DA	3424	1/1	0.91	0.12	49,49,49,49	0
54	MG	AA	1650	1/1	0.91	0.09	74,74,74,74	0
54	MG	BA	3571	1/1	0.91	0.10	74,74,74,74	0
54	MG	AA	1625	1/1	0.91	0.21	42,42,42,42	0
54	MG	BA	3576	1/1	0.91	0.08	55,55,55,55	0
54	MG	BA	3021	1/1	0.91	0.34	67,67,67,67	0
54	MG	BA	3026	1/1	0.91	0.16	50,50,50,50	0
54	MG	DA	3441	1/1	0.91	0.18	63,63,63,63	0
54	MG	DA	3443	1/1	0.91	0.11	51,51,51,51	0
54	MG	DA	3444	1/1	0.91	0.20	73,73,73,73	0
54	MG	BA	3454	1/1	0.91	0.15	55,55,55,55	0
54	MG	CA	1651	1/1	0.91	0.09	55,55,55,55	0
54	MG	DA	3451	1/1	0.91	0.09	60,60,60,60	0
54	MG	DA	3454	1/1	0.91	0.10	42,42,42,42	0
54	MG	DA	3170	1/1	0.91	0.16	31,31,31,31	0
54	MG	BA	3134	1/1	0.91	0.09	50,50,50,50	0
54	MG	BA	3136	1/1	0.91	0.10	24,24,24,24	0
54	MG	BA	3029	1/1	0.91	0.14	38,38,38,38	0
54	MG	CA	1792	1/1	0.91	0.16	65,65,65,65	0
54	MG	BA	3276	1/1	0.91	0.11	47,47,47,47	0
54	MG	DA	3477	1/1	0.91	0.07	63,63,63,63	0
54	MG	DA	3195	1/1	0.91	0.14	33,33,33,33	0
54	MG	CA	1796	1/1	0.91	0.12	85,85,85,85	0
54	MG	AA	1724	1/1	0.91	0.15	93,93,93,93	0
54	MG	BA	3279	1/1	0.91	0.13	38,38,38,38	0
54	MG	DA	3205	1/1	0.91	0.06	44,44,44,44	0
54	MG	BB	210	1/1	0.91	0.15	62,62,62,62	0
54	MG	CA	1661	1/1	0.91	0.12	55,55,55,55	0
54	MG	BA	3478	1/1	0.91	0.14	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3603	1/1	0.91	0.19	39,39,39,39	0
54	MG	AA	1618	1/1	0.91	0.31	57,57,57,57	0
54	MG	DA	3006	1/1	0.91	0.09	42,42,42,42	0
54	MG	DA	3010	1/1	0.91	0.20	48,48,48,48	0
54	MG	AA	1685	1/1	0.91	0.16	57,57,57,57	0
54	MG	BA	3151	1/1	0.91	0.12	34,34,34,34	0
54	MG	DA	3249	1/1	0.91	0.10	47,47,47,47	0
54	MG	CA	1682	1/1	0.91	0.20	60,60,60,60	0
54	MG	DA	3255	1/1	0.91	0.09	51,51,51,51	0
54	MG	BE	303	1/1	0.91	0.17	47,47,47,47	0
54	MG	DA	3524	1/1	0.91	0.10	61,61,61,61	0
54	MG	DA	3525	1/1	0.91	0.15	57,57,57,57	0
54	MG	DA	3017	1/1	0.91	0.16	48,48,48,48	0
54	MG	DA	3018	1/1	0.91	0.22	54,54,54,54	0
54	MG	CA	1685	1/1	0.91	0.20	62,62,62,62	0
54	MG	DA	3539	1/1	0.91	0.14	54,54,54,54	0
54	MG	BA	3040	1/1	0.91	0.12	52,52,52,52	0
54	MG	BA	3493	1/1	0.91	0.14	65,65,65,65	0
54	MG	DA	3546	1/1	0.91	0.08	64,64,64,64	0
54	MG	DA	3027	1/1	0.91	0.10	47,47,47,47	0
54	MG	DA	3549	1/1	0.91	0.15	39,39,39,39	0
54	MG	BG	201	1/1	0.91	0.13	56,56,56,56	0
54	MG	AA	1663	1/1	0.91	0.14	62,62,62,62	0
54	MG	DA	3553	1/1	0.91	0.12	64,64,64,64	0
54	MG	BA	3496	1/1	0.91	0.24	56,56,56,56	0
54	MG	BA	3161	1/1	0.91	0.17	20,20,20,20	0
54	MG	AA	1688	1/1	0.91	0.15	62,62,62,62	0
54	MG	BA	3168	1/1	0.91	0.11	68,68,68,68	0
54	MG	CA	1703	1/1	0.91	0.13	46,46,46,46	0
54	MG	AA	1803	1/1	0.91	0.17	81,81,81,81	0
54	MG	BA	3308	1/1	0.91	0.12	51,51,51,51	0
54	MG	BW	201	1/1	0.91	0.09	44,44,44,44	0
54	MG	DA	3570	1/1	0.91	0.12	63,63,63,63	0
54	MG	DA	3298	1/1	0.91	0.09	51,51,51,51	0
54	MG	AA	1636	1/1	0.91	0.07	49,49,49,49	0
54	MG	AA	1772	1/1	0.91	0.08	71,71,71,71	0
54	MG	DA	3076	1/1	0.91	0.32	54,54,54,54	0
54	MG	BA	3315	1/1	0.91	0.11	63,63,63,63	0
54	MG	B3	102	1/1	0.91	0.10	52,52,52,52	0
54	MG	DA	3315	1/1	0.91	0.08	49,49,49,49	0
54	MG	BA	3074	1/1	0.91	0.07	32,32,32,32	0
54	MG	B9	103	1/1	0.91	0.14	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1806	1/1	0.91	0.13	60,60,60,60	0
54	MG	BA	3527	1/1	0.91	0.10	51,51,51,51	0
54	MG	AA	1776	1/1	0.91	0.24	68,68,68,68	0
54	MG	AA	1746	1/1	0.91	0.08	63,63,63,63	0
54	MG	CA	1605	1/1	0.91	0.29	63,63,63,63	0
54	MG	AA	1778	1/1	0.91	0.10	74,74,74,74	0
54	MG	AA	1690	1/1	0.91	0.11	60,60,60,60	0
54	MG	BA	3659	1/1	0.91	0.08	61,61,61,61	0
54	MG	AA	1615	1/1	0.91	0.26	76,76,76,76	0
54	MG	DA	3098	1/1	0.91	0.36	52,52,52,52	0
54	MG	BA	3347	1/1	0.91	0.12	44,44,44,44	0
54	MG	DA	3352	1/1	0.91	0.10	82,82,82,82	0
54	MG	DA	3619	1/1	0.91	0.11	57,57,57,57	0
54	MG	DA	3623	1/1	0.91	0.07	42,42,42,42	0
54	MG	DA	3353	1/1	0.91	0.10	79,79,79,79	0
54	MG	CA	1744	1/1	0.91	0.11	69,69,69,69	0
54	MG	DA	3103	1/1	0.91	0.17	48,48,48,48	0
54	MG	DA	3369	1/1	0.91	0.06	85,85,85,85	0
54	MG	BA	3217	1/1	0.91	0.12	60,60,60,60	0
54	MG	AL	201	1/1	0.91	0.10	65,65,65,65	0
54	MG	BA	3546	1/1	0.91	0.10	46,46,46,46	0
54	MG	CA	1752	1/1	0.91	0.10	91,91,91,91	0
54	MG	DA	3385	1/1	0.91	0.19	59,59,59,59	0
54	MG	CA	1622	1/1	0.91	0.20	65,65,65,65	0
54	MG	AA	1610	1/1	0.91	0.13	64,64,64,64	0
54	MG	DA	3390	1/1	0.91	0.15	73,73,73,73	0
54	MG	BA	3676	1/1	0.91	0.17	46,46,46,46	0
54	MG	BA	3229	1/1	0.91	0.07	61,61,61,61	0
54	MG	DA	3397	1/1	0.91	0.11	59,59,59,59	0
54	MG	BA	3234	1/1	0.91	0.16	61,61,61,61	0
54	MG	DO	202	1/1	0.91	0.11	60,60,60,60	0
54	MG	BA	3419	1/1	0.91	0.08	29,29,29,29	0
54	MG	DQ	203	1/1	0.91	0.10	62,62,62,62	0
54	MG	AA	1786	1/1	0.91	0.08	89,89,89,89	0
54	MG	DT	202	1/1	0.91	0.08	62,62,62,62	0
54	MG	DA	3403	1/1	0.91	0.09	56,56,56,56	0
54	MG	CA	1763	1/1	0.91	0.07	66,66,66,66	0
54	MG	DA	3408	1/1	0.91	0.07	54,54,54,54	0
54	MG	DA	3135	1/1	0.91	0.23	59,59,59,59	0
54	MG	BA	3687	1/1	0.91	0.08	53,53,53,53	0
54	MG	DA	3382	1/1	0.92	0.13	57,57,57,57	0
54	MG	BB	217	1/1	0.92	0.08	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BB	219	1/1	0.92	0.09	54,54,54,54	0
54	MG	BD	301	1/1	0.92	0.11	51,51,51,51	0
54	MG	BA	3445	1/1	0.92	0.09	60,60,60,60	0
54	MG	BA	3582	1/1	0.92	0.13	66,66,66,66	0
54	MG	BA	3583	1/1	0.92	0.08	63,63,63,63	0
54	MG	BA	3587	1/1	0.92	0.06	60,60,60,60	0
54	MG	CA	1714	1/1	0.92	0.20	67,67,67,67	0
54	MG	DA	3101	1/1	0.92	0.20	60,60,60,60	0
54	MG	BF	301	1/1	0.92	0.12	40,40,40,40	0
54	MG	BA	3447	1/1	0.92	0.08	53,53,53,53	0
54	MG	DA	3401	1/1	0.92	0.12	56,56,56,56	0
54	MG	BA	3142	1/1	0.92	0.20	36,36,36,36	0
54	MG	AA	1676	1/1	0.92	0.10	86,86,86,86	0
54	MG	DA	3405	1/1	0.92	0.08	56,56,56,56	0
54	MG	BA	3145	1/1	0.92	0.10	33,33,33,33	0
54	MG	BA	3261	1/1	0.92	0.10	21,21,21,21	0
54	MG	DA	3111	1/1	0.92	0.10	44,44,44,44	0
54	MG	DA	3112	1/1	0.92	0.12	48,48,48,48	0
54	MG	BA	3263	1/1	0.92	0.08	63,63,63,63	0
54	MG	BA	3596	1/1	0.92	0.10	59,59,59,59	0
54	MG	BA	3460	1/1	0.92	0.10	51,51,51,51	0
54	MG	BA	3146	1/1	0.92	0.13	34,34,34,34	0
54	MG	DA	3421	1/1	0.92	0.15	44,44,44,44	0
54	MG	CA	1740	1/1	0.92	0.20	72,72,72,72	0
54	MG	BV	204	1/1	0.92	0.08	67,67,67,67	0
54	MG	BA	3266	1/1	0.92	0.21	66,66,66,66	0
54	MG	BA	3465	1/1	0.92	0.10	24,24,24,24	0
54	MG	AD	303	1/1	0.92	0.11	84,84,84,84	0
54	MG	B2	101	1/1	0.92	0.15	46,46,46,46	0
54	MG	BA	3067	1/1	0.92	0.19	55,55,55,55	0
54	MG	BA	3476	1/1	0.92	0.15	55,55,55,55	0
54	MG	AE	201	1/1	0.92	0.21	62,62,62,62	0
54	MG	AF	201	1/1	0.92	0.11	53,53,53,53	0
54	MG	DA	3145	1/1	0.92	0.16	60,60,60,60	0
54	MG	AA	1735	1/1	0.92	0.18	62,62,62,62	0
54	MG	AA	1716	1/1	0.92	0.07	62,62,62,62	0
54	MG	BA	3286	1/1	0.92	0.08	42,42,42,42	0
54	MG	DA	3458	1/1	0.92	0.10	58,58,58,58	0
54	MG	AM	201	1/1	0.92	0.25	78,78,78,78	0
54	MG	BA	3492	1/1	0.92	0.07	57,57,57,57	0
54	MG	DA	3163	1/1	0.92	0.10	39,39,39,39	0
54	MG	AM	202	1/1	0.92	0.14	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3166	1/1	0.92	0.09	56,56,56,56	0
54	MG	DA	3167	1/1	0.92	0.06	30,30,30,30	0
54	MG	DA	3472	1/1	0.92	0.10	73,73,73,73	0
54	MG	CA	1764	1/1	0.92	0.12	90,90,90,90	0
54	MG	CA	1766	1/1	0.92	0.13	65,65,65,65	0
54	MG	BA	3628	1/1	0.92	0.10	46,46,46,46	0
54	MG	DA	3176	1/1	0.92	0.18	37,37,37,37	0
54	MG	CA	1608	1/1	0.92	0.14	54,54,54,54	0
54	MG	DA	3489	1/1	0.92	0.08	48,48,48,48	0
54	MG	DA	3179	1/1	0.92	0.14	43,43,43,43	0
54	MG	CA	1772	1/1	0.92	0.10	61,61,61,61	0
54	MG	DA	3184	1/1	0.92	0.10	33,33,33,33	0
54	MG	BA	3167	1/1	0.92	0.12	45,45,45,45	0
54	MG	DA	3190	1/1	0.92	0.12	43,43,43,43	0
54	MG	AA	1687	1/1	0.92	0.20	79,79,79,79	0
54	MG	BA	3297	1/1	0.92	0.09	52,52,52,52	0
54	MG	BA	3298	1/1	0.92	0.09	43,43,43,43	0
54	MG	DA	3506	1/1	0.92	0.08	57,57,57,57	0
54	MG	BA	3101	1/1	0.92	0.15	37,37,37,37	0
54	MG	DA	3508	1/1	0.92	0.08	73,73,73,73	0
54	MG	BA	3646	1/1	0.92	0.11	38,38,38,38	0
54	MG	CA	1780	1/1	0.92	0.20	74,74,74,74	0
54	MG	DA	3516	1/1	0.92	0.10	56,56,56,56	0
54	MG	BA	3305	1/1	0.92	0.08	67,67,67,67	0
54	MG	CA	1623	1/1	0.92	0.23	60,60,60,60	0
54	MG	DA	3217	1/1	0.92	0.11	54,54,54,54	0
54	MG	BA	3509	1/1	0.92	0.09	77,77,77,77	0
54	MG	BA	3172	1/1	0.92	0.07	65,65,65,65	0
54	MG	AA	1718	1/1	0.92	0.11	59,59,59,59	0
54	MG	DA	3532	1/1	0.92	0.10	58,58,58,58	0
54	MG	DA	3533	1/1	0.92	0.08	79,79,79,79	0
54	MG	DA	3535	1/1	0.92	0.09	67,67,67,67	0
54	MG	BA	3179	1/1	0.92	0.21	31,31,31,31	0
54	MG	BA	3104	1/1	0.92	0.20	27,27,27,27	0
54	MG	DA	3236	1/1	0.92	0.07	40,40,40,40	0
54	MG	DA	3540	1/1	0.92	0.09	48,48,48,48	0
54	MG	AA	1742	1/1	0.92	0.09	78,78,78,78	0
54	MG	AA	1703	1/1	0.92	0.14	64,64,64,64	0
54	MG	AA	1602	1/1	0.92	0.15	70,70,70,70	0
54	MG	BA	3204	1/1	0.92	0.13	47,47,47,47	0
54	MG	BA	3329	1/1	0.92	0.07	30,30,30,30	0
54	MG	DA	3262	1/1	0.92	0.09	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3263	1/1	0.92	0.12	54,54,54,54	0
54	MG	BA	3331	1/1	0.92	0.10	47,47,47,47	0
54	MG	CA	1642	1/1	0.92	0.27	64,64,64,64	0
54	MG	DA	3274	1/1	0.92	0.07	51,51,51,51	0
54	MG	BA	3110	1/1	0.92	0.22	60,60,60,60	0
54	MG	AA	1706	1/1	0.92	0.21	59,59,59,59	0
54	MG	CE	201	1/1	0.92	0.11	78,78,78,78	0
54	MG	DA	3561	1/1	0.92	0.09	65,65,65,65	0
54	MG	CA	1646	1/1	0.92	0.17	71,71,71,71	0
54	MG	AA	1683	1/1	0.92	0.07	69,69,69,69	0
54	MG	DA	3566	1/1	0.92	0.14	70,70,70,70	0
54	MG	AA	1634	1/1	0.92	0.33	58,58,58,58	0
54	MG	BA	3540	1/1	0.92	0.13	64,64,64,64	0
54	MG	DA	3284	1/1	0.92	0.11	70,70,70,70	0
54	MG	BA	3544	1/1	0.92	0.09	60,60,60,60	0
54	MG	AA	1811	1/1	0.92	0.12	65,65,65,65	0
54	MG	BA	3705	1/1	0.92	0.08	57,57,57,57	0
54	MG	BA	3118	1/1	0.92	0.12	59,59,59,59	0
54	MG	BA	3547	1/1	0.92	0.08	33,33,33,33	0
54	MG	BA	3550	1/1	0.92	0.08	50,50,50,50	0
54	MG	DA	3581	1/1	0.92	0.08	46,46,46,46	0
54	MG	DA	3295	1/1	0.92	0.13	58,58,58,58	0
54	MG	BA	3220	1/1	0.92	0.11	62,62,62,62	0
54	MG	AA	1726	1/1	0.92	0.10	75,75,75,75	0
54	MG	BA	3121	1/1	0.92	0.20	26,26,26,26	0
54	MG	BA	3382	1/1	0.92	0.13	39,39,39,39	0
54	MG	DA	3305	1/1	0.92	0.17	66,66,66,66	0
54	MG	DA	3030	1/1	0.92	0.37	63,63,63,63	0
54	MG	CA	1673	1/1	0.92	0.16	73,73,73,73	0
54	MG	DA	3036	1/1	0.92	0.12	62,62,62,62	0
54	MG	DA	3309	1/1	0.92	0.12	45,45,45,45	0
54	MG	DA	3611	1/1	0.92	0.15	57,57,57,57	0
54	MG	AA	1727	1/1	0.92	0.12	82,82,82,82	0
54	MG	DA	3314	1/1	0.92	0.07	31,31,31,31	0
54	MG	BA	3722	1/1	0.92	0.09	71,71,71,71	0
54	MG	CA	1680	1/1	0.92	0.10	92,92,92,92	0
54	MG	DA	3317	1/1	0.92	0.13	55,55,55,55	0
54	MG	DA	3622	1/1	0.92	0.11	80,80,80,80	0
54	MG	BA	3723	1/1	0.92	0.07	70,70,70,70	0
54	MG	DA	3319	1/1	0.92	0.08	53,53,53,53	0
54	MG	DA	3321	1/1	0.92	0.08	74,74,74,74	0
54	MG	DA	3046	1/1	0.92	0.08	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3324	1/1	0.92	0.09	86,86,86,86	0
54	MG	DA	3325	1/1	0.92	0.06	72,72,72,72	0
54	MG	BA	3724	1/1	0.92	0.12	97,97,97,97	0
54	MG	BA	3725	1/1	0.92	0.07	57,57,57,57	0
54	MG	AA	1728	1/1	0.92	0.17	68,68,68,68	0
54	MG	DA	3636	1/1	0.92	0.09	66,66,66,66	0
54	MG	BA	3408	1/1	0.92	0.08	24,24,24,24	0
54	MG	DA	3060	1/1	0.92	0.08	57,57,57,57	0
54	MG	BA	3052	1/1	0.92	0.08	38,38,38,38	0
54	MG	DA	3066	1/1	0.92	0.21	51,51,51,51	0
54	MG	DA	3344	1/1	0.92	0.07	56,56,56,56	0
54	MG	BB	202	1/1	0.92	0.12	45,45,45,45	0
54	MG	DF	301	1/1	0.92	0.09	51,51,51,51	0
54	MG	DA	3074	1/1	0.92	0.21	46,46,46,46	0
54	MG	CA	1690	1/1	0.92	0.09	75,75,75,75	0
54	MG	BB	203	1/1	0.92	0.16	48,48,48,48	0
54	MG	BA	3573	1/1	0.92	0.08	54,54,54,54	0
54	MG	BA	3423	1/1	0.92	0.08	46,46,46,46	0
54	MG	DA	3362	1/1	0.92	0.20	53,53,53,53	0
54	MG	BA	3055	1/1	0.92	0.14	44,44,44,44	0
54	MG	BA	3240	1/1	0.92	0.12	66,66,66,66	0
54	MG	DA	3370	1/1	0.92	0.13	87,87,87,87	0
54	MG	CA	1702	1/1	0.92	0.10	55,55,55,55	0
54	MG	DA	3089	1/1	0.92	0.17	50,50,50,50	0
54	MG	BA	3138	1/1	0.92	0.08	64,64,64,64	0
55	ZN	D4	101	1/1	0.92	0.09	173,173,173,173	0
54	MG	BA	3524	1/1	0.93	0.12	35,35,35,35	0
54	MG	CA	1691	1/1	0.93	0.15	74,74,74,74	0
54	MG	DA	3251	1/1	0.93	0.10	41,41,41,41	0
54	MG	BA	3525	1/1	0.93	0.13	47,47,47,47	0
54	MG	BH	201	1/1	0.93	0.16	60,60,60,60	0
54	MG	BA	3350	1/1	0.93	0.09	28,28,28,28	0
54	MG	BN	202	1/1	0.93	0.10	57,57,57,57	0
54	MG	DA	3039	1/1	0.93	0.10	57,57,57,57	0
54	MG	DA	3266	1/1	0.93	0.07	40,40,40,40	0
54	MG	BA	3035	1/1	0.93	0.08	23,23,23,23	0
54	MG	CA	1699	1/1	0.93	0.18	73,73,73,73	0
54	MG	BA	3371	1/1	0.93	0.10	26,26,26,26	0
54	MG	BA	3636	1/1	0.93	0.18	25,25,25,25	0
54	MG	BA	3637	1/1	0.93	0.15	81,81,81,81	0
54	MG	BS	201	1/1	0.93	0.16	63,63,63,63	0
54	MG	DA	3053	1/1	0.93	0.16	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3638	1/1	0.93	0.09	82,82,82,82	0
54	MG	BA	3038	1/1	0.93	0.11	34,34,34,34	0
54	MG	DA	3063	1/1	0.93	0.22	47,47,47,47	0
54	MG	AA	1730	1/1	0.93	0.07	70,70,70,70	0
54	MG	BA	3642	1/1	0.93	0.09	46,46,46,46	0
54	MG	DA	3068	1/1	0.93	0.12	38,38,38,38	0
54	MG	DA	3503	1/1	0.93	0.07	59,59,59,59	0
54	MG	DA	3504	1/1	0.93	0.16	52,52,52,52	0
54	MG	DA	3291	1/1	0.93	0.14	64,64,64,64	0
54	MG	BA	3533	1/1	0.93	0.10	24,24,24,24	0
54	MG	BA	3644	1/1	0.93	0.12	35,35,35,35	0
54	MG	BA	3171	1/1	0.93	0.08	49,49,49,49	0
54	MG	BA	3650	1/1	0.93	0.11	53,53,53,53	0
54	MG	BA	3652	1/1	0.93	0.09	51,51,51,51	0
54	MG	B5	101	1/1	0.93	0.09	49,49,49,49	0
54	MG	DA	3517	1/1	0.93	0.14	52,52,52,52	0
54	MG	AA	1745	1/1	0.93	0.10	63,63,63,63	0
54	MG	CA	1725	1/1	0.93	0.13	91,91,91,91	0
54	MG	BA	3654	1/1	0.93	0.22	27,27,27,27	0
54	MG	BA	3053	1/1	0.93	0.08	33,33,33,33	0
54	MG	CA	1730	1/1	0.93	0.08	65,65,65,65	0
54	MG	DA	3529	1/1	0.93	0.10	65,65,65,65	0
54	MG	BA	3392	1/1	0.93	0.17	29,29,29,29	0
54	MG	BA	3278	1/1	0.93	0.11	39,39,39,39	0
54	MG	AA	1731	1/1	0.93	0.17	72,72,72,72	0
54	MG	BA	3280	1/1	0.93	0.08	57,57,57,57	0
54	MG	BA	3186	1/1	0.93	0.12	30,30,30,30	0
54	MG	DA	3537	1/1	0.93	0.07	49,49,49,49	0
54	MG	BA	3283	1/1	0.93	0.09	36,36,36,36	0
54	MG	AA	1691	1/1	0.93	0.09	57,57,57,57	0
54	MG	AA	1765	1/1	0.93	0.13	57,57,57,57	0
54	MG	CA	1748	1/1	0.93	0.13	57,57,57,57	0
54	MG	BA	3557	1/1	0.93	0.08	25,25,25,25	0
54	MG	DA	3544	1/1	0.93	0.07	67,67,67,67	0
54	MG	DA	3322	1/1	0.93	0.22	61,61,61,61	0
54	MG	BA	3675	1/1	0.93	0.10	48,48,48,48	0
54	MG	DA	3104	1/1	0.93	0.19	51,51,51,51	0
54	MG	BA	3196	1/1	0.93	0.12	52,52,52,52	0
54	MG	CA	1615	1/1	0.93	0.17	42,42,42,42	0
54	MG	BA	3061	1/1	0.93	0.15	44,44,44,44	0
54	MG	DA	3330	1/1	0.93	0.09	56,56,56,56	0
54	MG	DA	3334	1/1	0.93	0.09	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1620	1/1	0.93	0.27	74,74,74,74	0
54	MG	BA	3064	1/1	0.93	0.24	54,54,54,54	0
54	MG	BA	3292	1/1	0.93	0.07	36,36,36,36	0
54	MG	BA	3202	1/1	0.93	0.09	67,67,67,67	0
54	MG	DA	3562	1/1	0.93	0.09	65,65,65,65	0
54	MG	BA	3457	1/1	0.93	0.11	53,53,53,53	0
54	MG	DA	3342	1/1	0.93	0.09	40,40,40,40	0
54	MG	BA	3691	1/1	0.93	0.09	57,57,57,57	0
54	MG	BA	3294	1/1	0.93	0.06	32,32,32,32	0
54	MG	AA	1766	1/1	0.93	0.15	57,57,57,57	0
54	MG	DA	3571	1/1	0.93	0.10	53,53,53,53	0
54	MG	CA	1767	1/1	0.93	0.11	86,86,86,86	0
54	MG	BA	3130	1/1	0.93	0.14	79,79,79,79	0
54	MG	AA	1807	1/1	0.93	0.11	73,73,73,73	0
54	MG	BA	3710	1/1	0.93	0.10	63,63,63,63	0
54	MG	BA	3712	1/1	0.93	0.09	49,49,49,49	0
54	MG	DA	3137	1/1	0.93	0.19	45,45,45,45	0
54	MG	BA	3301	1/1	0.93	0.09	61,61,61,61	0
54	MG	CA	1638	1/1	0.93	0.39	65,65,65,65	0
54	MG	DA	3582	1/1	0.93	0.10	83,83,83,83	0
54	MG	BA	3302	1/1	0.93	0.15	47,47,47,47	0
54	MG	DA	3586	1/1	0.93	0.06	142,142,142,142	0
54	MG	DA	3373	1/1	0.93	0.18	58,58,58,58	0
54	MG	BA	3070	1/1	0.93	0.16	39,39,39,39	0
54	MG	DA	3593	1/1	0.93	0.08	58,58,58,58	0
54	MG	BA	3137	1/1	0.93	0.10	45,45,45,45	0
54	MG	DA	3378	1/1	0.93	0.15	65,65,65,65	0
54	MG	DA	3380	1/1	0.93	0.07	47,47,47,47	0
54	MG	BA	3013	1/1	0.93	0.18	24,24,24,24	0
54	MG	BA	3139	1/1	0.93	0.07	55,55,55,55	0
54	MG	CA	1782	1/1	0.93	0.14	63,63,63,63	0
54	MG	DA	3386	1/1	0.93	0.12	64,64,64,64	0
54	MG	AA	1809	1/1	0.93	0.21	79,79,79,79	0
54	MG	DA	3612	1/1	0.93	0.20	49,49,49,49	0
54	MG	CA	1784	1/1	0.93	0.10	53,53,53,53	0
54	MG	BA	3480	1/1	0.93	0.10	58,58,58,58	0
54	MG	CA	1648	1/1	0.93	0.14	72,72,72,72	0
54	MG	DA	3165	1/1	0.93	0.07	36,36,36,36	0
54	MG	AA	1810	1/1	0.93	0.15	67,67,67,67	0
54	MG	BA	3080	1/1	0.93	0.17	42,42,42,42	0
54	MG	BA	3318	1/1	0.93	0.09	64,64,64,64	0
54	MG	BA	3016	1/1	0.93	0.07	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1788	1/1	0.93	0.08	76,76,76,76	0
54	MG	BA	3597	1/1	0.93	0.08	36,36,36,36	0
54	MG	BA	3092	1/1	0.93	0.09	40,40,40,40	0
54	MG	BA	3330	1/1	0.93	0.10	45,45,45,45	0
54	MG	BA	3498	1/1	0.93	0.06	45,45,45,45	0
54	MG	AA	1669	1/1	0.93	0.14	80,80,80,80	0
54	MG	CA	1662	1/1	0.93	0.07	54,54,54,54	0
54	MG	DA	3188	1/1	0.93	0.08	51,51,51,51	0
54	MG	AA	1768	1/1	0.93	0.09	79,79,79,79	0
54	MG	AA	1648	1/1	0.93	0.20	73,73,73,73	0
54	MG	CA	1665	1/1	0.93	0.12	60,60,60,60	0
54	MG	CA	1666	1/1	0.93	0.08	71,71,71,71	0
54	MG	DA	3009	1/1	0.93	0.15	27,27,27,27	0
54	MG	BA	3610	1/1	0.93	0.12	36,36,36,36	0
54	MG	AA	1631	1/1	0.93	0.14	64,64,64,64	0
54	MG	BA	3614	1/1	0.93	0.23	47,47,47,47	0
54	MG	DF	305	1/1	0.93	0.10	74,74,74,74	0
54	MG	BA	3339	1/1	0.93	0.16	34,34,34,34	0
54	MG	DA	3015	1/1	0.93	0.11	56,56,56,56	0
54	MG	BA	3340	1/1	0.93	0.07	38,38,38,38	0
54	MG	BA	3341	1/1	0.93	0.13	44,44,44,44	0
54	MG	AA	1627	1/1	0.93	0.11	58,58,58,58	0
54	MG	DA	3229	1/1	0.93	0.13	76,76,76,76	0
54	MG	DW	201	1/1	0.93	0.10	63,63,63,63	0
54	MG	BA	3163	1/1	0.93	0.27	30,30,30,30	0
54	MG	BE	305	1/1	0.93	0.10	35,35,35,35	0
54	MG	DA	3447	1/1	0.93	0.13	58,58,58,58	0
54	MG	AA	1758	1/1	0.93	0.14	48,48,48,48	0
54	MG	D9	102	1/1	0.93	0.17	51,51,51,51	0
54	MG	DA	3450	1/1	0.93	0.06	70,70,70,70	0
54	MG	BF	304	1/1	0.93	0.11	47,47,47,47	0
54	MG	CA	1649	1/1	0.94	0.23	67,67,67,67	0
54	MG	AA	1751	1/1	0.94	0.20	54,54,54,54	0
54	MG	BA	3184	1/1	0.94	0.13	37,37,37,37	0
54	MG	AA	1697	1/1	0.94	0.09	50,50,50,50	0
54	MG	DA	3174	1/1	0.94	0.06	24,24,24,24	0
54	MG	CA	1790	1/1	0.94	0.07	48,48,48,48	0
54	MG	BA	3125	1/1	0.94	0.08	39,39,39,39	0
54	MG	DA	3425	1/1	0.94	0.23	42,42,42,42	0
54	MG	AA	1815	1/1	0.94	0.13	72,72,72,72	0
54	MG	BA	3018	1/1	0.94	0.24	52,52,52,52	0
54	MG	DA	3434	1/1	0.94	0.10	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1624	1/1	0.94	0.22	49,49,49,49	0
54	MG	AA	1754	1/1	0.94	0.07	49,49,49,49	0
54	MG	BA	3025	1/1	0.94	0.08	34,34,34,34	0
54	MG	BA	3077	1/1	0.94	0.07	43,43,43,43	0
54	MG	BA	3618	1/1	0.94	0.08	67,67,67,67	0
54	MG	DA	3442	1/1	0.94	0.16	59,59,59,59	0
54	MG	DA	3191	1/1	0.94	0.17	56,56,56,56	0
54	MG	BA	3522	1/1	0.94	0.17	53,53,53,53	0
54	MG	DA	3445	1/1	0.94	0.10	45,45,45,45	0
54	MG	DA	3194	1/1	0.94	0.10	22,22,22,22	0
54	MG	AA	1739	1/1	0.94	0.16	72,72,72,72	0
54	MG	BA	3395	1/1	0.94	0.05	37,37,37,37	0
54	MG	BD	305	1/1	0.94	0.06	46,46,46,46	0
54	MG	CA	1668	1/1	0.94	0.11	65,65,65,65	0
54	MG	CA	1669	1/1	0.94	0.09	71,71,71,71	0
54	MG	CA	1672	1/1	0.94	0.11	74,74,74,74	0
54	MG	BD	306	1/1	0.94	0.17	30,30,30,30	0
54	MG	CA	1674	1/1	0.94	0.11	80,80,80,80	0
54	MG	DA	3220	1/1	0.94	0.07	48,48,48,48	0
54	MG	BA	3401	1/1	0.94	0.16	34,34,34,34	0
54	MG	DA	3224	1/1	0.94	0.08	60,60,60,60	0
54	MG	CA	1676	1/1	0.94	0.10	64,64,64,64	0
54	MG	DA	3227	1/1	0.94	0.06	39,39,39,39	0
54	MG	DA	3474	1/1	0.94	0.08	41,41,41,41	0
54	MG	DA	3476	1/1	0.94	0.07	95,95,95,95	0
54	MG	BA	3290	1/1	0.94	0.05	27,27,27,27	0
54	MG	BA	3418	1/1	0.94	0.13	28,28,28,28	0
54	MG	BA	3084	1/1	0.94	0.15	43,43,43,43	0
54	MG	DA	3481	1/1	0.94	0.12	51,51,51,51	0
54	MG	DA	3482	1/1	0.94	0.07	69,69,69,69	0
54	MG	DA	3483	1/1	0.94	0.08	63,63,63,63	0
54	MG	DA	3232	1/1	0.94	0.08	45,45,45,45	0
54	MG	DA	3019	1/1	0.94	0.10	46,46,46,46	0
54	MG	BA	3531	1/1	0.94	0.08	25,25,25,25	0
54	MG	BA	3140	1/1	0.94	0.11	44,44,44,44	0
54	MG	BA	3431	1/1	0.94	0.17	28,28,28,28	0
54	MG	BA	3141	1/1	0.94	0.08	67,67,67,67	0
54	MG	BA	3434	1/1	0.94	0.11	56,56,56,56	0
54	MG	DA	3498	1/1	0.94	0.10	39,39,39,39	0
54	MG	AA	1607	1/1	0.94	0.18	57,57,57,57	0
54	MG	BA	3538	1/1	0.94	0.12	55,55,55,55	0
54	MG	DA	3256	1/1	0.94	0.17	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3257	1/1	0.94	0.17	40,40,40,40	0
54	MG	DA	3033	1/1	0.94	0.16	48,48,48,48	0
54	MG	DA	3035	1/1	0.94	0.07	43,43,43,43	0
54	MG	AA	1708	1/1	0.94	0.13	61,61,61,61	0
54	MG	AA	1713	1/1	0.94	0.10	61,61,61,61	0
54	MG	BA	3221	1/1	0.94	0.13	51,51,51,51	0
54	MG	DA	3273	1/1	0.94	0.07	93,93,93,93	0
54	MG	DA	3513	1/1	0.94	0.11	52,52,52,52	0
54	MG	BQ	204	1/1	0.94	0.08	46,46,46,46	0
54	MG	DA	3515	1/1	0.94	0.09	54,54,54,54	0
54	MG	BR	201	1/1	0.94	0.13	39,39,39,39	0
54	MG	BA	3227	1/1	0.94	0.15	55,55,55,55	0
54	MG	DA	3518	1/1	0.94	0.12	53,53,53,53	0
54	MG	DA	3043	1/1	0.94	0.15	64,64,64,64	0
54	MG	BA	3648	1/1	0.94	0.13	42,42,42,42	0
54	MG	BA	3094	1/1	0.94	0.22	33,33,33,33	0
54	MG	DA	3049	1/1	0.94	0.17	49,49,49,49	0
54	MG	BA	3303	1/1	0.94	0.10	40,40,40,40	0
54	MG	AA	1743	1/1	0.94	0.19	58,58,58,58	0
54	MG	DA	3052	1/1	0.94	0.09	35,35,35,35	0
54	MG	BV	203	1/1	0.94	0.07	56,56,56,56	0
54	MG	BA	3551	1/1	0.94	0.11	60,60,60,60	0
54	MG	DA	3057	1/1	0.94	0.18	53,53,53,53	0
54	MG	BA	3232	1/1	0.94	0.09	24,24,24,24	0
54	MG	AA	1744	1/1	0.94	0.14	74,74,74,74	0
54	MG	BA	3037	1/1	0.94	0.13	33,33,33,33	0
54	MG	AA	1761	1/1	0.94	0.12	65,65,65,65	0
54	MG	BA	3661	1/1	0.94	0.09	40,40,40,40	0
54	MG	B3	101	1/1	0.94	0.12	54,54,54,54	0
54	MG	DA	3070	1/1	0.94	0.17	51,51,51,51	0
54	MG	DA	3300	1/1	0.94	0.06	29,29,29,29	0
54	MG	DA	3545	1/1	0.94	0.07	53,53,53,53	0
54	MG	DA	3072	1/1	0.94	0.26	60,60,60,60	0
54	MG	CA	1716	1/1	0.94	0.12	49,49,49,49	0
54	MG	DA	3075	1/1	0.94	0.07	48,48,48,48	0
54	MG	CA	1718	1/1	0.94	0.08	76,76,76,76	0
54	MG	BA	3561	1/1	0.94	0.07	46,46,46,46	0
54	MG	DA	3552	1/1	0.94	0.18	56,56,56,56	0
54	MG	BA	3665	1/1	0.94	0.09	72,72,72,72	0
54	MG	DA	3310	1/1	0.94	0.16	47,47,47,47	0
54	MG	DA	3311	1/1	0.94	0.07	31,31,31,31	0
54	MG	DA	3080	1/1	0.94	0.13	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3562	1/1	0.94	0.06	34,34,34,34	0
54	MG	AA	1629	1/1	0.94	0.30	59,59,59,59	0
54	MG	CA	1724	1/1	0.94	0.13	60,60,60,60	0
54	MG	B9	104	1/1	0.94	0.11	52,52,52,52	0
54	MG	DA	3087	1/1	0.94	0.14	52,52,52,52	0
54	MG	BA	3670	1/1	0.94	0.09	65,65,65,65	0
54	MG	BA	3042	1/1	0.94	0.13	27,27,27,27	0
54	MG	DA	3568	1/1	0.94	0.06	62,62,62,62	0
54	MG	BA	3107	1/1	0.94	0.20	47,47,47,47	0
54	MG	CA	1731	1/1	0.94	0.10	62,62,62,62	0
54	MG	BA	3673	1/1	0.94	0.10	69,69,69,69	0
54	MG	BA	3468	1/1	0.94	0.18	63,63,63,63	0
54	MG	BA	3321	1/1	0.94	0.13	77,77,77,77	0
54	MG	DA	3327	1/1	0.94	0.07	66,66,66,66	0
54	MG	BA	3471	1/1	0.94	0.07	50,50,50,50	0
54	MG	DA	3097	1/1	0.94	0.08	30,30,30,30	0
54	MG	BA	3474	1/1	0.94	0.12	63,63,63,63	0
54	MG	BA	3244	1/1	0.94	0.10	49,49,49,49	0
54	MG	BA	3682	1/1	0.94	0.06	55,55,55,55	0
54	MG	BA	3323	1/1	0.94	0.16	57,57,57,57	0
54	MG	BA	3578	1/1	0.94	0.08	49,49,49,49	0
54	MG	BA	3685	1/1	0.94	0.15	69,69,69,69	0
54	MG	DA	3105	1/1	0.94	0.21	54,54,54,54	0
54	MG	DA	3343	1/1	0.94	0.09	54,54,54,54	0
54	MG	BA	3044	1/1	0.94	0.27	53,53,53,53	0
54	MG	DA	3346	1/1	0.94	0.10	57,57,57,57	0
54	MG	CA	1618	1/1	0.94	0.17	61,61,61,61	0
54	MG	CA	1753	1/1	0.94	0.21	74,74,74,74	0
54	MG	DA	3349	1/1	0.94	0.07	55,55,55,55	0
54	MG	BA	3002	1/1	0.94	0.10	60,60,60,60	0
54	MG	BA	3692	1/1	0.94	0.06	38,38,38,38	0
54	MG	BA	3701	1/1	0.94	0.07	34,34,34,34	0
54	MG	DA	3357	1/1	0.94	0.07	45,45,45,45	0
54	MG	DA	3114	1/1	0.94	0.08	36,36,36,36	0
54	MG	DA	3361	1/1	0.94	0.13	40,40,40,40	0
54	MG	BA	3252	1/1	0.94	0.08	52,52,52,52	0
54	MG	DA	3363	1/1	0.94	0.08	51,51,51,51	0
54	MG	BA	3483	1/1	0.94	0.13	31,31,31,31	0
54	MG	DA	3367	1/1	0.94	0.09	67,67,67,67	0
54	MG	BA	3586	1/1	0.94	0.11	39,39,39,39	0
54	MG	BA	3484	1/1	0.94	0.05	41,41,41,41	0
54	MG	BA	3256	1/1	0.94	0.10	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3372	1/1	0.94	0.15	79,79,79,79	0
54	MG	DA	3126	1/1	0.94	0.23	56,56,56,56	0
54	MG	BA	3711	1/1	0.94	0.14	52,52,52,52	0
54	MG	DA	3629	1/1	0.94	0.07	80,80,80,80	0
54	MG	DA	3376	1/1	0.94	0.07	73,73,73,73	0
54	MG	DA	3131	1/1	0.94	0.19	25,25,25,25	0
54	MG	DA	3132	1/1	0.94	0.13	54,54,54,54	0
54	MG	AA	1679	1/1	0.94	0.14	58,58,58,58	0
54	MG	DA	3381	1/1	0.94	0.08	55,55,55,55	0
54	MG	BA	3713	1/1	0.94	0.06	35,35,35,35	0
54	MG	CA	1633	1/1	0.94	0.15	50,50,50,50	0
54	MG	CA	1769	1/1	0.94	0.06	58,58,58,58	0
54	MG	BA	3490	1/1	0.94	0.07	74,74,74,74	0
54	MG	CA	1636	1/1	0.94	0.23	58,58,58,58	0
54	MG	DD	301	1/1	0.94	0.06	61,61,61,61	0
54	MG	AA	1749	1/1	0.94	0.09	58,58,58,58	0
54	MG	DD	304	1/1	0.94	0.08	39,39,39,39	0
54	MG	DE	301	1/1	0.94	0.06	29,29,29,29	0
54	MG	BA	3593	1/1	0.94	0.26	34,34,34,34	0
54	MG	CA	1775	1/1	0.94	0.14	78,78,78,78	0
54	MG	DF	304	1/1	0.94	0.07	41,41,41,41	0
54	MG	DA	3394	1/1	0.94	0.09	59,59,59,59	0
54	MG	BA	3007	1/1	0.94	0.08	41,41,41,41	0
54	MG	DA	3146	1/1	0.94	0.18	55,55,55,55	0
54	MG	CA	1640	1/1	0.94	0.15	63,63,63,63	0
54	MG	BA	3116	1/1	0.94	0.09	50,50,50,50	0
54	MG	BA	3012	1/1	0.94	0.13	37,37,37,37	0
54	MG	DA	3151	1/1	0.94	0.08	31,31,31,31	0
54	MG	BA	3720	1/1	0.94	0.07	64,64,64,64	0
54	MG	DA	3157	1/1	0.94	0.08	33,33,33,33	0
54	MG	AA	1789	1/1	0.94	0.10	78,78,78,78	0
54	MG	DA	3406	1/1	0.94	0.10	54,54,54,54	0
54	MG	BA	3599	1/1	0.94	0.11	63,63,63,63	0
54	MG	BA	3269	1/1	0.94	0.18	51,51,51,51	0
54	MG	BA	3601	1/1	0.94	0.12	43,43,43,43	0
54	MG	DA	3411	1/1	0.94	0.07	89,89,89,89	0
54	MG	BR	205	1/1	0.95	0.10	45,45,45,45	0
54	MG	BA	3541	1/1	0.95	0.11	21,21,21,21	0
54	MG	AA	1670	1/1	0.95	0.12	56,56,56,56	0
54	MG	BV	201	1/1	0.95	0.25	30,30,30,30	0
54	MG	DA	3239	1/1	0.95	0.07	46,46,46,46	0
54	MG	DA	3240	1/1	0.95	0.06	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3241	1/1	0.95	0.08	47,47,47,47	0
54	MG	DA	3242	1/1	0.95	0.06	36,36,36,36	0
54	MG	DA	3044	1/1	0.95	0.16	55,55,55,55	0
54	MG	DA	3245	1/1	0.95	0.08	37,37,37,37	0
54	MG	BA	3218	1/1	0.95	0.07	56,56,56,56	0
54	MG	DA	3453	1/1	0.95	0.05	49,49,49,49	0
54	MG	BA	3103	1/1	0.95	0.23	33,33,33,33	0
54	MG	DA	3250	1/1	0.95	0.14	38,38,38,38	0
54	MG	AA	1673	1/1	0.95	0.11	76,76,76,76	0
54	MG	DA	3252	1/1	0.95	0.06	45,45,45,45	0
54	MG	BA	3549	1/1	0.95	0.09	22,22,22,22	0
54	MG	DA	3254	1/1	0.95	0.19	39,39,39,39	0
54	MG	AA	1614	1/1	0.95	0.07	42,42,42,42	0
54	MG	DA	3468	1/1	0.95	0.10	66,66,66,66	0
54	MG	BA	3224	1/1	0.95	0.05	28,28,28,28	0
54	MG	B0	104	1/1	0.95	0.06	49,49,49,49	0
54	MG	DA	3258	1/1	0.95	0.10	35,35,35,35	0
54	MG	DA	3260	1/1	0.95	0.13	57,57,57,57	0
54	MG	B1	101	1/1	0.95	0.08	40,40,40,40	0
54	MG	BA	3448	1/1	0.95	0.11	46,46,46,46	0
54	MG	BA	3226	1/1	0.95	0.11	49,49,49,49	0
54	MG	BA	3058	1/1	0.95	0.24	57,57,57,57	0
54	MG	DA	3268	1/1	0.95	0.08	54,54,54,54	0
54	MG	DA	3271	1/1	0.95	0.06	42,42,42,42	0
54	MG	DA	3064	1/1	0.95	0.12	36,36,36,36	0
54	MG	AA	1709	1/1	0.95	0.12	57,57,57,57	0
54	MG	DA	3488	1/1	0.95	0.12	46,46,46,46	0
54	MG	B3	103	1/1	0.95	0.11	38,38,38,38	0
54	MG	DA	3490	1/1	0.95	0.07	60,60,60,60	0
54	MG	DA	3492	1/1	0.95	0.12	59,59,59,59	0
54	MG	DA	3067	1/1	0.95	0.29	58,58,58,58	0
54	MG	BA	3060	1/1	0.95	0.14	49,49,49,49	0
54	MG	AA	1710	1/1	0.95	0.17	52,52,52,52	0
54	MG	B7	101	1/1	0.95	0.09	45,45,45,45	0
54	MG	B8	101	1/1	0.95	0.14	45,45,45,45	0
54	MG	BA	3156	1/1	0.95	0.09	28,28,28,28	0
54	MG	BA	3566	1/1	0.95	0.11	48,48,48,48	0
54	MG	CA	1727	1/1	0.95	0.16	63,63,63,63	0
54	MG	BA	3459	1/1	0.95	0.20	57,57,57,57	0
54	MG	BA	3568	1/1	0.95	0.11	35,35,35,35	0
54	MG	BA	3022	1/1	0.95	0.07	38,38,38,38	0
54	MG	BA	3237	1/1	0.95	0.07	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1733	1/1	0.95	0.09	89,89,89,89	0
54	MG	CA	1735	1/1	0.95	0.09	85,85,85,85	0
54	MG	BA	3678	1/1	0.95	0.23	47,47,47,47	0
54	MG	BA	3312	1/1	0.95	0.06	32,32,32,32	0
54	MG	BA	3463	1/1	0.95	0.08	38,38,38,38	0
54	MG	AA	1775	1/1	0.95	0.07	63,63,63,63	0
54	MG	AA	1692	1/1	0.95	0.11	66,66,66,66	0
54	MG	DA	3299	1/1	0.95	0.06	33,33,33,33	0
54	MG	BA	3317	1/1	0.95	0.10	69,69,69,69	0
54	MG	CA	1743	1/1	0.95	0.13	65,65,65,65	0
54	MG	DA	3520	1/1	0.95	0.04	74,74,74,74	0
54	MG	BA	3027	1/1	0.95	0.06	32,32,32,32	0
54	MG	BA	3688	1/1	0.95	0.07	72,72,72,72	0
54	MG	CA	1614	1/1	0.95	0.13	70,70,70,70	0
54	MG	BA	3689	1/1	0.95	0.07	55,55,55,55	0
54	MG	DA	3528	1/1	0.95	0.07	36,36,36,36	0
54	MG	BA	3690	1/1	0.95	0.06	42,42,42,42	0
54	MG	BA	3071	1/1	0.95	0.14	46,46,46,46	0
54	MG	DA	3531	1/1	0.95	0.05	51,51,51,51	0
54	MG	CA	1619	1/1	0.95	0.25	56,56,56,56	0
54	MG	AA	1653	1/1	0.95	0.16	64,64,64,64	0
54	MG	BA	3581	1/1	0.95	0.09	42,42,42,42	0
54	MG	BA	3245	1/1	0.95	0.08	29,29,29,29	0
54	MG	BA	3247	1/1	0.95	0.09	45,45,45,45	0
54	MG	BA	3585	1/1	0.95	0.11	65,65,65,65	0
54	MG	DA	3107	1/1	0.95	0.18	38,38,38,38	0
54	MG	CA	1760	1/1	0.95	0.18	93,93,93,93	0
54	MG	DA	3320	1/1	0.95	0.06	54,54,54,54	0
54	MG	BA	3328	1/1	0.95	0.06	49,49,49,49	0
54	MG	BA	3170	1/1	0.95	0.07	38,38,38,38	0
54	MG	BA	3119	1/1	0.95	0.10	57,57,57,57	0
54	MG	CA	1628	1/1	0.95	0.11	71,71,71,71	0
54	MG	DA	3113	1/1	0.95	0.20	56,56,56,56	0
54	MG	BA	3589	1/1	0.95	0.06	41,41,41,41	0
54	MG	AA	1701	1/1	0.95	0.09	68,68,68,68	0
54	MG	BA	3173	1/1	0.95	0.07	63,63,63,63	0
54	MG	DA	3329	1/1	0.95	0.13	34,34,34,34	0
54	MG	AA	1729	1/1	0.95	0.09	55,55,55,55	0
54	MG	CA	1770	1/1	0.95	0.12	71,71,71,71	0
54	MG	BA	3122	1/1	0.95	0.08	46,46,46,46	0
54	MG	BA	3338	1/1	0.95	0.10	49,49,49,49	0
54	MG	DA	3557	1/1	0.95	0.26	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3128	1/1	0.95	0.16	47,47,47,47	0
54	MG	DA	3339	1/1	0.95	0.06	53,53,53,53	0
54	MG	DA	3560	1/1	0.95	0.09	57,57,57,57	0
54	MG	AA	1702	1/1	0.95	0.10	67,67,67,67	0
54	MG	BA	3264	1/1	0.95	0.07	86,86,86,86	0
54	MG	BA	3079	1/1	0.95	0.16	45,45,45,45	0
54	MG	BA	3494	1/1	0.95	0.10	52,52,52,52	0
54	MG	BA	3187	1/1	0.95	0.20	69,69,69,69	0
54	MG	DA	3567	1/1	0.95	0.07	57,57,57,57	0
54	MG	DA	3345	1/1	0.95	0.12	56,56,56,56	0
54	MG	BA	3344	1/1	0.95	0.09	41,41,41,41	0
54	MG	BA	3188	1/1	0.95	0.11	47,47,47,47	0
54	MG	CA	1644	1/1	0.95	0.23	63,63,63,63	0
54	MG	DA	3572	1/1	0.95	0.05	45,45,45,45	0
54	MG	DA	3138	1/1	0.95	0.29	49,49,49,49	0
54	MG	DA	3139	1/1	0.95	0.21	53,53,53,53	0
54	MG	BA	3604	1/1	0.95	0.14	43,43,43,43	0
54	MG	BA	3268	1/1	0.95	0.08	52,52,52,52	0
54	MG	DA	3356	1/1	0.95	0.12	44,44,44,44	0
54	MG	AA	1781	1/1	0.95	0.14	71,71,71,71	0
54	MG	BA	3729	1/1	0.95	0.13	42,42,42,42	0
54	MG	DA	3360	1/1	0.95	0.07	36,36,36,36	0
54	MG	BA	3353	1/1	0.95	0.07	51,51,51,51	0
54	MG	BA	3505	1/1	0.95	0.08	38,38,38,38	0
54	MG	DA	3584	1/1	0.95	0.07	37,37,37,37	0
54	MG	BA	3355	1/1	0.95	0.13	51,51,51,51	0
54	MG	DA	3364	1/1	0.95	0.08	54,54,54,54	0
54	MG	BA	3611	1/1	0.95	0.07	32,32,32,32	0
54	MG	BA	3359	1/1	0.95	0.16	19,19,19,19	0
54	MG	AA	1784	1/1	0.95	0.26	63,63,63,63	0
54	MG	DA	3595	1/1	0.95	0.11	90,90,90,90	0
54	MG	BA	3363	1/1	0.95	0.16	48,48,48,48	0
54	MG	BB	215	1/1	0.95	0.09	57,57,57,57	0
54	MG	CA	1794	1/1	0.95	0.09	57,57,57,57	0
54	MG	DA	3161	1/1	0.95	0.09	47,47,47,47	0
54	MG	BA	3365	1/1	0.95	0.10	33,33,33,33	0
54	MG	AA	1747	1/1	0.95	0.16	60,60,60,60	0
54	MG	DA	3610	1/1	0.95	0.12	79,79,79,79	0
54	MG	AA	1638	1/1	0.95	0.11	64,64,64,64	0
54	MG	BA	3519	1/1	0.95	0.07	26,26,26,26	0
54	MG	DA	3379	1/1	0.95	0.10	69,69,69,69	0
54	MG	BD	304	1/1	0.95	0.07	19,19,19,19	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3520	1/1	0.95	0.14	29,29,29,29	0
54	MG	AA	1750	1/1	0.95	0.14	55,55,55,55	0
54	MG	DA	3173	1/1	0.95	0.06	34,34,34,34	0
54	MG	BA	3625	1/1	0.95	0.13	52,52,52,52	0
54	MG	DA	3001	1/1	0.95	0.07	38,38,38,38	0
54	MG	DA	3003	1/1	0.95	0.18	34,34,34,34	0
54	MG	CA	1667	1/1	0.95	0.19	66,66,66,66	0
54	MG	AA	1812	1/1	0.95	0.07	82,82,82,82	0
54	MG	DA	3391	1/1	0.95	0.17	62,62,62,62	0
54	MG	DA	3392	1/1	0.95	0.08	43,43,43,43	0
54	MG	DA	3007	1/1	0.95	0.23	59,59,59,59	0
54	MG	BE	302	1/1	0.95	0.15	29,29,29,29	0
54	MG	CA	1671	1/1	0.95	0.07	78,78,78,78	0
54	MG	DA	3187	1/1	0.95	0.09	44,44,44,44	0
54	MG	BA	3203	1/1	0.95	0.15	39,39,39,39	0
54	MG	DA	3637	1/1	0.95	0.14	63,63,63,63	0
54	MG	BA	3096	1/1	0.95	0.07	36,36,36,36	0
54	MG	DB	204	1/1	0.95	0.15	65,65,65,65	0
54	MG	BA	3284	1/1	0.95	0.09	37,37,37,37	0
54	MG	BA	3097	1/1	0.95	0.06	40,40,40,40	0
54	MG	BA	3099	1/1	0.95	0.16	47,47,47,47	0
54	MG	DB	209	1/1	0.95	0.14	67,67,67,67	0
54	MG	BA	3047	1/1	0.95	0.06	30,30,30,30	0
54	MG	BF	306	1/1	0.95	0.08	61,61,61,61	0
54	MG	DD	302	1/1	0.95	0.06	32,32,32,32	0
54	MG	BA	3409	1/1	0.95	0.07	26,26,26,26	0
54	MG	BA	3415	1/1	0.95	0.11	26,26,26,26	0
54	MG	DD	305	1/1	0.95	0.08	56,56,56,56	0
54	MG	DA	3201	1/1	0.95	0.06	29,29,29,29	0
54	MG	DA	3203	1/1	0.95	0.07	36,36,36,36	0
54	MG	CA	1683	1/1	0.95	0.08	71,71,71,71	0
54	MG	DF	303	1/1	0.95	0.09	56,56,56,56	0
54	MG	DA	3412	1/1	0.95	0.13	75,75,75,75	0
54	MG	DA	3207	1/1	0.95	0.09	27,27,27,27	0
54	MG	DA	3208	1/1	0.95	0.07	31,31,31,31	0
54	MG	AA	1664	1/1	0.95	0.10	74,74,74,74	0
54	MG	BA	3535	1/1	0.95	0.08	58,58,58,58	0
54	MG	DP	202	1/1	0.95	0.07	53,53,53,53	0
54	MG	DP	203	1/1	0.95	0.12	61,61,61,61	0
54	MG	BA	3289	1/1	0.95	0.13	58,58,58,58	0
54	MG	CA	1687	1/1	0.95	0.13	68,68,68,68	0
54	MG	DA	3422	1/1	0.95	0.06	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3215	1/1	0.95	0.10	41,41,41,41	0
54	MG	DA	3223	1/1	0.95	0.07	39,39,39,39	0
54	MG	BA	3645	1/1	0.95	0.10	59,59,59,59	0
54	MG	DA	3225	1/1	0.95	0.08	53,53,53,53	0
54	MG	BA	3425	1/1	0.95	0.15	38,38,38,38	0
54	MG	D8	102	1/1	0.95	0.10	66,66,66,66	0
54	MG	BR	202	1/1	0.95	0.11	35,35,35,35	0
54	MG	BA	3428	1/1	0.95	0.13	23,23,23,23	0
54	MG	BA	3216	1/1	0.95	0.20	64,64,64,64	0
54	MG	CA	1700	1/1	0.96	0.08	56,56,56,56	0
54	MG	DA	3448	1/1	0.96	0.19	53,53,53,53	0
54	MG	CA	1701	1/1	0.96	0.09	74,74,74,74	0
54	MG	DA	3248	1/1	0.96	0.09	59,59,59,59	0
54	MG	DA	3048	1/1	0.96	0.18	50,50,50,50	0
54	MG	DA	3452	1/1	0.96	0.17	45,45,45,45	0
54	MG	BA	3647	1/1	0.96	0.07	59,59,59,59	0
54	MG	BT	203	1/1	0.96	0.04	51,51,51,51	0
54	MG	DA	3455	1/1	0.96	0.10	34,34,34,34	0
54	MG	DA	3456	1/1	0.96	0.08	45,45,45,45	0
54	MG	DA	3457	1/1	0.96	0.05	59,59,59,59	0
54	MG	CA	1704	1/1	0.96	0.17	71,71,71,71	0
54	MG	AA	1657	1/1	0.96	0.12	51,51,51,51	0
54	MG	BA	3422	1/1	0.96	0.05	33,33,33,33	0
54	MG	BA	3651	1/1	0.96	0.15	34,34,34,34	0
54	MG	DA	3056	1/1	0.96	0.04	31,31,31,31	0
54	MG	CA	1708	1/1	0.96	0.10	73,73,73,73	0
54	MG	DA	3058	1/1	0.96	0.06	38,38,38,38	0
54	MG	DA	3059	1/1	0.96	0.09	43,43,43,43	0
54	MG	BA	3296	1/1	0.96	0.15	40,40,40,40	0
54	MG	CA	1710	1/1	0.96	0.16	55,55,55,55	0
54	MG	DA	3475	1/1	0.96	0.07	60,60,60,60	0
54	MG	AA	1684	1/1	0.96	0.06	43,43,43,43	0
54	MG	BY	202	1/1	0.96	0.16	49,49,49,49	0
54	MG	AA	1640	1/1	0.96	0.15	70,70,70,70	0
54	MG	BZ	302	1/1	0.96	0.17	45,45,45,45	0
54	MG	AA	1763	1/1	0.96	0.12	73,73,73,73	0
54	MG	BA	3542	1/1	0.96	0.06	33,33,33,33	0
54	MG	BA	3300	1/1	0.96	0.11	54,54,54,54	0
54	MG	BA	3658	1/1	0.96	0.12	61,61,61,61	0
54	MG	DA	3485	1/1	0.96	0.10	33,33,33,33	0
54	MG	AA	1637	1/1	0.96	0.15	64,64,64,64	0
54	MG	DA	3487	1/1	0.96	0.16	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3277	1/1	0.96	0.07	60,60,60,60	0
54	MG	DA	3278	1/1	0.96	0.07	71,71,71,71	0
54	MG	BA	3435	1/1	0.96	0.05	40,40,40,40	0
54	MG	BA	3662	1/1	0.96	0.08	26,26,26,26	0
54	MG	AA	1798	1/1	0.96	0.06	67,67,67,67	0
54	MG	DA	3078	1/1	0.96	0.16	41,41,41,41	0
54	MG	BA	3441	1/1	0.96	0.08	58,58,58,58	0
54	MG	CA	1726	1/1	0.96	0.10	77,77,77,77	0
54	MG	BA	3023	1/1	0.96	0.07	43,43,43,43	0
54	MG	BA	3668	1/1	0.96	0.06	60,60,60,60	0
54	MG	BA	3231	1/1	0.96	0.07	35,35,35,35	0
54	MG	DA	3289	1/1	0.96	0.09	44,44,44,44	0
54	MG	DA	3085	1/1	0.96	0.22	60,60,60,60	0
54	MG	BA	3552	1/1	0.96	0.09	26,26,26,26	0
54	MG	BA	3554	1/1	0.96	0.05	41,41,41,41	0
54	MG	CA	1732	1/1	0.96	0.15	63,63,63,63	0
54	MG	BA	3555	1/1	0.96	0.07	23,23,23,23	0
54	MG	CA	1734	1/1	0.96	0.16	79,79,79,79	0
54	MG	BA	3446	1/1	0.96	0.09	42,42,42,42	0
54	MG	DA	3510	1/1	0.96	0.08	46,46,46,46	0
54	MG	DA	3512	1/1	0.96	0.08	43,43,43,43	0
54	MG	BA	3157	1/1	0.96	0.11	36,36,36,36	0
54	MG	BA	3159	1/1	0.96	0.12	44,44,44,44	0
54	MG	CA	1738	1/1	0.96	0.10	52,52,52,52	0
54	MG	BA	3063	1/1	0.96	0.09	31,31,31,31	0
54	MG	DA	3303	1/1	0.96	0.06	46,46,46,46	0
54	MG	DA	3304	1/1	0.96	0.04	39,39,39,39	0
54	MG	BA	3450	1/1	0.96	0.05	24,24,24,24	0
54	MG	BA	3236	1/1	0.96	0.06	27,27,27,27	0
54	MG	DA	3521	1/1	0.96	0.06	43,43,43,43	0
54	MG	DA	3099	1/1	0.96	0.05	54,54,54,54	0
54	MG	AA	1642	1/1	0.96	0.09	53,53,53,53	0
54	MG	BA	3565	1/1	0.96	0.08	57,57,57,57	0
54	MG	BA	3066	1/1	0.96	0.05	41,41,41,41	0
54	MG	DA	3526	1/1	0.96	0.06	42,42,42,42	0
54	MG	CA	1745	1/1	0.96	0.19	52,52,52,52	0
54	MG	CA	1611	1/1	0.96	0.20	56,56,56,56	0
54	MG	DA	3313	1/1	0.96	0.07	34,34,34,34	0
54	MG	CA	1747	1/1	0.96	0.07	63,63,63,63	0
54	MG	BA	3455	1/1	0.96	0.05	41,41,41,41	0
54	MG	AA	1661	1/1	0.96	0.13	62,62,62,62	0
54	MG	DA	3534	1/1	0.96	0.11	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1782	1/1	0.96	0.06	59,59,59,59	0
54	MG	BA	3241	1/1	0.96	0.16	56,56,56,56	0
54	MG	BA	3028	1/1	0.96	0.05	34,34,34,34	0
54	MG	CA	1617	1/1	0.96	0.27	63,63,63,63	0
54	MG	BA	3572	1/1	0.96	0.07	44,44,44,44	0
54	MG	BA	3243	1/1	0.96	0.09	31,31,31,31	0
54	MG	BA	3114	1/1	0.96	0.06	39,39,39,39	0
54	MG	DA	3116	1/1	0.96	0.16	26,26,26,26	0
54	MG	BA	3700	1/1	0.96	0.07	41,41,41,41	0
54	MG	DA	3120	1/1	0.96	0.15	47,47,47,47	0
54	MG	AA	1783	1/1	0.96	0.20	71,71,71,71	0
54	MG	BA	3464	1/1	0.96	0.05	28,28,28,28	0
54	MG	DA	3548	1/1	0.96	0.06	54,54,54,54	0
54	MG	DA	3123	1/1	0.96	0.15	48,48,48,48	0
54	MG	AA	1668	1/1	0.96	0.06	52,52,52,52	0
54	MG	DA	3333	1/1	0.96	0.07	54,54,54,54	0
54	MG	BA	3466	1/1	0.96	0.13	78,78,78,78	0
54	MG	BA	3707	1/1	0.96	0.07	49,49,49,49	0
54	MG	AP	101	1/1	0.96	0.11	81,81,81,81	0
54	MG	AA	1720	1/1	0.96	0.13	74,74,74,74	0
54	MG	BA	3177	1/1	0.96	0.08	41,41,41,41	0
54	MG	BA	3076	1/1	0.96	0.20	58,58,58,58	0
54	MG	BA	3473	1/1	0.96	0.09	54,54,54,54	0
54	MG	BA	3257	1/1	0.96	0.07	21,21,21,21	0
54	MG	CA	1634	1/1	0.96	0.08	40,40,40,40	0
54	MG	BA	3180	1/1	0.96	0.10	42,42,42,42	0
54	MG	BA	3034	1/1	0.96	0.17	40,40,40,40	0
54	MG	BA	3185	1/1	0.96	0.06	44,44,44,44	0
54	MG	DA	3564	1/1	0.96	0.13	61,61,61,61	0
54	MG	BA	3078	1/1	0.96	0.10	45,45,45,45	0
54	MG	BA	3123	1/1	0.96	0.10	48,48,48,48	0
54	MG	BA	3342	1/1	0.96	0.05	43,43,43,43	0
54	MG	DA	3142	1/1	0.96	0.16	48,48,48,48	0
54	MG	AA	1643	1/1	0.96	0.07	56,56,56,56	0
54	MG	AA	1787	1/1	0.96	0.10	54,54,54,54	0
54	MG	DA	3355	1/1	0.96	0.09	67,67,67,67	0
54	MG	BA	3190	1/1	0.96	0.13	36,36,36,36	0
54	MG	BA	3081	1/1	0.96	0.10	38,38,38,38	0
54	MG	DA	3358	1/1	0.96	0.06	59,59,59,59	0
54	MG	BA	3270	1/1	0.96	0.06	51,51,51,51	0
54	MG	BA	3351	1/1	0.96	0.06	49,49,49,49	0
54	MG	BA	3352	1/1	0.96	0.06	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3274	1/1	0.96	0.13	48,48,48,48	0
54	MG	BA	3602	1/1	0.96	0.05	43,43,43,43	0
54	MG	DA	3154	1/1	0.96	0.08	47,47,47,47	0
54	MG	CA	1788	1/1	0.96	0.07	51,51,51,51	0
54	MG	DA	3366	1/1	0.96	0.14	41,41,41,41	0
54	MG	BA	3275	1/1	0.96	0.12	31,31,31,31	0
54	MG	DA	3585	1/1	0.96	0.14	36,36,36,36	0
54	MG	BA	3357	1/1	0.96	0.16	40,40,40,40	0
54	MG	DA	3590	1/1	0.96	0.09	59,59,59,59	0
54	MG	DA	3162	1/1	0.96	0.11	33,33,33,33	0
54	MG	BA	3358	1/1	0.96	0.14	22,22,22,22	0
54	MG	BB	206	1/1	0.96	0.13	34,34,34,34	0
54	MG	BA	3194	1/1	0.96	0.21	52,52,52,52	0
54	MG	AA	1680	1/1	0.96	0.15	54,54,54,54	0
54	MG	BA	3361	1/1	0.96	0.08	30,30,30,30	0
54	MG	BA	3503	1/1	0.96	0.10	23,23,23,23	0
54	MG	BA	3362	1/1	0.96	0.06	30,30,30,30	0
54	MG	DA	3603	1/1	0.96	0.07	44,44,44,44	0
54	MG	DA	3604	1/1	0.96	0.07	72,72,72,72	0
54	MG	DA	3172	1/1	0.96	0.05	30,30,30,30	0
54	MG	BA	3133	1/1	0.96	0.09	30,30,30,30	0
54	MG	DA	3607	1/1	0.96	0.06	65,65,65,65	0
54	MG	BA	3364	1/1	0.96	0.05	24,24,24,24	0
54	MG	BA	3087	1/1	0.96	0.14	36,36,36,36	0
54	MG	BD	303	1/1	0.96	0.10	33,33,33,33	0
54	MG	BA	3616	1/1	0.96	0.15	26,26,26,26	0
54	MG	CQ	201	1/1	0.96	0.08	76,76,76,76	0
54	MG	DA	3387	1/1	0.96	0.08	72,72,72,72	0
54	MG	BA	3370	1/1	0.96	0.09	23,23,23,23	0
54	MG	BA	3039	1/1	0.96	0.16	58,58,58,58	0
54	MG	BA	3089	1/1	0.96	0.09	32,32,32,32	0
54	MG	DA	3620	1/1	0.96	0.06	65,65,65,65	0
54	MG	DA	3005	1/1	0.96	0.18	53,53,53,53	0
54	MG	BA	3620	1/1	0.96	0.19	40,40,40,40	0
54	MG	CA	1670	1/1	0.96	0.18	80,80,80,80	0
54	MG	DA	3008	1/1	0.96	0.13	44,44,44,44	0
54	MG	BA	3514	1/1	0.96	0.06	29,29,29,29	0
54	MG	DA	3627	1/1	0.96	0.10	58,58,58,58	0
54	MG	DA	3396	1/1	0.96	0.06	48,48,48,48	0
54	MG	BA	3516	1/1	0.96	0.07	54,54,54,54	0
54	MG	BA	3376	1/1	0.96	0.10	37,37,37,37	0
54	MG	DA	3631	1/1	0.96	0.08	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3518	1/1	0.96	0.10	28,28,28,28	0
54	MG	DA	3633	1/1	0.96	0.11	49,49,49,49	0
54	MG	BA	3090	1/1	0.96	0.20	30,30,30,30	0
54	MG	BF	302	1/1	0.96	0.42	31,31,31,31	0
54	MG	DA	3402	1/1	0.96	0.07	53,53,53,53	0
54	MG	BF	303	1/1	0.96	0.07	43,43,43,43	0
54	MG	BA	3009	1/1	0.96	0.15	23,23,23,23	0
54	MG	BA	3521	1/1	0.96	0.07	35,35,35,35	0
54	MG	BA	3629	1/1	0.96	0.17	34,34,34,34	0
54	MG	BA	3011	1/1	0.96	0.21	47,47,47,47	0
54	MG	DB	207	1/1	0.96	0.08	82,82,82,82	0
54	MG	DA	3022	1/1	0.96	0.10	37,37,37,37	0
54	MG	DA	3210	1/1	0.96	0.10	47,47,47,47	0
54	MG	BA	3043	1/1	0.96	0.08	30,30,30,30	0
54	MG	DA	3213	1/1	0.96	0.05	33,33,33,33	0
54	MG	DA	3216	1/1	0.96	0.07	43,43,43,43	0
54	MG	DA	3414	1/1	0.96	0.08	66,66,66,66	0
54	MG	BA	3390	1/1	0.96	0.09	33,33,33,33	0
54	MG	DA	3218	1/1	0.96	0.06	57,57,57,57	0
54	MG	BA	3209	1/1	0.96	0.10	19,19,19,19	0
54	MG	DE	303	1/1	0.96	0.16	31,31,31,31	0
54	MG	DA	3419	1/1	0.96	0.05	51,51,51,51	0
54	MG	BO	201	1/1	0.96	0.07	53,53,53,53	0
54	MG	DA	3029	1/1	0.96	0.14	37,37,37,37	0
54	MG	AA	1748	1/1	0.96	0.11	57,57,57,57	0
54	MG	DA	3031	1/1	0.96	0.20	46,46,46,46	0
54	MG	BA	3398	1/1	0.96	0.14	30,30,30,30	0
54	MG	DA	3426	1/1	0.96	0.11	55,55,55,55	0
54	MG	DO	203	1/1	0.96	0.07	75,75,75,75	0
54	MG	BQ	203	1/1	0.96	0.07	38,38,38,38	0
54	MG	DA	3034	1/1	0.96	0.09	34,34,34,34	0
54	MG	DA	3433	1/1	0.96	0.09	34,34,34,34	0
54	MG	BA	3400	1/1	0.96	0.04	39,39,39,39	0
54	MG	BA	3641	1/1	0.96	0.08	47,47,47,47	0
54	MG	CA	1693	1/1	0.96	0.06	73,73,73,73	0
54	MG	DA	3233	1/1	0.96	0.10	42,42,42,42	0
54	MG	DA	3438	1/1	0.96	0.08	54,54,54,54	0
54	MG	D5	102	1/1	0.96	0.05	44,44,44,44	0
54	MG	BA	3143	1/1	0.96	0.12	23,23,23,23	0
54	MG	AA	1790	1/1	0.96	0.14	63,63,63,63	0
54	MG	CA	1696	1/1	0.96	0.08	71,71,71,71	0
54	MG	D8	101	1/1	0.96	0.10	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3098	1/1	0.96	0.06	39,39,39,39	0
54	MG	AA	1773	1/1	0.96	0.07	52,52,52,52	0
55	ZN	AN	101	1/1	0.96	0.10	118,118,118,118	0
54	MG	BA	3147	1/1	0.96	0.10	33,33,33,33	0
54	MG	DA	3045	1/1	0.96	0.13	48,48,48,48	0
54	MG	BB	204	1/1	0.97	0.06	47,47,47,47	0
54	MG	DA	3511	1/1	0.97	0.07	44,44,44,44	0
54	MG	BA	3214	1/1	0.97	0.05	39,39,39,39	0
54	MG	BA	3440	1/1	0.97	0.07	50,50,50,50	0
54	MG	CA	1632	1/1	0.97	0.07	57,57,57,57	0
54	MG	BB	207	1/1	0.97	0.17	49,49,49,49	0
54	MG	DA	3350	1/1	0.97	0.08	40,40,40,40	0
54	MG	DA	3055	1/1	0.97	0.12	25,25,25,25	0
54	MG	BB	208	1/1	0.97	0.09	33,33,33,33	0
54	MG	BA	3160	1/1	0.97	0.04	32,32,32,32	0
54	MG	DA	3354	1/1	0.97	0.13	39,39,39,39	0
54	MG	BA	3335	1/1	0.97	0.07	43,43,43,43	0
54	MG	BA	3273	1/1	0.97	0.06	60,60,60,60	0
54	MG	BA	3630	1/1	0.97	0.07	57,57,57,57	0
54	MG	DA	3061	1/1	0.97	0.08	45,45,45,45	0
54	MG	DA	3062	1/1	0.97	0.17	43,43,43,43	0
54	MG	BA	3632	1/1	0.97	0.14	29,29,29,29	0
54	MG	DA	3527	1/1	0.97	0.07	38,38,38,38	0
54	MG	AA	1711	1/1	0.97	0.05	35,35,35,35	0
54	MG	BB	218	1/1	0.97	0.06	69,69,69,69	0
54	MG	BA	3032	1/1	0.97	0.09	25,25,25,25	0
54	MG	AA	1682	1/1	0.97	0.14	48,48,48,48	0
54	MG	DA	3211	1/1	0.97	0.07	38,38,38,38	0
54	MG	BD	302	1/1	0.97	0.07	37,37,37,37	0
54	MG	AA	1792	1/1	0.97	0.10	51,51,51,51	0
54	MG	DA	3214	1/1	0.97	0.06	32,32,32,32	0
54	MG	AA	1672	1/1	0.97	0.06	50,50,50,50	0
54	MG	DA	3071	1/1	0.97	0.08	39,39,39,39	0
54	MG	BA	3543	1/1	0.97	0.10	29,29,29,29	0
54	MG	DA	3219	1/1	0.97	0.04	32,32,32,32	0
54	MG	DA	3073	1/1	0.97	0.09	41,41,41,41	0
54	MG	DA	3541	1/1	0.97	0.06	46,46,46,46	0
54	MG	DA	3375	1/1	0.97	0.04	60,60,60,60	0
54	MG	BA	3451	1/1	0.97	0.04	49,49,49,49	0
54	MG	BA	3065	1/1	0.97	0.06	36,36,36,36	0
54	MG	BA	3222	1/1	0.97	0.04	34,34,34,34	0
54	MG	BA	3132	1/1	0.97	0.06	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3548	1/1	0.97	0.08	32,32,32,32	0
54	MG	CA	1765	1/1	0.97	0.05	87,87,87,87	0
54	MG	BA	3346	1/1	0.97	0.06	43,43,43,43	0
54	MG	DA	3383	1/1	0.97	0.11	59,59,59,59	0
54	MG	AA	1771	1/1	0.97	0.07	67,67,67,67	0
54	MG	DA	3230	1/1	0.97	0.07	31,31,31,31	0
54	MG	BA	3019	1/1	0.97	0.07	23,23,23,23	0
54	MG	BA	3135	1/1	0.97	0.06	50,50,50,50	0
54	MG	BA	3649	1/1	0.97	0.19	30,30,30,30	0
54	MG	BA	3553	1/1	0.97	0.07	27,27,27,27	0
54	MG	AA	1677	1/1	0.97	0.06	50,50,50,50	0
54	MG	DA	3237	1/1	0.97	0.07	51,51,51,51	0
54	MG	DA	3238	1/1	0.97	0.10	44,44,44,44	0
54	MG	DA	3088	1/1	0.97	0.07	39,39,39,39	0
54	MG	AA	1734	1/1	0.97	0.07	50,50,50,50	0
54	MG	BA	3354	1/1	0.97	0.05	24,24,24,24	0
54	MG	BA	3178	1/1	0.97	0.13	23,23,23,23	0
54	MG	BA	3356	1/1	0.97	0.07	55,55,55,55	0
54	MG	BA	3233	1/1	0.97	0.05	53,53,53,53	0
54	MG	DA	3246	1/1	0.97	0.06	41,41,41,41	0
54	MG	BA	3041	1/1	0.97	0.05	29,29,29,29	0
54	MG	BP	201	1/1	0.97	0.10	44,44,44,44	0
54	MG	AA	1774	1/1	0.97	0.07	78,78,78,78	0
54	MG	BA	3181	1/1	0.97	0.06	41,41,41,41	0
54	MG	BQ	202	1/1	0.97	0.07	47,47,47,47	0
54	MG	BA	3660	1/1	0.97	0.07	39,39,39,39	0
54	MG	AA	1612	1/1	0.97	0.07	61,61,61,61	0
54	MG	BQ	205	1/1	0.97	0.09	42,42,42,42	0
54	MG	BA	3024	1/1	0.97	0.12	44,44,44,44	0
54	MG	BA	3295	1/1	0.97	0.18	52,52,52,52	0
54	MG	BA	3075	1/1	0.97	0.09	36,36,36,36	0
54	MG	BA	3475	1/1	0.97	0.09	45,45,45,45	0
54	MG	BA	3045	1/1	0.97	0.10	35,35,35,35	0
54	MG	DA	3580	1/1	0.97	0.06	39,39,39,39	0
54	MG	DA	3261	1/1	0.97	0.05	37,37,37,37	0
54	MG	BA	3366	1/1	0.97	0.09	36,36,36,36	0
54	MG	BA	3367	1/1	0.97	0.10	34,34,34,34	0
54	MG	BA	3369	1/1	0.97	0.04	27,27,27,27	0
54	MG	BU	202	1/1	0.97	0.15	34,34,34,34	0
54	MG	DA	3267	1/1	0.97	0.06	34,34,34,34	0
54	MG	DA	3588	1/1	0.97	0.07	38,38,38,38	0
54	MG	DA	3589	1/1	0.97	0.07	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1795	1/1	0.97	0.06	66,66,66,66	0
54	MG	DA	3269	1/1	0.97	0.06	36,36,36,36	0
54	MG	BA	3109	1/1	0.97	0.06	37,37,37,37	0
54	MG	BA	3575	1/1	0.97	0.06	59,59,59,59	0
54	MG	BA	3481	1/1	0.97	0.06	22,22,22,22	0
54	MG	DA	3115	1/1	0.97	0.15	33,33,33,33	0
54	MG	DA	3430	1/1	0.97	0.09	28,28,28,28	0
54	MG	AA	1799	1/1	0.97	0.08	44,44,44,44	0
54	MG	DA	3117	1/1	0.97	0.21	69,69,69,69	0
54	MG	DA	3599	1/1	0.97	0.04	45,45,45,45	0
54	MG	BA	3372	1/1	0.97	0.10	32,32,32,32	0
54	MG	DA	3119	1/1	0.97	0.11	38,38,38,38	0
54	MG	BA	3373	1/1	0.97	0.10	46,46,46,46	0
54	MG	BA	3048	1/1	0.97	0.05	35,35,35,35	0
54	MG	BA	3050	1/1	0.97	0.28	54,54,54,54	0
54	MG	B0	101	1/1	0.97	0.16	40,40,40,40	0
54	MG	DA	3609	1/1	0.97	0.05	42,42,42,42	0
54	MG	BA	3193	1/1	0.97	0.08	46,46,46,46	0
54	MG	DA	3002	1/1	0.97	0.06	45,45,45,45	0
54	MG	BA	3380	1/1	0.97	0.06	37,37,37,37	0
54	MG	DA	3127	1/1	0.97	0.18	24,24,24,24	0
54	MG	DA	3287	1/1	0.97	0.12	52,52,52,52	0
54	MG	BA	3381	1/1	0.97	0.08	41,41,41,41	0
54	MG	DA	3129	1/1	0.97	0.25	38,38,38,38	0
54	MG	BA	3246	1/1	0.97	0.10	46,46,46,46	0
54	MG	BA	3051	1/1	0.97	0.13	33,33,33,33	0
54	MG	DA	3621	1/1	0.97	0.08	41,41,41,41	0
54	MG	BA	3006	1/1	0.97	0.05	67,67,67,67	0
54	MG	BA	3389	1/1	0.97	0.08	30,30,30,30	0
54	MG	BA	3250	1/1	0.97	0.06	39,39,39,39	0
54	MG	BA	3115	1/1	0.97	0.06	35,35,35,35	0
54	MG	BA	3083	1/1	0.97	0.06	32,32,32,32	0
54	MG	DA	3012	1/1	0.97	0.17	34,34,34,34	0
54	MG	BA	3695	1/1	0.97	0.07	52,52,52,52	0
54	MG	BA	3696	1/1	0.97	0.04	38,38,38,38	0
54	MG	DA	3301	1/1	0.97	0.06	31,31,31,31	0
54	MG	BA	3502	1/1	0.97	0.09	34,34,34,34	0
54	MG	DA	3461	1/1	0.97	0.06	76,76,76,76	0
54	MG	BA	3310	1/1	0.97	0.05	19,19,19,19	0
54	MG	BA	3504	1/1	0.97	0.10	53,53,53,53	0
54	MG	DA	3465	1/1	0.97	0.10	63,63,63,63	0
54	MG	BA	3399	1/1	0.97	0.10	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3253	1/1	0.97	0.08	39,39,39,39	0
54	MG	AA	1626	1/1	0.97	0.16	32,32,32,32	0
54	MG	DB	202	1/1	0.97	0.19	67,67,67,67	0
54	MG	DB	203	1/1	0.97	0.09	61,61,61,61	0
54	MG	DA	3021	1/1	0.97	0.11	32,32,32,32	0
54	MG	DA	3470	1/1	0.97	0.05	50,50,50,50	0
54	MG	DA	3471	1/1	0.97	0.04	41,41,41,41	0
54	MG	BA	3708	1/1	0.97	0.08	49,49,49,49	0
54	MG	DA	3473	1/1	0.97	0.08	34,34,34,34	0
54	MG	AA	1801	1/1	0.97	0.05	87,87,87,87	0
54	MG	BA	3259	1/1	0.97	0.07	20,20,20,20	0
54	MG	DA	3150	1/1	0.97	0.13	29,29,29,29	0
54	MG	DA	3026	1/1	0.97	0.12	47,47,47,47	0
54	MG	BA	3410	1/1	0.97	0.22	56,56,56,56	0
54	MG	DA	3153	1/1	0.97	0.04	32,32,32,32	0
54	MG	BA	3411	1/1	0.97	0.07	24,24,24,24	0
54	MG	DA	3155	1/1	0.97	0.08	53,53,53,53	0
54	MG	DE	302	1/1	0.97	0.05	37,37,37,37	0
54	MG	DA	3156	1/1	0.97	0.09	34,34,34,34	0
54	MG	BA	3414	1/1	0.97	0.12	23,23,23,23	0
54	MG	DA	3158	1/1	0.97	0.09	49,49,49,49	0
54	MG	BA	3515	1/1	0.97	0.06	35,35,35,35	0
54	MG	CA	1721	1/1	0.97	0.06	53,53,53,53	0
54	MG	BA	3154	1/1	0.97	0.07	47,47,47,47	0
54	MG	BA	3155	1/1	0.97	0.05	37,37,37,37	0
54	MG	BA	3262	1/1	0.97	0.06	51,51,51,51	0
54	MG	DA	3491	1/1	0.97	0.06	42,42,42,42	0
54	MG	AA	1616	1/1	0.97	0.12	55,55,55,55	0
54	MG	DA	3493	1/1	0.97	0.11	33,33,33,33	0
54	MG	BA	3325	1/1	0.97	0.07	28,28,28,28	0
54	MG	DQ	201	1/1	0.97	0.11	52,52,52,52	0
54	MG	DQ	202	1/1	0.97	0.14	39,39,39,39	0
54	MG	BA	3424	1/1	0.97	0.09	25,25,25,25	0
54	MG	BA	3326	1/1	0.97	0.05	46,46,46,46	0
54	MG	DR	201	1/1	0.97	0.09	40,40,40,40	0
54	MG	DR	202	1/1	0.97	0.10	45,45,45,45	0
54	MG	DT	201	1/1	0.97	0.14	52,52,52,52	0
54	MG	BA	3523	1/1	0.97	0.10	43,43,43,43	0
54	MG	BA	3207	1/1	0.97	0.04	57,57,57,57	0
54	MG	DA	3499	1/1	0.97	0.07	55,55,55,55	0
54	MG	D1	101	1/1	0.97	0.07	59,59,59,59	0
54	MG	BA	3429	1/1	0.97	0.08	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3430	1/1	0.97	0.15	27,27,27,27	0
54	MG	BA	3057	1/1	0.97	0.26	29,29,29,29	0
54	MG	BA	3158	1/1	0.97	0.11	22,22,22,22	0
54	MG	BA	3433	1/1	0.97	0.11	31,31,31,31	0
54	MG	BA	3622	1/1	0.97	0.09	31,31,31,31	0
54	MG	DA	3180	1/1	0.97	0.04	29,29,29,29	0
55	ZN	AD	301	1/1	0.97	0.18	76,76,76,76	0
54	MG	AA	1681	1/1	0.97	0.06	44,44,44,44	0
55	ZN	B4	101	1/1	0.97	0.04	117,117,117,117	0
54	MG	DA	3183	1/1	0.97	0.08	36,36,36,36	0
54	MG	BA	3211	1/1	0.97	0.09	49,49,49,49	0
54	MG	DA	3331	1/1	0.98	0.04	48,48,48,48	0
54	MG	DA	3332	1/1	0.98	0.06	28,28,28,28	0
54	MG	BA	3337	1/1	0.98	0.04	27,27,27,27	0
54	MG	BA	3388	1/1	0.98	0.09	20,20,20,20	0
54	MG	BA	3198	1/1	0.98	0.13	35,35,35,35	0
54	MG	DA	3336	1/1	0.98	0.06	53,53,53,53	0
54	MG	BA	3199	1/1	0.98	0.06	46,46,46,46	0
54	MG	BA	3680	1/1	0.98	0.04	37,37,37,37	0
54	MG	BA	3681	1/1	0.98	0.10	31,31,31,31	0
54	MG	AA	1722	1/1	0.98	0.08	48,48,48,48	0
54	MG	BA	3175	1/1	0.98	0.05	31,31,31,31	0
54	MG	BA	3396	1/1	0.98	0.06	39,39,39,39	0
54	MG	BA	3397	1/1	0.98	0.06	36,36,36,36	0
54	MG	DA	3025	1/1	0.98	0.28	35,35,35,35	0
54	MG	DA	3464	1/1	0.98	0.04	35,35,35,35	0
54	MG	BA	3686	1/1	0.98	0.04	43,43,43,43	0
54	MG	BA	3609	1/1	0.98	0.05	37,37,37,37	0
54	MG	BA	3176	1/1	0.98	0.05	27,27,27,27	0
54	MG	DA	3234	1/1	0.98	0.15	52,52,52,52	0
54	MG	BA	3069	1/1	0.98	0.04	42,42,42,42	0
54	MG	DA	3587	1/1	0.98	0.14	49,49,49,49	0
54	MG	AA	1814	1/1	0.98	0.07	66,66,66,66	0
54	MG	BA	3613	1/1	0.98	0.04	50,50,50,50	0
54	MG	BA	3470	1/1	0.98	0.05	33,33,33,33	0
54	MG	BA	3004	1/1	0.98	0.09	53,53,53,53	0
54	MG	BA	3403	1/1	0.98	0.08	35,35,35,35	0
54	MG	BA	3699	1/1	0.98	0.04	43,43,43,43	0
54	MG	BA	3404	1/1	0.98	0.06	27,27,27,27	0
54	MG	BT	201	1/1	0.98	0.15	49,49,49,49	0
54	MG	BA	3406	1/1	0.98	0.10	25,25,25,25	0
54	MG	CA	1751	1/1	0.98	0.09	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3480	1/1	0.98	0.04	57,57,57,57	0
54	MG	BA	3304	1/1	0.98	0.05	33,33,33,33	0
54	MG	DA	3600	1/1	0.98	0.04	33,33,33,33	0
54	MG	DA	3602	1/1	0.98	0.04	53,53,53,53	0
54	MG	DA	3041	1/1	0.98	0.10	34,34,34,34	0
54	MG	BU	201	1/1	0.98	0.17	30,30,30,30	0
54	MG	BA	3703	1/1	0.98	0.03	26,26,26,26	0
54	MG	CA	1755	1/1	0.98	0.10	79,79,79,79	0
54	MG	BU	203	1/1	0.98	0.22	31,31,31,31	0
54	MG	AA	1655	1/1	0.98	0.06	64,64,64,64	0
54	MG	BA	3348	1/1	0.98	0.06	44,44,44,44	0
54	MG	BA	3706	1/1	0.98	0.06	44,44,44,44	0
54	MG	BA	3271	1/1	0.98	0.06	66,66,66,66	0
54	MG	BA	3272	1/1	0.98	0.04	40,40,40,40	0
54	MG	BA	3046	1/1	0.98	0.09	35,35,35,35	0
54	MG	DA	3615	1/1	0.98	0.04	67,67,67,67	0
54	MG	BA	3482	1/1	0.98	0.10	21,21,21,21	0
54	MG	BA	3416	1/1	0.98	0.06	22,22,22,22	0
54	MG	BA	3417	1/1	0.98	0.05	25,25,25,25	0
54	MG	B0	102	1/1	0.98	0.06	50,50,50,50	0
54	MG	BA	3182	1/1	0.98	0.05	30,30,30,30	0
54	MG	BA	3486	1/1	0.98	0.06	25,25,25,25	0
54	MG	BA	3183	1/1	0.98	0.05	37,37,37,37	0
54	MG	CA	1679	1/1	0.98	0.08	53,53,53,53	0
54	MG	BA	3631	1/1	0.98	0.19	35,35,35,35	0
54	MG	BA	3558	1/1	0.98	0.05	60,60,60,60	0
54	MG	BA	3488	1/1	0.98	0.04	20,20,20,20	0
54	MG	BA	3634	1/1	0.98	0.05	63,63,63,63	0
54	MG	BA	3420	1/1	0.98	0.06	23,23,23,23	0
54	MG	BA	3311	1/1	0.98	0.07	34,34,34,34	0
54	MG	BA	3036	1/1	0.98	0.09	41,41,41,41	0
54	MG	BA	3563	1/1	0.98	0.06	59,59,59,59	0
54	MG	BA	3313	1/1	0.98	0.06	23,23,23,23	0
54	MG	B9	102	1/1	0.98	0.19	29,29,29,29	0
54	MG	AA	1705	1/1	0.98	0.04	46,46,46,46	0
54	MG	BA	3093	1/1	0.98	0.15	28,28,28,28	0
54	MG	BA	3316	1/1	0.98	0.05	43,43,43,43	0
54	MG	BA	3497	1/1	0.98	0.08	29,29,29,29	0
54	MG	DA	3171	1/1	0.98	0.04	28,28,28,28	0
54	MG	BA	3062	1/1	0.98	0.06	32,32,32,32	0
54	MG	BA	3166	1/1	0.98	0.08	53,53,53,53	0
54	MG	BA	3320	1/1	0.98	0.06	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3095	1/1	0.98	0.05	39,39,39,39	0
54	MG	BA	3131	1/1	0.98	0.07	28,28,28,28	0
54	MG	DA	3290	1/1	0.98	0.07	47,47,47,47	0
54	MG	DA	3177	1/1	0.98	0.07	32,32,32,32	0
54	MG	BA	3249	1/1	0.98	0.08	20,20,20,20	0
54	MG	BA	3324	1/1	0.98	0.06	48,48,48,48	0
54	MG	BA	3437	1/1	0.98	0.07	28,28,28,28	0
54	MG	DA	3181	1/1	0.98	0.05	50,50,50,50	0
54	MG	DA	3082	1/1	0.98	0.13	34,34,34,34	0
54	MG	BA	3438	1/1	0.98	0.06	31,31,31,31	0
54	MG	BA	3508	1/1	0.98	0.06	33,33,33,33	0
54	MG	BA	3439	1/1	0.98	0.04	30,30,30,30	0
54	MG	BB	214	1/1	0.98	0.07	38,38,38,38	0
54	MG	BA	3191	1/1	0.98	0.15	43,43,43,43	0
54	MG	DA	3189	1/1	0.98	0.07	36,36,36,36	0
54	MG	BA	3049	1/1	0.98	0.14	26,26,26,26	0
54	MG	BA	3442	1/1	0.98	0.10	24,24,24,24	0
54	MG	DA	3417	1/1	0.98	0.07	59,59,59,59	0
54	MG	DA	3192	1/1	0.98	0.03	37,37,37,37	0
54	MG	BA	3443	1/1	0.98	0.06	31,31,31,31	0
54	MG	AA	1712	1/1	0.98	0.10	43,43,43,43	0
54	MG	CA	1802	1/1	0.98	0.05	60,60,60,60	0
54	MG	BA	3223	1/1	0.98	0.06	24,24,24,24	0
54	MG	DA	3423	1/1	0.98	0.03	37,37,37,37	0
54	MG	DA	3197	1/1	0.98	0.06	28,28,28,28	0
54	MG	BA	3254	1/1	0.98	0.05	36,36,36,36	0
54	MG	DA	3199	1/1	0.98	0.09	29,29,29,29	0
54	MG	BA	3374	1/1	0.98	0.10	27,27,27,27	0
54	MG	DA	3429	1/1	0.98	0.10	26,26,26,26	0
54	MG	BA	3663	1/1	0.98	0.04	53,53,53,53	0
54	MG	DA	3431	1/1	0.98	0.08	27,27,27,27	0
54	MG	DA	3202	1/1	0.98	0.06	29,29,29,29	0
54	MG	AA	1738	1/1	0.98	0.04	62,62,62,62	0
54	MG	DA	3204	1/1	0.98	0.06	32,32,32,32	0
54	MG	BA	3225	1/1	0.98	0.07	19,19,19,19	0
54	MG	CA	1717	1/1	0.98	0.07	85,85,85,85	0
54	MG	BA	3332	1/1	0.98	0.05	37,37,37,37	0
54	MG	BA	3378	1/1	0.98	0.06	24,24,24,24	0
54	MG	BA	3379	1/1	0.98	0.06	30,30,30,30	0
54	MG	DA	3440	1/1	0.98	0.09	65,65,65,65	0
54	MG	BA	3258	1/1	0.98	0.09	18,18,18,18	0
54	MG	BA	3195	1/1	0.98	0.06	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1671	1/1	0.98	0.06	64,64,64,64	0
54	MG	BE	306	1/1	0.98	0.11	24,24,24,24	0
54	MG	DA	3215	1/1	0.98	0.03	30,30,30,30	0
54	MG	BA	3456	1/1	0.98	0.05	37,37,37,37	0
54	MG	BA	3383	1/1	0.98	0.04	26,26,26,26	0
54	MG	BA	3001	1/1	0.98	0.14	45,45,45,45	0
55	ZN	D5	101	1/1	0.98	0.03	53,53,53,53	0
54	MG	BA	3213	1/1	0.99	0.06	28,28,28,28	0
54	MG	DA	3270	1/1	0.99	0.03	24,24,24,24	0
54	MG	DA	3160	1/1	0.99	0.02	42,42,42,42	0
54	MG	BA	3402	1/1	0.99	0.04	31,31,31,31	0
54	MG	BA	3506	1/1	0.99	0.03	33,33,33,33	0
54	MG	BA	3085	1/1	0.99	0.15	23,23,23,23	0
54	MG	BA	3472	1/1	0.99	0.07	34,34,34,34	0
54	MG	BA	3086	1/1	0.99	0.14	21,21,21,21	0
54	MG	BA	3584	1/1	0.99	0.04	48,48,48,48	0
54	MG	BA	3008	1/1	0.99	0.07	20,20,20,20	0
54	MG	DA	3221	1/1	0.99	0.06	27,27,27,27	0
54	MG	CA	1678	1/1	0.99	0.08	55,55,55,55	0
54	MG	DA	3169	1/1	0.99	0.05	32,32,32,32	0
54	MG	BA	3200	1/1	0.99	0.07	24,24,24,24	0
54	MG	AA	1737	1/1	0.99	0.06	41,41,41,41	0
54	MG	BA	3255	1/1	0.99	0.02	25,25,25,25	0
54	MG	DA	3460	1/1	0.99	0.06	32,32,32,32	0
54	MG	BA	3667	1/1	0.99	0.04	22,22,22,22	0
54	MG	BA	3010	1/1	0.99	0.11	27,27,27,27	0
54	MG	BA	3412	1/1	0.99	0.08	19,19,19,19	0
54	MG	BA	3413	1/1	0.99	0.09	24,24,24,24	0
54	MG	AA	1808	1/1	0.99	0.06	43,43,43,43	0
54	MG	BA	3017	1/1	0.99	0.12	27,27,27,27	0
54	MG	BA	3384	1/1	0.99	0.09	29,29,29,29	0
54	MG	DA	3407	1/1	0.99	0.07	51,51,51,51	0
54	MG	BA	3385	1/1	0.99	0.06	31,31,31,31	0
54	MG	BA	3082	1/1	0.99	0.03	26,26,26,26	0
54	MG	BA	3319	1/1	0.99	0.10	26,26,26,26	0
54	MG	BA	3598	1/1	0.99	0.06	34,34,34,34	0
54	MG	BA	3162	1/1	0.99	0.09	22,22,22,22	0
54	MG	BA	3421	1/1	0.99	0.09	34,34,34,34	0
54	MG	DA	3186	1/1	0.99	0.04	27,27,27,27	0
54	MG	BA	3489	1/1	0.99	0.03	57,57,57,57	0
54	MG	BA	3054	1/1	0.99	0.05	31,31,31,31	0
54	MG	DA	3243	1/1	0.99	0.02	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3124	1/1	0.99	0.07	24,24,24,24	0
54	MG	BA	3528	1/1	0.99	0.08	27,27,27,27	0
54	MG	BA	3728	1/1	0.99	0.03	47,47,47,47	0
54	MG	BA	3391	1/1	0.99	0.09	24,24,24,24	0
54	MG	BA	3282	1/1	0.99	0.05	29,29,29,29	0
54	MG	BA	3426	1/1	0.99	0.05	28,28,28,28	0
54	MG	BA	3427	1/1	0.99	0.06	28,28,28,28	0
54	MG	BA	3393	1/1	0.99	0.08	29,29,29,29	0
54	MG	CA	1656	1/1	0.99	0.02	66,66,66,66	0
54	MG	DA	3427	1/1	0.99	0.07	24,24,24,24	0
54	MG	DA	3368	1/1	0.99	0.03	56,56,56,56	0
54	MG	DA	3613	1/1	0.99	0.05	45,45,45,45	0
54	MG	BA	3394	1/1	0.99	0.03	27,27,27,27	0
54	MG	CA	1658	1/1	0.99	0.08	64,64,64,64	0
54	MG	AA	1733	1/1	0.99	0.06	59,59,59,59	0
54	MG	BA	3126	1/1	0.99	0.10	30,30,30,30	0
54	MG	BA	3127	1/1	0.99	0.05	30,30,30,30	0
54	MG	BB	209	1/1	0.99	0.05	45,45,45,45	0
54	MG	DA	3259	1/1	0.99	0.05	39,39,39,39	0
54	MG	BA	3693	1/1	0.99	0.04	36,36,36,36	0
54	MG	BA	3694	1/1	0.99	0.07	21,21,21,21	0
54	MG	DA	3206	1/1	0.99	0.04	34,34,34,34	0
54	MG	BB	212	1/1	0.99	0.03	49,49,49,49	0
54	MG	BA	3212	1/1	0.99	0.04	52,52,52,52	0
55	ZN	B5	102	1/1	0.99	0.02	42,42,42,42	0
55	ZN	B9	101	1/1	0.99	0.02	49,49,49,49	0
54	MG	BA	3349	1/1	0.99	0.04	30,30,30,30	0
55	ZN	CN	101	1/1	0.99	0.04	108,108,108,108	0
55	ZN	DY	201	1/1	0.99	0.03	77,77,77,77	0
54	MG	BA	3698	1/1	0.99	0.08	24,24,24,24	0
54	MG	BA	3230	1/1	0.99	0.09	29,29,29,29	0
55	ZN	D6	101	1/1	0.99	0.06	66,66,66,66	0
55	ZN	D9	101	1/1	0.99	0.03	68,68,68,68	0
55	ZN	B6	101	1/1	1.00	0.04	42,42,42,42	0
54	MG	BA	3405	1/1	1.00	0.04	22,22,22,22	0
54	MG	BA	3164	1/1	1.00	0.09	39,39,39,39	0
54	MG	BA	3407	1/1	1.00	0.03	24,24,24,24	0
54	MG	DA	3601	1/1	1.00	0.03	32,32,32,32	0
54	MG	DA	3265	1/1	1.00	0.05	34,34,34,34	0
55	ZN	BY	201	1/1	1.00	0.02	54,54,54,54	0
54	MG	BA	3368	1/1	1.00	0.03	27,27,27,27	0
54	MG	BA	3697	1/1	1.00	0.06	27,27,27,27	0

6.5 Other polymers (i)

There are no such residues in this entry.